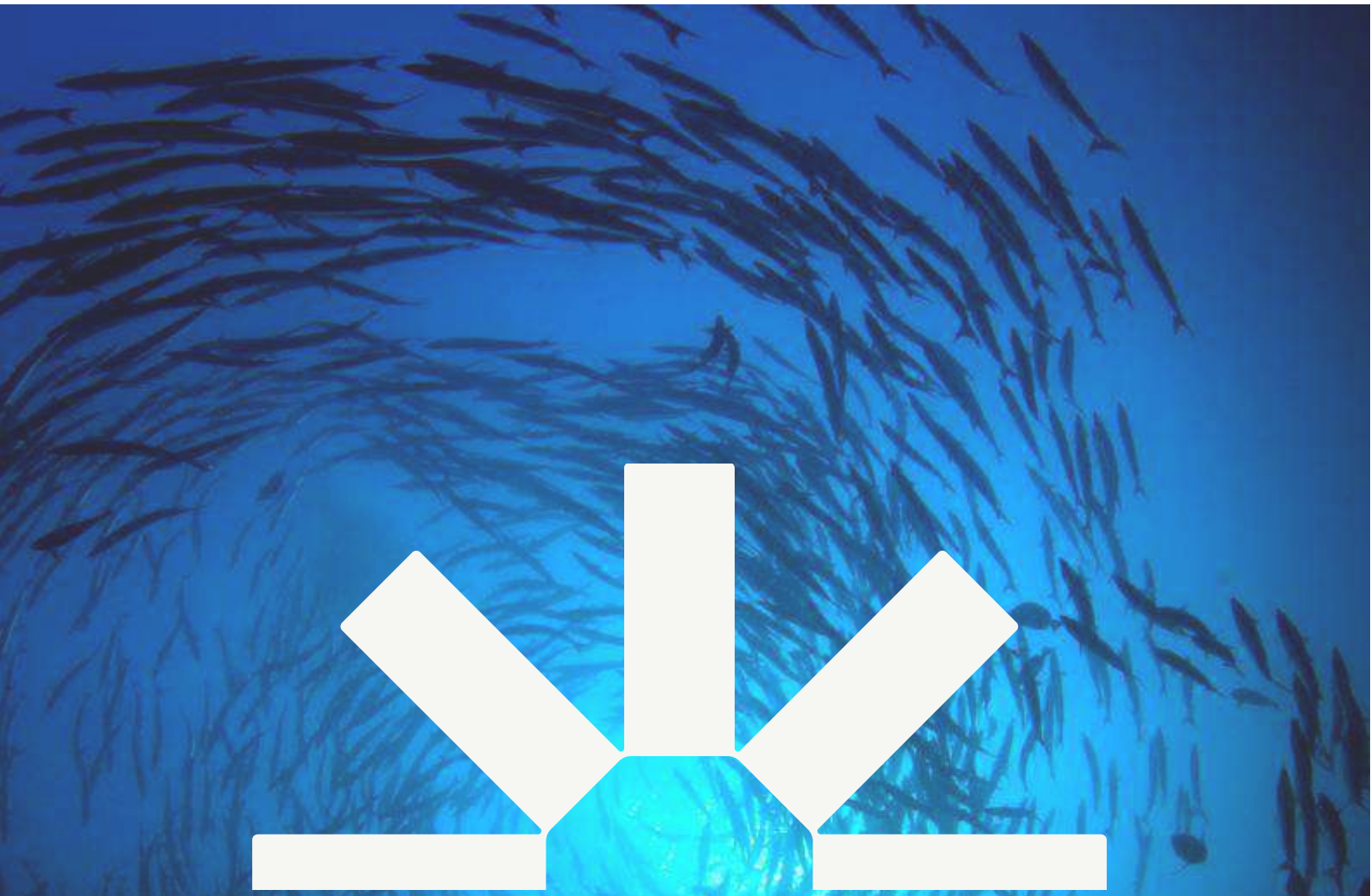
Environmental and Social Impact Assessment for the Venus Development (Offshore PEL0056/Block 2913B), Namibia

Volume 2: Environmental and Social Management Plan

FOR: TotalEnergies EP Namibia B.V. and the Joint Venture Partners

SLR Project No.: 713.000024.00001 Revision: 1

19 December 2025



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Volume 2: Environmental and Social Management Plan

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Prepared by:

SLR Environmental Consulting (Namibia) (Proprietary) Limited

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SLR Project No.: 713.000024.00001

Authority Reference No: APP - 005431

19 December 2025

Title	Environmental and Social Impact Assessment for the Venus Development (Offshore PEL0056/Block 2913B), Namibia: Environmental & Social Management Plan
Project Manager	Melissa Schulze
Author(s)	Robyn Christians, Lester Harker
Reviewer	Jeremy Blood
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00	3 November 2025	R. Christians & J. Blood	J. Blood	S. Reuther
01	19 December 2025	R. Christians & J. Blood	M. Schulze	S. Reuther

Declaration of Authorship

Application Number:	APP - 005431
Project Title:	Environmental and Social Impact Assessment for the Venus Development (Offshore PEL0056/Block 2913B), Namibia

I, **Robyn Christians**, understand and agree that the information I have furnished in this submission will be reviewed by the Office of the Environmental Commissioner (OEC). I accept that the Environmental Commissioner, will hold me accountable in terms of Section 43(1)(b) of the *Environmental Management Act*, Act No. 7 of 2007 for any inaccurate or misleading information knowingly provided in the following documentation.

Tick the box (es) applicable to your submission:

☐ Pro Forma Environmental Contract for Mining Claim(s)

☐ Environmental Questionnaire For Mining

☐ Scoping report

☐ Environmental Impact Assessment (EIA)

☒ Environmental Management Plan (EMP)

☐ Consent from Relevant Authority

I certify and acknowledge that the provision of such information will impede the lawful carrying out of the duties, responsibilities and functions of the Environmental Commissioner. I declare that the information submitted is my own work. All direct or indirect sources used are acknowledged as references.

Consultancy Name:	SLR Environmental Consulting (Namibia) (Proprietary) Limited
EAP Signature:	
Date:	19 December 2025

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Basis of Report

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1.0 Introduction

1.1 Background and Location

TotalEnergies EP Namibia B.V. (TEEPNA) and its Joint Venture (JV) partners (at present Impact Oil & Gas, NAMCOR and QatarEnergy) are the joint holders of a Petroleum Exploration Licence (PEL0056) over Block 2913B, located off the southern coast of Namibia. PEL0056/Block 2913B covers an area of 8 215 km^2 in extent and is located approximately 300 km from Oranjemund, 320 km from Lüderitz and 700 km from Walvis Bay, in water depths ranging from 2 600 to 3 300 m. The Venus offshore project area is located in the northern portion of PEL0056/Block 2913B, on an area of ~165 km^2 on the seabed, in a water depth of around 3 000 m (see Figure 1-1). Based on the exploration and appraisal results, as well as ongoing development studies, TEEPNA and its JV partners are now applying for an Environmental Clearance Certificate (ECC) to develop the Venus project area and produce crude light oil for commercialisation.

The proposed offshore development programme includes the following activities:

- Construction (drilling and installation) activities (approximately 4 years):
    - Drilling of up to 40 development wells, including 20 Oil Producer (OP) wells and 20 Gas Injection (GI) wells. Before completion, some wells may be tested to refine the knowledge of the reservoir characteristics;
    - Installation and commissioning of subsea infrastructure, which includes all equipment located on or below the seabed used to extract hydrocarbons from the reservoir and connect the wells to the Floating Production, Storage, and Offloading unit (FPSO), including wellhead, Christmas (Xmas) trees, flow line tie-ins and end-points, and Subsea Umbilicals, Risers, and Flowlines (SURF);
    - Mobilisation, mooring and commissioning of the FPSO; and
    - Installation of a mooring buoy in a nearshore transshipment area[1], ~5 km from the coast, located around 20 km north of Walvis Bay (Figure 1-2 and Figure 1-3), to support oil transshipment operations; and
    - Onshore, marine and aviation support operations using existing facilities.
- Production (operation) activities (21 years, with the option of extending production by an additional 10 years):
    - Offshore production operations, including the activities of the Dynamically Positioning Shuttle Tankers (DPST), which will be used to offload the oil from the FPSO;
    - Nearshore transshipment operations in an area ~5 km from the coast located ~20 km north of Walvis Bay where the DPST will offload the oil to a conventional tanker, which will, then, transport the oil to its final destination; and
    - Onshore, marine and aviation support operations using existing facilities.
- Decommissioning activities (approximately 1.5 years):
    - Flush and clean subsea network;
    - Disconnect the FPSO from the mooring system, recover top chains and mooring lines. Bottom chain and mooring piles may remain in the seabed. The FPSO will

[1] The final location of the mooring buoy will be within the proposed transshipment area.

then be towed to an approved recycling facility for cleaning and recycling if it cannot be re-used;

- Removal of underwater / seabed installations, including risers, flowline and In line tees (ILT) / flowline end termination (FLET), jumpers, Xmas trees and umbilicals, shall be considered on a case-by-case basis following a comparative assessment between removal or abandonment at seabed;
- Plug and abandonment of development wells following standard procedures. Wellheads will not be recovered;
- Removal of the nearshore transshipment buoy; and
- Onshore, marine and aviation support operations using existing facilities.

The proposed project triggers a number of listed activities in terms of the Environmental Impact Assessment (EIA) Regulations 2012, and as such requires an ECC before these activities can commence. SLR Environmental Consulting (Namibia) (Pty) Ltd (SLR) was appointed as the independent Environmental Assessment Practitioner (EAP) to manage the ECC application and to undertake a Scoping and EIA process for the proposed development and production activities (hereafter collectively referred to as "Environmental and Social Impact Assessment" or "ESIA" process).

This Environmental and Social Management Plan (ESMP) has been compiled as part of the ESIA process in compliance with EIA Regulations 2014 (as amended).

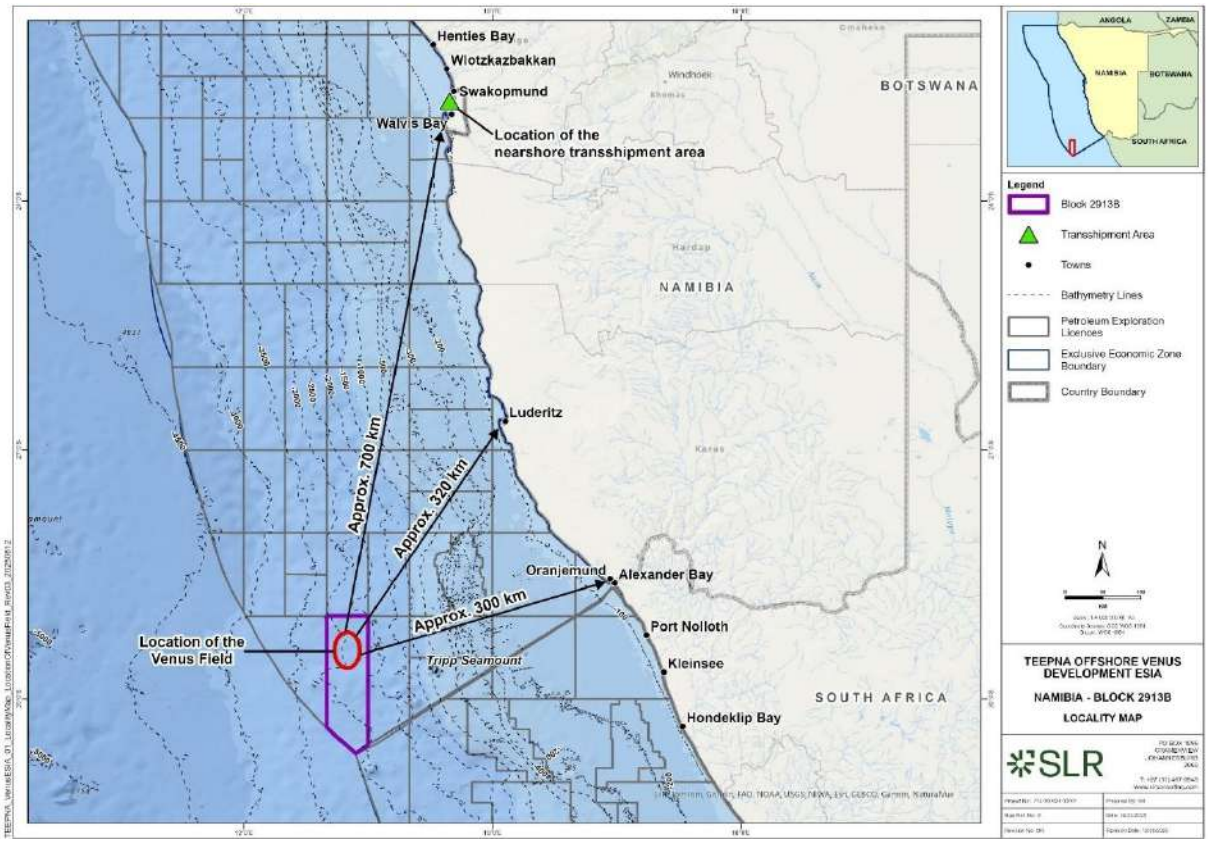


Figure 1-1: Locality Map of the Venus offshore project area (red ellipse) within PEL0056/Block 2913B (purple polygon), off the southern coast of Namibia, and the proposed nearshore transshipment area near Walvis Bay (green triangle).

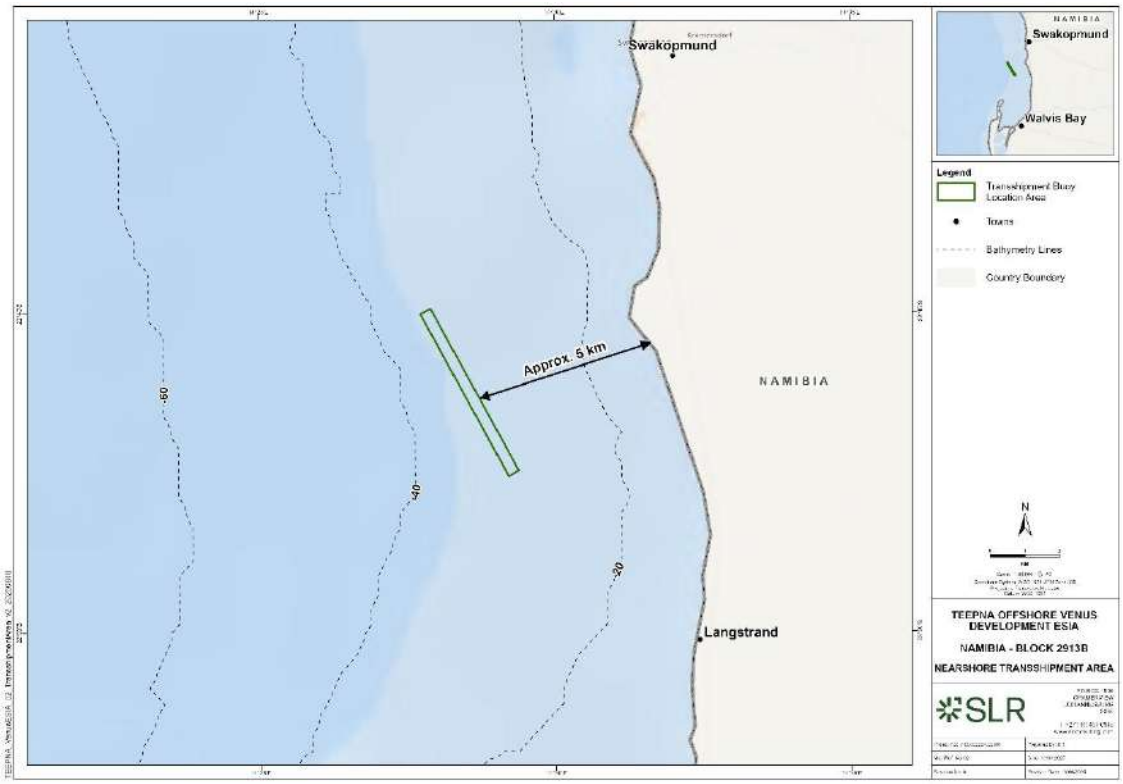


Figure 1-2: Locality map of the nearshore transshipment buoy location area.

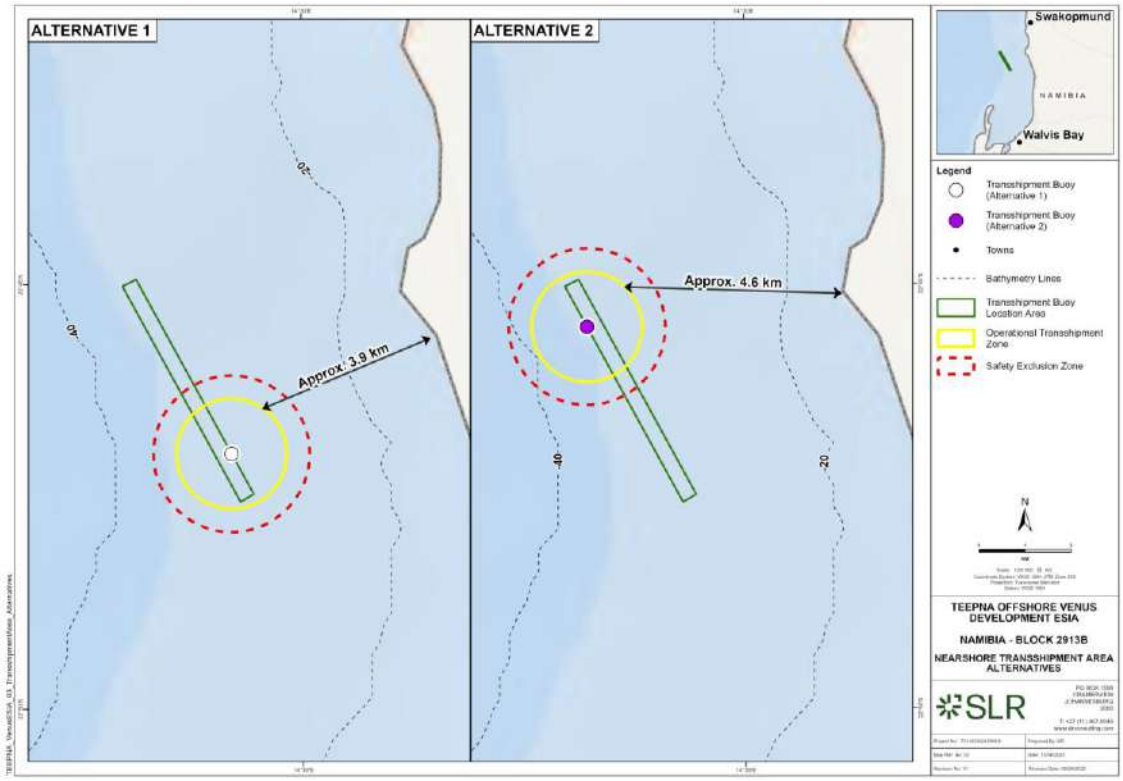


Figure 1-3: Locality map of the transshipment buoy location area showing two potential locations to illustrate the safety exclusion zone and operational zone.

1.2 Scope and Objectives of the ESMP

The objectives of this ESMP include the following:

- Meet Namibian EIA legislation and international laws and conventions.
- Operationalise oil and gas industry good practices and standards.
- Set out mitigation required to ensure the negative impacts associated with the proposed production activities (as assessed in Chapters 7 and 8 of the ESIA Report) are avoided and, where they cannot be avoided, are minimised, and to ensure any benefits are optimised and maximised.
- Provide an implementation mechanism, by project phase, for project controls and mitigation measures identified in the ESIA Report (as presented in Chapters 7 and 8 of the ESIA Report).
- Establish a monitoring programme and record-keeping protocol against which the operator and its contractor's/sub-contractor's performance can be measured and to allow for corrective actions or improvements to be implemented when needed.
- Provide protocols for dealing with unforeseen circumstances or ineffective mitigation measures.

1.3 Structure of this Report

Description of the structure and content of the ESMP is given in Table 1-1 below.

Table 1-1: Description of the Structure and Content of the ESMP

Section	Contents
Section 1.0	**Introduction** Objectives and structure of the ESMP.
Section 2.0	**Summary of the Key Environmental and Social Sensitivities** Key sensitivities in the study area and implications for the project.
Section 3.0	**Supporting Documentation / Actions** Main documentation supporting the implementation of the ESMP.
Section 4.0	**Roles and Responsibilities** Key roles and responsibilities for the implementation and management of the ESMP.
Section 5.0	**Training, Awareness and Competency** Training and awareness provisions for the operator's staff and Contractors involved in the project.
Section 6.0	**Compliance Verification and Corrective Actions** Inspections, monitoring and auditing requirements to ensure compliance with the ESMP and implementation of corrective actions.
Section 7.0	**Management of Change** Procedure to be followed to respond to changes to the ESMP and/or project design.
Section 8.0	**Communication** Communication channels between the operator, the contractor(s) and external stakeholders.
Section 9.0	**Document Control and Reporting** Document control and reporting requirements (internal and external).

Section	Contents
Section 10.0	**Environmental and Social Mitigation Management Commitment Register** Commitments and specifications that will be implemented to prevent, minimise or manage significant negative impacts and optimise and maximise any potential benefits of the project. • Section 10.1 deals with the **Drilling and Installation Phase**. • Section 10.2 deals with the **Operation Phase**. • Section 10.3 deals with the **Decommissioning Phase**.

2.0 Summary of the Key Environmental and Social Characteristics and Sensitivities

Key characteristics and sensitivities in the project's area of influence are summarised in Table 2-1 below to ensure that all project personnel, including contractors, are fully aware of the key sensitivities, features and resources.

Table 2-1: Key characteristics and sensitivities in the project's Area of Influence

Aspect	Key characteristics and sensitivities
1. Physical aspects	
1.1 Climate	
• The climate of the Namibian coastline is classified as hyper-arid with typically low, unpredictable winter rains and strong predominantly south-easterly winds. • Mild temperatures prevail year-round, averaging around 16°C along the coast and increasing inland. • Winds are one of the main physical drivers of the near shore Benguela region. During summer, wind is strongest with southerlies dominating most of the time. Winter remains dominated by southerly winds, but the proximity of winter cold-front systems introduces a significant north-westerly component. • Frequent fog occurs along the coast, mainly from February through May.	
1.2 Bathymetry and Sediments	

Venus Offshore Project Area:
• PEL0056/Block 2913B is located along the upper slope and within the deep-sea abyss. The Venus offshore project area is located in water depths of around 3 000 m.
• Slope gradients are typically very low, typically <10° except for the side slopes of the valley (and adjacent ridges) which tend to be around 20°.
• The region's geological features include Tripp Seamount and Orange Bank in Namibia, which have been mapped for Marine Spatial Planning purposes. Tripp Seamount is located approximately 85 km east of PEL0056/Block 2913B, with the Orange Bank located further inshore. Further an unnamed bathymetric feature is situated 36 km east of PEL0056/Block 2913B rising from depths of 2 000 m.
• The Venus offshore project area is typically homogenous, devoid of features as it consists of a smooth seabed. Geophysical surveys within the Venus offshore project area confirmed sediments ranging in thickness from 3 m to 40 m consisting of alternating flat lying very soft clay and silt layers.
• The continental shelf hosts extensive phosphorite deposits, formed by upwelling-induced phosphate precipitation. The presence of phosphate deposits within the project development area is deemed unlikely, as the area is located off the continental shelf, with none recorded during environmental surveys.
• Although there are also no significant geohazards associated with the survey areas, potential hazards include:
  ○ Small (<100 m) slumps occur on the valley/ridge side margins.
  ○ Turbidite flows travelling down the channel/valley floor.
Nearshore Transshipment Area:
• The nearshore transshipment area is situated along the inner shelf, in water depths less than 40 m. Owing to its nearshore location (<5 km from the coast at its closest point), the transshipment area sediment is likely to consist largely of sand.
• The nearshore transshipment area, located ~20km North of Walvis Bay, is located shallower than the known rock phosphate.	

Aspect	Key characteristics and sensitivities
1.3 Benguela Current and Upwelling	
General: • The Namibian coastline is strongly influenced by the Benguela Current system. The coastal upwelling region in the Benguela current is an area of particularly high natural productivity, with extremely high seasonal production of phytoplankton and zooplankton. • The Lüderitz upwelling cell is the most intense upwelling cell in the system, with the seaward extent reaching nearly 300 km. Venus Offshore Project Area: • PEL0056/Block 2913B is located in a deep-water environment that lies well offshore of coastal upwelling cells and areas of high productivity. Thus, nutrient levels are expected to be low / poor. • No natural hydrocarbon seeps have been identified in the vicinity of PEL0056/Block 2912. • Swells throughout the year come predominantly from a south and south-southwest direction with average significant wave height of 1.73 m. • Modelled operational currents based on measurements recorded at the Venus offshore project area indicate that surface and near surface (5 m below sea level) currents are primarily towards the west-northwest and northwest, with average speeds of 0.26 m/s. Current speeds decrease with depth to ≤0.05 m/s near the seabed (2 000-3 000 m deep), flowing predominantly towards the south. • The project area also lies well offshore of the areas periodically affected by low-oxygen, high nutrient and high-turbidity conditions. Environmental Baseline Survey (EBS) results indicate that the offshore waters of PEL0056/Block 2913B are comparatively clear and nutrient poor. Nearshore Transshipment Area: • The nearshore transshipment area falls within shallow, nutrient-rich coastal waters. Low oxygen waters are expected along the inner continental shelf. • Harmful Algal Blooms (HABs) are mainly associated with inshore upwelling cells may take place in waters in the nearshore transshipment area. • Swell come predominantly from the south-southwest to southwest, with an average significant wave height of 0.5 m. • Modelled operational currents based on measurements recorded at the nearshore transshipment area indicate that surface and near surface (5 m below sea level) currents are primarily towards the east and northwest, with average speeds of 0.125 m/s.	
2. Ecological aspects	
2.1 Biological Characteristics	
General: • Important biological processes such as primary production, fish spawning and migratory routes occur inshore (outside) of PEL0056/Block 2913B, however overlap with nearshore transshipment operations. • The distribution of small pelagic fish, which include many commercially important species such as sardine and anchovy, are located inshore (outside) of the Venus offshore project area, yet may be encountered by nearshore transshipment operations. • Large migratory pelagic fish species, such as tunas, billfish and sharks, occur seasonally throughout the southern oceans; they may thus be encountered in the project area of influence. • Turtle occurrence in the project area of influence is also possible, but abundances are similarly expected to be low.	

Aspect	Key characteristics and sensitivities

- Foraging and breeding areas of most resident breeding seabirds and Cape fur seals are located inshore (outside) of the PEL0056/Block 2913B, yet may overlap with inshore transshipment locations and vessel transfer passages.
- Thirty-five species of whales and dolphins are known or likely to occur in Namibian waters and thus could be encountered in PEL0056/Block 2913B.
- Cetacean species most likely to be encountered in the project area of influence are long-finned pilot, sperm, southern right and humpback whales, and common dolphins.

Venus Offshore Project Area:

- The Venus offshore project area lies within the cold temperate Namaqua Bioregion and the marine Namib Biozone.
- The benthic habitat at depths beyond 500 m have been assigned a threat status of 'Least Threatened' as they comprise large areas in the Namibian EEZ and experience limited impacts. However, the continental shelf is considered 'Endangered' due to habitat degradation from trawling (Figure 2-1).
- The Venus offshore project area is located in a deep-water environment that exhibits much lower diversity and abundance of species than the inner shelf areas that benefit from nutrient-rich upwelled waters and the resultant higher productivity.
- Benthic fauna are generally impoverished, which is typical for deep water sediments. The macrofaunal communities recorded were dominated by polychaetes, with lower abundances of molluscs and crustaceans. Bioturbation, in the form of burrows, was present within all biotopes indicating the presence of infaunal taxa.
- No colony forming corals and structural features (e.g., rocky outcrops) were identified in the Venus offshore project area during these geophysical surveys.

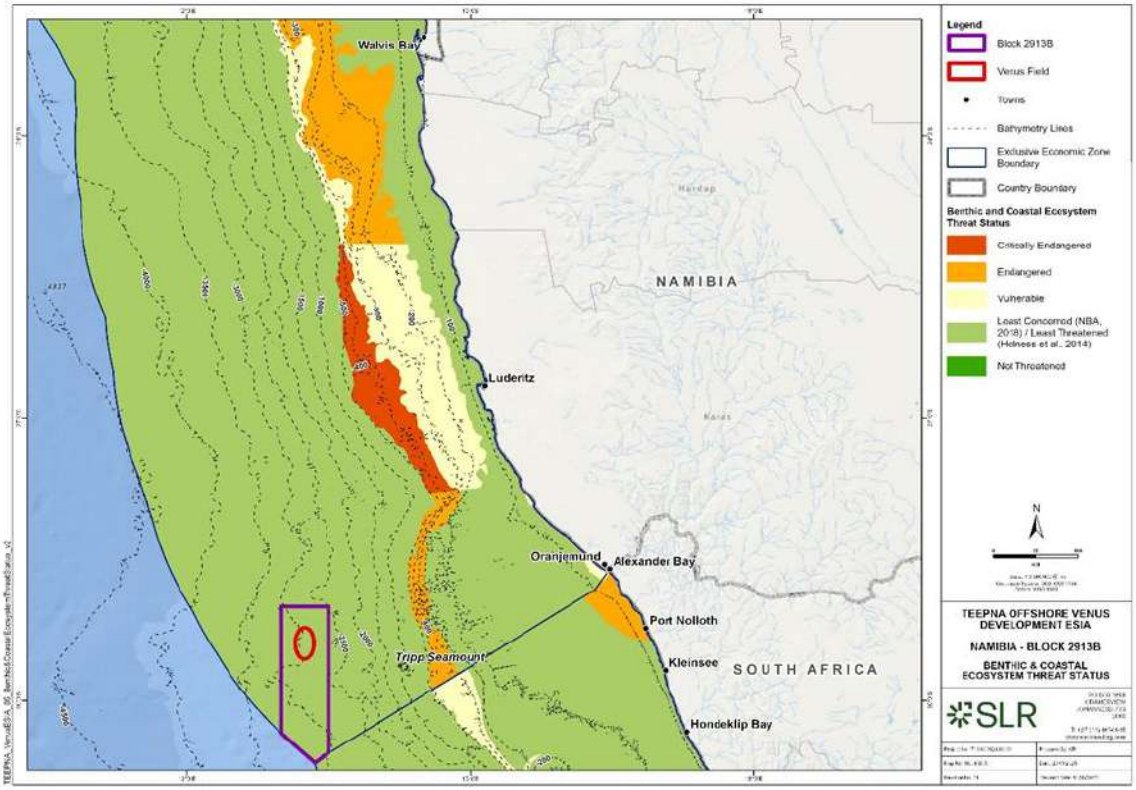


Figure 2-1: Venus offshore project area (red ellipse) within PEL0056/Block 2913B (purple polygon) and nearshore transshipment area (green triangle) in relation to benthic and coastal ecosystem threat status.

Aspect	Key characteristics and sensitivities
Nearshore Transshipment Area: • The nearshore transshipment area falls within the Namib Bioregion and the Kuiseb Biozone. • Nearshore transshipment operations fall within the 'Least Threatened' Kuiseb Inshore and Central Namib Inner Shelf ecosystem types (Figure 2-1).	
2.2 Conservation and Protected Areas	
General: • The entire coastline is part of a continuum of protected areas that stretch along a distance of about 1 570 km. • The Venus offshore project area and/or transshipment area do not overlap with any Marine Protected Areas (MPAs), confirmed Important Bird Areas (IBAs), Important Marine Mammal Areas (IMMAs) or Ramsar sites. Venus Offshore Project Area: • PEL0056/Block 2913B lies well offshore of the confirmed and proposed IBAs. • The Namibian Islands' Marine Protected Area (NIMPA) is 225 km to the north-east of PEL0056/Block 2913B (Figure 2-2). The Orange Shelf Edge MPA is 64 km east of PEL0056/Block 2913B at its closest point, in South African waters. • PEL0056/Block 2913B partially overlaps (0.01% surface overlap) along the eastern boundary with the Orange Seamount and Canyon Complex transboundary Ecologically or Biologically Significant Area (EBSA) (Figure 2-3). The Venus offshore project area is, however, over 15 km northwest of the EBSA.	

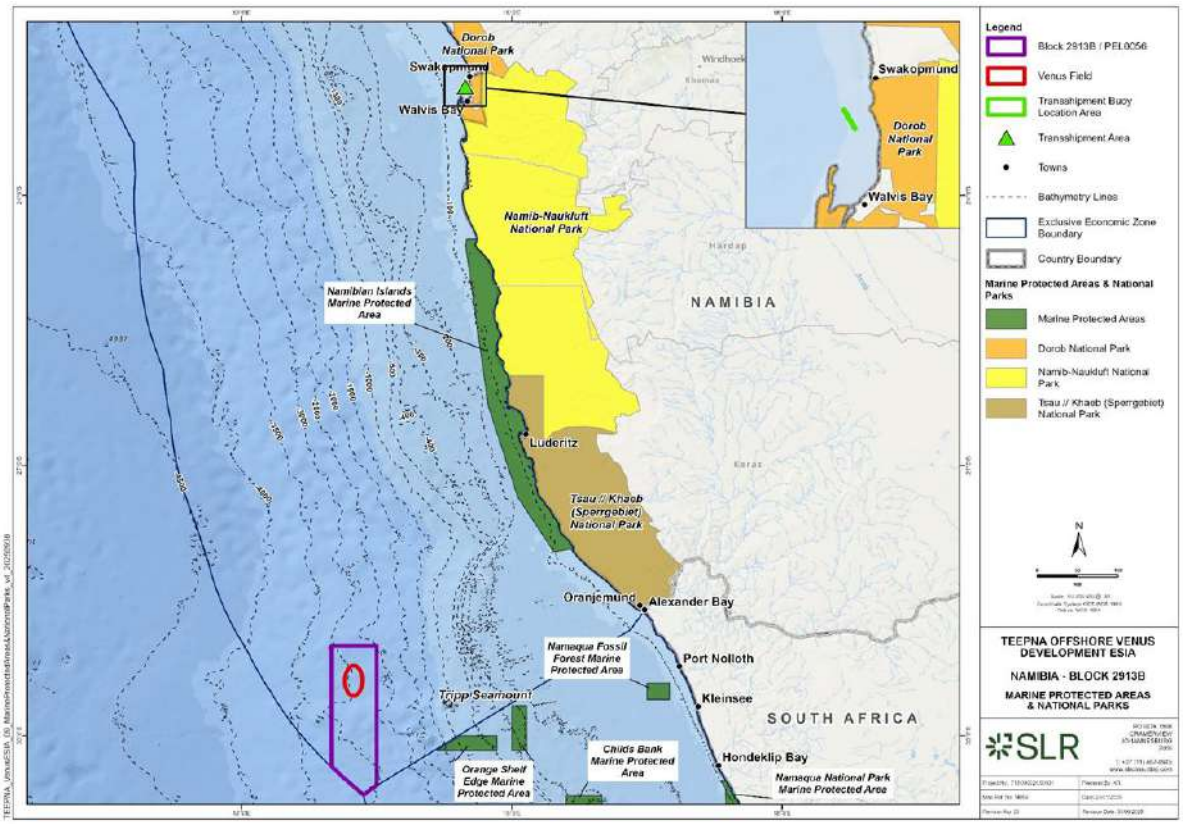


Figure 2-2: Venus offshore project area (red ellipse) within PEL0056/Block 2913B (purple polygon) and nearshore transshipment area (green triangle) in relation to National Parks and Marine Protected Areas in Namibia and South Africa.

Aspect	Key characteristics and sensitivities

Nearshore Transshipment Area:

- The coastline of Namibia is part of a continuum of protected areas that stretch along the entire Namibian coastline (Figure 2-2).
- The nearshore transshipment area lies within the proposed Walvis Bay–Cape Cross Lagoon–30-Kilometre Beach: Walvis–Swakopmund Marine IBA. This IBA encompasses the Walvis Bay area, the coastline up to Swakopmund, the Cape Cross lagoon, and the 30-Kilometre Beach, and has been identified for the protection of several key species, including the Cape Cormorant, Kelp Gull, and breeding populations of Damara and Caspian Terns.
- The transshipment zone is located just north of the confirmed Walvis Bay IBA, which focuses specifically on the Walvis Bay lagoon and its surrounding wetlands, a critical habitat for a wide range of species, including waders (such as flamingos), breeding coastal and pelagic seabirds, and non-breeding Palearctic and intra-African migrants.
- Vessel transit between the Venus offshore project area and Lüderitz port overlap with the NIMPA, which is 190 km south of the nearshore transshipment area (Figure 2-2).
- The nearshore transshipment area falls within the Namib flyway EBSA (Figure 2-3). In addition, transshipment and vessel transit activities fall within the Benguela Upwelling System EBSA – a transboundary EBSA containing important spawning and nursery areas for fish as well as foraging areas for threatened vertebrates, such as sea- and shorebirds, turtles, sharks, and marine mammals.

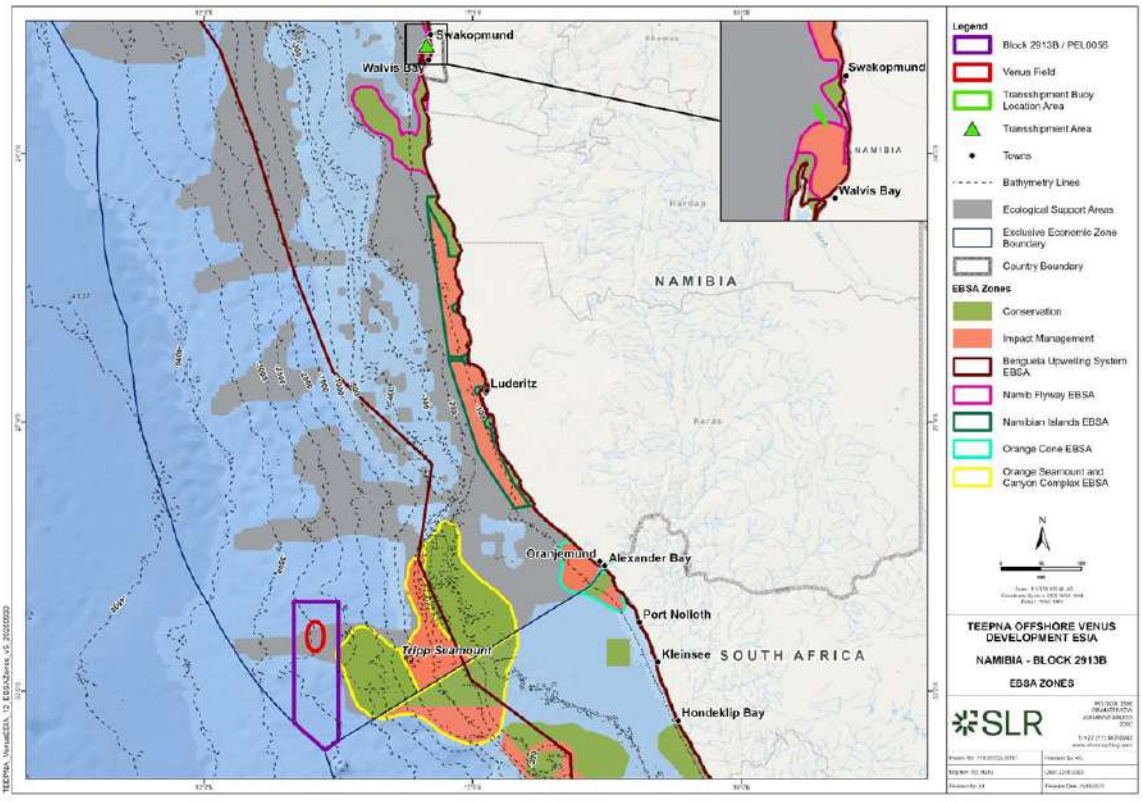


Figure 2-3: PEL0056/Block 2913B (purple polygon), Venus offshore project area (red ellipse) and nearshore transshipment area (green triangle) in relation to EBSAs and the Ecological Support Areas.

Aspect	Key characteristics and sensitivities
3. Socio-economic aspects	
3.1 General	

General:
• The main settlements along the coast are Walvis Bay, Lüderitz, Oranjemund and Swakopmund.
  ○ Walvis Bay is located in the Walvis Bay Urban Constituency in the Erongo Region and is the third largest town in Namibia (after Windhoek and Rundu). The Walvis Bay port is Namibia's largest commercial port and handles container imports, exports and transshipments and bulk commodities, including transfer of petroleum products. It is a base for many of oil and gas operations for offshore exploration activities in Namibia. The fisheries industry accounts for a significant portion of the local economy.
  ○ Lüderitz is located in the !Nami‡Nûs Constituency in the //Kharas Region and is the southern-most port town in Namibia. Founded in 1883, the town mainly supports the fishing and mining sectors, as well as oil and gas exploration activities, with little other industrial development. New industries, such as green hydrogen developments, have recently been proposed within the town and its surrounds.
  ○ Established in 1936, Oranjemund was run by Namdeb (formerly Consolidated Diamond Mines) until 2017, but was proclaimed as a town in 2011 and opened to the public in 2017. Today, Oranjemund is still dominated by the diamond mining industry.
  ○ Swakopmund is located in the Erongo Region and is the fourth largest urban centre and one of the main tourist destinations in Namibia. Swakopmund has a strong industrial base, mainly related to the provision of services to the mining sector inland of the town.
• Lüderitz and Walvis Bay, where the onshore support bases are anticipated, and their associated facilities are sufficiently developed and have the capacity to cater for development projects.
• Coastal tourism and recreational activities and services are found primarily in and around Lüderitz and further up the coast at Walvis Bay, Swakopmund and Henties Bay. It is important to note that the majority of tourism and small-scale fishing activities occur within 1 NM of the coastline.	

3.2 Commercial Fisheries	
General: • The location of the Venus offshore project area is well offshore of the expected spawning areas of most fish. However, vessel transit operations may overlap with spawning grounds off central Namibia, with the nearshore transshipment area off Walvis Bay falling within sardine, horse-mackerel, kob and monk fish spawning areas and ichthyoplankton drift. Venus Offshore Project Area: • The large pelagic longline sector is the only Namibian commercial fishing sector which overlaps with PEL0056/Block 2913B. However, fishing effort in this area is low (Figure 2-4). Nearshore Transshipment Area: • Nearshore transshipment operations may overlap with the linefish and Small-Scale Fisheries (SSF) sectors, as well as small pelagic purse-seine fisheries, should this sector reopen. • Walvis Bay is a key hub for Namibia's mariculture industry, primarily producing Pacific oysters and, to a lesser extent, European flat oysters. Cultivation typically takes place in the sheltered waters behind Pelican Point (13 km from the nearshore transshipment location). (Figure 2-5).	

Aspect	Key characteristics and sensitivities

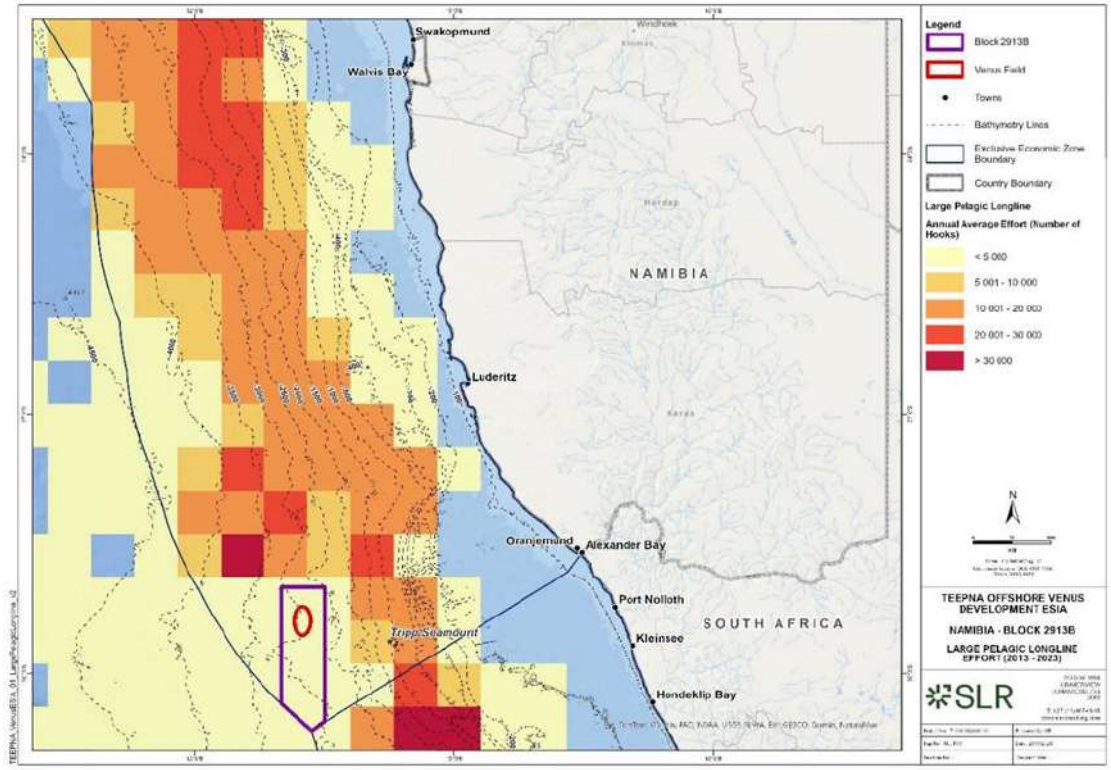


Figure 2-4: Venus offshore project area (red ellipse) within PEL0056/Block 2913B (purple polygon) and nearshore transshipment area (near Walvis Bay) in relation to the spatial distribution of annual average effort recorded by the large pelagic longline fisheries offshore Namibia (2013-2023).

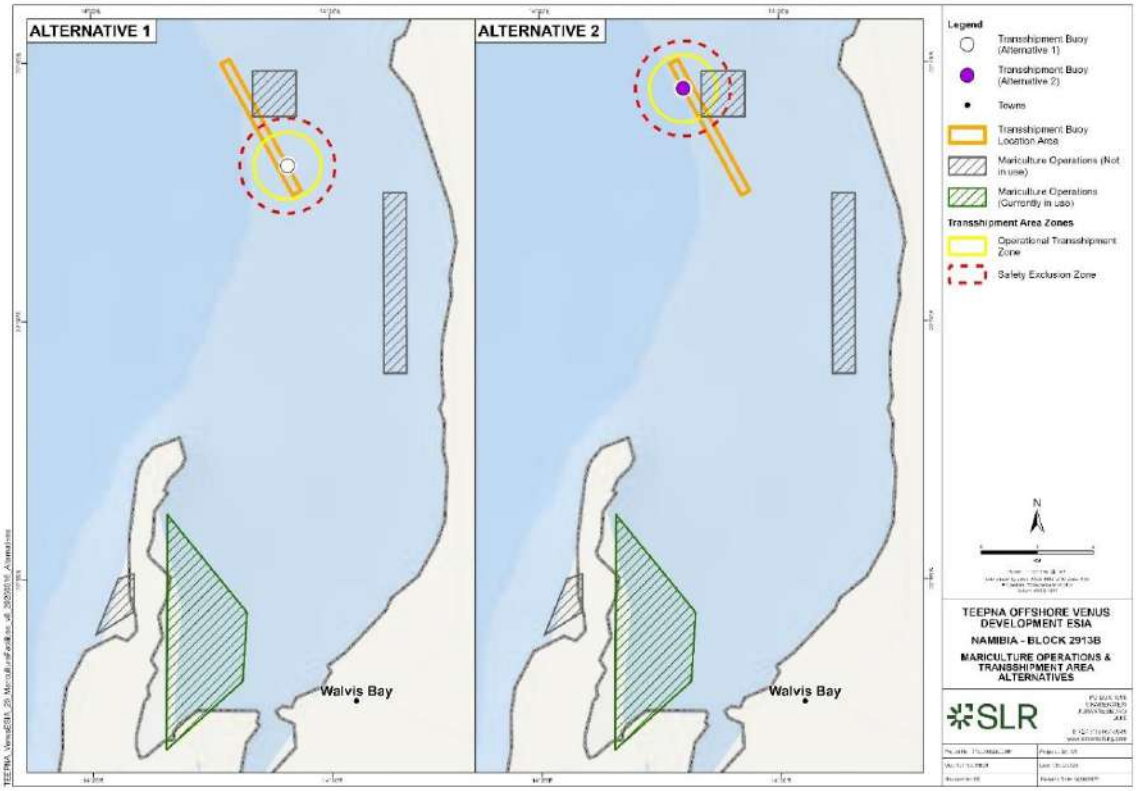


Figure 2-5: The nearshore transshipment area in relation to mariculture development areas.

Aspect	Key characteristics and sensitivities

3.3 Submarine cables

Venus Offshore Project Area:

- The Venus offshore project area lies between the WACS-SAT 3 and Equiano submarine cables (Figure 2-6).
- The exact positioning of WACS-SAT3 cable in relation to proposed Venus development subsea layout was recorded during the 2024 geophysical survey performed on PEL0056/Block 2913B in 2024 and confirmed that the proposed Venus development subsea layout does not impact any subsea telecommunication cables.

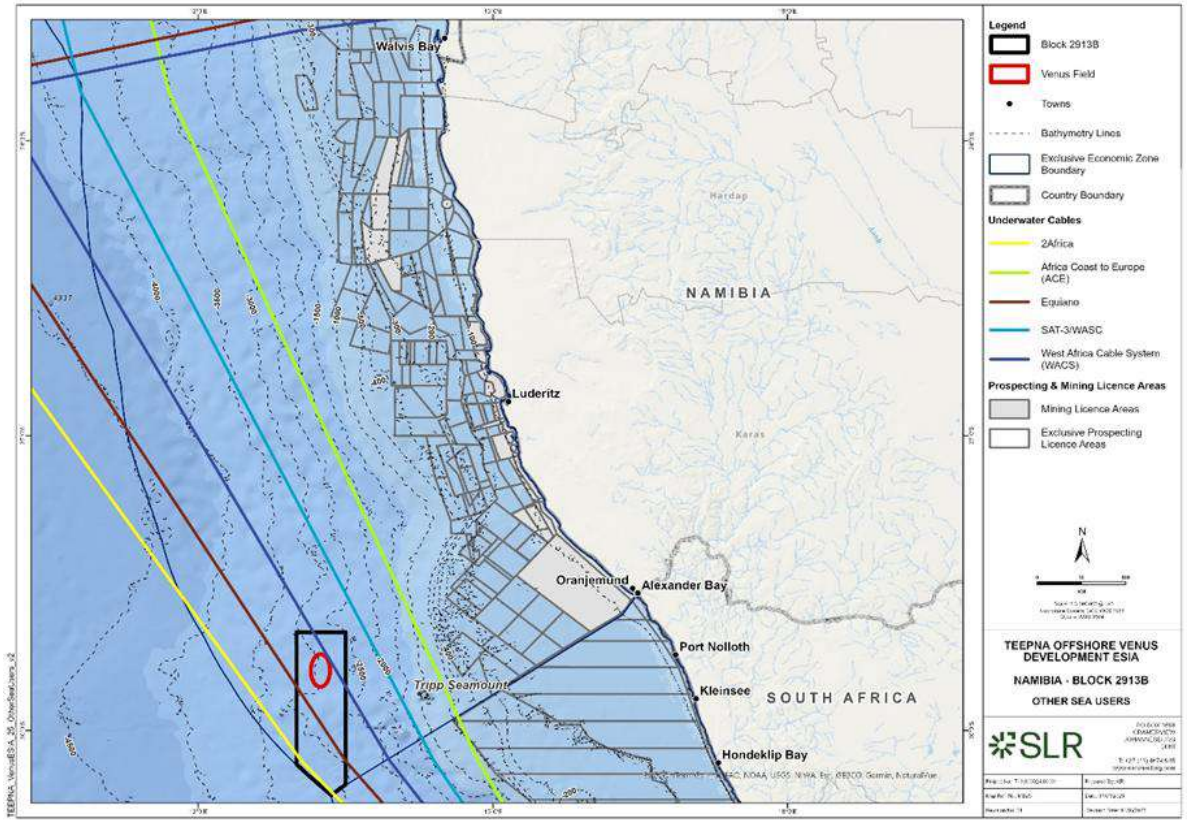


Figure 2-6: Venus offshore project area (red ellipse) within PEL0056/Block 2913B (black polygon) in relation to active marine diamond mining concessions and Exclusive Prospecting Mining Licences and telecommunications cables.

Nearshore Transshipment Area:

- The nearshore transshipment area lies to the south of the Equiano and WACS subsea cables, with the proposed location not impacting any subsea telecommunication cables (Figure 2-7).

3.4 Marine traffic

Venus Offshore Project Area:

- The Venus offshore project area lies within a medium to high intensity vessel route that passes around southern Africa (Figure 2-8).

Nearshore Transshipment Area:

- The nearshore transshipment area lies within a high intensity vessel route, being located near the entrance to the Walvis Bay Port (Figure 2-8). High levels of marine vessel traffic, related to passenger, shipping (import and/or export) and fisheries operations, is expected within the vicinity of the nearshore transshipment area.

Aspect	Key characteristics and sensitivities

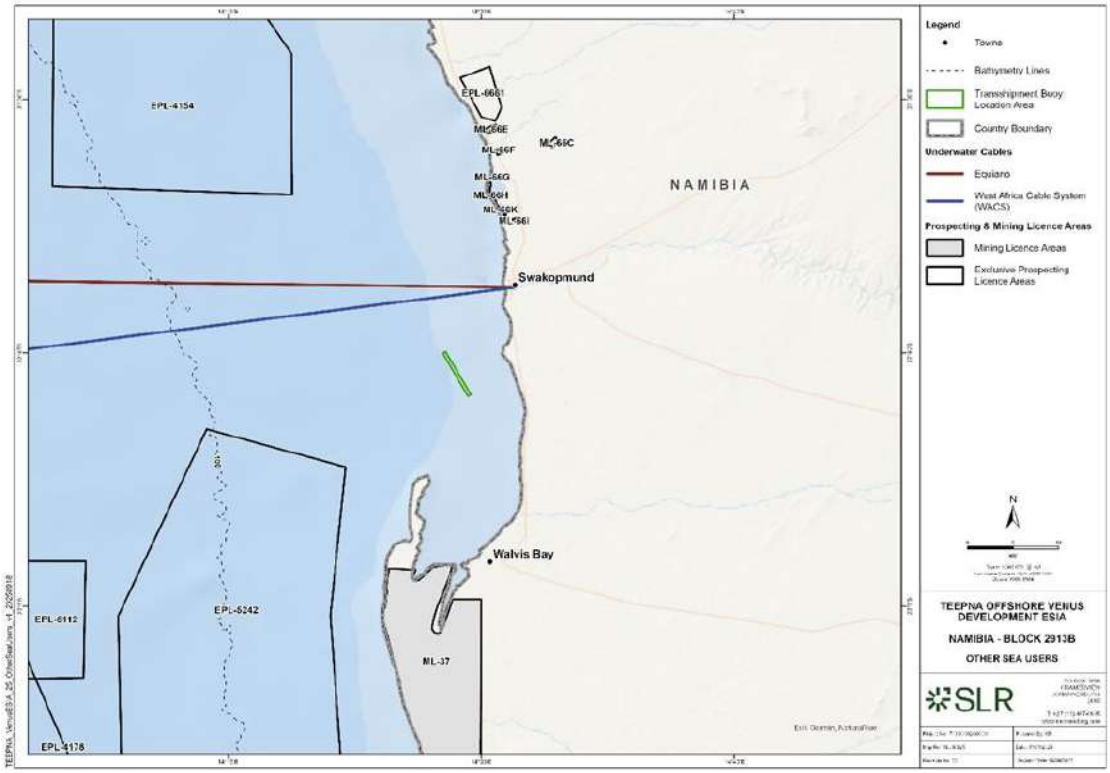


Figure 2-7: The nearshore transshipment area in relation to active marine diamond mining concessions and Exclusive Prospecting Mining Licences and telecommunications cables.

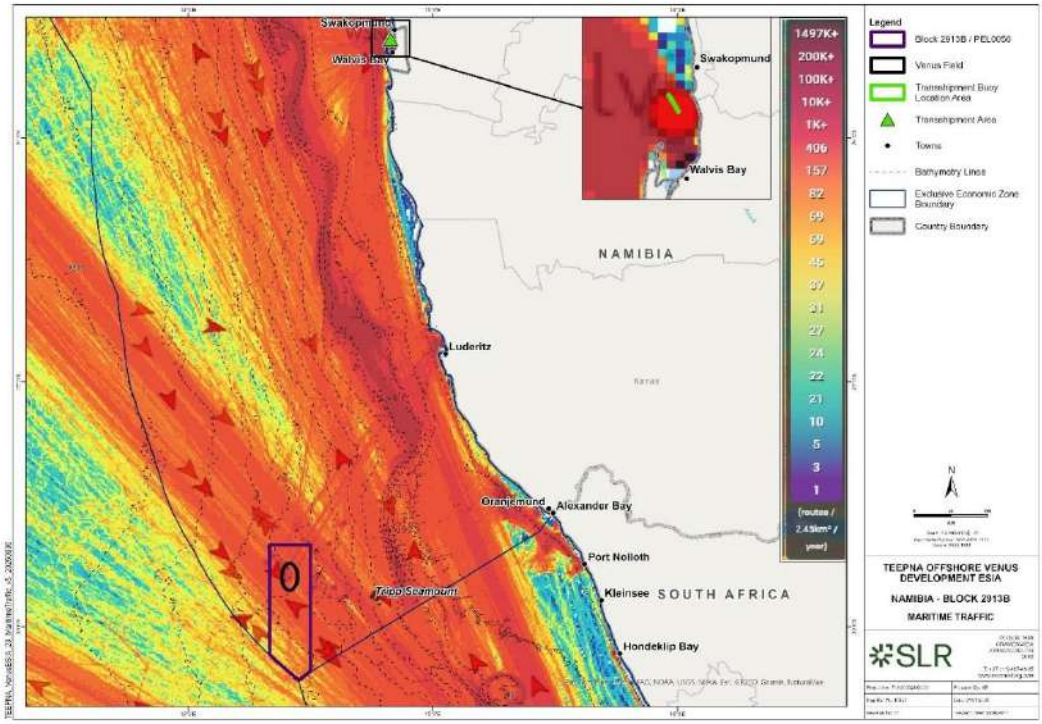


Figure 2-8: PEL0056/Block 2913B (purple polygon), Venus offshore project area (red ellipse) and nearshore transshipment area (green triangle) in relation to EBSAs and the Ecological Support Areas.

Aspect	Key characteristics and sensitivities
3.5 Heritage	
General: • Namibia has a rich tangible and intangible cultural heritages, which are located in the natural and desert landscapes of the country, as well as the languages, rituals and beliefs of the people. • Tangible heritage includes proclaimed national heritage sites such as colonial-era buildings, and archaeological sites. No tangible heritage sites fall within the project's Area of Influence and are unlikely to be impacted by the project's normal (i.e. planned) operations. • Intangible heritage encompasses diverse cultural practices among Indigenous groups such as the San, Nama, Topnaar, Ovahimba and Hai//om. These include rituals tied to nature and traditional healing practices. In addition, SSF communities are found to have cultural ties to the sea. Venus Offshore Project Area: • No wrecks are known to occur in PEL0056/Block 2913B based on available information and from environmental and geophysical surveys undertaken within the PEL0056/Block 2913B. Thus, it is unlikely that any shipwrecks will be identified in the Venus offshore project area. Nearshore Transshipment Area: • No wrecks are known or have been reported within the nearshore transshipment area. The possibility of identifying new wrecks during the installation of the nearshore buoy is of very low probability.	

3.0 Supporting Documentation / Actions

TEEPNA, as the Operator, has an internal Health, Safety and Environment Management System (HSE-MS) in place that contributes to managing the Health, Safety and Environment (HSE) risks of its activities. It encompasses the organisational structure, planning of activities, responsibilities, and practices, processes, procedures and resources utilised in maintaining conformance with the Operator's HSE policy and achieving continuous HSE performance improvement.

This section lists the plans / documents / actions that form part of the overall HSE-MS and will be prepared by the Operator and/or its contractors in addition to the ESMP, but only prior to the respective drilling, installation, production and decommissioning activities being undertaken.

3.1 Project Design

The Operator will develop and finalise the project design, including design of the proposed wells (20 Oil Producer wells and 20 Gas Injector wells), subsea infrastructure, FPSO according to applicable policies, procedures, standards and guidelines, prior to performing the activities.

The final project details will be presented to the Ministry of Industries, Mines and Energy (MIME) as part of the development plan.

3.2 Project HSE Plan

The Operator will prepare a project HSE Plan, which deals with HSE aspects specific to the project, e.g., operation specificities, project ESIA main outcomes, specific Emergency Response Plan (ERP), waste management, planning, organogram, social performance, Marine Mammal Observer (MMO) and Passive Acoustic Monitoring (PAM) scope, etc.

It will also detail the specificities and equipment related to the operations and associated environmental, socio-economic and health aspects, as well as the organisation supporting the project (objectives, resources, documentation, risk management and control, etc.). Part of this document are the aspects related to the management of air emissions, discharges to the sea, waste, spill and related logbooks.

All staff, contractors and sub-contractors are required to comply with this document when working on the project.

3.3 HSE-MS Bridging Document

The Operator will prepare a Bridging Document with its contractors, who will in turn have contractual agreements with their sub-contractors. These HSE-MS Bridging Documents will address specific organisational, procedural and emergency response arrangements between the Operator and its contractors for all project phases.

3.4 Contractor Induction, Kick-off Meetings and Crew Awareness

Part of the objectives of the Induction and Kick-Off Meetings to be held during drilling, installation, production and decommissioning is to introduce the teams, understand the project background, the key environmental and social sensitivities, what needs to be undertaken to mitigate risks and impacts, and also agree on how the work should be undertaken to ensure efficiency and effectiveness.

Prior to the start of operations, the Operator and/or contractor will present an HSE awareness introduction training to ensure the project personnel (including drilling unit,

FPSO, support and transshipment vessels, etc. where applicable) are appropriately informed of the purpose and requirements of the overall HSE-MS, including emergency procedures, spill management, etc., as well as the specificities of the project.

3.5 Plans and Procedures

As noted above, this ESMP will form part of the Operator's overall HSE-MS. It will include at least the documents listed below and will include all of the project controls and mitigation measures detailed in the Commitments Registers (see Section 10.0).

3.5.1 Shipboard Oil Pollution Emergency Plan

Before mobilisation to site, all vessel contractors will submit for approval to the Operator and MIME a Shipboard Oil Pollution Emergency Plan (SOPEP) and procedures to be implemented in the event of an accidental spill of oil (or other polluting substances) at sea.

This plan will notably require:

- The implementation of measures to immediately stop the spill (sealing the leak, repairing leaking tanks, etc.).
- Recovery of spilled fluids.
- The notification of the Operator and the Namibian authorities on the spill.
- The implementation of external response measures in the event of a large spill.

Any oil or chemical spills in water must be reported immediately to the Operator and regular updates must be sent during pollution clean-up operations.

The SOPEP will include procedures in line with international good practice for the accidental release of chemicals and fuels during appraisal activities. The plan will include the following:

- Definition of roles and responsibilities.
- Identification of potential sources of accidental pollution (storage, use, etc.).
- Definition of design standards adopted to ensure the integrity and reliability of the equipment.
- Description of the security systems in place to prevent pollution.
- Inspection reports for the proper maintenance of safety equipment and systems.
- Procedures for handling chemicals and fuels to reduce the risk of accidental pollution (also refer to Section 3.5.7 for the Chemical Management Plan).
- An action plan with instructions for the oil pollution prevention team. This is a list of duties the crew members have to fulfil in case of a spill.

3.5.2 Emergency Response Plan

The Operator holds the overarching Emergency Response Plan (ERP) and any gaps with the contractor ERP (site specific) are addressed in a bridging document (see Section 3.3). The ERP will establish the procedures for addressing potential emergency situations (e.g., fuel / oil spill, injury, damage to or loss of company / private property or equipment, etc.) that could occur during the project at the various project sites. The ERP addresses these situations and provides information and direction for addressing the situation as quickly as possible.

The ERP will classify emergencies into severity levels and include emergency procedures that address the potential degrees of impact / risk relating to various scenarios (including well control incident, oil / chemical spill, explosion / fire, helicopter incident, vessel incident,

man overboard / missing person, medical emergency, loss of office service and road transport incident):

- A low-level emergency (accident or incident) is one that can be handled at the site and involves no serious human injuries, no disruptions of operations and no publicity. There are no national or international implications.
- A moderate-level emergency (emergency) may involve a single serious injury, temporary disruption of operations, some publicity or the likelihood thereof, with possible implications at the national level.
- A high-level emergency (crisis) would involve one or more fatalities or multiple serious injuries, sustained disruption of operations, significant publicity or the certainty thereof, plus implications at the national and possibly international level. There might be a potential threat to the viability of a company.

3.5.3 Blow-Out Contingency Plan

A Blow-Out Contingency Plan (BOCP) is required prior to drilling operations. The BOCP focuses on well control operations and will set out the detailed response plan and intervention strategy to be implemented in the event of a blow-out. It ensures response times are minimised and that the most efficient and effective contingency measures are implemented.

Since potential blow-outs and subsequent intervention techniques may be inherently different, it is impractical to cover all possibilities in a general contingency document. However, for rapid response, a structured organisational and technical guideline, with examples and trigger mechanisms, is essential. These will be detailed in the BOCP, which is an internal document.

3.5.4 Oil Spill Contingency Plan

The Operator is committed to manage operational risks and develop tools, systems and safety culture to prevent the occurrence of major incidents, in particular accidental spills of liquid hydrocarbons in the environment. Nevertheless, whatever the residual probability of such an incident, the Operator implements systematically, for all its operations, a level of preparedness and response to incidents adapted to the specific environmental and socio-economic environment, through an HSE management system, which includes oil spill contingency planning.

Oil spill preparedness and response aims at reducing to a minimum the impact of accidental spills to the environment, and the time for polluted sites to recover. In that sense, an appropriate level of preparedness ensures that:

1. Response capability is fit for purpose;
2. Performance levels are set to promote effective preparedness;
3. Response capability is built to be adaptable;
4. Roles and responsibilities are clearly stated;
5. Levels of response are scalable; and
6. Response capability is sustainable.

The Operator is committed to follow applicable international and national regulatory guides and standards, as well as internal policies and procedures, relevant for oil spill preparedness and response.

The OSCP, complementary to the ERP (see Section 3.5.2), will be updated for drilling, installation, production and decommissioning activities, both offshore and nearshore. The

OSCP is the internal operational document prepared accordingly through a structured process and aligned with applicable requirements of local and national regulations, international conventions, guidelines related to oil spill preparedness and response, and Operator's internal reference document.

The primary objective of the OSCP is to enable an effective response and mitigation of the consequences of an accidental release. It identifies important issues to be addressed at an organisational and operational level, and it supports decision-making to ensure the best response is implemented in regard to the context of the spill (cause, nature, magnitude) and the types of environment to protect from potential impacts. The document takes into account the international Tiered approach for oil spill evaluation (refer to Box 3-1) and will provide for the following:

- Identify and analyse the different probable spill scenarios and their consequences.
- Establish response strategies which correspond to the scenarios defined.
- Define the specific roles and structure of the personnel involved in the oil spill response.
- Define the measures to be taken immediately following a spill.
- List the specific duties and responsibilities for spill response of each key player involved in the management of this type of incident.
- Provide an inventory of the response resources and equipment that can be mobilised (internally or externally) for the implementation of operations in the field in accordance with the strategies defined.
- Facilitate exchanges at the site/headquarters/authorities interfaces.
- Provide or refer to technical documents, information and data liable to facilitate response or organisation of response, at any technical or organisational level.

Thus, prior to drilling, a response strategy and plans (incl. OSCP and BOCP), aligned with the National OSCP, will be developed that identifies the resources and response required to minimise the risk and impact of oiling (shoreline and offshore). This response strategy and associated plans will take cognisance to the local oceanographic and meteorological seasonal conditions, local environmental receptors and local spill response resources. The development of the site-specific response strategy and plans will include the following:

- Assessment of onshore and offshore response resources (equipment and people) and capabilities for the duration of drilling and production operations, location of such resources (in-country or international), and associated mobilisation / response timeframes.
- Selection of response strategies that reduce the mobilisation / response timeframes as far as is practicable. Use the best combination of local and international resources to facilitate the fastest response.
- Update oil spill modelling should be any significant changes to the input data and well architecture to guide the final response strategy.
- Develop an oiled wildlife response plan developed in collaboration with specialist wildlife response organisations with experience in oiled wildlife response. The plans should include detailed protocols on the collection, handling and transport of oiled marine fauna.

The OSCP will be periodically tested to ensure an effective and co-ordinated response to oil spill situations. Then, if necessary, the OSCP will be adjusted to enable a continuous improvement cycle.

Box 3-1: Tiered Preparedness and Response

Oil spill response planning is based on the principle of a tiered response. Tiered Preparedness and Response give a structured approach to both establishing oil spill preparedness and undertaking a response. It allows potential oil spill incidents to be categorised in terms of their potential severity and the capabilities that need to be in place to respond (IPIECA, 2007). Conventionally the concept has been considered as a function of size and location of a potential oil spill, with three tiers typically defined (see table below). Tier 1 being the lowest category of response and Tier 3 being the highest category requiring response from international resources.

Tier 1	Minor spills that are quickly controlled, contained and cleaned up using local (onsite or immediately available) resources (personnel and equipment) at an affiliate level. For offshore facilities, local resources could include those at the facility, or nearby support vessels or at a designated shore support base or staging area.
Tier 2	Tier 2 events, most likely extending outside the remit of the Tier 1 response area, are more diverse in their scale and by their nature involve potentially a broader range of impacts and stakeholders. They require an increased response capacity or application of more specialist technical expertise, through the mobilisation of regional resources (local contractors and/or mutual aid agreements with industrials) in addition to the affiliate's resources.
Tier 3	Major spills with likelihood to cause major consequences, requiring mobilising international assistance. The Operator has developed framework contracts with Oil Spill Response Organisations to ensure availability of these resources worldwide.

3.5.4.1 Spill Contingency Planning Process Overview

To achieve the objective of developing an effective response, oil spill contingency planning is based on international best practices (e.g. IPIECA Oil Spill Preparedness and Response Good Practice Guidance) and a structured process (see Figure 3-1), resulting in an OSCP.

The main steps are listed below:

- **Step 1:** Once the operations are defined, the international and national regulatory framework and environmental/societal context are analysed to carefully define the requirements and expectations to be met, during the preparation and in case of a spill.
- **Step 2:** All oil spill scenarios are identified and analysed, together with their consequences and classified following the international tiered approach (Box 3-1). The OSCP will thus take cognisance of the oil spill modelling results, which are summarised in Appendix A for ease of reference.
- **Steps 3-8:** For each representative scenario, a response strategy is developed, appropriate tiered response resources are determined for an effective, proportionate and sustainable response and a functional incident management organisation is set up to implement the response, to operate effectively at all tier levels, with clear roles and responsibilities for each party involved.
- **Step 9:** OSCP is developed.
- **Step 10:** Personnel are trained, and the OSCP is tested through drills/exercises to verify the adequacy and effectiveness of the preparation.
- **Step 11:** As operations evolve and/or exercises show a need for, the OSCP is updated.

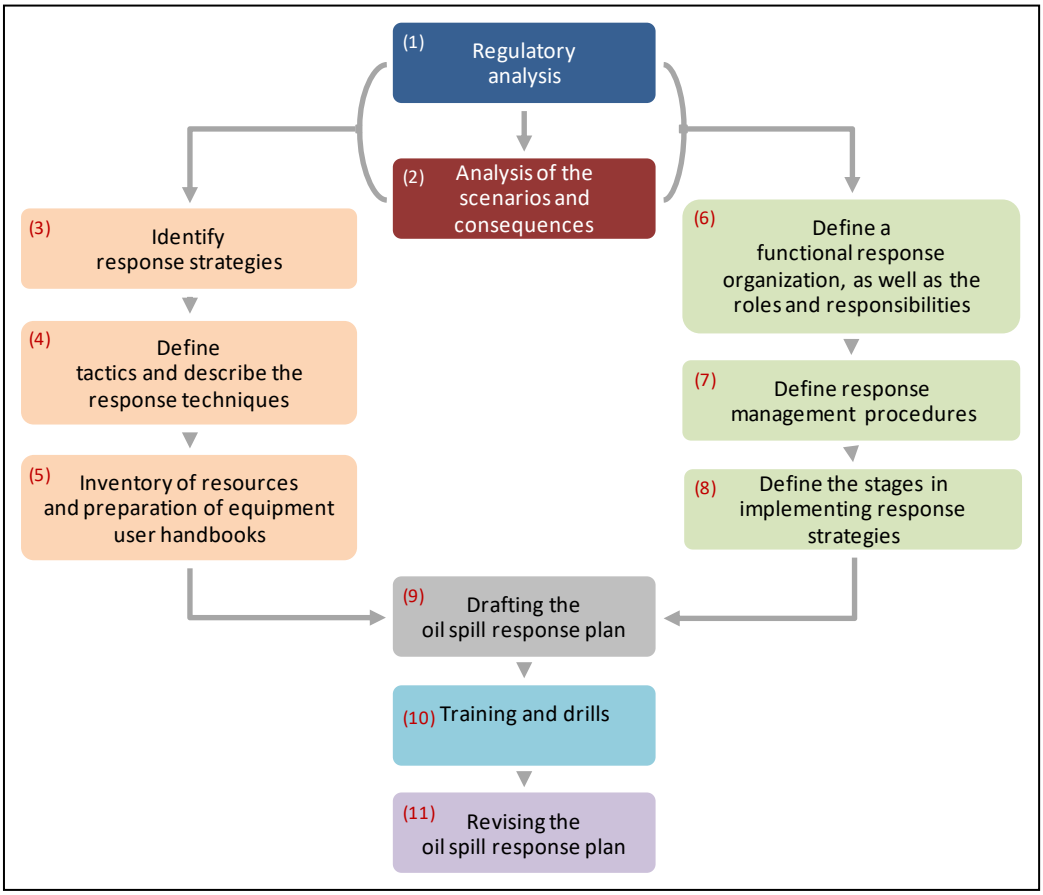


Figure 3-1: Spill Contingency Planning Process Overview

3.5.4.2 Structure of a standard OSCP

The structure of a standard OSCP is outlined in Box 3-2 below.

Box 3-2: Structure of a Standard Oil Spill Contingency Plan

Introduction

The introduction provides the overview and structure of the OSCP, including:

- the generic elements of any emergency document, confirming that the plan is approved and up to date, as well as a circulation list;
- the scope of application and list of previous versions of the oil spill response plan;
- the reference documents related to the oil spill response plan;
- information situating the plan in the more general context of the response, emphasising the priorities concerning the safety and security of the personnel; and
- the instructions for use to ensure that the plan is easy to use, specifying the scope of each volume and the operational supports, as well as the personnel concerned.

Volume 1: Action Plan (Operational Document)

Volume 1 is comprised of several sections, including Action Plan for Incident Management Team, Action Plans (as necessary) for Advanced Command Posts (sites) and Operational Support documents. It is the operational part of the plan, used during the emergency, and describes:

- "Who does what, What exactly to do": through the Action Plans,
- "How to do it, with Which means": through the Operational Supports.

Box 3-2 cont.

Volume 1.1: Action Plan for staff at the Incident Command Post (ICP) at Operator headquarters, Namibia

The objective of Volume 1.1 is to set up the initial actions and management of the incident. It helps the ICP staff to:

- Understand the responsibilities of the affiliate and national and local authorities.
- Rank the event according to the tiered approach for oil spill evaluation (Tiers 1 - 3).
- Set up a functional organisation according to the extent of the spill.
- Understand their roles and responsibilities and complete their tasks throughout all the response phases.
- Define the response strategies to be implemented in regards to the extent and type of spill, on the basis of representative scenarios and/or strategic decision trees and predefined actions.
- Manage the response stages via procedures associated with forms and template documents (immediate actions, alert, internal and external mobilisation, preparing a response action plan, internal and external communication, managing the end of response operations, etc.).

Volume 1.2: Action Plans intended for staff in the Advanced Command Post (ACP) on the operational site, e.g. drilling unit, FPSO, etc.

Volume 1.2 has the same objectives as Volume 1.1, but scaled for the ACP on the operational site.

Operational supports

They consist of a series of documents designed to assist the tasks of personnel involved in ICP and in the ACP. The list of Operational Supports for a standard OSCP is presented below.

Operational Support N°1: Description of the Project and Facilities
Description of the operations: characteristics of installations, location maps, logistics support and distance between main facilities.
Operational Support N°2: Characteristics of Oil and Hydrocarbon Products
Physico-chemical characteristics of hydrocarbon products which could be involved in an oil spill.
Operational Support N°3: Fate & Behaviour of Oil at Sea
Assessment of the likely behaviour of hydrocarbon products if spilled at sea. Principles of movements of oil. MetOcean Data – Results of modelling studies.
Operational Support N°4: Material Safety Data Sheets (MSDS)
Material Safety Data Sheets of hydrocarbon products which could be spilled.
Operational Support N°5: IMT Coordination for Offshore Monitoring and Response Strategies
Offshore response options: monitoring, containment and recovery, mechanical dispersion, chemical dispersion
Operational Support N°6: Onsite Coordination of Offshore Spill Response Tactics
Offshore response operations: safety procedures, setup, management and termination.
Operational Support N°7: IMT Coordination for Shoreline Survey and Response Strategies
Port response options: Containment and recovery at the quayside, protection and clean-up. Shoreline response options: shoreline surveys, containment and recovery in the coastal area, shoreline clean-up operations, management of oily wastes collected.
Operational Support N°8: Onsite Coordination of Shoreline Response Tactics
• Shoreline response operations: safety procedures, setup, management and termination. • Shoreline protection. • Oiled shoreline survey (Shoreline Cleanup Assessment Technique, SCAT). • Shoreline clean-up. • Waste management: technical recommendations.

Box 3-2 cont.

Operational Support N°9: Use of Offshore Monitoring, Response Tools and Equipment
Practical guidelines for monitoring and deployment of oil spill resources offshore. Use of tools to assist in the management of the response, including guidelines for the use of GPS, digital camera and dedicated software for documenting and reporting on aerial surveillance, the launching of drifter buoys, the use of dedicated oil spill response software for calculating the trajectories of oil slicks and quantifying oil on the water.
Operational Support N°10: Emergency Directory
Lists of emergency contacts for oil spills.
Operational Support N°11: Inventory of Oil Spill Response Resources
• Resources available on site. • Resources existing in Namibia (additional Operator equipment, other operators, national resources, oil spill contractors). • Resources which Operator could mobilise from outside Namibia.
Operational Support N°12: Forms
Forms which might be needed during an incident, e.g., Notification, mobilisation of resources, etc.
Operational Support N°13: Oiled Wildlife Response
Reference to the arrangements in place in Namibia.
Operational Support N°14: Sensitivity Mapping
Sensitivity maps showing sensitivities on the shoreline and in coastal area.

Volume 2: General context and OSCP management (non-operational document)

This volume details the elements of the plan relied on to guarantee it is compliant with internal and external requirements, to build the strategies and resources to be deployed, and how the preparedness planning is managed:

- Integration of the constraints imposed by the local regulatory framework, in terms of responsibilities of the various stakeholders in oil spill preparedness and response and the technical arrangements for the response (conditions for using specific techniques, such as dispersion or burning, managing waste generated by the clean-up, etc.).
- Justification of the strategic choices (overall strategy of the affiliate and response strategies adapted to the scenarios that have been identified) and access to response means. This rationale is important in relations with the local authorities, but also to retain a memory in the affiliate.
- Proof that the response strategies and means (particular for Tier 1) were identified and sized on the basis of a logical approach, taking into account the regulatory and environmental context, scenario analyses, and a history of previous oil spills.
- Demonstration that the plan is compliant with national legislation and Operator reference documents for crisis management procedures, training programmes and drills and updating the response plan.
- Providing of the references of useful reference works, guides and websites for preparing and implementing an oil spill response.

3.5.5 Stakeholder Engagement Plan

3.5.5.1 Objectives

The Stakeholder Engagement Plan (SEP) will provide the framework to ensure continued effective engagement with internal and external stakeholders during all project phases. It will detail the planning for information disclosure, stakeholder engagements and dealing with expectations / grievances. It will ensure that the relevant stakeholders are notified timeously and kept informed about project activities, progress and environmental and social performance with information that is accurate and transparent throughout the project lifecycle. The plan will provide for stakeholder concerns and grievances to be responded to in an efficient and coordinated manner.

This plan will set out the specific measures, and frequency thereof, to be taken to ensure the project is communicated to stakeholders, to minimise the potential negative impacts of the project on human and socio-economic receptors and enhance potential positive impacts, specifically:

- A public information and disclosure programme covering all JV activities and phases to ensure that the public are informed of the project activities (including offshore, nearshore and onshore activities) will commence after undertaking the following activities:
    - Understand the consultation environment, identify and map stakeholder groups, relationships and vulnerabilities.
    - Validate stakeholder analysis with the stakeholders and explore the most appropriate ways in which the Operator can ensure effective operational communication with its stakeholders.
    - Explore existing communication structures and channels within Walvis Bay and Lüderitz and assess its effectiveness (e.g. notices boards, announcements, WhatsApp groups, etc.).
    - Formulate alternative methods and structures to ensure effective long-term communication in each of these areas with all stakeholder groups.
- Discuss potential cultural heritage and human rights impacts and mitigation thereof.
    - Determine the form and extent of engagement necessary to mitigate potential impacts on cultural heritage arising from normal operations.
    - Regularly and formally engage external stakeholders in relation to human rights risk assessments, performance and identification and assessment of risks.
- Management of community expectations related to local procurement and content (Section 3.5.12) and local employment opportunities (Section 3.5.13).
- Provide an indication of the communication material that must be prepared and how minutes of meetings and data from engagements will be recorded and distributed.
- Establishment of a functional grievance mechanism that allows stakeholders to lodge specific grievances related to the operation.

The aim of such engagement is to ensure open, direct and consistent communication with stakeholders that may be affected by operations.

3.5.5.2 Stakeholder Database

A stakeholder database will be developed and maintained. This database will be developed, via a stakeholder mapping process, which will identify, analyse and categorise individuals, groups and organisations that have an interest or influence the project. At minimum, the database will contain the contact details of:

- All I&APs included on the ESIA stakeholder database. However, initial communication will request confirmation if they want to remain on the database. Any person wanting to be removed from the project database or not confirming to remain will be removed.
- All organs of state which have jurisdiction in respect of the project.
- Key stakeholders identified during in the Fisheries Impact Assessment, include Confederation of Namibian Fishing Association, Large Pelagic and Hake Longlining Association, Namibian Large Pelagic Association, Namibian Hake Association, Namibian Deep Water Trawling Association, Walvis Bay Pelagic Fishing Association,

Directorate of Maritime Affairs, Ministry of Works and Transport, South African Navy Hydrographic Office (SANHO), Namibian Ports Authority (NamPort), Department of Maritime Affairs and the Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLR) Monitoring, Control and Surveillance Unit in Walvis Bay (Vessel Monitoring System in particular).

- Key stakeholders identified during in the Cultural Heritage and Human Rights Impact Assessments, include small-scale fishers operating in the project area of influence, indigenous groups, representatives of the National Heritage Council (NHC) and MEFT, Human Rights Defenders, and other relevant stakeholders in the Lüderitz, Walvis Bay and/or Swakopmund towns.

As part of ongoing Project stakeholder mapping, beyond the ESIA, stakeholder vulnerability will be assessed based on exposure, sensitivity and adaptiveness to risks and incorporated into the SEP approach.

The database will be updated over time based on engagements as per SEP (attendance at meetings, requests to be registered, etc.) and customised to accurately cover the stakeholders of each activity.

All forms of correspondence between the project team and registered stakeholders will be recorded in the Stakeholder Database.

3.5.5.3 Notifications

A public information and disclosure programme will be implemented to ensure stakeholders are regularly informed of project activities. This will support ongoing engagement and assist in drawing out any ongoing or new issues and concerns. Focus should be placed on the nearshore transshipment area and the onshore logistics base location(s).

Notifications will provide the details and timing of the project activities, including amongst other:

- Notification to key stakeholders three-weeks prior to mobilisation of the drilling unit, installation vessels, FPSO and nearshore transshipment operations. These stakeholders shall again be notified at the completion of drilling and installation activities, and again after decommissioning, when the drilling units and vessels (construction, installation and support) are off location.
- Notification, via a request to the Ministry of Works and Transport: Department of Maritime Affairs as well as SANHO, via navigational warnings as appropriate (e.g. via Navigational Telex (Navtext) and twice daily on Channel 16 VHF).
- Set up a Maritime Surveillance Area of 20 NM around the FPSO and, based on trajectory, notify vessels about the presence of Maritime Exclusion Area[2] and Maritime Restricted Area[3] via radio regarding the safety requirements and restricted marine area around the Venus offshore project area.
- Notifications and meetings with stakeholders, as required or scheduled as per SEP.

[2] The Maritime Exclusion Area is defined as 3 NM around the around subsea equipment and FPSO.

[3] The Maritime Restricted Area is defined as 10 NM around the FPSO (limited to area within PEL0056/Block 2913B).

3.5.5.4 Information Disclosure

Operator will disclose project information[4] containing all the relevant facts in a truthful and transparent manner. Local partners (e.g. national, regional or local authorities) could be used, where possible, for information dissemination through their regular outreach and information sharing sessions throughout the country.

Through the disclosure, relevant information or documentation will be broadly available to stakeholders, including people with limited access to technology, education, or resources. Subject to existing communication structures and channels, this may include:

- Placing hardcopies of relevant documents at public venues at beneficiary communities.
- Placing hardcopies of relevant documents at municipal offices.
- Main documents will be prepared in English (as the official language).
- Translation of key documents to other languages where required.
- Meetings with stakeholders, as required.
- Monitoring of and engaging with other vessels.

3.5.5.5 Concerns and Grievances Management

TotalEnergies adheres to the United Nation Guiding Principles (UNGP) on Business and Human Rights and is, therefore, committed to ensure all its stakeholders have access to an effective Grievance Mechanism. The UNGP give a framework for companies to respect Human Rights through two main principles: (1) avoid causing or contributing to adverse Human Rights impacts through their own activities (directly or through their contractors) and in case of adverse impacts, (2) provide remediation through a Grievance Mechanism at operational level.

Thus, outside the ESIA public participation process, the Operator will put in place prior to its operations a grievance procedure detailing how to manage stakeholder grievances related to negative or perceived negative impacts caused by project related activities.

In compliance with international standards, this procedure will protect the complainant's rights to access to information, access to the grievance procedure, and the right to have one's confidentiality and/or anonymity protected, if requested.

This grievance procedure will be promoted among external stakeholders through different possible access points and communication means (e.g. Operator's grievance administrator, phone number, web page, email, complaint boxes, posters and leaflets, etc.).

The key steps of the process consist of:

- Receiving and registering the grievance;
- Acknowledgement of the grievance received and informing stakeholders about the follow-up actions;
- Assessing and investigating the grievance;
- Proposing a solution;

[4] Where information is deemed to be sensitive or private in nature, Operator may elect not release this information. Nevertheless, sufficient information will be provided for stakeholders to become aware and understand the components of the exploration so as to make informed comments and representations.

- Implementing the solution when the solution is accepted by the complainant and in line with good practice and industry standards;
- Incorporate an appeals provision for overdue or complex complaints that cannot be resolved per regular process; and
- Closing-out the grievance when no further action is required.

After a solution is proposed to the complainant, different levels of resolution are possible, depending on the acceptance of the solution by the complainant, until a final solution is satisfactory and accepted. The Operator will identify roles and responsibilities to support the resolution process internally and may include an appeals committee consisting of company representatives and external stakeholders, or the use of a neutral third-party mediator in the event that the complainant is not satisfied with the solution provided.

The Operator will ensure the complainant is informed and involved all along the resolution process.

All grievances will be documented to ensure they are handled properly and within the timeframe described in the procedure. It must also reflect that UN Guiding Principles on Business and Human Rights have adhered to in the process.

3.5.6 Waste Management Plan

3.5.6.1 Objectives

The Waste Management Plan will provide the waste management solutions / options for each of the waste types identified in the waste inventory through an analysis of the best available options / good international industry practice (GIIP) for improving waste management for the waste types generated, including any discharges (e.g. drilling discharges, produced water, etc.). It also establishes procedures for the storage, collection, management, and disposal of waste, including air emissions, liquid and solid waste (hazardous and non-hazardous wastes). Certain waste will be treated and disposed of offshore, while other waste will be transported ashore. The plan will, therefore, describe the procedures to be followed to ensure the treatment, transfer and/or disposal of waste both offshore and onshore.

3.5.6.2 Waste Management Principles

Waste management during the drilling, installation and production will be planned in accordance with the waste prevention and management principles described in Table 3-1.

Table 3-1: Waste Prevention and Management Principles

Principle	Rules to be implemented
Waste identification and classification	• Systematically assess and categorise waste types (e.g., drilling muds, produced water, chemical residues, sludges, etc.). • Identify hazardous verses non-hazardous waste.
Minimisation of waste generated	• In the project procurement policy, select the equipment and supplies that generate the least waste (by minimising packaging). • Select the equipment and supplies that generate the least hazardous waste.
Storage security	• Handle and store waste according to its nature and its risk class, in compliance with hygiene and safety rules. • Use appropriate containers and labelling to ensure safe handling and storage. • Define a waste storage area(s) on the drilling unit, FPSO and project vessels. • Store compatible waste together to avoid cross-contamination.

Principle	Rules to be implemented
	• Store any hazardous waste separately, on retention. The area will be adequately ventilated if the waste is flammable. • Control access to waste storage areas. • Ensure waste storage areas will be kept in good order and clean.
Waste management hierarchy	Manage waste by applying the following order of priority: • Avoid generating waste. • Minimise the generation of waste. • Reuse waste (especially for reusable non-hazardous waste). • Recycle waste. • Onboard treatment and incineration (when relevant and authorised). • Dispose of waste in compliance with applicable regulations and rules of good practice.
Recording and monitoring of waste generated	• Record waste generated in a register in order to identify the nature and quantity of the waste generated, ensure its traceability from generation to final disposal, and identify, if possible, the types of waste that can be avoided. This register will include monitoring of waste evacuated ashore and their disposal, specifying the providers mandated for their management, the disposal method agreed. The transfer and waste disposal forms will be kept for traceability. • Use licensed transporters and maintain documentation for all waste movements. • Monitor environmental impacts and adjust practices as needed.
Staff training	Ensure the workforce is trained: • Waste management. • Protection of the environment and the impacts associated with poor waste management, and how to avoid these impacts. • To promote the reuse and recycling of waste. • Treatment waste in accordance with the management plan by type and risk class. • Adopting the necessary safety measures when handling hazardous waste. • Maintaining traceability records.
Compliance and continuous improvement	• Align with local regulations and international standards. • Regularly review and improve waste management systems. • Regularly audit and update waste management systems to incorporate new technologies and lessons learned.

3.5.6.3 Compliance with International Conventions

The drilling units, FPSO and all other project vessels will have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with the International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL). MARPOL 73/78 was developed by the International Maritime Organisation (IMO) with an objective to minimise pollution of the oceans and seas, including dumping, oil and air pollution. MARPOL has six technical annexures:

- Annex I – Oil Pollution:
  - Regulates discharge of oil and oily water.
  - Requires oil tankers to have double hulls.
  - Mandates oil discharge monitoring and control systems.
- Annex II – Noxious Liquid Substances in Bulk:

- Covers pollution from chemicals transported in bulk.
- Sets discharge criteria and requires reception facilities at ports.

- Annex III – Harmful Substances in Packaged Form:
  - Regulates packaging, labelling, and documentation of harmful substances.
- Annex IV – Sewage:
  - Controls discharge of sewage from ships.
  - Requires treatment systems or holding tanks.
- Annex V – Garbage:
  - Prohibits discharge of plastics and regulates other types of garbage.
  - Requires garbage management plans and record-keeping.
- Annex VI – Air Pollution:
  - Limits emissions of sulfur oxides (SOx), nitrogen oxides (NOx) and particulate matter.

Specific MARPOL requirements are included in the detailed Environmental and Social Mitigation Management Commitment Register (see Section10.0).

3.5.6.4 Management of Discharges

The Waste Management Plan will also provide for the management of discharges linked to activities. The plan will include procedures that comply with national regulations and international good practice guides. The plan will include the following:

- Identification and characterisation of discharges and emissions.
- Definition of qualitative and quantitative treatment objectives for discharges and emissions.
- Setting of Key Performance Indicators (KPIs) for waste management (increase recycling and treatment, decrease landfilling, etc.).
- Definition of responsibilities for the measurement, recording and reporting of discharge / emission characteristics.
- Definition of resources, tools and methods to be used to measure, record and report discharges and emissions.
- Definition of the means (equipment and procedures) used to treat these discharges and emissions in accordance with the defined limits.

3.5.6.5 Monitoring Requirements

Monitoring requirements are presented in Section 6.1.

Furthermore, a monitoring programme will be established in alignment with the IFC's EHS guidelines for the oil and gas industry regarding waste monitoring and reporting. This monitoring programme will be detailed in the Waste Management Plan.

3.5.7 Chemical Management Plan

A Chemical Management Plan will describe how hazardous products and chemicals will be managed and the measures to minimise potential pollution. The purpose of this plan is to safeguard the health of personnel and to preserve the environment around the project infrastructure and the logistics base. The plan will be applied to all phases of the project and

will include all hazardous products used during the project, including drilling fluids, cement, etc. The Chemical Management Plan is based on the principles of life cycle assessment. A standard plan will include:

- Inventory of hazardous and chemical products (identification, classification, quantification and method of delivery).
- Product properties (dangerousness, toxicity, health and safety recommendations) based on product safety sheets (Safety data sheets, eco-toxicological data).
- Evaluation of the use of alternative products.
- Storage and handling procedures including personal protective equipment for personnel.
- Emergency procedures.
- Evaluation of recycling possibilities.
- Disposal procedures for unused products (return to the supplier for example).

3.5.8 Preventive Maintenance Plan

A Preventive Maintenance Plan will be available on board the drilling units, FPSO and all other project vessels in order to minimise the risk of mechanical failure likely to lead to reduced efficiency (e.g., sewage treatment plan, incinerator, macerator/grinder, oil/water separator, etc.) and other unplanned events (e.g., oil leaks or diesel spills). Control and maintenance procedures will be implemented at regular intervals by the various service providers.

This plan will provide for the implementation of leak detection and maintenance programmes for:

- Valves, flanges, fittings, seals, hydraulic systems, hoses, etc.;
- All diesel motors and generators receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere; and
- Waste treatment facilities, e.g., sewage treatment plan, incinerator, macerator/grinder, onboard oil/water separator, ballast water treatment systems, etc.

This plan will also detail the procedure to follow if certain facilities (e.g., oil/water separator) are not available due to maintenance or overload.

This plan will also ensure that all equipment (e.g., wellheads, BOPs, etc.) that has been used in other regions is thoroughly cleaned prior to deployment.

3.5.9 Ballast Water Management Plan

Ballast water discharge will follow the requirements of the IMO 2004 International Convention for the Control and Management of Ships' Ballast Water. All ships engaged in international traffic are required to manage their ballast water to a certain standard, according to a ship-specific Ballast Water Management Plan. This plan deals with the ballast water management system on each of the project vessels, including how it operates and procedures for monitoring and reporting, including ballast logbook.

3.5.10 Biodiversity Management Plan

The Biodiversity Management Plan will detail the required mitigation, monitoring and reporting actions related to marine biodiversity as set out in the ESMP. This plan would effectively form an operational procedure to be followed by the operator and their subcontractors to ensure full compliance with the terms of the ESMP. It would likely cover

aspects such as the requirements for MMOs / PAM, ecological monitoring (benthic and water quality), wildlife observations and encounter procedures and reporting.

3.5.10.1 Objectives

The Biodiversity Management Plan will set out the specific measures to be taken to minimise the impacts of the project on marine fauna for specific activities (e.g., VSP activities). These impacts are essentially:

- The impacts linked to noise emissions in the marine environment, mainly during the operation of VSP.
- Possible impacts related to direct collisions with cetaceans or turtles.

This plan will implement the relevant mitigation measures described in the detailed Environmental and Social Mitigation Management Commitment Register (see Section10.0).

3.5.10.2 Monitoring and detection of marine fauna during VSP operations

At least two MMOs (one with PAM training) will be on board the drilling unit during VSP operations. Their function will be to identify and monitor the presence of marine fauna in the mitigation zone and to inform the contractor when measures must be taken to avoid or reduce the potential impacts on these species.

During the VSP survey, as a minimum, one MMO will be on watch during daylight hours for the pre-shoot observations and when the acoustic source is active, and one possible PAM operator (subject to a risk assessment indicating that the PAM equipment can be safely deployed considering the metocean conditions) will be on duty during daylight and night-time hours for the pre-shoot observations and when the acoustic source is active.

The roles, responsibilities and necessary qualifications/experience of the MMOs and PAM operators are defined in Sections 4.4 and 4.5, respectively.

3.5.10.3 Reporting

Once the VSP acquisition is complete, the MMOs (and possibly PAM operator) will compile a report summarising their findings and observations during the survey/acquisition, and compliance levels with achieving the performance objectives as detailed in the commitment register. This report will be included as part of the end-of operations close-out compliance report, which will be submitted to Competent Authority (MIME) and MEFT, as part of its environmental reporting requirements.

3.5.10.4 Avifauna interactions

The Biodiversity Management plan will also detail how to care for downed seabirds and ensure that personnel are adequately trained in this regard.

Ringed/banded birds discovered on drilling unit and project vessels will be reported to the appropriate ringing/banding scheme (details are provided on the ring).

3.5.11 Corrective Action Plan

Events (incidents / accident) will be investigated according to the severity, while non-compliances identified during audit findings (see Section 6.2.1) will be investigated to identify underlying causes to non-compliance situations and then rectified. Management actions will be taken to correct the underlying causes behind the audit findings and improvements will be made before another audit is conducted. This audit process allows for problems to be corrected, compliance to be improved and prevention of the same findings during subsequent audits.

Where corrective actions are deemed necessary, specific measures will be developed, with designated responsibility and timing, and implemented. In this way, continuous improvement in performance will be achieved. Corrective actions will be captured in a Corrective Action Plan, which will document the actions to correct an issue, problem, non-compliance or underperformance. It is essentially a plan to improve performance and/or reduce risk.

3.5.12 Local Content Plan

The Local Content Plan will be developed to maximise the purchase of goods and services from within Namibia. This will be contingent on whether local suppliers can offer sufficient quality and reliability and can meet project requirements. Thus, this plan will:

- Detail the categories of goods and services required in all project phases and what goods and services can be purchased from businesses registered in Namibia, with a view to maximising the value of local purchases for the benefit of the local economy.
- Provide clear guidance, requirements and monitoring mechanisms to ensure that the JV and its contractors are obliged to include local content in their tender offers and their teams.
- Include a component of capacity building where skill and experience levels of local companies are improved.
- Address opportunities for employment of people without formal qualifications, especially those from vulnerable groups and communities. This should be aligned with Namibia's National Upstream Petroleum Local Content Policy (which is currently under development).
- Analyse whether capacity in Namibia can be developed over time to maximise local purchases.
- Highlight the need for contracts to include clauses relating to human rights and the Operator's right to monitor and audit contractors and suppliers to ensure ongoing compliance oversight.

3.5.13 Labour Management Plan

A Labour Management Plan will be developed and implemented by the Operator. This Plan will incorporate measures to promote non-discrimination and equal opportunities and ensure clear, transparent and fair recruitment procedures that prioritise local workers and their employment, especially for unskilled labour. The Plan will also include the requirement that all jobs, skilled and unskilled, company or contractor, have well defined and clear job descriptions. These descriptions will include the qualification requirements and clear terms and conditions in line with national labour laws, with remuneration consistent with the level of expertise and experience.

The Labour Management Plan will include the following commitments:

- Separate procedure to ensure fair distribution of opportunities especially for semi-skilled and unskilled labour within the area of influence.
- Communication of these procedures widely with potential applicants and other affected or interested stakeholders.
- Information about the recruitment process, which will include:
  - The review of the applicants' CVs;
  - Identifying the applicants' skills, experiences and qualifications; and
  - Holding local employment events.
- Measures to ensure no payment will be needed or accepted as part of the recruitment process.

- Communication with workers about the duration of temporary employment (and the need for sound financial management for the ultimate termination of their employment).

3.5.14 Community Development Plan

A Community Development Plan will be developed based on a community needs assessment and evaluation to assess the identified community development projects and interventions based on predetermined criteria to derive realistic, beneficial and sustainable community development interventions. It serves to determine the most beneficial and realistic projects for funding and implementation consideration. The Community Development Plan will focus on the projects selected during the evaluation stage and aim to provide a firm costing and approach to project implementation and identify partners to help with project implementation or function as agents.

3.5.15 Code of Conduct

A Code of Conduct will be developed and implemented, which provides a framework to guide behaviour of employees (Operator, contractors and suppliers) when onshore. As a minimum, it should include:

- Training on health and safety principles, disease awareness, prevention programmes, regular inductions.
- Measures and provisions to ensure that local residents and their cultures are respected.
- No tolerance for engaging in activities such as prostitution and substance abuse and other types of antisocial behaviour.
- No tolerance for activities that may compromise the health and well-being of the local community.

The Code of Conduct will include zero-tolerance systems and processes relating to corruption at project level and all forms of workplace harassment, bullying, gender-based violence, and sexual exploitation, abuse and harassment.

3.5.16 Energy and Carbon Management Plan

A Preliminary Energy and Carbon Management Plan was developed as part of the ESIA, which, had the following objectives:

- Provide an overview of the project's Significant Energy Users (SEUs) and highlight the anticipated major sources of Greenhouse Gas (GHG) emissions during the development and production phases;
- Summarise the measures which have been identified by the Operator in relation to energy and GHG emissions management (i.e. Project Controls);
- Propose additional measures which should be considered alongside those already identified by the Operator; and
- Propose GHG monitoring through the project lifecycle.

The Preliminary Energy and Carbon Management Plan will be updated based on final design; however, currently includes the following recommended actions (non-mandatory):

- Electric Motor Replacement Policy (FPSO): Introduce a motor management, replacement and rewind Policy to ensure that all 3-phase induction motors are retained as premium efficiency motor (PEM) models.

- Optimum motor sizing for FPSO: Ensure that electric motors are correctly sized for intended purpose as oversizing motors leads to persistent under-loading and poor power factor.
- Motor Management - switch off when not in use: Ensure that motors are switched off when not in use or have been idling for long periods of time (e.g. 10 minutes or longer), unless required for safe operations.
- Maintenance to ensure optimal Gas Turbine Operational Efficiency: Ongoing routine maintenance to follow Original Equipment Manufacturer (OEM) specifications to ensure gas turbine generation efficiency is maintained at optimum level.
- Define a site-specific energy intensity baseline for the FPSO, and adjust, if required, to account for changes in factors (e.g., processes) that have an influence on energy consumption.
- Develop energy intensity benchmarks for PSVs. Given that there may be a range of PSVs in operation, the benchmark should be derived per vessel and based on energy consumption per unit of activity.

3.5.17 Air Quality Monitoring Plan

The Air Quality Monitoring Plan will set out how air pollution will be controlled and reduced in specific areas. Its purpose is to protect human health, safeguard ecosystems and ensure compliance with environmental laws and standards. Air quality management should align with best practice for offshore hydrocarbon developments, with a focus on operational efficiency, emissions minimisation and proactive monitoring.

Nearshore air quality monitoring will be undertaken to monitor ambient NO_2, SO_2 and VOC (with benzene speciation) at selected receptors along the coast using the deployment of passive diffusion tube samplers. Results will be compared to guideline thresholds. If results remain measure consistently below guideline thresholds, monitoring could be discontinued. At minimum, the monitoring programme should include:

- A 1-month baseline survey to establish ambient pollutant levels prior to commencement of any transshipment activities.
- Monthly monitoring campaigns during the 48-hour nearshore transfer window (i.e. 24 hours for vessel manoeuvring and 24 hours for active cargo transfer). These campaigns should continue for 12 months to capture seasonal variability, after which the need for continued monitoring can be reassessed.
- Monitoring should include proximate shore-based receptors (e.g. in the region of Langstrand, Swakop river mouth and in the northern outskirts of Walvis Bay); and
- If reliable and representative weather data for the Swakopmund/Walvis Bay area are unavailable, the programme should include the installation of a suitably sited weather station to support data interpretation.

The Air Quality Monitoring Plan will define the monitoring protocols once the transshipment location is confirmed.

3.5.18 Decommissioning and Closure Plan

The Decommissioning and Closure Plan details the proposed abandonment and decommissioning of project wells, infrastructure and facilities at the end of operations, and to describe the anticipated work required to confirm that the abandoned facilities will be left in a condition that avoids harm to people and the environment. The Decommissioning and Closure Plan will essentially be aligned with the Preliminary Site Restitution Plan that will be

developed at the Front-End Engineering Design (FEED) stage, taking into account the infrastructure and facilities actually built.

A conceptual Decommissioning and Closure Strategy was compiled as part of the ESIA which outlines the technical, environmental, social and regulatory considerations necessary to ensure that decommissioning activities are conducted in a manner that minimises environmental disturbance, protects marine ecosystems and upholds stakeholder expectations. While this strategy is conceptual in nature, it establishes a solid foundation for future detailed planning. This conceptual strategy will be refined and updated as new data becomes available during the operational phase, including outcomes from a Net Environmental Benefit Analysis (NEBA), which will determine what infrastructure is recovered and what is abandoned, stakeholder engagement and ongoing environmental monitoring. The outcomes will be documented in the final Decommissioning and Closure Plan.

Nambian law requires that the Decommissioning and Closure Plan be revised on a date one year before the estimated date on which 50% of the estimated recoverable reserves of petroleum are produced. TotalEnergies, however, requires the revision of the Plan every five years. Furthermore, Nambian law mandates the establishment of financial provisions, such as trust funds, to ensure that decommissioning costs are covered, protecting the state from future liabilities. License holders are required to establish such a decommissioning trust fund once 50% of the estimated recoverable reserves in a production area have been extracted.

4.0 Roles and Responsibilities

The project will have dedicated, competent personnel that will manage and oversee the HSE aspects over the project lifecycle. TEEPNA, as Operator of the block, will retain the primary responsibility for meeting environmental and social commitments listed in this ESMP and ECC throughout the project life span.

The key HSE management roles and responsibilities supported by a project specific organogram will be defined by the Operator prior to the commencement of any project activities.

4.1 TEEPNA

TEEPNA, as Operator, will be responsible for the overall implementation of the ESMP and meeting the environmental and social commitments. TEEPNA duties listed in this ESMP are linked to the fact that TEEPNA is currently the Operator. TEEPNA maintains responsibility for the drilling, installation, production and decommissioning activities and the management of any contractors, and will have the following key responsibilities:

- Ensure that all contractors adhere to the ESMP, as stipulated in appointment contracts.
- Ensure that sufficient resources with clearly defined roles are deployed in order to efficiently implement this ESMP.
- Ensure that personnel with responsibilities are adequately trained and experienced and are supported with essential resources.
- Ensure the contractors implement the ESMP and any additional approval conditions contained in the ECC issued by the Ministry of Environment, Forestry and Tourism (MEFT).
- Ensure that environmental audits are undertaken to measure compliance with the agreed environmental performance objectives.
- Ensure that environmental monitoring and reporting are undertaken by all contractors.
- Conduct monitoring, auditing and implement corrective actions as per the requirements of the ESMP.
- Engage with MIME, MEFT and relevant stakeholders, when necessary, at key stages of the project and in accordance with the SEP.
- Coordinating with contractors to ensure that key stakeholders are timely informed about the project activities, and that concerns and questions are responded to and grievances are managed properly, as per the SEP.
- Appoint TEEPNA representatives onboard some project vessels (e.g. drilling unit and FPSO) to ensure compliance with the various commitments and supervise contractor coordination.
- Establish and maintain a functional grievance mechanism that allows stakeholders to submit specific grievances related to operations, by ensuring they are informed about the process and that resources are mobilized to manage the resolution of all grievances.

4.2 Contractors

Contractors appointed by the Operator shall be expected to comply fully with the Operator's HSE-MS. All regulatory requirements and obligations endorsed by the Operator shall apply

to the contractors and any sub-contractors. The Operator shall inform the contractors of these obligations in the appointment contract.

Contractors shall:

- Develop their own management system for the project that is consistent with the Operator's HSE-MS. For the main offshore contractors, the Operator will prepare a Bridging Document with its contractors, who will in turn have contractual agreements with their sub-contractors (see Section 3.3).
- Define individual responsibilities and accountabilities through position descriptions and conditions of employment contracts.
- Be responsible for and convey the requirements of the ESMP to all staff and any sub-contractors and ensure that they comply with their obligations.
- Ensure that all staff are given an environmental and social induction and that further training is undertaken at crew changes.
- Be responsible for ensuring the health and safety of all personnel on project vessels (including drilling unit, FPSO and support vessels) and at the onshore logistics base(s).

4.3 Environmental Auditor

Environmental Monitoring, audit and reporting will be submitted to MEFT at intervals and format as indicated in the ECC conditions or as agreed with MEFT and as per regulations.

4.4 Marine Mammal Observers

MMOs, required only during Vertical Seismic Profiling (VSP) operations, must have the following qualifications / experience:

- Experience in seabird, turtle, large pelagic fish and marine mammal identification and observation techniques.
- Certification from the Joint Nature Conservation Committer (JNCC) or an equivalent body, e.g., Bureau of Ocean Energy Management (BOEM).
- The lead MMO should have an appropriate graduate degree and relevant seafaring experience.
- Safety certificate (BOSIET or equivalent approved by the Operator).
- Medical certificate (OGUK, ENG1 or equivalent approved by the Operator).

The MMO shall have the following responsibilities during VSP operations:

- Provide effective regular briefings to crew members and establish clear lines of communication and procedures for onboard operations.
- Record airgun activities, including sound levels, "soft-start" procedures and pre-firing regimes.
- Observe and record responses of marine fauna to VSP operations from optimum vantage points, including penguin, large pelagic fish (e.g., shoaling tuna, sunfish, sharks), turtle and cetacean incidence and behaviour and any mortality or injuries of marine fauna as a result of VSP operations. Data captured should include species identification, position (latitude/longitude), distance/bearing from the drilling unit, swimming speed and direction (if applicable) and any obvious changes in behaviour (e.g., startle responses or changes in surfacing/diving frequencies, breathing patterns) as a result of the VSP activities. Both the identification and the behaviour of

the animals must be recorded accurately along with current VSP sound levels. Any attraction of predatory seabirds, large pelagic fish or cetaceans (by mass disorientation or stunning of fish as a result of VSP activities) and incidents of feeding behaviour among the hydrophone streamers should also be recorded.

- Record meteorological conditions at the beginning and end of the observation period, and whenever the weather conditions change significantly.
- Request the delay of start-up or temporary termination of VSP operations, as appropriate. It is important that MMO decisions on the termination of firing are made confidently and expediently, and following dialogue between the observers on duty at the time. A log of all termination decisions must be kept (for inclusion in both daily and “close-out” reports.
- Use a recording spreadsheet (e.g., JNCC, 2017) in order to record all the above observations and decisions.
- Prepare a close-out report summarising the findings of the MMO observations with the records database appended.

4.5 Passive Acoustic Monitoring Operators

PAM operators, required during VSP operations, must have the following qualifications/experience:

- Experience in marine mammal detection and identification techniques.
- Experience in appropriate deployment of PAM equipment.
- Certification from JNCC or an equivalent body (e.g., BOEM)
- The lead PAM operator should have an appropriate training certificate and relevant seafaring experience.
- Safety certificate (BOSIET or equivalent approved by Operator).
- Medical certificate (OGUK, ENG1 or equivalent approved by Operator).

The PAM operator will have the following responsibilities during VSP operations undertaken during periods of darkness or low visibility:

- Provide effective regular briefings to crew members and establish clear lines of communication and procedures for onboard operations.
- Ensure that the PAM hydrophone cable is optimally placed, deployed, tested and repaired / replaced (when necessary) for acoustic detections of marine mammals.
- Recording all airgun activities, including timeline log, sound levels, “soft-start” procedures and pre-firing regimes.
- Confirm that there is no marine mammal activity within 500 m of the airgun array prior to commencing with “soft-start” procedures.
- Record species identification, position (latitude/longitude), distance and bearing from the vessel and acoustic source, where possible.
- Record general environmental conditions.
- Request the delay of start-up and temporary shut-down of VSP operations, as appropriate.

5.0 Training, Awareness and Competency

The Operator and contractors will implement environmental awareness and training and ensure the competency of staff and sub-contractors with responsibilities in terms of the ESMP.

The Operator will, at kick-off or induction meeting(s), highlight its own and the contractor's responsibility in terms of identifying, planning, monitoring, and recording the training needs of personnel whose work may have a significant adverse impact upon safety, the environment and in the community. Employees at all levels will be made aware of the potential impacts of their activities, and the roles and responsibilities in achieving conformance with the ESMP and internal policy and procedures.

The personnel with responsibilities in specific HSE practices will be adequately trained to ensure effective implementation of the work instructions and procedures for which they have responsibilities. This training will include awareness and competency with respect to the following:

- General awareness relating to project activities (drilling, installation, production and decommissioning), including environmental and social impacts that could potentially arise from these activities.
- Legal requirements in relation to safety and environmental performance.
- Necessity of conforming to the requirements of the ECC and ESMP, including reporting requirements (i.e. such as incident reporting).
- Activity-specific training (i.e. waste management practices, oil spill containment and response, grievance management, etc.).
- Roles and responsibilities to achieve compliance, including change management and emergency response.
- Health and safety principles, disease awareness and prevention programmes.

Training will take cognisance of the level of education, designation and language preferences of the personnel.

The appointed contractor (and any sub-contractors) will also be required to institute training programmes for its personnel (e.g. toolbox talks). The contractor will be responsible for site HSE awareness training for personnel working on the project and for identification of any additional training requirements to maintain required competency levels.

The contractor training programme will be subject to approval by the operator, and it will be audited to ensure that:

- Training programmes are adequate and all personnel requiring training have been trained.
- Competency is being verified.

6.0 Compliance Verification and Corrective Actions

Monitoring and auditing will be undertaken to confirm adequate implementation of the ESMP, as well as the effectiveness of mitigation measures in avoiding or minimising impacts. The Operator's and contractor's HSE staff will implement a formal tracking procedure for investigating cause and identifying corrective actions in response to accidents, HSE and/or social non-compliances. Corrective actions include those intended to improve performance, non-compliances and non-conformances.

6.1 Monitoring

Monitoring will be conducted to ensure compliance with regulatory requirements and the performance objectives specified in the ESMP, as well as to evaluate the effectiveness of operational controls and mitigation measures. Monitoring will include, but not limited to, those criteria listed in Table 6-1, which must be reviewed and updated to incorporate any additional aspects that may need to be monitored.

The main objectives of the monitoring programme include:

- Gathering, recording and analysing data required for regulatory and ESMP purposes.
- Identifying changes in the physical, biological and social environment.
- Producing information to evaluate environmental performance specified in the ESMP.
- Producing information about emergencies that require an immediate response.
- Obtaining information on the actual and potential environmental and social impacts of appraisal activities.
- Using monitoring results as a source of information and as grounds for decision making regarding the design of new mitigation measures.

As a general approach, the Operator will ensure that all monitoring programmes comprise the following:

- A formal procedure.
- Use of appropriately calibrated equipment and monitored through a calibration log.
- The date, time and monitoring point of each sample is to be recorded.
- Where samples require analysis, these will be preserved according to laboratory specifications.
- Accredited laboratories will be used to undertake sample analyses and/or internal laboratory results will periodically be checked by independent and accredited laboratories.
- Analysis, where relevant, must be carried out in accordance with methods prescribed by the Namibian National Standards, in terms of the Standards Act, 2005 (No. 18 of 2005) or similar.
- Monitoring data will be stored in an appropriate database.
- Data will be interpreted and reports on trends in the data will be compiled on a regular basis.
- Both the data and the reports will be kept on record for the duration of operations.

Table 6-1: Monitoring Requirements

No.	Risk	Criteria to be monitored	Frequency / Timing	Accountability (indicative)[5]
M1	**Waste Management Plan**			
M1-1	Galley waste and air emissions	• Type and volume of waste discharged/incinerated • Estimate volume of air emissions from incineration	Recorded daily in the operational log inspection	Contractors (Vessel Captains / Offshore Installation Manager) / TEEPNA Responsible for Safety and Environment on Site (when relevant)
M1-2	General waste	• Type and volume of waste generated daily • Location of waste discharged • Type and volume transferred for onshore disposal and possibly incinerated • Compliance with Waste Management Plan	Prior to waste transfers to supply vessel / port	Contractors (Vessel Captains / Offshore Installation Manager) / TEEPNA Responsible for Safety and Environment on Site (when relevant) / TEEPNA HSE Manager
M1-3	Hazardous waste	• Type and volume of waste generated • Volume transferred for onshore disposal • Compliance with Waste Management Plan	Prior to waste transfers to supply vessel / port	Contractors (Vessel Captains / Offshore Installation Manager) / TEEPNA Responsible for Safety and Environment on Site (when relevant) / TEEPNA HSE manager
M1-4	Fuel usage and air emissions	• Type and volume on board • Type and volume consumed • Air emissions from fuel combustion, including CO_2, N_2O and CH_4 levels	Daily operational log inspection Fuel transfer log sheet	Contractors (Vessel Captains / Offshore Installation Manager / Helicopter Pilot)
M1-5	Sewage	• Discharge volumes • Residual chlorine concentration	Recorded daily in the operational log inspection	Contractors (Vessel Captains / Offshore Installation Manager)
M1-6	Drilling fluids (WBM)	• Volume of WBM on board drilling unit • Toxicity, barite contamination and oil content of WBM (prior to discharge) • Volume of WBM used • Volume of WBM discharged • Volume of residual muds sent to shore	Recorded daily in the operational log inspection	TEEPNA Drilling Manager / TEEPNA Fluid Superintendent, Contractors (Service Contractor)

[5] Final designations will be confirmed during project implementation.

No.	Risk	Criteria to be monitored	Frequency / Timing	Accountability (indicative)[5]
M1-7	NADF fluids and associated drill cuttings	• Volume of NADF on board drilling unit • Volume of NADF used • Volume of NADF discharged or shipped to shore • Oil content in NADF drill cuttings discharged (test to ensure <6.9% Oil On Cutting, OOC) • Gamma ray results to assess radioactivity if the risk of radioactivity exists	Recorded daily in the operational log inspection	TEEPNA Drilling Manager / TEEPNA Fluid Superintendent, Contractors (Service Contractor)
		• BOP integrity	Daily visual check using ROV	
M1-8	Cement	• Volume used (total volume, including volume discharged onto seabed) • Pressure testing on abandonment cement plugs	During cementing operations using ROV	TEEPNA Drilling Manager, TEEPNA Fluid Superintendent, Contractors (Service Contractor)
M1-9	Flaring	• Record daily flare and cumulative flare volumes • Continuous visual monitoring of the flare for security, malfunctioning and efficiency • Record Air emissions from flaring, including CO_2, N_2O and CH_4 levels	During flaring	TEEPNA Drilling Manager, Contractors (Service Contractor), TEEPNA Field operations manager (FPSO)
M1-10	Produced water	• Discharge volume and volume sent for onshore treatment (drilling and production phases) • Oil content in produced water (drilling and production phases) • Temperature of produced water to ensure compline with IFC guideline of temperature rise <3°C at 100 m from discharge point (production phase)	During produced water discharge	TEEPNA Drilling Manager, TEEPNA Field operation Manager, Contractors (Service Contractor)
M1-11	BOP fluid	• Volume of BOP fluid discharged	During drilling	TEEPNA Drilling Manager, TEEPNA Fluid Superintendent, Contractors (Service Contractor)
M1-12	Hydrostatic Fluid	• Volume of hydrostatic fluid discharged • Oil content in hydrostatic fluid	During hydrostatic testing	Contractors (Service Contractor), TEEPNA Field operations manager (FPSO)

No.	Risk	Criteria to be monitored	Frequency / Timing	Accountability (indicative)[5]
M2	**Preventive Maintenance Plan**			
M2-1	Deck drainage/ machinery space/ bilge water	• Correct operation of oil separating / filtering equipment and oil content meter (compliance with MARPOL 73/78 standards) • Oil in water concentration in normal discharges (not produced water) <15 ppm prior to discharge overboard	Prior to drilling and once during campaign	Contractors (Vessel Captains / Offshore Installation Manager)
M2-2	Sewage discharge	• Correct operation of sewage treatment system (compliance with MARPOL 73/78 standards) • BOD of <25 mg/l (if the treatment plant was installed after 01/01/2010,) or <50 mg/l (if installed before 01/01/2010) • Sewage Certificate	At start and once during campaign	Contractors (Vessel Captains / Offshore Installation Manager)
M2-3	Galley waste and air emissions	• Correct operation of macerator	At start and once during campaign	Contractors (Vessel Captain / Offshore Installation Manager)
M2-4	Equipment fouling	• Ensure all equipment (e.g., wellhead, BOP, etc.) that has been used in other regions is thoroughly cleaned prior to deployment	Prior to deployment	Contractors (Vessel Captains / Offshore Installation Manager)
M2-5	Lighting	• Ensure lighting on the drilling unit, FPSO and project vessels is reduced to a minimum compatible with safe operations whenever and wherever possible	At start and once during campaign	Contractors (Vessel Captain / Offshore Installation Manager)
M2-6	Cranes	• Ensure loads are lifted using the correct lifting procedure and within the maximum lifting capacity of crane system	Prior to lifting operations	Contractors (Vessel Captain / Offshore Installation Manager)
M2-7	Emissions	• Ensure diesel motors and generators are in good working order to minimise soot and unburnt diesel released to the atmosphere	Ad hoc during operation	Contractors (Vessel Captain / Offshore Installation Manager)

No.	Risk	Criteria to be monitored	Frequency / Timing	Accountability (indicative)[5]
M2-8	Gas pipeline integrity	• Undertake external pipeline inspection every 3 years	Every 3 years	TEEPNA Field operation Manager, FPSO Contractors (Service Contractor)
		• Use flow meters and monitor pressure/mass balance to detect any leaks.	Continuous	
M3	**Biodiversity Management Plan**			
M3-1	Fauna interaction	• Presence of marine faunal activity (cetaceans, penguins, shoaling large pelagic fish or turtles) within 500 m radius of the vessel prior to commencing with the "soft-start" procedures (visually during the day) and during VSP operations • Record airgun activities, including sound levels, "soft-start" procedures and pre-firing regimes • Species, position (latitude/longitude) and distance from the vessel, where possible • Responses of marine fauna to VSP operations • A log of all VSP activity and shut-down decisions	During VSP operations	MMO
M3-2		• Presence of cetacean activity detected by PAM within 500 m radius prior to commencing with the "soft-start" procedures and during operations (subject to risk assessment) • Species, position (latitude/longitude) and distance from the vessel, where possible • A log of all VSP (seismic) activity and shut-down decisions	During VSP operation (at night and periods of poor visibility)	PAM Operator
M3-3	Benthic fauna interaction	• Confirm placement and connection of subsea equipment and infrastructure.	During anchor installation using ROV	Contractors (Vessel Captain / Offshore Installation Manager)
M3-4		• Confirm anchor placement accuracy and a clear unobstructed anchoring area	During anchor installation using ROV	Contractors (Vessel Captain / Offshore Installation Manager)
M4	**Stakeholder Engagement Plan**			
M4-1	Grievances	• Registering of all grievances, solution and outcome	Continuous throughout operations	TEEPNA HSE Manager
M4-2	Vessels	• Maritime Surveillance Area and notify fishing vessels likely to enter the Maritime Restricted Area via radio regarding the safety requirements	Continuous throughout operations	Offshore Installation Manager)

No.	Risk	Criteria to be monitored	Frequency / Timing	Accountability (indicative)[5]
M5	**Emergency Response Plan, SOPEP and OSCP**			
M5-1	Faunal Strikes	• During normal operations ensure vessel transit speed between the drill area and port remain within operational speed limits: o Supply vessel: 10-13 knots o Fast supply vessel: 17-20 knots • Speed should be reduced to operational speed range minimums within 25 km of the coast. • Report any collisions with large whales to the International Whaling Commission (IWC) database.	Continuous during transit	Vessel Captains
M5-2	Lost equipment	• Scan seafloor for any dropped equipment around the well site • Retrieve these objects, where practicable, after assessing the safety and metocean conditions	Prior to drilling unit leaving site using ROV	TEEPNA Drilling Manager, Contractor (ROV Operator)
		• Establish a hazards database listing: > the type of gear lost / left on the seabed > date of abandonment/loss > location > where applicable, the dates of retrieval	Ongoing through daily operational log and incident reporting system	TEEPNA Drilling and Logistics Manager, Contractors (Vessel Captains / Offshore Installation Manager)
M5-3	Oil / fuel spill	• Bunkering operations log • Weather conditions and sea state during bunkering operations	During bunkering	Contractors (Vessel Captain / Offshore Installation Manager)
M5-4	Oil / fuel spill	• Record of all spills (Incident Register), including spill reports and use of dispersants; emergency exercise reports; contacts update, audit reports	Ongoing through daily operational log and incident reporting system	TEEPNA Drilling Manager, TEEPNA Field Operations Manager (FPSO) and TEEPNA Logistics Manager, Contractors (Vessel Captains / Offshore Installation Manager)
M5-5	Blow-out	• BOP certifications / tests • Emergency response equipment availability	At start of campaign	TEEPNA Drilling Manager

No.	Risk	Criteria to be monitored	Frequency / Timing	Accountability (indicative)[5]
M6	**Ballast Water Management Plan**			
M6-1	Ballast water	• Volume discharged and location (start and finish coordinates) • Uptake volumes and location (start and finish coordinates) • Start and finish times for pumping water during an exchange • Actual pumping times • Residual volume remaining in the tank at the end the empty cycle prior to refill (empty refill method only)	During and after de-ballasting	Contractor (Vessel Captains / Offshore Installation Manager)
M7	**Chemical Management Plan**			
M7-1	Chemicals and hazardous materials	• Volume stored • Volume consumed	Routine operational inspection of the: • Storage area • Management and transfer procedures • Log sheet update	Contractors (Vessel Captains / Offshore Installation Manager, Service Contractor)
M7-2	Radioactive sources	• Test to determine leak levels • Record sources lost down hole	At start and once during drilling campaign	Contractor (Service Manager)
M7-3	Accidental oil and chemical spills	• Type of chemical spilled • Volume	Ongoing through daily operational log and incident reporting system	TEEPNA Drilling Manager, TEEPNA Field Operations Manager (FPSO) and TEEPNA Logistics Manager, Contractors (Vessel Captains / Offshore Installation Manager, pilot)
M8	**Air Quality Management Plan**			
M8-1	Cumulative emissions inventory	• GHG (CO_2e) inventory across all operations	Annual	TEEPNA Logistics Manager, TEEPNA Drilling manager, TEEPNA Field Operation Manager
M8-2	Fugitive emissions (FPSO)	• Fugitive methane (and indirectly NMVOC) emissions using CH_4 Internet of Things (IoT) sensors for real-time detection supporting early leak identification and rapid response.	Continuous	TEEPNA Field Operation Manager
		• Fugitive emissions using gas detection instruments. • Fugitive emissions using the deployment of AUSEA (Airborne Ultralight Spectrometer for Environmental	Periodic	TEEPNA Field Operation Manager

No.	Risk	Criteria to be monitored	Frequency / Timing	Accountability (indicative)[5]
		Applications) drone campaigns to identify fugitive emissions.		
M8-3	Combustion emissions	• NO_2, SO_2 and VOC (with benzene speciation) along the coastline and at selected receptors. • Site-specific meteorological data from installed weather station	During nearshore transshipment operations (Note: If results remain consistently below guideline thresholds for 12 months, monitoring could be discontinued)	TEEPNA HSE Manager
M9	**Energy and Carbon Management Plan**			
M9-1	GHG emissions	Measure and report on the energy consumption and efficiency performance of the gas turbine generator (on FPSO) using continuous metering equipment connected to an online monitoring system	Continuous	TEEPNA Field Operation Manager
M9-2		Measure and report on the energy consumption of all electrically driven Significant Energy User (SEUs) using, whenever feasible, continuous metering equipment connected to an online monitoring system	Continuous (whenever feasible) or daily	TEEPNA Field Operation Manager
M9-4		Measure and report on the primary energy performance (fuel gas) of the FPSO in comparison to the site-specific energy intensity baseline (which should be defined for the FPSO, and adjust, if required, to account for changes in factors (e.g., processes) that have an influence on energy consumption).	Monthly	TEEPNA Field Operation Manager
M10	**Human Rights**			
M10-1	Supplier performance	• Ensure local procurement contracts include provisions for compliance monitoring and reporting aligned with project requirements. • Undertake random risk-focussed monitoring and evaluation of smaller, local suppliers to ensure aligned implementation of the project's HSE standards.	Ad hoc (risk-based monitoring and evaluation)	TEEPNA Logistics Manager

6.2 Auditing

Contractors will be required to conduct routine HSE inspections (internal and independent audits) to monitor compliance and implementation of conditions stipulated in this ESMP. The results of the inspection and monitoring activities will be reported to the Operator.

Beyond the routine inspection and monitoring activities conducted by the contractors, formal audits will be carried out internally by the Operator's representatives to determine the level of compliance with the ESMP and its own HSE standards and policies. The audit data will include the contractor's monitoring and inspection records.

The Operator will also be required to undertake independent audits, at intervals as specified in the ECC conditions or as agreed with MEFT, to ensure compliance with the ECC conditions of approval and environmental specialisations stipulated in this ESMP.

The audit will include amongst other things, checking:

- Completeness of HSE documentation, including planning documents and inspection records.
- Conformance with monitoring requirements.
- Efficacy of activities to address any non-conformance with monitoring requirements.
- Training activities and record keeping.

Findings will be documented in audit reports (see Section 9.3), which will be submitted to the relevant Manager for action and follow-up, or independent monitoring reports (see Section 9.4), which will be submitted to MEFT.

6.2.1 Audit Methodology

An audit methodology, programme and protocol will be developed for the internal audits and the external ESMP close-out compliance audits throughout the life of the ESMP. These audits are an integral part of the implementation of the ESMP and audit findings can be used as a basis to measure compliance and confirm the efficacy and efficiency of the mitigation measures. The proposed approach to auditing consists of four basic steps:

- Planning the audit.
- Conducting the audit.
- Producing audit findings (measuring compliance and identifying problems).
- Reporting audit findings for management action.

A four-level rating scale is proposed to assess the performance of the ESMP against each individual element. Elements are rated individually as "full compliance", "partial compliance", "non-compliance" or "not applicable" as per the Table 6-2 below.

Table 6-2: Audit Rating Scale

Full compliance	All requirements of the ESMP element have been fulfilled. The specifications have been documented and monitored and upon verification is found to be fully implemented.
Partial compliance	Only certain elements of the key requirements have been fulfilled and a plan is in place to progress to full compliance. The specifications have been documented and monitored but not consistently or completely implemented.
Non-compliance	The requirements of the ESMP have not been fulfilled. No evidence or incomplete evidence of compliance.
Not applicable	The ESMP specifications are not applicable.

6.3 Corrective Actions

The Operator and its contractors will implement a formal non-compliance and corrective action tracking procedure for investigating cause and identifying corrective actions in response to accidents, HSE and/or social non-compliances.

Major audit findings will undergo an analysis to identify underlying causes to non-compliance events. Management actions will be taken to correct the underlying causes behind the audit findings and improvements will be made before another audit is conducted. This process allows for problems to be corrected, compliance to be improved and prevention of the same findings during subsequent audits.

Where corrective actions are deemed necessary, specific measures will be developed and documented in a Corrective Action Plan, with designated responsibility and timing, and implemented. In this way, continuous improvement in performance will be achieved.

The Operator and its contractors will be responsible for keeping records of corrective actions and for overseeing the modification of environmental or social protection procedures and/or training programmes to avoid repetition of non-conformances and non-compliances.

7.0 Management of Change

The development and implementation of the ESMP is an ongoing process that is iterative in nature. This document must thus be seen as a 'living' document and amendments may need to be implemented during the project. Typical changes that can affect the ESMP include:

- A material project design change that occurs after the ESMP has been compiled and approved.
- Changes in the feasibility/availability of specific mitigation measures.
- Critical personnel changes directly affecting the planning on the project (i.e. any change in key staff whose roles are essential to how the project is planned, designed or implemented, and whose replacement could materially alter project outcomes).
- Equipment failure during the drilling, installation, production and decommissioning.

This document is the first version of the ESMP. Certain aspects of this document may be expanded/made more specific during the detailed design stage to ensure, firstly, that it includes all conditions of approval and, secondly, that it addresses all impacts related to the detailed design. It may also need to be amended if audit findings indicate:

- Insufficient mitigation of environmental impacts associated with the undertaking of project activities; or
- Insufficient levels of compliance with the ECC or ESMP.

These changes will be subject to a management of change procedure. Further detail on the management of change procedure, including levels of change and associated actions, is presented in Table 7-1.

Table 7-1: Management of Change Procedure

Level of Change	Description of Level of Change and Action
Level 1: Minor Change	This applies where the change is largely deemed to be **immaterial to the ESIA findings**, the listed activities that were applied for are still relevant and it does not affect the ability to meet environmental and social performance requirements outlined the ESIA Report and ESMP. Assuming the proposed activities is approved by MEFT, the ECC will need to be renewed every three years. As part of the ECC renewal application, the relevance of the ESMP should be reviewed and amendments proposed where necessary. These changes and their evaluation should be communicated to MIME and MEFT for information purposes and the ESMP revised where necessary.
Level 2: Significant Change	This applies where a change would **lead to a significant departure from the base-case** or a key aspect of it, such that the existing ESIA Report or ESMP does not adequately address potential impacts or require additional mitigation. This would imply that a new listed activity(s) is triggered or an approved activity would change. This requires an update of the ESIA Report and ESMP through an amendment application in terms of the Environmental Management Act, 2007 and Regulations 19 and 21 of the EIA Regulations 2012, and submission thereof to MEFT for review and decision.

8.0 Communication

8.1 Internal Communication

Channels of communication will be established between the Operator, the contractors, project personnel and external stakeholders. The Operator will establish and implement procedures for internal communication between the various levels and functions of the project staff organisation.

8.2 Stakeholder Engagement

Stakeholder engagement will be undertaken as per the SEP, which provides the framework to guide the establishment of an effective engagement with external interested parties and detailing the plan for engagements (see Section 3.5.5). Notification documents, meetings and expressed concerns will be recorded.

A grievance procedure will also be established and implemented, as part of the SEP, to deal with concerns and grievances and shall exist throughout operations through to the end of project life.

8.3 Authority Communication

Formal notification will be provided to the Competent Authority (MIME) and MEFT at least 30 days prior to offshore mobilisation.

The Operator will compile and submit environmental monitoring reports to MEFT (Office of the Environmental Commissioner) on an annual basis or as specified in the ECC conditions.

Authorities will also be engaged as determined by the SEP (see Section 3.5.5).

9.0 Document Control and Reporting

9.1 Documentation

The Operator will control HSE documentation, including project licences, approvals, management plans, associated procedures, checklists, forms, audits, and reports, through a formal procedure. The document control procedure will describe the processes that the project will employ for official communication of both hardcopy and electronic documents and the requirement for electronic filing, document tracking and version control numbers.

Contractors will be required to develop a system for maintaining and controlling its own HSE documentation and describe these systems in their respective HSE plans.

9.2 Incident Reporting

Following every HSE incident, the Operator will conduct an incident investigation and prepare a report detailing the events, root causes of the incident(s) and corrective and preventative measures implemented as a result. All incidents where local regulatory standards are exceeded will be reported to MIME and MEFT.

9.3 Audit Reports

Audit findings (see Section 6.2) will be documented in audit reports, which will be submitted to the relevant Manager for action and follow-up.

9.4 Independent Environmental Monitoring Reports

The Operator will submit independent environmental monitoring reports, undertaken by an Independent Environmental Auditor or ECO, to MEFT (Office of the Environmental Commissioner) at intervals as specified in the ECC conditions or as agreed with MEFT.

At the end of the production life of the project and after decommissioning, a Close-Out Compliance Report will be compiled as required by the Decommissioning and Closure Plan (see Section 3.5.18).

10.0 Environmental and Social Management Commitment Register

This section lists the specific management commitments and specifications that will be implemented to prevent, minimise or manage significant potential negative impacts and optimise and maximise any potential benefits of the project.

- Section 10.1 deals with the **Drilling and Installation Phase**.
- Section 10.2 deals with the **Operation Phase**.
- Section 10.3 deals with the **Decommissioning Phase**.

Note: the decommissioning phase has not been considered here as this is dependent on the Decommissioning and Closure Plan (see Section 3.5.18), which will only be finalised based on the outcomes from the Net Environmental Benefit Analysis (NEBA), stakeholder engagement and ongoing environmental monitoring.

Sections 10.1 to 10.3 are structured in the following manner so that the mitigation measures have a clear and logical context within which they are designed, implemented, monitored and evaluated:

- **Activities:** Activities are the operational activities that occur as a result of project implementation.
- **Aspect:** Environmental and social aspects are defined as ‘an element of an organisation’s activities, products or services that can interact with the natural and human environment’ e.g., atmospheric emissions, underwater noise levels or discharge of waste to sea.
- **Environmental and Social Performance Objectives / Impact Management Outcomes or Targets:** Every environmental and social management requirement must be translated into an objective, namely an outcome or target that is to be achieved. This is not to say that every requirement must be expressed as an objective, but requirements can be combined as appropriate into single objectives. If the outcome / target is met then the objective will have been deemed to be met, but if the target is not achieved then suitable corrective action must be defined and implemented so as to ensure that the performance is improved to the point that the target is met and the performance is sustained.
- **Associated Plan and Procedure:** The corresponding plan or procedure to which the commitment relates is listed in this column.
- **Mitigation / Management Actions:** A key component of the ESIA process is to explore practical ways of avoiding or reducing potentially significant negative impacts or enhance positive impacts of the proposed exploration programme. These are commonly referred to as mitigation measures and are incorporated into the project as part of the ESMP. Mitigation is aimed at preventing, minimising or managing potential negative impacts to as low as reasonably practicable (ALARP) and optimising and maximising any potential benefits of the proposed project.
- **Responsibility:** Defining who is responsible for the implementation, monitoring and recording of the mitigation measure.
- **Timing:** Timing refers to the schedule. The ‘timing’ can be specified in terms of a specific date or relative to other actions (i.e. before project mobilisation, or during operation, as examples) or frequency.
- **Monitoring and Record Keeping:** Monitoring and record keeping requirements must be defined, whereby the organisation responsible for implementing the action/s is given a prescribed reporting mechanism, limited as far as possible to documents plans, correspondence, records, registers, etc.

10.1 Environmental and Social Management Commitment Register: Drilling and Installation Phase

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.1 PLANNING PHASE							
10.1.1.1 PREPARATION OF SUBSIDIARY PLANS	Planning and Management	Identification of all parties and their responsibilities documented and communicated	See Section 3.5	Ensure the following subsidiary plans are in place for Drilling and Installation Phase: • OSCP • Blow-out Contingency Plan • SOPEP • Emergency Response Plan (including MEDIVAC plan) • Stakeholder Engagement Plan (including a Grievance Procedure) • Waste Management Plan • Chemical Management Plan • Preventive Maintenance Plan • Ballast Water Management Plan • Biodiversity Management Plan • Corrective Action Plan • Local Content Plan • Labour Management Plan • Community Development Plan • Code of Conduct • Energy and Carbon Management Plan • Heat Exposure Management Plan, including awareness sessions and adequate PPE.	TEEPNA, Contractors	30 days prior to commence-ment of operation	Copies of all plans and certificates Confirm compliance and justify any omissions
				In addition to the above, ensure that: • Drilling units must have Pollution Safety Certificate(s). • There is a record of drilling units / vessels seaworthiness certificate and/or classification			Copies of all plans and certificates

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				stamp. • A valid International Sewage Pollution Prevention Certificate (ISPPC), as required by vessel class. • International Oil Pollution Prevention (IOPP) Certificate, as required by vessel class.			Confirm compliance and justify any omissions
10.1.1.2 PREPARATION FOR DRILLING AND SEABED INSTALLATION	Identification and appointment of suppliers	Ensure fair, transparent and reasonable preferential contracting of local companies	Local Content Plan	• Implement Local Content Plan to ensure fair, transparent and reasonable preferential contracting of local companies with the suitable expertise. • Develop and widely communicate a dedicated information portal for prospective service providers with clear explanations of required standards of performance, compliance and qualification. • Ensure that social investment, local procurement opportunities processes are applied transparently communicated and available to all stakeholders, including vulnerable groups.	TEEPNA, Contractors	During contracting	Contracts (see Row M4-2 in Table 6-1) Information portal
		Minimise human rights risks in the supply chain	Local Content Plan Code of Conduct	• Adopt a human rights risk-based approach to ongoing human rights due diligence with contractors and suppliers, especially concerning modern slavery, forced labour, trafficking and child labour. • Ensure contractor standards align with standards espoused in IFC EHS Guidelines for the Oil and Gas Sector where appropriate to the activity conducted. • Ensure international and local procurement contracts include provisions for compliance monitoring and reporting aligned with project requirements.	TEEPNA	Prior to and during contracting suppliers	Assessment results Procurement contracts

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				• Ensure all third-party project security providers comply and align with the Voluntary Principles on Security and Human Rights (VPSHR) through procurement contracts. Conduct a first VPSHR risk assessment prior to drilling and installation phase. • Ensure contractors are aware of the Operator's human rights policy and expectations prior to contracting.			
10.1.1.2 PREPARATION FOR DRILLING AND SEABED INSTALLATION	Identification and appointment of suppliers	Minimise community health and safety risks	Code of Conduct	Share the company's Code of Conduct and Fundamental Principles of Purchasing with prospective contractors and suppliers.	TEEPNA		
	Employment	Maximise local employment opportunities	Local Content Plan	• Implement Local Content Plan to ensure fair and transparent employment. • Use the dedicated information portal to compile and publish detailed requirements for the various job categories within the industry together with information on where and how such skills can be acquired or enhanced and the funding opportunities that may be available to support the development of skills in these fields. • Ensure that social investment, local employment opportunities processes are applied transparently communicated and available to across vulnerable groups.	TEEPNA, Contractors	During recruitment	Local employment numbers
		Minimise community health and safety risks	Code of Conduct	• Share the company's Code of Conduct with staff. • Provide health services and screenings for staff.	TEEPNA, Contractors	Throughout operations	
			Stakeholder Engagement Plan	Engage with national and local government, and other operations in the area, to better understand and manage influx impacts.	TEEPNA	Prior to drilling / subsea installation and regularly	Record of engagements

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
						throughout operations	
10.1.1.2 PREPARATION FOR DRILLING AND SEABED INSTALLATION	Drilling and installation equipment	Minimise impact on and disturbance of marine fauna	Well drilling and subsea infrastructure design	• Make provision for using drilling units and installation vessels that are equipped with Dynamic Positioning Systems (DPS) to maintain their position precisely over the drill site (no anchoring in Venus offshore area). • Ensure drilling units are equipped with a fully watertight floor and efficient closed loop systems to optimise the fluid re-circulation and to reduce losses. It is forbidden to discharge pure NADF to the environment. • Ensure all vessels have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL requirements. • Give preference to drilling units and vessels using marine gas oil (MGO).	TEEPNA	Prior to drilling / subsea installation, during procurement / contracting	Technical scope of Contracts

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.1.3 PREPARATION FOR DRILLING	Well locations	Protect sensitive seabed habitats	Well Drilling and Subsea Infrastructure Design	• Should a well site fall outside of the existing geophysical survey area, undertake a complimentary survey to identify (with support of a marine ecologist) any sensitive seabed features (e.g., colony forming corals) and structural features (e.g. rocky outcrops) within ≥250-270 m[6] of the revised/new well location(s). • If necessary, based on the results of the complementary survey, adjust the well position accordingly to avoid this 250-270 m buffer area or implement appropriate technologies, operational procedures and monitoring surveys to reduce the risks of, and assess the damage to any vulnerable seabed habitats and communities identified.	TEEPNA	Prior to finalising of drill sites and spudding (if outside of the already surveyed area)	Final well drilling layout
	Drilling personnel for faunal observations / detections during VSP	Minimise impact on and disturbance of marine fauna	Biodiversity Marine Faunal Management Plan	• Make provision for the placing of at least two dedicated Marine Mammal Observer (MMO), with a recognised MMO certification, on board for marine mammal observation, distance estimation and reporting. • One MMO should also have Passive Acoustic Monitoring (PAM) training, should a risk assessment, undertaken ahead of the VSP operation, indicate that the PAM equipment can be safely deployed considering the metocean conditions (specifically current). Support vessels should be used to deploy PAM equipment should the drilling unit thrusters pose a technical risk.	Drilling Contractor	Prior to commencement of VSP operations	MMO monitoring (see Row M3-2 & M3-3 in Table 6-1) MMO / PAM report

[6] Drilling discharge modelling predicted that areas of significant smothering (>6.5 mm thickness) will be confined to a maximum distance of 270 m, and average distance of 245 m, for all seasons. The specified survey radius (250-270 m) encompasses this predicted impact zone while remaining within the technical constraints of typical ROV operations at these depths.

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
	Equipment			Ensure drilling unit (or support vessel) is fitted with PAM technology (one or more hydrophones), which detects animals through their vocalisations.			
10.1.1.3 PREPARATION FOR DRILLING	Oil spill planning	Minimise impact of a well blow-out by implementing response procedures efficiently	OSCP	Undertake a drilling unit inspection that is specifically focused on well control equipment. A specific BOP inspection, and relevant upgrades / refurbishment should be completed prior to the unit operating in Namibian waters.	TEEPNA	Prior to drilling unit hire	
				Ensure oil spill equipment is mobilised and installed on vessels in line with the SOPEP and OSCP.	Drilling Contractor, TEEPNA	Prior to commencement of drilling operations	
				Ensure contract arrangements and service agreements are in place to implement the SOPEP, ERP and OSCP, e.g., capping stack in Saldanha Bay and other international locations, SSDI kit, surface response equipment (e.g., booms, dispersant spraying system, skimmers, etc.), dispersants, response vessels, etc.	Drilling Contractor, TEEPNA	Prior to commencement of drilling operations	Contracts
				Secure an insurance policy, including coverage for third party liability.	TEEPNA	Prior to commencement of drilling operations	Contracts
				Plan for a standby vessel being within 30 minutes of the drilling unit and equipped for dispersant spraying and can be used for mechanical dispersion (using the propellers of the ship and/or firefighting equipment). It should have at least 5 m^3 of dispersant onboard for initial response.	TEEPNA	Prior to commencement of drilling operations	Contracts

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.1.4 PREPARATION FOR SUBSEA INSTALLATION	Subsea infrastructure location	Protect sensitive seabed habitats	Well Drilling and Subsea Infrastructure Design	• Should a subsea infrastructure fall outside of the existing geophysical survey area, undertake a complimentary geophysical survey to identify (with support of a marine ecologist) any sensitive seabed features (e.g., colony forming corals) and structural features (e.g. rocky outcrops) within ≥30 m of the infrastructure position. • If necessary, adjust the infrastructure position accordingly to avoid any identified sensitive seabed feature, prior to finalisation of infrastructure location. • Optimise subsea infrastructure routing and operations (i.e. placement/design) to minimise potential disturbance of the seabed.	TEEPNA	Prior to finalising of subsea infrastructure location (if outside of the already surveyed area)	Final subsea infrastructure layout
	Subsea infrastructure design	Minimise risk of pipeline rupture		• Use appropriate design, wall thickness with corrosion allowance and high-quality welding techniques to prevent pipeline rupture. • Design gas pipeline to allow for the undertaking of non-routine inline inspections when necessary. • Install remote-controlled valves to isolate the ruptured segment quickly.	TEEPNA	During FEED	Final design
10.1.1.5 PREPARATION FOR FPSO (ANCHOR INSTALLATION)	Physical disturbance of the seabed sediments	Minimise disturbance of seabed habitats	Well Drilling and Subsea Infrastructure Design	• Plan to install anchors and chains prior to FPSO arrival (pre-laid on seabed) to minimise extent of impact to benthic habitats by increasing accuracy of positioning in accordance with the anchor-spread and mooring analysis. • During anchor installation, undertake ROV surveys to confirm anchor placement accuracy and a clear unobstructed anchoring area.	TEEPNA	Prior to FPSO arrival on site	ROV footage

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.2 MOBILISATION PHASE							
10.1.2.1 STAKEHOLDER CONSULTATION AND NOTIFICATION OF DRILLING AND SUBSEA INSTALLATION	Interaction, engagement & communication with national authorities and key stakeholders	Inform MIME about the commencement of drilling and subsea installation	Stakeholder Engagement Plan Well Drilling and Subsea Infrastructure Design	Compile the drilling and installation details into a notification document and submit to MIME. The notification should provide: • Drilling and subsea installation programme (timing, co-ordinates and duration). • Contractors details. • Drilling unit and other vessel specifications (including relevant certification).	TEEPNA, Contractors	Notification to be submitted at least 30-days prior to commence-ment	Correspondence to MIME
10.1.2.1 STAKEHOLDER CONSULTATION AND NOTIFICATION OF DRILLING AND SUBSEA INSTALLATION	Interaction, engagement & communication with national authorities and key stakeholders	Ensure that other users of the sea are aware of drilling and installation activities and navigational safety and parties are aware of the mechanism to follow for raising concerns Minimise disruption to drilling / installation and other users of the sea	Stakeholder Engagement Plan	Implement Stakeholder Engagement Plan taking into account environmental, socio-economic and cultural aspects.	TEEPNA	Throughout operations	As per Stakeholder Engagement Plan
				Notify key stakeholders, via the Directorate of Maritime Affairs, at least three weeks prior to mobilisation of the drilling unit, installation vessels and FPSO, respectively. The Notice to Mariners should give notice of (1) the vessel name and co-ordinates of the drilling, installation and construction locations, (2) an indication of the estimated operational timeframes, (3) the dimensions of the safety zone around the drilling units and installation / construction vessels, as well as the maritime exclusion / restricted marine areas (which will be in place during construction and operation) and nearshore transshipment safety exclusion zone, and (4) details on the movements of support vessels servicing the project. This Notice to Mariners should be distributed timeously to the following Namibian fishing industry associations: • Fishing industry / associations: Confederation of Namibian Fishing Association, Large Pelagic and Hake Longline Association, Large Pelagic	TEEPNA	3 weeks prior to commence-ment of operations	Copies of all correspondence and list of those to whom it was sent

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				Association, Deep Water Trawling Association and Walvis Bay Pelagic Fishing Association. • Ministry of Works and Transport. • South African Navy Hydrographic Office (SANHO). • Namibian Ports Authority (Namport). • MAFWLR Monitoring, Control and Surveillance Unit in Walvis Bay (Vessel Monitoring System in particular).			
10.1.2.1 STAKEHOLDER PARTICIPATION AND NOTIFICATION FOR DRILLING AND SUBSEA INSTALLATION	Interaction, engagement & communication with authorities and key stakeholders	Ensure that other users of the sea are aware of drilling activities and navigational safety and parties are aware of the mechanism to follow for raising concerns Minimise disruption to drilling / installation and other users of the sea	Stakeholder Engagement Plan	Request, in writing, the Ministry of Works and Transport and Department of Maritime Affairs, as well as SANHO, to issue a navigational warning (e.g. via Navigational Telex (Navtext) and navigational warnings twice daily on Channel 16 VHF).	TEEPNA	7 days prior to drilling unit or installation vessels being on site	Confirm that request was sent to Ministry of Works, Transport and SANHO
				Implement a functional grievance mechanism that allows stakeholders to register specific grievances related to operations by ensuring they are informed about the process and that resources are mobilised to manage the resolution of all grievances, in accordance with the Grievance Management procedure.	TEEPNA, Contractors	Throughout the drilling and installation campaign	Grievance monitoring (see Row M4-1 in Table 6-1)
	Interaction, engagement & communication with authorities and key stakeholders	Manage community expectations related to local procurement, local content, and local		Provide local town authorities with forward-looking information on project implementation, planning and resource requirements throughout the project to support effective local planning for land, services and utilities by the local authorities.	TEEPNA	As per Stakeholder Engagement Plan	As per Stakeholder Engagement Plan

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
		employment opportunities					
10.1.2.2 PREPARATION FOR DRILLING	Oil spill planning	Minimise impact of a well blow-out by implementing response procedures efficiently	OSCP	Schedule joint oil spill exercises including TEEPNA and local departments/organisations to test the emergency response capability.	TEEPNA, Drilling Contractor	Prior to commence-ment of drilling	Copy of attendance register and training records
				Ensure availability of response equipment, as specified in the site-specific response strategy (OSCP and BOCP) - refer to Row 1.1 above.			Contracts
10.1.2.3 MOBILISATION OF PROJECT STAFF	Training and allocation of responsibilities	Project staff have the capability and competence to achieve the ESMP objectives and know what the ESMP environmental requirements are All staff receive HSE training as part of their HSE induction, refresher training and an ongoing awareness and behaviour system	Environmen-tal and Social awareness	Ensure that a copy of the ESIA Report and ESMP is supplied to all contractors and sub-contractors and is on board all project vessels during the operation.	TEEPNA	At commence-ment / kick-off meeting and before new staff commence with work	Acknowledge-ment receipts
				Undertake HSE Awareness Training, including induction training to ensure the project personnel (including drilling units and other project vessels) are appropriately informed of the purpose and requirements of the ESMP, including emergency procedures, spill management, etc.	TEEPNA Contractors	At commencem ent meeting (Kick-off Meeting) and before new staff commence with work on the project	Copy of attendance register and training records
				Ensure that ESMP responsibilities are clearly defined in Job Descriptions of relevant staff.			
				Establish training and exercise programmes to ensure that the response activities can be effectively executed.			
10.1.2.4 EQUIPMENT TRANSFER	Introduction of non-indigenous invasive marine species	Control the spread of non-native invasive species to vulnerable	Preventive Maintenance Plan	Ensure all equipment (e.g., wellheads, BOPs, riser, etc.) that has been used in other regions is thoroughly cleaned prior to deployment	Drilling Contractor	Prior to entry into Namibian waters	Equipment checking (see Row M2-4 in Table 6-1)

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
		ecosystems Ships' Ballast Water					
10.1.2.5 EXCHANGE OF BALLAST WATER	Introduction of non-indigenous invasive marine species	Control the spread of non-native invasive species to vulnerable ecosystems by fulfilling the requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments ("the Ballast Water Management Convention")	Ballast Water Management Plan	• Implement the Ballast Water Management Plan. • Discharge ballast water subject to the requirements of the 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments, (specifically Regulation D2 which requires water to be treated through an approved ballast water treatment system).	Contractors	During ballast water discharge	Waste monitoring (see Row M6-1 in Table 6-1) Copy of Ballast Water Management Plan and ballast water management certificate Maintain a complete and accurate Ballast Water Record System Records are to be maintained of ballast water uptakes, discharges and exchanges as per the Ballast Water Management Plan

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.2.6 AIR POLLUTION CONTROL DURING MOBILISATION	Emissions to the atmosphere	As per operation phase – refer to Row 10.1.3.7 below.					
10.1.2.7 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING MOBILISATION	Discharge of liquid and solid waste to sea	As per operation phase – refer to Row 10.1.3.9 below.					
10.1.2.8 LIGHT POLLUTION CONTROL DURING MOBILISATION	Increased ambient lighting	As per operation phase – refer to Row 10.1.3.12 below.					
10.1.3 DRILLING AND INSTALLATION PHASE							
10.1.3.1 STAKEHOLDER PARTICIPATION AND NOTIFICATION OF VESSEL OPERATIONS	Safety zone around drilling units and installation vessels	Ensure other users of the sea are notified and navigational safety, and prevention of emergencies / accidents Minimum disruption to drilling / installation and other users of the sea	Stakeholder Engagement Plan	If necessary, distribute an updated Notice to Mariners, via the Directorate of Maritime Affairs. The notice should give updated notice of (1) the vessel name and co-ordinates of the drilling, installation and construction locations, (2) an indication of the estimated operational timeframes, (3) the dimensions of the safety zone around the drilling units and installation / construction vessels, as well as the maritime exclusion / restricted marine areas (which will be in place during construction and operation) and nearshore transshipment safety exclusion zone, and (4) details on the movements of support vessels servicing the project.	TEEPNA, Contractors	7 days prior to establish-ment on site	Copies of all correspondence
				Implement a grievance mechanism that allows stakeholders to register specific grievances related to operations.	TEEPNA, Contractors	Throughout the drilling and	Grievance monitoring (see Row M4-1 in Table 6-1)

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
						installation campaign	Copy of grievance register
10.1.3.2 PREVENTION OF ACCIDENTS	Presence of drilling unit and installation vessels	Ensure navigational safety, prevention of accidents, preparation for emergencies and minimise the chance subsequent damage to the environment occurring	Notice to Mariners General Marine Instructions	• Monitor the Maritime Surveillance Area and notify fishing vessels likely to enter the Maritime Restricted Area via radio regarding the safety requirements. • Enforce the Maritime Exclusion Area (3 NM around subsea infrastructure and FPSO) and Maritime Restricted Area (10 NM around the FPSO) throughout the Project timeline.	TEEPNA logistics manager	Throughout operation	Notice to Mariners Vessel monitoring (see Row M4-2 in Table 6-1) Provide record of any incidents and interaction with other vessels.
			General Marine Instructions	Manage the lighting on the drilling units and other project vessels to ensure that it is sufficiently illuminated to be visible to fishing vessels and compatible with safe operations	Contractors		
			ERP	Practice regular emergency response drills.	OIM / Vessel Master / HSE manager	As per ERP	Provide record of safety drills
				Ensure access to and use of current meteorological and oceanographic information in management of production activities (part of TEEPNA's Technical Risk Assessment procedures).		Throughout operation	General Marine Instructions

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping

10.1.3.2 PREVENTION OF ACCIDENTS	Presence and operation of support vessel	Minimise risk of collision with large cetaceans	Biodiversity Marine Faunal Management Plan	• During normal operations, ensure vessel transit speed between the Venus offshore project area and port remains within operational speed limits:
				  ○ Supply vessel: 10-13 knots.
				  ○ Fast supply vessel: 17-20 knots.
				• Reduce speed to operational speed range minimums within 25 km of the coast.
					Contractors	Throughout transit	ERP

				Keep a constant watch for marine mammals and turtles in the path of the vessel. Alter course and avoid animals when necessary.			
10.1.3.3 WELL SPUDDING	Physical disturbance of the seabed sediments	Protect shipwrecks	Well design	Adjust the well location to avoid any shipwrecks identified in pre-drilling ROV clearance surveys.	Drilling Contractor	During spudding, if wreck is identified	ROV clearance footage
			Stakeholder Engagement Plan	Develop and implement Chance Find Procedure. Specifically if any historic shipwreck objects are found during the pre-drilling ROV survey (although unlikely due to geophysical survey results), which could potentially be impacted by the activity, work in the directly affected area should cease (if identified after drilling commencement) until the Namibian Heritage Council (NHC) has been notified and the operator has complied with any additional mitigation as specified by the Authority, including any recommended buffer.	Drilling Contractor		Correspondence with NHC
10.1.3.4 WELL DRILLING - DISCHARGE OF DRILL CUTTINGS, CEMENT AND OTHER FLUIDS	Physical disturbance of the seabed sediments and increased sediment in the water column	Protect sensitive seabed fauna / habitats and pelagic fauna	Waste Management Plan Chemical Management Plan	• Use WBMs for drilling, as far as possible. • Use certified Barite with low content of heavy metals and (Br and Hg). • Select chemicals according to the following criteria: lowest toxicity, lowest bioaccumulation potential and highest biodegradation, where practicable. • Use only low-toxicity and partially biodegradable additives in drilling fluid, where practicable.	Drilling Contractor	Throughout drilling, if using WBMs	Monitor fluids and cuttings and - see Row M1-6 in Table 6-1

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				• Maintain a full register of Material Safety Data Sheets (MSDSs) for all chemical used, as well as a precise log file of their use and discharge. • Monitor drilling fluid volumes continuously to detect any unexpected changes. Diagnose, assess and mitigate any unexpected changes in volume immediately.			
10.1.3.4 WELL DRILLING - DISCHARGE OF DRILL CUTTINGS, CEMENT AND OTHER FLUIDS	Physical disturbance of the seabed sediments and increased sediment in the water column	Protect sensitive seabed fauna / habitats and pelagic fauna	Waste Management Plan Chemical Management Plan	Use a low toxicity Group III NADF. When using NADF: • Use only low-toxicity and partially biodegradable additives in drilling fluid, including certified Barite with low content of heavy metals and (Br and Hg). where practicable. • Test any discharged fluids for visible oil contamination (static sheen or equivalent). • Use high efficiency solids control equipment to reduce the need for fluid change out and minimise the amount of residual fluid on drilled cuttings. • Treat NADF cuttings to reduce oil content to <6.9% Oil On Cutting (OOC) prior to discharge overboard. • Test drilled cuttings for retained oil content to ensure specified discharge standards are maintained (average residual oil on cuttings <6.9%). • Ensure regular maintenance of the onboard solids control package to allow higher NADF recovery. • Monitor drilling fluid volumes continuously to detect any unexpected changes. Diagnose, assess and mitigate any unexpected changes in volume immediately.	Drilling Contractor	Throughout drilling, if using NADFs	Monitor fluids and cuttings and - see Row M1-7 in Table 6-1

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				Discharge of risered cuttings via a caisson at least ~10 m below surface.	Drilling Contractor	Throughout drilling	
				Use only low-toxicity and partially biodegradable additives in cement.	Drilling Contractor	Throughout drilling	
10.1.3.4 WELL DRILLING - DISCHARGE OF DRILL CUTTINGS, CEMENT AND OTHER FLUIDS	Physical disturbance of the seabed sediments and increased sediment in the water column	Protect sensitive seabed fauna / habitats and pelagic fauna	Waste Management Plan Chemical Management Plan	• Avoid excess cement usage during top hole drilling operations by monitoring (by ROV) for discharges during cementing. If significant discharges are observed on the seafloor terminate cement pumping. • Undertake daily visual checks of BOP will be completed with ROV camera during drilling to ensure BOP integrity.	Drilling Contractor	During cementing	Monitor cement returns - see Row M1-8 in Table 6-1
	Increased pollutants in the water column	Protect pelagic fauna	Waste Management Plan Chemical Management Plan	• Minimise BOP fluid discharged into the marine environment.	Drilling Contractor	During drilling	Monitor BOP fluid discharged - see Row M1-11 in Table 6-1
	Increased levels of radioactivity	Protect the environment and workers	Waste Management Plan	If seabed radioactivity was not confirmed as part of the Environmental Baseline Study, analyse Gamma ray results for radioactivity during logging and / or during cuttings treatment. If any issues with regard to radioactivity are detected, undertaken appropriate treatment and disposal.	Drilling Contractor	During initial cutting treatment / logging	Monitor cuttings and - see Row M1-7 in Table 6-1

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.5 TRANSPORT, STORAGE AND HANDLING OF RADIOACTIVE DEVICES AND EXPLOSIVES	Increased levels of radioactivity	Protect the environment and workers	Preventive Maintenance Plan	Designate competent person/s in charge and to handle radioactive devices and/or explosives. • Comply with necessary regulations for the transport, storage and handling of radioactive devices. • Transport and store radioactive devices in specially designed secured (locked) storage containers.	Drilling Contractor Service Company	Throughout drilling operations	Training certificates
	Increased levels of radioactivity	Protect the environment and workers	Preventive Maintenance Plan	• Follow standard / prescribed radioactive sources procedure. • When radioactive sources are to be used, secure the area between and around the storage containers and the floor and only allow key personnel in the area.	Drilling Contractor Service Company	Throughout drilling operations	
				Set up incident and emergency reporting procedures for actual or suspected individual over-exposure, theft or loss, logging tools stuck downhole in wells, and release or spillage into the environment.			Incident and emergency reports
				Routinely test the sources according to industry requirements to document leak levels.			Test results
10.1.3.6 VERTICAL SEISMIC PROFILING (VSP)	Increased ambient underwater noise levels	Reduce disturbance of marine fauna, particularly cetaceans (whales and dolphins), seals, seabirds (particularly penguins) and turtles	Biodiversity Management Plan	<u>Pre-start Protocols:</u> • Commence VSP profiling, as far as possible, during daylight hours with good visibility. However, if this is not possible due to prolonged periods of poor visibility (e.g., thick fog) or unforeseen technical issue which results in a night-time start, refer to "periods of low visibility" below. • Undertake a 60-minute (as water depths > 200 m) pre-shoot visual scan (prior to soft-starts / airgun tests) within the 500 m radius mitigation zone in order to confirm there is no cetaceans, turtles,	Drilling Contractor	During VSP operations	MMO & PAM monitoring (see Row M3-1 & M3-2 in Table 6-1) MMO / PAM reports

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				penguins and shoaling large pelagic fish activity close to the source. Implement PAM during the 60-minute during the pre-watch period.			
10.1.3.6 VERTICAL SEISMIC PROFILING (VSP)	Increased ambient underwater noise levels	Reduce disturbance of marine fauna, particularly cetaceans (whales and dolphins), seals, seabirds (particularly penguins) and turtles	Biodiversity Management Plan	• Implement a "soft-start" procedure of a minimum of 20 minutes' duration when initiating the VSP acoustic source (except if testing a single airgun on lowest power). This requires that the sound source be ramped from low to full power rather than initiated at full power, thus allowing a flight response by marine fauna to outside the zone of injury or avoidance. • Delay "soft-starts" if cetaceans, turtles and shoaling large pelagic fish are observed / detected within the mitigation zone during the pre-shoot visual / acoustic scan. A "soft-start" should not begin until 20 minutes after cetaceans depart the mitigation zone or 20 minutes after they are last seen or acoustically detected by PAM in the mitigation zone. In the case of shoaling large pelagic fish and turtles, delay the "soft-start" until animals move outside the 500 m mitigation zone. • Maintain MMO visual observations and PAM acoustic detections within the 500 m mitigation zone continuously during VSP operation to identify if there are any cetaceans present. <u>Shut-Downs</u> • Shut down the acoustic source if cetaceans, penguins, shoaling large pelagic fish or turtles are sighted within 500 m mitigation zone until such time as the mitigation zone is clear of cetaceans for 20 minutes or, in the case of penguins, shoaling large pelagic fish or turtles, the animals move outside the 500 m mitigation zone before	Drilling Contractor	During VSP operations	MMO & PAM monitoring (see Row M3-1 & M3-2 in Table 6-1) MMO / PAM reports

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				the soft-start procedure and production may commence.			
10.1.3.6 VERTICAL SEISMIC PROFILING (VSP)	Increased ambient underwater noise levels	Reduce disturbance of marine fauna, particularly cetaceans (whales and dolphins), seals, seabirds (particularly penguins) and turtles	Biodiversity Management Plan	<u>Breaks in Airgun Firing: Breaks of less than 20 minutes</u> • There is no requirement for a soft-start and firing can recommence at the same power level as at prior to the break (or lower), provided no cetaceans, penguins, shoaling large pelagic fish or turtles were detected in the mitigation zone during the breakdown period. • If a cetacean is detected in the mitigation zone during the breakdown period, there must be a minimum of a 20-minute delay from the time of the last detection within the mitigation zone and a soft-start must then be undertaken. In the case of penguins, shoaling large pelagic fish or turtles, the animals move outside the 500 m mitigation zone within the 20-minute period.	Drilling Contractor	During VSP operations	MMO & PAM monitoring (see Row M3-1 & M3-2 in Table 6-1) MMO / PAM reports
				Breaks in Airgun Firing: Breaks longer than 20 minutes • If it takes longer than 20 minutes to restart the airguns, a full pre-watch and soft-start should be carried out before the survey re-commences. If an MMO/PAM operator has been monitoring during the breakdown period, this time can contribute to the 60-minutes pre-watch time.			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.6 VERTICAL SEISMIC PROFILING (VSP)	Increased ambient underwater noise levels	Reduce disturbance of marine fauna, particularly cetaceans (whales and dolphins), seals, seabirds (particularly penguins) and turtles	Biodiversity Management Plan	<u>Period of low visibility</u> Ensure that during periods of low visibility (where the mitigation zone cannot be clearly viewed out to 500 m), including night-time, the VSP source is only used if PAM technology is used to detect vocalisations or: • there have not been three or more occasions where cetaceans, penguins, shoaling large pelagic fish or turtles have been sighted within the 500 m mitigation zone during the preceding 24-hour period; and • a two-hour period of continual observation of the mitigation zone was undertaken (during a period of good visibility) prior to the period of low visibility and no cetaceans, penguins, shoaling large pelagic fish or turtles were sighted within the 500 m mitigation zone.	Drilling Contractor	During VSP operations	MMO & PAM monitoring (see Row M3-1 & M3-2 in Table 6-1) MMO / PAM reports
10.1.3.7 SUBSEA INFRASTRUCTURE INSTALLATION	Physical disturbance of the seabed sediments	Minimise disturbance of seabed habitats	Well Drilling and Subsea Infrastructure Design	• Use ROVs equipped with cameras and manipulator arms to assist in the precise placement and connection of subsea equipment and infrastructure. • Use Acoustic Positioning Systems that use acoustic signals to determine the exact location of subsea equipment. • Use pre-lay guidance systems for the installation of flowlines and umbilicals, using a combination of GPS, acoustic positioning, and ROVs to ensure the lines are laid along the predetermined path.	Contractor	During installation	ROV monitoring (see Row M3-3 in Table 6-1) and footage

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.7 SUBSEA INFRASTRUCTURE INSTALLATION	Physical disturbance of the seabed sediments	Protect shipwrecks	Subsea layout design	Adjust the subsea location to avoid any shipwrecks identified in ROV surveys.	Subsea Installation Contractor	During subsea installation, if wreck is identified	ROV footage
			Stakeholder Engagement Plan	Develop and implement Chance Find Procedure. Specifically, if any historic shipwreck objects are found during subsea installation (although unlikely due to geophysical survey results), which could potentially be impacted by the activity, work in the directly affected area should cease until the NHC has been notified and the operator has complied with any additional mitigation as specified by the Authority, including any recommended buffer.			Correspondence with NHC
10.1.3.7 FPSO ANCHOR INSTALLATION	Physical disturbance of the seabed sediments	Minimise disturbance of seabed habitats	Subsea Infrastructure Design	During anchor installation, undertake ROV surveys to confirm anchor placement accuracy and a clear unobstructed anchoring area.	Subsea Installation Contractor	During installation	ROV monitoring (see Row M3-4 in Table 6-1) and footage
10.1.3.7 AIR POLLUTION CONTROL DURING GENERAL OPERATION	Emissions to the atmosphere during operation	Reduce volume of diesel burned and emissions to the air	Subsea Infrastructure Design Waste Management Plan	Optimise drilling unit and vessel positioning, movement, idling and logistics (number of trips required to and from the onshore logistics base) in order to lower fuel consumption.	Contractors	Throughout operations	Fuel consumption monitoring (see Row M1-4 in Table 6-1) Inventory of volume and type of fuel used
			Waste Management Plan	Use distillate fuels with low sulphur content to reduce SO_2 and PM emissions			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.7 AIR POLLUTION CONTROL DURING GENERAL OPERATION	Emissions to the atmosphere during operation	Reduce volume of diesel burned and emissions to the air	Waste Management Plan	Annually calculate and publicly report: • Scope 1 emissions: Direct emissions from project facilities	TEEPNA	Annually	Fuel consumption monitoring (see Row M1-4 in Table 6-1) Inventory of volume and type of fuel used
				Ensure no incineration of waste occurs within the port limits.	Contractor	Throughout operations	Incineration monitoring (see Row M1-1 & 1-2 in Table 6-1)
			Preventive Maintenance Plan	Implement a maintenance plan to ensure all diesel motors and generators receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere (as well as noise emissions).	Contractor	Throughout operations	Equipment monitoring (see Row M2-7 in Table 6-1)
10.1.3.8 AIR POLLUTION CONTROL DURING WELL TEST (NON-ROUTINE FLARING)	Emissions to the atmosphere during flaring	Reduce volume of hydrocarbons burned and emissions to the air	Waste Management Plan	Use high design efficiency burners for flaring to optimise combustion of the hydrocarbons in order to minimise emissions and hydrocarbon 'drop-out' during well testing.	Drilling Contractor	During flaring	Flaring monitoring (see Row M1-9 in Table 6-1)

				• Minimise the volume and duration of flaring to the lowest practicable level.
				• Optimise well test programme to reduce emissions:
				  ○ Maintain high combustion efficiency via proper fuel-to-air ratios and high-efficiency flare tips.
				  ○ Ensure reliable ignition systems and protect pilot flames from blow-out.
				  ○ Control flare stability to avoid black smoke and odour (e.g. avoid flame lift-off).			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				Commence with well testing during daylight hours and avoid flaring in foggy conditions, as far as possible.			
				Annually calculate and publicly report: • Scope 1 emissions: Direct emissions from project facilities.	TEEPNA	Annually	
10.1.3.9 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	Implement the Waste Management Plan.	Contractors	Throughout operations	Copy of all plans Report the total discharge waste stream volumes
				Prohibit operational discharges in the nearshore transshipment area and when transiting through the NIMPA.	Contractors	Throughout operations	Waste and sewage monitoring (see Row M1-1 & M1-2 in Table 6-1)
				Drilling units and project vessels will have: • an onboard sewage treatment plant; • a sewage comminuting and disinfecting system, and/or • a sewage holding tank.	Contractors	Throughout operations	Sewage monitoring (see Row M1-5 & M2-2 in Table 6-1)
				Ensure sewage and black water discharges comply with: • a BOD of <25 mg/l (if the treatment plant was installed after 1/1/2010,) or <50 mg/l (if installed before this date); and • minimal residual chlorine concentration of 0.5 mg/l.	Contractors	Throughout operations, during discharges	Sewage Certificate containing the test results of the sewage treatment plant

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.9 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	Sewage discharge to comply with the following: • No visible floating solids must be produced or discolouration of the surrounding water must occur. • Sewage must be comminuted and disinfected for discharges between 3 nm and 12 nm from the coast. • Disposal of sewage from holding tanks must be discharged at a moderate rate while the ship is proceeding on route at a speed not less than 4 knots.	Contractors	Throughout operations, during discharges	
				Galley waste discharge to comply with the following: • No disposal to occur within 3 nm of the coast. • Disposal at >3 nm from coast to be comminuted to particle sizes smaller than 25 mm. • Disposal overboard without grinding can occur greater than 12 nm from the coast when the vessel is sailing. As the drilling units will be stationary, food waste will need to be comminuted prior to discharge at the drilling site.			Waste monitoring (see Row M1-1 & 1-2 in Table 6-1) Inventory of volume of waste discharged and discharge location
				Minimise the discharge of waste material should obvious attraction of fauna be observed.			

				• Ensure all relevant deck and machinery drainage is routed to:
				  ○ sump tanks on board for treatment prior to discharge to ensure MARPOL compliance.
				  ○ oil residue holding tanks.
				• Treat / dispose the residue from the onboard oil/water separator at a licenced hazardous waste treatment facility.
							Waste monitoring (see Row M1-3 & M2-1 in Table 6-1)
							Oil Record Book
							Waste receipts

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.9 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	• Ensure oil in water concentration in normal discharges (not produced water) is less than 15 ppm prior to discharge overboard. • Use an oil discharge monitoring and control system to ensure that any discharge of oily mixtures is stopped when the oil content of the effluent exceeds 15 ppm.	Contractors	Throughout operations, during discharges	Waste monitoring (see Row M1-3 & M2-1 in Table 6-1) Oil Record Book
				• Ensure all process areas are bunded to ensure drainage water flows into the closed drainage system. • Use drip trays to collect run-off from equipment that is not contained within a bunded area and route contents to the closed drainage system.			Waste monitoring (see Row M1-3 & M2-1 in Table 6-1) Quantity of oil residue (sludge) produced. Record all discharges, together with date, time and method of discharge, disposal route, any system failure and accidental oil spills in the Oil Record Book
				Use low-toxicity biodegradable detergents in deck cleaning.			
				Implement maintenance programmes for valves, flanges, fittings, seals, hydraulic systems, hoses, etc.			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.9 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	No disposal overboard of general waste (e.g., domestic waste, cooking oil, plastics and incinerator ash) Ensure on-board solid waste storage is secure. When authorized, incinerate (non-hazardous only) waste or transport to a licensed onshore waste management facility for disposal/recycling. Retain waste receipts. • Segregate, classify and store all hazardous waste in suitable receptacles on board in order to ensure the safe containment and transportation of waste • Dispose of hazardous waste at a facility that is appropriately licensed and accredited.	Contractors	Throughout operations	Waste monitoring (see Row M1 in Table 6-1) Inventory volume of waste generated Inventory of volume transferred for onshore disposal / incinerated Waste receipts
10.1.3.10 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING WELL TESTING (PRODUCED WATER FROM DRILLING UNITS)	Discharge of liquid waste to sea	Reduce discharges and improve quality of liquid waste to sea by compiling with TEEPNA standards	Waste Management Plan	Treat produced water prior to discharge. • If following onboard treatment, the hydrocarbon content is <30 mg/l, the produced water may be discharged overboard. • If the content is >30 mg/l, it should either undergo a second treatment (see bullet above) or be transferred to shore for treatment and disposal.	Drilling Contractor	During discharge of produced water	Produced Water monitoring (see Row M1-10 in Table 6-1)

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.11 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING HYDROSTATIC TESTING	Discharge of liquid waste to sea	Reduce discharges and improve quality of liquid waste to sea by compiling with TEEPNA standards	Waste Management Plan	Treat (maximum 15 mg/L Oil content) and discharge hydrostatic fluid from production line hydrostatic testing overboard, following treatment on the FPSO	Subsea Installation Contractor	During hydrostatic testing	Hydrostatic fluid monitoring (see Row M1-12 in Table 6-1)
10.1.3.12 LIGHT POLLUTION CONTROL DURING GENERAL OPERATION AND NON-ROUTINE FLARING	Increased ambient lighting	Protect marine fauna, migratory birds and seabirds by managing illumination of the project vessels Zero fatalities of marine fauna, migratory birds and seabirds	Biodiversity Management Plan	• Reduce lighting to a minimum compatible with safe operations whenever and wherever possible. • Positioning light sources, if possible and consistent with safe working practices, in places where emissions to the surrounding environment are minimised.	Contractors	Throughout operations	Lighting monitoring (see Row M2-5 in Table 6-1)
				Keep disorientated, but otherwise unharmed, seabirds in dark containers (e.g., suitably ventilated cardboard box) for subsequent release during daylight hours. Done in strict accordance with protocols outlined in the Wildlife Response Plan.	Contractors	As required	Record information on patterns of bird reaction to lights and real incidents of injury/death, including stray land birds resting on the project vessels
				Report ringed/banded birds to the appropriate ringing/banding scheme (details are provided on the ring).			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.13 UNDERWATER NOISE DURING DRILLING AND INSTALLATION	Increased noise into the water column	Reduce noise levels in the water column	General Marine Instructions	Reduced vessel power and duty cycle to lowest safe operational level when using dynamic positioning systems.	Contractors	Throughout operations	

				• During normal operations, ensure vessel transit speed between the Venus offshore project area and port remains within operational speed limits:
				  ○ Supply vessel: 10-13 knots.
				  ○ Fast supply vessel: 17-20 knots.
				• Reduce speed to operational speed range minimums within 25 km of the coast.
					Contractors	During transit	Vessel speed (see Row M5-21 in Table 6-1)

10.1.3.14 BUNKERING / REFUELLING AT SEA	Spill of hydrocarbons to sea	Protect marine environment Minimise disturbance / damage to marine life	Stakeholder Engagement Plan	Transfer of oil at sea is not permitted within the economic zone (i.e., 200 miles from the coast) without the permission of the Ministry of Works and Transport. Submit an application (including location, supplier and timing) for the transfer of oil at sea (outside a harbour within 50 nm of the Namibian coast) to the Ministry of Works and Transport.	Contractors	As required, at least 5 days prior to refuelling	Provide copies of the correspondence with the Ministry of Works and Transport and approval for bunkering
			Contractor HSE Plan Contractor Bridging Document SOPEP	• Ensure operating limits and restrictions are defined for offshore bunkering operations. Such operating limits shall be based upon a risk assessment, which takes into account weather conditions, sea conditions, activities to be performed and vessel characteristics. • Conducted connection and start of offloading, transshipment or bunkering operations during daylight. • Ensure bunkering operations are only performed after approval of both captain / Master involved.	Contractors	During bunkering	Bunkering (see Row M5-3 in Table 6-1) Spill monitoring (see Row M5-4 in Table 6-1) Record of all spills (Incident Register), including spill reports; emergency

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
							exercise reports; audit reports.

10.1.3.15 OPERATION OF HELICOPTERS for crew changes, servicing, etc.	Increased ambient noise levels	Minimise disturbance / damage to marine and coastal fauna
		
		All pilots are briefed on sensitivity of bird and seal colonies and whale breeding areas
			Flight path design	• Ensure all flight paths avoid (except in medical emergency):
				  ○ Lüderitz Lagoon.
				  ○ Offshore islands (including Halifax, Possession, Sinclair, Pomona, Plumpudding, Klein Ichaboe and Bird Island).
				  ○ Seal colonies (including Atlas Bay, Wolf Bay Van Reenen Bay, Sylvia Hill, Hollamsbird Island, Conception Bay and Cape Cross).
				• If above is not possible, ensure a minimum altitude of 762 m / 2500 ft is maintained except when taking off/landing, in an emergency, and for weather reasons.
					Helicopter contractor	All flights between drilling units and Lüderitz	Copy of set flight path (including altitude)
							
							Helicopter logs
							
							Deviations from set flight paths

				Avoid extensive low altitude (<762 m or 2 500 ft)) coastal flights by ensuring that the flight path is perpendicular to the coast, as far as possible.	Helicopter contractor		
			Environmen-tal Awareness Training	• Brief of all pilots, as part of the HSE indication for pilots, on the ecological risks associated with flying at a low altitude along the coast or above marine mammals. • No hovering or circling of aircraft over whales, or other marine megafauna.	TEEPNA and Helicopter contractor		

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.3.16 SUPPLIER PERFORMANCE	Adherence to worker health and safety provisions	Minimise human rights risks in the supply chain	Local Content Plan	• Ensure risk-based monitoring and evaluation of identified contractors to uphold international standards. • Undertake random risk-focussed monitoring and evaluation of smaller, local suppliers to ensure aligned implementation of the project's HSE standards. • Ensure contractors are aware of the Operator's human rights policy and expectations prior to contracting.	TEEPNA	Throughout operations	Supplier performance monitoring (see Row M10-1 in Table 6-1)
			SEP	Implement a grievance mechanism that allows stakeholders to register specific grievances related to operations.	TEEPNA, Contractors	Throughout the drilling and installation campaign	Grievance monitoring (see Row M4-1 in Table 6-1) Copy of grievance register
10.1.4 DEMOBILISATION OF DRILLING AND INSTALLATION PHASE							
10.1.4.1 DRILLING DEMOBILISATION	Increased hard substrate on seafloor	Minimise disturbance of the seafloor and modification of benthic habitat	Waste Management Plan	Ensure any excess cement onboard the drilling unit is shipped to shore for reuse, storage or disposal.	Drilling Contractor	On completion of well drilling	Waste receipts
		Minimise impact on other users of the sea	Emergency Response Plan	• Undertake final clearance survey by ROV to confirm the status of seafloor around the well to ensure no dropped equipment remain. • Retrieve of lost objects / equipment, where practicable, after assessing the safety and metocean conditions. • Refer to lost equipment in Row 5.2 for equipment that can't be retrieved.			Seafloor monitoring (see Row M5-2 in Table 6-1)

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.5 UNPLANNED EVENTS							
10.1.5.1 ACCIDENTAL OIL SPILLS	Diesel spills from refuelling or from tank failure	Minimise impact to the marine fauna and the environment by implementing response procedures efficiently	SOPEP Emergency Response Plan	• Implement emergency plans in Row 1.1 above. • Ensure personnel are adequately trained in both accident prevention and immediate response, and resources are available on each vessel.	Contractors	In event of spill	Spill monitoring (see Row M5-4 in Table 6-1) Record of all spills (Incident Register), including spill reports; emergency exercise reports; audit reports Incident log
				• Mop up any spills onboard immediately with biodegradable low toxicity detergents. • Use oil absorbent.			
				Attempt to control and contain the spill at sea, as far as possible and whenever the sea state permits, using suitable recovery techniques to reduce the spatial and temporal impact of the spill.			
				Where diesel, which evaporates relatively quickly, has been spilled, the water should be agitated or mixed using a propeller boat/dinghy to aid dispersal and evaporation.			
				Use low toxicity dispersants, as approved the relevant Namibian authorities, that rapidly dilute to concentrations below most acute toxicity thresholds.			
				Ensure adequate resources are provided to collect and transport oiled birds to a cleaning station.			
				• Plan for and implement responses in terms of IPICEA-IOGP guideline document for the economic assessment and compensation for marine oil releases. • Ensure that an insurance policy is in place, including coverage for third party liability in the event of unplanned events.	TEEPNA, Contractors	Throughout operations and in event of a spill	Insurance cover

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.5.2 EQUIPMENT LOSS	Obstruction on seafloor or in water column	Protect sensitive seabed habitat Minimise risk to other users of the sea	Preventive Maintenance Plan	Ensure containers are sealed / covered during transport and that loads are lifted using the correct lifting procedure and within the maximum lifting capacity of crane system.	Contractors	During operation	Equipment monitoring (see Row M2-6 and M5-2 in Table 6-1) Establish a hazards database listing: • the type of gear lost • date of abandon-ment / loss • location; and • where applicable, the dates of retrieval Copies of all correspondence
				Minimise the lifting path between vessels.			
				Maintain an inventory of all equipment and undertake frequent checks to ensure items and equipment are stored and secured safely on board each vessel.			
		Minimise risk of collision / accident / entanglement and inform relevant parties	Emergency Response Plan	• Undertake a post drilling ROV survey to scan seafloor for any dropped equipment near to the well. • Retrieve of lost objects / equipment, where practicable, after assessing the safety and metocean conditions.	Drilling contractor	As required	
				When any item that constitute a seafloor or navigation hazard is lost on the seabed, or in the sea, complete a standard form which records the date and cause of loss, details of equipment type, vessel Sea Control location, sea state and weather, and the nature of the seabed. Inform the Ministry of Works and Transport (Directorate of Maritime Affairs).	Contractors	As required	
				Notify Department of Maritime Affairs of any items left on the seabed or floating in the water column that constitute a seafloor or navigational hazard, and request that they send out a Notice to Mariners with this information.			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping

10.1.5.3 FAUNAL COLLISIONS WITH PROJECT VESSELS	Vessel strikes	Minimise risk of collision with large cetaceans	Biodiversity management Plan	• During normal operations, ensure vessel transit speed between the Venus offshore project area and port remains within operational speed limits:
				  ○ Supply vessel: 10-13 knots.
				  ○ Fast supply vessel: 17-20 knots.
				• Reduce speed to operational speed range minimums within 25 km of the coast.
					Contractors	During transit	Vessel speed (see Row M5-1 in Table 6-1)

				Keep a constant watch from all vessels (Vessel Captain and crew) for cetaceans and turtles in the path of the vessel. Alter course and avoid animals when necessary.			
				Apply the following measures for marine fauna: • For a whale sighting, maintain a distance of 91 m (or greater). • For a marine turtles or other cetacean sighting, maintain a distance of 45 m (or greater). • Attempt to remain parallel with animals' course, avoiding excessive speed or directional changes • Reduce vessel speeds to 10 knots should mother and calf pairs be encountered.	Contractors	As required	
				Report any collisions with large whales to the International Whaling Commission (IWC) database, which has been shown to be a valuable tool for identifying the species most affected, vessels involved in collisions, and correlations between vessel speed and collision risk.			
			Environmen-tal Awareness Training	Educate and create awareness with mariners about collision risks.		Before mobilisation and refresher annually	Copy of attendance register and training records

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.1.5.4 WELL BLOW-OUT	Oil spill from well blow-out	Minimise impact to the marine fauna and the environment by implementing response procedures efficiently	BOCP OSCP ERP	Implement emergency plans in Row 1.1 above.	Drilling Contractor, TEEPNA	In event of loss of well control or well blow-out	Spill monitoring (see Row M5-3 in Table 6-1) Copy of attendance register and training records Record of all spills (Incident Register), including spill reports; emergency exercise reports; audit reports Incident log
				Undertake oil spill response exercises as specified in the OSCP.			
				• Use low toxicity dispersants that rapidly dilute to concentrations below most acute toxicity thresholds. Dispersants should be used cautiously, based on a site/spill specific assessment, and in line with Namibian regulations, including relevant authorities' approval • Use dispersants and relevant responses to be used based on site/spill assessments. • Ensure a standby vessel is within 30 minutes of the drilling unit and equipped for dispersant spraying and can be used for mechanical dispersion (using the propellers of the ship and/or firefighting equipment). It should have at least 5 m^3 of dispersant onboard for initial response.			
				In the event of a large spill, implement methods to monitor and track the behaviour and size of the spill and optimise available response resources (e.g. Synthetic Aperture Radar (SAR), drift buoys, surveillance planes and satellite imaging).			
				Take all efforts, when the sea state permits, to attempt to control and contain the spill at sea with suitable recovery techniques to reduce the spatial and temporal impact of the spill.			
		Minimise financial loss to individuals, companies and other organisations	Stakeholder Engagement Plan	• Plan for and implement responses in terms of IPICEA-IOGP guideline document for the economic assessment and compensation for marine oil releases.	TEEPNA, Contractors	Throughout operations and in event of a spill	Insurance cover

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				• Ensure that an insurance policy is in place, including coverage for third party liability in the event of unplanned events.			

10.2 Environmental and Social Management Commitment Register: Production Phase

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.1 PLANNING PHASE							
10.2.1.1 PREPARATION OF SUBSIDIARY PLANS	Planning and Management	Identification of all parties and their responsibilities documented and communicated	See Section 3.5	Ensure the following subsidiary plans are in place for Production Phase: • OSCP • Blow-out Contingency Plan • SOPEP • Emergency Response Plan (including MEDIVAC plan) • Stakeholder Engagement Plan (including a Grievance Procedure) • Waste Management Plan • Chemical Management Plan • Preventive Maintenance Plan • Ballast Water Management Plan • Biodiversity Management Plan • Corrective Action Plan • Local Content Plan • Labour Management Plan • Community Development Plan • Code of Conduct • Energy and Carbon Management Plan • Air Quality Monitoring Plan (nearshore area) • Heat exposure management plan.	TEEPNA, Contractors	30 days prior to commence-ment of operation	Copies of all plans and certificates Confirm compliance and justify any omissions
				In addition to the above, ensure that: • There is a record of vessels seaworthiness certificate and/or classification stamp. • A valid International Sewage Pollution Prevention Certificate (ISPPC), as required by vessel class.			Copies of all plans and certificates Confirm compliance and

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				• International Oil Pollution Prevention (IOPP) Certificate, as required by vessel class.			justify any omissions
10.2.1.2 PREPARATION FOR PRODUCTION	Identification and appointment of suppliers	Minimise human rights risks in the supply chain	Local Content Plan	• Adopt a human rights risk-based approach to ongoing human rights due diligence with contractors and suppliers, especially concerning modern slavery, forced labour, trafficking and child labour. • Ensure contractor standards align with standards espoused in IFC EHS Guidelines for the Oil and Gas Sector where appropriate to the activity conducted. • Ensure international and local procurement contracts include provisions for compliance monitoring and reporting aligned with project requirements. • Ensure all third-party project security providers comply and align with the VPSHR through procurement contracts. • Ensure contractors are aware of the Operator's human rights policy and expectations prior to contracting.	TEEPNA	Prior contracting suppliers and regular assessments thereafter	Assessment results Procurement contracts
		Ensure fair, transparent and reasonable preferential contracting of local companies	Local Content Plan	• Implement Local Content Plan to ensure fair, transparent and reasonable preferential contracting of local companies with the suitable expertise. • Develop and widely communicate a dedicated information portal for prospective service providers with clear explanations of required standards of performance, compliance and qualification. • Ensure that social investment and local employment opportunities are transparently	TEEPNA, Contractors	During contracting	Contracts (see Row M4-2 in Table 6-1) Information portal

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				communicated and available to all stakeholders, including vulnerable groups.			
10.2.1.2 PREPARATION FOR PRODUCTION	Identification and appointment of suppliers	Minimise community health and safety risks	Code of Conduct	Share the company's Code of Conduct and Fundamental Principles of Purchasing with prospective contractors and suppliers.	TEEPNA		
	Employment	Maximise local employment opportunities	Local Content Plan Code of Conduct	• Implement Local Content Plan to ensure fair and transparent employment. • Use the dedicated information portal to compile and publish detailed requirements for the various job categories within the industry together with information on where and how such skills can be acquired or enhanced and the funding opportunities that may be available to support the development of skills in these fields. • Ensure that social investment and local employment opportunities are transparently communicated and available to all stakeholders, including vulnerable groups.	TEEPNA, Contractors	During recruitment	Local employment numbers
		Minimise community health and safety risks	Code of Conduct	• Share the company's Code of Conduct with staff. • Provide health services and screenings for staff.	TEEPNA, Contractors	Throughout operations	
			Stakeholder Engagement Plan	Engage with national and local government, and other operations in the area, to better understand and manage influx impacts.	TEEPNA	Regularly throughout operations	Record of engagements

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.1.2 PREPARATION FOR PRODUCTION	Equipment	Minimise impact on and disturbance of marine fauna	Well drilling and subsea infrastructure design	• Ensure all vessels have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL requirements. • Give preference to vessels using marine gas oil (MGO).	TEEPNA	During procurement / contracting	Contracts
		Minimise risk of spillages during crude oil offloading	Well drilling and subsea infrastructure design	Use breakaway couplings with shut-off valves during transshipment operations. As a result, any spill during transshipment is likely to be of a relatively small volume before it will be detected and stopped.	TEEPNA	During FEED	
	Oil spill planning	Minimise impact of a well blow-out by implementing response procedures efficiently	OSCP	Ensure oil spill equipment is mobilised and installed on vessels in line with the SOPEP and OSCP.	Contractors	Prior to commencement of production operations	
				Ensure contract arrangements and service agreements are in place to implement the SOPEP, ERP and OSCP, e.g., capping stack in Saldanha Bay and other international locations, SSDI kit, surface response equipment (e.g., booms, dispersant spraying system, skimmers, etc.), dispersants, response vessels, etc.	TEEPNA	Prior to commencement of production operations	Contracts
				Secure an insurance policy, including coverage for third party liability.	TEEPNA	Prior to commencement of production operations	Contracts
				Plan for a standby vessel being within 30 minutes of the FPSO and equipped for dispersant spraying and can be used for mechanical dispersion (using the propellers of the ship and/or firefighting equipment). It	Contractors	Prior to commencement of production operations	Contracts

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				should have at least 5 m^3 of dispersant onboard for initial response.			
10.2.1.2 PREPARATION FOR PRODUCTION	Oil spill planning	Minimise impact of a well blow-out by implementing response procedures efficiently	OSCP	Schedule joint oil spill exercises including TEEPNA and local departments/organisations to test the emergency response capability.	TEEPNA, Contractors	Prior to commence-ment of production operations	Copy of attendance register and training records
				Deploy response equipment, as specified in the site-specific response strategy (OSCP) - refer to Row 1.1 above.			Contracts
10.2.1.3 STAKEHOLDER CONSULTATION AND NOTIFICATION OF PRODUCTION COMMENCEMENT	Interaction, engagement & communicatio n with national authorities and key stakeholders	Ensure that other users of the sea are aware of production activities and navigational safety and parties are aware of the mechanism to follow for raising concerns Minimise disruption to production and other users of the sea	Stakeholder Engagement Plan	Implement Stakeholder Engagement Plan taking into account environmental, socio-economic and cultural aspects.	TEEPNA	Throughout operations	As per Stakeholder Engagement Plan
				Notify key stakeholders, via the Directorate of Maritime Affairs, at least three weeks prior to production of the FPSO and DPST operations, respectively. The Notice to Mariners should give notice of (1) the vessel name and co-ordinates of the FPSO location, (2) the dimensions of the Maritime Exclusion Area, Maritime Restricted Area and nearshore transshipment safety exclusion zone, and (3) details on the movements of support vessels servicing the project. This Notice to Mariners should be distributed timeously to the following Namibian fishing industry associations: • Fishing industry / associations: Confederation of Namibian Fishing Association, Large Pelagic and Hake Longline Association, Large Pelagic Association, Deep Water Trawling Association and Walvis Bay Pelagic Fishing Association. • Ministry of Works and Transport. • South African Navy Hydrographic Office (SANHO).	TEEPNA	3 weeks prior to commence-ment of production operations	Copies of all correspondence and list of those to whom it was sent

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				• Namibian Ports Authority (Namport). • MAFWLR Monitoring, Control and Surveillance Unit in Walvis Bay (Vessel Monitoring System in particular).			
10.2.1.3 STAKEHOLDER PARTICIPATION AND NOTIFICATION OF PRODUCTION	Interaction, engagement & communication with authorities and key stakeholders	Ensure that other users of the sea are aware of production activities and navigational safety and parties are aware of the mechanism to follow for raising concerns Minimise disruption to production and other users of the sea	Stakeholder Engagement Plan	Request, in writing, the Ministry of Works and Transport and Department of Maritime Affairs, as well as SANHO, to issue a navigational warning (e.g. via Navigational Telex (Navtext) and navigational warnings twice daily on Channel 16 VHF).	TEEPNA	7 days prior to FPSO being on site	Confirm that request was sent to Ministry of Works, Transport and SANHO
				Implement a grievance mechanism that allows stakeholders to register specific grievances related to operations.	TEEPNA, Contractors	Throughout the operations	Grievance monitoring (see Row M4-1 in Table 6-1)
		Manage community expectations related to local procurement, local content, and local employment opportunities		Provide local town authorities with forward-looking information on project implementation, planning and resource requirements throughout the project to support effective local planning for land, services and utilities by the local authorities.	TEEPNA	As per Stakeholder Engagement Plan	As per Stakeholder Engagement Plan

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.1.4 MOBILISATION OF PROJECT STAFF	Training and allocation of responsibilities	Project staff have the capability and competence to achieve the ESMP objectives and know what the ESMP environmental requirements are All staff receive HSE training as part of their HSE induction, refresher training and an ongoing awareness and behaviour system	Environmen-tal and Social awareness	Ensure that a copy of the ESIA Report and ESMP is supplied to all contractors and sub-contractors and is on board the FPSO and all project vessels during the operation.	TEEPNA	At commence-ment / kick-off meeting	Acknowledge-ment receipts
				Undertake HSE Awareness Training, including induction training to ensure the project personnel are appropriately informed of the purpose and requirements of the ESMP, including emergency procedures, spill management, etc.	TEEPNA Contractors	At commencement meeting (Kick-off Meeting) and before new staff commence with work on the project	Copy of attendance register and training records
				Ensure that ESMP responsibilities are clearly defined in Job Descriptions of relevant staff.			
				Establish training and exercise programmes to ensure that the response activities can be effectively executed.			
10.2.2 PRODUCTION PHASE							
10.2.2.1 PREVENTION OF ACCIDENTS	Presence of FPSO, DPST and support vessels	Ensure navigational safety, prevention of accidents, preparation for emergencies and minimise the chance subsequent damage to the environment occurring	Notice to Mariners General Marine Instructions	• Monitor the Maritime Surveillance Area and notify fishing vessels likely to enter the Maritime Restricted Area via radio regarding the safety requirements. • Enforce the Maritime Exclusion Area (3 NM around subsea infrastructure and FPSO) and Maritime Restricted Area (10 NM around the FPSO) throughout the Project timeline. • Enforce the safety zone around nearshore transshipment buoy.	TEEPNA Field operations manager (FPSO)	Throughout operation	Notice to Mariners Vessel monitoring (see Row M4-2 in Table 6-1) Provide record of any incidents and interaction with other vessels.

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.2.1 PREVENTION OF ACCIDENTS	Presence of FPSO, DPST and support vessels	Ensure navigational safety, prevention of accidents, preparation for emergencies and minimise the chance subsequent damage to the environment occurring	General Marine Instructions	Manage the lighting on the FPSO and project vessels to ensure that it is sufficiently illuminated to be visible to fishing vessels and compatible with safe operations	TEEPNA Field operations manager (FPSO)	Throughout operation	
			ERP	Practice regular emergency response drills.			Provide record of safety drills
				Ensure access to and use of current meteorological and oceanographic information in management of production activities (part of TEEPNA's Technical Risk Assessment procedures).	Contractors	Throughout operation	Provide record of any incidents and interaction with other vessels.

	Presence and operation of support vessel	Minimise risk of collision with large cetaceans	Biodiversity Marine Faunal Management Plan	• During normal operations, ensure vessel transit speed between the Venus offshore project area and port remains within operational speed limits:
				  ○ Supply vessel: 10-13 knots.
				  ○ Fast supply vessel: 17-20 knots.
				• Reduce speed to operational speed range minimums within 25 km of the coast.
					Contractors	Throughout transit	Vessel speed (see Row M4-2 in Table 6-1)

				Keep a constant watch for marine mammals and turtles in the path of the vessel. Alter course and avoid animals when necessary.			
10.2.2.2 AIR POLLUTION CONTROL DURING GENERAL OPERATION	Emissions to the atmosphere during operation	Reduce volume of diesel burned and emissions to the air	Well Drilling and Subsea Infrastructure Design	Optimise vessel positioning, movement, idling and logistics (number of trips required to and from the onshore logistics base) in order to lower fuel consumption.	Contractors	Throughout operations	Fuel consumption monitoring (see Row M1-4 in Table 6-1) Inventory of volume and type of fuel used
			Waste Management Plan	Use distillate fuels with low sulphur content to reduce SO_2 and PM emissions			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.2.2 AIR POLLUTION CONTROL DURING GENERAL OPERATION	Emissions to the atmosphere during operation	Reduce volume of diesel burned and emissions to the air	Waste Management Plan Energy and Carbon Management Plan Air Quality Monitoring Plan	Implement Energy and Carbon Management Plan and Air Monitoring Management Plan (Nearshore)	TEEPNA, Contractors	As per plans	As per plans Emissions and energy consumption monitoring (see Row M8 & M9 in Table 6-1)
				Annually calculate and publicly report: • Scope 1 emissions: Direct emissions from project facilities • GHG emissions intensity: Expressed as $kgCO_2e$ per barrel of oil equivalent. • Selected Scope 3 emissions: From refining and end-use of petroleum products (with Operator's global reporting).	TEEPNA	Annually	Fuel consumption monitoring (see Row M1-4 in Table 6-1) Inventory of volume and type of fuel used Operator's Global annual reports
				Ensure no incineration of waste occurs within the port limits.	Contractor	Throughout operations	Incineration monitoring (see Row M1-1 & 1-2 in Table 6-1)
			Preventive Maintenance Plan	Implement a maintenance plan to ensure all diesel motors and generators receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere (as well as noise emissions).	Contractor	Throughout operations	Equipment monitoring (see Row M2-7 in Table 6-1)

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping

10.2.2.2 AIR POLLUTION CONTROL DURING GENERAL OPERATION	Emissions to the atmosphere during operation	Reduce fugitive emissions	Waste Management Plan
			
			Energy and Carbon Management Plan
			
			Air Quality Management Plan
				• General design and operational measures
				  ○ Avoid open-ended lines.
				  ○ Use double mechanical seals on VOC-critical pumps where feasible.
				  ○ Minimise the number of flanged connections in hydrocarbon systems.
				• LDAR (Leak Detection And Repair) Programme:
				  ○ Establish an LDAR programme to identify and address VOC emissions from valves, flanges, pumps, and compressors.
				  ○ Conduct periodic inspections using gas detection instruments.
				  ○ Log leaks exceeding thresholds (e.g. 500 ppmv) and prioritise repairs within defined timeframes (e.g. 15–30 days).
				  ○ Allow exceptions only where access is unsafe or shutdown is required.
				• Deployment of AUSEA (Airborne Ultralight Spectrometer for Environmental Applications) drone campaigns to identify fugitive emissions.
				• Install CH_4 Internet of Things (IoT) sensors to enable continuous monitoring and real-time detection of fugitive methane (and indirectly NMVOC) emissions supporting early leak identification and rapid response.
				• Use meter vents to provide controlled measurement and routing of emissions to recovery systems rather than uncontrolled release.
				• Minimise VOC losses during crude oil loading, particularly at transfer hoses and connections:
					TEEPNA, Contractors	Throughout operations	Fugitive emissions monitoring (see Row M8-2 & M8-3 in Table 6-1)

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				○ Use closed loading systems (e.g. vapour recovery) where possible. ○ Use dry-break couplings to prevent vapour and liquid release. ○ Control loading rates to avoid overpressure and venting. ○ Include hoses and seals in the LDAR programme.			
10.2.2.2 AIR POLLUTION CONTROL DURING GENERAL OPERATION	Emissions to the atmosphere during flaring	Reduce volume of hydrocarbons burned and emissions to the air	Waste Management Plan	• Install pressure protection systems to reduce overpressure events and avoid upset flaring. • Use a high design efficiency burners for flaring to optimise combustion of the hydrocarbons in order to minimise emissions and hydrocarbon 'drop-out' during well testing.	TEEPNA Field Operations Manager (FPSO)	During flaring	Flaring monitoring (see Row M1-9 in Table 6-1)
				• Minimise the volume and duration of flaring to the lowest practicable level. • Optimise combustion to reduce emissions: ○ Maintain high combustion efficiency via proper fuel-to-air ratios and high-efficiency flare tips. ○ Ensure reliable ignition systems and protect pilot flames from blowout. ○ Control flare stability to avoid black smoke and odour (e.g. avoid flame lift-off).			
				Annually calculate and publicly report: • Scope 1 emissions: Direct emissions from project facilities • GHG emissions intensity: Expressed as $kgCO_2e$ per barrel of oil equivalent.	TEEPNA	Annually	
				Undertake inspection and maintenance of flare burners	TEEPNA	During planned Full	

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
						Field Shut Down	
10.2.2.3 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	Implement the Waste Management Plan.	Contractors	Throughout operations	Copy of all plans Report the total discharge waste stream volumes
				Prohibit operational discharges in the nearshore transshipment area and when transiting through the NIMPA.	Contractors	Throughout operations	Waste and sewage monitoring (see Row M1-1 & M1-2 in Table 6-1)
				FPSO and project vessels will have: • an onboard sewage treatment plant; • a sewage comminuting and disinfecting system, and/or • a sewage holding tank.	Contractors	Throughout operations	Sewage monitoring (see Row M1-5 & M2-2 in Table 6-1) Sewage Certificate containing the test results of the sewage treatment plant
				Ensure sewage and black water discharges comply with: • a BOD of <25 mg/l (if the treatment plant was installed after 1/1/2010,) or <50 mg/l (if installed before this date); and • minimal residual chlorine concentration of 0.5 mg/l.	Contractors	Throughout operations, during discharges	

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.2.3 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	Sewage discharge to comply with the following: • No visible floating solids must be produced or discolouration of the surrounding water must occur. • Sewage must be comminuted and disinfected for discharges between 3 nm and 12 nm from the coast. • Disposal of sewage from holding tanks must be discharged at a moderate rate while the ship is proceeding on route at a speed not less than 4 knots.	Contractors	Throughout operations, during discharges	
				Galley waste discharge to comply with the following: • No disposal to occur within 3 nm of the coast. • Disposal at >3 nm from coast to be comminuted to particle sizes smaller than 25 mm. • Disposal overboard without grinding can occur greater than 12 nm from the coast when the vessel is sailing. As the FPSO will be stationary, food waste will need to be comminuted prior to discharge.			Waste monitoring (see Row M1-1 & 1-2 in Table 6-1) Inventory of volume of waste discharged and discharge location
				Minimise the discharge of waste material should obvious attraction of fauna be observed.			

				• Ensure all relevant deck and machinery drainage is routed to:
				  ○ sump tanks on board for treatment prior to discharge to ensure MARPOL compliance.
				  ○ oil residue holding tanks.
				• Treat / dispose the residue from the onboard oil/water separator at a licenced hazardous waste treatment facility.
							Waste monitoring (see Row M1-3 & M2-1 in Table 6-1)
							Oil Record Book
							Waste receipts

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.2.3 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	• Ensure oil in water concentration in normal discharges (not produced water) is less than 15 ppm prior to discharge overboard. • Use an oil discharge monitoring and control system to ensure that any discharge of oily mixtures is stopped when the oil content of the effluent exceeds 15 ppm.	Contractors	Throughout operations, during discharges	Waste monitoring (see Row M1-3 & M2-1 in Table 6-1) Oil Record Book
				• Ensure all process areas are bunded to ensure drainage water flows into the closed drainage system. • Use drip trays to collect run-off from equipment that is not contained within a bunded area and route contents to the closed drainage system.			Waste monitoring (see Row M1-3 & M2-1 in Table 6-1) Quantity of oil residue (sludge) produced. Record all discharges, together with date, time and method of discharge, disposal route, any system failure and accidental oil spills in the Oil Record Book
				Use low-toxicity biodegradable detergents in deck cleaning.			
				Implement leak detection and maintenance programmes for valves, flanges, fittings, seals, hydraulic systems, hoses, etc.			
				Ensure only low-toxicity, low bioaccumulation potential and partially biodegradable additives (included in hydraulic fluid) are used, where practicable.			
				Maintain a full register of MSDSs for all chemical used, as well as a precise log file of their use and discharge.			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.2.3 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	No disposal overboard of general waste (e.g., domestic waste, cooking oil, plastics and incinerator ash) Ensure on-board solid waste storage is secure. When authorized, incinerate (non-hazardous only) waste or transport to a licensed onshore waste management facility for disposal/recycling. Retain waste receipts. • Segregate, classify and store all hazardous waste in suitable receptacles on board in order to ensure the safe containment and transportation of waste • Dispose of hazardous waste at a facility that is appropriately licensed and accredited.	Contractors	Throughout operations	Waste monitoring (see Row M1 in Table 6-1) Inventory volume of waste generated Inventory of volume transferred for onshore disposal / incinerated Waste receipts
		Minimise the risk of biocides from hull coatings affecting marine fauna and disrupting local ecosystems	Hull coating specification	Ensure anti-fouling paint is applied to the FPSO (in compliance with IMO International Convention on the Control of Harmful Anti-Fouling Systems on Ships.	TEEPNA	Throughout operations	

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.2.4 EXCHANGE OF BALLAST WATER	Introduction of non-indigenous invasive marine species	Control the spread of non-native invasive species to vulnerable ecosystems by fulfilling the requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments ("the Ballast Water Management Convention")	Ballast Water Management Plan	• Implement the Ballast Water Management Plan. • Discharge ballast water subject to the requirements of the 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments, (specifically Regulation D2 which requires water to be treated through an approved ballast water treatment system).	Contractors	During ballast water discharge	Waste monitoring (see Row M6-1 in Table 6-1) Copy of Ballast Water Management Plan and ballast water management certificate Maintain a complete and accurate Ballast Water Record System Records are to be maintained of ballast water uptakes, discharges and exchanges as per the Ballast Water Management Plan

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.2.5 DISCHARGE OF PRODUCED WATER	Discharge of produced water to sea	Reduce discharges and improve quality of liquid waste to sea by compiling with TEEPNA standards	Waste Management Plan	Treat produced water prior to discharge. • If following onboard treatment, the hydrocarbon content is <15 mg/l, the produced water may be discharged overboard. • If the content is >15 mg/l, it should either undergo a second treatment (see bullet above) or be transferred to shore for treatment and disposal.	TEEPNA Field operations manager (FPSO)	During discharge of produced water	Produced Water monitoring (see Row M1-10 in Table 6-1)
				Monitor discharge temperature from FPSO to ensure compliance with IFC guideline of temperature rise <3°C at 100 m from discharge point.			
				Discharge produced water ~15 m below the surface.	TEEPNA Field operations manager (FPSO)	During discharge of produced water	
10.2.2.5 DISCHARGE OF PRODUCED WATER	Discharge of produced water to sea	Reduce discharges and improve quality of liquid waste to sea by compiling with TEEPNA standards	Preventive Maintenance Plan	Ensure regular maintenance of the produced water treatment system.		As per Preventive Maintenance Plan	Maintenance log
10.2.2.6 LIGHT POLLUTION CONTROL DURING GENERAL OPERATION AND NON-ROUTINE FLARING	Increased ambient lighting	Protect marine fauna, migratory birds and seabirds by managing illumination of the project vessels Zero fatalities of marine fauna, migratory birds and seabirds	Biodiversity Management Plan	• Reduce lighting to a minimum compatible with safe operations whenever and wherever possible. • Positioning light sources, if possible and consistent with safe working practices, in places where emissions to the surrounding environment are minimised.	Contractors	Throughout operations	Lighting monitoring (see Row M2-5 in Table 6-1)
				Keep disorientated, but otherwise unharmed, seabirds in dark containers (e.g., suitably ventilated cardboard box) for subsequent release during daylight hours. Done in strict accordance with protocols outlined in the Wildlife Response Plan.	Contractors	As required	Record information on patterns of bird reaction to lights and real

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				Report ringed/banded birds to the appropriate ringing/banding scheme (details are provided on the ring).			incidents of injury/death, including stray land birds resting on the project vessels
10.2.2.7 UNDERWATER NOISE DURING PRODUCTION	Increased noise into the water column	Reduce noise levels in the water column	General Marine Instructions	Reduced vessel power and duty cycle to lowest safe operational level when using dynamic positioning systems.	Contractors	Throughout operations	

				• During normal operations, ensure vessel transit speed between the Venus offshore project area and port remains within operational speed limits:
				  ○ Supply vessel: 10-13 knots.
				  ○ Fast supply vessel: 17-20 knots.
				• Reduce speed to operational speed range minimums within 25 km of the coast.
					Contractors	During transit	Vessel speed (see Row M5-21 in Table 6-1)

10.2.2.8 BUNKERING / REFUELLING AT SEA	Spill of hydrocarbons to sea	Protect marine environment Minimise disturbance / damage to marine life	Stakeholder Engagement Plan	Transfer of oil at sea is not permitted within the economic zone (i.e., 200 miles from the coast) without the permission of the Ministry of Works and Transport. Submit an application (including location, supplier and timing) for the transfer of oil at sea (outside a harbour within 50 nm of the Namibian coast) to the Ministry of Works and Transport.	Contractors	As required, at least 5 days prior to refuelling	Provide copies of the correspondence with the Ministry of Works and Transport and approval for bunkering
			Contractor HSE Plan Contractor Bridging Document SOPEP	• Ensure operating limits and restrictions are defined for offshore bunkering operations. Such operating limits shall be based upon a risk assessment, which takes into account weather conditions, sea conditions, activities to be performed and vessel characteristics.	Contractors	During bunkering	Bunkering (see Row M5-3 in Table 6-1) Spill monitoring (see Row M5-4 in Table 6-1)

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				• Conducted connection and start of offloading, transshipment or bunkering operations during daylight. • Ensure bunkering operations are only performed after approval of both captain / Master involved.			Record of all spills (Incident Register), including spill reports; emergency exercise reports; audit reports.
10.2.2.9 OPERATION OF HELICOPTERS for crew changes, servicing, etc.	Increased ambient noise levels	Minimise disturbance / damage to marine and coastal fauna All pilots are briefed on sensitivity of bird and seal colonies and whale breeding areas	Flight path design	• Ensure all flight paths avoid (except in medical emergency): ○ Lüderitz Lagoon. ○ Offshore islands (including Halifax, Possession, Sinclair, Pomona, Plumpudding, Klein Ichaboe and Bird Island). ○ Seal colonies (including Atlas Bay, Wolf Bay Van Reenen Bay, Sylvia Hill, Hollamsbird Island, Conception Bay and Cape Cross). • If above is not possible, ensure a minimum altitude of 762 m / 2500 ft is maintained except when taking off/landing, in an emergency, and for weather reasons.	Helicopter contractor	All flights between FPSO and Lüderitz	Copy of set flight path (including altitude) Helicopter logs Deviations from set flight paths
				Avoid extensive low altitude (<762 m or 2 500 ft)) coastal flights by ensuring that the flight path is perpendicular to the coast, as far as possible.	Helicopter contractor		
			Environmen-tal Awareness Training	• Brief of all pilots, as part of the HSE indication for pilots, on the ecological risks associated with flying at a low altitude along the coast or above marine mammals. • No hovering or circling of aircraft over whales, or other marine megafauna.	TEEPNA and Helicopter contractor		

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.2.10 SEAWATER ABSTRACTION	Abstraction and entrapment of marine fauna in the intake system	Reduce Abstraction and entrapment of marine fauna	FPSO design	• Fit seawater intakes (e.g. for cooling or ballast) with grid system, featuring bars spaced approximately 50 mm or equivalent, to prevent entrainment of small fish.	TEEPNA	Throughout operations	Inspection findings
			Inspection protocol	• Regularly inspect and maintain grid systems to ensure effectiveness.			
10.2.2.11 REPORTING	Government payment	Avoid Conflict and governance failures	Document control and reporting	Ensure transparent reporting of Project payments to government in line with the Extractive Industries Transparency Initiative (EITI) expectations	TEEPNA	Annually	Reports
10.2.2.12 SUPPLIER PERFORMANCE	Adherence to worker health and safety provisions	Minimise human rights risks in the supply chain	Local Content Plan	• Ensure risk-based monitoring and evaluation of identified contractors to uphold international standards. • Undertake random risk-focussed monitoring and evaluation of smaller, local suppliers to ensure aligned implementation of the project's HSE standards. • Ensure contractors are aware of the Operator's human rights policy and expectations prior to contracting.	TEEPNA	Throughout operations	Supplier performance monitoring (see Row M10-1 in Table 6-1)
			SEP	Implement a grievance mechanism that allows stakeholders to register specific grievances related to operations.	TEEPNA, Contractors		Grievance monitoring (see Row M4-1 in Table 6-1) Copy of grievance register

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.2.3 UNPLANNED EVENTS							
10.2.3.1 ACCIDENTAL OIL SPILLS	Crude oil spill during loading and offloading Diesel spills from refuelling or from tank failure	Minimise impact to the marine fauna and the environment by implementing response procedures efficiently	SOPEP Emergency Response Plan OSCP	• Implement emergency plans in Row 1.1 above. • Ensure personnel are adequately trained in both accident prevention and immediate response, and resources are available on each vessel. • Mop up any spills onboard immediately with biodegradable low toxicity detergents. • Use oil absorbent. Attempt to control and contain the spill at sea, as far as possible and whenever the sea state permits, using suitable recovery techniques to reduce the spatial and temporal impact of the spill. Where diesel, which evaporates relatively quickly, has been spilled, the water should be agitated or mixed using a propeller boat/dinghy to aid dispersal and evaporation.	Contractors	In event of spill	Spill monitoring (see Row M5-4 in Table 6-1) Record of all spills (Incident Register), including spill reports; emergency exercise reports; audit reports Incident log
10.2.3.1 ACCIDENTAL OIL SPILLS	Crude oil spill during loading and offloading Diesel spills from refuelling or from tank failure	Minimise impact to the marine fauna and the environment by implementing response procedures efficiently	SOPEP Emergency Response Plan OSCP	• Use low toxicity dispersants, as approved the relevant Namibian authorities, that rapidly dilute to concentrations below most acute toxicity thresholds. • Dispersants should be used cautiously, based on a site/spill specific assessment, and in line with Namibian regulations, including relevant authorities' approval. • Use dispersants and relevant responses to be used based on site/spill assessments. Ensure adequate resources are provided to collect and transport oiled birds to a cleaning station.	Contractors	In event of spill	Spill monitoring (see Row M5-4 in Table 6-1) Record of all spills (Incident Register), including spill reports; emergency exercise reports; audit reports Incident log

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				• Plan for and implement responses in terms of IPICEA-IOGP guideline document for the economic assessment and compensation for marine oil releases. • Secure an insurance policy, including coverage for third party liability in the event of unplanned events.	TEEPNA, Contractors	Throughout operations and in event of a spill	Insurance cover
10.2.3.2 EQUIPMENT LOSS	Obstruction on seafloor or in water column	Protect sensitive seabed habitat Minimise risk of collision / accident / entanglement and inform relevant parties	Preventive Maintenance Plan	Ensure containers are sealed / covered during transport and that loads are lifted using the correct lifting procedure and within the maximum lifting capacity of crane system.	Contractors	During operation	Equipment monitoring (see Row M2-6 and M5-2 in Table 6-1) Establish a hazards database listing: • the type of gear lost • date of abandon-ment / loss • location; and • where applicable, the dates of retrieval
				Minimise the lifting path between vessels.			
				Maintain an inventory of all equipment and undertake frequent checks to ensure items and equipment are stored and secured safely on board each vessel.			
			Emergency Response Plan	When any item that constitute a seafloor or navigation hazard is lost on the seabed, or in the sea, complete a standard form which records the date and cause of loss, details of equipment type, vessel Sea Control location, sea state and weather, and the nature of the	Contractors	As required	Copies of all correspondence

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				seabed. Inform the Ministry of Works and Transport (Directorate of Maritime Affairs).			
				Notify Department of Maritime Affairs of any items left on the seabed or floating in the water column that constitute a seafloor or navigational hazard, and request that they send out a Notice to Mariners with this information.			
10.2.3.3 FAUNAL COLLISIONS WITH PROJECT VESSELS	Vessel strikes	Minimise risk of collision with large cetaceans	Biodiversity management Plan	• During normal operations, ensure vessel transit speed between the Venus offshore project area and port remains within operational speed limits: o Supply vessel: 10-13 knots. o Fast supply vessel: 17-20 knots. • Reduce speed to operational speed range minimums within 25 km of the coast.	Contractors	During transit	Vessel speed (see Row M5-1 in Table 6-1)
				Keep a constant watch from all vessels (Vessel Captain and crew) for cetaceans and turtles in the path of the vessel. Alter course and avoid animals when necessary.			
				Apply the following measures for marine fauna: • For a whale sighting, maintain a distance of 91 m (or greater). • For a marine turtles or other cetacean sighting, maintain a distance of 45 m (or greater). • Attempt to remain parallel with animals' course, avoiding excessive speed or directional changes • Reduce vessel speeds to 10 knots should mother and calf pairs be encountered.		As required	
				Report any collisions with large whales to the International Whaling Commission (IWC) database, which has been shown to be a valuable tool for identifying the species most affected, vessels involved		As required	

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				in collisions, and correlations between vessel speed and collision risk.			
			Environmen-tal Awareness Training	Educate and create awareness with mariners about collision risks.	Contractors	Before mobilisation and refresher annually	Copy of attendance register and training records
10.2.3.4 WELL BLOW-OUT	Oil spill from well blow-out	Minimise impact to the marine fauna and the environment by implementing response procedures efficiently	OSCP ERP	Implement emergency plans in Row 1.1 above.	TEEPNA Field Operations Manager (FPSO)	In event of loss of well control or well blow-out	Spill monitoring (see Row M5-3 in Table 6-1) Copy of attendance register and training records Record of all spills (Incident Register), including spill reports; emergency exercise reports; audit reports Incident log
				Undertake oil spill response exercises as specified in the OSCP.			
				• Use low toxicity dispersants that rapidly dilute to concentrations below most acute toxicity thresholds. Dispersants should be used cautiously, based on a site/spill specific assessment, and in line with Namibian regulations, including relevant authorities' approval • Use dispersants and relevant responses to be used based on site/spill assessments. • Ensure a standby vessel is within 30 minutes of the FPSO and equipped for dispersant spraying and can be used for mechanical dispersion (using the propellers of the ship and/or firefighting equipment). It should have at least 5 m^3 of dispersant onboard for initial response.			
				In the event of a large spill, implement methods to monitor and track the behaviour and size of the spill and optimise available response resources (e.g. Synthetic Aperture Radar (SAR), drift buoys, surveillance planes and satellite imaging).			
				Take all efforts, when the sea state permits, to attempt to control and contain the spill at sea with			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				suitable recovery techniques to reduce the spatial and temporal impact of the spill.			
		Minimise financial loss to individuals, companies and other organisations	Stakeholder Engagement Plan	• Plan for and implement responses in terms of IPICEA-IOGP guideline document for the economic assessment and compensation for marine oil releases. • Secure an insurance policy, including coverage for third party liability in the event of unplanned events.	TEEPNA, Contractors	Throughout operations and in event of a spill	Insurance cover
10.2.3.4 GAS PIPELINE RUPTURE	Gas release from pipeline rupture	Reduce risk of pipeline rupture and minimise impact to the marine fauna and the environment	OSCP ERP	• Minimise internal corrosion through the use of corrosion inhibitors, methanol, scale inhibitor and water-based hydraulic fluid. • Use flow meters and monitor pressure/mass balance to detect any leaks.	Offshore Installation Manager	Throughout operations	Pipeline inspection (see Row M2-8in Table 6-1)
				• Undertake external pipeline inspection.	Offshore Installation Manager	Every 3 years	

10.3 Environmental and Social Management Commitment Register: Decommissioning Phase

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.1 PLANNING PHASE							
10.3.1.1 PREPARATION OF SUBSIDIARY PLANS	Planning and Management	Identification of all parties and their responsibilities documented and communicated	See Section 3.5	Ensure the following subsidiary plans are in place for Decommissioning Phase: • OSCP • Blow-out Contingency Plan • SOPEP • Emergency Response Plan (including MEDIVAC plan) • Stakeholder Engagement Plan • Waste Management Plan • Chemical Management Plan • Preventive Maintenance Plan • Ballast Water Management Plan • Corrective Action Plan • Local Content Plan • Labour Management Plan • Code of Conduct	TEEPNA, Contractors	30 days prior to commence-ment of operation	Copies of all plans and certificates Confirm compliance and justify any omissions
				In addition to the above, ensure that: • Drilling units must have Pollution Safety Certificate(s). • There is a record of drilling units / vessels seaworthiness certificate and/or classification stamp. • A valid International Sewage Pollution Prevention Certificate (ISPPC), as required by vessel class. • International Oil Pollution Prevention (IOPP) Certificate, as required by vessel class.			Copies of all plans and certificates Confirm compliance and justify any omissions

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.1.2 PREPARATION FOR DECOMMISSIONING	Planning and Management	Safe and responsible shut down	Decommission-ing and Closure Plan	• Undertake a Net Environmental Benefit Analysis (NEBA), which will determine what infrastructure is recovered and what is abandoned, stakeholder engagement and ongoing environmental monitoring. • Revise Decommissioning and Closure Plan based on NEBA: o Ensure decommissioning plan addresses potential end of work or service contracts. o Share the decommissioning plan with employees so that they have advance warning of the planned shut down and are in a position to start searching for alternative employment. o Comply with labour law requirements and compensate employees for their retrenchment as a result of the closure of the project. o Provide employment certificates and testimonials for retrenched staff to facilitate alternative employment. The skills and experience that were acquired during the employment as well as the potential of other similar employment opportunities if the oil and gas sector was to grow in Namibia as anticipated will also contribute to improved ability to find alternative employment. o Provide opportunities for capacity-building and training for employees to enable them to find alternative employment after decommissioning. • Establish financial provisions, such as trust funds, to ensure that decommissioning costs are covered.	TEEPNA	One year before the estimated date on which 50% of the estimated recoverable reserves of petroleum are produced	Revised Decommission-ing and Closure Plan

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.1.2 PREPARATION FOR DECOMMISSIONING	Identification and appointment of suppliers	Ensure fair, transparent and reasonable preferential contracting of local companies	Local Content Plan	• Implement Local Content Plan to ensure fair, transparent and reasonable preferential contracting of local companies with the suitable expertise. • Develop and widely communicate a dedicated information portal for prospective service providers with clear explanations of required standards of performance, compliance and qualification. • Use the dedicated information portal to compile and publish detailed requirements for the various job categories within the industry together with information on where and how such skills can be acquired or enhanced and the funding opportunities that may be available to support the development of skills in these fields. • Ensure that social investment and local procurement opportunities are transparently communicated and available to all stakeholders, including vulnerable groups.	TEEPNA, Contractors	During contracting	Contracts (see Row M4-2 in Table 6-1) Information portal Procurement contracts
		Minimise human rights risks in the supply chain		• Adopt a human rights risk-based approach to ongoing human rights due diligence with contractors and suppliers, especially concerning modern slavery, forced labour, trafficking and child labour. • Ensure contractor standards align with standards espoused in IFC EHS Guidelines for the Oil and Gas Sector where appropriate to the activity conducted. • Ensure all third-party project security providers comply and align with the VPSHR through procurement contracts. Ensure international and local procurement contracts include provisions for	TEEPNA		

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				compliance monitoring and reporting aligned with project requirements. • Ensure contractors are aware of the Operator's human rights policy and expectations prior to contracting.			
		Minimise community health and safety risks	Code of Conduct	• Share the company's Code of Conduct and Fundamental Principles of Purchasing with prospective contractors and suppliers.	TEEPNA		
10.3.1.2 PREPARATION FOR DECOMMISSIONING	Equipment	Minimise impact on and disturbance of marine fauna	Decommission-ing and Closure Plan	• Ensure all vessels have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL requirements. • Give preference to drilling units and vessels using marine gas oil (MGO).	TEEPNA	During procurement / contracting	Contracts
	Oil spill planning	Minimise impact of spills by implementing response procedures efficiently	OSCP	Ensure oil spill equipment is mobilised and installed on vessels in line with the SOPEP and OSCP.	Contractors	Prior to commencement of decommis-sioning	
				Secure an insurance policy, including coverage for third party liability.	TEEPNA	Prior to commencement of decommis-sioning	Contracts

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.1.4 MOBILISATION OF PROJECT STAFF	Training and allocation of responsibilities	Project staff have the capability and competence to achieve the ESMP objectives and know what the ESMP environmental requirements are All staff receive HSE training as part of their HSE induction, refresher training and an ongoing awareness and behaviour system	Environmen-tal and Social awareness	Ensure that a copy of the ESIA Report and ESMP is supplied to all contractors and sub-contractors and is on board the FPSO and all project vessels during the operation.	TEEPNA	At commence-ment / kick-off meeting	Acknowledge-ment receipts
				Undertake HSE Awareness Training, including induction training to ensure the project personnel are appropriately informed of the purpose and requirements of the ESMP, including emergency procedures, spill management, etc.	TEEPNA Contractors	At commencem ent meeting (Kick-off Meeting) and before new staff commence with work on the project	Copy of attendance register and training records
				Ensure that ESMP responsibilities are clearly defined in Job Descriptions of relevant staff.			
				Establish training and exercise programmes to ensure that the response activities can be effectively executed.			
10.3.2 DECOMMISSIONING PHASE							
10.3.2.1 PREVENTION OF ACCIDENTS	Presence of drilling unit and support vessels	Ensure navigational safety, prevention of accidents, preparation for emergencies and minimise the chance subsequent damage to the environment occurring	Notice to Mariners	• Monitor the Maritime Surveillance Area and notify fishing vessels likely to enter the Maritime Restricted Area via radio regarding the safety requirements. • Enforce the Maritime Exclusion Area (3 NM around subsea infrastructure and FPSO) and Maritime Restricted Area (10 NM around the FPSO) throughout the Project timeline. • Enforce the safety zone around nearshore transshipment buoy.	TEEPNA Field operations manager (FPSO)	Throughout operation	Vessel monitoring (see Row M4-2 in Table 6-1) Provide record of any incidents and interaction with other vessels.
			General Marine Instructions	Manage the lighting on the FPSO and project vessels to ensure that it is sufficiently illuminated to be visible to fishing vessels and compatible with safe operations			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.2.1 PREVENTION OF ACCIDENTS	Presence of drilling unit and support vessels	Ensure navigational safety, prevention of accidents, preparation for emergencies and minimise the chance subsequent damage to the environment occurring	ERP	Practice regular emergency response drills.	TEEPNA Field operations manager (FPSO)	Throughout operation	Provide record of safety drills
				Ensure access to and use of current meteorological and oceanographic information in management of decommissioning activities (part of TEEPNA's Technical Risk Assessment procedures).	Contractors	Throughout operation	Provide record of any incidents and interaction with other vessels.

	Presence and operation of support vessel	Minimise risk of collision with large cetaceans	Biodiversity Marine Faunal Management Plan	• During normal operations, ensure vessel transit speed between the Venus offshore project area and port remains within operational speed limits:
				  ○ Supply vessel: 10-13 knots.
				  ○ Fast supply vessel: 17-20 knots.
				• Reduce speed to operational speed range minimums within 25 km of the coast.
					Contractors	Throughout transit	Vessel speed (see Row M4-2 in Table 6-1)

				Keep a constant watch for marine mammals and turtles in the path of the vessel. Alter course and avoid animals when necessary.			
10.3.2.2. ABANDONMENT OF WELLS	Sealing and testing of wells	Isolate permeable and hydrocarbon bearing formations and avoid leakages	Decommission-ing and Closure Plan	Seal well by inserting cement plugs in the well bore at various levels according to good oilfield practice.	Contractor	On completion of production	Log on pressure testing the abandonment cement plugs
				Test for integrity.			Test results
				Remove BOP stacks and any other equipment that may have dropped on the seafloor.			ROV footage

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.2.3 STAKEHOLDER CONSULTATION AND NOTIFICATION	Increased hard substrate on seafloor	Minimise impact on other users of the sea Ensure navigational safety	Stakeholder Engagement Plan	Ensure abandoned well locations are accurately charted with the Ministry of Works and Transport and Department of Maritime Affairs.	TEEPNA	On completion of decommis-sioning	Correspondence with Ministry of Works and Transport and Department of Maritime Affairs
				• Implement Stakeholder Engagement Plan. • Inform all key stakeholders that production has ceased and that all project vessels are off location and provide details of wellhead abandonment.	TEEPNA	Within 30 days after completion of decommis-sioning	Copies of notification documentation required
10.3.2.3 STAKEHOLDER CONSULTATION AND NOTIFICATION	Interaction, engagement & communicatio n with authorities and key stakeholders	Ensure that other users of the sea are aware of decommissioning activities and navigational safety and parties are aware of the mechanism to follow for raising concerns Minimise disruption to decommissioning and other users of the sea	Stakeholder Engagement Plan	Implement a grievance mechanism that allows stakeholders to register specific grievances related to operations.	TEEPNA, Contractors	Throughout the decommis-sioning	Grievance monitoring (see Row M4-1 in Table 6-1) Copy of grievance register and responses

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.2.4 AIR POLLUTION CONTROL DURING GENERAL OPERATION	Emissions to the atmosphere during operation	Reduce volume of diesel burned and emissions to the air	Waste Management Plan	Optimise vessel positioning, movement, idling and logistics (number of trips required to and from the onshore logistics base) in order to lower fuel consumption.	Contractors	Throughout operations	Fuel consumption monitoring (see Row M1-4 in Table 6-1) Inventory of volume and type of fuel used
			Waste Management Plan	Use distillate fuels with low sulphur content to reduce SO_2 and PM emissions			
10.3.2.4 AIR POLLUTION CONTROL DURING GENERAL OPERATION	Emissions to the atmosphere during operation	Reduce volume of diesel burned and emissions to the air	Waste Management Plan Energy and Carbon Management Plan	Ensure no incineration of waste occurs within the port limits.	Contractor	Throughout operations	Incineration monitoring (see Row M1-1 & 1-2 in Table 6-1)
			Preventive Maintenance Plan	Implement a maintenance plan to ensure all diesel motors and generators receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere (as well as noise emissions).	Contractor	Throughout operations	Equipment monitoring (see Row M2-7 in Table 6-1)

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.2.5 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	Implement the Waste Management Plan.	Contractors	Throughout operations	Copy of all plans Report the total discharge waste stream volumes
				Prohibit operational discharges in the nearshore transshipment area and when transiting through the NIMPA.	Contractors	Throughout operations	Waste and sewage monitoring (see Row M1-1 & M1-2 in Table 6-1)
				Drilling units and project vessels will have: • an onboard sewage treatment plant; • a sewage comminuting and disinfecting system, and/or • a sewage holding tank.	Contractors	Throughout operations	Sewage monitoring (see Row M1-5 & M2-2 in Table 6-1) Sewage Certificate containing the test results of the sewage treatment plant
				Ensure sewage and black water discharges comply with: • a BOD of <25 mg/l (if the treatment plant was installed after 1/1/2010,) or <50 mg/l (if installed before this date); and • minimal residual chlorine concentration of 0.5 mg/l.	Contractors	Throughout operations, during discharges	
10.3.2.5 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	Sewage discharge to comply with the following: • No visible floating solids must be produced or discolouration of the surrounding water must occur. • Sewage must be comminuted and disinfected for discharges between 3 nm and 12 nm from the coast. • Disposal of sewage from holding tanks must be discharged at a moderate rate while the ship is	Contractors	Throughout operations, during discharges	

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				proceeding on route at a speed not less than 4 knots.			
10.3.2.5 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	Galley waste discharge to comply with the following: • No disposal to occur within 3 nm of the coast. • Disposal at >3 nm from coast to be comminuted to particle sizes smaller than 25 mm. • Disposal overboard without grinding can occur greater than 12 nm from the coast when the vessel is sailing. As the drilling units will be stationary, food waste will need to be comminuted prior to discharge at the well site.	Contractors	Throughout operations, during discharges	Waste monitoring (see Row M1-1 & 1-2 in Table 6-1) Inventory of volume of waste discharged and discharge location
				Minimise the discharge of waste material should obvious attraction of fauna be observed.			

				• Ensure all relevant deck and machinery drainage is routed to:
				  ○ sump tanks on board for treatment prior to discharge to ensure MARPOL compliance.
				  ○ oil residue holding tanks.
				• Treat / dispose the residue from the onboard oil/water separator at a licenced hazardous waste treatment facility.
							Waste monitoring (see Row M1-3 & M2-1 in Table 6-1)
							Oil Record Book
							Waste receipts

				• Ensure oil in water concentration in normal discharges is less than 15 ppm prior to discharge overboard. • Use an oil discharge monitoring and control system to ensure that any discharge of oily mixtures is stopped when the oil content of the effluent exceeds 15 ppm.			Waste monitoring (see Row M1-3 & M2-1 in Table 6-1) Oil Record Book

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.2.5 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	• Ensure all process areas are bunded to ensure drainage water flows into the closed drainage system. • Use drip trays to collect run-off from equipment that is not contained within a bunded area and route contents to the closed drainage system. Use low-toxicity biodegradable detergents in deck cleaning. Implement maintenance programmes for valves, flanges, fittings, seals, hydraulic systems, hoses, etc. Ensure only low-toxicity, low bioaccumulation potential and partially biodegradable additives (included in hydraulic fluid) are used, where practicable. Maintain a full register of MSDSs for all chemical used, as well as a precise log file of their use and discharge.	Contractors	Throughout operations, during discharges	Waste monitoring (see Row M1-3 & M2-1 in Table 6-1) Quantity of oil residue (sludge) produced. Record all discharges, together with date, time and method of discharge, disposal route, any system failure and accidental oil spills in the Oil Record Book

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.2.5 POLLUTION CONTROL AND WASTE AND DISCHARGES MANAGEMENT DURING GENERAL OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Waste Management Plan	No disposal overboard of general waste (e.g., domestic waste, cooking oil, plastics and incinerator ash) Ensure on-board solid waste storage is secure. When authorized, incinerate (non-hazardous only) waste or transport to a licensed onshore waste management facility for disposal/recycling. Retain waste receipts. • Segregate, classify and store all hazardous waste in suitable receptacles on board in order to ensure the safe containment and transportation of waste • Dispose of hazardous waste at a facility that is appropriately licensed and accredited.	Contractors	Throughout operations	Waste monitoring (see Row M1 in Table 6-1) Inventory volume of waste generated Inventory of volume transferred for onshore disposal / incinerated Waste receipts
10.3.2.6 EXCHANGE OF BALLAST WATER	Introduction of non-indigenous invasive marine species	Control the spread of non-native invasive species to vulnerable ecosystems by fulfilling the requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments ("the Ballast Water Management Convention")	Ballast Water Management Plan	• Implement the Ballast Water Management Plan. • Discharge ballast water subject to the requirements of the 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments, (specifically Regulation D2 which requires water to be treated through an approved ballast water treatment system).	Contractors	During ballast water discharge	Waste monitoring (see Row M6-1 in Table 6-1) Copy of Ballast Water Management Plan and ballast water management certificate Maintain a complete and accurate Ballast Water Record System

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
							Records are to be maintained of ballast water uptakes, discharges and exchanges as per the Ballast Water Management Plan
10.3.2.7 BUNKERING / REFUELLING AT SEA	Spill of hydrocarbons to sea	Protect marine environment Minimise disturbance / damage to marine life	Stakeholder Engagement Plan	Transfer of oil at sea is not permitted within the economic zone (i.e., 200 miles from the coast) without the permission of the Ministry of Works and Transport. Submit an application (including location, supplier and timing) for the transfer of oil at sea (outside a harbour within 50 nm of the Namibian coast) to the Ministry of Works and Transport.	Contractors	As required, at least 5 days prior to refuelling	Provide copies of the correspondence with the Ministry of Works and Transport and approval for bunkering
			Contractor HSE Plan Contractor Bridging Document SOPEP	• Ensure operating limits and restrictions are defined for offshore bunkering operations. Such operating limits shall be based upon a risk assessment, which takes into account weather conditions, sea conditions, activities to be performed and vessel characteristics. • Conducted connection and start of offloading, transshipment or bunkering operations during daylight. • Ensure bunkering operations are only performed after approval of both captain / Master involved.	Contractors	During bunkering	Bunkering (see Row M5-3 in Table 6-1) Spill monitoring (see Row M5-4 in Table 6-1) Record of all spills (Incident Register), including spill reports; emergency

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
							exercise reports; audit reports.
10.3.2.8 OPERATION OF HELICOPTERS for crew changes, servicing, etc.	Increased ambient noise levels	Minimise disturbance / damage to marine and coastal fauna All pilots are briefed on sensitivity of bird and seal colonies and whale breeding areas	Flight path design	• Ensure all flight paths avoid (except in medical emergency): ○ Lüderitz Lagoon. ○ Offshore islands (including Halifax, Possession, Sinclair, Pomona, Plumpudding, Klein Ichaboe and Bird Island). ○ Seal colonies (including Atlas Bay, Wolf Bay Van Reenen Bay, Sylvia Hill, Hollamsbird Island, Conception Bay and Cape Cross). • If above is not possible, ensure a minimum altitude of 762 m / 2500 ft is maintained except when taking off/landing, in an emergency, and for weather reasons.	Helicopter contractor	All flights between drilling units and Lüderitz	Copy of set flight path (including altitude) Helicopter logs Deviations from set flight paths
				Avoid extensive low altitude (<762 m or 2 500 ft)) coastal flights by ensuring that the flight path is perpendicular to the coast, as far as possible.	Helicopter contractor		
			Environmen-tal Awareness Training	• Brief of all pilots, as part of the HSE indication for pilots, on the ecological risks associated with flying at a low altitude along the coast or above marine mammals. • No hovering or circling of aircraft over whales, or other marine megafauna.	TEEPNA and Helicopter contractor		

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.2.9 SUPPLIER PERFORMANCE	Adherence to worker health and safety provisions	Minimise human rights risks in the supply chain	Local Content Plan	• Ensure risk-based monitoring and evaluation of identified contractors to uphold international standards. • Undertake random risk-focussed monitoring and evaluation of smaller, local suppliers to ensure aligned implementation of the project's HSE standards. • Ensure contractors are aware of the Operator's human rights policy and expectations prior to contracting.	TEEPNA	Throughout operations	Supplier performance monitoring (see Row M10-1 in Table 6-1)
			SEP	Implement a grievance mechanism that allows stakeholders to register specific grievances related to operations.	TEEPNA, Contractors		Grievance monitoring (see Row M4-1 in Table 6-1) Copy of grievance register
10.3.3 UNPLANNED EVENTS							
10.3.3.1 ACCIDENTAL OIL SPILLS	Crude oil spill during loading and offloading Diesel spills from refuelling or from tank failure	Minimise impact to the marine fauna and the environment by implementing response procedures efficiently	SOPEP Emergency Response Plan OSCP	• Implement emergency plans in Row 1.1 above. • Ensure personnel are adequately trained in both accident prevention and immediate response, and resources are available on each vessel.	Contractors	In event of spill	Spill monitoring (see Row M5-4 in Table 6-1) Record of all spills (Incident Register), including spill reports; emergency exercise reports; audit reports
				• Mop up any spills onboard immediately with biodegradable low toxicity detergents. • Use oil absorbent.			
				Attempt to control and contain the spill at sea, as far as possible and whenever the sea state permits, using suitable recovery techniques to reduce the spatial and temporal impact of the spill.			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
				Where diesel, which evaporates relatively quickly, has been spilled, the water should be agitated or mixed using a propeller boat/dinghy to aid dispersal and evaporation.			Incident log
10.3.3.1 ACCIDENTAL OIL SPILLS	Diesel spills from refuelling or from tank failure	Minimise impact to the marine fauna and the environment by implementing response procedures efficiently	SOPEP Emergency Response Plan OSCP	• Use low toxicity dispersants, as approved the relevant Namibian authorities, that rapidly dilute to concentrations below most acute toxicity thresholds. • Dispersants should be used cautiously, based on a site/spill specific assessment, and in line with Namibian regulations, including relevant authorities' approval. • Use dispersants and relevant responses to be used based on site/spill assessments.	Contractors	In event of spill	Spill monitoring (see Row M5-4 in Table 6-1) Record of all spills (Incident Register), including spill reports; emergency exercise reports; audit reports Incident log
				Ensure adequate resources are provided to collect and transport oiled birds to a cleaning station.			
				• Plan for and implement responses in terms of IPICEA-IOGP guideline document for the economic assessment and compensation for marine oil releases. • Secure an insurance policy, including coverage for third party liability in the event of unplanned events.	TEEPNA, Contractors	Throughout operations and in event of a spill	Insurance cover

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.3.2 EQUIPMENT LOSS	Obstruction on seafloor or in water column	Protect sensitive seabed habitat Minimise risk of collision / accident / entanglement and inform relevant parties	Preventive Maintenance Plan	Ensure containers are sealed / covered during transport and that loads are lifted using the correct lifting procedure and within the maximum lifting capacity of crane system.	Contractors	During operation	Equipment monitoring (see Row M2-6 and M5-2 in Table 6-1) Establish a hazards database listing: • the type of gear lost • date of abandon-ment / loss • location; and • where applicable, the dates of retrieval
				Minimise the lifting path between vessels.			
				Maintain an inventory of all equipment and undertake frequent checks to ensure items and equipment are stored and secured safely on board each vessel.			
			Emergency Response Plan	When any item that constitute a seafloor or navigation hazard is lost on the seabed, or in the sea, complete a standard form which records the date and cause of loss, details of equipment type, vessel Sea Control location, sea state and weather, and the nature of the seabed. Inform the Ministry of Works and Transport (Directorate of Maritime Affairs).	Contractors	As required	Copies of all correspondence
				Notify Department of Maritime Affairs of any items left on the seabed or floating in the water column that constitute a seafloor or navigational hazard, and request that they send out a Notice to Mariners with this information.			

Project Activities	Aspect	Environmental and Social Performance Objectives / Impact Management Outcomes or Targets	Associated Plan and Procedure	Mitigation / Management Actions	Responsibility	Frequency / Timing	Monitoring and record keeping
10.3.3.3 FAUNAL COLLISIONS WITH PROJECT VESSELS	Vessel strikes	Minimise risk of collision with large cetaceans	Biodiversity management Plan	• During normal operations, ensure vessel transit speed between the Venus offshore project area and port remains within operational speed limits: o Supply vessel: 10-13 knots. o Fast supply vessel: 17-20 knots. • Reduce speed to operational speed range minimums within 25 km of the coast.	Contractors	During transit	Vessel speed (see Row M5-1 in Table 6-1)
				Keep a constant watch from all vessels (Vessel Captain and crew) for cetaceans and turtles in the path of the vessel. Alter course and avoid animals when necessary.			
				Apply the following measures for marine fauna: • For a whale sighting, maintain a distance of 91 m (or greater). • For a marine turtles or other cetacean sighting, maintain a distance of 45 m (or greater). • Attempt to remain parallel with animals' course, avoiding excessive speed or directional changes • Reduce vessel speeds to 10 knots should mother and calf pairs be encountered.		As required	
				Report any collisions with large whales to the International Whaling Commission (IWC) database, which has been shown to be a valuable tool for identifying the species most affected, vessels involved in collisions, and correlations between vessel speed and collision risk.		As required	
			Environmen-tal Awareness Training	Educate and create awareness with mariners about collision risks.	Contractors	Before mobilisation and refresher annually	Copy of attendance register and training records

Appendix A Summary of Oil Spill Modelling Results

Environmental and Social Impact Assessment for the Venus Development (Offshore PEL0056/Block 2913B), Namibia

Volume 2: Environmental and Social Management Plan

SLR Project No.: 713.000024.00001

Summary of Oil Spill Modelling

This section summarises the results of the oil dispersion modelling study for use in assessing the impacts of unplanned events (including a loss of marine diesel from drilling unit and/or vessel tank, loss of crude oil due to well blow-out or during transfer/transshipment).

The modelling, which used the Oil Spill Contingency and Response (OSCAR) modelling tool and SAT-OCEAN hindcast dataset (2017 – 2024), considered the following parameters:

- **Two oil types:** crude oil (unprocessed and processed) and marine diesel.
- **Two release locations with two scenarios each** (**Figure 1**). These locations are considered to be representative "worst-case" taking cognisance of the project layout, distance from the coast, proximity of protected areas (including MPAs , EBSAs and Tripp Seamount), water depth and the metocean dataset:
  - Nearshore transshipment area near Walvis Bay (L2), around 5 km from the coast:
    - Scenario O1 (Production Phase): Loss of 1 000 m³ of processed crude oil at sea surface during transfer from DPST to conventional tanker, without response.
    - Scenario O2 (Production Phase): Loss of 300 m³ of marine diesel at sea surface from a vessel tank rupture, without response.
  - Venus development area in offshore PEL0056/Block 2913B (L1), around 350 km from the coast:
    - Scenario O3 (Drilling / Operation Phase): Loss of 5 000 m³ of marine diesel at sea surface from a drilling unit tank rupture, with and without surface spill response.
    - Scenario O4 (Drilling Phase): Accidental release of 5 921 standard cubic meters per day (Sm³/day) of crude oil from a well blowout at the seafloor for 13 days (until the well is capped), with and without spill response[7].
- **Seasonal periods:** Four seasons were considered, namely Season 1: December to February, Season 2: March to May, Season 3: June to August, and Season 4: September to November.
- **Two modelling simulation approaches** were considered:
  - Stochastic simulations show the probability of an area being affected by an oil spill for all simulations combined. The area presented is, therefore, larger than the extent of a single spill.
  - Deterministic simulations show an oil spill spread for a single spill at a specific time.

[7]Modelled response included both Subsea Dispersant Injection (SSDI) and surface response measures. SSDI was applicable only in a well blowout scenario.

- **Modelling thresholds:**
  - Sea Surface:
    - Oil: A threshold of 5 µm thickness was selected as a margin to the thickness that would impart a lethal dose to an intersecting wildlife individual (10 µm) according French McCay (2009). This value is also the minimum thickness for surface response (including dispersant application).
    - Marine Diesel: A threshold of 0.3 µm thickness was adopted, which is based on values catalogued in the Bonn Agreement Oil Appearance Code (Bonn, 2009 and 2011). This value aligns with established visibility criteria for oil slicks (silvery sheen).
  - Water column: A threshold of 58 ppb was selected for both crude oil and marine diesel, following the OLF (the Norwegian Oil Industry Association) Guideline for risk assessment of effects on fish from acute oil pollution (2008) that indicate the value proposed by Neilson *et al.* (2005) for acute exposure to dispersed oil to various aquatic species.
  - Shoreline oiling: A threshold of 10 g/m² was selected for both crude oil and marine diesel, which is based on the literature reviews and analyses described in French McCay (2016) and French McCay *et al.* (2018).

Table 1 below only presents the season with the largest (worst case) modelled extent of the spill for each scenario over the four seasons. The maps show the probability of contamination above defined threshold values.

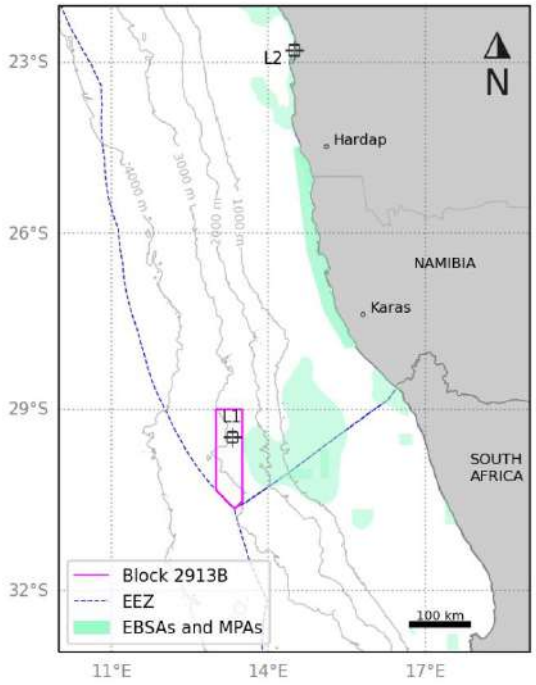
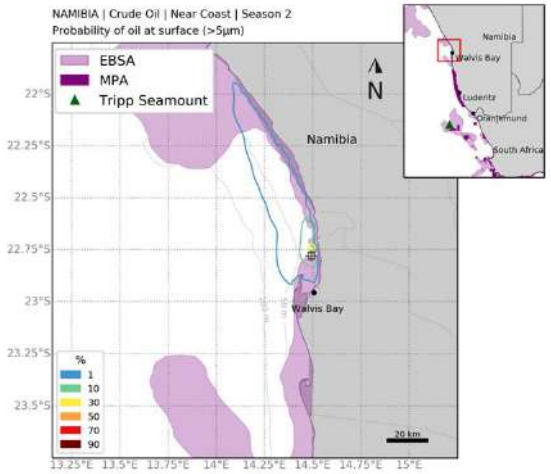
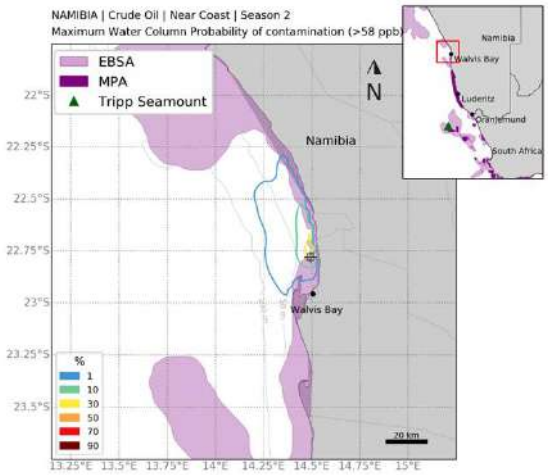
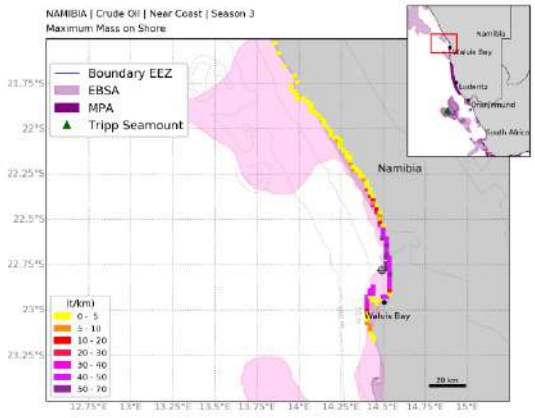


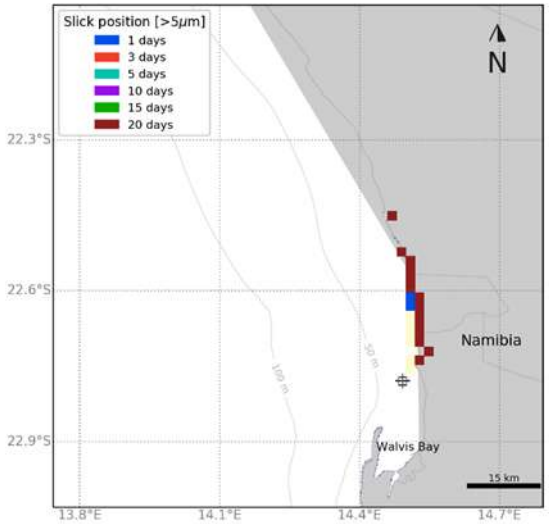
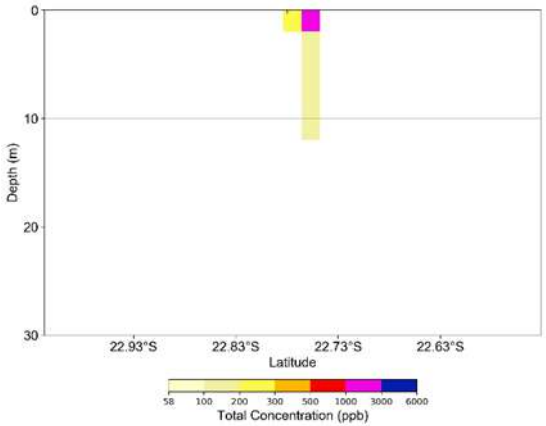
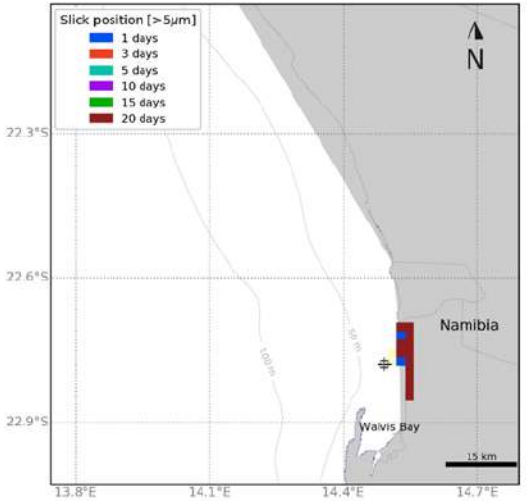
Figure 1: Location of oil spill modelling release points: L1 in the Venus offshore project area and Point L2 in the Nearshore Transshipment Area

Source: CLS Basil

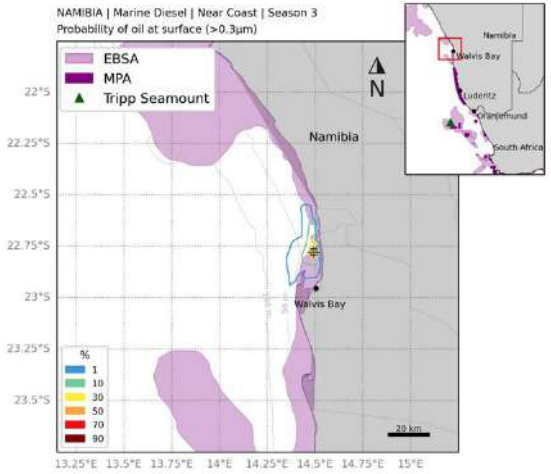
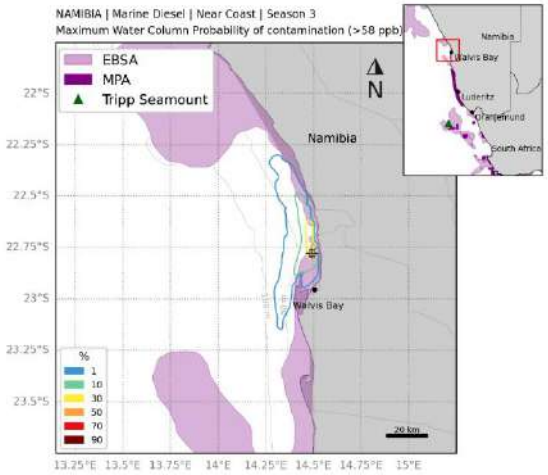
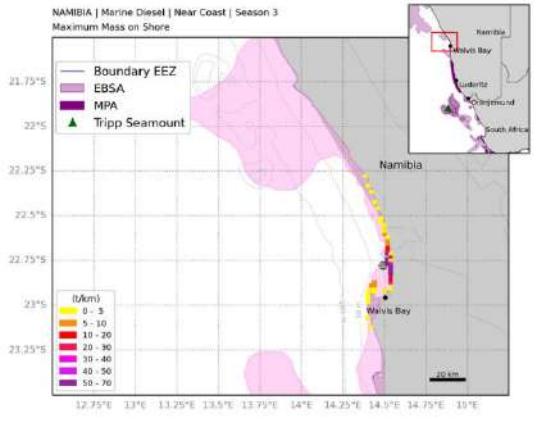
Table 1: Summary of Oil Spill Modelling Results

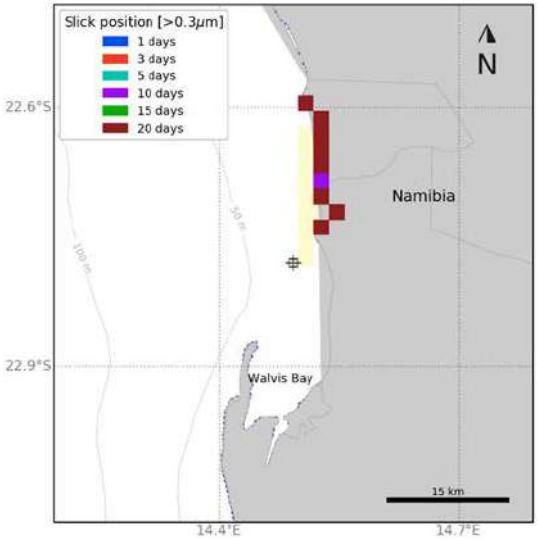
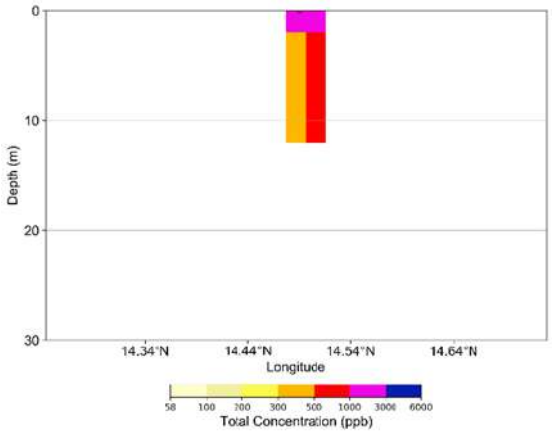
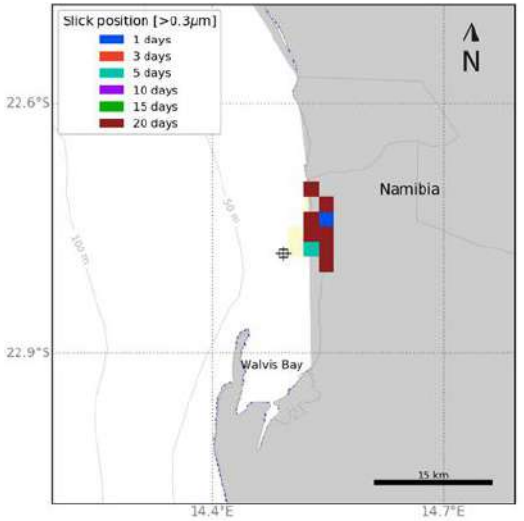
No.	Model type	Oil on surface	Oil in water column	Oil onshore
1	***Scenario O1: Loss of 1 000 m³ Processed Crude Oil During Transfer at Nearshore Transshipment Area***			
1.1	Stochastic[8] (combined spill scenarios)	Due to the proximity of the spill site to the coastline, oil on the surface drifts towards N and S, with greater dispersion towards the N, as well as to the east reaching the coast in all seasons. The greatest dispersion was up to 101 km from the release point during Season 2. Surface oil evaporates quickly, expected to be present for up to 0.75 days (18 hrs).  Oil surface probability area (> 5 µm) (Season 2)	Oil in the water column also drifts towards N, S, and E with greater dispersion towards the N. In all seasons, there is up to a 50% probability of oil remaining within the water column, with the highest concentrations observed in the upper 12 m.  Water column probability (> 58 ppb) (Season 2)	Shoreline oiling is predicted to occur during all season, with up to 51.5 t/km oil onshore affecting the coastline between up to ~263 km north of Walvis Bay and ~26 km south of Walvis Bay with a maximum extent of 281 km for Season 3. The minimum time to shoreline oiling is ~1.7 hrs in Season 4.  Maximum mass onshore (>10 g/m²) (Season 3)

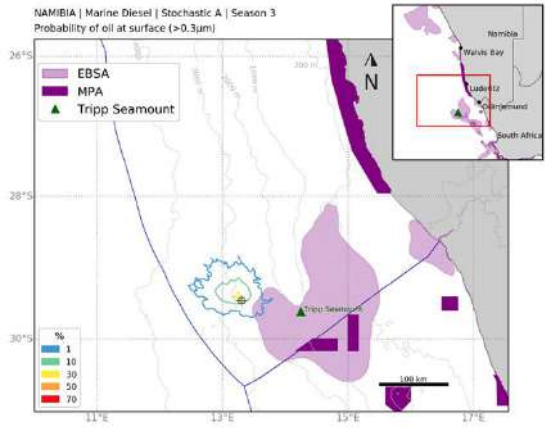
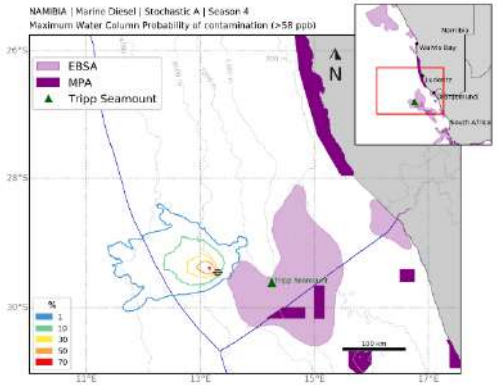
[8] Shows the probability (%) of oiling when combining all the modelled spill simulations. Colours show oiling probability percentage ranging from red (70%) to Light Blue (1%).

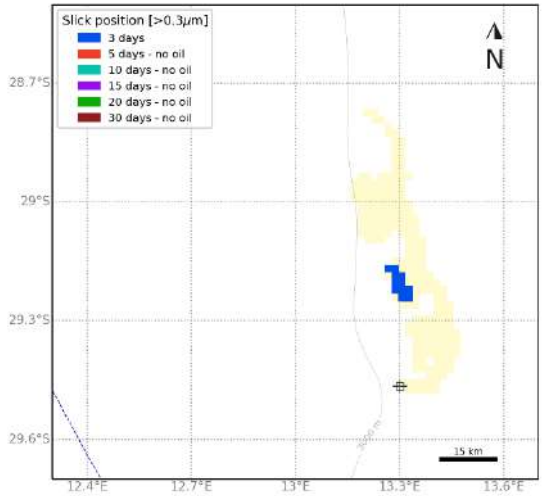
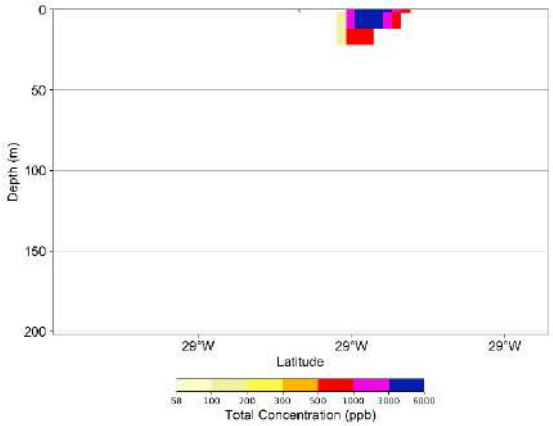
No.	Model type	Oil on surface	Oil in water column	Oil onshore
1.2	Deterministic[9] (2 individual spill scenario by season)	Oil drift follows dominant current for each season towards N and S, with greater dispersion towards the N. Due to proximity to the coast oil was found to spread to the E as well, reaching the coast across all seasons.  Surface spill drift evolution (Season 3)	In the water column, oil concentrations were observed near the release point, reaching depths of up to 15 m with maximum values reaching 3 000 ppb.  Water column concentration after 1 day (Season 3)	Shoreline oiling can occur as quickly as <2 hrs (in Season 4), while the largest mass of oil on coast is expected to be 411.7 tonnes in Season 3. The oil extent along the coast can reach up to 45 km north of Walvis Bay in Season 3. The minimum time to shoreline oiling is ~1.7 hrs.  Surface spill drift evolution for the simulation with highest mass of oil reaching the coast (Season 3)

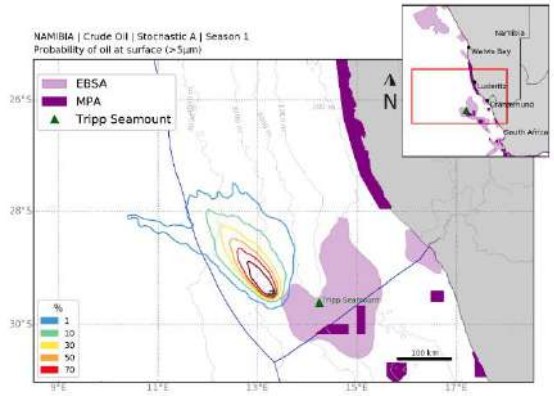
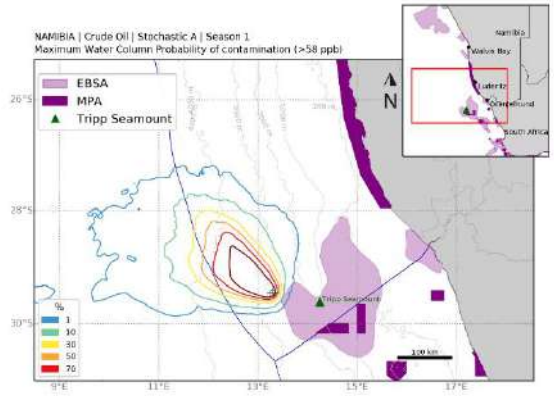
[9] Shows snapshots of oil distribution from a spill at specific times (e.g. on Days 5, 10, 15, 20, etc). Light yellow shows the total area affected at some point during the 60-day simulation.

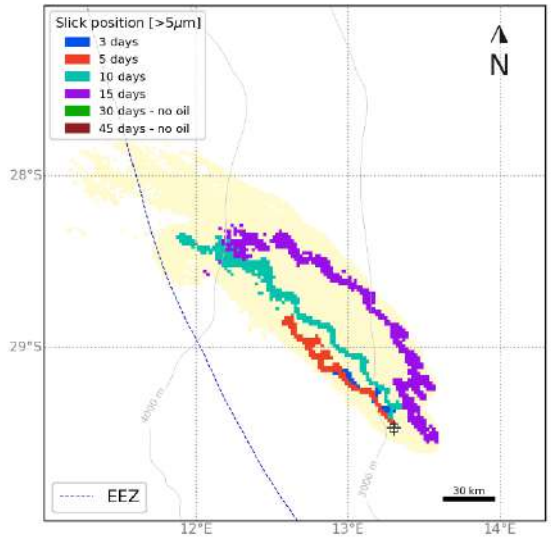
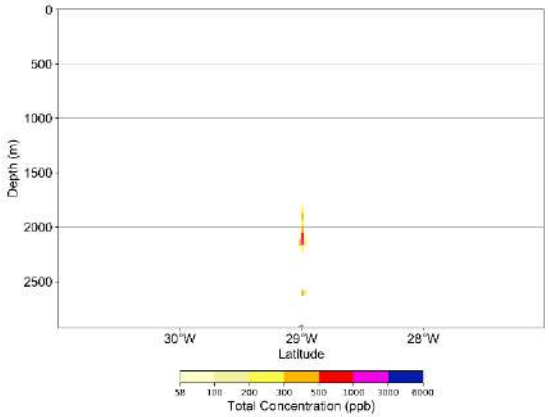
No.	Model type	Oil on surface	Oil in water column	Oil onshore
2	***Scenario O2: Loss of 300 m³ Marine Diesel at Nearshore Transshipment Area***			
2.1	Stochastic (combined spill scenarios)	Due to the proximity of the spill site to the coastline, diesel on the surface drifts mainly towards N and S, as well as to the E reaching the coast in all seasons. The greatest dispersion is towards the N for up to 26 km from release point during Season 3 and 4. Surface diesel evaporates quickly, expected to be present for up to 0.75 days (18 hrs).  Oil surface probability area (> 0.3 µm) (Season 3)	Diesel in the water column also drifts towards N and S, with greater dispersion towards the N. In all seasons, there is up to a 50% probability of diesel remaining within the water column, with the highest concentrations observed in the upper 12 m.  Water column maximum probability (> 58 ppb) (Season 3)	Shoreline “oiling” is predicted to occur during all season, with up to 52.3 t/km of oil stranded affecting the coastline between up to ~83 km north of Walvis Bay (between Wlotzkasbaken and Jakkalsputz) and ~22 km south of Walvis Bay depending on the season, with a maximum extent of 95 km for Season 3. The minimum time to shoreline oiling is ~1.7 hrs in Season 4.  Maximum mass onshore (>10 g/m²) (Season 3)

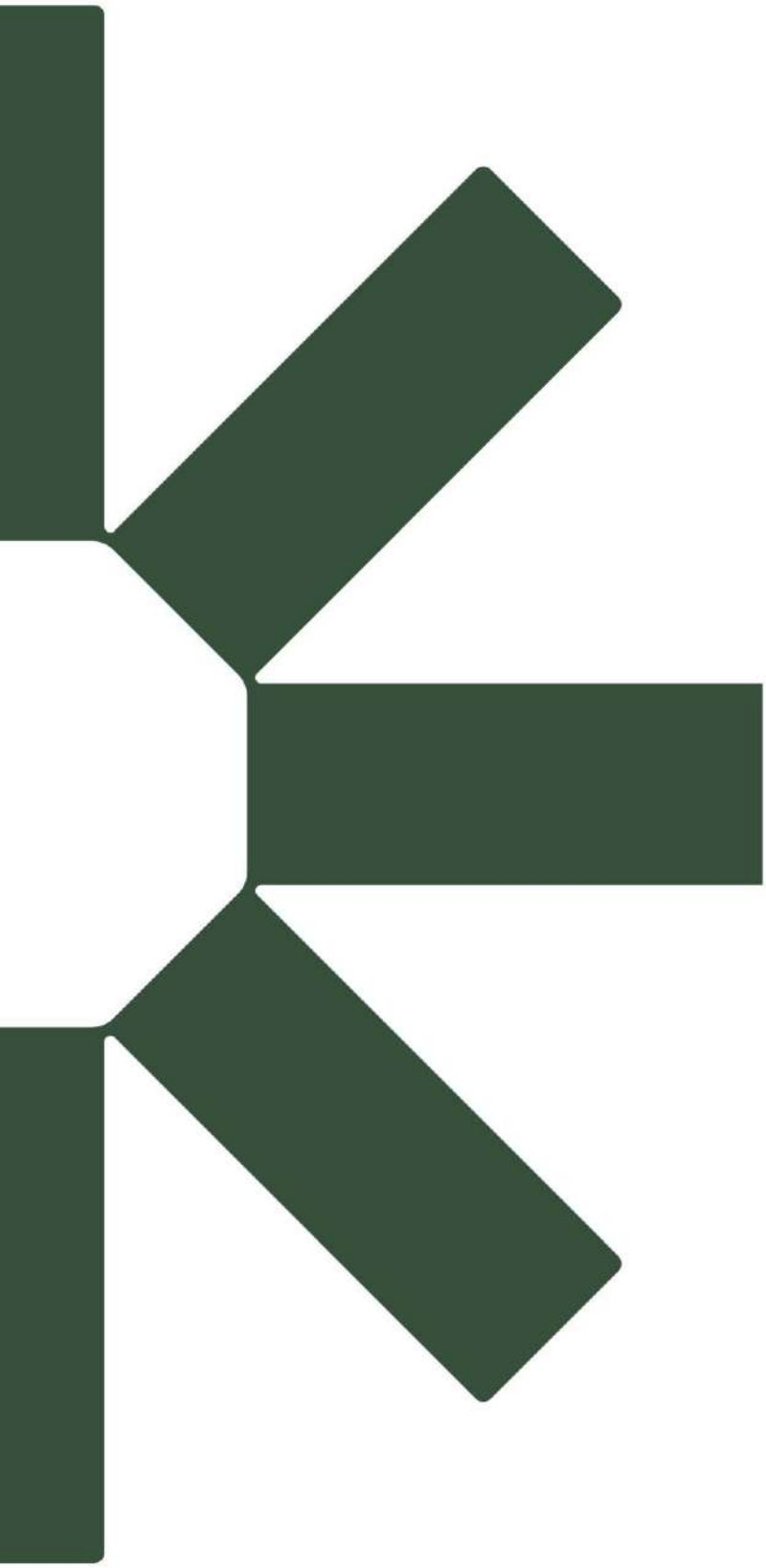
No.	Model type	Oil on surface	Oil in water column	Oil onshore
2.2	Deterministic (2 individual spill scenario by season)	Diesel drift follows dominant current for each season, spreading predominantly to the N with some seasonal variability in its spread and extent.  Surface spill drift evolution (Season 3)	Diesel concentrations were observed near the release point, reaching depths of up to 15 m with maximum values reaching 1 000 ppb.  Water column concentration after 1 day (Season 3)	Shoreline “oiling” can occur as quickly as <2 hrs (in Season 4), while the largest mass of oil on coast is expected to be 59.5 tonnes in Season 1. The oil extent along the coast can reach up to 35 km north of Walvis Bay. The minimum time to shoreline oiling is ~1.7 hrs.  Surface spill drift evolution for the simulation with highest mass of oil reaching the coast (Season 3)

No.	Model type	Oil on surface	Oil in water column	Oil onshore
3	***Scenario O3: Loss of 5 000 m³ marine diesel from a drilling unit tank at Venus offshore project area***			
3.1	Stochastic (combined spill scenarios)	Diesel on the surface drifts towards NW with dominant winds and currents. Model predicts the 1% probability extending up to 89 km from release point (Season 3) in a NW direction. No 90% surface probability is observed due to the high evaporation rate of marine diesel. Diesel is not expected to reach South African waters, Tripp Seamount or MPAs. There is a 1% probability that diesel reaches portions of the Orange Seamount and Canyon Complex EBSA. On the surface, the percentage of the total volume released in all seasons is less than 0.05% at the end of the 30-day simulation. Response has a very small effect on the area affected by a diesel spill.  Oil surface probability area (> 0.3 µm) without response (Season 3)	Diesel drifts towards NW and W with dominant currents and winds. Model predicts 1% probability of contamination presence in water column up to 212 km from the release point (Season 4). Due to the spill occurring at the surface, the shallower layers were found to have a greater spread, as compared to deeper layers. Diesel is not expected to reach South African waters, Tripp Seamount or MPAs. There is a 1% probability that oil reaches portions of the Orange Seamount and Canyon Complex EBSA. Response has a very small effect on the area affected by a diesel spill.  Water column maximum probability (> 58 ppb) without response (Season 4)	Diesel is not expected to reach shore (no shoreline “oiling”).

No.	Model type	Oil on surface	Oil in water column	Oil onshore
3.2	Deterministic (1 individual spill scenario by season)	Diesel drift follows dominant current for each season towards NW, with some seasonal variability in its spread and extent. In this deterministic scenarios, the spread of the spill trajectory is away from any EBSAs, Tripp Seamount and MPAs. Diesel is modelled to reach up to 80 km from the release point with the largest surface area during Season 1 and 2, and remains on the sea surface for up to 3 days. In all seasons, there was no surface oil above 0.3 µm thickness threshold. Response has a very small effect on the area affected by a diesel spill.  Surface spill drift evolution (Season 1)	The vertical profiles of diesel in the water column after 1 day showed concentrations above the threshold from the surface up to 22 m deep. The highest concentrations, between 3 000 and 6 000 ppb, occurred between 2 and 12 m deep in Seasons 2 and 4.  Water column concentration after 1 day (Season 4)	Diesel is not expected to reach shore (no shoreline “oiling”).

No.	Model type	Oil on surface	Oil in water column	Oil onshore
4	***Scenario O4: Release of Crude Oil from a 13-day Well Blow-Out at Venus offshore project area***			
4.1	Stochastic (combined spill scenarios)	Oil drifts towards NW / N at surface with dominant winds and currents. Model predicts 90% probability of oiling up to 85 km from release point and 1% probability of oiling up to 323 km from release point (Season 1) in a NW direction. Oil is not expected to reach South African waters, Tripp Seamount or MPAs. There is a 30% probability that oil reaches portions of the Orange Seamount and Canyon Complex EBSA in Season 3. In all seasons, the percentage of the total volume released is less than 0.05% at the end of the simulation. Response has a very small effect on the area affected by an oil spill.  Oil surface probability area (> 5 µm) without response (Season 1)	Oil drifts towards NW and W with dominant currents and winds. Model predicts 1% probability of oil presence in water column up to 489 km from the release point (Season 1). The shallower layers showed a wider spread of oil above the 58 ppb threshold compared to the deeper layers. Oil is not expected to reach South African waters or MPAs. There is a 30% probability that oil reaches portions of the Orange Seamount and Canyon Complex EBSA in Season 3. Response has a very small effect on the area affected by an oil spill.  Water column maximum probability (> 58 ppb) without response (Season 1)	Oil is not expected to reach shore (no shoreline oiling).

No.	Model type	Oil on surface	Oil in water column	Oil onshore
4.2	Deterministic (1 individual spill scenario by season)	Oil drift follows dominant current for each season towards NW, with some seasonal variability in its spread and extent. In these deterministic scenarios, the spread of the spill trajectory is away from Tripp Seamount, but there is overlap with the EBSA in Season 2 and 3. Oil is modelled to reach up to 250 km from the release point, with the largest surface area during Season 2. At the end of the simulation, there was no surface oil above 5 µm thickness threshold. Response has a very small effect on the area affected by an oil spill.  Surface spill drift evolution without response (Season 2)	The vertical profiles of oil in the water column after 13 days showed concentrations above the threshold between approximately 1 500 and 2 700 m depth. The highest concentrations, reaching up to 3 000 ppb, were observed between 2 000 and 2 500 m depth.  Water column concentration after 13 day (Season 3)	Oil is not expected to reach shore (no shoreline oiling).



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