PROJECT SUMMARY
STABROEK EXPLORATION/APPRAISAL PROJECT
STABROEK LICENCE AREA, OFFSHORE GUYANA

ExxonMobil Guyana Limited

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May 2026

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1 INTRODUCTION

ExxonMobil Guyana Limited (EMGL) is the designated Operator for the Stabroek Block, and is acting on behalf of itself and CNOOC Petroleum Guyana Limited, and Hess Guyana Exploration Limited (Block B) Exploration Limited.

The subject of this current application for Environmental Authorisation is to conduct further exploration/appraisal drilling in the Stabroek Block for an additional 35 wells (hereinafter referred to as "the Project"). The exact locations of the 35 exploration/appraisal wells comprising the Project have not yet been finalized. While some of the 35 wells will be drilled for exploration purposes, it is also possible that some of the wells may be drilled as appraisal wells within the proximity of previously drilled exploration areas. Therefore, four areas of interest (referred to herein as "Prospect Areas") have been identified within the Stabroek Block as the possible locations for the proposed 35 exploration/appraisal wells to occur and are depicted on Figure 1.

2 DESCRIPTION OF THE PROJECT

The Stabroek Block is located approximately 200 kilometers offshore in Guyana's waters, where EMGL has conducted substantial exploration and development activities to date. Based on data from exploration and development activities, the proposed 35 exploration/appraisal wells may be drilled within the four Prospect Areas as depicted on Figure 1. However, the exact locations of the 35 exploration/appraisal wells comprising the Project have not yet been finalized. While some of the 35 wells will be drilled for exploration purposes, it is also possible that some of the wells may be drilled as appraisal wells within the proximity of previously drilled exploration areas. If discoveries are found at particular locations, subsequent wells could be drilled in the vicinity of such locations to further assess the commerciality of the discoveries. Priorities and schedules could therefore change. Therefore, EMGL will continue to submit the well information necessary to obtain approval for an Environmental Permit from the Guyana Environmental Protection Agency (EPA).

It is anticipated that the Stabroek Block 35 well exploration/appraisal drilling campaign will begin in the second quarter of 2028. If discoveries are made, well test(s) may be performed. Conclusion of the proposed drilling campaign is expected by the fourth quarter of 2033. This schedule is preliminary and could be influenced by new discoveries, determination of the need for sidetracks, and/or well tests—all of which could extend the drilling period for the Project. The same factors could also influence the locations and sequence of subsequent wells.

The process of drilling these wells will be very similar to the process followed during prior EMGL's exploration drilling campaigns and may include mobilization, drilling, ancillary processes (possibly including sidetracks, well tests, and/or vertical seismic profiling [VSP]), and demobilization. The wells will be drilled in a yet-to-be-determined order, with timing of the initial well and between the

wells dependent on well results and prioritization with other EMGL activities offshore Guyana. The specific features and activities for each well are still being finalized and will be provided to the EPA in advance of spudding.

Well planning also incorporates evaluation and selection of a drill rig or, in this case, a drill ship. EMGL currently has five drill ships operating offshore Guyana: the *Stena Carron*, the *Noble Bob Douglas*, the *Noble Tom Madden*, the *Noble Don Taylor*, and the *Noble Sam Croft*. The wells could be drilled by any one of these five drill ships or other drill ships or mobile offshore drilling units (MODU) of opportunity. All drill ships are fully equipped for such drilling operations. If a well test is determined to be warranted for the Project, the well would likely be temporarily plugged and abandoned to enable the return of a drill ship to re-enter the well and complete the well test at a later date.

Onshore facilities to be used will include pier/port/quayside space with sufficient draft for receipt of cargo vessels bringing materials to and from the shorebases; marine support vessels will be used to service the offshore activities and operations. A marine berth and secure warehousing space for indoor and outdoor storage of materials and goods, trucking, stevedoring, freight forwarding, customs logistics, receiving, inspection, and associated container handling and storage operations will also be utilized to support the drilling and decommissioning stages of the Project.

The drilling of the exploration/appraisal well(s) in the Stabroek Block is expected to potentially occur simultaneously with other drilling activities, including:

- The Liza Phase 1 Project well drilling and production operations (authorized under Environmental Permit Ref. No. 20160705-EEDPF);
- The Liza Phase 2 Development Project well drilling program and production operations (authorized under Environmental Permit Ref. No. 20171204-ESSLP);
- The Payara Development Project well drilling program, installation, and start of production operations (authorized under Environmental Permit Ref. No. 20181204-PPOIX);
- Ongoing exploration/appraisal well drilling operations in the Stabroek Block covered under a 35-well campaign Environmental Assessment and Management Plan (approved on June 1 2023—together with the individual environmental permits issued by the EPA for individual wells in this campaign;
- The Yellowtail Development Project well drilling program and installation operations (authorized under Environmental Permit Ref. No. 20210406_YTPEX);
- The Uaru Development Project well drilling program and installation operations (authorized under Environmental Permit Ref. No.20220323-EEPGL);
- The Whiptail Development Project well drilling program and installation operations (authorized under Environmental Permit Ref. No. 20221215-EEPGL); and
- The Hammerhead Development Project well drilling program and installation operations (authorized under Environmental Permit Ref. No. 20250625-EMGL).

EMGL manages Simultaneous Operations (SIMOPs) through a structured process that includes weekly planning meetings to verify that simultaneous activities between different offshore teams (Drilling, Installation, Production, and Logistics) are managed safely. A detailed schedule including any sidetracking, well tests, or VSP for each well will be provided as it becomes available and presented with the Intent to Drill (ITD) prior to the start of any well-specific activities. A description of these ancillary processes is described in table one below.

Table 1: Ancillary processes conducted during exploratory campaigns.

Process	Function
Vertical Seismic Profiling (VSP)	VSP may be performed to improve velocity modelling and reduce uncertainty in reservoir mapping, correlate the surface-seismic data to physical data obtained from drilling the well, or improve knowledge and understanding of the structure and stratigraphy of the reservoir.
Sidetracking	A sidetrack may be drilled for mechanical reasons when it becomes impractical to continue drilling the initial wellbore, or it may be implemented to gather additional samples or information not gathered in the initial wellbore.
Well Testing	A well test may be performed to acquire dynamic rate through time, pressure, and fluid property data and/or to provide an indication of how the well will perform under a range of flow conditions.

While much of the exploration/appraisal activities will be offshore, the Project will also utilize onshore infrastructure. EMGL plans to use the existing Guyana shorebases located on the east side of the Demerara River as the primary shorebases supporting the Project. Additional onshore facilities may be used by other companies supporting the Project. All onshore support facilities will be owned/operated by others and will not be dedicated to the Project. Should any new or expanded shorebases or onshore support facilities be used, the construction/expansion and any required dredging of such facilities, as well as the associated environmental authorization, would be the responsibility of the owner/operator. Such work scope is therefore not included in this project summary or the assessment presented herein.

Onshore facilities to be used will include pier/port/quayside space with sufficient draft for receipt of cargo vessels bringing materials to and from the shorebases; marine support vessels will be used to service the offshore activities and operations. A marine berth and secure warehousing space for indoor and outdoor storage of materials and goods, trucking, stevedoring, freight forwarding, customs logistics, receiving, inspection, and associated container handling and storage operations will also be utilized.

3 SITE, DESIGN, AND SIZE OF PROJECT

3.1.1 Site

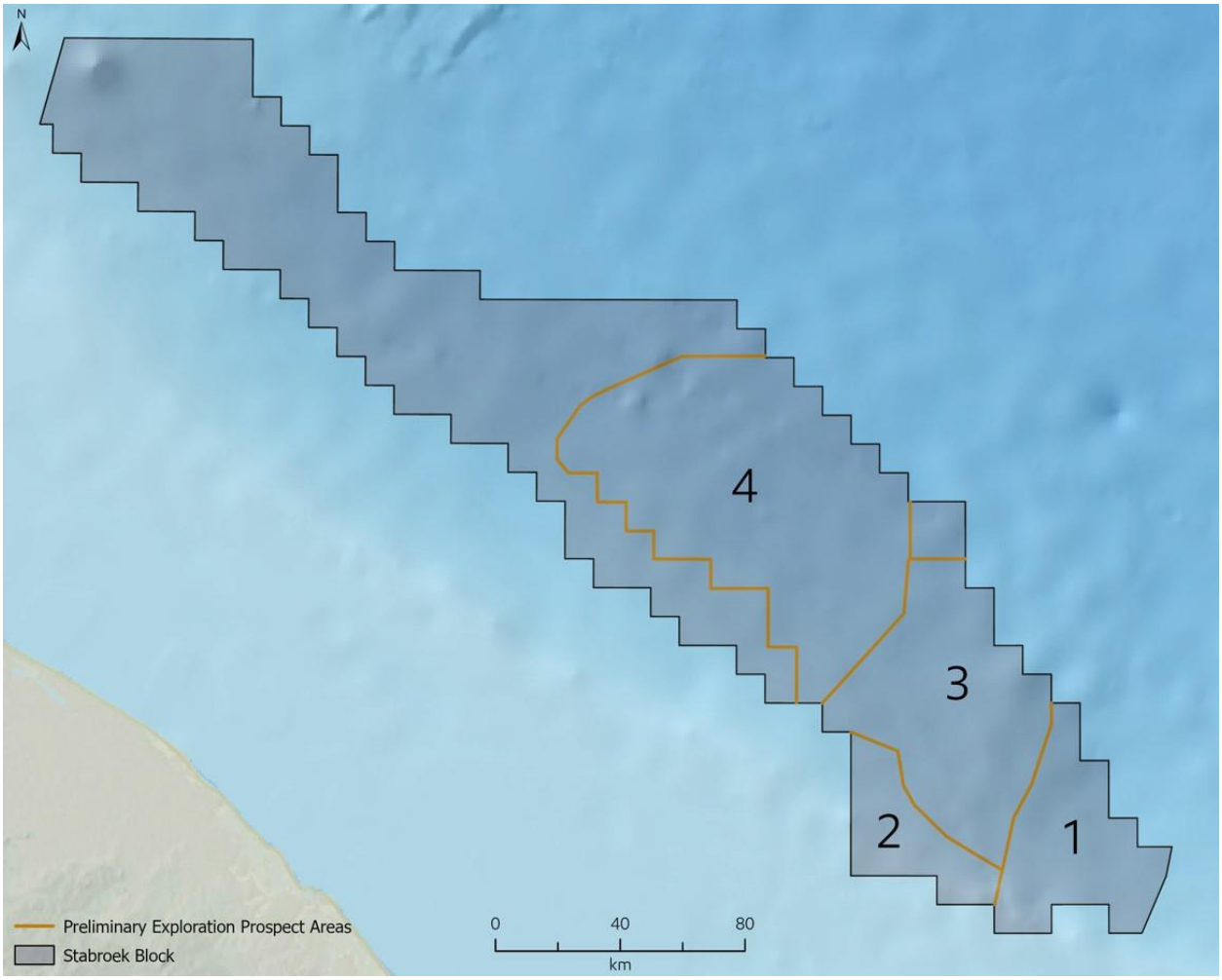


Figure 1: Prospect areas for proposed Stabroek Block 35-Well Exploration/Appraisal Drilling Campaign

The Stabroek Block is situated roughly parallel to the Guyanese Coast, approximately 200 kilometers offshore.

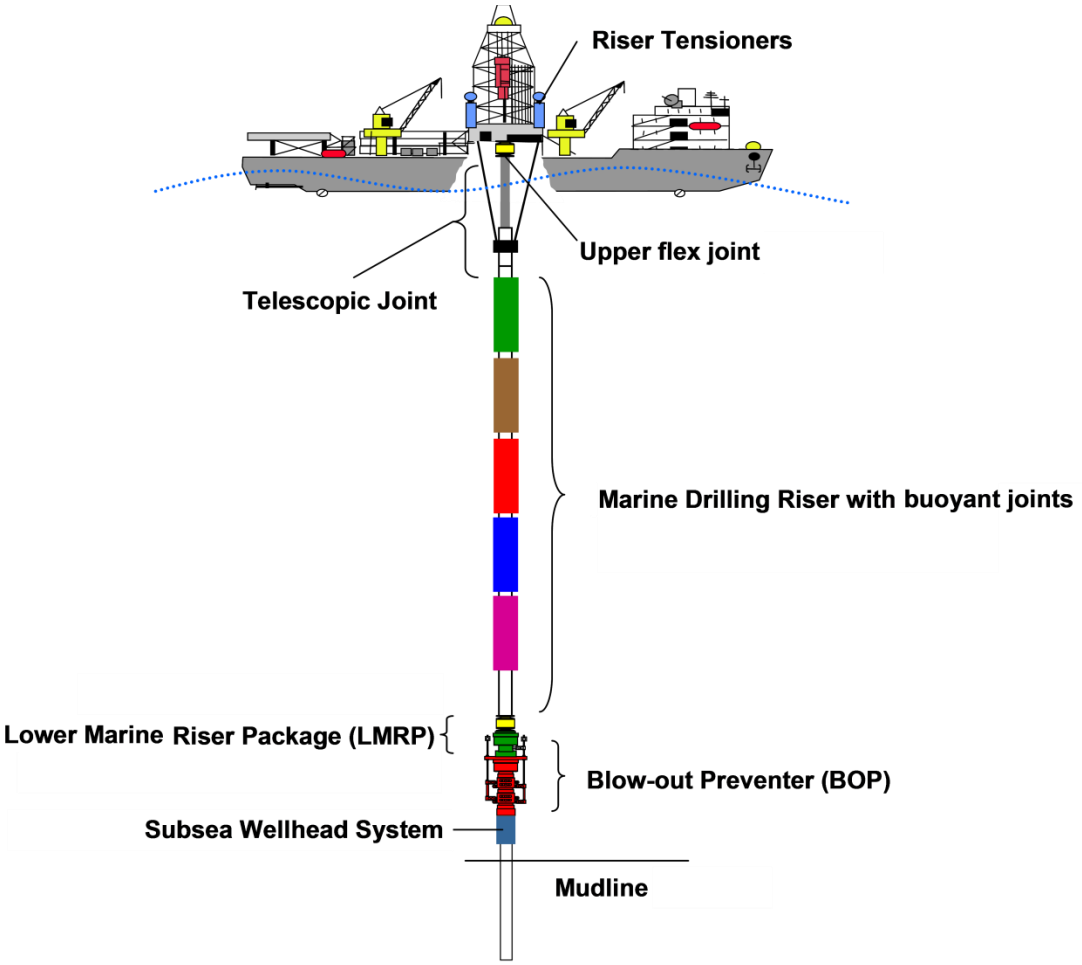
3.2 DESIGN AND SIZE OF PROJECT

3.2.1 Drilling

Based on the water depths in the Stabroek Block, multiple dynamically positioned drill ships, as shown in Figure 2, or other mobile offshore drilling unit (MODU) would be used to drill the wells and typical subsea drilling system as shown in Figure 3. The process of drilling the 35 exploration/appraisal wells for the Project will be similar to the process followed during previous exploration/appraisal well campaigns as well as the previous development projects of Liza Phase 1, Liza Phase 2, Payara, Yellowtail, Uara, Whiptail and Hammerhead. If a well test is determined to be warranted for the Project, the well would likely be temporarily abandoned to enable the return of a drill ship to re-enter the well and complete the well test at a later date.

Figure 2: Example of Drill Ship

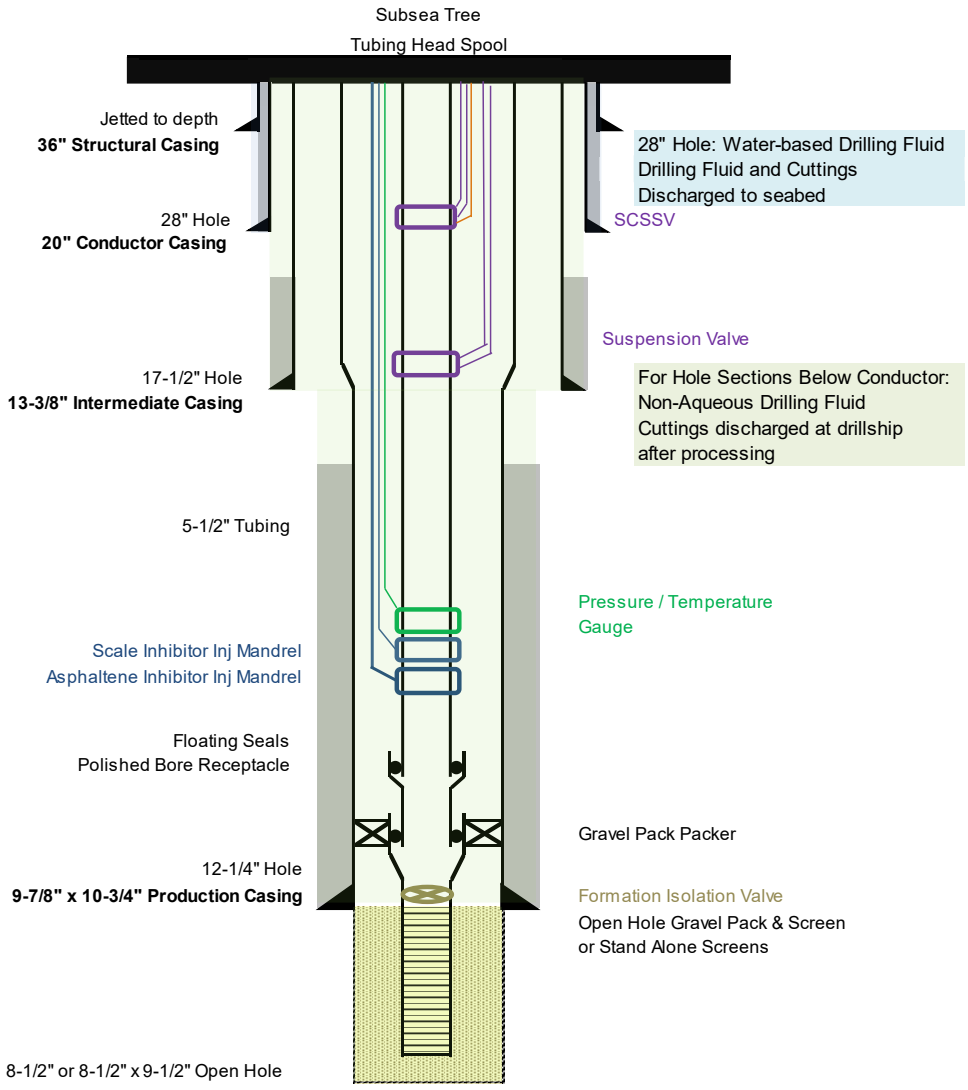
Figure 3: Typical Subsea Drilling System



The following information describes the exploration/appraisal well drilling process for the purposes of the Project.

Once the borehole is started for a well, pipe (also known as casing) is inserted into the borehole and cemented in place to keep the well from collapsing and to seal the casing to the formation. Various-sized casings are progressively set as the well is drilled deeper. After each casing (for the conductor casing and deeper casings) is installed, pressure and integrity testing is performed according to standard industry practices. A provisional well program and design for the Stabroek exploration/appraisal -drilling campaign, including preliminary casing types and sizes, setting depths, drilling fluid types, and discharge locations, is depicted on Figure 4: Provisional Casing Program for Exploration/Appraisal Drilling . Note, the architecture of each well (casing size and type, use of liner or long string, number of casing strings, casing set depth etc) is unique to each exploration and appraisal well.

Figure 4: Provisional Casing Program for Exploration/Appraisal Drilling



SCSSV = surface-controlled subsurface safety valve

During the drilling process, drill ships or MODU will require various materials, instruments, and devices to connect the drill bit to the drill ship or MODU. Various size casings will be set as the well is drilled deeper. The drilling process will also require circulating drilling fluid to remove cuttings and control formation pressures, and cement to support the casing and to isolate reservoir formations. Completion equipment and completion fluids will be also be required. The raw materials above are in addition to the basic supplies required to operate the production equipment and support vessels such as fuel, food for the crews, fresh water, and industrial consumables.

3.2.2 Work Forces

.EMGL is committed to providing employment opportunities to the local workforce where possible. Any qualified employee who will be deployed offshore will be provided with health and safety training (including emergency preparedness and response) appropriate for the role they would assume. Preliminary workforce estimates are provided below in Table 2. These estimates will be refined following selection and contracting for the drill ships and support vessels.

Table 2: Preliminary Workforce Levels

Well Drilling	Approximately 400 persons at peak utilizing at least two Drill Ships (approximately 200 persons per Drill Ship). Estimate is dependent upon final drilling schedule, drill ships and support vessels selected.
Decommissioning	Approximately 200 persons at peak.

In addition to the offshore components, there will be a comparatively smaller number of personnel providing shorebase and logistical support onshore, in addition to personnel already engaged in supporting other EMGL projects occurring concurrently with the Stabroek 35 well drilling campaign. The onshore staff will be expected to ramp up gradually through the mobilization and exploration/appraisal stage and return to the same level after the end of drilling campaign. Logistical support may be shared among the other EMGL exploration/appraisal and development Projects.

3.2.3 Waste Management

The Project will generate hazardous and non-hazardous wastes in a “per linear well-foot” volume similar to exploration campaigns conducted to date. Table 3 presents estimates of the quantities for major categories of wastes that would be generated based on the class of drill ships that would be used; anticipated number of support vessels and typical crew sizes normally used for deepwater well drilling of this type; planned duration of the drilling campaign, as described above; and experience gained on previous exploration wells drilled in the Stabroek Block. Waste will begin to be generated when drilling commences in 2028 and will extend through the life of the exploration drilling campaign, estimated to conclude by Q42033.

Table 3: Preliminary Estimates of Per-Well Waste Volumes to be Generated by the Project

Waste Type	**Quantity**
Hazardous waste[a]	≤100 tonnes
Cardboard	≤2 tonnes
Aluminum cans	≤1 tonnes
Scrap wood	≤15 tonnes

Waste Type	Quantity
Plastic	≤4 tonnes
Scrap metal	≤16 tonnes
Food waste	≤10 tonnes
Sanitary and domestic wastes	2,500-4,500 m^3

[a] Includes oily residues; m^3 = cubic meter;

Waste and effluents generated offshore will be avoided, reduced, recycled, and treated offshore where practicable, with the remainder directed for onshore treatment, recycling, reuse, or disposal. All waste streams for the Project will be managed in accordance with a Comprehensive Waste Management Plan (CWMP). The CWMP covers the storage, handling, treatment and disposal requirements of EMGL's wastes for the various offshore and onshore operations. The CWMP defines the waste management philosophy; responsibilities for waste management; waste management methodology and controls for various waste types and classifications; and inspection, monitoring, auditing and reporting of waste management activities.

The CWMP is intended to accommodate all projects in Guyana associated with EMGL's exploration and appraisal drilling, development drilling, installation and hook-up, commissioning, and start up, production operations, and related activities. Furthermore,as Projects are planned or come on stream, the CWMP will be updated to address them. The CWMP provides both EMGL and the EPA with an efficient way to understand and reference waste management practices for all EMGL waste management activities.

3.2.4 Plugging and Abandonment

Once exploration/appraisal drilling activity is completed, the wells will be plugged and abandoned. Several measures will be put in place to properly and securely plug and abandon the exploration wells at the end of the proposed exploration/appraisal activities. Consistent with industry standards, plugged and abandoned wells will be secured with two barriers above any hydrocarbon-bearing formation. Cement plugs will be used to isolate penetrated reservoirs for long-term abandonment integrity. A cement plug will also be set near the seabed prior to leaving the well. These barriers are integrity tested prior to removal of the Blow out preventer (BOP) at the conclusion of the well abandonment operations. The barriers installed are designed to restore the same integrity as the original reservoir caprock that was in place prior to the well construction activities. The barriers are designed on a rock-to-rock basis to provide isolation across the entire borehole geometry. The two-barrier standard provides redundancy and in the unlikely event of the failure of a single barrier, each barrier is designed to have the integrity required to contain the reservoir fluid pressure. The wellhead may be left on the seafloor.

While specific information is unlikely to be available until closer to the time of the well's abandonment, notice of the intent to abandon each well and the specific techniques to be used will, as may be required, be provided to the appropriate Guyanese regulators, with receipt of prior consent in the form of no-objection, and then in greater detail in the Well-Specific Drilling Program

for each exploration/appraisal well in accordance with the requirements of the Environmental Protection Act, Cap. 20:05, Petroleum Activities Act, No. 17 of 2023

4 POSSIBLE IMPACTS ON ENVIRONMENT

EMGL's environmental consultants have identified potential impacts from the Project which are related to physical, biological, and socioeconomic (inclusive of community health) values. Potential impacts from project activities have been considered for such resources as:

Physical Resources

- Air Quality, Climate
- Marine Sediments
- Marine water quality

Biological Resources

- Coastal Habitats
- Coastal Wildlife
- Marine Benthos
- Marine Fish
- Marine Turtles
- Riverine Mammals
- Marine Mammals
- Seabirds
- Special Status Species
- Protected Areas
- Ecological Balance and Ecosystems

Socioeconomic Resources

- Economic Conditions, Employment and Livelihood
- Community Health and Wellbeing
- Marine Use and Transportation
- Social Infrastructure and Services
- Waste Management Infrastructure and Capacity
- Coastal Cultural Heritage

- Land Use
- Ecosystem Services

4.1 IMPACTS

The impact assessment process is a comparative process that identifies differences between existing physical, biological, and socioeconomic conditions and the projected conditions that are directly or indirectly attributable to the Project, as well as potential cumulative impacts that may result from the Project in combination with other past, present, and reasonably foreseeable future activities. The potential impacts, which are expected to be similar to impacts identified in previous exploration/appraisal drilling Environmental Assessment and Management Plans in Stabroek Block, could be directly and/or indirectly generated by the Project during drilling and/or abandonment, and such impacts could be adverse or positive in nature. A summary of possible impacts of exploration/appraisal drilling are described in Appendix 1. Appendix 1 considers the resource/receptor, the potential impacts, and evaluates how the potential impacts could impact human life and the environment. Possible embedded controls (mitigations) for potential impacts are described in Appendix 2.

The impact assessment process also involves rating impacts from planned Project activities and rating risks from unplanned events that could be the Project. The impact assessment of planned Project activities consists of three primary steps: identifying the potential sources of Project-generated impacts, describing the characteristics of each impact, and rating the significance of each impact. Potential impacts from planned Project activities were rated according to the magnitude of the potential impact, and the sensitivity/vulnerability/importance of a given resource or receptor, as provided in Appendix 3: Planned Events, Summary of Potential Impacts. Conversely, the risks for unplanned events do not lend themselves readily to the analysis described above for planned Project activities. Rather than assigning significance ratings (as is done for potential impacts from planned activities), the assessment assigns risk ratings for potential risks from unplanned events according to the likelihood of occurrence of the unplanned event, and the consequence/severity of the impact on the affected resource if it were to occur, as provided in Appendix 4: Potential Impacts from Unplanned Events.

Appendices 3 and 4 are summarized based on similar, previous project analyses completed for exploration/appraisal drilling campaigns and the respective Environmental Assessment and Management Plans. In addition to impact ratings, the potential magnitude rating, defined as the degree of change that the identified potential impact is likely to impart upon the resource or receptor, is provided in Appendix 3. Depending on the impact, magnitude is a function of some or all of the following impact characteristics:

- Geographical extent
- Intensity
- Frequency

- Duration
- Degree of reversibility

The magnitude of impacts takes into account the various dimensions of a particular impact to determine where the impact falls on the spectrum (in the case of adverse impacts) from Negligible to Large. Some impacts will result in changes to the resource that may be immeasurable or undetectable and are characterized as having a Negligible magnitude.

Not all impacts can be assessed according to the same criteria, so the magnitude ratings for specific impacts may be determined differently according to the resource (or the type of impact) being assessed.

Residual significance of each potential impact, also listed in Appendix 3 and Appendix 4 tables, is the significance of each potential impact considering the implementation of the identified mitigation or management measures.

Cumulative impacts, also analyzed as part of previous environmental assessments, arise where impacts from the Project overlap with other existing or planned future activities in space or time. As such, a robust cumulative impact assessment will be performed as part of any Stabroek 35-well environmental assessment determined by the EPA.

5 NON-TECHNICAL EXPLANATION OF PROPOSED PROJECT

EMGL is proposing to drill up to 35 exploration/appraisal wells in the Stabroek Block, which is located approximately 200 km offshore from Georgetown, Guyana. The exact locations of the 35 exploration/appraisal wells comprising the Project have not yet been finalized, though they will be drilled within the four identified Prospect Areas depicted on Figure 1. While some of the 35 wells will be drilled for exploration purposes, it is also possible that some of the wells may be drilled as appraisal wells within the proximity of previously drilled exploration areas.

EMGL will utilize onshore logistical support facilities and marine/aviation services to support the exploration/appraisal drilling activities. One or more existing shorebase facilities could be used to support the Project. This may include but not limited to shorebases, warehouses, storage and pipe yards, fabrication facilities, fuel supply facilities, and waste management facilities in Guyana. Helicopters and supply boats will also be needed to support the Project.

During the exploration/appraisal drilling campaign, EMGL will utilize approximately 400 personnel offshore. A smaller number of personnel will be utilized at the onshore support facilities.

Once exploration/appraisal drilling activities are complete, the well will be plugged and abandoned. While specific information is unlikely to be available until closer to the time of the well's abandonment, notice of the intent to abandon each well and the specific techniques to be

used will, as may be required, be provided to the appropriate Guyanese regulators, with receipt of prior consent in the form of no-objection.

6 DURATION OF PROJECT

Pending receipt of approval, it is anticipated that the Stabroek Block 35-well exploration/appraisal drilling campaign will begin in 2028. If discoveries are made, well test(s) may be performed. Conclusion of the proposed drilling campaign is expected by the fourth quarter of 2033. This schedule is preliminary and could be influenced by new discoveries, determination of the need for sidetracks, and/or well tests—all of which could extend the drilling period for the Project. The same factors could also influence the locations and sequence of subsequent wells.

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APPENDIX 1: POSSIBLE IMPACTS OF THE EXPLORATION/APPRAISAL DRILLING

Resource or Receptor	Potential Impact	Primary Sources of Potential Impacts	How Potential Impacts Could Impact Human Life and Environment
Physical Resources			
Air Quality and Climate	Air emissions resulting from the Project have the potential to change ambient air quality in the Prospect Areas on a localized and temporary basis. Air quality is important for health of humans and wildlife. Greenhouse gas (GHG) emissions from the Project may increase the GHG concentrations in the atmosphere.	• Power generation • Other marine vessel and support aircraft combustion sources • Non-routine, temporary flaring • Waste incineration • Non-routine, unplanned event (e.g., oil spill or release)	Localized, increased concentrations of criteria pollutants in ambient air could contribute to health concerns in exposed humans and wildlife. Combustion of hydrocarbons from Project activities would contribute to GHG emissions.
Marine Geology and Sediments	The Project will disturb marine geology and sediments on a localized basis in the Prospect Areas and could impact sediment quality from deposition of non-aqueous base fluid adhered to discharged drill cuttings.	• Drilling of exploration/appraisal wells, including cuttings discharge • Non-routine, unplanned event (e.g., oil spill or release)	Change of seafloor morphology (considering habitat functionality as an indirect impact).
Marine Water Quality	The Project will have localized impacts on marine water quality in the Prospect Areas from discharge of drill cuttings and from routine operational and hydrotesting discharges. The Project also could potentially impact marine water quality in the Prospect Areas as a result of non-routine, unplanned events (e.g., oil spill or release).	• Drilling of exploration/appraisal development wells (cuttings and drilling fluid discharge) • Cooling water discharges • Wastewater effluent discharges • Produced water discharges • Hydrotesting discharges • Non-routine, unplanned event (e.g., oil spill or release)	Increased total suspended solids concentrations, chemical concentrations, or temperature in water column has a potential to affect marine water quality and marine habitat quality and affect wildlife.
Biological Resources			
Coastal Habitats	The Project is not expected to impact coastal habitats in the Project Area of Influence (AOI), such as beaches, mangroves, mudbanks, mudflats, and sandflats, as a result of routine, planned activities. The Project could potentially impact these coastal habitats in the Project AOI as a result of non-routine, unplanned events (e.g., oil spill or release).	• Non-routine, unplanned event (e.g., spill or release)	An unplanned event could potentially impact beaches, mangroves, and wetlands as wildlife habitat, or could result in declines in fisheries productivity, and/or affect other ecosystem services (e.g., flood control).
Protected Areas and Special Status Species	The Project is not expected to impact protected areas as a result of routine, planned activities in the Project AOI. The Project could potentially impact protected areas in the Project AOI as a result of non-routine, unplanned events (e.g., oil spill or release). The Project could potentially impact some special status species individuals (e.g., listed endangered or threatened species) in the Prospect Area as a result of underwater sound, light, and/or changes in marine water quality. The Project could potentially impact special status species in the Project AOI as a result of non-routine, unplanned events (e.g., oil spill or release, vessel strike).	• Underwater sound generated by marine operations (primarily VSP) • Lighting on offshore facilities (e.g., drill ships) • Wastewater effluent discharges • Drilling of exploration/appraisal wells (cuttings and drilling fluid discharge) • Vessel movements • Non-routine, unplanned event (e.g., oil spill or release, vessel strikes with marine mammals or turtles)	Reduction in wildlife habitat quality and disturbance, injury, or mortality of wildlife could occur. Potential declines in local abundance of some species within the Prospect Areas caused by decreased water quality and entrainment of early life stages of special status fish species, auditory impacts on noise-sensitive species, injury/death from vessel collisions, and habitat degradation and loss.
Seabirds	The Project has the potential to temporarily affect seabirds within the Prospect Areas.	• Drill ships and support vessel operations • Lighting on offshore facilities (related to potential for disorientation of seabirds)	Possible direct mortality and injury of seabirds related to attraction to offshore light sources and possible direct mortality and injury related to vessel (ship or air) strikes could occur.

Resource or Receptor	Potential Impact	Primary Sources of Potential Impacts	How Potential Impacts Could Impact Human Life and Environment
		• Non-routine, temporary flaring • Offshore waste incineration • Non-routine, unplanned event (e.g., oil spill or release)	
Marine Mammals	The Project has the potential to temporarily affect marine mammals within the Prospect Areas.	• Underwater sound generated by marine operations (primarily VSP) • Changes in forage availability • Lighting on offshore facilities (e.g., drill ships) • Wastewater effluent discharges • Changes in seafloor habitat • Drilling of exploration/appraisal wells (cuttings & fluid discharge) • Non-routine, unplanned events (e.g., oil spill or release, vessel strike) • Underwater sound generated by marine operations (primarily VSP)	Potential auditory injury to or disturbance of marine organisms from Project-related noise could occur. Potential injury/mortality of marine mammals or marine turtles from collisions with Project-related vessel traffic could occur. Minor potential impacts from decreased water quality on all taxa could occur from changes in water quality in the AOI. Entrainment of early life stages of fish, and potential trophic effects associated with concentration of prey species around artificial lights could occur. Non-routine/unplanned events (e.g. spill or release) could potentially cause a range of effects from acute and/or chronic sub-lethal toxic effects to mortality throughout the indirect AOI depending on the magnitude of the event.
Marine Turtles	The Project has the potential to temporarily affect some marine turtles within the Prospect Areas.		
Marine Fish	The Project could potentially temporarily affect marine fish as a result of underwater sound, light, changes to seafloor habitat, and changes in marine water quality in the Prospect Areas. The Project could potentially impact marine fish in the Project AOI as a result of non-routine, unplanned events (e.g., oil spill or release).		
Marine Benthos	The Project has the potential to temporarily affect some benthic habitat and organisms within the Prospect Areas.	• Drilling of exploration/appraisal wells (cuttings discharge and deposition) • Non-routine, unplanned event (e.g., oil spill or release)	Disturbance of benthic habitat in the Prospect Areas and potential smothering of benthos within footprint of the sediment deposition zones could occur.
• **Socioeconomic Resources**			
Coastal Demographics	The Project is not expected to directly cause any changes to population or demographics. The Project could potentially impact indigenous peoples in the Project AOI as a result of non-routine, unplanned events (e.g., oil spill or release).	• Non-routine, unplanned event (e.g., oil spill or release)	Increased demand for public infrastructure, services, and housing by the Project workforce could influence the availability of these services; and increased Project-related traffic could result in localized traffic congestion.
Cultural Heritage and Archaeology	The Project has the potential to adversely affect cultural heritage through localized disturbance of any archaeological or historic resources present in the subsea Project footprint. Such resources could have conservation, cultural, and other values to stakeholders. The Project also could potentially impact cultural heritage resources outside of the subsea Prospect Areas as a result of non-routine, unplanned events (e.g., oil spill or release).	• Drilling of exploration/appraisal wells • Non-routine, unplanned event (e.g., spill or release)	Disturbance of the seabed could potentially affect submerged archaeological resources (e.g., shipwrecks).
Employment and Livelihoods	The Project is expected to build capacity in the local labor force, increase demand for skilled labor, and increase demand for service industries. There is the potential for limited adverse impacts on fishing activities (and livelihoods stemming from those activities) as a result of marine safety exclusion zones or marine traffic, and non-routine, unplanned events (e.g., oil spill or release).	• Local employment for Project-related activities • Marine safety exclusion zones • Project-related marine traffic	Direct and indirect employment for the Project would enhance livelihoods and family incomes but could result in some competition with other businesses for skilled workers. Marine safety exclusion zones for the drill ship and Project-related vessel traffic could potentially interfere with fishing activities in certain areas.

Resource or Receptor	Potential Impact	Primary Sources of Potential Impacts	How Potential Impacts Could Impact Human Life and Environment
		• Project operations (aspects relating to occupational health and safety for Project workforce) • Non-routine, unplanned event (e.g., spill or release)	
Marine Use and Transportation	The Project activities will result in temporary increased marine-related traffic, which could potentially contribute to marine vessel congestion in port areas, as well as increasing the risk of unplanned events (e.g., marine vessel collisions). The Project will increase use of public infrastructure and services and thus could potentially compete with other existing businesses and consumers across a range of services (e.g., roads, airports/helicopters, accommodations, and utilities).	• Project-related marine vessel operations • Project demand requirements for selected infrastructure and services, which could increase the burden on existing capacity and supply • Shorebase operations and other Project-related onshore transportation of materials and personnel, which could contribute to traffic congestion • Project-related use of helicopters and airports	Increased vessel traffic could result in localized potential congestion near shorebase and marine safety exclusion zones around the drill ship support vessels would restrict access by unauthorised vessels.
Tourism and Recreation	The Project is not expected to impact tourism and recreation in the Project AOI as a result of routine, planned activities, as the bulk of Project-related activities will occur offshore, and activities at the shorebase would occur within an industrial zone. Potential adverse impacts on tourism and recreation could occur as a result of non-routine, unplanned events (e.g., oil spill or release).	• Non-routine, unplanned event (e.g., oil spill or release)	Positive economic impacts throughout the country, which could potentially affect all segments of the population.
Waste Management Infrastructure Capacity	The Project could potentially stress the capacity to manage wastes in Guyana.	• Project-generated wastes requiring off-site treatment, storage, or disposal	If the capacity in Guyana to properly treat, store, or dispose of waste is overburdened by Project demands, this could affect the ability to properly accommodate treatment, storage, or disposal needs by other parties.

APPENDIX 2 POTENTIAL EMBEDDED CONTROLS (MITIGATIONS)

A 2.1 Exploration/Appraisal Well Drilling

Potential Embedded Controls	Resources/Receptors Benefited
Coordinate with relevant aviation authorities and stakeholders to understand peak Project-related utilization rates.	Marine and Land Transportation
Use water-based drilling fluids to the extent reasonably practicable (upper sections of the wells). For well sections requiring non-aqueous drill fluid (NADF), use only low-toxicity International Oil and Gas Producers Group III base fluid.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, seabirds, marine benthos
When NADF is used, use a solids control and cuttings dryer system to treat drill cuttings such that end-of-well maximum weighted mass ratio averaged over all well sections drilled using NADF does not exceed 6.9 percent wet weight base fluid retained on cuttings.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, seabirds, marine benthos
Install a blowout preventer (BOP) system that can be closed rapidly in the event of an uncontrolled influx of formation fluids and that allows the well to be circulated to safety by venting the gas at surface and routing oil so that it may be contained.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, seabirds, marine benthos
Conduct BOP equipment inspections, at installation, and at regular intervals per manufacturer's recommendations, and after disconnection or repair of any pressure containment seal in the BOP system in accordance with the American Petroleum Institute (API) Recommended Practice (RP) 53 for Blowout Prevention Equipment Systems for Drilling Wells.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, seabirds, marine benthos
Visually check and take appropriate measures to mitigate occurrence of free oil resulting from discharge of NADF drill cuttings.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, seabirds, marine benthos
Employ trained Protected Species Observers (PSOs) during the conduct of seismic-related activities.	Marine mammals, marine turtles
Conduct a continuous observation of a mitigation zone (500 meters [1,640 feet] around the sound source) to verify whether it is clear of marine mammals and marine turtles before commencing sound producing seismic operations. Do not commence sound-producing seismic operations (including soft starts) if marine mammals or turtles are sighted within the mitigation zone during the 30 minutes prior to commencing sound-producing operations in water depths less than 200 meters [656 feet], or 60 minutes prior to commencing sound-producing operations in water depths greater than 200 meters [656 feet].	Marine mammals, marine turtles
Where reasonably practicable, equip sound-making devices or equipment with silencers or mufflers and are enclosed, and/or use soft-start procedures (e.g., for pile driving, vertical seismic profiling, etc.) to reduce noise to levels that do not cause material harm or injury to marine species.	Marine mammals, marine fish, marine turtles

Potential Embedded Controls	Resources/Receptors Benefited
Adhere to the Joint Nature Conservation Committee guidelines (JNCC 2017) during the conduct of seismic-related activities.	Marine mammals, marine turtles
Perform daily visual inspections of discharge points to confirm that there are no floating solids or discoloration of the surrounding waters.	Marine water quality, marine mammals, marine turtles, marine fish, marine benthos, seabirds, ecological balance and ecosystems
Inspect and maintain onboard equipment (engines, compressors, generators, sewage treatment plant, and oil-water separators) in accordance with manufacturers' guidelines, in order to maximize efficiency and minimize malfunctions, and unnecessary discharges into the environment.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, marine benthos, seabirds
Use low-sulfur (less than 0.5% sulfur content) fuels and/or natural gas on all Project vessels in turbines, reciprocating engines, or boilers used for heat or power generation or to drive machinery such as compressors or pumps..	Air quality and climate
If well testing[1] is performed, implement the following measures: • Flow only the minimum volume of hydrocarbons required for the test and reduce the test duration to the extent practical; • Use an efficient test-flare burner head equipped with an appropriate combustion enhancement system to minimize incomplete combustion, black smoke, and hydrocarbon fallout to the sea; • Record volumes of hydrocarbons flared during well drilling in End of Well Reports and make available to the EPA upon request; • Provide adequate gas sensors that are appropriately located during testing operations, as a means of detecting all sources of gas; • Monitor pipes and joints on a daily basis for leakages and fugitive emissions. Burn all collected gaseous streams in high-efficiency flares, and implement and maintain a leak detection and repair program; • Keep the well test to the minimum practical time, in keeping with a pre-approved schedule with the EPA. Notify the EPA immediately in case of any deviation/variation to the well test; and • Provide sufficient compressed air to the oil burner for efficient flaring assignment.	Air quality and climate
With respect to the prevention of spills of hydrocarbons and chemicals during the drilling stage: • Change liquid hydrocarbon transfer hoses periodically;	Marine geology and sediments, marine water quality, protected areas and special status species, coastal habitats, coastal wildlife,

[1] While well testing is not planned for the Project, there is the potential it could be needed, in which case EEPGL will implement the measures.

Potential Embedded Controls	Resources/Receptors Benefited
• Use dry-break connections on liquid hydrocarbon bulk transfer hoses; • Use a liquid hydrocarbon checklist before every bulk transfer; • Perform required inspections and testing of all equipment prior to deployment/installation; • Use dynamically overbalanced drilling fluids to control wells while drilling; • Perform operational training certification (including well-control training) for key drill ship leadership positions; • Regularly audit field operations on the drill ships to confirm application of designed safeguards; and • Use controls for mitigating a failure of the Dynamic Positioning (DP) system on the drill ships and maintaining station-keeping, which include: – Use of a Class 3 DP system, which includes numerous redundancies; – Rigorous personnel qualifications and training; – Sea trials and acceptance criteria; – DP proving trials; – System Failure Mode and Effects Analysis; – DP failure consequence analysis; and – Establishment of well-specific operations guidelines.	marine mammals, marine turtles, marine fish, marine benthos, ecological balance and ecosystems
Maintain marine safety exclusion zones to be issued through the Maritime Administration Department with a 500-meter radius around drill ships and major installation vessels, to prevent unauthorized vessels from entering areas with an elevated risk of collision.	Marine use and transportation
All vessel wastewater discharges (e.g., storage displacement water, ballast water, bilge water, deck drainage) should comply with International Maritime Organization (IMO)/International Convention for the Prevention of Pollution by Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78) requirements.	Marine water quality, marine mammals, marine turtles, marine fish, marine benthos, seabirds, ecological balance and ecosystems
Confirm leak detection systems are in place for equipment, treatment, and storage facilities (fuel, chemical, etc.) on drill ships in accordance with international offshore petroleum industry standards.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, marine benthos, seabirds

A2.2 General Measures

Potential Embedded Controls	Resources/Receptors Benefited
Regularly maintain equipment, marine vessels, vehicles, and helicopters and operate them in accordance with manufacturers' specifications and at their optimal levels to minimize atmospheric emissions and sound levels to the extent reasonably practicable.	Air quality and climate, sound, marine water quality, marine mammals, marine turtles, riverine mammals
Adhere to operational controls regarding material storage, wash-downs, and drainage systems.	Marine water quality, marine mammals, marine turtles, marine

Potential Embedded Controls	Resources/Receptors Benefited
	fish, marine benthos, seabirds, ecological balance and ecosystems
Equip Project vessels with radar systems and communication mechanisms to communicate with third-party mariners.	Marine use and transportation
Regularly inspect and service shorebase cranes and construction equipment to mitigate the potential for spills and to reduce air emissions to the extent reasonably practicable.	Air quality and climate, marine water quality
Shut down (or throttle down) sources of combustion equipment in intermittent use where reasonably practicable in order to reduce air emissions.	Air quality and climate
Implement chemical selection processes and principles that exhibit recognized industry safety, health, and environmental standards. Use low-hazard substances. The chemical selection process is aligned with applicable Guyanese laws and regulations and includes; • Review of Safety Data Sheets; • Evaluation of alternate chemicals; • Consideration of hazard properties, while balancing operational effectiveness and meeting performance criteria, including: – Using the minimum effective dose of required chemicals; – Minimum safety risk relative to flammability and volatility; • Risk evaluation of residual chemical releases into the environment;	Air quality and climate, marine water quality, marine geology and sediments, marine mammals, marine turtles, riverine mammals, marine fish, marine benthos, seabirds
Use secondary containment for storage of bulk fuel, drilling fluids, and hazardous materials, where reasonably practicable.	Marine water quality
Regularly (e.g., monthly) check pipes, storage tanks, and other equipment associated with storage or transfer of hydrocarbons/chemicals for leaks.	Marine water quality
Confirm wastewater released from the onboard sewage treatment plant complies with aquatic discharge standards in accordance with MARPOL 73/78 regulations.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, marine benthos, seabirds
Treat food waste in accordance with MARPOL 73/78 (e.g., food comminuted to 25-millimeter-diameter particle size or less) prior to discharge.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, marine benthos, seabirds
For transport of hazardous wastes offsite for treatment or disposal, the waste should be accompanied by a manifest signed by the hazardous waste generator and transporter.	Waste management infrastructure capacity
Provide for adequate onshore waste-management equipment and facilities for the proper management of waste in accordance with local regulation and good international oil field practice	Waste management infrastructure capacity
For wastes that cannot be reused, treated, or discharged/disposed on the drill ships, they should be manifested and safely transferred to appropriate onshore facilities for management.	Waste management infrastructure capacity

Potential Embedded Controls	Resources/Receptors Benefited
Periodically audit waste contractors to verify appropriate waste management practices are being used.	Waste management infrastructure capacity
Avoid, reduce, and reuse/recycle wastes preferentially prior to disposal in accordance with waste management hierarchy.	Waste management infrastructure capacity
Perform onshore waste treatment for certain categories of waste, thereby reducing demand on landfill capacity.	Waste management infrastructure capacity
Operate incinerators in accordance with the manufacturers' operating manuals and Waste Management Plan. That the incinerators should be operated only by trained personnel.	Waste management infrastructure capacity, air quality and climate
Confirm there is no visible oil sheen from commissioning-related discharges (e.g., flowlines/risers commissioning fluids, including hydrotesting waters).	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, marine benthos, seabirds
Treat bilge water in accordance with MARPOL 73/78 so that it may comply with an oil-in-water content of less than 15 parts per million, as applicable.	Marine geology and sediments, marine water quality, marine mammals, marine turtles, marine fish, marine benthos, seabirds
Provide awareness training to Project-dedicated marine personnel to recognize signs of marine mammals and riverine mammals at the sea surface. Provide standing instructions to Project-dedicated vessel masters to avoid marine mammals, riverine mammals, and marine turtles while underway and reduce speed or deviate from course, when possible, to reduce probability of collisions.	Marine mammals, marine turtles, riverine mammals
Provide standing instruction to Project-dedicated vessel masters to avoid any identified rafting seabirds when transiting to and from Project Development Area.	Seabirds
Provide standing instructions to Project-dedicated vessel masters to reduce their speed within 300 meters (984 feet) of observed marine mammals and marine turtles, and to not approach the animals closer than 100 meters (328 feet).	Marine turtles
Observe standard international and local navigation procedures in and around the Georgetown Harbour and Demerara River, as well as best ship-keeping and navigation practices while at sea.	Marine use and transportation
Employ Guyanese citizens having the appropriate qualifications and experience where reasonably practicable. Partner with select local institutions and agencies to support workforce development programs and proactively message Project-related employment opportunities.	Socioeconomic conditions, employment and livelihoods
Procure Project goods and services locally when available on a timely basis and when they meet minimum standards and are commercially competitive.	Socioeconomic conditions, employment and livelihoods
Use an established Safety, Security, Health, and Environment program to which all Project workers and contractors will be required to adhere to mitigate against risk of occupational hazards. All workers and contractors should receive training on the implementation of these principles and are required to adhere to them in the daily execution of their duties.	Workforce

Potential Embedded Controls	Resources/Receptors Benefited
Maintain an Oil Spill Response Plan (OSRP) to enable an effective response to an oil spill, including maintaining the equipment and other resources specified in the OSRP and conducting periodic training and drills including regular inspection and periodic testing of oil spill response equipment, preventive maintenance program execution, and annual exercise and simulated activation of oil spill response equipment to test readiness and response capability.	All resources and receptors potentially impacted by an oil spill
Where reasonably practicable, direct lighting on major Project vessels to required operational areas rather than at the sea surface or skyward. Lighting on vessels should adhere to maritime safety regulations/standards.	Seabirds, marine turtles
Provide screening for seawater intakes to avoid entrainment and impingement of marine flora and fauna.	Marine fish
Implement a community safety program for potentially impacted schools and neighborhoods to increase awareness and minimize potential for community impacts due to vehicle incidents.	Marine and Land Transportation
Implement a Road Safety Management Procedure to mitigate increased risk of vehicular accidents associated with Project-related ground transportation activities. The Road Safety Management Procedure has been implemented as of the writing of this, and the procedure includes the following components: • Definition of typical, primary travel routes for ground transportation in Georgetown area; • Development of an onshore logistics/journey management plan to reduce potential conflicts with local road traffic when transporting goods to/from onshore support facilities; • Definition of required driver training for Project-dedicated drivers, including (but not limited to) defensive driving, loading/unloading procedures, and safe transport of passengers, as applicable; • Designation and enforcement of speed limits through speed governors, global positioning system, or other monitoring systems for Project-dedicated vehicles; • Avoidance of deliveries during typical peak-traffic hours as well as scheduled openings of the Demerara Harbour Bridge, to the extent reasonably practicable; • Monitoring and management of driver fatigue; • Definition of vehicle inspection and maintenance protocols that include all applicable safety equipment for Project-dedicated vehicles; and Community outreach to communicate information relating to major delivery events or periods.	Marine and Land Transportation

APPENDIX 3: PLANNED EVENTS, SUMMARY OF POTENTIAL IMPACTS

Resource or Receptor	Resource/Receptor—Impact	Magnitude Rating	Sensitivity	Pre-Mitigation Significance Rating	Residual Significance Rating
Air Quality	Ambient air quality—increased concentrations of pollutants in ambient air, potentially contributing to health impacts for onshore human receptors	Negligible	Medium (most of population) High (more sensitive receptors)	Negligible	Negligible
	Climate and Climate Change	Negligible	Medium (most of population) High (more sensitive receptors)	Negligible	Negligible
Marine Geology and Sediments	Sediment morphology—changes from drill cuttings deposition (considering habitat functionality as an indirect impact)	Small	Low	Negligible	Negligible
Marine Water Quality	Marine water quality (marine fauna)—increased TSS concentrations and potential health impacts	Small	Medium	Minor	Minor
Special Status Species[a]	EN and VU Marine Fish	Negligible	High	Negligible to Moderate	Negligible to Moderate
	CR Marine Fish	Negligible to Moderate	High	Negligible to Moderate	Negligible to Moderate
	Turtles	Medium	Low	Negligible to Moderate	Negligible to Moderate

Resource or Receptor	Resource/Receptor—Impact	Magnitude Rating	Sensitivity	Pre-Mitigation Significance Rating	Residual Significance Rating
	Marine Mammals	Negligible	Medium	Negligible	Negligible
	Seabirds	Negligible	Low	Negligible	Negligible
Seabirds	Auditory, Visual (light), and Toxicological impacts from vessel discharges	Negligible	Low	Negligible	Negligible
Marine Mammals	Injury from sound exposure	Negligible	Medium	Negligible	Negligible
	Disturbance from sound exposure	Medium	Medium	Moderate	Minor
	Exposures to permitted discharges	Negligible	Medium	Negligible	Negligible
	Offshore lighting as an attractant of food sources for marine mammals	Positive	Medium	Positive	Positive
Marine Turtles	Disturbance from sound exposure	Small (impulsive sounds, e.g. VSP) and Negligible (non-impulsive sounds, e.g. marine vessel operation)	High	Negligible	Negligible
	Exposures to permitted discharges	Negligible	High	Negligible	Negligible
	Disturbance to turtles in the offshore environment from artificial lighting	Negligible	High	Negligible	Negligible
Marine Fish	Visual, Auditory, and Physical impacts	Negligible to Small	Low (Pelagic) and Medium (Demersal)	Negligible to Minor	Negligible to Minor

Resource or Receptor	Resource/Receptor—Impact	Magnitude Rating	Sensitivity	Pre-Mitigation Significance Rating	Residual Significance Rating
Marine Benthos	Physical impacts from spudding wells and cutting deposition, potential toxicological impacts, and impacts from additional non-cutting sediments	Small	Low Medium (Deepwater corals if present)	Negligible Minor (Deepwater corals if present)	Negligible Minor (Deepwater corals if present)
Socioeconomic Conditions	Coastal Demographics -	Small	Low	Negligible	Negligible
Employment and Livelihoods	Population of Georgetown and vicinity—increased employment, local business activity, and household incomes	Positive	Medium	Positive	Positive
	Deep-Sea Fisheries—displacement	Negligible	Medium	Negligible	Negligible
	Nearshore Fisheries—project-related vessel traffic near the coast and within the Demerara Harbour	Small	Medium	Minor	Minor
Navigation and Marine Transportation	Marine use and transportation - impacts to shipping lanes and traffic (marine safety exclusion zone)	Small	Low	Negligible	Negligible
	Marine use and transportation - impacts to commercial and subsistence fishing (marine safety exclusion zone)	Small	Medium	Minor	Minor
Land Transportation	Project-related vehicle movements between shorebases and other onshore facilities	Negligible	Medium	Negligible	Negligible

Resource or Receptor	Resource/Receptor—Impact	Magnitude Rating	Sensitivity	Pre-Mitigation Significance Rating	Residual Significance Rating
Cultural Heritage	Marine cultural heritage—damage from Project activities disturbing the seabed	Medium	Low	Minor	Negligible
Tourism and Recreation	Project impacts on tourism and recreation	Small	Low	Negligible	Negligible

[a] Potential impacts from planned Project activities on special status species are the same as those described in the resource-specific impact sections. Planned Project activities, the bulk of which will occur approximately 200 kilometers northeast of the coastline of Georgetown, will not impact coastal habitats, coastal wildlife, land use, ecosystem services, or indigenous peoples. Impacts on these resources from unplanned events, if applicable, are discussed in Appendix 4.

APPENDIX 4: POTENTIAL IMPACTS FROM UNPLANNED EVENTS

Resource/ Receptor	Unplanned Event	Resource/ Receptor - Impact	Likelihood of Event	Consequence/ Severity Rating	Pre-mitigation Risk Rating	Proposed Mitigation Measures	Residual Risk Rating
Air Quality, Climate, and Climate Change	Marine Oil Spill	Air Quality (onshore Guyana)	Unlikely	Low	Minor	Implement OSRP	Minor
		Climate	Unlikely	Low	Minor		Minor
	Coastal Fuel Spill	Air Quality (onshore Guyana)	Unlikely	Medium to High	Minor to Moderate		Minor
		Climate	Unlikely	Low	Minor		Minor
Marine Sediments	Marine Oil Spill	Marine Sediments	Unlikely	High	Moderate	Implement OSRP	Moderate
	Coastal Fuel Spill	Coastal Sediments	Unlikely	Low	Minor		Minor
	NADF Release	Marine Sediments	Unlikely	Low	Minor		Minor
Marine Water Quality	Marine Oil Spill	Water Quality	Unlikely	High	Moderate	Implement OSRP	Moderate
	Coastal Fuel Spill	Water Quality	Unlikely	Medium	Minor		Minor
	NADF Release	Water Quality	Unlikely	Medium	Minor		Minor
Protected Areas (SBPA)	Marine Oil Spill	Protected Areas (SBPA)	Unlikely	High	Moderate	Implement OSRP	Moderate
Special Status Species (Fish and Bird)	Marine Oil Spill	CR and EN Fish Species	Unlikely	High	Moderate	Implement OSRP	Minor
		VU and NT Fish Species	Unlikely	Medium	Moderate		Minor
		EN Black Capped Petrel (*Pterodroma hasitata*)	Unlikely	High	Moderate		Minor
		VU Leach's Storm-Petrel (*Oceanodroma leucorhoa*)	Unlikely	High	Moderate		Moderate

Resource/ Receptor	Unplanned Event	Resource/ Receptor - Impact	Likelihood of Event	Consequence/ Severity Rating	Pre-mitigation Risk Rating	Proposed Mitigation Measures	Residual Risk Rating
		VU and NT Coastal Bird Species	Unlikely	High	Moderate		Moderate
	Coastal Fuel Spill	CR and EN Fish Species	Unlikely	High	Moderate	Implement OSRP	Minor
		VU and NT Fish Species	Unlikely	Medium	Minor		Minor
		VU and NT Coastal Bird Species	Unlikely	Low	Moderate		
	Helicopter strike	EN Black-capped Petrel	Unlikely	Low	Minor	None	Minor
		VU Leach's Storm-Petrel	Unlikely	Low	Minor		Minor
	Vessel strike	EN Black-capped Petrel	Unlikely	Low	Minor		Minor
		VU Leach's Storm-Petrel	Unlikely	Low	Minor		Minor
	Collision with flare tower, flame, or radiant heat plume	EN Black-capped Petrel	Possible	Low	Minor		Minor
		VU Leach's Storm-Petrel	Possible	Low	Minor		Minor
Coastal Habitats	Marine Oil Spill	Coastal Habitats	Unlikely	High	Moderate	Implement OSRP	Moderate
	Coastal Fuel Spill	Coastal Habitats	Unlikely	Low	Minor		Minor
Coastal Wildlife	Marine Oil Spill	Coastal Wildlife	Unlikely	High	Moderate	Implement OSRP	Minor
	Coastal Fuel Spill	Coastal Wildlife	Unlikely	Medium	Minor		Minor
Seabirds	Marine Oil Spill	Seabirds	Unlikely	High	Moderate	Implement OSRP	Minor
	Flaring	Seabirds	Possible	Low	Minor	None	Minor

Resource/ Receptor	Unplanned Event	Resource/ Receptor - Impact	Likelihood of Event	Consequence/ Severity Rating	Pre-mitigation Risk Rating	Proposed Mitigation Measures	Residual Risk Rating
	Vessel strike	Seabirds	Unlikely	Low	Minor		Minor
	Helicopter strike	Seabirds	Unlikely	Low	Minor		Minor
Marine Mammals	Marine Oil Spill	Marine Mammals	Unlikely	High	Moderate	Implement OSRP	Minor
	Coastal fuel Spill	Marine Mammals	Unlikely	High	Moderate		Minor
	Vessel Collision	Marine Mammals	Possible	Medium	Moderate	None	Moderate
Riverine Mammals	Marine Oil Spill	Riverine Mammals	Unlikely	Low	Minor	Implement OSRP	Minor
	Coastal Fuel Spill	Riverine Mammals	Unlikely	Medium	Minor		Minor
	Vessel Collision	Riverine Mammals	Possible	Low	Minor	None	Minor
Marine Turtles	Marine Oil Spill	Marine Turtles	Unlikely	High	Moderate	Implement OSRP	Moderate
	Vessel Collision	Marine Turtles	Unlikely	High	Moderate	None	Moderate
Marine Fish	Marine Oil Spill	Marine Fish	Unlikely	Medium	Minor	Implement OSRP	Minor
	Coastal Fuel Spill	Marine Fish	Unlikely	High	Minor to Moderate		Minor
	NADF Release	Marine Fish	Unlikely	Low	Minor		Minor
Marine Benthos	Marine Oil Spill	Marine Benthos	Unlikely	High	Moderate	Implement OSRP	Minor
	Coastal Fuel Spill	Marine Benthos	Unlikely	Low	Minor		Minor
	NADF Release	Marine Benthos	Unlikely	Low	Minor		Minor
Ecological Balance and Ecosystems	Marine Oil Spill	Ecological Balance and Ecosystems	Unlikely	Medium to High	Minor to Moderate	Implement OSRP	Minor
	Coastal Fuel Spill	Ecological Balance and Ecosystems	Unlikely	Low to Medium	Minor		Minor
	NADF Release	Ecological Balance and Ecosystems	Unlikely	Low	Minor		Minor
Socioeconomics/ Economic	Marine Oil Spill	Fisherfolk	Unlikely	High	Moderate	Implement OSRP	Minor

Resource/ Receptor	Unplanned Event	Resource/ Receptor - Impact	Likelihood of Event	Consequence/ Severity Rating	Pre-mitigation Risk Rating	Proposed Mitigation Measures	Residual Risk Rating
Conditions/ Employment and livelihoods		Other economic users of marine waters				Implement claims and/or livelihood remediation processes for affected individuals	
		Coastal agricultural communities in Region 1	Unlikely	High	Moderate		Minor
	Coastal Fuel Spill	Fisherfolk Other economic users of marine waters	Unlikely	High	Moderate		Minor
		Coastal agricultural communities	Unlikely	High	Moderate		Minor
	Vessel Collision	Non-Project vessel operators	Unlikely	High	Minor to Moderate	Restitution consistent with applicable law	Minor
Community Health and Wellbeing	Marine Oil Spill	Community Health and Wellbeing	Unlikely	High	Moderate	Implement OSRP; institute claims and livelihood remediation process, as necessary	Minor
	Coastal Fuel Spill	Community Health and Wellbeing	Unlikely	Medium	Minor		Minor
	Vehicular Accident	Community Health and Wellbeing	Possible	Low to Medium	Minor to Moderate	None	Minor to Moderate
	Marine Vessel Collision	Community Health and Wellbeing	Unlikely	Low to Medium	Minor		Minor
Marine Use and Transportation	Marine Oil Spill	Marine Use and Transportation	Unlikely	Medium to High	Minor to Moderate	Implement OSRP	Minor

Resource/ Receptor	Unplanned Event	Resource/ Receptor - Impact	Likelihood of Event	Consequence/ Severity Rating	Pre-mitigation Risk Rating	Proposed Mitigation Measures	Residual Risk Rating
	Coastal Fuel Spill	Marine Use and Transportation	Unlikely	Low to Medium	Minor		Minor
	Vessel Collision	Marine Use and Transportation	Unlikely	Low	Minor	Prompt removal of damaged vessel	Minor
Social Infrastructure and Services (Lodging)	Marine Oil Spill (response efforts)	Social Infrastructure and Services (Lodging)	Unlikely	Low	Minor	None beyond implementation of Road Safety Management Procedure	Minor
	Coastal Fuel Spill (response efforts)	Social Infrastructure and Services (Lodging)	Unlikely	Low	Minor		Minor
	Vehicular Accident	Social Infrastructure and Services	Possible	Low	Minor		Minor
Waste Management Infrastructure and Capacity	Marine Oil Spill or Coastal Fuel Spill (response efforts)	Waste Management Infrastructure and Capacity (non-Project users of Georgetown-based hazardous waste treatment facilities)—exceedance of capacity	Unlikely	Low	Minor	As warranted based on anticipated future EMGL waste generation trends and trends in non-EMGL hazardous waste generation, continue enabling the expansion of existing local waste management	Minor

Resource/ Receptor	Unplanned Event	Resource/ Receptor - Impact	Likelihood of Event	Consequence/ Severity Rating	Pre-mitigation Risk Rating	Proposed Mitigation Measures	Residual Risk Rating
						capacity for hazardous wastes, and explore use of new local hazardous waste treatment facilities, or identify suitable alternative solutions.	
	Marine Oil Spill or Coastal Fuel Spill (response efforts)	Waste Management Infrastructure and Capacity (non-Project users of Georgetown-based landfill facilities)—exceedance of capacity	Unlikely	High	Moderate	Continue monitoring plans for further expansion of the HBL and/or (if approved by the EPA) construction of additional landfill sites in other locations (as decided by the government), or identify suitable alternative (interim) local solutions for	Minor

Resource/ Receptor	Unplanned Event	Resource/ Receptor - Impact	Likelihood of Event	Consequence/ Severity Rating	Pre-mitigation Risk Rating	Proposed Mitigation Measures	Residual Risk Rating
						non-hazardous waste management.	
Coastal Cultural Heritage	Marine Oil Spill	Coastal Cultural Heritage	Unlikely	Low	Minor	Implement OSRP	Minor
	Coastal Fuel Spill	Coastal Cultural Heritage	Unlikely	Low	Minor		Minor
	NADF Release	Marine Cultural Heritage	Unlikely	Low	Minor		Minor
Land Use	Marine Oil Spill	Land Use	Unlikely	High	Moderate	Implement OSRP	Minor
	Coastal Fuel Spill	Land Use	Unlikely	Low	Minor		Minor
Ecosystem Services	Marine Oil Spill (Region 1 and/or 2)	Fishing and aquatic transport	Unlikely	High	Moderate	Implement OSRP Implement claims and/or livelihood remediation processes for affected individuals	Minor
		Coastal agriculture, trapping, hunting	Unlikely	Medium	Minor		Minor
		Ecotourism	Unlikely	High	Minor		Minor
		Shoreline protection	Unlikely	High	Moderate	Implement OSRP	Minor
	Coastal Fuel Spill (Region 3 or 4)	Fishing and aquatic transport	Unlikely	High	Moderate	Implement OSRP Implement claims and/or livelihood remediation	Minor
		Coastal Agriculture	Unlikely	Low	Minor		Minor

Resource/ Receptor	Unplanned Event	Resource/ Receptor - Impact	Likelihood of Event	Consequence/ Severity Rating	Pre-mitigation Risk Rating	Proposed Mitigation Measures	Residual Risk Rating
						processes for affected individuals	
		Shoreline Protection	Unlikely	Low	Minor	Implement OSRP	Minor
		Recreation	Unlikely	Low	Minor		Minor
		Religious Ceremonies	Unlikely	Low	Minor		Minor
Indigenous Peoples	Marine Oil Spill	Indigenous Peoples	Unlikely	High	Moderate	Implement OSRP Implement claims and/or livelihood remediation processes for affected individuals	Minor