BALTIC HUB T5 OFFSHORE WIND TERMINAL PROJECT

Technical Volume 2

Part 2.1 Employer's Requirements
Section 1 - General

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1 GENERAL

1.1 OBJECTIVES OF EMPLOYER'S REQUIREMENTS

These Employer's Requirements set out the functional, design, quality and performance requirements for the Baltic Hub T5 Offshore Wind Terminal Construction Works Contract.

The Contractor shall note that the Employer takes particularly seriously their responsibilities for Health & Safety of employees and third parties on the existing terminal, and this will extend to the development area where the Works set out in these Requirements shall be executed.

1.1.1 PROJECT DESCRIPTION

The area subject to these Employer's Requirements is situated within the area of Port of Gdansk in the territory of the Republic of Poland and is subject to Polish Law.

The existing and operating Deepwater Container Terminals T1, T2, T3 (T3 is currently under construction) and T5 development projects, are situated in Gdansk on Stogi Island on a plot to the east of the main town that is leased from Zarząd Morskiego Portu Gdansk (ZMPG) SA, the Port Authority of Gdansk.

The Works described in these Employer's Requirements entails the further expansion of the port by commencing development of the fourth terminal, Terminal T5. For the initial operational period of T5 after being established, and before T5 is utilised as a container terminal, the Employer is proposing to operate the terminal as an offshore wind supply base (OWSB) to support the national offshore renewables energy plan in the Baltic Sea.

The T5 development project involves further land reclamation and construction of deep-water berths and the T5 site would initially be used as a storage, loading preparation and offloading port facility for offshore wind power generation components which will consist of wind turbine blades, nacelles, and wind turbine towers.

The intended modus operandi for the initial T5 OWSB is as follows:

- T5 to act as a receiving port for maritime transported offshore wind power generation components.
- T5 will serve as a storage facility of the offshore wind power generation components
- T5 also facilitate the pre-loading operations of the offshore wind power generation components
- T5 will then serve as an offloading port facility for all pre-assembled offshore wind power generation components.

The main western T5 quay is to be used as the main outbound berth for the offshore wind installation vessels to load up with prepared components. This quay will eventually be returned to the Employer and be utilised as the main T5 deep water container berth.

The northern berth along the main fairway channel will be utilised as an inbound berth for the unloading of offshore wind power generation components using mobile harbour cranes. A separate roll on- roll off (Ro-Ro) ramp will be constructed with temporary mooring dolphins constructed to receive a separate inbound offshore wind vessel on the North-East corner of Terminal T5

The eastern edge of T5 is a temporary edge and will eventually merge into the final T4 expansion terminal and therefore will be constructed as temporary edge protection structure.

In addition, there will also be a Ro-Ro vessel berth on the northeast corner of the T5 terminal where the new berth is to be formed using offshore piled breasting and mooring dolphins.

The new T5 reclamation area is to be constructed using suitable material. The Contractor shall be responsible for identifying external sources of suitable granular material for the balance of the reclamation volume including the sourcing, supplying and use of any material required for the Works, including the responsibility to supply material that complies with the Employer's Requirements.

The scope of Works set out in these Employer's Requirements, shall include but not be limited to, the design, execution and completion of the following:

- Site establishment and demolition of existing disused Terminal T1 marine structures.
- Construction of the T5 vessel quays and Ro-Ro ramps together with all ancillary works and any edge protection structures.
- Construction of a new Ro-Ro berth from piled mooring and breasting dolphin structures.
- Dredging associated with the T5 reclamation and vessel access, ground improvement and earthworks, and import of other suitable fill material as required. For the avoidance of doubt, the Contractor shall be responsible for sourcing all material for the reclamation.
- Construction of the T5 OSWB including all paving, drainage and necessary infrastructure for operations of the OWSB;
- Provision of communication routes suitable for heavy terminal equipment traffic from the existing port estate.
- Provision of all necessary services, in particular electrical, telecoms, potable, fuel bunkering transfer pipes in the main outbound quay, fire and sanitary water networks and modification of existing supply / connection points where necessary.
- Provision of substations and other terminal buildings (indicative locations shown on the Drawings).
- Provision of all other infrastructure necessary for the safe and secure operation of the terminal including fencing, lighting and CCTV.
- Works within the existing Terminal T1, T2 and T3 areas, including provision of services, utilities and road access to facilitate the operation of T5.

The Contractor, in his proposed design solutions, and during the performance of Works, shall take into consideration the fact that the future T5 OSWB terminal will eventually be converted into a container terminal. In addition, Terminal 4 (T4) developments are being planned (future development stages, not generally included in this scope of Works). Therefore, it is necessary to apply such design solutions and perform such a scope of Works which in the future shall not conflict with and shall not require significant demolition of the T5 Works and enable integration of the T5 development with the existing T1 and T2 Terminals, upcoming T3 Terminal and future T4 and T5 container terminals. Outline plans for the future T4 and T5 container terminals is shown within the Disclosed Data and described further in Section 3 of these Employer's Requirements.

Details of the existing terminals are shown on the Layout Drawings and within the Disclosed Data where the Site borders of the existing container terminals the Contractor shall carry out all necessary interfaces and connections to, and necessary reconstruction of the existing structures and services.

1.1.2 SITE ACCESS

Access to the Site by the Contractor shall be via the main terminal access road, passing through the Port Gate Complex, and following the defined route as shown on the Layout Drawings. All construction traffic

shall follow this route only and the Contractor shall not be allowed to use any other access routes without the written consent of the Engineer.

The Contractor is obliged to fulfil all access and H&S requirements stated in the Attachment to the Contract.

The Contractor shall not be permitted to park any vehicles within the Employer's existing parking areas.

It is currently assumed landside access to the T5 Site boundary shall be via T1, however this shall be confirmed during the tender negotiation stage. Throughout the construction period the Contractor shall be responsible for providing temporary security fencing to all temporary construction access routes through existing terminal areas which need to be in compliance with the Port Security guidelines, including the ISPS codes (e.g. secure boundary fencing, operational CCTV and search facilities etc.). The Contractor may provide additional gates to the T5 Site as required along this temporary fencing alignment; however the gates shall be no wider than 10m and shall be secured 24 hrs / 7 days a week by the Employer. The cost for providing security at each gate will be advised by the Employer on request, and recoverable from the Contractor monthly in arrears.

The Contractor shall be responsible for preparing and executing a plan to manage construction traffic within the existing terminal throughout the construction period, this shall include the provision of temporary road markings and signage along the whole route to the approval of the Engineer.

The Contractors attention is drawn to Section 1.3.18 with regards to the Site cleanliness to be maintained along the whole of the access route using proper equipment, and Section 1.3.14 for requirements associated with a visual and photographic condition survey of the access route prior to its use.

1.1.3 ACCESS TO OTHER EXISTING TERMINAL AREAS

The Contractor shall be given non-exclusive possession of areas within the existing Terminals T1, T2 and T3, as shown on the Layout Drawings, to undertake Works associated with the provision of all necessary services for Terminal T5, including electrical, telecoms, potable, fire and sanitary water networks and modification of existing supply / connection points.

It is noted that these areas are in constant use by the Employer for port operations and potentially ongoing construction works within T3. The Contractor shall identify within their programme the period of access required within the individual sections highlighted on the Layout Drawings. The Contractor shall give a minimum of 3 weeks' notice to the Employer to access individual sections of the existing terminal that are required by the Contractor to carry out the Works.

The Contractor should acknowledge that not all of the Works required in the existing terminal areas can be executed at the same time, as this will cause disturbance to the Employer's existing operations. Works shall be executed in individual sections to be agreed with the Employer. The Employer's H&S procedures shall be followed at all times.

1.1.4 SCOPE OF SERVICES

The Contractor shall comply with these Employer's Requirements in construction and completion of the Works.

It shall be noted that notwithstanding any descriptions given in the Employer's Requirements, the Contractor shall allow for clearance, excavation, removal and disposal of any material encountered. For the avoidance of doubt, "any material" means any material of any nature whatsoever (whether naturally occurring or

manmade) which may affect the execution of the Work, including (without limitation) polluted materials, mud, silt, sand, clay, rock, boulders, wrecks, chains, anchors, cables or existing structures and services.

In executing the work, the Contractor is deemed to have allowed for all necessary measures to overcome all site found conditions including, but not limited to, modifications and substitutions in labour, Contractor's Equipment, methodology, sequencing and the like in respect of the Works.

The Contractor shall complete the Works within the time indicated in the Contract.

1.1.5 WORKS REASONABLY INFERRED

The Contractor shall execute the Works in accordance with the intent and meaning of the Employer's Requirements and shall supply all resources and other items required for the proper execution of the Works and shall execute all work which may be reasonably inferred whether or not specifically shown or described. Compliance in full of all aspects of the Employer's Requirements is deemed to be included in the Contractor's Accepted Contract Amount.

The Employer's Requirements have been drawn up to cover the execution of all services and works necessary to complete the Works. In case there are any details which have not been referred to in the Employer's Requirements or Schedules, the necessity for which may reasonably be implied or inferred from the Employer's Requirements or Schedules, or which are usual or essential to the completion of all works in all trades, the same shall be deemed to be included in the Accepted Contract Amount and shall be performed.

Nothing stated in the Employer's Requirements, or any other part of the Contract shall relieve the Contractor of the obligation to comply with the requirements of legally constituted public authorities or private utility entities. Any deviation from the Employer's Requirements required to satisfy the requirements of legally constituted public authorities or private utility entities shall not be considered as a Variation or Claim under the Contract.

1.1.6 CONTRACTOR'S RESPONSIBILITY

The Contractor shall design, execute and complete the Works in accordance with the Contract, and shall remedy any and all defects in the Works.

The Employer has commissioned a design, to facilitate the obtaining of all necessary decisions, arrangements and permits, in particular a building permit and also the performance of geological surveys. These design documents included in the Disclosed Data are provided for information purposes and shall not be treated as a full or sufficient design by the Contractor.

The Contractor shall be aware that the building permit which is being obtained is strictly for the construction of the T5 Container Terminal, this shall be known as the 'Original Building Permit'. For the Original Building Permit, the technical descriptions and associated design and drawings relate to the final T5 container terminal infrastructure and operations. It is therefore necessary to reapply for a change in the initial usage of the T5 terminal and state the main technical and design differences between the T5 container terminal and the Offshore Wind Supply Base. Whilst it is the responsibility of the Employer to submit and obtain the Revised Building Permit application, the Contractor shall assist the Employer in the process by providing all necessary design and technical documents and drawings when requested by the Employer to furnish the application for the Revised Building Permit.

The Contractor during the tender phase, shall prepare a list of the Works to be performed on the basis of the Original Building Permit on the assumption that the Revised Building Permit is to be obtained in order to optimise the performance of the Works whilst awaiting for the revised building permit, in a manner allowing to advance the Works as much as reasonably possible without the need of removing or redoing them, without the need of incurring any additional cost or delay, and in a manner which does not expose the Employer for any liability that could result from the violation of the terms of the Building Permit being in force at the time.

The Contractor is fully responsible for the preparation, verification of all documents provided by the Employer for information purposes under the Disclosed Data, and obtaining and verification of necessary surveys, checks, calculations, as well as obtaining all necessary permits, decisions, approvals and opinions allowing him to execute the Contract and the Employer's Requirements.

The Contractor shall be fully responsible for all aspects of his Documents (design of the Works) and for providing such Plant, Material and workmanship as necessary to meet the Employer's Requirements.

The Contractor is obliged to prepare the Documents to the extent necessary to properly execute all the Works under the Contract and to obtain all the compulsory formal administrative decisions and in particular a replacement, Revised Building Permit and application for a change in usage of T5 from container terminal to Offshore Wind Supply Base in the first 10-15 years.

The Contractor is obliged to obtain a replacement Building Permit, if he introduces any changes in any elements included in the submitted construction design which are deemed to be significant changes to the final Building Permit or to any of the design elements that can be deemed executable under the Original Building Permit.

The Contractor shall, using suitably qualified personnel, all due skill, care and diligence, design, construct, test, commission, rectify defects in, and complete all facilities and systems of the kinds required to provide the terminal, such that the Works are in all respects suitable for the intended use as expressed in these Employer's Requirements, subject to the Employer regularly maintaining said works fully in accordance with the operation manuals.

The Contractor's design documentation (design of the Works) shall take into account the Employer's requirement to minimise operating and maintenance costs and to minimise the extent/frequency of maintenance and its disruptive effect to terminal operations. The Contractor shall in his Documents demonstrate how he intends to fulfil the above-mentioned requirement and then submit it to the Engineer for approval.

It shall be the Contractor's responsibility to ensure that the Works he performs are in compliance with the valid regulations, including any subsequent modifications thereto occurring throughout the entire term of the Contract.

The Employer may receive funding for this project from European Union funding programmes such as EBRD who have strict requirements for all contractors and sub-contractors concerning fraud and corruption. EBRD have a list of contractors who have not met these requirements and contractors and subcontractors on the EBRD list may not work on EBRD funded projects. The Contractor and all of his sub-contractors and supply chain shall comply with the EBRD requirements that are given in Annex A.

Even if the Employer does not seek funding from EBRD, the minimal environmental requirements that should be followed are the HELCOM and EU 'Do No Significant Harm' principals and requirements.

The Contractor shall familiarise themselves with and carry out the Works in line with the relevant rules and requirements given in the following documents and links:

- HELCOM https://helcom.fi/helcom-at-work/publications/manuals-and-guidelines/
- Social and Environmental Policy of the European Bank for Reconstruction and Development, and specific requirements as set out in Annex A.
- Performance Requirements of the Nordic Investment Bank
- European Commission Notice - The Technical guidance on the application of 'do no significant harm' under the Recovery and Resilience Facility Regulation (2021/C 58/01) with Article 17 of Regulation (EU) 2020/852 ("do no significant harm - DNSH")

1.1.7 DESIGN RESPONSIBILITY

The Contractor shall be fully responsible for all aspects of the design of the Works in accordance with these Employer's Requirements.

All solutions used in the design of the Works, require the Engineer's approval. This approval shall not relieve the Contractor of his full responsibility for the Contractor's Documents arising from the Contract and the provisions of Polish Building Law.

The Contractor is obliged to execute the design of the Works that shall deliver value for money without impact upon the quality or durability of the structures or facilities.

The Contractor's Documents shall be prepared simultaneously in both Polish and English language.

All Contractor's designs shall comply in every respect with the Employer's Requirements and conform to the following requirements:

- The design shall be of such a nature that overall work programme is not affected.
- If planning permits are affected, then the Contractor shall, by use of detailed programming, inform the Employer of the effects on the project programme and how he intends to mitigate the potential delay. The risks of such process shall be born entirely by the Contractor.
- Specifications for specific elements of the design shall be detailed and offered to the Engineer for approval.

The design and construction of all Contractor's designs shall comply in every respect with the Employer's Requirements unless:

- In the opinion of the Engineer, the Employer's Requirements are not appropriate to the particular element of the Contractor's design. In such cases, the Contractor shall propose a specification for this element, together with all necessary supporting Documents to demonstrate its suitability and durability. The specification shall not be accepted unless it has been demonstrated to the satisfaction of the Engineer that the outcome will be equivalent to the Employer's Requirements in

respect of stability, durability, maintenance, safety standards and operational characteristics and this has been accepted by the Employer; or

- The specifications for particular elements of the design have been expressly accepted by the Engineer at the time of acceptance of the relevant design.

1.1.8 CRITERIA FOR ALTERNATIVE DESIGNS

Alternative design are permitted, however, any alternative designs should be of such nature that they have no impact on the planning approvals or if there is an impact, the overall construction programme is not affected.

Any alternative design and construction recommended by the Contractor shall comply in every respect with the Employer's Requirements issued by the Employer and conform to the following:

a) The alternative design shall be of such nature that planning permits are not affected, and that confirmation to such effect has been sought and issued to the Employer.

b) An alternative specification for particular elements of the design has been detailed as part of the alternative design proposed and offered, allowing reasonable time period for review, to the Employer and approvals granted.

c) If planning permits are affected then the Contractor shall, by use of detailed programme, inform the Employer of the effects on the project programme and how he intends to mitigate the potential delay. The risks of such process shall be entirely born by the Contractor.

The design and construction of any alternative design shall comply in every respect with the Employer's Requirements unless:

a) In the opinion of the Engineer, the Employer's Requirements is not appropriate to the particular element of the alternative design. In such cases, the Contractor shall propose an alternative specification for this element, together with all necessary supporting documentation to demonstrate its suitability and durability. The alternative specification will not be accepted unless it has been demonstrated to the satisfaction of the Engineer that the outcome will be equivalent to the Employer's Requirements in respect of stability, durability, maintenance and safety standards and operational characteristics.

b) An alternative specification for particular elements of the design has been detailed as part of the alternative design proposed and has been expressly accepted by the Employer at the time of acceptance of the alternative design.

1.1.9 DESIGN LIFE

The design working life is defined as the period for which structural elements, pavements, buildings, Electrical and Mechanical ("E & M") systems, services, drainage systems, etc. shall be used for their intended purpose with acceptable routine maintenance but without major repair or replacement being necessary. The design life and levels of maintenance acceptable within this period shall be in accordance with Section 2 - Design Criteria of these Employer's Requirements and shall comply with the relevant design codes and standards.

1.1.10 UNITS, LEVELS, DATUMS

The SI system of units will be used throughout the design.

All levels are in metres (m) relative to PL-EVRF2007-NH. The average difference in height between the altitude system previously in force in Poland - the Kronsztad altitude system (PL-KRON86-NH or KR86bis) and PL-EVRF2007-NH is to be 0.08 m. The PL-EVRF2007-NH datum is equivalent to the Amsterdam Datum. With reference to the Polish regulations in force, the Law Journal, the Regulation of the Minister of Transport and Maritime Economy of June 1, 1998 on the technical conditions to be met by marine hydrotechnical structures and their location. The method of calculating the relationship between the PLEVRF2007-NH (Amsterdam) and KR86bis datums is as follows:

$$H_{Kr86} = H_{EVRF2007} + 0.08\ m$$

The mean sea level (MSL) is 512cm under water gauge level Gdańsk Port Północny, and 0.03m above Kronstadt (Kr) datum, which means:

$$H_{MSL} = H_{Kr86} + 0.03\ m$$

Consequently, the conversion from MSL to PL-EVRF2007-NH datum is as follow:

$$H_{MSL} = H_{EVRF2007} + 0.11\ m$$

The primary coordinates system used is: ETRS89-Poland 2000 Zone 6.

1.2 SCOPE OF WORK

The Works to be undertaken under this Contract shall include but not be limited to design, construction, installation, testing, and commissioning as necessary to meet these Employer's Requirements, ensuring that the Works are in all respects suitable for their intended use:

- Mobilisation and demobilisation of the Contractor.
- Site establishment.
- Demolition of existing disused Terminal T1 marine structures as required to facilitate the T5 Works.
- Ordnance Survey, works to remove ordnance from the T5 development area and ordnance supervision.
- Archaeological supervision (as described in Section 1.10.2) / geological supervision.
- Supervision of the environmental impact as required.
- Dredging, including but not limited to:
    - Obtaining the required berth depths in accordance with these Employer's Requirements
    - Removal of unsuitable material
    - Reclamation/replacement with suitable fill material
- Construction of approximately 451m of outbound offshore wind installation vessels quay, including bollards, fendering, ladders, water bunkering facilities, fuel bunkering facilities, cable trench and other quay furniture.
- Construction of approximately 349m of inbound offshore wind service vessel quay, including bollards, fendering, ladders, water bunkering facilities cable trench and other quay furniture.
- The quay structures shall be capable of facilitating the delivery of the future container terminal STS quayside cranes by crane or barge.
- Construction of a 30m wide and 105m long fixed Ro-Ro ramp landing area.
- Construction of four mooring dolphins equipped with fenders, bollards, access catwalks, safety ladders and navigational aids.
- Temporary quay structures, closing off the T5 reclamation area towards the eastern edge adjoining the future T4 terminal.
- Access road linking T1 to the Ro-Ro Area
- Crew transfer road and walkway providing access to the outbound quay.

- All necessary ancillary works and services including drainage, power supply and MV and LV distribution, communication ductwork, water supply system, lighting and road markings and signage.

- Provision of navigation markers and lights as applicable.

- Perform reclamation, filling and earthworks and ground improvements inshore of the new quay for an area of approximately 21ha in order to achieve the permissible maximum parameters for the settlement and loading requirements as described in the Employer's Requirements.

- Drainage, including outfalls to accommodate discharge flows from surface water drainage from terminal area.

- Provision of all necessary services, in particular electrical, telecoms, potable, fire and sanitary water networks and modification of existing supply / connection points where necessary;

- Provision of substations and other terminal buildings;

- Provision of all other infrastructure necessary for the safe and secure operation of the terminal including fencing, lighting and CCTV.

Works for Key Sub-Contractors

In accordance with the Conditions of Contract, Sub-Contractors need to be approved by the Employer prior to award if engaged for the following works:

- Dredging
- Reclamation
- Piling
- Ground Improvement
- Paving

Any changes to key Sub-contractors proposed by the Contractor during Tender will require approval from the Engineer. The Engineer may approve alternative Sub-Contractor's if the Contractor can demonstrate to the satisfaction of the Engineer that the alternative has equivalent competence and relevant experience as the Sub-Contractor indicated during Tender. The Contractor is obliged to submit all requested information concerning the competence and experience of the proposed alternative Sub-contractor.

1.2.1 LAYOUT DRAWINGS

The following Layout Drawings are deemed to be part of the Disclosed Data

Number	Drawing Number	Drawing Title
1	PC1063-RHD-T5-OW-DR-Z-1000	T5 Orientation Plan
2	PC1063-RHD-T5-OW-DR-Z-1200	T5 Terminal Layout General Arrangement
3	PC1063-RHD-T5-OW-DR-Z-1201	Site Location Plan and Access Routes
4	PC1063-RHD-T5-OW-DR-Z-1202	T5 Demolition Plan
5	PC1063-RHD-T5-OW-DR-Z-1203	T5 Dredging Plan
6	PC1063-RHD-T5-OW-DR-CP-2000	Typical Paving Plan
7	PC1063-RHD-T5-OW-DR-CM-3100	Quay Equipment Plan Sheets 1 and 2
8	PC1063-RHD-T5-OW-DR-CM-3101	Quay Equipment Plan Sheet 3
9	PC1063-RHD-T5-OW-DR-CM-3102	T5 Navigation Marking Plan
10	PC1063-RHD-T5-OW-DR-CM-3001	Outbound Quay Section
11	PC1063-RHD-T5-OW-DR-CM-3002	Inbound Quay & Ro-Ro Section
12	PC1063-RHD-T5-OW-DR-CM-3003	Eastern Interface Wall Section
13	PC1063-RHD-T5-OW-DR-CM-3004	Eastern Interface Wall Section 2
14	PC1063-RHD-T5-OW-DR-CM-3005	Ro-Ro Ramp Elevation
15	PC1063-RHD-T5-OW-DR-CM-3006	Structure of Mooring Dolphin Characteristic Cross Section
16	PC1063-RHD-T5-OW-DR-CM-3007	Alternate Mooring Dolphin Characteristic Cross Section
17	PC1063-RHD-T5-OW-DR-C-3200	STS Turnover Pit Details
18	PC1063-RHD-T5-OW-DR-C-4100	T5 Fences and Gates Layout
19	PC1063-RHD-T5-OW-DR-C-4101	T5 Fences and Gates Layout 2
20	PC1063-RHD-T5-OW-DR-LI-5000	T5 Terminal Lighting Arrangement Plan
21	PC1063-RHD-T5-OW-DR-EL-6001	T5 Electrical and Telecoms Cabling Routes
22	PC1063-RHD-T5-OW-DR-CD-6002	T5 Rainwater and Sewerage Drainage Routes
23	PC1063-RHD-T5-OW-DR-DW-6003	T5 Potable and Fire Water Routing Corridors
24	PC1063-RHD-T5-OW-DR-FB-1000	Fuel Bunkering System layout
25	PC1063-RHD-T5-OW-DR-FB-1100	Typical Ship Offloading Pit Details
26	PC1063-RHD-T5-OW-DR-FB-1101	Typical Ship loading pit details
27	PC1063-RHD-T5-OW-DR-FB-1102	Typical Buried Pipe and leak detection details
28	PC1063-RHD-T5-OW-DR-FB-1200	Fuel Bunkering Schematic

1.2.2 CONSTRUCTION DOCUMENTS

The Contractor shall provide, as part of his Construction Documents, complete and clear detailed specifications and drawings which describe all plant, manufactured items and materials which will be incorporated into the Works, details of the fabrication and construction of the Works, and the maintenance regime for the Works.

The Construction Documents shall comply with the requirements of the current provisions of the Polish law on the scope, content and form of a building design, any other Documents that will enable the execution of the Contract.

A detailed check of the Contractor's design, including calculations, will be undertaken by the Engineer.

The Contract shall be carried out in accordance with the BIM procedures document, provided in Annex B and the Employer's Information Requirement (EIR) document PC1063-RHD-T5-ZZ-XX-SP-Z-0001 to these Employer's Requirements. The Common Data Environment (CDE) shall be as specified in the BIM procedures document and also meet the requirements in Section 1.4 of these Employer's Requirements.

Where possible, all records of the execution of the Works shall be linked to Information Models or to the Federated Model and at least shall be published on the CDE.

Where 2D drawings are to be provided, they shall be derived from Information Models and further detailed in 2D.

Where progress reporting is to be provided, they shall be supported by data, images and reports derived from Information Models further elaborated in the reporting.

The Contractor shall accept full responsibility for the adequacy of the Design, including any design/details prepared by or on behalf of the Employer. The checking of the Contractor's Construction Documents by the Engineer shall result in documents being given:

- Consent as submitted
- Consent subject to implementation of Engineer's comments/notation without re-submission
- No consent and being subject to full re-submission in response to the Engineer comments/notation

At the start of the Contract the Contractor will prepare a design submission programme which will identify the scope of each design package and their submission dates. This programme shall allow a period of three weeks for the assessment of each design package by the Employer. To facilitate this process each design package shall have the Employer's Requirements in a section at the front. If it becomes necessary to revise the design submission programme the revised programme shall be submitted two weeks before any delayed design package is submitted.

1.2.3 DESIGN DOCUMENTATION

1.2.3.1 DESIGN MANUAL

A Design Manual shall be prepared to provide a summary of the basic design parameters to be used for the design of the Permanent Works. A separate manual shall be prepared, if the Contractor deems it necessary, to cover the design of any Temporary Works.

The Design Manual shall provide a summary of design criteria, methods, software and the like to ensure a consistent interpretation of the prescribed design criteria from the Employer's Requirements and relevant design standards. These design principles shall be expanded within specific design report(s).

The Design Manual shall be structured to be read in conjunction with other complimentary design documents.

The Design Manual is to be a working document and it is envisaged that, as the detailed engineering design progresses, revisions or additions to the Design Manual may be required.

1.2.3.2 DETAILED ENGINEERING DESIGN REPORTS

The Contractor's Design shall be undertaken as a single design report or as a number of design reports, with each report relating to a significant and clearly identifiable part of the design. Each design report shall enable the review and understanding of the design as a whole and shall be produced and submitted in an orderly and sequential manner.

Review by the Engineer will primarily focus on compliance with the Employer's Requirements and the Contract but may include comment on technical design details if the Engineer considers that the details presented, or methodology adopted in the design may lead to adverse and unacceptable completed Works.

Each design report shall be submitted in two (2) stages, as two (2) separate Contractor's Documents. The preliminary stage shall be the development of design packages to sufficient detail to establish that the design criteria, parameters, design methods, codes and design standards, and the preliminary design are in accordance with the Employer's Requirements, the Contractor's Proposal and sound engineering design practices and that the design which is the subject of the submission is reasonably capable of being developed into a detailed engineering design which can be constructed to meet all the requirements of the Contract.

Following receipt of a Notice of No-objection to the preliminary stage design report(s), the Contractor shall proceed to develop the design report(s) to the detailed engineering design stage. A fully detailed engineering design submission shall require that all elements of the design package are fully defined and specified and, in particular, but without limitation, that:

a) All calculations and analysis have been completed;
b) All significant elements have been delineated;
c) All information models have been constructed;
d) All studies and reports have been completed;
e) Proposed methods of construction have been defined;
f) Full account has been taken of the effect on the permanent works of the proposed methods of construction and of any temporary works.

The detailed engineering design report(s) shall cover all objects, elements, parts or systems of the Works and shall include but not be limited to:

a) General
I. A description of the Works;
II. Detailed technical specifications for the materials and workmanship;
III. Reports on tests and investigations carried out;
IV. Details of the provisions made for external interfaces;

V. A reference list of calculations;
VI. A document plan including a list of drawings.

b) Calculations containing:
I. A review of the assumptions and design philosophies adopted;
II. A table of the design criteria, loads and load combinations used;
III. A short description of each method of analysis used;
IV. A reference list with a short description of any computer software used.
V. Upon request by the Engineer, the Contractor shall submit the full structural or geotechnical design model file used for the design along with the outputs as required.

c) For each analysis carried out the Contractor shall submit a table summarising the governing criteria, loading and main results which are relied upon in the detailed engineering design. The table shall be fully referenced to the original calculation sheets;

d) Information Models for each object, element, part or system of the Works;

e) Detailed 2D drawings derived from the Information Model containing at least:
I. All temporary works to be applied for the Works;
II. Plans, cross sections and views of all Permanent Works;
III. Construction staging of all Works;
IV. Monitoring and survey plans.

All reports shall be prepared and structured in a way that facilitates their checking. For this reason, the following items shall be included at the beginning of each design report:

a) A detailed table of contents;
b) A brief description of the applied calculation method;
c) The applied starting points concerning among others safety coefficients;
d) Reference to the applied codes and standards;
e) All other information that is considered necessary for design review.

For the critical design elements of the quay wall and reclamation design, the Engineer may request for an independent CAT3 design check to be carried out. This shall be conducted by an independent engineering consultant procured by the Contractor who is suitably qualified and approved by the Engineer. If such CAT 3 check is required, the cost and procurement of the CAT3 check shall be the responsibility of the Contractor. The CAT 3 check is the highest level of check that may be required for novel methods of analysis or where considerable exercise of engineering judgement is required based on the Contractor proposed design for the critical design elements. This check is for deemed complex or innovative designs, which result in complex sequences of moving and/or construction of either temporary works or permanent work. Please note that a CAT 3 check will only be required when it is instructed by the Engineer.

1.2.3.3 GEOTECHNICAL INTERPRETATIVE REPORT

The Contractor shall prepare a detailed Geotechnical Interpretive Report for the Works which shall include but not be limited to:

a) A description of the geotechnical information that was analysed in developing the interpretation including the information provided by the Employer in the Site Data;

b) A description of the geology and various ground types to be encountered on the Site with an accompanying description of how interpretations, assumptions and conclusions were derived from the geotechnical data from the site investigation reports;
c) An assessment of the average and range of engineering properties of all soil and rock types expected to be encountered during construction;
d) Design parameters and characteristics for all soil and rock types;
e) A description of the types of buried objects that may be expected to be encountered during construction and the proposed methodology for dealing with these;
f) Temporary and permanent ground support considerations and design criteria;
g) Geological hazards;
h) Details of any further Site investigations deemed necessary by the Contractor.

1.2.4 CONSTRUCTION PLAN

The Contractor shall prepare and implement a detailed Construction Plan for the Works that identifies how the Contractor shall comply with the Employer's Requirements.

As a minimum the Construction Plan shall identify the processes whereby the following requirements will be achieved with respect to each discrete element of the Works:

a) Risk assessment and construction risk mitigation;
b) Plant and Material selection including source and quantities;
c) Construction monitoring and reporting, intervention and contingency planning;
d) Survey plan;
e) Safe processes for each element of work;
f) Adequacy and safety of any temporary works;
g) Access to adjacent properties/areas;
h) Environmental mitigation measures and construction interfaces;
i) Construction programme requirements;
j) "As constructed" information; and
k) Outline method of construction.

The Construction Plan shall be expanded as the Work is progressed to include detailed method statements for each aspect of the Work.

1.2.5 MONITORING AND INSTRUMENTATION PLAN

The Contractor shall prepare and implement a Monitoring and Instrumentation Plan detailing all monitoring equipment to be installed for active control of settlement development and safeguarding of the stability of existing structures adjacent to the Works. The plan shall include, but not be limited to:

a) Types of instrument;
b) Manufacturers details;
c) Numbers of instruments;
d) Location of instrument installation;
e) Placement depth (if relevant);
f) Placement schedule;
g) Installation methods;
h) Testing and calibration procedures;

i) Frequency and duration of monitoring;
j) Reporting procedures;
k) Tolerances of records.

1.2.6 THE CONTRACTOR'S DESIGNER AND OTHER KEY PERSONNEL

The Contractor shall provide the designer and other key personnel that are named in the Contract.

Where the Contractor's key personnel who shall take the roles of Project Director/Contractor's representative , Site Manager, Design Co-ordinator and Head of Design Team / Chief Designer are named in the Contract, the Employer may approve the use of alternatives if the Contractor can demonstrate to the satisfaction of the Engineer that the alternative has equivalent competence and relevant experience as the named person and in the case of the Head of Design Team / Chief Designer that they also carry the required Professional Indemnity Insurance.

The Contractor shall demonstrate that the named persons can meet the minimum criteria below:

Project Director – Contractor's Representative
Professional Experience
a) At least 36 months of experience in the execution of at least two contracts consisting of the design and build or construction of port structures and associated works with a minimum net value of each of them being 30,000,000.00 (in words: thirty million) Euro, each gained within 10 years before the publication of the Contract Notice, as: Project Director, or Contractor's Representative as defined by the Conditions of Contract by FIDIC, or, Deputy Project Director. b) A total experience of at least twenty years, and at least ten years of professional experience in performing independent technical functions in the construction industry or in the managerial role(s) in the execution of contracts consisting of the design and build construction or construction of port structures and associated works, including at least one function performed from the commencement to the completion of the project. Experience gained over the period of time indicated in point b) may include the experience gained over the period of time indicated in point a). The completion of the project shall mean the issue of the Taking-Over Certificate (for contracts executed according to the conditions of contract defined by FIDIC) or for the date of signing an equivalent document (in the case of contracts for which the Taking Over was not issued).
Foreign language skills
Fluency (C1 level to CEFR guidelines) in English language. Employer reserves the right to request proof of language skills declared.
Site Manager
Professional Experience
a) At least 36 months of experience in the execution of at least two contracts consisting of the design and build construction or construction of port structures and associated works of minimum net value of each of them being 10,000,000.00 (in words: ten million) Euro each, gained within 10 years before the publication of the Contract Notice, as: Site Manager, or Port Structures and Associated Works Manager. b) A total experience of at least twenty years, and at least ten years of professional experience in performing independent technical functions in the construction industry or in the managerial role(s) in the execution of contracts consisting of the design and build construction or construction of port

structures and associated works, including at least one function performed from the commencement to the completion of the project. Experience gained over the period of time indicated in point b) may include the experience gained over the period of time indicated in point a). The completion of the project shall mean the issue of the Taking-Over Certificate (for contracts executed according to the conditions of contract defined by FIDIC) or for the date of signing an equivalent document (in the case of contracts for which the Taking Over was not issued).
Foreign language skills
Fluency (B2 level to CEFR guidelines) in Polish and English languages.
Contractor's Design Co-ordinator
Professional Experience
At least 10 years' experience on behalf of a contractor in design co-ordination and at least two port developments with associated works including a new deep-water quay capable of handling vessels with a minimum draught of 12 metres and having a minimum length of 200m.
Foreign language skills
Fluency (B2 level to CEFR guidelines) in Polish and English languages.
Commercial Co-ordinator
At least 10 years' experience on behalf of a contractor in commercial co-ordination and at least two port developments with associated works including a new deep-water quay capable of handling vessels with a minimum draught of 12 metres and having a minimum length of 200m.
Foreign language skills
Fluency (B2 level to CEFR guidelines) in Polish and English languages.
Head of Design Team
Professional Experience
At least 20 years' of experience in the execution of designs for maritime works including leading at least two projects consisting of the design of container terminals of minimum net value of each of them being 30,000,000.00 (in words: thirty million) Euro, gained within 10 years before the publication of the Contract Notice as: Project Director or Design Team Leader.
Foreign language skills
Fluency (B2 level to CEFR guidelines) in English language.

The Site Manager shall take the named role under Polish Law.

The Head of Design Team shall not be the same person named to take the role of Contractor's Design Co-ordinator.

All proposed personnel shall have licenses in accordance with Polish Law to undertake these roles.

1.2.7 SERVICES DESIGN CO-ORDINATION

The pipework and ductwork layouts shown on the tender and building permit drawings prepared by the Employer in the Disclosed Data are schematic, and the Contractor shall co-ordinate the designs of the various services to:

- Avoid clashes / interference with the existing and designed services
- Interface with existing services where necessary
- Take into account ground settlement
- Minimise the size and depth of manholes to be provided

The Contractor shall prepare for approval by the Engineer services drawings with cross-sections indicating service separation. In this regards the Contractor's attention is drawn to the BIM procedures document, provided in Annex B to these Employer's Requirements and the benefits of using a 3D Federated Model for clash avoidance and detection.

1.2.8 WORKING, RECORD AND AS BUILT DRAWINGS, AND OPERATING AND MAINTENANCE MANUALS

Any drawings submitted by the Contractor, or his designer and sub-contractors shall include, without limitation:

- General arrangement and layout drawings
- Detail drawings
- Survey drawings and charts
- Single line flow diagrams of all services
- Services drawings, for each individual utility
- Combined services drawings
- Mechanical equipment drawings
- Erection drawings
- Cable and conduit routes
- Electrical circuit diagrams
- Line diagrams of control systems
- Logic diagrams

The drawings shall, without limitation

- Show the general arrangement and layout of the whole of the Works, including buildings, identifying each structure, item of plant and service facility.

- Indicate the arrangement, profiles and details of dredging, earthworks and surfacing.

- Indicate the final layout and details of piled foundations.

- Indicate the arrangement and details of structures including pre-cast elements, cast-in items and furniture, bar bending schedules, types/quality of materials and protective systems.

- Indicate the final layout and details of surface features including line marking, signage, operational safety lights etc.

- Indicate sizes and positions of all plant, equipment, pipes, cables, conduits, trunking, under floor ducting, manholes, pits, cable trays etc together with all inspection points, cable joints and lubrication points etc.

- Show the colour coding, labelling and identification of all services, and full working details of size, load, duty and capacity of each item of plant. The drawings shall also clearly indicate the positions of drains, valves and test points. The line diagrams of control systems and the electrical circuit diagrams shall indicate the type, location and function of each component and, together with the inter-connecting wiring and piping, the terminal connection reference numbers or letters of the actual equipment.

- Indicate the circuit reference for all equipment and each outlet shown. All references shall agree with the charts and labels in distribution boards fixed to the switchgear.

- Show the location and depth of all pipes and cables, whether buried directly in the ground, or drawn through ducts/manholes, to a scale of not less than 1:500. The positions of cables or pipes shall be physically measured from visible permanent features. All changes of cable or pipe direction shall be shown.

- Recommend servicing and maintenance schedules and include schedules showing the recommended types of lubricant, particulars of maker's types, serial number and rating, replacement parts, and a statement of the basic data on which the design of the plant has been based.

- Show the position and nature of all earth electrodes installed, and the range of copper connection tapes.

Working drawings shall follow recognised international standard for draughting in respect of drawing size, scale, format etc. The standard shall be proposed by the Contractor.

- Drawings shall be in both Polish and the English language.

- The orientation of civil drawings shall be parallel to the line of the Terminal T5 quays.

The Contractor shall produce, maintain, update and issue at weekly intervals a register of all drawings in circulation, identifying current status. Superseded drawings are to be clearly so marked (S/S) and removed from Site.

The preparation of record and as built drawings shall also follow the recognised international standard for draughting and shall proceed during the construction/installation of the Works.

To ensure that this requirement is met, the Engineer shall be allowed to inspect the drawings on request. Drawings shall be produced using AutoCAD.

Record and as built drawings shall be in both the Polish and English language, and orientation of civil drawings shall be parallel to the line of the Terminal T5 quays.

In addition to the above general requirements, as built drawings shall indicate deviations from original consents.

The operation and maintenance manuals shall be prepared, for civil, electrical and mechanical work elements, in both the Polish and English language, as soon as consent has been given by the Engineer to the relevant Construction Documents. The manuals shall include a description of the layout and function of the system, schedules of components comprising every item of equipment including manufacturer's name and contact details, reference and serial number, and detailed operating and maintenance instructions including electrical protection device settings.

Reduced scale copies of the record and as built drawings are to be inserted in the manuals. This may require oversize printing and wide spacing of pipe runs etc on the drawing to allow for reduction in size. Such adjustments shall be in accordance with recognised standards.

The drawings/manuals prepared by the Contractor, his designers, and any Subcontractors/ suppliers, shall be forwarded to the Engineer with register.

Maintenance manuals and details of all materials used shall be prepared for all civil, electrical and mechanical items included in the Works.

Included with the manuals shall be lists of spare parts for each item, a list of long lead-in items, and a list of local agents able to supply the parts, giving full contact details.

1.2.9 CONTRACTOR'S TESTS ON MATERIALS, PLANT AND EQUIPMENT

The Contractor shall provide the services of competent engineering staff to set to work all items of plant and equipment in a safe and efficient manner. The Contractor shall establish procedures for testing of all materials, equipment and plant in accordance with approved/specified standards and shall promptly produce certificates of such testing including all test certificates for proprietary materials, plant and equipment. All testing procedures and documentation shall be to the approval of the Engineer.

1.2.10 INSTRUCTION OF EMPLOYER'S STAFF AND NOMINEES

Prior to the issue of each Taking Over Certificate, and until the end of the Defects Notification Period, the Contractor shall provide the services of competent engineers, who shall instruct such of the Employer's staff, or other as the Employer may nominate, in the operation, servicing and maintenance of the Plant and equipment, including items supplied by Subcontractors. The Contractor shall submit for approval his proposed durations of training for each element of the Works. The Contractor shall provide staff training manuals and videos as appropriate.

1.3 SITE, WORKS AND PROGRAMME CONSTRAINTS

1.3.1 LISTED SUBCONTRACTORS

A Schedule of Subcontractors and Suppliers shall be submitted by the Contractor within 28 days of the Commencement Date. The Employer will only consider the Contractor's application for an alternative to a listed Subcontractor/supplier if it can be demonstrated that the proposed alternative is equivalent to the listed Subcontractor/supplier or if cost savings to the Employer or time benefits to the Time for Completion can be identified. This request for an alternative Subcontractor/supplier shall be submitted to the Engineer for his approval at least 28 days before placing any order with the Subcontractor/supplier.

Should Subcontractors be engaged for the works listed in “Section 1.2 “Works for Key Sub-Contractors”, the schedule for these Subcontractors shall be submitted to the Employer prior to award.

1.3.2 MOVEMENT OF CONTRACTORS EQUIPMENT AND PERSONNEL

The Contractor shall be responsible for negotiating with the Employer, or the Local Authority, as appropriate, the use of roads and accesses, adjacent and within, the Port of Gdańsk for the movement of equipment and personnel to and from the Site. The Contractor shall be responsible for obtaining the necessary permissions from the Harbour Master, or Port of Gdansk, as appropriate for the use of sea way access to and from the Site.

The Contractor shall also be responsible for negotiating with the Employer, Port of Gdańsk or any other organisation as appropriate, for the use of berthing facilities for mooring his vessels and floating plant.

Otherwise, Contractor’s vessels and floating plant shall not obstruct the existing navigable operational areas.

1.3.3 TEMPORARY WORKS REQUIREMENTS

The Temporary Works shall constitute any works required to successfully complete the Permanent Works but not form part of the Permanent Works under the Contract.

The Contractor shall design, construct, remove or demolish any Temporary Works considered necessary to execute the Permanent Works. Temporary Works shall be of the required quality to meet their purpose and comply with relevant health and safety standards, design standards, these Employer’s Requirements or any other part of the Contract.

All Temporary Works are deemed to have been included in the Accepted Contract Amount.

The Contractor shall, on request, submit to the Engineer, in the form of Temporary Works method statements, all details required by the Engineer to enable him to review the suitability of the proposed Temporary Works.

1.3.4 THIRD PARTY APPROVALS AND NOTICES

Prior to commencing work on the Site, the Contractor shall advise Pomorski Wojewodzki Inspektor Nadzoru Budowlanego of the intention to commence work. This department shall also issue the “Occupancy Permit” for the project at Completion of the Works or Sections thereof and is therefore to be advised on completion of construction with timely submission to them of the appropriate Contractor’s Documents. The submission shall require signed drawings and compliance documentation from each individual approving authority after construction work is checked against the approved design plans.

The Contractor shall obtain any interim “Occupancy Permit” that may be required to meet the requirements regarding Early Taking-Over and Sectional Completion.

The Contractor is required at all times to comply with Port Security guidelines (ISPS) and with the Safety Regulations of Baltic Hub Sp z.o.o.

The Contractor shall obtain all other approvals needed prior to construction including, without limitation, the following:

- General, Environmental
- Drainage discharge points
- Hazards

1.3.5 PROGRAMME AND ACCESS CONSTRAINTS

It shall be the responsibility of the Contractor to arrange road access and storage/ compound areas on the site with the Port Authority.

1.3.6 TAKING OVER

The Employer shall only Take Over the Site when the Engineer deems the Site to be fully functional and to complete to the standards and specifications required. All works in the Site shall be complete to a level where the Contractor does not need to re-enter the site.

1.3.7 USE BY THE EMPLOYER

For the avoidance of doubt, transient access to any part or Section of the Works from time to time by vehicles, plant or personnel of the Employer or his agents or contractors, or the movement of cranes over the Site from time to time for the purpose of relocation shall not constitute 'Use' by the Employer.

1.3.8 INTERFACE WITH EXISTING SERVICES AND FACILITIES

At the interface between the Works and any existing facilities, the Contractor shall ensure that all drainage and services, roadways, surfacing, fencing and the like, constructed under this Contract, are terminated or joined in a neat fashion, and tie in with existing services and facilities in such a way that ensures the integrity and functionality of the new and existing works and systems, and ensures that existing services and facilities and operations are not adversely affected.

The Contractor shall make provision in his design for accommodating differential settlement between any new and existing works.

Where works are to be undertaken in areas containing existing services, the Contractor shall establish their location by hand-digging trenches or by other suitable means such as electronic scanning before laying any new service. The Contractor shall provide such information regarding existing services to the Engineer and shall include such details on his Record and As-built drawings.

Where the Contractor is required to interface with existing supplies (e.g. electricity, water, sewage or gas), he shall ensure that work is carried out in a safe manner and so as to minimise impact upon the on-going terminal activities. Any works resulting in interruption to services shall be undertaken after a minimum of 10 days' notice, given to the Employer. The Contractor shall submit relevant consents/agreement with all necessary external organisations.

Any intrusions into existing operational cabling under this Contract shall be made good by re-terminating or jointing in a neat fashion and in such a way that ensures the integrity and functionality of the existing supplies.

The Contractor shall ensure that existing services within the Site area which are the property of service providers or others are adequately protected or relocated. In the event of damage to such service it shall be repaired, replaced or relocated at the Contractor's cost.

1.3.9 CO-ORDINATION WITH ON-GOING OPERATIONS

The Contractor shall co-ordinate his works with the on-going operations of the Employer, service providers, or other utility companies and authorities and the Employer and the Contractor shall ensure that access to their operations is maintained. Shut down, re-routing or diversions of existing sewage, drainage and services shall be subject to at least 14 days' notice to the Engineer and shall be coordinated to minimise disruption to on-going operations.

The Contractor shall at all times have in mind that activities at the existing adjacent Container Terminal shall not be interrupted or delayed under any circumstances without the prior written approval of the Employer.

1.3.10 OTHER/THIRD PARTY CONTRACTORS

The Contractor shall make himself aware of the existence of other contractors engaged by the Employer or others, who may be undertaking works and maintenance within or adjacent to the Site and other areas[1], and shall make due allowance for such, including, but not limited to the port Equipment Suppliers and their delivery, erection and commissioning activities for port equipment.

For the period of construction of the Works the Contractor shall provide any necessary services including power, water and drainage required by the equipment suppliers noted above.

1.3.11 COMMUNICATION WITH RELEVANT AUTHORITIES

The Contractor shall provide to the Engineer copies of all correspondence between the Contractor and local authorities, environmental groups or other utilities companies/ authorities.

1.3.12 SITE CONDITIONS

The Contractor shall be responsible for assessing the adequacy of the supplied information and undertaking any additional survey which he deems to be necessary.

The Contractor shall be responsible for seeking any additional data which may be available, and for undertaking any additional surveys, geotechnical or other investigations which may be necessary for the Works.

General information on the Project site covering location, topography, sub-soil conditions, climatological, environmental conditions, access to the Site and communications are given in the Disclosed Data. These

[1] 'Other Areas' means any area other outside of the T5 Site Boundary as shown on drawing

data are issued for information purposes only and the Employer makes no representation as to the adequacy, accuracy or reliability of the information provided. The Contractor shall be solely responsible for making any interpretation and use of the information provided.

The Contractor shall visit the Site and ascertain himself of all site and local conditions, sub-soil conditions, ground water table, existing ground levels and other working conditions and allow for any extras likely to be incurred due to such conditions.

Special attention is drawn to the location of the Project due to its close proximity to the sea with highly saline moisture content in the air and to the occurrence of high velocity dry winds. It shall be the Contractor's responsibility to interpret and satisfy himself regarding the sub-soil conditions and carry out all tests as may be necessary. The Employer assumes no responsibility in this respect.

1.3.13 CONTRACTORS EQUIPMENT

The Contractor shall submit to the Engineer, within 28 days of the Commencement Date, a comprehensive Contractor's Equipment schedule which shall include the proposed dates of arrival on Site of each item.

With reference to the Conditions of Contract the following items shall be Major Items of Contractor's equipment

- Dredgers
- Cranes
- Piling equipment
- Ground improvement equipment
- Concrete plant
- Asphalt plant

The Contractor shall at all times and at his own expense comply with the requirements of the relevant authorities, including the Employer and Gdańsk Port Authority, in respect of movement of floating plant.

The Contractor may, for the purposes of the Contract, be permitted to provide temporary moorings for his craft, in a position and manner to the approval of the Engineer and the relevant authorities. The Contractor shall not lay moorings so as to interfere with the traffic in the Port of Gdańsk navigation areas, and any other such moorings shall be removed if and when required by the relevant authorities.

If the Contractor requires the temporary removal/relocation of existing navigation buoys or navigation lights, he shall co-ordinate in advance to affect the removal with the relevant authority, namely the Employer and Port of Gdańsk. Should the removal/ relocation of the navigation buoys be possible the relevant authority will carry out the removal/relocation and their subsequent replacement. The Contractor shall be responsible for all costs arising from movement of buoys.

1.3.14 CONDITION SURVEY

In addition to any prior site appraisal and examination works carried out by the Contractor prior to the commencement of the project in accordance with the Contract, the Contractor shall carry out a visual and photographic condition survey of all elements of the existing services, facilities and adjacent areas, or as otherwise required by the Engineer, within two weeks of the Commencement Date and prior to the

commencement of any demolition or construction work. The Contractor will also establish the levels of these areas.

The survey shall be undertaken in conjunction with the Employer and/or the Engineer. The originals of the survey report and the photographs in digital format shall be handed over to the Engineer within two weeks of the completion of the survey, one copy retained by the Contractor, and one copy handed over to the Employer at the same time.

1.3.15 EXISTING SERVICES

Where works are to be undertaken in areas containing existing services, the Contractor shall establish their location by hand-digging trenches or by other suitable means such as electronic scanning before laying any of the adjacent new service.

The Contractor shall provide such information regarding existing services to the Engineer, and shall include such details on his record and as-built drawings.

1.3.16 DAMAGE TO EXISTING FACILITIES/AREAS ETC

The Contractor shall be responsible for the repair or reinstatement of any of the existing facilities, services, drainage and adjacent areas damaged as a result of his activities, to the satisfaction of the Engineer and relevant third parties.

1.3.17 DAMAGE TO ACCESS ROADS

The Contractor shall ensure that damage or contamination to any public or private roads, footpaths and tracks used by any vehicles or plant proceeding to or from the Site, shall be kept to a minimum. The Contractor shall be responsible for the cost of all repairs necessary to restore such roads, tracks or footpaths, including clearing debris, to the satisfaction of the Engineer and relevant local authorities.

1.3.18 SITE CLEANLINESS

The Site shall be kept clean and tidy at all times.

The activities on the Site shall not be permitted to create excessive noise, dust, water pollution, etc, in accordance with the requirements of the Buildings and Environmental Decisions and Permits, the Port of Gdansk Authority and all other relevant bodies. In particular the main terminal access road shall allow unhindered access to the terminal and the operations around the existing gate terminal area and be kept clean of any debris from the Contractor’s operations at all times.

On completion, all temporary fences and structures shall be removed, the Site area cleaned, tidied up and left to the satisfaction of the Engineer.

Failure to comply with the above requirements will result in the Engineer taking whatever action is deemed necessary to ensure compliance, which may include back-charging costs to the Contractor.

1.3.19 TEMPORARY DRAINAGE

The Contractor shall install and maintain as necessary all temporary drainage facilities to ensure the Works, the adjacent land and existing facilities are adequately drained during the course of the Works.

1.3.20 ABATEMENT OF POLLUTION AND NUISANCE

The Contractor shall take precautions to control nuisance and pollution arising from noise, vibration, light, silt from dredging, disposal and reclamation activities, dust (including that from cement and fly-ash), grit and the like to the approval of the relevant local authority.

1.3.21 SANITARY CONVENIENCES

Sanitary conveniences for the use of the Contractor's operatives employed on the Works shall be provided and maintained by the Contractor to the extent, in such a manner and at such places as to be to the satisfaction of the Engineer. All operatives shall be obliged to use them. Each sanitary convenience shall have provision for hand-washing. The Contractor shall make temporary arrangements for the proper removal of sewage and discharge of drainage from or in connection with the work, and shall maintain the same to the satisfaction of the Engineer.

In addition the Contractor shall arrange for the collection of rubbish by the provision of suitably located and regularly cleared bins.

1.3.22 CONTRACTORS SITE COMPOUND(S)

The Contractor shall, at his own risk and cost, make all arrangements with the Employer for the provision of a suitably located Site Compound(s)/working area.

At the Commencement of the Works the Employer shall make available an area suitable for a small site compound to be established within the existing terminal. It is expected however that not later than 5 months from commencement of the Works, the Contractor will totally relocate his Site Compound/working area to a larger area within the Terminal T5 reclamation to be created as part of the Works.

The size, type, location and programme for establishment of the Contractor's site compound(s) shall be approved by the Engineer. The Contractor's use of the site compound(s) shall be subject to the following:

- The compound(s) shall not inconvenience nor impede the Employer's operations and facilities.
- The compound(s) shall be fenced off and properly drained.
- The compound(s) shall be of a standard approved by the Engineer.
- The compound(s) shall be kept secure, clean and tidy at all times. The compound shall be provided with the necessary utilities.

Within 90 days of the substantial completion of the whole of the Works, the Contractor shall clear the Contractor's site compound(s), to the satisfaction of the Engineer. Such clearance shall involve:

- Removal of all Contractor's buildings and installations;

- Removal of all services, drainage, etc associated with the Contractor's buildings and installations;
- Removal of all foundations, concrete slabs, etc remaining after removal of the Contractor's installations;
- Site clearance and removal of all debris;
- Removal of all temporary fencing;
- Removal of all materials not required for the Permanent Works, surplus to requirements, or not required by the Employer.

Failure to comply with the above requirements will result in the Engineer taking whatever action is deemed necessary to ensure compliance, which may include back-charging costs to the Contractor.

1.3.23 SERVICES

The Contractor shall make arrangements and pay all charges for the provision of electric power for the Works, including that required by subcontractors. The Contractor shall make arrangements and pay all charges for the provision of fresh water for the Works, including that required by subcontractors.

The Contractor shall provide electric light and power for the Works including that required by subcontractors, pay all charges and provide all temporary installations and remove on completion and make good all work disturbed. Any cost of temporary electricity generating equipment, if necessary, shall be allowed for by The Contractor. The Contractor shall make arrangements for establishing international telephone and internet communications with the Site. The facility shall be for his use, the Engineer and his subcontractors' use. The Contractor shall arrange for all permission and licences necessary for the operation of these lines and the telephones shall be made available at the commencement of the Works. The Contractor shall bear all costs in establishing, maintaining and clearing away such installation. The Contractor shall make arrangements and pay all charges and fees for such telephone and internet provisions.

The Contractor shall make arrangements and pay all charges and fees for the collection, handling and disposal of all sewage generated from the main and subsidiary site offices for the Engineer.
The arrangements for services shall be to the approval of the Engineer and The Contractor shall comply with the requirements of all Authorities having jurisdiction over such supplies and installations.

1.3.24 MARINE ACCESS

The Contractor shall be responsible for obtaining the necessary permissions as appropriate for the use of the marine access to the Site and for the mooring of his vessels or floating equipment, at his own cost whilst taking account that the existing navigable operational areas shall not be obstructed without the specific consent of the Employer.

1.3.25 SPARE PARTS AND SPECIAL TOOLS

The Contractor shall supply spare parts sufficient for two years' continuous operation as recommended by the manufacturer for each item of plant and equipment. Such supply shall include lists of part numbers and unit prices.

The Contractor shall supply, in approved steel boxes, complete with keys, all special tools required for making adjustments to equipment during normal operation or maintenance periods. All tools shall be of high quality alloy steel, stamped with an approved identification. Prior to ordering or supplying such tools,

and within 90 days of Commencement, the Contractor shall provide a proposed list of tools for approval of the Engineer.

1.3.26 TESTING

The Contractor shall carry out all testing required under the relevant codes and standards and in the Employers Requirements, and shall report test results within 48 hours of the results becoming available.

The Contractor shall use an independent testing company and may establish an on-site testing laboratory or he may use an established laboratory located reasonably near the Site and accredited to BS ISO IEC 17025, 'General requirements for the competence of testing and calibration laboratories' (or equivalent Polish Standards), and by implementing a quality system which satisfies the requirements of ISO/IEC17025.

If a site laboratory is established it shall be fully equipped, staffed by qualified materials engineers and technicians operating in accordance with ISO 9000 and its related documents, and shall comply with the accreditation requirements described above. The laboratory shall be subject to external audits at four-monthly intervals, by an approved accreditation body or equivalent independent testing agency, at the Contractor's expense.

The Engineer shall have the right to request up to an additional 20% of further tests be made by another independent laboratory at the Contractor's expense, in order to fully and independently verify testing operations.

1.3.27 ENVIRONMENTAL REQUIREMENTS

The Contractor shall carry out the Works with full regard to the requirements of Polish law/coastal protection acts/environmental regulations but without in any way limiting the Contractor's other environmental obligations under the contract.

The Contractor shall as part of his method of works develop a 'green' recycling system whereby all waste materials, from site works through to office works, are segregated and recycled where possible or disposed of in an environmentally friendly manner.

1.3.28 ACCESS TO SITE AFTER ISSUE OF TAKING OVER CERTIFICATES

The Contractor shall liaise with the Engineer to pre-arrange access to the Site to carry out defects resolution, monitoring, maintenance and completion of outstanding work. Such work shall be undertaken in a safe manner, at a time to suit the Employer and the Engineer.

1.3.29 COMMUNICATION SYSTEM

The Contractor's communication systems shall not at any time disrupt the communication systems of the Employer, the Harbour Authority or any other operator. The Contractor shall provide and maintain a ship to ship and a ship to shore radio communication system. The Contractor's dredging and hopper barge masters, tug and launch masters are to keep constant watch on all relevant shipping/VHF frequencies and obey all instructions given by the harbour master.

1.3.30 OTHER CONTRACTORS

The Contractor shall make himself aware of the existence of other contractors engaged by the Employer, or others, who may be undertaking works and maintenance within or adjacent to the Site Area and Other Areas, and shall make due allowance for such, including but not limited to:

- Contractors for the construction of Terminal T3
- Contractors for the construction of Terminal T4
- Delivery , testing and commissioning of CRMG cranes on T3.
- Installation of onshore communication cables
- Maintenance dredging of the existing approach channels
- Automation suppliers

For the period of construction of the Works the Contractor shall provide any necessary services including power / water / drainage required by the equipment suppliers . For the provision of such services the Contractor shall be reimbursed, at cost, directly by the equipment suppliers.

1.4 COMMUNICATIONS AND DOCUMENT CONTROL SYSTEM

1.4.1 SCOPE

The Contractor shall provide the IT system (software) for communication and electronic document control (hereinafter referred to as "**System**").

- "Documents" referred to herein mean any drawings, applications, letters and other correspondence, designs, notes, decisions, notices, instructions, arrangements, permits, statements, reports, journals (in particular construction journals, certificates, records, programmes, certificates and other documents that appear in the construction process regardless of the form in which they are included in the System.

- "Data" referred herein means information, in particular information and data included in the Documents, and other content included in the System by its users or generated by means of the System.

1.4.2 ACCESS

- The System shall be accessible 24h a day by means of at least Microsoft Internet Explorer. The availability of the System can be temporarily suspended for maintenance work following prior arrangement with the Employer.

- The Contractor shall ensure the availability of the System for the users indicated by the Employer. The Employer allows a period of 40 calendar days to configure the System, in which not all of the functionalities described herein shall be fully accessible. The access to the System shall be until the Performance Certificate is issued and it shall be provided for retention by the Employer after the Contract has been completed.

- The System shall be sufficient and suitable for the scope of the Works specified in the Contract and the Employer's Requirements.

- Failures of the System, especially the unavailability of the System, shall be removed within 24 hours from reporting the failure by at least an e-mail, on days from Monday to Saturday.

Minimum technical requirements of the System are:

- No data transfer limit.
- Space for Documents: unlimited (may be increased with the development of the Project and the increase in demand).
- Database: MySQL, postgresql, MS SQL Server 2008 R2

1.4.3 SECURITY

1. Each user logs on to the System with an individual login name and password.

2. Authorization for the users indicated by the Employer will be defined by the Employer.

3. Backup copies of the Data and Documents, which shall be stored by the provider of the System and available for the Employer upon request and shall be created and periodically checked.

4. The data included in the System shall not be available to third parties (other than the System users) in any form and at any time, also after the completion of the Works. The Contractor is obliged to keep the confidentiality of the Data.

5. The data in the system shall NOT be freely modified by the Contractor, or the System Administrators (no authority to modify). The Documents in the System can be modified by users in accordance with their authorizations, however, they shall be saved as new versions of the same document (document versioning)

1.4.4 RECORD OF EVENTS

The System shall record, without the possibility of permanent deletion of data history, all events concerning the Data (in particular: the date, time and the users that post, opine and approve the Documents). The Documents history or the Documents themselves shall not be modified, even by the users-system administrators, in a manner other than by versioning of the Documents.

1.4.5 ARCHIVING

A local copy of the System (archive/database) shall be submitted to the Employer upon request and upon completion of the whole of the Works.
The archive shall be password protected.

1.4.6 FUNCTIONALITY AND MODULES

1. The System shall allow electronic communication between the parties cooperating in the execution of the Works, in particular between the Employer, the Contractor (together with the Designer) and the Engineer.

2. Document Circulation System shall be defined during the configuration of the System by the Employer, in cooperation with the Contractor and the Engineer. The System shall provide the possibility to dynamically modify the circulation of the Documents, in accordance with the authorization of the user. Document circulation may be defined both as serial and simultaneous.

3. After logging into the System the user will have access to a dashboard showing the most important information and tasks assigned to a given user.

4. The users will be able to upload Documents to the System at least by means of a web browser. The System shall support the entering of Data into the System. The system shall manage files of up to 4GB. File management by the System means that it will be possible to upload, download and to create version files (Document versioning). The System shall include a module to manage drawings (placing the drawings in the System, opening, adding comments, validation).

5. The System shall have a function to send email notifications to the users (e.g., notifications of new documents, reviews, validations). The user shall be able to configure the System to automatically send e-mail notifications, in the case of the tasks that should be performed in the System (e.g., required validation of the document) or in the case of an update of the document which was tracked by the user.

6. The system shall generate Reports regarding, inter alia:

    - the number of Documents and the time of their validation by a given user or a group of users.

    - lists of current Documents in circulation (e.g. list of accepted Material, list of accepted drawings, list of outdated drawings, etc.).

The system shall allow filtering of data. Filtering shall be based on the labels/tags.

1.4.7 ADMINISTRATION

1. The Employer shall have an access with an administrator authorization (i.e., the ability to define Document circulation, create groups of users, define user's authorization, and configure the System) to the appropriate part of the System (the Employer-Contractor, the Employer-Engineer and the Engineer-Contractor) and shall be given concurrent licenses for 20 persons (users).

2. Administrator authorization shall include, in particular, the ability to define user's authorizations, create new users (within the license pool), groups of users and assigning access/editing authorizations, insight into the logs/system records, the ability to define Document circulation, general ability to configure the System.

1.4.8 USE

1. The Contractor shall use the System to communicate with the Engineer and the Employer, in particular in order to agree the Contractor’s Documents (including drawings) and requests for Material. The System shall also enable communication between the Engineer and the Employer.

2. The Contractor shall use the System for communication and the exchange of documents between the parties executing the Works (Consortium members, subcontractors).

3. The Contractor shall make all the Documents necessary for the Employer and the Engineer available in the System. This means that if an opinion, approval, arrangement, permission, etc. is required, the Contractor's request is communicated in the Document (e.g. in a letter, drawing) and the Contractor shall obtain such an opinion/approval/arrangement primarily by means of the System, and not e.g. by e-mail. This shall not release the Contractor and the Engineer from obtaining signatures of the Employer or the Engineer, if necessary (e.g. after agreeing on a final version of the Contractor's Documents) - it means that the permissions, opinions and approvals expressed by the System, in relation to the Documents in other than a final version, shall be treated as for information only.

4. The Employer, in justified cases, may release the Contractor from the obligations referred to in items 1 to 3 above.

1.5 QUALITY ASSURANCE

1.5.1 INTRODUCTION

The Works (including any investigations, design, construction, provision, erection, setting to work, testing, monitoring and maintenance) shall be executed under the control of a Quality Assurance system which satisfies the requirements of ISO 9000 and ISO 9001 (or equivalent) and the particular requirements of this document.

The Contractor shall prepare a Quality Plan which shall be submitted to the Engineer for approval. No work shall commence on Site in the absence of such approval. The Quality Plan shall describe the quality system to be implemented for the Contract. The Contractor's Quality Plan shall describe in detail the quality management policies, organisation, responsibilities and procedures to be applied, and identify the applicable provisions of ISO 9000 and ISO 9001 (or equivalent) to be used. The Contractor's Quality Plan shall be prepared and submitted to the Engineer for approval within four weeks of the Commencement Date.

The Contractor's designer shall also operate a quality system, and that system shall comply with ISO 9001 (or equivalent).

The following sections describe the additional or specific quality assurance requirements in relation to this project. Due reference should be made to the requirements for the quality documentation in respect to the need to define particular arrangements.

1.5.2 REFERENCES

ISO 9000 and ISO 9001 - Quality Systems (or acceptable equivalent – wherever reference to ISO follows herein this may be taken to mean the relevant clause of an acceptable alternative to ISO).

1.5.3 DEFINITIONS

Unless otherwise defined, for the purposes of this Contract the definitions given in ISO 9000 and definitions in the Conditions of Contract shall apply.

1.5.4 QUALITY SYSTEM REQUIREMENTS

Management Responsibility

The Contractor shall nominate a Project Quality Manager with clearly defined responsibilities. The overall control of the activities on the project shall be the responsibility of a Contractors Representative. The Contractor shall be responsible for developing and implementing the project specific Quality Documentation.

Quality System

The particular requirements for implementing the Contractor's Quality System shall be described in the Quality Documentation (usually contained in or referenced by a quality manual, quality plan or plans, the latter should in general follow ISO 10005) for the Contractor. The Quality Documentation shall cover the requirements of the relevant part of the ISO 9000 series and describe how the requirements will be met for his contractual obligations with the Employer in this particular instance and define or make reference to the location of:

- Written quality procedures
- Scope of his work and deliverables
- Procedures and method statements, including design control
- Details of main contractual arrangements including a list of his Subcontractors
- Organisational structures and lines of communication
- Contact details of the Engineer and other interfacing parties
- Job descriptions of the key staff and the specific experience required
- Details of the person with defined authority for establishing, maintaining and reporting on his Quality Management System
- Details of the On-Site quality management staff and responsibilities
- Arrangements for auditing of his own and his Subcontractor's activities (including schedule), and for management review
- Arrangements for quality control of his work including inspection and test plans
- Identifying the proforma/ databases to be used for recording the inspection, tests and results and the certification of compliance of all items of the Works
- Arrangements for the quality control of the work of Subcontractors and suppliers both on and off site including inspection and test plans or like items and for records of compliance
- Contract documents in which the qualities of materials, workmanship and performance are described

- List of relevant standards and specifications that form part of the Contract or Agreement between the Contractor and the Employer
- List of the documentation necessary to demonstrate the achievement of the Employer's Requirements
- Review, liaison and document control arrangements with the Employer, Engineer, relevant authorities and other interested parties including arrangements to allow the Engineer to designate specific or random witness points
- Detailed method statements for each major activity whether directly controlled or subcontracted
- A list of the work instructions or other like detailed documentation describing process control
- A list of and the retention arrangements for particular quality records

The Quality Documentation submitted by his Subcontractors and suppliers which define:

- quality objectives to be attained including quality records
- specific allocation of responsibilities and authority during different phases
- specific procedures, methods and work instructions
- testing, inspection, examination and audit programmes at appropriate stages
- method for changes and modifications in the quality documentation as the work proceeds
- health and safety arrangements
- arrangements for the purchasing and control of Subcontractors, materials and products
- programme for the Works which shows project phasing
- handling, storage, package, preservation and delivery arrangements
- arrangements for reporting, review and disposition of non-conforming work or products
- arrangements for corrective and preventive action
- servicing and/or statistical technique requirements
- contract review requirements
- description of the method for controlling changes and modifications to their quality documentation
- details of any other particular measures necessary to meet their quality objectives and those imposed by the Employer

Contract Review

- The particular requirements shall be defined.

Design Control

- Emphasis shall be placed on planning, verification and timely validation at appropriate stages in the project.
- The documented procedures shall include measures which control and co-ordinate the design process activities of the Contractor, and detail the specific design criteria for the project.

Design Input and Planning

- Evaluation of the project brief including review of the Employer's Requirements and any changes thereto between the Contractor and the Employer
- Risk assessment and safety of users, shipping, aviation and railways
- Conceptual and detailed design statements and review
- External technical services
- Statutory requirements, specifications and standards
- Environmental consideration
- Identification, coordination and control of design interfaces

Design Output

- Calculations
- Computer programs, design aids and prototype or model testing
- Drawings and specifications
- Reports and advice

Design Review, Verification and Validation

- Evaluation of design reviews
- Verification methods
- Validation requirements
- Identification of hold points
- Project specific requirements

Design Change Control

- Project specific requirements

1.5.5 DOCUMENT AND DATA CONTROL

The documented procedures shall include measures which control documentation in hard copy or digital form including drawings, calculations, reports, communications, reports, computer programs, procedures, instructions and other relevant documents.

The procedures shall include registers to identify the issue status, source and location of all incoming and outgoing drawings, schedules and other relevant documentation affecting the quality.

Amendments to the list of relevant standards and specifications that become part of the Contract or Agreement between the Contractor and the Employer shall only be made on instruction from or by agreement with the Engineer.

A library shall be maintained by the Contractor providing access to current information including technical data as follows:

- Statutory Requirements
- Other relevant professional, industrial and international codes and specifications
- Relevant product data
- Design techniques
- Defects and failures, including analysis and rectification

General technical information relating to civil and structural engineering and related engineering disciplines relevant to the design, construction, maintenance and operation activities.

Changes to documents shall be subject to review in accordance with documented procedures. Changes to documents shall be reviewed and approved by the originating body.

The following table sets out guidelines as to the Employer's required minimum level of documentary and data control and records, but is not necessarily exhaustive or limiting.

Items	Details
Purchasing / Control of Product Supplied by the Employer	Where the Contractor has to employ the services of a supplier who is required by the Employer to operate a Third Party Certification scheme, then the Contractor shall obtain details and ensure compliance. The procedures shall include measures to establish incomplete, ambiguous or conflicting data and to inform the Engineer as appropriate.
Product Identification and Traceability	Materials and manufactured goods shall be identified in Maintenance Manuals and other records which the Employer may require. Records shall be maintained of each delivery or batch of materials used and their location in the structure. Process Control Method statements shall be produced.
Inspection and Testing	Inspection and Test Plans shall be produced where applicable. These shall include hold or witness points.

Control of Inspection, Measuring & Test Equipment	A list of equipment shall be established and maintained.
Inspection and Test Status	Any particular requirements shall be defined.
Control of Nonconforming Product	The Contractor shall inform the Engineer when Nonconforming Product is identified.
Corrective and Preventive Action	The Contractor shall follow Works change requirements when applicable.
Handling, Storage, Packaging, Preservation and Delivery	The Contractor shall take measures to protect the partially completed or completed Works.
Control of Quality Records	The Quality Records shall be retained by the Contractor for a minimum period of 12 years after the end of the Contract Period. The Contractor shall supply the Employer with copies of Records which the Employer may require from time to time.
Internal Quality Audits	Internal Quality Audits shall be undertaken by personnel independent of those having direct responsibility for the activity being audited and shall be carried out at regular three monthly intervals. The Internal Quality Audits shall cover the activities of the Contractor and where applicable his Subcontractors.
Training	The Contractor shall provide training of personnel performing activities affecting quality to ensure that suitable proficiency is achieved and maintained and to promote quality consciousness throughout the organisation.
Servicing	Any particular requirements shall be defined.
Statistical Techniques	Details of any statistical techniques being used by the Contractor shall be given to the Engineer.

1.6 HEALTH AND SAFETY

1.6.1 INTRODUCTION

The Contractor shall ensure that the Works can be built, operated and maintained safely and with the minimum risk to health to the extent that is required in accordance with, and in full compliance with legislation and the Employer´s Requirements.

If appropriate safety measures are not in place and the Engineer, in line with the Conditions of Contract, orders certain construction activities to be suspended, the Contractor shall immediately stop these and shall not be entitled to any Claim or Variation under the Contract.

The Contractor shall use his best endeavours to ensure the health and welfare at work of his employees including those of his Subcontractors and of all other persons on the Site.

The Contractor's general obligations shall include, but not be limited to the following:

1. Provision and maintenance of safe and properly illuminated Contractor's Equipment;
2. Establishment of safe and well-illuminated systems of working;
3. Measures to avoid health risks in connection with the use, handling, storage and transportation of harmful substances;
4. Provision of protective clothing and equipment;
5. Provision and maintenance of safe access to all places on the Site;
6. Provision of adequate sanitary facilities and maintenance of these in a clean and hygienic state for use by all persons employed by the Employer, Engineer, Contractor, Subcontractors or other contractors on the Site;
7. Measures to control flies, mosquitoes and pests in both working and recreational areas including chemical spraying, if necessary, in compliance with the rules and regulations of the appropriate public health authority;
8. Provision and maintenance of first aid equipment and medical facilities and any other medical attention on or off Site as may be necessary for the care of any of the Contractor's, Subcontractor's, Engineer's or Employer's personnel who may be injured or in need of medical treatment or attention due to, or arising out of the execution of the Works;
9. Promptly reporting by telephone and subsequently in writing to the Engineer any accident whatsoever arising out of or in connection with performance of the work whether on or adjacent to the Site which caused death, personal injury or property damage giving full details and statements of witnesses.
10. Taking all reasonable fire precautions in respect of his stores, workshops, other installations and the Works. Where it is necessary to use any naked flame or welding equipment in executing the work and where combustible materials are in use, adequate protection shall be given to other adjacent materials and personnel. Suitable fire extinguishers shall be readily available at a position where such work is proceeding.

If any claim is made by anyone against the Contractor or any Subcontractor on account of any accident the Contractor shall promptly report the facts in writing to the Engineer giving full details of the claim.

1.6.2 EMPLOYER'S SAFETY CODE

The safety rules and regulations of the Employer are included in the Disclosed Data. They shall apply at all times, in addition to the current legislation valid in the Republic of Poland. The Employer's HSE Department's engineers and inspectors have the authority to implement the Employer policies on safety and the Contractor must abide to it.

The Contractor shall erect and maintain barricades required in his operations at Site to guard or protect the following areas which may be caused by the Contractors operations.

- Construction areas
- Disposal areas
- Hoisting areas
- Existing Employer properties
- Areas considered hazardous by the Contractor or by the Engineer

1.6.3 DESIGN

The Contractor shall, during the design process, prepare the a construction stage Health and Safety Plan in compliance with the European Union directives and standards to fully consider the hazards and risks that may arise during construction, operation and maintenance of the Terminal, and design accordingly to avoid risks to health and safety as far as is reasonably practicable. If avoidance of risk is not possible, the Contractor shall reduce the risks at source.

1.6.4 MANAGEMENT RESPONSIBILITY

Prior to the start of construction, the Contractor shall appoint a Health and Safety Manager. The Health and Safety Manager shall have the responsibility, including but not limited to, the following:

- Develop the Site Health and Safety Plan and work activity specific risk assessments linked to the method statements;
- Prepare weekly summaries on safety statistics. Attend weekly safety meetings, and in addition, attend meetings when called by the Engineer;
- Conduct Site inspections and conduct routine and non-routine audits to monitor compliance;
- Provide training, guidance and support to all personnel and anyone else that will enter the Site on the Health and Safety regulations applicable on Site;
- Whenever a risk is identified which has not been accounted for in the Health and Safety Manual or risk assessments or which is not mitigated accordingly, he shall take remedial action to reduce hazards, if necessary, by stopping the works, and identifying adequate measures to reduce impact of the hazard;
- Keep up to date procedures, maintain protective equipment and perform any additional activities required to comply with the Contract.

The Contractor's senior Site management shall demonstrate their commitment to safety by their monthly participation in corresponding walkabouts, audits, toolbox meetings, training and events. Such events shall introduce specific safety themes and address corresponding high-risk topics.

1.6.5 SITE SAFETY MEETINGS

The Contractor and Subcontractors shall attend monthly Site Safety Meetings. The Engineer or his nominated representative shall attend these meetings which shall be chaired by the Contractor or his designated representative. The Contractor and all Subcontractors shall be represented at senior management level together with their nominated Site Safety Officers.

1.6.6 SITE HEALTH AND SAFETY PLAN

The Contractor shall prepare a Site Health and Safety Plan to internationally recognised standards and shall comply with all relevant Polish Construction, Design and Management regulations and laws regarding Health and Safety in Construction. Due attention shall also be given to the Baltic Hub Health & Safety Policy in force on the existing container terminal.

This plan shall be submitted to the Engineer for his consent within two weeks of the Commencement Date, and shall include co-ordinated emergency evacuation procedures for both land and marine-based activity. It shall be co-ordinated with the Employer and with other contractors and operators working on Site or on adjacent sites. The Contractor shall identify, as part of the plan, all potential risks and hazards, and his

proposed procedure for dealing with them should these hazards arise during construction. The plan shall be updated as necessary during the construction phase.

The Employer is to be advised immediately in the event of a Notifiable Accident occurring to persons. Plant or Equipment connected with the Works.

1.6.7 TRAINING

The Contractor shall ensure that all personnel employed on or about the Works receive appropriate training, such that they understand the risks involved in the works being undertaken, the safe use of tools and equipment, and the relevance of personal protective equipment (PPE).

1.6.8 PERSONAL PROTECTIVE EQUIPMENT

The Contractor shall be fully responsible for the provision and use of PPE for ALL staff, from which there shall be no exclusions of:

- Hard hat, reflective vest (except when operating rotating tools), safety boots/shoes.
- Life jackets when working over or near water
- Task specific PPE shall be supplied as identified by the activity specific risk assessment.

The Contractor shall provide personal protective equipment for all persons who can access the Site including, in particular the representatives of the Employer.

1.6.9 DIVING OPERATIONS

Diving operations shall be carried out in strict accordance with the Polish Diving Regulations or UK Health and Safety Executive Diving at Work Regulations 1997 if no equivalent.

The Contractor shall appoint a diving specialist who shall be one clearly identified person or company. Details of the diving specialist's experience, registration, diving rules, references and evidence of insurance coverage, shall be submitted to the Engineer for assessment of their suitability.

Prior to commencement of diving operations, the Contractor shall:

- Provide to the Engineer two copies of the divers' certificates of training/qualifications, medical fitness and diving first-aid achievements.

Working diving shall be expected to be carried out using surface-supplied air with full face masks or helmets. All divers, when underwater, shall be connected to the surface by means of a safety line. Safe access to/egress from the water shall be provided at all times.
The Contractor shall ensure that emergency services, including medical equipment, are available for the duration of the diving operation and that the Engineer is notified accordingly. The Contractor shall also ensure that there is effective communication between the work site and emergency services and with persons responsible for operations which might present a hazard to diving operations.

The Contractor shall provide diving assistance to the Engineer as and when required in the supervising of the Works.

1.6.10 INSPECTION AND CORRECTIVE ACTION

The Engineer shall be entitled to audit the compliance by the Contractor with the Site Health and Safety Plan at such times and as often as it may reasonably decide. The Contractor shall provide all the necessary support and assistance to allow the Engineer to carry out such audits.

The Contractor shall immediately notify the Engineer if any accident occurs whether on or off Site in connection with the Works which results in any injury to any person or damage to any property whether directly concerned with the Site or a third party.

Following a first inspection by the Contractor, which the Engineer shall be invited to attend, the Contractor shall determine the corrective action and timeframe for correction in consultation with the Engineer. Dependent on the incident the Engineer shall have the authority to temporarily suspend parts of the Works.

A second inspection shall be undertaken, allowing for a reasonable time period after the first inspection, in which the locations of all the previous incidents shall be re-visited. The Engineer shall then confirm whether the corrective action has been undertaken. If it has not been undertaken or if it is deemed to be inadequate, the Contractor shall be given a verbal warning and allowed time, to be determined by the Engineer, to undertake the necessary action.

A third inspection shall be conducted to determine if all the corrective actions have been undertaken and all outstanding non-conformances have been closed out. If not, a written warning shall be issued to the Contractor and the date given by which the Contractor must undertake adequate corrective action shall be specified by the Engineer. If the corrective action has still not been undertaken by the required action date, then the Employer shall be entitled to withhold an amount from Interim Payment Certificates until the non-conformance(s) have been closed out.

Reasonable time periods shall be determined by the Engineer and shall be dependent on the nature of the incident.

1.6.11 PRECAUTIONS AGAINST FIRE

The Contractor shall take all reasonable precautions to prevent outbreaks of fire on the Works, Temporary Works, and in all offices, stores and other places and things connected therewith or premises adjacent thereto and especially with respect to the safe and secure storage of petroleum products, paints, explosives and all other dangerous or hazardous goods. This shall include the preparation of a fire hazard risk assessment.

The Contractor shall provide and maintain in good order and hold available at all times and in all places connected with the Works sufficient and appropriate firefighting equipment together with personnel trained in its use.

The Contractor shall give all authorized fire officers or equivalent personnel all necessary facilities to inspect the fire prevention arrangements on the Site and shall at his own cost remove all surplus materials and equipment and take such steps as the Engineer may require to reduce the risk of fire.

1.6.12 WORKING OVER-OR NEAR WATER

Contractor's Personnel working over or near water (or any other large volume of liquid) shall wear a lifejacket and/or a safety harness appropriately tightened to a fixed structure. The Contractor shall provide and maintain during such Works suitable lifelines or ring buoys in easily accessible positions.

The Contractor shall provide, operate and maintain during such works a safety boat suitable for emergencies and rescue, fully equipped and ready for immediate use.

1.6.13 LIFTING AND RIGGING

All lifting and rigging shall be directed and supervised, at all times, only by the Contractor's Personnel that is authorised, dedicated and competent to stop the lifting operation if judged dangerous to proceed. Such Contractor's Personnel shall be capable to plan and manage the assembly/disassembly, site/support conditions, load/lift characteristics and sequence, schedule, communication and reporting, and specialized safety tasks.

The selected Contractor's Equipment shall be able to make all of its lifts in its standard configuration.

The Contractor shall establish, protect and maintain a dedicated lift/rig operational safety zone.

1.7 ENVIRONMENTAL MANAGEMENT PLAN

The Contractor shall prepare an Environmental Management Plan, the aim of which shall be to:

- Reduce the potential for damage to the coastal and marine environment
- Reduce the demand for natural resources
- Reduce the disruption to local residents and businesses
- Meet the requirements of recognised standards
- Comply with the specific requirements of the Environmental Decision issued by the Environmental Protection Agency

The Environmental Management Plan shall be submitted to the Engineer for his consent and shall include specific proposals for the following:

- Information on the relevant environmental standards
- Methods for reducing the disruption to nearby sensitive sites
- Separation of waste streams and waste management generally
- Methods of reduction, reclaiming, reuse and recycling of waste
- Techniques to minimise noise, dust and odour emissions

- Spillage prevention and control measures for fuel and chemicals
- Methods of dealing with Site runoff
- Management of Site traffic

1.8 CONTRACT PROGRESS CONTROL

1.8.1 PROGRAMME

A fully resourced programme shall be prepared by the Contractor using the latest version of Microsoft Project software, clearly indicating the critical path and the float on other activities. The work headings to be shown in the programme shall be the main elements of the Works. The programme shall clearly show the inter-relationship between design, fabrication, delivery, construction, testing and commissioning of each work heading. Long lead-in items and their lead-in times shall also be identified. The programme format shall be to the approval of the Engineer.

Each work heading shall be split into detailed activities. Work to be undertaken by statutory undertakers and other third parties shall be shown as separate activities. The duration of activities to be undertaken by the Contractor shall be broken down into periods not exceeding 6 weeks.

Each activity shall be uniquely referenced. Bar charts, logic diagrams/tables and any other necessary tabular and graphical reports shall be submitted to show the following information for each activity on the network:

- Reference
- Description
- Duration
- Relationship with other activities
- Early and Late Start and Finish Dates
- Resources or Unit Production Time

The Contractor shall provide all network details on computer disk to the Engineer.

1.8.2 PROGRESS

Progress against the programme shall be updated by the Contractor at fortnightly intervals so that the progress of the Works can be adequately scrutinised by the Engineer.

The Contractor shall assess and report progress on each activity and all other input data not more than 2 days after the scheduled time for an update. Changes in the network logic may only be made after consultation with the Engineer.

The Contractor shall submit to the Engineer updated programming data (Bar Charts, Tables and disk), showing actual progress and comparison with the programme.

Where slippage has occurred, the Contractor shall give explanations together with his proposals for recovery of critical activities.

1.8.3 SITE MEETINGS

Notwithstanding the following summary of meetings to be held at Site, the Contractor shall attend all meetings where he is requested to do so. In addition, the Contractor shall call any meeting he deems necessary to meet his obligations under the Contract. The Contractor shall provide a suitable meeting room to accommodate at least 20 people.

Kick-off Meeting
Not later than 28 days from Commencement Date, the Engineer shall call a meeting with the Contractor to discuss the Contractor's Programme, equipment mobilisation contractual and administrative issues and other matters which may be pertinent to the initial phase of the Works. The Contractor's Representative shall attend such meeting.

Co-ordination Meetings
The Contractor shall attend co-ordination meetings, arranged by the Engineer, during the course of the Works so as to ensure good communication with the Engineer and to prevent delays in the Works. The Contractor's Representative shall be present at these meetings together with any other person who in the opinion of the Engineer may be required.

Management Meetings
The Contractor's Representative and appropriate Site management staff shall attend a monthly Management Meeting with the Engineer and Employer. The Management Meeting shall be called within 7 days after the monthly progress report is. All issues regarding the Contract and the progress report and any additional issues, to be advised by the Engineer via circulating the agenda, shall be subject of discussion. From time to time, as requested by the Engineer, and at least every three (3) months, these meetings shall be attended by senior, non-Site based, management staff of the Employer and the Contractor for high level discussions on any items.

Weekly Meetings
The Contractor's Representative and appropriate Site management staff shall attend a weekly meeting to discuss the following issues:

- HSSE;
- Progress and Planning;
- Quality Assurance.

Other Meetings
Other meetings to be determined by the Employer or Engineer which may require attendance of the Contractor's Personnel may include:

- Specific technical meetings as the necessity dictates;
- Daily briefing meetings when the necessity arises;
- Occasional meetings and Site visits with any visitors including, but not limited to, environmental parties, health and safety inspectors, management of the Employer, other contractors, legally constituted public authorities or private utility entities, or students.

1.9 FACILITIES FOR THE ENGINEER

1.9.1 WORK SCOPE

The Contractor shall provide, erect, equip and maintain a suitable main office and an area of hard-standing for the use of the Engineer, at an approved location on or adjacent to the Site.

The facilities for the Engineer shall be provided within 2 weeks of the Commencement Date, during construction and for 3 months after the issuing of the final Taking-Over Certificate.

1.9.2 OFFICES, FURNITURE AND FITTINGS

The Engineer facilities shall be sufficient for a total of 11 staff. The Contractor shall locate the facilities for the Engineer as close as possible to his main office on the Site. The Engineer's offices shall be suitable to accommodate these personnel in the approximate room areas stated below:

Room No.	Description	Approximate Size
1	Engineer's office	5m x 3m
2	Office for 2 No. Deputy Engineer's Representative	5m x 3m
3	Office for 4 No. Inspectors	6m x 6m
4	Office for 2 No. Visiting Inspectors	6m x 3m
5	Office for 2 No Employer's staff with cabinet for clothing	6m x 3m
6	Office for 2 No. Secretaries	5m x 3m
7	Conference Room	6m x 6m
8	Stores	3m x 3m
9	Toilets, male and female	6m x 3m
10	Kitchen with fridge 2X microwave, coffee machine (Nivona NICR 1040)	3m x 3m
11	Shower and Changing Room	3m x 3m

These offices shall be arranged in a manner to be approved by the Engineer.

All the offices shall be substantial, draft proof and weathertight, shall have ample window provision and shall be fully lined internally to give adequate thermal insulation and the floors shall be covered with linoleum or other approved covering. Each room in the offices shall be provided with heating, electric lighting and ventilation and shall be internally painted in pastel colours. The Contractor shall supply the office with all services including electricity, water, drainage, internal plumbing (with hot and cold water). Outside the main offices a hose pipe connection and hose pipe shall be provided for washing cars etc. in accordance with the approved Environmental Management Plan.

The Contractor shall be fully responsible for the provision, operation, cost and maintenance of all required services, including daily cleaning, consumables, stationery, photographic processing and constant supply of spring drinking water.

All doors to the Engineer's offices shall have an approved lock and three keys, and the offices shall be to an approved furnished and sanitary standard throughout.

1.9.3 TELEPHONE AND INTERNET SERVICES

The Contractor shall provide all internet and telephone equipment and lines for the use of the Engineer and his staff in the main office, including conference call facilities, answer phones and four mobile phones.

The Contractor shall be responsible for the payment of all leases, set up/standing charges, equipment rental, line rental, local call charges, internet call charges and international call charges for all telephones and telephone equipment. The Contractor shall also ensure clarity of the telephone lines at all times.

1.9.4 IT AND ELECTRICAL EQUIPMENT

The Contractor shall provide the following new equipment in the Engineer's office for the use of his staff:

No	Items
8	Intel based laptop computer complete with minimum requirements: Intel Core i7 Processor 8GB DDR4 RAM 250GB Hard Drive Discrete NVIDIA NVS 4200M Graphic Card 14.0" HD LCD Display Panel Wireless LAN and LAN Card Battery Charger
8	HD Desktop Monitors and related docking equipment
1	Laser Printer with parallel and network cable or similar approved
1	Colour Multifunction Network Printer <i.e. print copy. scan and fax)
1	Colour Ink Jet Plotter, capable of plotting AO size documents
8	Mobile Phone with carrying case, battery chargers for Engineer
10	iPhone 15 or later version with carrying case, battery chargers for Employer
2	iPad Pro 12,9": Wi-Fi + Cellular 512GB - Space Grey Apple Pencil 2gen. Smart Keyboard Folio Apple Care Protection Plan
2	iPad Pro 11": Wi-Fi + Cellular 512GB - Space Grey Apple Pencil 2gen. Smart Keyboard Folio Apple Care Protection Plan
2	iPad Air: Wi-Fi + Cellular 256GB - Space Grey Apple Pencil 2gen.

	Smart Keyboard Folio AppleCare Protection Plan

These additional items shall also be provided to enable a Networked environment:

No	Items
	Cabling and Connectors for the above with the IEEE 802.310BASE-T standard.
1	8 node 10Base-T Ethernet
1	ADSL router or alternative approved high band with internet connection
4	USB Memory Stick with a minimum 256GB capacity

Network connections shall be provided in all Employer's, Engineers' and Inspectors' offices.

All computers shall be supplied with the following software:
Genuine Windows® 10 Professional 64-bit (or better)
Microsoft Office 2010 Professional Suite (or better)
Two of the Laptops shall also be supplied with the latest version of AutoCAD software.
All software shall be licensed in the name of the Employer. Ownership of the software will be retained by the Employer on completion of the works.

The Contractor shall pay all costs for the operation of this equipment.

The equipment shall be approved by the Employer

The desktop and laptop computers shall be fully networked to a secure server. Back-up of the computer data shall be done daily.

1.9.5 ASSISTANCE FOR THE ENGINEER

The Contractor shall provide when required by the Engineer a boat, and qualified boatman, appropriate for use in monitoring construction, including undertaking diving inspections (as a minimum the boat shall be a 4.0 m long aluminium dinghy complete with a 10HP outboard motor).

The Contractor shall when required by the Engineer, including any inspection during the Defects Period, also provide chainmen, boatmen, divers, drivers, surveyors and office attendants to assist the Engineer as and when required.

1.9.6 SAFETY EQUIPMENT

The Contractor shall provide the full and free issue of safety equipment for the Engineer and his staff and visitors.

In addition, the Contractor shall also supply for the use of the Employer the following:

- Winter Warning Jacket, Premium Class, Waterproof Alna With Insulation Primaloft® Helly Hansen 71392 - 5 pcs.

- Women's Winter Warning Jacket Luna Helly Hansen 71398 – 5 pcs.
- ICU HI VIS SOFTSHELL JACKET – 5 pcs.
- WOMEN'S LUNA HI VIS SOFTSHELL JACKET – 5 pcs.

- KENSINGTON FLEECE JACKET – 10 pcs.
- WOMEN'S LUNA FLEECE JACKET – 10 pcs.

All the clothes with logo provided by the Employer.

1.9.7 SURVEY EQUIPMENT

The Contractor shall provide and maintain for the sole use of the Engineer and his staff, within one month of the Commencement Date until three months after the date of issue of the Taking Over Certificate for the last Section or part of the Works, the following surveying equipment which shall remain the property of the Contractor.

- 1 no. digital GPS device (type to be agreed with the Engineer)
- 1 no. automatic level, tripod legs and 4m staff
- 1 no. rolling wheel measurement device
- 8 no. 3 metre steel tapes
- 4 no. 30m fabric tapes
- 1 no. 3m straight edge plus ‘wedges’
- 1 no. survey umbrella
- 4 no. waterproof torches
- 1 no. paint thickness meter
- 1 no. concrete cover meter
- 1 no. digital thermometer
- Survey books and clipboards as required.

Each item shall be new or reconditioned and where appropriate certified for accuracy at the start of the Contract and shall be subject to the approval of the Engineer before acceptance.

The Contractor shall ensure that the instruments and other items as appropriate are at all times in good repair and adjustment and shall make good any loss or damage howsoever caused. The above-mentioned equipment shall remain on Site during the period of the Contract.

The Contractor shall make his own survey equipment, which shall include a distomat or total station facility, available to the Engineer request together with any survey books, record sheets and setting out markers, as required. The Contractor shall be entirely responsible for the accuracy of the equipment within the limits specified by the manufacturer and shall immediately replace defective equipment.

1.9.8 VEHICLES

The Contractor is to provide, maintain, tax and insure three (3) airconditioned vehicles suitable for use throughout the contract period for the sole use of the Employer and the Engineer and his staff. Two of the vehicles shall be four-wheel drive turbo diesel station wagons or double cabin pick-up trucks with minimum 2,000cc engine capacity, automatic transmission and high ground clearance, with a carrying capacity of at least 0.25t. The other should be a diesel sedan type vehicle with a minimum 1,500cc engine capacity and automatic transmission.

In addition, one automatic Ford Ranger Limited (2 Cabins) vehicle shall be provided for the Employer which include road package and technology 65 package. The Ford Ranger must be Agate Black in colour.

All vehicles shall be retained by the Engineer and the Site supervisory staff until three months after issue of the Taking-Over Certificate for the last Section/part of the Works. On transfer to the ownership of the Employer the vehicles shall be fully serviced and free from all defects, damage and blemishes.

1.9.9 COPIES OF STANDARDS

The Contractor shall supply to the Engineer one set of the Standards, Codes of Practice and other publications referred to in his Construction Documents either before or at the latest at the time of submission of the Construction Documents.

The standards shall be supplied digitally. On completion of the Contract, these Standards, Codes of Practice and other publications shall remain the property of the Employer.

In the event of the Contractor failing to provide the standards in the required time the Employer will source the standards at the Contractor's expense. However, until the relevant standards are provided the Contractor's documentary submissions/designs/ calculations/method statements will not be considered, checked or reviewed.

1.9.10 SITE OFFICE STAFF

On demand the Contractor shall employ an experienced technical Polish/English translator.

1.10 STANDARDS, MATERIALS AND EQUIPMENT

1.10.1 PLANT AND MATERIALS

Plant and Material forming part of the Works shall be clearly and indelibly marked with the reference to the standards with which they comply wherever possible. Where this is impracticable, the relevant

advice/delivery notes shall include the reference with which they are to comply. Certificates of compliance shall be submitted to the Engineer.

- Plant and materials shall be of new manufacture.
- All materials and items of plant shall be of good quality and be able to operate in and withstand the environment in which they will be working.

1.10.2 STATUTORY REQUIREMENTS

In the event of a conflict between the requirements of statutory authorities and of these Employers Requirements, the highest standard requirement shall take precedence. Any such conflict identified by the Contractor shall be reported to the Engineer.

Ordnance Survey
Prior to commencing the Works and following the completion of dredging, in accordance with Clause 4.12B of the Conditions of Contract, the Contractor is obliged to perform a survey for Ordnance in accordance with the Employer's procedures.

Archaeological Supervision
Archaeologist(s) shall be present for the whole period of dredging and earthworks. Archaeologist(s) shall monitor the dredging and earthworks, take samples, collect data and document the artefacts that are excavated, prepare documentation (drawings, photographs). The archaeologist supervision starts on the day of commencing dredging or earthworks whichever is earlier and lasts without interruptions, until the completion of the dredging or earthworks, whichever is later.

Recommendations regarding archaeologist supervision:

Prior to the commencement of on-site works, the archaeologist shall read the reports from land and underwater archaeological surveys and the analysis of bathymetric, geological, sonar, seismo-acoustic and magnetometric surveys regarding shipwrecks.

Land survey:

- There shall be constant presence of an archaeologist during each ordnance survey, in particular while surveying the ground with a magnetometer and verification of magnetic anomalies due to the possibility of finding shipwrecks containing iron ore or other commercial cargoes.
- There shall be a constant presence of an archaeologist during earthworks.
- There shall be a constant presence of an archaeologist during demolition of bunkers in order to complete conservation and architectural documentation.

Underwater survey:

- There shall be a constant presence of an archaeologist during each ordnance survey, in particular while surveying the seabed with a proton magnetometer.

The Contractor shall not commence dredging until after the Contractor has verified any magnetic anomalies and the results of a seismo-acoustic survey to demonstrate that there is no possibility of encountering shipwrecks.

Archaeologist performing the supervision shall:

- have experience in supervising dredging on such a scale
- obtain permission from Regional Curator of Monuments to conduct the archaeological survey to an approved standard of archaeological supervision
- closely cooperate (consult) with the Curator of Monuments

In the event of encountering any shipwrecks, all works that may cause damages to the artefacts shall stop and the Regional Curator of Monuments has to be notified forthwith.

In order to identify a wreck and decide how to proceed the Contractor shall clean the wreck of sand with the use of vacuum ejector. If significant depths of seabed sediments cover the wreck, then a grab dredger may be used, and spoil may be disposed of by dump barge to a designated location.

In the case of this project, it is recommended to conduct an archaeological survey in the following way: raise the wreck out of the water after examining it, perform land survey and then sink it again in ship graveyard. The final decision on the methodology will be made by the Curator.

Geological Supervisor

If during the execution of the Works a significant amount of amber or minerals or any fossils are found, then the Contractor shall employ a Geological Supervisor to be present for the remaining period of dredging and earthworks. The geological supervisor shall monitor the dredging and earthworks, take samples, collect data and document the finds that are excavated, and prepare documentation (drawings, photographs) that is required by the authorities.

1.10.3 MATERIAL SUPPLIES

A Schedule of Subcontractors shall be provided by the Contractor for review and approval by the Engineer.

Non-listed materials and plant will be subject to approval prior to placing orders.

Within 28 days of the Commencement Date, the Contractor shall submit a list of suppliers from whom he intends to purchase all materials and plant required for the Works.

Where more than one manufacturer is able to supply any particular material or article, the Contractor shall obtain the whole quantity required to complete the work from one manufacturer or supplier, or prior to placing orders, inform the Engineer of his intention to multi-source or to any change in source of supply.

1.10.4 SAMPLING AND TESTING OF MATERIALS

Compliance of Materials with the Construction Documents shall be confirmed by sampling and testing in accordance with the relevant standards and prior to their inclusion in the Works. Materials subsequently supplied shall at least equal the conforming sample in all respects. Any samples not conforming or materials failing to comply with the conforming samples shall immediately be removed from the Site.

The Contractor shall provide and submit samples of materials/articles to the Engineer and shall:

- Retain samples on Site for comparison with materials/articles used in the works and remove these samples when no longer required.

- Prepare samples of finished work

1.10.5 COPIES OF ORDERS

The Contractor shall submit to the Engineer copies of all orders for materials to be incorporated in the Works (including CIF details for Materials on Site evaluations).

1.10.6 MANUFACTURER'S INSTRUCTIONS

All Materials, Plant, etc shall be used and installed in accordance with the instructions of the manufacturer or supplier unless otherwise specified in the Employer's Requirements. Copies of manufacturer's instructions shall be provided to the Engineer prior to incorporation of the Materials and Plant into the Works.

1.10.7 INSPECTION OF EQUIPMENT OR MATERIALS OFF-SITE

The Contractor shall give notice to the Engineer of any materials or equipment stored off-site (either in Poland or overseas) that are available for inspection. The Contractor shall arrange for such inspections by the Engineer, and specialists as are necessary, and shall be responsible for the payment of:

- All transport costs (including air fares)
- All accommodation costs (including hotels)
- All subsistence costs

1.11 TAKING-OVER

1.11.1 COMPLETION

The Works will not be considered to be substantially complete for the purposes of issuing the Taking Over Certificate until the requirements of the Contract and following conditions precedent have been met by the Contractor, and said part or Section is capable of being brought into continuous full-scale operation by the Employer:

a) Any outstanding works or defects or remedial Works are such that their completion will not interfere with the said full scale continuous operation;
b) All documents have been provided to the Engineer that are required by legally constituted public authorities and that the Works or the relevant Section conform to all Approvals
c) All necessary record documents shall be available for the Employer's use and possession; and
d) Certification by the Contractor that the Works have been constructed in accordance with the Employer's Requirements and the certificates have been submitted to the Engineer.

1.11.2 TAKING OVER CERTIFICATE - COMPLETION INSPECTION

At the completion of the Works a completion inspection shall be carried out by the Contractor and a report submitted to the Engineer as part of the Contractor's application for a Taking Over Certificate. As part of the

application, the Contractor shall include a written certification that the Work has been inspected, that Work is complete in accordance with the Contract and that it is ready for the Engineer's inspection.

Thereafter, the Employer and Engineer together with the Contractor shall conduct an inspection of the Works or Section to examine and inspect the Works upon which the Engineer will decide on whether to issue a Taking Over Certificate or reject the Contractor's application in accordance with the Contract.

If any defects or non-conforming Works items are found during the inspection, the Engineer will develop a punch list of items which do not conform to the Employer's Requirements and/or Contractor's design. Such a list of deficiencies shall include the estimated date by which the deficiencies will be corrected and notified to the Contractor as part of the application rejection. The Contractor shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Engineer when reapplying for a Taking Over Certificate.

The Employer and Engineer together with the Contractor shall thereafter conduct a second inspection to confirm completion of all items on the punch list. These inspections and any deficiency corrections required by this paragraph will be accomplished within the Time for Completion of the Work or any Section thereof before.

1.11.3 COMPLETION REPORT

The Contractor shall submit a Completion Report summarizing all important elements and experiences of the project, thirty days after Taking Over the Works. The Completion Report shall cover, among others:

- Compilation and description of the execution aspects of the project;
- Compilation of main data and features of the project;
- Concluding the effectiveness of project implementation;
- Recommendations for future maintenance measures;
- Cost compilation and financial analysis.

1.11.4 DOCUMENTATION

Taking over documentation shall be supplied by the Contractor to the Engineer and shall comprise the following, as appropriate and in accordance with the Employer's and the Engineer's instructions:

- The Information Models;
- "As-Built" drawings;
- Original certificate of all warranties and guarantees;
- All test and inspection certificates;
- Other information and data as described and defined in the Employer's Requirements.

ANNEX A

EBRD Definitions and Guidelines for Private Sector Operations (Fraud and Corruption)

The purpose of these Guidelines is to clarify the meaning of the terms "Corrupt Practices", "Fraudulent Practices", "Coercive Practices," and "Collusive Practices" in the context of the EBRD's non-sovereign operations in favour of private sector projects.

Corrupt Practices

Corrupt Practice means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party. In implementing this definition, the EBRD will be guided by the following principles:

(a) The conduct in question must involve the use of improper means (such as bribery or kickbacks) by someone to induce another person to act or to refrain from acting in the exercise of his duties, in order to obtain or retain business, or to obtain an undue advantage. Antitrust, securities and other violations of law that are not of this nature fall outside of the definition of Corrupt Practices but may still be scrutinised under alternative procedures.

(b) It is acknowledged that foreign investment agreements, concessions and other types of contracts commonly require investors to make contributions for bona fide social development purposes or to provide funding for infrastructure unrelated to the project. Similarly, investors are often required or expected to make contributions to bona fide local charities. These practices are not viewed as Corrupt Practices for purposes of these definitions, so long as they are permitted under local law and fully disclosed in the payer's books and records. Similarly, an investor will not be held liable for corrupt or fraudulent practices committed by entities that administer bona fide social development funds or charitable contributions.

(c) In the context of conduct between private parties, the offering, giving, receiving or soliciting of corporate hospitality and gifts that are customary by internationally accepted industry standards shall not constitute Corrupt Practices unless the action violates applicable law.

(d) Payment by private sector persons of the reasonable travel and entertainment expenses of public officials that are consistent with existing practice under relevant law and international conventions will not be viewed as Corrupt Practices.

(e) The EBRD does not condone facilitation payments whether they are criminalised or not. Such payments, which are illegal in most countries, are dealt with in accordance with relevant local laws and international conventions.

Fraudulent Practices

Fraudulent Practice means any action or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial benefit or to avoid an obligation. In implementing this definition, the EBRD will be guided by the following principles:

(a) An action, omission, or misrepresentation will be regarded as made recklessly if it is made with reckless indifference as to whether it is true or false. Mere inaccuracy in such information, committed through simple negligence, is not enough to constitute a "Fraudulent Practice".

(b) Fraudulent Practices are intended to cover actions or omissions that are directed to or against the EBRD. The expression also covers Fraudulent Practices directed to or against an EBRD member country in connection with the award or implementation of a government contract or concession in a project financed by the EBRD. Frauds on, or other illegal behaviour directed against, other third parties are not condoned. Such behaviour may represent an impediment to doing business with EBRD.

Coercive Practices

Coercive Practice means impairing or harming, or threatening to impair or harm directly or indirectly, any party or the property of the party to influence improperly the actions of a party. In implementing this definition, the EBRD will be guided by the following principles:

(c) Coercive Practices are actions undertaken for the purpose of bid rigging or in connection with public procurement or government contracting or in furtherance of a Corrupt Practice or a Fraudulent Practice.

(d) Coercive Practices are threatened in writing or actual illegal actions such as personal injury or abduction, damage to property, or injury to legally recognizable interests, in order to obtain an undue advantage or to avoid an obligation. It is not intended to cover hard bargaining, the exercise of legal or contractual remedies or litigation in such implementation.

Collusive Practices

Collusive Practice means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party. In implementing this definition, the EBRD will be guided by the principle that Collusive Practices are actions undertaken for the purpose of bid rigging or in connection with public procurement or government contracting or in furtherance of a Corrupt Practice or a Fraudulent Practice.

General

In implementing the foregoing definitions, the EBRD will be guided by the principle that a person should not be liable for actions taken by unrelated third parties unless that person has participated in the prohibited act in question.

EBRD, HELCOM and Environmental Decision -Environmental Management Requirements

Baltic Hub T5 Offshore Wind Project

Contract date / Umowa z dn	**Employer / Zamawiający:** Istrana
Engineer/Inżynier Kontraktu:	**Contractor/Wykonawca - Consortium / Konsorcjum**
HASKONINGDHV NEDERLAND B.V. Laan 1914, No. 35, 3818 EX Amersfoort, the Netherlands	

Commitment register

Nr.	Requirement	Theme	Topic	Action type	Location	Phase	Frequency
1	Employer & EBRD	CESMP	Construct a Contractors social and environmental management plan: 1.Turbidity management 2.Waste management 3.Marine mammal management 4.Sea birds management 5.Oil spill contingency plan	Plan	Area covered under contract	Pre-dredging	1-off
2	EBRD	CESMP	Labor management plan & Traffic Management plan	Plan	Area covered under contract	Pre-dredging	1-off
3	EBRD	CESMP	Monitoring strategy including mitigation measures	Plan	Area covered under contract	Pre-dredging	1-off
4	Contractor	Compliance register	Register with applicable legislation	Register	Area covered under contract	Pre-dredging + Dredging	1-off
5	EBRD	Marine Mammal mitigation	Soft-start	Procedure	Dredging area	During dredging	Continuous
6	EBRD	Marine Mammal mitigation	Awareness marine mammals	Observations sheets on board vessels	Dredging area	During dredging	Continuous
7	EBRD	Sea birds management	Visual monitoring of the sediment plume	Satellite & UAV flights	Dredging area	During dredging	every 5-days (sat) and bi weekly (drone)
8	EBRD	Sea birds management	Pollution prevention	Silt screen	Dredging area	During dredging	1-off
9	HELCOM	Sediment contamination	Environmental soil sampling campaign	Surface samples and drill cores to characterize if sediments are contaminated	Dredging area	Pre-dredging	1-off
10	ED	Sea birds management	Limit use of bird's compensation area	Limit the use of the 250m wide sea water area, adjacent to the beach area and its hinterland, to the minimum necessary for the implementation of the project, on which, in accordance with the decision of the Regional Director for Environmental Protection in Gdańsk, the RDOŚ-Gd-WOO. 4211.29 mark. 2013.AT.9 of March 28, 2014, mitigation measures are carried out related to the construction of the T 2 terminal.	Compensation area	Dredging	Continuous
11	HELCOM	Sediment contamination	Dredge hopper validation	5 Samples from TSHD	Dredging area	During dredging	weekly
12	HELCOM	Disposal dredged material	Dump location	Identify suitable dump location	Dump	Pre-dredging	1-off
13	HELCOM & EBRD	Disposal dredged material	Dump location	Speed upon disposal of the dredged material should be below 1 knot	Dump	During dredging	Continuous
14	HELCOM	Disposal dredged material	Overflow	No overflow while sailing to offshore dump	Sailing route	During dredging	Continuous
15	HELCOM & EBRD	Disposal dredged material	Procedure for spoil and dredged material usage	Define and update procedures of dredged material and spoil management and the way they are classified as waste. Dredged material should be reused to enhance coastal defences.	NA	Pre-dredging	1-off

16	ED & EBRD	Disposal dredged material	Dredged material management	disposal of dredged material. Management of dredged material in accordance with the intended purpose, considering its quality and obtaining appropriate permits if needed. In the case of spoil disposal in the sea area, proceed in accordance with Regulation of the Minister of Transport and Construction in the matter of issuing permits for the disposal of dredging spoil into the sea and for dumping waste or other substances in the sea of 26 January 2006 (Polish Journal of Laws 2006, No 22, item 166) and the Helsinki Convention	Dump	Pre-dredging	1-off
17	ED & EBRD	Disposal dredged material	Dumping contaminated dredged material on sea disposal site	Contaminated dredged material to be dumped at sea disposal site and should not be used as reclamation fill.	Dump	Dredging	Continuous
18	EBRD	Turbidity Management	Baseline measurements water clarity	Mobile turbidity measurements at 16 locations	Dredging area + reference locations	Pre-dredging	weekly
19	EBRD	Turbidity Management	Measurements water clarity	Mobile turbidity measurements	Dredging area + reference locations	During dredging	monthly
20	EBRD	Turbidity Management	Pollution prevention	Silt screen	Dredging area	During dredging	if required based on observations
21	ED & EBRD	Turbidity Management	Dredging techniques that minimize water turbidity.	Apply dredging techniques that minimize water turbidity.	Dredging area	During dredging	Continuous
22	HELCOM + EBRD	Turbidity Management	Reduction of the impact of sediment released during dredging actions required	Reduction of the impact of sediment released during dredging – required actions:	Dredging area	Dredging	Continuous
23	EBRD	Permit register	Permit register	Construct and keep permit register up to date	Area covered under contract	Pre-dredging	Continuous
24	EBRD	Archeological supervision	Archeological supervision	Field archaeological supervision including the identification, registration and reporting of objects to the Pomeranian Provincial Conservator of Monuments	Dredging area	During dredging	Continuous
25	EBRD	Archeological supervision	Archeological supervision	Sonar survey of the project area	Dredging area	Pre-dredging	1-off
26	ED	UXO	Unexploded ordinance procedure	Implement the procedures of recognizing and cleaning of the area intended for the project from unexploded ordnance and other remnants of military activities. Define procedures to be followed to identify and possible removal of metal objects, including explosives.	Dredging area	Pre-dredging	1-off
27	ED	Waste management	Maintaining cleanliness on the construction site	The construction site should be cleaned every day of the drink bottles left by the employees, which may be traps for insects	Construction site	Pre-dredging + Dredging	Continuous
28	ED	Waste management	Discharge of pollution from vessels used during construction works	Any pollution from vessels carrying out construction work must be discharged to the port reception facilities.	Dredging area	During dredging	Continuous
29	ED	Storage of material	Storage of materials on the construction site	At the construction site, designate, harden, and drain places for the storage of materials, products, and waste. Provide properly secured places for the storage of materials and devices.	Construction site	During dredging	Continuous
30	ED	Emergency response plans	Develop and implement emergency response procedures	Develop and implement emergency response procedures (e.g. unsealing of a container with hazardous substances, ship collisions) at the terminal. Persons involved in rescuing birds that meet oily waters should be properly trained in this regard.	NA	Pre-dredging	1-off
31	ED & EBRD	Oil spill	Protection of the investment area against oil spills	The investment area must be protected against possible oil spills (equipped with measures to combat spills, including sorbents, oil barriers). Equip the T3 container terminal with surfactant floating sorbents and cutting barrier, to prevent the spill from spreading over the water surface.	Dredging area+ construction site	Dredging	Continuous

32	ED	Pollution prevention	Usage of appropriate materials and devices	Use materials and devices with certificates and approvals for use and those that meet the requirements of environmental protection.	Construction site	Pre-dredging + Dredging	Continuous
33	ED	Pollution prevention	Neutralising leaks from construction equipment	Equip the construction site with sorbents to neutralize any leaks from construction machinery.	Construction site	Dredging	Continuous
34	ED	Pollution prevention	Minimize pollution of water during construction works	Carry out construction works in a way that minimizes the pollution of water and adjacent areas	Construction site	Dredging	Continuous
35	ED	Lighting pollution prevention	Limitation of lighting usage	Limit the lighting of the area to the necessary minimum	Dredging area+ construction site	Dredging	Continuous
36	EBRD	Biodiversity Management Plan	Biodiversity Management Plan	Contractor to implement Biodiversity Management Plan due to the identified priority biodiversity features: long-tailed duck Clangula hyemalis and horned grebe Podiceps auratus, and critical habitat identified for: little tern Sternula albifrons, common tern Sterna hirundo and sandwich tern Thalasseus sandvicensi, and	Dredging area+ construction site	Pre-dredging	1-off
37	EBRD	DMP	Implementation of Dredging Management plan (DMP)	The Contractor shall develop a Dredging Management Plan (DMP) considering the assessment of impacts and mitigation measures recommended for the capital dredging works. The DMP shall include as well: – Monitoring strategy to inform baseline data and trigger levels prior to dredging and reclamation works commencing. – Monitoring strategy during dredging and reclamation works. – Proposed mitigation measures to control release of sediments and potential contaminants and turbidity during dredging, reclamation works, and offshore disposal, and consider Biodiversity and ballast water plans. Document will submit for review to Supervision Engineer, Lenders Technical and E&S Advisor.	NA	Pre-dredging	1-off
38	Employer	Reporting	JV environmental coordinator	Coordinator to bundle DI & BX documents and to inform the required instances about the environmental progress and measures	Area covered under contract	During dredging and piling	Continuous
39	EBRD	Ornithological supervision	Ornithological supervision	Supervision of the bird population on the construction site	Area covered under contract	During contract	weekly
40	EBRD	Marine Mammal mitigation	Soft-start	Procedure	piling area	during piling	Continuous

ANNEX B

BIM PROCEDURES

Please also refer to the Employer's Information Requirements Document Attached

Standards

The following standards for information management shall be adopted on the Project.

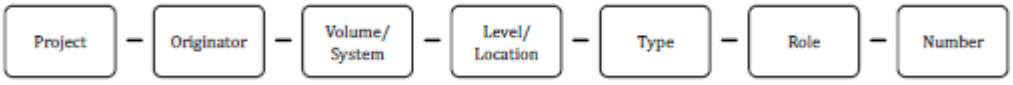
Standard or Guidance Reference	Title
BS EN ISO 19650-1:2018	Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) - Information management using building information modelling – Part 1: Concepts and principles
BS EN ISO 19650-2:2018	Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM)- Information management using building information modelling – Part 2: Delivery phase of the assets
National Annex to BS EN ISO 19650-2	To aid implementation and ensure BIM Level 2 within the ISO framework. The National Annex and Foreword are informative texts that provide contextual and supplementary information that does not conflict with the base document.
PAS 1192-3:2014	Specification for information management for the operational phase of assets using building information modelling (BIM)
BS 1192-4:2014	Collaborative production of information. Fulfilling employer's information exchange requirements using COBie. Code of practice
PAS 1192-5:2015	Specification for security minded building information modelling, digital built environments and smart asset management
PAS 1192-6:2018	Specification for collaborative sharing and use of structured Health and Safety information using BIM.

Security and Data Requirements

Information shall be shared though a CDE platform which uses two factor authentication to be able to access this information.

File Naming Convention

The Naming Convention is defined using the following fields (each field is separated using a hyphen):



Revision and Status (Suitability) Codes

The following revision and suitability codes shall be adopted on the Project.

Revision and Status Codes – BS EN ISO 19650	
Status (Suitability)	*Revision*
Work in Progress	
S0 - Initial Status	*P01.01, P01.02, PO1.03 etc* *PO2.01, PO2.02, PO2.03 etc*
SHARED (non-contractual)	
S1 - suitable for co-ordination *S2 - suitable for information* *S3 - suitable for review & comment* *S4 - suitable for stage approval* *S6 - suitable for PIM authorisation* *S7 - suitable for AIM authorisation*	*P01, P02 etc* *P01, P02 etc* *P01, P02 etc* *P01, P02 etc* *P01, P02 etc* *P01, P02 etc)*
PUBLISHED (Contractual)	
A1, An - Authorised and accepted (By the Appointing Party)*	*C01, C02 etc*
B1, Bn - Partial Sign Off with comments (By the Appointing Party)*	*P01, P02 etc*
PUBLISHED	
CR - As Constructed record	*C01, C02 etc*

**in relates to work stages Revisions: P = Preliminary & C = Contractual*

Project Volume Strategy

The following project volume strategy shall be adopted on the Project.

2-character code	***Description***
Standard Codes	
00	Used to define a project with only a single volume (All volumes / systems)
XX	No volume / system applicable
Project Specific Agreed Volume Codes (some examples shown, not exhaustive)	
[TBC]	

Employers Information Requirements

SPECIFICATION

Employers Information Requirements

Baltic Hub T5 Offshore Wind Terminal Project

Client: Baltic Hub

Reference: PC1063-RHD-T5-ZZ-XX-SP-Z-0001

Status: S0/P01

Date: 31 October 2023

Royal HaskoningDHV

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Royal HaskoningDHV

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Glossary

This glossary lists the terms, definitions and abbreviations most commonly referred to in this document.

The link below can further be used as reference for any descriptions of terms, definitions and abbreviations not included in this table.

https://airtable.com/shrvEQ6g0ctPi6lDH/tblV5ivWhq2XUrzBz/viwArn2pXPC5RRwt7?blocks=hide

Abbreviation	Term	Definition
EIR	Exchange (formerly Employer's) Information Requirements	Pre-tender document setting out the information to be delivered, and the standards and processes to be adopted by the supplier as part of the project delivery process
CDE	Common Data Environment	single source of information for any given project or asset, used to collect, manage and disseminate all relevant approved files, documents and data for multi- disciplinary teams in a managed process
TIDP	Task Information Delivery Plan	schedule of information deliverables and delivery dates, for a specific Task Team
MIDP	Master Information Delivery Plan	Plan incorporating all relevant task information delivery plans
PIM	Project Information Model	The Project Information Model (PIM) is the information model (comprising documentation, Geometrical information and non-Geometrical information) that is developed during the design and construction phases of a project.
SMP	Standard Method and Procedure	A set of standard methods and procedures covering the way information is named, expressed and referenced.
LOIN	Level of Information Need	The Level of Information Need defines the extent and granularity of the information and can be equated to: Level of Information Need = Level of Detail (LoD) + Level of Information (LoI).
LOD	Level of Detail	The graphical appearance of model objects
LOI	Level of Information	The level of detail of non-graphical content
DPOW	Digital Plan of Work	A generic schedule of phases, roles, responsibilities, assets and attributes, made available in a computable form.

1. Introduction and Project Information

These Employer's Information Requirements set out the requirements for Information Management for the Baltic Hub T5 Offshore Wind Terminal Project Contract.

1.1 Project Introduction

The area subject to these Employer's Requirements is situated within the area of Port of Gdansk in the territory of the Republic of Poland and is subject to Polish Law.

The existing and operating Deepwater Container Terminals T1, T2, T3 and site for the T5 development project, is situated in Gdansk on Stogi Island on a plot to the east of the main town that is leased from Zarząd Morskiego Portu Gdansk (ZMPG) SA, the Port Authority of Gdansk.

The Works described in these Employer's Requirements entails the further expansion of the port by commencing development of the T5 terminal for the use as an offshore wind terminal. The T5 development project involves further dredging and land reclamation to the north of existing Terminal T1.

1.2 BIM Scope of Work

1. Carry out the Project in accordance to BIM Level 2
2. Prepare a BIM Execution Plan (BEP) and Appendices in accordance with this EIR
3. Prepared and maintain the MIDP
4. Prepare and maintain the TIDP
5. Establish and maintain a Common Data Environment (CDE)
6. Generate data (graphical models, drawings, schedules, specifications etc.) as defined under the Contract, including preparing and submit 3D models and 2D drawings
7. Prepare 3D Visualisations as required in this EIR.
8. Transfer of As-Built BIM data to the Employers CDE by the Contractor.

1.3 Purpose of BIM

The Employer requires the adoption of Building Information Modelling (BIM) to enhance the project outcomes, to improve operational efficiency and to improve the future management of the assets.

The primary objective of individual and final BIM federated models is to capture and record all 'as-built' information for the Baltic Hub T5 Offshore Wind Terminal Project.

The Employer also requires the Contractor to adopt BIM models to perform clash detection of designed and for construction utilities and services.

1.4 Key Project Stakeholders

All stakeholders in the contract BEP should prepare list of contact names for all their key personnel.

Stakeholder	Organisation	Contact Name(s) (if known)
Employer	Istrana s.p. z.oo	
Project Engineer	RHDHV	
Contractor		

2. Management

2.1 Schedule of Standards and Guidance

The following standards for information management shall be adopted on the Project.

Standard or Guidance Reference	Title
BS EN ISO 19650-1:2018	Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM)- Information management using building information modelling – Part 1: Concepts and principles
BS EN ISO 19650-2:2018	Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM)- Information management using building information modelling – Part 2: Delivery phase of the assets
National Annex to BS EN ISO 19650-2	To aid implementation in the UK and ensure BIM Level 2 within the ISO framework. The National Annex and Foreword are informative texts that provide contextual and supplementary information that does not conflict with the base document.
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PAS 1192-5:2015	Specification for security minded building information modelling, digital built environments and smart asset management
PAS 1192-6:2018	Specification for collaborative sharing and use of structured Health and Safety information using BIM.

2.2 Schedule of Security and Data Requirements

All project information is to be treated as confidential, in accordance with the Contract.

Contractor shall provide a protocol for uploading and managing information to the CDE, which will be fully adopted by all parties.

Contractor shall work with Third-Party Contractors to manage security aspects of information management during project delivery.

Information shall be shared though a CDE platform which has the ability for extended access security such as two factor authentication to be able to access this information.

2.3 Training Requirements

Employer requires the Contractor to train all presented staff of the Employer and Engineer in the usage of the approved CDE system and agreed naming convention of project files.
The Contractor should prepare schedules of training for Employer and Engineer teams, including new staff on the project.

3. Planning (for information delivery)

3.1 Task Information Delivery Plan (TIDP)

The TIDP is a schedule of a Task Teams deliverables and their associated delivery dates. Each Contractor Task Team must establish and maintain their own TIDP. The Task Team Manager(s) is / are responsible for the production and maintenance of their TIDP.

The TIDP must:

- Align with the project information delivery milestones
- Align with the responsibility matrix
- Allow the time required to generate, co-ordinate, review and approve the information

The TIDP needs to list and identify (for each deliverable)

- Filename and title of the deliverable
- Predecessor or dependencies
- Level of information need
- Estimated production duration
- The responsible information authors
- The delivery milestone (date to issue)

3.2 Master Information Delivery Plan (MIDP)

The MIDP is a culmination of all of the project teams deliverables detailed in the TIDP's.
There must be a single person nominated to produce the MIDP. It is recommended that this is either the Project Delivery Manager (Technical / Design Lead) or the Delivery Team Lead (Project Manager) since the project team members with these roles (functions) are responsible for approving and / or authorising the project deliverables contained in the MIDP.

The MIDP must:

- Be an aggregate of the TIDP's
- Align with the responsibility matrix
- Take account of Information predecessors or dependencies on information between Task Teams
- Allow the time to review and authorise for external issue
- Identify the time the Employer will require to review and accept the information

3.3 Level of Information Need

The Level of Information Need (formerly Level of Definition) is the definition of the level of detail required for information submissions (deliverables) at defined project stages (eg concept, definition, design).

LOD and LOI definition used by Employer for this project is based on NBS Standard. For different stages of project required LOD and LOI can be found in table below:

	Preliminary Design Submission Stage	Final Design Submission Stage	Handover Stage
Level of Detail (LOD)	LOD 3 (2D drawings)	LOD 5 (2D Drawings)	LOD 6 (3D Federated Model – IFC files)
Level of Information	LOI 3	LOI 5	LOI 6
COBie	No (design report only + draft Specifications)	No (Design report + Specifications)	Yes
BIM Models	No	Optional	Yes

Please note that the Federated BIM models are only required at the end of each Sectional Completion stage. Note that COBie files are only required when submitting the final federated BIM Models.

All other Design deliverables for approval shall be submitted in accordance with the Contractor's design programme.

All BIM Models must be conducted in Autodesk Revit version no earlier than 2021 and exchanged files must be RVT/IFC.

All 2-D drawings must be drawn in AutoCAD version no earlier than 2021 and exchanged files in .DWG format. 2-D drawings can also be created from any BIM models that the Contractor has elected to use during the design stages.

3.4 Co-ordination and Clash Detection

Design clash detection reviews shall be carried out to satisfy design development and to minimise project risk and waste. As a minimum this shall take place fortnightly from the end of preliminary design onwards. Focus shall be on clash avoidance as a philosophy. Beyond this, clash activities shall emphasise reduction of hard clashes, construction tolerances, and compliance to building code, safety in operations, and safe working / maintenance zones.

Third-party contractors may be creating information and data to support the delivery of the Project. The Contractor shall work with Third-Party Contractors to manage clash avoidance and detection aspects during project delivery.

3.5 Co-ordination System

The Contractor shall use a common design-space coordinate system. The design-space coordinate system shall be referenced to ETRS89 Poland CS2000 Zone 6

All levels shall be referenced to PLEVRF2007-NH (Amsterdam) datum.

3.6 Common Data Environment (CDE)

The CDE is the agreed source of information for any given project for collating, managing and sharing each deliverable through a managed process.

- The principles of a CDE are based around a collaborative and structured way of working rather than the use of a singular piece of software.
- The structured use of a CDE requires strict discipline by all members of a design team in terms of adherence to agreed approaches and procedures.
- Information can subsequently be used for estimating, cost planning, construction planning, facilities management and other downstream activities.

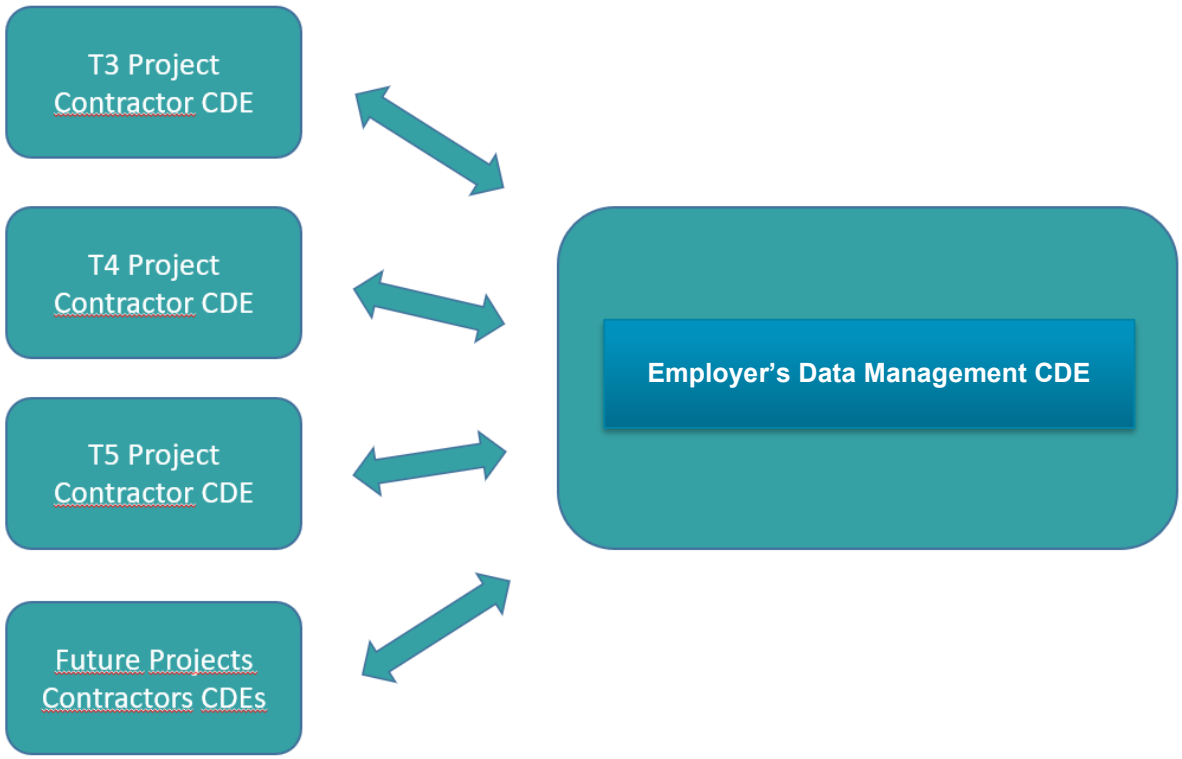
According to

WORK IN PROGRESS (WIP)	The WIP section of the CDE is used to hold unapproved information that is being developed by individual Task Teams.
Approval and Authorisation Process (WIP to SHARED) Information in the WIP section must be checked, reviewed and approved before it can make the transition to the SHARED area. This process is the responsibility of the originating Task Team.	
SHARED	The SHARED section of the CDE is used to hold Information which has been approved for sharing with other organisations. Information in the SHARED section may be accessed by the Employer and other Appointed Parties. The information should not be editable in this section. Only the originator can make edits and the information must be returned to WIP for this to happen.
Approval and Authorisation Process (SHARED to PUBLISHED) Information in the SHARED area must be authorised by the Employer/Engineer before it can make the transition to the PUBLISHED area.	
PUBLISHED	The PUBLISHED section of the CDE shall be used to hold published information. Published information can be relied upon for the next stage of the project and these documents can then be released to the Employer's CDE.
Approval and Authorisation Process (PUBLISHED to ARCHIVE) Transition of PUBLISHED information into the ARCHIVE at key project milestones.	
ARCHIVE	The ARCHIVE section of the CDE is used to hold all of the information that has been shared and published as well as an audit trail of the development of that information.

3.6.1 Employer's Common Data Environment (CDE)

The Employer is in progress of setting up their own CDE as a Data Management CDE to manage defined information for this and future projects. Employer's intention is to have one data management system for current and future projects.

Simple diagram below:



Information shall be progressively shared and published from the Contractor's CDE to the Employer's CDE so that in normal circumstances the Employer will not need access to the prospective Contractor's CDE other than for compliance purposes. All final and approved data should be migrated to Employers CDE at least on a weekly basis where applicable by the Contractor.

3.6.2 Contractor Project Team Common Data Environment (CDE)

3.6.2.1 SCOPE

The Contractor shall provide the IT system (software) for communication and electronic document control (hereinafter referred to as "**System**").

- "Documents" referred to herein mean any drawings, applications, letters and other correspondence, designs, notes, decisions, notices, instructions, arrangements, permits, statements, reports, journals (in particular construction journals, certificates, records, programmes, certificates and other documents that appear in the construction process regardless of the form in which they are included in the System.

- "Data" referred herein means information, in particular information and data included in the Documents, and other content included in the System by its users or generated by means of the System.

3.6.2.2 ACCESS

- The System shall be accessible 24h a day by means of at least Microsoft Internet Explorer. The availability of the System can be temporarily suspended for maintenance work following prior arrangement with the Employer.

- The Contractor shall ensure the availability of the System for the users indicated by the Employer. The Employer allows a period of 40 calendar days to configure the System, in which not all of the functionalities described herein shall be fully accessible. The access to the System shall be until the Performance Certificate is issued and it shall be provided for retention by the Employer after the Contract has been completed

- The System shall be sufficient and suitable for the scope of the Works specified in the Contract and the Employer's Requirements.

- Failures of the System, especially the unavailability of the System, shall be removed within 24 hours from reporting the failure by at least an e-mail, on days from Monday to Saturday.

Minimum technical requirements of the System are:

- No data transfer limit.
- Space for Documents: unlimited (may be increased with the development of the Project and the increase in demand).
- Database: MySQL, postgresql, MS SQL Server 2008 R2

3.6.2.3 SECURITY

1. Each user logs on to the System with an individual login name and password.

2. Authorization for the users indicated by the Employer will be defined by the Employer.

3. Backup copies of the Data and Documents, which shall be stored by the provider of the System and available for the Employer upon request and shall be created and periodically checked.

4. The data included in the System shall not be available to third parties (other than the System users) in any form and at any time, also after the completion of the Works. The Contractor is obliged to keep the confidentiality of the Data.

5. The data in the system shall NOT be freely modified by the Contractor, or the System Administrators (no authority to modify). The Documents in the System can be modified by users in accordance with their authorizations, however, they shall be saved as new versions of the same document (document versioning).

3.6.2.4 RECORD OF EVENTS

The System shall record, without the possibility of permanent deletion of data history, all events concerning the Data (in particular: the date, time and the users that post, opine and approve the Documents, all changes to data workflows and modification of user rights and access). The Documents history or the Documents themselves shall not be modified, even by the users-system administrators, in a manner other than by versioning of the Documents.

3.6.2.5 ARCHIVING

A local copy of the System (archive/database) shall be submitted to the Employer upon request and upon completion of the whole of the Works.
The archive shall be password protected.

3.6.2.6 FUNCTIONALITY AND MODULES

1. The System shall allow electronic communication between the parties cooperating in the execution of the Works, in particular between the Employer, the Contractor (together with the Designer) and the Engineer.

2. Document Circulation System shall be defined during the configuration of the System by the Employer, in cooperation with the Contractor and the Engineer. The System shall provide the possibility to dynamically modify the circulation of the Documents, in accordance with the authorization of the user. Document circulation may be defined both as serial and simultaneous.

3. After logging into the System the user will have access to a dashboard showing the most important information and tasks assigned to a given user.

4. The users will be able to upload Documents to the System at least by means of a web browser. The System shall support the entering of Data into the System. The system shall manage files of up to 4GB. File management by the System means that it will be possible to upload, download and to create version files (Document versioning). The System shall include a module to manage drawings (placing the drawings in the System, opening, adding comments, validation).

5. The System shall have a function to send email notifications to the users (e.g., notifications of new documents, reviews, validations). The user shall be able to configure the System to automatically send e-mail notifications, in the case of the tasks that should be performed in the System (e.g., required validation of the document) or in the case of an update of the document which was tracked by the user.

6. The system shall generate Reports regarding, inter alia:

    - the number of Documents and the time of their validation by a given user or a group of users.

    - lists of current Documents in circulation (e.g. list of accepted Material, list of accepted drawings, list of outdated drawings, etc.).

The system shall allow filtering of data. Filtering shall be based on the labels/tags

3.6.2.7 ADMINISTRATION

1. The Employer shall have an access with an administrator authorization (i.e., the ability to define Document circulation, create groups of users, define user's authorization, and configure the System) to the appropriate part of the System (the Employer-Contractor, the Employer-Engineer and the Engineer-Contractor) and shall be given concurrent licenses for 20 persons (users). Contractor is responsible to manage platform, but Employer shall have at least 2 users with administrator authorization. Employers intention is to manage internal Employer-Engineer workflows, add own users to specific groups and manage those groups.

2. Administrator authorization shall include, in particular, the ability to define user's authorizations, create new users (within the license pool), groups of users and assigning access/editing authorizations, insight into the logs/system records, the ability to define Document circulation, general ability to configure the System

3.6.2.8 USE

1. The Contractor shall use the System to communicate with the Engineer and the Employer, in particular in order to agree the Contractor's Documents (including drawings) and requests for Material. The System shall also enable communication between the Engineer and the Employer.

2. The Contractor shall use the System for communication and the exchange of documents between the parties executing the Works (Consortium members, subcontractors).

3. The Contractor shall make all the Documents necessary for the Employer and the Engineer available in the System. This means that if an opinion, approval, arrangement, permission, etc. is required, the Contractor's request is communicated in the Document (e.g. in a letter, drawing) and the Contractor shall obtain such an opinion/approval/arrangement primarily by means of the System, and not e.g. by e-mail. This shall not release the Contractor and the Engineer from obtaining signatures of the Employer or the Engineer, if necessary (e.g. after agreeing on a final version of the Contractor's Documents) - it means that the permissions, opinions and approvals expressed by the System, in relation to the Documents in other than a final version, shall be treated as for information only.

The Employer, in justified cases, may release the Contractor from the obligations referred to in items 1 to 3 above.

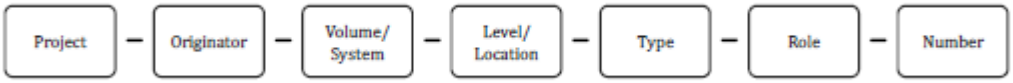
3.7 System Performance Requirements

System Type	Employers System Restrictions and / or Requirements
Model file size	If model files become slow or unmanageable, they shall be segregated. Model files shall be no larger than the following sizes unless otherwise agreed in writing by the Employer: Design Authoring Models – 200MB Federated Models – 100MB
Common Data Environment	The Employer CDE uses IFC files to view federated models
Free Model Viewers	Autodesk Navisworks files can be viewed and federated by the Employer

4. Methodology (for information delivery)

4.1 File Naming Convention

The Naming Convention is defined using the following fields (each field is separated using a hyphen):



Field	Description	Field Reference	Standard Codes	Project Specific
Project	Project Number (2-6 characters)	Eg PB1234	N/A	Yes
Originator	Each Appointed Party within the project team will need to be defined by a unique acronym. (3-6 characters)	Eg RHD, BH	N/A	Yes
Volume/ System	Where applicable, the project will need to be split into volumes / systems as defined by the volume strategy (Section 3.7 Volume Strategy) . (2 characters)	Eg V1 (project specific) V2 V3 etc or ZZ (All volumes / systems) or XX (Volume / System N/A)	ISO Standard Codes + RHDHV or Contractor Standard Codes	Can define project specific codes if not covered by ISO or RHDHV / Contractor Standard Codes
Level/ Location	Where applicable, the project will need to be split into levels or locations (2 characters)	Eg L1 (project specific) L2 L3 etc or ZZ (multiple levels / locations) or XX (levels / locations not applicable)	ISO Standard Codes + RHDHV or Contractor Standard Codes	Can define project specific if not covered by ISO or RHDHV / Contractor
Type	This will define the 'type' of information (eg drawing / model / document / data) in the referenced deliverable. (2 characters)	Eg BQ (Bill of Quantities) M3 (3D model file) MS (Method Statement)etc Use drop down option on the spreadsheet tool.	ISO Standard Codes + RHDHV or Contractor Standard Codes	Can define project specific if not covered by ISO or RHDHV / Contractor Standard Codes

	This will define the 'role' of the information author within an organisation. (1-2 characters)	Eg A (Architect) B (Building Surveyor) C (Civil Engineer) etc Use drop down option on the spreadsheet tool.	ISO Standard Codes + RHDHV or Contractor Standard Codes	Can define project specific if not covered by ISO or RHDHV / Contractor Standard Codes
	A number assigned to each deliverable. Numbers can be repeated as long as the alpha numeric deliverable reference remains unique. (4-6 digits)	0001 00010 000100 etc	N/A	Yes

Contractor should prepare naming convention standard to be approved by Engineer.

4.2 Project Volume Strategy

Volumes should be defined as a logical portion of work by a single team. There should be no more than one set of volumes per role explicitly designated as non-overlapping.

The volume strategy will detail the relevant volume codes to use in the Naming Convention. The agreed project volumes should be documented by populating the table below:

2-character code	Description
Standard Codes	
ZZ	Used to define a project with only a single volume (All volumes / systems)
XX	No volume / system applicable
Project Specific Agreed Volume Codes (some examples shown, not exhaustive) Volumes are not based on 2-dimensional 'areas' on a drawing, rather 3-dimensional spaces in a model or it's built equivalent. Volumes may be based on Discipline / Task Team specific 3-dimensional spaces or functions (eg M&E, Buildings, Maritime Structures, Materials Handling etc).	
MA	Maritime
ME	Mechanical and Electrical (Or separate out and use ME & EL)
WA	Water
AV	Aviation etc

Contractor should prepare project volume strategy to be approved by Engineer.

4.3 Date format

All dates on a Project should be in day-month-year format.