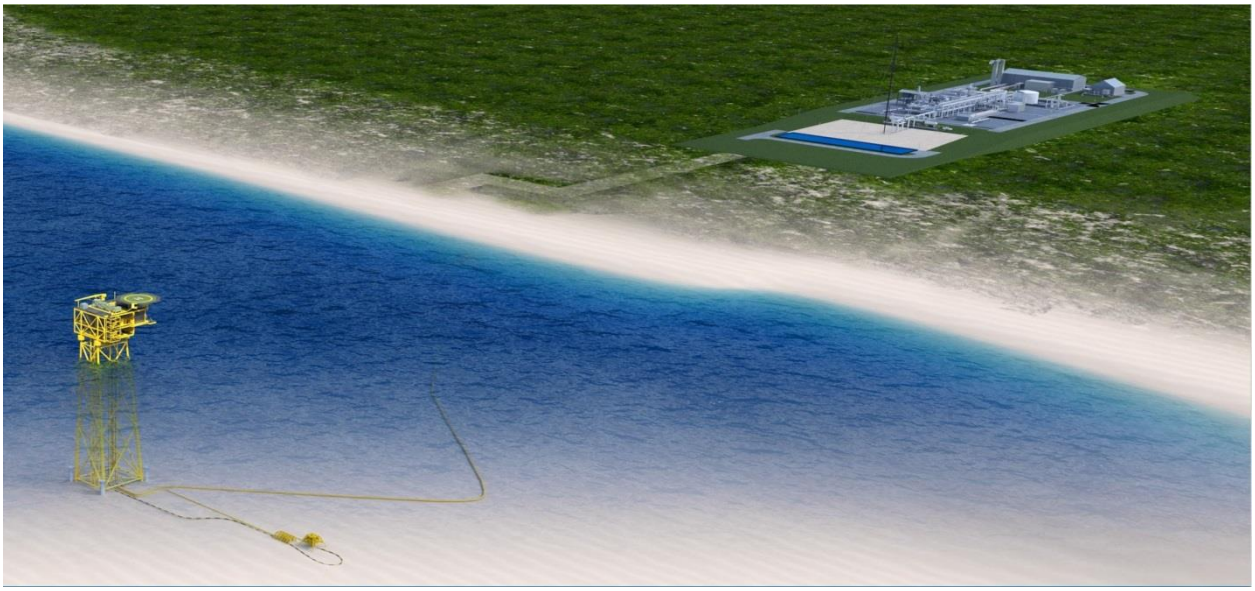

Midia Gas Development Project

Non-Technical Summary

Black Sea Oil & Gas SRL

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ABBREVIATIONS

AESIA	Additional Environmental and Social Information and Assessment
AoI	Area of Influence
BSOG	Black Sea Oil & Gas S.R.L.
DDBRA	Danube Delta Biosphere Reserve Authority
EBRD	European Bank for Reconstruction and Development
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EPCIC	Engineering Procurement Construction Installation and Commissioning
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
EU	European Union
GHG	Greenhouse Gases
GSP	Grup Servicii Petroliere (the Project EPCIC Contractor)
GTP	Gas Treatment Plant
IFC	International Finance Corporation
HDD	Horizontally Directional Drilling
MEG	Monoethylene glycol
MGD	Midia Gas Development
NGO	Non-Governmental Organisation
NTS	Non-Technical Summary
ROW	Right of way

1. INTRODUCTION

Black Sea Oil & Gas S.R.L. (BSOG) is a Romanian-based independent oil and gas company, targeting exploration and development of conventional oil and gas resources. The company's current portfolio is made up of one offshore concession covering two blocks on the continental shelf of the Romanian Black Sea, namely Blocks XIII Pelican and XV Midia, Shallow Water Area (Midia Block), totalling almost 4,200 km^2.

BSOG intends to develop the Midia Gas Development Project (referred to as the *MGD Project*), to produce and process gas from the Ana and Doina reservoirs offshore and deliver it to consumers within Romania and/or the wider region. Once operational, it is estimated that the MGD Project will cover approximately 10% of Romania's gas necessities.

The MGD Project will require an investment of approximately 400 million USD and will be financed by international lending institutions, whose institutional policies require that the Project complies with all applicable laws and regulations of Romania and the European Union (EU), as well as with the best practice international environmental and social standards and guidelines. These international standards require that, before starting the Project, a comprehensive Environmental and Social Impact Assessment (ESIA) is performed. The role of the ESIA is to identify the potential environmental, health & safety and social impacts of the Project and to define measures to avoid impacts by appropriate design and planning, and when avoidance is not possible, to reduce/minimize impacts as far as feasible. Only as a last resort should compensation be made for the negative effects that still remain upon the implementation of the impact minimization measures.

The ESIA for the MGD Project was completed in two stages:

- Initially an ESIA was completed at the end of 2018; and
- An Additional Environmental and Social Information and Assessment (AESIA) Report was developed end of March 2019 including further assessments performed to supplement the initial ESIA and ensure that the Project meets the best practice international standards and guidelines as required by the Project international lenders.

The above-mentioned ESIA assessments performed for the MGD Project are further referred to as the "Project ESIA package" or "the ESIA package" throughout this document.

Based on the Project ESIA package outcomes, an Environmental and Social Management Plan (ESMP) has been defined and will be implemented during the MGD Project construction and then during the operation stages. The ESMP defines the processes and resources put in place as part of BSOG's commitment to avoid, mitigate and effectively manage Project environmental, health & safety and social risks and impacts.

This commitment complies with the national requirements of the MGD Project's host country (Romania), the relevant EU Directives and the following key international standards for managing project environmental, social, health and safety risk, referred to throughout this document as 'lender standards':

- EBRD Performance Requirements (2014);
- International Financing Corporation (IFC) Performance Standards (2012);
- IFC General Environmental, Health, and Safety (EHS) Guidelines;
- IFC Industry-specific EHS Guidelines:
- Offshore Oil and Gas Development;
- Onshore Oil and Gas Development.

This Non-Technical Summary (NTS) explains briefly the outcomes of the Project ESIA package previously mentioned. This NTS reflects BSOG's ongoing commitment to provide stakeholders with clear, relevant and sufficient information to enable a proper understanding of the MGD Project.

Every effort has been made to ensure that the information contained in this NTS is correct at the time of its release. Further information on the MGD Project and the ESIA process can be accessed as follows:

- In electronic form at: https://www.blackseaog.com/ro/proiecte/mdg/
- In printed (paper) format at:
  - Project Management Team's office in Constanta: Blue Bike Gate One, Constanta Port, Constanta, Romania
  - BSOG main office in Bucharest: 175 Calea Floreasca, 10th floor, district #1, 014459, Bucharest, Romania, phone +40 21 231 32 56, e-mail: office@blackseaog.com.

In addition to the above, anybody wishing to express their views or submit questions about the Project can address these at any time by following means:

- By contacting BSOG using the following contact details:
  Ms. Ana-Maria Pericleanu
  Telephone: +40 21 231 32 56
  E-mail: ana-maria.pericleanu@blackseaog.com/office@blackseaog.com.

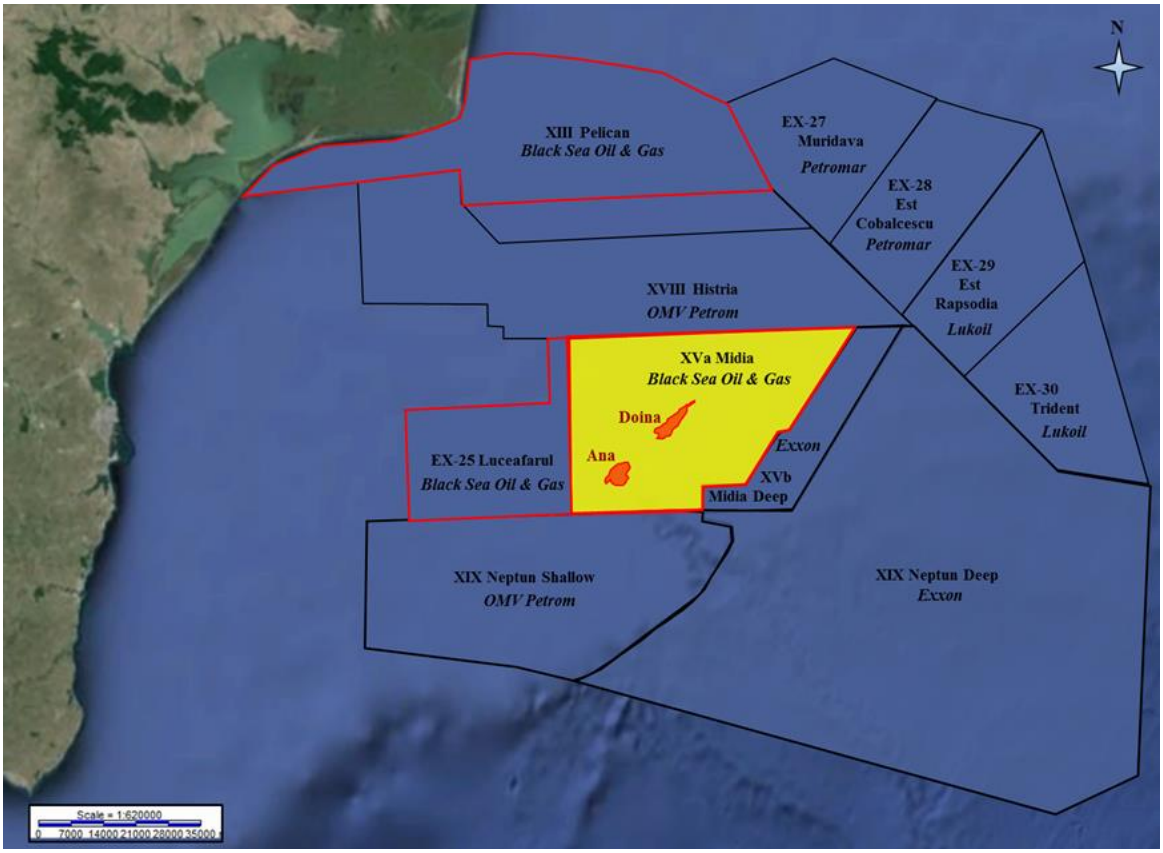
- By sending a letter by post to one of the BSOG offices using the postal addresses indicated above.

2. INTRODUCING THE MGD PROJECT

2.1 What is the MGD Project and where will it be located?

The MGD Project will enable the gas from the Ana and Doina reservoirs discovered in the Black Sea, to be collected, transported on-shore and made available for use by consumers within Romania and countries in the wider region, by 2021. The Doina gas field was discovered in 1995 and the Ana field was discovered in 2007. Both Doina and Ana fields are located in the offshore Block Midia XV. The location of the offshore Ana and Doina fields is shown in *Figure 0-1* below.

Figure 0-1 Location of Ana and Doina fields to be developed through the MGD Project

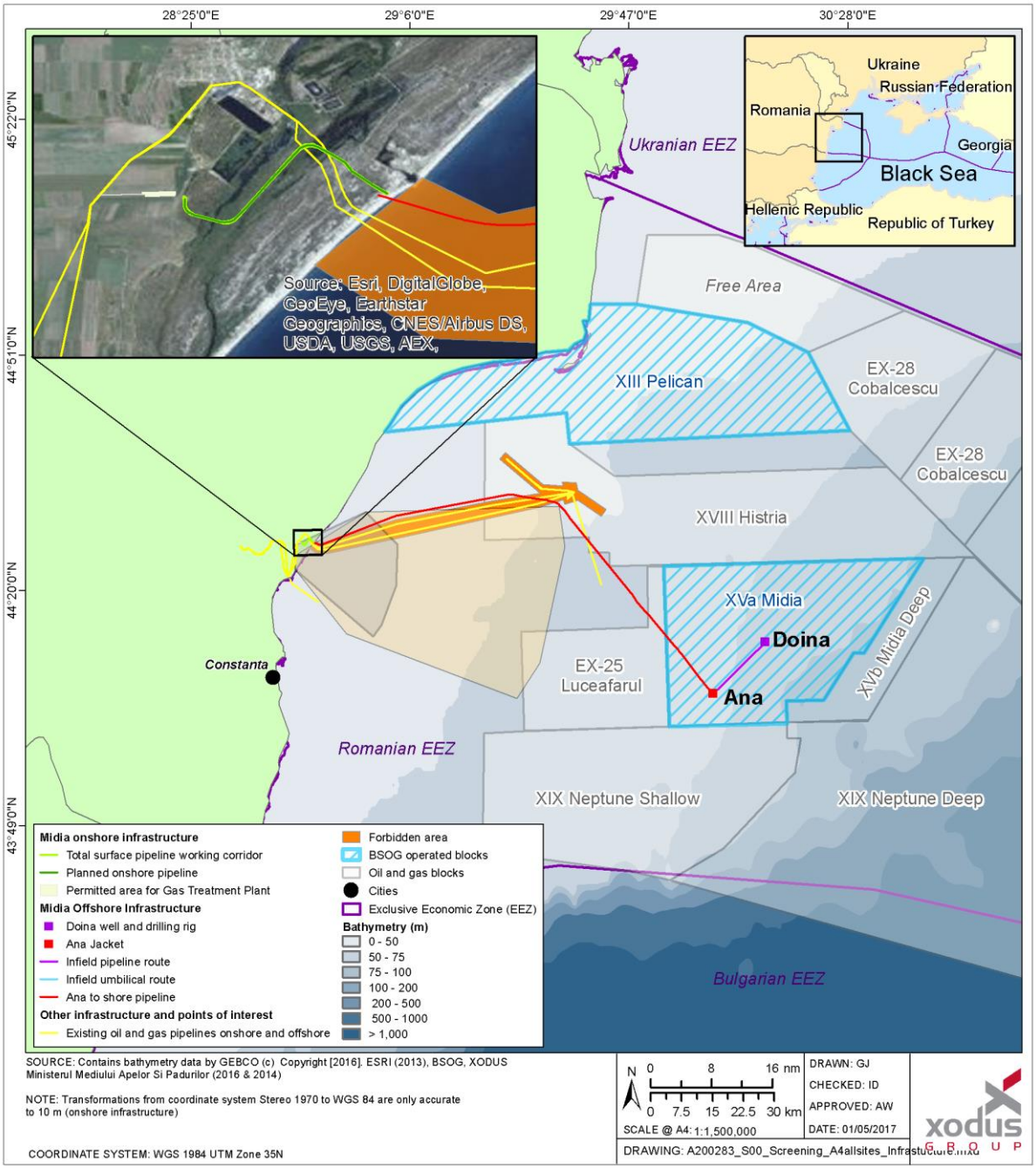


The MGD Project comprises 5 offshore production wells (1 subsea well at Doina field and 4 platform wells at Ana field) a subsea gas production system over the Doina well. Doina well and the unmanned production platform will be connected through an 18 km-long pipeline. Then the Ana platform will be connected to an onshore Gas Treatment Plant through a pipeline comprising an approximately 121 km-long offshore segment and an approximately 4.5 km-long onshore one. The gas pipeline landfall and the Gas Treatment Plant (GTP) are located in the Vadu area, Corbu Commune, Constanta County.

The MGD Project pipeline crosses two existing gas and oil pipelines offshore approximately 60 km off the coastline, as well as on its onshore section at the landfall area in Vadu.

The general location of the onshore Project components is shown in Figure 2-2.

Figure 2-2 General location of the MGD Project



Source: *Midia Gas Development FEED Study, ESIA Report*

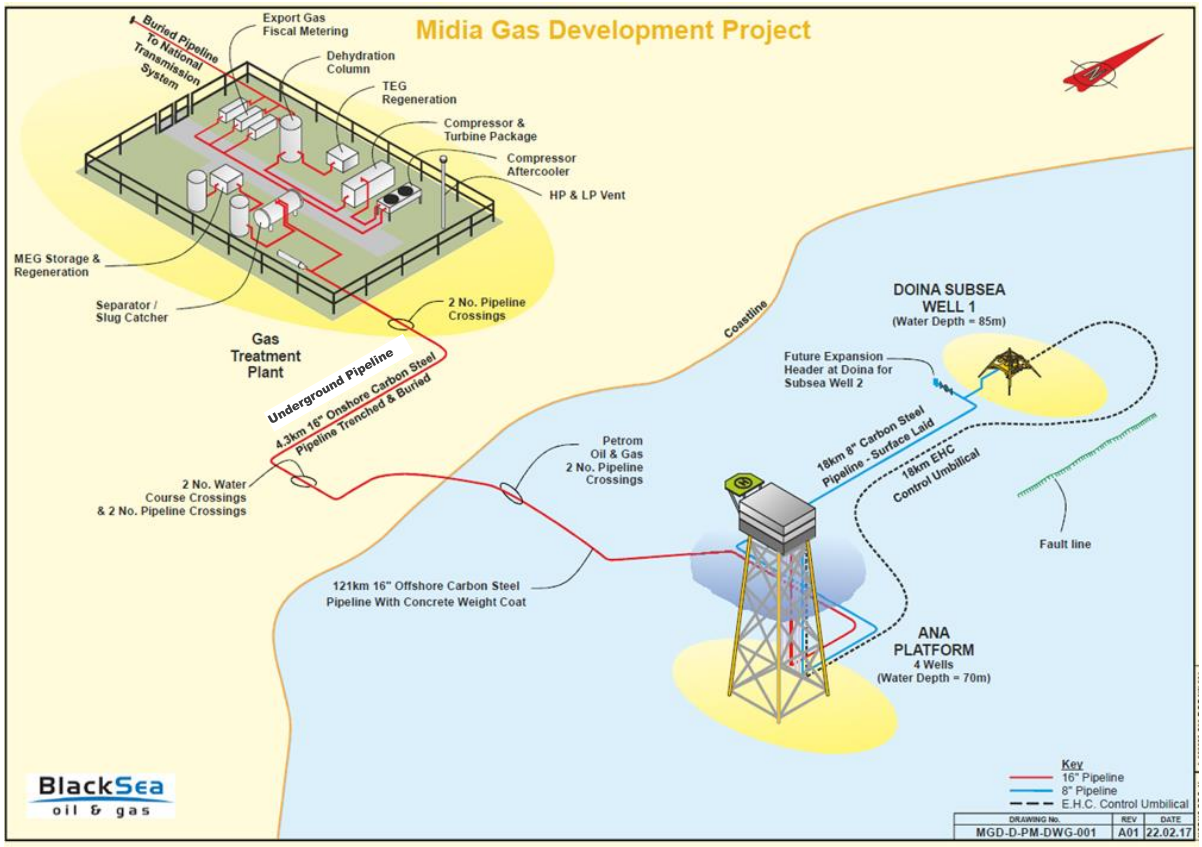
2.2 What are the main MGD Project components?

The MGD Project consists of the following components:

- drilling of four near vertical production wells for Ana field (Ana-100 to Ana-103), and of one vertical production well for Doina field (Doina-100);
- installation of a small normally unmanned platform to house the four wells and minimum facilities at the Ana field (Ana Platform):
- a subsea gas production system at the Doina field (Doina Subsea) controlled from the Ana Platform via an 18 km-long connection called umbilical (a bundle of cables and conduits allowing transfer of fluids and electric power between the two facilities);
- an 18 km-long (8-inch diameter) carbon-steel pipeline, routing the gas from Doina subsea to the Ana platform (Ana-Doina pipeline);
- an upstream gas transmission pipeline for the routing of the gas to the GTP located onshore (Ana Platform – GTP pipeline) consisting of:
    - 121 km of 40.64 cm (16-inch diameter) diameter subsea pipeline (offshore segment of the pipeline) and
    - 4.5 km of onshore underground (16-inch diameter) carbon-steel pipeline (onshore segment of the pipeline); and
- the GTP located in Vadu area, Corbu commune, Constanta county.

In summary, the MGD Project comprises an **Offshore Component**, namely: the production wells, Ana Platform, Doina Subsea, Ana-Doina pipeline, and the offshore segment of the Ana platform – GTP pipeline, and an **Onshore Component**, namely: the onshore segment of the Ana platform – GTP pipeline and the GTP.

Figure 0-2 Schematic of the MGD Project components



Source: *Midia Gas Development FEED Study, ESIA Report*

Both the Ana and Doina fields have high methane content (over 99%) and the fields are predicted to have an overall production life of 10 to 15 years.

2.2.1 What are MGD Project offshore components and how will these be constructed?

The Engineering Procurement Construction Installation and Commissioning (EPCIC) Contractor selected for the delivery of the MGD Project is the Romanian company Grup Servicii Petroliere (GSP). The EPCIC Contractor will be undertaking the MGD Project construction works as briefly presented in the following subsections of this NTS.

Ana Platform

The offshore Ana Platform will be located approximately 100 km straight-line from shore, in a water depth of 70 m. The platform will consist of a deck supported by a 4-legged x-braced steel structure (the jacket) with one pile per leg. The topside deck will be arranged on three levels hosting production support facilities for the Ana and Doina fields, temporary refuge, local equipment room, lifeboat, crane, a helideck, control, safety telecommunication systems etc.

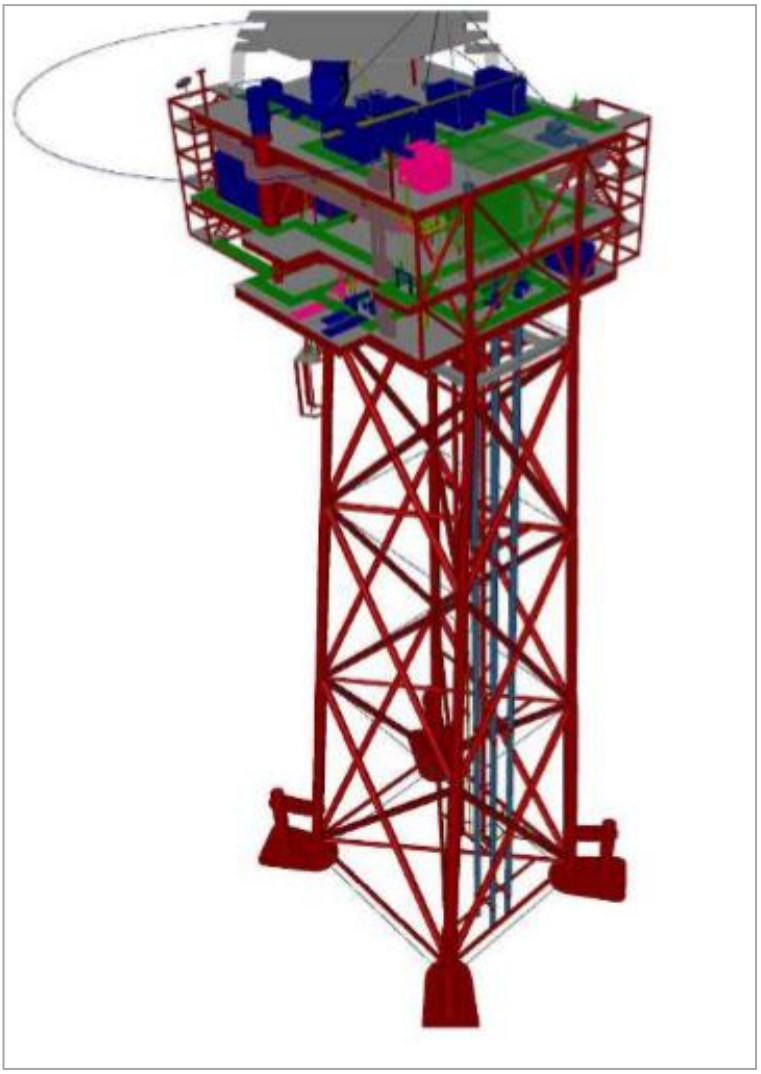
The jacket and topsides of Ana Platform will be assembled at an existing yard belonging to the EPCIC Contractor (GSP) and located in Agigea Harbour, Constanta County, Romania. Once

assembled, Ana Platform elements will be then transported from the fabrication yard for installation at their final location using cargo barges owned by GSP. These elements will be installed at their location offshore using a floating crane and support barges.

The Ana platform is designed to be started up, controlled and shut down from the onshore GTP control room with minimal requirement for intervention by offshore personnel (limited to re-start of the platform following an emergency shutdown and bunkering of fluids to the platform).

The Ana Platform is illustrated in Figure 2-4 below. Ana Platform will be connected to the shore via a pipeline laid on the sea bottom.

Figure 0-4 Ana platform schematic



Source: *Midia Gas Development FEED Study, ESIA Report*

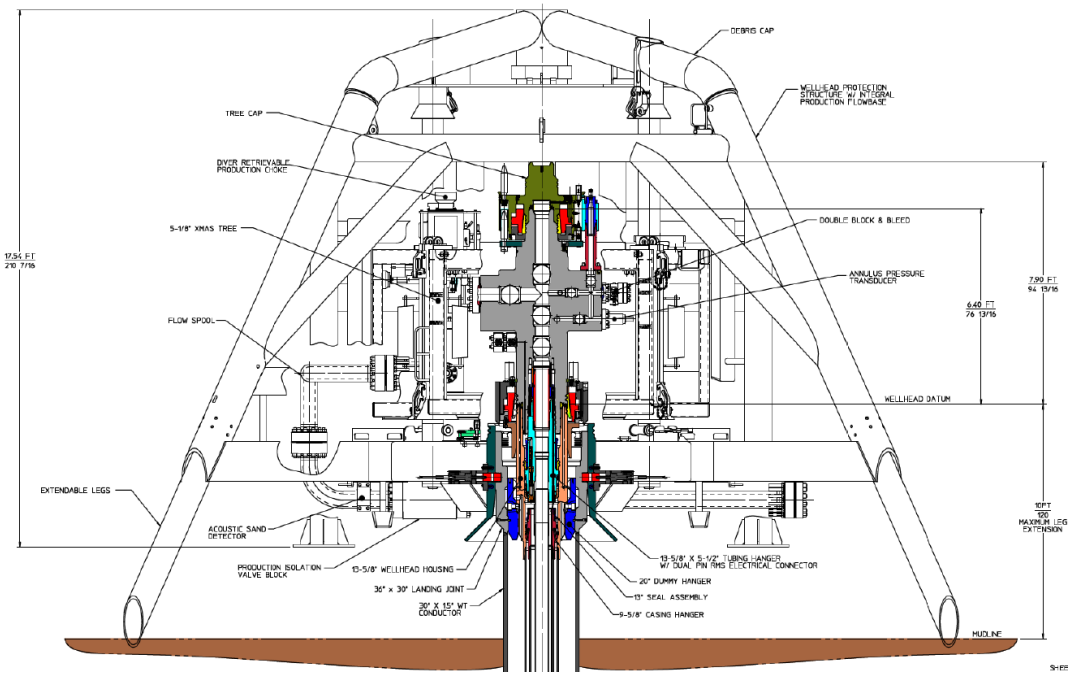
Doina Subsea Production System

Doina subsea production system will be located at a water depth of 83 m. It will comprise one vertical well and a wellhead assembly system over it, including a wellhead housing protective structure. The wellhead housing protective structure encapsulates and protects the wellhead assembly and is illustrated in Figure 2-5 below.

An 18 km-long pipeline laid on the sea bottom will deliver the gas from Doina to Ana Platform. Doina subsea production system will be connected to and controlled from Ana Platform via an 18 km-long umbilical[1]. The umbilical will be first laid down on the sea bottom alongside the Ana to Doina pipeline, and then it will be trenched using a special equipment (trenching machine).

[1] Bundle of cables and conduits allowing transfer of fluids and electric power between the two facilities.

Figure 2.3: Doina Subsea Wellhead Assembly



Well drilling

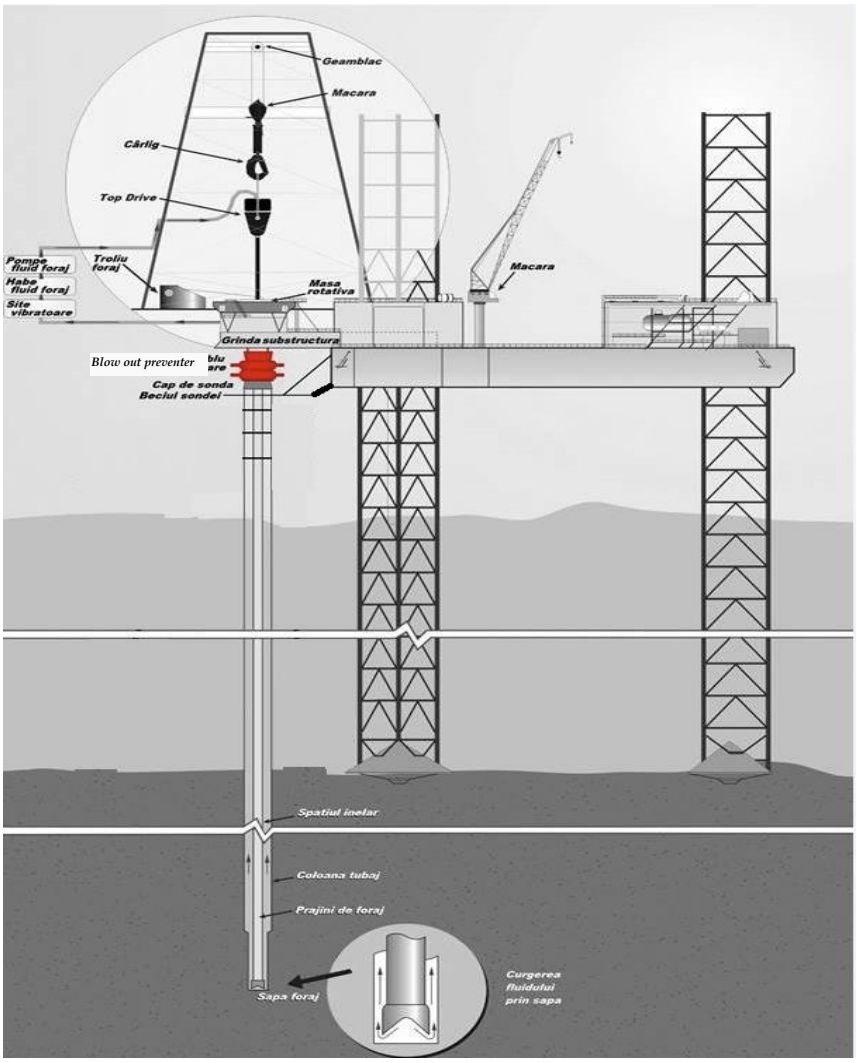
Drilling of the wells is planned to occur in the period July 2020 – February 2021 and last for 207 days. The five wells will be drilled using a jack-up rig, GSP Uranus, which has previously worked in the Black Sea. A jack-up drilling rig consists of a buoyant steel hull that can raise and lower itself on a number of legs (often usually three or four) and on which the drilling deck is cantilevered out to on one side.

Figure 0-6 GSP Uranus jack-up drilling rig

Source: *http://www.gspoffshore.com*

The Ana-100 and Doina-100 wells are vertical wells while the Ana-101, Ana-102, Ana-103 are slightly deviated (around 45-50 degrees of inclination). Each well will be drilled in four sections, the diameter of each being successively reduced with depth. The drilling process uses a drill string; this is a long section of drill pipes connected together and terminating in a drill bit, which is rotated from surface to drill down through the seabed and formations beneath. Through a central bore in the drill string, a mixture of water, potassium chloride, calcium carbonate and other chemicals, known as drilling mud or drilling fluid, is pumped into the well to keep the drill bit cool and lubricated and to aid in the suspension and removal of the drilled formation cuttings.

Figure 0-7 Generic diagram of the well and of the drilling installation



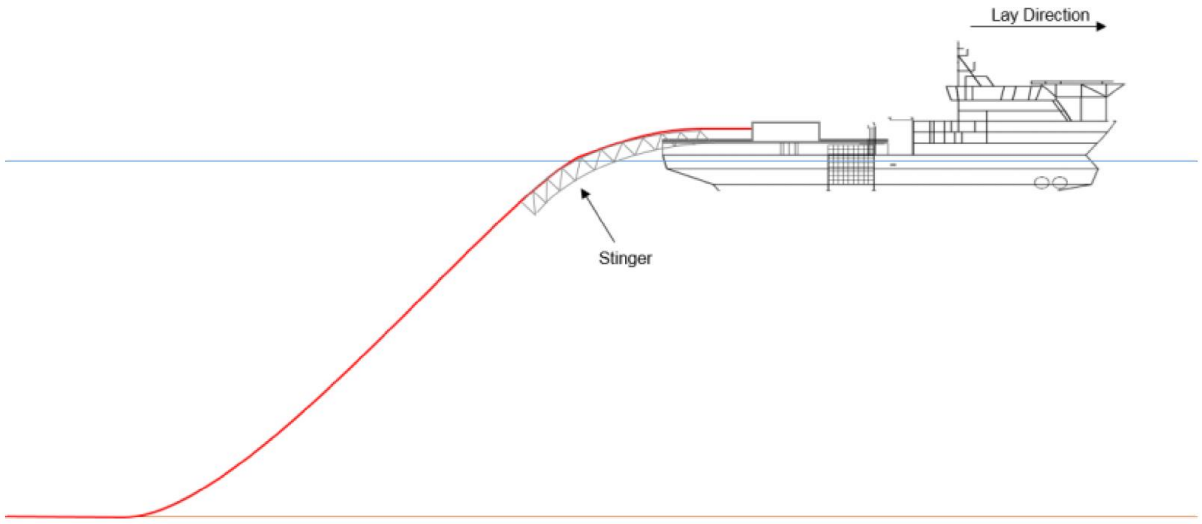
Source: *Midia Gas Development FEED Study, ESIA Report*

Offshore pipeline installation

The MGD Project offshore gas pipelines will be laid down on the sea bottom. The Ana–shore pipeline segment will be laid from the shore to Ana Platform, while the Ana – Doina pipeline segment will run between Ana platform and Doina Subsea Well. This pipeline section will cross over two existing OMV Petrom offshore pipelines. The Ana-Doina pipeline (18 km) and offshore segment of the Ana Platform – GTP pipeline (121 km) will be surface laid onto the seabed, with concrete mattresses for protection at the two crossings of existing offshore pipelines.

The two offshore pipelines will be installed by employing the so-called S-lay technique using the GSP Bigfoot 1 pipe-lay barge. During installation the pipeline curves downwards towards the seabed forming an ‘S’ shape in the water as illustrated in Figure 2-8 below.

Figure 0-4 Offshore pipeline installation using the S-lay method



Source: *Midia Gas Development Project, Additional Environmental and Social Information and Assessment Report, 2019*

Shore Approach and Crossing

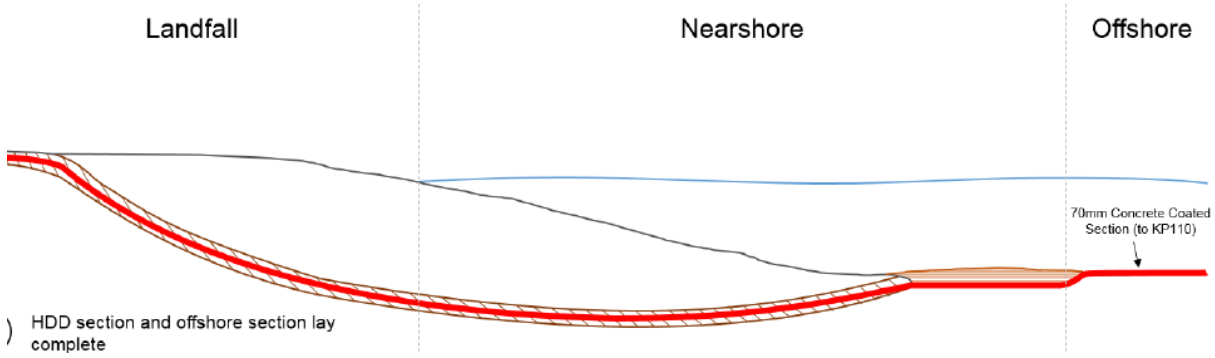
The nearshore gas pipeline will be installed using horizontal directional drilling (HDD) to create the bore path. Directional drilling will be performed from shore to offshore (land-to-sea approach). The pipeline will then be 'pulled' from installation vessel through the bore path.

The onshore HDD equipment set-up site will be kept at a small, approximately 25 x 40 m footprint on a land plot adjacent to and partially overlapping with the onshore pipeline right of way (ROW). The pipeline will be buried for the full extent of the nearshore region and the pop-out location offshore will be located at approximately 1,300 m from the shore, at a water depth of 5 m.

A seawater-based 100% bio-degradable, bio polymer fluid will be used to advance the HDD and there will be no requirement for trucking of fresh water to advance the HDD. In order to minimize drilling fluids consumption, the entry pit will be as small as possible (10 to 15 m^3). The drilling fluid will be continuously recycled during drilling and reaming and therefore be reused. The drilling operations will last 18 days, working continuously, 24 hours daily.

The drill cuttings will be stored intermediately on a dedicated storage area on site to further dry out and then be finally disposed on a licensed landfill.

Figure 0-5 Near-shore HDD pipeline



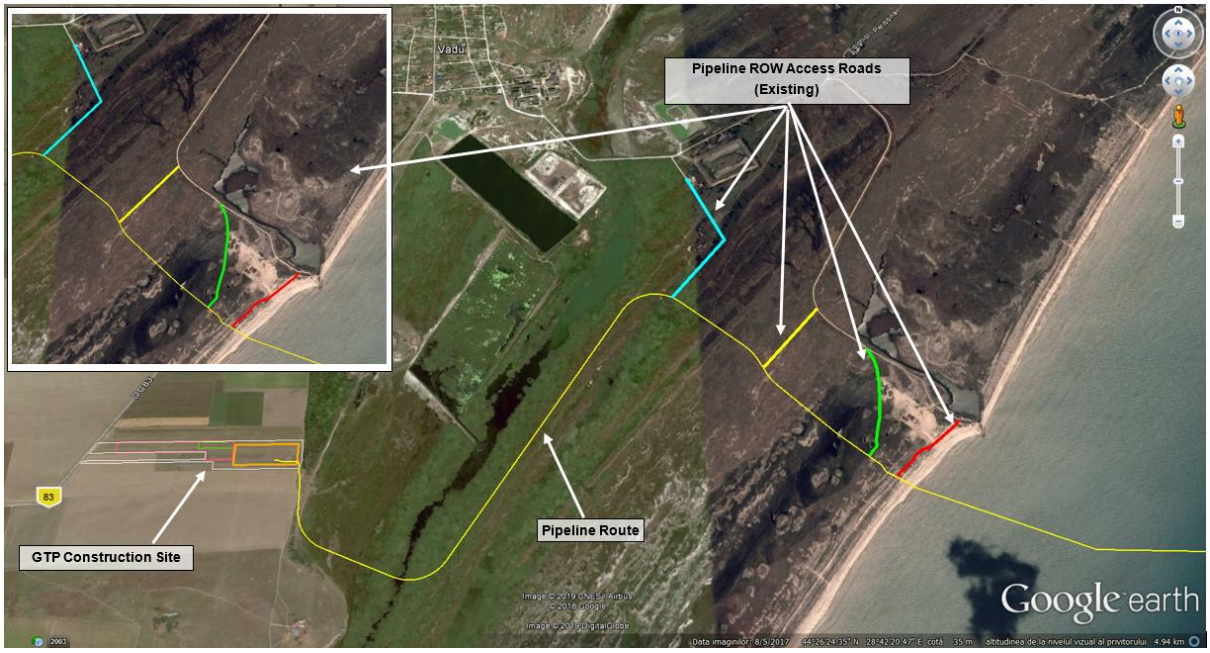
Source: *Midia Gas Development Project, Additional Environmental and Social Information and Assessment Report*

2.2.2 What are MGD Project onshore components and how will these be constructed?

The onshore MGD Project components include the Gas Treatment Plant (GTP) and the onshore section of the Ana Platform – GTP gas pipeline. The location of the onshore MGD Project components is illustrated in *Figure 0-6* below.

All onshore construction areas including the GTP site and the pipeline construction corridor will be accessed using existing roads and tracks, and no new temporary construction access roads are required for this purpose.

Figure 0-6 Onshore MGD Project elements location and access



Onshore gas pipeline

The onshore gas pipeline in length of approximately 4.5 km will run from the offshore pipeline shore landing point to the GTP. The pipeline construction will be performed by employing two main construction techniques i.e. horizontal directional drilling (HDD) and open cut construction technique respectively.

According to the project design which was initially considered in the national EIA process and permitted by authorities, the pipeline will be constructed by HDD on its shore crossing section (from approximately 1.3 km offshore to approximately 150 m onshore) and by employing open cut technique for the rest of the onshore pipeline route.

Technical changes were proposed during subsequent design stages to include additional horizontal directional drilling (HDD) across the two small water bodies crossed by the pipeline. Therefore, the existing project design calls for onshore pipeline construction based on HDD at the beach crossing (from 1.3 km offshore extending to 150 beyond the shoreline) and across the two small watercourses as presented in

Figure 02-11.

In order to align with international best practice standards and to apply the principle of No Net Loss to protected habitats (refer to section 3.6 of this NTS), additional measures to avoid, reduce and mitigate impacts on biodiversity are proposed by BSOG. These measures comprise the extension of the onshore HDD from an original shore crossing of 150 m plus two water body crossings of approximately 100m each to include an additional approximately 1,800 m HDD thereby avoiding over one and half kilometre of onshore open trenching. The exact configuration of the HDD is still being reviewed in attempt to ensure technical feasibility and to avoid and reduce environmental impacts. The rough configuration is shown on Figure 0-12.

Figure 0-11 Existing Onshore Project Layout

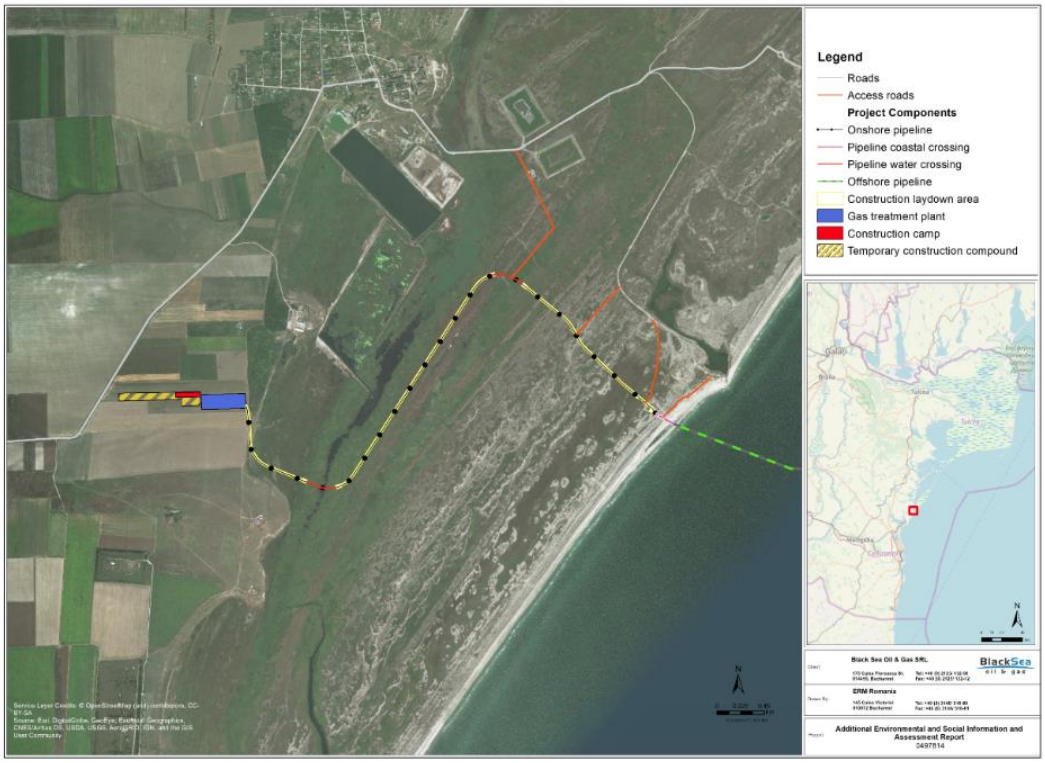
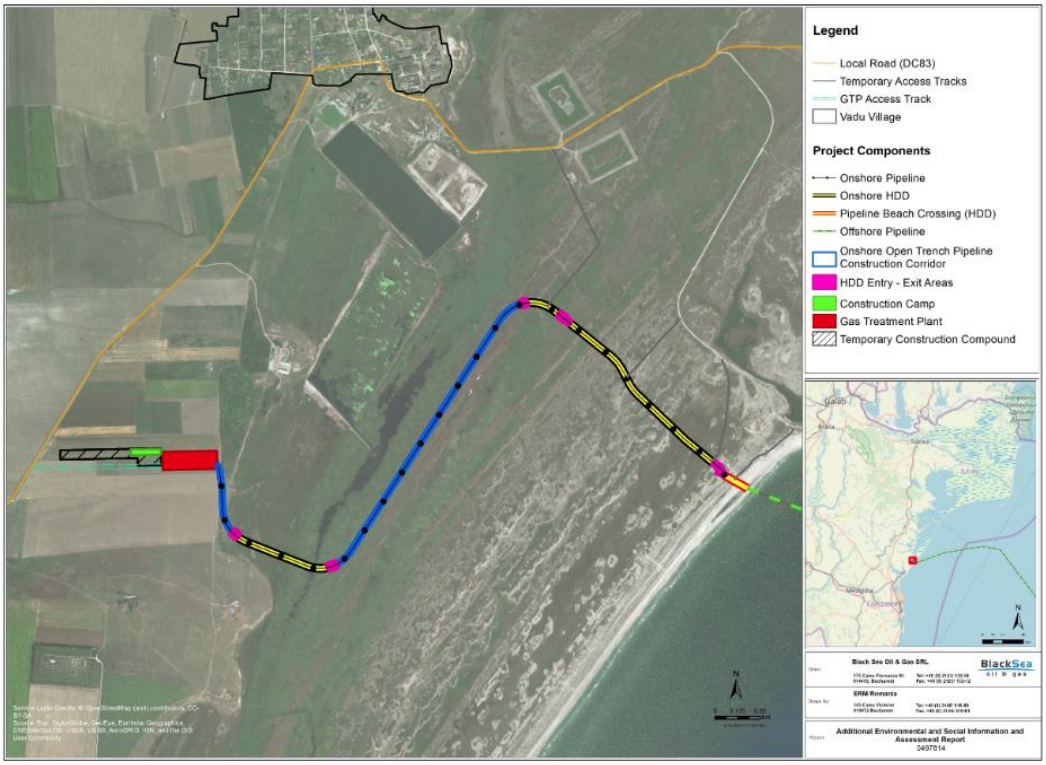


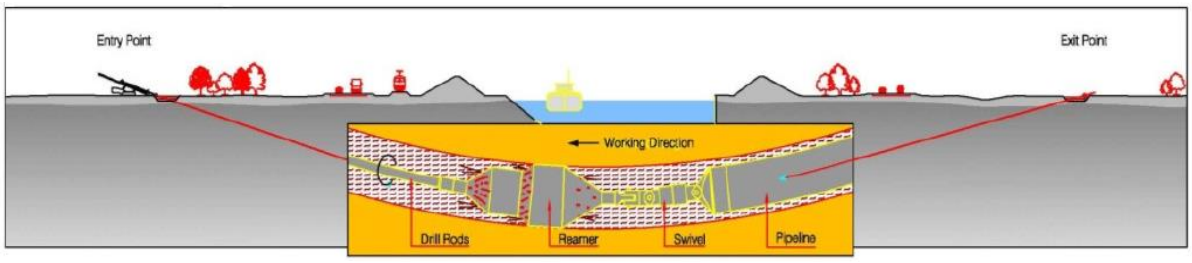
Figure 0-12 Proposed Onshore Project Layout



The HDD pipeline construction involves using a special drilling rig to advance a so-called pilot hole starting from an entry to an exit point located at the beginning respectively the end of the HDD segment. On completion of the pilot hole drilling, the drilled hole will be enlarged using a reamer to allow pipeline placement, operation called reaming. After the completion of the reaming operations, the pipeline will be pulled through the pre-drilled hole. For Each HDD section, the method requires a temporary construction site of approximately 25x40 m for the HDD rig (the entry site) and an approximately 25x40 m exit site. This method requires use of drilling mud (based on 100% bio-degradable, bio polymer) which is continuously recirculated to help maintain the stability of the drilled hole as well as to carry the generated drill cuttings into a settlement pit located on the entry site. Upon completion of the HDD pipeline installation the entry and exit rig sites are restored to the original conditions.

An illustration of the HDD pipeline construction to under cross a water body is provided in Figure 7-13 below.

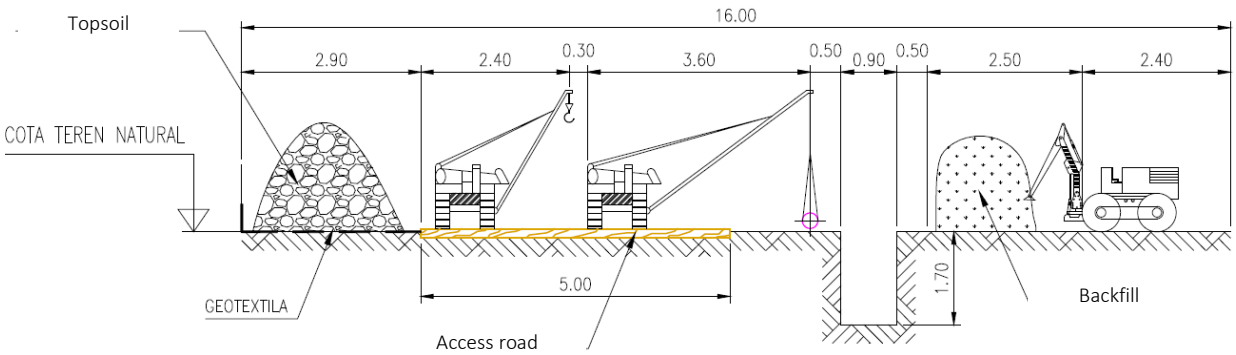
Figure 0-13 Illustration of HDD pipeline construction method



The open cut pipeline construction requires a temporary 16 m-wide work area along the route to allow the pipeline placement. This construction method requires the temporary removal of the topsoil which will be separately stored at the limit of the working area, excavation of the pipeline trench and lowering in the pre-welded segments of pipeline in the trench. Once the pipeline was placed at its location, the trench is backfilled with the previously-excavated material and the entire construction area reinstated using the topsoil separately stored for this purpose.

The configuration of the open cut pipeline construction area is represented in Figure 2-14 below:

Figure 2-14 Schematic of open cut pipeline construction area



The GTP

The onshore GTP will receive the gas from the offshore facilities and then treat it to ensure that it meets the specifications. The GTP will be located within a permitted area, on arable land owned by BSOG, approximately 2.5 km from Vadu village, Constanta County. It will be connected to the national gas transmission system via an extension pipeline (24.5 km-long) to be owned and operated by Transgaz. This connection pipeline will tie into the GTP and will connect it with the "Transit 1" pipeline of the national gas transmission system.

The GTP construction will initiate with establishing the temporary construction camp. First will be established the access road and the camp office with required utilities, laydown area, enclosed storages fabrication shelter as necessary, and the perimeter will be fenced. The construction camp will not include workforce accommodation facilities. The site area will be cleared and graded. The topsoil will be stored separately at the dedicated area of the site construction camp to be used for the site reinstatement at the end of construction. The entire construction camp area will be reinstated to the initial conditions upon GTP construction finalization.

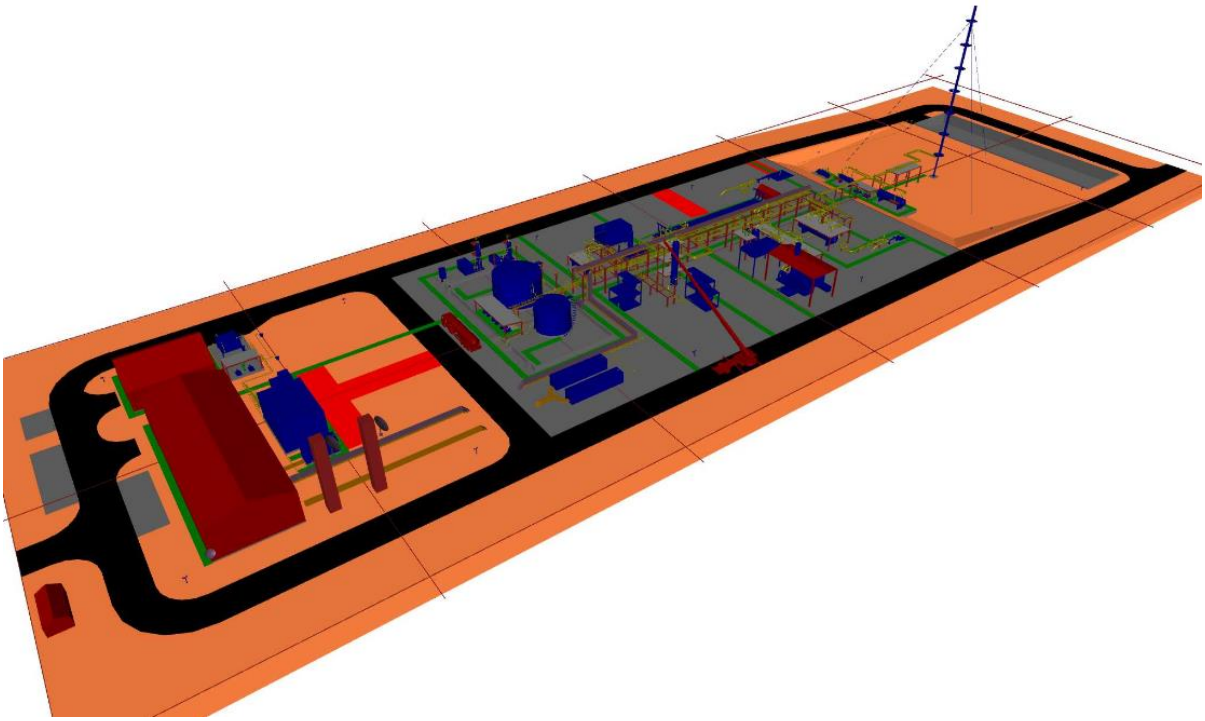
The GTP will comprise:

- the main gas processing systems: pig receiver, slug separator, gas compressor including auxiliary systems, Triethylene glycol (TEG) dehydration column, gas fiscal metering package (point of sale)
- auxiliary processing systems: Monoethylene glycol (MEG) storage tank, transfer pumps, regeneration package, corrosion inhibitor storage and injection facility and TEG regeneration package.
- utility systems: main power generation, back-up power generation, utilities (fuel gas, diesel, instrument air, nitrogen and drains), fixed firefighting system and cold vent.

The overall plot size for the GTP is 300 m × 100 m, arranged east-west with the gas processing equipment and cold vent disposal systems to the east of the site and the control room and support facilities to the west of the site. The GTP will be located in the immediate vicinity of an acacia plantation forest and is estimated not to exceed the height of the forest (about 10-11 m), except for the gas discharge cold vent. The stack is 50 m high and approximately 1 m in diameter.

The GTP will be surrounded by a fence and trees will be planted around the perimeter. The site will be manned 24 hours a day. A workforce comprising 20 – 24 persons, will be required for the operation of the MGD Project.

Figure 0-75 Schematic Layout of the GTP



Source: *Midia Gas Development FEED Study, ESIA Report*

2.3 Is MGD Project related to other projects or operations? How?

MGD Project is inherently related to a new gas pipeline project that will ensure the transfer of the produced gas to the national transmission system.

The treated gas from the GTP will be injected into connection pipeline and further to the national natural gas transmission system operated by Transgaz, via a connection point and metering station located within the GTP.

For this purpose, Transgaz will extend the national gas transmission system by construct a 24.37 km-long, 20-inch diameter connection pipeline. The pipeline follows a general south-east to north-west direction, between the MGD Project GTP at Vadu area and the “Transit 1” pipeline of the national gas transmission system.

This pipeline, referred to further in this NTS as the “connection pipeline” represents an “Associated Facility” to the MGD Project. Associated Facilities (AFs) are not part of the project but would not have been constructed if the project did not exist and without them the project would not be viable.

The pipeline connecting the GTP with the national gas transmission system was initially considered an MGD Project component and envisaged to be constructed and operated as integral part of MGD Project. Consequently, two alternative routes were assessed by BSOG and constraints mapped within a 5 km corridor. Criteria considered in the assessment of alternatives included environmental and social aspects in addition to technical/engineering and cost aspects. Environmental and social criteria considered included the number of waterbodies crossed, number of built up/populated areas to be avoided, pipeline length in environmental-protected areas, in wetland areas, in areas of geological constraints and number of residential areas and buildings to avoid. Based on the assessment performed, the alternative that obtained a better score on the basis of the above-indicated environmental and social criteria was selected as the preferred route.

With the 10-year Development Plan of the National Gas Transmission System (period 2017 – 2026), the connection pipeline was considered by the authorities an extension of the national gas transmission system, to enable acceptance of offshore Black Sea gas production. Transgaz, the national gas transmission system operator, was therefore legally mandated to build and operate the connection pipeline as an additional entry point to the national gas transmission system. The development of the connection pipeline project was therefore taken over by Transgaz.

The preferred route as determined based on the assessment performed by BSOG represented the basis of the connection pipeline design, as further refined by Transgaz. The design of the connection pipeline was therefore influenced by the outcomes of the BSOG assessment, the route with less environmental impacts being selected. The final route of the connection pipeline as defined by Transgaz is illustrated in

Figure **0-8** below:

Figure 0-8 Connection pipeline route (Transgaz, 2019)

Source: *MGD Project AESIA, March 2019*

The impact assessment performed for the MGD Project takes into account the potential cumulative impacts with the connection pipeline project (i.e. in relation with the construction traffic through the communities and with potential biodiversity impacts at the GTP construction site area) and the environmental and social management plans to be implemented by BSOG define mitigation measures in cumulative context.

The MGD Project Grievance Mechanism also takes into account the connection pipeline development and provides for a process to deal with grievances potentially received by MGD Project but pertaining to the Transgaz connection pipeline.

During the projects implementation BSOG will be able to make, as needed, suggestions to Transgaz for their further consideration and point out the benefits in respect of managing environmental and social risks or impacts associated with the connection pipeline, but BSOG cannot take responsibility for the further action or inaction of Transgaz on any particular matter particularly as this pipeline is not an MGD Project connection pipeline but represents state-owned national gas transmission infrastructure.

The MGD Project will not use the entire capacity of the connection pipeline. Approximately 90% of the connection pipeline capacity will be required by MGD Project for the initial 4 years of operation, i.e. until 2024. After 2024, the use of the connection pipeline capacity by MGD Project

will gradually decrease to an estimated 2 % of the connection pipeline transmission capacity in 2034. The MGD Project life time is estimated at 15-20 years.

Third parties will be able to use the additional transmission capacity by tying in at any Transgaz-accepted location on the connection pipeline route, or by using the MGD Project offshore and onshore infrastructure. The MGD Project will thus provide the opportunity to unlock other gas discoveries in the Black Sea by avoiding the need for construction of extended offshore and landfall gas transmission infrastructure.

2.4 What are the main alternatives considered for the MGD Project?

The Project owner adopted a methodical approach for the selection of the best-case design, which included consideration of:

- alternatives in terms of the location of the MGD Project components; and
- the technological processes.

The decision-making processes about the Project location and design incorporated environmental and social considerations as well as implementation of the Best Available Techniques (BAT) in terms of technology adopted. Different location and technology options were considered for the onshore and offshore Project components, with main ones being briefly presented in the following subsections.

2.4.1 Alternative Locations of Project Components

Landfall and shore approach options

There were a number of constraints to locating the landfall along the coastline including:

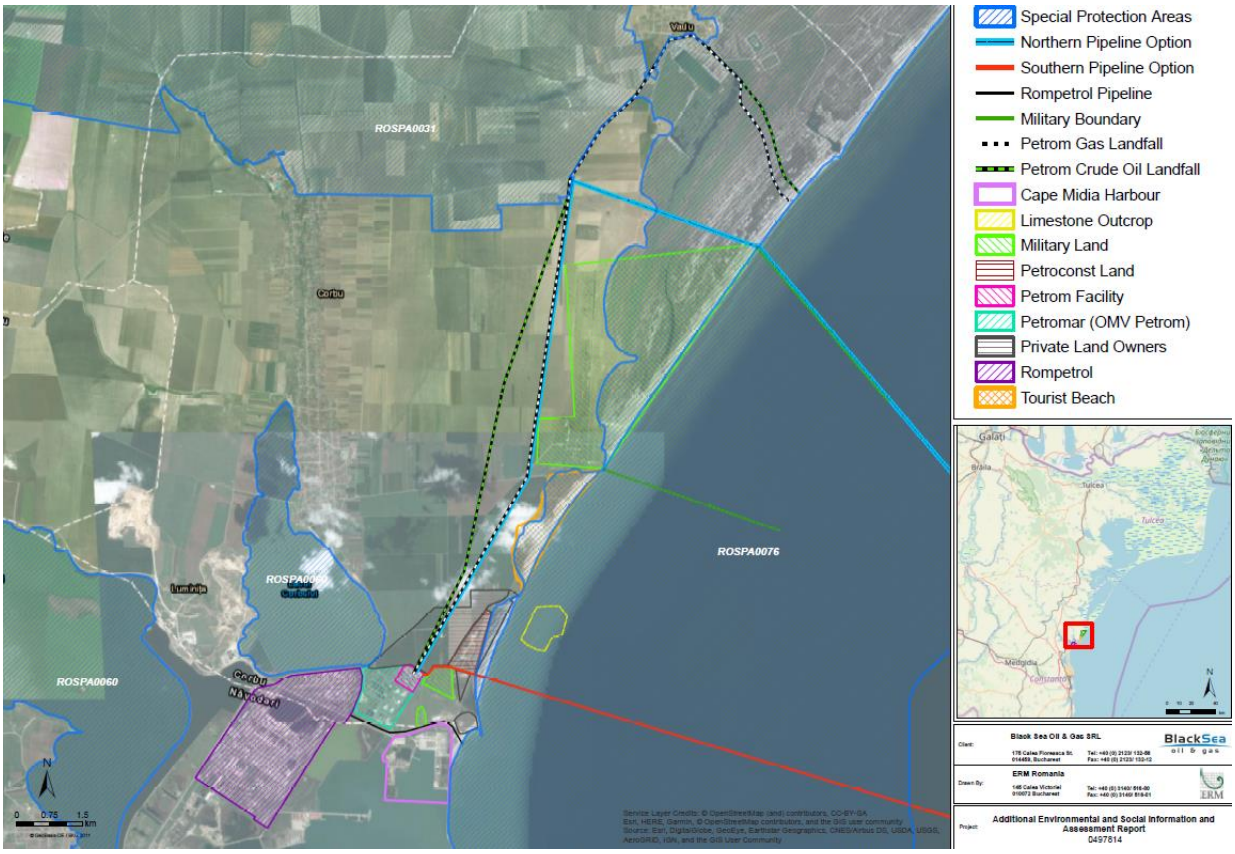
- sites of importance for nature conservation (e.g. those associated with the Danube Delta);
- offshore and onshore areas used by the Romanian Military and associated safety/exclusion zones;
- areas of importance for tourism;
- nearshore limestone rock outcrops area;
- existing industrial infrastructure development and associated safety buffers triggering technical/engineering constraints for pipeline routing (e.g. at Capu Midia Harbour/Navodari area, offshore pipelines and crude buoy etc.);
- legal restrictions in connection to land use and permitted activities;
- “exit” options towards inland gas transmission infrastructure; and
- land availability and ability to secure land rights.

With consideration of the above, a number of offshore pipeline route options were assessed, and two main landfall options identified as possible as follows (refer to Figure 4-3 below):

- Northern Option - landfall in the Vadu area; and

- Southern Option - landfall in the Capu Midia Harbour area.

Figure 2-17 Proposed Landfall Onshore / Pipeline Routes and Key Constraints



Due to combination of the constraints listed above, an appropriate location for the GTP site and associated pipeline routing could not be defined for the Southern Landfall Option. The main objection against the Southern Landfall was raised by the military authorities. They asked for the pipeline to be re-routed to the north, to bypass the offshore firing range and to approach the shoreline at the area of two existing OMV Petrom offshore pipelines.

The above-indicated triggered the need for a GTP site location at the Northern Landfall Option at Vadu area.

GTP Site Location and Onshore Pipeline Routing

The GTP location was subject to several limitations and had to meet some specific requirements (*e.g.* flat land area, sufficient height above sea level, distance over 1 km from military areas (military firing range), location outside areas protected for nature conservation, away from watercourses. Of these, the presence of an onshore military facility and firing range to the south and the nature protection areas and Vadu Village to the north were the key limiting factors.

The GTP location was selected to meet all of the above-indicated requirements, in an area where land rights could be secured. Its position in an agricultural field (modified habitat), avoided impacts

on sites of importance for nature conservation associated with the economic zone of the Danube Delta Biosphere Reserve and did not support flora / fauna species that triggered critical habitat.

The routing of the onshore pipeline proved to be challenging from many perspectives. The need to bypass to the north the offshore military firing range determined the location of the pipeline shore landing and prevented the perpendicular coast approach.

With the start point (offshore pipeline shore landing location) and the end point (the GTP site location) determined, the onshore pipeline route was further determined by the limitations in finding a continuous string of land plots with updated, valid and unchallenged ownership documentation whose owners were willing to sell / grant easements for the pipeline. The onshore pipeline route crosses a part of the Danube Delta Biosphere Reserve that has been zoned for economic development. It will not affect any strictly protected zones or buffer zones of the Biosphere Reserve. Refinements to the onshore pipeline Project design have also been identified (discussed in Section 3.6).

2.4.2 Consideration of Best Available Techniques (BAT) in Project Technology Alternatives Selection Process

The initial Project concept envisaged the development of two interconnected offshore production platforms (one at each Doina and Ana fields) with 3 wells each. The initial Project concept was subsequently refined and the final MGD Project design considers the development of only one offshore platform comprising four wells at the Ana field. At the Doina field only one subsea well will be developed which will be controlled via an umbilical from Ana platform. This resulted in avoiding the more intrusive works needed for the installation of a second offshore platform at Doina field, with a larger footprint.

A number of technology options were further considered for the onshore and offshore project components. Consideration of the Best Available Techniques (BAT) in the design represents a project commitment that has been incorporated in the design decision-making process to date and will be considered in the further detailed design stages of the project.

Exemplification of key alternative design decisions informed by BAT analysis is provided below.

Drill Cuttings Disposal Best Practicable Environmental Option

Drill cuttings and associated water-based drilling fluids, also termed water-based mud (WBM), or water-based drilling fluid (WBDF) will be generated through the drilling of the Ana and Doina wells.

Alternative MGD Project drill cuttings management and disposal options considered include:

- Reinjection;
- Sea disposal, and
- Land disposal (ship to shore for re-use, recycling or disposal).

To identify the preferred drill cuttings option, a Best Practical Environmental Option (BPEO) study was performed taking into account technical, environmental, health & safety and cost aspects.

The BPEO assessment was based on a detailed review of envisaged drilling activities and of the alternative drill cuttings management and disposal options, on a review of the environmental sensitivities at the drilling sites and drill cuttings dispersion modelling. These informed the assessment of each disposal option and determined the selection of the preferred option along with relevant mitigation and management approaches.

Based on the results of the above-indicated options analysis, the sea disposal of water-based drilling fluid (WBDF) and WBDF-based cuttings has been identified as the Best Practical Environmental Option (BPEO). The impacts to the aquatic environment associated with this option were not considered to be significant. Taking into account the other considerations, sea disposal was considered to be the most preferable of the disposal options having the lowest GHG footprint; being the best (most reliable) technically; having the lowest cost; and presenting the lowest health & safety hazard profile.

The BPEO findings were used to inform the development of a drill cuttings management plan as part of the overall Project Environmental and Social Management Plan (ESMP).

BAT Consideration in Gas Venting versus Gas Flaring Selection Process

BAT analysis was employed for key design decision regarding gas flaring and venting to minimize the project air emissions. The MGD Production process requires continuous onshore flaring or venting of gas to atmosphere in relation to the gas processing at the GTP site. The BAT assessment was performed with consideration of two options, i.e. whether to flare (including the requirement for a continuous pilot flare), or to vent to atmosphere. The assessment included the overall technical, environmental and commercial aspects of the two options to determine the BAT solution. The assessment of flaring versus venting aimed at finding a balance between the project requirements from a technical stand point and the environmental objectives and requirements. This was performed using a BAT assessment based on five drivers, each allocated with a weighting reflecting the priority and importance in the selection process. With consideration of the European Directive 2010/75/EU on Industrial Emissions, for both processes assessed (venting and flaring) the considered drivers were: associated environmental and social impacts, engineering practicability, health and safety, reputation and stakeholders' objectives and the cost. Each of the above-indicated drivers was allocated with a weighting reflecting the priority and importance in the selection process. The environmental and social driver was allocated a higher weighting (30%) than the other drivers (17.5% each) to reflect the importance of the associated assessment criteria.

The outcome of the assessment indicated venting as the preferred technology which was taken further and selected for the project design.

Gas Processing BAT Review

Upon the completion of the project basic engineering stages, a BAT Assessment of the gas processing at the project GTP was performed to confirm project BAT alignment, supplement BAT assessments previous made and inform the further stages of the project.

The BAT assessment was carried following three main steps:

- Review of European guidance for BAT to determine what constitutes BAT for the key project components, including design and management controls for the operational phase;
- Compilation of the techniques that constitute BAT;
- Evaluation of the Project's design against the BAT requirements; and
- Recommend actions for further project stages based on the results of the assessment.
- The following European BAT Reference Documents (BREF) were reviewed as part of the assessment:
- European Commission (2015), Best Available Technique (BAT) Reference Document for the Refining of Mineral Oil and Gas.
- European Commission (2009), Reference Document on Best Available Techniques for Energy Efficiency.
- European Commission (2006), Reference Document on Best Available Techniques on Emissions from Storage.

The assessment identified no deviations from the BAT measures set out in the above-indicated applicable BREFs at the stage the assessment was performed. Some of the BAT requirements could not be confirmed at the stage of the assessment given that key equipment selection is contingent to the subsequent detailed design stage and certain operational and management systems were not in place. In the case of those requirements for which BAT is to be further confirmed and considered during actual equipment selection, the BAT Assessment provided specific guidance for planning future design and management measures to ensure the BAT requirements identified as applicable are considered and implemented.

Project GHG Emissions Consideration in Alternatives Analysis Process

GHG emissions aspects have been incorporated in the analysis of the alternatives considered for the selection of technologies employed in both the construction and the operational stages of the project.

For the construction stage, key aspects considered are related to the elevated GHG emissions associated with the offshore and onshore transportation and technology employed for project execution. Thus, as indicated in above in this section, the GHG emissions was a key aspect considered in the decision-making process regarding drill cuttings disposal.

As opposed to the selected drill cuttings disposal method, the other two options considered are associated higher air pollutants and GHG emissions due to elevated fuel consumption for additional drilling and technology needs (the case of drill cuttings reinjection), or marine and onshore transportation for cuttings disposal as wastes (the case of drill cuttings shore disposal).

The selected sea disposal method is the least GHG-intensive and associated with most reduced air pollutants emissions of the three methods assessed.

The MGD Project committed to implementing energy efficiency BAT and consequently minimise GHG emissions during the operation stage. The BAT Assessment performed confirmed alignment

with the energy efficiency BAT at the FEED stage and provides specific guidance for ensuring BAT implementation during subsequent stages.

Main technological alternatives considered for the operation stage with increased relevance from the perspective of the project GHG footprint are related to the selection of best option for the continuous hydrocarbons release to atmosphere from the GTP. GHG emissions aspect has been incorporated in the decision-making process for the selection of the hydrocarbon release via flaring or venting as indicated in this section above.

2.5 What is the MGD Project schedule?

The MGD Project construction schedule planned at the time of releasing this NTS is presented below.

Table 0-1 Indicative Construction Time Schedule

Construction Activity	Timeline	Duration (days)
Offshore Structures Fabrication (at Contractor yard)	April 2019 – June 2020	423
Offshore Structures Transportation and Installation	May 2020 – June 2020	32
Drilling	July 2020 – February 2021	207
Offshore Pipelines and Umbilical Installation	February 2020 – March 2021	382
GTP Construction	May 2019 – February 2021	643
Onshore Pipeline Installation	February 2020 – April 2020	56

Source: Midia Gas Development Project, *Additional Environmental and Social Information and Assessment Report (AESIA),* 2019

The planned first gas production date for the Ana and Doina fields is Quarter 1 of 2021.

The majority of the Project components shall have a minimum design life of 15 years, whereas the design life of the offshore infrastructure and pipelines will be 20 years. When the beneficial life of the facilities, both onshore and offshore, comes to an end a detailed Decommissioning Plan will be prepared in line with the technology available at the time. The Decommissioning Plan will be developed in consultation with the relevant regulatory authorities and will be fully compliant with legislation and Good International Industrial Practice (GIIP) in place at the time.

3. HOW WILL THE PROJECT AFFECT THE ENVIRONMENT AND THE COMMUNITY?

The main effects induced by the MGD Project on the offshore environment and onshore environment and local communities are summarised in the following sections. Mitigation measures and management plans addressing negative impacts are also presented to show how BSOG will be managing and mitigating identified impacts.

3.1 Air emissions and ambient air quality aspects

Air quality impacts from offshore MGD Project components

The main offshore sources of emissions during the construction stage of the MGD Project are associated with fuel combustion at the various construction phases, including for wells drilling, use of vessels (e.g. pipelay vessels, heavy lift vessels and barges), helicopters use for personnel transfer offshore during construction period.

During the operational stage, atmospheric emissions are associated with fuel consumption by Diesel generators on the Ana Platform, support and intervention vessels and helicopter use.

In the frame of the project ESIA emission calculations have been made for all equipment emitting to the atmosphere either on a regular basis or during unforeseen events such as refuelling or temporary closures. Air emissions modelling was then performed to support the assessment of the associated impacts.

It is to be noted that the conditions at the offshore project facilities location at more than 100 km in open sea result in a highly dispersive environment for the relatively limited project air emissions.

The assessment performed indicated that the project offshore air emissions will not result in exceedances of the applicable air quality standards.

Key mitigation measures considered by the project includes use of vessels and marine equipment compliant with the International Marine Organization Engine Regulations and the “International Convention on the Prevention of Pollution from Ships” (known as MARPOL 73/78).

Air quality impacts from onshore MGD Project components

The main air pollution sources during the construction phases for the Project are represented by:

- Dust emissions from construction works execution (land excavation, handling of construction materials, vehicles and equipment traffic);
- Emissions from construction vehicles and equipment fuel combustion.

During the operational phase the project air emissions are associated with the GTP operations. The main air emissions are associated with the technological process including gas venting to the atmosphere from the equipment at the GTP and air emissions from combustion processes.

The ESIA included estimation of the air emissions from routine operations and from occasional maintenance or emergency situations. These estimations represented the input data for air emissions modelling which was performed to assist in the assessment of the project impacts.

The assessment performed indicated that the project onshore air emissions will not result in exceedances of the applicable air quality standards. MGD Project committed to implementing BAT-compliant technology.

3.2 Greenhouse gas emissions aspects

As indicated earlier in this NTS, the project alternatives analysis and equipment selection process considered the aspect of GHG emissions to ensure these are minimised.

For each project stage, the GHG footprint of the project was calculated, always following a conservative approach. The total project footprint as conservatively estimated as part of the project ESIA is 818,829 tonnes of CO_2 equivalent. This conservative estimate represents the total GHG emissions for a maximum 20-years project lifetime, throughout all project stages including construction, operation and decommissioning.

With consideration of global warming and climate change aspects (please also refer to project GHG emissions considerations above), the implementation of the MGD Project will lead indirectly to an overall reduction in GHG emissions as result of replacing more carbon-intensive fuels (e.g. coal or oil) with natural gas which results in up to 50% less CO_2 than the quantities resulted from other fossil fuels combustion.

3.3 Wastewater discharge aspects

Wastewater discharges from offshore MGD Project components

During construction stage, main offshore wastewater discharges to the sea are wastewater from the drilling rig and the vessels used for project facilities installation and water discharge from offshore pipeline testing after installation.

The drilling rig and the vessels used for project construction are compliant with the international conventions and Romanian regulatory requirements. The wastewater discharges from these sources will be compliant with the “International Convention on the Prevention of Pollution from Ships” (MARPOL 73/78) and the Convention on the Protection of the Black Sea against Pollution, 1992, Bucharest, ratified by Law no. 98/1992, and Related Protocols.

The commissioning phases of the offshore pipeline requires pressure-testing using seawater treated for corrosion inhibition. For this purpose, the seawater is treated with chemicals selected according to a specific BSOG procedure and compliant with applicable best practice international

standards[2] and approved by national authorities. These chemicals generally degrade or bind to the pipeline and therefore the concentrations in the seawater discharged at the end of the testing is expected to be very low and will be confirmed based on sampling and testing.

Dispersion modelling of these discharges was performed as part of the project ESIA in support of the assessment process. The outcomes of the impact assessment based on the modelling performed indicated that the associated impact to the sea environment is negligible. Key mitigation considered to address this is to optimise the discharge rate based on detailed design calculation informed by the discharge modelling performed.

During the operation stage there are no routine wastewater discharges to sea during the operational stage, other than stormwater from the Ana Platform. The equipment will have local drip pans to collect any released liquids and prevent their discharge to the sea and which will be then transported ashore for appropriate disposal by the supply vessel.

Wastewater discharges from onshore MGD Project components

During the construction stage limited sanitary wastewater streams will be generated in relation with the construction workforce. This water will be locally collected in tanks and tanker-shipped for disposal to licensed facilities.

Similarly, to the offshore pipeline, the onshore pipeline will be tested upon installation. The test water discharged upon completion of this operation will be collected, treated and disposed of by a specialist company.

During operation the sanitary wastewater streams generated at the GTP are collected in an underground tank and tanker-shipped for disposal to licensed facilities.

Process wastewater at the GTP site is generated as result of the process of drying the natural gas. This water is collected into a drainage basin in closed system (without discharge). If occasional discharge is required, the water from the retention basin is tested and tanker-shipped for disposal or treatment to licensed facilities.

3.4 Noise and vibration aspects

MGD Project offshore noise

The construction of the MGD Project facilities includes operations generating underwater noise (e.g. hammer piling) which may affect marine mammals if these are in the proximity.

To address this impact a so-called soft start protocol will be employed to progressively increase the energy of the hammering operations and consequently that associated noise generated. This will allow adequate time for any cetaceans to move away from the area before full power and associated increased noise levels are reached. Also, a Marine Mammal Observer (MMO) holding adequate internationally-recognised licence will be employed for the duration of the offshore construction operations generating elevated noise levels. The MMO duties will include delaying

[2] Oslo/Paris convention OSPAR - List of Substances/Preparations Used and Discharged Offshore which are Considered to Pose Little or No Risk to the Environment (PLONOR); The Offshore Chemical Notification Scheme (OCNS).

the start of the operations if cetaceans are detected within 500 m until they have moved away and not sighted for at least 30 minutes. The MMO will be entitled to suspend increased noise level-generating operations in case marine mammals are observed approaching.

No relevant noise issues are associated with the operation stage of the offshore project components.

MGD Project onshore noise

Potential onshore noise impacts may be associated with the construction activities of both onshore pipeline and the GTP include and the GTP operation.

The project is not located in a residential area, the closest residential area being located over 2 km north of the site. There are no sensitive receptors in the immediate vicinity of the site.

Construction noise will be mainly associated with the transportation of materials, equipment and installations necessary for performing works, and with the on-site construction activities. All these activities will be carried out during daytime hours only. The outcomes of the assessment performed indicate these activities will not to cause impact at residential receptors in the area.

Background (baseline) noise measurements and noise modelling using specialised software were performed to support with the assessment of the noise impact associated with the GTP site operations. GTP equipment noise levels represented the input data for the model and the noise levels at the site boundaries and at the sensitive receptors during routine operation conditions as well as considering operation of all equipment on site (including spare equipment) were modelled.

The model output indicated that the sensitive receptors will not be affected by the noise from the GTP site. The modelling informed on the required mitigation to be put in place to ensure noise levels within the regulatory threshold levels at the GTP site boundaries. These mitigation measures are predicted to result in attenuation of noise produced by specific pieces of equipment at the GTP site, and their implementation will ensure operation noise levels at the site boundaries will comply with the regulatory requirements.

3.5 Waste management aspects

MGD Project offshore waste

Main waste streams associated with the construction stage are represented by the waste generated during drilling of the Ana and Doina wells. The wells will be drilled using water-based drilling fluids.

The drilling process will result in generation of drill cuttings and associated water-based drilling fluids (also termed water-based mud and or water based drilling fluid). As discussed earlier in this NTS, a number of alternatives for the disposal of these wastes were analysed and the sea disposal was determined as the Best Practicable Environmental Option.

The above-indicated analysis was supported by a review of the environmental conditions at the drilling site and by a drill cuttings dispersion modelling that informed the assessment of the

associated environmental impacts. A specialised program was employed to estimate the spread and thickness of discharged drill cuttings from the Ana and Doina wells.

The impact assessment performed demonstrated the environmental acceptability of the sea disposal and informed the development of a Drill Cuttings Management Plan that will be implemented within the frame of the project ESMP.

The management plan:

- documents the controls required for the water-based drilling fluid selection, use and discharge.
- provides evidence of compliance with the good international industry practice, and
- provides details of required monitoring.

No relevant waste generation is associated with the operation stage of the offshore MGD Project facilities.

MGD Project onshore waste

During the construction stage the generation of the following main waste types is anticipated:

- inert construction wastes;
- paper/cardboard and plastic packaging resulted from various construction materials;
- domestic waste resulted from the activity of the personnel at the site area;
- hazardous waste resulted from the contact with hazardous chemicals (textile materials used for cleaning, personal protective equipment, contaminated packaging, containers for transportation etc.);
- absorbent waste, filter materials (including oil filters without any other specification), polishing materials, protective clothing contaminated with hazardous substances; and
- waste resulted from welding, iron and steel waste, wooden packages, metallic packages, synthetic engine oils, transmission and grease oils etc.

The main waste sources during the operation of the project are the activities at the GTP site including maintenance and current repair works and from the administration and management of the site. The waste quantities generated during operation stage will be reduced.

Adequate waste management practices will be employed during the construction and operation stages including implementation of a Waste Management Plan detailing the measures enforced for waste segregation, storage and labelling, waste loading (transfer and expedition), duty of care process, monitoring and reporting.

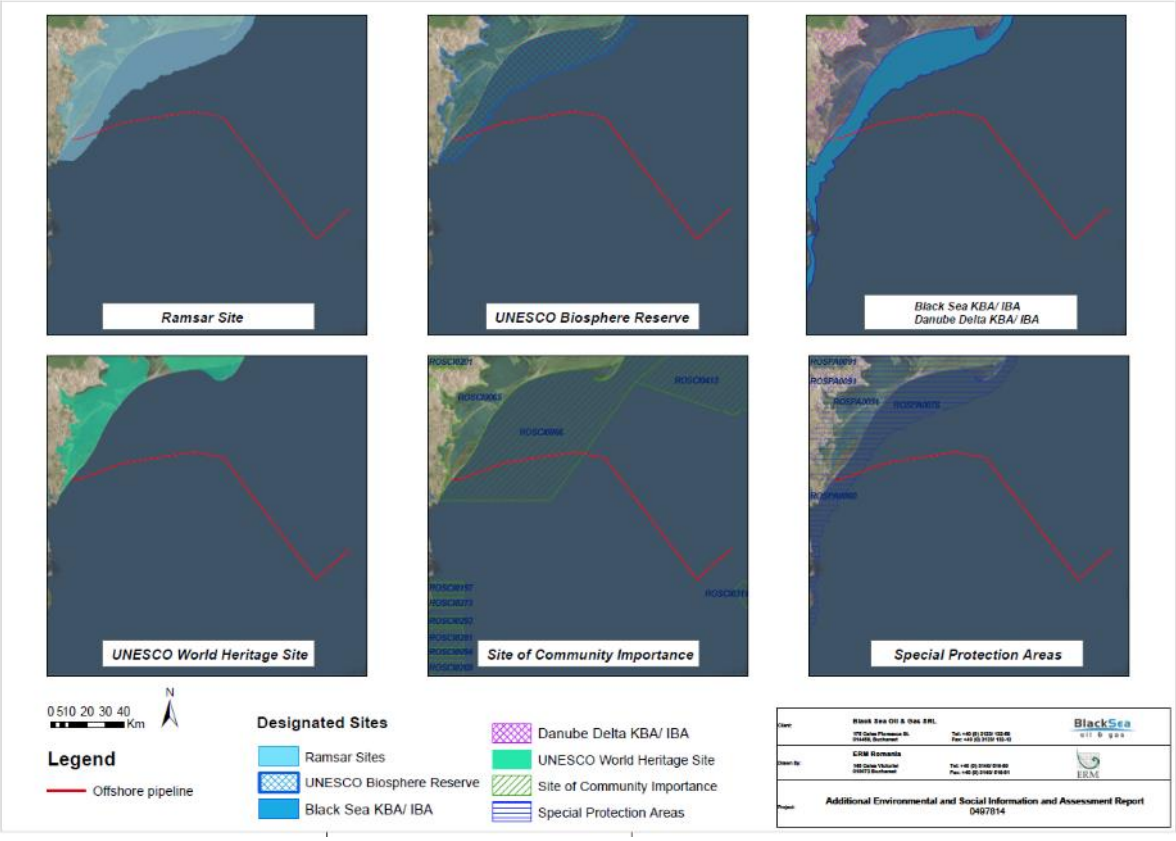
3.6 Biodiversity aspects

MGD Project offshore biodiversity impacts

The Ana and Doina platforms and in-field pipeline are located on the outer part of the northwestern shelf of the Black Sea, the relatively shallow part of the coastal Black Sea up to the 100 m depth contour. The offshore pipeline crosses the northwestern shelf to the Romanian coastline, passing through the marine parts of the Danube Delta Biosphere Reserve and Ramsar Site, the Danube

Delta – Marine Zone SCI, the Black Sea SPA and the Black Sea IBA/KBA (refer to Figure 3-1 below).

Figure 3-1 Offshore Nationally Protected and Internationally Recognised Areas



The biodiversity baseline information collected and processed as part of the impact assessment included identification of biodiversity species in the project area of influence. This included benthic habitats and fauna, fish, cetaceans and birds. For each of these, species of conservation concern (nationally, regionally or globally, Vulnerable, Endangered or Critically Endangered or nationally protected) and habitats of concern (European Red List of Habitats or EU Habitats Directive Annex I habitats) likely to occur in the Project area of influence were identified. These species included 8 fish species, 3 cetacean species and 5 bird species and two habitats.

The habitats on the project offshore area of influence were identified and mapped (refer to figures 3-2 and 3-3 below). All of the marine project area of influence (AoI) is considered to comprise natural habitat.Of the identified marine habitats, A5.71 ‘Seep and vents in sublittoral sediments’ and A5.628 ‘Pontic Mytilus galloprovincialis beds on sublittoral sediment’ are both considered to be Annex I[3] habitats listed in the Habitats Directive.

The baseline defined as per above informed a detailed assessment focussed specifically on the critical habitat, natural habitat and priority biodiversity feature (PBF) receptors identified, as defined by IFC Performance Standard 6 (PS6) and EBRD Performance Requirement 6 (PR6).

[3] Annex I of the Council Directive 92/43/EEC on the conservation of natural habitat and of wild fauna and flora

This assessment supplements the Project's Appropriate Assessment that was carried out in accordance with the EU Habitats Directive as part of the overall permitting process.

Figure 3-2 Nearshore Benthic Habitat Map

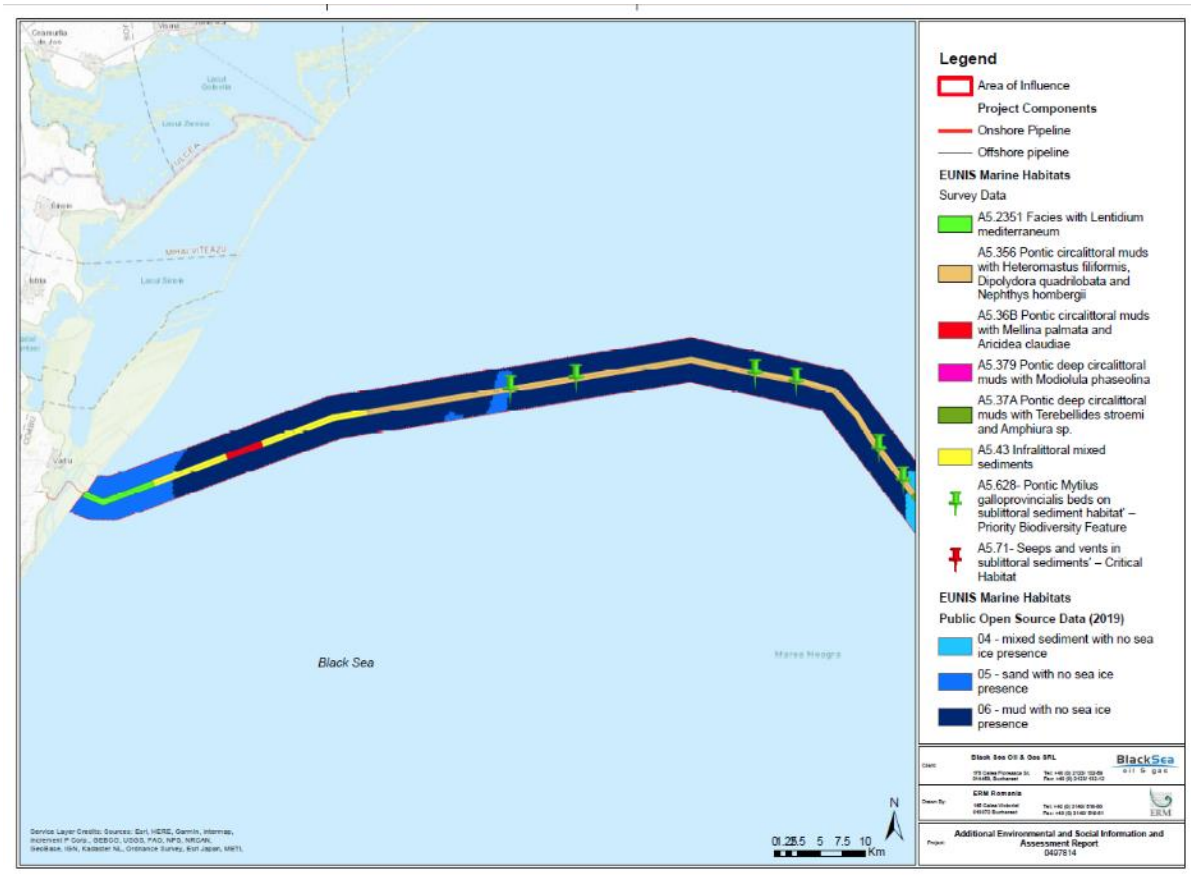
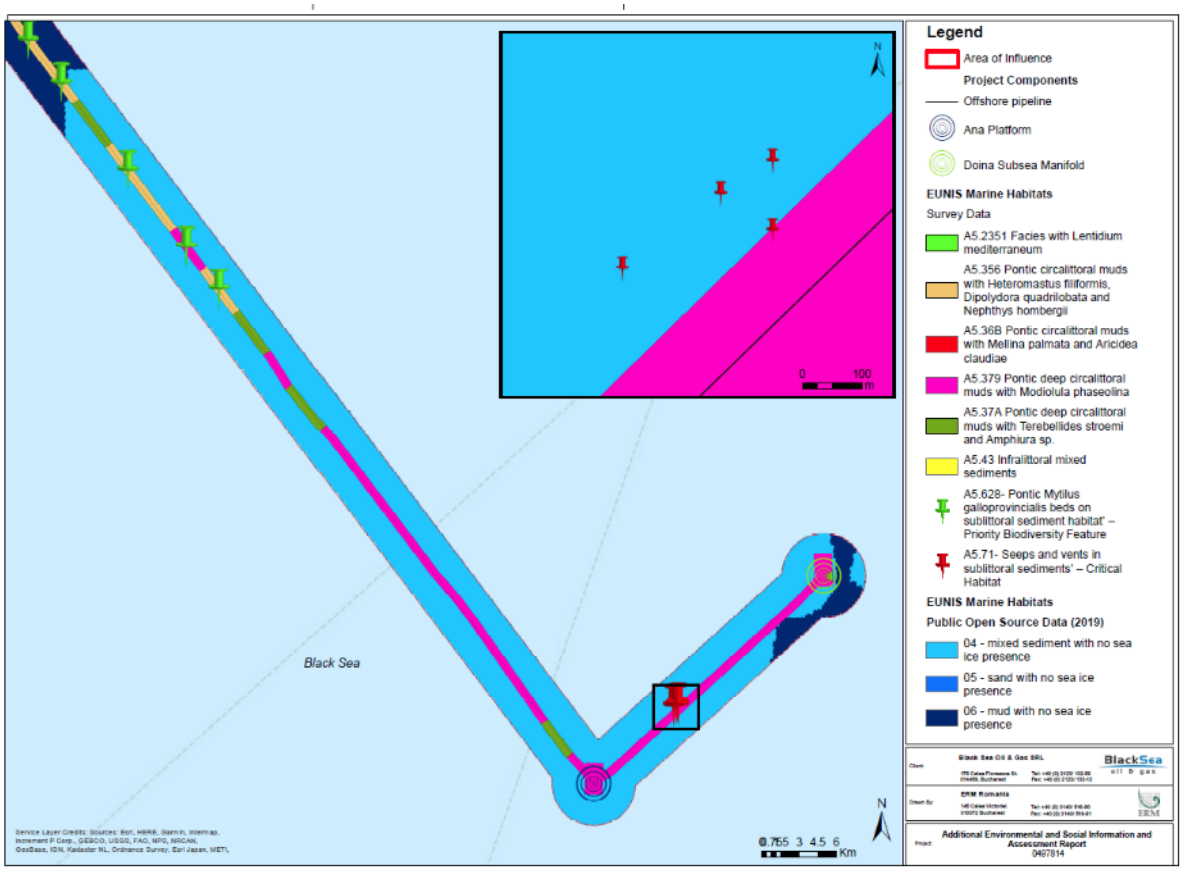


Figure 3-3 Offshore Benthic Habitat Map



The assessment performed indicates there will be a permanent loss of approximately 6.8 ha (68,366 m^2) of offshore natural habitat under the footprint of the Ana platform, subsea in field infrastructure and export pipeline, and deposition of drill cuttings as a result of the Project. The vast majority of the benthic habitat lost comprises soft sediments. In place of the lost benthic habitat, the Project will introduce a similar area of hard substrate (in the form of the subsea infrastructure) which will provide a greater diversity of benthic habitat than currently occurs in the Project AoI as new habitat forms over the infrastructure and it is colonised. This hard substrate will be colonised by marine species throughout the lifetime of the Project.

Given the relatively small area of offshore natural habitat affected, and the extensive areas of similar natural habitats on the northwestern shelf of the Black Sea, the Project is not predicted to significantly convert or degrade offshore natural habitats.

The Project will result in the permanent conversion of approximately 2.4 ha of benthic habitat within the Danube Delta Marine Zone SCI, 0.5 ha of benthic habitat within the Black Sea SPA and IBA/KBA and 0.4 ha of benthic habitat within the Danube Delta Ramsar Site, UNESCO Biosphere Reserve. As with the effects on benthic natural habitat, the new infrastructure will provide a greater diversity of benthic habitat than currently occurs in the Project AoI as new habitat forms over the infrastructure and it is colonised. This hard substrate will be colonised by marine species throughout the lifetime of the Project.

Impacts on seep and vents in sublittoral sediments will be avoided through micro siting of the infield pipeline route, and the use of dynamic positions rather than anchor spreads by the pipe laying vessel. Small areas of Pontic *Mytilus galloprovincialis* beds on sublittoral sediment will be lost as a result of pipeline installation. However, the area affected are small, and these habitats are predicted to recolonise the hard substrates of the pipeline. Significant effects are not predicted.

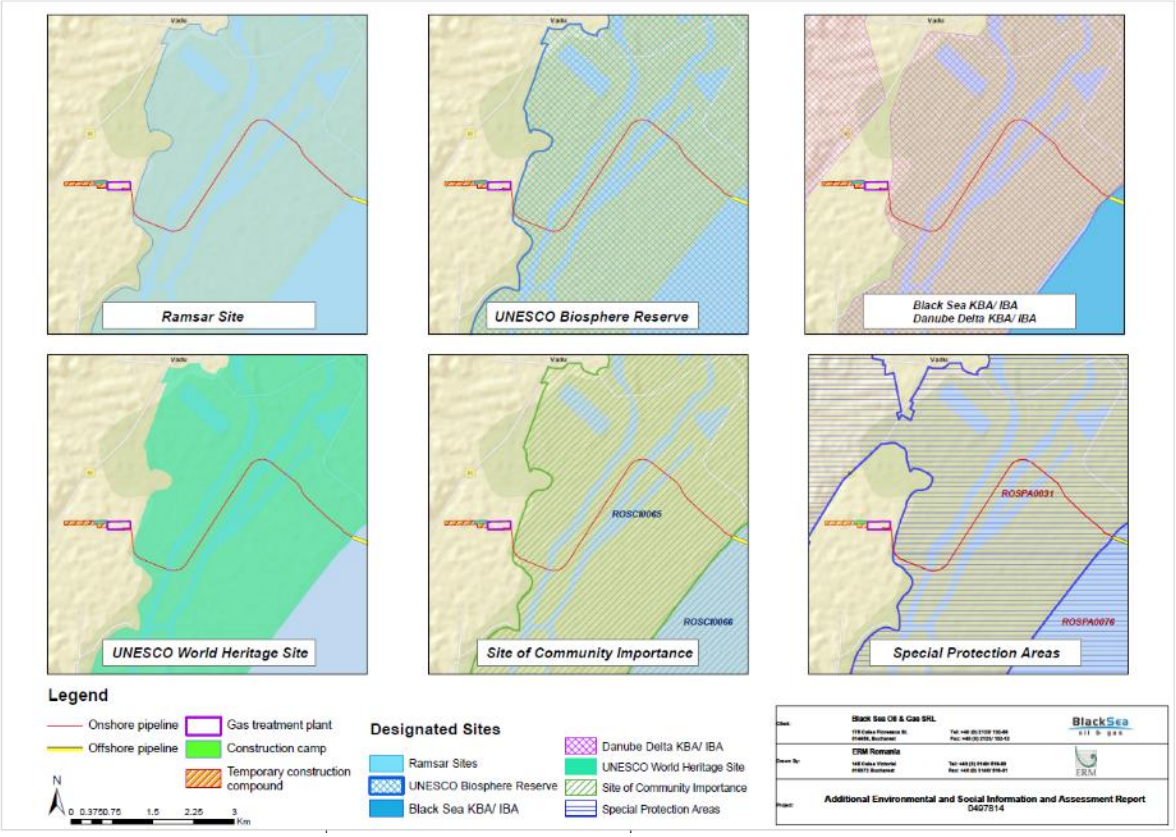
The Project may result in the temporary displacement of three critical habitat marine mammals and two critical habitat fish species as a result of increased noise levels from piling and vessel operations during installation of the subsea infrastructure and pipelines. Impacts will be temporary, and individuals are expected to return following completion of the construction works. Mitigation measures for biodiversity receptors have been captured in a Project Biodiversity Management Plan (BMP).

As a result of the predicted residual impacts on offshore critical habitat biodiversity receptors, measures to deliver biodiversity net gain for these receptors have been identified in the Project Framework Biodiversity Action Plan (BAP). The BAP will be a living document that evolves and is updated as the Project progresses. Measures identified to deliver NNL and NG for offshore in the BAP include but are not limited to provision of monitoring data from the Project about the status of habitat and marine species within the western part of the Black Sea, and supporting capacity building for Black Sea conservation agencies, and especially work on Marine Protected Areas,

MGD Project onshore biodiversity impacts

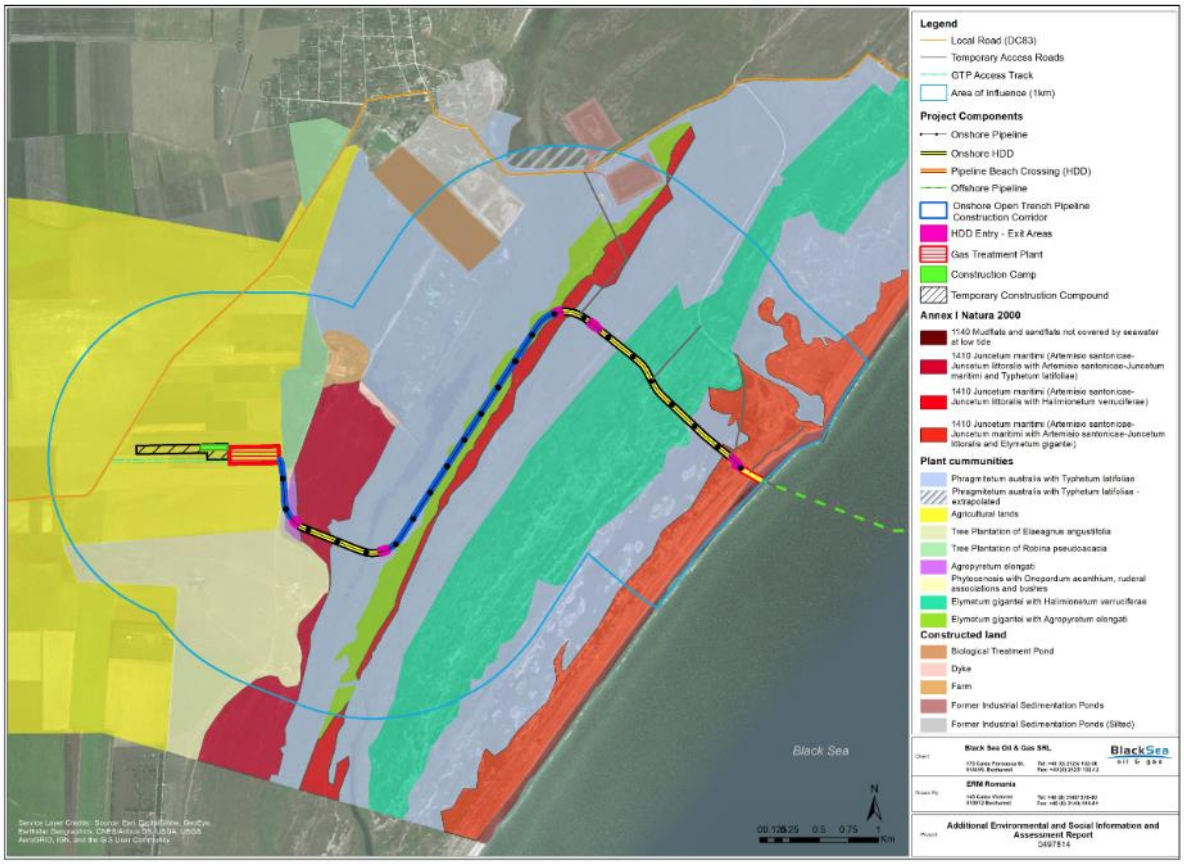
The pipeline landfall and the majority of the onshore pipeline falls within Danube Delta UNESCO Biosphere Reserve, World Heritage Site, Wetland of International Importance (Ramsar Site), Important Bird and Biodiversity Area (IBA)/Key Biodiversity Area (KBA), Site of Community Importance (SCI) and Danube Delta and Razim-Sinoie Complex Special Protection Area (SPA) – refer to Figure 3-4 below.

Figure 3-4 Onshore Nationally Protected and Internationally Recognised Areas



Habitat surveys were undertaken and mapped as presented in Figure 3-5.

Figure 0.1 Onshore Habitats within the Project AoI



Of the 29 Annex I habitats which are designating features of Danube Delta SCI includes, one was identified in the onshore pipeline route area during the baseline surveys, i.e. 1410 Mediterranean salt meadows (*Juncetalia maritimi*). The Annex I habitat 1140 Mudflats and sandflats not covered by seawater at low tide which will be crossed via HDD at the pipeline landfall is also within the Project AoI. However, this habitat is not a qualifying interest feature of the Danube Delta SCI.

Other non-Annex I habitats identified in the onshore area include:

- reed beds: *Phragmitetum australis* with *Typhetum latifoliae*
- littoral and halophytic vegetation communities: *Elymetum gigantei* with *Halimionetum verruciferae; Elymetum gigantei* with *Agropyretum elongati;* and *Agropyretum elongati*
- agricultural areas,
- ruderal areas: Phytocenosis with *Onopordum acanthium*, ruderal associations and bushes; and
- plantation woodlands: Tree plantation with *Elaeagnus angustifolia* and Plantation with *Robinia pseudoacacia*.

No Annex II[4] plant species were identified in the Project AoI during baseline surveys. Eight other plant species of conservation concern were identified in the Project AoI.

Fauna species of conservation concern identified in the project AoI include three mammal species *(Canis aureus, Lutra lutra* and *Spermophilus citellus),* eight amphibians and reptile species, two invertebrates species and thirty eight bird species.

As indicated in section 2.4.1 of this NTS, the selection of the onshore pipeline route was subject of a number of constraints that prevented complete avoidance of critical habitats. Thus, to minimise the associated impact, alternative construction methods were investigated. As indicated in section 2.2.2 (Onshore gas pipeline) of this NTS, existing project design is based on horizontal directional drilling (HDD) pipeline construction at the beach crossing (from 1.3 km offshore extending to 150 beyond the shoreline) and across the two small watercourses (Figure 2-11).

In order to align with international financing standards (particularly IFC PS6 and EBRD PR6) and to apply the principle of No Net Loss to protected habitats, additional measures to avoid, reduce and mitigate impacts on biodiversity are proposed by BSOG (Figure 2-12) comprising the following:

- Extending the onshore HDD from an original shore crossing of 150 m plus two water body crossings of approximately 100m each to include an additional approximately 1800 m HDD thereby avoiding over one and a half kilometre of onshore open trenching. The exact configuration of the HDD is still be reviewed in attempt to ensure technical feasibility and to avoid and reduce environmental impacts. The current proposed configuration is shown on Figure 0-12 and includes the following elements.
- An additional new section of HDD to extend from the beach crossing HDD approximately 1.3 km inland. As a result of the angle of approach of the offshore pipeline and the location of the secured land plots, the shore crossing HDD cannot continue in a straight line and the (25 m x 40 m) exit pit of this HDD section will be maintained at its original location, within the SCI Annex I habitat 1410 Mediterranean salt meadows. The additional HDD will require a new, adjacent entry pit (25 m x 40 m) within the SCI Annex I habitat 1410 Mediterranean salt meadows, noting that this option does avoid 1300 m of linear open cut trenching.
- The additional section of HDD will extend to the start of the HDD on the beach side of the first watercourse crossing, with an exit pit (25 m x 30 m) before the entry pit for the watercourse HDD crossing.
- The additional section of HDD will reduce direct temporary impacts on the SCI Annex I habitat 1410 Mediterranean salt meadows, as well as direct loss of *Phragmitetum australis* with Typhetum latifoliae and *Elymetum gigantei* with *Halimionetum verruciferae* natural habitats by replacing open trenching with HDD for approximately 1300 m.
- Extending the HDD at the second watercourse crossing approximately 500 m under the area of SCI Annex I habitat 1410 Mediterranean salt meadows to avoid impacts associated with open cut trenching of 500 linear meters on this area of habitat.

[4] Annex II of Council Directive 92/43/EEC on the conservation of natural habitat and of wild fauna and flora

In addition, pre-construction check surveys will be undertaken to identify micro-siting options within areas of natural habitat along the existing section of open cut pipeline installation between the two HDD sections. Micro-siting will seek to move the route into areas of *Phragmitetum australis with Typhetum latifoliae* habitats where this is more easily restored than areas of the *Elymetum gigantei* with *Agropyretum elongati* habitat, thereby avoiding further impacts in this area. With increase in HDD, temporary direct effects on Annex I habitats have been reduced from 0.76 ha to 0.26 ha. Overall direct effects on habitats from open trenching have been reduced from 6.9 ha to 4.32 ha. The Project will also develop a site-specific method statement for the onshore construction area to ensure that the commitments noted above are incorporated into construction level management plans.

The proposed changes are subject to technical feasibility studies on the HDD approach, and being able to secure revised permitting for the changes to the Project approach. However, BSOG is committed to developing the Project as outlined above as a minimum approach to avoiding and reducing impacts on critical habitat and applying an approach of No Net Loss of critical habitat.

Any subsequent updates or changes to the Project approach assessed in this document necessitated by the technical feasibility studies, or re-application of permitting documents, will be assessed through BSOGs Management of Change procedure, and the rigorous application of the mitigation hierarchy in line with IFC PS6 and EBRD PR6. The outcomes of such updated Critical Habitats Assessment will be publicly disclosed by BSOG.

With the implementation of the approach outlined above, there will still be small residual impacts on natural and critical habitats and PBF, relating to the temporary disturbance of habitats and fauna receptors. Measures to deliver biodiversity net gain for these receptors have been identified in the Project Framework Biodiversity Action Plan (BAP). The BAP will be a living document that evolves and is updated as the Project progresses. Measures identified to deliver NNL and NG in the BAP include but are not limited to habitat creation and improvement within land plots owned by BSOG, creation and management of reed beds in the wider Danube Delta area and support to work with the Danube Delta Biosphere Reserve Administration (ARBDD) to further develop the management plan for the Danube Delta.

As the Project will impact critical habitat, an assessment has been undertaken of whether alternatives for the development of the Project exist outside of critical habitat. The general assessment of alternatives is presented in Section 2.4.1 of this NTS. In relation to critical habitat, the consideration of alternatives informed the increase in use of HDD set out above.

The Project overlaps with a number of nationally protected and internationally recognised sites. The ARBDD are responsible for the management of the Danube Delta Biosphere Reserve and UNESCO World Heritage Site. They also have responsibility for the other protected areas which overlap with the Biosphere reserve, in so much as the management plan and conservation actions overlap with the area and features of the other sites.

BSOG actively engaged with ARBDD during Project development and received the required permits for Project activities that set out conditions for the Project within the SPA. The permits reference the conditions and mitigation recommendations made in the Project ESIA and Appropriate Assessment as part of their conditions. These measures have been included in the Project commitments register and incorporated into the ESMP and BMP. Going forward BSOG

will continue to work with the ARBDD to ensure that the project contributes to the promotion and enhancement of the conservation objections of this protected area. Specific commitments will be covered in the BAP.

3.7 Cultural heritage aspects

The Project ESIA package has been prepared taking into consideration Romanian legislation and international lender requirements. A study area for identifying cultural heritage assets was defined within 1.5 km of the MGD Project onshore components, while for the offshore Project components it comprised a 400 m-wide corridor along the offshore pipeline (200 m each side of the pipeline alignment) (except the nearshore segment on a length of approximately 8 km where the investigated corridor was 200 m) and 500 m around Ana and Doina facilities location.

The cultural heritage assessment performed for the MGD Project was based on a staged approach comprising desktop data review and fieldwork including walkover reconnaissance and intrusive surveys.

No intangible cultural heritage elements have been identified in the study area.

Six archaeological sites were identified based on desktop research on the Romanian continental shelf of the Black Sea including one submarine archaeological site and five submarine archaeological vestiges. The initial desk-based research informed the subsequent cultural heritage field works performed offshore and onshore.

Offshore cultural heritage site investigations were based on geophysical and bathymetric surveys performed for all offshore MGD Project components including Ana, Doina, infield facilities and pipelines to identify the location of any objects of cultural heritage interest at Ana and Doina fields and along the project offshore pipelines. These surveys identified along the offshore pipeline route two objects that were suspected as being shipwrecks. This determined further investigations at these two locations and comprising specialised, cultural heritage expert autonomous diving surveys. These surveys film and photo-documented the two investigated objects and identified them as sunk modern metal objects (parts of military targets or floats) without cultural heritage value.

The conclusions of the investigations indicated that no elements of historical or archaeological interest were identified in the study area for the offshore MGD Project components.

The onshore MGD Project components are located in an area with confirmed archaeological sites of Roman and Ottoman ages. While Cultural Heritage research and field investigations performed along the pipeline corridor did not result in findings of archaeological interest, archaeological material was recovered and an unpaved antic road (*via terrena*) was identified at the eastern part of the GTP site. The permitting of the onshore MGD Project components was allowed on the condition that an intrusive archaeological research is performed at a specified area of the GTP site prior to construction initiation, and specialized archaeological supervision is ensured ring the earth moving stage of the construction of both the onshore pipeline and of the GTP.

To ensure the above conditions are appropriately implemented, a Cultural Heritage Management Plan will be developed as part of the Environmental and Social Management System of MGD Project. The Plan will detail how BSOG manages and implements mitigation measures for impacts

to Cultural Heritage as the MGD Project execution progresses. Additionally, a Chance Finds Procedure will be developed to define the roles and responsibilities of individuals responsible for dealing with unexpected discoveries during construction.

3.8 Socio-economic impacts

The project ESIA process determined that, from socioeconomic and health perspective, the project will directly impact during the construction stage on the population living in Corbu and Vadu communities and the local beach users, as well as the communities along the road used by the project towards south of the project area until Agigea. During operation stage, the potential impacts will be associated with the GTP operations (e.g. air emissions, noise) which according to the ESIA outcomes will not be significant.

The offshore activities performed in the construction period will have a temporary direct impact on the sea users that will be active within the pipeline construction corridor (approximately 200 m each side) and around Project offshore facilities within 500 m radius. During operational period, the project activities will have a direct impact on sea users navigating within 500 m radius around Ana platform and Doina field and will result in negligible impacts.

Project land acquisition aspects

The process of identifying and securing the land required for the MGD Project was performed between 2012 and 2016. The acquisition of private land (11 private land plots for the onshore pipeline and 3 private land plots for the GTP site) was a transparent process conducted directly by the BSOG.

Prior to engaging in discussions on acquiring land rights, the company made a full disclosure of its identity and intention to develop the MGD Project to the local authorities and to each and all landowners and community members of Corbu and Vadu. Of the private land plots affected, the majority (8 of 14 land plots and representing approximately 85% of the total area) was non-productive land, while the reminder had the legal destination of pasture (2 land plots, approximately 5% of the total area) and farming (4 land plots, approximately 10% of the total area).

Upon confirmation of affected landowners' willingness to sell, direct negotiations with each landowner in relation to the price were carried out. For each land plot affected, the transaction consisted of (i) execution of a promissory sale and purchase agreement having attached the superficies right for which a down payment out of the agreed price was paid, followed by (ii) execution of the sale and purchase agreement (before the lapsing of the term sent in the promise) and payment of the price balance. In addition to the above-indicated private land plots, the project also secured the right of way for 11 publicly-owned land plots along the onshore pipeline.

Economic displacement aspects

The project acquisition of private land was finalised in 2016. Of the private land plots affected by the project, only those secured for the GTP site were actually in use (farmed) prior to their acquisition. No use restrictions on the project land plots have been imposed by BSOG since their acquisition in 2016. The former owner of the GTP site land plots continues to cultivate the area at no cost until the construction will start, based on BSOG approval.

Upon construction finalization, only the GTP site will be fenced. All other project-affected land plots will be restored to their initial conditions. As no physical barriers preventing access will be put in place, the previous land use of these land plots will not be constrained.

No situations of economic displacement were generated by the project land acquisition.

In addition to agriculture, other important economic activity in Corbu Commune is tourism. Tourist accommodation activities include limited formal activities in officially-registered guest houses as well as informal accommodation of tourists in private houses or facilities. There are three operational restaurants in Corbu Commune, two in Corbu and one located on Vadu beach, approximately 400 m from the MGD Project pipeline route.

Positive impacts of the MGD Project on the restaurants in the area may be associated with increased revenues as result of the use of their services by the project construction workforce during the construction stage. On the other hand, according to the Project ESIA the restaurant located on the Vadu beach may experience a temporary decrease in revenues due to a reduction in the number of clients as result of the project onshore pipeline construction activities, in case these will be performed in the touristic season (June 1st – September 15th). Execution of the beach crossing construction activities outside the touristic season was proposed in the Project ESIA as mitigation measure to address this potential impact. The existing project execution schedule is aligned with the proposed mitigation, considering the beach crossing construction between February and April 2020. Therefore, the above indicated potential impact is not anticipated to occur.

While no impacts to livelihoods are expected, a Livelihood Restoration Framework (LRF) was developed as a precautionary measure. The LRF identifies all potential economic displacement situations related to the MGD Project, identifies the project affected persons/groups (PAP) and defines the compensation measures to be implemented. These measures will be implemented on the basis of a detailed Livelihood Restoration Plan that will be put in place prior to displacement in case the project schedule changes and beach area construction activities would be performed during touristic season.

Small-scale, informal fishing is also performed by local residents near-shore, in the proximity of the project area. This small-scale fishing is mainly performed using small boats and fishing nets located on poles placed on the shallow waters close by the shore. Any fishing nets potentially located nearshore will not be physically impacted as the shore crossing will be performed via HDD with the exit point located approximately 1300 m into the sea. Restrictions to near-shore fishing during MGD Project construction will temporarily be enforced 100 – 200 m each side of the alignment of the offshore pipeline segment under construction and will occur starting approximately 1,300 m from the shoreline. Given the limited boat fishing activities performed at this distance the mobility allowed by the fishing technique employed and the short duration of pipeline laying activities at the area, the potential project impacts on the fishing activities will therefore not be significant.

Upon laying the pipeline and during the operational phase of the project, nearshore fishing will not be restricted in any way.

Project workforce-related aspects

BSOG selected a Romanian company, Grup Servicii Petroliere (GSP) as the main construction contractor for the project and the majority of the construction personnel will be Romanian. It is expected that Romanian content will amount to between 70% and 80% of the total MGD Project contract value.

At peak of construction activities, a workforce of approximately 100 persons is estimated as being required for the onshore construction (including GTP site and onshore pipeline execution). Approximately 80% of the construction man power will be sourced from locally available resources and will therefore not require accommodation. The remaining 20% of the workforce will be accommodated in existing guesthouses in the area and, therefore, provision of temporary construction accommodation camps is not planned.

Construction staff needs for the offshore construction works varies greatly with the type of operations executed. Accommodation of the workforce will be ensured on the vessels employed at the various construction stages. It is currently envisaged that the vessels used for project offshore construction are GSP Bigfoot 1 and GSP Falcon. According to current estimation up to 180 staff (including vessel and construction crews) will be accommodated on GSP Bigfoot 1 and up to 130 staff on GSP Falcon. These vessels are provided with cabins having capacities of 1, 2, 4 and 6 beds, all with private sanitary facilities, as well as with all required auxiliary facilities including staffed kitchen, mess rooms recreational and fitness rooms, prayer room etc.

A workforce comprising 20 – 24 persons, will be required for the operation of the MGD Project. This permanent workforce will be concentrated at the GTP facility, while a number of employees will perform regular maintenance and, if needed, emergency interventions on the pipeline and the Ana Platform. No need for worker accommodation provision by the project is envisaged during the operation stage.

Vulnerable People

Project vulnerable groups and people are “people who, by virtue of gender identity, sexual orientation, religion, ethnicity, indigenous status, age, disability, economic disadvantage or social status may be more adversely affected by project impacts than others and who may be limited in their ability to claim or take advantage of project benefits.

Socio-economic impacts refer to the project related activities that can cause disturbances to everyday social and economic activities of the local community. While considering these impacts it is important to note that while a certain group may be in a social risk situation (i.e. ethnic minorities, the unemployed, the elderly, single mothers etc.), their vulnerability should be considered in relation to project activities.

The project ESIA, included an assessment aimed at determining if there are any project-related impacts that might have a differentiated impact on specific groups of people or that have the potential to create vulnerabilities. The aspects considered in this analysis included

- project location and land use
- project traffic and transportation

- livelihoods impact (i.e. agriculture, tourism, fishing-related)

The outcomes of this assessment indicate that the MGD Project may generate a potential situation of vulnerability for the local children enrolled in schools and kindergartens situated in the proximity of the roads affected by the project traffic and transportation activities. These children are considered as being vulnerable (in a social risk situation) in relation to the project traffic and therefore specific mitigation measures are envisaged to minimize potential project impacts on them. Such measures include:

- Traffic management measures:
  - A Traffic Management Plan will be developed for the project and all project staff including contractors and sub-contractors will comply with the provisions included in this plan (refer to below section of this NTS for further details).
  - Cooperation with the local authorities to ensure provision of adequate traffic signing in Vadu. Based on consultations performed, further speed limit restrictions may be enforced for the project traffic through the Traffic Management Plan.
  - Schedule the transportation of heavy equipment and materials to avoid the time periods when children travel to and from school (i.e. during 7-8 a.m. and 12-14 p.m.)
- Awareness raising:
  - Awareness program on traffic-related risks and risks associated with approaching active construction areas in the schools and kindergartens in Corbu and Vadu, in line with the project Stakeholder Engagement Plan.
- Health and safety measures:
  - Adequate marking of the construction perimeters (especially along the pipeline construction corridor) by installing adequate safety/warning signs
  - Enforcement of adequate site security measures during construction period to prevent public access in the construction perimeter.

Mitigation measures addressing this aspect consist of enforcement of adequate traffic and construction site management measures (including construction traffic speed limitations and associated traffic signage, heavy construction traffic avoidance of times when children travel to and from school, control measures of public access in construction areas) as well as delivery of an awareness program in the schools and kindergartens in the communities. Further details on these impacts and associated mitigation are provided below.

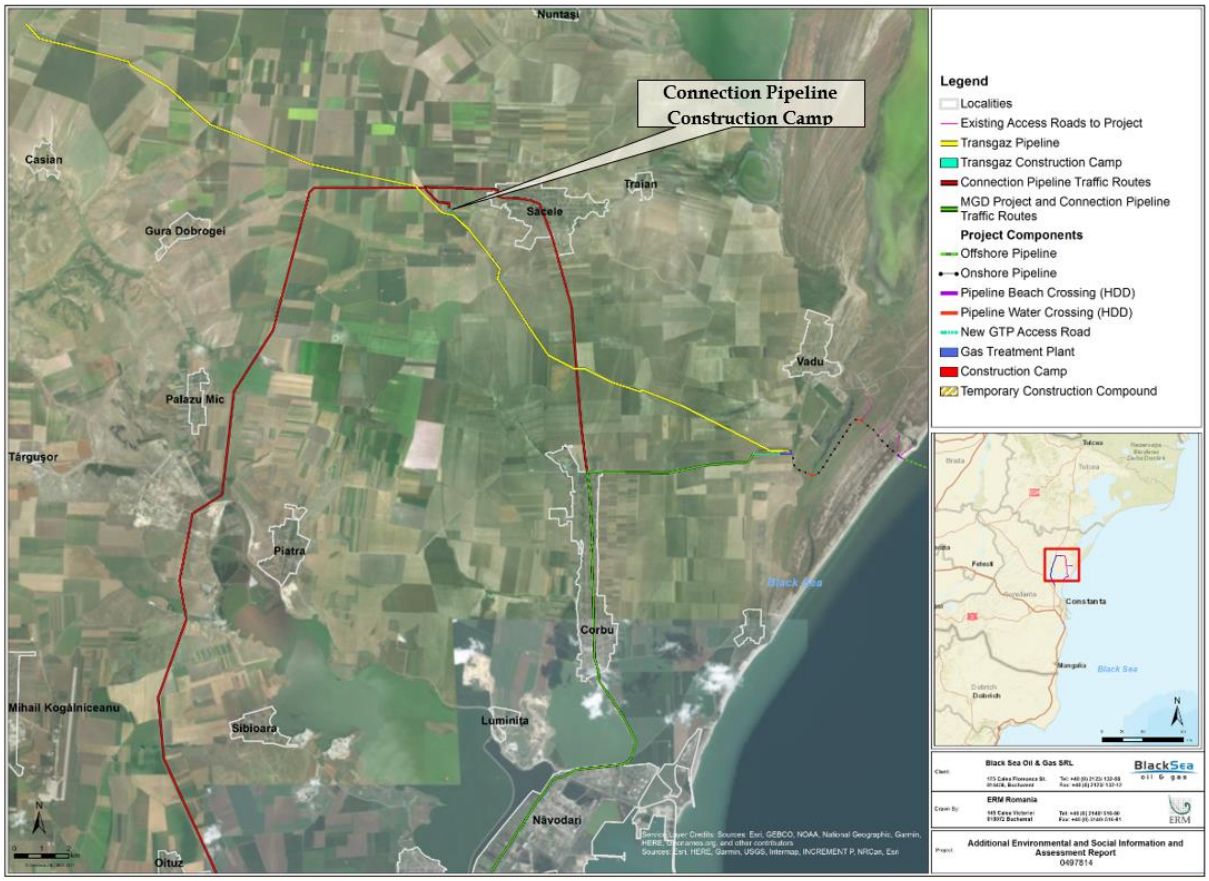
Project Traffic and Transportation

The majority of the materials and equipment required for the Project will be transferred to the construction site from Midia Harbour area, located to the north of Navodari Town. Other project-related traffic will be associated with transfer of equipment and materials from the Constanta Port/Agigea.

Most of the project traffic will however be expected on the route segment between Midia Harbour and the MGD Project area, on Road DJ226 segment from Navodari trough Corbu and DC83 road further to the MGD Project GTP site as illustrated in Figure 3-6 below.

Given that the MGD Project construction will overlap with the construction of the connection pipeline to be implemented by Transgaz, the ESIA considered the construction traffic impact in cumulative context. For this purpose, the assessment identified the road segments to be used by both projects as indicated in Figure 3-6 and took into consideration the expected construction traffic and construction schedule of both projects. As indicated in the Figure 3-6, it was determined that the route segment between Midia Harbour and the MGD Project area, on Road DJ226 from Navodari trough Corbu and DC83 road further to the MGD Project GTP, will be simultaneously used by both projects, for a period of up to 3 months.

Figure 0.6 Construction Traffic Routes used by MGD Project and Transgaz connecting pipeline project



It was determined that the construction traffic of the two projects would likely cause some changes in daily non-project travel patterns, will contribute to the degradation of existing roads and would result in increased safety risks. Therefore, adequate mitigation of the above indicated potential impacts has been considered and will be implemented based on a Traffic and Transport Management Plan addressing the following aspects:

- Timing, volume, speed, and authorized routes for project-related traffic;
- Speed restrictions applicable to project traffic at specific road sections including schools and kindergarten areas;

- Collaboration with local authorities for ensuring adequate traffic signage on road sections affected by project traffic.
- Road repairing required prior to and after construction, as well as maintenance required during construction;
- Temporary traffic management measures, such as banksmen and signage;
- Planning of materials transport to reduce the amount of traffic;
- Identification and reduction of transportation safety risks;
- Vehicle inspection, maintenance and cleaning;
- Dust, air emissions, noise abatement requirements and measures
- Provision of information and consultation with community members regarding the construction schedule and roads affected by project traffic
- Communication in advance of heavy construction traffic through communities
- Community awareness program on traffic-related risks, in line with the SEP provisions
- Handling of road accidents;
- Driver training, and
- Internal monitoring and reporting.

In implementing the above, BSOG will coordinate with Transgaz on the construction traffic planning associated with the connection pipeline interface with the MGD GTP and easternmost section of the connection pipeline.

4. IMPACTS MITIGATION AND MANAGEMENT

To ensure these mitigation measures are effectively implemented, adequate resources and project management planning will be put in place as guided by an Environmental and Social Management Plan (ESMP) package available for the project.

The key objectives of the ESMP package are to:

- Document and direct BSOG personnel and guide the contractors on how project environmental and social risks are managed;
- Clarify environmental and social compliance assurance roles and responsibilities in implementing the mitigation measures;
- Ensure that adequate processes and resources are in place to appropriately monitor project activities against project environmental and social policies, regulations and standards;
- Ensure reporting systems are developed and implemented to communicate environmental and social compliance performance to all project staff including contractors;
- Facilitate continual improvement and environmental and social compliance assurance.

The ESMP package includes adequate project management plans addressing the entire spectrum of environmental and social issues. The following table provides an overview of the project management plans including indication of key issues addressed by each.

Table 4-1 Project environmental and social management plans.

No.	Project Management Plan	Key issues covered
Overall (Project-wide) Management Plans		
1	**Biodiversity Management Plan**	• Plan for implementation of mitigation measures identified in the assessment and in particular, those on critical and natural habitat and priority biodiversity features. • Sets out requirements for pre-construction check surveys • Monitoring requirements during both the construction and operational phases of the project.
2	**Biodiversity Action Plan**	• The approach to achieving No Net Loss (NNL) of natural habitat / priority biodiversity features and net gains for loss of critical habitat through additional conservation actions and/or biodiversity offsets. • Additional measures to promote and enhance the conservation objectives of the affected designated sites • Targets for management measures
3	**Waste Management Plan**	• Non-hazardous and hazardous waste management (waste hierarchy implementation, identification and classification of waste, waste register, waste handling and disposal, waste duty of care, monitoring and reporting).
4	**Workforce Management Plan**	• Training and skill development • Employee grievance mechanism; • Worker accommodation management aspects • Measures for fair treatment, non-discrimination, and equal opportunity in employment. • Requirements related to provision of safe and healthy working conditions, and the health of workers • Management of potential communicable diseases associated with construction workforce. • Workers' community interaction behavioural code of conduct • Contractor employment practices conformance, reporting and monitoring • Management measures related to child labour, forced labour, third-party workers.
5	**Cultural Heritage Management Plan**	• Cultural heritage responsibilities, management and works supervision during construction • Chance finds procedure • Chance finds training, management and response • Interface and coordination with relevant authorities
6	**Stakeholder Engagement Plan**	• Stakeholder identification and mapping • Stakeholder analysis • Previous engagement activities • Stakeholder engagement plan and record keeping • Grievance mechanism • Monitoring and evaluation • Internal and external reporting • Roles and responsibilities
7	**Livelihoods Restoration Framework**	• To address potential tourism-related livelihoods impacts. • Requirement for development and implementation of a Livelihoods Restoration Plan (need determined in case of project execution schedule changes triggering relevant onshore construction overlapping touristic season. • Livelihoods restoration principles and activities • Eligibility and entitlements • Planning and implementation

No.	Project Management Plan	Key issues covered
		• Monitoring and evaluation
8	**MGD Project Emergency Preparedness and Response Plan**	Provision of a consistent and systematic approach to ensure effective control and management of emergencies that may be encountered during project development on project sites
9	**Health and Safety Management Plan**	• MGD Project safety principles and philosophy • H&S policies and commitments and objectives • MGD Project H&S management structure • H&S leadership, organization, competence, communication • H&S contractors management
Onshore Management Plans		
10	**Pollution Prevention and Control Plan**	• General pollution prevention and protection measures • Pollution prevention and protection measures at hazardous materials storages, such as bunding of storage areas, tank overfilling prevention measures etc. • Spill prevention and management • Wastewater discharge and management • Construction dust mitigation and monitoring • Noise management, abatement, monitoring • Resourcs (including water, energy and fuel) management.
11	**Soil, Waterbody Crossing and Reinstatement Management Plan**	• Pre-construction conditions recording and documentation • Earthworks & construction management • Temporary/permanent erosion control requirements and measures • Waterbodies crossing • Reinstatement and revegetation measures, planning, monitoring and verification
12	**Traffic and Transport Management Plan**	• Traffic-related aspects management • Approved access and haulage routes • Road traffic management including on-site and off-site/public roads speed limits, vehicle inspection requirements, operating rules and procedures • Dust, air emissions, noise abatement requirements and measures • Access roads management • Road-related accidents prevention • Training of drivers and equipment operators • Community awareness program on traffic-related risks.
13	**Site-specific Emergency Preparedness and Response Plans**	• Roles and responsibilities, chain-of-command and communication framework • Emergency Response Resources • Incident management, notification, investigation • Training and review requirements.
14	**Site-specific Security Management Plans**	• Security arrangements roles and responsibilities • Security-related communication arrangements • Interface with host government agencies • Security Code of Conduct • Voluntary Principles on Security and Human Rights • Grievance mechanism
Offshore Management Plans		
15	**Pollution Prevention and Control Plan**	• Pollution prevention and protection measures • Wastewater discharges and management • Noise and vibration mitigation and monitoring • Resources Management

No.	Project Management Plan	Key issues covered
16	**Drilling Cuttings Management Plan**	• Ccontrols required for water-based drilling fluids selection, use and discharge. • Solid control equipment, mud and cuttings disposal arrangements • Monitoring
17	**Site-specific Emergency Preparedness and Response Plans**	• Roles and responsibilities, chain-of-command and communication framework • Emergency Response Resources • Incident management, notification, investigation • Training and review requirements.
18	**Site-specific Security Management Plans**	• Security arrangements roles and responsibilities • Security procedures and communication arrangements • Interface with host government agencies • Security training program as per International Ship and Port Facility Security (ISPS) Code provisions • Grievance mechanism

The management of environmental and social risks of the project will follow a “cascade” approach, reflecting good international practice. This means that on the basis of the above-indicated management plans, each contractor will develop their own environmental and social management plans which in turn will be approved by BSOG. The implementation and enforcement of the requirements of these management plans will be monitored by BSOG and will also be subject to external, third-party audits.

All the management plans comprising the ESMP package will be updated as needed to reflect the changes and lessons-learned throughout the project implementation.

To ensure that the project environmental and social aspects are appropriately managed at all times, a so-called “Management of Change” process was defined to ensure that any project changes with environmental and social implications are adequately considered and the management processes adapted accordingly.

5. HOW IS THE PROJECT ENGAGING WITH THE COMMUNITIES AND OTHER STAKEHOLDERS?

BSOG has identified the project stakeholders and is engaging with them since early stages of the project. The engagement was tailored to the needs at each stage of project development. Previous stakeholder engagement activities have been related mainly to (1) the permitting process that started in 2014 and is still ongoing, (2) the land acquisition process that was finalised in 2016, (3) the ESIA development process, and (4) implementation of Corporate Social Responsibility (CSR) programme.

As of 2017 a community relations team was appointed for the project and coordinates the engagement activities performed.

The engagement activities are guided by a Stakeholder Engagement Program (SEP) that was initially developed in 2016 and is periodically updated since then. The SEP summarises the previous engagement activities and provides the planning for the further engagement as envisaged for the project.

Annual reports on stakeholder engagement activities performed are disclosed on BSOG website at the following link: https://www.blackseaog.com/sustainability/environmental-policy/.

According to the SEP the engagement activities envisaged for the project in 2019 are mainly focused on the disclosure of the outcomes of the ESIA process and mainly includes engagement with the following key stakeholders:

- representatives of NGOs active in nature conservation at national and international level and NGOs with activities focused on Black Sea region
- representatives of local authorities from community of Corbu and Vadu
- representatives of Ministry of Environment and local Environmental Protection Agency of Constanta
- representatives of local community, especially representatives of local touristic business and key opinion leaders from Corbu and Vadu.

At the end of the ESIA disclosure process, a Public Consultation Report will be prepared and publicly disclosed on the BSOG website to document the activities conducted and present the feedback and concerns raised by the stakeholders engaged. It will also provide information on how BSOG will take into account the concerns raised by stakeholders.

A key element of the SEP is the so-called “Grievance Mechanism”, which provides an easy way for anybody to submit their, questions, suggestions or complaints (together called “grievances”) to the Project representatives. Under the Grievance Mechanism, all such grievances submitted are tracked and must be responded to within 30 days.

All stakeholders can submit any questions, suggestions or complaints personally, by post, e-mail, web site or facsimile using the contact details provided in the introduction of this SEP, at page 6.