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**PETLİM LİMANCILIK TİCARET A.Ş.**

# **NON TECHNICAL SUMMARY FOR PETKIM CONTAINER TERMINAL PROJECT**

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**REPORT**





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## **1.0 INTRODUCTION**

Petlim Limancilik Ticaret A.Ş. ("Petlim") is planning to develop a Terminal Container ("Project") in Nemrut Bay in Aliağa Town (İzmir Province), Turkey. The proposed project site is located in an industrial district and on land owned by Petkim Petrochemicals Inc. ("Petkim" - majority shares owned by Socar). The site is adjacent to the Petkim Petrochemicals Complex and Tüpraş İzmir Petroleum Refinery. The planned Terminal Container Project will be utilized in connection to Petkim Petrochemical Complex activities.

## **2.0 PROJECT HISTORY AND JUSTIFICATION**

Petlim Limancilik Ticaret A.Ş. was established on November 2010 as a 100% subsidiary of Petkim Petrokimya A.Ş., in order to develop the Port of Petkim, to improve its economical performance and to generate revenues through increased activities.

Petkim Petrokimya A.Ş. is currently an indispensable manufacturer of raw material in Turkey with its wide range of petrochemical products, exceeding 50 items. Petrochemical products manufactured by Petkim Petrokimya A.Ş. are important inputs of industries such as agriculture, construction, automotive, electricity, electronics, packaging and textile. In addition to this, inputs for several industries such as pharmaceuticals, paint, detergent and cosmetics are manufactured.

Products from Turkey to Western Europe and from Western Europe to Turkey are transported by truck, generally using highway transportation infrastructures. The latest developments in the Balkan countries have increased the costs of transportation by truck. Since shipping is more economical when compared with trucking, the demand for shipping has increased.

Shipping is the most cost-effective transportation system in world trade, and therefore it is inevitably preferred when compared with other transportation systems. The share of shipping in international trade is currently around 85 %. Ports constitute departure and arrival points for shipping. The shipping opportunities provided by ports decrease the costs in export and import processes, saving foreign currency and increasing national economy competitiveness.

Considering the advantages of shipping, Petkim Petrokimya A.Ş. has decided to increase capacity of the port in Nemrut bay, operating it under more effective economical conditions.

## **3.0 PROJECT DESCRIPTION**

The Project was designed primarily to meet the needs of the Project Owner, and, in order to maintain commodity flow, it will provide port services to third parties.

The Project area is located in the peninsula between the Aliağa and Nemrut Gulfs, along the coast of the Petkim Aliağa Complex, facing the Nemrut Gulf. An aerial image showing the structures located around Petkim Petrokimya Holding A.Ş. Port Complex is provided in the figure below.



Figure 1: Marine Structures around the Port Complex

The 2018 Growth Strategy prepared by Petkim Petrokimya A.Ş. in 2010 sets the following objectives:

- to become one of the most important logistic terminals of the area;
- to have a container handling potential with high capacity;
- to have a liquid and dry cargo handling potential with high capacity; and
- to have logistic support units with high capacity.

At the beginning of 2009 Petkim Petrokimya Holding A.Ş planned major construction activities with the following general objectives: to expand the existing container port (Maximum 8.000 TEU Ship Berthing Capacity); to create a stationing area for crude oil/petroleum oil tankers for the STAR Refinery (STAR), in order to increase crude oil processing capacity to 10.000.000 ton/year; to build fuel berths designed to accommodate future expansions of the existing petrochemical facilities; and to build bulk carries berth with a capacity of 150.000 DWT.

The following construction activities were planned to reach these objectives:

- expanding of the existing Dry Load Cargo Berth from 335 m length x 100 m width to 427 m length x 60 m width.
- redesign of the existing Berth from 222 m length x 25 m width to 150 in length x 20 in width.
- expanding of the existing Jetty to 300 m length and 15 m width
- construction of New Fuel Berth (450 m length x 10 m width)
- construction of New Fuel Berth (350 m length and 7 m width)
- construction of New Bulk Cargo Berth (556 m length and 25 m width)
- dredging of the berth and wharf area up to -16 m in order to ensure sufficient depth for ships (1.278.000 m<sup>3</sup> of material dredged from an area of 223.000 m<sup>2</sup> area)





The EIA Report was prepared according to this project and an “EIA Positive Decision” was granted on 26/07/2010, with protocol No. 1944 by the Ministry of Environment and Forestry (now Ministry of Environment and Urbanisation, General Directorate of Environmental Impact Assessment and Planning).

The following figure shows main elements of the project that has been granted the “EIA Positive Decision” on 26.07.2010.



*Figure 2: The Operations under the scope of the Capacity Increase Project that has EIA Positive Document in 2010*

After the EIA Positive Decision was granted in 2010, the project has been modified and integrated with the following additional elements:

- two additional filling areas of 152.655 m<sup>2</sup> (126.130 m<sup>2</sup> in 1<sup>st</sup> Region, and 26.525 m<sup>2</sup> in 2nd Region);
- construction of two new liquid cargo berths with a sea depth of 36-42 and a length of 510 m and 370 m, replacing two fuel berths and bulk cargo berth planned in the initial Project;
- construction of a container terminal with an extension of 440.000 m<sup>2</sup> in an area outside the port;
- additional dredging activities to ensure a sufficient depth in the marine area;
- extension of the existing wharf (Dry Cargo Berth 1-2) and a general revision of the jetty area.

## **4.0 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT APPROACH**

### **4.1 Overall Objectives and Components of the ESIA**

A bankable ESIA needs to follow both national legislation and international standards. IFC Performance Standard 1 (IFC 2012) lists overall objectives for an ESIA, including:

- to identify and assess social and environmental impacts, both adverse and beneficial, in the project’s area of influence;



- to follow the mitigation hierarchy of avoidance, minimization of impacts, mitigation and if needed compensation, with respect to adverse impacts to workers, other affected people, and the environment;
- to conduct meaningful consultation; and
- to promote improved social and environmental performance of companies through the effective use of management systems.

The ESIA is prepared in accordance with both Turkish Regulations and International Standards. As described in IFC Performance Standard 1, main components of the assessment will include:

- the potential environmental and social impacts of the Project throughout the full development cycle – construction, operation, closure;
- a public consultation and disclosure plan to ensure that local communities and other key stakeholders are informed of the Project and have an opportunity to express their opinions concerning the Project;
- proposed mitigation activities to minimize adverse environmental impacts;
- the nature and significance of residual impacts (those adverse impacts that occur after mitigation has been applied) and ongoing monitoring and management plans to address them;
- the nature and significance of cumulative impacts;
- a social management plan to maximize benefits to the local community and promote a sustainable economy.

## **4.2 Study area**

The Project Site is located in the district of Aliağa within İzmir Province in the Aegean Region of Turkey. The area of influence of the Peltim Container Terminal Project is the area in which a direct or indirect impact on the biological, physical and social components might occur. A **Local Study Area (LSA)** is defined for each environmental and social component.

The terrestrial LSA is defined by a 300 m buffer around container terminal and container deposit areas and a 100 m buffer for connection roads.

The offshore LSA includes a coastal Local Study Area (LSA), defined by a 1km buffer around the infrastructures (container terminal, and dock expansion) and the port dredging area. The sediment disposal area (also part of the offshore LSA) is located approximately 6 km offshore and it is approximately a 220 m by 600 rectangular area.

The LSA is expected to encompass the area affected by all potential environmental impacts (e.g. noise and air quality impacts), and it is consistent with the methodologies adopted by other studies of similar projects. For some components like visual impacts, the study area will have a variable size depending on landscape features.

In order to correctly assess the importance and the role of the biological components living in the LSA, a **Regional Study Area (RSA)** was analyzed as well. This large area can be identified applying the eco-regions approach for the following categories: vegetation; terrestrial fauna; hydrobiology; marine biology.



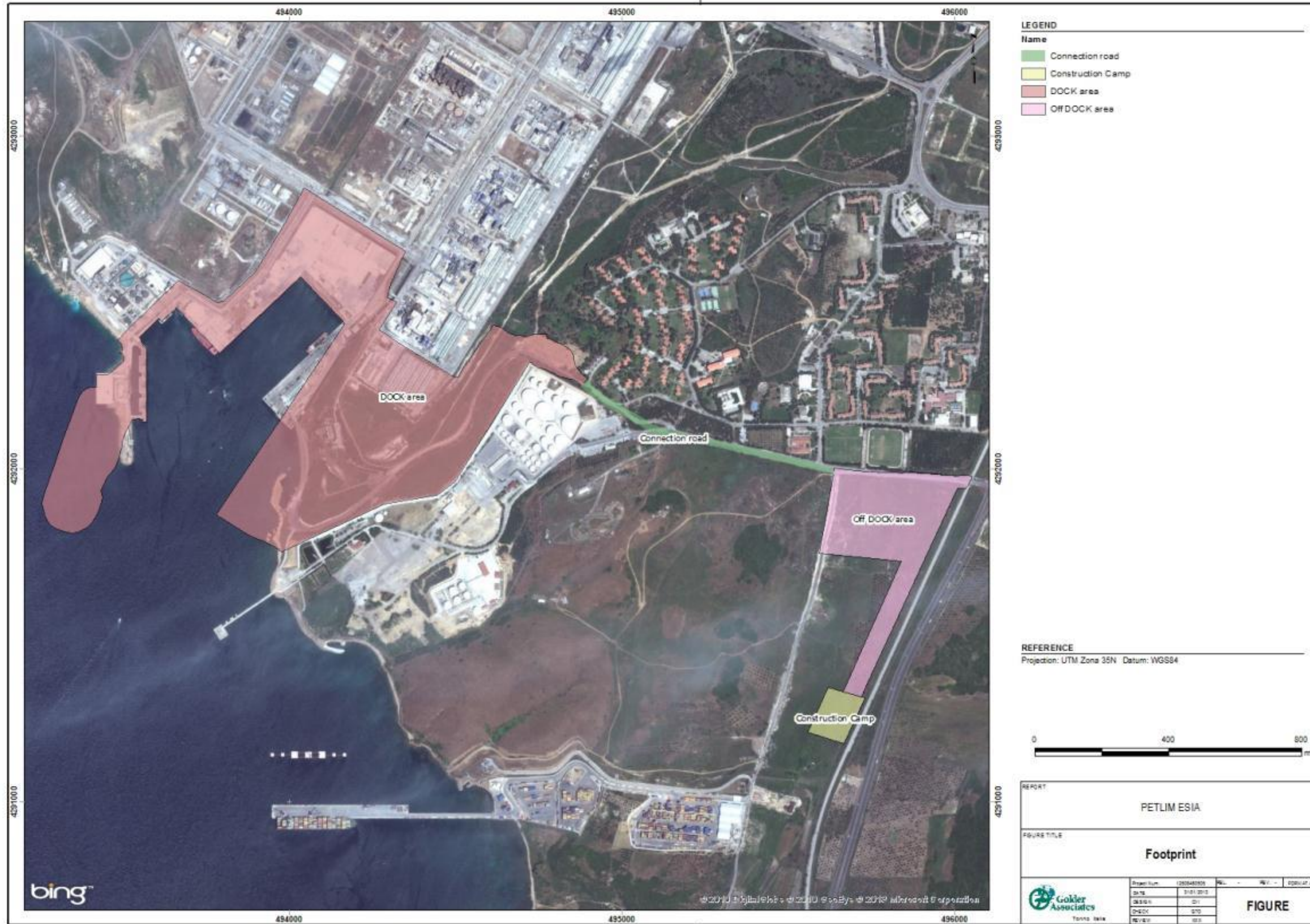


Figure 3: Project footprint



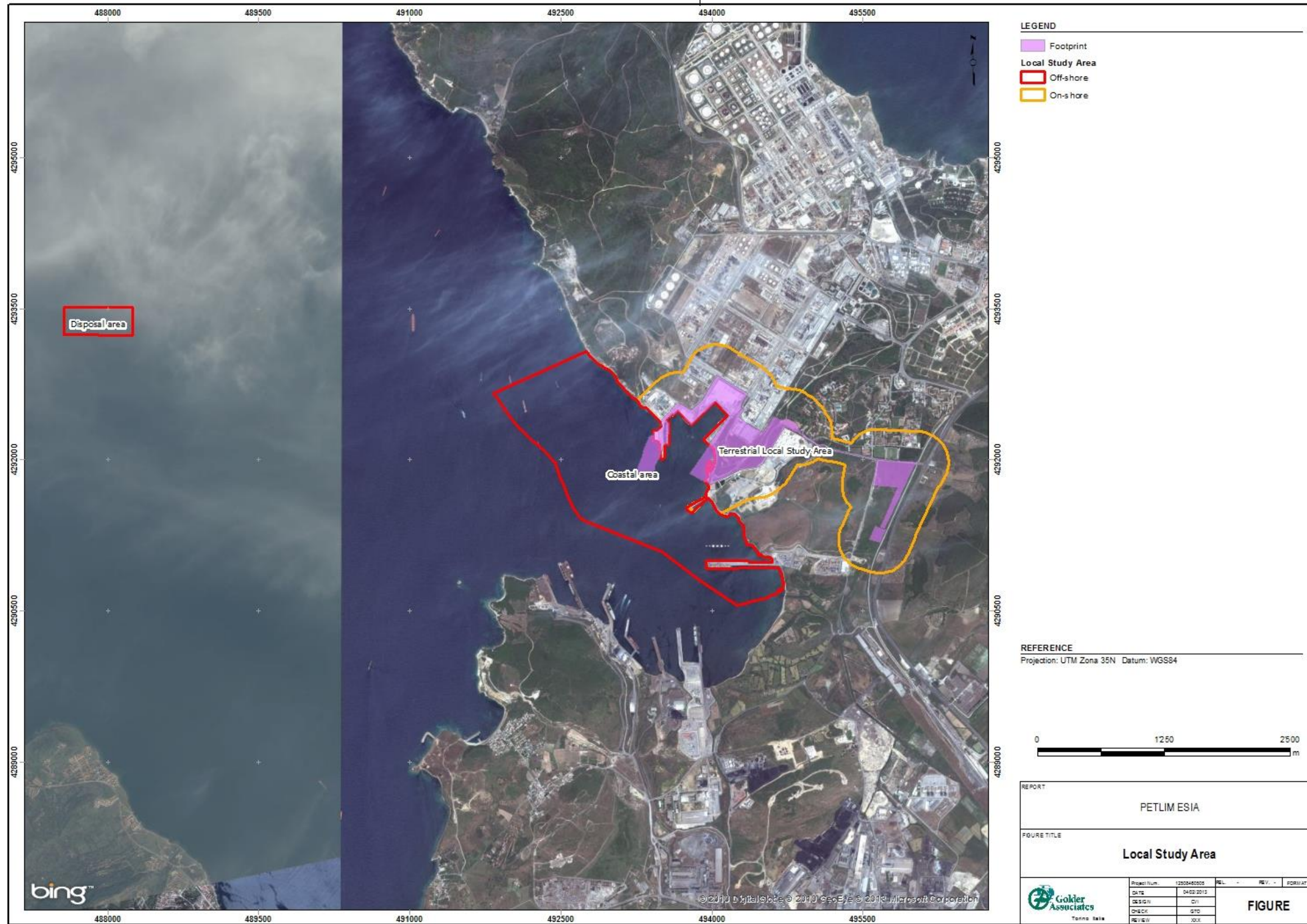


Figure 4: local study area (LSA)





### 4.3 Gap analysis and scoping

The preliminary stage of the ESIA process consisted in the preparation of the following documents:

- A Gap analysis (concluded in October 2012)
- A Scoping document (concluded in November 2012)

In the Gap analysis each environmental and socio-economic component/discipline was analyzed and assessed under three aspects: “Available information typology and sources”, “Component / Discipline Brief Description” and “Deficiency / GAP Analysis and Required Studies for the ESIA”.

Within the Gap Analysis the gaps/needs listed below were identified to complete the environmental components characterization:

- Lack of biological characterization of the marine benthonic fauna in the offshore disposal area to collect the information on the species and habitats colonizing the substrate of the area;
- Need of interviews to fishermen of Aliaga Port in order to acquire further information on fishing activities in the disposal area and neighbouring zones;
- Lack of chemical analysis of the soil of the hill interested by excavation and grading in order to verify the presence of contaminants in the soil and to organize as appropriate the disposal of the removed material;
- Need to collect recent traffic data about including vehicle category, average speed and the hourly average vehicle count on two-lane roadways for the elaboration of a model to assess the impact of traffic on air quality during the construction and operational phases.
- Need of field surveys on terrestrial habitats and flora inside the terrestrial local study area to verify the habitat maps.

With the exception of the chemical analysis of the soil of the hill interested by excavation (postponed to the further stages of the Project) all the other gaps were filled-in in the months subsequent the Gap Analysis delivery.

### 4.4 Potential impacts identification

Based on Project description, activities that during the construction or the operational phases could potentially contribute to environmental or social changes are identified and referred to as **Project actions**.

**Environmental, biological and social components** are then analyzed against Project actions in a Leopold Matrix in order to identified the components potentially impacted (negatively or positively) by the Project actions during the construction or the operational phases.

Finally, **impacts factors** able to interfere positively or negatively, in a direct or indirect way, are identified for each component during the construction and the operational phases. This analysis is based on the Project actions previously recognized.

### 4.5 Baseline

The methodology used for the baseline studies is different for the different components, therefore it has been detailed in the paragraph corresponding to each component.



Data sources used for the assessment could be divided in three categories:

- literature research: including scientific publications for the characterization of the general regional area and grey literature (e.g. ESIA for Aegean Refinery – STAR) for studies located inside or in close proximity to the LSA;
- field work conducted as part of the process for the realization of the National EIA for Petkim Port;
- additional field work specifically conducted for this ESIA (December 2012) in order to bridge the gaps identified:
  - biological characterization of the offshore disposal area;
  - field surveys on terrestrial habitats and flora in the local study;
  - interviews with fishermen in the local communities;
  - traffic data collection.

## 4.6 Impact assessment

Impact assessment is performed for main issues for each ESIA component (discipline). The common impact assessment methodology consists of five main steps:

- identification of Project activities that could contribute to environmental or social change;
- evaluation of the potential effects;
- description of mitigations for potential effects;
- analysis and characterization of residual effects; and
- as necessary, identification of monitoring to evaluate and track performance.

The general methodology adopted by Golder for Environmental and Social Impact Assessment Studies is consistent with the **DPSIR framework** (Drivers-Pressures-State-Impact-Response) developed by the European Environmental Agency (“EEA”). The methodology has been designed to be highly transparent and allow a semi-quantitative analysis of the impacts on the various environmental and social components. In the following paragraphs the methodology is described in its general terms.

The framework is based on the identification of the following elements:

- **Drivers:** project actions which can interfere significantly with the environment as primary generative elements of the environmental pressures;
- **Pressures** (impact factors): forms of direct or indirect interference produced by the project actions on the environment, able to influence the environmental state or quality;
- **State** (sensitivity): sum of the conditions which characterize the present quality and/or trends of a specific environmental and social component and/or of its resources’;
- **Impacts:** changes undergone by the environmental state or quality because of the different pressures generated by the drivers;
- **Responses** (mitigation measures): actions adopted in order to improve the environmental conditions or to reduce pressures and negative impacts.





The overall impact analysis methodology has been developed by Golder based on its experience in the field of the environmental and social impact assessment; the methodology includes the following phases:

- definition of the current state or quality of the different environmental and social components potentially impacted based on the results of the baseline studies;
- identification of the impacts potentially affecting the environmental and social components in the different phases of the project (construction, operation and decommissioning/closure);
- definition and assessment of the effects of the planned mitigation measures.

The **impact assessment** on the single valued environmental and social component interfered in the different project phases is completed through the use of specific **environmental impact matrices** which compare the component state, expressed in terms of sensitivity, with the relevant impact factors, quantified on the basis of a series of parameters which include:

- duration (short, medium-short, medium, medium-long, long);
- frequency (concentrate, discontinuous, continuous);
- geographic extent (local, regional, beyond regional); and
- intensity (negligible, low, medium, high).

The quantification of the single impacts resulting from each factor acting on the environmental component is obtained assigning to each feature of the impact factor a score increasing in relation to the bigger entity of the impact related to it.

## **5.0 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROJECT**

### **5.1 Identification of the project actions**

Activities or project actions that could potentially contribute to environmental or social changes during the construction or the operational phase of the Project have been identified through an analysis of the Project documentation available at the time of the preparation of this ESIA. .

#### **Construction phase**

- demolition of the existing buildings;
- surface leveling and grading;
- temporary stockpiling of the material;
- disposal of the excavated material;
- transport of construction material;
- construction of the facilities;
- expansion of the connection road;
- sediment dredging;
- sediment transportation;
- disposal of marine sediment off-shore (dumping);
- filling of sea areas;
- disposal of the waste deriving from construction.

#### **Operational phase**

- presence of the container deposit facilities;
- presences of offshore new infrastructures;
- operation of the facilities (including use of consumer goods);
- road traffic;
- ship traffic.



## 5.2 Identification of the components

After the identification of the Project actions, a Leopold Matrix has been created (environmental, biological and social components against Project actions in order to identify the components potentially impacted by the project actions.

Through the use of the matrices, the following components were identified as potentially impacted (negatively or positively) during the construction or the operational phases of the Project.

### Physical components

- geology and geomorphology;
- soil (including land use);
- surface water hydrology;
- hydrogeology;
- physical oceanography;
- sea floor features and marine sediment;
- atmosphere (air quality, climate and meteorology);
- noise and vibration;
- traffic and infrastructures.

### Biological components

- terrestrial Fauna;
- terrestrial Flora;
- marine Fauna;
- marine Flora;
- onshore habitat;
- offshore habitat;
- protected areas;
- alien species;
- biodiversity.

### Social components

- housing and employment issues;
- cultural resources, including archaeology;
- project stakeholders and any project-affected people - ecosystem services;
- human and ecological health risk;
- settlement patterns;
- resettlement and compensation;
- visual aesthetics.

## 5.3 Identification of the impact factors and measures

In order to show the correlation among the Project actions, the impact factors for different phases and the single components potentially impacted, the following correlation matrices were created and mitigation measures for each component were identified.





5.3.1 Impacts in Physical Components

| Components                | Project actions (construction phase)             | Project actions (operational phase)           | Impact factors  | Mitigation measures including but not limited to  |
|---------------------------|--|---|---|---|
| GEOLOGY AND GEOMORPHOLOGY | demolition of the existing buildings             | -   | groundwater pollution; hydrogeological changing                           | <p>Mitigations should be applied by using best practices during construction activities, to reduce accidental pollutants emission in groundwater. Groundwater pollution is also related to soil quality assessment; in case of contamination, soil storage will follow standards and best practice and will be located in areas with low soil and groundwater vulnerability.</p> <p>To prevent or reduce impacts on groundwater in terms of additional needs, it could be useful to apply a water resource management plan, including surface water and wastewater in order to optimize water needs and minimize environmental impact.</p>  |
|                           | surface leveling and grading                     | -   |   |   |
|                           | temporary stockpiling of the material            | -   |   |   |
|                           | Excavation operations (foundations)              | -   |   |   |
|                           | expansion of the connection road                 | -   |   |   |
|                           | disposal of waste deriving from construction     | -   |   |   |
|                           | -  | presence of the container deposit facilities; | hydrogeological changing  |   |
|                           | -  | increase of traffic                           |   |   |
| SOIL AND LAND USE         | demolition of the existing buildings             | -   | soil removal; occupation of land; pollutant and dust emission in top soil | <p>Prior to construction a detailed Phase I Environmental Site Assessment should be conducted in order to determine if there are any contaminant sources present within the sit or in the near vicinity. After Phase I study if needed, a Phase II Environmental Site Assessment should be conducted by collecting soil samples in order to determine if there is any contamination in the soil, types and distribution of the contaminants.</p> <p>In order to reduce loss of top soil due to project actions in the construction phase, mitigations could be applied.</p> <p>Concerning potential emission of dust and pollution in top soil in construction phase, mitigations measures could be in place.</p> <p>During the operational phase, the presence of new structures and related increase in artificial surface cannot be mitigated, although compensatory instruments should be contemplated during following steps of consultation with authorities.</p> |
|                           | surface leveling and grading                     | -   |   |   |
|                           | temporary stockpiling of the material            | -   |   |   |
|                           | Excavation operations (foundations)              | -   |   |   |
|                           | expansion of the connection road                 | -   |   |   |
|                           | disposal of the waste deriving from construction | -   |   |   |
|                           | -  | presence of the container deposit facilities  | occupation of land; increase of artificial surface                        |   |
|                           | -  | increase of traffic                           |   |   |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components                     | Project actions (construction phase)             | Project actions (operational phase)          | Impact factors                                     | Mitigation measures including but not limited to   |
|--------------------------------|--|--|--|--|
| <b>SURFACE WATER HYDROLOGY</b> | demolition of the existing buildings             | -  | surface water pollution;<br>hydrological changing  | <p>The LSA is unlikely to be subject to risk of flooding, however, rain water interceptor sewers and grids should be placed in port area within the scope of construction practices.</p> <p>A drainage system should be installed or the existing one should be adapted to the new and enlarged port setting.</p> <p>It could be necessary to plan monitoring actions to verify compliance of wastewater with regulatory requirements.</p> <p>To prevent impacts on water and wastewater in terms of additional production and needs, it could be useful to apply a water resource management plan directed at optimizing the use of water and in minimizing the environmental impact of water use on the natural environment.</p> |
|                                | Excavation operations (foundations)              | -  |  |  |
|                                | expansion of the connection road                 | -  |  |  |
|                                | disposal of waste deriving from construction     | -  |  |  |
|                                | -  | presence of the container deposit facilities | hydrological changing                              |  |
| <b>HYDROGEOLOGY</b>            | demolition of the existing buildings             | -  | hydrogeological changing;<br>groundwater pollution | <p>Mitigations should be applied by using best practices during construction activities, to reduce accidental pollutant emission in groundwater.</p> <p>To prevent or reduce impacts on groundwater in terms of additional needs, it could be useful to apply a water resource management plan, including surface water and wastewater in order to optimize water needs and minimize environmental impact.</p>   |
|                                | surface leveling and grading                     | -  |  |  |
|                                | temporary stockpiling of the material            | -  |  |  |
|                                | disposal of the excavated material               | -  |  |  |
|                                | Excavation operations (foundations)              | -  |  |  |
|                                | expansion of the connection road                 | -  |  |  |
|                                | disposal of the waste deriving from construction | -  |  |  |
|                                | -  | presence of the container deposit facilities | hydrological changing                              |  |





## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components                                   | Project actions (construction phase)            | Project actions (operational phase)                           | Impact factors  | Mitigation measures including but not limited to   |
|--|---|---|---|--|
| <b>PHYSICAL OCEANOGRAPHY</b>                 | sediment dredging                               | -   | sediment disturbance and removal; discharge of organic and inorganic substances in the sea.   | In order to avoid emission of organic and inorganic substances in the sea, the subcontractor in charge of dredging and construction activities should take structural measures in order to limit sediment dispersion during both dredging and sediment transport to the disposal area.   |
|  | sediment transportation                         | -   |   |  |
|  | disposal of marine sediment off-shore (dumping) | -   |   |  |
|  | filling of sea areas                            | -   |   |  |
|  |   | operation of the facilities (including use of consumer goods) | deposition of sediment in new areas; discharge of organic and inorganic substances in the sea; presence of new infrastructures off-shore. | During the operational phase, any accidental discharges will be reported through an incident reporting system. The response actions taken for facing the contingency will also be reported, thus providing sea bed/water contamination monitoring and control.   |
|  | -   | ship traffic  |   |  |
| <b>SEAFLOOR FEATURES AND MARINE SEDIMENT</b> | sediment dredging                               | -   | sediment disturbance and removal; deposition of sediment in new areas .   | <p>In order to avoid deposition of sediment in new areas as a result of dredging and dumping activities during the construction phase, following measures should be implemented:</p> <ul style="list-style-type: none"> <li>Classical systems like silt curtains and containment booms can be adopted during the construction activities to avoid or limit sediment dispersion. Moreover, during sediment transportation, bulkhead should be used on the barge in order to avoid sediment fall into the sea;</li> <li>To limit sediment spreading in the gulf, two different dumping position will be considered depending on wind direction (and therefore surface waves direction).</li> </ul> |
|  | sediment transportation                         | -   |   |  |
|  | disposal of marine sediment off-shore (dumping) | -   |   |  |
|  | filling of sea areas                            | -   |   |  |
|  | -   | presences of offshore new infrastructures                     | deposition of sediment in new areas; presence of new infrastructures  |  |
|  | -   | operation of the facilities (including use of consumer goods) |   |  |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components   | Project actions (construction phase)             | Project actions (operational phase)                           | Impact factors                                | Mitigation measures including but not limited to   |
|--|--|---|---|--|
| <b>ATMOSPHERE (AIR QUALITY, CLIMATE AND METEOROLOGY)</b> | demolition of the existing buildings             | -   | pollutant and dust emission in the atmosphere | <p>Mitigation techniques for the reduction and control of dust and exhaust emissions from construction activities will include:</p> <p>Construction sites, open storage piles and transportation routes will be moisturized twice a day in hot-dry seasons;</p> <ul style="list-style-type: none"> <li>■ Trucks transporting fugitive material such as soil, sand, etc. will be covered to prevent dispersion during transportation;</li> <li>■ Periodic maintenance will be provided for construction machinery and equipment to control the exhaust emissions;</li> <li>■ Good condition construction equipment will be used.</li> </ul>   |
|  | surface leveling and grading                     | -   |   |  |
|  | temporary stockpiling of the material            | -   |   |  |
|  | disposal of the excavated material               | -   |   |  |
|  | transport of construction material               | -   |   |  |
|  | construction of the facilities                   | -   |   |  |
|  | expansion of the connection road                 | -   |   |  |
|  | disposal of the waste deriving from construction | -   | pollutant and dust emission in the atmosphere | <p>The fuel system of the vehicles shall be controlled permanently and it shall be complied with the provision of the legal requirements.</p>  |
|  | -  | operation of the facilities (including use of consumer goods) |   |  |
|  | -  | road traffic  |   |  |
| -  | ship traffic                                     |   |   |  |
| <b>NOISE AND VIBRATIONS</b>                              | demolition of the existing buildings             | -   | emission of noise and vibrations              | <p>During the construction stage appropriate personal protective equipment and materials such as helmet, ear protector or ear plug will be provided to protect workers from noise and having Petkim and Tüpraş lodgments in close vicinity, the construction activities will be limited during night time.</p> <p>The following measures recommended by IFC will be applied where possible: selection of equipment with lower sound power levels, installing silencers for fan, installing suitable mufflers on engine exhausts and compressor components, installing acoustic enclosures for equipment casing radiating noise, installing vibration isolation for mechanical equipment, limiting the hours of operation for specific pieces of equipment or operations, especially mobile sources operating through community areas, reducing project traffic routing through community</p> |
|  | surface leveling and grading                     | -   |   |  |
|  | temporary stockpiling of the material            | -   |   |  |
|  | disposal of the excavated material               | -   |   |  |
|  | transport of construction material               | -   |   |  |
|  | construction of the facilities                   | -   |   |  |





## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components               | Project actions (construction phase)             | Project actions (operational phase)                           | Impact factors                   | Mitigation measures including but not limited to   |
|--------------------------|--|---|----------------------------------|--|
|                          | sediment dredging                                | -   | emission of noise and vibrations | <p>areas wherever possible; and developing a mechanism to record and respond to complaints. In addition, regular maintenance will be made for the construction equipment to ensure decreasing the possible high noise levels generated by the equipment.</p> <p>Given the already high ambient noise levels at the Petkim lodgments, consideration will be given to providing additional sound barriers. This could include strategic location of salvaged soil and the siting of tree plantings.</p> <p>During the construction stage, appropriate personal protective materials such as helmet, ear protector or ear plug will be given to protect workers from noise. In addition, maintenance of the equipment will be made regularly to ensure high noise levels are minimized.</p> <p>Following methods will be applied to reduce the potential noise effects during the Project operations:</p> <ul style="list-style-type: none"> <li>■ designing main substation in a way to decrease noise generation;</li> <li>■ limiting trucks transportation only within daylight hours;</li> <li>■ topsoil salvage areas will as possible be located to aid in providing sound barriers; and</li> <li>■ trees will also be planted between the residential area and Project Site to establish a sound barrier.</li> </ul> |
|                          | expansion of the connection road                 | -   |                                  |  |
|                          | disposal of the waste deriving from construction | -   |                                  |  |
|                          | -  | operation of the facilities (including use of consumer goods) |                                  |  |
|                          | -  | road traffic  |                                  |  |
| -                        | ship traffic                                     |   |                                  |  |
| <b>VEHICULAR TRAFFIC</b> | demolition of the existing buildings             | -   | increased road traffic           | <p>Main mitigations for traffic will include:</p> <ul style="list-style-type: none"> <li>■ scheduling of traffic to avoid peak hours on local roads;</li> <li>■ adopting best transport safety practices with the goal of preventing traffic accidents and minimizing injuries suffered by project personnel and the public;</li> </ul>  |
|                          | surface leveling and grading                     | -   |                                  |  |
|                          | temporary stockpiling of the material            | -   |                                  |  |
|                          | disposal of the excavated material               | -   |                                  |  |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components | Project actions (construction phase)             | Project actions (operational phase)                           | Impact factors         | Mitigation measures including but not limited to  |
|------------|--|---|------------------------|---|
|            | transport of construction material               | -   |                        | <ul style="list-style-type: none"> <li>emphasizing safety aspects among project drivers; specifically ensure drivers respect speed limits through built areas and urban centres;</li> <li>ensure contractors regularly maintain vehicles to minimize potentially serious accidents caused by for example, brake failure commonly associated with loaded construction trucks. Fuel systems of the vehicles that will be used within the scope of the project shall be controlled permanently and it shall be complied with the provision of the “Regulation on Exhaust Gad Emission Control”.</li> </ul> |
|            | construction of the facilities                   | -   |                        |   |
|            | expansion of the connection road                 | -   |                        |   |
|            | filling of sea areas                             | -   |                        |   |
|            | disposal of the waste deriving from construction | -   |                        |   |
|            | -  | operation of the facilities (including use of consumer goods) | increased road traffic | <p>With reference to the access road to the project area, connecting the D550 highway to the port area upgrading and enlarge work of the road should be considered by Petlim.</p>   |
|            | -  | road traffic  |                        |   |
| -          | ship traffic                                     |   |                        |   |

### 5.3.2 Impacts in Biological Components

| Components        | Project actions (construction phase)             | Project actions (operational phase) | Impact factors   | Mitigation measures including but not limited to  |
|-------------------|--|-------------------------------------|--|---|
| TERRESTRIAL FLORA | demolition of the existing buildings             | -                                   | vegetation clearing and removal of top soil; pollutant and dust emission in the atmosphere | <p>The mitigation measures here listed will be effective both for the construction and the operational phase:</p> <ul style="list-style-type: none"> <li>Project footprint will be minimized to the smallest extent possible in order to meet and support the Project works and activities;</li> <li>inadvertent disturbance to the adjacent vegetated areas should be avoided through clear demarcation of the Project Site boundaries, particularly in forest and shrubland habitat types;</li> <li>dust control measures will be implemented along roads, in areas of</li> </ul> |
|                   | surface leveling and grading                     | -                                   |  |   |
|                   | temporary stockpiling of the material            | -                                   |  |   |
|                   | disposal of the excavated material               | -                                   |  |   |
|                   | expansion of the connection road                 | -                                   |  |   |
|                   | disposal of the waste deriving from construction | -                                   |  |   |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components               | Project actions (construction phase)             | Project actions (operational phase)          | Impact factors   | Mitigation measures including but not limited to   |
|--------------------------|--|--|--|--|
|                          | -  | presence of the container deposit facilities | occupation of land; pollutant and dust emission in the atmosphere  | <p>excavation and earthworks and for stockpiles and spoil heaps.</p> <ul style="list-style-type: none"> <li>plants of <i>Olea europaea</i> L. var. <i>europaea</i> L. present in the LSA and potentially subjected to direct and indirect impacts will be relocated to suitable sites already identified and the transportation will be performed by Regional Directorate of Forestry or Provincial Directorate of Food, Livestock and Agriculture;</li> <li>progressive reclamation of areas cleared during construction but not subjected to the placement of facilities will occur, with the goal of producing a stable vegetative cover to minimize erosion from air and water and to produce visual and ecological advantages;</li> <li>suitable areas of the site should be re-vegetated after construction is completed. Grass and decoration plants should be used in locations such as the office and directorate building and evergreen young plants could be used in more distant locations away from buildings. Existing flora of the region should be considered in selecting plant species to be used and species known for their potentiality to become invasive will not be used.</li> </ul> |
|                          | -  | road traffic                                 |  |  |
| <b>TERRESTRIAL FAUNA</b> | demolition of the existing buildings             | -  | vegetation clearing and removal of top soil; pollutant and dust emission in the atmosphere; emission of noise and vibrations | <p>During construction an ecologist will briefly survey areas of natural vegetation prior to clearing for construction. The survey will focus on nesting species that fall into protection categories and on fauna species that may have limited mobility and cannot move ahead of construction. Should any such protected species with limited mobility be noted, specific mitigation will be implemented to ensure that all applicable regulations described above are complied with.</p> <p>Awareness will be developed among employees and contractor working on site about the protected species potentially present in the area, in order to ensure a constant monitoring and promote the reporting of incidental observations.</p> <p>Moreover, with specific reference to the possible presence of listed species during construction, instructions will be given to employees and contractors at the Project site in order to prevent harming those fauna species that might be</p>   |
|                          | surface leveling and grading                     | -  |  |  |
|                          | temporary stockpiling of the material            | -  |  |  |
|                          | disposal of the excavated material               | -  |  |  |
|                          | construction of the facilities                   | -  |  |  |
|                          | expansion of the connection road                 | -  |  |  |
|                          | disposal of the waste deriving from construction | -  |  |  |





## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components          | Project actions (construction phase)            | Project actions (operational phase)                           | Impact factors  | Mitigation measures including but not limited to   |
|---------------------|---|---|---|--|
|                     | -   | presence of the container deposit facilities                  | occupation of land; pollutant and dust emission in the atmosphere; emission of noise and vibrations                                     | <p>present. Some of BERN Convention conservation measures and provisions of 6th article, specified in Appendix II, could be considered and remembered to contractors during the construction:</p> <p>In respect of specially protected fauna species (Article 6), following acts are strictly forbidden:</p> <ul style="list-style-type: none"> <li>■ all forms of deliberate capture and keeping and deliberate killing;</li> <li>■ the deliberate damage to or destruction of breeding or resting sites;</li> <li>■ the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention;</li> <li>■ the deliberate destruction or taking of eggs from the wild or keeping these eggs even if empty.</li> </ul>   |
|                     | -   | operation of the facilities (including use of consumer goods) |   |  |
|                     | -   | road traffic  |   |  |
| <b>MARINE FLORA</b> | construction of the facilities                  | -   | sediment disturbance and removal; discharge of organic and inorganic substances in the sea; deposition of sediment in new areas.        | <p>In order to avoid filling material run off, and turbidity and sea pollution, the subcontractor in charge of dredging and construction activities should take structural measures to limit sediment dispersion during both the dredging and the sediment transport to dumping area. In particular, the northern section of the bay colonised by residual posidonia meadows and interested by the presence of hard substrata with sponge communities should be protected by the risk of sediment accumulation.</p> <ul style="list-style-type: none"> <li>■ Classical systems like silt curtains and containment booms can be adopted during the construction activities to avoid the sediment dispersion in the northern part of the bay. Moreover, during sediment transportation, bulkhead should be used on the barge in order to avoid sediment dispersion.</li> <li>■ To limited sediment spreading in the gulf, two different dumping position will be considered depending on wind direction (and therefore surface waves direction). Under the influence of wind in N, NE and E direction the A</li> </ul> |
|                     | sediment dredging                               | -   |   |  |
|                     | sediment transportation                         | -   |   |  |
|                     | disposal of marine sediment off-shore (dumping) | -   |   |  |
|                     | filling of sea areas                            | -   | deposition of sediment in new areas; discharge of organic and inorganic substances in the sea; presence of new infrastructures offshore |  |
|                     | -   | presences of offshore new infrastructures                     |   |  |
|                     | -   | ship traffic  |   |  |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components          | Project actions (construction phase)            | Project actions (operational phase)       | Impact factors  | Mitigation measures including but not limited to  |
|---------------------|---|---|---|---|
|                     |   |   |   | <p>sequence will be adopted. Dumping activities performed under the influence of S, SW, W wind directions will follow the B sequence.</p> <ul style="list-style-type: none"> <li>The filling material used for land reclamation should not include heavy metals; moreover the mineralogical, chemical and physicochemical characteristics of the material shall not deteriorate the present quality of the sea, and shall be in accordance with the General Technical Specifications of T.R. Transportation Ministry, RHA Construction.</li> <li>Any accidental discharges will be reported through an incident reporting system. The response actions taken for facing the contingency will also be reported, thus providing sea bed/water contamination monitoring and control.</li> </ul>  |
| <b>MARINE FAUNA</b> | construction of the facilities                  | -   | sediment disturbance and removal; discharge of organic and inorganic substances in the sea; emission of noise and vibrations; deposition of sediment in new areas         | <p>The following mitigation measures specifically aimed to marine fauna should be taken into consideration. These measures will increase the biological value, of planned artificial submerged structures, and therefore increase the intensity of the positive impact factor “presence of new surfaces offshore”.</p> <ul style="list-style-type: none"> <li>where applicable, ad hoc small concrete perforated modules should be accumulated at the base of the piers of the jettie and wharf in order to offer additional ecological niches for marine flora and fauna species. Artificial fish habitat modules should not be placed on muddy bottom in order to avoid subsidence.</li> <li>if possible, provide a stone side on the jetty to offer a rough surface more attractive for settlement of marine organisms and additional ecological niches for marine flora and fauna species. Rocks are especially durable and stable in marine environments and different rock sizes can provide a variety of interstitial spaces to accommodate different fish species and life-cycle stages.</li> <li>avoid the use of building materials potentially toxic to marine fauna (e.g. polystyrene, wood treated with chemicals, uncured cement).</li> </ul> |
|                     | sediment dredging                               | -   |   |   |
|                     | sediment transportation                         | -   |   |   |
|                     | disposal of marine sediment off-shore (dumping) | -   |   |   |
|                     | filling of sea areas                            | -   |   |   |
|                     | -   | presences of offshore new infrastructures | deposition of sediment in new areas; discharge of organic and inorganic substances in the sea; emission of noise and vibrations; presence of new infrastructures offshore |   |
|                     | -   | ship traffic                              |   |   |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components               | Project actions (construction phase)             | Project actions (operational phase)                           | Impact factors  | Mitigation measures including but not limited to  |
|--------------------------|--|---|---|---|
| <b>ONSHORE HABITATS</b>  | demolition of the existing buildings             | -   | vegetation clearing and removal of top soil; pollutant and dust emission in the atmosphere; emission of noise and vibrations                                      | No specific mitigation measures are described for this component. However, all mitigations measures described in the previous assessments for terrestrial flora and fauna, together with the mitigations described for alien species will contribute to mitigate the impacts on onshore habitats as well. |
|                          | surface leveling and grading                     | -   |   |   |
|                          | temporary stockpiling of the material            | -   |   |   |
|                          | disposal of the excavated material               | -   |   |   |
|                          | construction of the facilities                   | -   |   |   |
|                          | expansion of the connection road                 | -   |   |   |
|                          | disposal of the waste deriving from construction | -   |   |   |
|                          | -  | presence of the container deposit facilities                  | occupation of land; pollutant and dust emission in the atmosphere; emission of noise and vibrations   |   |
|                          | -  | operation of the facilities (including use of consumer goods) |   |   |
| -                        | road traffic                                     |   |   |   |
| <b>OFFSHORE HABITATS</b> | construction of the facilities                   | -   | sediment disturbance and removal; discharge of organic and inorganic substances in the sea; emission of noise and vibrations; deposition of sediment in new areas | No specific mitigation measures are described for this component. However, all mitigations measures described in the previous assessments for terrestrial flora and fauna, together with the mitigations described for alien species will contribute to mitigate the impacts on onshore habitats as well. |
|                          | sediment dredging                                | -   |   |   |
|                          | sediment transportation                          | -   |   |   |
|                          | disposal of marine sediment off-shore (dumping)  | -   |   |   |
|                          | filling of sea areas                             | -   |   |   |
|                          | -  | presences of offshore new infrastructures                     | deposition of sediment in new areas; discharge of   |   |





## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components             | Project actions (construction phase)            | Project actions (operational phase)       | Impact factors   | Mitigation measures including but not limited to  |
|------------------------|---|---|--|---|
|                        | -   | ship traffic                              | organic and inorganic substances in the sea; emission of noise and vibrations; presence of new infrastructures offshore                                    |   |
| <b>PROTECTED AREAS</b> | sediment dredging                               | -   | pollutant and dust emission in the atmosphere;   | Since protected areas are all located at more than 15 km from the LSA, no impact is expected on on the component as a result of the project.  |
|                        | sediment transportation                         | -   |  |   |
|                        | disposal of marine sediment off-shore (dumping) | -   | discharge of organic and inorganic substances in the sea; emission of noise and vibrations   |   |
|                        | -   | road traffic                              | pollutant and dust emission in the atmosphere;   |   |
|                        | -   | ship traffic                              | discharge of organic and inorganic substances in the sea; emission of noise and vibrations   |   |
| <b>ALIEN SPECIES</b>   | surface leveling and grading                    | -   | vegetation clearing and removal of top soil  | During the construction and operational phases, the presence and diffusion of terrestrial alien species should be regularly monitored with particular attention to areas where removal of the existing vegetation and disturbance of the top soil have been performed. In case the diffusion of invasive species is observed, an eradication program will be put in place.  |
|                        | disposal of the excavated material              | -   |  |   |
|                        | expansion of the connection road                | -   |  |   |
|                        | -   | presences of offshore new infrastructures | presence of new non-colonized surfaces offshore; accidental introduction of terrestrial invasive alien species through goods transiting in the facilities; | In order to avoid the introduction of marine alien species the following mitigation measures recommended by IMO should be applied:<br><br><ul style="list-style-type: none"> <li>■ avoiding ballast water uptake in shallow and turbid areas, e.g. where propellers can stir up sediment, and avoiding uptake at night when many organisms migrate vertically to feed, reduces the number of organisms that enter ballast water tanks;</li> </ul> |
|                        | -   | road traffic                              |  |   |
|                        | -   | ship traffic                              |  |   |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components          | Project actions (construction phase)            | Project actions (operational phase) | Impact factors  | Mitigation measures including but not limited to  |
|---------------------|---|-------------------------------------|---|---|
|                     |   |                                     | accidental introduction of marine invasive alien species through ballast water and or attached to the boats' hulls  | <ul style="list-style-type: none"> <li>■ ballast water should be exchanged between ports, mid-ocean and in deep water, in order to reduce the risk of organisms carried in the water finding a suitable environment on discharge;</li> <li>■ routine cleaning of ballast water tanks and removal of sediment in mid-ocean or at specific facilities provided in port reduces the number of organisms that are transported;</li> <li>■ discharge ballast water on land where treatment facilities exist. Discharge of ballast water to reception facilities prevents organisms transported in ballast water from release into the wild;</li> <li>■ awareness will be developed among the professional scuba diver operating in the port facility in monitor the presence of exotic species. Incidental observations of alien species will be collected and analyzed in other to assess the need of further mitigation measures.</li> </ul> |
| <b>BIODIVERSITY</b> | demolition of the existing buildings            | -                                   | vegetation clearing and removal of top soil; pollutant and dust emission in the atmosphere; emission of noise and vibrations; sediment disturbance and removal; discharge of organic and inorganic substances in the sea; deposition of sediment in new areas | No specific mitigation measures are identified for biodiversity. However, all mitigations measures described in the previous onshore and offshore components, together with the mitigations described for alien species will contribute to diminish the impacts on biodiversity.  |
|                     | surface leveling and grading                    | -                                   |   |   |
|                     | temporary stockpiling of the material           | -                                   |   |   |
|                     | disposal of the excavated material              | -                                   |   |   |
|                     | construction of the facilities                  | -                                   |   |   |
|                     | expansion of the connection road                | -                                   |   |   |
|                     | sediment dredging                               | -                                   |   |   |
|                     | sediment transportation                         | -                                   |   |   |
|                     | disposal of marine sediment off-shore (dumping) | -                                   |   |   |
|                     | filling of sea areas                            | -                                   |   |   |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components | Project actions (construction phase)             | Project actions (operational phase)                           | Impact factors  | Mitigation measures including but not limited to |
|------------|--|---|---|--|
|            | disposal of the waste deriving from construction | -   |   |  |
|            | -  | presence of the container deposit facilities                  | occupation of land; pollutant and dust emission in the atmosphere; emission of noise and vibrations; deposition of sediment in new areas; discharge of organic and inorganic substances in the sea; presence of new non-colonized surfaces offshore; accidental introduction of terrestrial invasive alien species through goods transiting in the facilities; accidental introduction of marine invasive alien species through ballast water and or attached to the boats' hulls |  |
|            | -  | presences of offshore new infrastructures                     |   |  |
|            | -  | operation of the facilities (including use of consumer goods) |   |  |
|            | -  | road traffic  |   |  |
|            | -  | ship traffic  |   |  |



5.3.3 Impacts in Social Components

| Components  | Project actions (construction phase) | Project actions (operational phase)                           | Impact factors  | Mitigation measures including but not limited to  |
|---|--------------------------------------|---|---|---|
| <b>SOCIO-ECONOMIC CONDITIONS AND HOUSING ISSUES</b> | construction of the facilities       | -   | need of workforce; use of goods and services; demand for housing; unsatisfied occupational expectations, use of local infrastructures | <p>In order to provide an efficient accommodation during the construction works of the Project and to minimize the potential effects on the existing infrastructural sources for water, wastewater, transportation, housing, etc. in the area, construction camps will be established for the temporary employees. Construction camps are considered a viable mitigation measure for the potential negative impacts brought about by the additional population. These camps will have all necessary infrastructure and facilities such as water, wastewater, heating, praying, basic health, etc. to meet the needs of the employees and to minimize the effects on the existing infrastructure and resources.</p> <p>The location of the construction camps will be chosen, to the extent possible, close to the Project Site, along the highway and within Petkim area. If there will be need for camps out of Petkim area, possible best locations will be decided through the consultation with the Municipality and District Governorate. In addition, for part of the construction-phase workers, existing Petkim lodgments will be utilized. Petlim will maintain an open and continuous dialogue with the Municipality and other authorities in order to evaluate with a shared approach if other infrastructure requirements will be needed.</p> |
|   | -                                    | operation of the facilities (including use of consumer goods) |   |   |
|   | -                                    | road traffic  |   |   |
|   | -                                    | ship traffic  |   | <p>need of workforce; use of goods and services.</p> <p>The Azerbaijan State Oil Company (SOCAR) financed the construction and running of a public vocational high school in Aliaga, focusing on oil, gas and petrochemicals industries in the Town, to meet the additional needs for the technical educational services at high school level. The school will provide student with the technical knowledge which is needed in the industrial complexes of the area, thus increasing the possibility of hiring staff locally and bringing benefits to the overall economy of Aliaga and surroundings</p> <p>With regards to hiring processes, it is recommended that Petlim adopts a transparent and clear hiring procedure, also extended to all other companies possibly involved in the hiring process, in order to reduce complaints and grievances by people that are not considered eligible for the positions. In order to enhance occupation opportunities locally, Petlim is planning to employ the reserve workforce in Aliaga in the first place and then employ the people from other parts of Turkey.</p>  |





## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components                                      | Project actions (construction phase)            | Project actions (operational phase) | Impact factors                                | Mitigation measures including but not limited to   |
|---|---|-------------------------------------|---|--|
|   |   |                                     |   | <p>In addition, in order to sustain the local economy and to build positive relationships with local communities, it is recommended that goods and services needed for the workforce's livelihood and welfare, as well as for other requirements for the operation of the facilities, are purchased by Petlim locally, in cooperation with enterprises and businesses from the Aliaga district.</p> <p>An explicit grievance mechanism will be developed for the Project, to invite feedback related to unpredicted community impacts. The results of the grievance mechanism will be regularly reported.</p>  |
| <b>CULTURAL RESOURCES INCLUDING ARCHAEOLOGY</b> | surface leveling and grading                    | -                                   | damage and destruction of cultural resources. | <p>Due to the absence of specific marine studies on possible archaeological remains in the Nemrut bay, it is advisable that an archaeological study of the seabed affected by the project is performed by expert archaeologists. This investigation should be conducted using side scan sonar data, multibeam echosounder data, sub bottom profiler data and underwater video recording, which allow the identification of possible remains. In addition an archaeological study of the onshore areas affected by construction activities is recommended, in accordance with the Izmir Directorate of Cultural Heritage. The outcomes of these studies will identify the archaeological risk of the area and whether the presence of an archaeologist on site during main construction activities is necessary. Eventually samplings and small investigations on site can be performed before construction activities, to confirm possible presence of remains in areas considered at high risk of archaeological findings.</p> <p>As required by the Law for Protection of Cultural and Natural Estates (dated 1983 and numbered 2863, amended by the Law numbered 5226) and its relevant regulations, should an archaeological and cultural property be found on the Project Site during land or sea excavations, all the construction activities will be stopped immediately and the Aliğa Governorate Office and the town museum will be contacted. Further construction activities will be conducted along with the instructions of the authorities. A chance find procedure will be prepared in the scope of Environmental and Social Management Plan.</p> |
|   | construction of the facilities                  | -                                   |   |  |
|   | sediment dredging                               |                                     |   |  |
|   | expansion of the connection road                | -                                   |   |  |
|   | disposal of marine sediment off-shore (dumping) | -                                   |   |  |
|   | filling of sea areas                            | -                                   |   |  |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components                              | Project actions (construction phase)            | Project actions (operational phase)          | Impact factors  | Mitigation measures including but not limited to   |
|---|---|--|---|--|
| <b>ECOSYSTEM SERVICES</b>               | surface leveling and grading                    | -  | discharge of organic and inorganic substances at sea; emission of noise and vibration; increased ship traffic; landscape features alteration. | Effective mitigations to the causes of impact are difficult to apply, because of technical issues that are not feasible to overcome. With regards to ship traffic, which can cause noise and disturbance along the coast, it is recommended that Petlim requires ships to follow routes as far as possible from the coast. In addition, it is advisable that Petlim considers implementing compensation measures directed to the tourism operators. This activity is important to establish positive relationships with stakeholders and to avoid resentment and grievances from the local community. Compensation measures could include improvements to tourism facilities or infrastructures, or providing support in marketing strategies to promote the tourism appeal of the locations on the national and international market (actions to promote the archeological area of Kyme should be also considered). In particular marketing strategies can be useful to avoid that the area becomes renowned only for the presence of industries, which can become a threat to the tourism industries with consequences hard to avoid. Marketing strategies should both focus on the promotion of the area as a tourism destination, and on a transparent communication of Project characteristics and objectives, to demonstrate that the planned activities are not necessarily in contrast to the tourist appeal of the area. Overall it is important that such initiatives are the outcome of a shared approach with tourism operators and associations, possibly to be conducted as part of stakeholder engagement activities, in order to maximize benefits and therefore efficacy of the measures. |
|   | construction of the facilities                  | -  |   |  |
|   | sediment dredging                               | -  |   |  |
|   | sediment transportation                         | -  |   |  |
|   | disposal of marine sediment off-shore (dumping) | -  |   |  |
|   | filling of sea areas                            | -  |   |  |
|   | -   | presence of the container deposit facilities | discharge of organic and inorganic substances at sea; increased ship traffic; landscape features alteration.                                  |  |
|   | -   | presences of offshore new infrastructures    |   |  |
| -                                       | ship traffic                                    |  |   |  |
| <b>RESETTLEMENT AND COMPENSATION</b>    | construction of the facilities                  | -  | changes to land property and land use;  | The Project will be entirely developed on land which is property of Petlim, where no building, structures or plots of other owners are present. In addition no major economic activities by third parties are affected by the project.   |
|   | expansion of the connection road                | -  |   |  |
|   | filling of sea areas                            | -  |   |  |
| <b>HUMAN AND ECOLOGICAL HEALTH RISK</b> | demolition of the existing buildings            | -  | surface water pollution; discharge of organic and inorganic substances in the sea. pollutant and dust emission in the atmosphere              | All mitigations inherent within the Project design to minimize emissions of airborne pollutants will contribute to protection of human health offsite. The Project case impact predictions for both air quality and noise will be compared to the limits in regulations and additional guidance documents.   |
|   | surface leveling and grading                    | -  |   |  |
|   | temporary stockpiling of the material           | -  |   |  |
|   | disposal of the excavated material              | -  |   |  |



## PETLİM LİMANCILIK TİCARET A.Ş. - NON TECHNICAL SUMMARY

| Components               | Project actions (construction phase)             | Project actions (operational phase)                           | Impact factors   | Mitigation measures including but not limited to   |
|--------------------------|--|---|--|--|
|                          | construction of the facilities                   | -   |  | <p>Within the Project site occupational health and safety procedures for both normal and upset situations will be put in place to protect workers.</p> <p>The mitigation measures inherent with the project design and operational procedures on minimising the impacts on the marine ecology and habitat are described in various sections of the ESIA report.</p>  |
|                          | expansion of the connection road                 | -   |  |  |
|                          | disposal of the waste deriving from construction | -   |  |  |
|                          | -  | presence of the container deposit facilities                  |  |  |
|                          | -  | operation of the facilities (including use of consumer goods) |  |  |
|                          | -  | road traffic  |  |  |
| <b>VISUAL AESTHETICS</b> | demolition of the existing buildings             | -   | <p>presence of new constructions;<br/>landscape features alteration;</p> | <p>Mitigations from the aesthetic point of view aim at reducing the contrast between the artificial structures and the natural context in which they are placed. It is therefore recommended to use landscaping and revegetation techniques in all open areas, using native species that do not need major maintenance. This technique also leads to benefits from other points of view, such as reduction of possible natural hazards and creation of pockets for natural wildlife. During the construction and operation phases, it is recommended to use shielded lights at the Project facilities, and the lights will be directed downwards and so away from the nearest residential areas and the forest area on the peninsula, to minimize effects on both people and wildlife. Finally it is recommended that at the end of construction, the campsites are decommissioned and any waste from these facilities or construction materials are properly disposed of.</p> |
|                          | surface leveling and grading                     | -   |  |  |
|                          | construction of the facilities                   | -   |  |  |
|                          | expansion of the connection road                 | -   |  |  |
|                          | sediment dredging                                | -   |  |  |
|                          | sediment transportation                          | -   |  |  |
|                          | filling of sea areas                             | -   |  |  |
|                          | -  | presence of the container deposit facilities                  |  |  |
|                          | -  | presences of offshore new infrastructures                     |  |  |
| -                        | ship traffic                                     |   |  |  |



## **6.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS**

Environmental and Social Management Plan (ESMP) for the Project will be facilitated by Project-specific Environmental and Social Policies including overall principles towards environment, biodiversity, labour, health and safety, and public health issues. The ES policies and ESMP will ensure that the Project:

- complies with all applicable Turkish legislation as well as Equator Principles, EU legislation and relevant IFC guidelines provided in the ESIA as well as further framework developed to date;
- implements internationally recognized best management/industry practices and best available techniques to minimize potential environmental and social impacts during the construction, operation and closure phases;
- complies with the commitments addressed in the ESIA to minimize the expected potential environmental and social impacts;
- adheres to high standards of safety and care for the protection of the employees and public;
- promotes its policies through training, supervision, regular reviews and consultation;
- maximizes the use of local and regional labour forces to the extent feasible, to maximize local socio-economic benefits;
- implements a stakeholder engagement program to engage the local community in the Project activities at all phases; and
- supports and participates to any regionally decided protection, mitigation and monitoring plans for Aliğa.





## Report Signiture Page

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