SundaGas Banda
Unipessoal Lda

SGBU

Integrated Management System

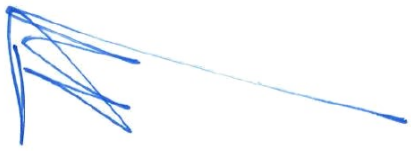
Environmental Management Plan (EMP) for Drilling Activities

PSC TL-SO-1916

SGBU.1916.HSSE.0016

Revision Control

Rev	Date	Changes made in first document.	Author	Reviewer	Consolidate	Approval
A	14/04/2025	First Draft	Maria do Ceu Rosales	B Foley T DeBarr		
B	30/05/2025	Second draft. provided to ANP and EC for public consultation and internal review	Maria do Ceu Rosales	B Foley S Curnow T DeBarr D Gandara	B Foley	Dr. A Butler
0	13/10/2025	First Issue	B Anderson	Dr. M Fraser T DeBarr B Anderson P Sequeira A Nash	B Anderson	Dr. A Butler
1	09/02/2026	Issued for approval by ANP EC.	B Anderson	Dr. M Fraser Dr. A Butler	B Anderson	Dr. A Butler

Proponents Authorisation and Endorsement of the EMP			
SGBU is committed to good Industry practice and has rigorously undertaken the environmental permitting and approval process including the EIS and EMP documents. The EMP is one of the methods by which SundaGas demonstrates transparency and accountability in the planning and execution of an offshore project. Hence, SGBU endorses the contents of this plan and will abide by all sections contained herein.			
Role.	**Name.**	**Digital Signature.**	**Date of Signing.**
Chief Executive Officer & Managing Director. SundaGas Banda Unipessoal, Lda. andy.butler@sundagas.com	**Dr. Andy Butler**		09/02/2026

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Definitions and Abbreviations

Acronym	Definition
ADB	Asian Development Bank
AHT	Anchor Handling Tug
AMSA	Australian Maritime Safety Authority
ANP	Autoridade Nacional do Petróleo
ANZG	Australian and New Zealand Guidelines
AOF	Absolute Open Flow
APORTIL	Autoridade Portuário Timor-Leste
ATSEA	Arafura & Timor Seas Ecosystem Action
ATS	Arafura and Timor Seas
BMSL	Below Mean Sea Level
BOD	Biological Oxygen Demand
BoM	Bureau of Meteorology
BOP	Blow Out Preventer
BTEXN	Benzene, Toluene, Ethylbenzene, Xylenes, and Naphthalene
CPR	Competent Personal Report
CSO	Civil Society Organizations
CTD	Conductivity, Temperature, and Depth
DAFF	Department of Agriculture, Fisheries and Forestry
DEWHA	Department of the Environment, Water, Heritage and the Arts
DGV	Default Guideline Value
DNCPIA	Direcção Nacional do Controlo Polução e Impacto Ambiental
DST	Drill Stem Test
EBS	Environmental Baseline Survey
EDTL	*Eletrisidade de Timor-Leste*/Timor-Leste Electrical Company
EEZ	Exclusive Economic Zone
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPO	Environmental Performance Objectives
EPS	Environmental Performance Standards
ESIA	Environmental and Social Impact Assessment
ENSO	El Niño-Southern Oscillation
EMP	Environmental Management Plan
ESD	Emergency Shut Down
FPSO	Floating Production, Storage and Offloading
GHG	Green House Gases

Acronym	Definition
GOTL	Government Of Timor-Leste
GTL	Gas-to-Liquid
HAZID	Hazard Identification
HAZOP	Hazard and Operability Study
HSE	Health, Safety & Environment
IBAs	Important Bird Areas
IFC	International Finance Corporation
ILO	International Labour Organization
IOGP	International Association of Oil and Gas Producers
IUCN	International Union for Conservation of Nature
ITCZ	Inter-Tropical Convergence Zone
ITF	Indonesian Throughflow
INSTANT	International Nusantara Stratification and Transport Program
JPDA	Joint Petroleum Development Area
LFPR	Labour Force Participation Rate
LNG	Liquified Natural Gas
LOR	Limit of Reporting
LTMO	Low Toxicity Mineral Oil
MAF	Ministry of Agriculture and Fisheries
MD	Measured Depth
MDKB	Measured Depth Below Rotary Kelly Bushing.
MFV	Monitoring Fishing Vessel
MODU	Mobile Offshore Drilling Unit
MoU	Memorandum of Understanding
MSL	Mean Sea Level
MPA	Marine Protected Areas
MuTek	MuTeknologi Software
NADF	Non-Aqueous Drilling Fluid
NE	Northeast
NOPSEMA	National Offshore Petroleum Safety and Environmental Management
NT	Northern Territory
NW	Northwest
OBM	Oil Based Mud
OCNS	Offshore Chemical Notification Scheme
OIW	Oil-in-Water
OOC	Oil-on Cuttings
OSCP	Oil Spill Contingency Plan
OTL	*Oras Timor-Leste*

Acronym	Definition
PAH	Polycyclic Aromatic Hydrocarbon
PESKAS	“Peskas" is a digital application and platform developed for monitoring and managing small-scale fisheries, specifically in Timor-Leste. It is a pseudo-acronym meaning "fisheries" in the Tetum language.
PD	Project Documents
PNTL	*Polícia Nacional Timor-Leste*
PSC	Production Sharing Contract
PSD	Particle Size Distribution
Q1, Q2, Q3, Q4	Fiscal Quarters
RCP	Representative Concentration Pathway
ROV	Remotely Operated Vehicle
RT	Rotary Table
SAQP	Sampling and Analysis Quality Plan
SBM	Synthetic Based Mud
SDP	Strategic Development Plan
SDS	Safety Data Sheet
SE	Southeast
SG	Specific Gravity
SW	Southwest
SundaGas/SGBU	SundaGas Banda Unipessoal Lda
SSS	Sea Surface Salinity
SST	Sea Surface Temperature
TD	Total depth
TG	TIMOR GAP Chuditch Unipessoal Lda
THR	Total Hydrocarbon Recoverable
TL	Timor-Leste
TLEA	Timor-Leste Exclusive Area
TOR	Term of Reference
TSS	Total Suspended Solid
TVD	True/Total Vertical Depth
MDBRT	Measured Depth Below Rotary Table
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNTL	*Universidade Nasional Timor-Lorosa’e* (Timor-Leste National University)
UPF	*Unidade Polícia Fronteira*
WBM	Water Based Mud
WHO	World Health Organization

Measurement Units

Acronym	Definition
BCF	Billion cubic feet
BBL	Barrel
BOPD	Barrel of Oil per Day
dB	Decibel
Degree	Celsius
HP	Horse Power
Hz	Hertz
Km	Kilometre
Km^2	Kilometre square
Km/h	Kilometre per hour
Kn and Kts	Knots
M	Metre
mm	Millimetre
MMSCFD	Million standard cubic feet per day
M/S	metres per second
μPa	Micro Pascal (10^{-6})
NM	Nautical mile
PPM	Parts Per Million
TC	Tropical Cyclone
TCF	Trillion Cubic Feet
%	Percentage

1. Executive Summary

1.1 Project Background

SundaGas Banda Unipessoal, Lda. (SGBU) and TIMOR GAP Chuditch Unipessoal, Lda. (TIMOR GAP) were awarded a Production Sharing Contract by the ANP in 2019 to conduct petroleum operations offshore Timor-Leste. PSC TL-SO-19-16 includes the Chuditch-1 gas discovery drilled by Shell in 1998. SGBU has evaluated the Chuditch-1 discovery and is planning to undertake an appraisal drilling program in this PSC area during Q2 of 2026.

SGBU is planning on drilling an appraisal well, Chuditch-2, using a suitably designed and capable self-elevating Jack Up MODU. Following completion of a site survey for Chuditch-2, the appraisal well is expected to be drilled in approximately 68m water depth and to a target depth of approximately 3,010m True Vertical Depth (TVD) in the Plover Formation.

The Chuditch-2 appraisal well is located within the Chuditch field in PSC-TL-SO-19-16 block in the Timor Sea. The Chuditch field is situated about 100NM south of Timor-Leste's south coast and is approximately 43NM south-west of Greater Sunrise and 76NM east-northeast of Bayu-Undan. The drilling program plans to conduct a DST to determine the presence of sufficient economic quantities of hydrocarbons in the gas-charged Plover reservoir interval in the Chuditch-2 appraisal well. Thereafter, the Chuditch-2 well will be plugged and abandoned.

1.2 Scope and Objectives of the EMP

This EMP has been prepared for the appraisal drilling program of the project and encompasses all activities associated the planned drilling activities on the MODU.

The primary objectives of the EMP are as follows:

i. To establish a comprehensive framework that effectively mitigates potential environmental impacts during well drilling and testing, ensuring that environmental risks and impacts are to As Low As Reasonably Practicable (ALARP).

ii. To provide the means to ascertain the effectiveness of environmental protection / conservation measures identified in the EIS study, which will form the basis for additional / modified provisions to meet the stipulated limits where these are expected; and

iii. To provide guidance for environmental management so that the drilling operations are carried out in accordance with legislative requirements and in meeting the overall environmental objectives of the project.

1.3 Summary of Impact

Offshore drilling presents both positive socio-economic benefits and negative environmental impacts. This summary outlines key aspects of the Chuditch-2 drilling project's potential effects and their significance.

Positive Socio-Economic Impacts

- Employment Opportunities: The future development and production phases will create job opportunities for national and international workers, engineers, and local communities, contributing to long-term economic growth.
- Revenue Generation: Royalties and income taxes from petroleum activities will provide substantial financial benefits to the Government of Timor-Leste, supporting national infrastructure and social programs.

Negative Environmental Impacts

Marine Habitat Disturbance

- Seabed Disruption: MODU positioning and the orientation and deployment of the legs and spud cans can disturb benthic communities, affecting marine biodiversity.
- Sediment Smothering: The discharge of drilling mud, cuttings, and cement can lead to burial and contamination of marine sediments, impacting benthic organisms.

Water Quality Degradation

- Chemical and Hydrocarbon Discharges: Routine discharge of drilling cuttings / fluids, and well cleanup brine can alter offshore water quality, leading to increased turbidity and potential toxicity to marine life.
- Wastewater and Sewage Disposal: Routine discharges of sewage, grey water, macerated food, and cooling water may result in temporary nutrient enrichment, attracting marine fauna to the drilling site.

Air Pollution and Climate Impact

- Greenhouse Gas Emissions: MODU operations, well cleanup flaring, and fuel combustion contribute to CO_2 and other emissions, increasing the cumulative impact on air quality and climate change.

Unplanned Events and High-Risk Scenarios

- Well Blowouts and Oil Spills: Loss of well control could result in oil spills, contaminating marine habitats, affecting fisheries, and harming marine mammals, reptiles, and seabirds.
- Vessel Collisions and Fuel Spills: Offshore supply vessel incidents pose a risk of diesel and Synthetic-Based Mud (SBM) spills, leading to oiling of marine life and coral reefs.
- Introduction of Invasive Species: MODU ballast water and biofouling on vessel hulls can introduce non-native marine species, potentially displacing indigenous marine biodiversity.

A detailed summary of potential impacts is given in section 8 of this EMP.

1.4 Mitigation Measures

The mitigation measures aim to minimize potential environmental risks associated with the Chuditch-2 appraisal drilling project. These measures align with international best practices and regulatory standards to ensure responsible offshore operations while maximizing socio-economic benefits for Timor-Leste.

Key Mitigation Strategies

Marine Ecosystem Protection

- Seabed Disturbance: A detailed beam bathymetry analysis seabed survey has been undertaken to select the least sensitive location for the MODU.
- Sediment and Water Contamination: Water-based mud (WBM) will be used in riser-less drilling of the open hole 171/2” section and as such there will be no return to the rig of cuttings or WBM. Modelling for cuttings dispersion and turbidity/TSS in the water column suggests affects will be localised and the benthic fauna will recover rapidly.
- Marine Fauna Protection: Noise-reduction technologies and lighting control strategies will be implemented to mitigate impacts on sensitive marine species.

Water and Air Quality Management

- Effluent and Discharge Control: Drilling fluids, cooling water, and other operational discharges will be treated before controlled release to prevent contamination.
- Air Emission Reduction: Low-emission combustion technologies and optimized flaring / DST will be utilized to curb greenhouse gas (GHG) emissions.

Spill Prevention and Emergency Response

- Hydrocarbon Spill Containment: A comprehensive oil spill response plan, including containment booms, dispersants, and regular emergency drills, will ensure prompt and effective containment should a Tier 2 or 3 level event occur.
- Well Blowout Prevention: The use of tested blowout preventers (BOPs) and emergency shut-down systems will minimize the risk of uncontrolled hydrocarbon releases.

Risk Management for Unplanned Events

- Vessel Collision Prevention: Strict navigation safety protocols, including vessel tracking and exclusion zones, will reduce the likelihood of accidents.
- Invasive Species Control: Adherence to the International Maritime Organization (IMO) Ballast Water Management Convention will mitigate risks of introducing non-native species.

The mitigation measures set forth in this EMP emphasize environmental stewardship while ensuring safe and efficient drilling operations. Through proactive risk management, regulatory compliance, and best environmental practices, SGBU and TIMOR GAP reaffirm their commitment to sustainable offshore exploration in Timor-Leste.

The mitigation measures are given in section 9 of this EMP along with Environmental Performance Objectives (EPOs), Environmental Performance Standards (EPS), and measurement criteria.

1.5 Monitoring Program

SGBU is committed to conducting performance monitoring in accordance with EPOs, EPS, and measurement criteria, as well as environmental quality monitoring during drilling operations. The environmental performance monitoring will encompass inspection and record-keeping for operational, maintenance, consumption, waste, and logistics aspects.

Furthermore, environmental quality monitoring will be conducted during the drilling period to ascertain any alterations in water quality parameters, benthic habitats, and sediment characteristics in proximity to the well site. This assessment will determine whether post-drilling environmental quality monitoring is necessary.

The remotely operated vehicle (ROV) will be deployed to conduct a post well survey in the vicinity of the well. This survey will be conducted to ensure that no dropped equipment or other objects remain on the seabed. The video transects obtained during the survey will be downloaded to a separate storage device and made available for use in post project environmental monitoring if necessary. Additionally, the data will be utilized in environmental monitoring reporting.

1.6 Conclusion

This EMP is prepared to provide environmental guidance so that the appraisal drilling program is conducted in line with the environmental requirements and minimizes potential impacts to the environment. It also identifies the roles and responsibilities of personnel and parties involved in the management of environmental aspects related to the appraisal drilling activities. In addition, this EMP has specified the implementation of environmental management practices, environmental quality monitoring and surveillance audit program to ascertain the current effectiveness of mitigation measures and control measures implemented.

With proper implementation of the EMP, the associated environmental impacts caused by the appraisal drilling program should be minimized, controlled, and mitigated throughout the drilling activities. The EMP is a living document and shall be continuously reviewed and updated accordingly to reflect the current situation and site conditions.

2. Detail of the Project Proponent

2.1 Detail of the proponent

Operator: **SundaGas Banda Unipessoal, Lda.**

TIN: 2003222

Rua Presidente Nicolau Lobato

Timor Plaza, Level 3, Suite 337

Comoro, Dom Aleixo, Dili

Timor-Leste

Tel: +670 331 0847

Joint Venture Partner: **TIMOR GAP Chuditch Unipessoal, Lda.**

TIN: 2003016

Rua Presidente Nicolau Lobato

Timor Plaza, Level 3, Suite 301-314

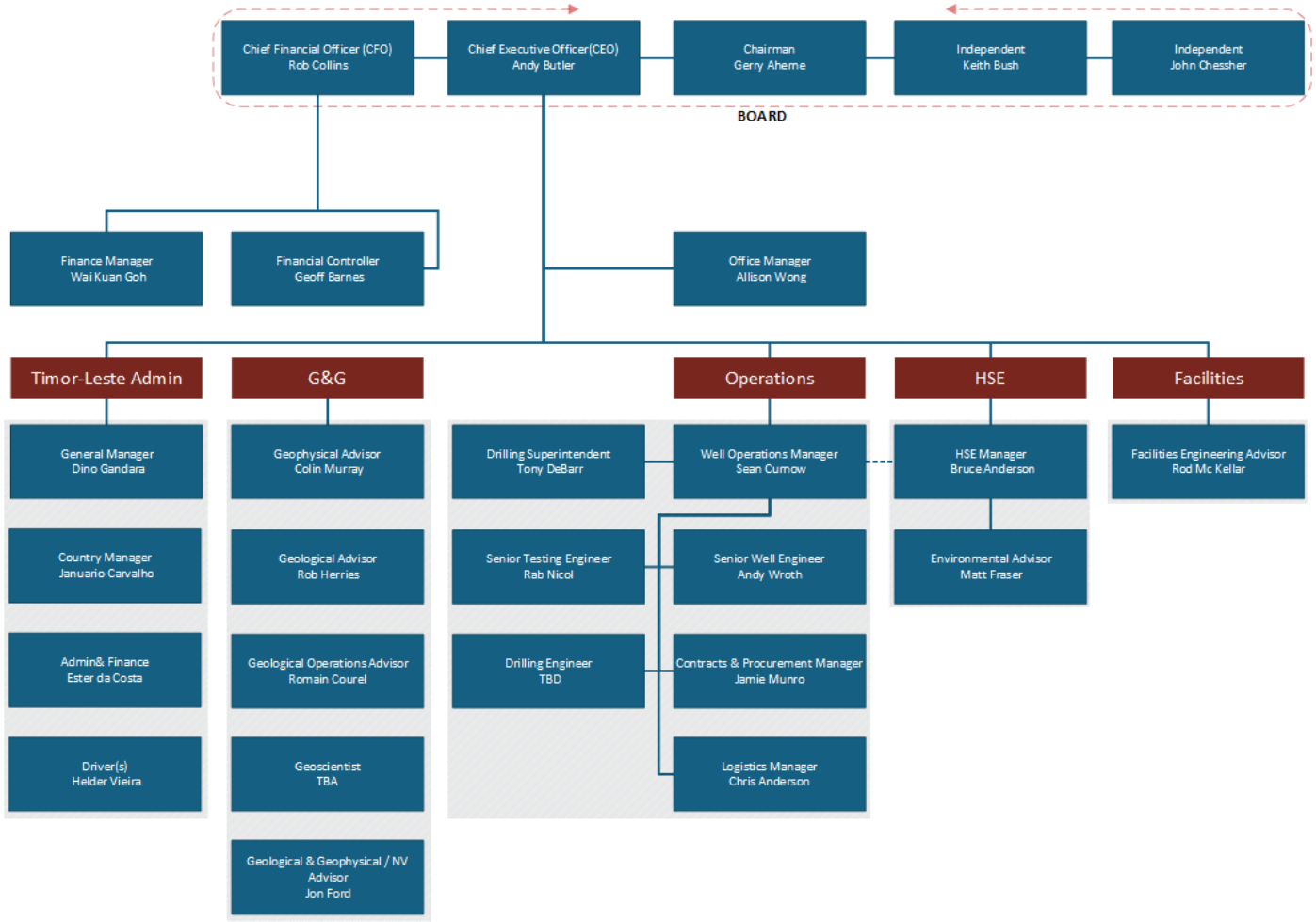
Comoro, Dom Aleixo, Dili

Timor-Leste

Tel: +670 331 1422

2.2 Company Organisation Structure

Figure 1 SGBU Organisation Structure



2.3 Company Contact Personnel

Table 1 Key SGBU Personnel and their Contact Details

Name	Position	Email	Phone
Dr Andy Butler	Managing Director	andy.butler@sundagas.com	+65 93845820
Sean Curnow	Well Operations Manager	sean.curnow@sundagas.com	WhatsApp +44 7384 513 212
Tony DeBarr	Drilling Superintendent	tony.debarr@sundagas.com	WhatsApp +84 129 713 9040
Bruce Anderson	HSE Manager	bruce.anderson@sundagas.com	WhatsApp +61 439 039 066
Dino Gandara	General Manager	dino.gandara@sundagas.com	+670 77626286

3. Detail of the EIA Consultant

SundaGas Banda Unipessoal, Lda (SGBU) engaged Halona Serena Lda (Halona Serena), a Timor-Leste registered national consulting company, to carry out the Environmental Impact Assessment (EIA) study to produce the Environmental Impact Statement (EIS) and Environmental Management Plan (EMP) for the proposed project. Halona Serena has been providing services to domestic projects in Timor-Leste for approximately 3 years prior to commencing the subject EIA study.

Halona Serena is located in:

Rua Presidente Nicolao Lobato, Timor Plaza CBD 2, Room 402

Comoro, Dom Aleixo, Dili, Timor-Leste

Telephone: +670 7711 4459

A number of highly qualified Halona Serena personnel were involved in this project:

Name:	**Maria Do Ceu Rosales**
Role:	Owner and Director Halona Serena
Qualification:	Environmental Science and Business Law
Experience:	As an Environmental Scientist with more than 7 years' experience predominantly in environmental assessment, management, and public procurement. Maria has led environmental studies on a variety of environmental assessments and feasibility studies specifically for water resources management and worked on a variety of projects from small-scale to large projects, including establishing more than five water and sanitation projects to the rural communities and successfully completed marine environmental monitoring project for Tibar Port mega project.

Name:	**Awinash Dulip**
Role:	Senior Consultant
Qualification:	MBA from The International University Baton Rouge, Louisiana; Master of Science in Hydrobiology and Fisheries from University of Port Harcourt, Nigeria; and Bachelor of Science in Zoology from University of Poona, India
Experience:	35 years' experience in EHS and specifically in Environment management around EIA, EIS and EMP development, and environment monitoring in Oil & Gas and the Mining sector. Worked with various governments, private companies, organizations, funding institutions and as a member of the Timor Leste ANP regulatory authority

Name:	**Pascoela Sequeira**
Role:	Senior Consultant
Qualification:	M.Sc. in Natural Gas Engineering and Management; B.Sc. in Chemical Engineering from University of Oklahoma.
Experience:	Process Engineer experience for 8 years in evaluating the LNG process plant design for future Timor-Leste LNG plant and its supporting activities. As part of the Halona Serena team, successfully obtained Environmental Licensing for TGPB for the Pualaca Block Seismic Activity.

Name:	**Bertanizo Guro da Costa**
Role:	Consultant
Qualification:	Associate degree
Experience:	10 years of experience in research in various sectors, including environmental science, conservation, security, defence, legal pluralism, impartiality of formal justice system, education and domestic violence. 5 years of experience in leadership role, as a research coordinator, and general coordinator of association and Expertise in monitoring and evaluation, research methods, statistics, data analysis, media and communications

Name:	**Mario Marques Cabral**
Role:	Consultant
Qualification:	Marine Biologist
Experience:	20 + years of experience as a marine biologist. Worked under Indonesian and Timor - Leste governments for marine departments. Candidate for Blue Planet prize in 2022 (af:011785). The Blue Planet Prize is an award presented to individuals or organizations from around the world in recognition of outstanding achievements in scientific research and its application that have helped provide solutions to global environmental problems.

Name:	**Eurico Ediana da Costa**
Role:	Consultant
Qualification:	MBA from Auckland University of Technology, New Zealand; Bachelor of Public Administration from Timor-Leste National University.
Experience:	An experienced sociologist with a demonstrated history of working around private sector development, research, decentralization, public policy, social-economic, community development, local government development, monitoring and evaluation, and gender mainstreaming. Skills in M&E design, data analysis, research reporting, project management, policy analysis, business analysis, negotiation, problem-solving, capacity building, community consultation.

Name:	**Tiago Gamboa**
Role:	Consultant
Qualification:	Master in Geographer - Urban Planning.
Experience:	25 years' experience as a Geographer and HSE Consultant with experience in environmental management and awareness, EIA, environmental and social management planning, climate change and infrastructure resilience, water resources, urban cleaning and public health, in the Public and Private Sector, including international development cooperation in Timor-Leste.

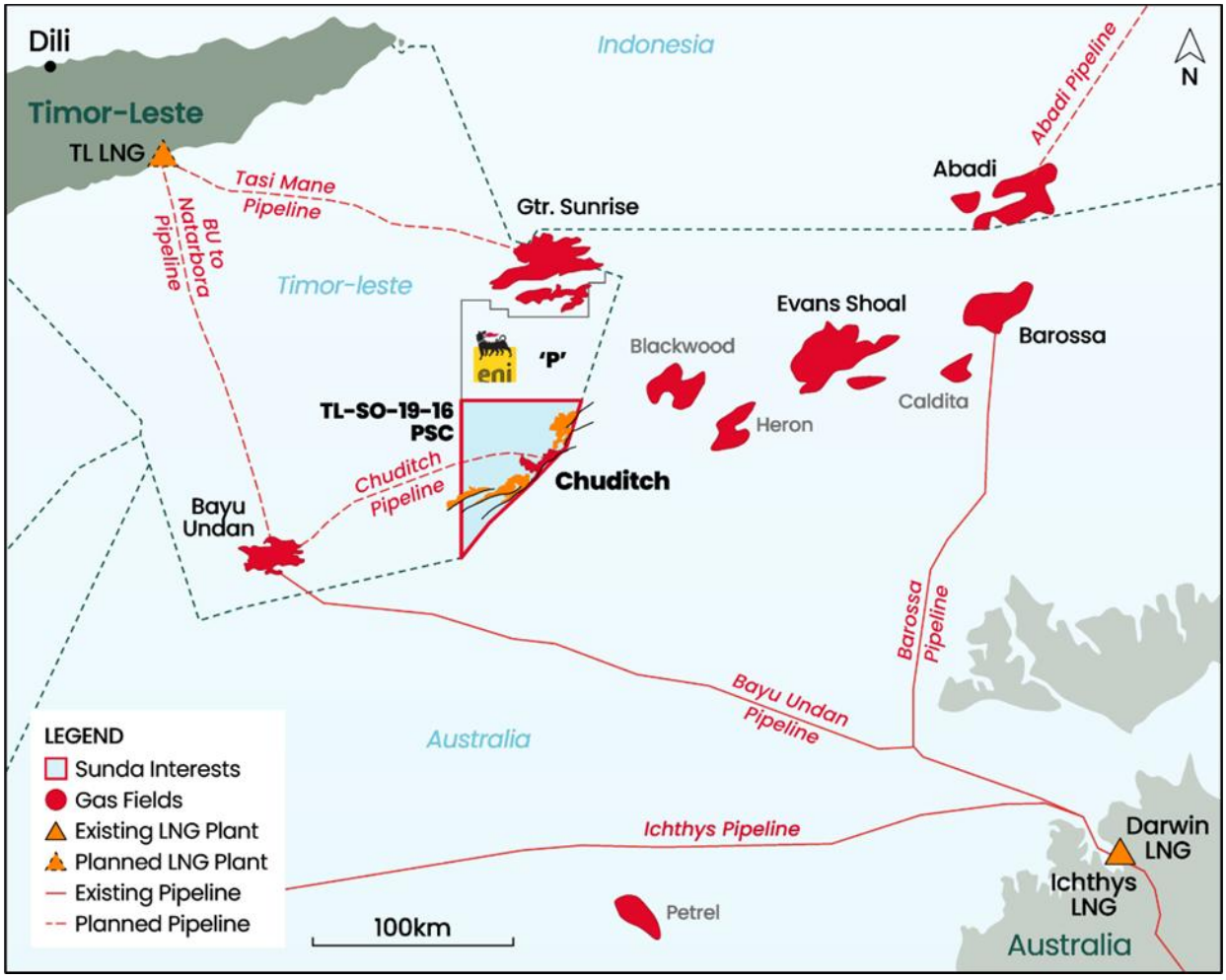
Name:	**Joctan Dos Reis Lopes**
Role:	Consultant
Qualification:	MSc in Marine Biology at Bangor University (School of Ocean Sciences)
Experience:	A marine and coastal fisheries ecologist, actively engaged in small-scale fisheries for over 6 years. Work mainly focuses on developing data innovation and digital transformation to improve fisheries stock assessments, ecosystem interactions and aquatic food systems and enhance coastal resilience and livelihoods in Indo-Pacific Island countries. A published researcher with profound knowledge of ecosystem modelling and local and indigenous knowledge systems. Worked alongside scientists, experts, governments, and fisheries practitioners, to co-develop adaptive tools and context-specific practices that guide inclusive, well-informed, and sustainable marine resource management. One of the pioneers who developed PESKAS, an augmented real-time dashboard that collects catch data and provides fishing trends around Timor-Leste.

4. Project Description

4.1 Project Identification

The appraisal well is known as Chuditch-2 and is located within the Chuditch field located in contract area PSC-TL-SO-19-16. This contract area is located in Timor Sea, in the northern Bonaparte Basin, Sahul Platform area. The Chuditch field is situated approximately 145Nm south of Timor-Leste's southern coast and well will be located approximately 43NM south-west of Greater Sunrise; and approximately 76NM east-northeast of Bayu Undan. The location of Chuditch and the nearby fields are shown in Figure 2.

Figure 2 -Location of Contract Area PSC-TL-SO-19-16/Chuditch and nearby fields.



4.2 Project Category

The project falls within the context of oil and gas appraisal drilling well operations. Chuditch-2 is an appraisal well drilled to evaluate the potential quantities of gas in the Chuditch field in the Timor Sea for future hydrocarbon production. Such a project requires offshore drilling, environmental analysis, and geological data to make future operational and commercial decisions.

In November 2023, ANP approved the Project Document (PD) for drilling of Chuditch-2 on the PSC-TL-SO-19-16 and classified the project as a Category A activity, based on Decree Law No. 39/2022 1st Amendment of Decree Law No. 5/2011 on Environmental Licensing. SGBU subsequently submitted the Terms of Reference (TOR) document which was approved in November 2024 by ANP and is the basis for preparing the Environmental Impact Statement (EIS) and this Environmental Management Plan (EMP).

4.3 Nature, Size and Location of the Project

4.3.1 Project Nature

Appraisal well drilling and well testing operations are conducted to assess the presence and viability of hydrocarbon resources in quantities that may support commercial extraction. These operations typically occur following the drilling of an exploration well, (Chuditch-1) and evaluation of all subsurface data including in this instance reinterpretation of existing seismic data. The purpose of drilling Chuditch-2 appraisal well is to confirm and assess commercial viability of the gas resource while minimizing environmental impact.

The objectives of the Chuditch-2 appraisal well are to confirm the gas anticipated from the seismic mapping, better define gas resources associated with the Chuditch-1 discovery in the Plover sandstones reservoir and to perform a Drill Stem Test (DST) to evaluate the expected future production rates that may be achieved from the Chuditch field.

SGBU's team has designed procedures to cover the proposed drilling and well testing operations on the planned Chuditch-2 well, which is the second of two wells drilled on Block PSC TL-SO-19-16 in the Chuditch field.

The well will be drilled vertically using a jack-up drilling unit and is expected to penetrate the Plover sandstone formations in 12¼" in the interval from 2,880m to 3,010m MDBRT. The well total depth is planned to be 3,010m MDBRT.

The 12¼" hole will be drilled utilizing SBM. Wireline logging will be run in open hole to evaluate formation character and pressure.

If appraisal drilling is deemed successful based on the gas column and reservoirs encountered, a 9⅝" casing will be run and cemented in place, and a DST will be conducted in 9⅝" cased hole to evaluate well productivity.

Prior to any testing operations, the well will be displaced with sea water then circulated to NaCl brine for the DST. The well will be perforated under-balanced with 4.50" HSD TCP guns, with 5" DST tools and a 4½" test string with a multi-rate test planned to evaluate the reservoir productivity. On completion of the DST, the well will be plugged and abandoned. Project details are summarized in Table 2.

Table 2 Summary of Chuditch-2 Project Details

Item	Detail			
Well name	Chuditch 2			
Partnership	SundaGas Banda Unipessoal, Lda 60%, TIMOR GAP Chuditch Unipessoal, Lda 40%,			
Project name	Chuditch 2			
Well type	Appraisal			
Well trajectory	Vertical profile			
Country	Timor-Leste			
Anticipated hydrocarbon(s)	Gas / Condensate			
Block	TL-SO-19-16 PSC			
Basin	North Bonaparte Basin			
Surface Location (Chuditch-2)	Latitude:	10° 32' 56.832" S	X:	406,436
	Longitude:	128° 8' 41.402" E	Y:	8,833,746
Bottom hole Target (Chuditch-2)	Latitude:	10° 32' 56.832" S	X:	406,436
	Longitude:	128° 8' 41.402" E	Y:	8,833,746
Geodetic Information	WGS84, UTM Zone 52S, CM 129°E			
Target Objective	Plover Formation			
Drilling Rig	Jack-up MODU			
Depth Reference	Mean Sea Level (MSL)			
Water Depth (MSL)	+/- 70m			
Well TD	+/- 2,971 m TVD-MSL			
Formation Temperature (Max)	~139°C (~282.2 °F) at TD			
Formation Pressure	+/- 4400psi - Formations are predicted to be normally pressured from seabed down to Plover Formation			
Target tolerance	50m at the Plover Formation target area			
Hole Section	• 17½" hole for 13⅜" casing, planned setting at 1,650 m MDBRT. Drilling fluid will be WBM (Seawater and Hi-vis) sweeps with returns to seabed. • 12¼" hole for 9⅝" casing, planned setting depth at 3,010 m MDBRT. Drilling fluid will be SBM. Return to shale shaker before cuttings discharge to seabed.			

4.3.2 Jack Up MODU

The jack-up MODU is equipped with comprehensive facilities, including accommodation, kitchen services, heating and power supply, sewage management, storage areas, medical and emergency response units, as well as secondary operations such as welding, painting, and machining.

To support logistics, a minimum of two Anchor Handling Tugs (AHT) will assist the MODU by providing

- Mobilisation, positioning & marine support
- Drilling & Well-Testing marine support
- Routine cargo & consumables supply
- Backloading / Waste management
- Emergency & regulatory functions (Standby / SAR / Firefighting / Medevac / OSR)
- Personnel Transport (backup)

Two Supply Vessels will then assist the MODU by providing the transportation of equipment and supplies between the shore and the MODU and support overall project activities offshore, including:

- Drilling & Well-Testing Marine Support
- Routine Cargo & Consumables Supply
- Backloading / Waste Management
- Emergency & Regulatory Functions (Standby / SAR / Firefighting / Medevac / OSR)
- Personnel Transport (backup)

Additionally, Rotary Wing services will be deployed for:

- Personnel Transport (primary)
- Emergency Response (LIMSAR / Medevac)
- Critical Cargo

Crew members will operate on a nominal 28-day rotation schedule, with approximately five crew change flights conducted per week to ensure operational efficiency and workforce sustainability. Both the vessels and rotary wing aircraft will be contracted through a tendering process supported by a detailed scope of work that will include minimum acceptable technical specifications to undertake all of the activities listed here.

The MODU will also provide dedicated storage for a variety of process chemicals and secondary materials. These include:

- Fuel Oil.
- Fresh (potable) water.
- Ballast (Seawater).
- Drilling water.
- Bulk mud and cement.
- Liquid mud.
- Dry process materials.
- Pipe rack storage.

A typical jack-up MODU and the main deck view are shown in figure 3 and figure 4, respectively.

Figure 3 -Illustration of typical Jack-Up MODU

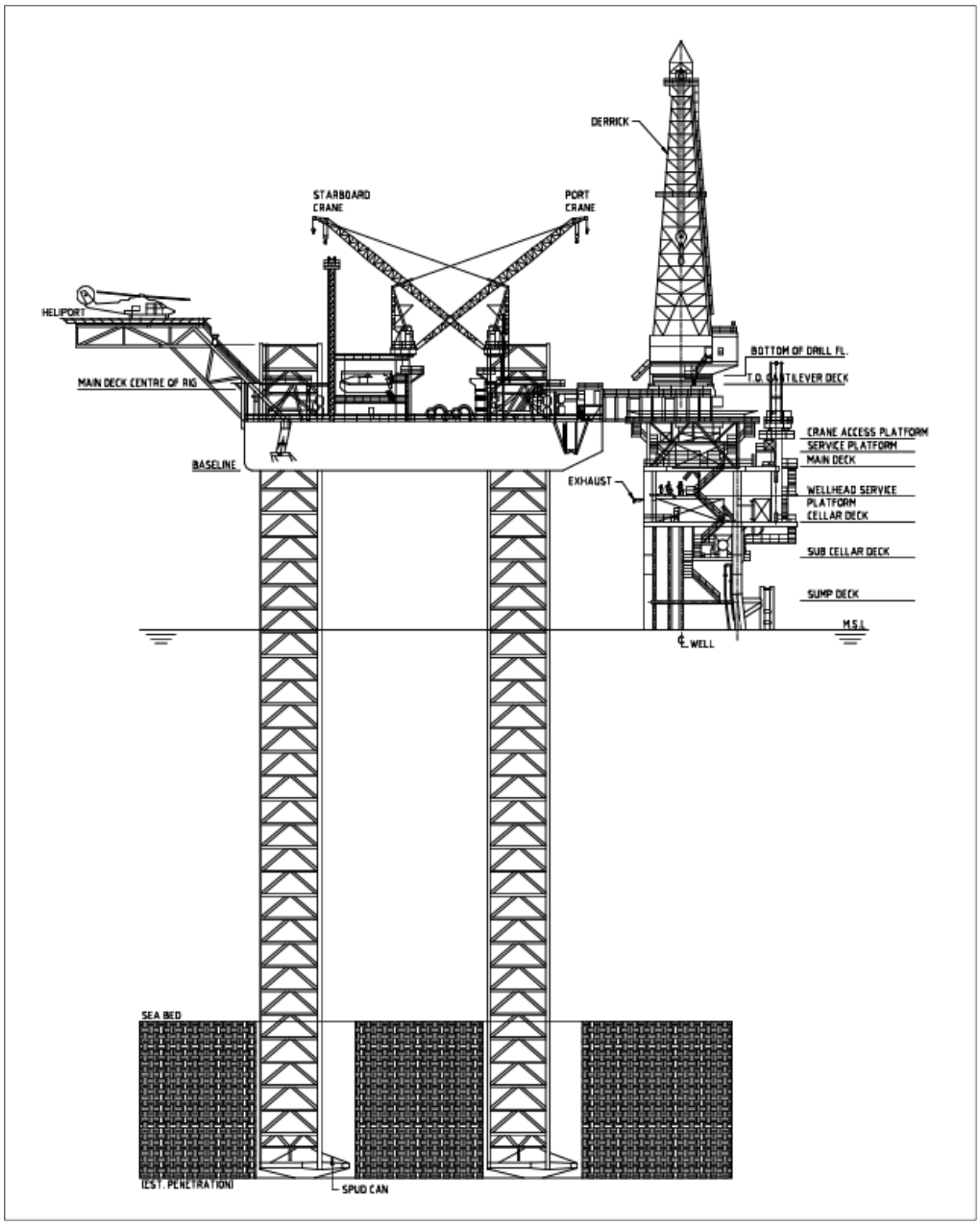
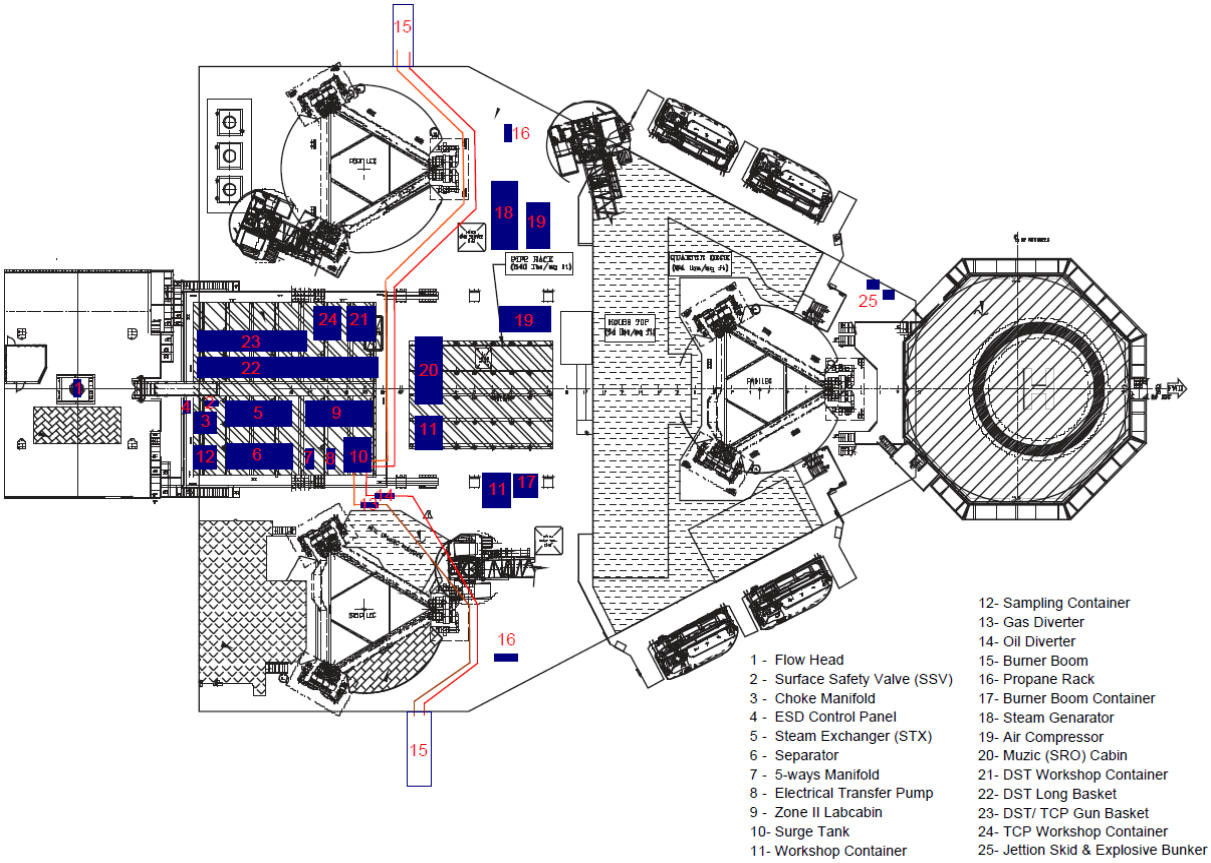


Figure 4 Typical view of Main Deck of a Jack-Up MODU



4.3.3 Project activities and drilling program

The MODU will be towed by one or two AHT's to the drill site. Upon arriving at the required location, the second AHT will be connected to the aft of the MODU (port or starboard depending on metocean conditions at the time). The two AHT's will position the MODU over the planned location, and the legs will then be lowered to the seabed. Pre-loading of each leg will be performed to verify stability, and the MODU will then be elevated to the desired height above the MSL.

Jack-up MODU legs are typically 43m apart in the transverse direction and 40m apart in the longitudinal direction. The spud cans, on the bottom of the legs, are approximately 14m in diameter. The spud cans will be the only part of the MODU that contacts the seabed.

Geotechnical and Geophysical site surveys were completed in Q1 2024. The Geotechnical and Geophysical site surveys confirmed a suitable primary well location and selected two additional locations should construction of a relief well be required. A temporary safety exclusion zone of 500m radius will be established around the MODU location during the drilling operations.

Offshore supply vessels will be sourced through competitive tender, one of the vessels will always be at location to act as a 'standby' vessel. Helicopters required for personnel transfer and medivac will be sourced from aviation contractors capable of providing a safe and cost-effective service.

SGBU are planning to commence project activities and rig move in Q2 of 2026, the MODU will be towed to location and positioned over the programmed well centre. Following soft pinning and ballasting operations, the MODU will jack up to the approved air gap of approximately 15-

18m above mean sea level and begin to rig up, take on extra personnel, equipment, fluids and chemicals in preparation for spudding the well.

Drilling activity of the Chuditch-2 well will target the Plover Formation to appraise the gas discovery encountered by Shell on the Chuditch-1 well. Its primary goals include confirming thicker gas pay in an upward direction from the original well toward its bounding fault and conducting a Drill Stem Test (DST) to assess the field's production potential.

The drilling process uses bits of different sizes to drill a series of concentric holes from the seabed to the planned well total depth. During drilling operations, a fluid known as drilling fluid or mud is circulated through the inside of the drill string to the bit and returns to the surface once the surface casing string has been installed. Drilling fluid performs several important functions including:

Removal of drilled cuttings from the bottom of the well and transports cuttings back to the surface, where they are then separated from the mud and discarded.

- Providing a hydrostatic column to control formation pressures, preventing the uncontrolled flow of formation fluids into the borehole.
- Sealing permeable formations.
- Maintaining well stability.
- Cooling, lubricating and supporting the drill bit and assembly.
- Transmitting hydraulic energy to tools and drill bit.

The Water Based Mud (WBM) drilling fluid is prepared by mixing mud additives and chemicals on site to the desired concentrations in seawater whilst the majority of the Synthetic Based Mud (SBM) drilling fluid will be prepared at the drilling fluid contractors base in Darwin. During the drilling of the 12¼" section, SBM will circulate in a closed system being pumped down hole and recovered over shale shakers on the MODU to separate SBM from cuttings prior to the SBM being returned to the active circulation system. The WBM and SBM systems to be used for the drilling campaign do not pose a risk of contamination to subsurface formations.

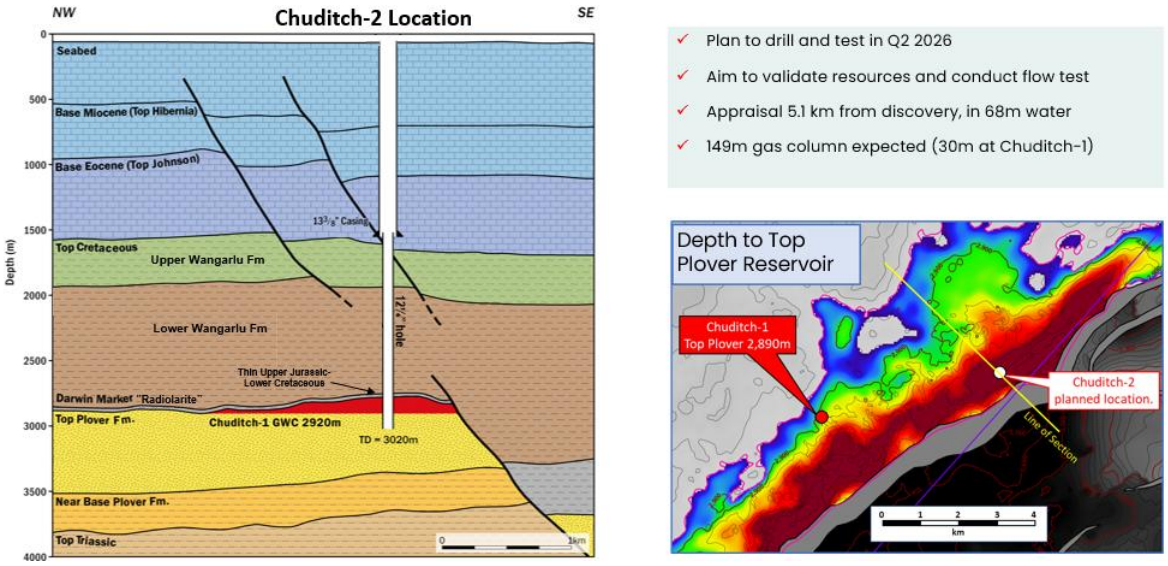
4.3.3.1 Well Design

The objectives of an appraisal well in Chuditch contract area will be to confirm the gas anticipated from the seismic mapping, better define gas resources associated with the Chuditch-1 discovery and to perform a DST to evaluate the expected future production rates that may be achieved at Chuditch, and thus likely commercial viability. The program will include detailed engineering plans for the drilling of the well, including casing and cementing strategies, drilling fluid selection, and well control measures. Figure 5 shows the well design for Chuditch-2.

The well will commence drilling 17½" hole, with fluid and cuttings returns taken to the seabed, once this hole section is drilled a casing string will be lowered into the hole and cemented. This provides a conduit for the return fluid during the drilling of the next section when SBM will be used.

After each section of the well is completed, the drill string is lifted and protective steel pipe or casing lowered into the well and cemented into place. The casing assists in maintaining well stability and helps to reduce fluid loss from the well bore into the surrounding rock formations.

Figure 5 Well design of Chuditch 2 appraisal well



4.3.3.2 Safety and risk management procedures

The chosen MODU will have a comprehensive safety management system and hold a validated, current Safety Case in accordance with Degree Law 32, Article 120. Further, SGBU and the MODU Contractor will work to develop a Safety Case Revision and bridging documents as required, to incorporate and systematically manage additional risks bought to the MODU by SGBU operation. The incorporation of SGBU risks will go through HAZOP and HAZID studies in strict accordance with the in-force MODU's Safety Case and with Decree Law 32.

Specific references to emergency planning, well control procedures, tropical rotating storm planning, personnel training and equipment maintenance schedules and strategies to mitigate risk and ensure the safety and success of the operation in an environmentally responsible manner are specifically detailed in the MODU safety and operational management system, or in SGBU operational plans and procedures. All of these requirements and systems are clearly laid out in Decree Law 32, to which both the MODU Contractor and SGBU are legally obliged and committed to fulfilling.

4.3.3.3 Logistics and supply chain management

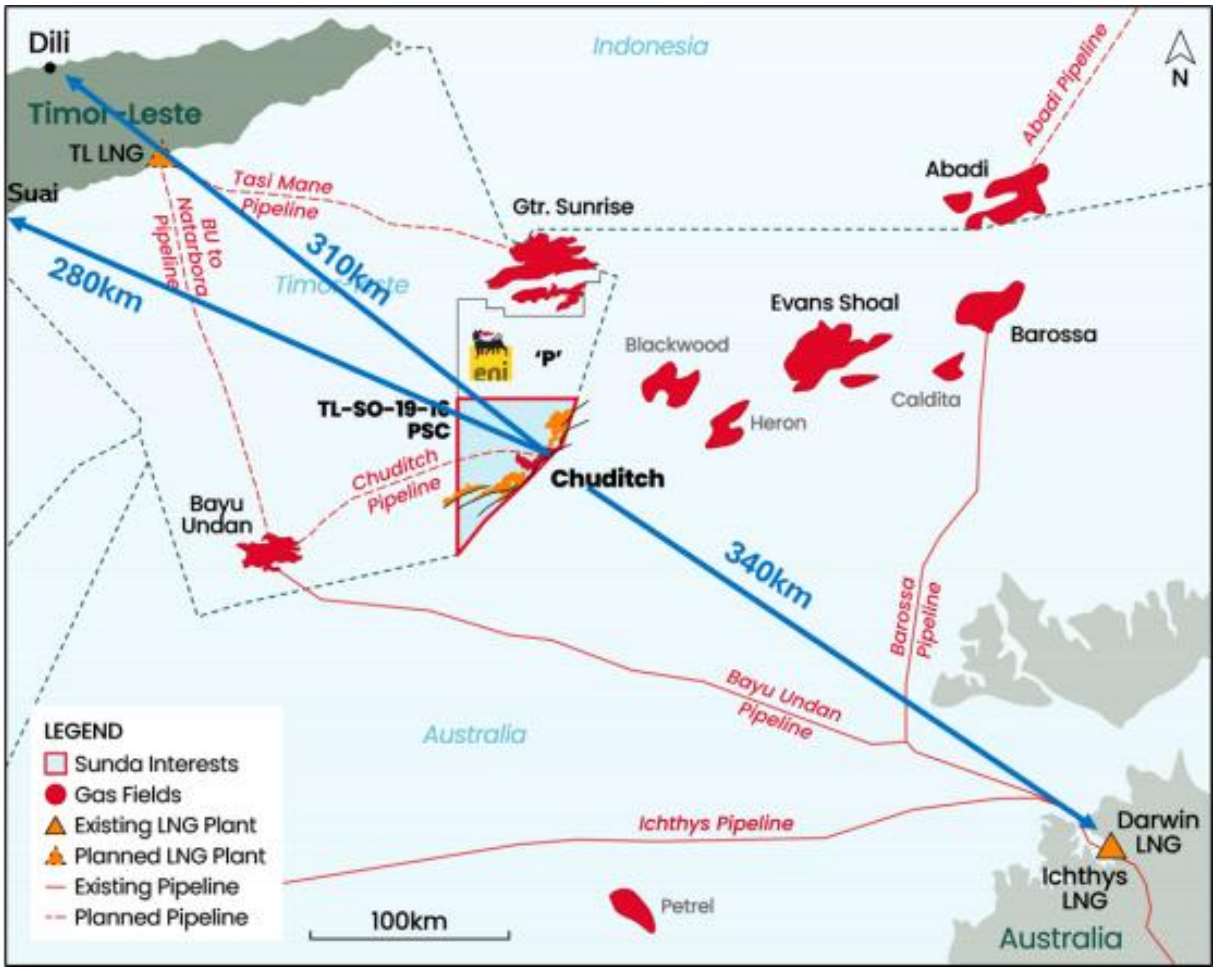
Plans for the procurement and transportation of equipment, materials, and personnel to and from the offshore drilling site are in planning and are not finalized. SGBU will plan to ensure efficient operations. The Chuditch-2 well is located 167NM SE of Dili and 184NM NW from Darwin, with travel times of 1.5 hours for helicopters and 24 hours for supply vessels.

In addition to the mobilisation, drilling and testing operations, normal operations will include loading and offloading of cargo vessels as well as mud and chemical transfers. It is anticipated that equipment and chemicals required during the drilling program will be supplied to the MODU by vessel from Darwin, these will be transferred to the MODU by the MODU crane. Figure 6 shows potential support supply base locations and relevant distances.

4.3.3.4 Drilling resource requirements

The majority of the resources required to drill the offshore appraisal well will be sourced from Australia. The MODU will come self-contained with a highly trained and specialized workforce. Accommodation is supplied on the MODU, which will cater for two drilling shifts working on a 12-hour basis as well as daily operational and maintenance staff requirements. All other supporting drilling technical services will also be accommodated on-board.

Figure 6 Support Supply Base Location and Routes



4.3.3.5 Weather monitoring and contingency plans

Monitoring systems will be employed to track weather conditions and contingency plans will be developed for adverse weather events, such as cyclones or tropical lows to ensure the safety of personnel and equipment. SGBU will contract with an appropriate weather forecasting company to provide metocean data for the project. Contingency planning for weather events will be in accordance with MODU procedures

4.3.3.6 Community engagement

SGBU has engaged with local communities and stakeholders through the Public Consultation process, addressing concerns, and providing information about the location, intended drilling activities, duration and their potential impacts. The company will continue to reach out to all stakeholders through the period of preparation and operations.

4.3.3.7 Regulatory compliance

Adherence to regulatory frameworks and obtaining necessary permits and approvals for offshore drilling activities in liaison with ANP, ensuring compliance with legal and environmental standards from the Government Of Timor-Leste (GOTL), is a critical ongoing consideration in operations planning.

4.3.3.8 Drilling schedule and milestones

A timeline outlining the sequence of drilling operations, including key milestones and targets for completion of each stage of the drilling program is presented in Table 3

4.3.3.9 Quality Assurance and Quality Control

Procedures will be in place to maintain the quality and integrity of drilling operations, including regular inspections, testing, and monitoring of equipment and processes in accordance with SGBU-GEN-OPS-0026 Quality Assurance and Quality Control Standard.

4.3.3.10 Environmental and baseline survey

An Environmental Baseline Survey (EBS) study was conducted in February 2025 which included water quality, sediment quality, and marine fauna. The EIA data obtained will inform the EIS, EMP and the monitoring program. The Scope of Environmental Baseline Study was approved by ANP in September 2024.

The primary objective of the EBS was to gather comprehensive baseline environmental data to enable effective post-drilling monitoring and impact assessment. The EBS identifies and documents baseline conditions for water quality, benthic habitats, and sediment characteristics near the well site to assess potential impacts from drilling activities.

Environmental quality monitoring is planned to be carried out during drilling to understand if any changes are seen in environmental parameters of water quality, benthic habitats, and sediment characteristics near the well site. The anticipated monitoring program during the drilling phase will include representative sampling of the EBS locations and associated testing.

4.3.4 Drilling Plan Summary

The planned sequence of operations is presented in the estimated project execution timeline detailed operation breakdown for appraisal well drilling in table 3.

The planned sequence of operations is:

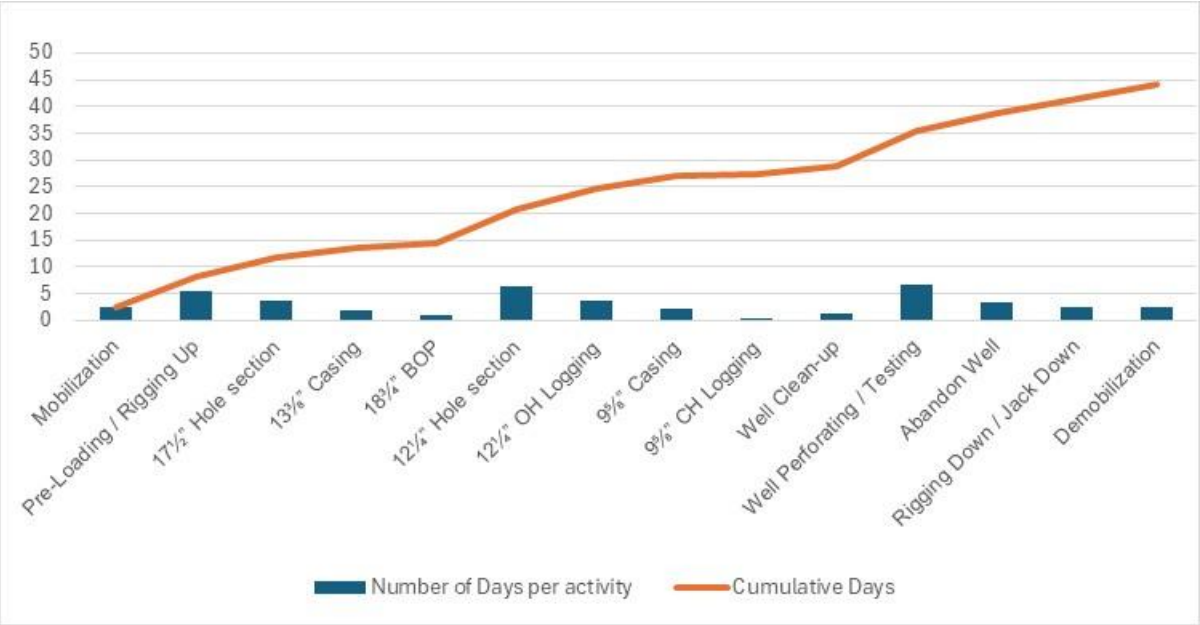
- Mobilize the jack up MODU to the Chuditch-2 well location. Position, pre-load and jack up to the planned air gap height above MSL. Skid out cantilever and prepare for well spud.
- Drill 17½" hole combined with Measurement While Drilling (MWD / Logging While Drilling (LWD)) to planned section Total Depth (TD) using Sea Water, pumping 50bbls Hi-vis sweeps every half stand. At section TD, the hole will be circulated clean and displaced with 9.5ppg Potassium Chloride (KCL) / Polymer mud prior to running casing. The Remotely Operated Vehicle (ROV) will be launched to monitor for gas bubbles and returns to seabed.
- Run 13⅜" casing with the compact housing). Install casing clamp, activate the tensioning unit and land the casing string on the tensioning unit. Cement 13⅜" casing with full bore cement head. Disconnect compact housing running tool. Retrieve and layout the casing landing string. Install Blow Out Preventer (BOP) adaptor/BOP and pressure test connection between BOP and compact housing (The full BOP test will have been conducted offline). Run wear bushing.

- Make up and Run In Hole (RIH) 12¼" Bottom Hole Assembly (BHA) to tag cement. Drill out the 13⅜" shoe track and 3m into new formation and conduct Formation Integrity Test (FIT).
- Drill 12¼" hole c/w MWD/LWD to well TD using SBM with mud weight in the range of 9.5-9.8ppg (TBC). At the TD of well, circulate hole clean and Pull Out Of Hole (POOH) for logging.
- Wireline logging will be performed over the 12¼" open hole section as per program.
- A 9⅝" casing string will be run and cemented in place, top of cement will be placed at 100m above 13⅜" shoe. Disconnect 9⅝" casing hanger running tool and layout landing string. Run and install 9⅝" pack-off assembly inside the compact housing and pressure test.
- Run wellbore clean out tools. Clean and circulate well until clean including BOP ram cavities. Displace well to NaCl packer fluid. POOH.
- Rig up wireline. Run Cement Bond Log (CBL) tools and POOH. Rig down wireline.
- Run guns and DST string. Set DST packer and pressure test. Fire the guns and perform well testing as per program.
- Kill the well and pull DST string.
- Set cement plugs, cut casing and recover wellhead/BOP for the well abandonment as per the program.
- Prepare for the MODU move off location.
- Demobilize the MODU.

Table 3 Estimated project execution timeline, detailed operational breakdown for appraisal well drilling

Operation	Type	Number of Days
Mobilization	Move	2.5
Pre-Loading / Rigging Up	Move	5.6
17½" Hole section	Drill	3.6
13⅜" Casing	Casing	1.9
18¾" BOP	BOP	1.0
12¼" Hole section	Drill	6.3
12¼" OH Logging	Log	3.8
9⅝" Casing	Casing	2.3
9⅝" CH Logging	Log	0.4
Well Clean-up	Clean-Up	1.4
Well Perforating / Testing	Test	6.6
Abandon Well	Plug	3.4
Rigging Down / Jack Down	Move	2.6
Demobilization	Move	2.6
Duration in Total	Approximation	**44.0**

Figure 7 Number of days per activity and cumulative days



4.3.4.1 Well testing

The DST is intended to assess the commercial viability and potential of the hydrocarbon reservoir and specifically to determine the productive capacity, pressure, permeability, and extent of the reservoir. It is usual that in the event of the presence of sufficient quantities of hydrocarbons a temporary drill stem test string may be run and the well fluids flowed to the surface and processed using a surface well testing package that involves the hydrocarbons being flared to the atmosphere.

SGBU plans to perform a DST on the expected gas-charged Plover reservoir interval in the Chuditch-2 appraisal well. The DST is currently being designed and will be integrated into the overall well design by the SGBU well test engineer. The DST package consists of two horizontal burner booms, one each to port and starboard of the jack-up MODU, with dedicated gas lines complete with an ignition system to avoid 'dropout' during ignition for flaring gas and separate burner heads complete with ignition system for burning oil/condensate on each boom.

A standard three phase separator rated at 1,440psi, complete with oil, gas and water outlets capable of handling 75mmscf/d of gas and 6000bopd will be used. A full suite of 2.25" ID, 10K DST of downhole test tools including the following:

- retrievable packer.
- tubing test valve.
- safety valve.
- sample carrier.
- downhole shut-in tester valve.
- single and multi-cycle circulating valves.
- gauge carriers.

These together provide isolation, tubing testing, downhole safety closure, downhole shut-ins for pressure build up, circulation, sampling and memory gauge conveyance.

The two DST gauge carriers will be run in the DST string with 2/4 x electronic pressure / temperature memory gauges in each carrier. All gauges will be linked to surface through the

acoustic SRO system which gives real time bottom hole data read out throughout the DST. A full-bore DST sample carrier will also be deployed complete with bottom hole samplers. These samplers will be activated by applying a predetermined annulus pressure.

A subsurface, hydraulically controlled safety valve will be located in the MODU BOP, where the BOP is close around a slick joint on the tool, allowing annulus pressure to be controlled via the MODU pumps through the MODU choke and kill lines, giving the required pressure for the downhole tool operations.

A thermal flow monitoring system will also be run along the length of the perforated interval, attached to the perforating guns and linked to the surface read out system, allowing real time monitoring of the flowing temperature profile of the perforations during DST operations.

Sufficient methanol will be brought onto the jack-up MODU to mitigate the potential for hydrates formation.

In general, drill string testing entails taking measurements while flowing hydrocarbons to the surface and flaring and is a primary source of critical data for the reservoir model and the principal means by how reservoir engineers adjust reservoir model parameters, understand the reservoir and employ the knowledge gained to optimize future completion and development strategies.

During testing, operators measure formation pressure, characterize the formation fluids and reservoir and determine permeability and skin (damage to the formation incurred during drilling or other well operations). Data that indicate how the formation reacts to pressure increases and decreases during a test can also reveal critical information about the reservoir.

Once TD has been reached, the well logged (noting in particular the gas water contact) and casing run and cemented, well testers will rig up the well test package. A test string complete with tubing conveyed perforating guns and test packer will be run to a pre-determined depth and the packer set to isolate the zone to be tested, ensuring that the perforation location avoids formation water production, as is reasonably practicable. Guns are then fired and the formation perforated. The well is flowed at different rates through a choke valve and surface equipment which can be adjusted to control the flow rate precisely and provide positive well control.

Reservoir fluids produced to the surface are sent directly to a separator/surge tank, designed to function as storage/separation for produced liquids and gases until contaminants such as drilling fluids are eliminated, or at least minimized, from the flow stream.

On the Chuditch-2 well, three clean-ups flow are programmed and produced gases and fluids including produced water will be redirected to the test separator where bulk fluids are separated into oil (if present), condensate, gas and water. The separator also facilitates the separation of any debris, such as sand and other material from the flow. The liquid wastes and liquid fraction of the PFW will then be processed through the MODU oily water separator prior to discharge overboard. The bulk solids and slops from liquid and PFW streams in both the separator and oily water separator will be retained onboard and shipped back to shore for disposal in accordance with the waste management plan. Failure of the rig's oily water separator would result in the cessation of discharge of PFW and the retainment of oily water until the oily water separator is functioning in accordance with the MODU Procedures and manufactures specifications.

During the DST, reservoir fluids are produced to the separator at varying rates according to a predetermined schedule. Apart from clean-up flows, well testing will include build up, drawdown and Absolute Open Flow (AOF). The AOF refers to the theoretical rate at the limit at which the well would flow if backpressure on the sand-face, or the borehole wall, were zero.

Note the maximum capacity of the well test choke and system is 50mmscf/d, which will limit the AOF to the maximum flow rate of the test package. The minimised flaring plan anticipates a total flare time of approximately 31 hours. Table 4 provides estimated flow periods and produced volumes.

Table 4 Estimated flow periods and estimated produced volumes

Period	Duration Hours	Gas Rate MMSCF/D	CGR BBL/MMSCF	Estimated Gas Volume MMSCF	Estimated Condensate Volume BBL	Notes
Initial flow	1	0	0	0	0	Shut it when gas to surface
Clean-Up Flow	8	40	4	13.33	53.33	
Multi Rate Flow #1	6	10	4	2.5	10	
Multi Rate Flow #2	6	25	4	6.25	25	
Multi Rate Flow #3	6	40	4	10	40	
Sampling Flow	2	10	4	0.83	3.33	
Maximum Flow	2	45	4	3.75	15	
Total Cumulative Volumes				36.67	146.67	

4.3.4.2 Cement Program

Cementing is an important aspect of drilling hydrocarbon wells as the cement is used for a variety of purposes including to secure and support casing strings, isolate zones for production purposes and solve various hole problems. In the cementing process, cement is used with a variety of additives that act as accelerators/ retarders/ density adjusters and fluid loss additives, etc. An outline of the proposed cementing program is detailed in table 5.

Table 5 Proposed cementing program

Hole Size (in)	Casing Size (in)	Shoe depth (MD RT)	Slurry	Density (PPG)	TOC	Cement Type*	Excess (%)	Comment
17½	13⅜	1,650	Lead and Tail	12.0/15.8	250m Tail. Lead: Seabed	Class G	200	
12¼	9⅝	3,010	Lead and Tail	12.5/15.8	350m Tail. Lead: 100m above previous shoe	Class G blended	20	Including additives for gas tight and CO2 anti corrosion for Tail slurry
8½ Contingent	7	3,010	Single	15.8	Top of Liner hanger	Class G Blended	15	Same as tail slurry of 9⅝" casing.

* Class G cement is a specialised, API Specification 10A compliant Portland Cement designed for oil and gas well cementing and is primarily used from the surface to depths of 2400 meters.

This illustrated cementing program is for technical guidance only. The final slurry designs for each casing size will be based on tests utilizing MODU cement and water samples, recorded temperatures or other means of determining accurate bore hole pressures, temperatures, final shoe depths, callipered hole volumes, etc. The final cementing program will be issued to the MODU prior to each individual cement job. Any excess cement on the rig and boats will be returned to shore in Darwin.

The planned cementing programs are:

- 13⅜" casing will be cemented by full bore cement head c/w 12.0 ppg Lead and 15.8ppg Tail slurry with Top Of Cement (TOC) at seabed.
- Spacer for WBM shall be pumped prior to releasing bottom plug to improve cement quality.
- 9⅝" casing will be cemented by full bore cement head c/w 12.5ppg Lead and 15.8ppg Tail slurry with TOC at 100m above 13⅜" shoe.
- As the static bottom hole temperature is more than 110°C, Class G cement blended with silica will be used. Also, as the isolation of reservoir interval is required, the tail slurry will include gas block additives and CO2 anti-corrosion additives.
- Spacer for SBM shall be pumped prior to releasing bottom plug to improve cement quality.

4.3.4.3 Cement plugs program

Cement plugs are to be set for isolation of perforation zones in 9⅝" cased hole. A slurry at 15.8ppg shall be utilized for all plugs.

In general, the blended cement will be used for the deep plugs. However, this type of cement can be used for the shallow plugs to avoid loading new cement.

The maximum length of cement plugs to be set is 200m which will minimize the risk of cementing-in the stinger due to the extra time taken to pull slowly out of the plug.

After plug is in place POOH slowly (30-50ft/min) and break connections carefully to avoid stripping plug. Any delays shall be avoided as usually the slurry is designed with a short pump time to improve strength development.

Prior to testing a plug (tagging or pressure testing), time should be allowed for it to develop sufficient compressive strength of at least 500psi.

4.3.4.4 Chemical Usage

Various drilling chemicals are added to the mud as it is mixed on the MODU in order to provide specific properties for drilling at different depths, through various rock types and reactive clays. The density of the mud will be monitored and adjusted to match the downhole conditions and maintain a 150psi overbalance. The drilling mud is stored in dedicated tanks within the drilling unit.

A summary of the current estimate of the types (WBM and SBM) consumption of drilling fluid is provided in table 6. The basic formulation for mud is lime, montmorillonite / bentonite, caustic soda, and barite, none of which are considered toxic. Additives including a bactericide and hydrocarbon based defoamer are used in small amounts to prevent environmental impacts. Chemical use will be dependent on downhole conditions.

Table 6 Mud Chemical consumption summary

Water Based Mud: 13646 bbls	**25Kg Sack**	**Maximum Volume**
Bentonite		161 (MT)
Soda Ash	46	
Caustic Soda	46	
Xan-plex D	110	
Potassium Chloride		2 (MT)
Mil-Pac LV	6	
Barite		2 (MT)
Synthetic Based Mud: 4017 bbls	**25Kg Sack**	**Maximum Volume**
Saraline 185V		1434 (bbls)
Carbo-Mul HT		3300 (gallons)
Carbo-Gel	505	
Lime	467	
Delta FL ST	267	
Calcium Chloride		27 (MT)
OMYA-Carb 10	377	
OMYA-Carb 20	377	
Barite		61 (MT)
Brine: 4000 bbls	**25Kg Sack**	**Maximum Volume**
Sodium Chloride		96 (MT)
Brine-Pac XTS		150 (gallons)
Mil-Bio Sea 98		150 (gallons)
N'Oxygen XT	4	
NX Clean-up A+		5000 (litres)
Xan-plex D	17	

4.3.4.5 Plug and abandonment

Once the DST is completed, the well test equipment is rigged down and back loaded. Upon completion of drilling activities, the well will be plugged and abandoned where a bridge plug, or a high viscosity pill, will be installed to ensure that higher density cement does not fall in the wellbore. The bridge plug or pill would be set and cement pumped on top through the drill pipe and then the drill pipe withdrawn before the slurry thickens.

The well will be abandoned as per an approved abandonment program which will detail depth and length of cement plugs and requirement for pressure or weight testing of same. Finally, the casing is cut below the mudline and pulled to surface

Once the well is secured for abandonment and all equipment retrieved, the MODU will be prepared for moving to the next location

4.3.4.6 Post well survey

The ROV will be deployed and conduct a post well survey in the vicinity of the well to ensure no dropped equipment or other object is left on the seabed. Video transects are downloaded to a separate storage device and made available for use in post project environmental monitoring if required and/or used in environmental monitoring reporting.

4.3.4.7 Rig Down and Rig Move

The jack-up then down rigs equipment, jacks down to the water and retracts the legs in a pre-planned sequence. The tow vessel takes tension on the bridle and moves the jack-up MODU off location.

4.3.4.8 Well control event

The Plover is a normally pressured formation. In the event of encountering shallow gas whilst drilling top hole, drilling into an unknown over pressured zone or equipment failure the jack-up MODU may encounter a well kick or loss of control resulting in either partial loss of down hole fluids or in a worst-case scenario total evacuation of the hydrostatic mud column and well bore fluids migrating to the surface. Risks are considered in jack-up MODU and equipment selection, and all scenarios are considered in well design and drill pipe, casing selection and BOP specification.

The well is prognosed to be an almost dry gas well with a small fraction of condensates (<4%) and approximately 18% CO_2. Modelling indicates a condensate release will remain offshore and disappear rapidly through a combination of evaporation, bioremediation and entrainment in the water column. The weathered residues of the condensate will comprise mostly straight chain normal alkane (n-alkane) commonly called “paraffin wax”. The paraffin wax residues in the condensate will always remain afloat as the product spreads out and thins while it weathers at sea. As the residual condensate increases in viscosity until the pour point is higher than the surrounding seawater, it will begin to form thin clear sheets and white crystalline pancakes. These waxy sheets will then break up into small white waxy flakes due to the action of the waves and wind over time.

Condensate hydrocarbons which cause most of the aquatic toxicity are usually smaller aromatic and soluble components (one and two ring aromatics) or poly aromatic hydrocarbons. The condensate is prognosed to be 82% by mass of volatile and semi volatile compounds, which are the compounds considered toxic. However, these compounds will evaporate rapidly on the sea-surface. Hence, the weathered residues of the condensate are considered to not have these components present at levels that would pose a significant aquatic toxicity risk.

The dry gas including CO_2 will rise to the surface and combine with atmospheric gases in the event of a subsea release and will not remain entrained in the water column.

4.3.4.9 Side track

Should the drill string become stuck in hole and efforts to free it are unsuccessful, it may be necessary to use either a shaped explosive charge or a specialised mechanical cutter to separate drill pipe above the stuck pipe.

After recovering remaining drill pipe above the stuck pipe, a contingency, which will be considered in the event of loss of the drill string, will be to run back in hole to a planned depth and kick off a side track and use directional drilling techniques to continue drilling to target. There is no additional impact to the environment in a side track other than operational duration being increased.

4.3.4.10 Unplanned anchoring

Should a supply vessel experience a loss of power or propulsion and be close to the MODU on the upwind side, it may be necessary to drop an anchor to halt drift. Vessels of the size to be employed for the project will have enough anchor chain and rode to allow a 3 to 1 scope. In water depths of ~68m the majority of the chain will remain off the seabed ensuring a minimized drag zone and impact to the seabed. Where safe and practicable to do so, any anchoring will occur in waters deeper than 70m, which are mostly devoid of live benthic habitats, so as to minimize potential impacts to the benthic habitats.

4.3.4.11 Diesel, Non-Aqueous Drilling Fluid (NADF), Synthetic Based Mud (SBM) Spill

Spill modelling for realistic unplanned discharges to the environment show that in all modelled scenarios, diesel and Non-Aqueous Drilling Fluid (NADF) spills remain well offshore with a diesel spill remaining at surface level and weathering/evaporating within 5 days to a level where it is no longer visible to the naked eye. Modelled NADF similarly lost approximately 45% of total volume within a 5-day period. NADF at ~0.8 Specific Gravity (SG) is significantly lighter than sea water and thus remains at surface level where wind/wave/current and sun combined with high levels of biodegradation of the Saraline 185V cause the spill to rapidly disperse within a 5-day period (MuTek, 2024).

4.3.5 MODU Specification

SGBU will contract a jack-up MODU for the Chuditch-2 appraisal well program. The jack-up MODU is supported by three vertical legs, with spud cans designed to contact and penetrate the seabed and provide stability and support for the MODU. Impact to receptors from spud can interaction with the seabed will be transient and minimal.

Typical Drilling equipment is described in table 7 and expanded on in this section.

4.3.5.1 Mud Pumps

There will be three or four National Oilwell model 14-P-220 Triplex each with a continuous 2,200HP rating capable of operating at a maximum working pressure of 7,500Psi or of similar specification depending upon the MODU contracted.

Table 7 Typical High pressure mud system

Item	Output / Size	Detail
System working pressure	Psi	7500
System test pressure	Psi	7500
Mud pump quantity		4
Mud pump OEM.		National Oilwell
Model		14-P-220
Type (Triplex/Duplex)		Triplex
Mud Pump drive motors/pump		2
Motor type		General Electric 752 Hi Torque Shunt Wound Motors
Continuous Power Rating	Hp	2200
Fluid End Type		Plungers
Maximum Working Pressure	Psi	7500
Test Pressure	Psi	7500
Max. Pump Speed	SPM	90
Working flowrate per pump		1155gpm @ 2660 psi – 514gpm @ 6000 psi
Liner sizes		5-9''

4.3.5.2 Mud Tanks

A typical MODU will have between 8 and 10 mud storage tanks, with a total capacity of 5000 bbls. Approximately half of this capacity will be for the active system with the remainder being reserve mud.

4.3.5.3 Shale Shakers

The rig will be equipped with four or five, high efficiency, liner motion shale shakers. The screen size will be selected at the minimum screen mesh size practical to minimize OOC (Oil-on Cuttings). OOC will be monitored closely whilst drilling / circulating operations are ongoing. Samples from all the solids control discharges will be taken, analysed and reported daily when drilling the 12¼" section.

4.3.5.4 Blow Out Preventer (BOP)

The rig will be equipped with a minimum 10,000psi rated, 18¾ inch high-pressure BOP. All appropriate components will be H_2S rated with sealing elements suitable for use in an SBM environment.

4.3.5.5 Engine and Generator Units

The MODU power generation system will typically consist of 5 Diesel fuelled internal combustion engines coupled to hi output alternators. The generation plant will be situated within the internal levels of the MODU structure where noise is negated by several compartments of varying size between the noise source and the exterior. The exhaust stacks emerge from the upper level of the MODU structure and hot exhaust gases are exhausted via tubular exhaust stacks high above workspaces in open air.

4.3.5.6 Solids Treatment Equipment

In addition to the MODU supplied shale shakers SGBU will install a centrifuge to further reduce drilled solids in the drilling fluid minimizing the amount of dilution required. As a function of the approval to employ the NADF Saraline 185 V, SGBU has committed to the discharge of 9.2% NADF by wet weight of cuttings or less for SBM contaminated drill cuttings averaged over the usage of SBM during drilling. Cuttings generated during operations are presented in table 8.

Table 8 Cuttings generated during Operations

Hole Diameter (Inches)	Casing Diameter (Inches)	Interval (mBRT)		Mud Type	Discharge Depth (mBMSL)	Cuttings Volume (m3)
		From	To			
17.5	13.375	109	1950	WBM	70	365
12.25	9.625	1650	3010	SBM	5	142

4.3.5.7 Drilling Fluid

This project will use both Water Based Mud (WBM) in the 17½" section and Synthetic Based Mud (SBM) when drilling the 12¼" section through technically challenging formations. The chemical selection and assessment process used for the appraisal drilling and well testing is in accordance with good oilfield practice. SGBU have a process for selection and evaluation and use of chemical substances including drilling fluid and cement additives to ensure the well integrity, formation compatibility, operational efficiency, and environmental safety throughout Chuditch-2 drilling operations.

Chemicals are chosen on the basis of efficiency in performance and environmental acceptance criteria. Wherever possible chemicals are chosen which are Centre for Environment, Fisheries and Aquaculture Science (CEFAS) Chemical Hazard Assessment and Risk Management (CHARM) Gold standard or CEFAS Offshore Chemical Notification Scheme (OCNS) E rated as least harmful to the environment and considered to be As Low As Reasonably Practicable (ALARP).

Should a specified chemical not meet ALARP acceptability criteria, SGBU may conduct a chemical-specific hazard assessment of the candidate chemical to determine its suitability for use. The Hazard assessment process will be documented and conducted in accordance with the Hazard Assessment process.

If a chemical is rated as equivalent to D through E, or colour banded as Silver or Gold the chemical shall be acceptable for use.

If a chemical is rated A, B, or C or colour banded purple, orange, blue or white, use of the chemical must be justified. When a candidate chemical is proposed for use in a drilling program and it is rated A, B or C or has colour banding of Purple, Orange, Blue or white in accordance with CEFAS CHARM or OCNS rating methodology, alternatives will be considered to eliminate or substitute the chemical.

If the chemical cannot be suitably eliminated or substituted and SGBU has determined the candidate chemical poses the lowest environmental hazard and is necessary to safe and efficient operation, SGBU will develop a written submission and justification which demonstrates to the ANP on the use and discharge of the candidate chemical will meet regulatory obligations and/or propose controls/mitigations must be in place in order to do so. The submission will include a chemical assessment that uses the ecotoxicity and environmental fate data to estimate the Hazard Quotient (HQ) of the chemical, which is the basis of the CHARM/OCNS ranking. This assessment will then be used to rank the chemical and choose the least harmful chemical that also meets technical specifications.

If the justification is acceptable to the regulator, the chemical is accepted for use. Should the justification not be sufficient for approval by the regulator, the chemical shall be rejected.

Once a chemical has been chosen, the quantity used, and its ultimate fate will be tracked. Its 'ultimate fate' could include such aspects as storage, discharge overboard, waste brought to shore, injection downhole or being left in the well, or it could be consumed in a chemical reaction. This 'material balance' will be calculated, where reasonably practical, using conservative assumptions if precise information is not readily available. (i.e., assuming any material otherwise not accounted for is discharged).

Water-Based Mud

Water-based mud (WBM) will be used to drill the 17½" hole from seabed to the 13⅜" casing setting depth (1,650m MDBRT) using seawater and hi-viscosity sweeps. The water-based mud volume to be discharged to the environment is approximately 2,170m^3.

The WBM will be seawater and high viscosity sweeps which contains bentonite, caustic soda, soda ash, drill water and Xan-plex D. The mix has a specific gravity of 1 to 1.14 and will be discharged at seabed.

Synthetic Based Mud (SBM)

The NADF to be used in the construction of the 12¼" section of the Chuditch-2 well will be Saraline 185V, an OCNS "E" rated substance. Saraline 185V was the subject of an application for use by SGBU granted by ANP on 19 July 2024. ANP reference ANP/HSE/S/24/106 - Approved for Offshore Discharge. The SBM volume to be discharged to the environment as oil retained on cuttings is approximately 99m^3 (20% over gauge hole).

Saraline 185 V is an 'E' rated (Lowest Environmental Hazard) product under the OCNS (Offshore Chemical Notification Scheme) and approved for offshore discharge in more than 40 countries due to its extremely favourable environmental profile. Table 9 details Saraline 185V Properties.

Table 9 Saraline 185V Properties

Property	Test Protocol	Result
Biodegradation		
Aerobic (Freshwater)	OECD 301F	75% after 28d (Readily biodegradable
Aerobic (Marine Water)	OECD 306	64% after 28d (Readily biodegradable)
Aerobic (Soil)	OECD 307	Half-life (DT50) = 21d (Based on 1000mg/kg initial dose)

Property	Test Protocol	Result
Water Column Toxicity		
Acartia Tonsa	PARCOM, ISO 14669	48h EL50:>1,000mg/L (non-toxic)
Skeletonema costatum	OSPAR/PARCOM	72h EL50:>1,000mg/L (non-toxic)
Mysidopsia Bahia	US-EPA 2001 40 CFR 435	96h IC50:>1,000,000ppm of 10% SPP (non-toxic)
Pagrus Auratus	US-EPA 2003	7d IC50:>100,000mg/L (non-toxic)
Daphina Magna	OECD 202	48h EL50:>1,000mg/L (non-toxic)
Brachydania Reria	OECD 203	96h LL50:>1,000mg/L (non-toxic)
Sediment Organism Toxicity		
Caraphium Valutator	PARCOM Protocol 1995 (A)	10d IC50>20,000mg/kg (wet basis)
Bioaccumulation Potential		
Octanol-water partition coefficient	OECD 117	Log Kaw>6.5 (not bio accumulative due to poor bioavailability)

Low Toxicity

Its linear structures result in low toxicity to fish, invertebrates and algae in the water column and sedimentary toxicity testing. Notably, Saraline 185 V does not bioaccumulate in marine organisms.

High Biodegradability

Saraline 185V is readily biodegradable in both marine water (OECD 306 test) and fresh water (OECD 301F test). Saraline demonstrated excellent bioremediation properties even considering onshore land farming methods as proven in studies in Bangladesh, China and New Zealand (Sanzone et al., 2016).

SBM consisting of Saraline 185V drill water, Carbomul HT, Deltaver, Carbogel, Deltalift, Carbotrol 375, lime, calcium chloride and barite will be used from the depth of 1,650m, in the 12¼" hole until TD is reached at approximately 3,010m MDBRT. Whilst in use The SBM will be circulated in a closed system and returned over the shale shakers.

The cuttings will be treated to a maximum of 9.2% wet weight, oil on cuttings before discharge overboard to the seabed from a discharge depth of 5m below MSL. Note: Only cuttings will be discharged. SBM will be separated from cuttings as the cuttings and mud move across the shaker screens, or through the centrifuge, and mud will be returned to the active system for re-use.

At the conclusion of the drilling project the total remaining volume of SBM will be returned to the service provider's onshore storage facility prior to MODU release. The SBM will then be recycled, reused, or resold. Table 10 provides physical properties of Saraline 185V and Table 11 provides a comparison of Saraline 185V to Diesel and LTMO.

Table 10 Saraline 185V Physical Properties

Typical Properties	Saraline 185V	Remarks
Product Type	Synthetic Paraffin	Higher purity, consistent quality
Density @ 15°C, kg/m3	778	Under/ near balanced drilling
Flash Point, °C	85 - 93	Improved worker and assets safety
Viscosity @ 40°C, cSt	2.6 – 2.8	Higher drilling efficiency
Pour Point, °C	-30	Better cold flow properties

Typical Properties	Saraline 185V	Remarks
Aniline Point, °C	95	Enhanced elastomer compatibility, less non-productive time.

Table 11 Comparison of Saraline 185V to Diesel and LTMO

Property	Diesel	LTMO	Saraline 185V	GTL Advantages
Flashpoint °C	56-75th	70-115	85	Improved Safety
Aromatics PPM wt total PAHs PPM (Grimmer series)	3x10^5 - 6x10^5 – 3000 (NA)	50-1000 (NA)	200 ~ 0.002 (<0.2 PPB	Lower toxicity, improved worker safety
BTEX, PPM	400 – 2500	Non detected	Not detected	Lower toxicity, improved worker safety
Density at 15°C, Kg/M^3	800 – 865	804 – 814	790	Lower mud density
Viscosity, eSt, 40°C	1.9 – 4.1	1.68 – 3.6	<2.8	Fast consistent drilling
Pour Point °C	-12	-27 to -20	-24	Good performance in harsh environments
Aniline point °C	61	72 – 91	94	Improved elastomer compatibility

4.3.6 Drilling Waste Management

The various waste streams that are likely to be generated from the jack-up MODU will include:

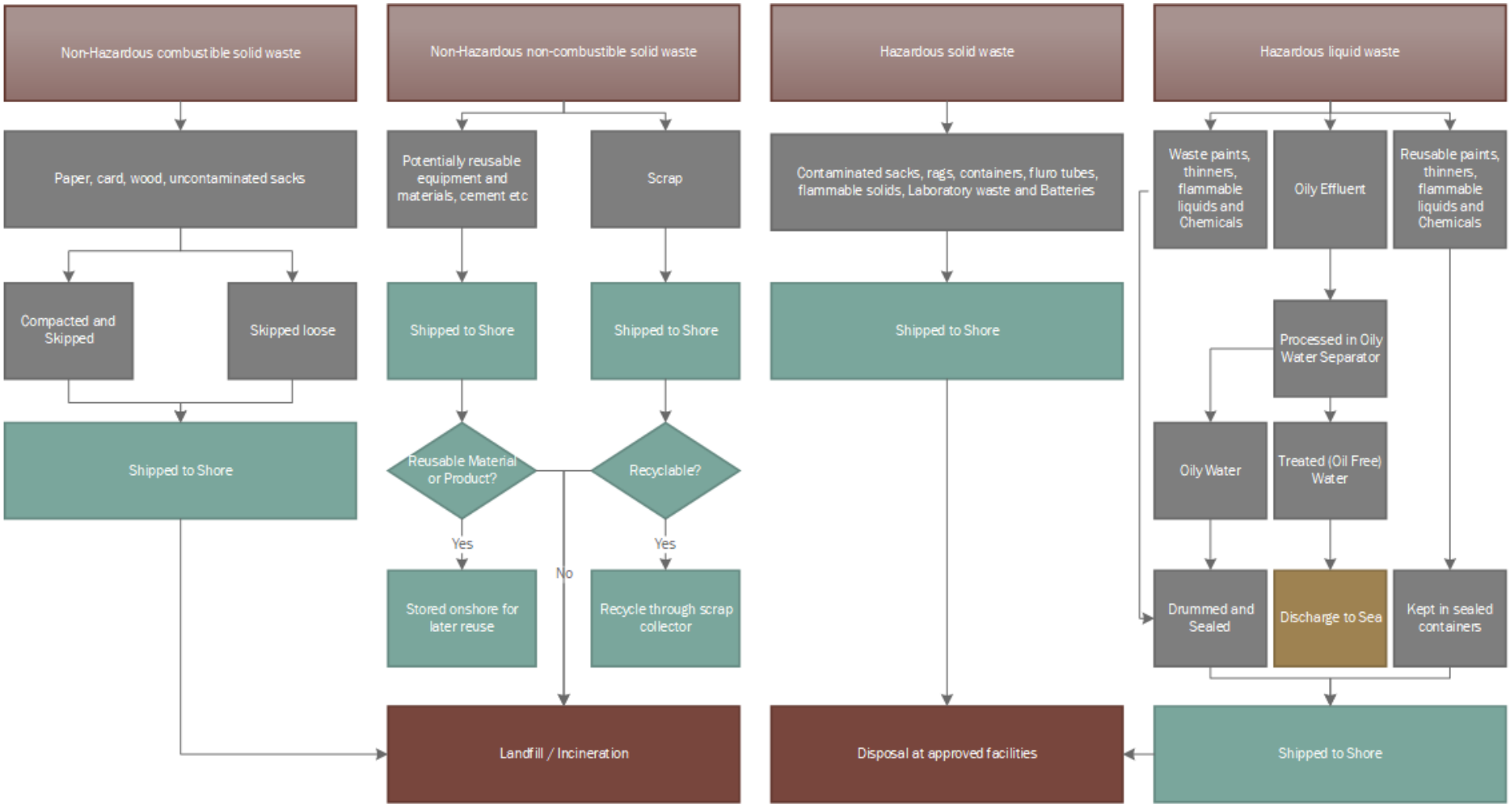
- Drill cuttings mainly comprised of shale, limestone, sand and clay.
- Waste WBM and SBM from drilling activity.
- Drilling wastewater as a result of washing the drilling cuttings. Silt and sand will contain chemical ingredients from the drilling fluid and needs treatment before discharge.
- Chemical and slops generated from the wastewater treatment and oily water separator.
- Hydrocarbons such as waste oil from oil changes and leakages from equipment. Used oil is designated as hazardous.
- Non-hazardous solid waste such as paper wood and plastics.
- Hazardous waste including hazardous ingredients such as fluid or testing chemicals and containers previously holding hazardous material.
- Biodegradable waste such as food scraps.
- Wastewater will be treated by the MODU waste disposal system and discharged into the sea after treatment. Excess water-based drilling mud will be pumped straight into the sea as the chemicals used are biodegradable, non-toxic and environmentally acceptable. In the case of hazardous drilling wastes, these will be collected, stored and transported ashore for disposal in accordance with the waste management plan.
- Used fuels and chemicals will be stored in containers in areas lined with impervious floors and surrounded by containment bunds on the MODU. Recyclable material will intermittently be transported to the supply vessel and materials include used filters, paper, cardboard, and plastic.
- Oily water will be treated by oily water separators and any overboard discharge from the oily water separators will be monitored by an oil-in-water monitor. By design the overboard pump will automatically shut down if the concentration of oil in discharged water exceeds 15 parts per million (ppm) oil in water.

- Sewage treatment unit with vacuum collection system is installed on the MODU.

Waste management arrangements for Chuditch 2 are detailed in the SGBU Waste Management Plan (SGBU-GEN-HSSE-0012)

The MODU contractor will conform to MARPOL and other international standards for waste segregation and management. Figure 8 provides a flow diagram for a typical waste management process which is typical and representative of a MODU waste management process. The project EMP and the Waste Management Plan will provide details of the waste management process to be implemented for the Chuditch 2 well.

Figure 8 Representative Jack Up Waste Management Plan



4.3.6.1 Drainage System

The drainage system on the MODU provides controlled contaminated water collection and treatment system with dedicated discharge points as a means of reducing the likelihood of uncontrolled discharge of contaminants into the environment to a level that is ALARP.

At the helideck, an effective drainage system is important to prevent water and aviation fuel ponding on the landing surface. Therefore, the helideck on the jack up MODU is designed to always remain free from standing water and fuel accumulations. It is facilitated with gutter and drip trays to prevent spilled or leaked materials from entering the water. The drains will be penetrated by a valve and will be discharged overboard directly. The contaminated water will be collected in a catch tank and transferred to the portable container.

At the main deck, deck drain will capture various fluids and other materials that are spilled or washed onto the deck. In order to prevent the uncontrolled discharge of the deck drain, a perimeter drain system and separate drainage systems for each process area are in place to funnel fluids etc. to the deck drainage system. Fluids collected by deck drains will be filtered prior to discharge and the contaminated water will be stored in a 'slops' holding tank and pumped to a supply vessel for discharge and processing at an authorised and appropriately certified waste management station.

The heavy machinery and equipment area is equipped with pollution drip pans i.e. rotary table drip pan, draw-works drip pan, etc. The drainage from this area is collected via drip pans under the MODU floor and directed to the slops tank before being treated by a separator tank. In term of the mud process area, the drain is directed to a drain sump for treatment. All of the contaminated water and pollutants from these two areas will be finally transferred into a mud contaminated drainage tank, fluids treated to MARPOL standard will be discharged overboard.

4.3.6.2 Jack Up Effluent Management

During operation, measures aimed at minimizing harmful effects to the receiving environment will be put in place in regard to controlled discharge of liquids such as drilling fluids and cooling water from the vessel and MODU. Discharge limits/guidelines as stipulated in MARPOL have been adopted for screening criteria for the Chuditch-2 Appraisal well project.

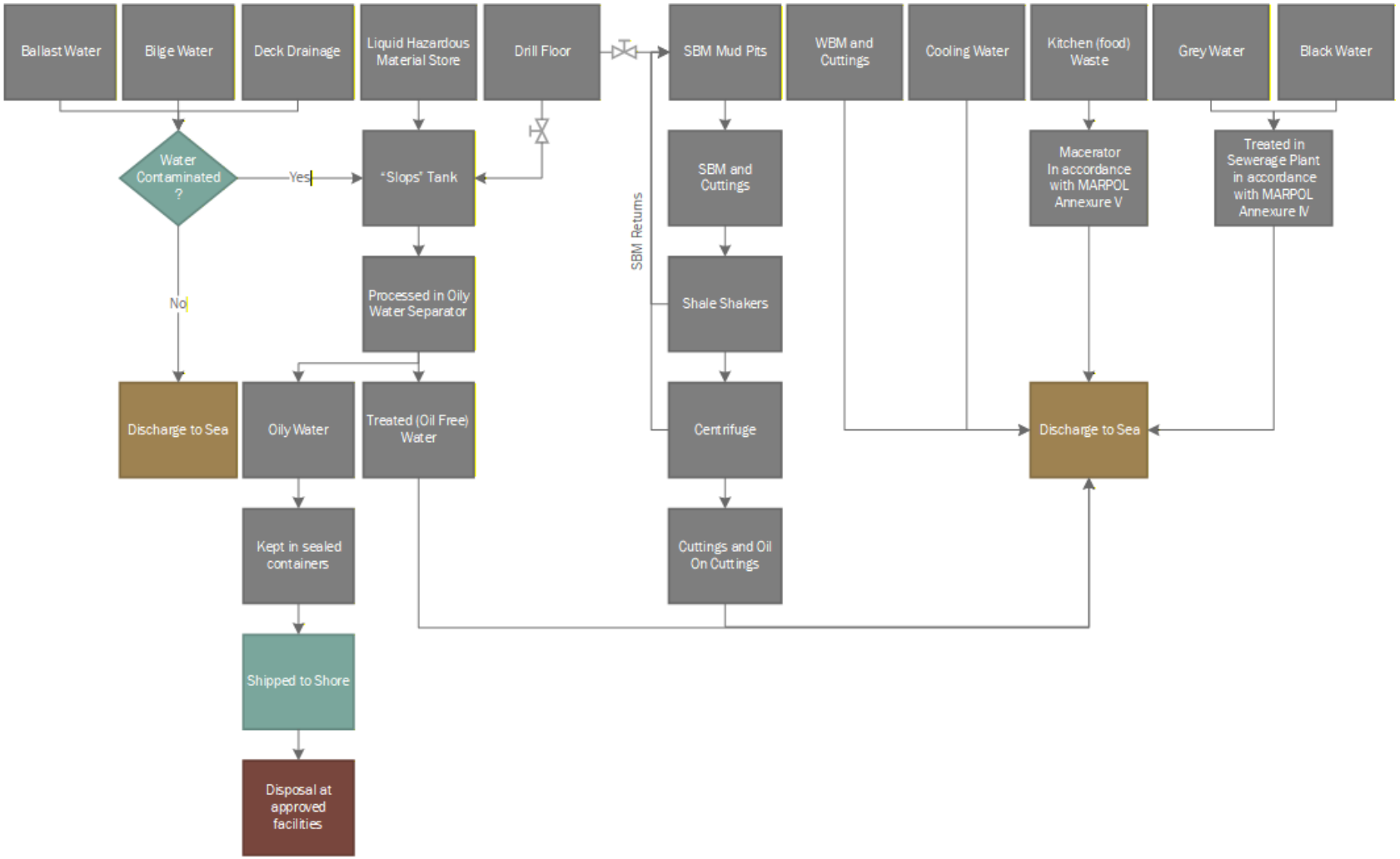
All liquid discharges will be in accordance with the applicable MARPOL requirement or other applicable standard such as World Bank EHS Guideline for Offshore Oil and Gas Development. Hazardous materials such as chemicals and used oil will be segregated and transferred back to shore for treatment, recycling and disposal.

Oily/contaminated water will be routed to the oil/water separator and treated to separate the oil which will be transferred to the waste oil tank for transfer to shore for recycling/disposal. Contaminated water will then move to the greywater treatment unit for further treatment before discharge. Grey and black water will be treated and discharged in accordance with MARPOL. MODU effluent management plan is given in figure 9.

Cleaners and detergents may have an effect on the environment. SGBU will ensure that all chemicals, cleaners and surfactants to be used offshore are approved by the ANP.

MODU wash, a widely used, non-hazardous liquid cleaner, is routinely employed on jack-up MODU's and offshore vessels in the maintenance of apparatus and machinery as well as deck areas subject to contamination from crew boots, oil and other products. Wastewater from cleanup on the jack-up MODU will be captured by deck drainage and channelled to the oil/water separator where oily substances can be captured, treated, and managed to avoid marine environment contamination. Any chemicals or cleaning agents to be used in this regard will not violate environmental standards on safety or environmental harm and hence will not cause ecological effects

Figure 9 Representative Jack Up Effluent Management Plan



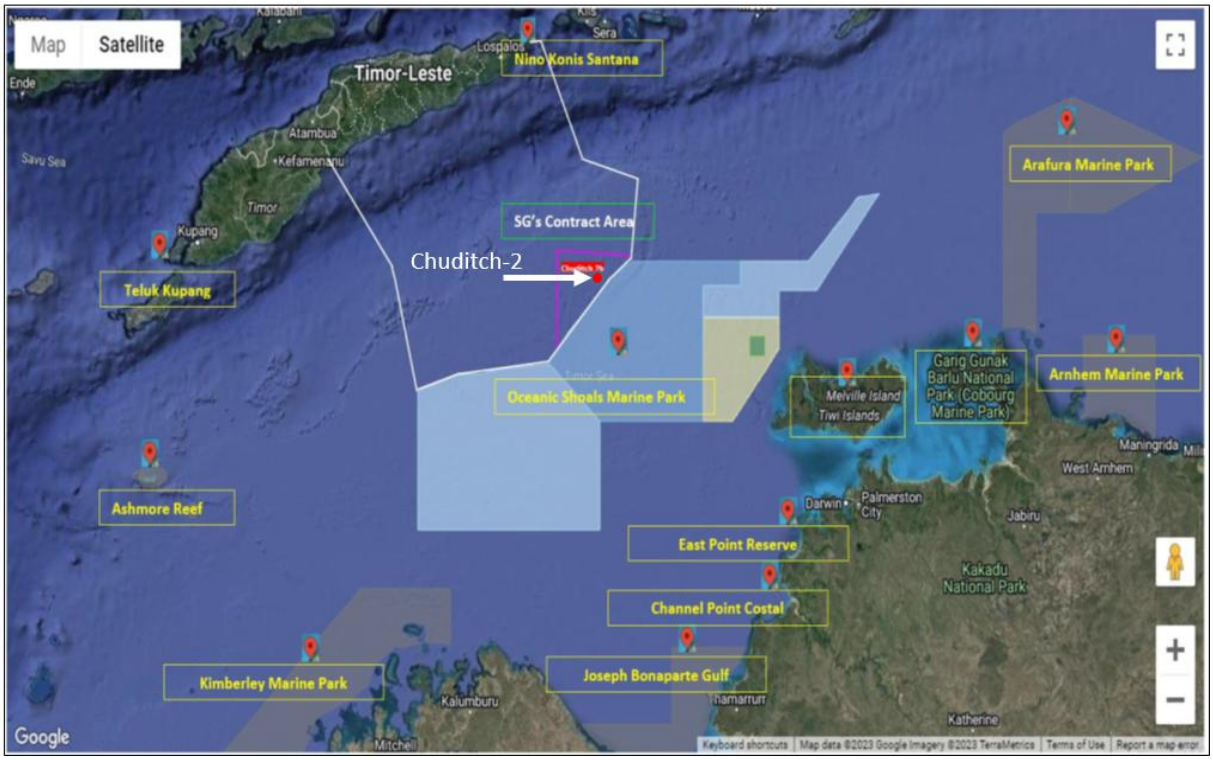
4.3.7 Project Size

The appraisal drilling of Chuditch-2 is located within the contract area PSC TL-SO-19-16 which is approximately 3,571km^2 in total size. The appraisal well is expected to be drilled to target depth of approximately 3,010m in the Plover Formation.

4.3.8 Project Location

The proposed surface location for Chuditch-2 well is 5.1 km east of the Chuditch-1 well in approximately 68m of water depth. The well is in Timor-Leste waters approximately 700m from the delineator between Timor-Leste and Australian Exclusive Economic Zones (EEZ). The Chuditch prospect is located approximately 145NM off the south coast Timor-Leste and part of the PSC-TL-SO-19-16 Production Sharing Contract area in the northern Bonaparte Basin. The Chuditch-2 field is located on the Sahul Platform in the Timor Sea, 80km southwest of Greater Sunrise and 140km east-northeast of Bayu-Undan. Figure 10 shows the location of the Chuditch-2 appraisal well in relation to the EEZ boundary and the Oceanic Shoals marine park.

Figure 10 Proposed Chuditch-2 Well Location in reference to EEZ and Oceanic Shoals Marine Park



4.4 Justification and need for the Project

The Petroleum industry has been identified as a key component in the Timor-Leste Strategic Development Plan (SDP) 2011-2030 for economic development to move the country from low-income to a middle-income nation. The revenue from the petroleum sector can contribute greatly to health care, education, and security of Timor-Leste's people. Additionally, the petroleum sector will be able to create opportunities for the people in Timor-Leste to improve their living standards through high-level employment as well highly skilled professional careers.

Human resources improvement and opportunities through training in geology, petroleum and chemical engineering, petroleum finance, and business and project management, as well as for operational staff will occur with development of the hydrocarbons sector.

Timorese with appropriate training and skills will be valuable in the petroleum industry, not only in Timor-Leste but in the Asia Pacific region and around the world.

This project will directly assist Timor-Leste in reaching the stated target in the SDP: The private sector will be the primary source of growth in incomes and employment for Timorese. Moreover, SGBU have signed with Government of Timor-Leste through MPRM the Memorandum of Understanding (MoU) of production for SundaGas to supply raw material/gas to the future LNG plant in Natarbora, Manatuto.

4.5 Proponents Endorsement of the EMP

The signed endorsement of the EMP is provided on page (ii) of this document, under the title 'Proponents Authorisation and Endorsement of the EMP' with the complimentary language:

"SGBU is committed to good Industry practice and has rigorously undertaken the Environmental permitting and approval process including the EIS and EMP documents. An EMP is one of the methods by which SundaGas demonstrates transparency and accountability in the planning and execution of an offshore project. Hence, SGBU endorses the contents of this plan and will abide by all sections contained herein".

4.6 Structure of the EMP

Per Decree Law No. 32/2016 on Offshore Petroleum Operations in Timor-Leste and Ministerial Diploma No. 46/2017 Article 8 and Annex 6, the minimum content of an EMP is as follow:

1	Executive Summary
2	Details of the Project Proponent
3	Details of the Consultant for EIS and EMP
4	Project Description
5	Legal Requirements
6	Existing Environmental Description
7	Institutional Roles and Responsibilities
8	Summary of Impacts
9	Proposed Mitigation Measures
10	Governing Parameters
11	Monitoring Program
12	Reporting Requirements
13	Responsibilities for Mitigation and Monitoring
14	Emergency Plan
15	Decommissioning Plan
16	Capacity Development and Training
17	Public Consultation & Information Disclosure
18	Complaints and Grievances Mechanism
19	Work Plan and Implementation Schedule
20	Cost Estimates
21	Review of EMP
22	Non-Technical Summary

5. Policy, Legal and Institutional Framework

This chapter identifies key environmental legislation relevant to this Project and is not intended to provide an extensive legal review of the Project Proponent's obligations.

According to the scope of work, the EMP for this Project will be conducted in accordance with relevant environmental legislation, which includes:

- Regulatory approval of oil and gas development projects is undertaken by ANP under Decree Law No. 39/2022 1st Amendment of Decree Law No.5/2011 on Environmental Licensing which defines the environmental licensing system for public and private projects which are likely to produce environmental and social impacts.
- Government licensing (or approval) of the drilling campaign is required under Timor-Leste Decree-Law No. 39/2022 1st amendment of Decree-Law No. 5/2011 Environmental Licensing prior to the commencement of project operations on location.

As of November 15th, 2023, ANP approved the Project Document (PD) for the proposed Chuditch-2 Appraisal Well Project. Per the approved PD and aforementioned Decree-Law, the planned drilling campaign by SGBU on PSC TL-SO-19-16 is classified as a Category A development as it has "the potential to cause significant adverse impacts", and as prescribed in Ministerial Diploma 46/2017, requires a detailed EIA.

The EIA required under Timor-Leste national law is similar to an Environmental and Social Impact Assessment (ESIA) required for International Finance Corporation (IFC) Category A Projects. The required TOR was prepared to meet the Government of Timor-Leste requirements and IFC Performance Standards, to guide the preparation of the EIA in accordance with the project approval conditions. During the EIA process, data obtained from the baseline data survey and secondary data is used to prepare the EIS, EMP and environmental monitoring program for the project including mobilization, drilling, and demobilization.

SGBU will identify and assess the environmental and social risks and impacts of the drilling campaign, design and incorporate appropriate impact avoidance and mitigation measures into the project design, well construction and associated operations. This shall be done in accordance with:

- National legislation and regulations
- International Standards and Guidelines as applicable.
- International Conventions and Agreements as applicable.

The details of these laws, regulations, guidelines, action plans, agreements and conventions including their brief description and relevance to the project are shown in table 12.

Table 12 Applicable Timor-Leste Laws, Regulations, and International Standards and Guidelines.

Title	Description	Relevance to the Project	Compliance with the Provision
Timor-Leste Legislation and Regulations			
Constitutions of the Republic Democratic of Timor-Leste Article 61 (Environment).	The article specifies provisions for state including the proponent shall undertake to defend, and safeguard the environment recognizes the rights of all citizens to a humane, health and ecologically balances environment while also specifying the duty of everyone to preserve and protect the environment for the benefit of future generations.	Provides the basis for environmental protection and safeguarding in the Country.	SGBU shall comply with all relevant laws for environmental protection.

Title	Description	Relevance to the Project	Compliance with the Provision
Decree Law No. 39/2022 - the first alteration of the Decree Law no. 5/2011 about the Environmental Licensing.	The procedure for directing the environmental assessment, the review of application for environmental license, issuance and renewal of license. • Categorization of the project according to severity of the environmental impacts. • Procedures and information requirement for Category A project • Organization and composition of the review committee and its duties and responsibilities. • Specific provisions for public consultation and the protection of the traditional customs and cultural practices. The issuance of the decision by the Environment Authority on the review of the application and the rights of the project owner to appeal the decision.	Categorization of the project according to severity of the environmental impacts. Procedures and information requirement for Category A project Provides the Environmental Licensing procedure	Undertake all necessary steps, conduct studies and follow the procedures set in this Law especially obtaining the Environmental Licence for the proposed appraisal drilling project.
Decree Law No. 5/2016 – National System of Protected Areas (Appendix 1 – List of Timor-Leste Protected Areas).	The Decree Law defines the norms and principles for the creation of the national system of terrestrial and marine protected areas, for the classification of protected areas and for the approval of the applicable management instruments, according to the international best practices, in the matter, duly adapted the national reality, without forgetting the important role of community authorities and existing customs.	Defines for the protection of the terrestrial and marine protected areas	SGBU shall acknowledge in the EIS, those protected areas.
Decree Law No. 26/2012 on Basic Environmental Law	The Decree Law identifies the protection of the environmental life and wildlife protection, including the basic principles for the conservation, preservation, and sustainable use of natural resources in order to improve the quality of life of the local populations.	Defines sustainable use of natural resources, conservation and preservation of natural resources	SGBU shall prepare an EIS and EMP for the proposed activity.
Decree Law No. 6/2020 Legal Regime for protection and the conservation of biodiversity	The decree law sets a legal regime for the conservation of biodiversity, and the sustainable use of its component.	To protect and conserve the biodiversity, including marine species and their habitat around the drilling project.	SGBU shall conduct risk and impact assessment and design an EMP.
Diploma Ministerial No.45/2017 – Rules and Procedures of the Evaluation Committee for Project with Category A	The article specifies the importance of establishing rules and procedures for the evaluation committee for the management of the environmental evaluation process for projects in category A	Establishment of a committee in order to review the project that categorize into category A.	SGBU shall comply with this rule and procedure.
Diploma Ministerial No. 46/2017 -	The article specifies details requirement for Screening, Baseline Study, Term of Reference, EIA, EIS, and EMP including	Mandates requirements and obtaining approval for TOR, EIS, and EMP	SGBU shall carry out the detailed requirements in accordance with this

Title	Description	Relevance to the Project	Compliance with the Provision
Regulation on the Detailed Requirements for Screening, Scoping and TOR, EIS and EMP.	language to be used in the aforementioned documents and their minimum content requirement.		Ministerial Diploma No 46/2017
Diploma Ministerial No.47/2017 – Public Consultation Procedure and Requirement during Environmental Baseline Process	The Diploma Ministerial specifies the procedures and requirement of involvement of public and communities into different stages of the environmental assessment process through public consultation.	Specifies the procedures and requirement of involvement of public and communities into different stages of the environmental assessment process through public consultation.	SGBU shall follow the procedure and requirements to ensure the involvement of the public and communities at all stages.
Decree Law No. 59/2023 – Organic structure of the Ministry of Petroleum and Mineral Resources	Constitutional Article 33 (c) (Minister of Petroleum and Minerals) responsibilities item (o) Considering the complexity and technical expertise of the oil and mineral resources sector, conduct the respective environmental licensing procedures and approve the corresponding environmental licenses in that sector.	Provides a description of legal framework that empower Ministry of Petroleum and Minerals to issue environmental license.	SGBU shall apply for an Environmental Licence.
Decree-Law No.32/2016 Offshore Petroleum Operations	The decree law applies to all offshore petroleum operations, which is carried out in accordance with the law on petroleum activities, including the transport and storage of crude oil and natural gas, with a direct impact on any deposits. This decree law also sets the requirements, including the EIS, EMP, Environmental monitoring, and OSCP.	Sets the requirements, including the EIS, EMP, Environmental monitoring, and OSCP.	SGBU shall follow the requirements of carrying out an EIS, EMP, Monitoring plan and OSCP.
Labour Legislation Law No. 4/2012 – Timor-Leste Labour Code	The law describes the rights between employers and workers regarding the working hours, leaves, remunerations, compensations and health and safety welfare	Provides basis for the project proponent to set up a working condition and contracts between employer and employee and used during the project activities.	SGBU shall comply with the Labour Legislation Law No. 4/2012 – Timor-Leste Labour Code.
Government Resolution No. 27/2023 about the Ocean National Policy of Timor-Leste	The national policy intends to address the national marine issues, including pollution and climate change.	The drilling activity will take place in the Timorese water, and to find integrated approach based on the national policy to mitigate the drilling impact to the ocean.	SGBU shall ensure an integrated approach to mitigate any impact to the Ocean.
Decree-Law No. 39/2020 in Timor-Leste establishes the Maritime Authority System (SAM).	This law aims to create a coordinated institutional framework for maritime affairs, bringing together various entities with competencies related to maritime areas under Timor-Leste's sovereignty or jurisdiction.	Article 21 on COMAR operational level and coordination with relevant entities to respond to oil spills in Timor-Leste waters.	SGBU shall prepare an OSCP.

Title	Description	Relevance to the Project	Compliance with the Provision
International Guidelines, Conventions and Agreements			
IFC EHS General Guidelines 2007	The Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry specific examples of Good International Industry Practice.	Provides general guidance on the application of good environmental practice.	SGBU shall follow these guidelines
IFC EHS (June 2015) guidelines for offshore oil and gas development.	The guidelines are industry specific for offshore oil and gas development and are designed to be used together with the General EHS Guidelines document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors.	Provides guidance on the application of good environmental practice for offshore oil and gas development.	SGBU shall follow these guidelines
United Nations Convention on Biological Diversity (UNCBD)	The Convention on Biological Diversity (CBD) entered into force on 29 December 1993. It has 3 main objectives: 1. The conservation of biological diversity 2. The sustainable use of the components of biological diversity 3. The fair and equitable sharing of the benefits arising out of the utilization of genetic resources	Timor-Leste is a biodiverse and significant ecosystem with many endemic species. The country signed the convention in 2001. As the project could have impacts on the flora and fauna or risk to the loss of the biodiversity, it is fundamental principle for the project proponent to prevent or minimize the risk of biodiversity loss during the project implementation.	SGBU shall comply with these guidelines
United Nations Framework for Climate Change Convention (UNFCCC)	The United Nations Framework Convention on Climate Change (UNFCCC) provides a framework for intergovernmental efforts to reduce greenhouse gas emissions and adapt to the expected impacts of climate change. It also provides guidance to member states on developing and implementing national climate change strategies, incorporating both adaptation and mitigation actions. Timor-Leste became a signatory to the UNFCC in October 2006.	The project activities release GHG emissions which could be one of the contributing factors to the country's climate change issue. Minimization climate change risks by reducing the GHG emissions are an essential part of the project environmental objective and target. This convention is the principal guidance for the project proponent to prevent the air pollution and reduce the GHG emissions as much as possible	SGBU shall conduct an EIS and consider the ecology, flora and fauna
IPIECA Guideline	Social responsibility, application of good environmental practice. IPIECA is a not-for-profit association that provides a forum for encouraging continuous improvement in industry performance. IPIECA is the only global association involving both the upstream and	Provides oil and gas industry specific guidance on the application of good environmental practice.	SGBU shall follow Good Industry practice.

Title	Description	Relevance to the Project	Compliance with the Provision
	downstream oil and gas industry. It is also the industry's principal channel of communication with the United Nations. IPIECA develops, shares and promotes good practice and knowledge to help the industry and improve its environmental and social performance. This is done with the understanding that the issues that dominate the sustainable development agenda – climate and energy, environmental and social issues – are too big for individual companies to tackle alone. The industry must work together to achieve improvements that have real impact. IPIECA helps to achieve this goal.		
International Union for Convention of Nature (IUCN)	The international convention is an international organization focus on the nature conservation and sustainable of utilizing the natural resources. The IUCN works in the field to promote ecological conservation in order to ensure the sustainable development concepts.	Timor-Leste is a signatory member of the IUCN convention which has responsibility to protect its ecological components to ensure the economic sustainable development. Therefore, this project will identify all species categories listed under the IUCN red list which can be impacted by the project activities	SGBU shall follow these guidelines.
International Finance Corporation performance standards 1.	Performance Standard 1 – Assessment & Management of Environmental and Social Risks and impacts establish the importance of (i) integrated assessment to identify the environmental and social impacts, risks, and opportunities of projects including effective community engagement and consultation with local communities on matters that directly affect them, management of environmental and social performance throughout the life of the project.	Provides internationally recognized guidance on the conduct of EIA process	SGBU shall consider the IUCN convention
International Finance Corporation performance standard 3.	Performance Standard 3 - Resource Efficiency & Pollution Prevention- To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities. To promote more sustainable use of resources, including energy and water. To reduce project-related GHG emissions.	Provides internationally recognized guidance on best practice to avoid / minimize environmental and social impacts, promoting reduction of GHG emissions	SGBU shall conduct EIS and EMP
International Finance Corporation	Performance Standard 6- Biodiversity Conservation and Sustainable Management of Living Natural Resources. Habitat is defined as a	Provides internationally recognized guidance on best practice to marine habitat protection and	SGBU shall follow these guidelines.

Title	Description	Relevance to the Project	Compliance with the Provision
performance standard 6.	terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the non-living environment. For the purposes of implementation of this Performance Standard, habitats are divided into modified, natural, and critical. Critical habitats are a subset of modified or natural habitats. To protect and conserve biodiversity. To maintain the benefits from ecosystem services. To promote the sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities.	conservation of biodiversity in the planning of offshore projects	
WHO Air Quality Guidelines (AQG)	WHO Air Quality Guidelines (AQG) offer guidance on threshold limits for key air pollutants that pose health risks and provide a reference for setting air pollution targets at regional and national levels to improve air quality. Air quality guidelines have been published by WHO in 1987 and they were revised in 1997. The 2005 update represents the most current assessment of air pollution health effects, based on an expert evaluation of the scientific evidence. The guidelines offer recommended exposure levels for particulate matter (PM_{10} and $PM_{2.5}$), ozone, nitrogen dioxide and sulphur dioxide, as well as a set of interim targets to encourage a progressive improvement in air quality.	The air quality benchmark used as reference by the project proponent is the WHO air quality guidelines.	SGBU shall consider these guidelines in the management of air emissions.
Climate Change Kyoto Protocols. Government Resolution of National Action Plan for Climate Change	Kyoto Protocol is an international treaty which extends the UNFCCC parties commitment to reduce the greenhouse gas according to the scientific consensus. The protocol implements the objective of reducing the global warming potential gas in the atmospheres. The government resolution of national action plan for climate change (NAPA) is the first national document that identifies urgent and immediate climate change adaptation needs of the most vulnerable groups. It provides a starting point from which climate change adaptation can be mainstreamed into development plans as a key strategy for attaining sustainable development and poverty reduction (MDG, 2010)	Timor-Leste is the signatory party of the Kyoto Protocol which shall ensure the implementation of the protocol in order to reduce the GHG emissions.	SGBU will record the greenhouse gas emissions generated during the drilling of Chuditch-2.
ANZECC & ARMCANZ (2000) – Australian and New Zealand	These guidelines provide a summary of water and sediment quality parameters and their 'trigger values' to protect and manage environment of the fresh and marine water. Additionally, it provides	The water and sediment quality parameters are adopted for the purpose of this project. The 'trigger values' are used	SGBU shall note the requirements of this protocol.

Title	Description	Relevance to the Project	Compliance with the Provision
Guidelines for Fresh and Marine Water Quality	advice on designing and implementing water quality monitoring and assessment programs.	as a benchmark for all the parameters used for environmental baseline survey as well as monitoring program.	
United Nations Convention on the Law of the Sea, 1982 (UNCLOS)	The convention on the Law of the Sea lays down a comprehensive regime of law and order in the world's oceans and seas establishing rules governing all uses of the oceans and their resources. It enshrines the notion that all problems of ocean space are closely interrelated and need to be addressed as a whole. Coastal States have sovereign rights over the continental shelf (the national area of the seabed) for exploring and exploiting it; the shelf can extend at least 200 nautical miles from the shore, and more under specified circumstances	Relates to EEZ Governance and sovereign rights /National area of the seabed.	This law was considered in the development if the EIS and EMP
London Convention on the Prevention of Marine Pollution by dumping of wastes and other matter, 1972 (London Convention).	The convention is an agreement to control pollution of the sea by intentional disposal at sea of potentially harmful materials	Any chemical inventories onboard the survey vessel will be adequately transported and stored in suitable containers to prevent accidental discharge to the sea.	SGBU shall comply with the convention.
MARPOL 73/78 – The international Convention for the Prevention of Pollution from Ships.	The international convention is the main convention covering prevention of pollution of the marine environment by ships/vessels from operation or accidental causes. The objective of this convention is to reduce the volumes of the harmful material entering marine environment. • Annex I – Regulations for the Prevention of Pollution from Oil • Annex IV – Regulations for the Prevention of Pollution by Sewage from Ships • Annex V – Regulations for the Prevention of Pollution by Garbage from Ships Annex VI – Regulations for the Prevention of Air Pollution from Ships	The survey vessel is required to comply with the provisions of MARPOL.	SGBU shall comply with MARPOL 73/78 convention for the MODU operations.

6. Description of the Environment.

This chapter is prepared using secondary, published information and according to the approved Terms of Reference (TOR) - Drilling Activities PSC TL-SO-19-16 dated November 2024, along with data and information from the Chuditch-2 Environmental Baseline Survey (EBS) Technical Report dated March/April 2025.

The Timor Sea and its tropical marine environment support significant and growing economic activity including oil and gas exploration. To reduce uncertainty in decision making regarding the sustainable use and ongoing protection of these marine resources, environmental baseline studies and data are important to describe the existing environment.

Timor Sea region is tropical with two distinct seasons having a dry season and monsoon season. These govern the climate, ecological and biological components. This section has used both secondary and primary environmental baseline data.

The approved EBS was conducted in February 2025 and the information gathered is considered while writing this section. The baseline conditions of the existing environment have thus formed the basis of valuable insight into the natural, ecological, economic, social, and cultural features of the project area. The description of environment is used while writing the possible impacts that may arise from the Chuditch-2 project which are considered crucial in writing the environmental management statement.

6.1 Physical Component

These elements focus on those aspects of the physical environment and considering how natural processes can relate to or be affected by the appraisal drilling project.

6.1.1 Climate

The Bonaparte Basin and Timor Sea region experience a tropical climate and distinct summer monsoonal ‘wet’ season from October to March and followed by a typical cooled winter ‘dry’ season from April to September. The two seasons go through a rapid transitioning, usually in April and September-October due to two major atmospheric pressure system affecting the region. These atmospheric pressures are the subtropical ridge of high-pressure cells and a broad tropical low pressure or Monsoon Trough.

The subtropical highs move from west to east across the Southern Indian Ocean in winter, and further South in summer, usually separated by low pressure troughs or cold fronts. The highs provide the driving force behind the Southeast trade winds which dominate the Timor Sea in winter months.

The Monsoon trough or Inter-Tropical Convergence Zone (ITCZ) is a broad area of low atmospheric pressure running East-West through the tropics in the summer months.

During the wet season the South-Westerly winds can generate thunderstorm activity, high rainfall and cyclones. While in the dry season the Easterly winds result in dry and warm conditions with very little rainfall (RPS, 2024)

There have been no major catastrophic climate incidents in the past years in the area of the Chuditch-2 appraisal drilling campaign nor is there any data to suggest the negligible and transient impacts to the receiving environment generated by the Chuditch-2 well activities will contribute to a measurable impact to climate change.

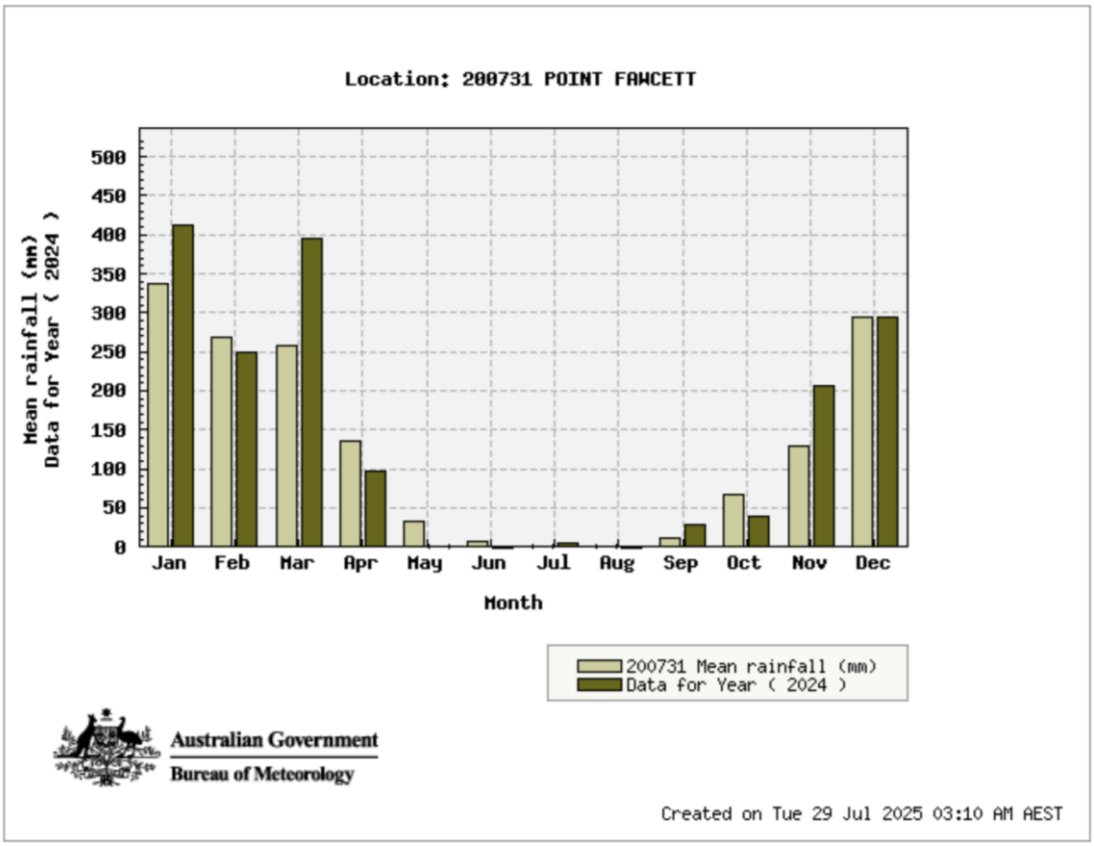
6.1.2 Rainfall

During 'dry' season (April to September), rainfall in the north is low to non-existent in most areas, although light showers are common closer to the coast in the southern waters of the Timor Sea.

During the wet season, the weather on the south coast of Timor-Leste is largely determined by the position of the monsoon trough, which can be in either an active or inactive phase. The active phase is usually associated with broad areas of cloud and rain, with sustained moderate to fresh north-westerly winds on the north side of the trough. Widespread heavy rainfall can result if the trough is close to or over land. An active phase occurs when the monsoon trough is temporarily weakened or retreats northwards. It is characterised by light winds, isolated showers, and thunderstorm (ADB, 2021)activity, sometimes with gusty squall lines.

Historical mean rainfall data for 1995 to 2025 and rainfall data for 2024 in Point Fawcett, Melville Island are shown in Figure 11. The figure shows maximum annual rainfall of 337mm occurred in January and minimum annual rainfall of 0.5mm in July. High rainfall is associated with the Northwest Monsoon and low rainfall with the Southeast Monsoon. Heavy rainfalls are also associated with tropical cyclones and thunderstorm activity.

Figure 11 Mean Rainfall Data (1995-2025) and data for the year of 2024 in Point Fawcett (Source: BoM, 2025)



6.1.3 Oceanography

The main forces contributing to surface water movement in the vicinity of Chuditch Area are:

- General oceanic circulation.
- Astronomical tides.
- Wind stress.

Tides and Currents

The Pacific–Indian through-flow flows south through the Indonesian Archipelago and into the Eastern Indian Ocean bathing it in warm, relatively low salinity seawater. Figure 12 shows the regional synoptic-scale currents of northern Australia and the Timor Sea.

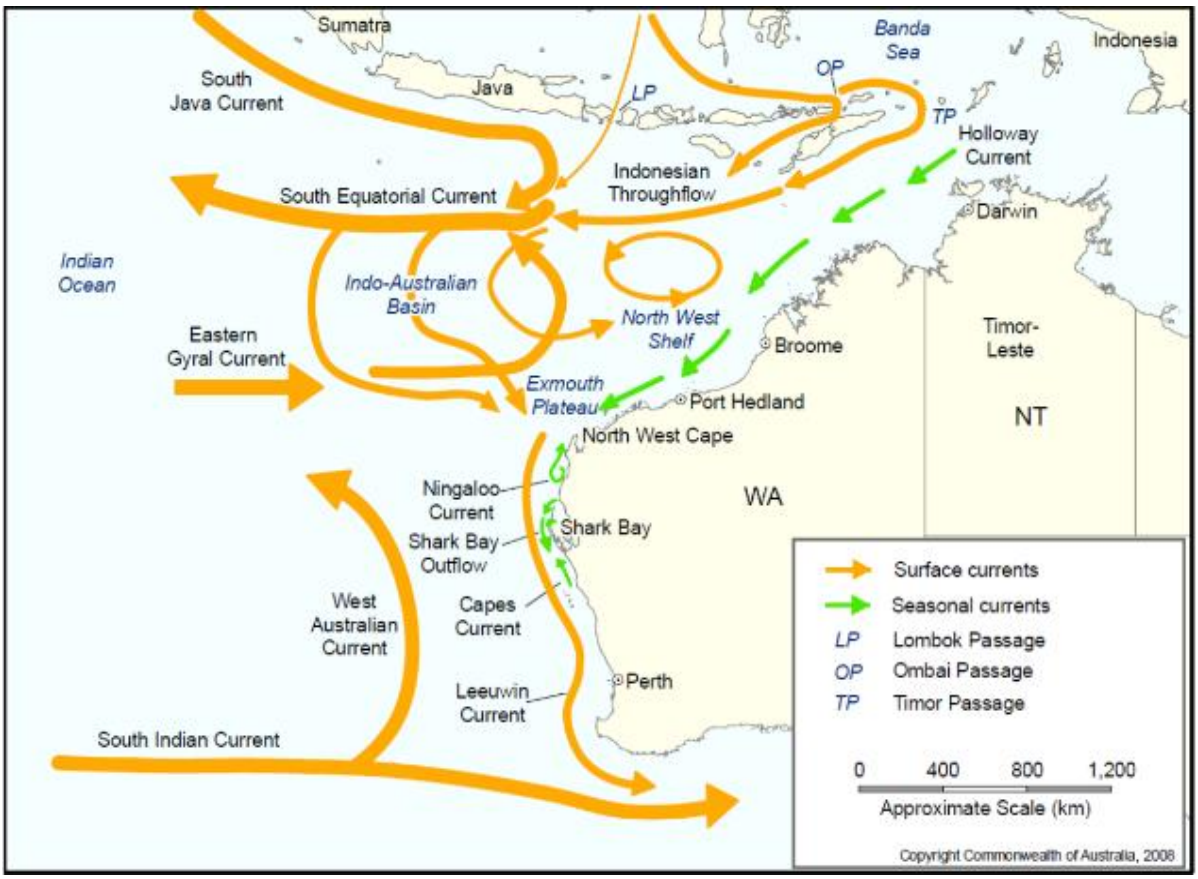
Within the project area, this may add a westerly component to the current regime. Current speeds vary depending on the season. Lowest speeds would occur in April at the end of the northwest monsoon when winds blow towards the Pacific whilst highest speeds would occur in September associated with the southeast monsoon (Wijffels et al., 1996).

The majority of water movement off northern Australia and the Timor Sea is poleward, with the water being relatively warm and low in nutrients (DEWHA, 2008). A strong seasonal wind regime is closely associated with seasonality in surface currents in the region, including the seasonal strength of trade winds in the equatorial Pacific Ocean which drive the Indonesian through-flow (ITF).

The Chuditch location is situated near the EEZ delineation between Timor-Leste and Australian territorial waters and experiences semi diurnal tides. Tidal ranges are large – 0.8m neap and up to 7m spring tides (RPS, 2018) and thus strongly influence currents in the region, notably, tidal amplitudes appear to be retained at long distances offshore and travel initially in a north easterly direction in the deeper waters of the region (RPS, 2018).

The tidal current component is imposed over the synoptic scale flow. In addition to the synoptic-scale and tidal currents, locally generated wind-driven currents also influence water movement within the area. These appear to be more variable and are superimposed over large-scale flows.

Figure 12 Regional synoptic-scale currents of northern Australia and the Timor Sea (Source: DEWHA, 2008).



Waves

The wave conditions in Chuditch-2 are influenced by the regional wind and ocean current system. The area typically experiences moderate wave heights of 1.5 to 3 meters. However, during the wet season, the waves increase due to the strengthening of monsoonal winds. Tropical cyclone swell will generate waves which propagate radially (roughly) out from the storm centre. Depending on the size, intensity, relative location, and forward speed of the storm, a tropical cyclone in the Timor Sea region can generate swell with a period of 6 to 16 seconds, in any direction, with heights reaching up to 10 meters or more.

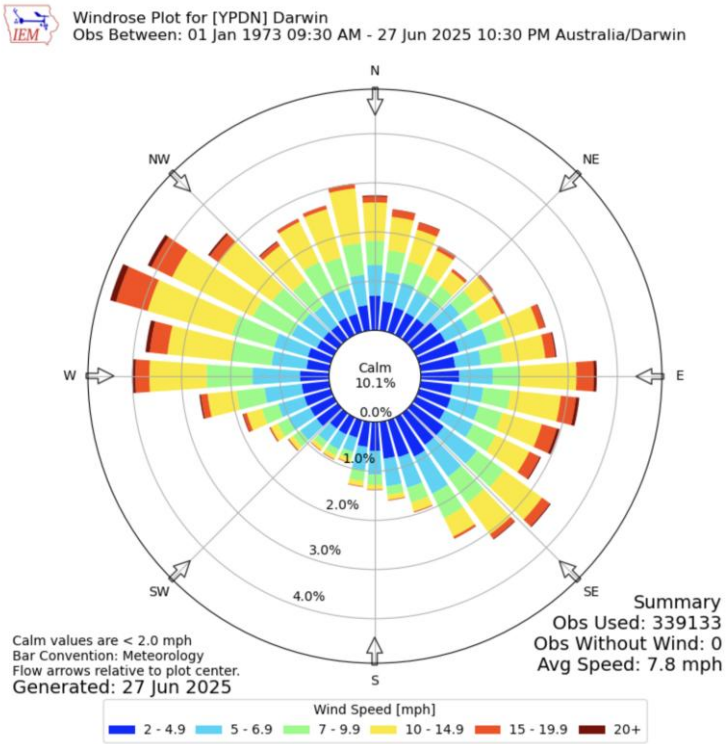
6.1.4 Winds

Based on the long-term climatology, the Timor sea is strongly influenced by the Australia-Asian monsoon cycle. In dry season (April to September) is characterized by steady northeast to southeast winds of 5 to 12m/s driven by the southeast trade winds over the Timor Sea. The 'wet' season (October to March) is characterized by northwest to southwest winds of 5m/s for periods of 5 to 10 days with surges in mean wind speeds of 8 to 12m/s for periods of 1 to 3 days.

During the transition season (September to October), with seasonal low-pressure systems sweeping across the Australian mainland West to East, the surface wind in the Timor Sea possesses a westerly component with a light wind of less than 5m/s. While during the transition season in April, the wind is charactered by southeasterlies for a period and then returns to northwest airflow (RPS, 2024).

The interannual variability of winds is closely linked to the El Niño-Southern Oscillation (ENSO), which exhibits a weak state during El Niño events and a strong state during La Niña events. (Wang et al, 2022). The IOD and ENSO are important anomalous climatic events in the Indian Ocean and Pacific Ocean. In the event where IOD and ENSO are cooccur the pacific force dominates the interannual variability. The wind speed and wind direction data were gathered from Darwin station as shown in Figure 13.

Figure 13 Summary of wind speed and direction from 1973 to 2025 at Darwin Station. Accessed on 27 June 2025 (Source: IEM, 2025)



6.1.5 Cyclonic Weather Systems

The Bonaparte Basin is prone to tropical cyclones during the wet season. Under extreme cyclonic conditions, 10-minute sustained wind speeds can exceed 205km/h with gusts reaching as high as 408km/h (Cyclone Olivia – Aus BOM, 1996).

Tropical cyclones develop in the Timor Sea in the northern wet season, usually forming within an active monsoon trough. Tropical Lows and Cyclones may also develop in the Coral Sea and move through the Torres Strait, usually as a tropical low or low range cyclone and may strengthen through the Gulf of Carpentaria region or in the Timor Sea (ABOM, 2024).

Heavy rain and strong winds, sometimes of destructive strength can be experienced along coastlines within several hundred kilometres of the centre of large cyclonic systems.

Most tropical lows and cyclonic systems pass through the area in a west or southwest direction before turning southwards.

Fully mature tropical cyclones range in size from 100km in diameter to 1,500km (Cyclone Justin 3/03/1997, Aus BOM). Tropical cyclones typically have a distinct life cycle of about 4 to 7 days although some category 1 systems briefly reach gale force while other systems can be sustained for weeks at various levels of intensity or degrade to tropical low status before reforming.

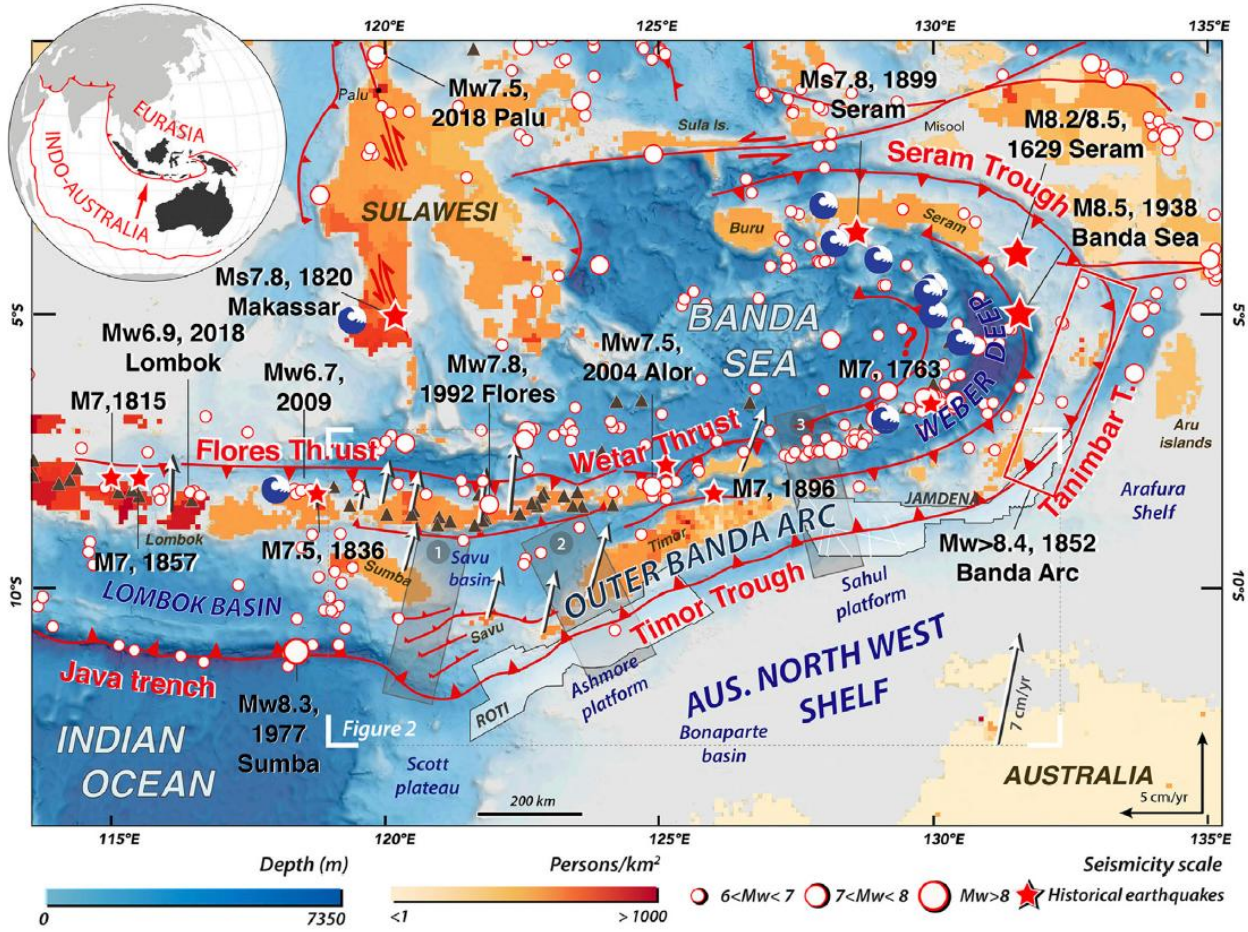
The most active months for tropical cyclones in the Timor Sea/Bonaparte Basin region are December to April, when the surface temperatures are at their highest and the water column is at or above 26.7°C (SKM, 2001).

Most (75%) of these cyclones are not fully mature, with estimated wind speeds of less than ~80km/h. Severe cyclones, with wind speeds exceeding 100km/h occur, on average, once every 2.6 years (Heyward et al., 1997).

6.1.6 Seismicity and Tsunamis

The Timor Sea has experienced tectonic activity for at least six million years due to the convergence of the Australian and Eurasian continental plates. The dominant earthquakes in this area are subduction and strike-slip related earthquakes, caused by one crustal plate being forced below another. Earthquake activity tends to be focused to the north of the island of Timor, along the Flores-Wetar trend and further west in the Lombok Basin. The contract area south of the Timor Trough on the Australian continental plate, in an area with very limited seismicity and no recorded tsunamis. Figure 14 shows the locations of seismicity and tsunamis in the Banda and Timor Seas region.

Figure 14 Seismo-tectonic setting of the Banda Arc region, based on seismicity from USGS catalogue (1976–2020) are represented by red and white dots. Blue wave symbols are past tsunamis. Major faults (in red). (Source: Coudurier-Curveur et al, 2023).



6.1.7 Geology

The primary hydrocarbon reservoir in the Bonaparte Basin is sandstone of the Plover Formation, ranging from Early Jurassic to Callovian age. The Chuditch-2 well, based on offset data is prognosed to encounter 'near-dry' gas in the Plover Formation.

The regional stratigraphy in the area includes various formations spanning different geological periods:

1. Plover Formation (Pliensbachian to Callovian): Primary reservoir target, comprising fluvio-deltaic sandstone, mudstone, coals, and marginal marine sandstone. At Chuditch-1, it underlies shales of the Jurassic Flamingo Formation.
2. Flamingo Formation: Deep marine shales and turbiditic sandstone sourced from the south, displaying different depositional facies on the Sahul Platform, including marginal marine sandstone equivalent to the Sandpiper Sandstone south of the Malita Graben.
3. Bathurst Island Group: Comprising several sequences:
   - Echuca Shoals Formation: Glauconitic claystone and siltstone overlying the Intra-Valanginian Disconformity.
   - Darwin Formation (Aptian to Early Albian): Condensed radiolarian claystone/calcilutite unit deposited during the Cretaceous transgression.
   - Wangarlu and Vee Formation: Claystone, marls, and calcilutites deposited in a marine shelf to slope environment.

4. Johnson Formation (Palaeocene) and Hibernia Formation (Eocene): Mainly calcilutites with dolomites, cherts, and claystone streaks.
5. Cartier Formation (Oligocene): Calcareous claystone and marls.
6. Oliver Formation (Miocene): Continuous carbonate deposition with an unconformity at the top due to the collision of the Australian and southeast Asian plates.
7. Barracouta Formation (Pliocene to Recent): Active margin carbonates overlying the Miocene unconformably.

The estimated target formation tops are 2,813m TVD-MSL (Chuditch-2) and the geology of the Chuditch-2 well is shown in **Error! Reference source not found.**.

Table 13 Geology Structure of Chuditch-2 Appraisal Well

Formation	Chuditch-2 Depth TVD-MSL (m)	Uncertainty (m)
Sea Bed Carbonates	70	+/- 5
Hibernia Fm (Green horizon) Calcarenites & calcilutites grading to calcareous clay stones	726	+/- 20
Johnson Fm (Pink horizon) Argillaceous calcilutites to calcareous clay stones	1225	+/- 20
Wangarlu Fm (Purple horizon) Claystone with minor calcareous claystone	1604	+/- 20
Darwin Fm (Pink horizon) “radiolarite” Claystone & marl	2750	+/- 30
Plover Fm – reservoir target Sandstones & clay stones	2776	+/- 30
Gas-water-contact	2920	+/- 2
Total Depth	**2970**	**+/- 30**

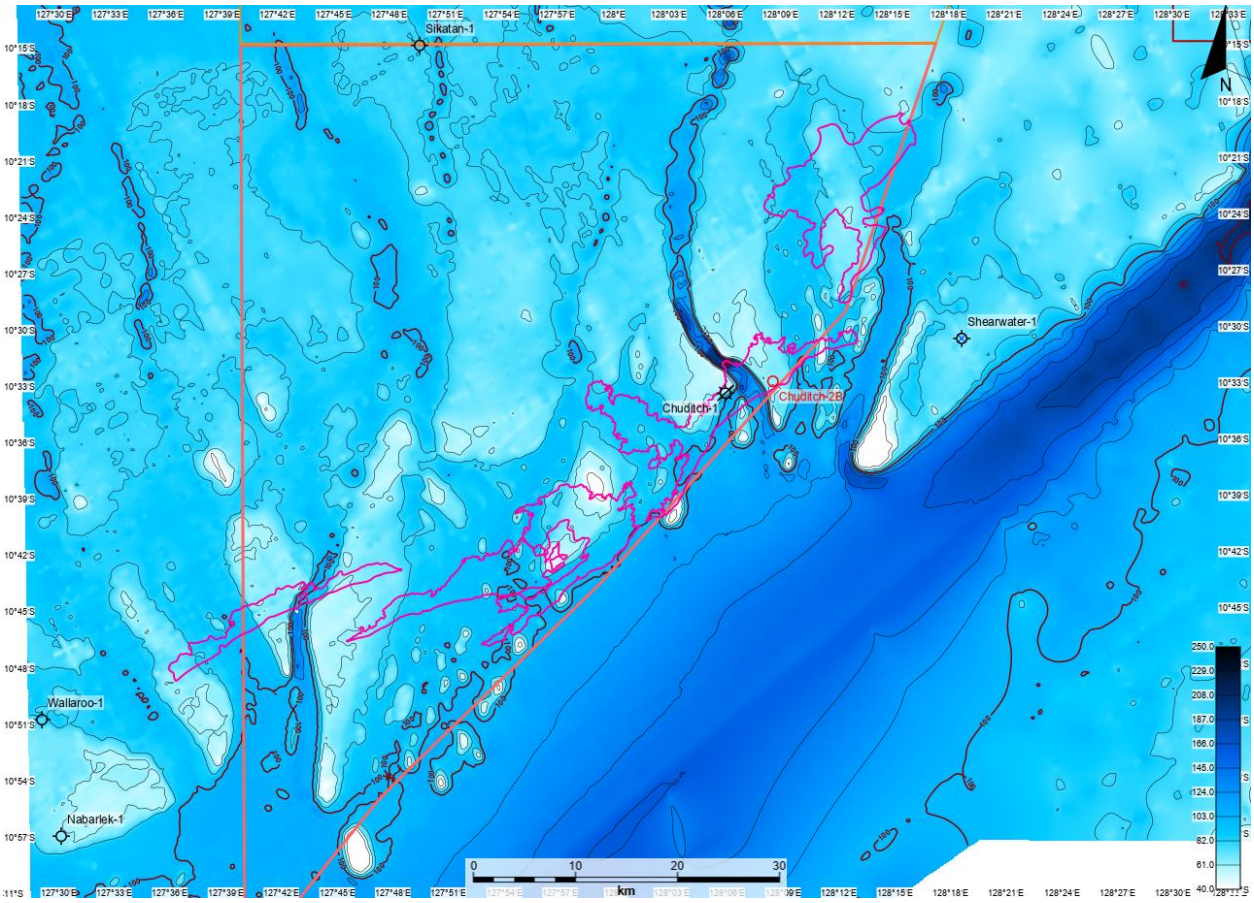
6.1.7.1 Bathymetry

The Geotechnical and Geophysical study for Chuditch-2 Appraisal drilling was completed in Q1 2024. This study indicated that the benthic topography is approximately 68 meters within a semi-arid plateau with mounds and ridges which might harbour a more diverse infaunal and benthic community (figure 15). However live coral reefs, which typically thrive in shallower, sunlit waters, are absent. The ROV survey conducted during the EBS indicates substrate composition of soft sediments (sand/mud and hard substrates (rock, pebbles/ gravel-rubble)) in some localized areas around the well, creating complex topography features. The Chuditch-2 well, based on offset data is prognosed to encounter ‘near-dry’ gas in the Plover Formation.

6.1.8 Air

The air quality is normally good in offshore location, although emissions from shipping, drilling and other offshore activities will contribute to localized air pollution. The appraisal drilling program is of a short duration of about 44 days. The diesel driven power generators generate some pollutants, namely SO_2, NO_x, and CO which will be discharged into the atmosphere through exhaust stacks of suitable heights to ensure noxious gases are directed away from crew accommodation. Therefore, impacts of gaseous pollutants on the ambient air quality due to drilling operations are insignificant. Moreover, the drilling location is located at a distance beyond territorial waters from the shores of Timor-Leste and Australia. The impact of pollutants discharged in exhaust gases from the diesel driven power generators in the offshore area will be minimal. The generators are maintained as per manufacturers criteria.

Figure 15 Bathymetry of PSC TL-SO-19-16 Chuditch Contract Area



The air sampling is not included in EBS prior to drilling activities as the operational area is approximately 130Nm from the Timor-Leste coastline, which itself is a remote and non-industrialized area.

Secondary data shows that the air temperature variations are small. The mean maximum summer and winter air temperature recorded at Point Fawcett on Melville Island as the closest metrological station to the project area range between 33-34˚C in November/December. The annual minimum temperature is 27˚C in June (RPS, 2024). The average tropical cyclone frequency for the Timor and Arafura seas region is one cyclone per year with cyclones most commonly occurring between December and April (RPS, 2024).

6.1.9 Noise

Noise pollution in the Timor Sea, like in other marine environments, is primarily caused by human activities such as shipping, oil and gas exploration, and fishing. Cargo ships, tankers, and fishing vessels generate significant underwater noise, the large heavy vessels produce low-frequency sounds that can travel long distances underwater.

With a significant present of oil and gas reserves in Timor Sea, there are several offshore drilling platforms, pipelines, and seismic surveys conducted in the region. The Eni block next to the Chuditch contract area is shortly planning on conducting a seismic survey and hence, it will generate underwater noise.

Overtime, Timor-Leste has entered several bilaterial agreements allowing commercial fishing fleets to access deep-sea fishing, however, these were cancelled due to noncompliance issues (FAO, 2019). In the absence of licensed and active offshore fishing vessels in the proposed drilling project area, there is no known noise generated by fishing vessels.

The closest secondary data for noise was the survey conducted by INPEX in the Browse Basin for the Ichthys field development. Based on this survey, the average ambient noise level under low sea states was found to be 90 dB re 1 µPa, with inputs of low-frequency energy from the Indian Ocean (INPEX – Ichthys Phase 2 Development Drilling, 2025)

6.1.10 Marine Waters

Information in this section is taken from the Chuditch-2 EBS Technical Report dated March/April 2025, conducted by WA Marine Pty Ltd trading as O2 Marine, Western Australia. The data, figures and tables and information is reproduced from that report as primary information around the planned Chuditch-2 Appraisal Well Program.

Generally, the marine waters in the Timor Sea are pristine, with high values of dissolved oxygen and low levels of pollutants. Baseline water quality parameters such as salinity, temperature, and nutrient levels are critical to any assessment of potential impacts due to drilling activities.

Environmental Baseline water quality data allows for an assessment of potential impacts caused by drilling operations, such as the discharge of drilling mud, drilling fluids, and other pollutants. The EBS measured relevant water quality for physical, chemical and biological parameters, including heavy metals, hydrocarbons and other pollutants related to the discharges.

The criteria of selection the locations and criteria parameters are based on OSPAR Commission Assessment of the impacts of the offshore oil and gas industry on the marine environment and the results as per NATA (National Association of Testing Authorities) accredited laboratory-Analytical Reference Laboratory (ARL), ANZG (2018) and IMCRA (2018) guidelines. ANZECC and ARMCANZ (2000) guidelines are used to evaluate the marine water quality, sediment quality, and toxicants from the proposed project

EBS Sampling Summary

The EBS was conducted in February 2025 with laboratory analysis occurring immediately afterwards encompassing the extent of potential impacts to water quality, sediment quality and benthic habitats based on the mud and cuttings dispersion modelling for the drilling program (MuTek, 2024) to design the sampling plan for impacts on potential receptors.

The sampling design and rationale for the scope of works has been presented by RPS in the Scope of Chuditch-2 Environmental Baseline Study [AU213017880.001] document (RPS, 2024).

The sampling design is grouped as follows:

- At the well location and in the immediate vicinity (direct impact, benthic impact zone);
- 300m from the well location (potential for benthic impact);
- 600m from the well location (furthest potential extent for benthic impact);
- Relief well location; and
- 1000m from the well location (potential low water quality impact).

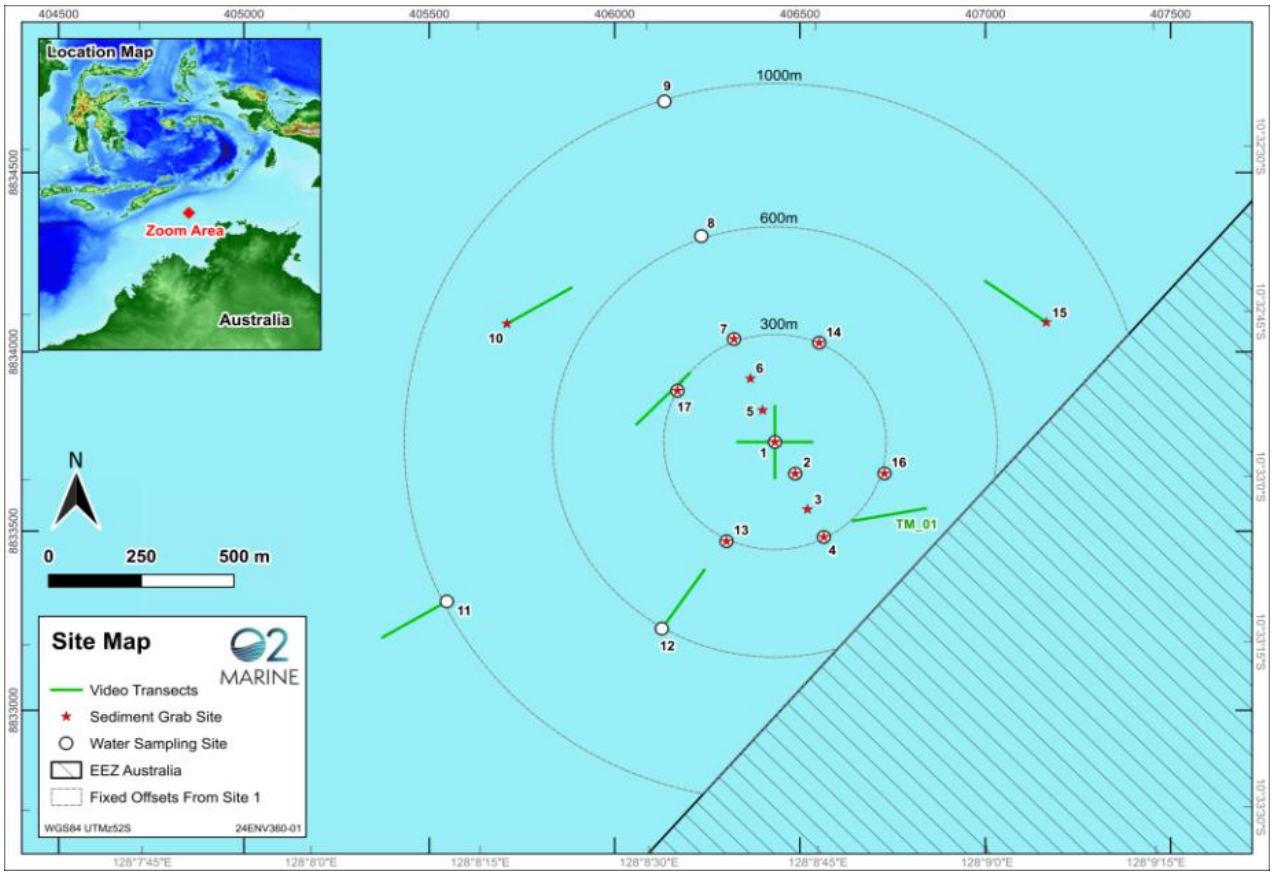
Sampling Location

Sampling locations for the Chuditch-2 Environmental Baseline Survey were selected to ensure relevance to cuttings dispersion modelling. The number of sites required for sampling is outlined in table 14. The EBS sampling locations around Chuditch-2 Appraisal Well are presented in figure 16.

Table 14 Sampling locations and numbers of sites completed

Task	Sample	Required number of sites	Number of sites completed
Water quality sampling	Water samples	12	12
	Water column profiles	12	12
Sediment sampling	Sediment samples	13	13
	Infauna	13	13
Benthic habitat assessment	Towed camera	8	8
Marine fauna sightings	Opportunistic sightings	N/A	N/A

Figure 16 EBS Sampling locations around Chuditch-2 Appraisal Well



Water quality samples were collected using Niskin bottles (figure 17) which was then analysed in a NATA certified laboratory for suspended solids, heavy metals, and hydrocarbons.

Figure 17 Niskin bottle water sampler used for water quality sample collection

Water samples were collected at the sea surface (1-5m depth), mid-column (~30m depth) and near bottom (seabed+ 1-5m) using 10 litre Niskin bottles.

Water samples were then stored and transported to laboratories for analyses which comply with industry standards (e.g. SW-PACK-012 for Environmental Monitoring at Environmental Analysis Laboratory).

Water Column Quality Profiling

A Conductivity, Temperature and Depth (CTD) profiler (figure 18) was used to measure water temperature and salinity in the water column and inform the water sampling analyses and provided useful environmental baselines for the area.

Water column profiles were collected in accordance with the SAQP. The CTD profiler recorded the following parameters:

- Time
- Depth
- Temperature
- Specific conductivity (SpC)
- Salinity (ppt)
- pH
- PAR (9 wavelength multispectral sensor);
- Turbidity (FNU) and
- Dissolved Oxygen (DO) (%).

Figure 18 YSI Exo1 Sonde and IMO Ms9 light

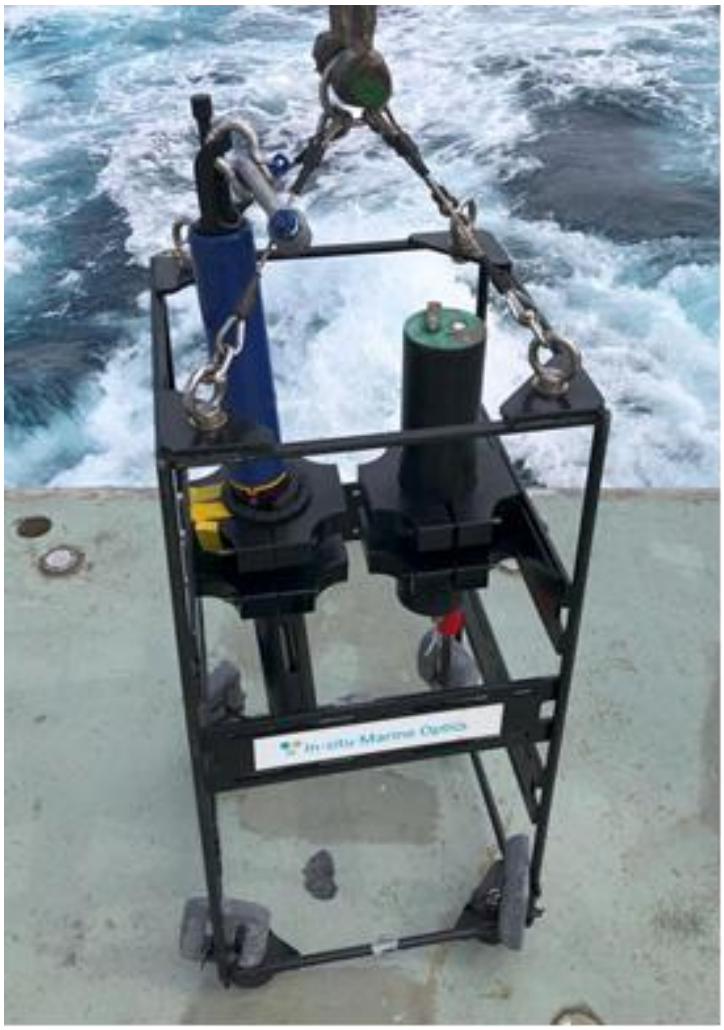


Table 15 Parameters and ANZECC Guidelines

Parameters	ANZECC 2000	EBS Data
Temperature (°C)		28.77 – 30.29
pH	8.2	8.21 – 8.26
Dissolved Oxygen (% Saturation)	90 – 110	~95
Salinity (ppt)		34.05 – 34.19
Conductivity (µs/cm)		51990.00 – 52147.10
Turbidity (FNU)	0.5 – 10	0.06 – 0.26
Oil and Grease (mg/L)		<5 - 9
Sulphur (mg/L)		980 - 1300
Chlorophyll a, Chl a (µg/L)	0.5 – 0.9	<LOR
Dissolved Metals:		
95% SPL		<LOR
99% SPL		<LOR
Hydrocarbons		<LOR

Physiochemical Profiles

The summary of physiochemical water column profiles from the EBS, in summary are:

- pH results ranged from between 8.21 and 8.26
- Salinity results ranged between 34.05 and 34.19 ppt
- Temperature values ranged between 28.77 and 30.29°C
- Conductivity results ranged between 51990.00 and 52147.10 µs/cm
- Turbidity values ranged between 0.06 and 0.26 FNU.
- Minimal spatial variability in water quality across the project area.
- Temperature, salinity, turbidity, and pH remained stable from surface to seafloor.
- Slight thermocline detected at 22–25m depth.
- Dissolved oxygen (DO) levels were high (~95%) but decreased slightly below 25m, indicating a stratified water column.
- Low turbidity levels indicate minimal sediment resuspension and particulate matter.

PAR Profiles

The light penetration results from the light Photosynthetically Active Radiation (PAR) tests from the water column profiles are summarized in table 16 across all locations measured under the EBS survey in February 2025.

Table 16 PAR values from EBS Survey across all locations.

Location	Mean	Minimum	Maximum
Surface	467.2	92.79	1115.8
Bottom	1.42	0.57	2.98

Water Samples EBS Analysis Results

The water samples were analysed for the following parameters.

- Total Recoverable Hydrocarbons (TRH)
- Total aromatic hydrocarbons
- BTEX (benzene, toluene, ethylbenzene and xylene)
- Polycyclic aromatic hydrocarbons
- Oil and grease
- Sulphur
- Heavy metals (As, Ba, Cd, Cr, Co, Cu, Hg, Ni, Pb, Zn, Mg, Fe, Se)
- Chlorophyll-a; and
- Total organic carbon.

The samples were analysed at NATA-accredited laboratories in Australia. The analytical results are summarized below.

Dissolved Metals

The dissolved metals results across all EBS locations sampled are in summary:

- Gold, mercury and manganese results were reported below the LOR in all samples.
- Generally, for the metals (As, Ba, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Ni, Sb, Se) analysis data all reported at low concentrations below ANZG (2018) 95% and 99% Special Protective levels (SPLs).

Hydrocarbons

Hydrocarbon results from water samples for BTEXN, TPH, TRH, and VOCs were all reported below the Limit of Reporting (LOR).

Chlorophyll-α

Chlorophyll-α was reported below the LOR in all water quality samples.

Oil and Grease

Oil and Grease values ranged between <5mg/L and 9mg/L and the Median oil and grease results across all sampling sites was <5mg/L.

Sulphur

Sulphur results ranged between 980mg/L and 1300mg/L. The Sulphur results were generally consistent between sites and across depths.

The details results and analysis of the marine water quality are placed Appendix 1. The Chuditch-2 Environmental Baseline Survey (EBS) Technical Report dated March/April 2025 conducted by WA Marine Pty Ltd trading as O2 Marine, Western Australia. The data, figures, tables and information are reproduced from that report as primary information around the Chuditch-2 Appraisal Well Program.

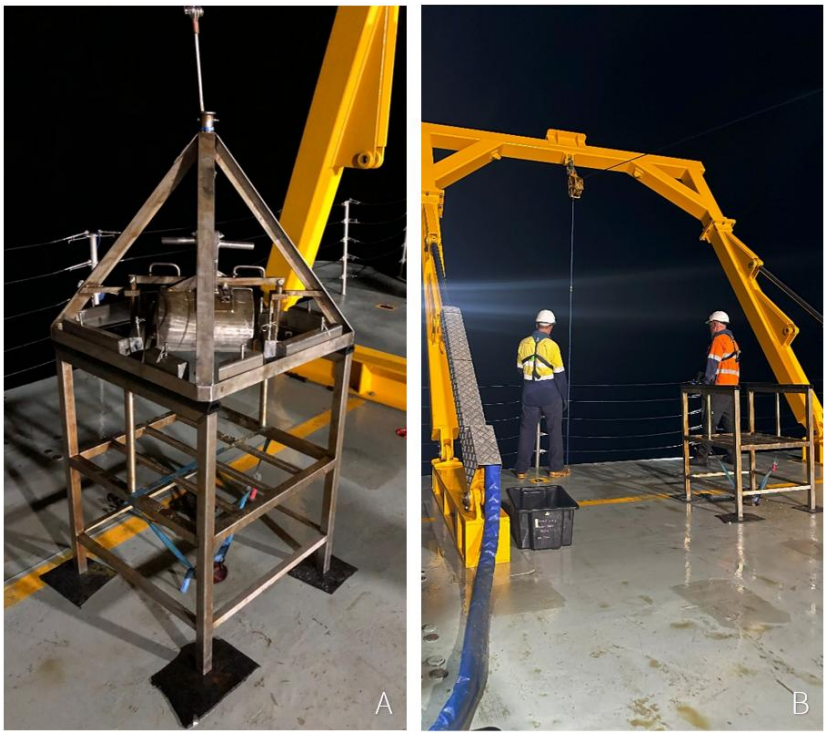
6.1.11 Sediment

The sediments in the Timor Sea are dominated by fine sand, silt, and clay. Sediment quality is of prime importance as an aid to understanding the possible impact of drilling activities, such as sediment resuspension or contamination from drilling waste.

Sediment quality monitoring helps identify any potential impacts caused by drilling operations, particularly the release or creation of contaminated sediments which can affect marine ecosystems (Trefry et al., 2013, Reuscher et al., 2020).

Sediment was collected and processed onboard using methods adapted from the Australian national standard for grab and box corer sampling (Przeslawski et al., 2024). At each designated grab site two sediment samples were collected using a large Van Veen grab / day grab sediment sampler, (figure 19) with a volume of at least 7 litres (Álvarez et al., 2020) for physical, chemical and biological analysis.

Figure 19 Day Grab sediment sampler positioned on retrieval point, B) Day Grab deployed overboard from vessel stern via A-Frame



From each grab, sediment was sampled for sediment quality analysis. Sediment samples was stored and transported to laboratories for the following analyses which included as industry standards (e.g. SS-PACK-080 for Drilling Mud Exemption at Environmental Analysis Laboratory).

Sediment samples were analysed for the following parameters:

- Total Recoverable Hydrocarbons (TRH).
- Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene (BTEXN).
- Total Petroleum Hydrocarbons (TPH).
- Polycyclic Aromatic Hydrocarbons (PAH).
- Metals (Al, As, Ba, Cd, Cr, Co, Cu, Fe, Hg, Ni, Pb, & Zn).
- Oil and grease.
- Sulphur.
- Total Organic Carbon (TOC); and
- Particle Size Distribution (PSD).

The samples were analysed at a NATA-accredited laboratory in Australia.

Summary of the EBS results:

Particle Size Distribution

Particle Size Distribution (PSD) were clay (<4 µm), silt (4-62µm), sand (62-250µm), medium sand (250-500µm), and coarse sand (500-2000µm).

Sediment PSD was generally uniform across sampling locations, where coarse grained sand (500µm-2000µm) was typically the most dominant fraction, followed by silt (4µm-62µm). Medium grained sand generally comprised the lowest fraction of grains across all sample sites, and while no sites appeared to be significantly different in their PSD composition.

Dissolved Metals

Dissolved metals results are presented summarised below.

- Gold, mercury and manganese results were reported below the LOR in all samples.
- Remaining metals (As, Ag, Ba, Cd, Co, Cu, Cr, Fe, Pb, Mn, Hg, Ni, Sb, Se, and Zn) were all generally reported at low concentrations below ANZG (2018).

Moisture

Moisture content of sediment samples ranged between 33% and 44%. The median moisture content across all sample sites was 39%, while there was a low standard deviation in % moisture content between samples (2%).

Oil and Grease

Oil and grease results was generally reported below the LOR (<500-mg/kg) however was detected in low concentrations except two sites which recorder 690mg/kg and 630mg/kg.

Sulphur

Sulphur concentrations ranged between 2100-mg/kg and 6100-mg/kg. Median concentrations of sulphur across all samples were 3500-mg/kg, while the standard deviation was 1217-mg/kg.

Hydrocarbons

Results for hydrocarbons in sediments of BTEXN, Aliphatic and Aromatic Hydrocarbon, and Polyaromatic Hydrocarbon (PAH) concentrations were reported below the LOR at all sample sites.

Total recoverable hydrocarbons (TRH) were detected in low concentrations at several sample sites, normalised TRH concentrations were reported below the ANZG (2018) DGV.

The details results and analysis of the marine sediment quality are located in appendix 1 to 5 of the EIS. The Chuditch-2 Environmental Baseline Survey (EBS) Technical Report dated March/April 2025 conducted by WA Marine Pty Ltd trading as O2 Marine, Western Australia. The data, figures, tables and information are reproduced from that report as primary information around the Chuditch-2 Appraisal Well Program.

6.2 Ecological Components

These components include living organisms and ecosystems which may be affected by the project. From secondary data the following description on ecological components are inferred.

Benthic communities consist of hundreds of species, yet many are sparsely distributed. As such, indicator groups are often used where the abundance or richness of one taxonomic group is used as a proxy for others (Mellin et al., 2011). Previous studies have yielded species inventories of sponges, octocorals, and polychaetes in the region and identified these groups as appropriate biological surrogates for benthic biodiversity (Wilson, 2010, Przeslawski et al., 2015, Przeslawski et al., 2019). As such, environmental baselines and monitoring around the Chuditch-2 site should focus on sponges, octocorals and polychaetes to assess conditions and detect changes in benthic communities in the Chuditch-2 region.

The grab samples from the Geotechnical and Geophysical site survey were consistently similar across the area, and no live bivalves or bryozoans were recovered. Only one live sponge and one brittle star were retrieved from the samples. The high degree of easily suspended sediment and the lack of light suggest that sponge growth is low. Additionally, the drop camera work over the area showed a high similarity with single sponges present in 3 of 10 images and covering less than 5% of the field of view which were reconfirmed by the observations made during the EBS survey February 2025 and figure 20 shows towed video footage collected by ROV in the same study.

At the regional scale, the Timor Sea is characterised by raised geomorphic features with shoals and banks which foster biodiversity levels observed due to light penetration at shallower depths and increased nutrients from ocean currents. This highlights the fact that the carbonate banks and terrace formations serve as key ecological features that promote regional biodiversity hotspots. Benthic communities can vary within these environmental attributes based on bathymetry, exposure, geochemistry, and substrate coupled with currents shaping the structure, distribution and abundance over time (Przeslawski et al., 2011, Nichol et al., 2013, Radke et al., 2015).

The Chuditch-2 site closely resembles that shown by environmental data collected by Geoscience Australia and the Australian Institute of Marine Science in Oceanic Shoals Marine Park, sampled within 45-90 meters of depth (Nichol et al., 2013). The sediments found in these terraces were typically medium to coarse-grained sand. In contrast, finer sediments were more common in deeper subdued geomorphic features (plains, valleys), and coarser sediments were more common on banks (Anderson et al., 2011). These terraces offer a significant correlation to the high biodiversity of benthic faunal groups where dense patches of sponges and octocorals (e.g. lithistids, halichondrids, and Xestospongia testudinaria) and both hard and soft substrates are profoundly intricated (Heap et al., 2010, Przeslawski et al., 2014).

Figure 20 Description and example images of each of the five (5) benthic habitat classes. (Source: O2 Marine, 2025)

Class	Description	Image
Bare Sediment	Largely featureless (flat), unconsolidated substrate with minimal (<1%) or no biota cover	

Class	Description	Image
Bare Sediment (bioturbated)	Unconsolidated substrate with minimal (<1%) or no biota cover, although with consistent bioturbation	
Sediment with Sparse Filter Feeders	Largely unconsolidated substrate with sparse (<10%) biota cover, where various filter feeder types are present	
Filter Feeders (mixed habitat)	Combination of habitat types (e.g. sediment, rubble, reef, etc.) with no dominant substrate. Filter feeders (e.g. sponges, sea whips, gorgonians, ascidians, soft corals, hydroids, etc.) dominant across substrate, typically in moderate to high cover.	
Reef with Mixed Assemblage	Varying relief (from flat to >3 m) of consolidated rock which typically forms part of a large, structurally complex reef feature. Reef substrate dominated by various forms of filter feeders and fish. Typically, high (25-75%) to dense (>75%) in biota cover	

6.2.1 Benthic Infauna

Infauna can also provide an important environmental baseline for soft sediment communities, as they are important to ecosystem function and often an integral component of environmental monitoring in soft sediment habitats (Nygård et al., 2020, Schenone et al., 2023).

During the EBS, after sediment was removed for sediment quality analysis, the remainder of the sediment sample was then processed for infauna analysis. Sediment was washed through a 1mm sieve, and the retained fraction was preserved in ethanol. The sieved fraction was then sorted and analysed by a taxonomist to operational taxonomic unit. Taxonomic analysis occurred onshore.

The result of the benthic infauna analysis is described in table 17.

Table 17 Benthic Infauna classification & result from EBS Report by O2 Marine

Parameters	EBS Data
Substrate Type	Of the 4,542 classified points, 3,772 were assigned substrate information, which were largely comprised of Sand / Mud (59.4%), while similar proportions were assigned as Rock (20.9%) and Pebble / Gravel – Rubble (49.1%), with Cobbles (0.6%) the only other substrate classification recorded.
Major category	Mixed Filter Feeders comprised 96.4% of all points assigned with dominant biota information, with Black & Octocorals (2.3%), Sponges (cup) (0.7%), Black & Octocorals - Fan (2D) (0.4%), and Sponges (mixed) (0.1%) collectively comprising the remaining 3.4%.
Total Biota Cover (%)	3,692 points, with 53.5% classified as Sparse/Low in cover. Relatively similar proportions of benthic biota cover were classified as Moderate (15.5%), Bare (14.1%), and High (12.2%), while 4.2% was classified as Dense, and 0.4% of classified points had None Recorded assigned to percent cover.
Summary of Classification	3,752 points which were largely allocated to the Sediment with Sparse Filter Feeders (48.6%) and Filter Feeders (mixed habitat) (21.1%) classifications, followed by Reef with Mixed Assemblage (14.9%), Bare Sediment (bioturbated) (12.9%), and Bare Sediment (2.6%).

The three most abundant species across all sites were the bristle worm Anthuridae, the Litocorsa sp1, and the Apseudidae.

Detailed information on marine fauna including habitat and characteristics of benthic habitats and detailed information on the characteristics and abundances of the filter feeders encountered during the EBS are located in appendix 1 to 5 of the EIS

6.2.1.1 Diversity Indices

Diversity indices are mathematical measures of species diversity and richness that provide more information about community composition than simply using raw abundance. Four indices were selected to provide information relevant to diversity, richness, and evenness. These are:

- Margalef's index (d) was selected to assess the species richness; Across the EBS survey area, the species richness index (Margalef) had the lowest value of (0.0) and the highest value of (6.636).
- Shannon's index (H) was selected to assess the species diversity; The species diversity index (Shannon-H) had the lowest value of (0.0) and the highest value of (3.086)

In general, the abundance of benthic infauna in the area of the Chuditch-2 appraisal well is low and with a sparse population of observed infaunal and epi faunal species. The area around the Chuditch-2 well is generally poor in diversity.

6.2.2 Marine Fauna

The Timor Sea is a biodiversity hotspot in terms of fish, marine mammals - such as dolphins, whales, sea turtles and sharks. Baseline studies recorded key species and habitats with an emphasis on the possibility of disruptions due to underwater noise/vibration, pollution, or habitat disturbance.

During the EBS study, no opportunistic marine megafauna were observed by O2 Marine field staff or Offshore Unlimited vessel crew during survey operations.

Biodiversity Hotspot: The Timor Sea is home to a wide variety of marine organisms such as fish, marine mammals like dolphins and whales, and sea turtles. These species are of ecological importance and therefore create a need for protection.

Marine Mammals

A wide array of whale, dolphin, and porpoise species have broad distributions, including in the Timor Sea, with some considered endangered or vulnerable due to their migratory habits. While species like humpback, and fin whales may occasionally appear in the contract area, it does not offer a unique or suitable habitat for them and therefore their movements in the area are transitory. Humpback whales' migration, calving, and resting areas are over 400 km southwest of the contract area, only occasional individuals might travel toward the Joseph Bonaparte Gulf and NT offshore waters.

Blue whales, particularly the pygmy blue whale sub-species, are unlikely to be found in the contract area as the well location is far from their known migration routes and known distribution (Edyvane et al., 2024). Omura's whale may occur in the contract area based on limited data of sightings across north-western Australia and off north-east Queensland. The coastal waters of the Joseph Bonaparte Gulf and Darwin Harbour are significant areas for coastal dolphin species, such as Indo-Pacific humpback, Australian snubfin, and spotted bottlenose dolphin. However, they are less likely to be found in the deep offshore waters of the contract area. Species may occasionally venture into the Bonaparte Basin waters.

The Indo-Pacific humpback dolphin, found along the northern coast of Australia, prefers warm waters shallower than 25m and feeds on coastal-estuarine fish. Breeding occurs yearly, with births usually in spring and summer. While not known for large-scale migrations, seasonal shifts in abundance have been observed. Spotted bottlenose dolphins inhabit tropical and subtropical coastal waters, typically near shores or in shallow waters less than 30 m deep. Their presence in the contract area, located offshore at greater depths, is likely limited due to their preference for shallower waters.

Omura's whales, a recently described species, are distributed in tropical and warm-temperate regions globally. They have been detected year-round in the Timor Sea, with more common sightings between April and September (Stacey et al., 2015). While some populations may be non-migratory, their movements across north-western Australia are still not fully understood. Given their year-round detection in the Joseph Bonaparte Gulf and across north-western Australia, Omura's whales may be encountered within the contract area and Bonaparte Basin (Pomilla et al., 2005).

In 2012, during the Marine Fauna Observation conducted by Minza, (Minza, 2007), there were 11 cetacean sightings in block JPDA 06-101A. The G & G survey conducted in 2024 did not record any sightings of marine mammals. This could suggest that the cetaceans sighted in 2012 were migratory species, and their usual habitat was far from the contract area as the cetacean sightings between September and December were within a known migration period. In contrast, the proposed appraisal drilling in Q2 2026 is understood to be outside of the known migration period.

Table 18 Marine Mammals - Common & scientific name, cetacean type, & IUCN Red list status.

Common Name	Scientific Name	Cetacean Type	IUCN Red list status
Humpback	*Megaptera Novaeangliae*	Whale	Endangered (EN)
Bryde's whale	*Balaenoptera edeni*	Whale	Least Concerned
Blue Whale	*Balaenoptera musculus*	Whale	Endangered
Killer whale, Orca	*Orcinus Orca*	Whale	Data Deficient
Sperm Whale	*Physeter Macrocephalus*	Whale	Vulnerable
Omura's Whale	*Balaenoptera Omurai*	Whale	Data Deficient
Spotted bottlenose	*Tursions aduncus*	Dolphin	Near threatened (NT)
Snubfin	*Orcaella heinsohni*	Dolphin	Vulnerable
Dugong	*Dugong Dugon*	Dolphin	Vulnerable
Australia Humpback	*Sousa Sahulensis*	Dolphin	Vulnerable

Turtles

As part of the Arafura and Timor Sea (ATS) region, the Timor Sea provides favourable biophysical and oceanographic conditions that support foraging, nesting, and migratory activities for marine species, including sea turtles. Timor-Leste, located within this region, is home to five recorded species of marine turtles: Hawksbill Turtle, Leatherback Turtle, Green Turtle, Loggerhead Turtle, and Olive Ridley Turtle. Additionally, six of the world's seven species of sea turtles can be found in the ATS region, highlighting its significance as a habitat for these endangered marine creatures (Fajariyanto et al., 2020).

Sea turtles, including Leatherback and Olive Ridley Turtles, rely on a cohesive network connected by migratory pathways influenced by oceanographic currents. While some species, like Green and Leatherback Turtles, travel globally across multiple oceans, complete tracking data for all species is lacking. Sea turtles exhibit fidelity to their breeding sites, returning annually, which ensures the continuity of genetic stock and evolutionary lineage. Marine Protected Areas (MPAs) within the ATS region are crucial for sea turtle conservation. Jaco Island and Tutuala Beach are known nesting sites, and other potential breeding sites may exist along the South coast of Timor-Leste or in the Northern Territories of Australia.

Australia leads conservation efforts with its Recovery Plan for Marine Turtles. However, sea turtle preservation requires connectivity among multiple locations through migratory pathways and nesting beaches with more than 30 % reported (Fajariyanto et al., 2020).

Table 19 Turtles common and scientific names and IUCN Red List Status

Common Name	Scientific Name	IUCN Red list status
Green Turtle	*Chelonia mydas*	Endangered
Hawksbill Turtle	*Eretmochelys imbricata*	Critically Endangered
Loggerhead Turtle	*Caretta caretta*	Vulnerable
Leatherback Turtle	*Dermochelys coriacea*	Vulnerable
Olive Ridely Turtle	*Lepidochelys olivacea*	Vulnerable

Table 20 Sharks common and scientific name and IUCN Red list status

Common Name	Scientific Name	IUCN Red list status
Whale Shark	*Rhincodon typus*	Endangered
White shark	*Carcharodon carcharias*	Vulnerable
Grey nurse shark	*Carcharias taurus*	Critically Endangered
Northern River shark	*Glyphis garricki*	Vulnerable
Oceanic Whitetip shark	*Carcharias longimanus*	Critically Endangered
Scalloped Hammerhead	*Sphyrna lewini*	Critically Endangered
Speartooth	*Glyphis glyphis*	Vulnerable

Birds

Birds, while primarily land animals, rely on the ocean for their life cycles, particularly during migration. Coastal areas are crucial for roosting, nesting, and foraging, with mangrove trees providing safe roosting spots and easy access to food sources. Birdlife International has identified several Important Bird Areas (IBAs) in the ATS region, including small islands and mangrove habitats that serve as sanctuaries for seabird species.

In Timor-Leste, approximately 224 bird species exist, with 23 endemic to the Timor Island group. Among these, two are critically endangered, and three are endangered, according to the IUCN Red List. The Christmas Island Frigatebird is the only seabird among them. Seabirds that may occur in the general area include various tern species, the silver gull, the lesser frigatebird, the common noddy, and the streaked shearwater.

During the Minza 2D seismic survey in the contract area in 2009, the MMO reported a total of 10 seabirds in 6 sightings. The species recorded were Shearwaters sp., Petrel Sp. (*Pterodroma Sp.*), Crested Tern (*Sterna Bergii*), Frigatebird sp, and one sighting of an unidentified seabird. In 2012, during the Marine Fauna Observation, there was one sighting of an Eastern Reef Egret (*Egretta sacra*). The G & G Survey does not provide specific names of bird species that might transit the area of the Chuditch-2 drilling project. With the short timeframe of drilling activities, the impact on migratory birds is considered to be insignificant.

Table 21 Birds common and scientific name and IUCN Red list status

Common Name	Scientific Name	IUCN Red list status
Christmas Island Frigatebird	*Fregata Andrewsi*	Vulnerable
Silver gull	*Larus novaehollandiae*	Least Concern
Lesser frigatebird	*Fregata areil*	Least concern
Common noddy	*Anous stoildus*	Least concern
Streaked shearwater	*Calonectris leucomelas*	Near threatened
Crested tern	*Sterna bergii*	Least concern
Sooty tern	*Sterna fuscata*	Least concern
Roseate tern	*Sterna dougalli*	Least concern
Brown booby	*Sula leucogaster*	Least concern
Masked booby	*Sula dactylatra*	Least concern
Bulwer's petrel	*Bulweria bulweril*	Least concern
Matsudaira's Storm-Petrel	*Oceanodroma matsudairae*	Vulnerable
Leach's Storm-Petrel	*Oceanodroma leucorhoa*	Vulnerable

6.2.3 Corals

The EBS study did not find any significant Corals in the vicinity of the Chuditch-2 well location.

However, several coral reefs exist in the Timor Sea, all of which perform critical functions as habitats for marine species. No soft reef systems were observed during the EBS survey in the vicinity of the Chuditch well location due to water depth, lack of light and unconsolidated sediments on the seabed. However, as reef systems might lie within the area of influence of a spill or well control event, potential impacts related to increased turbidity, sedimentation, and pollution were considered to preserve these sensitive ecosystems.

Coral Reefs at Risk in Southeast Asia Report indicate the percentage of coral reefs in good or excellent condition (live coral cover of more than 50%) in the eastern side were 45% compared to only 23% in the western side. (Burke et al., 2002) also identified a number of coral reefs along the Timor-Leste coast, including five distinct communities along the south coast of Timor-Leste, that were considered to be at medium to high risk of impact from the combined effects of coastal development, marine based pollution, sedimentation, overfishing and destructive fishing.

Fringing reefs are one of the most visible types of corals in Timor-Leste. These reefs are exposed to strong coastal currents and are even found in river mouths. They contribute to high fragment levels deposited at the upper reef slope. The shallow coral reefs on the northern coast occupy an estimated area of 3,000 hectares, with potential coral habitat of over 60,000 hectares in deeper waters (Kim et al., 2022). Whilst coral species occur in shallow coastal waters to open ocean depths of 6,000m, reef-building corals occur in less than 46m depth waters.

Corals on the northern coast of Timor-Leste include Acropora, Porites, Heliopora, Millepora, Xenia, and Briarium species. In contrast, the southern coast reefs have higher sponge, hydroid, algal, ascidian, and Montipora coral cover. Montipora colonies with black line disease and some damaged by Drupella grazing are recorded on the southern coast.

The southern coast's climatic variation, including high rainfall and lower water salinity, may affect coral distribution, however, there is limited knowledge about coral reefs in this area. Shallow waters support coral filter-feeders, while deep-water continental shelf communities lack habitat diversity but may host filter-feeding heterotrophs where hard substrate is available.

The eastern side of Timor-Leste exhibits a higher percentage of coral reefs in good or excellent condition, with 45%, compared to only 23 % on the western side, as indicated by the Timor-Leste coral reefs risk assessment (Burke et al., 2002). This study also identified several coral reefs along the Timor-Leste coast, including five distinct communities along the south coast, considered to be at medium to high risk of impact from coastal development, marine-based pollution, sedimentation, overfishing, and destructive fishing practices. These reefs include coral filter-feeders in shallow waters and continental shelf communities in deep waters.

In areas with minimal seafloor topography and hard substrate, habitat diversity is limited, predominantly hosting detritus-feeding crustaceans, holothurians, and echinoderms. However, filter-feeding heterotrophs such as sponges, soft corals, and gorgonians may occur when hard substrate is available (Kim, 2021).

The Geotechnical and Geophysical site survey in early 2024 indicated that at the well location's depth of approximately 68 meters, live coral reefs, which typically thrive in shallower, sunlit waters, are absent. Thus, drilling operations have minimal risk of directly impacting these sensitive marine ecosystems.

6.2.4 Fisheries

The Chuditch Field is located approximately 183Nm from the nearest coastline of Timor-Leste. The Chuditch-2 Appraisal well activities are restricted to a 500-meter declared safety zone and will not be of significance to commercial or artisanal fisheries for local communities.

Coastal communities along the 600km of Timor-Leste's coastline rely on a wide range of fish, including the large tuna species, flying fish, coral reef fish and deep-water snappers for their livelihoods. Fishing is of great economic importance because it provides a source of livelihood and ensures food security. Artisanal fishing characterizes catches in the region, together with a little commercial fishing targeting tuna and mackerel among other species.

The DNFA estimates that for over half the 20,000 fishermen of Timor-Leste, fishing is the main source of food and income many individual, small-scale operators with small boats catch a range of fish mostly sardines.

There are 739 species (234 genera, 61 families) of reef fish and expected to predict 921 species of coral fish record in Timor-Leste. The site diversity ranged from 64 to 293 species/site with an average of 210 species/site.

The coral Fish Diversity Index predicts 921 species. Sites with the highest fish diversity included Atauro Island with barrier reefs (293), *Loikere* (271), *Ete Asa Lepek* (259), West Jaco Island (249), and Tenu in Lautem (243). Several new fish species were also collected including *Chrysiptera caesifrons* and *Eviota santani*.

Fish densities in the contract area are likely to be low with some pelagic species that are utilized in traditional and commercial fisheries in the deeper offshore areas. Timor-Leste government has implemented several regulatory measures for illegal, unreported, and unregulated (IUU) fishing. These regulatory measures include establishment of minimum sizes and weights for taking species, list of protected aquatic species in order to preserve biodiversity, and commercial fishing licenses.

Despite these efforts, challenges persist, hence, Timor-Leste has taken steps to strengthen its commitment to combating IUU fishing by approving accession to the Agreement on Port State Measures, as outlined in Government Resolution No. 8/2023. SGBU will contact relevant entities in Timor-Leste including the Department of Fisheries, Ministry of Transport, and National Maritime Authority if and when SGBU obtains any data on illegal fishing activities and the presence of Fish Aggregating Devices (FADs).

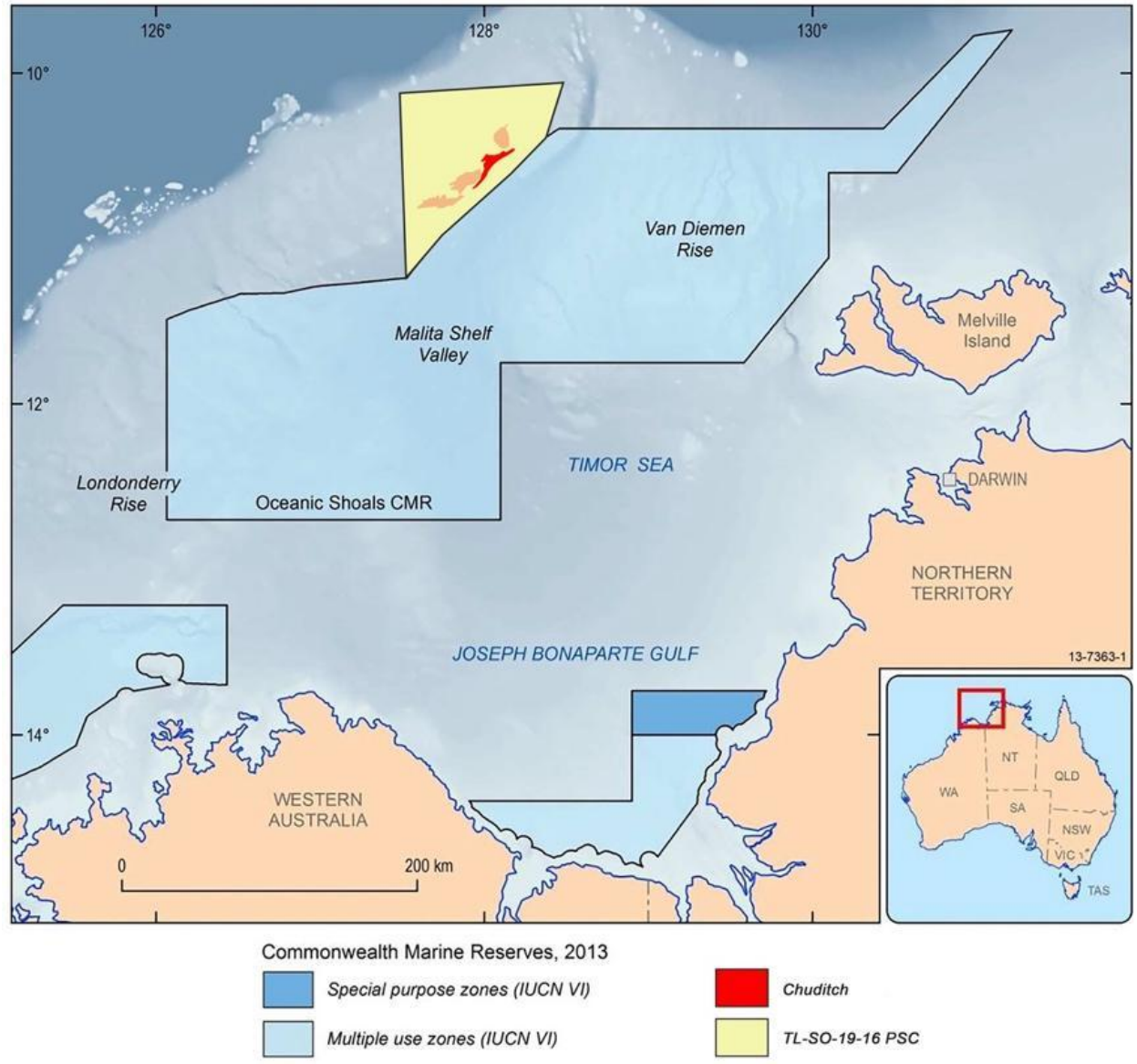
6.2.5 Protected Areas and National Parks

This area comprises Marine Protected Areas (MPA) and National Parks that provide protection to biodiversity and importance for geo-tourism. Since the project is situated close to certain MPAs, proper project planning will be carried out in order not to harm species and their natural habitats.

- The MPAs, National Parks: The project area is proximal to MPAs and National Parks crucial in biodiversity conservation for eco-tourism, especially geo-tourism.
- Biodiversity Importance: These protected areas safeguard various ecosystems, hence protecting different species and their habitats, most of which are very sensitive to environmental changes.

The Coral Triangle (figure 21), in general, is a highly biodiverse region globally, renowned as the central hub of tropical marine biodiversity. The origins of this remarkable biodiversity are attributed to the complex tectonics, evolution, and geological history of the region, along with climate fluctuations and changing sea levels. Within the Ocean Shoals Marine National Park (located approximately 8NM from the Chuditch well location (figure 10), there is the Oceanic Marine reserve which does not permit any fishing activities ('no take' zone).

Figure 21 Proposed Chuditch contract area and marine protected areas i.e. Oceanic Shoals Marine Park



6.3 Economic Components

These components address the human economic activities and industries that could be impacted by the project.

Traditionally, the majority of Timorese still practice subsistence agriculture growing corn, rice, cassava, millet and sweet potatoes. Other products such as palm and betel nut play important role for traditional rituals. Coffee plantations are the main source of income for the Timor-Leste economy. Forest products such as sandalwood have had significant value also, but due to the near extinction of relevant species it is protected and controlled in trade by the government.

In farming activities, buffalo, cattle, pig and chicken are important for the economy of rural communities. Due to the agricultural traditions in Timor-Leste, industry is limited. The Timor-Leste government is also promoting tourism and with recent development of international involvement in the country, it opens potential to grow the tourism industry. In terms of fisheries, Timor-Leste has enormous resources, but relatively little has been explored of the country's potential economic contribution.

For mineral and energy industry, offshore oil and natural gas deposits found in Timor Sea, there is potential for this to support the future of Timor-Leste's economy. The development of oil and gas resources in offshore waters and recently onshore has begun to supplement government revenue.

Timor-Leste's economy has experienced fluctuations in recent years. In 2022 according to World Meters, the country's nominal Gross Domestic Product (GDP) was approximately $3.16 billion, with a real GDP of about $2.25 billion after adjusting for inflation. This represented a significant decline from the previous year, with a real GDP growth rate of -17.49% in 2022.

Looking ahead, the Asian Development Bank (ADB) forecasts a GDP growth of 3.1% in 2024 and 3.9% in 2025, indicating a potential economic recovery. Whilst, based on World Bank data, Timor-Leste's GDP per capita was estimated at $1,502.50 as of 2023.

The economy is heavily reliant on oil and gas revenues, which poses challenges due to the finite nature of these resources. Efforts to diversify the economy are ongoing, with a focus on sectors such as agriculture, tourism, and manufacturing.

In terms of trade, Timor-Leste's imports were valued at $850 million in 2020, with refined petroleum, cars, cement, delivery trucks, and motorcycles being the main import goods. The primary import partners were Indonesia (27.1%), China (23.2%), and Singapore (8.97%).

The country faces socio-economic challenges, including poverty and unemployment. Efforts to address these issues are critical for sustainable development.

For a comprehensive analysis of Timor-Leste's socio-economic components, it is essential to consider these economic indicators alongside factors such as education, healthcare, infrastructure, and governance.

The Oil and gas sector is a critical component of its socio-economic landscape. The operation of the Chuditch-2 project significantly impacts the country and supports national development. The royalties, taxes and production sharing agreements go into the government's budget to fund education, health and infrastructure. It also creates jobs in maritime logistics, engineering and maintenance and in supporting industries such as transportation, catering and accommodation. Offshore drilling also boosts the economy through increased demand for local businesses and services and a multiplier effect that increases household incomes and consumer spending. These are key to diversifying and strengthening Timor-Leste's economy and broader economic resilience.

6.3.1 Employment Sectors

The employment sector in Timor-Leste reflects a developing economy characterized by high informality, sectoral imbalances, and ongoing challenges in job creation. According to Trading Economics (2023), the overall unemployment rate in Timor-Leste was 1.8% in 2022 and 2023, a relatively low figure compared to global averages. However, this does not account for the high levels of underemployment and informal labour, particularly in rural areas. Youth unemployment remains a major issue, with a rate of 12.31% among individuals aged 15–24 as of 2019. Many young people struggle to transition into formal employment due to limited opportunities and inadequate skills training.

Additionally, the International Labour Organization (ILO, 2021) reported that Timor-Leste's labour force participation rate (LFPR) is 30.5%, which is low for a developing nation. This figure reflects significant gender disparities, with men participating at a rate of 36.9% compared to 24.2% for women. Many women are engaged in unpaid domestic work or informal agricultural activities, which limits their participation in the formal economy.

Employment in Timor-Leste is primarily concentrated in sectors such as services, agriculture, and industry. According to the ILO (2021), the services sector is the largest employer, accounting for 59.1% of the workforce and including areas such as education, healthcare, public administration, and retail. The agriculture sector employs 26.9%, focusing on subsistence farming of crops like coffee, maize, and cassava. The industrial sector accounts for 13.5% of employment and is driven by construction, manufacturing, and extractive industries. Despite its relatively small workforce share, the industrial sector is vital for infrastructure development and economic diversification.

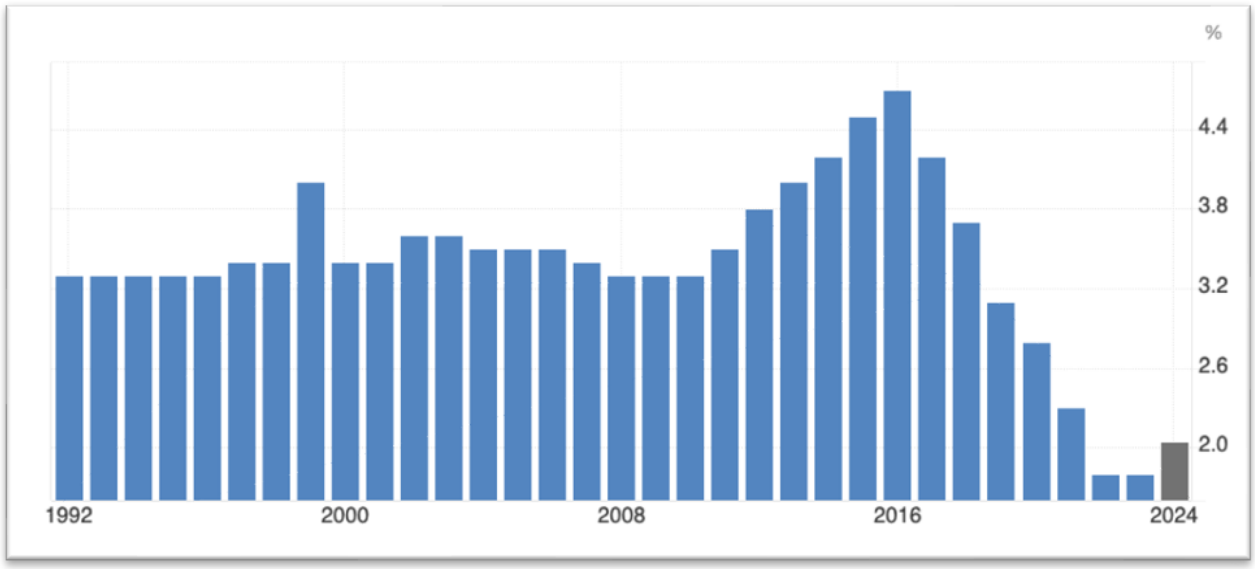
The industry of oil and gas in the country is among the biggest employment in Timor-Leste. Employment opportunities will be both directly created and through support industries such as transport and logistics for skilled and unskilled labour.

In terms of economic contributions, the AMAN Alliance (2023) reported that private-sector employment in non-oil-producing companies contributed $590.2 million to the GDP in 2023. The retail/wholesale trade and construction sectors were key contributors to this growth. Private sector employment grew by 3%, with approximately 62,500 people employed in 2023, reflecting a modest improvement in job creation.

To address the challenges in the employment sector, the government has prioritized strategic economic diversification as outlined in the Strategic Development Plan (2011–2030). This includes reducing reliance on oil revenues by promoting agriculture, tourism, and manufacturing, which are expected to generate sustainable employment opportunities. Investments in infrastructure projects, such as road networks and construction, are also being prioritized to stimulate economic activity. Human capital development is another key focus, with vocational training and education initiatives being implemented in collaboration with organizations like the ILO to improve workforce skills and align them with market demands.

Despite these efforts, challenges such as high levels of informal employment, limited opportunities for youth, and gender inequality persist. Addressing these systemic issues remains critical to achieving sustainable economic growth and improving livelihoods in Timor-Leste. The government's focus on education, infrastructure, and economic diversification offers a pathway toward fostering a more inclusive and resilient labour market.

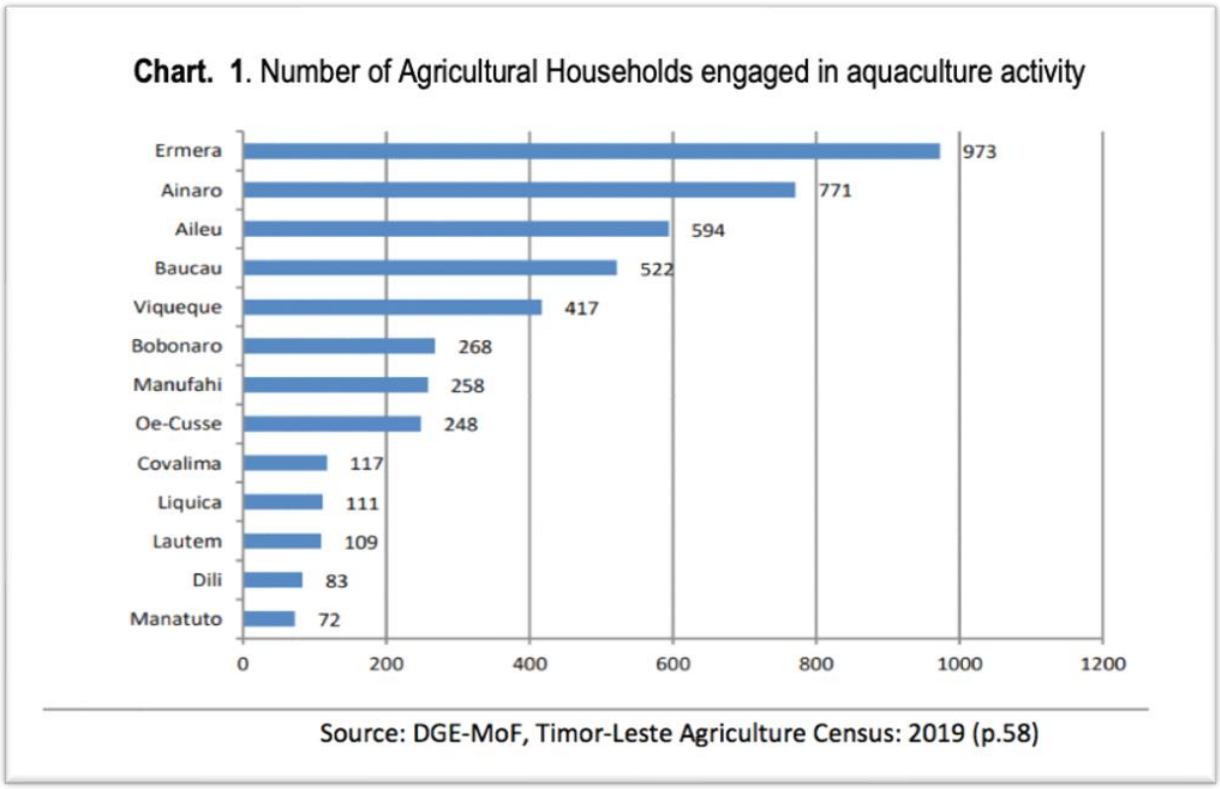
Figure 22 Unemployment rate (Source: World Bank, 2024)



6.3.2 Fishing

Fishing is a cornerstone of Timor-Leste's economy and sustenance, with approximately 40,000 individuals directly engaged in the sector. The nation's waters, part of the Coral Triangle, are rich in marine biodiversity, supporting both artisanal and small-scale fisheries. Number of Households engaged in aquaculture / fisheries activities (figure 23)

Figure 23 Number of Agriculture Households engages in aquaculture activity. (Source DGE-MOF, 2019)



Fisheries are a major part of the local economy in the coastal areas. It is of great economic importance since fishing provides a source of livelihood and ensures food security, besides aiding in artisanal fisheries and commercial fisheries, which assist the coastal economy. Artisanal fishing, in a traditional manner, characterizes catches in the region, together with a little commercial fishing targeting tuna and mackerel among other species.

Their economic importance, be it at local incomes or market contributions, is immense, and as such, they are vital in securing the livelihood of the communities. However, it may destroy fishing grounds, cause habitat contamination, and add another player that competes for resources. This also includes mitigation through compensation programmes, continued monitoring, and liaison with local fishermen for resolution of issues that will help minimize conflict.

Artisanal fishers primarily use handlines, gillnets, and traditional traps to target species such as reef fish, tuna, and mackerel. These activities are vital for food security, as fish constitute a primary protein source for the population.

Coastal communities along the 600km of Timor-Leste's coastline rely on a wide range of fish, including the large tunas, flying fish, coral reef fish and deep-water snappers for their livelihoods. The DNFA estimates that for over half the 20,000 fishermen of Timor-Leste, fishing is the main source of food and income many individual, small-scale operators with small boats catch a range of fish mostly sardines.

According to fish production data from the National Directorate of Fisheries and Aquaculture in ATSEA Program Socio Economic Impact Assessment report (2011), there were an estimated 2,889 tonnes of fish (with equivalent value of around US$ 5.8 million) landed in Timor-Leste in 2005. Dili was the most active fishing district, dominating the country's fish production and seaweed export, with limited fishing from the south coast towards the Contract Area.

There are 739 species (234 genera, 61 families) of reef fish and expected to predict 921 species of coral fish record in Timor-Leste. The site diversity ranged from 64 to 293 species/site with an average of 210 species/site.

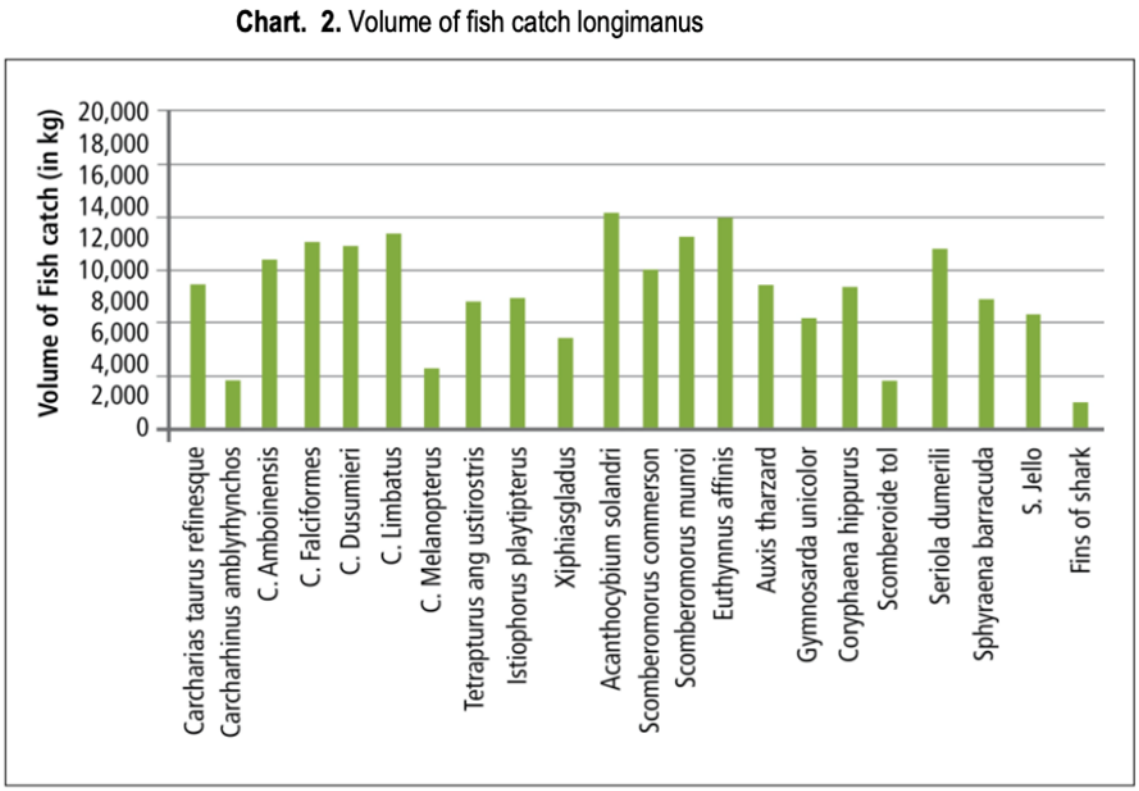
The coral Fish Diversity Index predicts 921 species. Sites with the highest fish diversity included Atauro Island with *barrier reefs* (293), *Loikere* (271), *Ete Asa Lepek* (259), West Jaco Island (249), and Tenu in Lautem (243). Several new fish species were also collected including Chrysiptera caesifrons and Eviota santani.

Many of the species listed for Timor-Leste are found throughout the tropics and are important commercial species, such as the tunas (The Big Tuna, Thunnus obesus) listed as threatened species, mackerels and snappers. Fish densities in the region of the contract area are likely to be low, with some pelagic species traversing the area.

However, waters with greater fish abundance are likely to occur in the shallow, coastal fringe and around reefs and shoals on the edge of the continental shelf (CSIRO 1999a). The broader area of the Timor Sea region supports pelagic fish species that are utilized in traditional and commercial fisheries that occur in the deeper offshore areas.

Some figures that give the efforts of fishery in Timor-Leste:

Figure 24 Volume of fish catch



Source: MAF, 2017.

Figure 25 Small scale fishing area in Timor-Leste

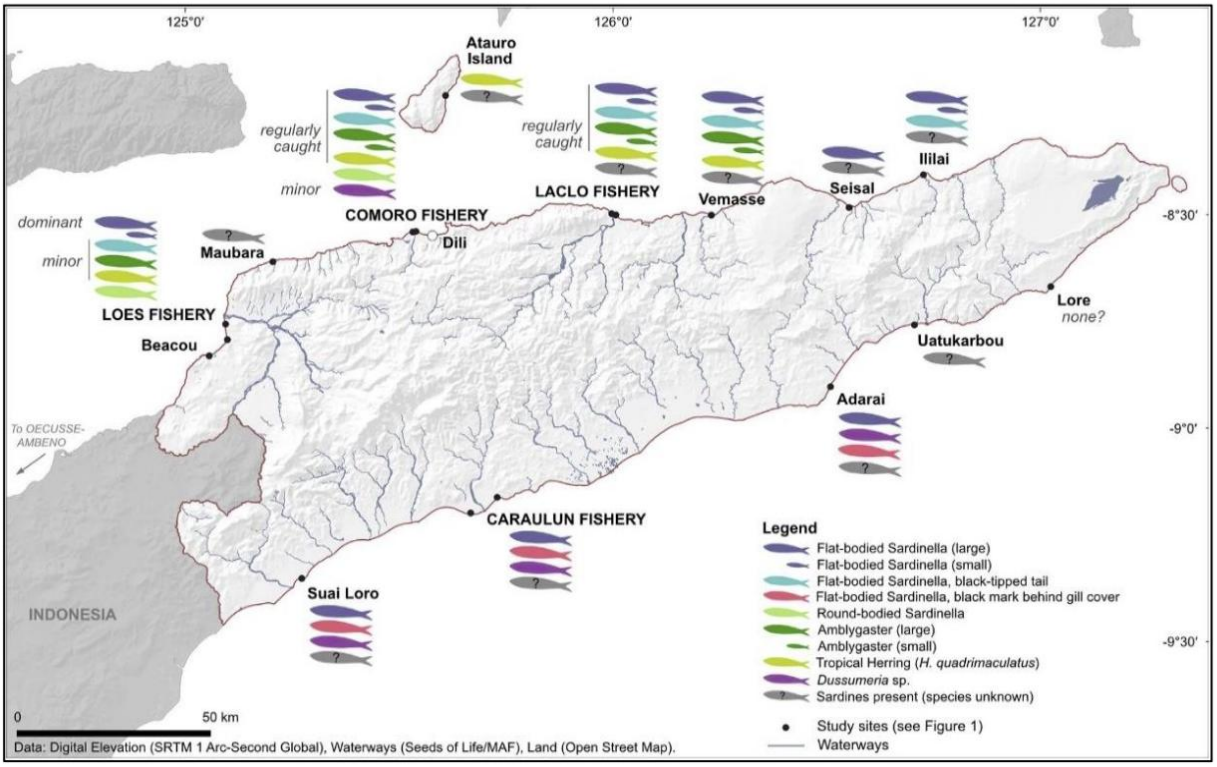
In the Timor-Leste Sea, at that time more than 239,460 tons of fish or equivalent to $1.2 Billion were stolen from Timor Sea.

To ensure sustainable fishing practices, the government has implemented several regulatory measures. Joint Ministerial Order No. 11/GM/2015 establishes minimum sizes and weights for taking of species, aiming to prevent overfishing of juvenile stocks. Additionally, Joint Ministerial Order No. 18/MAP/MCIA/II/2017 lists protected aquatic species, prohibiting their capture to preserve biodiversity. The implementation of a Satellite System for Monitoring Fishing Vessels (VMS) under Decree-Law No. 21/2008 further enhances the management of fish stocks by enabling effective monitoring, control, and surveillance of fishing activities.

Despite these efforts, challenges persist, including illegal, unreported, and unregulated (IUU) fishing, which threatens marine ecosystems and local livelihoods. In response, Timor-Leste has taken steps to strengthen its commitment to combating IUU fishing by approving accession to the Agreement on Port State Measures, as outlined in Government Resolution No. 8/2023.

The Peskas platform, an open-source web portal, provides data and insights on fisheries in Timor-Leste. Initiated in 2016 in partnership with the Ministry of Agriculture and Fisheries, Peskas uses catch data collected by local enumerators and vessel tracking data to show fishing trends over time and space. This near-real-time monitoring system focuses on small-scale fisheries and supports sustainable management practices.

Figure 26 Fish catch composition per area (Source Hunnam et. al. 2021)



6.3.3 Tourism

Though the Chuditch Appraisal Well project is an offshore project, its impacts on the tourism industry, mainly on marine-based tourism activities of diving, snorkelling, and eco-tourism are considered.

There are no known impacts to tourism associated with the Chuditch location which is 184 Nm offshore and in a minimum of 65m of open seas. Aquatic and Eco-tourism is predominantly a coastal or near coastal waters activity. The only credible impact considered is that of environmental pollution resulting from an unplanned spill or well control event.

Tourism is one of the Government of Timor-Leste's tools for ensuring economic and socially sustainable development. The Government of Timor-Leste has officially published a website providing information related to tourism in Timor-Leste. This has been a stepping-stone for the country to introduce Timor-Leste worldwide through the website.

Marine tourism has been identified as a potential economic growth area for Timor-Leste, particularly along the north and east coasts, and could deliver social and economic benefits through employment. Some eco-tourism, including cultural tourism in coastal areas, in interaction with marine wildlife (dolphins, whales) fishing competitions and diving outfits already exist however further development of these industries is reliant on improved infrastructure and services (Bateman & Bergin, 2011).

In northern Australia, commercial marine tourism is an important industry although a small component of the overall tourism sector. Activities include charter fishing, diving, snorkelling, whale mammal watching and visitations on luxury cruise boats around the Kimberley archipelago and NT coast to view sparsely inhabited pristine marine and coastal region. This industry is expected to grow over coming years (DEWHA, 2008b).

In the northern region, the marine tourism industries are largely associated with recreational fishing ventures which are projected to increase to increase both in terms of effort, numbers and potentially movement from coastal to offshore areas (Fernander and Grainer 2010 - ATSEA Program Socio Economic Impact Assessment report 2011). The cruise shipping sector has seen significant growth in northern Australia, particularly through Darwin.

There are no known significant heritage or archaeological sites, shipwrecks or marine heritage sites in the vicinity of the survey/drilling area. There is no regular passenger vessel passing by the Chuditch Field.

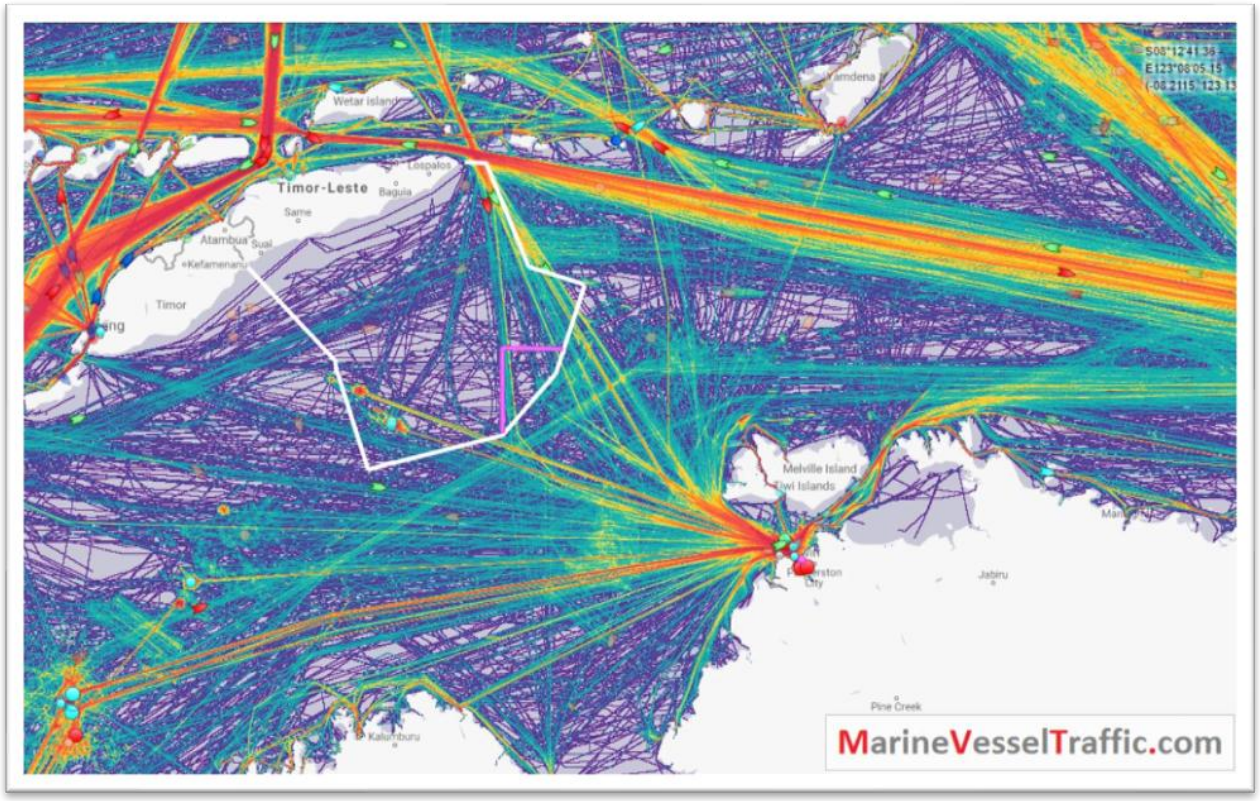
6.3.4 Seaport and Shipping

Shipping into and out of Timor-Leste is through the port of Dili, with a relatively limited but growing number of vessels. However, administration of shipping is underdeveloped. A new port has recently been completed in Tibar, Liquiça municipality, 2 km to the west of Dili and has been operating since November 2022. It is estimated that this new facility will lead to an increase in shipping traffic to Timor-Leste. Additionally, there are passengers ferry services between Dili and regions like Oecusse and Atauro, providing essential connectivity for passengers and vehicles. These operation ports their operation is in the opposite site of the project; hence, there is no intervention with the project activity.

On the other hand, in northern Australia, the major ports (Darwin, Dampier, Broome, Weipa, Karumba, Nhulunbuy) are experiencing increased activity due to expansion in the resources sector and exports of major commodities (Iron-ore, natural gas and other petroleum products, lead, zinc, manganese and copper) (DEWHA 2008A & 2008B). The number of non-government port authority ports in Australia are associated with private resources sector (e.g., in areas adjacent to Gove, Groote Eylandt and McArthur River in the Northern Territories) with major expansion in ports having been undertaken for gas developments).

There is almost a certain amount of traffic associated with offshore support vessels associated with oil and gas industry production and exploration. An increase in shipping and port expansion associated with the growth of the resources sector in the region has potential implications for the marine environment (DEWHA 2008b). Details record of fishing and shipping activity in Timor Sea shown in figure 27.

Figure 27 Details recording fishing and shipping activity in Timor-Leste (Source: Marine Vessel Traffic



The drilling project will operate within a defined safety exclusion zone declared by Rig management and published in Notices to Mariners (NOTAM). The project will maintain a standby vessel within close proximity to the Rig at all times tasked with contacting and shepherding away any errant vessel. The proposed project activities will have no impact on vessel traffic.

6.3.5 Agriculture and Forestry

Timor-Leste is famous with its coffee variety named Timor Hybrid and also known as the country origin of sandalwood. The following crops are considered economically productive for Timor-Leste: cashew nuts, mangos, spices, vanilla, pineapples, passion fruit, guavas, as

well as flowers. The proposed drilling location is far offshore and would not have any significant impact on the agriculture and forestry aspects. The development of Oil and Gas subsequently would have significant positive impact in supply chain of fresh fruits and vegetable to Oil and Gas Industry.

6.3.6 Other Industries

Mineral Exploration

Timor-Leste is considered as a highly promising country for mineral and natural gas and oil both onshore and offshore. Based on the study carried out by UNESCAP, Timor-Leste has reserves of metallic minerals: copper-gold, chromite, gold, manganese; and non-metallic minerals: bentonite clay, phosphorite, gypsum and salt, wollastonite, graphite and talc, silica sands, sulphur, and ochre.

In the northern edge of Timor-Leste, there are indications of the existence of copper, chromite, gold, silver, and manganese.

The north edge of Oecusse is claimed as the richest copper zones in Timor-Leste as well as Baucau and north central Viqueque Municipality. Atauro and Ossu area of the Viqueque Municipality have number of gold and silver occurrences. In the eastern and western coastal areas of Timor-Leste possesses limestone and marl. Phosphate and bentonite are found in central Baucau Municipality. Good quality marble is also found in Manatuto. The belt from east Dili to the east coast possibly contains clay and kaolin. Mineral that has not been explored yet but are predicted to exist in Timor-Leste are laterite nickel, platinum, and diamonds. This is onshore and development of mining resources would boost the economic development of Timor-Leste.

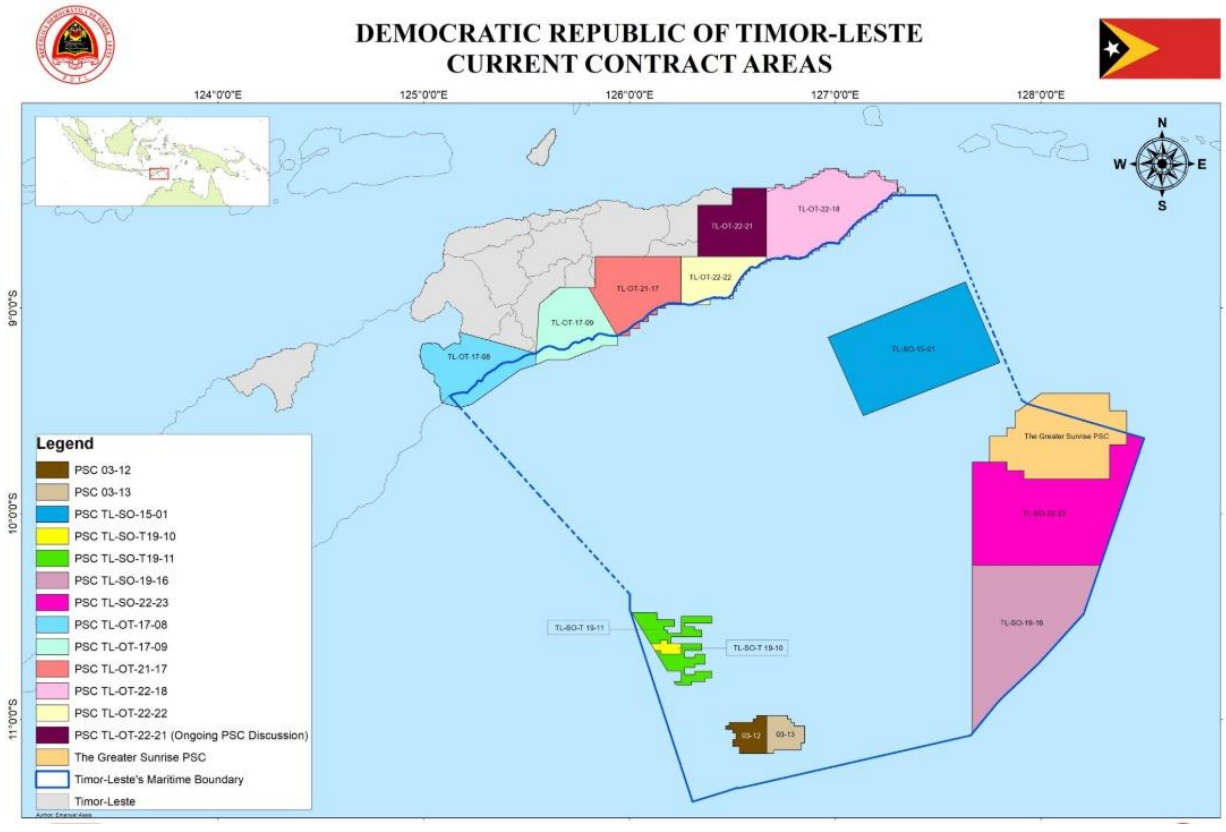
6.3.7 Oil and Gas Industry

Until recently, there was only one operational asset within 150km radius of the Chuditch contact area which was Bayu-Undan field. The Bayu Undan production is ceased in May 2025 and is planning to be repurposed to a Carbon sequestration project.

Adjacent to Chuditch contract area, there is the ENI contract area that will acquire 3D Seismic survey. Additionally, there are other oil and gas fields that are underdeveloped including Greater Sunrise, Kelp-deep, Kuda Tasi, and other fields beyond Timor-Leste's jurisdiction.

Whilst, in the onshore of Timor-Leste there are a number of product sharing contact (PSC) blocks that are either in the exploration or under contract. Both onshore and offshore assigned PSC blocks are presented in figure 28.

Figure 28 Map of PSC block for onshore and offshore of Timor-Leste (Source: ANP Website)



6.4 Social Components

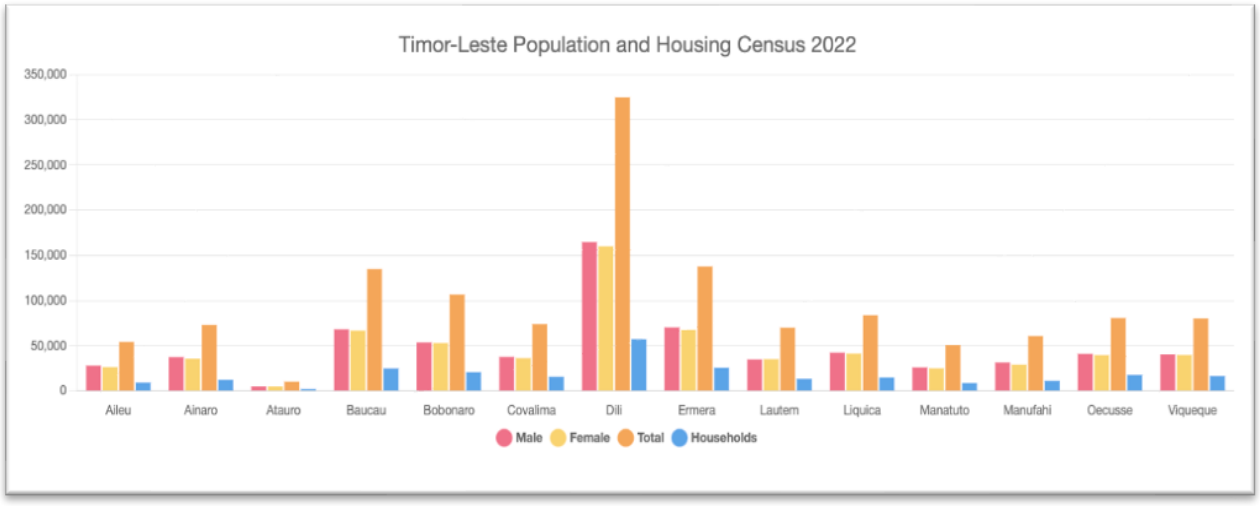
The baseline information regarding social components are derived from secondary, publicly available and published sources. The sources are Government websites, public, Institutional publications, Government of Timor-Leste National Strategic Development Plan, World Bank 2023, basic sanitation facilities, WHO, UNDP, UNFPA, ILO, MAF.

Timor-Leste has made significant strides in rebuilding its social and economic components since achieving independence in 2002.

6.4.1 Demographics and Population Composition

As of 2023, Timor-Leste's population is estimated at approximately 1.34 million people (World Bank, 2023), with a youthful demographic profile. Over 60% of the population is under the age of 25, reflecting high fertility rates averaging 4.2 births per woman (UNFPA, 2022). Figure 29 shows Timor-Leste Population Census 2022. This demographic trend has implications for the country's labour force, education system, and social services. Rural areas account for about 70% of the population, while Dili, the capital city, is the primary urban hub. Ethnically, the population is diverse, with Austronesian and Melanesian influences, and there are over 30 local languages spoken, in addition to the official languages of Tetum and Portuguese.

Figure 29 Timor-Leste Population Census 2022. (Source: INE, IP., 2022)



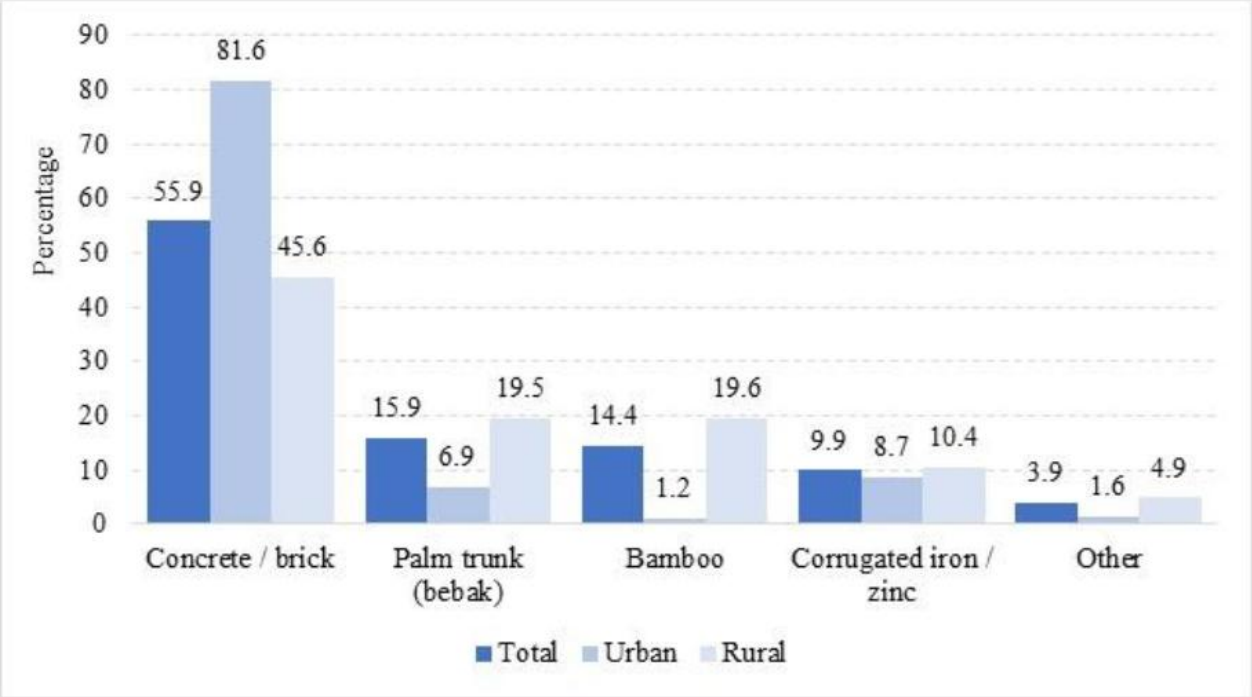
6.4.2 Living Standards

The Timor-Leste housing 2022 Census reported that 55.9% of household lived in accommodation units with concrete or brick walls while 19.5% of all housing units have palm trunks (*bebak*). About one in seven houses use bamboo walls.

Housing

The Timor-Leste Housing 2022 Census (figure 30) reported that 55.9% of households lived in accommodation units with concrete or brick walls. Palm trunk (*bebak)* is the second-most common wall material used. In rural areas, 19.5 percent of all housing units have palm trunks as wall material. In urban areas, this is much less (6.9 percent). About one in seven Timor-Leste housing units have bamboo walls (14.4 percent). While this is 19.6 percent in rural areas, just a few houses in urban areas use bamboo as construction material for walls (1.2 percent).

Figure 30 Timor-Leste Housing Census 2022 (Source: INE.IP, 2022)



Clean Water and Sanitation

The criteria to classify drinking water services are 'improved' or 'unimproved' type of drinking water sources, accessibility of drinking water on the premises, the time required to collect drinking water, including queuing, the availability of water if needed and absence of contamination.

An improved drinking water source can deliver safe water through its design or construction. The following types of water supplies are considered a source of improved drinking water: piped supplies and non-piped supplies (such as boreholes, protected wells and springs, rainwater, and packaged or delivered water, e.g. by tanker trucks). Unimproved water sources do not protect against bacterial and chemical contamination. These sources include rivers, streams, irrigation channels and lakes.

The Clean Water and Sanitation Census 2022 (figure 31) reported for drinking water source that the most occupied housing units rely on public taps or public piped water (39.5percent). Only a minority of 10.2 percent of all housing units have piped or pumped water in the house, and 11.0 percent have a private water source in the yard. Bottled water and water delivered by a water vendor account for 8.8 and 2.3 percent of all housing units, respectively. Figure 32 shows that people in 8.7 percent of all housing units depend on rivers, streams, lakes, ponds and irrigation channels to get drinking water, and 4.3 percent obtain their drinking water from unprotected wells and unprotected springs. This means that unimproved drinking water sources are used in 13.0 percent of all housing units.

Approximately 75% of households have access to improved drinking water sources, but only 46% have access to basic sanitation facilities (WHO/UNICEF Joint Monitoring Programme, 2022).

Lack of proper sanitation is a major contributor to waterborne diseases, particularly in rural communities.

Figure 31 Clean water and sanitation census 2022. (Source: WHO/UNICEF, 2022)

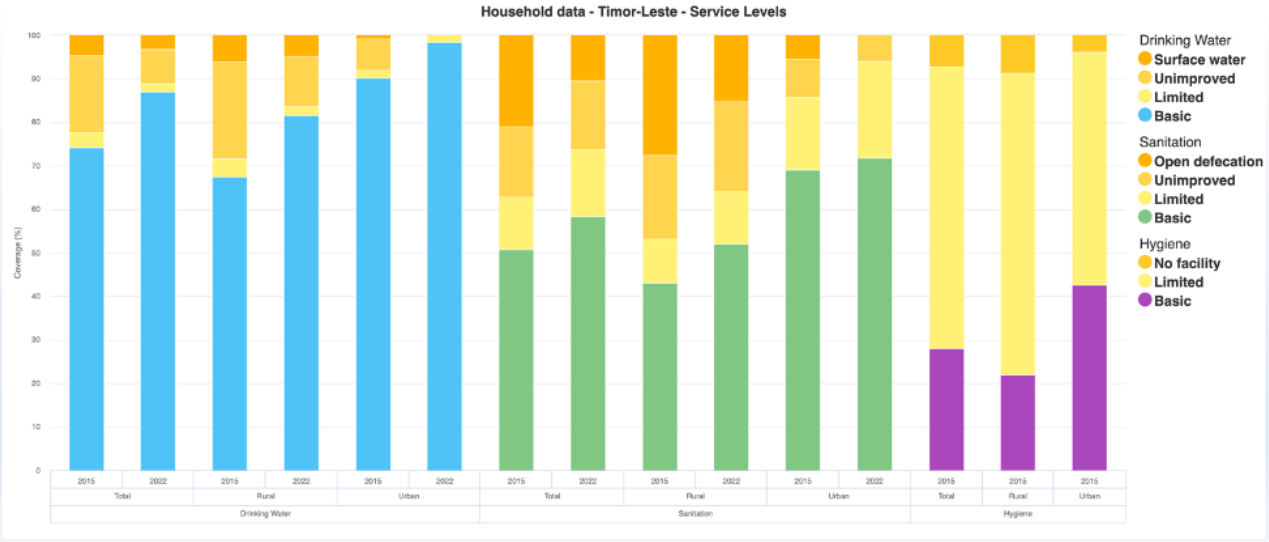
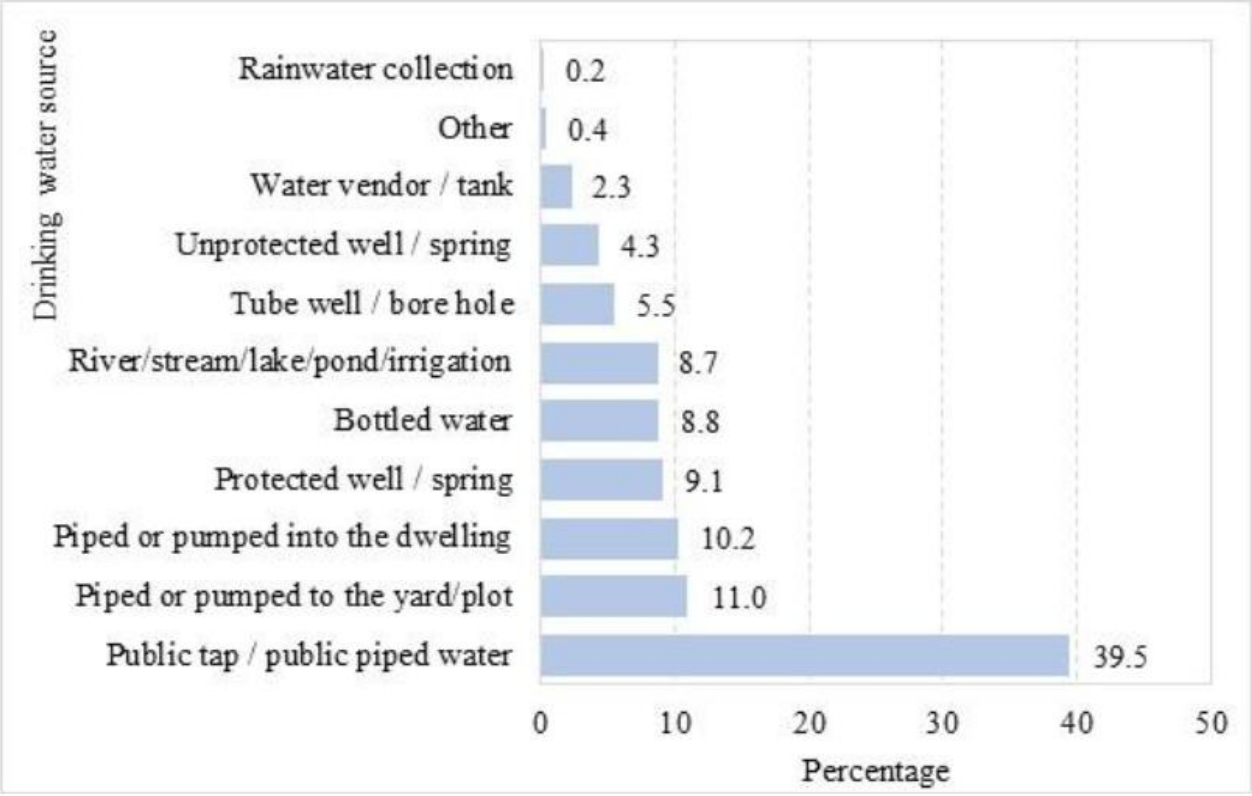


Figure 32 Drinking water source (Source: INE.IP, 2022)



Electricity Access

As of 2024, Timor-Leste has achieved a national electrification rate of 99%, according to Eletricidade de Timor-Leste (EDTL). This milestone reflects substantial government efforts to expand electricity access across the country. Currently, only one suku, Betulau, in the post-administrative area of Lequidoe, Aileu Municipality, remains under construction. Furthermore, 96% of aldeias nationwide are now connected to the electrical grid, marking significant progress in enhancing electricity access for both urban and rural communities.

This achievement aligns with the National Strategic Development Plan (2011–2030), which prioritizes universal access to reliable, 24-hour electricity by 2030. The plan emphasizes rural electrification as a cornerstone of sustainable development, aiming to reduce inequalities and foster economic growth across Timor-Leste. (Timor-Leste National Strategic Development Plan).

Despite these advancements, challenges persist, particularly in rural areas, where intermittent power supply hampers productivity and quality of life. To address these challenges, the government and international organizations have launched targeted initiatives. For instance, the UNDP's Accelerating Clean Energy Access to Reduce Inequality (ACCESS) project, funded by the Korea International Cooperation Agency, has been pivotal in improving energy access for vulnerable communities. Between 2020 and 2023, the project focused on enhancing sustainable electricity access in 25 villages across Dili (Atauro), Bobonaro, and Manatuto municipalities, aiming to improve livelihoods and reduce energy inequality (UNDP ACCESS Project).

Additionally, the UNSDG's Solar-Powered UN House project highlights Timor-Leste's commitment to greener and more sustainable energy solutions. This initiative showcases the potential of renewable energy sources, such as solar power, to address chronic energy challenges and reduce dependency on expensive and environmentally harmful diesel generators (UNSDG Solar-Powered UN House).

The government is further promoting renewable energy technologies, including micro-hydro, solar panels, and biofuel generators, particularly in remote areas. Communities are encouraged to adopt these solutions, with opportunities to produce surplus energy for sale to the national grid.

While Timor-Leste has made commendable progress toward electrification, continued efforts are necessary to ensure the reliability, affordability, and sustainability of electricity, particularly in rural areas. Strengthening infrastructure and advancing renewable energy initiatives will be critical to achieving the country's long-term development goals.

6.4.3 Living Standards

Public health indicators in Timor-Leste highlight areas of progress and ongoing challenges.

Life Expectancy

Life expectancy in Timor-Leste has seen significant improvement, increasing to approximately 70 years as of 2023. This progress reflects advancements in healthcare, education, and living conditions within the country. Despite these gains, life expectancy in Timor-Leste remains lower than the global average, which was 73.4 years in 2019 according to the World Health Organization (WHO).

The improvement is attributed to investments in public health infrastructure, vaccination programs, and reductions in infant and maternal mortality rates. However, challenges persist, including access to healthcare in remote areas, nutritional deficiencies, and the burden of communicable and non-communicable diseases. Continued efforts in addressing these issues are essential to closing the gap with the global average.

Healthcare

Health facilities in Timor-Leste often operate with limited resources, including insufficient medical equipment, essential medicines, and infrastructure such as clean water, electricity, and transportation services. Rural health posts, which are typically the first point of care for many communities, are especially affected by these shortages.

Moreover, the country faces a critical shortage of skilled healthcare professionals, including doctors, nurses, and midwives. This shortage is compounded by challenges in recruiting and retaining qualified staff in rural areas. Many healthcare workers prefer urban settings due to better living conditions, professional opportunities, and access to education for their families.

Maternal and Child Health

Maternal and child health indicators highlight the need for targeted interventions. Although progress has been made since independence in 2002, maternal mortality remains high, with 142 maternal deaths per 100,000 live births in 2020 (World Bank). Neonatal and under-five mortality rates are also higher in rural regions (41 per 1,000 live births) due to limited access to antenatal care, skilled delivery services, and postnatal care (World Bank, 2023).

While Timor-Leste has made notable progress in rebuilding its healthcare system post-independence, significant disparities remain. Achieving universal healthcare access requires sustained investments in health infrastructure, human resources, and community outreach programs. Addressing these challenges is critical to improving health outcomes, particularly for women and children in rural areas.

6.4.4 Education

Timor-Leste's education system comprises six years of primary education, followed by three years each of lower and upper secondary education, totalling 12 years of formal schooling. As of 2015, the country had 106 secondary schools, with 61 public and 45 private institutions. The net attendance ratio for secondary education stood at 32.8%, with a higher participation among females (35.9%) compared to males (29.9%).

In tertiary education, the net attendance ratio was 16.3%, indicating that a modest proportion of the population pursued higher education. A significant concentration of tertiary students resided in Dili municipality, accounting for 66.7% of the total higher education student body.

Additionally, the Timor-Leste government has committed to supporting students through initiatives through the Human Capital Development Fund, which allocated at least $150,000 in 2023 to assist up to three Timorese students in pursuing studies in the United States. Furthermore, the collaboration with development partner’s support students to study in Europe, Australia, New Zealand, China, Japan, etc.

These collaborative efforts between the government and international partners aim to develop a skilled workforce capable of contributing to Timor-Leste's ongoing development, aligning with the educational objectives outlined in the SDP 2011–2030.

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6.4.5 Transportation

Infrastructure plays an important role to support economic and social development. The Government of Timor-Leste along with Funding agencies have improved the transportation infrastructure in general. However, there are many challenges due to climate changes, low maintenance, not enough human resources to support the system.

The Timor-Leste Strategic Development Plan 2011–2030 outlines a comprehensive vision for enhancing the nation's transport infrastructure across land, air, and maritime sectors. The plan emphasizes the critical role of a robust transportation network in facilitating economic growth, social development, and national integration Timor-Leste's transportation infrastructure encompasses land, air, and maritime sectors, each presenting unique challenges and ongoing development efforts.

Land Transportation

The nation's road network spans approximately 6,041km, with about 2,600km paved and the remainder unpaved. The general condition of these roads is inadequate, often hindering efficient transportation. Public transport primarily consists of privately operated minibuses, known locally as *microlets*, which serve various routes without formal schedules. Recent initiatives, such as the Timor-Leste Branch Roads Project, aim to improve road connectivity by linking key towns and enhancing access to popular destinations like Mount Ramelau

Air Transportation

The country operates several airports, with Presidente Nicolau Lobato International Airport in Dili being the primary hub for international flights. This airport accommodates flights to destinations including Darwin, Denpasar, and Singapore. However, limitations such as a short runway and lack of night-time landing capabilities restrict operations to daylight hours. Other airports, such as those in Oecusse, Baucau and Suai, primarily handle domestic flights and are less equipped for international traffic.

Marine Transportation

Maritime transport is vital for both domestic and international trade. The Port of Dili has historically been the main international cargo reception port, but its capacity has been insufficient to meet import needs. To alleviate this, the Tibar Bay Port was developed and began on November 2022, aiming to handle all cargo shipping and improve trade efficiency. Additionally, ferry services operate between Dili and regions like Oecusse and Atauro, providing essential connectivity for passengers and vehicles.

6.4.6 Religion

Timor-Leste has no official state religion and the government values different religious views. Catholicism has dominated the religion of Timor-Leste especially due to the Portuguese's occupation for a very long time. Protestant, Animist and Islamic have also been practiced by Timorese. Most Timorese also practice animistic beliefs, where traditions and old animistic cultures are still attached in some rural areas. However, animistic is more cultural rather than religion belief.

6.4.7 Social Structure and Local Governance

Timor-Leste's community structures are deeply rooted in traditional systems, with customary practices ("*adat*") playing a pivotal role in social cohesion and dispute resolution. Local governance operates through village-level councils ("*sucos*"), which are essential for implementing development programs and resolving conflicts. These councils work alongside formal administrative systems established by the national government, ensuring localized decision-making and community engagement

6.4.8 Language

Timor-Leste consists of diversity of ethnic groups that speaks more than 30 languages as well as Bahasa Indonesia and Portuguese has been used across the territory with some of the larger language groups being, Timorese largely speak Tetum, *Mambae*, Portuguese, Bahasa Indonesia, *Tokodede*, *Makasae, Kemak,* and *Bunak*. Among those languages, Tetum and Portuguese are claimed as the official languages in Timor-Leste for those living around Dili and the neighbouring northern coast.

6.5 Cultural Component

6.5.1 Traditions

Timor-Leste traditions are strongly related to mythology and verbally spread from generation to generation. The tradition is dominated by animist spiritualism that believes the spirits of the dead people should be worshiped. The spirits, named as *Lulik*, are on shapes and objects such wells, streams, stones, and animals.

A significant tradition of Timor-Leste is *Tais* weaving. It is the textile of the country that expresses the beauty and ancient traditions of Timor-Leste, which is mostly crafted by women. *Tais* has been widely worn for dances, religious gatherings and special rituals in Timor-Leste.

Music and dance in Timor-Leste have been strongly influenced by Portuguese and Indonesian cultures, with the most popular dance namely Likurai. Performed by women, this is a welcoming dance for men back to their homes after the war.

6.5.2 Cultural Heritage

The form of cultural heritage may thus relate to valuable sites, whether these are related to maritime heritage, traditional fishing practices, or indigenous systems of knowledge. The analysis of the cultural impact by identifying all places featuring cultural significance and analyse the potential influence of a project on such an area. The Cultural Heritage: Sites might include maritime heritage: sites related to the sailing tradition, Traditional fishing practices form part of the culture and employment of local communities, and Indigenous knowledge systems manifest themselves in the unique practices tied to land and sea. However, in the vicinity of the drilling activity, there are no known significant heritage or archaeological sites, shipwrecks or marine heritage sites. Furthermore, the Timorese people still carry out traditional rituals prior to conducting activities in the ocean.

7. Institutional Roles and Responsibilities.

This section provides details of the roles and responsibilities for all Health, Safety, and Environment (HSE) related aspects of SGBU and its drilling contractor management within the drilling of Chuditch-2 Appraisal Well.

Table 22 Roles and Responsibilities for HSE.

Position	Responsibility
SGBU Chief Executive Officer & Managing Director.	• Provides strategic leadership and accountability for environmental performance. • Endorses and upholds the company's Environmental Policy and sustainability objectives. • Ensures environmental compliance and adequate resources for implementation. • Holds management accountable for meeting environmental performance standards. • Reviews performance reports and drives continual improvement across operations. • Represents the company in environmental and regulatory matters. • Obtain the Authority's permission and approval with regards to the relevant environmental requirements • Verify that contractor's environmental policies, standards and procedures are acceptable and conform to applicable laws and regulations
SGBU Well Operations Manager (WOM)	• Provides overall leadership to ensure drilling operations comply with all environmental laws, permits, and company standards. • Approves drilling programs and Environmental Plans with appropriate environmental risk controls. • Monitors environmental performance and ensures corrective actions are implemented for any non-conformances. • Ensures adequate resources, training, and competence for environmental management within the drilling team. • Oversees environmental incident response, reporting, and communication with regulatory authorities. • Promotes continual improvement and the integration of environmental stewardship into all drilling activities. • To ensure that suitable management processes are in place to carry out the operations safely and in an environmentally sound manner and to reduce risk to ALARP as reasonable and practicable • To provide environmental emergency support, including emergency response plans, equipment and professional support for Tier 2 and Tier 3 emergencies. • To review actions undertaken in response to any non-conformance or complaints received from the public in accordance with this plan and consider whether additional mitigation measures are required with respect to the operation of the work • To report environmental related incidents to the ANP and other relevant agencies in accordance with SGBU Incident Management Procedure. • To engage an Environmental Consultant in conducting environmental monitoring and verification of environmental performance on site
SGBU Drilling Superintendent	• Ensure all drilling operations comply with this EMP, Oil Spill Contingency Plan and relevant environmental permits or licences. • Promote environmental awareness and good stewardship among offshore and onshore teams. • Ensure operations meet company and regulatory environmental performance standards and objectives. • Incorporate environmental protection measures into drilling programs, logistics, and operational planning. • Identify potential environmental risks and ensure appropriate mitigation controls are in place before operations commence.

Position	Responsibility
	• Review and approve waste management, spill prevention, and chemical management plans. • Ensure spill prevention and response systems are available, functional, and tested. • Lead or support the response to environmental incidents or non-conformances, ensuring timely reporting, investigation, and corrective actions. • Oversee environmental monitoring programs (e.g., waste tracking, discharge logs, emissions records). • Ensure accurate and timely submission of environmental reports to regulatory authorities and company management. • Ensure contractors and supply vessels operate in accordance with environmental procedures and permit conditions. • Verify that third-party operations, such as fuel transfer or waste disposal, follow approved environmental standards and this plan. • Ensure all drilling and marine personnel are trained in environmental requirements, including spill response and waste segregation. • Communicate environmental expectations, objectives, and performance outcomes to crews and contractors. • Responsible for safe execution of all operations on the rig including rig moving, well construction, well testing and maintenance of facilities on rig. • Ensure the Offshore Drilling Supervisor and MODU personnel, carry out environmental hazard's identification, assessment and any preventative or mitigation plans to prevent recurrence of issues
SGBU HSE Manager	• Ensures compliance with all environmental legislation, permits, and company environmental standards. • Oversees the development and implementation of Environmental Plans, Waste Management Plans, and SOPEPs. • Monitors environmental performance, audits compliance, and reports to management and regulators. • Leads environmental incident investigations and ensures corrective actions are implemented. • Promotes environmental awareness and provides training to operational personnel. • Drives continual improvement in environmental management and performance across operations.
SGBU Senior Drilling Supervisor	• Ensure all drilling operations comply with the Environmental Management Plan and relevant regulatory requirements. • Promote environmental awareness among drilling crews and contractors through daily leadership and supervision. • Ensure that environmental controls such as containment systems, waste segregation, and spill prevention measures are implemented and maintained at the rig site. • Verify that mud systems, chemical handling, and waste management activities are carried out according to environmental procedures. • Identify and communicate potential environmental risks during planning and execution of drilling activities. • Ensure mitigations (e.g., closed-loop systems, zero-discharge controls, proper waste storage) are in place prior to operations. • Review and verify daily drilling reports, waste manifests, and mud system data to ensure accurate environmental records are maintained. • Conduct or participate in "walk the line" checks before transfers of SBM, fuel, or waste to confirm environmental controls are in place. • Ensure immediate action is taken in the event of an environmental spill or discharge. • Report all environmental incidents, near misses, or non-conformances promptly to the OIM and onshore management. • Ensure drilling crews are familiar with environmental procedures relevant to their tasks.

Position	Responsibility
	• Reinforce compliance through toolbox talks, pre-job meetings, and supervision during high-risk operations.
SGBU Environmental Advisor and Consultants	• Provide expert advice to the Drilling Manager, HSE Manager, and offshore personnel on environmental obligations and best practices. • Maintain awareness of applicable legislation and regulatory requirements, ensuring any updates are communicated to the offshore team. • Review, verify, and consolidate environmental data and reports received from the offshore MODU (e.g., waste tracking, discharge logs, emissions reports, fauna observations). • Prepare and submit environmental compliance and performance reports to regulatory authorities and company management. • Maintain accurate environmental records for audit and regulatory inspection purposes. • Provide onshore coordination and technical support during environmental incidents, including notification, investigation, and reporting. • Ensure root cause analysis and corrective actions are implemented and tracked to closure. • Liaise with regulators and stakeholders on environmental incidents and corrective actions as required. • Contribute to environmental risk assessments, drilling programs, and project planning to ensure environmental risks are identified and managed proactively. • Review and endorse environmental sections of operational plans, contractor procedures, and bridging documents. • Develop and deliver environmental training and awareness materials for offshore and onshore personnel. • Support offshore HSE teams in promoting environmental stewardship and continual improvement. • Facilitate regular environmental meetings or briefings with offshore teams and management. • Identify trends and opportunities for improvement in environmental performance and assist in implementing best practices. • Support the integration of environmental management into the company's operational and HSE systems.
Offshore Installation Manager (OIM)	• Provide visible environmental leadership and ensure offshore operations are conducted in accordance with the Environmental Plan, SOPEP, and company environmental standards. • Ensure compliance with all applicable environmental legislation and permit conditions. • Oversee implementation of all environmental controls related to drilling, waste management, and marine activities. • Ensure environmental risks are identified, mitigated, and communicated to all personnel and contractors. • Ensure effective response to any environmental incident, including activation of the SOPEP and notification of relevant onshore management. • Lead or support environmental incident investigations and implement corrective actions. • Ensure environmental records such as waste tracking, discharge logs, and marine fauna observations are maintained and accurate. • Verify that daily reports capture environmental compliance activities and any deviations. • Promote environmental awareness among all personnel through inductions, toolbox talks, and supervision. • Ensure crew and all personnel understand the facilities environmental obligations and reporting procedures. • Ensure that the drillers are aware of all environmental requirements and abide with the best environmental practices in carrying out drilling and associated activities

Position	Responsibility
Barge Master	• Ensure all marine operations, including ballasting, fuel transfers, and waste handling, comply with the Environmental Management Plan, Ballast Water Management Plan, and SOPEP. • Maintain valid ballast water and pollution prevention certificates onboard. • Oversee all bunkering and fluid transfer operations to prevent spills or leaks. • Ensure appropriate containment systems (e.g., drip trays, flotation collars, dry-break couplings) are in place and functional. • Maintain accurate records of fuel transfers, ballast water exchanges, waste storage, and discharges. • Ensure logs and documentation are kept up to date and available for inspection. • Ensure all spill response equipment is available, maintained, and ready for use. • Lead initial actions in the event of a spill or discharge in accordance with the SOPEP. • Ensure marine crew are trained and competent in pollution prevention and spill response procedures. • Promote awareness of environmental controls during daily marine operations.
Facility HSE Advisor	• Advise the OIM and supervisors on environmental requirements, controls, and permit conditions. • Ensure compliance with the Environmental Management Plan, SOPEP, and waste management procedures. • Conduct regular environmental inspections of waste segregation areas, containment systems, and pollution prevention equipment. • Monitor discharges, waste streams, and emissions to ensure they are within approved limits. • Assist in the response to environmental incidents or near misses, ensuring accurate reporting and documentation. • Provide environmental inductions, toolbox talks, and awareness campaigns to offshore personnel and contractors. • Reinforce company environmental policies and ensure personnel understand their responsibilities • Identify opportunities for environmental improvement and support implementation of corrective actions following inspections or audits.

8. Summary of Impacts

8.1 Introduction

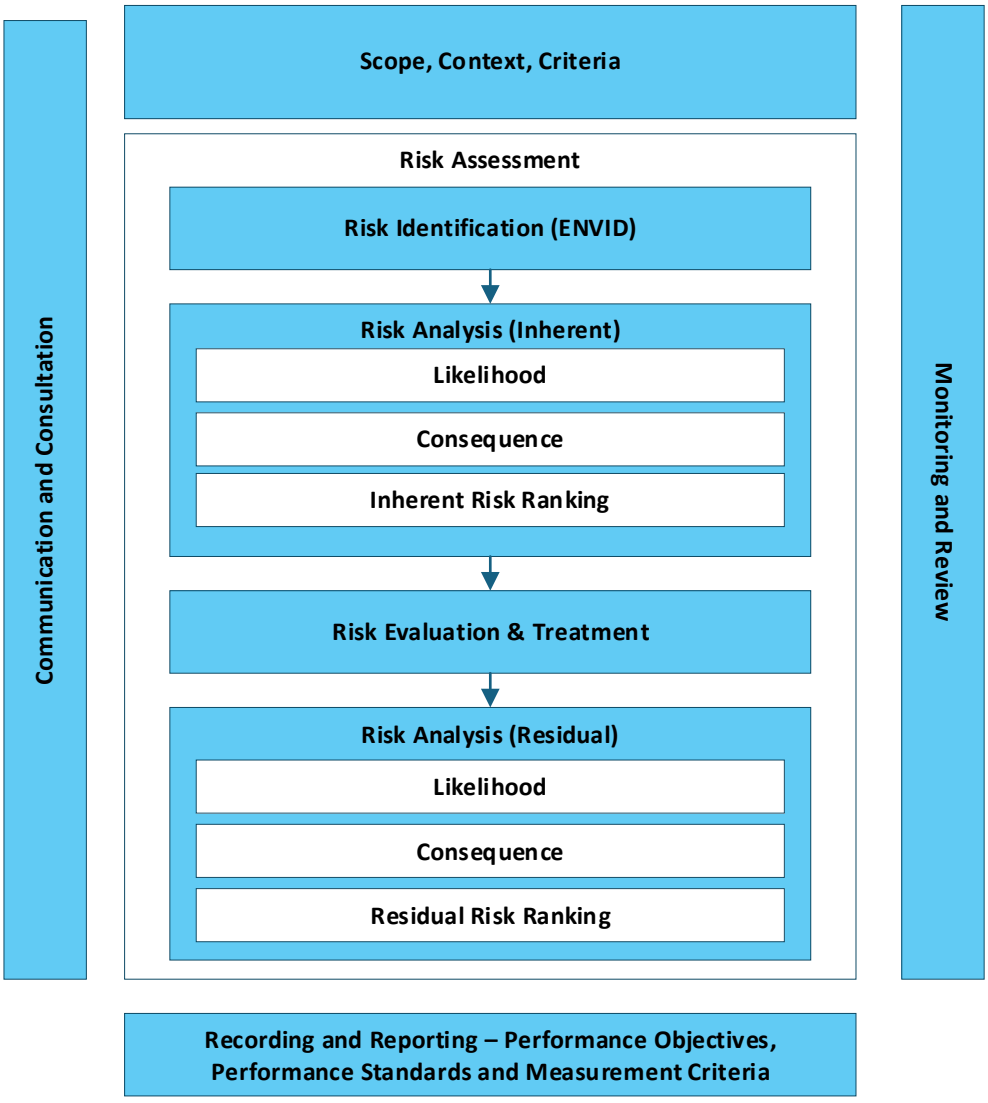
SGBU maintains a comprehensive, integrated system which includes standards and procedures necessary for the management of Health Safety and Environment (HSE) risks. The SGBU HSE Policy sets the direction and minimum expectations for environmental performance and is implemented through the standards and procedures of the SGBU Safety Management System.

The potential environmental impacts associated with the proposed appraisal drilling activities and the corresponding mitigation measures are discussed below. The assessment is limited to the current drilling project and does not extend to future petroleum development.

8.2 Methodology and Approach

An Environmental Risk Assessment (ENVID) was conducted, and which followed the general principles of ISO 31000: 2018 Risk Management Guidelines. The Company's Environmental risk assessment process is presented in figure 33.

Figure 33 Company Environmental Risk Assessment Process, based on ISO 31000:2018



8.2.1 Establishment of Scope, Context and Criteria

The first stage of the ENVID process was to establish scope, context, and criteria based on the company Environmental objectives, regulations, government decree laws and international standards and guidelines as presented in section 5 of this EMP document.

When establishing the scope and the context of the process, it is important that consideration is given to:

- Objectives and decisions that need to be made.
- Outcomes expected from the steps taken in the process.
- Time, location, specific inclusions and exclusions.
- Appropriate risk assessment tools and techniques.
- Resources required, responsibilities, and records to be kept.
- Relationship with other projects, processes, and activities.

The criteria must be clearly defined, taking into account the obligations of SGBU and the perspectives of stakeholders. The following has been considered when setting the risk criteria:

- The nature and type of uncertainties that can affect outcomes and objectives.
- How consequences and likelihood are measured.
- Time related factors.
- Consistency in the use of measurement.
- How the level of risk is to be determined
- How combinations and sequences of multiple risks will be taken into account; and
- SGBU's capacity.

8.2.2 Risk and Impact Assessment Overview and Approach

Risk Identification

The primary objective of the ENVID process was to ascertain, recognize, and delineate potential environmental risks that could impede SGBU's drilling operations in Chuditch-2. The ENVID process is based on activities (planned and unplanned) that will be implemented during the appraisal drilling and those activities impact on the defined receptors.

In the case of the appraisal drilling, the receptors are:

- Biological and Ecological processes include protected species, marine primary producers, and ecological diversity.
- Environmental quality included water quality, marine water quality, and air quality.
- Societal included protected areas or marine protected areas, cultural, and compliance.

Risk Analysis

The risk analysis process followed a structured, step-by-step approach consistent with ISO 31000. Initially, risk sources were identified by examining the sources of impact, the environmental aspects and the potential environmental receptors, including social, economic and cultural impacts that could reasonably arise from those activities.

Risk Evaluation

Risks were assessed on an inherent basis by evaluating the consequence and likelihood of identified impacts in line with the SGBU Environmental Risk Matrix (SGBU-GEN-HSSE-0047) and prior to the application of mitigation measures.

Where relevant:

- Accepted criteria and standards, including regulatory limits for pollutants and guidelines for acceptable noise levels, were referenced.
- IFC Guidance (IFC, 2007a) together with ANZECC and ARMCANZ (2000) guidelines for marine water quality, sediment quality and toxicants were applied as appropriate.

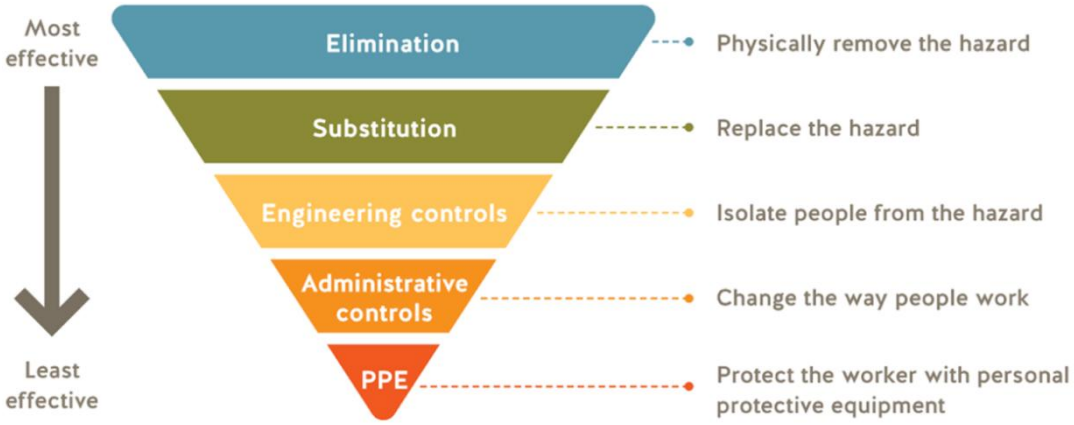
Appropriate planned and existing mitigation measures and controls were identified and documented. The inherent risks were then re-analysed with the planned and existing mitigation measures and controls in place, and reassessed to determine their residual risk, through reassessment of likelihood and consequence with the planned and existing mitigation measures and controls in place.

For social, economic and cultural impacts, the SGBU Environmental Risk Matrix was used as an objective benchmark to balance professional judgement against prevailing contextual factors.

Risk Treatment

Environmental performance objectives and standards were developed to define the environmental outcomes and the measurable requirements for managing and monitoring environmental impacts, to ensure that risks are controlled to acceptable levels. Based on the outcomes of the environmental objectives and standard, qualitative measurement criteria were defined and the hierarchy of control was used where reasonable and practicable as the basis for selecting the most effective and appropriate control mechanism, as represented in figure 34

Figure 34 Hierarchy of Control



The following were considered when establishing the acceptable levels of impacts and risks:

- The principles of Ecologically Sustainable Development (ESD)
- Other requirements applicable to the Chuditch-2 project (e.g., laws, policies, standards, conventions etc)
- Significant impacts to the Marine Environment
- Internal context.

Principles of Ecologically Sustainable Development (ESD)

SGBU has considered the principles of ESD in defining acceptable levels of impacts and risks.

The principles of ESD are summarised as:

- Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social, and equitable considerations.
- Precautionary principle – if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
- The principles of inter-generational equity – that the present generation should ensure that the health, diversity, and productivity of the environment is maintained or enhanced for the benefit of future generations.
- The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.

Other Relevant Requirements

SGBU considered other relevant requirements that apply to the environmental management of petroleum activities, including legislation, policies, standards, and guidelines in establishing acceptable levels of impacts and risks.

The TOR forms the basis for the assessment of the Chuditch-2 project, the scope of work and potential impacts, SGBU has given specific attention to the acceptability of impacts and risks to the marine environment.

Significant impacts to the Marine Environment

Potential impacts and risks to the environment from aspects of petroleum activities were deemed inherently acceptable if:

- The significant impact criteria in relation to the environment are not anticipated to be exceeded.
- The management of the aspect is aligned with published guidance material, including the Australian Department of Agriculture, Fisheries and Forestry (DAFF) (as the leading best practice standard), including threat abatement plans, recovery plans and conservation advice.

Internal Context

The following outlines SGBU internal impact and risk assessment defined acceptable levels:

- Residual planned impacts that are ranked as minor or low (i.e., minor, negligible, no effect or positive effect) and residual risks for unplanned events ranked yellow green, are inherently 'acceptable', if they meet legislative and SGBU requirements and the established acceptable levels of impacts and risks.
- Moderate or medium risk ranked yellow, are ‘acceptable’ with appropriate controls in place and if good industry practice can be demonstrated.
- Major and massive residual impacts from planned activities, and orange residual risks from unplanned activities, are ‘acceptable only if the risks are assessed and manage to ALARP’.
- Catastrophic, critical and red residual risks from unplanned activities, are “unacceptable.” The activity (or element thereof) should not be undertaken as the impact or risk is serious and does not meet the principles of ESD, legal requirements, SGBU requirements or regulator and stakeholder expectations. The activity requires further assessment to reduce the risk to an acceptable level.

The impact significance or risk ranking can be calculated by multiplying the consequences on the environmental to likelihood of the impact (Impact Significance or risk ranking = consequence x Likelihood).

The Total Environmental Impact will then be multiplied by the likelihood to obtain the Impact Significance as shown in table below.

The impact significance (risk ranking)can be calculated by multiplying the consequence on the environment to the likelihood of the impact (Impact Significance = Likelihood x consequence).

The total environmental impact can be obtained by accumulating or adding all four impact categories (i.e., Extension, duration, Intensity Environment and the Intensity Socioeconomic) according to their rankings. The Total Environmental Impact will then be multiplied by the likelihood to obtain the Impact Significance as shown in the figure 35.

Figure 35 Environmental Risk Matrix

													Likelihood						
												Historical:	"Unheard of in the industry"	"Has occurred once or twice in the industry"	"Has occurred many times in the industry, but not in the Company"	"Has occurred once or twice in the Company"	"Has occurred frequently in the Company"	"Has occurred frequently at the location"
												Frequency: (Continuous Operation)	Once every 10,000-100,000* years at location	Once every 1,000-10,000 years at location	Once every 100-1,000 years at location	Once every 10-100 years at location	Once every 1-10 years at location	More than once a year at location or continuously
												Probability: (Single Activity)	1 in 100,000-1,000,000*	1 in 10,000-100,000	1 in 1,000-10,000	1 in 100-1,000	1 in 10-100	>1 in 10
	Biodiversity and Ecological Processes			**Environmental Quality**				**Societal**					1	2	3	4	5	6
	Protected Species	**Marine Primary Producers**	**Ecological Diversity**	**Water Quality**	**Marine Sediment Quality**	**Air Quality**	**Soil and Ground Water Contamination**	**Protected Areas**	**Cultural**	**Compliance**			**Remote**	**Highly Unlikely**	**Unlikely**	**Possible**	**Likely**	**Highly Likely**
Consequence	Eradication of local population Loss of critical habitats or activities	Permanent eradication of primary producers on a regional scale	Permanent effects on ecosystem diversity on a regional scale	Continuous or regular contamination to water quality above national/international standards &/or known biological effects concentrations on a regional scale (>100km2)	Permanent contamination above background &/or national/ international quality standards &/or biological effect concentrations on large – regional scale	Continuous exceedances over national/ international air quality standards Damage to the environment or human health	Permanent off site contamination of ground water &/or soil Cost of effective treatment not possible Damage to the environment or human health	Significant permanent effect on one or more of protected area values	Significant permanent impact on aesthetic, economic or recreational values Overall societal benefits do not outweigh impacts	Continuous license/ regulatory exceedances Fines or prosecutions incurred / expected	**A**	**Catastrophic**						
	Extensive impact on population (s) Significant impact on critical habitats or activities	Large scale and long term effects Recovery >10 years or permanent	Large scale long term effects on ecosystem diversity Recovery >10 years or permanent	Continuous or regular discharge with contamination above background &/or national/ international quality standards &/or know biological effect concentrations on large scale (10 – 100km2)	Long term contamination above background &/or national/ international quality standards &/or known biological effect concentration on large scale	Sustained, exceedance over national/ international air quality standard Potential harm to the environmental or human health	Extensive off site contamination of ground water &/or soil. Treatment difficult/ expensive Potential threat to the environment or human health	Significant long term effect on one or more of protected areas values	Significant long term impact on aesthetic, economic or recreational values Overall societal benefits do not outweigh impacts	Regular or ongoing license / regulatory exceedances Fines or prosecutions	**B**	**Massive**					**Critical**	
	Minor disruptions to a significant portion of the population Minor impacts on critical habitats or activities No threat to overall population viability	Moderate or large scale effect recovering within 10 years	Localized but long term effect on ecosystem diversity Community/habitat maintains ecological integrity through an unacceptable change in species composition may occur	Continuous or regular discharge with contamination above background &/or national/ international quality standards &/or known biological effect concentrations on medium scale (1-10km2)	Short to medium term contamination above background &/or national/ international quality standards &/ or known biological effect concentrations on large scales	Temporary exceedances over national/ international air quality standards Potential harm to the environment or human health	Extensive contamination of ground water &/ or soil, offsite contamination probable, treatment difficult/ expensive Limited threat to the environment or human health	Minor but long term or permanent effect on one of more of protected area values	Moderate impact on aesthetic, economic or recreational values Overall societal benefits do not outweigh impacts	Repeated license/regulatory exceedances Fines or prosecutions likely	**C**	**Major**			**High**			
	Minor disruptions or impact on a small portion of the population Minor and temporary impact on critical habitat or activity No threat to overall population visibility	Localized and medium term effect Recovery 5-10 years Localized effect recovery in either medium or long term	Localized medium long term effect on ecological diversity Community/ habitat maintains ecological integrity though an acceptable change in species composition may occur	Continuous or regular discharge with contamination above background &/or national/ international quality standards &/or known biological effect concentrations on local-medium scale (<10km2)	Temporary exceedance over national/ international air quality standards No harm to the environment or human health expected	Minor contamination of ground water or soil, contained within the site boundary, treatment difficult/ expensive. No threat to the environment or human health	Minor and short term contamination to ground water or soil, contained within site boundary, readily treated No threat to the environment or human health	Minor and short term effect on one or more of protected areas values Full recovery expected	Minor and temporary impact on aesthetic, economic or recreational values	Occasional license/ regulatory/ target exceedance No fines or prosecutions	**D**	**Moderate**		**Medium**				
	Minor and temporary disruption to small portion of the population. No impact on critical habitat or activity	Localized and short term effect on key primary producers Recovery<5 years	Localized and short – medium term effect on ecological diversity Full recovery expected	Temporary discharge with contamination above background levels & or known biological effect concentrations on local – medium scale (<10km2)	Temporary contamination above background &/or national/ international quality standards &/or known biological effect concentrations on local – medium scale	Minor and temporary exceedance over national/international air quality standards No harm to the environment or human health expected	Minor contamination of ground water or soil, contained within site boundary, readily treated No threat to the environment or human health	Minor and short term effect on one or more of protected areas values Full recovery expected	Minor and temporary impact on aesthetic, economic or recreational values	Occasional license/ regulatory/ target exceedance No fines or prosecution	**E**	**Minor**						
	Negligible effect	Negligible effect	Negligible effect	Negligible effect	Negligible effect	Negligible effect	Negligible effect	Negligible effect	Negligible effect	Negligible effect	**F**	**Slight**	**Low**					

8.3 Summary of Risk and Impact Assessment

A multi-disciplinary team consisting of SGBU Well Operations Manager, Drilling Superintendent, HSE Manager, Geophysics Manager, Environment Adviser and the EIS consultants held an ENVID online workshop on 11 and 12th August 2025 and discussed the environmental impacts of drilling operations, identified the hazards, the sources and deliberated as Chuditch-2 well is a gas well and classified the environmental risk.

8.3.1 Planned Activity

The Environmental risk assessment for inherent and residual risk, for the planned and unplanned activities, was evaluated based on the consequence and likelihood of potential environmental impacts, before and after the application of control and mitigation measures.

Table 23 Planned Activities

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
Physical presence	Grounding MODU spud cans on seabed	Seabed disturbance and smothering / Corals, seabed invertebrates, benthic habitats.	Minor	Highly Unlikely	Low
	Grounding MODU spud cans on seabed – preload testing		Major	Highly Unlikely	Medium
	Drilling	Vessel collision with MODU / Marine fauna (fish, mammals, turtles and seabirds), benthic habitats, fisheries and socio-economic receptors	Massive	Remote	Medium
		Collision, entanglement with subsea infrastructure, interference with emergency response / Fisheries and socio-economic receptors	Minor	Highly Unlikely	Low
	Flaring	Flaring can reduce a vessel operator's ability to accurately perceive navigation cues at night and may cause a visual distraction / Air quality, Marine fauna (behavioural disturbance), Avifauna (sea birds and migratory birds), marine water quality, benthic habitats, thermal radiation, light	Major	Remote	Medium

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
		pollution and socio-economic receptors			
	Drilling	Dropped object on Benthic Habitats	Minor	Remote	Low
	Plug and Abandonment	Loss of well control or hydrocarbon release / Air quality, Marine fauna (fish, turtles' marine mammals), Seabirds and Avifauna, marine water quality, benthic habitats and subsea ecosystems, thermal radiation and socio-economic receptors	Major	Remote	Medium
Drilling discharges	Discharges water-based mud (WBM) cuttings, and cement	Water quality degradation - Smothering of benthic habitats and biota, water quality degradation, Increased local turbidity	Minor	Likely	Medium
	Discharge of Synthetic Based Mud (SBM) on cuttings	Water quality degradation - Smothering of benthic habitats and biota, water quality degradation, Increased local turbidity	Minor	Likely	Medium
	Recycling of Synthetic Based Mud (SBM)	Water quality degradation - Smothering of benthic habitats and biota, water quality degradation, Increased local turbidity	Slight	Remote	Low
Other waste discharges	Chemical and Hydrocarbon discharges	Marine water quality, marine fauna, fisheries and socio-economic receptors	Moderate	Unlikely	Medium
	Chemical and Hydrocarbon discharges	SBM Spill overboard / Marine water column, marine fauna, fisheries and socio-economic receptors	Minor	Highly Unlikely	Low

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
	Wastewater and sewage disposal	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Slight	Highly Likely	Low
	Hazardous, laboratory and medical waste	Biohazardous waste comingled with other waste / Marine water quality. Marine Fauna, Terrestrial and Human Receptors, Fisheries and Socio-Economic Receptors	Minor	Remote	Low
	Cooling and brine water	Water quality degradation and potential alteration of marine environment through localised increase in water temperature with engine cooling water / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Minor	Likely	Medium
	Produced formation water (PFW)	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Moderate	Highly Unlikely	Medium
	Bilge water discharge	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Minor	Highly Unlikely	Low
	Deck Drainage	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna,	Minor	Possible	Medium

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
		fisheries and socio-economic receptors			
	Drill floor drainage	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Minor	Possible	Medium
	Food waste	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Slight	Highly Likely	Low
	Solid waste	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Minor	Unlikely	Medium
Air emissions	MODU and support vessel operations - fuel combustion	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors),	Slight	Highly Likely	Low
	Fugitive emission - MODU	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors)	Slight	Highly Likely	Low
	Fugitive Emission - Well test package	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors)	Slight	Highly Likely	Low
	Controlled Emission - Well test package	Increase the cumulative impact on air quality and climate change / Atmospheric air	Slight	Highly Unlikely	Low

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
		quality, global system (global receptors).			
Light Pollution	MODU Operations general	Changes to marine fauna behaviour due to light emissions / Marine fauna, Avifauna (including flying and surface feeding birds), Plankton.	Minor	Highly Unlikely	Low
Noise pollution	MODU Operation-Drilling	Changes to marine fauna behaviour due to noise emissions / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton communities, Benthic Habitats and Biota and Fisheries resources	Slight	Highly Likely	Low
	Helicopter operations – take-off and landing	Changes to marine fauna behaviour due to noise emissions / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton communities, Benthic Habitats and Biota and Fisheries resources	Slight	Highly Likely	Low
	MODU Operations – Flaring	Short term behavioural / disruption impacts on local wildlife including noise vibration / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton communities, Benthic Habitats and Biota and Fisheries resources	Minor	Likely	Medium
	Versatile Seismic Imager Tool (SLB)	Changes to marine fauna behaviour due to noise emissions / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton communities, Benthic Habitats	Minor	Highly Unlikely	Low

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
		and Biota and Fisheries resources			
Socio-Economic development	Drilling program	Disruption in daily living and movement patterns	Slight	Remote	Low
		Change in occupational opportunities	Minor	Highly Unlikely	Low

Table 24 Unplanned Activities

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
Uncontrolled release of Hydrocarbons at surface -Well blow out at 17 1/2-inch mud line	Drilling 17½" Top hole section – surface gas leaks	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Major	Highly Unlikely	Medium
Uncontrolled release of Hydrocarbons at surface -Well blowout 12 1/4-inch section	Drilling 12 ¼ section – Oil spill from well blowout	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Massive	Remote	Medium
Uncontrolled release of hydrocarbon	Errant Vessel enters 500M exclusion zone -	GHGs to the atmosphere, toxic and physical	Major	Remote	Medium

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
	collision with MODU	impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities			
Uncontrolled release of hydrocarbon	Vessel to vessel and vessel to MODU collusion within 500m exclusion zone	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Major	Highly Unlikely	Medium
Uncontrolled release of hydrocarbon	Spillage during refuelling – Vessel to MODU	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Moderate	Unlikely	Medium
Uncontrolled release of hydrocarbon	Flare Burner Dropout	GHGs to the atmosphere, toxic and physical impacts from	Minor	Unlikely	Medium

Aspect	Activity	Potential Environmental Impact	Risk		
			Consequence	Likelihood	Rank
		hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities			
Uncontrolled release of hydrocarbon	Uncontrolled release of SBM	Temporary physical and toxic effects of SBM on marine fauna and flora / Marine water Quality, benthic habitats and biota, marine fauna.	Minor	Unlikely	Medium
Uncontrolled release of hydrocarbon	Contained and localised Oil Spill	Temporary physical and toxic effects of oil on marine fauna and flora / Marine water quality, benthic habitats and biota, marine fauna.	Slight	Possible	Low
Introduction of Invasive Marine Species (IMS) from Ballast Water	Biofouling from Ballast water	Changes in the marine ecology / Benthic Habitat and Biota, Native Fish Populations, fisheries and Socio-Economic Receptors and Protected areas and Biodiversity Values	Massive	Highly Unlikely	High
Introduction of Invasive Marine Species (IMS) on MODU and Vessels Hulls	Biofouling on MODU and Vessel Hulls	Changes in the marine ecology / Benthic Habitat and Biota, Native Fish Populations, fisheries and Socio-Economic Receptors and Protected areas and Biodiversity Values	Massive	Highly Unlikely	High

9. Description of Proposed Mitigation Measures

9.1 Introduction

This section will describe the appropriate mitigation measures with objective to avoid, reduce/mitigate or compensate the impacts were identified in the EIS and the summary of impacts in section 8 of this EMP. The mitigation measures describe in this EMP are composed of planned and unplanned activities.

9.2 Mitigation Measures for Planned Activities

9.2.1 Physical Presence of the MODU

Jack-up MODU's, which rest on the seabed, create distinct footprints when their legs are lowered. Jack-up MODU legs are typically spaced 43 meters apart in the transverse direction and 40 meters apart in the longitudinal direction. The spud cans, located at the base of the legs, have a diameter of approximately 14 meters. The spud cans should be the sole component of the rig that contacts the seabed.

The movement of MODU and the physical pressure from jack-up rig can disturb local marine fauna and displace sediment. Damage to potential seabed artefacts from MODU positioning, orientation and spud cans was also considered. In addition, the impact on the interaction with other users such as fishing and shipping were also assessed. The consequence of the risk is (E) minor with all the mitigation in place.

To prevent any collision or disturbance from other users, it is essential to establish a standard 500m petroleum safety exclusion zone around MODU, where only approved vessels are allowed to enter. The exclusion zone is maintained through a notice to mariners and detection and alert to other mariners approaching the exclusion zone. Before the proposed commencement and completion of the appraisal drilling program the Fisheries department will be notified by the ANP.

A detailed multi beam bathymetry analysis seabed survey has been undertaken during the Geotechnical and Geophysical survey to select least sensitive location for MODU positioning and orientation by avoiding coral outcrops. In addition, seabed sediment, geotechnical sampling and pre-loading testing will be conducted to determine seabed stability during MODU positioning to limit seabed destruction.

9.2.2 Drilling Discharges

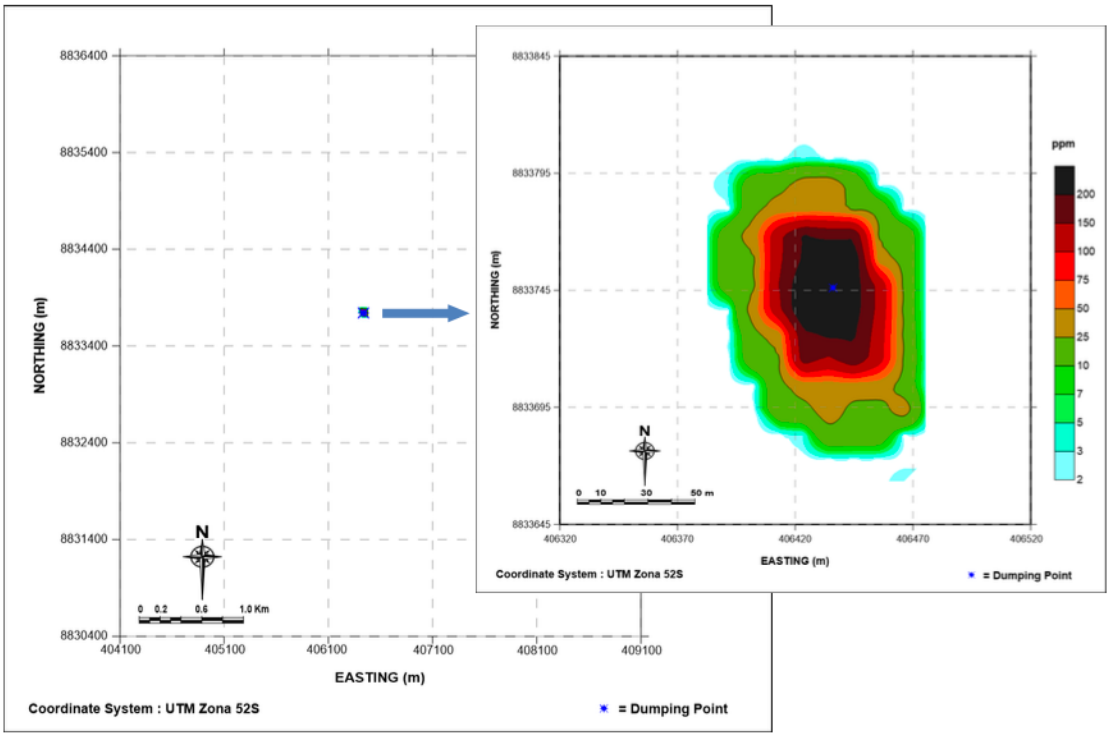
The major discharges associated with offshore drilling are drill cuttings and drilling muds. Appraisal drilling in Churidtch-2 will use Water Based Mud (WBM) for the 17½'' top-hole section and Synthetic Based Mud (SBM) when drilling through technically challenging formations (12¼"). The water-based mud volume to be discharged to the environment is approximately 2,170m^3. During the drilling of the 12¼" section, SBM will circulate in a closed system being pumped down hole and recovered over shakers to separate SBM from cutting prior to the SBM being returned to the active circulation. Cuttings from SBM will be discharge after being treated in triple shakers and sample from all solids control discharges will be taken. The estimated volume of SBM cutting to be discharged to the environment as oil retained on cuttings is approximately 99m^3 (20% over gauge hole).

SGBU contracted PT. MuTeknologi Komputasi Hidraulika to perform drill cuttings and mud dispersion modelling at the Chuditch-2 Well using MuTeknologi Software to assess the potential impacts of the discharge on the environment. There were different scenarios of two seasons, and four discharges points evaluated. Since, the appraisal drilling is scheduled for Q2 2026, therefore the June season scenario season has been used.

The drill cuttings dispersion modelling used for the study was MuDrillCutting3D. The modelling showed that in the month of June the drilling cutting discharges are transported northwest and southward. The model suggests that when discharge WBM cuttings near the seabed or riser less,

the maximum concentration of the cuttings disperse near the seabed with a thickness of approximately 200 millimetres within a 25-meter radius from the dumping point. Furthermore, the modeling indicates that the TSS concentration is elevated within a 50-meter radius, but it diminishes to less than 2 parts per million (ppm) within a 500-meter radius

Figure 36 Spatial extent of maximum concentration of TSS at seabed discharge point for 100% overgauge in June. Adopted: MuTEK, 2024



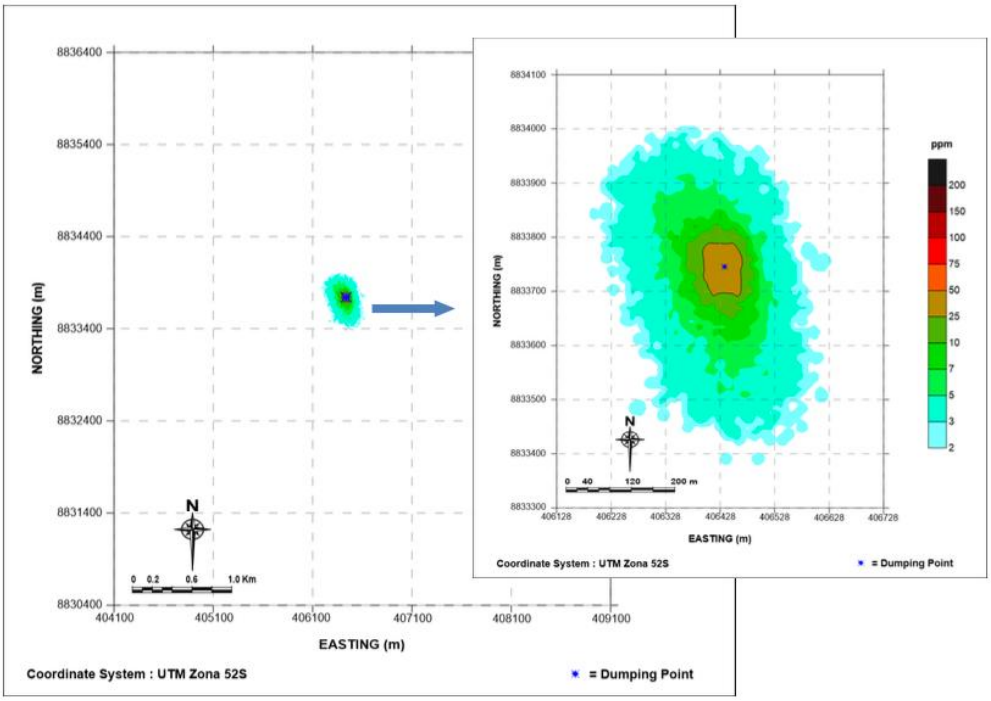
Under certain conditions, a plume of turbid water may progress into Australian territorial waters but at a level of between 5-25ppm, which is analogous to TSS/turbidity levels produced naturally in the region influenced by passing weather systems (Woodside, 2004, Pineda et al, 2016, Pineda et al, 2017).

The discharging point for SBM cuttings is 5m below mean sea level at 20 percent over gauge hole. For June month scenario, the model indicates that the sediment will be dispersed in a small region for cutting with coarse grain size and high settling velocity. Whilst the cuttings with finer grain will be dispersed over a larger area. The sediment deposition thickness is 0.5mm within a radius of less than 270m from the discharge point, with approximately 7 percent coverage by cutting. The maximum concentration of TSS at the release water depth layer is predicted to be 25ppm and 2ppm within 50m and 500m radius, respectively as presented in figure 37.

The dispersion modelling indicates a northwest-southeast dispersion trajectory for drilling in June. However, the adverse effects of sediment deposition and TSS/turbid plumes will be limited to the immediate vicinity of the well site and discharge location, with a maximum sediment deposition thickness of 0.7-1.2mm and coverage of less than 10% (MuTek, 2024). Also of note is the potential movement of the modelled plume of TSS/turbid water from drilling activities in June into Australian waters.

WBM cuttings discharges commonly effect is smothering of benthic fauna near the discharge point due to physical burial. Trace metal impurities and heavy metals in WBM can accumulate in sediments and potentially bioaccumulate in aquatic organism, posing some risk to sensitive species. SBM cuttings typically have a slightly higher impact on benthic communities compared to WBMs.

Figure 37 Spatial extent of maximum concentration of TSS (ppm) at the release depth layer when discharges at 5m bmsl in June (20% over gauge). Adopted: MuTek, 2024



Adhering SBM base fluids in cuttings can cause oxygen depletion in sediments, resulting in shifts in benthic species composition. SBM are designed for low toxicity and are more biodegradable, so prolonged or widespread marine toxicity is not typical but local organic enrichment, and brief hypoxic (severely oxygen-depleted) conditions may occur. Water column impacts are minimal with any toxic effects quickly diluted and overall impacts rarely extending to larger ecosystem. The effect on TSS in water column is localized for WBM and SBM at the layer of the discharged point as well as near the seabed. Therefore, the consequence of the impacts on the environment from WBM and SBM cutting discharges are (E) minor.

One of the mitigation measures to reduce the impact of smothering of benthic habitat and biota is to discharge the WBM cutting riser less and SBM cuttings at 5m below mean sea level. Additionally, high efficiency triple deck shale shakers and centrifuge used to separate cuttings from SBM oil-on-cuttings (OOC) to <9.2% prior to discharging it to the seabed. More importantly, prior to discharge sampling of the cuttings will be taking, recorded, and reported. As mentioned earlier, SBM will be reuse after being separated from the cuttings, and at the end of the campaign any unuse SBM will be dispose onshore. To control cutting dispersion and reducing the spread of cutting in water column, a cutting caisson will be used to discharge the cuttings. Cutting caisson can also reduce turbidity and surface contamination while directing cutting to the seabed near the drilling site.

9.2.3 Other Waste Discharges

Chemical and Hydrocarbon Discharges

All hazardous waste materials generated will be documented and tracked, segregated from other waste streams and stored in suitable containers. Recyclable hazardous wastes, such batteries, will be stored separately from non-recyclable materials. All hazardous waste materials will be transported to shore for disposal or recycled at an approved and licensed facility.

Maintenance wastes include used chemicals, lubricating oils, paint, solvents, rags and other cleaning items. Maintenance wastes will not be discharged to the marine environment but will be stored in an appropriate container until the materials are transported onshore for recycling or disposal at approved and licensed facilities.

All downhole chemicals will undergo a CHARM/OCNS risk assessment prior to selection. Any chemicals that do not have a CHARM/OCNS and cannot be substituted for a chemical that it, shall undergo assessment based on similar toxicity. Additionally, a copy of the Safety Data Sheet (SDS) will be made available and readily accessible on the MODU as guidance for material handling and disposal.

Wastewater and sewage disposal

The discharge of sewage, drainage water, runoff, and wash water during the appraisal drilling has been assessed as having a minor consequence to the environment. The direct effects of these discharges include minor pollution from trace amounts of oils and chemicals, a slight increase in water temperature, and a marginal rise in nutrient levels within the water column. These changes may lead to localized population increases of certain marine organisms and potential disturbances to the marine environment.

Based on data compiled for cruise ships (EPA, 2008), the following estimates for greywater and blackwater production have been calculated.

Table 25 Cruise Ship greywater and blackwater production

Discharge Type	Per Capita Production	Total Production [1]
Greywater	0.14-0.450m^3/day (Average 0.250m^3/day)	25m^3/day
Blackwater	0.0042-0.0102m^3/day (Average 0.032m^3/day)	3.2m^3/day

Using the upper Biological Oxygen Demand (BOD) estimates for both greywater and blackwater, along with the calculated total production rates, the total daily BOD load from these wastewater streams is estimated at 30kg/day. This estimate does not account for any treatment processes that may occur prior to discharge. Given the rapid dispersion of waste in the marine environment and the temporary nature of these discharges, the overall environmental impact is considered to be (E) minor. With additional treatment on board and compliance of MARPOL Annex IV requirement of sewage disposal, the wastewater and sewage disposal impact is minor and localised.

Hazardous, Laboratory and medical waste

The procedures and design of the facility will be such that the risk of discharge of laboratory wastes is very low. The concentrations of chemicals likely to enter the marine environment, as a result of laboratory activities, are unlikely to cause any detectable environmental effect because of the very small quantities involved. No significant environmental effects are anticipated from this source.

Cooling and Brine water

Once discharged into the ocean, the cooling water would initially be subject to mixing due to ocean turbulence and some heat transferred to the surrounding waters. The volume of discharge from the rig will be small compared to the receiving waters and so the environmental effects of the elevated temperature of discharged waters is therefore predicted to be insignificant due to the large buffering capacity of the ocean. The plume will quickly lose heat and water in only a small area around the outfall will have a substantially elevated temperature (Swan et al., 1994).

Upon discharge of Brine to the sea, the Brine is of greater density than seawater and is expected to sink and disperse in the currents. It is also expected that any pelagic species that may occur at the proposed drilling location would be able to tolerate short-term exposure to the slight increase in

[1] Assuming a total of 140 persons on board platform and vessels and average per capita production

salinity caused by discharge of the Brine. Both potassium and chloride are common in seawater and so the effect on the marine environment is considered negligible.

Produced Formation Water

Produced Formation Water (PFW) comprises a blend of formation water, flowback water (water extracted during drilling operations), and any injected water recovered during drilling. While formation water refers to the naturally occurring water present within subsurface geological formations. PFW is a byproduct of oil and gas operations, comprises formation water. However, it also contains additional contaminants originating from these operations, which require treatment before discharging it to the seawater. It is expected that the volume of the produced formation water to be low and will be treated to comply with MARPOL before discharging, hence the risk ranking for the discharge is minor.

Bilge water discharges

Bilge water from MODU is a mixture of water, oil, fuel, and chemicals that collects in the lowest compartments of the unit that accumulated from various leaks and operation on the platform. Bilge waters from machinery spaces on the Jack-up Rig will be routed to the oily water separator, treated before discharge into the sea. Hence, the consequence of the water quality degradation from bilge water discharge is minor.

Deck drainage

The volume of deck drainage water that is likely to be discharged at any given time is expected to be low. The concentrations of oil, grease and trace metals and other contaminants that could potentially enter the marine environment as a result of deck wash activities are expected to be low.

Notwithstanding, the MODU deck drainage system will allow segregation of water. System will enable clean water (for example rainwater) to be discharged directly, while potentially contaminated water will be segregated, treated to acceptable disposal limits prior to discharge. Any slops which cannot be adequately treated will be transported to shore for handling/disposal.

There is unlikely to be a detectable environmental effect due to the expected low volumes of deck drainage in relation to the high dilution rates afforded by the open ocean environment of the permit area. Therefore, the consequence of the water quality degradation is minor.

Drill floor

Water Based Mud system: Drill floor water is generated from routine operations like cleaning the drill floor, shaker room, and pump room. It may contain a mixture of seawater, drilling fluids, drill cuttings, traces of oil, grease, and other chemicals. Discharge of the drill floor water can affect marine water quality, marine life, and seabed quality. However, given the type of drilling fluid used and the duration of the drilling campaign, the consequence from drill floor discharge is expected to be minor.

Synthetic Based Mud System: Any clean-up of the drill floor or where SBM is used and or is combined with water, will be diverted to the oily water separator and treated in accordance with MARPOL

Hence, the consequence is expected to be minor.

Food waste

Food waste, being biodegradable, will be treated using a macerator with the final disposal having grain size of less than 25mm diameter prior to disposal into the sea. Disposal of food and sewage into the sea should be handled in accordance with MARPOL requirements. While localized organic enrichment may occur, no significant impacts are anticipated from this discharge. Hence, the consequence is expected to be minor.

Solid waste

General non-hazardous waste includes scrap materials, packaging, wood and paper and empty containers. These non-hazardous waste materials will be stored on board the vessel in suitable containers (segregated from hazardous waste materials) ahead of transport back to shore for disposal/recycling in accordance with local regulations.

Domestic waste generation, including paper, wood, pallets, cardboard, scrap metal, and packaging materials, is expected to be insignificant due to the short duration of the appraisal drilling activities. All waste will be sorted, compacted where feasible, and stored based on type and disposal route, for later transfer to shore. Hazardous materials, including those considered 'special wastes', will be stored separately from non-hazardous materials in designated containers. The segregation, compaction, storage, and transfer of waste materials will be short-term and transient in nature, with a low likelihood of waste escaping during transport to shore. All domestic waste will be transferred to shore for proper disposal in accordance with relevant standards and procedures. Improper management of non-hazardous solid wastes could result in unpleasant visual, and odour impacts and may pose safety risks to workers' health and safety.

Table 26 Summary of type of waste produces anticipated during the appraisal drilling project

Waste Type / Volume Used	Volume / Weight
Putrescible waste	1kg/pax/day
Waste water discharge	40 ltr/pax
Haz Chems	500 kg
Non Haz Chems	500 kg
Oily rags/waste	300 kg
Scrap metal	1000 kg
Metal drums	500 kg
Plastic receptacles/Drums	200 kg
Recyclables Wood/plastic/paper	8000 kg
Batteries/Accumulators/Electrical waste	200 kg
Lubricants	350 ltr

The effects of discharges of solid or hazardous wastes to the marine environment would vary depending on the nature of the material involved. For example, solid wastes such as plastics are persistent in the environment and have been implicated in the deaths of a number of marine species including marine mammals and turtles. This is due to ingestion, inhalation, or physical entanglement.

Solid and hazardous wastes would be transferred to Timor-Leste or the Australian mainland for onshore recycling or disposal at appropriate locations. Any release of solid and hazardous wastes into the marine environment would be recorded as an environmental incident and treated accordingly by SGBU's incident investigation and corrective and preventative action processes.

With the effective implementation of SGBU's policy to transfer solid and hazardous wastes onshore for recycling or disposal, these wastes are not expected to have any impact on the marine environment.

9.2.4 Air Emissions

Atmospheric emissions, including greenhouse gases (GHGs) such as greenhouse gases such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases or ozone depleted substances (ODS) generated from diesel-fuelled internal combustion engines used for power generation on the jack-up rig, as well as for power generation, propulsion, and on supply and standby vessels. Sources of ODS in drilling operations are refrigeration, air conditioning and fire extinguishing equipment, these are close loop systems. The deliberate discharge of these substances is prohibited by MARPOL Annex VI, Montreal protocol and maintains IAPP certificate, an ODS Record keeping book on MODU and vessels.

Diesel will be the main fuel sources used by the 2 supply vessels employed for the drilling and associated activities. Fuel consumption estimates for the Chuditch-2 appraisal well drilling at a distance of approximately 250km from land, taking an average of 10m³/day/vessel (10x44x2 = 880m³) so the total fuel diesel consumption is estimated to be approximately 880m^3 for the vessel transportation directly associated with the drilling activities. This transport will include towing of the MODU to the drilling site, standby vessel duties and support vessels from logistic points to the drilling site.

In addition, based on an estimation of five crew changes on a weekly basis, a total of 30 crew changes could be expected from the entire drilling program. An estimated 54.5m³ of jet fuel consumption is predicted from the helicopter transfer for the crew change.

For the majority of appraisal drilling well testing activities, air emissions are primarily generated from gas flaring during well testing operations. Flaring emissions typically result in elevated levels of non-methane volatile organic compounds (VOCs), methane (CH_4), sulphur oxides (SO_x), nitrogen oxides (NO_x), and carbon monoxide (CO). However, for this appraisal drilling well, flaring will be conducted for a short period during the DST limited to approximately 30 hours total. Estimated volumes of flaring during the well testing period is 36.67mmscf. Based on the estimated fuel consumption of 1,672m³ of diesel, 54.5m³ of jet fuel and 36.67mmscf of natural gas flaring for the proposed appraisal drilling program, the total GHG emissions are projected to be approximately 6,912.7 metric tonnes (MT) of CO_2-equivalent (CO_2-eq).

To detect a small-scale gas leak from the hydrocarbon containing vessels and pipe work, a handheld gas detection devices are used by the well flowback/testing personnel for routine monitor. The portable, self-contained gas detectors are powered by integral batteries and provided with audible and visual alarms. Dräger portable gas detection and alarm units will be installed in strategic locations throughout the well flowback / testing area as a means of temporary fixed gas detection during the campaign. Moreover, well flowback procedure implemented including a continuous flare watch during flaring operations and function testing continuous ignition system and pilot system. The utilization of high-efficiency flare burner design is used to reduce the air emission during flaring.

9.2.5 Light Pollution

Light pollution will be generated from the MODU for a period of approximately 44 days. Low-intensity light will also be generated from the supply and standby vessels, and high-intensity light will be generated from the artificial light used on the MODU.

The lighting levels are a consequence of providing safe illumination of work and accommodation areas and both MODU and, vessel lighting is directed over the work area, which aids in limiting light spill to the marine environment. Light will also be generated during flaring activity although for staggered periods of time, mostly planned in day time for a total estimated period of 30 hours.

Artificial light at night can alter daily and seasonal cycles for marine organism which effects on reproduction, survival, and growth in fish species in addition to changes in metabolic rates and increased mortality rates for certain life stages. Coral reefs are vulnerable to chronic disturbances, which can interfere with spawning and feeding cycles, contributing to reef decline. This will have an impact on black and octocorals in and around the Chuditch-2 site.

Artificial light from drilling activity attracts and disorient birds and bats, increasing the risk of fatal collisions and interfering with migration paths.

To mitigate intense light pollution, the MODU and Vessels will meet conventional navigation rules for lighting limited only for the safety of personnel working on the facilities and the safe operation of the facilities in an active marine environment. Additionally, specific work on the vessel's deck will be planned to be minimised, and unnecessary lights directed towards water will be avoided as reasonably practicable. When practicable, operational activities are restricted to either side of November through March, during which time sea turtles typically return to the shore for nesting. This limitation minimizes potential disturbance to the turtles' migratory pathway. Putting these mitigation measures in place and with drilling activity schedule for Q2 of 2026, the environmental impact from light pollution is predicted to be (E) minor.

9.2.6 Noise Pollution

Sources of noise pollution during appraisal drilling are support vessel propeller and thruster movement, engine noise and mechanically generated vibration, the Drilling Top Drive System, drill string and shakers. Additional noise sources will come from helicopter operation and use of air guns deployed by MODU crane when using the Versatile Seismic Imager Tool. The constant presence and operations of support vessels and passing ships also contribute to the ambient ocean noise. Sound travels faster and more efficiently underwater which can significantly harm marine life that relies on sound for vital functions.

Marine mammals and other wildlife, including whales, dolphins, and fish, exhibit heightened sensitivity to underwater noise. This sensitivity can lead to hearing loss, stress, behavioural alterations, habitat displacement, and disruptions in feeding and breeding patterns. The risk of hearing damage for high-frequency-hearing marine mammals can extend 300 meters from the source, while behavioural disruptions can be detected up to 2km (Huang et.al, 2023). Communication interference specifically affects whales and dolphins that rely on echolocation, sometimes leading to strandings and mortality. Chronic exposure to noise can lead to long-term population declines in vulnerable species through reduced reproductive success and altered habitat use.

Noise buffer zone is one of the solutions to mitigate the impacts of underwater noise pollution on marine life. Mechanically generated noise and vibration can be effectively minimized by adhering to the manufacturer's specifications for the maintenance and use of the drilling top drive, drill string, and shakers. All equipment will be maintained in accordance with the original equipment manufacturer's guidelines. DP2 boats minimize manual intervention to maintain station. Boats will only be operated to optimize time on-site efficiency. Helicopters are brought to a standstill (rotors running at idle) on the helideck. Optimized flight scheduling will also be employed to minimize the overall number of take-offs and landings.

During well testing, flaring times are optimized to minimize flaring while simultaneously achieving the objectives set forth for DST. Lastly, the deployment of air guns during MODU crane operation will be in accordance with the agreed company and vendor procedure.

These mitigation measures will ensure that the noise and vibration pollution during mobilization, drilling operation and demobilization is (E) minor and localised.

9.2.7 Socio-Economic Development

Timor-Leste faces considerable challenges in developing its infrastructure and creating employment opportunities for young people entering the workforce. The development of oil and gas resources in offshore waters has been an important component of government revenues since the restoration of independence, funding many state services and resulting directly and indirectly in the creation of employment.

Article 5.4 of PSC-TL-SO-19-16 includes clear obligations for SGBU to provide some opportunity to suppliers based in Timor-Leste and give preference in employment to Timor- Leste nationals and permanent residents. There is limited opportunity to incorporate significant local content into the drilling program due to the nature of the work and the short duration of the program. However, SGBU endeavours to incorporate local content wherever feasible. For example, crew changes are intended to be conducted via helicopter based in Dili. SGBU will continue to liaise with Timor-Leste stakeholders to identify and develop local content opportunities, particularly if the Chuditch-2 appraisal well proves the economic viability of the project.

The duration of the appraisal drilling is 44 days campaign with about 144 crew members, therefore, there will be influx of temporary workers in Timor-Leste and Darwin. This includes preparation pre-drilling phase, and the actual investigate drilling phase. It is expected that a large number of workers engaged on the drilling and logistics phase will be workers of International / Australian nationality due to the specialist knowledge, training and experience required. Nevertheless, prioritize local employment by actively sourcing workers from Darwin and Timor-Leste, and implementing training programs for the local workforce whenever feasible. A record of any employment and training provided to workforce from Timor-Leste will be maintain.

More opportunities would be available once the Chuditch field is proven to be profitable for production. Additionally, there is potential for increased business to goods and service-related industries such as accommodation providers, food suppliers, and environmental consultancies in short to medium term.

In reference to the appraisal drilling conducted in Chuditch-2, it is anticipated that the drilling campaign will have a negligible impact on the daily activities and movement patterns of the local population. This is because appropriate health and safety policies and procedures will be developed and implemented.

Given that the majority of Timor-Leste fishing is of an artisanal nature where local fishermen, generally do not venture out of sight of the Timor-Leste landmass, it is considered there will be no impact to either artisanal or commercial fishing activities as the appraisal drilling location is approximately 184nm offshore, where commercial fishing activity is minimal or absent. Even though, the overall impact is expected to be low to non-existent, it is essential to notify appropriate maritime authorities prior to commencing the appraisal drilling campaign.

9.2.8 Environmental Performance Objectives, Standards and Measurement Criteria for Planned Activities

Table 27 Environmental Performance Objectives, Standards and Measurement Criteria for Planned Activity

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Physical Presence	MODU positioning	Seabed disturbance and smothering / Corals, seabed invertebrates, benthic habitats.	A detailed multi beam bathymetry analysis baseline seabed survey has been undertaken to select least sensitive location for MODU positioning and orientation (e.g. avoidance of coral outcrops)	Reduce or avoid physical damage to sensitive seabed habitats such as coral reefs, seagrass beds, benthic communities	A detailed multibeam bathymetry baseline seabed survey shall inform selection of the least sensitive MODU location and orientation, avoiding sensitive seabed features and minimising seabed disturbance, in accordance with DL 32/2016 and MD 46/2017.	The multibeam bathymetry survey confirms that sensitive seabed features (including coral outcrops and hard substrates) within the potential spud can footprint and surrounding buffer have been identified and assessed	Final positioning survey records confirm that the MODU was positioned and oriented in accordance with the approved location and orientation derived from the baseline seabed survey.		WOM
Physical Presence	MODU positioning	Seabed disturbance and smothering / Corals, seabed invertebrates, benthic habitats.	Drilling contractors Rig Move procedure is followed by drilling contractor and surveyor		The approved drilling contractor Rig Move Procedure shall be followed during MODU rig move and positioning activities to minimise seabed disturbance and prevent avoidable environmental impact, in accordance with DL 32/2016 and MD 46/2017.	Records and direct observations confirm that the drilling contractor's approved Rig Move Procedure was implemented in full during MODU positioning and spudcan grounding, with no unauthorised deviations.	The presence and active involvement of a suitably competent surveyor, the Senior Day Supervisor are documented, confirming that rig move & spudcan grounding activity were conducted in accordance with the approved procedure & environmental controls.	Any deviation from the approved Rig Move Procedure was identified, documented, environmentally assessed, and approved through the management of change or deviation process prior to continuation of operations.	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Physical Presence	MODU positioning	Seabed disturbance and smothering / Corals, seabed invertebrates, benthic habitats.	Conducted seabed sediment and geotechnical sampling as part of EIS program		Seabed sediment and geotechnical sampling shall be undertaken as part of the EIS programme to characterise baseline seabed conditions and support environmental impact assessment and control selection, in accordance with DL 32/2016 and MD 46/2017.	Sampling records and interpretation demonstrate that seabed sediment and geotechnical data are sufficient to characterise baseline seabed conditions and identify relevant environmental sensitivities within the project area.	Results of seabed sediment and geotechnical sampling are documented within the EIS and demonstrably used to inform impact assessment, risk evaluation, and selection of environmental controls and mitigation measures.		WOM
Physical Presence	MODU positioning	Seabed disturbance and smothering / Corals, seabed invertebrates, benthic habitats.	Pre load testing conducted in accordance with the MODU Procedures to mitigate punch through risk when MODU "Jacks Up" to determine seabed stability		Pre-load testing shall be undertaken in accordance with approved MODU procedures during jack-up operations to confirm seabed stability and minimise unplanned seabed disturbance, in accordance with DL 32/2016 and MD 46/2017.	Records and observations confirm that pre-load testing was planned and executed in accordance with the MODU's approved jack-up and pre-load procedures, including sequencing, hold periods, and monitoring requirements.	Pre-load test outcomes demonstrate that seabed bearing capacity and stability were assessed and confirmed prior to full jack-up, with no indications of uncontrolled leg penetration or instability.		Senior Drilling Supervisor
Physical Presence	Drilling - Commercial Marine traffic	Vessel collision with MODU / Marine fauna (fish, mammals, turtles and	The Company will prepare and submit the necessary notifications and	Limit or avoid interference or disruption to commercial vessels and other marine	The Company shall ensure that all required notifications and operational information relating to MODU and	Records demonstrate that required notifications and operational	Records demonstrate that any navigational concerns,		Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		seabirds), benthic habitats, fisheries and socio-economic receptors	operational details to the ANP to enable the facilitation and onward distribution of a Notice to Mariners to relevant authorities and stakeholders. The Company will also maintain ongoing, direct and local communication with mariners regarding the presence and progress of drilling activities to minimise interference with marine traffic.	users arising from MODU and associated support vessel activities.	support vessel activities are prepared and submitted to the ANP in a timely manner to enable onward distribution to relevant ministries, including to facilitate the issuance of a Notice to Mariners. Marine user communications shall be maintained for the duration of activities to minimise interference with other marine users, in accordance with Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	information relating to MODU location, support vessel activities and operational status were prepared and submitted to the ANP in a timely manner, and that marine users were informed through facilitated Notices to Mariners and ongoing marine user communications.	complaints or near-miss interactions involving marine users were recorded, assessed and managed in a timely manner, with appropriate corrective actions implemented where required.		
Physical Presence	Drilling - Commercial Marine traffic	Vessel collision with MODU / Marine fauna (fish, mammals, turtles and seabirds), benthic habitats, fisheries and socio-economic receptors	Maintenance of a 500m exclusion zone by shadow support vessel		A 500 m exclusion zone around the MODU shall be actively monitored and maintained by a dedicated shadow support vessel during drilling and associated marine operations to prevent unauthorised vessel entry and minimise interference with other marine users, in accordance with DL 32/2016 and MD 46/2017.	Records and observations confirm that the shadow support vessel actively monitored, communicated, and enforced the 500 m exclusion zone throughout MODU operations.	Any attempted or actual breach of the 500 m exclusion zone were identified, recorded, investigated, and managed in accordance with approved marine procedures, with corrective actions implemented where required.		Senior Drilling Supervisor

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Physical Presence	Drilling - Rig mobilisation	Vessel collision with MODU / Marine fauna (fish, mammals, turtles and seabirds), benthic habitats, fisheries and socio-economic receptors	The Company will prepare and submit notification and relevant operational detail to the ANP, including MODU and vessel routes, schedule and drilling location, to enable onward distribution to relevant ministries and authorities regarding the entry of the MODU and support vessels into the PSC contract area and the maritime territory of Timor-Leste. The Company will formally notify the ANP in writing of the entry of the MODU & vessels into the PSC contract area and the maritime territory of Timor-Leste, providing sufficient information to facilitate marine user notification.		The Company shall ensure that written notifications containing planned shipping routes, vessel schedules, and drilling location details for the MODU and support vessels are prepared and submitted to the ANP in a timely manner to enable onward distribution to relevant ministries and facilitate marine user notification. Marine activities shall be communicated and managed to minimise interference or disruption to commercial vessels and other marine users, in accordance with Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records demonstrate that written notifications containing complete and accurate information on MODU and support vessel routes, schedules and drilling location were prepared and submitted to the ANP in a timely manner, sufficient to enable onward distribution and facilitate marine user notification	Evidence confirms that notifications were submitted to the ANP prior to the entry of the MODU and support vessels into the PSC contract area and the maritime territory of Timor-Leste, and that any changes to routes, schedules or drilling location were promptly communicated to the ANP.	Records demonstrate that any deviations from notified routes, schedules or operational areas were documented, assessed and formally notified to the ANP in accordance with approved change management arrangements.	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			The Company will prepare and submit notifications and relevant operational details relating to the entry of the MODU and support vessels into the PSC contract area and the maritime territory of Timor-Leste to the ANP, to enable onward distribution to the maritime regulator and other relevant regulatory agencies.		The Company will ensure that timely and accurate notifications, including MODU and support vessel routes, schedules and drilling location details, are prepared and submitted to the ANP to enable onward distribution to relevant ministries and maritime authorities. Marine activities shall be communicated and coordinated to minimise interference with commercial vessels and other marine users, in accordance with Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records demonstrate that timely and accurate notifications, including MODU and support vessel routes, schedules and drilling location details, were prepared and submitted to the ANP and were sufficient to enable onward distribution to maritime authorities and other relevant regulatory agencies.	Evidence confirms that notifications were submitted to the ANP prior to the entry of the MODU and support vessels into the PSC contract area and the maritime territory of Timor-Leste, and that coordination with the ANP was maintained for the duration of the activity.		Drilling Superintendent
Physical Presence	Drilling - Commercial Marine traffic	Vessel collision with MODU / Marine fauna (fish, mammals, turtles and seabirds), benthic habitats, fisheries and socio-economic receptors	MODU bridge manned at all times to maintain ongoing communication with other mariners. Shadow support vessel always on location to Sheppard vessels attempting to enter the exclusion zone		The MODU bridge shall be continuously manned, and a shadow support vessel maintained on location to manage marine communications and vessel approaches, thereby minimising interference with other marine users during MODU operations, in accordance with DL 32/2016 and MD 46/2017.	Records and observations confirm that the MODU bridge maintained continuous watch and effective two-way communication with other marine users throughout drilling and marine operations.	Evidence demonstrates that the shadow support vessel actively monitored approaching traffic and implemented timely warning, communication, and shepherding actions to prevent unauthorised entry into the exclusion zone.	Any navigational interactions, attempted exclusion-zone breaches, or communication issues were identified, recorded, and managed in accordance with approved marine procedures, with escalation where required.	Senior Drilling Supervisor

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Physical Presence	Drilling - Local marine traffic	Collision, entanglement with subsea infrastructure, interference with emergency response / Fisheries and socio-economic receptors	The Company will submit notifications and relevant operational details to the ANP to facilitate consultation with and notification of the Fisheries Department regarding commencement and completion of the appraisal drilling.	To minimise interaction with local and artisanal fishing vessels and prevent collision, entanglement, and socio-economic impacts arising from MODU activities	The Company will ensure that notifications and relevant operational information relating to the proposed commencement and completion of the appraisal drilling programme are prepared and submitted to the ANP in a timely manner to enable onward consultation with and notification of the Fisheries Department. Engagement and information sharing shall be undertaken to support awareness of MODU activities and minimise interaction with local and artisanal fishing vessels, thereby reducing the risk of collision, entanglement and socio-economic impacts, in accordance with Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records demonstrate that notifications and relevant operational information relating to the commencement and completion of the appraisal drilling programme were prepared and submitted to the ANP in a timely manner and were sufficient to enable onward consultation with and notification of the Fisheries Department, supporting awareness of MODU activities among local and artisanal fishing communities.	Evidence confirms that notifications were submitted to the ANP in advance of drilling commencement and updated at completion, with coordination maintained as required during the programme to support effective information sharing and minimise interaction with local and artisanal fishing vessels.		Drilling Superintendent
Physical Presence			The Company will submit exclusion zone notifications and operational details to the ANP to facilitate onward publication through appropriate national and local		The Company will ensure that notifications and relevant operational details relating to the commencement and completion of appraisal drilling are prepared and submitted to the ANP in a timely manner to enable onward consultation with and notification of the	Records demonstrate that exclusion zone notifications and relevant operational details were prepared and submitted to the ANP in a timely manner and	Evidence confirms that exclusion zone notifications were submitted to the ANP in advance of appraisal drilling commencement and updated, where required,	Records demonstrate that any fisheries-related concerns, complaints or incidents associated with MODU activities were documented,	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			communication channels.		Fisheries Department. Information sharing shall support awareness of MODU activities and minimise interaction with local and artisanal fishing vessels and associated socio-economic impacts, in accordance with Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	were sufficient to enable onward publication through appropriate national and local communication channels, supporting awareness of the timing, duration and location of MODU activities among fisheries stakeholders.	at completion, with coordination maintained for the duration of the appraisal programme.	reviewed and managed in coordination with the ANP, with outcomes recorded and corrective actions implemented where required.	
			Records demonstrate that any fisheries-related concerns, complaints or incidents associated with MODU activities were documented, reviewed and managed in coordination with the ANP, with outcomes recorded and corrective actions implemented where required.		The Company will ensure that the information, notifications and operational details required to support the issuance of Notices to Mariners, including accessible notifications for local and artisanal fishing communities, are prepared and submitted to the ANP in a timely manner to enable onward distribution to relevant ministries and authorities. Notifications shall support awareness of MODU activities and minimise interaction with local and artisanal fishing vessels, thereby reducing the risk of collision, entanglement and associated socio-economic	Records demonstrate that information, notifications and relevant operational details supporting Notices to Mariners were prepared and submitted to the ANP in a timely manner and were suitable for onward distribution through formats and channels accessible to local and artisanal fishing communities	Evidence confirms that Notices to Mariners and associated communications clearly and consistently conveyed the location, timing and nature of MODU activities in a manner understandable to local and artisanal fishers, supporting awareness and minimising interaction with fishing vessels.		

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						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					impacts, in accordance with Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	with limited access to television, print or electronic media.			
Physical Presence	Drilling - Flaring	Flaring can reduce a vessel operator's ability to accurately perceive navigation cues at night and may cause a visual distraction / Air quality, Marine fauna (behavioural disturbance), Avifauna (sea birds and migratory birds), marine water quality, benthic habitats, thermal radiation, light pollution and socio-economic receptors	The Company will prepare and submit timely notifications and relevant operational details relating to flaring activities to the ANP to enable onward distribution and facilitate the issuance of Notices to Mariners. The Company will maintain ongoing local marine user communications regarding the presence and progress of drilling activities to minimise navigational risk.	To minimise the potential for flaring-related high-intensity flame and glow to interfere with the safe navigation of nearby vessels, by reducing visual distraction and avoiding impairment of vessel operators' ability to accurately perceive navigation cues during night-time operations.	The Company will ensure that flaring notifications and relevant operational details are provided to the ANP in a timely manner to facilitate the issuance of Notices to Mariners and shall maintain local marine communications to minimise flaring-related visual distraction or navigational risk during night-time MODU operations, in accordance with Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records demonstrate that timely notifications and relevant operational details relating to flaring activities were prepared and submitted to the ANP and were sufficient to enable onward distribution and facilitate the issuance of Notices to Mariners, alerting marine users to potential flaring-related visual hazards during night-time operations.	Evidence confirms that local marine user communications clearly described the presence, timing and status of flaring activities and were maintained for the duration of relevant drilling operations to minimise navigational risk	Records demonstrate that any navigational concerns, complaints or reported visibility issues associated with flaring were documented, reviewed and managed in a timely manner, with appropriate corrective actions implemented where required	Drilling Superintendent
Physical Presence	Drilling - Dropped Objects	Impact to benthic habitats	Tool tethering, adherence to lifting procedures, use of certified equipment, secondary	To prevent dropped objects during drilling activities, in order to avoid seabed disturbance and potential damage to	Dropped objects during drilling activities shall be prevented so far as is reasonably practicable through the use of tool tethering, certified lifting	Records demonstrate tool tethering, secondary retention (where practicable), and	Evidence confirms lifting equipment was certified, inspected, and fit for purpose,	DROPS inspections, lifting audits, and housekeeping checks confirm	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			retention where practicable, DNV 2.7-1 containers with secured loads in open top baskets	benthic habitats, while maintaining safe operations, effective equipment control, and compliance with applicable environmental protection and operational requirements.	equipment, secondary retention where practicable, compliant lifting procedures, and controlled material transfer systems, including DNV 2.7-1 certified containers and secured loads in open-top baskets, to avoid seabed disturbance and potential damage to benthic habitats, in accordance with good oilfield practice, API guidance, and applicable Timor-Leste environmental and maritime legislation.	approved MODU lifting procedures were implemented for all lifting and work-at-height activities over open water and that all personnel operating cranes overwater have been trained and certified in accordance with the procedure and lifting standards as determined by the drilling contractor.	and that materials were transferred using DNV 2.7-1 certified containers or approved baskets with loads adequately secured.	ongoing compliance with dropped-object prevention requirements.	
Physical Presence	Drilling	Loss of well control or hydrocarbon release / Air quality, Marine fauna (fish, turtles' marine mammals), Seabirds and Avifauna, marine water quality, benthic habitats and subsea ecosystems, thermal radiation and socio-economic receptors	Establish and follow industry best practice plug and abandonment practices for well abandonment and incorporate and operate the same in accordance with the Drilling Program	To maintain effective hydrocarbon containment during drilling, plug and abandonment, and the cutting and retrieval of well infrastructure, in order to prevent loss of well control and any unplanned release of hydrocarbons to the environment.	Plug and abandonment activities, including cutting and retrieval of well infrastructure, shall be planned and executed in accordance with industry best-practice well abandonment requirements and the approved Drilling Program to maintain hydrocarbon containment and prevent loss of well control or unplanned hydrocarbon release.	Records demonstrate that plug and abandonment activities were conducted in accordance with recognised industry best practice and the approved Drilling Program, including barrier philosophy and verification requirements.	Evidence confirms that primary and secondary well barriers were installed, tested, and verified to be effective prior to proceeding with cutting, retrieval, or final abandonment activities.	Any deviations from the approved plug and abandonment programme or best-practice requirements were documented, technically assessed, and approved through the management of change process prior to implementation.	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Physical Presence	Drilling	Loss of well control or hydrocarbon release / Air quality, Marine fauna (fish, turtles' marine mammals), Seabirds and Avifauna, marine water quality, benthic habitats and subsea ecosystems, thermal radiation and socio-economic receptors	ANP to review and approve the abandonment program in accordance with DL32 Article 39 (2). The abandonment of the well will be based on actual construction and submitted to ANP DL32 / Article 39 and approved in accordance with the same		Well abandonment activities, including cutting and retrieval of well infrastructure, shall be based on the as-constructed well condition and undertaken only in accordance with an abandonment programme reviewed and approved by the ANP pursuant to Decree-Law No. 32/2016, Article 39, to maintain hydrocarbon containment and prevent loss of well control or unplanned hydrocarbon release.	Records demonstrate that the abandonment programme, reflecting the as-constructed well configuration, was submitted to, reviewed, and formally approved by the ANP in accordance with DL 32/2016, Article 39(2) prior to execution.	The approved abandonment programme demonstrates appropriate well-barrier philosophy and containment measures consistent with the as-constructed well design and drilling history.	Any changes to the abandonment programme arising from operational findings were documented, technically assessed, and approved by the ANP prior to implementation.	Drilling Superintendent
Planned	Drilling - Drilling Fluid Discharges (WBM)	Water quality degradation / Smothering of benthic habitats and biota, water quality degradation, Increased local turbidity	Approved Water-Based Mud (WBM), drill cuttings and cement will be discharged at the mudline in accordance with the drilling program. ROV observation of cuttings returned to mudline and water quality sampling as per agreed monitoring plan.	To manage and control the discharge of water-based drilling fluids, cuttings, and cement during drilling operations so as to protect water quality and prevent or minimise degradation of the marine environment.	Approved water-based muds (WBM), cuttings, and cement shall be discharged at the mudline in accordance with the approved Drilling Program, with ROV verification and water-quality monitoring implemented as per the agreed monitoring plan to protect water quality and minimise marine environmental degradation.	Records demonstrate that WBM, cuttings, and cement discharges occurred in accordance with the approved Drilling Program and discharge conditions.	ROV observations confirm that discharged materials returned to and remained at the mudline as intended, with no evidence of unintended plume behaviour or off-target dispersion.	Water-quality monitoring results were reviewed against agreed criteria, and any anomalies were investigated and managed in accordance with the monitoring plan and corrective action procedures.	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Planned	Drilling - Drilling Fluid Discharges (SBM)	Water quality degradation / Smothering of benthic habitats and biota, water quality degradation, Increased local turbidity	Detailed ecotocity study conducted on the SBM proposed to be used in the program to understand the environmental fate. Approve and use Saraline 185V, an OCNS "E" rated substance	To protect water quality and minimise marine environmental degradation by ensuring that the average synthetic-based mud (SBM) retained on discharged cuttings does not exceed 9%, and that drilling fluid discharges are managed in accordance with approved limits and good oilfield practice.	Only approved synthetic-based mud (SBM) with demonstrated low environmental toxicity shall be used, informed by a detailed ecotoxicity and environmental fate assessment, and managed such that the average SBM retained on discharged cuttings does not exceed 9%, in accordance with the approved Drilling Program, OCNS requirements, and good oilfield practice	Records demonstrate that the SBM selected for use was subject to a detailed ecotoxicity and environmental fate assessment and determined to be suitable for use and discharge under the approved programme.	Evidence confirms that Saraline 185V, or equivalent SBM, with an OCNS "E" rating, was used as specified in the Drilling Program and associated approvals.	Approval granted by ANP to use Saraline 185V	Drilling Superintendent
Planned	Drilling - Drilling Fluid Discharges (SBM)	Water quality degradation / Smothering of benthic habitats and biota, water quality degradation, Increased local turbidity	High efficiency triple deck shale shakers and centrifuge used to separate cuttings from SBM prior to overboard discharge of cuttings		High-efficiency triple-deck shale shakers and centrifuges shall be operated and maintained to maximise recovery of synthetic-based mud (SBM) from cuttings prior to discharge, ensuring the average SBM retained on discharged cuttings does not exceed 9% and protecting water quality in accordance with approved limits and good oilfield practice.	Records and observations confirm shale shakers and centrifuges were configured, operated, and monitored to optimise SBM recovery from cuttings prior to discharge.	Evidence demonstrates solids control equipment was fit for purpose, appropriately maintained, and operated by competent personnel throughout drilling operations.		Drilling Superintendent
Planned	Drilling - Drilling Fluid Discharges (SBM)	Water quality degradation / Smothering of benthic habitats and biota, water quality degradation, Increased local turbidity	Discharge of cutting via a cutting caisson. Caisson positioned below the lowest part of the hull / spud can interface and below the splash		Cuttings shall be discharged via a dedicated cuttings caisson positioned below the lowest hull/spud-can interface and below the splash zone, with the discharge point configured to avoid leg bracing, spud-can structures, and	Records and verification confirm the cuttings caisson is correctly positioned below the hull/spud-can interface and splash	Observations and/or verification demonstrate that discharged cuttings fall away from the structure with no evidence of		Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			zone. its location avoids interaction with leg bracing, spud can structures, or any area where hydrodynamic turbulence may cause plume recirculation.		hydrodynamic turbulence, to prevent plume recirculation and ensure the average SBM retained on discharged cuttings does not exceed 9%.	zone, and oriented to avoid structural interference and turbulence.	plume recirculation or re-entrainment.		
Planned	Drilling - Drilling Fluid Recycling (SBM)	Water quality degradation / Smothering of benthic habitats and biota, water quality degradation, Increased local turbidity	Reuse of SBM - Returned to shore base at end of campaign for treatment and reuse, while maintaining Compliance with shore based and OEM requirements for the return and discharge of the SBM	To protect water quality and minimise marine environmental degradation by ensuring that synthetic-based mud (SBM) is effectively recovered, recycled, and reused during drilling operations, thereby reducing the volume of SBM requiring discharge or disposal.	Synthetic-based mud (SBM) shall be recovered, stored, and returned to an approved shore base at the end of the drilling campaign for treatment and reuse, in compliance with OEM requirements and applicable shore-based handling and discharge approvals, to minimise SBM discharge and protect water quality.	Records demonstrate that SBM was recovered and segregated during drilling and prepared for return to shore without uncontrolled discharge or loss.	Evidence confirms that SBM return, storage, transport, and treatment complied with OEM specifications and shore base procedures and approvals.	Documentation demonstrates full traceability of SBM volumes from offshore recovery through transport, shore-based treatment, and reuse or final disposition.	Drilling Superintendent
Planned	Drilling - Chemical and Hydrocarbon Discharges	SBM Spill overboard / Marine water quality, marine fauna, fisheries and socio-economic receptors	All downhole chemicals that do not have a CHARM/OCNS classification and cannot be substituted for a chemical that has one, will undergo a risk assessment based on similar toxicity assessment prior to selection.	To prevent the release of synthetic-based mud (SBM) and other chemicals or hydrocarbons to the marine environment during drilling operations, by ensuring effective containment, handling, and spill-prevention controls are in place to protect water quality	Only approved downhole chemicals that have undergone OCNS/CHARM classification, or an equivalent toxicity-based risk assessment shall be selected and used in accordance with the Company's chemical selection procedure and international standards, with all assessments documented in a chemical risk register and provided	Records demonstrate that all downhole chemicals were subject to OCNS/CHARM classification or a documented equivalent toxicity and environmental risk assessment where	Evidence confirms that chemical selection followed the Company's OCNS/CHARM-compliant chemical selection procedure and aligned with international standards and	The chemical risk register demonstrates that assessments were completed, reviewed, and submitted to the ANP for regulatory review and acceptance prior to use.	WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
				and the marine environment.	to the ANP for review and approval, to prevent SBM, chemical, or hydrocarbon spills to the marine environment.	substitution was not practicable.	ANP requirements.		
Planned	Drilling - Chemical and Hydrocarbon Discharges	SBM Spill overboard / Marine water column, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	All chemicals on the MODU or Vessel comply with that MODU or facility chemical management procedures including Safety Data Sheets (SDS) available and accessible on MODU or vessels, chemicals are handled and disposed of in accordance with the SDS and MODU and vessels chemical handling and management procedures		All chemicals stored or used on the MODU, and support vessels shall be managed, handled, and disposed of in accordance with approved facility chemical management procedures and applicable Safety Data Sheets (SDS), with SDS readily accessible at point of use, to prevent the release of SBM, chemicals, or hydrocarbons to the marine environment	Records and observations confirm that all chemicals onboard the MODU and vessels are managed in accordance with approved chemical management and handling procedures.	Evidence demonstrates that current SDS are readily accessible to personnel at point of use and are actively referenced for safe handling, storage, and disposal.	Any chemical handling non-conformances, near misses, or spill risks were identified, documented, and corrected in accordance with facility procedures.	Drilling Superintendent
			A designated and appropriate storage area for chemical and hazardous materials will be provided on the MODU and the vessels. The storage area will		All chemicals stored or used on the MODU, and support vessels shall be managed in accordance with approved chemical management procedures and stored in designated, sheltered, and bunded storage areas to contain spills and prevent runoff,	Records and observations confirm that chemicals and hazardous materials are stored in designated, sheltered, and bunded areas	Evidence demonstrates that chemical storage, handling, and transfer activities comply with approved MODU and	Any deficiencies in chemical storage or containment arrangements were identified, recorded, and corrected in a timely manner in accordance	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			be sheltered and bunded to prevent rainwater collection and to contain spills.		thereby preventing the release of SBM, chemicals, or hydrocarbons to the marine environment	that prevent rainwater ingress and provide effective spill containment.	vessel chemical management procedures.	with facility procedures.	
			Spill kits, absorbents materials and containers will be made available for clean-up of oil and grease contamination on deck.		All chemicals used or stored on the MODU, and support vessels shall be managed in accordance with approved facility chemical management procedures, with spill kits, absorbent materials, and suitable containers readily available and maintained to enable immediate response and containment of oil, grease, SBM, or chemical spills, thereby preventing release to the marine environment	Records and observations confirm that appropriate spill kits, absorbents, and containers are available at relevant locations and are suitable for the types and quantities of chemicals handled.	Evidence demonstrates that personnel manage chemicals and respond to spills in accordance with approved MODU and vessel chemical management and spill-response procedures.	Any spills, near misses, or deficiencies in spill-response capability were identified, documented, and corrected in a timely manner in accordance with facility procedures.	Drilling Superintendent
			Any spills and leaks of chemicals or hydrocarbon to deck will be cleaned immediately using absorbent materials and that material will be disposed of in an appropriate manner as hazardous waste.		All chemicals used or stored on the MODU, and support vessels shall be managed in accordance with approved chemical management procedures, with any chemical or hydrocarbon spills or leaks to deck immediately contained, cleaned using absorbent materials, and disposed of as hazardous waste, to prevent release to the marine environment	Records and observations confirm that spills or leaks to deck were promptly contained and cleaned using appropriate absorbent materials in accordance with procedures.	Evidence demonstrates that contaminated absorbents and residues were handled, labelled, and disposed of as hazardous waste in accordance with approved waste-management arrangements.	Any spill, near miss, or non-conformance was documented, investigated, and corrective actions implemented to prevent recurrence.	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			All used oil and chemicals will be collected, safely stored, treated / decanted and disposed of at the approved facilities in Australia.		All used oils and chemicals, and where practicable partially used or recycled chemicals, shall be collected, stored, and returned to approved facilities in Australia for treatment and disposal, in accordance with approved waste-management procedures, to prevent release of SBM, chemicals, or hydrocarbons to the marine environment	Records and observations confirm that used, partially used, and recycled oils and chemicals were segregated, stored, and prepared for return to shore in accordance with approved procedures.	Evidence demonstrates that oils and chemicals were transferred only to approved Australian facilities for treatment and disposal, with appropriate documentation and chain-of-custody records.		Logistics Manager
			Fugitive chemicals and hydrocarbons that go undetected on deck or in machine spaces will be held in the MODU holding tank to be treated in the oily water separator before being treated under MARPOL Annex 1		Fugitive chemicals and hydrocarbons from deck or machinery spaces shall be contained, collected to the MODU holding tank, and treated through the oily water separator in accordance with MARPOL Annex I prior to any discharge, to prevent release to the marine environment and protect water quality.	Records and observations confirm that fugitive chemicals and hydrocarbons were captured and routed to the MODU holding tank, with no uncontrolled discharge to sea.	Evidence demonstrates that oily water separator operation and discharge practices complied with MARPOL Annex I requirements and approved MODU procedures.		OIM
Planned	Drilling	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Black and grey water onboard will be treated in the sewage treatment plant before discharge to sea and in accordance with MARPOL Annex IV	To manage and control wastewater and sewage generated during drilling operations so as to protect water quality and prevent or minimise degradation of the marine environment,	All black and grey water generated onboard the MODU and support vessels shall be treated through the approved sewage treatment plant and discharged only in accordance with MARPOL Annex IV, with system operation verified to ensure	Records and observations confirm that sewage treatment and discharge practices comply with MARPOL Annex IV requirements	Evidence demonstrates that sewage treatment systems were operated, monitored, and maintained in accordance with manufacturer	Any malfunction, bypass, or non-compliance of sewage systems was identified, recorded, and rectified promptly in	OIM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
				in accordance with applicable marine pollution prevention requirements.	protection of water quality and prevention of marine environmental degradation.	and approved vessel procedures.	and vessel requirements	accordance with procedures.	
Planned	Drilling	Biohazardous waste comingled with other waste / Marine water quality. Marine Fauna, Terrestrial and Human Receptors, Fisheries and Socio-Economic Receptors	Biohazardous waste will be stored so it is isolated, contained, identifiable, and incapable of comingling or accidental release.	To segregate, manage, and dispose of hazardous, laboratory, and medical wastes generated during drilling operations in a manner that prevents commingling of biohazardous waste with other waste streams, thereby protecting personnel, preventing environmental contamination, and avoiding adverse impacts on the marine environment.	Biohazardous waste generated during drilling operations shall be segregated, labelled, secured, and stored in designated contained areas on the MODU, , to prevent commingling with other waste streams and protect water quality and the marine environment.	Records and observations confirm that biohazardous waste is stored in designated, contained areas and is not commingled with hazardous or general waste streams.	Evidence demonstrates that biohazardous waste is clearly labelled, secured, and managed under the oversight of the rig medic in accordance with approved procedures.	Any instances of improper segregation, labelling, or storage were identified, documented, and corrected promptly in accordance with waste management procedures.	OIM
Planned	Drilling	Water quality degradation and potential alteration of marine environment through localised increase in water temperature with engine cooling water / Marine water	Engine and machinery cooling water and brine water are comingled with other liquid waste water discharges from the MODU	To manage and control cooling and brine water discharges generated during drilling operations so as to protect water quality and minimise localised thermal impacts, including changes to ambient seawater temperature, thereby preventing	Engine and machinery cooling water and brine water generated by the MODU will be commingled with other approved liquid wastewater discharges and released in accordance with approved operational procedures, ensuring adequate dilution and dispersion to protect water quality and prevent localised thermal impacts on the marine environment.	Records and observations confirm that cooling and brine water are commingled with other wastewater streams as designed, providing effective dilution prior to discharge.	Evidence demonstrates that cooling, brine, and wastewater discharge systems are operated and maintained in accordance with approved MODU procedures and design intent.		Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors		degradation or alteration of the marine environment.					
Planned	Drilling	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Perforate the well at such a distance so that any incursion of a water aquifer underlying the gas reservoir, is mitigated to such an extent so there is no produced formation water. Records demonstrate that if any Production Formation Water is produced, it has been comingled with other liquid waste streams In the unlikely event any PFW is produced this will be sampled and chemically analysed for future campaigns and learning	To manage and control any produced formation water generated during well flow operations so as to protect water quality and prevent degradation of the marine environment during drilling and testing activities.	Well perforation shall be designed and executed to avoid production of formation water, and where any formation water is produced, it shall be contained, sampled and chemically analysed, and commingled with approved liquid waste streams for managed handling, to protect water quality and prevent degradation of the marine environment during drilling and testing activities.	Records demonstrate that perforation depth and placement were selected based on reservoir and geotechnical data to mitigate the risk of underlying aquifer incursion.	Evidence confirms that perforation activities were conducted in accordance with the approved drilling and completion programme and supporting well integrity analyses.	Post-perforation reviews confirm no indicators of water production, and any anomalies were assessed and managed in accordance with approved procedures.	Well Test Supervisor
Planned	Drilling	Water quality degradation / Marine water quality, benthic	Bilge waters from machinery spaces on the MODU will be	To manage and control bilge water generated during drilling operations so	Bilge water from MODU machinery spaces shall be contained, treated via the oily water separator in	Records and observations confirm bilge water is routed	Evidence demonstrates that slops not meeting		OIM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		habitats and biota, marine fauna, fisheries and socio-economic receptors	held in the MODU holding tank to be treated in the oily water separator before being treated under MARPOL Annex 1. Any slops which cannot be adequately treated on the MODU will be transported to shore for handling/disposal.	as to protect water quality and prevent degradation of the marine environment, in accordance with applicable marine pollution prevention requirements.	accordance with MARPOL Annex I, and any slops not adequately treatable onboard shall be transferred to shore for approved handling and disposal, to protect water quality and prevent marine environmental degradation.	to holding tanks and treated through the oily water separator in accordance with approved procedures and MARPOL Annex I.	treatment criteria are identified and transferred to shore using approved arrangements, with no overboard discharge.		
Planned	Drilling	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	The deck drainage system allows for the segregation of water. The deck drainage system is designed to allow clean water (e.g. rainwater) to be discharged directly overboard. All oily water will be held in the MODU holding tank to be treated in the oily water separator before being treated under MARPOL Annex 1	To manage and control deck drainage generated during drilling operations or rain events so as to protect water quality and prevent degradation of the marine environment, in accordance with applicable marine pollution prevention requirements.	The MODU deck drainage system shall segregate clean and oily water, allowing uncontaminated rainwater to be discharged directly overboard while all oily water is captured in holding tanks and treated through the oily water separator in accordance with MARPOL Annex I, to protect water quality and prevent marine environmental degradation.	Records and observations confirm that the deck drainage system effectively separates clean rainwater from potentially contaminated deck runoff.	Evidence demonstrates that oily deck drainage is routed to the MODU holding tank and treated via the oily water separator in accordance with approved procedures and MARPOL Annex I.		OIM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Planned	Drilling	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	SBM on the drill floor, comingled with water, will be diverted to the oily water separator and treated in accordance with MARPOL Annex 1	To manage and control drill floor drainage during drilling operations so as to prevent contamination of deck runoff and protect water quality, thereby avoiding degradation of the marine environment.	Drill-floor drainage containing synthetic-based mud (SBM) and water shall be captured, routed to holding tanks, and treated through the oily water separator in accordance with MARPOL Annex I, with no uncontrolled discharge to sea, to protect water quality and prevent marine environmental degradation.	Records and observations confirm that SBM-contaminated drill-floor drainage is effectively captured and diverted to the MODU holding tank and oily water separator.	Evidence demonstrates that oily water treatment and discharge practices comply with MARPOL Annex I and approved MODU procedures.		OIM
Planned	Drilling	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Biodegradable food waste from galleys, mess rooms, pantries, and accommodation will be treated in accordance with MARPOL Annex V	To manage and control food waste generated during drilling operations so as to prevent discharge to the marine environment, protect water quality, and avoid degradation of the marine environment, in accordance with applicable marine pollution prevention requirements.	Biodegradable food waste generated from galleys, mess rooms, pantries, and accommodation areas shall be managed, treated, and discharged only in accordance with MARPOL Annex V, to prevent marine pollution, protect water quality, and avoid degradation of the marine environment during drilling operations.	Records and observations confirm that food-waste handling, treatment, and any permitted discharge are conducted in accordance with MARPOL Annex V and approved MODU procedures.	Evidence demonstrates that biodegradable food waste is correctly segregated from other waste streams and managed using approved methods.		OIM
Planned	Drilling	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	All Solid waste to be segregated according to comparable characteristics, stored in clearly marked skips for treatment and disposal onshore at approved disposal sites.	To manage and control solid waste generated during drilling operations so as to prevent discharge to the marine environment, protect water quality, and avoid degradation of the marine environment,	All solid waste generated during drilling operations shall be segregated, clearly labelled, securely stored, and returned to shore for treatment and disposal at approved facilities, with no plastics, domestic waste, or maintenance waste discharged overboard, to protect water quality and	Records and observations confirm that plastics, domestic waste (e.g. glass, cans, paper), and maintenance wastes (e.g. paint sweepings,	Evidence demonstrates solid wastes are segregated by waste stream and stored in clearly marked offshore skips in accordance with the waste management		Logistics Manager

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			Nothing overboard	in accordance with applicable marine pollution prevention requirements.	prevent marine environmental degradation.	oily rags, deck sweepings) are not discharged to sea.	plan and procedures		
Planned	Drilling	Water quality degradation / Marine water quality, benthic habitats and biota, marine fauna, fisheries and socio-economic receptors	Waste containers and offshore rated rubbish skips to be covered to prevent the loss of waste overboard. Maintenance of good housekeeping mitigates the potential for rubbish overboard and the propagation of Foreign Object Debris (FOD) that could also impact aviation operations		Solid waste containers and offshore-rated rubbish skips shall be covered, secured, and managed under good housekeeping practices to prevent loss of waste overboard and the generation of foreign object debris (FOD), thereby protecting water quality, the marine environment, and aviation operations, in accordance with applicable marine pollution prevention requirements.	Records and observations confirm that waste containers and skips are covered, secured, and appropriately located to prevent windblown or accidental loss of waste overboard.	Evidence demonstrates that good housekeeping practices are implemented and maintained on decks and work areas to minimise loose items, rubbish overboard risk, and FOD hazards.		Logistics Manager
Planned	Drilling	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors),	MODU and vessel contractor has a preventative maintenance system to ensure diesel powered generation equipment is maintained and operated within OEM Specification	To minimise emissions from fuel combustion associated with MODU and support vessel operations during drilling activities, so as to limit impacts on air quality, through efficient operations and compliance with MARPOL Annex VI and the	Diesel-powered generation equipment on the MODU and support vessels shall be maintained and operated within OEM specifications under a preventive maintenance system to minimise air emissions from fuel combustion, in compliance with MARPOL Annex VI and the environmental protection requirements of Decree-Law No. 32/2016	Records demonstrate that a preventive maintenance system is implemented and followed for all diesel-powered generation equipment in accordance with OEM requirements.	Evidence confirms engines are operated within OEM parameters (e.g., load management, tuning, alarms) to minimise excessive emissions and inefficient combustion.	Greenhouse Gas (GHG) Reporting. Record volumes of all fuel consumed and for each fuel type	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
				environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	and Ministerial Diploma No. 46/2017.				
Planned	Drilling	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors)	Optimization of fuel efficiency and minimization of emissions from fired machinery through the use of low-sulphur-content fuels		Fuel combustion associated with MODU, and support vessel fired machinery shall utilise low-sulphur-content fuels to optimise fuel efficiency and minimise atmospheric emissions, in compliance with MARPOL Annex VI and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records demonstrate that fuels procured and used onboard the MODU and support vessels meet MARPOL Annex VI sulphur content requirements and are suitable for the installed machinery.	Evidence confirms that fired machinery is operated using compliant fuels in a manner that supports efficient combustion and reduced emissions.		WOM
Planned	Drilling	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors)	Leak detection and repair programs on HVAC and like systems in place. Person qualified to repair, reclaim and Regas HVAC systems and an up-to-date maintenance program	To minimise fugitive emissions from the MODU during drilling operations, including unintentional releases from equipment, systems, and processes, so as to limit cumulative impacts on air quality and greenhouse gas emissions, consistent with efficient operations and applicable environmental protection requirements.	Fugitive emissions from MODU HVAC and similar systems shall be minimised through an implemented leak detection and repair (LDAR) program, with timely identification, repair, and verification of leaks, to limit impacts on air quality and greenhouse gas emissions	Records demonstrate that a formal LDAR program is in place for HVAC and similar systems, including defined inspection methods, frequencies, and responsibilities.	Evidence confirms that identified leaks are repaired promptly and repairs are verified to ensure effective mitigation of fugitive emissions	Review qualification in MODU training matrix and ensure technician is trained and the appropriate equipment is available and fit for service	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Planned	Flaring	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors)	Handheld gas detection devices are used by the well flowback / testing personnel to routinely monitor for small-scale leaks from the hydrocarbon containing vessels and pipe work.	To minimise fugitive emissions from the well test package during drilling and testing operations, including unintentional releases from valves, connections, and associated equipment, so as to limit cumulative impacts on air quality and greenhouse gas emissions, consistent with efficient operations and applicable environmental protection requirements.	Fugitive emissions from the well test package shall be minimised through routine leak monitoring using handheld gas detection devices by well flowback and testing personnel, enabling early identification and control of small-scale leaks from hydrocarbon-containing vessels and pipework to limit impacts on air quality and greenhouse gas emissions.	Records demonstrate that handheld gas detectors are routinely used by well test personnel during flowback and testing activities in accordance with approved procedures.	Evidence confirms that any gas detections are promptly investigated and appropriate corrective actions are implemented to control fugitive emissions.	Documentation demonstrates that handheld gas detection devices are suitable for the application and are maintained and calibrated in accordance with manufacturer requirements.	Well Test Supervisor
Planned	Flaring	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors).	Static Dräger gas detection and alarm units will be installed in strategic locations throughout the well flowback / testing area as a means of temporary fixed gas detection during the campaign.		Fugitive emissions from the well test package shall be detected and controlled using temporary fixed Dräger gas detection and alarm units installed at strategic locations throughout the well flowback and testing area, to enable early identification of leaks and minimise impacts on air quality and greenhouse gas emissions.	Records and verification demonstrate that temporary fixed Dräger gas detection and alarm units are installed at strategic locations across the well test package in accordance with the detection layout plan.	Evidence confirms that gas detection units are operational, alarms are active, and personnel respond to alarms in accordance with approved procedures.	Documentation demonstrates that gas detectors are tested, calibrated, and maintained in accordance with manufacturer requirements for the duration of the campaign	Well Test Supervisor
Planned	Flaring	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors).	Meter volumes of all fuel consumed for the well testing	To manage and minimise controlled emissions from the well test package during drilling and testing operations, so as to limit cumulative impacts on air quality and greenhouse gas	Controlled emissions from the well test package shall be managed through metering and recording of all fuel consumed during well testing, to enable verification of efficient operation and minimisation of air quality and greenhouse gas impacts in	Records demonstrate that fuel consumption for well testing is metered and logged using calibrated equipment for	Evidence confirms that fuel consumption data is reviewed to verify efficient operation of the well test package and identify		Well Test Supervisor

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
				emissions, through efficient operation of testing equipment and adherence to applicable environmental protection requirements.	accordance with applicable environmental protection requirements.	the duration of testing activities.	opportunities to minimise emissions.		
Planned	Flaring	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors).	Well flow back procedure (well test package) implemented including a continuous (24/7) flare watch during flaring operations and function testing of continuous ignition system and pilot system. Use of well test checklist as agreed with the Contractor		Controlled emissions from the well test package shall be managed through implementation of the approved well flowback and testing procedures, including continuous (24/7) flare watch, verified operation of continuous ignition and pilot systems, and use of an agreed well test checklist, to ensure efficient combustion and minimise air quality and greenhouse gas impacts.	Records demonstrate that the approved well flowback and well test procedures were implemented, including continuous flare monitoring during flaring operations.	Evidence confirms that the continuous ignition and pilot systems were function-tested and maintained operational prior to and during flaring to prevent unburnt hydrocarbon release.	Documentation demonstrates that the agreed well test checklist was completed and verified in coordination with the Contractor prior to and during testing activities.	Well Test Supervisor
Planned	Flaring	Increase the cumulative impact on air quality and climate change / Atmospheric air quality, global system (global receptors).	Utilization of high-efficiency flare burner design		Controlled emissions from the well test package shall be minimised through the use of a high-efficiency flare burner design to promote stable combustion and maximise destruction efficiency, thereby limiting impacts on air quality and greenhouse gas emissions during drilling and testing operations.	Documentation demonstrates that the flare burner design is fit-for-purpose, engineered for high combustion efficiency, and suitable for the expected flow rates and gas composition during well testing.	Evidence confirms that the flare burner operates with stable flame characteristics during testing, with no persistent smoking, flame instability, or incomplete combustion.		Well Test Supervisor
Planned	Drilling	Changes to marine fauna behaviour due to light	MODU and boats will meet conventional navigation rules	To manage and minimise light emissions from general MODU	Lighting on the MODU and support vessels shall be limited to those required for safe operations and	Records and observations confirm that navigation and	Evidence demonstrates that non-essential		Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		emissions / Marine fauna, Avifauna (including flying and surface feeding birds), Plankton.	for lighting, for the safety of personnel working on the facilities and the safe operation of the facilities in an active maritime environment	operations during drilling activities so as to avoid or reduce disturbance to marine fauna and prevent changes to natural behaviour patterns, while maintaining safe operations and compliance with applicable environmental protection requirements.	navigation, and configured to meet conventional navigation rules, to minimise unnecessary light emissions and reduce disturbance to marine fauna while maintaining personnel safety and maritime operational safety.	operational lighting meet applicable maritime navigation rules and safety requirements, with no unnecessary or excessive lighting in use.	lighting is minimised or controlled during drilling operations where practicable, without compromising safety.		
Planned	Drilling	Changes to marine fauna behaviour due to light emissions / Marine fauna, Avifauna (including flying and surface feeding birds), Plankton.	Minimisation of unnecessary lights directed towards water on supply boats (particularly work lights) when not within the 500M exclusion zone or doing any specific work on the deck of the vessel. Maintain light discipline on supply vessels by minimising non-essential deck lighting during night transit or when alongside.		Lighting on supply vessels shall be managed to minimise non-essential deck and work lights directed toward the water, particularly when vessels are outside the 500 m exclusion zone, transiting at night, or alongside, while maintaining lighting required for safe navigation and deck operations, to reduce disturbance to marine fauna.	Records and observations confirm that non-essential deck and work lights on supply vessels are minimised when not required for active deck work or safety.	Evidence demonstrates that vessel crews apply lighting discipline during night transit and while alongside, without compromising navigational or occupational safety.	Discussed at environmental induction around awareness regarding lighting impacts and requirements	Senior Drilling Supervisor
Planned	Drilling	Changes to marine fauna behaviour due to light emissions / Marine fauna, Avifauna (including flying	Limit operational activities (where practicable) from November through to March, which is the period where sea turtles typically		Where practicable, MODU operational activities shall be limited or scheduled to minimise disturbance during the November–March sea turtle nesting and migration period, to reduce potential disruption	Records demonstrate that operational planning considered the November–March turtle nesting and			WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		and surface feeding birds), Plankton.	return to shore to nest, hence minimise potential disturbance to the turtle migratory pathway;		to turtle migratory pathways while maintaining safe and efficient drilling operations.	migration period and incorporated practicable measures to reduce potential disturbance.			
Planned	Drilling	Changes to marine fauna behaviour due to noise emissions / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton communities, Benthic Habitats and Biota and Fisheries resources	Mechanically generated subsea noise and vibration are minimised when machinery is maintained to minimise operational noise and vibration in accordance with OEM specifications,	To manage and minimise noise emissions from MODU drilling operations so as to avoid or reduce disturbance to marine fauna and prevent changes to natural behaviour patterns, while maintaining safe and efficient drilling activities and compliance with applicable environmental protection requirements.	Underwater noise and vibration from MODU drilling operations and associated support vessels shall be minimised through maintenance of noise-generating machinery in accordance with OEM specifications and optimised support-vessel thruster use and speed management, to reduce disturbance to marine fauna while maintaining safe and efficient operations.	Records demonstrate that noise- and vibration-critical machinery is maintained and operated in accordance with OEM specifications to minimise operational noise.	Evidence confirms that abnormal noise or vibration is identified promptly and addressed through maintenance or operational adjustment.	Any machinery-related noise issues or non-conformances are documented, investigated, and rectified in accordance with approved procedures.	OIM
Planned	Drilling	Changes to marine fauna behaviour due to noise emissions / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton communities, Benthic Habitats and	DP2 boats minimises manual intervention to hold station Optimising support vessel thruster operation and speed management by the master when steaming and working the MODU	To manage and minimise noise emissions arising from MODU operations involving support and supply vessels during drilling activities, so as to avoid or reduce disturbance to marine fauna and prevent changes to natural behaviour	Noise emissions from MODU support and supply vessel operations shall be minimised through use of DP2 vessels to reduce manual station-keeping intervention and optimised thruster operation and speed management by the vessel Master, to limit disturbance to marine fauna while maintaining	Records demonstrate DP2 capability is utilised to maintain station with minimal manual intervention, avoiding unnecessary thruster activity.	Evidence confirms Masters apply appropriate speed and thruster management when steaming to and working alongside the MODU to minimise unnecessary	Any instances of excessive thruster use, abnormal noise, or operational inefficiency are identified, documented, and corrected in accordance with vessel procedures.	Vessel Master

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		Biota and Fisheries resources		patterns, while maintaining safe and efficient marine operations and compliance with applicable environmental protection requirements.	safe and efficient marine operations.		underwater noise.		
Planned	Drilling	Changes to marine fauna behaviour due to noise emissions / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton communities, Benthic Habitats and Biota and Fisheries resources	Optimised flight scheduling to minimise the total number of take off and landings Helicopters Idle down on helideck, daylight only operations (except for SAR or Medevac), use of modern helicopters	To manage and minimise noise emissions from helicopter take-off, landing, and flight operations associated with drilling activities, so as to avoid or reduce disturbance to marine fauna and prevent changes to natural behaviour patterns, while maintaining aviation safety and operational efficiency.	Noise from helicopter take-off, landing, and flight operations shall be minimised through optimised flight scheduling, reduced idling on the helideck, daylight-only operations (except SAR/Medevac), and use of modern aircraft, to limit disturbance to marine fauna while maintaining aviation safety and operational efficiency.	Records demonstrate that helicopter movements are planned to minimise the number of take-offs and landings consistent with operational requirements.	Evidence confirms helicopters idle down on the helideck where practicable and operate primarily during daylight hours, except for SAR or Medevac.	Documentation demonstrates the use of modern helicopters with improved noise performance, and any deviations are justified and approved.	Drilling Superintendent
Planned	Drilling	Short term behavioural / disruption impacts on local wildlife including noise vibration / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton	Flaring times optimised to achieve the least amount of flaring while still achieving the DST objectives	To manage and minimise noise and vibration generated by the well test package during drilling and testing operations, so as to avoid or reduce short-term behavioural disturbance to local wildlife, while	Noise and vibration from the well test package shall be minimised by optimising flaring duration and timing to achieve DST objectives with the least practicable flaring, thereby reducing short-term behavioural disturbance to local wildlife while maintaining safe and efficient operations.	Records demonstrate that well test and DST procedures were planned to minimise flaring duration while still meeting technical test objectives.	Evidence confirms that flaring was limited to periods necessary for data acquisition, with no unnecessary extension of flaring activities.		Well Test Supervisor

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		communities, Benthic Habitats and Biota and Fisheries resources		maintaining safe, efficient operations and compliance with applicable environmental protection requirements.					
Planned	Drilling	Changes to marine fauna behaviour due to noise emissions / Marine Mammals, Marine Turtles, Fish, Seabirds, Plankton communities, Benthic Habitats and Biota and Fisheries resources	Completed in accordance with the agreed Company and Vendor procedure. VSI tool selected rather than older version VSP.	To manage and minimise noise emissions associated with deployment and operation of the well test package Versatile Seismic Imager (VSI) tool during drilling and testing activities, so as to avoid or reduce disturbance to marine fauna and prevent changes to natural behaviour patterns, while maintaining data quality, operational safety, and compliance with applicable environmental protection requirements.	Noise emissions from deployment and operation of the Versatile Seismic Imager (VSI) tool shall be minimised by using the lower-impact VSI tool in preference to older VSP technology and by executing operations strictly in accordance with the agreed Company and Vendor procedures, to reduce disturbance to marine fauna while maintaining data quality and operational safety.	Records demonstrate that the VSI tool was selected in preference to older VSP technology based on reduced noise footprint and suitability for the required data acquisition	Evidence confirms VSI deployment and operation were conducted in accordance with the approved Company and Vendor procedures, including defined operating parameters.	Any deviations from approved VSI procedures or operating parameters were documented, technically assessed, and approved prior to implementation	Drilling Superintendent
Planned	Drilling	Disruption in daily living and movement patterns / Primary Human and Socio-Economic	Development of OH&S policies and procedure;	To manage drilling activities in a manner that minimises disruption to local communities' daily living and movement patterns, while	Drilling activities shall be conducted under approved OH&S policies and procedures that manage work practices, movements, and interfaces with the public to minimise	Evidence confirms that activities with potential to affect local movement or daily routines			Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		Receptors, Institutional and governance receptors		supporting socio-economic development, maintaining safe operations, and complying with applicable regulatory and stakeholder engagement requirements.	disruption to local communities' daily living and movement patterns, while supporting socio-economic development and maintaining safe operations.	are identified, assessed, and managed in accordance with OH&S procedures.			
			Notify appropriate maritime authorities of the drilling work prior to commencing, with the ANP to advise maritime regulator and all other regulatory agencies of the MODU and support vessels to the PSC contract area and Timor-Leste Territory.		Prior to commencement of drilling activities, the ANP shall notify relevant maritime authorities and regulatory agencies of the presence and movements of the MODU and support vessels within the PSC contract area and Timor-Leste Territory, to minimise disruption to marine traffic and local movement patterns while supporting safe operations and socio-economic activity.	Records demonstrate that advance notification of drilling activities and vessel movements was provided through the ANP to relevant maritime authorities prior to mobilisation	Evidence confirms that notifications clearly described vessel locations, schedules, and operational activities sufficient to inform other marine users.		Drilling Superintendent
			Records showing appropriate authorities have been informed.		Drilling activities shall be conducted only after appropriate authorities have been formally informed, with records maintained to demonstrate timely notification, to minimise disruption to local communities' daily living and movement patterns while supporting safe operations and socio-economic activity	Records demonstrate that relevant authorities were formally notified of drilling activities and associated movements prior to commencement.	Notifications contain sufficient information on timing, location, and nature of activities to enable authorities to manage potential impacts on community movement patterns.		Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		Changes in occupational opportunities / Primary Human and Community receptors, Economic Receptors, Institutional and governance receptors	Prioritize, where practical, local employment by actively sourcing workers from Timor-Leste.	To support socio-economic development by promoting fair and transparent access to occupational opportunities associated with drilling activities, while minimising adverse effects on existing livelihoods and complying with applicable regulatory and stakeholder engagement requirements.	Where practicable, employment opportunities arising from drilling activities will prioritise suitably qualified workers from Timor-Leste, through transparent recruitment processes, to support socio-economic development while maintaining operational safety and competence.	Records demonstrate that recruitment processes actively consider and promote employment of suitably qualified Timor-Leste nationals.	Evidence confirms that all locally recruited personnel meet role competency, training, and safety requirements.		MD
			Implement training programs where possible to enhance the skills of Timor-Leste's workforce.		Where practicable, training and skills-development programs shall be implemented for Timor-Leste personnel engaged in drilling activities to enhance workforce capability, support socio-economic development, and maintain operational safety and competence.	Records demonstrate that training opportunities were identified and implemented for Timor-Leste personnel where practicable.	Evidence confirms that training provided is relevant to assigned roles and supports safe and effective participation in drilling activities as applicable.	Training outcomes, limitations, and lessons learned are documented and used to inform future workforce development initiatives	MD
			Develop and enforce robust pollution and waste management plan.		Drilling activities shall be conducted in accordance with a robust, implemented, and enforced Waste Management Plan, to prevent contamination, protect existing livelihoods, and support socio-economic development while complying with applicable regulatory and stakeholder engagement requirements	Records demonstrate that an approved Waste Management Plan is implemented, communicated to personnel, and enforced throughout drilling operations.	Evidence confirms that waste handling, storage, and disposal practices are managed to prevent adverse effects on local communities, fisheries, and other socio-economic receptors.	Any pollution incidents, non-conformances, or waste management deficiencies are recorded, investigated, and corrected in accordance with the Plan.	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			Maintain detailed records of any employment and training provided to workers from Timor-Leste.		Employment and training opportunities provided to Timor-Leste workers during drilling activities shall be formally recorded and maintained, to demonstrate transparent access to occupational opportunities and support socio-economic development while complying with regulatory and stakeholder engagement requirements.	Records demonstrate that employment and training provided to Timor-Leste workers are accurately documented, current, and traceable.	Employment and training records are retained in accordance with Company document control procedures and are available for internal review and regulatory inspection if required.	Records are reviewed to inform workforce planning, training effectiveness, and future socio-economic development initiatives.	MD

9.3 Mitigation Measures and Unplanned Activities

9.3.1 Uncontrolled Release of Hydrocarbons at Surface

An uncontrolled release of hydrocarbons at surface, commonly referred to as a blowout can occur when formation fluids (oil, gas, or condensate) flow into the wellbore and reach the surface without being safely contained. This typically happens due to a breakdown in well control barriers.

Surface Gas Leaks

Gas bubbles have the potential to escape the while drilling the 17-1/2" hole section if a gas pocket is encountered. The bubbles of gas rising from the seabed would not have any material impact on the marine environment. Once at the water's surface any gas would escape into the atmosphere and contribute to greenhouse gas emissions. Due to its drilling location and mitigations in placed the likelihood for the surface gas leak to occur is remote, the consequence is minor, hence, the risk ranking is low.

To prevent surface gas leaks, adhere to the well program plan and ensure the integrity of the well barriers. In the event of a surface gas leak, allow the gas pocket to deplete naturally. During drilling, a remote operator vehicle (ROV) will be deployed for bubble monitoring.

Well Blow Out

Oil spills are the most significant potential threat to the environment from drilling projects. Oil spills can potentially occur from a number of sources ranging from a major spill, such as a well blowout, down to smaller leaks and spills from equipment and piping.

Weathering and dispersibility studies on Australian marine diesel indicate that in the case of a spill approximately 50% of the mass will be evaporated (Kagi et al., 1988).

Oil spill modelling is an essential component of offshore environmental management. It predicts the movement, dispersion, and impact of potential hydrocarbon releases under different scenarios. The Oil Spill Modelling Study for Chuditch-2 Appraisal drilling Well in the Timor Sea was conducted using MuTeknologi Software (PT. MuTeknologi Komputasi Hidraulika). The modelling used for the simulation is stochastic modelling which aims to predict the spill's movement, spreading, weathering, and coastal impact where the spill is condensate, diesel, base oil, and SBM/NADF in the marine environment. The spill modelling was simulated for the February (West Season/Monsoon) and June (East Season/Dry Season).

The modelling study simulated multiple spill scenarios based on different failure types, including:

- Transfer Hose Failures: Small-scale spills of diesel, base oil, and synthetic-based mud (SBM).
- Tank Rupture: A larger spill of diesel (723 barrels) due to structural failure.
- Mud Tank Discharge: Release of 400 barrels of SBM.
- Well Control Events (Blowouts): Major hydrocarbon releases from uncontrolled well flow, modelled at three increasing rates (25, 50, and 75 million standard cubic feet per day).

Simulation Results and Environmental Impact:

Spill Dispersion:

- Diesel and base oil spills were predicted to disperse offshore, with a significant portion evaporating (~43% for diesel and ~20% for base oil).
- Synthetic-based mud (SBMg) settled on the seabed, affecting benthic habitats but undergoing biodegradation (~23% within five days).

- Condensate from well blowouts showed 82% evaporation within five days, with the remainder dispersing in the water column.

Geographic Impact:

- In the West Season, spills tended to drift toward Australia's Exclusive Economic Zone (EEZ), with potential effects on the Oceanic Shoals Marine Special Purpose Zone.
- In the East Season, spills moved northwest, impacting Timor-Leste's EEZ rather than Australian waters.

Timeframe for Spill Effects:

- Most hydrocarbons reached their maximum spread within five days.
- Surface oil thickness decreased below 0.034mm, rendering it invisible to the naked eye.

Key findings from the hydrodynamics and oil spill simulation using MoTuM are summarized as follows:

a) The fates simulation results show that diesel and condensate will evaporate about 75% of the total spill after 5 days of oil spill release.
b) For base oil, the fates simulation results show that 57% will stay in the offshore for 5 days. During those 5 days, 23 % of the base oil will be biodegradable and the remaining base oil will evaporate.
c) During the East Season (June), the Diesel, Base Oil, SBM and Condensate will also spread to the Oceanic Marine Special Purpose Zone and Australia's EEZ. But the dominant spreading is to Timor-Leste's EEZ

For each season and scenario, the oceanic shoals Marine National Park Zone will not be affected by the spill the Diesel, Base Oil, SBM and Condensate

Oil spill trajectory modelling has shown that any spill of either crude oil or diesel from the proposed drilling area is highly likely to dissipate before it could contact a shoreline. Thus, nearshore marine communities and habitats of the Timor-Leste and Indonesian coastlines (which may contain corals, seagrasses, mangroves, turtle nesting beaches, intertidal and subtidal communities) are not considered to be at significant risk from the drilling program.

9.3.2 Introduction of Invasive Marine Species

The introduction of invasive marine species during offshore drilling is commonly through releasing of ballast water at the drilling location. The ballast water within the vessel might contained foreign species from the original location where the ship docked. As the ship arrived at the drilling location, it releases the ballast water into the marine water hence introducing non-native species to the surrounding ecosystem.

The impact from introducing invasive marine species into Chuditch-2 location is that these non-native species will harm the existing ecosystems by competing with the native species for food and habitat leading to a decline number of native population. Additionally, the lack of natural predators in the new environment will lead to uncontrol growth of the invasive species.

Therefore, the consequence of the introduction of invasive marine species is massive and the likelihood is remote, hence, the risk ranking is medium. Release of ballast water from MODU and vessels should adhere to approved ballast water management plan and valid ballast water management certificate, unless an exemption applies or is obtained through relevant regulatory jurisdiction. Additionally, SGBU's Biofouling Management Plan (BMP) will be in place and implemented to control biofouling.

Table 28 Environmental Performance Objectives, Standards and Measurement Criteria for Unplanned Activity

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Bubble watch for potential gas with ROV on location; kill weight mud available as necessary. Allow the pocket to deplete	To prevent any uncontrolled release of hydrocarbons at surface during drilling operations, including a potential well blowout at the 17½-inch mudline section, in order to avoid greenhouse gas emissions to the atmosphere and prevent toxic, physical, and ecological impacts on marine fauna and flora, while maintaining well integrity, safe operations, and compliance with applicable regulatory and environmental protection requirements.	During drilling of the 17½-inch mudline section, potential shallow gas shall be identified early and managed to prevent uncontrolled surface hydrocarbon release through implementation of continuous ROV bubble watch, availability of appropriate kill-weight mud, and controlled management of any gas pocket to allow safe depletion without escalation, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, and relevant industry standards (including API Standard 53 and IADC well control guidance).	Records demonstrate that an ROV bubble watch was maintained during drilling of the mudline section to identify any shallow gas or hydrocarbon release indicators at the seabed.	Evidence confirms that kill-weight mud was available and that well control responses were implemented in accordance with approved procedures and good oilfield practice.	Any indication of gas was assessed by competent personnel, with documented decisions supporting controlled depletion and prevention of escalation to a surface release.	Drilling Superintendent
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate	Primary Barrier: Fluid column (mud system) ' - Bespoke mud system designed and developed to maintain well bore pressure by effectively managing	To prevent any uncontrolled release of hydrocarbons to surface during drilling of the 12¼-inch section, including a potential well blowout, in order to avoid greenhouse gas emissions to the	During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through effective primary and secondary well barriers, comprising a bespoke drilling fluid system to maintain wellbore pressure integrity	Records demonstrate the drilling fluid system was engineered and maintained to balance formation pressures and formation	Documentation confirms third-party verification and certification of the complete BOP stack to API Standard 53 prior to use and evidence	Records demonstrate BOP control systems and well control instrumentation were function-tested and maintained in accordance with	WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	formation fluid pressures and strength of subsurface formations Secondary barrier Blow out preventer Secondary barrier, inclusive of Third-party verification and certification of the complete BOP stack to API Standard 53 and Certification of the BOP Control system, Choke and Kill System, Diverter system, Well control instrumentation, high pressure mud system	atmosphere and prevent toxic, physical, and ecological impacts on marine fauna and flora, while maintaining well integrity, safe operations, and compliance with applicable regulatory and environmental protection requirements.	and a fully functional, independently verified BOP and well control system, designed, certified, and operated in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	strength for the 12¼-inch section.	confirms choke and kill systems, diverter system, and high-pressure mud system were installed, tested, and ready for immediate use.	OEM and API requirements and Independent verification reports confirm compliance of well control equipment and barriers prior to and during drilling operations.	
			Comprehensive well control procedures including continuous monitoring of pressure reading during drilling to detect any abnormal pressures		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through implementation of comprehensive well control procedures, including continuous monitoring and verification of well pressures to detect	Approved well control procedures covering the 12¼-inch section are implemented and communicated to relevant personnel.	Records demonstrate continuous monitoring of key pressure parameters (e.g. standpipe pressure, casing pressure, pit volume) during	Any abnormal pressure indication triggered timely response actions in accordance with approved well control procedures, while pressure	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					abnormal conditions at the earliest practicable stage, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance		drilling and evidence confirms that abnormal pressure trends or indicators were promptly recognised and assessed by competent personnel.	monitoring instruments and alarms are maintained, tested, and fit for purpose in accordance with OEM and API requirements.	
			Drilling contractor and company personnel are appropriately trained and certified to IWCF level 4 or 3 depending on role and responsibility. This requirement also includes ongoing evidence of well control training and drills		During drilling of the 12¼-inch section, well control competency shall be assured by ensuring drilling contractor and Company personnel are trained, assessed, and certified to IWCF Level 3 or Level 4 as appropriate to their role, with ongoing well control training and drills conducted and recorded, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, and relevant IADC well control guidance (and consistent with the competency expectations supporting API Standard 53 well control system integrity)	Records demonstrate role-to-competency mapping (who requires IWCF 3 vs 4) and verification of valid certification prior to commencing the 12¼-inch section.	Evidence confirms well control drills are conducted to an approved schedule and include realistic scenarios relevant to the 12¼-inch section.	Drill debriefs capture lessons learned, corrective actions, and updates to practices where needed and records demonstrate competent, timely responses during monitoring, drills, or actual anomalies, consistent with well control procedures.	WOM
			Third party & verification, including an independent verification body		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through	Documentation confirms that an independent verification body has verified	Records demonstrate that well control–related SCEs are	Evidence confirms functional testing and verification of	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			(confirming BOP compliance, control system operability, manifold integrity and diverter operability); SCE verification; and record verification		independent third-party verification of safety-critical well control systems, including the BOP stack, control system, choke and kill manifold, diverter system, and associated safety-critical elements (SCEs), with verification records maintained, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	compliance of the BOP stack, control system, choke and kill manifold, and diverter system prior to drilling the 12¼-inch section.	identified, performance standards defined, and verification activities completed in accordance with the Safety Case.	BOP control systems, choke and kill manifolds, and diverter operability in accordance with approved procedures and verification reports and records are complete, traceable, and retained in accordance with document control requirements.	
			Well control bridging document outlines agreed bridge between the drilling contractor and the company.		A well control bridging document shall be prepared, approved, and implemented prior to drilling the 12¼-inch section, clearly aligning roles, responsibilities, procedures, and interfaces between the Company and the drilling contractor, to ensure consistent application of good oilfield practice and effective well control in accordance with Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	Records demonstrate the well control bridging document was jointly agreed, approved, and available to relevant personnel prior to commencement of drilling	The bridging document clearly defines well control roles, decision authority, communication protocols, and escalation pathways between Company and contractor.	Evidence confirms relevant Company and contractor personnel were briefed on the bridging arrangements prior to drilling.	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			Verification of SCE Performance Standards		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through verification that all well control–related Safety-Critical Elements (SCEs) meet their defined Performance Standards, confirming functionality, reliability, availability, and survivability, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	Records demonstrate that well control SCEs for the 12¼-inch section are identified and have approved performance standards (functionality, reliability, availability, survivability).	Evidence confirms SCE verification activities (inspection, testing, certification) were completed against the defined performance standards before and during the section.	Records demonstrate SCEs remained available and fit-for-purpose throughout drilling, with any degradations managed under approved procedures.	Drilling Superintendent
			Periodical test and maintenance on the BOP during the operations.		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through periodic testing, inspection, and maintenance of the Blowout Preventer (BOP) system, to verify continued functionality and integrity of the primary well control barrier, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	Records demonstrate that a BOP testing and maintenance program was implemented and aligned with the drilling program and API Standard 53 requirements.	Evidence confirms that BOP components (rams, annular's, control system) functioned as intended during tests and operations.	Any BOP defects or test failures were documented, assessed, and rectified in accordance with approved maintenance procedures prior to resuming drilling.	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Development of contingency plan for relief well and incident - SGBU-GEN-OPS-0034 Relief Well Plan - Chuditch 2. Wild Well Control will be contracted who will use their WWCI ERP which is designed to support response preparations to well control emergencies and establish a process for responding to safely managing them using a standard uniform approach. It includes the equipment and procedures to address a range of well control scenarios necessitating immediate mobilisation of intervention equipment and personnel.		Uncontrolled surface release of hydrocarbons during drilling of the 12¼-inch section shall be mitigated through established and maintained well control contingency arrangements, including an approved Relief Well Plan (SGBU-GEN-OPS-0034 – Chuditch-2) and a contracted specialist well control provider (Wild Well Control Inc.), with documented procedures, equipment, and mobilisation capability in place to respond promptly and effectively to a well control emergency, consistent with good oilfield practice and applicable regulatory requirements.	Records demonstrate that an approved Relief Well Plan is in place and that Wild Well Control's ERP is aligned with Company emergency response arrangements and well control scenarios.	Evidence confirms that Wild Well Control is contracted and capable of providing specialist personnel, equipment, and procedures for rapid response to a well control incident.	Contingency arrangements demonstrate preparedness to safely manage a range of well control scenarios without escalation.	WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Development of Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that address all risks and contingencies and Emergency response training for the company IMT and CMT and drills conducted to ensure familiarisation with the documents		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented and effectively managed through approved and implemented Emergency Response and Oil Spill Contingency arrangements, including a comprehensive ERP and OSCP addressing credible well control and spill scenarios, supported by trained Incident Management Team (IMT) and Crisis Management Team (CMT) personnel and regular drills, to ensure preparedness and timely response in accordance with applicable regulatory requirements and good oilfield practice.	Records demonstrate that approved ERP and OSCP documents are in place, current, and address credible well control and hydrocarbon release scenarios relevant to the 12¼-inch section.	Evidence confirms IMT and CMT personnel have received training and familiarisation on the ERP and OSCP relevant to their roles.	Records demonstrate emergency response drills were conducted, debriefed, and lessons learned incorporated into plans or procedures.	WOM OIM Vessel Masters Drilling Superintendent
			Shipboard Oil Pollution Emergency Plan (SOPEP) in place and Drilling Crews familiarised with facility ERP and SOPEP and are familiarised with the Company OSCP and ERP		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented and effectively managed through an approved Shipboard Oil Pollution Emergency Plan (SOPEP), with drilling crews trained and familiarised with the facility ERP, SOPEP, and the Company OSCP, to ensure prompt, coordinated response to any	Records demonstrate that a current, approved SOPEP is in place on the MODU and integrated with the facility ERP and Company OSCP.	Evidence confirms drilling crews have been familiarised with the SOPEP, facility ERP, and Company OSCP relevant to their roles.		WOM OIM Vessel Masters Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					hydrocarbon release in accordance with applicable regulatory requirements and good oilfield practice.				
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Primary Barrier: Fluid column (mud system) ' - Bespoke mud system designed and developed to maintain well bore pressure by effectively managing formation fluid pressures and strength of subsurface formations Secondary barrier Blow out preventer Secondary barrier, inclusive of Third-party verification and certification of the complete BOP stack to API Standard 53 and Certification of the BOP Control system, Choke and Kill System, Diverter system, Well control instrumentation, high pressure	To prevent any uncontrolled release of hydrocarbons to surface during drilling of the 12¼-inch section, including a potential well blowout, in order to avoid greenhouse gas emissions to the atmosphere and prevent toxic, physical, and ecological impacts on marine fauna and flora, while maintaining well integrity, safe operations, and compliance with applicable regulatory and environmental protection requirements.	During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through effective primary and secondary well barriers, comprising a bespoke drilling fluid system to maintain wellbore pressure integrity and a fully functional, independently verified BOP and well control system, designed, certified, and operated in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	Records demonstrate the drilling fluid system was engineered and maintained to balance formation pressures and formation strength for the 12¼-inch section.	Documentation confirms third-party verification and certification of the complete BOP stack to API Standard 53 prior to use and evidence confirms choke and kill systems, diverter system, and high-pressure mud system were installed, tested, and ready for immediate use.	Records demonstrate BOP control systems and well control instrumentation were function-tested and maintained in accordance with OEM and API requirements and Independent verification reports confirm compliance of well control equipment and barriers prior to and during drilling operations.	WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			mud system						
			Comprehensive well control procedures including continuous monitoring of pressure reading during drilling to detect any abnormal pressures		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through implementation of comprehensive well control procedures, including continuous monitoring and verification of well pressures to detect abnormal conditions at the earliest practicable stage, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance	Approved well control procedures covering the 12¼-inch section are implemented and communicated to relevant personnel.	Records demonstrate continuous monitoring of key pressure parameters (e.g. standpipe pressure, casing pressure, pit volume) during drilling and evidence confirms that abnormal pressure trends or indicators were promptly recognised and assessed by competent personnel.	Any abnormal pressure indication triggered timely response actions in accordance with approved well control procedures, while pressure monitoring instruments and alarms are maintained, tested, and fit for purpose in accordance with OEM and API requirements.	Drilling Superintendent
			Drilling contractor and company personnel are appropriately trained and certified to IWCF level 4 or 3 depending on role and responsibility. This requirement also includes ongoing evidence		During drilling of the 12¼-inch section, well control competency shall be assured by ensuring drilling contractor and Company personnel are trained, assessed, and certified to IWCF Level 3 or Level 4 as appropriate to their role, with ongoing well control training and drills conducted and recorded, in accordance with good	Records demonstrate role-to-competency mapping (who requires IWCF 3 vs 4) and verification of valid certification prior to commencing the 12¼-inch section.	Evidence confirms well control drills are conducted to an approved schedule and include realistic scenarios relevant to the 12¼-inch section.	Drill debriefs capture lessons learned, corrective actions, and updates to practices where needed and records demonstrate competent, timely responses	WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			of well control training and drills		oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, and relevant IADC well control guidance (and consistent with the competency expectations supporting API Standard 53 well control system integrity)			during monitoring, drills, or actual anomalies, consistent with well control procedures.	
			Third party & verification, including an independent verification body (confirming BOP compliance, control system operability, manifold integrity and diverter operability); SCE verification; and record verification		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through independent third-party verification of safety-critical well control systems, including the BOP stack, control system, choke and kill manifold, diverter system, and associated safety-critical elements (SCEs), with verification records maintained, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	Documentation confirms that an independent verification body has verified compliance of the BOP stack, control system, choke and kill manifold, and diverter system prior to drilling the 12¼-inch section.	Records demonstrate that well control–related SCEs are identified, performance standards defined, and verification activities completed in accordance with the Safety Case.	Evidence confirms functional testing and verification of BOP control systems, choke and kill manifolds, and diverter operability in accordance with approved procedures and verification reports and records are complete, traceable, and retained in accordance with document control requirements.	Drilling Superintendent
			Well control bridging document outlines agreed bridge between		A well control bridging document shall be prepared, approved, and implemented prior to drilling the 12¼-inch	Records demonstrate the well control bridging document was	The bridging document clearly defines well control roles, decision	Evidence confirms relevant Company and contractor	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			the drilling contractor and the company.		section, clearly aligning roles, responsibilities, procedures, and interfaces between the Company and the drilling contractor, to ensure consistent application of good oilfield practice and effective well control in accordance with Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	jointly agreed, approved, and available to relevant personnel prior to commencement of drilling	authority, communication protocols, and escalation pathways between Company and contractor.	personnel were briefed on the bridging arrangements prior to drilling.	
			Verification of SCE Performance Standards		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through verification that all well control–related Safety-Critical Elements (SCEs) meet their defined Performance Standards, confirming functionality, reliability, availability, and survivability, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	Records demonstrate that well control SCEs for the 12¼-inch section are identified and have approved performance standards (functionality, reliability, availability, survivability).	Evidence confirms SCE verification activities (inspection, testing, certification) were completed against the defined performance standards before and during the section.	Records demonstrate SCEs remained available and fit-for-purpose throughout drilling, with any degradations managed under approved procedures.	Drilling Superintendent
			Periodical test and maintenance on the BOP during the operations.		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented through periodic testing, inspection, and	Records demonstrate that a BOP testing and maintenance program was	Evidence confirms that BOP components (rams, annular's,	Any BOP defects or test failures were documented, assessed, and rectified in	Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					maintenance of the Blowout Preventer (BOP) system, to verify continued functionality and integrity of the primary well control barrier, in accordance with good oilfield practice, Decree-Law No. 32/2016, Ministerial Diploma No. 46/2017, API Standard 53, and relevant IADC well control guidance.	implemented and aligned with the drilling program and API Standard 53 requirements.	control system) functioned as intended during tests and operations.	accordance with approved maintenance procedures prior to resuming drilling.	
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Development of contingency plan for relief well and incident - SGBU-GEN-OPS-0034 Relief Well Plan - Chuditch 2. Wild Well Control will be contracted who will use their WWCI ERP which is designed to support response preparations to well control emergencies and establish a process for responding to safely managing them using a standard uniform approach. It includes the equipment and procedures to		Uncontrolled surface release of hydrocarbons during drilling of the 12¼-inch section shall be mitigated through established and maintained well control contingency arrangements, including an approved Relief Well Plan (SGBU-GEN-OPS-0034 – Chuditch-2) and a contracted specialist well control provider (Wild Well Control Inc.), with documented procedures, equipment, and mobilisation capability in place to respond promptly and effectively to a well control emergency, consistent with good oilfield practice and applicable regulatory requirements.	Records demonstrate that an approved Relief Well Plan is in place and that Wild Well Control's ERP is aligned with Company emergency response arrangements and well control scenarios.	Evidence confirms that Wild Well Control is contracted and capable of providing specialist personnel, equipment, and procedures for rapid response to a well control incident.	Contingency arrangements demonstrate preparedness to safely manage a range of well control scenarios without escalation.	WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			address a range of well control scenarios necessitating immediate mobilisation of intervention equipment and personnel.						
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Development of Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that address all risks and contingencies and Emergency response training for the company IMT and CMT and drills conducted to ensure familiarisation with the documents		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented and effectively managed through approved and implemented Emergency Response and Oil Spill Contingency arrangements, including a comprehensive ERP and OSCP addressing credible well control and spill scenarios, supported by trained Incident Management Team (IMT) and Crisis Management Team (CMT) personnel and regular drills, to ensure preparedness and timely response in accordance with applicable regulatory requirements and good oilfield practice.	Records demonstrate that approved ERP and OSCP documents are in place, current, and address credible well control and hydrocarbon release scenarios relevant to the 12¼-inch section.	Evidence confirms IMT and CMT personnel have received training and familiarisation on the ERP and OSCP relevant to their roles.	Records demonstrate emergency response drills were conducted, debriefed, and lessons learned incorporated into plans or procedures.	WOM OIM Vessel Masters Drilling Superintendent
			Shipboard Oil Pollution Emergency Plan (SOPEP) in place and Drilling Crews		During drilling of the 12¼-inch section, uncontrolled surface release of hydrocarbons shall be prevented and effectively managed through an	Records demonstrate that a current, approved SOPEP is in place on the	Evidence confirms drilling crews have been familiarised with the SOPEP,		WOM OIM Vessel Masters Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			familiarised with facility ERP and SOPEP and are familiarised with the Company OSCP and ERP		approved Shipboard Oil Pollution Emergency Plan (SOPEP), with drilling crews trained and familiarised with the facility ERP, SOPEP, and the Company OSCP, to ensure prompt, coordinated response to any hydrocarbon release in accordance with applicable regulatory requirements and good oilfield practice.	MODU and integrated with the facility ERP and Company OSCP.	facility ERP, and Company OSCP relevant to their roles.		
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Monitor and communicate with vessels approaching drilling site to reduce the risk of vessel collision.	To prevent uncontrolled release of hydrocarbons resulting from vessel collision with the MODU, including an errant vessel entering the 500 m exclusion zone during drilling operations, in order to avoid greenhouse gas emissions to the atmosphere and prevent toxic and physical impacts on marine fauna and flora, while maintaining facility integrity, navigational safety, and compliance with applicable maritime and environmental protection requirements.	The risk of vessel collision with the MODU shall be minimised through continuous vessel traffic monitoring, proactive communication with approaching vessels, and compliant watchkeeping in accordance with international maritime regulations and contracted vessel procedures, to prevent unauthorised entry into the 500 m exclusion zone and avoid uncontrolled hydrocarbon release while maintaining navigational safety and facility integrity.	Records demonstrate continuous monitoring of vessel traffic in the vicinity of the MODU using available bridge surveillance and tracking systems.	Evidence confirms that approaching vessels were contacted in a timely manner and advised of the MODU location and 500 m exclusion zone requirements.		OIM Vessel Masters
			Watch keeping and operation controlled by international regulation and contracted vessels systems and procedures			Records and observations demonstrate that bridge watchkeeping and lookout arrangements are maintained in accordance with applicable international maritime regulations and	Evidence confirms contracted vessels operate under approved navigation, collision-avoidance, and exclusion-zone procedures aligned with international requirements.		

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
						vessel procedures.			
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Monitor and communicate with vessels approaching drilling site to reduce the risk of vessel collision.	To prevent uncontrolled release of hydrocarbons resulting from vessel collision with the MODU, including an errant vessel entering the 500 m exclusion zone during drilling operations, in order to avoid greenhouse gas emissions to the atmosphere and prevent toxic and physical impacts on marine fauna and flora, while maintaining facility integrity, navigational safety, and compliance with applicable maritime and environmental protection requirements.	The risk of vessel collision with the MODU shall be minimised through continuous vessel traffic monitoring, proactive communication with approaching vessels, and compliant watchkeeping in accordance with international maritime regulations and contracted vessel procedures, to prevent unauthorised entry into the 500 m exclusion zone and avoid uncontrolled hydrocarbon release while maintaining navigational safety and facility integrity.	Records demonstrate continuous monitoring of vessel traffic in the vicinity of the MODU using available bridge surveillance and tracking systems.	Evidence confirms that approaching vessels were contacted in a timely manner and advised of the MODU location and 500 m exclusion zone requirements.		OIM Vessel Masters
			Watch keeping and operation controlled by international regulation and contracted vessels systems and procedures			Records and observations demonstrate that bridge watchkeeping and lookout arrangements are maintained in accordance with applicable international maritime regulations and vessel procedures.	Evidence confirms contracted vessels operate under approved navigation, collision-avoidance, and exclusion-zone procedures aligned with international requirements.		
			Notice to mariners and maintain on going communication with other mariners on the presence and progress of the		The risk of vessel collision with the MODU shall be minimised through formal notification and continuous communication with marine users, including issuance of a Notice to Mariners by the ANP and coordination	Records demonstrate the ANP issued a Notice to Mariners and formally advised maritime regulators and	Evidence confirms ongoing communication with mariners regarding MODU location, exclusion zone,		Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			drilling activity with the ANP to develop and issue a notice to mariners and advise maritime regulator and all other regulatory agencies of the MODU and support vessels to the PSC contract area and Timor-Leste Territory.		with maritime regulators and relevant authorities regarding the presence, location, and progress of drilling activities within the PSC Contract Area and Timor-Leste Territory, in accordance with good marine and oilfield practice, relevant API guidance, and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	relevant agencies of the MODU and support vessel activities prior to commencement.	and activity status throughout drilling operations.		
			Development of Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that address all risks and contingencies and Emergency response training for the company IMT and CMT and drills conducted to ensure familiarisation with the documents		The risk of uncontrolled hydrocarbon release arising from vessel collision with the MODU, including unauthorised entry into the 500 m exclusion zone, shall be managed and mitigated through approved Emergency Response and Oil Spill Contingency arrangements, comprising a comprehensive ERP and OSCP addressing collision-related spill scenarios, supported by trained Incident Management Team (IMT) and Crisis Management Team (CMT) personnel and regular drills, in accordance with good oilfield practice, relevant API guidance, and the environmental	Records demonstrate that current, approved ERP and OSCP documents explicitly address vessel-collision and hydrocarbon-release contingencies relevant to MODU operations.	Evidence confirms IMT and CMT personnel are trained and familiarised with ERP/OSCP roles, responsibilities, and collision response scenarios.		WOM OIM Vessel Masters Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					protection requirements of Timor-Leste legislation.				
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	DP 2 vessels only allowed into the 500M radius of the petroleum safety zone	To prevent any uncontrolled release of hydrocarbons resulting from vessel-to-vessel or vessel-to-MODU collisions within the 500 m exclusion zone during drilling operations, in order to avoid greenhouse gas emissions to the atmosphere and prevent toxic and physical impacts on marine fauna and flora, while maintaining facility integrity, navigational safety, and compliance with applicable maritime and environmental protection requirements.	The risk of vessel-to-vessel and vessel-to-MODU collision within the 500 m petroleum safety zone shall be minimised by restricting entry to DP2-class vessels only, ensuring enhanced station-keeping capability and collision avoidance, in accordance with good marine and oilfield practice, relevant API guidance, and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records demonstrate that only DP2-certified vessels were authorised to enter and operate within the 500 m petroleum safety zone.	Evidence confirms DP2 certification and operational readiness of vessels were verified prior to entry into the safety zone.	Records demonstrate vessel movements within the safety zone were managed without loss of station-keeping control or collision risk.	WOM
			Double hull and double-skinned (or inboard-located) hydrocarbon product tanks that reflect MARPOL Annex I		The risk of uncontrolled hydrocarbon release arising from vessel-to-vessel or vessel-to-MODU collision within the 500 m petroleum safety zone shall be minimised through the use of double-hulled or double-skinned (or inboard-located) hydrocarbon product tanks, providing passive impact protection and containment integrity, in accordance with MARPOL Annex I, good marine and oilfield practice, relevant API guidance, and the	Records demonstrate that vessels operating within the 500 m exclusion zone are fitted with double-hulled, double-skinned, or inboard-located hydrocarbon product tanks consistent with MARPOL Annex I design intent.	Evidence confirms vessel design compliance was verified and accepted prior to authorisation to operate within the exclusion zone.		WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.				
			Navigation lighting and watch aboard the MODU. The MODU and boats will meet conventional navigation rules for lighting, for the safety of personnel working on the facilities and the safe operation of the facilities in an active maritime environment		The risk of vessel-to-vessel and vessel-to-MODU collision within the 500 m exclusion zone shall be minimised through continuous navigation lighting and watchkeeping on the MODU and support vessels, with lighting and lookout arrangements compliant with international navigation rules, to maintain vessel awareness, prevent collision, and avoid uncontrolled hydrocarbon release, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation.	Records and observations confirm the MODU and support vessels display navigation and operational lighting in accordance with applicable international navigation rules at all times.	Evidence confirms continuous bridge and lookout watchkeeping is maintained on the MODU and support vessels in accordance with approved procedures.		OIM and Masters
			Verification of Vessel and MODU systems through specification and independent verification through OVID audit and independent audit of SCE and performance		The risk of vessel-to-vessel and vessel-to-MODU collision within the 500 m exclusion zone shall be minimised through specification-based verification and independent assurance of vessel and MODU systems, including independent audits (e.g., OVID) and verification of	Records demonstrate completion and acceptance of independent verification of vessel and MODU systems against specifications, including an OVID audit and	Evidence confirms collision-prevention and hydrocarbon-containment SCEs are identified, have approved performance standards, and are verified as		WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			standards of the MODU		Safety-Critical Elements (SCEs) against approved performance standards, to ensure collision-prevention and containment systems are fit-for-purpose, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation.	independent SCE verification.	compliant prior to operations.		
			Open radio and satellite phone contact between MODU and supply vessels at all times.		The risk of vessel-to-vessel and vessel-to-MODU collision within the 500 m exclusion zone shall be minimised by maintaining continuous, open radio and satellite phone communication between the MODU and all supply vessels, to ensure timely coordination of vessel movements, preserve navigational safety, and prevent uncontrolled hydrocarbon release, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation.	Records and observations confirm that open radio and satellite phone communication channels are maintained between the MODU and supply vessels at all times during operations.	Evidence demonstrates that communication protocols are actively used to coordinate vessel approach, positioning, and departure within the exclusion zone.		OIM and Masters
			Where practicable, all MODU and Vessel operations will occur on the leeward side of the MODU		Where practicable, MODU and support vessel operations shall be conducted on the leeward side of the MODU to reduce relative vessel motion, improve station-keeping stability, and	Records demonstrate that prevailing environmental conditions (wind, sea state, current) were assessed and	Any operations conducted other than on the leeward side are agreed by both the vessel master and the OIM and		OIM and Masters

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					minimise collision risk within the 500 m exclusion zone, thereby preventing uncontrolled hydrocarbon release, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation.	leeward-side operations were planned and implemented where practicable.	documented with operational or safety justification		
			Maintain update weather forecast information on the MODU and Vessels		The risk of vessel-to-vessel and vessel-to-MODU collision within the 500 m exclusion zone shall be minimised by maintaining current and accurate weather forecast information on the MODU and all vessels and using that information to plan and manage vessel movements and operations, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation.	Records demonstrate that up-to-date meteorological and oceanographic forecasts (e.g. wind, sea state, currents) are available on the MODU and vessels.			OIM and Masters
			Development of Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that address all risks and contingencies and Emergency response training for the company		The risk of uncontrolled hydrocarbon release arising from vessel-to-vessel or vessel-to-MODU collision within the 500 m exclusion zone shall be managed and mitigated through approved Emergency Response and Oil Spill Contingency arrangements, including a comprehensive ERP and	Records demonstrate that current, approved ERP and OSCP documents are in place and explicitly address vessel-collision and hydrocarbon-release	Evidence confirms IMT and CMT personnel are trained and familiarised with ERP/OSCP roles, responsibilities, and collision-response scenarios.		WOM OIM Vessel Masters Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			IMT and CMT and drills conducted to ensure familiarisation with the documents		OSCP addressing collision and spill scenarios, supported by trained Incident Management Team (IMT) and Crisis Management Team (CMT) personnel and regular drills, in accordance with good oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation	contingencies relevant to MODU operations.			
			Shipboard Oil Pollution Emergency Plan (SOPEP) in place and Drilling Crews familiarised with facility ERP and SOPEP and are familiarised with the Company OSCP and ERP		The risk of uncontrolled hydrocarbon release arising from vessel-to-vessel or vessel-to-MODU collision within the 500 m exclusion zone shall be managed through an approved Shipboard Oil Pollution Emergency Plan (SOPEP) and effective crew familiarisation with the facility ERP, SOPEP, and Company OSCP, to ensure prompt, coordinated response to any collision-related spill, in accordance with good marine and oilfield practice, relevant API guidance, MARPOL Annex I (SOPEP), and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).	Records demonstrate a current, approved SOPEP is in place on the MODU and relevant vessels and is aligned with the facility ERP and Company OSCP.	Evidence confirms drilling crews are familiarised with SOPEP activation, roles, and interfaces with the facility ERP and Company OSCP.		WOM OIM Vessel Masters Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Unplanned	Drilling	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Schedule refuelling activities during daylight hours and during calm weather and suitable sea-state conditions and at the discretion of the Vessel Master and OIM.	To prevent any uncontrolled release of hydrocarbons during vessel-to-MODU refuelling operations associated with drilling activities, in order to avoid greenhouse gas emissions to the atmosphere and prevent toxic and physical impacts on marine fauna and flora, while maintaining safe transfer operations, facility integrity, and compliance with applicable maritime and environmental protection requirements.	Vessel-to-MODU refuelling operations shall be planned and conducted only under suitable environmental and operational conditions, including daylight hours and calm weather/sea state, and authorised at the discretion of the Vessel Master and OIM, to minimise the risk of hydrocarbon spillage and prevent environmental harm, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).	Records demonstrate refuelling activities were planned for daylight and suitable weather/sea-state conditions and formally authorised by the Vessel Master and OIM.	Evidence confirms current weather and sea-state conditions were assessed and deemed suitable immediately prior to refuelling.	Number of hydrocarbon spill incidents during vessel-to-MODU refuelling operations is zero.	OIM and Masters
			Hose and couplings checked for integrity prior to refuelling and form part of the MODU PM program and in certification		Vessel-to-MODU refuelling operations shall be conducted using fuel hoses and couplings that are inspected, maintained, and certified as fit-for-purpose, with integrity checks completed prior to transfer and ongoing maintenance managed through the MODU Planned Maintenance (PM) system, to prevent loss of containment and uncontrolled hydrocarbon release, in accordance with	Records demonstrate that refuelling hoses and couplings are inspected for integrity and suitability immediately prior to each refuelling operation.	Evidence confirms refuelling hoses and couplings are included in the MODU PM program and maintained and certified in accordance with manufacturer and industry requirements.	Number of hydrocarbon spill incidents during refuelling attributable to hose or coupling failure: zero.	OIM and Senior Day Supervisor

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).				
			Dry break couplings installed on all hydrocarbon and SBM lines and couplings form part of the MODU PM program and in certification		Vessel-to-MODU refuelling operations shall be conducted using dry-break couplings on all hydrocarbon and synthetic-based mud (SBM) transfer lines, with couplings maintained, certified, and managed through the MODU Planned Maintenance (PM) system, to prevent loss of containment and uncontrolled release during connection, disconnection, or emergency separation, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).	Records demonstrate dry-break couplings are installed and used on all hydrocarbon and SBM transfer lines during refuelling operations.	Evidence confirms dry-break couplings are included in the MODU PM program and maintained and certified in accordance with manufacturer and industry requirements.	Number of hydrocarbon or SBM spill incidents during refuelling attributable to coupling failure or disconnection: zero.	OIM and Senior Day Supervisor
			Installation of flotation collars on all hoses, with the collars forming part of the MODU PM		Vessel-to-MODU refuelling operations shall be conducted using fuel and SBM transfer hoses fitted with flotation collars, with collars maintained, inspected, and certified	Records demonstrate that flotation collars are installed on all hoses used for hydrocarbon	Evidence confirms flotation collars are included in the MODU PM system and are inspected and	Number of hydrocarbon or SBM spill incidents during refuelling attributable to hose	OIM and Senior Day Supervisor

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			program and in certification		through the MODU Planned Maintenance (PM) system, to prevent hose submergence, loss of control, and uncontrolled hydrocarbon release, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).	and SBM transfer during refuelling operations.	certified in accordance with manufacturer and industry requirements.	submergence or flotation failure: zero.	
			Continuous visual monitoring of hoses, couplings and sea surface during refuelling to monitor potential spill and leakage and continuous monitoring of fuel flow gauges on the MODU		Vessel-to-MODU refuelling operations shall be continuously monitored for loss of containment through active visual surveillance of hoses, couplings, and the sea surface, together with real-time monitoring of fuel flow gauges on the MODU, to enable immediate detection and response to any leak or spill, in accordance with good marine and oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).	Records and observations confirm continuous visual monitoring of hoses, couplings, and the surrounding sea surface throughout refuelling operations.	Evidence demonstrates that MODU fuel flow gauges are actively monitored during refuelling to verify expected transfer rates and detect anomalies.	Number of hydrocarbon spill incidents during refuelling attributable to undetected leaks or flow anomalies: zero.	OIM and Masters
			Development of Emergency Response Plan (ERP) and Oil		The risk of uncontrolled hydrocarbon release during vessel-to-MODU refuelling operations shall be	Records demonstrate that current, approved ERP	Evidence confirms IMT and CMT personnel are		WOM OIM Vessel Masters

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			Spill Contingency Plan (OSCP) that address all risks and contingencies and Emergency response training for the company IMT and CMT and drills conducted to ensure familiarisation with the documents		managed through approved emergency preparedness and response arrangements, including a current Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that explicitly address refuelling and spill scenarios, supported by trained and exercised Incident Management Team (IMT) and Crisis Management Team (CMT), in accordance with good oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).	and OSCP documents are in place and explicitly address vessel-to-MODU refuelling spill scenarios.	trained and familiarised with ERP/OSCP roles, spill response actions, and refuelling-related contingencies.		Drilling Superintendent
			Shipboard Oil Pollution Emergency Plan (SOPEP) in place and Drilling Crews familiarised with facility ERP and SOPEP and are familiarised with the Company OSCP and ERP		Vessel-to-MODU refuelling operations shall be supported by an approved Shipboard Oil Pollution Emergency Plan (SOPEP) and effective crew familiarisation with the facility Emergency Response Plan (ERP) and Company Oil Spill Contingency Plan (OSCP), to ensure rapid, coordinated response to any loss of containment during fuel transfer, in accordance with good	Records demonstrate a current, approved SOPEP is in place onboard the MODU and relevant vessels and is aligned with the facility ERP and Company OSCP.	Evidence confirms drilling crews and relevant vessel personnel are familiarised with SOPEP activation, refuelling spill response actions, and interfaces with the ERP and OSCP.		WOM OIM Vessel Masters Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
					marine and oilfield practice, MARPOL Annex I, relevant API guidance, and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.				
Unplanned	DST	GHGs to the atmosphere, toxic and physical impacts from hydrocarbons on marine fauna and flora / Global Climate System, Air Quality Receptors, Marine Water Column, Benthic Habitats and Biota, Marine Fauna, Human and Socio-Economic Receptors including fisheries and coastal communities	Installation of high energy flare ignition system comprised of an ignition panel and a propane bottle rack for the pilot flame on the burner boom. A single thermo-couple is used to detect the flame of each pilot. Three pilots are fitted one on each side of the burner head and one on the gas line exit. The hermocouple sends a signal to the main control unit as an indication that a flame is present. The pilot lights on the burner booms are maintained in continual operation during well flowback / testing operations	To prevent any uncontrolled release of hydrocarbons at surface during drill stem testing (DST) arising from flare burner dropout or loss of ignition, in order to avoid greenhouse gas emissions to the atmosphere and prevent toxic and physical impacts on marine fauna and flora, while maintaining well control, safe testing operations, and compliance with applicable environmental protection, safety, and operational requirements.	During drill stem testing (DST), uncontrolled hydrocarbon release due to flare burner dropout or loss of ignition shall be prevented through the installation and continuous operation of a high-energy flare ignition system, including multiple continuously lit pilots with flame detection and automatic status feedback, ensuring reliable ignition and safe combustion of hydrocarbons, in accordance with good oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).	Records confirm a high-energy ignition system is installed, comprising an ignition panel, propane supply, and three pilot flames (two on the burner head and one on the gas exit), each fitted with thermocouple flame detection.	Evidence demonstrates pilot flames are maintained in continuous operation during well flowback/testing and flame presence is continuously monitored via thermocouple feedback to the control system.	Number of uncontrolled hydrocarbon releases or flare dropouts during DST attributable to ignition system failure: zero.	Well Test Supervisor

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			Development of Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that address all risks and contingencies and Emergency response training for the company IMT and CMT and drills conducted to ensure familiarisation with the documents		The risk of uncontrolled hydrocarbon release at surface during drill stem testing (DST) arising from flare burner dropout or loss of ignition shall be managed through approved emergency preparedness and response arrangements, including a current Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that explicitly address DST flaring and loss-of-ignition scenarios, supported by trained and exercised Incident Management Team (IMT) and Crisis Management Team (CMT) personnel, in accordance with good oilfield practice, relevant API guidance, and Timor-Leste environmental protection legislation (including Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017).	Records demonstrate approved, current ERP and OSCP are in place and explicitly address DST flaring, ignition loss, and uncontrolled release contingencies.	Evidence confirms IMT and CMT personnel are trained and familiarised with ERP/OSCP roles, DST flare-related response actions, and escalation protocols.		WOM OIM Vessel Masters Drilling Superintendent
			Shipboard Oil Pollution Emergency Plan (SOPEP) in place and Drilling Crews familiarised with facility ERP and SOPEP and are familiarised with		During drill stem testing (DST), the risk of uncontrolled hydrocarbon release at surface resulting from flare burner dropout or loss of ignition shall be managed through an approved Shipboard Oil Pollution Emergency Plan (SOPEP) and effective	Records demonstrate a current, approved SOPEP is available onboard and aligned with the facility ERP and Company OSCP	Evidence confirms drilling and well-test personnel are familiarised with SOPEP activation, ERP roles, and OSCP interfaces		WOM OIM Vessel Masters Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			the Company OSCP and ERP		crew familiarisation with the facility Emergency Response Plan (ERP) and Company Oil Spill Contingency Plan (OSCP), ensuring prompt, coordinated response to any loss of containment, in accordance with good oilfield practice, relevant API guidance, MARPOL Annex I, and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	for DST flaring scenarios.	relevant to flare ignition loss.		
		Temporary physical and toxic effects of SBM on marine fauna and flora / Marine water Quality, benthic habitats and biota, marine fauna.	Inadvertent discharge of Synthetic Based Mud (SBM) during displacement via overboard lines including diverted lines. All over-board lines are locked when displacing SBM. Diverter and overboard lines will be walked and line up checked prior to commencement of operations by senior drilling supervisor and OIM	To prevent any uncontrolled release of synthetic-based mud (SBM) during drill stem testing (DST) activities, in order to avoid temporary physical smothering and toxic effects on marine fauna and flora, while maintaining safe testing operations, effective containment of fluids, and compliance with applicable environmental protection and operational requirements.	During drill stem testing (DST), uncontrolled release of synthetic-based mud (SBM) shall be prevented by positive isolation of all overboard and diverted discharge lines and formal verification of line-up and isolation prior to SBM displacement, ensuring full containment of SBM in accordance with good oilfield practice, relevant API guidance, and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records demonstrate all overboard and diverted discharge lines were positively locked and isolated prior to and throughout SBM displacement activities.	Evidence confirms diverter and overboard line-ups were physically walked, checked, and verified by the Senior Drilling Supervisor and OIM prior to commencement of SBM displacement.	Records demonstrate SBM displacement was completed without loss of containment or discharge to the marine environment.	Senior Drilling Supervisor Tool Pusher

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			Development of Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that address all risks and contingencies and Emergency response training for the company IMT and CMT and drills conducted to ensure familiarisation with the documents		During drill stem testing (DST), the risk of uncontrolled release of synthetic-based mud (SBM) shall be managed through approved emergency preparedness and response arrangements, including a current Emergency Response Plan (ERP) and Oil Spill Contingency Plan (OSCP) that explicitly address SBM loss-of-containment scenarios, supported by trained and exercised Incident Management Team (IMT) and Crisis Management Team (CMT) personnel, in accordance with good oilfield practice, relevant API guidance, and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records demonstrate approved, current ERP and OSCP documents are in place and explicitly address SBM spill and containment scenarios associated with DST activities.	Evidence confirms IMT and CMT personnel are trained and familiarised with ERP/OSCP roles, SBM spill response actions, and escalation procedures.		WOM OIM Vessel Masters Drilling Superintendent
			Shipboard Oil Pollution Emergency Plan (SOPEP) in place and Drilling Crews familiarised with facility ERP and SOPEP and are familiarised with		During drill stem testing (DST), the risk of uncontrolled release of synthetic-based mud (SBM) shall be managed through an approved Shipboard Oil Pollution Emergency Plan (SOPEP) and effective crew familiarisation with the facility Emergency	Records demonstrate a current, approved SOPEP is available onboard and aligned with the facility ERP and Company OSCP for SBM spill	Evidence confirms drilling and DST personnel are familiarised with SOPEP activation, ERP roles, and OSCP interfaces relevant to SBM		WOM OIM Vessel Masters Drilling Superintendent

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
			the Company OSCP and ERP		Response Plan (ERP) and Company Oil Spill Contingency Plan (OSCP), ensuring prompt, coordinated response to any SBM loss-of-containment event, in accordance with good oilfield practice, relevant API guidance, MARPOL Annex I, and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	scenarios during DST.	loss-of-containment.		
Unplanned	Drilling	Temporary physical and toxic effects of oil on marine fauna and flora / Marine water quality, benthic habitats and biota, marine fauna.	Placing of drip trays and sump trays under engines to contain leaks. Activation of SOPEP	To effectively manage & minimise the consequences of any contained and localised oil spill arising from drilling activities, in order to limit the duration and extent of temporary physical smothering and toxic effects on marine fauna & flora, while maintaining safe operations and ensuring timely response in accordance with applicable environmental protection and spill response requirements.	Any contained and localised oil spill arising from drilling activities shall be prevented from escalating and promptly managed through the use of drip trays and sump trays beneath engines and equipment to contain leaks, together with immediate activation of the Shipboard Oil Pollution Emergency Plan (SOPEP), in accordance with good oilfield practice, relevant API guidance, MARPOL Annex I, and the environmental protection requirements of Decree-Law No. 32/2016 and Ministerial Diploma No. 46/2017.	Records and inspections confirm drip trays and sump trays are installed and correctly positioned beneath engines and oil-containing equipment.	Evidence demonstrates SOPEP is activated promptly for any oil spill exceeding routine housekeeping, with response actions implemented as per plan.		OIM and Vessel Master

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
Unplanned	Drilling	Changes in the marine ecology / Benthic Habitat and Biota, Native Fish Populations, fisheries and Socio-Economic Receptors and Protected areas and Biodiversity Values	MODU and Vessels have an approved ballast water management plan and valid ballast water management certificate that is suitable for entry into Australian Ports	To prevent the introduction and spread of invasive marine species (IMS) through ballast water associated with drilling activities, in order to protect native marine ecosystems and avoid adverse changes to marine ecology, while ensuring ballast water management is conducted safely and in compliance with applicable environmental protection and biosecurity requirements.	Ballast water associated with the MODU and all support vessels shall be managed to meet Australian biosecurity entry requirements, including carriage and implementation of an approved Ballast Water Management Plan and valid Ballast Water Management Certificate (or approved exemption), with records available for inspection, to prevent the introduction of invasive marine species, consistent with Australia's ballast water biosecurity framework under the Biosecurity Act 2015 and the Australian Ballast Water Management Requirements administered by the Australian biosecurity authority (formerly AQIS, now within DAFF).	Records demonstrate the MODU and all support vessels hold a current, approved Ballast Water Management Plan and valid Ballast Water Management Certificate (or approved exemption) acceptable for Australian port entry, with documentation available for inspection.	Evidence confirms ballast water operations are conducted in accordance with the approved plan and Australian biosecurity requirements (e.g. exchange, treatment, or discharge controls as applicable).	Records demonstrate no Australian biosecurity non-compliances, detentions, or corrective actions related to ballast water management.	WOM
		Changes in the marine ecology / Benthic Habitat and Biota, Native Fish Populations, fisheries and Socio-Economic Receptors and	SGBU has a Biofouling Management Plan (BMP) that is a requirement under Australian Legislation for vessels entering and exiting Australian waters and that provides	To prevent the introduction and establishment of invasive marine species (IMS) through biofouling on MODU and support vessel hulls during drilling activities, in order to protect native marine	The introduction of invasive marine species (IMS) via hull biofouling shall be prevented by ensuring the MODU and all support vessels implement and comply with an approved Biofouling Management Plan (BMP) that meets Australian biosecurity requirements administered	Records demonstrate the MODU and all support vessels have an approved BMP compliant with Australian biofouling requirements and have	Evidence confirms a Biofouling Record Book is maintained and updated in accordance with the Biosecurity Amendment (Biofouling Management)	Records demonstrate no Australian biosecurity non-compliances, detentions, or corrective actions related to hull biofouling.	WOM

Aspect	Source of Impact	Potential Environmental Impact / Receptors	Existing / Planned Controls Measures	Performance Objective	Performance Standard	Measurement Criteria			Responsible Person
						Measurement Criteria (1)	Measurement Criteria (2)	Measurement Criteria (3)	
		Protected areas and Biodiversity Values	all controls and that all vessels will be audited against prior to Operations. Records to be retained within a biofouling record book in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements and in Timor Leste through the relevant regulatory jurisdiction	ecosystems and avoid adverse changes to marine ecology, while maintaining safe marine operations and compliance with applicable biosecurity and environmental protection requirements.	by Australian Quarantine and Inspection Service (now DAFF), including pre-operation vessel audits, maintenance of a Biofouling Record Book in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021, and retention of records for inspection. Controls shall be applied consistently for vessels entering or exiting Australian waters and aligned with applicable Timor-Leste regulatory requirements, in accordance with good marine practice and relevant API guidance.	undergone audit prior to operations.	Regulations 2021 and Australian biofouling management requirements, with records retained and available for inspection.		

10. Governing Parameters

This chapter sets out the general governing parameters accepted as International Guidelines and practices for air, noise, and light emissions. Additionally, the parameters for drilling discharges, wastewater, sewage, cooling, brine, ballast, solid waste discharge, etc. in offshore oil and gas projects are given in Table 29.

Table 29 International Guidelines for Air Emission, liquid, solid waste discharge for Oil and Gas Offshore Development

Aspects	Guidelines
MODU, machinery engines release of emissions – Air Emission	**International Air Pollution Prevention (IAPP)** • Certificate in accordance with Marine Orders – Part 97: Marine Pollution Prevention - Air Pollution. Marine Pollution Prevention (MARPOL) Annex VI • limits for open water are set: • Sulphur (SO_X) content: 0.50% m/m • NO_x emission: 14-17g/KWh • No limit values for CO_2 and GHG emissions, however the 2021 amendment to Annex VI includes mandatory measures to improve ships' energy efficiency and reduce GHG emissions.
Discharge of WBM drill cuttings and fluids to the seabed during riserless drilling	**OCNS Offshore Chemical Notification Scheme.** • All chemicals will be selected to be least hazardous and will have an OCNS rating of D or E or a Hazard Quotient (HQ) rating of Silver or Gold (in accordance with the OCNS) **IFC (2015) EHS Guidelines – Offshore Oil and Gas Development** • WBM cuttings discharge to the sea if facility is located beyond 2.6NM from shore
Discharge of drill cuttings and residual SBM	**OCNS Offshore Chemical Notification Scheme.** • All SBM, will be selected to be least hazardous and have an OCNS rating of D or E or a Hazard Quotient (HQ) rating of Silver or Gold in accordance with OCNS. **IFC (2015) EHS Guidelines – Offshore Oil and Gas Development** • Maximum residual NADF (C_{12}-C_{14} ester or C_8 ester) 9.4% on wet cuttings
Discharge of blowout preventer fluids during BOP operations testing	**OCNS Offshore Chemical Notification Scheme.** • OCNS rating of D or E or a Hazard Quotient (HQ) rating of Silver or Gold in accordance with contractor hydraulic fluid selection process, OCNS Offshore Chemical Notification Scheme.
Supply Vessel collision with a release of hydrocarbons (<80m3)	**Marine Order 30 (Prevention of collisions) 2016 - AMSA** • Vessels will be equipped with approved navigation systems in accordance with Marine Orders – Part 30: Prevention of Collisions, Issue 8, including measures relating to operations with other vessels.

Aspects	Guidelines
Cooling water	**IFC (2015) EHS Guidelines – Offshore Oil and Gas Development** • The effluent should result in temperature increase of no more than 3°C at edge of the zone where initial mixing and dilution take place/ where the zone is not defined, use 100m from point of discharge.
Brine Water	**IFC (2015) EHS Guidelines – Offshore Oil and Gas Development** • Where practicable, commingled with other waste.
Produced Formation Water (PFW)	**IFC (2015) EHS Guidelines – Offshore Oil and Gas Development** • Reinject or discharge to sea is allowed if oil and grease content does not exceed 42mg/L daily maximum, **Protection of Sea (Prevention of Pollution from Ships) Act 1983 (MARPOL Annex I)** • Oil and grease concentration of the oily effluent discharge from ships should be below 15ppm.
Sewage discharge within Timor Sea EEZ or in international water	**Protection of Sea (Prevention of Pollution from Ships) Act 1983 (MARPOL) (Part IIIB, Division 2, Section 26D – Prohibition of discharge of sewage into the sea)** • Sewage from MODU and supporting vessels should be treated either by sewage disinfection system or a sewage holding tank. • Discharge of the sewage are prohibited except the sewage has been treated using an approved system at a distance of more than 3nm from the nearest land. • Discharge of untreated or disinfected sewage only permitted at a distance of more than 12nm from the nearest land. • Where the sewage has been stored in holding tanks, the sewage is not discharged instantaneously but is discharged at a prescribed rate when the ship is proceeding on route at a speed of not less than 4 knots. • The effluent does not produce visible floating solids in the waters of the sea and does not cause discoloration of the waters of the sea.
Solid domestic and food wastes discharge within Timor Sea EEZ or in international water	**Protection of Sea (Prevention of Pollution from Ships) Act 1983 (MARPOL) (Part IIIC – Section 26F- Prohibition of disposal of garbage into the sea)** • No onboard disposal of plastic waste is allowed (plastics includes synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products that may contain toxic or heavy metal residues); and • Untreated food waste may be discharged to sea at a distance more than 12 nautical miles from the nearest land • For onboard disposal of the garbage, the garbage has to be passed through a macerator so that it is capable of passing through a screen with no opening wider than 25mm; and the disposal occurs when the ship is at a distance 3-12NM from the nearest land.

Aspects	Guidelines
Ballast water	**Australian Ballast Water Management Guidelines** • In accordance with Australian Ballast Water Management Guidelines and Australian Department of Agriculture, Fisheries and Forestry (DAFF); and • The discharge of high-risk ballast water in Australian ports or waters is prohibited.
Bilge water	**Protection of Sea (Prevention of Pollution from Ships) Act 1983 (MARPOL) (Part II, Section 9 – Prohibition of discharge of oil or oily mixtures into sea)** • Oil and grease concentration of the oily effluent discharge from ships should be below 15ppm.
Bilge water discharge and contaminated brine containing SBM Deck Drainage (non- hazardous and hazardous drains)	**Protection of Sea (Prevention of Pollution from Ships) Act 1983 (MARPOL) (Part II, Section 10 – Prohibition of discharge of oil residues into sea), MARPOL Annex I (as appropriate for vessel classification) Regulation for the Prevention of Pollution by Oil.** • Oil and grease concentration of the oily effluent discharge from ships should be below 15ppm.
Noise pollution	**National Marine Fisheries Service (NMFS 2018)**. • Non-impulsive (continuous drilling / vessel noise) o Low-frequency cetaceans (baleen whales): 199 dB o Mid-frequency cetaceans (dolphins, most toothed whales): 198 dB o High-frequency cetaceans (porpoises): 173 dB o Pinnipeds in water (seals, sea lions): 201 dB **Occupational Safety and Health Administration (OSHA)** • Permissible exposure limit of 90dBA for 8 hours • Hearing protection is required when noise exposure equals or exceeds 85dBA
Light Pollution	**Convention on the International Regulation for Preventing Collisions at Sea (COLREGS 1972) – Rule 22, 23, 24, 27, 30** • Navigation lights must be displayed for vessels including offshore unit, to avoid collisions. **International Convention for the Safety of Life a Sea (SOLAS 1974)** • SOLAS focuses on ship safety and complements COLGREGS. • Safety and emergency (helideck, escape routes, muster areas, emergency power). • COLREGS and SOLAS lights cannot be turned on or shielded. • Light pollution management applied to non-mandatory lighting, such as: o Deck floodlights can be shielded, dimmed or switched off when not in use. o Decorative or convenience lighting should be eliminated. o Flaring should be limited to well testing period only.
Note: In the absence of international accepted regulations for discharge from the MODU, discharge limits/guidelines as stipulated in MARPOL have been adopted for screening criteria for this Project.	

Table 30 WHO Air Quality Guidelines, 2021

Parameter	Averaging Period	Guideline Value
Carbon monoxide (CO)	24-hour	4mg/m3
Sulphur Dioxide (SO2)	24-hour	40 µg/m3
Nitrogen Dioxide (NO2)	1-year	10 µg/m3
	24-hour	25 µg/m3
Ozone	6-month high ozone month	60 µg/m3
	8-hour	100 µg/m3
Particulate Matter (PM10)	1-year	15 µg/m3
	24-hour	45 µg/m3
Particulate Matter (PM2.5)	1-year	5 µg/m3
	24-hour	15 µg/m3

The parameters for marine water quality and sediment quality are set out from default guideline values (DGVs) of ANZG (2018) Default Guideline Values (DGVs).

Table 31 ANZG (2018) water quality DGV and baseline data from EBS.

Parameter	Unit	ANZG (2018)	Baseline Data
pH	-	8.0-8.4	8.21-8.26
Salinity	ppt	30-36	34.05-34.19
Temperature	°C	27.6-32	28.77-30.29
Conductivity	µS/cm	50,000-53,000	51,990-52,147
Dissolved Oxygen (DOsat)	% Saturation	90 (surface), 80-85 (near bottom)	83-94
Turbidity	NTU or FNU	<10 for dry season	0.06-0.26
Dissolved Metals (95% SPL)			
Arsenic (As)	µg/L	12	1.8
Silver (Ag)	µg/L	-	<100
Barium (Ba)	µg/L	-	20
Cadmium (Cd)	µg/L	2	0.6
Cobalt (Co)	µg/L	1	0.06
Copper (Cu)	µg/L	1.3	0.4
Chromium (Cr)	µg/L	-	0.7
Iron (Fe)	µg/L	540	40
Lead (Pb)	µg/L	4.4	2
Manganese (Mn)	µg/L		<5
Mercury (Hg)	µg/L	0.4	<0.1
Nickel (Ni)	µg/L	7	1
Antimony (Sb)	µg/L	-	1
Selenium (Se)	µg/L	-	1
Zinc (Zn)	µg/L	8	4

Parameter	Unit	ANZG (2018)	Baseline Data
Total Recoverable Hydrocarbon (TRH)	mg/L	-	<5
Chlorophyll-a	mg/L	0.001	<0.001
Oil and Grease	mg/L		9
Sulphur	mg/L	-	1300
Total Suspended Solid (TSS)	mg/L or ppm	5	22

The baseline data for water quality is tabulated with the ANZG (2018) because the DGVs is a trigger values which is adjusted with the baseline data. However, the baseline data here is taking from the maximum data collected during EBS in January 2025. Similar approach is used for table 32 of sediment quality.

Table 32 ANZG (2018) Sediment quality DGV and baseline data from EBS.

Parameter	Unit	ANZG (2018)	Baseline Data
Moisture	%	-	44
Oil and Grease	mg/kg	-	690
Sulphur	mg/kg	-	6100
TRH C10-C36	mg/kg	-	480
TOC	%	-	11
Dissolved Metals			
Aluminium (Al)	mg/kg	-	8500
Antimony (Sb)	mg/kg	2	56
Arsenic (As)	mg/kg	20	6.3
Cadmium (Cd)	mg/kg	1.5	<1
Chromium (Cr)	mg/kg	80	26
Cobalt (Co)	mg/kg	-	<5
Copper (Cu)	mg/kg	65	7.8
Iron (Fe)	mg/kg		16000
Lead (Pb)	mg/kg	50	5.3
Manganese (Mn)	mg/kg	-	200
Mercury (Hg)	mg/kg	0.15	<0.1
Nickel (Ni)	mg/kg	21	15
Selenium (Se)	mg/kg		<5
Silver (Ag)	mg/kg	1	<1
Vanadium (V)	mg/kg	-	18
Zinc (Zn)	mg/kg	200	15

11. Environmental Monitoring Program

11.1 Environmental Management Induction Program

Prior to the commencement of work on site, a project specific induction program will be developed and implemented for the appraisal drilling program. The program will incorporate all the practical environmental issues that could influence either the behaviour of individuals or the standards of environmental performance of the appraisal drilling activity.

The training program will include a site induction briefing prior to starting work on site to clearly identify the environmental commitments and individual duties and responsibilities while doing works as well as to highlight any potential health, safety and environmental issues. Topics to be covered in the induction program include the importance of implementation of best environmental management practices and housekeeping requirements to minimize potential impacts to the marine environment as well as disturbance to the social environment particularly at the onshore logistic points, guidance on how to avoid disturbing the aforementioned and pertinent mitigation measures.

The drilling and service contractors shall provide site workers with all necessary personal protective equipment (PPE) and shall take necessary precautions in the movement and operation of machinery within the site for the safety of both workers and other existing mariners.

The SGBU Senior Drilling Supervisor will ensure that records of all site inductions are documented and maintained. Proper documentation of training records is required in order to monitor the level of relevant competency and appropriateness of the skilled employees, suitable training programs, and adequate supervision for the site works.

11.2 Environmental Monitoring Program

The environmental monitoring requirements for the proposed appraisal drilling program are provided in this section. Generally, two types of monitoring program are proposed namely, environmental performance monitoring and environmental quality monitoring.

11.2.1 Environmental Performance Monitoring

Environmental performance monitoring focus on measuring and evaluating the effectiveness of environmental management practices, mitigation measures and compliance with environmental regulations and SGBU procedures during operations. This system applies to the drilling procedures and the operation of the MODU. The proposed environmental performance monitoring activities are based on the environmental performance objectives, standards, and measurement criteria discussed in section 9 of this EMP.

Table 33 presents an indicative example only of what the proposed inspection program of environmental performance monitoring and review may cover, notwithstanding that as a minimum, activities where there is a performance standard and measurement criteria, these activities will be checked and verified. All specific and final details of the audit and assurance program will be detailed in the Audit and Assurance Procedure (SGBU-GEN-HSSE-0049) and specific activities are addressed in the HSE and Operational Audit Schedule (SGBU-1916-HSSE-0021).

Table 33 Environmental Management practices performance monitoring

Aspect / Activity	Activity / Inspection[2]	Records[3]	Frequency	Responsible Person
MODU Positioning, orientation and deployment of spud cans		Records demonstrate the MODU has been positioned in the pre-planned location	Once prior to spud	Senior Drilling Supervisor
Drilling	Support vessels maintain the 500m radius of exclusion zone	Publish the exclusion zone in local newspapers and national television	Once prior to spud	Country Manager
		Approval of MODU and support vessels to enter PSC area and Timor-Leste water	Once prior to mobilization	Drilling Superintendent
	Watch keeping on the bridge of the MODU and support vessels on location	Location and activity of MODU, support vessels and helicopter	Daily	OIM
Drilling operations – Drilling Mud	Operational log inspection based on daily drilling report.	• Total volume intake to jack-up rig for each month. • Total volume unused / in storage on board at the end of each month. • Total volume used and/or discharged into sea each month. • Sampling of oil-on-cuttings for SBM prior to discharge into the sea	Daily	Senior Drilling Supervisor
Drilling operations – Cooling Water and Brine discharge	Operational log inspection based on daily drilling report.	• Engines are maintained to OEM recommendations	Monthly	Senior Drilling Supervisor
Drilling Operations	All company vessels to report marine fauna sightings	• Record of marine fauna sighting completed by the person who made the observation	When sighted	Senior Drilling Supervisor
MODU, helicopter operations, and support vessel operations- Air emission	Operational and maintenance logs	• Total volume of fuel consumed for each month	Daily	Drilling Superintendent

[2] The inspection scheduled is proposed for internal implementation by SGBU on the MODU
[3] The total volume to be summarized at the end of each month. This summary will be provided to ANP upon completion of the drilling campaign.

Aspect / Activity	Activity / Inspection[2]	Records[3]	Frequency	Responsible Person
		• Total trips/flight schedule for helicopter operation		
Well Test – Air emission	Operational and maintenance logs for flaring equipment	• Well test checklist • Approval of high-efficiency flare burner design • Total volumes flared, characteristics of the gas from the well site and gas composition • Total volume dropout/unburned gas	On commencement of flaring and daily during flaring.	Well Test Supervisor
	Operational and maintenance logs for handheld gas detection devices	• Total numbers available and ready for use • Leakages detected	As determined by the Well Test Supervisor in the well test program	Well Test Supervisor
Well Test – PFW	Operational and maintenance logs	• Duration of flow recorded • Estimate of flow rate recorded	Daily	Well Test Supervisor
Cement Returns	Monitor cement discharge	• Total discharge volume calculated	End of well	Senior Drilling Supervisor
Drilling operations – Fuel Consumption	Operational inspection and log based on daily report	• Total volume intake to MODU. • Total volume unused / in storage on board at the end of each month. • Total volume consumed for each month. • Sulphur fuel content	Daily	Barge Captain
Chemical and hazardous materials for drilling muds	Operational inspection of the storage area, management and transfer procedures and recorded in the daily mud report.	• Total volume intake to MODU • Total volume unused / in storage at the end of each month.	Daily	Mud Engineer
Hazardous waste (used paint, contaminated waste, used chemical, etc.)	Inspection of storage area and hazardous waste log	• Total volume of hazardous wastes generated and stored for each month. • Total volume of hazardous wastes transferred for onshore disposal for each month.	Every return cycle of a vessel with waste returns	Logistic Manager

Aspect / Activity	Activity / Inspection[2]	Records[3]	Frequency	Responsible Person
Laboratory and Medical Waste	Inspection of laboratory and medical waste area	• Volume of laboratory and medical waste each month • Accident/incident log	Every return cycle of a vessel with waste returns	Logistic Manager
Sewage (Grey and Blackwater)	Inspection for the sewage treatment facility	• Volumes of grey and black water discharged	As per the MODU frequency schedule	Barge Captain
Other liquid waste	Inspection of oil-water separator	• Total volume of waste discharge into the sea • Sampling of oil-in water content	As per the MODU frequency schedule	Barge Captain
Food waste	Best management practices and log maintenance.	• Volume of food waste generated and discharged into the sea for each month. • Maintenance log for macerator	As per the MODU frequency schedule	Barge Captain
Solid waste/garbage (plastic, glass, paper, etc.)	Best management practices and log maintenance	• Total volume of garbage generated and stored. • Total volume of garbage transferred off the MODU	Every return cycle of a vessel with waste returns	Logistic Manager
Surface gas leaks	Deploy ROV for bubble watch	• ROV deployment for bubble watch	Daily during 17½" hole	Drilling Superintendent
Oil Spills	Verification audit in accordance with DL32 Article 35 against SCE and performance standards on the MODU	• Audit Report	Once prior to drilling	Third Party
	Test and maintenance on the BOP	• Well control events log • Test and maintenance log for BOP	As per the agreement in the well control bridging document or as per the MODU standard and procedure	Drilling Superintendent
	Vessel supports inspect the 500m radius of exclusion zone	• Record of 500m exclusion zone breach	Incident Report	Vessel masters

Aspect / Activity	Activity / Inspection[2]	Records[3]	Frequency	Responsible Person
	Tanks, hose and couplings inspection and maintenance	• Inspection and maintenance logs	Weekly and/or prior to hydrocarbon transfers	Drilling Superintendent
	Inspection and maintenance on all main power systems	• Maintenance log	Weekly	Drilling Superintendent

11.2.2 Environmental Quality Monitoring

Environmental Quality Monitoring has been undertaken to establish baseline water quality, sediment quality and infauna, and benthic habitat conditions and is described in Appendix 1 to 5 of the EIS. The purpose of this survey was to document baseline conditions to compare with any future monitoring.

The EBS was conducted in January 2025 and covers an area extending 1km from the Chuditch-2 well site, excluding waters within the Australian Exclusive Economic Zone (EEZ) and the Oceanic Shoals Marine Park. The sampling locations include the well site, relief well sites, and additional sites at prescribed distances based on drilling cuttings and mud dispersion modelling. This sampling design covers the potential environmental impact areas and confirms baseline status of water, sediments and benthic habitats. The details of the EBS conducted are provided in the approved scope of Chuditch-2 Environmental Baseline Study Report number AU213017880.001 dated 26 September 2024. The survey for Chuditch-2 Environmental Baseline Study (EBS) survey was conducted from 26 to 31 January 2025 and report dated March / April 2025. The report is provided in Appendix 1 to 5 of the EIS.

A second environmental monitoring survey is proposed to occur after drilling has been completed and before the MODU demobilises from site. The primary objective of an environmental monitoring program after drilling is to determine the extent of drill cuttings and disturbance to the seabed in the vicinity of the MODU. The sampling will be conducted using methods and the sampling design as was used for the baseline survey and sampling locations will be informed by sediment plume modelling. The outcome of the environmental monitoring will be compared with baseline data gathered during EBS, which presented in description of the existing environment.

The scope of the monitoring program will be agreed with ANP prior to drilling. SGBU envisage that the monitoring plan will employ a similar sampling design and analysis techniques as employed during the recent environmental baseline survey for water quality, sediment sampling and video transects so as to obtain comparative samples assessments of impacts.

12. Reporting Requirements

12.1 Surveillance Audit Program

The objective of the surveillance audit program is to:

- Verify impacts and risks are effectively managed.
- Ensure relevant standards and procedures are being implemented.
- Demonstrate compliance with regulatory requirements, approval commitments and conditions within the EMP.
- Check EMP implementation by various parties involve in the appraisal drilling activities.

This is critical to verify that environmental controls are incorporated in the project planning stage, implemented on site and in the closure and any required rehabilitation activities. The findings of the surveillance audit program are useful to improve EMP implementation and will be used to verify the need for revision of the EMP and monitoring program, if deemed necessary. Three phases of surveillance are proposed for the appraisal drilling program in table 34. All surveillance activities are governed under the Audit and Assurance Procedure (SGBU-GEN-HSSE-0049) and specific activities are addressed in the HSE and Operational Audit Schedule (SGBU-1916-HSSE-0021)

Table 34 Proposed three phases of surveillance audit programs

Stage	Focus	Schedule
Planning stage (Pre-drilling Audit)	The objective of the audit is to verify whether appropriate planning is in place before the commencement of the exploratory activities. The audit primarily includes inspection on compliance to various environmental related approval requirements, agency/ stakeholders' notification/consultation, if required, provision of the necessary control measures/ equipment/ tools on board, etc.	Before the start of the drilling program
Drilling stage (Drilling Audit)	The objective of the audit is to verify the implementation of EMP during the drilling operation. The audit primarily focuses on the compliance of environmental practice implementation to evaluate the level of compliance against the EMP requirements, to identify area for improvement, to review the appropriateness/ efficiency of mitigation measures employed and to recommend or suggest additional mitigation measures, if deemed necessary.	During drilling of the Chuditch-2 appraisal well.
Demobilization stage (Demobilization Audit)	The objective of the audit is to monitor and verify waste disposal management in compliance with the EMP requirements, removal of materials and equipment from drilling site and to verify environmental damage, if any, is rehabilitated to an acceptable level.	Upon completion of the Chuditch-2 appraisal well.

The surveillance audit will encompasses the following main elements:

- Review of environmental requirements for the appraisal drilling activities
- Review of relevant documentation and records
- Physical inspection of sites and operations
- Discussion on ambiguous information, facts and data with the person in charge.

12.2 Management of non-conformance and corrective action

All incidents are reported in accordance with the SGBU Incident Reporting and Investigation Procedure. Root cause analysis of incidents is performed to determine the cause and aid identification of appropriate corrective actions.

Monitoring and measurement are planned in accordance with the Audit and Assurance Procedure which also details how non-conformances will be addressed.

12.3 Records and communication

The findings from the surveillance audit program will be recorded and reported as per table 35. The report will be made available to all parties involved in the project and a copy will be submitted to ANP. Any non-conformance recorded from the surveillance audit program will be dealt with in accordance with the Audit and Assurance Procedure (SGBU-GEN-HSSE-0049) so as to identify and understand the non-conformance and actions considered and implemented to ensure controls are in place.

SGBU will also ensure that the Daily Drilling Report (DRR) has a detailed section on HSE activities and issues and relevant environmental management practices monitoring activities.

All incidents will be investigated and reported in accordance with the Incident Management Procedure (SGBU-GEN-HSSE-0011)

In accordance with Decree Law No. 32/2016 Article 143 all records, including the above-mentioned reports, will be kept for a minimum of 5 years.

Table 35 Records, Reporting and Communication

Item	Records and Reporting	Frequency	Submission Requirement
1	Environmental Quality Monitoring Report	EBS Technical report and drilling phase environmental monitoring report.	ANP
2	Environmental Surveillance Audit Report	Pre-Mobilisation Surveillance Audit Report During Drilling Surveillance Audit Report Demobilisation Surveillance Audit Report	ANP
3	Daily Drilling Report	Daily	ANP
4	Environmental management practices monitoring records	As part of daily operation procedures (for SGBU's internal records only)	NA
5	Other relevant environmental report such as oil spills or other environmental incident reports, etc.	2 weeks after the incident if the oil spill is not significant.	ANP
6	End of campaign environmental performance report	End of campaign environmental performance report will contain a summary of the environmental performance of the appraisal drilling and well testing campaign to determine whether the EPO's and standards for the appraisal drilling campaign as detailed within this EMP have been met.	ANP

13. Responsibilities for Mitigation and Monitoring

The roles and responsibilities for implementation of the mitigation measures are provided in Section 9. Table 33 in Section 11 outlines the performance monitoring through inspections and reporting.

14. Emergency Plan

SGBU Integrated Management Systems includes the Chuditch-2 Emergency Response Plan (ERP) which has been developed in line with the Incident Management System for the Oil and Gas Industry, good practice guidelines for incident management and emergency response personnel (IOGP and IPIECA, 2023).

This ERP outlines the emergency response procedures for SGBU operations and activities conducted in the Chuditch field. This includes providing for a functioning Incident Management Team (IMT) and Crisis Response Team (CRT) and the Facility, Support Craft and Supply Base organisations having a like for like response structure.

The drilling campaign bridging document will bridge to the MODU, support vessel and helicopter providers. The Supply Base will be managed under that facilities ERP but will interface with the SGBU IMT. Each organisation including the principal contractor shall maintain a response structure (Emergency Response Team) at the potential source of an event and:

- A fully functioning Incident Management Team (ERT)
- A fully functioning Crisis Response Team (CRT)

The Objectives of the Chuditch-2 ERP is to ensure that the systems and processes used by SGBU, Vessel, Supply Base, Helicopters, and Support Craft Operators in an emergency are focused on:

People

- Protecting people.
- Treating the injured and warning personnel / public to avoid further casualties.
- Evacuate or shelter people from the effects of an emergency.

Environment

- Protecting the environment.
- Preventing further contamination to the environment.

Assets

- Protection of assets.
- Help protect the basis of our operations and the community it seeks to serve if there is a release from a SGBU operated facility.

Reputation.

- Protect SGBU reputation.

Table 36 Primary and support emergency functions

Emergency Event Description	Primary Responsibility	Support Responsibility
General emergency on the MODU (Fire, major injury, etc.)	Drilling Contractor	SGBU
General emergency within the 500m exclusion zone (man overboard, helicopter ditching, etc.)	Drilling Contractor	SGBU
Emergency event with drilling and intervention equipment, including BOP and risers	Drilling Contractor	SGBU
Emergency event - Well integrity (below the Wellhead)	SGBU	Drilling Contractor
Emergency event - Well blow out/loss of well control event	Drilling Contractor	SGBU
Oil or chemical spill contained on-board MODU	Drilling Contractor	SGBU
Oil or chemical spill overboard into ocean	SGBU	Drilling Contractor
Helicopter incident, ditching or missing offshore	Helicopter Contractor	SGBU
Helicopter incident on or near the MODU	Drilling Contractor	SGBU and Helicopter Contractor
Contracted Vessel emergency inside MODU 500m zone	Vessel Contractor	Drilling Contractor
Contracted Vessel emergency outside MODU 500m zone	Vessel Contractor	SGBU
Emergency event – Darwin Supply Base	Supply Base Operator	SGBU

SGBU Incident Command structure and the Incident Command System (ICS) is a standardized approach to the command, control, and coordination of emergency response providing a common hierarchy within which responders from multiple agencies can be effective. Incident Command structure is organized in such a way as to expand and contract as needed by the incident scope, resources and hazards.

14.1 Integrated Management System

SGBU Integrated management Systems has a tiered response. In the event of an emergency, the OIM is responsible for the initial situation assessment and emergency response. Both the rig contractor and SGBU classify emergencies into Levels 1, 2 and 3, according to the consequence of each emergency and its potential to escalate. Where there is doubt regarding the exact level of an emergency, the higher classification will be used until a definitive classification can be made by the OIM. Table 37 provides guidance and assistance in determining the incident response level and classification.

Table 37 Provides guidance and assistance in determining the incident response level and classification

Response Level	Incident Management and Emergency Response		
Criteria	**Incident Level 1**	**Major Incident Level 2**	**Emergency Incident Level 3**
Definition	Can be rectified using existing business as usual (BAU) processes and resources	Requires escalated and coordinated response with enhanced stakeholder communications	Requires special mobilization and organization of resources well beyond BAU
Coordinated By	MODU ERT	MODU ERT Activated and SGBU IMT IC Advised	SGBU IMT activated – CEO Advised CMT Leader Advised / Activated
Delegation	MODU ERT is responsible with additional company support as required	SGBU IMT IC responsible with functional roles activated	CMT Leader responsible with functional roles activated
Resources	Site response & local resources (potentially with or without SGBU IMT support	Additional management expertise and resources (potentially with SGBU IMT support)	Company-wide resources available including support Aust EMT
Primary internal document reference	Drilling Contractor Offshore Emergency response document and OSCP	SGBU Emergency Response Bridging Document and OSCP	SGBU Crisis Management Plan and OSCP

15. Decomissioning Plan

The planned sequence of operations is presented in the estimated project execution timeline detailed operation breakdown for appraisal well drilling in table 5 of the EIS.

The planned sequence of operations is:

- Mobilize the jack up MODU to the Chuditch-2 well location. Position, pre-load and jack up to the planned air gap height above MSL. Skid out cantilever and prepare for well spud.
- Drill 17½" hole combined with Measurement While Drilling (MWD / Logging While Drilling (LWD)) to planned section Total Depth (TD) using Sea Water, pumping 50bbls Hi-vis sweeps every half stand. At section TD, the hole will be circulated clean and displaced with 9.5ppg Potassium Chloride (KCL) / Polymer mud prior to running casing. The Remotely Operated Vehicle (ROV) will be launched to monitor for gas bubbles and returns to seabed.
- Run 13⅜" casing with the compact housing off). Install casing clamp, activate the tensioning unit and land the casing string on the tensioning unit. Cement 13⅜" casing with full bore cement head. Disconnect compact housing running tool. Retrieve and layout the casing landing string. Install Blow Out Preventer (BOP) adaptor/BOP and pressure test connection between BOP and compact housing (The full BOP test will have been conducted offline). Run wear bushing.
- Make up and Run In Hole (RIH) 12¼" Bottom Hole Assembly (BHA) to tag cement. Drill out the 13⅜" shoe track and 3m into new formation and conduct Formation Integrity Test (FIT).
- Drill 12¼" hole c/w MWD/LWD to well TD using SBM with mud weight in the range of 9.5-9.8ppg (TBC). At the TD of well, circulate hole clean and Pull Out Of Hole (POOH) for logging.
- Wireline logging will be performed over the 12¼" open hole section as per program.
- A 9⅝" casing string will be run and cemented in place; top of cement will be placed at 100m above 13⅜" shoe. Disconnect 9⅝" casing hanger running tool and layout landing string. Run and install 9⅝" pack-off assembly inside the compact housing and pressure test.
- Run wellbore clean out tools. Clean and circulate well until clean including BOP ram cavities. Displace well to NaCl packer fluid. POOH.
- Rig up wireline. Run Cement Bond Log (CBL) tools and POOH. Rig down wireline.
- Run guns and DST string. Set DST packer and pressure test. Fire the guns and perform well testing as per program.
- Kill the well and pull DST string.
- Set cement plugs, cut casing and recover wellhead/BOP for the well abandonment as per the program.
- Prepare for the MODU move off location.
- Demobilize the MODU.

15.1 Rig Move

In Q2 2026, based on the current rig schedule, the rig will be towed to location and positioned over the programmed well centre. Following soft pinning and pre-load operations, the rig will jack up to the approved air gap of approximately 15-18m above mean sea level and begin to rig up, take on extra personnel, equipment, fluids and chemicals in preparation for spudding the well.

15.2 Drilling

The Chuditch-2 well will target the Plover Formation to appraise the gas discovery encountered by Shell on the Chuditch-1 well. Its primary goals include confirming thicker gas pay in an upward

direction from the original well toward its bounding fault and conducting a Drill Stem Test (DST) to assess the field's production potential.

15.3 Drill String Test (DST)

SGBU plans to perform DST on the expected gas-charged Plover reservoir interval in the Chuditch-2 appraisal well.

15.4 Plug and Abandonment

Upon completion of drilling activities, the well will be plugged and abandoned where a bridge plug or high viscosity pills will be installed in conjunction with cement slurries to ensure that higher density cement does not fall in the wellbore.

15.5 Post Well Survey

The ROV will be deployed and conduct a post well survey in the vicinity of the well to ensure no dropped equipment or other object is left on the seabed. Video transects are downloaded to a separate storage device and made available for use in post project environmental monitoring if required and/or used in environmental monitoring reporting.

15.6 Rig down and Rig Move

The MODU then rigs down equipment, jacks down to the water and retracts the legs in a pre-planned sequence. The tow vessel takes tension on the bridle and moves the MODU off location.

16. Capacity Development and Training

The framework for petroleum exploitation in Timor-Leste was set in 2005 (Law No. 13/2005). The general framework in the Act is then elaborated further in various decree laws, for example in public tendering, policy and guidelines for administration and monitoring of Timor-Leste Content, and the award of petroleum contracts. Specific provisions are set in the Timor-Leste Content to include proposals for training of and giving preference in employment in the Petroleum Operations to, nationals of Timor-Leste, and the procurement of goods and services from persons based in Timor-Leste to stimulate development of local suppliers of goods and services and the Timor-Leste economy.

Job creation is critical for the stability and long-term development of Timor-Leste. This effort will provide a strong economic growth, consistent and supportive of macroeconomic policies, competitive wages, support private sectors, local involvement, and competitive and skilled workforce. From the stakeholder's consultation, training to upgrade and enhance skills, equal opportunities and access to skills for men and women, also the matchmaking between the training and actual employment prospects are important for Timorese so they will be able to compete with foreigners.

SGBU will train local workers in Timor-Leste, keep records of where workers are employed and training conducted with these workers.

16.1 Induction and Offshore Certification Requirements

There will be Safety Training and Induction for all working offshore to raise awareness of the increased safety risk and provide them with skill and knowledge to deal with offshore emergencies. An environmental and safety induction will be undertaken with crew members prior to commencement of any drilling-related operations. Items that will be covered include:

- General offshore safety training.
- Regulatory requirements for drilling operations.
- Environmental considerations and special procedures to be used for environmental protection in the permit area.
- Safety procedures with regard for appropriate conduct on the MODU and safe use of equipment.
- Permit to work training
- Safety Case training

16.2 Local Content

Due to the brevity of the drilling campaign, the level of experience and skill required to fulfil offshore positions and the lack of suitably qualified Timorese personnel, there is limited opportunity for local employment and training during the 44-day Chuditch-2 appraisal well campaign.

17. Public Consultation and Information Disclosure

The public consultation for a Category A project, such as Chuditch-2 Appraisal Drilling is a requirement per Decree Law No. 39/2022 first amendment of Decree Law No. 5/2011 of Environmental License, for environmental assessment involving the preparation of the Environmental Impact Statement (EIS) and Environmental Management Plan (EMP). This requirement is aimed at addressing the public's concern, understanding, and acceptance of the project, especially on how the project may affect them positively and/or negatively.

17.1 Purpose of the Consultation

Public Consultation process for the Environmental Impact Assessment (EIA) is carried out in accordance with the Ministerial Diploma No. 47/2017 for the Regulation on the Public Consultation Procedures and Requirements during the environmental assessment process. Based on the aforementioned Ministerial Diploma, the objective of the Public Consultation is to disseminate information on the result of Environmental Baseline Survey (EBS) as part of EIA and Environmental Management Plan.

17.2 Methodology and Approach

The methodology and approach for this public consultation:

17.2.1 Methodology

- Preparation includes date and venues, invitation, coordination, and presentation materials.
- Identification of Stakeholders:
  1. *Autoridade Nacional do Petróleo (ANP);*
  2. Ministry of Petroleum and Mineral Resources (MPRM);
  3. Ministry of Tourism and Environment;
  4. *Unidade de Policia Maritima (UPF-PNTL);*
  5. *Unidade Policia Esplosivo;*
  6. *Autoridade Maritima Nacional;*
  7. *Direcção Nacional de Transporte e Maritima;*
  8. *Gabinete das Fronteiras Tereste e Maritima;*
  9. *Asosiasaun Peskan no Marina Timor-Lorosa'e (APM-TL);*
  10. Port Custom (Ministry of Finance);
  11. Port Authority (APORTIL);
  12. Ministry of Agriculture and Fisheries (MAF);
  13. *Forca Componente Marinha/Naval de Falintil Forca da Defesa de Timor-Leste (F-FDTL)*
  14. Ministry of Health;
  15. Australian Embassy;
  16. Civil Society Organizations – CSOs (e.g. Lao Hamutuk);
  17. Ministry of Foreign Affairs;
  18. Quarantine;
  19. Direção Nacional da Protecção Civil – Bombeiros TL;
  20. Direção Nacional de Meteorologia e Geofísica;

21. Autoridade Municipal de Dili;
22. SANTOS;
23. Eni Timor-Leste S.PA; and
24. UNTL – Faculdade Educação – Departamento Biologia.

17.2.2 Approach

- Public Notice will be published through ANP's website, proponent's website, any social networks such as Facebook, LinkedIn, Newspaper, Radio, and Televisions on the day of the EIS and EMP drafts submission.
- Through Public Notice: anyone has the right to review and provide their comments through writing via e-mail or in-person at the office of the Environmental Authority - ANP, Project Proponent – SGBU.
- SGBU will organize a formal meeting where result from the Environmental Baseline Survey (EBS) results, EIA, and potential impacts as well as mitigation measures will be presented to stakeholders identified in sub-section 17.2.1.
- As a courtesy, SGBU will notify the Australian National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), the Northern Territory government, and the Australian Maritime Safety Authority (AMSA) of the offshore drilling.

17.3 Summary of Consultation

Public Notice for Draft Term of Reference (TOR)

- Publication of Public Notice for draft TOR was published on 13th June, 2024 on Timor Post newspaper and was announced in GMN TV. Additionally, the public notice was also published in SGBU's social media platform as well as environmental consultant's platform.

Public Notice for Draft EIS and EMP

- The public notice for draft EIS and EMP was published on 11th April, 2025 on Timor Post newspaper and was announced in GMN TV. Additionally, the public notice was also published in SGBU's social media platform as well as environmental consultant's platform.

Public Consultation for Draft EIS and EMP

Date:	22 April 2025
Venue:	Suai Room Timor-Plaza Rua Presidente Nicolao Lobato, Comoro, Dom Aleixo, Dili
Time:	08.30 am to Finish

The Participants and their comment are included in EIS Appendix 8

Public Consultation for EIS and EMP

Date:	23 June 2025
Venue:	Delta Nova Rua Presidente Nicolao Lobato, Comoro, Dom Aleixo, Dili
Time:	08.30 am to Finish

The Participants and their comment are included in EIS Appendix 9

17.4 Summary of main comments

The objective of this public consultation is to ensure transparency and responsibility in oil and gas exploration. Through this public consultation, everyone has the right to review and submit their concerns, if any, regarding the appraisal drilling campaign in Chuditch-2. A few comments arose during the public consultation:

- Disturbance of marine life biodiversity from underwater noise pollution cause by drilling activity.
- Publicity of EBS results.
- Collaboration with UPM, UPF, and National Naval authority if any illegal activity is observed during drilling campaign.
- Economic viability of Chuditch field and contingency plan during the drilling campaign.
- Contribution of the drilling activity to the climate change in regard to the fishing activity.
- Challenges faced by SGBU in the delay of drilling activity.
- Technical preparation for ensuring safety and integrity during the campaign.
- Marine environmental study.

17.5 Summary of Public Acceptance of the Project

During the Public Consultation and public notice, there was no opposition stated to the Chuditch-2 drilling campaign. On the contrary, there was broad acceptance of this campaign by the public, judging by the number of attendees and their proactive participation during the consultation event.

17.6 Summary of Public Acceptance of the Project

On April 11th, 2025, Jeremy Beckman published an article in Offshore Magazine, titled “SundaGas submits draft of preparation for Chuditch well Offshore Timor-Leste.” (https://www.offshore-mag.com/print/content/55282573)

On June 16th, 2025, an article published in energy-pedia news, titled “Timor-Leste: Sunda Energy provides Chuditch update.” (https://www.energy-pedia.com/news/timor-leste/sunda-energy-provides-chuditch-update-200180)

17.7 Recommendations for Future Consultation

SGBU will continue to collaborate with ANP and stakeholders to share any changes on any amendments on potential environmental impacts and any mitigation measures within EIS and EMP. Public/stakeholders will be updated through SGBU’s platform, newspaper, and TV when the project is commencing and when any changes occur. Complaints and grievances mechanism is provided in the subsequent chapter where public/stakeholders can use to submit any concerns and participate throughout the duration of the project.

Lessons Learnt

The lesson learned process is a structured, continuous improvement process used to capture knowledge from incidents, near misses, audits, forums and operational experience, analyse the underlying causes, and convert those insights into corrective and preventive actions that improve future performance. SGBU acknowledges this and has identified and documented three key learnings:

- The benefit of initiating consultation earlier in the planning cycle,
- Providing clearer and more accessible explanations of technical activities, and
- Improving the tracking and closure of issues raised by stakeholders.

SGBU also recognises that an effective lessons learned process requires open, two-way communication between all parties involved. SGBU are committed to maintaining transparent and timely communication and welcome constructive feedback from stakeholders and regulatory bodies to help strengthen future engagement. SGBU would appreciate any observations or suggestions the ANP may wish to share from the consultation rounds, as this input is essential to improving the overall consultation process and ensuring that future activities continue to meet regulatory expectations and community needs.

Improvement in future consultation

Lessons learned will be incorporated into future consultation plans to improve transparency, responsiveness and overall effectiveness of engagement with communities, government authorities and other interested parties.

17.8 Photos from Public Consultation Meetings

Figure 38 Photos taken during Public Consultation for Draft EIS and EMP 22 April 2025.

Figure 39 Photos taken during Public Consultation for Draft EIS and EMP 23 June 2025

17.8 Recommendations for Future Consultation

SGBU will continue to collaborate with ANP and stakeholders to share any changes on any amendments on potential environmental impacts and any mitigation measures within EIS and EMP. Public/stakeholders will be updated through SGBU's platform, newspaper, and TV when the project is commencing and when any changes occur. Complaints and grievances mechanism is provided in the subsequent chapter where public/stakeholders can use to submit any concerns and participate throughout the duration of the project.

18. Complaints and Grievances Mechanism

The drilling project is offshore, far from land and interaction with local community is unlikely. However, SGBU will liaise with the ANP and other authorities to manage complaints and grievances, should they be reported or occur.

The complaints and grievances mechanism is intended to assist anyone or any stakeholders who might be affected by the Chuditch-2 Appraisal drilling activities, with their complaints and/or grievances. The project proponent, SGBU, has the obligation to record and address any complaints submitted.

18.1 Objective

The objectives of the complaints and grievances process are:

- To give anyone from the community and/or stakeholder the opportunity to submit their opinion, complaints, and/or grievances on the environmental impacts from the drilling campaign.
- To ensure that any complaints and/or grievances are heard and addressed properly.
- To assist SGBU in addressing complaints and/or grievances regarding the drilling campaign.
- To assist transparency and fair process.

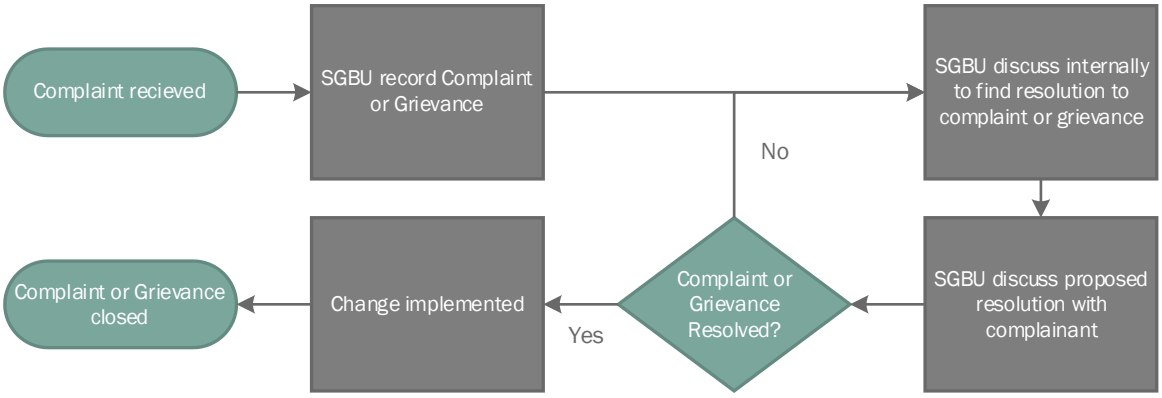
18.2 Mechanism

SGBU is committed to treat all complaints and grievances:

- Seriously and confidentially without discrimination.
- Within a specified timeframe.
- Through negotiation, mediation, and conciliation.
- Clear communication between SGBU and complainants.

Figure 40 outlines the complaints and grievances process

Figure 40 Complaints and Grievances Process



19. Work Plan and Implementation Schedule

Further detail is provided in section 4 of the EIS. Table 38 details the breakdown of activities and the corresponding execution timeline

Table 38 Estimated project execution timeline and operational breakdown for drilling

Operation	Type	Number of Days
Mobilization	Move	2.5
Pre-Loading / Rigging Up	Move	5.6
17½" Hole section	Drill	3.6
13⅜" Casing	Casing	1.9
18¾" BOP	BOP	1.0
12¼" Hole section	Drill	6.3
12¼" OH Logging	Log	3.8
9⅝" Casing	Casing	2.3
9⅝" CH Logging	Log	0.4
Well Clean-up	Clean-Up	1.4
Well Perforating / Testing	Test	6.6
Abandon Well	Plug	3.4
Rigging Down / Jack Down	Move	2.6
Demobilization	Move	2.6
Duration in Total	Approximation	**44.0**

20. Cost Estimate

SGBU has budgeted for all anticipated and credible mitigation measures and monitoring requirements to be correctly implemented.

Table 39 Summary of Estimated Cost

Activity	Timing	Estimated Cost (USD)
EIA including spill and cuttings modelling	April 2024 - Current	$130,000.00
EBS including SOW.	January 2025	$634,000.00
Tier 1/Tier 2/Tier 3	Q/2 2026	$350,000[4]
Drilling Environmental Monitoring Plan	Q/2 2026	$150,000.00
Post Drilling EBS Survey	Q2 2026	$250,000.00
Total		**$1,164,000.00**

[4] This is an estimate only, and is not based on any contracted rate as no contracts are currently in place nor is there a firm understanding if this estimate is correct

21. Review of the EMP

The Environmental Management Plan (EMP) is considered as a living document which is subject to review or update as necessary based on any new events which may occur during the appraisal drilling. As stipulated in Decree Law No. 32/3016, Article 140, the EMP is required to be reviewed annually. In this instance, the EMP is designed for the Chuditch-2 Appraisal Well Drilling Program and is limited to that scope. Furthermore, when necessary, revisions and submissions are required to reflect any changes amended through ongoing monitoring, reports, and inspections/audits conducted on environmental impacts and risks.

Additionally, since this is a 44-day drilling campaign, there is no annual review; instead, the EMP review is subject to:

- Changes in project plan, activity, process, and/or procedure that may have an impact on the project, its human resources, and/or the environment. This includes positive changes that can enhance the project's value.
- Changes in the physical area of the project and its size.
- Changes of responsibility towards any social and/or environmental aspects identified within the project EIS and EMP.
- Changes in any legislation related to the project implementation and monitoring that may require an update to the EMP
- Changes of monitoring results deviate from any guiding values and/or environmental standards that may require an update to the EMP.

22. Non Technical Summary

Non-Technical Summary

Introduction

Environmental Management Plan (EMP) is a detailed plan that outlines how the company will comply with environmental laws and ensure that the drilling activities do not cause long-term damage to the marine environment. It provides guidelines on safety measures, waste disposal, emergency preparedness, and community engagement.

Why This Plan is Important

The EMP is essential because it:

- Establish framework that effectively mitigates potential environmental impacts to ALARP.
- Ensures that drilling activities follow environmental laws.
- Reduces harm to marine life and natural habitats.
- Keeps workers and local communities safe.
- Establishes a plan for responding to emergencies such as oil spills.
- Helps monitor and report environmental impacts.

Without an EMP, drilling activities could become uncoordinated and less effective in safeguarding the environment including less effective planning to safeguard water pollution, destruction of marine habitats, and health risks to people living nearby.

Overview of the Chuditch-2 Drilling Project

The Chuditch-2 drilling project is taking place in the Timor Sea, about 185NM East of Timor-Leste. The goal is to determine if there is enough natural gas in the area to support future production. An offshore drilling rig will be used for this project.

The project consists of three main stages:

Mobilization: Preparing equipment, transporting the drilling rig, and setting up at the site.

Drilling and Testing: Drilling the well, collecting samples, and analysing them to confirm the presence of natural gas.

Decommissioning and any mitigation or restoration recommended by the planned environmental monitoring program: Plugging and abandoning the well safely, removing

Sumáriu Naun-Tékniku

Introdusaun

Planu Jestaun Ambientál (PJA) hanesan planu detallu ne'ebé trasa oinsá kompañia sei kumpre lei ambientál sira no asegura katak atividade perfurasaun sira la hamosu estragu ba tempu naruk ba ambiente tasi. Ida-ne'e fornese matadalan sira kona-ba medida seguransa nian, soe lixu, preparasaun ba emerjénsia, no envolvimentu komunidade nian.

Tanbasá Planu Ida-ne'e Importante

EMP ne'e esensiál tanba:

- Estabelese enkuadramentu ne'ebé mak mitiga ho efetivu impaktu ambientál potensiál sir aba ALARP.
- Asegura katak atividade perfurasaun tuir lei ambiental.
- Hamenus prejuízu ka riksu ba moris tasi nian no habitat naturál sira.
- Mantein traballadór sira no komunidade lokal sira ne'ebé besik seguru.
- Estabelese planu atu responde ba emerjénsia sira hanesan asidente mina-rai fakar.
- Ajuda monitoriza no relata impaktu ambientál sira.

La ho EMP, atividade perfurasaun sira bele la koordenadu no ladun efetivu iha salvaguarda ambiente inklui salvaguarda ba poluisaun bee, destruisaun ba habitat tasi nian, no risku saúde ba ema sira ne'ebé hela besik.

Vizaun Jerál kona-ba Projetu Perfurasaun Chuditch-2

Projetu perfurasaun Chuditch-2 hala'o dadaun hela iha Tasi Timor, milha náutika 185 leste husi Timor. Objetivu husi projeitu ne'e atu determina se iha gás naturál ne'ebé sufisiente iha área ne'e atu suporta produsaun iha futuru. Sei uza plataforma perfurasaun tasi-klaran ba projetu ida-ne'e.

Projetu ne'e kompostu husi etapa prinsipál tolu tuir mai:

Mobilizasaun: Prepara ekipamentu, transporta plataforma perfurasaun, no monta iha fatin perfurasaun.

Perfurasaun no Teste: Perfurasaun posu, halibur amostra sira, no analiza sira hodi konfirma prezensa gás naturál.

equipment, and ensuring the site is left in a safe condition.
The drilling will be done in 68 meters of water depth and will reach a total depth of approximately 3,010 meters below the seabed.

Expected Environmental Impacts
The project has both positive and negative effects on the environment and society.

Positive Effects
Job Opportunities: The project in the long term, will create jobs for local workers in Timor-Leste. In the short term there is limited opportunity for employment due to the level of training, formal qualifications, experience and skill sets required to safely work in the oil and gas sector.
Economic Growth: The drilling will generate revenue for the government through taxes and royalties.
Skill Development: Future workers will receive training in offshore drilling operations.
Technology Transfer: Advanced drilling technology will be introduced to Timor-Leste. Offshore drilling requires engineering and support services on shore. Future opportunities will exist for Timor-Leste citizens to become trained in these support activities.

Possible Negative Effects and Solutions
Seabed Disturbance: The drilling may damage marine habitats, although this will be transient and very localized. To prevent this, the company will use precise positioning systems to avoid unnecessary seabed disruption.
Water Pollution: Drilling chemicals and waste could pollute the ocean, although the volumes of chemicals and treated wastes discharge to the sea will be negligible in comparison to the overall volume of the water column in the area. To prevent and measurable harm, waste will be treated before disposal, and only environmentally safe chemicals will be used.
Air Pollution: The operation may release emissions that affect air quality. This will be highly localized and far less than seasonal crop burn-offs ashore. To minimize this, the project will use fuel-efficient equipment and monitor emissions.

Dekomisaun no kualkér mitigasaun ka restaurasaun ne'ebé rekomenda hosi programa monitorizasaun ambientál ne'ebé planeadu: Taka no abandona posu ho seguru, hasai ekipamentu, no asegura katak fatin ne'e husik hela iha kondisaun seguru.
Perfurasaun ne'e sei halo iha tasi kle'an metru 68 no sei to'o metru 3,010 iha tasi okos.

Projetu ne'e iha efeitu pozitivu no negativu ba ambiente no sosiedade.

Efeitu Pozitivu sira
Oportunidade Servisu: Projetu ne'e iha tempu naruk, sei loke kampu traballu ba traballadór lokál sira iha Timor-Leste. Iha tempu badak iha oportunidade limitadu ba empregu tanba nivel formasaun, kualifikasaun formál, esperiénsia no konjuntu abilidade sira ne'ebé presiza atu serbisu ho seguru iha setór mina no gás.
Kresimentu Ekonómiku: Perfurasaun sei hamosu reseita ba governu liuhosi impostu no regalias.
Dezenvolvimentu Abilidade: future traballadór sira sei simu formasaun kona-ba operasaun perfurasaun iha tasi-laran/klean.
Transferénsia Teknolojia: Teknolojia perfurasaun avansadu sei introduz mai Timor-Leste. Perfurasaun iha tasi-ibun presiza enjeñaria no servisu apoiu husi rai-maran. Oportunidade sira iha futuru sei eziste ba Timor-oan sira atu hetan treinamentu hodi fó apoiu ba atividade sira-ne'e.

Efeitu negativu no solusaun sira ne'ebé posivel
Perturbasaun iha tasi okos: Perfurasaun bele estraga habitat tasi nian, maski ne'e trnasiente no lokalizadu. Atu prevene ida-ne'e, empreza sei uza sistema kolokasaun sistemátiku hodi evita interupsaun tasi-okos ne'ebé la nesesáriu.
Poluisaun Bee: Produtu kímiku no lixu perfurasaun nian bele halo poluisaun ba tasi, maski volume kímiku no lixu tratadu sira ne'ebé soe ba tasi sei ladún importante kompara ho volume jerál hosi koluna bee nian iha área ne'e. Atu prevene no prejuízu ne'ebé bele sukat, lixu sei hetan tratamentu molok soe, no sei uza de'it kímiku sira ne'ebé seguru ba ambiente.
Poluisaun Ar: Operasaun bele hasai emisaun sira ne'ebé afeta kualidade ar. Ida-ne'e sei lokalizadu tebes no menus liu duké sunu ai-horis iha rai-maran. Atu minimiza ida-ne'e,

Oil Spills: A major risk is oil spills, which can damage marine life. The Chuditch well is not expected to produce liquid oil. It is prognosed as a dry gas well with a very small percentage of condensate which upon release will evaporate on the sea surface rapidly.
In the event of a diesel spill, studies show this will also evaporate and weather rapidly. To assist and mitigate, the company has an emergency response plan with trained teams and spill containment equipment to handle any accidents.
Impact on Marine Life: Noise and light pollution from the drilling could disturb fish and marine mammals. It is considered this effect will be transitory with wildlife exhibiting avoidance behaviours and returning to normal behavioural patterns after the drilling campaign is completed. To reduce this impact, the project will use noise-reduction technology and limit unnecessary lighting.

Legal and Environmental Compliance

The project must follow national and international environmental laws, including:

- Timor-Leste's Environmental Licensing Laws – Implement responsible oil and gas exploration practices.
- MARPOL Convention – Protects the marine environment from pollution.
- Biodiversity Protection Guidelines – Ensures that marine life is not harmed by drilling activities.
- Climate Change Regulations – Aims to reduce greenhouse gas emissions.
- Health and Safety Standards – Ensures workplace safety for employees.

By following these laws, the project will operate responsibly and minimize environmental risks.

Environmental Monitoring and Reporting

To ensure environmental safety, the project will regularly check and report on:

- Water and Air Quality – Testing marine water samples to establish baseline data and ensure air quality adheres to manufacturers standards.
- Waste Disposal – Ensuring waste is properly handled and not harmful to the environment.
- Marine Life – Studying the impact of drilling on fish, coral reefs, and other marine species.

projetu sei uza ekipamentu sira ne'ebé efisiente iha kombustível no monitoriza emisaun sira.
Derretamentu/fakar mina-rai: Risku boot ida maka mina-rai fakar, ne'ebé bele estraga vida tasi nian. Posu Chuditch sei la produz mina-rai líkidu. Ida-ne'e prognostika hanesan posu gás maran ida ho persentajen kondensadu ne'ebé ki'ik bainhira liberta sei evapora iha tasi leten.
Iha kazu derramamentu gazolina nian, estudu hatudu katak ida-ne'e mós sei evapora lalais. Atu ajuda no mitiga, empreza iha planu resposta emerjénsia nian ho ekipa sira ne'ebé hetan ona treinamentu no ekipamentu sira ba kontensaun hodi maneja asidente ruma.
Impaktu ba Vida Tasi nian: Poluisaun barullu no naroman husi perfurasaun bele perturba ikan no mamíferu sira tasi nian. Konsidera katak efeitu ida-ne'e sei tranzitóriu ho animál fuik sira ne'ebé hatudu hahalok evitasaun nian no fila fali ba padraun hahalok normál sira hafoin kampaña perfurasaun nian remata. Atu hamenus impaktu ida-ne'e, projetu sei uza teknolojia hodi hamenus barullu no limita iluminasaun ne'ebé la nesesáriu.

Kumprimentu Legál no Ambientál

Projetu ne'e tenke tuir lei ambientál nasionál no internasionál, inklui:

- Lei Lisensiamentu Ambientál Timor-Leste nian – Implementa prátika esplorasaun mina no gás ne'ebé responsavel.
- Konvensaun MARPOL – Proteje ambiente tasi nian husi poluisaun.
- Matadalan Protesaun Biodiversidade – Asegura katak moris tasi la hetan prejuízo/risku husi atividade perfurasaun.
- Regulamentu sira kona-ba Mudansa Klimátika – Ho objetivu atu hamenus emisaun gás ho efeitu estufa.
- Padraun Saúde no Seguransa – Garante seguransa iha servisu fatin ba funsionáriu sira.

Banati tuir lei sira-ne'e, projetu sei funsiona ho responsabilidade no minimiza risku ambientál sira.

Monitorizasaun no Relatóriu Ambientál

Atu garante seguransa ambientál, projetu sei regularmente halo verifikasaun no relatóriu kona-ba:

- Kualidade Bee no Ar – Teste amostra bee tasi nian hodi estabelese dadus baze no

- Compliance with Laws – Regular audits to make sure the project follows all environmental regulations.

If any problems are detected, corrective actions will be taken immediately.

Emergency Preparedness

The project has a detailed **emergency response plan** to handle unexpected events, such as oil spills or gas leaks. The plan includes:

Trained Emergency Teams – Workers who are prepared to respond to accidents.

Spill Containment Equipment – Booms and skimmers to stop oil from spreading.

Coordination with Authorities – Quick communication with government agencies for assistance.

Regular Safety Drills – Employees will be trained through drills to ensure they are ready for emergencies.

These measures will help to quickly control and reduce the damage caused by any accidents.

Community Engagement and Public Involvement

Even though the drilling takes place 185 NM offshore, the project team has engaged with local communities and stakeholders to ensure transparency and address concerns. The company has set up a grievance mechanism where people can report environmental concerns or issues related to the project.

Additionally, the project team will continue to update the public and government authorities on the progress of the drilling and any environmental risks.

Decommissioning and Site Restoration

After drilling is complete, the company will:

- Plug and abandon the Well Safely – To prevent any gas leaks.
- Remove All Equipment – Ensuring no waste is left behind.
- Monitor the environment during drilling to ensure the area recovers naturally.

Environmental monitoring will occur throughout the drilling program to assess if the area needs any restoration efforts post drilling.

Capacity Building and Training

Current personnel and future workers will receive extensive training on:

asegura kualidade ar nian tuir padraun sira fabrikante nian.

- Soe Lixu – Asegura katak lixu hetan maneja ho di'ak no la prejudika ambiente.
- Vida Tasi nian – Estuda impaktu husi perfurasaun ba ikan, ahu-ruin, no espésie tasi nian sira seluk.
- Kumprimentu ba Lei sira – Auditoria regular sira atu asegura katak projetu tuir regulamentu ambientál hotu-hotu.

Karik iha problema ruma ne'ebé detekta, asaun koretiva sira sei foti kedas.

Preparasaun ba Emerjénsia

Projetu ne'e iha planu resposta emerjénsia ne'ebé detallu atu maneja eventu sira ne'ebé la espera, hanesan fakar mina-rai ka vazamentu gás. Planu ne'e inklui:

Ekipa Emerjénsia Treinadu sira – Traballadór sira ne'ebé preparadu atu responde ba asidente sira.

Ekipamentu Kontensaun Derramamentu – Booms no skimmers atu hapara mina-rai atu labele sulin namkari.

Koordenasaun ho Autoridade sira – Komunikasaun lalais ho ajénsia governu nian ba asisténsia.

Ezersísiu Seguransa Regular – Funsionáriu sira sei hetan treinamentu liuhosi ezersísiu sira hodi asegura katak sira prontu ba emerjénsia sira.

Medida sira-ne'e sei ajuda atu kontrola lalais no hamenus estragu sira ne'ebé kauza hosi asidente ruma.

Envolvimentu Komunidade no Envolvimentu Públiku

Maski perfurasaun ne'e hala'o iha Milha náutika 185 husi tasi-laran/klean, ekipa projetu nian envolve ona ho komunidade lokál sira no parte interesada sira hodi asegura transparénsia no rezolve preokupasaun sira. Kompañia estabelese ona mekanizmu keixa ida iha ne'ebé ema sira bele hato'o preokupasaun ambientál sira ka kestaun sira ne'ebé relasiona ho projetu.

Adisionalmente, ekipa projetu nian sei kontinua atu atualiza públiku no autoridade governu nian sira kona-ba progresu perfurasaun nian no risku ambientál ruma.

Dekomisaun no Restaurasaun ba Fatin

Hafoin perfurasaun hotu, empreza sei:

- Taka no abandone Posu ho seguru – Atu prevene fuga gás ruma.
- Hasai Ekipamentu Hotu-hotu – Asegura katak laiha lixu ne'ebé maka husik hela.

- Environmental Protection – Learning how to reduce pollution and protect marine life.
- Safety Procedures – Training on emergency response and safe handling of equipment.
- Technical Skills – Gaining knowledge in drilling, waste management, and best practices for offshore operations.

This will improve the local workforce and create better job opportunities in the energy sector.

Cost and Resources

The company has allocated funds to cover:

- Environmental monitoring programs.
- Emergency response and safety measures.
- Training programs for workers.
- Equipment and technology to reduce environmental impact.

This ensures the project operates responsibly while maintaining financial sustainability.

Conclusion

The Chuditch-2 drilling project is expected to contribute significantly to Timor-Leste's economic growth while ensuring environmental safety. By following strict environmental laws, using advanced technology, and having a clear emergency response plan, the project aims to minimize negative effects on the environment.

The Environmental Management Plan ensures that drilling activities are carried out responsibly, with continuous monitoring and improvement to reduce risks. Through cooperation with local authorities and community engagement, the project can support sustainable energy exploration while protecting Timor-Leste's marine ecosystems for future generations.

- Halo monitorizasaun ba ambiente durante perfurasaun hodi asegura katak área ne'e rekupera naturalmente.

Monitorizasaun ambientál sei akontese durante programa perfurasaun atu avalia se área ne'e rekere esforsu restaurasaun depoizde perfurasaun.

Hasa'e Kapasidade no Treinamentu

Traballadór sira agora no iha futuru sei hetan formasaun klean kona-ba:

- Protesaun Ambientál – Aprende oinsá atu hamenus poluisaun no proteje vida tasi nian.
- Prosedimentu Seguransa nian – Treinamentu kona-ba resposta emerjénsia no manejamentu seguru ba ekipamentu sira.
- Abilidade Tékniku – Hetan koñesimentu iha perfurasaun, jestaun lixu, no prátika di'ak sira ba operasaun sira iha tasi-ibun.

Ida-ne'e sei hadi'a forsa traballu lokál no kria oportunidade serbisu ne'ebé di'ak liu iha setór enerjia.

Kustu no Rekursu sira

Kompañia aloka ona fundu sira atu kobre:

- Programa monitorizasaun ambientál.
- Resposta ba emerjénsia no medida seguransa nian.
- Programa formasaun ba traballadór sira.
- Ekipamentu no teknolojia hodi hamenus impaktu ambientál.

Ida-ne'e garante katak projetu funsiona ho responsabilidade enkuantu mantein sustentabilidade finanseira.

Konkluzaun

Projetu perfurasaun Chuditch-2 hein katak sei kontribui maka'as ba kreximentu ekonómiku Timor-Leste nian enkuantu garante seguransa ambientál. Hodi tuir lei ambientál sira ne'ebé rigorozu, uza teknolojia avansadu, no iha planu resposta emerjénsia ne'ebé klaru, projetu ne'e hakarak minimiza efeitu negativu sira ba ambiente.

Planu Jestaun Ambientál garante katak atividade perfurasaun sira hala'o ho responsabilidade, ho monitorizasaun no melloramentu kontínuu hodi hamenus risku sira. Liuhosi kooperasaun ho autoridade lokál sira no envolvimentu komunidade nian, projetu ne'e bele apoia esplorasaun enerjia sustentável enkuantu proteje Timor-Leste nia ekosistema tasi nian ba jerasaun sira iha futuru.

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Appendix 1: HSE Policy

Health Safety & Environment Policy

SUNDA ENERGY

Sunda Energy are committed to:

- Eliminating, mitigating and managing hazards and risks that could cause accidents, injuries, illnesses, property damage or an environmental impact.
- Supporting personnel to meet their health, safety and environmental responsibilities.
- Ensuring all decisions consider short and long term economic, environmental, safety and community impacts.

Sunda Energy demonstrate this commitment by

- Integrating Health, Safety and Environment (HSE) management into all business plans and operations. We will clearly define accountabilities and communicate our operating principles effectively.
- Ensuring that systems and processes are developed and implemented to identify, assess, control, and review HSE risks in all operations. Additionally, processes will be defined to investigate, learn from, and manage incidents effectively.
- Ensuring that appropriately trained, qualified and competent personnel are provided to manage, maintain, and implement systems and controls to manage hazards and risk in all operations of the business.
- Ensuring that effective communication channels are established to provide staff with relevant information on HSE issues and, conduct all structured meetings so that pertinent HSE learnings or information can be shared as appropriate with the meeting group, fostering involvement and stimulating discussion on HSE matters.
- Regularly measuring, monitoring, and reviewing HSE performance as part of our management review process, ensuring records are maintained and results are reported to senior management, relevant authorities, and other stakeholders as required.
- Ensuring that established procedures for the procurement or provision of Goods and operation of Services, incorporate HSE requirements in alignment with the Company management principles and standards.
- Ensuring that timely treatment and active rehabilitation for personnel who suffer work-related injuries or illnesses. In case of an environmental incident, we will take necessary steps to minimize its impact. We will also learn from these events to enhance our health, safety, and environmental practices.
- Ensuring that we take all viable opportunities to reduce waste and green house gas emissions, conserve energy and repurpose or recycle materials.

Andy Butler
Chief Executive Officer, Sunda Energy Plc
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