

Non-Technical Summary

Background

The Montrose field is located in Blocks 22/17 and 22/18 in the Central North Sea (CNS) approximately 190 km from the Scottish coastline and c. 46 km from the UK/ Norwegian median line (Figure i). The Montrose Field is one of nine fields: Montrose, Arbroath, Carnoustie, Arkwright, Brechin, Wood, Godwin, Cayley and Shaw, which combined are referred to as the MonArb Area. Owners of the MonArb hub are NEO NEXT+ Energy Delta Limited (58.97%) and Ithaca Energy (41.03%).

It is proposed that the Montrose Infill wells be developed as a subsea tie-back to the Montrose Bridge Linked Platform (BLP). Montrose BLP is located to the north of Montrose Alpha, which was installed as part of the Montrose Area Redevelopment (MAR) BLP Project, together with the Cayley and Shaw subsea tie-backs to BLP.

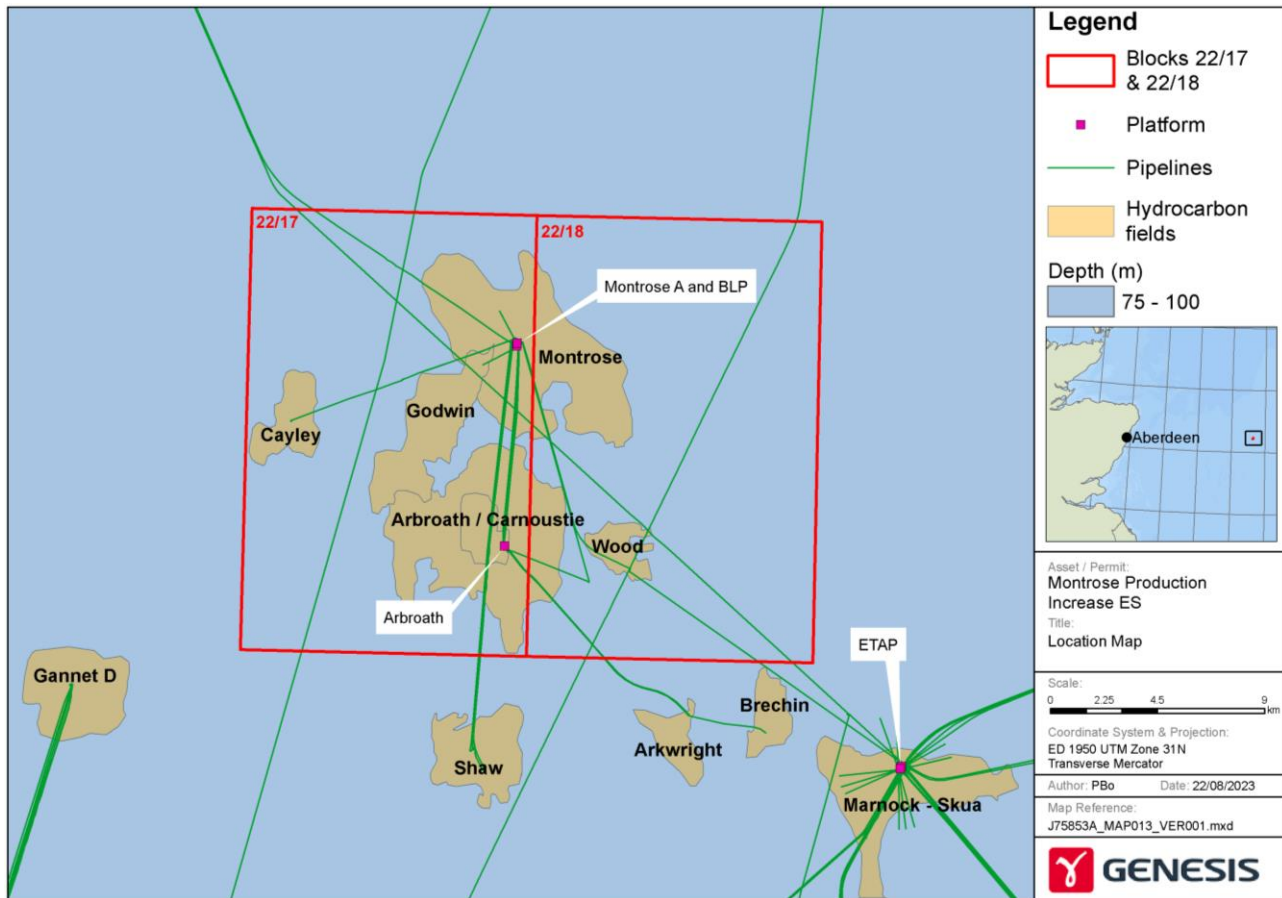


Figure i: Location of Montrose Field.

Overview of the Montrose Field

The Montrose Field is one of nine fields: Montrose, Arbroath, Carnoustie, Arkwright, Brechin, Wood, Godwin, Cayley and Shaw, which combined are referred to as the MonArb Area.

There are three platforms in the MonArb Area operated by NEO NEXT+ including Montrose Alpha commissioned in 1976, the Arbroath platform commissioned in 1990, and the Montrose Alpha Bridge Linked Platform (BLP)



commissioned in 2017. The Montrose Alpha and Montrose BLP combined are referred to as the Montrose Complex.

The Arbroath platform located 11 km south of the Montrose Complex receives fluids from the Arbroath, Carnoustie, Arkwright, Brechin and Godwin fields. These fluids go through a primary separation process on Arbroath before being piped to the Montrose Alpha platform for final processing and export. The Shaw and Cayley Fields are subsea wells tied back to the Montrose BLP whilst the Montrose Field is currently producing via production wells drilled from the Montrose Alpha platform.

The Wood Field also ties directly back to the Montrose Alpha platform. Oil from all fields is exported from Montrose Alpha via the Forties Pipeline System (FPS). Gas is exported from Montrose BLP to the Central Area Transmission System (CATS), which transports gas to the Teesside gas terminal for processing and entry into the UK National Transmission System (NTS).

Environmental Statement Scope

The scope of the Environmental Impact Assessment (EIA) and resultant Environmental Statement (ES) includes the following activities:

- The drilling of up to five production wells from a single subsea drill centre located c. 0.7 km north-west of the Montrose BLP, outside the existing 500 m exclusion zone;
- Installation of subsea infrastructure to support tie-back of the wells to the existing Montrose BLP;
- Modifications to the existing Montrose BLP; and,
- Production at the Montrose BLP platform.

In line with the 2020 Offshore EIA Regulations and supporting OPRED guidance (OPRED 2021 and OPRED 2025), the EIA sets out to describe and evaluate the impacts of any emissions to air, discharges to sea, seabed disturbance, noise, waste production and resource use resulting from the proposed development on a range of receptors including flora, fauna, water, air, climate (including Scope 3 emissions) and material assets. In addition, the potential interactions with other users of the sea are considered. These aspects are considered for planned activities and unplanned (i.e. accidental) events.

Consideration of Alternatives

The ES describes the socio-economic benefits of the proposed Project when compared to the ‘Do Nothing’ scenario. Aspects considered include security of energy supply, job security and contribution to the wider economy and meeting climate obligations.

Decision to Drill More Wells

The addition of the infill wells maintains the economic viability of the Montrose installation and allows maximised recovery of the reserves in line with the North Sea Transition Authority (NSTA) guidance.

Location of Wells

Due to the cost and complexity of re-instating full drilling capability on Montrose Alpha, it was considered uneconomic to drill platform wells therefore; subsea wells were selected as the only viable development alternative.



Installation Method for Manifold

The underlying sediments, combined with the requirement to make the manifold fishing friendly due to the potential for fishing gear interaction, determined that a piled manifold would be required. Other installation methods such as suction anchors and gravity based were therefore ruled out. It is acknowledged that as of 16th October 2025, the East of Gannet and Montrose Fields Nature Conservation Marine Protected Area (NCMPA) has a restriction on dredging and beam trawling within the full site, as well as a restriction on demersal gear (other than demersal seine nets) within one zoned area (Scottish Government, 2025). Whilst fishing restrictions may currently be enforced, future changes are outside the control of NEO NEXT+ and it is prudent to ensure the design caters for this possibility as far as practicable.

Pipeline Installation Options

A number of installation methods for the pipelines and control line between the production manifold and the Montrose BLP have been investigated, taking into account a number of factors including the sediment type, location within a protected area, and engineering requirements. Studies undertaken by NEO NEXT+ determined that the most suitable installation method for the pipeline would be surface laid with mattress protection as the preferred option, with surface laid with rock placement protection as an alternative option. Both of these options have been carried through in the ES, considering the worst case scenario in the impact assessment for each receptor. No trenching options have been carried through in the ES as it was considered that this method of installation would not be practical given the short length of line.

Montrose Infill Project

The proposed Montrose Infill Project involves the installation of new subsea production infrastructure tied back to the existing Montrose BLP, which will be subject to brownfield modifications and a modular extension.

Final well design has yet to be determined, however the base case is for up to five wells to be drilled at one drill centre located within a single 500 m safety zone. The drill centre will be located c. 0.7 km from the Montrose BLP. At the time of writing, it had yet to be determined if a semi-submersible drilling rig or a heavy-duty jack-up (HDJU) drilling rig will be used to drill the proposed Montrose Infill Project wells. The water depth, weather conditions and seabed conditions in the area are such that either drilling rig could be used. The ES therefore takes into consideration both options, and for each environmental aspect considered, the drilling rig resulting in the worst-case environmental impact will be assessed.

Infrastructure to be installed as part of the proposed Montrose Infill Project includes:

- A production flowline, gas lift flowline, and an Electro-Hydraulic Control (EHC) umbilical for well control between the BLP and the manifold;
- Manifold, drilling template (if used), Xmas trees and wellhead protection structures.

As noted above in terms of installation method of the infield lines; the ES assesses the impacts associated with the worst-case scenario for each receptor, between surface laid with mattress protection as the preferred option and surface laid with rock placement protection as an alternative option.

Stabilisation and protection materials such as grout bags and mattresses will be required on the approaches to the BLP riser and the manifold. A contingency volume of rock cover (11,100 te) has been presented in the ES as a worst case to mitigate upheaval buckling if the placement of concrete mattresses is insufficient, such that the full length of the flowlines would be rock covered in the alternative option. Prior to production, the integrity of the flowlines and gas export pipeline will be confirmed via testing such as leak detection.

Spare caisson risers on Montrose BLP will be utilised, with production fluids received into the existing Shaw separator on Montrose BLP. Utilities and services will be provided from the Montrose BLP. Processed oil and gas will continue to be exported via the existing Forties Pipeline System and CATs respectively.

Taking account of the anticipated High Case production profiles, daily oil and gas production rates from the Montrose Infill wells are anticipated during the first full year of production (in 2029) at an approximate rate of 2,061 te/d (tonnes per day) and 263,433 m³/d (cubic metres per day), respectively. Note that these figures include some back-out of the existing fields being produced at MonArb to adjust the overall production rates. After 2029, production rates for both oil and gas subsequently decrease every year to end of field life. The reservoir will not require water injection to maintain the pressure required during production, produced water profiles increase over field life with maximum produced water rates associated with the final years of production.

At Cessation of Production (CoP) the Montrose Infill Project infrastructure will be decommissioned in line with legislation in force at that time. It is expected that the subsea structures (mattresses, grout bags, spools and umbilical jumpers) will be removed from the seabed and returned to shore for reuse / recycling / disposal and a seabed clearance campaign conducted, however, this would be subject to future legislative requirements and guidance. In line with current legislation, if mattresses are used to mitigate UHB along the full length of lines (base case), then the lines and associated mattresses would be recovered to shore. However, if it is necessary to rock cover the lines for UHB mitigation, the decommissioning of the lines under the rock would be subject to a Comparative Assessment. Should Comparative Assessment determine that the pipelines / umbilical should be decommissioned *in situ* (in the alternative case scenario), NEO NEXT+ will agree an ongoing monitoring plan with the relevant authority (currently this is OPRED).

Schedule of Activities

The activities associated with the drilling, installation, and commissioning of the Montrose Infill Project are currently scheduled to take place between Q3 2027 and Q4 2028 with first oil expected in Q4 2028 (Table i). It should be noted that the schedule presented is indicative and is liable to change as the project develops.

Table i: Indicative schedule of activities for the proposed Montrose Infill Project.

Activity	2027				2028			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Drilling								
Installation of subsea infrastructure								
Well tie-ins and commissioning								
First oil								

Baseline Environment

A high-level summary of the environment at the Montrose Field is provided in Table ii.

Table ii: Summary of the Environment at the Montrose Field.

Summary Description of the Baseline Environment.
Bathymetry and Metocean Characteristics
The seabed in the Montrose area is relatively flat. Water depth at the Montrose platform is approximately 91 m. General gradients recorded throughout the survey area are less than 0.5°, although there are some localised maximum gradients of up to 7.5° at existing wells and pipelines. Wind direction and speed is changeable throughout the year. The area experiences rough

Summary Description of the Baseline Environment.

seas, particularly from October to March. Currents in the area originate from the vertically well-mixed coastal water and the inflow of Atlantic water from the Fair Isle and Dooley current.

Sediment and Seabed Features

The seabed gradient is generally $< 0.5^\circ$ with the seabed gently shoaling to the west-north-west. A modelled distribution of seabed sediments in the North Sea revealed that the predominant habitat in Blocks 22/17 and 22/18 is ‘offshore circalittoral sand’.

Levels of contaminants in the Montrose field area are generally at the background levels reported for the CNS. The 2022 surveys showed an increase in some concentrations of heavy metal compared to those of the 2011 surveys whereby metals were all consistent with background concentrations for the sediment type and region. There was minor elevation in the concentration of cadmium 17 km south of the Montrose platform, but this was not sufficient to result in any toxicological effect on the faunal community. A contaminated drill cuttings pile is present directly below the Montrose A platform, which will not be disturbed by the Montrose Infill project.

Plankton

Plankton form the basis of the food chain in the marine ecosystem and are a crucial source of food for multiple species. The composition and abundance of plankton communities varies throughout the year; influenced by several factors including depth, tidal mixing, temperature stratification, nutrient availability, and the location of oceanographic fronts. The zooplankton community is dominated by calanoid copepods such as the cold-water copepod *Calanus finmarchicus* and the temperate copepod *Calanus helgolandicus*. Between 1960 and 2015, *C. finmarchicus* abundance declined significantly in Regional Sea 1, whilst *C. helgolandicus* increased. Other important components of the zooplankton assemblage include *Paracalanus*, *Pseudocalanus* and larval stages of *Calanus*, euphausiids, *Acartia*, and decapods.

Seabed Habitat and Communities

A veneer of very loose to very dense silty shelly sand, less than 1 m thick, is present over the MAR Project survey area, with the exception of occasional clay outcrops close to the Shaw field (more than 10 km south of the Montrose platform). The seabed is relatively flat across the survey area, with sparse fauna. The seabed across the site was characterised by muddy sands and gravelly muddy sands, primarily represented by consistent low reflectivity sonar data, with the exception of a large high reflectivity patch to the east of the area, ground-truthed as a higher density of shell fragments overlaying silty sands, with some agglomerations of white sea urchin (*Gracilechinus acutus norvegicus*).

The seabed within the area includes one main level four European Nature Information System (EUNIS) habitat type: MD52 ‘Offshore circalittoral sand’ (JNCC: SS.SSa.OSa). This habitat is characterised by muddy sand with variable proportions of shell. Smaller areas consisting of a greater accumulation of shells have been classified as MC42 ‘Offshore circalittoral mixed sediment’ (JNCC: SS.SMx.OMx). Areas where a high density of sea urchins, thought to be *Gracilechinus acutus*, were present were classified as ME6212 ‘*Gracilechinus acutus norvegicus* assemblage on Atlantic mid bathyal mud’ (JNCC: M.AtLB.Mu.UrcCom.GraAcu).

Fish and Shellfish

A variety of fish species inhabit the shelf seas in the project area some identified as priority marine features and others of commercial importance. Cod, lemon sole, mackerel, *Nephrops*, Norway pout, plaice and sandeel all may use the area for spawning. Several species may use the area as nursery grounds including anglerfish, blue whiting, cod, European hake, haddock, herring, ling, mackerel, *Nephrops*, plaice, sandeels, spotted ray, spurdog and whiting.

Seabirds

A number of seabird species are likely to occur in the area over the summer breeding season and winter months. Many species, e.g., terns, overwinter out with the area, whilst other seabirds e.g., little auks, move to the area from more northerly breeding grounds to overwinter. For all species combined, a maximum of 17 seabirds are predicted to occur per km² during the breeding season (April to September), this number increased to 171 seabirds per km² during summer months (July to August) and 65 seabirds per km² during the winter months (November to March). A large variety of seabirds use the area including guillemot, European storm petrel, northern fulmar and Atlantic puffin. The nearby coastlines of North East Scotland support a number of seabird colonies for various species.

Marine Mammals

Harbour seals are unlikely to occur in the area, however there have been sightings from a number of North Sea platforms. Telemetry data revealed that 0 to 0.001% of UK and Ireland at-sea grey seal population may be present. Several whales and

Summary Description of the Baseline Environment.

dolphin species have been sighted in the area including, harbour porpoise, bottlenose dolphin, white-beaked dolphin, Atlantic white-sided dolphin, minke whale, killer whale and Risso’s dolphin. Distribution and abundance of these dolphin and whale species varies throughout the year, with an increase in abundance of species over the summer months for all species.

Conservation

Blocks 22/17 and 22/18 lie within the East of Gannet and Montrose Fields NCMPA. There are no other protected areas within 40 km of these blocks. The East of Gannet and Montrose Fields NCMPA was designated in 2014 to protect the ‘offshore deep sea muds’ habitat and the low or limited mobility species ‘ocean quahog aggregations (including sands and gravels as their supporting habitat)’. Ocean quahog (*Arctica islandica*) is considered as threatened and/or declining across the northeast Atlantic (OSPAR 2008) and is a Scottish Priority Marine Feature (PMF).

The next closest site is the Norwegian Boundary Sediment Plain NCMPA 55 km to the northeast. Loch of Strathbeg Special Protection Areas (SPA) and the Buchan Ness to Collieston Coast SPA are some of the closest coastal sites to the Project area. A number of species identified in the area are afforded protection under European, UK and Scottish conservation regulations.

Other Sea Users

The area is fished by local and international vessels, with fishing effort tending to be higher in spring and summer. Otter trawls targeting demersal and shellfish species have been used the most intensely in the area while pelagic trawls and seine nets have been used second most. When fishing effort in the Project area (ICES 43F1) is compared against effort across all ICES rectangles in the UKCS, fishing effort within 43F1 accounted for 0.1% between 2019 and 2023 (Scottish Government, 2024). Fishing effort within this rectangle is therefore considered relatively Low. The proposed Project lies within a well-developed oil and gas production area with a number of installations, pipelines and umbilicals present. The proposed Montrose Infill Project is located within the vicinity of six confirmed Innovation and Targeted Oil and Gas (INTOG) application sites, the closest awarded INTOG site is located c. 23 km south of the proposed Montrose drill centre. The closest operational wind farm is the Hywind Scotland wind farm located off the coast of Peterhead, over 100 km west of the Montrose area. The closest Scotwind lease area is E2, which is located c. 65 km west of the Montrose platform.

Environmental Impact Assessment

In order to determine the impact that the proposed Montrose Infill Project may have on the environment, an ENVironmental and socio-economic impact IDentification (ENVID) was undertaken using a structured methodology. The purpose of the ENVID was to identify the significance of the environmental and socio-economic risks associated with the planned activities and any possible unplanned events and to identify appropriate mitigation measures, controls and safeguards to minimise this risk.

For each of the planned activities an environmental and/or socio-economic Impact Significance is assigned for the relevant aspects (e.g. emissions to air, discharges to sea, underwater noise etc.) by taking into account the Receptor Sensitivity and the Magnitude of Effect.

For unplanned events the environmental and/or socio-economic significance of risk ranking also takes into account the Likelihood of the event occurring. A summary of the key findings of the impact assessment is presented in Table iii.

Table iii: Environmental Impact Assessment Key Findings.

Aspect
Physical Presence
The physical presence of project vessels, the drilling rig, and subsea infrastructure associated with the proposed Project has the potential to be a navigational hazard, restrict fishing operations in the area and to cause disturbance to marine fauna. Mitigation measures include early consultation with the Scottish Fishermen’s Federation (SFF) for all operations, notification to other users of the sea regarding the project’s activities, a safety exclusion zone in place around the drill centre, and use of the ERRV at Montrose to warn of anchor location prior to semi-submersible rig coming on location (if used). The physical presence of the project related aspects listed above is considered a Low socio-economic impact significance. In addition, the environmental impact significance in relation to marine mammals, birds and fish is considered Low . The environmental and



Aspect
<p>socio-economic impacts are therefore considered acceptable when managed within the additional controls and mitigation measures outlined in Table iv.</p>
Emissions to Air
<p>Activities associated with the proposed Montrose Infill Project including drilling, subsea installation, production start-up, modifications to the existing Montrose BLP, operations and decommissioning will all result in emissions to air which can contribute to global atmospheric concentrations of greenhouse gases (GHGs) and regional acid loads. NEO NEXT+ has assessed the impact associated with atmospheric emissions from the proposed Project. In the drive to towards supporting the UK’s Net Zero target and meeting the company’s GHG commitments, the identification, assessment, and minimisation of emissions have been embedded in all stages of the project management process. A number of integrated measures across drilling, installation, commissioning and production will be adopted to ensure emissions are minimised to as low as reasonably practicable.</p> <p>Emission of atmospheric pollutants that affect air quality, such as NO_x, SO₂ and carbon monoxide, from combustion equipment at the Montrose Complex currently have low impact on the environment. Air dispersion modelling shows that neither short-term nor long-term air quality standards or objectives are at risk of being breached. Potential for impact at all external human receptors is insignificant.</p> <p>Release of atmospheric air quality pollutants at and around the Montrose Complex would increase during the period of construction, drilling and installation before returning to levels similar, or slightly lower than, present for the duration of production. Air dispersion modelling shows that air quality standards are at low risk of being exceeded anywhere during either the drilling or production periods.</p> <p>Baseline greenhouse gas intensity of production in 2023 was 29.0 kilograms of carbon dioxide equivalent per barrel of oil equivalent (kgCO₂e/boe) as compared to the average for all facilities in the UK sector of the North Sea of 24.5 kgCO₂e/boe and the average for large platforms of over 25 years age of 50.3 kgCO₂e/boe. Production from the existing fields served by the Montrose Complex will decline over the next five years up to the planned date for cessation of production and, as such, the baseline greenhouse gas intensity is projected to increase in the absence of the proposed Project.</p> <p>During production of the proposed Infill Project, greenhouse gas intensity of production will decrease relative to the baseline, with a project life-of field intensity of 29.7 kgCO₂e/boe. The flaring intensity of production at the Montrose Complex will reduce as a result of the proposed Project due to the installation of flare gas recovery to ensure no routine flaring.</p> <p>Greenhouse gas emissions have been estimated for all phases of the project, including indirect downstream emissions associated with the end use of exported hydrocarbons. The proposed Project has been determined to be fully compatible with the UK meeting its climate obligations, including legally binding greenhouse gas emissions reductions, and helping to meet the projected demand for oil and gas to affect the transition to a Net Zero economy by 2050. Greenhouse gas emissions from the proposed Project are identified as minor adverse magnitude and insignificant impact severity at the project level and, in combination with other plans and projects, at a UK national level. In combination with all projects at a global level, the proposed Project would also be consistent with scenarios for achieving the objectives of the Paris Agreement, such as the International Energy Association Net Zero by 2050 scenario and low emission Shared Socio-economic Pathways scenarios of the UN Intergovernmental Panel on Climate Change, if governments and organisations across the globe implement policies and actions for cutting demand accordingly. In such scenarios, indirect downstream greenhouse gas emissions from the proposed Project would have a minor adverse magnitude of impact and would not be significant. In other, higher emissions, scenarios the baseline future impact magnitude on climate change from global activities could be of moderate adverse or major adverse magnitude. The proposed Project will have negligible effect on the future baseline magnitude of global emissions and on the significance of the impact.</p>
Discharges to Sea
<p>Activities that result in planned discharges to sea will occur from the drilling, installation, commissioning, and production phases of the proposed Montrose Infill Project. Discharges from drilling will include drilling fluids and cuttings, cement and well bore clean-up fluids. Installation discharges will include water containing a mix of chemicals used for testing the integrity of pipelines. Impacts associated with these drilling and installation related discharges may arise from the suspension of particulate matter in the water column and the presence of chemicals within the discharge. Modelling of drill cuttings discharges was carried out to support the impact assessment. Discharges to sea from the existing Montrose platforms during production will include drainage water discharges and treated produced water discharges (as per existing practices on the Montrose platforms). Impacts from production related discharges may arise from a decrease in water quality, which in turn could affect plankton which drift in the water column and therefore cannot avoid discharges in the same way that fish and marine mammal can. Assessment of planned discharges on the water column and its associated receptors concluded that the</p>

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overall Impact Significance of the environmental impacts of all planned discharges is **Low** and therefore considered acceptable when managed within the additional controls and mitigation measures identified in Table iv.

Seabed Disturbance

There will be disturbance of the seabed during the drilling and installation phases of the proposed Project.

It is not known if a semi-submersible drilling rig or a HDJU drilling rig will be used to drill the proposed wells; the assessment considers the worst-case seabed impact associated with anchoring of a semi-submersible drilling rig as this would result in a greater impact than the positioning of the HDJU drilling rig. However, the potential for spud can depressions remaining is also considered should a HDJU drilling rig be selected. Having been towed to the site, the semi-submersible drilling rig will be held on location using eight drag anchors connected to the drilling rig via anchor lines measuring c. 1,500 m in length. The ES assumes that the semi-submersible drilling rig and associated anchor system would only need to be positioned once to reach all well locations.

Drill cuttings and associated drilling fluids are expected to be discharged at the seabed during drilling of the tophole sections of each well. The lower well sections will be drilled using low toxicity oil based muds (LTOBM). It is not known if the LTOBM contaminated cuttings from the lower sections will be skipped and shipped to shore or if they will be thermally treated offshore and discharged from the drilling rig. The ES assumes a worst case whereby these cuttings are treated offshore and discharged. Modelling of the discharge of the drill cuttings has been carried out to support the assessment of cuttings. Drill cuttings discharge simulations using the Dose-related Risk and Effects Assessment Model (DREAM) estimated a maximum thickness of cuttings of 373 mm in the immediate vicinity of the wells, reducing rapidly with distance. The area with a thickness of greater than 6.5 mm is predicted to be c. 0.17 km² at the end of drilling but reduces over time. To put this into context, a typical exclusion zone around a platform of 500 m radius is equivalent to an area of 0.785 km².

The maximum area where there is a combined risk (takes account of depth of burial, change in grain size, oxygen depletion and toxicity due to chemicals) to more than 5 % of the most sensitive species in the sediment following drilling is predicted to be approximately 2.64 km² after drilling ends. The area reduces to 1.30 km² after two years due to re-colonisation by opportunistic species. Seabed recovery then slows down, and after 5 years and 10 years the potentially impacted area is estimated to be 0.87 km² and 0.56 km² respectively.

There will be an area of permanent disturbance associated with any surface laid infrastructure, mattresses, grout bags, and contingency rock cover.

Impacts resulting from the proposed activities have the potential to impact on areas of potential OSPAR habitat ‘sea pens and burrowing megafauna communities’ however given the widespread distribution of the habitat across the surveyed areas in the vicinity of the project, the impact is not considered significant.

The Montrose Field is located within the East of Gannet and Montrose Fields NCMFA. As noted in Table ii, the NCMFA is protected for ‘offshore deep-sea muds’ habitat, and *A.islandica* aggregations (including sands and gravels as their supporting habitat). Given the location of the proposed wells within the ‘offshore circalittoral sand’ area of the NCMFA, there will be no impacts to the ‘offshore deep-sea mud’ habitats. Although no adult *A.islandica* specimens were identified in the Montrose survey area, juveniles were present within the survey area. The impact significance of seabed disturbance on *A.islandica* and sands and gravels as their supporting habitats is therefore considered to be Moderate. The impacts are expected to result in noticeable changes to baseline conditions, beyond natural variation, but are not expected to cause degradation or impair the value of the receptor.

Decommissioning activities will result in temporary disturbance to the seabed. It is anticipated that the area disturbed by the decommissioning activities will be less than that disturbed by the drilling and installation activities and will mostly be within the same footprint disturbed by the installation activities.

Overall, the worst-case analysis of the proposed Montrose Infill Project activities that require interaction with the seabed shows that most of disturbance will be temporary whilst the drilling rig is on station and during installation of the flowlines, EHC umbilical, and other subsea structures. Approximately 3.20 km² may be subject to temporary disturbance by drilling and installation activities, and 0.57 km² will have a permanent or long-term footprint from the subsea structures, stabilisation and protection materials, and residual drill cuttings accumulation. The temporary and permanent disturbance represents 0.045 % and 0.25 %, respectively, of the sands and gravels area within the NCMFA. Therefore, the area impacted by the proposed Montrose Infill Project is relatively small (and is also noted to be an overestimate as the area covered by drill cuttings and other disturbances will overlap).

Though recovery is expected to begin immediately after some of the activities are completed, taking account of the total area that could be impacted either permanently or temporarily, the overall Impact Significance associated with disturbing the seabed is considered **Moderate**, such that some of the environmental impacts will be discernible after the activities are

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completed or through to the time of decommissioning. The Project will continue to work towards minimising the potential impact e.g. surface laying rather than burying the lines.
Underwater Noise
<p>The main sources of underwater noise associated with the proposed Montrose Infill Project will result from drilling operations, placement of contingency rock cover, vessel use, and the piling of the manifold.</p> <p>Many marine organisms use sound for navigation, communication, and prey detection. Therefore, the introduction of man-made sources of underwater noise has the potential to impact marine animals if it interferes with their ability to receive and use sound. Types of impact include temporary avoidance or behavioural changes, the masking of biological sounds, as well as auditory and other injuries.</p> <p>Underwater noise modelling was carried out to assess the impacts of piling noise. Although the sound from the proposed project does have the potential to cause disturbance to marine animals, it is not expected to have a significant impact on any cetacean or fish species. Taking this into account, and considering the mitigation measures outlined in Table iv, the Impact Significance of the environmental impact of the underwater noise associated with the proposed activities is considered Low. The impacts are therefore considered acceptable when managed within the controls and mitigation measures identified.</p>
Waste
<p>NEO NEXT+ is committed to reducing waste generation and to managing all generated waste, by applying approved and practical methods and by adhering to the waste hierarchy. Waste will only be disposed of if it cannot be prevented, reclaimed or recovered. All waste will be managed in accordance with NEO NEXT+/ vessel Waste Management Plans, including existing waste management procedures on the Montrose platforms. The procedure establishes the controls required to manage the hazards associated with the transportation and disposal of waste from offshore sites and the processes, and verification activities necessary to ensure legal obligations are satisfied. The overall Impact Significance of waste generation is therefore considered to be Low and is therefore acceptable when managed within the mitigation measures described. With the application of the control and mitigation measures identified, the Impact Significance of waste generation is considered Low such that any environmental impacts associated with waste production are thought to be negligible.</p>
Accidental Events
<p>The ES presents a detailed evaluation of a low probability well blowout. Small scale accidental events, ranked Minor or Moderate, have also been reviewed in this ES.</p> <p>The potential hydrocarbon spill scenario was modelled using the Oil Spill Contingency and Response (OSCAR) model. The likelihood of the hydrocarbon release modelled occurring is considered remote owing to the procedural and operational controls that will be applied during the Montrose Infill Project. Given the Likelihood of such a release, and following the application of control and mitigation measures, the overall Environmental Risk of impacts from a large hydrocarbon release resulting from a well blowout is considered to range from Low to Moderate depending on the environmental receptor.</p> <p>The well blowout scenario is considered a Major Accidental Hazard (MAH). MAH's must be assessed to determine if they may result in significant adverse effects on the environment and constitute a Major Environmental Incident (MEI). Based on the criteria outlined in the Safety Case Regulations (SCR, 2015) and the oil spill simulation results, it was established that the blowout scenario could lead to impacts in relation to seabirds, marine mammals, offshore protected areas, coastal protected areas and fisheries/aquaculture/shellfish water protected areas, that would qualify as an MEI as defined in the SCR (2015).</p>

Overall Conclusion

In summary, the ES concludes that the proposed Montrose Infill Project will not result in any significant environmental effects provided that all identified mitigation measures are implemented. Environmental and social impacts identified through the impact identification process, as well as all mitigation measures, will be inputted to the Project Risk Register. NEO NEXT+'s Environmental Management System (EMS) will be used to ensure that the on-going process of identification, assessment and control of environmental risks will continue throughout planning and operations of the Montrose Infill Project. In addition, no significant cumulative or transboundary effects are considered likely to arise from the proposed Montrose Infill Project.

Risks and impacts can be readily mitigated and controlled through robust design, effective operating practices and systems implemented by a highly trained workforce. NEO NEXT+ has a track record in the delivery and



operation of offshore project developments in the North Sea and is committed to protecting the environment by carefully considering the potential impact new developments may have during the planning of projects and throughout the lifetime of operations.

Project commitments to be inputted to the Project Risk Register are summarised in Table iv.

Table iv: Montrose Infill Project commitments.

Aspect	Commitments
Physical Presence	<ul style="list-style-type: none"> ➤ Operations Notice 6 notification will be submitted prior to rig mobilisation; ➤ A Vessel Traffic Survey (VTS) will inform a Consent to Locate (Ctl) application for the drilling rig; ➤ A Collision Risk Management Plan will be produced, if determined to be required; ➤ All vessels will adhere to International Regulations for preventing Collisions at Sea (COLREGS) and will be equipped with navigational aids, including radar, lighting and AIS (Automatic Identification System) etc.; ➤ The drilling rig will have a 500 m safety zone to mitigate any collision risk; ➤ An Emergency Response and Rescue Vessel (ERRV) will patrol the area during the drilling operations; ➤ The drilling rig will be equipped with navigational aids and aviation obstruction lights system, as per the Standard Marking Schedule for Offshore Installations; ➤ Vessel use will be optimised by minimising the number of vessels required and length of time vessels are on site; and ➤ All infrastructure will be laid within one of two 500 m exclusion/safety zones.
Emissions to Air	Proposed Pre-Start Up Mitigation Measures
	<ul style="list-style-type: none"> ➤ Inclusion of optimised energy efficiency and GHG emissions reduction in the rig selection and tendering process. ➤ Batch drilling and completion opportunities will be evaluated. These would reduce emissions through reduced logistical requirements and fluid handling efficiencies. ➤ The information gained from each well test will be assessed with a view to reducing the volumes of hydrocarbons to be flared during well testing for each subsequent production well. ➤ During flaring from well clean-up and testing operations, environmental conditions will be monitored, and a dedicated person will be assigned for full-time fire watch duty. ➤ The drilling rig and other project vessels will be subject to audits ensuring compliance with UK legislation. ➤ Vessel use will be optimised where possible by minimising the number of vessels required, and their length of time on site. ➤ Vessels will be operated where possible in modes that allow for economical fuel use.
	Proposed Production Mitigation Measures
<p>In accordance with the revised NSTA strategy, and associated Stewardship Expectation 11, as well as with the industry commitments within the North Sea Transition Deal (NSTD), NEO NEXT+ will incorporate the following controls:</p> <ul style="list-style-type: none"> ➤ Select, plan and execute NEO NEXT+'s emissions reduction and monitoring initiatives over a reasonable timescale in line with the Montrose Complex's Emissions Reduction Action Plan (ERAP). ➤ Where it is not considered reasonable to electrify, NEO NEXT+ is committed to pursue other power emissions reductions. 	

Aspect	Commitments
	<ul style="list-style-type: none"> ➤ With the proposed Montrose Infill Project and planned production post-2030, the goal of no routine flaring and venting through the provision of a new flare gas recovery system onboard the Montrose Complex is anticipated. ➤ Diesel use by the gas turbine generators (GTGs) onboard the BLP is limited to turnarounds and shutdowns and for plant re-start when fuel gas is unavailable. ➤ With the proposed Montrose Infill Project, continual monitoring and reviewing of emissions and carbon intensity of the Montrose Complex. The Montrose Complex’s ERAP will continue to be reviewed for potential opportunities to further reduce emissions against the sector targets outlined in the NSTD. <p>These measures will help to ensure that opportunities for efficiency and reduction of atmospheric emissions, where not in conflict with safe operations, are identified, actioned as appropriate and reviewed.</p>
Discharges to Sea	<ul style="list-style-type: none"> ➤ Minimise use of vessels, through efficient journey planning; ➤ The drilling rig used will be audited under NEO NEXT+’s Marine Operations and Vessel Assurance Standards and subject to rig recertification audits; ➤ All vessels used will be International Convention for the Prevention of Pollution from Ships (MARPOL) compliant; ➤ Where technically feasible NEO NEXT+ will prioritise the selection of chemicals which are Pose Little or No Risk (PLONOR), or chemicals with a lower Risk Quotient (RQ); ➤ Preference will be given to skipping and shipping produced sand; ➤ Produced water will be treated to reduce Oil in Water (OiW) content to below 30 mg/l; and ➤ The discharges of any water based hydraulic fluids, sand or chemicals are regulated by the Oil Pollution Prevention and Control (OPPC) and/or Offshore Chemicals Regulations (OCR) regulations and reported through the Environmental and Emissions Monitoring System (EEMS). As such, NEO NEXT+ will confirm that sampling, analysis, and reporting are undertaken in line with the regulations and permit conditions.
Seabed Disturbance	<ul style="list-style-type: none"> ➤ Pre-deployment surveys will be undertaken to identify suitable locations for the anchors (if required); ➤ Pipeline and umbilical route surveys will be undertaken; ➤ The use of mattresses, grout bags, and contingency rock cover, will be minimised through optimal project design. ➤ Anchors of the drill rig (if used) will be maintained under tension to minimise chain contact on seabed; ➤ Cement volumes required will be planned and optimised; ➤ Use of ROV for visual monitoring and pH monitoring during cementing jobs that allows stopping when cement is either observed or detected at seabed (to minimise excess cement); ➤ Sea dye will be used to indicate when cement is approaching the surface; ➤ The use of dynamically positioned vessels where possible will minimise anchor use; ➤ Use of low toxicity chemicals in Water-based Mud (WBM) sweeps; ➤ Use of specialist contractors to minimise dropped objects; and ➤ Lifting plans in place.
Underwater Noise	<ul style="list-style-type: none"> ➤ A qualified, trained and equipped marine mammal observer (MMO) will be present during piling. The MMO will carry out a pre-piling survey of a 500 m mitigation zone and, if an animal is detected, the piling will be delayed until all marine mammals vacate the 500 m mitigation zone; ➤ A soft-start/ramp-up of hammer energy will be employed where the hammer will commence at a low energy at the start of piling. The soft start will be such that maximum hammer energy will not be reached until after a period of 20 minutes;



Aspect	Commitments
	<ul style="list-style-type: none"> ➤ Passive Acoustic Monitoring (PAM) will be employed during periods of low visibility and at night to detect marine mammal presence; and ➤ Avoiding commencing piling at night or in poor visibility when marine mammals cannot reliably be detected. If this cannot be avoided, then PAM will be used; ➤ Commitment to preparing a Marine Management Mitigation Protocol (MMMP) to summarise all mitigation measures.
Waste	<ul style="list-style-type: none"> ➤ NEO NEXT+ will apply the principles of the Waste Management Hierarchy during all activities i.e. Reduce, Reuse, Recycle; ➤ Existing asset and vessel WMPs will be followed; and ➤ Only suitably permitted and licensed disposal yards / landfill sites will be used, in compliance with relevant legislation.
Accidental Events	<ul style="list-style-type: none"> ➤ Activities will be carried out by trained and competent offshore crews and supervisory teams; ➤ An approved Oil Pollution Emergency Plan (OPEP) will be in place prior to any activities being undertaken; ➤ Records will be kept of oil spill training and exercises as required by the OPEP; ➤ Process Safety Assurance Processes will be identified and adhered to; ➤ Shipboard Oil Pollution Emergency Plans (SOPEPs) will be in place for project vessels; ➤ A co-ordinated industry oil spill response capability will be available; and ➤ Enhanced sharing of industry best practices via the Oil Spill Response Forum (OSRF) will continue.
	<p>Wells specific control measures</p>
	<ul style="list-style-type: none"> ➤ A robust Blowout Preventer (BOP) pressure and functional testing regime will be in place and the BOP will have fully redundant control systems; ➤ Appropriate mud weights will be used to allow well control to be maintained; ➤ The drilling rig will be appropriately certified; ➤ The drilling rig shall have an approved safety case with all Safety and Environment Critical Elements (SECEs) verified by an independent verification body and managed through a recognised maintenance management system; ➤ Well construction and operation activities to be conducted with multiple barriers in place; and ➤ Well Control Contingency Plan in place detailing relief well plans and arrangements with internal and external well control specialists.
	<p>Operations-specific control measures</p>
<ul style="list-style-type: none"> ➤ A mandatory 500 m safety zone will be in place for the drilling rig and for the wells following completion; ➤ Operational restrictions will be in place for visiting vessels in bad weather; ➤ Simultaneous operations (SIMOPS) procedures will be in place; ➤ Pipelines will have pressure monitoring and low pressure alarms; and ➤ Oil spill control measures will be followed as outlined in the OPEP. 	