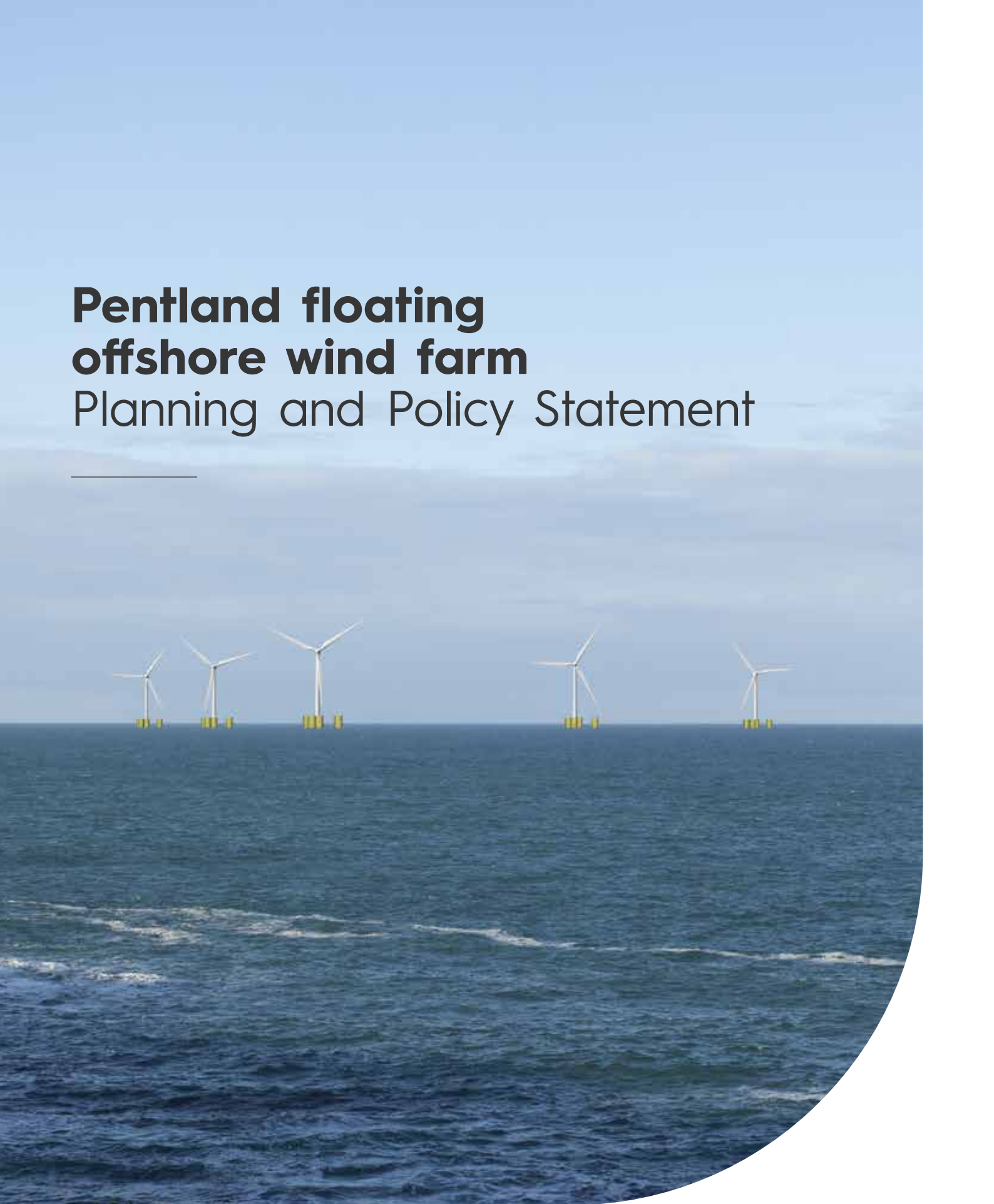


# **Pentland floating offshore wind farm**

## Planning and Policy Statement

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## PLANNING AND POLICY STATEMENT

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## 2. Introduction

This Planning and Policy Statement has been prepared in support of an application for the Pentland Floating Offshore Wind Farm ('PFOWF'). The application is accompanied by an Environmental Impact Assessment Report ('EIA') and a Report to Inform Appropriate Assessment ('RIAA').

The PFOWF Project ('the Project') is being developed by Highland Wind Limited (HWL) which is a Special Purpose Vehicle ('SPV') established to deliver the Project. HWL is majority owned by a fund managed by Copenhagen Infrastructure Partners ('CIP') (90%) with HexiconAB as a minority shareholder (10%). Project development activities are being led by CIP's development partner, Copenhagen Offshore Partners ('COP').

The overarching objective of the PFOWF is to test and demonstrate new technologies and solutions to support floating offshore wind farm development in Scotland, the UK and worldwide. The innovations and technology trialled in the delivery of this project will be key to advancing the deployment of large-scale floating offshore wind in Scotland, including the successful realisation of nearly 15 GW of floating capacity allocated under the ScotWind leasing round, and will support Scotland's continued role as a global leader for offshore floating wind technology worldwide. CIP, with its project partners SSE Renewables and Marubeni were awarded a 2.6 GW floating Project in Scotwind, therefore technology trialled on the PFOWF has the potential to accelerate the development timeframes for this large scale commercial project. The PFOWF will also create significant opportunities for the local and national economy, including developing the Scottish supply chain for floating offshore wind farm technology and contributing to job creation and gross value-added arising both directly and indirectly as a result of the Project.

In order to tackle the climate emergency, Scotland has ambitious renewable energy targets and a commitment to reaching net zero by 2045. The PFOWF will generate renewable electricity to feed into the national grid, increasing domestic energy security of supply and supporting net zero targets by reducing reliance on fossil fuels and future levels of atmospheric carbon dioxide and other greenhouse gases. The PFOWF will also contribute to the security of domestic supply of energy and to ensure a diverse and sustainable energy mix. The PFOWF will generate enough electricity to power approximately 70,000 homes, equivalent to around 65% of homes in the Highland Council.<sup>1</sup>

### 2.1 Project History

The PFOWF is being developed in the same location as the previously consented Dounreay Trì Floating Wind Demonstration Project (the Dounreay Trì Project). The Dounreay Trì Project was previously owned by Dounreay Trì Limited (now in administration) and was granted consent for project development in 2017. HWL acquired the Dounreay Trì Project and the consents were assigned to HWL on 3 March 2021. While the Dounreay Trì consents are still capable of being implemented, it was recognised that the site could accommodate a larger pre-commercial project, than was consented, which could test and demonstrate innovative floating technologies in advance of future commercial scale projects in ScotWind.

### 2.2 Design Evolution

In reviewing the stakeholder consultation responses associated with the original Dounreay Trì Project, a decision was taken early in the design evolution process for the PFOWF to set back the Array Area (the area

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1. <sup>1</sup> According to the Scottish Government's renewable electricity output and energy conversion calculators (Scottish Government, 2020c) and Highland Council statistics for 2020 available from National Records of Scotland (2021).

where the Wind Turbine Generators [WTGs] will be located) from the mainland coast by a further 1 km. The primary purpose of this setback was to reduce potential visual impacts by increasing the distance between the north coast and the closest WTG.

Following the Pre-application Consultation (PAC) event held in May 2022 (see the PAC Report accompanying the application), the Project was further refined from what was presented in the Scoping Report and Scoping Addendum Report (HWL, 2020; HWL, 2021). This refinement reduced the Array Area by 50%, with the primary aim of decreasing the horizontal spread associated with the WTGs, thereby reducing the visual impacts when viewed from the coast and reducing impacts to important seabird species. This refinement halves the footprint available to locate the WTGs, demonstrating HWL's commitment to reducing potential visual impacts from the WTGs on land-based receptors. The smaller footprint also benefits various other receptors, including ornithology, commercial fisheries and shipping and navigation users whilst also reducing direct impacts on the seabed. The closest the WTGs will now be to the coast is 7.5 km.

Additionally, the maximum number of WTGs that may be installed has been reduced from 10 (as presented in the Scoping Report) down to seven, further reducing potential visual impacts. Despite this reduction, due to advances in WTG technology, the operational capacity of the PFOWF remains the same.

The refined project boundary, including the PFOWF Array Area and Offshore Export Cable Corridor (OECC) against the Array Area and OECC presented at Scoping and the Dounreay Tri Project consented Boundary are shown in Figure 1.1.

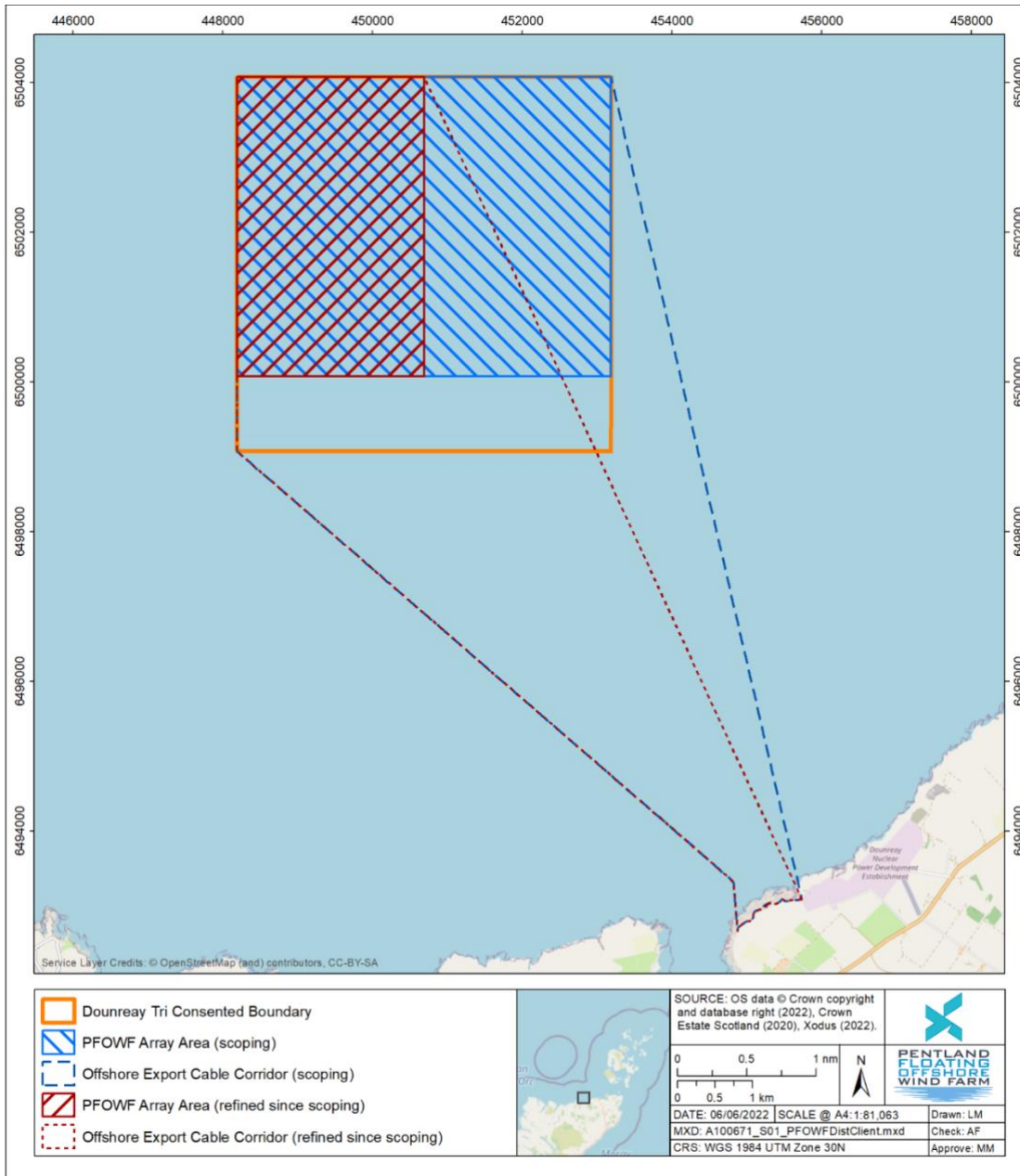


Figure 1.1 The refined Offshore Development Boundary including the Array Area and Export Cable Corridor against the Dounreay Tri consented Boundary and the Boundary presented during Scoping

## 2.3 Environmental Context

A number of environmental considerations were key drivers in HWL's decision to locate the PFOWF in the same location as the previously consented Dounreay Tri Project. These included:

- The principle of an offshore wind project having already obtained consent at this site;
- Suitable water depths (60 to 102 m) and wind resource within the area to support a floating wind project;
- Avoidance of shipping lanes which reduces interaction with existing vessel traffic;
- Well established ports and harbours to aid construction, operation and maintenance and decommissioning works required;

- No overlap at the PFOWF Array Area with designated sites protected for seabed features which could be affected through the deployment of the substructures and cables;
- Likely viability of horizontal directional drilling (HDD), at a suitable landfall location, to bring cables ashore, to ensure impacts are minimised to environmental receptors and other identified constraints at the landfall;
- Close proximity to an identified landfall location, leading to export cable efficiencies and reduced impacts on marine life and habitats; and
- Proximity to onshore grid connections, minimising disturbance to local communities and the onshore natural environment.

## 2.4 Site description

The key offshore components of the PFOWF (the Offshore Development) are located wholly within the Offshore Site within which the applications for consent are being sought. This includes:

- The Array Area: The area where the WTGs and associated infrastructure will be located. This is an area of 10 km<sup>2</sup> located approximately 7.5 km off the coast of Dounreay, Caithness, at its closest point to shore: and
- The OECC: The area where the offshore export cable(s) will be located. The corridor runs from the PFOWF Array Area up to mean high water springs ('MHWS').

The OECC will include up to two subsea export cable(s) which will export the renewable electricity generated to shore. The Project will connect to the grid at Dounreay via the existing 132 kV SSE Dounreay substation. The location of the Offshore Development, including the Array Area and the Offshore Export Cable Corridor is shown in Figure 1.1.

The key components of the onshore transmission infrastructure (the Onshore Development) will include the onshore substation compound, onshore export cables and associated joint bays and grid connection works. The Onshore Development is subject to separate consent from the Highland Council (THC) and is not included within this application for development consent.

## 2.5 Description of Development

The Offshore Development has adopted a Design Envelope approach to the assessment and application. This is because at this early stage in the development process it is not possible to finalise the specifics of the project design, due to:

- Procurement and supply chain considerations associated with emerging technologies;
- The timing of investment decisions; and
- Further site investigations which inform the final project design.

The full Design Envelope for the Offshore Development is presented within Chapter 5: Project Description of the EIAR. This has been refined where possible during the Environmental Impact Assessment (EIA) process and will be further refined as the Project development process progresses.

The key components of the Offshore Development will comprise:

- Up to seven offshore WTGs;
- Up to seven associated floating substructures;
- Up to nine moorings lines for each floating substructure (63 in total);

- Up to nine anchors or piles for each floating substructure (63 in total);
- Inter-array cables (dynamic and static) to connect the WTGs in an array configuration;
- Up to two offshore export cables (continuation of inter-array cables to bring power ashore); and
- Associated cable and scour protection, where necessary.

### 2.5.1 Construction and Installation

Construction activities for the Offshore Development are planned to commence in 2024 with commencement of horizontal directional drilling (HDD) works at the landfall. Construction of the wind farm and installation of the offshore export cable(s) is then anticipated to take place in two stages:

- Stage 1: The anchors for all WTGs will be installed, and a single floating demonstrator WTG and associated infrastructure may be deployed and commissioned ahead of the wider array to trial the technology required for the project.
- Stage 2: The remainder of the array, comprising up to seven WTGs (up to six if a single WTG is installed as part of the first stage) and associated offshore infrastructure, will be deployed to test and demonstrate commercial-scale floating wind technologies in Scotland.

The project is anticipated to be commissioned and in operation by the end of 2026.

The proposed deployment of a single WTG in Stage 1 provides a valuable test and demonstration opportunity for the floating technology and innovations proposed. Any lessons learned will be fed back into the construction of the remaining WTGs and will offer valuable insight for the development of floating offshore wind both nationally and internationally.

The construction methodology and timescales detailed above are indicative at this stage and are subject to the project securing all relevant consents and a route to market through the Contract for Difference (CfD) process, as well as the finalisation of procurement and supply chain contracts. It is anticipated that the design life of the WTGs and hence the operational life of the Offshore Development will be up to 30 years.

## 3. Consents and Permitting Framework

The Offshore Development lies within Scottish Territorial Waters and as such requires Section 36 (S36) Consent and Marine Licences from Marine Scotland on behalf of the Scottish Ministers for the construction, operation and maintenance and decommissioning of the wind farm and offshore export cable infrastructure. Further details of the consents required are set out in the following sections.

### 3.1 Overview of Consent Applications

The Marine (Scotland) Act 2010 which applies to Scottish Territorial Waters (between 0 and 12 nautical miles [nm] from MHWS) states that a Marine Licence is required to construct, alter or improve any works, or deposit any object in or over the sea, or on or under the seabed. The Offshore Development is located seaward of MHWS and lies within 12 nm of the coast. Therefore, Marine Licences will be required to install the anchors, mooring lines, floating substructures and offshore export cable(s) in/on the seabed.

Separate marine licences are being applied for, one for the wind farm infrastructure and one for the export cable(s):



- a) Marine licence pursuant to Section 20 of the Marine (Scotland) Act 2010 for the deposit of substances and objects, and the construction, alteration or improvement of the wind farm (the WTGs and associated substructures, anchors, mooring lines, inter array cables and associated cable and scour protection); and
- b) Marine licence pursuant to Section 20 of the Marine (Scotland) Act 2010 for the deposit of substances and objects, and the construction, alteration or improvement of the transmission infrastructure (the export cable(s) and associated cable protection).

A consent under Section 36 of the Electricity Act 1989 is required to construct and operate a generating station. This is required for the Offshore Development and will allow for the installation, operation and maintenance, and decommissioning of the WTGs and inter-array cables associated with the Project.

A declaration under Section 36A of the Electricity Act 1989 is required to allow WTGs and other structures to interfere with the rights of navigation. In line with Section 36B of the Electricity Act 1989, Ministers may not grant a consent in relation to offshore generating activities if it would interfere with 'recognised sea lanes essential to international navigation'. In determining what interference or obstruction is likely and its extent, the Scottish Ministers must consider how they will exercise their powers in relation to a declaration to extinguish rights of navigation and applications for safety zones.

The S36 and Marine Licence applications are supported by the Environmental Impact Assessment Report (EIAR), prepared in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) and the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended). A Habitats Regulation Appraisal has been prepared in accordance with the applicable HRA regulations, including the Conservation of Habitats and Species Regulations 2017, the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and the Wildlife and Countryside Act 1981.

The EIAR submitted in support of the application has been prepared by competent experts in accordance with good industry practice.

Other permits and licences may be required for the Offshore Development including, but not limited to, European Protected Species and Basking Shark Licences. If required, these will be applied for under separation applications.

### 3.2 Offshore Development Consent Applications Package

The consents application package for the Offshore Development comprises the following:

- Cover letter including application for consent under Section 36 of the Electricity Act 1989 and request for a declaration under Section 36A of the Electricity Act 1989;
- Completed and signed Marine Licence application forms for the wind farm, accompanied by supporting information;
- Completed and signed Marine Licence application form for the offshore transmission infrastructure, accompanied by supporting information;
- EIAR covering both the wind farm infrastructure and the offshore transmission infrastructure;
- Non-Technical Summary (NTS);
- Pre-Application Consultation Report as required under Section 24 of The Marine Licensing (Pre-Application Consultation) (Scotland) Regulations 2013;
- Report to Inform Appropriate Assessment (RIAA); and
- Planning and Policy Statement (this document).

## 4. Policy Context

In April 2019, the First Minister of the Scottish Government (First Minister) declared a climate emergency (CED, 2019a) and two days later, the UK Parliament formally declared an environmental and climate emergency (CED, 2019b), publicly stating their concern about climate change and its consequences. In May 2019, the Highland Council (THC), also declared a climate and ecological emergency. In November 2021, the UK hosted the 26th United Nations Change Conference of the Parties (COP26) in Glasgow, Scotland, which focused on accelerating action towards achieving the goals of the Paris Agreement and the United Nations Framework Convention on Climate Change (UNFCCC). The outcome of COP26 was the Glasgow Climate Pact, a series of decisions and resolutions that build on the Paris Agreement and establish what needs to be done to accelerate action on climate change within this decade, to limit the global temperature rise to 1.5°C in the longer term.

Scotland has committed to tackling climate change and to reaching net zero by 2045 at the latest. This will be achieved in part through the acceleration of the development of alternative sources of energy, to reduce reliance on unsustainable energy sources and improve energy security.

The UK Government in the publishing of its 'British Energy Security Strategy' policy paper in April 2022 identified the ambition of delivering up to 50 GW of offshore wind by 2030, including up to 5 GW of innovative floating wind. It is within this context that HWL is seeking development consent for the Offshore Development.

### 4.1 Climate Change and Energy Policy

The United Nations Framework Convention on Climate Change (UNFCCC) is an international treaty adopted in 1992 by most of the world's countries to address global warming. The United Kingdom (UK) is a signatory to the Kyoto Protocol. The protocol came into effect in 2005 and its commitments were transposed into UK law by the Climate Change Act 2008 and Scottish law by the Climate Change (Scotland) Act 2009. These Acts state that, by 2050, emissions are required to be 80% lower than the 1990 baseline. Subsequently, in 2019 the Climate Change Act 2009 (2050 Target Amendment) Order 2019 came into force and amended the targets to ensure by 2050 emissions are 100% lower than the 1990 baseline. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 amended the Climate Change (Scotland) Act 2009 to go a step further and see emissions reduced by 100% by 2045.

The Paris Agreement is the first-ever universal, legally binding global climate change agreement, adopted at the Paris climate conference (COP21). It sets out a global framework to reduce emissions of gases which contribute to global warming and avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. It also aims to strengthen each countries' ability to deal with the impacts of climate change and support them in their efforts.

On 3 January 2020, the UK formally left the EU (Brexit). Since formally leaving the EU, the UK Government has committed to implement international environmental obligations and to maintain environmental commitments and legislation already made. On this basis, the existing EU renewable energy targets for the UK, including the EU Renewable Energy Directive 2009/28/EC will remain applicable. Under the Renewable Energy (2009/28/EC) Directive, the UK has committed to sourcing 32% of its total energy needs from renewable sources by 2030.

On 28 April 2019, the Scottish Government's First Minister made history by declaring a climate emergency, the first government in the world to do so (CED, 2019a). In line with this declaration, and the associated challenges of climate change, energy supply and security of supply are driving policy on renewable energy developments. Scotland's Energy Strategy: The Future of Energy in Scotland (Scottish Government, 2017) sets out a vision for the energy system in Scotland until 2050. The strategy sets a 2030 target for the equivalent

of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied by renewable sources.

Recent geopolitical events and socioeconomic trends have also underscored the need for increased domestic energy security and to secure an energy supply. In April 2022, the UK Government published the British Energy Security Strategy which commits to increased support for renewable generation, including offshore wind. While Scotland has not published its own energy security strategy, correspondence from the Cabinet Secretary for Net Zero and Energy to the Secretary of State, in response to the proposed UK Government energy security policy emphasises that the plans do not go far enough, quickly enough:

*“While the oil and gas sector has, and continues to remain, a key part of the Scottish economy, increasing domestic production is not the way to end dependence on fossil fuel from Russia. Instead we should be looking to **immediately accelerate the transition to renewables** and reduce our dependence on oil and gas products.”*

**The PFOWF, as a renewable energy source and a test and demonstrator project for floating offshore wind technologies, is aligned with this vision and will contribute to ensuring the delivery of low carbon energy in support of net-zero emission targets.**

## 4.2 Offshore Renewables Policy

Support for the offshore renewables sector was a prominent component of the original Industrial Strategy published by the UK Government in 2017, and its successor Build Back Better: The Plan for Growth published in 2021. The Plan for Growth identifies opportunities for up to 60,000 jobs across the UK in the offshore renewables sector, thereby building upon the targets set out in the UK Government's Ten Point Plan for a Green Industrial Revolution, announced in 2020 (BEIS, 2020a).

Also in 2020, the UK Government launched the Offshore Wind Sector Deal, which seeks to support and stimulate additional investment in the offshore renewable energy sector through initiatives such as providing greater certainty over the future CfD rounds; strengthening the UK supply chain for renewables; R&D support for the adoption of floating offshore wind farms; targets for increased representation of women and other under-represented groups in the offshore renewables industry workforce, and a target for 60% UK content in offshore schemes to be achieved by 2030 (BEIS, 2020b).

The UK Government's British Energy Security Strategy (April 2022) sets additional targets for the development of offshore wind, including ensuring that the UK remains a world leader in offshore wind by “aiming to bring forward up to 5 GW of floating offshore wind by 2030” (BEIS, 2022).

The Scottish Government's Offshore Wind Energy Policy Statement (Scottish Government, 2020a) sets out ambitions to capitalise on offshore wind development and the role this technology could play in meeting the net-zero target by 2045. Scotland's Energy Strategy is integral to the implementation of the Offshore Wind Policy Statement, through the identification of suitable offshore wind farm development areas. The statement also highlights the floating wind opportunities in Scotland, stating that:

*‘There is huge economic opportunity attached to floating offshore wind – Crown Estate Scotland's Macroeconomic Benefits of Floating Offshore Wind report suggests that the UK floating offshore wind market has the potential to support 17,000 jobs and £33.6 billion of Gross Value Added (GVA), with particular potential for deployment in Scotland's 462,000 km<sup>2</sup> of waters, much of which are more than 60 m in depth. Globally, the market is set to grow to at least 4 GW of capacity by 2030 and 55 GW by 2050, offering an export opportunity to Scotland's supply chain which is estimated at around £550 million per annum by 2050’*

**As a test and demonstration project, the PFOWF is an important precursor to the development of commercial floating wind projects in Scotland and the UK. As the only Scottish floating offshore wind farm progressing ahead of the larger scale ScotWind projects, the PFOWF will provide a unique advantage to the local supply chain in terms of preparing and demonstrating capabilities ahead of these larger projects. The successful deployment of the PFOWF will also be key to unlocking future floating offshore wind farm projects necessary for meeting the UK Government's targets of 5 GW of floating offshore wind by 2030.**

### 4.3 Scottish Planning Policy

On 23 June 2014, the Scottish Government published the new Scottish Planning Policy (SPP) (Scottish Government, 2014b). The SPP sets out Scottish Government policy on how nationally important land use matters should be addressed and outlines Governmental priorities for land use planning. SPP 2014 sits alongside other key Scottish Government documents including the National Planning Framework 3 (NPF3) (Scottish Government, 2014a) and Circulars. It emphasises the merits of sustainable development and the need to deliver heat and electricity in a low carbon manner through supportive policies in development plans, including supporting the expansion of renewable energy generation capacity.

A core value of SPP is for it to play a role in facilitating sustainable economic growth, particularly the creation of new jobs and the strengthening of economic capacity and resilience of communities, including regeneration and the creation of well-designed and sustainable places, reducing carbon emissions and adapting to climate change.

Published in June 2014, NPF3 provides a statutory framework for Scotland's long-term spatial development priorities for the next 20 to 30 years. SPP and NPF3 both share a single vision; for Scotland to achieve sustainable, distributable, and fair growth without comprising the quality of the environment, place, and life.

NPF3 recognises opportunities for the Scottish economy to become a world leader in low carbon energy generation, with important potential benefits in terms of economic growth and support for local communities and services. Moreover, NPF3 identifies Pentland Firth as one of six 'energy hubs', a location of particular significance to the delivery of the Scottish Government's low carbon strategy. Orkney, Pentland Firth and North Caithness is identified as an area with *'unparalleled opportunities for marine renewable energy development, generating significant new business and employment opportunities for the surrounding coastal and island communities.'*

A draft National Planning Framework 4 (NPF4) was submitted for consultation in November 2021, which ran until March 2022. NPF4 will, when adopted, set out the Scottish Government's priorities and policies for the planning system up to 2045 and will detail how the approach to planning and development will help to achieve a net zero, sustainable Scotland by 2045.

The offshore renewables sector is also prominent in NPF4 which highlights:

- The opportunity the development of offshore renewables provides for coastal and island communities to strengthen local economies, to successfully regenerate, and to secure long-term sustainability;
- Greener energy choices such as offshore renewables have a natural home in coastal Scotland and will be at the heart of the future wellbeing economy; and
- Offshore renewables are an important part of Scotland's energy transition, and there will be a need to align terrestrial and marine development to maximise the potential of this sector.

NPF4 differs from the previous NPFs in two ways: it incorporates SPP (and any revisions) and the NPF into a single document; and will form a part of the statutory development plan.

**The PFOWF has the potential to make a significant contribution to delivering the vision and objectives set out in the SPP, NPF3, draft NPF4, and the various other economic strategy and policy statements set out above. The Project would achieve this by generating local and national economic growth and resilience benefits and by directly supporting climate change mitigation and Scotland's energy transition. It is the right development in the right place which will bring immediate, long term sustainable benefits in the form of low carbon electricity generation.**

## 4.4 Marine Policy

The UK Marine Policy Statement (UK Government, 2011), adopted by the UK Government and devolved administrations, facilitates an integrated approach to marine planning across the UK and sets out the high-level framework for preparing marine plans and taking decisions affecting the marine environment.

In March 2015, the Scottish Government published 'Scotland's National Marine Plan (NMP) – a Single Framework for Managing our Seas' (the NMP) (Scottish Government, 2015). The NMP 2015 sets out strategic policies for the sustainable development of Scotland's marine resources out to 200 nm.

Scotland's NMP recognises that sustainable development and use of the marine environment can provide multiple economic benefits, including growth opportunities, employment, skills development, investment, and trade. Chapter 11 of the NMP identifies key objectives of the marine planning policy for offshore wind, including:

- Sustainable development of offshore wind in the most suitable locations;
- Economic benefits from offshore wind, maximised by securing a competitive local supply chain in Scotland;
- Contribute to achieving the renewables target to generate electricity equivalent to 100% of Scotland's gross annual electricity consumption from renewable sources by 2020; and
- Contribute to achieving the decarbonisation target.

It is noted that the target to generate electricity equivalent to 100% of Scotland's gross annual electricity consumption from renewable sources by 2020 was narrowly missed. This highlights the increased urgency for the successful delivery of renewable energy projects, such as the PFOWF, and the NMP identifies that Scotland's offshore waters provide an opportunity for the further development of an internationally important renewable energy industry.

The first Sectoral Marine Plan for Offshore Wind Energy (Blue Seas Green Energy) (Scottish Government, 2011) was adopted in 2011. In July 2013, Marine Scotland published the Draft Sectoral Marine Plan for offshore wind, wave and tidal energy in Scotland (Scottish Government, 2013). It identified potential future options for commercial scale (potential to generate greater than 100 megawatts (MW)) offshore wind energy developments. Since then, the final Sectoral Marine Plan for Offshore Wind Energy (SMP) was published in October 2020 (Scottish Government, 2020b).

The SMP seeks to contribute to the achievement of Scottish and UK climate change policy objectives and targets, through the provision of a spatial strategy to inform the seabed leasing process for commercial offshore wind energy in Scottish waters. It seeks to maximise the benefits for Scotland, and its communities and people, whilst minimising the potential adverse effects on other marine users, economic sectors and the environment resulting from further commercial offshore wind development. It identifies 15 final plan options across four Scottish regions which are capable of generating several GW of renewable energy.

Regional marine plans are currently in the process of being prepared within Scottish marine regions where there is an established regional Marine Planning Partnership. The planning competence of these regional Marine Planning Partnerships extends out to 12 nm. The PFOWF falls under the north coast region. However, a Regional Marine Plan for the north coast has yet to be developed.

**The Pilot Pentland Firth and Orkney Waters Marine Spatial Plan (Scottish Government, 2016), developed by Marine Scotland, Orkney Islands Council and the Highland Council, sets out an integrated planning policy framework to guide marine development and activities, and management decisions, whilst ensuring protection of the quality of the marine environment. It has identified most of the north coast, including the location of the Project, as being a potential offshore renewable energy generation activity area.**

## 4.5 Local Policy

The Highland-wide Local Development Plan (HwLDP) came into force in April 2012, setting out broad strategic themes within its vision statement which seek to guide and inform development in the Highland local administrative area until 2030 (THC, 2012). The PFOWF is directly associated with a number of HwLDP policies including Policy 67: Renewable Energy Developments which notes the Council's in principle support for renewable energy development.

The HwLDP relates to development within THC's administrative boundary and is not a statutory document for the purpose of determining the applications for the S36 Consent and Marine Licences. However, HWL is conscious that the Offshore Development is visible from many locations within THC's administrative boundary. Policy 67 states that:

*“Renewable energy development proposals should be well related to the source of the primary renewable resources that are needed for their operation. The Council will also consider:*

- *the contribution of the proposed development towards meeting renewable energy generation targets; and*
- *any positive or negative effects it is likely to have on the local and national economy;*

*and will assess proposals against other policies of the development plan, the Highland Renewable Energy Strategy and Planning Guidelines and have regard to any other material considerations, including proposals able to demonstrate significant benefits including by making effective use of existing and proposed infrastructure or facilities.*

*Subject to balancing with these considerations and taking into account any mitigation measures to be included, the Council will support proposals where it is satisfied that they are located, sited and designed such that they will not be significantly detrimental overall, either individually or cumulatively with other developments.”*

In reaching a decision on renewable energy developments under Policy 67, THC must also have regard to any significant effects on species and habitats, visual impact and amenity, tourism and recreation, together with additional topics specified. The EIAR submitted with the application for development consent assesses the proposed impacts of the Offshore Development and demonstrates that the PFOWF complies with Policy 67.

It is noted that the HwLDP is more than five years old and, therefore, the PFOWF benefits from the 'tilted balance' set out in SPP insofar as the HwLDP is relevant to the Offshore Development. Paragraph 33 of SPP states: *“Where relevant policies in a development plan are out-of-date, or the plan does not contain policies relevant to the proposal, then the presumption in favour of development that contributes to sustainable development will be a significant material consideration. Decision-makers should also take into account any*

*adverse impacts which would significantly and demonstrably outweigh the benefits when assessed against the wider policies in this SPP. The same principle should be applied where a development plan is more than five years old.”*

The Highland Coastal Development Strategy (THC, 2010), identifies the development of the marine renewables industry as a key opportunity for the North Coast, due to the potential energy generation. The vision identified in the strategy includes a diverse range of renewable energy developments and businesses to ‘develop a truly mixed renewable energy economy’ including offshore wind farms. This is also considered important for retaining a coastal population.

The adopted Caithness and Sutherland Local Development Plan (2018) identifies the positive employment and economic growth potential offered by the expansion of the offshore renewables sector. The Local Development Plan (CaSPlan) seeks to maximise these opportunities by supporting the development of ports and harbours and other infrastructure. The CaSPlan also seeks to support and enable the energy hub area for co-ordinated action, as identified in NPF3 for Pentland Firth and Orkney waters, and maximise opportunities from the offshore renewables sector by promoting an area for energy business expansion in the north east.

In line with these objectives, HWL has signed a Memorandum of Understanding (MoU) with Scrabster Harbour Trust to investigate the harbour becoming the project’s operations and maintenance base. Scrabster and the nearby area provides the Project with an accessible harbour for berthing and crew transfer, landfall area, storage facilities and office facilities. Operation of the PFOWF from Scrabster is expected to create 10-12 full time local jobs, and several part time jobs including site manager, technical support, warehouse management, technicians and inspectors. HWL aims to become an integrated part of the Scrabster community and is committed to delivering wider benefits, which will be defined as the partnership develops.

## 5. Considerations Relevant to the Determination

In considering whether to grant consent for the Offshore Development, Marine Scotland will have regard to the findings of the EIAR, compliance with legal tests and the extent to which the proposals are consistent with national and other policies.

Schedule 9 of the Electricity Act 1989 requires relevant proposals (including the construction of a generating station in excess of 1 MW) to consider ‘the desirability of preserving natural beauty, of conserving flora, fauna or geological and physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic and archaeological interest’ and do what can be reasonably done to mitigate any effect the proposals would have on ‘the natural beauty of the countryside, or on any such flora, fauna, features, sites, buildings or objects’. Additionally, Schedule 9 requires a licence holder to ‘avoid, so far as possible, causing injury to fisheries or to stocks of fish in any waters’.

Section 15 of the Marine (Scotland) Act 2010 requires decisions of the Scottish Ministers on marine licence applications to be in accordance with the specified marine plans and policy documents unless ‘relevant considerations indicate otherwise’.

Section 27 of the Marine (Scotland) Act 2010 requires that ‘in determining an application for a marine licence (including the terms on which it is to be granted and what conditions, if any, are to be attached to it), the Scottish Ministers must have regard’ to:

- The need to protect the environment;
- The need to protect human health;
- The need to prevent interference with legitimate users of the sea;
- Any representations received from any person having an interest in the outcome of the application;

- Such other matters as the Scottish Ministers consider relevant;
- The practical availability of alternative methods;
- The effects of any use intended to be made of the works; and
- Giving the applicant the opportunity to make representations to them about observations made by consultees.

## 5.1 Statutory Framework

With regard to the principle of the proposed Project, the statutory documents are considered to have the greatest weight. The statutory documents in this case are the NMP, SPP, NPF3 and HwLDP.

Scotland's NMP identifies that Scotland's offshore waters provide an opportunity for the further development of an internationally important renewable energy industry and recognises that sustainable development and use of the marine environment can provide multiple economic benefits, including growth opportunities, employment, skills development, investment, and trade. The NMP identifies sustainable development of offshore wind, in the most suitable locations, as a key objective of marine planning policy.

SPP introduces a presumption in favour of development that '*contributes to sustainable development*', although it acknowledges that the effect of this is not to allow development at any cost but to '*achieve the right development in the right place*'. The PFOWF will immediately accelerate the transition to renewable energy with its timetable for implementation and operation, and it will facilitate further projects by serving as a necessary test and demonstrator project for the large-scale floating offshore wind projects awarded leases in ScotWind, including the 2.6 GW floating project of CIP and project partners. The PFOWF is, therefore, the right development in the right place at the right time and, as sustainable development, benefits from the presumption in its favour.

While HwLDP relates to development within THC's administrative boundary and is not a statutory document for the purpose of determining the applications for the S36 Consent and Marine Licences, HWL is conscious that the Offshore Development is visible from many locations within THC's administrative boundary. The PFOWF contributes towards meeting renewable energy generation targets and will have a positive effect on the local and national economy. In reaching a decision on renewable energy developments under Policy 67, THC must have regard to any significant effects on species and habitats, visual impact and amenity, tourism and recreation, together with other considerations listed in Policy 67. The EIAR submitted in support of the application for development consent assesses the proposed impacts of the Offshore Development and demonstrates that the PFOWF complies with Policy 67.

## 5.2 The Principle of Development

The principle of developing an offshore wind farm off the north coast of Dounreay, in Caithness, has been established by the consent of the original Dounreay Tri Project which provides a degree of certainty that an offshore wind farm can be built out at this location. The original consent was for two WTGs with a blade tip height of up to 201 m. The consent was granted where assessments concluded that significant effects on a small number of receptors was likely to occur, suggesting the benefits of the project outweighed these impacts. The application for the PFOWF is for a larger wind farm development, comprising a greater number of WTGs and in this context significant landscape and visual effects are experienced for a small number of localised receptors. However, the larger PFOWF also provides greater benefits to the community, the economy and in helping meet net zero targets which should be a consideration in the acceptability of proposals and the determination of the application.

The acceptability of offshore wind farm development at this location relates to the ability of the expansive seascape to accommodate an offshore wind farm, due to its relative simplicity and lack of existing



development. The small number of WTGs proposed (maximum of seven), combined with the refined Array footprint, which is more distant from the coast (set back by 1km) and 50% smaller than the consented footprint of the Dounreay Tri Project Array, ensures that the wind farm is relatively contained within the wider seascape. At 7.5 km from the coast at its closest point the distance of the wind farm from the coastline also reduces the visibility of the WTGs at close range, while the presence of the floating substructures demonstrates the temporary nature of these structures and reduces the perception that any changes to the seascape may be permanent.

**There is clear support in principle within the established policies for the development of a floating offshore wind farm within the proposed development area. As a test and demonstrator project for floating offshore wind farm technology and the largest Scottish floating offshore wind farm progressing ahead of the larger scale ScotWind projects, the PFOWF is aligned with national policies to reach Scotland’s renewable energy potential, increase energy security, and reach net zero by 2045. The previous consent granted demonstrates the principle of developing of an offshore wind farm at this location has been established.**

## 5.3 The Need to Protect the Environment

### 5.3.1 The Climate Emergency

In August 2021, the IPCC issued its sixth assessment report (AR6) stating that climate change is a global issue, resulting from greenhouse gas emissions released into the atmosphere, largely due to human activity and the combustion of fossil fuels. Evidence of the effects of climate change include widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere. Global warming of 1.5°C and 2°C will be exceeded during the 21<sup>st</sup> century, unless large reductions in carbon dioxide and other greenhouse gas emissions occur in the coming decades (IPCC, 2021).

In light of the IPCC AR6 report, the First Minister wrote to the UK Prime Minister in August 2021 detailing the urgency with which the four nations of the UK must work together and ensure leadership to limit the global temperature rise to 1.5°C in the longer term. The First Minister emphasised that “the answer to these challenges – given the urgency of the climate emergency – cannot be business as usual. Instead, we must take decisions and make investments now to support – and accelerate – the development of these alternative [energy sources]” (Scottish Government, 2021a).

The UK hosted the 26<sup>th</sup> UN Climate Change Conference (COP26) in Glasgow, Scotland, in November 2021. Scotland’s First Minister delivered an address at COP26, detailing how Scotland will continue playing its full part in tackling climate change. The address reaffirmed Scotland’s renewable energy potential and the role that renewable energy developments, including offshore wind, can play in delivering Scotland’s targets of becoming a net-zero country by 2045.

There is a clear need for expanded renewable energy in order to address the climate emergency and significantly reduce greenhouse gas emissions, to replace high carbon energy sources (e.g., burning coal and oil). The recent geopolitical events have also underscored the need for increased domestic energy security and to secure an energy supply.

The PFOWF will demonstrate new floating offshore windfarm technology ahead of anticipated larger scale floating projects in Scottish waters. The innovative technology trialled within this project will provide valuable learning opportunities and insight, to inform the development of floating wind farm technology in Scottish waters and worldwide. This is key to reaching Scotland’s renewable energy potential, increasing energy security, and reaching net zero by 2045.

### 5.3.2 Developing the PFOWF

The need to protect the environment has underpinned the design development process and design envelope refinement for the Offshore Development.

As set out in section 2.2, the Array Area has been set back by a further 1 km (from the Dounreay Tri consented footprint) in order to increase the distance between the WTGs and the closest point on the north coast (which is now 7.5 km). The Array Area has also been reduced by 50%, in an east-west direction, in order to reduce the potential horizontal spread of WTGs when viewed from the north coast and thereby reduce potential visual impacts and to reduce the impacts on important seabird species. In addition, the smaller footprint of the PFOWF Array Area and associated Offshore Export Cable Corridor will result in reduced impacts upon benthic ecology, marine mammals, and fish receptors, and will reduce disturbance upon other sea users, including commercial fisheries and shipping and navigation receptors.

The maximum number of WTGs that will be installed has also been reduced from the design submitted in Scoping, from 10 to seven, further reducing the Project's environmental impacts, including potential visual impacts and potential impacts on seabirds in relation to collision risk. The corresponding reduction in associated infrastructure, including anchors and mooring, also further reduces potential impacts on marine receptors such as fish and marine mammals. The reduction in the number of WTGs is reflective of advancements in wind turbine technology, which allows fewer larger-capacity WTGs to provide the same generating capacity. However, with these project refinements now incorporated into the Design Envelope, no further reductions in the Array Area or number of WTGs can be afforded if the Offshore Development is to maintain commercial and engineering viability.

Following early-stage assessments, HWL has also committed to increasing the minimum blade tip clearance from the sea surface with the primary driver of reducing potential impacts to seabirds, in terms of collision with WTG blades. Increasing blade tip clearance has been shown to be an effective mitigation to reduce the number of potential collisions and the minimum blade tip clearance for the Offshore Development has been substantially increased, from 22 m to 35 m above mean sea level.

Alternative locations for the Offshore Export Cable Corridor were considered as part of the design development process and the final corridor and landfall location selected results in fewer potential environmental impacts by minimising the length of the offshore export cable(s) required. HDD has been selected as the installation method at the landfall for the Offshore Development and this removes the potential for any direct impacts upon intertidal receptors as a result of cable installation works. The offshore export cable(s) and static inter-array cables will be buried to a target depth of 0.6 m wherever possible and where this cannot be achieved cable protection will be applied. Cable burial and cable protection measures increase the physical distance between the cables and marine receptors, reducing the potential for any electromagnetic field effects.

In finalising the design for the Offshore Development a number of additional commitments have been made by HWL. These include embedded and additional mitigation measures which are described in full within the EIAR supporting the application for development consent. Such measures will form part of the final design for the Project and will be set out within post consent plans which will be approved by Marine Scotland prior to construction. A commitment register will also be maintained by HWL which will be shared with Marine Scotland, to ensure that these commitments are applied within final project design.

The refinements to the Array Area and engineering design were made to ensure that the project is developed in the most environmentally sensitive manner and to reduce the potential impacts to the environment wherever possible. Taking into account the design refinements made and additional embedded mitigation measures, the EIA has concluded that there will be no significant impacts to physical or biological receptors as a result of the Offshore Development. This includes consideration of impacts upon ornithology, benthic ecology, fish and

shellfish ecology and marine mammal receptors, as well as consideration of the marine and coastal environment in which they live.

It is recognised that offshore wind farm developments such as the PFOWF may have significant effects on the environment by virtue of their size, scale and location. The PFOWF is a test and demonstrator project and therefore it is relatively small in size compared to existing fixed bottom offshore wind farm projects. However, once constructed it will be the largest floating offshore wind farm array in UK waters and its successful deployment will provide valuable learning opportunities and supply chain developments, which will facilitate the delivery of future larger scale floating offshore wind farm projects including Scotwind.

The results of the Seascape, Landscape and Visual assessment (SLVIA) for the Offshore Development are presented in Chapter 16 of the EIAR. The SLVIA concluded that the Offshore Development is likely to give rise to some significant effects during its operational life, on coastal and landscape character and visual amenity. Effects, are found to extend out to a radius of no more than 13 km and as such, are relatively localised within the wider 50 km Study Area. The localised nature of these effects means that the majority of the landscape and visual receptors across the wider SLVIA Study Area will not be significantly affected.

The significant effects predicted and the introduction of the Offshore Development will be in an area of coast and landscape that currently has a number of industrialised features. The Dounreay Nuclear facility, the Vulcan Naval Reactor Test Establishment and a number of onshore wind farms and associated large overhead lines are found within the immediate onshore vicinity. The relatively small number of WTGs associated with the Offshore Development and the compact footprint means that it will be relatively contained within the wider seascape which is generally expansive and as such is considered able to accommodate the proposed PFOWF.

As noted in section 5.2 the principle of developing an offshore wind farm and the potential for significant landscape and visual impacts in this location has been established through the consent of the Dounreay Trī Project. While this is the case, to ensure a precautionary or cautious approach, the SLVIA undertaken for the Offshore Development has been based on the baseline scenario of an undeveloped seascape. If the effects of the Offshore Development were assessed against a baseline comprising the Offshore Development in relation to the Dounreay Trī Project, the extent of the effects would likely be reduced.

The results of the ornithological impact assessment are presented in Chapter 12 of the EIAR, and in the Report to inform the Appropriate Assessment (RIAA). The most likely pathways the Offshore Development could impact seabird species is through collision and displacement caused by the operational WTGs. The assessment carried out demonstrates that the additional impacts caused by the Offshore Development do not give rise to additional significant effects beyond that already consented by the Scottish Ministers. This is due to the small number or negligible mortalities modelled for the different species associated with the Offshore Development.

Information to inform an HRA has also been presented with the Report to Inform Appropriate Assessment (RIAA). This assessment considers the potential for any likely significant effects (LSE) on qualifying features of protected European Sites including Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. The RIAA concludes that there will be no adverse effect on the integrity of the protected sites and their qualifying interests as result of the Offshore Development.

**The decision of whether to grant a consent, requires a judgement to be made about the weight to be attached to adverse impacts of a project and the benefits to the environment which will result in the longer term. With regards to the PFOWF there are no significant impacts predicted for the offshore physical or biological environment including benthic ecology, fish and shellfish, marine mammals or ornithology receptors and no adverse effect is predicted on the integrity of any protected sites or qualifying interests assessed. While some significant effects on seascape, landscape and visual**

**receptors are predicted, due to the nature and location of the Offshore Development, these will be relatively contained in the wider seascape and as such, significant effects will be relatively localised, with the majority of the landscape and visual receptors across the wider SLVIA Study Area remaining unaffected.**

## 5.4 The Need to Protect Human Health

The World Health Organisation (2021) has identified that climate change is already having an impact on human health in a number of ways including death and illness from increasingly frequent extreme weather events, such as heatwaves, storms and floods, disrupted food systems and increases in food, water and vector-borne diseases, and associated mental health issues. In addition, climate change is undermining many of the social determinants for good health, such as livelihoods, equality and access to health care and social support structures. By generating renewable energy and improving energy security, the PFOWF is addressing a number of key issues associated with the climate crisis.

The PFOWF is located off the coast of an area that has a relatively low population density. However, the potential impacts of the Offshore Development on human health have been considered in the design development process. As set out above, the Array Area has been set back by a further 1 km to increase the distance between the WTGs and the coast and the number of WTGs has also been reduced from 10 to seven, reducing potential visual impacts.

The potential impact of wind turbine noise on land-based receptors has been considered and when considering the distance from shore, combined with the reduced number of WTGs, operational noise assessments demonstrate that the Offshore Development will operate within levels recommended in national guidance for wind energy schemes. In terms of maritime and aviation safety, necessary mitigation measures will be adhered to throughout construction and operation, including lighting and marking requirements and accordance with best practice. These arrangements will form part of the embedded mitigation measures identified and will be confirmed prior to construction through condition of consent, and maintained in a commitment register by HWL, to ensure these are applied within final project design. With consideration of embedded mitigation measures the EIA has concluded that there will be no significant impacts to shipping and navigation users or aviation or radar receptors as result of the Offshore Development.

Unexploded Ordnance may also present a risk to human health if not appropriately managed. To understand the level of risk, HWL commissioned a desk-based UXO risk assessment undertaken by Ordtek in 2021. The results of the assessment indicate that it will be possible to avoid any UXO encountered during project development. Should further mitigation be required (i.e., clearance or detonation), this would be subject to separate assessment and licence applications. However, to provide a comprehensive assessment, an initial assessment of noise-related impacts from UXO clearance has been undertaken and presented within the EIAR. The results of the assessment demonstrate that there will be no significant impacts associated with UXO clearance.

The Offshore Export Cable(s), which brings the energy generated from the WTGs to the shore, will cross through an area currently closed off for fishing. The Food Protection (Emergency Prohibitions) (Dounreay Nuclear Establishment) Order 1997 created a ban for all fishing within a 2 km area around an outfall pipe associated with the Dounreay nuclear facility. The reason for the exclusion is due to contaminated seabed sediments by fragments of irradiated nuclear fuel. During the installation of the cable there is a very low possibility of encountering radioactive particles that remain in the seabed. An independent risk assessment has been carried out by a world leading radioactive company who has been involved in monitoring the area on behalf of Dounreay. This assessment shows that with adherence to a number of safe working systems in place, any risk associated with the Offshore Development to human health is removed.

**The Offshore Development will not have a detrimental impact on human health and any potential risks can be clearly managed. Instead, clear benefits are provided through reducing emissions and protecting human health in the longer term.**

## 5.5 The Need to Prevent Interference with Legitimate Users of the Sea

The proposed Offshore Development has the potential to interact with and cause interference to other users of the sea. The potential for such impacts have been assessed in full within the EIAR supporting the consent application.

A Navigational Risk Assessment (NRA) was undertaken in consultation with all relevant maritime stakeholders and in accordance with Marine Guidance Note 654. A number of potential risks and impacts on shipping and navigation users (including commercial fishing vessels in transit) associated with the construction, operation and maintenance, and decommissioning phases of the Offshore Development were identified and assessed in the EIAR, supported by the NRA. With consideration of the relevant embedded mitigation measures in place, all risks and impacts were assessed as not significant. These include:

- Adherence to charting requirements;
- Promulgation of information as per standard industry practice;
- Development of a lighting and marking plan;
- Use of, buoyed construction areas and guard vessel(s) where required;
- Development of a navigational safety plan;
- Development of a vessel management plan; and
- Application of safety zones (subject to separate application prior to construction).

A commercial fisheries impact assessment was undertaken in consultation with relevant stakeholders and informed by the NRA. The assessment considered potential impacts of displacement, loss of access to fishing grounds, snagging and gear entanglement with floating structures and the obstruction to fishing transit routes. Impacts were considered throughout the construction, operation and maintenance and decommissioning phases of the Offshore Development. With consideration of the relevant embedded mitigation measures in place, all impacts to commercial fisheries were assessed as not significant.

Given the location of the Array Area relative to the main commercial shipping routes, it is expected that displacement of commercial vessels will be limited. The Offshore Development will not interfere with 'recognised sea lanes essential to international navigation' and so there would be no grounds under section 36B of the Electricity Act 1989 to refuse to grant the Section 36 consent.

**Concerns relating to other legitimate users of the sea can be addressed through the application of appropriate mitigation measures and adherence to standard industry practice. The Offshore Development will not interfere with 'recognised sea lanes essential to international navigation' and there would be not grounds under section 36A of the Electricity Act 1989 to refuse to grant the Section 36 consent.**

## 5.6 Benefits of the Proposal

The PFOWF is anticipated to have a wide range of benefits throughout its operational life. This will include:

- Mitigating the effects of climate change through avoided emissions and contributing to Scotland's target of Net Zero by 2045;

- Facilitating progress towards technological innovation in floating offshore wind through testing and demonstrating new technologies;
- Supporting the deployment of large-scale floating offshore wind in Scotland, including nearly 15 GW of floating capacity allocated under the ScotWind leasing round;
- Developing the Scottish supply chain for floating offshore wind farm technology, helping to establish Scotland as a global leader in floating offshore wind.
- Economic benefits, including job creation and gross value added arising both directly and indirectly; and
- Ensuring security of domestic supply of energy and contributing to a diverse and sustainable energy mix;

A carbon assessment has been undertaken and is presented in Appendix 20.1, of the EIAR. This has calculated that that the Offshore Development will displace CO<sub>2</sub>e emissions from other energy sources by between 2.57 and 4.17 million tonnes when considering 'high emissions' and 'low emissions' scenarios respectively. The payback period has been calculated to be within two to seven years from the start of operations. Consequently, the PFOWF will make a beneficial contribution to UK carbon budgets, a proxy for the global climate.

The PFOWF also has the potential to play an important role in helping to facilitate further progress towards technological innovation in offshore wind that will be important for future Offshore Developments at other sites in Scottish waters. This is because:

- The PFOWF offers the opportunity to test and implement various innovations and the introduction of new technologies, including floating substructure technologies, mooring technologies, anchoring technologies, and technologies for dynamic inter-array cables.
- The PFOWF also offers the opportunity for the establishment or strengthening of the Scottish and UK supply chains for floating wind farm technologies, thereby helping to realise the various economic, sustainability and other goals set for offshore renewables by both the Scottish Government and the UK Government.

These points are important because larger scale floating wind farms are expected to comprise an important component of Scotland's portfolio of offshore electricity generating assets. For example, in the ScotWind 1 leasing round there are several projects that are envisaged to utilise floating wind farm technologies, including sites with a capacity of up to 3,000 MW. The prospect of successful implementation of such projects and the capturing of the supply chain opportunities for Scotland would both be increased through the successful delivery of smaller projects such as the PFOWF, which will be an important 'stepping stone' towards larger floating wind farm projects located further offshore.

The Socio-economic, Tourism and Recreation chapter (Chapter 19) assesses potential effects that would arise as a result of the PFOWF on employment, economic output, tourism and recreational activities, and on demand for housing and services. The assessment considers effects at local (Caithness), regional (the Highland Council local authority area), and – where applicable – national (Scotland and the UK) areas relative to the PFOWF.

Beneficial impacts to socio-economic receptors include the potential effects on business activity in the Project's supply chain, the potential for generation of additional economic output (Gross Value Added), the potential opportunities for employment, and for the development of workforce skills and training. Assessments indicate that the PFOWF is anticipated to create between 401 and 639 full time jobs in the Highland area and between 639 and 894 full time jobs in Scotland during construction and between 30 and 35 full time jobs in the Highland Area and between 40 and 48 full time jobs in Scotland throughout its operation. The PFOWF is also expected

to support the development of supply chains in local and regional areas and to encourage the recruitment and training of the local workforce, both during construction and operation. This would create direct and indirect employment, including the creation of highly skilled roles.

The socio-economic, tourism and recreation assessment concludes that the PFOWF is likely to significantly benefit local and regional areas, during both the construction and the operational and maintenance phases.

**The PFOWF will potentially deliver a wide range of benefits which together would help to deliver sustainable economic growth in Scotland. This includes employment opportunities and development of workforce skills and training, supporting the development of supply chains in local and regional areas. This is one of the key aims of Scottish Planning Policy which is cascaded down into strategic and local development plans.**

## 5.7 Stakeholder Engagement and Representations

HWL believes in an inclusive approach to developing offshore wind farm projects, ensuring that local companies and communities gain the advantage from the opportunities these projects bring.

HWL has conducted extensive stakeholder engagement during the project development process. This has included engagement with statutory consultees, community councils, organisations and members of the public, including those who live, work, or have an interest in areas affected by the proposals. A variety of communication methods have been used including, public consultation events (as detailed in the PAC report supporting the application for development consent), individual and community meetings and online information.

Key feedback from consultation has been taken on board in the design of the Offshore Development and specifically in the design of the Array Area and Export Cable Corridor. Refinements have been made to the Array Area, including increasing the set back of the area from the coast by an additional 1 km, reduction of the Array Area by 50% and reduction in the number of WTGs from 10 to seven. These refinements have resulted in reduced impacts to environmental receptors including landscape and visual impacts, seabed impacts and impacts on other sea users and this is described in more detail above.

Stakeholder engagement has also been key to the development of additional embedded mitigation such as increases in minimum blade tip clearance and selection of HDD methods at landfall, to ensure impacts from the Offshore Development are reduced wherever possible. HWL will continue to engage with stakeholders throughout the development process to ensure views are taken board in the development of management plans and monitoring proposals to further minimise impacts and increase benefits wherever possible.

HWL is committed to ensuring the PFOWF provides long term benefits to communities local to the Project. Foundation Scotland, working on behalf of HWL is carrying out consultation on the development of a Community Benefits Fund. The fund would likely become available on commissioning of PFOWF and will support local projects that are focused on climate initiatives. Online information sessions were held in July 2022 to provide an opportunity to learn more about the PFOWF and how Community Benefit Funds from similar projects have benefited local communities. A Community Liaison Officer will be appointed ahead of construction commencing. The CLO will be the interface between the Project and the local community. An important part of the CLO job role will be to report to the Project team any emerging concerns on the part of the local community and/or local stakeholders.

HWL is also supporting an Education and Training Fund, which will provide scholarships to select students from Thurso and Farr High Schools who are going on to higher education and training courses focused on

Science, Technology, Engineering, Maths and Renewable Energy. HWL is working with the high schools and Foundation Scotland to deliver this, and the first awards were made in June 2022.

## 6. Conclusion

In determining the application, the Scottish Ministers must have regard to the following:

- Marine Licence Applications - Section 15 and 27 of the Marine (Scotland) Act 2010
- Section 36 Application – Schedule 9 of the Electricity Act 1989

The policies outlined in this document indicate that there is a clear principle for the development of the Offshore Development at this location.

- There is an established history of an offshore wind farm being located at this site as demonstrated through the consents granted for the Dounreay Tri Project.
- The location and design of the Offshore Development has been carefully selected to minimise adverse effects wherever possible.
- Embedded mitigation, including the refinements made to the design of the Offshore Development have minimised potential impacts.
- Where there are predicted to be adverse effects, these are shown to be localised and are outweighed by the clear benefits of the Offshore Development in terms of mitigating climate change through avoided emissions, economic benefits through job creation and gross value added, developing the Scottish supply chain for floating offshore wind, ensuring security of supply for the domestic UK market and contributing to a sustainable energy mix within UK and Scotland.

Accordingly the Scottish Ministers are asked to grant approval for development consent for the Offshore Development.



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## 8. Appendix A – Comparison between Dounreay Tri and PFOWF

KEY CONSENT PARAMETERS	DOUNREY TRI CONSENT	PFOWF CONSENT APPLICATION
Total Capacity	12 MW (2 WTGs each with an installed capacity of up to 6 MW)	Anticipated up to 100 MW
Households powered in Scotland for a year	7,748	69,868*
Size of Array Area (Offshore Site)	25 km <sup>2</sup>	10 km <sup>2</sup>
Approximate distance from shore	6 km	7.5 km
Capacity of Single WTG	Up to 6 MW	No maximum capacity
Maximum No. of WTGs	2	7
Maximum Blade Tip Height	201 m from LAT	300 m from HAT
Maximum Hub Height	124 m from LAT	190 m from HAT
Maximum Rotor Diameter	154 m	260 m
Minimum blade clearance (air gap)	22 m from MHWS	35 m from sea level
Type of Platform	Single floating, semi-submersible, column-stabilised platform comprising buoyancy columns interconnected in a steel lattice truss framework	Semi-submersible or Tension-Leg-Platform (TLP) (Steel, Concrete or Hybrid)
Type of Anchor	Drag embedment	Gravity, Drag Embedment, Vertical Load, Suction Bucket, Drilled/Screw Piles, Impact/Driven Piles
Mooring System	Passive (catenary) mooring system	Catenary mooring, semi-taut mooring, taut spread mooring, tension leg
No. of mooring lines	Up to 8	Up to 9 mooring lines per WTG (up to 63 in total)
Maximum cumulative length of inter-array cables on seabed	Not stated	20 km (depending on distance between WTGs and the number of WTGs installed)
No. of export cables	1 (33 kV)	Up to 2 export cables with a maximum voltage of 110kV.
Maximum export cable length	13.8 km	12.5 km (25 km in total for two cables)

\*According to Scottish Government Renewable electricity output and energy conversion calculators (Scottish Government, 2020c)