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Volume 7D Caledonia South Appendices

Appendix 3-1 Marine Water Quality Baseline

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Volume 7D Appendix 3-1 Marine Water Quality Baseline

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Acronyms and Abbreviations

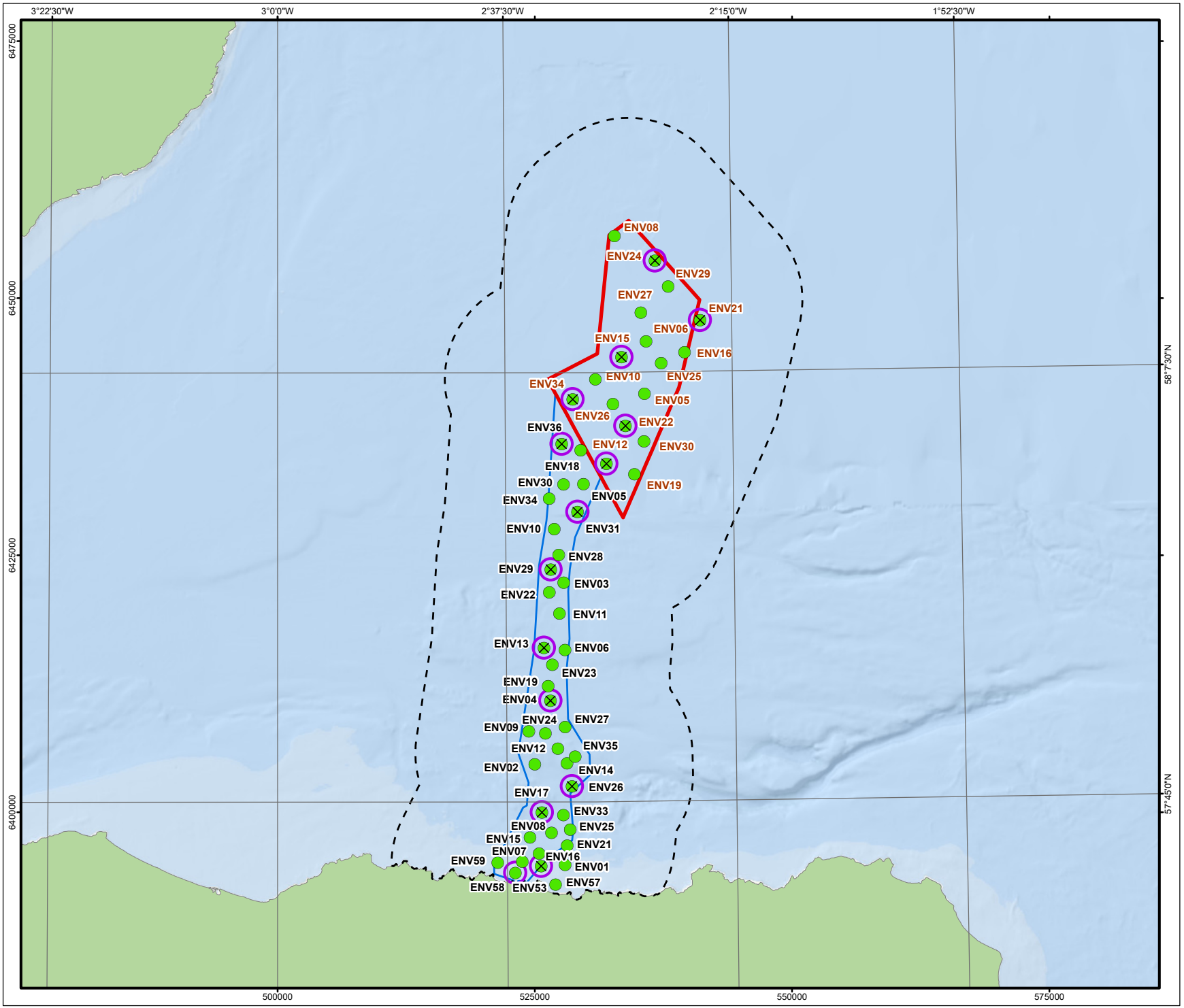
CTD	Conductivity, Temperature and Depth
MW&SQ	Marine Water and Sediment Quality
NMPI	National Marine Plan Interactive
OECC	Offshore Export Cable Corridor
OWF	Offshore Wind Farm
SPM	Suspended Particulate Matter
SSC	Suspended Sediment Concentration

1 Introduction

1.1.1.1 This section covers an in-depth analysis of the baseline environment of Caledonia South in terms of marine water quality parameters in the Marine Water and Sediment Quality (MW&SQ) Study Area, such as:

- Temperature and Salinity;
- Dissolved Oxygen;
- Turbidity; and
- pH.

1.1.1.2 Illustrations of the location of sample stations across the Caledonia South Site and the Caledonia South Offshore Export Cable Corridor (OECC) are shown in Figure 1-1. The results of this site-specific survey are compared with publicly available regional data, including previous Offshore Wind Farm (OWF) Environmental Impact Assessments (EIAs), to provide a robust characterisation of the entire MW&SQ Study Area.



Caledonia South Site

Caledonia South Offshore Export Cable Corridor

10km Zone of Influence

PSA Sample

Chemistry Sample

Water Sample

0 5 10 15 20 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
01	16/09/2024	Approved	EV	BB	DH

CALEDONIA Offshore Wind Farm

GoBe APEM Group

CONTRACTOR DRAWING NO: UKCAL1_GO_WNF_MWS_MAP_0043[illegible]

CONTRACTOR REV: 01

GEODETIC PARAMETERS: WGS 84 / UTM zone 30N (EPSG: 32630)

DRAWING TITLE

Figure 1-1: Site-Specific Survey Locations in the Caledonia South Site and Caledonia South OECC

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SCALE: 1:500,000

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SHEET NO: 01 of 01

REV: N/A

2 Temperature and Salinity

2.1 Overview

2.1.1.1 Using data organised by grid cells as presented on Scotland's National Marine Plan Interactive Map (NMPi), monthly temperature (°C) and salinity (‰) data were extracted from 20 grid cells located within the Caledonia South Site and nine grid cells within the Caledonia South OECC (Marine Directorate, 2024[1]). The available data layers represent a 30-year (1971-2000) temperature/salinity climatology for surface regions of the Northwest European shelf seas. From the original data, which are irregularly distributed in space and time, the mean monthly surface temperature and salinity are calculated, as well as the climatic mean annual cycle. These regional data are compared with site-specific survey data to provide a robust characterisation of temperature and salinity across the receiving environment established with high data confidence. This section refers to two measurements of salinity; parts per thousand (‰) and practical salinity units (psu). To convert salinity from parts per thousand to practical salinity units, you can use the relationship: 1 ‰ = 1 psu (e.g. 34.70 ‰ is equal to 34.70 psu).

2.2 Caledonia South Site

2.2.1.1 Salinity data were extracted from Scotland's NMPi Map (detailed in Section 2.1) for coordinates available within the Caledonia South Site. The annual mean surface salinity (‰) was reported to remain fully marine at around 34.78 ‰ with minimal fluctuations throughout the year (ranging from 34.70 ‰ in April to 34.99 ‰ in October) (Table 2-1; Figure 2-1).

2.2.1.2 Scotland's NMPi placed Aprils monthly average sea surface salinity within the Caledonia South Site at 34.70‰. A site-specific survey of the Caledonia South Site conducted in April observed a comparable sea surface salinity between 34.10 psu and 34.60 psu, with a mean surface salinity of 34.5 psu (Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)). All stations recorded stable salinity profiles apart from Station ENV12. Station ENV12 shows a halocline (vertical zone in the oceanic water column in which salinity changes rapidly with depth) between approximately 10m to 25m. Decreasing salinity and development of a halocline is consistent with the freshwater input from the river catchments of the Inner Moray and Cromarty Firths which flow into the Moray Firth.

2.2.1.3 Temperature data were extracted from Scotland's NMPi Map (detailed in Section 2.1) for coordinates available within the Caledonia South Site. Temperature values across the Caledonia South Site showed a strong seasonal signal with highs of 12.69°C in September and lows of 5.76°C in March. Moreover, during the summer months (May, June, July, August, and September), a slight temperature variation was observed in the depth of the

water column with ranges of up to 1.8°C (in June) between mean surface and bottom temperatures (Figure 2-1). This is in line with anticipated seasonal temperature stratification resulting from solar heating forming a weak thermocline (Sharples et al., 2006[2]; Volume 4, Chapter 2: Marine and Coastal Processes).

2.2.1.4 Scotland's NMPi placed Aprils monthly average sea surface temperature within the Caledonia South Site at 7.21°C. A site-specific survey of the Caledonia South Site conducted in April observed a comparable range of sea surface temperatures between 7.9°C and 8.5°C depending on sample location, with a mean sea surface temperature of 8.63°C (Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)). The survey output demonstrated a relatively constant sea surface temperature, suggesting a well-mixed upper layer (to c. 10 m). Of note, Station ENV12 presented surface water temperature approximately 1°C to 2°C warmer than the other stations sampled. In addition, a clear thermocline (distinct vertical layer within a body of water where there is a rapid change in temperature with depth) was observed with temperatures decreasing rapidly at depths ranging from c. 5 to 20 m in all stations, with the exception of Station ENV34. Station ENV34 showed a well-mixed profile. Beyond the thermocline observed at most sample stations, temperatures were relatively stable.

2.2.1.5 In summary, the values reported for temperature and salinity of the Caledonia South Site are characteristic of an offshore marine environment in the North Sea throughout an annual cycle.

Table 2-1: Mean monthly sea temperature (surface and bottom) and salinity (surface and bottom) across the Caledonia South Site based on climatology data between 1971 and 2000.

Month	Sea Surface Temperature (°C)	Sea Bottom Temperature (°C)	Sea Surface Salinity (‰)	Sea Bottom Salinity (‰)
January	7.44 (± 0.08)	7.71 (± 0.07)	34.70 (± 0.04)	34.76 (± 0.04)
February	6.55 (± 0.10)	6.55 (± 0.07)	34.71 (± 0.04)	34.74 (± 0.03)
March	5.76 (± 0.11)	5.80 (± 0.06)	34.72 (± 0.03)	34.73 (± 0.02)
April	7.21 (± 0.02)	7.01 (± 0.05)	34.70 (± 0.05)	34.79 (± 0.04)
May	8.29 (± 0.02)	7.55 (± 0.05)	34.74 (± 0.04)	34.85 (± 0.04)
June	10.53 (± 0.12)	8.65 (± 0.15)	34.77 (± 0.03)	34.79 (± 0.03)
July	11.35 (± 0.02)	10.06 (± 0.13)	34.83 (± 0.04)	34.93 (± 0.02)
August	12.69 (± 0.10)	11.11 (± 0.15)	34.78 (± 0.02)	34.85 (± 0.03)
September	12.23 (± 0.08)	11.85 (± 0.16)	34.86 (± 0.03)	34.93 (± 0.04)
October	11.80 (± 0.03)	11.71 (± 0.06)	34.93 (± 0.03)	34.99 (± 0.04)
November	9.93 (± 0.07)	9.85 (± 0.08)	34.82 (± 0.03)	34.83 (± 0.05)
December	8.56 (± 0.07)	8.64 (± 0.04)	34.85 (± 0.02)	34.90 (± 0.02)
Annual	9.36	8.87	34.78	34.84

Note, mean (± standard deviation) are shown for each parameter (n = 20).
Source: Marine Directorate (2024[1]).

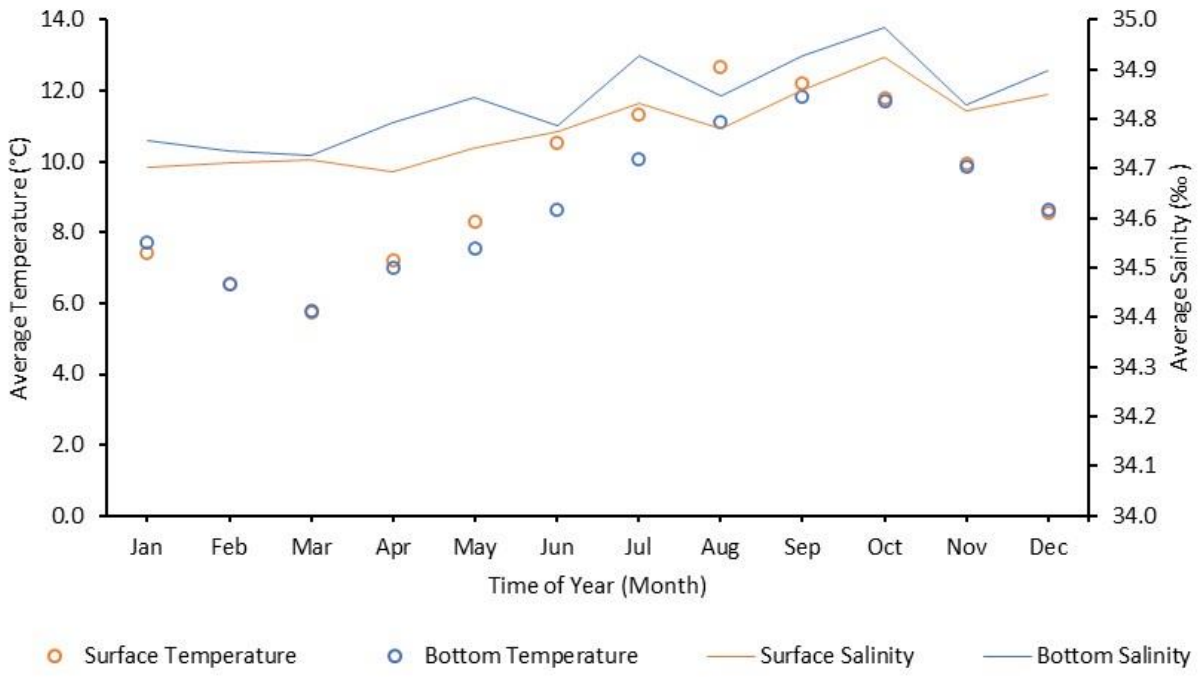

Figure 2-1: Monthly mean sea surface and bottom temperature and salinity within the Caledonia South Site of Caledonia South based on climatology data between 1971 and 2000. Source: Marine Directorate (2024[1]).

2.3 Caledonia South OECC

2.3.1.1 Salinity data were extracted from Scotland's NMPi Map (detailed in Section 2.1) for coordinates available within the Caledonia South OECC. The annual mean surface salinity (‰) was reported to remain fully marine at around 34.74 ‰ with minimal fluctuations throughout the year (ranging from 34.63 ‰ in April to 34.89 ‰ in October) (Table 2-2). A slight variation in salinity was recorded in the depth of the water column where the annual average reported a variance of 0.06 ‰ favouring a slightly more saline environment at the sea bottom.

2.3.1.2 Scotland's NMPi placed Aprils monthly average sea surface salinity within Caledonia South OECC at 34.70‰. A site-specific survey of the Caledonia South OECC conducted in April observed a comparable sea surface salinity between 33.8 psu and 34.40 psu (Volume 7B, Appendix 4-2: Environmental Baseline Report (Offshore Export Cable Corridor)). Sampled stations within the Caledonia South OECC reported slightly decreased salinity in surface waters. This reduced salinity in surface waters, and therefore development of a halocline, is consistent with the freshwater input from river catchments which flow into the Moray Firth.

2.3.1.3 Temperature data were extracted from Scotland's NMPi Map for coordinates available within the Caledonia South OECC (detailed in Section 2.1. Temperature values exhibited a strong seasonal signal with highs of 12.88 °C in September and lows of 5.58 °C in March. Moreover, during the summer

months (May, June, July, and August), a slight temperature variation was observed in the depth of the water column with variations of up to 2.04 °C in June between mean surface and mean bottom temperatures (Figure 2-2). This is in line with anticipated seasonal temperature stratification resulting from solar heating forming a weak thermocline.

2.3.1.4 Scotland's NMPi placed Aprils monthly average sea surface temperature within the Caledonia South OECC at 7.17°C. A site-specific survey of the Caledonia South OECC conducted in April observed a comparable range of sea surface temperatures between 6.9 °C and 8.2 °C depending on sample location (Volume 7B, Appendix 4-2: Environmental Baseline Report (Offshore Export Cable Corridor)). The survey data reported a general increase in sea surface temperature associated with distance from shore, where near shore Station ENV17 recorded a temperature of 6.9 °C which increased to 8.1 °C at the furthest offshore Station ENV36. In addition, a clear thermocline was observed at depths ranging from approximately 10 to 15 m in the offshore environment, whereas nearshore stations recorded a well-mixed profile throughout. Reports observed a narrowing temperature range (c. 0.5 °C) beyond depths of 30 m which continued until temperature remained relatively stable at 40 m and beyond (ranging from 7.2 °C to 7.6 °C).

2.3.1.5 In summary, these values reported for temperature and salinity of the Caledonia South OECC are characteristic of a typical coastal environment throughout an annual cycle with inputs from freshwater sources.

Table 2-2: Mean monthly sea temperature (surface and bottom) and salinity (surface and bottom) across the Caledonia South OECC based on climatology data between 1971 and 2000.

Month	Sea Surface Temperature (°C)	Sea Bottom Temperature (°C)	Sea Surface Salinity (‰)	Sea Bottom Salinity (‰)
January	7.29 (± 0.03)	7.59 (± 0.04)	34.64 (± 0.04)	34.71 (± 0.02)
February	6.39 (± 0.05)	6.42 (± 0.04)	34.66 (± 0.03)	34.69 (± 0.02)
March	5.58 (± 0.05)	5.71 (± 0.01)	34.68 (± 0.02)	34.69 (± 0.01)
April	7.17 (± 0.02)	6.92 (± 0.03)	34.63 (± 0.03)	34.74 (± 0.02)
May	8.32 (± 0.05)	7.47 (± 0.02)	34.69 (± 0.02)	34.78 (± 0.02)
June	10.73 (± 0.14)	8.69 (± 0.15)	34.72 (± 0.02)	34.75 (± 0.02)
July	11.40 (± 0.03)	10.13 (± 0.10)	34.78 (± 0.05)	34.90 (± 0.01)
August	12.88 (± 0.05)	11.24 (± 0.11)	34.75 (± 0.01)	34.81 (± 0.02)
September	12.33 (± 0.07)	12.01 (± 0.11)	34.82 (± 0.02)	34.89 (± 0.03)
October	11.82 (± 0.00)	11.75 (± 0.02)	34.89 (± 0.03)	34.95 (± 0.03)
November	9.79 (± 0.04)	9.71 (± 0.05)	34.76 (± 0.03)	34.75 (± 0.04)
December	8.49 (± 0.07)	8.65 (± 0.04)	34.83 (± 0.02)	34.88 (± 0.02)
Annual Average	9.35 (± 2.37)	8.86 (± 2.03)	34.74 (± 0.08)	34.80 (± 0.08)

Note, mean (± standard deviation) are shown for each parameter (n = 9).
Source: Marine Directorate (2024[1]).

Figure 2-2: Monthly mean sea surface and bottom temperature and salinity within the Caledonia South OECC based on climatology data between 1971 and 2000. Source: Marine Directorate (2024[1]).

3 Dissolved Oxygen

3.1 Overview

3.1.1.1 Dissolved oxygen levels are indicative of oxygen sufficiency, with concentrations below 6mg/l considered oxygen deficient and below 2mg/l as hypoxic. Typical dissolved oxygen concentrations in the North Sea range from 6mg/l to 10mg/l (Mahaffey *et al*., 2020[3]). In the OSPAR Quality Status Report (2023[4]), a DO concentration of >6mg/l near the seafloor is used as an indicator of a healthy marine environment.

3.2 Caledonia South Site

3.2.1.1 Dissolved oxygen was recorded throughout the water column for four locations across the Caledonia South Site associated with CTD profiling. As a result, measured dissolved oxygen concentrations are available as profiles through the water column, with a summary for each sample station presented in Table 3-1. In the OSPAR Quality Status Report (2023[4]), a dissolved oxygen concentration of >6mg/l near the seafloor is used as an indicator of a healthy marine environment. All dissolved oxygen concentrations were >6mg/l throughout the water column for each sampled station within the Caledonia South Site, based on the minimum and maximum levels and water column profiles (Table 3-1).

3.2.1.2 Results indicate that concentrations of dissolved oxygen range from a minimum of 9.1mg/l to a maximum of 11.4mg/l. The highest dissolved oxygen concentrations were reported in surface samples within the top 10 m of the water column. This is consistent with literature that suggests surface mixing contributes to heightened air-sea gas exchange. These data are characteristic of a typical offshore coastal region of the North Sea (Mahaffey *et al*., 2020[3]). The observed decline of dissolved oxygen throughout the water column may be due to a variety of physical (e.g., gas exchange with the atmosphere, stratification and mixing) and/ or biological factors (e.g., variations in production via photosynthesis and respiratory consumption by a wide range of organisms).

Table 3-1: Dissolved oxygen concentrations throughout the water column and across the Caledonia South Site (Source: Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)).

Sample Station	Range of Dissolved Oxygen (mg/l)			Dissolved oxygen at Specific Depth (mg/l)			Station Depth (m LAT)*
	Min	Max	Surface	25m	50m	Max Depth	
ENV12	9.1	11.3	10	9.9	9.2	9.1	69
ENV15	9.6	11.4	11.3	9.8	9.6	9.6	62
ENV21	9.1	11.1	10.8	9.9	9.5	9.1	102
ENV22	9.1	10.7	10.7	9.6	9.1	9.1	62
ENV24	9.9	11	11	9.9	9.9	9.9	62
ENV34	9.3	10	10	9.7	9.4	9.3	66
* Note, the maximum station depth is consistent across all sample stations for dissolved oxygen measurements taken in the Caledonia South Site.							

3.3 Caledonia South OECC

3.3.1.1 Dissolved oxygen was recorded throughout the water column for eight locations across the Caledonia South OECC associated with the CTD profiling. As a result, measured dissolved oxygen concentrations are available as profiles through the water column, with a summary for each sample station presented in Table 3-2. All dissolved oxygen concentrations were >6mg/l throughout the water column for each samples station within the Caledonia South OECC (Table 3-2), indicating a healthy marine environment (OSPAR, 2017[5]).

3.3.1.2 Survey results showed concentrations of dissolved oxygen range from a minimum of 9.0mg/l to a maximum of 10.7mg/l. The highest dissolved oxygen concentrations were reported in surface samples within the top 5m to 10m of the water column. This is consistent with literature that suggests surface mixing contributes to air-sea gas exchange and corresponds to the fresher inputs recorded in the salinity profiles. These data are characteristic of typical dissolved oxygen concentrations in offshore coastal region of the North Sea (Mahaffey *et al.*, 2020[3]). The observed decline of dissolved oxygen throughout the water column may be due to a variety of physical (e.g., gas exchange with the atmosphere, stratification and mixing) and/or biological factors (e.g., variations in production via photosynthesis and respiratory consumption by a wide range of organisms).

Table 3-2: Dissolved oxygen concentrations throughout the water column and across the Caledonia South OECC (Source: Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)).

Sample Station	Range of Dissolved Oxygen (mg/l)			Dissolved Oxygen at Specific Depth (mg/l)			Station Depth (m LAT)*
	Min	Max	Surface	25m	50m	Max Depth	
ENV53	9.4	9.6	9.6	N/A	N/A	9.5	28
ENV17	9.0	10.4	10.3	9.4	9.1	9.1	73
ENV26	9.0	10.2	10.2	9.5	9.1	9.0	109
ENV04	9.1	10.6	10.6	9.6	9.2	9.1	81
ENV13	9.0	10.4	10.3	9.5	9.1	9.0	62
ENV29	9.2	10.4	10.4	9.6	9.3	9.2	81
ENV31	9.0	10.2	10.2	9.5	9.2	9.1	73
ENV36	9.0	10.7	10.7	9.5	9.3	9.0	71

* Note, the maximum station depth is consistent across all sample stations for dissolved oxygen measurements taken in the Caledonia South OECC.

4 Turbidity and Suspended Particulate Matter

4.1 Overview

4.1.1.1 Suspended Particulate Matter (SPM) concentrations differ between the northern and southern regions of the North Sea. The northern North Sea with weaker tidal currents and deeper waters, has lower SPM concentrations compared to the southern region. Baseline SPM values in the Study Area are generally low (<5mg/l) (United Kingdom Marine Monitoring and Assessment Strategy, 2018[6]). However, storm events can temporarily increase near seabed SSC due to wave action. Coarser sediments are transported short distances before redeposition, while finer materials are carried further in the direction of net tidal flow (Cefas, 2016[7]).

4.1.1.2 Turbidity in the North Sea varies by location, season, weather and human activities. Typical turbidity levels in the North Sea are generally low to moderate, where coastal or estuarine environments are more turbid. In the relatively clear offshore waters of the North Sea, turbidity levels may range from around 1 to 5 Formazan Turbidity Units (FTU) under normal conditions. However, turbidity levels can be higher in nearshore areas, especially in areas influenced by river runoff, coastal erosion, or industrial activities.

4.2 Caledonia South Site

4.2.1.1 A site-specific survey (Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)) measured the turbidity of the Caledonia South Site in FTU, results of which are presented in Table 4-1. Overall, turbidity profiles revealed that the water turbidity remained relatively consistent throughout the water column.

4.2.1.2 A minor increase in turbidity was observed below 60m at Station ENV21, the deepest station, with turbidity increasing from 1.4 FTU to 3.3 FTU. The 'spiky' appearance of the profiles (see Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)) is consistent with the sensor becoming momentarily obscured by suspended particles, debris or fauna in the water column.

4.2.1.3 A range of factors may be used to explain the increased turbidity at the deepest station, such as sediment resuspension, vertical mixing, anthropogenic activities and/or natural processes.

Table 4-1: Summary of turbidity (FTU) throughout the water column and across the Caledonia South Site (Source: Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)).

Sample Station	Range of Turbidity (FTU)			Turbidity (FTU) at Specific Depth		
	Min	Max	Surface	25m	50m	Max Depth
ENV12	1.3	4.3	1.4	1.4	1.9	2.5
ENV15	1.2	5.8	1.4	1.5	1.7	1.9
ENV21	1.2	3.5	1.3	1.4	1.5	2.8
ENV22	1.2	2.9	1.6	1.4	2.1	2.0
ENV24	1.3	5.1	1.4	1.5	1.6	1.8
ENV34	1.2	2.5	1.4	1.4	1.4	1.5

4.3 Caledonia South OECC

4.3.1.1 A site-specific survey (Volume 7B, Appendix 4-2: Environmental Baseline Report (Offshore Export Cable Corridor) measured the turbidity within the Caledonia South OECC in FTU, the results of which are presented in Table 4-2. Overall, turbidity profiles indicate that the water turbidity was relatively consistent throughout the water column. A slight increase in turbidity, together with data spikes, were observed in the deepest 5m to 10m at most stations. The data spikes are consistent with the instrument sensor becoming momentarily obscured by suspended particles, debris or fauna in the water column. For example, the nearshore Station ENV53 generally exhibited more turbidity than the offshore stations, which may be attributed to the spring plankton bloom observed in the seabed imagery at this station (Volume 7B, Appendix 4-2: Environmental Baseline Report (Offshore Export Cable Corridor)).

Table 4-2: Summary of turbidity (FTU) throughout the water column and across the Caledonia South OECC (Source: Volume 7B, Appendix 4-2: Environmental Baseline Report (Offshore Export Cable Corridor)).

Sample Station	Range of Turbidity (FTU)			Turbidity (FTU) at Specific Depth		
	Min	Max	Surface	25m	50m	Maxi Depth
ENV53	1.8	6.7	2.1	N/A	N/A	2.7
ENV17	1.3	4.1	1.6	1.5	1.8	2.0
ENV26	1.4	2.8	1.5	1.5	1.6	2.2
ENV04	1.3	3.3	1.5	1.5	1.8	2.4
ENV13	1.4	4.3	1.5	1.6	2.2	2.2
ENV29	1.4	2.7	1.5	1.5	1.5	2.1
ENV31	1.4	3.4	1.6	1.6	1.8	2.4
ENV36	1.2	2.7	1.7	1.4	1.3	2.5

5 pH

5.1 Overview

5.1.1.1 Fluctuations in pH can indicate changes in water chemistry, such as inputs of acid or alkaline substances from natural sources or human activities (such as coastal runoff). Monitoring pH helps assess the health and stability of marine ecosystems and identify potential sources of pollution or environmental stress. Overall, maintaining stable pH levels in seawater is essential for supporting healthy marine ecosystems, regulating biogeochemical cycles, and sustaining valuable ecosystem services provided by the oceans. The normal pH of seawater in the Moray Firth can vary depending on factors such as location, season, weather conditions, and local environmental influences.

5.1.1.2 Data extracted from Copernicus for pH levels between 2021 and 2024 (Copernicus, 2024[8]), focusing on a central data point within the Caledonia South Site, indicates an annual average pH of 8.06. The typical pH of seawater in the Moray Firth varies based on location, season, and environmental influences. Air-sea interaction with carbon dioxide generally keeps seawater pH within a range of 7.5 to 8.5, aligning with the survey results.

5.2 Caledonia South Site

5.2.1.1 A site-specific survey measured pH levels at various depths in the water column across the Caledonia South Site (Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)), results of which are displayed in Table 5-1. The pH values generally remained stable throughout the water column and across the Caledonia South Site, with a pH range of 8.1 to 7.9.

Table 5-1: Summary of pH throughout the water column across the Caledonia South Site (Source: Volume 7B, Appendix 4-1: Environmental Baseline Report (Array Area)).

Sample Station	Range of pH			pH at Specific Depth		
	Min	Max	Surface	25m	50m	Max Depth
ENV12	7.9	8.1	8.1	8.0	8.0	8.0
ENV15	7.9	8.1	8.1	8.0	7.9	7.9
ENV21	7.9	8.1	8.1	8.0	8.0	7.9
ENV22	7.9	8.1	8.1	8.0	7.9	7.9
ENV24	8.0	8.1	8.1	8.0	8.0	8.0
ENV34	7.9	8.0	8.0	8.0	8.0	7.9

5.3 Caledonia South OECC

5.3.1.1 A site-specific survey measured pH levels at various depths in the water column across the Caledonia South OECC (Volume 7B, Appendix 4-2: Environmental Baseline Report (Offshore Export Cable Corridor)), results of which are displayed in Table 5-2. The pH values remained relatively stable throughout the water column and across the Caledonia South OECC. However, there were slight increases in pH observed in conjunction with the presence of thermoclines. Air-sea interaction with carbon dioxide ensures seawater is generally within a range of 7.5 to 8.5, which is in agreement with the survey output.

Table 5-2: Summary of pH throughout the water column across the Caledonia South OECC (Source: Volume 7B, Appendix 4-2: Environmental Baseline Report (Offshore Export Cable Corridor)).

Sample Station	Range of pH			pH at Specific Depth		
	Min	Max	Surface	25m	50m	Max Depth
ENV53	8.0	8.0	8.0	N/A	N/A	8.0
ENV17	7.9	8.0	8.0	7.9	7.9	7.9
ENV26	7.9	8.0	8.0	8.0	7.9	7.9
ENV04	7.9	8.1	8.1	8.0	7.9	7.9
ENV13	7.9	8.1	8.0	8.0	7.9	7.9
ENV29	7.9	8.1	8.1	8.0	7.9	7.9
ENV31	7.9	8.1	8.1	8.0	7.9	7.9
ENV36	7.9	8.1	8.1	8.0	7.9	7.9

6 References

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