

1 INTRODUCTION

1.1 Project Background

- 1.1 MeyGen Ltd (“MeyGen”) was awarded an Agreement for Lease (AfL) for the Inner Sound tidal development site on 21st October 2010 by The Crown Estate (TCE). The Inner Sound AfL is for the installation of 398MW tidal stream energy capacity by 2020. The Inner Sound is the body of water in the Pentland Firth between the north coast of the Scottish mainland and the island of Stroma.
- 1.2 The Inner Sound AfL was awarded to MeyGen as part of TCE Pentland Firth and Orkney Waters (PFOW) leasing round for wave and tidal energy projects (Figure 1.2). This was the first competitive seabed leasing round for wave and tidal projects in the UK and was designed to develop the industry on a commercial scale. Through the PFOW leasing round the TCE has agreements for 11 sites with a potential capacity of 1600MW.
- 1.3 The AfL does not give consent for MeyGen to develop the site, it provides MeyGen with the security required to develop the project whilst seeking the required consents for the installation and operation of the project from the regulatory authorities.

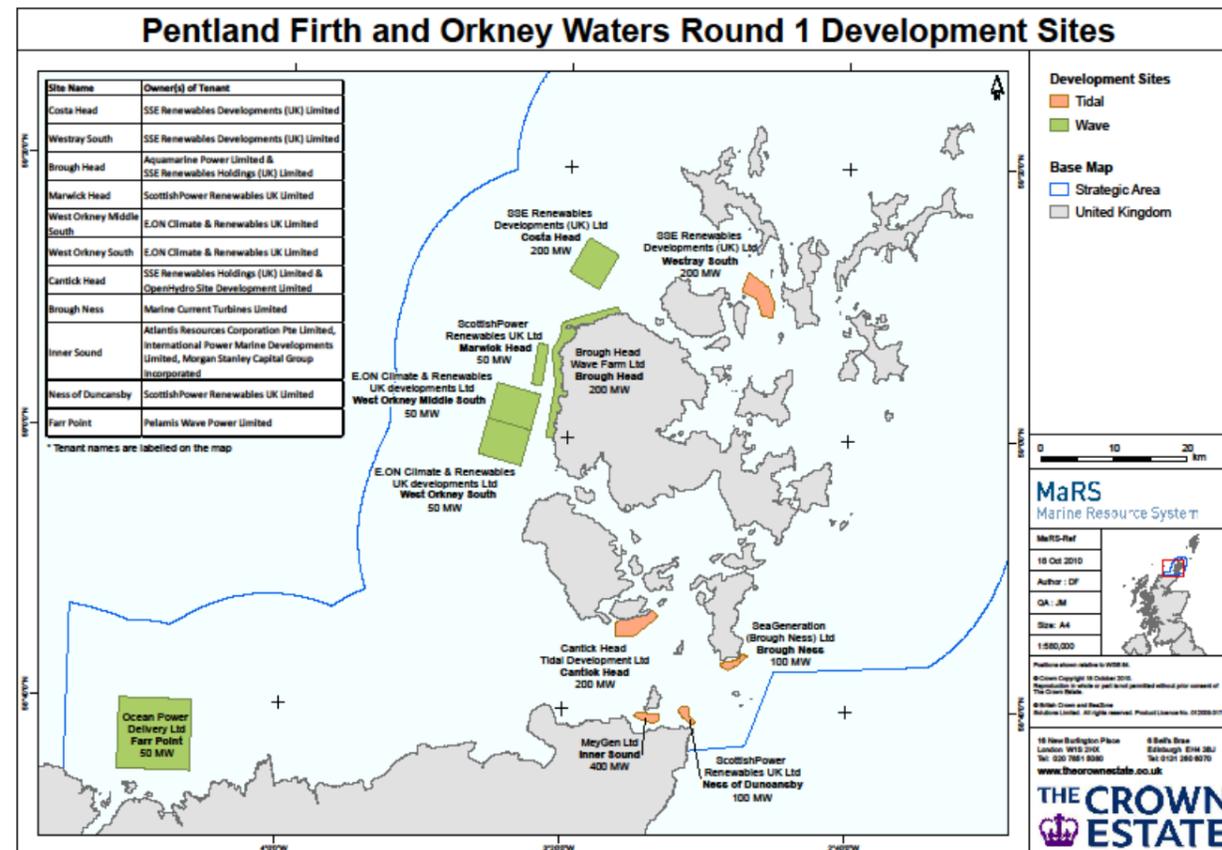


Figure 1.2: Pentland Firth and Orkney Waters Wave and Tidal Development Sites

1.2 MeyGen Ltd

- 1.4 MeyGen is a Scottish registered company created in 2010 for the purpose of developing the MeyGen project. MeyGen shareholders provide an excellent combination of development expertise, tidal technology manufacturer, secure financial backing and project operations experience.

- 1.5 MeyGen has an in-house development team with a broad range of expertise and experience in offshore energy project development and managing the successful installation of tidal energy devices.

1.3 Project Overview

- 1.6 MeyGen intends to consent the 398MW project in two separate phases. The MeyGen Tidal Energy Project Phase 1 (“the Project”) will have a maximum aggregated capacity of 86MW, with up to 86 tidal turbines and associated infrastructure. The artist’s impression provides an overview of the Project (Figure 1.1). Phase 1 is the subject of this Environmental Impact Assessment (EIA), Environmental Statement (ES) and accompanying consent application.
 - 1.7 The Project requires an area of approximately 1.1km², the remainder of the AfL area will be developed as Phase 2 (312MW). Phase 2 will be subject to a separate consent application and supporting ES.
 - 1.8 Figure 1.3 illustrates the AfL area, the Phase 1 turbine deployment area, potential offshore cable corridors and potential areas for onshore infrastructure.
 - 1.9 The Project will comprise a maximum of 86 fully submerged tidal turbines in the deep water channel in the Inner Sound. All turbines will be located in water depths of over 31m at Lowest Astronomical Tide (LAT). The turbines will comprise of a rotor and nacelle and will be supported by a Turbine Support Structure (TSS).
 - 1.10 Each turbine will have its own dedicated electricity export cable to shore. Cable landfalls will take the form of Horizontally Directionally Drilled (HDD) bores which will be drilled from onshore. Cables will be laid across the seabed from the turbines to the HDD bores.
 - 1.11 An onshore Power Conversion Centre (PCC) will comprise terminations of the export cables from the turbines, power conversion equipment, transformers and switchgear for grid connection housed in Power Conversion Unit Buildings (PCUBs), and a control centre.
 - 1.12 Electricity will be exported to the local electricity grid via buried onshore cables to grid connection point.
 - 1.13 The Project is split into three distinct generating stations, each with turbines, PCUB and export cable to the grid connection.
 - 1.14 It is anticipated that onshore construction and offshore installation will commence in 2014 and continue over a 3 year period. Following this the operational life of the Project will be 25 years. After this there will be a decommissioning programme in place to remove the turbines and the associated infrastructure. However at that time there may be an option to gain further consent to extend the Project.
- ### 1.4 Document Purpose
- 1.15 This document reports the findings of the Environmental Impact Assessment (EIA) conducted for Phase 1 in line with EIA Regulations (Section 3). The document will form part of the Project consent application to The Highland Council (onshore) and Marine Scotland (offshore).
 - 1.16 MeyGen has considered two sites for the combined HDD and PCC site, Ness of Quoys and Ness of Huna (Figure 1.3). At this stage in the development programme of the Project it is not possible to confirm, which of these two sites will be taken forward. As such, planning applications will be submitted for both of these sites, however only one will be developed for Phase 1 of the project.

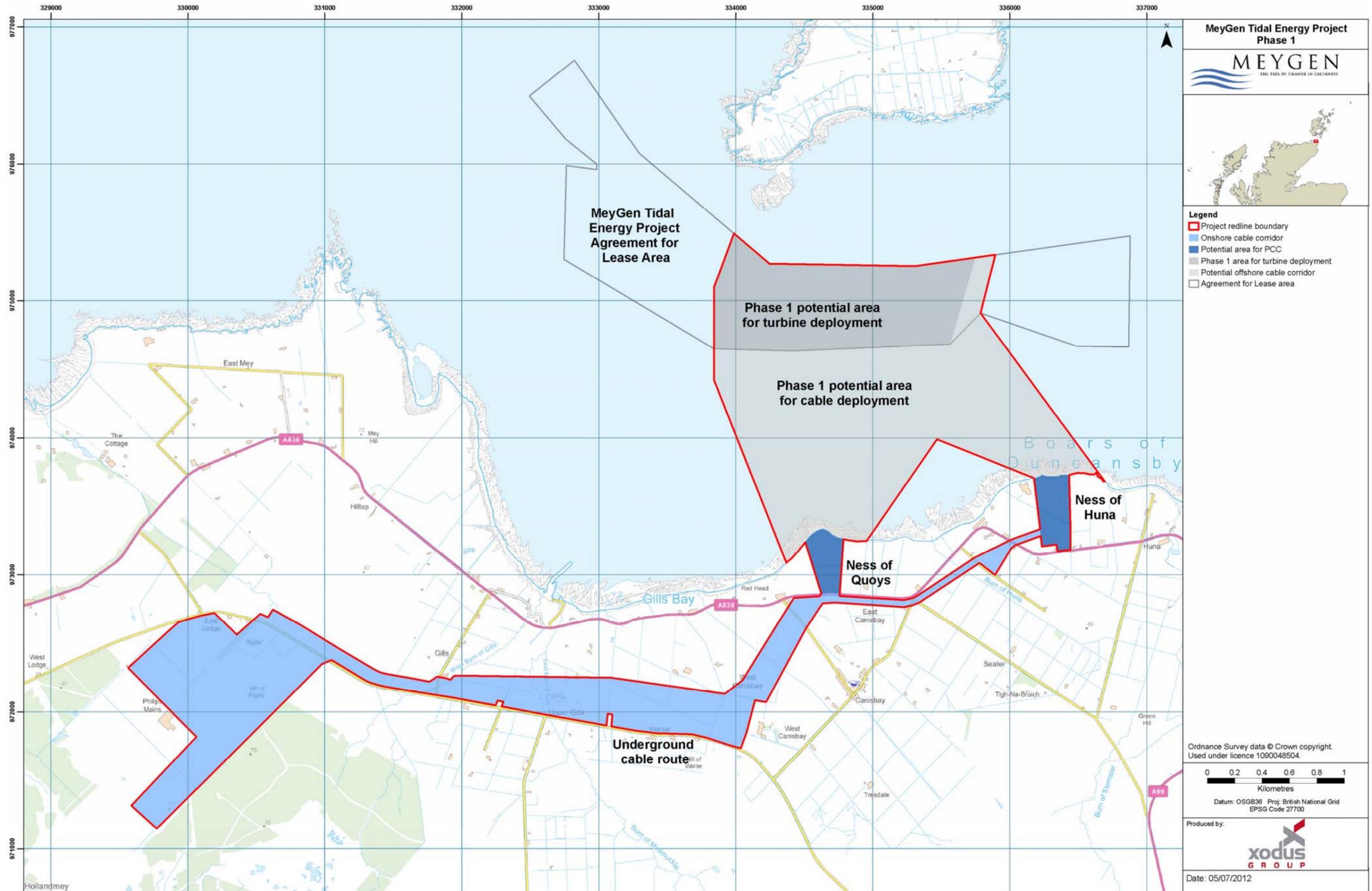


Figure 1.3: MeyGen Tidal Energy Project, Phase 1