



OPEN SKETCH DESIGN COMPETITION WITH INVITED  
PARTICIPANTS

## **“THE PROSPECTIVE RIGA ROPAX TERMINAL”**



DESIGNING PROGRAMME

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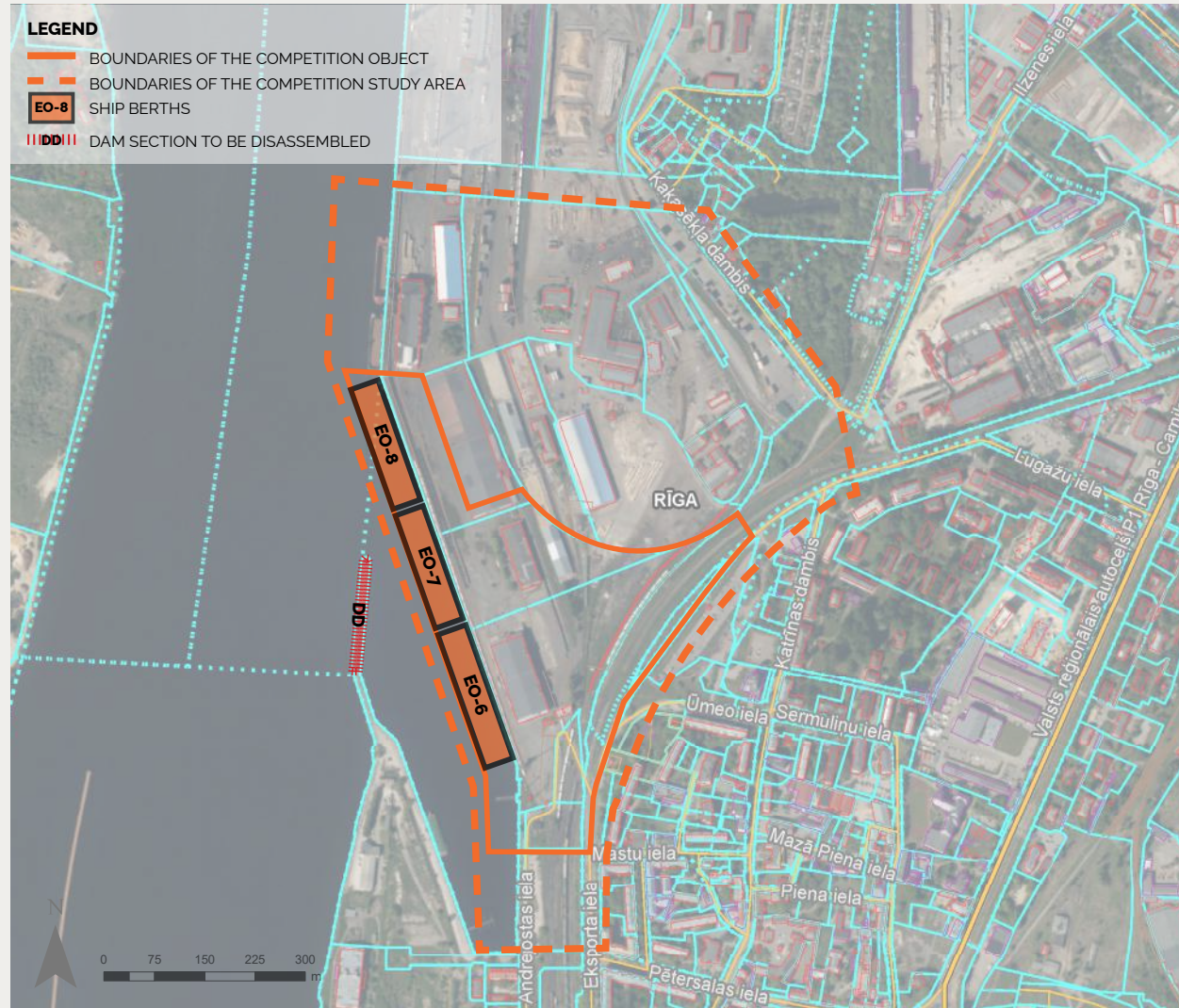
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# INTRODUCTION

The competition site is located on the right riverbank of the Daugava, in the southern part of Eksportosta (Export Port) territory, and partly in the protection zone of the UNESCO World Heritage Site "Riga Historic Centre" (protection No. 852).

The border of the protection zone of the historic centre of Riga runs along the northern border of the land unit with cadastral designation 01000130218 (cadastral number 01000122055) (4.9391 ha).

The competition site also includes land units with cadastral designation 01000130213 (cadastral number 01000130244) and cadastral designation 01000130217 (cadastral number 01000132008).



The competition site and the study area



## LIST OF ACRONYMS USED

**UNESCO** - The United Nations Educational, Scientific and Cultural Organization

**RHC** - Riga Historic Centre

**RHC PZ** - The historic centre of Riga and its protection zone

**JC** - Territory of mixed centre construction

**RVC AZ TIAN** - *"Regulations on Land Use and Construction in the Historic Centre of Riga and Its Protection Zone"*

**RO-RO** - *(roll-on/roll-off)* vessels designed to carry wheeled cargo, such as cars, trucks, trailers, railroad cars, etc. that are driven on and off the ship on their own wheels

**ROPAX** - *(roll-on/roll-off passenger)* (roll-on/roll-off passenger) A RO-RO vessel is built for transportation of cargo vehicles, but it can also accommodate passengers. Ships that can accommodate more than 500 passengers are called cruise ferries. A cruise ferry is a vessel that combines the characteristics of a cruise ship and a ROPAX vessel

**FR** - The Freeport of Riga, which is managed by the Freeport of Riga Authority (FRA) that is a legal entity derived from public law.

# THE COMPETITION OBJECT, THE AIM AND TASKS

**The Competition Object** - the Riga ROPAX terminal (its part on the land), which would ensure the reception of passengers in a modern passenger terminal, develop the RO-RO cargo segment, double the number of cruise ship arrivals per year and create prerequisites for the future development of the home port of cruise ships.

**The aim of the Competition** - to obtain a sketch design with elaborate urban planning and architectural solutions for the Competition Object complying with the requirements of the Brief and the Designing Programme, ensuring rational use of funds and free competition between participants.

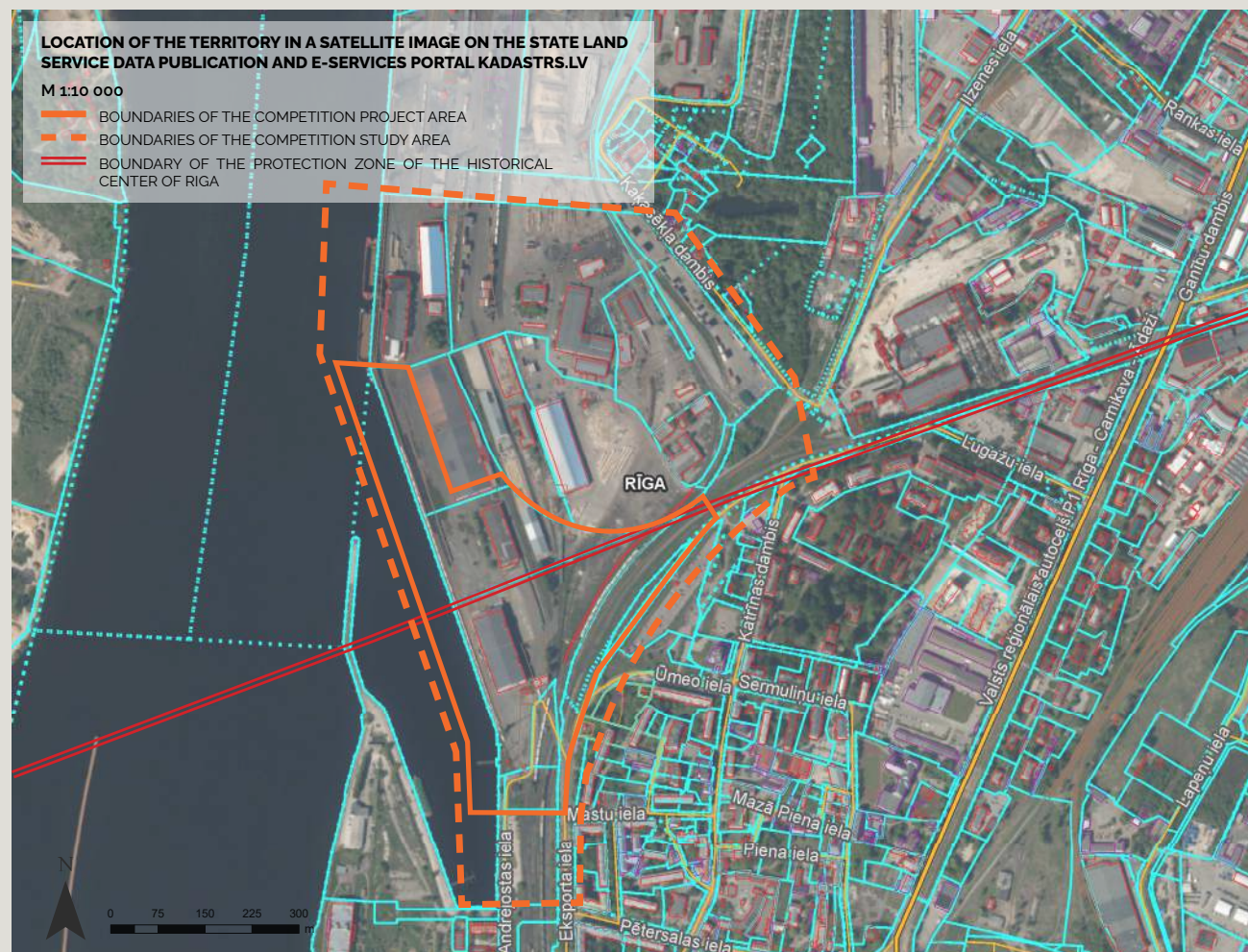
**The task of the Competition** - to determine the best proposal for the vision of spatial development of the territory of the Riga ROPAX terminal among the sketch designs submitted in the competition and to obtain a partner for further elaboration of the construction design for the Competition Object.



# THE COMPETITION SITE AND THE STUDY AREA

**The territory of the Competition Object** lies on the right riverbank of the Daugava, in the southern part of Eksportosta (cadastral designations 01000130218, 01000130217 and 01000130213) bordering on Eksporta iela in the east.

**The study area of the Competition** includes the territory of the Export Port up to Kaķasēkļa dambis (street) and the urban area with adjacent streets, infrastructure and buildings in a section of Eksporta iela starting from Mastu iela in the south and up to Kaķasēkļa dambis in the northeast.



*Borders of the competition object and the study area of the competition*

# THE COMMISSIONER OF THE COMPETITION



**SIA "Riga Ropax Terminal"**

registration No. 40203289209,

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Contact details: Chairperson of the Board Jūlija Bērziņa,  
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# BRIEF HISTORICAL OVERVIEW OF THE TERRITORY OF THE COMPETITION OBJECT AND THE STUDY AREA

Riga was founded in 1201 as a port city.

The Riga Historic Centre (RHC) lies on the right riverbank of the Daugava. In 1997, the RHC was inscribed on the UNESCO list of the World Heritage Sites, stating that the historic centre with its medieval and later age urban fabric retained relatively intact, is of outstanding universal value by virtue of the quality and quantity of its medieval and Art Nouveau architecture, which is unparalleled anywhere in the world. At the turn of the 19th-20th centuries, Riga was one of the most important industrial cities not only in the Russian Empire, but in the entire Baltic Sea region.

In the 13th-15th centuries, the competition study area was a typical rural district of Riga with sand hills, numerous arms of the River Daugava, islands, marshes, pine forests, dunes and peatlands. In springs, these territories regularly over-flooded. The mouth of the Daugava was shallow and it abounded in sand bars that had formed over the centuries, which prevented water from flowing into the sea during spring floods. Already at the end of the 13th century, construction of wooden fortifications or bulwarks began at the site where the River Rīdzene flowed into the Daugava in order to protect the walls of the city fortifications from ice and to prevent the foundations from being washed away during spring floods. The dams built at the end of the 16th and 17th centuries could not completely prevent the rivers from bursting their banks and it caused great losses to merchants. Ice floating to the sea and floodwaters changed the Daugava riverbed and shipping lanes. Initially, the townspeople only wanted to restrain the Daugava to protect the city from flooding, however, in the 17th-18th century, navigation safety issues came to the fore, along with the need to clean and regulate the riverbed. Several dams were built on the Daugava near Riga to protect the city from floods, as evidenced by the names of some streets: Ganību dambis, Katrīnas dambis, Kaķasēkļa dambis and Balasta dambis (*'dambis' means 'dam' in Latvian*).

In 1763, the Riga Town Council signed a contract with the engineer Gustav Emanuel von Weissmann who undertook to develop a unified project for the regulation of the Daugava riverbed. As a result, between 1764 and 1782 as many as 14 versts (an old Russian unit

of length, in the metric system one verst corresponds to 1066.8 meters) of dams were built along both banks of the Daugava. The task of longitudinal dams was to channel the stream, so that the riverbed would be deepened by spring floodwaters themselves. Unfortunately, they did not fulfil their task and during the first major flood in 1783, the water broke through and destroyed a large section of artificial structures, while the floods of 1807 and 1814 completely destroyed Weissman's dams.

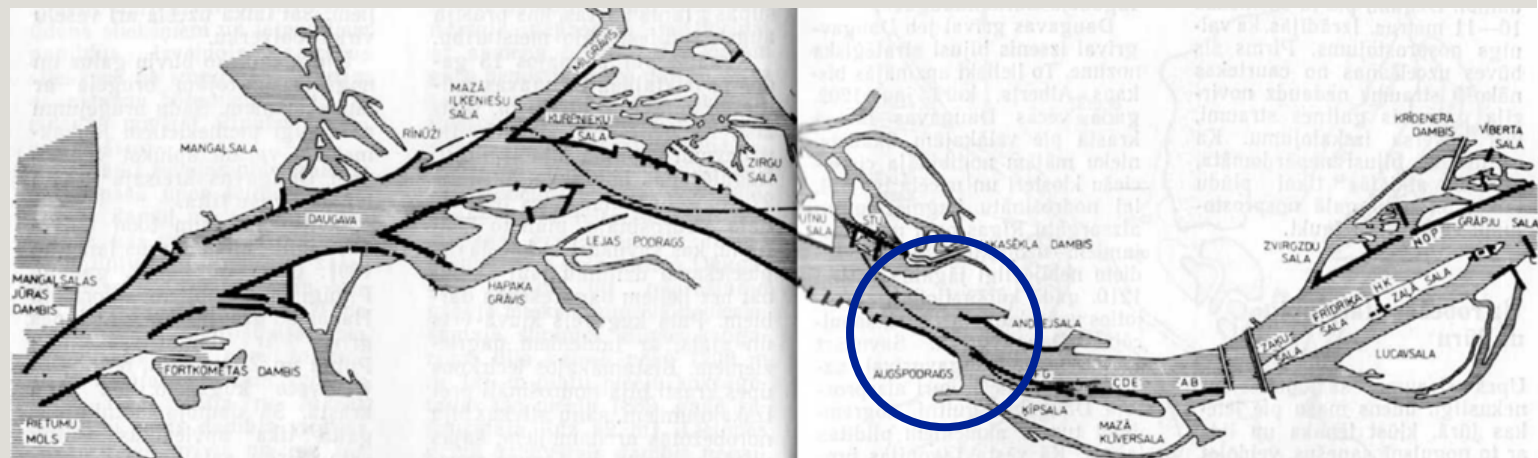
At the beginning of the 19th century, for the first time, more attention was paid to the dredging of the river. In 1850, the Port Construction Committee was established, which organised and managed various works in the port area for the regulation of the riverbed, fortification of banks and deepening of fairways. Advancement of technological progress, the Riga-Daugavpils railway line built in 1861 and the expansion of the railway network contributed to the development of the Port of Riga and changed the importance of the Daugava waterway. With the opening of the railway, the turnover of sea cargo increased. The flourishing trade required expansion of works for the improvement of the port. In 1867, the river regulation plan proposed by engineer Napiersky was approved, and in 1869-1870 dams in Andrejsala and Ķīpsala were built. The condition of shipping in the Daugava improved, the fairway within the city limits was deepened and new areas for cargo operations were created behind the dams. Between 1881 and 1883 all river regulation works upstream of the railway bridge were completed.

Along with the construction, in 1880-1883, studies on the speed and individual directions of the current were also carried out in different river profiles depending on the water level, e.g. from the railway bridge to the entrance to the Andreja inlet 450-460 m, depth on the dynamic axis - 5.5 m, but from the Andreja inlet to Kaķasēkļa dambis, the riverbed width was 530 m, and in the profile at the root of the eastern breakwater - 640 m, depth 5.5 m. In order to ensure the planned width and depth in the entire downstream section, it was necessary to create additional breakwaters by building dams opposite the old town, to build a dam as a continuation of the bulwark near Andrejsala and to build stream diverting dams on both banks of the Daugava from the culvert in Milgrāvis to the root of the breakwaters.



The regulation works of the Daugava riverbed continued at certain intervals until 1912. In addition, along with the export port, the export port dam (reconstructed in 1962) was also built downstream of the Andrejsala dam. For the needs of the port, riverbank fortifications were constructed near the Jelgava suburb, and the Daugava riverbank acquired its current shape.

Stream-regulating structures are still used today, when the hydrological regime has changed and the draft of ships has increased impressively. The current depths of the Riga Sea Channel are ensured by the hydrotechnical structures built in the late 19th century, which have no analogues in hydrotechnical engineering.



*The Daugava scheme with hydrotechnical structures built in 1864-1912*

In 1908, the stream-regulating works in the lower reaches of the Daugava were almost completed ensuring reliable shipping conditions. At the turn of the century, the water area of the commercial port of Riga included the Daugava from its mouth to the railway bridge and another 18.5 versts upstream of the bridge.

Ships bound for European ports were moored in a 642-meter long stretch along the city embankment, between the railway bridge and Riga Castle. Passenger ships to many countries of the world also departed from there. Downstream of the present-day Vanšu Bridge, Muižas krastmala (embankment) began, which stretched 1 km in length. On the right riverbank of the Daugava the embankment ended with a 300-meter long semi-sloping sheet pile wall at the railway port, followed by a 475-meter long deep-water berth and a 360-meter long embankment with berths at the main riverbed of the Daugava.

However, in the second half of the 19th century, it turned out that the number of berths in the Port of Riga was insufficient. The berths in Andrejosta and Ekspostosta were built along with new warehouse complexes and the first power plant that was built in Andrejsala. In the 1900s, the Port of Riga ranked first in Russia in terms of foreign trade turnover, ahead of St. Petersburg and Odessa.

In the first decade of the 20th century, in its development, the Port of Riga increasingly opted for establishing of berths and cargo operation zones farther away from the old town downstream the Daugava. As the shipping conditions became stable in the lower reaches of the Daugava, it fostered further development of the Port of Riga. Already in 1898, the engineer A. Pabsts had developed four port development variants in the stretch from Muižas krastmala up to Kaķasēkla dambis, envisaging creation of several port basins in the area of Andreja and Eksporta inlets. These water areas were designed to be 100-130 m wide and up to 2 km long. Pabsts' design was partially implemented in 1901-1905 when one of the berths of the Export Port was constructed. The 1916 map already shows an embankment and berths at the Daugava, as well as a railway branch running along them in the northern direction in the territory of the Export Port (on the peninsula).

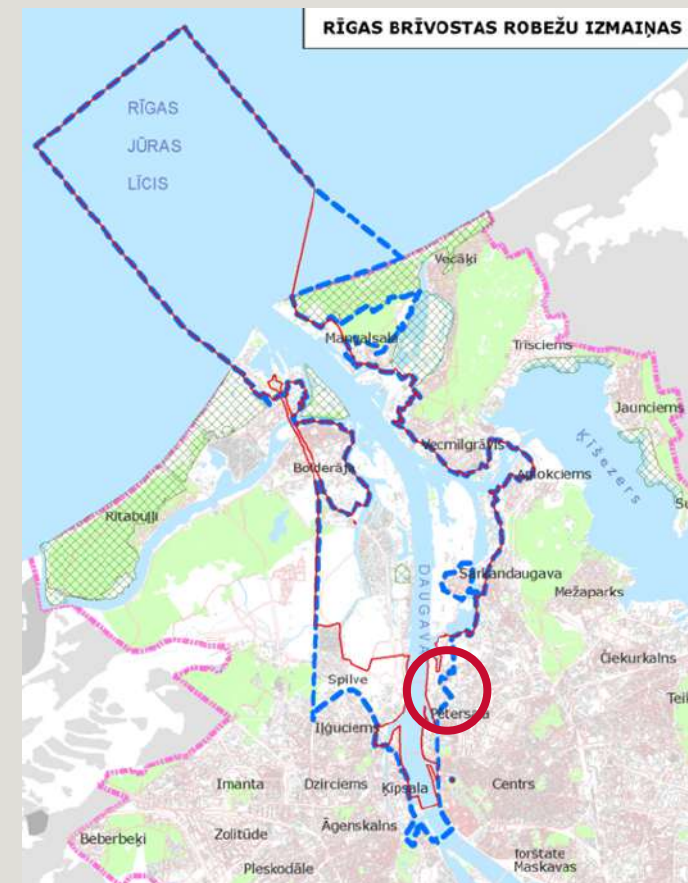
In the period between the two world wars, works for the improvement of the port, deepening of the river and construction of new embankments continued. The 1936 map shows rapid development of the territory in the period between the two world wars resulting in a vast network of railway tracks with many branches and access roads. In 1944, when the Germans were retreating, the embankments in front of the old town, in Mīlgrāvis and Klīversala, were blown up. As a result of the post-war reconstruction works, 11. novembra krastmala (street and embankment) was built (during the Soviet period it was called Komjaunatnes krastmala). When berths were renovated, it was done by applying the principle of gradually moving the economic activity of the port from the city centre to areas with a lower population density and closer to the sea. Today, the reconstructed embankments of the right bank of the Daugava are not only a technical monument that preserves the creative work of several generations of builders, but also a memorial to the perseverance of the inhabitants of Riga in the restoration of embankments and an urban ornament.

The dam at the Export Port inlet, which had been badly damaged during the war, was reconstructed in 1963 and adjusted to the needs of the berths. All port berths are built as high-pile grillage structures with a back corrugated wall covered with granite slabs. Ships from all countries of the world berthed there. After the ships moored, gangways were lowered to unload or load the ships (practically by hand or floating cranes). Around 1940, the Riga Commercial Port became the second largest port in the Baltics. After the destruction caused by WW II, in 1947, the reconstruction of port berths began, which lasted 25 years.

The berths along the Export Port were restored to their traditional appearance, however, the new type of ships with horizontal loading and unloading required berths that formed a right angle with each other. The design of the new roll on/roll off ships ensured that the cargo was brought into the ship's hold from one end, and taken out from the other. So that the ships of this type could moor laterally to the shore, two berths placed at right angles were necessary. The first such berths in the Pīlmuīža arm of the river were put into operation in 1970, but then fully completed in 1976.

Based on the prospective development plan of the Riga Commercial Port developed by the Maritime Transport Design Institute in 1978, it was decided to create completely new container berths in Kundziņsala. By 1980, the berths with a total length of 450 m were built. The construction of completely new embankments began after the opening of the Riga Hydroelectric Power Plant. In the 1970s-80s, the main purpose of the construction of the embankments was to solve urgent urban development and transport issues which are still relevant today. In order to ensure the continuous development of the port, the Daugava riverbed has been dredged several times in the last decade, what was necessary to allow the entry of large ships into the port. Dredging of the riverbed was carried out in 2012, 2016 and 2018.

The Export Port, the creation of which began in 1901 when the municipality decided to increase the throughput capacity of the port, is one of Riga's ports on the right bank of the lower reaches of the Daugava near Vējzaķsala in the southern part of Sarkandaugava neighbourhood and in the northern part of Pētersala-Andrejsala neighbourhood. In 1908, it became the most important part of the Port of Riga. On 11 April 2000, the Law on the Free Port of Riga came into force, according to which the entire territory of the port was handed over to the Free Port Authority of Riga. In the territory of the Freeport of Riga, terminals and production companies were not located in one place, but rather scattered in different areas of the port. Until 1 September 2006, the Export Port was also located in the territory of the Free Port of Riga.



- the border of the Free Port of Riga approved by Cabinet Regulation No. 690 "Regulation on Determining the Borders of the Free Port of Riga" of 22 August 2006
- - - the border of the Free Port of Riga approved by Cabinet Regulation No. 516 "Regulation on Determining the Borders of the Free Port of Riga" of 11 December 2001

The berths and related infrastructure owned by the Free Port of Riga were built along the Daugava riverbank. When the Daugava embankment was rebuilt, its function was also changed: apart from receiving passengers and ships, it also had to accommodate residents' recreational needs, while the port was moved farther away from the city centre. In 1965, the building of the Riga Sea Passenger Station (official name Riga Passenger Terminal) was put into operation, architects M. Ģelzis, V. Savisko, civil engineer A. Briedis.

Between 1995 and 2000, the functions of the Riga Passenger Port included handling of passenger ships and ferries, provision of port and other services. After that, the company SIA "RĪGAS PASAŽIERU TERMINĀLS" started operating by leasing two berths (two it owned) and facilities related to the berths from the Free Port of Riga. The Export Port handled coal until the infrastructure project for the transfer of cargo operations to Krievu sala (island) was completed (more information is available at <https://rop.lv/lv/projekti/infrastrukturas-attistiba-krievu-sala-ostas-aktivitasu-parcelsanai-no-pilsetas-centra>).

As the number of cruise ships serviced in the Riga Passenger Port increases, it is necessary to create a modern passenger servicing infrastructure and new berths at least 620 m long in one line. In 2018, the development of a local plan for the southern part of the territory of the Export Port of Riga began in order to build a new passenger and "RO-RO" cargo terminal in this territory - "Riga ROPAX Terminal". According to the market research conducted by Deloitte in 2021, the implementation of this project will allow to increase the number of passengers handled in the Port of Riga by 8% annually and facilitate cargo turnover. On 29 June 2023, the Riga City Council approved the local plan, namely, Regulations No. RD-23-209-sn "Binding Regulations on the Use and Construction in the Southern Part of the Export Port".

One of the most important reasons why it is necessary to develop the "Riga ROPAX Terminal" is the non-compliance of the existing infrastructure of the Riga Passenger Terminal with modern requirements, i.e. limited length of berths and insufficient turning basin of ships, what does not allow the reception of large ships (over 300 m) in the port. Currently, cruise ships over 300 m are serviced in the Port of Riga at cargo terminals on the left riverbank of the Daugava, handling up to 25% of all cruise ships.

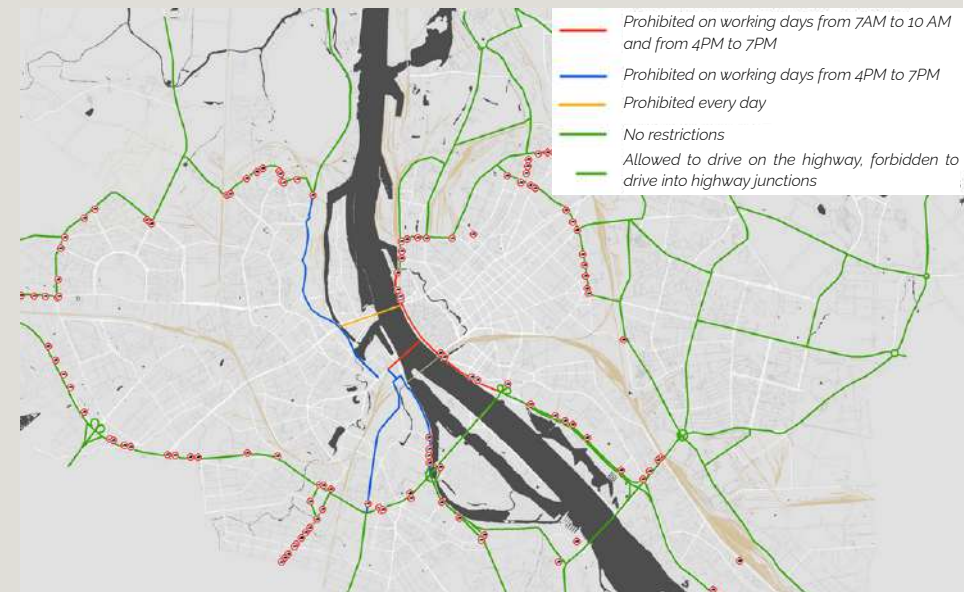
It deserves mentioning that since the transportation of trucks, which cause pollution in the city centre, accounts for a large proportion of the ferry line business, in order to relieve the centre of Riga from trucks, the existing Riga Passenger Terminal must be relocated.

The development of the railway infrastructure project Rail Baltica also plays an important role. By simultaneously developing two passenger infrastructure objects, i.e. the Central Station and the Passenger Terminal, there is an opportunity to increase the competitiveness of the Port of Riga, with the prospect of establishing a connection between the Passenger Terminal, the Central Station and the airport, thus creating a prerequisite for the development of the home port of cruise ships.



*The building of the Riga Passenger Terminal*

*Map showing the area where freight transport is prohibited, effective from 1 December 2009*



# CURRENT SITUATION IN THE TERRITORY OF THE COMPETITION

## OBJECT AND COMPETITION STUDY AREA, EXISTING OBJECTS

The territory of the competition object and its study area lies in the Northern District of the administrative territory of the city of Riga, on the right riverbank of the lower reaches of the Daugava, in the middle of the neighbourhood of Pētersala - Andrejsala.

The territory of the Competition Object and its study area spreads between the Daugava and residential blocks of the historic centre of Riga, bordering on railway tracks and Eksporta iela. A section of its water area is part of the territory of the Freeport of Riga. The southern part of the territory of the Competition Object falls within the protection zone of the UNESCO World Heritage Site No. 852 "Historic Centre of Riga". Currently the largest part of the competition study area at Eksporta iela 15 is connected to the operation of port companies (cargo handling), where a new branch of railway tracks has been built in the northern part of the territory, establishing a connection with the railway station "Zemitāni". Founded in 2012, JSC "Riga Port", which operates at Eksporta iela 15, is the most important investor, developer and operator of port assets and transport service companies in the Republic of Latvia. More information is available at [www.rigaport.lv](http://www.rigaport.lv). Access to the most part of the Competition Object and the competition study area (the territory of the companies operating in the port) is limited and the territory is fenced off. At present, it is possible to access the Daugava waterfront only along Andrejostas iela, which is currently not fenced off. Pedestrian paths have been built along Eksporta iela.

Where the footpath runs along the railway, there is a sectioning-off concrete wall built. The territory of the competition object includes a warehouse building, buildings for checking passes, a transformer substation, a shed, a building housing guards and compressors. Ship berths and related infrastructure owned by the Freeport of Riga are constructed along the Daugava riverbank.



*The former warehouse of JSC "Rīgas 1. saldētava" at Eksporta iela 15 k-8, cadastral designation 01000132008039*

In the territory of the competition object, situated parallel to the Daugava riverbank, there is a rectangular three-storey warehouse building of a reinforced concrete frame structure without a basement (Eksporta iela 15 k-8, former warehouse of JSC "Rīgas 1. saldētava"), constructed in 1960.

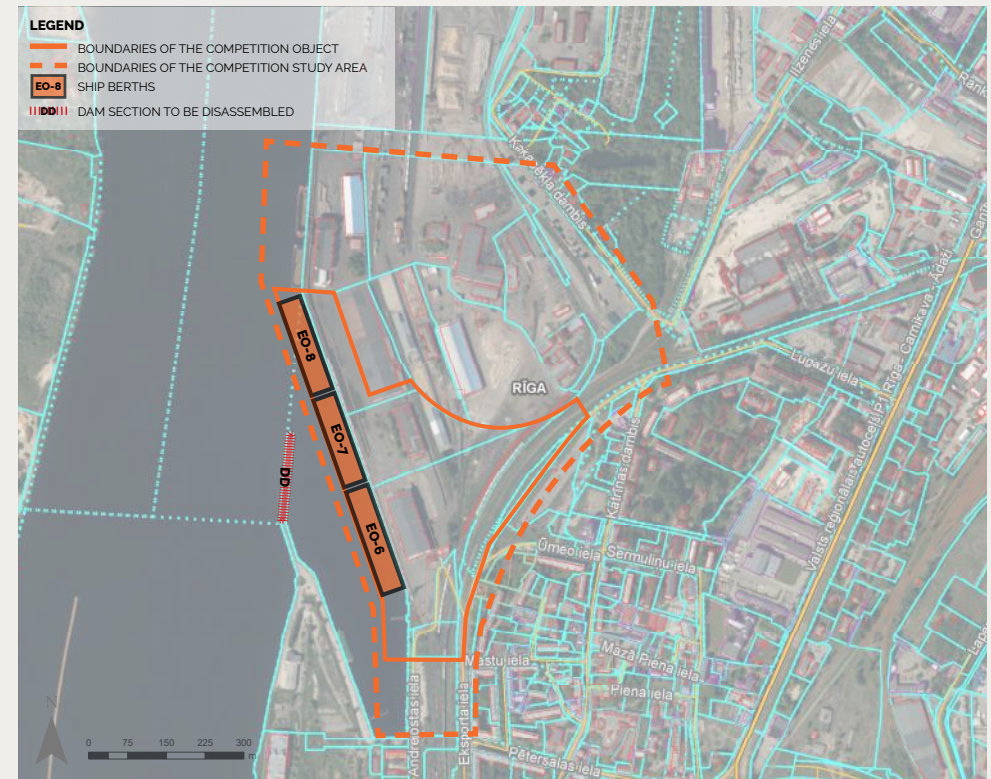
The building has a total built-up area of 7242.6 square metres and a construction volume of 112,504 m<sup>3</sup>. Load-bearing external walls of the building envelope and separate internal structures are built using different building materials, i.e. silicate solid brickwork, reinforced concrete wall elements and ribbon fenestration. The building has a reinforced concrete structural frame with reinforced concrete columns and crossbars, precast concrete ribbed slabs, asphalt-concrete floors and a combination roof with external rainwater drainage. On the same level with the 3rd-storey floor, there are balconies built along the western longitudinal wall of the building in the cargo crane operation area. The building has two reinforced concrete staircases in separate stairwells, one cargo lift and a vertical shaft for vertical movement of goods.

According to the statement of technical inspection of the building carried out in 2009 (see Folder 4.1. STATEMENT OF TECHNICAL INSPECTION), the load-bearing structure of the existing building has no defects or damage that would reduce its load-bearing capacity. The existing load-bearing structures are in a satisfactory technical condition. It is intended to convert the said building into a new passenger terminal.

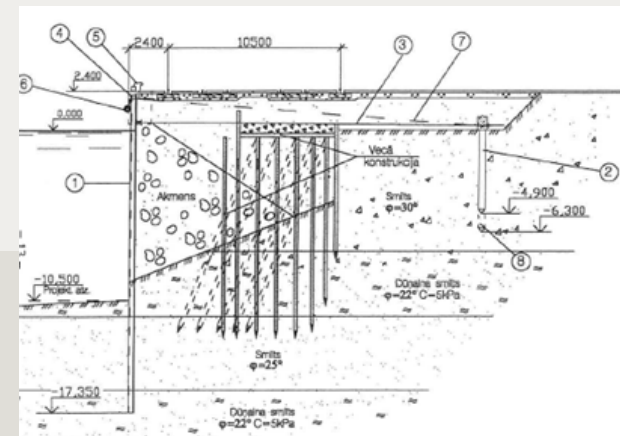
The competition territory includes berths **EO-6**, **EO-7** and **EO-8** of the existing port, which will be used for handling of passenger ships, ROPAX vessels, RO-RO ships and cruise ships.

**Berth EO-6** (time of construction 1901, 1905, reconstruction in 1962):

- 240 m long,
- riverbed mark (in the Baltic system) project/actual – minus 9.75/minus 10.6 + 11.7,
- ship dimensions for calculations – length 160 m, draft in full load 9.4 m,
- In the 2001 berth passport, it is recommended to carry out major repairs of the berth superstructure.



*The territory of the competition object with ship berths*



*Section of berth EO-6*

**Berth EO-7** (time of construction 1901, 1905, reconstruction in 1947-1949):

- 190 m long,
- riverbed mark (in the Baltic system) project/actual – minus 10.5/minus 10.1 + 11.4,
- ship dimensions for calculations – length 150 m, draft in full load 8.4 m,
- In the 2001 berth passport, it is recommended to carry out major repairs of the berth superstructure.

**Berth EO-8** (time of construction 1901, 1905, reconstruction in 1947-1949):

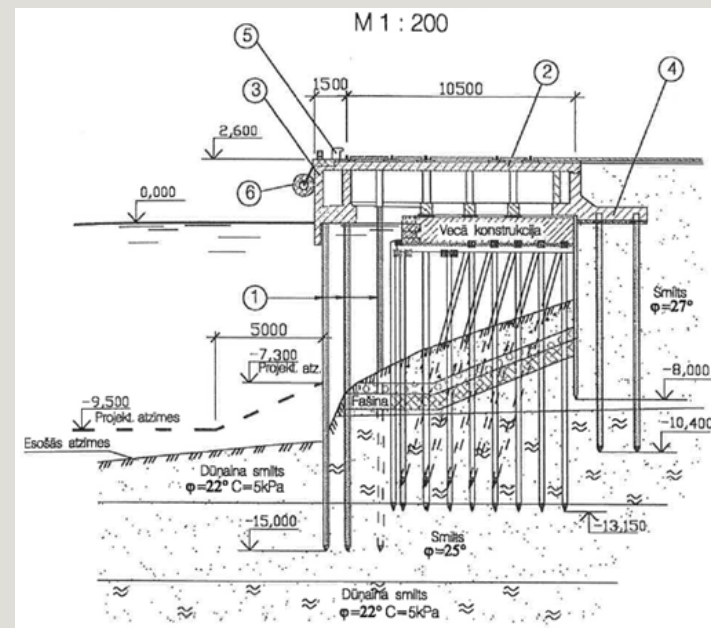
- 188.5 m long,,
- riverbed mark (in the Baltic system) project/actual – minus 9.5/minus 9.5 + 12.0,
- ship dimensions for calculations – length 150 m, draft in full load 8.4 m,
- In the 2001 berth passport, it is recommended to carry out major repairs of the berth surfacing, cranes and railway tracks.

Description of natural conditions of **Berths EO-6, EO-7 and EO-8**:

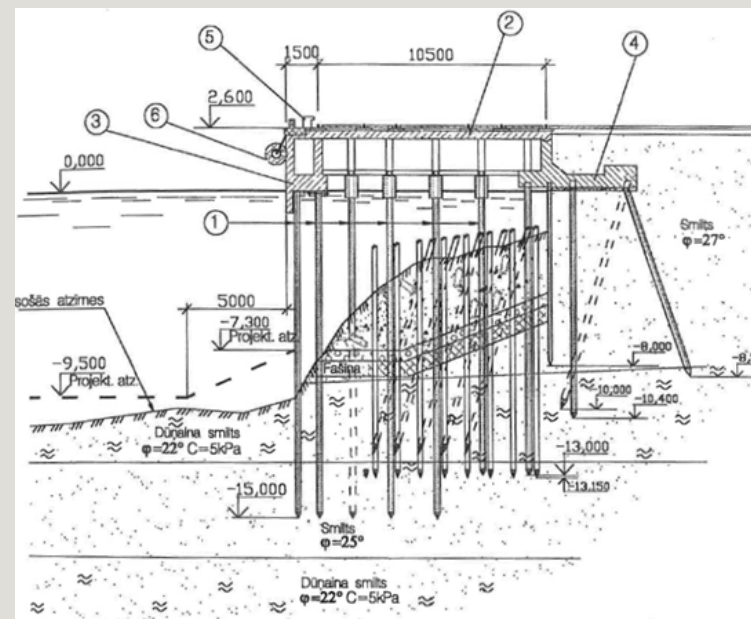
- water horizons (in the Baltic system) minimum -1.30 m, maximum 2.29 m,
- wave height calculated up to 1.0 m,
- the berths are located in the area not affected by the Daugava currents,
- wind conditions - mostly winds from S, SE and SW directions. Prevailing wind speeds 4-8 m/s. Maximum wind speed 24 m/s. The largest number of storms – from September to January,
- ice conditions – the ice cover is unstable and usually forms in January and melts in March. The ice thickness in severe winters reaches 25 + 70 cm.

**ED** (Export Port dam) dam (reconstruction in 1962) parameters:

- 171 m long, 11.11 m wide,
- Riverbed mark (in the Baltic system) minus 6.50 m,
- 2 t/m<sup>2</sup> normative operating loads,
- According to the decision of the Free Port of Riga, it is planned to dismantle a section of the ED dam in 2024 and to complete the dredging in 2025.



Section of the old structure of Berth EO-7 and EO-8 in the undamaged grillage area, Type 1



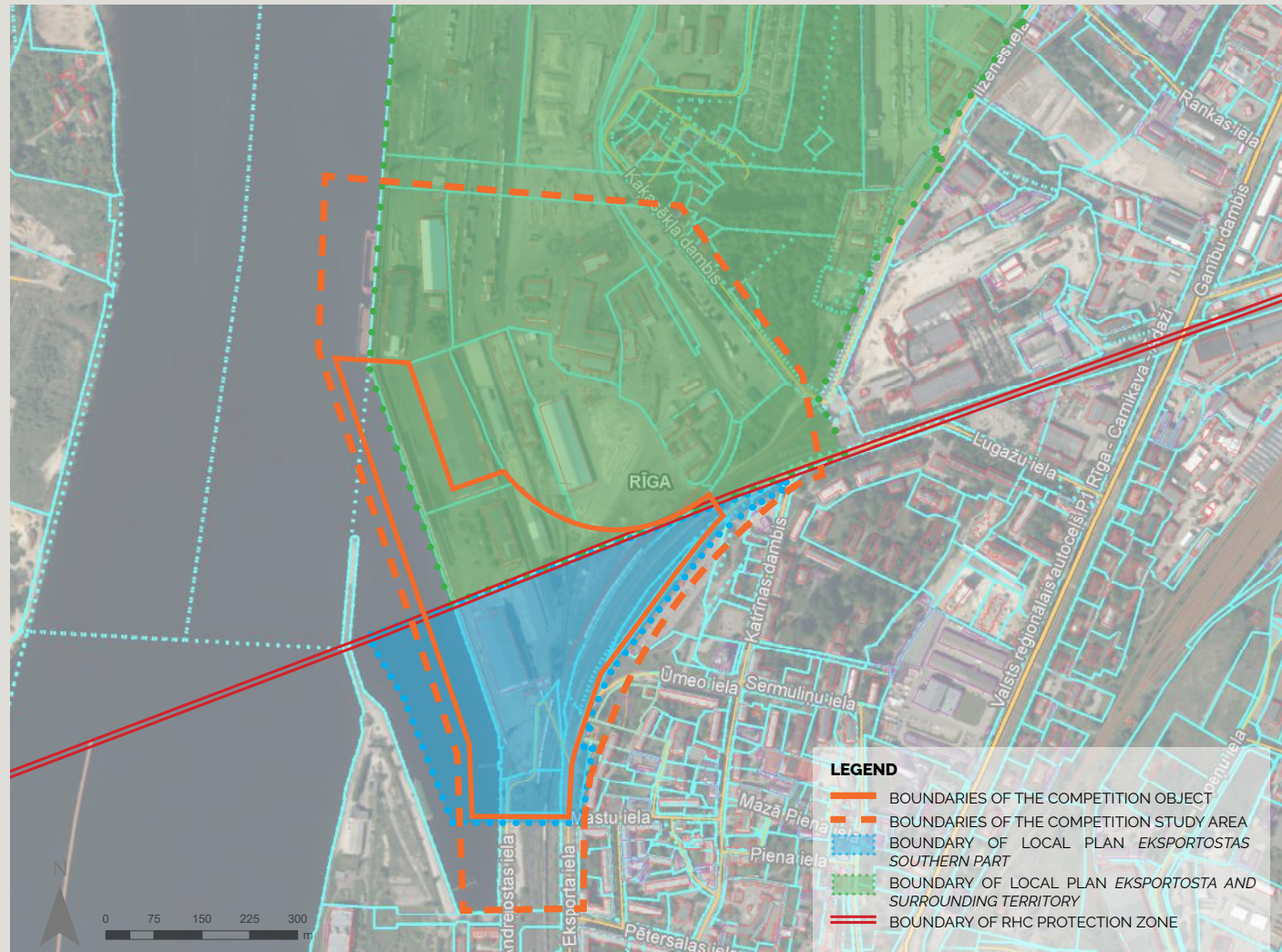
Section of the old structure of Berths EO-7 and EO-8 in the undamaged grillage area, Type 2

# BINDING REGULATIONS APPLYING TO THE COMPETITION OBJECT AND THE STUDY AREA

## “Binding Regulations on the Use and Construction in the Export Port and the Territory Adjoining It” (excerpt)

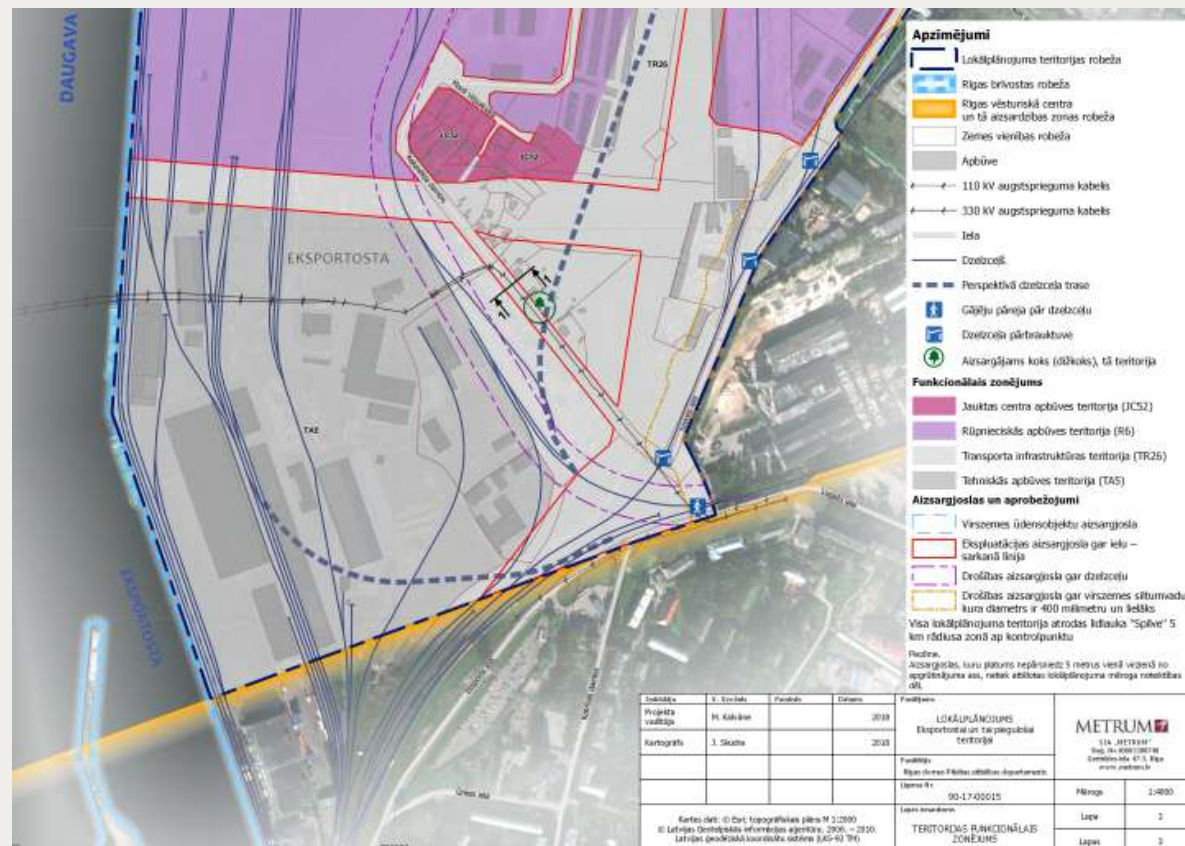
Binding Regulation No. 46 “Binding Regulations on the Use and Construction in the Export Port and the Territory Adjoining It” of the Riga City Council on 11 July 2018 (hereinafter - the EO TIAN) apply to the northern part of the territory of the Competition Object and the study area. Local Plan materials in Latvian are available at: [https://geolatvija.lv/geo/tapis#document\\_27526](https://geolatvija.lv/geo/tapis#document_27526)

*The territory of the Competition Object and the study area with the border of the RHC, the Local Plan territory of the southern part of the Export Port (see Section 8.2) and the Local Plan territory of the Export Port and the territory adjoining it (see Section 8.1)*



According to the EO TIAN, the study area of the Competition is located in the territory of technical buildings **TA5**, where among other things:

- access to the territory of technical buildings must be organised from Eksporta iela, Lugažu iela or Ilzenes iela, all streets should have hard surfacing;
- the required number of parking spaces must be provided in each building block and/or plot of land, and the total number of vehicles required is determined by adding up the number of vehicles required for each type of use or object;
- the number of parking spaces at buildings or structures is determined in line with the Binding Regulations No. 103 "Regulations on the Use and Construction in the Territory of Riga" of the Riga City Council of 15 December 2021 as well as in accordance with the requirements of other legal acts in force;
- car parks and other landscaping elements are set up within the boundaries of the land unit outside the street lines;
- during the construction of streets, street plantings are restored or new plants are planted along the entire street or street section, taking into account the spatial parameters of the street, location of engineering networks, requirements for the creation of greenery specified in the design conditions of the building permit issued by the Construction Board, as well as the technical provisions issued by utility providers.





## Requirements for the territory of technical buildings TA5

The territory of technical buildings (TA5) is a functional sub-zone determined to ensure the organization of the territory and the transport infrastructure necessary for the construction, maintenance, functioning and development of engineering supply networks and objects required by the companies related to the operation of the port, where it is also allowed to carry out polluting activity of Category B or C, observing the restrictions laid down in legal acts and binding provisions..

### Main types of use of the territory TA5

- Construction of airports and ports (14005): a built-up area comprising port terminals and related infrastructure, hydrotechnical structures, navigation equipment and facilities in the port, berths for river ships;
- Construction of energy supply companies (14006): a built-up area comprising energy production and energy supply companies, locating combustion plants with an input heat capacity of up to 5 megawatts, if biomass (including wood and peat) or gaseous fuel is used in the combustion plant, excluding linear engineering infrastructure;
- Transport service infrastructure (14003): buildings for the provision of land and water traffic services, including passenger and/or cargo ports, garages, separately established open car parks, P&R car parks, multi-storey car park;
- Linear transport infrastructure (14002);
- Engineering infrastructure (14001);
- Construction of warehouses (14004).

### Other provisions:

- It is allowed to build in the territory berths for RO-RO ships, including passenger ships;
- It is allowed to rebuild the infrastructure of the existing berths, making them suitable not only for handling of cargo ships, but also passenger ships, including cruise ships and RO-RO vessels, providing the necessary facilities and pedestrian paths that are necessary for convenient disembarkment and access to the city's public transport.

### TA5 additional types of uses of the territory:

- Construction of shopping and/or service objects (12002);
- Construction of office buildings (12001): a built-up area comprising public administration offices and other companies, organisations and institutions.

### Parameters of the built-up area:

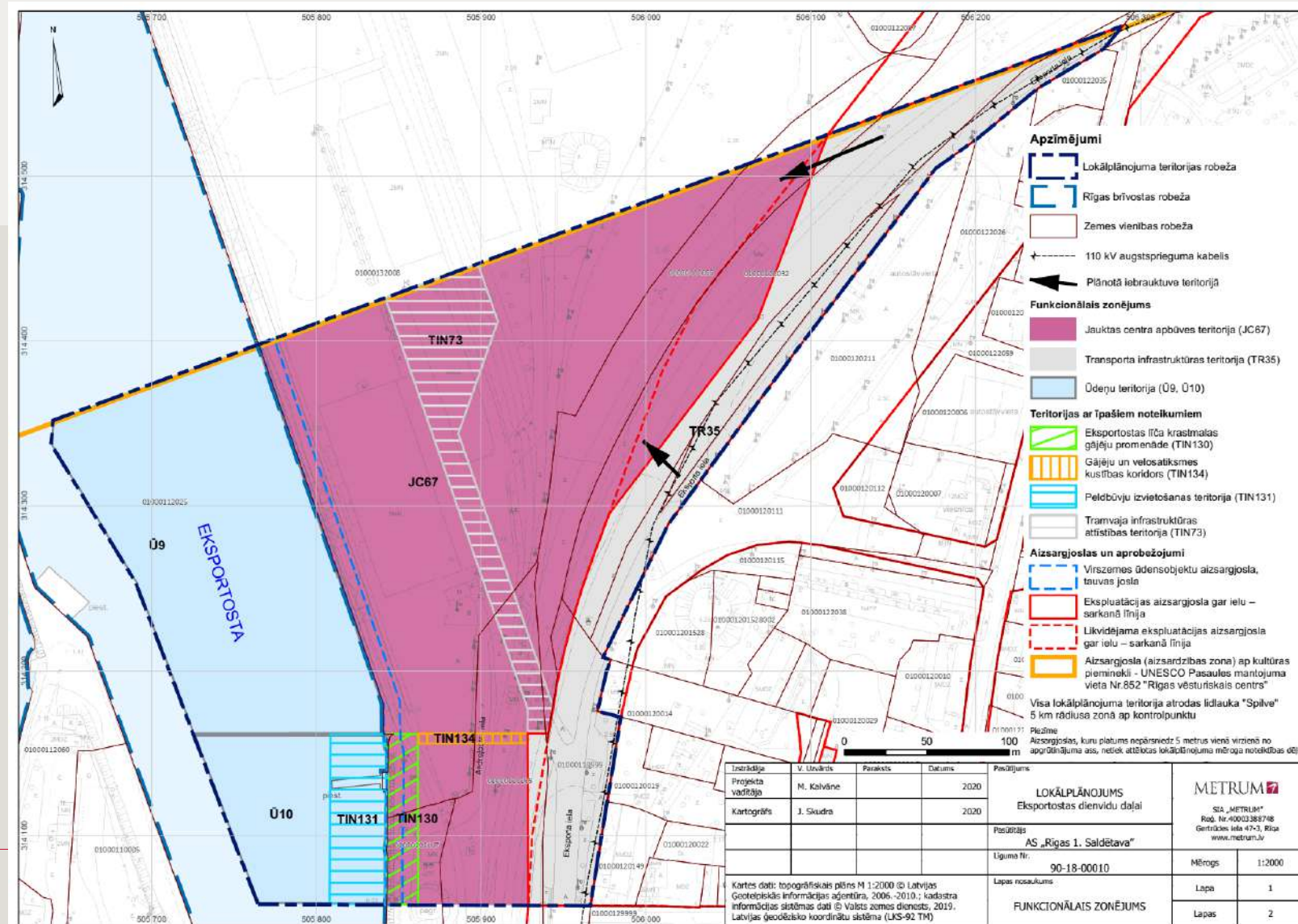
- Construction intensity 280%,
- Building height 24 m (excluding port cranes and other port facilities),
- The number of floors of the buildings 5.



## **"Binding Regulations on the Use and Construction in the Southern Part of the Export Port" (excerpt)**

The southern part of the territory of the Competition object is subject to Binding Regulations No. RD-23-209-sn of the Riga City Council of 29 June 2023 "Binding Regulations on the Use and Construction in the Southern Part of the Export Port" (hereinafter - Local Plan). Local Plan materials in Latvian are available at [https://geolattvija.lv/geo/tapis#document\\_27526](https://geolattvija.lv/geo/tapis#document_27526). The development of the Local Plan was initiated by JSC "Rīgas 1. Saldētava" (current name - SIA "Eksportostas īpašumi"). On the date when JSC "Rīgas 1. Saldētava" invested its property, which is located in the Local Plan territory, in the share capital of (the Commissioner) SIA "Riga Ropax Terminal", SIA "Riga Ropax Terminal" (the Commissioner) became the initiator of the Local Plan.

*Functional zoning of the local plan of the southern part of the Export Port*



According to the Local Plan, the territory of the Competition Object is located in **the territory of mixed centre construction (JC67)**, where, among other things:

- Access to the Competition territory must be organised from Eksporta iela

- from the planned intersection of Eksporta and Ūmeo Streets, according to the map of the graphical part "Transport and Construction Development Scheme";;

- from the area of the planned intersection of Eksporta iela, Lugažu iela and Katrīnas dambis, according to the map of the graphical part "Transport and Construction Development Scheme";

- for the part of the Local Plan territory between Eksporta iela, the border of the Local Plan territory, the territory with special provisions "Pedestrian and Cyclist Movement Corridor" (TIN134) and "Pedestrian Promenade along the Embankment of the Inlet of the Export Port" (TIN130), in addition, it is allowed to organise access from the prospective Mastu iela (outside the Local Plan territory), in line with the detail plan solutions for Andrejsala (approved with Decision No. 4889 of 31 March 2009 of the Riga City Council "On the Approval of Andrejsala's Detail Plan" and Binding Regulations No. 161 of 31 March 2009 of the Riga City Council);

- all access roads and streets must have hard surface. Hard surfaces such as concrete, asphalt concrete, concrete slabs, pavement, etc. are allowed;

Until the construction of the section of Ūmeo iela from Eksporta iela to Ganību dambis is carried out, no more than 60 trucks per hour are allowed to be diverted from the Local Plan territory to the intersection of Ganību dambis and Lugažu iela. The other trucks from the Local Plan territory should be diverted along alternative freight transport routes to the north of the Local Plan territory, through the northern part of the Export Port. After the construction of the said section of Ūmeo iela, the truck traffic intensity indicator specified in this Clause can be increased to 100 trucks per hour from the Local Plan territory, if a repeated study of traffic flows and an assessment of the impact on air and noise pollution confirms that an optimal traffic regime can be ensured in Lugažu iela and at the intersection of Ganību dambis, and that requirements of environmental standards are not expected to be exceeded.

- there should be a place where public transport can turn around if the territory is used as a terminus;

- the total number of parking spaces planned for servicing the berth of passenger ships and RO-RO passenger ships must not be less than 100, in addition, there must be parking spaces necessary for trucks, coaches and bicycles, and short-term parking spaces for vehicles of emergency services and taxis. For other uses permitted in the Local Plan, the total number of parking spaces must not be less than 30% of the (normative) number of parking spaces determined in the territory of the RHC PZ, while not exceeding the total number of parking spaces required by legal acts;

- car parks should be located within the boundaries of a land unit outside the street area between street lines;

- the car park intended for servicing the berths of passenger ships (including ferries and cruise ships) and RO-RO passenger ships (ro-pax ships) needs to have charging stations for electric vehicles and publicly accessible toilets, as well as a storage area for waste containers (bins) for sorted waste collection and for placement of sorting containers.



### Requirements for a built-up area:

When transforming the existing buildings or designing new ones, the architectural character of the industrial built-up area must be preserved. It is recommended to use the so-called features of "brick style". It is allowed to use historic or analogous finish materials, such as yellow or red brick, plaster, glass, in the facade finish of buildings. Materials with lower heat absorption capacity should be used in construction as much as possible.

When designing new buildings in the Local Plan territory, as part of the construction design, their location, height and architectural composition must be evaluated by performing an assessment of their visual impact from the vantage points specified in the Local Plan:

- the northern tip of Andrejsala;
- the southern end of the inlet of the Export Port;
- the intersection of Eksporta iela and Katrīnas dambis;
- the intersection of Eksporta iela and Mastu iela;
- the intersection of Eksporta iela and Pētersalas iela;
- the intersection of Ūmeo iela and Katrīnas dambis;
- the intersection of Ūmeo iela and Eksporta iela;
- the intersection of Eksporta iela and the planned Pedestrian and Cyclist Movement Corridor (TIN134);
- the River Daugava downstream of the historic centre of Riga.

### Location of buildings:

- in the section from Lugažu iela to the border of the territory of tram infrastructure development (TIN73) specified in the Local Plan, a building line must be observed at a distance of 9 m from the street line of Eksporta iela;
- in the section from Mastu iela to the border of the territory of tram infrastructure development (TIN73) specified in the Local Plan, a building line must be observed at a distance of 3 m from the street line of Eksporta iela, coordinating it with the building line specified in the detail plan of Andrejsala;
- buildings to be constructed along the access road L1 envisaged in the detail plan of Andrejsala should be located directly along the border of the Local Plan territory;
- it is allowed to place buildings up to the border of the territory of tram infrastructure development (TIN73), and then up to the border of the territory necessary for the tram infrastructure and its operation, after the tram route is specified (i.e. elaboration of construction design/fulfilment of conditions of a building permit).

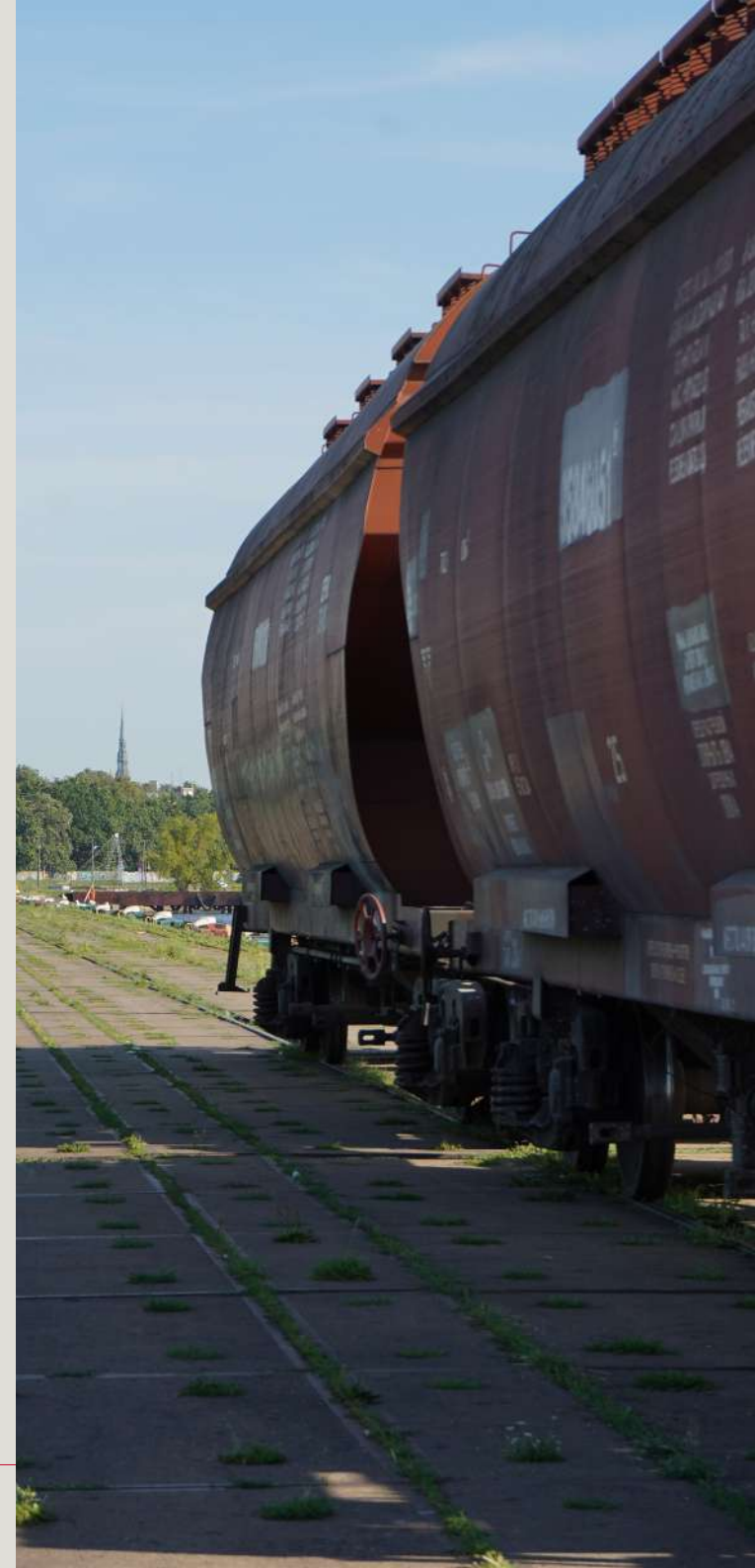


## Requirements for the improvement of the territory:

- The improvement and landscaping of the territory must preserve the industrial character of the built-up area. It is allowed to use historic stone pavement as an element of landscaping in the area of greenery or pedestrian paths, combining it with modern road surfacing materials.
- The improvement and landscaping of the forecourt of the Passenger Terminal, the berth and the pedestrian promenade should be carried out using a unified design and ensuring multi-functional use of the territory.
- It is forbidden to fence off land units and their parts that are intended to be used as a public open space, except for the territory of Berth EO-6 shown on the map of the graphical part "Transport and Construction Development Scheme".
- When planning greenery, such woody plants and shrubs should be chosen that maintain biological diversity and shape the landscape, creating ventilating green "wedge" structures. Fountains and other water objects should be placed within in the greenery structure.

## Requirements for the use of the waterfront area:

- It is prohibited to fence off the publicly accessible embankment, designated as an area "Pedestrian Promenade along the Embankment of the Inlet of the Export Port" (TIN130) where special provisions apply, or to obstruct with other landscaping elements free movement of pedestrians along the embankment and their access to the waterfront.
- It is allowed to restore the existing reinforced sections of the embankment or to build new ones in the territory of the Competition Object, respecting the variants of transverse profiles developed as part of the Local Plan or types of embankment reinforcements specified in Appendix 5 "Transverse Profiles of Embankment Reinforcements" to Binding Regulation No. 38 "Regulations on the Use and Construction in the Territory of the Historic Centre of Riga and its Protection Zone" of the Riga City Council of 7 February 2006:
  - in the territory Berth EO-6 intended for passenger ships (including ferries and cruise ships) and RO-RO passenger ships (ro-pax ships), which is designated as an area where special provisions apply "Berth" (TIN146), it is allowed to restore the existing vertical reinforced sections of the shore or to build a new one, ensuring the operation of the existing berth;
  - in the publicly accessible section of the embankment, which is defined as an area where special provisions apply "Pedestrian Promenade along the Daugava Embankment (TIN130)", it is allowed to build a sloping reinforced embankment with a hard surface or a terraced slope, by reinforcing the slope and its lower part. It is allowed to reinforce the slope with natural stone surfacing (historical bulwark structure).
  - in addition, the provisions of Andrejsala's detail plan (see [https://geolatvija.lv/geo/tapis3?organization=100018#document\\_3282](https://geolatvija.lv/geo/tapis3?organization=100018#document_3282)) regarding the reinforcement of the embankment should be taken into account.



## Main types of use of the territory:

- Built-up area of office buildings (12001):
- Built-up area of retail or service objects (12002): a built-up area consisting of shops, pharmacies, public catering companies, seasonal retail or service objects (retail kiosks and covered stands), restaurants, bars, cafes, as well as consumer and other service objects, including vehicle maintenance facilities providing minimal services (tire changing, self-service car washes, electric vehicle charging stations), petrol stations and gas stations;
- Built-up area of tourism and recreation facilities (12003): a built-up area consisting of hotels, motels, staff accommodation facilities, dormitories, and other objects and infrastructure necessary for provision of accommodation services;
- Built-up area of cultural establishments (12004);
- Built-up area of sports facilities (12005):

## Additional types of uses of the territory:

- Built-up area of light industry enterprises (13001): buildings and infrastructure, including warehouses necessary for the production of goods and products for the manufacturing of which it is not required to obtain a permit for the performance of polluting activity and it is not required to register polluting activity of Category C under the laws and regulations.
- Transport service infrastructure (14003): buildings for the provision of land and water traffic services, including a railway passenger station, a terminal and a berth for passenger ships (including ferries and cruise ships) and RO-RO passenger ships (ro-pax ships), garages, separately arranged open car parks, P&R car parks, multi-storey car parks.

- Built-up area of defence and security service establishments (12006): a built-up area consisting of buildings of police forces, fire and rescue services and fire stations, customs and other state defence and security service establishments and the buildings and engineering structures necessary for their functions;

- Built-up area of educational and scientific institutions (12007): a built-up area consisting of objects and infrastructure necessary to ensure the operation of vocational, special, interest education, higher, adult and further education, or scientific research institutions, including scientific research institutes, meteorological stations;

- Landscaped public open space (24001): courtyards of public buildings, waterfronts, including greenery and landscaping infrastructure (including non-residential buildings and engineering structures) built for the purpose of recreation, health improvement and physical activities, and provision of other functions of a public open space.

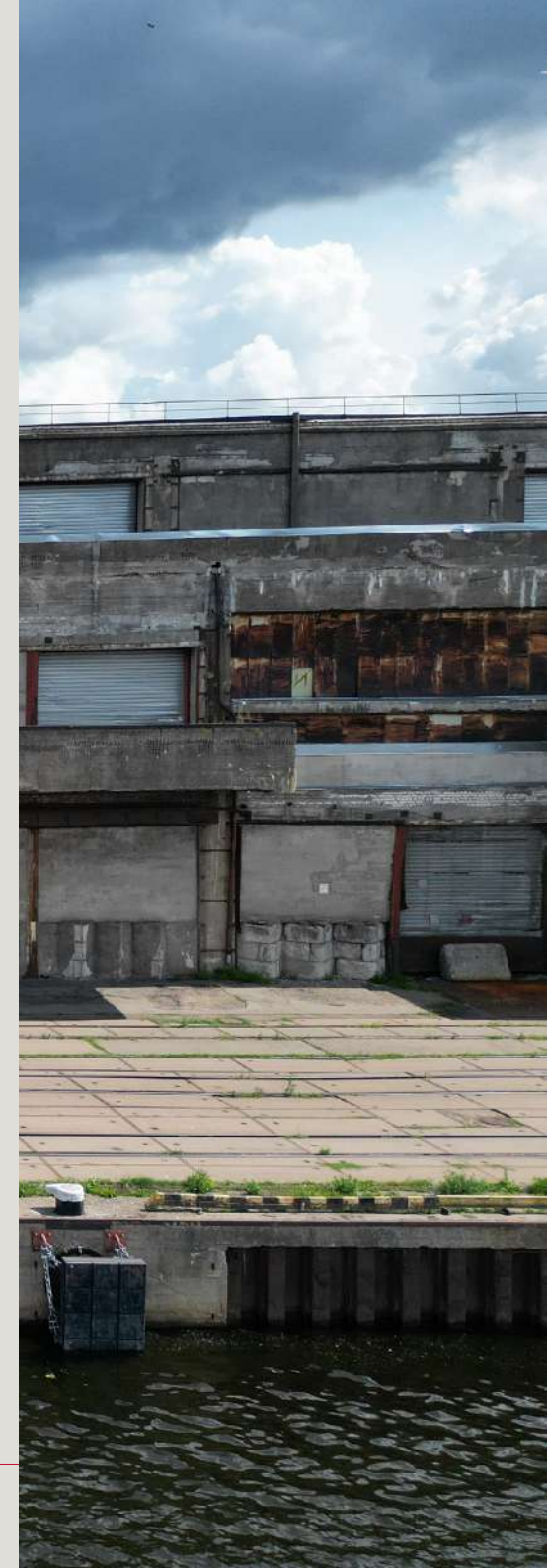


## Construction parameters, among others:

- Built-up area of office buildings - intensity up to 220%, height up to 6 floors, minimum vacant green area 10%;
- Built-up area of retail or service objects – intensity up to 220%, height 24 m, minimum vacant green area 10%;
- Parameters of tourism and recreation facilities, culture and sports buildings – intensity up to 220%, maximum 6 floors, minimum vacant green area 20%;
- Built-up area of cultural establishments - intensity up to 220%, height up to 6 floors, minimum vacant green area 20%;
- Built-up area of educational and scientific institutions - intensity up to 220 %, height up to 6 floors, minimum vacant green area 20 %;
- Transport service infrastructure – intensity up to 280 %, height 24 m, minimum vacant green area 10%;

## Other provisions:

- It is permitted to rebuild the infrastructure of the existing Berth EO6, allowing it to service all types of passenger ships (including ferries and cruise ships) and RO-RO passenger ships (ro-pax ships) and, at the same time to provide the necessary improvements and landscaping and build pedestrian paths, which are necessary for easy access of passengers to the shore and to public transport;
- In the southern part of the territory of mixed centre construction with index JC67 between Eksporta iela, the territory "Pedestrian and Cyclist Movement Corridor" (TIN134) where special provisions apply and the waterfront of the inlet of the Export Port, a built-up area must be created with a city-block structure, which will be the continuation of the built-up area planned in Andrejsala's detail plan and which will connect compositionally the new buildings seen in street perspectives. It allowed to be build arcades in the territory. Arcades are also allowed to be built on the first, second and higher floors of the building;
- The urban development in the southern part of the territory of mixed centre construction with index JC67, between Eksporta iela, territories "Public Square" (TIN141), "Territory of Tram Infrastructure Development" (TIN73) and "Pedestrian Promenade along the Inlet of the Export Port (TIN130)" where special provisions apply, and the southern border of the Local Plan territory should have a character of adjoining city blocks;
- In the northern part of the territory of mixed centre construction with index JC67, which directly borders on the existing Berth EO6 and is located between the inlet of the Export Port, the border of the protection zone of Riga historic centre, Lugažu iela, Eksportostas iela and the territory "Pedestrian and Cyclist Movement Corridor" (TIN134) where special provisions apply, the construction of multi-apartment houses (11006) and educational and scientific institutions (12007) are allowed, if this is provided for in the detail plan;
- In the southern part of the territory of mixed centre construction with index JC67, between Eksporta iela, territories "Public Square" (TIN141), "Territory of Tram Infrastructure Development" (TIN73) and "Pedestrian Promenade along the Inlet of the Export Port (TIN130)" where special provisions apply, and the southern border of the Local Plan territory, it is not allowed to have the types of additional uses permitted in the Local Plan territory, i.e. a built-up area of light industry enterprises (13001) and transport service infrastructure (14003), except for separately arranged open car parks and multi-storey car parks.



## **Pedestrian Promenade along the Inlet of the Export Port (TIN130):**

- The planned pedestrian promenade along the (Daugava) waterfront of the inlet of the Export Port is a public open space with priority for pedestrians and cyclists, and its purpose is to ensure access to the inlet of the Export Port in the Daugava. It is determined as a territory necessary for the development and construction of technical public infrastructure;

- A section of the waterfront of the inlet of the Export Port is part of a single pedestrian promenade in the territory of the RHC PZ along the Daugava, which is designed, built and landscaped as a publicly accessible, continuous outdoor lane without fencing. In the southern part of the territory, its connection and unified landscaping with the pedestrian promenade planned in Andrejsala's detail plan should be provided, while in the middle part of the Local Plan territory, its connection and unified landscaping with the planned "Public Square" (TIN141) should be provided;

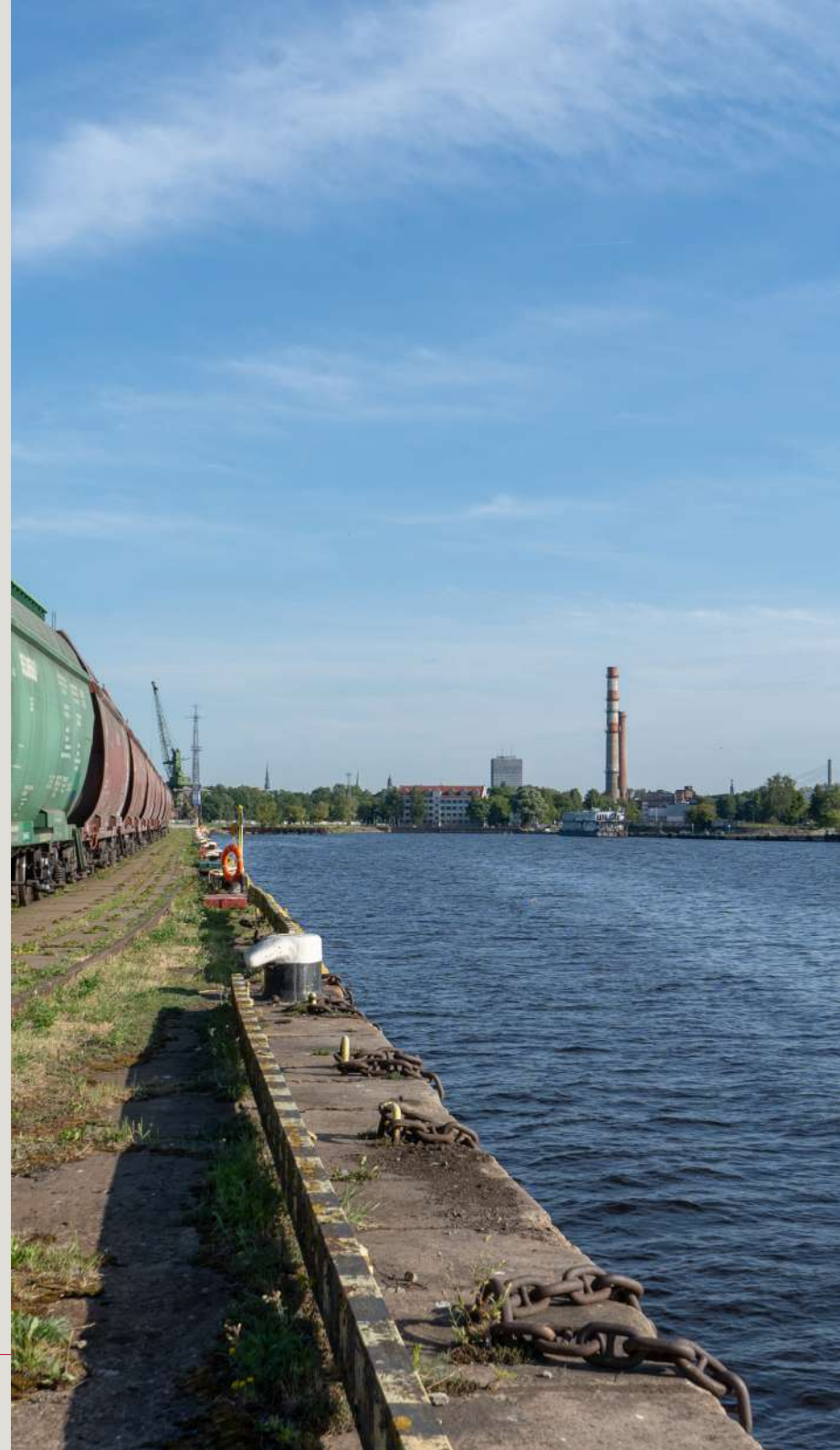
- A uniform landscape and construction design should be developed for the planned pedestrian promenade along the entire waterfront of the inlet of the Export Port, creating a publicly accessible and landscaped embankment, no less than 15 meters wide, including the minimum width of a pedestrian and cycling path - 6 meters (excluding side security spaces and the area occupied by landscaping elements). It is forbidden to fence off the pedestrian promenade or to obstruct with landscaping elements free movement of pedestrians along the embankment and their access to the waterfront.

- There must be well-equipped ramps leading to the water. A mooring site should be provided on the publicly accessible section of the embankment, allowing mooring and disembarkation.

- In the territory of the Pedestrian Promenade along the Inlet of the Export Port (TIN130), it is allowed to build different types of embankment elements that are harmoniously complementing one another, to place benches, seasonal cafes and lighting elements, maintaining a zone free from landscaping elements for pedestrians and cyclists with a width of no less than 6 meters;

- It is necessary to ensure a possibility for vehicles of emergency services, incl. fire-fighting and rescue service, to move in the territory.

- The buildings planned at the ground level on the side of the inlet of the Export Port should be located no closer than the designated Pedestrian Promenade along the Inlet of the Export Port (TIN130), but at a height of at least 6 meters from the level of the pedestrian zone of the promenade, it is allowed to create an overhang projecting above the Pedestrian Promenade along the Inlet of the Export Port (TIN130), but no more than 5 meters wide.







### **Pedestrian and cyclist movement corridor (TIN134):**

- The planned pedestrian and cyclist movement corridor is the territory of a public open space, and its purpose is to ensure access to the inlet of the Export Port in the Daugava. It is determined as a territory necessary for the development and construction of technical public infrastructure;
- The planned pedestrian and cyclist movement corridor is part of a single pedestrian promenade in the territory of the RHC PZ along the Daugava ending at Eksporta iela, which is designed, built and landscaped as a publicly accessible, continuous outdoor stretch without fencing;
- The width of a free space of the planned pedestrian and cyclist movement corridor is no less than 6 meters, including a pedestrian pavement and a bicycle path;
- In the planned pedestrian and cyclist movement corridor it is allowed to build underground engineering networks, if they are necessary for the engineering supply of the pedestrian promenade and waterfront of the inlet of the Export Port, or for the development of adjacent city blocks;
- In the planned pedestrian and cyclist movement corridor, it is allowed to install different landscaping elements that are harmoniously complementing one another, to place benches and lighting. Greenery is arranged within or outside the planned pedestrian and cyclist movement corridor, taking into account the location of the prospective buildings and structures (including underground engineering networks);
- It is necessary to ensure a possibility for vehicles of emergency services, incl. fire-fighting and rescue service, to move in the territory.

### **Public Square (TIN141):**

- The envisaged public square is a territory of a public open space provided for creation of a landscaped public square and pedestrian access to the Daugava along the waterfront of the Export Port inlet;
- It is prohibited to construct buildings in the territory of the Public Square (TIN141), except for seasonal or temporary small structures; vienlaicīgi jāņem vērā arī teritorijas ar īpašiem noteikumiem Kuģu piestātne (TIN146) noteikumi;
- In the territory of the Public Square (TIN141), where the existing Berth EO-6 is located, the provisions of the territory "Berth" (TIN146) where special provisions apply, must also be taken into account;
- The following principles must be observed in the improvement and landscaping of the public square:
  - the square is covered with a high-quality, continuous, one-level surfacing. Different areas of use are separated by surfacing of different material or colour;
  - the main directions of pedestrian movement have no obstacles and steps, they have flat and non-slip surface;
  - there is lighting of uniform design on square, which illuminates the main directions of pedestrian movement in the dark and accentuates the main entrances of buildings, choosing the spectrum of yellow light;
  - there are quiet areas of relaxation set up by placing benches, waste bins and greenery (in natural soil, boxes or pots);
  - there are bicycle stands, the design of which matches that of other landscaping elements.
- The Public Square (TIN141) needs to be landscaped as part of a unified public open space on the Daugava embankment and the end of the pedestrian promenade in the territory of the RHC PZ along the Daugava near the planned passenger ship terminal, which is designed, constructed and landscaped as a publicly accessible, landscaped area;
- The territory and location of the Public Square (TIN141) should be specified in the construction design, maintaining an open view of the Daugava, as well as its visual and functional connection with the passenger terminal, the waterfront pedestrian promenade, the tram track and its terminus, and Eksporta iela.

## **Berth:**

- The berth is a hydrotechnical structure that primarily provides berthing and mooring for ships on the shore, and it is designated as a limited public access area, taking into account the technical operation and navigation safety regulations of the berths of the Freeport of Riga;
- When transforming the berth and making it suitable for servicing passenger ships (including ferries and cruise ships) and RO-RO passenger ships (ro-pax ships), it is necessary to ensure access to the berth, its connection to the centralised sewerage and water supply systems, and to equip it with shore power supply systems. When developing a construction design for the reconstruction of the berth, the possibility of timely construction of all the necessary engineering networks, including the shore power supply system by reserving and/or installing the necessary engineering network corridors, cable shafts, etc. must be envisaged.
- The southern part of the Berth (TIN146), which at the same time is partially designated as the Public Square (TIN141) and borders on the Pedestrian Promenade along the Inlet of the Export Port (TIN130), can be improved as part of the unified public open space on the Daugava waterfront.
- At Berth EO-6, when servicing a ship with a length exceeding 200 m, the necessary berth area during the servicing of the ship in the territory of the Public Square (TIN141) is sectioned-off using movable/mobile fencing or other landscaping elements that enable continuous pedestrian movement from the Public Square (TIN141) to the Pedestrian Promenade along the Inlet of the Export Port (TIN130), no less than 6 m wide.

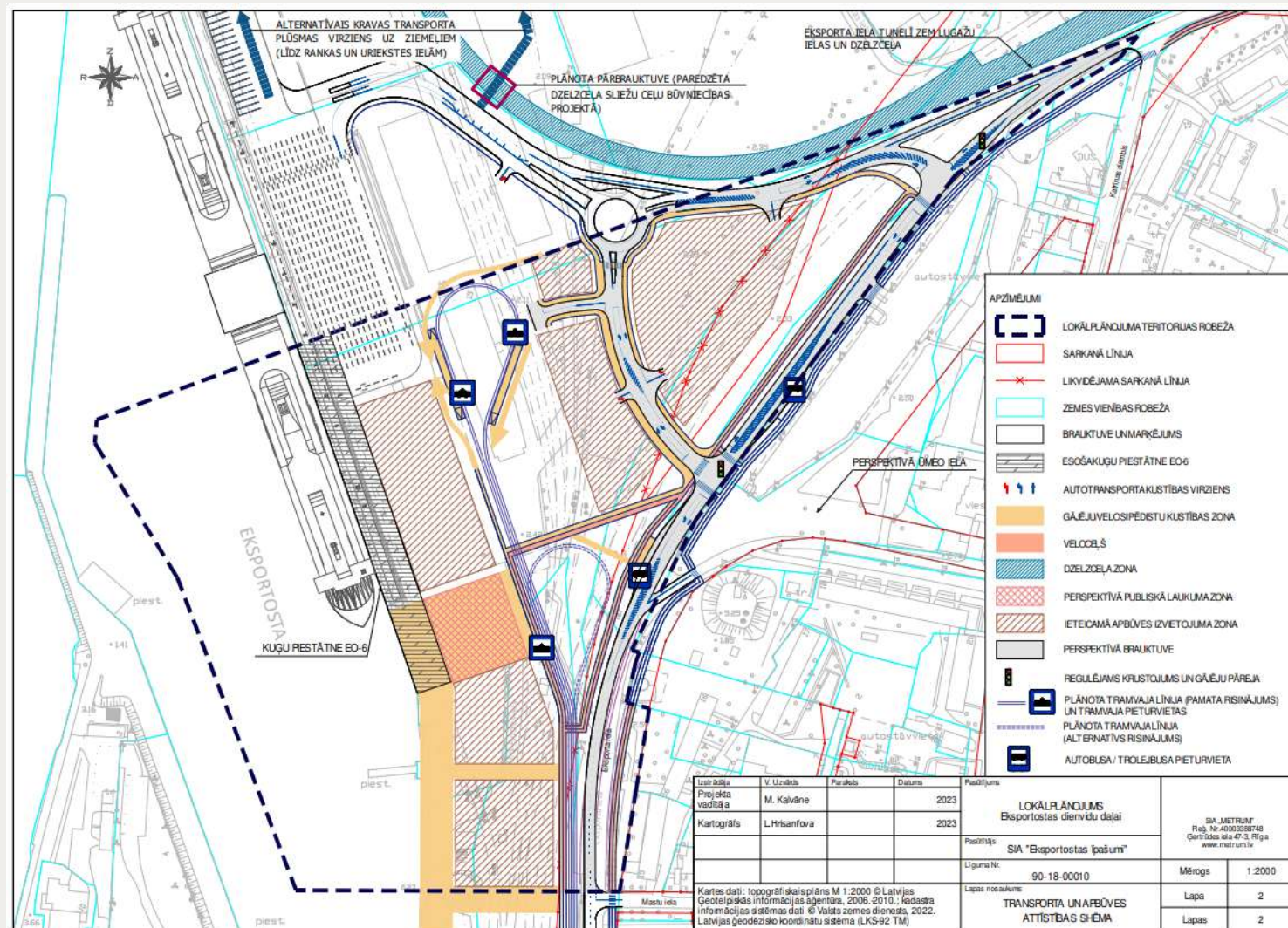
## **Territory of tram infrastructure development (TIN73):**

- The territory reserved for the construction of the planned tram route and its terminus, which is determined as the territory necessary for the development and construction of technical public infrastructure;
- Until the location of the tram route is specified and the tram tracks are built, it is allowed to arrange open over-ground car parks, access roads and plant greenery in the territory, as well as to use the territory for providing other public transport services up to the passenger terminal. In the case of the construction of the tram track and terminus, the arranged car parks are rebuilt or removed.
- The territory or its part, which is not necessary for the construction of the tram line and related infrastructure in accordance with the construction design developed and accepted in accordance with the established procedure, may be used for the types of use permitted in the functional zone.



The participants of the Competition can envisage deviations from the Local Plan solutions where there are no street lines, respectively, for the creation of a network of internal roads, a tram terminus and public transport stops. The solution for the terminus of the tram line must be included in the territory TIN73 specified in the Local Plan. If the participants of the Competition envisage deviations from the laws and regulations, Local Plan solutions, the requirements and conditions set by the programme and the Commissioner within the limits of street lines, which require further coordination with third parties or require amendments to the Local Plan, then, according to the Local Plan, the explanatory description of the Sketch Design must include an unequivocally clear reasoning with justification for such deviations.

The provisions of EO TIAN (see Designing Programme, Section 8.1) apply to the territory of the northern part of the Competition Object, including EO-7 and EO-8.



Transport and construction development scheme of the Local Plan in the southern part of the Export Port



# GUIDELINES FOR THE PLANNING OF THE COMPETITION

## OBJECT AND THE TERRITORY OF THE STUDY AREA

*The southern part of the Competition Object and the study area is part of the protection zone of the UNESCO World Heritage Site No. 852 "Historic Centre of Riga", while its part on the Daugava riverbank is also included in the protective belt established along surface water bodies.*

### Idea of the Competition

The participants of the Competition are invited to develop a proposal for the new Riga ROPAX terminal, offering new commercial spaces, creative spaces, retail options, modern infrastructure for handling of passengers and "RO-RO" cargos, and the territory adjoining it, which includes a publicly accessible waterfront, a high-quality public open space as well as additional infrastructure for servicing cruise ships with the prospect of creating a home port of a cruise line with restaurants and cafes that would also be available to local residents, intending to diminish sound and air pollution in the city centre and ensure safe movement.

Based on the analysis of possible types of use of the port, its water area and berths, the traffic and use scheme of the water area, the Competition proposal must present a functional scheme of the port including **the following parameters:**

- 3 berths, EO-6, EO-7 and EO-8, in one line, in a stretch of 620 m,
- simultaneous reception of two ships, "RO-RO" ramp with the possibility of handling ships from both sides on Berth EO-7,
- at Berth EO-6 only "ROPAX" (Tallink type) vessels can be handled,
- development of three segments – reception of ferries, RO-RO and cruise ships,
- draft at the berths – 10.5 m,
- reception of cruise ships 300+m,
- a turning basin 450 m.

According to the business plan, it is planned to have arrivals of 360 ROPAX ships, 180 RO-RO ships and 150 cruise ships per year. The maximum simultaneous number of passengers per day is 4000 passengers.

The participants of the Competition should take into account that it is planned to handle ROPAX ships 365 days a year at Berth EO-6, consequently, cruise ship passengers would be served seasonally at Berth EO-8, using also Berth EO-7 if necessary. A cruise ship season in Latvia lasts from May till September. The number of passengers served by cruise ships varies depending on the ship model and it can range from a few dozen passengers to 4,000 passengers. Currently, the Riga Post can receive cruise ships with the length exceeding 300 m at the cargo terminal on Krievu sala (island), while other cruise ships are received at the existing passenger port. Most of the cruise ships that visit Riga stay here for one day, and only occasionally the ships stay overnight. Cruise ship passengers mostly do not use the services of the terminal building and go on excursions by bus, taxi or on foot. Cruise ship passengers go on a cruise without cars. The average berthing time for one-day cruise ships is 7 hours, and 24 hours - for two-day cruise ships. It means that there must be infrastructure for cruise ship passenger buses and for safe access to and from them.

ROPAX ships, on the other hand, stay in the port for a fixed time during the day, mostly 7-8 hours. A ROPAX ship is not changed according to the choice of the shipping line. It is expected that the maximum number of its passengers will be 2,500. In most cases, passengers of a ROPAX ship do not choose to spend the night in the city they are visiting, e.g. Riga. They arrive on a ship in the morning and leave on a ship in the evening. Although ROPAX ship passengers may also go on excursions the same way like cruise ship passengers, about 25% of ROPAX ship passengers arrive in personal cars.

In the handling of ROPAX ships, it should be taken into account that passengers go to the city through the terminal building, therefore a safe and appropriate infrastructure should be provided. In addition to the handling of passengers, ROPAX ships also provide services for trucks, trailers and campers.

RO-RO ships are intended for the development of the RO-RO cargo segment. It is intended to service them at Berth EO-7 (where the ramp is) every other day when there is no cruise ship service or when the length of the cruise ship allows using Berth EO-7 for handling of RO-RO ships. The intended length of a RO-RO vessel is 200 m, the average berthing time is 7 hours.

Zoning must be developed for the territory of the Competition Object, showing schemes of flows in separate layers and considering the recommendations of the Local Plan according to the following scheme:

- a plan of open and closed zones of the port territory (in scale 1:2000 or in an axonometric scheme),
- a cruise ship traffic scheme that includes bus parking places and passenger flows (in scale 1:2000 or in an axonometric scheme),
- a scheme of RO-RO car movement (in scale 1:2000 or in an axonometric scheme),
- a scheme of movement of cars and trucks (max. 60 trucks/hour can pass through Eksporta iela to the city centre) (scale 1:2000 or axonometric scheme),
- a scheme of taxi movement and their stops and a "kiss and ride" car park scheme (1:2000 or axonometric scheme),
- a scheme of public car parks, indicating short-term and long-term parking spaces/their respective number, main driving directions (1:2000 or axonometric scheme),
- a public transport organisation scheme (a traffic circle solution - according to the Local Plan) (1:2000 or axonometric scheme),
- organization of pedestrian and cyclist flows, separating a cruise ship passenger flow, bicycle stands (scale 1:2000 or axonometric scheme).

The master plan of the Competition Object with an organisation scheme of landscaped areas and a greening concept (scale 1:1000).



In order to continue the construction of the pedestrian promenade planned in Andrejsala also in the territory of the Competition Object along the waterfront of the inlet of the Export Port, the Local Plan defines a territory with special provisions, i.e. **"Pedestrian Promenade along the Inlet of the Export Port"** (TIN130), which must ensure:

- its connection and unified landscape design with the pedestrian promenade planned in the detail plan of Andrejsala in order to provide access to the inlet of the Export Port on the Daugava. A section of the waterfront of the inlet of the Export Port is part of a single pedestrian promenade in the territory of the RHC PZ along the Daugava, which must be designed, built and landscaped as a publicly accessible, continuous outdoor lane without fencing. In the southern part of the territory, its connection and unified landscaping with the pedestrian promenade planned in Andrejsala's detail plan should be provided, while in the middle part of the Competition territory, its connection and unified landscaping with the planned public square must be provided;
- a uniform landscape and construction design must be developed for the planned pedestrian promenade along the entire waterfront of the inlet of the Export Port, creating a publicly accessible and landscaped embankment, no less than 15 m wide, including the minimum width of a pedestrian and cycling path - 6 m (excluding side security spaces and the area occupied by landscaping elements). It is forbidden to fence the pedestrian promenade or to obstruct the free movement of pedestrians along the embankment and access to the waterfront with elements of refurbishment;
- there must be well-equipped ramps leading to the water. A mooring site shall be provided on the publicly accessible section of the embankment, allowing mooring and disembarkation;
- in the territory of the Pedestrian Promenade along the Inlet of the Export Port (TIN130), it is allowed to build different types of embankment elements that are harmoniously complementing one another, to place benches, seasonal cafes and lighting elements, maintaining a zone free from landscaping elements for pedestrians and cyclists with a width of no less than 6 m;
- it is necessary to ensure a possibility for vehicles of emergency services, incl. the State fire-fighting and rescue service, to move in the territory;
- the buildings planned at the ground level on the side of the inlet of the Export Port should be located no closer than the designated Pedestrian Promenade along the Inlet of the Export Port (TIN130), but at a height of at least 6 m from the level of the pedestrian zone of the promenade, it is allowed to create an overhang projecting above the Pedestrian Promenade along the Inlet of the Export Port (TIN130), but no more than 5 m wide

A territory **"Public Square"** (TIN141) where special provisions apply is determined in the Local Plan, namely, a territory of a public open space provided for creation of a landscaped public square and pedestrian access to the Daugava along the waterfront of the Export Port inlet where:

- the public square needs to be landscaped as part of a unified public open space on the Daugava embankment and the end of the pedestrian promenade in the territory of the RHC PZ along the Daugava near the planned passenger ship terminal, which must be designed, constructed and landscaped as a publicly accessible, landscaped area;
- it is prohibited to construct buildings in the territory of the public square, except for seasonal or temporary small structures.
- in the territory of the public square where the existing Berth EO6 is located.
- an open view towards the Daugava must be preserved, as well as its visual and functional connection with the passenger terminal, the waterfront pedestrian promenade, the tram track and its terminus and Eksporta iela.

These principles must be observed in the improvement and landscaping of the public square:

- the square must be covered with a high-quality, continuous, one-level surfacing. Different areas of use are separated by surfacing of different material or colour;
- the main directions of pedestrian movement must have no obstacles and steps, they must have flat and non-slip surface;
- there must be lighting of uniform design on square, which illuminates the main directions of pedestrian movement in the dark and accentuates the main entrances of buildings, choosing the spectrum of yellow light;
- there must be quiet areas of relaxation set up by placing benches, waste bins and greenery (in natural soil, boxes or pots);
- there must be bicycle stands, the design of which matches that of other landscaping elements.



As part of the Local Plan, proposals have been elaborated for the development of both the pedestrian promenade and the embankment, as well as the pedestrian connecting road (corridor) ("Public Square" (TIN141) and "Pedestrian and Cyclist Movement Corridor" (TIN134)). Developing solutions for the forecourt of the passenger terminal, improvement of the berths and the pedestrian promenade, the multi-functional use of the territory should be ensured by using uniform environmental design elements.

The public open space of the territory of the Competition Object, must have the following:

- access to the Daugava should be improved by integrating it into the urban structure and connecting with the river those areas which are stretching along the Daugava but which are currently functionally and spatially separated from it;
- development on the banks of the Daugava must be planned in a complex manner, including both water and land areas; assessing the most important views from the Daugava to the city, as well as from one bank of the river to the other;
- high-quality pavement material for the area to be landscaped and improved, i.e. natural stone slabs, crushed stone, natural stone paving;
- ease of movement for people with disabilities, which is only allowed on smooth surfaces, ensuring a well thought-out design of the horizontal plane;
- paths, their width and surfacing must respect the local climatic conditions, especially in the winter period, ensuring convenient movement of mechanized tending and maintenance machinery and operation in the territory.

Elements of the improvement and landscaping of the territory of the Competition Object:

- all types of small architectural forms - benches, waste bins, lighting elements, flower boxes, signs, etc., suitable for the overall style of the passenger terminal building and the public open space;
- in the public open space there can be an environmental design element(s) with/without a fountain or an environmental design element with low fountains operating during the warm seasons of the year.

When planning the greenery of the public open space, it is recommended to choose plantings of trees and shrubs suitable for all seasons which maintain biodiversity and shape the landscape, and it is also recommended to respect seasonality, ensuring the presence of blossoming plants in all seasons (except winter), as well as colours, presence and seasonal variation of plant foliage. The integration of sustainable rainwater management solutions must be encouraged in greenery belts.

Approaching the city by water transport from the Gulf of Riga, the former warehouse building at Eksporta iela 15 k-8, cadastral designation 01000132008039, and the port cranes are prominently exposed against the silhouette of Old Riga. As a result of the warehouse reconstruction, the planned passenger terminal building can become Riga's landmark or "sea gate" for city guests arriving in Riga by water transport.

It is planned to adjust the building at Eksporta iela 15 k-8 to the functions of the passenger terminal (during **the first construction stage**) and activities (during **the second construction stage**), the performance of which does not depend on ship traffic.

The construction area of the building at Eksporta iela 15 k-8 (according to the cadastral survey file) is 7,242.6 m<sup>2</sup>, the total area is 18,761.8 m<sup>2</sup>, the useful area is 17,378.1 m<sup>2</sup>.



*A view to the former warehouse building at Eksporta iela 15 k-8, behind it there is a building at Eksporta iela 15 k-9*

The following functions must be provided in the passenger terminal (**in the first construction stage**):

Floor/level	Type of room	Desirable room area m <sup>2</sup>
1.	Public area	1340,00
1.	Port service area	250,00
1.	Rooms for public services	230,00
1.	Technical rooms	100,00
1.	Storage rooms	400,00
1.	Security service	110,00
2.	Border control and customs	250,00
2.	Port service area	250,00
2.	Technical room	200,00
3.	Public area	1600,00
3.	Port service area	250,00
3.	Bar	200,00
3.	VIP area	120,00
3.	Retail area/shops	390,00
4.	Tallink offices	600,00
	Corridors and staircases	<1070,00
	TOTAL	7360,00

During **the second construction stage**, besides the passenger terminal function, a concept for additional commercial spaces should be offered in the amount of -13,000.00 m<sup>2</sup>, which could include:

- catering area,
- retail area,
- business area, including shipping agent offices,
- education function,
- culture area,
- other functions at the discretion of Competition participants.

Considering that as a result of the development of the Export Port, the passenger terminal building will become a kind of urban attraction, the participants of the Competition may propose creative ideas for the functional and architectural transformation of the building. When transforming the existing buildings, according to the Local Plan, the architectural character of the industrial built-up area must be preserved.

It is planned to retain the rest of the buildings in the territory of the Competition Object, dismantling one section of the warehouse with cadastral designation 01000132008004.

The Sketch Design must, among other things, comply with the principles of the New European Bauhaus – beauty, sustainability and inclusion. Key criteria for high quality architecture and living environment:

- the design must provide for responsible attitude towards natural, financial and human resources;
- the design must respect the surrounding built-up environment, local scenery and traditions;
- the designed built-up environment is accessible and reachable for everyone;
- the design uses new skills, discoveries, knowledge and technologies;
- the design uses sustainable construction materials and technologies;
- the design improves the quality of the environment in the whole neighbourhood and enhances the well-being of people.

## Transport infrastructure

The territory of the Competition Object can currently be accessed from the land, i.e. via the access roads and streets from the side of Eksporta iela, and from the water, using the existing waterways along the Daugava and the existing berths.

The street lines of Eksporta iela have been changed in the Local Plan territory, making it possible to build an extension of the tram line and to extend Eksporta iela northwards in the future. New street lines have not been determined in the territory of the Competition Object. In the Local Plan, internal roads of the territory of the Competition Object are not planned as public streets, thus ensuring appropriate functioning of these territories.

As part of the Local Plan, studies and projections of existing and planned transport flows were carried out, based on the existing situation and spatial planning documents applying to the territory of Riga, as well as examples of the Port of Tallinn. Taking into account the expected traffic flows to/from the Competition Object and the study area, as well as the development trends of the surrounding areas, it is recommended to provide access from Lugažu iela, from the intersection of Ūmeo iela and Eksporta iela. In the future, freight transport flows will pass directly through the prospective intersection of Ūmeo and Eksporta Streets, thus a connection with the network of Category C streets will be established, and it has been taken into account that in the future, freight transport will reach the port on the right bank of the Daugava via the Eastern Highway and/or the Riga Northern Transport Corridor (RZTK), according to Riga 2030. Cars will use the intersection of Eksporta and Ūmeo streets and Lugažu iela, thus a connection will be established between streets of both Category C and D.

*The prospective street scheme and the connection of the Competition Object and the study are with the network of streets of Categories B, C and D*



The ferry terminal, whose flows consist of both direct flows to/from the ferry and adjacent flows that bring and take away passengers, has the biggest impact on the surrounding infrastructure. However, the flows to/from the ferry terminal cannot be considered as new flows on a city scale, since the construction of the ferry terminal would “relocate” the flows from the area in the immediate vicinity of the RHC to the area on the edge of the RHC protection zone, thus reducing the impact of both freight transport and passenger car flows on the RHC territory what complies with the Long-Term Strategy of Riga until 2030 and the policy of the thematic plan of the Freeport of Riga

The total number of parking spaces planned for servicing the berth of passenger ships (including ferries and cruise ships) and ro-ro passenger ships (ro-pax ships) must not be less than 100, in addition, there must be parking spaces necessary for trucks, coaches and bicycles, and short-term parking spaces for vehicles of emergency services and taxis. For other uses permitted in the Local Plan, the total number of parking spaces must not be less than 30 % of the (normative) number of parking spaces determined in the territory of the RHC PZ, while not exceeding the total number of parking spaces required by legal acts. It is recommended to determine an exact number based on the actual demand for parking spaces. The number of parking spaces required for such a building depends on the type of control system chosen and the sequence of operations.

## **Railway infrastructure**

During the development of the Local Plan, a new railway track was built leading into the Export Port, which maintains the connection with the railway station "Zemitāni". As part of the Local Plan, a safety protective belt along the newly built railway track was defined and shown.

## **Water transport and infrastructure necessary for navigation**

It is planned to renovate and reconstruct the existing berth EO-6 in the territory of the Competition Object to make it suitable for handling of passenger ships, RO-RO passenger ships and cruise ships. It should be taken into account that two ships, their length permitting, can be located simultaneously at Berths EO-6 and EO-7, and they can be passenger ships, RO-RO passenger ships or cruise ships.

When transforming the berth and making it suitable for servicing passenger ships (including ferries and cruise ships) and RO-RO passenger ships (ro-pax ships), it is necessary to ensure access to the berth, its connection to the centralised sewerage and water supply systems, and to equip it with shore power supply systems.

The southern part of the Berth (TIN146), which at the same time is partially designated as the public square (TIN141) and borders on the pedestrian promenade along the inlet of the Export Port (TIN130), can be improved as part of the unified public open space on the Daugava waterfront.

At Berth EO-6, when servicing a ship with a length exceeding 200 m, the necessary berth area during the servicing of the ship in the territory of the Public Square must be sectioned-off using movable/mobile fencing or other landscaping elements that enable continuous pedestrian movement from the Public Square to the pedestrian promenade along the inlet of the Export Port, no less than 6 m wide.

## **Availability of public transport**

Public transport stops that are nearest to the current competition site and the study area are located in Eksporta iela, Pētersalas iela and Ganību dambis, where both trams and buses run:

- Tram 5 "Iļģuciems–Mīlgrāvis" connects the Local Plan territory with Sarkandaugava, the city centre, Āgenskalns and Iļģuciems;
- Tram 9 "Aldaris-Ķengarags" connects the Local Plan territory with Sarkandaugava, the city centre, Maskavas suburb and Ķengarags. The tram runs only on working days;
- Bus 2 "Abrenes iela–Vecmīlgrāvis" connects the Local Plan territory with the city centre, Sarkandaugava, Mežaparks and Vecmīlgrāvis.

In the area of intersection of Pētersalas, Pulkveža Brieža Streets and Ganību dambis (street), there is a terminus of Bus 20 and Trolleybuses 1 and 19.

- Bus 20 "Pētersala–Pļavnieki Cemetery" connects neighbourhoods of Pļavnieki and Pētersalas iela.
- Trolleybus 19 "Pētersala–Ziepniekkalns" connects neighbourhoods of Ziepniekkalns and Pētersalas iela.
- Trolleybus 1 "Valmieras iela–Pētersalas iela" connects neighbourhoods of Pētersalas iela and Avotu iela.

In accordance with the planned functions of the Competition Object and the study area, public transport is vital for the visitors of the respective area who arrive by ship or go to the ship, as well as for the provision of other functions of the area. EO TIAN suggests creating a new public transport route – a bus or trolleybus route, along Eksporta iela, which would service areas where currently there is a limited number of public transport routes.

The Local Plan determines a wide tram track trajectory (TIN73), so that in the future, it will be possible to extend the tracks to the north in the territory of the Export Port, if such opportunity and need may arise. Considering the location of the prospective tram line and alternative solutions developed as part of the "Study of Transport Flows", "Territory of Tram Infrastructure Development" (TIN73) where special provisions apply was designated in the Local Plan territory, which defines that:

- The location of the tram route must be specified by assessing the level of noise pollution caused by tram traffic and, if necessary, by planning measures to reduce the noise level.
- Until the location of the tram route is specified and the tram tracks are built, it is allowed to arrange open over-ground car parks, access roads and plant greenery in the territory, as well as to use the territory for providing other public transport services up to the passenger terminal. In the case of the construction of the tram route and terminus, the arranged car parks are to be rebuilt or removed.

### **Network of pedestrian and bicycle paths**

According to the Local Plan solutions, it is necessary to build pavements for pedestrians along Eksporta iela, and to have a controlled intersection with pedestrian crossings at the intersection of Eksporta and Ūmeo Streets, ensuring safe and comfortable movement of pedestrians and cyclists. Given the cyclist infrastructure development plans, there should be bicycle paths along Eksporta iela on both sides, and along Lugažu iela at least on one side of the street (on the side of the prospective development). It is recommended to create bicycle lanes along the prospective Ūmeo iela, like it is envisaged in the Local Plan of the Skanste neighbourhood.

Pedestrian and cyclist movement must be planned along the Daugava, along the pedestrian promenade envisaged in the territory, and along its connection with Eksporta iela.

- The planned pedestrian and cyclist movement corridor is part of a single pedestrian promenade in the territory of the RHC PZ along the Daugava ending at Eksporta iela, which is designed, built and landscaped as a publicly accessible, continuous outdoor stretch without fencing.
- The width of a free space of the planned pedestrian and cyclist movement corridor is no less than 6 m, including a pedestrian pavement and a bicycle path.
- In the planned pedestrian and cyclist movement corridor, it is allowed to install different landscaping elements that are harmoniously complementing one another, as well as to place benches and lighting. Greenery is arranged within or outside the planned pedestrian and cyclist movement corridor, taking into account the location of the prospective buildings and structures (including underground engineering networks).
- It is necessary to ensure a possibility for vehicles of emergency services, incl. fire-fighting and rescue service, to move in the territory.





# ENGINEERING NETWORKS IN THE TERRITORY OF THE COMPETITION OBJECT AND THE STUDY AREA

*The territory of the Competition Object and the study area includes exploitation protective belts along the engineering networks, and it also includes and borders on the territory of the exploitation protective belt along streets or roads or street lines of the streets. This section provides an informative description of the situation of engineering networks.*

## **Water supply**

According to the information provided by the company SIA "Rīgas ūdens", there are DN 500 mm and DN 350 mm street water pipes, and DN 200/100 mm street water pipe with a service pipe, built in Eksporta iela.

Taking into account the existing water supply network and the location of the facilities, the Competition Object and the study area are provided with a centralised water supply.

Envisaging, for example, solutions for the reconstruction of Eksporta iela and/or the extension of the tram line in the territory of the Competition Object, when elaboration of the construction design starts, it will be necessary to evaluate the need to rebuild the existing centralised domestic sewerage and water supply network of the city of Riga, including dismantling and relocation (construction) of existing communications, in order to arrange the engineering communications in the street area in line with legal acts, taking into account that it is prohibited to build buildings, grow trees and bushes in the protective belts along engineering communications.

## **Water supply for firefighting**

Fire hydrants have been installed on all water mains of the centralised water supply in the territory of the Competition Object and study area, ensuring the accessibility of the existing buildings and structures from them.

When planning new buildings and structures, their fire safety must comply with Cabinet Regulation No. 333 "Regulations Regarding Latvian Construction Standard LBN 201-15, Fire Safety of Structures" of 30 June 2015, Cabinet Regulation No. 238 "Fire Safety Regulations" of 19 April 2016.

## **Wastewater**

Two types of wastewater are produced in the enterprises located in the territory of the Competition Object and study area - domestic wastewater and rainwater. Domestic wastewater from the largest part of the territory is discharged into the centralised domestic sewage networks of the city of Riga. According to the information provided by the company SIA "Rīgas ūdens", there are DN 1840/1500/2x1000/1500/1840 mm and DN 1840 mm main collectors of the city's domestic and industrial wastewater sewers, as well as a DN 600 mm collector, located in Eksporta iela. A divided system must be established in the territory of the Competition Object and the study area where a domestic and industrial wastewater network is separated from a rainwater collection network. Domestic and industrial wastewaters, are discharged into the centralised wastewater networks of the city of Riga.

## Rainwater collection and drainage

The management of the rainwater drainage system in the city of Riga is currently provided by the Traffic Department of the Riga City Council. According to the information provided by the Traffic Department of the Riga City Council, there are no city rainwater collectors near the Competition Object and the study area. When planning the development of the territory, surface waters must be prevented from entering the street from the object, they must be intercepted and discharged into the territory outside the street lines.

Rainwater must be discharged into the centralised rainwater networks of the city or into the Daugava (with pre-treatment), ensuring compliance of the quality of the discharged rainwater with Appendix No. 2 to the Riga City Council Binding Regulation No. 147 "Regulations on the Use and Maintenance of the Riga Hydrographic Network" of 15 November 2011. It is allowed to provide local water storage and drainage solutions in the territory (e.g. pond, reservoir, etc.).

Rainwater in the territory of the Competition Object and its study area accumulates as a result of precipitation, raining or melting of snow, draining from roofs, runoff from internal roads, squares, streets and other areas. After its collection, rainwater is discharged into the city's rainwater drainage system or into the environment. Local rainwater systems have been built to collect rainwater from the Competition Object and the study area, ensuring the collection, treatment and discharge of rainwater from built-up areas, streets and roads into the Daugava.

## Flood protection

The probability of flooding of the territory of the Competition Object and the study area is very low (0.5%) – once in 200 years. The probability of flooding is higher along the riverbank. According to the results of the research carried out as part of the project "Riga against Flood" (full name "Assessment, Prevention and Improvement of the Ecological Condition of the Surface Waters of the City of Riga", 2012), it is recommended to protect the city of Riga against floods that may occur in the near future (2021-2050) in the climate with a 1% probability or once in 100 years. Specific anti-flooding measures are not designed for the territory of the Competition Object and the study area, but it is allowed to change the terrain (filling up the territories) if it is necessary for the development of the territories. Existing berths, railways or any roads built above the maximum height of forecast floods can act as a levee to protect the rest of the area in the event of floods.

## Power supply

According to the information provided by JSC "Augstsprieguma tīkls", there is a 110kV underground cable power line of the public infrastructure power transmission network owned by JSC "Augstsprieguma tīkls" in Eksporta iela running along the study area of the Competition. A transformer substation TP051 is located in Eksporta iela K-10 in the study area of the Competition.

Power supply in the territory of the Competition Object and the study area is provided via medium voltage cables belonging to SIA "Riga Port Electric" and others. SIA "Riga Port Electric" is an electricity operator and supplier that ensures the physical distribution of electricity and operation of the power supply infrastructure, as well as provides related services in the Export Port. The territory of the Competition Object and the study area have the supply of the necessary electric power, detailed solutions can be developed during the stage of the construction design.

When developing a construction design for the reconstruction of the berth, the possibility of timely construction of all the necessary engineering networks, including the shore power supply system by reserving and/or installing the necessary engineering network corridors, cable shafts, etc. must be envisaged.





## Heat supply

Dn500 mm and Dn200 heating networks of the company AS "RĪGAS SILTUMS" are located on Eksporta iela (in the section from the city centre to Ūmeo iela).

The heat supply of the Competition Object and the study area, the adjoining port and production area is mainly provided locally, separately in each object, using mainly solid fuel. Since the Competition Object and the study area are located in the zone of air pollution III, where it is prohibited to build or install equipment that uses coal for production of thermal energy or for the implementation of technological processes, during the elaboration of the construction design, the need and solutions for the reconstruction of the existing heat pipes should be determined, depending on the location of the prospective buildings and objects and the required capacities.

## Gas supply

According to the information provided by the company JSC "Latvijas Gāze" (JSC "GASO"), in the territory of the Competition study area, namely, Eksporta iela, there is a medium pressure (up to 0.4 MPa) distribution gas pipeline dn 400, thus, currently gas supply is ensured to a part of the study area, and there is also a possibility to expand the mentioned gas supply network if the need arises.

When developing construction designs for the reconstruction or construction of new streets, roads, tram lines and access to the Competition Object and the study area, the existing gas pipelines must be taken into account and they must be retained or, if necessary, relocated.





# DESCRIPTION OF THE CLIMATE AND ENVIRONMENT

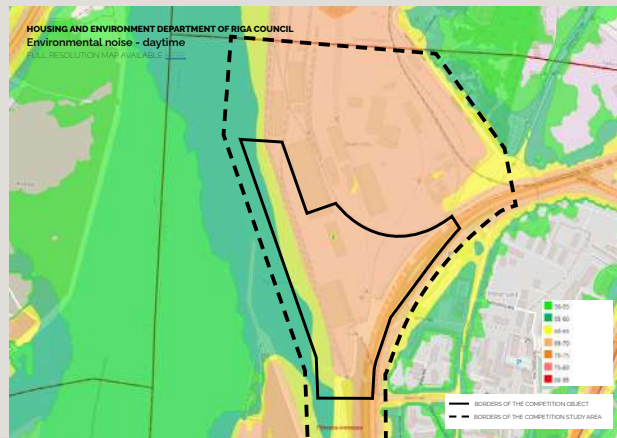
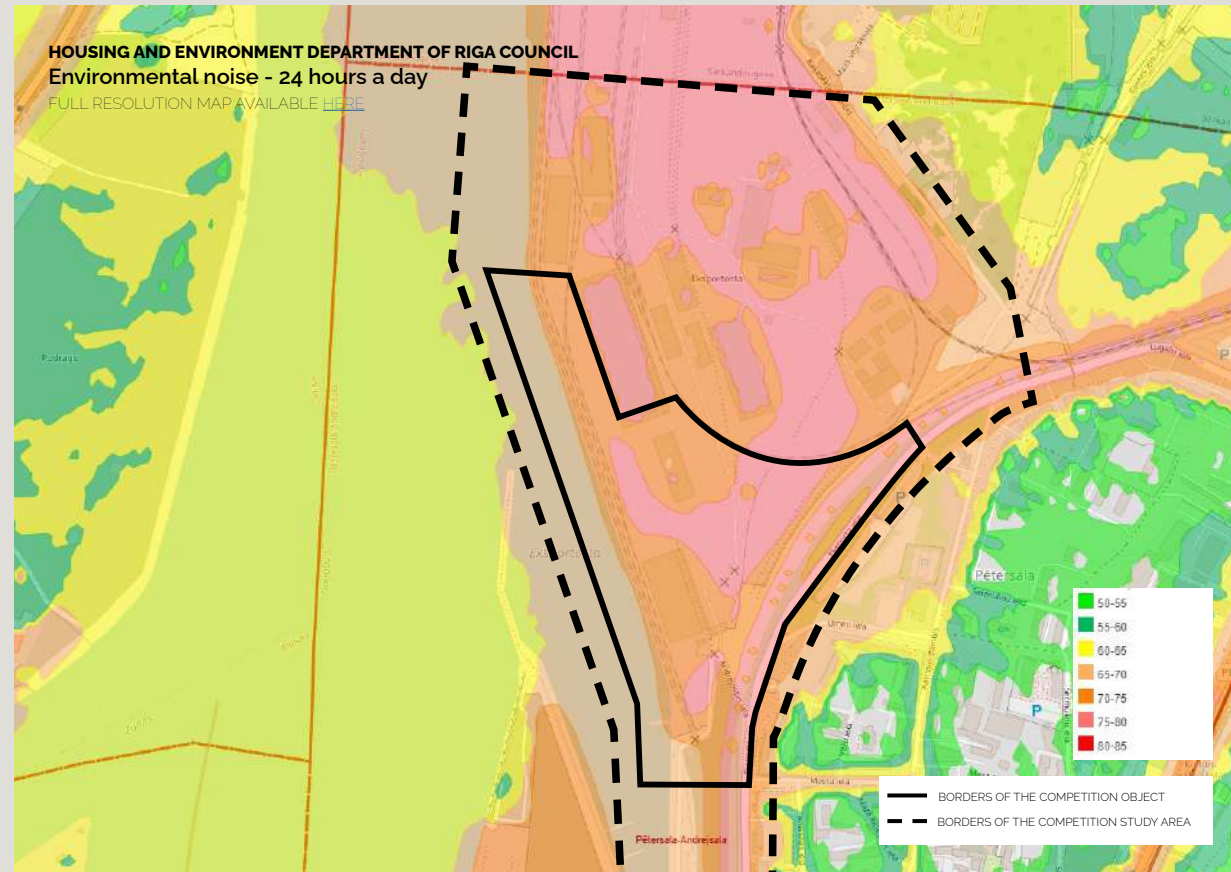
## Environmental noise

Noise is an unwanted, disturbing set of sounds in the air environment, which, among many natural and anthropogenic factors of the environment, is considered to have the most significant impact on human health. Noise is associated with many human activities, however, traffic has the greatest impact.

Currently, issues related to the noise assessment and measures to reduce noise are regulated by Cabinet Regulation No. 16 "Noise Assessment and Management Procedure" of 7 January 2014.

Noise and vibrations in the territory of the Competition Object and the study area are mainly caused by industrial activity in the territory of the Export Port (various technological facilities) and by transport infrastructure, i.e. railways and roads.

Since the territory of the Competition Object is situated in the RHC protection zone, it should be taken into account that any industrial object located there, including noise-emitting facilities located outside the territory are also sources of increased noise. Operation of such sources of noise without special measures for noise reduction at the source is not permitted.



Fragments of the noise maps of the territory of the Competition Object and the study area - 24 hours, day

## Air pollution

In order to ensure air quality for the protection of human health and the ecosystem, air quality standards are established, which determine the permissible level of air pollution. On 3 November 2009, the Council Regulation No. 1290 "Regulations Regarding Ambient Air Quality" was adopted, which determines the permissible level of 12 air pollutants in the environment along with certain measures to be taken if an increased level of air pollution is observed in a certain area.

The Riga City Council with Decision No. 1109 of 29 December 2021 approved "The Air Quality Improvement Action Programme 2021-2025 in the City of Riga". As part of the development of the programme, those measures that can potentially affect air quality were evaluated in detail, dividing them into the following groups: (1) Transport and traffic infrastructure; (2) Public transportation; (3) Heat supply equipment; (4) Stationary sources of pollution; (5) Port traffic and (6) Air quality management and raising of public awareness and education. Several of them also directly apply to the Competition Object and study area and the operations either ongoing or envisaged in this territory as a result of the prospective development.

As a result of pollution dispersion modelling, it was concluded that in 2019 the most important sources of NO<sub>2</sub> emissions in Riga were road transport (up to 60%), individual heating equipment (12%), ship traffic and mooring in port areas (11%) and production and heat supply companies (6%). The highest concentrations of NO<sub>2</sub> are formed near the busiest streets, however, increased pollution levels are also determined near the berths.

The main emission sources of PM<sub>10</sub> particles are production and port companies, road transport and individual heating, which in 2019 accounted for 31%, 31% and 27% of total PM<sub>10</sub> emissions, respectively.

