

Midia Gas Development Project

Biodiversity Management Plan (BMP)

Black Sea Oil & Gas SRL

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Table of Contents

1. INTRODUCTION	5
1.1. Background	5
1.2 Purpose of Report	5
2. PROJECT DESCRIPTION	5
3. REGULATORY FRAMEWORK AND PROJECT STANDARDS	7
3.1 Romanian Legislative Framework.....	7
3.1.1 Environmental Impact Assessment Legislation	7
3.1.2 Biodiversity Protection and Protected Area Legislation.....	8
3.1.3 Environmental and Offshore Safety Legislation	9
3.2 EU and International Legislation	10
3.2.1 International conventions and protocols	10
3.2.2 EU Regulations	11
3.3 Good International Industry Practice.....	11
3.4 Consenting Process	12
4 DESCRIPTION OF THE BIOLOGICAL ENVIRONMENT	12
4.1 Designated and Recognized Sites.....	12
4.2 Offshore.....	13
4.2.1 Plankton.....	13
4.2.2 Benthos.....	13
4.2.3 Infauna.....	14
4.2.4 Fish.....	14
4.2.5 Cetaceans.....	15
4.2.6 Birds.....	16
4.3 Onshore	17
4.3.1 Habitats and Flora.....	17
4.3.2 Mammals	18
4.3.3 Amphibians and Reptiles.....	19
4.3.4 Invertebrates	20
4.3.5 Birds.....	20
5. POTENTIAL IMPACTS ON THE ENVIRONMENT AND MITIGATION	24
5.1 Offshore.....	24
5.2 Onshore	24
6. Mitigation and Monitoring Plan	25
6.1 Introduction.....	25

- 6.2 Roles and Responsibilities 25
 - 6.2.1 BSOG 25
 - 6.2.2 Contractors 27
 - 6.2.3 Mitigation and Monitoring Measures 27
- 6.3 Biodiversity Monitoring Commitments 43
 - 6.3.1 Offshore 43
 - 6.3.2 Onshore 45
- 6.4 Inspection, Monitoring and Audit 48
- 6.5 Reporting and Review 48
- 6.6 External Reporting and Communication 48
- 6.7 BMP Review and Amendment 48
- 6.8 Management of Change 48
- 6.9 Related Documentation 49

1. INTRODUCTION

1.1. Background

Black Sea Oil & Gas SRL (BSOG) are the operators of petroleum exploration, development and exploitations of Block XV Midia, offshore Romania. The Ana and Doina fields are located in the western Black Sea, approximately 110 kilometres to the east of Constanta, Romania. BSOG intend to develop the Midia Gas Development Project (MGD, the Project) to produce and process natural gas from those reservoirs and route it to export to consumers within Romania and the European Union.

1.2 Purpose of Report

To align with the environmental standards of the principal lenders for the Project, BSOG have undertaken a Critical Habitat Assessment (CHA) and supplementary assessment of impacts on biodiversity as part of the supplementary lenders information package (SLIP). The CHA identified additional impacts on sensitive biodiversity receptors. This Biodiversity Management Plan (BMP) captures the new mitigation and management measures identified in the CHA. It also captures mitigation and management measures identified in the Project Environmental and Social Impact Assessment (ESIA) so that all biodiversity mitigation and management measures for the Project are captured and presented in one document.

The specific objects of this BMP are to:

- Briefly describe the existing conditions within the Projects Area of Impact (Aoi).
- Summarise the potential impacts on biodiversity receptors associated with the Project.
- Describe BSOGs proposed approach to manage potential impacts and risks to biodiversity based on the mitigation hierarchy.
- Describe the proposed monitoring to ensure that the mitigation measures within the BMP are implemented and are effective.

Specific requirements to achieve no net loss (NNL) and net gain (NG) for species and habitats will be addressed in the Project Biodiversity Action Plan (BAP).

2. PROJECT DESCRIPTION

The Project will involve drilling four development wells at the Ana field and one at the Doina field (production wells). A small normally unmanned platform to house the wellheads and minimum facilities at the Ana field (Ana Platform). A subsea gas production system at the Doina field (Doina Subsea); will be joined to the Ana Platform via an 18 km 8" pipeline. A 16" pipeline comprising a 121 km offshore segment and a 4.5 km, onshore segment will route the gas from the Ana Platform to the gas treatment plant (GTP). The landfall of the offshore segment of the pipeline is located in the Vadu area, Corbu Commune, Constanta County.

Figure 1 Project Location

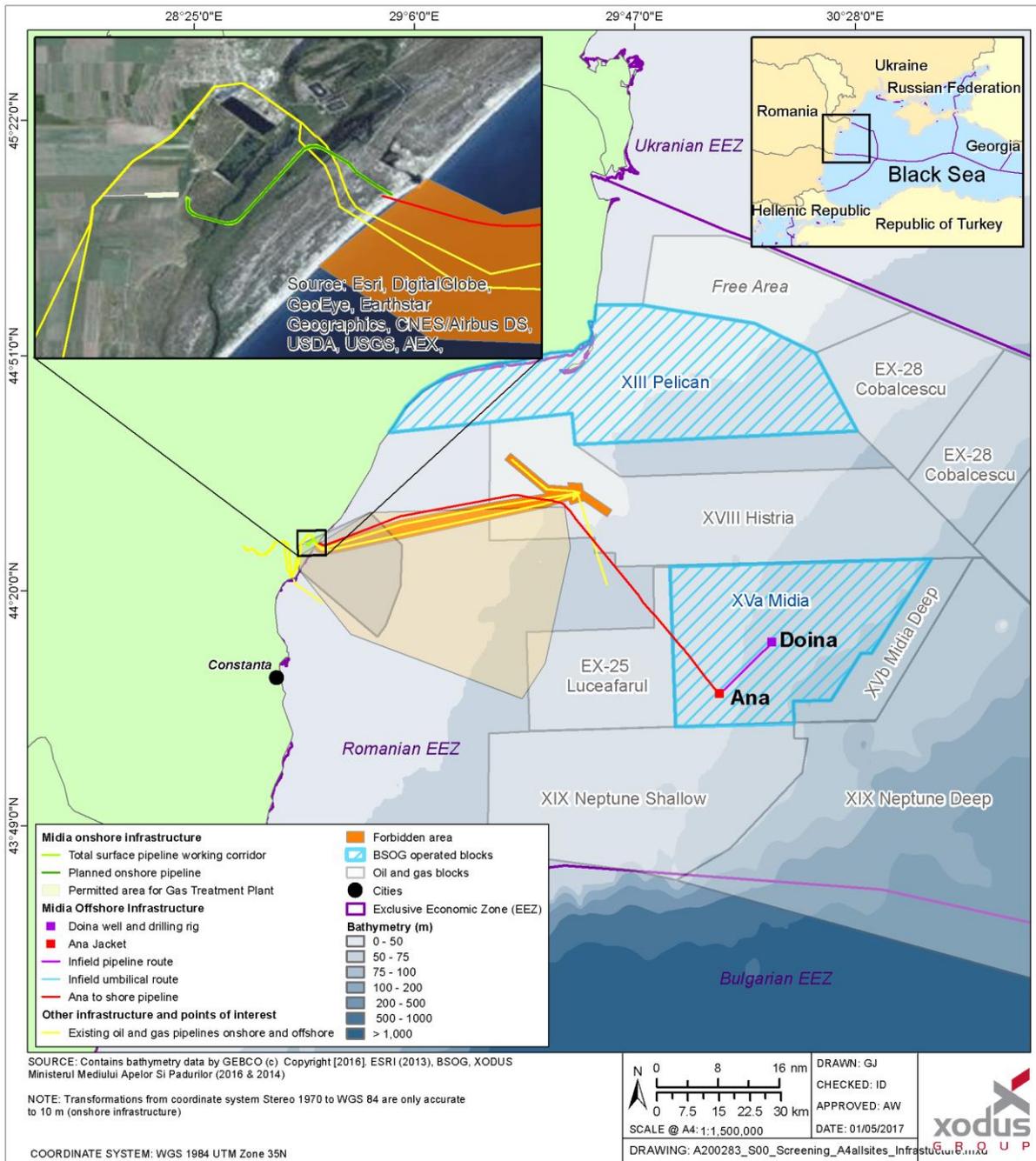
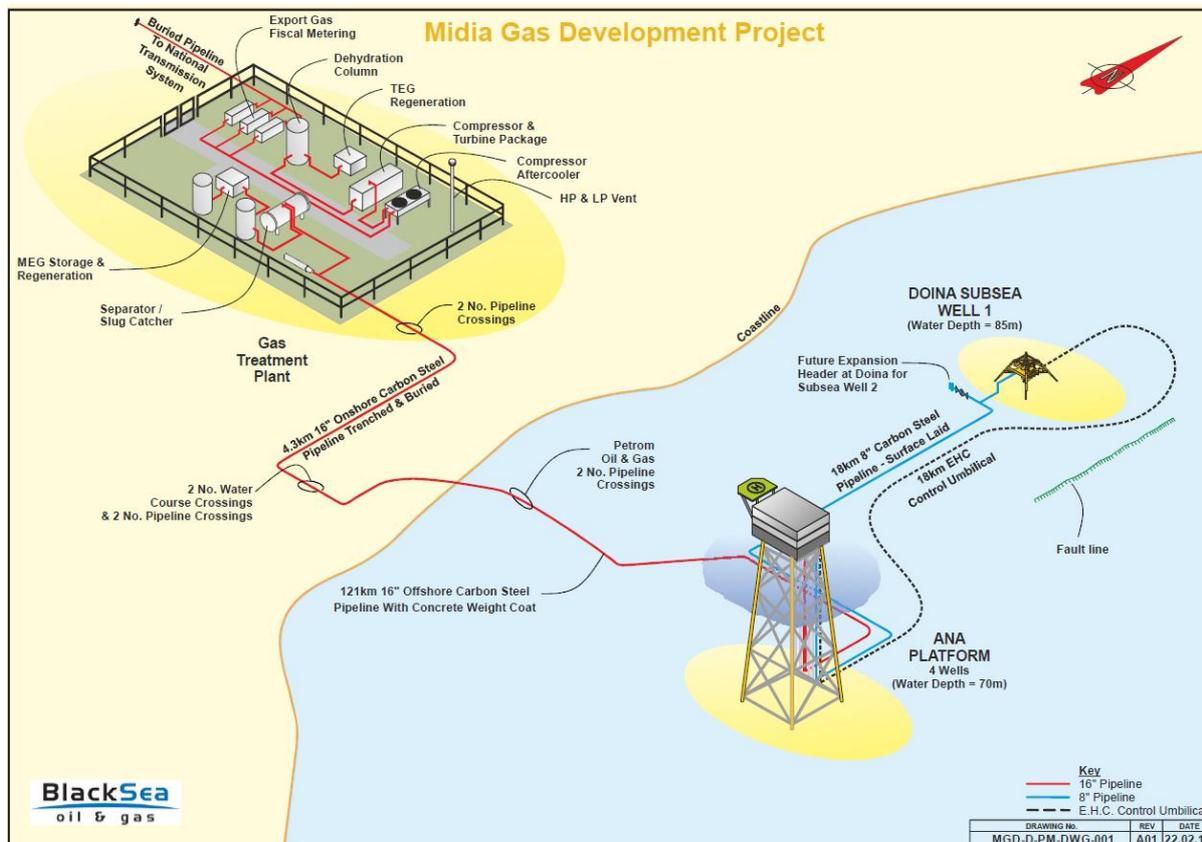


Figure 2 Project Overview



3. REGULATORY FRAMEWORK AND PROJECT STANDARDS

The Project is subject to a range of policies, legal and regulatory requirements and other applicable standards of relevance to this BMP. All international standards and commitments applicable to this BMP are described in the ESIA.

3.1 Romanian Legislative Framework

3.1.1 Environmental Impact Assessment Legislation

According to Government Decision no. 2075/2004 approving the Methodology of application of the Petroleum Law no. 238/2004 (GD no. 2075/2004), exploitation works can only begin after obtaining environmental approval and providing the necessary conditions for the capture of petroleum, disposal of waste water and, if necessary, flaring of the associated gas.

The EIA procedure is governed by:

- Government Decision no. 445/2009 on environmental impact assessment pertaining to certain public and private projects (GD no. 445/2009) - which transposes the EIA Directive 85/337/EEC and the Directive 2003/35/EC providing for public participation in respect of the drawing up of certain plans and programs relating to the environment

and amending with regard to public participation and access to justice Council Directive 85/337/EEC;

- Order no. 135/2010 approving the Methodology for the application of the environmental impact assessment for public and private projects (Order no. 135/2010); and
- Directive 2014/52/EU, amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

According to GD no. 445/2009 an EIA is mandatory for MGD Project because it will involve (as listed on Annex 1 of the GD) the extraction of oil and natural gas for commercial purposes, where the amounts extracted exceed 500 tonnes/day in the case of petroleum and 500,000 cubic metres/day in the case of natural gas¹.

Order no. 863/2002 approving the Methodological guides applicable to the stages of the environmental impact assessment framework procedure (Order no. 863/2002) contains the approved methodological guidelines applicable to the three key stages of the EIA framework procedure:

1. Screening;
2. Scoping and Developing the EIA Report (including stakeholder engagement); and
3. Analysis of the EIA Report.

3.1.2 Biodiversity Protection and Protected Area Legislation

The following legislation is relevant to the protection of biodiversity and governs the identification and management of protected areas in Romania.

- Law no. 82/1993 on the establishment of the “Danube Delta” Biosphere Reserve;
- Government Decision no. 248/2004 for the adopting of certain measures for the application of Law no.82/1993 on the establishment of the “Danube Delta” Biosphere Reserve;
- Emergency Government Ordinance (GEO) no. 57/2007 on the regime of protected natural areas, the preserve of natural habitats, wild flora and fauna – which transposes Directive 79/409/EEC on the conservation of wild birds, the Habitats Directive 92/43/EEC and Directive 2006/105/EC adapting Directives 73/239/EEC, 74/557/EEC and 2002/83/EC in the field of environment, by reason of the accession of Bulgaria and Romania;

¹ Although not applicable to MGD Project, the Romanian regulator deemed to frame the Project under the “Pipelines for the transmission of gas, petroleum and chemical substances having a diameter exceeding 800 mm and a length of at least 40 km”. Of consequence, the EIA has been made in consideration thereto as well.

- Government Decision no. 663/2016 setting up the protected natural areas and declaring special protection areas, as integral part of the European ecological network Natura 2000 in Romania;
- Government Decision no. 763/2015 approving the Plan of Management and associated Regulation of the Delta Danube Biosphere Reserve;
- Government Decision no. 1284/2007 regarding the institution of bird protection areas as integral part of Natura 2000 European ecological network in Romania – which transposes the Habitats Directive 92/43/EEC;
- Order no. 46/2016 establishing protected natural areas and declaring the sites of community importance as an integral part of the European ecological network Natura 2000 in Romania;
- Order no. 1964/2007 on the institution of the protected natural area regime for sites of community importance as integral part of Natura 2000 European ecological network in Romania, which transposes the Birds Directive 2009/147/EC;
- Law no. 5/2000 re the approval of the Spatial Planning of the National Territory – Section III – protected areas.

3.1.3 Environmental and Offshore Safety Legislation

Since becoming a member of the European Union, Romania has made good progress transposing the EU's environmental, occupational health and safety, employment and social 'Acquis' (body of law, mainly Directives) into national legislation.

The main enactments governing oil and gas exploration and production in Romania are the Petroleum Law no. 238/2004 and its implementing norms approved under GD no. 2075/2004. These reflect the implementation of Directive 94/22/EC on the conditions for granting and using authorisations for the prospection, exploration and production of hydrocarbons.

Of particular note, Law no.165/2016 on the safety of offshore oil and gas operations transposed Directive 2013/30/EU. This law aims to prevent or reduce major accident occurrences in offshore fields and to ensure appropriate clean-up and mitigation actions are taken to limit impacts from such accidents. Operators of offshore oil and gas assets are required to:

- Identify and implement all suitable measures to prevent major accidents and limit consequences for human health and the environment in the event of such an accident;
- Develop:
 - a report on major accident hazards;
 - an internal emergency response plan, covering both environment and safety matters and taking into account the major accident risk assessment;
 - a safety and environmental management system;

- a corporate major accident prevention policy;
- a description of the scheme of independent verification;
- Obtain approval from the Competent Authority Regulating Offshore Petroleum Operations (CAROPO) prior to commencement of operations with fixed and/or mobile installations;
- Demonstrate technical and financial capacity throughout the operations' lifecycle; and
- Notify the competent authorities and other agencies when a major accident occurs and submit the mandated reports on the incident as appropriate.

In a biodiversity context, these Laws are important in the protection of marine and coastal biodiversity receptors from potential effects from major accidents.

3.2 EU and International Legislation

The following EU and International legislation is relevant to the management of biodiversity impacts from the MGD Project.

3.2.1 International conventions and protocols

Romania has ratified both Aarhus and Espoo international conventions:

- United Nations Economic Commission for Europe (UNECE) [Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters](#) 1998, ratified by Law no. 86/2000 (Aarhus Convention);
- The 1991 UNECE Convention on Environmental Impact Assessment in a Transboundary Context, ratified by Law no. 22/2001 (Espoo Convention);

Compliance with public participation requirements defined by Aarhus Convention will be fully covered by MGD Project through the compliance with Romanian legislation and EBRD standards.

Additional international conventions that are relevant to the management of biodiversity impacts from MGD Project comprise:

- Convention on the Protection of the Black Sea against Pollution, 1992, Bucharest, ratified by Law no. 98/1992 and related Black Sea Biodiversity and Landscape Conservation Protocol, ratified by Law no. 218/2011;
- IMO Convention for the Prevention of Pollution from Ships, 1973 and the Additional Protocol from 1978, ratified by Law no. 6/1993 (MARPOL 73/78);
- IMO Convention on Oil Pollution Preparedness, Response and Co-operation, 1990, ratified by Government Ordinance no. 14/2000 (OPRC Convention);

- International Convention on Civil Liability for Oil Pollution Damage, 1992, ratified by Government Ordinance no. 15/2000 (CLC Convention);
- Convention on the Conservation of European Wildlife and Natural Habitats, 1979, ratified by Law no. 13/1993 (Bern Convention);
- Convention on Biological Diversity, 1992, ratified by Law no. 58/1994 (CBD);
- Convention on Wetlands of International Importance especially as Waterfowl Habitat. Ramsar (Iran), 2 February 1971. UN Treaty Series No. 14583. As amended by the Paris Protocol, 3 December 1982, and Regina Amendments, 28 May 1987.
- Convention on Conservation of Migratory Species of Wild Animals, 1979, ratified by Law no. 13/1998 (Bonn Convention); and
- The Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS), 2001, established under the auspices of the Bonn Convention (UNEP/CMS).

3.22 EU Regulations

The following EU Regulations are relevant to the management of biodiversity impacts by the MGD Project; they are all directly applicability in Romania and will be adhered to by the project:

- Council Directive 92/43/EEC on the conservation of natural habitat and of wild fauna and flora; and
- Regulation (EC) 147/2009 on the conservation of wild birds, amending and repealing Directive 79/409/EEC.

3.3 Good International Industry Practice

There are a number of EBRD Performance Requirements (PRs) which are relevant to the Project. Those that specifically relate to the management of impacts on biodiversity are:

- PR 1: Assessment and Management of Environmental and Social Impacts and Issues
- PR 3: Resource Efficiency and Pollution Prevention and Control
- PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

Although EBRD requirements are the main focus, IFC standards are also considered and, where these differ, the most stringent of them has been addressed. In particular, the IFC's Performance Standard 6 on Biodiversity Conservation and Sustainable Management of Living Natural Resources are relevant, as are the General EHS Guidelines for onshore construction, while both onshore and offshore EHS Guidelines for Oil and Gas Development also apply as appropriate.

3.4 Consenting Process

National EIA and an Appropriate Assessments (AA) (under the Habitats Directive) have been undertaken for the Project. Mitigation measures have been identified as part of the national EIA, AA and international ESIA process. Mitigation measures were also included as obligations from the Environmental Consent (Environmental Consent No. 3 of 22.01.2019), Danube Delta Biosphere Reserve Administration (ARBDD) Permit (ARBDD Permit No. 2 of 21.01.2019) and permission from the custodians of the Black Sea SPA (Custodian notice no. EL 1228 of 21.12.2018).

4 DESCRIPTION OF THE BIOLOGICAL ENVIRONMENT

The following sections present a summary of the key biodiversity receptors identified through desk-based study and the field surveys undertaken to inform the Project development and ESIA.

4.1 Designated and Recognized Sites

The MGD Project overlaps with a number of nationally protected and internationally recognised areas, as set out below.

- Danube Delta Site of Community Importance (ROSCI0065);
- Danube Delta Site of Community Importance – marine area (ROSCI0066)
- Danube Delta and Razim Sinoe Complex Special Protection Area (ROSPA0031);
- Black Sea Special Protection Area (ROSPA0075);
- Danube Delta Biosphere Reserve;
- Danube Delta UNESCO World Heritage Site;
- Danube Delta Wetland of International Importance (Ramsar Site);
- Danube Delta Important Bird and Biodiversity Area (IBA)/Key Biodiversity Area (KBA);
and
- Black Sea IBA/KBA.

Approximately 6.5 km southwest and 8.5 km north of the proposed onshore development site is the - Corbu – Nuntași – Histria natural reservation (RONPA0365) and approximately 10 km southwest Lacul Tașaul Special Protection Area (ROSPA0060) and 15 km west Cheile Dobrogei Special Protection Area (ROSPA0019). Further details, and maps of the protected sites in relation to the proposed project area, are presented in the ESIA.

4.2 Offshore

4.2.1 Plankton

Phytoplankton sampled in the Project area in 2015 comprised 55 species from six taxonomic groups. Among these, dinoflagellates followed by Bacillariophyta. The 0-10 m layer was the most important area for growth of phytoplankton with 20-80% of total biomass. Samples in 2016 recorded that zooplankton was represented by 14 species belonging to 10 taxonomic groups, and mostly consisted of juvenile life stages of bivalves, gastropods, polychaetes and decapods

4.2.2 Benthos

RPS and MG3 (2017b) identified three different EUNIS habitat types along the infield pipeline route from Doina to Ana:

- A5.37 'Deep circalittoral mud';
- A5.71 'Seep and vents in sublittoral sediments'; and
- A5.379 'Pontic deep circalittoral muds with *Modiolula phaseolina*'.

RPS and MG3 (2017b) identified seven different EUNIS habitat types within the pipeline corridor from Ana to shore:

- A5.36 'Circalittoral fine mud';
- A5.44 Circalittoral mixed sediment';
- A5.37 'Deep circalittoral mud';
- A5.37 'Deep circalittoral muds' with a dense *M. phaseolina* shell gravel component';
- A5.379 'Pontic deep circalittoral muds with *Modiolula phaseolina*'; and
- A5.628 'Pontic *Mytilus galloprovincialis* beds on sublittoral sediment'.

Of the identified 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 habitats listed in the Habitats Directive.

The shallowest sections of the export route (i.e. water depth <30 m) were typically flat and muddy. Although some areas consisted of bare, soft mud, sediments were patchily covered by accumulations of large bivalve shells including the species *Lutraria* sp., *Mya* sp., *Spisula* sp. and *M. galloprovincialis*, among others.

The seabed in water depths <30 m also included areas of muddy sand habitat, often rippled by the prevailing current. The main species present included *M. galloprovincialis*, recorded as single, semi-infaunal individuals or arranged in small clumps of 1-5 specimens, the cockle *Cerastoderma* sp., and occasional burrowing anemones. The presence of burrows and tubes made by infaunal invertebrates was also noted.

The seabed >30 m also consisted predominantly of bare mud with occasional mussel shell with a visible fauna including burrowing Cerianthid anemones, hydroids and semi-infaunal *M. galloprovincialis* and mobile opportunistic scavengers (e.g. the crab *Liocarcinus* sp.) and infaunal polychaetes and amphipods. In some areas, *M. galloprovincialis* were relatively abundant especially compared to shallower transects. The mussels were usually recorded in scattered clumps of 5-20 individuals, together with dense aggregations of polychaete or amphipod tubes. This mussel-dominated habitat was recorded at depths between 30 and 50 m. As *M. galloprovincialis* shell became less abundant with depth, it was substituted by shells of the small mussel *Modiolula phaseolina*, with shell fragments became increasingly abundant towards Ana, forming dense carpets. Some of these shell beds hosted live *M. phaseolina*.

4.2.3 Infauna

Polychaete worms, mollusc species (largely bivalves) and crustaceans (amphipods) were noted in the 2016 survey to dominate, in abundance, the infauna Ana and Doina fields and pipeline routes. However, in terms of biomass, molluscs were dominant. Of all species recorded, five represented 45% of the total abundance. The most numerous species was the mussel *Modiolula phaseolina*, representing 16% of the total. As indicated in the summary account of benthic habitats and epifauna above, *M. phaseolina* was the characteristic, biotope-defining organism over the majority of the survey area. Another bivalve, *Lentidium mediterraneum* was also abundant, contributing to 12% of the total faunal abundance. However, this clam was recorded at just one location (the shallowest, sandiest and most inshore of the stations sampled), whereas *M. phaseolina* was relatively ubiquitous, recorded at 36 stations. The polychaetes *Melinna palmata* (5%), *Terebellides stroemi* (6%) and *Dipolydora quadrilobata* (5%) were also relatively abundant.

The total number of taxa found ranged from 9 to 46/0.2m² over the whole survey area. Although the mean number of taxa found did not vary significantly over most of MGD Project area, the numbers of taxa at stations in the relatively deep water of the Ana Field were slightly higher compared to other stations and showed a positive correlation with sediment gravel content.

4.2.4 Fish

The main fish species of interest from the Romanian waters of the Black Sea are:

- sprat (*Sprattus sprattus*);
- brill (*Psetta maeotica*);
- anchovy (*Engraulis encrasicolus*);
- saurel (*Trachurus mediterraneus ponticus*);
- whiting or bluefish (*Merlangius merlangus euxinus*);
- blue fish (*Pomatomus saltatrix*);
- common grey mullet (representatives of Mugilidae family); and

- spiny dogfish (*Squalus acanthias*)

Vulnerable or Endangered fish species, according to Romanian Red Books and IUCN Red List, likely to occur in the Project Aol are listed in **Error! Reference source not found.**

Table 1 Conservation Status of Marine Fish in the Project Area

No.	Species Name	IUCN Red List	Redbook of Vertebrates from Romania	Black Sea Red Book	EU Habitats Directive
1	<i>Balistes caprisus</i>	Vulnerable	Not Included	Not Included	
2	<i>Mullus barbatus ponticus</i>	Not Evaluated	Not Included	Endangered	Not Included
3	<i>Alosa immaculata</i>	Vulnerable	Not Included	Not Included	Annex II
4	<i>Alosa tanaica</i>	Least Concern	Not Included	Not Included	Annex II
5	<i>Dentex dentex</i>	Vulnerable	Not Included	Not Included	Not Included
6	<i>Gobius cobitis</i>	Least Concern	Not Included	Endangered	Not Included
7	<i>Pomatomus saltatrix</i>	Vulnerable	Not Included	Not Included	Not Included
8	<i>Trachurus trachurus</i>	Vulnerable	Not Included	Not Included	Not Included

4.2.5 Cetaceans

Romanian sea waters are host to all three of the cetacean species known to live in the Black Sea: these being the bottlenose dolphin (*Tursiops truncatus ponticus*), the common dolphin (*Delphinus delphis ponticus*) and the harbour porpoise (*Phocoena phocoena relicta*) all of which are endemic subspecies of the species found elsewhere in Europe. Opportunistic visual sightings and passive acoustic monitoring data was obtained during a seismic campaign over Block XV Midia between 13th May - 23rd June 2016 when daily sightings of common and bottlenose and occasional harbour porpoise were recorded. Sightings included mixed pods containing adults and juveniles and adult only pods, cetaceans that were actively feeding/hunting.

Opportunistic visual sightings and passive acoustic monitoring data were also obtained during geophysical survey activities around the Ana platform location between October 27th and November 12th, 2016. During this period one single recording of a cetaceans was made, on November 10th, when five common dolphins were observed (two adults and three juveniles) hunting pelagic fish.

The conservation status of the three marine mammal species, according to Romanian Red Books and IUCN Red List, likely to occur in the Project Aol is listed in **Error! Reference source not found..**

Table 2 Conservation Status of Marine Mammals in the Project Area

No.	Species Name	IUCN Red List	Redbook of Vertebrates from Romania	Black Sea Red Book	EU Habitats Directive
1	<i>Delphinus delphis ponticus</i>	Not Evaluated	Endangered	Data Deficient	ANNEX II and IV
2	<i>Phocoena phocoena relicta</i>	Not Evaluated	Endangered	Data Deficient	ANNEX II and IV
3	<i>Tursiops truncatus ponticus</i>	Not Evaluated	Endangered	Data Deficient	ANNEX II and IV

4.2.6 Birds

Due to the location of the Black Sea located within large areas of continental land mass a large majority of species migrate across the Black Sea on the north-south / south – north migrations and some on their east – west / west – east migrations. Therefore, a considerable number of birds are present over the Black Sea during migrations periods (autumn and spring).

Surveys in the Project Area recorded a total of 52 species of birds during the observation period. The most abundant to of these were the Caspian gull (*Larus cachinnans*) and great cormorant (*Phalacrocorax carbo*) where 212 and 164 individuals were observed over the 11-day observation period, respectively.

The marine and onshore environment surrounding the Project is identified to be of conservation importance for a variety of birds, including waterfowl and seabirds. In particular the nearshore section of the Ana to shore pipeline route passes through the Black Sea SPA which is designated for over 37 bird species due to its importance site for breeding and wintering species.

Vulnerable or Endangered marine bird species, according to Romanian Red Books and IUCN Red List, recorded from the offshore Project Aol are listed in **Error! Reference source not**

found.3. A number of coastal and marine birds recorded during onshore coastal surveys are presented in Section 4.3.

Table 3 Conservation Status of Marine Birds in the Project Area

No	Species Name	IUCN Red List	Redbook of Vertebrates of Romania	Black Sea Red Book	Europe	Europe 27	EU Birds Directive
1	<i>Gavia arctica</i>	Least Concern	Not included	Not included	Least Concern	Least Concern	ANNEX I
2	<i>Larus genei</i>	Least Concern	Not included	Critical Endangered	Not included	Not included	ANNEX I
3	<i>Larus melanocephalus</i>	Least Concern	Not included	Endangered	Not included	Not included	ANNEX I
4	<i>Sterna sandvicensis</i>	Least Concern	Not included	Critical Endangered	Not included	Not included	ANNEX I
	<i>Puffinus yelkouan</i>	Vulnerable	Not included	Not included	Least Concern	Least Concern	ANNEX I

4.3 Onshore

4.3.1 Habitats and Flora

The Danube Delta SCI includes 29 Annex I¹ habitats as designating features. The following of these habitats were identified within the Project Aol:

- 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 Aol. However, this habitat is not a designated feature of the Danube Delta SCI. Other non-annex one habitats identified in the onshore area include reed beds, sand dunes, agricultural areas, ruderal areas and plantation woodlands.

No Annex II² plant species were identified in the Project Aol. Other species of conservation concern, i.e. those species classed as Vulnerable, Endangered or Critically Endangered plant

¹ Annex I of the Council Directive 92/43/EEC on the conservation of natural habitat and of wild fauna and flora

² Annex II of Council Directive 92/43/EEC on the conservation of natural habitat and of wild fauna and flora

species, according to Romanian Red Books, identified in the Project Aol are listed in **Error! Reference source not found..**

Table 4 Conservation Status of Vascular Plants in the Project Area

No.	Species Name	IUCN Red List	Redbook of Vascular Plants of Romania	Black Sea Red Book	EU Habitats Directive
1	<i>Artemisia tschernieviana</i>	Data Deficient	Endangered	Not included	Not included
2	<i>Centaureum spicatum</i>	Least Concern	Vulnerable	Not included	Not included
3	<i>Cirsium alatum</i>	Least Concern	Critically Endangered	Not included	Not included
4	<i>Crambe maritima</i>	Least Concern	Endangered	Not included	Not included
5	<i>Dianthus bessarabicus</i>	Least Concern	Endangered	Not included	Not included
6	<i>Elymus farctus ssp. bessarabicus</i>	Data Deficient	Critically Endangered	Not included	Not included
7	<i>Eryngium maritimum</i>	Least Concern	Vulnerable	Endangered	Not included
8	<i>Scolymus hispanicus</i>	Data Deficient	Vulnerable	Not included	Not included

4.3.2 Mammals

European otter (*Lutra lutra*) and European ground squirrel (*Spermophilus citellus*) were identified within the Project Aol, both species are designating features of the Danube Delta SCI.

Other species of conservation concern, i.e. those classed as Vulnerable or Endangered according to Romanian Red Books and IUCN Red List or listed on Annex II or IV of the EU Habitats Directive, identified in the Project Aol are listed in **Error! Reference source not found..**

Table 5 Conservation Status of Mammals in the Project Area

No.	Species Name	IUCN Red List	Redbook of Vertebrates from Romania	Black Sea Red Book	EU Habitats Directive
1	<i>Canis aureus</i>	Least Concern	Vulnerable	Not included	Not included
2	<i>Lutra lutra</i>	Near Threatened	Vulnerable	Endangered	ANNEX II
3	<i>Spermophilus citellus</i>	Vulnerable	Vulnerable	Not included	ANNEX II

4.3.3 Amphibians and Reptiles

European pond turtle (*Emys orbicularis*) and the common tortoise (*Testudo graeca*) were identified within the Project Aol, both are Annex II species and designating features of the Danube Delta SCI.

Other species of conservation concern, i.e. those classed as Near Threatened, Vulnerable or Endangered according to Romanian Red Book and IUCN Red List, identified in the Project Aol are listed in **Error! Reference source not found..**

Table 6 Conservation Status of Herpetofauna in the Project Area

No.	Species Name	IUCN Red List	Redbook of Vertebrates from Romania	EU Habitats Directive
1	<i>Bombina bombina</i>	Least Concern	Near Threatened	ANNEX II
2	<i>Emys orbicularis</i>	Least Concern	Vulnerable	ANNEX II
3	<i>Eremias arguta</i>	Near Threatened	Endangered	Not included
4	<i>Hyla arborea</i>	Least Concern	Vulnerable	ANNEX IV

5	<i>Lacerta trilineata</i>	Least Concern	Endangered	Not included
6	<i>Natrix tessellata</i>	Least Concern	Near Threatened	ANNEX IV
7	<i>Pelobates syriacus</i>	Least Concern	Endangered	ANNEX III
8	<i>Testudo graeca</i>	Vulnerable	Endangered	ANNEX II

4.3.4 Invertebrates

Large copper butterfly (*Lycaena dispar*) and steppe carpenter moth (*Catopta thrips*) were identified in the Project Aol. Both are designating features of the Danube Delta SCI.

Other species of conservation concern, i.e. those classed as Vulnerable or Endangered, according to Romanian Red Book and IUCN Red List, or listed on Annex II or IV of the EU Habitats Directive identified in the Project Area are listed in **Error! Reference source not found..** No mapping of invertebrate records was undertaken for the Project ESIA.

Table 7 Conservation Status of Invertebrates in the Project Aol

No.	Species Name	IUCN Red List	European red List	EU Habitats Directive
1	<i>Catopta thrips</i>	Not Evaluated	Not included	ANNEX II
2	<i>Lycaena dispar</i>	Near Threatened	Not included	ANNEX II
3	<i>Helix pomatia</i>	Leas Concern	Not included	ANNEX II

4.3.5 Birds

The following species of birds of conservation concern were identified in the Project Aol listed in **Error! Reference source not found..** These species are considered of conservation concern because they fulfil one or more of the following criteria:

- Listed on Annex I of the Birds Directive;
- Are designating features of one of the designated sites listed in Section 4.1;

- Classified as Vulnerable, Endangered or Critically Endangered on a Global, Regional or National Red List; and/or
- The Project Aol supports >1% of the global population at any one time of an annual cycle.

Table 8 Conservation Status of Birds in the Project Area

No.	Species Name	IUCN Red List	Redbook of vertebrates of Romania	Black Sea Red Book	Europe	Europe 27	EU Birds Directive
1	<i>Alcedo atthis</i>	Least Concern	Not included	Not included	Vulnerable	Vulnerable	ANNEX I
2	<i>Ardea purpurea</i>	Least Concern	Not included	Endangered	Least Concern	Least Concern	ANNEX I
3	<i>Ardeola ralloides</i>	Least Concern	Endangered	Vulnerable	Least Concern	Least Concern	ANNEX I
4	<i>Aythya ferina</i>	Vulnerable	Not included	Not included	Vulnerable	Vulnerable	ANNEX II
5	<i>Aythya nyroca</i>	Near Threatened	Not included	Vulnerable	Least Concern	Least Concern	ANNEX I
6	<i>Buteo lagopus</i>	Least Concern	Not included	Not included	Least Concern	Endangered	Not included
7	<i>Buteo rufinus</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	ANNEX I
8	<i>Ciconia ciconia</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	ANNEX I
9	<i>Circus macrouros</i>	Near Threatened	Not included	Endangered	Near Threatened	Endangered	ANNEX I
10	<i>Circus pygargus</i>	Least Concern	Not included	Endangered	Least Concern	Least Concern	ANNEX I

11	<i>Egretta alba</i>	Least Concern	Not included	Endangered	Least Concern	Least Concern	ANNEX I
12	<i>Egretta garzetta</i>	Least Concern	Not included	Endangered	Least Concern	Least Concern	ANNEX I
13	<i>Falco peregrinus</i>	Least Concern	Endangered	Endangered	Least Concern	Least Concern	ANNEX I
14	<i>Falco vespertinus</i>	Near Threatened	Not included	Vulnerable	Near Threatened	Vulnerable	ANNEX I
15	<i>Glareola pratincola</i>	Least Concern	Endangered	Vulnerable	Least Concern	Least Concern	ANNEX I
16	<i>Haematopus ostralegus</i>	Near Threatened	Vulnerable	Vulnerable	Vulnerable	Vulnerable	ANNEX II
17	<i>Haliaeetus albicilla</i>	Least Concern	Endangered	Not included	Least Concern	Least Concern	ANNEX I
18	<i>Himantopus himantopus</i>	Least Concern	Vulnerable	Not included	Least Concern	Least Concern	ANNEX I
19	<i>Larus genei</i>	Least Concern	Not included	Critical Endangered	Least Concern	Least Concern	ANNEX I
20	<i>Larus melanocephalus</i>	Least Concern	Not included	Endangered	Least Concern	Least Concern	ANNEX I
21	<i>Limosa limosa</i>	Near Threatened	Not included	Not included	Vulnerable	Endangered	ANNEX II
22	<i>Netta rufina</i>	Least Concern	Not included	Endangered	Least Concern	Least Concern	ANNEX II
23	<i>Nycticorax nycticorax</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	ANNEX I

24	<i>Pandion haliaetus</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	ANNEX I
25	<i>Pelecanus crispus</i>	Least Concern	Vulnerable	Critically endangered	Least Concern	Least Concern	ANNEX I
26	<i>Pelecanus onocrotalus</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	ANNEX I
27	<i>Platalea leucorodia</i>	Least Concern	Endangered	Endangered	Least Concern	Least Concern	ANNEX I
28	<i>Plegadis falcinellus</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	ANNEX I
29	<i>Recurvirostra avosetta</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	ANNEX I
30	<i>Sterna albifrons</i>	Least Concern	Not included	Endangered	Least Concern	Least Concern	ANNEX I
31	<i>Sterna sandvicensis</i>	Least Concern	Not included	Critical Endangered	Least Concern	Least Concern	ANNEX I
33	<i>Tadorna tadorna</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	Not included
34	<i>Tringa stagnatilis</i>	Least Concern	Not included	Not included	Least Concern	Endangered	Not included
35	<i>Tringa totanus</i>	Least Concern	Not included	Not included	Least Concern	Vulnerable	ANNEX II
36	<i>Turdus pilaris</i>	Least Concern	Not included	Not included	Least Concern	Vulnerable	ANNEX II
37	<i>Upupa epops</i>	Least Concern	Not included	Vulnerable	Least Concern	Least Concern	Not included

38	<i>Vanellus vanellus</i>	Near Threatened	Not included	Not included	Vulnerable	Vulnerable	ANNEX II
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5. POTENTIAL IMPACTS ON THE ENVIRONMENT AND MITIGATION

5.1 Offshore

Potential impacts on marine biodiversity associated with construction, commissioning, operation and decommissioning of the offshore infrastructure include:

- direct and indirect loss of benthic habitat;
- direct and indirect loss of fish spawning and nursery habitats, in particular demersal (seabed) habitats; and
- injury and disturbance to marine mammals and fish from underwater noise generated during the construction and operation of the offshore infrastructure, including piling and vessels.

5.2 Onshore

Potential impacts to terrestrial and intertidal ecology and biodiversity associated with construction, operation and decommissioning of the onshore pipeline and GTP are assessed in the ESIA and include:

- temporary loss and destruction of sensitive habitat such as 1410 Mediterranean salt meadows habitat (*Juncetalia maritimi*);
- permanent loss and/or fragmentation of habitat if not replaced or if recoverability of habitat is significantly reduced;
- temporary loss of habitat and/or disturbance due to noise, vibration and light on protected species such as European ground squirrel (*Spermophilus citellus*), European pond turtle (*Emys orbicularis*), Caspian whipsnake (*Dolichophis caspius*) and bats (*Chiroptera* spp.);
- disturbance caused by the light associated with works during construction and operation on light sensitive species such as the moth *Catopta thrips*;
- impacts upon adjoining habitats from uncontrolled activities of construction workforce;
- killing or injuring of species due to construction works;
- potential effects on habitats and species resulting from a fuel or chemical spill; and

- introduction of terrestrial or intertidal alien invasive species from vehicles /vessels or materials, which have come from outside the local or Romanian area.

6. Mitigation and Monitoring Plan

6.1 Introduction

A range of management actions (and other mitigation measures) are required to be implemented in respect of biodiversity management. The specific management actions and measures required of BSOG staff and its contractors are summarised in **Error! Reference source not found.** and **Error! Reference source not found.**

6.2 Roles and Responsibilities

An integrated approach to biodiversity management involves a range of stakeholders, including the Company, the Contractors (and subcontractors), local authorities, regulatory agencies and the general public.

6.2.1 BSOG

BSOG HSE management roles and responsibilities during Project construction are detailed in the Project Environmental and Social Management Plan (ESMP). With regards to this BMP, BSOG is responsible for key management activities including:

- Development of bidding conditions regarding biodiversity management;
- Professional training of its representative on site;
- Surveillance and control;
- Management cooperation in case of environmental accident; and
- Management of pollution from its own operations.

To this end, BSOG have identified a biodiversity specialist role who will drive application of the BMP. The biodiversity specialist will report to the BSOG HSSE Manager and be in place prior to construction.

The Roles and responsibilities detailed in **Error! Reference source not found.** will apply. The full list of BSOG roles and responsibilities is presented in the Project ESMP.

Table 9 Roles and responsibilities within the organization

Responsible persons	Activities
BSOG Senior management	<p>Approves BMP and the resources for implementation</p> <p>Ensures the Project compliance with the Plan requirements.</p> <p>Has overall responsibility for implementation of this BMP, including main contractors. Ensure that this plan is available to all employees and key contractors.</p> <p>Develops, revises and monitors implementation of this BMP.</p>
HSE - Manager	<p>Provide necessary support for main contractors to ensure compliance with the requirements of the BMP.</p> <p>Performs audits and regular inspections of the main contractors for monitoring performance compared to the requirements of this BMP.</p> <p>Report all hazards, incidents and non-conformities.</p> <p>Prepares an annual environmental report that includes details on biodiversity issues.</p> <p>Centralises the reports issued by the Contracting parties of the biodiversity services.</p> <p>Assures communication between BSOG Contracting parties of the biodiversity services and the constructor.</p> <p>Makes periodical field inspections</p>
Deputy Project HSE Manager	<p>Supervise and coordinate the ESHS field daily activities at the construction sites.</p> <p>Support ESHS and construction field staff through assistance with ESHS documents review, incident investigation and technical advice.</p> <p>Organizing and participating in inspections, reviews and audits of the EPCIC contractor ESHS performance with respect to the requirements of this ESMP.</p> <p>Perform field-based ESHS oversight of the EPCIC Contractors as required.</p> <p>Review and provide comments to EPCIC Contractor ESHS Management Plans.</p> <p>Responsibility for maintaining systematic ESHS records and evidence demonstrating compliance with Project standards.</p> <p>Ensure that all ESHS-related incidents happened on construction sites are reported and investigated with effectively and lessons learned are shared in accordance with the BSOG incident reporting procedure.</p> <p>Act as local liaison between the community/stakeholders and BSOG and maintain positive relationship with them.</p> <p>Ensure that stakeholder engagement activities are documented and evidence (e.g. Minutes of Meetings) are kept on file.</p> <p>Responsible for the monitoring of Grievance Mechanism implementation at the field level</p> <p>Report to the HSE Manager on daily basis and agreed format on all health, safety and environmental matters and activities performed.</p> <p>Report to the Communication and CSR Manager on daily basis and agreed format on all social matters and stakeholder activities performed.</p>
BSOG Biodiversity Specialist	<p>Ensuring that the pre-works data collection surveys are completed sufficiently.</p> <p>Drawing up bespoke method statements for all works within Natura 2000 sites and sensitive habitats, (including sensitive riparian areas). This includes:</p> <ul style="list-style-type: none"> ○ vegetation clearance methods statement (including check survey methods); ○ flora translocation method statement; ○ fauna translocation method statement; and ○ vegetation re-instatement method statement. <p>Ensures that walkthrough (rapid assessment) surveys are being undertaken by qualified personnel immediately prior to works commencing in an area.</p> <p>Providing tool box talks to contractors to ensure compliance.</p> <p>Monitoring the works and ensuring that any species discovered are moved away from the works.</p> <p>Monitoring that day-to-day checks are occurring such as checking trenches for fauna and ensuring the other components of the BMP are followed.</p> <p>Ensuring that mapping and findings from the field are reported back to relevant stakeholders at regular intervals (at least every two weeks).</p> <p>Reviewing species data in the field to ensure that the receptors selected for monitoring are appropriate.</p> <p>Ensuring adequate data is captured to inform the monitoring within the BAP (Biodiversity Action Plan).</p> <p>Report into Deputy Project HSE Manager</p>

Responsible persons	Activities
Marine Mammal Observer (MMO)	<p>Perform monitoring of offshore and nearshore noisy operations (i.e. hammer piling)</p> <p>Perform passive acoustic monitoring to audibly detect cetacean presence (e.g. in adverse weather or sea state conditions that may prevent visual identification);</p> <p>Responsible for delaying the start of the operations if cetaceans are detected within 500 m until cetaceans have moved away (i.e. not sighted for at least 30 minutes);</p> <p>Responsible for suspending, if possible, such operations should a marine mammal be observed approaching too close to operations (risk of injury/hearing impairment close to the source);</p> <p>Responsible for monitoring enforcement of soft start operations to allow adequate time for any cetaceans to move away from the area before full power is reached;</p> <p>Responsible for recording all sightings of marine mammals in pre-defined format and supported by photographs;</p> <p>Reporting to BSOG following the end of the operations, detailing the marine mammals sighted, methods used to detect them, details of any problems encountered and recommendations for any adjustments to these precautionary measures.</p> <p>Report into Deputy Project HSE Manager</p>

6.2.2 Contractors

Overarching Contractor HSSE requirements are defined in the relevant articles of their contracts and associated Methods Statements. Each contractor must also implement all relevant requirements of the BMP. Contractors are responsible for ensuring that any subcontracted work also meets these requirements. Contractors will therefore be required to provide BSOG their proposed approaches to:

- prevention and management of ecological impacts on site; and
- any other conditions outlined in this BMP.

In addition, Contractors will present BSOG with details of:

- their proposed team responsible for implementing requirements management and monitoring for biodiversity protection, including inclusion of a biodiversity specialist;
- contracts/agreements' pre-staff team responsible for implementing requirements management and monitoring for the protection of biodiversity and their CVs; and
- records of any ecological impacts.

6.2.3 Mitigation and Monitoring Measures

Many of the potential impacts on biodiversity can be either avoided or reduced prior to the implementation of onsite mitigation measures.

Measures to avoid and reduce project effects include:

- siting of the offshore platform and well in habitats that are not critical;
- siting of the GTP outside of the Danube Delta designated sites, and on modified habitat;

- use of Horizontal Directional Drilling (HDD) for sections of the onshore pipeline to avoid EU Habitats Directive Annex I critical habitats as far as practicable;
- minimisation of the onshore pipeline working width; and
- implementation of seasonal constraints.

Mitigation measures have been identified as part of the ESIA process. Mitigation measures were also included as obligations from the Environmental Consent (Environmental Consent No. 3 of 22.01.2019), Danube Delta Biosphere Reserve Administration (ARBDD) Permit (ARBDD Permit No. 2 of 21.01.2019) and permission from the custodians of the Black Sea SPA (Custodian notice no. EL 1228 of 21.12.2018). These have been reviewed, consolidated and amended based on the additional assessment of effects on biodiversity undertaken as part of the SLIP. Where necessary additional mitigation measures have been identified based on the updated assessment.

A consolidated summary of all required mitigation and management measures related to biodiversity is provided in *Table 11* and ***Error! Reference source not found.***

Any deviation from the mitigation and management measures set out in *Table 11* and *Table 12* will be subject to the Project Management of Change (MoC) procedure (see Section 6.8).

Table 10 Offshore Mitigation and Management Measures

Commitments Register Reference Number ¹⁰	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
-	Benthic Habitats	During the detailed design stage, the infield pipeline route will be microsited to avoid sensitive carbonate concretions and bacterial mats habitats identified during baseline surveys.	Pipeline Construction Contractors	Drop down video. Microsited pipeline route	Pre-construction and construction
1	Fish and Marine Mammals	The duration and amplitude of noise emissions during drilling and piling operations will be minimised as far as reasonably practicable to avoid or reduce the risk of potential injury or mortality to marine mammals or fish.	Drilling, Construction and Decommissioning Contractors	Any records of cetacean injury/fatality	Drilling and Completion, Installation and Commissioning and Decommissioning
2	Fish and Marine Mammals	As far as possible and in accordance with the duration of the offshore Environmental Permit, construction piling or decommissioning activities using explosives will take place during the period when there is minimal marine mammal or other marine fauna presence within the project area (i.e. during the winter months).	Construction and Decommissioning Contractors	Activity Schedule	Installation and Commissioning and Decommissioning
3	Fish and Marine Mammals	To minimise the impacts of noise on marine mammals, a JNCC accredited Marine Mammal Observer (MMO) will be employed to check for the presence of marine mammals within a 500 m monitoring zone around offshore and nearshore noise sources for 30 mins before hammer piling activities commence. If any marine mammals are detected within the monitoring zone prior to the start of operations, piling operations will not start until the MMO confirms that the cetaceans have moved out of the 500 m zone. These procedures will also be applied if there is a pause in piling operations for a period of more than 10 minutes, unless a continuous watch has been kept and the MMO can confirm the absence of any marine mammals within the 500 m monitoring zone.	Construction Contractors	MMO Report	Installation and Commissioning

⁽¹⁾ New measures developed as part of the updated impact assessment which are not included in the commitments register do not have a number.

4	Fish and Marine Mammals	As far as possible, hammer piling activities will be started during daylight hours. In the event of adverse weather / sea state conditions that prevent visual detection of marine mammals, Passive Acoustic Monitoring (PAM) will be undertaken, to help identify when marine mammals are present within the 500 m monitoring zone and to inform the need to delay the start of piling operations as described in the item 3 above.	Construction Contractors	MMO Report	Installation and Commissioning
5	Fish and Marine Mammals	A "soft-start" procedure will be implemented for piling operations in which the amplitude of the noise emission is gradually increased in accordance with a procedure to be prepared.	Construction Contractor	MMO Report	Installation and Commissioning
6	Fish and Marine Mammals, Benthic Habitats	Pipeline installation methods will aim to reduce the use of anchors, where feasible, to ensure minimal impacts to benthic species, demersal fish and their habitats. The in-field pipeline and offshore sections of the Ana – shore pipeline will be laid using dynamic positioning (DP). The location of the single anchor point used to initiate the DP laying of the in-field pipeline will be checked against survey data to avoid sensitive seabed vent habitats.	Offshore Construction Contractors	Method statement / Inspection records	Installation and Commissioning
7	Invasive Species	International / regional project vessels will comply with IMO Ballast Water Management and biofouling / Romanian Environmental Permit requirements to avoid the introduction of invasive species. Any vessels that will discharge ballast will have a Ballast Water Management Plan and a Ballast Water Record Book, in line with the requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) . If the vessels do not have a ballast water treatment system on-board, they will exchange ballast in mid-ocean (where possible, at least 200 nm from shore and in water more than 200 m deep) prior to reaching the Project location.	Rig Manager and Vessel Masters	Inspection records / Antifouling and Ballast Water records	Drilling and Completion, Installation and Commissioning, Operations and Decommissioning
8	Birds	Lighting on the Ana wellhead platform will be reduced to levels required for safe and secure operations.	BSOG	Inspection records	Installation and Commissioning, Operations and Decommissioning

9	Benthic Habitats	Drilling platform jacket total surface area will be calculated to identify the impact region. As well, anchorages will be limited to the 500 m interaction zone.	Drilling Contractor	Dropped Objects Procedure / Incident and inspection records	Drilling Completion and
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Table 11 Onshore Mitigation and Management Measures

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
10	Flora and Fauna	<p>In accordance with applicable legal/permit requirements, it is strictly forbidden to undertake any of the following actions to prevent any harm to species of flora or fauna (see Commitment 11 for additional measures relevant to bird species):</p> <p>Any type of gathering, capturing, killing, destroying or causing injury to such species in their natural environment, at any stage of the biological cycle;</p> <p>Deliberate disturbance during reproduction, development, hibernation and migration;</p> <p>Damaging and/or destroying places for reproduction or for rest;</p> <p>Uncontrolled storage of waste resulting from administrative functions and from specific activities. It is mandatory to arrange a special place for waste storage and to ensure its transportation as soon as possible, so that it does not endanger the wildlife in the area.</p>	BSOG and Contractors	<p>Training Records</p> <p>Register of reports of breaches</p> <p>Waste Management Plan</p> <p>BAP</p>	Pre-construction and Construction
11	Birds	<p>For all bird species, the following actions are forbidden:</p> <p>Deliberately killing or capturing birds, regardless of the method;</p> <p>Deliberately damaging, destroying and/or gathering nests and/or eggs;</p> <p>Deliberate disturbance, especially during reproduction, breeding and migration periods;</p> <p>Owning individuals of the species for which hunting and capturing are</p>	BSOG and Contractors	<p>Training Records</p> <p>Register of reports of breaches</p> <p>Waste Management Plan</p>	Pre-construction and Construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
		<p>forbidden;</p> <p>Trading, owning and/or transporting live or dead birds or any easily identifiable parts or production order to be traded.</p> <p>All works within 20 m of known nests or regularly used winter roosts should be supervised by the Biodiversity Specialist or appropriate buffer areas marked where no construction activity.</p> <p>To avoid disturbing nesting birds, vegetation clearance will be scheduled outside of the breeding bird season (April – August). Where this is not possible, check surveys will be undertaken by the biodiversity specialist prior to the start of works. A 20 m exclusion zone will be set up around any identified active nests until all young have fledged.</p>		<p>BAP</p> <p>Implementation of seasonal constraints.</p> <p>Check surveys.</p> <p>Establishment of buffer zones.</p>	
12	Biodiversity	<p>An external biodiversity expert (the Biodiversity Specialist) will be appointed to train the personnel performing activities within the Project area in order to ensure minimal impact upon biodiversity and to ensure informed monitoring of activities. EPC contractors will be required to have a biodiversity specialist on their team to interface with the BSOG Biodiversity specialist.</p> <p>The Biodiversity Specialist will be notified by the site management team whenever specimens of the specific fauna/flora (i.e. protected or endangered species) are located in the area and will temporarily relocate or otherwise ensure adequate protection of the identified specimens from the designated working area.</p> <p>BSOG will record details about the actions performed in order to demonstrate limited impact upon biodiversity (date, species, measures that were implemented, means that were used). These records will be made available to EPA Constanta, upon reasonable</p>	BSOG and external expert	<p>Appointment of Competent Biodiversity Specialist.</p> <p>Register of fauna and flora records and interactions.</p> <p>Development and implementation of specific biodiversity</p>	Pre-construction and Construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
		<p>request.</p> <p>Implement BMP and BAP</p>		<p>method statements.</p> <p>BAP</p>	
-	Habitats and Flora	<p>The following measures will be applied to all habitats affected along the onshore pipeline route.</p> <p>Ground levelling activities will be limited, in order to preserve as far as possible the local topographic features, which have an important role in ensuring some wet habitats (especially temporarily flooded areas) for certain species of community importance. The landscape and landforms presented prior to construction will be re-instated following construction in line with the Soil, Waterbody Crossing and Reinstatement Management Plan.</p> <p>Minimising the footprint of the works as far as is practicable. Minimising the soil storage footprint as far as practicable whilst meeting the requirements of the Soil, Waterbody Crossing and Reinstatement Management Plan.</p> <p>Removal of turfs and the top most soil layer and depositing it separately from the filling soil in order to be reinstated for the revegetation of the habitat surfaces affected by pipeline installation.</p> <p>Covering the turfs and top soil in order to prevent erosion and wind blow that can affect it and that can reduce the number of seeds and</p>	BSOG and Contractors	<p>Soil, Waterbody Crossing and Reinstatement Management Plan</p> <p>BAP</p>	Pre-construction and Construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
		<p>bulbs available for revegetation.</p> <p>The habitat surface affected by works will be revegetated using exclusively seeds and bulbs preserved in the vegetal soil layer that was removed and stored separately; the voluntary or accidental use of species that are not native will be avoided under any situation.</p> <p>All habitats will be reinstated in line with the Soil, Waterbody Crossing and Reinstatement Management Plan and the vegetation re-instatement method statement.</p>			
-	Habitats and Flora	<p>The open cut trench pipeline installation through land plots 4-7 will be micrositied to reduce impacts on habitats which will take longer to re-instate or recover from temporary disturbance. Micrositing will be informed by walk over surveys prior to detailed design stage.</p> <p>The area of <i>Phragmites/Typha</i> habitat mapped by remote sensing will be ground truthed prior to the start of construction.</p>	BSOG and Contractors	Refined pipeline route	Pre-construction
-	Habitats and Flora	<p>Access tracks will be sited on existing dirt roads where ever possible. Where new access tracks are required, pre-construction biodiversity surveys will be carried out and all impacts to species/habitats of conservation importance will be managed in accordance with the BMP/BAP.</p> <p>Access tracks will be constructed as soon as possible and tracking of vehicles on site will be avoided outwith these roads, so that adjacent vegetation and sand dune structure is left undisturbed and uncompacted as far as possible.</p>	BSOG and Contractors	Photographic evidence and reporting of implementation of measures.	Pre-construction and construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
		<p>Along sections of access tracks and the pipeline working strip which have fragile soil structure or have waterlogged or wet soils, ground protection will be installed to protect the soil from damage by vehicle movement (measures may include choir matting, temporary plastic road surfaces or temporary log roads).</p> <p>The habitats lost in construction areas will be progressively restored to minimise the time between habitat loss and restoration. Where relevant, BSOG will update the critical habitat assessment and BAP</p>			
-	<p>Flora species</p> <p><i>Artemisia tschernieviana</i></p> <p><i>Crambe maritima</i> (sea kale)</p> <p><i>Dianthus bessarabicus</i></p> <p><i>Eryngium maritimum</i> (sea holly)</p> <p><i>Elymus farctus</i> ssp. <i>Bessarabicus</i></p>	<p>To minimise impacts on national Endangered and Critically Endangered plant species the following measures will be implemented:</p> <p>Check surveys will be undertaken of the temporary project footprint prior to construction to identify individuals of Endangered and Critically Endangered plant species.</p> <p>Individuals found will be translocated to suitable receptor sites prior to construction, in line with the flora translocation method statement.</p>	BSOG and Contractors	<p>Development and implementation of flora translocation method statement.</p> <p>Photographic evidence and reporting of implementation of measures.</p>	Pre-construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
13	European ground squirrel (<i>Spermophilus citellus</i>)	<p>To minimise any impacts on the European ground squirrel the following measures will be implemented.</p> <p>Check surveys of the GTP, Temporary Construction Compound and suitable habitat within the pipeline working corridor footprint will be undertaken prior to the start of construction to identify any colonies or important habitat for European ground squirrel. These will be undertaken in line with the Vegetation clearance method statement (including check survey methods).</p> <p>Colonies or individuals present will be translocated to suitable receptor sites identified by the Biodiversity Specialist in line with the Fauna translocation method statement.</p> <p>If necessary, the GTP and Temporary Construction Compound footprint will be fenced off with small mammal/reptile fences made of thick netting or plastic sheeting to exclude European ground squirrels from areas prior to the start of construction (if applicable).</p> <p>All works within 20 m of known ground squirrel colonies should be supervised by the Biodiversity Specialist.</p> <p>Speed limits will be imposed on site and construction traffic in order to reduce road collisions involving individual animals. Any collisions will be reported to the Biodiversity Specialist and documented to allow additional mitigation to be identified and implemented as necessary (e.g. use of speed bumps near areas identified as high risk, fencing, light reflectors).</p> <p>The provisions of GEO no. 57/2007 will be observed in relation to the prohibition of the:</p> <ul style="list-style-type: none"> ○ gathering, capturing, killing, destroying or causing injury to such species in their natural environment, at any stage of the biological cycle; ○ deliberate disturbance during reproduction, development, hibernation and migration; and ○ damaging and/or destroying places for reproduction or for rest. 	BSOG and external expert	Development and implementation of vegetation clearance methods statement (including check survey methods). Photographic evidence and reporting of implementation of measures. Implementation of the Soil, Waterbody Crossing and Reinstatement Management Plan	Pre-construction and construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
14	<p>Amphibians and reptiles including European fire-bellied toad (<i>Bombina bombina</i>)</p> <p>Spur-thighed tortoise (<i>Testudo graeca</i>)</p> <p>European pond turtle (<i>Emys orbicularis</i>)</p> <p>Eastern spadefoot (<i>Pelobates syriacus</i>)</p> <p>European tree frog (<i>Hyla arborea</i>)</p> <p>Balkan green lizard (<i>Lacerta trilineata</i>)</p> <p>Dice snake (<i>Natrix tessellata</i>)</p> <p>Caspian whip snake (<i>Dolichophis caspius</i>)</p>	<p>The following measures will be applied to minimise effects on amphibians and reptiles.</p> <p>The pipeline working corridor, GTP and Temporary Construction Compound footprint will be surveyed before commencement of works in order to identify any amphibian and reptile individuals present. These will be undertaken in line with the vegetation clearance method statement (including check survey methods).</p> <p>Individuals found will be translocated to a suitable receptor site outside the project footprint in line with the fauna translocation method statement.</p> <p>The construction areas will then be fenced off with small mammal/reptile fences to prevent individuals from re-entering the area. Fencing off will be performed in stages, in parallel with the installation works to reduce habitat fragmentation to short lengths of the easement and for short time spans.</p> <p>All site personnel to undertake driver awareness training on the species present in the area that may be affected by vehicle collisions.</p> <p>Speed limits will be imposed on site and construction traffic in order to reduce road collisions involving individual animals. Any collisions will be reported to the Biodiversity Specialist and documented to allow additional mitigation to be identified and implemented as necessary (e.g. use of speed bumps near areas identified as high risk, fencing, light reflectors).</p> <p>The provisions of GEO no. 57/2007 will be observed in relation to the prohibition of the:</p>	BSOG and external expert	<p>Production of Check Survey Report.</p> <p>Development and implementation of fauna translocation method statement.</p> <p>Implementation of the Soil, Waterbody Crossing and Reinstatement Management Plan</p> <p>BAP</p>	Pre-construction and Construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
		<ul style="list-style-type: none"> ○ gathering, capturing, killing, destroying or causing injury to such species in their natural environment, at any stage of the biological cycle; ○ deliberate disturbance during reproduction, development, hibernation and migration; and ○ damaging and/or destroying places for reproduction or for rest. <p>At the end of construction works for the Temporary Construction Compound and pipeline route, the original configuration of the micro-relief should be reinstated in line with the Soil, Waterbody Crossing and Reinstatement Management Plan. In this way, the floodable areas will be kept and they will serve as breeding habitat for amphibians. The potential for use of additional micro-reliefs for habitat creation to achieve no net loss and net gain of biodiversity will be explored as part of the BAP.</p>			

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
15	European otter (<i>Lutra lutra</i>)	<p>Signs of otters have been recorded within the Project Aol, however no holts have been identified. The following measures will be applied to minimise effects on European otters.</p> <p>Check surveys of watercourses and waterbodies within 150 m of the Project footprint will be undertaken prior to the start of construction. If any holts or couches (day resting sites) are identified, these will be marked.</p> <p>HDD compounds will be located at least 20 m from any active otter holt and 150 m from any active breeding holt.</p> <p>The construction areas will then be fenced off with small mammal/reptile fences to prevent individuals from re-entering the area. Fencing off will be performed in stages, in parallel with the installation works to reduce habitat fragmentation to short lengths of the easement and for short time spans.</p> <p>Check surveys of open pipes and trenches will be conducted every morning to identify any individuals which have become trapped in construction areas.</p> <p>Speed limits will be imposed on site and construction traffic in order to reduce road collisions involving individual animals. Any collisions will be reported to the Biodiversity Specialist and documented to allow additional mitigation to be identified and implemented as necessary (e.g. use of speed bumps near areas identified as high risk, fencing, light reflectors).</p> <p>Sharp tools/machinery are not to be left out on site overnight</p> <p>The provisions of GEO no. 57/2007 will be observed in relation to the prohibition of the:</p> <ul style="list-style-type: none"> ○ gathering, capturing, killing, destroying or causing injury to such species in their natural environment, at any stage of the biological cycle; ○ deliberate disturbance during reproduction, development, hibernation and migration; and ○ damaging and/or destroying places for reproduction or for rest. . 	BSOG and external expert	Production of Check Survey Report. Implementation of the Soil, Waterbody Crossing and Reinstatement Management Plan	Pre-construction and Construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
16	Red-footed falcon (<i>Falco vespertinus</i>)	<p>The following measures will be applied to minimise effects on red-footed falcon.</p> <p>Pipeline work will be scheduled to be outside of the reproduction season of birds (e.g. 31.03 through to 15.08 – 31.03). This is considered optimal as birds have finished breeding and migrant species will leave the area. If this period is not feasible or at odds with specified permit duration, additional effort will be applied to the following practical mitigation measures. It is strictly forbidden to kill, capture or disturb any falcons or deliberately damage, destroy and/or collect nests and/or eggs of falcon or Corvidae species (which red-footed falcon use the abandoned nests of).</p> <p>The GTP perimeter will not be exceeded and no intervention will be made under any circumstance in the acacia plantation in the Plant's eastern area.</p> <ul style="list-style-type: none"> - Along the GTP perimeter, a visual barrier made up of grassy vegetation, mature trees and native scrubs (e.g.: <i>Crategus monogyna</i>, <i>Fraxinus ornus</i>, <i>Salix</i> sp., <i>Tilia</i> sp. etc.), will be maintained or established following construction in order to reduce visual, noise and vibration effects on red-footed falcon nest sites generated by the GTP during operations. <p>No raw materials/waste will be stored in the acacia plantation in the eastern part of the GTP site</p> <p>As far as reasonably practicable - construction activities, which have a disturbing impact in terms of noise and vibrations, to avoid the immediate vicinity of the acacia plantation between April 20th and September 15th (e.g. building the retention basin located in the eastern part of the site and installing the chimney).</p>	BSOG and external expert	Biodiversity Action Plan	Pre-construction and Construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
17 and 19	Invertebrates including Large copper (<i>Lycaena dispar</i>) Steppe carpenter moth (<i>Catopta thrips</i>) Roman snail (<i>Helix pomatia</i>)	<p>The following measures will be applied to minimise effects on protected and threatened invertebrates:</p> <p>Check surveys in suitable habitat on the GTP, Temporary Construction Compound and pipeline working corridor footprint will be undertaken prior to the start of construction to identify individuals of roman snail in line with the vegetation clearance method statement (including check survey methods).</p> <p>Roman snail individuals found will be translocated to a suitable receptor site outside the project footprint in line with the fauna translocation method statement.</p> <p>Stands of dock (<i>Rumex sp</i>) (the larval food plant of large copper) and <i>Artemisia sp.</i> (the larval food plants for <i>Catopta thrips</i>) will be preserved within the construction footprint where possible.</p> <p>No individuals of steppe carpenter moth attracted by the light associated with works during construction/operation stage will be captured/killed.</p> <p>The use of insecticides and pesticides on the PP surface is forbidden; however, rodenticides and traps may be used during operational phase to control vermin and protect assets.</p>	BSOG	Inspection records	Pre-construction and Construction
18	Biodiversity Features	Avoid working at night during construction works. If light is used at night, excess use will be avoided and the light sources will be directed into the site management area and shadowed by matt screens to minimise illumination of external areas. During operations, site lighting will be required and will be mitigated as described.	BSOG and Contractors	Inspection records	Pre-construction and Construction
20	Biodiversity Features	The activities for transporting materials will be planned so that the vehicles limit their trips to the minimum necessary for works performance.	Contractors	Inspection records	Pre-construction and Construction
-	Invasive species	<p>All vehicles will be washed and have wheels and wheel arches cleaned prior to being mobilised to site (e.g at equipment yards).</p> <p>Cattle grids will be installed at the start of all access tracks leading into the Danube Delta designated sites to help prevent the spread of invasive species (e.g <i>Robinia pseudacacia</i>) as seeds, or viable vegetative material into sensitive habitats.</p>	Contractors	Vehicle inspection records. Construction of cattle grids.	Prior to and during construction

Commitments Register Reference Number	Topic	Impact Mitigation/ Management Measures	Responsible Party	Monitoring Indicators	Implementation Time Period
		Ongoing monitoring and maintenance of the Project wayleave will include the selective removal of invasive species from the Project footprint.		Monitoring of invasive species.	

6.3 Biodiversity Monitoring Commitments

6.3.1 Offshore

The following offshore biodiversity monitoring will be undertaken during the construction, operation and decommissioning under the responsibility of BSOG.

Table 12 Offshore Monitoring

Receptor	Monitoring	Period	Frequency/Duration	Responsible
Benthic habitats	Monitoring of marine habitats along the pipeline route and at the drill cutting disposal areas at the Ana and Doina wells. Monitoring campaigns performed every six months, every year and every two years after completion of the construction, in order to identify the degree of restoration of disturbed habitats (monitoring will be carried out along the pipeline route, in the areas where wells will be drilled and will discharge debris and water-based drilling fluid). Monitoring will comprise drop down video surveys.	Construction, operation, decommissioning	After six months, one year, and then every two years.	BSOG

Receptor	Monitoring	Period	Frequency/Duration	Responsible
Benthic habitats	Monitoring habitats, focusing on designated areas for their protection (ROSCI 0066 Danube Delta). Monitoring of habitats within the ROSCI 0066 Danube Delta will be reported as part of the wider benthic habitats monitoring.	Construction, operation, decommissioning.	After six months, one year, and then every two years.	BSOG
Plankton	Monitoring the marine planktonic component (phytoplankton, zooplankton) from the project implementation area. Surveys will be undertaken monthly during construction.	Construction	Monthly during construction	BSOG
Marine mammals	Monitoring marine mammals (using JNCC accredited marine mammal observers and acoustic monitoring equipment) throughout the construction period, focusing on the installing/assembling Ana platform (the period during which the greatest disturbance of marine mammals is expected to occur during pile driving for platform installation).	Construction	Daily during piling activity and other noise generating activities.	BSOG
Birds	Monitoring birds during construction throughout the construction period, focusing on the installing/assembling Ana platform.	Construction	Daily during piling activity and other noise generating activities.	BSOG
Fish and marine mammals	Monitoring the potential occurrence of mortality in fish and marine mammal species. Reporting by MMO of any mortality events observed.	Construction	Daily during piling activity and other noise generating activities.	BSOG

6.3.2 Onshore

The following onshore biodiversity monitoring will be undertaken during the construction, operation and decommissioning operations, under the responsibility of BSOG. These monitoring surveys are in addition to the pre-construction check surveys and habitat re-instatement check surveys carried out immediately following construction. Timings of the monitoring should be informed by the survey timings presented in Appendix A.

Table 13 Onshore Monitoring

Receptor	Monitoring	Period	Frequency/Duration	Responsible
Habitats	All habitats within the temporary project footprint (including pipeline route, temporary laydown areas and compounds, HDD compounds and access tracks) will be monitored. Pre-construction condition surveys and photographs will be undertaken to establish baseline conditions for habitat restoration, in line with the Soil Waterbody Crossing and Reinstatement Management Plan. Post construction monitoring will be undertaken to monitor the success of habitat re-instatement using transect surveys, fixed point photography and habitat mapping.	Pre-construction, post construction/operation.	Three visits in spring, early summer and late summer. Undertaken for at least two years post construction. If satisfactory habitat reinstatement has not been completed after two years, monitoring will be continued and reviewed annually.	BSOG
Flora	Monitoring of flora of conservation concern (critical and priority habitat species and qualifying features of designated sites) individuals replanted within the temporary project footprint.	Post construction/operation.	Three visits (one in spring, early summer and late summer). Undertaken for at least two years post construction. If satisfactory re-colonisation has not taken place after two years monitoring will be continued and reviewed annually.	BSOG

Receptor	Monitoring	Period	Frequency/Duration	Responsible
	Monitoring of flora of conservation concern (critical and priority habitat species and qualifying features of designated sites) individuals translocated to suitable receptor sites.	Post construction/operation	Three visits (one in spring, early summer and late summer). Undertaken for at least two years post-construction. If satisfactory colonisation has not taken place after two years, monitoring will be continued and reviewed annually.	BSOG
All fauna groups	Pre-construction surveys to inform baseline for future monitoring. Transects will be used to provide representative coverage across different habitats affected by the Project.	Pre-construction	One visit prior to the start of construction activities	BSOG
Birds	Breeding bird surveys will be undertaken, including identifying breeding migrants and breeding resident species. Transect methods will be used, using a similar survey area and approach as the baseline studies undertaken to inform the ESIA so pre and post construction survey results are comparable.	Post construction/operation	Two visits (one in early breeding season, one mid-breeding season). Surveys will be undertaken for two years post-construction.	BSOG
	Wintering bird surveys will be undertaken using transect methods. A similar survey area and approach as used for the baseline studies undertaken to inform the ESIA will be used so pre and post construction survey results are comparable.	Post construction/operation	Three visits (one early winter, one mid-winter and one late winter). Surveys will be undertaken for two years post-construction.	BSOG
	Migratory bird surveys will be undertaken using point based/vantage point methods. A similar survey area and approach as used for the baseline studies undertaken to inform the ESIA will be used so pre and post construction survey results are comparable.	Post construction/operation	Three visits (one early autumn, one mid-autumn and one late autumn). Surveys will be undertaken for two years post-construction.	BSOG
Mammals	Mammal surveys will be undertaken using transect methods, including both day time and night time transects. A similar survey area and approach as used for the baseline studies undertaken to inform the ESIA will be used so pre and post construction survey results are comparable.	Post construction/operation	Two visits (one in early summer and one in mid-summer). Surveys will be undertaken for two years post-construction.	BSOG

Receptor	Monitoring	Period	Frequency/Duration	Responsible
Reptiles and Amphibians	Amphibian and reptile surveys will be undertaken using day time transects, active searching, and evening transects to record vocalisations of amphibians.	Post construction/operation	Two visits (one in spring during the amphibian breeding season and one in summer). Surveys will be undertaken for two years post-construction.	BSOG
Invertebrates	Invertebrate surveys will be undertaken using transects and active searching. Food plants of priority or critical or designated feature butterfly and moth species will be recorded within the Project footprint.	Post construction/operation	Two visits (one in early summer and one in mid or late summer). Surveys will be undertaken for two years post-construction.	BSOG

The monitoring will be carried out for 2 calendar years from the completion of the construction works and the report containing the results of the biodiversity monitoring will be submitted annually to Constanta EPA.

Additional monitoring of measures to deliver no net loss and net gain for biodiversity receptors set out in the Project BAP will be monitored separately. Applicable monitoring measures will be outlined in the BAP

6.4 Inspection, Monitoring and Audit

Inspection and monitoring of the impacts of the Project activities on biodiversity will increase the effectiveness of BMP. BSOG will establish a schedule for BMP audits or inspections of the principal onshore contractors. Contractors will be required to establish a similar schedule for its activities and those of any subcontractors.

Through the process of inspection, monitoring and auditing, BSOG will seek to ensure that the conditions stipulated within this BMP and its applicable standards, procedures and guidelines are complied with.

Inspections, monitoring and audits will be documented, and any corrective actions will be assigned owners and timescales for implementation. An action tracking database will be used to coordinate the close out of corrective actions in a timely manner.

Inspection, monitoring and audit findings, along with their respective improvement programmes, will be regularly reported to the HSSE Manager.

6.5 Reporting and Review

Given the biodiversity sensitivities identified in the onshore and nearshore environment, BSOG will report on Project performance against the commitments in the BMP on a monthly basis to BSOG management.

Contractors will be required to report on their performance on a monthly basis during design and procurement. Daily and weekly reporting is expected upon commencement of onshore construction works during pre-construction check surveys.

Reports from MMOs should be provided on a daily basis during periods when they are monitoring for marine mammal activity.

6.6 External Reporting and Communication

BSOG will prepare an annual report on environmental, health and safety performance. The annual report will be disclosed on the BSOG website. Biodiversity reporting to national regulatory bodies will be undertaken as required in line with the applicable regulations and Project permits.

6.7 BMP Review and Amendment

The BMP will be reviewed and updated as necessary. Changes may be based on the Project design, the environmental and social performance of the Project, or updated to reflect changes in planned activities, legislation, company standards, stakeholders concerns, and project personnel.

6.8 Management of Change

The process in place to manage changes impacting ESHS aspects of the project are integrated in the overall change management process applicable to all Project Changes and

are driven by the requirements set forth in the BSOG-HS-GDL-006-D02 Management of Change (MoC) Guideline and in the Project ESMP.

In relation to biodiversity impacts, of particular importance are the potential triggers for changes that should be considered under the Management of Change Guidelines. These may include:

- design refinement or detailed design outcomes that affect biodiversity receptors;
- changes in construction methodologies that may change effects on biodiversity receptors;
- field obstacles or wildlife encounters during construction;
- results of further field surveys and monitoring (including check surveys);
- comments/concerns submitted by public/stakeholders/lenders; and
- changes in regulations or requirements by regulatory bodies.

The MoC Guideline sets out different Tiers of change that require different levels of approval by the Project Lenders (as defined in the MoC Guidelines). In relation to environmental and social impacts, the different Tiers are defined by the impact severity prior to the implementation of mitigation, which will be determined using the methodology presented in the Project ESIA.

- Tier 1 Changes – Changes where the potential impact of the change prior to mitigation will be no more than minor.
- Tier 2 Changes – Changes where the potential impact of the change prior to mitigation will be moderate. BSOG will inform lenders but will not need their approval to implement change
- Tier 3 Changes – Change were the potential impact of the change prior to mitigation will be major – BSOG seeks lenders approval for the change prior to implementing.

For Tier 2 Changes, BSOG will inform the Project Lenders of the change, but will not have to secure their approval prior to implementing the change. For Tier 3 Changes, BSOG will seek approval from the Project Lenders prior to implementing the change. The following changes will be considered as Tier 3 Changes.

- Changes to the Project design and footprint or activity that may result in a potential new major impact, or elevate an impact already assessed to a potential major impact. This includes any changes that may result in additional impacts on critical habitat.
- Changes to commitments to mitigate or avoid potential impacts that may result in a potential new major impact.

6.9 Related Documentation

The BMP is one of a number of Plans that form part of the Project Environmental and Social (ESHS) Management System. The Project ESMP sets out the structure and full list of

individual plans. The following Project wide, onshore and offshore management plans are relevant to the management of biodiversity issues.

- Project Wide Management Plans
 - Framework Biodiversity Action Plan (BAP)
 - MGD Project Emergency Preparedness and Response Plan
- Onshore Management Plans
 - Pollution Prevention and Control Plan
 - Soil Waterbody Crossing and Reinstatement Management Plan
 - Site-specific Emergency Preparedness and Response Plans
- Offshore Management Plans
 - Pollution Prevention and Control Plan
 - Drill Cuttings Management Plan
 - Site-specific Emergency Preparedness and Response Plans

In particular, the Framework BAP sets out the measures identified by the Project to deliver no net loss of natural habitats/priority biodiversity features and net gain of critical habitat, in line with IFC PS6 and EBRD PR6. This will be updated by BSOG following financial close. The detailed BAP will be a 'living document' that will be regularly updated as the Project develops, in line with the Projects adaptive management of project effects and Management of Change (MoC) process.

As part of this BMP, a number of method statements will be developed for specific biodiversity management measures. These will include the following.

- Vegetation clearance methods statement (including check survey methods).
- Flora translocation method statement.
- Fauna translocation method statement.
- Vegetation re-instatement method statement.

Additional method statements may be developed by the Project if the need is identified as part of the Projects approach to adaptive management.

APPENDIX A Onshore Optimal Survey Timings

10 April 2019

Onshore Optimal Survey Timings

Table 14 Onshore Optimal Survey Timings

	Jan	Feb	Mar	Apr	Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nesting birds				Optimal period	Favourable period	Favourable period	Favourable period	Favourable period	Optimal period			
Resident birds	Optimal period	Optimal period	Optimal period	Optimal period	Favourable period	Favourable period	Favourable period	Favourable period	Optimal period	Optimal period	Optimal period	Optimal period
Passage Birds			Optimal period	Favourable period	Optimal period			Optimal period	Favourable period	Optimal period		
Wintering birds	Favourable period	Optimal period								Optimal period	Favourable period	Favourable period
Mammals			Optimal period	Optimal period	Favourable period	Favourable period	Favourable period	Favourable period	Optimal period			
Reptiles and amphibians			Optimal period	Optimal period	Favourable period	Favourable period	Favourable period	Favourable period	Optimal period			
Invertebrates					Optimal period	Favourable period	Favourable period	Favourable period	Optimal period			

Legend

Optimal period
Favourable period