

LINDO PORT OF ODENSE



Fairway expansion – Lite 150 SPECIFICATION OF REQUIREMENTS



November
2017





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1 Introduction

This tender document relates to the extension of the approx. 6.5 km fairway from Gabet to Lindo. The wide fairway is to be deepened from present 7,5m to 8,0m. The project is named Dredging of Fairway Lite 150.

The deepening of the fairway has to be executed along the hole channel, but the main volumes will be in the bends of the channel. The deepening concerns only the wide 150m fairway to a new depth of -8,3m in total. The narrow deep fairway of -11 m will not be dredged. For the Contractor it is in his method to ensure, that the deep fairway will not get a surplus of material.

For the authorities and permits issued the Contractor has to ensure, that all relevant conditions will be fulfilled in terms of environmental conditions and restriction as to time of execution. See also chapter 3 below.

1.1 Main works of contract

This contract mainly includes the following services / volumes:

Deepening and maintenance dredging of the fairway from the entrance of Gabet until Terminal Nord from existing depth of 7.5 m to 8.0 m with a paid overdredge of 0,3m that the depth effectively will be -8,3m DVR, which gives a volume of approx. 140,000 m³.

The work starts at the entrance of Gabet km 22.247 and ends at the new harbour basin of the port expansion OST Nord km 15.785. See also DWG TN150-101.

The work area for this project is shown in TN150-101, TN150-201, TN150-202 and TN150-204.

1.2 Interfaces other contracts

For the works under this contract there will be no interfaces with other projects. The possible interface with the port expansion OST Nord will not appear if the works are completed before the start of the expansion OST Nord. (Expected start mid-March 2018).

1.3 Time schedule

The Client expects that the dredging will start up as soon as the Contractor has his equipment available – preferable in December 2017.

With reference to the constringes in the given permits, the works must be completed by March 30. 2018. See also chapter 3 below.

1.4 Drawings

Tender drawings are shown in the drawing list attached.

1.5 Attachment

Attachments are shown in the Attachment list.

2 Site conditions

The contractor is obliged to be aware of the site condition and the present conditions at the site. The Client has done a recent bathymetric survey, which gives the basis of volumes to be dredged. To give information on the different soil types in the channel the Client has done some geotechnical borings. In addition to the borings the Client has executed a geophysical survey, which has been calibrated with the borings.

The fairway is described on existing sea charts, specifically 115 "Odense Fjord", where both the "wide" 150m channel with 7.5m depth and the "narrow" 60m channel with 11.0m depth are described.

2.1 Existing conditions

The channel has been surveyed in September-October 2017 and the bathymetric survey can be seen in drawing TN150-111. The xyz-data is also provided with the tender material.

The bathymetric layout is the basis for the project.

If the Contractor believes that since the offer has been made changes in the work area, this must be notified in writing to the supervisor before the work is commenced in the area concerned, cf. addition to § 15 in AB 92.

Objections to the Client's surveys must be made in writing no later than 1 week prior to commencement in a work area (time for clarification of measurement and possible design change).

The bathymetric survey is related to the dock bottom (concrete floor) of the big dock 3 at Lindø.

All known cables and pipes in relation to the channel are shown in the sea map 115.

LPO has established and is maintaining aids to navigation in the fairway from Gabet to Terminal Nord. The AtoN for the "wide" channel width of minimum 150 m and a depth of -7.5 m is marked permanently. For navigation in the "narrow" channel, additional buoys will be put out.

The permanent fairway can be used by ships with a draft of up to 6.8 m. For ships with greater draft or a length of more than 100 m or a width over 15 m, pilotage is mandatory in Odense Fjord.

Currently the largest ships calling the port are 210 meters long, 32 meters wide and with a draft of 9.8 meters.

It is the Contractor's task to consider the additional AtoN / markings and possible pilotage fees, depending on the equipment used by the Contractor. The Client will not pay the pilotage fee or any other related fees. The cost shall be included in the tender price.

2.2 Geotechnical conditions

During spring 2016, GEO and Orbicon have conducted geotechnical drilling and CPT testing as well as geophysical surveys in the fairway.

In addition to a geotechnical assessment, grain size analyses and environmental analyses were also performed for selected boreholes.

It was evaluated, that the material to be dredged is foremost Gytta, but also some Moraine. At the entrance to Gabet areas of sand and gravel can be encountered.

2.3 The results of the geotechnical surveys have been reported in Attachment B.1 to B.3. Environmental conditions

No contaminated soil has been registered in the area.

The fairway is situated close to a Natura 2000 area, which gives some restriction to the dredging. See Attachment D.1.

2.4 Hydrographic conditions

The water level conditions at Odense Fjord have been described in Den danske Havnelods (Danish Harbour Pilot):

Den danske Havnelods can be found at <http://www.danskehavnelods.dk>

The difference between mean high water and mean low water is normally 0.3 m, while northerly gales may give up to 1.2 m high water and southerly gales up to 1.0 m low water.

The Client states that the mean water level is currently approximately level +0.2 m (DVR90).

The water level can be found at <http://www.dmi.dk/hav/maalinger/vandstand/> by selecting Odense Fjord.

Based on the water levels (DVR90) measured during the period of 30 August 2010 to 5 September 2016 at the Gabet measuring station, Figure 1.1 and Figure 1.2 shows high water and low water statistics.

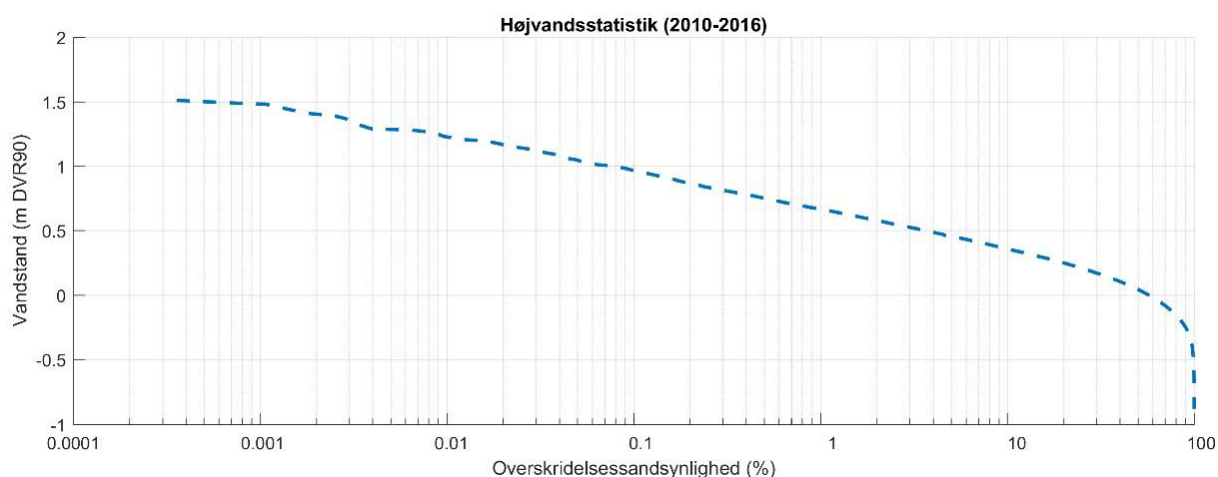


Figure 1.1: The high water frequency for the period September 2010 to August 2016. x-axis: excess probability; y-axis: water level

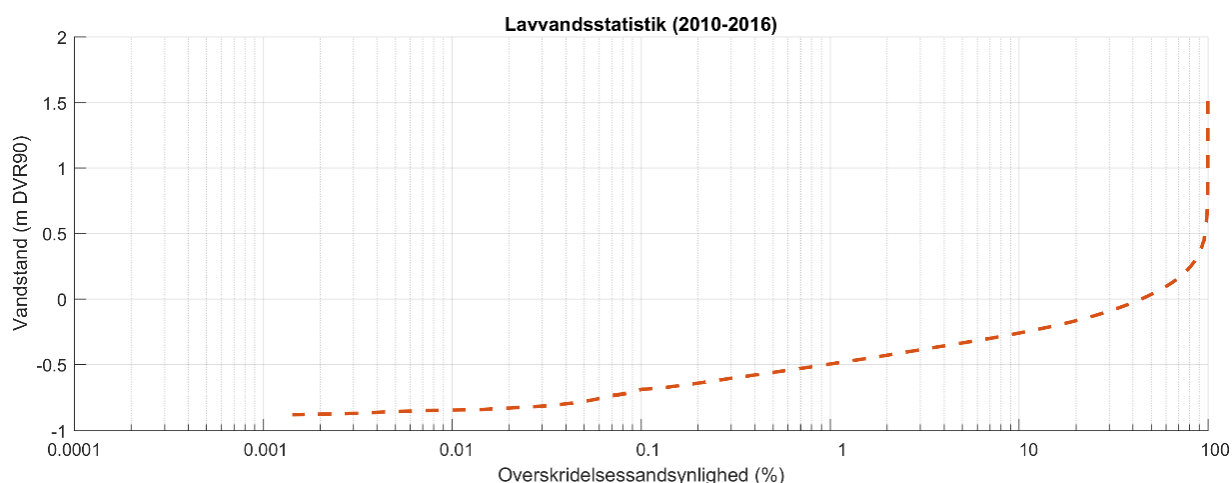


Figure 1.2: The low water frequency for the period September 2010 to August 2016. x-axis: excess probability; y-axis: water level

The highest registered water level in the period was +1.51 m and the lowest registered water level in the period was -0.88 m.

Based on the water level statistics that have been prepared, the following tidal water levels (DVR90) have been determined:

HAT	0.37 m
MHWS	0.26 m
MHWN	0.17 m
MWL	0.05 m
MLWN	-0.07 m
MLWS	-0.16 m
MLLWS	-0.18 m
LAT	-0.35 m

According to the latest high-water statistics of 2012 from the Danish Coastal Authority water levels of up to +1.74 m (DVR90) were registered in the period from 02/07/1973 to 20/12/2012. Statistically extreme 100-, 50- and 20-year water levels are stated as being as follows:

- VS100 = 179 cm with a spread of 13 cm
- VS50 = 171 cm with a spread of 10 cm
- VS20 = 160 cm with a spread of 8 cm

The 1-year water level is stated at WL1 = 113 cm

On the website: <http://omkystdirektoratet.kyst.dk/hoejvandsstatistikker.html>, further information can be found concerning the latest high-water statistics, from 2012.

2.5 Waves, currents and wind conditions

No detailed wave statistics are available for Odense Fjord. TE shall obtain the necessary information of wave conditions.

Currents follow the fairway. According to LINDØ port of ODENSE, the general current condition is 1-2 knots. There are often strong currents at Gabet. TE shall obtain the necessary information of current conditions itself.

Wind statistics from Odense Airport can be found in Attachment C.1.

3 Authorities

The Client has obtained authority permits, where the conditions in the permits have an influence on the execution of the contract work.

The permit for execution (Tilladelse til udvidelse af sejlrende i Odense Fjord) was issued December 16. 2015 (Attachment D.1.) with an expiration December 16. 2017. This permit has been extended with a validation until March 1. 2020 (Attachment D.2.). One of the conditions in the permit of execution is that dredging is only allowed from November 1. until March 30. thus, in the winter period. The volume of the permit for execution has an estimated volume of 150,000 m³.

The permit for offshore deposit was issued June 20. 2016 (Attachment D.3.) and has a validation until July 19. 2018. The offshore deposit is allowed all year. This permit has an estimated volume of 100,000 m³.

These two permits together give, that the execution of the works shall be finalized before March 30. 2018. It also gives that the possible dredged volume of 150,000 m³ – a volume of 100,000 m³ can be deposited offshore whereas a volume of 50,000 m³ either can be re-used or deposited on land.

No work may commence before all necessary regulatory permits have been obtained and copies have been presented to the Client and before the Client has reviewed TE's project and released the project for execution. Hereby also referred to Attachment D.4 concerning an evaluation of navigational safety which shall be presented and approved by the Danish Maritime Authority.

4 Working areas

4.1 General

TE shall inspect the workplaces and working areas to familiarize itself with areas, access conditions, etc.

TE is not entitled to any additional payment concerning matters resulting from lack of knowledge of the areas and of local conditions in general, and claims concerning such additional payment shall not be met.

The site is located within the port's ISPS zone, which means there is stricter access control and monitoring, plus special rules when in the zone. See the enclosed folder "Health/Safety/Security" (HSS) for LINDØ port of ODENSE, Attachment E.1.

TE's workplace will be within the site. The location of TE's employee car park is to be agreed with the Client, and will be outside the port ISPS zone. Immediately after having received the Contract, TE shall prepare a plan showing the extent and layout of the working areas. Camping or overnight stays in the port area is forbidden.

When the work has been completed, all areas in question shall be re-established and cleared.

Access to the port area shall be via the access barrier/gateway on Havnevejen. TE may use existing access roads, but shall regularly maintain and clean them and shall restore any damaged paving to original appearance when the construction work has been completed.

4.2 Plan for health and safety

The Client is handing over the full responsibility for the Plan for Health & Safety to the Contractor. See the Client template in Attachment A.2.

4.3 Offshore works

Limits for the available working area shall be agreed with the Port authorities.

Vessel traffic shall be kept possible outside the working area throughout the construction period. TE shall notify the Danish Maritime Authority of the construction work well in advance.

Any limitation of vessel traffic due to the works shall be announced to and accepted by the Client prior to commencement of the works causing the limitation of vessel traffic.

Furthermore, if vessel traffic for a period of time is limited in connection with the work, such periods shall be as short as possible, and the work schedule shall state when and where vessel traffic is limited so that it can be announced in Notices to Mariners (Efterretninger for Søfarende) and included in the Port's planning.

TE shall observe all instructions from the Port authorities and the Danish Maritime Authority regarding marking of equipment, the working area in the construction period and construction work being executed.

Floating barges and vessels shall be equipped with the regulatory signals and lights.

TE shall inform the Port authorities, the Danish Maritime Authority and the Client immediately after having set up or removed signage and equipment and if decisions are made or situations arise which may affect vessel traffic in the area.

Any anchors from floating equipment may only be placed outside the defined working area by agreement with the Port authorities and the Danish Maritime Authority. Such anchors must be marked.

Wires for anchors placed outside the defined working areas shall be slackened and lowered to the seabed when the passage of ships makes this necessary. TE shall keep a lookout as required and ensure that attention is paid to and consideration shown for the normal traffic in the port.

Equipment and materials via quays

TE shall use the equipment and materials described in the tender and is not entitled to use any other equipment without the Client's prior approval, cf. item 3.6 below.

If TE wants storage areas, the necessary agreements and costs shall be paid by TE. The Client shall be informed in writing of this.

TE's work shall take into account that the bearing capacity of existing quays in Terminal Nord is a characteristic uniform load of 40 kN/m².

The Port authorities will identify the quays that can be used for unloading and loading, etc. and the allowable loads.

Docking at Terminal Nord

TE's vessels used for the Contract may call at and be moored at Terminal Nord free of charge as agreed with the Port authorities, e.g. so that the work manager may attend a site meeting, a supervisor may board the vessel, supplies may be procured or employees put ashore/sailed to offshore workplaces.

If one or more such vessels must be moored for a prolonged period of time, the Port authorities may require that it/they be moved to another location. This shall not entitle TE to additional payment.

Whenever it is necessary to lead side chains/anchors across the quay, breakwaters or sea walls, this work shall – in order to prevent damage – be performed in such a way that chains and ropes do not rest directly on these structures, and anchoring tools shall be led so far ashore that constructions and installations are not subject to tension.

No anchoring is permitted in Terminal Nord except by prior agreement with the Port authorities and with permission from the Client.

Pilot is compulsory for vessels with l.o.a. of 100 m and above and/or vessels of a width of 15 m and above. In accordance with Danish pilot legislation, pilot exemption certificates can be issued after 10 trips with pilot onboard. Pilot fees are not exempted for dredging equipment

Relations with ships

The Contractors relations with ships sailing in the area shall be subject to the following:

- The work shall be planned to ensure that the usual number of calls to/from LINDØ port of ODENSE can be maintained.
- The applicable conditions for LINDØ port of ODENSE and special conditions for vessel traffic in “Den danske Havnelods”.
- The work shall be executed with a minimum of nuisance to ships sailing in the area. Vessel traffic past dredging vessels shall not be prevented, and if necessary dredging vessels shall make way for passing ships. The Port authorities’ and the Client’s supervision have the right, but not the obligation, to demand that work be suspended if visibility or weather conditions in general are so poor that navigational safety may be at risk.
- When working in harbour areas, it shall also be taken into account that ships and barges docked in the port should be disturbed as little as possible.
- Anchoring and mooring shall take place by agreement with the Client or the Client’s supervision and it is not permitted to call at LINDØ port of ODENSE without permission from the Port authorities.
- It is not mandatory to work with stevedores in the LINDØ port of ODENSE.
- Empty barges shall be safely moored and shall not be in the way of calling ships.
- Any expenses related to the nuisance, disturbances and work interruptions caused by maritime traffic and docking shall be included in the bid, and TE cannot subsequently require extra fees for or demand extension of deadlines because of nuisance or work interruptions caused by maritime traffic or docking.

- Should TE's vessel(s) or parts of them sink during the work, TE shall, without undue delay and by a deadline stated by the Client, remove the sunken vessel or object, leaving no obstacles whatsoever to vessel traffic. If sunken vessels are not removed by the deadline stated, the Client shall be entitled to have them removed at TE's expense. In that case, the Client shall be entitled to demand payment under the guarantee provided, from the part of the contract sum that has been withheld or not paid yet, or otherwise from TE.

The Contractor cannot expect navigation channels to be reserved for vessels sailing to and from any dredging or reclamation area.

The Danish Maritime Authority's terms for working on sea territory shall be observed, cf. Executive Order no. 1351 of 29 November 2013 on navigation safety for contract work and other activities etc. in Danish territorial waters.

The Contractor shall fill in and submit the Danish Maritime Authority's evaluation form for navigation safety for work at sea, cf. Executive Order no. 1351 of 29 November 2013 on navigation safety for contract work and other activities etc. in Danish territorial waters. TE's project shall meet the Danish Maritime Authority's requirements for navigation safety. TE is subject to the applicable conditions and special conditions for navigating LINDØ port of ODENSE as stated in "Den danske Havnelods" and the Executive Order on standard code of conduct for maintaining order in Danish commercial ports, applicable in the order stated.

The instructions of the Port authorities must be followed.

The Contractor shall be responsible for any damage to maritime traffic as result of negligence on its/its employees' part.

A VHF radio shall be installed on equipment and shall be manned when work is being performed so that the Port authorities and the Contractors ships may be contacted if necessary. All communication is reserved to channel 12 and channel 16.

Prior to commencement of the work, the Contractor shall contact the Port authorities of LINDØ port of ODENSE and local fishermen via their local associations to inform them of the work.

Requirements for the Contractors vessels

The vessels shall be mounted with electronic positioning equipment (GDPS and AIS) and their positions shall be logged on a current basis. The position of ships shall be available via the national monitoring system for ships: AIS class A.

No later than 8 days prior to the commencement of the work, information about the name and AIS identification (MMSI number) of the vessel shall be provided to the relevant authority.

AIS equipment shall always be switched on while dredging and dumping takes place. If the AIS equipment breaks down, work shall be suspended, and the relevant authorities informed.

TE's vessels shall be manned by captains who speak Danish or English.

Shipping dues and tax on goods

TE shall be exempt from shipping dues to LINDØ port of ODENSE for ships solely bringing or removing goods and equipment for use in connection with the Contract and for ships, floating barges, etc. used only in connection with the Contract.

TE shall be exempt from tax on goods for goods and equipment purely intended for use in connection with the Contract, cf. clause II.2.h of the regulation on ship dues and tax on goods (Regulativ for skibs- og vareafgift).

4.4 Noise and working hours

Noise requirements: The Environmental Protection Agency's guideline noise limits do not apply to construction work, but for this project, the limit values are to be the benchmark (see the following figure 1, from the Agency's guide no. 5/1993).

TE shall assess whether use of construction machinery gives rise to exceeding the noise levels stated, and if necessary for compliance, adapt working hours and apply for dispensation from Kerteminde Municipality.

		Monday - Friday 7am-6pm, Saturday 7am-2pm	Monday - Friday 6am-10pm, Saturday 2pm-10pm, Sundays and Holidays 7am-10pm	All days 10pm-7am
1	Industrial and commercial areas	70 dB	70 dB	70 dB
2	Industrial and commercial areas with ban against annoying activities	60 dB	60 dB	60 dB
3	Areas for mixed dwellings and commercial use, center areas, etc.	55 dB	45 dB	40 dB
4	Multi-storey dwelling areas	50 dB	45 dB	40 dB
5	Dwelling areas, low rise dwellings	45 dB	40 dB	35 dB
7	Areas for holiday cottages, recreational areas	40 dB	35 dB	35 dB

Figure 1: Noise limits (Environment Ministry guide no. 5/1993).

Kerteminde Municipality and the Client can demand that the Contractor proves compliance with the above noise limits by noise measurement. Measurement point positions to be agreed with the Client.

The working hours shall be in accordance with Danish Law but for the current project the Client is the opinion that the works can be executed 24 h / 7 days a week.

5 Measurement basis

The Client surveyed the project area in September 2017, as shown in TN150-110. The survey has been performed by Sensor Survey and data is available to the Contractor.

Measurement basis can be found on the drawings. It is up to the Contractor to verify data before being used for execution.

5.1 Height reference

All heights on the drawings refers to Dansk Vertikal Reference 1990 (DVR90), unless other is stated.

5.2 Coordinate system

Coordinates are in system UTM32/ETRS89.

The Contractor makes the necessary markings and surveys under this contract and is solely responsible for ensuring that all measures in the project are observed in the finished work.

If the Contractor estimates that the current surveys cannot be used for execution of the project, it is left to the Contractor to carry out a reassessment at his own expense.

The Contractor shall make the out-survey. Raw data shall be available for the Client.

6 Quality assurance

The Contractor is obliged to set up a plan for Quality Assurance with the Client.

TE shall submit written details to the Client's supervision prior to each site meeting (by no later than 12 noon on the previous working day) on:

- Work performed during the period
- Activities scheduled for the next 2 weeks
- Stage of work
- Progress compared to the relevant detailed main schedule
- Materiel and labour used
- Weather conditions and spillages
- Plan documents (plan and status)
- Quality assurance (plan and status)
- Technical and financial agreements
- Non-conformities and deviations (list and status)
- Extra work (list and status)

The quality plan shall be submitted to the Client for approval no later than 10 working days after conclusion of the Contract. Unless otherwise agreed, no work can be started before approval has been granted.

Unless otherwise agreed, supplementary method descriptions shall be presented to the Client for review at the time of submission of the detailed project for the work in question.

7 Project description

The project description comprises the requirements from the Client in relation to the execution of the dredging and offshore deposit of material fulfilling the deepening of the fairway.

7.1 Project Scope

7.1.1 Scope of work

The project comprises the following main elements and volumes:

Deepening and maintenance dredging of the fairway, also called lite150-deepening, from the entrance of Gabet until Terminal Nord from existing depth of 7.5 m to 8.0 m in the width fairway of 150 m. A volume of approx. 140,000 m³. The Client is also paying the overdredge of 0,3m which effectively shall give a new overall depth of -8,3m DVR.

7.1.2 Scope of design

The purpose of the design is to obtain sufficient water depths in the fairway and in the entrance to Odense Fjord. The Contractor shall include a comprehensive plan and time schedule for carrying out this work as well as a description of the equipment used and the offered method of dredging no later than 10 days after signing the Contract.

The execution of the dredging shall comprise the following elements:

- Preparation of work description for dredging and reclamation
- Dredging levels according to the bathymetric survey in the completed dredged areas
- Transport and disposal of dredging materials
- Reporting of volumes to Authorities according to given permits
- Preparation of the necessary documents for the Danish Maritime Authority (DMA) before, during and after the work with a view to approval of the work by the Authority.

7.2 Norms, standards and guidelines

The Client requests that the dredging and reclamation is designed and executed in accordance with the requirements set out in the following norms and standards and guidelines or equivalent and it shall be described in the Tenders to what extent this requirement is fulfilled.

DS/EN 13242	Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction
EAU 2012	Empfehlungen des Arbeitsausschusses "Ufereinfassungen", Hafen und Wasserstraßen EAU 2012 (insbesondere Abschnitt 7)
BS 6349	Recommendations of the Committee for Waterfront Structures – EAU 2012 (particular chapter 7)
Pianc Report 121 - 2014	Harbour approach channels – design guidelines
VD, The Danish Road Directorate	Danish Standard for Earth works
EN 1997-1, Eurocode 7	Geotechnical Design

7.3 Execution

The Contractor shall in its tender describe how TE will carry out the work and the methods used for carrying out the work, including the dredging and execution methods.

7.3.1 Dredging

The full fairway shall effectively be dredged to a depth of minimum 8.3 m DVR in the wide channel in accordance with drawing TN150-101, TN150-201 and TN150-204, which is given in the x,y,z-model attached.

The Client seabed in-survey and new fairway depth of -8,3m gives a theoretically volume of 93,592 m³, which most likely will be the minimum dredged volume. See BoQ and PaP item 2.2 and 2.3.

The differential drawing no. TN150-202 shows the areas with a depth less than -8.3m DVR. Within the complete area of the 150m fairway a minimum depth of -8.3m DVR shall be secured.

If the dredged material is suitable for re-use the Client will in close cooperation with the Contractor extend the volume due to the permit restriction of the offshore deposit.

It is up to the Contractor to assess any deviations which the dredging method chosen may actually cause in relation to the required dredging level (overdredging) and to include this assessment in the tender price for the volumes in question. Any changes in volumes due to overdredging shall be of no concern to the Client. Only the required overdredge in the fairway of 30 cm (from -8.0 to -8.3m) will be paid by the Client.

Slopes

The slope of the dredged area shall be secured by the Contractor. The volume will be calculated with the following inclination; 1:3 (sand / gravel / moraine and Gytja).

Dredging close to existing structures

In connection with dredging close to existing structures (e.g. quay wall, rubble embankment), extreme caution should be exercised when working and manoeuvring in the vicinity of these structures as the underwater ends and sides of the structures extend further into the water than the visible end of the structures above the surface allows.

The Contractor's equipment shall be equipped with devices that ensure exact adherence to the planned dredging depth to avoid overdredging close to existing structures.

Based on its experience with similar work and knowledge of the capacity of its own equipment, the Contractor shall assess the working conditions in the area close to these structures and in small water depths, and factor in the risk of grounding and weather conditions in its bid.

Debris

Removal of large rocks, debris or unfamiliar objects can be deposit offshore and if not possible, they shall be transported to the new terminal area or at a site appointed by the Client.

The Contractor shall notify the supervision of any objects of value or interest found in connection with dredging, including wrecks, objects of historical value and similar.

The Contractor shall document to the Clients supervision that all obstacles have been removed to get a plain surface of soil.

Maintenance

The Contractor is obliged to maintain the dredged area until The Client has approved the dredged area and taken over the approved areas.

It shall be stated in the tender and appear from the delivery schedule when the dredged areas shall be taken over by the Client.

The demands and requirements of disposal are stated in the approvals from the Authorities, see Attachment D.3.

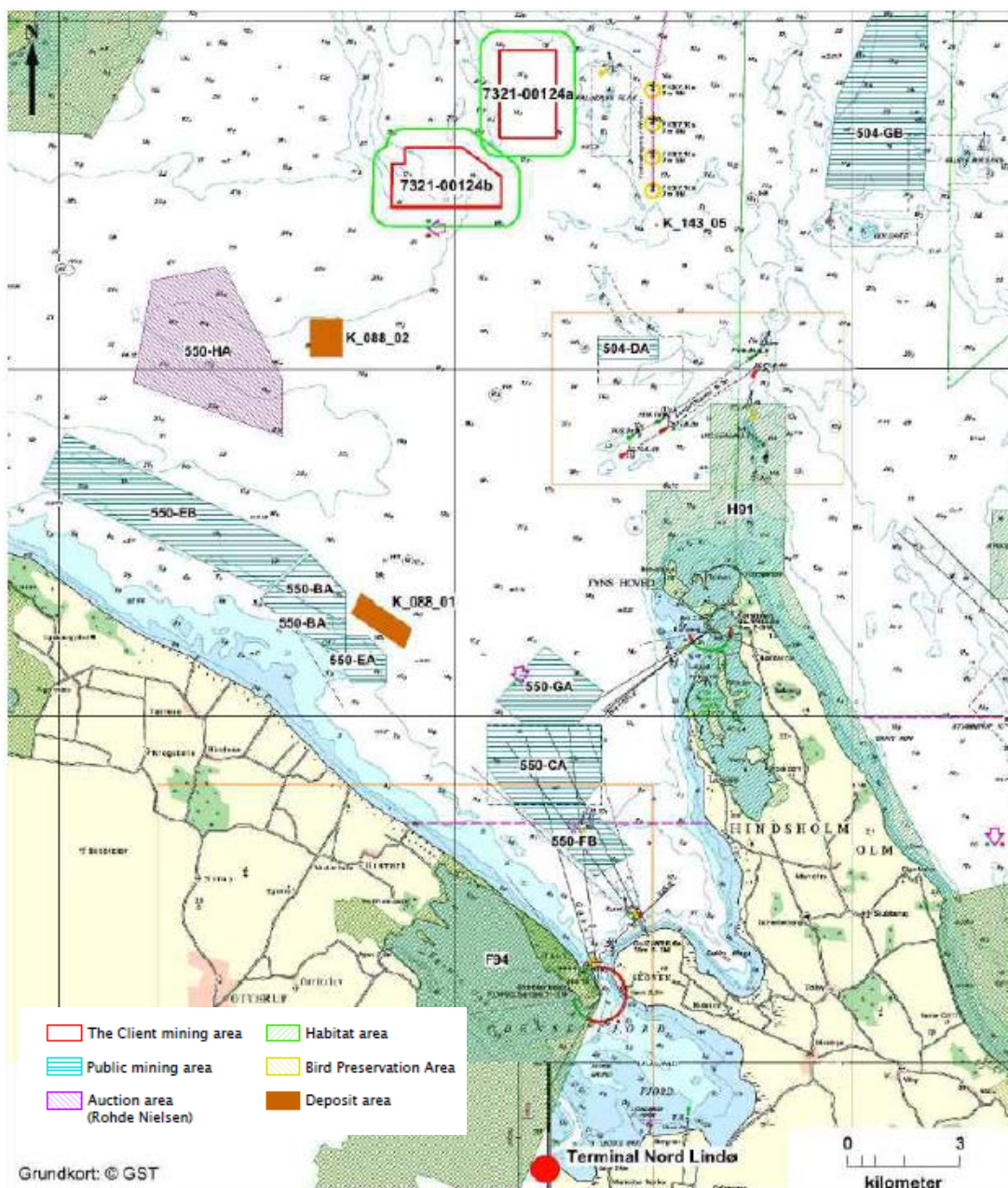
The dredged soil from the site shall be transported and discharged at the disposal area outside the Odense Fjord (see figure below).

Disposal of dredged material that can be disposed offshore shall take place in the area K_088_02.

In-survey (initial survey) of the offshore disposal area prior to disposal has been executed by the Client.

7.3.2 Inspection and monitoring

The Contractor shall comply with the requirements of the Authorities concerning dredging and offshore deposit activities reported to The Client / Supervision.



Measurements and geometry

The measurements and surveys shall comply with IHO Standards for Hydrographic Surveys with the Swedish Annex S-44.

Dredged area

The dredging tolerance is +1,0 / -0,0 m in horizontal direction and +0 / -50 cm in vertical direction whereas the Client will pay for the first 30 cm of overdredge from -8,0 to -8,3 m DVR.

TE shall undertake the following bathymetric surveys:

- Out-survey of all dredged areas extending a min. 50 m beyond the dredged areas and the existing fairways in front of the new quay wall, after completion.

The results shall be submitted to the Client. The initial depths (in-survey) shall form the basis of a possible regulation of the contract sum offered, see the relevant provisions in the Form of Prices and Payment section 3.

The initial depths and the related volume calculations must be approved by the Client before dredging can commence. On the basis of the initial depths, the Contractor shall calculate the expected dredging volumes and present this documentation to the Client.

The intention of bathymetric survey is to give evidence of reaching the agreed depth within dredging tolerance. The result shall be used for controlling the calculated and approved volume of dredging material.

The depth shall be used for control and identification of any deficiencies. Hence, the Customer's control of these depths shall not have any impact on volumes, but shall be used to check compliance with the contractual terms and conditions regarding water depths.

If the results of bathymetric surveys indicate reduced water depths in adjacent areas, the Contractor shall without payment make supplementary surveys and if necessary clean up these areas.

All costs for making surveys shall be included in the contract price offered.

Disposal site

The Contractor shall comply with the requirement of the Authorities and given approvals.

