MINISTÈRE
DE LA TRANSITION
ÉCOLOGIQUE
Liberté
Égalité
Fraternité

TECNOAMBIENTE
A TRADEBE COMPANY

Document reference				*Issue information*	
Project	**Package**	**Issuer**	**Chrono**	**Revision**	**Status**
FGL	-	TEC	0005	02	A

Title	**FECAMP GRAND LARGE OWF - INTEGRATED REPORT**			
Additional Metadata	**Discipline**	**Document Type**	**System**	**Activity**
	INT	PMM		
	Contract	**Acceptance Class**	**Dossier**	**Alternative ref.**
	113401607			
	Confidentiality	**Print format**	**Subcontractor**	**Contractor ref.**
	Restricted	A4		

Date	Rev	Status	Reason for Revision	Issued by	Checked by	Approved by
1707/26	00	B	First Edition	R Harrison	Alex Natale	Francois Lopez
14/08/26	01	B	After Comments	R Harrison	Alex Natale	Francois Lopez
09/09/26	02	A	After Comments	R Harrison	Alex Natale	Francois Lopez

Change Log:

Document uncontrolled when printed/downloaded.

Always check with document control for the latest revision.

TECNOAMBIENTE

A TRADEBE COMPANY

Enabling sustainable progress



INTEGRATED REPORT

FECAMP GRAND LARGE OWF - INTEGRATED REPORT

DOCUMENT CONTROL

COSAP	Doc ID	Rev No.	Issue Date	Status	No. Pages
113401607	FGL-TEC-0005	02	09/09/2026	A	95+ Appendix

	Issued By	Reviewed By	Approved By
Name	Rosie Harrison	Alessandro Natale	François Lopez
Position	Geophysicist	Geotechnical Engineer	Project Manager
Date	09/09/2026	09/09/2026	09/09/2026

Validity

This document is fully prepared, reviewed and approved in its digital form. The digital version is controlled as per the TECNOAMBIENTE Business Management System. Any printed or downloaded version is considered for information purposes only and cannot be guaranteed valid. The holder´s responsible for ensuring that they have a valid version.

Confidentiality

Intended recipients of this document must refer to the confidentiality status listed below before distributing, disclosing, or taking any action in reliance upon the contents herein. Any non-intended recipients are strictly prohibited from any review, copying, retransmission, dissemination, or other use of the information contained within this document, regardless of the confidentiality status.

Images and Figures

All images and figures without sources cited are property of TECNOAMBIENTE.

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY 8
2. INTRODUCTION 10
2.1. SCOPE OF WORK 10
2.2. SURVEY AREA 10
3. DATA SOURCE AND REFERENCES 12
3.1. INPUT DATA 12
3.1.1. Data references 12
3.1.2. Summary of the Survey Information 18
3.1.3. Data limitations 19
3.2. SEISMIC DATA QUALITY 25
3.3. BIBLIOGRAPHIC REFERENCES 26
4. REFERENCE DATUM AND TRANSFORMATION 28
4.1. GEODETIC PARAMETERS 28
4.2. VERTICAL DATUM 28
5. SITE CONTEXT 29
5.1. HUMAN ACTIVITY AND ANTHROPIC CONTEXT 29
5.2. HYDROGRAPHIC CONTEXT 29
5.3. REGIONAL GEOLOGY 29
5.4. TECTONISM AND POTENTIAL GEOHAZARDS 31
6. SEABED CONDITIONS 33
6.1. BATHYMETRY AND SLOPE 33
6.2. SEABED CLASSIFICATION 39
6.3. SEABED FEATURES 40
7. GEOLOGICAL FRAMEWORK 42
7.1. SEISMO-STRATIGRAPHIC UNITS 42
7.1.1. General overview 42
7.1.2. unit description 44
7.2. GEOHAZARDS 54
7.2.1. Shallow gas 54
7.2.2. Faults 55
7.2.3. Specific morphologies 58
8. GEOTECHNICAL PARAMETERS 59
8.1. BULK & DRY DENSITY AND WATER CONTENT 59
8.2. PLASTICITY INDEX 59
8.3. CONE PENETRATION TEST (CPT) TIP RESISTANCE 59
8.4. RELATIVE DENSITY 59
8.5. FRICTION ANGLE 60
8.6. UNDRAINED SHEAR STRENGTH 60
8.7. UNCONFINED COMPRESSIVE STRENGTH OF ROCK 60
9. SOIL UNITS 62
9.1. USED DATASETS FOR CROSS-CORRELATION 62

9.1. CROSS-CORRELATION DESCRIPTION 64
9.1.1. Assumed Sound Velocity 64
9.1.2. Cross-correlation 64
9.2. SOIL UNITS' DESCRIPTION 67
9.2.1. Geotechnical description of the soil units 67
9.2.2. Geotechnical parameters of the soil units 85
10. GROUND MODEL 88
11. SOIL PROVINCES 90
11.1. METHODOLOGY/CRITERIA 90
11.2. DESCRIPTION 90
11.3. SPATIAL EXTENT 90
12. GEOHAZARDS ASSESSMENT 91
12.1. SUMMARY OF THE POTENTIAL GEOHAZARDS 91
13. LIMITATIONS ON THE USE OF THIS REPORT 93
14. CONCLUSIONS AND RECOMMENDATIONS 94
14.1. CONCLUSIONS 94
14.2. RECOMMENDATIONS 94
15. CHARTS 95
APPENDIX A. NORTH-UP CHARTS 96
APPENDIX B. UHRS REGIONAL PROFILES 97
APPENDIX C. BOREHOLE LOGS 98
APPENDIX D. GEOTECHNICAL DATA 99
APPENDIX D1. GEOTECHNICAL PARAMETERS TABLES PER LOCATION 100
APPENDIX D2. GEOTECHNICAL PARAMETERS PLOTS PER LOCATIONS 101
APPENDIX D3. GEOTECHNICAL PARAMETERS PLOTS PER SOIL UNIT 102
APPENDIX D4. GEOTECHNICAL PARAMETERS PER SOIL UNIT 103

LIST OF FIGURES

FIGURE 2-1: FÉCAMP GRAND LARGE OWF AREA 11
FIGURE 3-1: MBES OF THE UXO AND SHOM SURVEY 21
FIGURE 3-2: MBES OF THE GEOXYZ GEOPHYSICAL SURVEY 22
FIGURE 3-3: AVAILABLE SSS AND BACKSCATTER MOSAIC 23
FIGURE 3-4: SBP SHOM SURVEYS LINE PLAN. 24
FIGURE 3-5: SBP INTERPRETATION – SEDIMENTARY THICKNESS – SHOM SURVEYS 25
FIGURE 5-1: GEOLOGICAL MAP AND LITHOLOGY – MACRO-ZONE FGL (PAQUET ET AL., 2024 - [15]) 30
FIGURE 5-2: GEOLOGICAL SCHEMATIC (GEOXYZ, 2024 - REF 1) THROUGH THE FGL AREA 31
FIGURE 6-1: FECAMP GRAND LARGE BATHYMETRY, ZOOMING IN THE WEST 34
FIGURE 6-2: BATHYMETRIC MAP FROM FECAMP GRAND LARGE (EMODNET,2022) AND MORPHOLOGICAL INTERPRETATION MAP . 35

FIGURE 6-3: FECAMP GRANDE LARGE OWF SLOPE MAP 36
FIGURE 6-4: MAP SHOWING LOCATIONS OF THE PROFILES 37
FIGURE 6-5: CROSS-SECTION 1 38
FIGURE 6-6: CROSS-SECTION 2 38
FIGURE 6-7: CROSS-SECTION 3 39
FIGURE 6-8: SEDIMENT DISTRIBUTION WITHIN FECAMP OWF. 40
FIGURE 6-9: LOCATION OF WRECKS WITHIN THE FECAMP GRAND LARGE OWF. (RED IS ON ACQUISITION LINE, YELLOW IS WITHIN THE ZONE) 41
FIGURE 7-1: CORRELATION OF STRATIGRAPHY, SOIL UNITS AND HORIZONS 43
FIGURE 7-2: HOLOCENE VENEER EXTENSION AND SEISMIC FACIES 47
FIGURE 7-3: HOLOCENE EXTENT WITHIN FGL OWF 48
FIGURE 7-4: UNIT 2A SUBCROPPING EXTENT 49
FIGURE 7-5: BH09 INSIDE A CHANNEL 49
FIGURE 7-6: UNIT 3-5 EXTENT 50
FIGURE 7-7: UNIT 6 EXTENT AND DEPTH BSB (M) 51
FIGURE 7-8: BH11 OVERLAIN ON GEOPHYSICAL DATA SHOWING CHANGE TO MUDSTONE 51
FIGURE 7-9: UNIT 7 EXTENTS AND DEPTH BSB (M) 52
FIGURE 7-10: UNIT 8 EXTENT AND DEPTH BSB (M) 53
FIGURE 7-11: DATA EXAMPLE ILLUSTRATING UNITS 6-9 53
FIGURE 7-12: GAS EXTENTS 54
FIGURE 7-13: ILLUSTRATING GAS ANOMALIES 55
FIGURE 7-14: MAIN FAULTING WITHIN THE FGL OWF 56
FIGURE 7-15: FÉCAMP-LILLEBONNE FAULT AND ASSOCIATED TECTONISM INDUCED MORPHOLOGIES 56
FIGURE 7-16: EASTERN FAULT SYSTEM AND ASSOCIATED TECTONISM INDUCED MORPHOLOGIES 57
FIGURE 7-17: SHALLOW GEOHAZARDS – FAULTS, POTENTIAL SHALLOW GAS AND MASS TRANSPORT 57
FIGURE 9-1: LOCATION OF THE GEOTECHNICAL INVESTIGATED SITES AND SBP/UHRS TRACK-LINES WITHIN THE FGL OWF AREA. .. 64
FIGURE 9-2. EXAMPLES OF CROSS-CORRELATION RESULTS 65
FIGURE 10-1: FGL OWF GROUND MODEL: VARIABILITY FROM WSW TO ENE 88
FIGURE 11-1: FGL OWF SOIL PROVINCES SUBCROPPING 90

LIST OF TABLES

TABLE 3-1: SURVEY DOCUMENTATION AND REPORTS CONSIDERED FOR THE INTEGRATED REPORT. 12
TABLE 3-2: SURVEY DOCUMENTATION FROM EXTERNAL SOURCE (RTE PROVIDER) – USED FOR SITE CONTEXT 13
TABLE 3-3: SURVEY DOCUMENTATION AND REPORTS DISMISSED FOR THE INTEGRATED REPORT. 13
TABLE 3-4: RASTER AND SHAPEFILE DATASETS CONSIDERED IN THE INTEGRATED REPOT 14
TABLE 3-5: RASTER AND SHAPEFILE DATASETS DISMISSED FOR THE INTEGRATED REPORT 17
TABLE 3-6: SUMMARY OF SURVEYS FROM 2023 TO 2024 19
TABLE 4-1: GEODETIC PARAMETERS 28
TABLE 4-2: PROJECTION PARAMETERS 28
TABLE 6-1: SUMMARY OF BATHYMETRY AND SLOPE ALONG THE FGL OWF AREA. 33
TABLE 6-2: SEABED GRADIENT CLASSIFICATION OVER THE FGL OWF AREA. 35
TABLE 7-1: UNITS THICKNESS AND EXTENSION. 44
TABLE 7-2: BOREHOLE UNIT SUMMARY 45
TABLE 8-1: IS50 TO UCS CALIBRATION 60
TABLE 9-1: BOREHOLES AND INSITU CPT LOCATIONS AND CHARACTERISTICS. 62
TABLE 9-2: LITHOLOGY AND SEDIMENT UNITS SUMMARY 66
TABLE 9-3: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH01 67
TABLE 9-4: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH02-02A 69
TABLE 9-5: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH03 70
TABLE 9-6: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH04 71
TABLE 9-7: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH07 73
TABLE 9-8: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH08-08A 74
TABLE 9-9: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH09-09A 75
TABLE 9-10: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH11 75
TABLE 9-11: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH13 77
TABLE 9-12: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH14-14A-14B 78
TABLE 9-13: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH15-15A 80
TABLE 9-14: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH18 81
TABLE 9-15: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH23-23A 82

TABLE 9-16: GEOTECHNICAL DESCRIPTION FOR FGL-OWF-BH24-24A 84
TABLE 9-17: GEOTECHNICAL PARAMETERS ESTIMATE PER SOIL UNIT (QN, FR, SU AND DR) 85
TABLE 9-18: GEOTECHNICAL PARAMETERS ESTIMATE PER SOIL UNIT (PHI´, BD, MC, IS_{50}) 85
TABLE 9-19: GEOTECHNICAL PARAMETERS ESTIMATE PER SOIL UNIT (UCS, UU, CIU AND DR) 86
TABLE 12-1: CRITERIA FOR GEOHAZARDS ESTIMATION. 91
TABLE 12-2: GEOHAZARDS AND SOIL CONDITIONS SUMMARY FOR FGL OWF AREA. 91
TABLE 15-1: NORTH-UP CHARTS FOR THE FGL OWF AREA 95
TABLE 15-2: UHRS REGIONAL PROFILE CHARTS FOR THE FGL OWF AREA 95

ABBREVIATION LIST

ALARP	As Low as Reasonably Practicable
ASV	Assumed Sound Velocity
BE	Best Estimate
Bq	Pore pressure ratio
BRGM	Bureau de Recherche Géologique et Minière
BSB	Below Seabed
CID	Isotopically Consolidated Drained Triaxial Compression
CIU	Isotopically Consolidated Undrained Triaxial
CPT	Cone Penetration Test
DEM	Digital Elevation Model
DGEC	Direction Générale de l'Énergie et du Climat
DR	Relative Density
DTM	Digital Terrain Model
DTS	Desk-Top Study
EPSG	European Petroleum Survey Group
FGL	Fécamp Grand Large
Fr	Friction Ratio
Fs	Friction sleeve
GDB	Geodatabase
GIS	Geographic Information System
GRS1980	Geodetic Reference System 1980
HE	High Estimate
LAT	Lowest Astronomical Tide
LE	Low Estimate
LIN	Line
MAG	Magnetometer
MBES	Multibeam Echosounder
MSL	Mean Sea Level
NNW	North North West
OWF	Offshore windfarm
PBMA	Plus Basse Mer Astronomiques
PLY	Polygone
PNT	Point
pUXO	Possible Unexploded Ordnance
q_c	Cone tip resistance
q_t	Total cone resistence
Qnet /q_n	Net cone resistance
SB	Sub-Bottom
SBP	Sub Bottom Profiler
SHOM	Service Hydrographique et Océanographique de la Marine
SSS	Side Scan Sonar
SSU	Seismo-stratigraphic Unit
SU	Soil Unit
Su	Undrained Shear Strength
SRB	Sulphate Reducing Bacteria
TA	Tecnoambiente
u_2	Pore Pressure
UHRS	Ultra-High Resolution Seismic
UTM	Universal Transverse Mercator
UXO	Unexploded Ordnance
WGS84	World Geodetic System 1984
Wl	Liquid limit
Wp	Plastic limit

1. EXECUTIVE SUMMARY

DGEC contracted TECNOAMBIENTE (TA) to integrate previously interpreted geophysical and geotechnical data to build a ground model to delineate the soil provinces of the Fecamp Grand Large OWF area.

The integrated dataset in this report was acquired in three separate surveys: a UHRS Geophysical survey, a Geotechnical Survey and a UXO survey:

- Geophysical Survey (by GEOxyz):

  MBES, UHRS and SBP datasets.

- Geotechnical survey (by Fugro):

  15 composite geotechnical locations (tot of 23 CPT/sampling/rock coring including bump overs) with associated offshore and onshore laboratory testing. Final depths comprised between 40 m and 70 m BSB.

- UXO Survey (by GEOxyz):

  24 30m x 30m boxes were acquired prior to the Geotechnical survey to gain clearance for the sampling locations. These were acquired with MBES, MAG, and SSS data. ALARP (As Low As Reasonably Practicable) certificates were issued for all locations via a sub contractor Geomines.

Additional data from the SHOM hydrographic campaigns are used to obtain a better understanding of the geological background of the area of interest.

A comprehensive GIS database was developed and included in this report. Also included are a set of North-Up charts, UHRS regional profiles, digital geotechnical data including geotechnical parameters per location and per soil unit.

The geotechnical parameters presented per Soil Unit shall be used with caution for preliminary design only.

The geotechnical parameters of the 14 geotechnical boreholes acquired by Fugro are summarised. The characteristic values (HE, BE and LE) are presented using a statistical approach with an engineering judgement for each of the defined soil units.

The geotechnical parameters of each soil unit should be used with caution and for preliminary design only.

Ten (10) horizons were interpreted from the 2D UHRS data. Every attempt has been made to correlate these with the geotechnical data and produce a ground model over the entire region. Due to the nature of the area, the dipping units and the positions and depths of the geotechnical samples, the ground model simplifies the regional geology.

The following ten (10) Soil Units are presented based on the mechanical properties derived from the Geotechnical dataset and are part of one unique seismo-stratigraphic unit:

1 SAND and GRAVEL (Holocene/Neogene)

2a SAND and CLAY/SILT (Neogene)

2b CALCARENITE (Eocene)

3 CHALK (U. Cretaceous)

4 LIMESTONE (Cretaceous)

5 SANDSTONE (Cretaceous)

6 MUDSTONE (Cretaceous)

7 Dense SAND (L.Cretaceous)

8 SAND and CLAY/SILT (L.Cretaceous)

9 LIMESTONE interbedded with calcareous CLAY (Jurassic)

2. INTRODUCTION

2.1. SCOPE OF WORK

Under the framework agreement 2023-DGEC-07 for geophysical studies supporting DGEC's proposed offshore wind farm (OWF) development zone in the west part of the English Channel (Birttany region), Tecnoambiente (TA) were commissioned to produce this comprehensive integration and interpretation report. This project will cover the macro-zone **Fecamp Grand Large (FGL)**, part of the MEMN area (Manche Est – Mer du Nord).

The purpose of this study is to provide information to assist the preliminary foundation design of the Fecamp Grand Large OWF area.

The detailed objectives of this report are to propose:

- A summary of the general site context based on available information, previous reports and DTS,
- Description of the seabed – morpho-sedimentology and hazards,
- A geological framework based on UHRS and SBP data (seismo-stratigraphic description and geohazards),
- Define the soil units, ground model and soil provinces based on the cross-correlation of the provided UHRS/SBP data and geotechnical survey results,
- Assess geohazards and their implications regarding engineering constraints,
- Propose any relevant recommendations for further operations/studies.

2.2. SURVEY AREA

The FGL OWF area is a 483 km^2 area at about 30 km offshore Fécamp. Based on previous studies the water depth ranges from -30.1m in the southeast of the area to -53.2m LAT in the southwest.

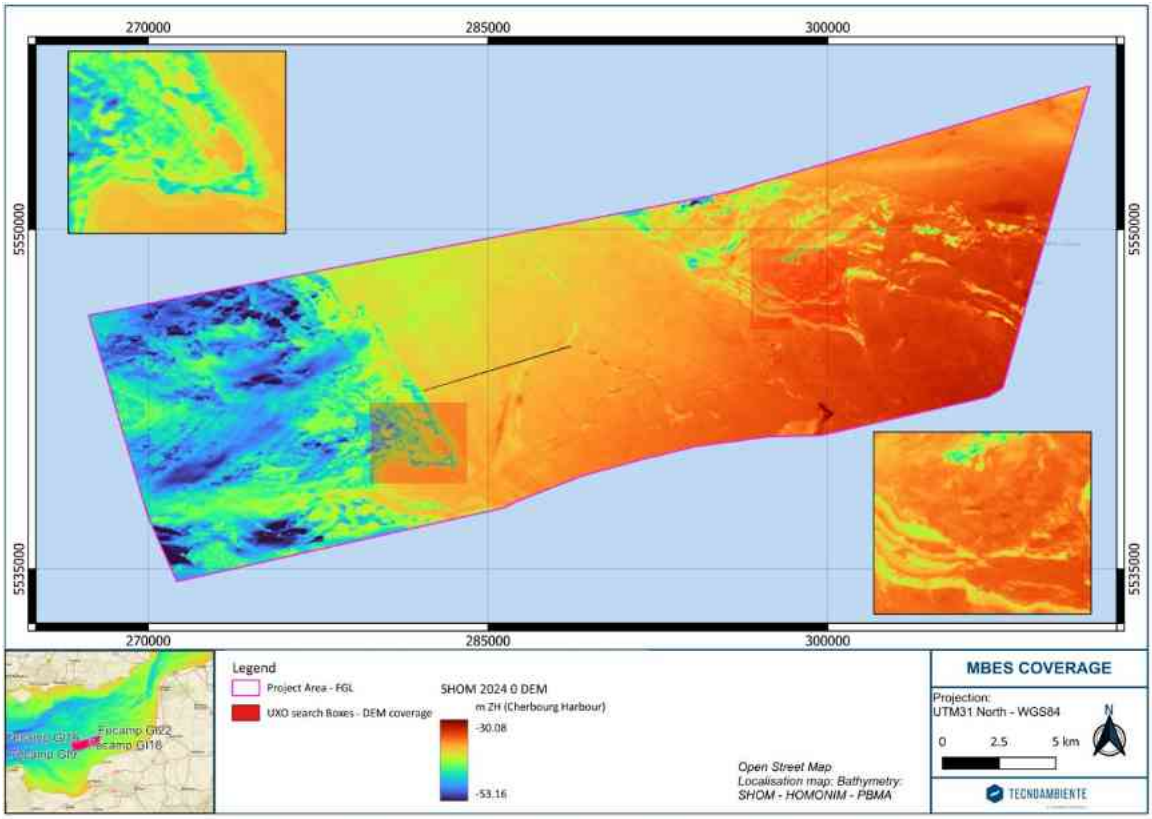


Figure 2-1: Fécamp Grand Large OWF area

3. DATA SOURCE AND REFERENCES

3.1. INPUT DATA

3.1.1. DATA REFERENCES

This integration report considers the documents and survey reports listed in Table 3-1. Table 3-2 includes documentation from external sources (RTE) used for the study but not integrated in the geodatabase.

Table 3-3 and Table 3-5 include reports and data that have been dismissed, along with the reasons for their exclusion.

Table 3-1: Survey documentation and reports considered for the Integrated report.

Document Type	Document Name	Source	Ref #
Geophysical (UHRS) survey Factual Report	6168_2-RR-01-A_UHRS Factual Report_Rev3.0	GEOxyz	Ref 1
Geophysical (UHRS) survey Operational Report	6168_2-OR-01- Operations Report-GOVI - A	GEOxyz	Ref 2
UXO Factual Report	6168_2-RR-02-A_UXO Factual Report_Fecamp_Rev2.0	GEOxyz	Ref 3
UXO Operational Report	6168_2-OR-02- Operations Report-GOVI - A	GEOxyz	Ref 4
ALARP certificate	FGL_OWF_ALARP_V1	GeoMines	Ref 5
Geotechnical intermediate Factual Report	F255271-REP-001_i03	FUGRO	Ref 6
Geotechnical Operational Report	F255271-OPS-001_i02	FUGRO	Ref 7
Geotechnical final report	F255271-REP-001_i04	FUGRO	Ref 8
Regional geological context	BRGM_RP-73268-FR_MEMN_RapportFinal-A	BRGM	Ref 9
Geology report	RP-73601-FR_Rapport-Final_LOT1-FGL_A.	BRGM	Ref 10
Preliminary study, sedimentology context	Seabed nature: Rapport_DECI_EMR_FGL_Lot1_Sedimentologie_v1.1_aout2023	SHOM	Ref 11
Preliminary study, anthropic elements	Rapport_DECI_EMR_FGL_Lot1_Elements-anthropiques_v1	SHOM	Ref 12
Reconnaissance geophysical survey - bathymetry	20240926_NP_SHOM-GHOA_174-RELATIF-AU-LEVE-EMR-A-FECAMP-GRAND-LARGE-EN-2024	SHOM	Ref 13
Reconnaissance geophysical survey – sediment sampling	Rapport_T4.S3_RAP_FGL_V1-1	SHOM	Ref 14
Reconnaissance geophysical survey - hydrography	Rapport_EMR_FGL_T4_HDYN1_A2	SHOM	Ref 15
Reconnaissance geophysical survey - sedimentology	Rapport_EMR_FGL_Parcs_T4S4_A4c	SHOM	Ref 16

Document Type	Document Name	Source	Ref #
Reconnaissance geophysical survey - synthesis	Rapport_EMR_FGL_Parcs_T4S4_EXT_A1	SHOM	Ref 17

Table 3-2: Survey documentation from external source (RTE provider) – used for site context

Document Type	Document ID	Source	Ref #
Geophysical (OSS) survey Factual Report	HA1-PEM-XYZ-0007-IFE-rev01- Factual report geophysical survey	GEOxyz	Ref 18
Hydrosedimentary report	HA1-LSM-IMD-0000-IFE-rev02-Preliminary_hydro-sedimentary_study.pdf	IMDC	Ref 19

Table 3-3: Survey documentation and reports dismissed for the Integrated report.

Document Type	Folder or Document ID	Comment	Source
Weather report	01-Météo France	This information falls outside the scope of the integrated report or have been superseded and will not be included, or final report will be used.	Meteo France
Sparker survey report	BRGM_RP-73312-FR_Lot-2_RapportFinal-A		BRGM
Bathymetry & Oceanography - DTS	Lot 1: BATHYMETRY COURANTS HOULE HYDROLOGIE MAREE		SHOM
Morpho-sedimentology (survey) – intermediate report	Lot 2: 20240725_NP_SHOM-GHOA_145-RAPPORT-INT-EMR-FECAMP-2024 PUBLIC 20231103_RAP_INT_216_EMR_FECAMP		
Oceanography - survey	Lot 3: COURANT HOULE		SHOM
Geophysical survey	20240514_NP_SHOM-GHOA_86-LEVE-SHOM-N-S202303300-FECAMP-D-AOUT-A-OCTOBRE-2023	Superseded by updated final report	SHOM – lot 4

Table 3-4: Raster and shapefile datasets considered in the integrated repot

Dataset		Type of data	Available data	Resolution Line spacing Scale	Format	Source
Survey	Type					
UXO SURVEY	MBES	Bathymetry	24 encoded rasters	0.5 x 0.5 m	Geotiff	GEOxyz
		Slope	24 encoded rasters	1 x 1 m	flt	GEOxyz
		Density	23 encoded rasters (missing GI13)	1 x 1 m	Geotiff	GEOxyz
	SSS	Global Mosaic	24 RGB rasters	0.1 x 0.1 m	Geotiff	GEOxyz
	MAG	Residual grid	24 encoded rasters	0.3 x 0.3 m	Geotiff	GEOxyz
		Analytic Signal	24 encoded rasters	0.3 x 0.3 m	Geotiff	GEOxyz
		Total Field	24encoded rasters	0.3 x 0.3 m	Geotiff	GEOxyz
		Altitude	24 encoded rasters	0.3 x 0.3 m	Geotiff	GEOxyz
	Geodatabase	Survey measurements	Including in the features gdb	Line spacing: From 1 to 8 m	gdb	GEOxyz
		Interpretation results - pUXO	Including in the features gdb	Variable	gdb	GEOxyz
		Rasters - results	Including in the raster gdb	Variable	gdb	GEOxyz
GEOPHYSICAL SURVEY	MBES	Bathymetry	FR6168_Fecamp_2410_32631_LAT_MB_Encoded_50cm FR6168_Fecamp_2410_32631_LAT_MB_Encoded_1m	0.5 x 0.5 m 1 x 1 m	Geotiff	GEOxyz
		Bathymetry	T4.B2_bathy	1 x 1 m	Geotiff	SHOM – Lot 4
		Slope	FR6168_Fecamp_2411_MB_Slope_50cm FR6168_Fecamp_2411_MB_Slope_1m	0.5 x 0.5 m 1 x 1 m	flt	GEOxyz
		Slope	Pentes_FGL_EPSG4326	1 x 1 m	Geotiff	SHOM – Lot 4

Dataset		Type of data	Available data	Resolution Line spacing Scale	Format	Source
Survey	Type					
		Backscatter mosaic	5 RGB geotiff (T4_S5): 3 from 2023, 2 from 2024	0.5 x 0.5 m	Geotiff	SHOM – Lot 4
		Density	FR6168_Fecamp_2411_MB_HitCount_Encoded_50cm FR6168_Fecamp_2411_MB_HitCount_Encoded_1m	0.5 x 0.5 m 1 x 1 m	Geotiff	GEOxyz
	UHRS	Final Processed UHRS data	44 sgy lines	1500 x 1500 m	SEG-Y	GEOxyz
		Isopachs	FR6168_2409_Fecamp_Holocene_thickness_m_1600 FR6168_2409_Fecamp_Neogene_thickness_m_1800	10 x 10 m	Encoded Geotiff	GEOxyz
		Horizon BSB	FR6168_2409_Fecamp_BSB_Neogene FR6168_2409_Fecamp_BSB_Pre-Neogene: 11 encoded rasters (Horizon: C1c, C2, C3-5, E3, E4a, E5a, E5b, E5c, N1, N5, N6)	10 x 10 m	Encoded Geotiff	GEOxyz
		Processed SBP data	43 seg-y lines	1500 x 1500 m	SEGY	GEOxyz
	SBP	Processed SBP data	134 seg-y lines	Heterogeneous line spacing	SEGY	SHOM – Lot 4
		Isopachs	FGL_T4S2_Thickness_Meters_EPSG2154 (not EPSG of the project => reprojection will be applied)		Geotiff	SHOM – Lot 4
		Sparker (monochannel) - processed data	71 seg-y	Heterogeneous line spacing	SEG-Y	BRGM
		Kingdom Project	UHRS + SBP processed data UHRS picked horizon and calculated isopachs and Horizon BSB	NA	.tks	GEOxyz

Dataset		Type of data	Available data	Resolution Line spacing Scale	Format	Source
Survey	Type					
	SSS	SSS Mosaic	3 RGB geotiff (T4_S5): T4_S5_FGL_2023_IMASONAL_1_EPSG2154 T4_S5_FGL_2024_IMASONAL_1_EPSG2154 T4_S5_FGL_2024_IMASONAL_2_EPSG2154	2023: 1 x 1 m 2024: 0.5 x 0.5 m	Geotiff	SHOM – Lot 4
	Seabed interpretation	Seabed classification	Nature_des_fonds_FGL_EPSG4326.shp	Digitalization scale not specified	Shapefile	SHOM – Lot 4
	Seabed interpretation	Seabed features - anthropic	1 shapefile (wrecks)	NA	Shapefile	SHOM – Lot 4
		Seabed features - natural	5 shapefiles (fault, linear and circular features, dunes, crest)	Digitalization scale not specified	Shapefile	SHOM – Lot 4
	Sedimentology	Sediment sampling	Localisation_prelevements_FGL_EPSG2154	NA	Shapefile	SHOM – Lot 4
		Sediment sampling	S202303300_S202400600_data_granulo	NA	xlsx	SHOM – Lot 4
	Geodatabase	Survey measurements	Including in the features gdb	1500 x 1500 m	gdb	GEOxyz
		Interpretation results - pUXO	Including in the features gdb	Variable	gdb	GEOxyz
		Rasters - results	Including in the raster gdb	Variable	gdb	GEOxyz
GEOTECHNICAL SURVEY	Borehole	Photo	F255271-REP-001_Sample Photographs_i02_a F255271-REP-001_Sample Photographs_i02_b	NA	jpg	FUGRO
	CPT	AGS	F255271-REP-001_AGS4_CPT Data_i04	NA	AGS	FUGRO

Dataset		Type of data	Available data	Resolution Line spacing Scale	Format	Source
Survey	Type					
	CPT	ASCII	21 files with associated results for : BH01, 02, 02a ,03, 04, 07, 08, 08a, 09, 09a, 11, 13, 14, 14b, 15, 15a, 18, 22, 23, 24, 24a	NA	ascii	FUGRO
	Lab tests	AGS	F255271-REP-001_AGS_i04	NA		FUGRO

Table 3-5: Raster and shapefile datasets dismissed for the integrated report

Dataset		Type	Format	Comment	Source
GEOPHYSICAL SURVEY	MBES	EMR_FECAMP_1m_DEFLATE	Geotiff	Superseded by Lot 4 dataset	SHOM – Lot 2
	SSS	T4_S5_FGL_2023_IMASONAL_2_EPSG2154	Geotiff	SSS Mosaic – outside of project area	SHOM – Lot 4
	SBP	FGL_T4S2_Thickness_TWT_Seconds_EPSG4326 FGL_T4S2_Thickness_TWT_Seconds_EPSG2154 FGL_T4S2_Thickness_TWT_Seconds_EPSG3395 FGL_T4S2_Thickness_Meters_EPSG3395 FGL_T4S2_Thickness_Meters_EPSG4326	Geotiff	Sediment thickness GeoTIFF containing depth values in meters based on EPSG 2154 (Lambert93 – RGF93) will be used instead	SHOM – Lot 1
Bibliography	MBES	MNT_ATL100m_HOMONIM_WGS84_PBMA_ZNEG	Geotiff	Higher-resolution bathymetry (EMR_MED_C-4_2023_3m_L93) will be used.	SHOM – Lot 1
	Sedimentology – DTS mapping	Extrait_carte_sedimentaire_mondiale_v2021 Isopaques_nappes_alluviales_Mer_du_Nord_Manche_et_Atlantique_EPSG2154	Shapefile	Replace by higher resolution/accuracy mapping from the SHOM survey dedicated to FGL area	SHOM – Lot 1
	Seabed Ground truth	Points_Prelevements_Lot1_FecampGrandLarge	Shapefile	Old data used to prepare the French and worldwide seabed nature	SHOM – Lot 1

3.1.2. SUMMARY OF THE SURVEY INFORMATION

The project area has been surveyed numerous times between 2023 and 2025. A summary of operations and types of survey is in Table 3-6.

Table 3-6: Summary of surveys from 2023 to 2024

GEOPHYSICS				
Survey	GEOxyz - geophysics survey	GEOxyz - UXO survey	SHOM 2024	SHOM 2023
Survey ID	FGL_GPY_2024	FGL_UXO_2024	S202400600	S202303300
Vessel	GeoOcean VI	GeoOcean VI	Laplace / Beautemps-Beauprés	BH2 Borda
Survey date	09 September to 03 October 2024	04 October to 05 November2024	16 March to 27 June 2024 5 to 23 March 2024	2023
Positioning	Trimble BX992 - OmniSTAR G4+	Trimble BX992 - OmniSTAR XP2 and G4+	DGNSS + MarineStar corrections	Not mentionned
MBES	Kongsberg EM2040	Kongsberg EM2040	Kongsberg EM710 / EM712	Not mentionned
SSS	*NA*	Edgetech 4205	Edgetech 4205-FS & 4301	Not mentionned
SBP	Innomar SES Medium 100	*NA*	iXblue ECHOES 3500 T2/ Kongsberg SBP29	iXblue Echoes 3500 T2
MAG	*NA*	Geometrics G-882 - TVG	Not mentionned	Not mentionned
UHRS	Geoeel Streamer Applied Acoustics Duraspark 400 DGNSS - Applied Acoustics AAE minipod101G			

GEOTECHNICS	
Survey	FUGRO - phase 1 & phase 2
Survey ID	F255271
Vessel	MV FUGRO Zephyr
Survey date	5 June to 15 July 2025 27 August to 30 October 2025
CPT	SeaDevil® + Fugro WISON MkV® / CP10 cones
Borehole	SeaDevil® SQ Core / S-Geobor
Positionning	Starfix.G4+
USBL	Sonardyne Ranger 2

The geophysical datasets from BRGM provide only a few seismic lines extracted from past research surveys. Those data were used only for QC purposes, and the survey details are not provided in this report.

3.1.3. DATA LIMITATIONS

The key data limitations identified within FGL OWF area include the following:

- Across the available Geophysical (UHRS) surveys performed by GEOxyz, seabed features interpretations (such as bedforms, slope maps, or contours) appear to have not been done or delivered to date.
- Information regarding the Acoustic Seismic Velocity (ASV) are not mentioned within the GEOxyz UHRS factual report and only mentioned in the Isopachs encoded raster name (1600 and 1800 m/s respectively).

The ASV used by the SHOM is 1500 m/s for the uppermost soft sediment layers. Tecnoambiente will compare the geophysical interpretation, and the geotechnical depths and will propose an assumed sound velocity that best fits the geophysical with the geotechnical data.

- For the GEOxyz MBES datasets, the DEM (0.5 m cell size) coverage is limited along UHRS survey tracklines and within UXO boxes. Full-area coverage is available from the SHOM dataset at a 1 m cell size. The GEOxyz datasets are included in the final gdb but used only for seabed morphology/features QA/QC. The data coverage is shown on Figure 2-1.
- SHOM MBES data (DEM and Slope) are relatively noisy, this reduces resolution for seabed features interpretation.
- The SSS data does not cover the full project area (Figure 3-3):
    - SHOM SSS survey covers only some parts of the FGL area. The SSS mosaic quality differs over the four different survey/mosaics, one from 2023 and two from 2024. The full area coverage requires the integration of the backscatter data from the MBES surveys (2023 and 2024),
    - UXO survey was focused only on the UXO boxes,
    - Geophysical – UHRS – survey was done without SSS.
- The SBP and UHRS data from the UHRS survey (GEOxyz) have a very wide line spacing, approximately 1500 m, which requires significant extrapolation when gridding across the full area. A buffer zone is recommended around the survey lines, beyond which interpretations should be treated with caution or potentially disregarded.
- The SBP data from the SHOM geophysical survey (lot 2 and 4) have a variable line spacing, from very small to quite large, and areas without cross-lines. Except a reduced area in the north-west corner and some borders, the project area is fully covered by the SBP data interpretation (Figure 3-5).
- The navigation files from the SHOM geophysical survey in the FGL area is provided as a text file without any information about the sensors used or line name except for the SBP datasets. The SBP and SSS data were not acquired for all lines. Without more detailed information, the tracklines that will be integrated to the final geodatabase will have limited useful information, only date/time.
- Outside the UXO search boxes, no magnetic data are available on the provided datasets, nothing from SHOM survey. Only the GEOxyz data will be provided for the geodatabase if no additional datasets are provided prior to the deliverable deadline.
- Borehole recovery was not 100% and CPT logs are not continuous, the accuracy of the boundaries between the soil can be affected.
- Currently the geodatabase from the geotechnical survey is not available. If it is not possible to provide it, the information will not be part of the geodatabase.

No additional SSS, MAG or SBP interpretation will be carried out within the scope of this integration report.

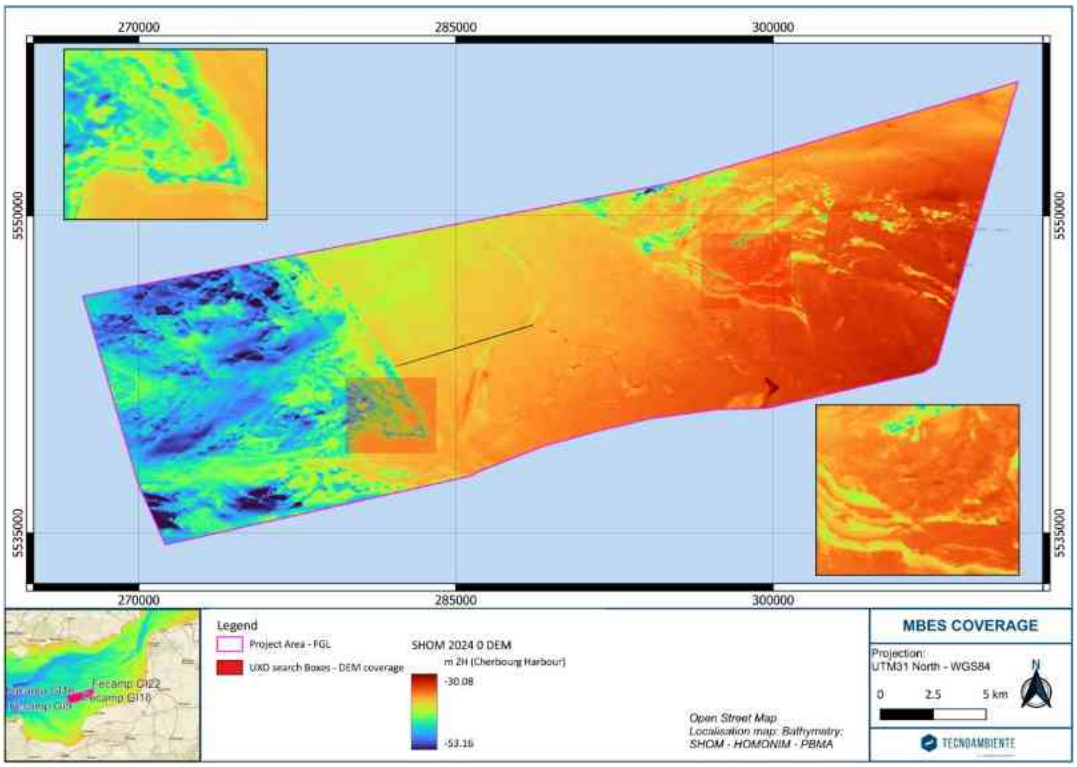


Figure 3-1: MBES of the UXO and SHOM survey

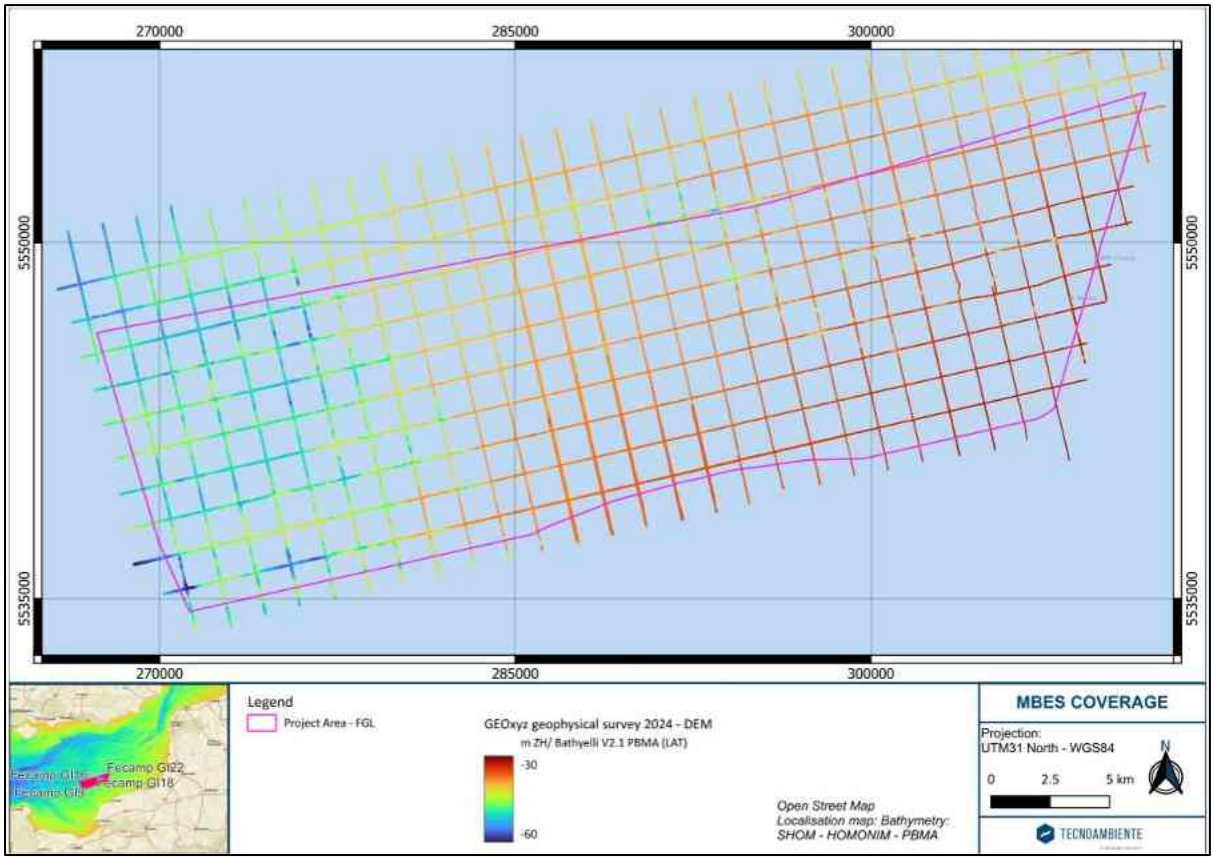


Figure 3-2: MBES of the GeoXYZ Geophysical survey

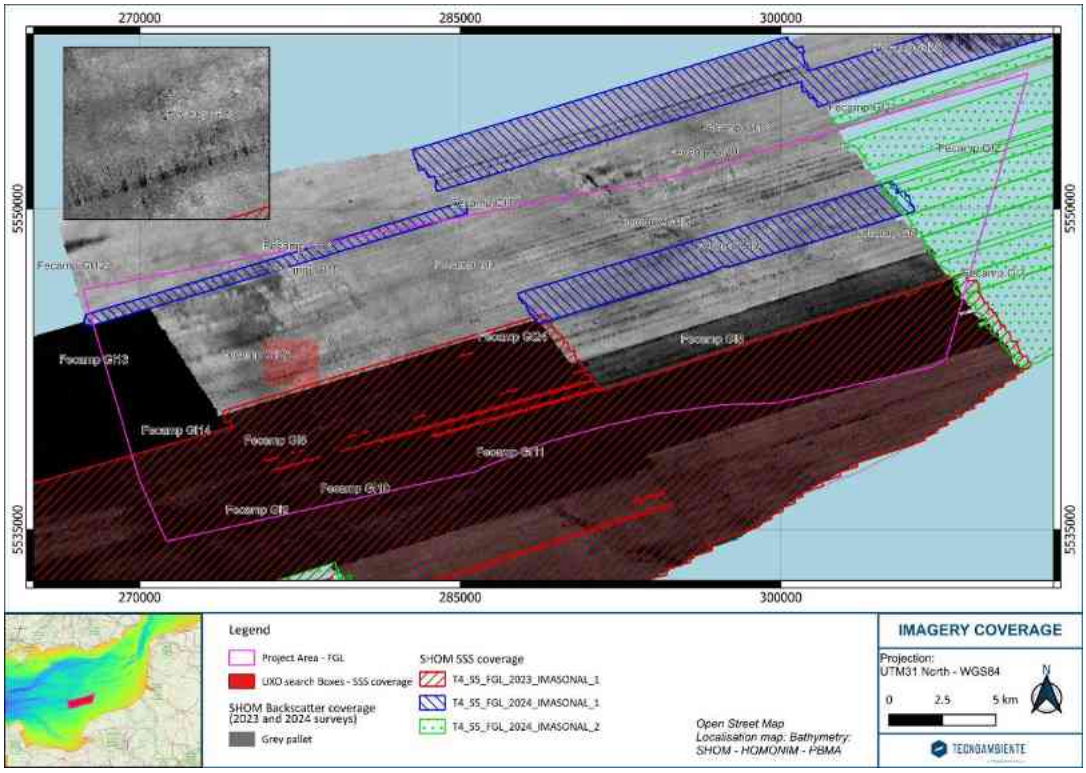


Figure 3-3: Available SSS and Backscatter mosaic

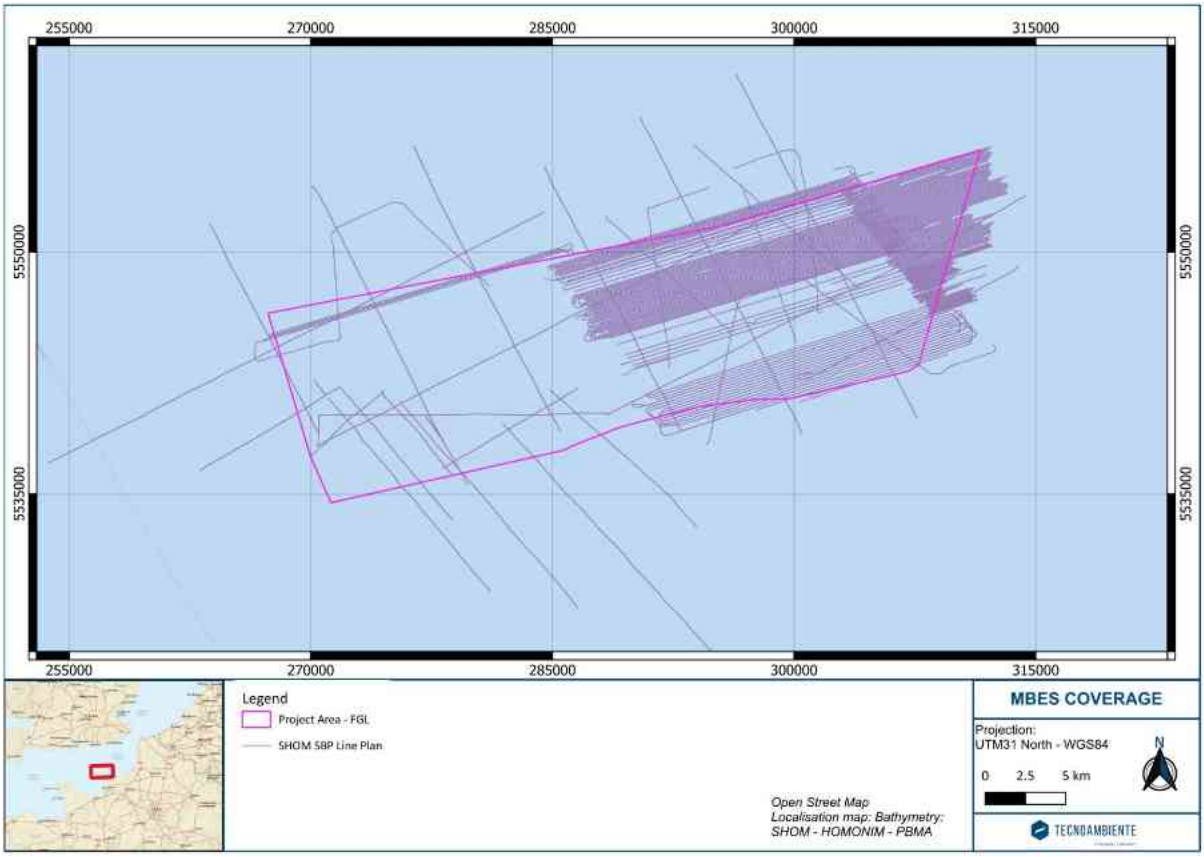


Figure 3-4: SBP SHOM surveys line plan.

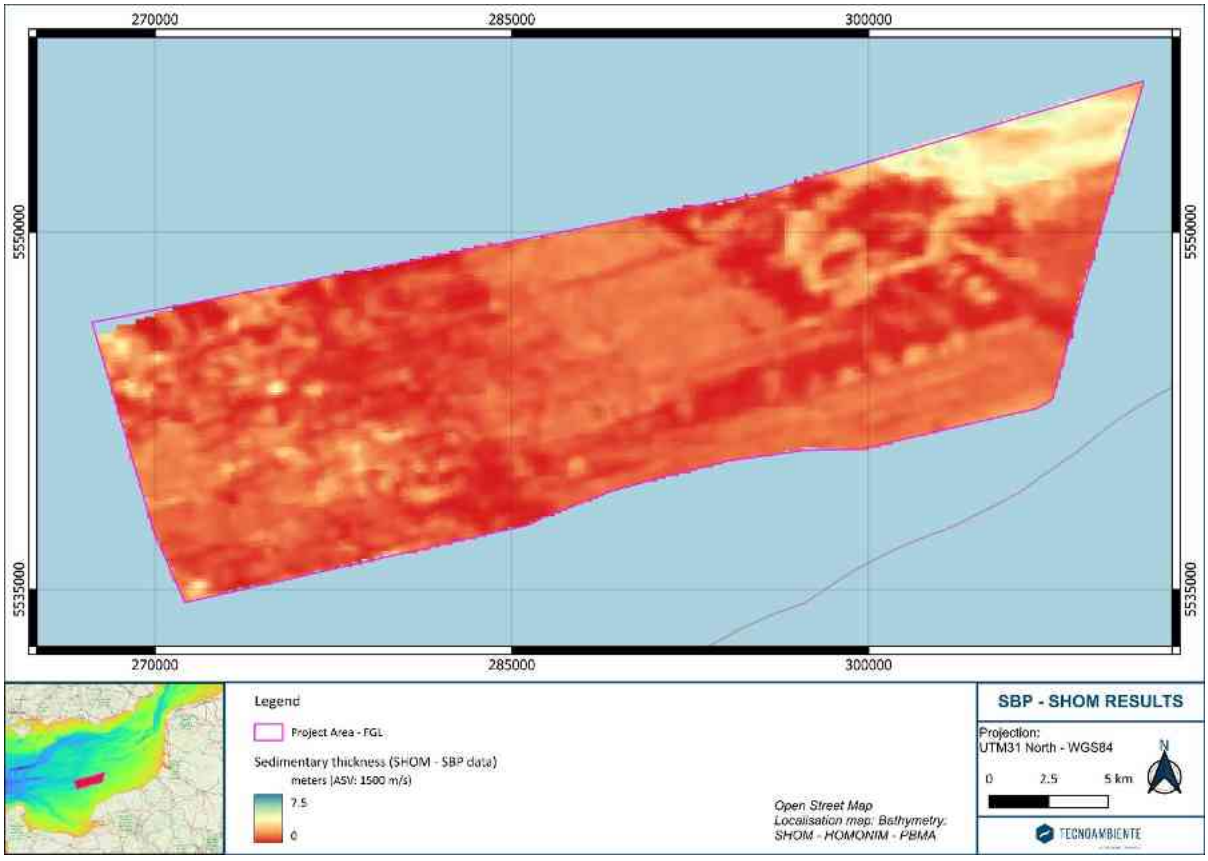


Figure 3-5: SBP interpretation – sedimentary thickness – SHOM surveys

3.2. SEISMIC DATA QUALITY

The preliminary step was the seismic data QC:

- SHOM datasets: few SEG-Y profiles provided and some without any processing or vertical corrections. The available lines are integrated as provided within the Kingdom Suite Project but have not been used for cross-correlation or picking updates.
- BRGM datasets: The processed SEG-Y, digitalization of old datasets, is of medium quality, the datasets have been mainly used for QC of the main seismo-stratigraphic limits as defined in the BRGM study [14].
- GEOxyz SBP dataset: the overall profile quality is acceptable for the uppermost soft sediments.
- GEOxyz UHRS dataset: the overall profile quality is good above the seabed multiple. A variable layer thickness shows multiples between the seabed and uppermost reflectors. Interpretation below the seabed multiple is of lower confidence.

The SBP and UHRS data interpretation presents both the main horizons considered a boundary of a stratigraphic unit as defined in previous studies ([14] & Ref 1) and some major internal horizons that can be assigned to the limit of a geological unit.

The data interpretation has some limitations due to:

- Sparse UHRS lines, 1500 m line spacing for both main and cross-lines that limit the accuracy of the extension and thickness of some geological features such as paleo-channels,
- Signal attenuation below the seabed multiple with long period noisy signal around this artefact
- Dipping units means that there is a large lateral variation over the survey area. As a result some units are only contained within one or two geotechnical locations.

3.3. BIBLIOGRAPHIC REFERENCES

[1] Augris C., Simplet L., Maze J.-P., Morvan L., Satra Le Bris C., Fitamant N., Bourillet J.-F., Stephan M. (2006). Inventaire des ressources en matériaux marins : Façades « Manche-Est » et « LoireGironde ». https://archimer.ifremer.fr/doc/00135/24577/

[2] Belderson, R. H., Johnson, M. A., & Kenyon, N. H. (1982). Bedforms. [In]: Stride, AH (Ed.), Offshore tidal sand, processes and deposits.

[3] Chantraine J., Autran A., Cavelier C., (2003) Carte Géologique de la France à l'échelle du millionième. Sixième édition révisée. Editions BRGM.

[4] Gautier E., Augris C., Simplet L., Prevot J., Drussel B., Abrieux E., Morvan L., de Chambure L., Maze J.-P. (2012). Inventaire des ressources en matériaux marins. Façades Bretagne et SudGascogne. https://archimer.ifremer.fr/doc/00125/23646/

[5] Hicks Michael A. (2013). An Explanation of Characteristic Values of Soil Properties in Eurocode 7. In Advances in Soil Mechanics and Geotechnical Engineering. IOS Press. https://doi.org/10.3233/978-1-61499-163-2-36

[6] International Organization for Standardization. (2017a). Geotechnical investigation and testing—Identification and classification of soil—Part 1: Identification and description (ISO 14688-1:2017). https://www.iso.org/standard/66345.html

[7] Jamiolkowski, M., LoPresti, D. C. F., & Manassero, M. (2001). Evaluation of relative density and shear strength of sands from cone penetration test and flat dilatometer test. Soil behaviour and soft ground construction (GSP 119, pp. 201–238). American Society of Civil Engineers.

[8] Jollivet-Castelot M. (2018). Bassin de Dieppe-Hampshire (Manche orientale) : Evolution cénozoïque et enregistrement des évènements géodynamiques. Thèse de doctorat, Université de Lille. 296 p.

[9] Kaci T. (2023). Tectonique du Nord-Ouest Cotentin par approche Terre-Mer et implications sismotectoniques.Thèse de doctorat, Université Le Havre Normandie. 249 p.

[10] Kulhawy, F. H., & Mayne, P. W. (1990). Manual on estimating soil properties for foundation design (No. EPRI-EL-6800). Electric Power Research Inst., Palo Alto, CA (USA); Cornell Univ., Ithaca, NY (USA). Geotechnical Engineering Group.

[11] Lengkeek, H. J., & Brinkgreve, R. B. J. (2022). CPT-based unit weight estimation extended to soft organic clays and peat: An update. In Cone penetration testing (pp. 503–508).

[12] Mansy J.-L., Manby G.M., Averbuch O., Everaerts M., Bergerat F., Van Vliet-Lanoe B., Lamarche J., Vandycke S. (2003). Dynamics and inversion of the Mesozoic Basin of the Weald–Boulonnais area: role of basement reactivation. Tectonophysics 373, 161–179.

[13] Paquet F., Thinon I., Dugue O., Tessier B., Benabdellouahed M., Lasseur E., Briais J., Coueffe R., Guennoc P., Gaullier V. (2023). The Central English Channel troughs: major source-to-sink remnants giant tidal scours? doi.org/10.1016/j.marpetgeo.2023.106303

[14] Paquet F. 2024. Aperçu géologique de la façade Manche Est - Mer du Nord. Rapport final - A. BRGM/RP-73268FR, 51 p.

[15] Paquet F., Rusch R., Bertil D. (2024). Aperçu géologique de la macro-zone Fécamp-Grand-Large. Rapport final - A. BRGM/RP-73601-FR, 107 p.

[16] Schmertmann, J. H. (1982). A method for determining the friction angle in sands from the Marchetti dilatometer test (DMT). In Proceedings of the Second European Symposium on Penetration Testing. Amsterdam, Netherlands.

4. REFERENCE DATUM AND TRANSFORMATION

4.1. GEODETIC PARAMETERS

Geodetic parameters are included in Table 4-1 below.

Table 4-1: Geodetic parameters

DATUM	
Survey Datum:	World Geodetic System 1984 (WGS84)
EPSG	4326
Spheroid	GRS80 (EPSG code: 7019)
Semi-Major Axis (a)	6378137.000 m
Semi-Minor Axis (b)	6356752.314 m
Inverse Flattening (1/f)	298.257223563
Eccentricity Squared	0.00669428002290

Projection parameters are included in Table 4-2 below.

Table 4-2: Projection parameters

PROJECTION PARAMETRES	
Projection	UTM
UTM Zone	31 N
EPSG	32631
False Easting	500000 m
False Northing	0 m
Latitude of Origin	0º00’00.000’’
Central Meridian	-3º00’00.000’’
Scale Factor on CM	0.9996
Units:	Metres

4.2. VERTICAL DATUM

The project vertical datum refers to the LAT based on Bathyelli V2.1 PBMA geoid from the SHOM report.

The Fugro datasets, including geotechnical sampling, have been provided as Bathyelli ZH reference but with a reduction of -0.332 m as mentioned in the mobilisation report and then additional vertical offset of +0.183 m to final data as stated in the operations report. As the applied final offset is around the general accuracy expecting at the project water depth (< 0.15 m), the water depths in the factual report are included without modifications.

5. SITE CONTEXT

5.1. HUMAN ACTIVITY AND ANTHROPIC CONTEXT

Three pipelines/cables cross the FGL OWF from the south to the north, and one traverses the site from the southeast corner to the northwest of the FGL OWF.

5.2. HYDROGRAPHIC CONTEXT

The FGL area is in the eastern part of the English Channel, also called 'La Manche'. The English Channel is a sea corridor connecting the Atlantic and the North Sea.

5.3. REGIONAL GEOLOGY

Several studies within the FGL OWF area aid the understanding of the regional geology of the FGL area and are brought together in the BRGM desk study reports (Paquet et al., 2024- [15] and Paquet, 2024 - [14]). The FGL OWF area is mainly within the Anglo-Paris Basin which extends from northern France to southern England and comprises Mesozoic to Cenozoic formations.

Inside this large basin, an accumulation of Cretaceous and Cenozoic formations is detailed in the Jollivet-Castelot PhD (2018, [8]) the sediments form a large syncline-oriented SW-NE through the Eastern Channel Block.

The simplified geological map derived from Chantraine et al., 2003 - [3] issued in the BRGM desk study shows different geological terrains. There is a general trend of decreasing age of the rocks from west to east due to the tectonic activity (faults and large syncline):

- Later Jurassic terrains are mainly restricted to the western area of the FGL OWF area,
- From west to east, the geologic map shows the outcrop/subcrop of successively younger Cretaceous, Palaeocene then Eocene formations.

Locally, the Paleogene deposits are incised by the 'median paleovalley' described by Augris et al., 2006 - [1], Gautier et al., 2012 - [4]) this valley is linked to Neogene sea-level variations, generated by the late Quaternary eustatic cycles. The paleovalley infill has a mixed origin of fluvial, tidal and marine deposits (Pleistocene).

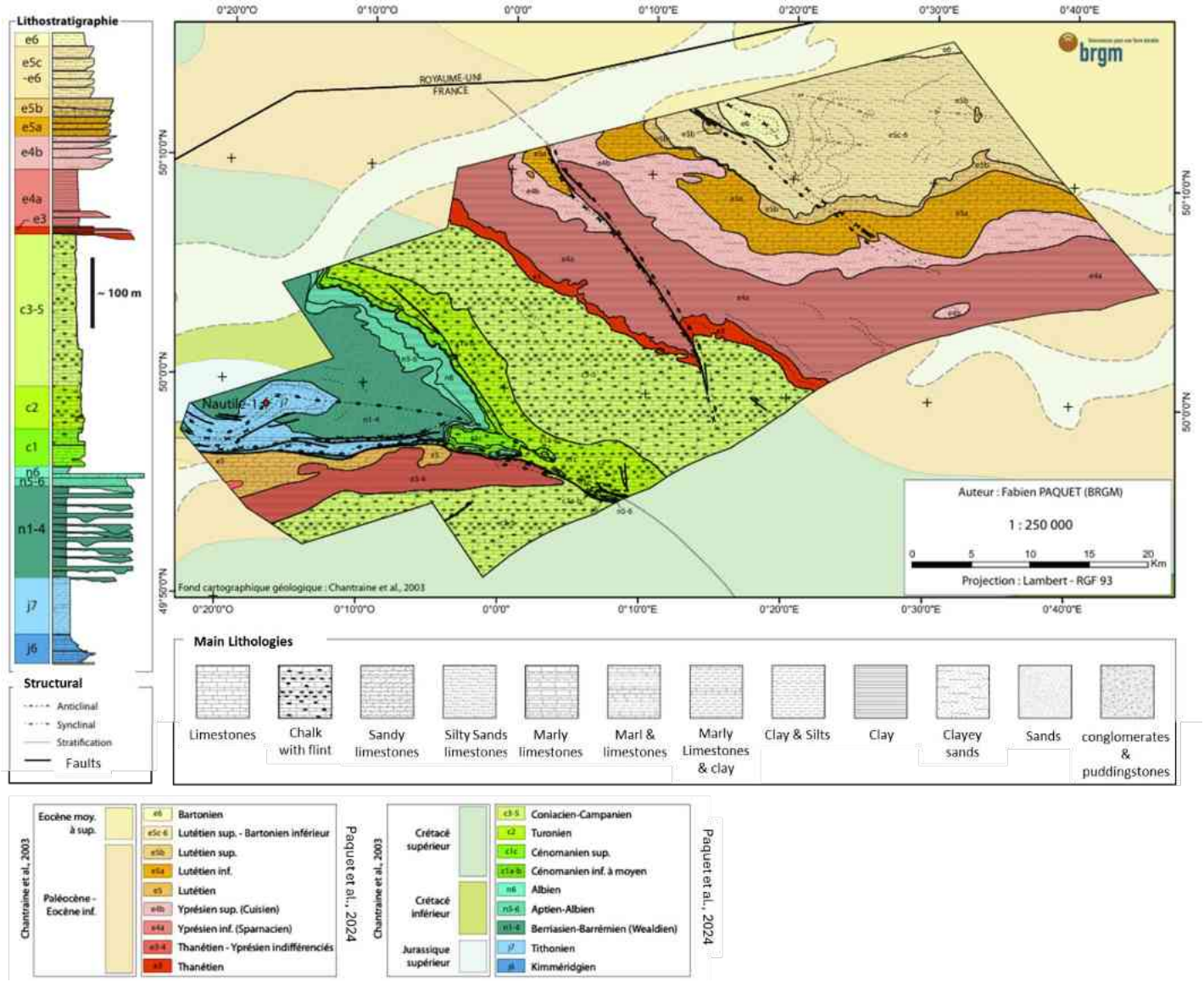


Figure 5-1: Geological map and lithology – macro-zone FGL (Paquet et al., 2024 - [15])

There are numerous faults in the area. This tectonic activity, which extends throughout the Anglo-Paris Basin, is considered a reactivation of structural trends inherited from the Variscan orogeny (Devonian- Carboniferous period). This is dated to the late Palaeozoic and considered as potentially still active (Mansy et al., 2003 - [12]).

The GEOxyz factual report from 2024 that proposed the results of the UHRS and SBP data interpretation (Ref 1) is based on the BRGM geological framework and stratigraphic units. The main points highlighted by this study based on UHRS/SBP data only, no geotechnical results, are (Figure 5-2):

- General organisation of the geology appears more complex in the west of the area,
- The Late Cretaceous to Eocene rocks dip at about 1° towards the north-east,
- Due to a large unconformity (N5) the Lower Cretaceous deposits, in the west of the area, have a lower dip towards north-east compared to the upper formations,

- The Late Cretaceous deposits are in a localised area and have a wavy seismic facies.
- The Neogene/Quaternary deposits are defined as:
  - Marked by a truncation surface at the base,
  - Mainly with a thickness less than 3 m with most of the deposits associated with the Holocene seabed veener,
  - Some local areas with thickness around 20 m and up to 60 m associated with potential valley infill.

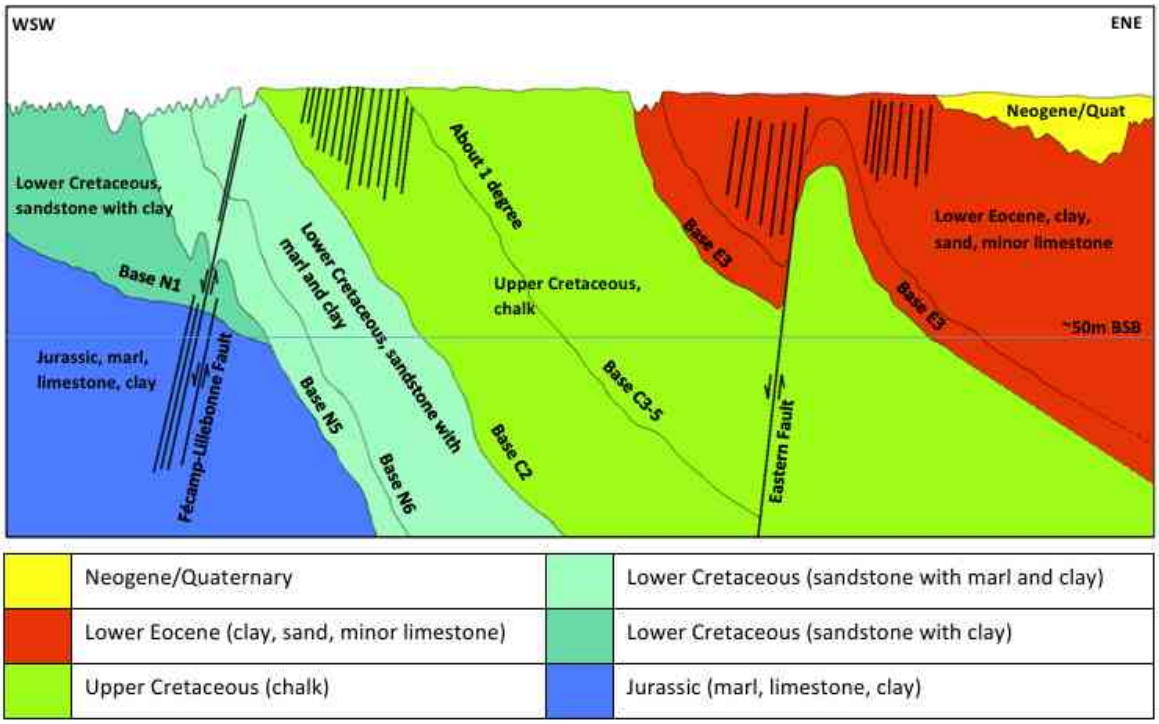


Figure 5-2: Geological schematic (GEOxyz, 2024 - Ref 1) through the FGL area

5.4. TECTONISM AND POTENTIAL GEOHAZARDS

The area is affected by tectonic activity along structures inherited from the Variscan orogenesis and reactivated in the late Palaeozoic. This activity is marked by two major faults:

- The Fécamp-Lillebonne fault at the west of the FGL OWF area:
  - This fault extends offshore with different orientation, from NW-SE to WNW-ESE and divides into the Nord Baie de Seine fault system in its end part,
  - Associated with complex tectonism with primary and secondary faults and folds (anticlinal, synclinal),
  - Active during Mesozoic and Cenozoic – reactivation of old structures,
  - Induce the Cenozoic basin subsidence/Jurassic uplift,
  - Associated with an anticline through the Jurassic deposits east of the fault.

- The Eastern fault – named Eletot fault in the desk study from Paquet et al, 2024 - [15]:
  - Potential part of the Bray-Wight structure,

- NW-SE orientation,
- Induces the Cenozoic basin subsidence,
- Associated with an anticline within the Eocene deposits east of the fault.

Between the two major faults, small faults are apparent and noted in the GEOxyz interpretation report. The GEOxyz interpretation highlights numerous small faults, with low displacements, within the late Cretaceous and the Paleocene/Early Eocene.

The occurrence of faults induces potential geohazards for the FGL OWF area as mentioned in the BRGM desk study - [15]:

- Modification of geotechnical properties induced by deformation, fracturing zones, mineralized veins etc,
- Calcareous alteration: potential water flow development that can act on soil dissolution, karstification and mineralization,
- High ground geology spatial variations with different geological/soil units such as the Jurassic/Cretaceous contact induced by the Fécamp-Lillebonne fault.

Those potential geohazards were not estimated within the desk top studies due to the lack of information, few seismic lines / too large line spacing, and lack of geotechnical information.

Potential fault activity is evaluated using the recent seismic activity analysis. The conclusions define the area as a very low seismicity zone ([15]), nevertheless some recent seismic events can be associated with the two major faults of the study area within a radius of 50 km and with a magnitude below 4.5.

The UHRS data from GEOxyz show scattered shallow gas accumulations, mostly within the Neogene deposits. It is noted that a full interpretation cannot be undertaken due to the sparsity of the data.

6. SEABED CONDITIONS

This section provides a summary of the morpho-sedimentary and seabed constraints identified within the Fecamp Grand Large OWF.

Appendix A includes 10 north-up charts describing the seabed conditions (MBES bathymetric model, MBES slope model, seabed features and sediment classification).

6.1. BATHYMETRY AND SLOPE

The bathymetry and slope of Fecamp Grand Large area with 0.5 × 0.5 m pixel resolution is shown in north-up charts 1 and 2 in APPENDIX A. A summary of these details is provided in Figure 6-1 and Figure 6-3 along with Figure 6-4, which illustrates three bathymetric profiles and the corresponding slope for the Fecamp Grand Large OWF. It should be noted that all descriptions are based on the available SHOM data.

Table 6-1: Summary of bathymetry and slope along the FGL OWF area.

Attribute along the OWF area	Value	Description
Minimum water depth	-28.1 m ZH	Northeast of the area
Maximum water depth	-56.5 m ZH	Southwest of the area
Depth Characteristics		Gradually deepening to the west
Average (natural) seabed gradient	<1°	
Maximum gradient	<4°	To the west of the survey area where the ground is more undulating
Slope Characteristics		A central flatter region associated with chalk outcrop and more undulating seabed to the east and west

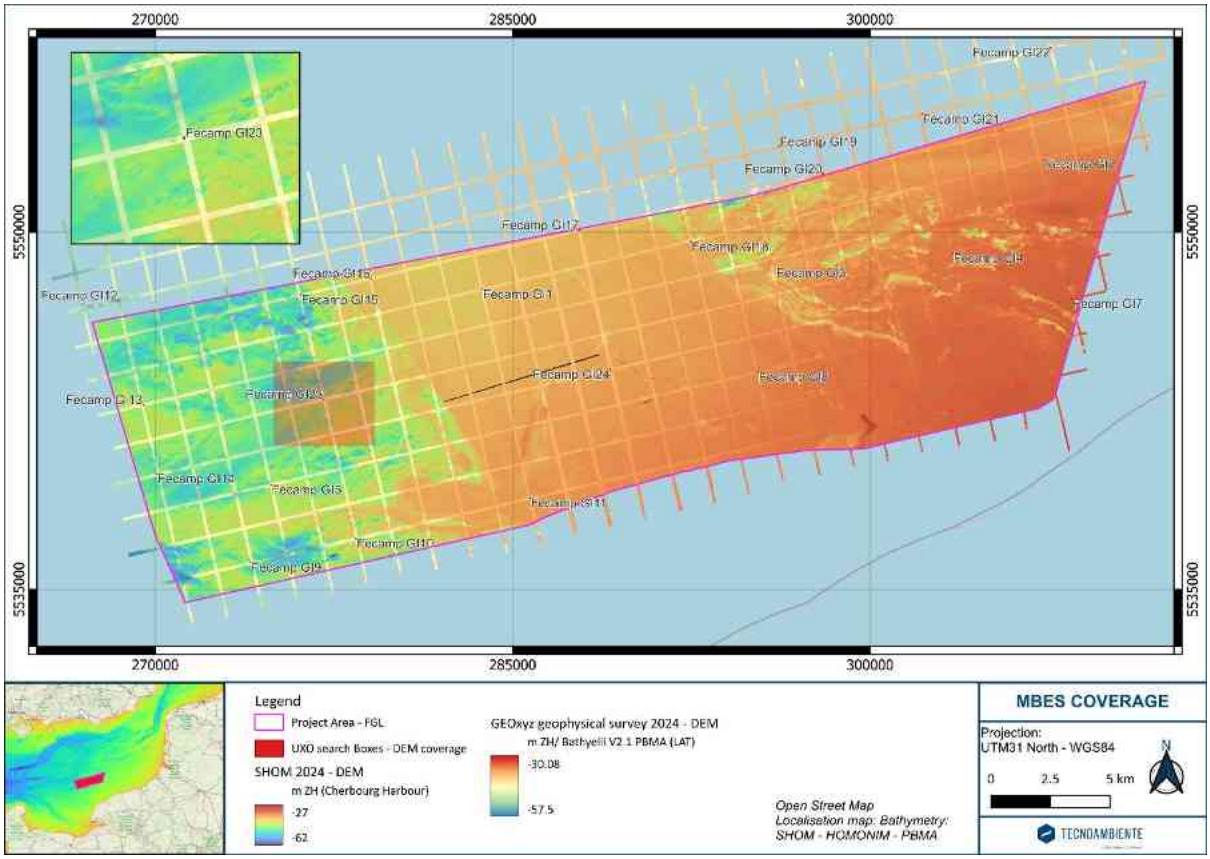


Figure 6-1: Fecamp Grand Large bathymetry, zooming in the west

A bathymetry grid from the SHOM regional survey, and also from EMODNET provides complete bathymetric coverage over the FGL OWF area. The water depths vary between -28.1 m in the southeast and -56.5m in the southwest. The slope analysis shows gradients are generally less than 1°, although occasionally up to 4°. The central third of the OWF area is generally flatter than the surrounding seabed. This is due to the underlying geology in this zone. There are no indications of sediment mobility within the area.

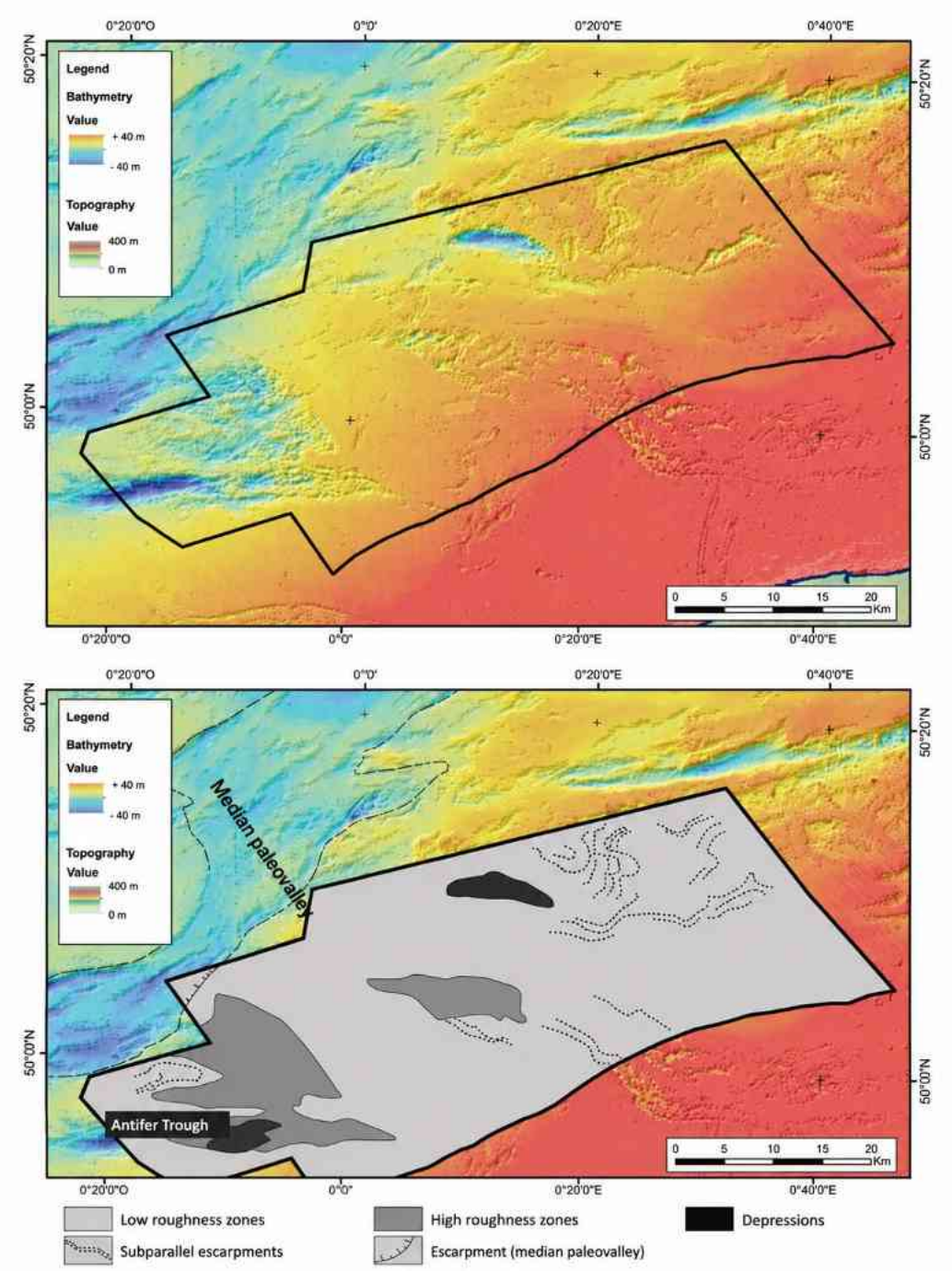


Figure 6-2: Bathymetric map from Fecamp Grand Large (EMODnet,2022) and morphological interpretation map

Table 6-2: Seabed gradient classification over the FGL OWF area.

Slope classification	Gradient (º)	Colour
Very gentle	<1º	

Slope classification	Gradient (º)	Colour
Gentle	1º - 5º	
Moderate	5º – 10º	
Steep	10º - 15º	
Very steep	>15º	

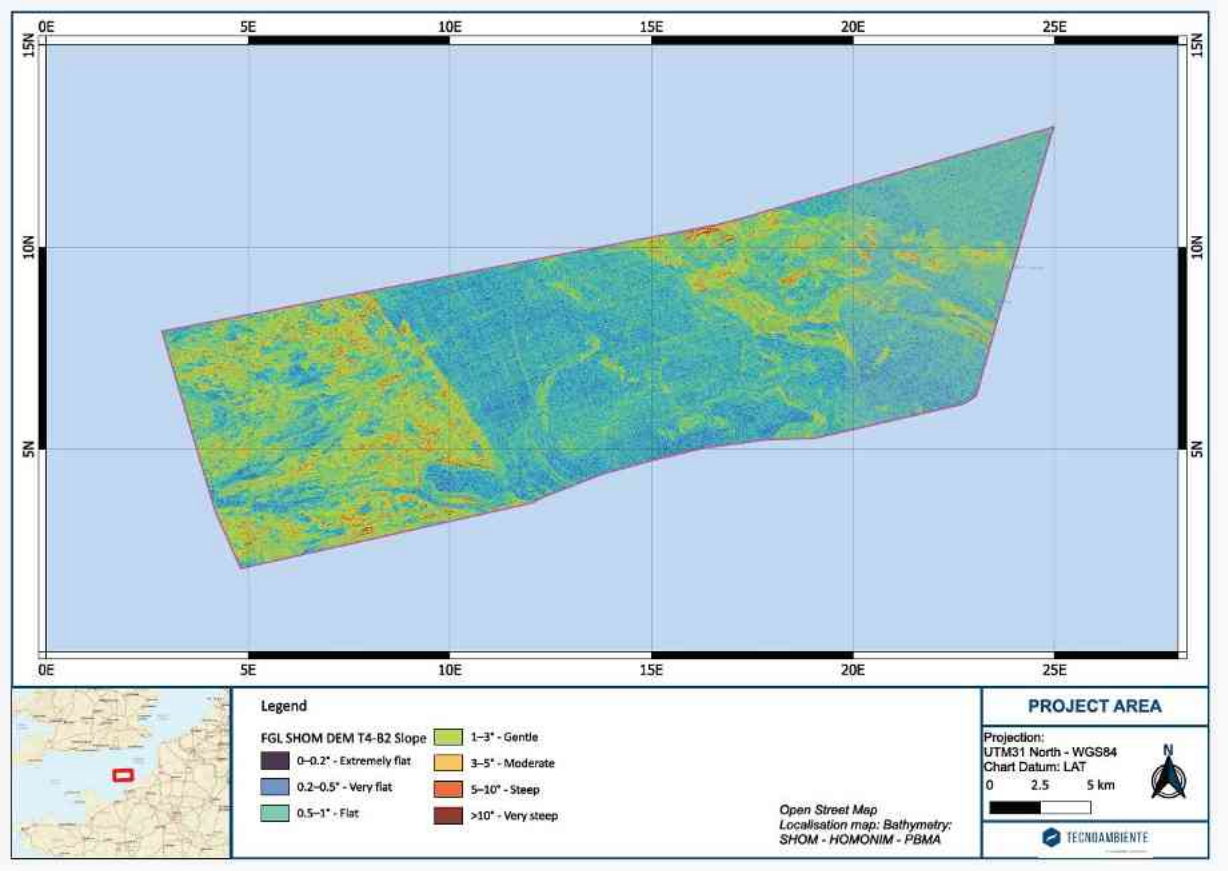


Figure 6-3: Fecamp Grande Large OWF slope map

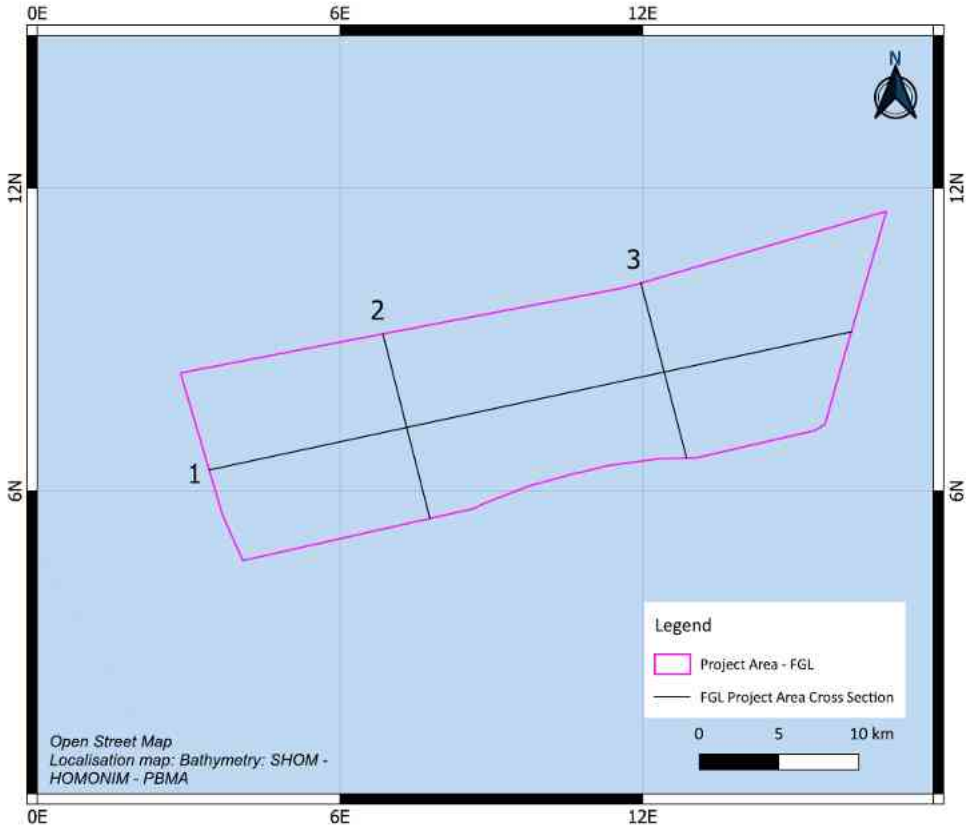


Figure 6-4: Map showing locations of the profiles

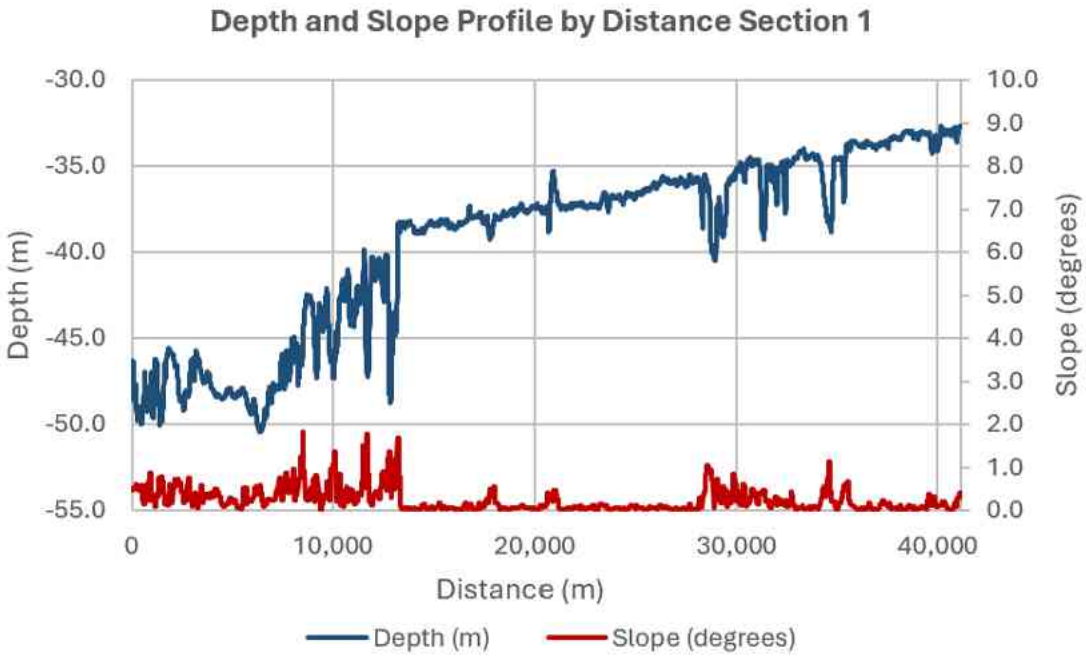


Figure 6-5: Cross-Section 1

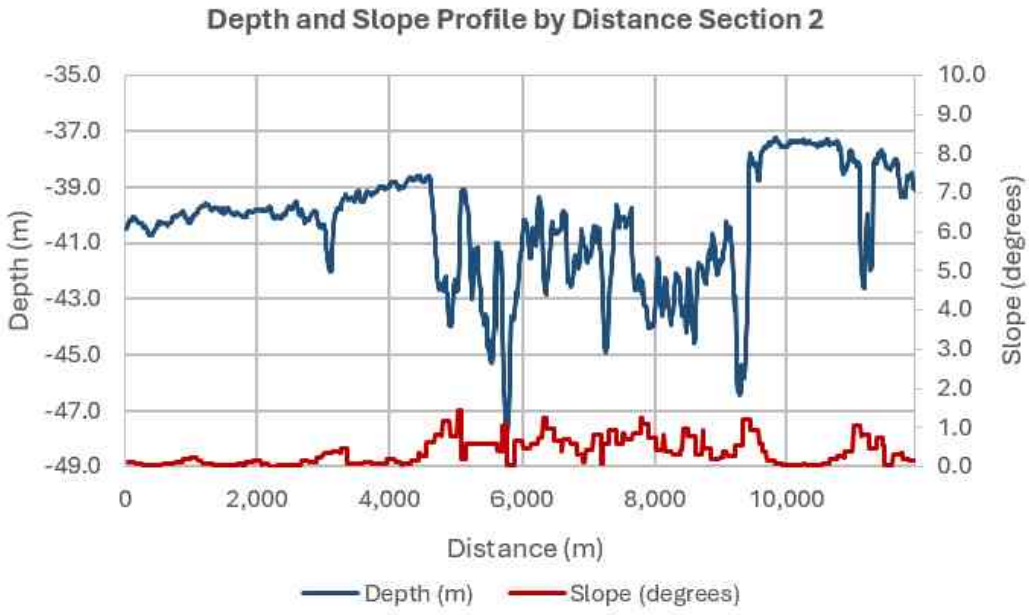


Figure 6-6: Cross-Section 2

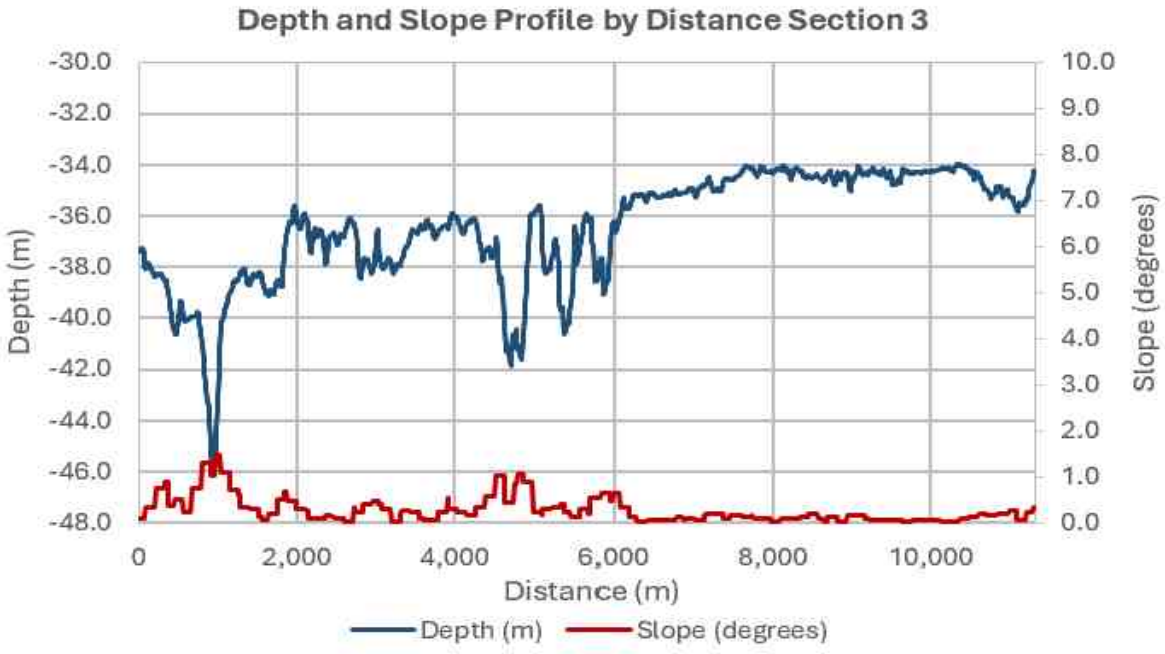


Figure 6-7: Cross-Section 3

6.2. SEABED CLASSIFICATION

The seabed classification is based on the available datasets as defined in Section 3. SSS data is not available within the whole OWF area. Geotechnical samples have been used; however, it has been taken into consideration that the uppermost sediments may have winnowed out of the sample.

The seabed is interpreted as predominantly sandy gravel.

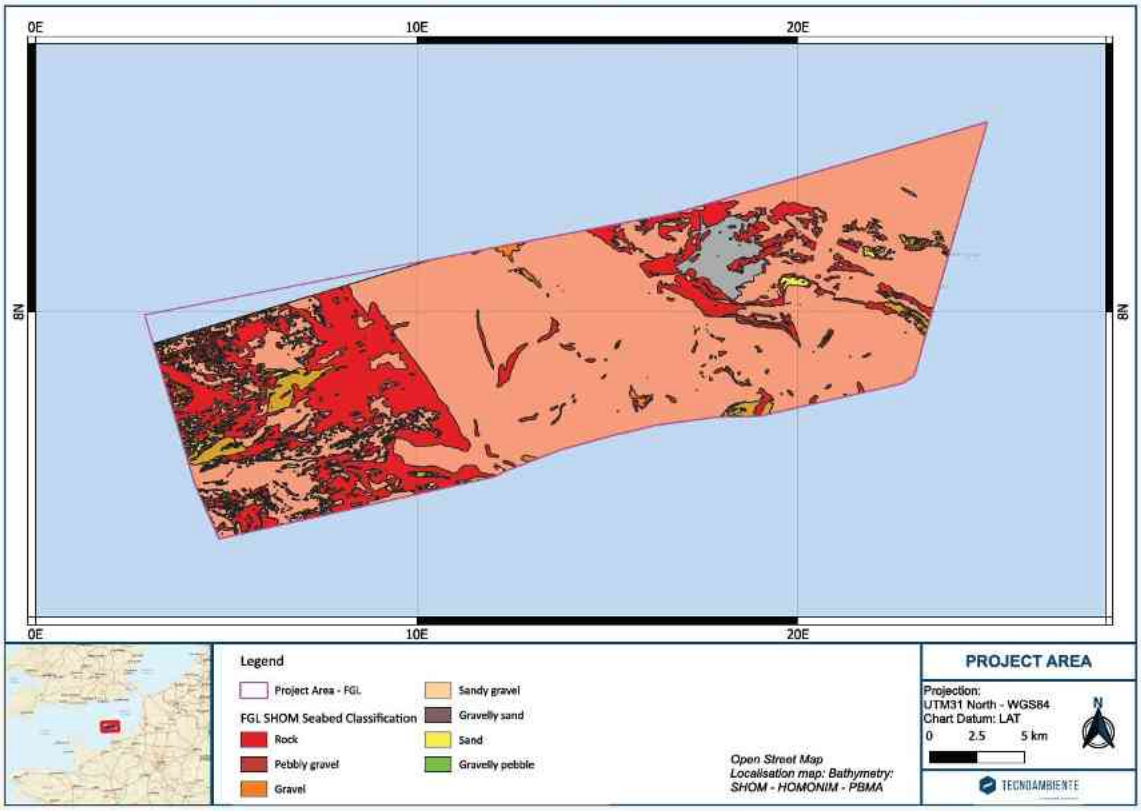


Figure 6-8: Sediment distribution within Fecamp OWF.

6.3. SEABED FEATURES

The identification and characterization of the seabed features within Fecamp Grand Large OWF area was based on the previous interpretation results from the SHOM data and the accurate analysis of the bathymetry and slope from the SHOM survey. Results are shown in the North-Up Chart 3 of APPENDIX A.

Eleven wrecks are reported as occuring within the survey area, three of these on planned acquisition lines from the GeoXYZ survey. Their locations are shown in Figure 6-9 below.

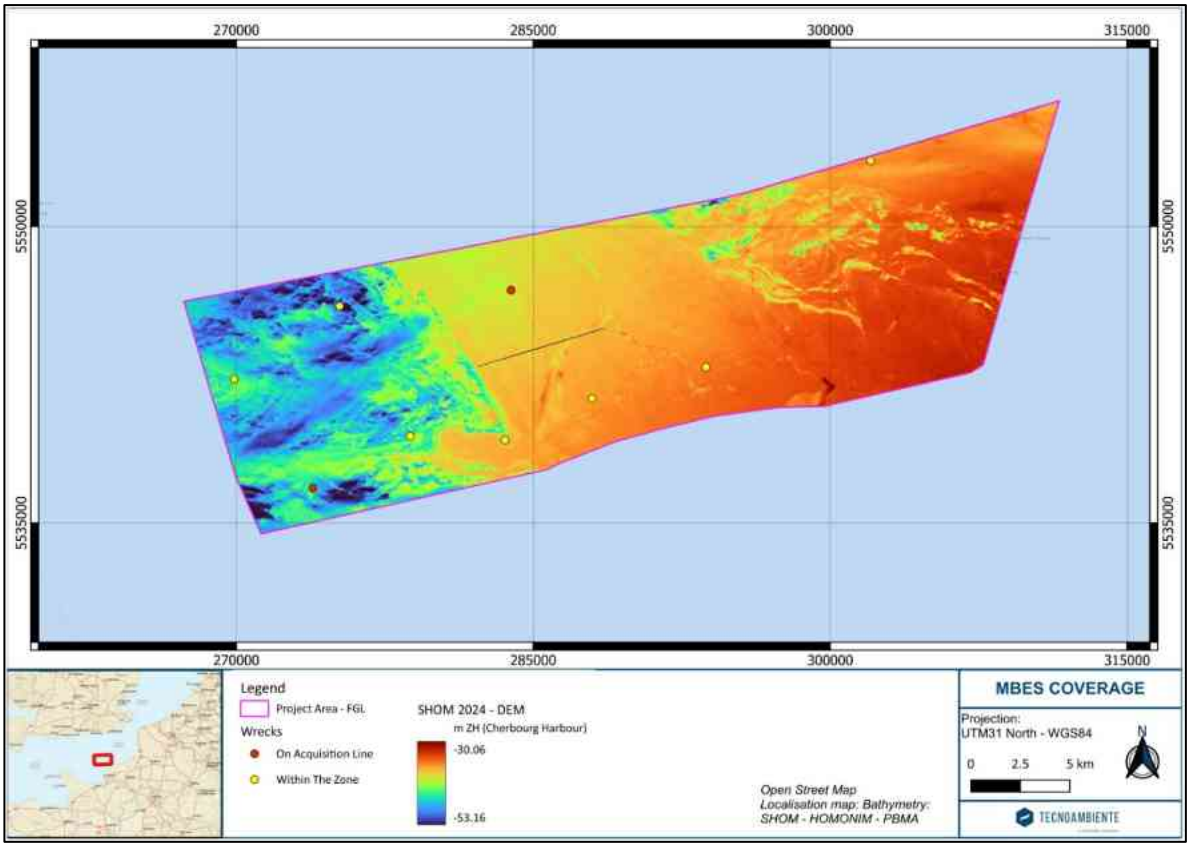


Figure 6-9: Location of Wrecks within the Fecamp Grand Large OWF. (Red is on acquisition line, yellow is within the zone)

7. GEOLOGICAL FRAMEWORK

SBP and UHRS data interpretation is updated based on:

- Integration and cross-correlation of the seismic database,
- Potential additional well-defined horizons associated with geotechnical units,
- Seismo-stratigraphic concepts.

7.1. SEISMO-STRATIGRAPHIC UNITS

7.1.1. GENERAL OVERVIEW

As described in the regional site context and previous DTS and UHRS interpretation report (Ref 1), the geological and context of the FGL OWF area is complex and largely influenced by pre-Neogene tectonism.

The UHRS interpretation defines 9 units associated with formations from the Holocene to Jurassic periods. The proposed interpretation is based on updated picking of the GEOxyz provided horizons regarding both UHRS datasets and major lithology variations in the geotechnical boreholes from the Fugro survey report (Ref 8).

Unit 1 is only defined by a veneer imaged in some areas primarily in the SBP dataset. It is most developed within large channels in the south-west and north-east of the area. It is marked by a cross-cutting truncation surface at the base (Base Holocene).

Below Unit 1, Unit 2 is present. Unit 2 has been subdivided into Unit 2a and Unit 2b. Unit 2a comprises SAND with SILT/CLAY. Unit 2b comprises CALCARENITE although Unit 2b is only sampled in BH09 in the southwest of the survey area within a channel infill sequence.

The general trend is that the units conformably overlie each other with a general dip toward the north-east at around 1°. Younger sediments outcrop in the east, whilst to the west much older sediments subcrop at seabed.

Below this, CHALK (Unit 3) is present. This unit subcrops in the central third of the survey area. There is a change in character on the bathymetry data where this occurs with a higher relief, smoother seabed in this area.

The dip increases in some places marked by large anticlinal/synclinal shape. The dip means that generally sediments get younger to the east of the OWF area, except in the south-west corner of the project area where a major fault (Fécamp-Lillebonne fault) disturbs the pattern. In this corner, Unit 2 is sub-outcropping. When the base of this unit is imaged (Base N5), it appears as a truncated well-marked horizon.

Towards the base of the dipping Units (Base Unit 7), a strong horizon (Base N5 in the seismic interpretation) sits unconformably on the underlying units 8 and 9, which are interpreted to be early Cretaceous and Jurassic in age. These units do not share the general dipping trend to the south-east. These units appear as relatively flat dipping, except in areas marked by strong tectonism that led to folding. The data quality, sparse line spacing and strong tectonism, faults and deformation do not allow separate mapping of these SSUs.

Both major faults mentioned in previous studies, the Eastern and Fécamp-Lillebonne faults, are imaged within the datasets, with the Fécamp-Lillebonne fault appearing as an area of scattered acoustic signal on the UHRS data and no penetration within it. Unit 2 contains numerous low displacement faults.

Figure 7-1: Correlation of stratigraphy, soil units and horizons shows the break down of the geophysical interpretation and the integration with the geotechnical data.

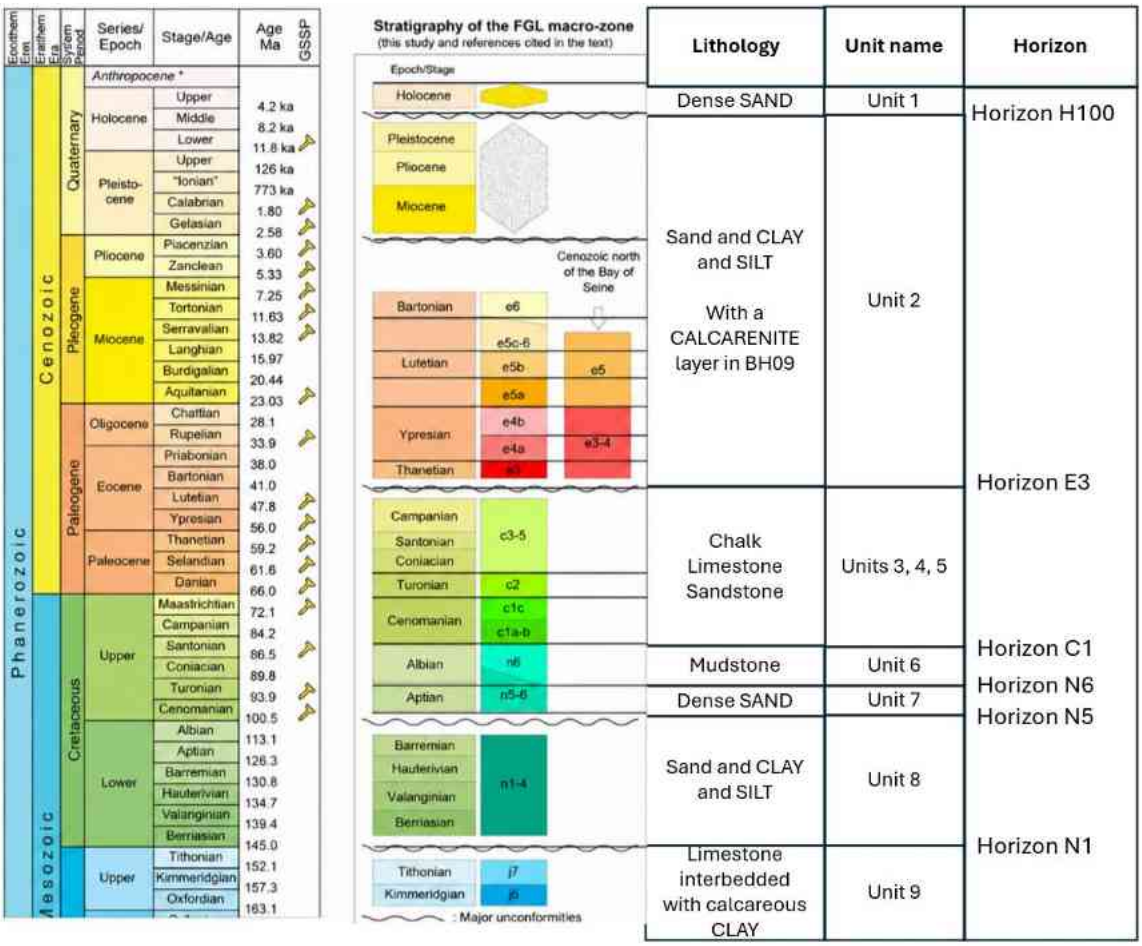


Figure 7-1: Correlation of stratigraphy, soil units and horizons

7.1.2. UNIT DESCRIPTION

The Table 7-1 Summaries the main characteristics of the units over the project area. Appendix D1 presents the unit distribution for each geotechnical location.

Table 7-1: Units thickness and extension

Unit	Seismic facies	Lithology	Extension and comments
1	Mapped SBP: chaotic facies	Dense SAND	Used ASV: 1800 m/s Thin seabed cover over most of the area East and south-west extremities: thick U-shape infill
Base Holocene/Neogene – truncation surface, erosional base			
2a	Dominated by low to medium amplitude sub-parallel reflectors	Sand and CLAY/SILT	Used ASV: 2000 m/s
Base E6/E3			
2b	Unit 2b only occurs within a channel infill as Calcarenite according to the geotechnical data. The likelihood is that although this is of Eocene age, the actual sediments are reworked and relocated from elsewhere.	Calcarenite	
E3			
3	Base and top of the unit are dominated by low to medium amplitude reflectors Central part shows a thick layer with a wavy seismic facies.	Chalk	Used ASV: 2000 m/s
4	Not determined on the seismic data as similar in character to the chalk above.	Limestone	Used ASV: 2000 m/s
5	Not determined on the seismic data as similar in character to the chalk and limestone above.	Sandstone	Used ASV: 2000 m/s
Base C1c			
6	Parallel bedded dipping reflectors with a strong horizon at the upper surface.	Mudstone	Used ASV: 2000 m/s
Base N6			
7	A quieter unit than those above with a strong unconformity at the base	Dense SAND	Used ASV: 2000 m/s

Unit	Seismic facies	Lithology	Extension and comments
Base N5			
8	A change in dip angle suggests much older sediments with a strong unconformable surface. Horizontal layers. Some evidence of faulting	SAND and CLAY/SILT	Used ASV: 2000 m/s
Base N1			
9	Parallel bedded reflectors	Limestone interbedded with calcareous CLAY	

Table 7-2: Borehole Unit summary

Borehole	Depth	Unit Name	Lithology
BH01	0.0-0.3	Unit 1	Dense SAND
	0.3-base	Unit 3	CHALK
BH02	0-17	Unit1	Sand and gravel
	17 to bottom	Unit2a	Sand and CLAY and SILT
BH03	0-1	Unit1	Sand and gravel
	1-40.9	Unit2a	Sand and CLAY and SILT
	40.9 to bottom	Unit3	CHALK
BH04	0-1	Unit1	Sand and gravel
	1 to 31.5	Unit2a	Sand and CLAY and SILT
	31.5 to bottom	Unit3	CHALK
BH07	0-7	Unit1	Sand and gravel
	7-33.5	Unit2a	Sand and CLAY and SILT
	33.5 to bottom	Unit3	CHALK
BH08	0-1	Unit1	Sand and gravel

Borehole	Depth	Unit Name	Lithology
	1 to bottom	Unit3	CHALK
BH09	0-2.5	Unit1	Sand and gravel
	2.5-38	Unit2a/2b	Sand and CLAY and SILT/CALCARENITE
	38-bottom	Unit3	CHALK
BH11	0-11.45	Unit 3	CHALK
	11.45-20.70	Unit 4	LIMESTONE
	20.70-31.35	Unit 5	SANDSTONE
	31.35-52.60m	Unit 6	MUDSTONE
	52.60-70m	Unit 7	Dense SAND
BH13	0-0.8	Unit 1	SAND and GRAVEL
	0.8-base	Unit 9	LIMESTONE interbedded with calcareous CLAY
BH15	0-23.5	Unit 7	Dense SAND
	23.5-base	Unit 8	SAND and CLAY/SILT
BH18	0-0.65	Unit 1	Sand and gravel
	0.65-base	Unit 3	CHALK
BH22	0-base	Unit 2	SAND and CLAY/SILT
BH23	0-2.5	Unit 1	SAND and Gravel
	2.5-base	Unit 8	SAND and CLAY/SILT
BH24	0-base	Unit 3	CHALK

UNIT 1: HOLOCENE

The uppermost interface is picked from the SBP datasets from the GEOxyz survey and corresponds to a veneer, from 0 to 4.1 m in thickness, sub-outcropping in a large part of the FGL OWF area (Figure 7-2). The above sub-unit is named Holocene in previous studies. It is associated with recent soft deposits of the Post-Glacial period (<10 ky). The large line spacing means that the greatest thickness may occur as pocket between survey lines.

The grabs samples show areas with coarse deposits, sands to gravels. Those samplings show some unconsolidated sediment, mainly gravels, in areas without an imaged horizon to define the 'Holocene' layer. This may be due to lack of SBP penetration within coarse sediment and/or inadequate UHRS resolution, < 0.5 m of sediments. The isopach of Unit 1 has been produced primarily from the geophysical data, however, the geotechnical boreholes and grab samples have been used to aid the interpretation in these areas. The potential occurrence within this veneer of coarse unconsolidated sediment all over the area is also suggested by the occurrence of trawl marks on the high resolution SSS mosaic provided by GEOxyz.

Note: SHOM provided an isopach of the sediment thickness based on their SBP datasets survey 2023 and 2024. This DTM can be considered as equivalent to the 'Holocene' veneer presented here. Nevertheless, the DTM resolution 200x200 m grid cells and quite important difference with the GEOxyz SBP interpretation means that this grid is not used in this report. It is proposed as deliverable with the geodatabase only.

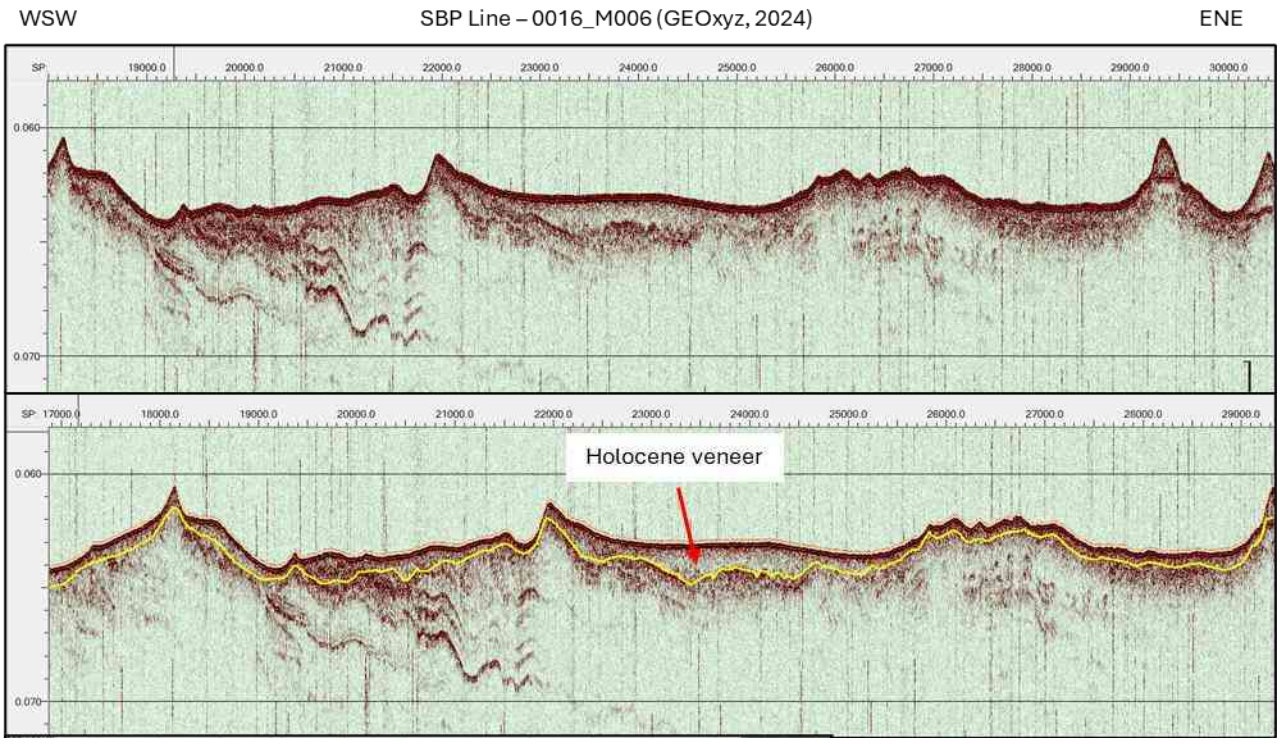


Figure 7-2: Holocene veneer extension and seismic facies

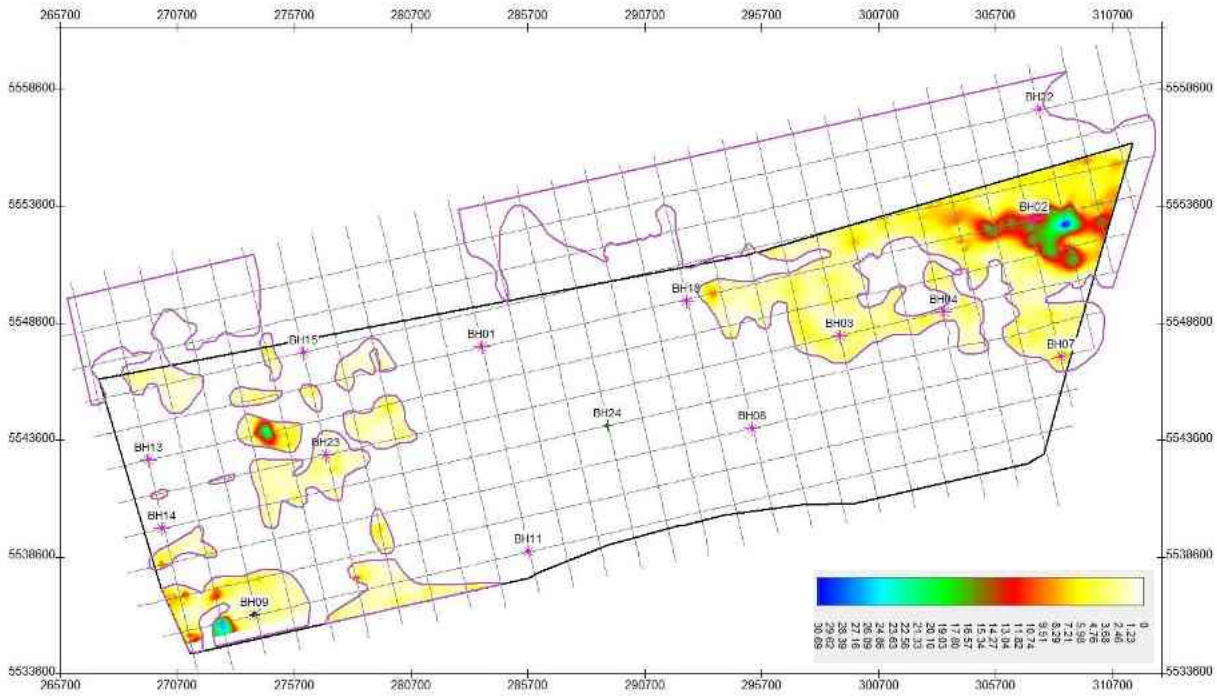


Figure 7-3: Holocene extent within FGL OWF

Unit 2a: Sand and Silt/Clay

Unit 2 is subdivided into two sub units. The upper sediments are sand and clay/silt, with the lower sediments comprising CALCARENITE.

Across the eastern half of the OWF, Unit 2a, comprising SAND and SILT/CLAY is present below a veneer, usually up to 1m thick of dense SAND (Unit 1). This unit is generally about 30m thick where the base is sampled. Due to the higher sand content of these sediments, they are interpreted to be Pleistocene to Miocene in age although previous studies suggest Eocene formations are outcropping in this area. Ultimately, the age is of less concern for the purpose of this report than the engineering parameters. Due to the dipping nature of the units, as previously discussed, the base of Unit 2a/Top Unit 3 subcrops/outcrops in the central section of the OWF area. To the west of this, Unit 2a is absent, apart from in the southeast corner, below the Fecamp-Lillebonne fault where much younger sediments are present.

In the south-west, the Eocene formations cannot be divided as per the well-defined stacking pattern of the east part. The proposed interpretation is based on previous interpretation from the BRGM (geological map) and some minor modification from the GEOxyz UHRS data interpretation. There is little geotechnical sampling in this south-west extremity to get a better modelling of this area, with only one location south of the Fecamp-Lillebonne fault.

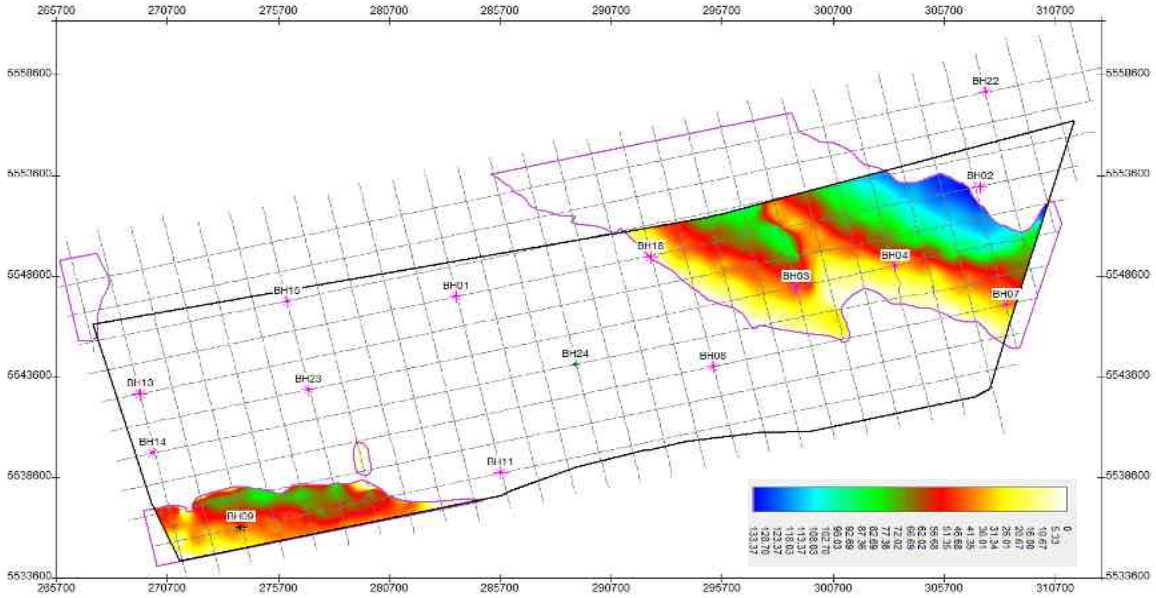


Figure 7-4: Unit 2a Subcropping Extent

UNIT 2B: CALCARENITE

Unit 2b comprises CALCARENITE.

CALCARENITE is only sampled in BH09 within a channel and lies between two occurrences of Unit 2a. Whilst these sediments are calcified one interpretation would be that they are reworked older sediments infilling the channel and recemented. Unit 2b does not subcrop at seabed. Figure 7-5 below highlights the conditions found within this location.

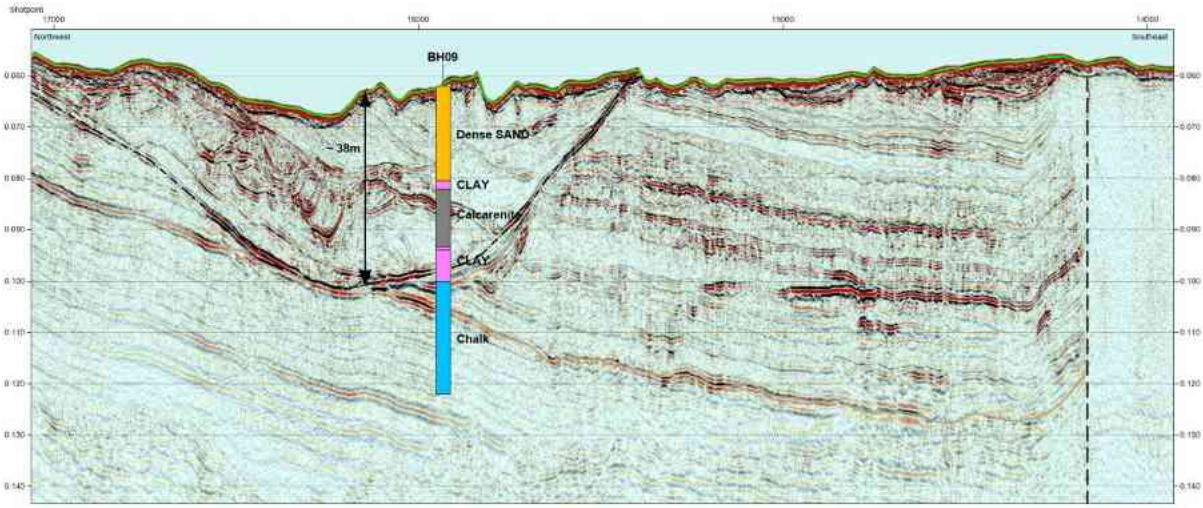


Figure 7-5: BH09 inside a channel

UNITS 3, 4 AND 5: CHALK, LIMESTONE AND SANDSTONE

Below Unit 2, Chalk (Unit 3) occurs within the boreholes, and subcrops/outcrops within the central third of the survey area. The extent of Unit 3 outcropping at seabed is also well defined, and in good agreement with a change in texture at seabed.

Below the Chalk, Limestone (Unit 4) and Sandstone (Unit 5) are also sampled (specifically BH11). In all other boreholes containing Chalk, Chalk extends to the base of the sample. There is however little to no change in seismic acoustic character, and due to the line spacing and sparseness of the data for correlation, there is no horizon marking the boundaries between these sediments. Additional boreholes where the Chalk is thin would also aid the understanding of the spatial distribution of the Limestone and Sandstone (Units 4 and 5).

It has been noted that there is evidence of prograding deposits within this unit. It is possible these are more likely to be associated with the sandstone unit.

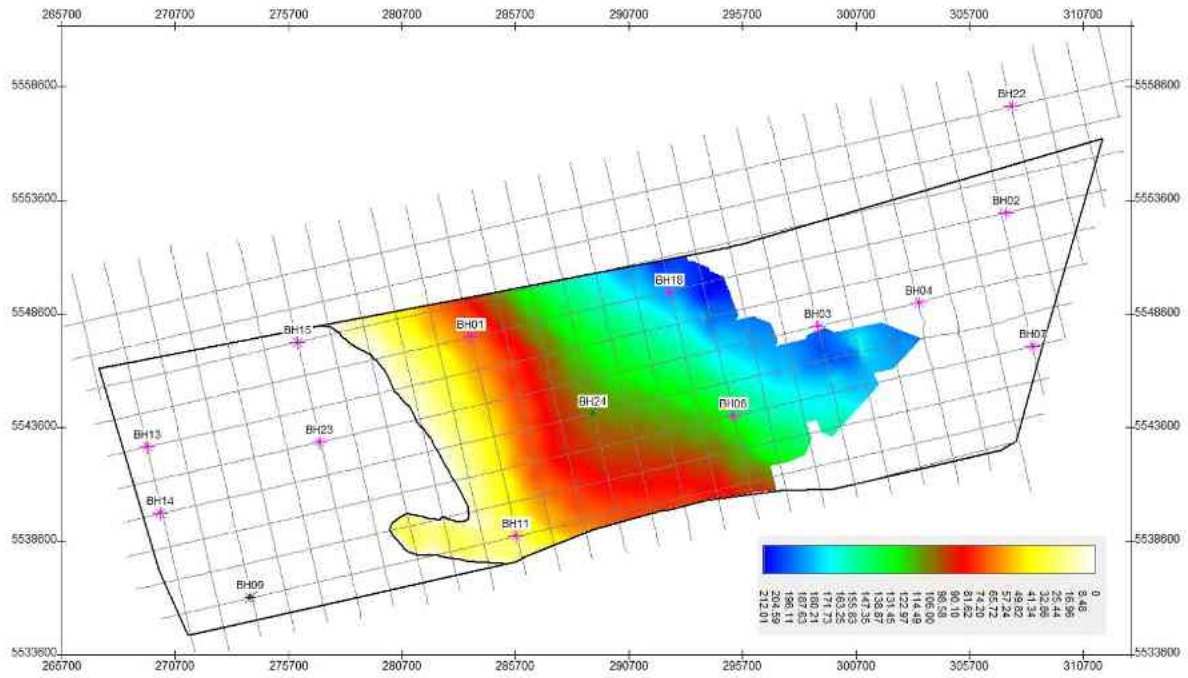


Figure 7-6: Unit 3-5 Extent

UNIT 6: MUDSTONE

Below Units 3-5, Mudstone (Unit 6) occurs in the boreholes, and is outcropping/subcropping in the western third of the survey area. Unit 6 occurs stratigraphically directly underneath Units 3-5. There is a strong reflector marking the top of the Mudstone which marks a change to a quieter and more chaotic seismic facies. This reflector has been mapped where present on the geophysical data and the extents are shown in Figure 7-7. Figure 7-8 illustrates the geophysical data at BH11 which determines the Mudstone unit.

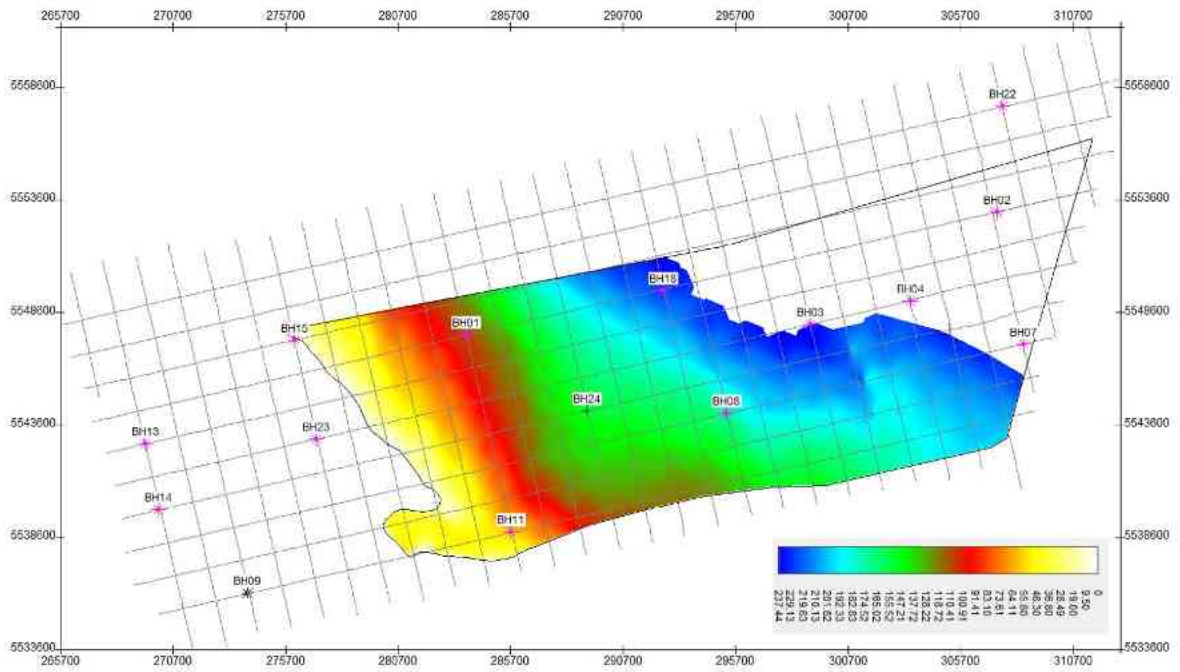


Figure 7-7: Unit 6 Extent and depth BSB (m)

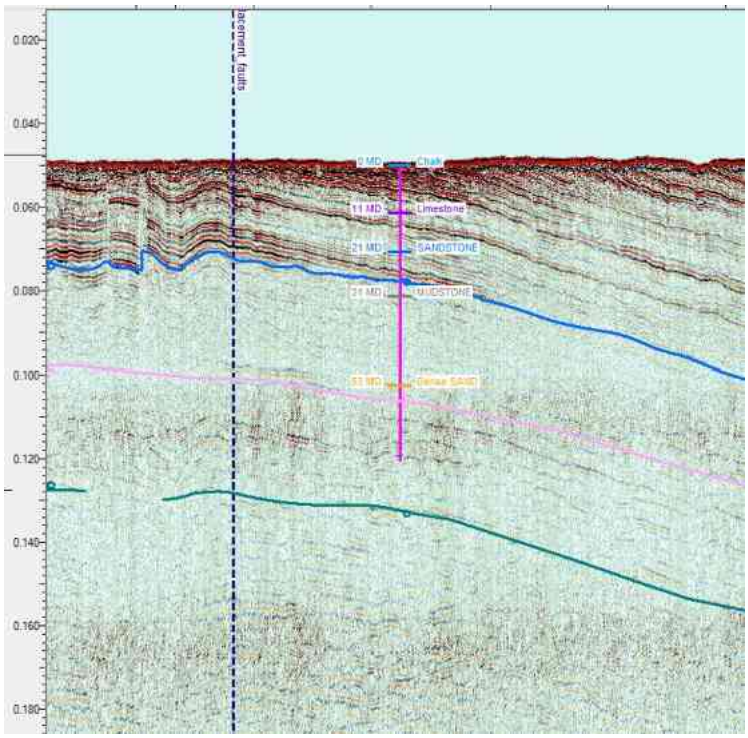


Figure 7-8: BH11 overlain on geophysical data showing change to mudstone

UNIT 7: DENSE SAND

From Boreholes BH11 and BH15, Unit 7 occurs below Unit 6 and comprises Dense SAND. The geophysical data can interpret the reflector to below BH08, BH18, BH24 and BH01, however, the depth of penetration of the boreholes is not sufficient to sample this unit within them. The seismic acoustic character changes from the parallel bedded units above to an acoustically quiet unit with little to no internal structure. The base of this unit is an unconformable surface (N5) where there is a change in dip angle between the overlying sediments, where the dip is approximately 1° and below, where the horizons are much more horizontally laminated.

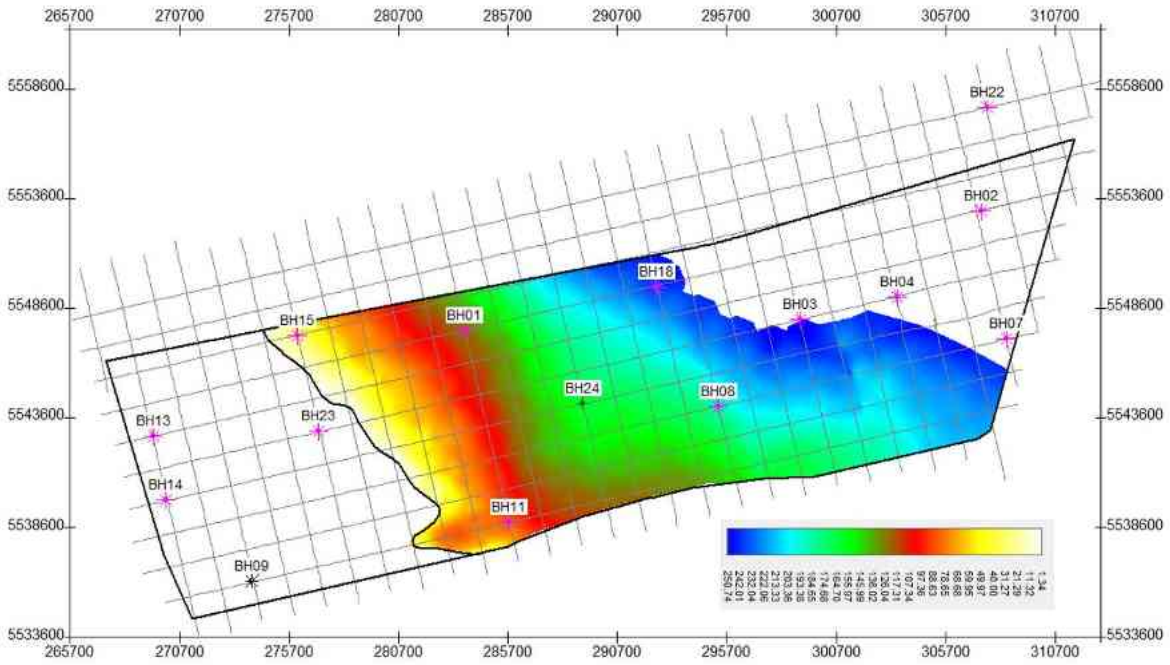


Figure 7-9: Unit 7 Extents and depth BSB (m)

UNIT 8: SAND AND CLAY/SILT

Unit 8 occurs below the N5 unconformity and comprises SAND and SILT/CLAY which is much more consolidated than the Unit 2 sediments of a similar lithology. The depth to the base of Unit 8 is shown in Figure 7-10.

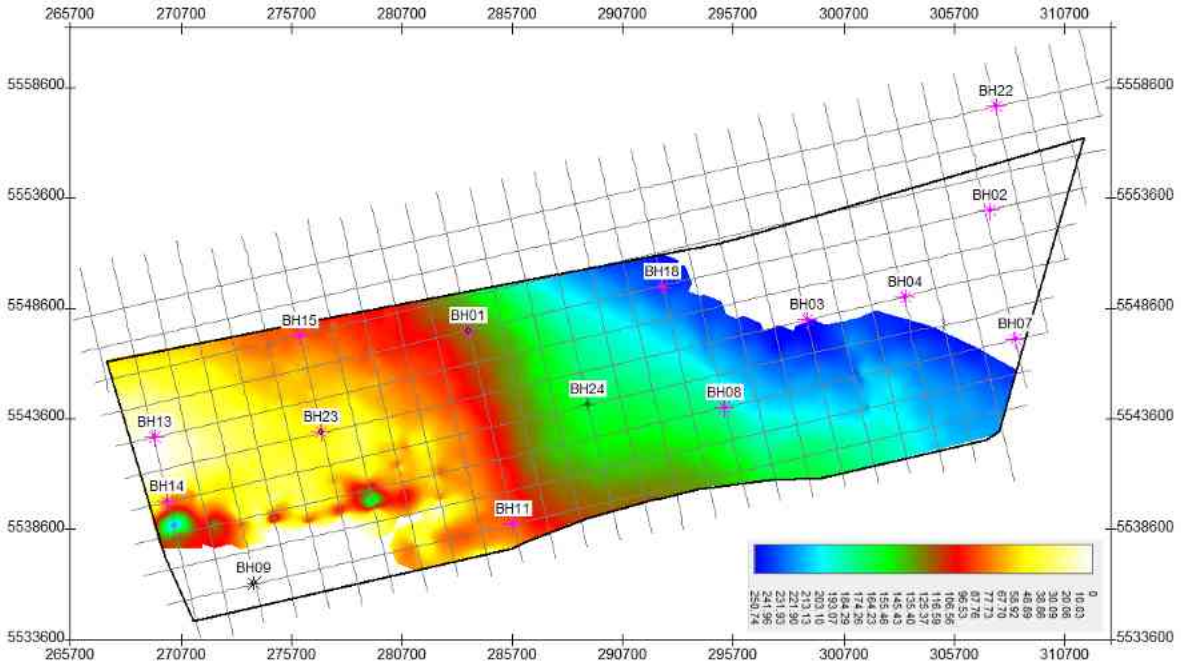


Figure 7-10: Unit 8 Extent and depth BSB (m)

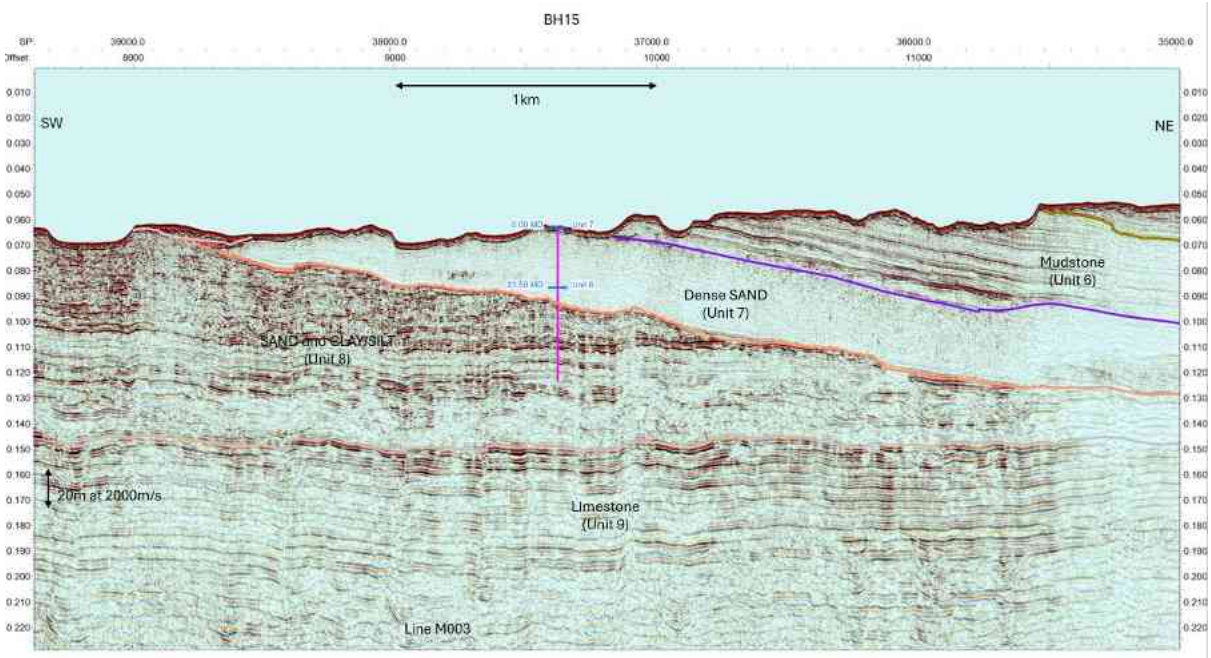


Figure 7-11: Data Example illustrating Units 6-9

UNIT 9: LIMESTONE INTERBEDDED WITH CALCAREOUS CLAY - JURASSIC

Limestone interbedded with Calcareous clay is the oldest sampled sediments within the Fecamp OWF area. These sediments occur within BH13, from 0.8m to greater than the depth of recovery. Due to the large Fecamp-Lillebone Fault, BH14, which is less than 3km to the south, along a survey line does not contain any Limestone of Unit 9.

7.2. GEOHAZARDS

7.2.1. SHALLOW GAS

The UHRS interpretation shows scattered evidence of shallow gas. These areas are mapped on the Figure 7-17 and CHART 8 presented in APPENDIX A.

The large line spacing of the UHRS survey and low penetration of the SHOM SBP survey does not allow accurate assessment of shallow gas geohazards.

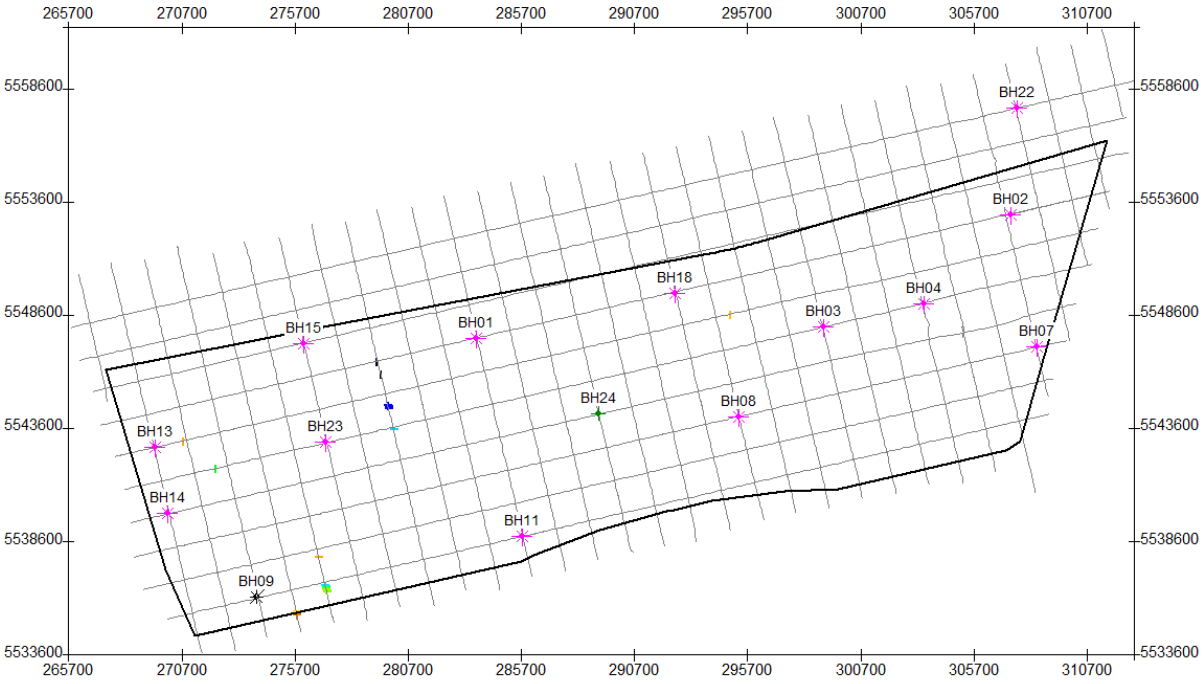


Figure 7-12: Gas Extents

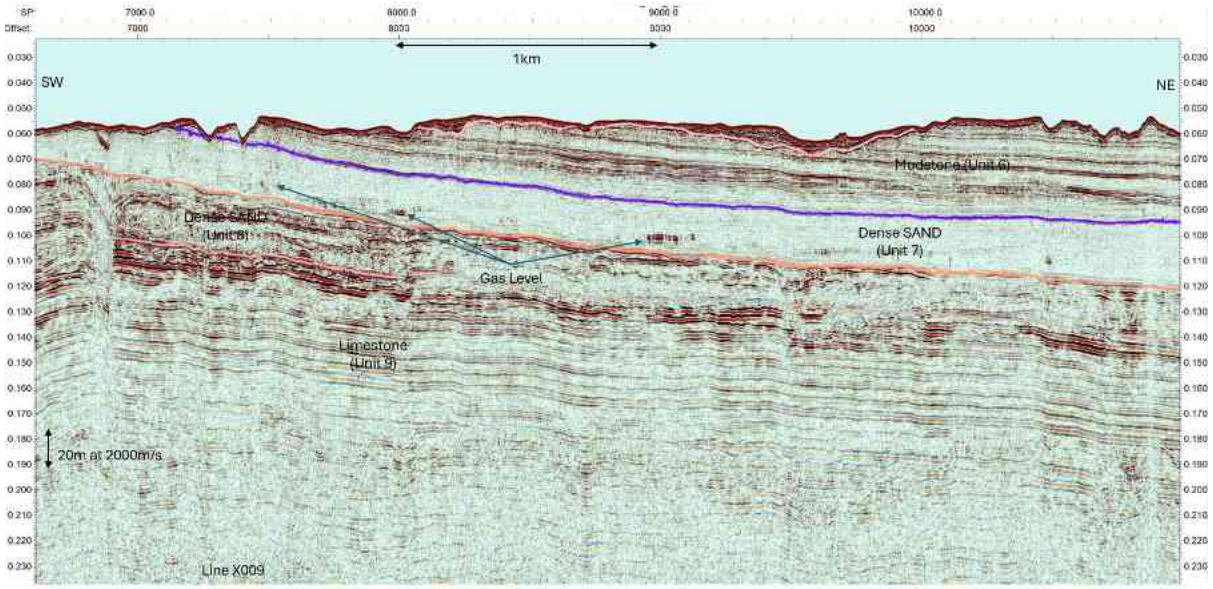


Figure 7-13: Illustrating Gas anomalies

7.2.2. FAULTS

The tectonism that affects the pre-Neogene formation led to numerous faults along the FGL OWF area. The major faults described within the DTS, Fécamp-Lillebonne and Eastern faults, are imaged in the datasets and their location based on the large UHRS line spacing is shown on (Figure 7-17).

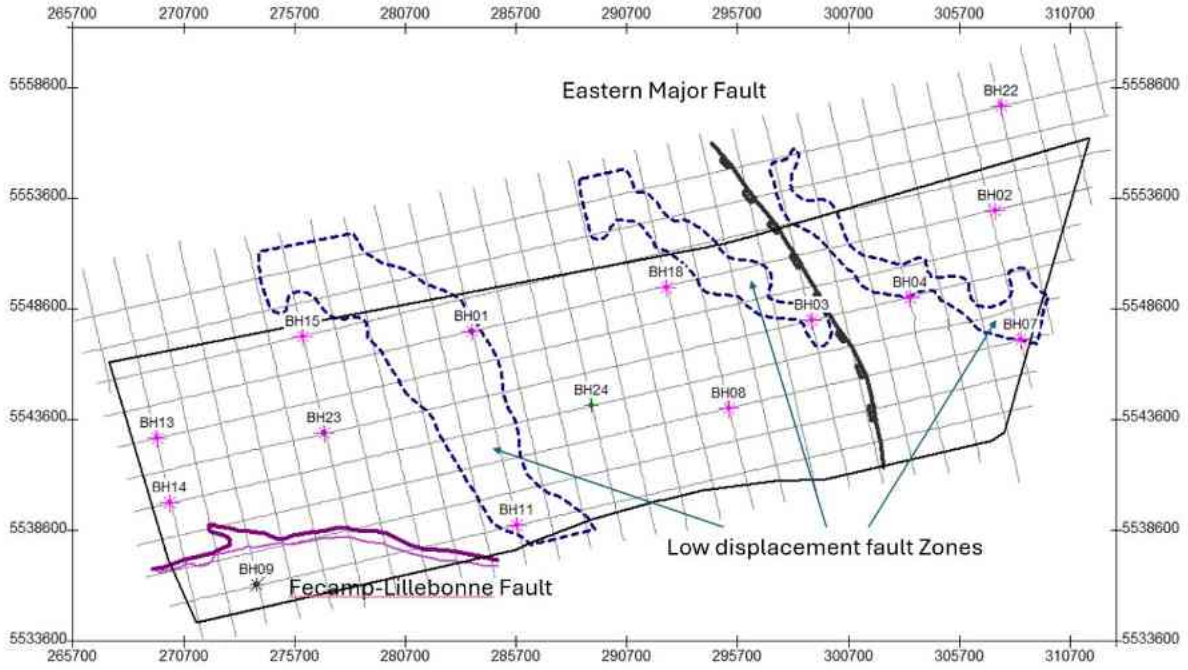


Figure 7-14: Main faulting within the FGL OWF

The Fécamp-Lillebonne (F-L) major fault is located in the southwest of the FGL OWF area. This fault shows a steep dip and an east-west strike, with a rotation to the south close to the southern border of the area. The F-L fault led to a direct contact between Jurassic and much younger Eocene formations that induces a very abrupt contrast in the ground conditions. Within the geophysical data, there is little to no signal received within the faulted zone, with little to no penetration recovered.

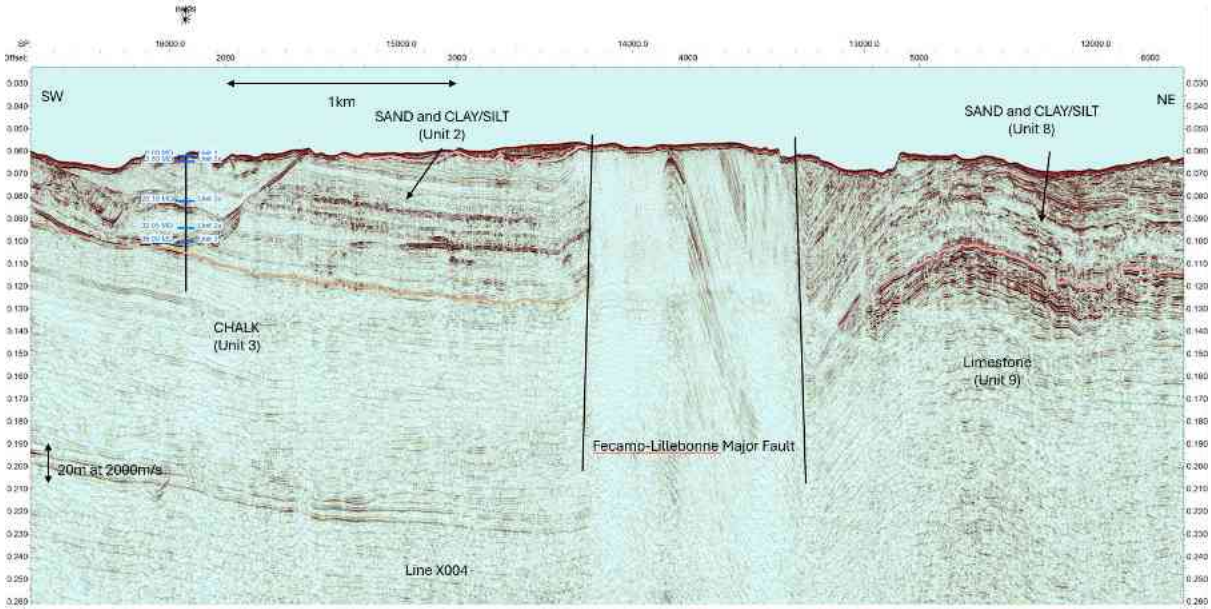


Figure 7-15: Fécamp-Lillebonne fault and associated tectonism induced morphologies

The Eastern major normal fault affects at least Units 2 and 3 on the east part of the FGL OWF area. This major fault appears as a complex system with up to three quite steep dipping parallel faults in some places and numerous small normal faults up to at least 500 m from each side (Figure 7-16). Regarding the shallow sub-bottom, the Eastern fault affects only the Late Cretaceous SSU in the southern part and the Eocene for SSUs in the northern part. It can be explained by an anticline shape east of this fault. In the central part, the Eastern fault leads to a direct contact between Eocene and Late Cretaceous formations.

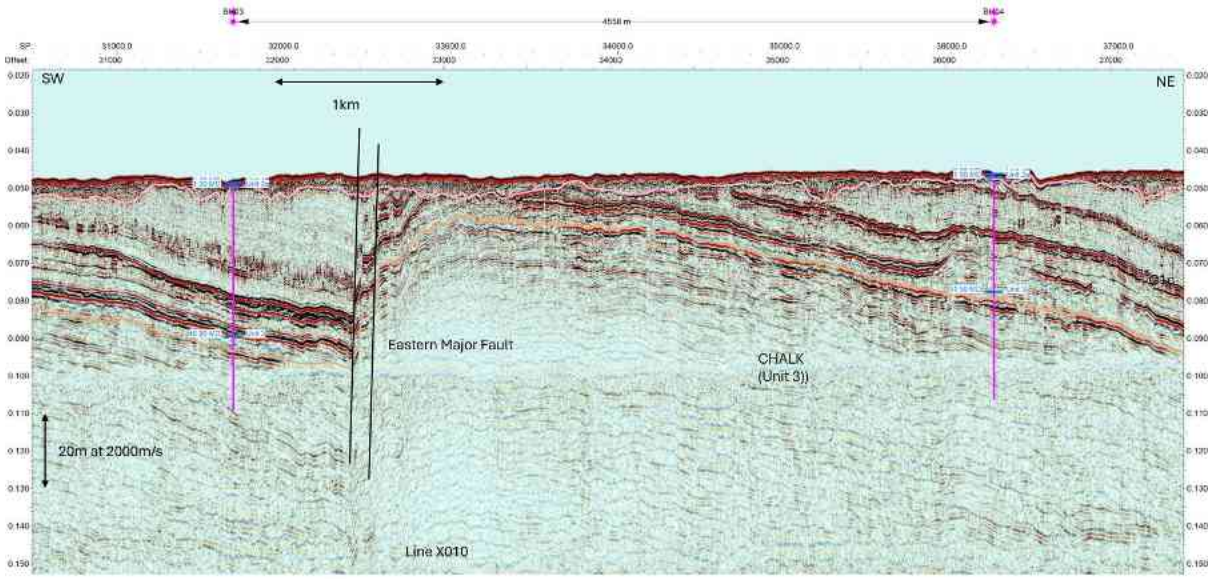


Figure 7-16: Eastern fault system and associated tectonism induced morphologies

Several small normal faults are imaged within the UHRS dataset. They are characterized by low displacements and most occur within the Chalk of Unit 3 and the underlying Mudstone (Unit 6). These faults may be accommodating general tectonic stress, especially for the ones close to major faults, or they may be related to dewatering/shrinkage of the affected formations.

Note: The extents of the low displacement fault zones have been mapped, but due to quantity of fault fractures and the sparsity of the data not all individual faults are mapped.

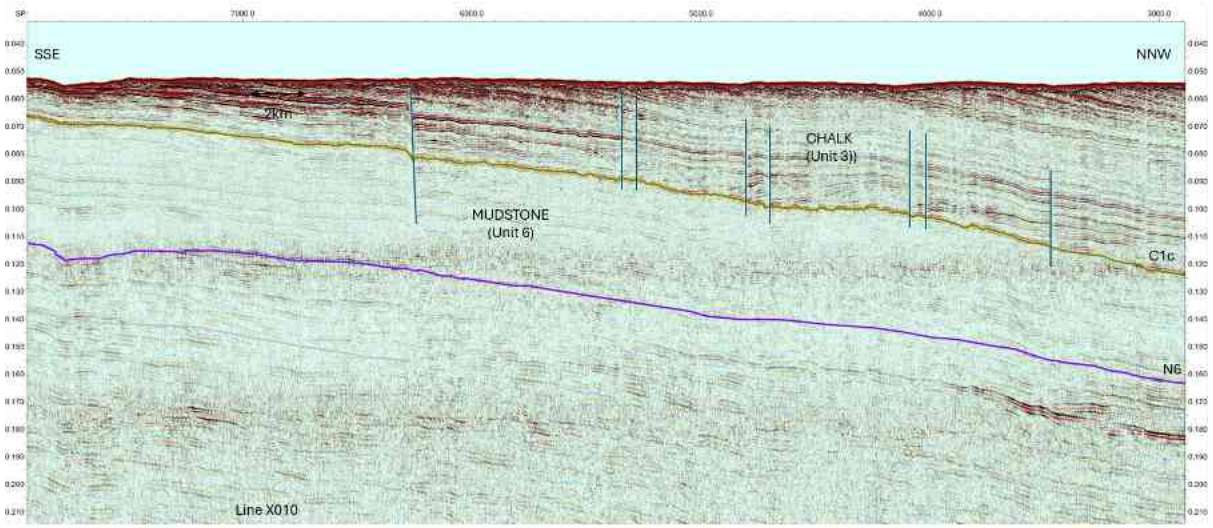


Figure 7-17: Shallow geohazards – faults, potential shallow gas and mass transport

7.2.3. SPECIFIC MORPHOLOGIES

Unit 2 is characterised by a channel-fill morphology where the formation is well developed. The seismic data and the geotechnical results highlight the high heterogeneity of the deposits and their geotechnical properties both spatially and vertically.

Additional rapid variations of the ground conditions both vertically and spatially can be associated with the anticline and syncline shape east of the two major faults and the dipping beds. Such morphology affects mainly Units 3 to 7.

8. GEOTECHNICAL PARAMETERS

Geotechnical parameters relevant for pile design were derived based on the in-situ and laboratory data referenced in the Fécamp Grand Large Geotechnical Investigation Manche Est Measured and Derived Geotechnical Parameters and Results report, Fugro (F255271-REP-001_i04).

The geotechnical parameters obtained for the ten (10) soil units discussed in section 7.1.2 of this report are presented in the following sub-sections. The geotechnical parameters for each geotechnical location are summarised in tables included in APPENDIX D1. Geotechnical parameters plots are included in APPENDIX D2. Digital geotechnical data used are included in APPENDIX D4.

8.1. BULK & DRY DENSITY AND WATER CONTENT

Bulk & Dry densities were determined in the offshore and onshore labs by Fugro on intact samples. Values are presented for each of the ten (10) soil units and range between 15 and 30 kN/m3.

The very low bulk density values of 15 kN/m3 are due to the reworked clay infilling the Limestone (SU8), whilst the high values of 30 kN/m3 were in the Mudstone (SU6).

Water contents (WC) were determined in the offshore and onshore lab by Fugro. The results are summarised per each soil unit, and values range from 3 to 48.6%.

8.2. PLASTICITY INDEX

Soil plasticity results presented as plasticity index % are based on Atterberg limit tests results obtained by Fugro onshore lab. Atterberg limits were executed on cohesive samples of units SU2a, SU2b, SU3 and SU8; it should be noted that drained units SU7 also had some cohesive specimens and therefore plasticity index (PI) data is reported, although is only representative of the cohesive layers within the dense sand. Among the aforementioned unit PI values varies quite extensively from 6 to 46%.

8.3. CONE PENETRATION TEST (CPT) TIP RESISTANCE

Cone Penetration Test tip resistance (qnet) is a geotechnical parameter utilised in pile design and pile driving methods. This parameter represents the in-situ density and strength of the soils, limited CPT pushes were attempted in rock units SU2b and SU3 and SU9, mostly refusing due to the high tip resistance reached, therefore these results are to be used with caution and may be representative only for the less competent sections of these units. Qnet is presented for all units except for rock units SU4, SU5 and SU6.

8.4. RELATIVE DENSITY

Relative density is presented for drained soil units SU1, SU2a, SU3, SU7 and SU8. Relative density is derived following the equation by Jamiolkowski et al. 2001 [4] using Values of $K0$ of 0.5 and 1.0. Characteristic values of DR% range from 10 to 180%.

8.5. FRICTION ANGLE

Friction angle is presented for drained soil units SU1, SU2a, SU3, SU5, SU7 and SU8 and was derived from CPT data following the method by Kulhawy and Mayne 1990 [5] and ranges from 25^0 to 55^0.

8.6. UNDRAINED SHEAR STRENGTH

Values of undrained shear strength for cohesive units have been derived using the following methods:

- Consolidated Isotropically Undrained Triaxial Tests (CIU)
- Unconsolidated Undrained Triaxial Tests (UU)
- Cone penetration tests (CPT)

Undrained Shear Strength (Su) has been empirically derived from CPT in cohesive layers using the following relationship from Lunne et al., (1997). To derive undrained shear strength properties from the CPT measurements, a Nkt factor assessment has been performed to determine a cone factor to be used for correlating the CPT to undrained shear strength, where the factors of 15 and 20 are found, to be representative for cohesive Soil units SU2a, SU3, SU8 and SU9. Su values range form 60-2800 kPa.

8.7. UNCONFINED COMPRESSIVE STRENGTH OF ROCK

The Unconfined Compressive Strength (UCS) of rock is the maximum axial compressive stress that a rock specimen can withstand under zero lateral confinement. It is a mechanical parameter used in geotechnical engineering to characterise rock mass behaviour.

UCS provides a direct measure of the intact rock's resistance to crushing, while UCS is a key parameter, it has the following limitations:

- Represents intact rock only, not the rock mass.
- Does not capture anisotropy (e.g., bedding, foliation).
- Requires high-quality core samples.
- Should be complemented with triaxial tests for more realistic stress conditions.

When UCS was not available, the unconfined compressive strength was derived from Point Load tests (PLT) results of corrected point load strength index $Is(50)$ using a calibrated k factor of 17 as indicated in table below.

$$UCS \approx 17 \times I_{s50}$$

Table 8-1: IS50 to UCS calibration

Location	k	Lithology
FGL-OWF-BH01	13.7	CHALK
FGL-OWF-BH02-a	21.8	SILT
FGL-OWF-BH03	15.5	CHALK

Location	k	Lithology
FGL-OWF-BH04	14.7	CHALK
FGL-OWF-BH07	8.9	CHALK
FGL-OWF-BH08-a	19.7	CHALK
FGL-OWF-BH09-09-a	21.3	CHALK
FGL-OWF-BH11	16.7	LIMESTONE
BH10	16.9	SANDSTONE
BH11	12.8	MUDSTONE
FGL-OWF-BH13	17.7	LIMESTONE
FGL-OWF-BH14-b	n/a	n/a
FGL-OWF-BH15-15-a	n/a	n/a
FGL-OWF-BH18	17.9	CHALK
FGL-OWF-BH23-23-a	n/a	n/a
FGL-OWF-BH24-a	21.9	CHALK

The UCS is presented for all soil units except for SU1 and SU7 and ranges from 0.7 to 314 MPa.

9. SOIL UNITS

9.1. USED DATASETS FOR CROSS-CORRELATION

To define the Soil Units, geophysics and geotechnics datasets had to be cross correlated to:

- Define the key seismic horizons for the regional extent of the Soil Units based on geotechnical parameters and seismic facies,
- Propose the Assumed Sound Velocity (ASV).

The ground model is then derived from the Soil Units defined for the area and their lateral variabilities.

The data used for the SBP-UHRS and ground truth cross-correlation (see location map in Figure 9-1 and detailed geotechnical location in Table 9-1) were:

- SBP and UHRS data from the GEOxyz survey done in 2024 (Ref 1) with general quality and seismo-stratigraphy presented in Section 7,
- 15 boreholes from the geotechnical survey by Fugro in 2025 (Ref 8, Table 9-1).

Table 9-1: Boreholes and insitu CPT locations and characteristics.

BH_Name	Easting [m]	Northing [m]	Z [m LAT]	Penetration Depth [m BSF]	Recovery Depth [m BSF]	Sampling and Testing Details	Operator	Date
FGL-OWF-BH01	283719.51	5547590.2	39.66	60.5	60.5	4 CPT, 6 WIP, 50 RC	Fugro	26-Jun-2025 - 29-Jun-2025
FGL-OWF-BH02	307334.98	5558040.33	35.9	49.06	49.06	33 CPT, 22 WIP, 9 RC	Fugro	15-Jun-2025 - 19-Jun-2025
FGL-OWF-BH02-a	307335.17	5553044.53	35.6	65	64.55	5 CPT, 14 RC	Fugro	12-Oct-2025 - 13-Oct-2025
FGL-OWF-BH03	299038.91	5548070.31	39.08	60.5	60.25	15 CPT, 16 WIP, 30 RC	Fugro	08-Oct-2025 - 10-Oct-2025
FGL-OWF-BH04	303477.12	5549110.1	34.5	60	60	21 CPT, 17 WIP, 27 RC	Fugro	01-Oct-2025 - 02-Oct-2025
FGL-OWF-BH07	308489.34	5547189.92	32.48	60.5	60.3	16 CPT, 19 WIP, 34 RC	Fugro	28-Sep-2025 - 30-Sep-2025
FGL-OWF-BH08	295304.89	5544120.08	35.39	9.13	9.13	4 CPT, 6 WIP, 4 RC	Fugro	03-Oct-2025 - 03-Oct-2025
FGL-OWF-BH08-a	295305.3	5544124.94	35.52	61.5	61.45	11 CPT, 1 WIP, 39 RC	Fugro	10-Oct-2025 - 12-Oct-2025
FGL-OWF-BH09	273997.27	5536127.74	46.26	1.3	1.3	1 CPT	Fugro	25-Oct-2025 - 25-Oct-2025
FGL-OWF-BH09-a	274006.84	5536124.25	45.94	60	59.9	16 CPT, 11 WIP, 27 RC	Fugro	28-Oct-2025 - 30-Oct-2025
FGL-OWF-BH11	285733.45	5538830.15	37.32	70.5	70.05	9 CPT, 7 WIP, 46 RC	Fugro	07-Jul-2025 - 10-Jul-2025

BH_Name	Easting [m]	Northing [m]	Z [m LAT]	Penetration Depth [m BSF]	Recovery Depth [m BSF]	Sampling and Testing Details	Operator	Date
FGL-OWF-BH13	269495.12	5542750.01	44.8	61	61	4 CPT, 3 WIP, 45 RC	Fugro	04-Jul-2025 - 07-Jul-2025
FGL-OWF-BH14	270070.81	5539850.2	46.79	24.79	24.79	12 CPT, 11 WIP, 10 RC	Fugro	28-Aug-2025 - 29-Aug-2025
FGL-OWF-BH14-a	270071.46	5539854.69	46.45	4	3.35	1 RC	Fugro	21-Sep-2025 - 22-Sep-2025
FGL-OWF-BH14-b	270075.5	5539852.55	46.48	60.5	60.45	8 CPT, 5 WIP, 35 RC	Fugro	26-Sep-2025 - 28-Sep-2025
FGL-OWF-BH15	276102.79	5547359.62	46.83	45.08	45.08	28 CPT, 17 WIP, 11 RC	Fugro	29-Jun-2025 - 02-Jul-2025
FGL-OWF-BH15-a	276100.13	5547364.87	46.9	60.5	60.4	6 CPT, 2 WIP, 15 RC	Fugro	16-Oct-2025 - 18-Oct-2025
FGL-OWF-BH18	292490.83	5549580.2	41	61.5	61.5	25 CPT, 12 WIP, 27 RC	Fugro	22-Jun-2025 - 26-Jun-2025
FGL-OWF-BH22	307586.68	5557742.93	41.98	60.5	60.5	24 CPT, 18 WIP, 17 RC	Fugro	14-Oct-2025 - 16-Oct-2025
FGL-OWF-BH23	277070.76	5542984.91	47.24	36.5	36.3	14 CPT, 7 WIP, 24 RC	Fugro	18-Oct-2025 - 19-Oct-2025
FGL-OWF-BH23-a	277071.75	5542984.44	47.22	40	39.65	9 RC	Fugro	22-Oct-2025 - 22-Oct-2025
FGL-OWF-BH24	289101.84	5544230.02	37.04	4.92	4.92	3 CPT, 2 WIP	Fugro	10-Jul-2025 - 11-Jul-2025
FGL-OWF-BH24-a	289101.91	5544234.78	37.04	61.5	61.35	4 CPT, 3 WIP, 44 RC	Fugro	13-Jul-2025 - 15-Jul-2025

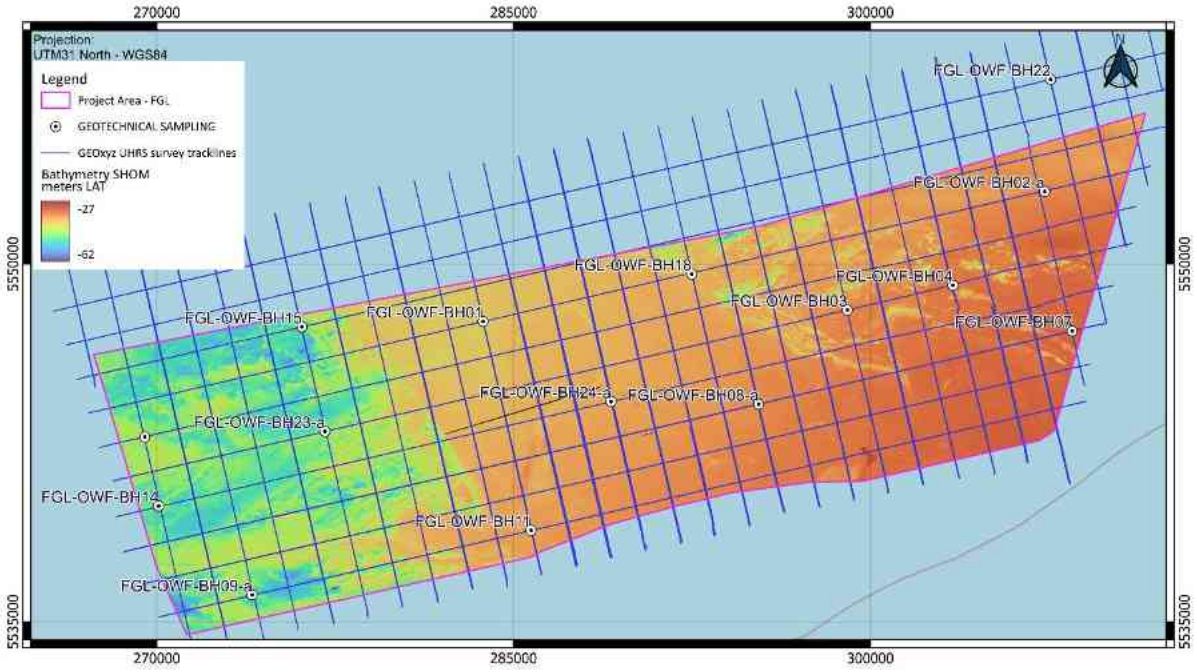


Figure 9-1: Location of the geotechnical investigated sites and SBP/UHRS track-lines within the FGL OWF area.

9.1. CROSS-CORRELATION DESCRIPTION

9.1.1. ASSUMED SOUND VELOCITY

The integration of the detailed lithology prior the soil units definition allows to provide good overview of the ASV to be considered for this report. In the previous studies several values have been used:

- SHOM: 1500 m/s, for the seabed conversion from MBES data
- BRGM: 2000 m/s as single time-depth conversion for all layers,
- GEOxyz: Respectively 1600 and 1800 m/s for uppermost sediment layer (soft/recent sediments) and all other seismic units observed through the UHRS datasets.

The bibliographic analyses shows a high variation for the potential sound velocity, from 1500 to 3000 m/s depending on soil type, depth, weathering, compaction degree etc. Without dedicated velocity measurements and due to large UHRS line spacing with reduced number of boreholes, average values have been defined.

The selection of the average value was based on:

- Integration of the detailed description of the boreholes (Ref 8),
- Comparison of the results for:
  - Different single ASV value for all units (1800 and 2000 m/s),
  - Model with average ASV values by major lithologic units per borehole,
  - Comparison of the assessment with the UHRS profiles for each borehole.

The considered major lithologic units are based on potential age of the deposits, previous studies, and main type such as sedimentary deposits, weathered sedimentary rocks, weathered/weak or structureless chalk.

For this study, the uppermost unit has been converted to depth using an asv of 1800m/s. For the rest of the sedimentary succession, an asv of 2000m/s has been used. This appears to be generally in good agreement with the depths from the available boreholes as displayed on Charts 11-13.

9.1.2. CROSS-CORRELATION

Based on the cross-correlation results, the shallow geological deposits have been split into 9 main seismo-stratigraphic units correlated to the geotechnical Soil Units. The APPENDIX A – UHRS Regional Profiles show the cross-correlation results and overview of the seismic horizon and unit regional extent.

The key seismic horizons have been modified/created at the top and base of each Soil Unit, based on the Geo XYZ UHRS and SBP datasets, to provide the regional variability of the area.

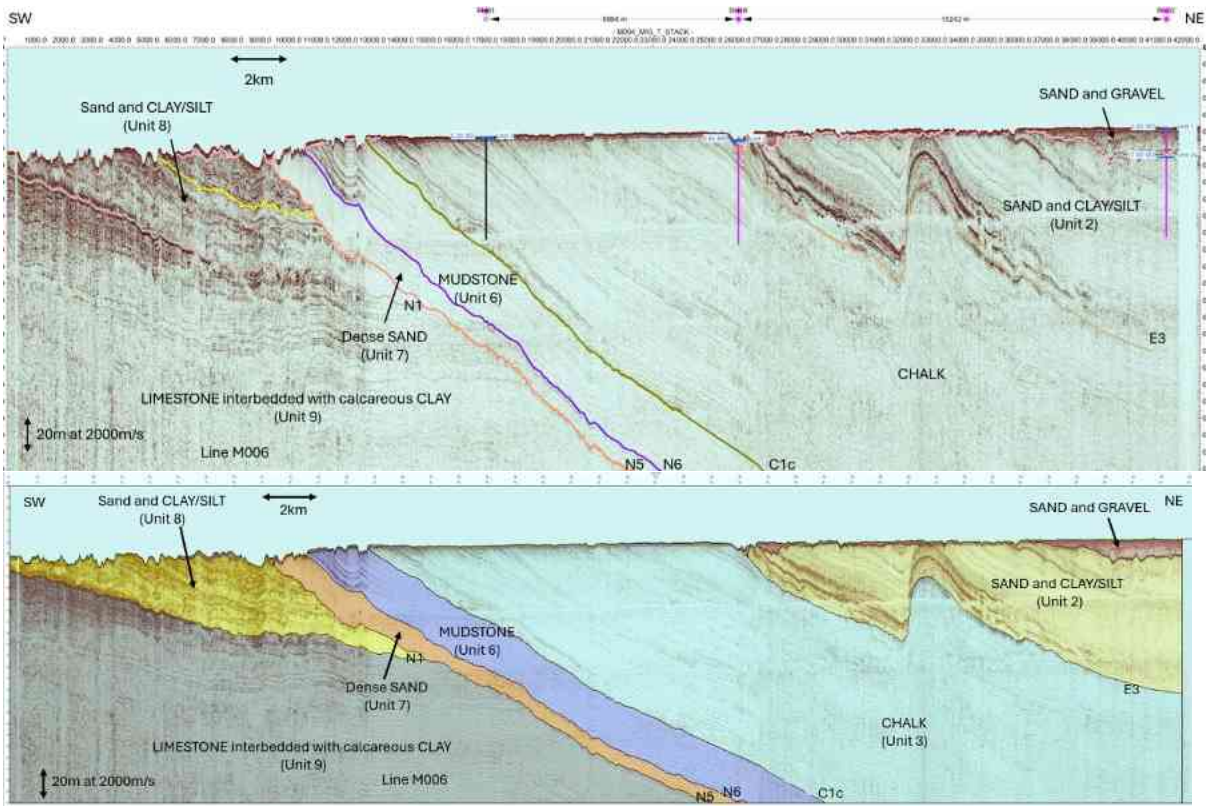


Figure 9-2. Examples of cross-correlation results

The Figure 9-2 illustrates some relevant correlation between seismic interpretation and geotechnical data over the project area. Using the ASV of 2000m/s, the cross-correlation appears as coherent and for most cases fits well between geotechnical properties and seismic facies vertical changes.

The following table provides the characteristics of the main seismic units and their correlation with the Soil Units defined with the geotechnical analyses. A correlation with existing GEOXYZ interpretation is proposed to keep traceability of the previous reporting and studies.

Table 9-2: Lithology and sediment units summary

Unit	Sediment	Age	Geotechnical summary description
		Seabed	
1	SAND and GRAVEL	Holocene/Neogene	Dense to very dense very gravelly highly calcareous SAND
		Base Holocene *(from: geoXYZ)*	
2a	SAND and CLAY/SILT (Neogene)*	Pliocene to Eocene	Dense to very dense silty SAND with closely to medium spaced thin to thick laminae of) clay
2b	CALCARENITE	Eocene	Weak to strong distinctly weathered CALCARENITE
		Base E3	
3	CHALK	U. Cretaceous	Extremely weak to weak medium to high density slightly weathered marly CHALK
4	LIMESTONE	Cretaceous	Extremely weak to weak slightly weathered LIMESTONE
5	SANDSTONE	Cretaceous	Very weak to weak slightly weathered thinly laminated medium-grained SANDSTONE
		Base C1c	
6	MUDSTONE	Cretaceous	Extremely weak to very weak slightly weathered to completely weathered MUDSTONE
		Base N6	
7	Dense SAND	L. Cretaceous	Very dense fine to medium gravelly SAND
		Base N5	
8	SAND and CLAY/SILT*	L. Cretaceous	Extremely high strength slightly sandy to sandy slightly calcareous CLAY
		Base N1	
9	LIMESTONE interbedded with Calcareous CLAY	Jurassic	Extremely weak to very weak moderately weathered to highly weathered LIMESTONE

**The grouping of sand and clay within Units 2a and 8 was intentional and reflects both the depositional characteristics of these units and the limitations of the available geophysical data.Alternating sequences of sand and clay are frequently encountered in depositional environments such as tidal flats, turbiditic systems and floodplains. In the FGL area, this alternation was observed at several geotechnical investigation locations. The clay layers are generally sandy, while the sand layers commonly contain significant clay or silt fractions. Consequently, the different layers often display sufficiently comparable geotechnical behaviour to justify their inclusion within a single engineering geological unit.*

9.2. SOIL UNITS' DESCRIPTION

9.2.1. GEOTECHNICAL DESCRIPTION OF THE SOIL UNITS

Geotechnical description of the various soil layers as described in BH logs (APPENDIX C) is correlated with the Nº 10 Soil Units and presented for each of the geotechnical location in the tables below.

Table 9-3: Geotechnical description for FGL-OWF-BH01

FGL-OWF-BH01					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Very dense SAND	0.00	0.30
SU3- CHALK (U. Cretaceous)	2	CHALK	Structureless CHALK composed of slightly silty GRAVEL. Clasts are weak to medium strong low and medium density white (N 8.5/) angular to subrounded fine to coarse with heavy reddish yellow (5YR 6/8) staining. Matrix is white (N 8.5/) (CIRIA Dc)	0.30	4.00
SU3- CHALK (U. Cretaceous)	3	CHALK	Extremely weak to weak medium to high density white (N 8/) CHALK with very closely to closely spaced thin laminae to thin beds of greenish grey (5GY 6/1) marl (CIRIA A1) From 4.50 m to 5.40 m - Very weak to weak medium density white (N 8.5/) CHALK From 7.80 m to 8.00 m - very weak From 11.70 m to 11.95 m - extremely weak	4.00	12.50
SU3- CHALK (U. Cretaceous)	4	CHALK	Weak high to very high density white (N 8/) CHALK with very closely to closely spaced thin to thick laminae of greenish grey (5GY 6/1) to dark greenish grey (5GY 4/1) marl (CIRIA A1)	12.50	16.00
SU3- CHALK (U. Cretaceous)	5	CHALK	Very weak to weak medium to high density white (N 8.5/) locally light greenish grey (10GY 8/1) CHALK with extremely closely to closely spaced thick laminae to very thin beds of light greenish grey (10GY 7/1) marly chalk (CIRIA B2 to B3). Bedding fractures are medium occasionally closely to very widely spaced (150/1000/4115) 15 degree inclined occasionally subhorizontal undulating rarely planar smooth partly open infilled with silt occasionally with greenish grey staining From 16.35 m to 16.55 m - very weak	16.00	23.00
SU3- CHALK (U. Cretaceous)	6	CHALK	Very weak to weak medium to high density white (N 8.5/) and light greenish grey (10GY 7/1) CHALK with extremely closely to medium spaced thin to very thin beds of greenish grey (10GY 5/1) chalky marl locally with glauconite surfaces (CIRIA A1). With occasional flint nodules	23.00	27.00
SU3- CHALK (U. Cretaceous)	7	CHALK	Very weak to weak high density white (N 8.5/) CHALK with extremely closely to very closely thin laminae to thin beds of greenish grey (5GY 6/1) marly chalk and chalky marl (CIRIA A1) Bedding fractures are closely to very widely spaced	27.00	34.20

FGL-OWF-BH01					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
			(90/800/2280) subhorizontal undulating rarely stepped rough rarely smooth very tight clean From 27.00 m to 27.55 m - medium to high density From 31.50 m to 34.20 m - very weak very high density		
SU3- CHALK (U. Cretaceous)	8	NR	No recovery	34.20	36.00
SU3- CHALK (U. Cretaceous)	9	CHALK	Very weak to weak low to medium density white (N 8.5/) CHALK with very closely to closely spaced thin laminae to very thin beds of light greenish grey (10GY 7/1) and greenish grey (10GY 6/1) marly chalk (CIRIA B1) From 37.30 m to 37.32 m - a bedding fracture subhorizontal undulating smooth infilled with silt	36.00	39.50
SU3- CHALK (U. Cretaceous)	10	CHALK	Very weak to weak medium to very high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to very thin beds of light greenish grey (10GY 7/1) and greenish grey (10GY 6/1) medium strong marly chalk and chalky marl and very weak to weak chalk (CIRIA A1) Bedding fractures are widely occasionally closely to medium spaced (135/1100/1965) subhorizontal undulating smooth tight clean From 39.50 m to 40.50 m - very weak medium to very high density	39.50	45.00
SU3- CHALK (U. Cretaceous)	11	CHALK	Weak medium to high density white (N 8.5/) CHALK with extremely closely to closely spaced thin to thick laminae and coarse gravel-size pockets of light greenish grey (10GY 7/1) and greenish grey (10GY 6/1) medium strong marly chalk and chalky marl and weak chalk (CIRIA A1 to A2) Bedding fractures are closely to widely spaced (120/396/1160) subhorizontal rarely 15 degree inclined undulating rarely stepped rough to smooth very tight rarely tight clean	45.00	49.45
SU3- CHALK (U. Cretaceous)	12	CHALK	Weak to medium strong very high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to thin beds of light greenish grey (10GY 7/1) medium strong marly chalk and chalky marl with occasional fine to medium gravel-size pockets of white (N 9.5/) chalk (CIRIA A1 to A2) Bedding fractures are closely to widely occasionally extremely closely to very closely spaced (30/459/1570) subhorizontal undulating rarely planar and stepped rough rarely smooth very tight clean	49.45	57.50
SU3- CHALK (U. Cretaceous)	13	CHALK	Weak to medium strong high to very high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to thin beds of light greenish grey (10GY 7/1) medium strong marly chalk and chalky marl with occasional fine to medium gravel-size pockets of white (N 9.5/) chalk (CIRIA A1)	57.50	60.50

Table 9-4: Geotechnical description for FGL-OWF-BH02-02a

FGL-OWF-BH02-02a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Dense to very dense pale olive (5Y 6/3) very gravelly highly calcareous SAND with rare coarse sand-size to fine gravel-size shell fragments. Gravel is subangular to subrounded fine to coarse of flint	0.00	0.75
SU1- SAND and GRAVEL (Holocene/Neogene)	2	SAND	Very dense very gravelly calcareous to highly calcareous fine to medium SAND with rare coarse sand-size to fine gravel-size shell fragments. Gravel is subangular to subrounded fine to coarse of various lithologies From 6.00 m to 6.50 m - medium dense	0.75	7.55
SU1- SAND and GRAVEL (Holocene/Neogene)	3	SAND	Dense to very dense grey (5Y 5/1) slightly silty highly calcareous fine to medium SAND with rare mica crystals and rare coarse sand-size shell fragments From 10.50 m to 11.25 m - silty	7.55	13.00
SU1- SAND and GRAVEL (Holocene/Neogene)	4	GRAVEL/COBBLES	Poor recovery of Very dense multi-coloured subangular to subrounded COBBLES, fine to medium GRAVEL of flint, quartz, sandstone and dark greyish olive (10Y 4/2) slightly silty slightly calcareous fine to medium SAND	13.00	17.00
SU2a- SAND and CLAY/SILT (Neogene)	5	SAND	Dense to very dense dark greyish olive (10Y 4/2) slightly silty slightly calcareous fine to medium SAND with closely to medium spaced thin to thick laminae of very dark grey (2.5Y 3/1) clay	17.00	25.20
SU2a- SAND and CLAY/SILT (Neogene)	6	CLAY	Extremely high strength dark grey (5Y 4/1) slightly sandy slightly calcareous to calcareous CLAY with rare foraminifera, rare mica crystals, and rare coarse sand-size organic matter - with frequent coarse sand-size to fine gravel-size lenses of sand. From 38.35 m to 38.60 m - dark grey (5Y 4/1) very sandy highly calcareous CLAY From 38.60 m to 38.95 m - with frequent fine to medium gravel-size pockets of glauconite particles	25.20	43.60
SU2a- SAND and CLAY/SILT (Neogene)	7	SAND	Dense to very dense very dark grey (5Y 3/1) to dark olive grey (5Y 3/2) slightly silty slightly calcareous to calcareous fine SAND with rare mica crystals - with closely to medium spaced thin laminae of very dark grey (2.5Y 3/1) to medium beds of clay	43.60	44.90
SU2a- SAND and CLAY/SILT (Neogene)	8	SILT	Very dense olive grey (5Y 4/2) slightly sandy SILT with frequent to numerous medium sand-size to fine gravel-size foraminifera - with extremely closely to very closely spaced thin laminae of dark olive grey (5Y 3/2) clay. At 49.06 m - end of borehole FGL-OWF-BH02	44.90	52.90
SU2a- SAND and CLAY/SILT (Neogene)	9	SILT	Very dense dark olive grey (5Y 3/2) slightly sandy SILT with frequent to numerous medium sand-size to fine gravel-size foraminifera - with extremely closely to very closely spaced thin laminae of dark olive grey (5Y 3/2) clay	52.90	56.10
SU2a- SAND and CLAY/SILT (Neogene)	10	SAND	Very dense olive grey (5Y 4/2) silty micaceous fine SAND - with extremely closely to very closely spaced thin laminae of clay	56.10	58.10

FGL-OWF-BH02-02a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU2a- SAND and CLAY/SILT (Neogene)	11	SILT	Very dense olive grey (5Y 4/2) slightly sandy clayey SILT - with extremely closely to very closely spaced thin to thick laminae of clay	58.10	62.30
SU2a- SAND and CLAY/SILT (Neogene)	12	SAND	Olive grey (5Y 4/2) silty fine SAND - with extremely closely to very closely spaced thin to thick laminae of clay	62.30	64.55

Table 9-5: Geotechnical description for FGL-OWF-BH03

FGL-OWF-BH03					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Very dense SAND	0.00	1.15
SU2a- SAND and CLAY/SILT (Neogene)	2	CLAY	Medium to high strength dark greyish brown (2.5Y 4/2) silty CLAY - with extremely closely to medium spaced thin laminae to thin beds of fine sand	1.15	9.50
SU2a- SAND and CLAY/SILT (Neogene)	3	CLAY	Very high strength very dark greyish brown (2.5Y 3/2) CLAY	9.50	16.00
SU2a- SAND and CLAY/SILT (Neogene)	4	SAND	Very dense olive grey (5Y 4/2) to olive (5Y 4/4) silty fine SAND	16.00	19.90
SU2a- SAND and CLAY/SILT (Neogene)	5	CLAY	Very high to extremely high strength dark olive brown (2.5Y 3/3) CLAY - with closely to medium spaced thin to thick laminae of fine sand - with occasional medium to coarse gravel-size pockets of organic matter	19.90	25.90
SU2a- SAND and CLAY/SILT (Neogene)	6	CALCIRUDITE	Conglomeratic weak distinctly weathered thickly laminated pinkish white (2.5YR 8/2) CALCIRUDITE From 26.75 m to 28.80 m - medium dense dark grey (2.5Y 4/1) slightly silty fine SAND with coarse sand-size to medium gravel-size shell fragments and shells with frequent medium to coarse gravel-size pockets of clay	25.90	29.60
SU2a- SAND and CLAY/SILT (Neogene)	7	CLAY	Very high to extremely high strength CLAY - with closely spaced thin laminae of clayey silt	29.60	32.30
SU2a- SAND and CLAY/SILT (Neogene)	8	Organic CLAY	Black (2.5Y 2.5/1) slightly sandy silty organic CLAY. Soil has musty odour From 33.90 m to 34.45 m - high to extremely high strength very dark grey (2.5Y 3/1) organic CLAY. Soil has putrid odour	32.30	36.10
SU2a- SAND and CLAY/SILT (Neogene)	9	SAND	Very dense grey (2.5Y 5/1) silty fine SAND - with frequent fine gravel-size pockets of organic matter	36.10	38.50
SU2a- SAND and CLAY/SILT (Neogene)	10	SAND	Medium to very dense greyish green (5G 5/2) slightly gravelly very clayey glauconitic fine to medium SAND	38.50	40.90

FGL-OWF-BH03					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU3- CHALK (U. Cretaceous)	11	CHALK	Extremely weak to weak low density moderately weathered white (5Y 8/1) CHALK (CIRIA A1 to A2) At 42.45 m - a bedding fracture subhorizontal undulating smooth tight clean From 41.05 m to 41.30 m - structureless CHALK composed of yellowish grey (5y81) slightly sandy silt (CIRIA Dm) From 41.80 m to 42.10 m - very weak	40.90	42.85
SU3- CHALK (U. Cretaceous)	12	CHALK	Extremely weak to weak medium density slightly weathered, locally structureless, white (5Y 8/1) CHALK. From 51.50 m to 53.00 m - with extremely closely to closely spaced thin to thick laminae of greenish grey marl	42.85	53.00
SU3- CHALK (U. Cretaceous)	13	CHALK	Very weak medium density fresh white (5Y 8/1) CHALK with medium spaced to widely spaced thick laminae to thin beds of greenish grey marl. Nodular flints are medium to widely spaced medium and large. Tubular flints are widely spaced small and medium (CIRIA A1)	53.00	60.25

Table 9-6: Geotechnical description for FGL-OWF-BH04

FGL-OWF-BH04					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Medium dense to very dense SAND	0.00	1.00
SU2a- SAND and CLAY/SILT (Neogene)	2	SAND	Medium dense to dense dark greyish brown (2.5Y 4/2) and very dark greyish green (5GY 3/2) mottled silty fine to medium SAND with extremely closely to very closely spaced thick laminae to thin beds of dark olive grey (5Y 3/2) clay	1.00	2.25
SU2a- SAND and CLAY/SILT (Neogene)	3	SAND	Very dense very dark greyish brown (2.5Y 3/2) to very dark greyish brown (2.5Y 3/2) silty fine SAND From 4.00 m to 4.25 m - siliceous strong partially weathered light brownish grey (10YR 6/2) CALCARENITE	2.25	7.60
SU2a- SAND and CLAY/SILT (Neogene)	4	CLAY	Medium strength CLAY with rare coarse sand-size shell fragments	7.60	8.45
SU2a- SAND and CLAY/SILT (Neogene)	5	SAND	Medium dense to very dense very dark greyish brown (2.5Y 3/2) silty fine SAND with coarse sand-size pockets of black (10YR 2/1) organic matter	8.45	10.50
SU2a- SAND and CLAY/SILT (Neogene)	6	CLAY	High to very high strength dark grey (10YR 4/1) to very dark grey (10YR 3/1) CLAY - with occasional fine to coarse gravel-size pockets of clay. From 13.50 m to 15.40 m - sandy	10.50	19.40

FGL-OWF-BH04					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU2a- SAND and CLAY/SILT (Neogene)	7	SAND	Very dense very dark greyish brown (2.5Y 3/2) very silty fine to medium SAND with rare medium gravel-size organic matter - with very closely spaced thin laminae of organic matter - with occasional medium gravel-size pockets of clay between 21.40m -22.15m: with occasional subrounded medium to coarse of sandstone gravel	19.40	25.10
SU2a- SAND and CLAY/SILT (Neogene)	8	NR	no recovery	25.10	26.00
SU2a- SAND and CLAY/SILT (Neogene)	9	SAND	Very dense very dark greyish brown (10YR 3/2) clayey fine to medium SAND - with medium spaced very thin beds of very high strength very dark greyish brown (10YR 3/2) clay	26.00	28.40
SU2a- SAND and CLAY/SILT (Neogene)	10	CLAY	Extremely high strength dark greenish grey (5GY 4/1) CLAY - with rare fine gravel-size pockets of black (10YR 2/1) organic matter	28.40	30.05
SU2a- SAND and CLAY/SILT (Neogene)	11	SAND	Very dense light olive brown (2.5Y 5/6) silty fine to medium SAND	30.05	31.00
SU2a- SAND and CLAY/SILT (Neogene)	12	NR	no recovery	31.00	31.50
SU3- CHALK (U. Cretaceous)	13	CHALK	Structureless CHALK composed of white (2.5Y 8/1) slightly gravelly SILT. Gravel is extremely weak low density white (2.5Y 8/1) (CIRIA Dm). From 31.50 m to 32.35 m and from 38.40 m to 40.50 m - becomes slightly sandy silty GRAVEL and COBBLES	31.50	42.00
SU3- CHALK (U. Cretaceous)	14	CHALK	Extremely weak low to medium density white (25Y 8/1) CHALK with widely spaced to very closely spaced thin laminae of greenish grey (10Y 5/1) marl (CIRIA A1) At 45.45 m - a bedding fracture subhorizontal planar smooth very tight clean	42.00	49.50
SU3- CHALK (U. Cretaceous)	15	CHALK	Extremely weak to very weak medium density white (25Y 8/1) CHALK with frequent small black (5Y 2.5/1) flints (CIRIA C1 to C3) - with very closely to closely spaced thin laminae of greenish grey (N 7/1) marl - with very closely to widely spaced thin laminae of very dark grey (5Y 3/1) clay - with rare coarse sand-size to medium gravel-size pockets of very dark grey (5Y 3/1) clay. Bedding fractures are closely to very widely spaced (90/2100/4970) subhorizontal undulating occasionally stepped smooth tight occasionally open infilled with clay	49.50	60.00

Table 9-7: Geotechnical description for FGL-OWF-BH07

FGL-OWF-BH07					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Dense to very dense SAND	0.00	1.50
SU1- SAND and GRAVEL (Holocene/Neogene)	2	GRAVEL	Very dense multi-coloured very angular to subrounded fine to coarse GRAVEL of various lithologies with rare subangular to subrounded cobbles of flint and limestone	1.50	7.00
SU2a- SAND and CLAY/SILT (Neogene)	3	SAND	Medium dense dark grey (10YR 4/1) very clayey fine SAND - with occasional medium to coarse gravel-size pockets of dark grey (10YR 4/1) clay	7.00	9.15
SU2a- SAND and CLAY/SILT (Neogene)	4	SAND	Very dense dark olive grey (5Y 3/2) clayey fine to medium SAND	9.15	14.90
SU2a- SAND and CLAY/SILT (Neogene)	5	CLAY	Very high strength dark greenish grey (10Y 4/1) slightly sandy CLAY with abundant fine to coarse gravel-size shells and shell fragments From 19.30 m to 20.40 m - extremely high strength	14.90	21.50
SU2a- SAND and CLAY/SILT (Neogene)	6	SAND	Very dark grey (10YR 3/1) fine to medium SAND with abundant fine to medium gravel-size shells and shell fragments - with frequent fine to coarse gravel-size pockets of clay. From 22.50 m to 22.90 m -extremely high strength CLAY	21.50	24.00
SU2a- SAND and CLAY/SILT (Neogene)	7	SILT	Dense to very dense olive grey (5Y 4/2) sandy SILT with occasional mica crystals - with thin to thick laminae of organic matter - with rare to occasional medium gravel-size pockets of clay From 24.55 m to 24.95 m - gravelly. Gravel is subrounded coarse of sandstone From 27.33 m to 30.00 m - gravelly with extremely closely to closely spaced thin laminae of organic matter. Gravel is subrounded coarse of sandstone	24.00	30.00
SU2a- SAND and CLAY/SILT (Neogene)	8	CLAY	Extremely high strength greenish grey (10Y 5/1) and brown (10YR 4/3) mottled CLAY with rare coarse sand-size organic matter - with coarse sand-size pockets of pale yellow (2.5Y 7/3) clay. From 30.00 m to 30.33 m - medium strength greenish grey (10Y 5/1) and dark grey (5Y 4/1) mottled	30.00	33.50
SU3- CHALK (U. Cretaceous)	9	CHALK	Structureless CHALK composed of white (2.5Y 8/1) slightly gravelly SILT. Gravel is extremely weak, medium density white (2.5Y 8/ 1). Flint is nodular black (5Y 2.5/1) small [Dm] From 37.25 m to 37.60 m and from 41.50 m to 42.00 m - becomes slightly sandy silty GRAVEL	33.50	42.00
SU3- CHALK (U. Cretaceous)	10	CHALK	Extremely weak to very weak medium to high density white (2.5Y 8/1) CHALK with rare small to medium flint and with very closely spaced to closely spaced thin laminae of greenish grey (10Y 6/1) marl (CIRIA A1) From 49.31 m to 51.50 m - becomes very weak high density greenish grey (10Y 6/1) marly CHALK	42.00	51.50
SU3- CHALK (U. Cretaceous)	11	CHALK	Extremely weak to very weak medium density white CHALK with rare small flint and with very closely spaced to closely spaced thin laminae of greenish grey	51.50	60.30

FGL-OWF-BH07					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
			(10Y 6/1) marl (CIRIA A1) below 57.50m with medium subrounded greenish grey (10Y 6/1) gravels of marl (CIRIA A1)		

Table 9-8: Geotechnical description for FGL-OWF-BH08-08a

FGL-OWF-BH08-08a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	GRAVEL	Very dense white (N 9/) to black (N 2.5/) angular to subrounded sandy medium to coarse GRAVEL of flint and medium strong to strong partially weathered to distinctly weathered pale yellowish pink (7.5YR 9/2) CALCARENITE with pervasive orange iron oxide staining Bedding fractures are closely spaced (75/100/145) subhorizontal to 30 degree inclined undulating rough open to moderately wide infilled with silt	0.00	1.00
SU3- CHALK (U. Cretaceous)	2	CHALK	Structureless CHALK composed of white (N 8/) slightly gravelly slightly sandy SILT. Clasts are very weak to weak low to medium density white subangular to rounded fine to coarse. Silt is white (Ciria Dm)	1.00	6.30
SU3- CHALK (U. Cretaceous)	3	CHALK	Extremely weak to very weak medium density white (N 8/) CHALK. Flints are widely spaced nodular large (CIRIA A1) At 9.13 m - end of borehole FGL-OWF-BH08 From 9.50 m to 9.90 m and from 11.50 m to 11.65 m- structureless CHALK composed of gravelly slightly sandy SILT. Matrix is white (CIRIA Dm)	6.30	13.50
SU3- CHALK (U. Cretaceous)	4	CHALK	Very weak to weak medium density white (N 8/) CHALK. Flints are closely to widely spaced nodular large to very large (CIRIA A1)	13.50	23.15
SU3- CHALK (U. Cretaceous)	5	CHALK	Very weak, locally strong, low to medium density white (N 8/) CHALK. Flints are closely to widely spaced nodular large (CIRIA A1) From 20.00 m to 20.70 m and from 23.50 m to 24.20 m - recovered as structureless CHALK composed of sandy gravelly SILT. Matrix is white (CIRIA Dm)	23.15	27.75
SU3- CHALK (U. Cretaceous)	6	CHALK	Extremely weak to weak medium to high density white (N 8/) CHALK. Nodular flints are medium to widely spaced small to large. Tubular flints are widely spaced small (CIRIA A1)	27.75	45.00
SU3- CHALK (U. Cretaceous)	7	CHALK	Extremely weak to weak medium to high density white (N 8/) CHALK with very closely to medium spaced thin to thick laminae of greenish grey (5G 6/1) marl. Flints are medium to widely spaced large nodular (CIRIA A1)	45.00	53.00
SU3- CHALK (U. Cretaceous) Unit 6 occurs	8	CHALK	Extremely weak to weak medium to high density white (N 8/) CHALK with very closely spaced thin to thick laminae of greenish grey (5G 6/1) marl. Flints are medium to widely spaced nodular medium to large (CIRIA A1)	53.00	61.45

Table 9-9: Geotechnical description for FGL-OWF-BH09-09a

FGL-OWF-BH09-09a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Medium dense to dense olive yellow (2.5Y 6/8) gravelly fine to coarse SAND with numerous coarse sand-size to coarse gravel-size shells and shell fragments. Gravel is subangular to subrounded fine to coarse of various lithologies. At 1.30 m - end of borehole FGL-OWF-BH09	0.00	2.50
SU2a- SAND and CLAY/SILT (Neogene)	2	SAND	Medium dense to very dense grey (2.5Y 5/1) to olive brown (2.5Y 4/3) slightly gravelly slightly silty slightly calcareous fine to medium SAND. Gravel is subangular to subrounded fine to medium of various lithologies - with closely to medium spaced thick laminae to very thin beds of silt	2.50	18.50
SU2a- SAND and CLAY/SILT (Neogene)	3	CLAY	Very high to extremely high strength pinkish grey (7.5YR 6/2) CLAY	18.50	20.10
SU2b - CALCARENITE (Eocene)	4	CALCARENITE (glauconitic)	Weak to strong distinctly weathered dark greenish grey (10GY 4/1) CALCARENITE (glauconitic) From 21.40 m to 26.10 m - moderately weak partially weathered	20.10	32.05
SU2a- SAND and CLAY/SILT (Neogene)	5	CLAY	Extremely high strength dark greenish grey (5GY 4/1) sandy very gravelly calcareous CLAY. Gravel is subrounded fine to coarse of various lithologies	32.05	38.00
SU3- CHALK (U. Cretaceous)	6	CHALK	Extremely weak to weak medium to high density slightly weathered white (N 8/) to greenish grey (5GY 6/1) marly CHALK. Nodular flints are closely to medium spaced small to large. Tubular flints are medium to widely spaced medium to large (CIRIA A1) From 42.35 m to 43.50 m - weak slightly weathered thinly laminated to thickly laminated white (N 8/) to greenish grey (5GY 6/1) marl	38.00	51.50
SU3- CHALK (U. Cretaceous)	7	CHALK	Very weak to weak high density slightly weathered white (N 8/) CHALK. Nodular flints are medium to widely spaced large. Sheet flints are widely spaced small (CIRIA A1)	51.50	59.90

Table 9-10: Geotechnical description for FGL-OWF-BH11

FGL-OWF-BH11					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU3- CHALK (U. Cretaceous)	1	CHALK	Structureless CHALK composed of white (N 9/) slightly sandy slightly gravelly highly calcareous SILT. Clasts are moderately weak very high density angular to subangular fine to medium (CIRIA Dm)	0.00	3.05
SU3- CHALK (U. Cretaceous)	2	CHALK	Very weak to weak very high density moderately weathered thinly bedded white (N 8.5/) CHALK (CIRIA A1 to A3) From 3.85 m to 5.90 m - with closely to medium spaced thick laminae to very thin beds of light grey (N	3.05	11.45

FGL-OWF-BH11					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
			7/) marly chalk From 3.85 m to 5.90 m and from 4.00 m to 9.75 m - with rare to frequent coarse sand-size to fine gravel-size pockets of greyish green (5G 5/2) glauconitic silty sand		
SU4- LIMESTONE (Cretaceous)	3	LIMESTONE	Weak, locally to extremely strong, slightly weathered thinly laminated light greenish grey (10Y 7/1) arenaceous LIMESTONE with mica crystals. Flints are extremely closely to medium spaced small to large nodular	11.45	16.70
SU4- LIMESTONE (Cretaceous)	4	LIMESTONE	Extremely weak to weak slightly weathered dark greyish green (5GY 4/2) glauconitic arenaceous LIMESTONE From 16.70 m to 17.20 m - thinly laminated light greenish grey (10Y 7/1) with occasional fine to coarse gravel-size pockets of glauconitic sand and mica crystals	16.70	20.70
SU5- SANDSTONE (Cretaceous)	5	SANDSTONE	Very weak to weak slightly weathered thinly laminated greenish grey (5GY 5/1) medium-grained SANDSTONE with occasional fine and medium sand-size black (N 2.5/) specks of possible manganese. Bedding fractures are closely to medium occasionally widely spaced (60/500/1945) subhorizontal undulating rough to smooth partly open to open infilled with sandy clay From 23.50 m to 23.70 m - extremely weak to weak	20.70	23.70
SU5- SANDSTONE (Cretaceous)	6	SAND	Greenish grey (10GY 5/1) to very dark greenish grey (5G 3/1) slightly gravelly slightly clayey slightly calcareous medium to coarse SAND with rare subangular cobbles of sandstone	23.70	26.90
SU5- SANDSTONE (Cretaceous)	7	SANDSTONE	Extremely weak to weak greyish green (5G 5/2) to dark greenish grey (5G 4/1) fine-grained to coarse-grained SANDSTONE. Bedding fractures are extremely close to very close rarely close to widely spaced (10/41/1360) subhorizontal undulating smooth open infilled with glauconitic clay From 28.55 m to 28.80 m - strong	26.90	31.35
SU6- MUDSTONE (Cretaceous)	8	MUDSTONE	Extremely weak to very weak slightly weathered to completely weathered thinly laminated very dark greenish grey (10Y 3/1) MUDSTONE. Bedding fractures are wide to very wide occasionally extremely close to medium spaced (20/1105/11285) subhorizontal rarely 15 degrees inclined undulating smooth very tight to open occasionally infilled with clay	31.35	52.60
SU7- Dense SAND (L.Cretaceous)	9	SAND	Dense to very dense dark greenish grey (5GY 4/1) medium to coarse SAND	52.60	58.15
SU7- Dense SAND (L.Cretaceous)	10	SILT	Medium dense to very dense very dark greenish grey (10GY 3/1) sandy SILT with rare to frequent mica crystals - with frequent fine to medium gravel-size pockets of fine sand From 60.00 m to 60.45 m - very sandy silty CLAY	58.15	63.50
SU7- Dense SAND (L.Cretaceous)	11	SAND	Very dense greyish green (5G 5/2) medium to coarse SAND with rare to frequent mica crystals with glauconite particles with very closely spaced thick	63.50	70.00

FGL-OWF-BH11					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
			laminae to thin beds of very dark greyish green (5G 3/2) clay		

Table 9-11: Geotechnical description for FGL-OWF-BH13

FGL-OWF-BH13					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Dense to very dense SAND	0.00	0.80
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	2	CLAY	Medium to high strength grey (N 6/) to greenish grey (5GY 5/1) gravelly CLAY. Gravel is angular fine to medium	0.80	2.50
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	3	LIMESTONE	Weak slightly weathered greenish grey (5GY 5/1) arenaceous LIMESTONE. Bedding fractures are closely to medium spaced (45/167/300) subhorizontal undulating smooth partly opened clean with black staining	2.50	3.50
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	4	CLAY	High to extremely high strength greyish green (5G 5/2) fissured slightly sandy CLAY. Fissures are sub-horizontal extremely closely to very closely spaced undulating smooth.	3.50	8.60
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	5	LIMESTONE	Extremely weak to weak moderately weathered to highly weathered greenish grey (10GY 6/1) LIMESTONE. Bedding fractures are medium to very widely spaced (90/1533/3360) subhorizontal undulating smooth very tight clean. From 9.00 m to 10.00 m - weak moderately weathered to highly weathered light greenish grey (10Y 7/1) LIMESTONE From 10.00 m to 11.00 m - with extremely closely to closely spaced partings of silt From 21.40 m to 22.50 m - extremely weak to strong moderately weathered light grey (10YR 7/2) to very dark greenish grey (5GY 3/1)	8.60	22.50
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	6	LIMESTONE	Extremely weak to weak slightly weathered to moderately weathered thinly laminated to thickly laminated light greenish grey (10GY 7/1) to dark greenish grey (10GY 4/1) arenaceous LIMESTONE with occasional organic matter Bedding fractures are medium to widely spaced (150/929/2345), subhorizontal undulating smooth partly opened infilled with clay occasionally with black staining	22.50	27.50
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	7	CLAY	Very high strength dark greenish grey (10GY 4/1) slightly sandy highly calcareous CLAY From 28.55 m to 29.50 m - with closely to medium spaced thin beds of limestone	27.50	33.50

FGL-OWF-BH13					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	8	LIMESTONE	Extremely weak to very weak moderately weathered to highly weathered dark greenish grey (10Y 4/1) to greenish black (10G 2.5/1) arenaceous LIMESTONE	33.50	45.40
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	9	LIMESTONE	Very weak to medium strong moderately weathered to highly weathered greenish grey (10GY 5/1) LIMESTONE	45.40	61.00

Table 9-12: Geotechnical description for FGL-OWF-BH14-14a-14b

FGL-OWF-BH14-14a-14b					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Medium dense to very dense light grey (10YR 7/1) gravelly fine to medium SAND. Gravel is subangular to subrounded fine to medium of various lithologies At 3.35 m - end of borehole FGL-OWF-BH14-a	0.00	2.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	2	CLAY	Thinly interlaminated very high to extremely high strength grey (10YR 5/1) to dark yellowish brown (10YR 4/4) slightly sandy silty CLAY with rare pockets of organic matter	2.50	8.00
SU8- SAND and CLAY/SILT (L.Cretaceous)	3	SAND	Medium dense to very dense olive brown (2.5Y 4/3) silty SAND	8.00	11.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	4	CLAY	Extremely high strength grey (2.5Y 6/1) and dark red (5R 3/8) mottled slightly sandy silty CLAY locally extremely weak highly weathered mudstone	11.50	15.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	5	SILTSTONE	Extremely weak moderately weathered grey (2.5Y 6/1) to dark red (5R 3/8) mottled SILTSTONE locally extremely high strength clay. Bedding fractures are closely occasionally extremely closely to medium spaced (30/132/550) subhorizontal planar smooth tight occasionally very tight infilled with clay occasionally clean	15.50	17.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	6	MUDSTONE	Extremely weak highly weathered to completely weathered grey (2.5Y 6/1) and dark red (5R 3/8) mottled MUDSTONE locally becoming clay	17.50	19.00
SU8- SAND and CLAY/SILT (L.Cretaceous)	7	No recovery	No recovery	19.00	20.00
SU8- SAND and CLAY/SILT (L.Cretaceous)	8	MUDSTONE	Residual soil very dark grey (10YR 3/1) MUDSTONE locally tending to clay	20.00	21.30
SU8- SAND and CLAY/SILT (L.Cretaceous)	9	SAND	Very dense very dark grey (10YR 3/1) sandy fine SAND with very closely spaced thin laminae of silt and with rare coarse sand-size pockets of organic matter From 24.15 m to 24.35 m - extremely weak moderately weathered grey (10YR 6/1) SILTSTONE	21.30	24.20

FGL-OWF-BH14-14a-14b					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU8- SAND and CLAY/SILT (L.Cretaceous)	10	CLAY	Extremely high strength dark grey (10YR 4/1) slightly sandy CLAY At 24.79 m - end of borehole FGL-OWF-BH14	24.20	27.83
SU8- SAND and CLAY/SILT (L.Cretaceous)	11	SAND	Very dense clayey fine to medium SAND with occasional coarse sand-size organic matter with occasional fine to medium gravel-size pockets of clay	27.83	28.75
SU8- SAND and CLAY/SILT (L.Cretaceous)	12	CLAY	Extremely high strength black (10YR 2/1) slightly sandy CLAY with occasional black (10YR 2/1) coarse sand-size organic matter - with thin laminae to very thin beds of sand - with fine to medium gravel-size pockets of sand	28.75	31.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	13	SAND	Very dense greyish brown (10YR 5/2) very silty fine to medium SAND with rare black (10YR 2/1) coarse sand-size organic matter - with rare fine gravel-size pockets of clay From 31.90 m to 32.32 m - very weak slightly weathered very dark grey (10YR 3/1) SILTSTONE From 35.30 m to 35.45 m - very weak slightly weathered thinly laminated dark grey (10YR 4/1) SILTSTONE	31.50	35.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	14	CLAY	Extremely high strength grey (10YR 5/1) slightly sandy CLAY with occasional black (10YR 2/1) coarse sand-size organic matter. Below 38.50m with frequent fine to medium gravel-size pockets of sand From 43.70 m to 44.90 m - gravelly CLAY. Gravel is subangular to subrounded fine to medium of sandstone and pyrite	35.50	45.10
SU8- SAND and CLAY/SILT (L.Cretaceous)	15	No recovery	No recovery	45.10	46.15
SU8- SAND and CLAY/SILT (L.Cretaceous)	16	SAND	Very dense silty fine SAND to dark grey (10YR 4/1) slightly sandy SILT with rare mica crystals and rare coarse gravel-size organic matter	46.15	48.20
SU8- SAND and CLAY/SILT (L.Cretaceous)	17	CLAY	Extremely high strength very dark grey (10YR 3/1) CLAY with occasional black (10YR 2/1) coarse sand-size organic matter and rare fine to medium gravel-size pieces of wood - with very closely spaced thin laminae of silt - with occasional fine to medium gravel-size pockets of sand with organic matter and pieces of wood	48.20	52.35
SU8- SAND and CLAY/SILT (L.Cretaceous)	18	SAND	Very dense grey (10YR 5/1) very clayey fine SAND - with rare coarse sand-size to fine gravel-size pockets of organic matter	52.35	54.30
SU8- SAND and CLAY/SILT (L.Cretaceous)	19	No recovery	No recovery	54.30	56.45
SU8- SAND and CLAY/SILT (L.Cretaceous)	20	SILT	Extremely high strength grey (2.5Y 5/1) to dark greyish brown (2.5Y 4/2) slightly gravelly slightly sandy clayey SILT with rare black (10YR 2/1) coarse sand-size to fine gravel-size organic matter. Gravel is subrounded fine of various lithologies - with extremely closely to closely spaced thin laminae to very thin beds of black (10YR 2/1) organic matter - with frequent fine to coarse gravel-size lenses of light grey (2.5Y 7/1) sand	56.45	60.45

Table 9-13: Geotechnical description for FGL-OWF-BH15-15a

FGL-OWF-BH15-15a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU7- Dense SAND (L.Cretaceous)	1	SAND	Dense to very dense dark reddish brown (5YR 3/3) gravelly silty highly calcareous fine to medium SAND. Gravel is subangular to subrounded fine to medium of various lithologies	0.00	3.50
SU7- Dense SAND (L.Cretaceous)	2	SAND	Very dense very dark greenish grey (5G 3/1) fine to medium gravelly SAND with rare mica crystals. Gravel is subangular to subrounded medium to coarse of various lithologies	3.50	23.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	3	CLAY	Extremely high strength very dark bluish grey (5B 3/1) sandy CLAY - with extremely closely spaced thin laminae and fine to medium gravel-size lenses of greenish grey (5GY 6/1) silty sand. Highly calcareous below 25m	23.50	28.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	4	CLAY	Extremely high strength grey (2.5Y 5/1) slightly sandy to sandy slightly calcareous CLAY From 32.50 m to 33.30 m - grey (2.5Y 6/1) and greyish brown (2.5Y 5/2) mottled with extremely closely to very closely spaced occasional thin laminae of light olive brown (2.5Y 5/4) SAND	28.50	34.10
SU8- SAND and CLAY/SILT (L.Cretaceous)	5	No recovery	No recovery	34.10	35.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	6	CLAY	Extremely high strength grey (2.5Y 5/1) sandy CLAY with rare mica crystals - with extremely closely spaced thin laminae of sand - with coarse sand-size to medium gravel-size pockets of sand	35.50	38.30
SU8- SAND and CLAY/SILT (L.Cretaceous)	7	CLAY	Extremely high strength greenish grey (10GY 5/1) slightly sandy CLAY - with numerous coarse sand-size to fine gravel-size pockets of red (10R 4/6) clay	38.30	43.10
SU8- SAND and CLAY/SILT (L.Cretaceous)	8	No recovery	No recovery	43.10	44.00
SU8- SAND and CLAY/SILT (L.Cretaceous)	9	SAND	Very dense greyish brown (2.5Y 5/2) slightly silty SAND - with frequent coarse sand-size to fine gravel-size pockets of black (2.5Y 2.5/1) organic matter. At 45.08 m - end of borehole FGL-OWF-BH15	44.00	46.00
SU8- SAND and CLAY/SILT (L.Cretaceous)	10	SILT	Very dense greyish brown (2.5Y 5/2) sandy SILT - with extremely closely to medium spaced thin laminae of black (2.5Y 2.5/1) organic matter	46.00	48.75
SU8- SAND and CLAY/SILT (L.Cretaceous)	11	CLAY	High to extremely high strength very dark grey (2.5Y 3/1) silty CLAY with extremely closely to very closely spaced thin laminae of grey (2.5Y 5/1) sand	48.75	52.00
SU8- SAND and CLAY/SILT (L.Cretaceous)	12	SILT	Very dense greyish brown (2.5Y 5/2) sandy SILT - with extremely closely to medium spaced thin laminae of black (2.5Y 2.5/1) organic matter	52.00	53.45
SU8- SAND and CLAY/SILT (L.Cretaceous)	13	CLAY	Extremely high strength very dark grey (2.5Y 3/1) silty CLAY - with extremely closely to medium spaced thin laminae of dark grey (2.5Y 4/1) silt	53.45	55.00
SU8- SAND and CLAY/SILT (L.Cretaceous)	14	SILT	Very dense very dark grey (2.5Y 3/1) slightly sandy clayey SILT, locally with closely spaced thin laminae of black (2.5Y 2.5/1) organic matter	55.00	58.05

FGL-OWF-BH15-15a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU8- SAND and CLAY/SILT (L.Cretaceous)	15	CLAY	Extremely high strength dark grey (2.5Y 4/1) slightly sandy CLAY with frequent coarse sand-size to medium gravel-size pockets of black (2.5Y 2.5/1) organic matter	58.05	60.40

Table 9-14: Geotechnical description for FGL-OWF-BH18

FGL-OWF-BH18					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	GRAVEL	Dense subangular to subrounded slightly sandy fine to medium GRAVEL of various lithologies including flints	0.00	0.65
SU3- CHALK (U. Cretaceous)	2	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Gravel is extremely weak to very weak low to medium density white (N 8.5/) subrounded fine to medium (CIRIA Dm) - with rare medium gravel-size pockets of dark brown (10YR 3/1) and light greenish grey (10GY 8/1) silt - flint is nodular angular and subangular small. Pseudoflints are moderately weak subrounded and rounded small	0.65	5.00
SU3- CHALK (U. Cretaceous)	3	CHALK	Structureless CHALK composed of white (N 8.5/) sandy SILT. Clasts are extremely weak to weak low to medium density white (N 8.5/) subrounded and subangular to angular fine to coarse. Matrix is white (2.5Y 8/1) (CIRIA Dc). Locally with occasional thin beds of slightly gravelly silt (CIRIA Dm)	5.00	20.00
SU3- CHALK (U. Cretaceous)	4	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Gravel is very weak to weak low to medium density white (N 8.5/) subrounded to subangular and angular (CIRIA Dm) - with rare medium gravel-size pockets of dark brown (10YR 3/1) and light greenish grey (10GY 8/1) silt. Flint is large and tabular From 21.40 m to 25.50 m - locally gravelly. Gravel is very weak medium density white (N 8.5/) subrounded with medium spaced subhorizontal very thin to thin beds of weak light greenish grey (10Y 7/1) to greenish grey (10Y 5/1) marly chalk	20.00	28.00
SU3- CHALK (U. Cretaceous)	5	CHALK	Very weak to weak low to medium density white (N 8.5/) CHALK with occasional medium chalk nodules with rare extremely closely spaced to medium spaced subhorizontal to cross-oriented greenish grey (10 GY 6/1) thin lamina of marl and marly chalk. (CIRIA B1 to B3) - Pseudoflints are very closely to closely spaced nodular subangular to rounded small to medium - Flints are very closely spaced nodular small. Bedding fractures are closely to widely rarely very close spaced subhorizontal undulating rarely planar to stepped smooth rarely rough partly open to open infilled with silt rarely with gravelly silt	28.00	34.00
SU3- CHALK (U. Cretaceous)	6	CHALK	Structureless CHALK composed of white (2.5Y 8/1) slightly sandy silty GRAVEL. Gravel is fine to medium	34.00	38.00

FGL-OWF-BH18					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
			extremely weak medium density white (2.5Y 8/1) and angular. Flint is greenish black (10Y 2.5/1) medium to coarse subangular to subrounded (CIRIA Dc)		
SU3- CHALK (U. Cretaceous)	7	CHALK	Extremely weak to weak high density white (2.5Y 8/1) CHALK with very closely to closely spaced thin lamina of marl (CIRIA A2 to A3) - Flint are nodular small to medium. Bedding fractures are medium occasionally very closely to widely spaced (30/326/1235) subhorizontal rarely 15 to 30 degree inclined undulating occasionally planar rarely stepped rough to smooth clean rarely infilled with marl	38.00	43.50
SU3- CHALK (U. Cretaceous)	8	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Gravel is very weak low density (CIRIA Dm)	43.50	48.90
SU3- CHALK (U. Cretaceous)	9	CHALK	Very weak low to medium density white (N 8.5/) CHALK (CIRIA B2 to B4) - with extremely closely to closely spaced subhorizontal greenish grey (5GY 5/1) thin laminae of marls, randomly oriented light greenish grey (5GY 7/1) to greenish grey (5GY 6/1) coarse gravel-size burrows and fine gravel-size lenses of greenish grey (5GY 5/1) marly chalk. Bedding fractures are very closely to widely spaced (30/262/845) subhorizontal undulating smooth rarely rough partly open rarely open to moderately wide infilled with silt	48.90	53.70
SU3- CHALK (U. Cretaceous)	10	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly SILT. Clasts are very weak to weak low density white (N 8.5/) angular and subangular fine to coarse. Matrix is white (N 8.5/) (CIRIA Dm)	53.70	61.50

Table 9-15: Geotechnical description for FGL-OWF-BH23-23a

FGL-OWF-BH23-23a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU1- SAND and GRAVEL (Holocene/Neogene)	1	SAND	Medium dense to very dense light grey (10YR 7/1) silty fine SAND with occasional subangular fine to coarse gravels of various lithologies	0.00	1.95
SU1- SAND and GRAVEL (Holocene/Neogene)	2	No recovery	No recovery	1.95	2.50
SU1- SAND and GRAVEL (Holocene/Neogene)	3	SAND	Very dense brown (10YR 5/3) gravelly slightly clayey fine to medium SAND. Gravel is subangular to rounded fine to coarse of various lithologies - with frequent fine to medium gravel-size pockets of black (10YR 2/1) organic matter	2.50	2.75
SU8- SAND and CLAY/SILT (L.Cretaceous)	4	No recovery	No recovery	2.75	4.50

FGL-OWF-BH23-23a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU8- SAND and CLAY/SILT (L.Cretaceous)	5	SAND	Very dense SAND	4.50	4.82
SU8- SAND and CLAY/SILT (L.Cretaceous)	6	No recovery	No recovery	4.82	5.50
SU8- SAND and CLAY/SILT (L.Cretaceous)	7	SAND	Dark greyish brown (10YR 4/2) slightly silty fine to medium SAND - with extremely closely to very closely spaced thin to thick laminae of black (2.5Y 2.5/1) organic matter	5.50	5.95
SU8- SAND and CLAY/SILT (L.Cretaceous)	8	CLAY	Extremely high strength grey (10YR 6/1) slightly sandy silty CLAY From 9.10 m to 9.95 m - high to very high strength grey (10YR 6/1) and red (2.5YR 5/8) mottled clayey SILT	5.95	9.95
SU8- SAND and CLAY/SILT (L.Cretaceous)	9	CLAY	Extremely high strength grey (10YR 5/1) slightly sandy clayey SILT - with frequent medium sand-size to medium gravel-size pockets of black (2.5Y 2.5/1) organic matter	9.95	12.45
SU8- SAND and CLAY/SILT (L.Cretaceous)	10	SAND	Very dense dark grey (10YR 4/1 to 10YR 5/1) fine to medium SAND between 14.05 m - 16.0 m : with extremely closely to very closely spaced thin to thick laminae of black (2.5Y 2.5/1) organic matter below 16.0m : with extremely closely to very closely spaced thin to thick laminae of very dark grey (10YR 3/1) clay	12.45	19.25
SU8- SAND and CLAY/SILT (L.Cretaceous)	11	CLAY	High to very high strength very dark grey (10YR 3/1) CLAY - with extremely closely to very closely spaced thin to thick laminae of grey (10YR 5/1) silt - with occasional coarse sand-size to medium gravel-size pockets of grey (10YR 5/1) fine sand	19.25	21.00
SU8- SAND and CLAY/SILT (L.Cretaceous)	12	SAND	Medium dense to very dense dark grey (10YR 4/1) silty fine SAND with black (N 2.5/) organic matter below 22.30m	21.00	23.30
SU8- SAND and CLAY/SILT (L.Cretaceous)	13	CLAY	Extremely high strength grey (10YR 5/1) to very dark brown (10YR 2/2) CLAY: - becoming silty CLAY below 25.50m - From 26.50 m to 27.40 m - fissured. Fissures are sub-horizontal extremely closely to very closely spaced planar smooth with frequent coarse sand-size to medium gravel-size pockets of black (2.5Y 2.5/1) organic matter	23.30	29.55
SU8- SAND and CLAY/SILT (L.Cretaceous)	14	COAL	Moderately weak pyritised black (N 2.5/) COAL	29.55	29.80
SU8- SAND and CLAY/SILT (L.Cretaceous)	15	SILT	Extremely high strength greyish brown (10YR 5/2) clayey SILT From 31.50 m to 33.40 m - with extremely closely to closely spaced thin to thick laminae of light brownish grey (10YR 6/2) fine sand At 36.50 m - end of borehole FGL-OWF-BH23	29.80	36.85

FGL-OWF-BH23-23a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU8- SAND and CLAY/SILT (L.Cretaceous)	16	CLAY	Very high to extremely high strength greyish brown (10YR 5/2) slightly sandy silty CLAY	36.85	38.90
SU8- SAND and CLAY/SILT (L.Cretaceous)	17	SILT	Extremely high strength dark grey (2.5Y 4/1) clayey SILT - with extremely closely spaced thin laminae of dark grey (2.5Y 4/1) clay	38.90	40.00

Table 9-16: Geotechnical description for FGL-OWF-BH24-24a

FGL-OWF-BH24-24a					
Soil Unit	Layer as per BH log	Main soil type	Simplified description	Depth bsb (m)	
				From	To
SU3- CHALK (U. Cretaceous)	1	CHALK	Structureless CHALK composed of white (N 8.5/) gravelly SILT. Clasts are very weak low density angular to rounded fine to coarse of various lithologies including chalk flint and sandstone. Flint are extremely closely spaced very small special to large and nodular (CIRIA Dm). From 6.00 m to 6.40 m and from 8.00 m to 8.45 m - multi-coloured angular to subrounded fine to coarse GRAVEL of various lithologies including chalk, sandstone and flint	0.00	8.95
SU3- CHALK (U. Cretaceous)	2	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Clasts are very weak medium density angular to subrounded medium to coarse. Flint are extremely closely to medium spaced very small special to large and nodular (CIRIA Dm)	8.95	25.80
SU3- CHALK (U. Cretaceous)	3	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Clasts are extremely weak to very weak low density subangular to subrounded fine to medium. Flints are closely to medium spaced very small special to large and nodular (CIRIA Dm). From 29.00 m to 30.00 m - no recovery	25.80	50.00
SU3- CHALK (U. Cretaceous)	4	CHALK	Very weak to weak high to very high density white (N 8.5/) CHALK with extremely closely to very closely spaced subhorizontal thin to thick laminae of light grey (N 7/) marly chalk (CIRIA A1 to A3). Bedding fractures are closely to widely rarely very widely spaced (120/642/2050) subhorizontal undulating rarely planar smooth very tight to tight rarely open clean rarely infilled with silt From 55.10 m to 56.00 m - very weak to strong high density white (N 8.5/) CHALK with closely spaced subhorizontal and inclined 60 degree very thin to thin beds of strong grey (N 6/) limestone	50.00	61.35

Graphical plots of the relevant geotechnical parameters summarised for each of the geotechnical location have been included in Appendix D2

9.2.2. GEOTECHNICAL PARAMETERS OF THE SOIL UNITS

Geotechnical parameters have been summarised for each of the Soil Units using a statistical approach guided by engineering judgment, within the stated limitations in section 13. Geotechnical parameters have been grouped per Soil Units presenting similar mechanical properties and seismic characteristic as discussed in section 9.2.1 above. Geotechnical parameters summarised per unit are presented graphically in Appendix D3. Digital geotechnical data are included in Appendix D4. Tables below present the results of the best estimate (BE), higher estimate (HE) and lower estimates (LE) of the relevant geotechnical parameters for each of the Soil Units derived; extreme low and high values (outliers) have been removed using engineering judgement for LE/HE.

Table 9-17: Geotechnical parameters estimate per Soil Unit (Qn, Fr, Su and Dr)

Soil Unit ID	Soil Unit	qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)		
		LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE
1	SAND and GRAVEL (Holocene/Neogene)	2.00	13.86	80.00	0.30	0.73	3.00	N/A	N/A	N/A	30	92	160
2a	SAND and CLAY/SILT (Neogene)	3.00	55.00	120.00	0.50	2.27	6.00	80	700	1800	20	90	140
2b	CALCARENITE (Eocene)	35.00	48.00	80.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	CHALK (U. Cretaceous)	4.00	30.00	110.00	0.20	2.00	6.00	200	1000	2300	40	80	150
4	LIMESTONE (Cretaceous)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	SANDSTONE (Cretaceous)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	MUDSTONE (Cretaceous)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	Dense SAND (L.Cretaceous)	2.00	45.00	130.00	0.20	1.50	3.50	N/A	N/A	N/A	40	100	160
8	SAND and CLAY/SILT (L.Cretaceous)	5.00	50.00	160.00	0.30	3.30	8.00	200	1400	2600	30	105	160
9	LIMESTONE interbedded with calcareous CLAY (Jurassic)	5.00	30.00	105.00	5.00	9.00	14.00	150	900	2400	N/A	N/A	N/A

Table 9-18: Geotechnical parameters estimate per Soil Unit (Phi´, BD, MC, IS_{50})

Soil Unit ID	Soil Unit	Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50} (MPa)		
		LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE
1	SAND and GRAVEL (Holocene/Neogene)	35	45	50	18.50	19.50	20.00	10.00	15.00	20.00	N/A	N/A	N/A

Soil Unit ID	Soil Unit	Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50} (MPa)		
		LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE
2a	SAND and CLAY/SILT (Neogene)	35	43	50	17.00	20.00	25.00	10.00	26.00	40.00	0.50	2.00	6.00
2b	CALCARENITE (Eocene)	N/A	N/A	N/A	18.00	19.00	22.00	7.00	12.00	20.00	0.20	5.00	12.00
3	CHALK (U. Cretaceous)	30	45	55	18.00	20.00	23.00	7.00	23.00	35.00	0.10	0.60	6.00
4	LIMESTONE (Cretaceous)	N/A	N/A	N/A	19.8	21.6	23.3	8.0	18.0	26.0	0.1	0.6	1.5
5	SANDSTONE (Cretaceous)	30	31	32	19.0	22.0	24.0	13.0	22.0	32.0	0.1	1.0	4.4
6	MUDSTONE (Cretaceous)	N/A	N/A	N/A	19.0	20.0	21.0	14.0	23.0	35.0	0.1	0.6	1.3
7	Dense SAND (L.Cretaceous)	30	45	50	18.00	19.00	20.00	15.00	25.00	33.00	N/A	N/A	N/A
8	SAND and CLAY/SILT (L.Cretaceous)	30	45	50	17.00	21.00	25.00	8.00	19.00	36.00	0.10	0.12	0.13
9	LIMESTONE interbedded with calcareous CLAY (Jurassic)	N/A	N/A	N/A	15.00	24.00	30.00	4.00	15.00	25.00	0.10	0.50	1.80

Table 9-19: Geotechnical parameters estimate per Soil Unit (UCS, UU, CIU and Dr)

Soil Unit ID	Soil Unit	UCS (MPa)			UU (kPa)			CIU (MPa)			Attemberg Limit [%] PI		
		LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE
1	SAND and GRAVEL (Holocene/Neogene)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2a	SAND and CLAY/SILT (Neogene)	0.20	30.00	110.00	81	340	1006	109	190	268	10	30	47
2b	CALCARENITE (Eocene)	0.20	80.00	145.00	N/A	N/A	N/A	N/A	N/A	N/A	18	18	18
3	CHALK (U. Cretaceous)	0.20	20.00	100.00	N/A	N/A	N/A	650	650	650	6	13	38
4	LIMESTONE (Cretaceous)	0.8	25.0	300.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	SANDSTONE (Cretaceous)	0.8	22.0	75.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	MUDSTONE (Cretaceous)	1.0	3.2	18.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	Dense SAND (L.Cretaceous)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17	17	17

Soil Unit ID	Soil Unit	UCS (MPa)			UU (kPa)			CIU (MPa)			Attemberg Limit [%]		
											PI		
		LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE
8	SAND and CLAY/SILT (L.Cretaceous)	0.20	1.00	2.00	161	415	1474	N/A	N/A	N/A	7	15	28
9	LIMESTONE interbedded with calcareous CLAY (Jurassic)	0.20	10.00	80.00	89	89	90	N/A	N/A	N/A	19	26	36

10. GROUND MODEL

All data sets, geophysical and geotechnical, were integrated to correlate the GEOxyz geological interpretation based on the acoustic characteristic of the sediments, with the geotechnical data results. The GEOxyz interpretation was re-assessed together with the provided data velocity functions, frequency content of the supplied SEG-Y and geotechnical data. The updated ground model has been defined and correlates well with the geotechnical data available. Due to the similarity in the acoustic character of Units 3, 4 and 5 these cannot be well defined from the geophysical data currently.

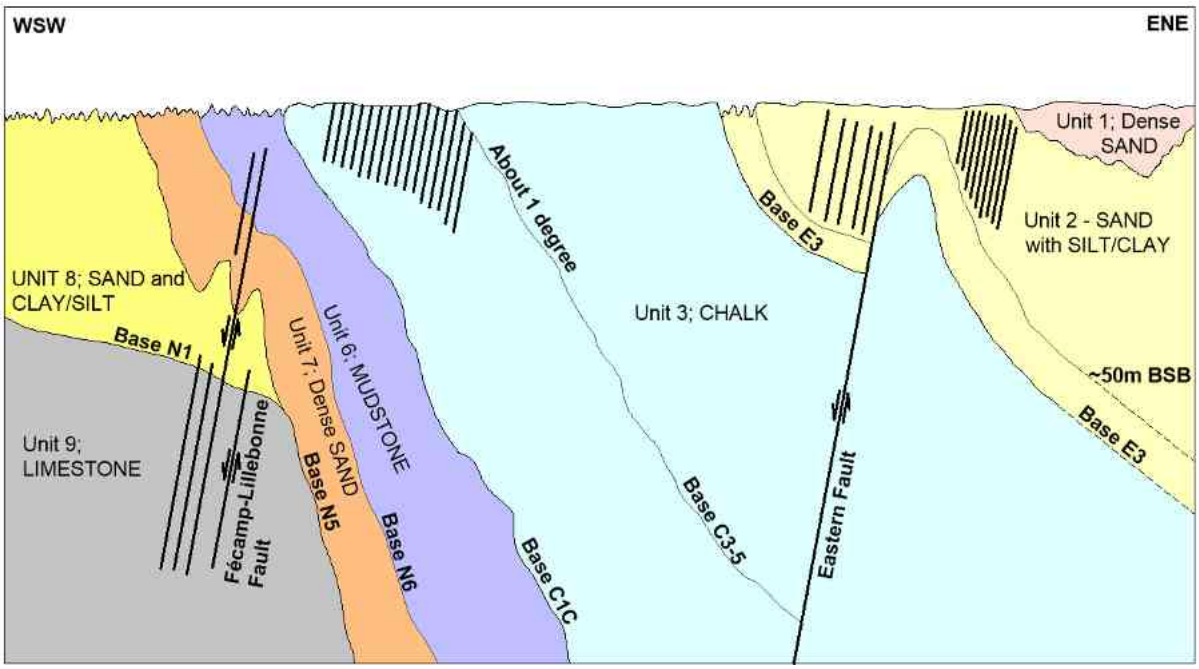


Figure 10-1: FGL OWF ground model: variability from WSW to ENE

The grouping of sand and clay within Units 2a and 8 was intentional and reflects both the depositional characteristics of these units and the limitations of the available geophysical data.

Alternating sequences of sand and clay are frequently encountered in depositional environments such as tidal flats, turbiditic systems and floodplains. In the FGL area, this alternation was observed at several geotechnical investigation locations. The clay layers are generally sandy, while the sand layers commonly contain significant clay or silt fractions. Consequently, the different layers often display sufficiently comparable geotechnical behaviour to justify their inclusion within a single engineering geological unit.

From a geophysical perspective, the individual sand and clay layers cannot be consistently correlated across the site. The available profiles do not show sufficiently strong or laterally continuous reflectors to support a reliable subdivision. For example, a prominent reflector may correspond to the top of a clay layer at one borehole but occur close to the base of a clay layer, or within an interval transitioning to sand, at a nearby borehole.

Attempting to interpret each individual sand and clay layer across an area affected by considerable lateral and vertical variations would therefore introduce a greater level of uncertainty than retaining them within a combined unit. Perhaps see the attached PowerPoint. The first slide shows BH07 descriptions and then the following two slides show line M006, with both the initial sand and clay descriptions, and the preliminary interpretation where an obvious change would be at the strong yellow reflector. At BH03 (left) this looks to tie with the top of a CLAY unit, but on the right hand side this is towards the base of a clay unit, and soon into SAND. Lines are approximately 10m apart.

This grouping also provides a more robust and readable integration between the geophysical interpretation and the geotechnical results, while ensuring that the relevant geotechnical parameters remain available.

Regarding the reported parameters:

The effective friction angle is not considered a relevant parameter for cohesive clay materials and is therefore reported as N/A for clay in the tables and appendices.

The measured water content does not always show a consistent trend within either the sand or clay layers at the investigation locations. For reporting at unit level, the average value was therefore considered the most representative.

The appendices nevertheless retain the more detailed information, including the minimum, average and maximum values for each soil layer and soil type.

Overall, subdividing Units 2a and 8 into separate sand and clay units would suggest a degree of geological continuity and interpretative confidence that is not supported by the available data. The combined interpretation is therefore considered the most technically robust representation at site scale.

11. SOIL PROVINCES

11.1. METHODOLOGY/CRITERIA

The soil provinces have been determined based on the geophysical and geotechnical data. As already discussed, the dipping horizons within the area mean the sediments subcropping or outcropping at seabed get older to the west.

11.2. DESCRIPTION

The geological interpretation has been done by taking the geophysical data, using the geotechnical borehole results to produce a sensible series of units and integrating the two. The provinces are then determined by which is the uppermost unit across the area by using the geophysical lines and the point samples from the geotechnical data to extrapolate the units within the OWF.

Generally, the agreement between the units and the geotechnical soil units are in good agreement.

11.3. SPATIAL EXTENT

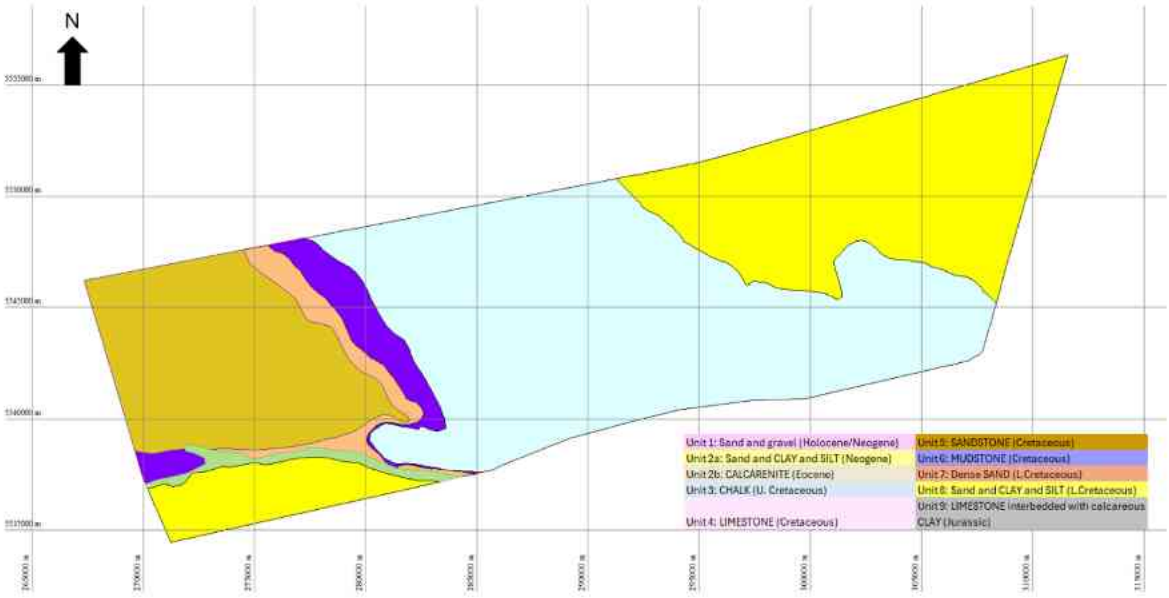


Figure 11-1: FGL OWF soil provinces subcropping

12. GEOHAZARDS ASSESSMENT

12.1. SUMMARY OF THE POTENTIAL GEOHAZARDS

This section presents the possible geohazards identified across the Fecamp Grand Large OWF. The Table 12-1 presents a qualitative classification based on the observed indicators listed.

Table 12-2 summarizes the potential geohazards encountered in the FGL OWF area. It should be noted that this assessment is limited to the available data as previously listed.

At this stage, some general recommendations can be proposed for the identified geohazards, more detailed recommendations or mitigation will require additional site studies.

Table 12-1: Criteria for geohazards estimation.

Class	Description
High	Indicators observed in the area within the data sets.
Moderate	Some indicators observed in the area within the data sets.
Low	No indicators observed in the area within the data sets.

Table 12-2: Geohazards and soil conditions summary for FGL OWF area.

Geohazard	Likelihood	Description	Notes	Recommendations
Variable Ground Conditions	Moderate	The thickness of Unit 1 is variable and may affect pile installation. Moreover, due to the dipping nature of the units, the anchoring conditions vary across the area.	The data available are sufficient for preliminary and conceptual floating wind turbine design.	Ensure additional geotechnical borehole with rock coring is performed at every anchor location for detailed design. Additional SBP data to map any sediment cover present.
Slope Stability	Low	Gradients are low and the sediments are consolidated/rock.	The survey area is essentially flat.	Slope stability modelling after survey with improved line spacing.
Channel	Moderate	Some channelling is noted into the uppermost sediments, the largest of these is outside the FGL OWF area but within the extents of the 2DHRS data.	Hazards to anchoring conditions	Awareness of ground conditions, more detailed survey to better map the extents.
Depressions	High	Depression may affect cables and wind turbine layout and anchoring conditions.		Avoidance of depression areas. Detailed Seafloor and SBP survey with

Geohazard	Likelihood	Description	Notes	Recommendations
				improved line spacing. Distinguish between Dolines and surface depressions would be worthwhile.
Migrating bedforms	Low to Moderate	Amiable survey line spacing is too wide to accurate evaluate smaller bedforms. Dunes are documented as being present within the area		Detailed seafloor imagery survey with improved line spacing.
Shallow gas	Low	The likelihood of shallow gas at pressure within the survey area is considered to be low.		Detailed UHRS survey: Very dense line spacing Or 3D survey. Anchor structures and cables shall be located at a safe distance from interpreted gas.
Seismogenic faults	Moderate	There are two main faults running within the survey area.	The UHRS and SBP line spacing does not allow accurate seismogenic study. Potential strike-slip fault (horizontal movement) cannot be observed through 2D seismic survey.	Detailed UHRS survey: Very dense line spacing Or 3D survey Anchor structures and cables shall be located at a safe distance from seismogenic faults.

13. LIMITATIONS ON THE USE OF THIS REPORT

This integrated report presents the deliverables in accordance with the scope of service contracted by the Client. The purpose of the investigation and any deviations. Such as final geophysical line plans and final geotechnical locations coordinates and depths, as well as the extent of the laboratory testing program was instructed, monitored and agreed by the Client. This was a significant factor in determining the scope and level of the information available for the integration work.

The report is based on the geophysical and geotechnical factual data and limitations as referenced herein and acknowledged by the Client prior to the integration work.

As a result of MBES, backscatter and SSS data, bedforms conditions are limited to the resolution and quality of the datasets available. Consequently, geohazard identification and estimation are restricted to that coverage and resolution.

The UHRS datasets are relatively good quality only above the seabed multiple. The mask induced by multiple of seismic reflectors have not been totally removed with the data processing and led to some low confidence for the extension of the Horizon picking below the seabed multiple, around 100 ms TWT that equivalent to 30 to 60 m BSB upon sound velocity and water depth.

The UHRS line spacing and the few geotechnical samplings regarding the FGL OWF area sub-bottom complexity limit the confidence of the soil unit regional extension. As mentioned in this report, some potential spatial variations of the properties of the soil unit can appear and not be documented due to lack of geotechnical samplings. The UHRS data shows in some place spatial seismic facies variation with only one type documented with the provided data.

Soil Unit distribution provided are based on seismic horizons in line with sections presented in Appendix B and limited to approximately 60 m below seabed (limit of the geotechnical dataset). The geotechnical parameters and Soil Units distribution shall be confirmed at each turbine location by additional geotechnical investigations prior to detailed design.

Within the stated limitations, no liability is accepted concerning the provided interpretation and parameters should ground conditions vary beyond the imaging potential of the available dataset (i.e. changes in the derived Rock and soils properties, depth and thickness of the derived unit's presence of undetected boulders, more competent rock, etc.).

The end user of this report shall consider the limitations reported in this document and its references prior to using any information and/or parameters as the basis of design under their own responsibility.

14. CONCLUSIONS AND RECOMMENDATIONS

14.1. CONCLUSIONS

- The Fecamp Grand Large OWF area has been surveyed several times in the last 5 years with the available data aiding the overall integration for this report.
- Nine units are present within the survey area, and due to the dipping nature of the seabed most are subcropping across the OWF area. varying in age from Holocene to Jurassic.
- Two large faults cross the Fecamp Grand Large OWF area, the Fecamp-Lillebonne fault and the Eastern major fault.

14.2. RECOMMENDATIONS

The FGL OWF area shows a high sub-bottom organisation complexity due to the strong tectonism that affect the pre-Neogene formations and the presence of large channel associated to the Neogene. At this stage, recommendations for additional geotechnical sampling will be not pertinent at the regional scale. Upon selected site within the FGL OWF area, additional UHRS and geotechnical data will be required to provide a confident and accurate soil units description. A maximum of 200x200m UHRS line spacing for more complex area is recommended and definition of the new geotechnical location upon UHRS interpretation or known accurate location for the future anchorage.

15. CHARTS

The integration of geophysical and geotechnical data is summarized in two groups of charts:

- North-Up Charts: A total of 10 charts with a north-up view in DIN A1 scaled as 1:40,000 of the entire Fecamp Grand Large OWF.
- UHRS regional profiles: A set of 3 ultra-high resolution seismic regional profiles that cover FGL OWF.

North-up charts are provided in APPENDIX A and UHRS regional profiles in APPENDIX B.

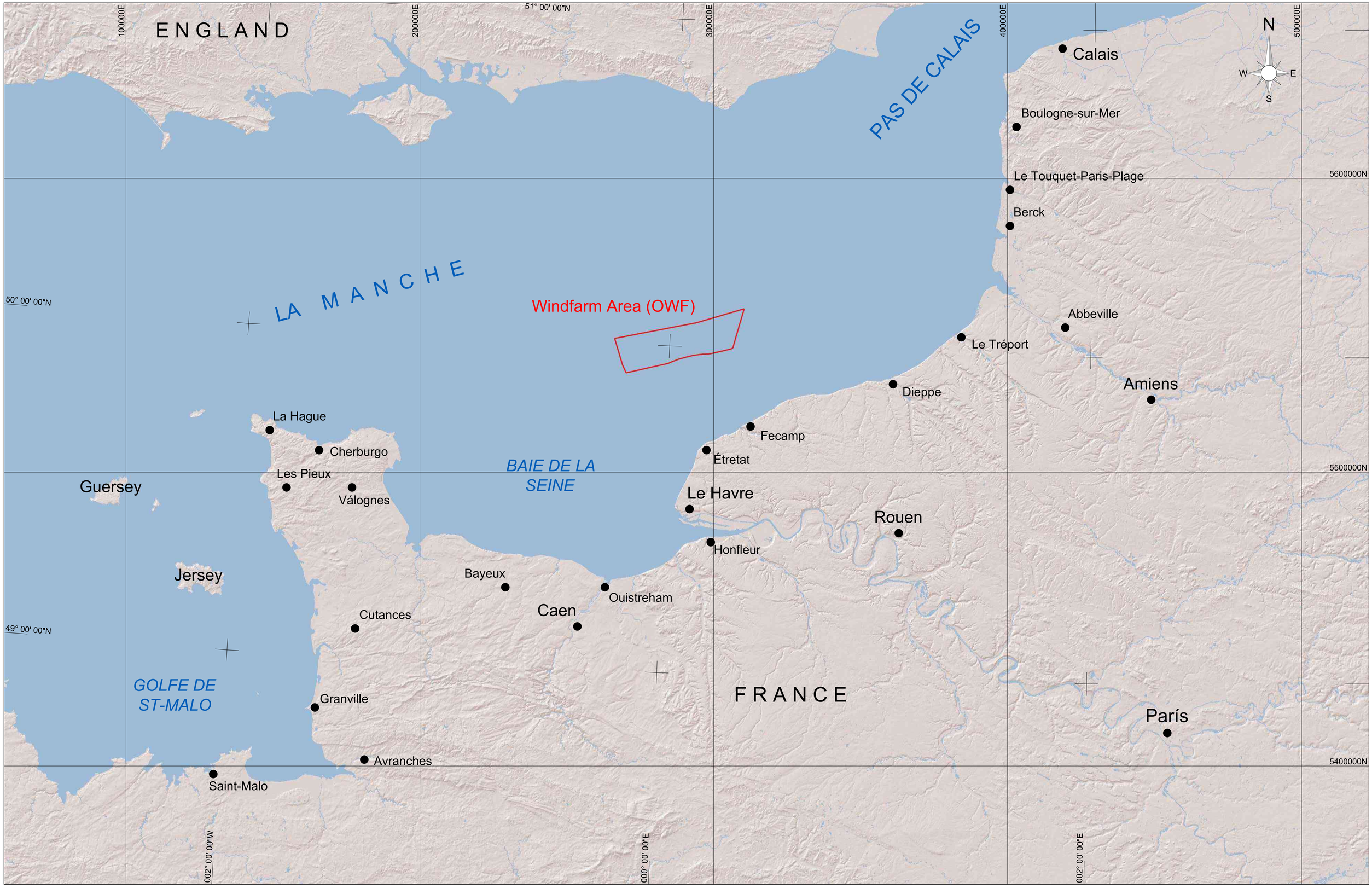
Table 15-1: North-up charts for the FGL OWF area

North-Up Chart #	Contents
Chart 1	FGL_NU_A0_SITUATION_MAP
Chart 2	FGL_NU_A0_BATHYMETRY_SHOM+GeoXYZ
Chart 3	FGL_NU_A0_SLOPE_SHOM+GeoXYZ
Chart 4	FGL_NU_A0_BACKSCATTER
Chart 5	FGL_NU_A0_SSS_MOSAIC_MAP
Chart 6	FGL_NU_A0_SEABED_CLASSIFICATION_MAP
Chart 7	FGL_NU_A0_SEABED_FEATURES_MAP
Chart 8	FGL_NU_A0_ISOPACH_UNIT1
Chart 9	FGL_NU_A0_SOIL_PROVINCES
Chart 10	FGL_NU_A0_GEOHAZARDS_MAP

Table 15-2: UHRS Regional profile charts for the FGL OWF area

Regional profile Chart #	Contents
Chart 1	UHRS PROFILE M004
Chart 2	UHRS PROFILE X002
Chart 3	UHRS PROFILE X028

APPENDIX A. NORTH-UP CHARTS



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 8 16 24 32 40
Kilometers

DATUM:	PROJECTION:	REVISION NO.
WGS84	UTM 31N	1

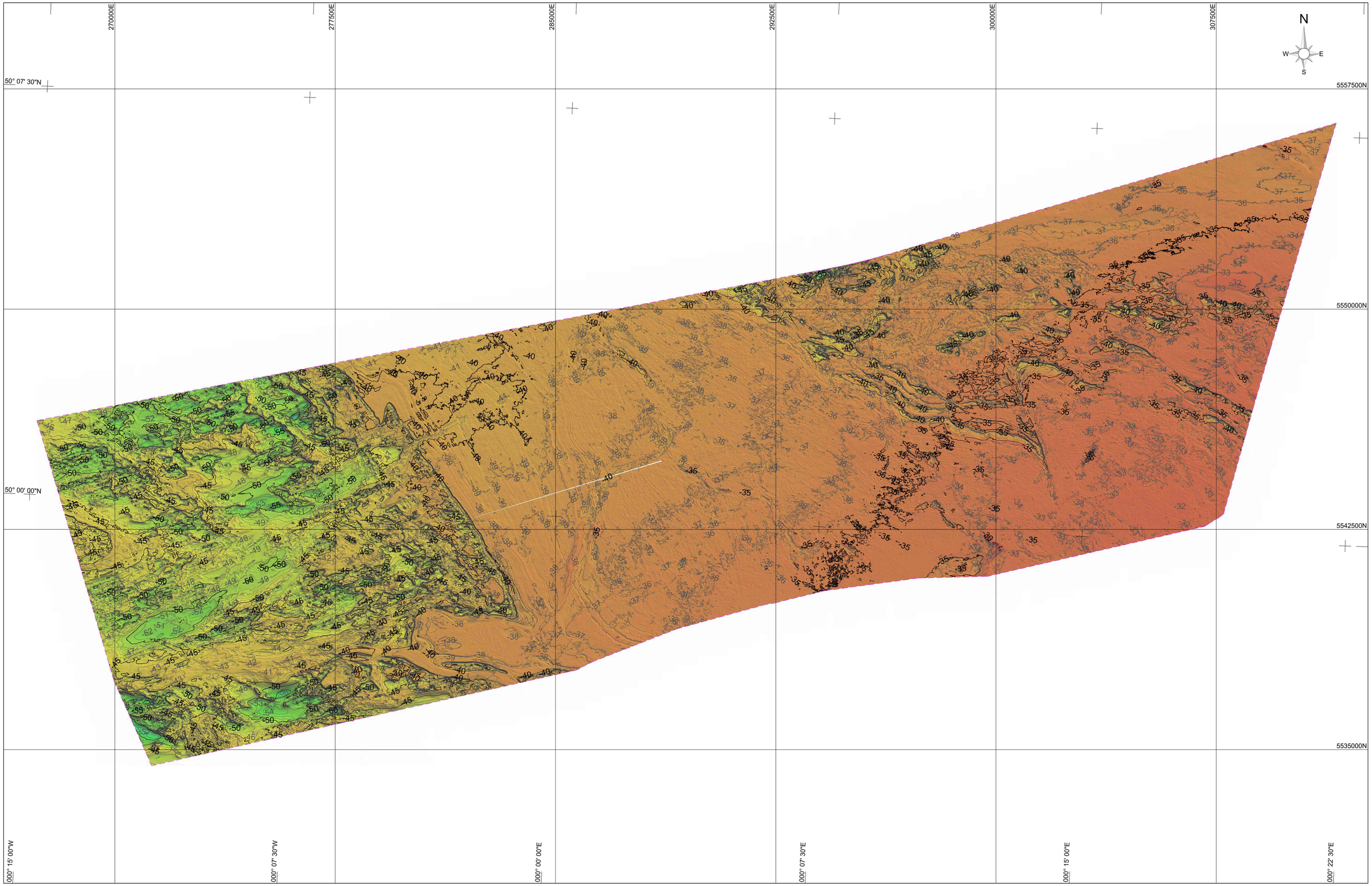
DATE: July 2026

LEGEND:

Survey area



PROJECT TITLE:	AREA:	CHART:
FECAMP GRAND LARGE OWF Integration report	MEMN-FGL	1 of 13
CHART TITLE:	**REFERENCE:**	**SCALE:**
Location Map	FGL TEC-004	1:400000



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

DATUM:	PROJECTION:
WGS84	UTM 31N

DATE: July 2026

REVISION NO. 1

LEGEND:

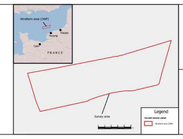
Survey area

Major contour at 5m intervals

Minor contour at 1m intervals

Source: SHOM - GHOA 2024
Depth in metres
Data gridded at 1m cell size

-28m -30m -35m -40m -45m -50m -55m -60m -62m



PROJECT TITLE: FECAMP GRAND LARGE OWF Integration Report

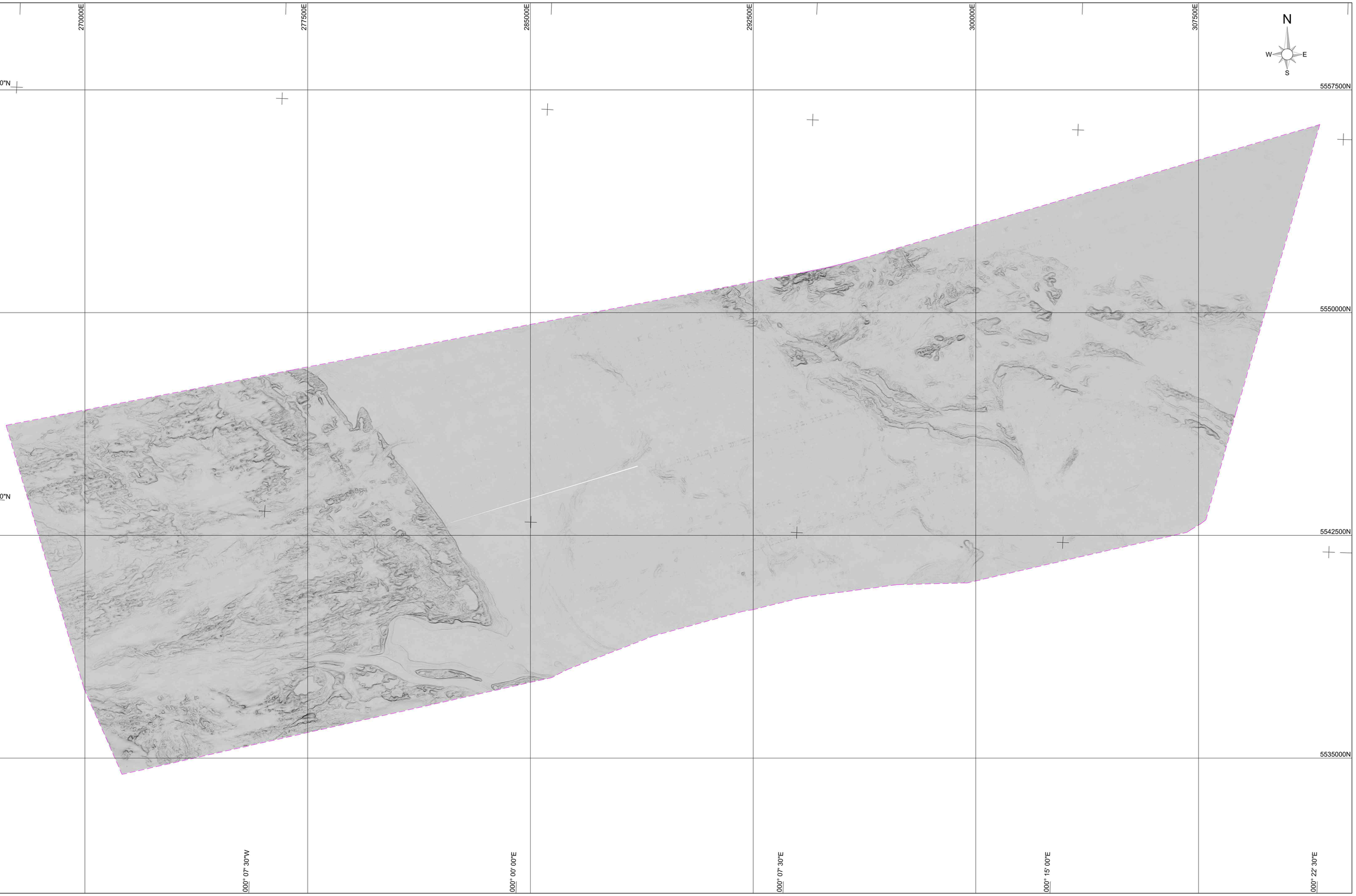
AREA: MEMN-FGL

CHART: 2 of 13

CHART TITLE: FGL OWF Area - Bathymetry Chart

REFERENCE: FGL TEC-004

SCALE: 1:40000



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

DATUM: WGS84

PROJECTION: UTM 31N

DATE: July 2026

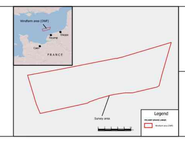
REVISION NO. 1

LEGEND:

Survey area

Slopes in degrees (°)
Data gridded at 1m cell size

0° 2.5° 5° 7.5° 10° 12.5° 15°



PROJECT TITLE: FECAMP GRAND LARGE OWF Integration Report

AREA: MEMN-FGL

CHART: 3 of 13

CHART TITLE: FGL OWF Area - Slope Chart

REFERENCE: FGL TEC-004

SCALE: 1:40000

270000E
277500E
285000E
292500E
300000E
307500E
307500E

N
W
E
S

50° 07' 30"N
5557500N
5550000N
50° 00' 00"N
5542500N
5535000N

000° 15' 00"W
000° 07' 30"W
000° 00' 00"E
000° 07' 30"E
000° 15' 00"E
000° 22' 30"E

MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE
0 1 2 3 4
Kilometers

DATUM: WGS84

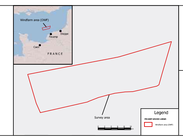
PROJECTION: UTM 31N

DATE: July 2026

REVISION NO. 1

LEGEND:

Survey area



PROJECT TITLE: FECAMP GRAND LARGE OWF Integration Report

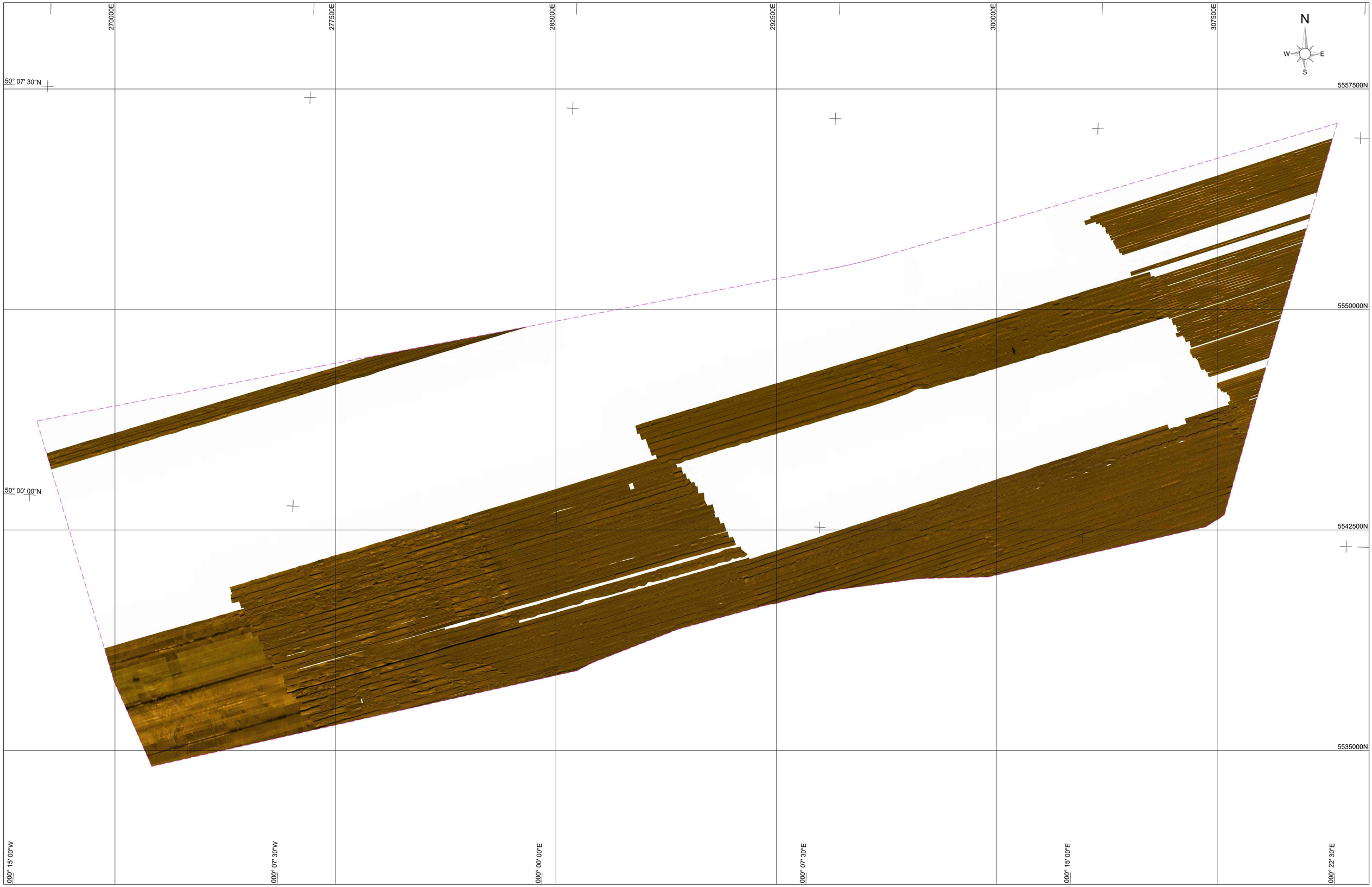
AREA: MEMN-FGL

CHART: 4 of 13

CHART TITLE: FGL OWF Area - Backscatter Chart

REFERENCE: FGL TEC-004

SCALE: 1:40000



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

DATUM: WGS84

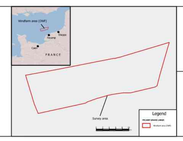
PROJECTION: UTM 31N

DATE: July 2026

REVISION NO. 1

LEGEND:

Survey area



PROJECT TITLE: FECAMP GRAND LARGE OWF Integration Report

AREA: MEMN-FGL

CHART: 5 of 13

CHART TITLE: FGL OWF Area - SSS Mosaic Chart

REFERENCE: FGL TEC-004

SCALE: 1:40000

270000E
277500E
285000E
292500E
300000E
307500E
307500E

N
W
E
S

50° 07' 30"N
5557500N
5550000N
50° 00' 00"N
5542500N
5535000N

000° 15' 00"W
000° 07' 30"W
000° 00' 00"E
000° 07' 30"E
000° 15' 00"E
000° 22' 30"E

MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

DATUM:	PROJECTION:
WGS84	UTM 31N

DATE: July 2026

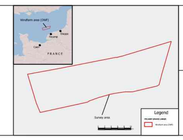
REVISION NO. 1

LEGEND:

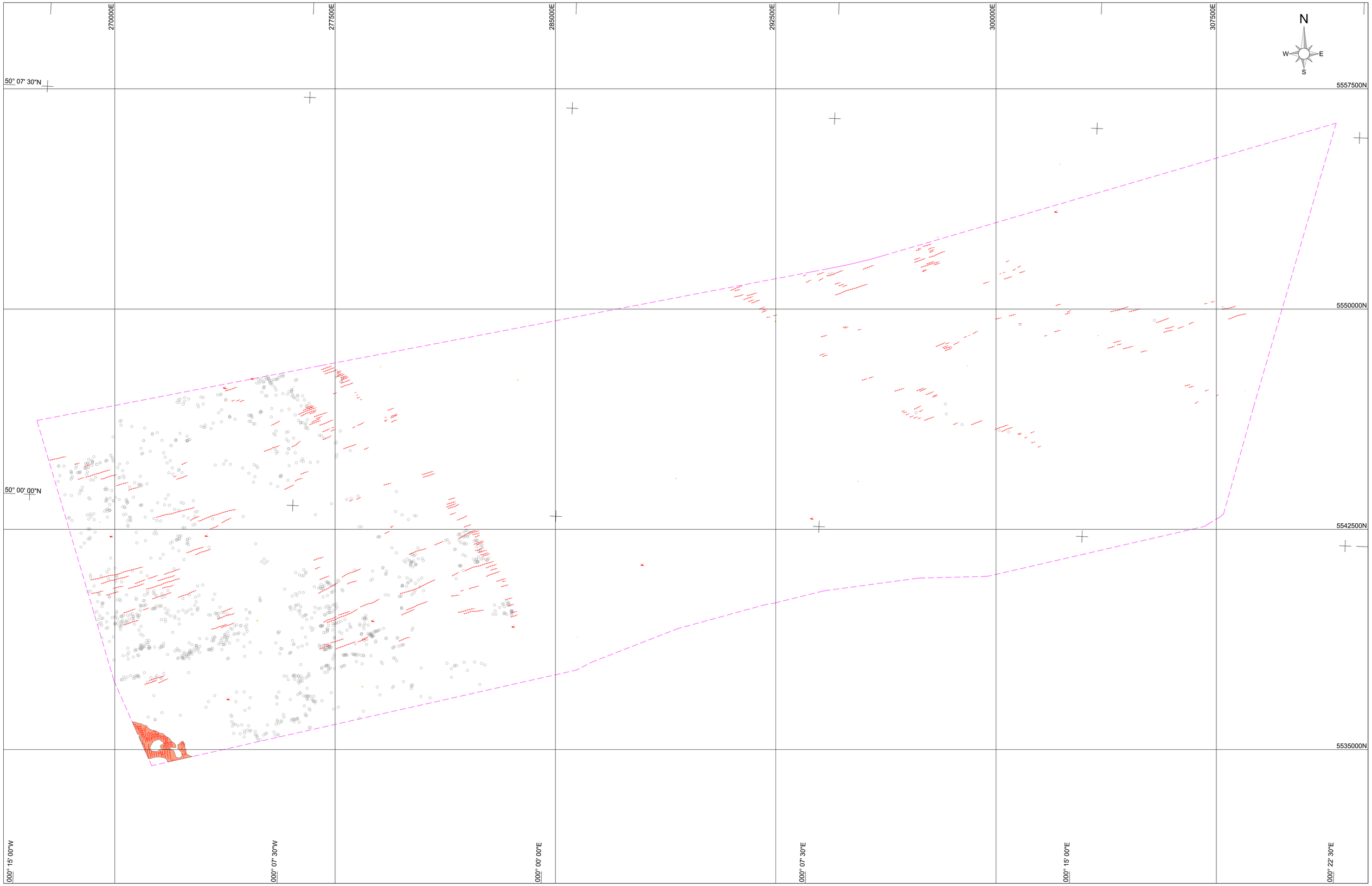
Survey area

Seabed Classification - Sedimentology

- Rock
- Pebbly gravel
- Gravel
- Gravelly sand
- Sandy gravel
- Sand
- Pebbly gravel



PROJECT TITLE:	AREA:	CHART:
FECAMP GRAND LARGE OWF Integration Report	MEMN-FGL	6 of 13
CHART TITLE:	REFERENCE:	SCALE:
FGL OWF Area - Sedimentology Chart	FGL TEC-004	1:40000



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

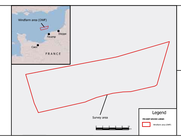
DATUM:	PROJECTION:
WGS84	UTM 31N

DATE: July 2026

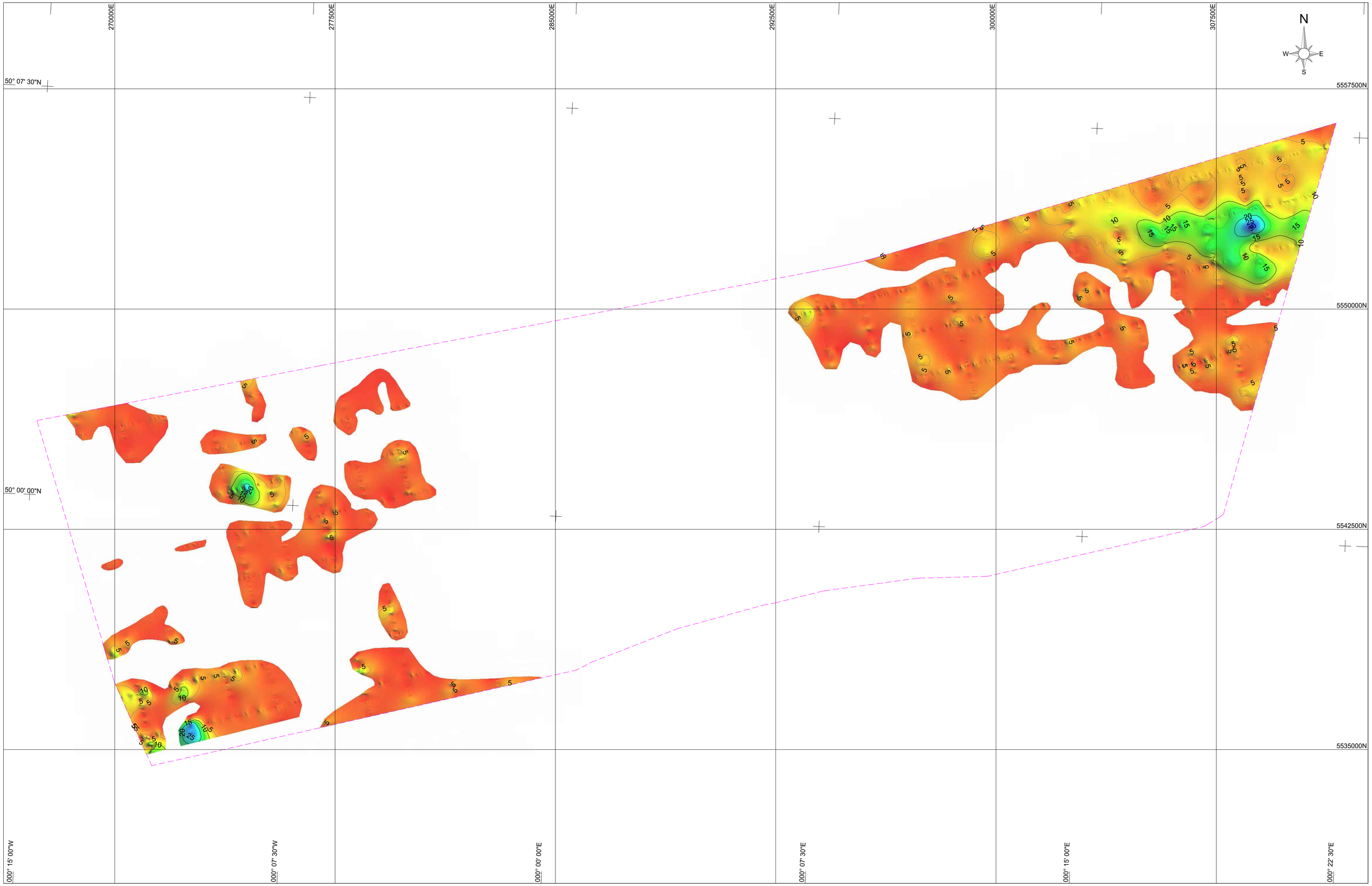
REVISION NO. 1

LEGEND:

- Survey area
- IOGP 1005 Isolated Depression
- IOGP 1022 Wreck
- IOGP 2069 Rock Crest
- IOGP 2001 Plough Mark
- IOGP 2069 Trawl Mark
- Dune area



PROJECT TITLE:	AREA:	CHART:
FECAMP GRAND LARGE OWF Integration Report	MEMN-FGL	7 of 13
CHART TITLE:	**REFERENCE:**	**SCALE:**
FGL OWF Area - Seabed Features Chart	FGL TEC-004	1:40000



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

DATUM:	PROJECTION:
WGS84	UTM 31N

DATE: July 2026

REVISION NO. 1

LEGEND:

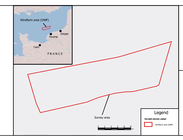
Survey area

Thickness at 10m intervals (Unit 1)

Thickness at 5m intervals (Unit 1)

Depth in metres below - ASV used: 2000 m/s
Data gridded at 10m cell size

0m 5m 10m 15m 20m 25m 30m



PROJECT TITLE: FECAMP GRAND LARGE OWF Integration Report

AREA: MEMN-FGL

CHART: 8 of 13

CHART TITLE: FGL OWF Area - Isopaches Unit 1 Chart

REFERENCE: FGL TEC-004

SCALE: 1:40000

270000E
277500E
285000E
292500E
300000E
307500E

N
W
E
S

50° 07' 30"N
5557500N
5550000N
50° 00' 00"N
5542500N
5535000N

000° 15' 00"W
000° 07' 30"W
000° 00' 00"E
000° 07' 30"E
000° 15' 00"E
000° 22' 30"E

Unit 2b - CALCARENITE (Eocene)

Unit 3 - CHALK (U.Cretaceous)

Unit 7 - Dense SAND (L.Cretaceous)

Unit 6 - MUDSTONE (Cretaceous)

Unit 8 - Sand and CLAY and SILT (L.Cretaceous)

Unit 8 - Sand and CLAY and SILT (L.Cretaceous)

Lillebonne fault

Lillebonne fault

Unit 2b - CALCARENITE (Eocene)

MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

DATUM:	PROJECTION:
WGS84	UTM 31N

DATE: July 2026

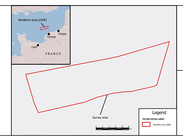
REVISION NO. 1

LEGEND:

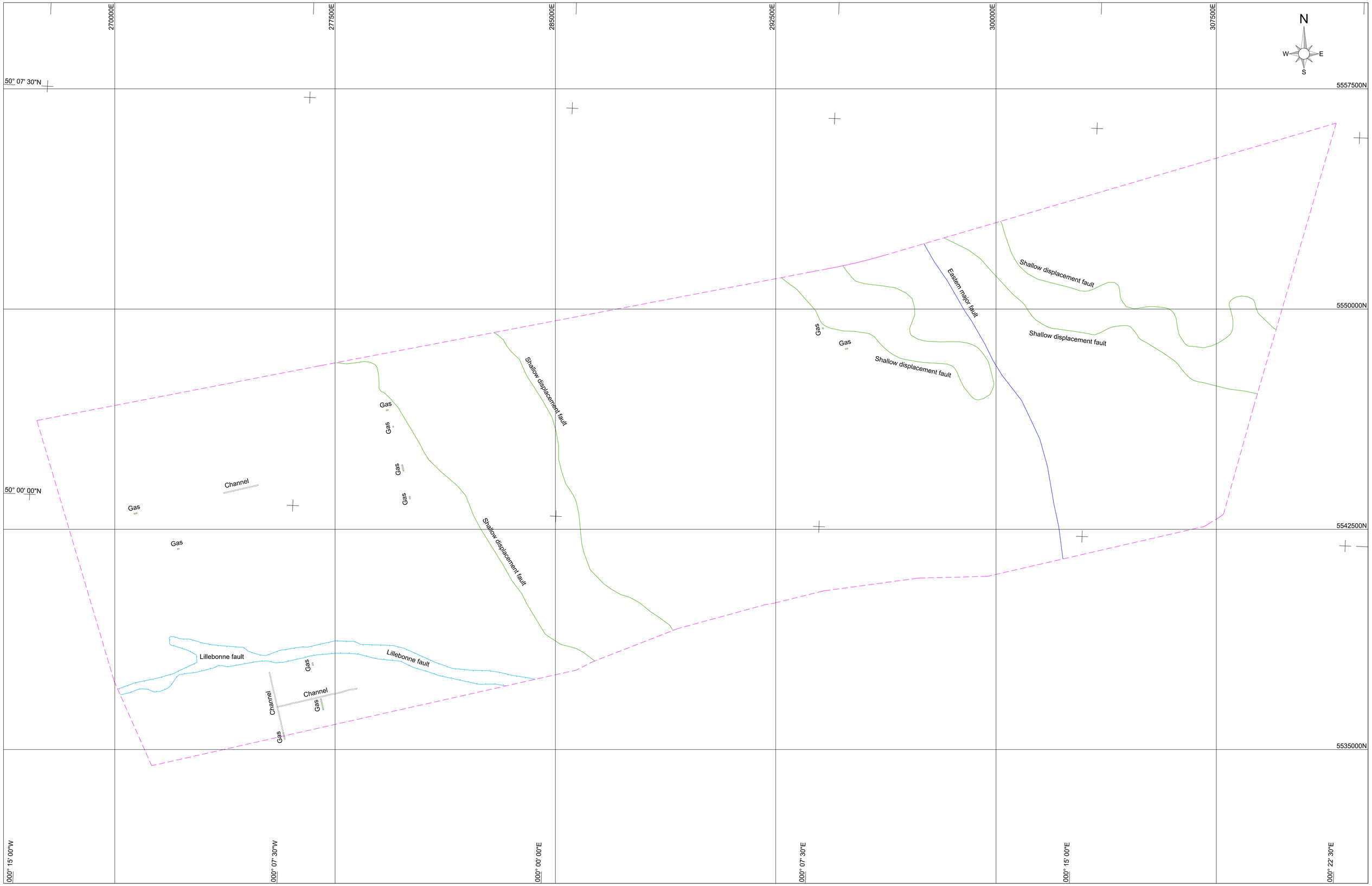
Survey area

Soil Provinces Classification

- Unit 2b CALCARENITE (Eocene)
- Unit 3 CHALK (U.Cretaceous)
- Unit 6 MUDSTONE (Cretaceous)
- Unit 7 Dense SAND (L.Cretaceous)
- Unit 8 Sand and CLAY and SILT (L.Cretaceous)
- Lillebonne Fault



PROJECT TITLE:	AREA:	CHART:
FECAMP GRAND LARGE OWF Integration Report	MEMN-FGL	9 of 13
CHART TITLE:	**REFERENCE:**	**SCALE:**
FGL OWF Area - Soil Provinces Chart	FGL TEC-004	1:40000



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

DATUM:	PROJECTION:
WGS84	UTM 31N

DATE: July 2026

REVISION NO. 1

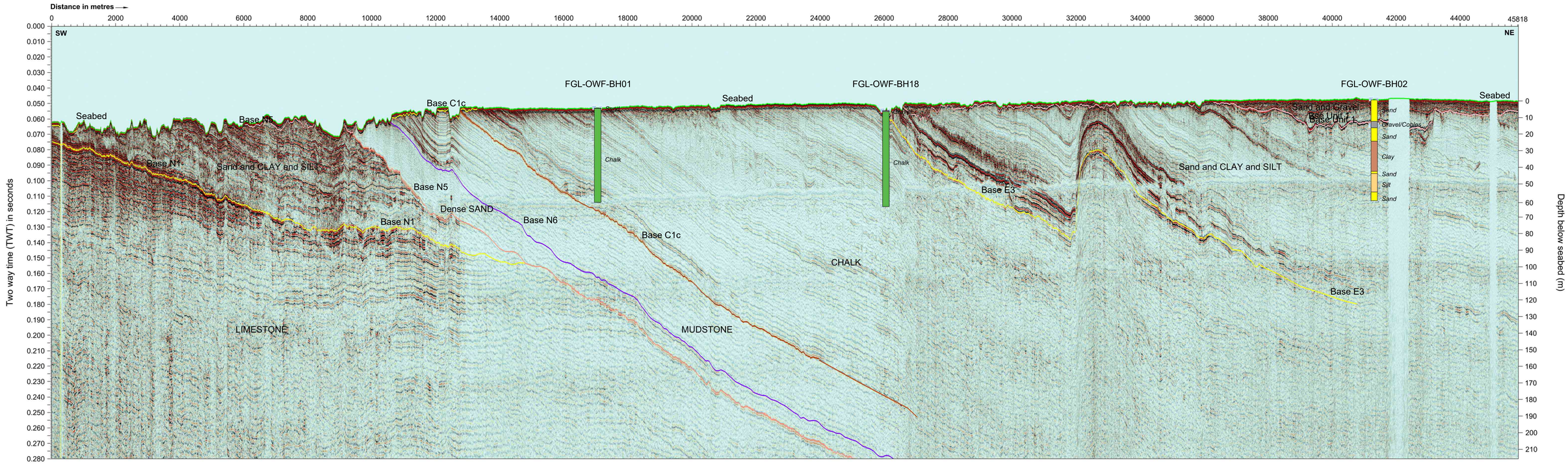
LEGEND:

- Survey area
- Channels lines
- Eastern major fault
- Lillebonne fault
- Shallow displacement fault zones
- Gas zones

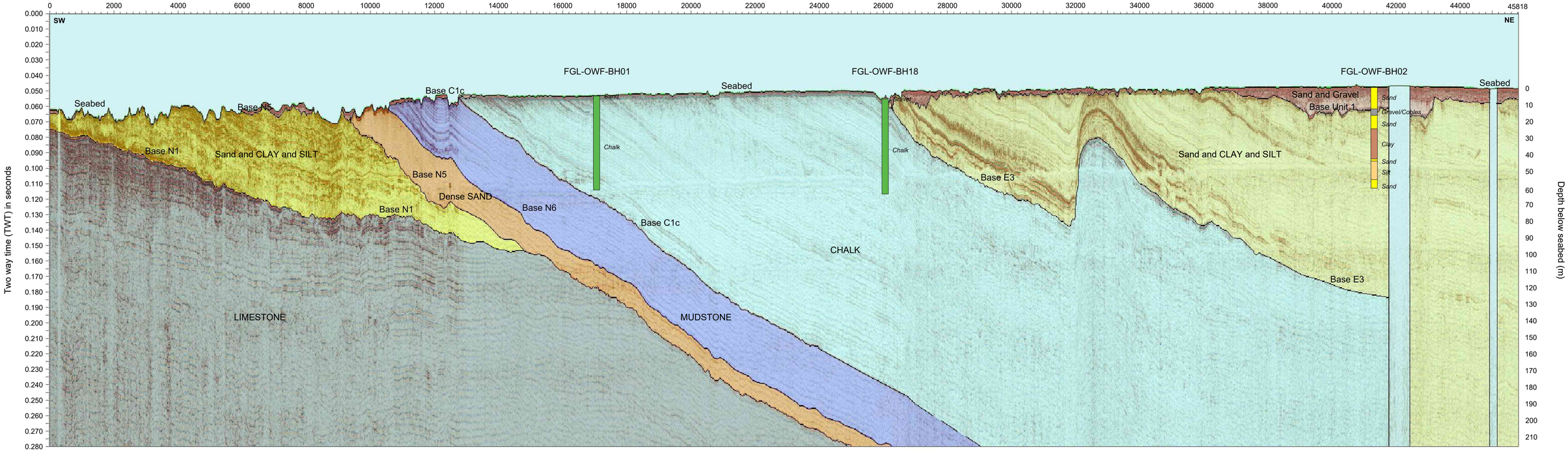
PROJECT TITLE:	AREA:	CHART:
FECAMP GRAND LARGE OWF Integration Report	MEMN-FGL	10 of 13
CHART TITLE: FGL OWF Area - Geohazards Chart	REFERENCE: FGL TEC-004	SCALE: 1:40000

APPENDIX B. UHRS REGIONAL PROFILES

Line FGL_OWF_M004



Line FGL_OWF_M004



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 1 2 3 4
Kilometers

DATUM: WGS84

PROJECTION: UTM 31N

DATE: July 2026

REVISION NO. 1

LEGEND:

Units

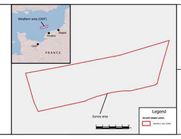
- Sand and Gravel
- Sand and CLAY and SILT
- CALCARENITE
- CHALK
- LIMESTONE
- SANDSTONE
- MUDSTONE
- Dense SAND
- Sand and CLAY and SILT
- LIMSTONE

Seismic horizons

- Seabed profile
- Base Unit 1
- Base Unit 2a/Top Chalk
- Base C1c
- Base N6
- Base N5

Borehole interpretation

- Sand
- Gravel
- Chalk
- Clay
- Silty



PROJECT TITLE: FECAMP GRAND LARGE OWF Integration Report

AREA: MEMN-FGL

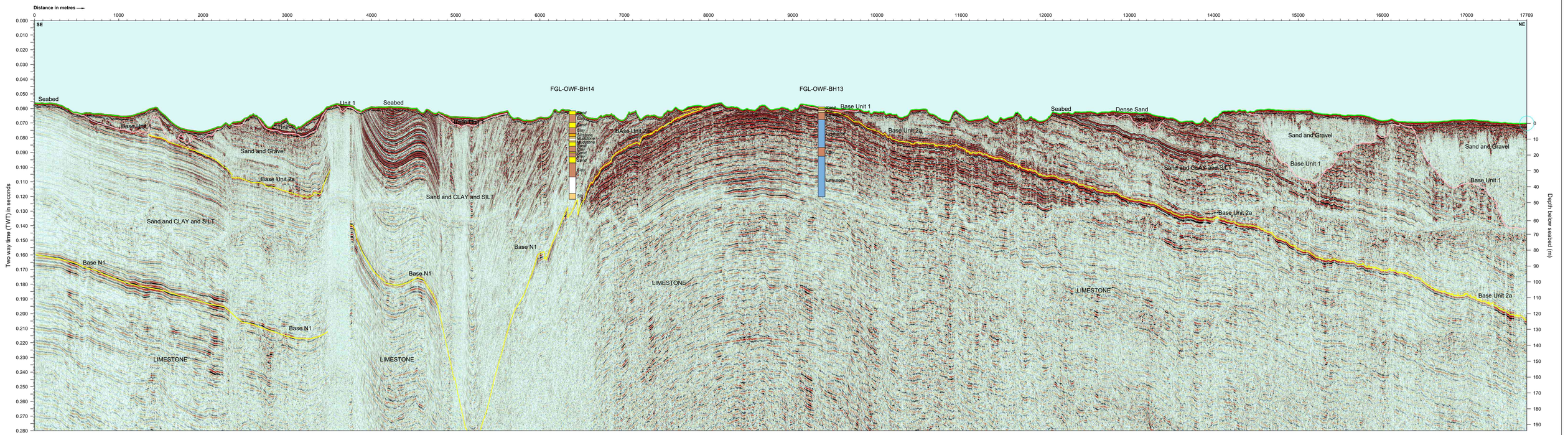
CHART: 11 of 13

CHART TITLE: FGL OWF Area - Profile M004 Chart

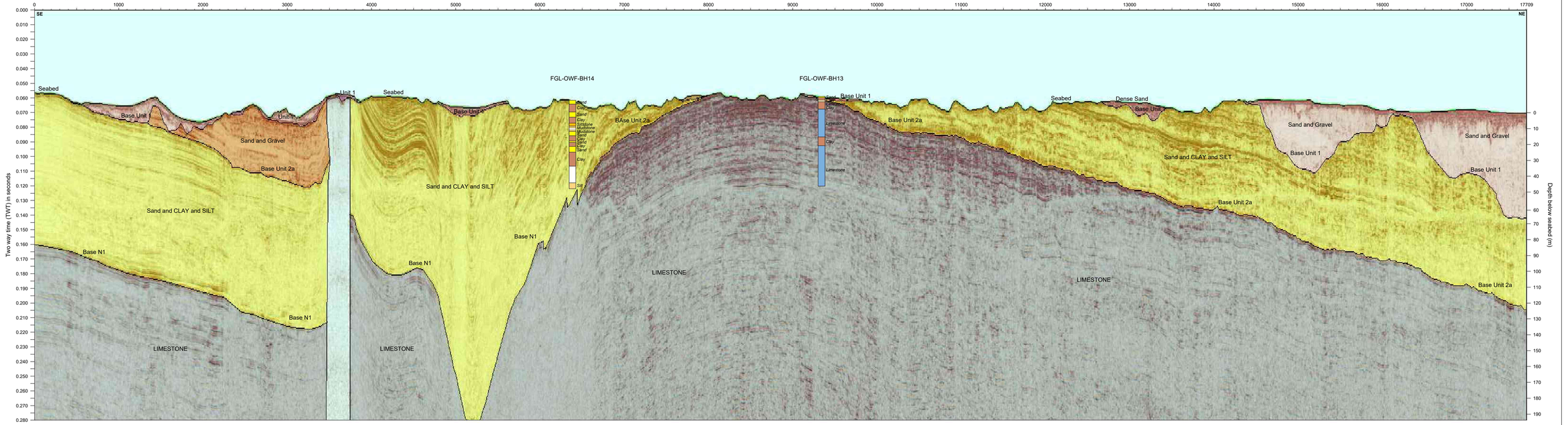
REFERENCE: FGL TEC-004

SCALE: H=1:44000 V=1:850

Line FGL_OWF_X002



Line FGL_OWF_X002



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE
0 250 500 750 1000 1250 1500
Meters

DATUM: WGS84

PROJECTION: UTM 31N

DATE: July 2026

REVISION NO. 1

LEGEND:

Units
- Sand and Gravel
- Sand and CLAY and SILT
- CALCARENITE
- CHALK
- LIMESTONE
- SANDSTONE
- MUDSTONE
- Dense SAND
- Sand and CLAY and SILT
- LIMSTONE

Seismic horizons
- Seabed profile
- Base Unit 1
- Base Unit 2a/Top Chalk
- Base C1c
- Base N6
- Base N5

Borehole interpretation
- Sand
- Gravel
- Chalk
- Clay
- Silty

PROJECT TITLE: FECAMP GRAND LARGE OWF Integration Report

AREA: MEMN-FGL

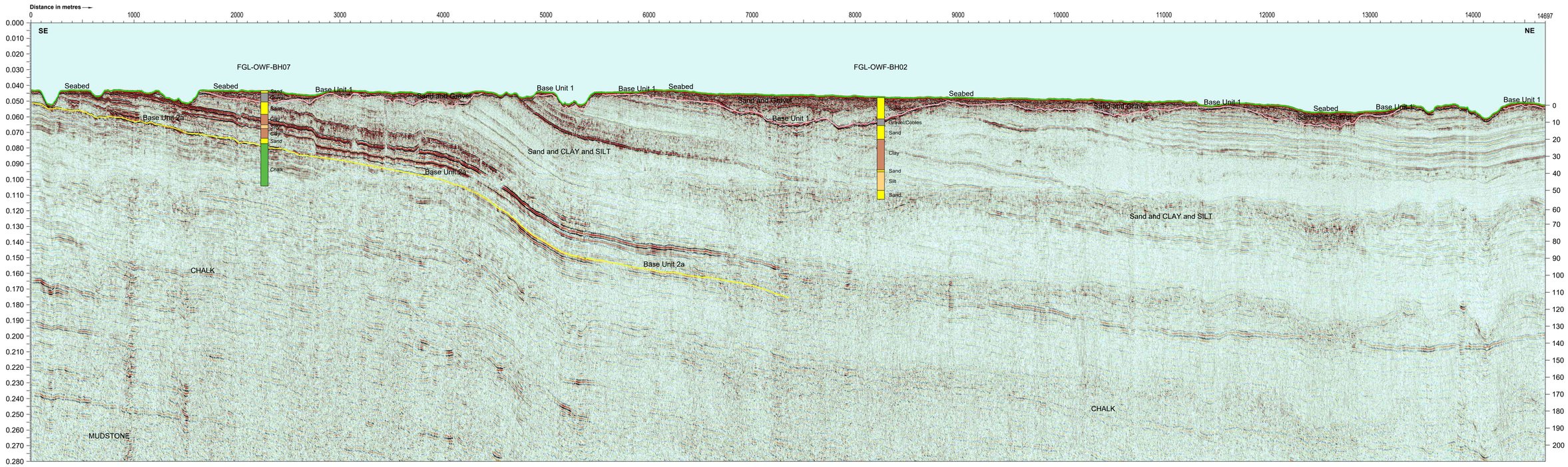
CHART: 12 of 13

CHART TITLE: FGL OWF Area - Profile X002 Chart

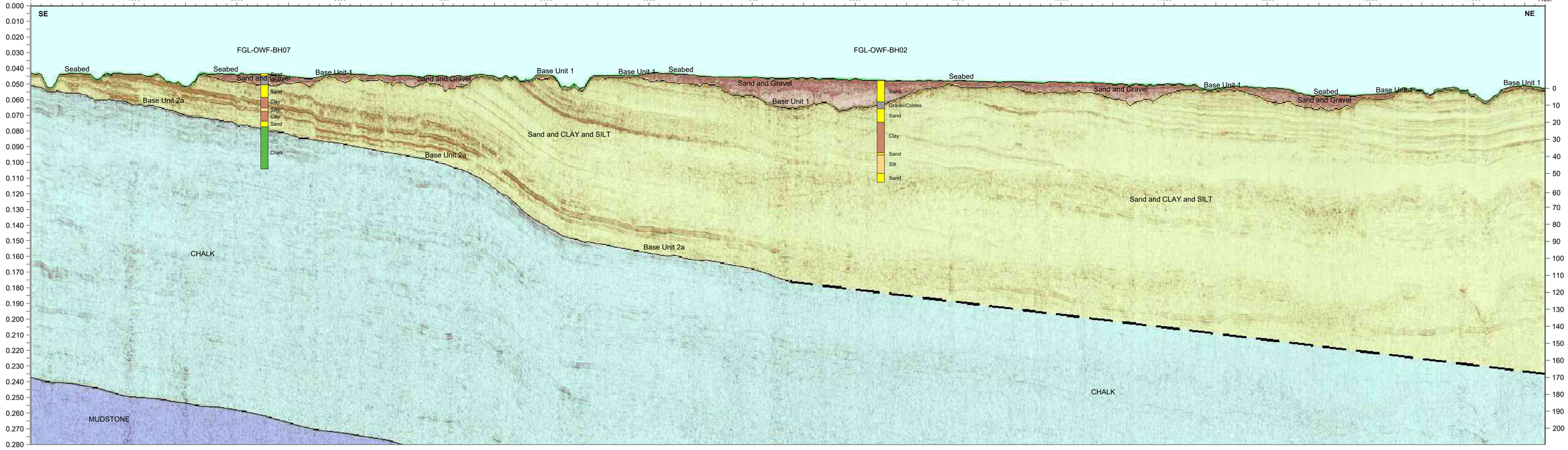
REFERENCE: FGL TEC-004

SCALE: H=1:16000 V=1:850

Line FGL_OWF_X028



Line FGL_OWF_X028



MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

TECNOAMBIENTE
A TRADEBE COMPANY

CARTOGRAPHIC INFORMATION

ELEVATION REFERRED TO BATHYELLI v2.1 GEOID

GRAPHIC SCALE

0 250 500 750 1000 1250 1500
Meters

DATUM: WGS84

PROJECTION: UTM 31N

DATE: July 2026

REVISION NO. 1

LEGEND:

Units

- Sand and Gravel
- Sand and CLAY and SILT
- CALCARENITE
- CHALK
- LIMESTONE
- SANDSTONE
- MUDSTONE
- Dense SAND
- Sand and CLAY and SILT
- LIMSTONE

Seismic horizons

- Seabed profile
- Base Unit 1
- Base Unit 2a/Top Chalk
- Base C1c
- Base N6
- Base N5

Borehole interpretation

- Sand
- Clay
- Gravel
- Silty
- Chalk

PROJECT TITLE: FECAMP GRAND LARGE OWF Integration Report

AREA: MEMN-FGL

CHART: 13 of 13

CHART TITLE: FGL OWF Area - Profile X028 Chart

REFERENCE: FGL TEC-004

SCALE: H=1:14000 V=1:850

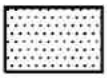
APPENDIX C. BOREHOLE LOGS

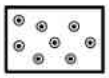
Drawn by : DRF Date : 31/07/2013

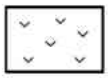
Filename: J:\...\CAD\Symbols_and_Terms_Used_on_Geotechnical_Logs_ISO.dwg

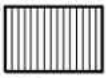
SOIL IDENTIFICATION SYMBOLS

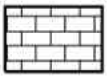

Clay

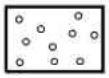

Sand


Cobbles


Shell Debris


Silt

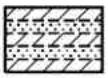

Chalk


Gravel

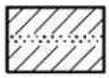

Peat

Note:
These soil identification symbols differ from BS 5930 (1999) but they are used to conform with those generally adopted for offshore purposes
Vertical symbols on the log indicate a soil mixture of primary, secondary and tertiary constituents as presented in the soil descriptions

SOIL STRUCTURE SYMBOLS



Interbedded/laminated Soil A and Soil B

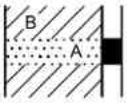


Bed of Soil A in layer of Soil B

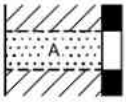
Note:

1. Pockets are not continuous through the sample
2. Partings are 1 to 2 grains thick
3. Thinly laminated is under 6 mm thick
4. Thickly laminated is from 6 mm to 20 mm thick
5. Very thinly bedded is from 20 mm to 60 mm thick
6. Thinly bedded is from 60 mm to 200 mm thick
7. Medium bedded is from 200 mm to 600 mm thick
8. Thickly bedded is from 600 mm to 2000 mm thick
9. Very thickly bedded is over 2000 mm thick

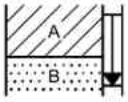
SOIL STRATIFICATION SYMBOLS



Bed of Soil A found in layer of Soil B detected by sampling



Layer of Soil A detected during drilling



Layer change from Soil A to Soil B detected during cone penetration test

Note:
Depth and thickness of layers detected during drilling are less accurate than those determined by sampling or cone penetration tests

SOIL SAMPLING AND TESTING SYMBOLS

BC1 (Box core sample No.1)

PUS1 (Push sample No.1)

CPT1 (Cone penetration test No.1)

GC1 (Gravity core sample No.1)

SC1 (STACOR® sample No.1)

TBT1 (T-Bar test No.1)

H1 (Hammer sample No.1)

VC1 (Vibrocore sample No.1)

P1 (Piston sample No.1)

W1 (Wireline push sample No.1)

Sample attempted but no recovery obtained

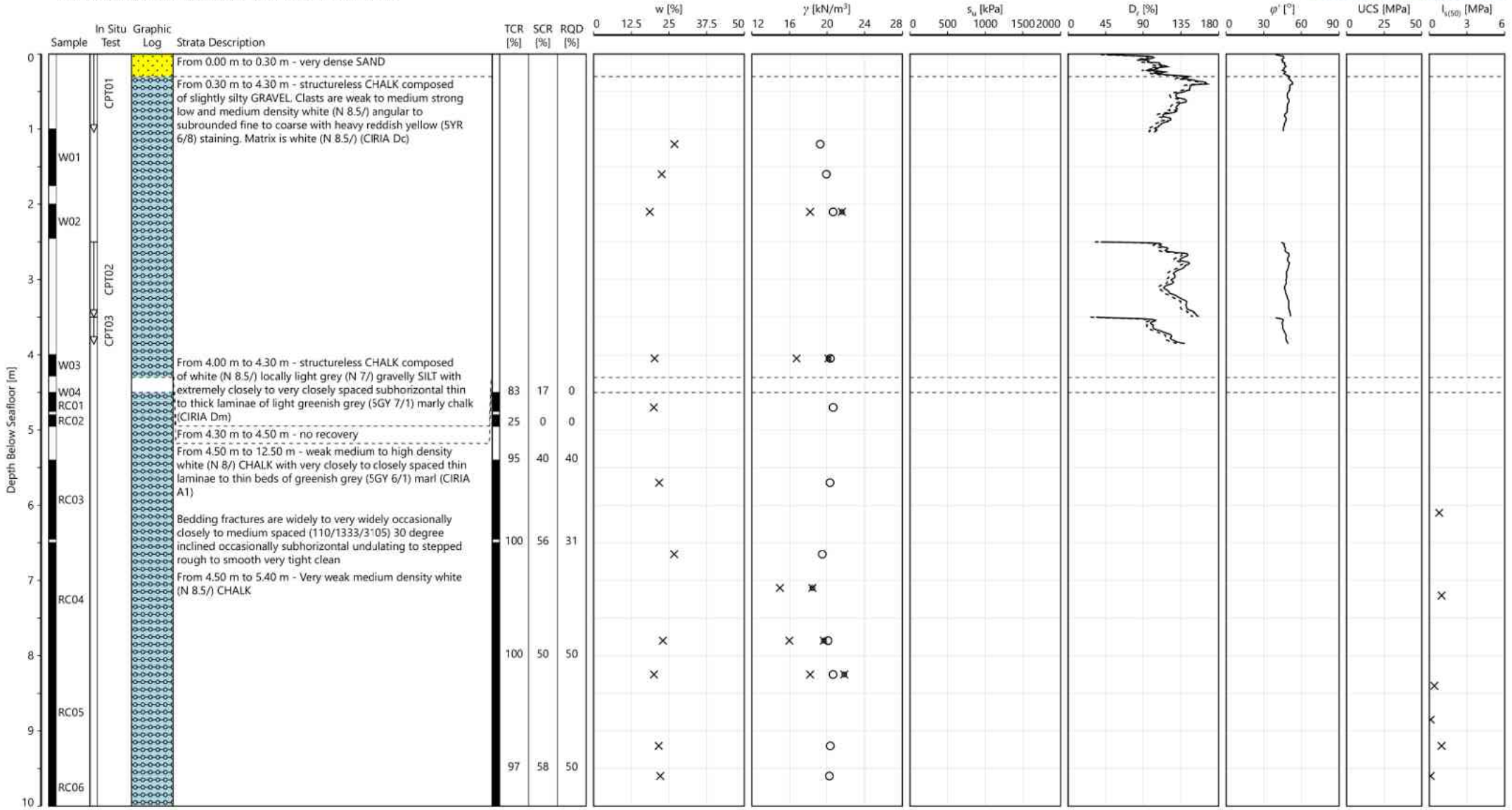
TERMS FOR SOIL STRENGTH AND DENSITY

Fine-grained Soils

Term	Undrained Shear Strength [kPa]
Extremely low	< 10
Very low	10 – 20
Low	20 – 40
Medium	40 – 75
High	75 – 150
Very high	150 – 300
Extremely high	300 – 600
Ultra high	> 600

Coarse-grained Soils

Term	Estimated Relative Density [%]
Very loose	0 – 15
Loose	15 – 35
Medium dense	35 – 65
Dense	65 – 85
Very dense	85 – 100



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH01

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

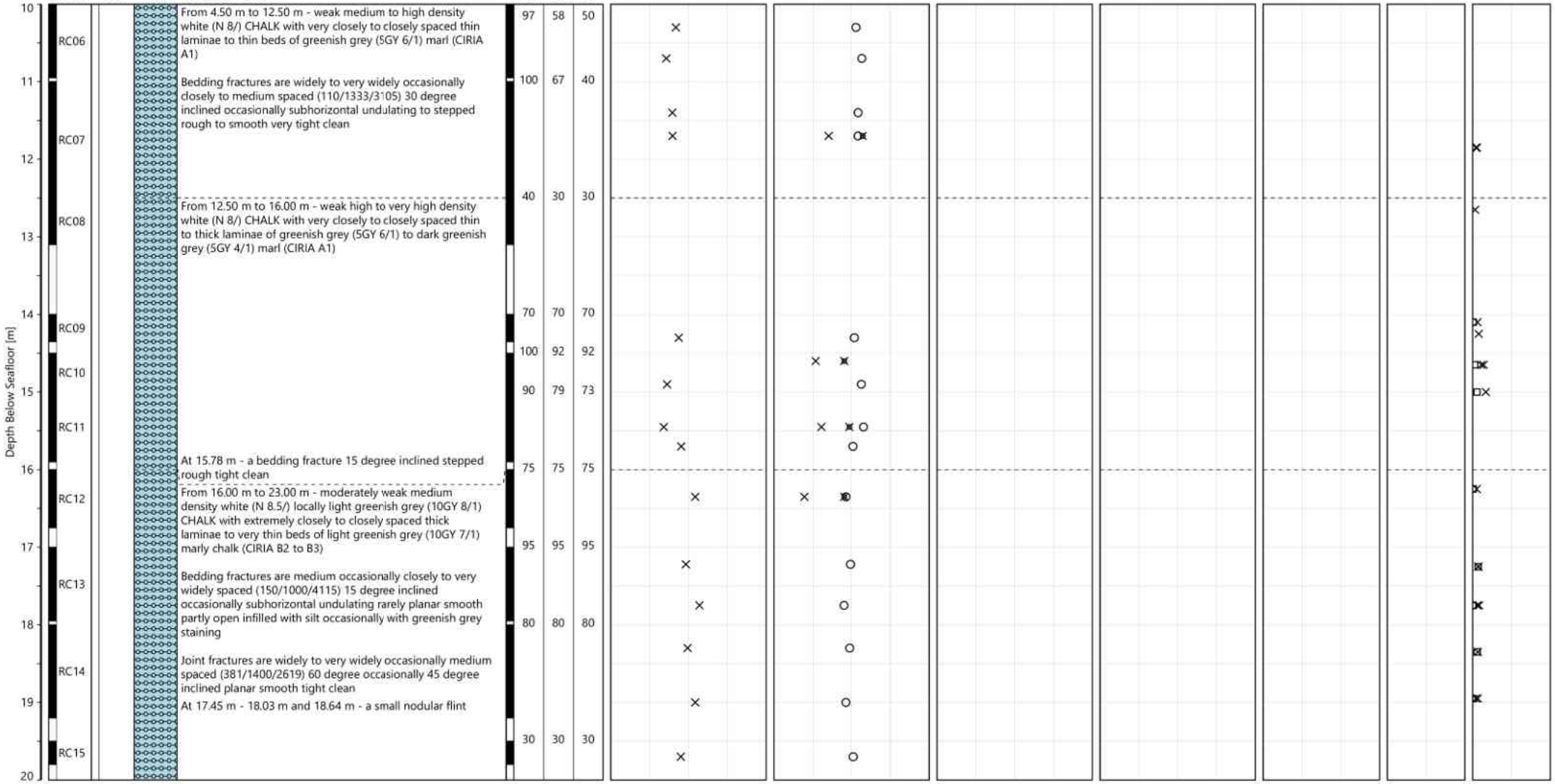
Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH01	283719.5	5547590.2	39.66	26-Jun-2025 - 29-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC06			From 4.50 m to 12.50 m - weak medium to high density white (N 8/) CHALK with very closely to closely spaced thin laminae to thin beds of greenish grey (5GY 6/1) marl (CIRIA A1) Bedding fractures are widely to very widely occasionally closely to medium spaced (110/1333/3105) 30 degree inclined occasionally subhorizontal undulating to stepped rough to smooth very tight clean	97	58	50
RC07				100	67	40
RC08			From 12.50 m to 16.00 m - weak high to very high density white (N 8/) CHALK with very closely to closely spaced thin to thick laminae of greenish grey (5GY 6/1) to dark greenish grey (5GY 4/1) marl (CIRIA A1)	40	30	30
RC09				70	70	70
RC10				100	92	92
RC11				90	79	73
			At 15.78 m - a bedding fracture 15 degree inclined stepped rough tight clean	75	75	75
RC12			From 16.00 m to 23.00 m - moderately weak medium density white (N 8.5/) locally light greenish grey (10GY 8/1) CHALK with extremely closely to closely spaced thick laminae to very thin beds of light greenish grey (10GY 7/1) marly chalk (CIRIA B2 to B3)	95	95	95
RC13			Bedding fractures are medium occasionally closely to very widely spaced (150/1000/4115) 15 degree inclined occasionally subhorizontal undulating rarely planar smooth partly open infilled with silt occasionally with greenish grey staining	80	80	80
RC14			Joint fractures are widely to very widely occasionally medium spaced (381/1400/2619) 60 degree occasionally 45 degree inclined planar smooth tight clean At 17.45 m - 18.03 m and 18.64 m - a small nodular flint			
RC15				30	30	30

Depth Below Seafloor [m]



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH01

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- × Water Content
- ● Liquid Limit
- ○ Plastic Limit
- ⊖● Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- × Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- ▼ Pocket penetrometer
- ▲ Torvane
- ● UU-triaxial
- × CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- ◆ CD triaxial
- ● DS-Shear box

Unconfined Compressive Strength (UCS) :
- × UCS

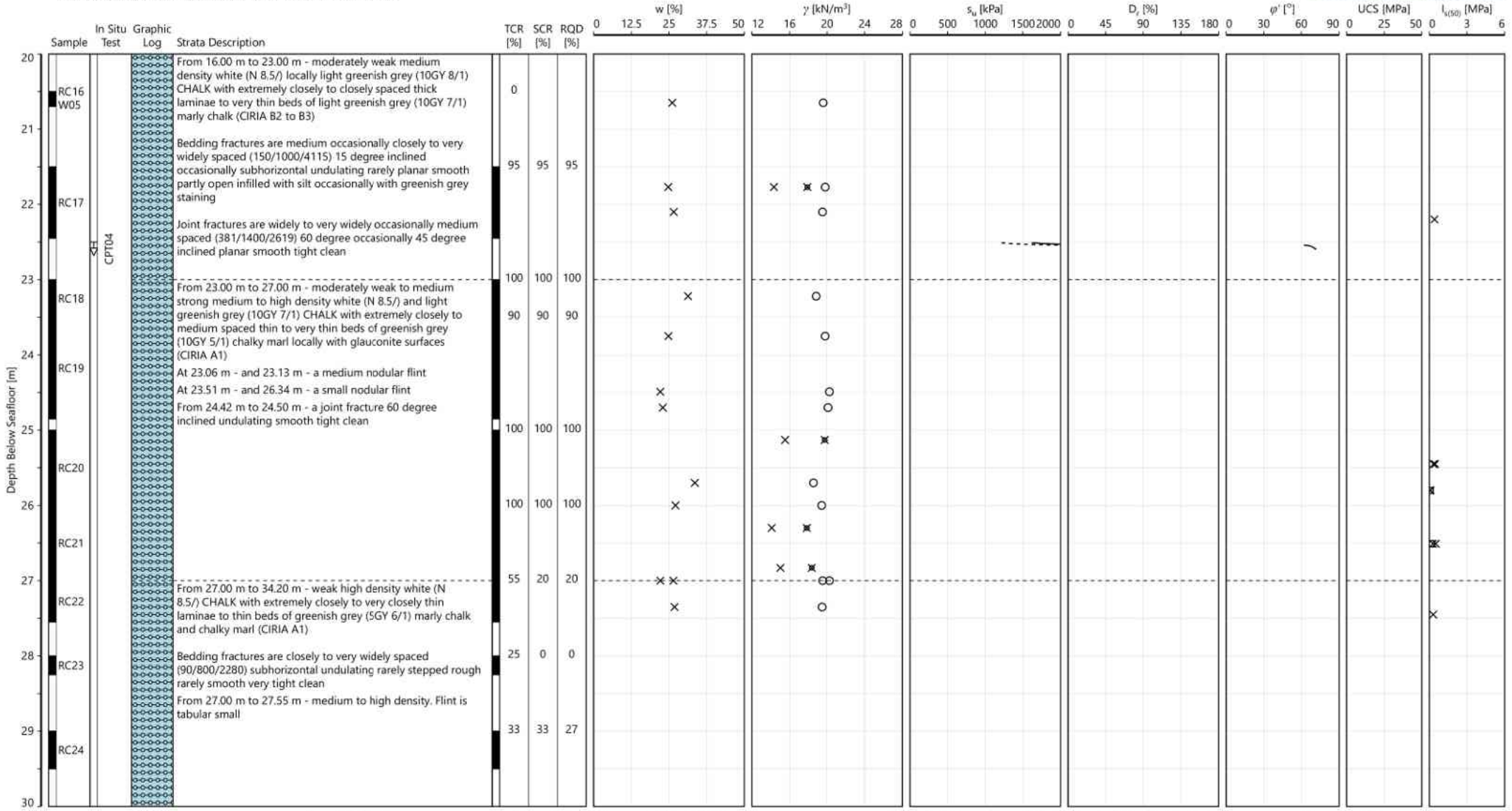
Point Load Index Strength ($I_{s(50)}$) :
- × $I_{s(50)}$ axial
- □ $I_{s(50)}$ diametral
- ◇ $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH01	283719.5	5547590.2	39.66	26-Jun-2025 - 29-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH01

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

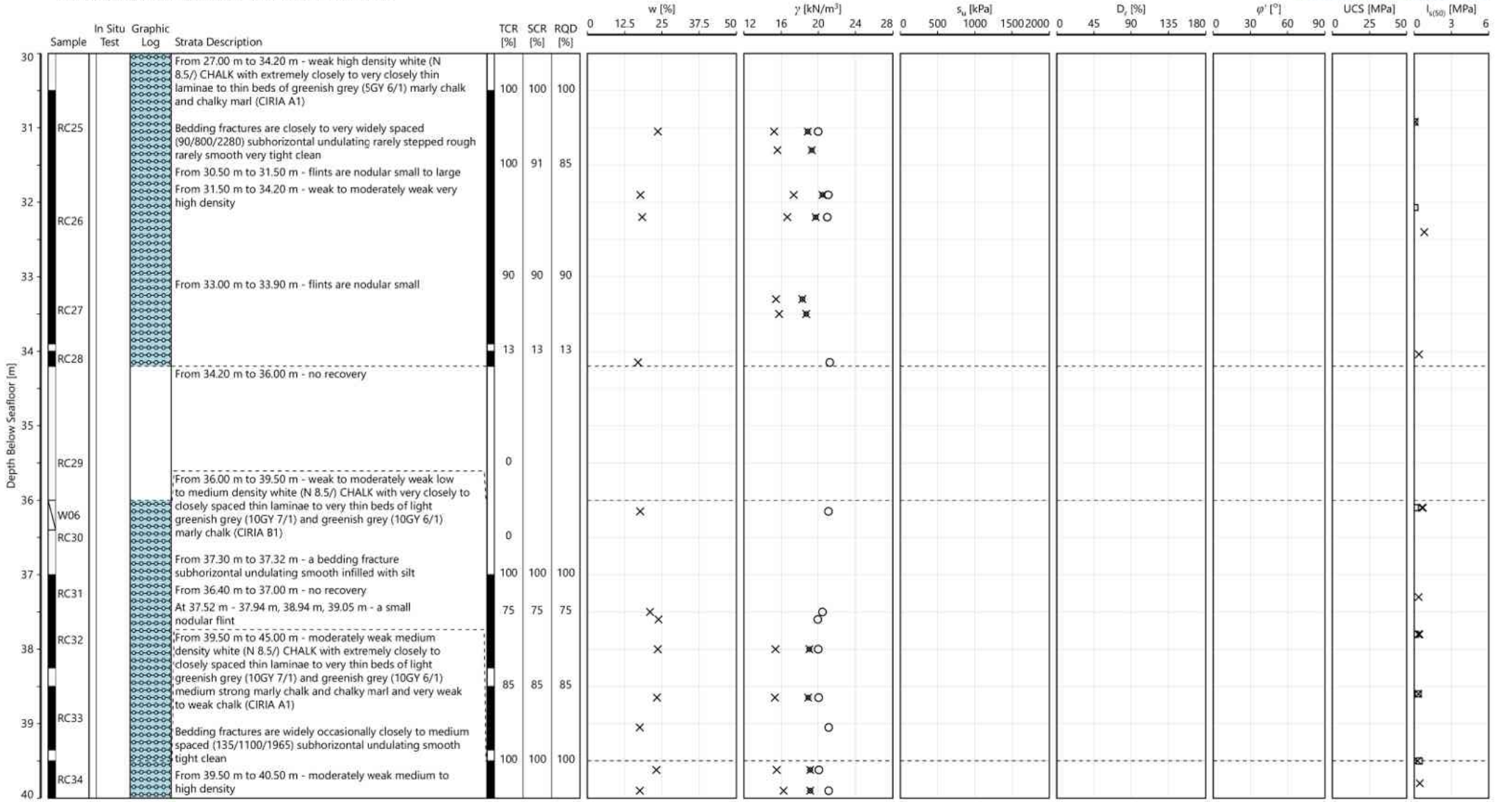
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH01	283719.5	5547590.2	39.66	26-Jun-2025 - 29-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH01

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

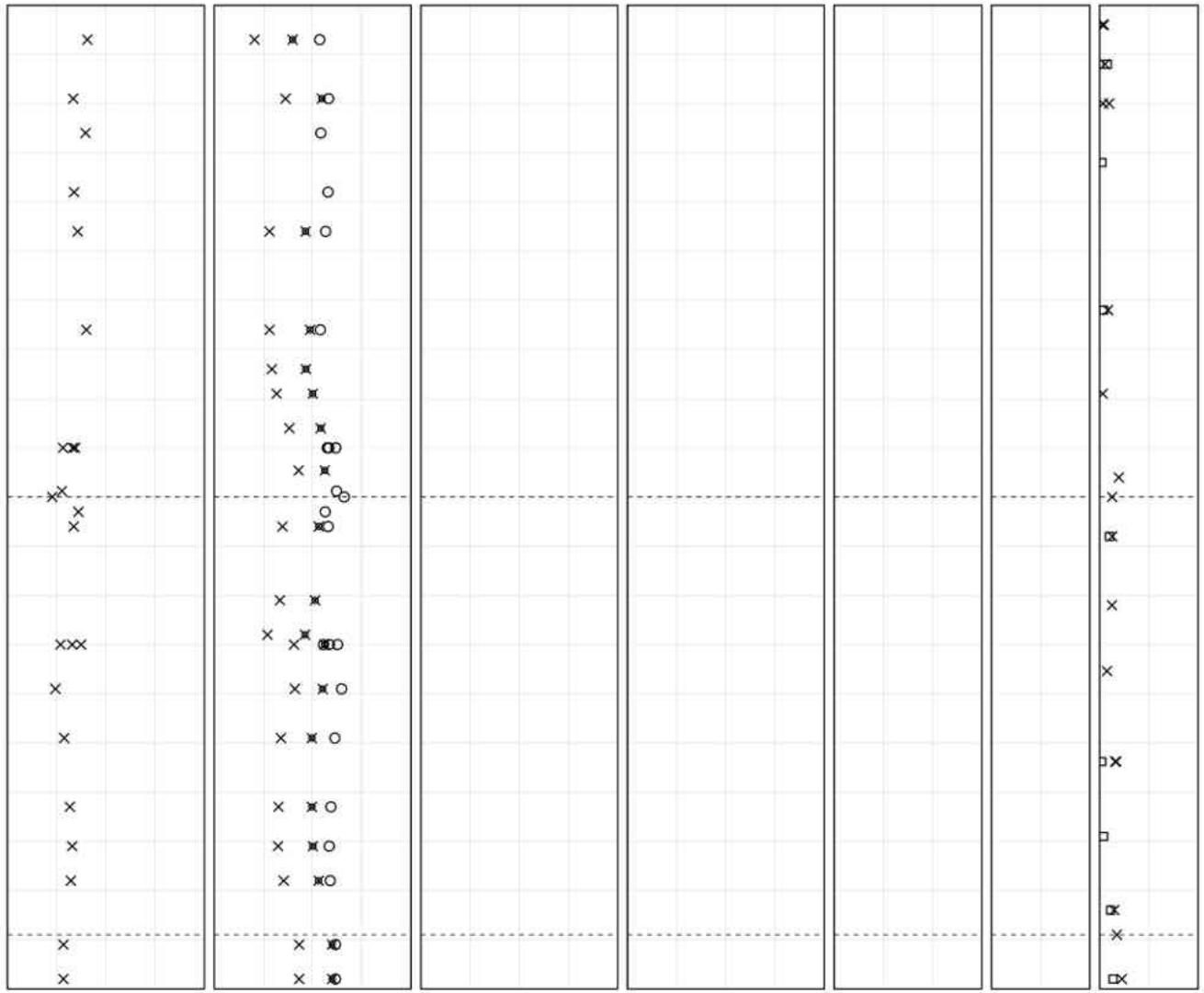
Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH01	283719.5	5547590.2	39.66	26-Jun-2025 - 29-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC34			From 39.50 m to 45.00 m - moderately weak medium density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to very thin beds of light greenish grey (10GY 7/1) and greenish grey (10GY 6/1) medium strong marly chalk and chalky marl and very weak to weak chalk (CIRIA A1)	100	100	100
				100	100	100
RC35			Bedding fractures are widely occasionally closely to medium spaced (135/1100/1965) subhorizontal undulating smooth tight clean	100	100	100
			From 39.50 m to 40.50 m - moderately weak medium to high density			
RC36			At 40.58 m - a small nodular flint			
			At 42.72 m - a coarse gravel-size glauconite trace	100	100	100
RC37						
				100	100	100
RC38				100	100	100
			From 45.00 m to 49.45 m - moderately weak medium to high density white (N 8.5/) CHALK with extremely closely to closely spaced thin to thick laminae and coarse gravel-size pockets of light greenish grey (10GY 7/1) and greenish grey (10GY 6/1) medium strong marly chalk and chalky marl and weak chalk (CIRIA A1 to A2)			
RC39			Bedding fractures are closely to widely spaced (120/396/1160) subhorizontal rarely 15 degree inclined undulating rarely stepped rough to smooth very tight rarely tight clean	100	100	100
			At 45.40 m - a small nodular flint			
RC40						
			From 49.45 m to 57.50 m - moderately weak high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to thin beds of light greenish grey (10GY 7/1) medium strong marly chalk and chalky marl with occasional fine to medium gravel-size pockets of white (N 9.5/) chalk (CIRIA A1 to A2)	97	97	97
RC41						
			Bedding fractures are closely to widely occasionally extremely closely to very closely spaced (30/459/1570) subhorizontal undulating rarely planar and stepped rough rarely smooth very tight clean	100	100	100
RC42				100	100	100
RC43						

Depth Below Seafloor [m]



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH01

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

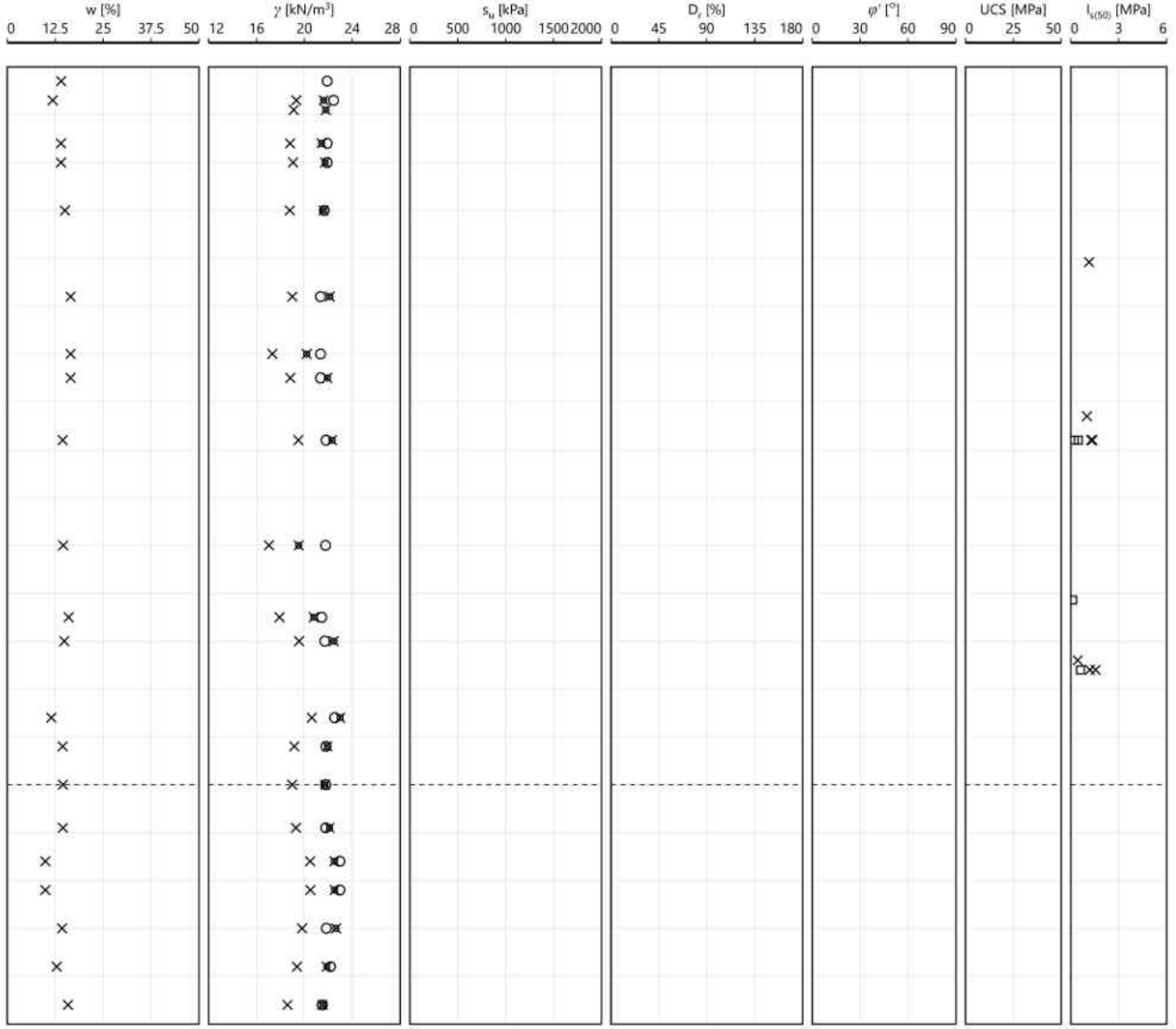
Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH01	283719.5	5547590.2	39.66	26-Jun-2025 - 29-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC43			From 49.45 m to 57.50 m - moderately weak high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to thin beds of light greenish grey (10GY 7/1) medium strong marly chalk and chalky marl with occasional fine to medium gravel-size pockets of white (N 9.5/) chalk (CIRIA A1 to A2)	100	100	100
RC44				83	83	80
			Bedding fractures are closely to widely occasionally extremely closely to very closely spaced (30/459/1S70) subhorizontal undulating rarely planar and stepped rough rarely smooth very tight clean	100	97	97
RC45						
				100	100	100
RC46						
				100	100	100
RC47			At 55.05 m - an incipient fracture subhorizontal undulating rough very tight clean			
				100	100	96
RC48						
				100	100	100
RC49			From 57.50 m to 60.50 m - moderately weak very high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to thin beds of light greenish grey (10GY 7/1) medium strong marly chalk and chalky marl with occasional fine to medium gravel-size pockets of white (N 9.5/) chalk (CIRIA A1)			
			At 57.99 m - a bedding fracture subhorizontal undulating rough clean	100	100	100
RC50						

Depth Below Seafloor [m]



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH01

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

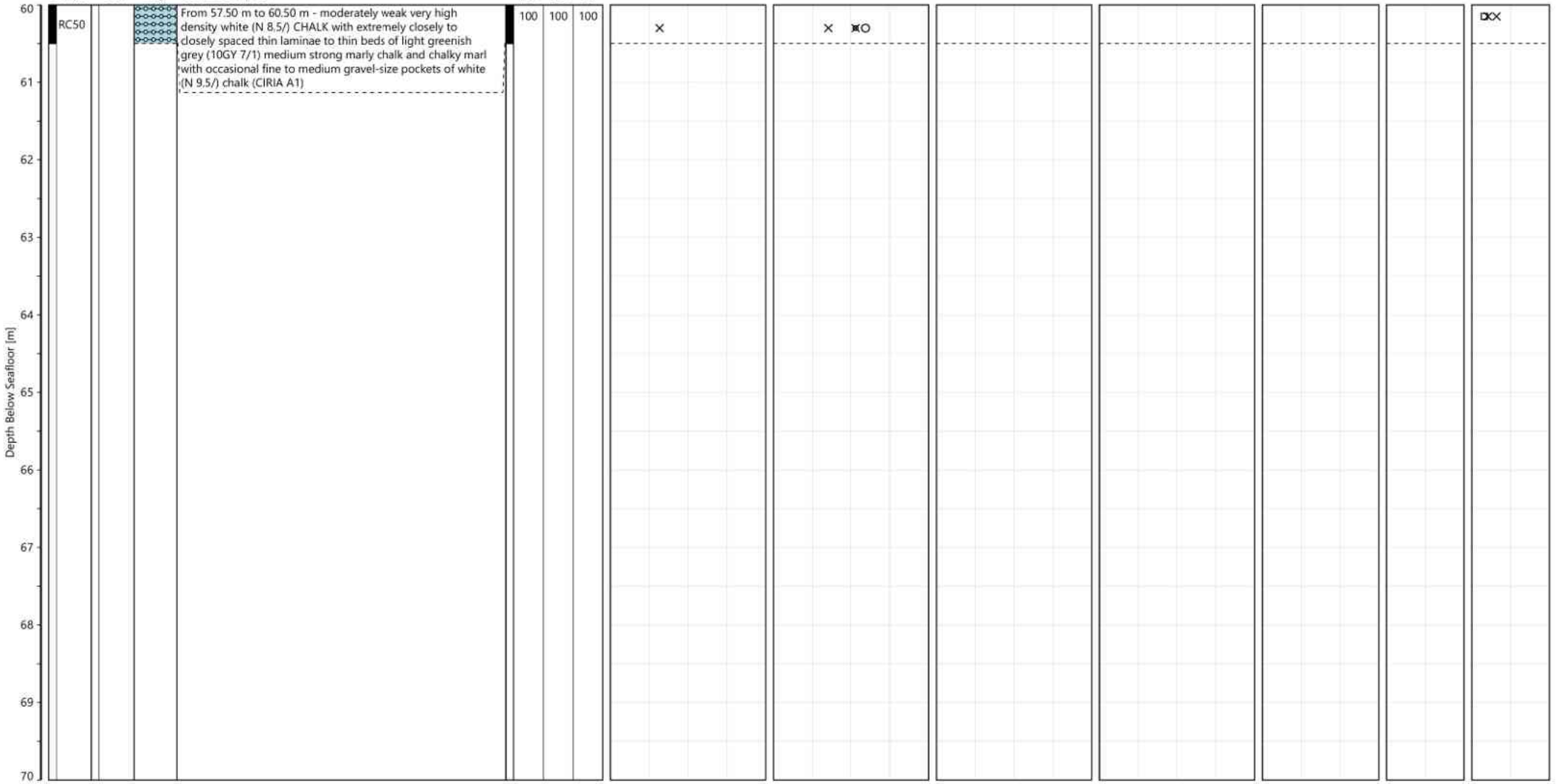
Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH01	283719.5	5547590.2	39.66	26-Jun-2025 - 29-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC50			From 57.50 m to 60.50 m - moderately weak very high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to thin beds of light greenish grey (10GY 7/1) medium strong marly chalk and chalky marl with occasional fine to medium gravel-size pockets of white (N 9.5/) chalk (CIRIA A1)	100	100	100



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH01

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- × Water Content
- ● Liquid Limit
- ○ Plastic Limit
- ⊖● Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- × Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- ▼ Pocket penetrometer
- ▲ Torvane
- ● UU-triaxial
- × CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- ◆ CD triaxial
- ● DS-Shear box

Unconfined Compressive Strength (UCS) :
- × UCS

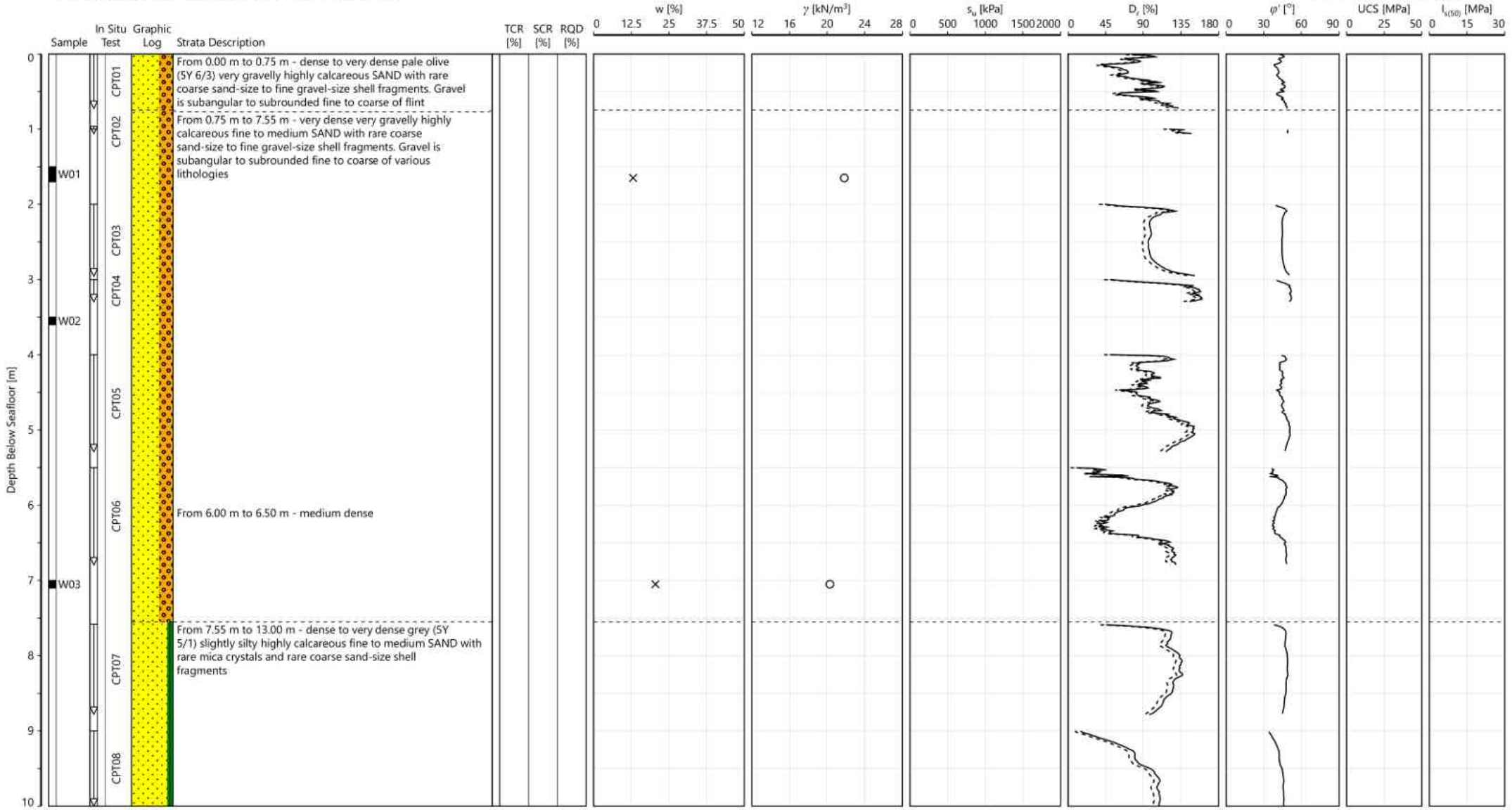
Point Load Index Strength ($I_{s(50)}$) :
- × $I_{s(50)}$ axial
- □ $I_{s(50)}$ diametral
- ◇ $I_{s(50)}$ irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH01	283719.5	5547590.2	39.66	26-Jun-2025 - 29-Jun-2025	Fugro Zephyr	

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH02

FGL-OWF-BH02-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

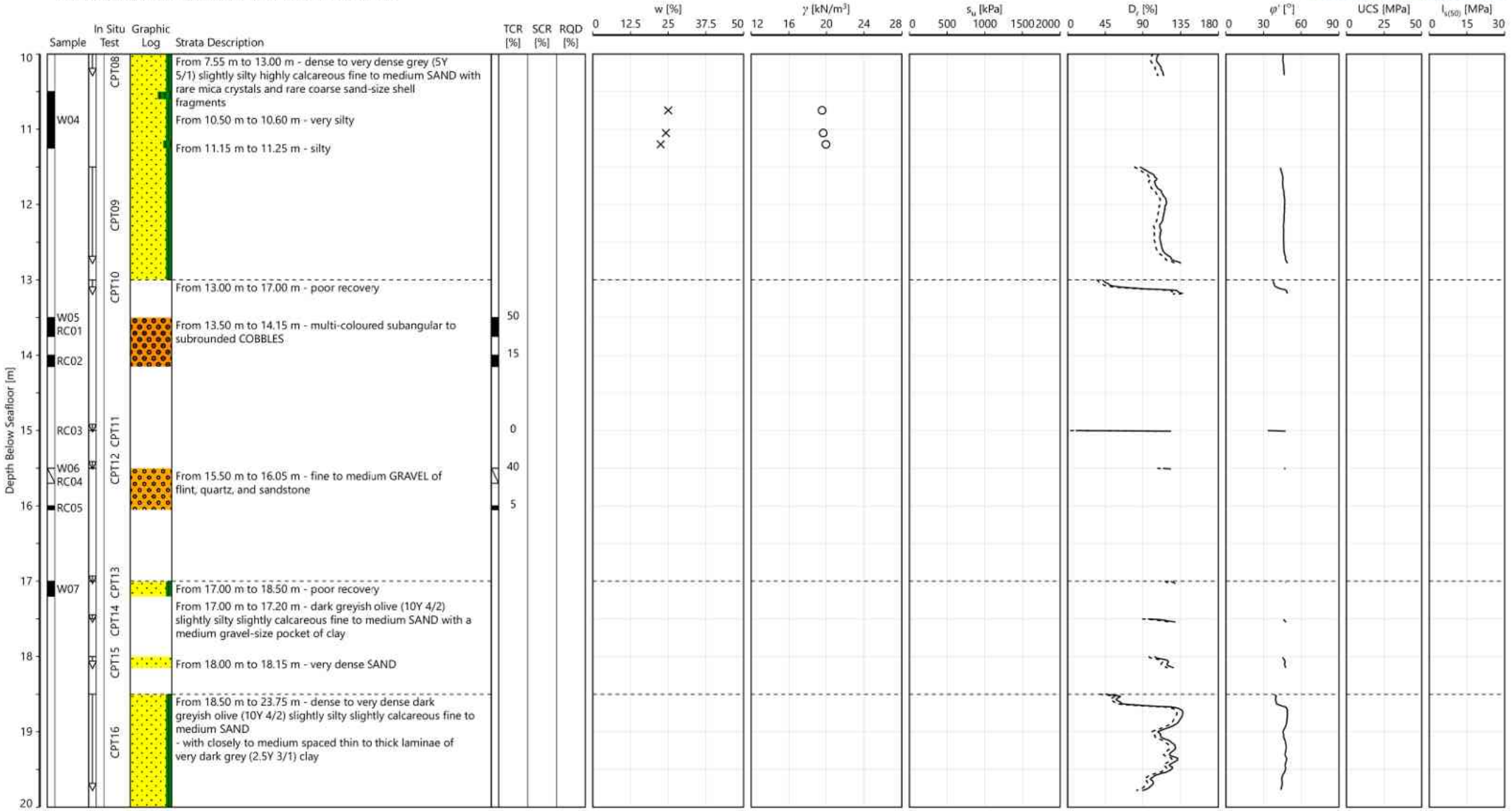
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH02	307335.0	5553040.3	35.66	15-Jun-2025 - 19-Jun-2025	Fugro Zephyr	
FGL-OWF-BH02-a	307335.2	5553044.5	35.60	12-Oct-2025 - 13-Oct-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.9
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH02

FGL-OWF-BH02-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH02	307335.0	5553040.3	35.66	15-Jun-2025 - 19-Jun-2025	Fugro Zephyr	
FGL-OWF-BH02-a	307335.2	5553044.5	35.60	12-Oct-2025 - 13-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample | In Situ Test | Graphic Log | Strata Description | TCR [%] | SCR [%] | RQD [%] | w [%] (0 12.5 25 37.5 50) | γ [kN/m³] (12 16 20 24 28) | s_u [kPa] (0 500 1000 1500 2000) | D_r [%] (0 45 90 135 180) | φ' [°] (0 30 60 90) | UCS [MPa] (0 25 50) | $I_{s(50)}$ [MPa] (0 15 30)

Depth Below Seafloor [m]

20 21 22 23 24 25 26 27 28 29 30

W08 W09 RC06 W10 W11 W12

CPT17 CPT18 CPT19 CPT20 CPT21

From 18.50 m to 23.75 m - dense to very dense dark greyish olive (10Y 4/2) slightly silty slightly calcareous fine to medium SAND
- with closely to medium spaced thin to thick laminae of very dark grey (2.5Y 3/1) clay

At 21.05 m - with rare coarse sand-size shell fragments

From 23.75 m to 24.50 m - poor recovery

From 24.00 m to 24.02 m - slightly gravelly very bioclastic fine to coarse SAND with abundant medium to coarse sand-size foraminifera

From 24.50 m to 25.20 m - dense to very dense SAND

From 25.20 m to 43.60 m - extremely high strength dark grey (5Y 4/1) slightly sandy slightly calcareous to calcareous CLAY with rare foraminifera, rare mica crystals, and rare coarse sand-size organic matter
- with frequent coarse sand-size to fine gravel-size lenses of sand

From 26.00 m to 27.70 m - with coarse sand-size to fine gravel-size shell fragments

TCR [%]: 0

GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH02
FGL-OWF-BH02-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

Unconfined Compressive Strength (UCS) :
UCS

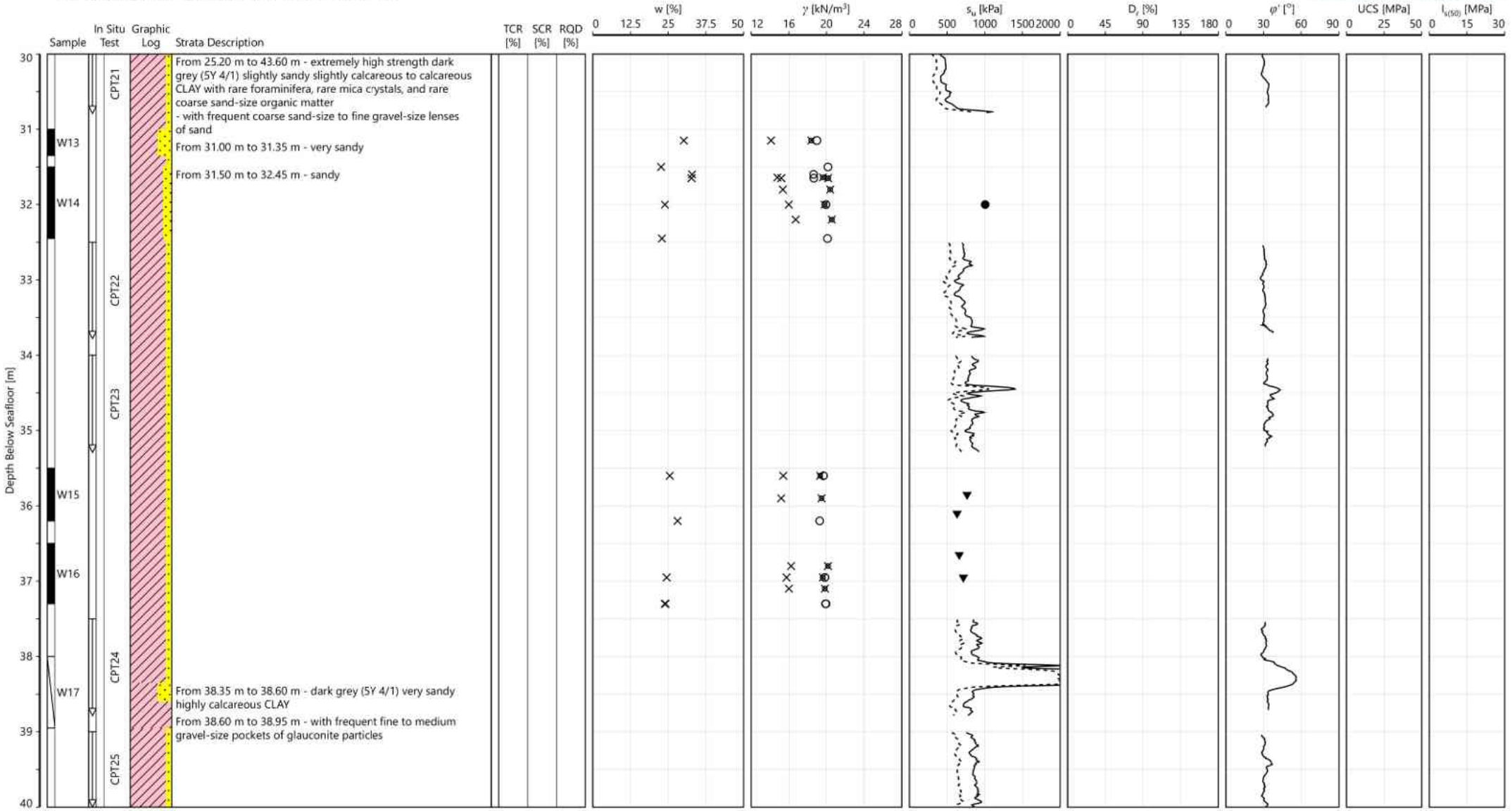
Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH02	307335.0	5553040.3	35.66	15-Jun-2025 - 19-Jun-2025	Fugro Zephyr	
FGL-OWF-BH02-a	307335.2	5553044.5	35.60	12-Oct-2025 - 13-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.11
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

FUGRO



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH02

FGL-OWF-BH02-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH02	307335.0	5553040.3	35.66	15-Jun-2025 - 19-Jun-2025	Fugro Zephyr	
FGL-OWF-BH02-a	307335.2	5553044.5	35.60	12-Oct-2025 - 13-Oct-2025	Fugro Zephyr	

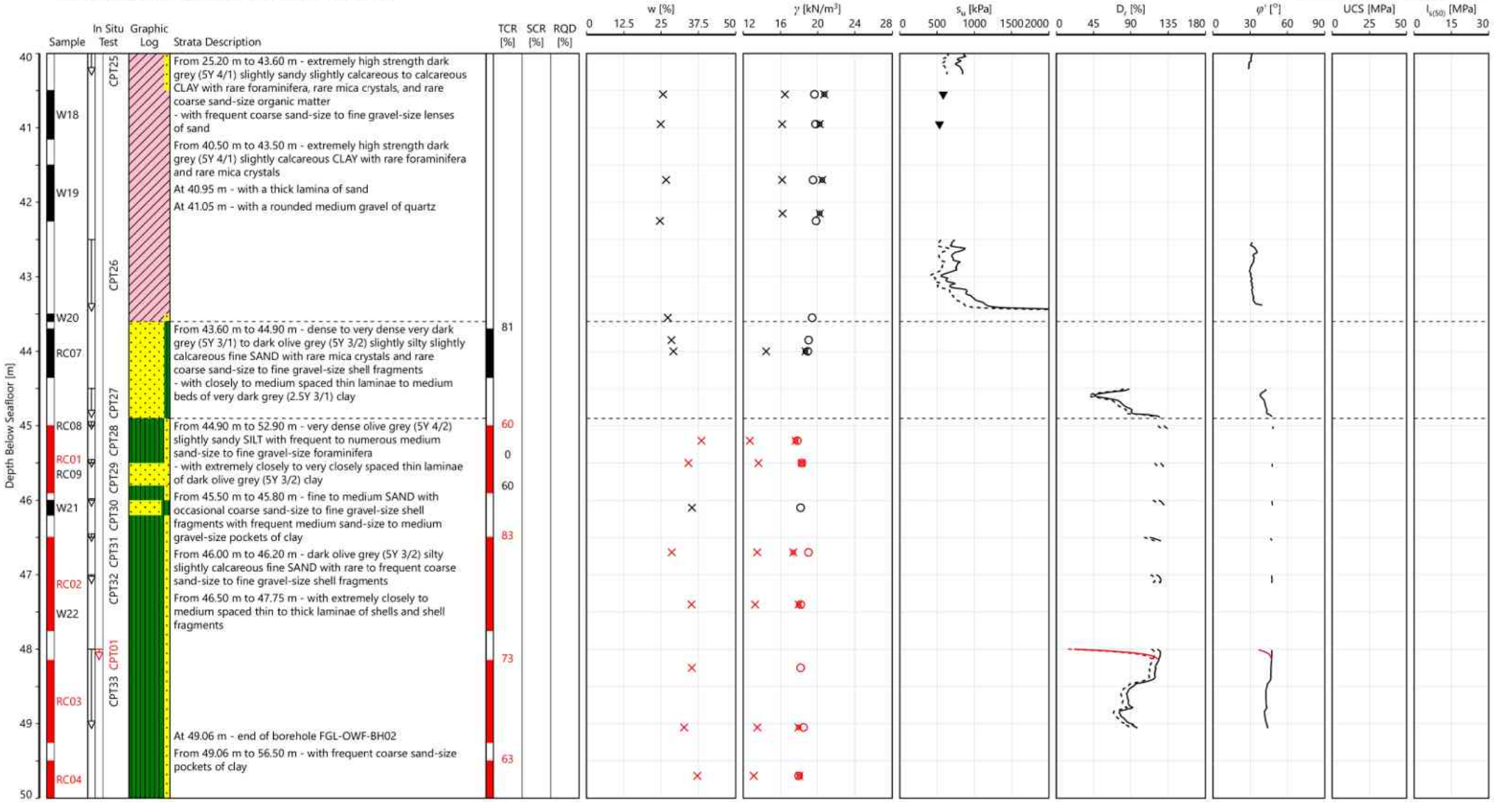
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH02
FGL-OWF-BH02-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

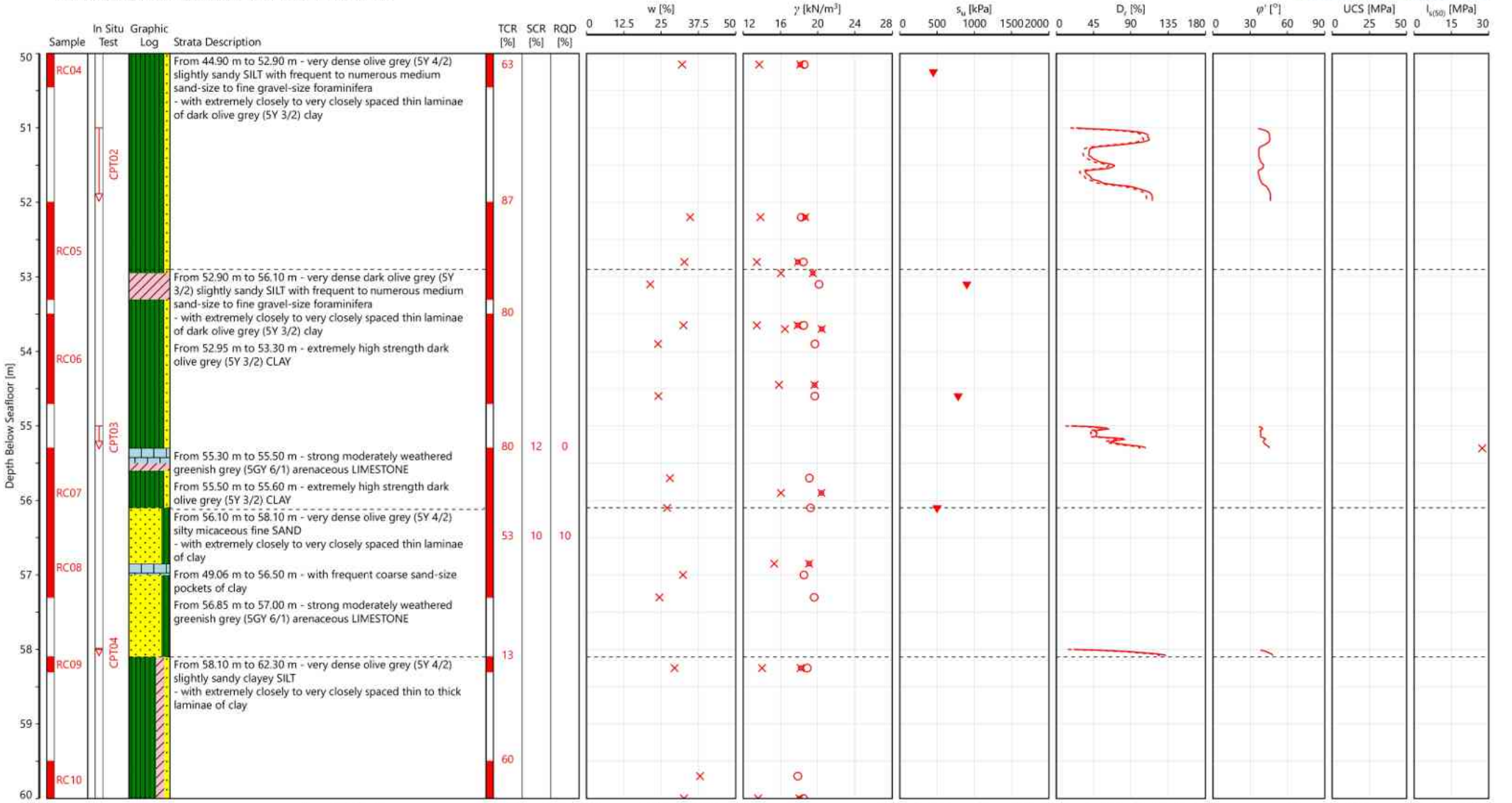
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH02	307335.0	5553040.3	35.66	15-Jun-2025 - 19-Jun-2025	Fugro Zephyr	
FGL-OWF-BH02-a	307335.2	5553044.5	35.60	12-Oct-2025 - 13-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.13
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH02

FGL-OWF-BH02-a

Sample Details:

W	Wison Push Sampler (WIP)
RC	Rock Coring Sample
	Disturbed/Undisturbed Sample

Core Details:

TCR	Total Core Recovery
SCR	Solid Core Recovery
RQD	Rock Quality Designation

In Situ test Details:

CPT	Cone penetration test

Water Content (w):

- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :

- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :

- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :

- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :

- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :

- UCS

Point Load Index Strength ($I_{s(50)}$) :

- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH02	307335.0	5553040.3	35.66	15-Jun-2025 - 19-Jun-2025	Fugro Zephyr	
FGL-OWF-BH02-a	307335.2	5553044.5	35.60	12-Oct-2025 - 13-Oct-2025	Fugro Zephyr	

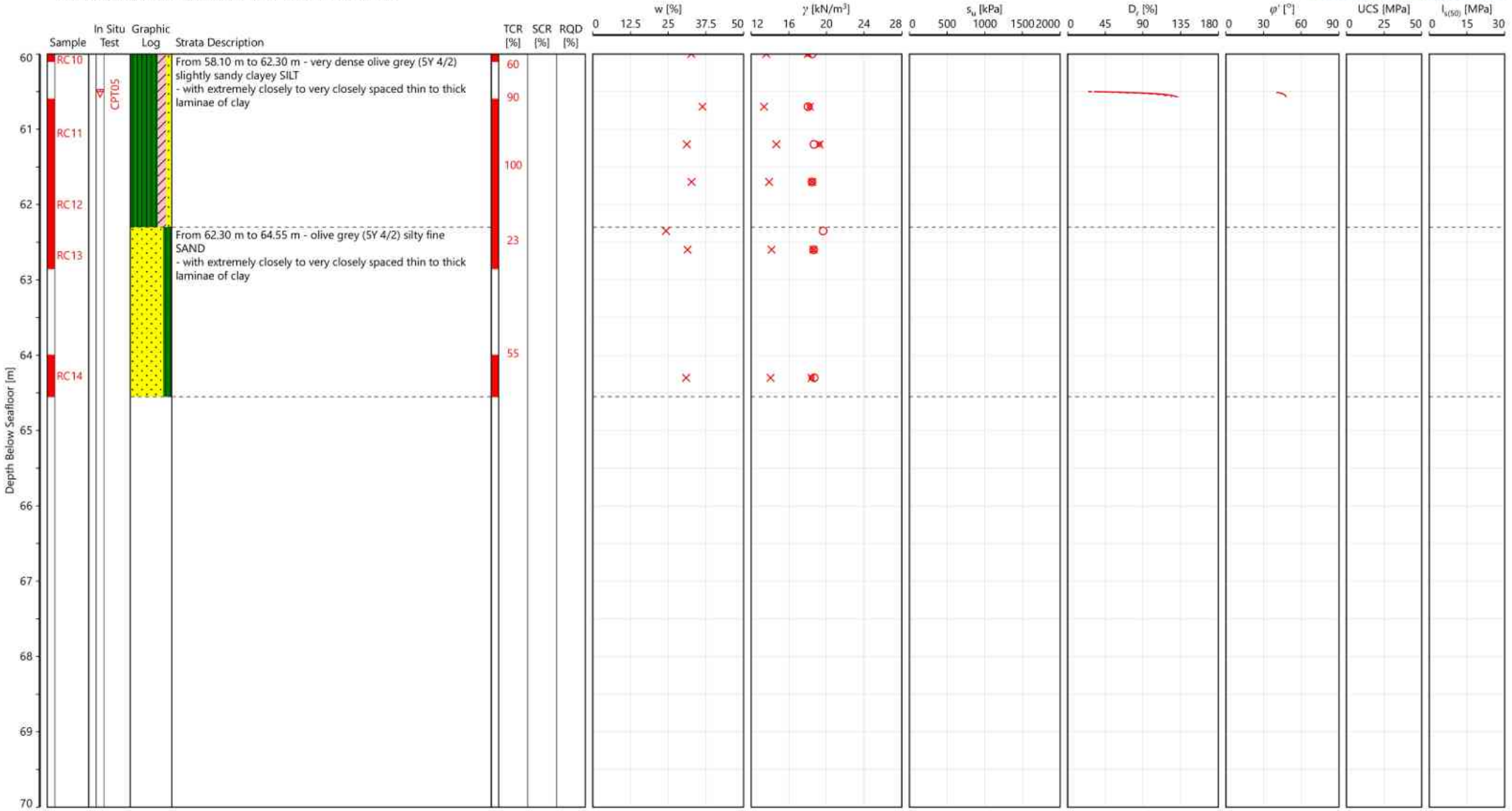
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH02

FGL-OWF-BH02-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

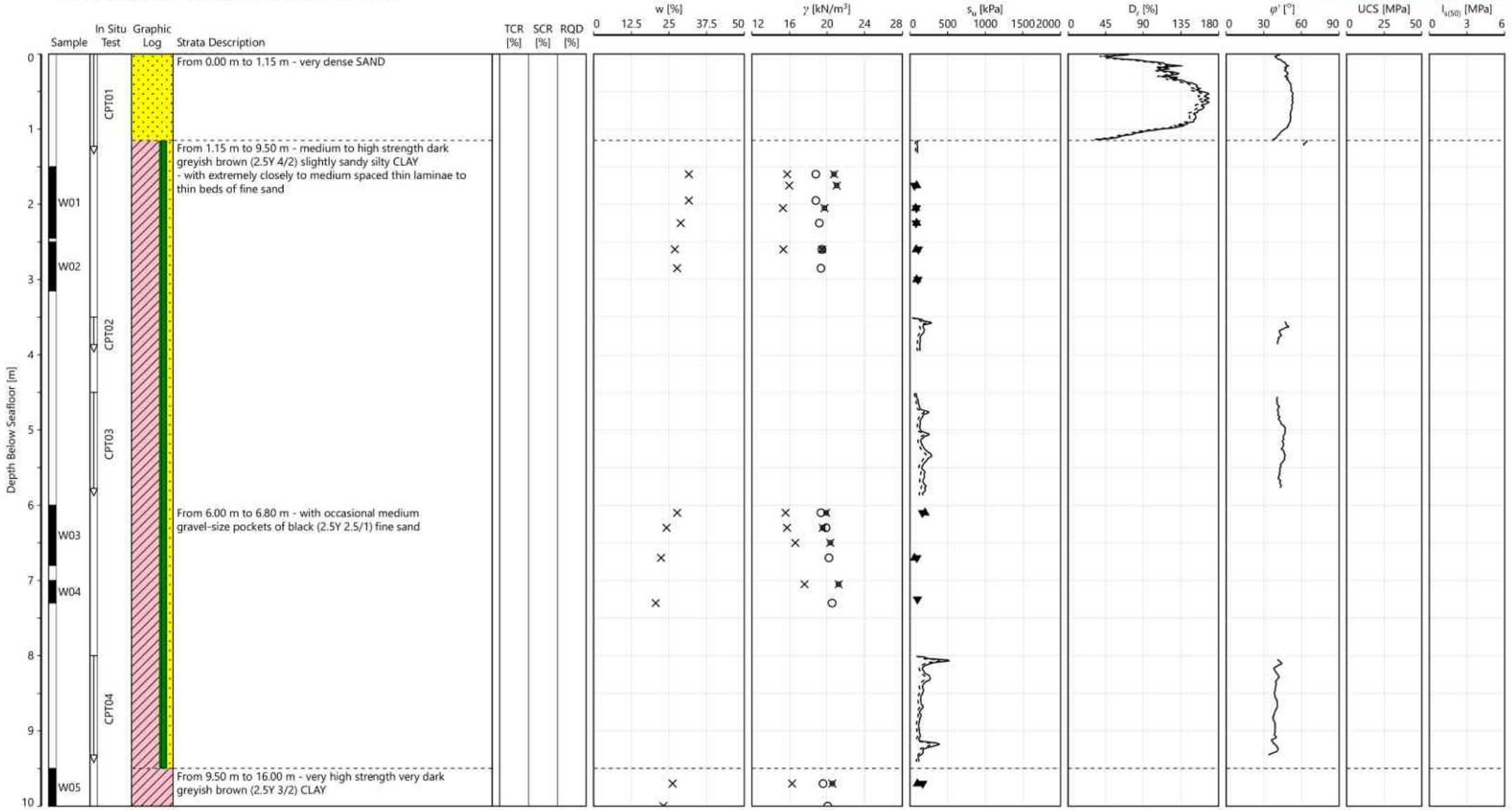
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH02	307335.0	5553040.3	35.66	15-Jun-2025 - 19-Jun-2025	Fugro Zephyr	
FGL-OWF-BH02-a	307335.2	5553044.5	35.60	12-Oct-2025 - 13-Oct-2025	Fugro Zephyr	

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH03

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

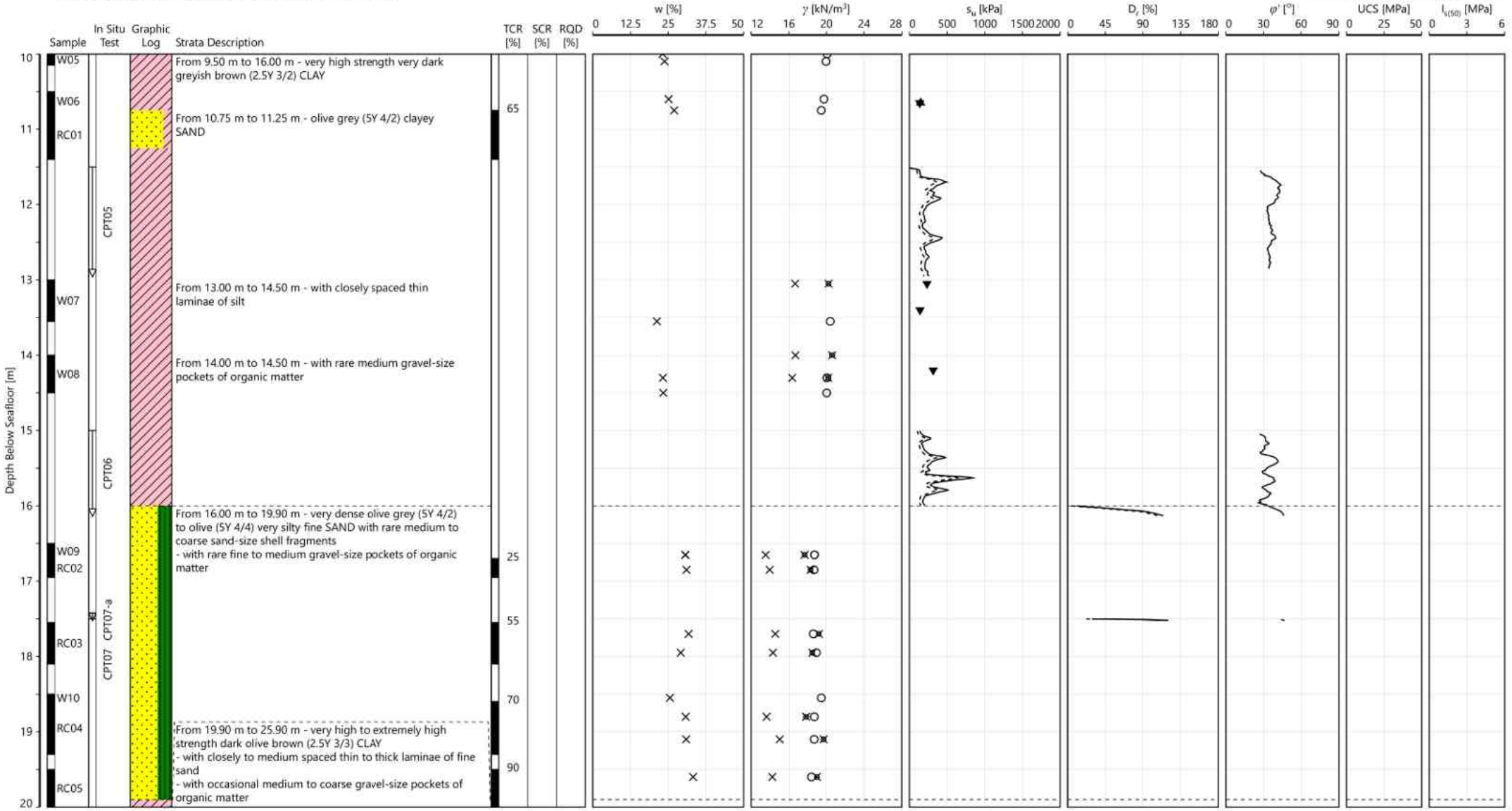
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH03	299038.9	5548070.3	35.74	08-Oct-2025 - 10-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH03

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

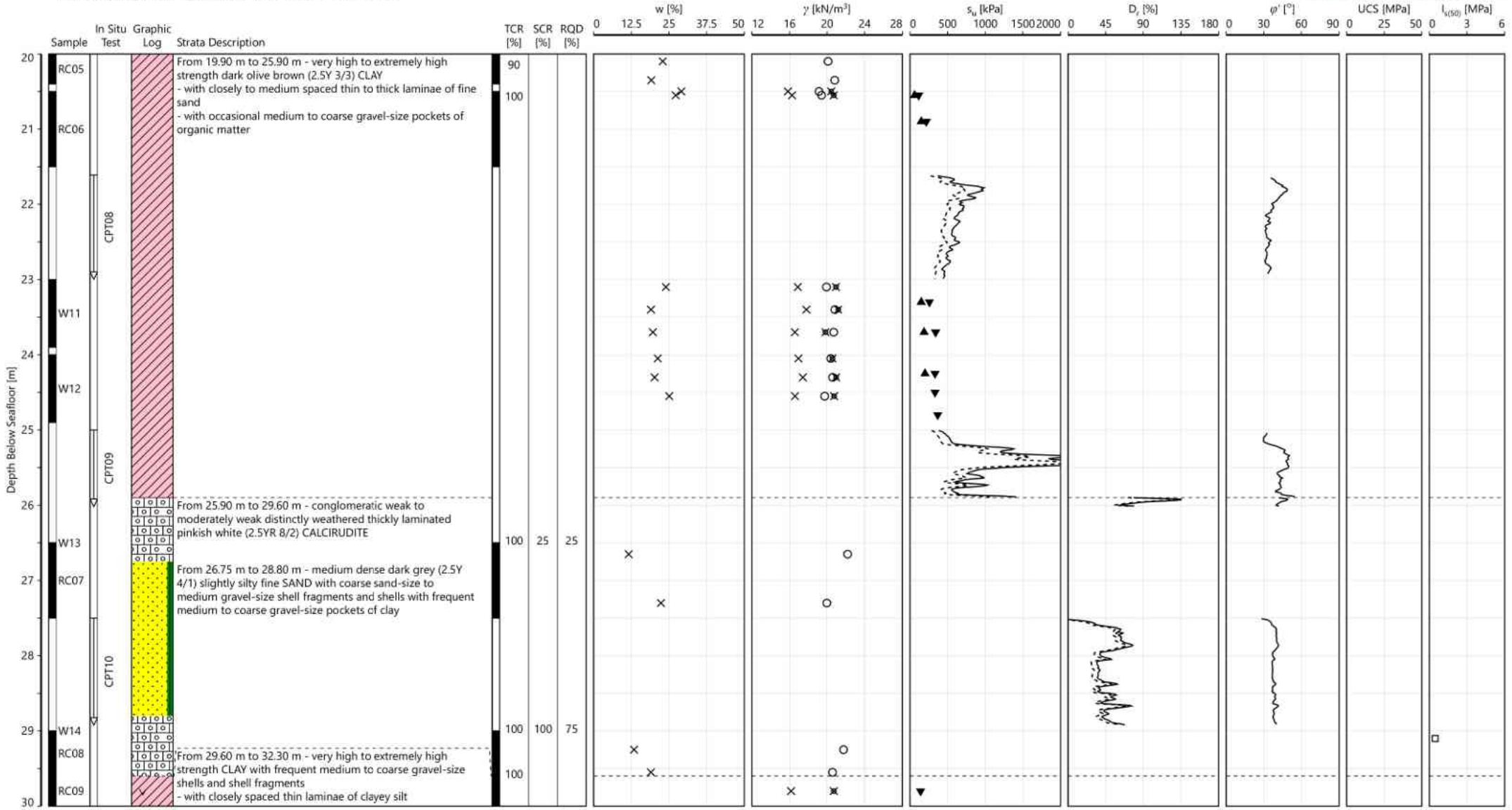
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH03	299038.9	5548070.3	35.74	08-Oct-2025 - 10-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH03

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

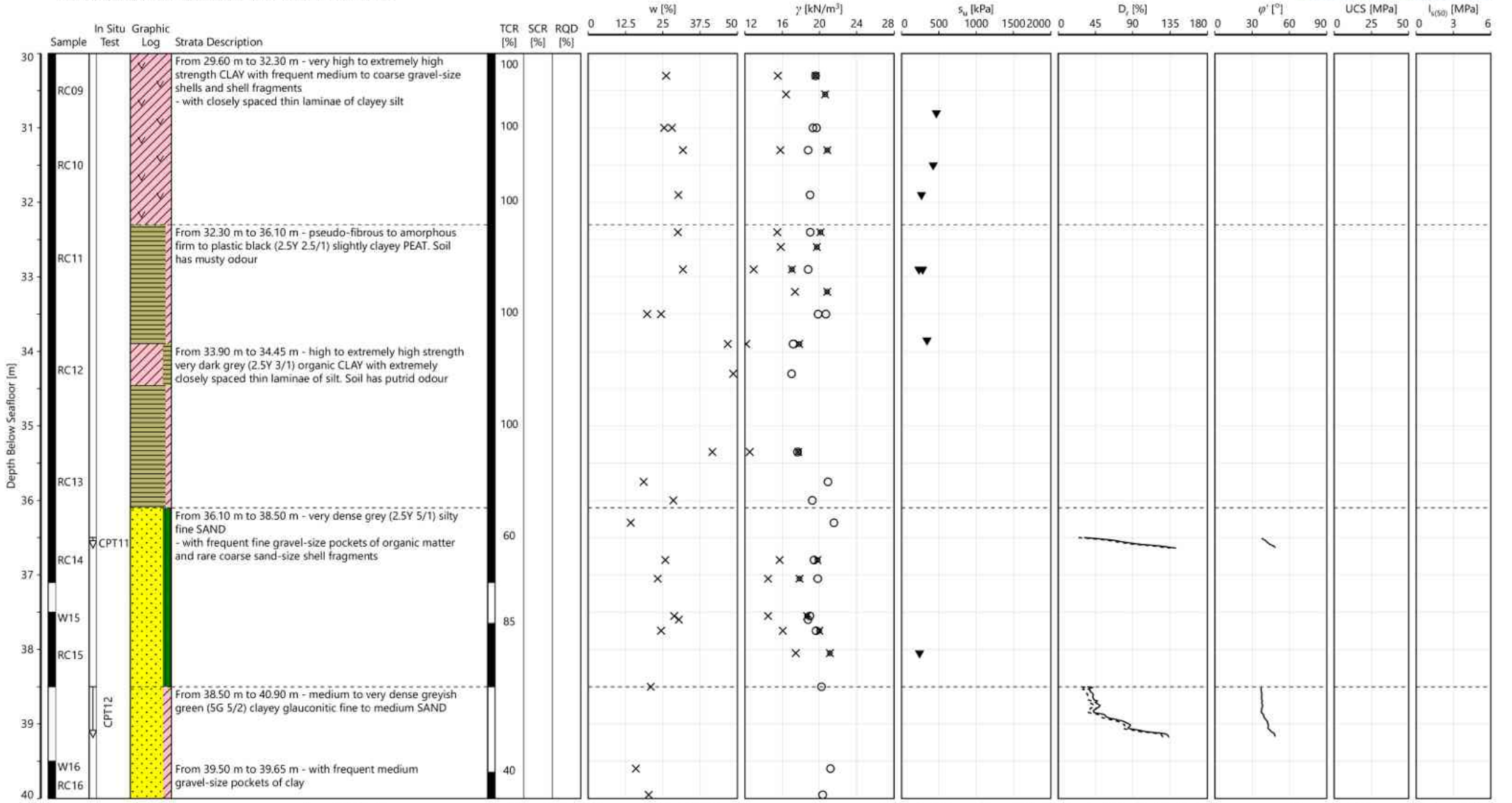
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH03	299038.9	5548070.3	35.74	08-Oct-2025 - 10-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH03

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

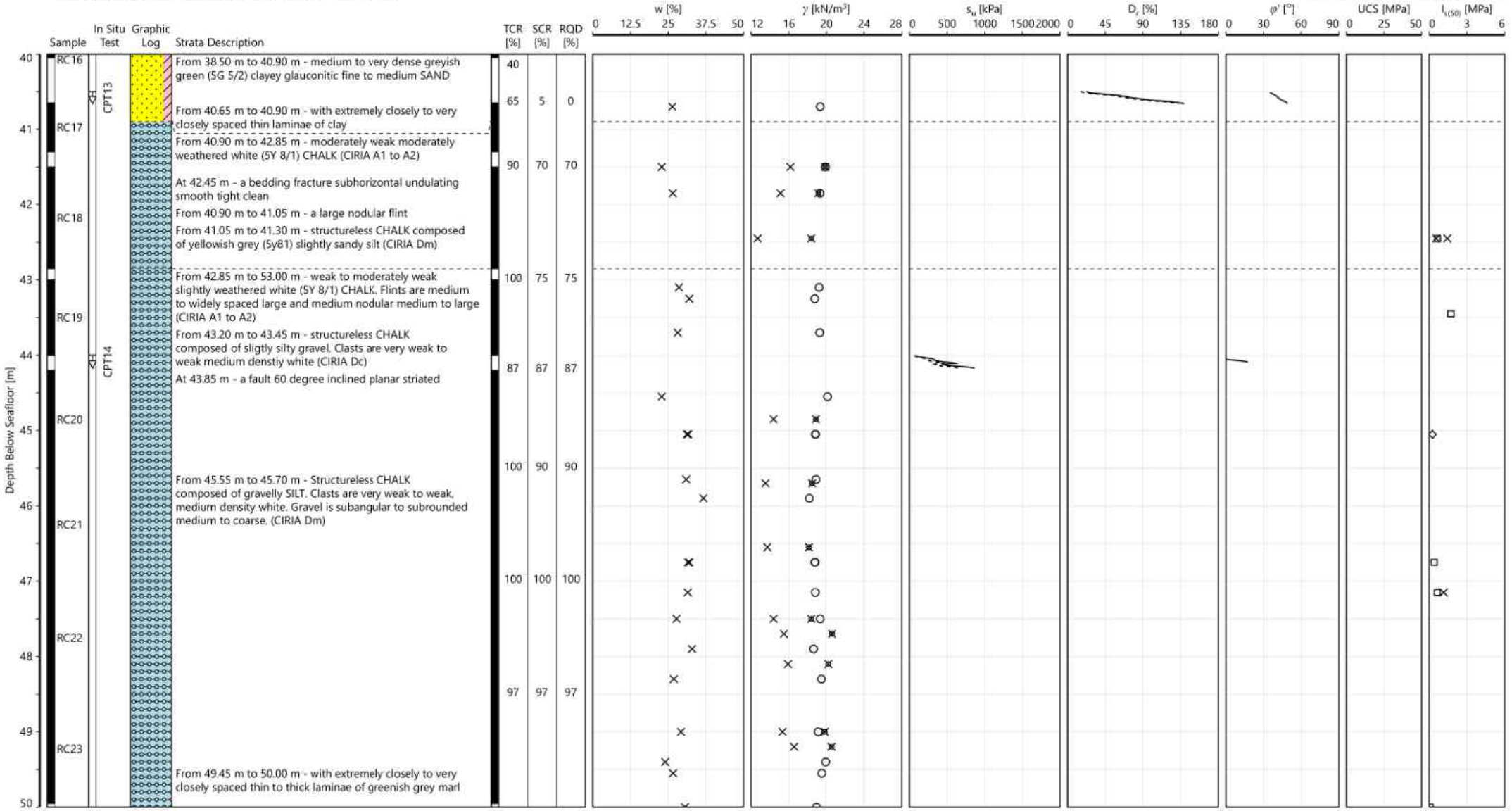
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH03	299038.9	5548070.3	35.74	08-Oct-2025 - 10-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH03

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

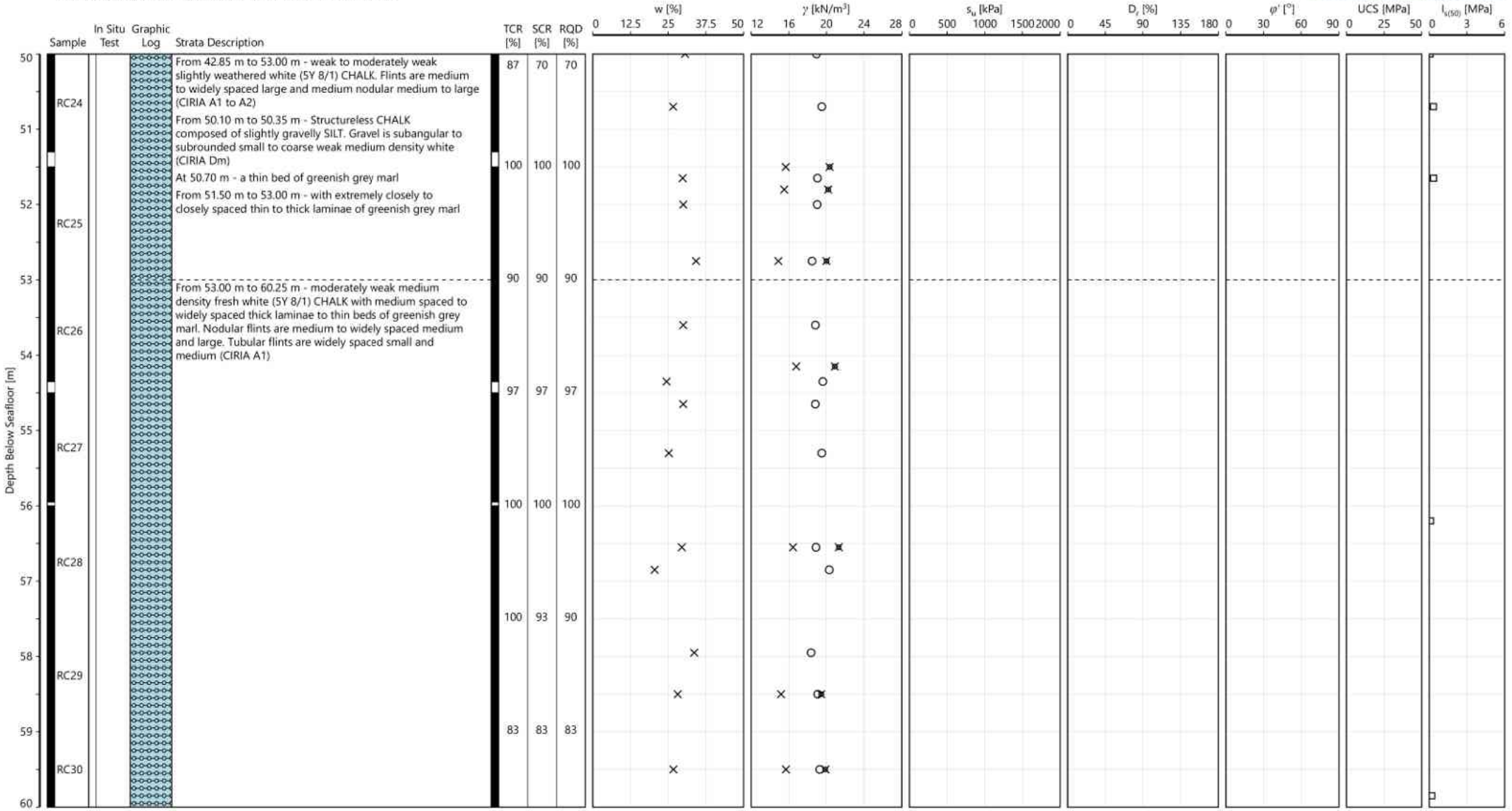
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH03	299038.9	5548070.3	35.74	08-Oct-2025 - 10-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.20
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH03

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

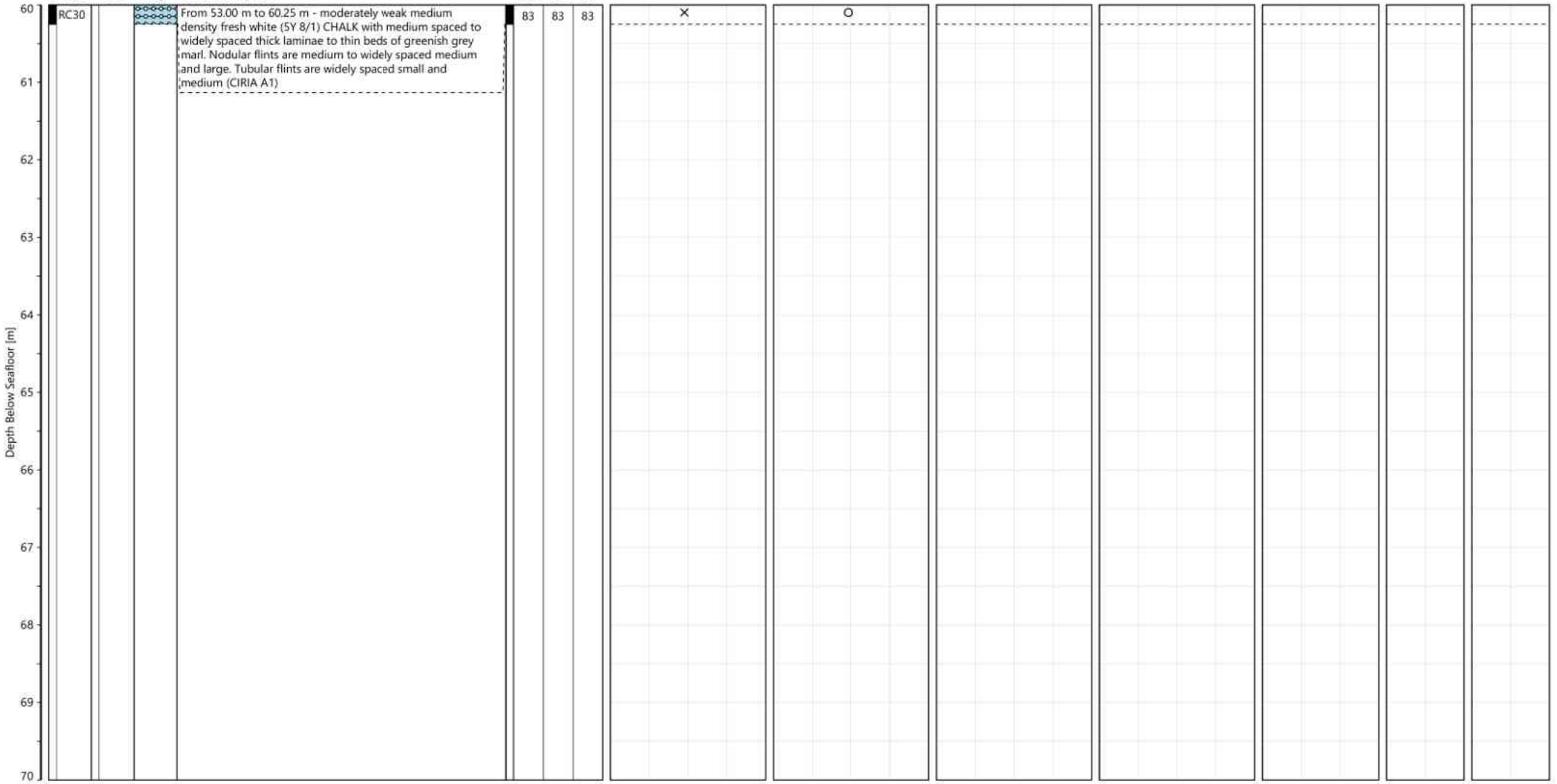
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH03	299038.9	5548070.3	35.74	08-Oct-2025 - 10-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC30			From 53.00 m to 60.25 m - moderately weak medium density fresh white (5Y 8/1) CHALK with medium spaced to widely spaced thick laminae to thin beds of greenish grey marl. Nodular flints are medium to widely spaced medium and large. Tubular flints are widely spaced small and medium (CIRIA A1)	83	83	83



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH03

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- × Water Content
- ● Liquid Limit
- ○ Plastic Limit
- ⊖● Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- × Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- ▼ Pocket penetrometer
- ▲ Torvane
- ● UU-triaxial
- × CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- ◆ CD triaxial
- ● DS-Shear box

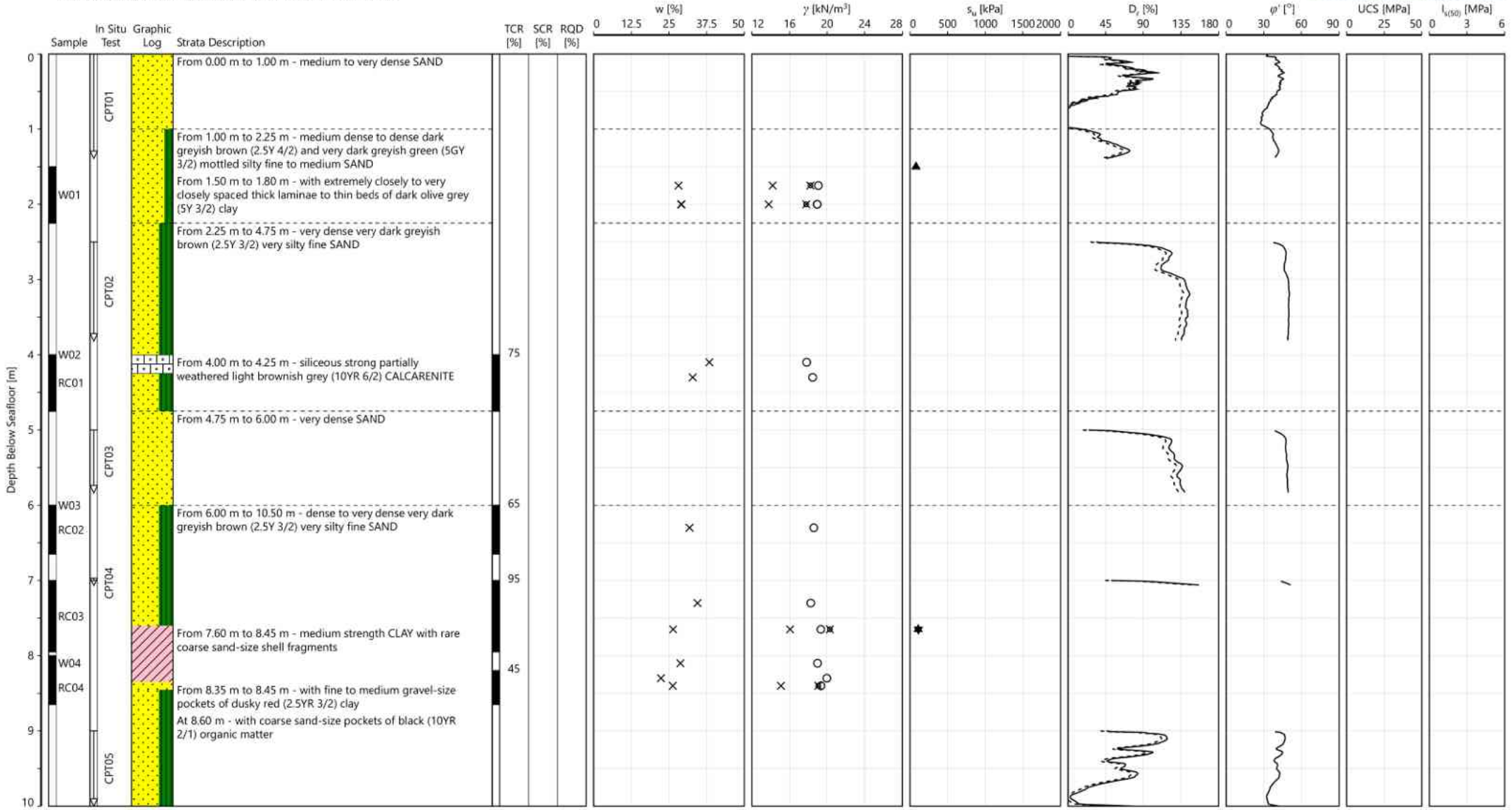
Unconfined Compressive Strength (UCS) :
- × UCS

Point Load Index Strength ($I_{s(50)}$) :
- × $I_{s(50)}$ axial
- □ $I_{s(50)}$ diametral
- ◇ $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH03	299038.9	5548070.3	35.74	08-Oct-2025 - 10-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH04

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

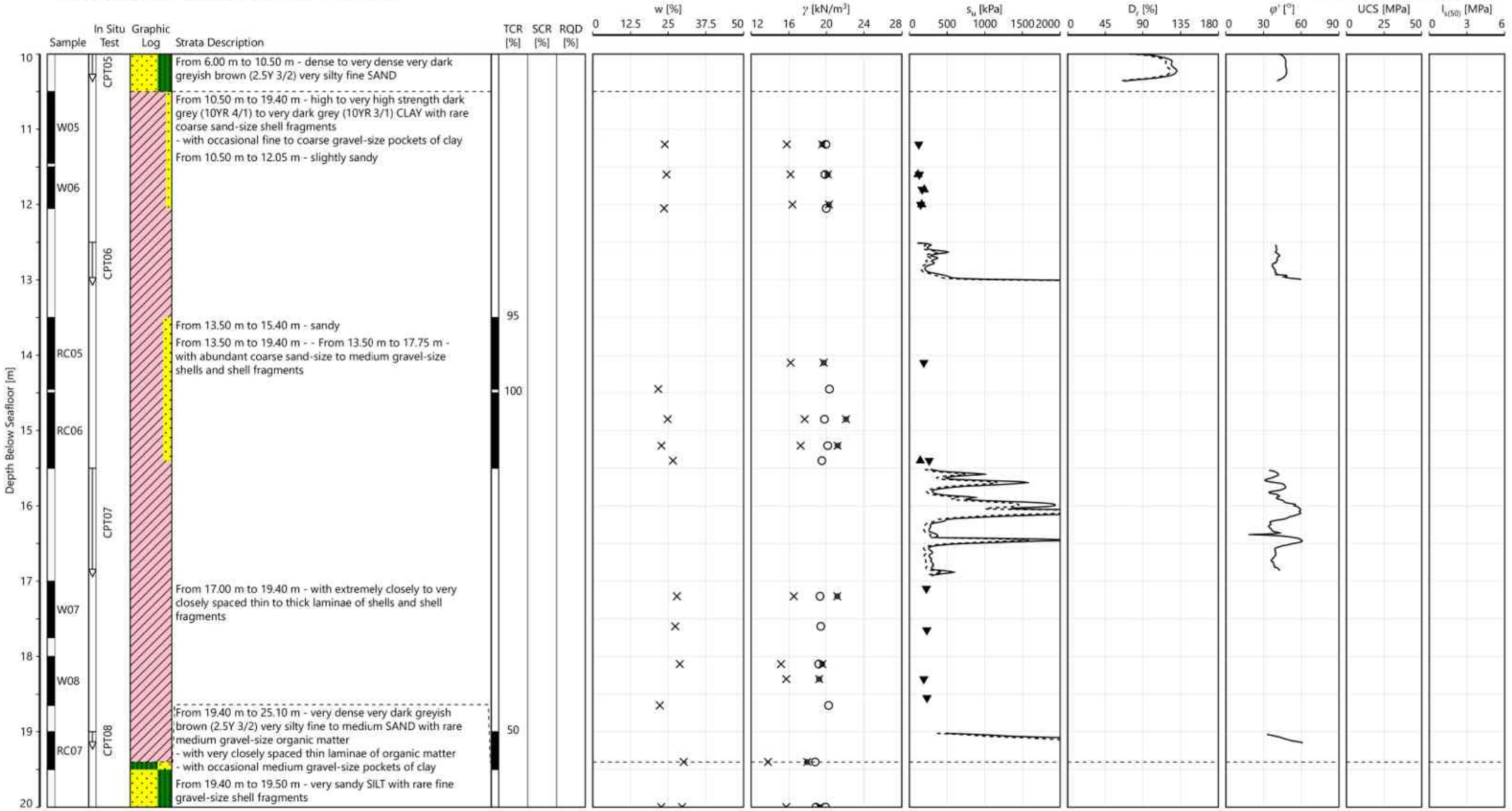
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH04	303477.1	5549110.1	34.50	01-Oct-2025 - 02-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH04

Sample Details:
- W — Wison Push Sampler (WIP)
- RC — Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR — Total Core Recovery
- SCR — Solid Core Recovery
- RQD — Rock Quality Designation

In Situ test Details:
- CPT — Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

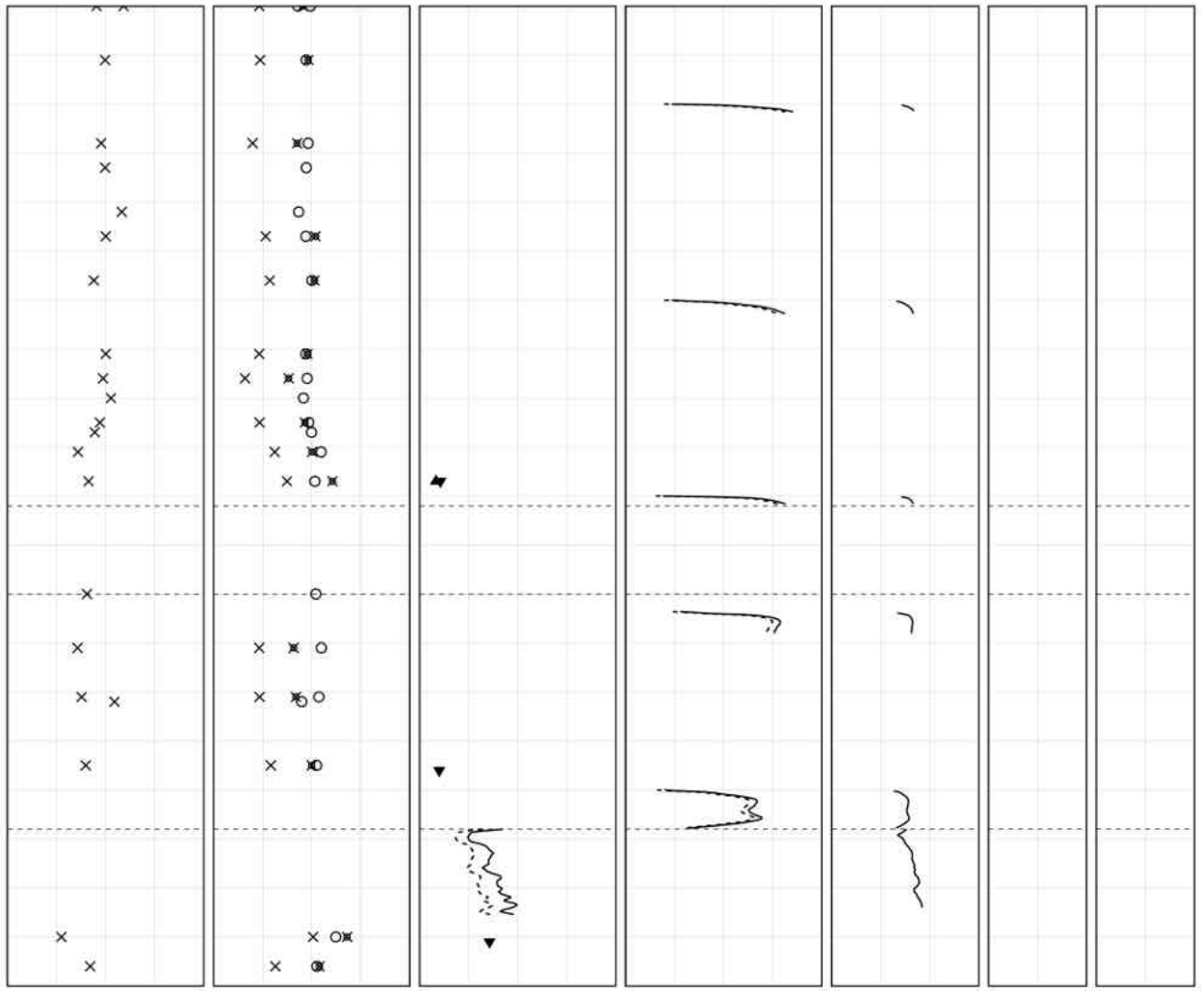
Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH04	303477.1	5549110.1	34.50	01-Oct-2025 - 02-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Depth Below Seafloor [m]

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
W09	CPT09		From 19.40 m to 25.10 m - very dense very dark greyish brown (2.5Y 3/2) very silty fine to medium SAND with rare medium gravel-size organic matter - with very closely spaced thin laminae of organic matter - with occasional medium gravel-size pockets of clay	80		
RC08						
RC09			From 21.20 m to 21.40 m - very dark greyish brown (2.5Y 3/2) and very dark brown (10YR 2/2) mottled From 21.40 m to 21.70 m - gravelly clayey. Gravel is subrounded medium to coarse of sandstone	70		
W10			At 22.15 m - with a subangular coarse gravel of sandstone	75		
RC10	CPT10		From 22.15 m to 22.45 m - very dark greyish brown (10YR 3/2) and black (10YR 2/1) mottled clayey			
RC11			From 23.00 m to 23.10 m - with frequent medium to coarse gravel-size pockets of clay From 23.00 m to 24.80 m - brown (7.5YR 4/2) and very dark greyish brown (10YR 3/2) mottled	85		
W11				95		
RC12						
RC13	CPT11		From 24.80 m to 25.00 m - very high strength very dark greyish brown (10YR 3/2) sandy CLAY	0		
			From 25.10 m to 26.00 m - no recovery			
RC14	CPT12		From 26.00 m to 28.40 m - very dense very dark greyish brown (10YR 3/2) clayey fine to medium SAND - with medium spaced very thin beds of very high strength very dark greyish brown (10YR 3/2) clay	65		
W12				70		
RC15						
	CPT13		From 28.40 m to 30.05 m - extremely high strength dark greenish grey (5GY 4/1) CLAY - with rare fine gravel-size pockets of black (10YR 2/1) organic matter			
W13			From 29.70 m to 29.75 m - light olive brown (2.5Y 5/6) slightly sandy	70		
RC16						



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH04

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

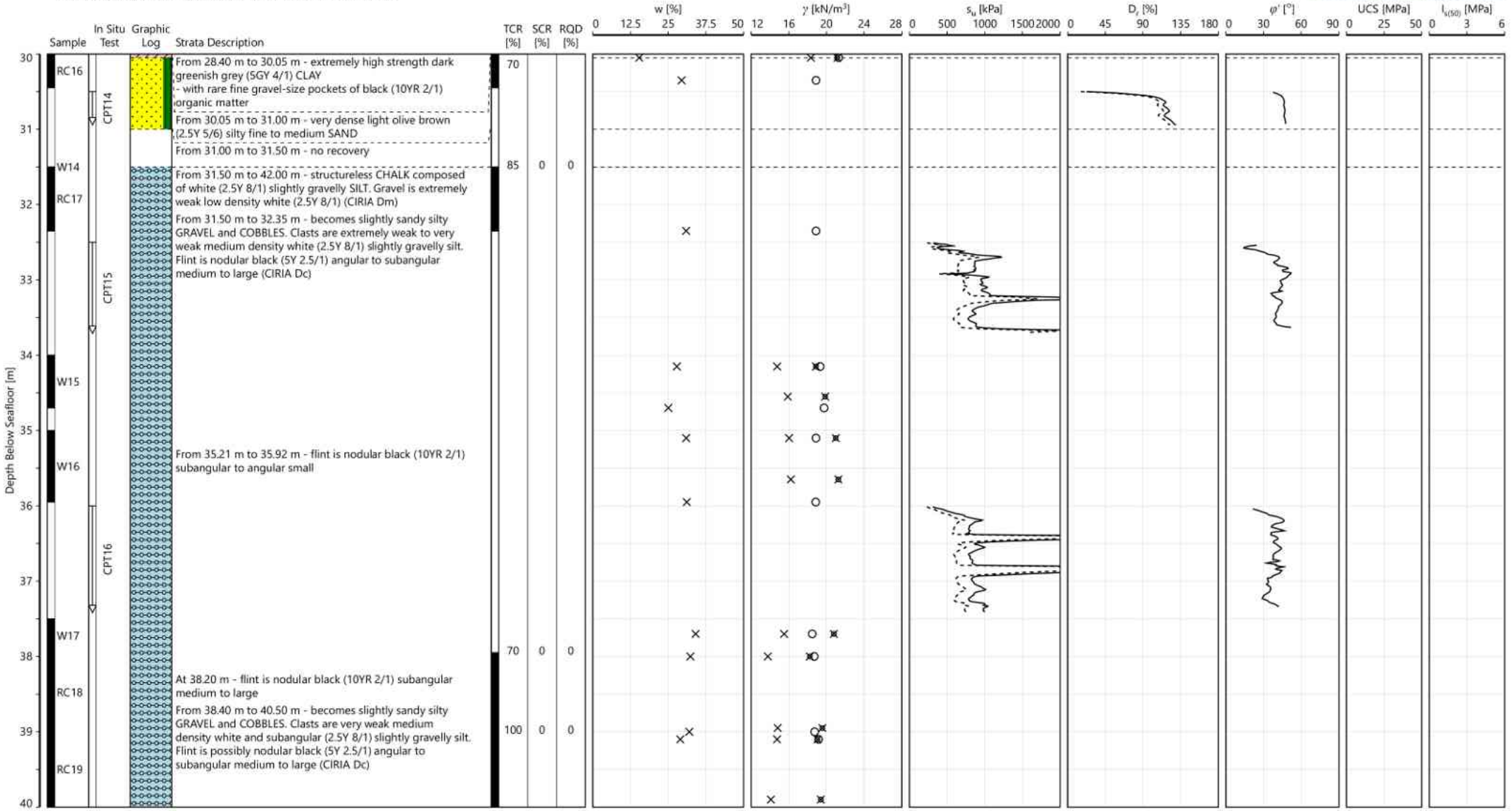
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH04	303477.1	5549110.1	34.50	01-Oct-2025 - 02-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.25
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH04

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

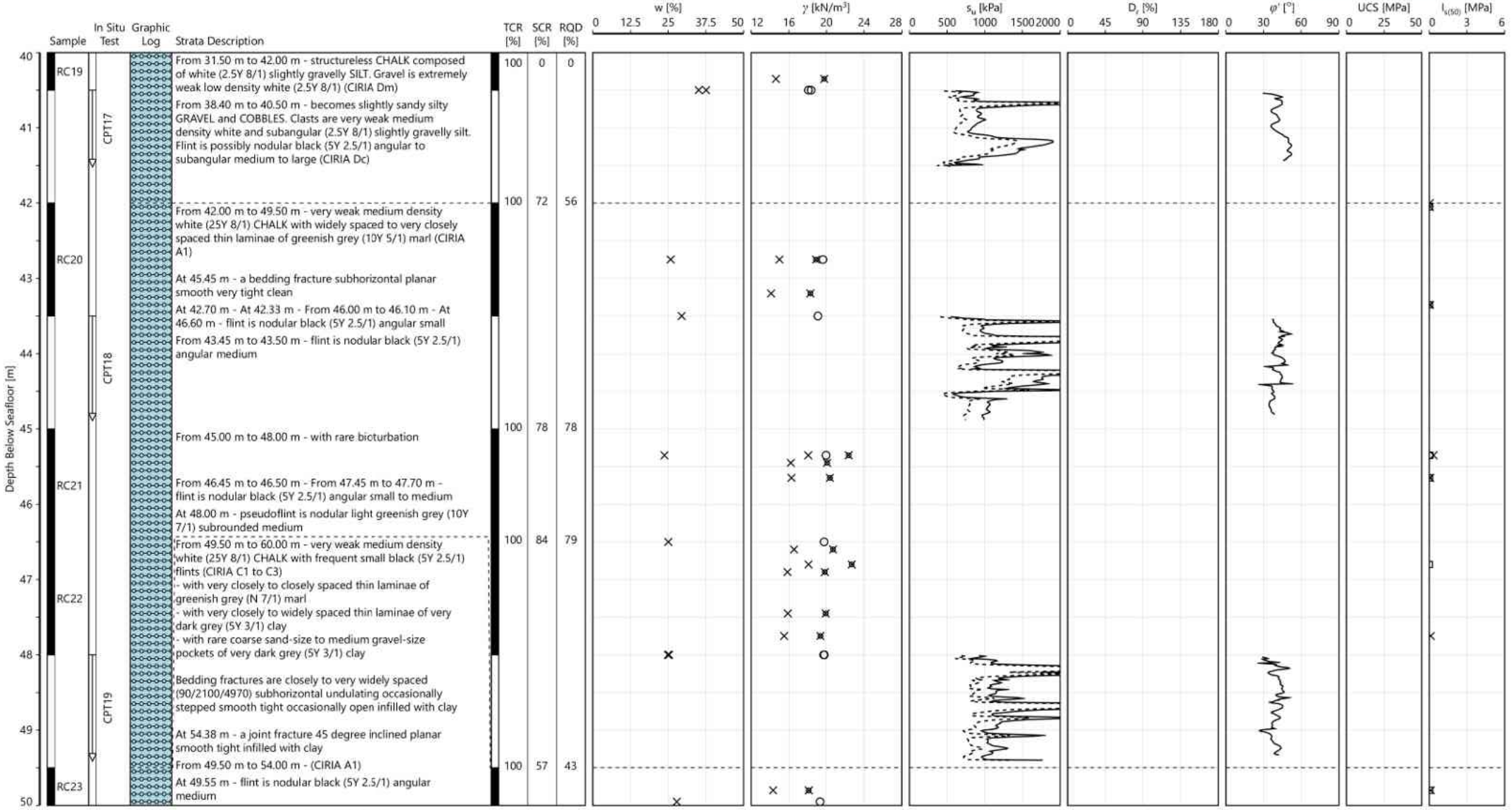
Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH04	303477.1	5549110.1	34.50	01-Oct-2025 - 02-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC19	CPT17		From 31.50 m to 42.00 m - structureless CHALK composed of white (2.5Y 8/1) slightly gravelly SILT. Gravel is extremely weak low density white (2.5Y 8/1) (CIRIA Dm) From 38.40 m to 40.50 m - becomes slightly sandy silty GRAVEL and COBBLES. Clasts are very weak medium density white and subangular (2.5Y 8/1) slightly gravelly silt. Flint is possibly nodular black (5Y 2.5/1) angular to subangular medium to large (CIRIA Dc)	100	0	0
RC20	CPT18		From 42.00 m to 49.50 m - very weak medium density white (25Y 8/1) CHALK with widely spaced to very closely spaced thin laminae of greenish grey (10Y 5/1) marl (CIRIA A1) At 45.45 m - a bedding fracture subhorizontal planar smooth very tight clean At 42.70 m - At 42.33 m - From 46.00 m to 46.10 m - At 46.60 m - flint is nodular black (5Y 2.5/1) angular small From 43.45 m to 43.50 m - flint is nodular black (5Y 2.5/1) angular medium	100	72	56
RC21	CPT18		From 45.00 m to 48.00 m - with rare bioturbation From 46.45 m to 46.50 m - From 47.45 m to 47.70 m - flint is nodular black (5Y 2.5/1) angular small to medium At 48.00 m - pseudoflint is nodular light greenish grey (10Y 7/1) subrounded medium	100	78	78
RC22	CPT19		From 49.50 m to 60.00 m - very weak medium density white (25Y 8/1) CHALK with frequent small black (5Y 2.5/1) flints (CIRIA C1 to C3) - with very closely to closely spaced thin laminae of greenish grey (N 7/1) marl - with very closely to widely spaced thin laminae of very dark grey (5Y 3/1) clay - with rare coarse sand-size to medium gravel-size pockets of very dark grey (5Y 3/1) clay Bedding fractures are closely to very widely spaced (90/2100/4970) subhorizontal undulating occasionally stepped smooth tight occasionally open infilled with clay At 54.38 m - a joint fracture 45 degree inclined planar smooth tight infilled with clay From 49.50 m to 54.00 m - (CIRIA A1)	100	84	79
RC23			At 49.55 m - flint is nodular black (5Y 2.5/1) angular medium	100	57	43



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH04

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

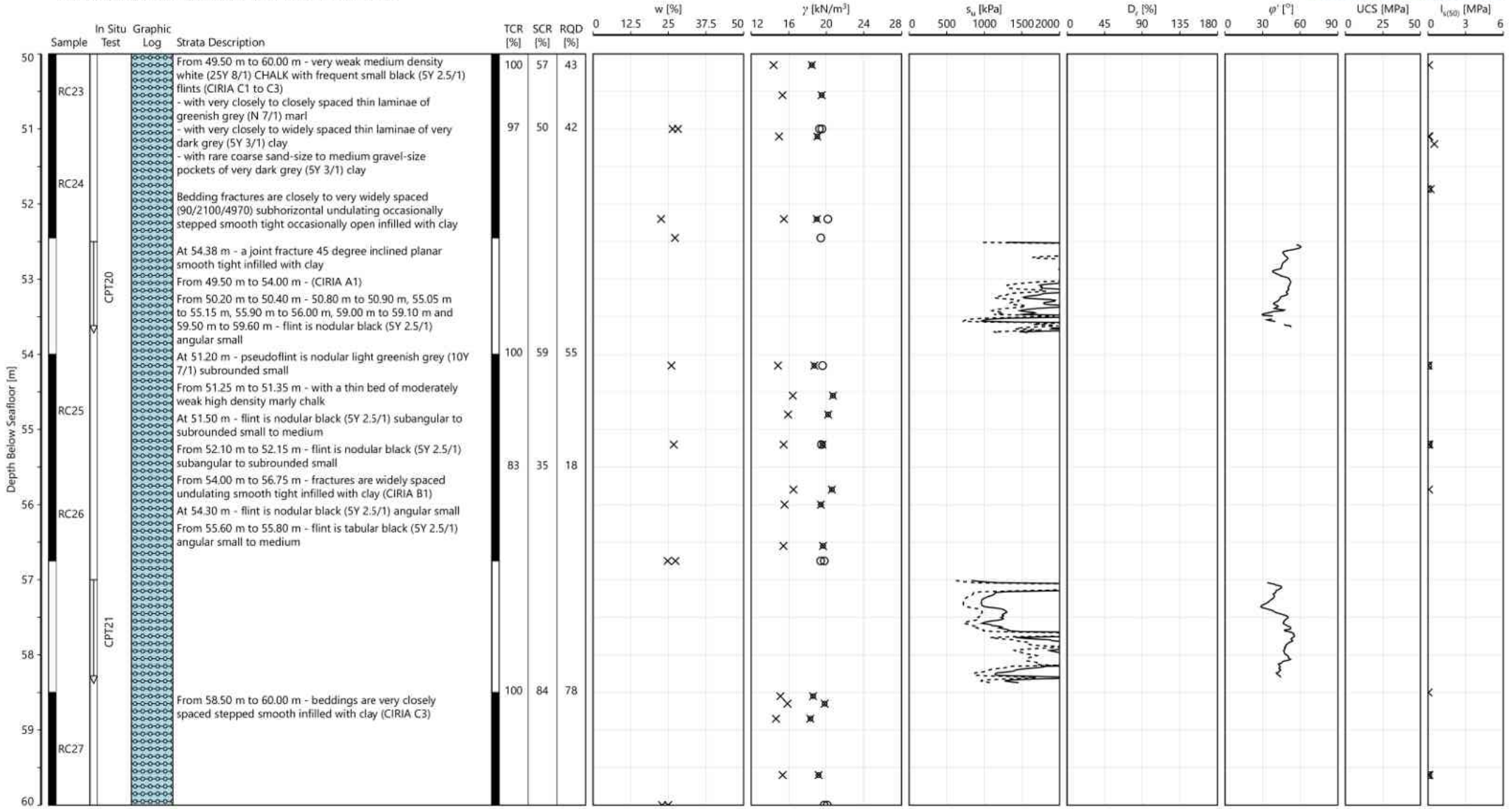
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH04	303477.1	5549110.1	34.50	01-Oct-2025 - 02-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH04

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

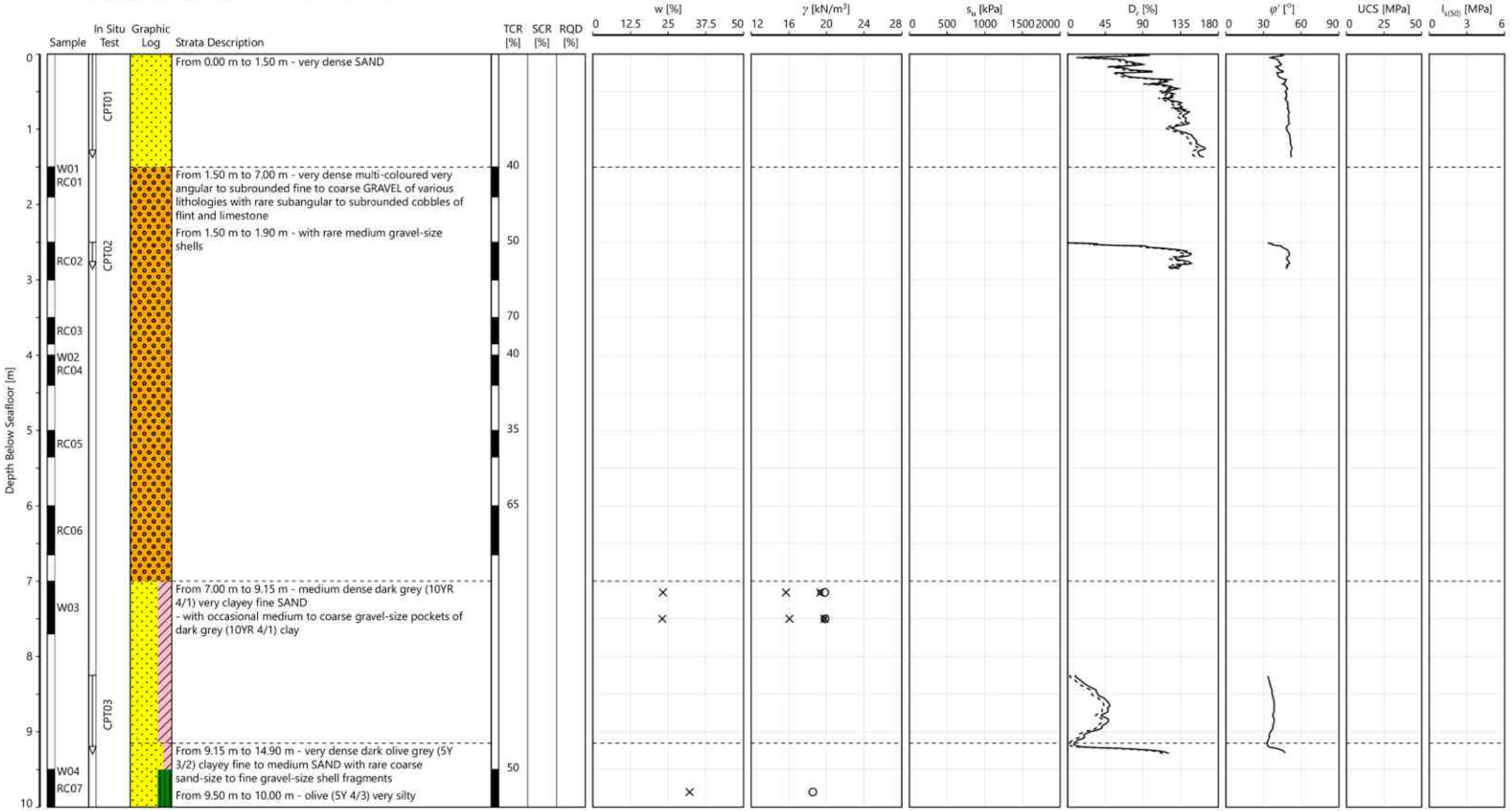
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH04	303477.1	5549110.1	34.50	01-Oct-2025 - 02-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.28
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH07

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

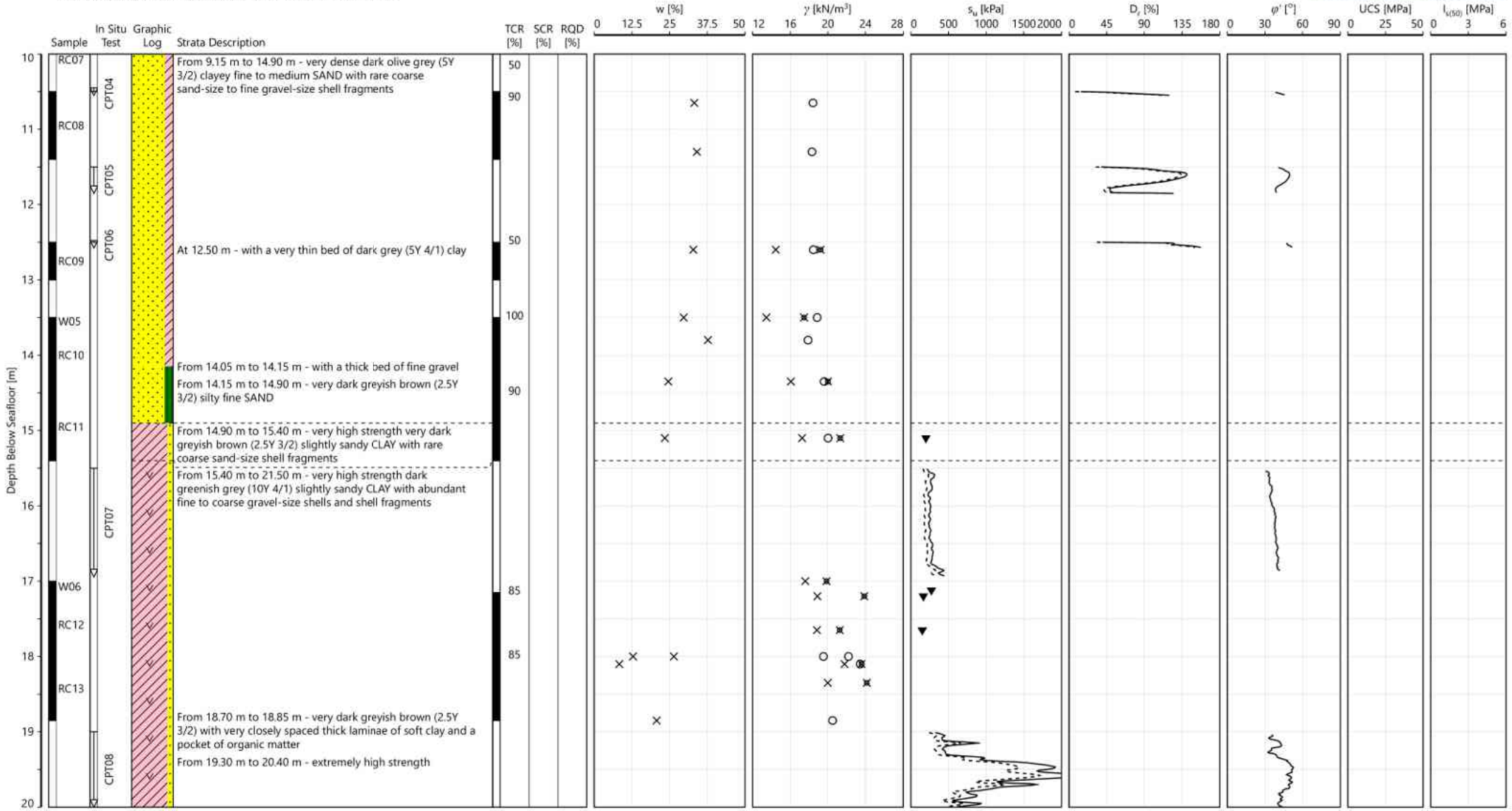
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH07	308489.3	5547189.9	32.48	28-Sep-2025 - 30-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH07

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

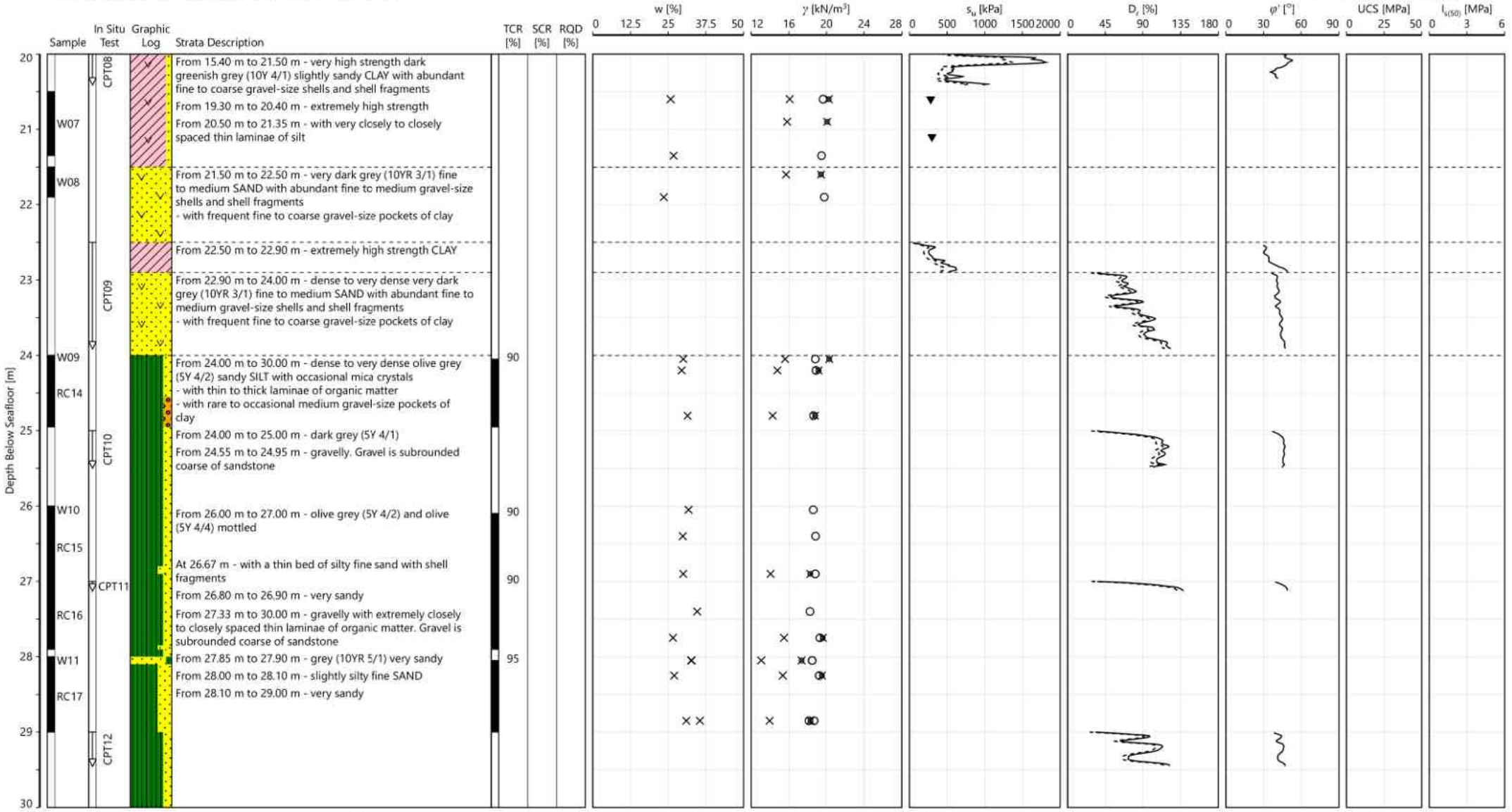
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH07	308489.3	5547189.9	32.48	28-Sep-2025 - 30-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH07

Sample Details:
- W — Wison Push Sampler (WIP)
- RC — Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR — Total Core Recovery
- SCR — Solid Core Recovery
- RQD — Rock Quality Designation

In Situ test Details:
- CPT — Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

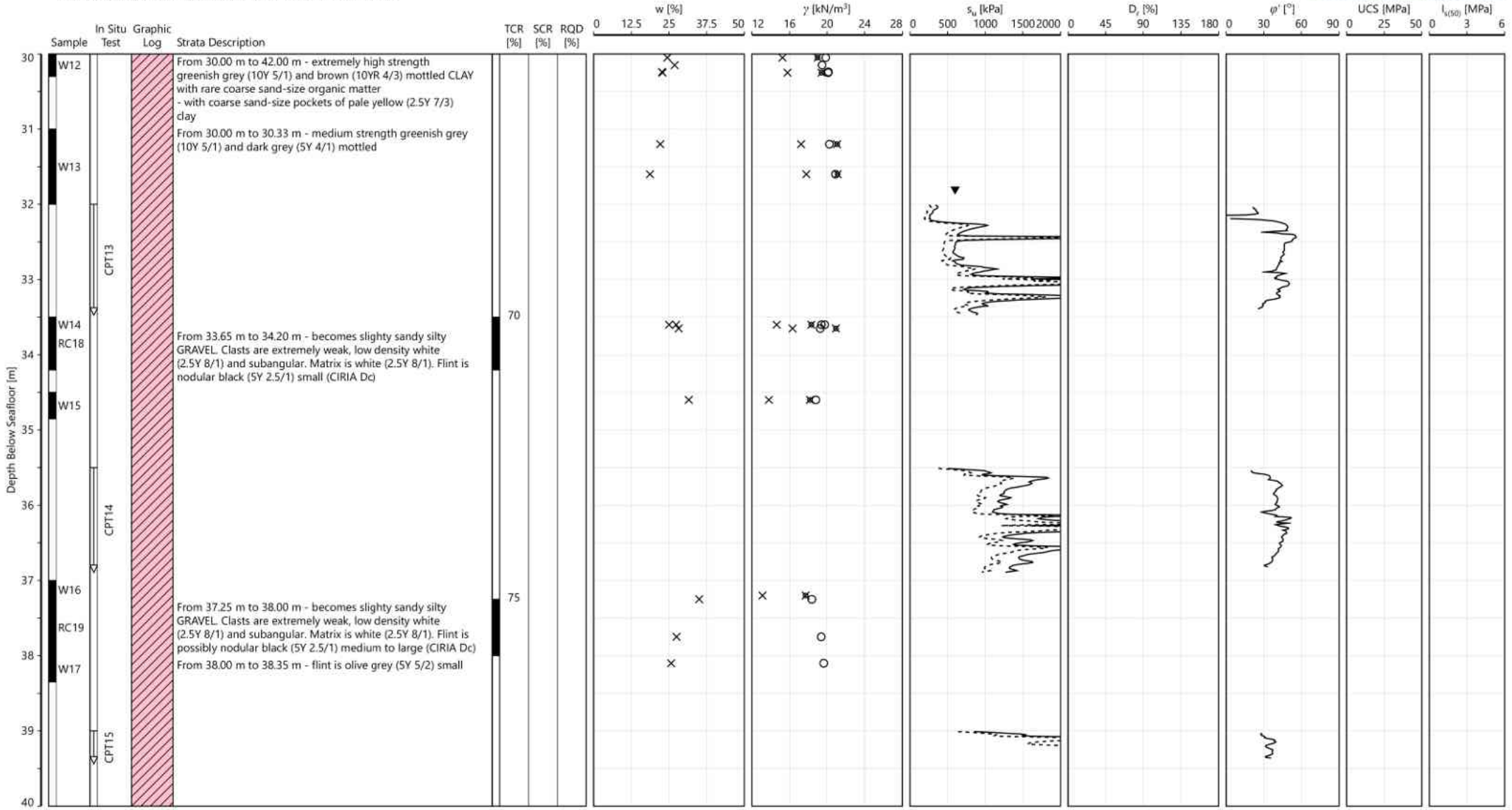
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH07	308489.3	5547189.9	32.48	28-Sep-2025 - 30-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH07

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

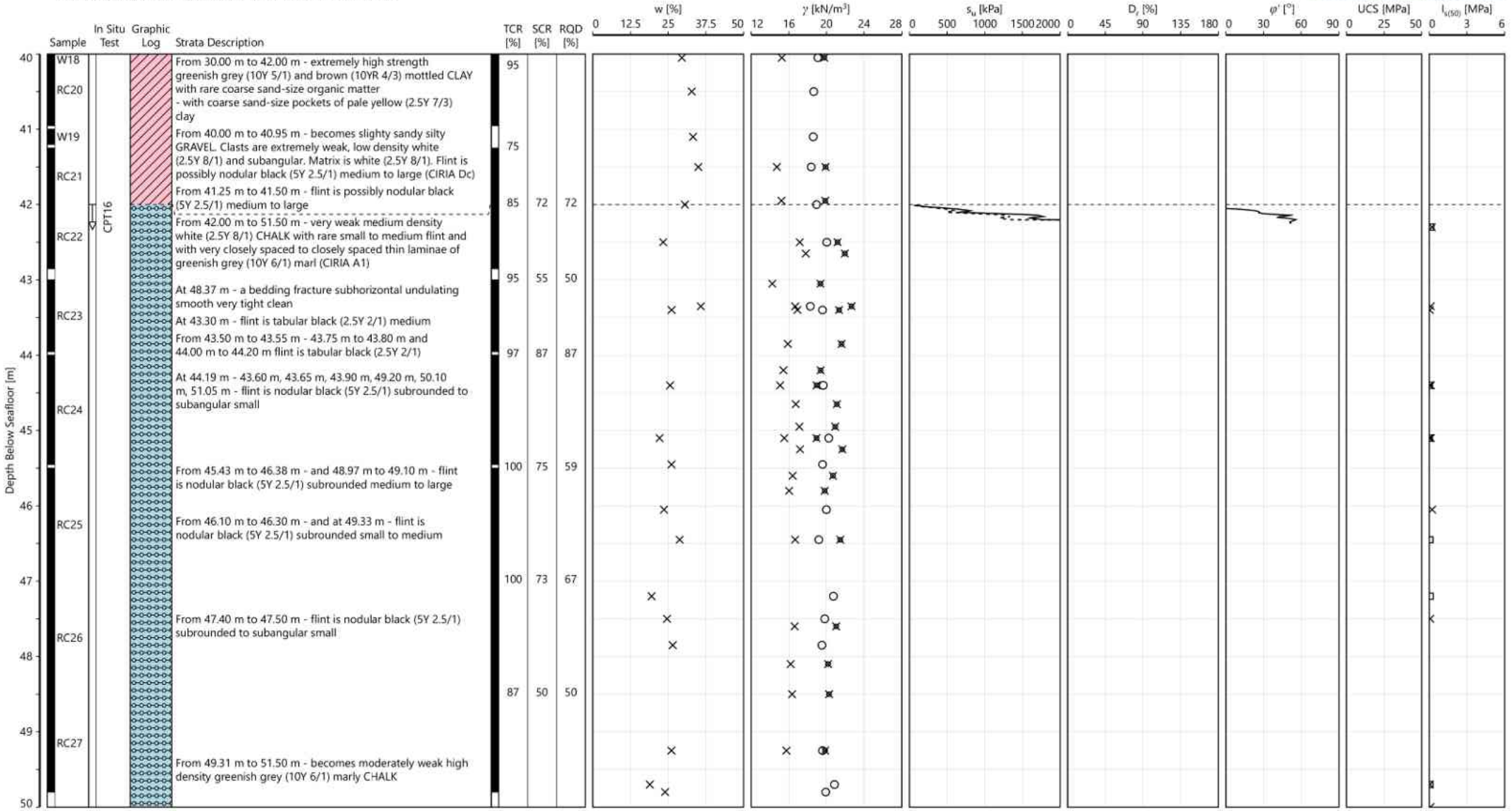
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH07	308489.3	5547189.9	32.48	28-Sep-2025 - 30-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.32
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH07

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

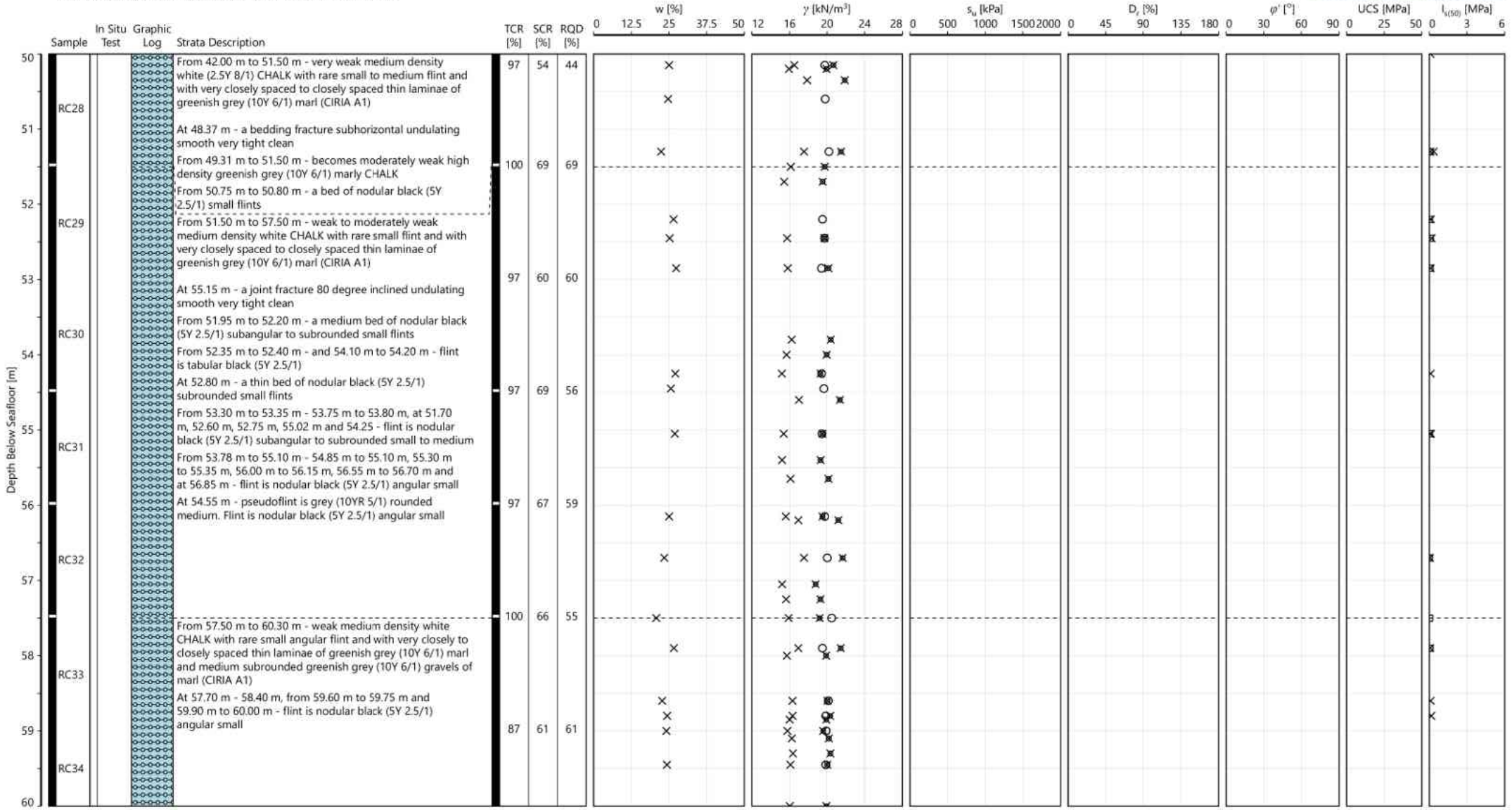
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH07	308489.3	5547189.9	32.48	28-Sep-2025 - 30-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH07

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

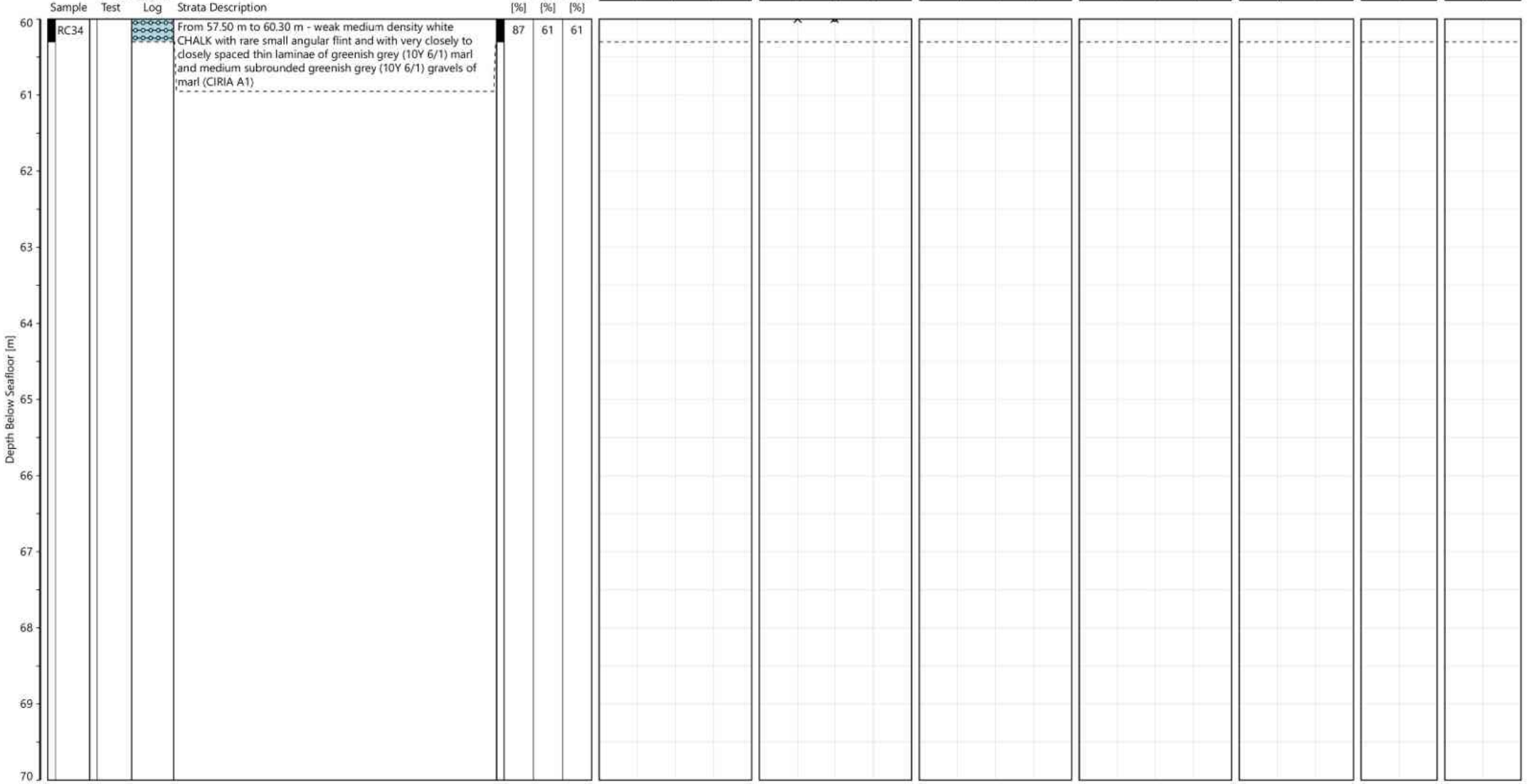
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH07	308489.3	5547189.9	32.48	28-Sep-2025 - 30-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC34			From 57.50 m to 60.30 m - weak medium density white CHALK with rare small angular flint and with very closely to closely spaced thin laminae of greenish grey (10Y 6/1) marl and medium subrounded greenish grey (10Y 6/1) gravels of marl (CIRIA A1)	87	61	61



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH07

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

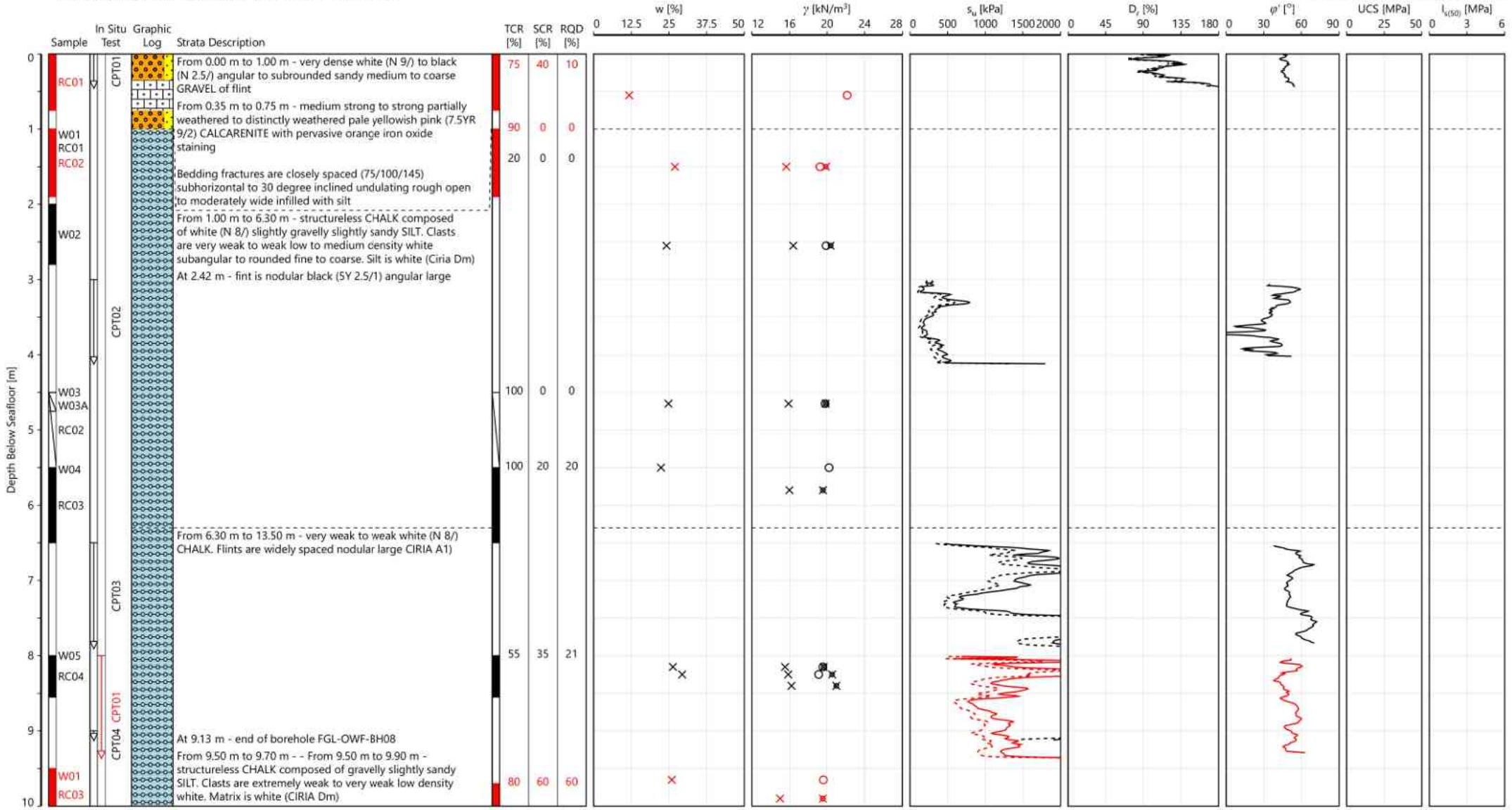
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH07	308489.3	5547189.9	32.48	28-Sep-2025 - 30-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH08

FGL-OWF-BH08-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH08	295304.9	5544120.1	35.39	03-Oct-2025 - 03-Oct-2025	Fugro Zephyr	
FGL-OWF-BH08-a	295305.3	5544124.9	35.52	10-Oct-2025 - 12-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**

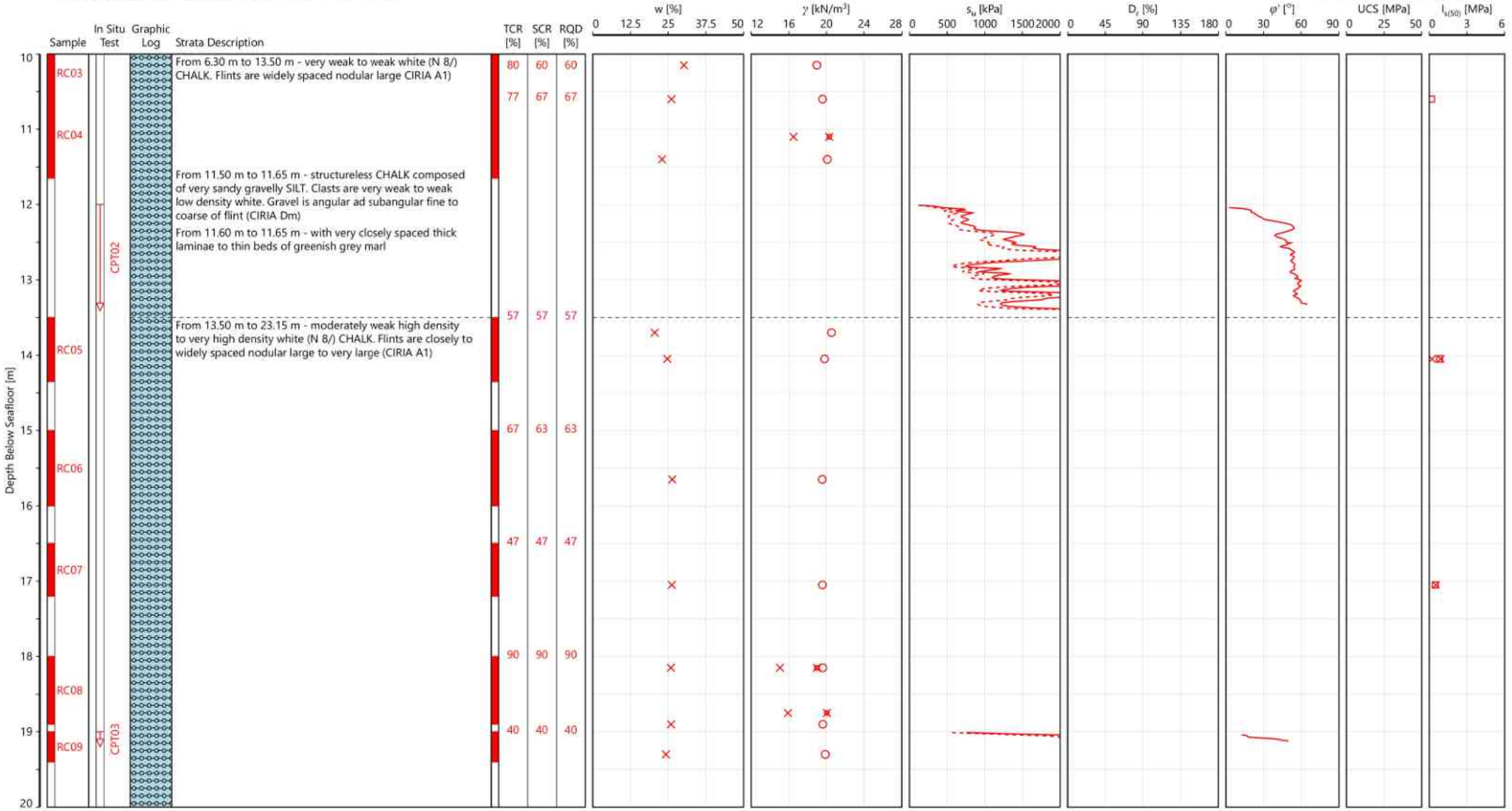
Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.36

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH08

FGL-OWF-BH08-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH08	295304.9	5544120.1	35.39	03-Oct-2025 - 03-Oct-2025	Fugro Zephyr	
FGL-OWF-BH08-a	295305.3	5544124.9	35.52	10-Oct-2025 - 12-Oct-2025	Fugro Zephyr	

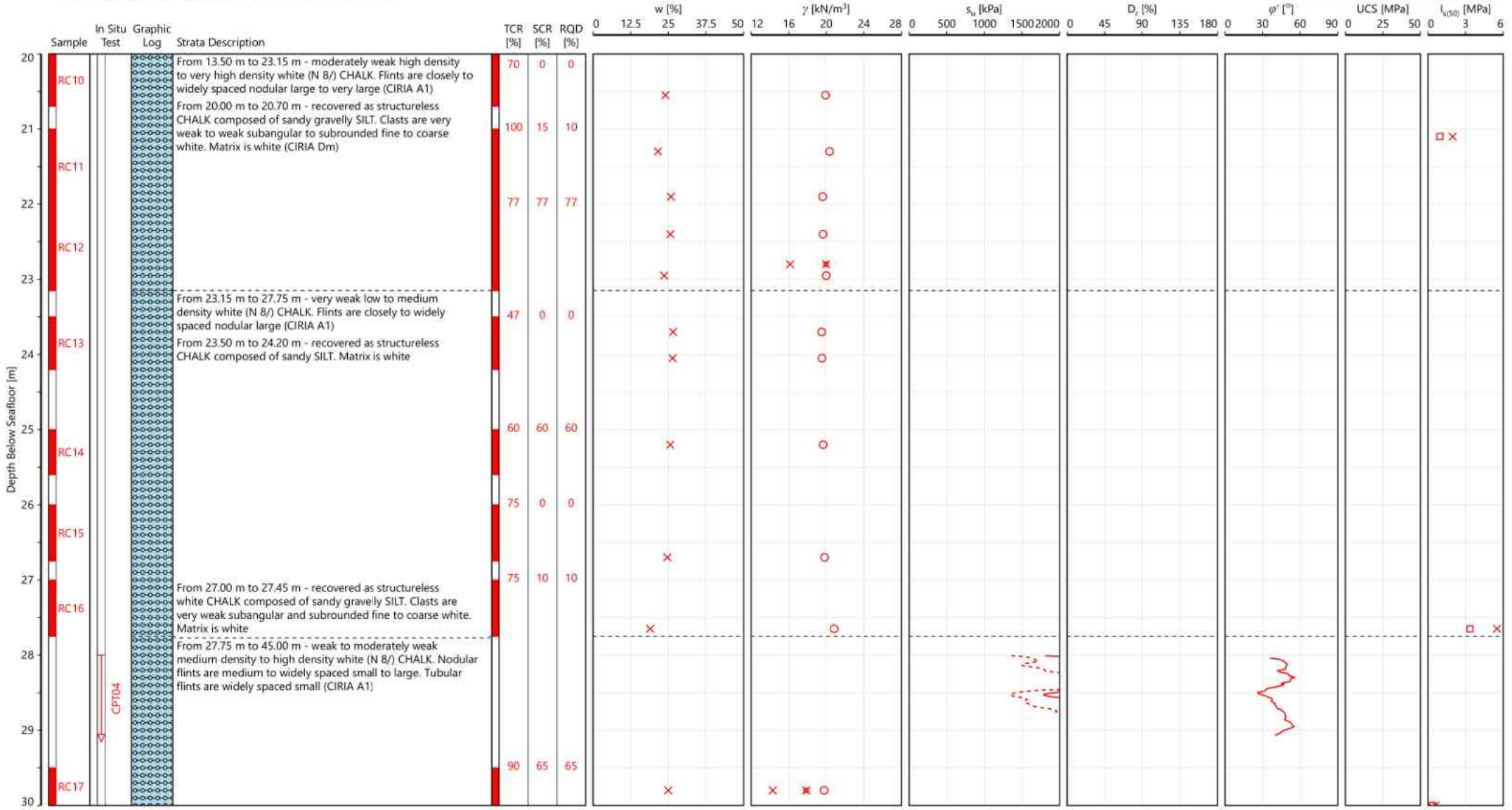
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH08

FGL-OWF-BH08-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

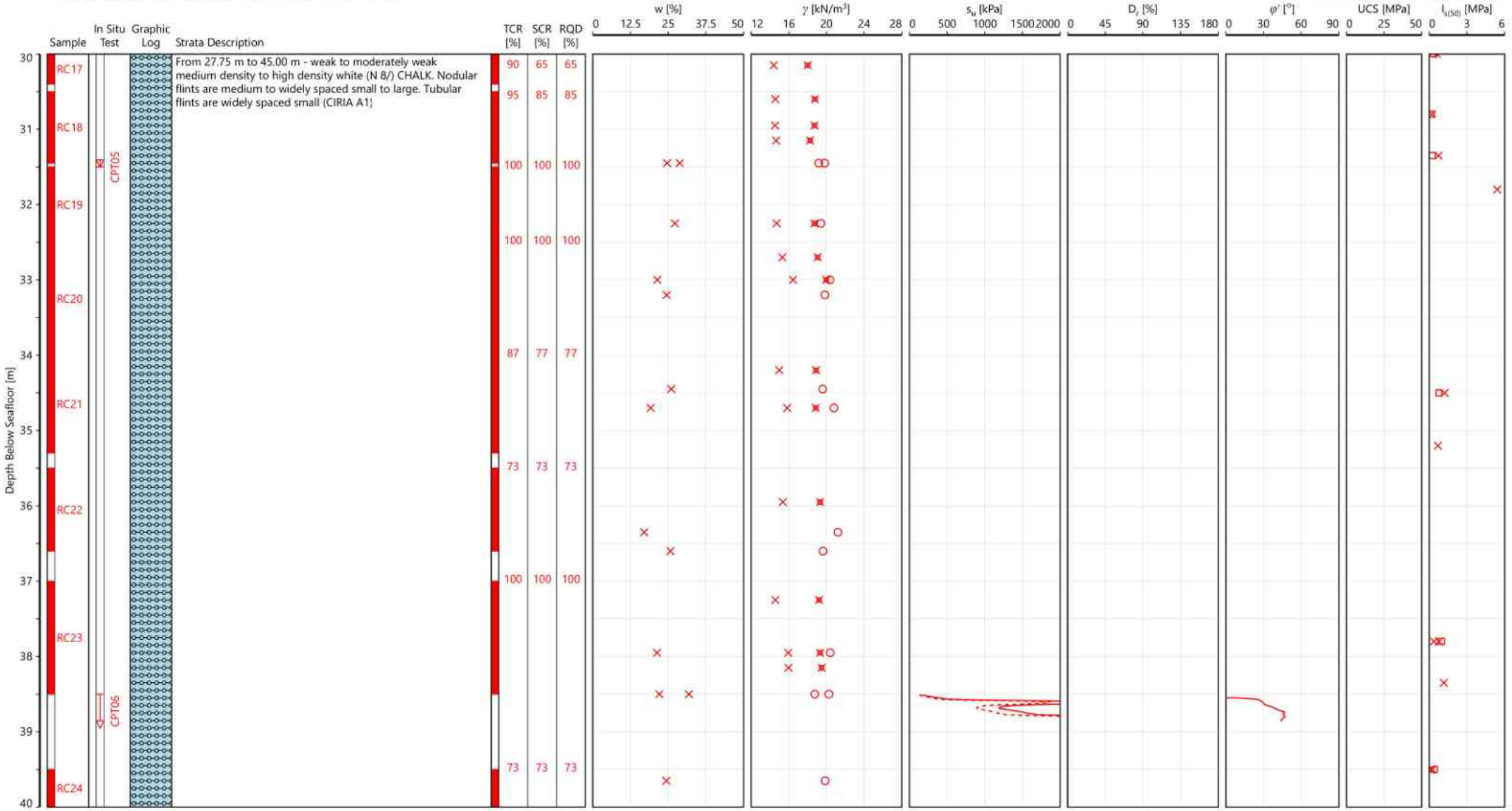
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH08	295304.9	5544120.1	35.39	03-Oct-2025 - 03-Oct-2025	Fugro Zephyr	
FGL-OWF-BH08-a	295305.3	5544124.9	35.52	10-Oct-2025 - 12-Oct-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.38

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH08

FGL-OWF-BH08-a

Sample Details:

W Wison Push Sampler (WIP)

RC Rock Coring Sample

Disturbed/Undisturbed Sample

Core Details:

TCR Total Core Recovery

SCR Solid Core Recovery

RQD Rock Quality Designation

In Situ test Details:

CPT Cone penetration test

Water Content (w):

Water Content

Liquid Limit

Plastic Limit

Plasticity index

CAU

CIU

OED

DSS

Unit weight (γ) :

Unit weight from volume mass calculation

Unit weight from Moisture Content

Dry Unit weight

CAU

CIU

OED

DSS

Unit weight from CPT

Undrained Shear Strength Tests (s_u) :

Pocket penetrometer

Torvane

UU-triaxial

CAU Slashed symbols refer to tests on remoulded soil

CIU

DSS

s_u from CPT: N_{kt}= 15

s_u from CPT: N_{kt}= 20

Relative density (D_r) :

Relative density from CPT: K_0=0.5

Relative density from CPT: K_0=1.0

Friction angle (φ') :

Derived from CPT (Mayne, 2007)

CD triaxial

DS-Shear box

Unconfined Compressive Strength (UCS) :

UCS

Point Load Index Strength ($I_{s(50)}$) :

$I_{s(50)}$axial

$I_{s(50)}$diametral

$I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

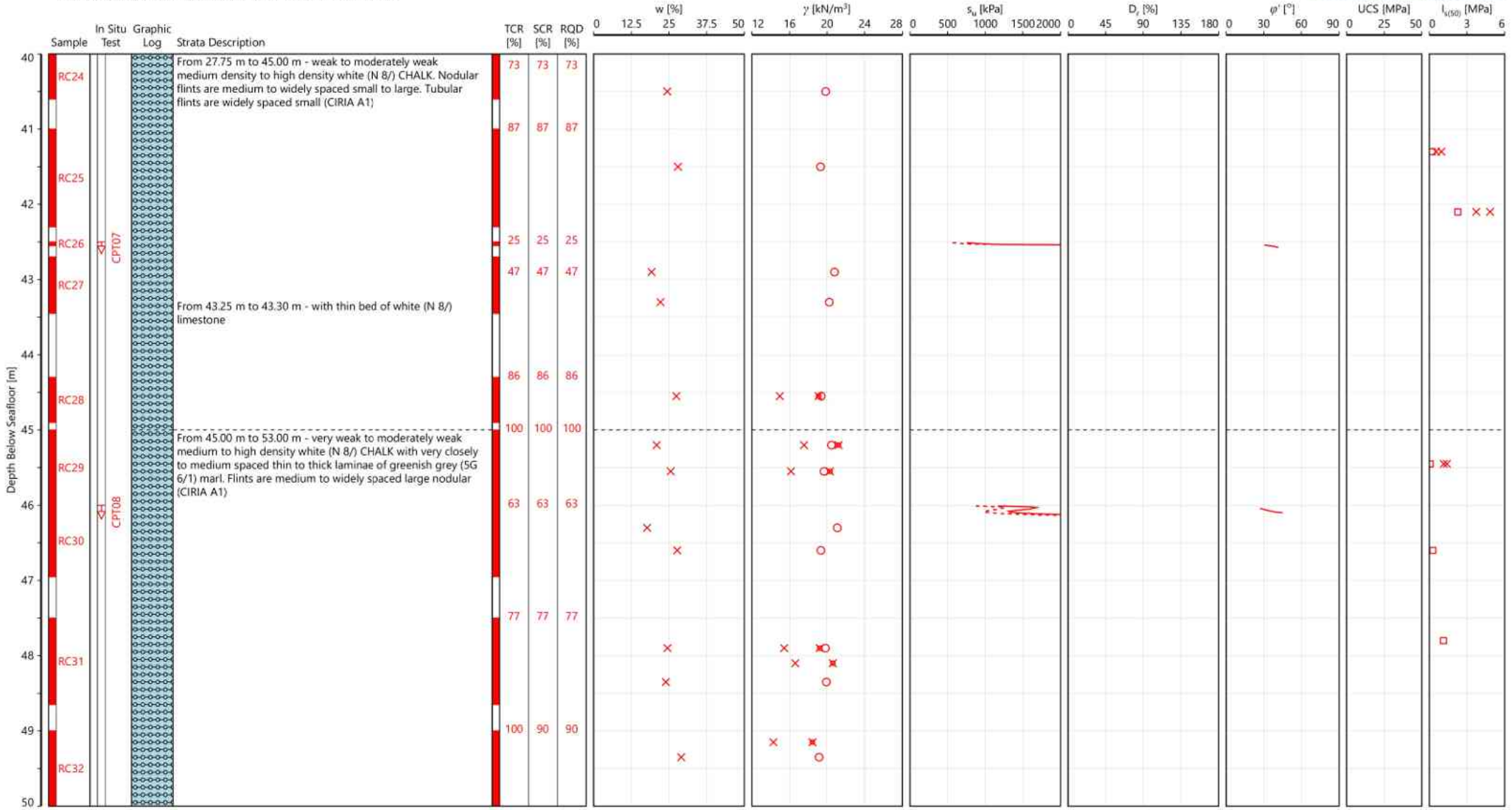
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH08	295304.9	5544120.1	35.39	03-Oct-2025 - 03-Oct-2025	Fugro Zephyr	
FGL-OWF-BH08-a	295305.3	5544124.9	35.52	10-Oct-2025 - 12-Oct-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.39

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH08
FGL-OWF-BH08-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

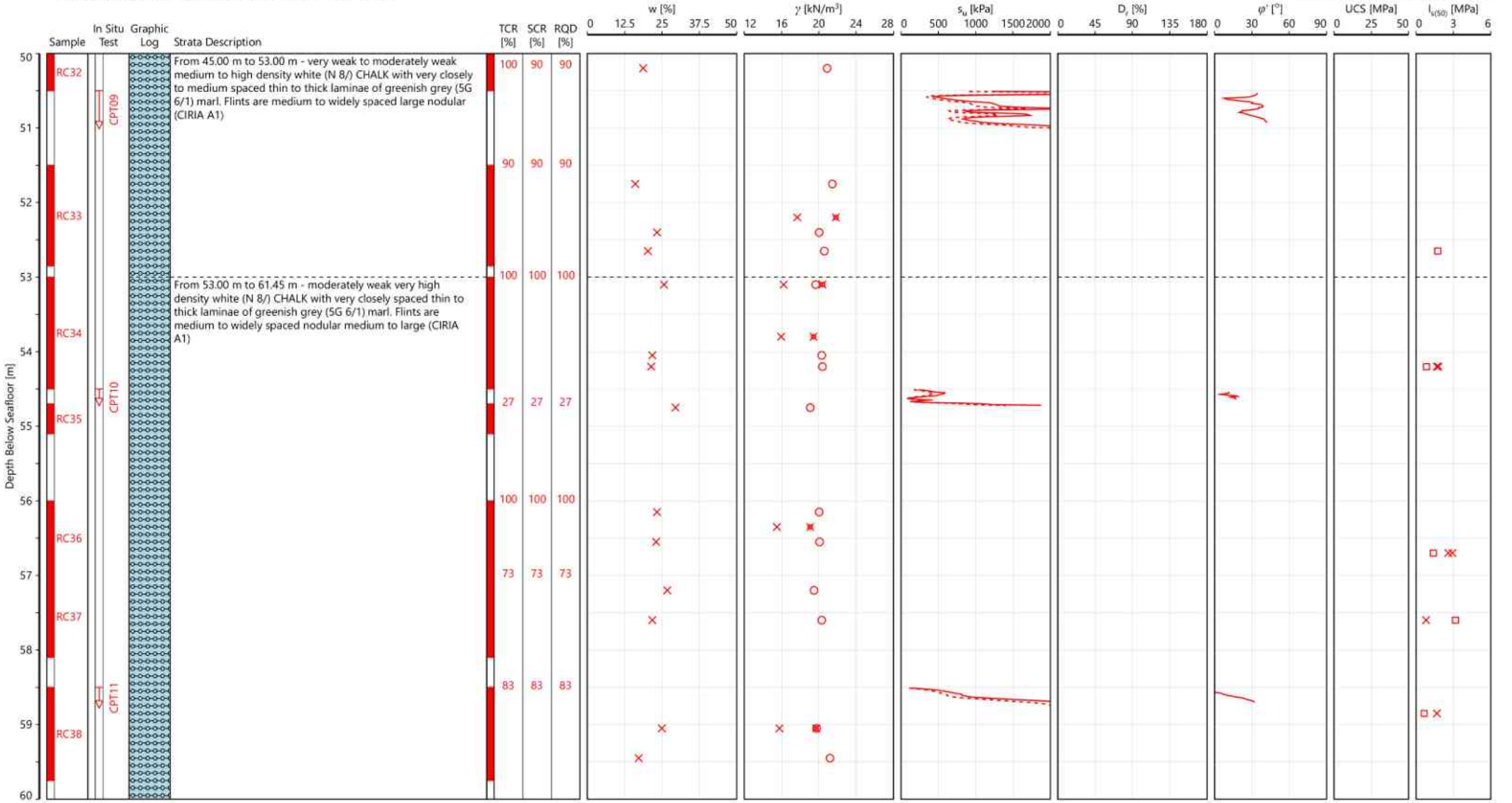
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH08	295304.9	5544120.1	35.39	03-Oct-2025 - 03-Oct-2025	Fugro Zephyr	
FGL-OWF-BH08-a	295305.3	5544124.9	35.52	10-Oct-2025 - 12-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH08

FGL-OWF-BH08-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH08	295304.9	5544120.1	35.39	03-Oct-2025 - 03-Oct-2025	Fugro Zephyr	
FGL-OWF-BH08-a	295305.3	5544124.9	35.52	10-Oct-2025 - 12-Oct-2025	Fugro Zephyr	

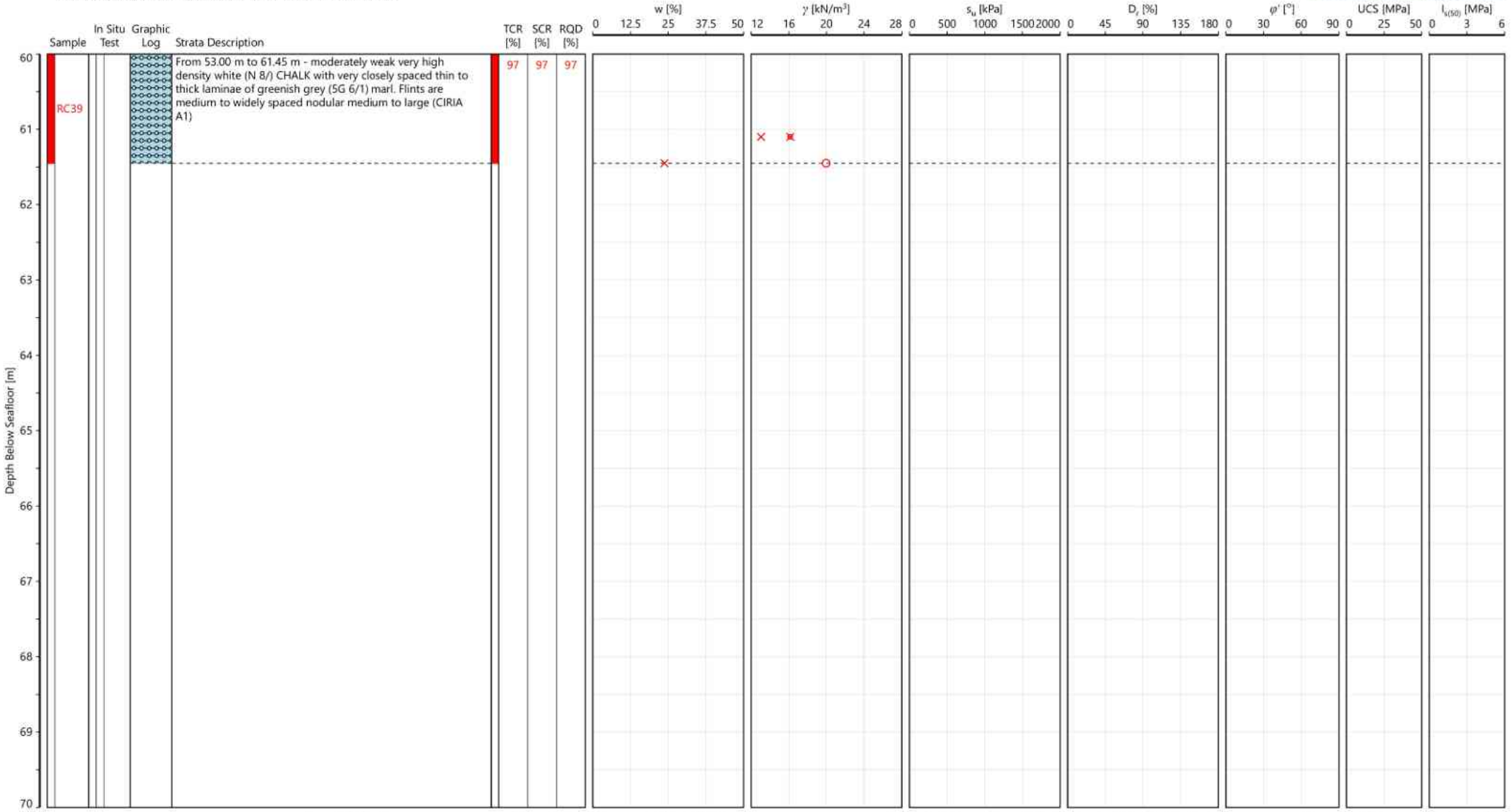
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH08

FGL-OWF-BH08-a

Sample Details:

W Wison Push Sampler (WIP)

RC Rock Coring Sample

Disturbed/Undisturbed Sample

Core Details:

TCR Total Core Recovery

SCR Solid Core Recovery

RQD Rock Quality Designation

In Situ test Details:

CPT Cone penetration test

Water Content (w):

Water Content

Liquid Limit

Plastic Limit

Plasticity index

CAU

CIU

OED

DSS

Unit weight (γ) :

Unit weight from volume mass calculation

Unit weight from Moisture Content

Dry Unit weight

CAU

CIU

OED

DSS

Unit weight from CPT

Undrained Shear Strength Tests (s_u) :

Pocket penetrometer

Torvane

UU-triaxial

CAU Slashed symbols refer to tests on remoulded soil

CIU

DSS

s_u from CPT: N_{kt}= 15

s_u from CPT: N_{kt}= 20

Relative density (D_r) :

Relative density from CPT: K_0=0.5

Relative density from CPT: K_0=1.0

Friction angle (φ') :

Derived from CPT (Mayne, 2007)

CD triaxial

DS-Shear box

Unconfined Compressive Strength (UCS) :

UCS

Point Load Index Strength ($I_{s(50)}$) :

$I_{s(50)}$ axial

$I_{s(50)}$ diametral

$I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH08	295304.9	5544120.1	35.39	03-Oct-2025 - 03-Oct-2025	Fugro Zephyr	
FGL-OWF-BH08-a	295305.3	5544124.9	35.52	10-Oct-2025 - 12-Oct-2025	Fugro Zephyr	

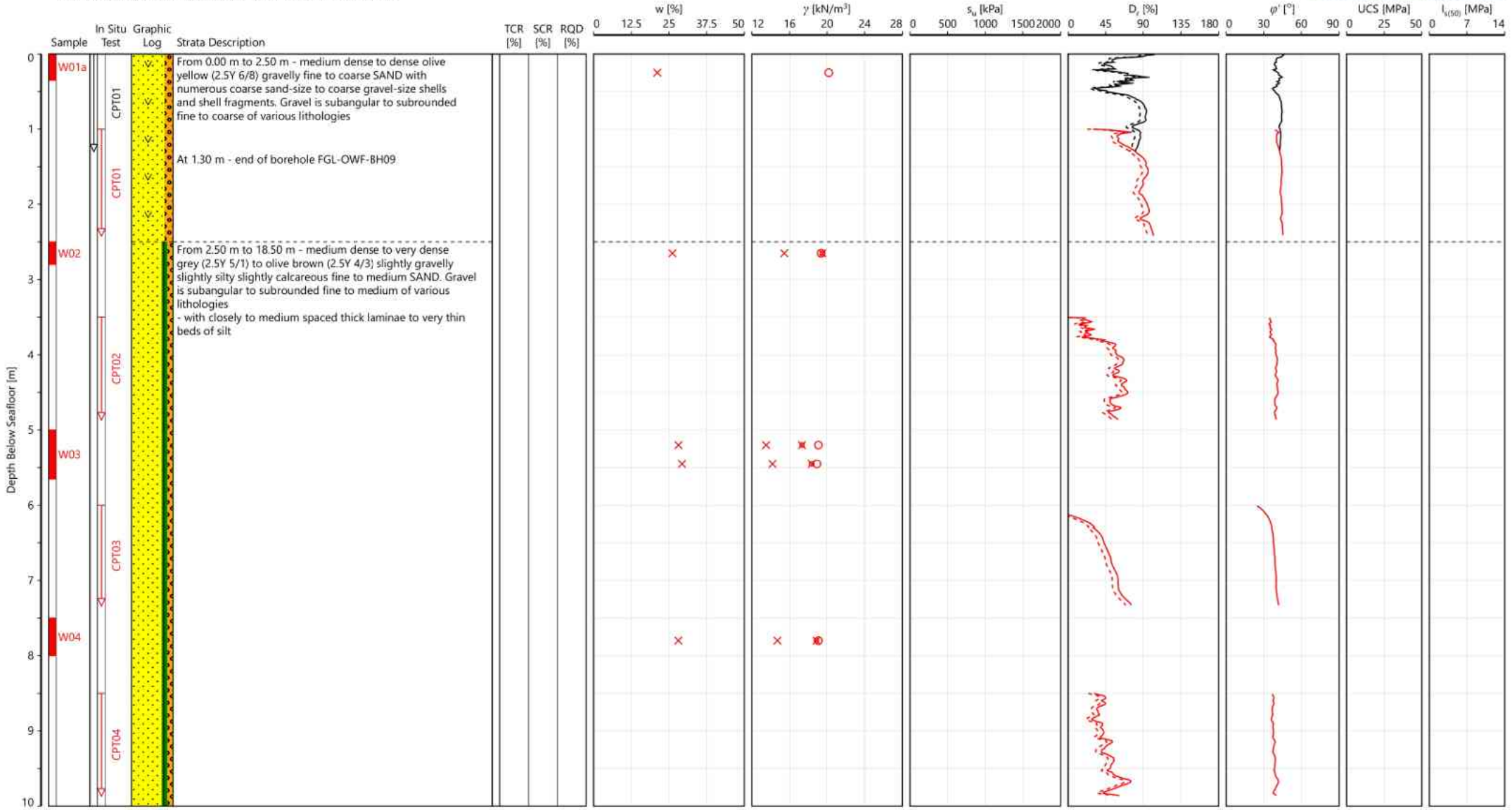
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH09
FGL-OWF-BH09-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

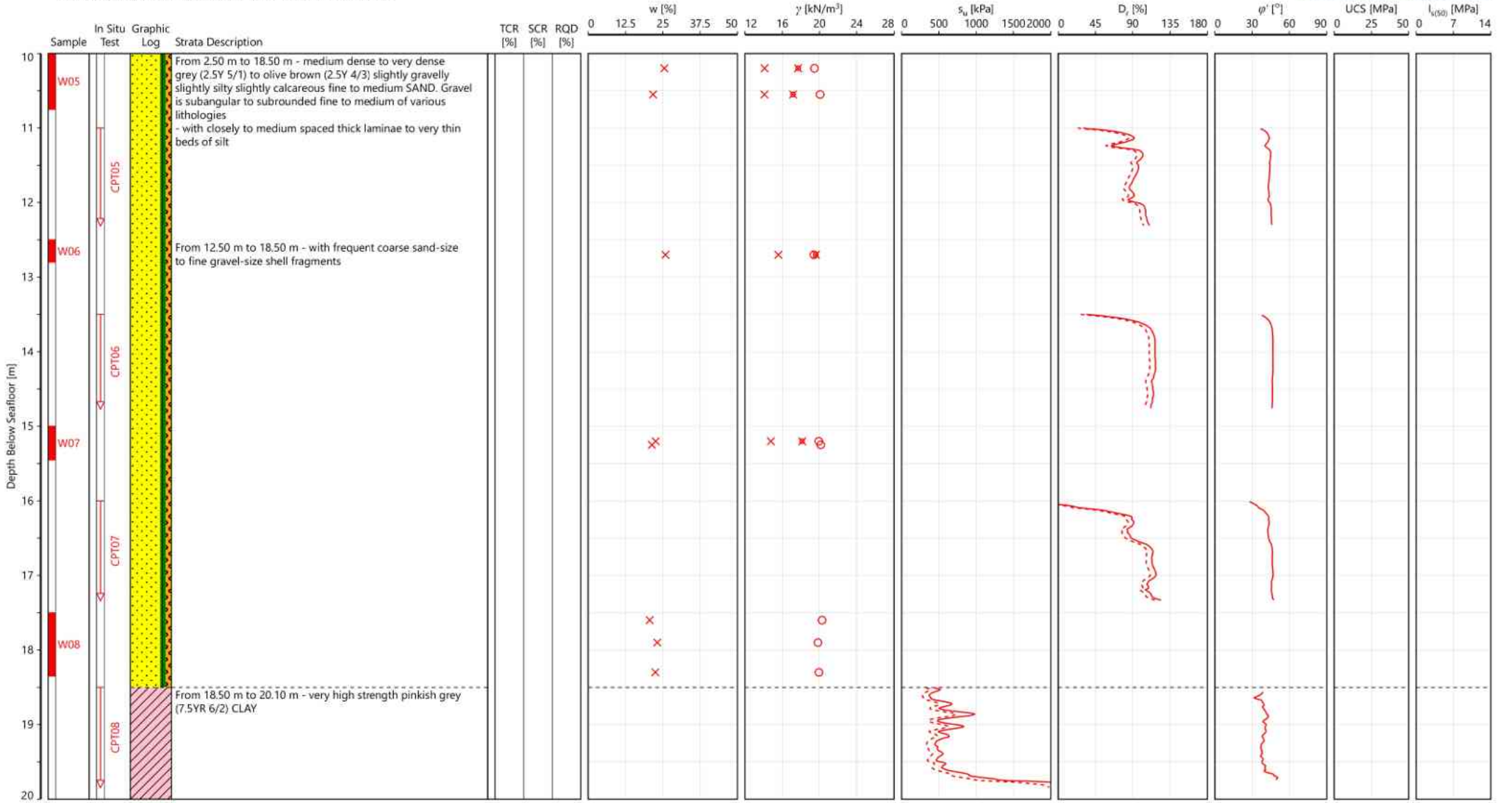
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH09	273997.3	5536127.7	46.26	25-Oct-2025 - 25-Oct-2025	Fugro Zephyr	
FGL-OWF-BH09-a	274006.8	5536124.3	45.94	28-Oct-2025 - 30-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH09
FGL-OWF-BH09-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

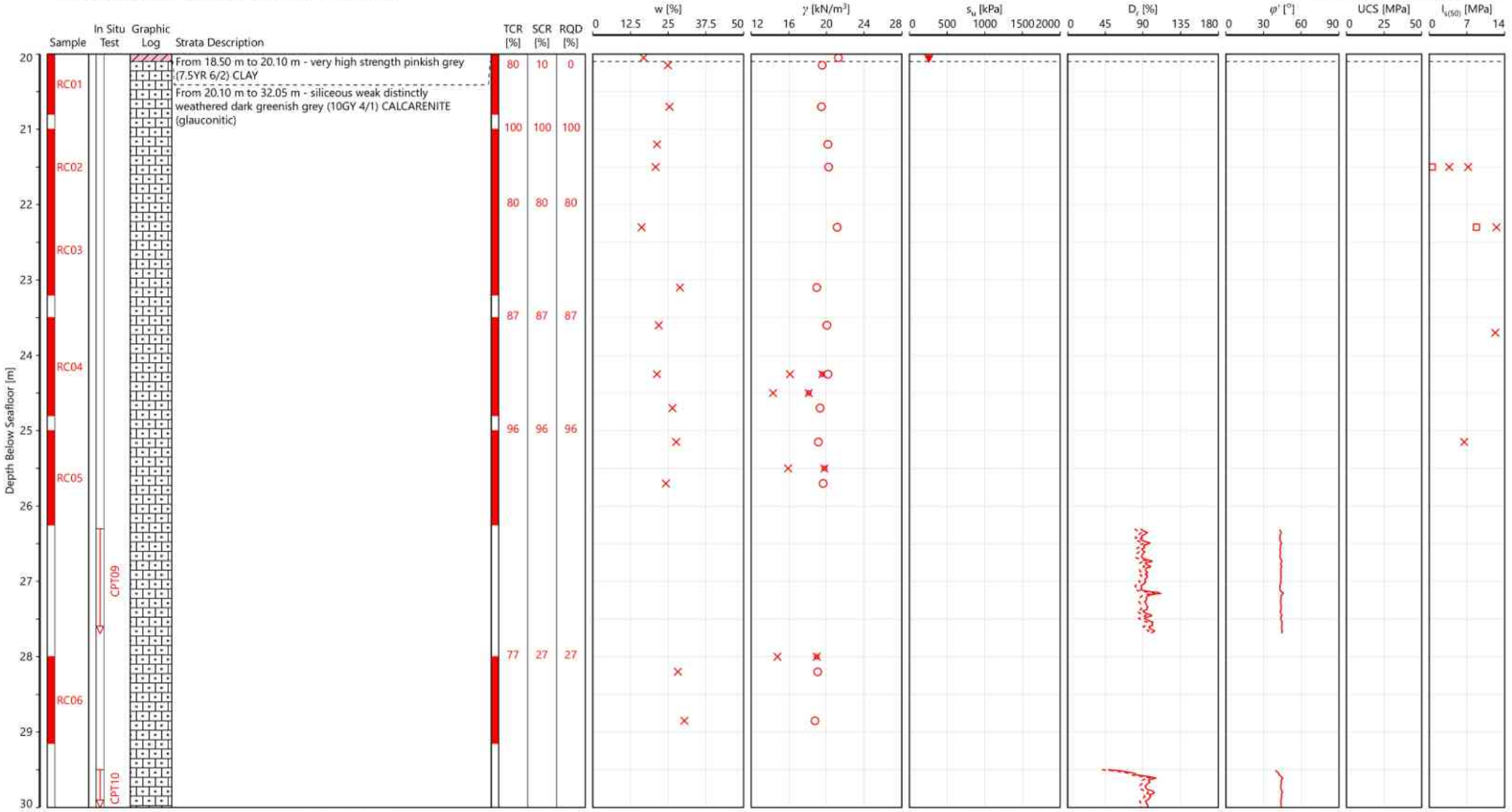
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH09	273997.3	5536127.7	46.26	25-Oct-2025 - 25-Oct-2025	Fugro Zephyr	
FGL-OWF-BH09-a	274006.8	5536124.3	45.94	28-Oct-2025 - 30-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH09

FGL-OWF-BH09-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH09	273997.3	5536127.7	46.26	25-Oct-2025 - 25-Oct-2025	Fugro Zephyr	
FGL-OWF-BH09-a	274006.8	5536124.3	45.94	28-Oct-2025 - 30-Oct-2025	Fugro Zephyr	

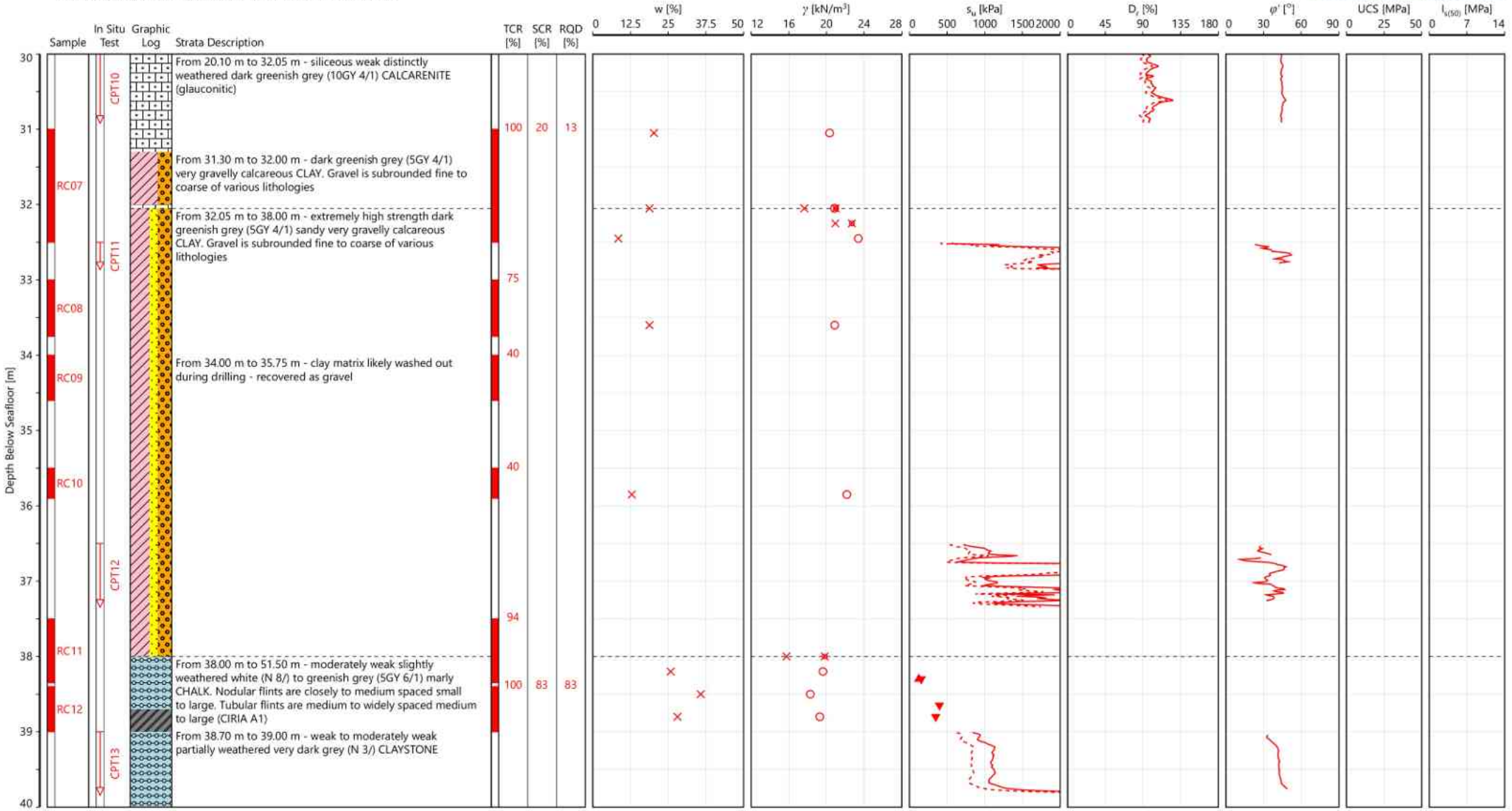
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH09

FGL-OWF-BH09-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

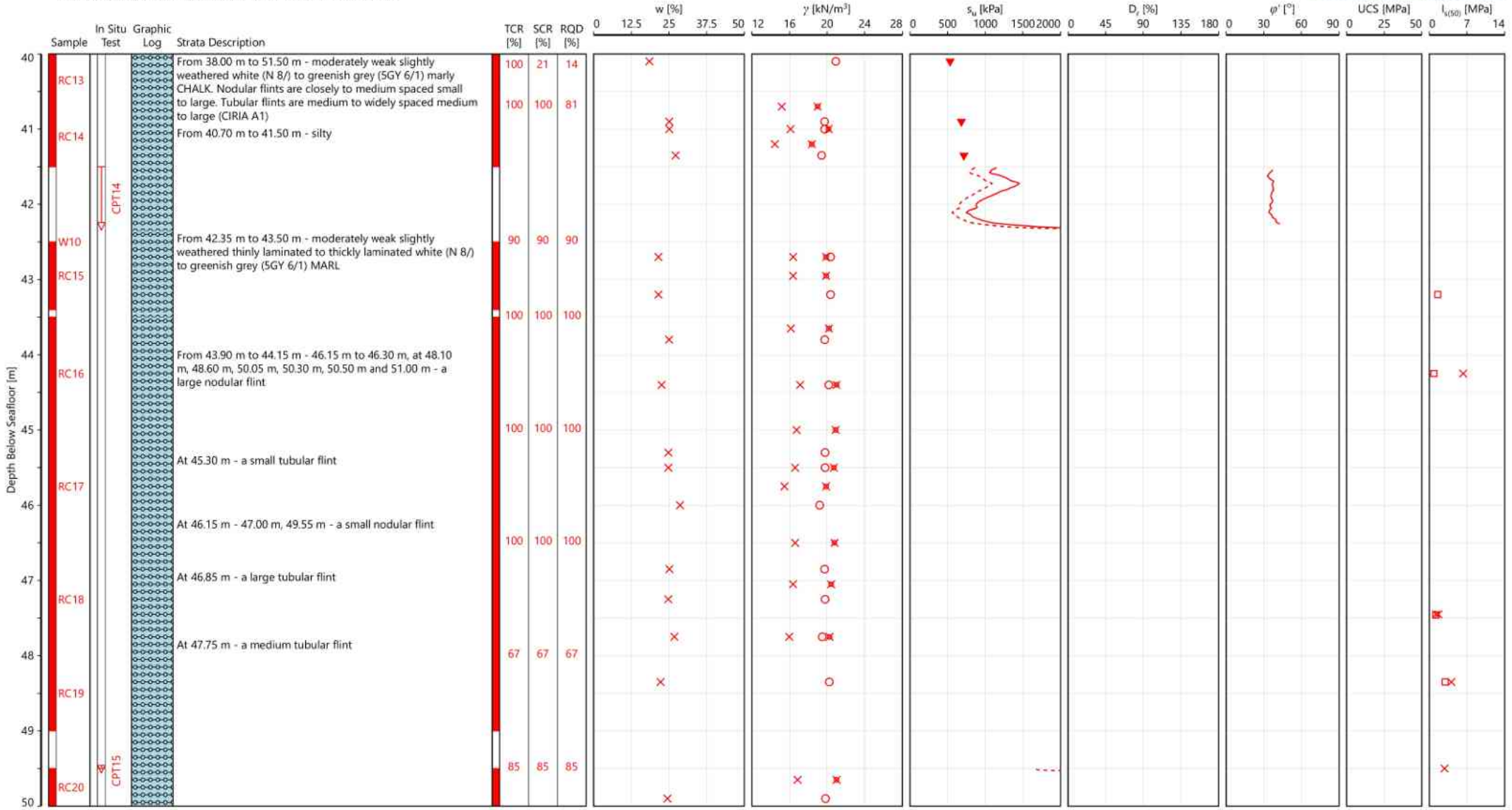
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH09	273997.3	5536127.7	46.26	25-Oct-2025 - 25-Oct-2025	Fugro Zephyr	
FGL-OWF-BH09-a	274006.8	5536124.3	45.94	28-Oct-2025 - 30-Oct-2025	Fugro Zephyr	

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH09

FGL-OWF-BH09-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH09	273997.3	5536127.7	46.26	25-Oct-2025 - 25-Oct-2025	Fugro Zephyr	
FGL-OWF-BH09-a	274006.8	5536124.3	45.94	28-Oct-2025 - 30-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**

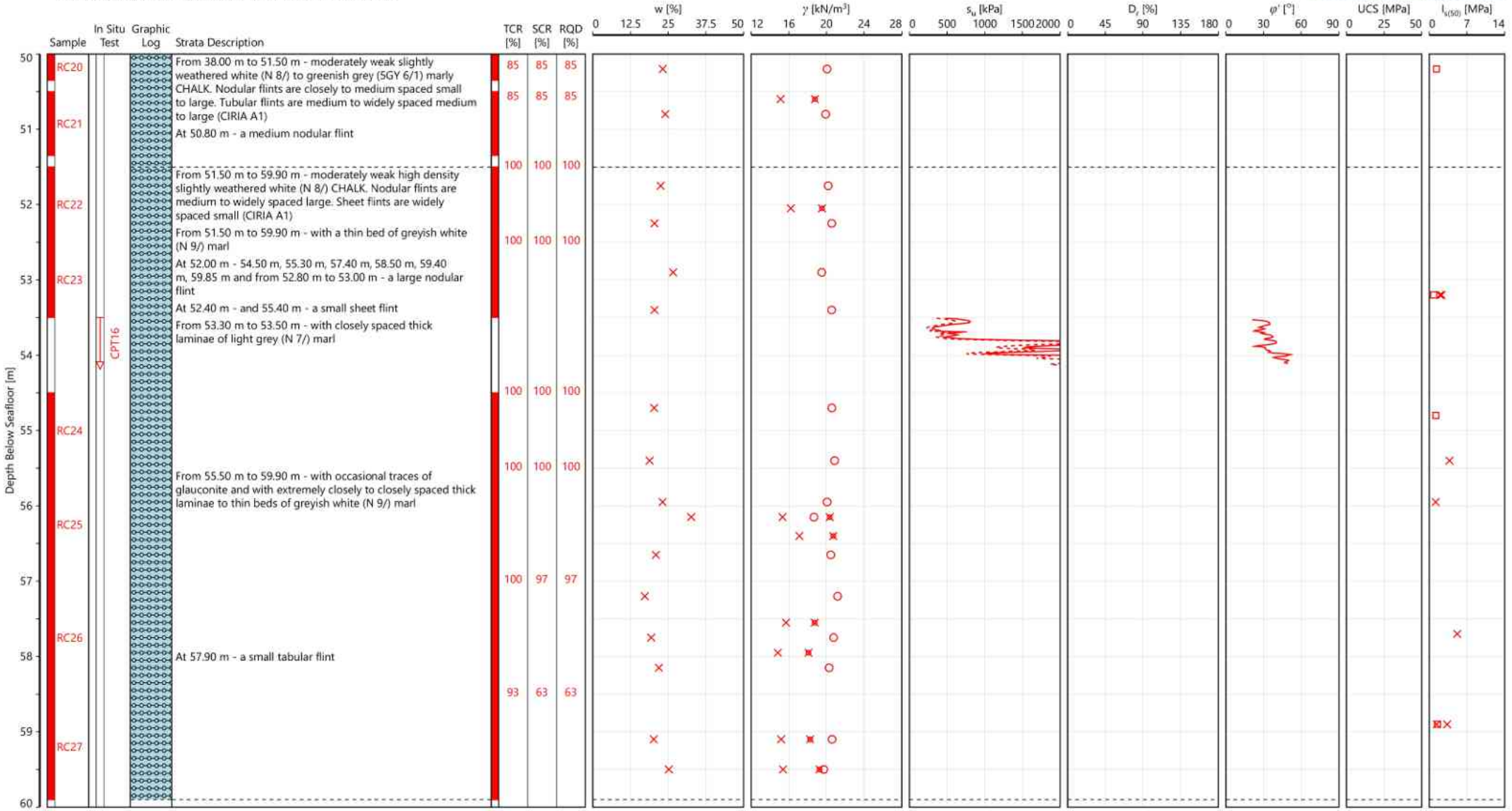
Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.47

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH09

FGL-OWF-BH09-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

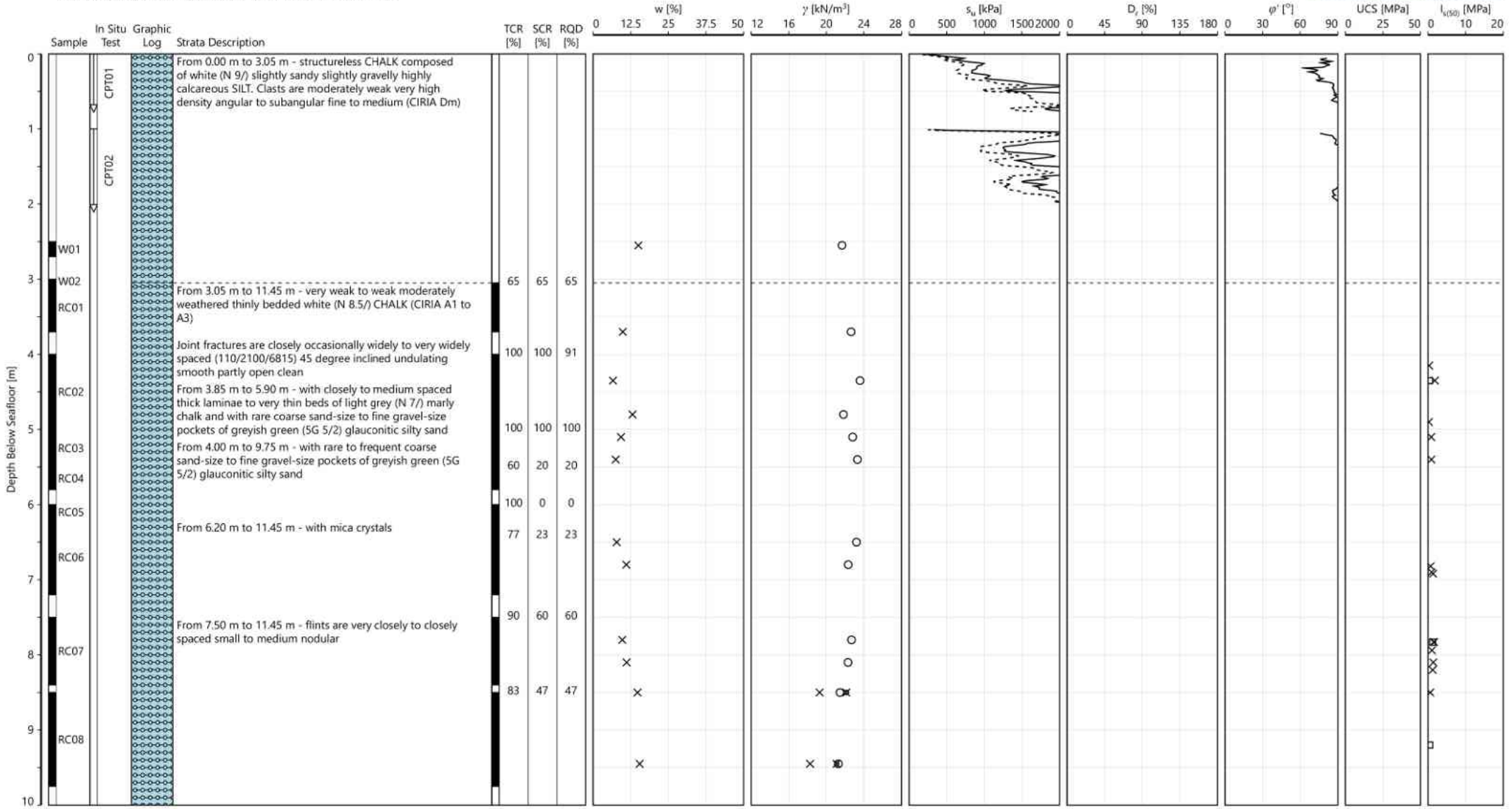
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH09	273997.3	5536127.7	46.26	25-Oct-2025 - 25-Oct-2025	Fugro Zephyr	
FGL-OWF-BH09-a	274006.8	5536124.3	45.94	28-Oct-2025 - 30-Oct-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.48

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH11

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

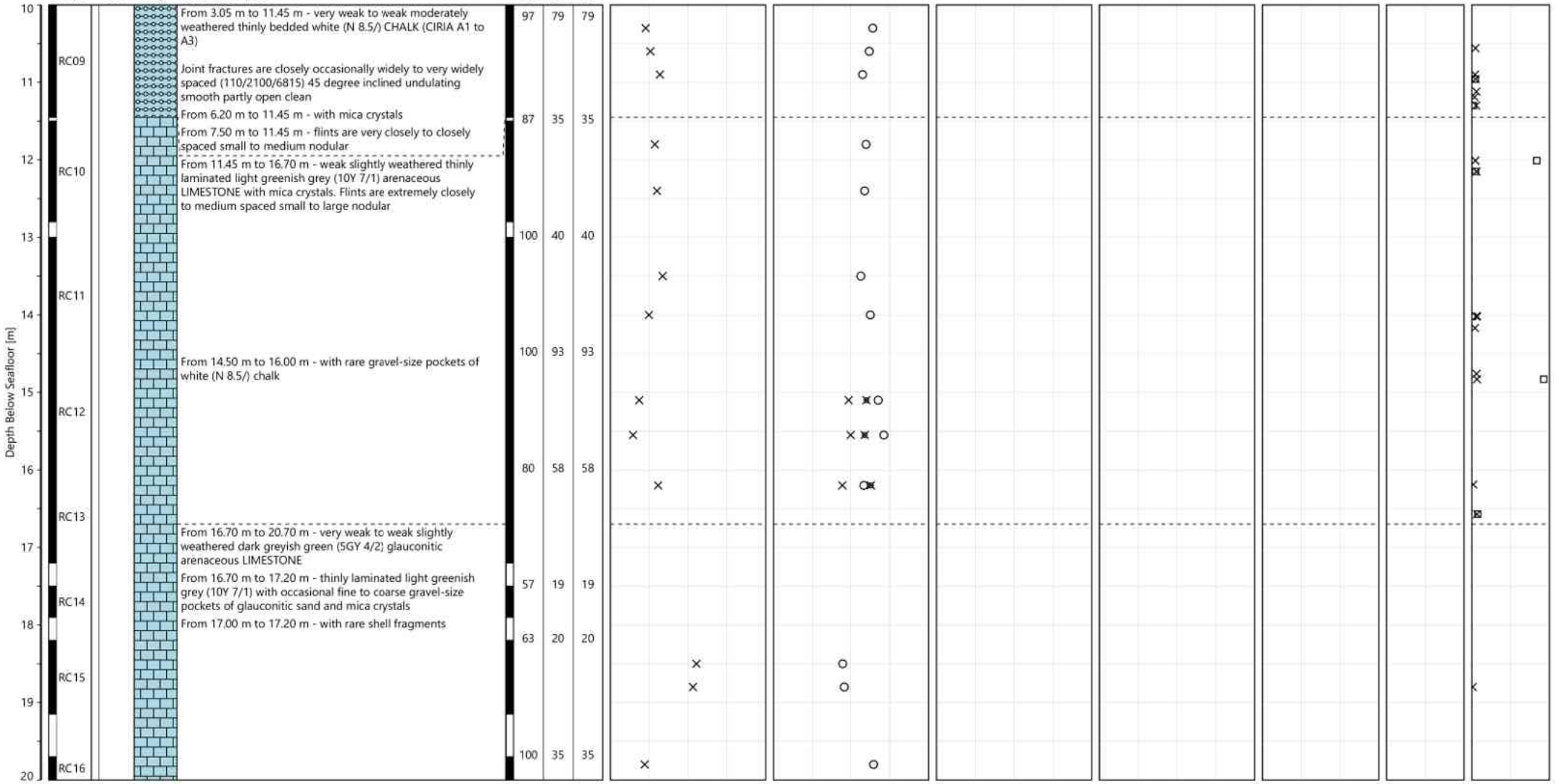
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH11	285733.5	5538830.2	37.32	07-Jul-2025 - 10-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC09			From 3.05 m to 11.45 m - very weak to weak moderately weathered thinly bedded white (N 8.5/) CHALK (CIRIA A1 to A3) Joint fractures are closely occasionally widely to very widely spaced (110/2100/6815) 45 degree inclined undulating smooth partly open clean From 6.20 m to 11.45 m - with mica crystals From 7.50 m to 11.45 m - flints are very closely to closely spaced small to medium nodular	97	79	79
RC10			From 11.45 m to 16.70 m - weak slightly weathered thinly laminated light greenish grey (10Y 7/1) arenaceous LIMESTONE with mica crystals. Flints are extremely closely to medium spaced small to large nodular	87	35	35
RC11				100	40	40
RC12			From 14.50 m to 16.00 m - with rare gravel-size pockets of white (N 8.5/) chalk	100	93	93
RC13				80	58	58
RC14			From 16.70 m to 20.70 m - very weak to weak slightly weathered dark greyish green (5GY 4/2) glauconitic arenaceous LIMESTONE From 16.70 m to 17.20 m - thinly laminated light greenish grey (10Y 7/1) with occasional fine to coarse gravel-size pockets of glauconitic sand and mica crystals From 17.00 m to 17.20 m - with rare shell fragments	57	19	19
RC15				63	20	20
RC16				100	35	35



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH11

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

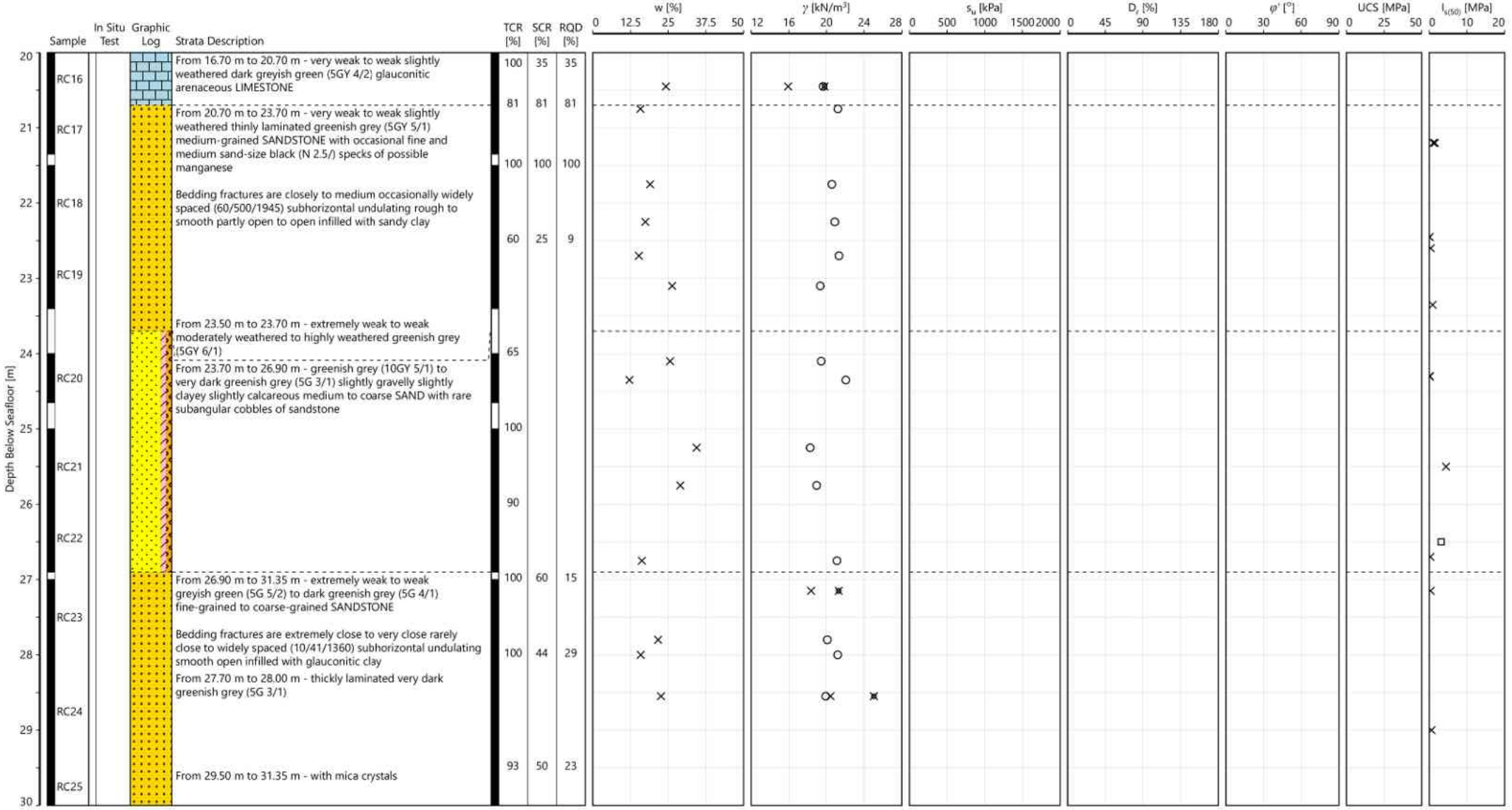
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH11	285733.5	5538830.2	37.32	07-Jul-2025 - 10-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC16			From 16.70 m to 20.70 m - very weak to weak slightly weathered dark greyish green (5GY 4/2) glauconitic arenaceous LIMESTONE	100	35	35
RC17			From 20.70 m to 23.70 m - very weak to weak slightly weathered thinly laminated greenish grey (5GY 5/1) medium-grained SANDSTONE with occasional fine and medium sand-size black (N 2.5/) specks of possible manganese Bedding fractures are closely to medium occasionally widely spaced (60/500/1945) subhorizontal undulating rough to smooth partly open to open infilled with sandy clay	81	81	81
RC18				100	100	100
RC19				60	25	9
			From 23.50 m to 23.70 m - extremely weak to weak moderately weathered to highly weathered greenish grey (5GY 6/1)	65		
RC20			From 23.70 m to 26.90 m - greenish grey (10GY 5/1) to very dark greenish grey (5G 3/1) slightly gravelly slightly clayey slightly calcareous medium to coarse SAND with rare subangular cobbles of sandstone			
RC21				100		
RC22				90		
RC23			From 26.90 m to 31.35 m - extremely weak to weak greyish green (5G 5/2) to dark greenish grey (5G 4/1) fine-grained to coarse-grained SANDSTONE Bedding fractures are extremely close to very close rarely close to widely spaced (10/41/1360) subhorizontal undulating smooth open infilled with glauconitic clay	100	60	15
RC24			From 27.70 m to 28.00 m - thickly laminated very dark greenish grey (5G 3/1)	100	44	29
RC25			From 29.50 m to 31.35 m - with mica crystals	93	50	23



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH11

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

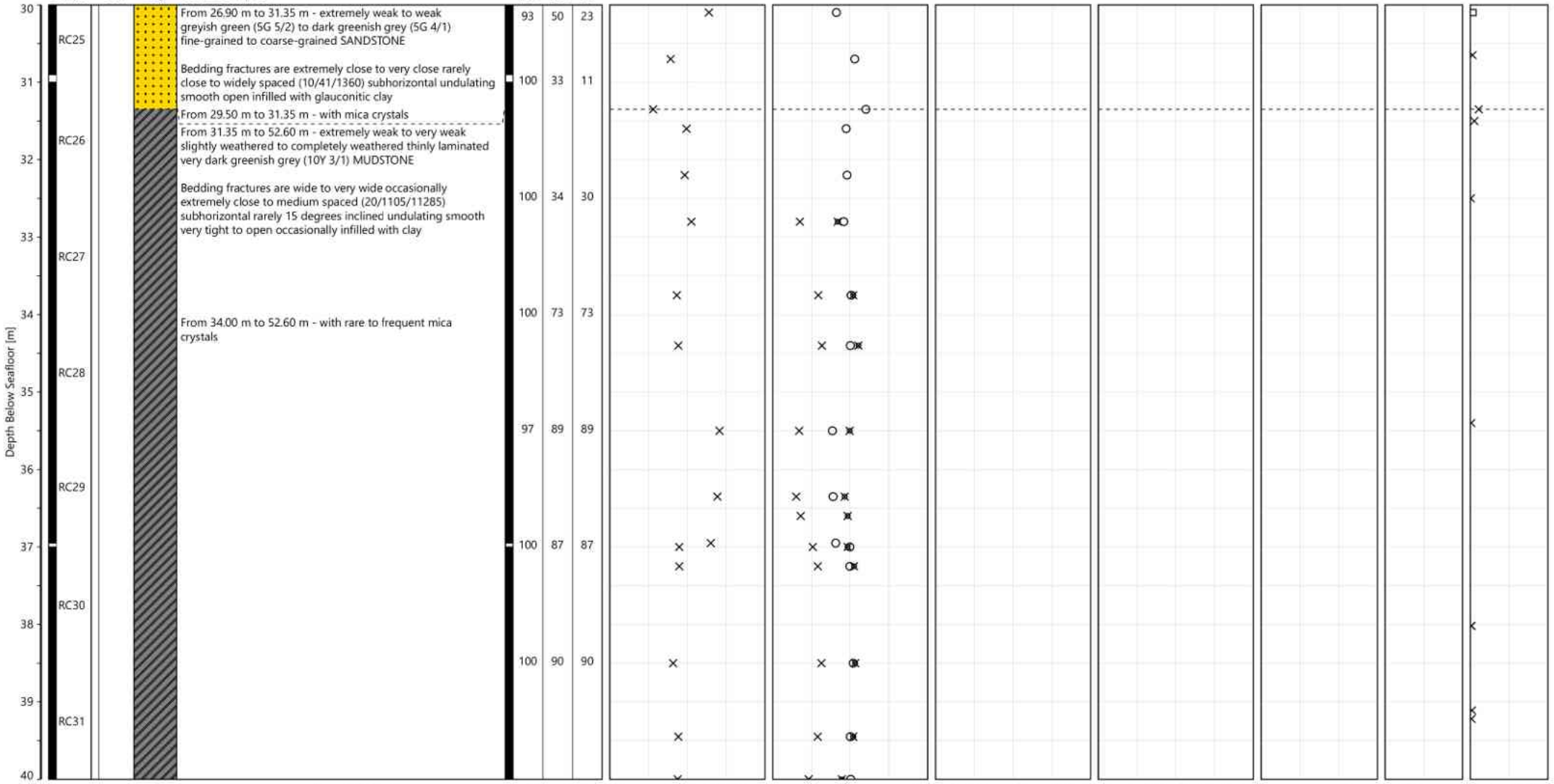
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH11	285733.5	5538830.2	37.32	07-Jul-2025 - 10-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC25			From 26.90 m to 31.35 m - extremely weak to weak greyish green (5G 5/2) to dark greenish grey (5G 4/1) fine-grained to coarse-grained SANDSTONE Bedding fractures are extremely close to very close rarely close to widely spaced (10/41/1360) subhorizontal undulating smooth open infilled with glauconitic clay	93	50	23
			From 29.50 m to 31.35 m - with mica crystals			
RC26			From 31.35 m to 52.60 m - extremely weak to very weak slightly weathered to completely weathered thinly laminated very dark greenish grey (10Y 3/1) MUDSTONE Bedding fractures are wide to very wide occasionally extremely close to medium spaced (20/1105/11285) subhorizontal rarely 15 degrees inclined undulating smooth very tight to open occasionally infilled with clay	100	33	11
RC27				100	34	30
			From 34.00 m to 52.60 m - with rare to frequent mica crystals	100	73	73
RC28						
RC29				97	89	89
RC30				100	87	87
RC31				100	90	90



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH11

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

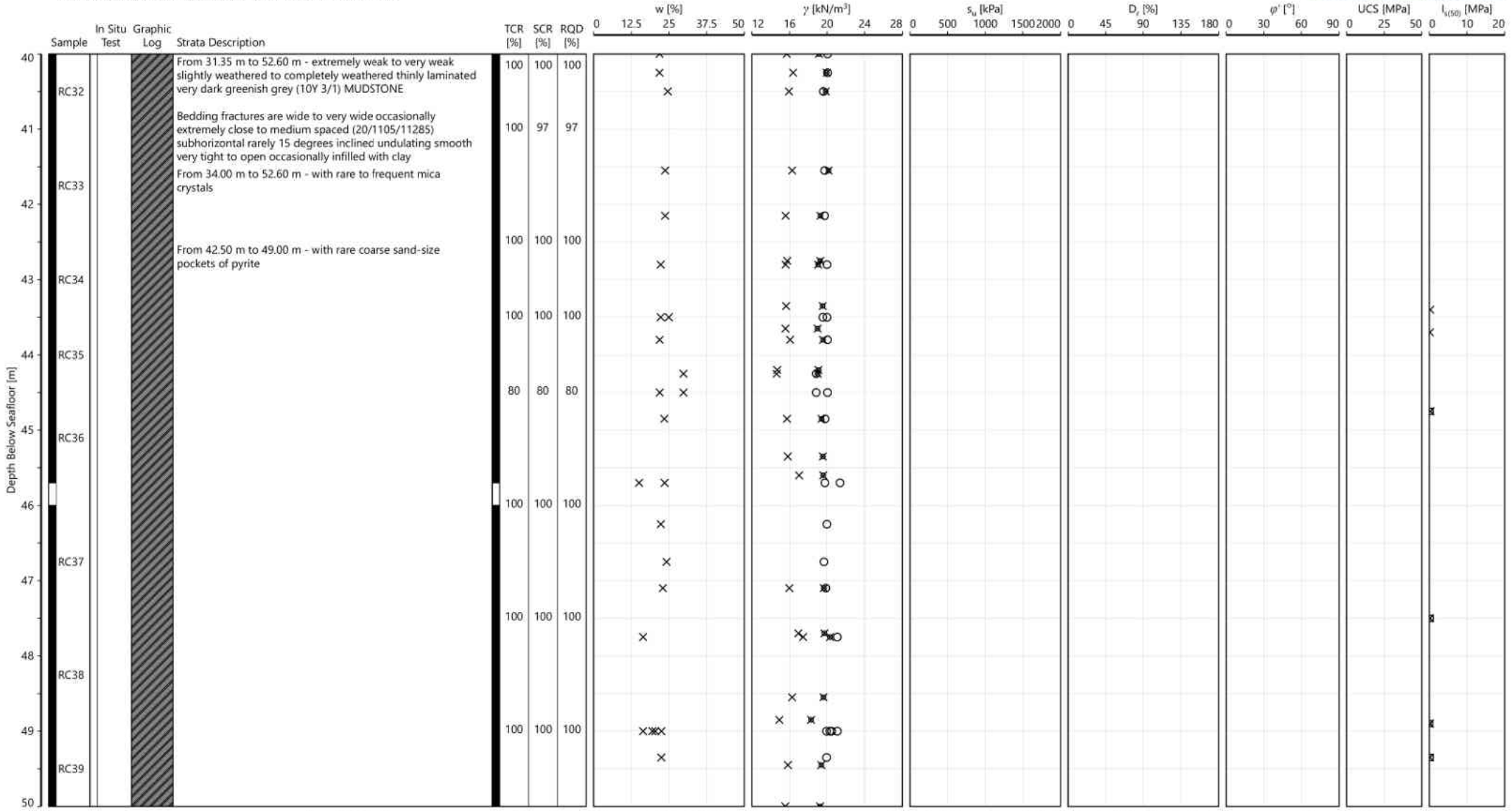
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH11	285733.5	5538830.2	37.32	07-Jul-2025 - 10-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH11

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

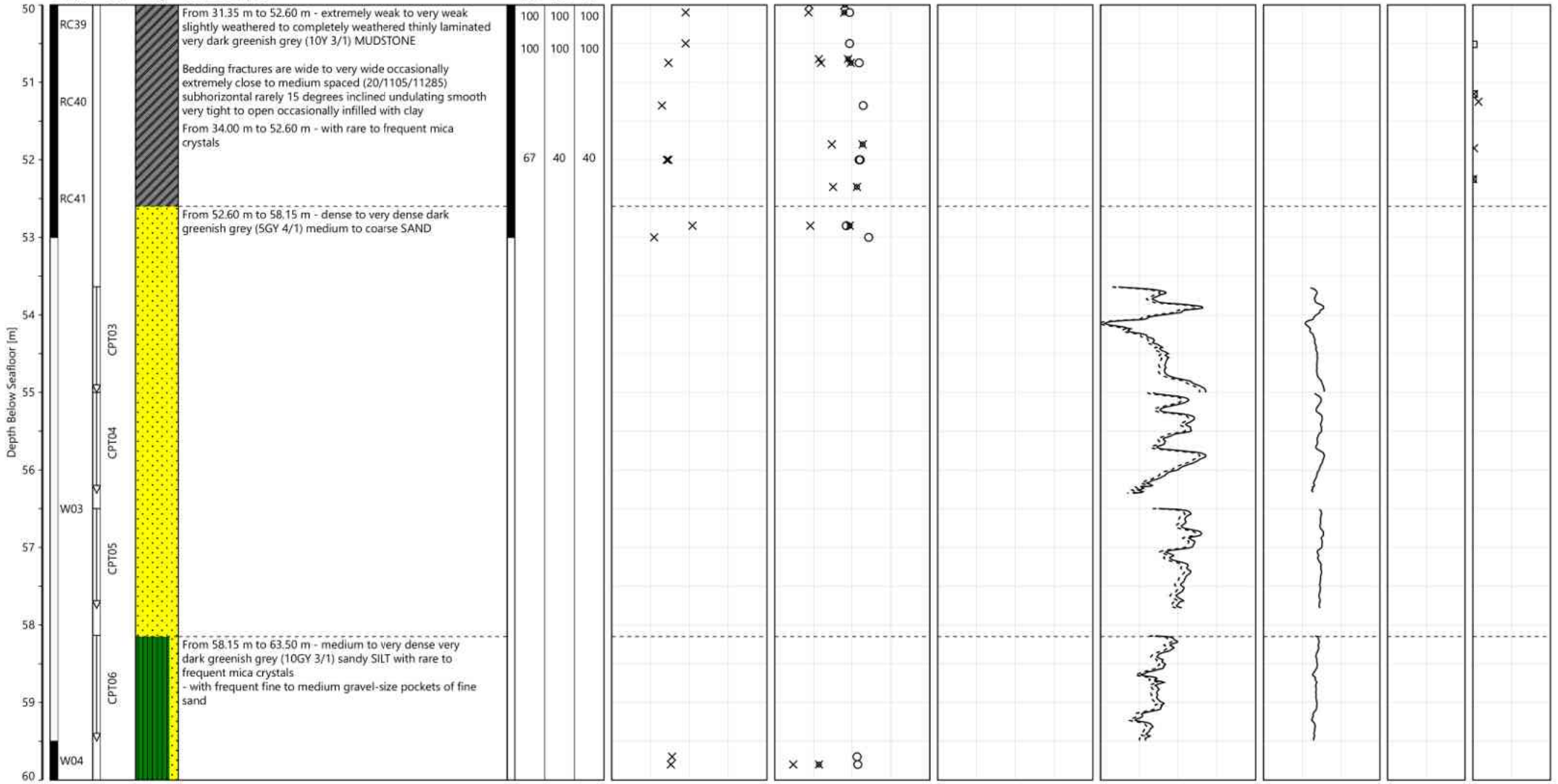
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH11	285733.5	5538830.2	37.32	07-Jul-2025 - 10-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.53
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC39			From 31.35 m to 52.60 m - extremely weak to very weak slightly weathered to completely weathered thinly laminated very dark greenish grey (10Y 3/1) MUDSTONE Bedding fractures are wide to very wide occasionally extremely close to medium spaced (20/1105/11285) subhorizontal rarely 15 degrees inclined undulating smooth very tight to open occasionally infilled with clay From 34.00 m to 52.60 m - with rare to frequent mica crystals	100	100	100
				100	100	100
RC40						
				67	40	40
RC41						
	CPT03		From 52.60 m to 58.15 m - dense to very dense dark greenish grey (5GY 4/1) medium to coarse SAND			
	CPT04					
W03						
	CPT05					
	CPT06		From 58.15 m to 63.50 m - medium to very dense very dark greenish grey (10GY 3/1) sandy SILT with rare to frequent mica crystals - with frequent fine to medium gravel-size pockets of fine sand			
W04						



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH11

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

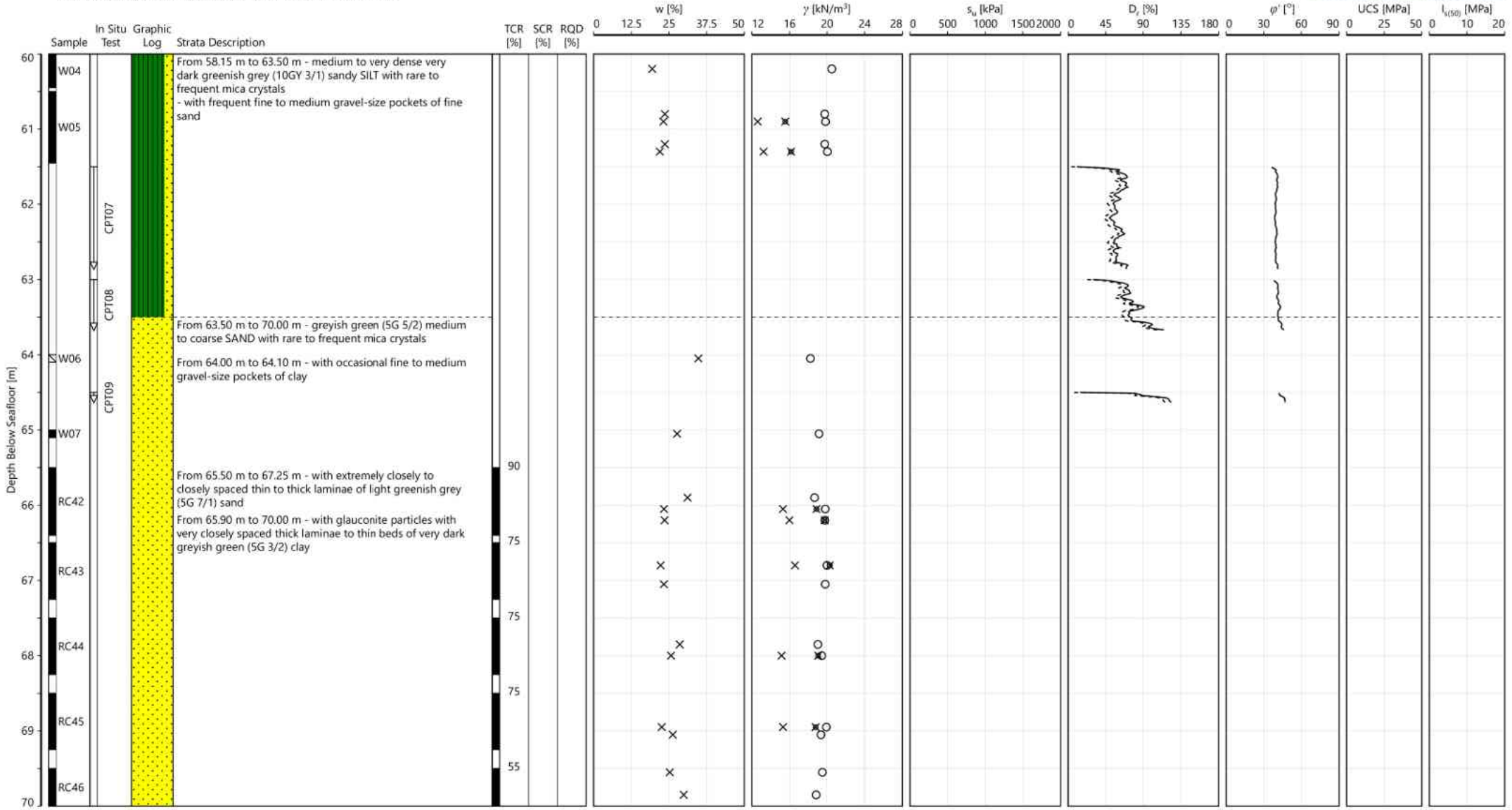
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH11	285733.5	5538830.2	37.32	07-Jul-2025 - 10-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH11

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

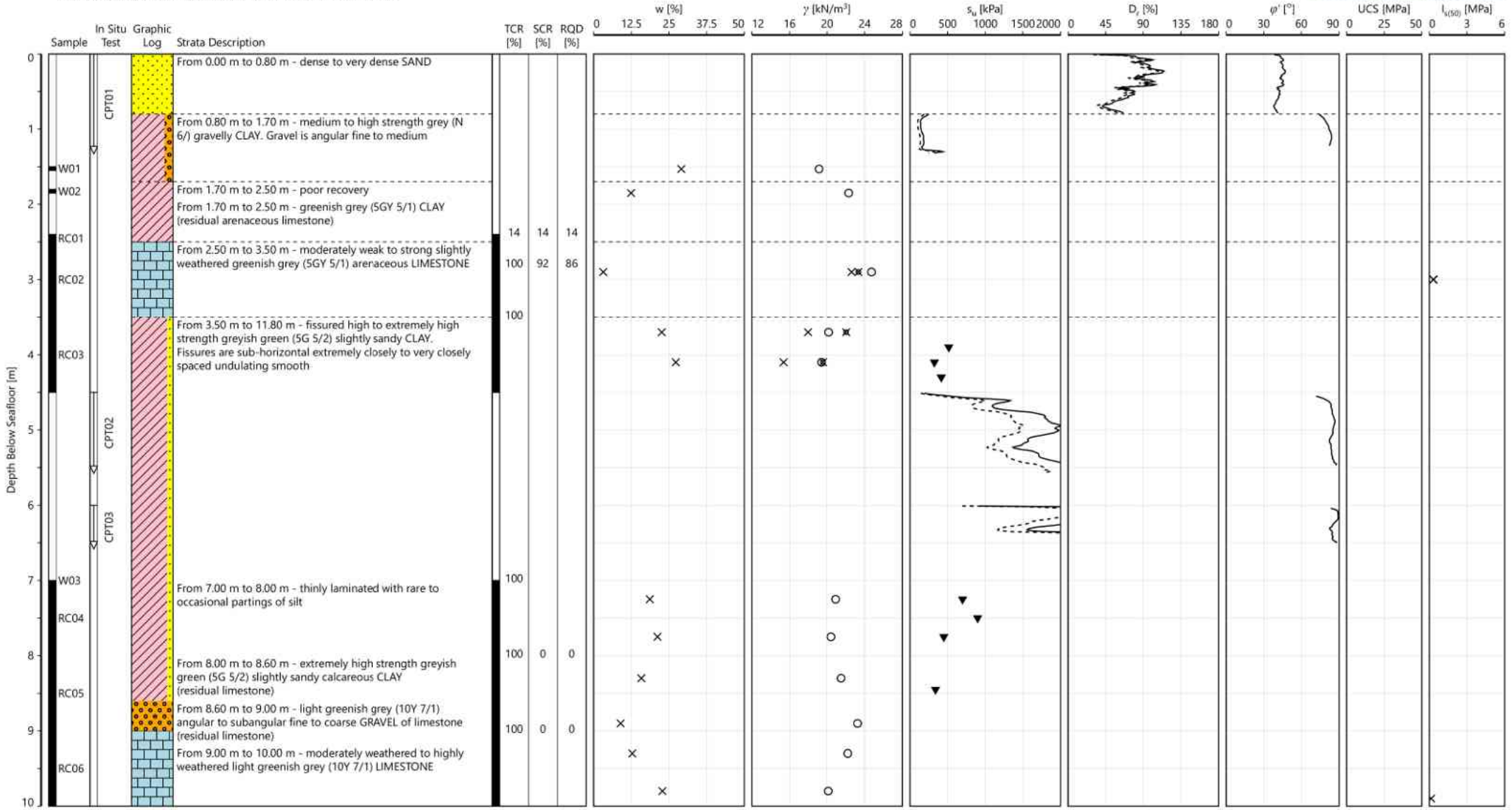
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH11	285733.5	5538830.2	37.32	07-Jul-2025 - 10-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH13

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

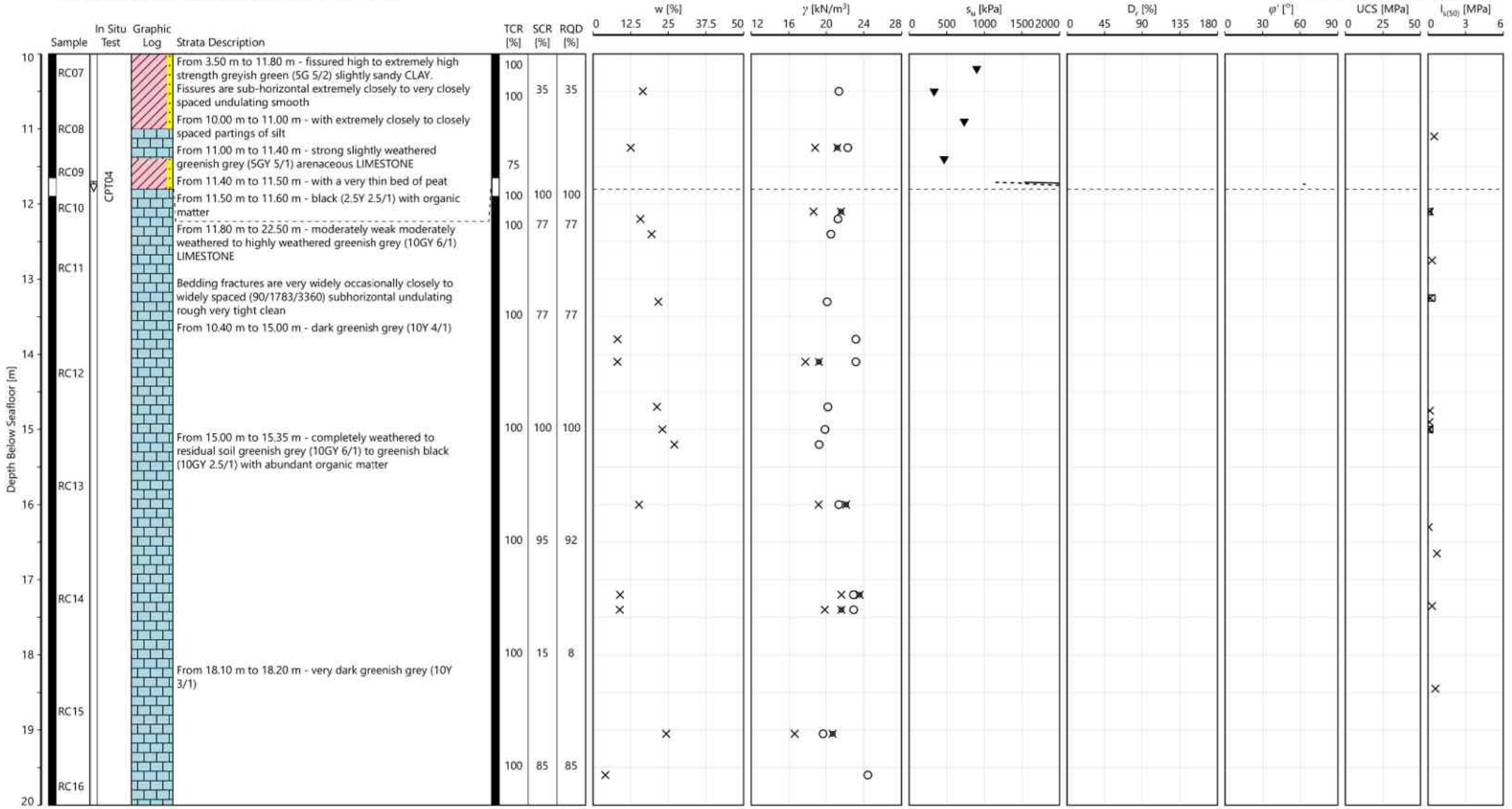
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH13	269495.1	5542750.0	44.53	04-Jul-2025 - 07-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



Sample	TCR [%]	SCR [%]	RQD [%]
RC07	100	35	35
RC08	100		
RC09	75		
RC10	100	100	100
RC11	100	77	77
RC12	100	77	77
RC13	100	100	100
RC14	100	95	92
RC15	100	15	8
RC16	100	85	85

GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH13

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

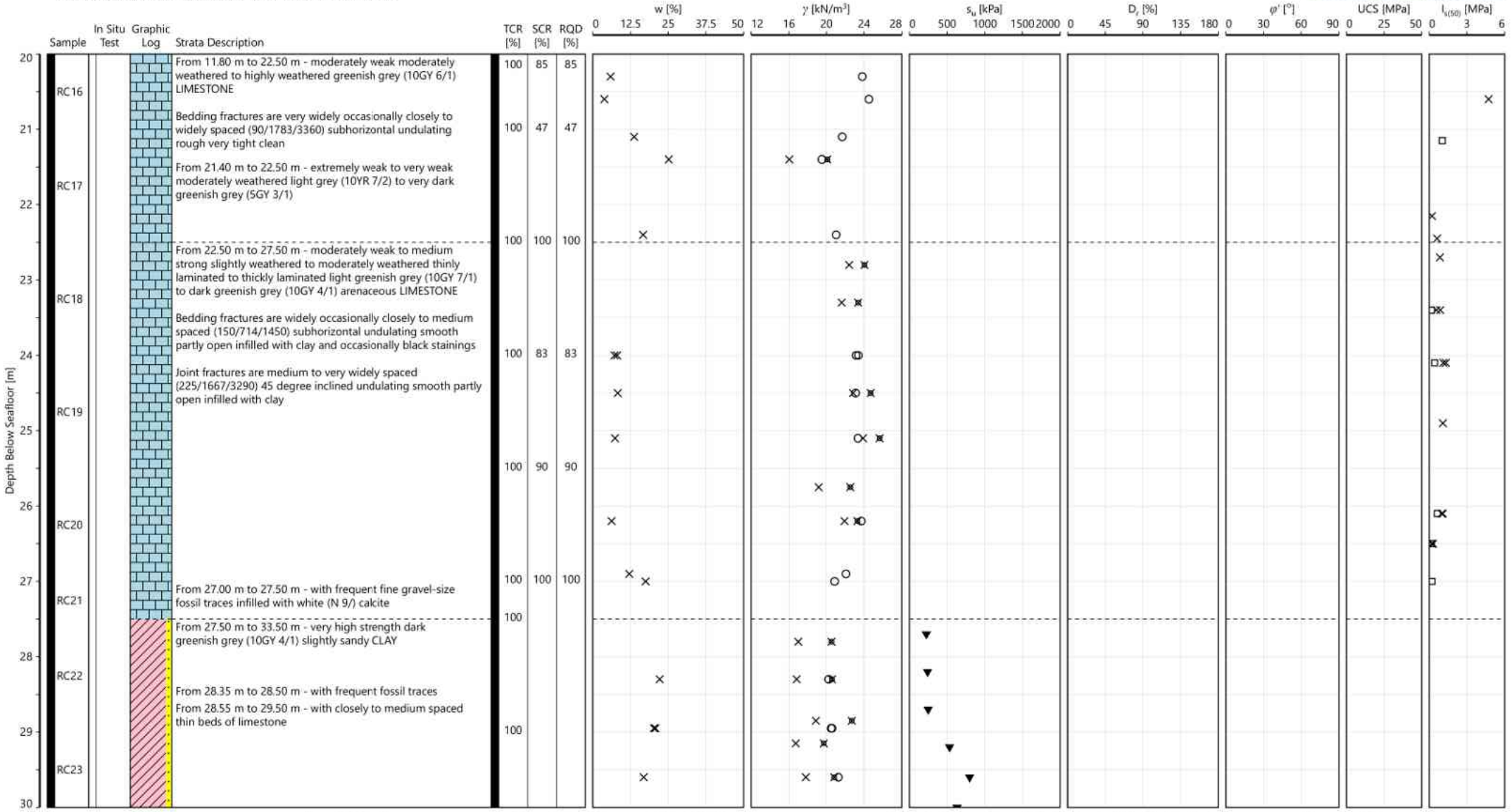
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH13	269495.1	5542750.0	44.53	04-Jul-2025 - 07-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH13

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

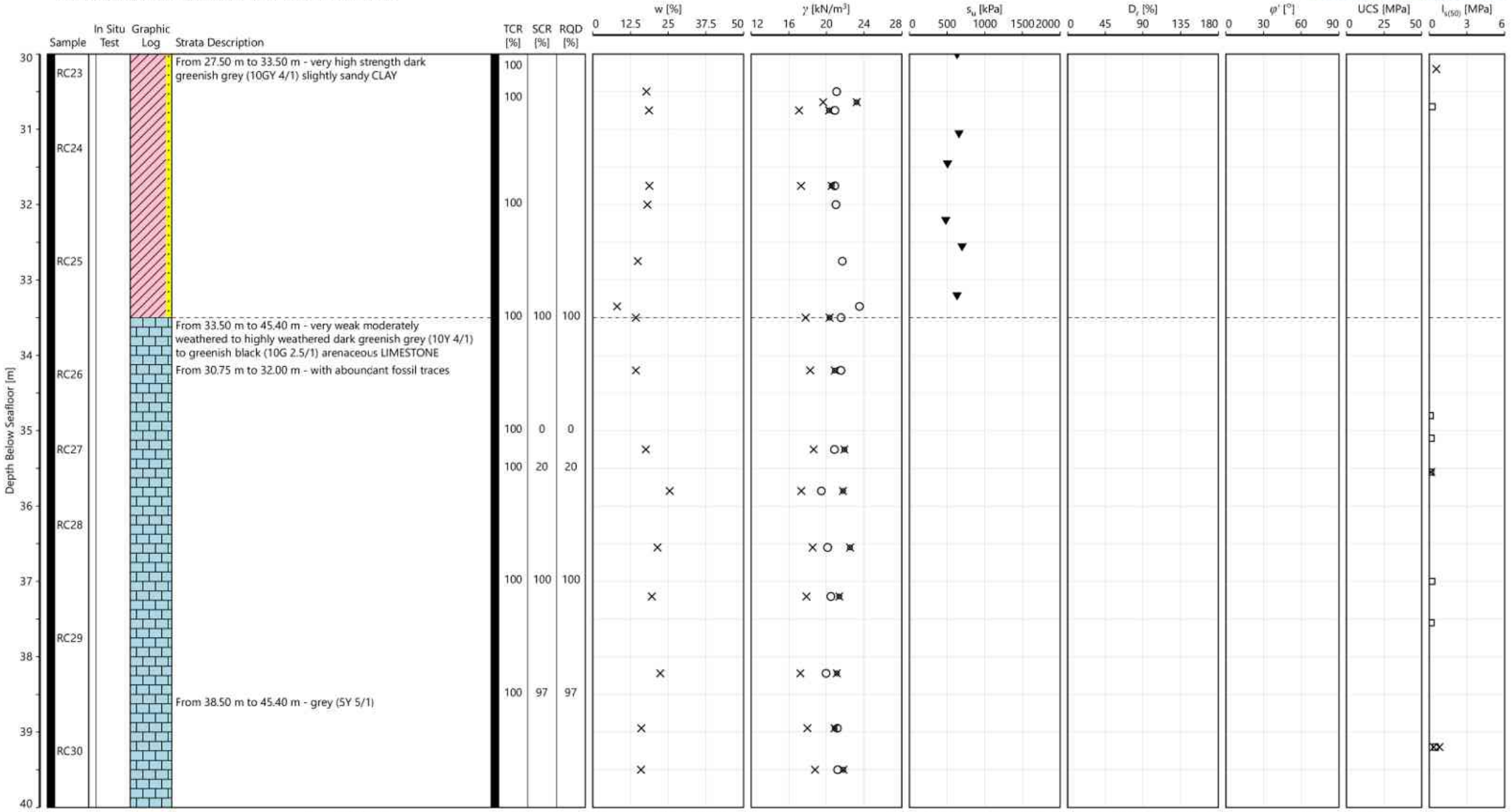
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH13	269495.1	5542750.0	44.53	04-Jul-2025 - 07-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH13

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

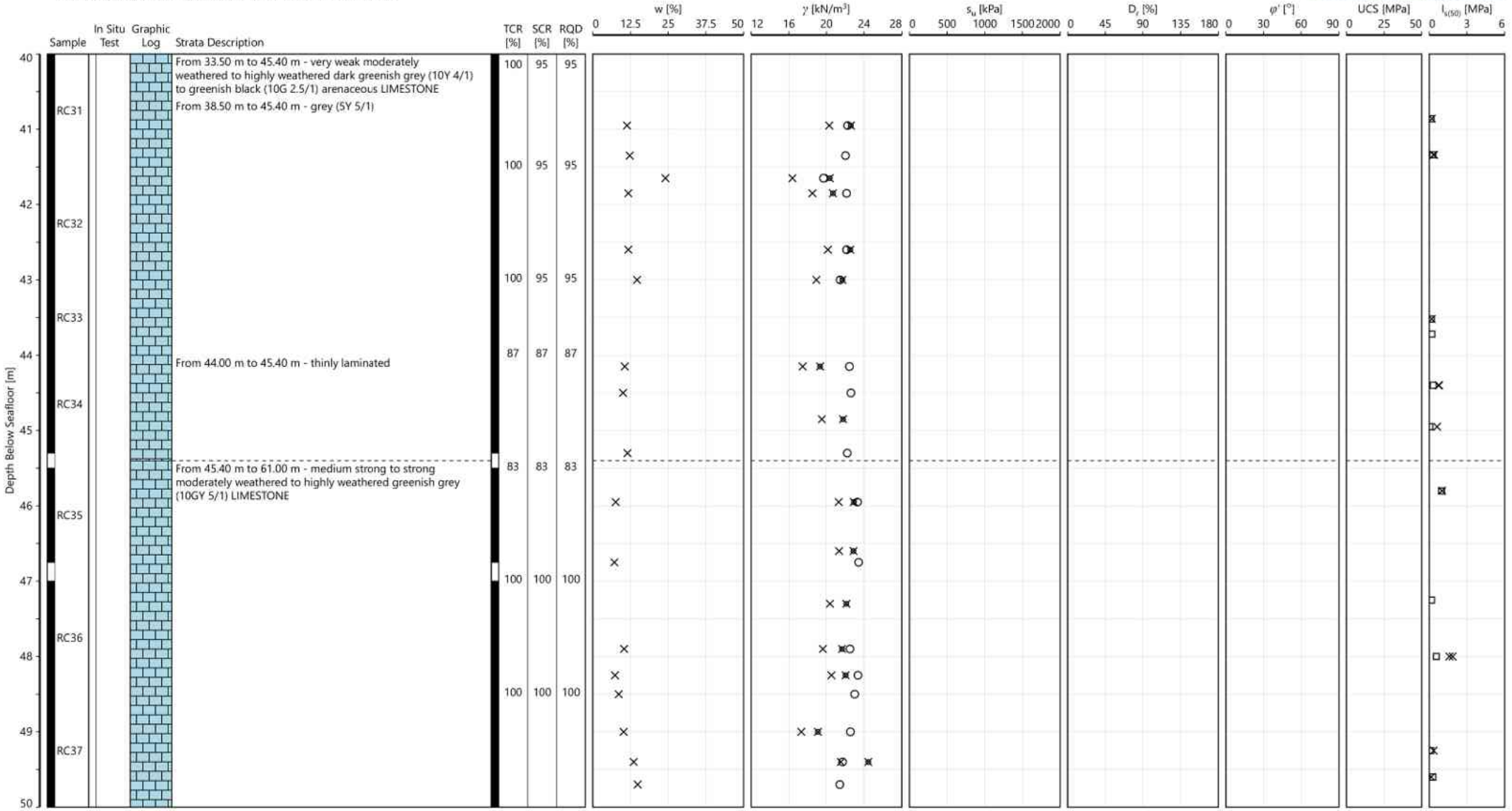
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH13	269495.1	5542750.0	44.53	04-Jul-2025 - 07-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.59
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH13

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

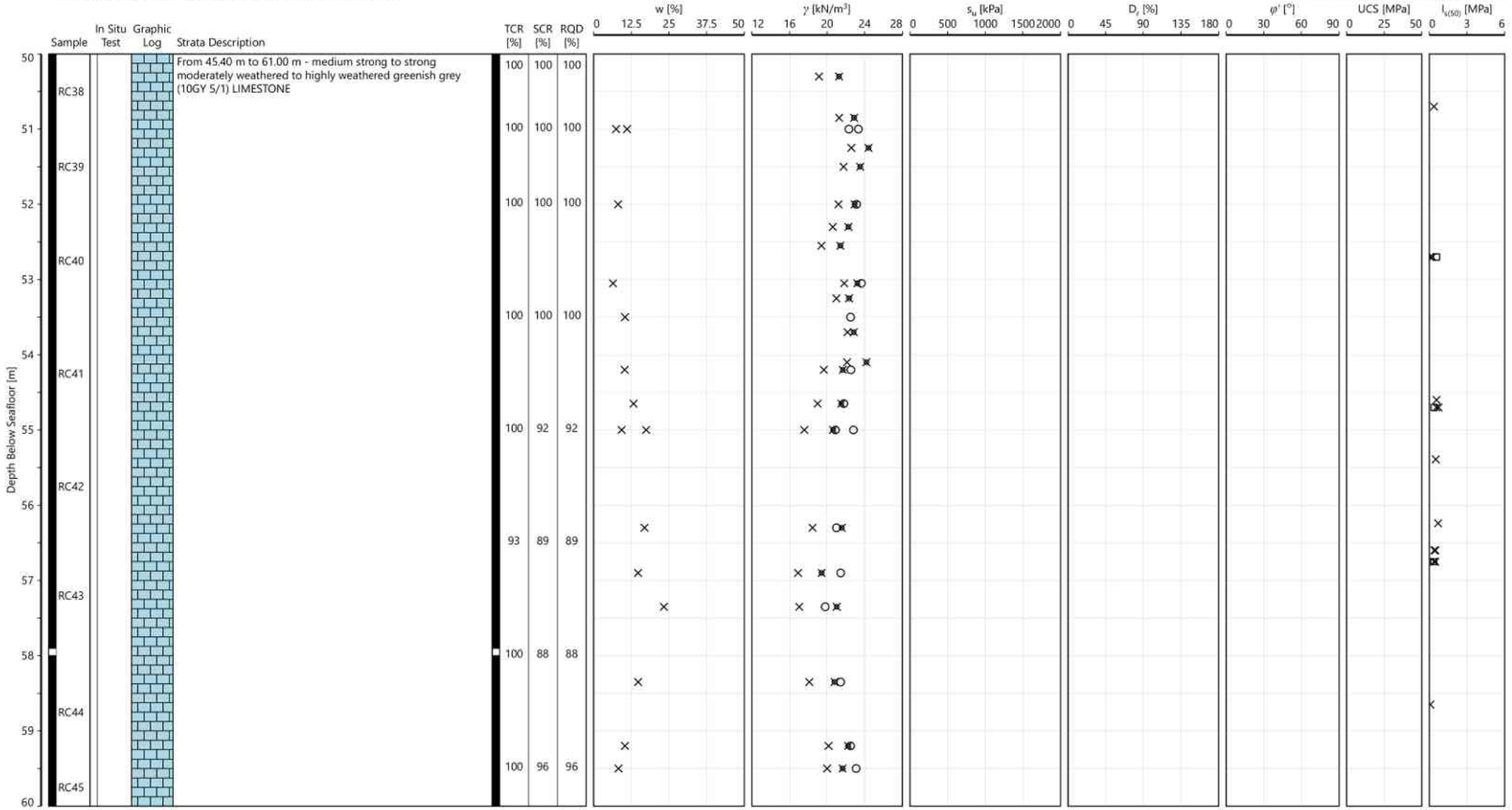
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH13	269495.1	5542750.0	44.53	04-Jul-2025 - 07-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.60
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH13

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

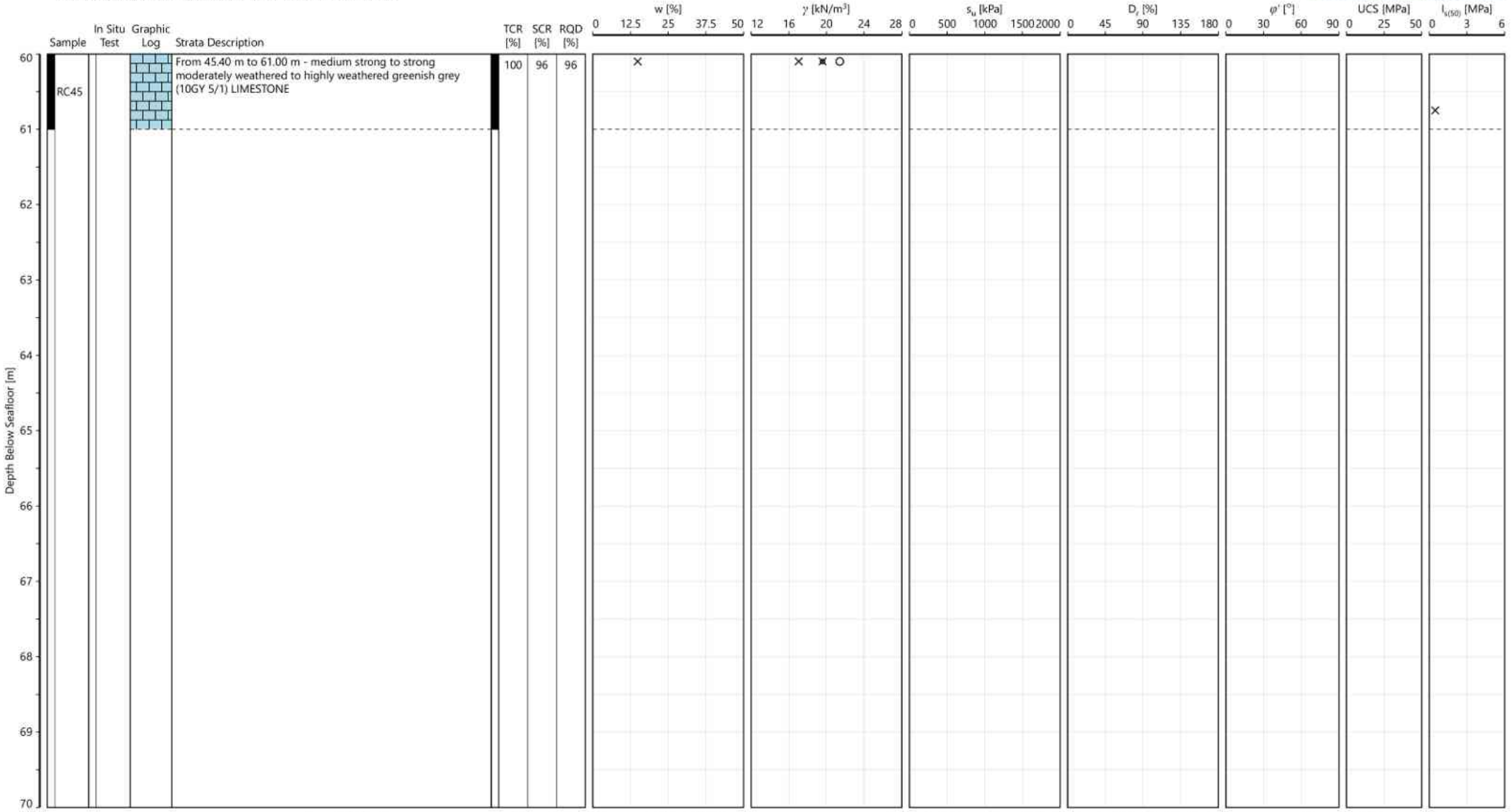
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH13	269495.1	5542750.0	44.53	04-Jul-2025 - 07-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.61
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH13

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

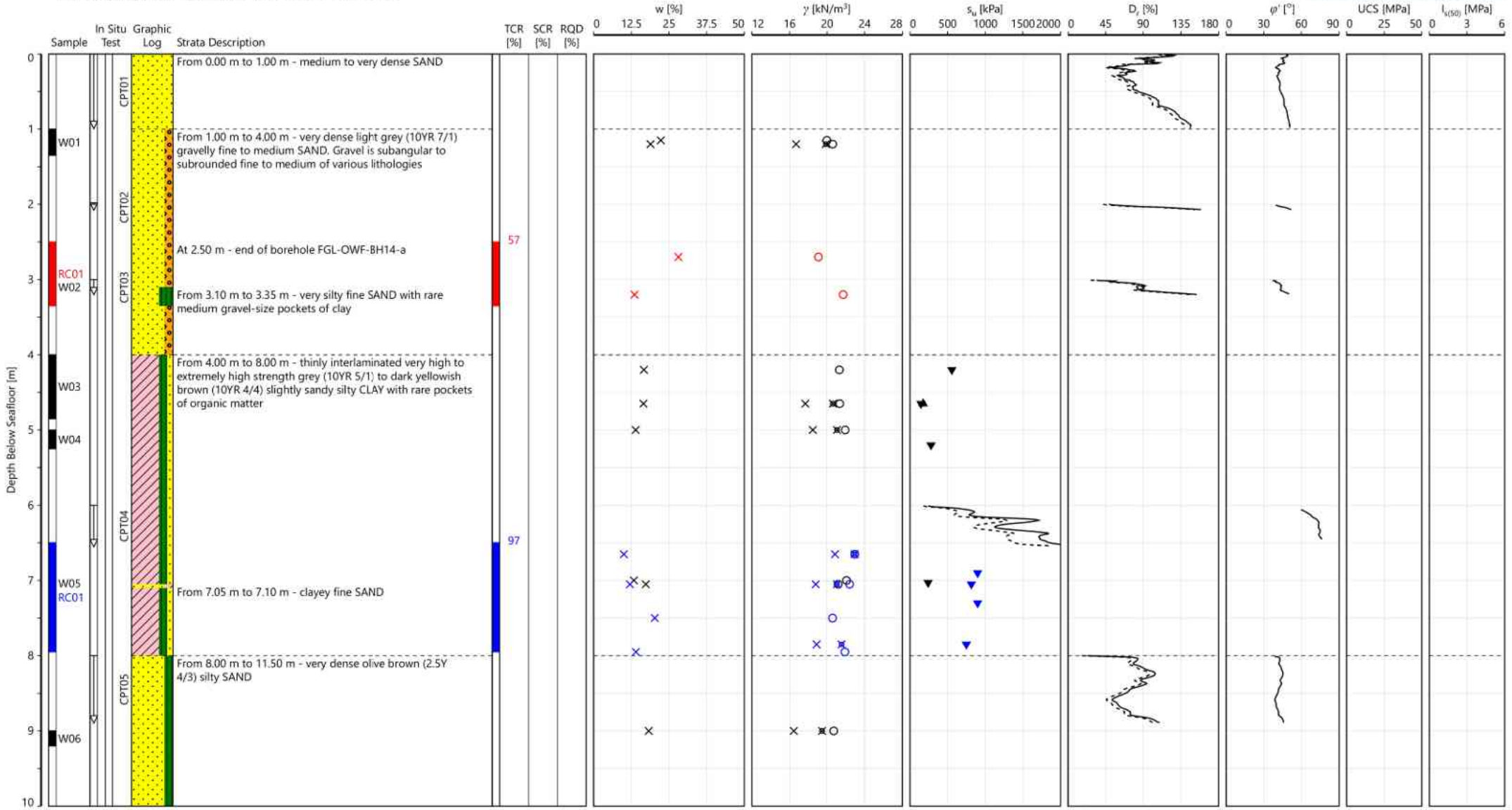
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH13	269495.1	5542750.0	44.53	04-Jul-2025 - 07-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.62
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH14
FGL-OWF-BH14-a
FGL-OWF-BH14-b

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

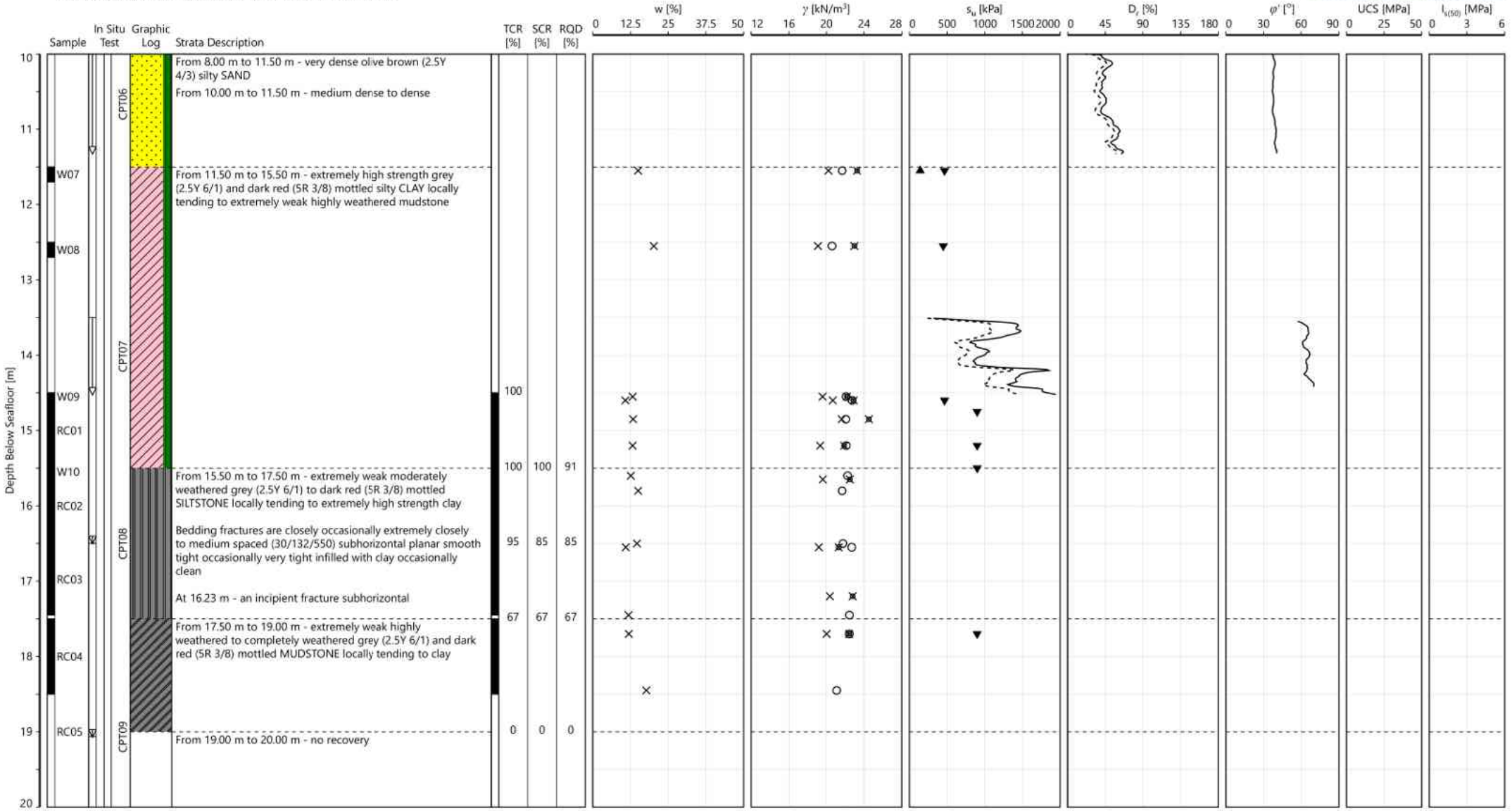
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH14	270070.8	5539850.2	46.79	28-Aug-2025 - 29-Aug-2025	Fugro Zephyr	EOH at 24.79 m BSF
FGL-OWF-BH14-a	270071.5	5539854.7	46.45	21-Sep-2025 - 22-Sep-2025	Fugro Zephyr	
FGL-OWF-BH14-b	270075.5	5539852.6	46.14	26-Sep-2025 - 28-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH14
FGL-OWF-BH14-a
FGL-OWF-BH14-b

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

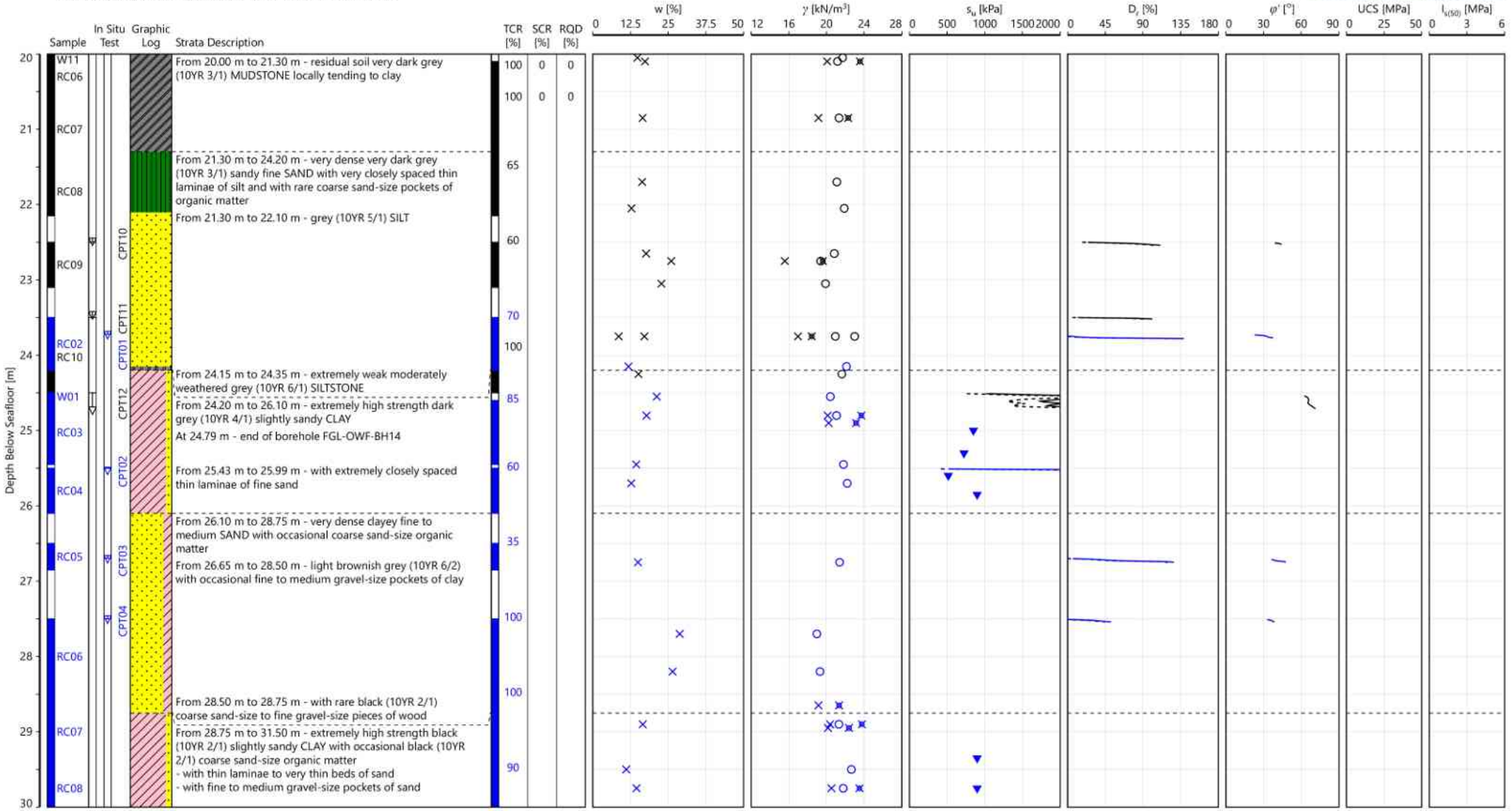
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH14	270070.8	5539850.2	46.79	28-Aug-2025 - 29-Aug-2025	Fugro Zephyr	EOH at 24.79 m BSF
FGL-OWF-BH14-a	270071.5	5539854.7	46.45	21-Sep-2025 - 22-Sep-2025	Fugro Zephyr	
FGL-OWF-BH14-b	270075.5	5539852.6	46.14	26-Sep-2025 - 28-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH14
FGL-OWF-BH14-a
FGL-OWF-BH14-b

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

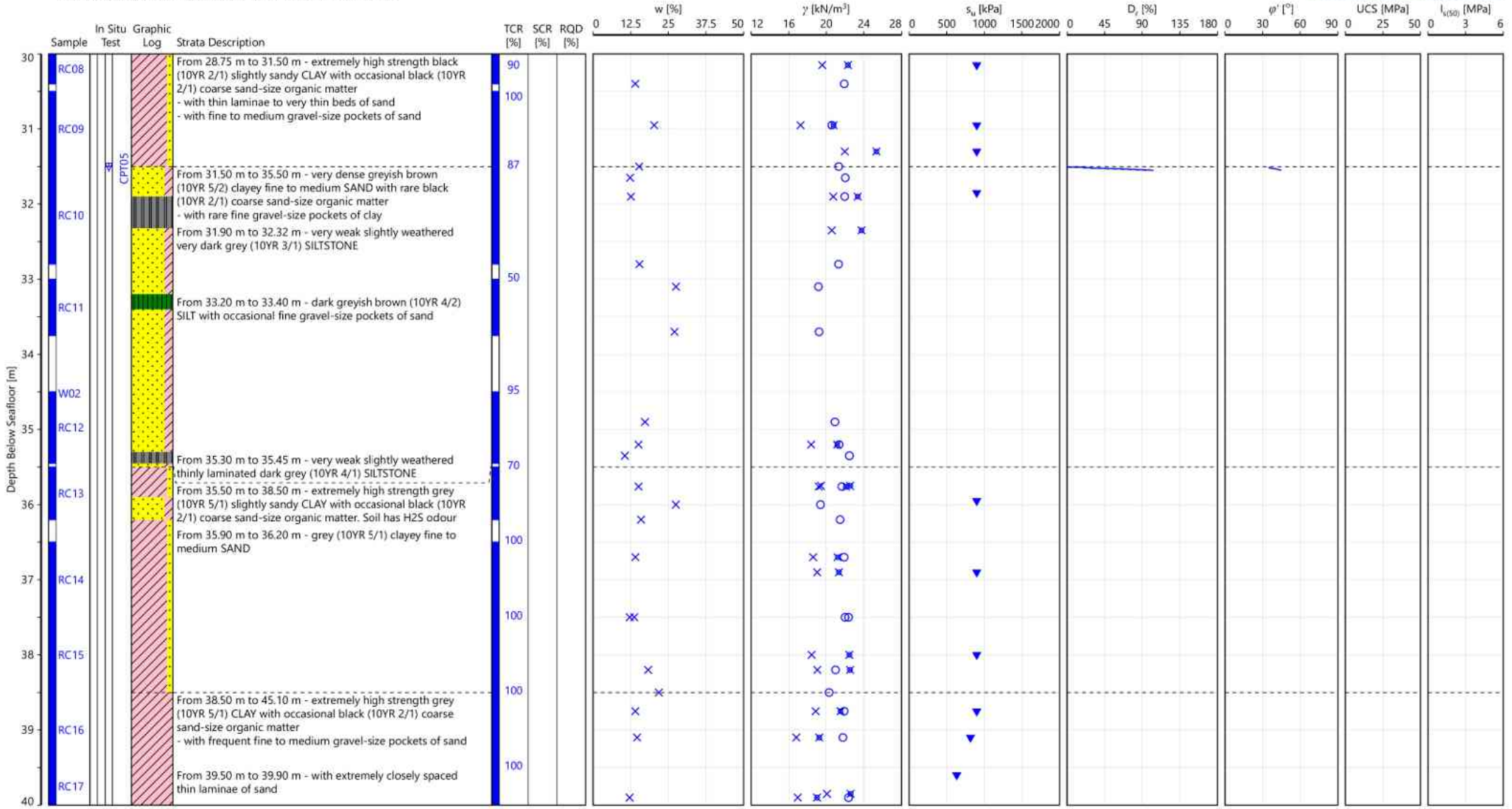
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$ axial
$I_{s(50)}$ diametral
$I_{s(50)}$ irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH14	270070.8	5539850.2	46.79	28-Aug-2025 - 29-Aug-2025	Fugro Zephyr	EOH at 24.79 m BSF
FGL-OWF-BH14-a	270071.5	5539854.7	46.45	21-Sep-2025 - 22-Sep-2025	Fugro Zephyr	
FGL-OWF-BH14-b	270075.5	5539852.6	46.14	26-Sep-2025 - 28-Sep-2025	Fugro Zephyr	

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH14
FGL-OWF-BH14-a
FGL-OWF-BH14-b

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

Unconfined Compressive Strength (UCS) :
UCS

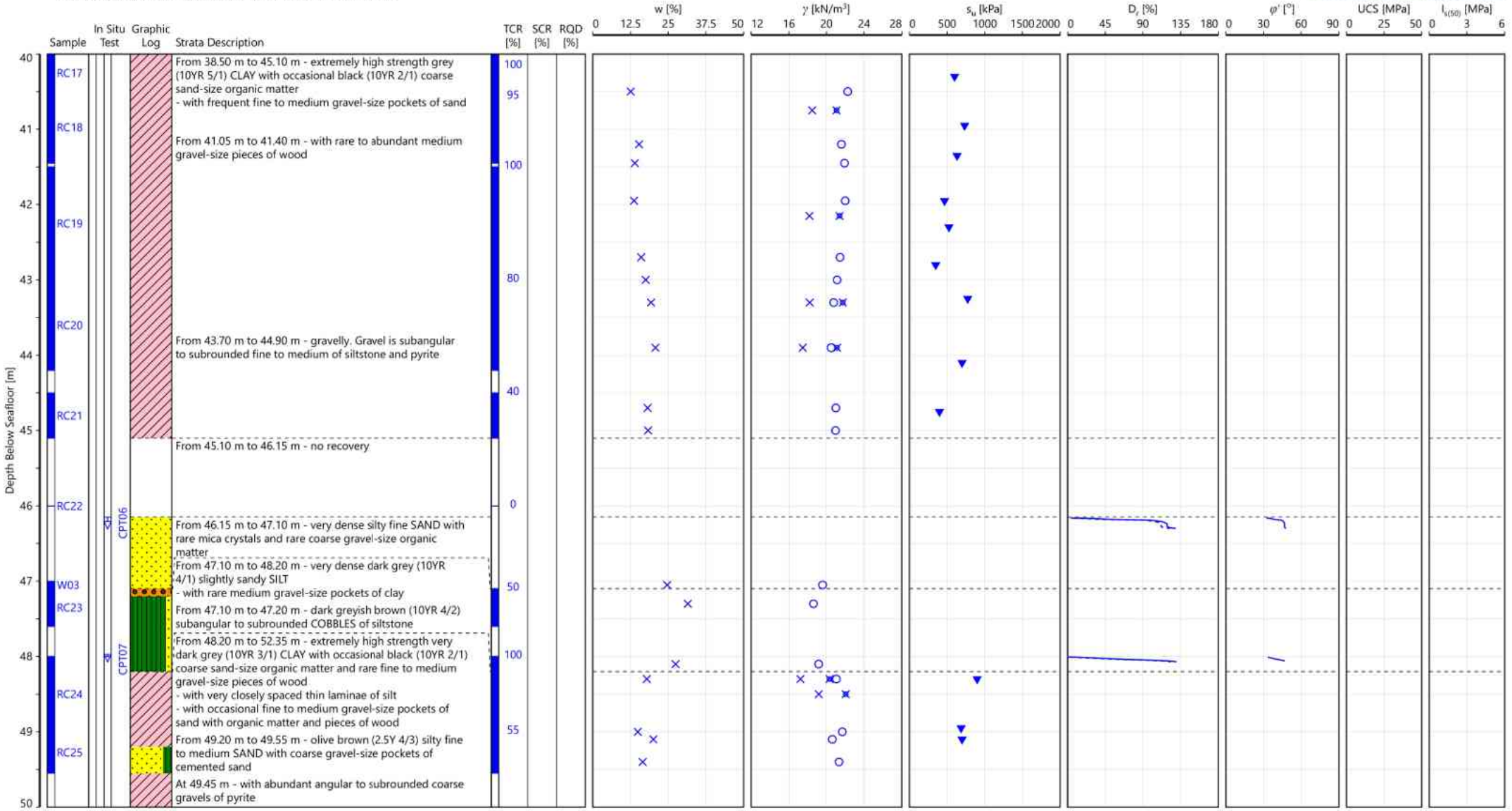
Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH14	270070.8	5539850.2	46.79	28-Aug-2025 - 29-Aug-2025	Fugro Zephyr	EOH at 24.79 m BSF
FGL-OWF-BH14-a	270071.5	5539854.7	46.45	21-Sep-2025 - 22-Sep-2025	Fugro Zephyr	
FGL-OWF-BH14-b	270075.5	5539852.6	46.14	26-Sep-2025 - 28-Sep-2025	Fugro Zephyr	

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH14
FGL-OWF-BH14-a
FGL-OWF-BH14-b

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample
Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation
In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

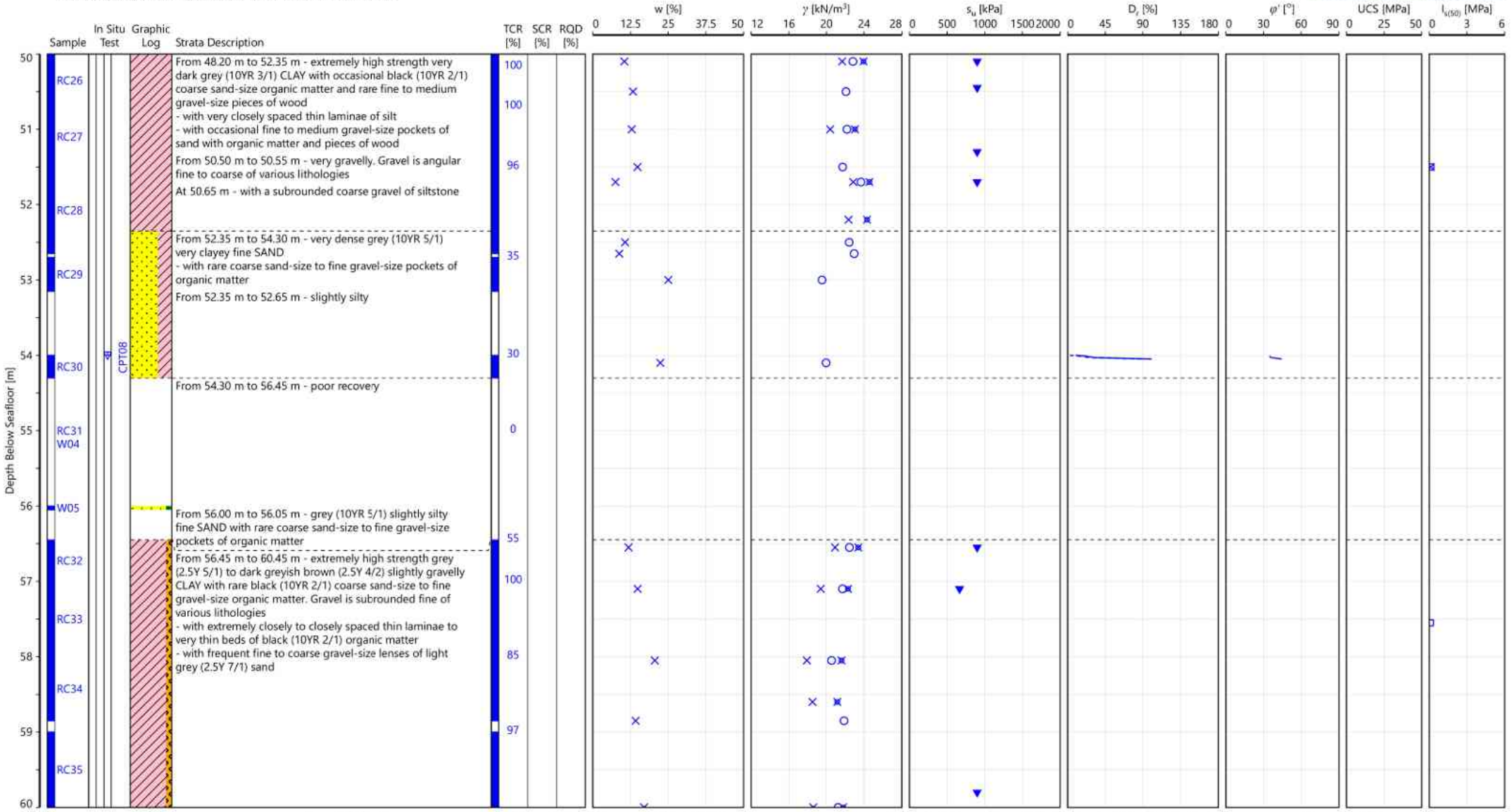
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH14	270070.8	5539850.2	46.79	28-Aug-2025 - 29-Aug-2025	Fugro Zephyr	EOH at 24.79 m BSF
FGL-OWF-BH14-a	270071.5	5539854.7	46.45	21-Sep-2025 - 22-Sep-2025	Fugro Zephyr	
FGL-OWF-BH14-b	270075.5	5539852.6	46.14	26-Sep-2025 - 28-Sep-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.67
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH14
FGL-OWF-BH14-a
FGL-OWF-BH14-b

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

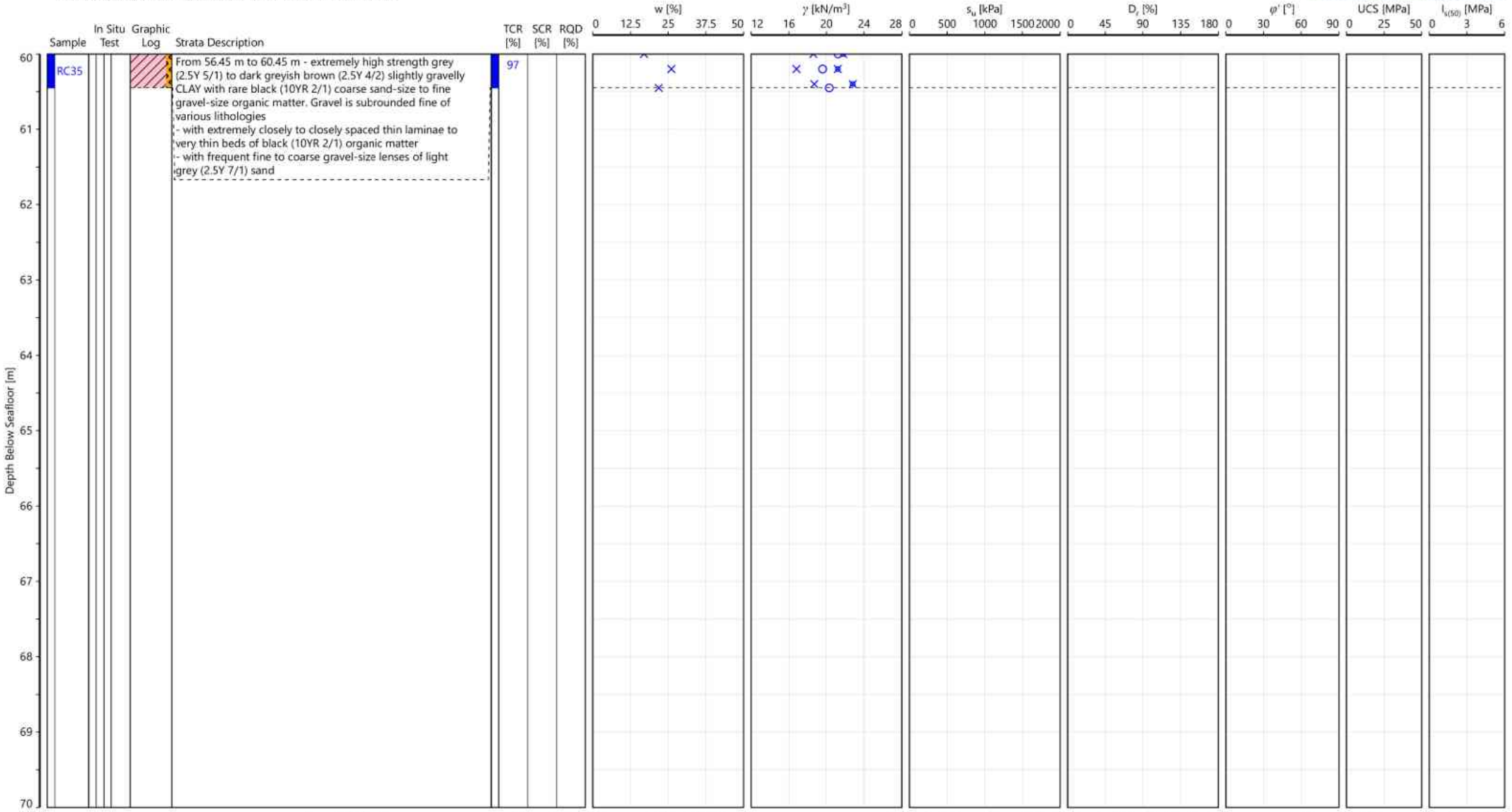
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH14	270070.8	5539850.2	46.79	28-Aug-2025 - 29-Aug-2025	Fugro Zephyr	EOH at 24.79 m BSF
FGL-OWF-BH14-a	270071.5	5539854.7	46.45	21-Sep-2025 - 22-Sep-2025	Fugro Zephyr	
FGL-OWF-BH14-b	270075.5	5539852.6	46.14	26-Sep-2025 - 28-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.68
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH14
FGL-OWF-BH14-a
FGL-OWF-BH14-b

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

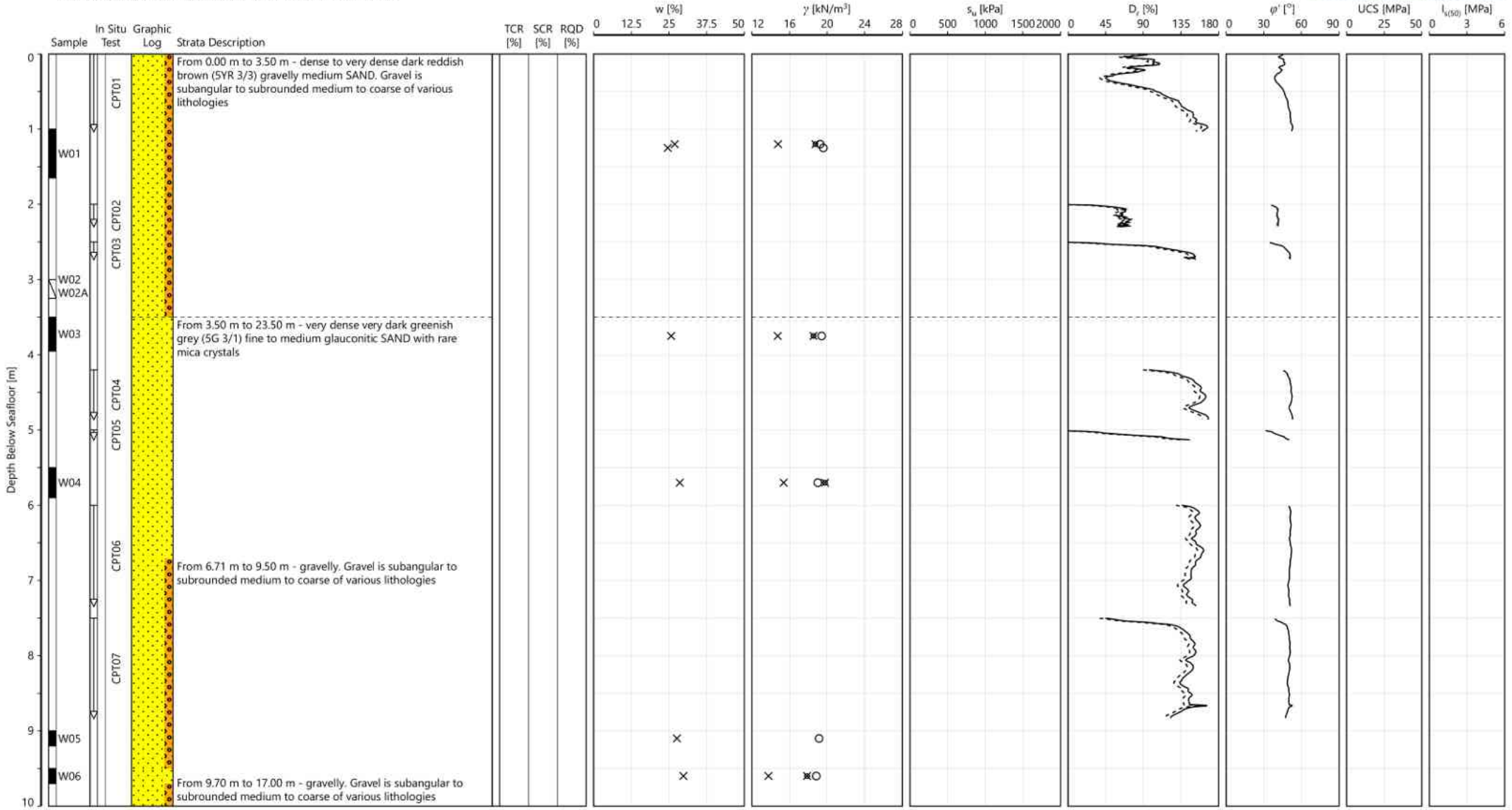
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH14	270070.8	5539850.2	46.79	28-Aug-2025 - 29-Aug-2025	Fugro Zephyr	EOH at 24.79 m BSF
FGL-OWF-BH14-a	270071.5	5539854.7	46.45	21-Sep-2025 - 22-Sep-2025	Fugro Zephyr	
FGL-OWF-BH14-b	270075.5	5539852.6	46.14	26-Sep-2025 - 28-Sep-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.69
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH15

FGL-OWF-BH15-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH15	276102.8	5547359.6	46.83	29-Jun-2025 - 02-Jul-2025	Fugro Zephyr	
FGL-OWF-BH15-a	276100.1	5547364.9	46.90	16-Oct-2025 - 18-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

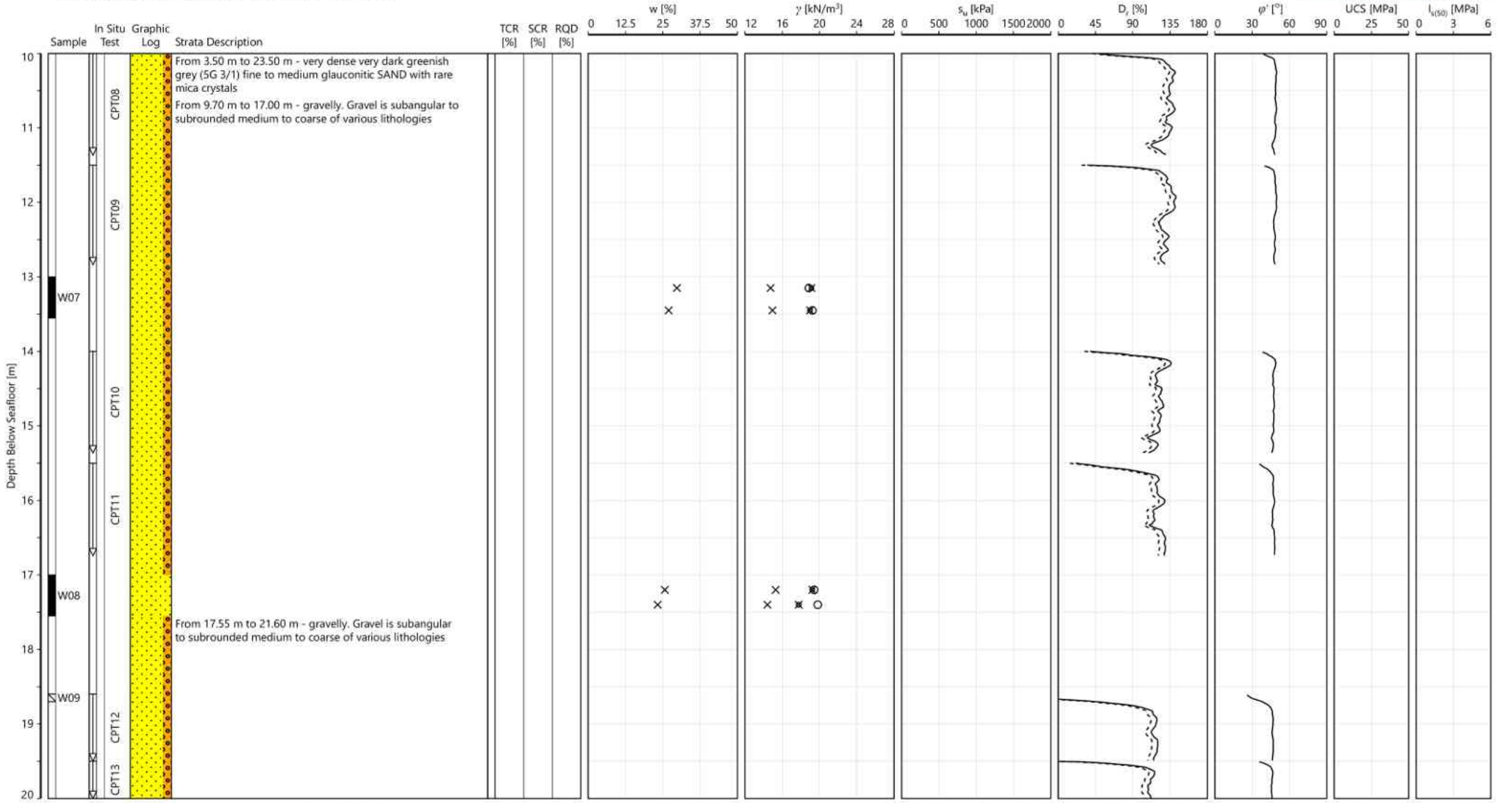
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report

Plate 2.70

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH15

FGL-OWF-BH15-a

Sample Details:

W	Wison Push Sampler (WIP)
RC	Rock Coring Sample
	Disturbed/Undisturbed Sample

Core Details:

TCR	Total Core Recovery
SCR	Solid Core Recovery
RQD	Rock Quality Designation

In Situ test Details:

CPT	Cone penetration test

Water Content (w):

- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :

- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :

- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :

- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :

- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :

- UCS

Point Load Index Strength ($I_{s(50)}$) :

- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

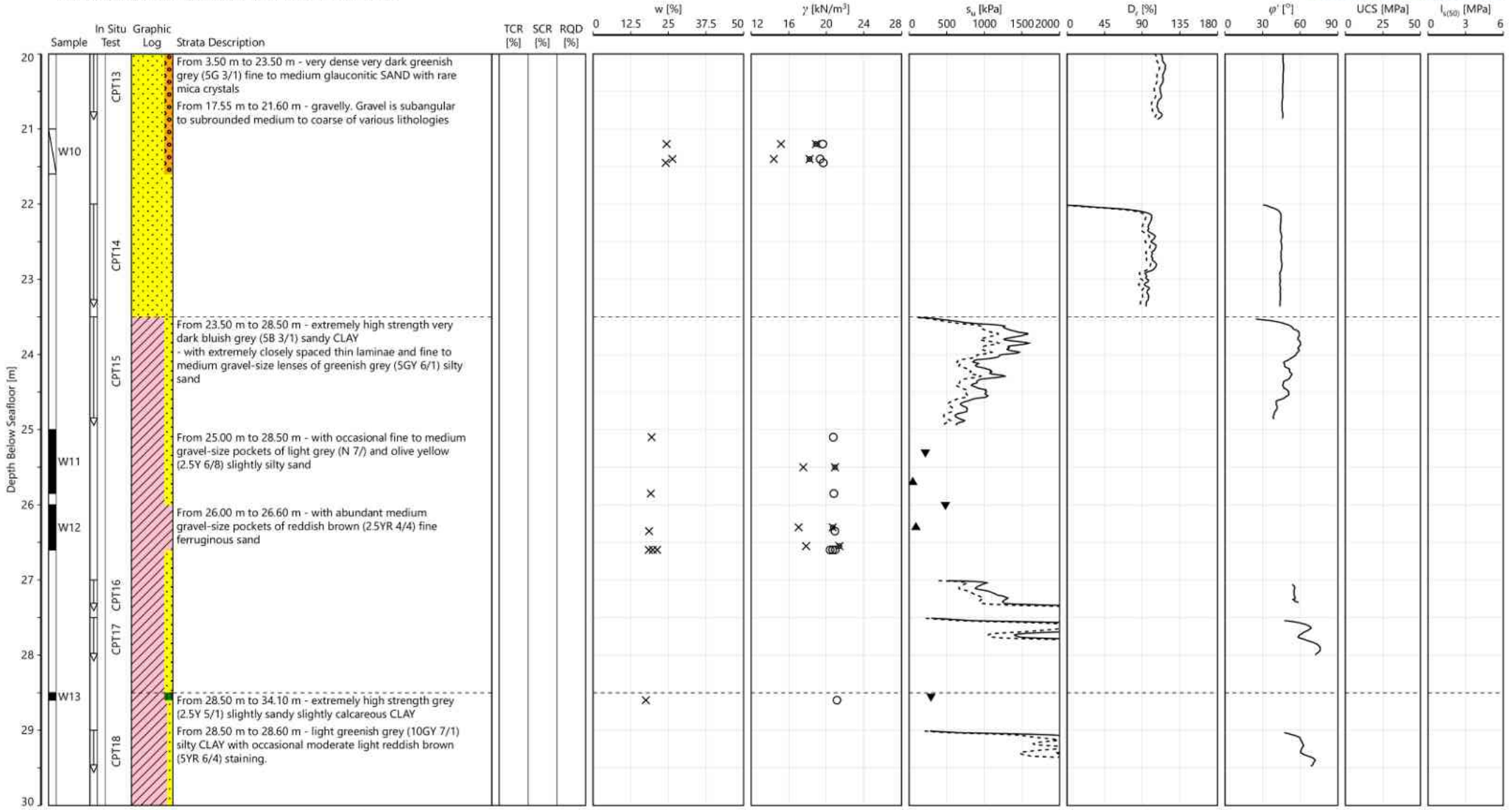
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH15	276102.8	5547359.6	46.83	29-Jun-2025 - 02-Jul-2025	Fugro Zephyr	
FGL-OWF-BH15-a	276100.1	5547364.9	46.90	16-Oct-2025 - 18-Oct-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.71

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH15
FGL-OWF-BH15-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

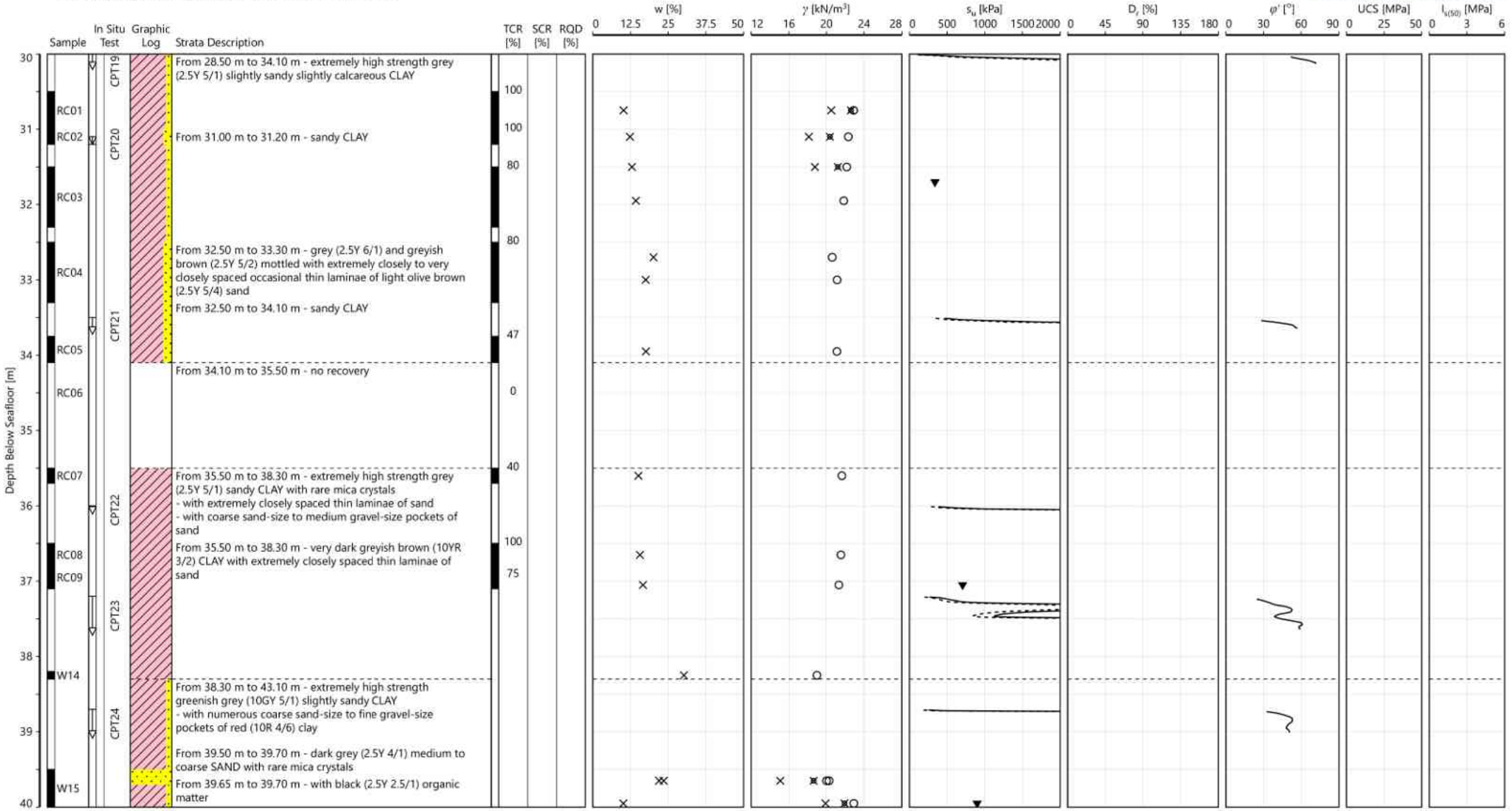
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH15	276102.8	5547359.6	46.83	29-Jun-2025 - 02-Jul-2025	Fugro Zephyr	
FGL-OWF-BH15-a	276100.1	5547364.9	46.90	16-Oct-2025 - 18-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH15

FGL-OWF-BH15-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH15	276102.8	5547359.6	46.83	29-Jun-2025 - 02-Jul-2025	Fugro Zephyr	
FGL-OWF-BH15-a	276100.1	5547364.9	46.90	16-Oct-2025 - 18-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

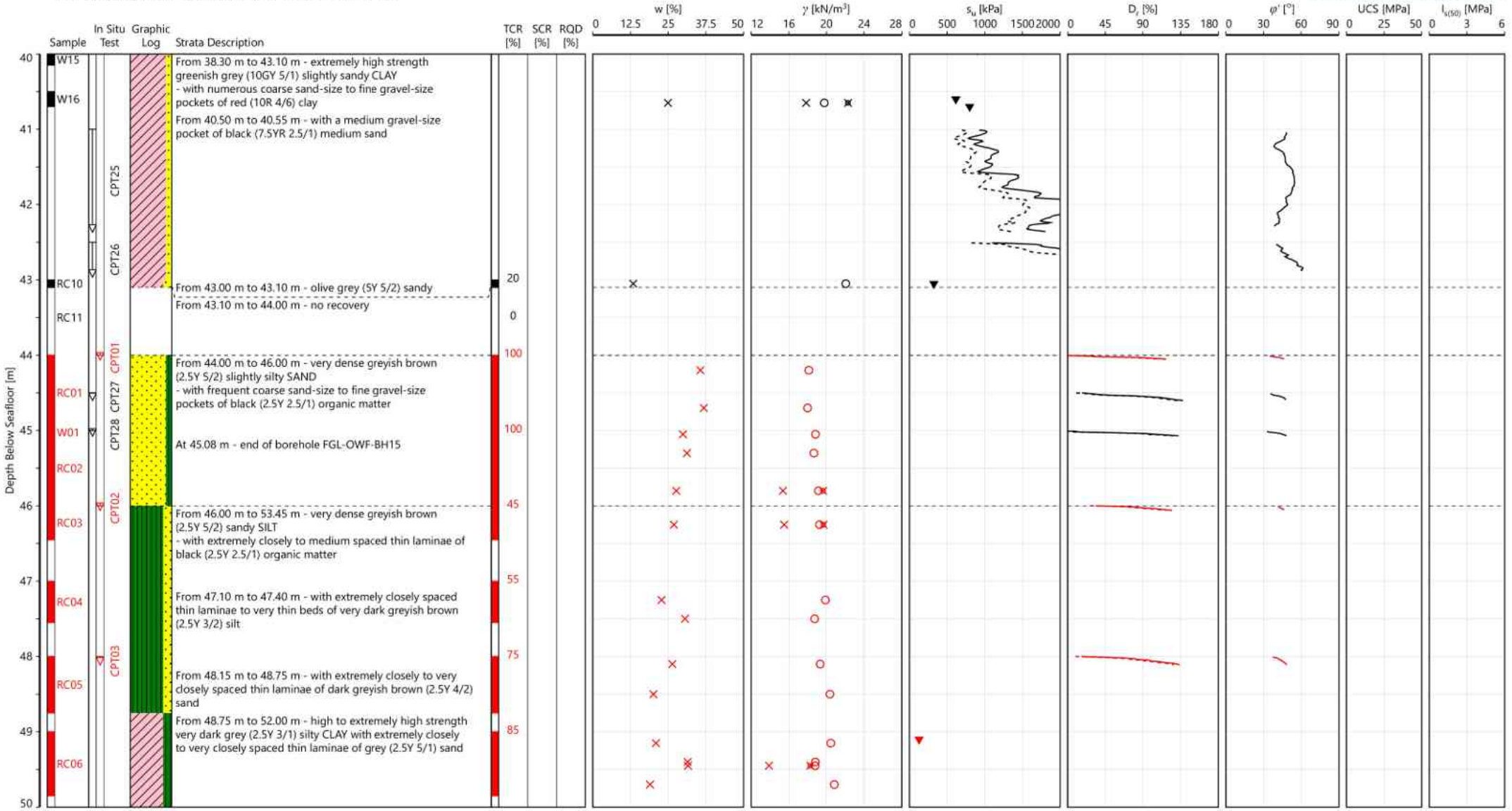
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report

Plate 2.73

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH15
FGL-OWF-BH15-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

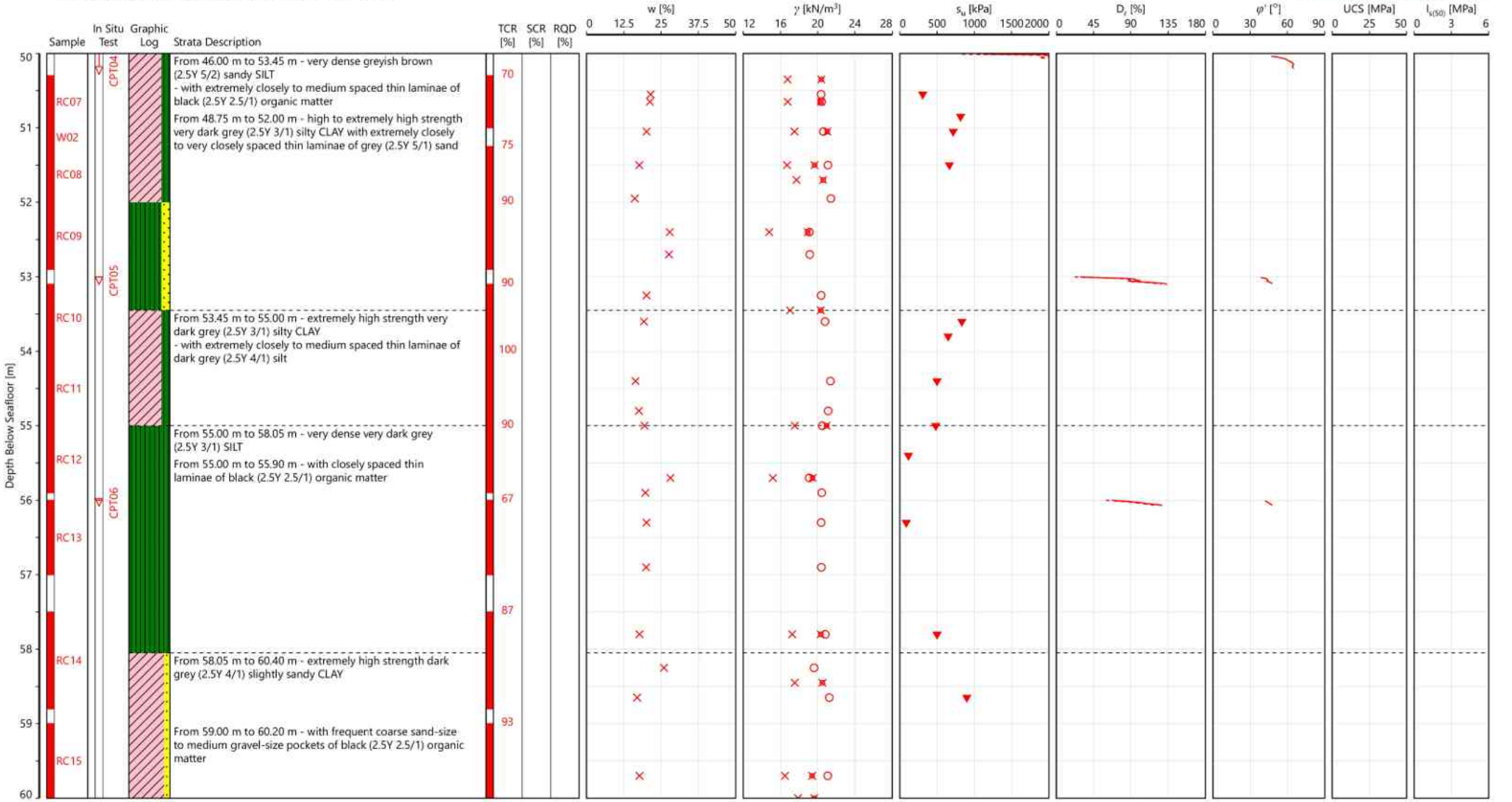
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH15	276102.8	5547359.6	46.83	29-Jun-2025 - 02-Jul-2025	Fugro Zephyr	
FGL-OWF-BH15-a	276100.1	5547364.9	46.90	16-Oct-2025 - 18-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH15
FGL-OWF-BH15-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

Unconfined Compressive Strength (UCS) :
UCS

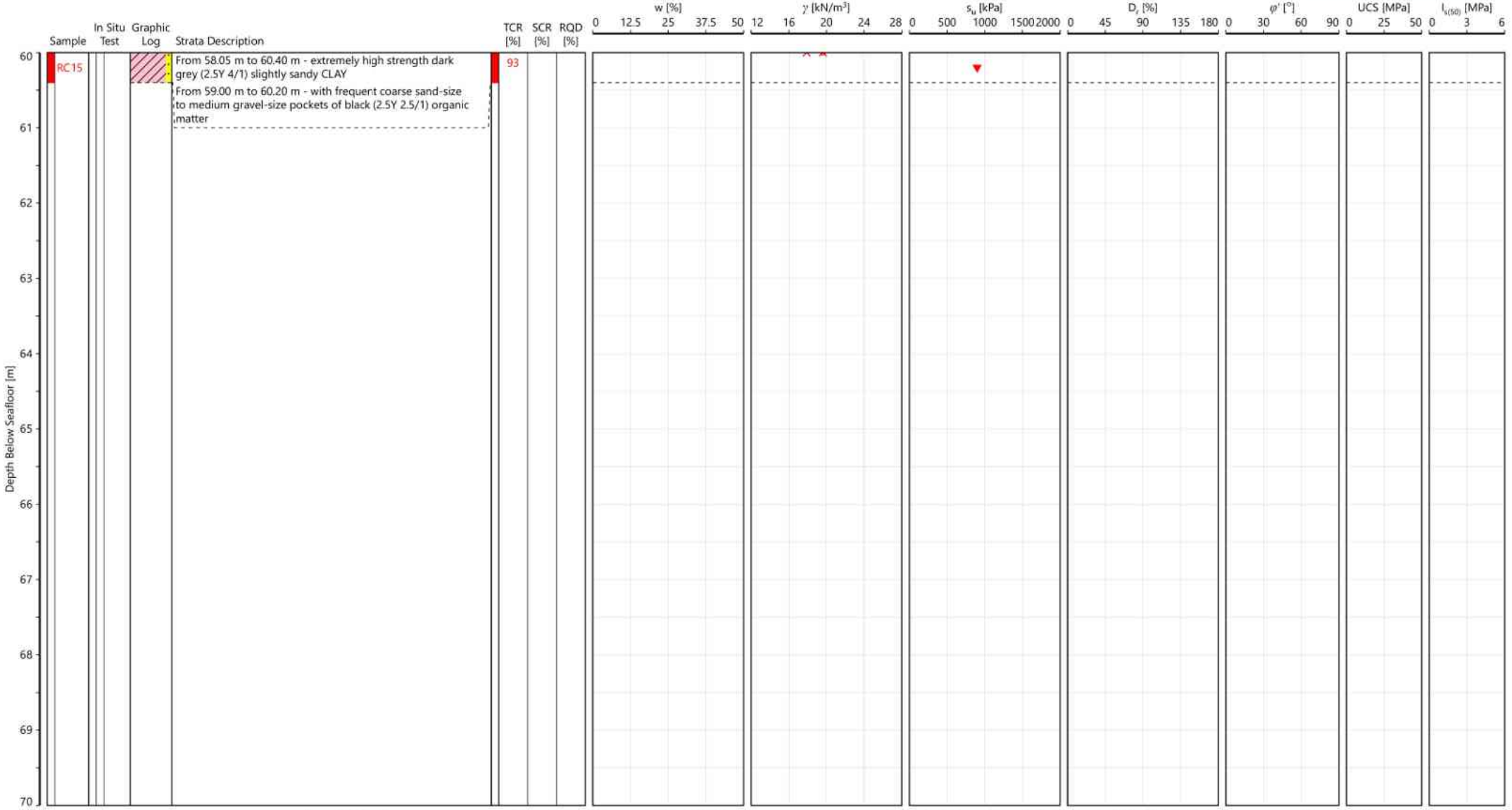
Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH15	276102.8	5547359.6	46.83	29-Jun-2025 - 02-Jul-2025	Fugro Zephyr	
FGL-OWF-BH15-a	276100.1	5547364.9	46.90	16-Oct-2025 - 18-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC15			From 58.05 m to 60.40 m - extremely high strength dark grey (2.5Y 4/1) slightly sandy CLAY From 59.00 m to 60.20 m - with frequent coarse sand-size to medium gravel-size pockets of black (2.5Y 2.5/1) organic matter	93		



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH15

FGL-OWF-BH15-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

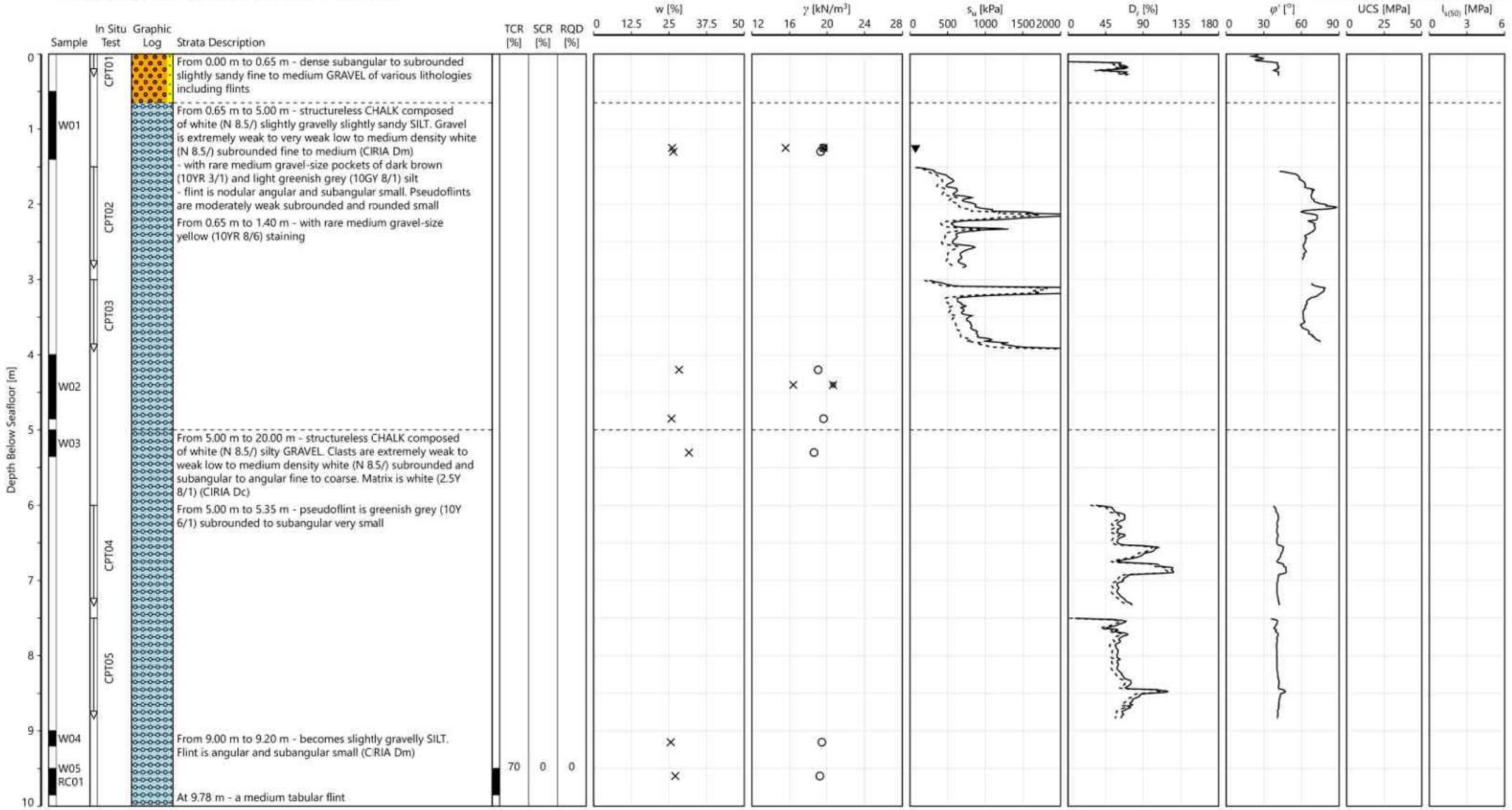
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH15	276102.8	5547359.6	46.83	29-Jun-2025 - 02-Jul-2025	Fugro Zephyr	
FGL-OWF-BH15-a	276100.1	5547364.9	46.90	16-Oct-2025 - 18-Oct-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.76
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH18

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

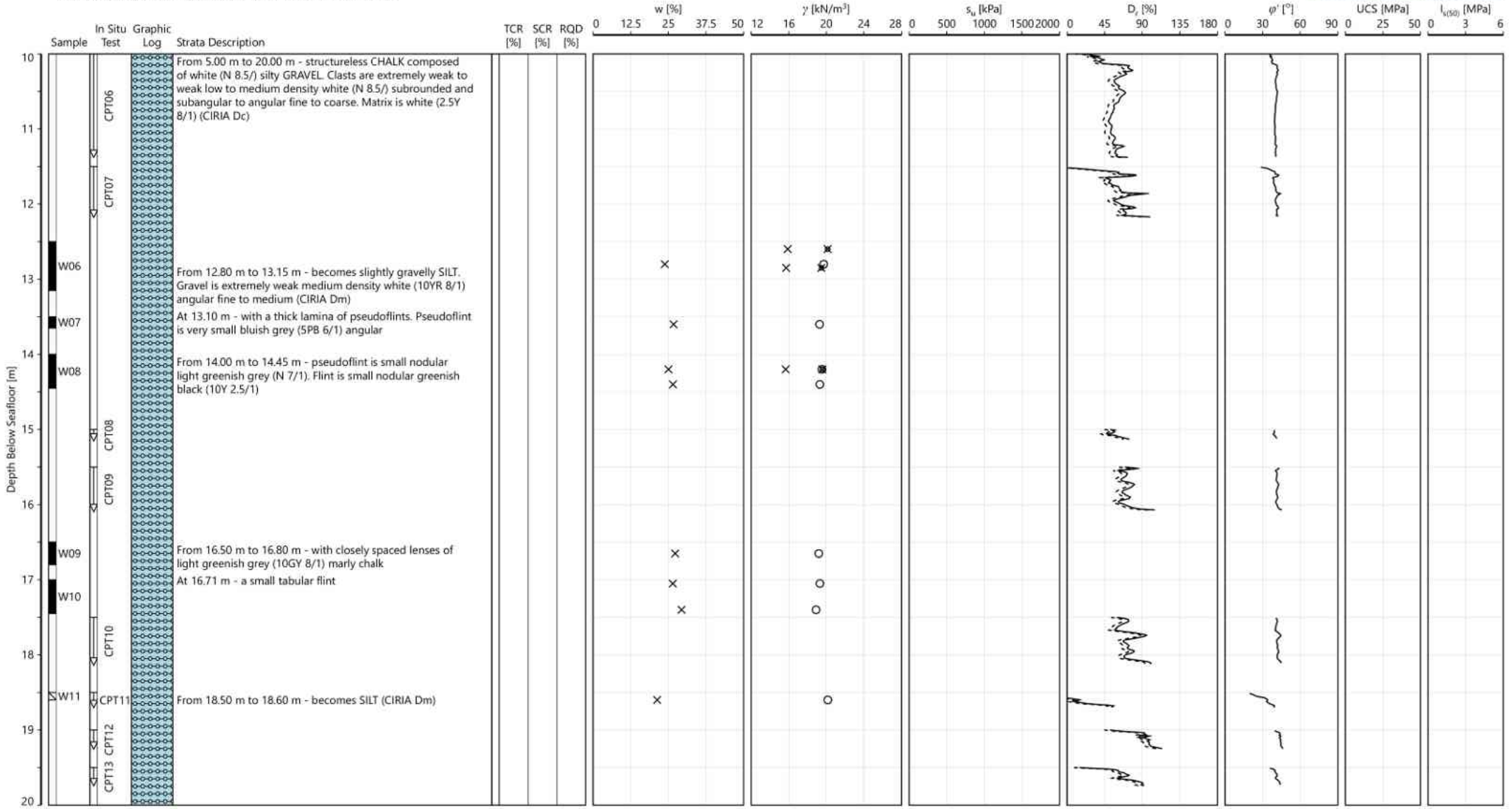
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH18	292490.8	5549580.2	41.48	22-Jun-2025 - 26-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH18

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

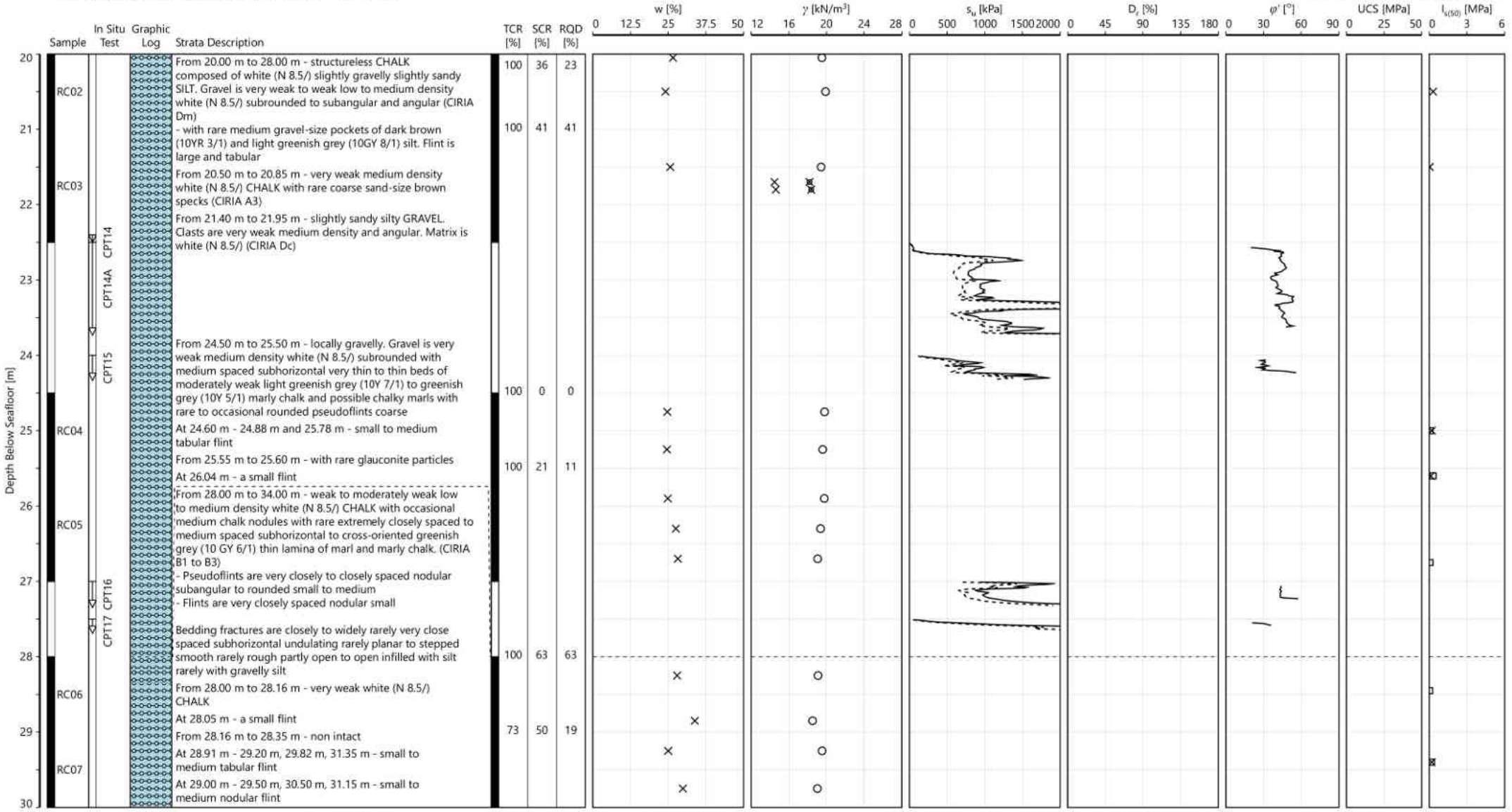
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH18	292490.8	5549580.2	41.48	22-Jun-2025 - 26-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH18

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

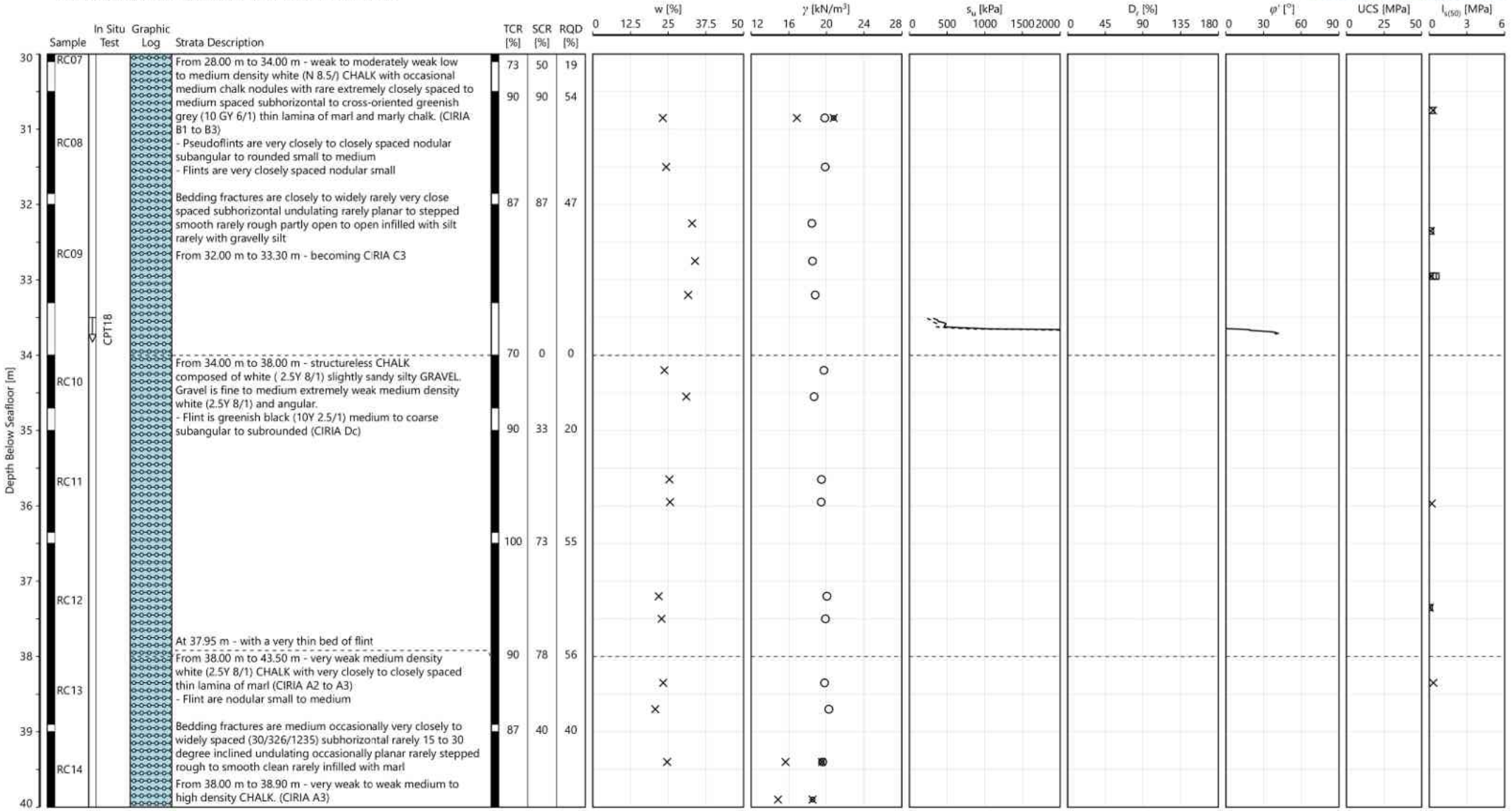
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH18	292490.8	5549580.2	41.48	22-Jun-2025 - 26-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH18

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH18	292490.8	5549580.2	41.48	22-Jun-2025 - 26-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.80
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC14			From 38.00 m to 43.50 m - very weak medium density white (2.5Y 8/1) CHALK with very closely to closely spaced thin lamina of marl (CIRIA A2 to A3) - Flint are nodular small to medium Bedding fractures are medium occasionally very closely to widely spaced (30/326/1235) subhorizontal rarely 15 to 30 degree inclined undulating occasionally planar rarely stepped rough to smooth clean rarely infilled with marl	87	40	40
RC15				100	63	47
RC16				100	67	25
			From 43.50 m to 48.90 m - structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Gravel is very weak low density (CIRIA Dm)	100	7	0
RC17				100	27	19
RC18						
			From 48.50 m to 48.90 m - becomes slightly sandy silty GRAVEL. Clasts are very weak to weak low density white (N 8.5/) angular and subangular fine to coarse (CIRIA Dc)	100	0	0
RC19	CPT19 CPT20		From 48.90 m to 53.70 m - weak to moderately weak low to medium density white (N 8.5/) CHALK (CIRIA B2 to B4) - with extremely closely to closely spaced subhorizontal greenish grey (5GY 5/1) thin laminae of marls, randomly oriented light greenish grey (5GY 7/1) to greenish grey (5GY 6/1) coarse gravel-size burrows and fine gravel-size lenses of greenish grey (5GY 5/1) marly chalk Bedding fractures are very closely to widely spaced (30/262/845) subhorizontal undulating smooth rarely rough partly open rarely open to moderately wide infilled with silt	90	43	33
RC20			From 49.20 m to 49.40 m - non intact At 49.36 m - 52.50 m, 52.68 m - small to medium tabular flint At 49.50 m - 49.69 m, 51.60 m - small to large nodular flint	50	50	50
RC21 RC22			From 49.57 m to 49.69 m - non intact	100	100	90

Depth Below Seafloor [m]

GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH18

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

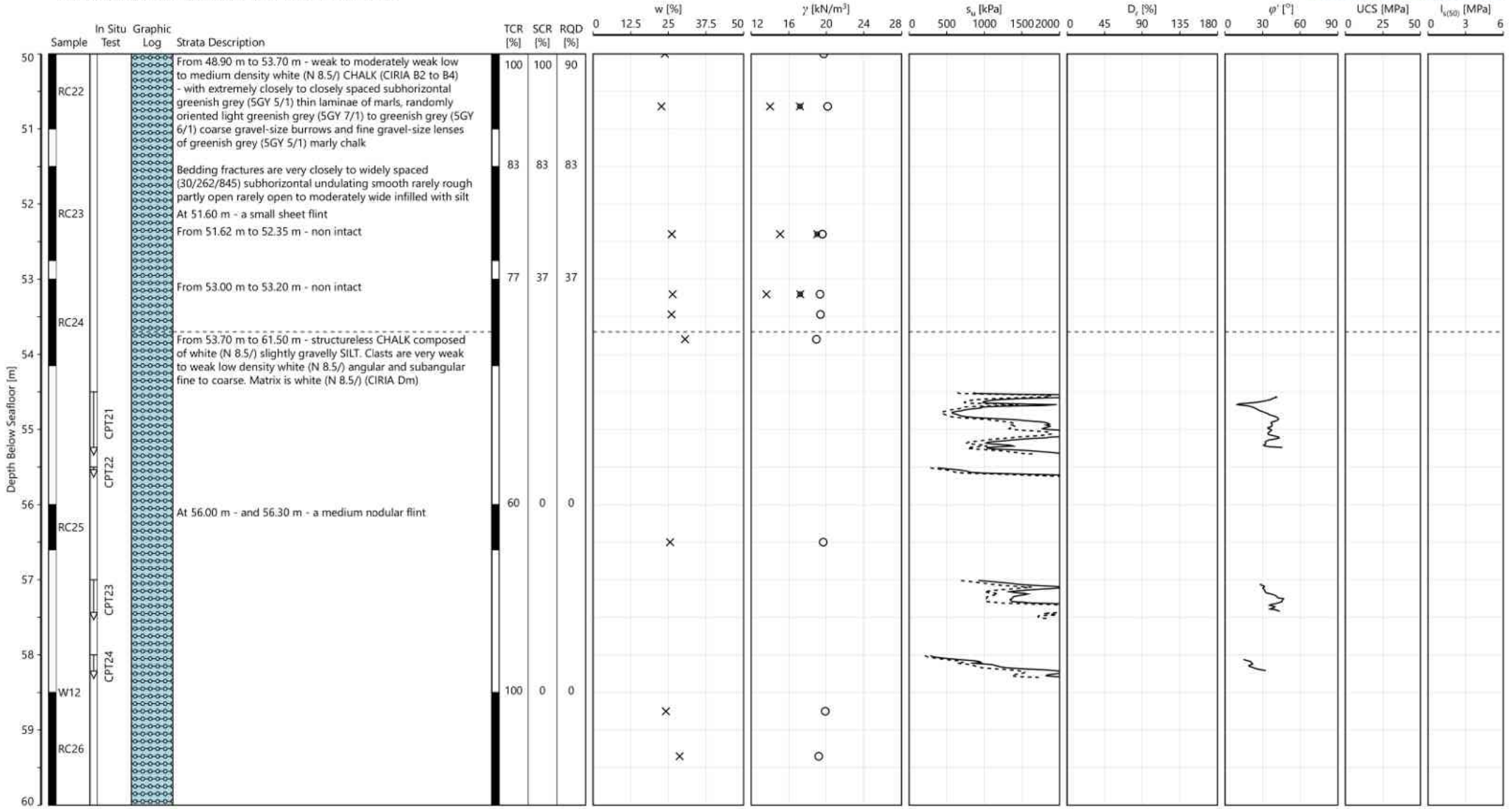
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH18	292490.8	5549580.2	41.48	22-Jun-2025 - 26-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH18

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

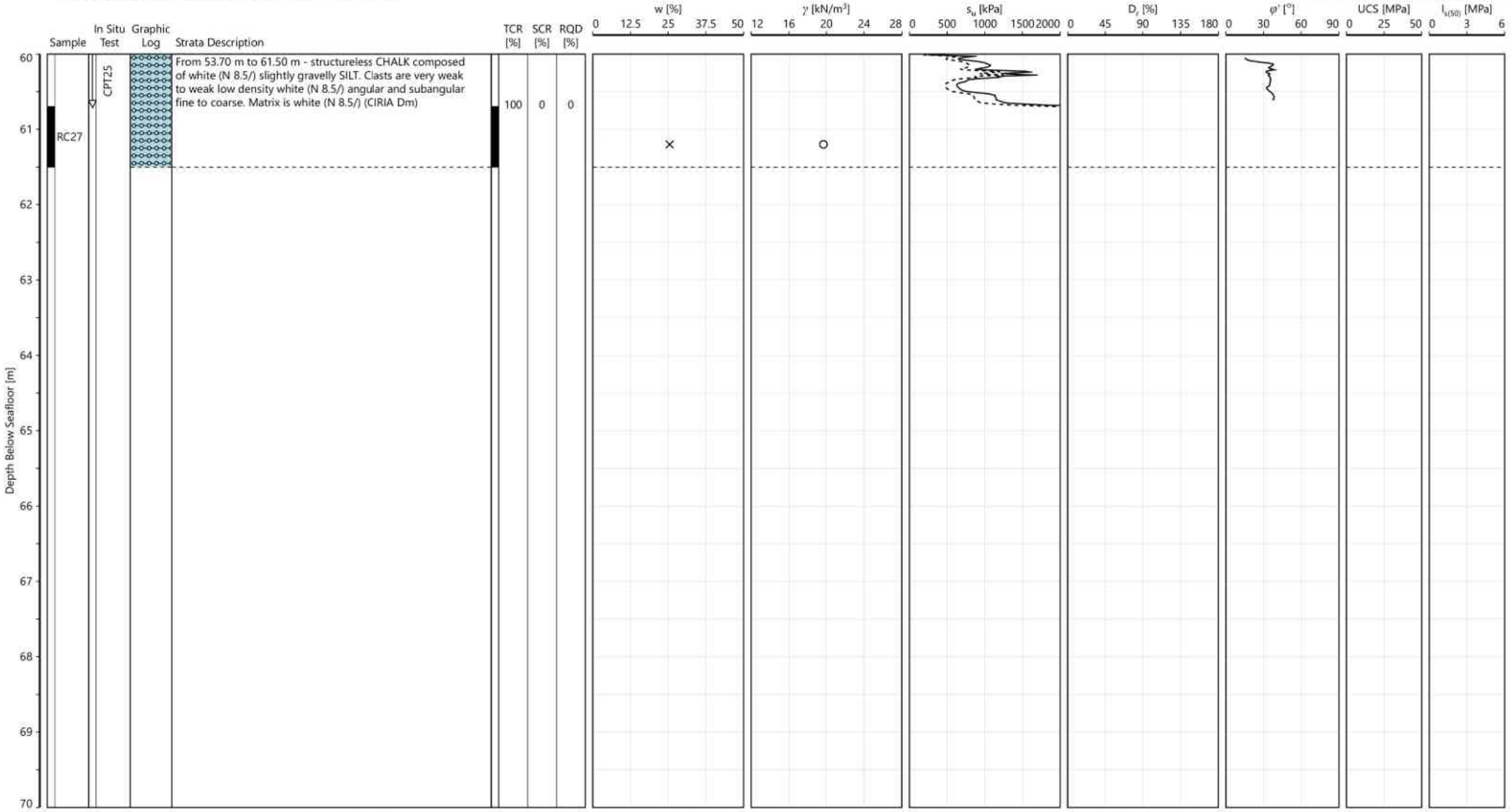
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH18	292490.8	5549580.2	41.48	22-Jun-2025 - 26-Jun-2025	Fugro Zephyr	

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH18

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH18	292490.8	5549580.2	41.48	22-Jun-2025 - 26-Jun-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.83
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
	CPT01		From 0.00 m to 3.50 m - medium to very dense very dark greyish olive (10Y 3/2) gravelly glauconitic fine to coarse SAND with frequent coarse sand-size to medium gravel-size shell fragments. Gravel is subangular to subrounded fine to medium of various lithologies			
W01 RC01			From 1.50 m to 1.80 m - very strong slightly weathered pale yellow (2.5Y 7/3) to light olive green (5GY 5/4), multi-coloured rudaceous LIMESTONE	30	0	0
RC02			From 2.90 m to 3.25 m - with extremely closely spaced very thin beds of slightly clayey medium sand	75		
	CPT02		From 3.50 m to 5.00 m - very high strength clayey SILT			
W02	CPT03		From 5.00 m to 8.05 m - dense to very dense greenish grey (10GY 5/1) clayey glauconitic calcareous fine to medium SAND with frequent fine gravel-size foraminifera and frequent medium sand-size to fine gravel-size shells and shell fragments			
W03 RC03			From 7.00 m to 7.45 m - strong to very strong slightly weathered greenish grey (10GY 5/1) arenaceous LIMESTONE	85	45	45
RC04			From 8.00 m to 8.05 m - very high to extremely high strength greenish black (10Y 2.5/1) sandy slightly calcareous CLAY with occasional coarse sand-size shell fragments	5		
	CPT04		From 8.05 m to 17.25 m - medium to very dense dark greenish grey (5GY 4/1) glauconitic slightly calcareous fine to medium SAND - with occasional fine gravel-size pockets of silt			

Depth Below Seafloor [m]

w [%] 0 12.5 25 37.5 50

γ [kN/m^3] 12 16 20 24 28

s_u [kPa] 0 500 1000 1500 2000

D_r [%] 0 45 90 135 180

φ' [°] 0 30 60 90

UCS [MPa] 0 25 50

$I_{s(50)}$ [MPa] 0 10 20

GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH22

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

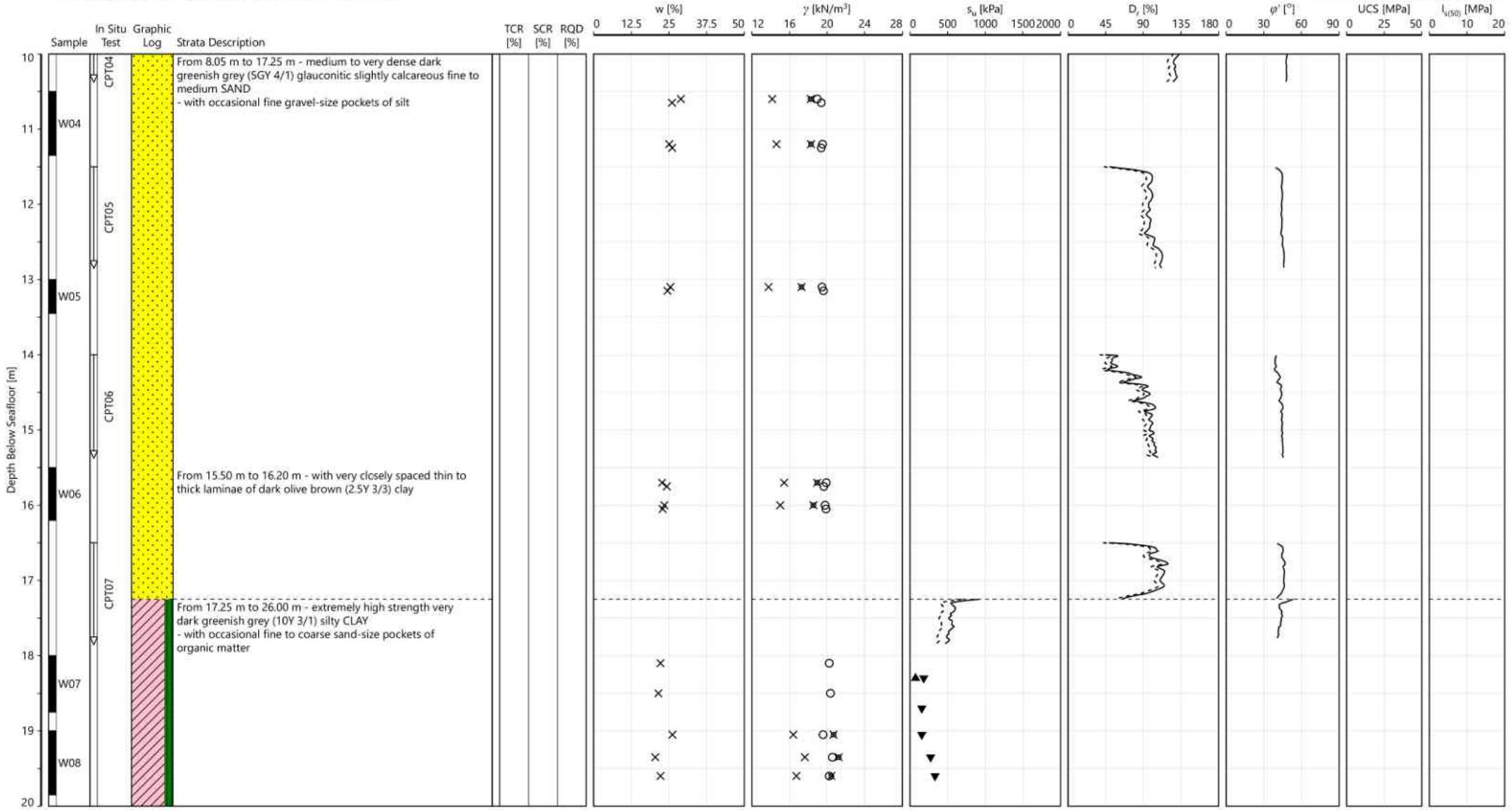
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH22	307586.7	5557742.9	41.98	14-Oct-2025 - 16-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH22

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

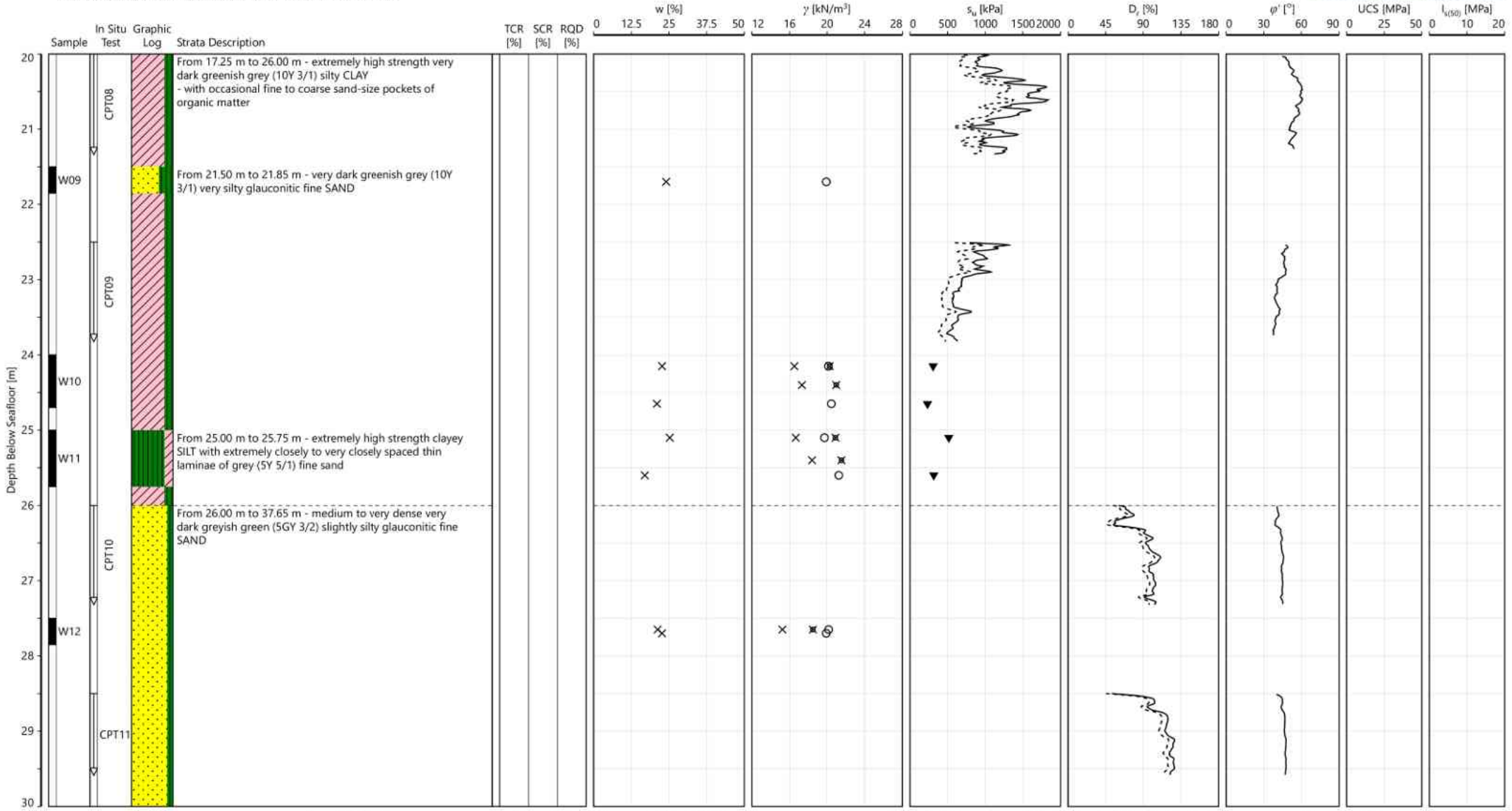
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH22	307586.7	5557742.9	41.98	14-Oct-2025 - 16-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH22

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

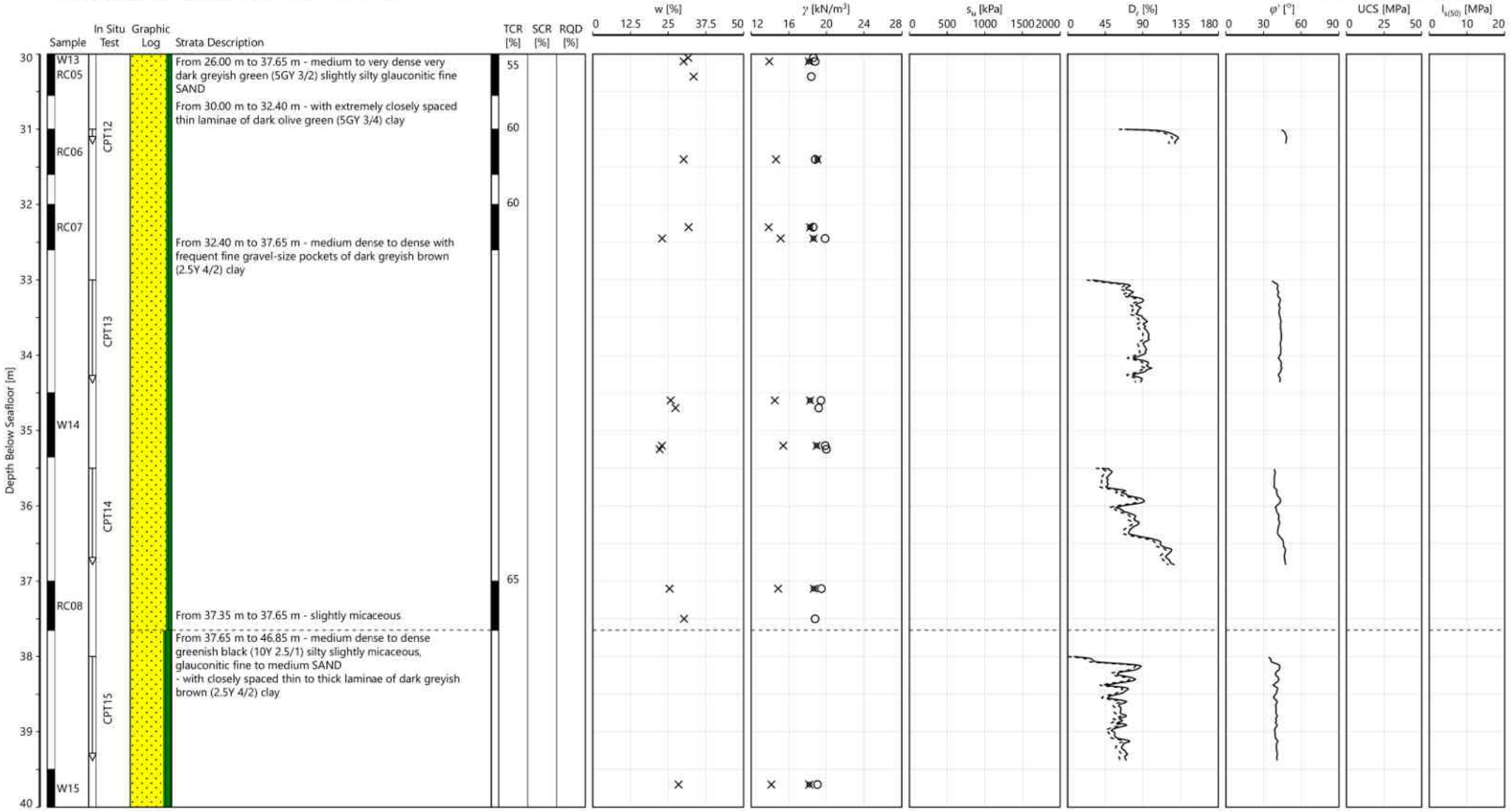
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH22	307586.7	5557742.9	41.98	14-Oct-2025 - 16-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH22

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

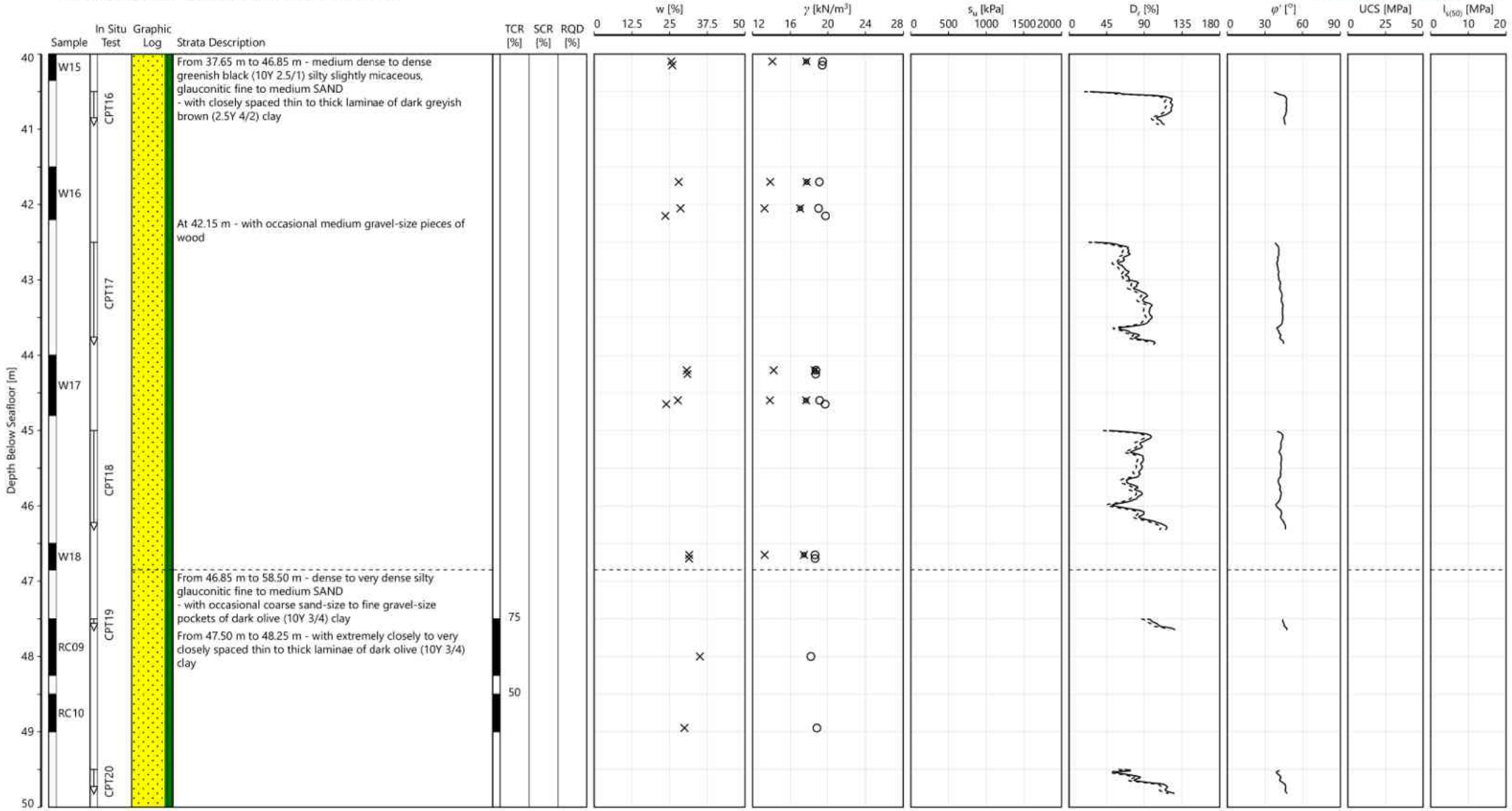
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH22	307586.7	5557742.9	41.98	14-Oct-2025 - 16-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH22

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

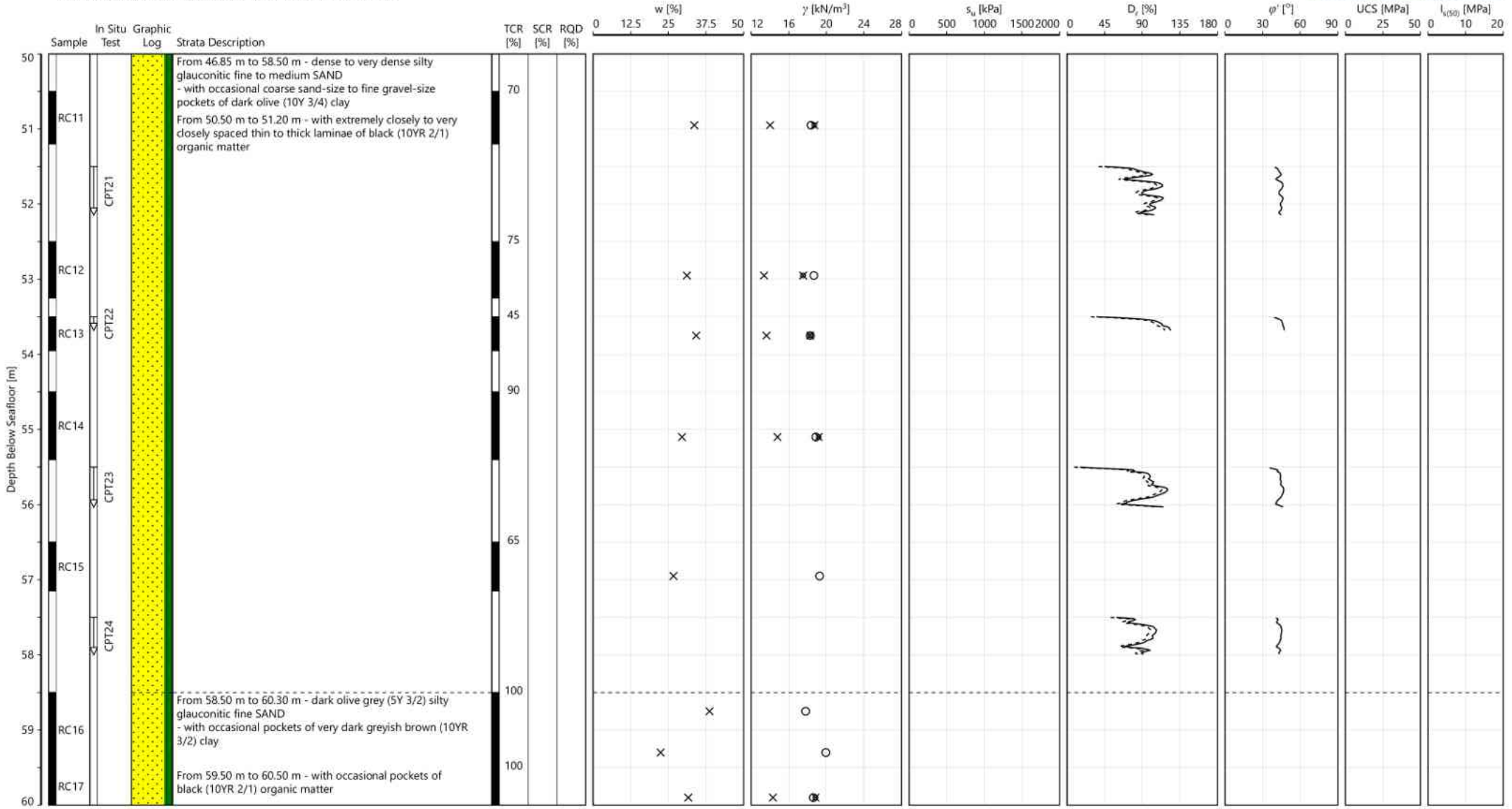
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH22	307586.7	5557742.9	41.98	14-Oct-2025 - 16-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH22

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

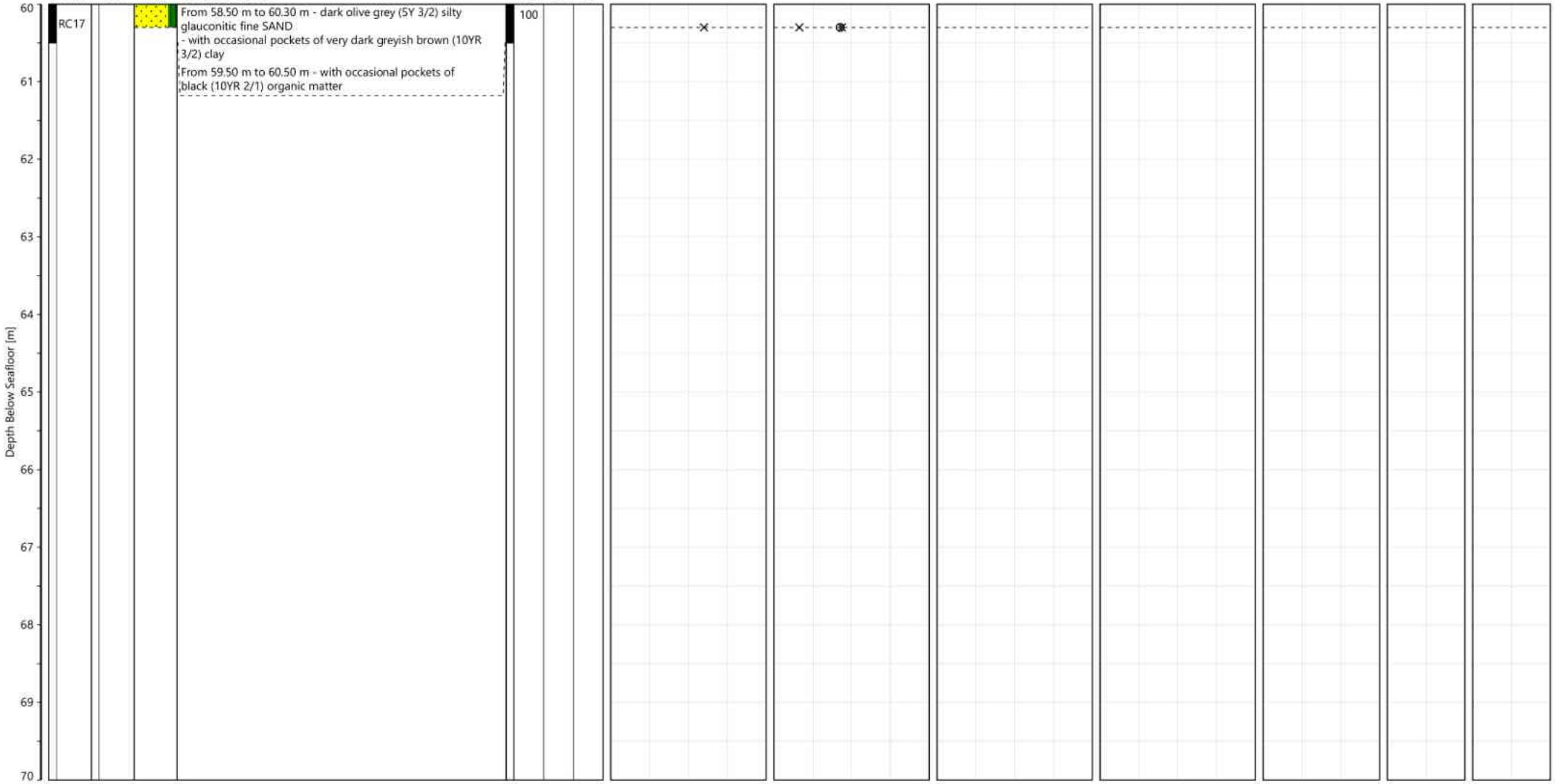
Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH22	307586.7	5557742.9	41.98	14-Oct-2025 - 16-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC17			From 58.50 m to 60.30 m - dark olive grey (5Y 3/2) silty glauconitic fine SAND - with occasional pockets of very dark greyish brown (10YR 3/2) clay From 59.50 m to 60.50 m - with occasional pockets of black (10YR 2/1) organic matter	100		



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH22

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

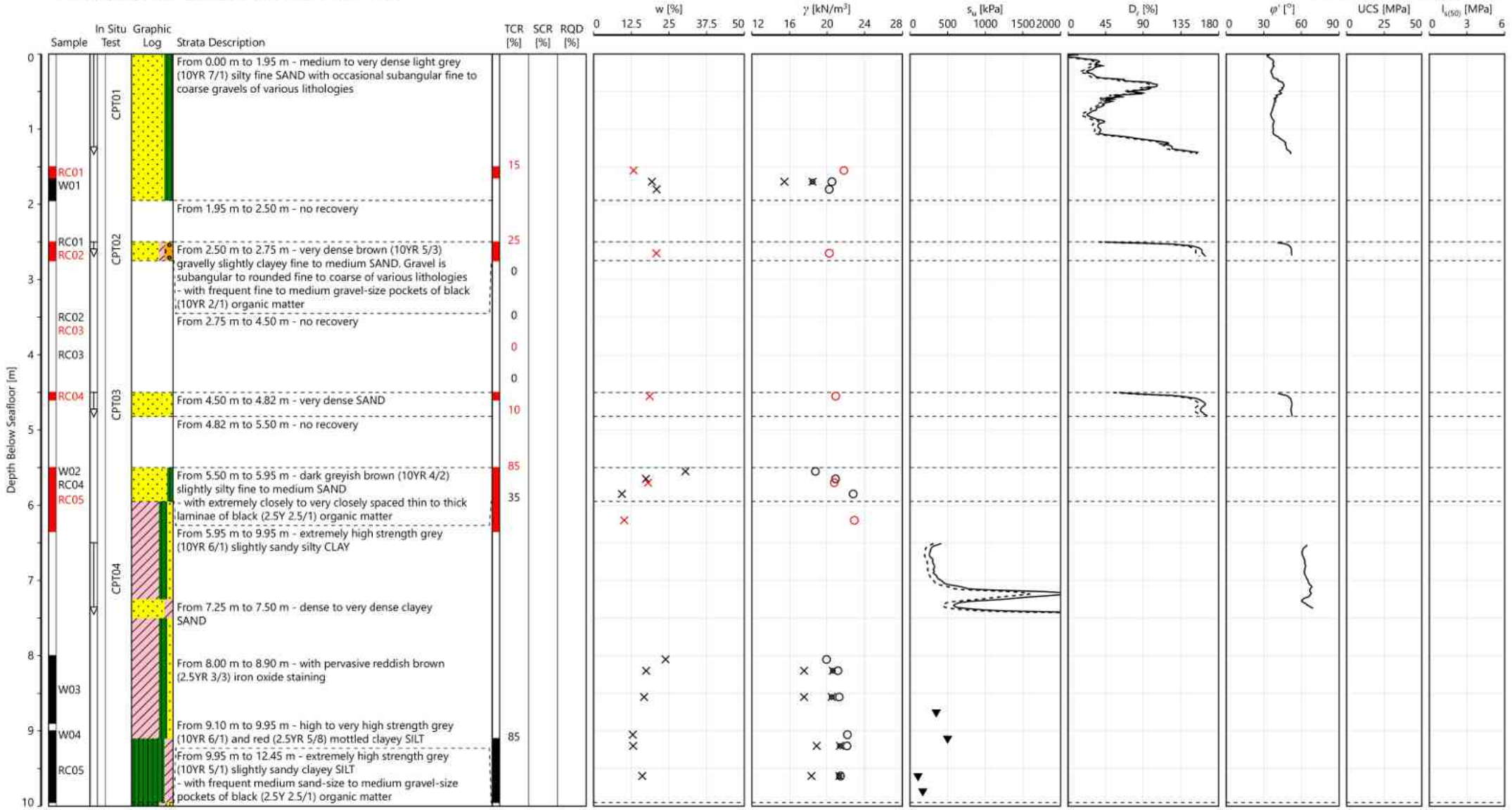
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH22	307586.7	5557742.9	41.98	14-Oct-2025 - 16-Oct-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH23

FGL-OWF-BH23-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

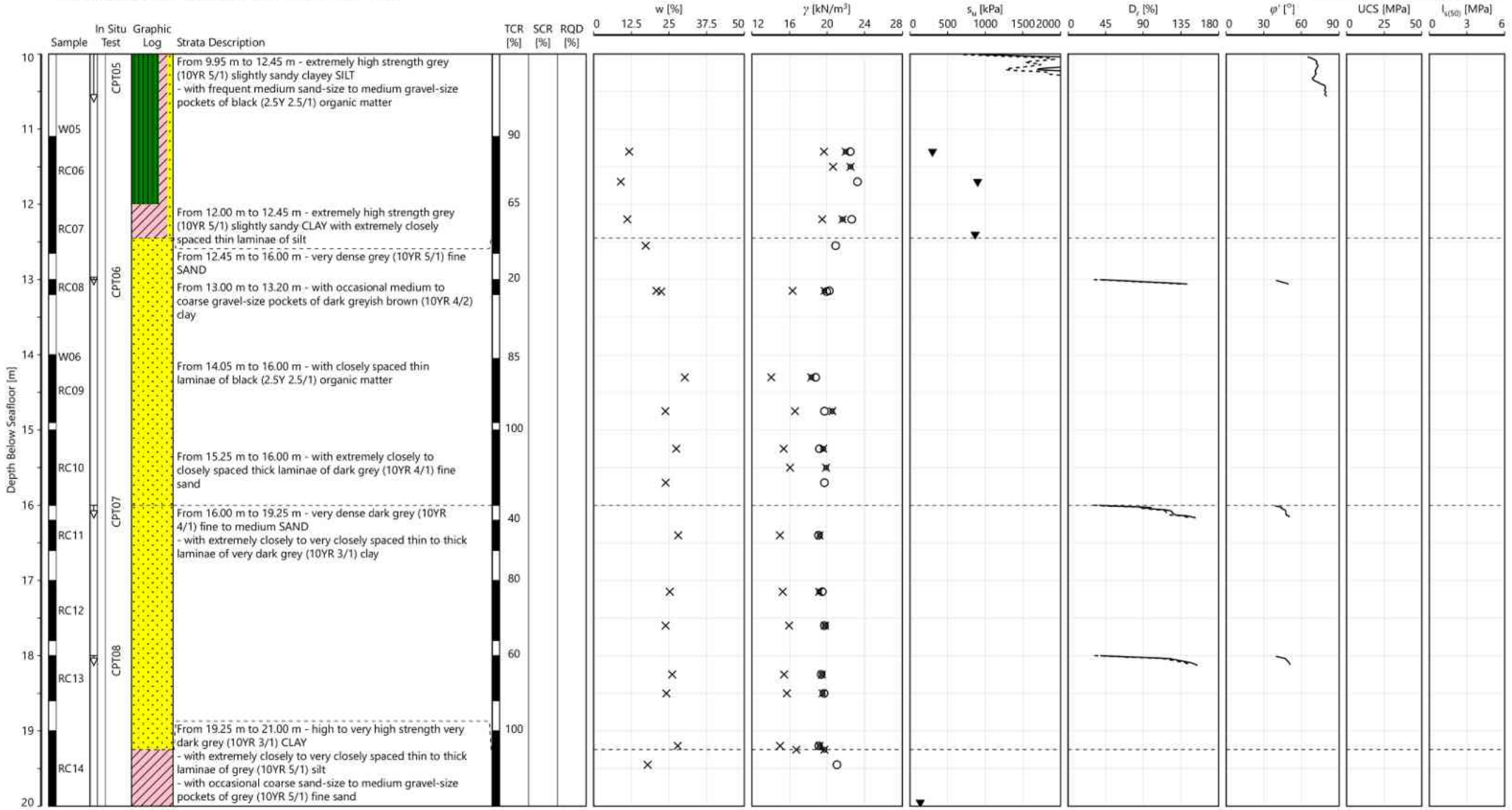
Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH23	277070.8	5542984.9	47.24	18-Oct-2025 - 19-Oct-2025	Fugro Zephyr	
FGL-OWF-BH23-a	277075.7	5542984.4	47.19	22-Oct-2025 - 22-Oct-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.91
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH23

FGL-OWF-BH23-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH23	277070.8	5542984.9	47.24	18-Oct-2025 - 19-Oct-2025	Fugro Zephyr	
FGL-OWF-BH23-a	277075.7	5542984.4	47.19	22-Oct-2025 - 22-Oct-2025	Fugro Zephyr	

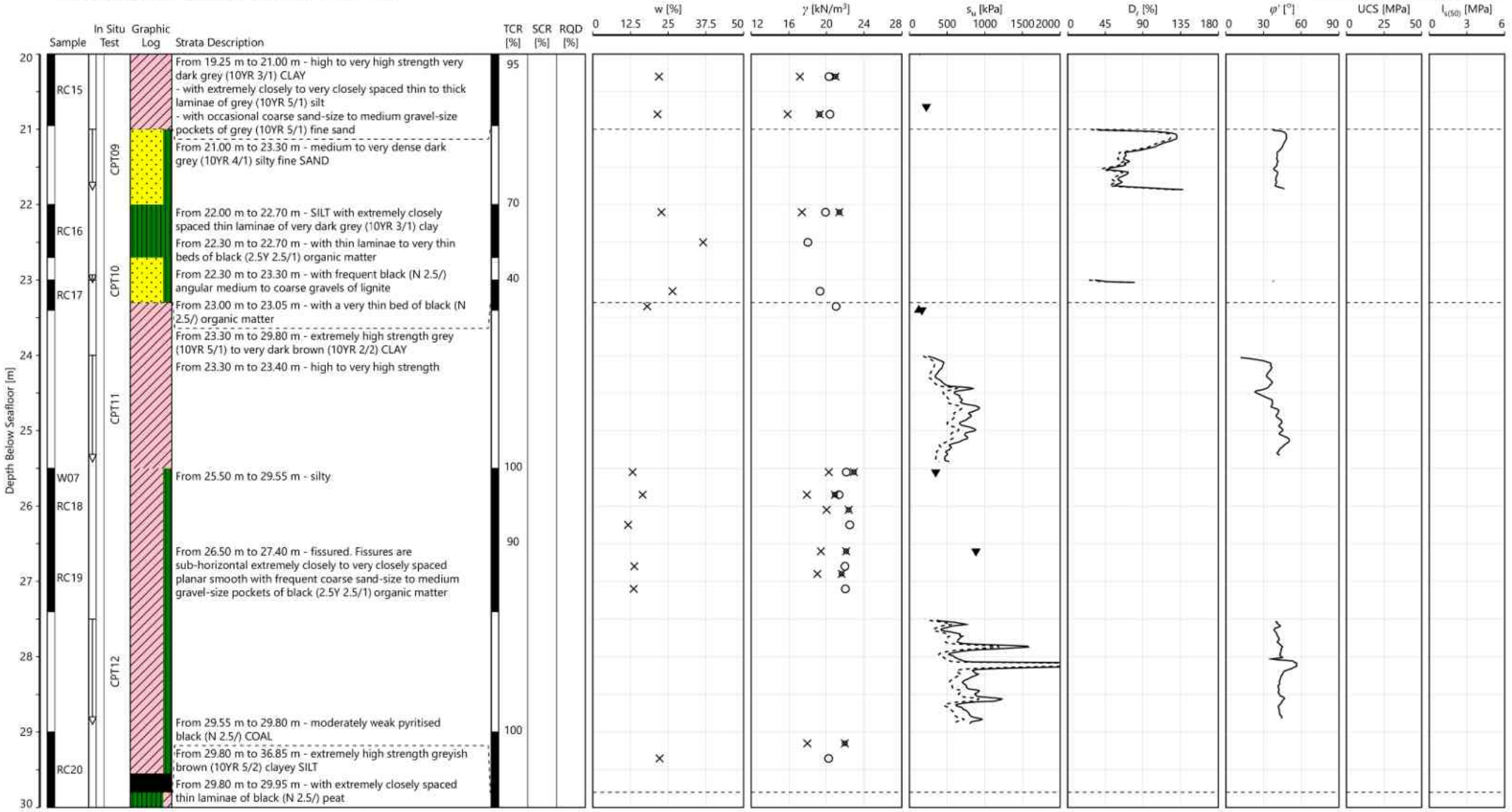
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH23

FGL-OWF-BH23-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH23	277070.8	5542984.9	47.24	18-Oct-2025 - 19-Oct-2025	Fugro Zephyr	
FGL-OWF-BH23-a	277075.7	5542984.4	47.19	22-Oct-2025 - 22-Oct-2025	Fugro Zephyr	

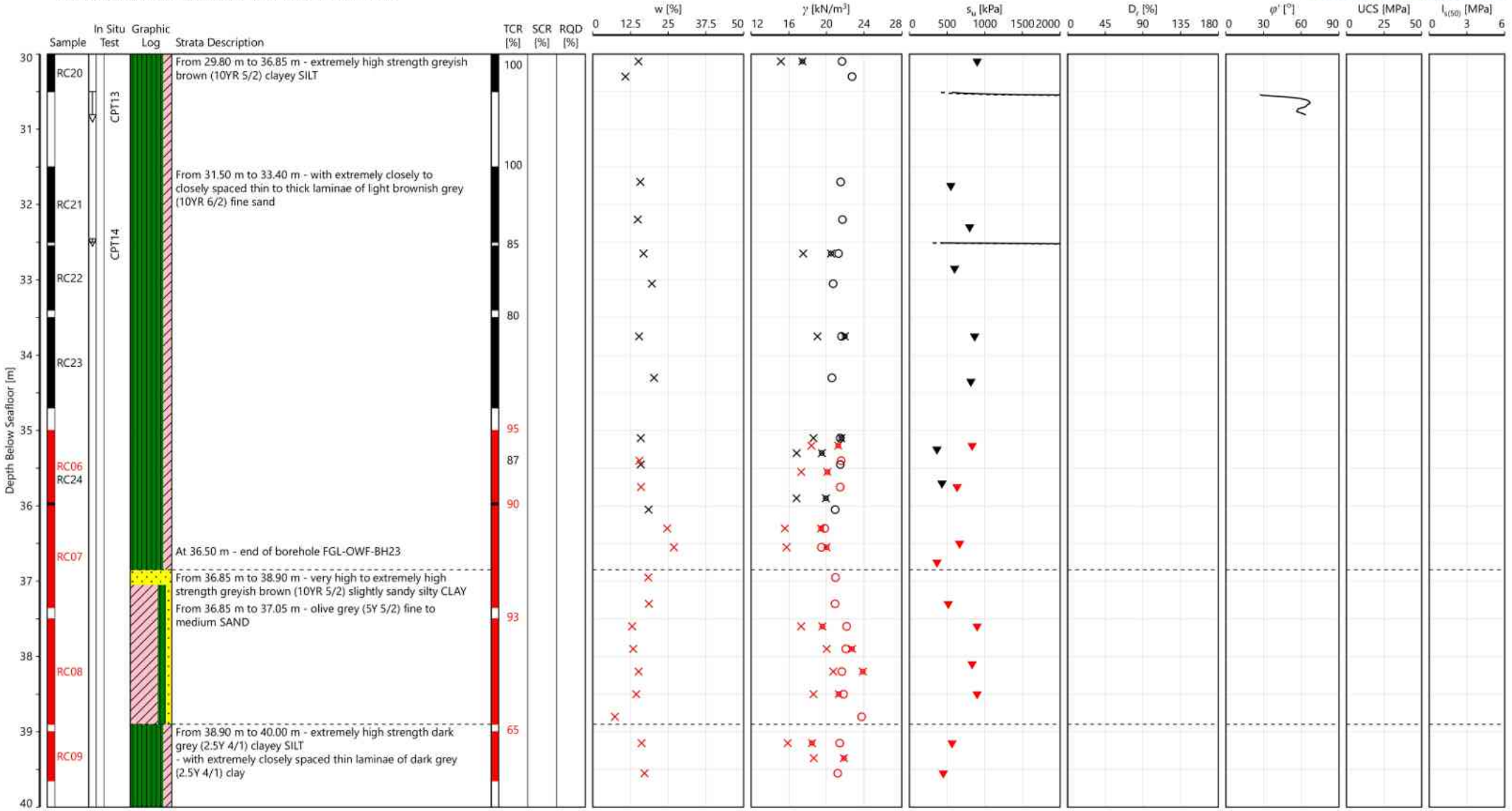
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH23

FGL-OWF-BH23-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH23	277070.8	5542984.9	47.24	18-Oct-2025 - 19-Oct-2025	Fugro Zephyr	
FGL-OWF-BH23-a	277075.7	5542984.4	47.19	22-Oct-2025 - 22-Oct-2025	Fugro Zephyr	

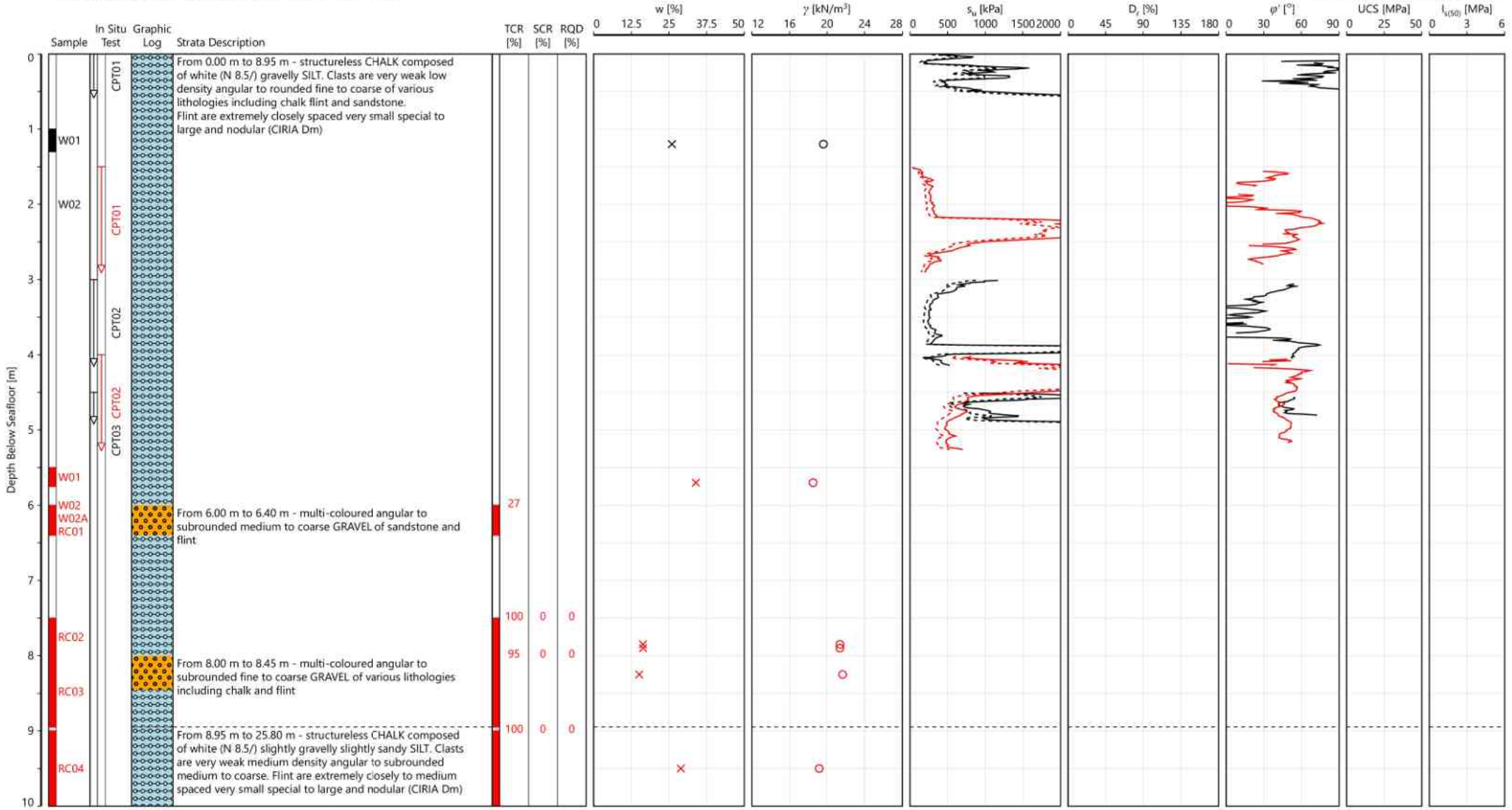
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH24

FGL-OWF-BH24-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$ axial
- $I_{s(50)}$ diametral
- $I_{s(50)}$ irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**

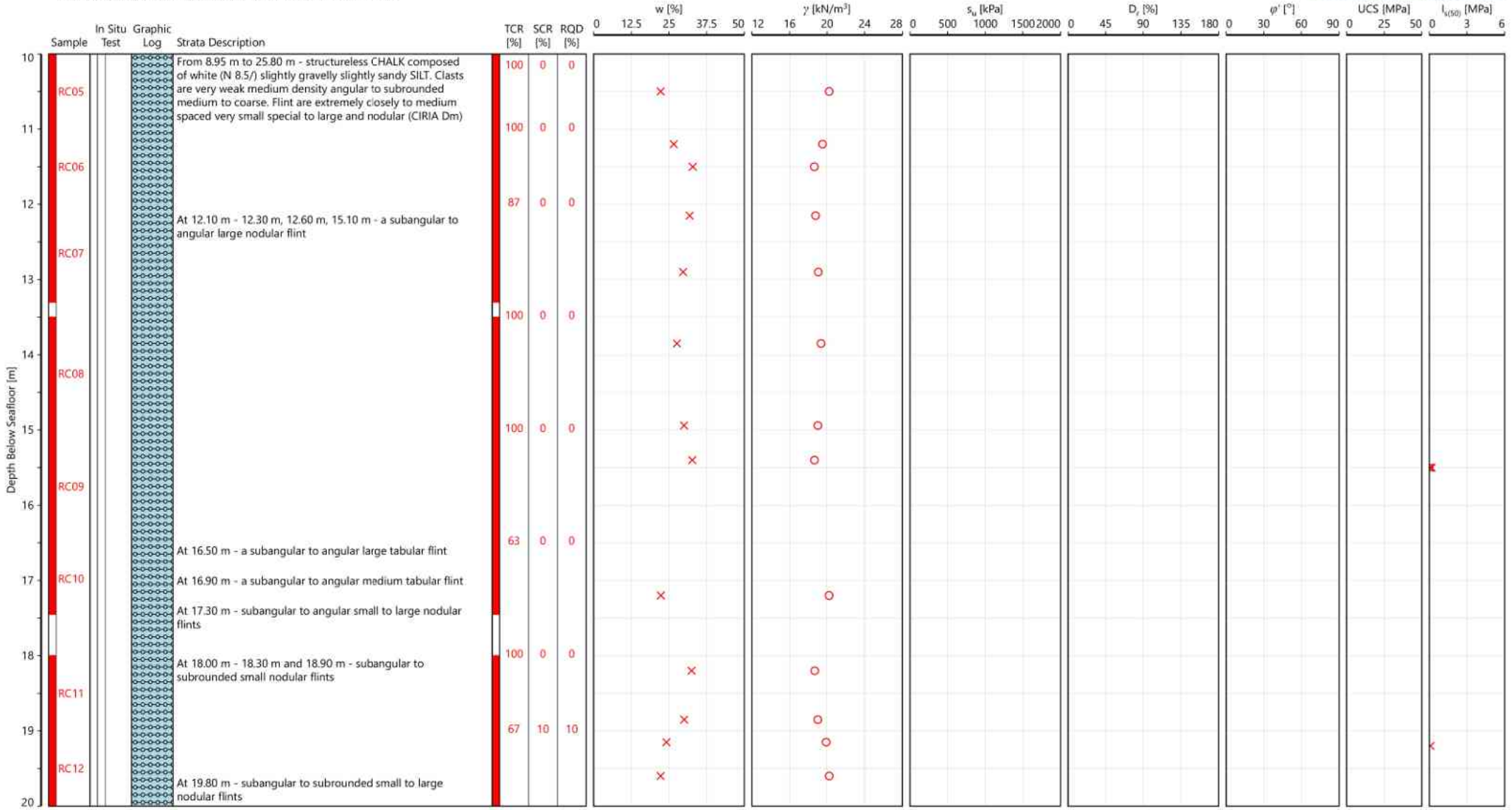
Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH24	289101.8	5544230.0	36.98	10-Jul-2025 - 11-Jul-2025	Fugro Zephyr	
FGL-OWF-BH24-a	289101.9	5544234.8	37.04	13-Jul-2025 - 15-Jul-2025	Fugro Zephyr	

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH24

FGL-OWF-BH24-a

Sample Details:

W	Wison Push Sampler (WIP)
RC	Rock Coring Sample
	Disturbed/Undisturbed Sample

Core Details:

TCR	Total Core Recovery
SCR	Solid Core Recovery
RQD	Rock Quality Designation

In Situ test Details:

CPT	Cone penetration test

Water Content (w):

- × Water Content
- ● Liquid Limit
- ○ Plastic Limit
- ⊖● Plasticity index
- ▬ CAU
- ▬ CIU
- □ OED
- ◪ DSS

Unit weight (γ) :

- ▣ Unit weight from volume mass calculation
- ○ Unit weight from Moisture Content
- × Dry Unit weight
- ▬ CAU
- ▬ CIU
- □ OED
- ◪ DSS
- —— Unit weight from CPT

Undrained Shear Strength Tests (s_u) :

- ▼ Pocket penetrometer
- ▲ Torvane
- ● UU-triaxial
- × CAU
- ▬ CIU
- ◪ DSS

Slashed symbols refer to tests on remoulded soil

—— s_u from CPT: N_{kt}= 15

- - - s_u from CPT: N_{kt}= 20

Relative density (D_r) :

—— Relative density from CPT: K_0=0.5

- - - Relative density from CPT: K_0=1.0

Friction angle (φ') :

—— Derived from CPT (Mayne, 2007)

◆ CD triaxial

● DS-Shear box

Unconfined Compressive Strength (UCS) :

× UCS

Point Load Index Strength ($I_{s(50)}$) :

× $I_{s(50)}$axial

□ $I_{s(50)}$diametral

◇ $I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

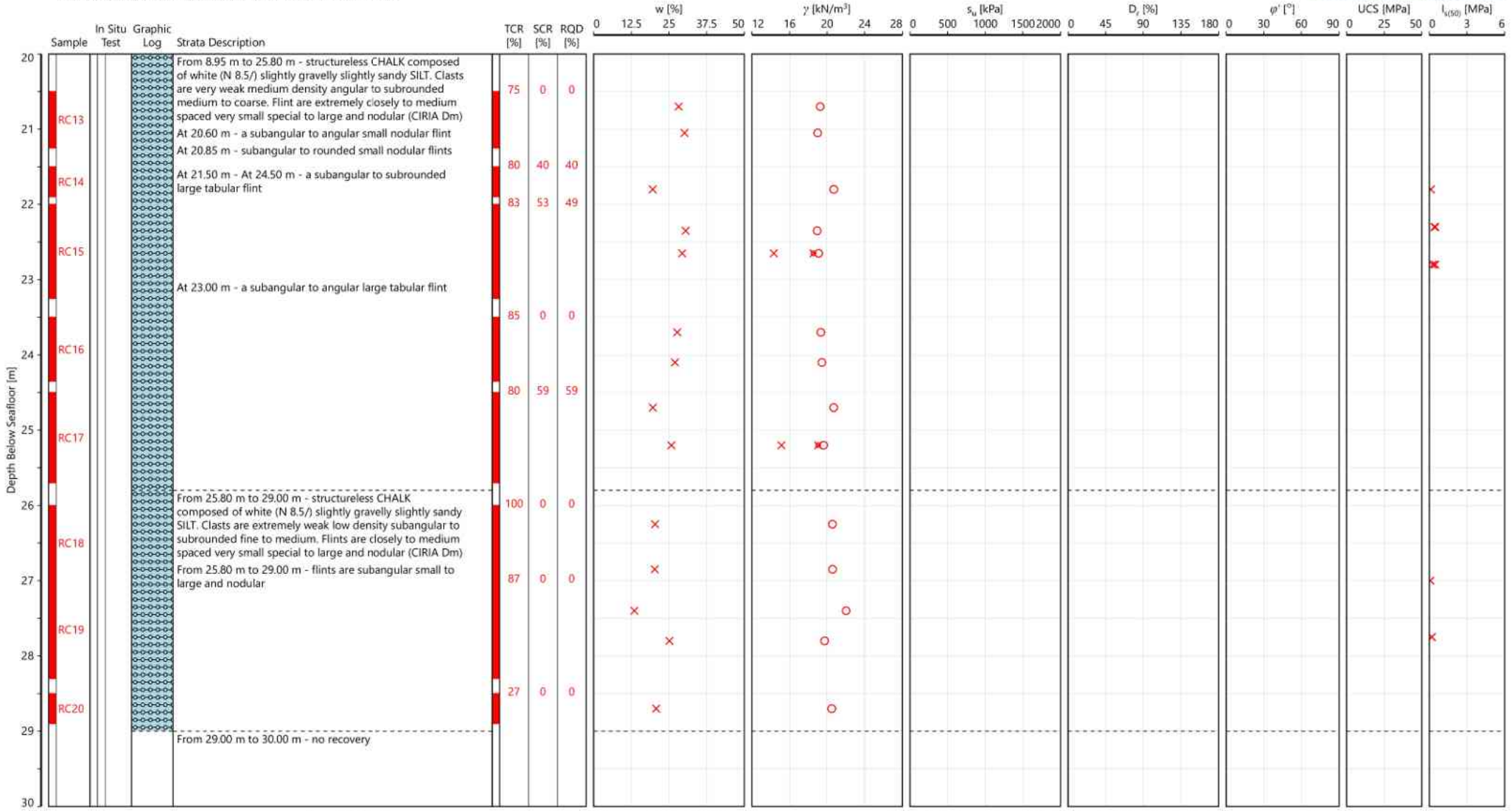
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
—— FGL-OWF-BH24	289101.8	5544230.0	36.98	10-Jul-2025 - 11-Jul-2025	Fugro Zephyr	
—— FGL-OWF-BH24-a	289101.9	5544234.8	37.04	13-Jul-2025 - 15-Jul-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.96

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH24

FGL-OWF-BH24-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

Unconfined Compressive Strength (UCS) :
UCS

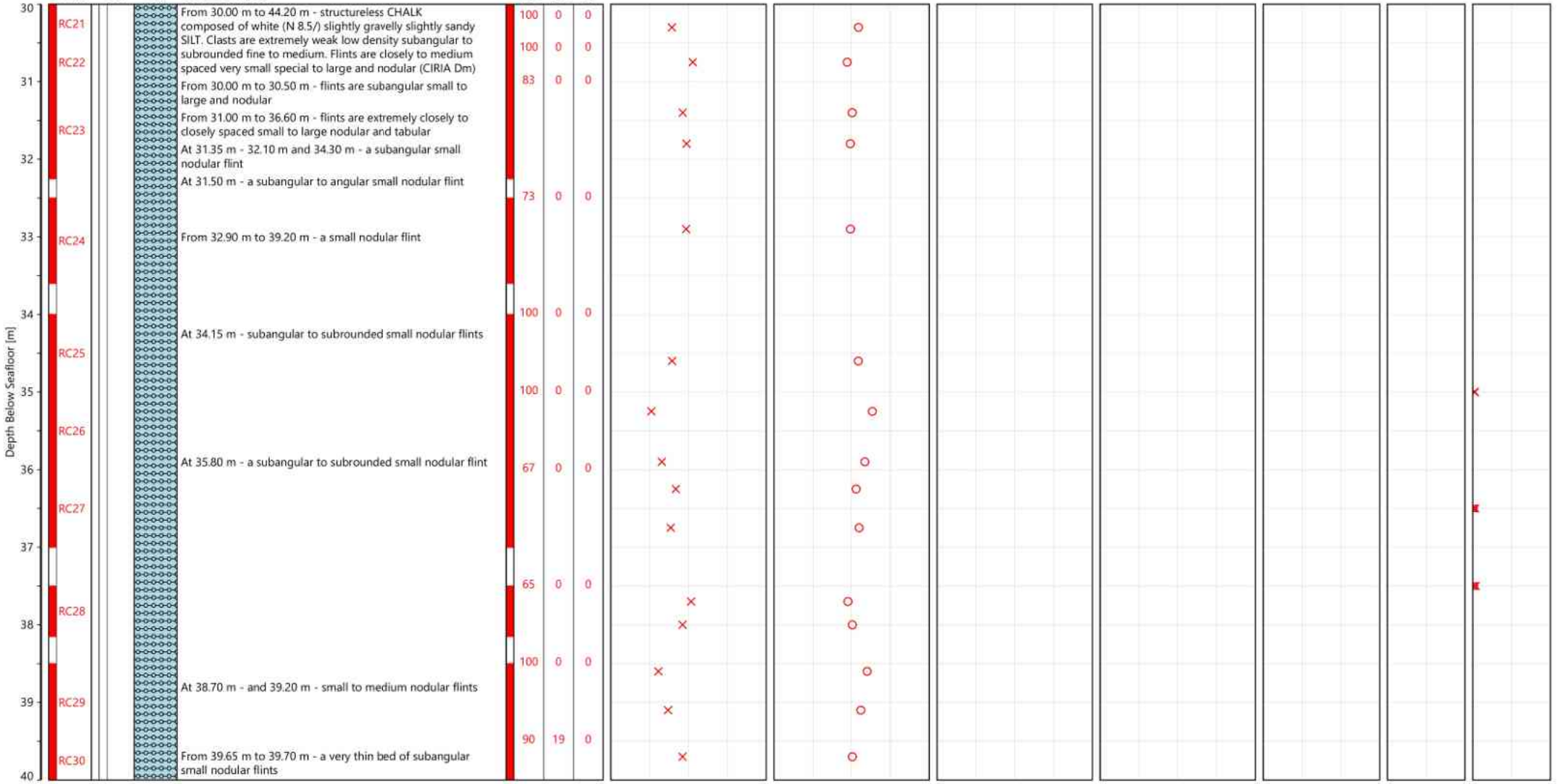
Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH24	289101.8	5544230.0	36.98	10-Jul-2025 - 11-Jul-2025	Fugro Zephyr	
FGL-OWF-BH24-a	289101.9	5544234.8	37.04	13-Jul-2025 - 15-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC21			From 30.00 m to 44.20 m - structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Clasts are extremely weak low density subangular to subrounded fine to medium. Flints are closely to medium spaced very small special to large and nodular (CIRIA Dm)	100	0	0
RC22				100	0	0
			From 30.00 m to 30.50 m - flints are subangular small to large and nodular	83	0	0
RC23			From 31.00 m to 36.60 m - flints are extremely closely to closely spaced small to large nodular and tabular			
			At 31.35 m - 32.10 m and 34.30 m - a subangular small nodular flint			
			At 31.50 m - a subangular to angular small nodular flint	73	0	0
RC24			From 32.90 m to 39.20 m - a small nodular flint			
				100	0	0
			At 34.15 m - subangular to subrounded small nodular flints			
RC25						
				100	0	0
RC26						
			At 35.80 m - a subangular to subrounded small nodular flint	67	0	0
RC27						
				65	0	0
RC28						
				100	0	0
			At 38.70 m - and 39.20 m - small to medium nodular flints			
RC29						
				90	19	0
RC30			From 39.65 m to 39.70 m - a very thin bed of subangular small nodular flints			



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH24

FGL-OWF-BH24-a

Sample Details:
- W Wison Push Sampler (WIP)
- RC Rock Coring Sample
- Disturbed/Undisturbed Sample

Core Details:
- TCR Total Core Recovery
- SCR Solid Core Recovery
- RQD Rock Quality Designation

In Situ test Details:
- CPT Cone penetration test

Water Content (w):
- Water Content
- Liquid Limit
- Plastic Limit
- Plasticity index
- CAU
- CIU
- OED
- DSS

Unit weight (γ) :
- Unit weight from volume mass calculation
- Unit weight from Moisture Content
- Dry Unit weight
- CAU
- CIU
- OED
- DSS
- Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
- Pocket penetrometer
- Torvane
- UU-triaxial
- CAU
- CIU
- DSS

Slashed symbols refer to tests on remoulded soil

- s_u from CPT: N_{kt}= 15
- s_u from CPT: N_{kt}= 20

Relative density (D_r) :
- Relative density from CPT: K_0=0.5
- Relative density from CPT: K_0=1.0

Friction angle (φ') :
- Derived from CPT (Mayne, 2007)
- CD triaxial
- DS-Shear box

Unconfined Compressive Strength (UCS) :
- UCS

Point Load Index Strength ($I_{s(50)}$) :
- $I_{s(50)}$axial
- $I_{s(50)}$diametral
- $I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH24	289101.8	5544230.0	36.98	10-Jul-2025 - 11-Jul-2025	Fugro Zephyr	
FGL-OWF-BH24-a	289101.9	5544234.8	37.04	13-Jul-2025 - 15-Jul-2025	Fugro Zephyr	

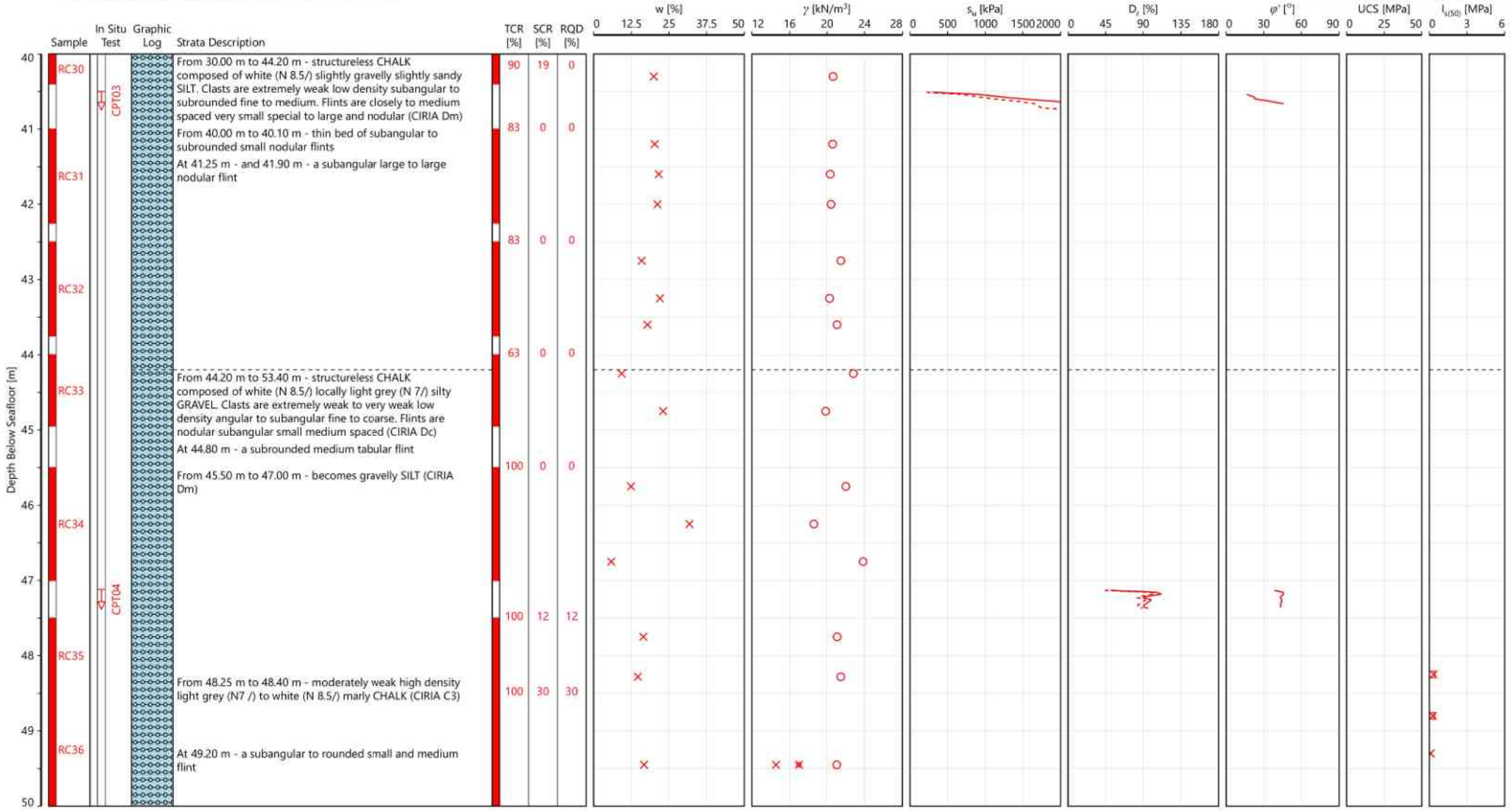
Project Title : **Fecamp Grand Large Geotechnical Investigation**

Coordinate system : WGS 84 / UTM zone 31N

Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH24

FGL-OWF-BH24-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

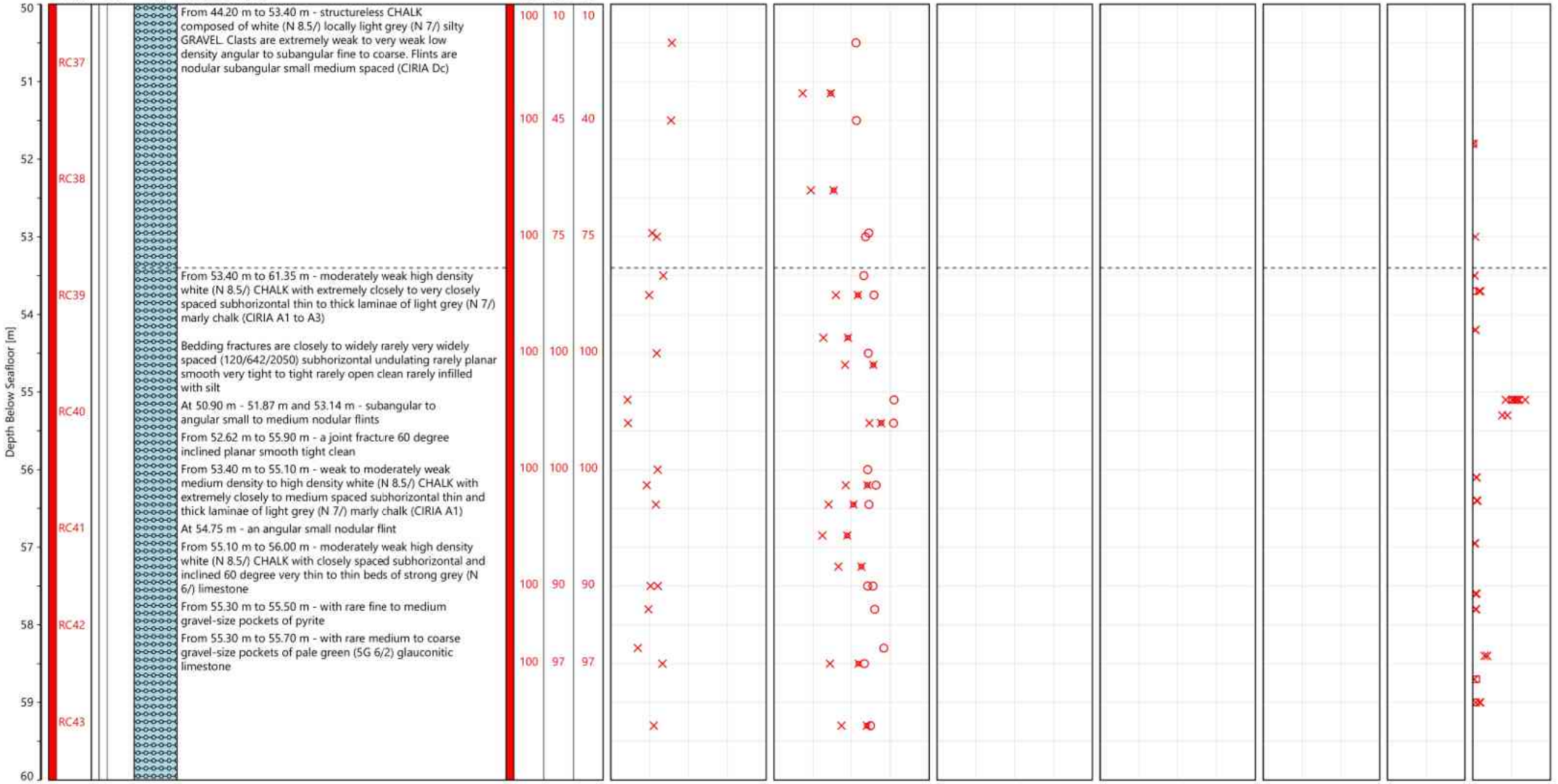
Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH24	289101.8	5544230.0	36.98	10-Jul-2025 - 11-Jul-2025	Fugro Zephyr	
FGL-OWF-BH24-a	289101.9	5544234.8	37.04	13-Jul-2025 - 15-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT

Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

Sample	In Situ Test	Graphic Log	Strata Description	TCR [%]	SCR [%]	RQD [%]
RC37			From 44.20 m to 53.40 m - structureless CHALK composed of white (N 8.5/) locally light grey (N 7/) silty GRAVEL. Clasts are extremely weak to very weak low density angular to subangular fine to coarse. Flints are nodular subangular small medium spaced (CIRIA Dc)	100	10	10
RC38				100	45	40
RC39			From 53.40 m to 61.35 m - moderately weak high density white (N 8.5/) CHALK with extremely closely to very closely spaced subhorizontal thin to thick laminae of light grey (N 7/) marly chalk (CIRIA A1 to A3) Bedding fractures are closely to widely rarely very widely spaced (120/642/2050) subhorizontal undulating rarely planar smooth very tight to tight rarely open clean rarely infilled with silt	100	75	75
RC40			At 50.90 m - 51.87 m and 53.14 m - subangular to angular small to medium nodular flints From 52.62 m to 55.90 m - a joint fracture 60 degree inclined planar smooth tight clean From 53.40 m to 55.10 m - weak to moderately weak medium density to high density white (N 8.5/) CHALK with extremely closely to medium spaced subhorizontal thin and thick laminae of light grey (N 7/) marly chalk (CIRIA A1)	100	100	100
RC41			At 54.75 m - an angular small nodular flint From 55.10 m to 56.00 m - moderately weak high density white (N 8.5/) CHALK with closely spaced subhorizontal and inclined 60 degree very thin to thin beds of strong grey (N 6/) limestone	100	90	90
RC42			From 55.30 m to 55.50 m - with rare fine to medium gravel-size pockets of pyrite From 55.30 m to 55.70 m - with rare medium to coarse gravel-size pockets of pale green (5G 6/2) glauconitic limestone	100	97	97
RC43						



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH24
FGL-OWF-BH24-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

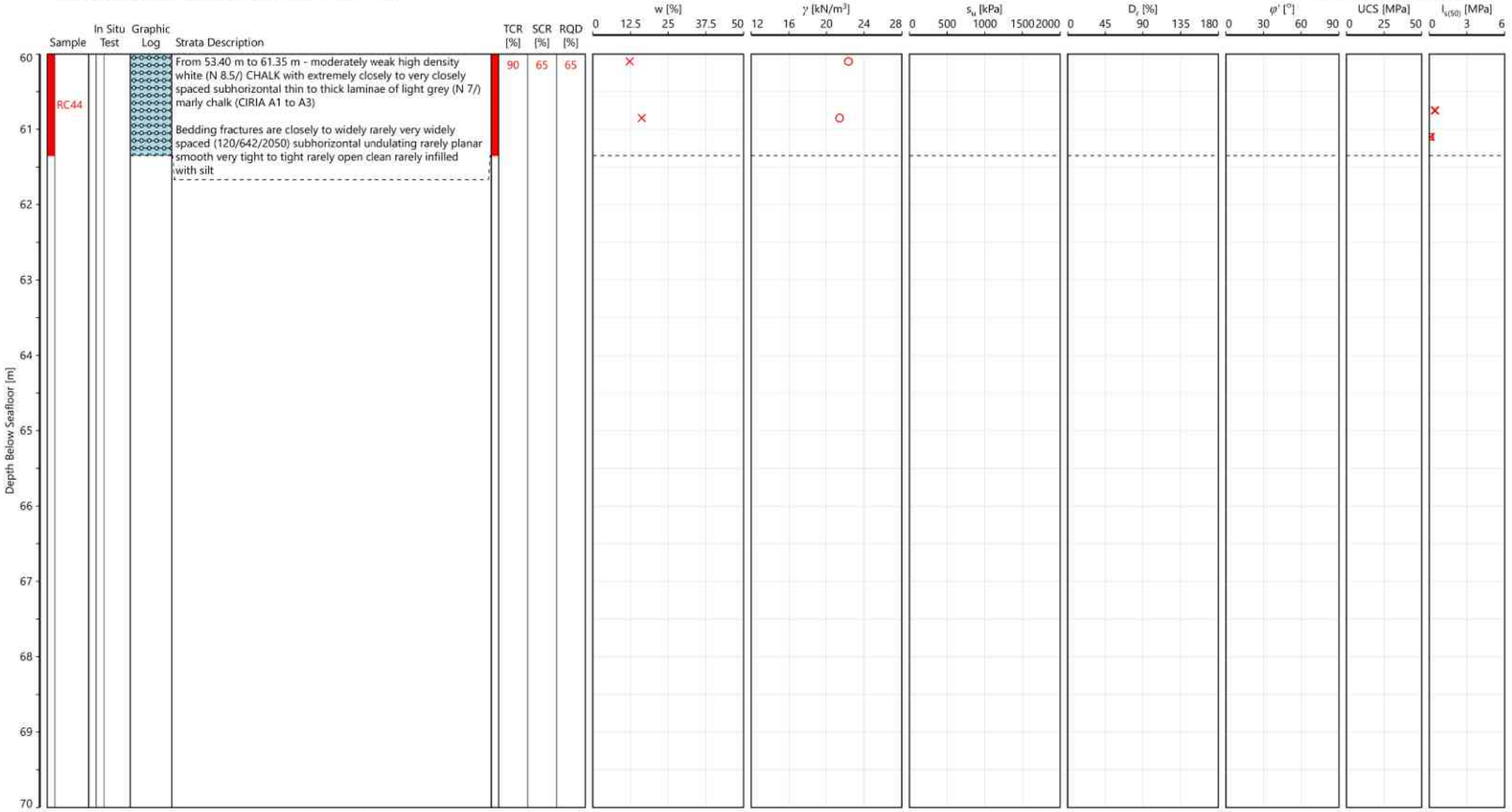
Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH24	289101.8	5544230.0	36.98	10-Jul-2025 - 11-Jul-2025	Fugro Zephyr	
FGL-OWF-BH24-a	289101.9	5544234.8	37.04	13-Jul-2025 - 15-Jul-2025	Fugro Zephyr	

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes



GEOTECHNICAL LOG

Soil profile interpreted from details recorded in the following boreholes:

FGL-OWF-BH24
FGL-OWF-BH24-a

Sample Details:
W Wison Push Sampler (WIP)
RC Rock Coring Sample
Disturbed/Undisturbed Sample

Core Details:
TCR Total Core Recovery
SCR Solid Core Recovery
RQD Rock Quality Designation

In Situ test Details:
CPT Cone penetration test

Water Content (w):
Water Content
Liquid Limit
Plastic Limit
Plasticity index
CAU
CIU
OED
DSS

Unit weight (γ) :
Unit weight from volume mass calculation
Unit weight from Moisture Content
Dry Unit weight
CAU
CIU
OED
DSS
Unit weight from CPT

Undrained Shear Strength Tests (s_u) :
Pocket penetrometer
Torvane
UU-triaxial
CAU
CIU
DSS
Slashed symbols refer to tests on remoulded soil
s_u from CPT: N_{kt}= 15
s_u from CPT: N_{kt}= 20

Relative density (D_r) :
Relative density from CPT: K_0=0.5
Relative density from CPT: K_0=1.0

Friction angle (φ') :
Derived from CPT (Mayne, 2007)
CD triaxial
DS-Shear box

Unconfined Compressive Strength (UCS) :
UCS

Point Load Index Strength ($I_{s(50)}$) :
$I_{s(50)}$axial
$I_{s(50)}$diametral
$I_{s(50)}$irregular lump

Project Title : **Fecamp Grand Large Geotechnical Investigation**
Coordinate system : WGS 84 / UTM zone 31N
Water Depth Method: CTD Probe

Location	Easting [m]	Northing [m]	Water depth [m]	Date	Vessel	Comments
FGL-OWF-BH24	289101.8	5544230.0	36.98	10-Jul-2025 - 11-Jul-2025	Fugro Zephyr	
FGL-OWF-BH24-a	289101.9	5544234.8	37.04	13-Jul-2025 - 15-Jul-2025	Fugro Zephyr	

F255271-REP-001 | Measured and Derived Geotechnical Parameters and Final Results - Intermediate Report
Plate 2.101
Water depths are relative to Chart Datum LAT
Water depths are considered sufficiently accurate for geotechnical use but should not be used in isolation for design purposes

APPENDIX D. GEOTECHNICAL DATA

APPENDIX D1. GEOTECHNICAL PARAMETERS TABLES PER LOCATION

FGL-OWF-BH01

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50} (MPa)			UU (KPa)			UCS (MPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%] PL			Attemberg Limit [%] LL			Attemberg Limit [%] PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Very dense SAND	0.00	0.30	2	5	14	0.85	1.64	3.40	N/A	N/A	N/A	40	101	140	44.0	46.0	50.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of slightly silty GRAVEL. Clasts are weak to medium strong low and medium density white (N 8.5/) angular to subrounded fine to coarse with heavy reddish yellow (5YR 6/8) staining. Matrix is white (N 8.5/) (CIRIA Dc)	0.30	4.00	18	29	65	0.80	1.83	3.80	N/A	N/A	N/A	48	124	160	39.0	48.4	52.0	21.6	21.6	21.6	18.0	18.6	26.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	650	650	650	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to weak medium to high density white (N 8/) CHALK with very closely to closely spaced thin laminae to thin beds of greenish grey (5GY 6/1) marl (CIRIA A1) From 4.50 m to 5.40 m - Very weak to weak medium density white (N 8.5/) CHALK From 7.80 m to 8.00 m - very weak From 11.70 m to 11.95 m - extremely weak	4.00	12.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.4	20.2	23.1	18.0	21.2	26.0	0.10	0.49	1.00	N/A	N/A	N/A	0.3	7.1	16.6	N/A	N/A	N/A	0.11	0.11	0.11	N/A	N/A	N/A	17	17	17	28	28	28	11	11	11
SU3- CHALK (U. Cretaceous)	CHALK	Weak high to very high density white (N 8/) CHALK with very closely to closely spaced thin to thick laminae of greenish grey (5GY 6/1) to dark greenish grey (5GY 4/1) marl (CIRIA A1)	12.50	16.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.2	19.5	19.8	17.0	17.6	23.0	0.10	0.45	1.00	N/A	N/A	N/A	0.7	7.7	17.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak medium to high density white (N 8.5/) locally light greenish grey (10GY 8/1) CHALK with extremely closely to closely spaced thick laminae to very thin beds of light greenish grey (10GY 7/1) marly chalk (CIRIA B2 to B3). Bedding fractures are medium occasionally closely to very widely spaced (150/1000/4115) 15 degree inclined occasionally subhorizontal undulating rarely planar smooth partly open infilled with silt occasionally with greenish grey staining From 16.35 m to 16.55 m - very weak	16.00	23.00	22	86	115	1.90	2.98	6.00	1200	1740	2000	N/A	N/A	N/A	N/A	N/A	N/A	18.0	18.6	21.6	22.5	26.0	28.5	0.05	0.31	0.50	N/A	N/A	N/A	0.3	5.1	8.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak medium to high density white (N 8.5/) and light greenish grey (10GY 7/1) CHALK with extremely closely to medium spaced thin to very thin beds of greenish grey (10GY 5/1) chalky marl locally with glauconite surfaces (CIRIA A1). With occasional flint nodules	23.00	27.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.9	18.6	22.0	22.0	25.2	33.6	0.05	0.24	0.50	N/A	N/A	N/A	0.8	4.4	8.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak high density white (N 8.5/) CHALK with extremely closely to very closely thin laminae to thin beds of greenish grey (5GY 6/1) marly chalk and chalky marl (CIRIA A1) Bedding fractures are closely to very widely spaced (90/800/2280) subhorizontal undulating rarely stepped rough rarely smooth very tight clean From 27.00 m to 27.55 m - medium to high density From 31.50 m to 34.20 m - very weak very high density	27.00	34.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.2	19.2	22.0	18.0	20.0	27.0	0.05	0.27	0.80	N/A	N/A	N/A	0.5	4.3	13.8	N/A	N/A	N/A	0.32	0.32	0.32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	NR	No recovery	34.20	36.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak low to medium density white (N 8.5/) CHALK with very closely to closely spaced thin laminae to very thin beds of light greenish grey (10GY 7/1) and greenish grey (10GY 6/1) marly chalk (CIRIA B1) From 37.30 m to 37.32 m - a bedding fracture subhorizontal undulating smooth infilled with silt	36.00	39.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.9	19.0	19.0	17.5	23.5	24.0	0.10	0.36	0.70	N/A	N/A	N/A	1.6	6.2	11.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak medium to very high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to very thin beds of light greenish grey (10GY 7/1) and greenish grey (10GY 6/1) medium strong marly chalk and chalky marl and very weak to weak chalk (CIRIA A1) Bedding fractures are widely occasionally closely to medium spaced (135/1100/1965) subhorizontal undulating smooth tight clean From 39.50 m to 40.50 m - very weak medium to very high density	39.50	45.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.3	19.8	22.7	11.0	17.5	25.0	0.15	0.39	1.17	N/A	N/A	N/A	2.0	6.3	19.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Weak medium to high density white (N 8.5/) CHALK with extremely closely to closely spaced thin to thick laminae and coarse gravel-size pockets of light greenish grey (10GY 7/1) and greenish grey (10GY 6/1) medium strong marly chalk and chalky marl and weak chalk (CIRIA A1 to A2) Bedding fractures are closely to widely spaced (120/396/1160) subhorizontal rarely 15 degree inclined undulating rarely stepped rough to smooth very tight rarely tight clean	45.00	49.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.4	20.3	22.4	12.0	15.6	19.0	0.15	0.65	1.00	N/A	N/A	N/A	2.1	10.7	17.3	N/A	N/A	N/A	1.38	1.38	1.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Weak to medium strong very high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to thin beds of light greenish grey (10GY 7/1) medium strong marly chalk and chalky marl with occasional fine to medium gravel-size pockets of white (N 9.5/) chalk (CIRIA A1 to A2) Bedding fractures are closely to widely occasionally extremely closely to very closely spaced (30/459/1570) subhorizontal undulating rarely planar and stepped rough rarely smooth very tight clean	49.45	57.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.5	21.6	23.0	11.5	14.5	17.5	0.14	0.90	1.50	N/A	N/A	N/A	1.8	15.3	26.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Weak to medium strong high to very high density white (N 8.5/) CHALK with extremely closely to closely spaced thin laminae to thin beds of light greenish grey (10GY 7/1) medium strong marly chalk and chalky marl with occasional fine to medium gravel-size pockets of white (N 9.5/) chalk (CIRIA A1)	57.50	60.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.5	21.9	22.7	10.0	13.5	18.0	0.98	1.38	1.90	N/A	N/A	N/A	16.5	21.8	32.4	N/A	N/A	N/A	1.21	1.21	1.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	**1**	2	5	14	0.85	1.64	3.40	N/A	N/A	N/A	40	101	140	44.0	46.0	50.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	**3**	18	58	115	0.80	2.40	6.00	1200	1740	2000	48	124	160	39	48.4	52	18	20.0	23	10	19.4	34	0.05	0.55	1.90	N/A	N/A	N/A	0.3	8.9	32.4	650	650	650	0.11	0.76	1.38	N/A	N/A	N/A	17	17	17	28	28	28	11	11	11

FGL-OWF-BH02 / BH02-a

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPTs			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50}			UU (kPa)			UCS (MPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																													PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Dense to very dense pale olive (5Y 6/3) very gravelly highly calcareous SAND with rare coarse sand-size to fine gravel-size shell fragments. Gravel is subangular to subrounded fine to coarse of flint	0.00	0.75	0.10	5.76	11.00	0.01	0.08	1.00	N/A	N/A	N/A	35	90	125	39	44	48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Very dense very gravelly calcareous to highly calcareous fine to medium SAND with rare coarse sand-size to fine gravel-size shell fragments. Gravel is subangular to subrounded fine to coarse of various lithologies From 6.00 m to 6.50 m - medium dense	0.75	7.55	5.00	28.60	78.00	0.10	0.49	1.20	N/A	N/A	N/A	30	101	160	37	45	51	N/A	N/A	N/A	13.10	16.80	20.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Dense to very dense grey (5Y 5/1) slightly silty highly calcareous fine to medium SAND with rare mica crystals and rare coarse sand-size shell fragments From 10.50 m to 11.25 m - silty	7.55	13.00	15.00	40.21	80.00	0.10	0.47	1.00	N/A	N/A	N/A	75	105	140	34	46	49	N/A	N/A	N/A	22.50	23.93	25.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU1- SAND and GRAVEL (Holocene/Neogene)	GRAVEL/COBBLES	Poor recovery of Very dense multi-coloured subangular to subrounded COBBLES, fine to medium GRAVEL of flint, quartz, sandstone and dark greyish olive (10Y 4/2) slightly silty slightly calcareous fine to medium SAND	13.00	17.00	15.00	37.12	83.00	0.20	1.13	1.50	N/A	N/A	N/A	40	89	130	33	42	48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Dense to very dense dark greyish olive (10Y 4/2) slightly silty slightly calcareous fine to medium SAND with closely to medium spaced thin to thick laminae of very dark grey (2.5Y 3/1) clay	17.00	25.20	5.00	52.70	112.00	0.40	1.29	4.20	N/A	N/A	N/A	30	103	140	30	44	50	17.76	18.69	19.62	25.00	31.64	35.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	22	22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Extremely high strength dark grey (5Y 4/1) slightly sandy slightly calcareous to calcareous CLAY with rare foraminifera, rare mica crystals, and rare coarse sand-size organic matter - with frequent coarse sand-size to fine gravel-size lenses of sand. From 38.35 m to 38.60 m - dark grey (5Y 4/1) very sandy highly calcareous CLAY From 38.60 m to 38.95 m - with frequent fine to medium gravel-size pockets of glauconite particles	25.20	43.60	5.00	11.56	46.00	1.30	2.14	4.00	250	603	2300	N/A	N/A	N/A	N/A	N/A	N/A	18.05	19.93	20.60	22.00	26.18	32.90	N/A	N/A	N/A	397	647	1006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29	32	37	64	68	74	35	36	37
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Dense to very dense very dark grey (5Y 3/1) to dark olive grey (5Y 3/2) slightly silty slightly calcareous to calcareous fine SAND with rare mica crystals - with closely to medium spaced thin laminae of very dark grey (2.5Y 3/1) to medium beds of clay	43.60	44.90	15.00	40.92	50.00	1.20	3.92	5.00	N/A	N/A	N/A	55	87	95	34	43	47	18.74	18.74	18.74	28.50	28.90	29.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	63	63	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SILT	Very dense olive grey (5Y 4/2) slightly sandy SILT with frequent to numerous medium sand-size to fine gravel-size foraminifera - with extremely closely to very closely spaced thin laminae of dark olive grey (5Y 3/2) clay. At 49.06 m - end of borehole FGL-OWF-BH02	44.90	52.90	10.00	68.22	135.00	1.20	3.16	6.60	N/A	N/A	N/A	35	95	131	33	44	48	17.40	18.00	19.50	28.60	34.11	38.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33	33	33	28	28	28	38	38	38	10	10	10
SU2a- SAND and CLAY/SILT (Neogene)	SILT	Very dense dark olive grey (5Y 3/2) slightly sandy SILT with frequent to numerous medium sand-size to fine gravel-size foraminifera - with extremely closely to very closely spaced thin laminae of dark olive grey (5Y 3/2) clay	52.90	56.10	10.00	33.56	116.00	1.00	2.19	4.00	N/A	N/A	N/A	35	66	125	34	40	46	17.90	19.56	20.40	21.30	25.90	32.50	######	######	######	N/A	N/A	N/A	0.17	0.24	0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	26	26	26	42	42	42	16	16	16
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dense olive grey (5Y 4/2) silty micaceous fine SAND - with extremely closely to very closely spaced thin laminae of clay	56.10	58.10	15.00	79.95	133.00	0.80	1.71	2.50	N/A	N/A	N/A	64	108	135	38	45	47	19.13	19.13	19.13	24.40	27.03	32.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.2	6.2	6.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SILT	Very dense olive grey (5Y 4/2) slightly sandy clayey SILT - with extremely closely to very closely spaced thin to thick laminae of clay	58.10	62.30	15.00	86.26	135.00	0.80	1.77	2.60	N/A	N/A	N/A	86	117	134	40	46	47	18.10	18.42	19.20	29.50	33.00	38.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Olive grey (5Y 4/2) silty fine SAND - with extremely closely to very closely spaced thin to thick laminae of clay	62.30	64.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.40	18.54	18.60	24.30	29.82	31.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	**1**	0.10	27.92	83.00	0.01	0.54	1.50	N/A	N/A	N/A	30	96	160	33	44	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	**2a**	5.00	53.31	135.00	0.40	2.31	6.60	250	603	2300	30	96	140	30	44	50	17.40	18.88	20.60	21.30	29.57	38.50	0.01	0.01	0.02	397	647	1006	0.17	0.24	0.34	N/A	N/A	N/A	6.2	6.2	6.2	0	30	63	26	29	37	38	49	74	10	21	37

FGL-OWF-BH03																																																							
Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPTs			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50}			UU (kPa)			UCS (MPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																												PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Very dense SAND	0.00	1.15	2.00	21.13	44.00	0.05	0.28	1.00	N/A	N/A	N/A	30	133	170	41	49	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Medium to high strength dark greyish brown (2.5Y 4/2) silty CLAY - with extremely closely to medium spaced thin laminae to thin beds of fine sand	1.15	9.50	2.00	2.54	7.75	1.40	3.85	5.30	77	151	430	N/A	N/A	N/A	N/A	N/A	N/A	19.10	20.23	21.20	20.60	27.74	33.00	N/A	N/A	N/A	116	124	131	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24	24	24	60	60	60	36	36	36
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Very high strength very dark greyish brown (2.5Y 3/2) CLAY	9.50	16.00	2.50	4.02	12.65	1.16	1.96	4.50	100	223	680	N/A	N/A	N/A	N/A	N/A	N/A	18.90	20.40	20.60	21.00	23.50	27.00	N/A	N/A	N/A	113	132	151	N/A	N/A	N/A	193	193	193	N/A	N/A	N/A	16	16	16	20	21	22	42	43	43	21	22	22
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dense olive grey (5Y 4/2) to olive (5Y 4/4) silty fine SAND	16.00	19.90	10.00	31.37	84.00	0.40	1.42	1.80	N/A	N/A	N/A	30	90	130	33	42	48	17.70	18.62	19.70	25.50	31.10	33.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16	16	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Very high to extremely high strength dark olive brown (2.5Y 3/3) CLAY - with closely to medium spaced thin to thick laminae of fine sand - with occasional medium to coarse gravel-size pockets of organic matter	19.90	25.90	5.00	11.30	41.00	1.35	2.07	4.20	200	575	1400	N/A	N/A	N/A	N/A	N/A	N/A	19.90	20.69	21.20	19.10	23.19	29.10	N/A	N/A	N/A	256	362	468	N/A	N/A	N/A	268	268	268	N/A	N/A	N/A	16	16	16	20	20	20	49	49	49	29	29	29
SU2a- SAND and CLAY/SILT (Neogene)	CALCIRUDITE	Conglomeratic weak distinctly weathered thickly laminated pinkish white (2.5YR 8/2) CALCIRUDITE From 26.75 m to 28.80 m - medium dense dark grey (2.5Y 4/1) slightly silty fine SAND with coarse sand-size to medium gravel-size shell fragments and shells with frequent medium to coarse gravel-size pockets of clay	25.90	29.60	9.00	16.15	110.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24.16	24.16	24.16	10.00	17.10	22.30	0.458	0.458	0.458	N/A	N/A	N/A	7.79	7.79	7.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Very high to extremely high strength CLAY - with closely spaced thin laminae of clayey silt	29.60	32.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.60	20.43	20.80	25.50	27.88	31.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	35	35	82	82	82	47	47	47
SU2a- SAND and CLAY/SILT (Neogene)	Organic CLAY	Black (2.5Y 2.5/1) slightly sandy silty organic CLAY. Soil has musty odour From 33.90 m to 34.45 m - high to extremely high strength very dark grey (2.5Y 3/1) organic CLAY. Soil has putrid odour	32.30	36.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.10	18.88	20.80	18.60	32.40	48.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	109	109	N/A	N/A	N/A	16	16	16	21	24	26	40	49	58	19	26	32
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dense grey (2.5Y 5/1) silty fine SAND - with frequent fine gravel-size pockets of organic matter	36.10	38.50	10.00	56.09	110.00	0.25	1.23	4.00	N/A	N/A	N/A	40	93	140	37	43	48	17.90	19.48	21.10	14.20	24.64	30.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Medium to very dense greyish green (5G 5/2) slightly gravelly very clayey glauconitic fine to medium SAND	38.50	40.90	10.00	11.74	120.00	0.25	3.86	7.00	N/A	N/A	N/A	35	93	140	35	41	48	18.44	18.49	18.54	10.00	20.20	26.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to weak low density moderately weathered white (5Y 8/1) CHALK (CIRIA A1 to A2) At 42.45 m - a bedding fracture subhorizontal undulating smooth tight clean From 41.05 m to 41.30 m - structureless CHALK composed of yellowish grey (5y81) slightly sandy silt (CIRIA Dm) From 41.80 m to 42.10 m - very weak	40.90	42.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.83	19.13	20.29	18.70	24.20	28.60	0.020	0.445	1.030	N/A	N/A	N/A	0.17	6.64	11.24	N/A	N/A	N/A	0.33	0.33	0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to weak medium density slightly weathered, locally structureless, white (5Y 8/1) CHALK. From 51.50 m to 53.00 m - with extremely closely to closely spaced thin to thick laminae of greenish grey marl	42.85	53.00	1.00	6.30	14.00	0.25	0.47	1.40	100	394	900	N/A	N/A	N/A	N/A	N/A	N/A	18.10	19.59	21.53	19.90	30.44	36.70	0.020	0.370	1.720	N/A	N/A	N/A	0.17	5.64	19.53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak medium density fresh white (5Y 8/1) CHALK with medium spaced to widely spaced thick laminae to thin beds of greenish grey marl. Nodular flints are medium to widely spaced medium and large. Tubular flints are widely spaced small and medium (CIRIA A1)	53.00	60.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.40	20.38	21.30	20.50	27.23	33.60	0.100	0.176	0.250	N/A	N/A	N/A	1.54	2.90	4.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	1	2.00	21.13	44.00	0.05	0.28	1.00	N/A	N/A	N/A	34	103	145	41	49	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	2a	2.00	19.03	120.00	0.25	2.40	7.00	77	317	1400	30	92	140	33	42	48	17.10	20.16	24.16	10.00	25.30	48.60	0.458	0.458	0.458	113	206	468	7.79	7.79	7.79	109	190	268	N/A	N/A	N/A	0	13	16	20	25	35	40	57	82	19	32	47
			Unit	3	1.00	6.30	14.00	0.25	0.47	1.40	100	394	900	N/A	N/A	N/A	N/A	N/A	N/A	18.10	19.70	21.53	18.70	27.29	36.70	0.020	0.330	1.720	N/A	N/A	N/A	0.17	5.06	19.53	N/A	N/A	N/A	0.33	0.33	0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

FGL-OWF-BH04

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa)			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50}			UU (kPa)			UCS (MPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																															PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Medium dense to very dense SAND	0.00	1.00	0.10	1.82	6.00	0.10	0.90	4.50	N/A	N/A	N/A	35	55	108	28	37	46	19.00	19.26	19.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Medium dense to dense dark greyish brown (2.5Y 4/2) and very dark greyish green (5GY 3/2) mottled silty fine to medium SAND with extremely closely to very closely spaced thick laminae to thin beds of dark olive grey (5Y 3/2) clay	1.00	2.25	2.00	3.14	6.00	0.88	1.52	2.27	N/A	N/A	N/A	35	47	74	32	39	41	15.40	16.44	18.20	11.00	22.05	29.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dense very dark greyish brown (2.5Y 3/2) to very dark greyish brown (2.5Y 3/2) silty fine SAND From 4.00 m to 4.25 m - siliceous strong partially weathered light brownish grey (10YR 6/2) CALCARENITE	2.25	7.60	20.00	39.67	60.00	0.50	1.20	2.20	N/A	N/A	N/A	100	124	144	35	48	50	19.23	22.89	26.55	26.00	32.72	38.40	3.09	4.77	6.70	116	116	116	52	81	114	N/A	N/A	N/A	N/A	N/A	N/A	7	7	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Medium strength CLAY with rare coarse sand-size shell fragments	7.60	8.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.00	19.67	20.30	22.30	26.05	28.80	N/A	N/A	N/A	81	81	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.0	20	20.0	51.00	51	51.0	31.00	31	31.0
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Medium dense to very dense very dark greyish brown (2.5Y 3/2) silty fine SAND with coarse sand-size pockets of black (10YR 2/1) organic matter	8.45	10.50	2.00	22.84	61.00	0.30	1.74	3.50	N/A	N/A	N/A	40	82	130	33	42	48	19.91	19.91	19.91	24.00	24.00	24.00	N/A	N/A	N/A	113	113	113	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	High to very high strength dark grey (10YR 4/1) to very dark grey (10YR 3/1) CLAY - with occasional fine to coarse gravel-size pockets of clay. From 13.50 m to 15.40 m - sandy	10.50	19.40	4.00	17.23	40.00	0.60	2.77	5.00	100	379	1670	N/A	N/A	N/A	N/A	N/A	N/A	19.20	20.31	22.10	21.70	24.59	28.90	N/A	N/A	N/A	162	162	162	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.0	26	30.0	57.00	62	67.0	36.00	37	37.0
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dense very dark greyish brown (2.5Y 3/2) very silty fine to medium SAND with rare medium gravel-size organic matter - with very closely spaced thin laminae of organic matter - with occasional medium gravel-size pockets of clay between 21.40m -22.15m: with occasional subrounded medium to coarse of sandstone gravel	19.40	25.10	10.00	84.73	120.00	0.60	1.63	2.50	N/A	N/A	N/A	80	120	155	38	47	50	18.00	19.60	21.70	17.90	24.00	30.10	N/A	N/A	N/A	468	468	468	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21	21	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	NR	no recovery	25.10	26.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dense very dark greyish brown (10YR 3/2) clayey fine to medium SAND - with medium spaced very thin beds of very high strength very dark greyish brown (10YR 3/2) clay	26.00	28.40	10.00	74.34	120.00	1.20	1.75	2.00	N/A	N/A	N/A	85	113	142	37	46	49	18.50	19.10	20.00	17.80	20.09	27.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Extremely high strength dark greenish grey (5GY 4/1) CLAY - with rare fine gravel-size pockets of black (10YR 2/1) organic matter	28.40	30.05	7.00	11.33	15.00	4.50	6.07	7.80	365	662	1020	N/A	N/A	N/A	N/A	N/A	N/A	20.60	21.73	22.90	13.70	17.40	21.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dense light olive brown (2.5Y 5/6) silty fine to medium SAND	30.05	31.00	6.00	69.71	105.00	1.40	2.39	3.30	N/A	N/A	N/A	100	111	130	35	46	48	15.40	21.19	29.40	20.07	20.07	20.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	NR	no recovery	31.00	31.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (2.5Y 8/1) slightly gravelly SILT. Gravel is extremely weak low density white (2.5Y 8/1) (CIRIA Dm). From 31.50 m to 32.35 m and from 38.40 m to 40.50 m - becomes slightly sandy silty GRAVEL and COBBLES	31.50	42.00	5.00	16.44	80.00	0.60	3.06	5.00	200	730	1800	N/A	N/A	N/A	N/A	N/A	N/A	18.20	19.66	21.30	25.00	31.23	37.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24.0	24	24.0	33.00	33	33.0	9.00	9	9.0
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak low to medium density white (25Y 8/1) CHALK with widely spaced to very closely spaced thin laminae of greenish grey (10Y 5/1) marl (CIRIA A1) At 45.45 m - a bedding fracture subhorizontal planar smooth very tight clean	42.00	49.50	10.00	22.50	90.00	0.70	2.76	5.00	381	958	1950	36	58	130	27	40	52	18.20	20.31	22.70	20.00	25.71	30.00	0.01	0.05	0.35	N/A	N/A	N/A	0	1	6	N/A	N/A	N/A	0.19	0.19	0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to very weak medium density white (25Y 8/1) CHALK with frequent small black (5Y 2.5/1) flints (CIRIA C1 to C3) - with very closely to closely spaced thin laminae of greenish grey (N 7/1) marl - with very closely to widely spaced thin laminae of very dark grey (5Y 3/1) clay - with rare coarse sand-size to medium gravel-size pockets of very dark grey (5Y 3/1) clay. Bedding fractures are closely to very widely spaced (90/2100/4970) subhorizontal undulating occasionally stepped smooth tight occasionally open infilled with clay	49.50	60.00	14.00	31.51	76.00	0.85	2.53	5.50	590	1581	2450	N/A	N/A	N/A	N/A	N/A	N/A	18.30	19.45	20.70	17.30	25.66	27.80	0.01	0.07	0.50	N/A	N/A	N/A	0	1	9	N/A	N/A	N/A	0.11	0.11	0.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	1	0.10	1.82	6.00	0.10	0.90	4.50	N/A	N/A	N/A	35	55	108	28.00	37.21	46.00	19.00	19.26	19.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	2a	2.00	37.72	120.00	0.30	2.38	7.80	100	521	1670	35	99	155	31.50	44.56	49.70	15.40	20.09	29.40	11.00	23.44	38.40	3.09	4.77	6.70	81	188	468	52	81	114	N/A	N/A	N/A	N/A	N/A	N/A	0.00	9.33	21.00	20.00	22.75	30.00	51.00	56.50	67.00	31.00	33.75	37.00
			Unit	3	5.00	23.48	90.00	0.60	2.78	5.50	200	1090	2450	36	58	130	27.30	40.11	51.80	18.20	19.81	22.70	17.30	27.54	37.60	0.01	0.06	0.50	N/A	N/A	N/A	0	1	9	N/A	N/A	N/A	0.11	0.15	0.19	N/A	N/A	N/A	24.00	24.00	24.00	33.00	33.00	33.00	9.00	9.00	9.00

FGL-OWF-BH07

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa)			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50}			UU (kPa)			UCS (MPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																													PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Dense to very dense SAND	0.00	1.50	5.00	21.02	55.00	0.05	0.29	0.50	N/A	N/A	N/A	60	123	165	42	48	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU1- SAND and GRAVEL (Holocene/Neogene)	GRAVEL	Very dense multi-coloured very angular to subrounded fine to coarse GRAVEL of various lithologies with rare subangular to subrounded cobbles of flint and limestone	1.50	7.00	25.00	33.93	52.00	0.10	1.39	2.00	N/A	N/A	N/A	82	119	146	46	47	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Medium dense dark grey (10YR 4/1) very clayey fine SAND - with occasional medium to coarse gravel-size pockets of dark grey (10YR 4/1) clay	7.00	9.15	2.00	5.10	7.00	1.00	1.92	2.20	N/A	N/A	N/A	10	32	50	33	37	38	19,3	19.57	19.80	23.00	23.10	23.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dense dark olive grey (5Y 3/2) clayey fine to medium SAND	9.15	14.90	5.00	40.31	85.00	0.50	2.00	3.50	N/A	N/A	N/A	40	99	160	31	44	49	17.50	18.90	20.20	24.50	31.12	37.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Very high strength dark greenish grey (10Y 4/1) slightly sandy CLAY with abundant fine to coarse gravel-size shells and shell fragments From 19.30 m to 20.40 m - extremely high strength	14.90	21.50	5.00	9.49	34.00	1.20	2.93	4.60	140	388	1400	N/A	N/A	N/A	N/A	N/A	N/A	18.28	21.34	24.01	12.80	19.83	26.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29	33	36	63	68	73	34	36	37
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Very dark grey (10YR 3/1) fine to medium SAND with abundant fine to medium gravel-size shells and shell fragments - with frequent fine to coarse gravel-size pockets of clay. From 22.50 m to 22.90 m -extremely high strength CLAY	21.50	24.00	5.00	26.03	85.00	1.20	3.05	4.50	N/A	N/A	N/A	35	79	125	30	41	45	19.42	19.42	19.42	23.60	23.60	23.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SILT	Dense to very dense olive grey (5Y 4/2) sandy SILT with occasional mica crystals - with thin to thick laminae of organic matter - with rare to occasional medium gravel-size pockets of clay From 24.55 m to 24.95 m - gravelly. Gravel is subrounded coarse of sandstone From 27.33 m to 30.00 m - gravelly with extremely closely to closely spaced thin laminae of organic matter. Gravel is subrounded coarse of sandstone	24.00	30.00	20.00	52.40	75.00	0.90	3.06	5.00	N/A	N/A	N/A	50	99	138	42	59	70	17.40	18.91	20.30	26.60	30.52	35.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Extremely high strength greenish grey (10Y 5/1) and brown (10YR 4/3) mottled CLAY with rare coarse sand-size organic matter - with coarse sand-size pockets of pale yellow (2.5Y 7/3) clay. From 30.00 m to 30.33 m - medium strength greenish grey (10Y 5/1) and dark grey (5Y 4/1) mottled	30.00	33.50	5.00	14.51	40.00	1.00	3.39	6.50	380	668	1100	N/A	N/A	N/A	N/A	N/A	N/A	19.00	20.09	21.10	18.70	22.58	26.90	N/A	N/A	N/A	319	319	319	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	23	23	52	52	52	29	29	29
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (2.5Y 8/1) slightly gravelly SILT. Gravel is extremely weak, medium density white (2.5Y 8/ 1). Flint is nodular black (5Y 2.5/1) small [Dm] From 37.25 m to 37.60 m and from 41.50 m to 42.00 m - becomes slightly sandy silty GRAVEL	33.50	42.00	15.00	28.76	60.00	0.50	1.51	3.50	700	1086	1700	N/A	N/A	N/A	N/A	N/A	N/A	17.80	19.26	20.90	25.70	30.33	35.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20	20	20	31	31	31	11	11	11
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to very weak medium to high density white (2.5Y 8/1) CHALK with rare small to medium flint and with very closely spaced to closely spaced thin laminae of greenish grey (10Y 6/1) marl (CIRIA A1) From 49.31 m to 51.50 m - becomes very weak high density greenish grey (10Y 6/1) marly CHALK	42.00	51.50	25.00	40.78	110.00	1.00	1.95	2.00	600	1088	1700	35	77	131	42	48	55	18.90	20.82	22.70	19.10	25.07	35.80	0.01	0.09	0.22	N/A	N/A	N/A	0.2	1.4	3.8	N/A	N/A	N/A	0.04	0.04	0.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to very weak medium density white CHALK with rare small flint and with very closely spaced to closely spaced thin laminae of greenish grey (10Y 6/1) marl (CIRIA A1) belwo 57.50m with medium subrounded greenish grey (10Y 6/1) gravels of marl (CIRIA A1)	51.50	60.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.70	20.13	22.02	20.80	24.83	27.04	0.01	0.07	0.17	N/A	N/A	N/A	0.17	1.1	3.06	N/A	N/A	N/A	0.15	0.18	0.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	1	5.00	27.47	55.00	0.05	0.84	2.00	N/A	N/A	N/A	60	121	165	42	48	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	2a	2.00	24.64	85.00	0.50	2.72	6.50	140	528	1400	10	77	160	30	45	70	17.40	19.71	24.01	12.80	25.12	37.70	N/A	N/A	N/A	319	319	319	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	23	28	36	52	60	73	29	32	37
			Unit	3	15.00	34.77	110.00	0.50	1.73	3.50	600	1087	1700	35	77	131	42	48	55	17.80	20.07	22.70	19.10	26.74	35.80	0.01	0.08	0.22	N/A	N/A	N/A	0.17	1.24	3.79	N/A	N/A	N/A	0.04	0.11	0.21	N/A	N/A	N/A	20	20	20	31	31	31	11	11	11

FGL-OWF-BH08 / BH08-a

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPTs			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50}			UU (kPa)			UCS (MPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%] PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	GRAVEL	Very dense white (N 9/) to black (N 2.5/) angular to subrounded sandy medium to coarse GRAVEL of flint and medium strong to strong partially weathered to distinctly weathered pale yellowish pink (7.5YR 9/2) CALCARENITE with pervasive orange iron oxide staining Bedding fractures are closely spaced (75/100/145) subhorizontal to 30 degree inclined undulating rough open to moderately wide infilled with silt	0.00	1.00	2.00	13.92	65.00	0.04	0.67	3.62	N/A	N/A	N/A	80	124	180	43.0	47.4	49.0	N/A	N/A	N/A	11.80	11.80	11.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8/) slightly gravelly slightly sandy SILT. Clasts are very weak to weak low to medium density white subangular to rounded fine to coarse. Silt is white (Ciria Dm)	1.00	6.30	3.00	5.84	55.00	0.00	0.96	5.51	110	154	225	N/A	N/A	N/A	N/A	N/A	N/A	19.60	19.94	20.40	22.40	24.60	27.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	16	18	22	23	24	6	7	8
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to very weak medium density white (N 8/) CHALK. Flints are widely spaced nodular large (CIRIA A1) At 9.13 m - end of borehole FGL-OWF-BH08 From 9.50 m to 9.90 m and from 11.50 m to 11.65 m- structureless CHALK composed of gravelly slightly sandy SILT. Matrix is white (CIRIA Dm)	6.30	13.50	7.00	27.18	109.00	0.50	1.39	5.00	400	845	1400	N/A	N/A	N/A	N/A	N/A	N/A	19.50	20.73	21.70	19.10	25.98	30.20	0.04	0.09	0.18	N/A	N/A	N/A	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak medium density white (N 8/) CHALK. Flints are closely to widely spaced nodular large to very large (CIRIA A1)	13.50	23.15	10.00	37.58	52.00	0.10	0.56	1.00		N/A		N/A	N/A	N/A	N/A	N/A	N/A	18.90	19.90	20.70	20.50	24.71	26.20	0.10	0.47	2.00	N/A	N/A	N/A	1	7	33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak, locally strong, low to medium density white (N 8/) CHALK. Flints are closely to widely spaced nodular large (CIRIA A1) From 20.00 m to 20.70 m and from 23.50 m to 24.20 m - recovered as structureless CHALK composed of sandy gravelly SILT. Matrix is white (CIRIA Dm)	23.15	27.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15.01	15.01	15.01	19.30	22.20	26.60	3.40	4.42	5.50	N/A	N/A	N/A	56	75	93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to weak medium to high density white (N 8/) CHALK. Nodular flints are medium to widely spaced small to large. Tubular flints are widely spaced small (CIRIA A1)	27.75	45.00	15.00	43.21	90.00	0.50	1.12	3.00	250	949	1600	N/A	N/A	N/A	N/A	N/A	N/A	17.90	21.38	21.60	17.10	24.35	28.80	0.10	0.86	5.40	N/A	N/A	N/A	1	13	91	N/A	N/A	N/A	0.180	0.180	0.180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to weak medium to high density white (N 8/) CHALK with very closely to medium spaced thin to thick laminae of greenish grey (5G 6/1) marl. Flints are medium to widely spaced large nodular (CIRIA A1)	45.00	53.00	7.00	25.82	110.00	0.50	1.87	4.00	325	1032	1800	N/A	N/A	N/A	N/A	N/A	N/A	18.40	20.74	22.60	16.00	22.57	29.50	0.10	0.50	1.70	N/A	N/A	N/A	1	7	30	N/A	N/A	N/A	0.198	0.198	0.198	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to weak medium to high density white (N 8/) CHALK with very closely spaced thin to thick laminae of greenish grey (5G 6/1) marl. Flints are medium to widely spaced nodular medium to large (CIRIA A1)	53.00	61.45	5.00	17.00	94.00	0.50	1.41	5.00	70	580	1800	N/A	N/A	N/A	N/A	N/A	N/A	19.10	20.24	22.50	17.20	22.68	26.70	0.15	1.12	3.10	N/A	N/A	N/A	2	17	54	N/A	N/A	N/A	0.063	0.063	0.063	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	1	2.00	13.92	65.00	0.04	0.67	3.62	N/A	N/A	N/A	80	124	180	43.0	47.4	49.0	N/A	N/A	N/A	11.80	11.80	11.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	3	3.00	26.10	110.00	0.00	1.22	5.51	231	712	1365	N/A	N/A	N/A	N/A	N/A	N/A	15.01	19.71	22.60	16.00	23.87	30.20	0.04	1.24	5.50	N/A	N/A	N/A	1	20	93	N/A	N/A	N/A	0.063	0.147	0.198	N/A	N/A	N/A	14	16	18	22	23	24	6	7	8

FGL-OWF-BH09 / BH09-a

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50}			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%] PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Medium dense to dense olive yellow (2.5Y 6/8) gravelly fine to coarse SAND with numerous coarse sand-size to coarse gravel-size shells and shell fragments. Gravel is subangular to subrounded fine to coarse of various lithologies. At 1.30 m - end of borehole FGL-OWF-BH09	0.00	2.50	2.00	7.51	16.00	0.27	0.41	0.64	N/A	N/A	N/A	30	78	102	38	43	45	19.91	19.91	19.91	27.00	27.00	27.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	SAND	Medium dense to very dense grey (2.5Y 5/1) to olive brown (2.5Y 4/3) slightly gravelly slightly silty slightly calcareous fine to medium SAND. Gravel is subangular to subrounded fine to medium of various lithologies - with closely to medium spaced thick laminae to very thin beds of silt	2.50	18.50	5.00	21.33	58.00	0.40	1.03	2.30	N/A	N/A	N/A	22	72	120	37	41	47	14.91	18.42	20.30	10.50	26.37	30.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	9	17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Very high to extremely high strength pinkish grey (7.5YR 6/2) CLAY	18.50	20.10	5.00	11.07	40.00	1.00	2.20	3.00	281	502	1290	N/A	N/A	N/A	N/A	N/A	N/A	20.01	20.01	20.01	25.90	25.90	25.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU2b - CALCARENITE (Eocene)	CALCARENITE (glauconitic)	Weak to strong distinctly weathered dark greenish grey (10GY 4/1) siliceous CALCARENITE (glauconitic) From 21.40 m to 26.10 m - moderately weak partially weathered	20.10	32.05	32.00	43.33	90.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.90	18.96	28.00	19.00	25.15	28.80	0.10	5.20	12.49	0	80	148	N/A	N/A	N/A	N/A	N/A	N/A	0.57	0.57	0.57	N/A	N/A	N/A	19	19	19	37	37	37	18	18	18
SU2a- SAND and CLAY/SILT (Neogene)	CLAY	Extremely high strength dark greenish grey (5GY 4/1) sandy very gravelly calcareous CLAY. Gravel is subrounded fine to coarse of various lithologies	32.05	38.00	10.00	26.08	52.00	0.50	1.30	2.40	400	917	1600	N/A	N/A	N/A	N/A	N/A	N/A	18.80	19.21	20.00	17.10	24.04	31.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to weak medium to high density slightly weathered white (N 8/) to greenish grey (5GY 6/1) marly CHALK. Nodular flints are closely to medium spaced small to large. Tubular flints are medium to widely spaced medium to large (CIRIA A1) From 42.35 m to 43.50 m - weak slightly weathered thinly laminated to thickly laminated white (N 8/) to greenish grey (5GY 6/1) marl	38.00	51.50	11.00	20.00	100.00	1.50	2.53	4.30	375	920	1500	N/A	N/A	N/A	N/A	N/A	N/A	18.40	20.28	21.41	17.15	23.47	29.00	0.10	1.36	6.30	2	20	107	N/A	N/A	N/A	N/A	N/A	N/A	0.46	0.46	0.46	N/A	N/A	N/A	30	32	33	59	64	68	26	32	38
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak high density slightly weathered white (N 8/) CHALK. Nodular flints are medium to widely spaced large. Sheet flints are widely spaced small (CIRIA A1)	51.50	59.90	5.00	28.45	105.00	1.00	2.77	7.00	200	920	2400	N/A	N/A	N/A	N/A	N/A	N/A	16.20	20.36	21.90	16.00	22.33	29.50	0.10	1.46	5.20	1	21	88	N/A	N/A	N/A	N/A	N/A	N/A	0.12	0.18	0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	1.00	2.00	7.51	16.00	0.27	0.41	0.64	N/A	N/A	N/A	30	78	102	38	43	45	19.91	19.91	19.91	27.00	27.00	27.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	2a	5.00	19.49	58.00	0.40	1.51	3.00	281	641	1600	22	72	120	37	41	47	17.91	19.21	20.10	17.83	25.44	29.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	9	17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	2b	32.00	43.33	90.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.90	18.96	28.00	19.00	25.15	28.80	0.10	5.20	12.49	0	80	148	N/A	N/A	N/A	N/A	N/A	N/A	0.57	0.57	0.57	N/A	N/A	N/A	19	19	19	37	37	37	18	18	18
			Unit	3.00	5.00	24.23	105.00	1.00	2.65	7.00	200	920	2400	N/A	N/A	N/A	N/A	N/A	N/A	17.30	20.32	21.66	16.58	22.90	29.25	0.10	1.41	6.30	1	21	107	N/A	N/A	N/A	N/A	N/A	N/A	0.12	0.32	0.46	N/A	N/A	N/A	30	32	33	59	64	68	26	32	38

FGL-OWF-BH11

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50} (MPa)			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																											PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 9/) slightly sandy slightly gravelly highly calcareous SILT. Clasts are moderately weak very high density angular to subangular fine to medium (CIRIA Dm)	0.00	3.05	12.00	26.98	60.00	0.50	2.03	4.50	750	1500	2500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18	18	18	30	30	30	12	12	12
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak very high density moderately weathered thinly bedded white (N 8.5/) CHALK (CIRIA A1 to A3) From 3.85 m to 5.90 m - with closely to medium spaced thick laminae to very thin beds of light grey (N 7/) marly chalk From 3.85 m to 5.90 m and from 4.00 m to 9.75 m - with rare to frequent coarse sand-size to fine gravel-size pockets of greyish green (5G 5/2) glauconitic silty sand	3.05	11.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.91	22.15	23.55	6.60	11.60	15.90	0.20	0.93	1.80	3.60	15.83	30.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU4- LIMESTONE (Cretaceous)	LIMESTONE	Weak, locally to extremely strong, slightly weathered thinly laminated light greenish grey (10Y 7/1) arenaceous LIMESTONE with mica crystals. Flints are extremely closely to medium spaced small to large nodular	11.45	16.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.40	22.09	23.32	7.30	12.18	16.80	0.23	1.03	1.52	3.70	44.06	314.00	N/A	N/A	N/A	N/A	N/A	N/A	1.38	1.38	1.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU4- LIMESTONE (Cretaceous)	LIMESTONE	Extremely weak to weak slightly weathered dark greyish green (5GY 4/2) glauconitic arenaceous LIMESTONE From 16.70 m to 17.20 m - thinly laminated light greenish grey (10Y 7/1) with occasional fine to coarse gravel-size pockets of glauconitic sand and mica crystals	16.70	20.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.80	21.17	22.52	11.00	22.03	27.70	0.08	0.20	0.32	0.69	2.40	5.44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU5- SANDSTONE (Cretaceous)	SANDSTONE	Very weak to weak slightly weathered thinly laminated greenish grey (5GY 5/1) medium-grained SANDSTONE with occasional fine and medium sand-size black (N 2.5/) specks of possible manganese. Bedding fractures are closely to medium occasionally widely spaced (60/500/1945) subhorizontal undulating rough to smooth partly open to open infilled with sandy clay From 23.50 m to 23.70 m - extremely weak to weak	20.70	23.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.00	20.30	21.50	15.30	18.76	26.30	0.08	0.66	1.47	1.25	11.26	25.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU5- SANDSTONE (Cretaceous)	SAND	Greenish grey (10GY 5/1) to very dark greenish grey (5G 3/1) slightly gravelly slightly clayey slightly calcareous medium to coarse SAND with rare subangular cobbles of sandstone	23.70	26.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	31	31	18.50	20.10	23.00	12.10	23.48	34.40	0.20	1.63	4.44	3.16	27.72	75.54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	31	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU5- SANDSTONE (Cretaceous)	SANDSTONE	Extremely weak to weak greyish green (5G 5/2) to dark greenish grey (5G 4/1) fine-grained to coarse-grained SANDSTONE. Bedding fractures are extremely close to very close rarely close to widely spaced (10/41/1360) subhorizontal undulating smooth open infilled with glauconitic clay From 28.55 m to 28.80 m - strong	26.90	31.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.30	23.15	25.00	16.30	21.44	31.90	0.05	0.53	4.10	0.68	28.03	69.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU6- MUDSTONE (Cretaceous)	MUDSTONE	Extremely weak to very weak slightly weathered to completely weathered thinly laminated very dark greenish grey (10Y 3/1) MUDSTONE. Bedding fractures are wide to very wide occasionally extremely close to medium spaced (20/1105/11285) subhorizontal rarely 15 degrees inclined undulating smooth very tight to open occasionally infilled with clay	31.35	52.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.30	19.68	21.10	13.60	23.16	35.40	0.05	0.63	1.42	0.90	3.22	18.55	N/A	N/A	N/A	N/A	N/A	N/A	0.14	0.30	0.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU7- Dense SAND (L.Cretaceous)	SAND	Dense to very dense dark greenish grey (5GY 4/1) medium to coarse SAND	52.60	58.15	12.00	51.67	117.00	0.50	1.79	4.00	N/A	N/A	N/A	37	84.7	122	34	43	47	19.72	19.72	19.72	13.60	21.87	26.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU7- Dense SAND (L.Cretaceous)	SILT	Medium dense to very dense very dark greenish grey (10GY 3/1) sandy SILT with rare to frequent mica crystals - with frequent fine to medium gravel-size pockets of fine sand From 60.00 m to 60.45 m - very sandy silty CLAY	58.15	63.50	16.00	28.93	43.00	1.20	2.00	3.50	N/A	N/A	N/A	40	60.7	100	28	37	49	15.60	16.12	16.60	19.40	21.43	23.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19	19	19	36	36	36	17	17	17
SU7- Dense SAND (L.Cretaceous)	SAND	Very dense greyish green (5G 5/2) medium to coarse SAND with rare to frequent mica crystals with glauconite particles with very closely spaced thick laminae to thin beds of very dark greyish green (5G 3/2) clay	63.50	70.00	42.00	74.11	134.00	1.15	2.27	2.70	N/A	N/A	N/A	72	96.1	125	30	44	47	18.80	19.38	20.30	22.20	25.63	34.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21	21	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	3	12.00	26.98	60.00	0.50	2.03	4.50	750	1500	2500	N/A	N/A	N/A	N/A	N/A	N/A	19.91	22.15	23.55	6.60	11.60	15.90	0.20	0.93	1.80	3.60	15.83	30.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18	18	18	30	30	30	12	12	12
			Unit	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.80	21.63	23.32	7.30	17.11	27.70	0.08	0.61	1.52	0.69	23.23	314.00	N/A	N/A	N/A	N/A	N/A	N/A	1.38	1.38	1.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	31	31	18.50	21.18	25.00	12.10	21.23	34.40	0.05	0.94	4.44	0.68	22.34	75.54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	31	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.30	19.68	21.10	13.60	23.16	35.40	0.05	0.63	1.42	0.90	3.22	18.55	N/A	N/A	N/A	N/A	N/A	N/A	0.14	0.30	0.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	7	12.00	51.57	134.00	0.50	2.02	4.00	N/A	N/A	N/A	37.0	80.5	125.0	28	41	49	15.60	18.41	20.30	13.60	22.98	34.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21	21	21	19	19	19	36	36	36	17	17	17

FGL-OWF-BH13

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50}			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																													PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Dense to very dense SAND	0.00	0.80	2.50	3.87	7.60	0.30	0.84	2.50	N/A	N/A	N/A	35	76.5	115	38	43	48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	CLAY	Medium to high strength grey (N 6/) to greenish grey (5GY 5/1) gravelly CLAY. Gravel is angular fine to medium	0.80	2.50	2.00	2.81	6.50	5.00	10.19	13.00	120	172	445	N/A	N/A	N/A	N/A	N/A	N/A	24.61	24.61	24.61	12.40	20.75	29.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	LIMESTONE	Weak slightly weathered greenish grey (5GY 5/1) arenaceous LIMESTONE. Bedding fractures are closely to medium spaced (45/167/300) subhorizontal undulating smooth partly opened clean with black staining	2.50	3.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23.30	24.09	24.57	3.00	5.00	8.60	0.30	0.32	0.34	5	5	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	CLAY	High to extremely high strength greyish green (5G 5/2) fissured slightly sandy CLAY. Fissures are sub-horizontal extremely closely to very closely spaced undulating smooth.	3.50	8.60	16.80	29.97	108.00	4.00	7.34	9.30	325	1578	2460	N/A	N/A	N/A	N/A	N/A	N/A	19.60	22.70	22.10	15.80	22.17	27.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18	23	27	37	46	55	19	24	28
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	LIMESTONE	Extremely weak to weak moderately weathered to highly weathered greenish grey (10GY 6/1) LIMESTONE. Bedding fractures are medium to very widely spaced (90/1533/3360) subhorizontal undulating smooth very tight clean. From 9.00 m to 10.00 m - weak moderately weathered to highly weathered light greenish grey (10Y 7/1) LIMESTONE From 10.00 m to 11.00 m - with extremely closely to closely spaced partings of silt From 21.40 m to 22.50 m - extremely weak to strong moderately weathered light grey (10YR 7/2) to very dark greenish grey (5GY 3/1)	8.60	22.50	23.00	42.08	68.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.25	25.54	35.25	4.00	14.99	27.00	0.02	0.41	1.04	0	6	80	N/A	N/A	N/A	N/A	N/A	N/A	0.12	0.12	0.12	N/A	N/A	N/A	22	22	22	44	44	44	22	22	22
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	LIMESTONE	Extremely weak to weak slightly weathered to moderately weathered thinly laminated to thickly laminated light greenish grey (10GY 7/1) to dark greenish grey (10GY 4/1) arenaceous LIMESTONE with occasional organic matter Bedding fractures are medium to widely spaced (150/929/2345), subhorizontal undulating smooth partly opened infilled with clay occasionally with black staining	22.50	27.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15.01	23.92	27.08	5.90	8.81	17.50	0.17	0.72	1.32	3	12	22	N/A	N/A	N/A	N/A	N/A	N/A	1.60	1.60	1.60	31	31	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	CLAY	Very high strength dark greenish grey (10GY 4/1) slightly sandy highly calcareous CLAY From 28.55 m to 29.50 m - with closely to medium spaced thin beds of limestone	27.50	33.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.70	21.05	23.20	14.90	18.28	22.20	0.23	0.58	1.10	4	10	20	89	89	90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	23	24	50	54	59	26	31	36
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	LIMESTONE	Extremely weak to very weak moderately weathered to highly weathered dark greenish grey (10Y 4/1) to greenish black (10G 2.5/1) arenaceous LIMESTONE	33.50	45.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.30	21.34	23.67	9.00	16.30	29.00	0.02	0.30	0.81	0	5	15	N/A	N/A	N/A	N/A	N/A	N/A	0.12	0.84	1.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU9- LIMESTONE interbedded with calcareous CLAY (Jurassic)	LIMESTONE	Very weak to medium strong moderately weathered to highly weathered greenish grey (10GY 5/1) LIMESTONE	45.40	61.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.10	22.03	25.21	6.40	10.87	23.30	0.02	0.62	1.85	0	11	51	N/A	N/A	N/A	N/A	N/A	N/A	1.34	2.39	3.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	1	2.50	3.87	7.60	0.30	0.84	2.50	N/A	N/A	N/A	35.00	76.46	115.00	38	43	48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	9	2.00	24.95	108.00	4.00	8.77	14.00	120	875	2460	N/A	N/A	N/A	N/A	N/A	N/A	11.25	23.16	35.25	3.00	14.65	29.10	0.02	0.49	1.85	0	8	80	89	89	90	N/A	N/A	N/A	0.12	1.23	3.43	31	31	31	18	23	27	37	48	59	19	26	36

FGL-OWF-BH14 / BH14-a / BH14-b

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50} (MPa)			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%] PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Medium dense to very dense light grey (10YR 7/1) gravelly fine to medium SAND. Gravel is subangular to subrounded fine to medium of various lithologies At 3.35 m - end of borehole FGL-OWF-BH14-a	0.00	2.50	4.00	11.67	76.00	0.10	0.32	1.30	N/A	N/A	N/A	42	99	168	39	46	50	19.72	19.91	19.90	10.00	19.97	28.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	7	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Thinly interlaminated very high to extremely high strength grey (10YR 5/1) to dark yellowish brown (10YR 4/4) slightly sandy silty CLAY with rare pockets of organic matter	2.50	8.00	3.00	19.72	43.00	2.60	3.16	5.50	155	1011	1860	N/A	N/A	N/A	N/A	N/A	N/A	20.60	20.83	23.00	10.00	15.13	20.30	N/A	N/A	N/A	N/A	N/A	N/A	230	230	230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	13	13	24	24	24	11	11	11
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Medium dense to very dense olive brown (2.5Y 4/3) silty SAND	8.00	11.50	7.00	12.70	49.00	2.40	6.64	9.40	N/A	N/A	N/A	35	70	120	36	40	46	19.52	19.52	19.52	18.30	18.30	18.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength grey (2.5Y 6/1) and dark red (5R 3/8) mottled slightly sandy silty CLAY locally extremely weak highly weathered mudstone	11.50	15.50	12.00	18.62	30.00	3.80	6.48	8.70	450	1085	1970	N/A	N/A	N/A	N/A	N/A	N/A	21.90	22.94	24.50	10.80	14.28	20.20	N/A	N/A	N/A	N/A	N/A	N/A	1139	1139	1139	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	14	14	30	30	30	16	16	16
SU8- SAND and CLAY/SILT (L.Cretaceous)	SILTSTONE	Extremely weak moderately weathered grey (2.5Y 6/1) to dark red (5R 3/8) mottled SILTSTONE locally extremely high strength clay. Bedding fractures are closely occasionally extremely closely to medium spaced (30/132/550) subhorizontal planar smooth tight occasionally very tight infilled with clay occasionally clean	15.50	17.50	74.61	74.27	74.61	N/A	N/A	N/A	400	467	533	N/A	N/A	N/A	N/A	N/A	N/A	21.30	22.17	22.80	10.60	12.78	15.00	0.01	0.020	0.03	0.17	0.3	0.51	N/A	N/A	N/A	N/A	N/A	N/A	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	MUDSTONE	Extremely weak highly weathered to completely weathered grey (2.5Y 6/1) and dark red (5R 3/8) mottled MUDSTONE locally becoming clay	17.50	19.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.46	22.46	22.46	11.90	13.83	17.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	No recovery	No recovery	19.00	20.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	MUDSTONE	Residual soil very dark grey (10YR 3/1) MUDSTONE locally tending to clay	20.00	21.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.40	22.96	23.50	10.00	16.48	17.30	0.02	0.030	0.04	0.26	0.4	0.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Very dense very dark grey (10YR 3/1) sandy fine SAND with very closely spaced thin laminae of silt and with rare coarse sand-size pockets of organic matter From 24.15 m to 24.35 m - extremely weak moderately weathered grey (10YR 6/1) SILTSTONE	21.30	24.20	5.00	29.75	154.00	0.20	3.52	5.50	N/A	N/A	N/A	75	96	116	33	41	49	18.40	19.03	19.60	9.00	16.76	26.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength dark grey (10YR 4/1) slightly sandy CLAY At 24.79 m - end of borehole FGL-OWF-BH14	24.20	27.83	5.00	41.60	164.00	0.20	4.14	8.00	500	1200	2400	N/A	N/A	N/A	N/A	N/A	N/A	21.60	22.83	23.70	11.10	17.47	21.20	N/A	N/A	N/A	N/A	N/A	N/A	1474	1474	1474	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	13	13	28	28	28	15	15	15
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Very dense clayey fine to medium SAND with occasional coarse sand-size organic matter with occasional fine to medium gravel-size pockets of clay	27.83	28.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.39	21.39	21.39	11.40	18.95	26.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength black (10YR 2/1) slightly sandy CLAY with occasional black (10YR 2/1) coarse sand-size organic matter - with thin laminae to very thin beds of sand - with fine to medium gravel-size pockets of sand	28.75	31.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.80	23.00	25.30	11.00	15.28	20.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20	20	20	37	37	37	17	17	17
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Very dense greyish brown (10YR 5/2) very silty fine to medium SAND with rare black (10YR 2/1) coarse sand-size organic matter - with rare fine gravel-size pockets of clay From 31.90 m to 32.32 m - very weak slightly weathered very dark grey (10YR 3/1) SILTSTONE From 35.30 m to 35.45 m - very weak slightly weathered thinly laminated dark grey (10YR 4/1) SILTSTONE	31.50	35.50	5.00	26.866	60.00	0.40	1.62	4.00	N/A	N/A	N/A	55	85	105	35	41	45	21.20	22.76	23.70	10.50	16.33	27.50	0.05	0.077	0.11	0.85	1.3	1.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	58	58	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength grey (10YR 5/1) slightly sandy CLAY with occasional black (10YR 2/1) coarse sand-size organic matter. Below 38.50m with frequent fine to medium gravel-size pockets of sand From 43.70 m to 44.90 m - gravelly CLAY. Gravel is subangular to subrounded fine to medium of sandstone and pyrite	35.50	45.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.00	21.42	22.60	12.10	16.18	27.50	N/A	N/A	N/A	N/A	N/A	N/A	568	568	568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17	18	18	34	36	38	17	19	20
SU8- SAND and CLAY/SILT (L.Cretaceous)	No recovery	No recovery	45.10	46.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Very dense silty fine SAND to dark grey (10YR 4/1) slightly sandy SILT with rare mica crystals and rare coarse gravel-size organic matter	46.15	48.20	4.00	72.108	149.00	0.50	1.33	1.96	N/A	N/A	N/A	42	110	133	39	45	47	20.30	21.20	22.10	24.60	27.83	31.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength very dark grey (10YR 3/1) CLAY with occasional black (10YR 2/1) coarse sand-size organic matter and rare fine to medium gravel-size pieces of wood - with very closely spaced thin laminae of silt - with occasional fine to medium gravel-size pockets of sand with organic matter and pieces of wood	48.20	52.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.59	22.99	24.60	7.50	13.39	20.00	0.11	0.121	0.13	1.94	2.1	2.18	492	492	492	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	22	22	49	49	49	27	27	27
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Very dense grey (10YR 5/1) very clayey fine SAND - with rare coarse sand-size to fine gravel-size pockets of organic matter	52.35	54.30	5.00	28.046	105.00	1.26	1.26	1.26	N/A	N/A	N/A	62	92	117	41	43	45	N/A	N/A	N/A	8.80	16.73	25.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	No recovery	No recovery	54.30	56.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SILT	Extremely high strength grey (2.5Y 5/1) to dark greyish brown (2.5Y 4/2) slightly gravelly slightly sandy clayey SILT with rare black (10YR 2/1) coarse sand-size to fine gravel-size organic matter. Gravel is subrounded fine of various lithologies - with extremely closely to closely spaced thin laminae to very thin beds of black (10YR 2/1) organic matter - with frequent fine to coarse gravel-size lenses of light grey (2.5Y 7/1) sand	56.45	60.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.02	22.02	23.30	11.80	17.74	26.00	0.08	0.084	0.08	1.43	1.4	1.43	334	334	334	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	15	15	27	27	27	12	12	12
			Unit	1	4.00	11.67	76.00	0.10	0.32	1.30	N/A	N/A	N/A	42	99	168	39	46	50	19.72	19.91	19.90	10.00	19.97	28.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	7	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	8	3.00	35.96	164.00	0.20	3.52	9.40	155	941	2400	35	91	133	33	42	49	18.40	21.83	25.30	7.50	16.72	31.50	0.01	0.07	0.13	0.17	1.10	2.18	230	706	1474	N/A	N/A	N/A	0.3	0.3	0.3	58	58	58	13	16	22	24	33	49	11	17	27

FGL-OWF-BH15 / BH15-a

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50} (MPa)			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																														PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU7- Dense SAND (L.Cretaceous)	SAND	Dense to very dense dark reddish brown (5YR 3/3) gravelly silty highly calcareous fine to medium SAND. Gravel is subangular to subrounded fine to medium of various lithologies	0.00	3.50	1.00	16.71	60.00	0.20	0.61	1.50	N/A	N/A	N/A	40	102	167	30	46	51	18.74	18.74	18.74	24.60	26.13	26.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU7- Dense SAND (L.Cretaceous)	SAND	Very dense very dark greenish grey (5G 3/1) fine to medium gravelly SAND with rare mica crystals. Gravel is subangular to subrounded medium to coarse of various lithologies	3.50	23.50	4.00	60.48	107.00	0.80	1.76	2.50	N/A	N/A	N/A	88	121	168	32	47	51	17.17	18.25	19.80	23.30	26.63	29.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	8	8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength very dark bluish grey (5B 3/1) sandy CLAY - with extremely closely spaced thin laminae and fine to medium gravel-size lenses of greenish grey (5GY 6/1) silty sand. Highly calcareous below 25m	23.50	28.50	4.00	22.72	80.00	2.10	4.18	6.80	300	1238	2200	N/A	N/A	N/A	N/A	N/A	N/A	20.70	20.99	21.40	18.40	19.67	21.30	N/A	N/A	N/A	N/A	N/A	N/A	294	294	294	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	23	23	51	51	51	28	28	28
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength grey (2.5Y 5/1) slightly sandy to sandy slightly calcareous CLAY From 32.50 m to 33.30 m - grey (2.5Y 6/1) and greyish brown (2.5Y 5/2) mottled with extremely closely to very closely spaced occasional thin laminae of light olive brown (2.5Y 5/4) SAND	28.50	34.10	4.00	46.57	130.00	1.00	4.95	6.00	400	2105	2500	N/A	N/A	N/A	N/A	N/A	N/A	20.50	21.58	22.60	10.20	14.36	20.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	14	14	26	26	26	12	12	12
SU8- SAND and CLAY/SILT (L.Cretaceous)	No recovery	No recovery	34.10	35.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength grey (2.5Y 5/1) sandy CLAY with rare mica crystals - with extremely closely spaced thin laminae of sand - with coarse sand-size to medium gravel-size pockets of sand	35.50	38.30	3.00	52.36	120.00	0.80	1.84	4.00	300	1116	1600	N/A	N/A	N/A	N/A	N/A	N/A	19.20	21.00	22.80	13.00	16.00	29.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength greenish grey (10GY 5/1) slightly sandy CLAY - with numerous coarse sand-size to fine gravel-size pockets of red (10R 4/6) clay	38.30	43.10	12.00	40.46	135.00	1.65	3.46	8.00	450	1472	2100	N/A	N/A	N/A	N/A	N/A	N/A	18.60	20.93	22.30	10.10	19.05	30.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	No recovery	No recovery	43.10	44.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Very dense greyish brown (2.5Y 5/2) slightly silty SAND - with frequent coarse sand-size to fine gravel-size pockets of black (2.5Y 2.5/1) organic matter. At 45.08 m - end of borehole FGL-OWF-BH15	44.00	46.00	6.00	54.41	134.00	0.50	2.59	4.50	N/A	N/A	N/A	68	109	142	33	45	49	14.32	15.38	19.60	27.70	31.50	36.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SILT	Very dense greyish brown (2.5Y 5/2) sandy SILT - with extremely closely to medium spaced thin laminae of black (2.5Y 2.5/1) organic matter	46.00	48.75	6.00	64.33	150.00	0.30	1.68	2.00	N/A	N/A	N/A	58	103	136	34	44	48	19.72	19.72	19.72	20.10	25.62	30.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	High to extremely high strength very dark grey (2.5Y 3/1) silty CLAY with extremely closely to very closely spaced thin laminae of grey (2.5Y 5/1) sand	48.75	52.00	9.00	64.87	108.00	2.28	4.37	7.00	300	3277	2200	N/A	N/A	N/A	N/A	N/A	N/A	18.20	20.03	21.00	16.20	21.87	31.50	N/A	N/A	N/A	N/A	N/A	N/A	467	467	467	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21	21	21	41	41	41	20	20	20
SU8- SAND and CLAY/SILT (L.Cretaceous)	SILT	Very dense greyish brown (2.5Y 5/2) sandy SILT - with extremely closely to medium spaced thin laminae of black (2.5Y 2.5/1) organic matter	52.00	53.45	9.00	68.80	152.00	2.40	4.88	6.90	N/A	N/A	N/A	86	109	135	44	46	48	18.93	18.93	18.93	20.10	25.88	27.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength very dark grey (2.5Y 3/1) silty CLAY - with extremely closely to medium spaced thin laminae of dark grey (2.5Y 4/1) silt	53.45	55.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.31	20.31	20.31	16.40	18.08	19.40	N/A	N/A	N/A	N/A	N/A	N/A	212	212	212	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	27	27	27	39	39	39	12	12	12
SU8- SAND and CLAY/SILT (L.Cretaceous)	SILT	Very dense very dark grey (2.5Y 3/1) slightly sandy clayey SILT, locally with closely spaced thin laminae of black (2.5Y 2.5/1) organic matter	55.00	58.05	27.00	83.56	153.00	2.40	4.19	7.00	N/A	N/A	N/A	84	111	134	44	46	47	19.40	20.24	21.00	17.80	21.16	28.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19	19	19	27	27	27	8	8	8
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength dark grey (2.5Y 4/1) slightly sandy CLAY with frequent coarse sand-size to medium gravel-size pockets of black (2.5Y 2.5/1) organic matter	58.05	60.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.40	19.85	20.50	17.00	17.55	17.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	7	1.00	38.60	107.00	0.20	1.19	2.50	N/A	N/A	N/A	40	112	168	30	46	51	17.17	18.49	19.80	23.30	26.38	29.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	8	8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	8	3.00	55.34	153.00	0.30	3.57	8.00	300	1842	2500	58	108	142	33	45	49	14.32	19.91	22.80	10.10	20.97	36.80	N/A	N/A	N/A	N/A	N/A	N/A	212	324	467	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	14	21	27	26	37	51	8	16	28

FGL-OWF-BH18																																																				
Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa)			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50}			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%] PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	GRAVEL	Dense subangular to subrounded slightly sandy fine to medium GRAVEL of various lithologies including flints	0.00	0.65	0.20	1.29	3.00	0.50	0.95	1.50	N/A	N/A	N/A	30	60	70	37	41	42	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Gravel is extremely weak to very weak low to medium density white (N 8.5/) subrounded fine to medium (CIRIA Dm) - with rare medium gravel-size pockets of dark brown (10YR 3/1) and light greenish grey (10GY 8/1) silt - flint is nodular angular and subangular small. Pseudoflints are moderately weak subrounded and rounded small	0.65	5.00	6.00	12.76	39.00	0.70	1.96	4.00	150	419.9	860	N/A	N/A	N/A	N/A	N/A	N/A	19.60	20.11	20.60	25.80	26.38	28.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	22	22	34	34	34	12	12	12
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8.5/) sandy SILT. Clasts are extremely weak to weak low to medium density white (N 8.5/) subrounded and subangular to angular fine to coarse. Matrix is white (2.5Y 8/1) (CIRIA Dc). Locally with occasional thin beds of slightly gravelly silt (CIRIA Dm)	5.00	20.00	8.00	15.57	59.00	1.00	4.68	6.00	N/A	N/A	N/A	35	65	120	39	54	68	19.50	20.23	22.00	21.30	26.16	29.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	23	23	31	31	31	8	8	8
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Gravel is very weak to weak low to medium density white (N 8.5/) subrounded to subangular and angular (CIRIA Dm) - with rare medium gravel-size pockets of dark brown (10YR 3/1) and light greenish grey (10GY 8/1) silt. Flint is large and tabular From 21.40 m to 25.50 m - locally gravelly. Gravel is very weak medium density white (N 8.5/) subrounded with medium spaced subhorizontal very thin to thin beds of weak light greenish grey (10Y 7/1) to greenish grey (10Y 5/1) marly chalk	20.00	28.00	10.00	18.10	75.00	0.50	7.83	6.00	100	718.8	1600	N/A	N/A	N/A	N/A	N/A	N/A	15.00	16.32	18.30	24.10	25.77	28.20	0.02	0.14	0.30	0.4	2.4	5.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	23	23	33	33	33	10	10	10
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak low to medium density white (N 8.5/) CHALK with occasional medium chalk nodules with rare extremely closely spaced to medium spaced subhorizontal to cross-oriented greenish grey (10 GY 6/1) thin lamina of marl and marly chalk. (CIRIA B1 to B3) - Pseudoflints are very closely to closely spaced nodular subangular to rounded small to medium - Flints are very closely spaced nodular small. Bedding fractures are closely to widely rarely very close spaced subhorizontal undulating rarely planar to stepped smooth rarely rough partly open to open infilled with silt rarely with gravelly silt	28.00	34.00	12.00	32.37	80.00	0.10	0.20	0.90	348	406.0	464	N/A	N/A	N/A	N/A	N/A	N/A	20.80	20.98	21.30	21.00	27.51	33.80	0.02	0.18	0.31	0.4	3.0	9.0	N/A	N/A	N/A	N/A	N/A	N/A	0.39	0.39	0.39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (2.5Y 8/1) slightly sandy silty GRAVEL. Gravel is fine to medium extremely weak medium density white (2.5Y 8/1) and angular. Flint is greenish black (10Y 2.5/1) medium to coarse subangular to subrounded (CIRIA Dc)	34.00	38.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.31	20.31	20.31	20.00	24.36	31.00	0.01	0.07	0.20	0.2	1.1	3.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16	16	16	29	29	29	13	13	13
SU3- CHALK (U. Cretaceous)	CHALK	Extremely weak to weak high density white (2.5Y 8/1) CHALK with very closely to closely spaced thin lamina of marl (CIRIA A2 to A3) - Flint are nodular small to medium. Bedding fractures are medium occasionally very closely to widely spaced (30/326/1235) subhorizontal rarely 15 to 30 degree inclined undulating occasionally planar rarely stepped rough to smooth clean rarely infilled with marl	38.00	43.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.50	20.06	20.92	18.00	23.39	27.30	0.01	0.11	0.33	0.2	1.9	5.5	N/A	N/A	N/A	N/A	N/A	N/A	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Gravel is very weak low density (CIRIA Dm)	43.50	48.90	10.00	34.98	75.00	0.50	1.85	4.00	130	986.7	1800	N/A	N/A	N/A	N/A	N/A	N/A	22.27	22.27	22.27	25.20	25.80	26.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU3- CHALK (U. Cretaceous)	CHALK	Very weak low to medium density white (N 8.5/) CHALK (CIRIA B2 to B4) - with extremely closely to closely spaced subhorizontal greenish grey (5GY 5/1) thin laminae of marls, randomly oriented light greenish grey (5GY 7/1) to greenish grey (5GY 6/1) coarse gravel-size burrows and fine gravel-size lenses of greenish grey (5GY 5/1) marly chalk. Bedding fractures are very closely to widely spaced (30/262/845) subhorizontal undulating smooth rarely rough partly open rarely open to moderately wide infilled with silt	48.90	53.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.20	18.94	20.90	22.70	25.18	27.70	0.15	0.22	0.27	1.5	3.2	4.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18	18	18	27	27	27	9	9	9
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly SILT. Clasts are very weak to weak low density white (N 8.5/) angular and subangular fine to coarse. Matrix is white (N 8.5/) (CIRIA Dm)	53.70	61.50	10.00	22.12	80.00	1.00	2.57	6.00	200	1099.3	2000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24.20	26.90	28.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	1	0.20	1.29	3.00	0.50	0.95	1.50	N/A	N/A	N/A	30	60	70	37	41	42	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	3	6.00	22.65	80.00	0.10	3.18	6.00	100	726.1	2000	35	65	120	39	54	68	15.00	19.90	22.27	18.00	25.72	33.80	0.01	0.14	0.33	0.2	2.3	9.0	N/A	N/A	N/A	N/A	N/A	N/A	0.25	0.32	0.39	N/A	N/A	N/A	16	20	23	27	31	34	8	10	13

FGL-OWF-BH23 / BH23-a

Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50} (MPa)					UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																														PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver. BH08	Aver. BH08-a	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Medium dense to very dense light grey (10YR 7/1) silty fine SAND with occasional subangular fine to coarse gravels of various lithologies	0.00	1.95	1.00	5.94	45.00	0.10	0.48	2.00	N/A	N/A	N/A	18	59	155	36	41	51	18.45	18.69	18.90	13.00	18.74	21.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU1- SAND and GRAVEL (Holocene/Neogene)	No recovery	No recovery	1.95	2.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU1- SAND and GRAVEL (Holocene/Neogene)	SAND	Very dense brown (10YR 5/3) gravelly slightly clayey fine to medium SAND. Gravel is subangular to rounded fine to coarse of various lithologies - with frequent fine to medium gravel-size pockets of black (10YR 2/1) organic matter	2.50	2.75	4.00	56.09	80.00	0.33	0.79	4.60	N/A	N/A	N/A	37	140	166	38	50	52	N/A	N/A	N/A	20.80	20.80	20.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	No recovery	No recovery	2.75	4.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Very dense SAND	4.50	4.82	8.00	78.96	114.00	1.30	1.85	2.20	N/A	N/A	N/A	54	144	170	41	46	50	N/A	N/A	N/A	18.50	18.50	18.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	No recovery	No recovery	4.82	5.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Dark greyish brown (10YR 4/2) slightly silty fine to medium SAND - with extremely closely to very closely spaced thin to thick laminae of black (2.5Y 2.5/1) organic matter	5.50	5.95	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.20	20.60	22.90	9.00	18.80	30.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength grey (10YR 6/1) slightly sandy silty CLAY From 9.10 m to 9.95 m - high to very high strength grey (10YR 6/1) and red (2.5YR 5/8) mottled clayey SILT	5.95	9.95	4.00	11.53	100.00	1.00	7.01	9.60	160	410	1200	N/A	N/A	N/A	N/A	N/A	N/A	19.90	20.74	21.40	10.00	15.77	24.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	161	161	161	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	23	23	41	41	41	18	18	18
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength grey (10YR 5/1) slightly sandy clayey SILT - with frequent medium sand-size to medium gravel-size pockets of black (2.5Y 2.5/1) organic matter	9.95	12.45	10.00	62.06	120.00	1.60	3.12	5.50	600	1602	2200	N/A	N/A	N/A	N/A	N/A	N/A	21.70	22.04	22.50	9.00	10.63	12.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	12	12	19	19	19	7	7	7
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Very dense dark grey (10YR 4/1 to 10YR 5/1) fine to medium SAND between 14.05 m - 16.0 m : with extremely closely to very closely spaced thin to thick laminae of black (2.5Y 2.5/1) organic matter below 16.0m : with extremely closely to very closely spaced thin to thick laminae of very dark grey (10YR 3/1) clay	12.45	19.25	7.00	71.87	160.00	0.45	1.92	3.00	N/A	N/A	N/A	50	120	155	30	46	50	18.25	19.40	20.60	17.30	24.52	30.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	10	11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	High to very high strength very dark grey (10YR 3/1) CLAY - with extremely closely to very closely spaced thin to thick laminae of grey (10YR 5/1) silt - with occasional coarse sand-size to medium gravel-size pockets of grey (10YR 5/1) fine sand	19.25	21.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.20	19.84	21.00	17.90	20.43	22.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	266	266	266	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	15	15	31	31	31	16	16	16
SU8- SAND and CLAY/SILT (L.Cretaceous)	SAND	Medium dense to very dense dark grey (10YR 4/1) silty fine SAND with black (N 2.5/) organic matter below 22.30m	21.00	23.30	7.00	34.68	118.00	0.35	2.15	4.50	N/A	N/A	N/A	26	80	140	36	42	48	21.39	21.39	21.39	22.70	27.10	36.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Extremely high strength grey (10YR 5/1) to very dark brown (10YR 2/2) CLAY: - becoming silty CLAY below 25.50m - From 26.50 m to 27.40 m - fissured. Fissures are sub-horizontal extremely closely to very closely spaced planar smooth with frequent coarse sand-size to medium gravel-size pockets of black (2.5Y 2.5/1) organic matter	23.30	29.55	4.00	11.22	59.00	0.72	3.52	8.60	200	618	2400	N/A	N/A	N/A	N/A	N/A	N/A	20.90	21.97	23.00	11.70	15.37	22.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	14	14	24	24	24	10	10	10
SU8- SAND and CLAY/SILT (L.Cretaceous)	COAL	Moderately weak pyritised black (N 2.5/) COAL	29.55	29.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SILT	Extremely high strength greyish brown (10YR 5/2) clayey SILT From 31.50 m to 33.40 m - with extremely closely to closely spaced thin to thick laminae of light brownish grey (10YR 6/2) fine sand At 36.50 m - end of borehole FGL-OWF-BH23	29.80	36.85	3.00	59.99	123.00	0.39	2.87	4.82	300	2426	2800	N/A	N/A	N/A	N/A	N/A	N/A	19.40	20.20	22.00	11.00	17.53	27.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	14	15	24	28	31	10	14	16
SU8- SAND and CLAY/SILT (L.Cretaceous)	CLAY	Very high to extremely high strength greyish brown (10YR 5/2) slightly sandy silty CLAY	36.85	38.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.40	21.88	23.80	13.00	14.20	18.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SU8- SAND and CLAY/SILT (L.Cretaceous)	SILT	Extremely high strength dark grey (2.5Y 4/1) clayey SILT - with extremely closely spaced thin laminae of dark grey (2.5Y 4/1) clay	38.90	40.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.40	20.16	21.90	16.20	16.70	17.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16	16	16	30	30	30	14	14	14
			Unit	1	1.00	31.02	80.00	0.10	0.63	4.60	N/A	N/A	N/A	18	100	166	36	45	52	18.45	18.69	18.90	13.00	19.77	21.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	8	3.00	47.19	160.00	0.35	3.21	9.60	160	1264	2800	26	115	170	30	45	50	18.20	20.82	23.80	9.00	18.14	36.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	161	213	266	N/A	N/A	N/A	N/A	N/A	N/A	9	10	11	12	16	23	19	29	41	7	13	18

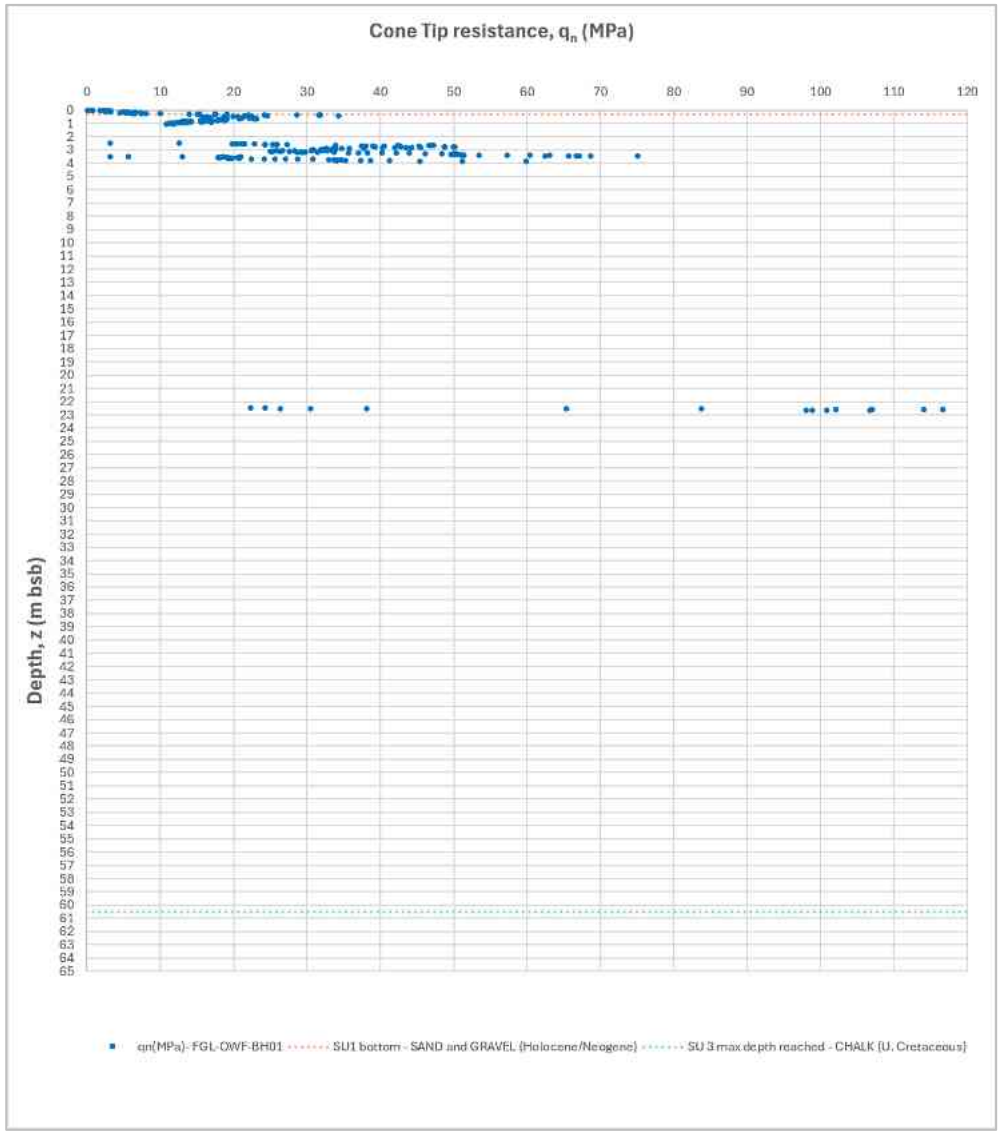
FGL-OWF-BH24 / BH24-a																																																				
Soil Unit	Type	Simplified description	Depth bsb (m)		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (ø')			Bulk Density [kN/m3]			Moisture Content [%]			IS_{50} (MPa)			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																												PL			LL			PI		
			From	To	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8.5/) gravelly SILT. Clasts are very weak low density angular to rounded fine to coarse of various lithologies including chalk flint and sandstone. Flint are extremely closely spaced very small special to large and nodular (CIRIA Dm). From 6.00 m to 6.40 m and from 8.00 m to 8.45 m - multi-coloured angular to subrounded fine to coarse GRAVEL of various lithologies including chalk, sandstone and flint	0.00	8.95	4.00	14.63	70.00	0.10	0.82	4.00	60	356	1100	N/A	N/A	N/A	N/A	N/A	N/A	18.64	18.64	18.64	15.00	22.30	34.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18	18	18	27	27	27	9	9	9
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Clasts are very weak medium density angular to subrounded medium to coarse. Flint are extremely closely to medium spaced very small special to large and nodular (CIRIA Dm)	8.95	25.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.50	18.79	19.00	16.90	27.48	32.90	0.10	0.23	0.50	1.3	3.8	8.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17	17	18	24	26	28	8	10	11
SU3- CHALK (U. Cretaceous)	CHALK	Structureless CHALK composed of white (N 8.5/) slightly gravelly slightly sandy SILT. Clasts are extremely weak to very weak low density subangular to subrounded fine to medium. Flints are closely to medium spaced very small special to large and nodular (CIRIA Dm). From 29.00 m to 30.00 m - no recovery	25.80	50.00	5.00	40.77	38.00	0.50	1.24	2.00	140	1678	1700	N/A	N/A	N/A	N/A	N/A	N/A	17.00	20.73	22.22	9.30	19.45	26.40	0.05	0.13	0.30	1.2	2.1	3.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16	17	18	23	25	28	6	8	11
SU3- CHALK (U. Cretaceous)	CHALK	Very weak to weak high to very high density white (N 8.5/) CHALK with extremely closely to very closely spaced subhorizontal thin to thick laminae of light grey (N 7/) marly chalk (CIRIA A1 to A3). Bedding fractures are closely to widely rarely very widely spaced (120/642/2050) subhorizontal undulating rarely planar smooth very tight to tight rarely open clean rarely infilled with silt From 55.10 m to 56.00 m - very weak to strong high density white (N 8.5/) CHALK with closely spaced subhorizontal and inclined 60 degree very thin to thin beds of strong grey (N 6/) limestone	50.00	61.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.90	20.92	23.10	6.00	14.14	20.10	0.05	0.76	2.70	0.2	12.0	68.0	N/A	N/A	N/A	N/A	N/A	N/A	0.22	0.22	0.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Unit	3	4.00	27.70	70.00	0.10	1.029	4.00	60	1017	1700	N/A	N/A	N/A	N/A	N/A	N/A	17.00	19.77	23.10	6.00	20.84	34.10	0.05	0.37	2.70	0.20	5.98	68.00	N/A	N/A	N/A	N/A	N/A	N/A	0.22	0.22	0.22	N/A	N/A	N/A	16	17	18	23	26	28	6	9	11

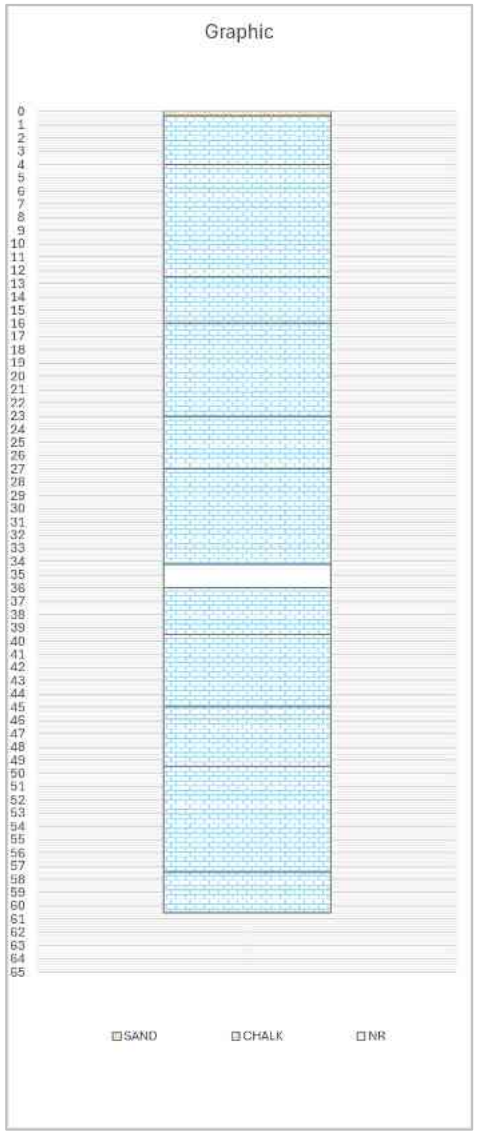
Location	Units		qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (°)			Bulk Density [kN/m3]			Moisture Content [%]			IS50 (MPa)			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																										PL			LL			PI		
			Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max	Min	Aver.	Max
FGL-OWF-BH01	Unit	1	2	5	14	0.85	1.54	3.48	48	101	148	44.8	46.8	50.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH01	Unit	3	18	58	115	0.88	2.48	6.88	1288	1748	2888	48	124	168	33	48.4	52	18	28.8	29	18	19.4	34	0.3	0.3	32.4	N/A	N/A	N/A	658	658	658	0.11	0.76	1.38	N/A	N/A	N/A	17	17	17	28	28	28	11	11	11
FGL-OWF-BH02	Unit	1	8.18	27.32	85.88	0.81	0.54	1.58	N/A	N/A	N/A	38	96	168	33	44	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH02	Unit	2a	5.88	59.34	195.88	0.48	2.34	6.58	258	685	2588	38	96	148	38	44	58	17.48	18.88	28.58	21.58	25.57	38.58	0.81	0.84	0.82	0.47	0.24	0.54	357	647	1885	6.2	6.2	6.2	8	38	68	26	29	37	38	45	74	18	21	37
FGL-OWF-BH03	Unit	1	2.88	24.18	44.88	0.85	0.28	1.88	N/A	N/A	N/A	34	183	145	41	48	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH03	Unit	2a	2.88	13.85	128.88	0.25	2.48	7.88	77	317	1488	38	92	148	33	42	48	17.18	28.15	24.15	18.88	25.38	48.58	0.458	0.458	0.458	7.75	7.75	7.75	113	286	458	183	138	258	N/A	N/A	N/A	8	13	15	28	25	35	48	57	82	13	32	47
FGL-OWF-BH03	Unit	3	1.88	6.38	14.88	0.25	0.47	1.48	188	354	588	N/A	N/A	N/A	N/A	N/A	N/A	18.18	13.78	24.53	18.78	27.23	36.78	0.828	0.838	1.728	0.47	5.85	13.53	N/A	N/A	N/A	0.33	0.33	0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH04	Unit	1	8.18	1.82	6.88	0.18	0.38	4.58	N/A	N/A	N/A	35	55	188	28.88	37.24	46.88	15.88	15.26	15.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH04	Unit	2a	2.88	37.72	128.88	0.38	2.38	7.88	188	521	1678	35	93	155	32	45	58	15.48	28.88	28.48	11.88	23.44	38.48	5.858	4.758	6.788	52.88	84.85	114.88	84	188	458	N/A	N/A	N/A	N/A	N/A	N/A	8	9	21	28	29	38	54	57	67	34	34	37
FGL-OWF-BH04	Unit	3	5.88	28.48	38.88	0.58	2.78	5.58	288	1838	2458	36	58	138	37.38	48.44	54.88	18.28	15.84	22.78	17.38	27.54	37.58	0.84	0.86	0.58	8	4	8	N/A	N/A	N/A	0.44	0.45	0.48	N/A	N/A	N/A	24.88	24.88	24.88	33.88	33.88	33.88	5.88	5.88	5.88
FGL-OWF-BH07	Unit	1	5.88	27.47	55.88	0.85	0.84	2.88	N/A	N/A	N/A	58	124	165	42	48	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH07	Unit	2a	2.88	24.64	85.88	0.58	2.72	6.58	148	528	1488	38	77	158	38	45	55	17.48	13.74	24.84	12.88	25.42	37.78	N/A	N/A	N/A	N/A	N/A	N/A	313	313	313	N/A	N/A	N/A	N/A	N/A	N/A	8	8	8	23	28	36	52	68	73	23	32	37
FGL-OWF-BH07	Unit	3	15.88	34.27	118.88	0.58	1.73	5.58	688	1887	1788	35	77	151	42	48	55	17.88	28.87	22.78	15.18	26.74	35.88	0.84	0.88	0.82	0.47	4.24	5.73	N/A	N/A	N/A	0.84	0.41	0.24	N/A	N/A	N/A	28	28	28	31	31	31	11	11	11
FGL-OWF-BH08	Unit	1	2.88	13.32	55.88	0.84	0.67	3.62	N/A	N/A	N/A	88	124	188	45.8	47.4	45.8	N/A	N/A	N/A	11.88	11.88	11.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH08	Unit	3	3.88	26.18	118.88	0.88	1.22	5.51	231	742	1365	N/A	N/A	N/A	N/A	N/A	N/A	15.84	13.71	22.58	16.88	23.87	38.28	0.84	1.24	5.58	1	28	33	N/A	N/A	N/A	0.865	0.147	0.138	N/A	N/A	N/A	14	16	18	22	23	24	6	7	8
FGL-OWF-BH09	Unit	1	2.88	7.51	15.88	0.27	0.41	0.54	N/A	N/A	N/A	38	78	182	38	43	45	13.34	13.31	13.34	27.88	27.88	27.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH09	Unit	2a	5.88	13.43	58.88	0.48	1.54	5.88	284	641	1688	22	72	128	37	41	47	17.34	13.24	28.18	17.88	25.44	29.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	9	17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH09	Unit	2b	32.88	43.93	58.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.38	18.36	28.88	19.88	25.45	28.88	0.48	5.28	12.43	8	88	148	N/A	N/A	N/A	0.57	0.57	0.57	N/A	N/A	N/A	13	13	13	37	37	37	18	18	18
FGL-OWF-BH09	Unit	3	5.88	24.23	185.88	1.88	2.65	7.88	288	328	2488	N/A	N/A	N/A	N/A	N/A	N/A	17.38	28.52	24.65	16.58	22.38	29.25	0.48	1.44	6.58	1	24	187	N/A	N/A	N/A	0.42	0.52	0.45	N/A	N/A	N/A	38	52	55	55	64	68	26	32	38
FGL-OWF-BH11	Unit	3	12.88	26.58	68.88	0.58	2.83	4.58	758	1588	2588	N/A	N/A	N/A	N/A	N/A	N/A	13.34	22.15	29.55	6.68	11.68	15.38	0.28	0.33	1.88	5.68	15.83	38.78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18	18	18	38	38	38	12	12	12
FGL-OWF-BH11	Unit	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15.88	24.63	29.32	7.38	17.11	27.78	0.88	0.84	1.52	0.65	28.23	344.88	N/A	N/A	N/A	1.38	1.38	1.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH11	Unit	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	31	31	18.58	24.18	25.88	12.18	24.25	34.48	0.85	0.34	4.44	0.68	22.34	75.54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	31	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH11	Unit	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.38	13.58	24.18	13.68	28.16	35.48	0.85	0.53	1.42	0.58	5.22	18.55	N/A	N/A	N/A	0.44	0.58	0.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH11	Unit	7	12.88	54.57	134.88	0.58	2.82	4.88	N/A	N/A	N/A	37.8	88.5	125.8	28	41	48	15.68	18.41	28.38	13.68	22.38	34.78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21	21	21	18	18	18	36	36	36	17	17	17
FGL-OWF-BH13	Unit	1	2.58	5.87	7.58	0.58	0.84	2.58	N/A	N/A	N/A	35	75	115	38	43	48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH13	Unit	3	3.88	24.35	188.88	4.88	8.77	15.88	128	875	2468	N/A	N/A	N/A	N/A	N/A	N/A	11.25	23.16	38.88	5.88	14.65	23.18	0.82	0.43	1.85	8	8	88	83	83	98	N/A	N/A	N/A	N/A	N/A	N/A	8.12	4.23	5.43	31	31	31	18	23	27	37	48	53	13	26	35
FGL-OWF-BH14	Unit	1	4.88	11.67	76.88	0.18	0.32	1.58	N/A	N/A	N/A	42	93	168	33	45	58	13.72	13.31	13.58	18.88	15.37	28.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	7	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH14	Unit	8	5.88	35.36	164.88	0.28	5.52	5.48	155	341	2488	35	91	155	33	42	48	18.48	24.88	25.58	7.58	16.72	31.58	0.84	0.87	0.45	0.47	4.18	2.48	298	785	1474	N/A	N/A	N/A	N/A	N/A	N/A	0.3	0.3	0.3	58	58	58	15	16	22	24	33	43	11	17	27
FGL-OWF-BH15	Unit	7	1.88	38.58	187.88	0.28	1.15	2.58	N/A	N/A	N/A	48	112	168	38	46	54	17.17	18.45	15.88	23.38	26.58	29.78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	8	8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH15	Unit	8	5.88	55.34	155.88	0.38	3.57	8.88	388	1842	2588	58	108	142	33	45	48	14.52	13.31	22.88	18.18	28.37	36.88	N/A	N/A	N/A	N/A	N/A	N/A	242	324	457	N/A	N/A	N/A	N/A	N/A	N/A	8	8	8	14	21	27	26	37	51	8	16	28
FGL-OWF-BH18	Unit	1	0.28	1.23	3.88	0.58	0.35	1.58	N/A	N/A	N/A	38	68	78	37	41	42	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH18	Unit	3	6.88	22.65	88.88	0.48	3.48	6.88	188	728.1944535	2888	35	65	128	33	34	35	15.88	13.38	22.27	18.88	25.72	33.88	0.84	0.44	0.83	0.2	2.3	3.8	N/A	N/A	N/A	0.2458	0.3475	0.3588	N/A	N/A	N/A	16	28	23	27	31	34	8	18	13
FGL-OWF-BH23	Unit	1	1.88	31.82	88.88	0.48	0.63	4.58	N/A	N/A	N/A	18	188	155	36	45	52	18.45	18.63	18.38	15.88	15.77	21.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FGL-OWF-BH23	Unit	8	5.88	47.19	168.88	0.35	5.24	5.58	158	1264	2888	26	115	178	38	45	58	18.28	28.82	23.88	5.88	18.44	36.58	N/A	N/A	N/A	N/A	N/A	N/A	184	248	266	N/A	N/A	N/A	N/A	N/A	N/A	3	18	11	12	16	23	13	23	41	7	13	18
FGL-OWF-BH24	Unit	3	4.88	27.28	78.88	0.18	1.823	4.88	68	1847	1788	N/A	N/A	N/A	N/A	N/A	N/A	17.88	13.77	29.18	6.88	28.84	34.18	0.85	0.37	2.78	0.28	5.58	58.88	N/A	N/A	N/A	0.22	0.22	0.22	N/A	N/A	N/A	15	17	18	23	26	28	5	9	11

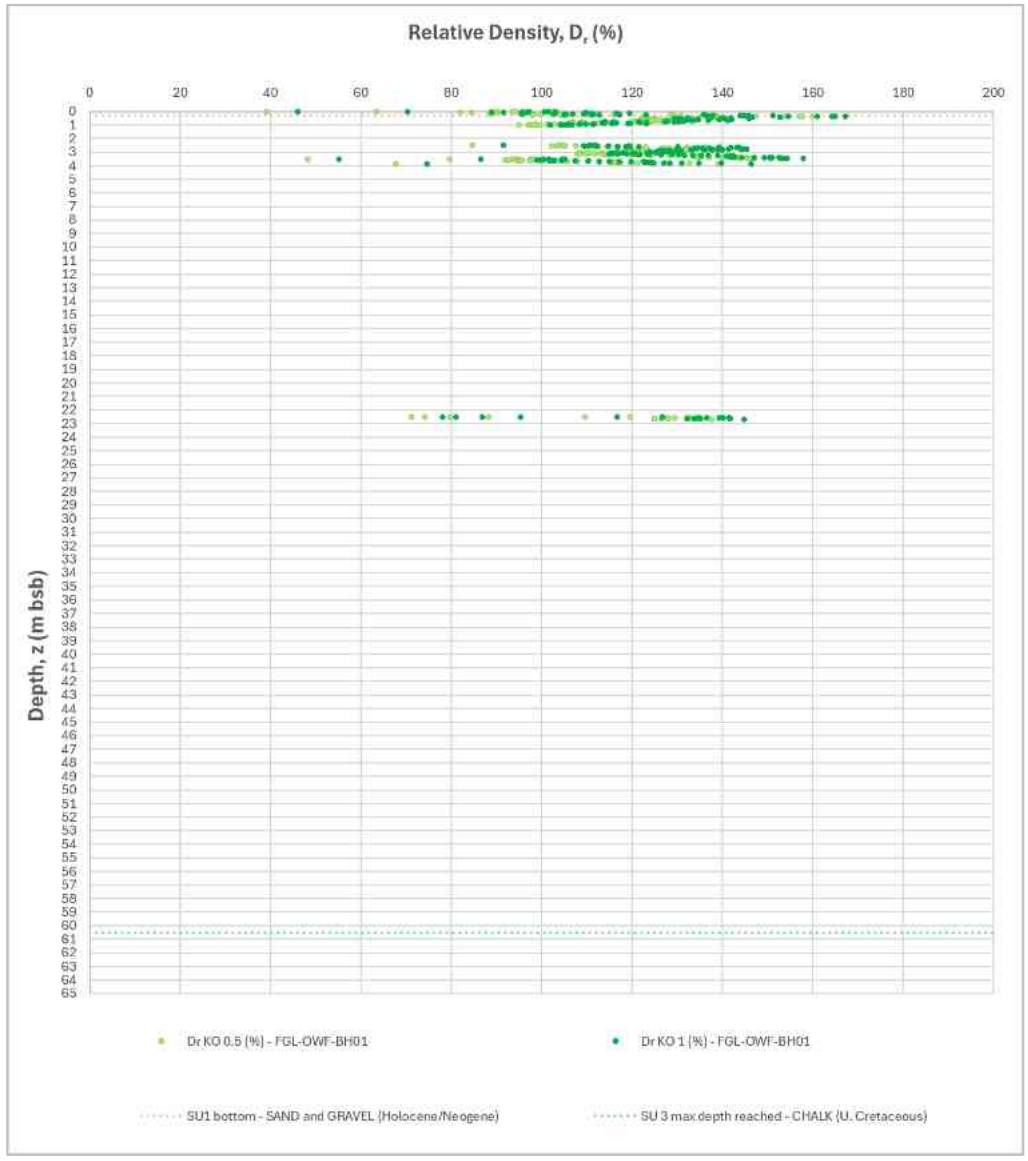
Soil Unit ID	Soil Unit	qnet (MPa)			Fr (%)			Su (kPa) from CPT			Dr (%)			Friction Angle (°)			Bulk Density [kN/m3]			Moisture Content [%]			IS50 (MPa)			UCS (MPa)			UU (kPa)			CIU (MPa)			Tensile (MPa)			Cohesion (KPa)			Attemberg Limit [%]								
																																								PL			LL			PI		
		LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE	LE	BE	HE
1	SAND and GRAVEL (Holocene/Neogene	2.00	13.86	80.00	0.20	0.73	3.00	N/A	N/A	N/A	30	92	160	35	45	50	18.50	19.50	20.00	10.00	15.00	20.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	7	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2a	SAND and CLAY/SILT	3.00	55.00	120.00	0.50	2.27	6.00	80	700	1800	20	90	140	35	43	50	17.00	20.00	25.00	10.00	26.00	40.00	0.50	2.00	6.00	0.20	30.00	110.00	81	340	1006	109	190	268	6.20	6.20	6.20	0	12	63	20	26	37	38	56	82	10	30	47
2b	CALCARENITE (Eocene)	35.00	48.00	80.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.00	19.00	22.00	7.00	12.00	20.00	0.20	5.00	12.00	0.20	80.00	145.00	N/A	N/A	N/A	N/A	N/A	N/A	0.57	0.57	0.57	N/A	N/A	N/A	19	19	19	37	37	37	18	18	18
3	CHALK (U. Cretaceous)	4.00	30.00	110.00	0.20	2.00	6.00	200	1000	2300	40	80	150	30	45	55	18.00	20.00	23.00	7.00	23.00	35.00	0.10	0.60	6.00	0.20	20.00	100.00	N/A	N/A	N/A	650	650	650	0.04	0.29	1.38	N/A	N/A	N/A	14	21	33	22	33	68	6	13	38
4	LIMESTONE (Cretaceous)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.8	21.6	23.3	8.0	18.0	26.0	0.1	0.6	1.5	0.8	25.0	300.0	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.4	1.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	SANDSTONE (Cretaceous)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	31	32	19.0	22.0	24.0	13.0	22.0	32.0	0.1	1.0	4.4	0.8	22.0	75.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	31	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	MUDSTONE (Cretaceous)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.0	20.0	21.0	14.0	23.0	35.0	0.1	0.6	1.3	1.0	3.2	18.0	N/A	N/A	N/A	N/A	N/A	N/A	0.1	0.3	0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	Dense SAND (L.Cretaceous)	2.00	45.00	130.00	0.20	1.50	3.50	N/A	N/A	N/A	40	100	160	30	45	50	18.00	19.00	20.00	15.00	25.00	33.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	15	21	19	19	19	36	36	36	17	17	17
8	SAND and CLAY/SILT	5.00	50.00	160.00	0.20	3.30	8.00	200	1400	2600	30	105	160	30	45	50	17.00	21.00	25.00	8.00	19.00	36.00	0.10	0.12	0.13	0.20	1.00	2.00	161	415	1474	N/A	N/A	N/A	0.29	0.29	0.29	0	23	58	12	18	27	19	33	51	7	15	28
9	LIMESTONE interbedded with calcareous CLAY	5.00	30.00	105.00	5.00	9.00	14.00	150	900	2400	N/A	N/A	N/A	N/A	N/A	N/A	15.00	24.00	30.00	4.00	15.00	25.00	0.10	0.50	1.80	0.20	10.00	80.00	89	89	90	N/A	N/A	N/A	0.12	1.23	3.43	31	31	31	18	23	27	37	48	59	19	26	36

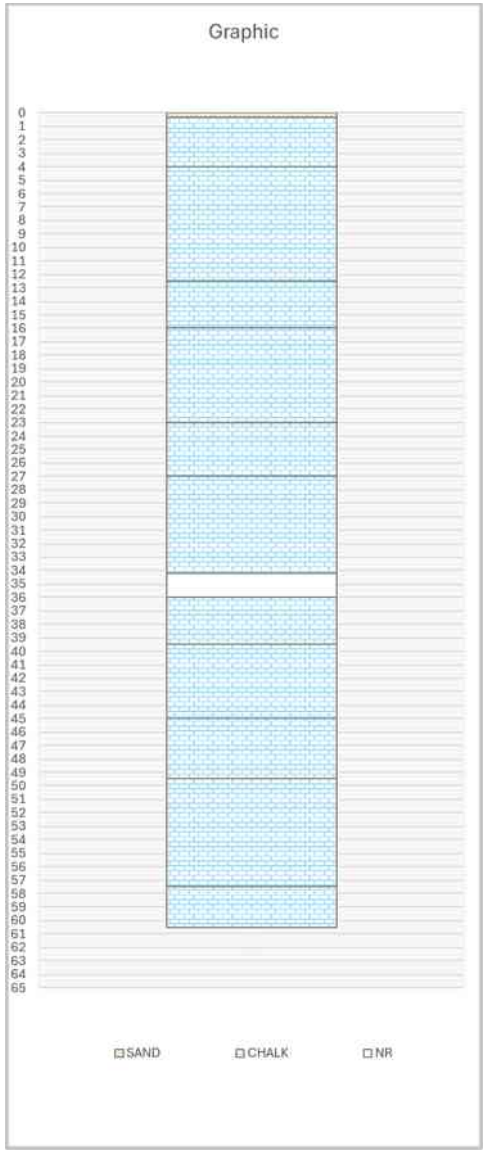
APPENDIX D2. GEOTECHNICAL PARAMETERS PLOTS PER LOCATIONS

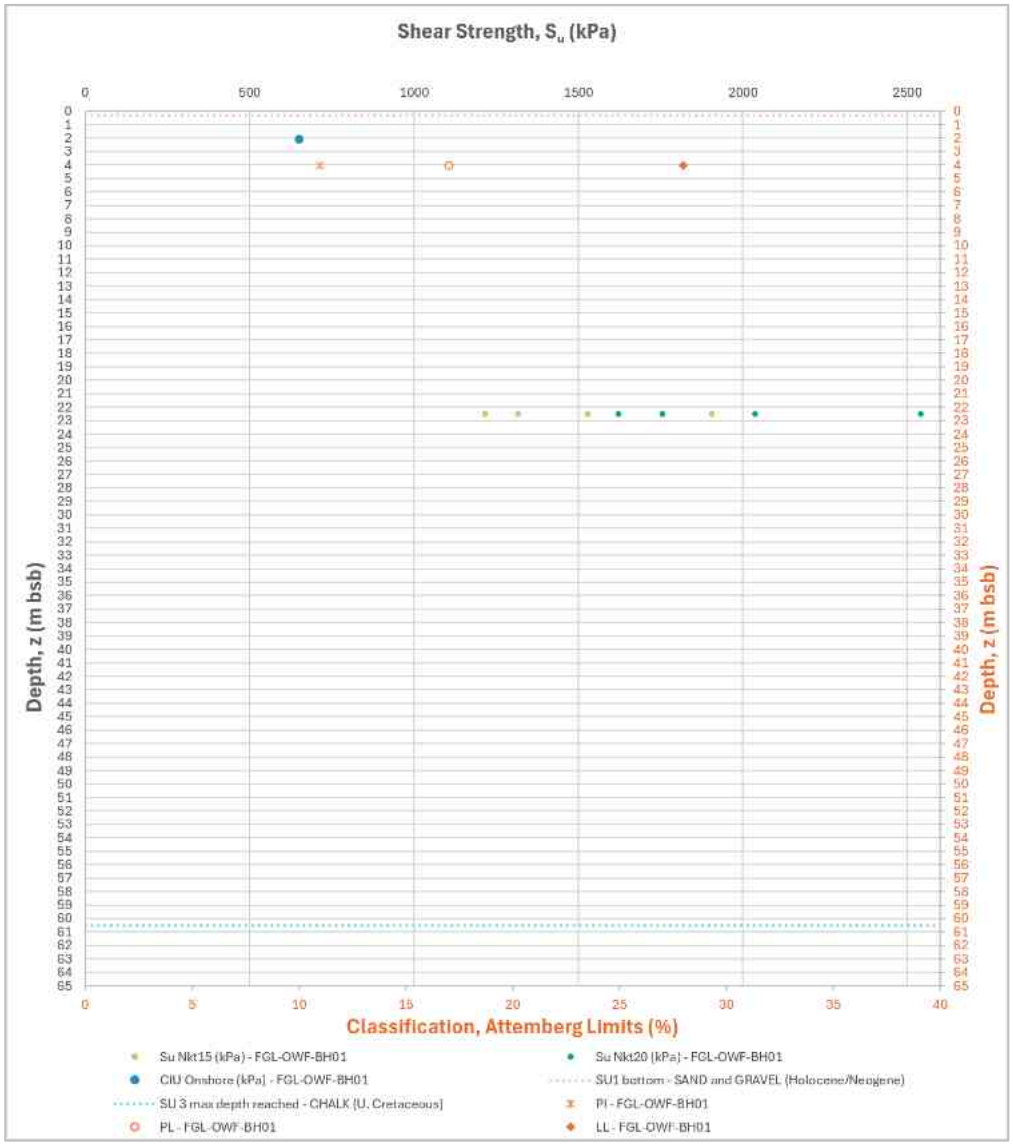
FGL-OWF-BH01

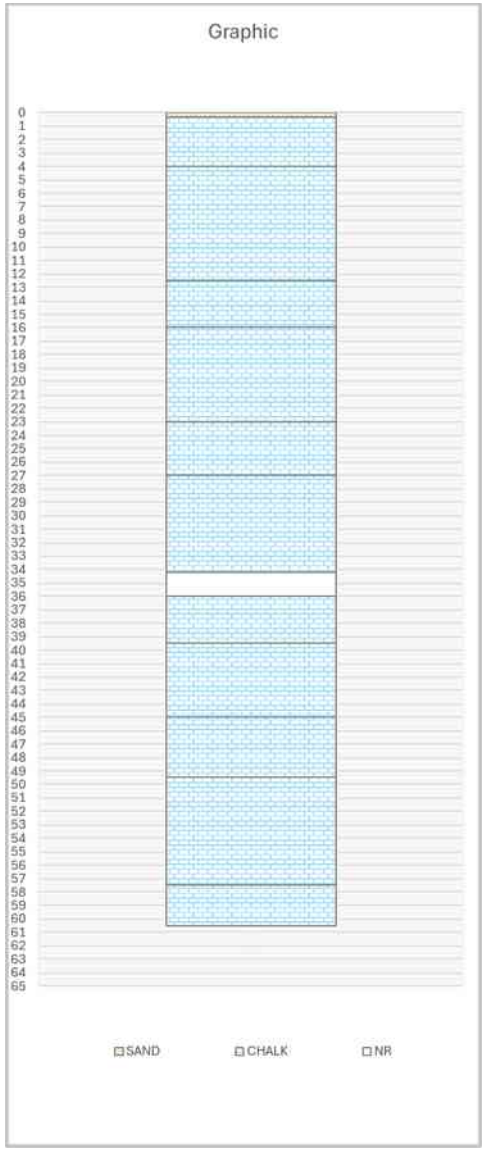

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa) - FGL-OWF-BH01
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU 3 max depth reached - CHALK (U. Cretaceous)

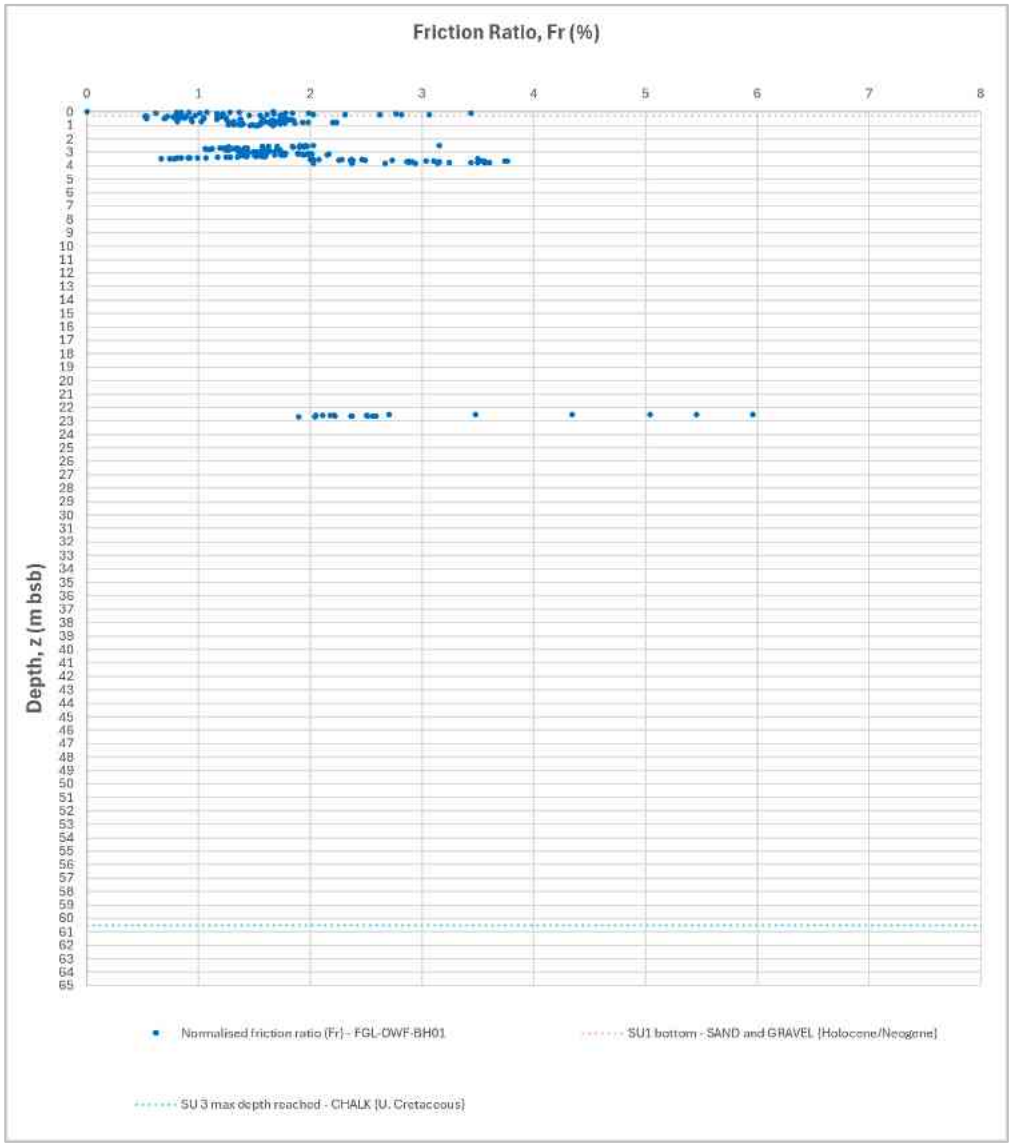

Graphic
SAND
CHALK
NR

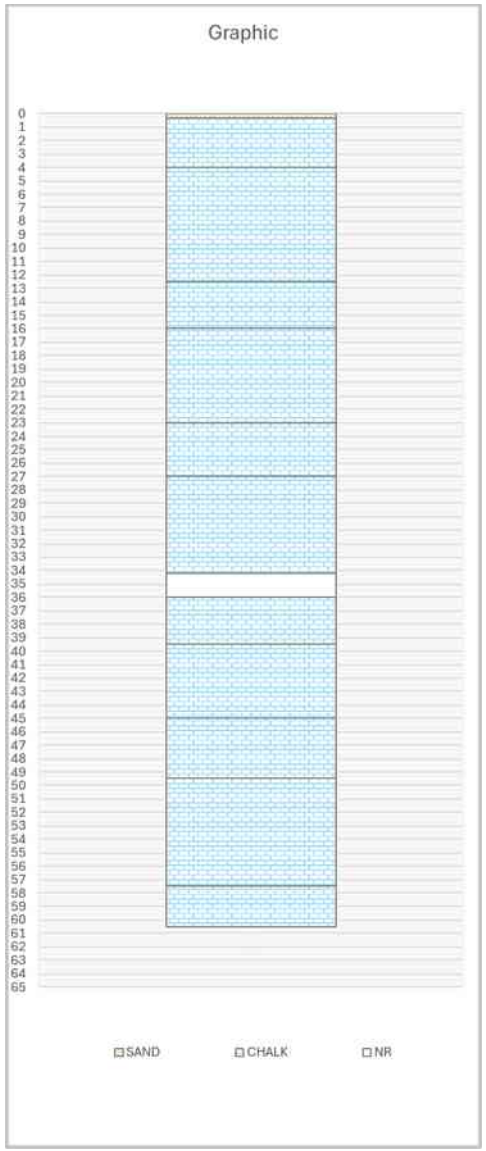

Relative Density, D, (%)
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH01
Dr KO 1 (%) - FGL-OWF-BH01
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU 3 max depth reached - CHALK (U. Cretaceous)

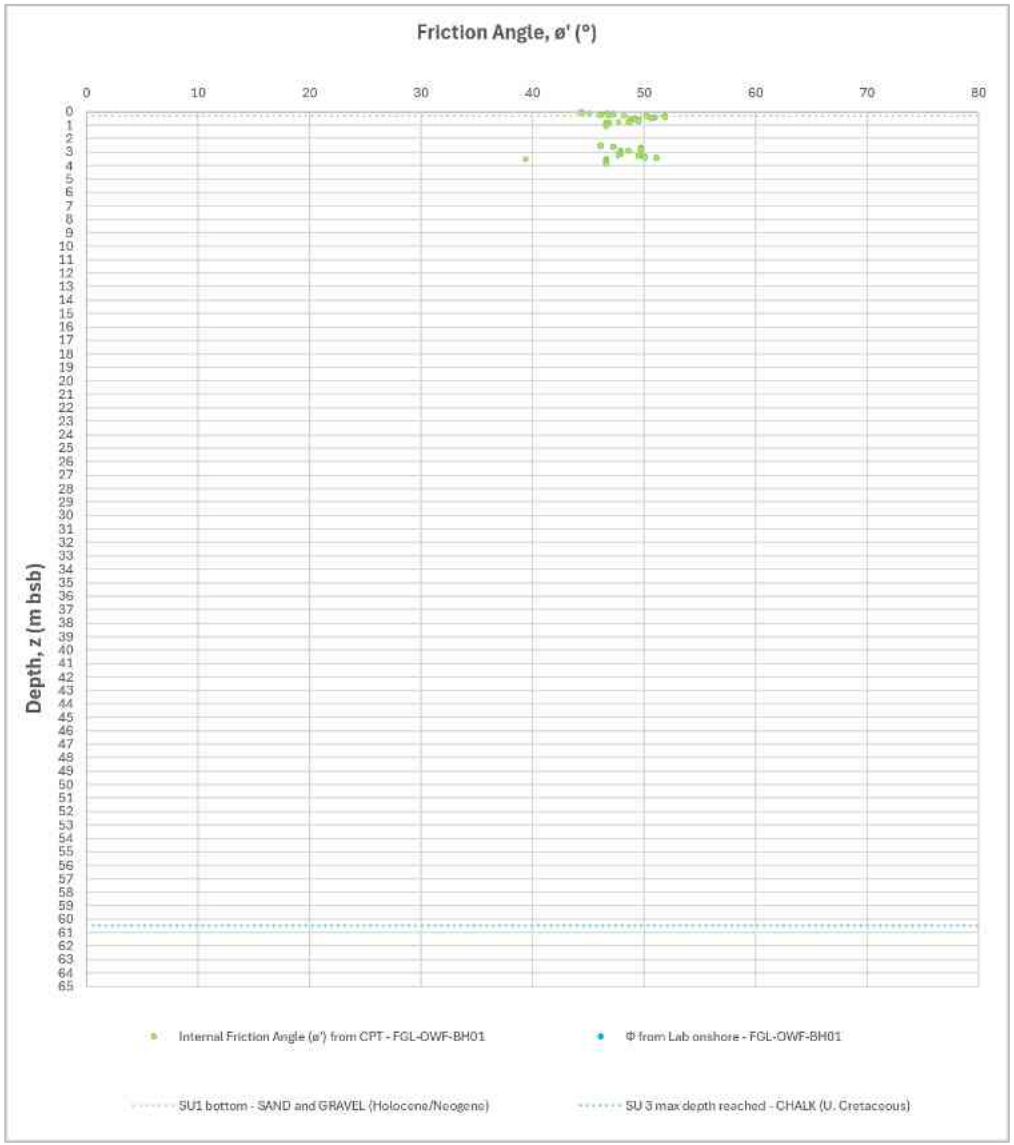

Graphic
SAND
CHALK
NR

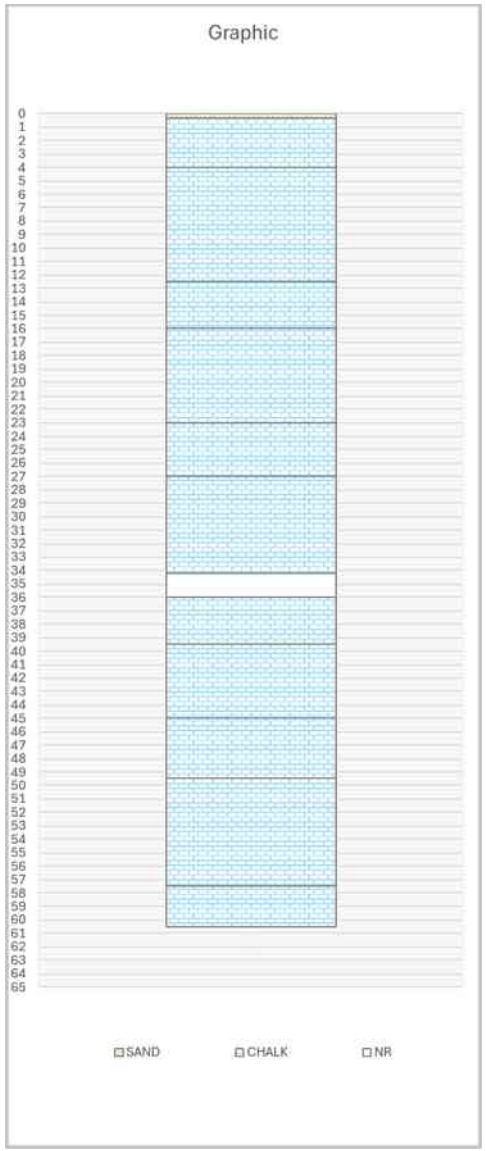

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH01
Su Nkt20 (kPa) - FGL-OWF-BH01
CIU Onshore (kPa) - FGL-OWF-BH01
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU 3 max depth reached - CHALK (U. Cretaceous)
PI - FGL-OWF-BH01
PL - FGL-OWF-BH01
LL - FGL-OWF-BH01

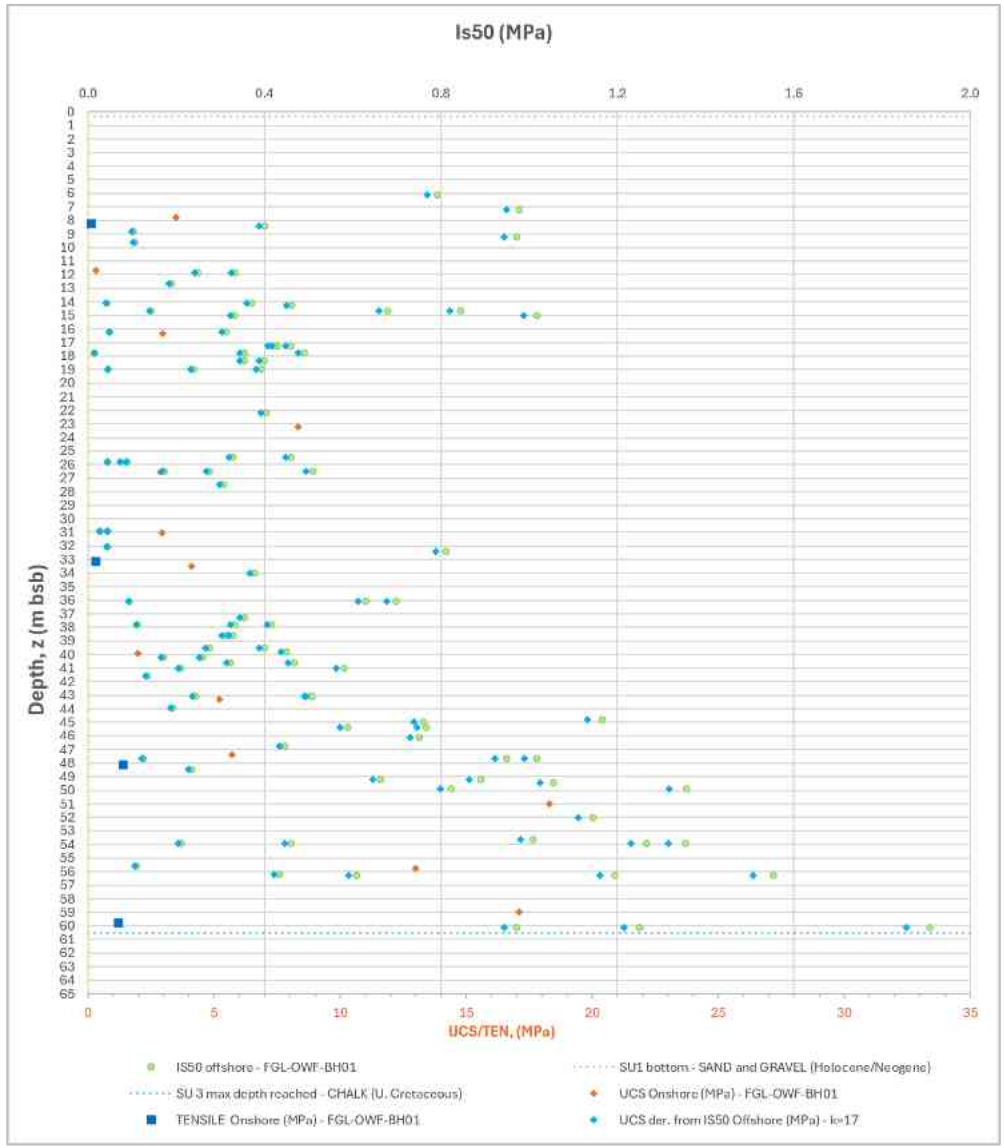

Graphic
SAND
CHALK
NR

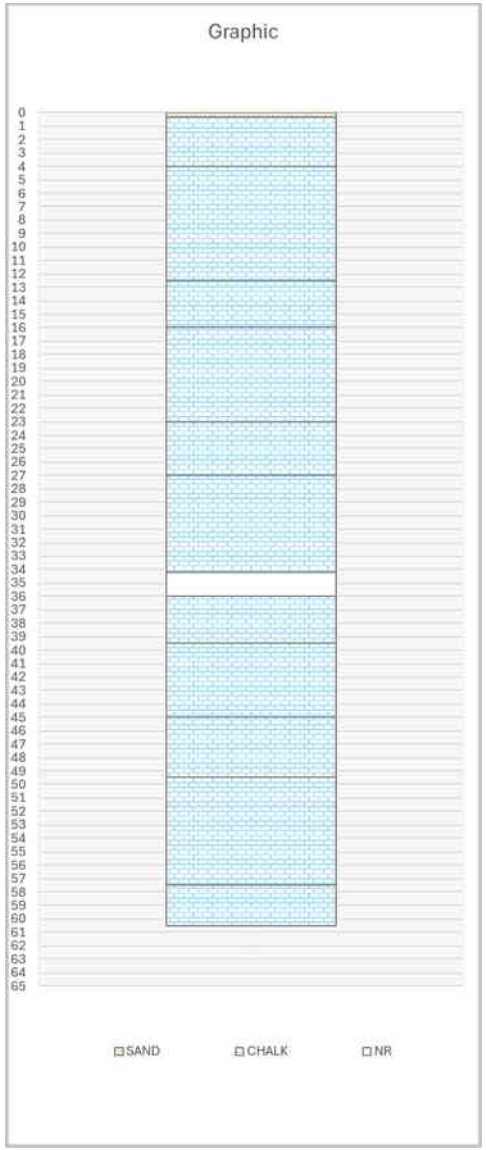

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH01
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU 3 max depth reached - CHALK (U. Cretaceous)

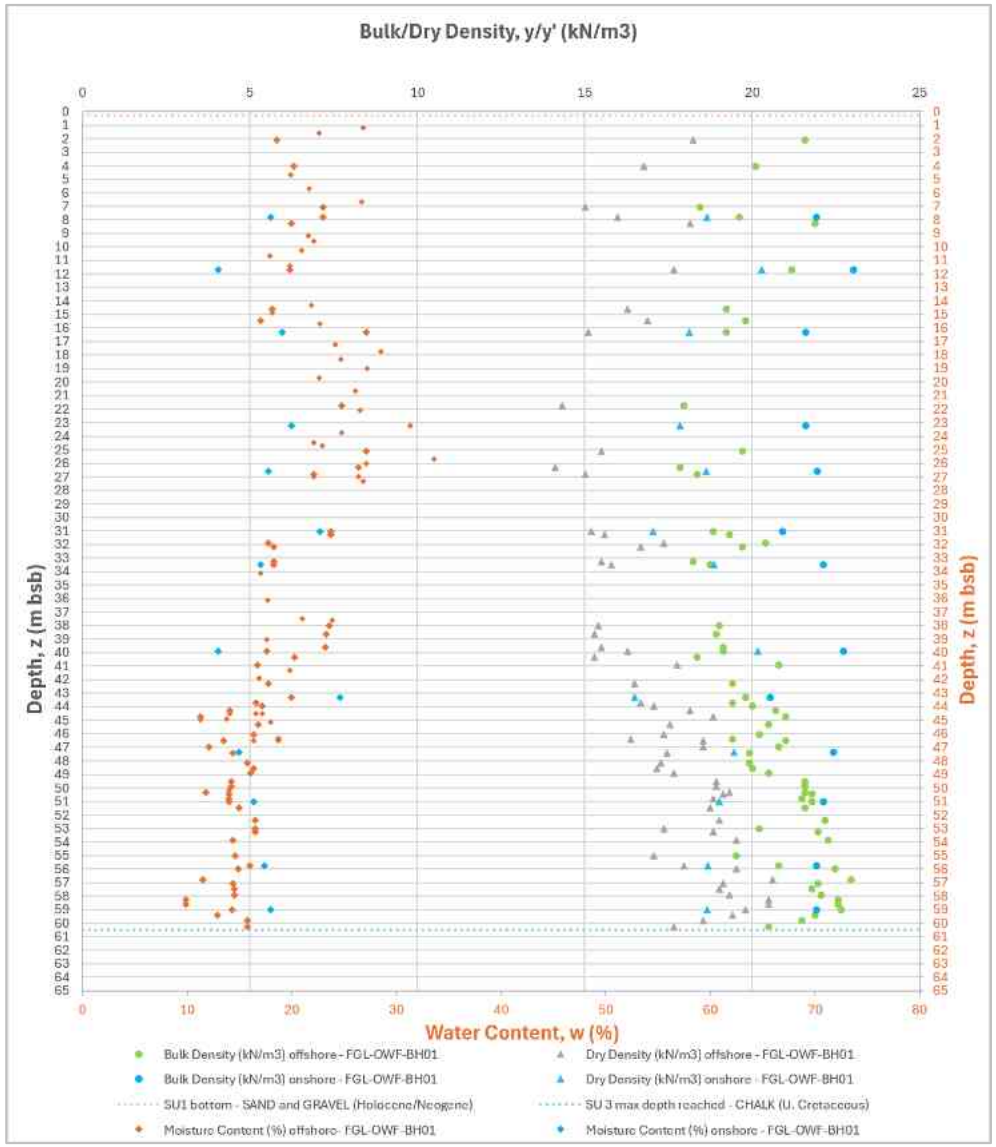

Graphic
SAND
CHALK
NR

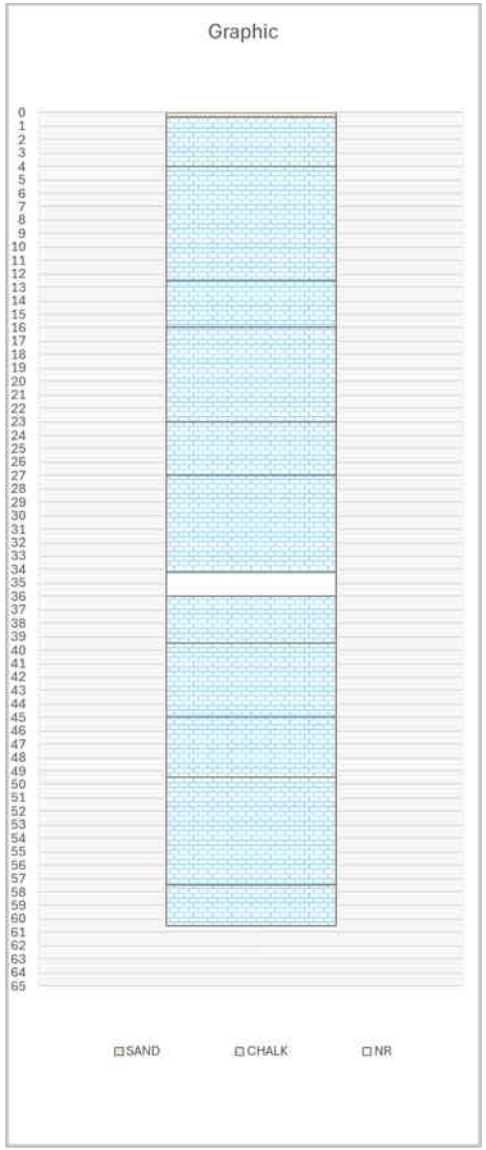

Friction Angle, ø' (°)
0
10
20
30
40
50
60
70
80
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH01
Φ from Lab onshore - FGL-OWF-BH01
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU 3 max depth reached - CHALK (U. Cretaceous)


Graphic
SAND
CHALK
NR


Is50 (MPa)
0.0
0.4
0.8
1.2
1.6
2.0
Depth, z (m bsb)
UCS/TEN, (MPa)
0
5
10
15
20
25
30
35
IS50 offshore - FGL-OWF-BH01
SU 3 max depth reached - CHALK (U. Cretaceous)
TENSILE Onshore (MPa) - FGL-OWF-BH01
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
UCS Onshore (MPa) - FGL-OWF-BH01
UCS der. from IS50 Offshore (MPa) - k=17

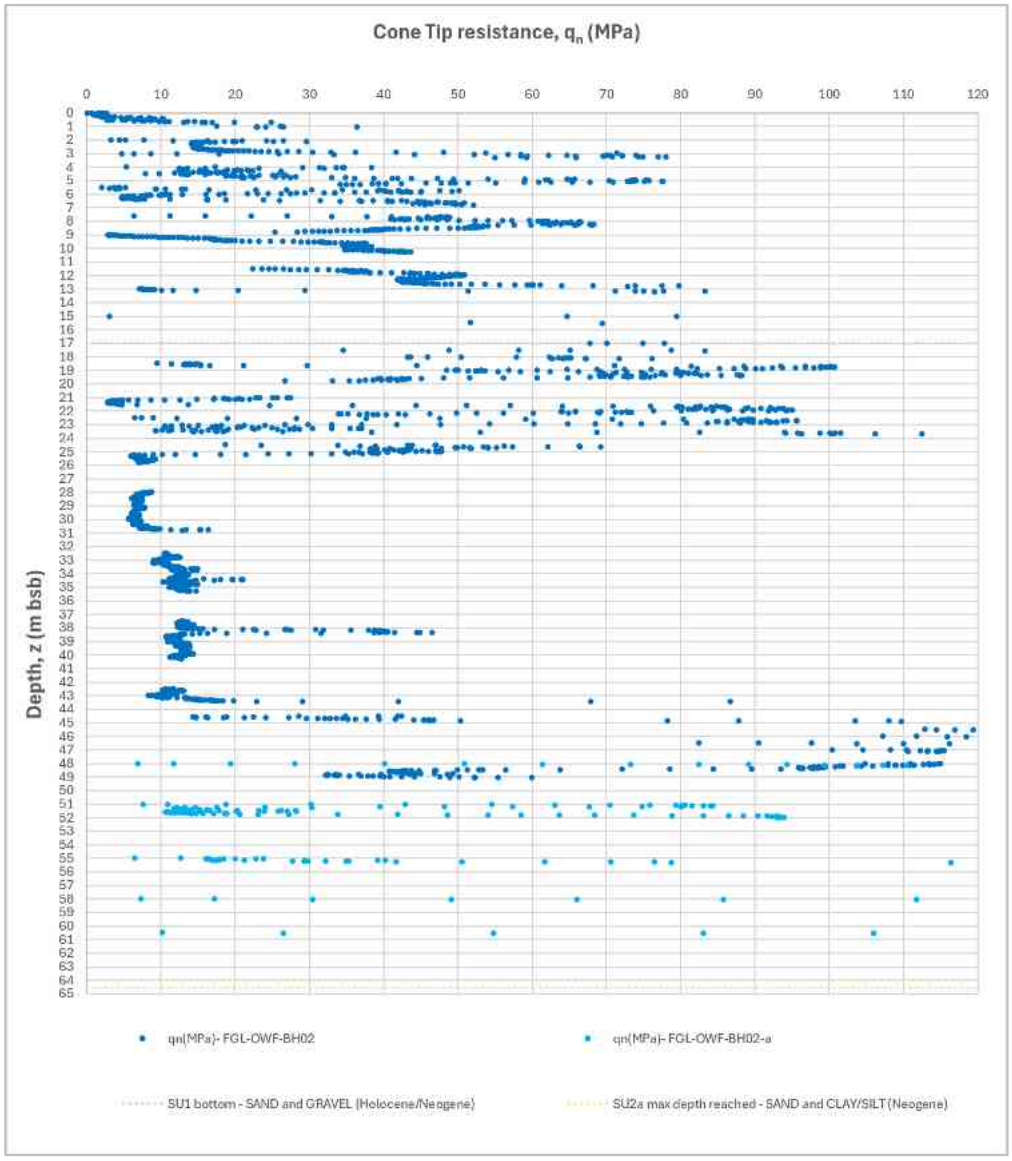

Graphic
SAND
CHALK
NR

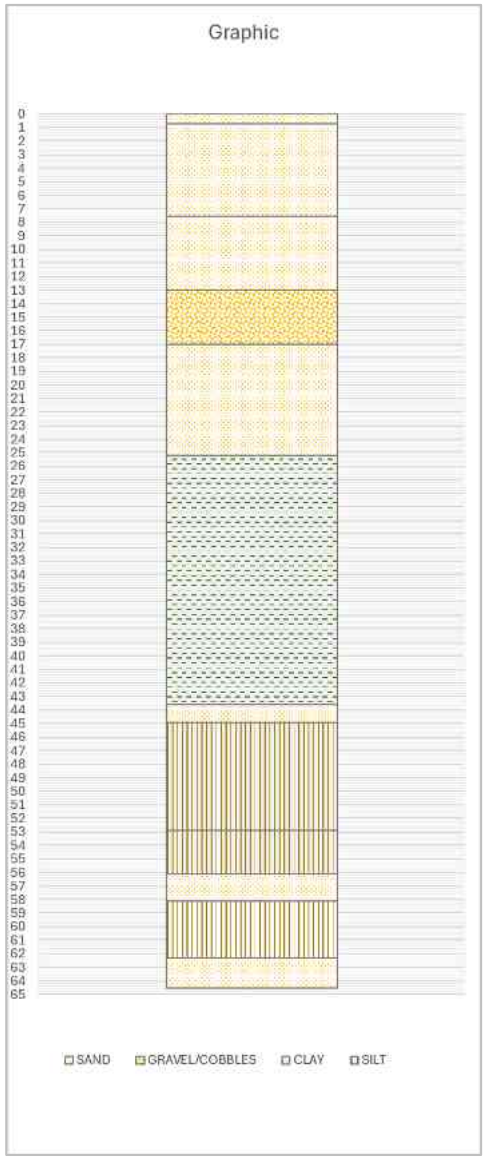

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH01
Dry Density (kN/m3) offshore - FGL-OWF-BH01
Bulk Density (kN/m3) onshore - FGL-OWF-BH01
Dry Density (kN/m3) onshore - FGL-OWF-BH01
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU 3 max depth reached - CHALK (U. Cretaceous)
Moisture Content (%) offshore- FGL-OWF-BH01
Moisture Content (%) onshore - FGL-OWF-BH01

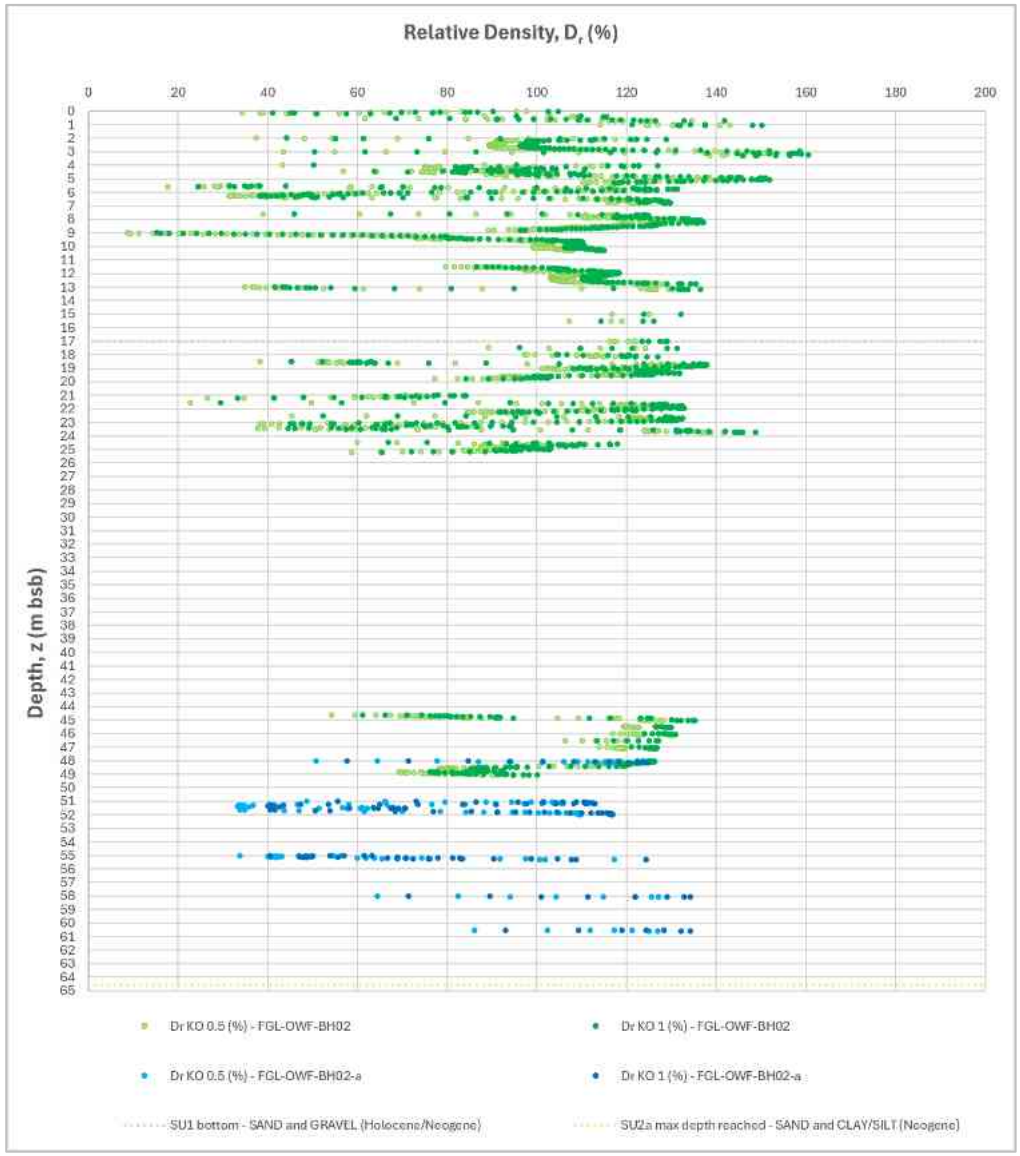

Graphic
SAND
CHALK
NR

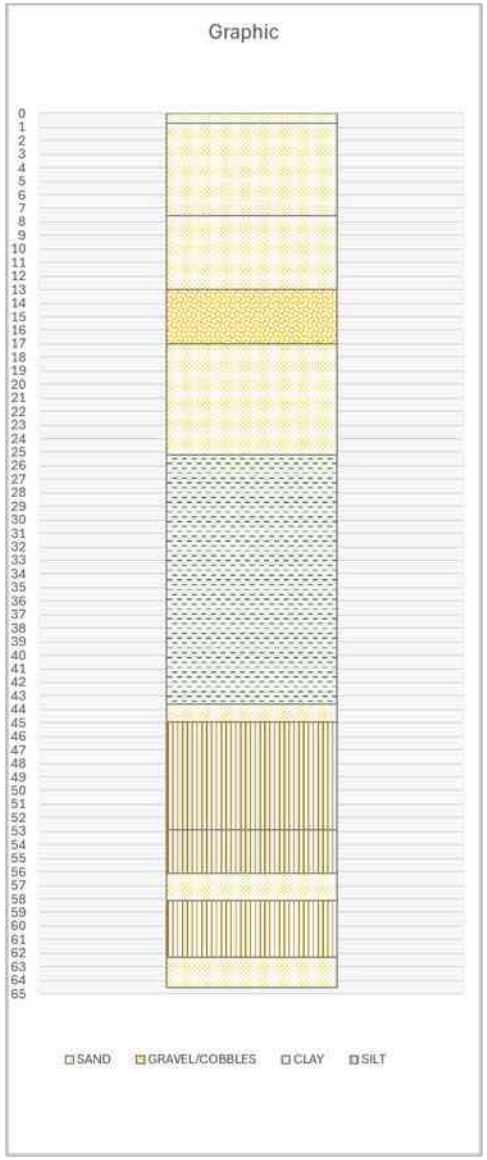
FGL-OWF-BH02

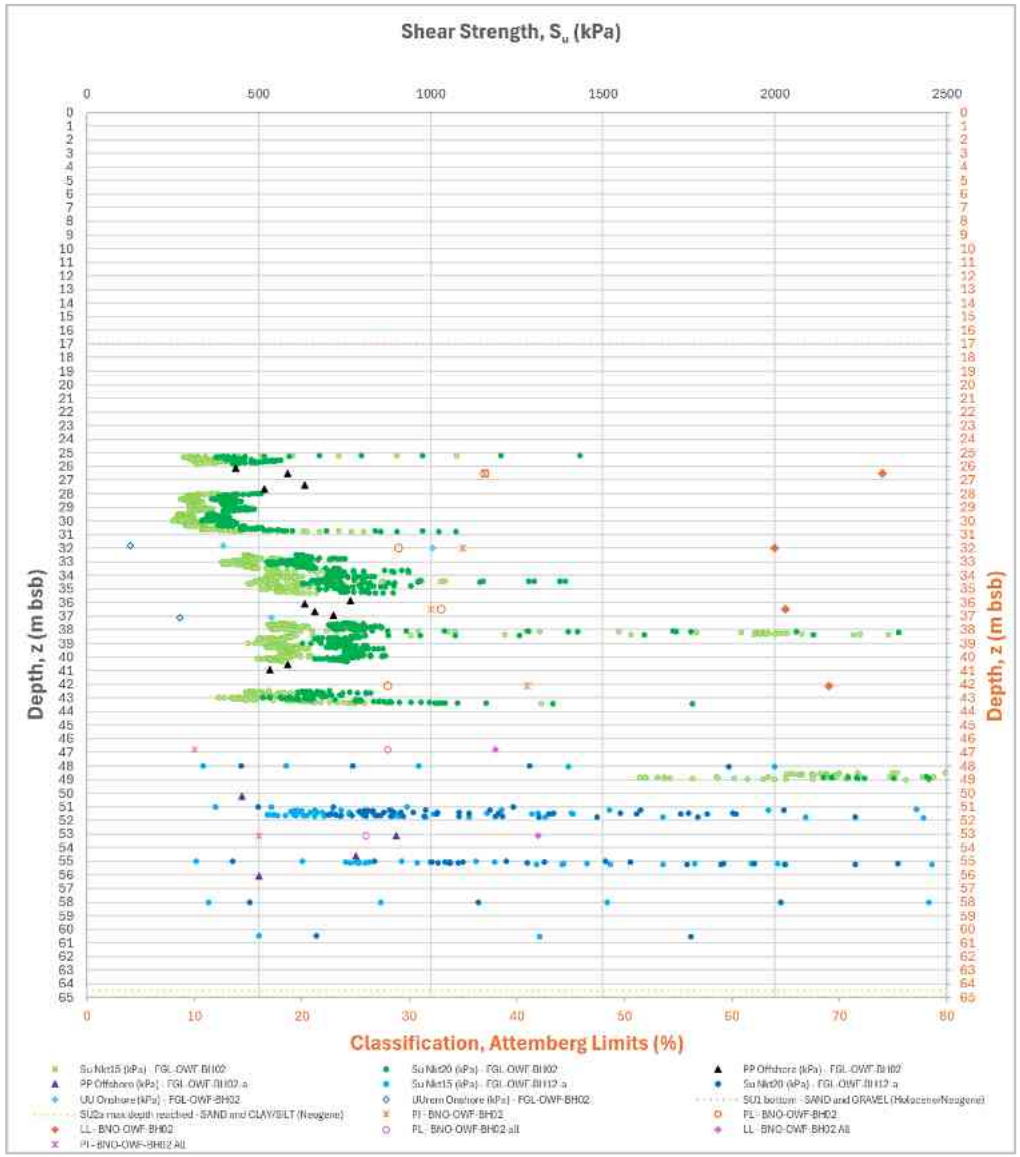
FGL-OWF-BH02-a

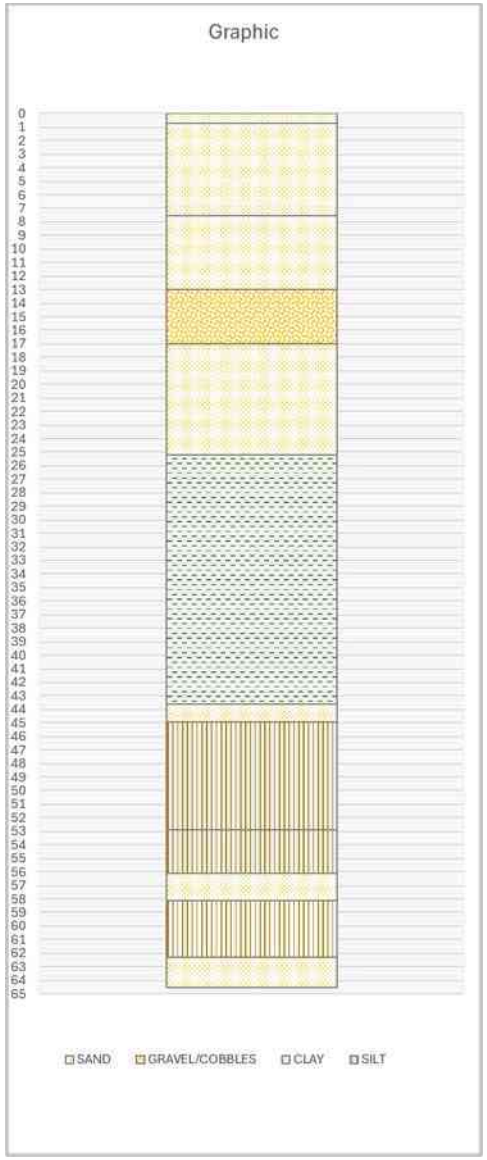

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH02
qn(MPa)- FGL-OWF-BH02-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a max depth reached - SAND and CLAY/SILT (Neogene)

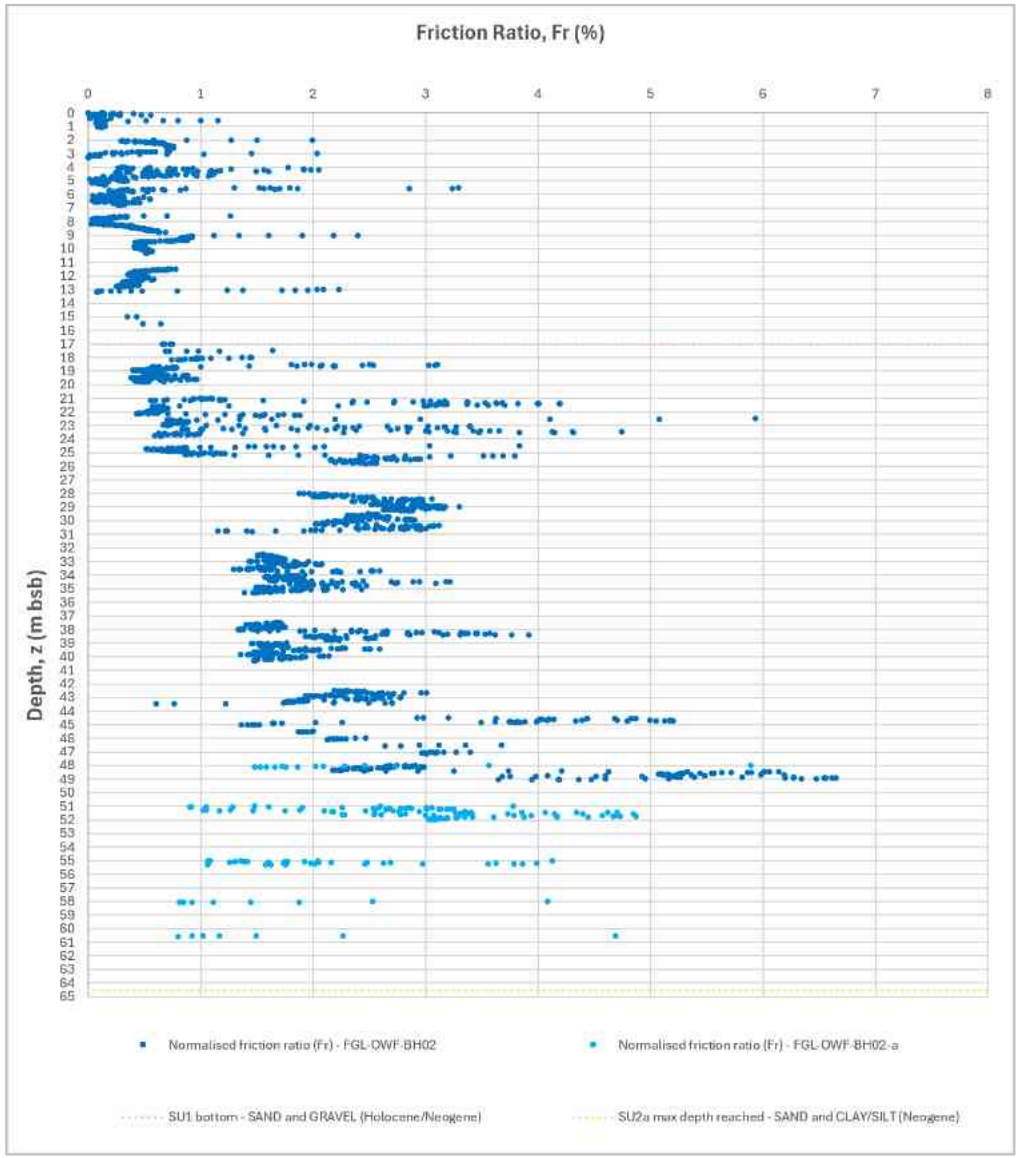

Graphic
SAND
GRAVEL/COBBLES
CLAY
SILT

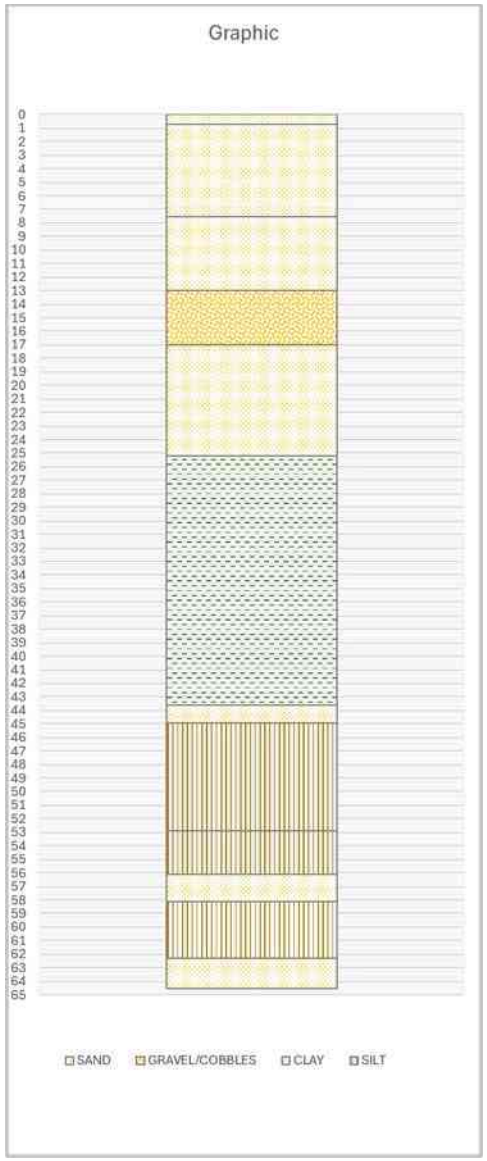

Relative Density, D, (%)
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH02
Dr KO 1 (%) - FGL-OWF-BH02
Dr KO 0.5 (%) - FGL-OWF-BH02-a
Dr KO 1 (%) - FGL-OWF-BH02-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a max depth reached - SAND and CLAY/SILT (Neogene)

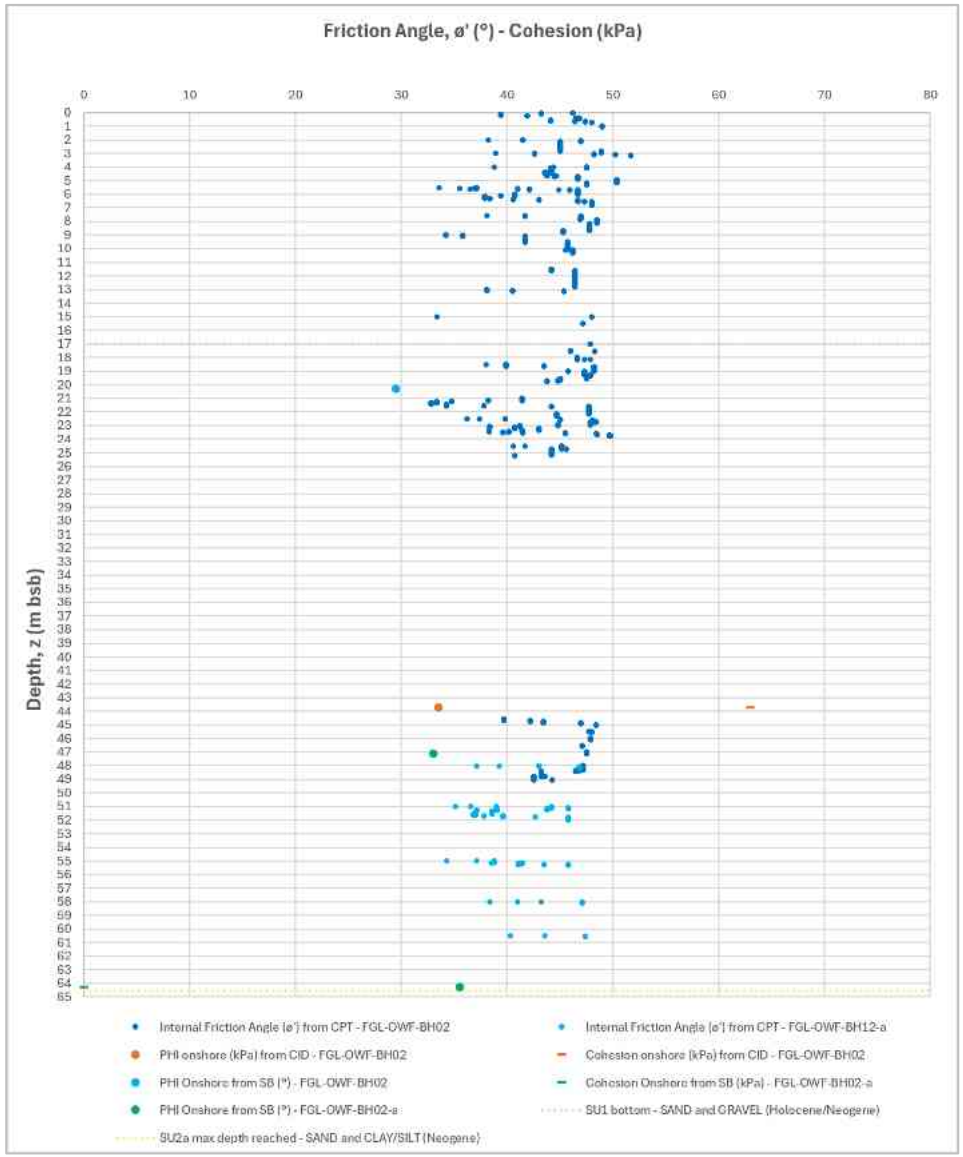

Graphic
SAND
GRAVEL/COBBLES
CLAY
SILT

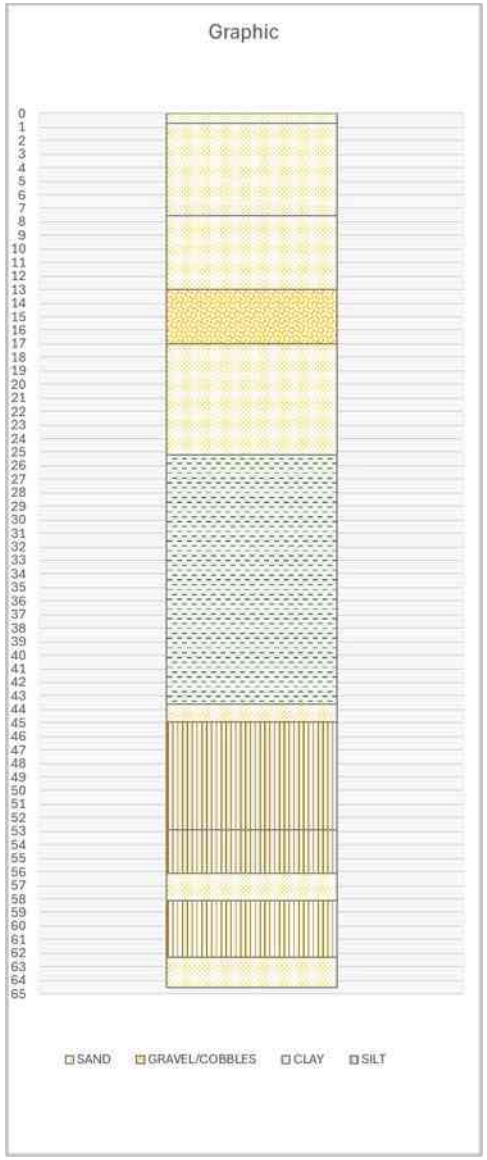

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)

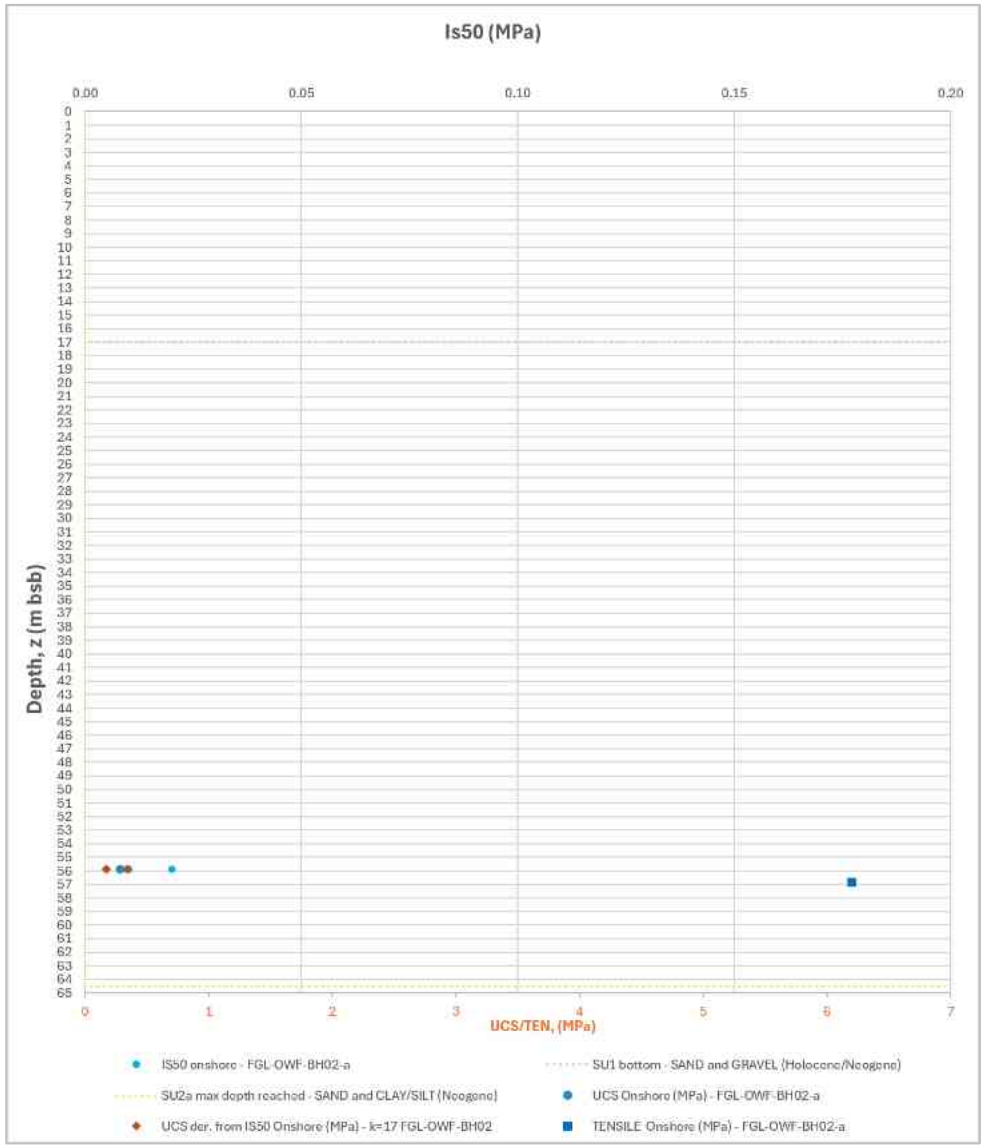

Graphic
SAND
GRAVEL/COBBLES
CLAY
SILT

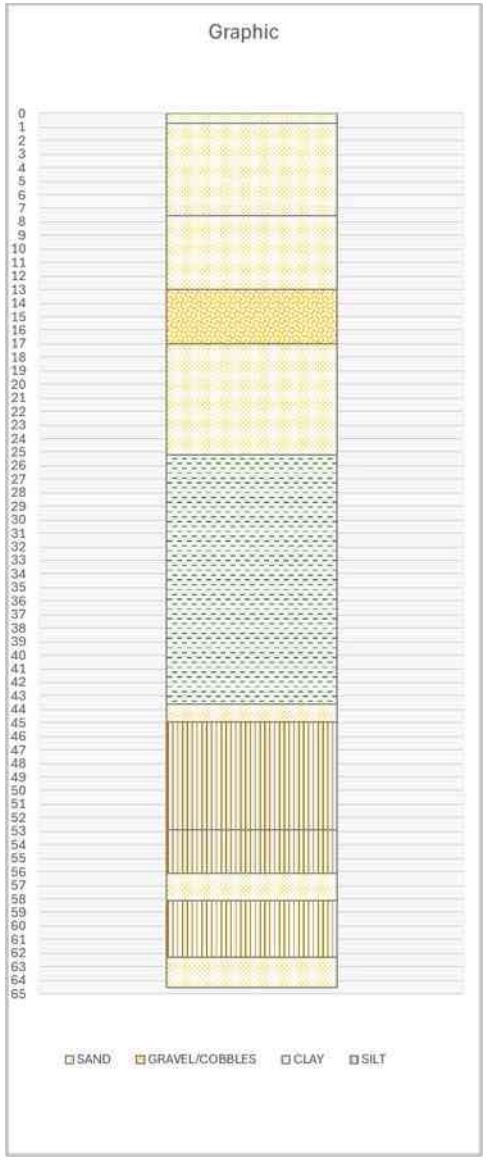

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH02
Normalised friction ratio (Fr) - FGL-OWF-BH02-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a max depth reached - SAND and CLAY/SILT (Neogene)

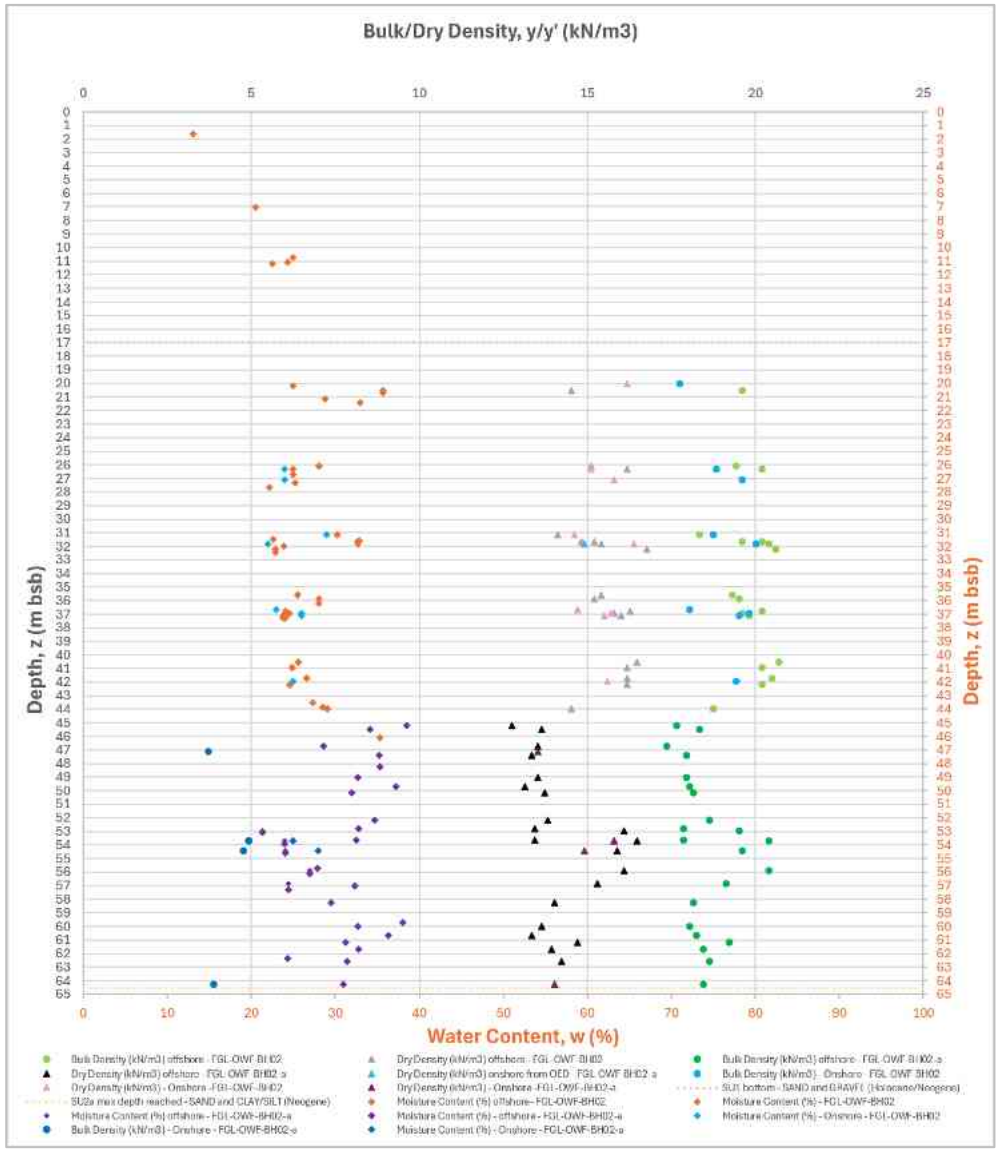

Graphic
SAND
GRAVEL/COBBLES
CLAY
SILT

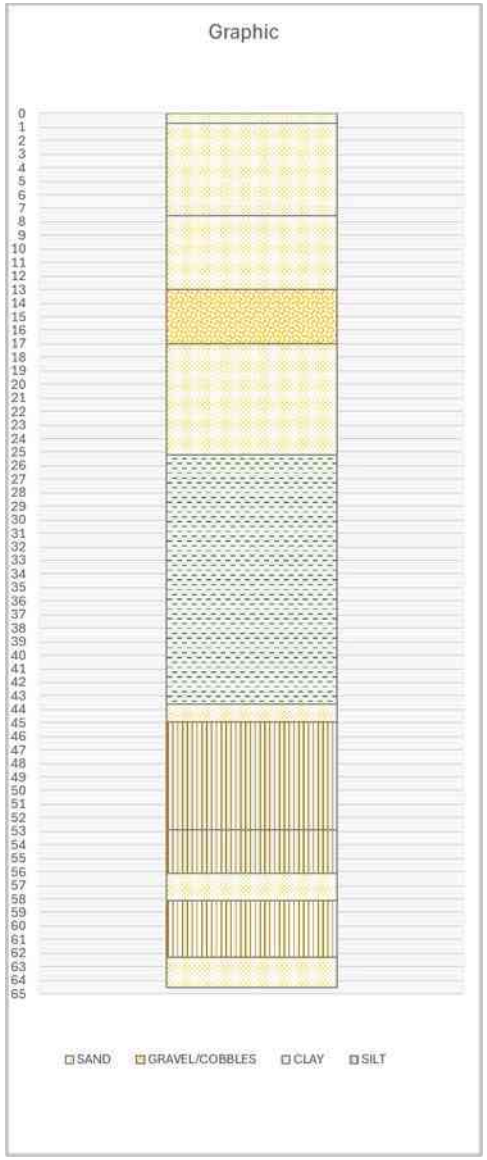

Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH02
Internal Friction Angle (ø') from CPT - FGL-OWF-BH12-a
PHI onshore (kPa) from CID - FGL-OWF-BH02
Cohesion onshore (kPa) from CID - FGL-OWF-BH02
PHI Onshore from SB (°) - FGL-OWF-BH02
Cohesion Onshore from SB (kPa) - FGL-OWF-BH02-a
PHI Onshore from SB (°) - FGL-OWF-BH02-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a max depth reached - SAND and CLAY/SILT (Neogene)


Graphic
SAND
GRAVEL/COBBLES
CLAY
SILT

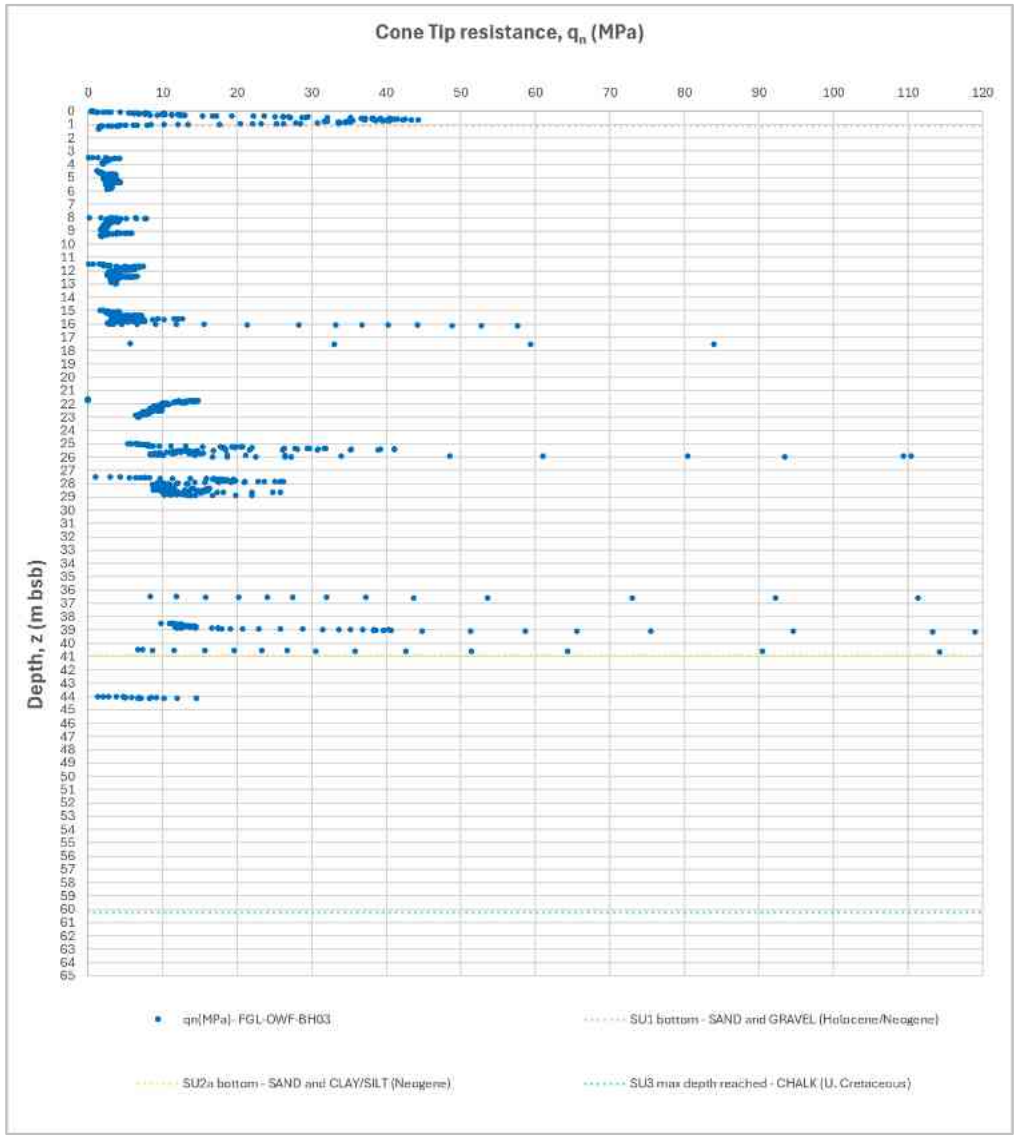

Is50 (MPa)
0.00
0.05
0.10
0.15
0.20
Depth, z (m bsb)
UCS/TEN, (MPa)
0
1
2
3
4
5
6
7
IS50 onshore - FGL-OWF-BH02-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a max depth reached - SAND and CLAY/SILT (Neogene)
UCS Onshore (MPa) - FGL-OWF-BH02-a
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH02
TENSILE Onshore (MPa) - FGL-OWF-BH02-a

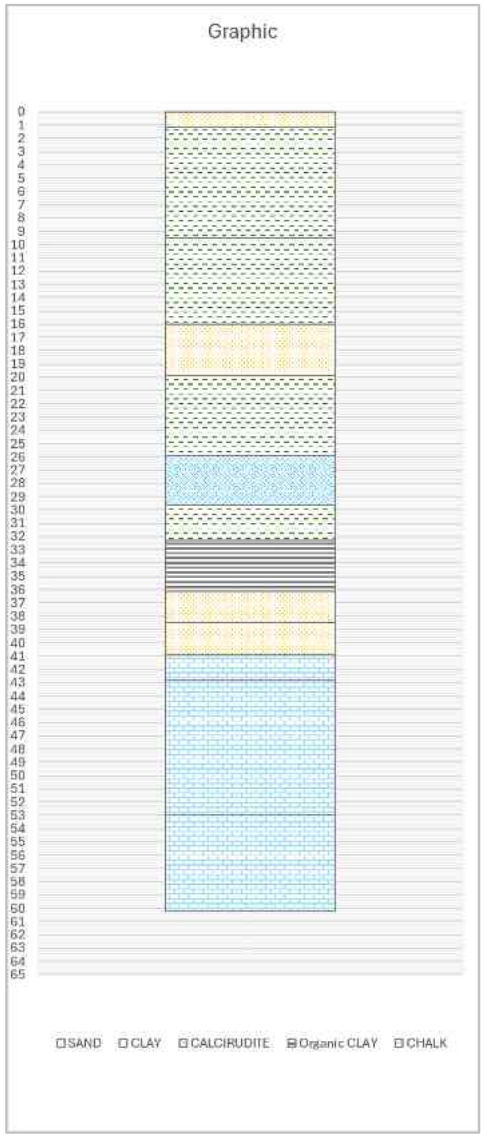

Graphic
SAND
GRAVEL/COBBLES
CLAY
SILT

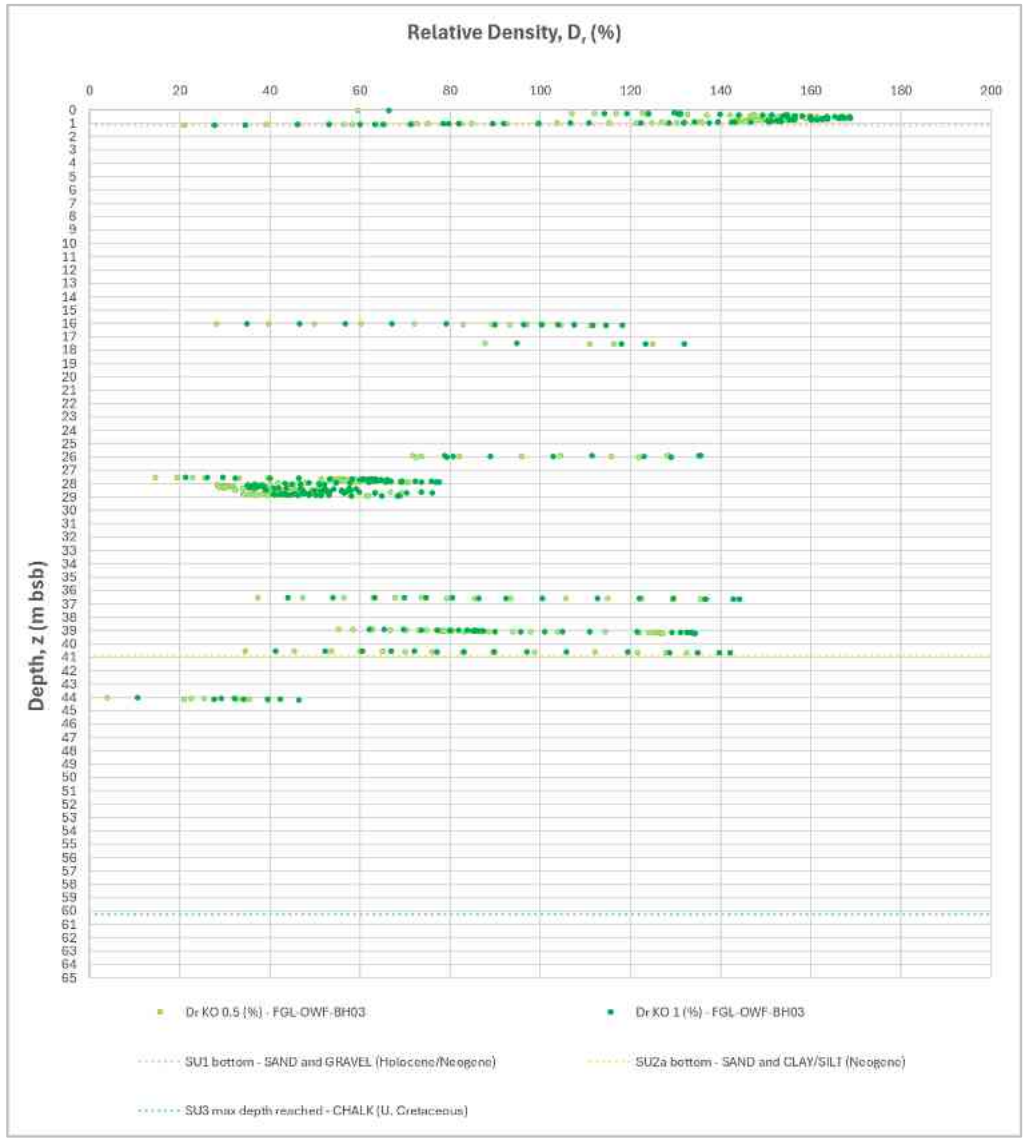

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH02
Dry Density (kN/m3) offshore - FGL-OWF-BH02.a
Dry Density (kN/m3) - Onshore - FGL-OWF-BH02
SU2a max depth reached - SAND and CLAY/SILT (Neogene)
Moisture Content (%) offshore - FGL-OWF-BH02-a
Bulk Density (kN/m3) - Onshore - FGL-OWF-BH02-a
Dry Density (kN/m3) offshore - FGL-OWF-BH02
Dry Density (kN/m3) onshore from OED - FGL-OWF-BH02.a
Dry Density (kN/m3) - Onshore - FGL-OWF-BH02-a
Moisture Content (%) offshore - FGL-OWF-BH02
Moisture Content (%) - offshore - FGL-OWF-BH02-a
Moisture Content (%) - Onshore - FGL-OWF-BH02-a
Bulk Density (kN/m3) offshore - FGL-OWF-BH02.a
Bulk Density (kN/m3) - Onshore - FGL-OWF-BH02
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
Moisture Content (%) - FGL-OWF-BH02
Moisture Content (%) - Onshore - FGL-OWF-BH02

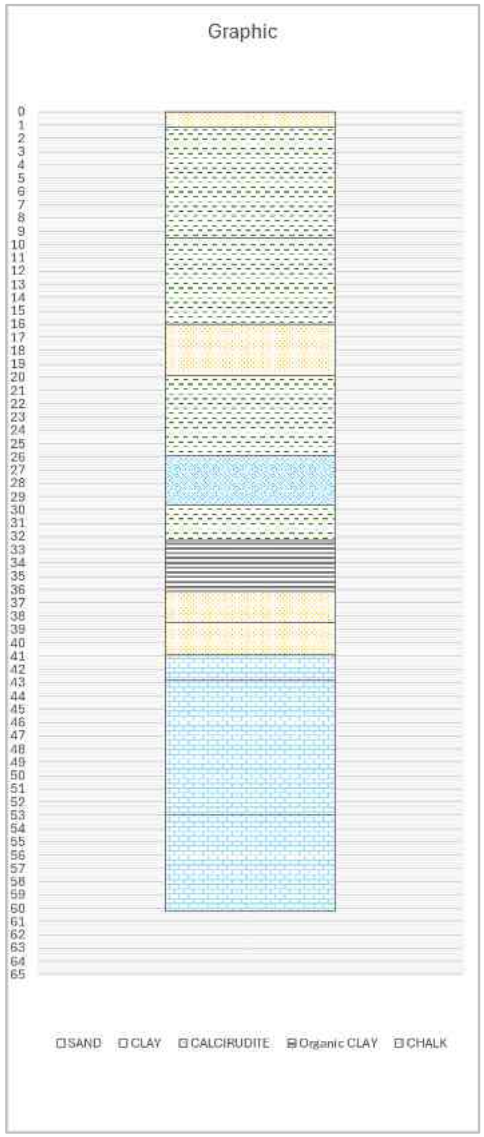

Graphic
SAND
GRAVEL/COBBLES
CLAY
SILT

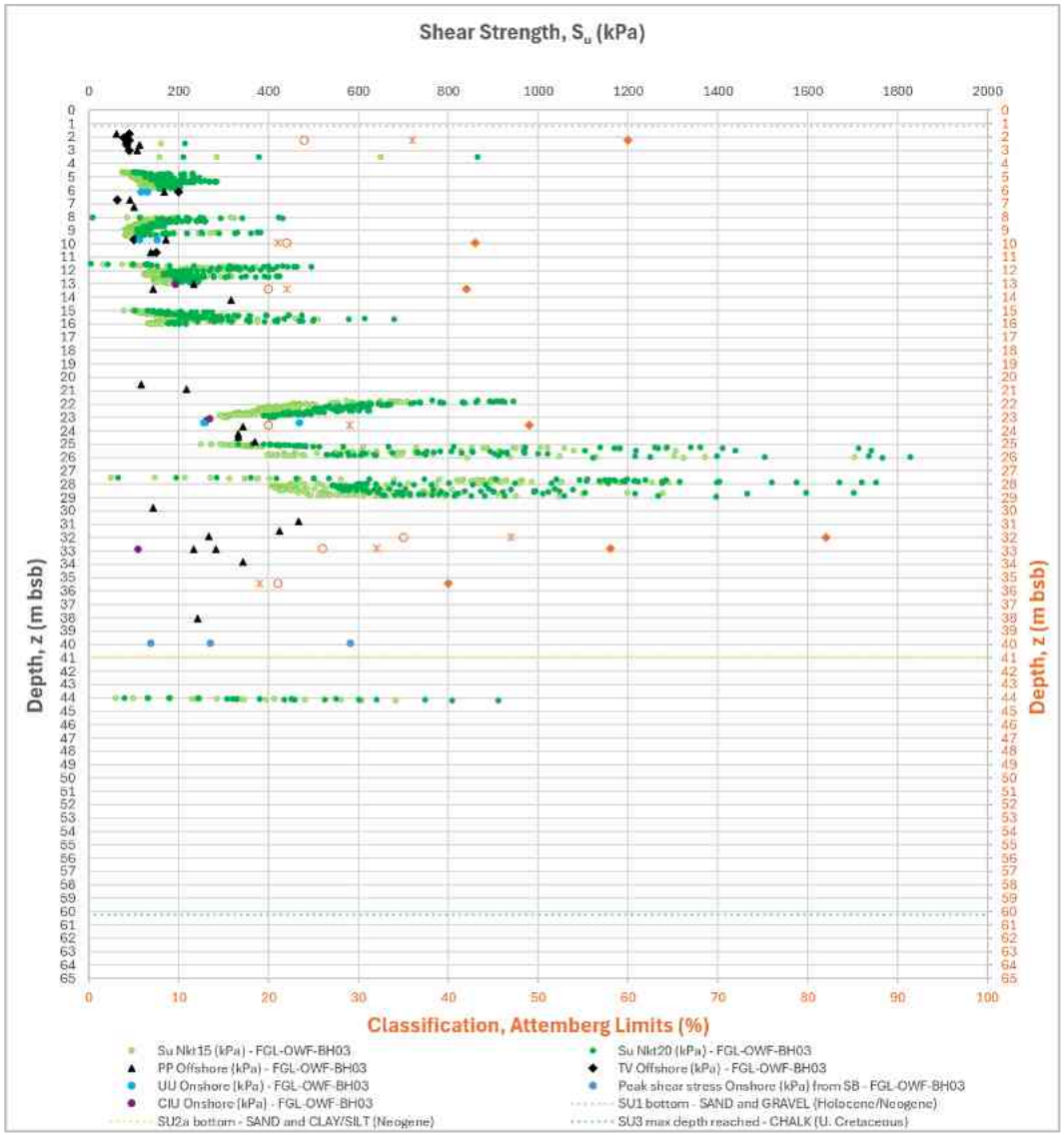
FGL-OWF-BH03

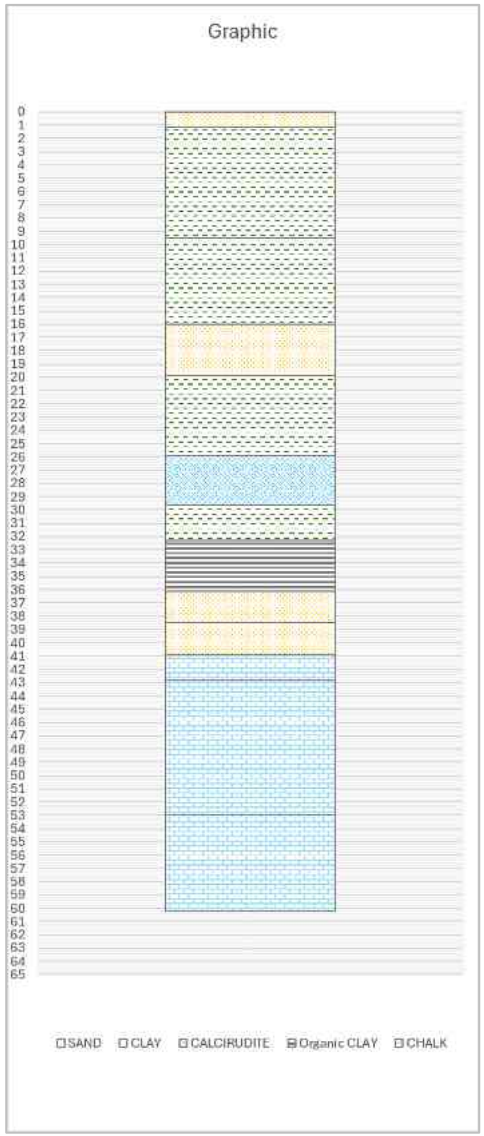

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH03
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

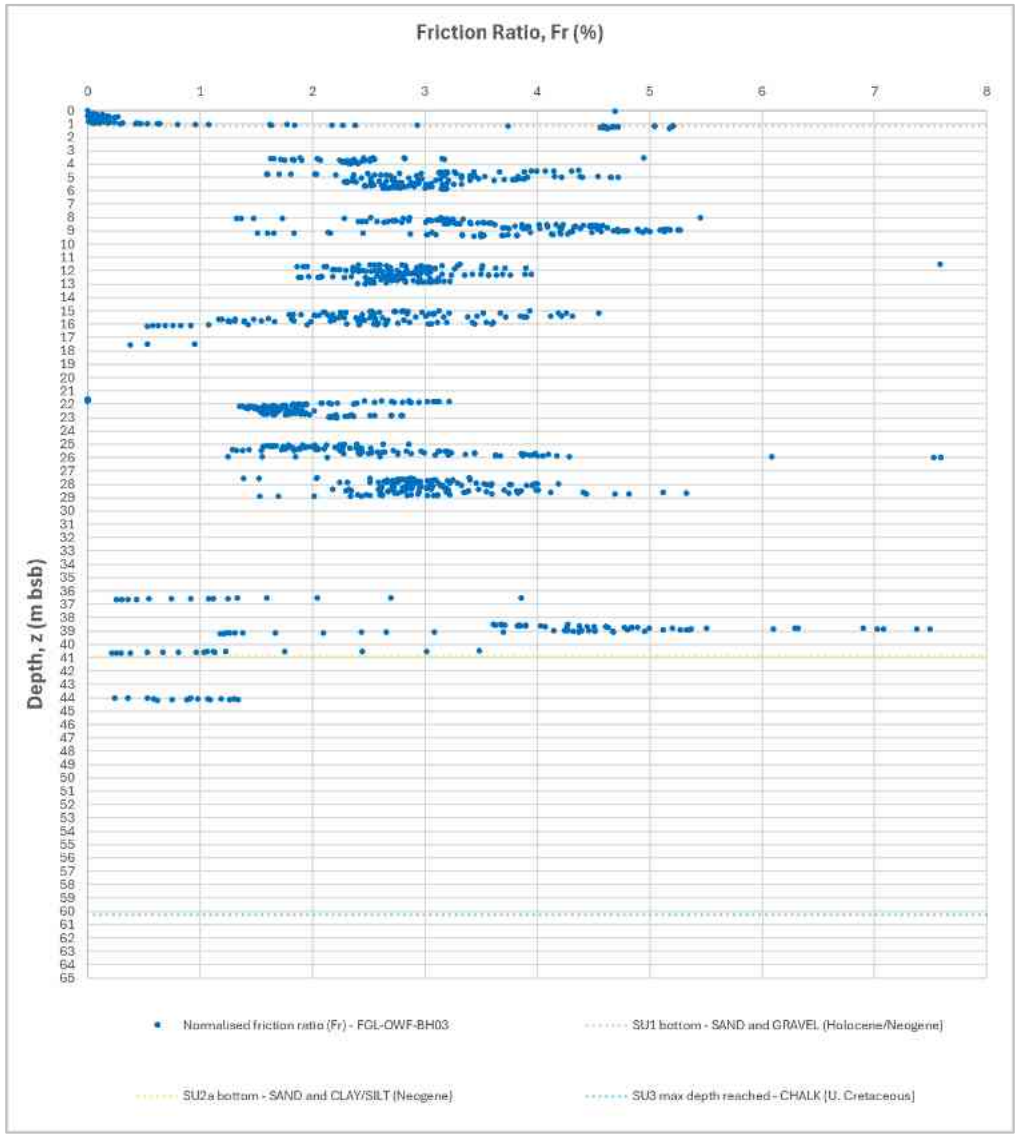

Graphic
SAND
CLAY
CALCIRUDITE
Organic CLAY
CHALK

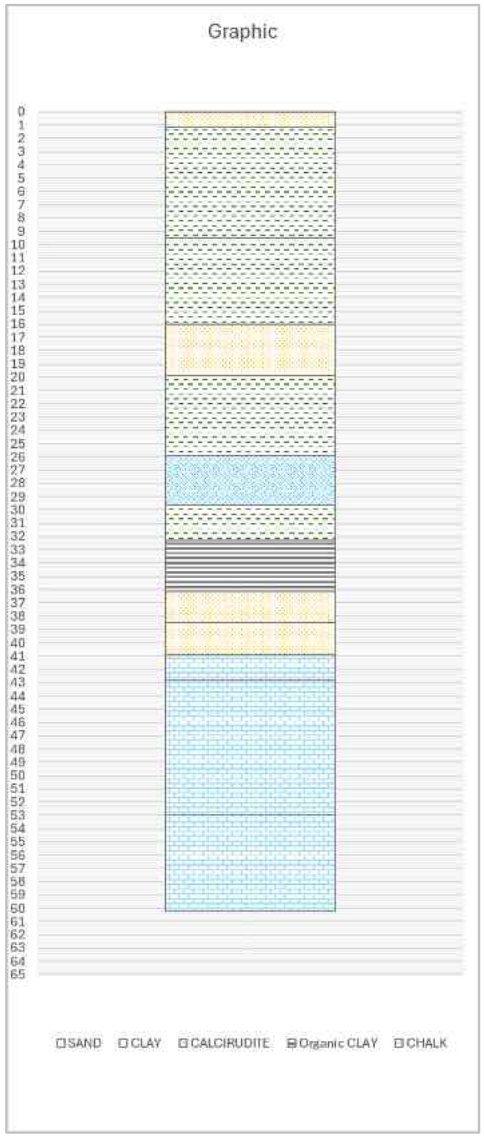

Relative Density, D, (%)
0
20
40
60
80
100
120
140
160
180
200
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH03
Dr KO 1 (%) - FGL-OWF-BH03
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

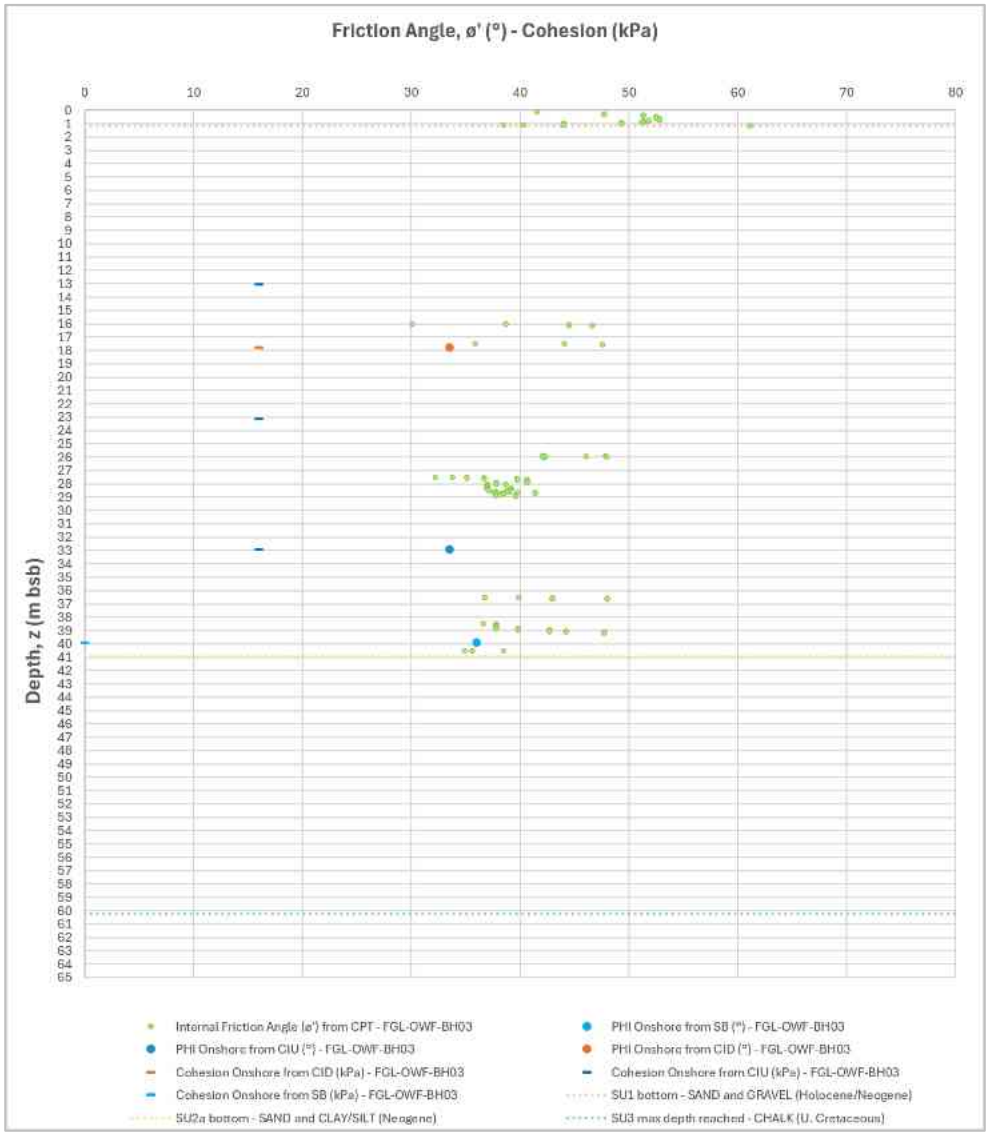

Graphic
SAND
CLAY
CALCIRUDITE
Organic CLAY
CHALK

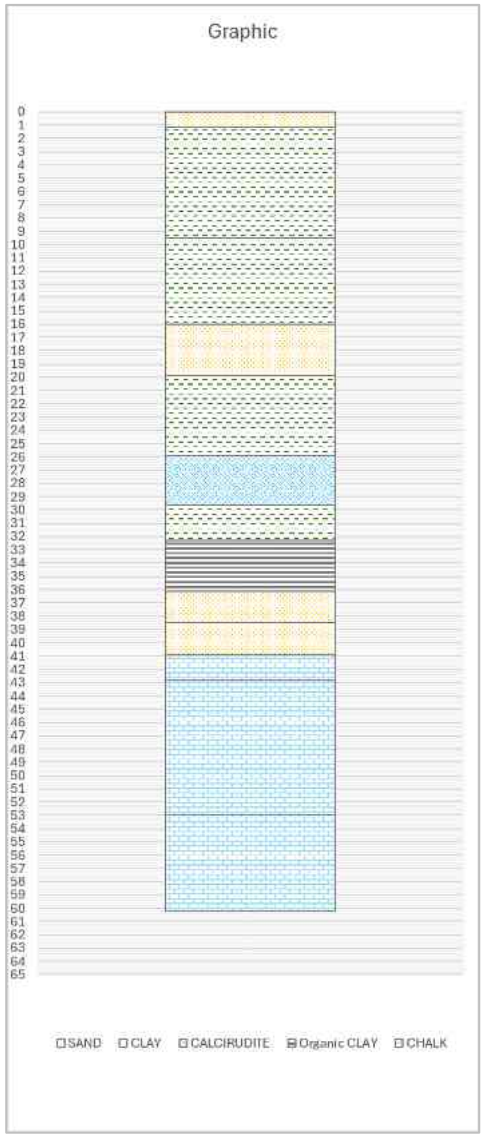

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Atterberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH03
Su Nkt20 (kPa) - FGL-OWF-BH03
PP Offshore (kPa) - FGL-OWF-BH03
TV Offshore (kPa) - FGL-OWF-BH03
UU Onshore (kPa) - FGL-OWF-BH03
Peak shear stress Onshore (kPa) from SB - FGL-OWF-BH03
CIU Onshore (kPa) - FGL-OWF-BH03
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

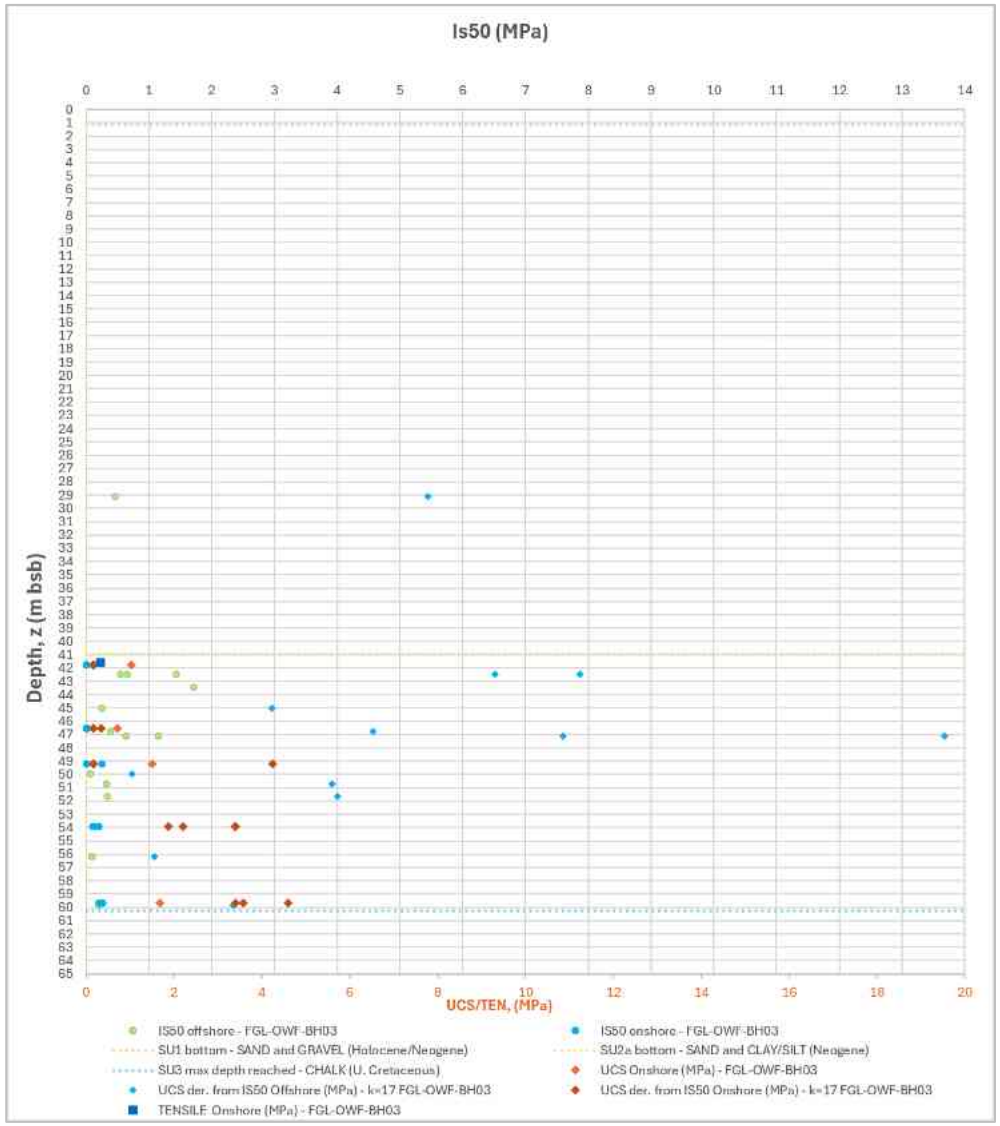

Graphic
SAND
CLAY
CALCIRUDITE
Organic CLAY
CHALK

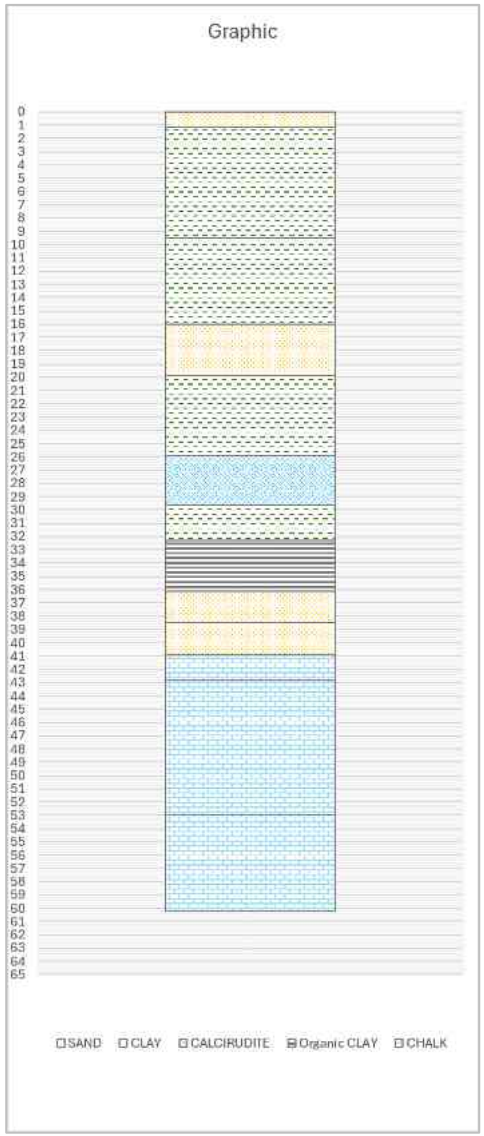

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH03
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
SAND
CLAY
CALCIRUDITE
Organic CLAY
CHALK

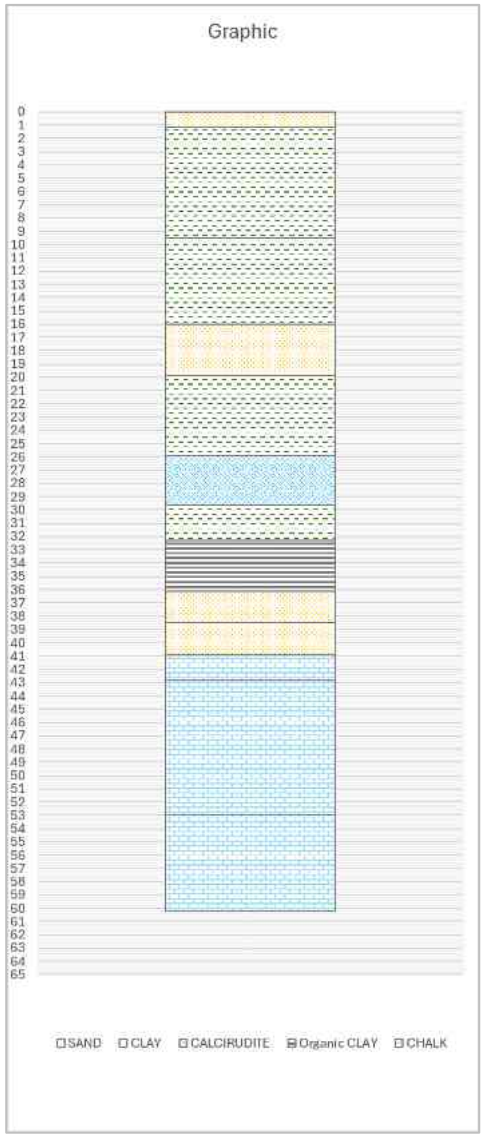

Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH03
PHI Onshore from SB (°) - FGL-OWF-BH03
PHI Onshore from CIU (°) - FGL-OWF-BH03
PHI Onshore from CID (°) - FGL-OWF-BH03
Cohesion Onshore from CID (kPa) - FGL-OWF-BH03
Cohesion Onshore from CIU (kPa) - FGL-OWF-BH03
Cohesion Onshore from SB (kPa) - FGL-OWF-BH03
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
SAND
CLAY
CALCIRUDITE
Organic CLAY
CHALK

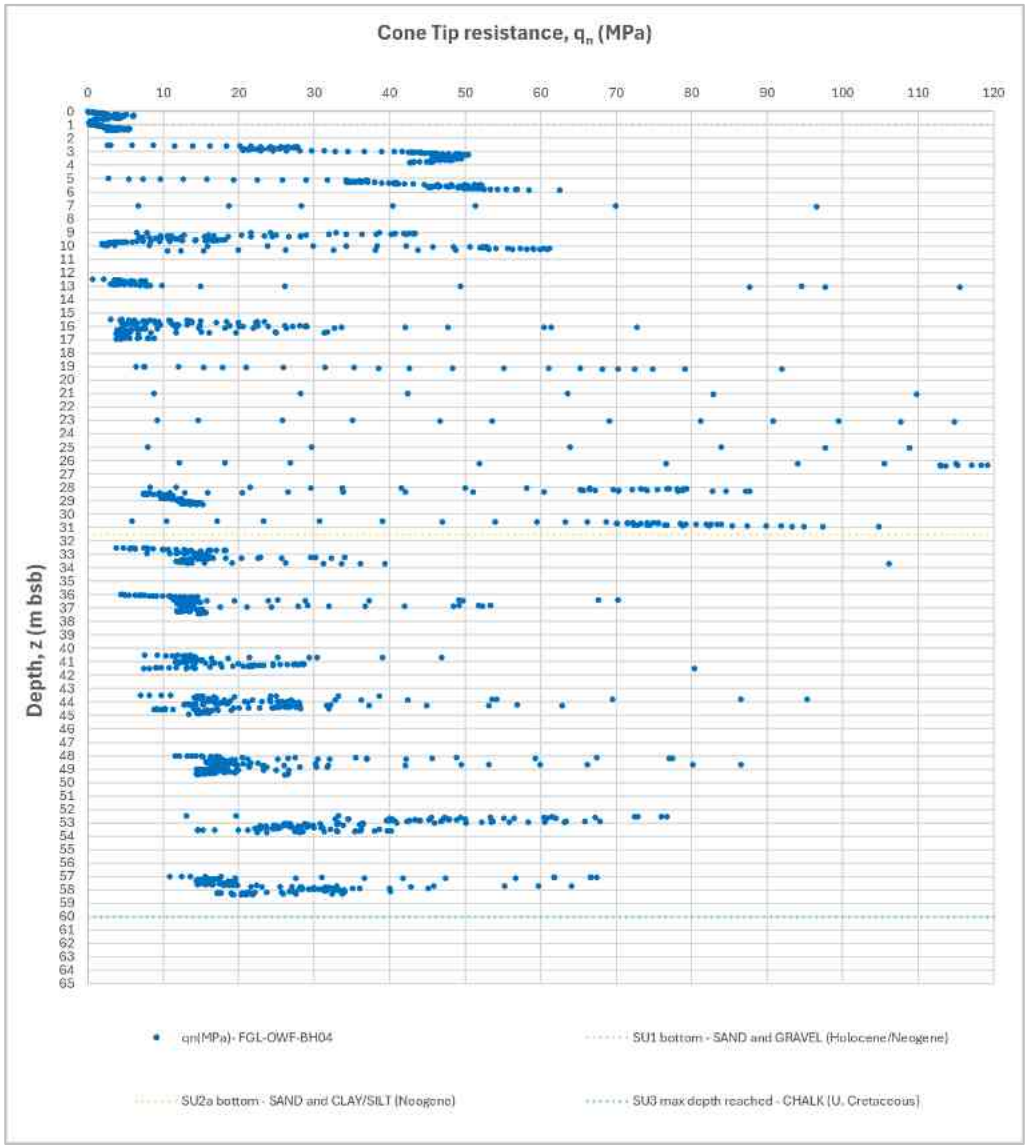

Is50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 offshore - FGL-OWF-BH03
IS50 onshore - FGL-OWF-BH03
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
UCS Onshore (MPa) - FGL-OWF-BH03
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH03
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH03
TENSILE Onshore (MPa) - FGL-OWF-BH03

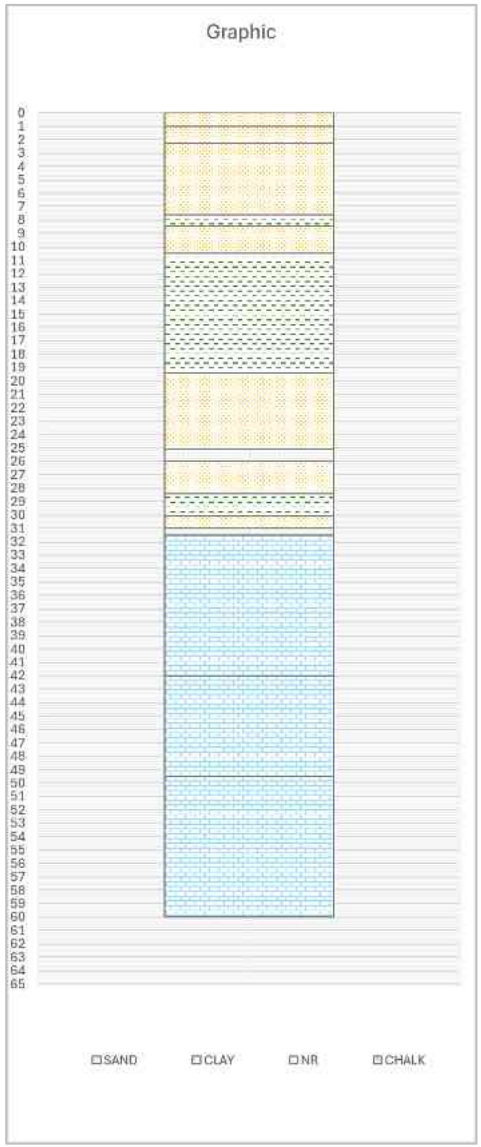

Graphic
SAND
CLAY
CALCIRUDITE
Organic CLAY
CHALK

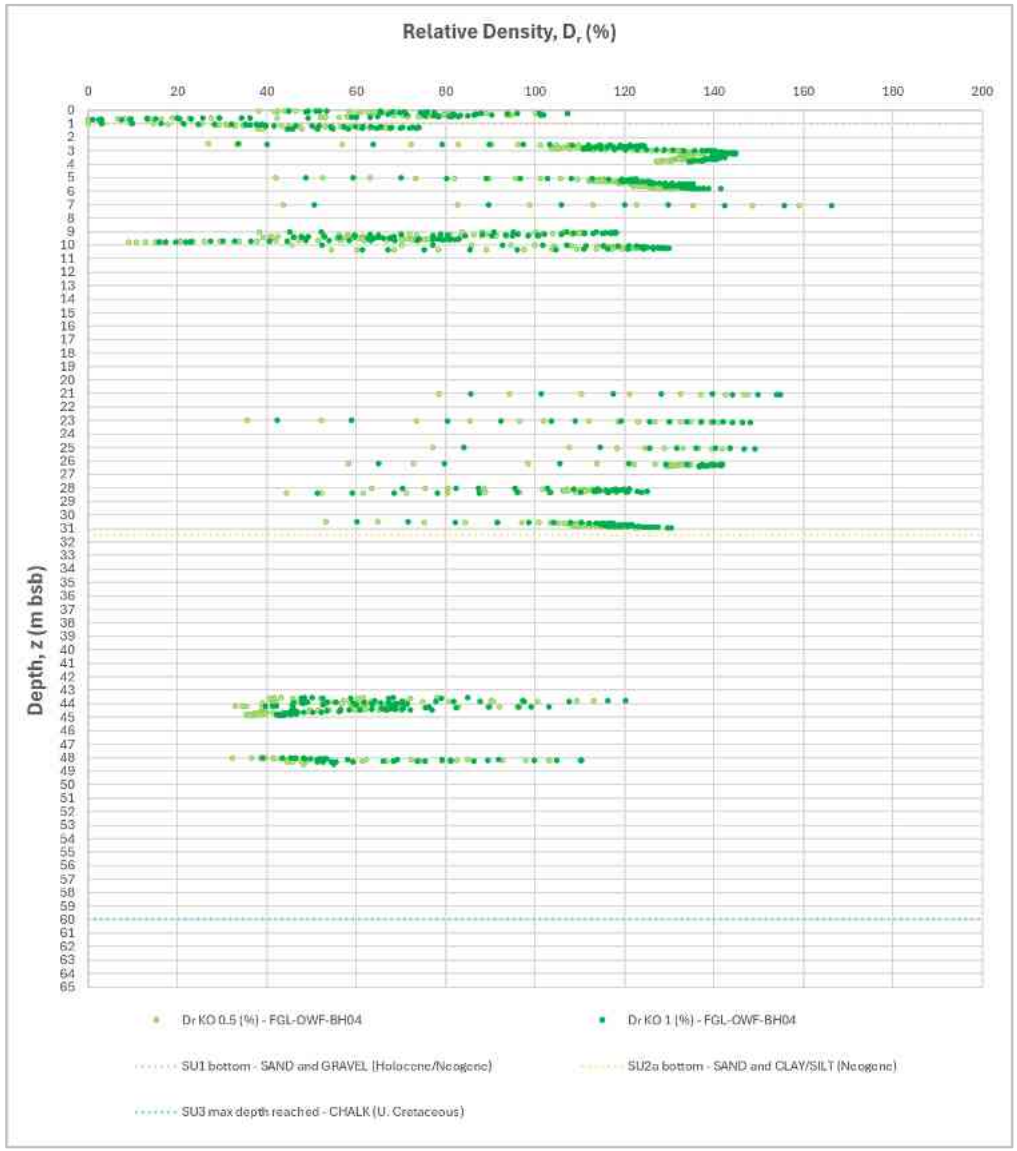

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH03
Dry Density (kN/m3) onshore - FGL-OWF-BH03
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
Moisture Content (%) onshore - FGL-OWF-BH03
Dry Density (kN/m3) offshore - FGL-OWF-BH03
Bulk Density (kN/m3) onshore - FGL-OWF-BH03
SU2a bottom - SAND and CLAY/SILT (Neogene)
Moisture Content (%) offshore- FGL-OWF-BH03

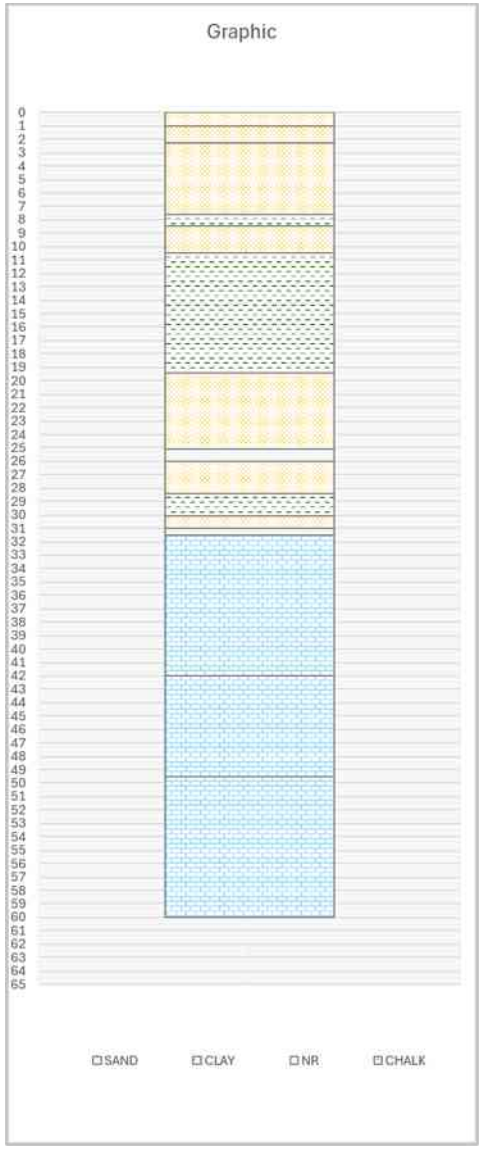

Graphic
SAND
CLAY
CALCIRUDITE
Organic CLAY
CHALK

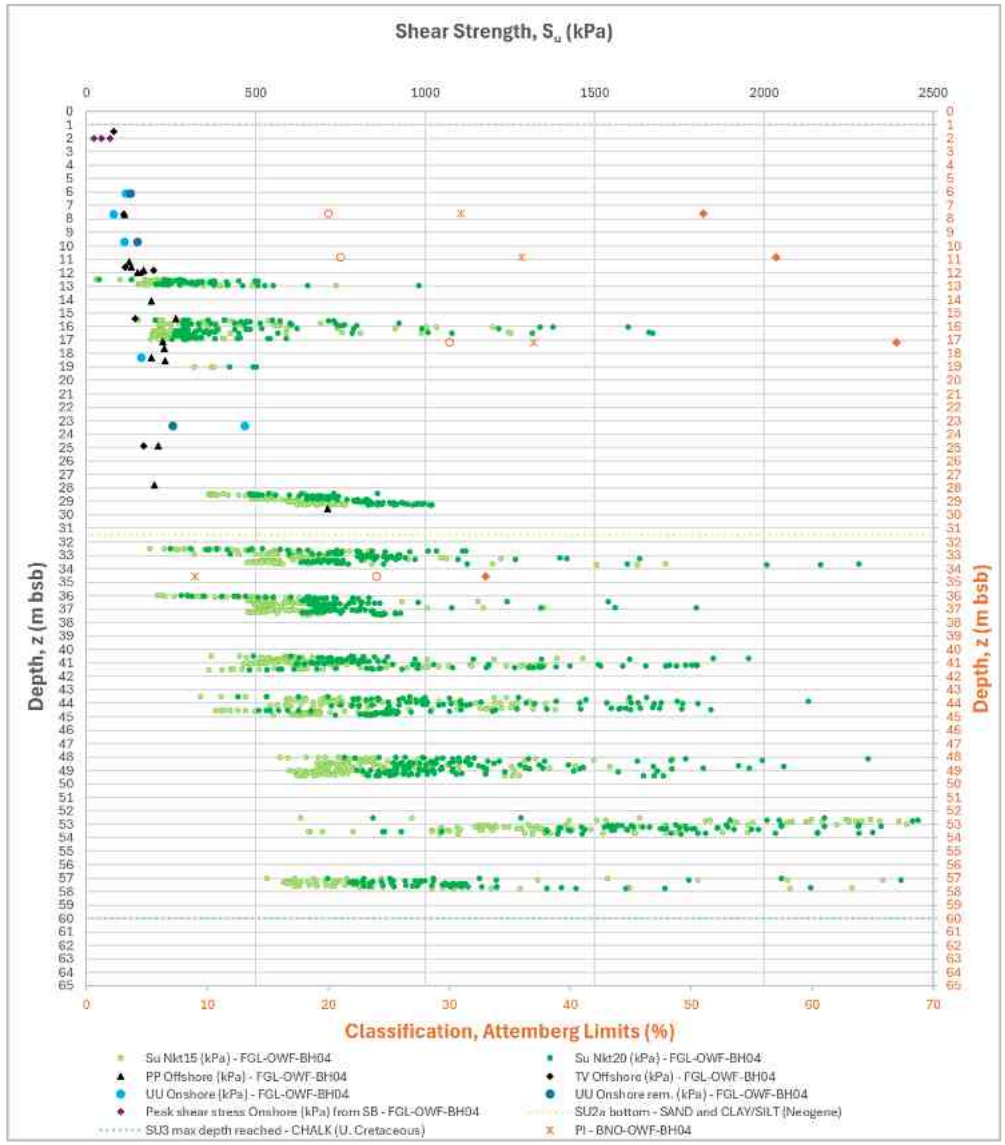
FGL-OWF-BH04

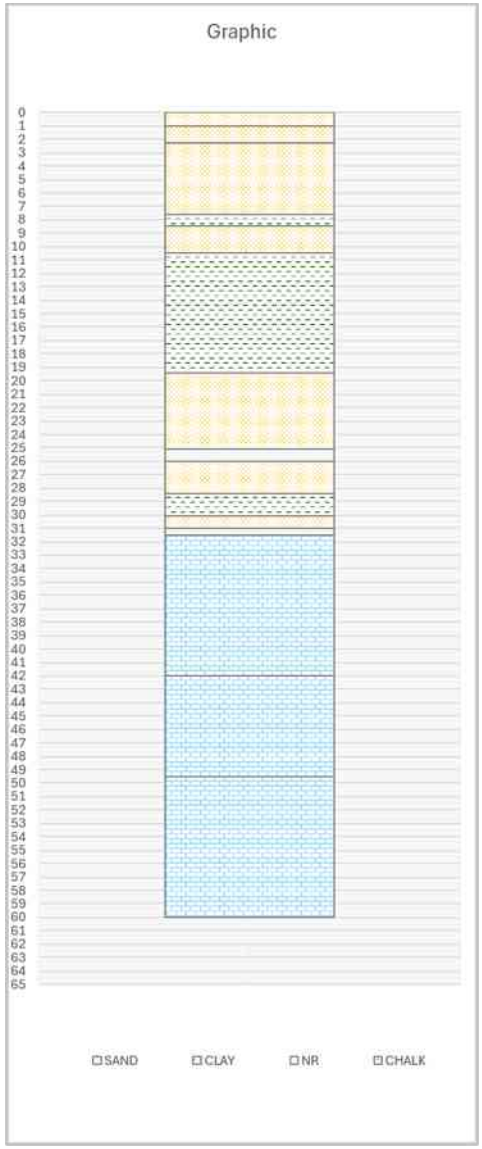

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa) - FGL-OWF-BH04
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

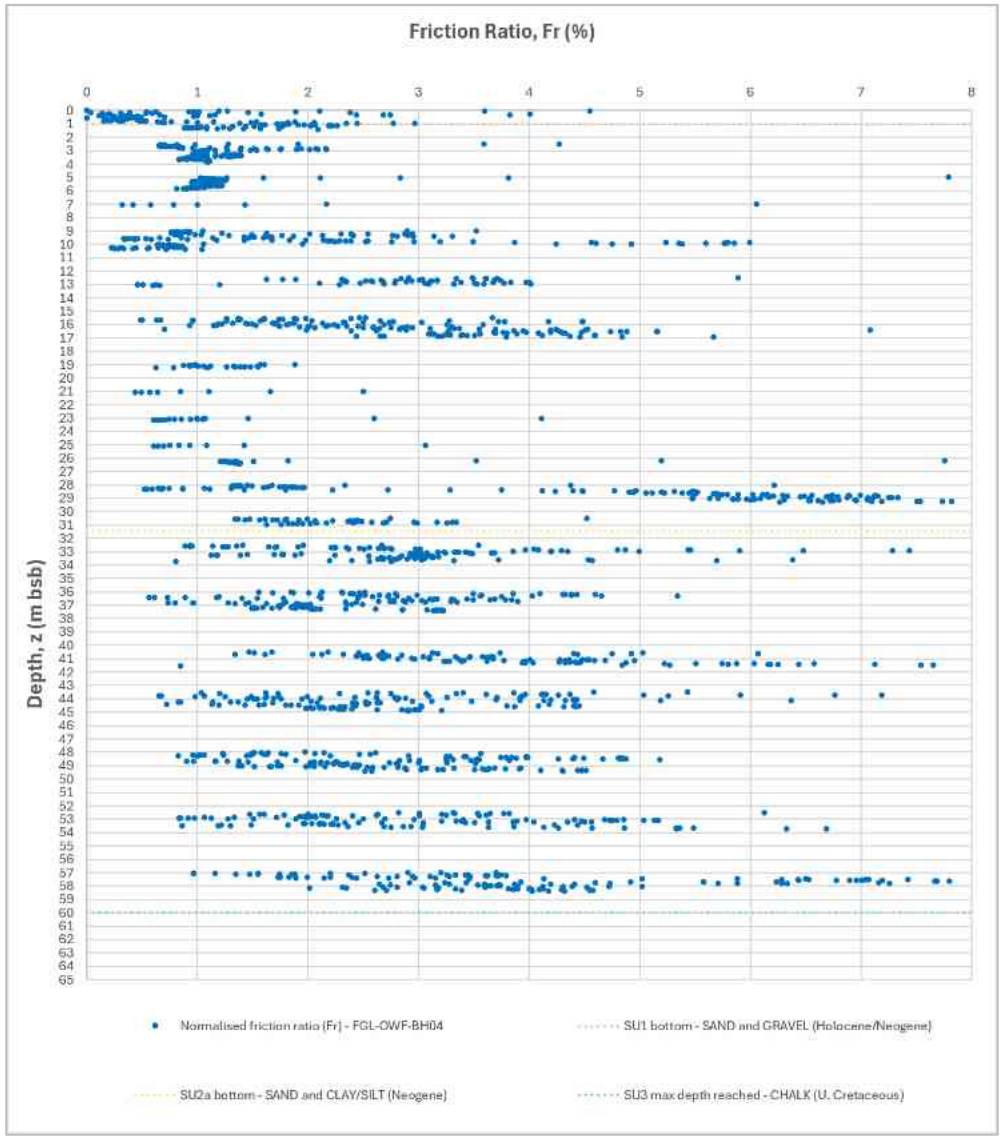

Graphic
SAND
CLAY
NR
CHALK

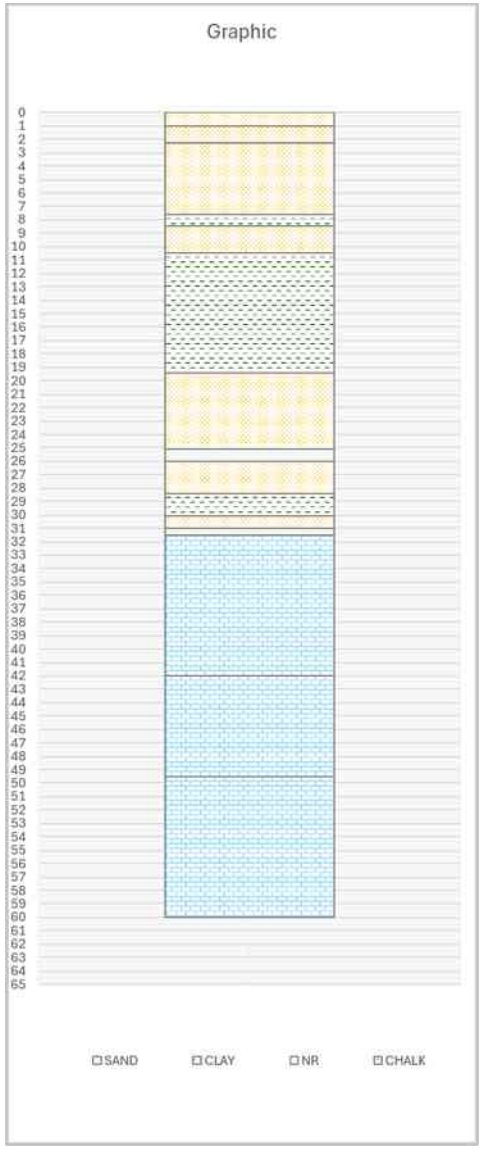

Relative Density, D_r (%)
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH04
Dr KO 1 (%) - FGL-OWF-BH04
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
SAND
CLAY
NR
CHALK

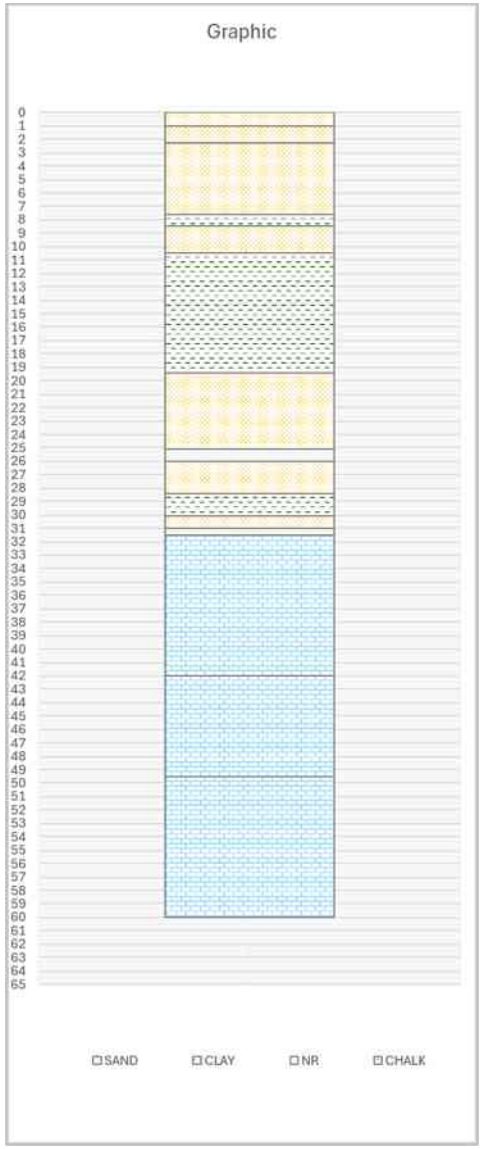

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH04
Su Nkt20 (kPa) - FGL-OWF-BH04
PP Offshore (kPa) - FGL-OWF-BH04
TV Offshore (kPa) - FGL-OWF-BH04
UU Onshore (kPa) - FGL-OWF-BH04
UU Onshore rem. (kPa) - FGL-OWF-BH04
Peak shear stress Onshore (kPa) from SB - FGL-OWF-BH04
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
PI - BNO-OWF-BH04

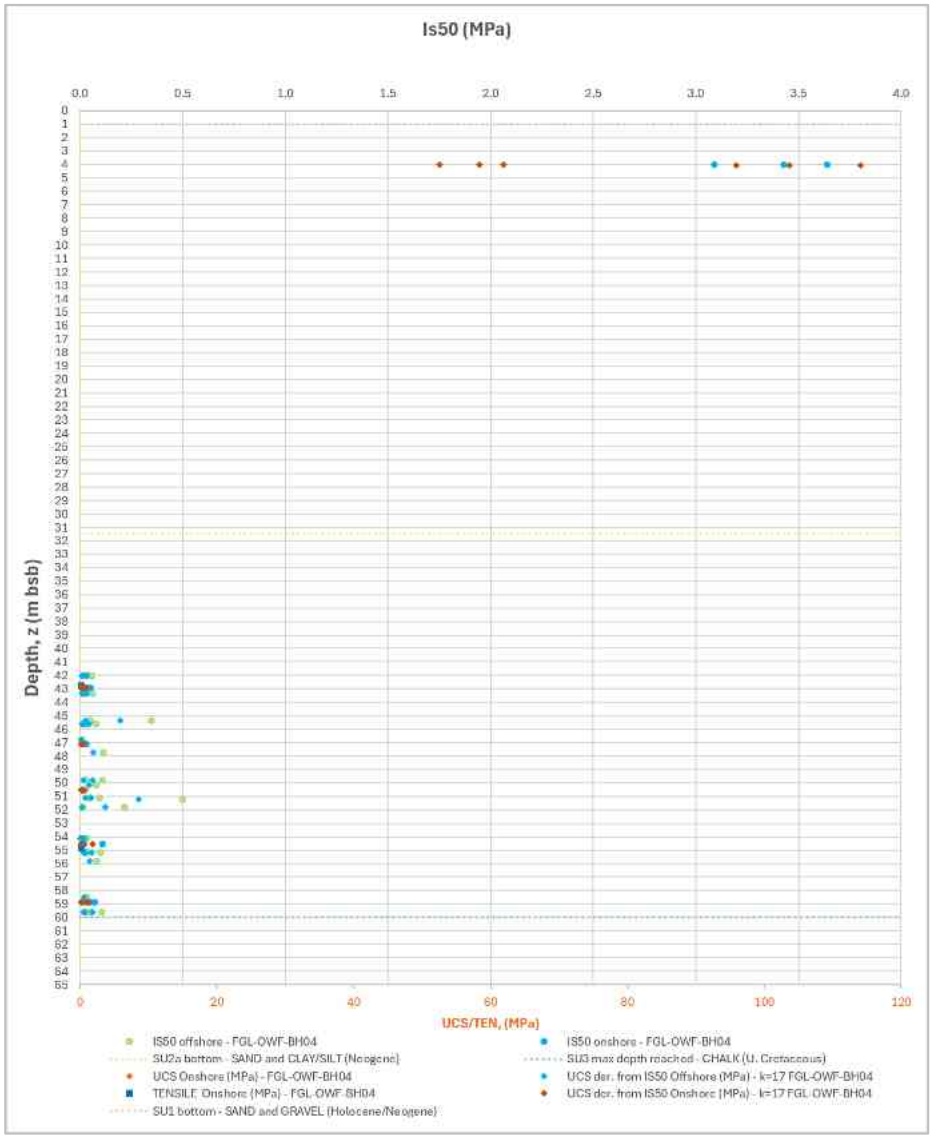

Graphic
SAND
CLAY
NR
CHALK

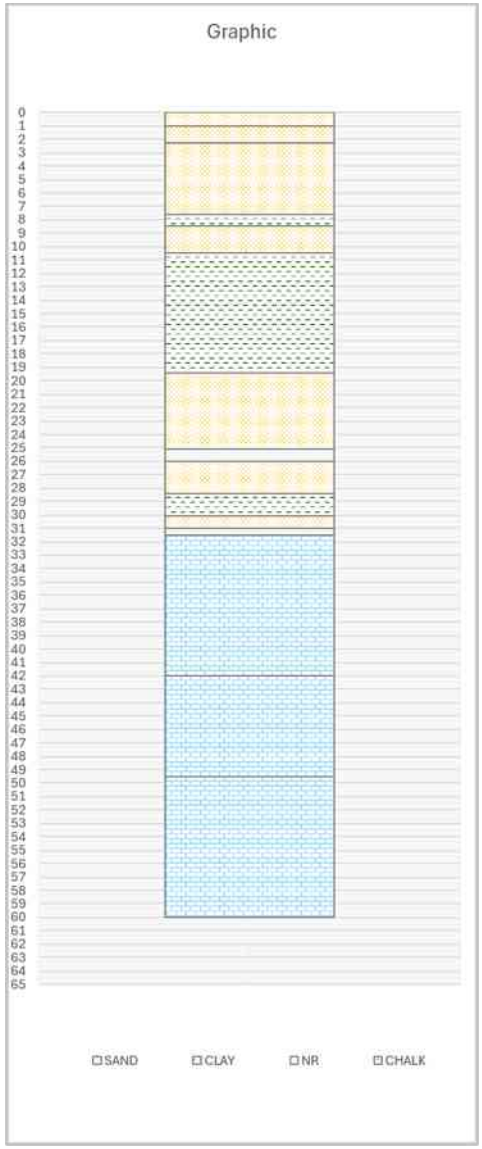

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH04
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

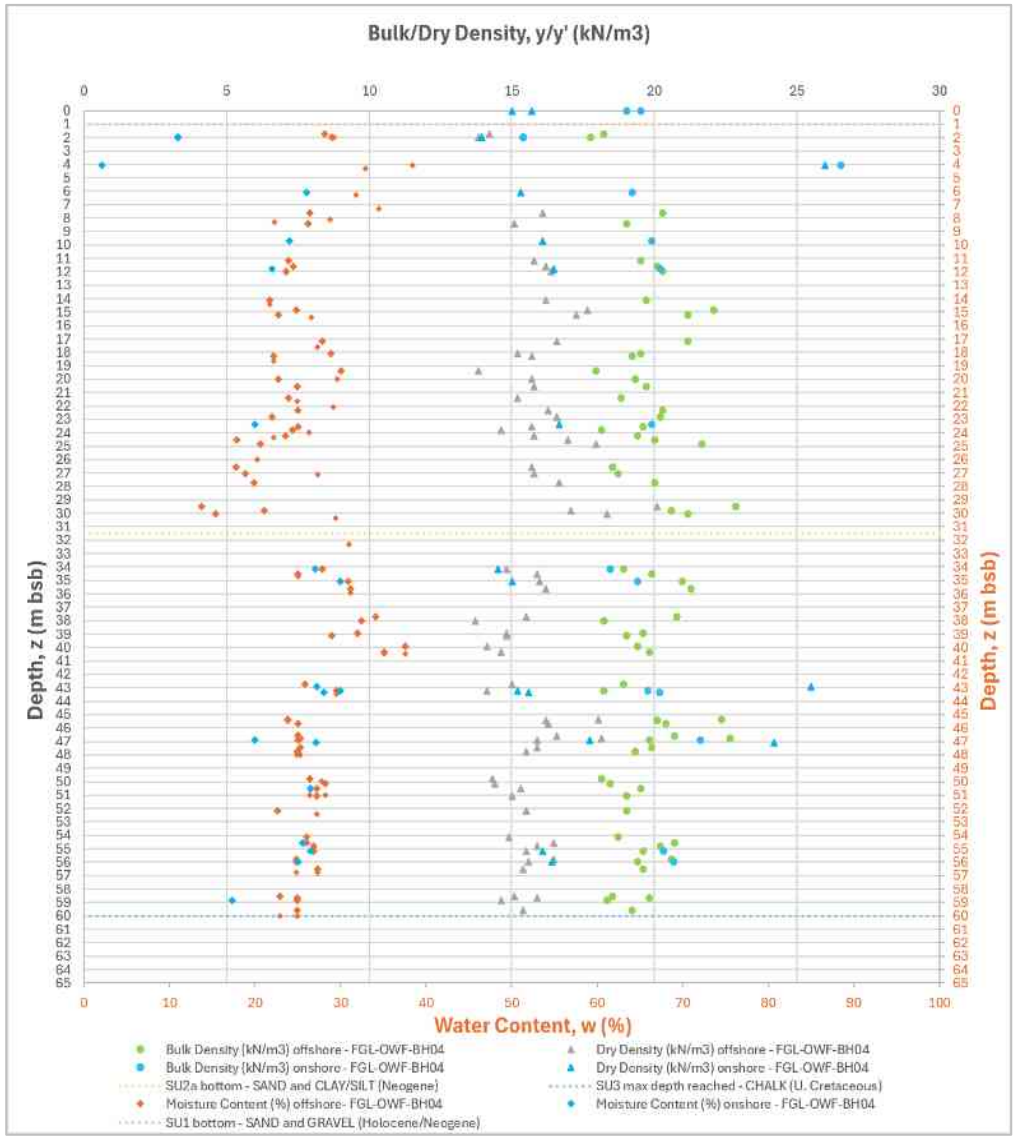

Graphic
SAND
CLAY
NR
CHALK

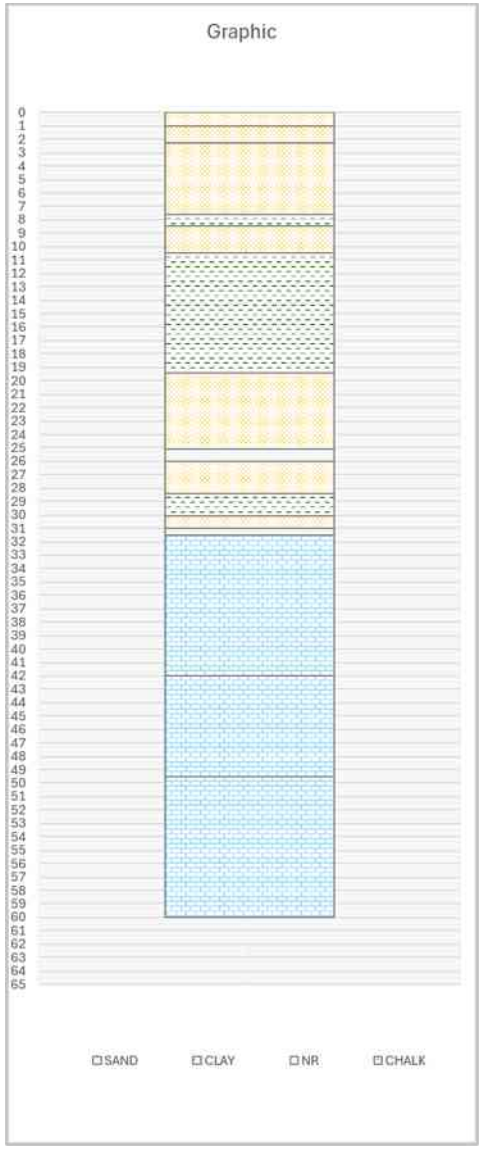

Friction Angle, ø' (°)
0
10
20
30
40
50
60
70
80
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH04
PHI Onshore from SB (°) - FGL-OWF-BH04
Cohesion Onshore from SB (kPa) - FGL-OWF-BH04
PHI Onshore from CID (°) - FGL-OWF-BH04
Cohesion Onshore from CID (kPa) - FGL-OWF-BH04
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
SAND
CLAY
NR
CHALK

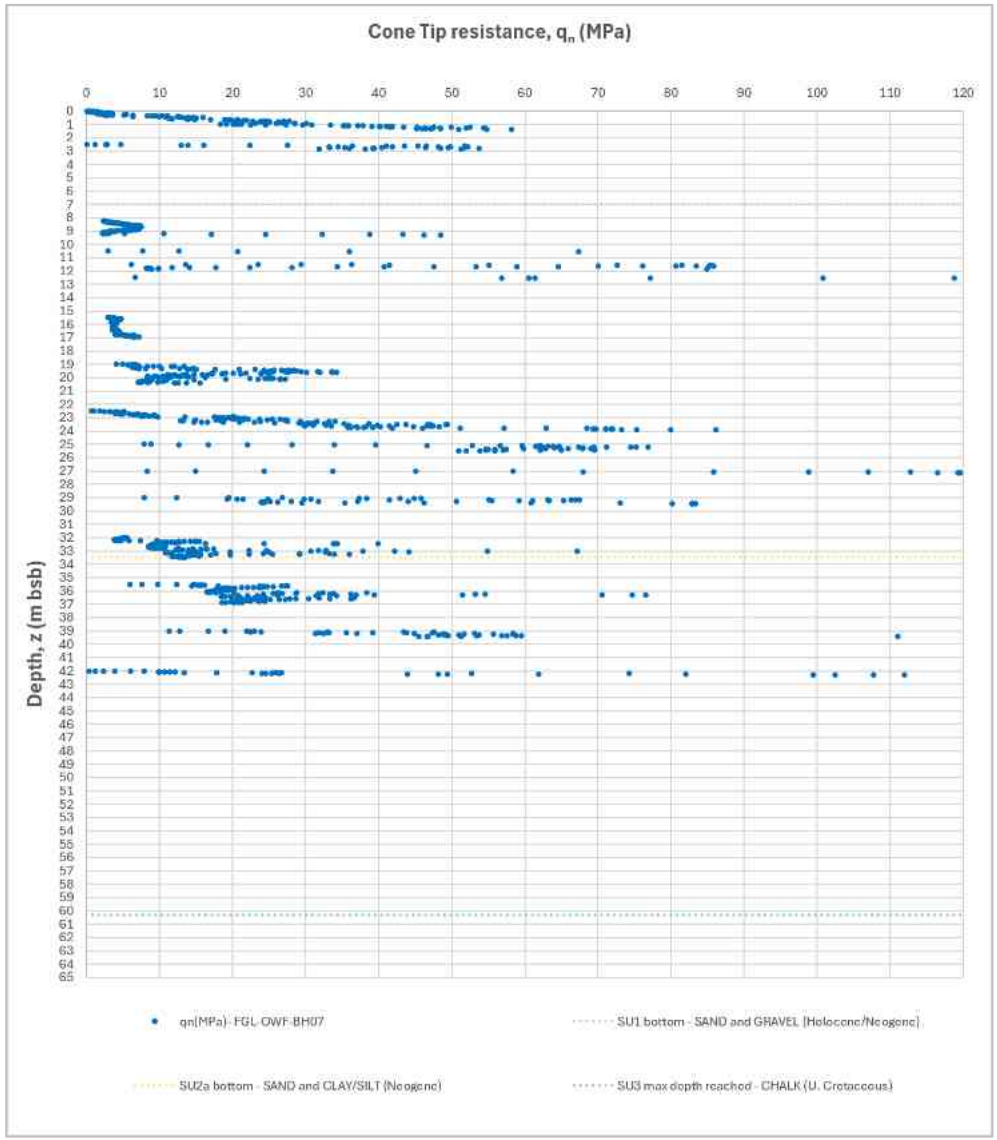

Is50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 offshore - FGL-OWF-BH04
IS50 onshore - FGL-OWF-BH04
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
UCS Onshore (MPa) - FGL-OWF-BH04
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH04
TENSILE Onshore (MPa) - FGL-OWF-BH04
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH04
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)

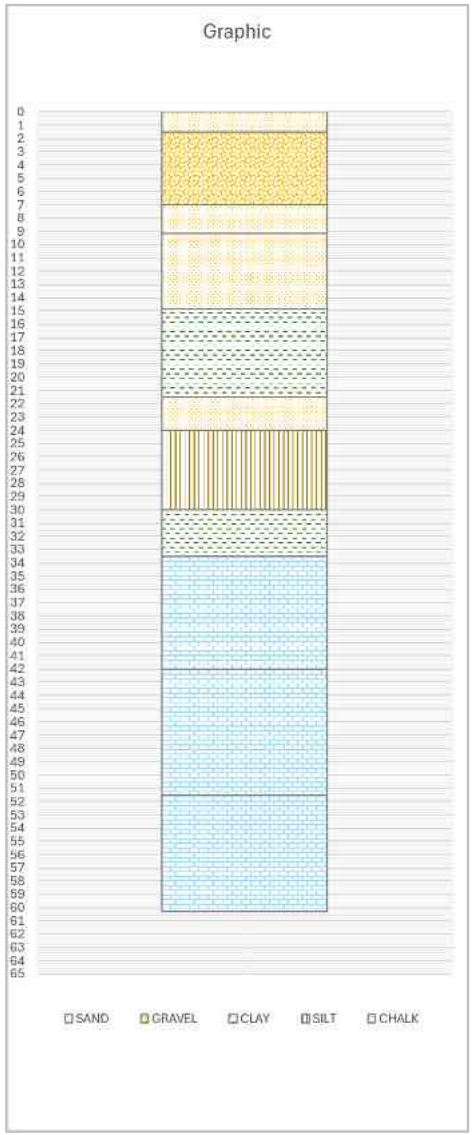

Graphic
SAND
CLAY
NR
CHALK

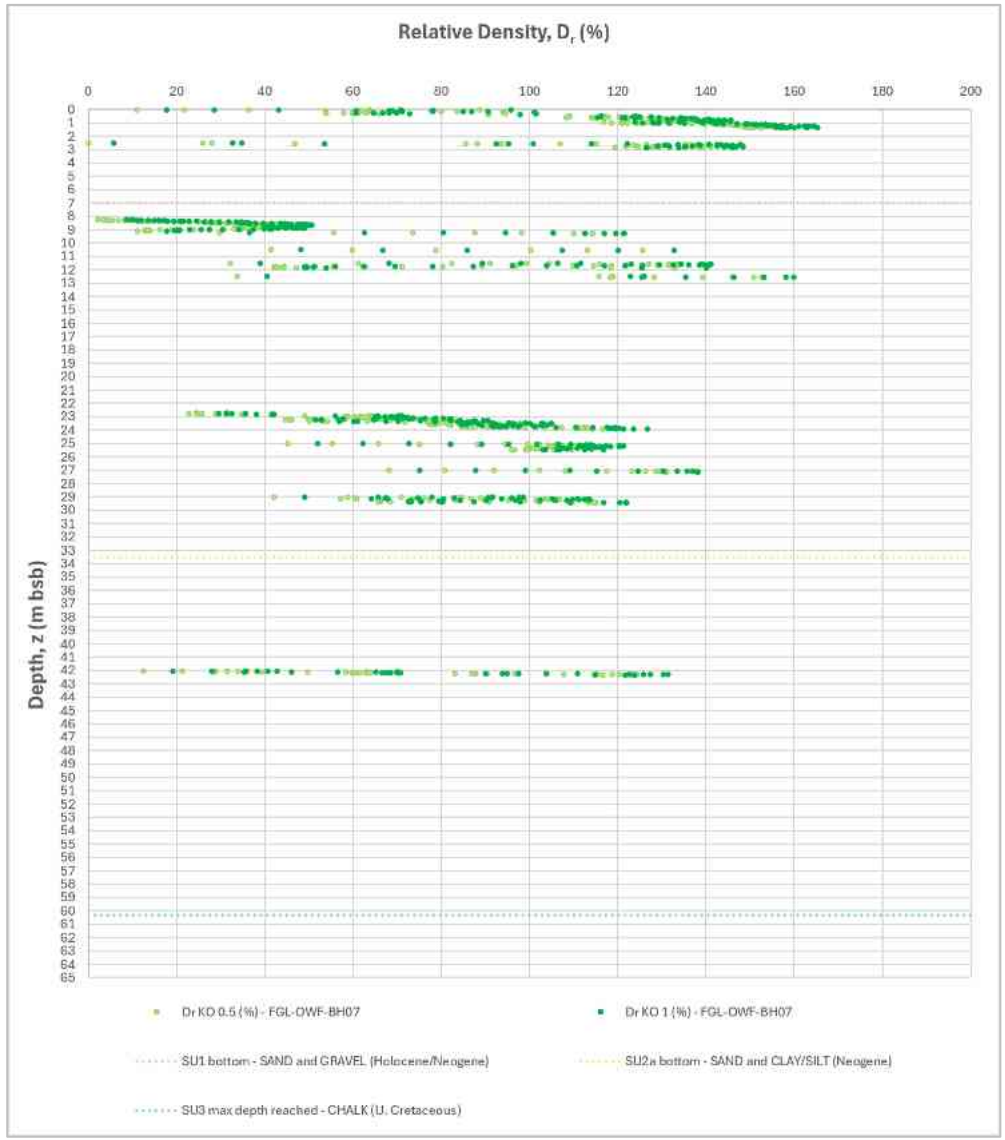

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH04
Bulk Density (kN/m3) onshore - FGL-OWF-BH04
SU2a bottom - SAND and CLAY/SILT (Neogene)
Moisture Content (%) offshore- FGL-OWF-BH04
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
Dry Density (kN/m3) offshore - FGL-OWF-BH04
Dry Density (kN/m3) onshore - FGL-OWF-BH04
SU3 max depth reached - CHALK (U. Cretaceous)
Moisture Content (%) onshore - FGL-OWF-BH04

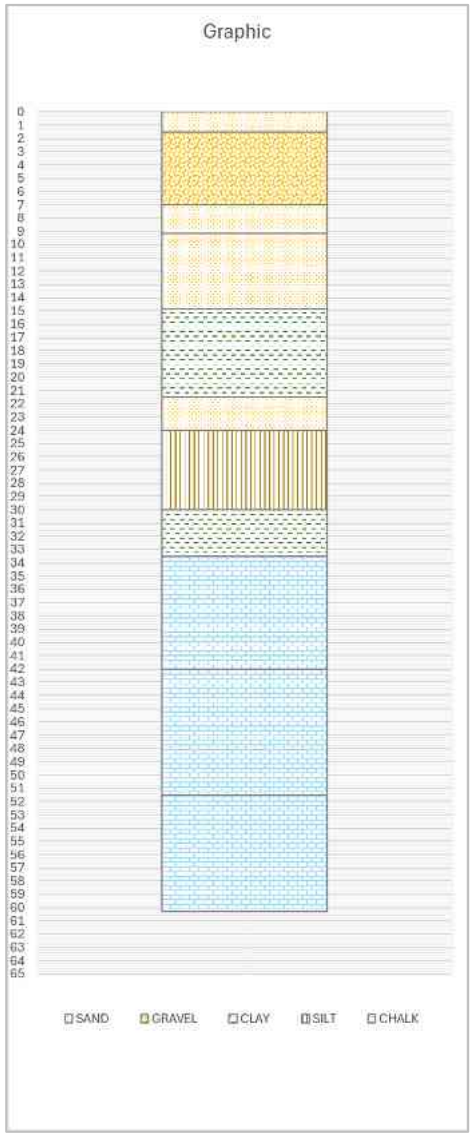

Graphic
SAND
CLAY
NR
CHALK

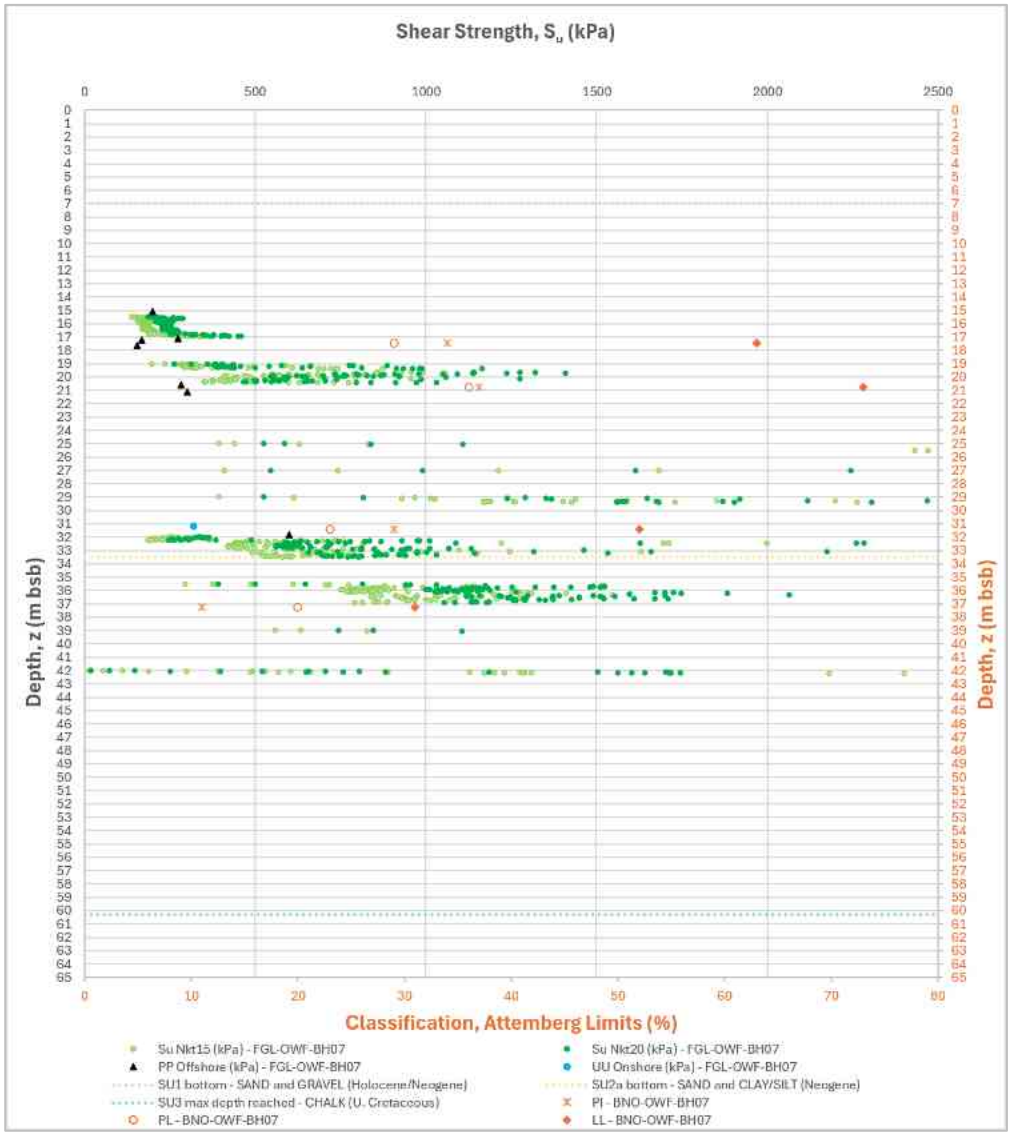
FGL-OWF-BH07

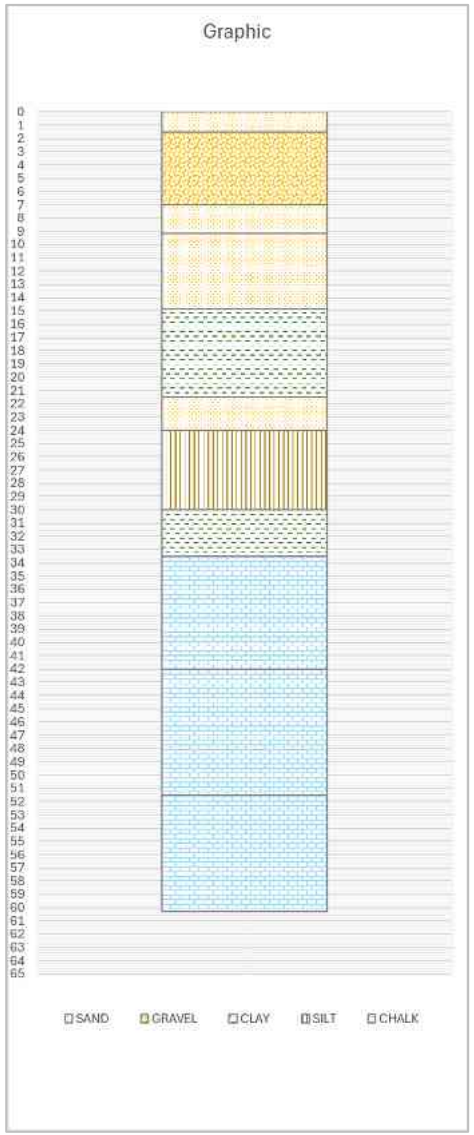

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa) - FGL-OWF-BH07
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

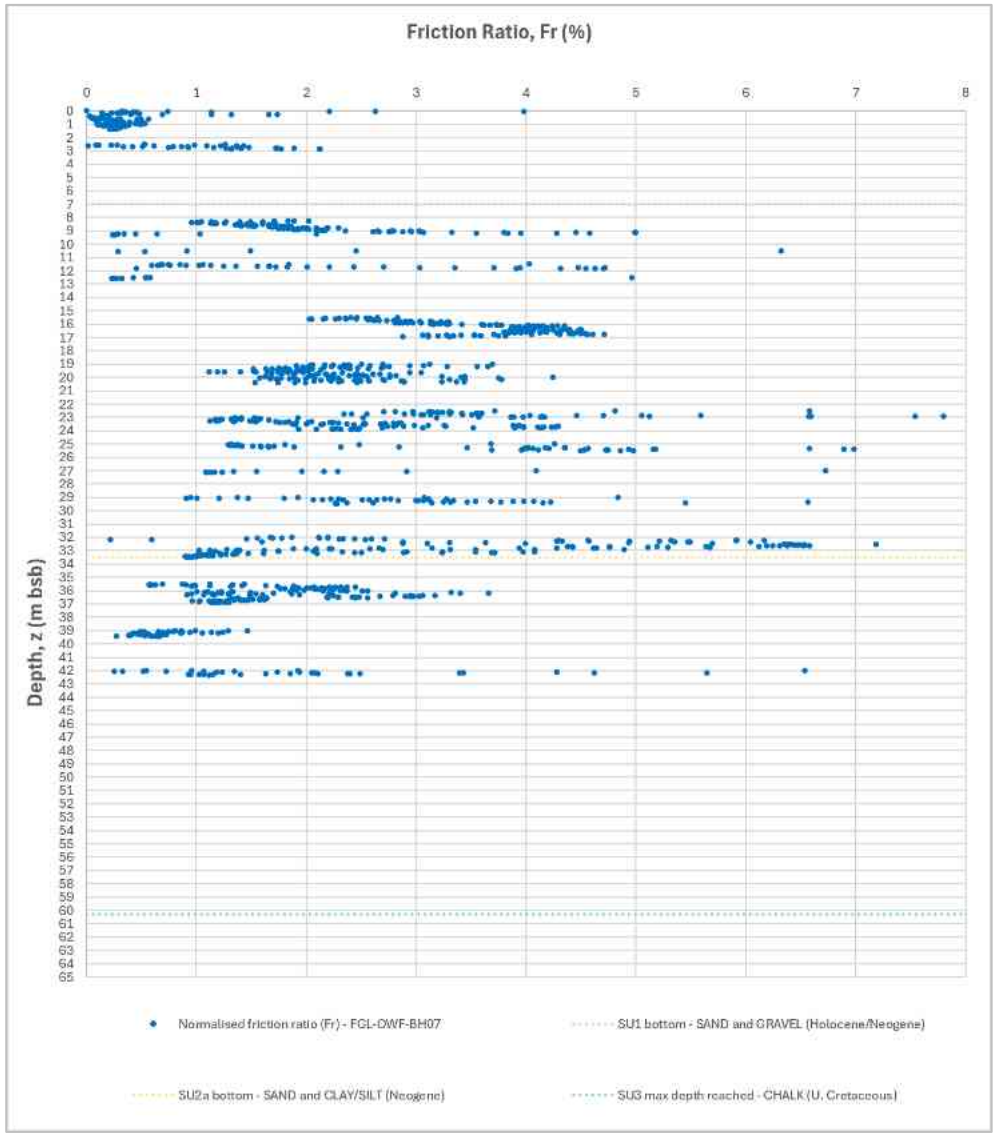

Graphic
SAND
GRAVEL
CLAY
SILT
CHALK

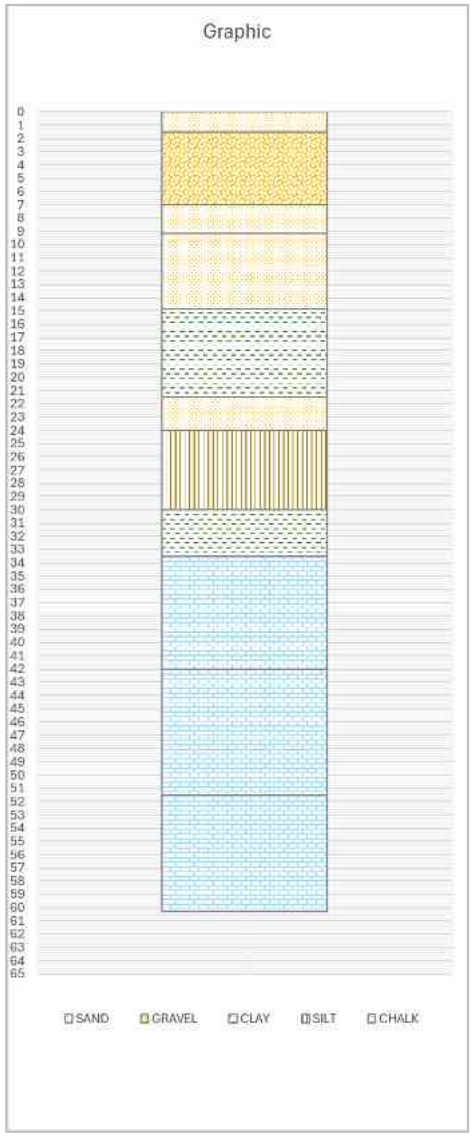

Relative Density, D_r (%)
0
20
40
60
80
100
120
140
160
180
200
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH07
Dr KO 1 (%) - FGL-OWF-BH07
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

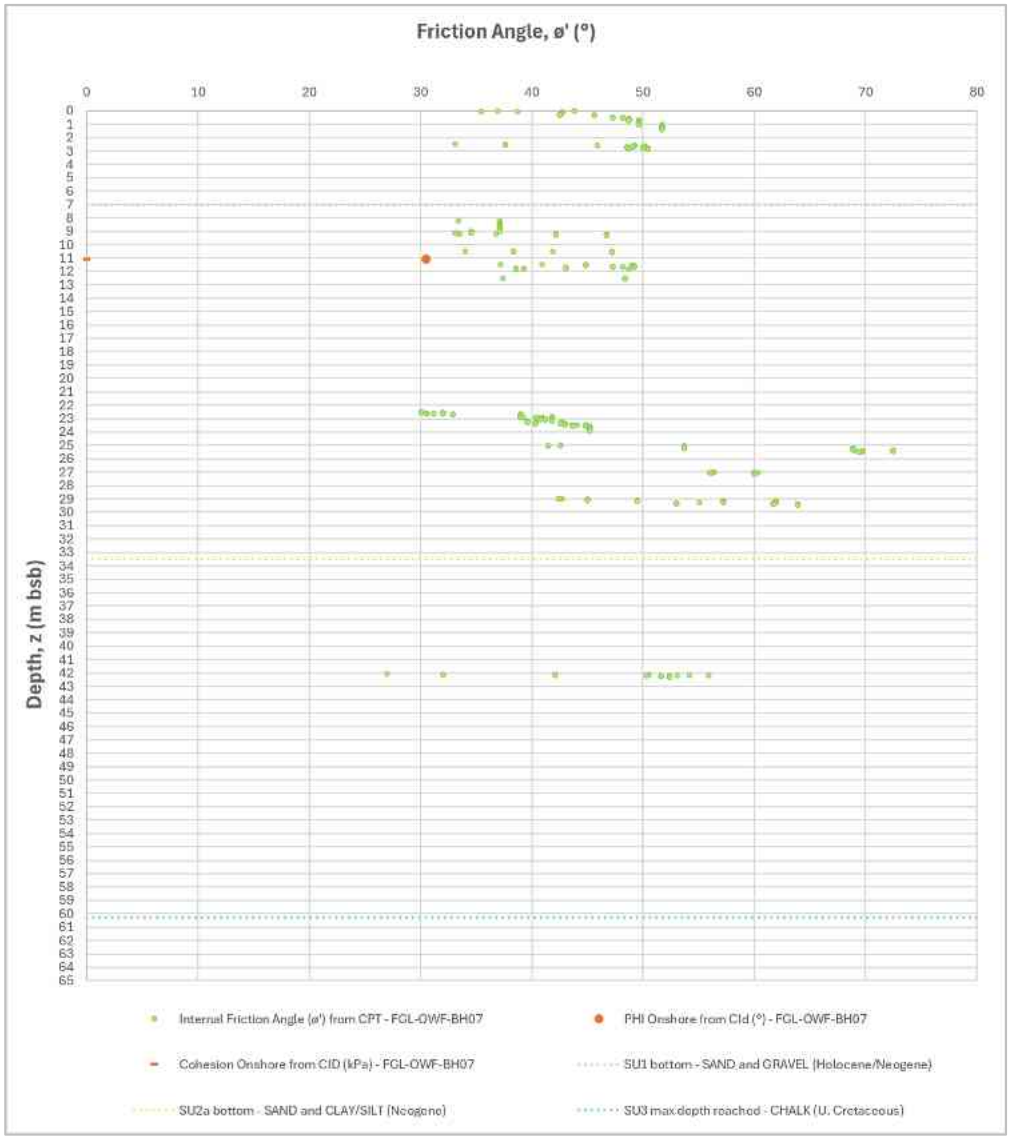

Graphic
SAND
GRAVEL
CLAY
SILT
CHALK

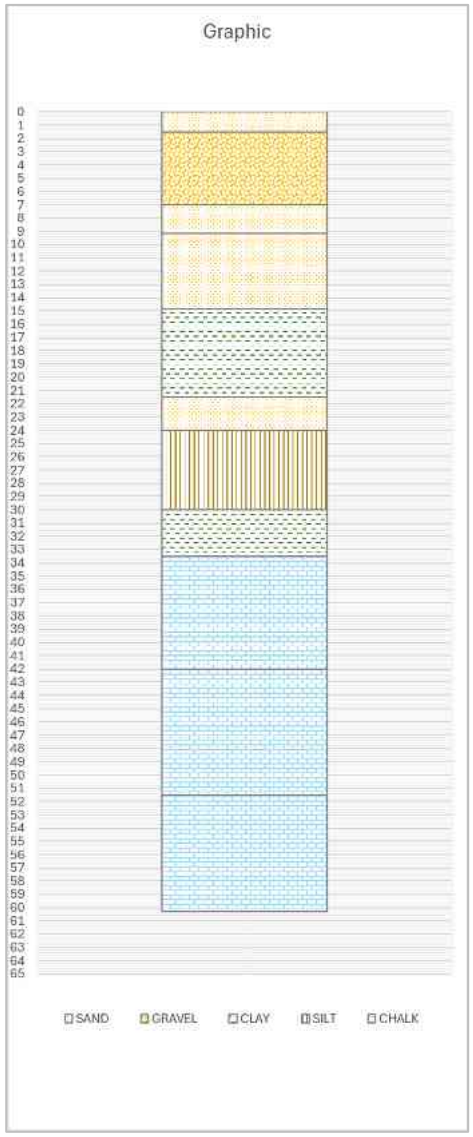

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Atterberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH07
Su Nkt20 (kPa) - FGL-OWF-BH07
PP Offshore (kPa) - FGL-OWF-BH07
UU Onshore (kPa) - FGL-OWF-BH07
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
PI - BNO-OWF-BH07
PL - BNO-OWF-BH07
LL - BNO-OWF-BH07

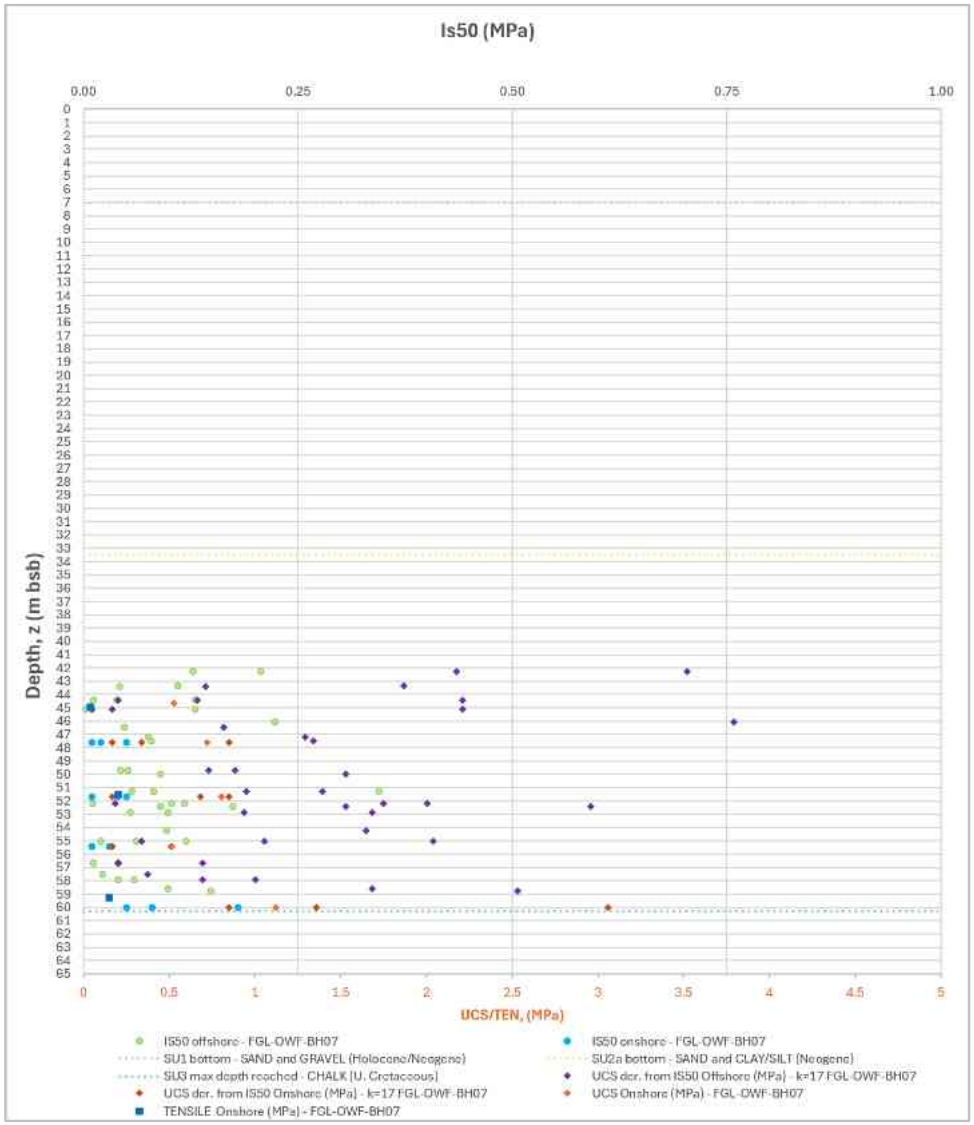

Graphic
SAND
GRAVEL
CLAY
SILT
CHALK

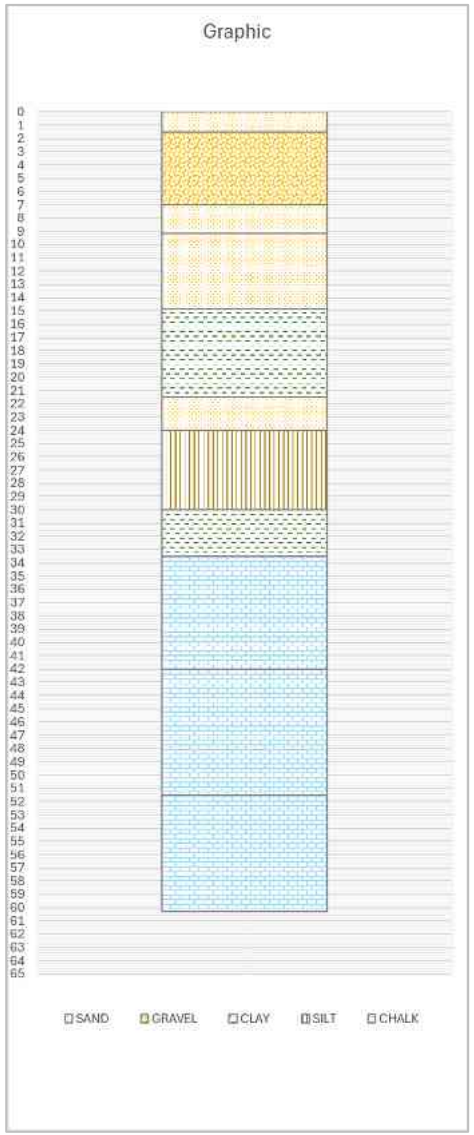

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH07
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

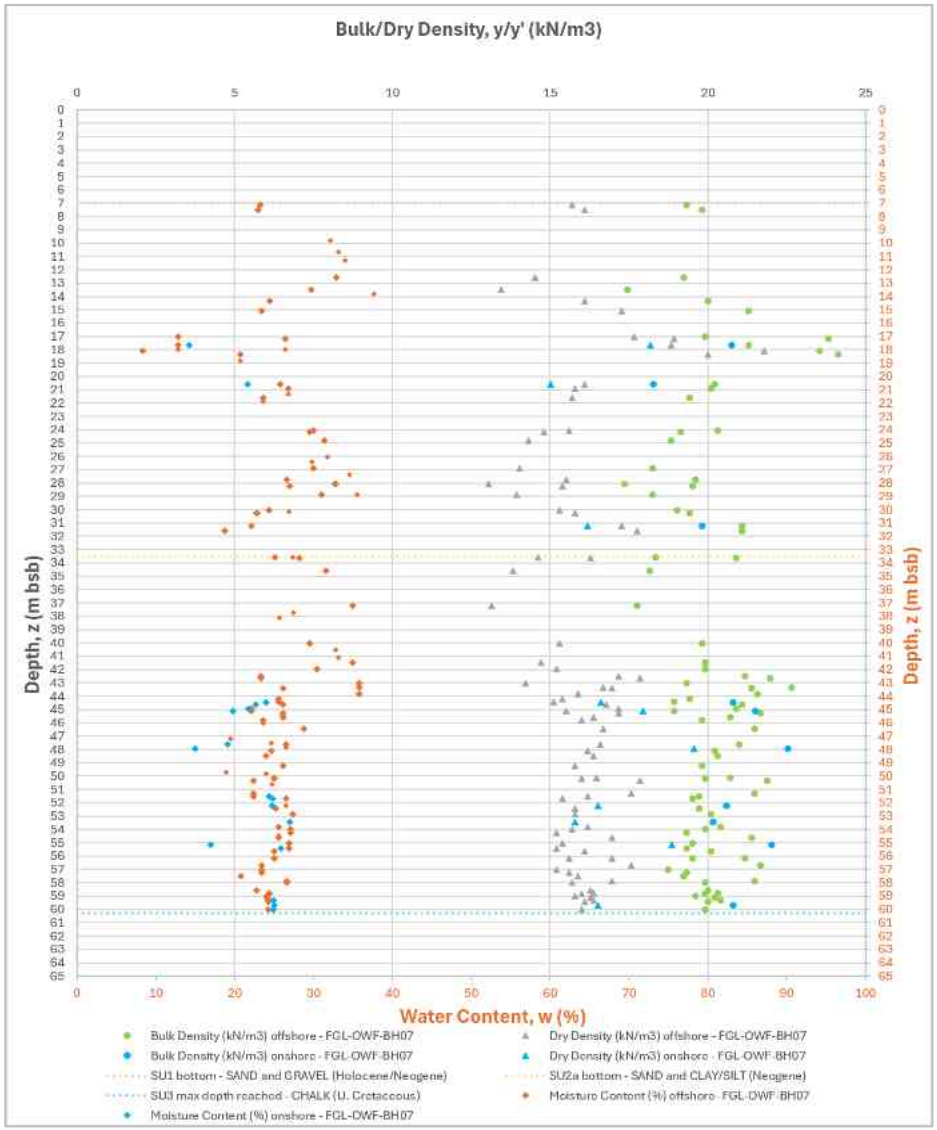

Graphic
SAND
GRAVEL
CLAY
SILT
CHALK

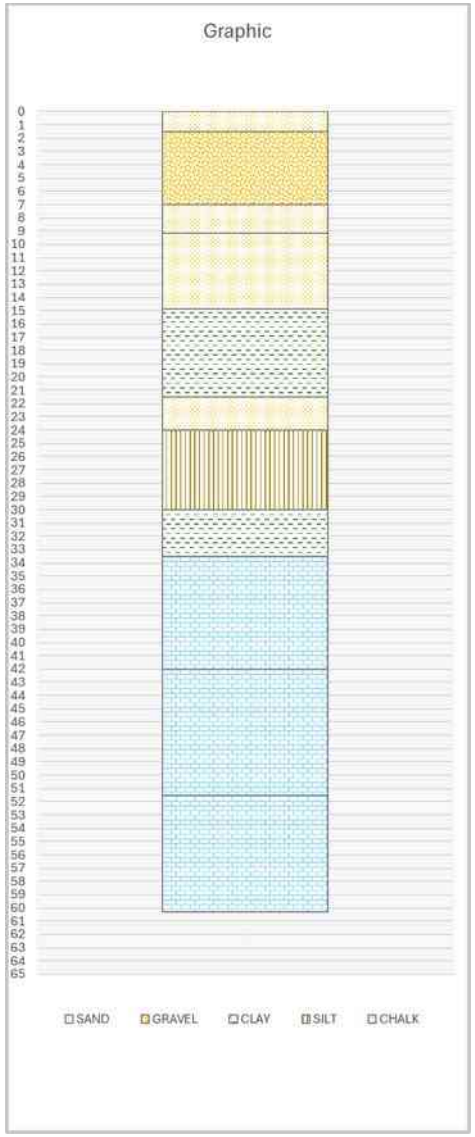

Friction Angle, ø' (°)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH07
PHI Onshore from CID (°) - FGL-OWF-BH07
Cohesion Onshore from CID (kPa) - FGL-OWF-BH07
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
SAND
GRAVEL
CLAY
SILT
CHALK


Is50 (MPa)
0.00
0.25
0.50
0.75
1.00
Depth, z (m bsb)
UCS/TEN, (MPa)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
IS50 offshore - FGL-OWF-BH07
IS50 onshore - FGL-OWF-BH07
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH07
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH07
UCS Onshore (MPa) - FGL-OWF-BH07
TENSILE Onshore (MPa) - FGL-OWF-BH07

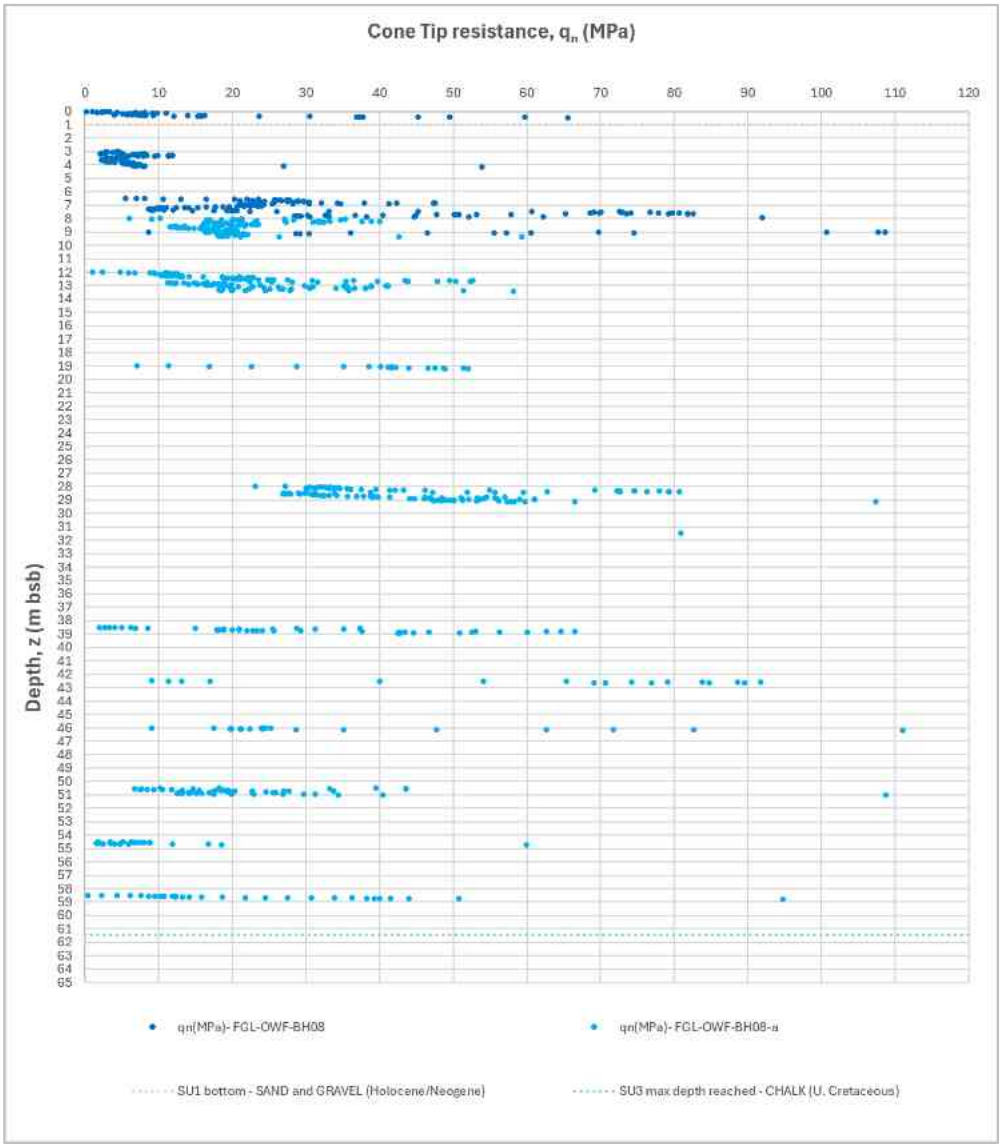

Graphic
SAND
GRAVEL
CLAY
SILT
CHALK

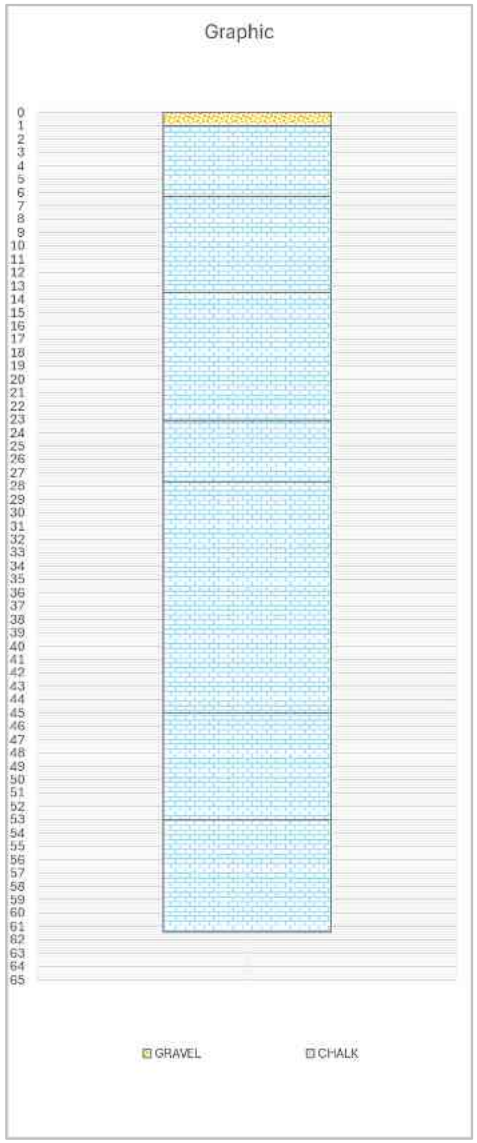

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH07
Bulk Density (kN/m3) onshore - FGL-OWF-BH07
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
Moisture Content (%) onshore - FGL-OWF-BH07
Dry Density (kN/m3) offshore - FGL-OWF-BH07
Dry Density (kN/m3) onshore - FGL-OWF-BH07
SU2a bottom - SAND and CLAY/SILT (Neogene)
Moisture Content (%) offshore - FGL-OWF-BH07

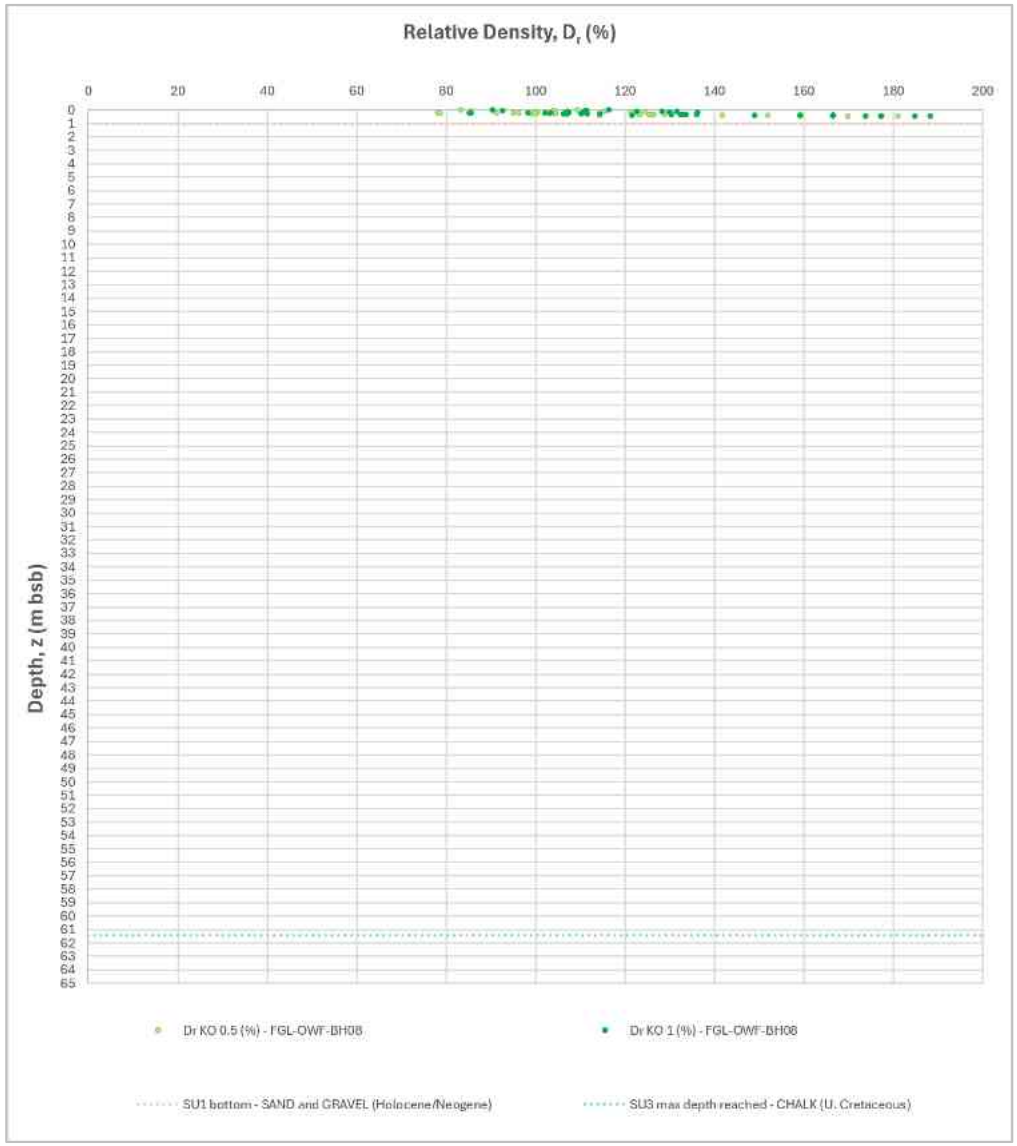

Graphic
SAND
GRAVEL
CLAY
SILT
CHALK

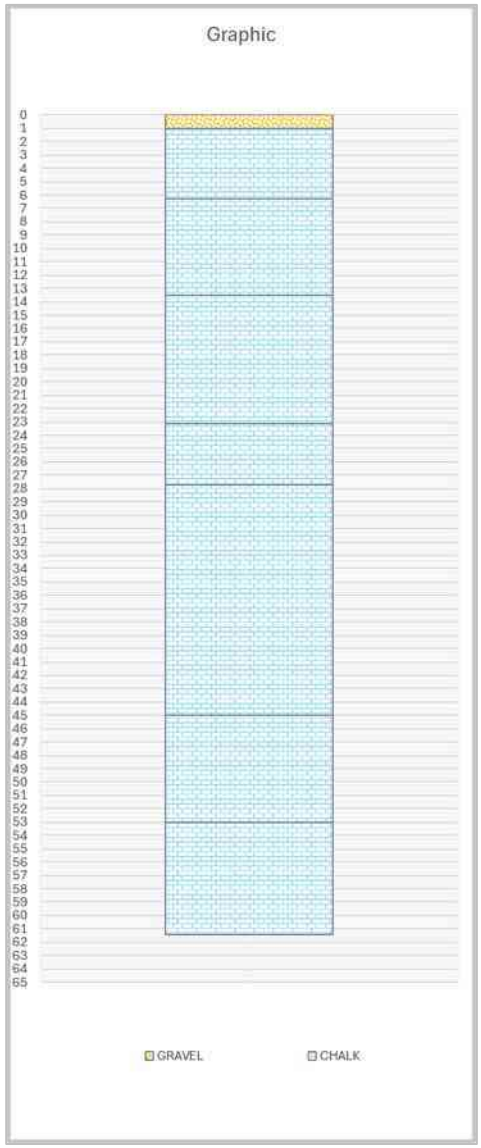
FGL-OWF-BH08

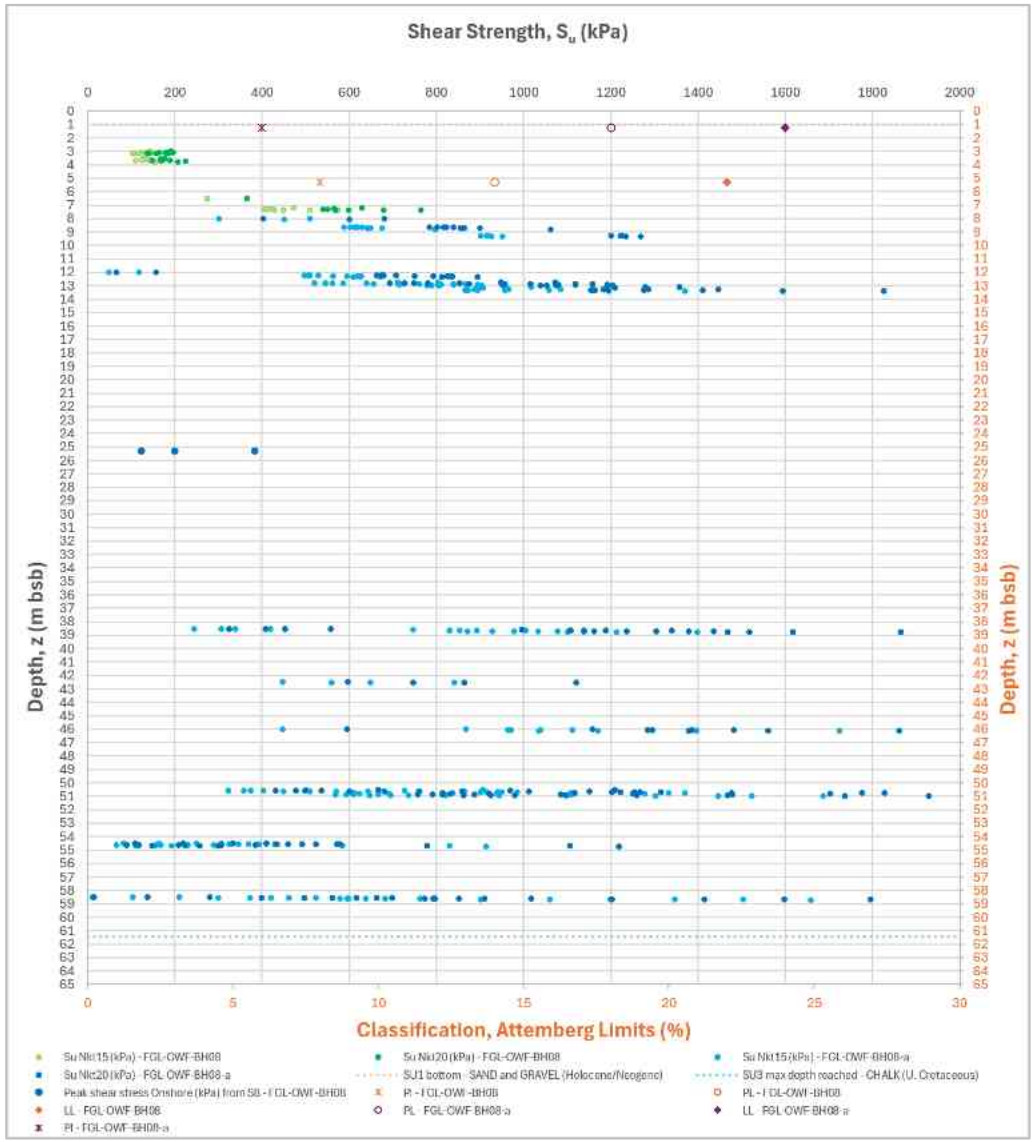
FGL-OWF-BH08-a

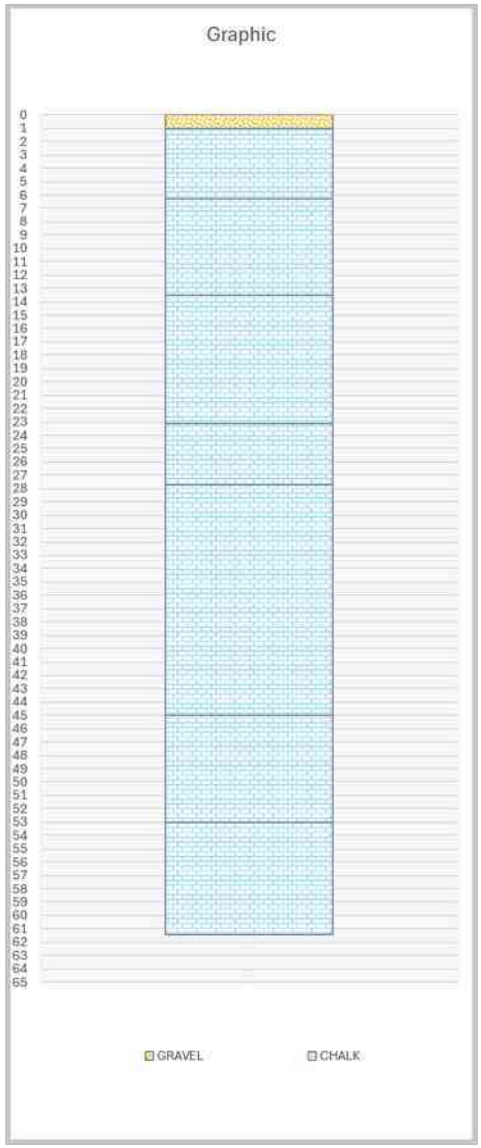

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH08
qn(MPa)- FGL-OWF-BH08-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

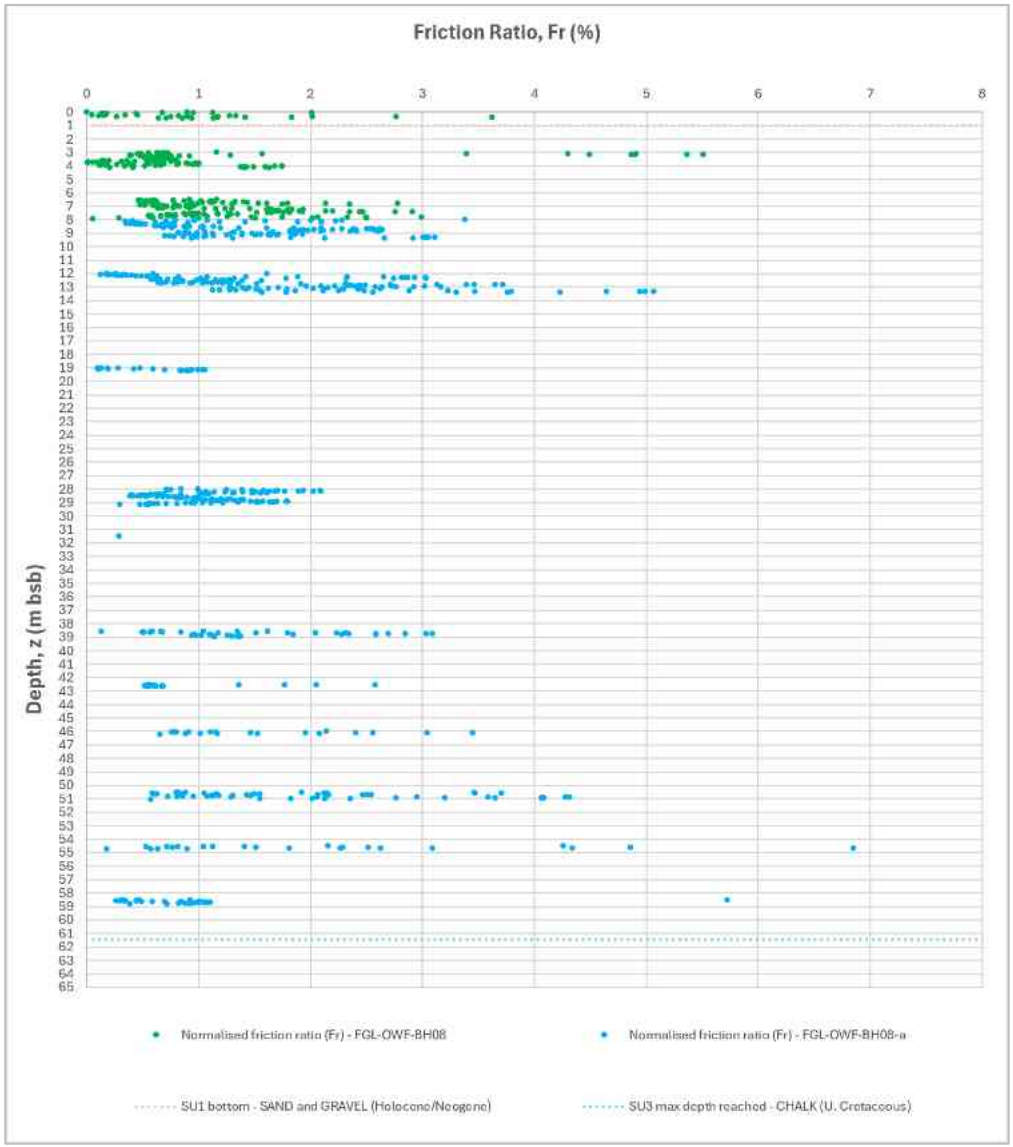

Graphic
GRAVEL
CHALK

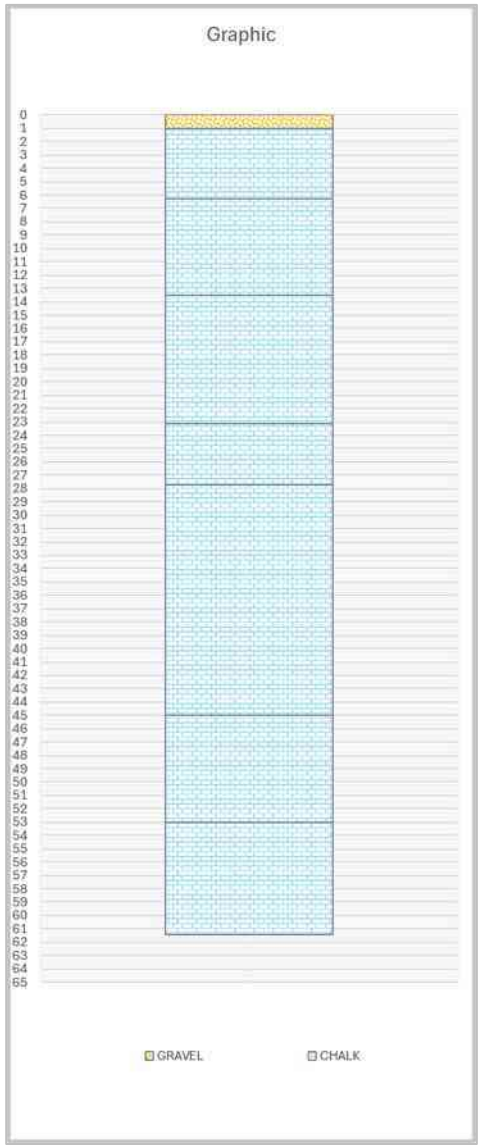

Relative Density, D_r (%)
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH08
Dr KO 1 (%) - FGL-OWF-BH08
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

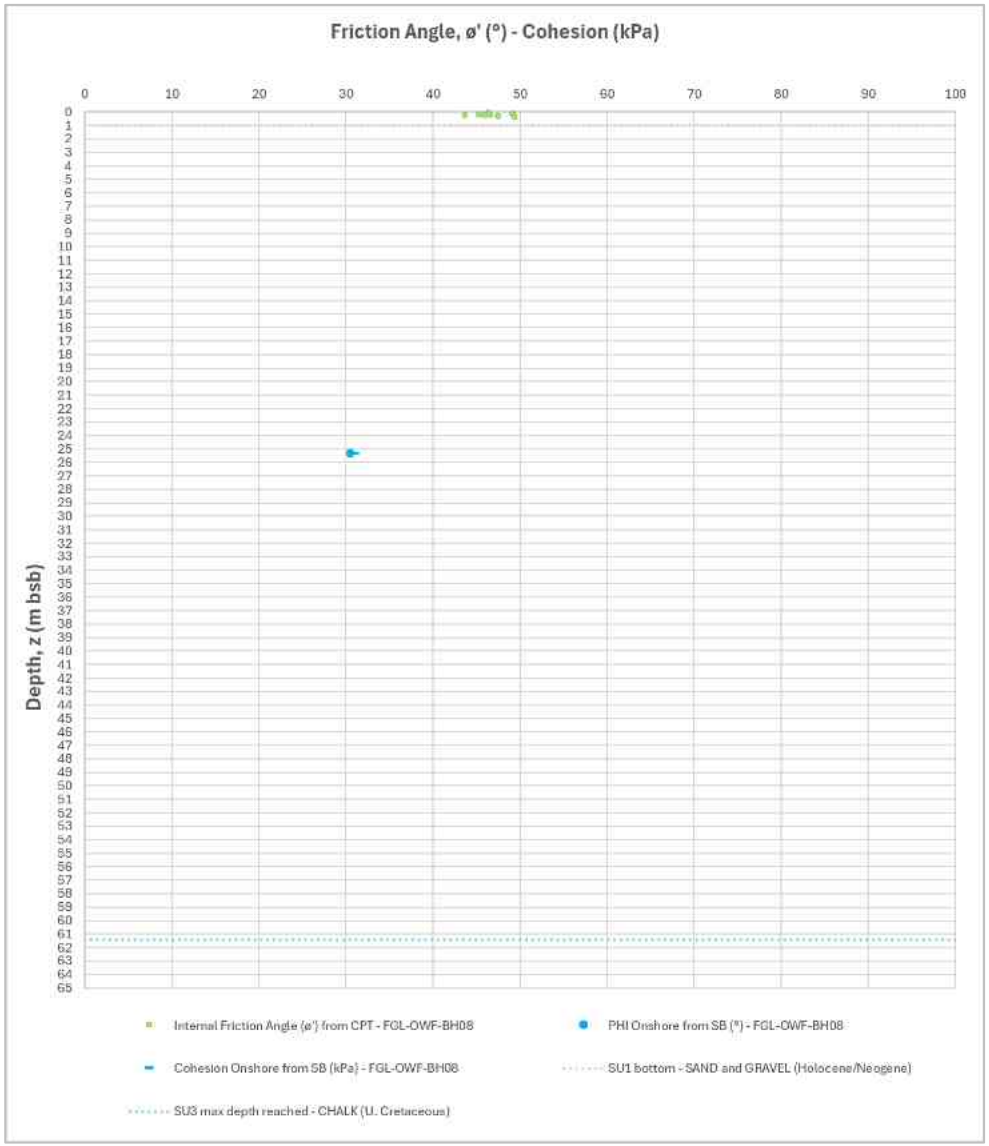

Graphic
GRAVEL
CHALK

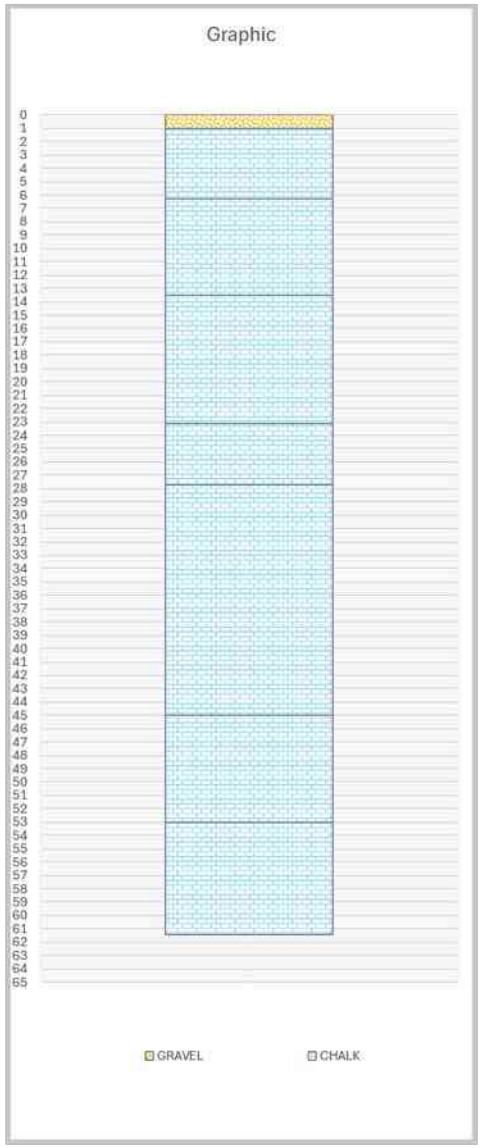

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH08
Su Nkt20 (kPa) - FGL-OWF-BH08
Su Nkt15 (kPa) - FGL-OWF-BH08-a
Su Nkt20 (kPa) - FGL-OWF-BH08-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
Peak shear stress Onshore (kPa) from SB - FGL-OWF-BH08
PI - FGL-OWF-BH08
PL - FGL-OWF-BH08
LL - FGL-OWF-BH08
PL - FGL-OWF-BH08-a
LL - FGL-OWF-BH08-a
PI - FGL-OWF-BH08-a

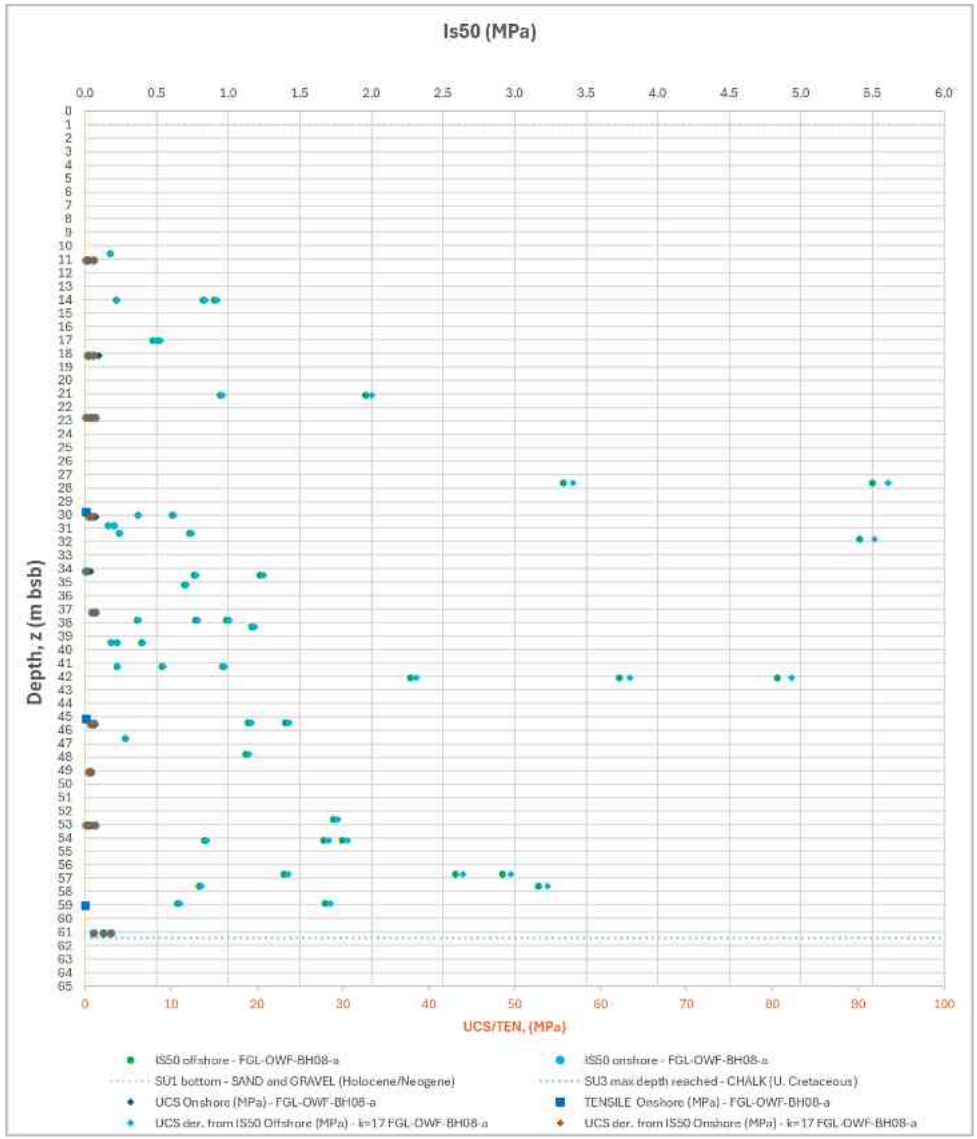

Graphic
GRAVEL
CHALK

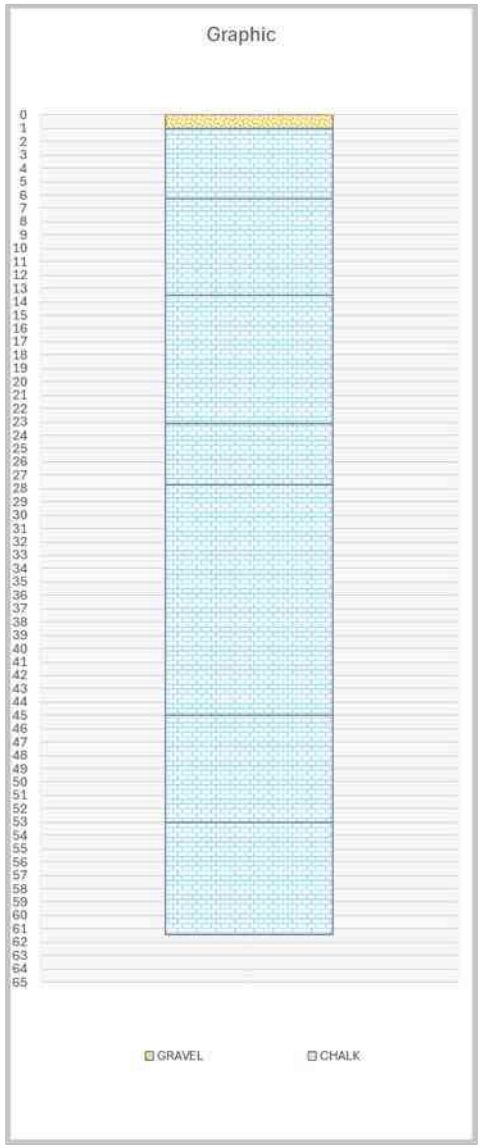

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH08
Normalised friction ratio (Fr) - FGL-OWF-BH08-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

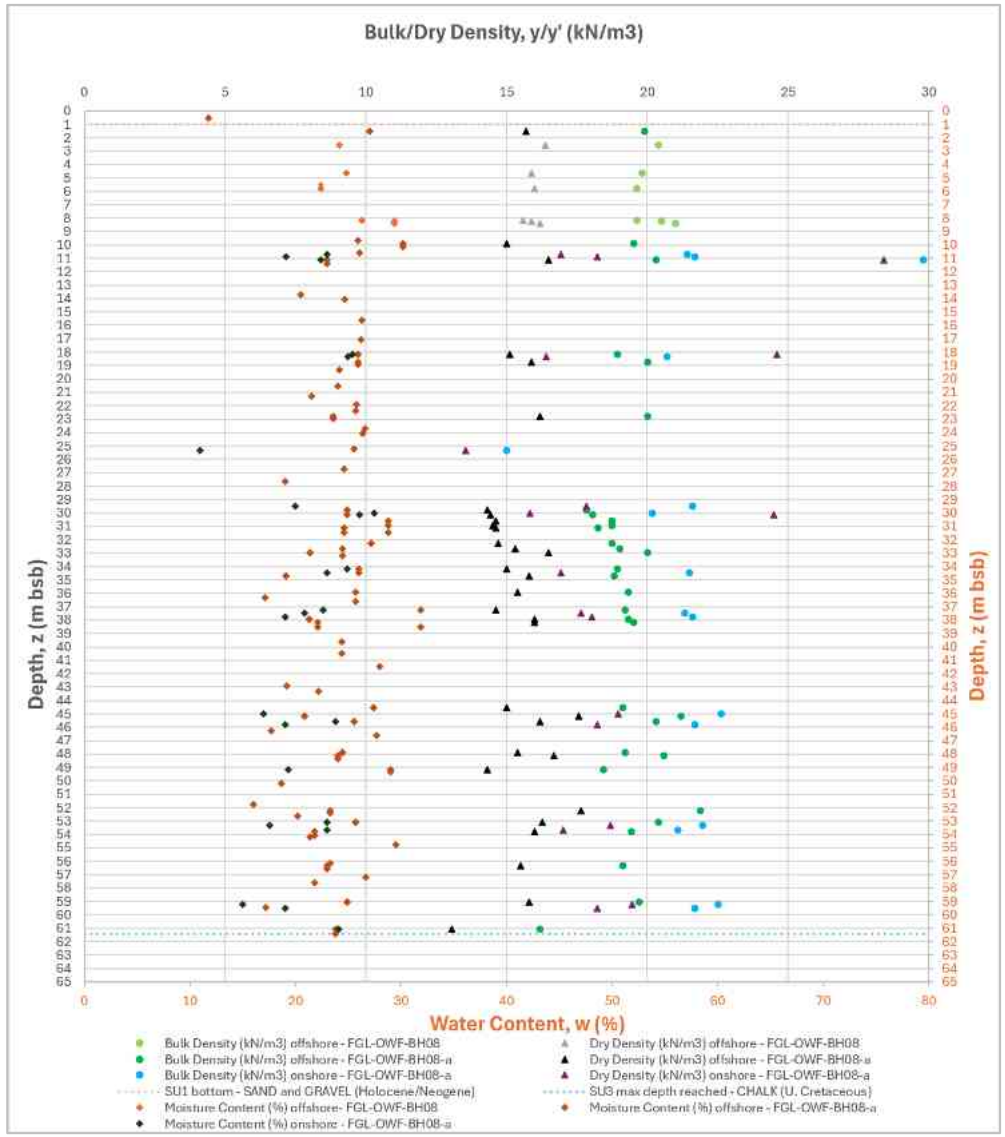

Graphic
GRAVEL
CHALK

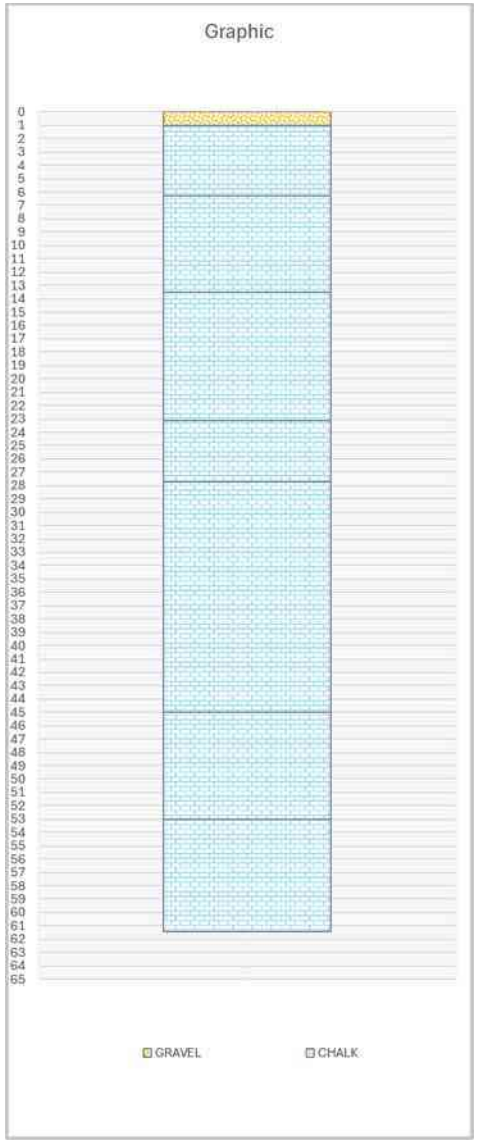

Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH08
PHI Onshore from SB (°) - FGL-OWF-BH08
Cohesion Onshore from SB (kPa) - FGL-OWF-BH08
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
GRAVEL
CHALK


Is50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
Is50 offshore - FGL-OWF-BH08-a
Is50 onshore - FGL-OWF-BH08-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
UCS Onshore (MPa) - FGL-OWF-BH08-a
TENSILE Onshore (MPa) - FGL-OWF-BH08-a
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH08-a
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH08-a

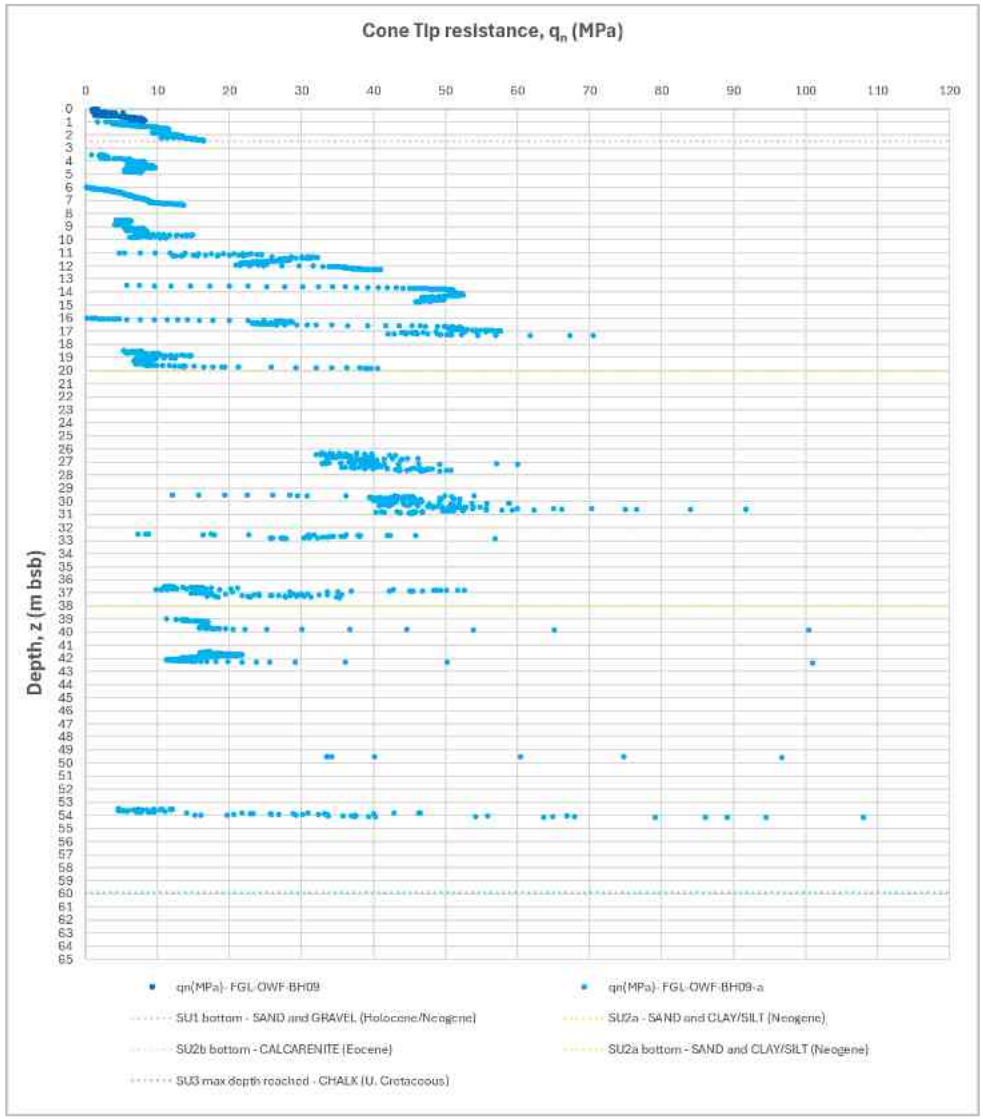

Graphic
GRAVEL
CHALK

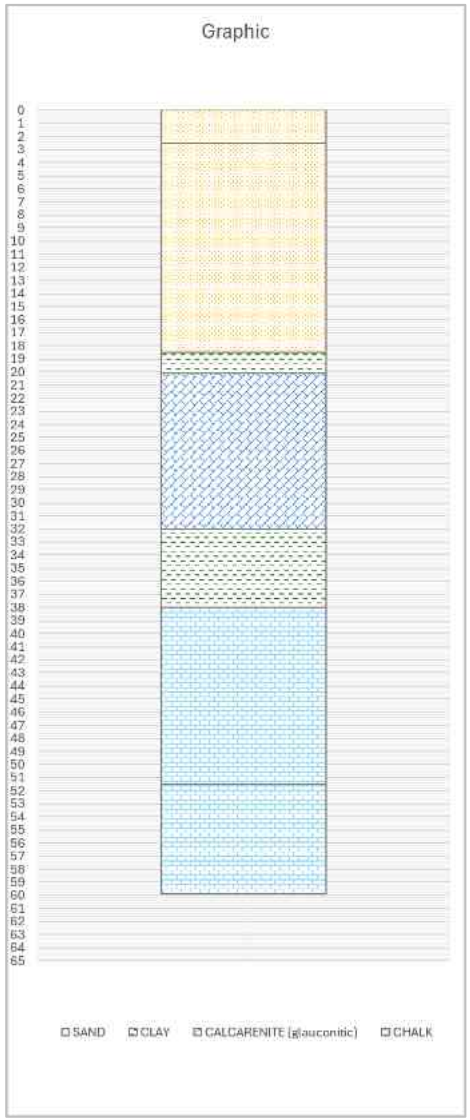

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH08
Bulk Density (kN/m3) offshore - FGL-OWF-BH08-a
Bulk Density (kN/m3) onshore - FGL-OWF-BH08-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
Moisture Content (%) offshore- FGL-OWF-BH08
Moisture Content (%) onshore - FGL-OWF-BH08-a
Dry Density (kN/m3) offshore - FGL-OWF-BH08
Dry Density (kN/m3) offshore - FGL-OWF-BH08-a
Dry Density (kN/m3) onshore - FGL-OWF-BH08-a
SU3 max depth reached - CHALK (U. Cretaceous)
Moisture Content (%) offshore - FGL-OWF-BH08-a

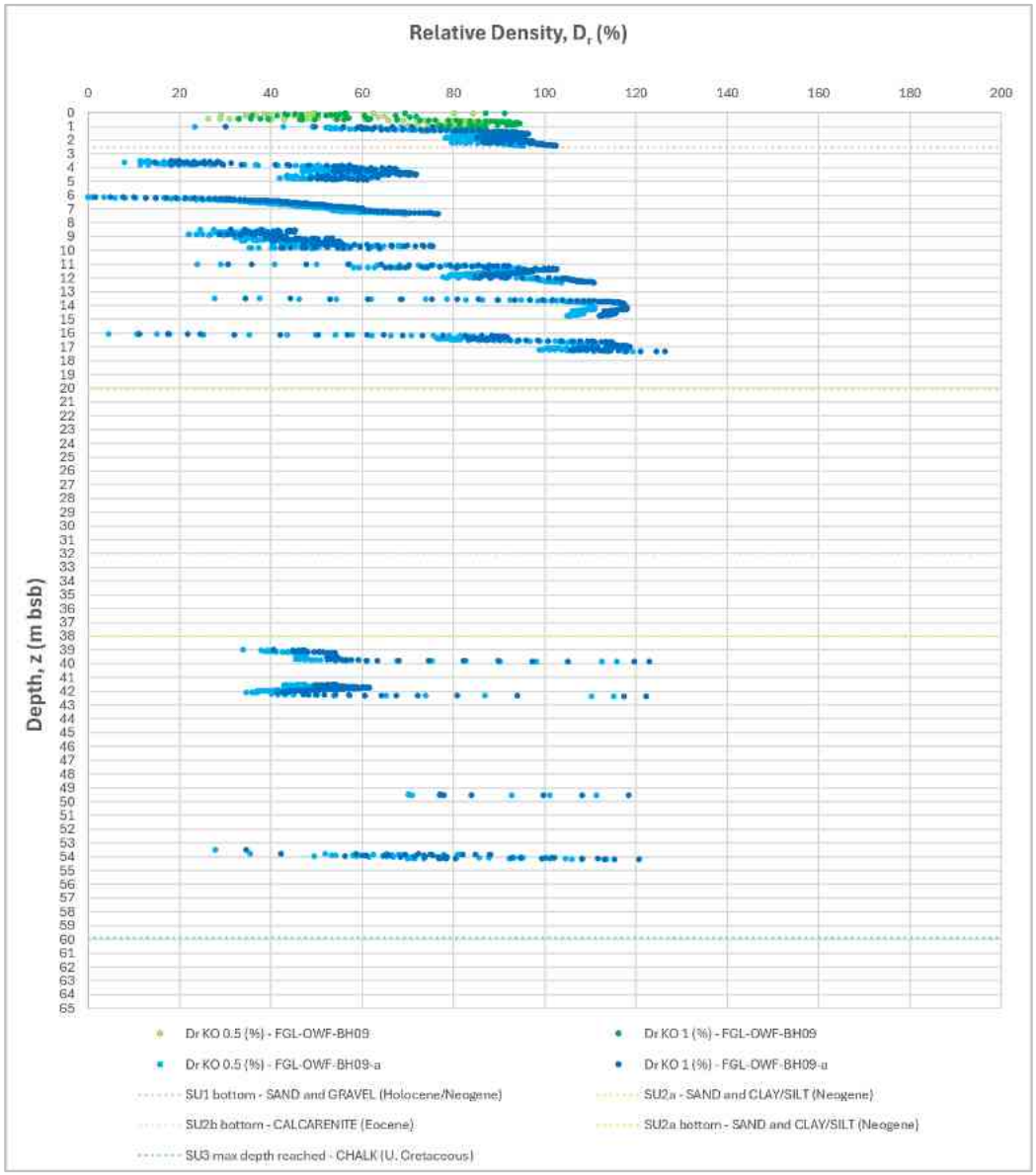

Graphic
GRAVEL
CHALK

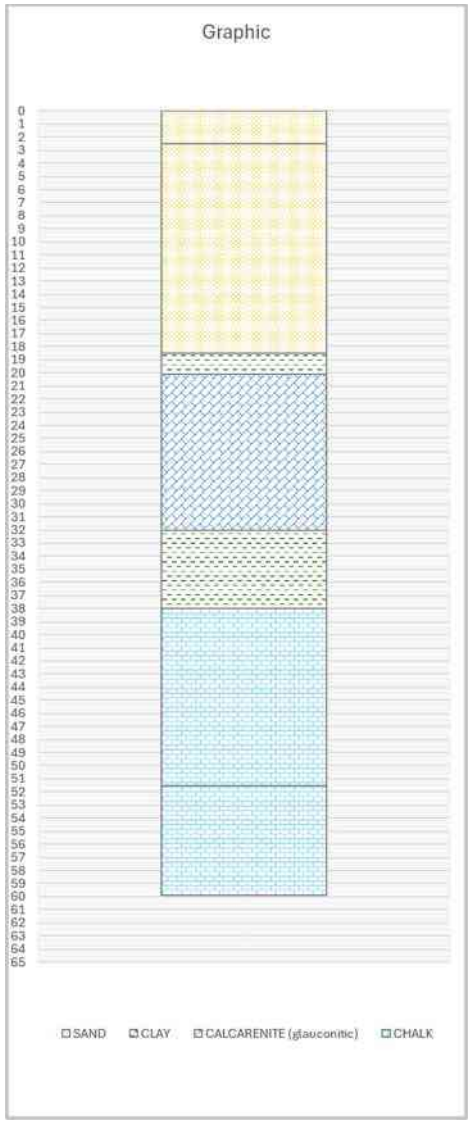
FGL-OWF-BH09

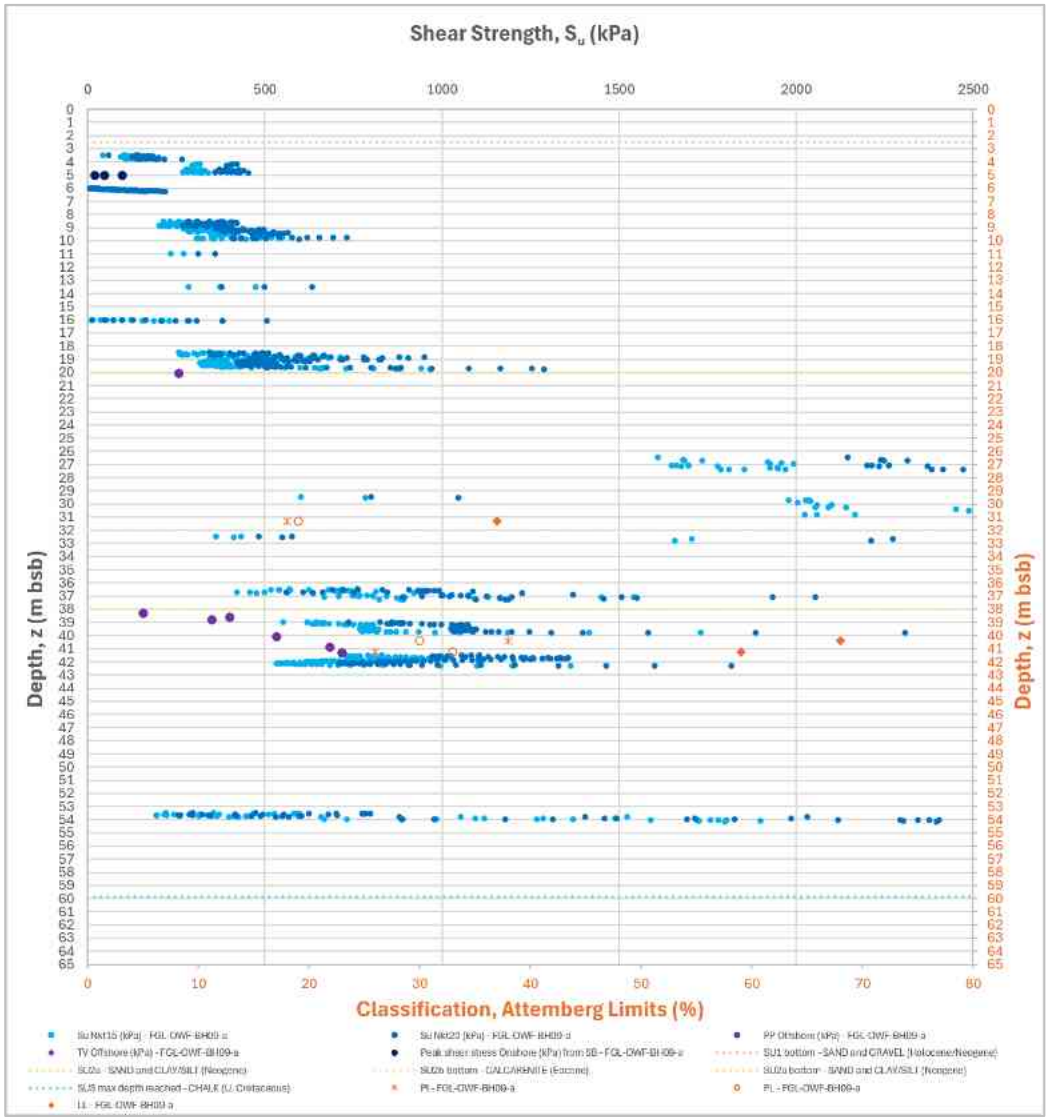
FGL-OWF-BH09-a

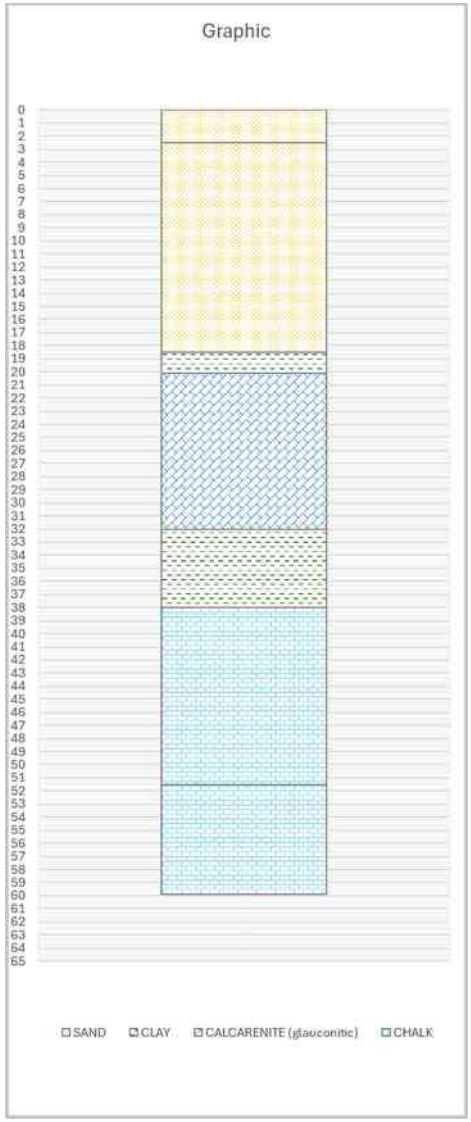

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH09
qn(MPa)- FGL-OWF-BH09-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a - SAND and CLAY/SILT (Neogene)
SU2b bottom - CALCARENITE (Eocene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

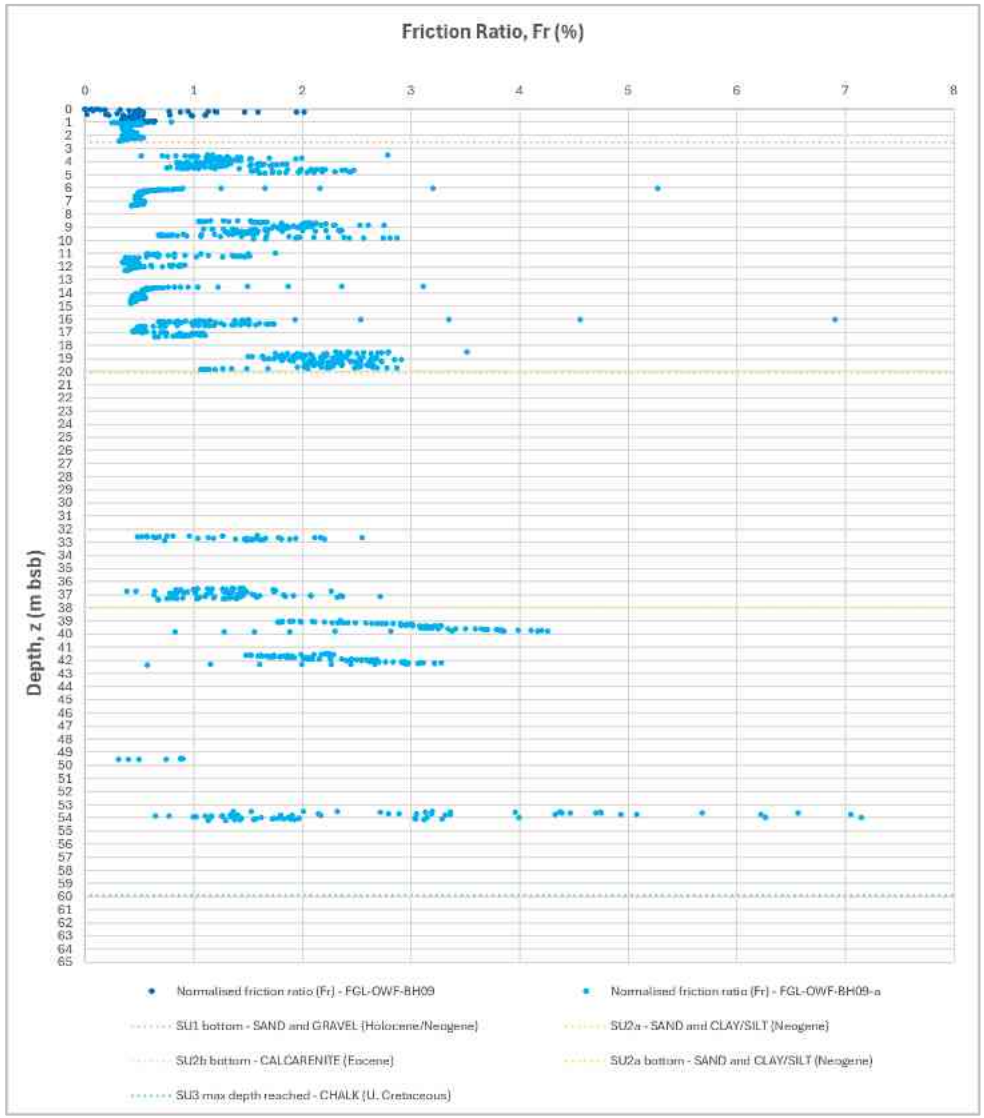

Graphic
SAND
CLAY
CALCARENITE (glauconitic)
CHALK

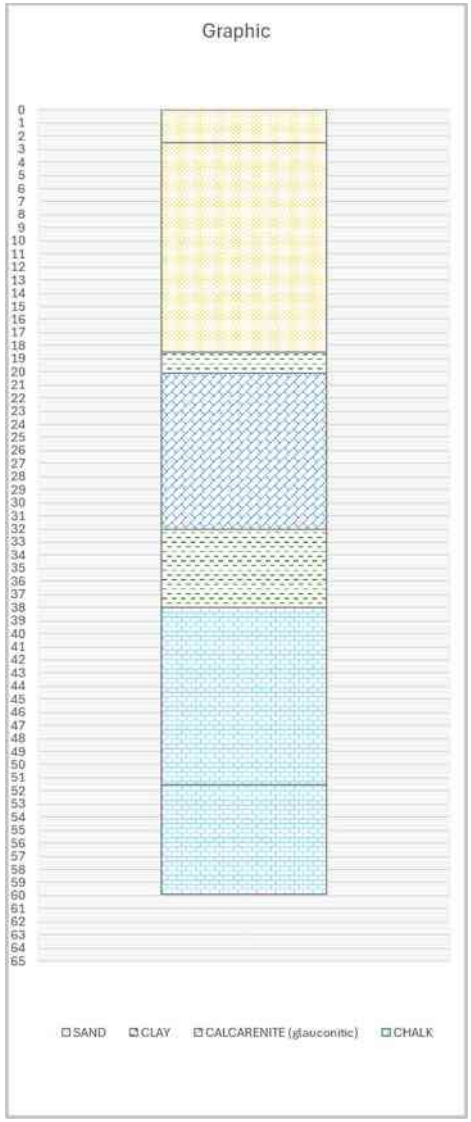

Relative Density, D_r (%)
0
20
40
60
80
100
120
140
160
180
200
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH09
Dr KO 1 (%) - FGL-OWF-BH09
Dr KO 0.5 (%) - FGL-OWF-BH09-a
Dr KO 1 (%) - FGL-OWF-BH09-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a - SAND and CLAY/SILT (Neogene)
SU2b bottom - CALCARENITE (Eocene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

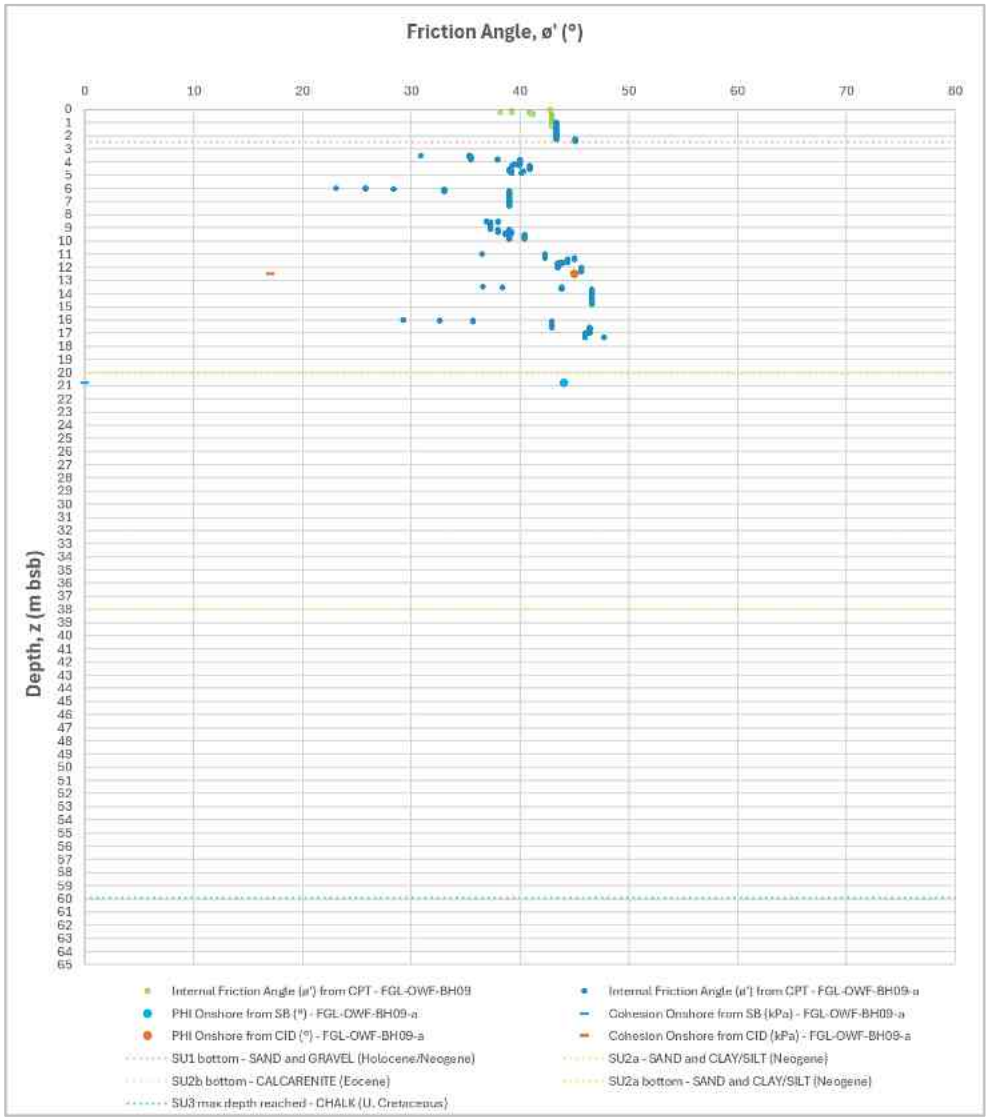

Graphic
SAND
CLAY
CALCARENITE (glauconitic)
CHALK

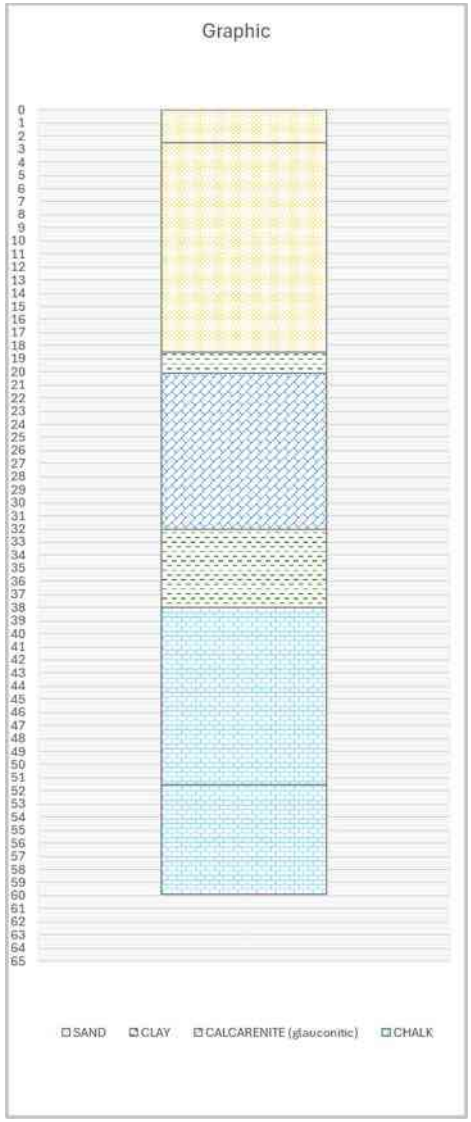

Shear Strength, S_u (kPa)
0
500
1000
1500
2000
2500
Depth, z (m bsb)
Classification, Attemberg Limits (%)
0
10
20
30
40
50
60
70
80

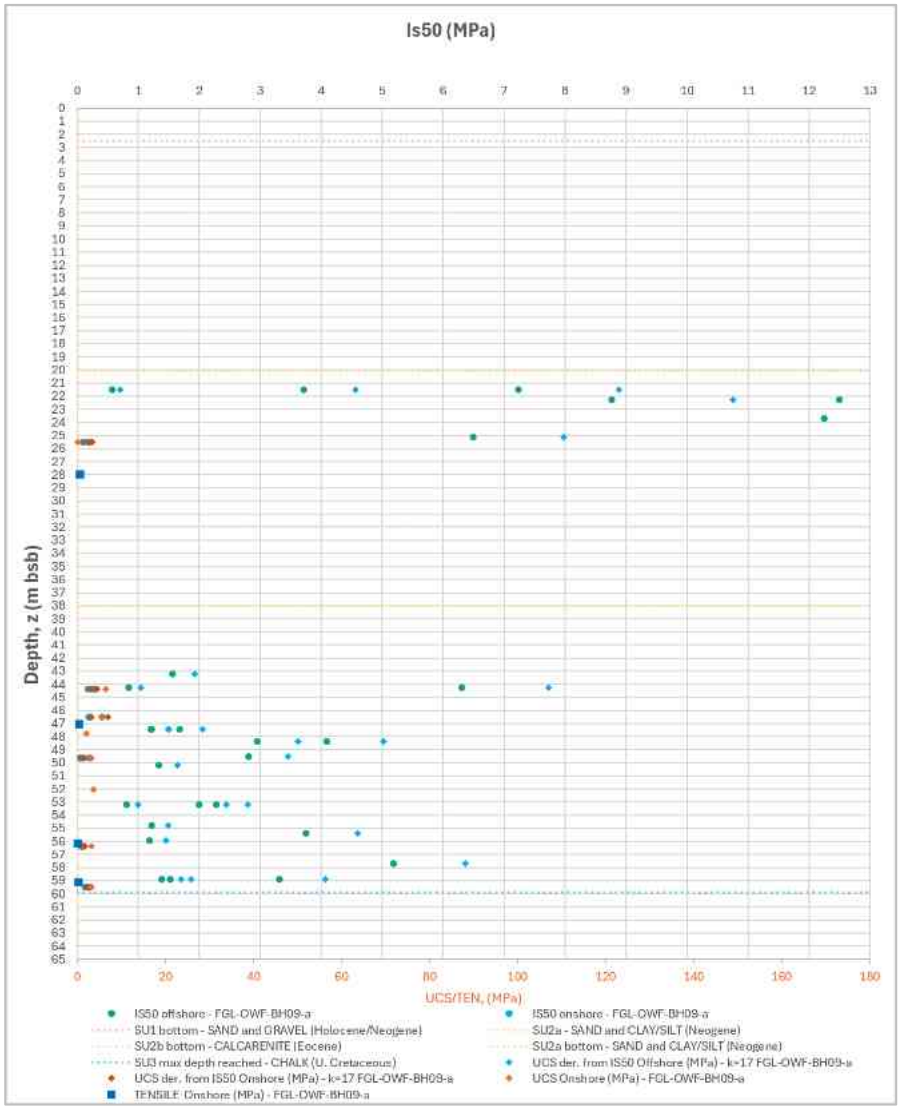

Graphic
SAND
CLAY
CALCARENITE (glauconitic)
CHALK

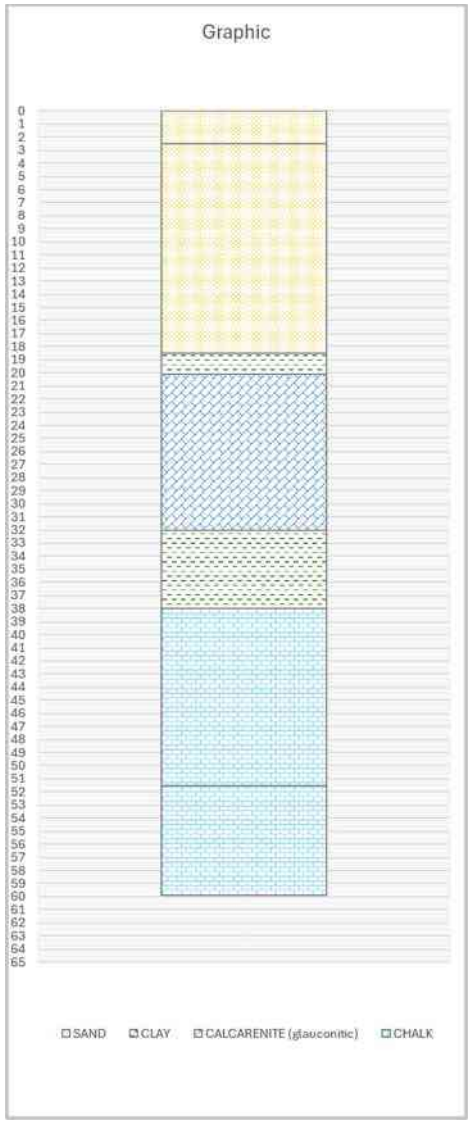

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH09
Normalised friction ratio (Fr) - FGL-OWF-BH09-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a - SAND and CLAY/SILT (Neogene)
SU2b bottom - CALCARENITE (Eocene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

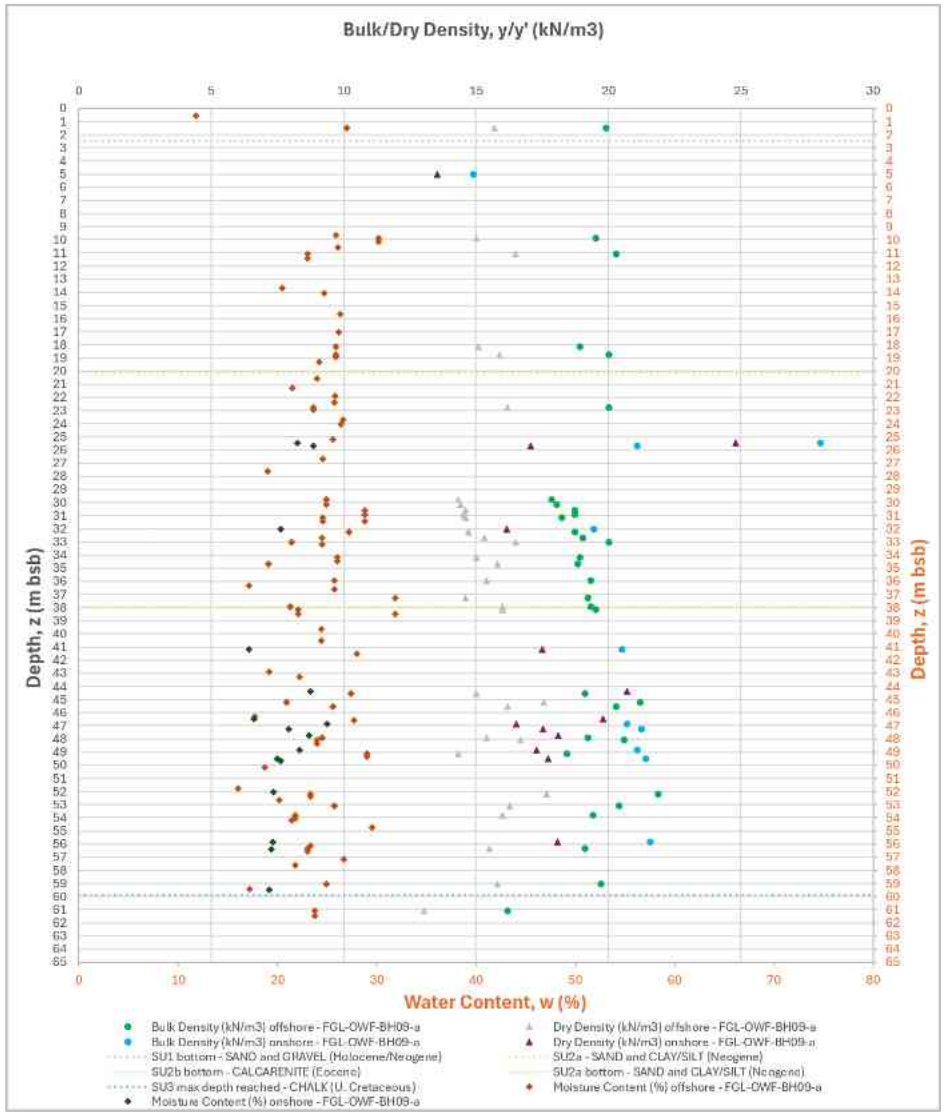

Graphic
SAND
CLAY
CALCARENITE (glauconitic)
CHALK

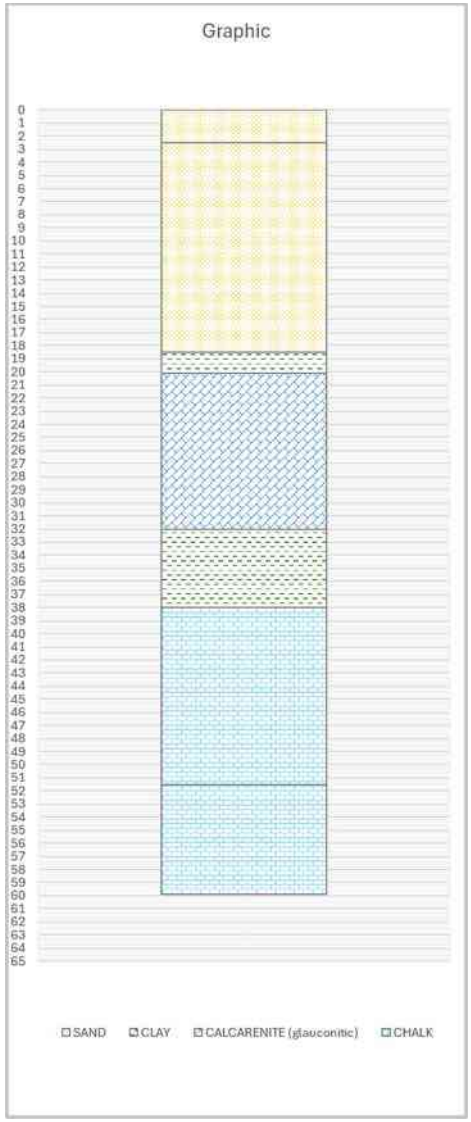

Friction Angle, ø' (°)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH09
Internal Friction Angle (ø') from CPT - FGL-OWF-BH09-a
PHI Onshore from SB (°) - FGL-OWF-BH09-a
Cohesion Onshore from SB (kPa) - FGL-OWF-BH09-a
PHI Onshore from CID (°) - FGL-OWF-BH09-a
Cohesion Onshore from CID (kPa) - FGL-OWF-BH09-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a - SAND and CLAY/SILT (Neogene)
SU2b bottom - CALCARENITE (Eocene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
SAND
CLAY
CALCARENITE (glauconitic)
CHALK

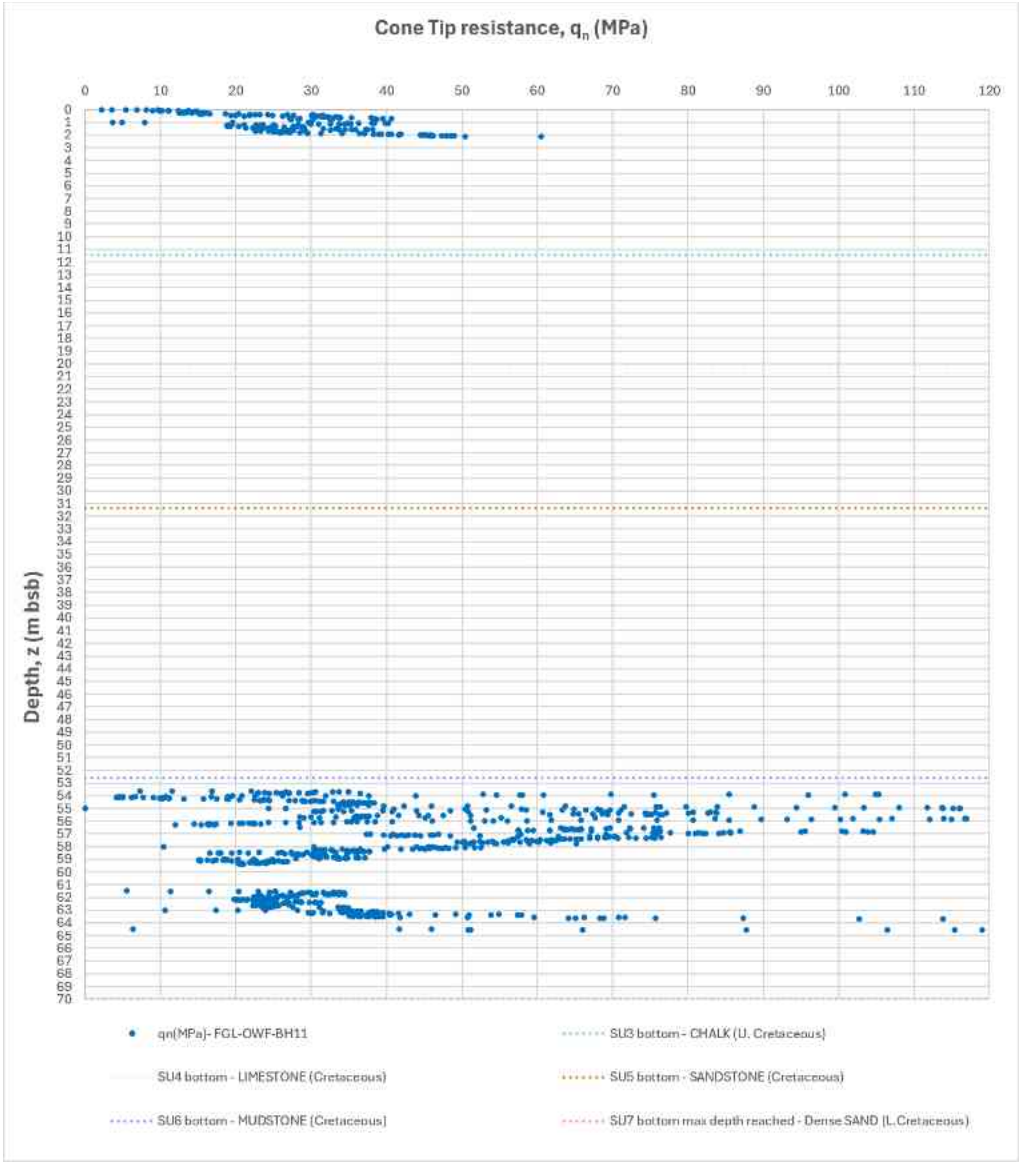

Is50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 offshore - FGL-OWF-BH09-a
IS50 onshore - FGL-OWF-BH09-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2a - SAND and CLAY/SILT (Neogene)
SU2b bottom - CALCARENITE (Eocene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH09-a
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH09-a
UCS Onshore (MPa) - FGL-OWF-BH09-a
TENSILE Onshore (MPa) - FGL-OWF-BH09-a

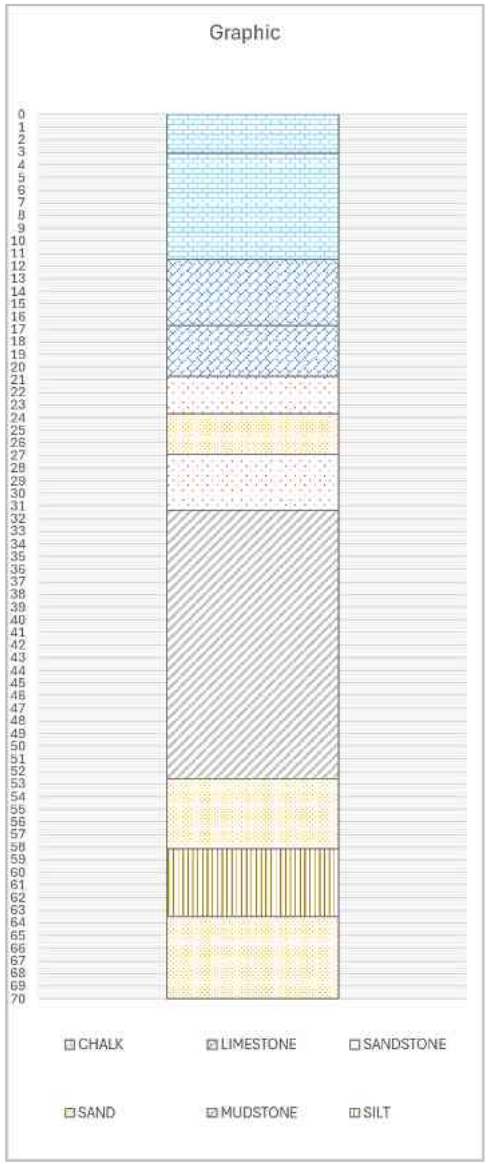

Graphic
SAND
CLAY
CALCARENITE (glauconitic)
CHALK

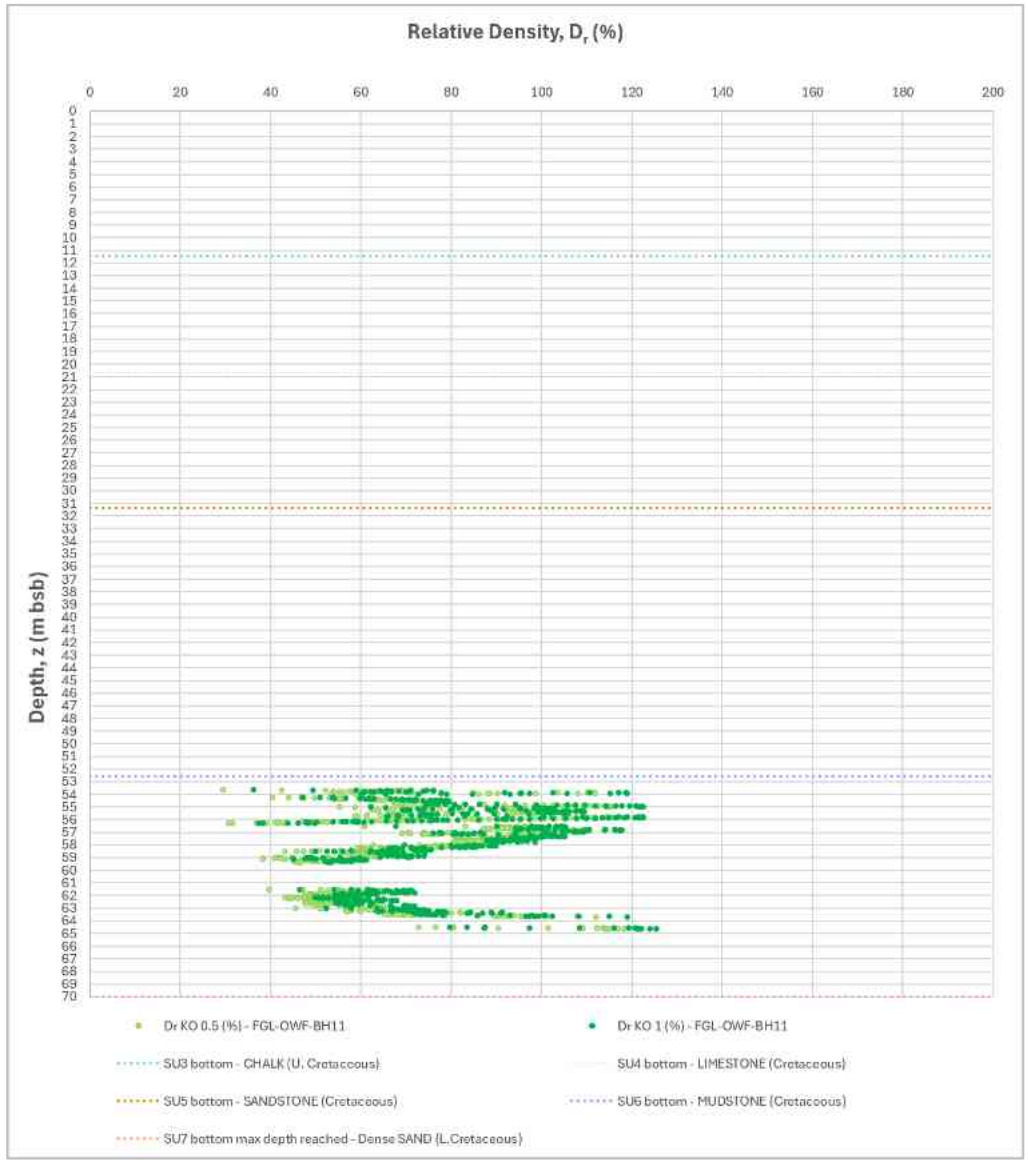

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH09-a
Bulk Density (kN/m3) onshore - FGL-OWF-BH09-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU2b bottom - CALCARENITE (Eocene)
SU3 max depth reached - CHALK (U. Cretaceous)
Moisture Content (%) onshore - FGL-OWF-BH09-a
Dry Density (kN/m3) offshore - FGL-OWF-BH09-a
Dry Density (kN/m3) onshore - FGL-OWF-BH09-a
SU2a - SAND and CLAY/SILT (Neogene)
SU2a bottom - SAND and CLAY/SILT (Neogene)
Moisture Content (%) offshore - FGL-OWF-BH09-a

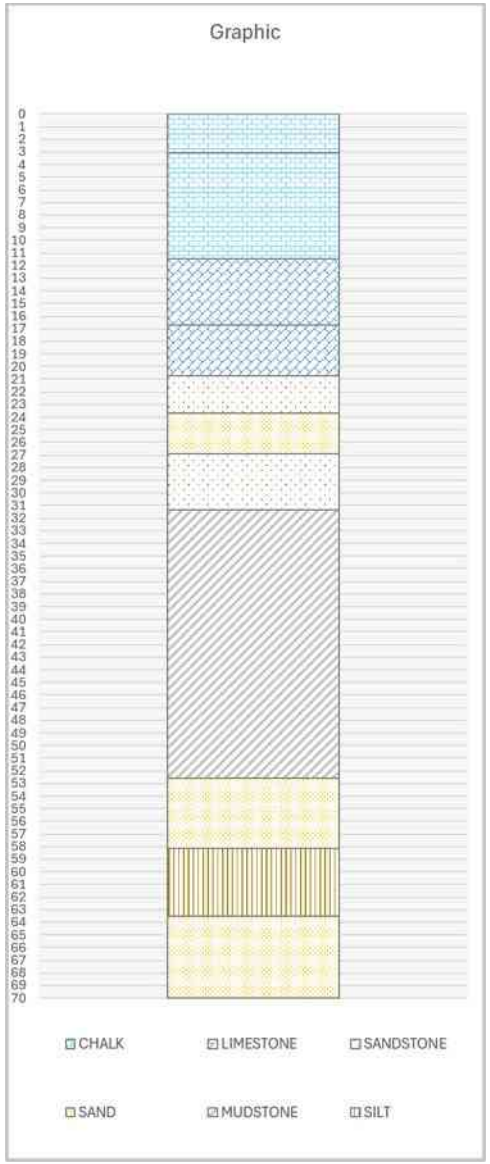

Graphic
SAND
CLAY
CALCARENITE (glauconitic)
CHALK

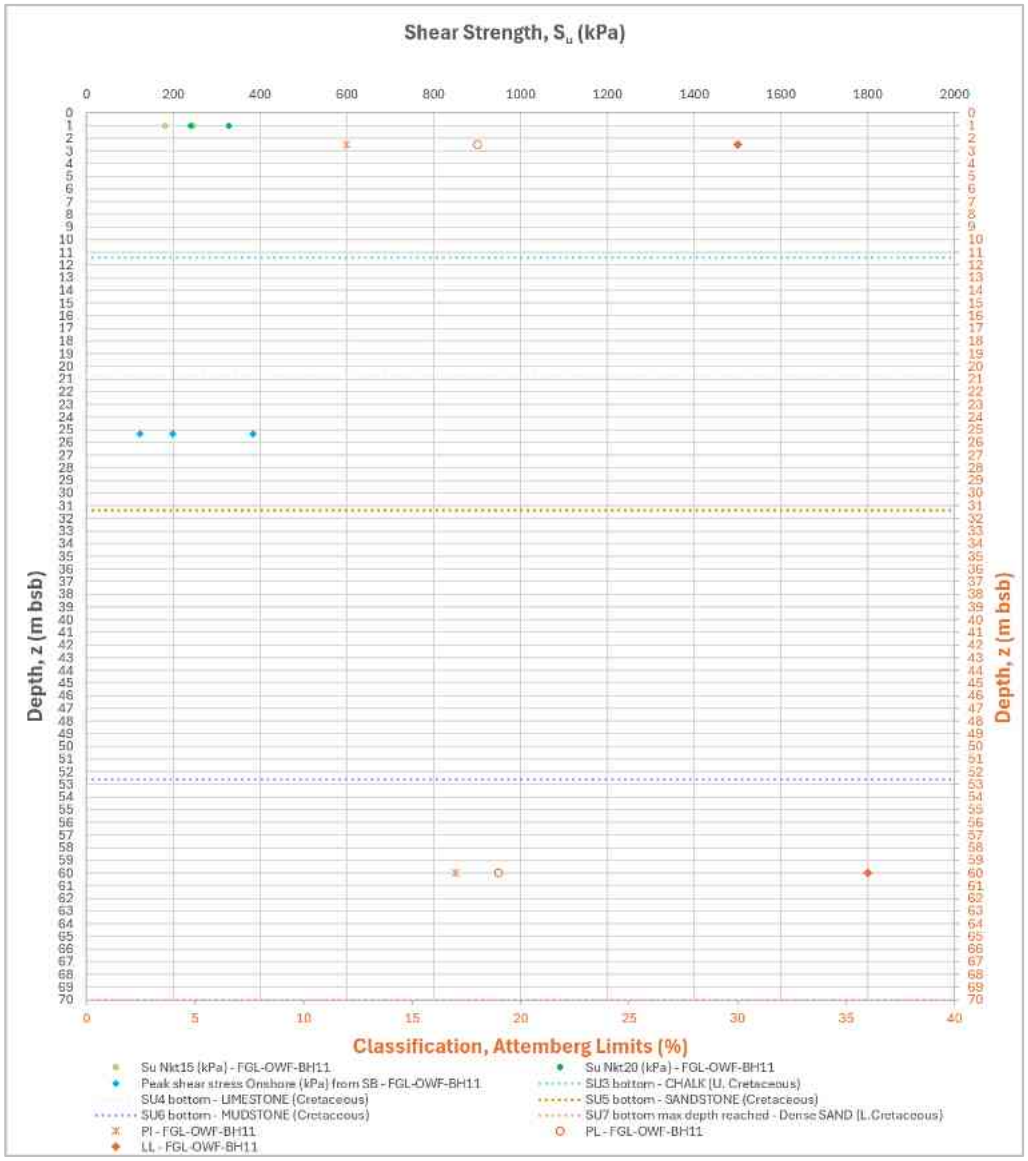
FGL-OWF-BH11

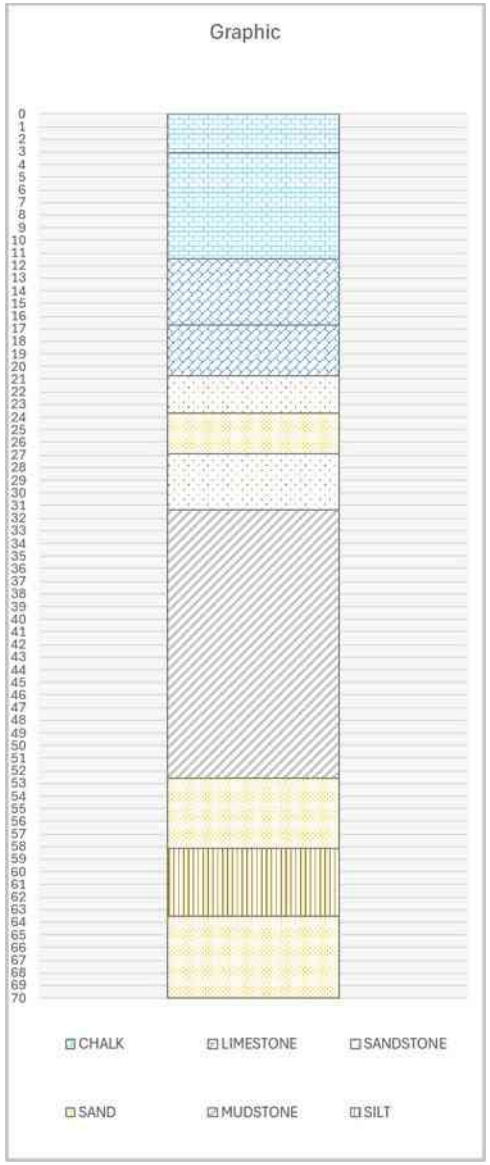

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH11
SU3 bottom - CHALK (U. Cretaceous)
SU4 bottom - LIMESTONE (Cretaceous)
SU5 bottom - SANDSTONE (Cretaceous)
SU6 bottom - MUDSTONE (Cretaceous)
SU7 bottom max depth reached - Dense SAND (L.Cretaceous)

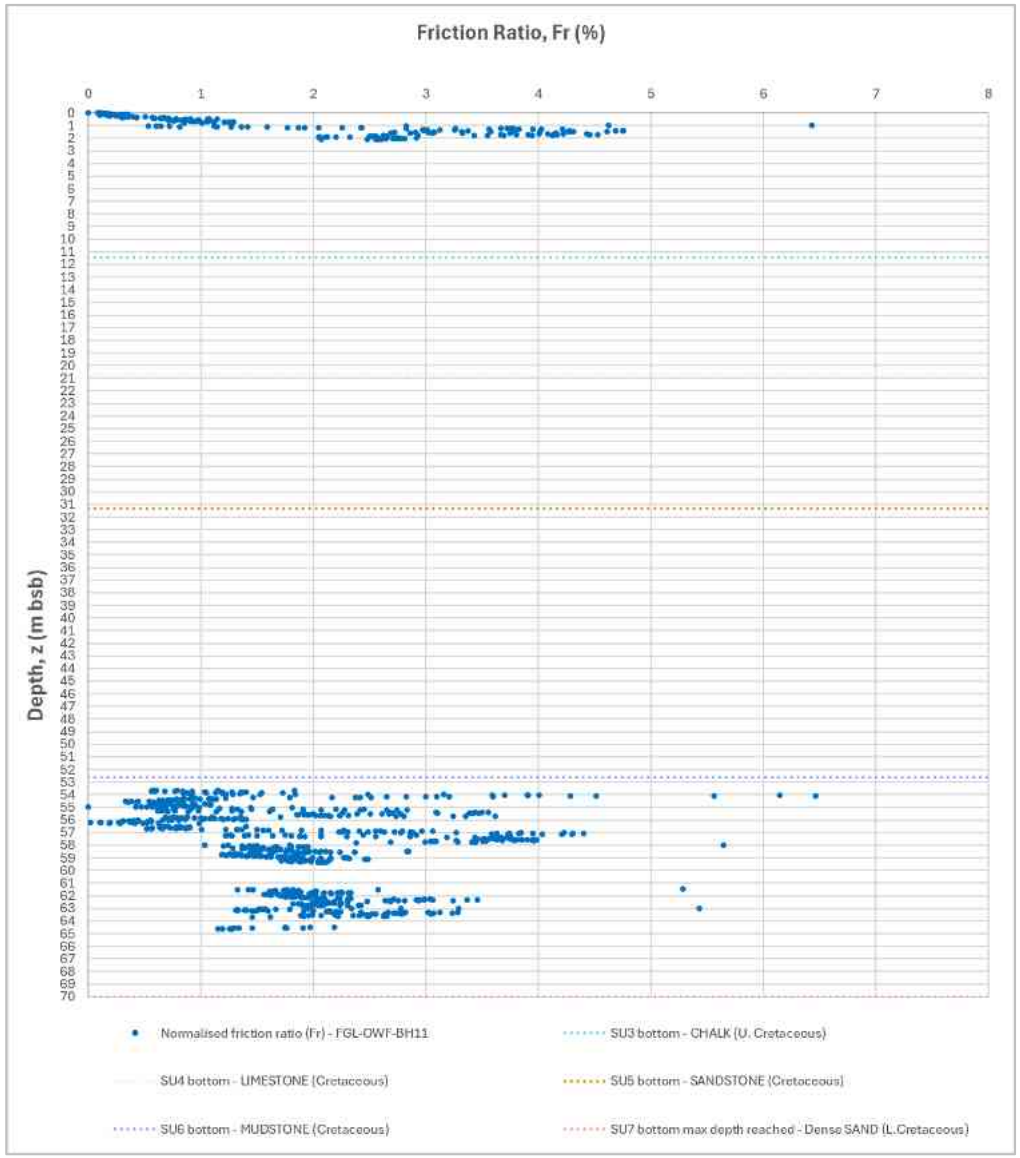

Graphic
CHALK
LIMESTONE
SANDSTONE
SAND
MUDSTONE
SILT

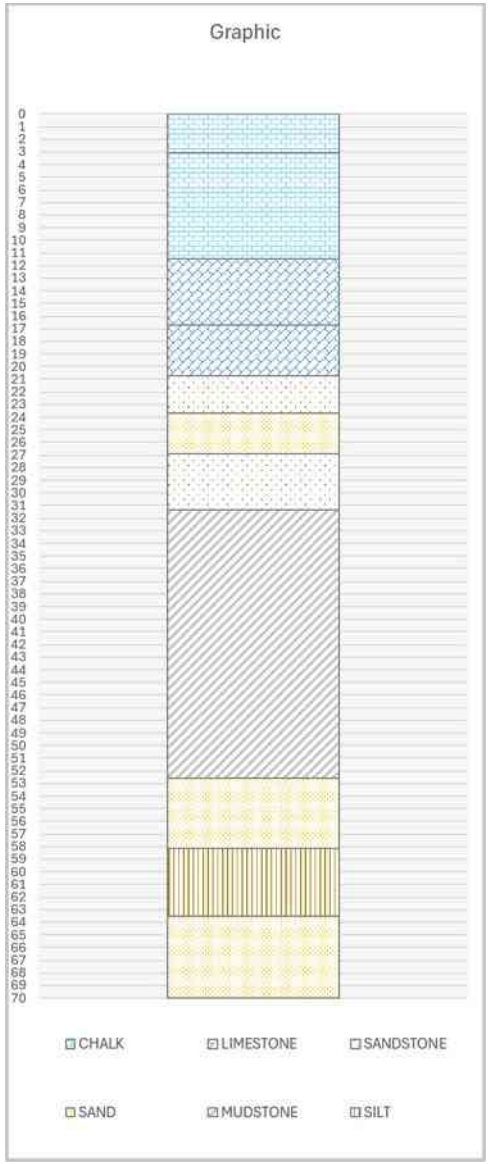

Relative Density, D, (%)
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH11
Dr KO 1 (%) - FGL-OWF-BH11
SU3 bottom - CHALK (U. Cretaceous)
SU4 bottom - LIMESTONE (Cretaceous)
SU5 bottom - SANDSTONE (Cretaceous)
SU6 bottom - MUDSTONE (Cretaceous)
SU7 bottom max depth reached - Dense SAND (L.Cretaceous)

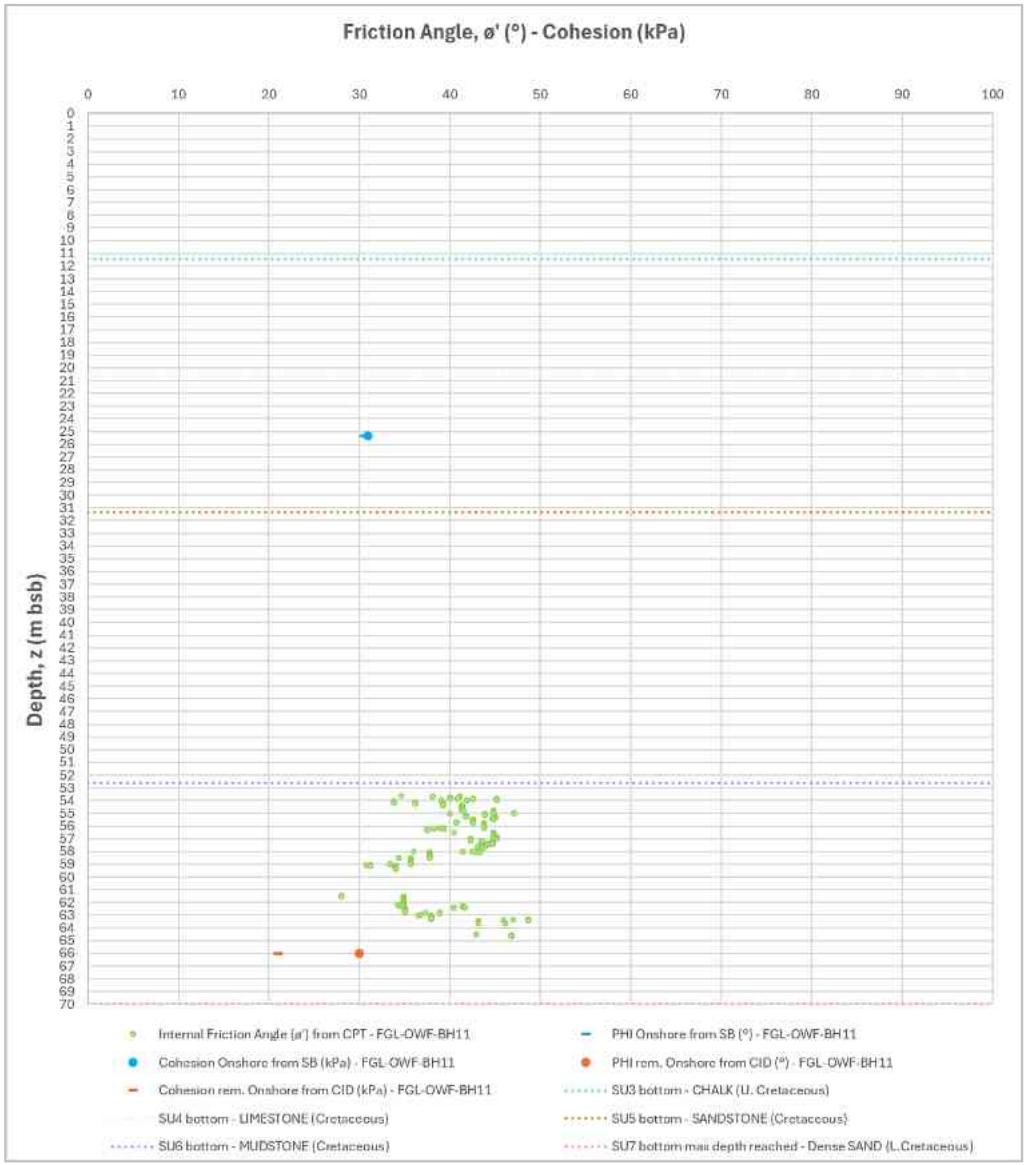

Graphic
CHALK
LIMESTONE
SANDSTONE
SAND
MUDSTONE
SILT

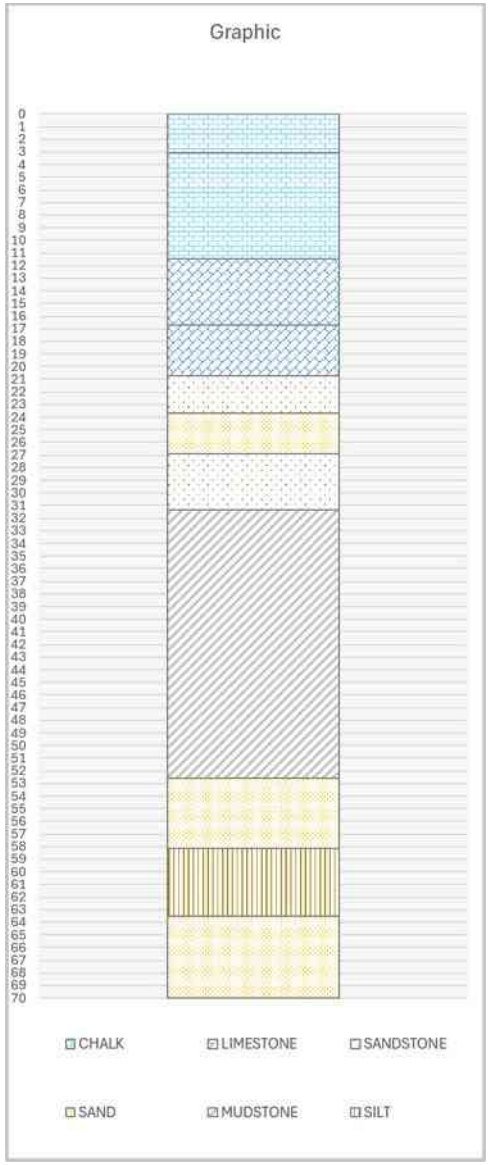

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH11
Su Nkt20 (kPa) - FGL-OWF-BH11
Peak shear stress Onshore (kPa) from SB - FGL-OWF-BH11
SU3 bottom - CHALK (U. Cretaceous)
SU4 bottom - LIMESTONE (Cretaceous)
SU5 bottom - SANDSTONE (Cretaceous)
SU6 bottom - MUDSTONE (Cretaceous)
SU7 bottom max depth reached - Dense SAND (L.Cretaceous)
PI - FGL-OWF-BH11
PL - FGL-OWF-BH11
LL - FGL-OWF-BH11

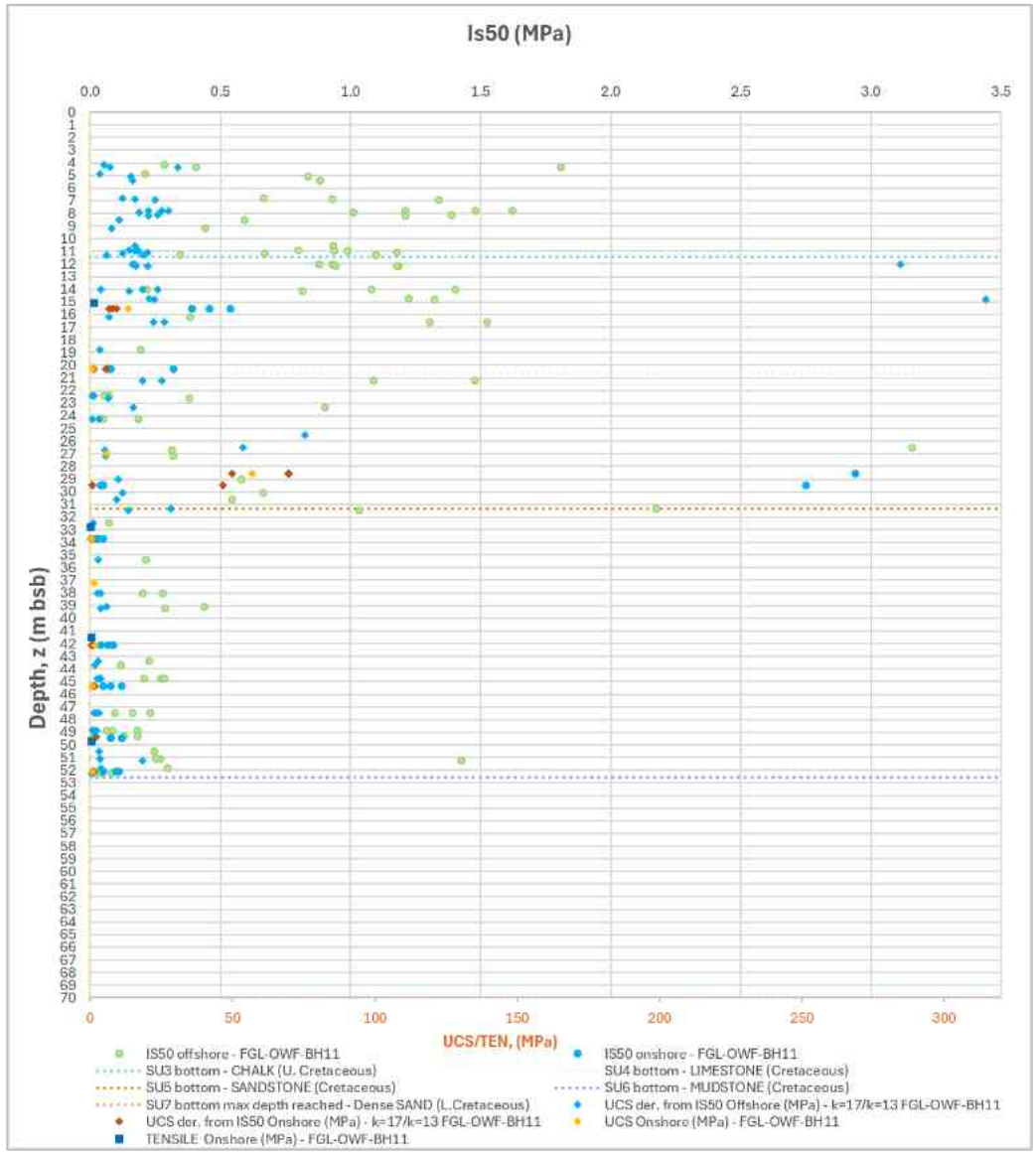

Graphic
CHALK
LIMESTONE
SANDSTONE
SAND
MUDSTONE
SILT

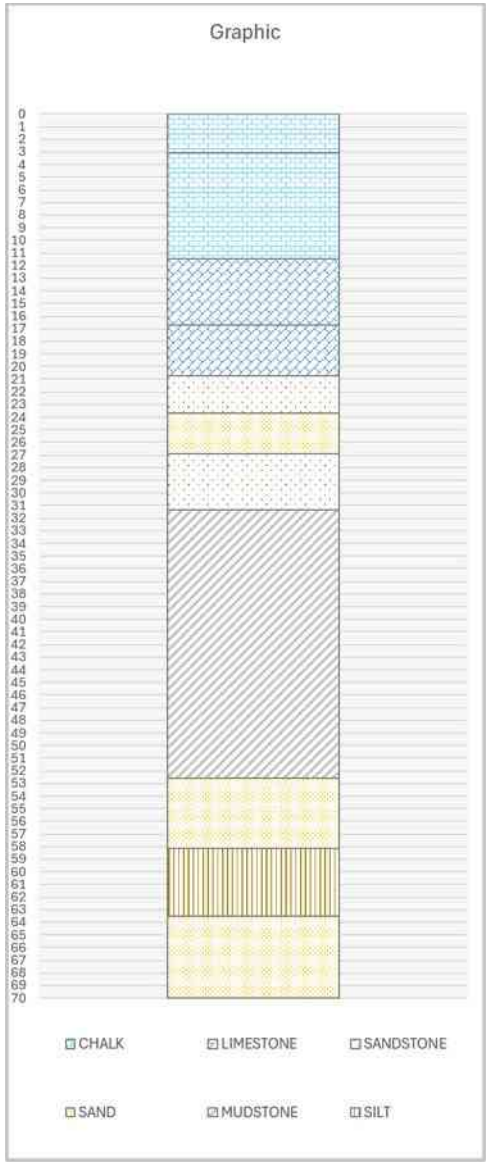

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH11
SU3 bottom - CHALK (U. Cretaceous)
SU4 bottom - LIMESTONE (Cretaceous)
SU5 bottom - SANDSTONE (Cretaceous)
SU6 bottom - MUDSTONE (Cretaceous)
SU7 bottom max depth reached - Dense SAND (L.Cretaceous)

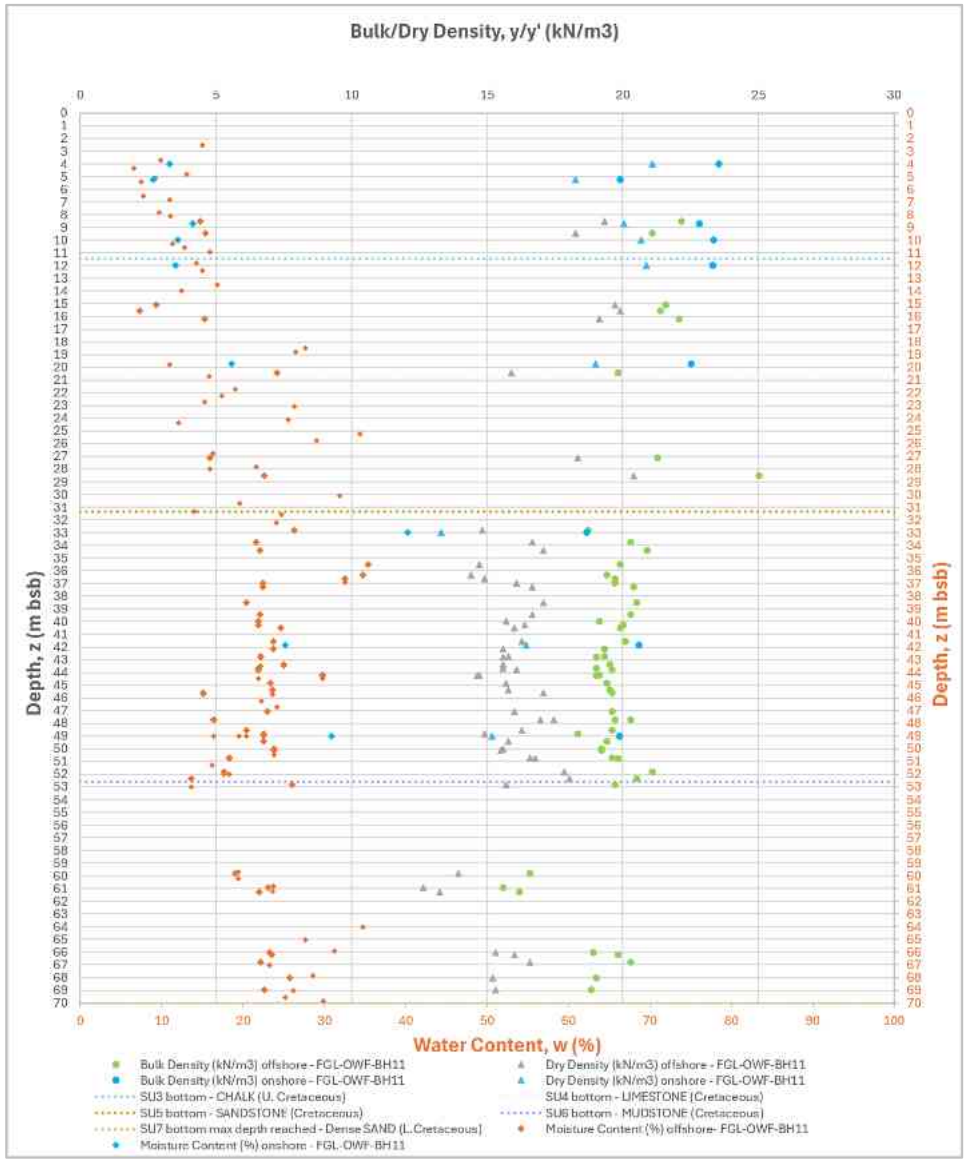

Graphic
CHALK
LIMESTONE
SANDSTONE
SAND
MUDSTONE
SILT

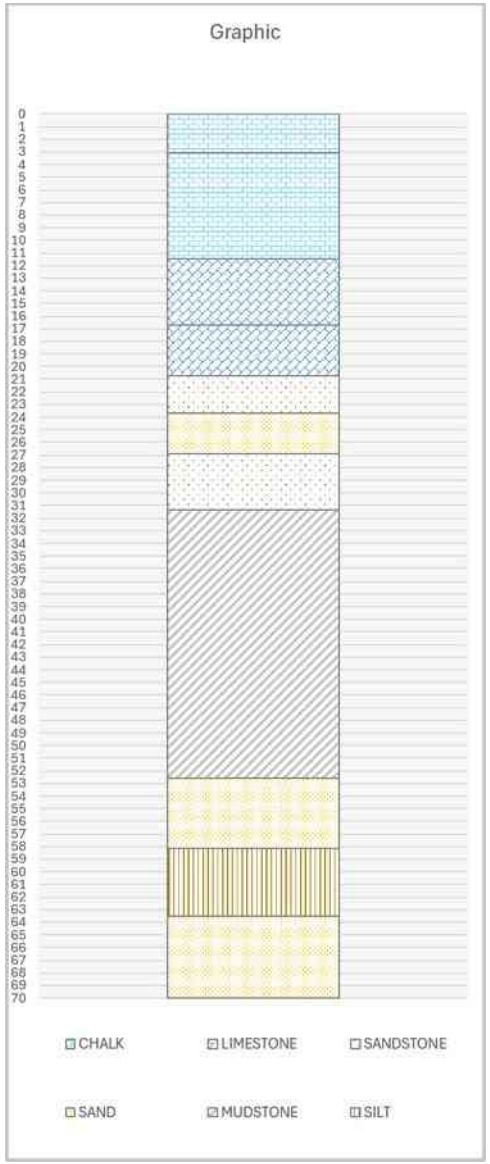

Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
Internal Friction Angle (a') from CPT - FGL-OWF-BH11
Cohesion Onshore from SB (kPa) - FGL-OWF-BH11
Cohesion rem. Onshore from CID (kPa) - FGL-OWF-BH11
SU4 bottom - LIMESTONE (Cretaceous)
SU6 bottom - MUDSTONE (Cretaceous)
PHI Onshore from SB (°) - FGL-OWF-BH11
PHI rem. Onshore from CID (°) - FGL-OWF-BH11
SU3 bottom - CHALK (U. Cretaceous)
SU5 bottom - SANDSTONE (Cretaceous)
SU7 bottom max depth reached - Dense SAND (L.Cretaceous)


Graphic
CHALK
LIMESTONE
SANDSTONE
SAND
MUDSTONE
SILT

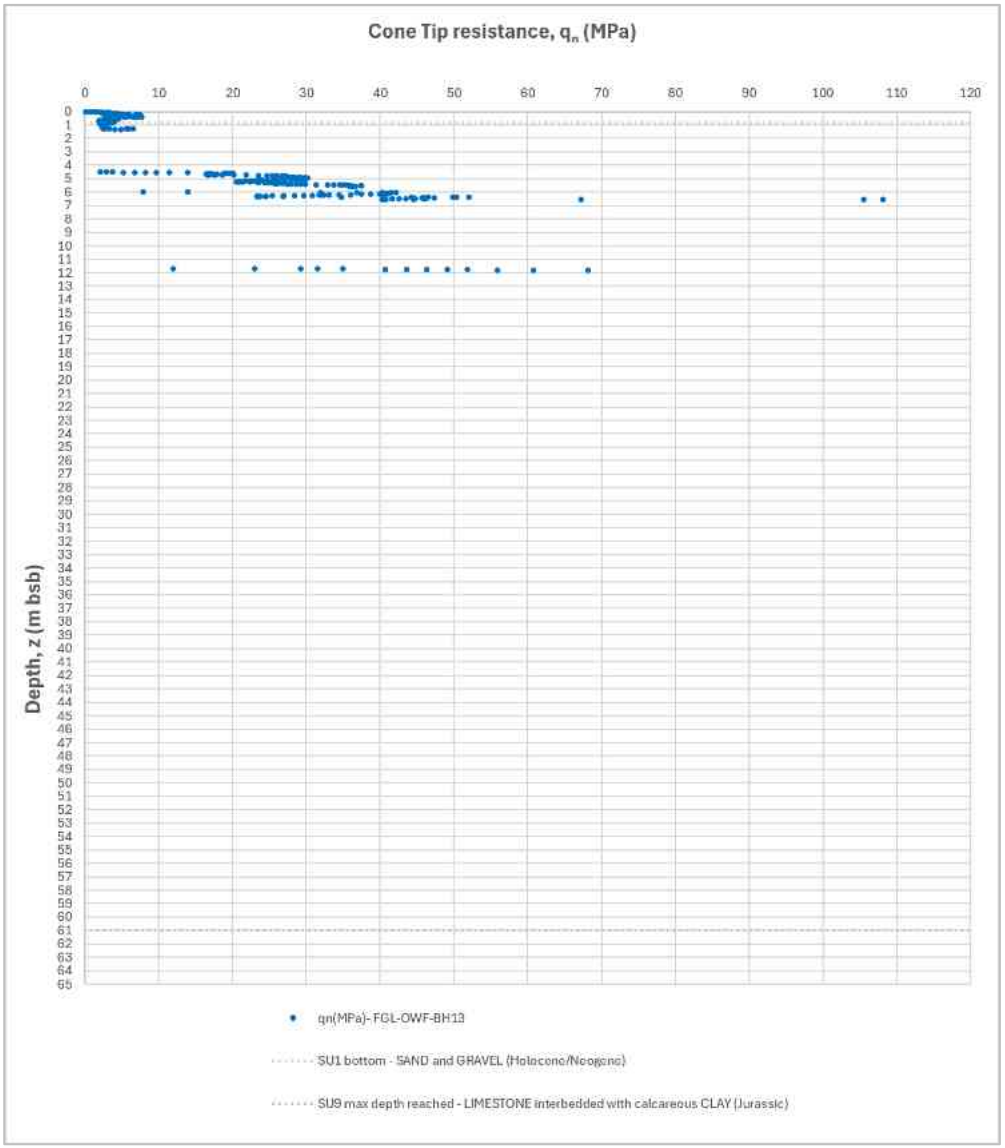

Is50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 offshore - FGL-OWF-BH11
IS50 onshore - FGL-OWF-BH11
SU3 bottom - CHALK (U. Cretaceous)
SU4 bottom - LIMESTONE (Cretaceous)
SU5 bottom - SANDSTONE (Cretaceous)
SU6 bottom - MUDSTONE (Cretaceous)
SU7 bottom max depth reached - Dense SAND (L.Cretaceous)
UCS der. from IS50 Offshore (MPa) - k=17/k=13 FGL-OWF-BH11
UCS der. from IS50 Onshore (MPa) - k=17/k=13 FGL-OWF-BH11
UCS Onshore (MPa) - FGL-OWF-BH11
TENSILE Onshore (MPa) - FGL-OWF-BH11

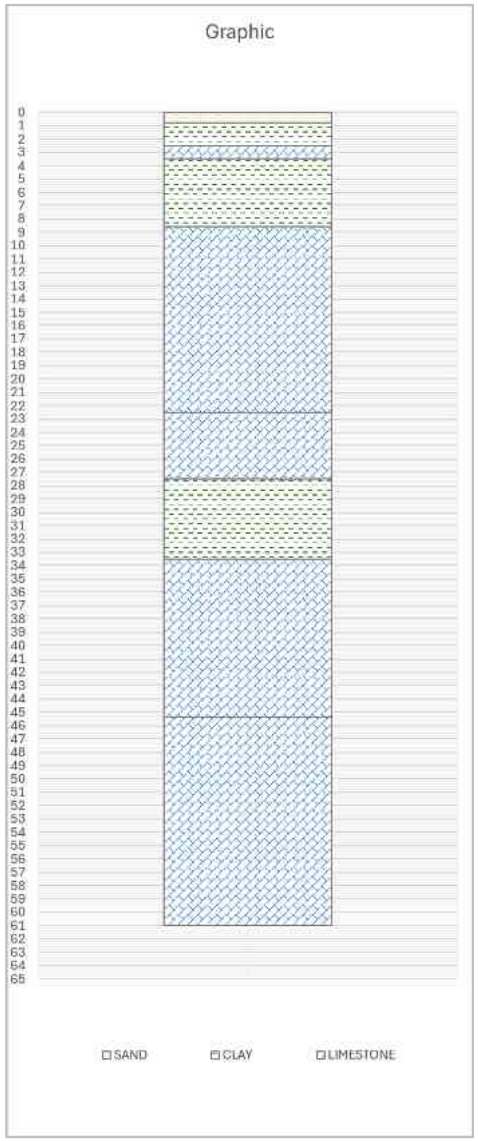

Graphic
CHALK
LIMESTONE
SANDSTONE
SAND
MUDSTONE
SILT

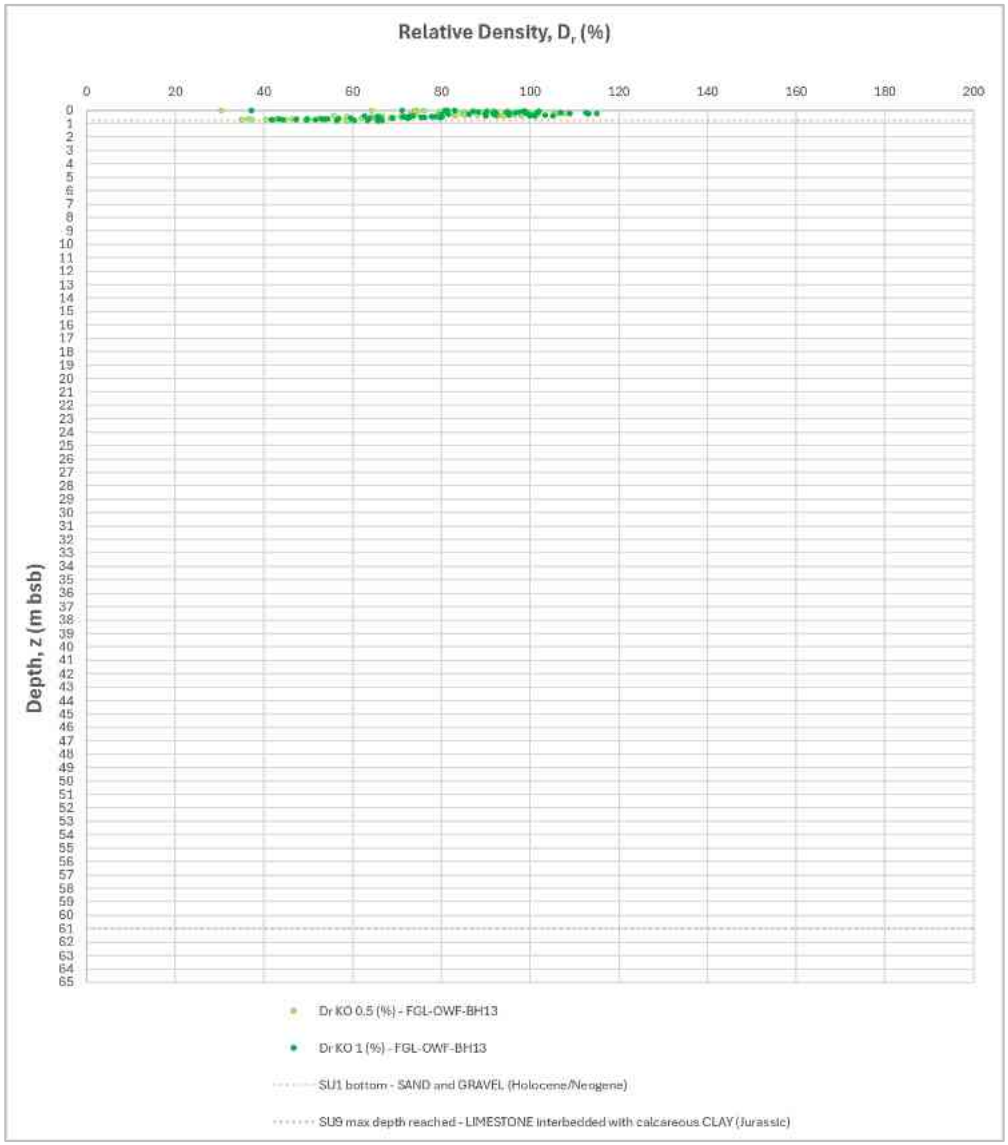

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH11
Bulk Density (kN/m3) onshore - FGL-OWF-BH11
Dry Density (kN/m3) offshore - FGL-OWF-BH11
Dry Density (kN/m3) onshore - FGL-OWF-BH11
SU3 bottom - CHALK (U. Cretaceous)
SU4 bottom - LIMESTONE (Cretaceous)
SU5 bottom - SANDSTONE (Cretaceous)
SU6 bottom - MUDSTONE (Cretaceous)
SU7 bottom max depth reached - Denise SAND (L.Cretaceous)
Moisture Content (%) offshore - FGL-OWF-BH11
Moisture Content (%) onshore - FGL-OWF-BH11

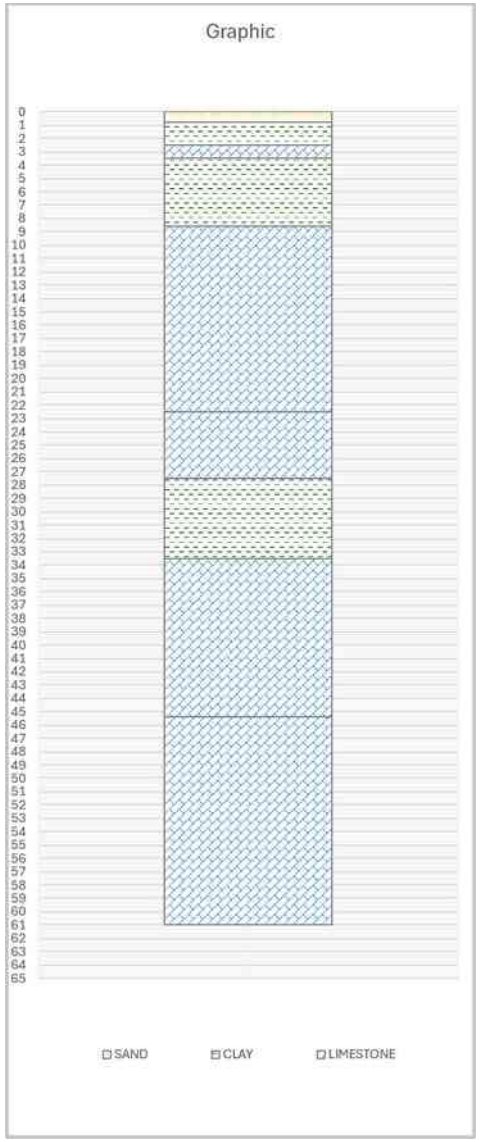

Graphic
CHALK
LIMESTONE
SANDSTONE
SAND
MUDSTONE
SILT

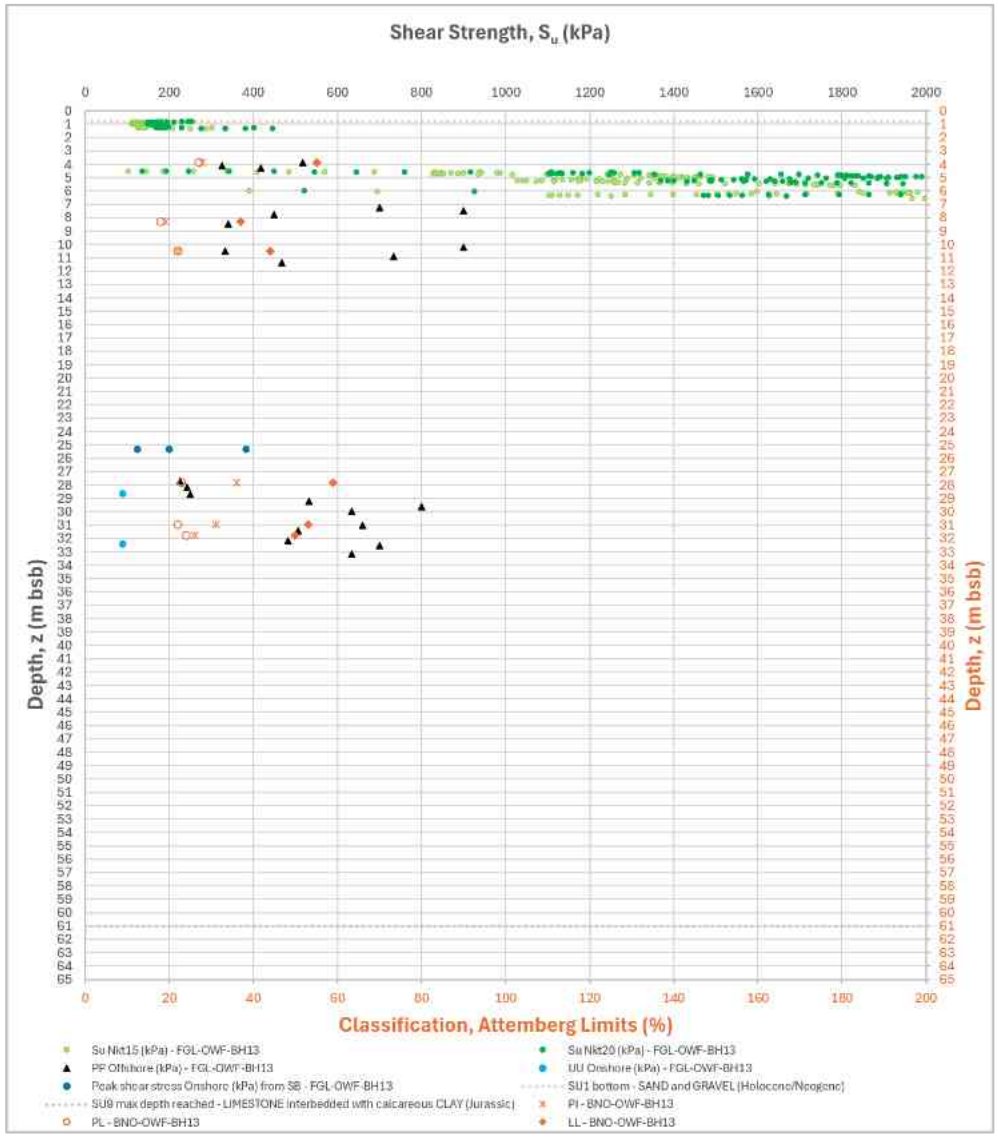
FGL-OWF-BH13

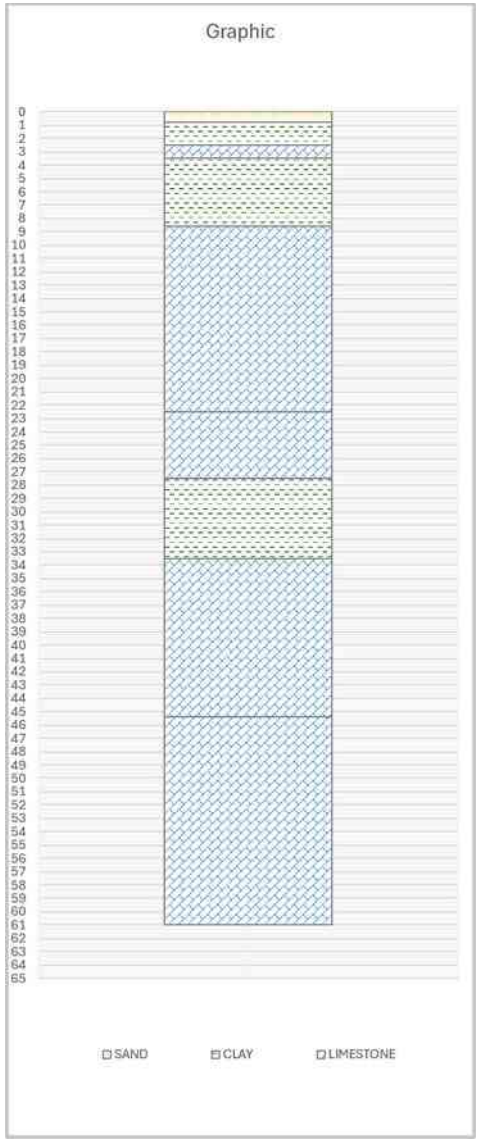

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH13
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU9 max depth reached - LIMESTONE interbedded with calcareous CLAY (Jurassic)

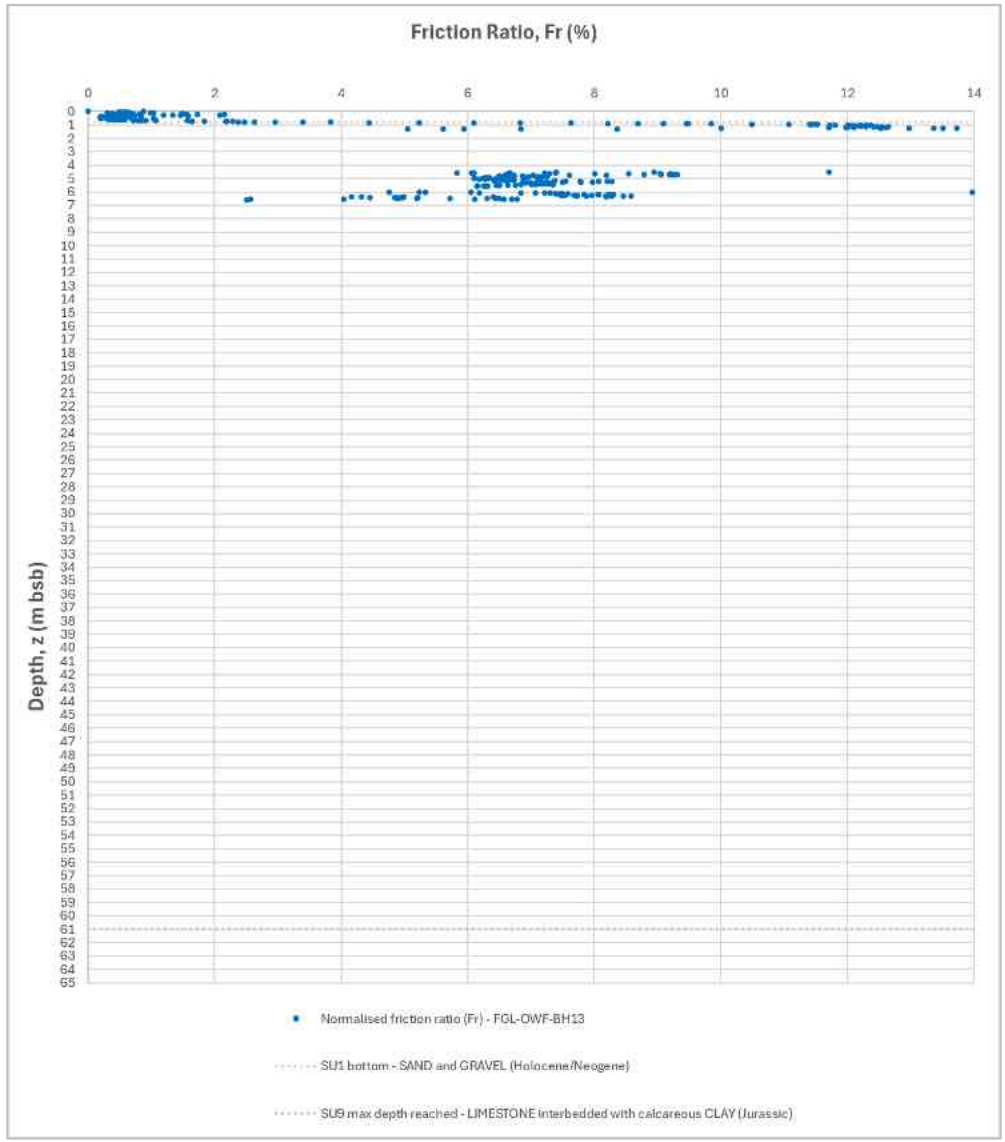

Graphic
SAND
CLAY
LIMESTONE

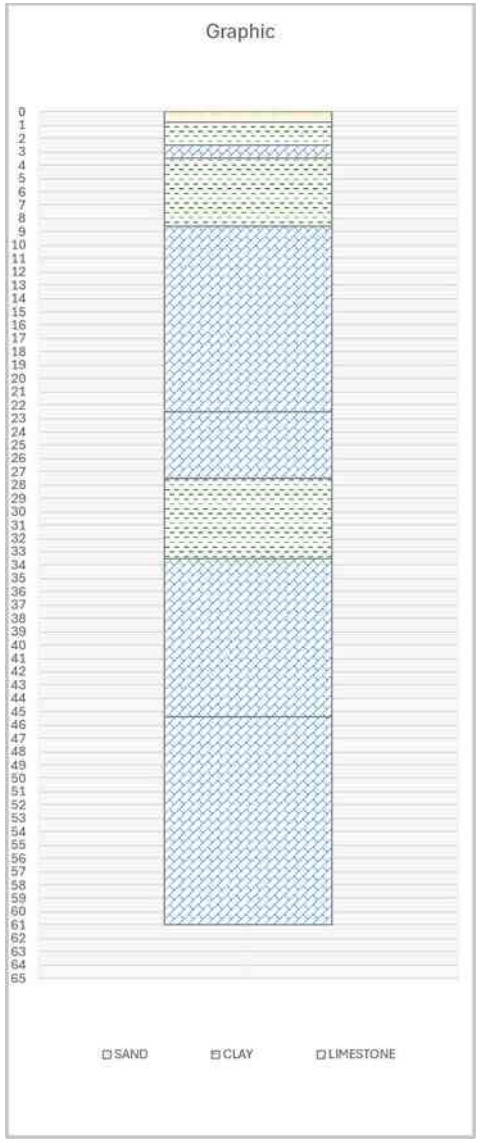

Relative Density, D_r (%)
0
20
40
60
80
100
120
140
160
180
200
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH13
Dr KO 1 (%) - FGL-OWF-BH13
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU9 max depth reached - LIMESTONE interbedded with calcareous CLAY (Jurassic)

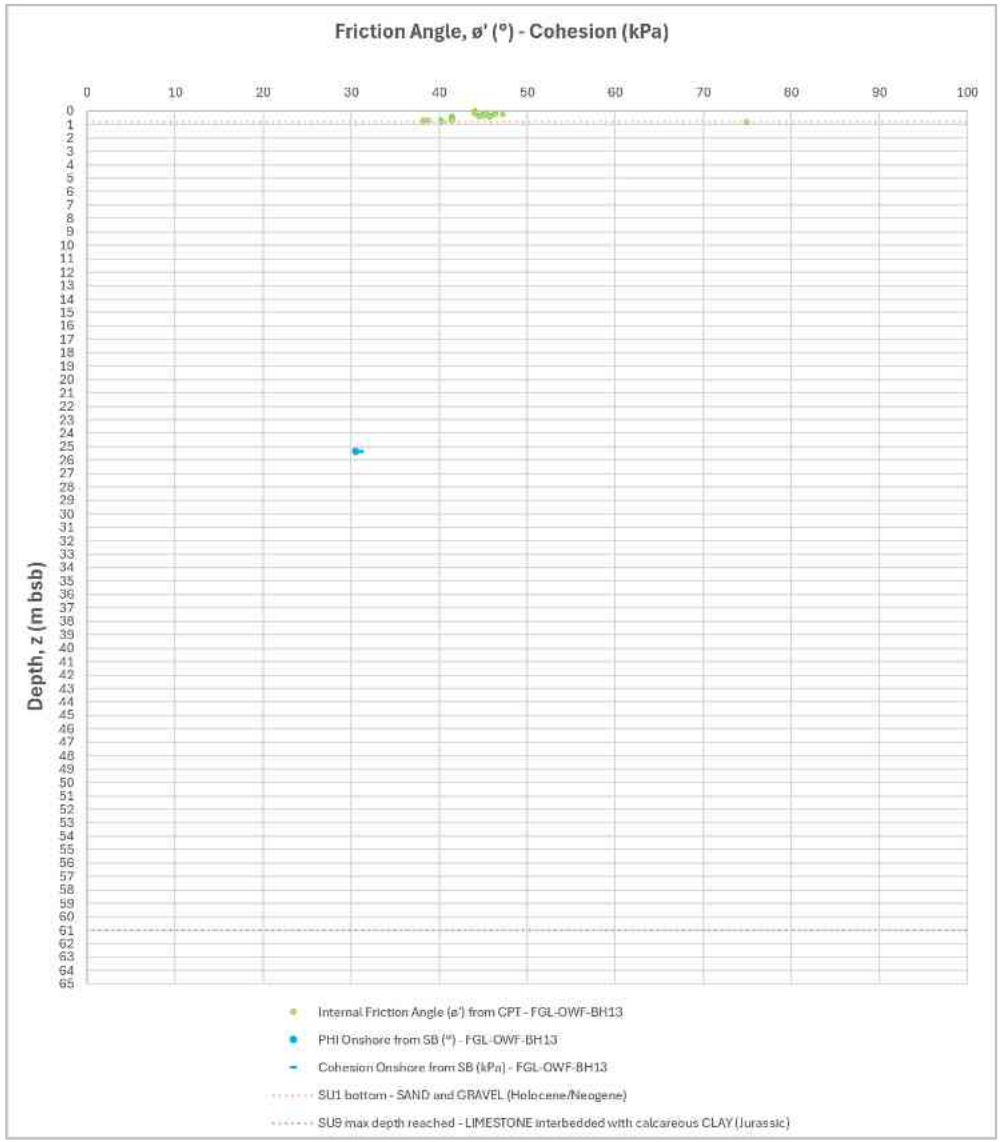

Graphic
SAND
CLAY
LIMESTONE

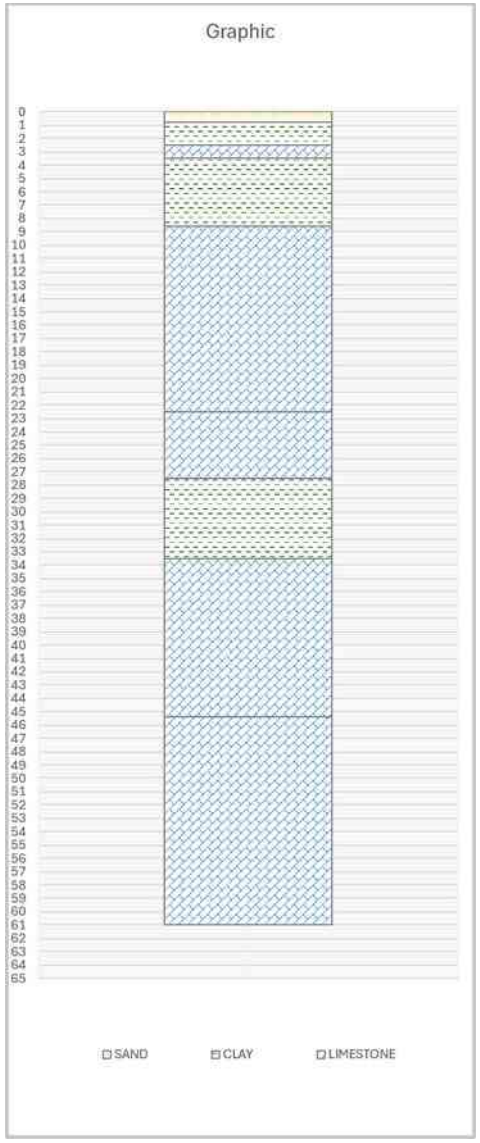

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH13
Su Nkt20 (kPa) - FGL-OWF-BH13
PP Offshore (kPa) - FGL-OWF-BH13
UU Onshore (kPa) - FGL-OWF-BH13
Peak shear stress Onshore (kPa) from SB - FGL-OWF-BH13
SU1 bottom - SAND and GRAVEL (Holocene/Neoglene)
SU9 max depth reached - LIMESTONE interbedded with calcareous CLAY (Jurassic)
PI - BNO-OWF-BH13
PL - BNO-OWF-BH13
LL - BNO-OWF-BH13

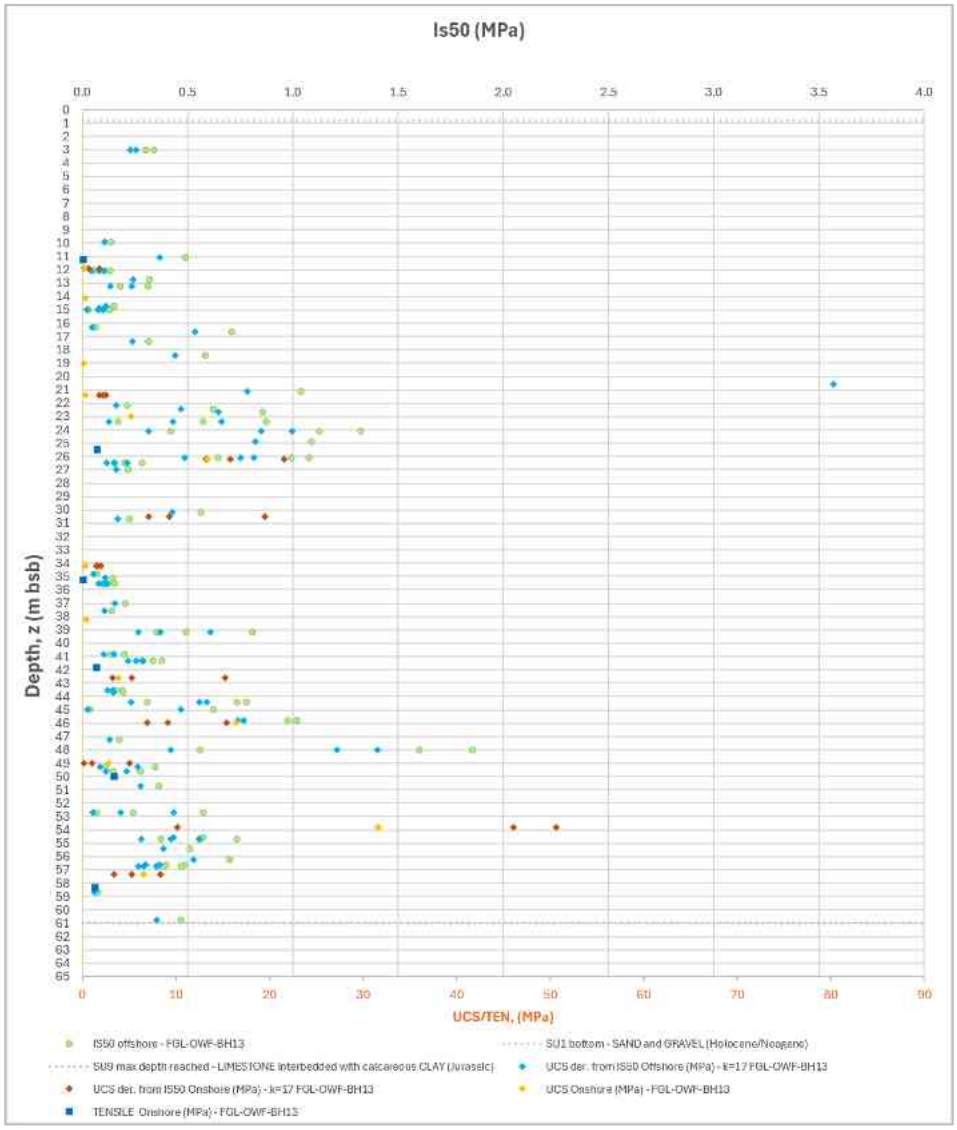

Graphic
SAND
CLAY
LIMESTONE

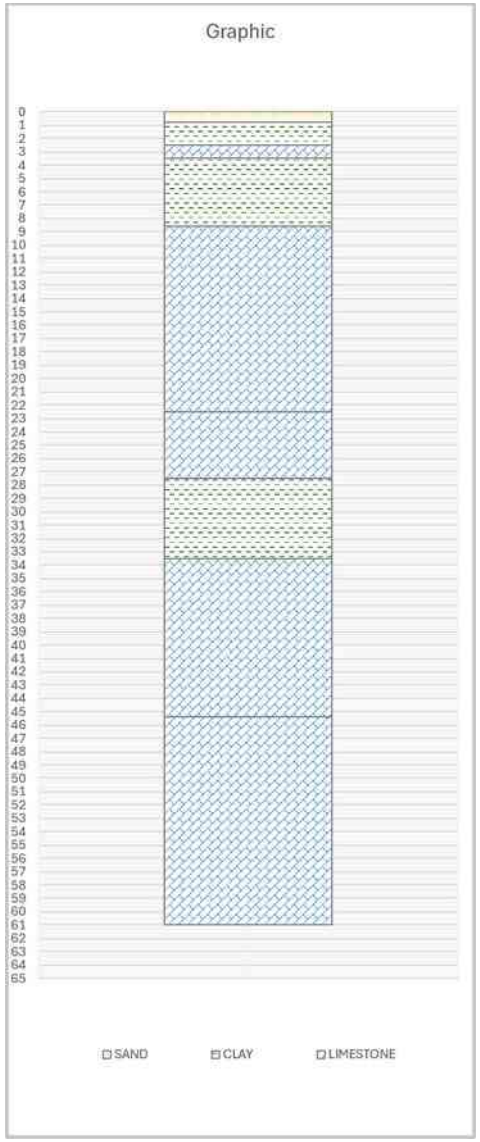

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH13
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU9 max depth reached - LIMESTONE interbedded with calcareous CLAY (Jurassic)

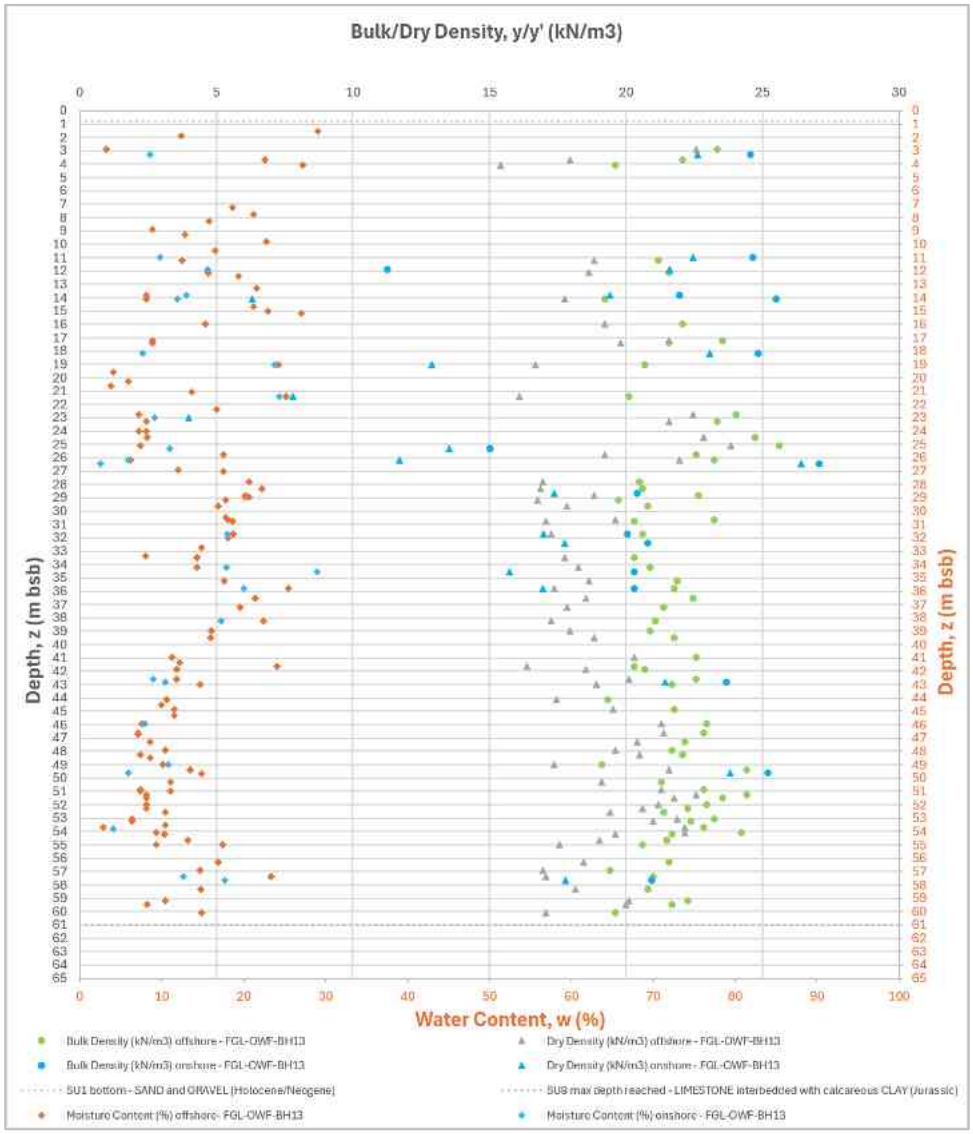

Graphic
SAND
CLAY
LIMESTONE

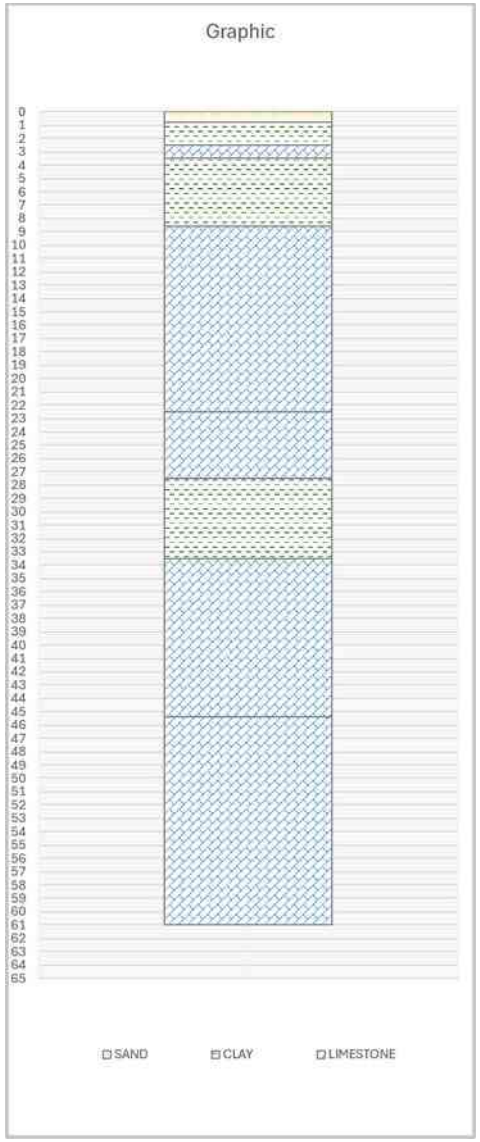

Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH13
PHI Onshore from SB (°) - FGL-OWF-BH13
Cohesion Onshore from SB (kPa) - FGL-OWF-BH13
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU9 max depth reached - LIMESTONE interbedded with calcareous CLAY (Jurassic)


Graphic
SAND
CLAY
LIMESTONE


Is50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 offshore - FGL-OWF-BH13
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU9 max depth reached - LIMESTONE interbedded with calcareous CLAY (Jurassic)
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH13
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH13
UCS Onshore (MPa) - FGL-OWF-BH13
TENSILE Onshore (MPa) - FGL-OWF-BH13


Graphic
SAND
CLAY
LIMESTONE

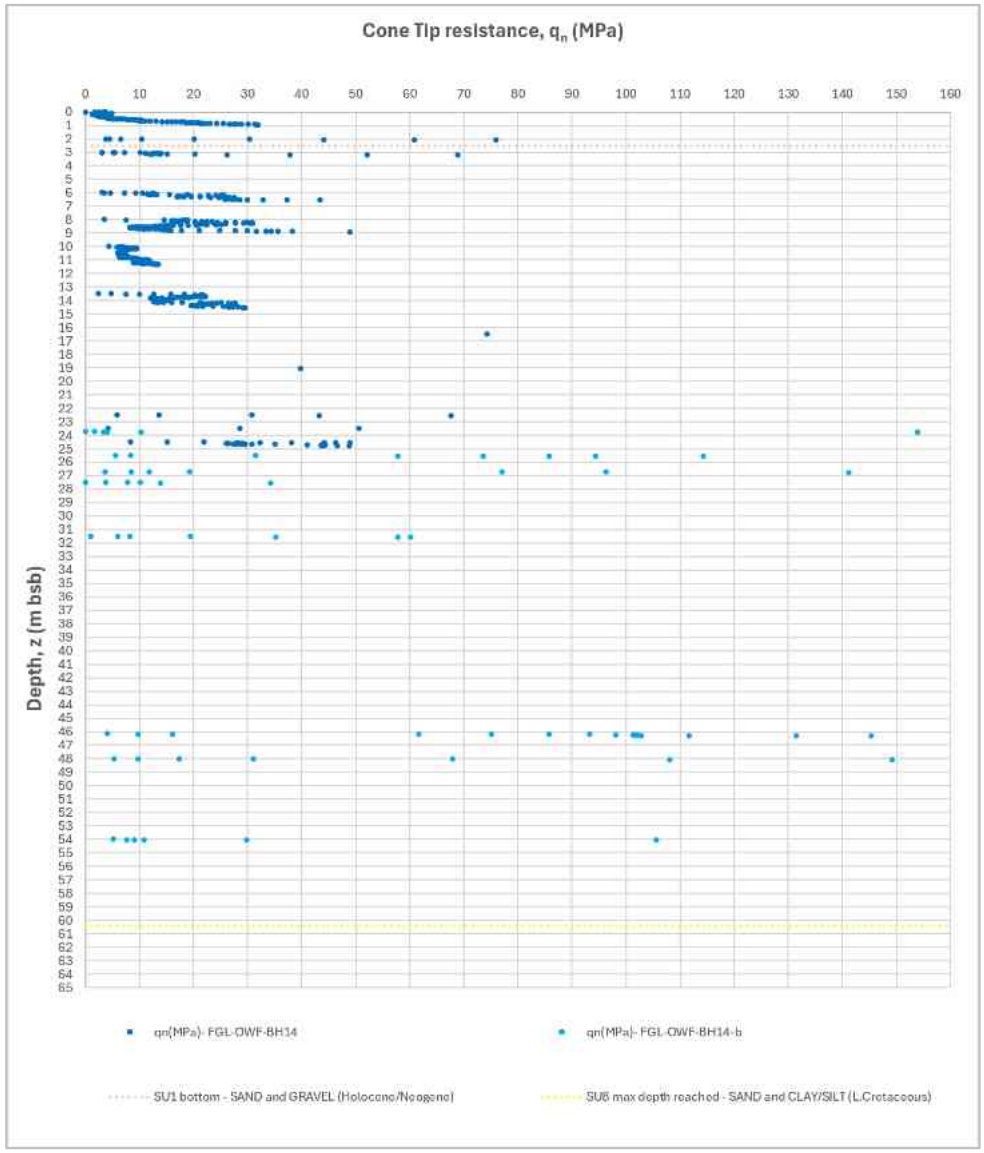

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH13
Bulk Density (kN/m3) onshore - FGL-OWF-BH13
Dry Density (kN/m3) offshore - FGL-OWF-BH13
Dry Density (kN/m3) onshore - FGL-OWF-BH13
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - LIMESTONE interbedded with calcareous CLAY (Jurassic)
Moisture Content (%) offshore - FGL-OWF-BH13
Moisture Content (%) onshore - FGL-OWF-BH13

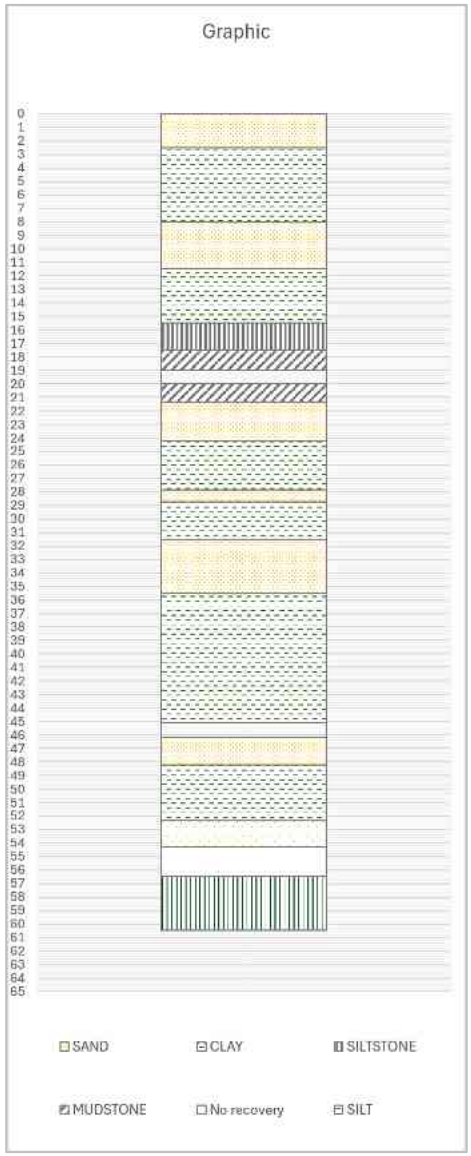

Graphic
SAND
CLAY
LIMESTONE

FGL-OWF-BH14

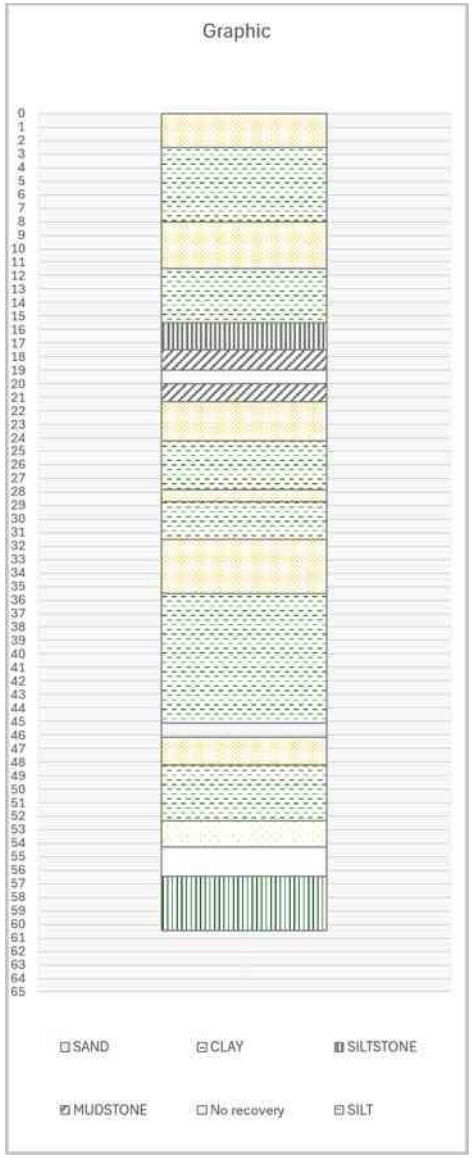
FGL-OWF-BH14-a

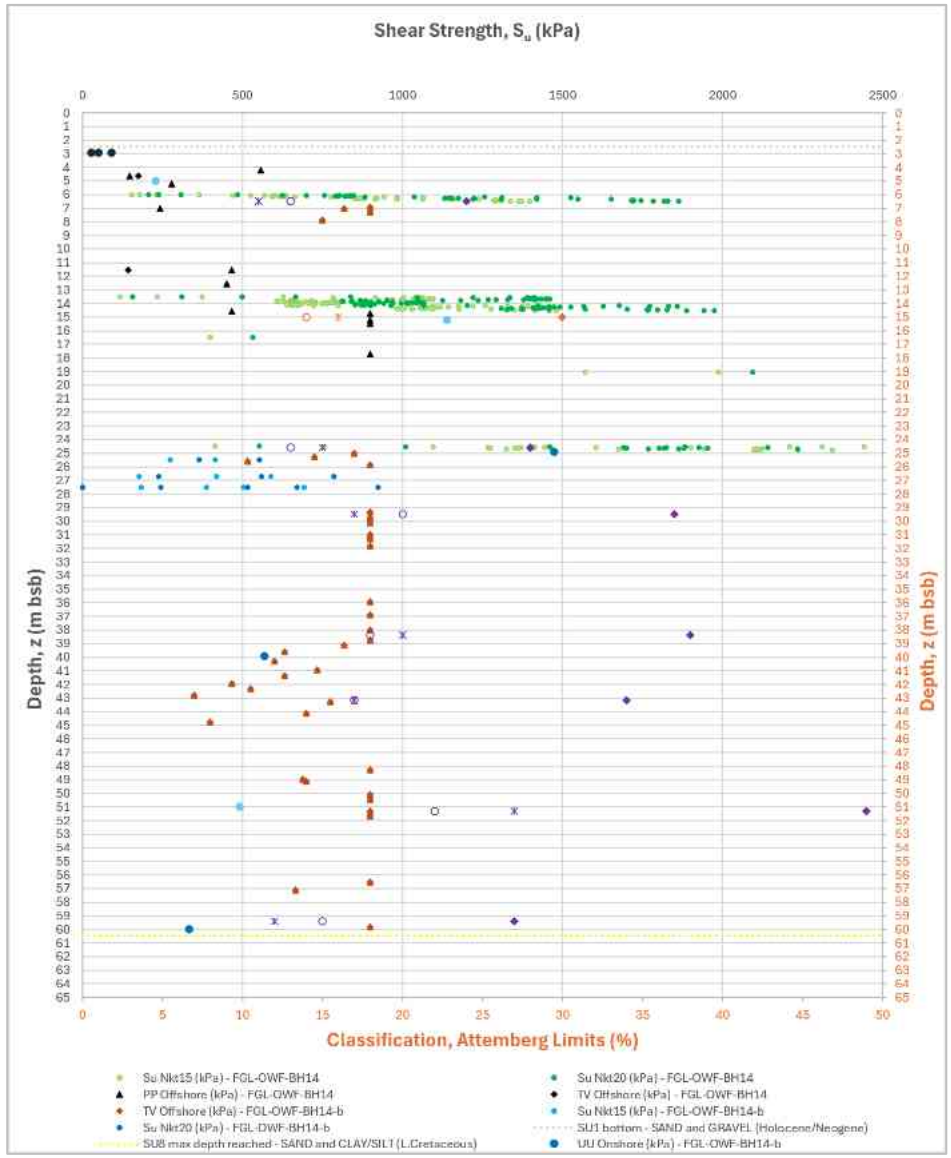
FGL-OWF-BH14-b

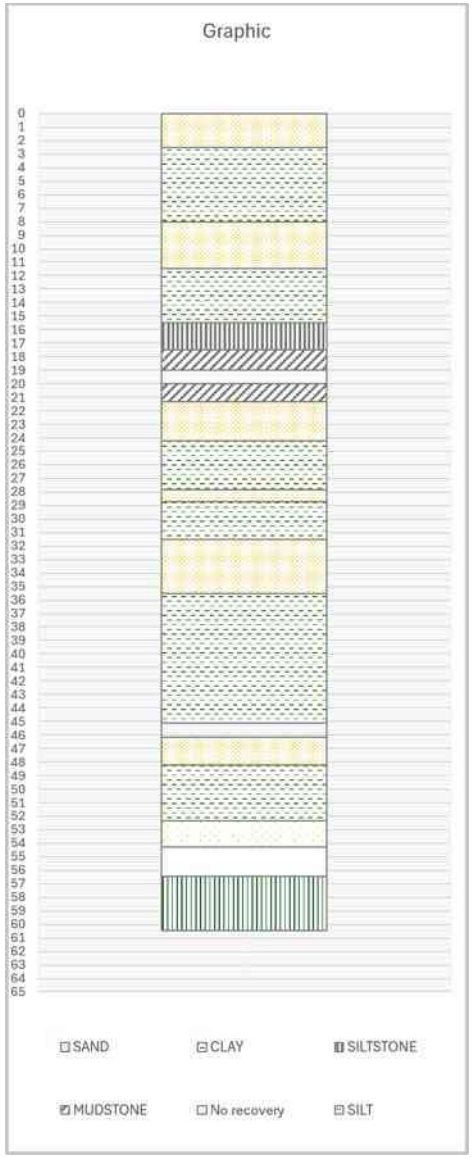

Cone Tip resistance, q_n (MPa)
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH14
qn(MPa)- FGL-OWF-BH14-b
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU6 max depth reached - SAND and CLAY/SILT (L.Cretaceous)

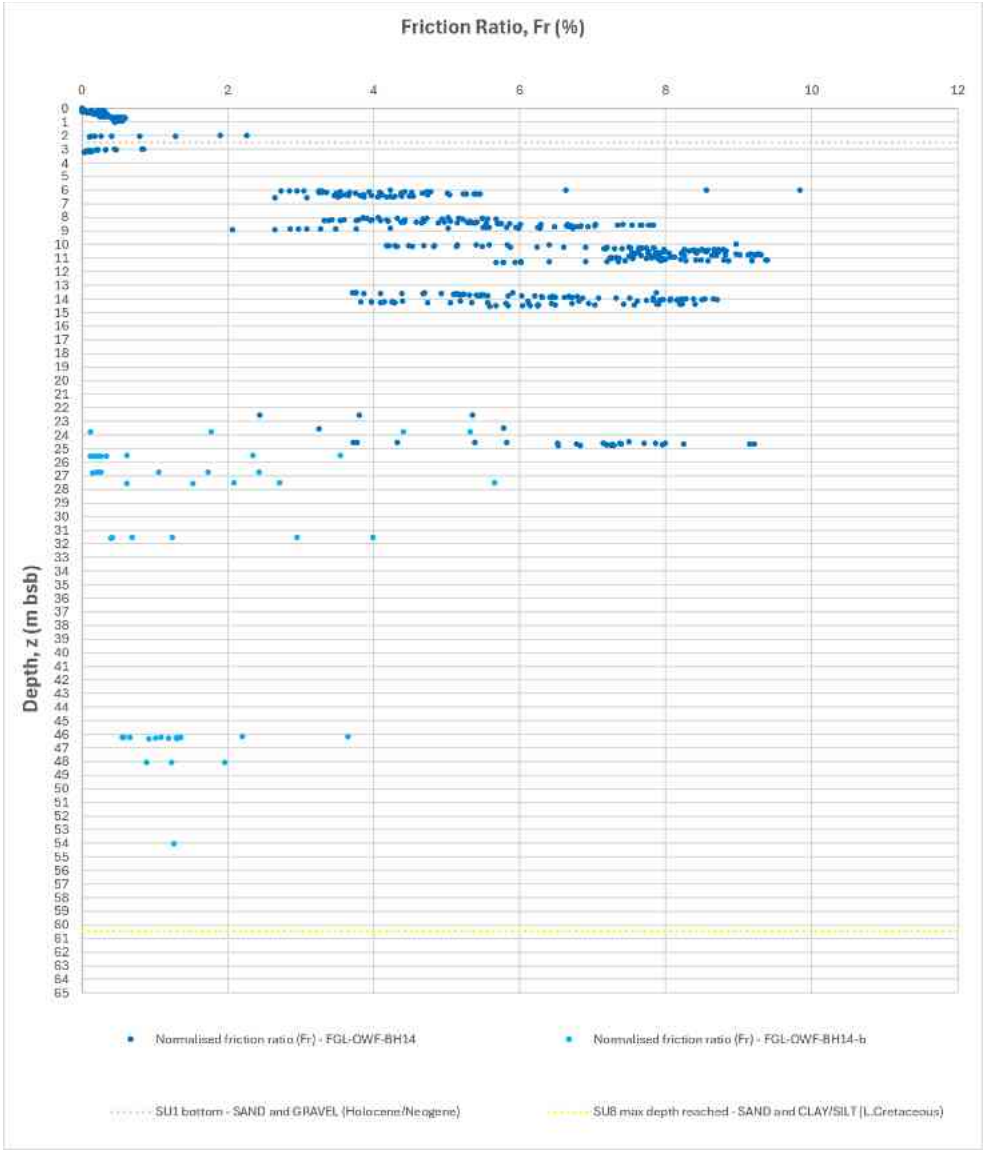

Graphic
SAND
CLAY
SILTSTONE
MUDSTONE
No recovery
SILT

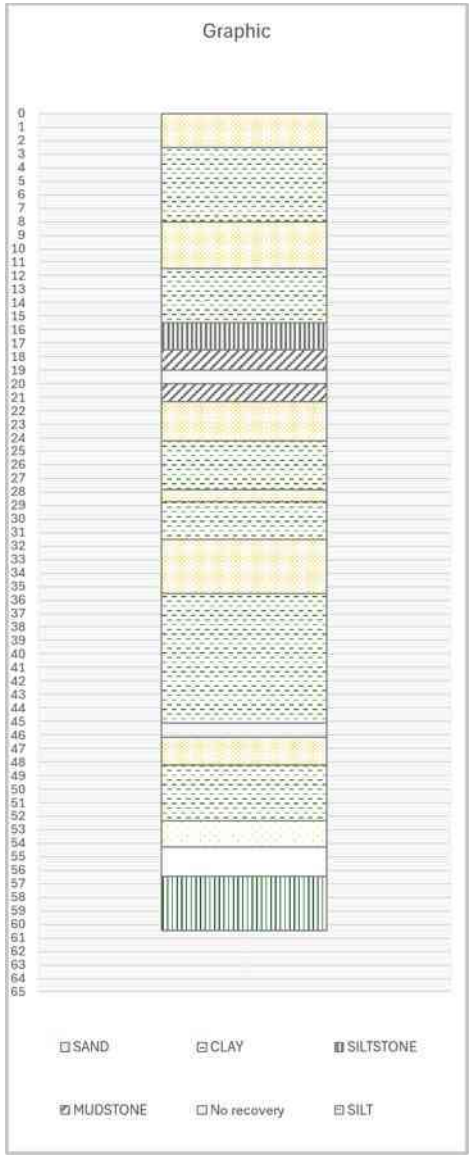

Relative Density, D_r (%)
0
20
40
60
80
100
120
140
160
180
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH14
Dr KO 1 (%) - FGL-OWF-BH14
Dr KO 0.5 (%) - FGL-OWF-BH14-b
Dr KO 1 (%) - FGL-OWF-BH14-b
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)

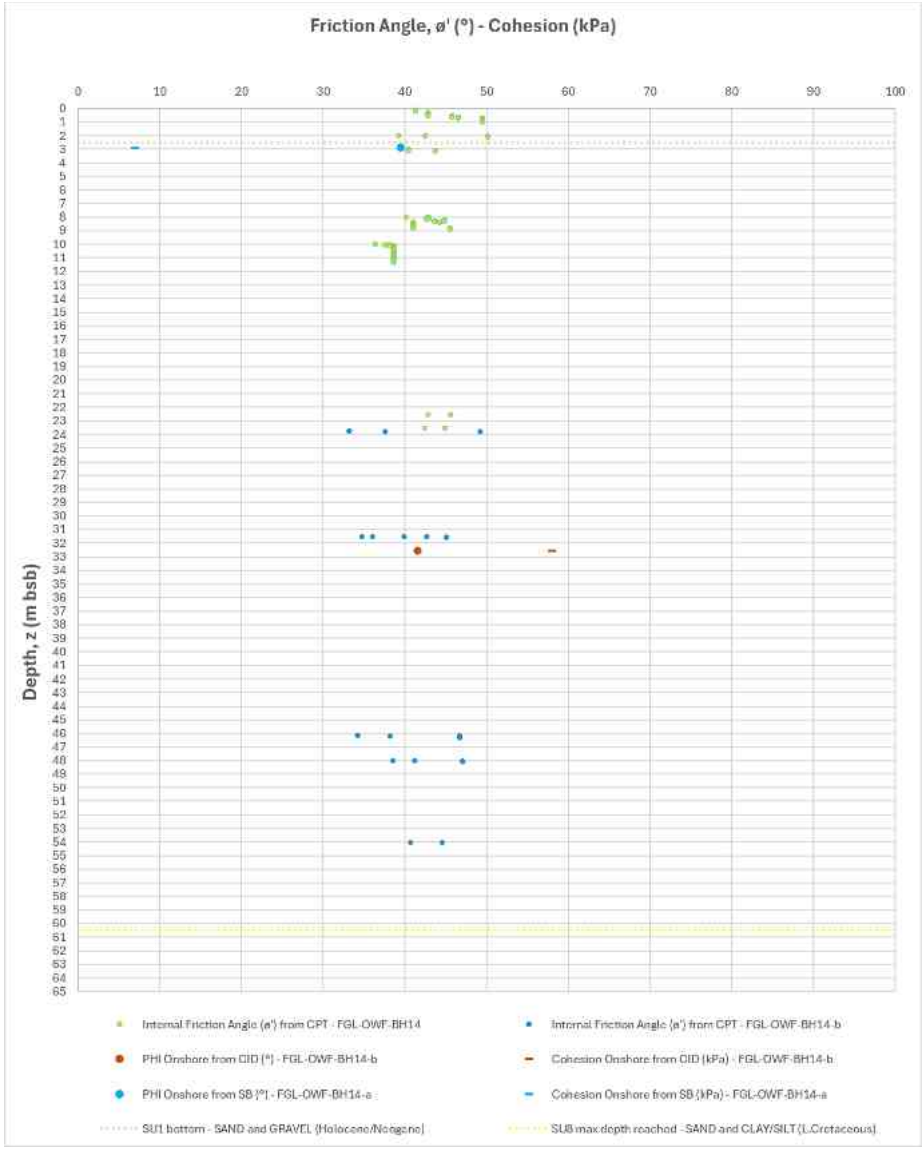

Graphic
SAND
CLAY
SILTSTONE
MUDSTONE
No recovery
SILT

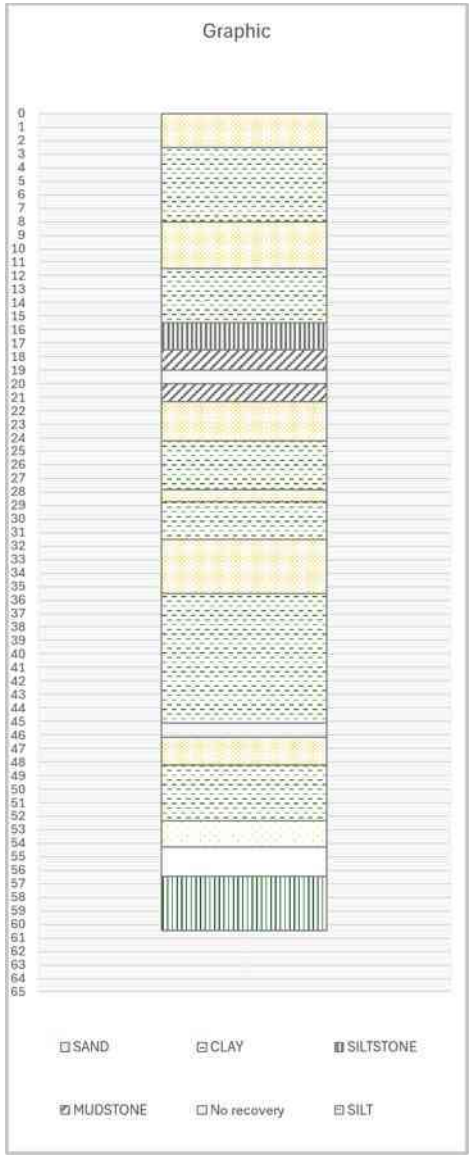

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH14
Su Nkt20 (kPa) - FGL-OWF-BH14
PP Offshore (kPa) - FGL-OWF-BH14
TV Offshore (kPa) - FGL-OWF-BH14
TV Offshore (kPa) - FGL-OWF-BH14-b
Su Nkt15 (kPa) - FGL-OWF-BH14-b
Su Nkt20 (kPa) - FGL-OWF-BH14-b
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)
UU Onshore (kPa) - FGL-OWF-BH14-b

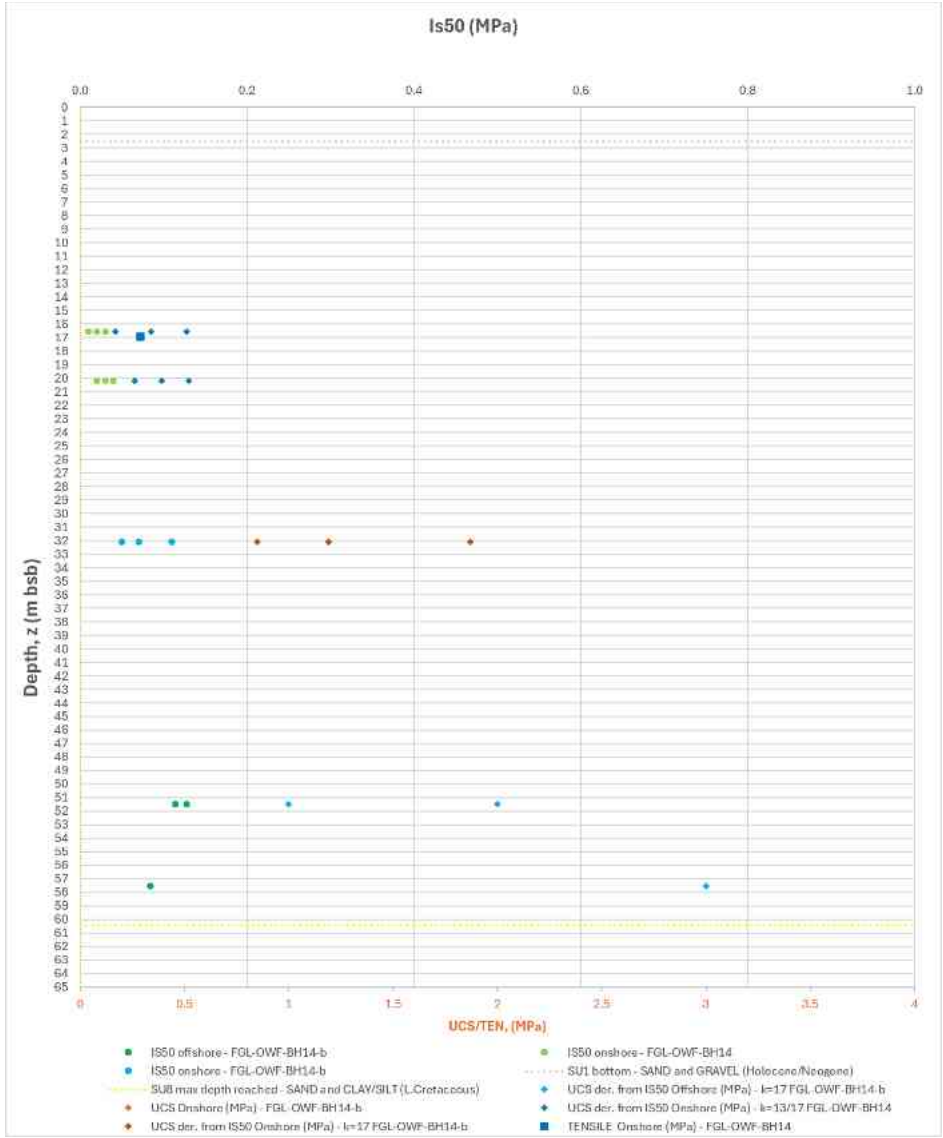

Graphic
SAND
CLAY
SILTSTONE
MUDSTONE
No recovery
SILT

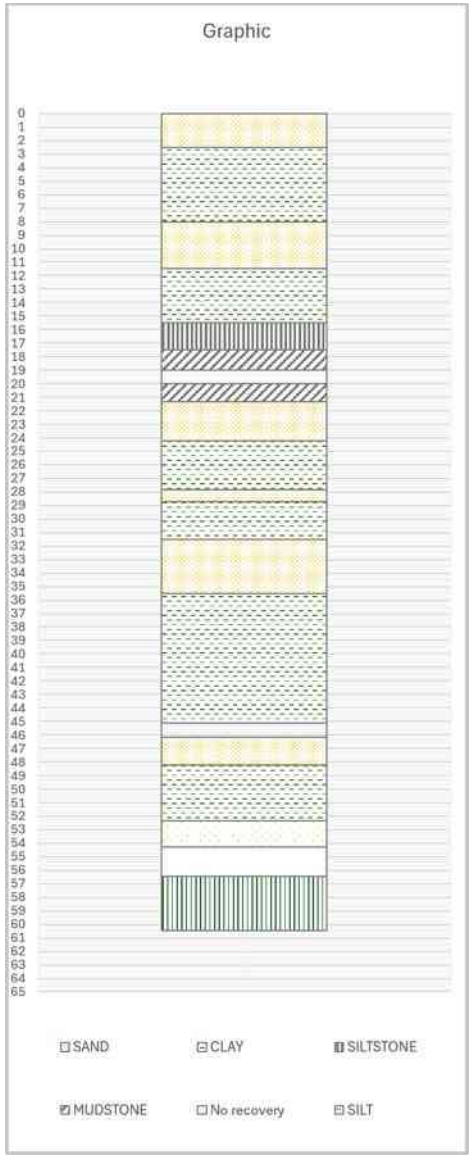

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH14
Normalised friction ratio (Fr) - FGL-OWF-BH14-b
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)

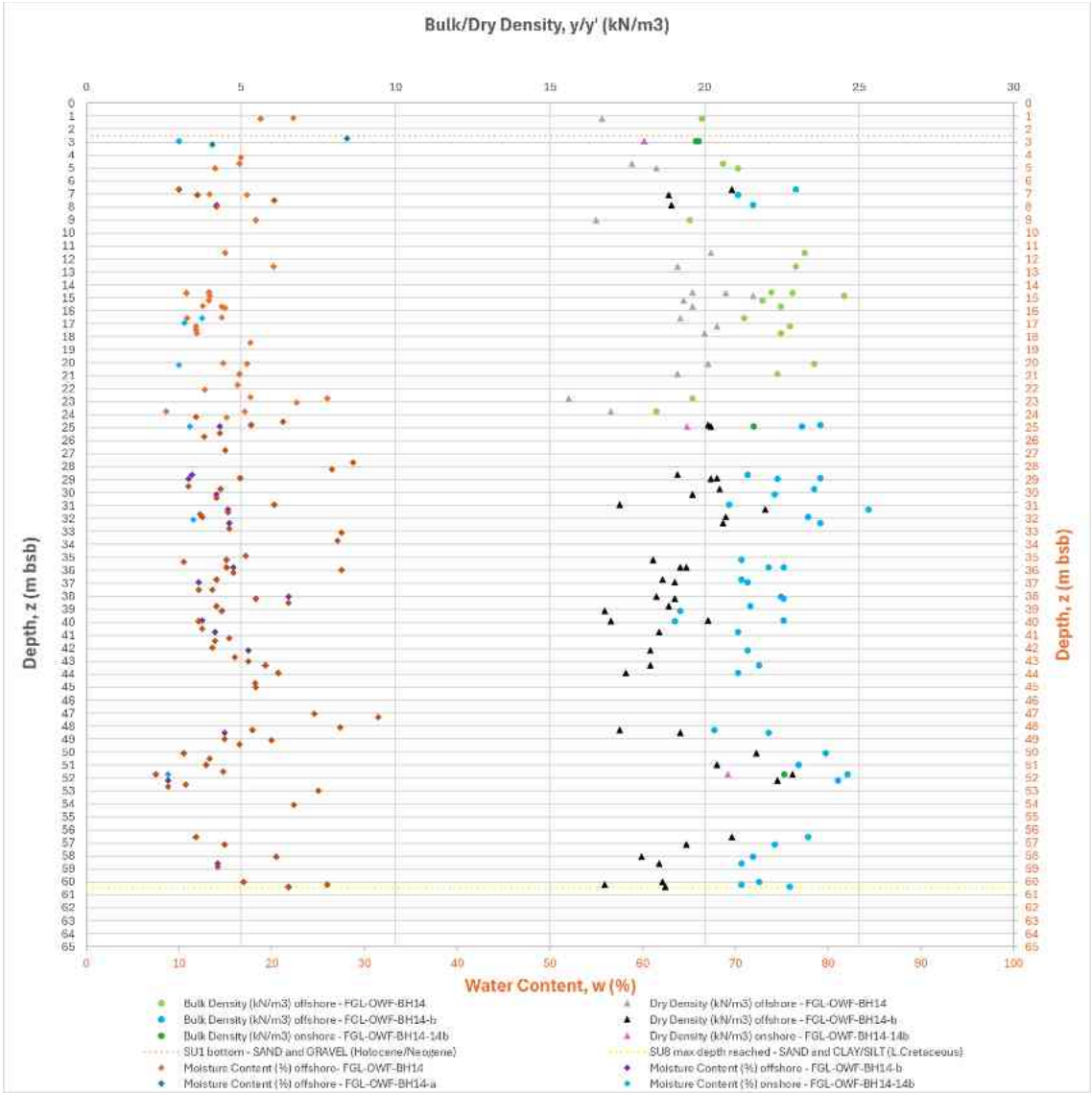

Graphic
SAND
CLAY
SILTSTONE
MUDSTONE
No recovery
SILT

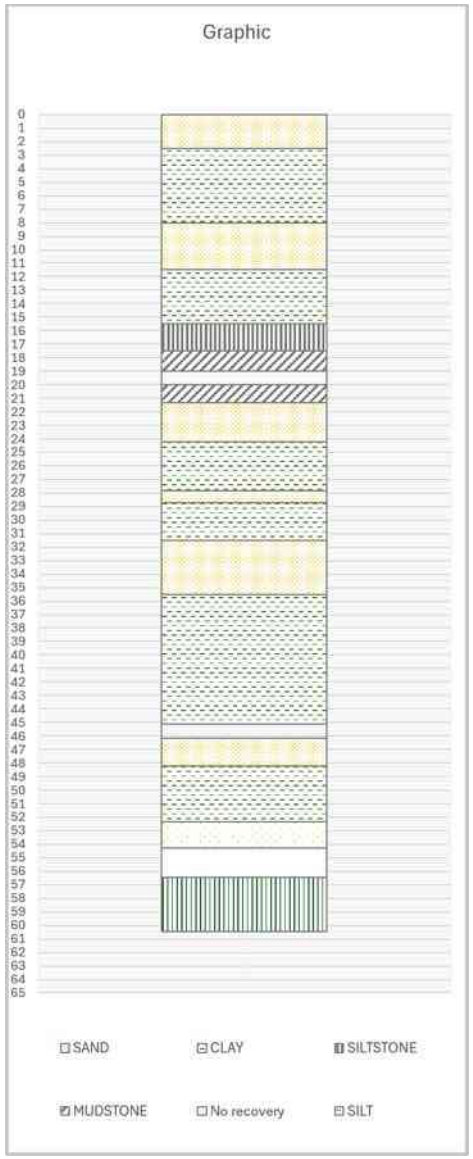

Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH14
Internal Friction Angle (ø') from CPT - FGL-OWF-BH14-b
PHI Onshore from CID (°) - FGL-OWF-BH14-b
Cohesion Onshore from CID (kPa) - FGL-OWF-BH14-b
PHI Onshore from SB (°) - FGL-OWF-BH14-a
Cohesion Onshore from SB (kPa) - FGL-OWF-BH14-a
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SUB max depth reached - SAND and CLAY/SILT (L.Cretaceous)


Graphic
SAND
CLAY
SILTSTONE
MUDSTONE
No recovery
SILT


Is50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 offshore - FGL-OWF-BH14-b
IS50 onshore - FGL-OWF-BH14-b
IS50 onshore - FGL-OWF-BH14
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH14-b
UCS Onshore (MPa) - FGL-OWF-BH14-b
UCS der. from IS50 Onshore (MPa) - k=13/17 FGL-OWF-BH14
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH14-b
TENSILE Onshore (MPa) - FGL-OWF-BH14

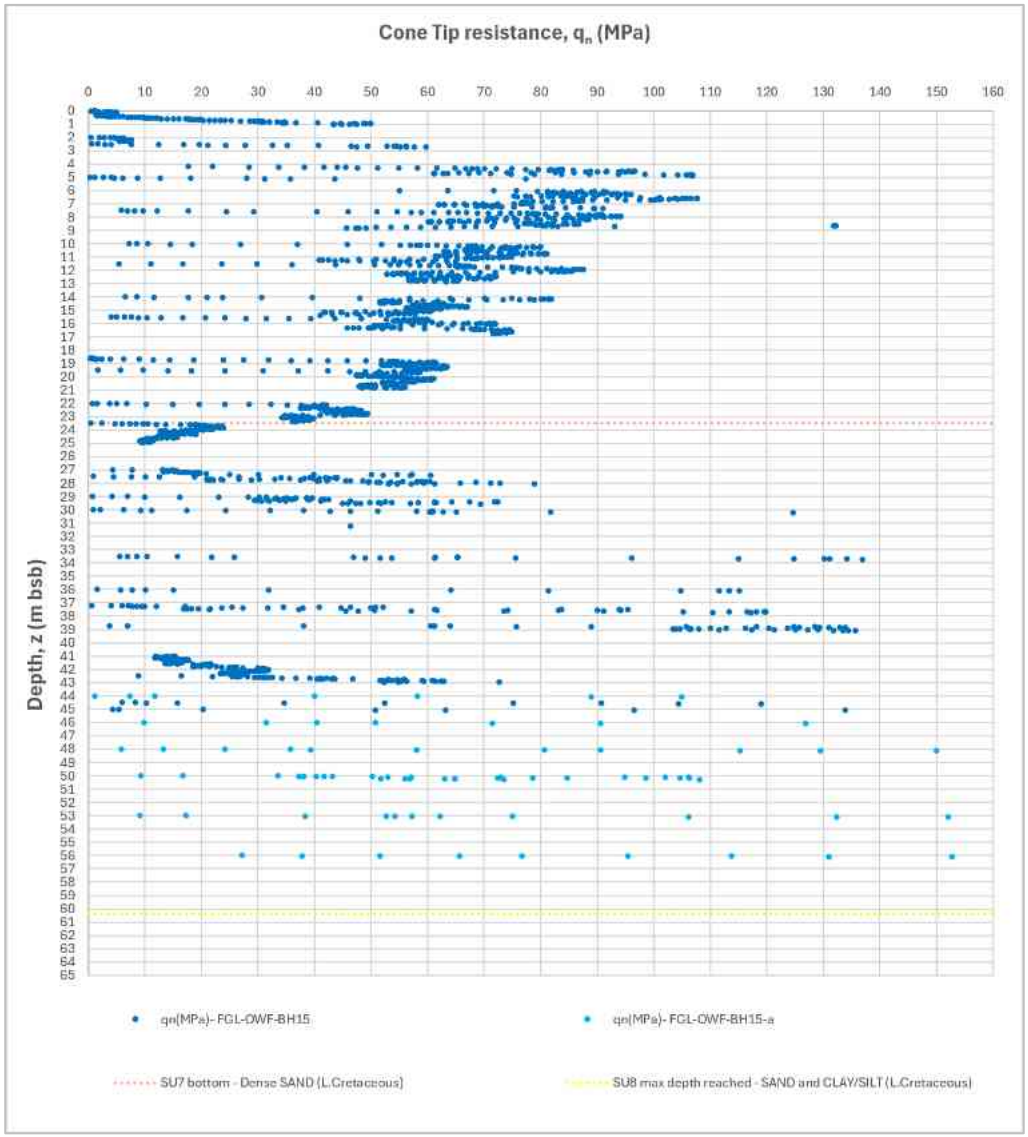

Graphic
SAND
CLAY
SILTSTONE
MUDSTONE
No recovery
SILT

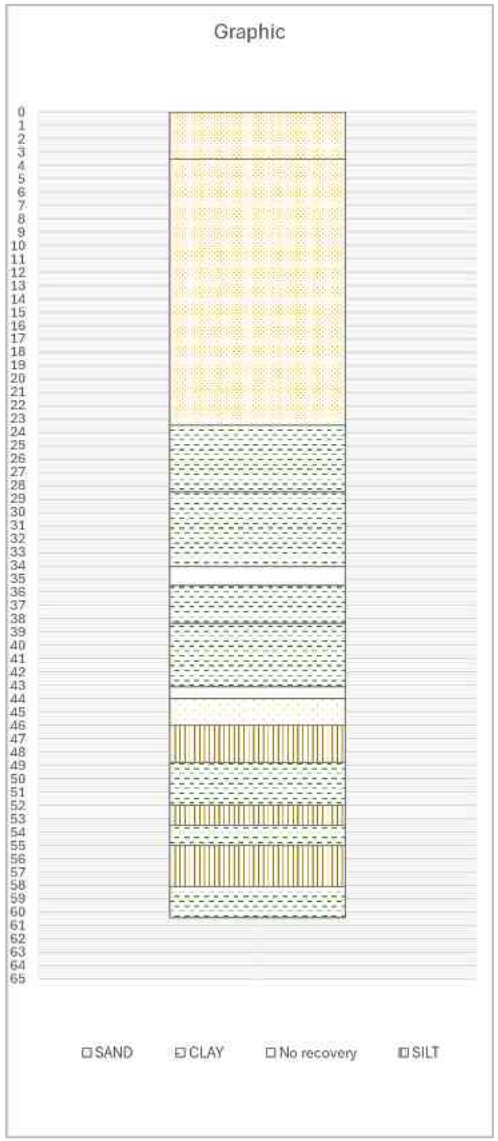

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH14
Bulk Density (kN/m3) offshore - FGL-OWF-BH14-b
Bulk Density (kN/m3) onshore - FGL-OWF-BH14-14b
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
Moisture Content (%) offshore- FGL-OWF-BH14
Moisture Content (%) offshore - FGL-OWF-BH14-a
Dry Density (kN/m3) offshore - FGL-OWF-BH14
Dry Density (kN/m3) offshore - FGL-OWF-BH14-b
Dry Density (kN/m3) onshore - FGL-OWF-BH14-14b
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)
Moisture Content (%) offshore - FGL-OWF-BH14-b
Moisture Content (%) onshore - FGL-OWF-BH14-14b

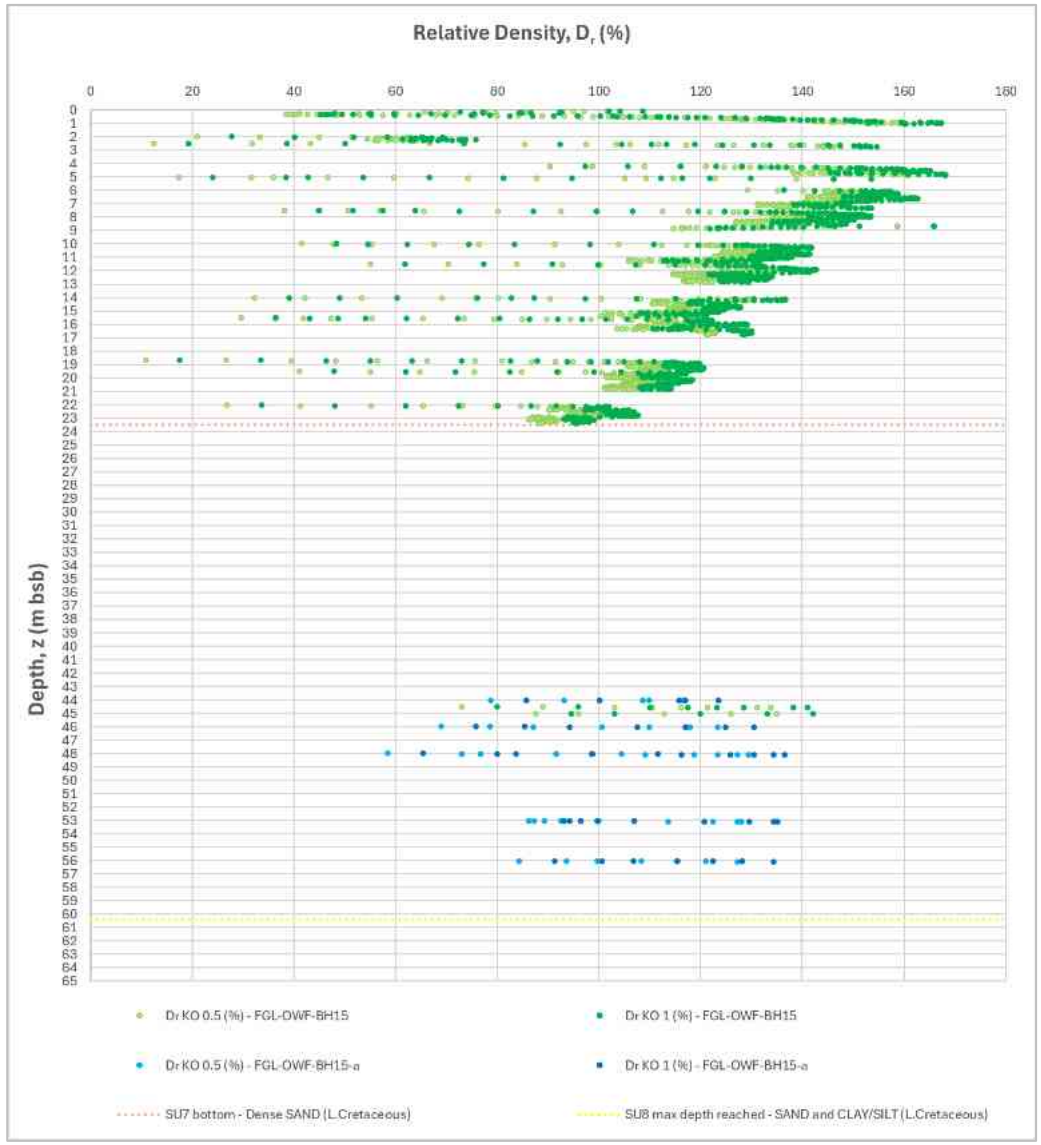

Graphic
SAND
CLAY
SILTSTONE
MUDSTONE
No recovery
SILT

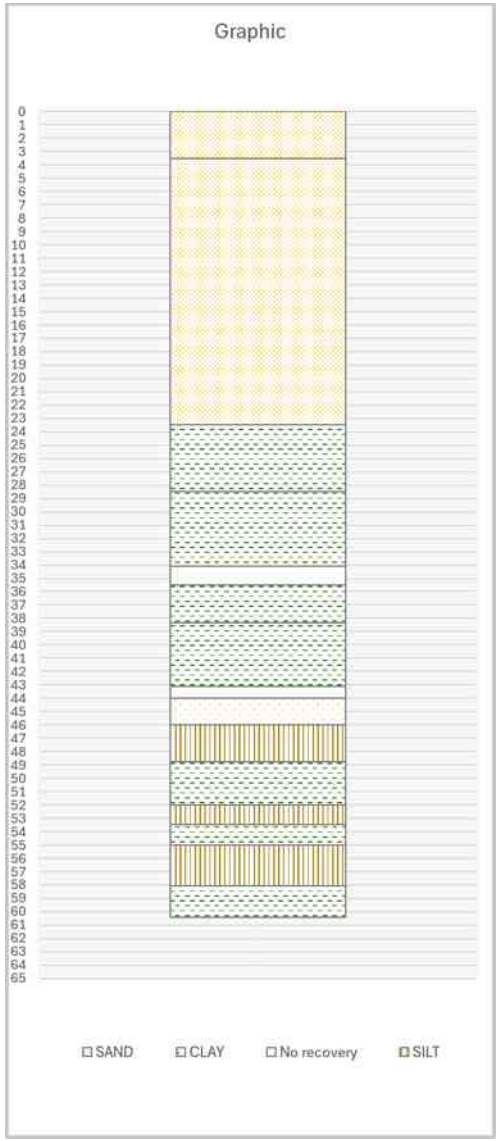
FGL-OWF-BH15

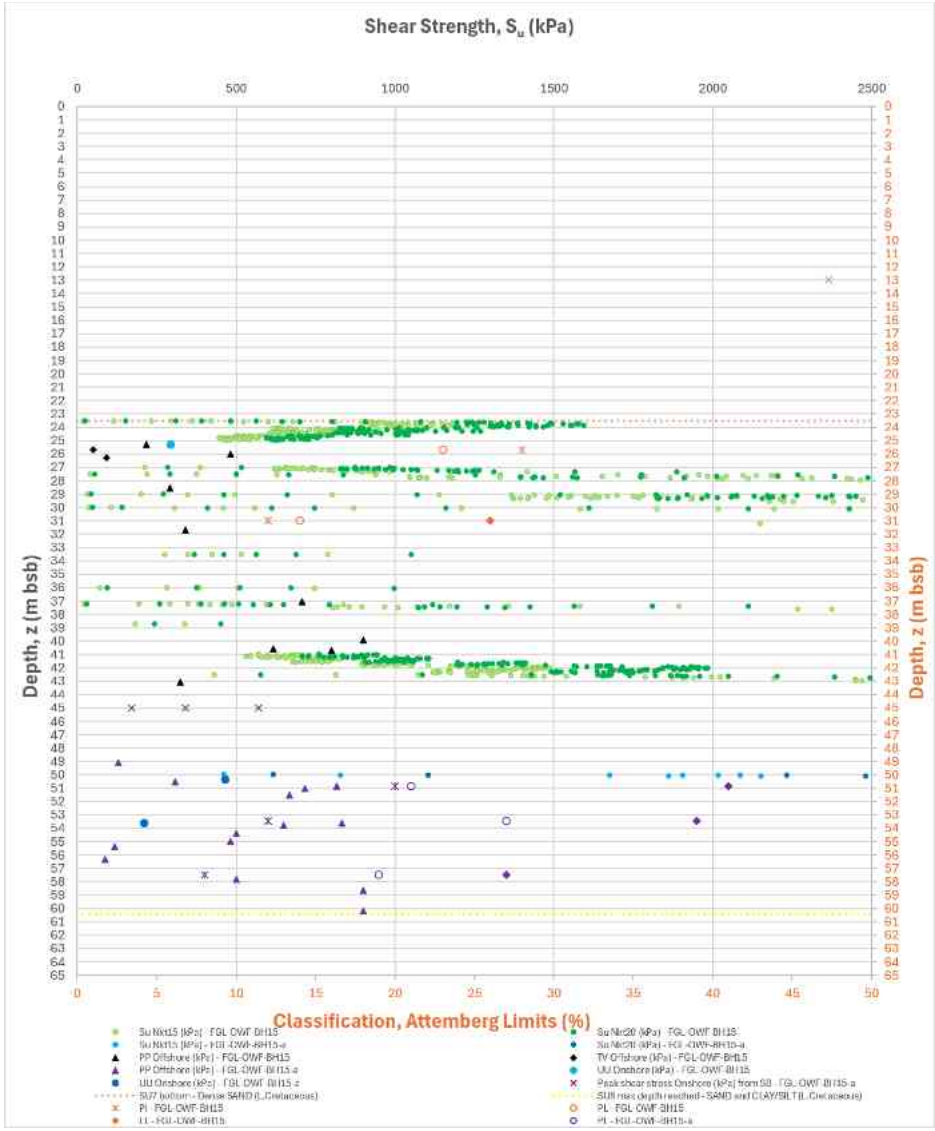
FGL-OWF-BH15-a

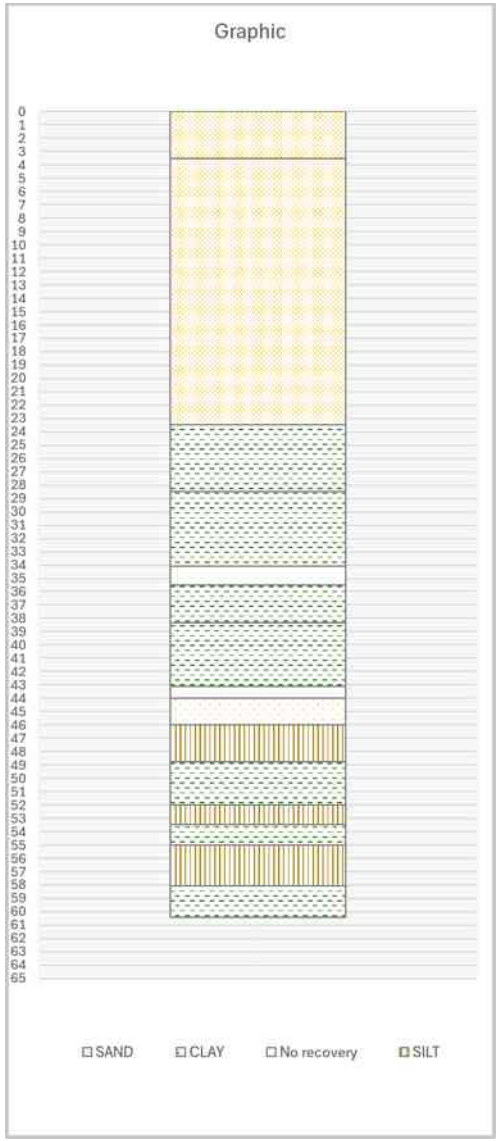

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH15
qn(MPa)- FGL-OWF-BH15-a
SU7 bottom - Dense SAND (L.Cretaceous)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)

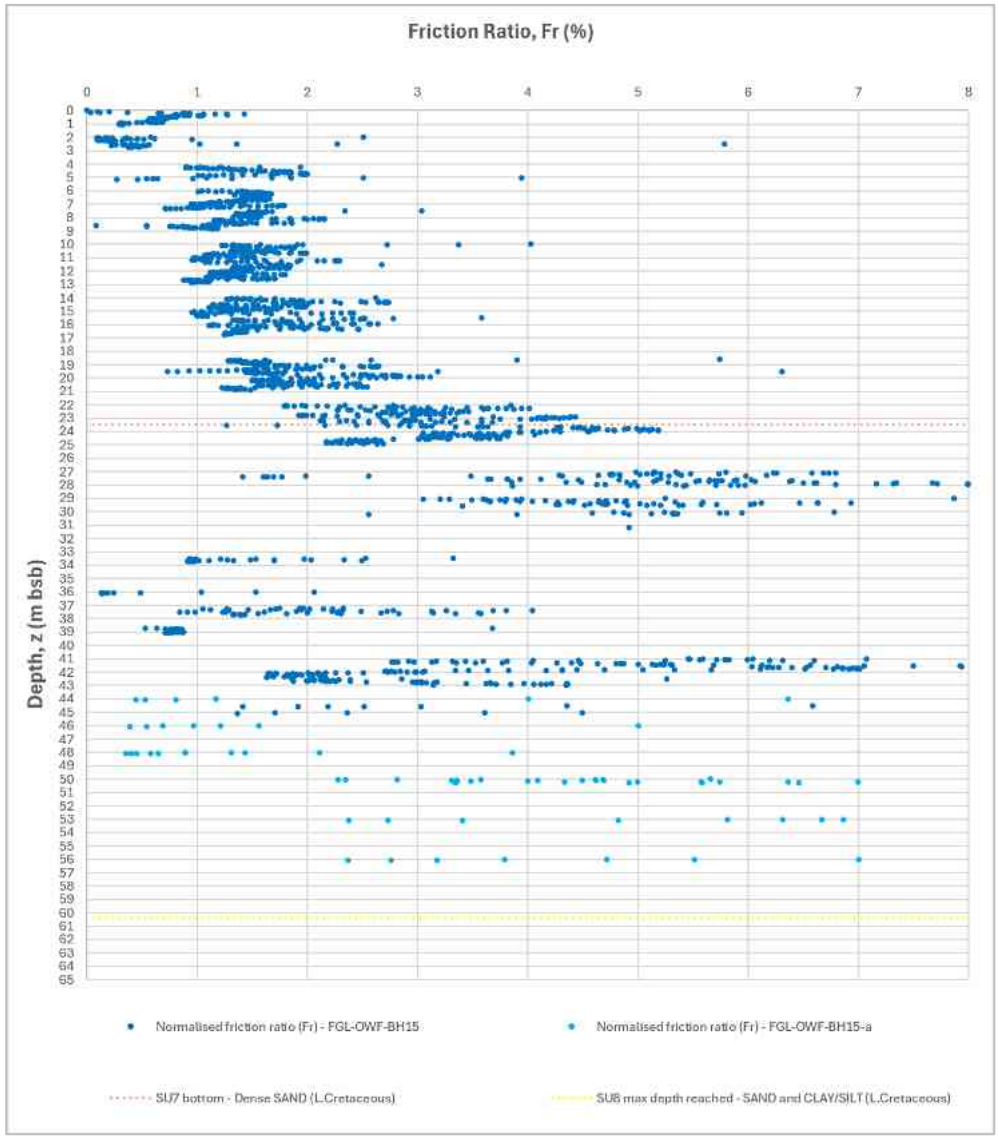

Graphic
SAND
CLAY
No recovery
SILT

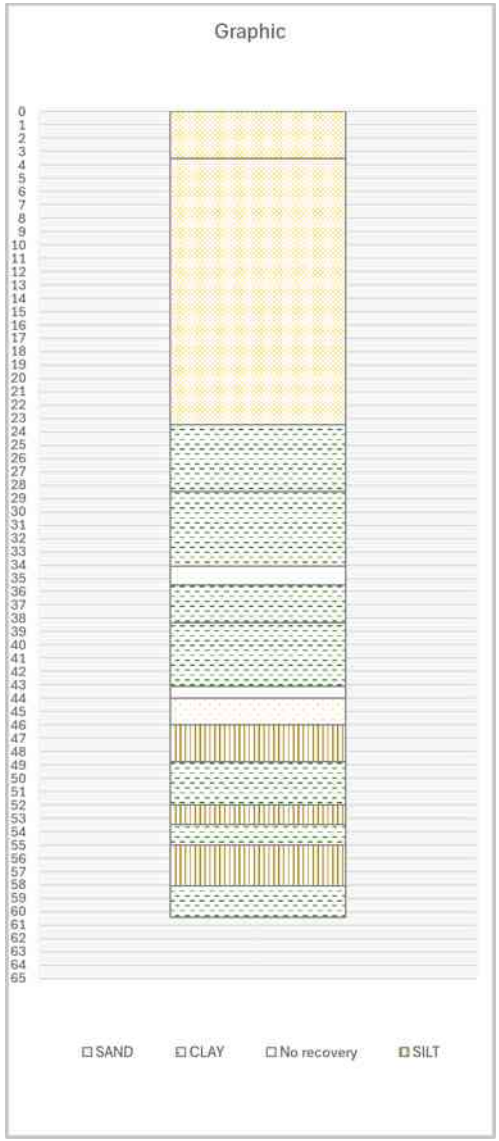

Relative Density, D_r (%)
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH15
Dr KO 1 (%) - FGL-OWF-BH15
Dr KO 0.5 (%) - FGL-OWF-BH15-a
Dr KO 1 (%) - FGL-OWF-BH15-a
SU7 bottom - Dense SAND (L.Cretaceous)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)


Graphic
SAND
CLAY
No recovery
SILT

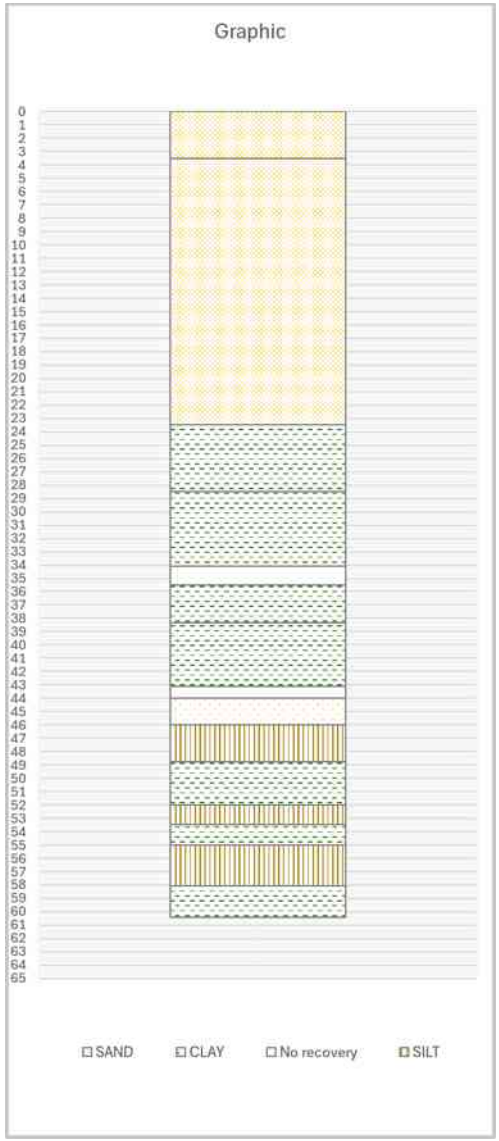

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)

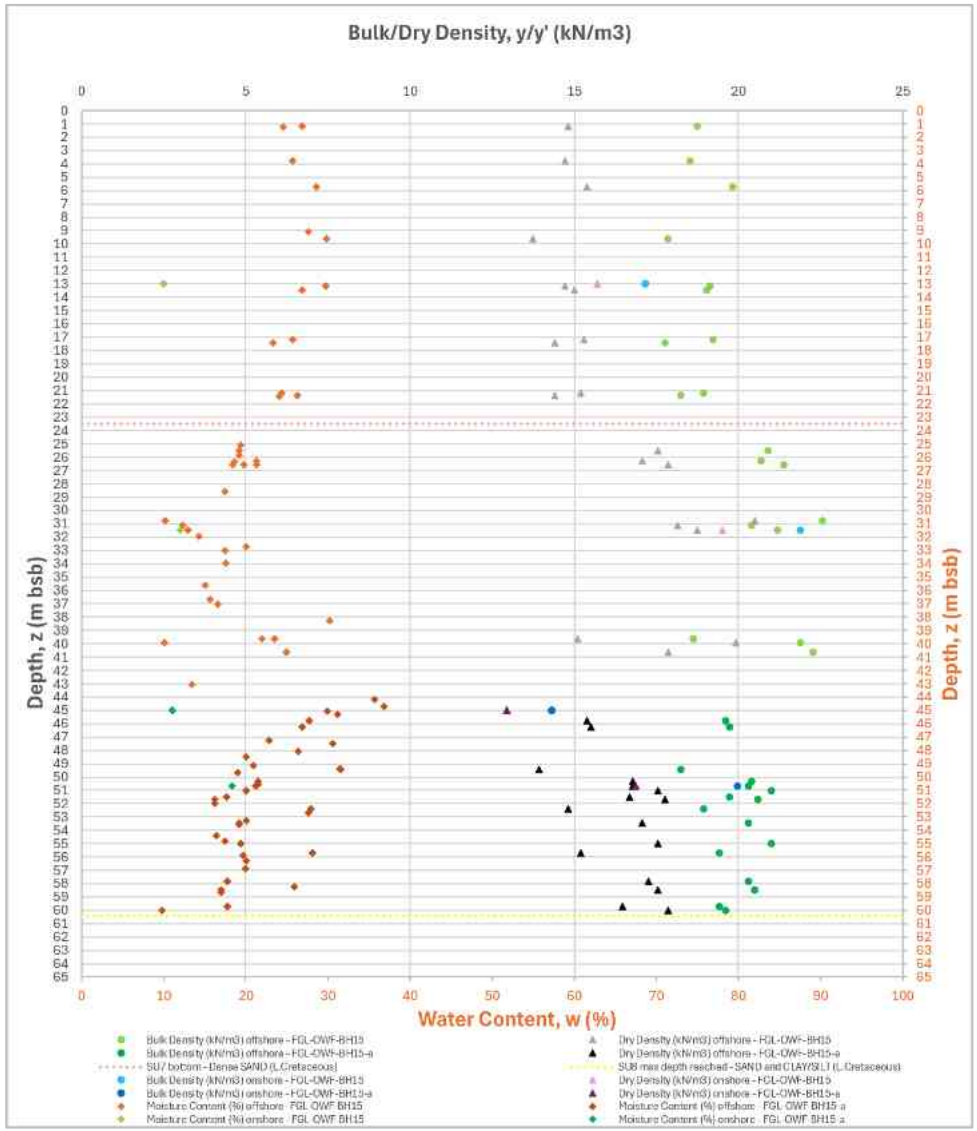

Graphic
SAND
CLAY
No recovery
SILT

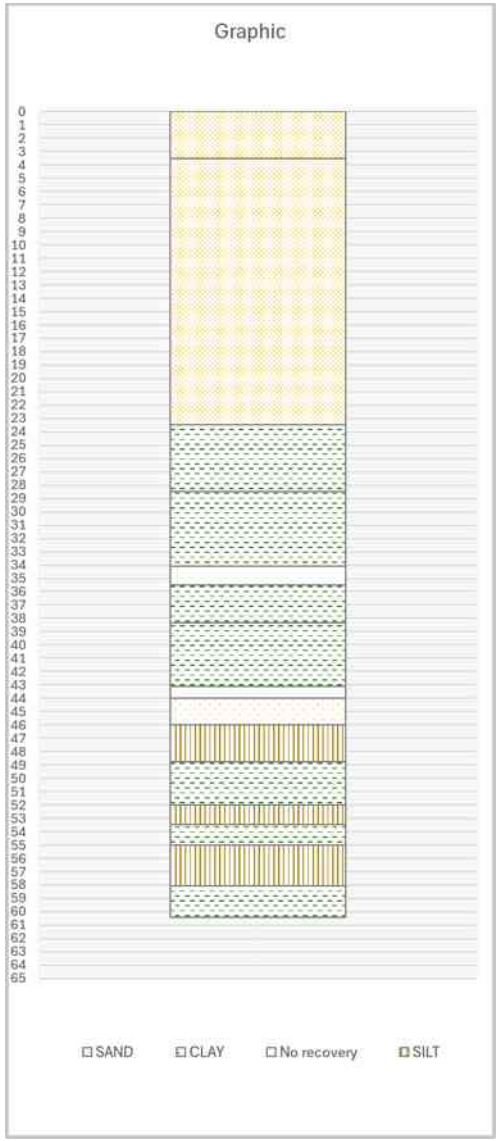

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH15
Normalised friction ratio (Fr) - FGL-OWF-BH15-a
SU7 bottom - Dense SAND (L.Cretaceous)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)


Graphic
SAND
CLAY
No recovery
SILT

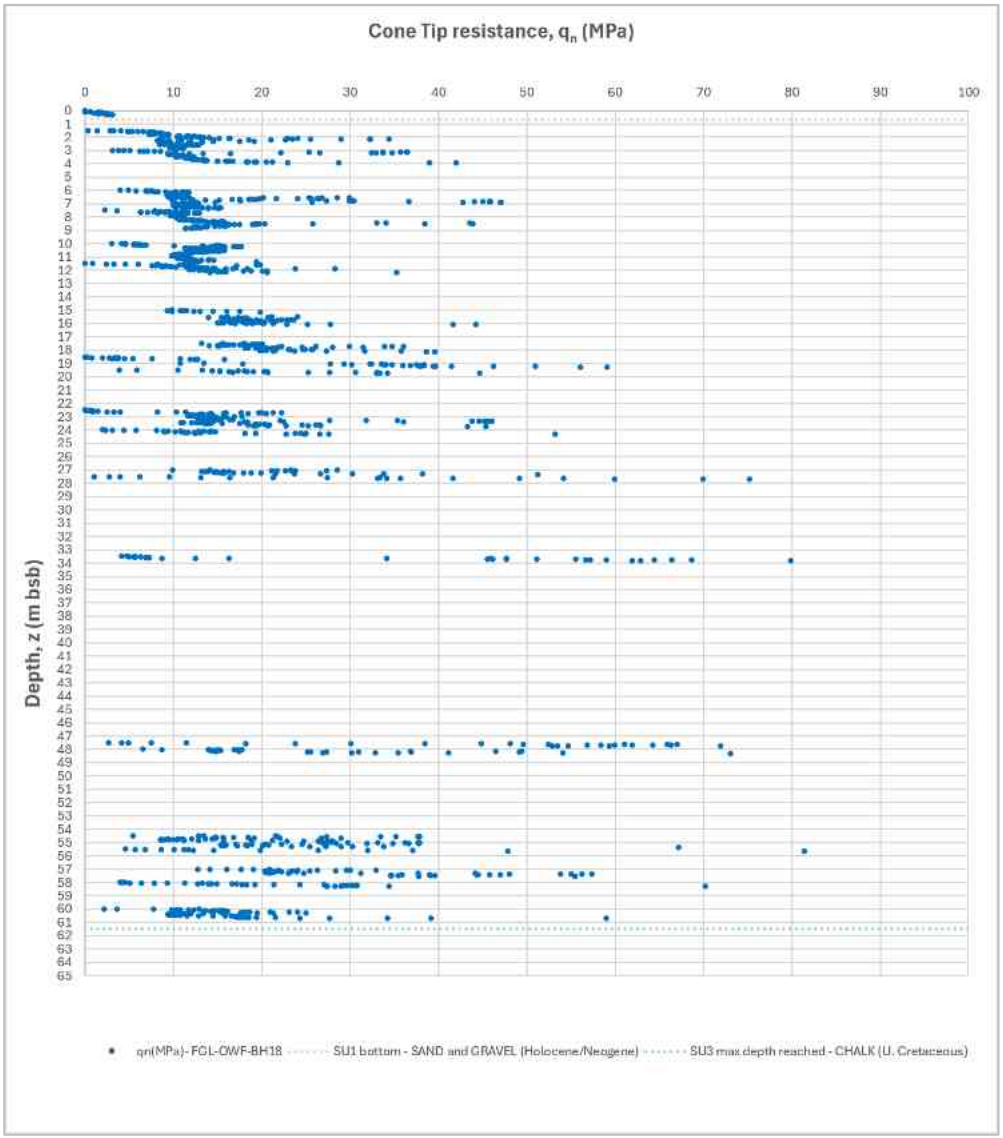

Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH15
Internal Friction Angle (ø') from CPT - FGL-OWF-BH15-a
PHI Onshore from SB (°) - FGL-OWF-BH15
Cohesion Onshore from SB (kPa) - FGL-OWF-BH15
PHI Onshore from SB (°) - FGL-OWF-BH15-a
Cohesion Onshore from SB (kPa) - FGL-OWF-BH15-a
SU7 bottom - Dense SAND (L.Cretaceous)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)

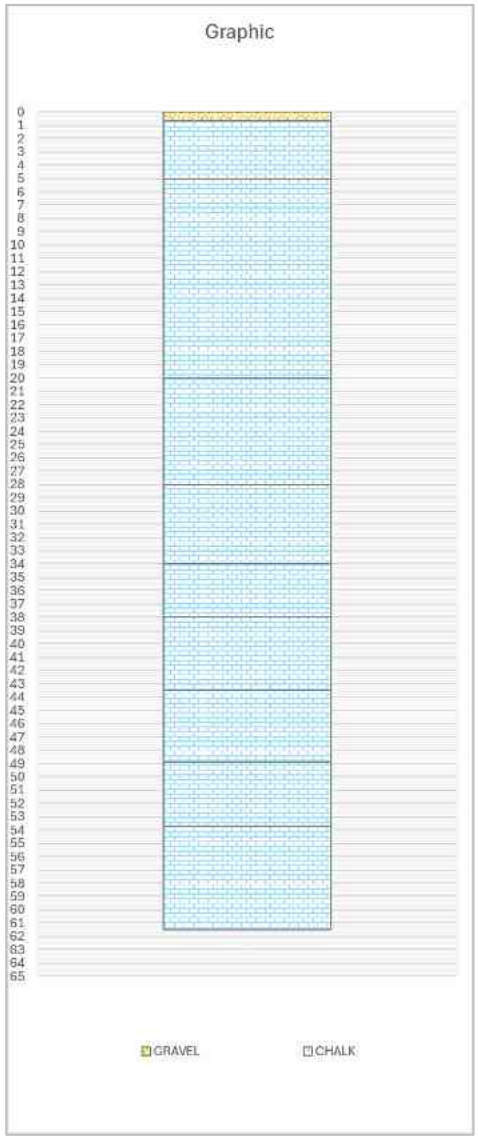

Graphic
SAND
CLAY
No recovery
SILT

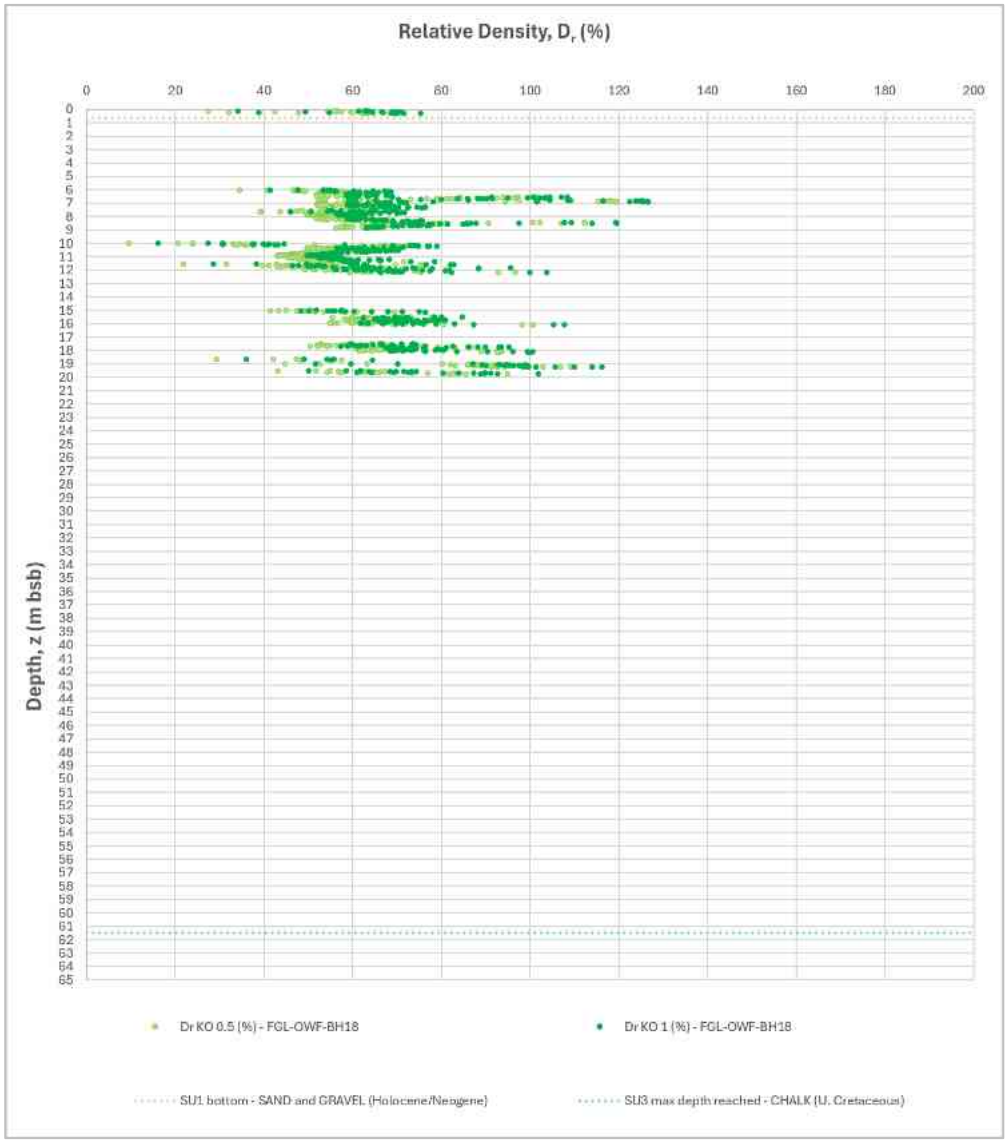

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH15
Bulk Density (kN/m3) offshore - FGL-OWF-BH15-a
SU7 bottom - Dense SAND (L Cretaceous)
Bulk Density (kN/m3) onshore - FGL-OWF-BH15
Bulk Density (kN/m3) onshore - FGL-OWF-BH15-a
Moisture Content (%) offshore - FGL-OWF-BH15
Moisture Content (%) onshore - FGL-OWF-BH15
Dry Density (kN/m3) offshore - FGL-OWF-BH15
Dry Density (kN/m3) offshore - FGL-OWF-BH15-a
SU8 max depth reached - SAND and CLAY/SILT (L Cretaceous)
Dry Density (kN/m3) onshore - FGL-OWF-BH15
Dry Density (kN/m3) onshore - FGL-OWF-BH15-a
Moisture Content (%) offshore - FGL-OWF-BH15-a
Moisture Content (%) onshore - FGL-OWF-BH15-a

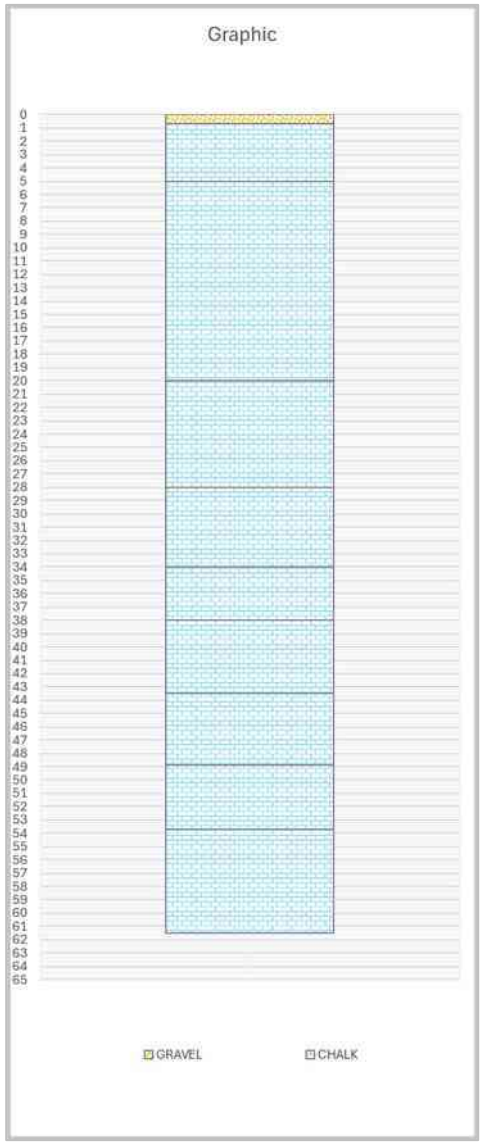

Graphic
SAND
CLAY
No recovery
SILT

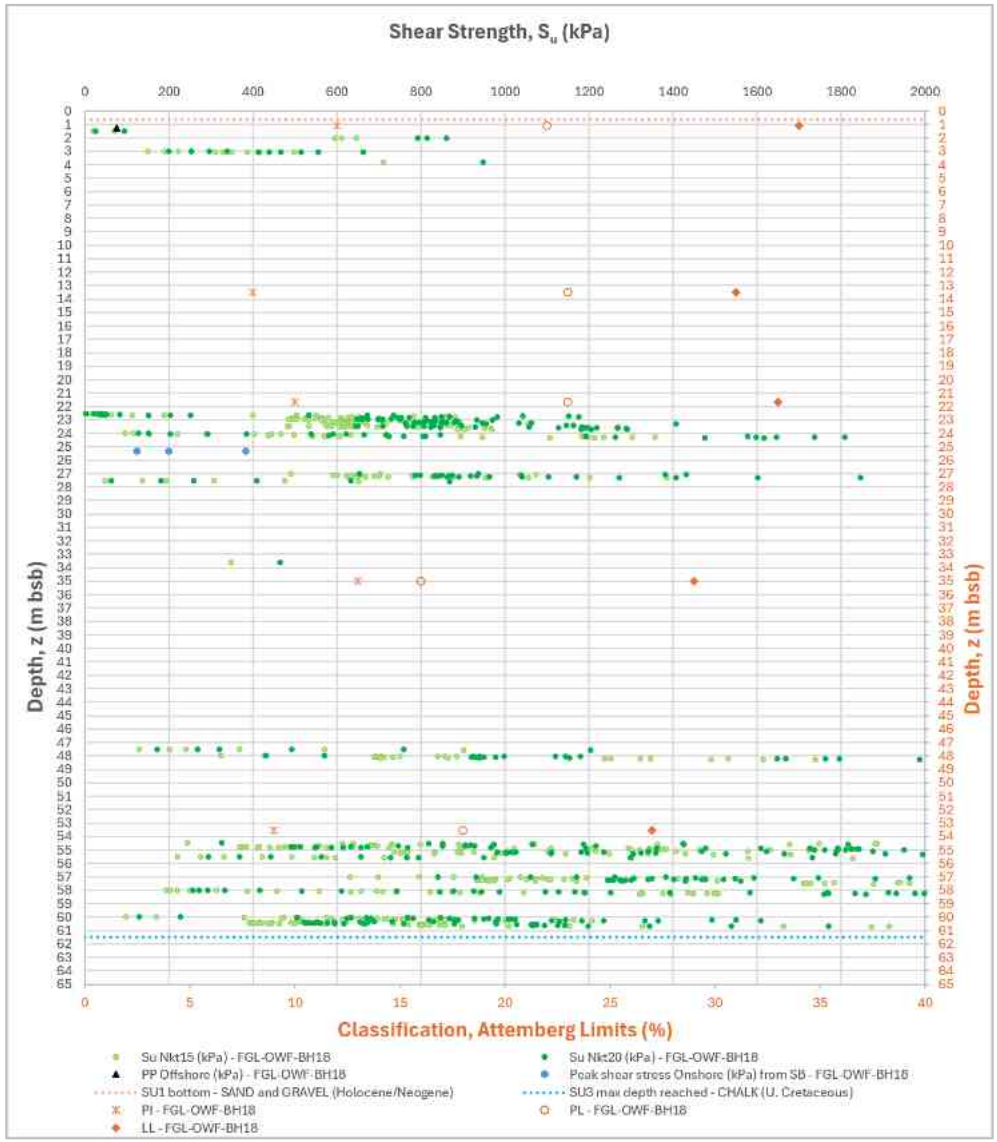
FGL-OWF-BH18

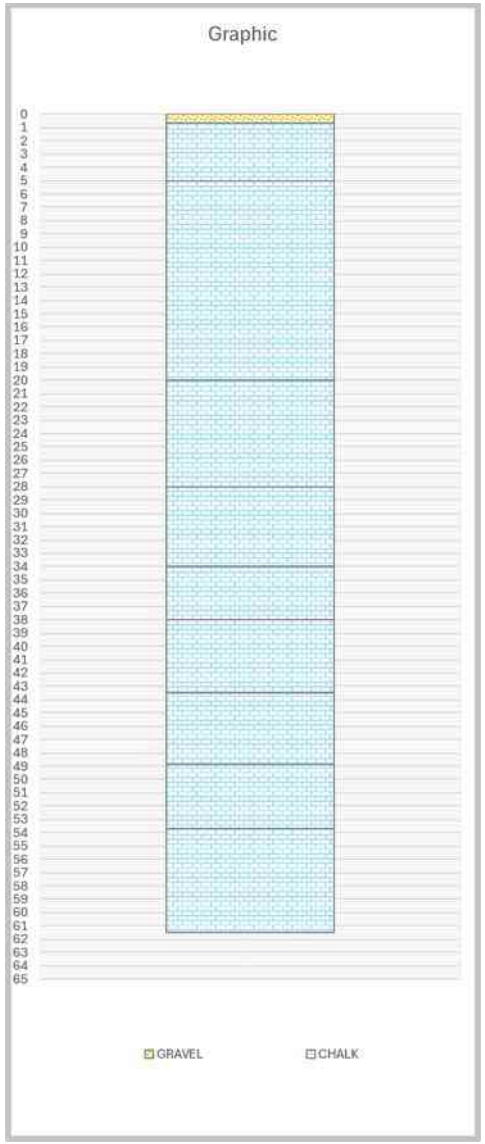

Cone Tip resistance, q_n (MPa)
0
10
20
30
40
50
60
70
80
90
100
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH18
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

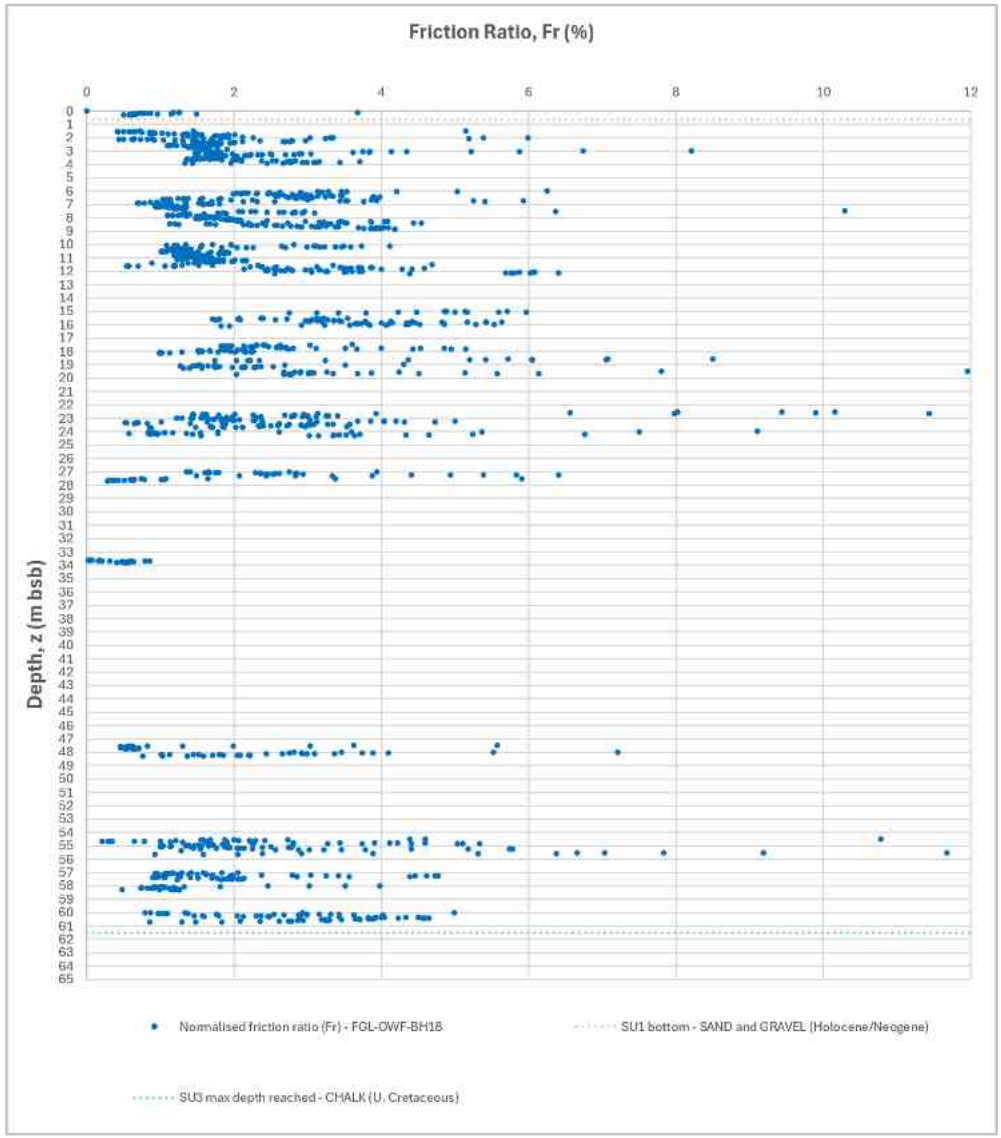

Graphic
GRAVEL
CHALK

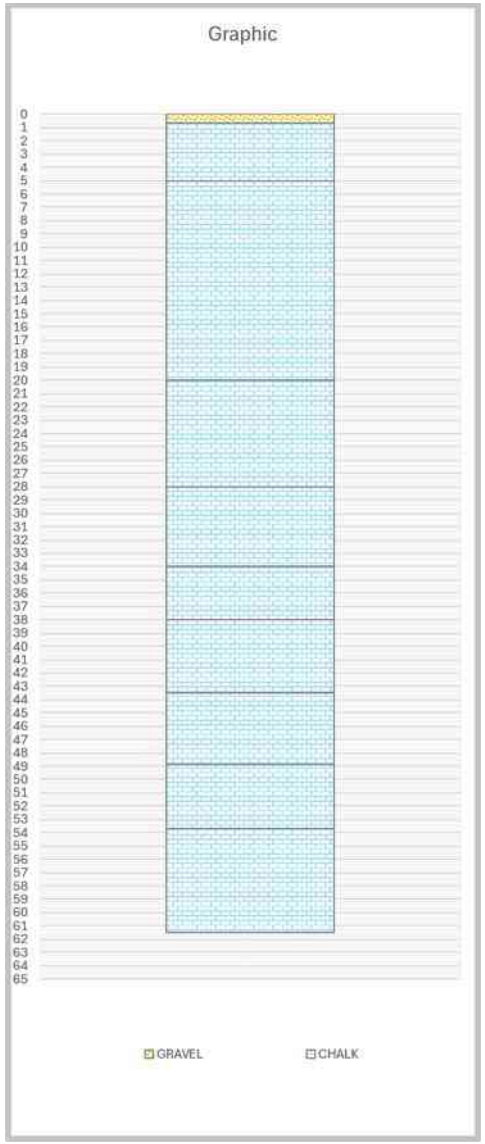

Relative Density, D_r (%)
0
20
40
60
80
100
120
140
160
180
200
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH18
Dr KO 1 (%) - FGL-OWF-BH18
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

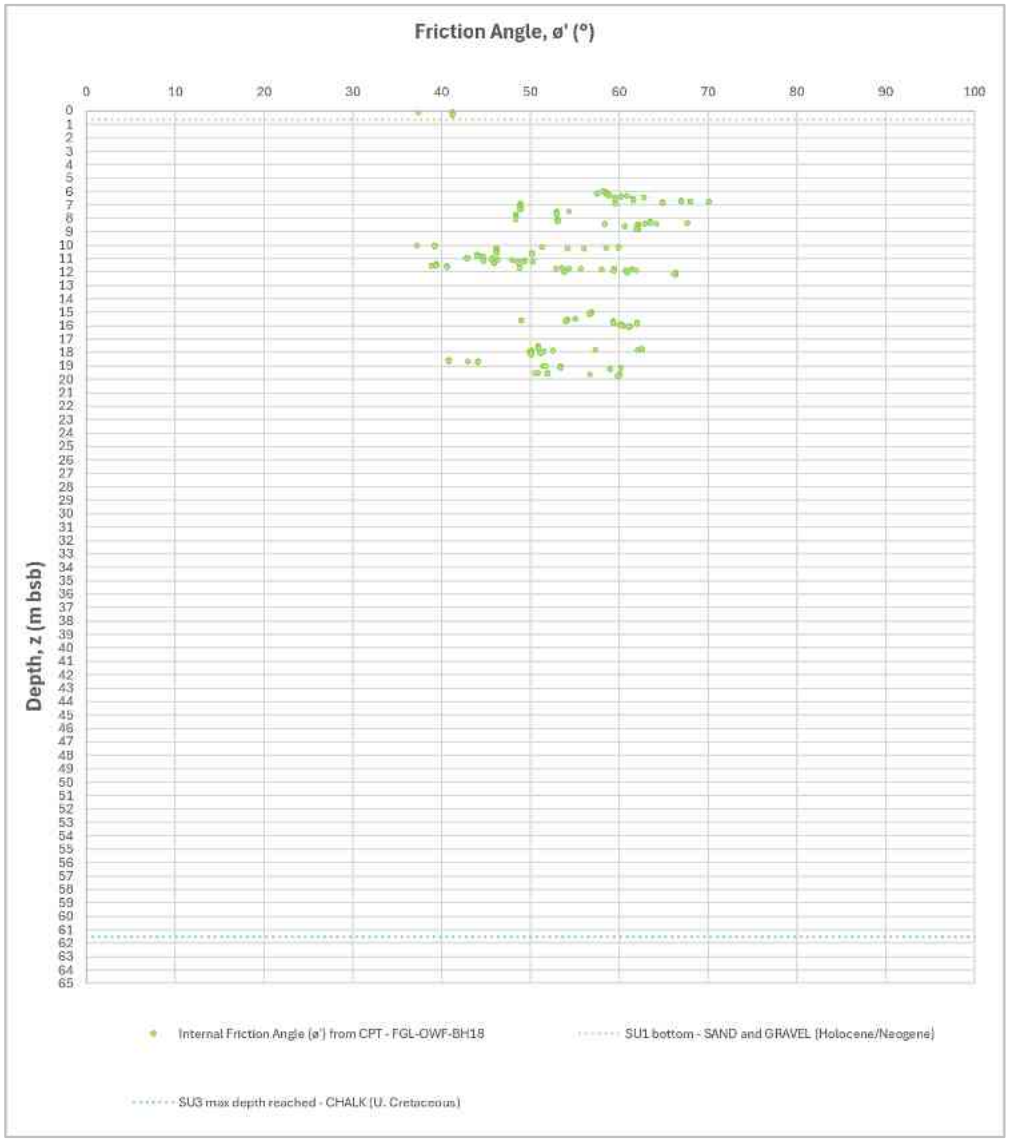

Graphic
GRAVEL
CHALK

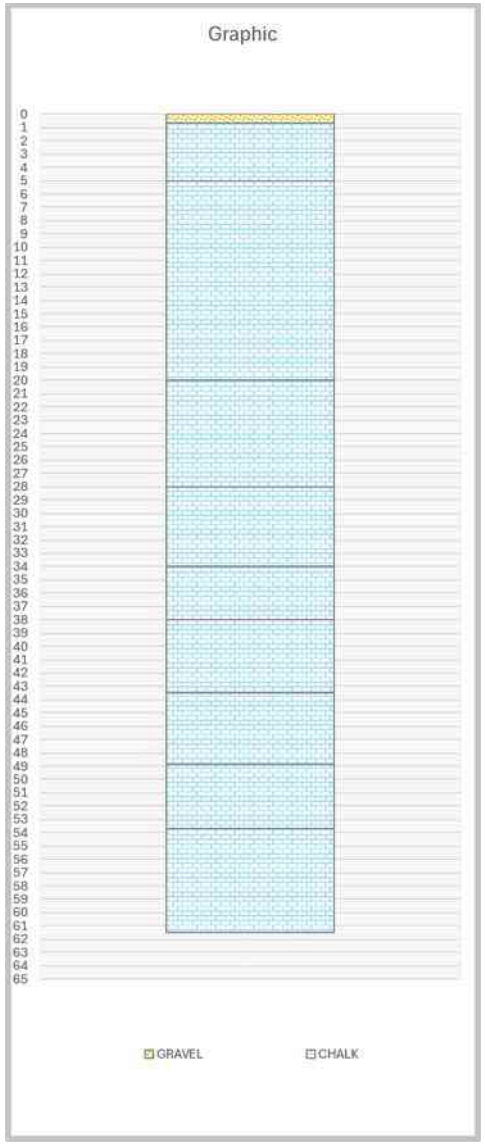

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 (kPa) - FGL-OWF-BH18
Su Nkt20 (kPa) - FGL-OWF-BH18
PP Offshore (kPa) - FGL-OWF-BH18
Peak shear stress Onshore (kPa) from SB - FGL-OWF-BH18
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
PI - FGL-OWF-BH18
PL - FGL-OWF-BH18
LL - FGL-OWF-BH18

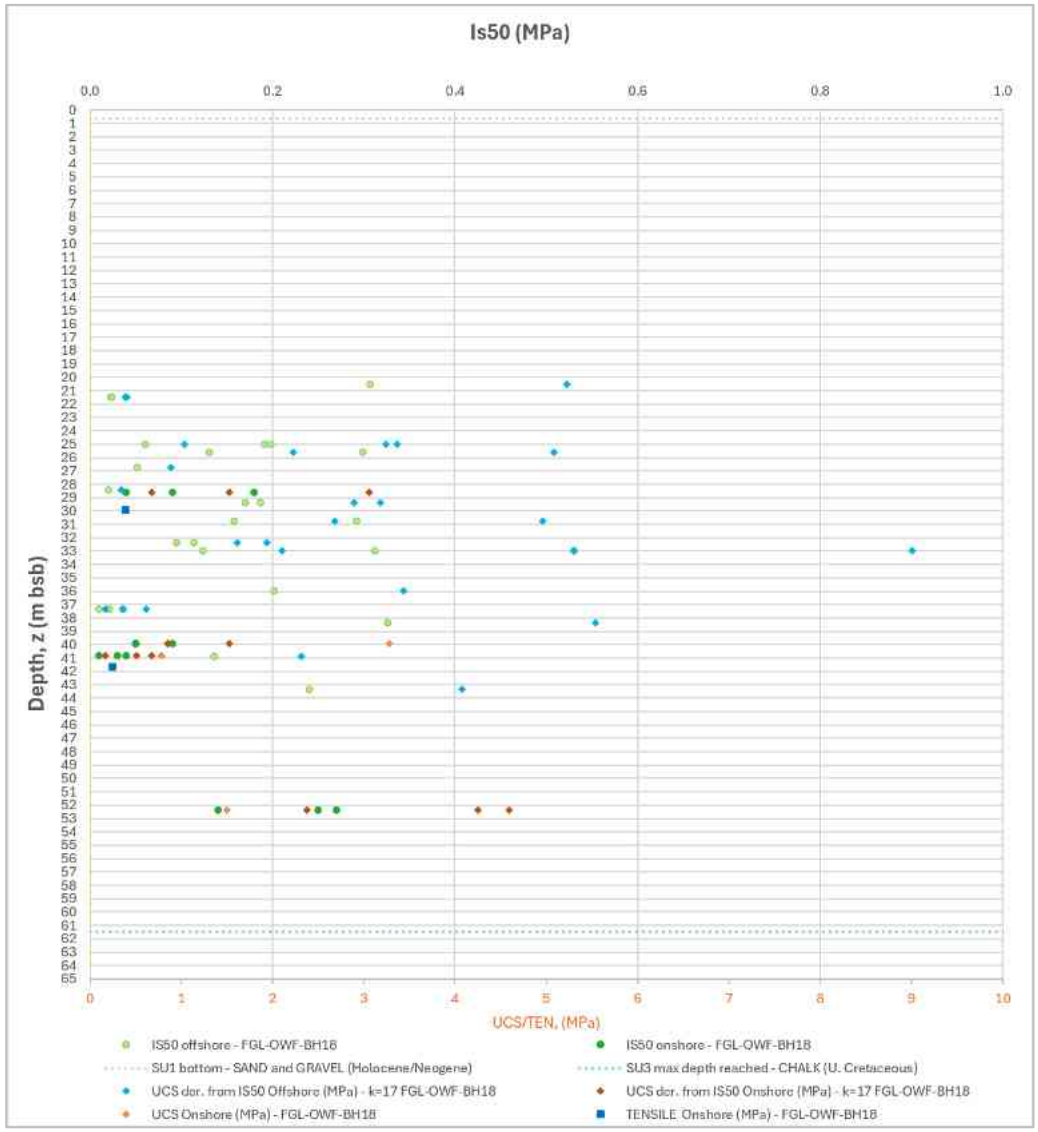

Graphic
GRAVEL
CHALK

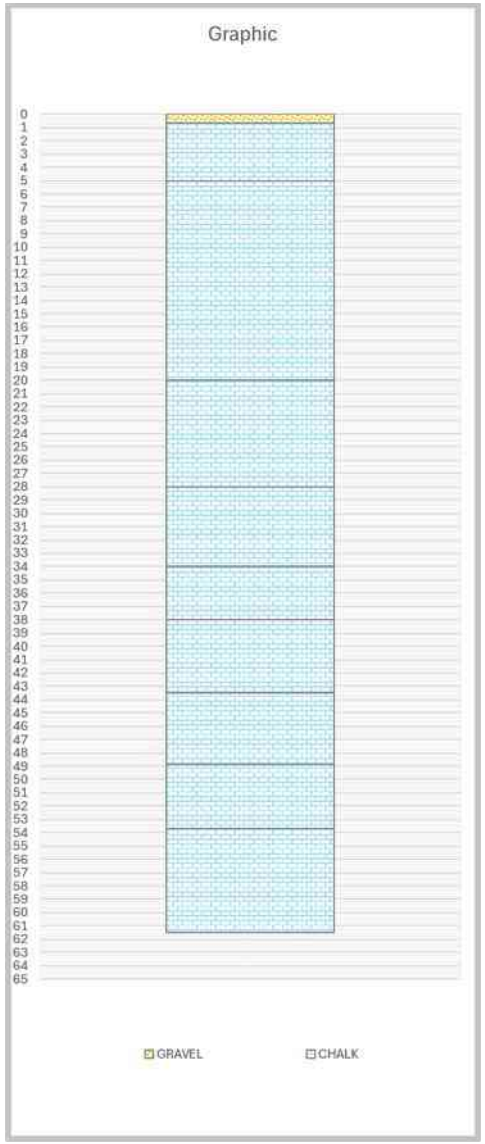

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH18
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)

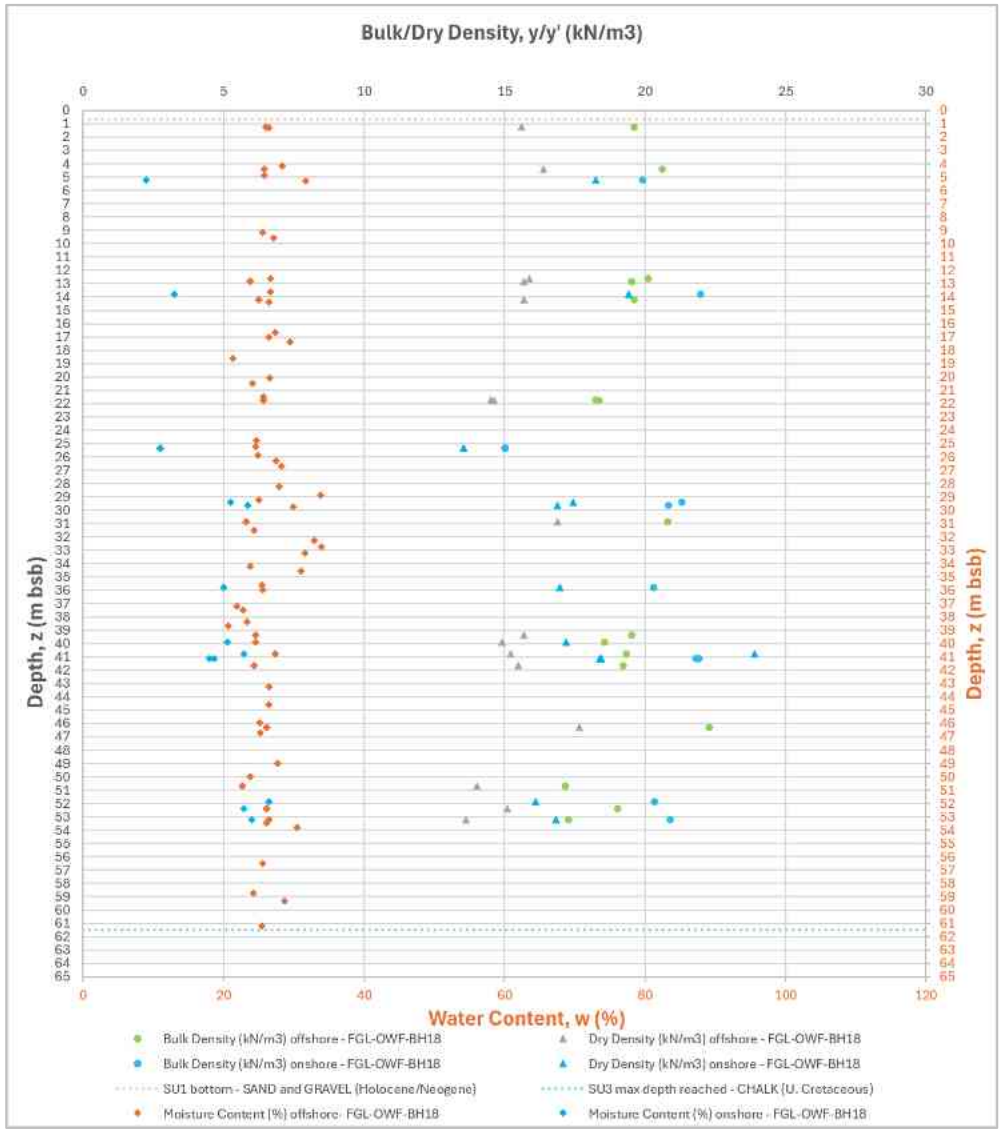

Graphic
GRAVEL
CHALK

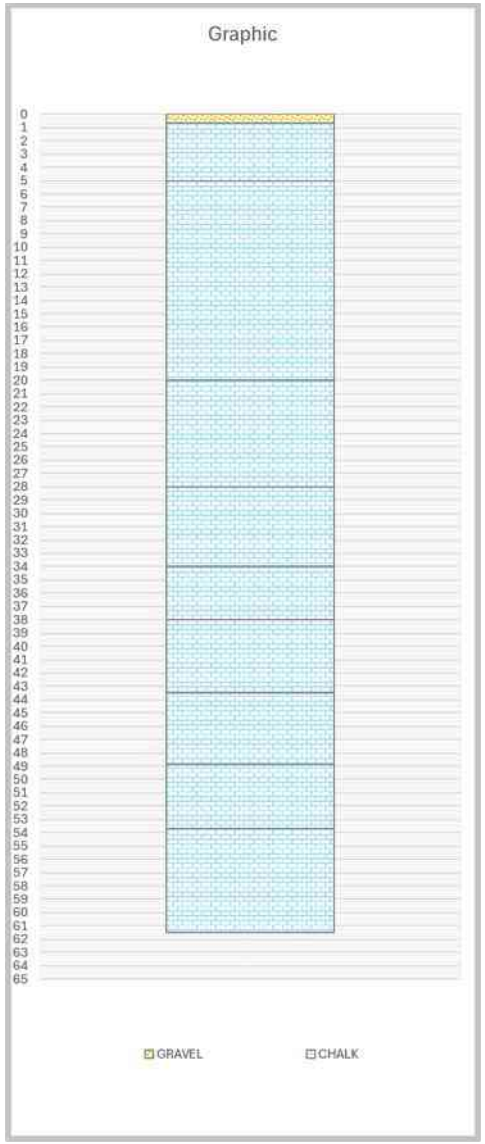

Friction Angle, ø' (°)
0
10
20
30
40
50
60
70
80
90
100
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH18
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
GRAVEL
CHALK


Is50 (MPa)
0.0
0.2
0.4
0.6
0.8
1.0
Depth, z (m bsb)
UCS/TEN, (MPa)
0
1
2
3
4
5
6
7
8
9
10
IS50 offshore - FGL-OWF-BH18
IS50 onshore - FGL-OWF-BH18
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH18
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH18
UCS Onshore (MPa) - FGL-OWF-BH18
TENSILE Onshore (MPa) - FGL-OWF-BH18

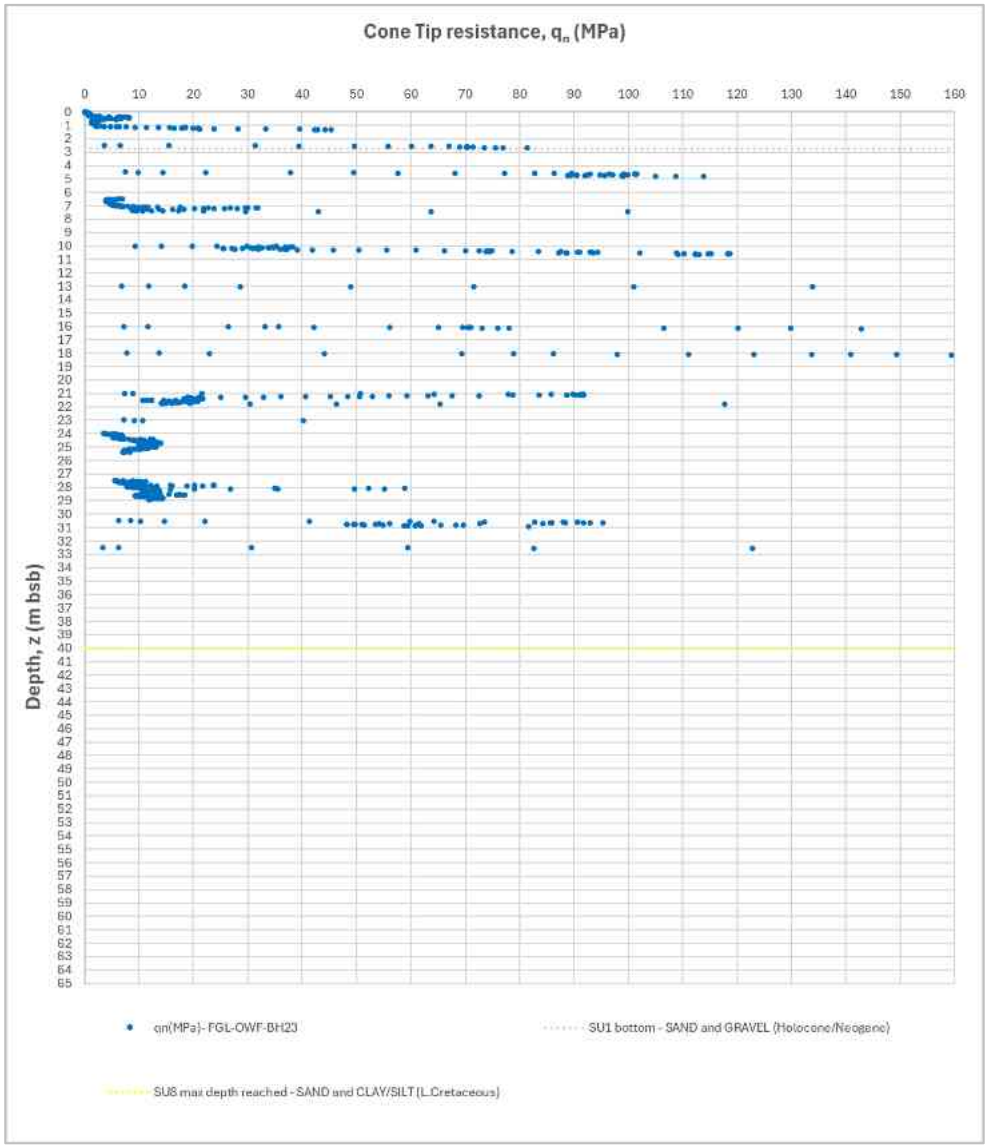

Graphic
GRAVEL
CHALK

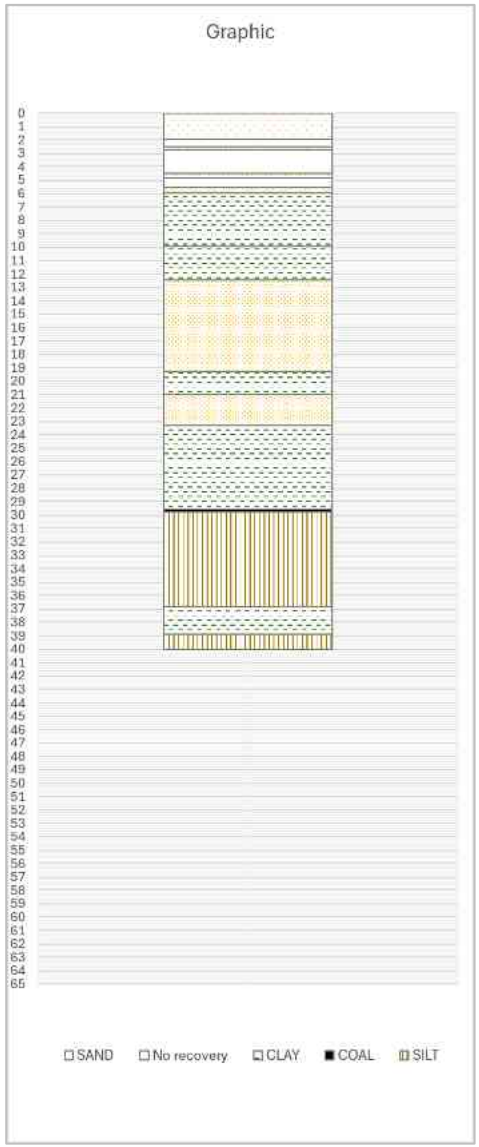

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH18
Dry Density (kN/m3) offshore - FGL-OWF-BH18
Bulk Density (kN/m3) onshore - FGL-OWF-BH18
Dry Density (kN/m3) onshore - FGL-OWF-BH18
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU3 max depth reached - CHALK (U. Cretaceous)
Moisture Content (%) offshore - FGL-OWF-BH18
Moisture Content (%) onshore - FGL-OWF-BH18

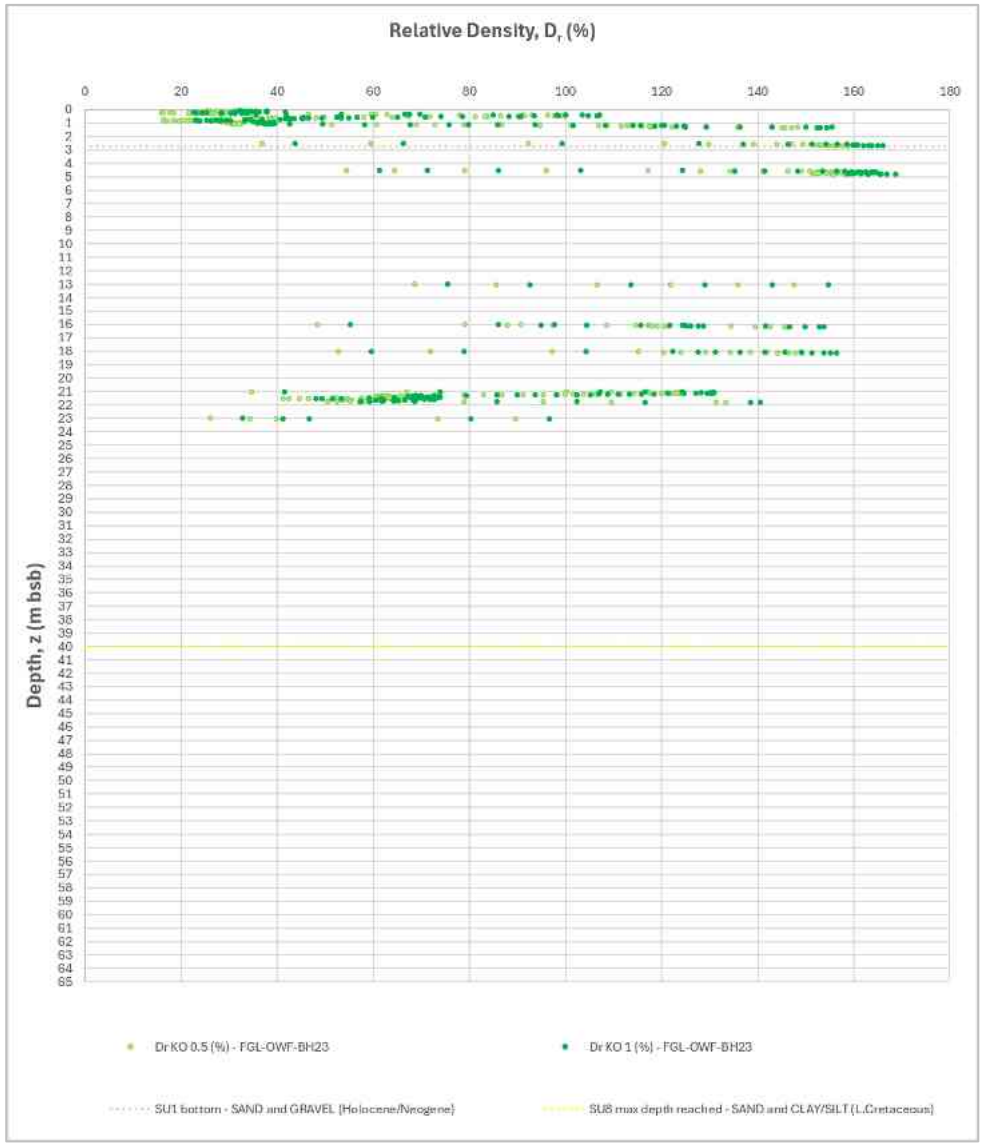

Graphic
GRAVEL
CHALK

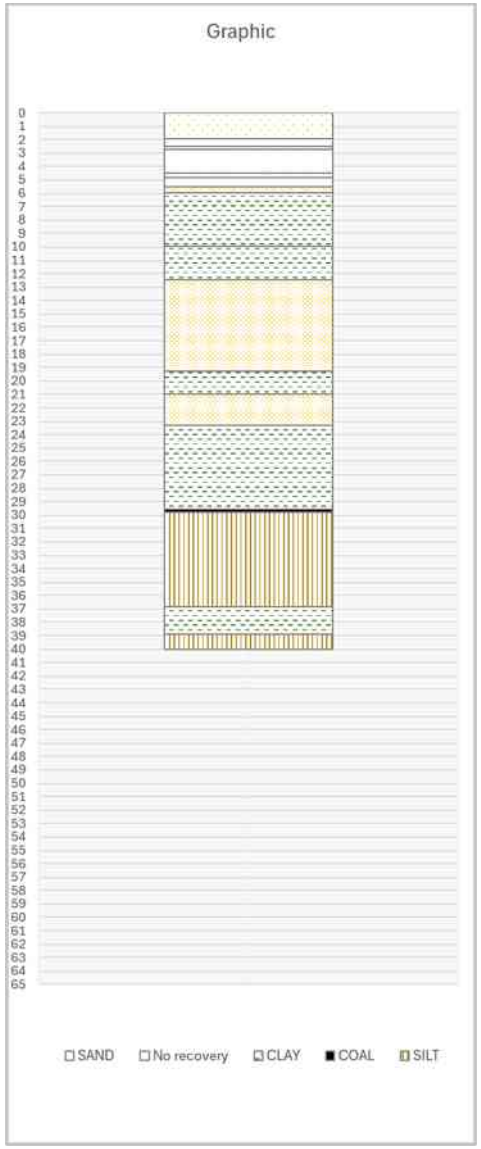
FGL-OWF-BH23

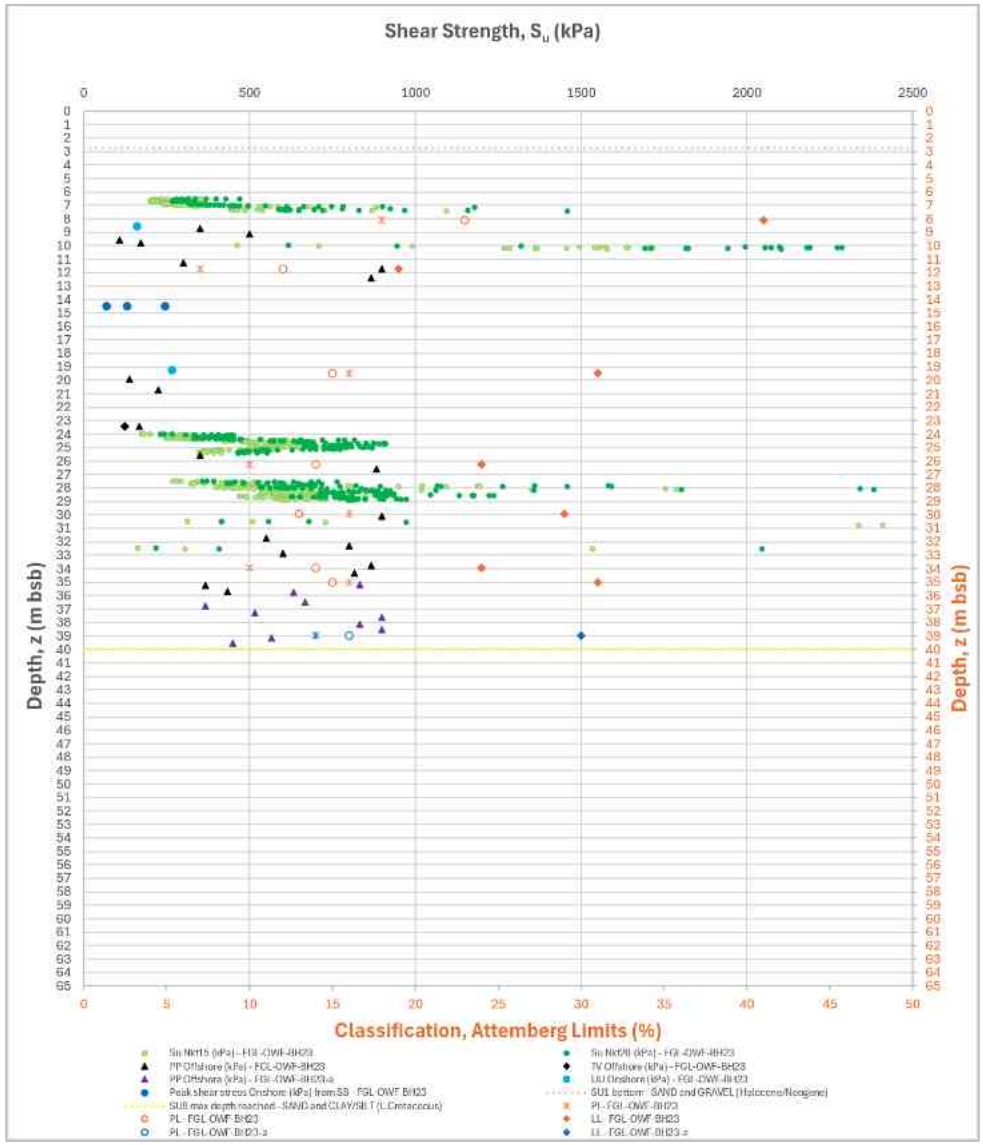
FGL-OWF-BH23-a

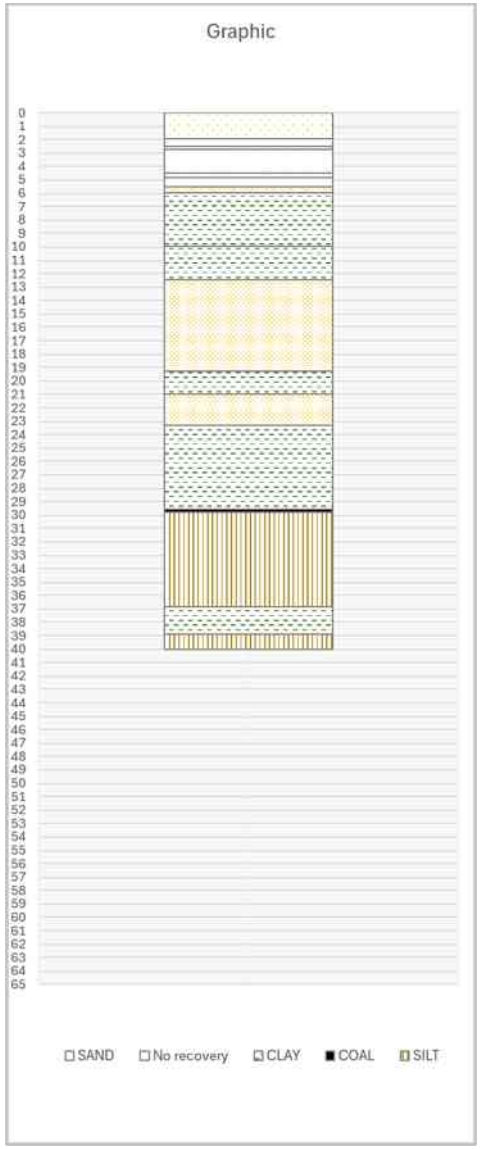

Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH23
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)

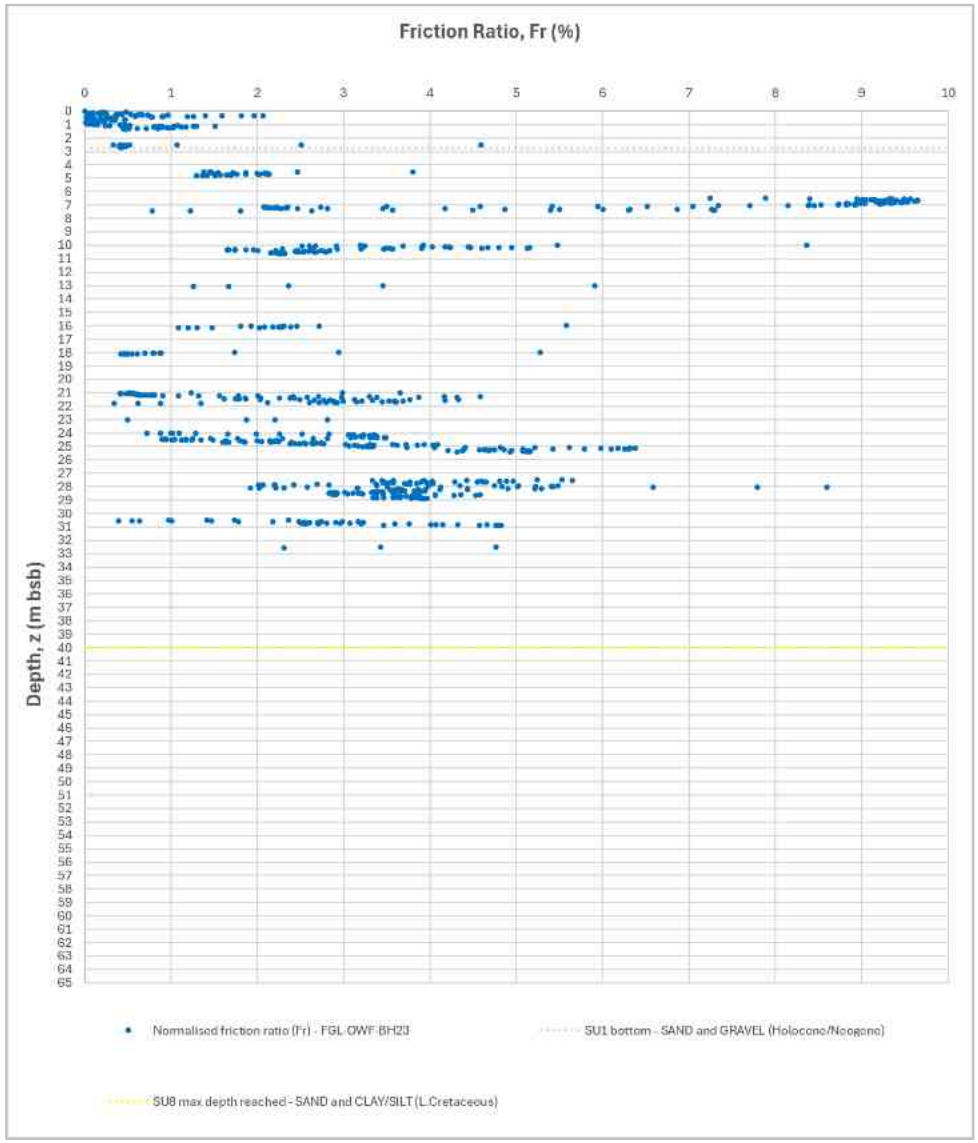

Graphic
SAND
No recovery
CLAY
COAL
SILT

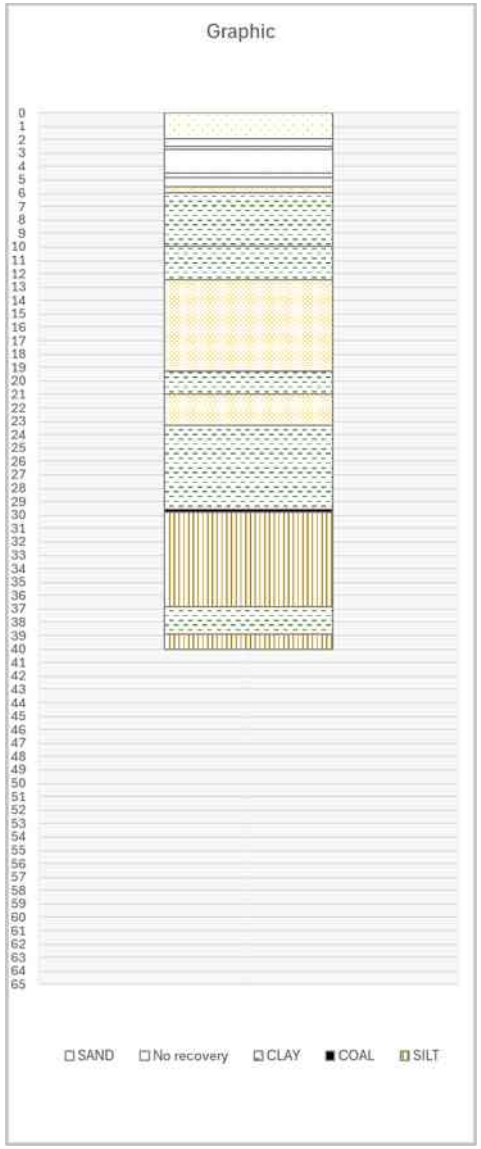

Relative Density, D_r (%)
Depth, z (m bsb)
Dr KO 0.5 (%) - FGL-OWF-BH23
Dr KO 1 (%) - FGL-OWF-BH23
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)

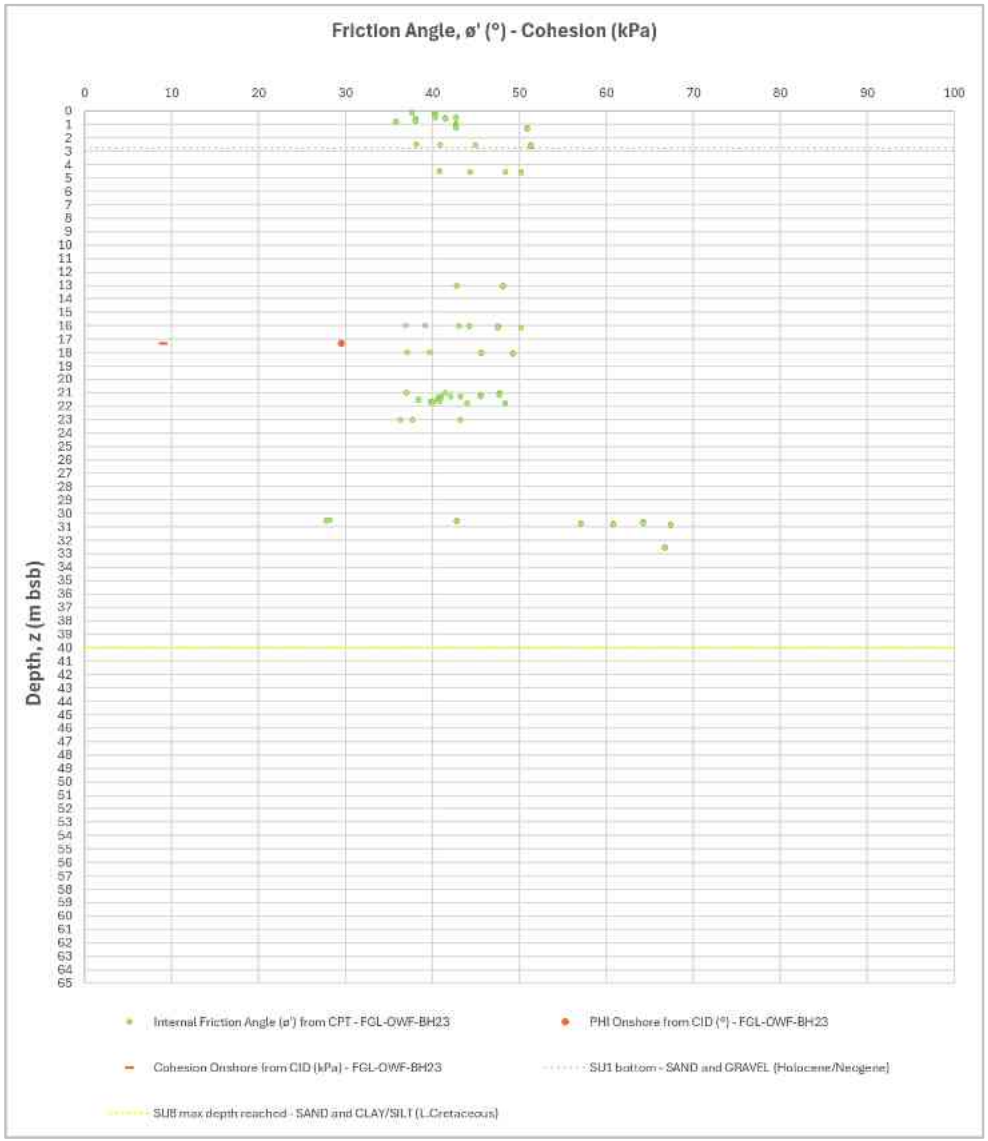

Graphic
SAND
No recovery
CLAY
COAL
SILT

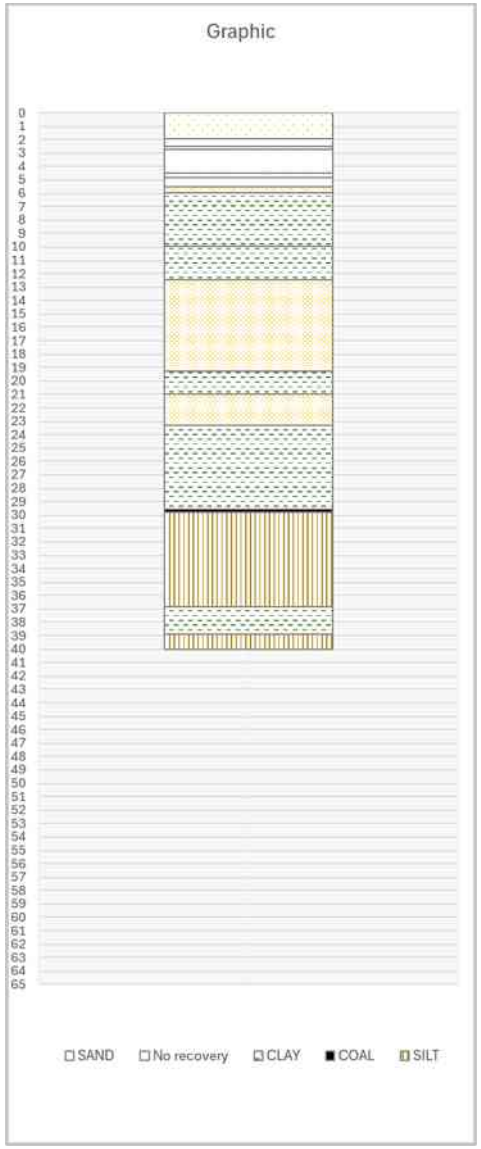

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
PP Offshore (kPa) - FGL-OWF-BH23
Peak shear stress Onshore (kPa) from SB - FGL-OWF-BH23
PL - FGL-OWF-BH23
PL - FGL-OWF-BH23-a
TV Offshore (kPa) - FGL-OWF-BH23
LL - FGL-OWF-BH23
LL - FGL-OWF-BH23-a

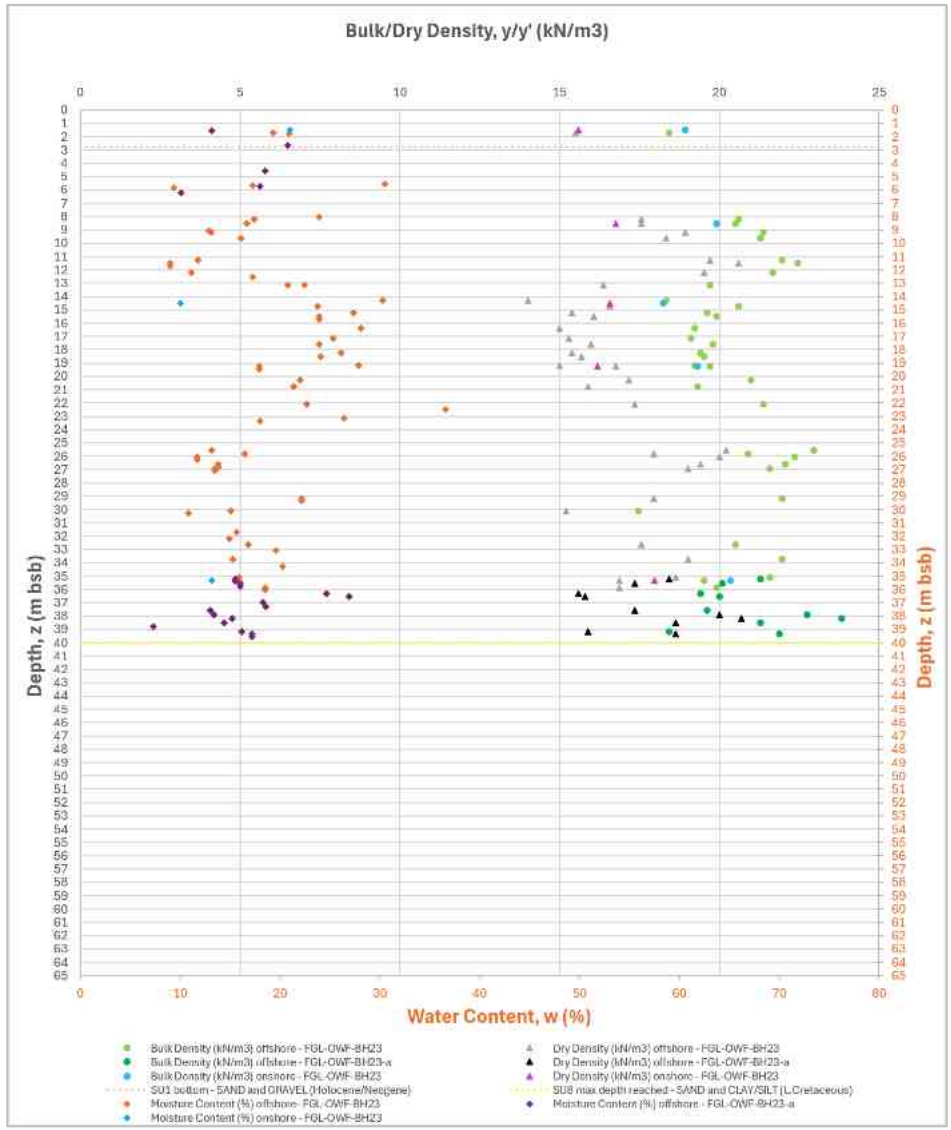

Graphic
SAND
No recovery
CLAY
COAL
SILT

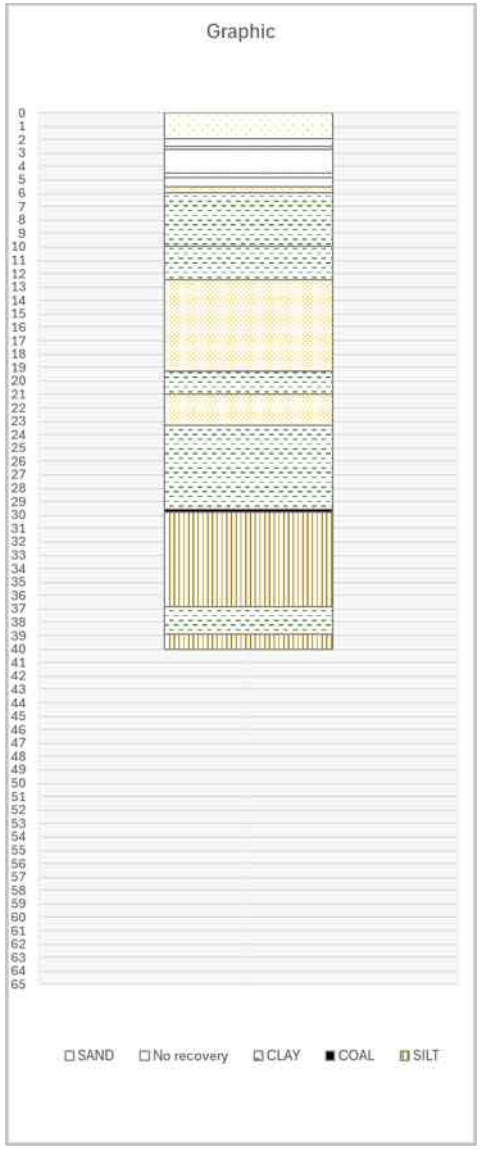

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL OWF BH23
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)


Graphic
SAND
No recovery
CLAY
COAL
SILT


Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
Internal Friction Angle (ø') from CPT - FGL-OWF-BH23
PHI Onshore from CID (°) - FGL-OWF-BH23
Cohesion Onshore from CID (kPa) - FGL-OWF-BH23
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)

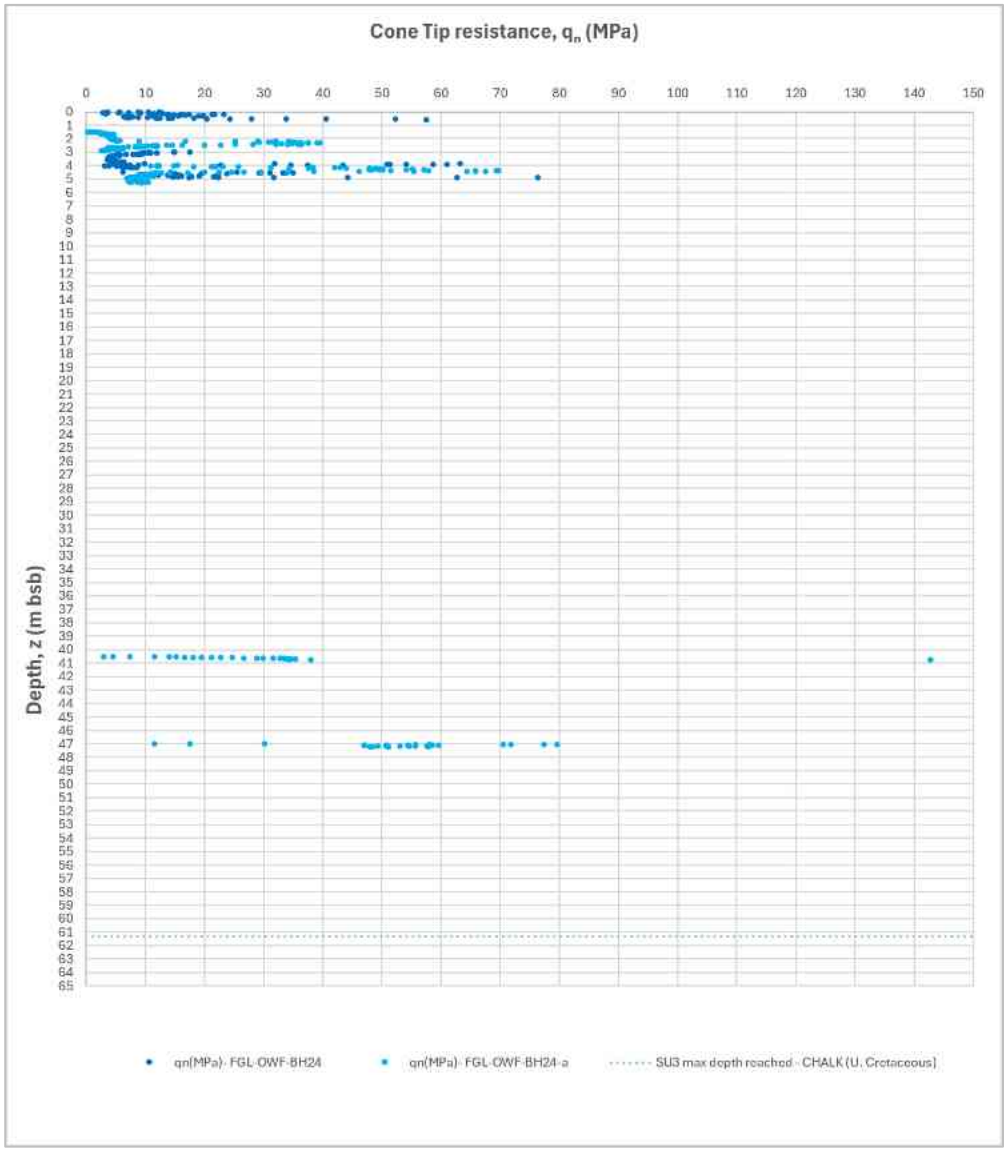

Graphic
SAND
No recovery
CLAY
COAL
SILT

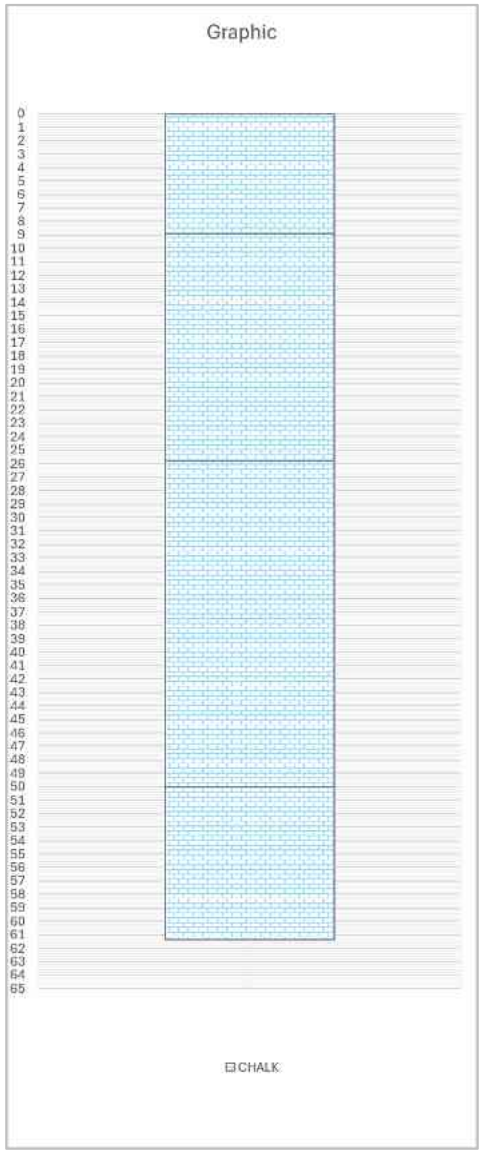

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH23
Bulk Density (kN/m3) offshore - FGL-OWF-BH23-a
Bulk Density (kN/m3) onshore - FGL-OWF-BH23
SU1 bottom - SAND and GRAVEL (Holocene/Neogene)
Moisture Content (%) offshore - FGL-OWF-BH23
Moisture Content (%) onshore - FGL-OWF-BH23
Dry Density (kN/m3) offshore - FGL-OWF-BH23
Dry Density (kN/m3) offshore - FGL-OWF-BH23-a
Dry Density (kN/m3) onshore - FGL-OWF-BH23
SU8 max depth reached - SAND and CLAY/SILT (L.Cretaceous)
Moisture Content (%) offshore - FGL-OWF-BH23-a

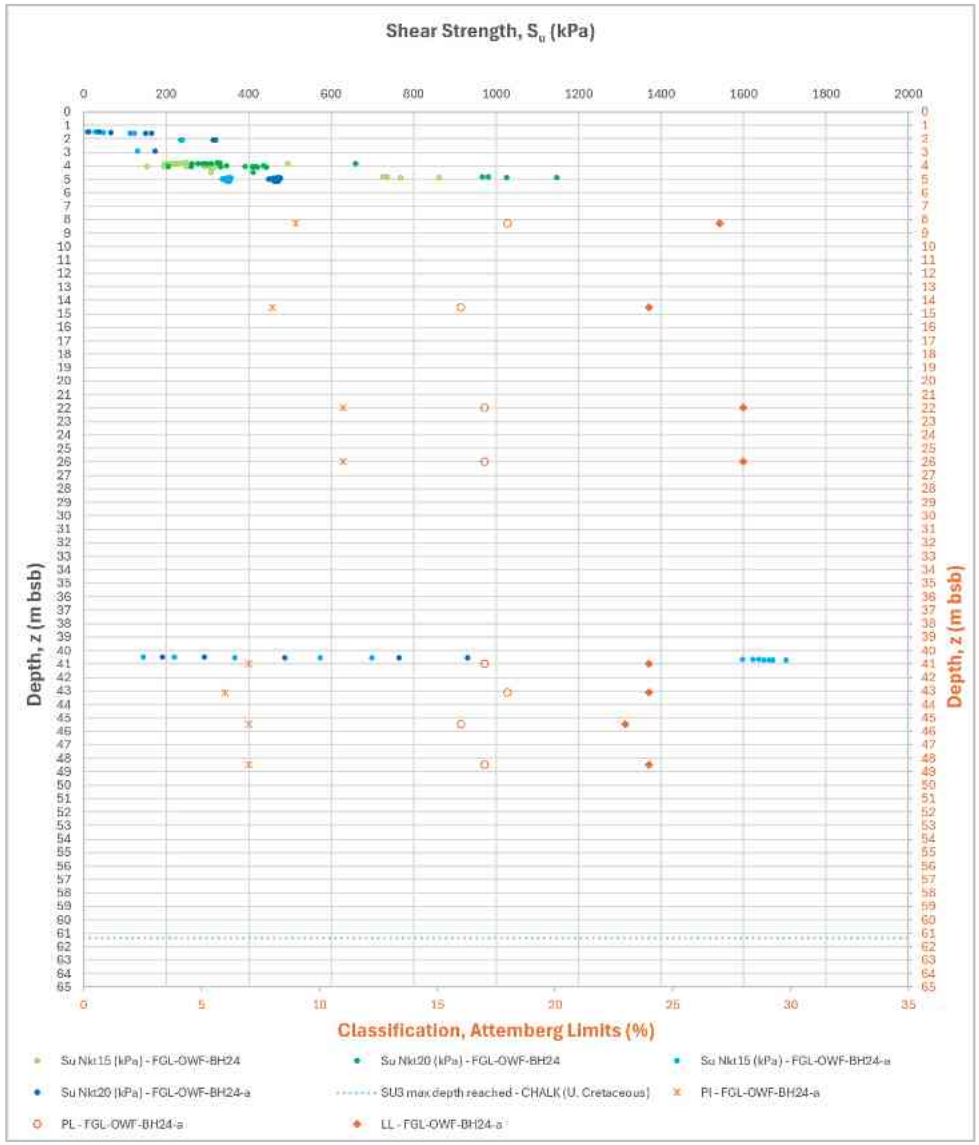

Graphic
SAND
No recovery
CLAY
COAL
SILT

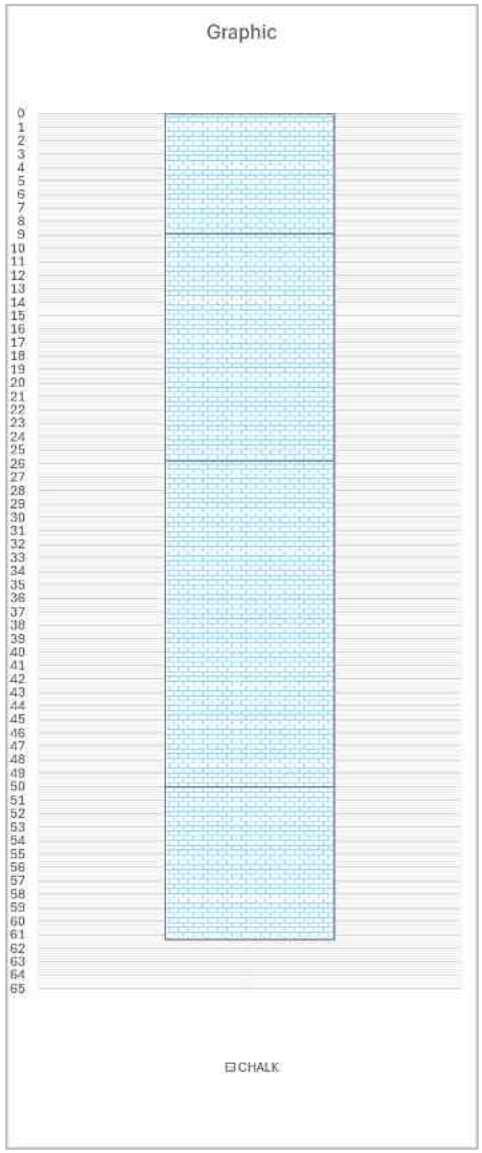
FGL-OWF-BH24

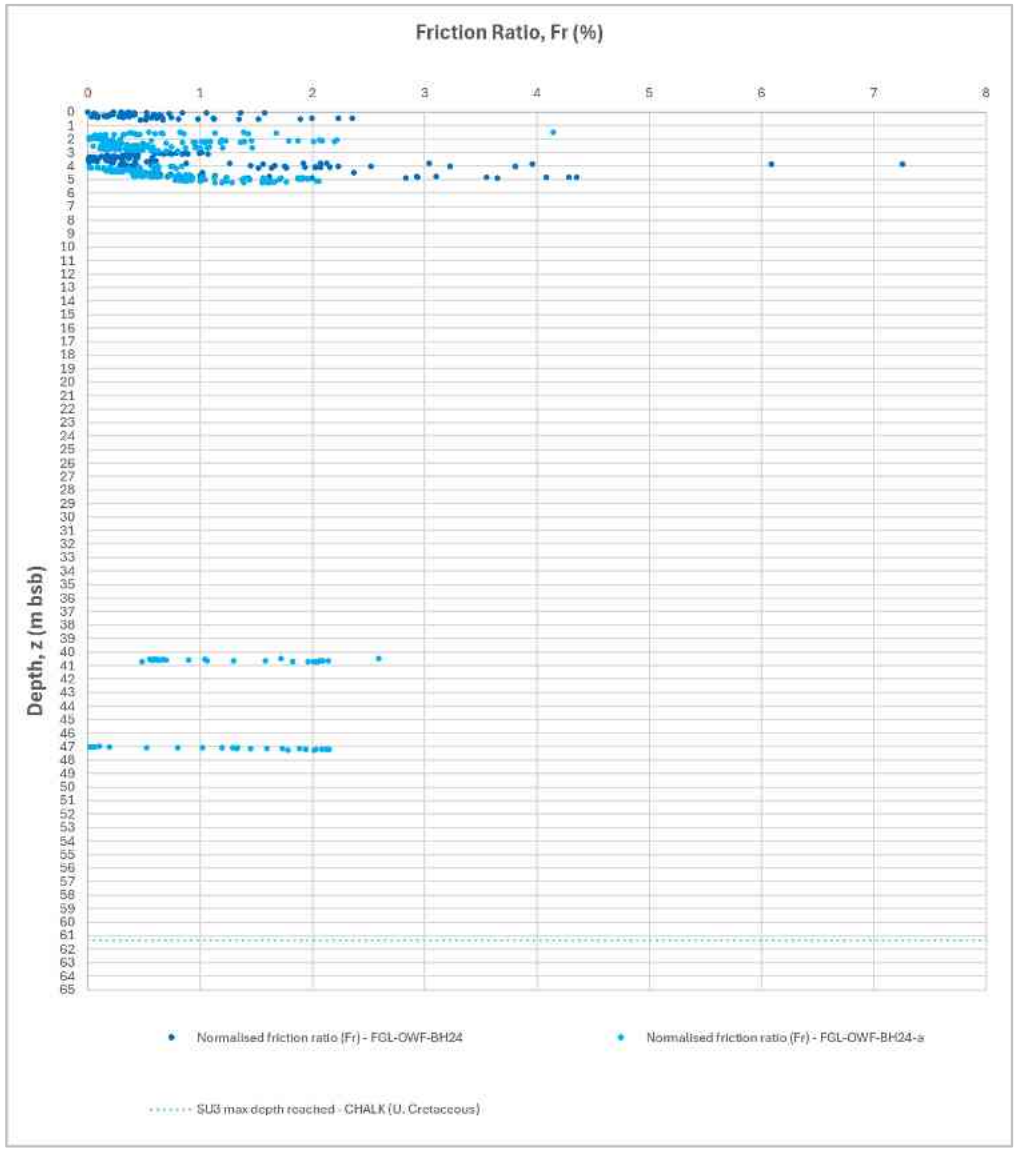
FGL-OWF-BH24-a

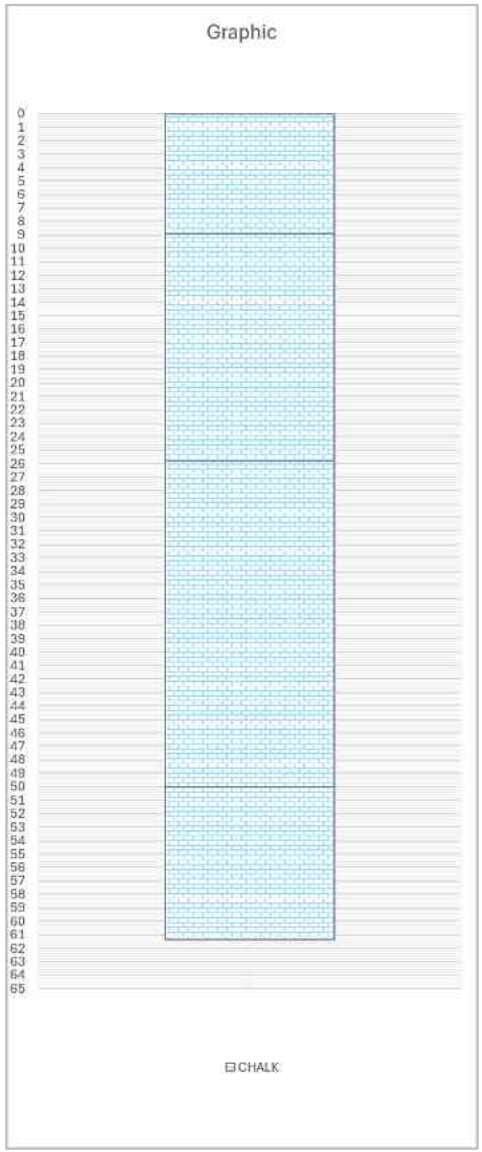

Cone Tip resistance, q_n (MPa)
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
Depth, z (m bsb)
qn(MPa)- FGL-OWF-BH24
qn(MPa)- FGL-OWF-BH24-a
SU3 max depth reached - CHALK (U. Cretaceous)

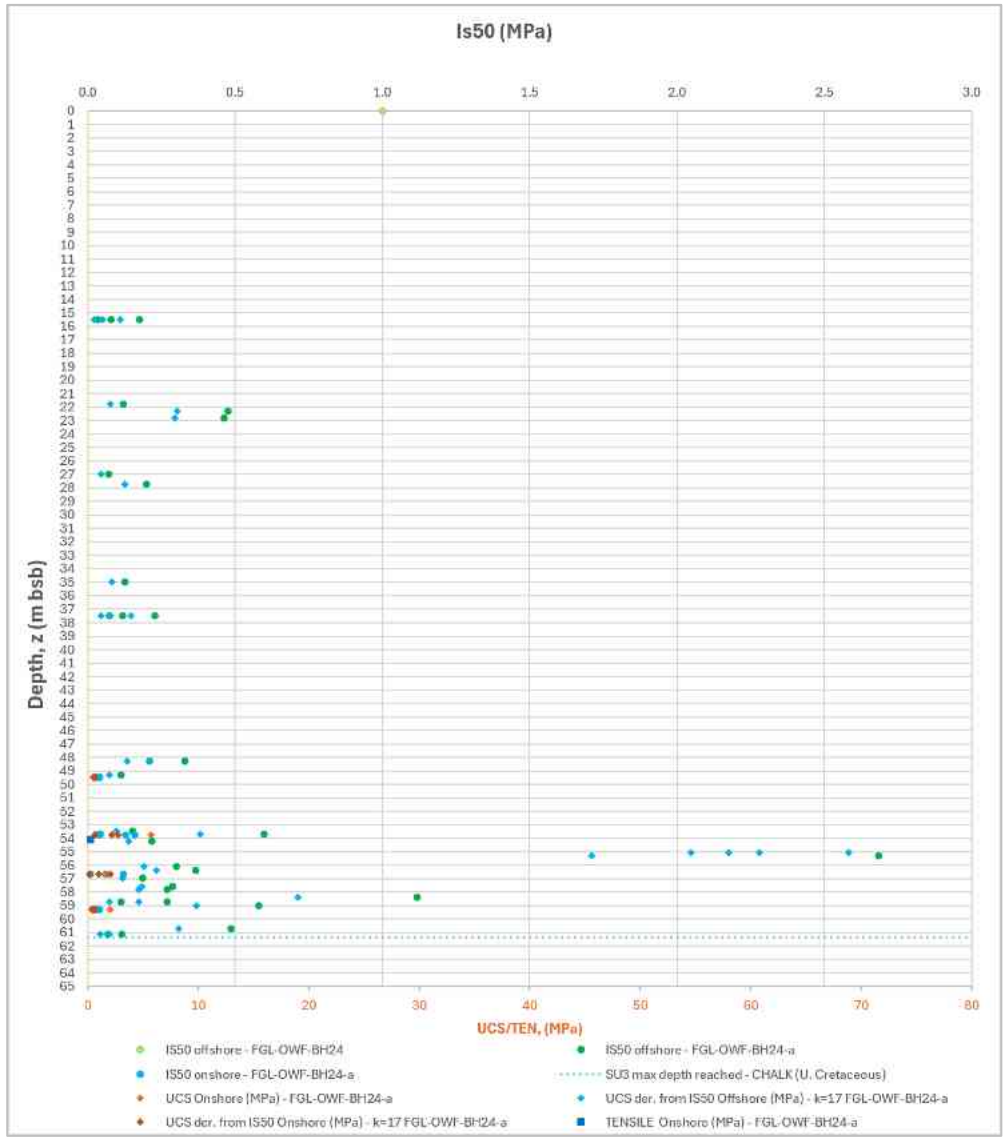

Graphic
CHALK

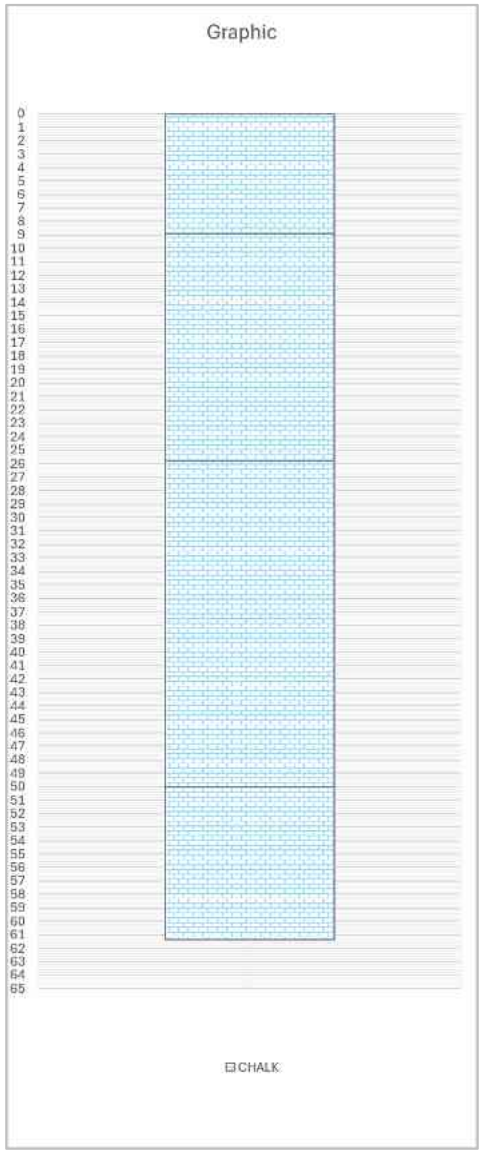

Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 [kPa] - FGL-OWF-BH24
Su Nkt20 [kPa] - FGL-OWF-BH24
Su Nkt15 (kPa) - FGL-OWF-BH24-a
Su Nkt20 [kPa] - FGL-OWF-BH24-a
SU3 max depth reached - CHALK (U. Cretaceous)
PI - FGL-OWF-BH24-a
PL - FGL-OWF-BH24-a
LL - FGL-OWF-BH24-a

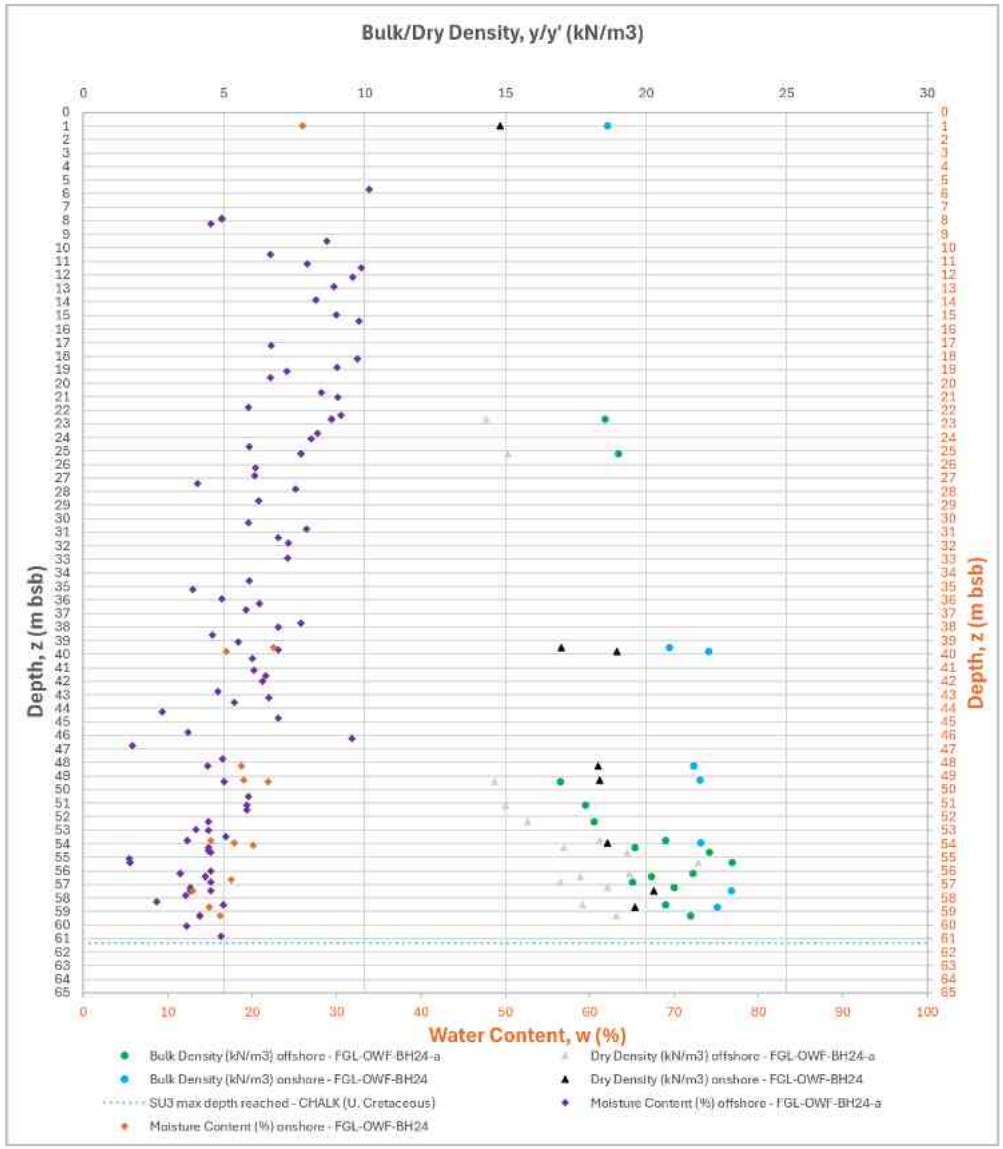

Graphic
CHALK

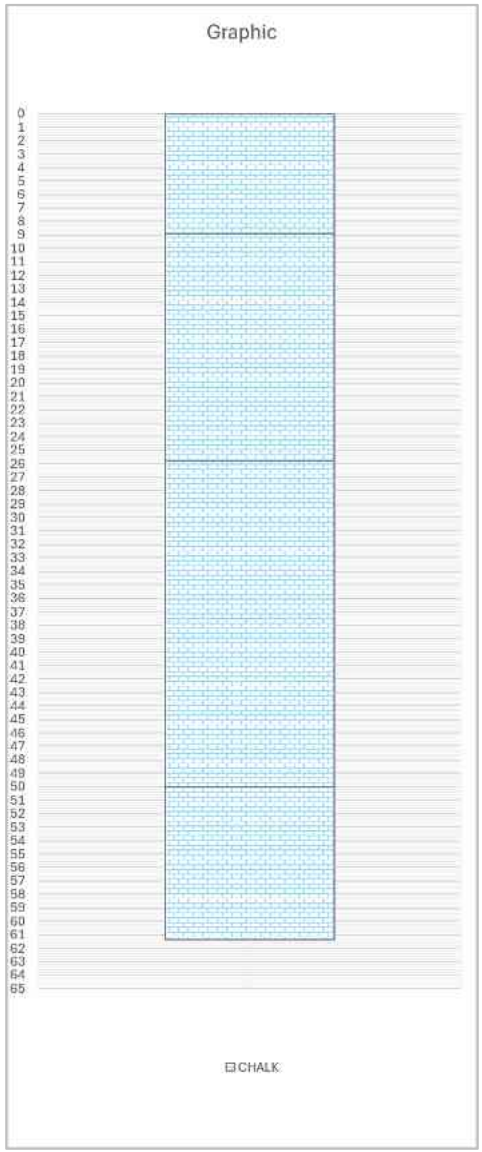

Friction Ratio, Fr (%)
Depth, z (m bsb)
Normalised friction ratio (Fr) - FGL-OWF-BH24
Normalised friction ratio (Fr) - FGL-OWF-BH24-s
SU3 max depth reached - CHALK (U. Cretaceous)


Graphic
CHALK


Is50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 offshore - FGL-OWF-BH24
IS50 offshore - FGL-OWF-BH24-a
IS50 onshore - FGL-OWF-BH24-a
SU3 max depth reached - CHALK (U. Cretaceous)
UCS Onshore (MPa) - FGL-OWF-BH24-a
UCS der. from IS50 Offshore (MPa) - k=17 FGL-OWF-BH24-a
UCS der. from IS50 Onshore (MPa) - k=17 FGL-OWF-BH24-a
TENSILE Onshore (MPa) - FGL-OWF-BH24-a

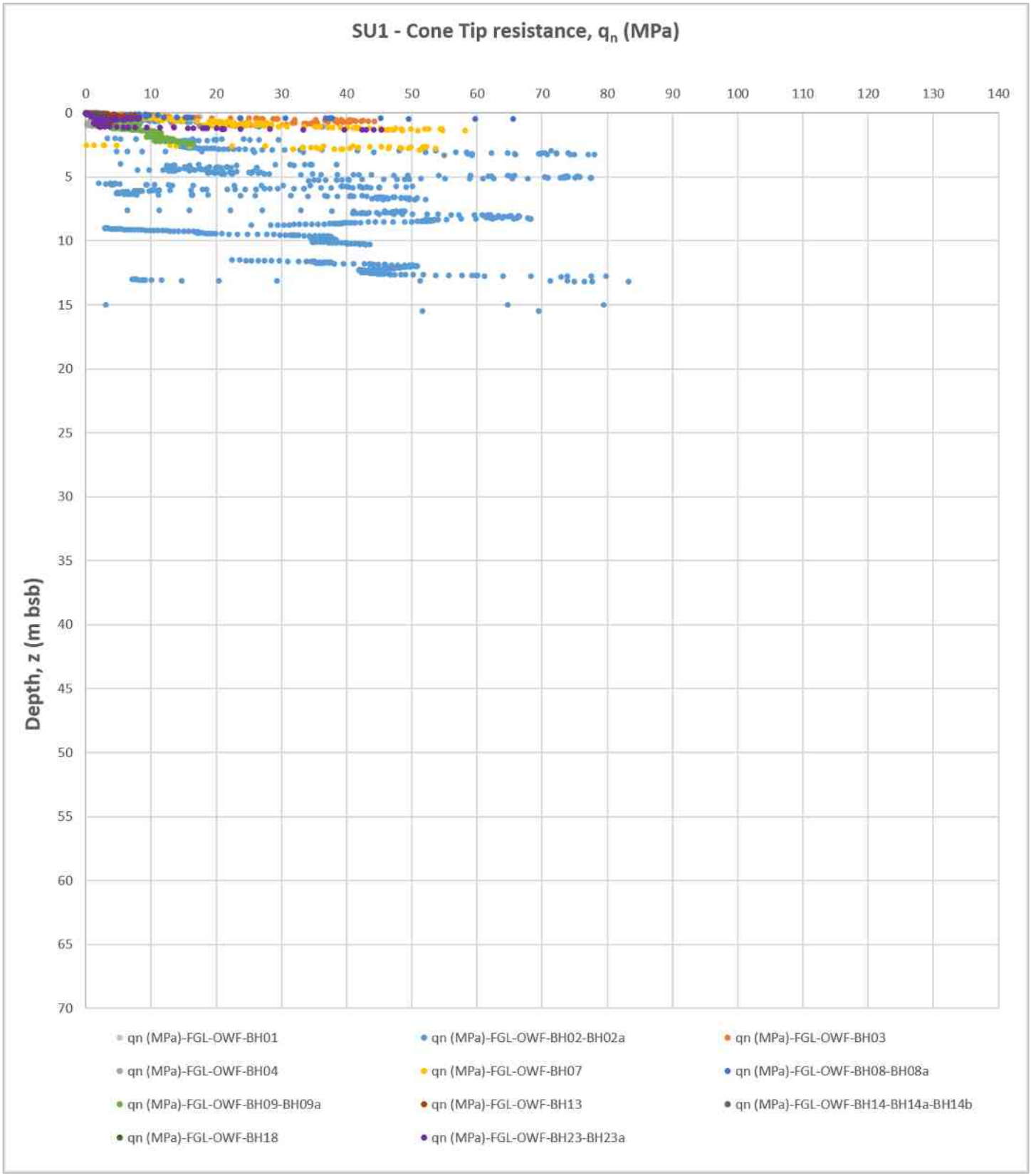

Graphic
CHALK

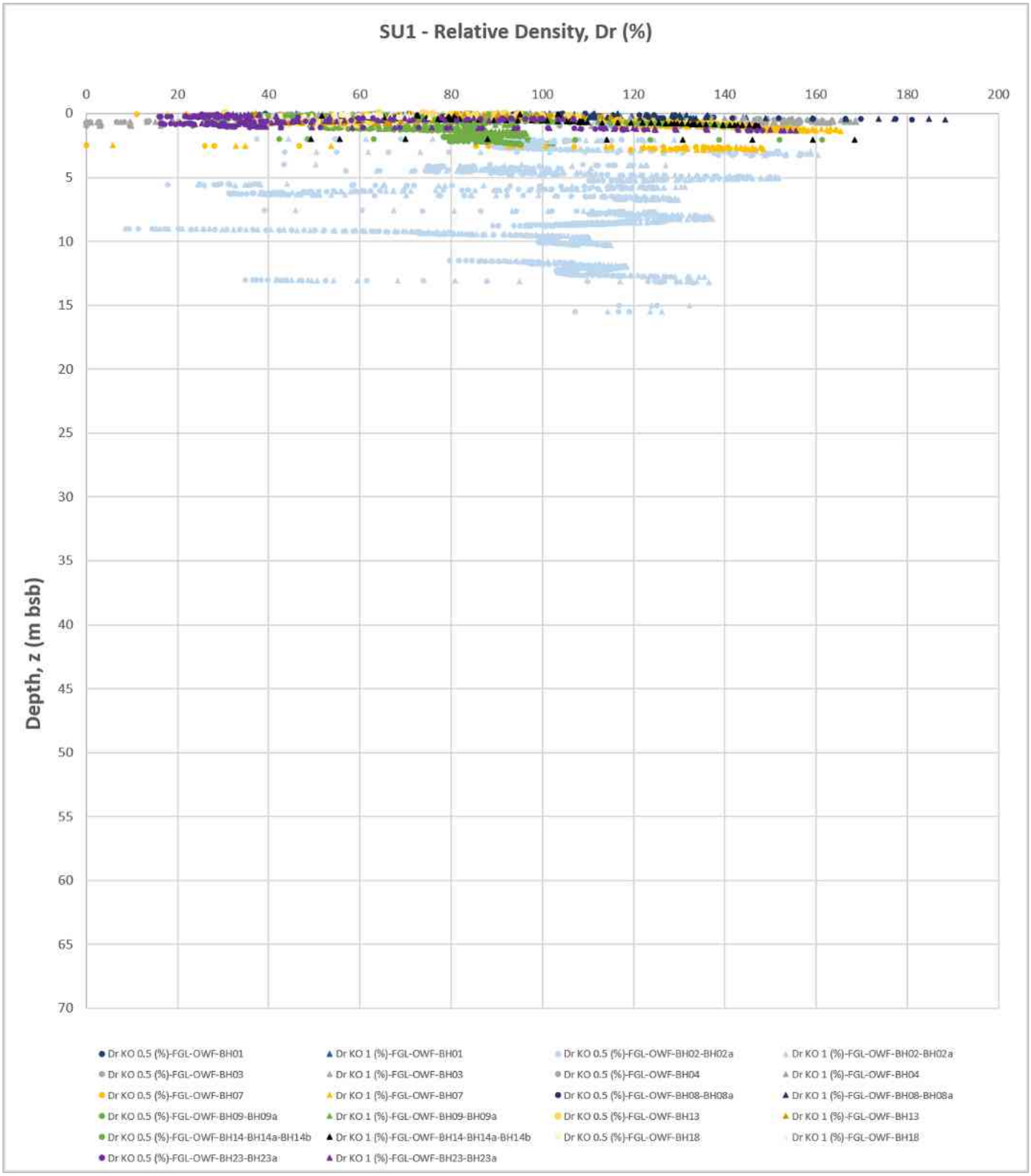

Bulk/Dry Density, y/y' (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density (kN/m3) offshore - FGL-OWF-BH24-a
Bulk Density (kN/m3) onshore - FGL-OWF-BH24
SUJ max depth reached - CHALK (U. Cretaceous)
Moisture Content (%) onshore - FGL-OWF-BH24
Dry Density (kN/m3) offshore - FGL-OWF-BH24-a
Dry Density (kN/m3) onshore - FGL-OWF-BH24
Moisture Content (%) offshore - FGL-OWF-BH24-a

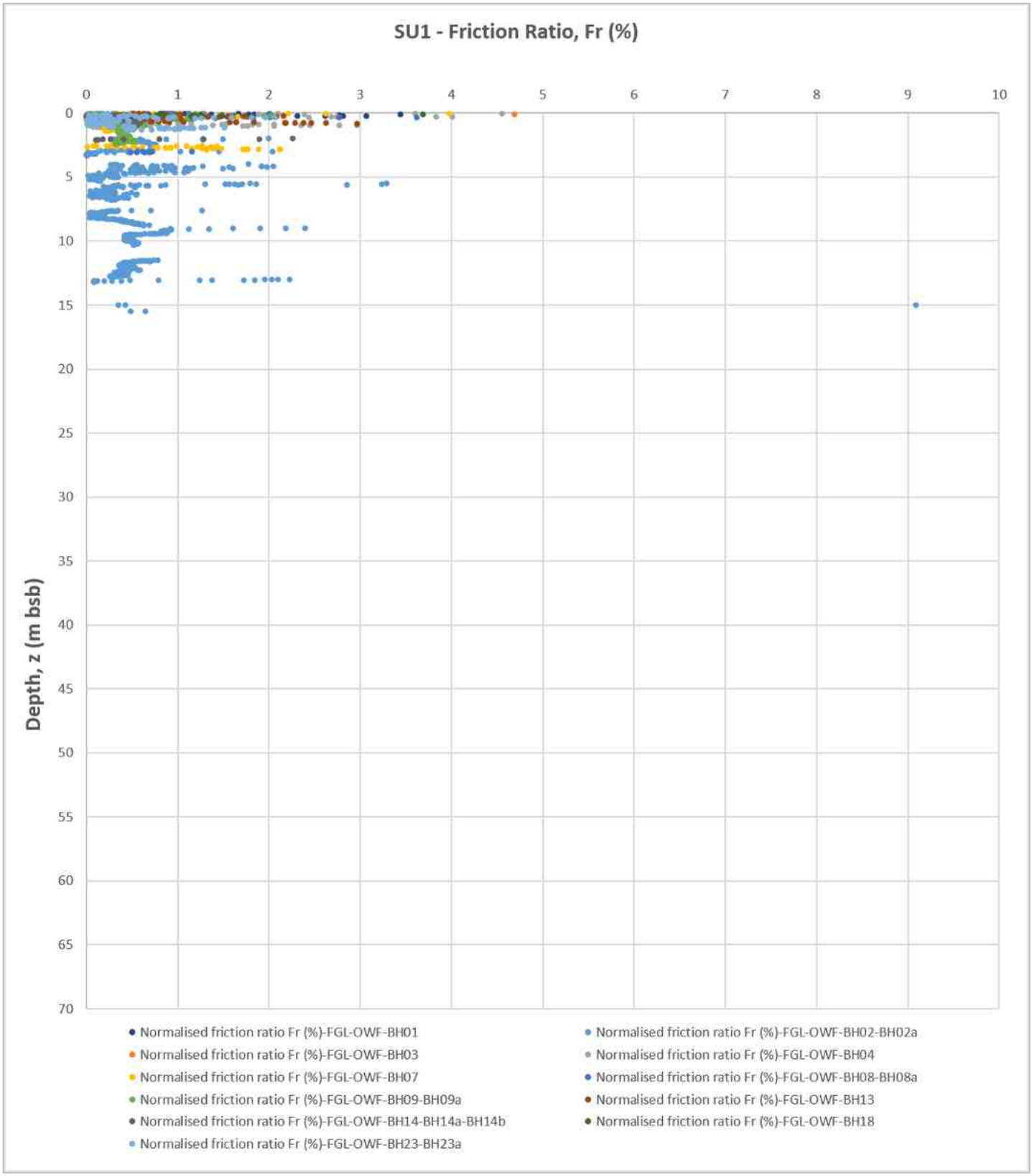

Graphic
CHALK

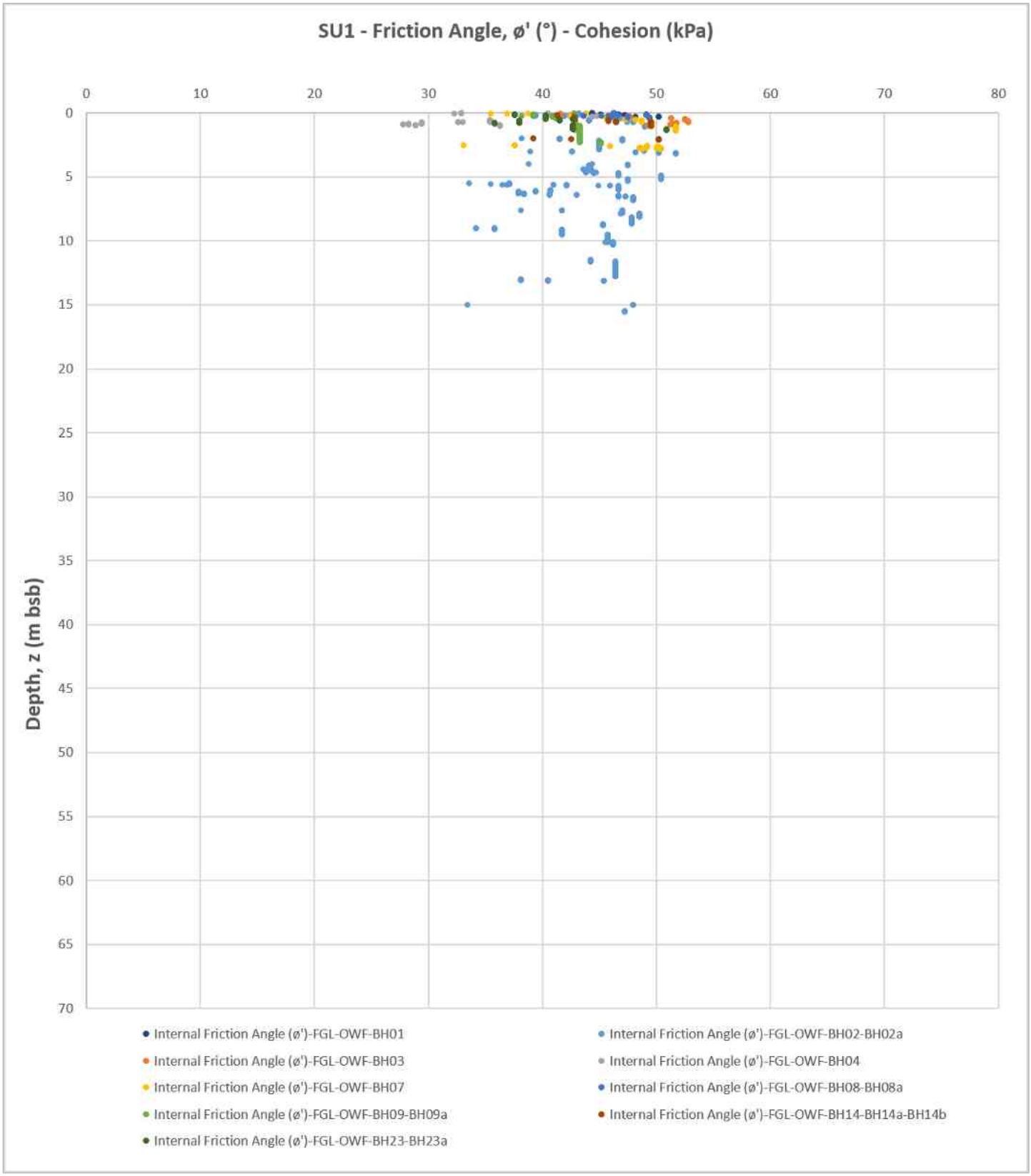
APPENDIX D3. GEOTECHNICAL PARAMETERS PLOTS PER SOIL UNIT

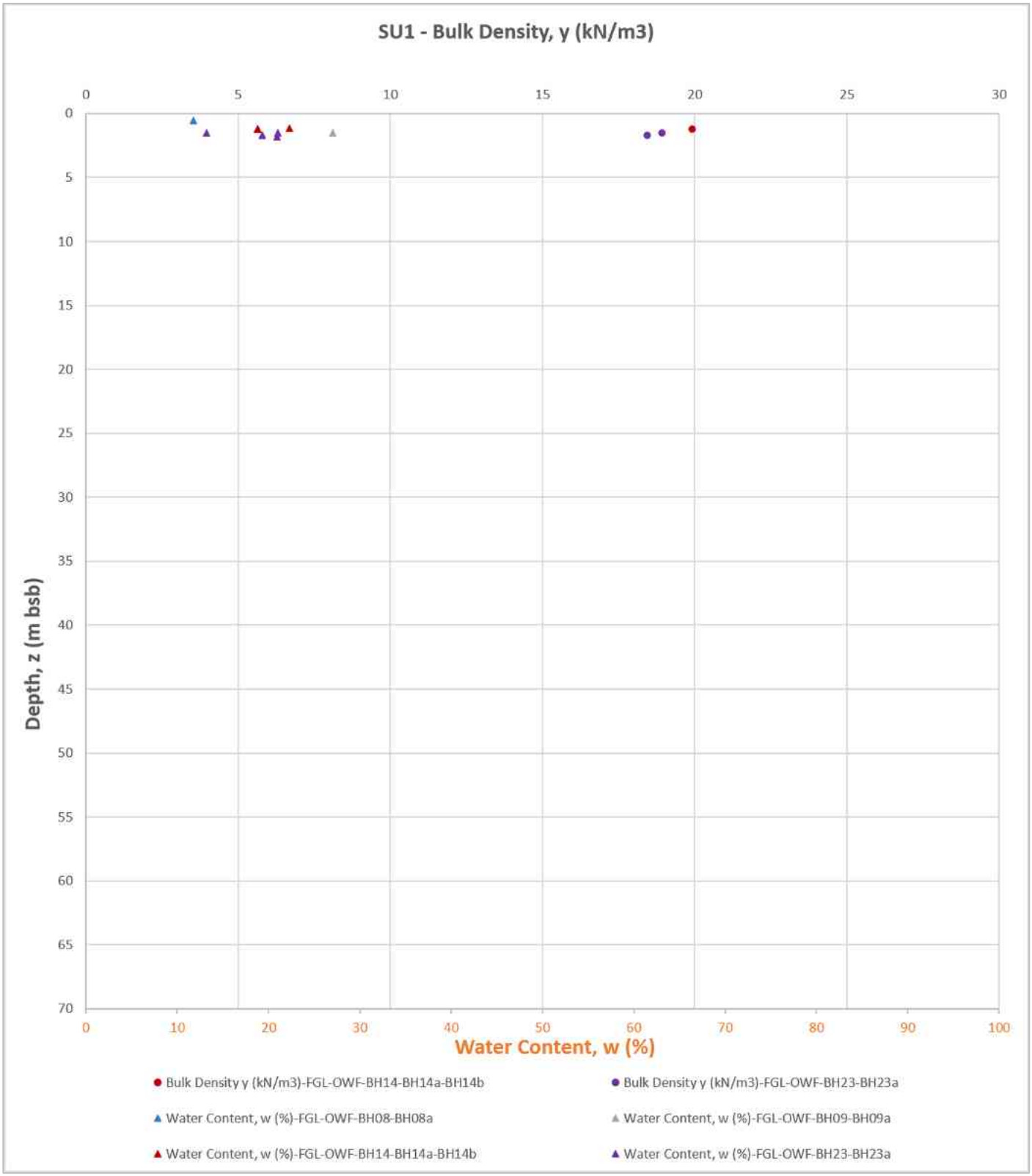
SU1


SU1 - Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
qn (MPa)-FGL-OWF-BH01
qn (MPa)-FGL-OWF-BH02-BH02a
qn (MPa)-FGL-OWF-BH03
qn (MPa)-FGL-OWF-BH04
qn (MPa)-FGL-OWF-BH07
qn (MPa)-FGL-OWF-BH08-BH08a
qn (MPa)-FGL-OWF-BH09-BH09a
qn (MPa)-FGL-OWF-BH13
qn (MPa)-FGL-OWF-BH14-BH14a-BH14b
qn (MPa)-FGL-OWF-BH18
qn (MPa)-FGL-OWF-BH23-BH23a

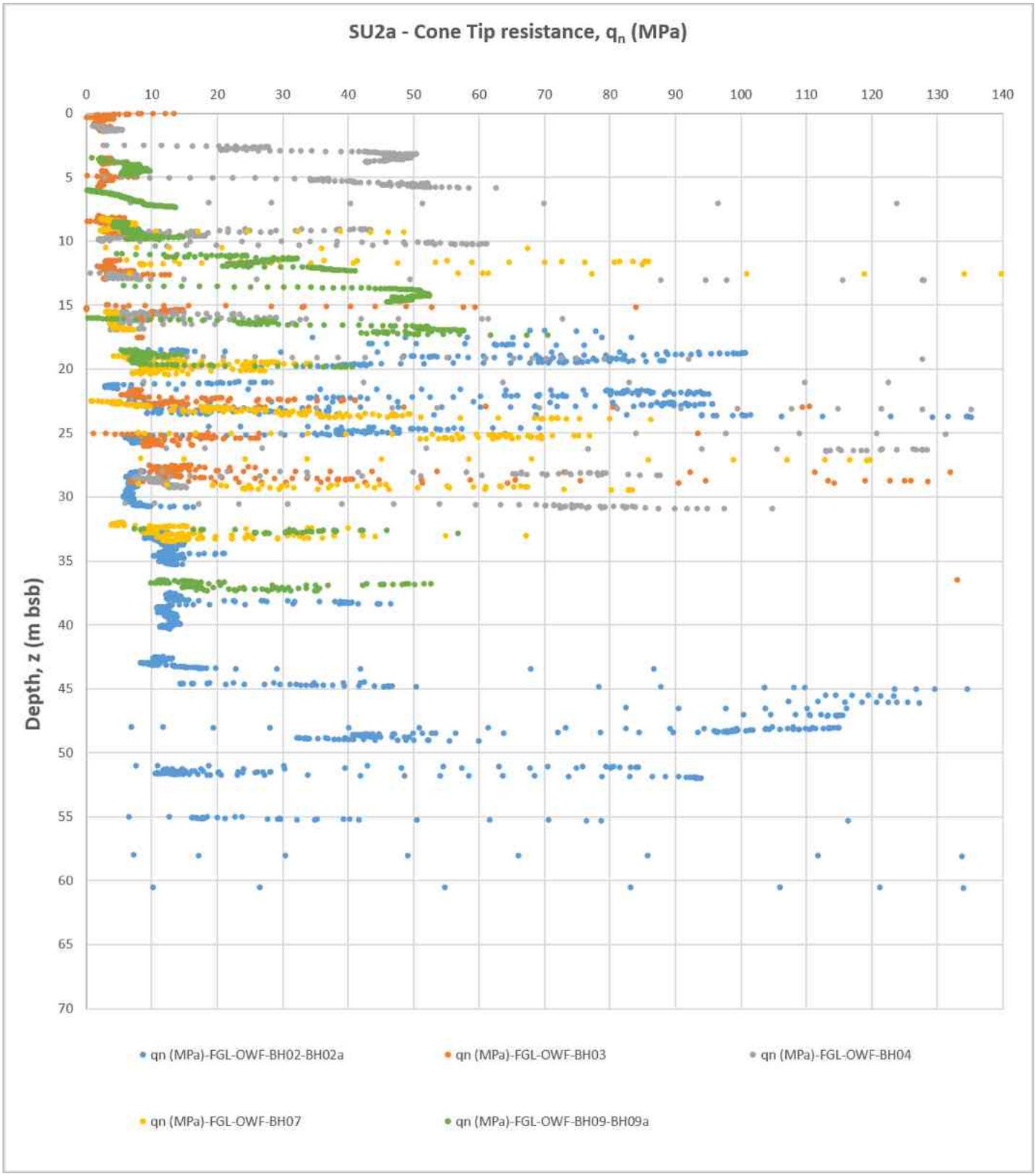

SU1 - Relative Density, Dr (%)
Depth, z (m bsb)
0
20
40
60
80
100
120
140
160
180
200
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Dr KO 0.5 (%)-FGL-OWF-BH01
Dr KO 1 (%)-FGL-OWF-BH01
Dr KO 0.5 (%)-FGL-OWF-BH02-BH02a
Dr KO 1 (%)-FGL-OWF-BH02-BH02a
Dr KO 0.5 (%)-FGL-OWF-BH03
Dr KO 1 (%)-FGL-OWF-BH03
Dr KO 0.5 (%)-FGL-OWF-BH04
Dr KO 1 (%)-FGL-OWF-BH04
Dr KO 0.5 (%)-FGL-OWF-BH07
Dr KO 1 (%)-FGL-OWF-BH07
Dr KO 0.5 (%)-FGL-OWF-BH08-BH08a
Dr KO 1 (%)-FGL-OWF-BH08-BH08a
Dr KO 0.5 (%)-FGL-OWF-BH09-BH09a
Dr KO 1 (%)-FGL-OWF-BH09-BH09a
Dr KO 0.5 (%)-FGL-OWF-BH13
Dr KO 1 (%)-FGL-OWF-BH13
Dr KO 0.5 (%)-FGL-OWF-BH14-BH14a-BH14b
Dr KO 1 (%)-FGL-OWF-BH14-BH14a-BH14b
Dr KO 0.5 (%)-FGL-OWF-BH18
Dr KO 1 (%)-FGL-OWF-BH18
Dr KO 0.5 (%)-FGL-OWF-BH23-BH23a
Dr KO 1 (%)-FGL-OWF-BH23-BH23a

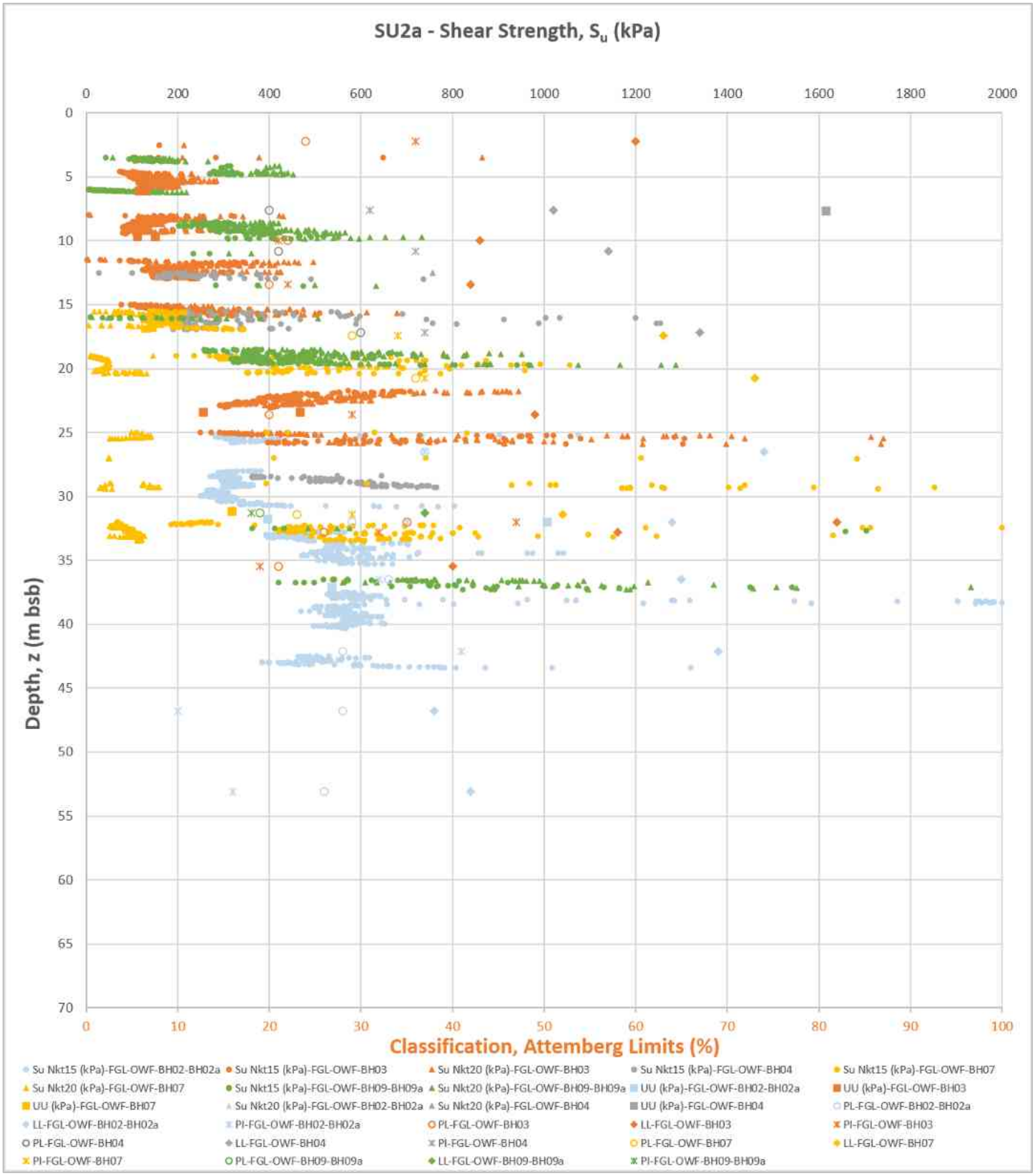

SU1 - Friction Ratio, Fr (%)
Depth, z (m bsb)
0
1
2
3
4
5
6
7
8
9
10
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Normalised friction ratio Fr (%)-FGL-OWF-BH01
Normalised friction ratio Fr (%)-FGL-OWF-BH02-BH02a
Normalised friction ratio Fr (%)-FGL-OWF-BH03
Normalised friction ratio Fr (%)-FGL-OWF-BH04
Normalised friction ratio Fr (%)-FGL-OWF-BH07
Normalised friction ratio Fr (%)-FGL-OWF-BH08-BH08a
Normalised friction ratio Fr (%)-FGL-OWF-BH09-BH09a
Normalised friction ratio Fr (%)-FGL-OWF-BH13
Normalised friction ratio Fr (%)-FGL-OWF-BH14-BH14a-BH14b
Normalised friction ratio Fr (%)-FGL-OWF-BH18
Normalised friction ratio Fr (%)-FGL-OWF-BH23-BH23a

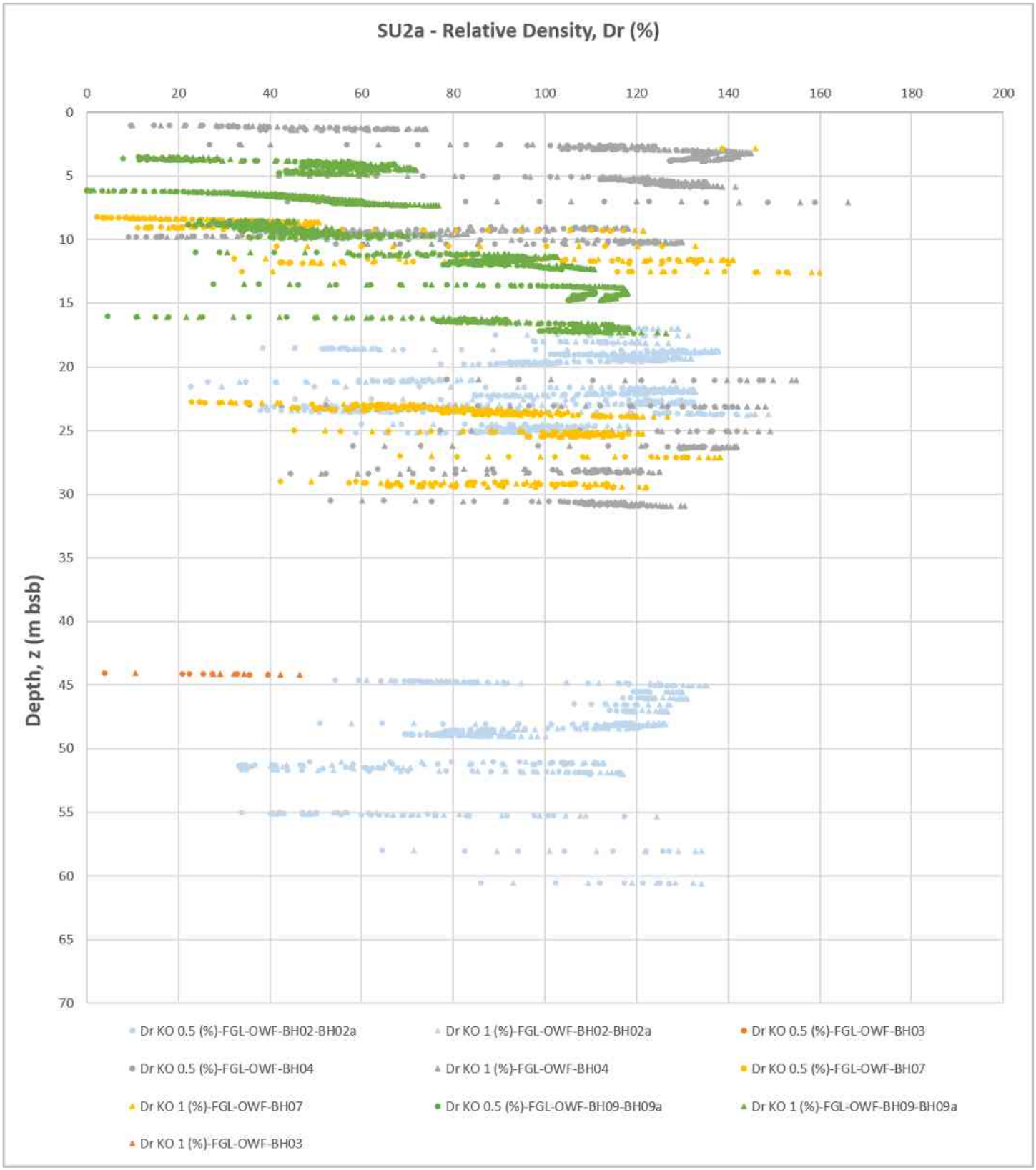

SU1 - Friction Angle, ø' (°) - Cohesion (kPa)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Internal Friction Angle (ø')-FGL-OWF-BH01
Internal Friction Angle (ø')-FGL-OWF-BH02-BH02a
Internal Friction Angle (ø')-FGL-OWF-BH03
Internal Friction Angle (ø')-FGL-OWF-BH04
Internal Friction Angle (ø')-FGL-OWF-BH07
Internal Friction Angle (ø')-FGL-OWF-BH08-BH08a
Internal Friction Angle (ø')-FGL-OWF-BH09-BH09a
Internal Friction Angle (ø')-FGL-OWF-BH14-BH14a-BH14b
Internal Friction Angle (ø')-FGL-OWF-BH23-BH23a

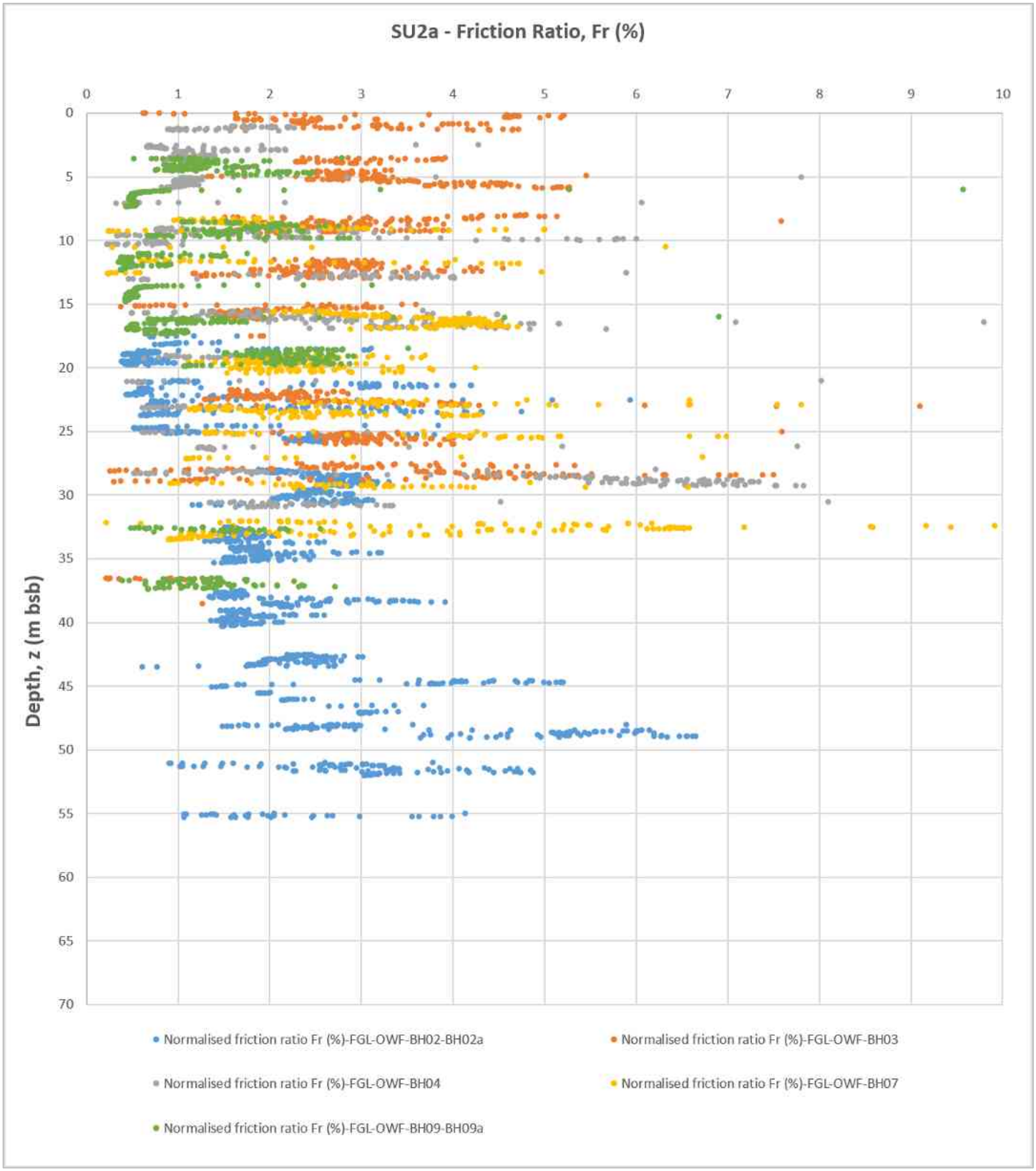

SU1 - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
0
10
20
30
40
50
60
70
80
90
100
Bulk Density y (kN/m3)-FGL-OWF-BH14-BH14a-BH14b
Bulk Density y (kN/m3)-FGL-OWF-BH23-BH23a
Water Content, w (%)-FGL-OWF-BH08-BH08a
Water Content, w (%)-FGL-OWF-BH09-BH09a
Water Content, w (%)-FGL-OWF-BH14-BH14a-BH14b
Water Content, w (%)-FGL-OWF-BH23-BH23a

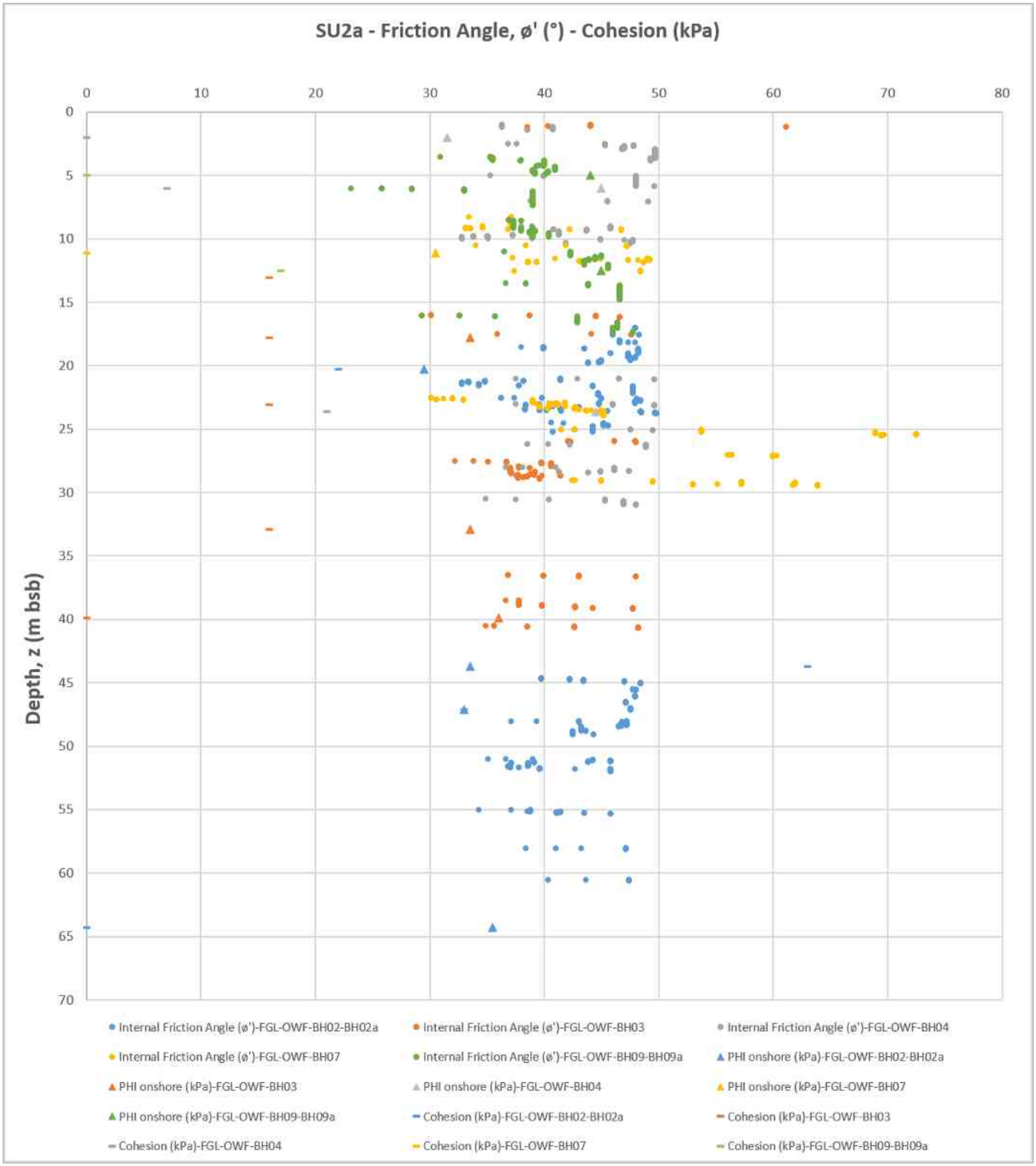
SU2a

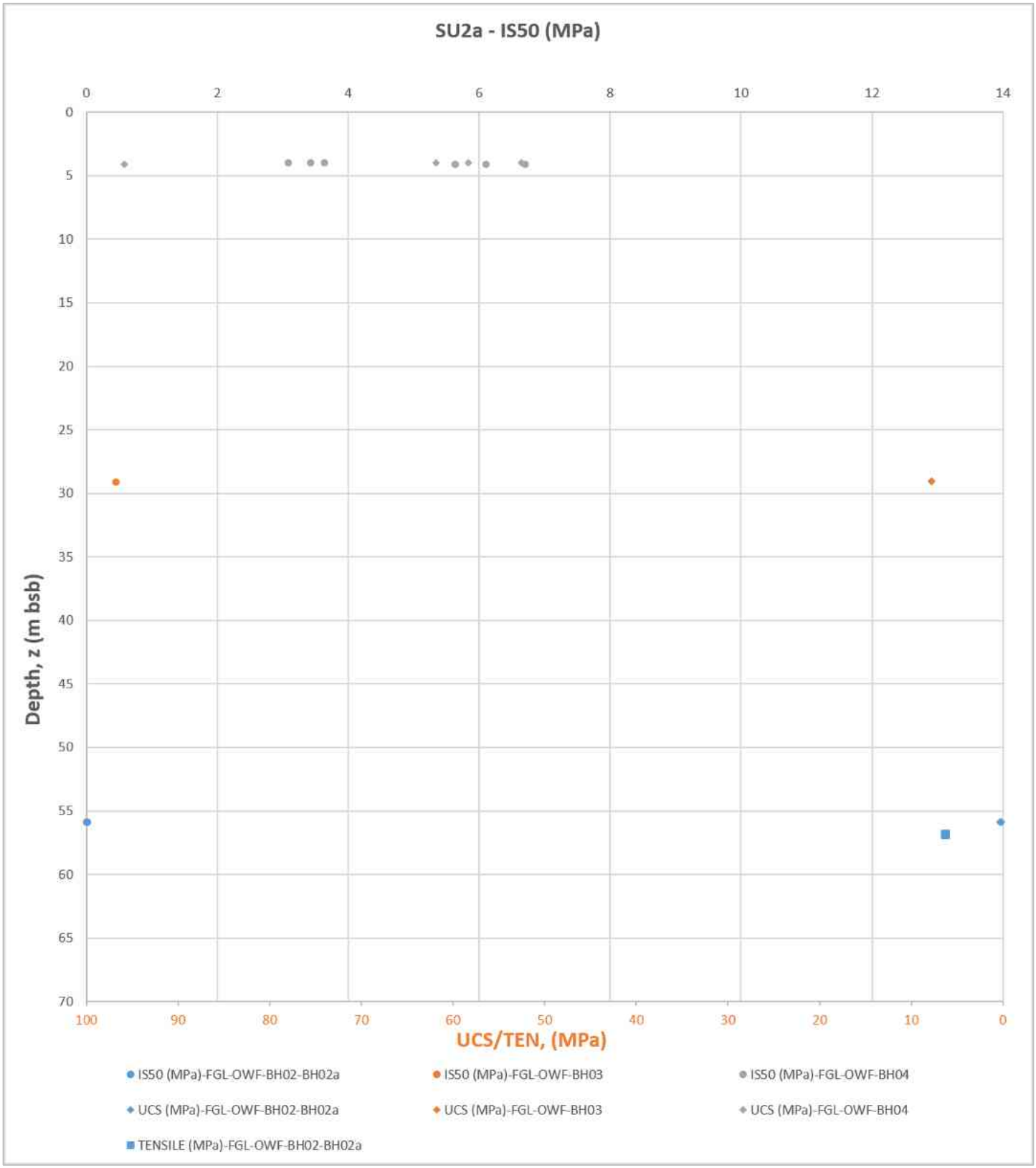

SU2a - Cone Tip resistance, q_n (MPa)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
qn (MPa)-FGL-OWF-BH02-BH02a
qn (MPa)-FGL-OWF-BH03
qn (MPa)-FGL-OWF-BH04
qn (MPa)-FGL-OWF-BH07
qn (MPa)-FGL-OWF-BH09-BH09a

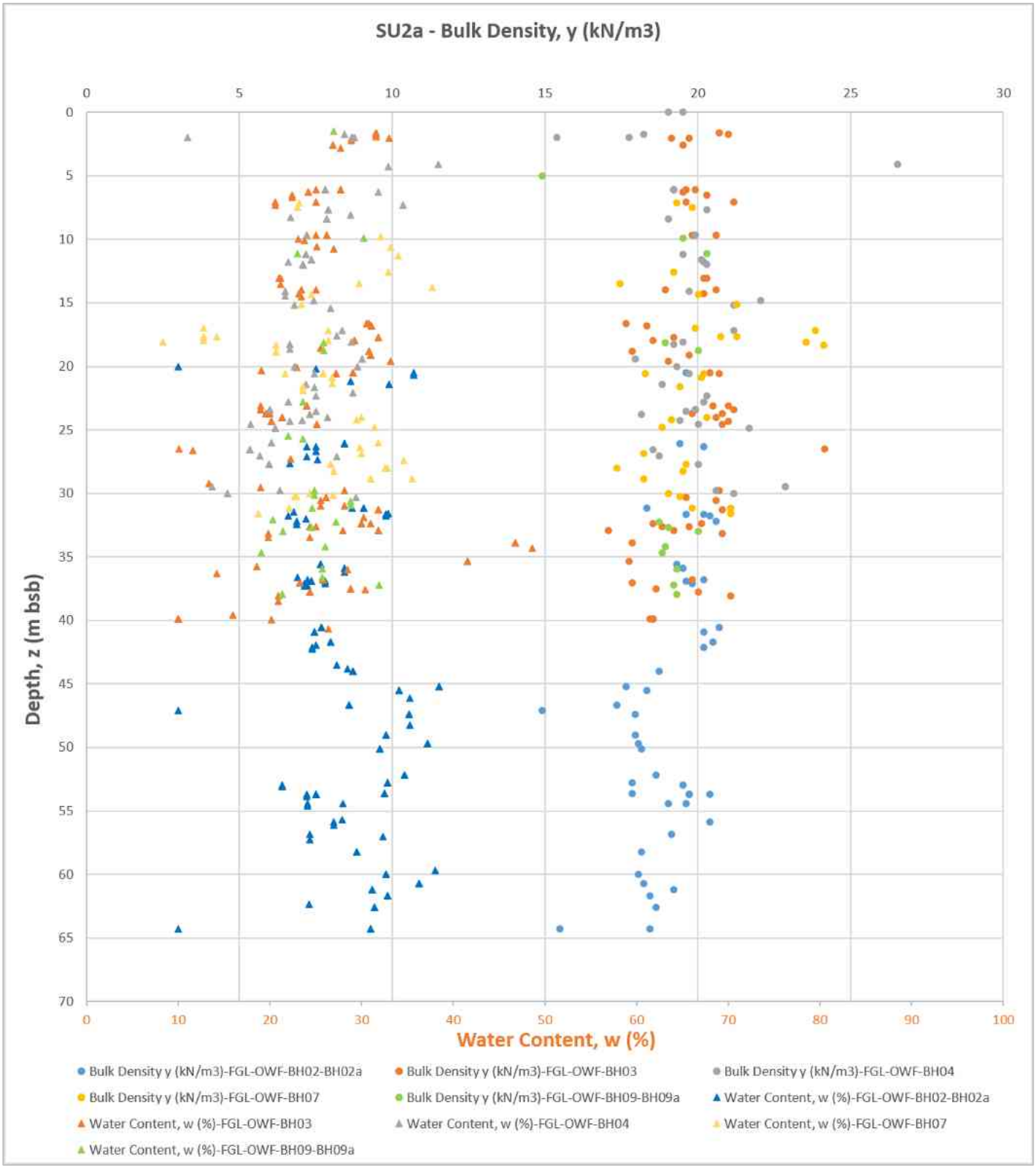

SU2a - Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Attemberg Limits (%)
Su Nkt15 (kPa)-FGL-OWF-BH02-BH02a
Su Nkt15 (kPa)-FGL-OWF-BH03
Su Nkt20 (kPa)-FGL-OWF-BH03
Su Nkt15 (kPa)-FGL-OWF-BH04
Su Nkt15 (kPa)-FGL-OWF-BH07
Su Nkt20 (kPa)-FGL-OWF-BH07
Su Nkt15 (kPa)-FGL-OWF-BH09-BH09a
Su Nkt20 (kPa)-FGL-OWF-BH09-BH09a
UU (kPa)-FGL-OWF-BH02-BH02a
UU (kPa)-FGL-OWF-BH03
UU (kPa)-FGL-OWF-BH07
Su Nkt20 (kPa)-FGL-OWF-BH02-BH02a
Su Nkt20 (kPa)-FGL-OWF-BH04
UU (kPa)-FGL-OWF-BH04
PL-FGL-OWF-BH02-BH02a
LL-FGL-OWF-BH02-BH02a
PI-FGL-OWF-BH02-BH02a
PL-FGL-OWF-BH03
LL-FGL-OWF-BH03
PI-FGL-OWF-BH03
PL-FGL-OWF-BH04
LL-FGL-OWF-BH04
PI-FGL-OWF-BH04
PL-FGL-OWF-BH07
LL-FGL-OWF-BH07
PI-FGL-OWF-BH07
PL-FGL-OWF-BH09-BH09a
LL-FGL-OWF-BH09-BH09a
PI-FGL-OWF-BH09-BH09a


SU2a - Relative Density, Dr (%)
Depth, z (m bsb)
0
20
40
60
80
100
120
140
160
180
200
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Dr KO 0.5 (%)-FGL-OWF-BH02-BH02a
Dr KO 1 (%)-FGL-OWF-BH02-BH02a
Dr KO 0.5 (%)-FGL-OWF-BH03
Dr KO 0.5 (%)-FGL-OWF-BH04
Dr KO 1 (%)-FGL-OWF-BH04
Dr KO 0.5 (%)-FGL-OWF-BH07
Dr KO 1 (%)-FGL-OWF-BH07
Dr KO 0.5 (%)-FGL-OWF-BH09-BH09a
Dr KO 1 (%)-FGL-OWF-BH09-BH09a
Dr KO 1 (%)-FGL-OWF-BH03

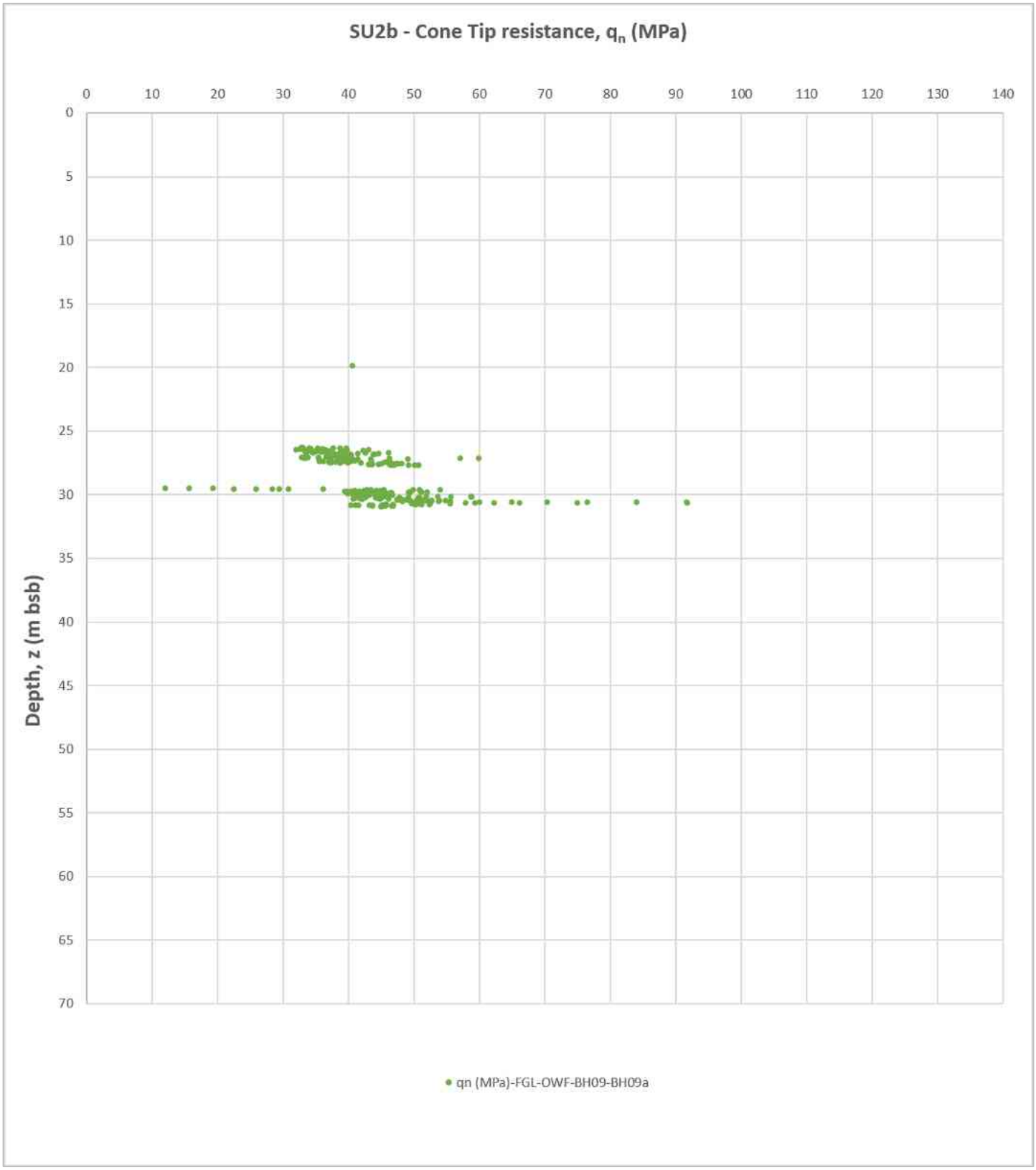

SU2a - Friction Ratio, Fr (%)
Depth, z (m bsb)
0
1
2
3
4
5
6
7
8
9
10
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Normalised friction ratio Fr (%)-FGL-OWF-BH02-BH02a
Normalised friction ratio Fr (%)-FGL-OWF-BH03
Normalised friction ratio Fr (%)-FGL-OWF-BH04
Normalised friction ratio Fr (%)-FGL-OWF-BH07
Normalised friction ratio Fr (%)-FGL-OWF-BH09-BH09a

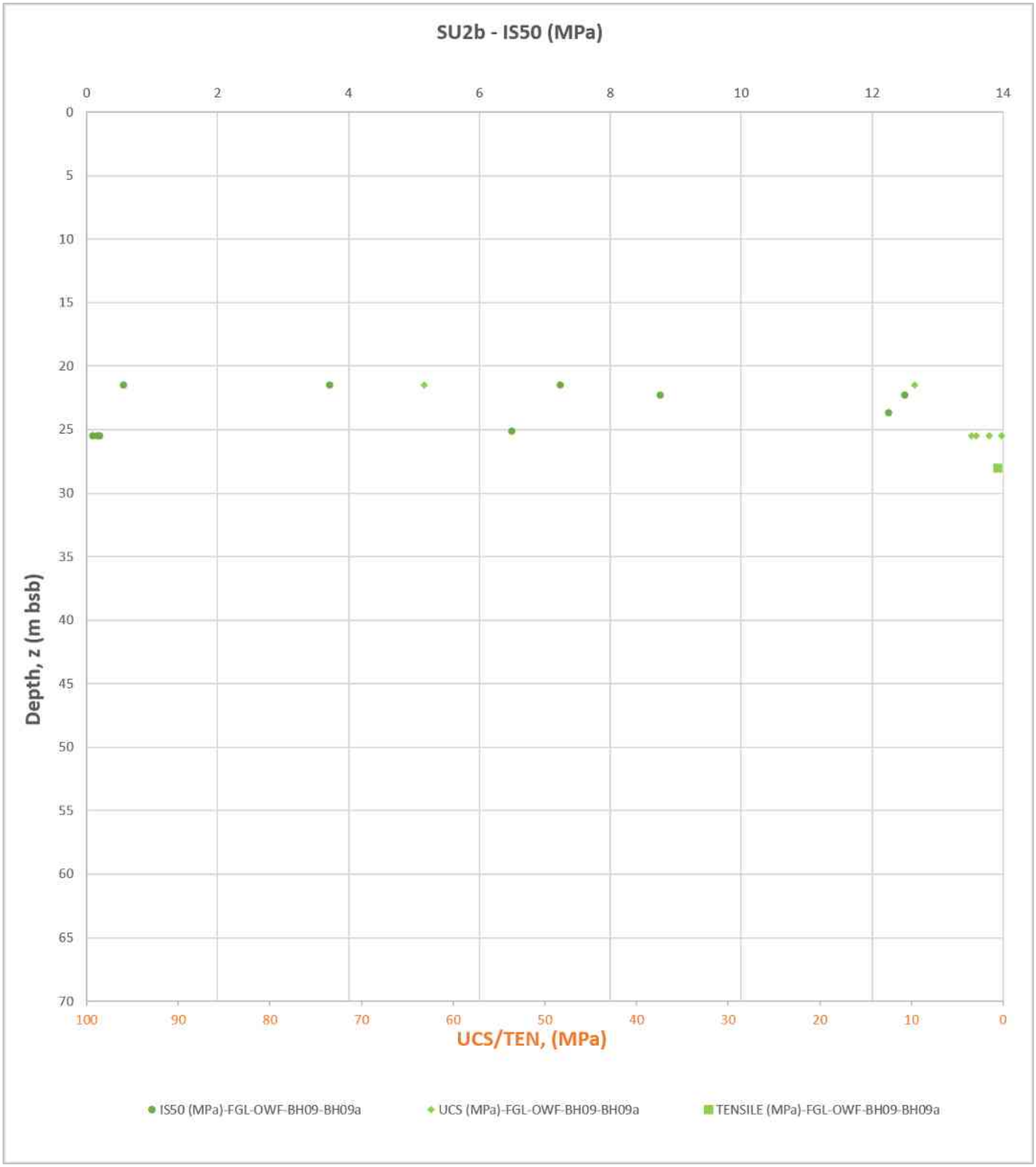

SU2a - Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Internal Friction Angle (ø')-FGL-OWF-BH02-BH02a
Internal Friction Angle (ø')-FGL-OWF-BH03
Internal Friction Angle (ø')-FGL-OWF-BH04
Internal Friction Angle (ø')-FGL-OWF-BH07
Internal Friction Angle (ø')-FGL-OWF-BH09-BH09a
PHI onshore (kPa)-FGL-OWF-BH02-BH02a
PHI onshore (kPa)-FGL-OWF-BH03
PHI onshore (kPa)-FGL-OWF-BH04
PHI onshore (kPa)-FGL-OWF-BH07
PHI onshore (kPa)-FGL-OWF-BH09-BH09a
Cohesion (kPa)-FGL-OWF-BH02-BH02a
Cohesion (kPa)-FGL-OWF-BH03
Cohesion (kPa)-FGL-OWF-BH04
Cohesion (kPa)-FGL-OWF-BH07
Cohesion (kPa)-FGL-OWF-BH09-BH09a

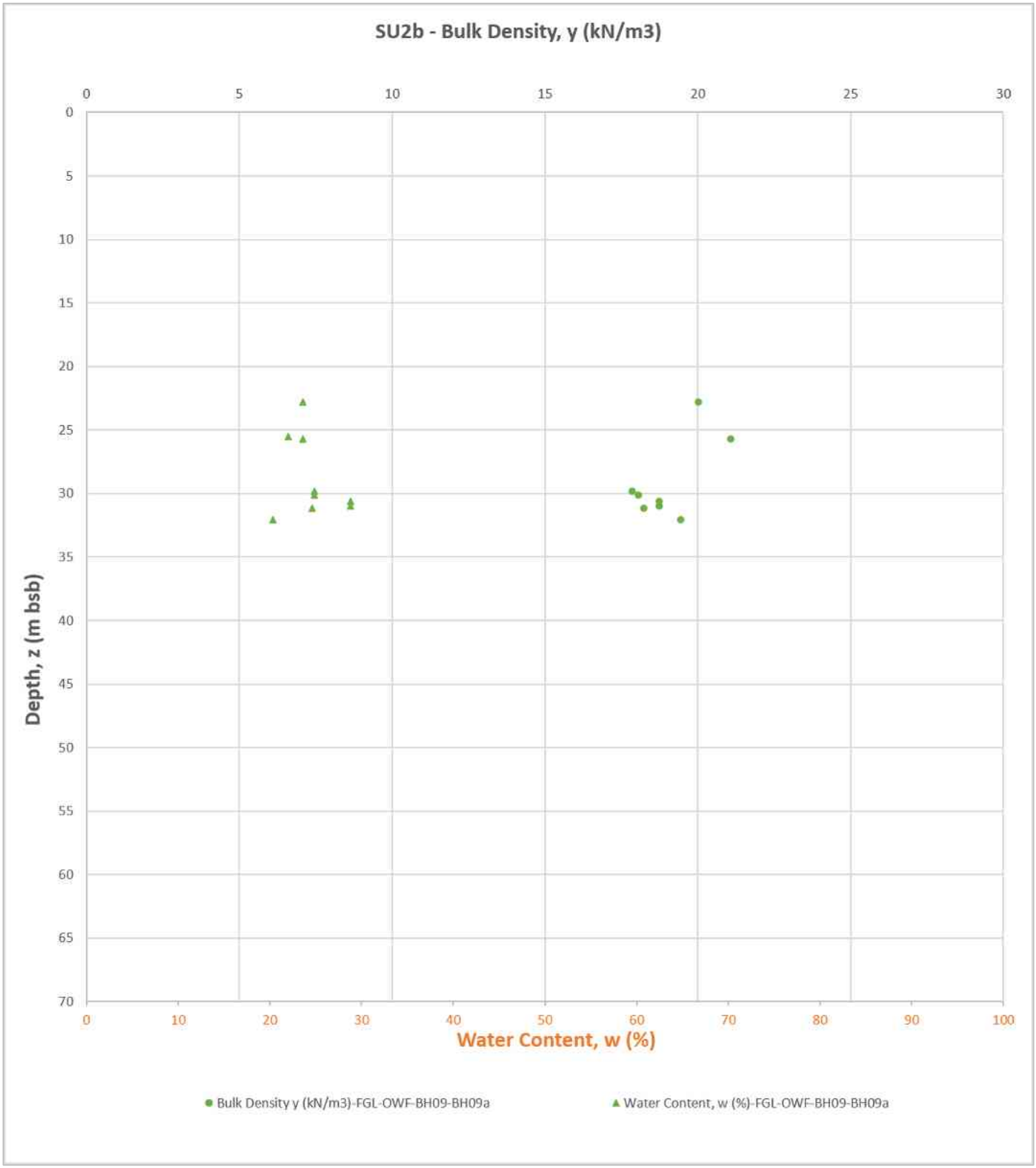

SU2a - IS50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 (MPa)-FGL-OWF-BH02-BH02a
IS50 (MPa)-FGL-OWF-BH03
IS50 (MPa)-FGL-OWF-BH04
UCS (MPa)-FGL-OWF-BH02-BH02a
UCS (MPa)-FGL-OWF-BH03
UCS (MPa)-FGL-OWF-BH04
TENSILE (MPa)-FGL-OWF-BH02-BH02a


SU2a - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
0
10
20
30
40
50
60
70
80
90
100
Bulk Density y (kN/m3)-FGL-OWF-BH02-BH02a
Bulk Density y (kN/m3)-FGL-OWF-BH03
Bulk Density y (kN/m3)-FGL-OWF-BH04
Bulk Density y (kN/m3)-FGL-OWF-BH07
Bulk Density y (kN/m3)-FGL-OWF-BH09-BH09a
Water Content, w (%)-FGL-OWF-BH02-BH02a
Water Content, w (%)-FGL-OWF-BH03
Water Content, w (%)-FGL-OWF-BH04
Water Content, w (%)-FGL-OWF-BH07
Water Content, w (%)-FGL-OWF-BH09-BH09a

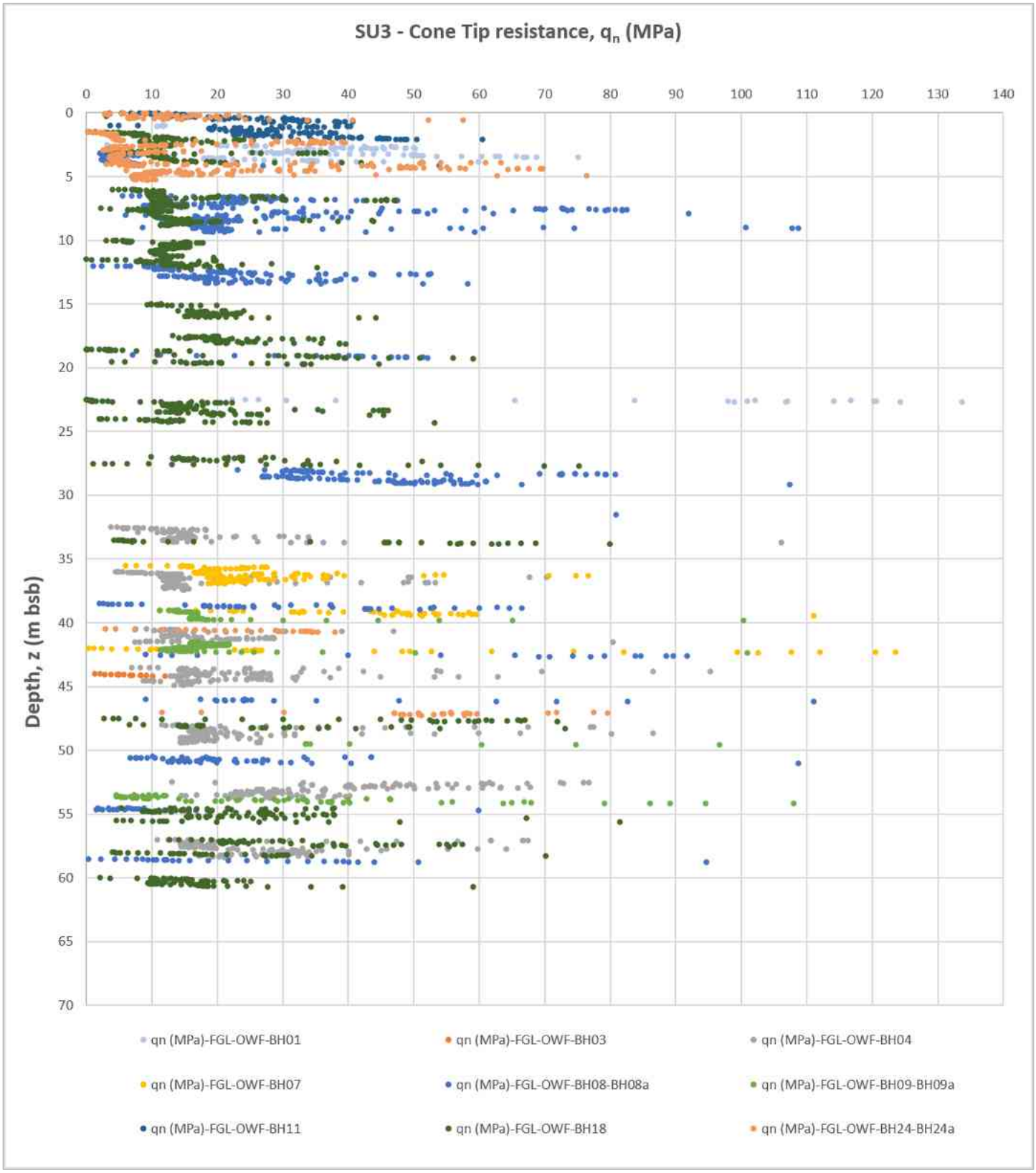
SU2b

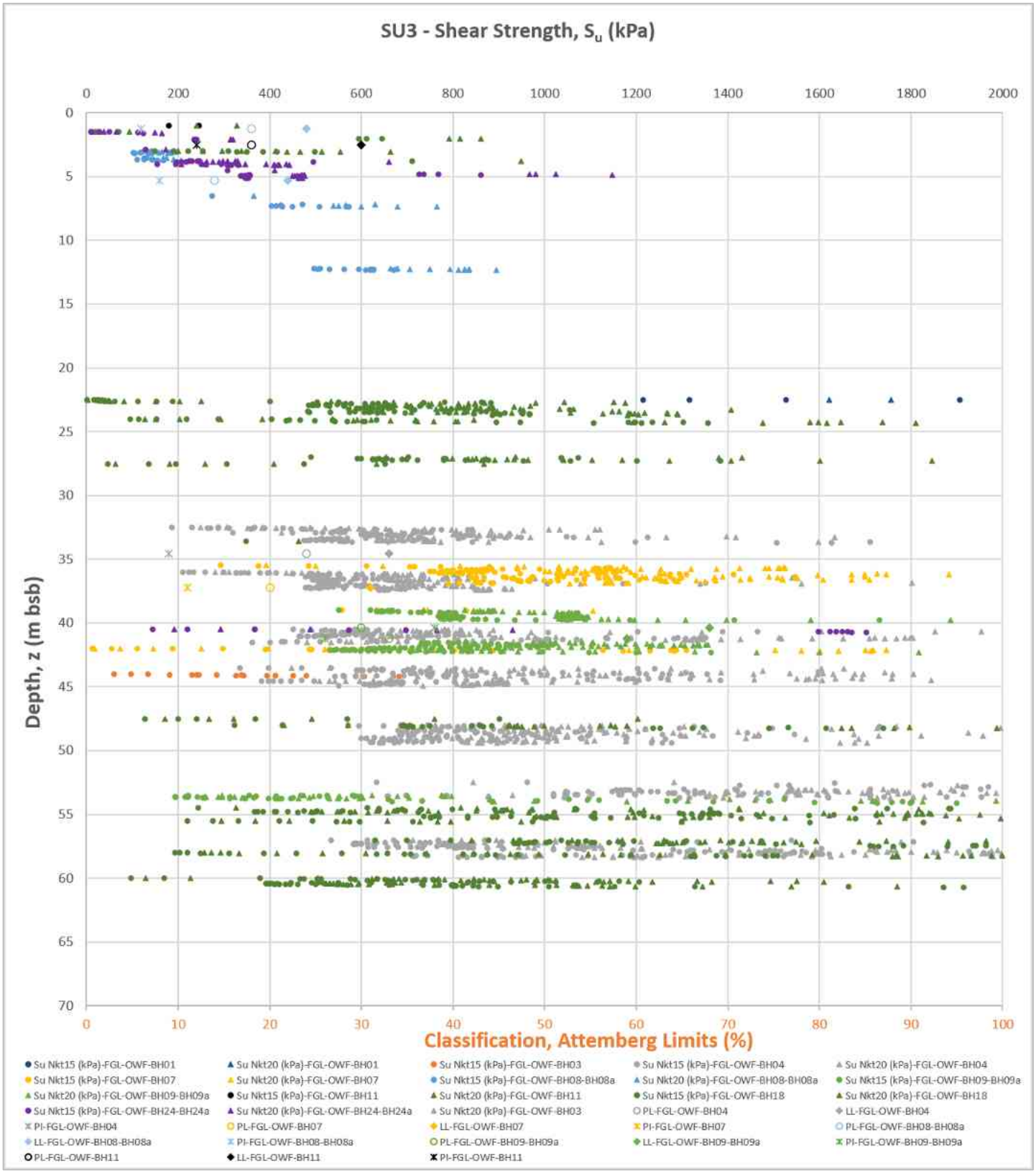

SU2b - Cone Tip resistance, q_n (MPa)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
qn (MPa)-FGL-OWF-BH09-BH09a

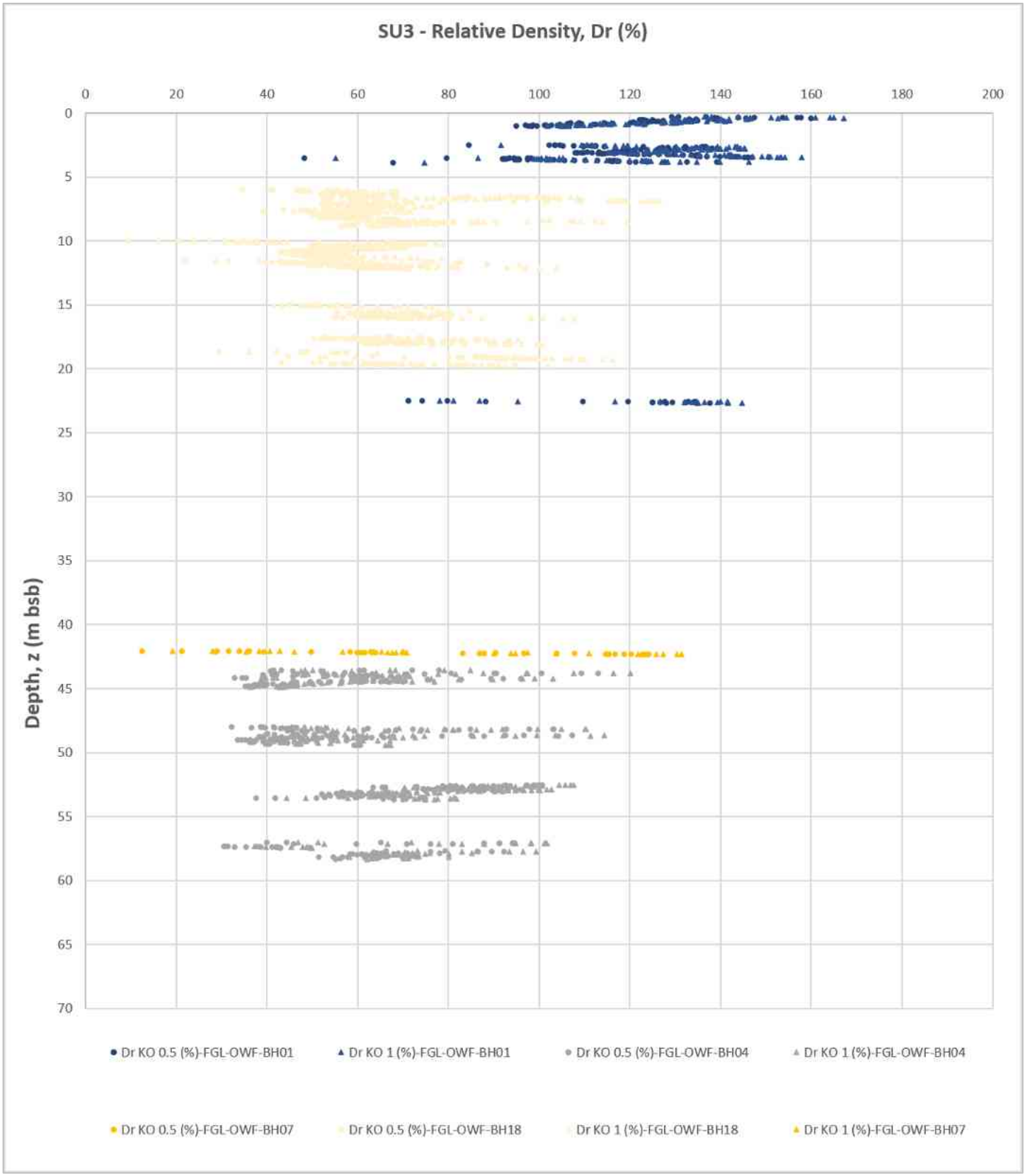

SU2b - IS50 (MPa)
0
2
4
6
8
10
12
14
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
100
90
80
70
60
50
40
30
20
10
0
UCS/TEN, (MPa)
IS50 (MPa)-FGL-OWF-BH09-BH09a
UCS (MPa)-FGL-OWF-BH09-BH09a
TENSILE (MPa)-FGL-OWF-BH09-BH09a

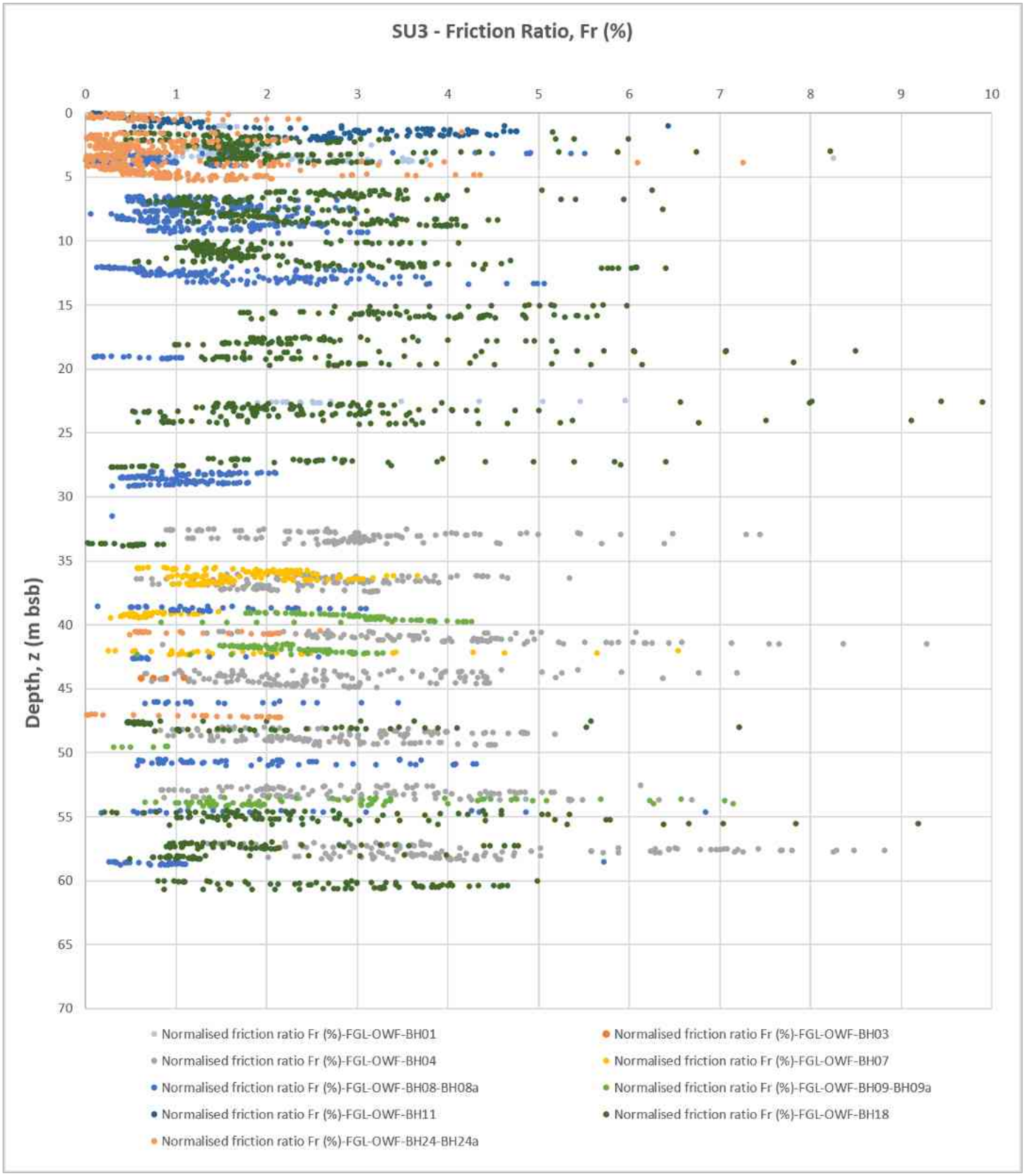

SU2b - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density y (kN/m3)-FGL-OWF-BH09-BH09a
Water Content, w (%)-FGL-OWF-BH09-BH09a

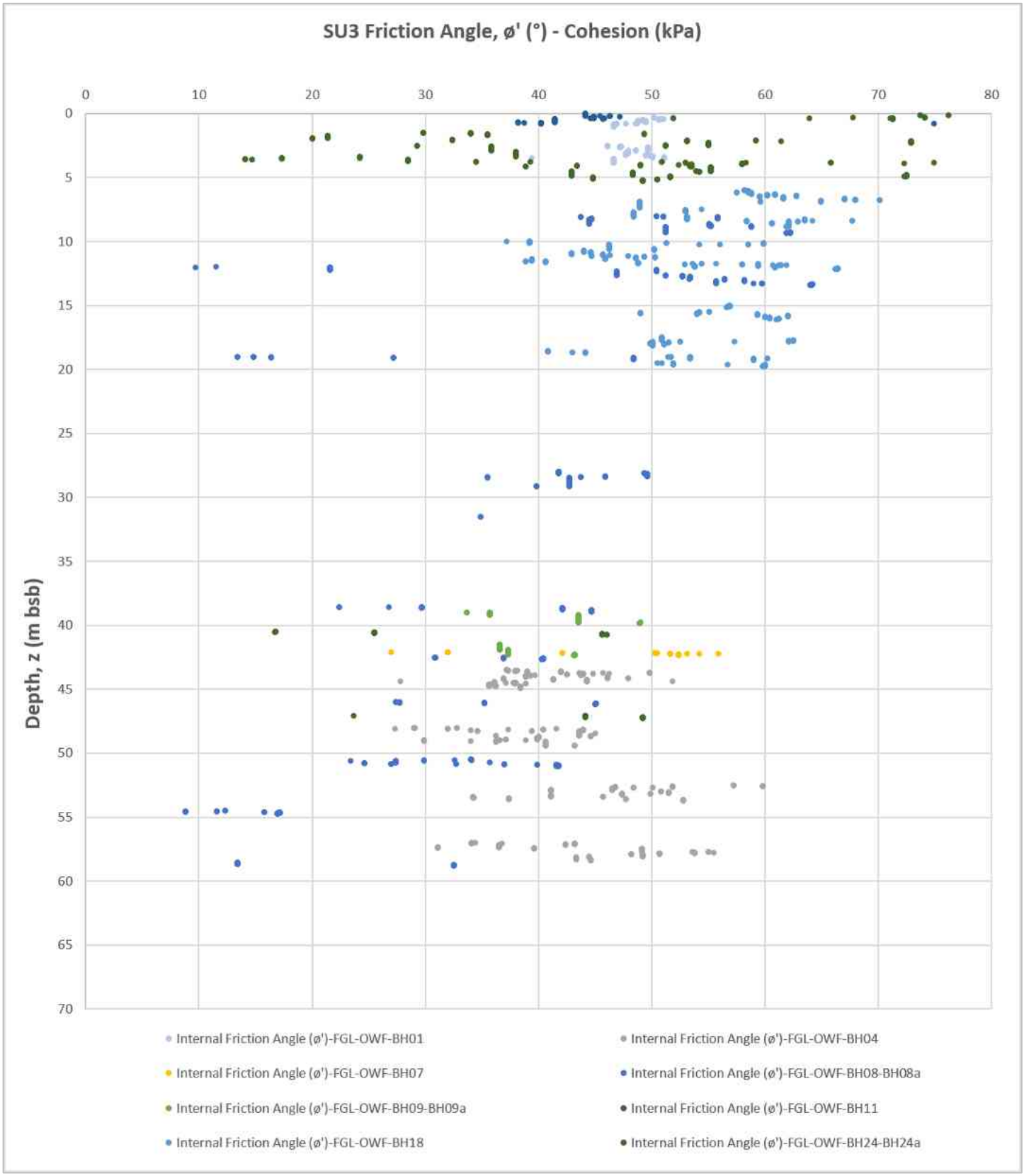
SU3

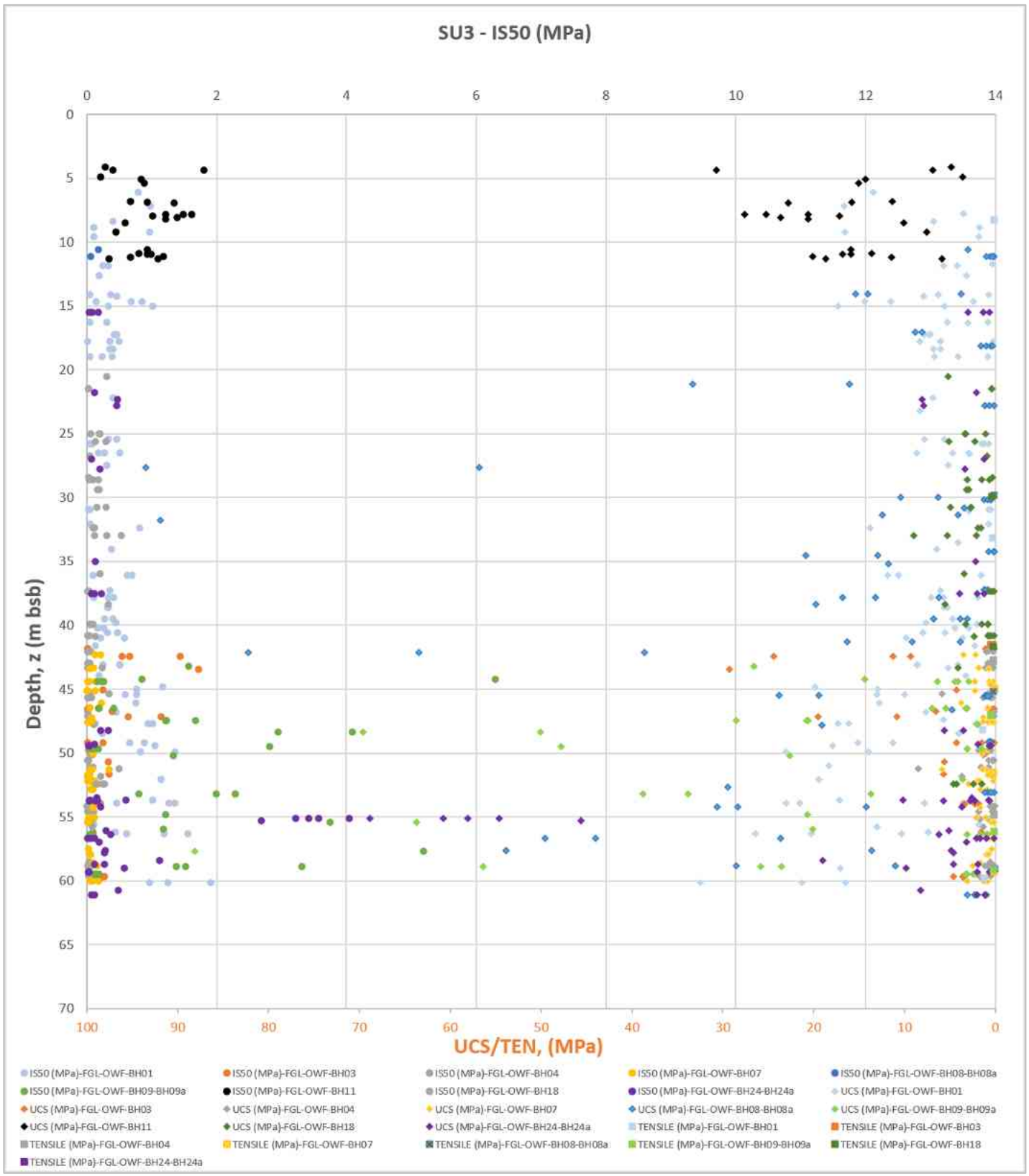

SU3 - Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
qn (MPa)-FGL-OWF-BH01
qn (MPa)-FGL-OWF-BH03
qn (MPa)-FGL-OWF-BH04
qn (MPa)-FGL-OWF-BH07
qn (MPa)-FGL-OWF-BH08-BH08a
qn (MPa)-FGL-OWF-BH09-BH09a
qn (MPa)-FGL-OWF-BH11
qn (MPa)-FGL-OWF-BH18
qn (MPa)-FGL-OWF-BH24-BH24a

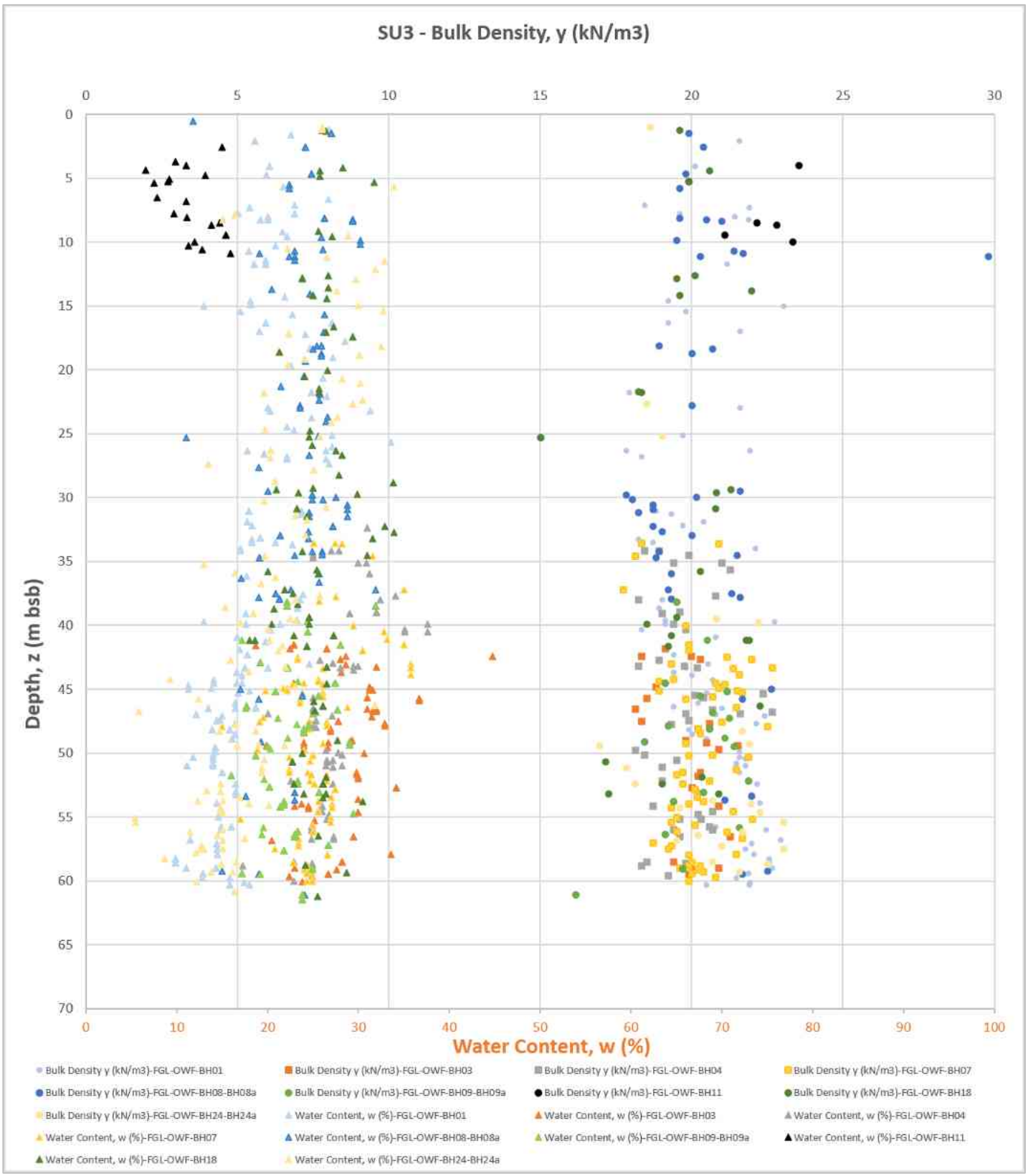

SU3 - Shear Strength, S_u (kPa)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Depth, z (m bsb)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Classification, Attemberg Limits (%)
0
10
20
30
40
50
60
70
80
90
100
Su Nkt15 (kPa)-FGL-OWF-BH01
Su Nkt20 (kPa)-FGL-OWF-BH01
Su Nkt15 (kPa)-FGL-OWF-BH03
Su Nkt15 (kPa)-FGL-OWF-BH04
Su Nkt20 (kPa)-FGL-OWF-BH04
Su Nkt15 (kPa)-FGL-OWF-BH07
Su Nkt20 (kPa)-FGL-OWF-BH07
Su Nkt15 (kPa)-FGL-OWF-BH08-BH08a
Su Nkt20 (kPa)-FGL-OWF-BH08-BH08a
Su Nkt15 (kPa)-FGL-OWF-BH09-BH09a
Su Nkt20 (kPa)-FGL-OWF-BH09-BH09a
Su Nkt15 (kPa)-FGL-OWF-BH11
Su Nkt20 (kPa)-FGL-OWF-BH11
Su Nkt15 (kPa)-FGL-OWF-BH18
Su Nkt20 (kPa)-FGL-OWF-BH18
Su Nkt15 (kPa)-FGL-OWF-BH24-BH24a
Su Nkt20 (kPa)-FGL-OWF-BH24-BH24a
Su Nkt20 (kPa)-FGL-OWF-BH03
PL-FGL-OWF-BH04
LL-FGL-OWF-BH04
PI-FGL-OWF-BH04
PL-FGL-OWF-BH07
LL-FGL-OWF-BH07
PI-FGL-OWF-BH07
PL-FGL-OWF-BH08-BH08a
LL-FGL-OWF-BH08-BH08a
PI-FGL-OWF-BH08-BH08a
PL-FGL-OWF-BH09-BH09a
LL-FGL-OWF-BH09-BH09a
PI-FGL-OWF-BH09-BH09a
PL-FGL-OWF-BH11
LL-FGL-OWF-BH11
PI-FGL-OWF-BH11


SU3 - Relative Density, Dr (%)
Depth, z (m bsb)
0
20
40
60
80
100
120
140
160
180
200
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Dr KO 0.5 (%)-FGL-OWF-BH01
Dr KO 1 (%)-FGL-OWF-BH01
Dr KO 0.5 (%)-FGL-OWF-BH04
Dr KO 1 (%)-FGL-OWF-BH04
Dr KO 0.5 (%)-FGL-OWF-BH07
Dr KO 0.5 (%)-FGL-OWF-BH18
Dr KO 1 (%)-FGL-OWF-BH18
Dr KO 1 (%)-FGL-OWF-BH07

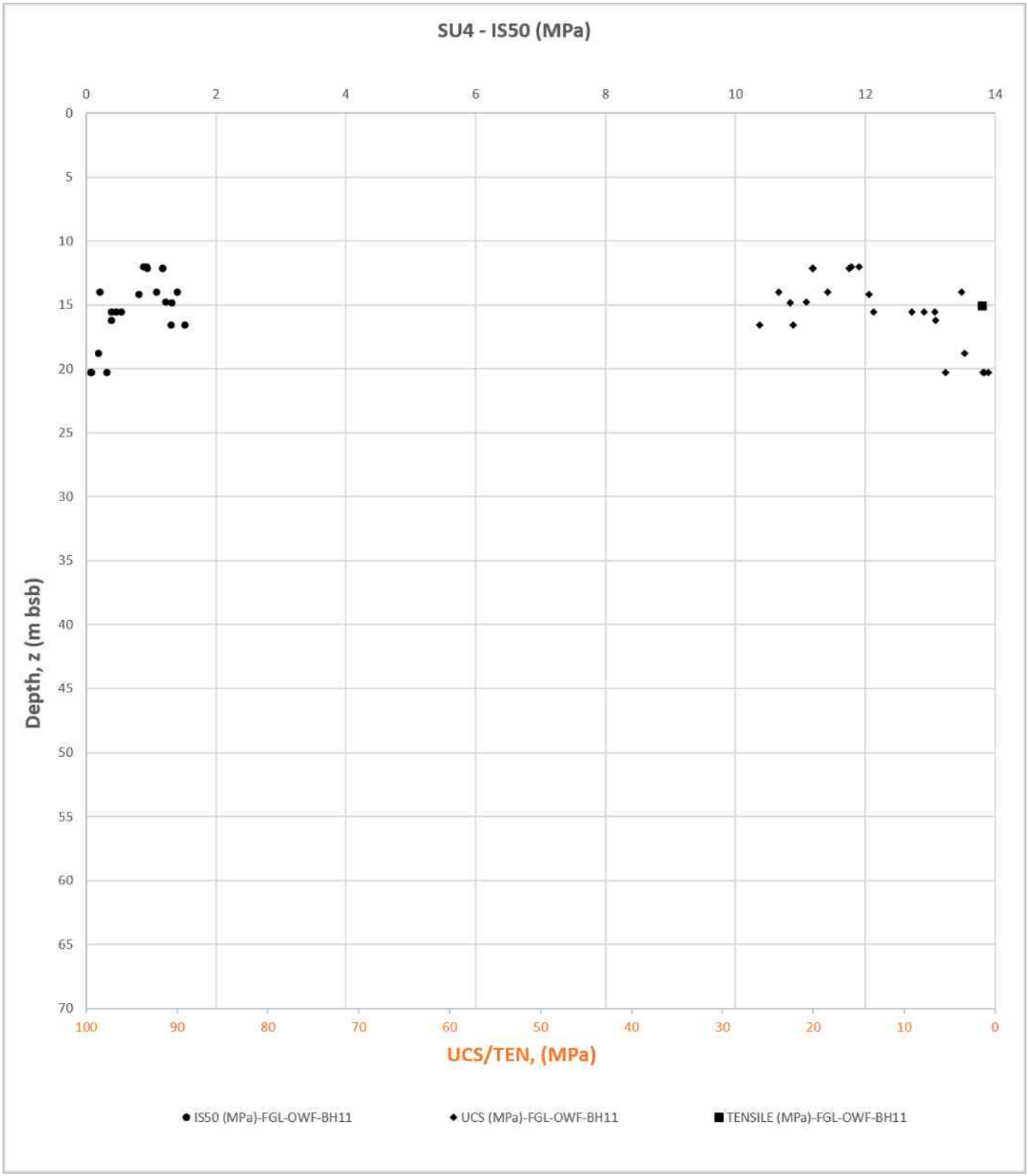

SU3 - Friction Ratio, Fr (%)
Depth, z (m bsb)
0
1
2
3
4
5
6
7
8
9
10
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Normalised friction ratio Fr (%)-FGL-OWF-BH01
Normalised friction ratio Fr (%)-FGL-OWF-BH03
Normalised friction ratio Fr (%)-FGL-OWF-BH04
Normalised friction ratio Fr (%)-FGL-OWF-BH07
Normalised friction ratio Fr (%)-FGL-OWF-BH08-BH08a
Normalised friction ratio Fr (%)-FGL-OWF-BH09-BH09a
Normalised friction ratio Fr (%)-FGL-OWF-BH11
Normalised friction ratio Fr (%)-FGL-OWF-BH18
Normalised friction ratio Fr (%)-FGL-OWF-BH24-BH24a

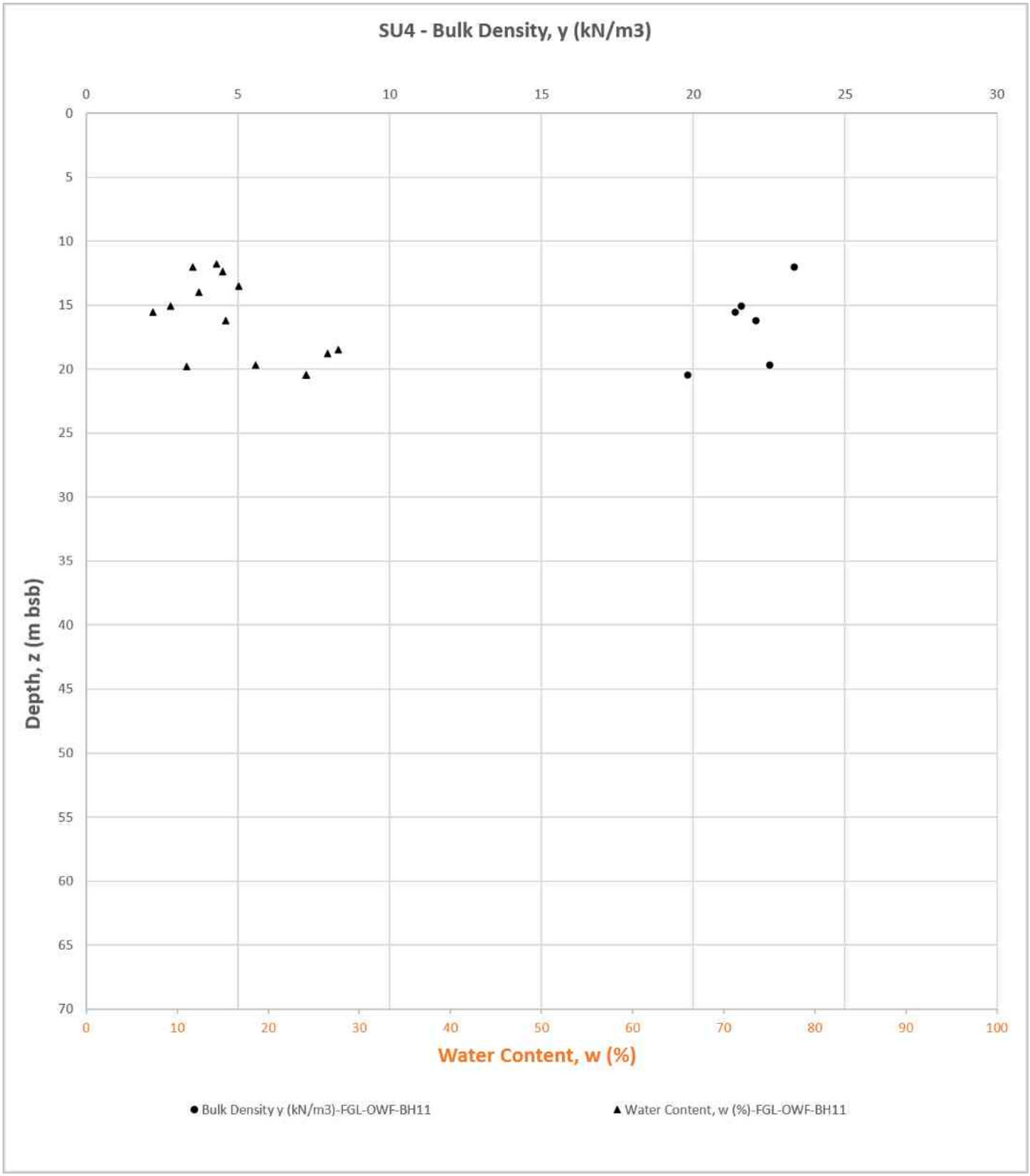

SU3 Friction Angle, ø' (°) - Cohesion (kPa)
Depth, z (m bsb)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Internal Friction Angle (ø')-FGL-OWF-BH01
Internal Friction Angle (ø')-FGL-OWF-BH04
Internal Friction Angle (ø')-FGL-OWF-BH07
Internal Friction Angle (ø')-FGL-OWF-BH08-BH08a
Internal Friction Angle (ø')-FGL-OWF-BH09-BH09a
Internal Friction Angle (ø')-FGL-OWF-BH11
Internal Friction Angle (ø')-FGL-OWF-BH18
Internal Friction Angle (ø')-FGL-OWF-BH24-BH24a


SU3 - IS50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 (MPa)-FGL-OWF-BH01
IS50 (MPa)-FGL-OWF-BH03
IS50 (MPa)-FGL-OWF-BH04
IS50 (MPa)-FGL-OWF-BH07
IS50 (MPa)-FGL-OWF-BH08-BH08a
IS50 (MPa)-FGL-OWF-BH09-BH09a
IS50 (MPa)-FGL-OWF-BH11
IS50 (MPa)-FGL-OWF-BH18
IS50 (MPa)-FGL-OWF-BH24-BH24a
UCS (MPa)-FGL-OWF-BH01
UCS (MPa)-FGL-OWF-BH03
UCS (MPa)-FGL-OWF-BH04
UCS (MPa)-FGL-OWF-BH07
UCS (MPa)-FGL-OWF-BH08-BH08a
UCS (MPa)-FGL-OWF-BH09-BH09a
UCS (MPa)-FGL-OWF-BH11
UCS (MPa)-FGL-OWF-BH18
UCS (MPa)-FGL-OWF-BH24-BH24a
TENSILE (MPa)-FGL-OWF-BH01
TENSILE (MPa)-FGL-OWF-BH03
TENSILE (MPa)-FGL-OWF-BH04
TENSILE (MPa)-FGL-OWF-BH07
TENSILE (MPa)-FGL-OWF-BH08-BH08a
TENSILE (MPa)-FGL-OWF-BH09-BH09a
TENSILE (MPa)-FGL-OWF-BH18
TENSILE (MPa)-FGL-OWF-BH24-BH24a

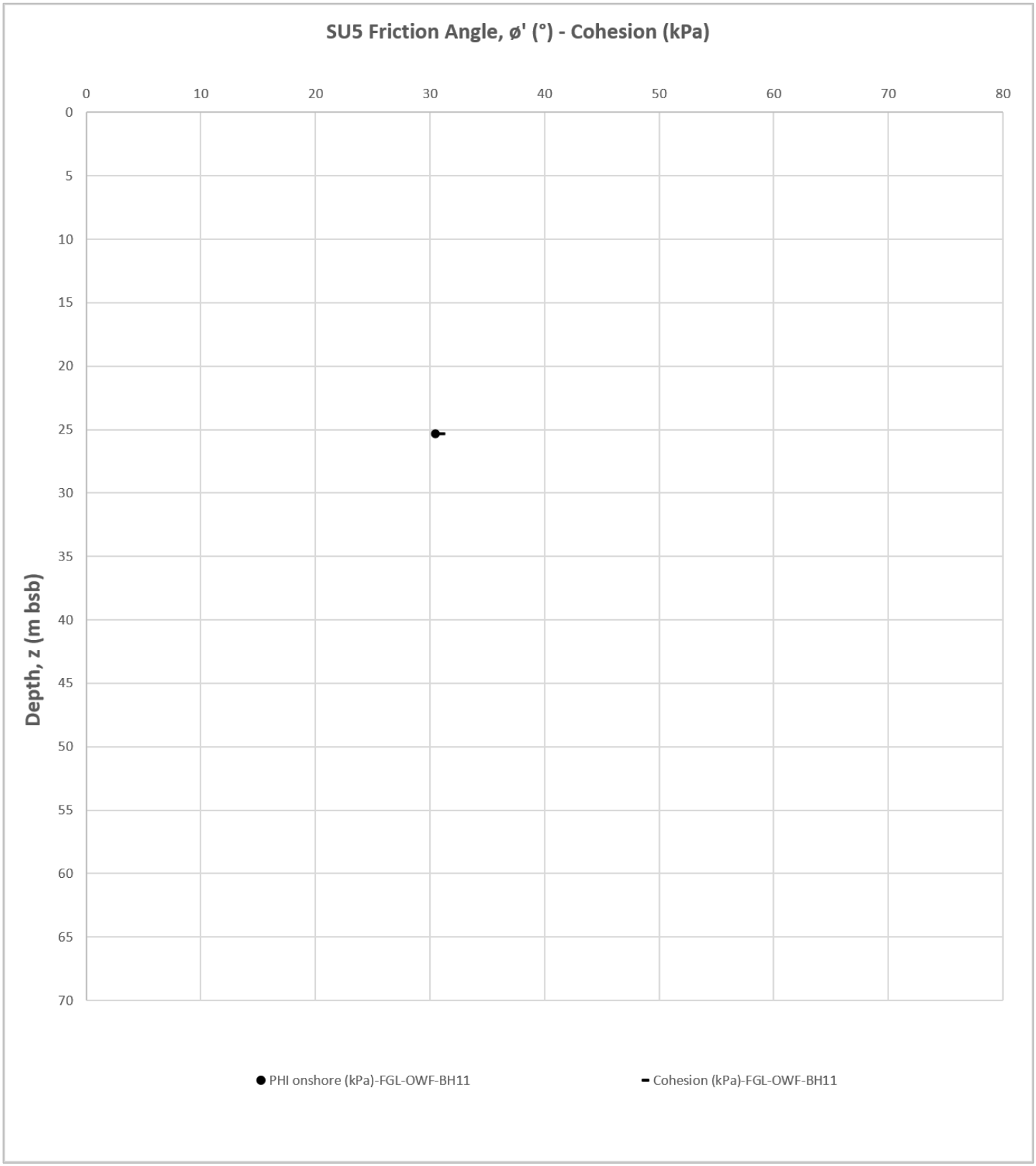

SU3 - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density y (kN/m3)-FGL-OWF-BH01
Bulk Density y (kN/m3)-FGL-OWF-BH03
Bulk Density y (kN/m3)-FGL-OWF-BH04
Bulk Density y (kN/m3)-FGL-OWF-BH07
Bulk Density y (kN/m3)-FGL-OWF-BH08-BH08a
Bulk Density y (kN/m3)-FGL-OWF-BH09-BH09a
Bulk Density y (kN/m3)-FGL-OWF-BH11
Bulk Density y (kN/m3)-FGL-OWF-BH18
Bulk Density y (kN/m3)-FGL-OWF-BH24-BH24a
Water Content, w (%)-FGL-OWF-BH01
Water Content, w (%)-FGL-OWF-BH03
Water Content, w (%)-FGL-OWF-BH04
Water Content, w (%)-FGL-OWF-BH07
Water Content, w (%)-FGL-OWF-BH08-BH08a
Water Content, w (%)-FGL-OWF-BH09-BH09a
Water Content, w (%)-FGL-OWF-BH11
Water Content, w (%)-FGL-OWF-BH18
Water Content, w (%)-FGL-OWF-BH24-BH24a

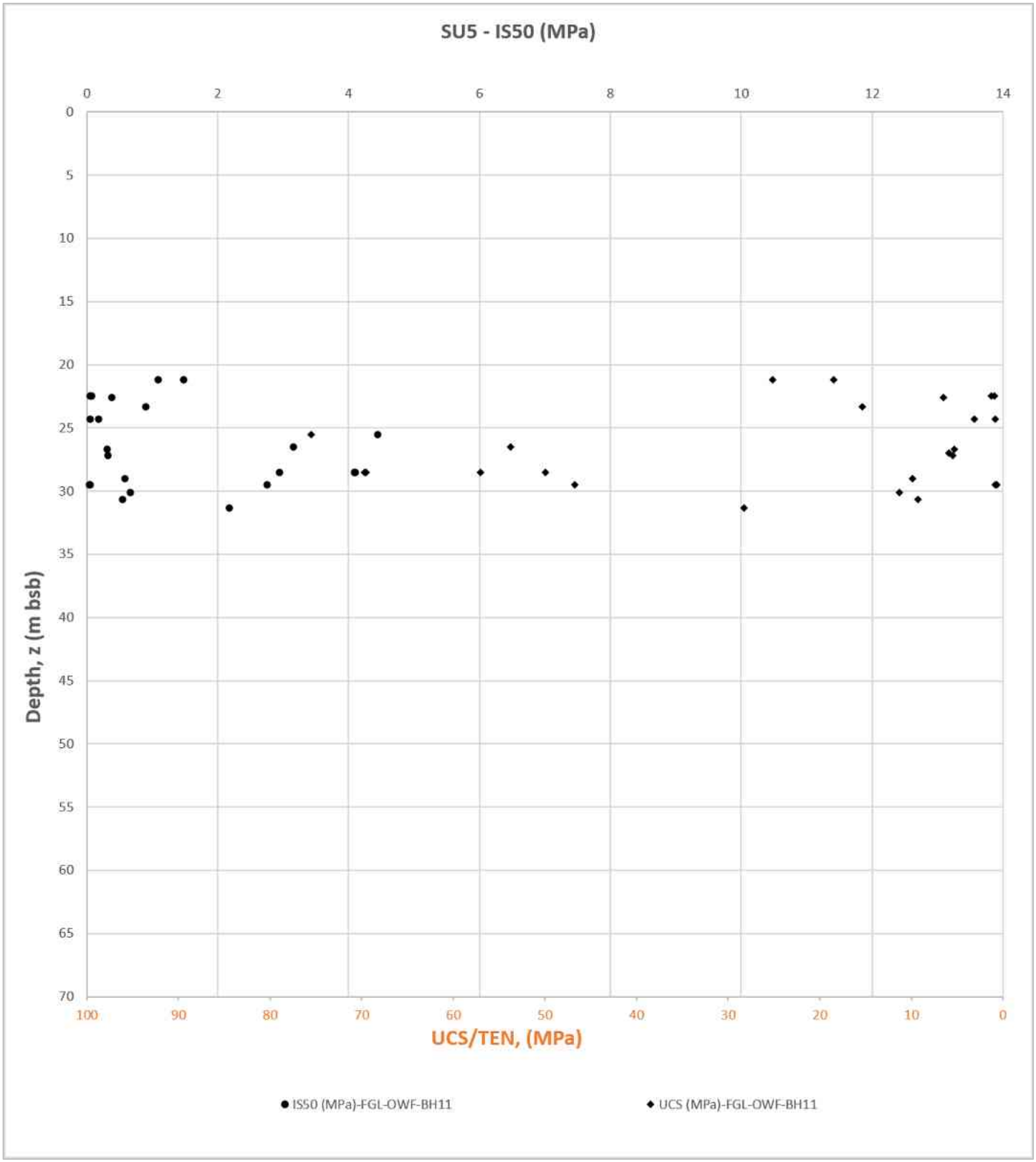
SU4

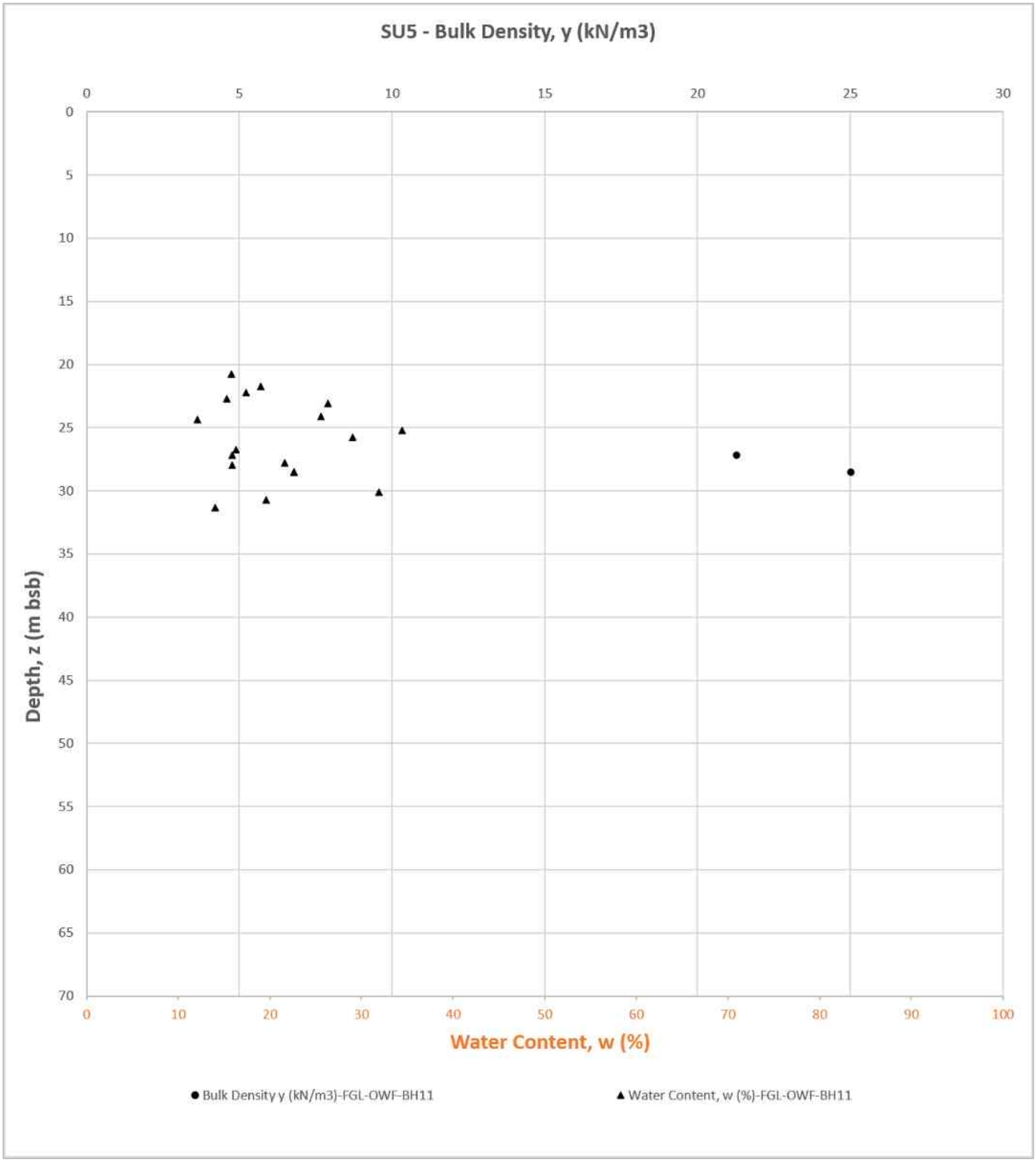

SU4 - IS50 (MPa)
0
2
4
6
8
10
12
14
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
100
90
80
70
60
50
40
30
20
10
0
UCS/TEN, (MPa)
IS50 (MPa)-FGL-OWF-BH11
UCS (MPa)-FGL-OWF-BH11
TENSILE (MPa)-FGL-OWF-BH11


SU4 - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
0
10
20
30
40
50
60
70
80
90
100
● Bulk Density y (kN/m3)-FGL-OWF-BH11
▲ Water Content, w (%)-FGL-OWF-BH11

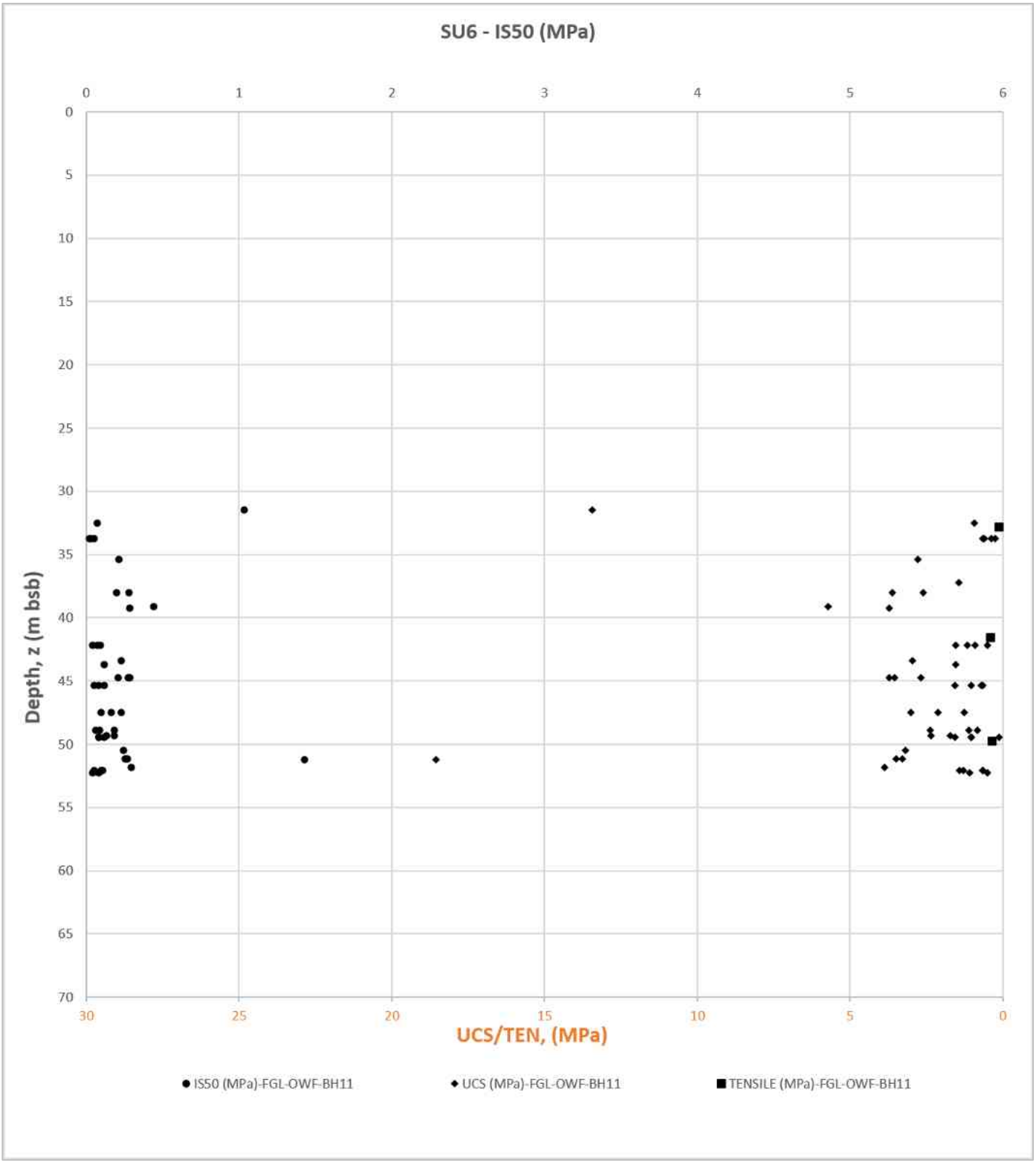
SU5

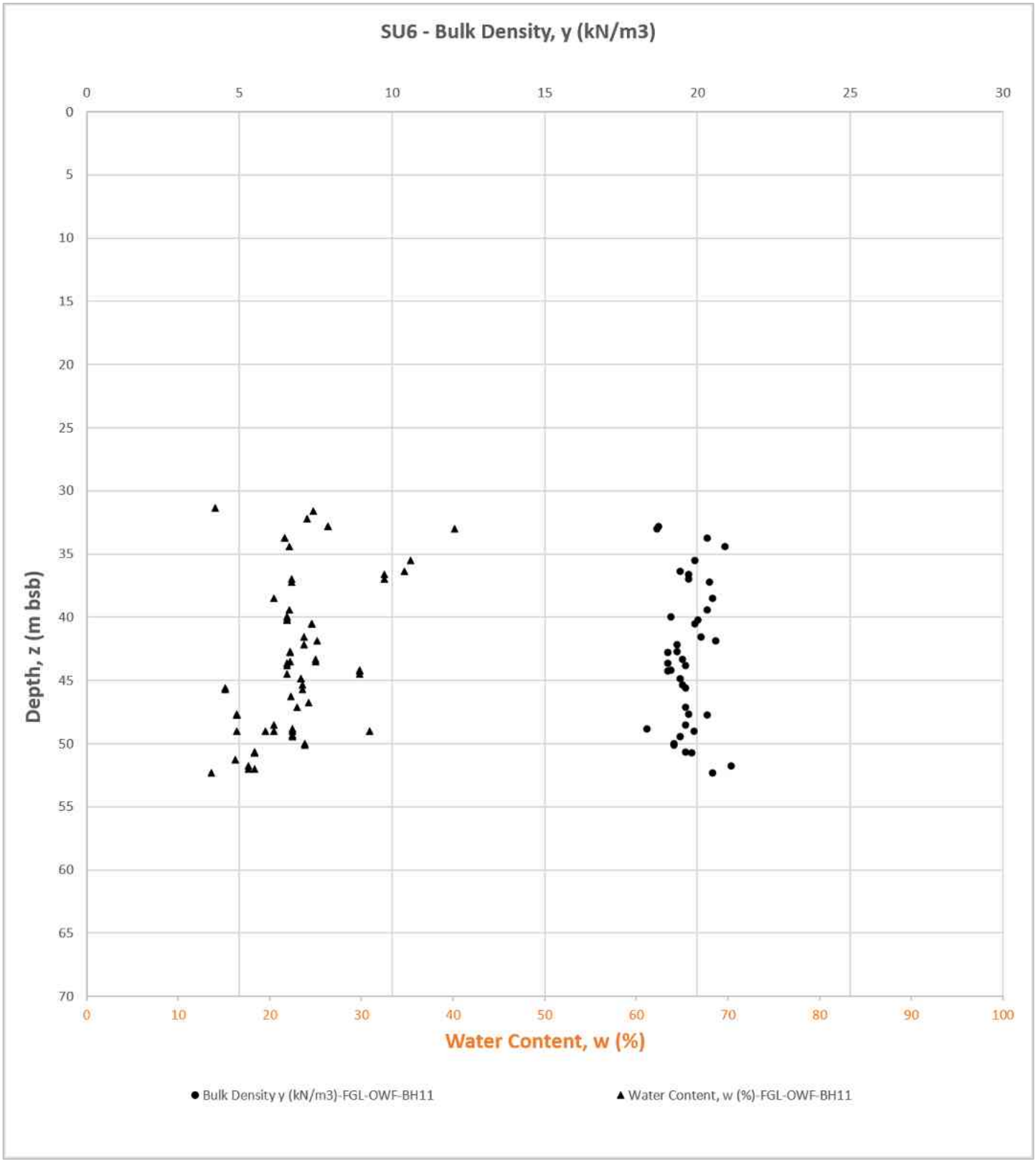

SU5 Friction Angle, ø' (°) - Cohesion (kPa)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
PHI onshore (kPa)-FGL-OWF-BH11
Cohesion (kPa)-FGL-OWF-BH11


SU5 - IS50 (MPa)
0
2
4
6
8
10
12
14
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
100
90
80
70
60
50
40
30
20
10
0
UCS/TEN, (MPa)
IS50 (MPa)-FGL-OWF-BH11
UCS (MPa)-FGL-OWF-BH11

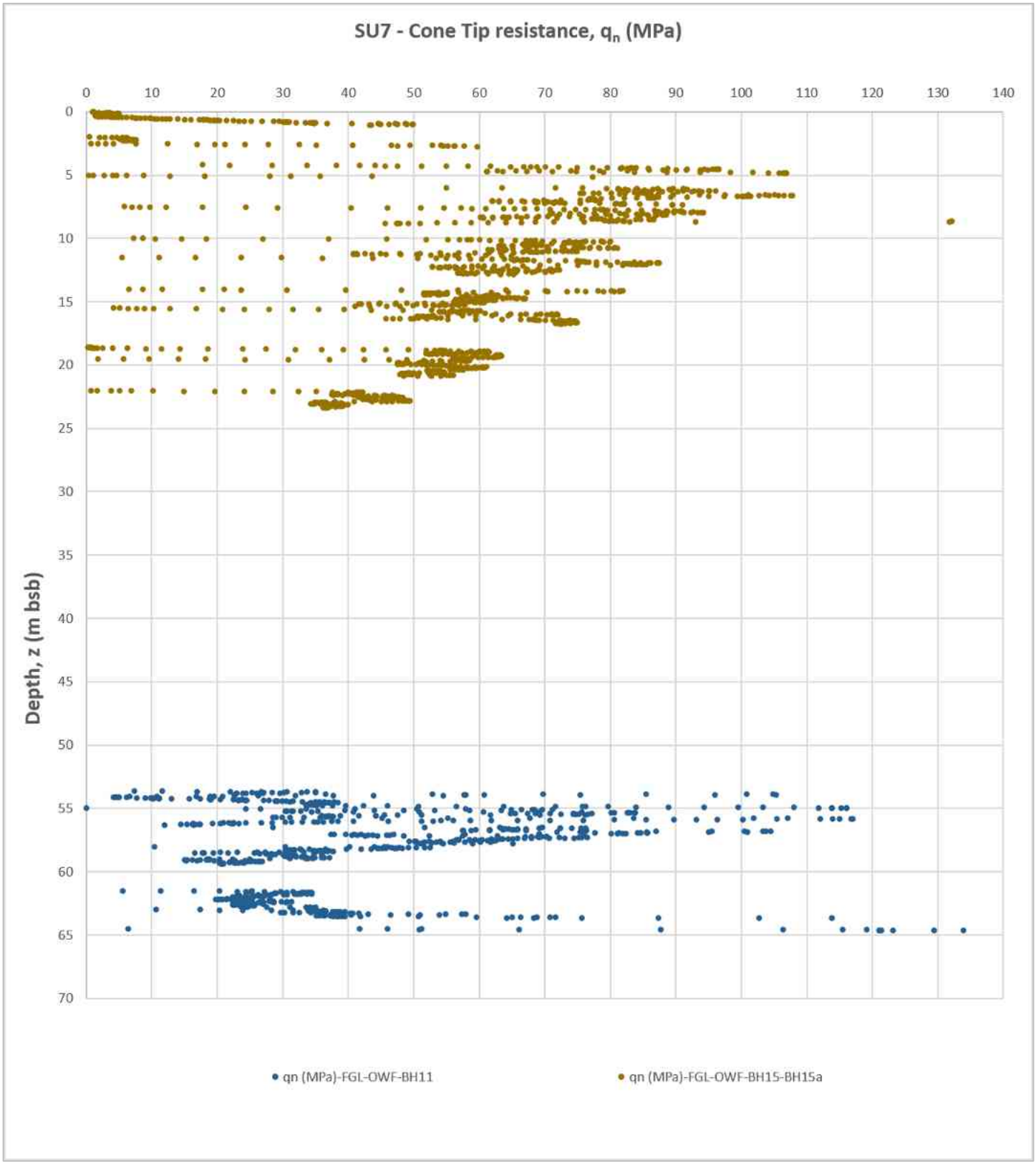

SU5 - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
0
10
20
30
40
50
60
70
80
90
100
● Bulk Density y (kN/m3)-FGL-OWF-BH11
▲ Water Content, w (%)-FGL-OWF-BH11

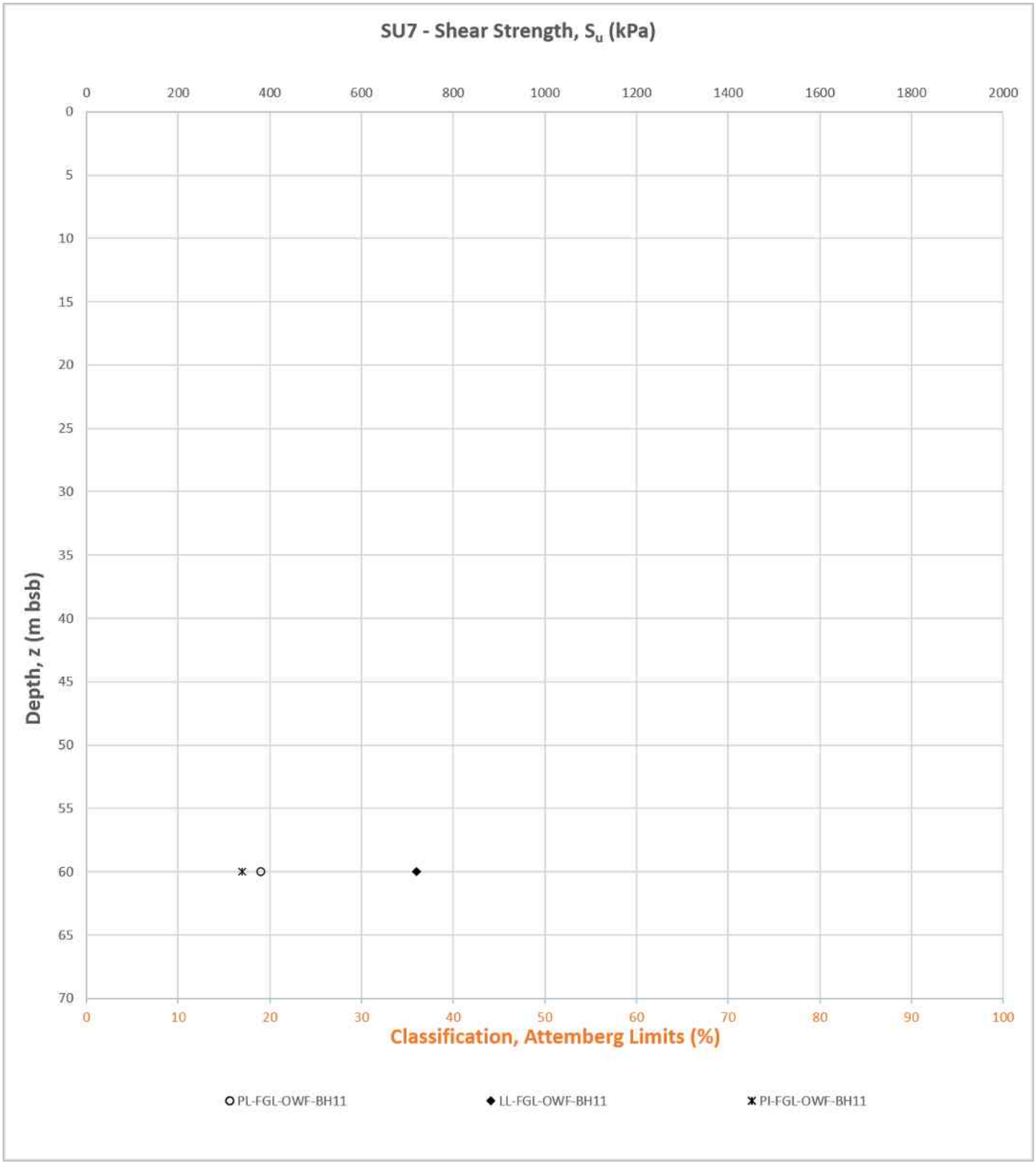
SU6

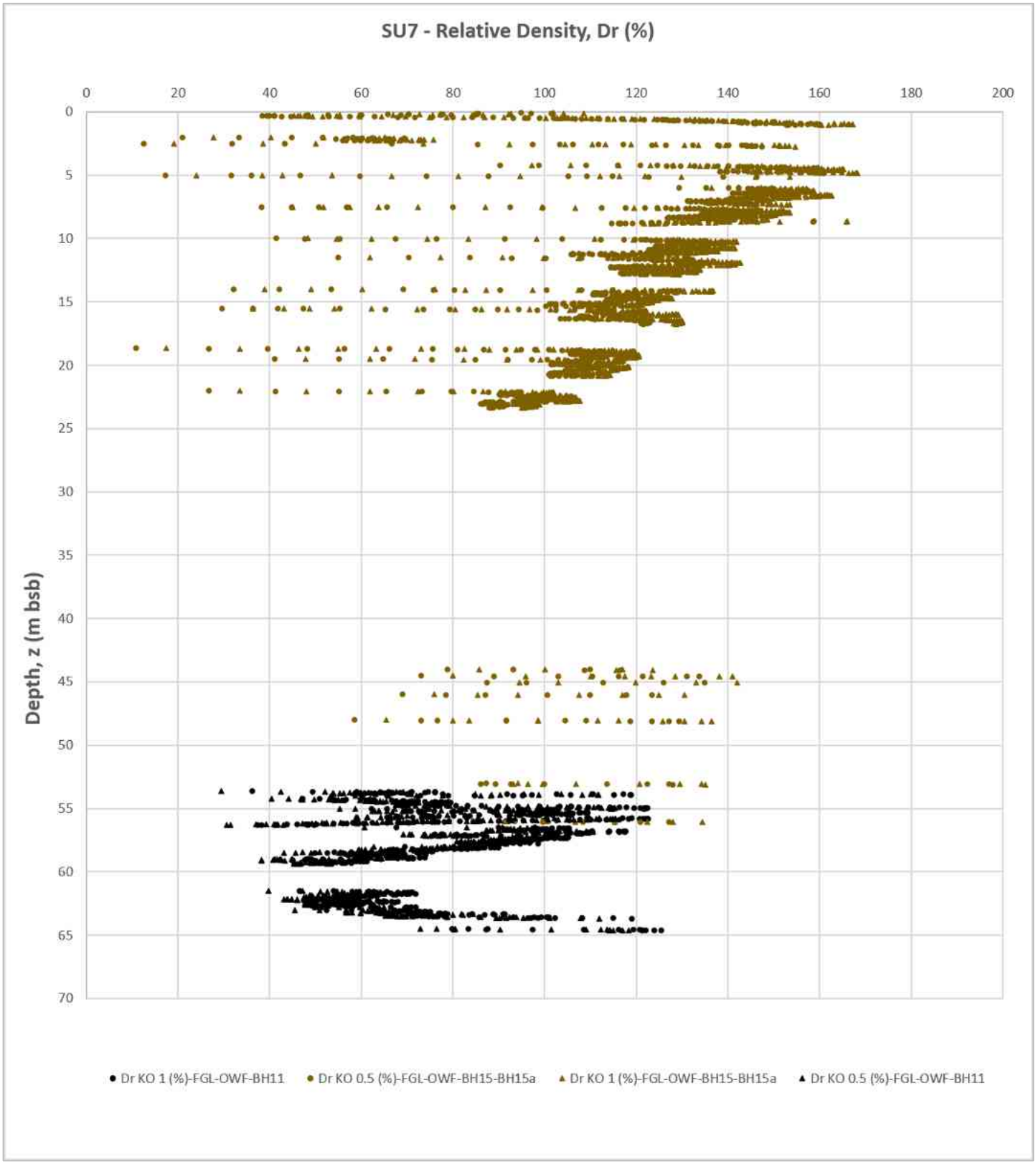

SU6 - IS50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 (MPa)-FGL-OWF-BH11
UCS (MPa)-FGL-OWF-BH11
TENSILE (MPa)-FGL-OWF-BH11

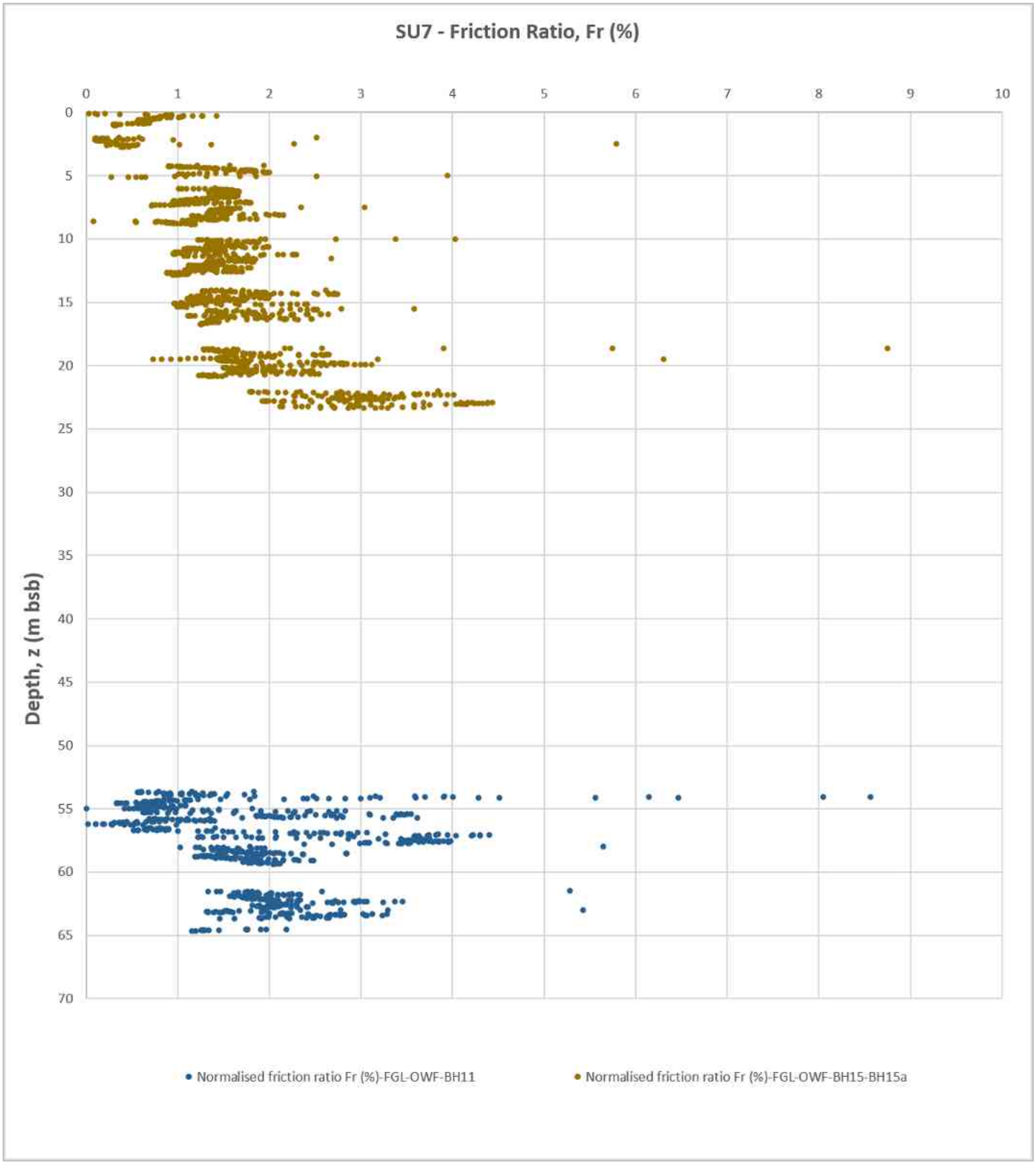

SU6 - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
0
10
20
30
40
50
60
70
80
90
100
● Bulk Density y (kN/m3)-FGL-OWF-BH11
▲ Water Content, w (%)-FGL-OWF-BH11

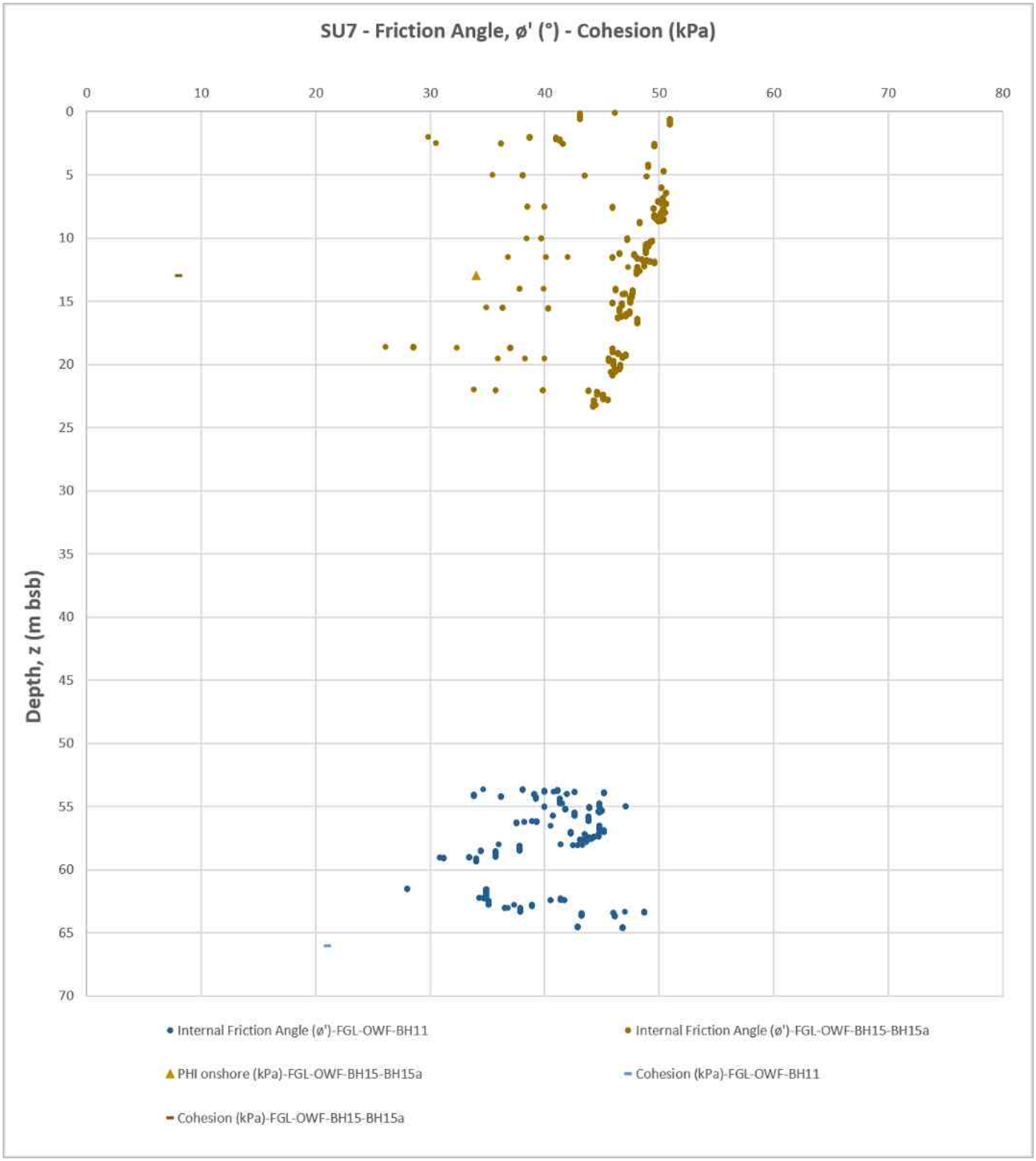
SU7

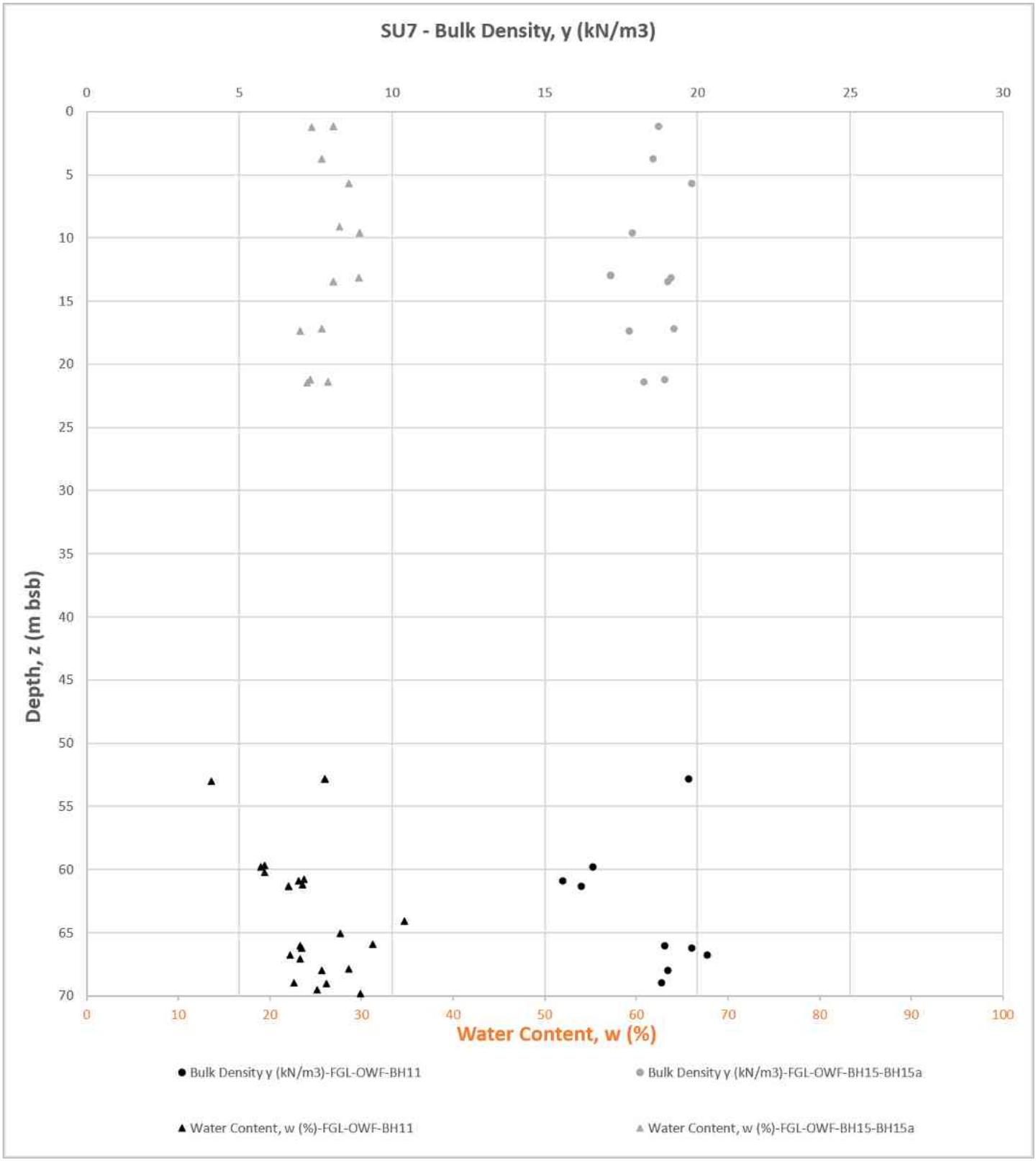

SU7 - Cone Tip resistance, q_n (MPa)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
qn (MPa)-FGL-OWF-BH11
qn (MPa)-FGL-OWF-BH15-BH15a


SU7 - Shear Strength, S_u (kPa)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Depth, z (m bsb)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
0
10
20
30
40
50
60
70
80
90
100
Classification, Attemberg Limits (%)
PL-FGL-OWF-BH11
LL-FGL-OWF-BH11
PI-FGL-OWF-BH11

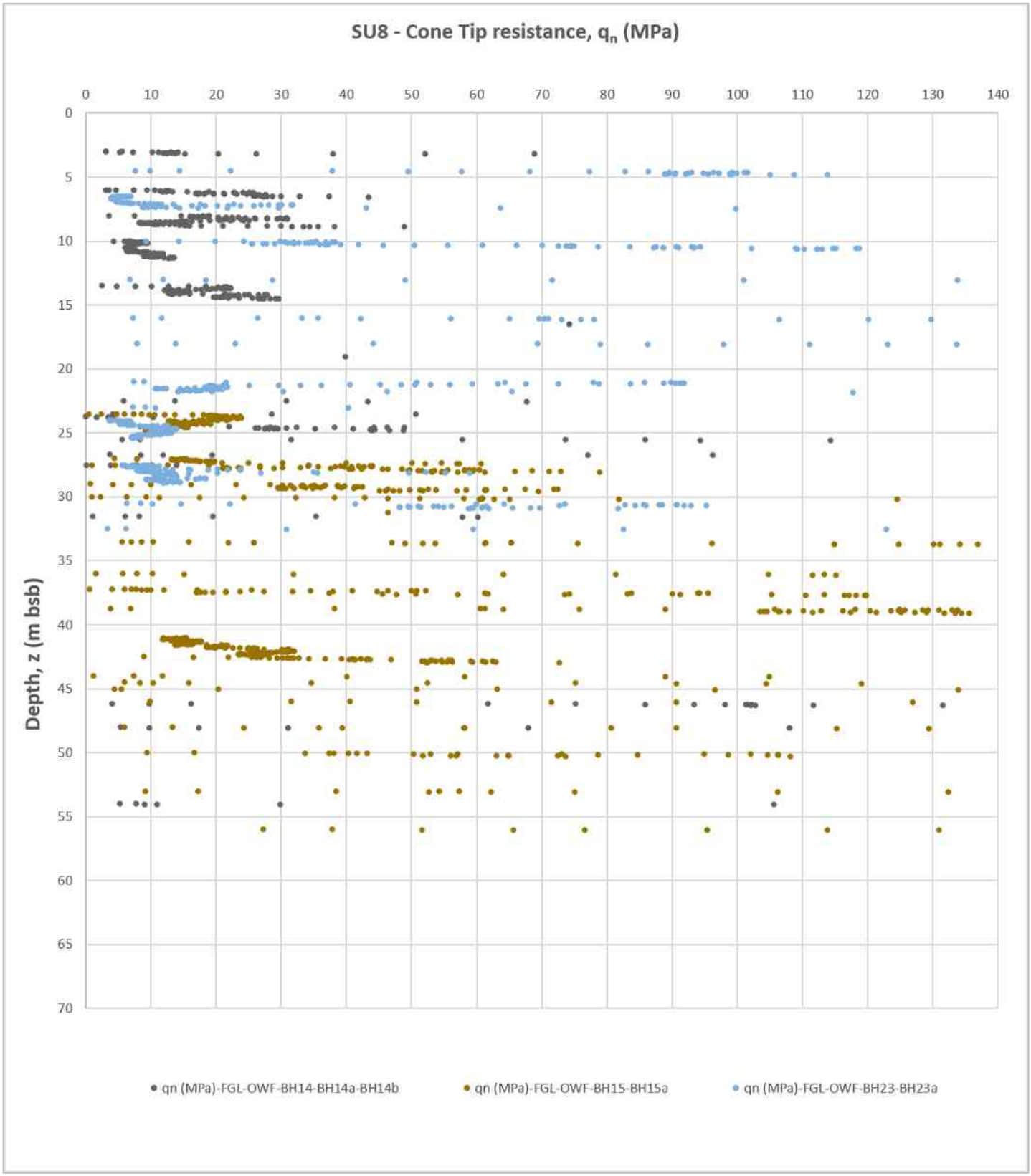

SU7 - Relative Density, Dr (%)
0
20
40
60
80
100
120
140
160
180
200
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Dr KO 1 (%)-FGL-OWF-BH11
Dr KO 0.5 (%)-FGL-OWF-BH15-BH15a
Dr KO 1 (%)-FGL-OWF-BH15-BH15a
Dr KO 0.5 (%)-FGL-OWF-BH11


SU7 - Friction Ratio, Fr (%)
0
1
2
3
4
5
6
7
8
9
10
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Normalised friction ratio Fr (%)-FGL-OWF-BH11
Normalised friction ratio Fr (%)-FGL-OWF-BH15-BH15a

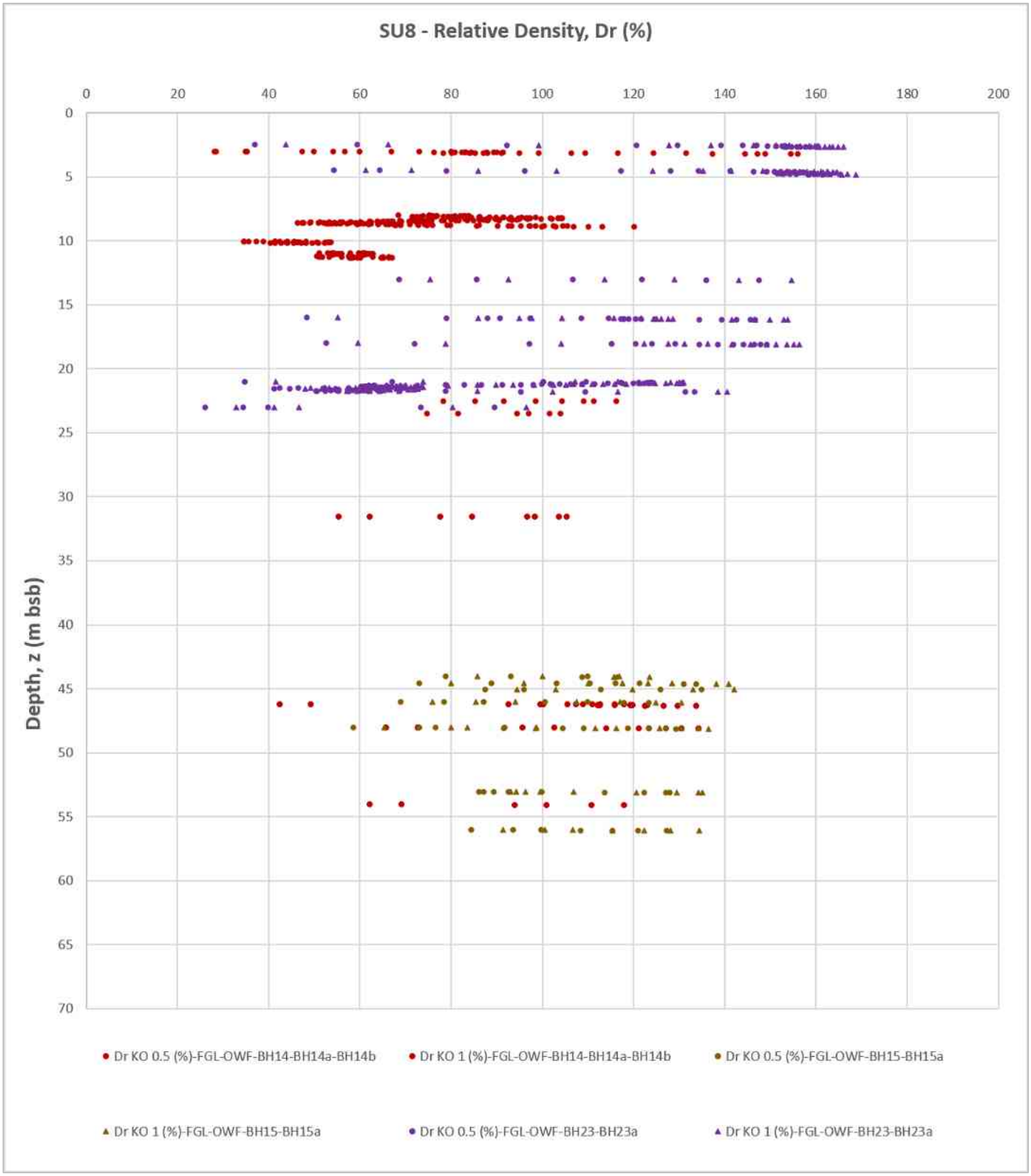

SU7 - Friction Angle, ø' (°) - Cohesion (kPa)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Internal Friction Angle (ø')-FGL-OWF-BH11
Internal Friction Angle (ø')-FGL-OWF-BH15-BH15a
PHI onshore (kPa)-FGL-OWF-BH15-BH15a
Cohesion (kPa)-FGL-OWF-BH11
Cohesion (kPa)-FGL-OWF-BH15-BH15a

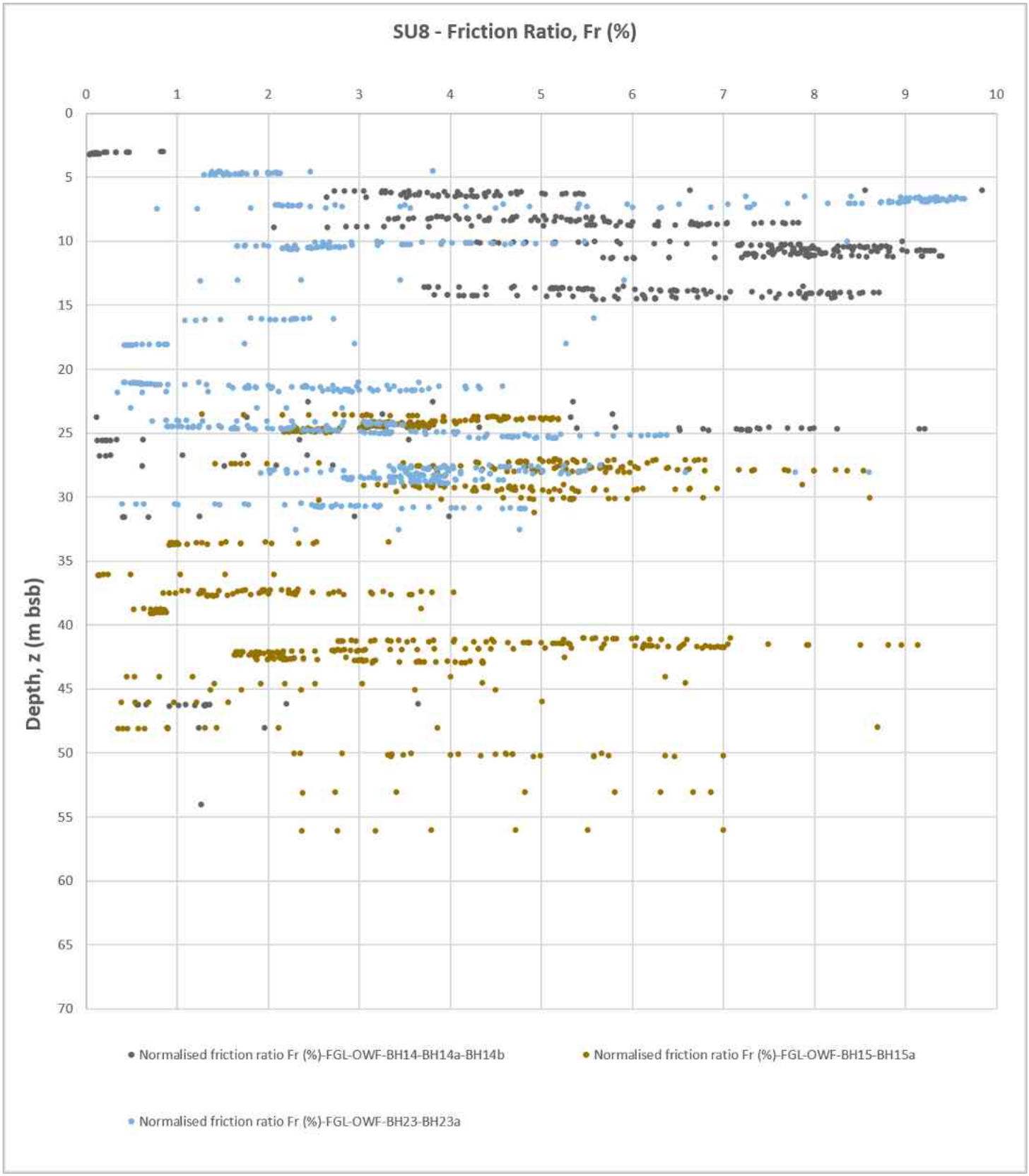

SU7 - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density y (kN/m3)-FGL-OWF-BH11
Bulk Density y (kN/m3)-FGL-OWF-BH15-BH15a
Water Content, w (%)-FGL-OWF-BH11
Water Content, w (%)-FGL-OWF-BH15-BH15a

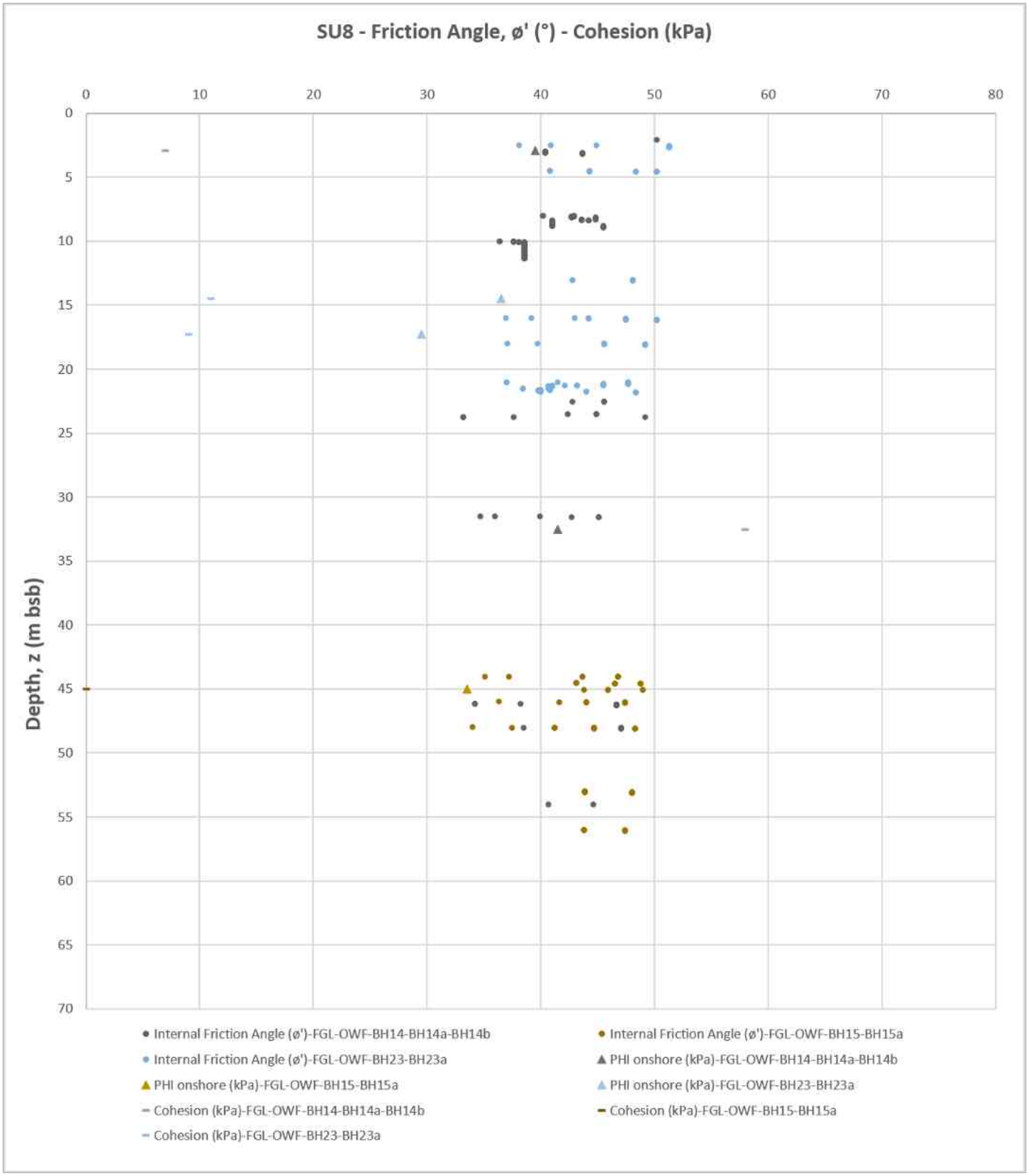
SU8

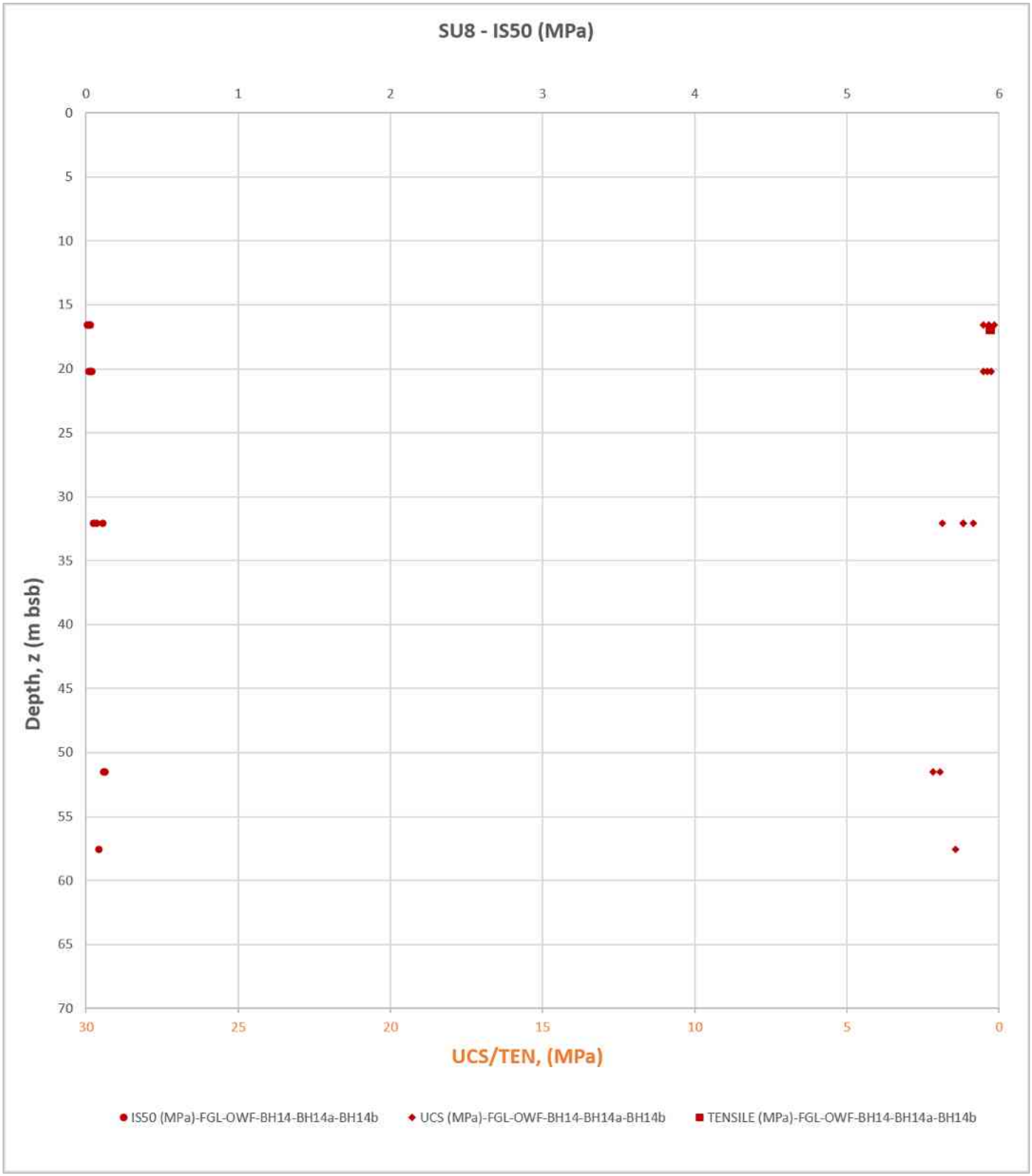

SU8 - Cone Tip resistance, q_n (MPa)
Depth, z (m bsb)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
qn (MPa)-FGL-OWF-BH14-BH14a-BH14b
qn (MPa)-FGL-OWF-BH15-BH15a
qn (MPa)-FGL-OWF-BH23-BH23a

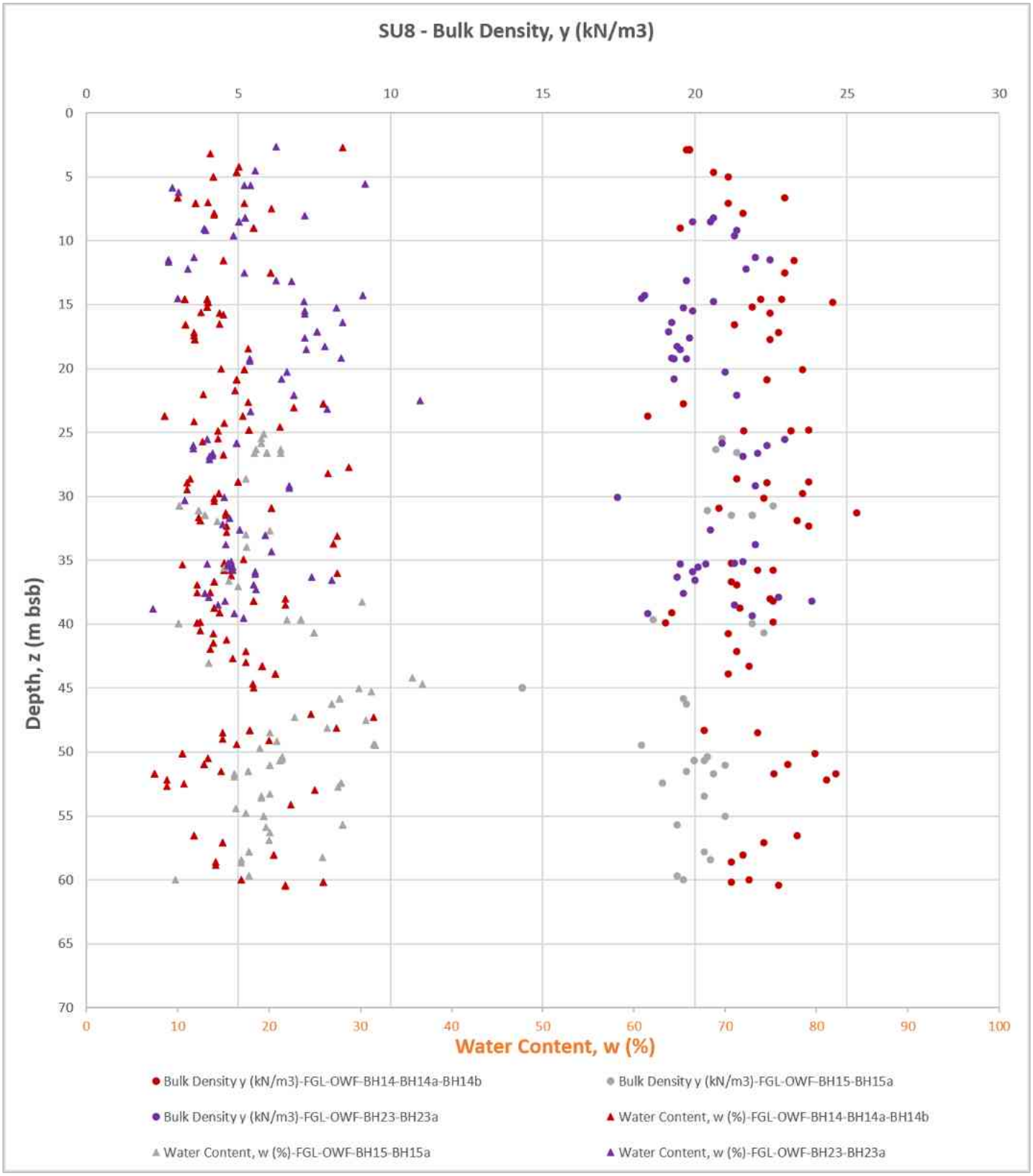

SU8 - Shear Strength, S_u (kPa)
Depth, z (m bsb)
Classification, Atterberg Limits (%)
Su Nkt15 (kPa)-FGL-OWF-BH14-BH14a-BH14b
Su Nkt20 (kPa)-FGL-OWF-BH14-BH14a-BH14b
Su Nkt15 (kPa)-FGL-OWF-BH15-BH15a
Su Nkt20 (kPa)-FGL-OWF-BH15-BH15a
Su Nkt15 (kPa)-FGL-OWF-BH23-BH23a
Su Nkt20 (kPa)-FGL-OWF-BH23-BH23a
UU (kPa)-FGL-OWF-BH14-BH14a-BH14b
UU (kPa)-FGL-OWF-BH15-BH15a
UU (kPa)-FGL-OWF-BH23-BH23a
PL-FGL-OWF-BH14-BH14a-BH14b
LL-FGL-OWF-BH14-BH14a-BH14b
PI-FGL-OWF-BH14-BH14a-BH14b
PL-FGL-OWF-BH15-BH15a
LL-FGL-OWF-BH15-BH15a
PI-FGL-OWF-BH15-BH15a
PL-FGL-OWF-BH23-BH23a
LL-FGL-OWF-BH23-BH23a
PI-FGL-OWF-BH23-BH23a


SU8 - Relative Density, Dr (%)
0
20
40
60
80
100
120
140
160
180
200
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Dr KO 0.5 (%)-FGL-OWF-BH14-BH14a-BH14b
Dr KO 1 (%)-FGL-OWF-BH14-BH14a-BH14b
Dr KO 0.5 (%)-FGL-OWF-BH15-BH15a
Dr KO 1 (%)-FGL-OWF-BH15-BH15a
Dr KO 0.5 (%)-FGL-OWF-BH23-BH23a
Dr KO 1 (%)-FGL-OWF-BH23-BH23a

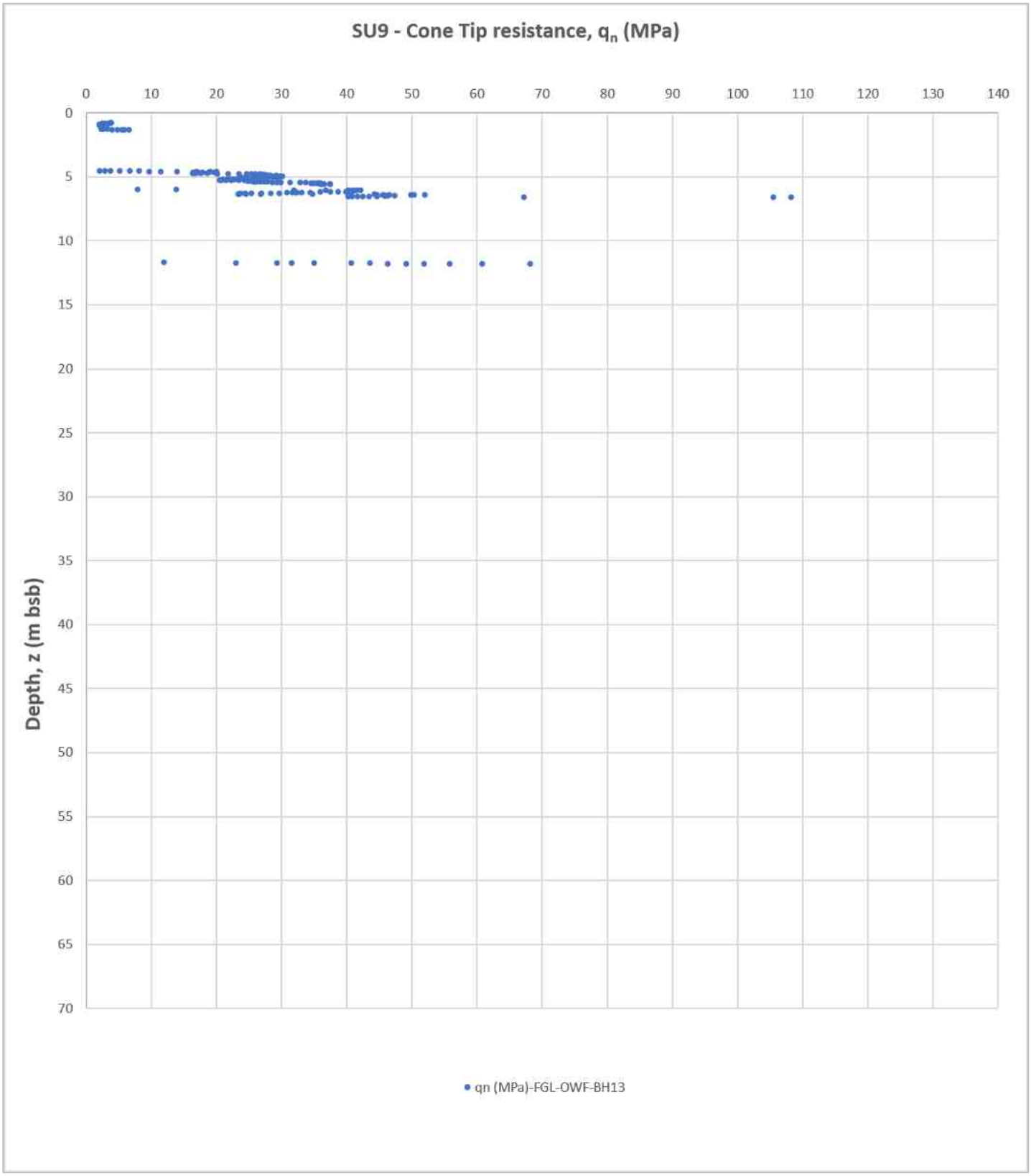

SU8 - Friction Ratio, Fr (%)
0
1
2
3
4
5
6
7
8
9
10
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Normalised friction ratio Fr (%)-FGL-OWF-BH14-BH14a-BH14b
Normalised friction ratio Fr (%)-FGL-OWF-BH15-BH15a
Normalised friction ratio Fr (%)-FGL-OWF-BH23-BH23a

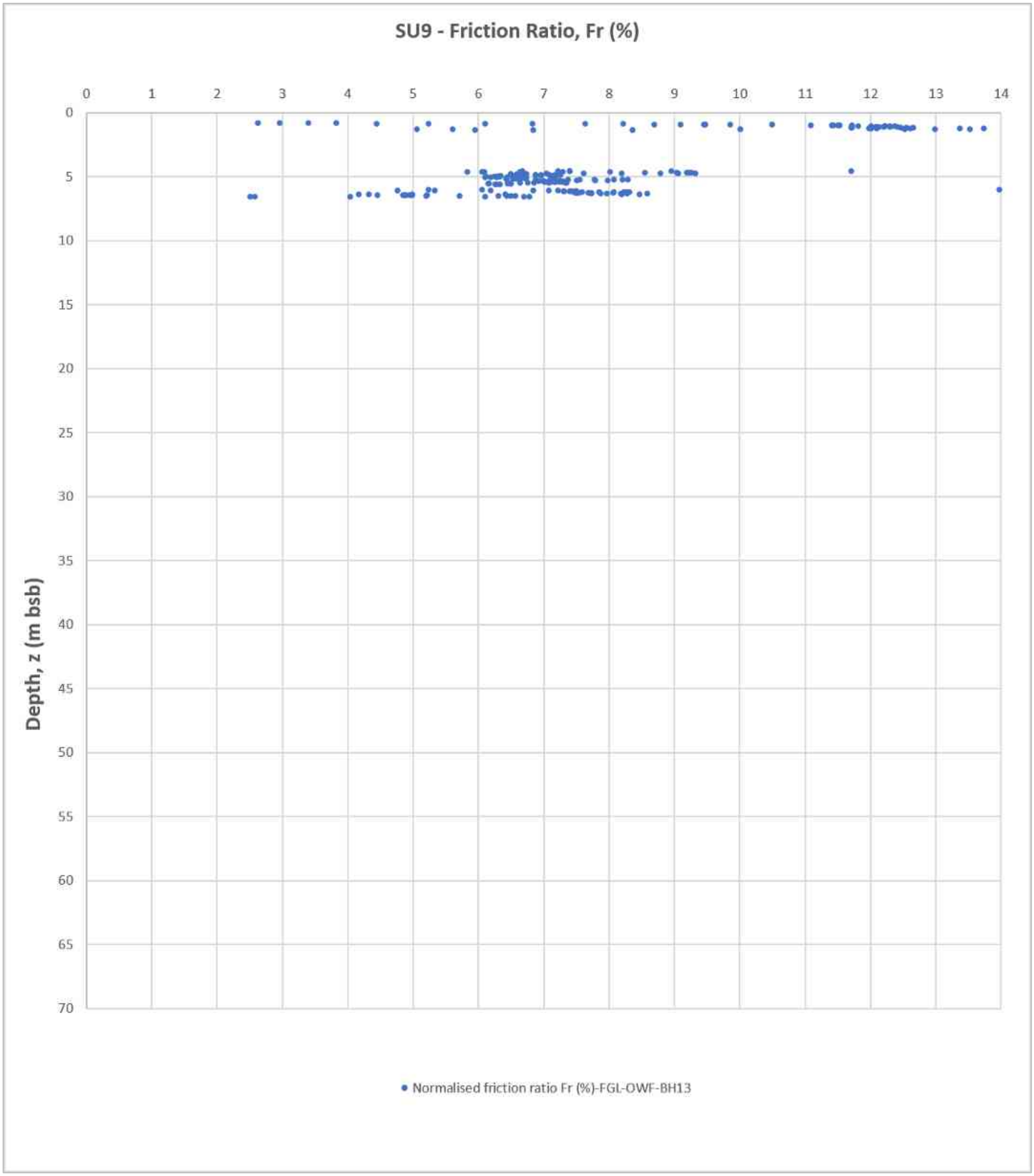

SU8 - Friction Angle, ø' (°) - Cohesion (kPa)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Internal Friction Angle (ø')-FGL-OWF-BH14-BH14a-BH14b
Internal Friction Angle (ø')-FGL-OWF-BH15-BH15a
Internal Friction Angle (ø')-FGL-OWF-BH23-BH23a
PHI onshore (kPa)-FGL-OWF-BH14-BH14a-BH14b
PHI onshore (kPa)-FGL-OWF-BH15-BH15a
PHI onshore (kPa)-FGL-OWF-BH23-BH23a
Cohesion (kPa)-FGL-OWF-BH14-BH14a-BH14b
Cohesion (kPa)-FGL-OWF-BH15-BH15a
Cohesion (kPa)-FGL-OWF-BH23-BH23a

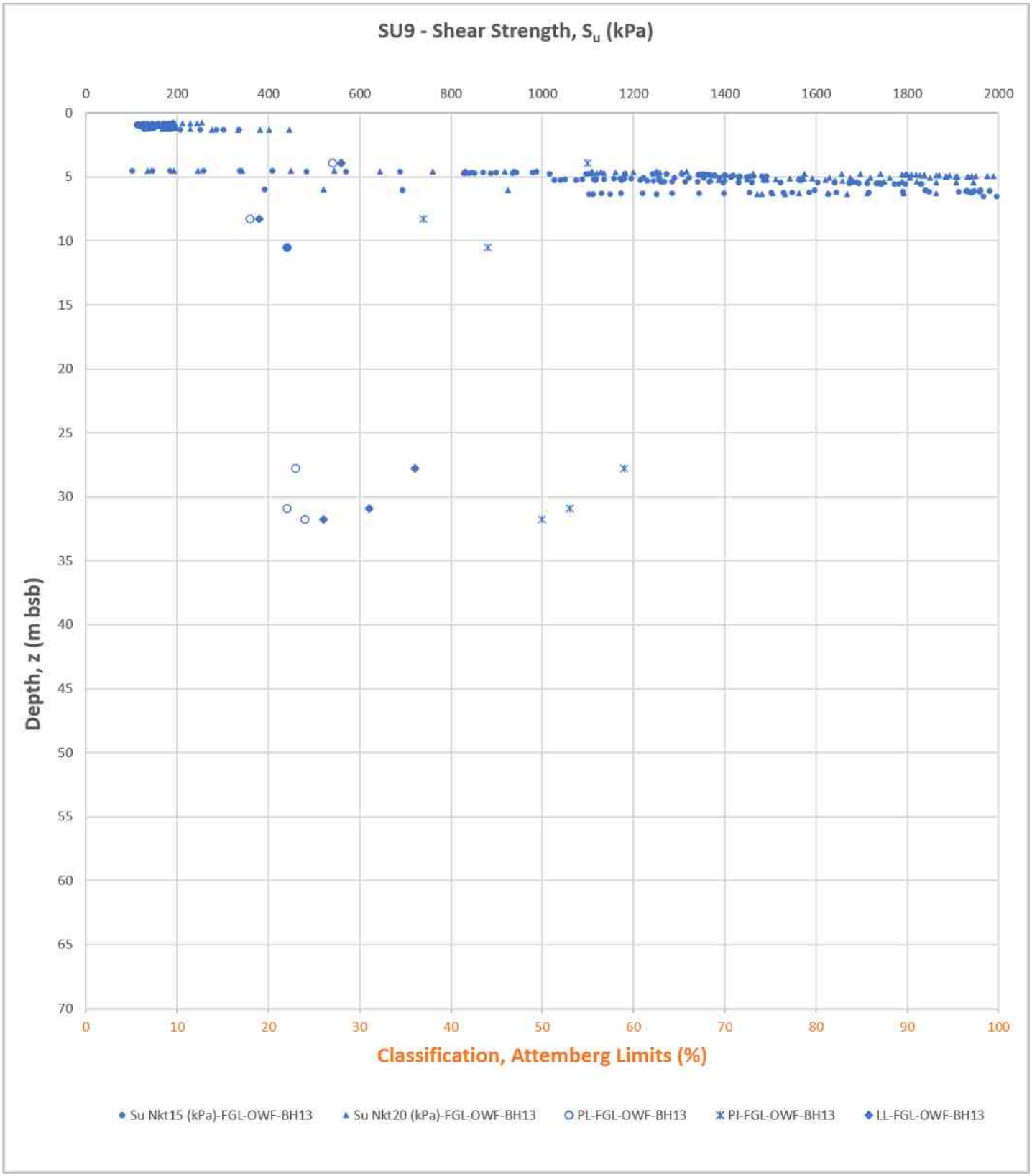

SU8 - IS50 (MPa)
0
1
2
3
4
5
6
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
30
25
20
15
10
5
0
UCS/TEN, (MPa)
IS50 (MPa)-FGL-OWF-BH14-BH14a-BH14b
UCS (MPa)-FGL-OWF-BH14-BH14a-BH14b
TENSILE (MPa)-FGL-OWF-BH14-BH14a-BH14b

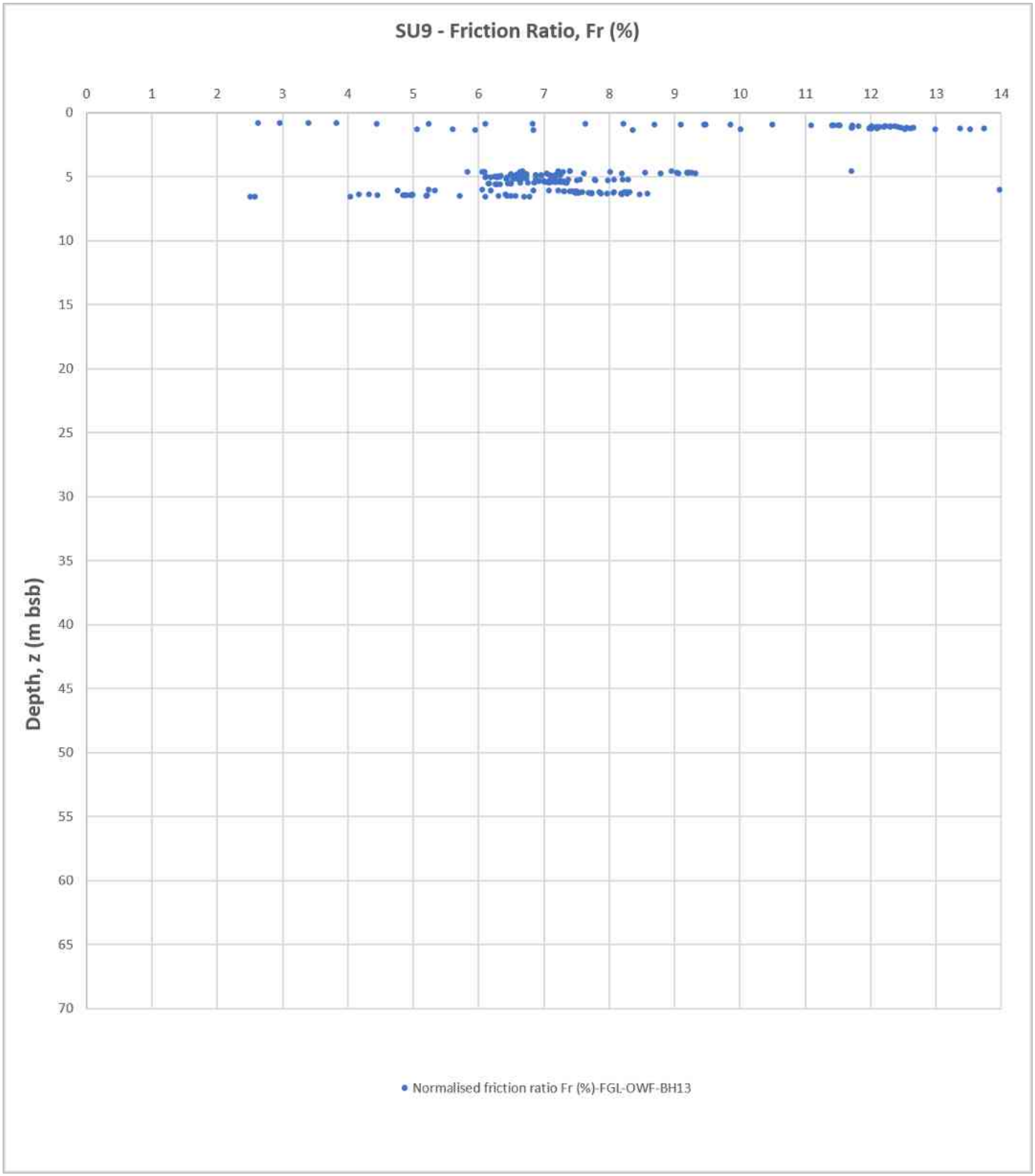

SU8 - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
Bulk Density y (kN/m3)-FGL-OWF-BH14-BH14a-BH14b
Bulk Density y (kN/m3)-FGL-OWF-BH15-BH15a
Bulk Density y (kN/m3)-FGL-OWF-BH23-BH23a
Water Content, w (%)-FGL-OWF-BH14-BH14a-BH14b
Water Content, w (%)-FGL-OWF-BH15-BH15a
Water Content, w (%)-FGL-OWF-BH23-BH23a

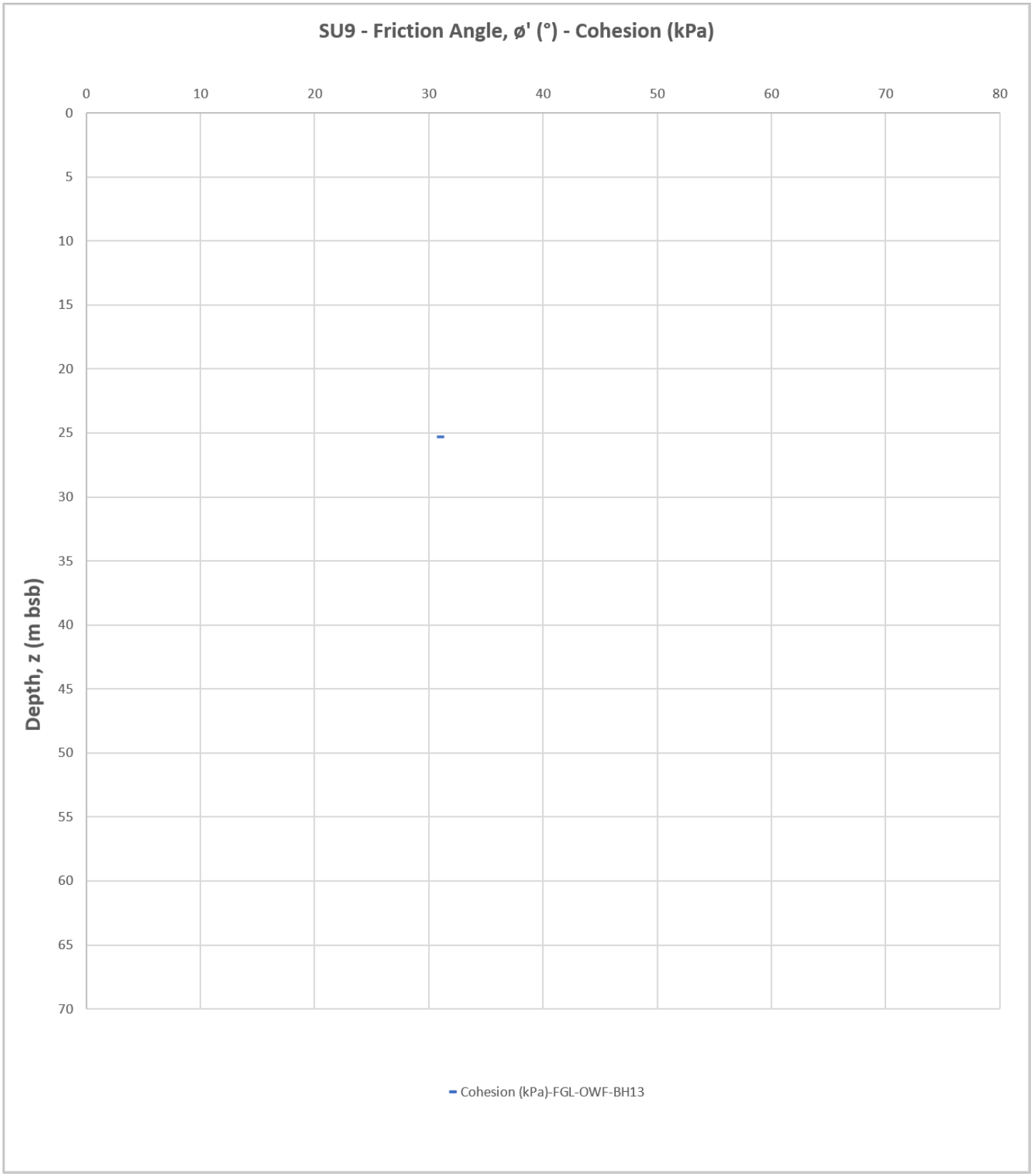
SU9

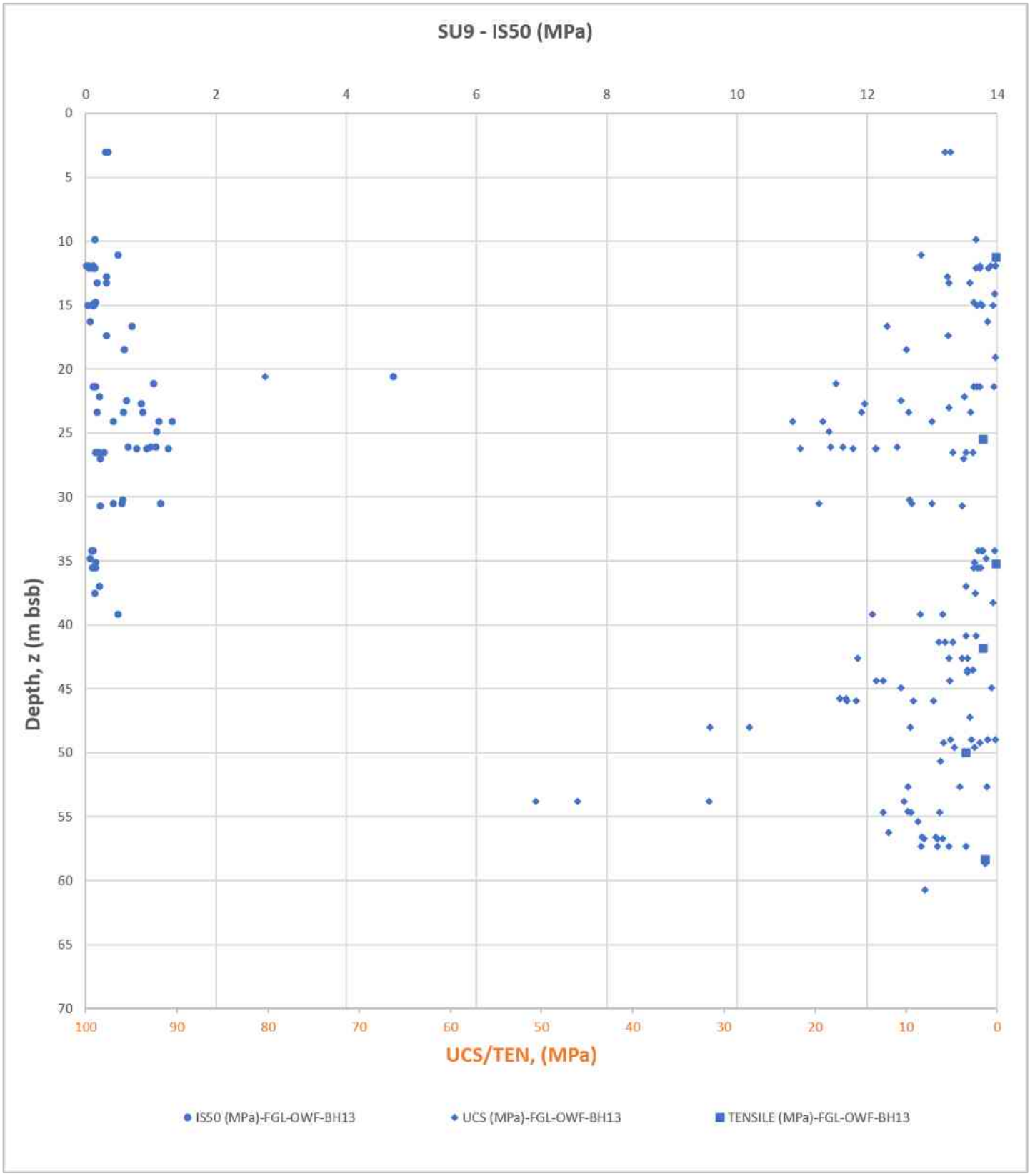

SU9 - Cone Tip resistance, q_n (MPa)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
qn (MPa)-FGL-OWF-BH13

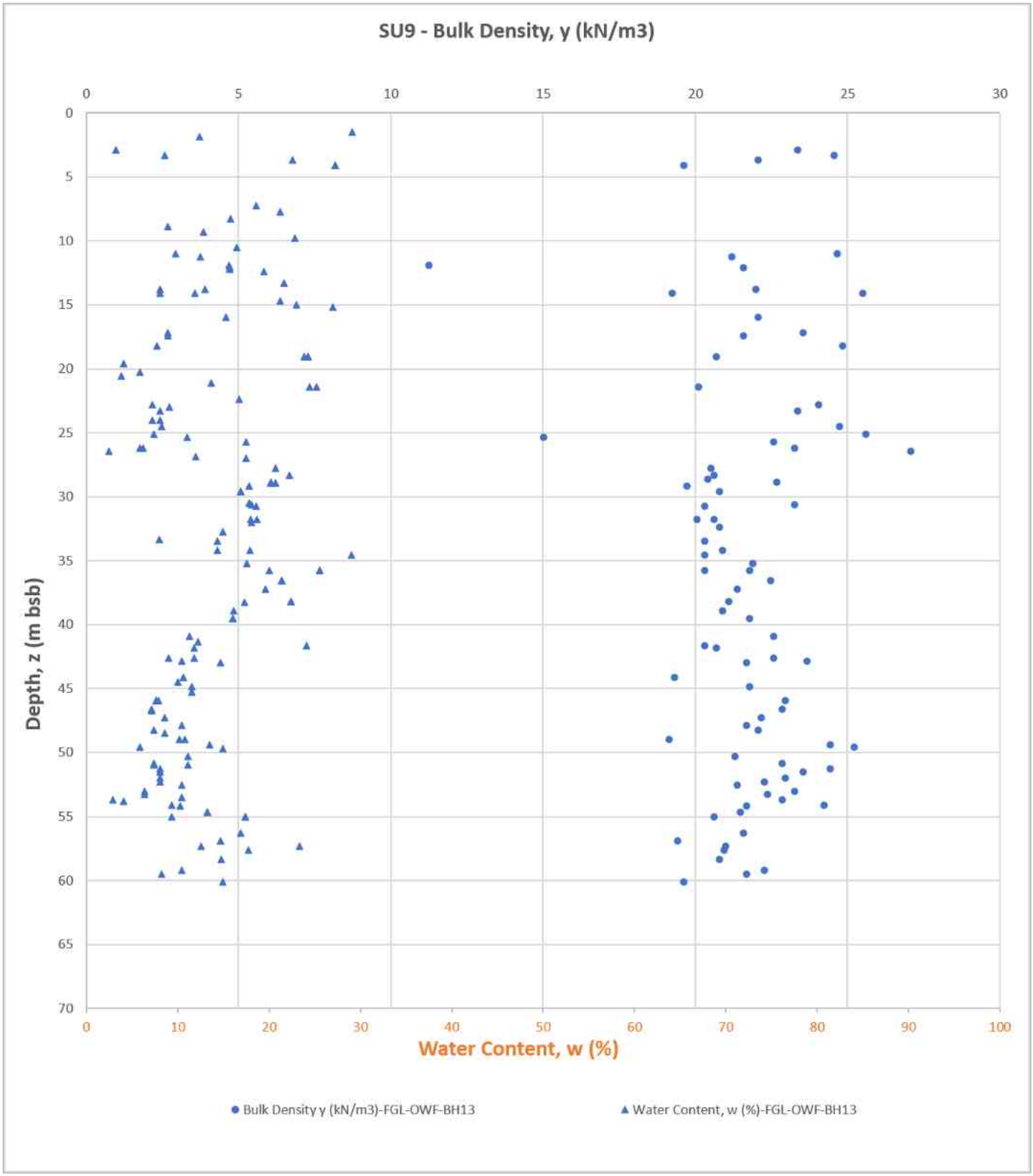

SU9 - Friction Ratio, Fr (%)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Normalised friction ratio Fr (%)-FGL-OWF-BH13


SU9 - Shear Strength, S_u (kPa)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Depth, z (m bsb)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
0
10
20
30
40
50
60
70
80
90
100
Classification, Attemberg Limits (%)
Su Nkt15 (kPa)-FGL-OWF-BH13
Su Nkt20 (kPa)-FGL-OWF-BH13
PL-FGL-OWF-BH13
PI-FGL-OWF-BH13
LL-FGL-OWF-BH13


SU9 - Friction Ratio, Fr (%)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Normalised friction ratio Fr (%)-FGL-OWF-BH13


SU9 - Friction Angle, ø' (°) - Cohesion (kPa)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
Depth, z (m bsb)
Cohesion (kPa)-FGL-OWF-BH13


SU9 - IS50 (MPa)
Depth, z (m bsb)
UCS/TEN, (MPa)
IS50 (MPa)-FGL-OWF-BH13
UCS (MPa)-FGL-OWF-BH13
TENSILE (MPa)-FGL-OWF-BH13


SU9 - Bulk Density, y (kN/m3)
Depth, z (m bsb)
Water Content, w (%)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
0
10
20
30
40
50
60
70
80
90
100
Bulk Density y (kN/m3)-FGL-OWF-BH13
Water Content, w (%)-FGL-OWF-BH13

APPENDIX D4. GEOTECHNICAL PARAMETERS PER SOIL UNIT

This appendix is delivered in two separate spreadsheets:

Appendix D4-1 - Z5_Geotech parameters for UNIT_REV.02.xlsx
Appendix D4-2 - Z5_Units-graphs_REV.02.xlsx

END OF DOCUMENT