

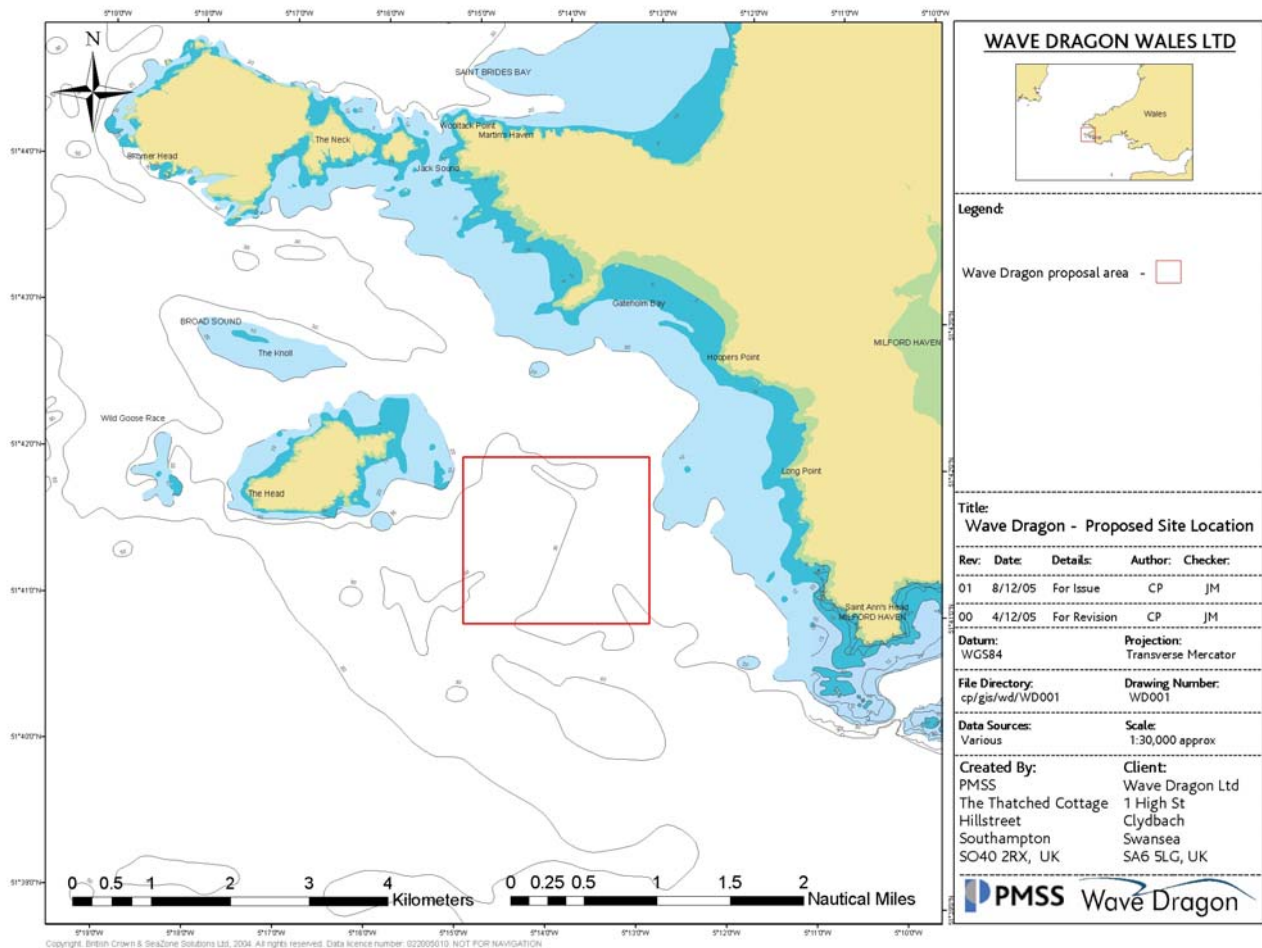
Wave Dragon Wave Energy Converter Project Briefing Note #2, March 2006

1. Introduction

Wave Dragon (Wales) Ltd, a leading developer in Wave Energy technology, are proposing the world's largest wave energy converter at a location off the Pembrokeshire Coast. The demonstration project is being supported by the Welsh European Funding Office under the Objective 1 initiative. The device is intended to be tested for 3-5 years, whereupon it will be removed from the site and the site decommissioned.

At the proposed location, the device can generate sufficient electricity each year to meet the annual demand of between 2,500 and 3,000 homes. Further out to sea, the device could eventually generate up to double this amount.

This Briefing Note #2 provides an introduction to the project, a project status and a description of ongoing work.

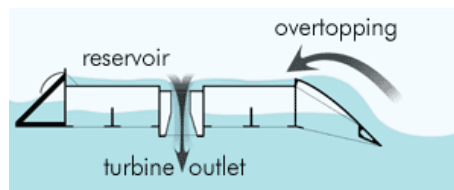


**Proposed Site Location – (please note this box is a survey area,
and the Wave Dragon device is 1/30th the size of the box)**

2. Wave Dragon Device

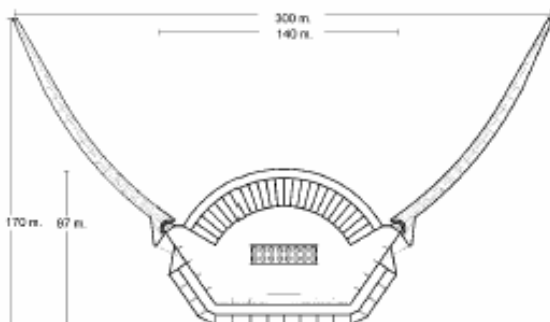
The Milford Haven Wave Dragon Pre-Commercial Demonstrator is a floating slack moored wave energy converter with a rated capacity of 4-7MW. The Wave Dragon Company have been working toward commercialisation of the device for 3 years, and have had a 1:4.5 scale prototype deployed in Denmark since 2003 where reliable power production has already been demonstrated.

The device allows ocean waves to overtop a ramp which elevates water to a reservoir above sea level. This creates an artificial 'head' of water which is subsequently released through a number of traditional hydro turbines and in this way transformed into electricity. The only moving parts in the device are the turbines.



Energy Conversion Schematic

The unit comprises a central platform, with a curved ramp and a large water reservoir equipped with an array of hydro turbines, and two lateral curved wave reflecting arms which concentrate the power of incoming waves. A 50mm grill over the turbine housing stops any large fish, birds or larger creatures, or debris, from entering the device.



General Arrangement Drawing and Artists Impression

Distance between tips of arms	300m
Arm length	145m
Length (tip of arm to rear of central housing)	170m
Maximum height above sea level	6 – 3m
Draught	11-14m

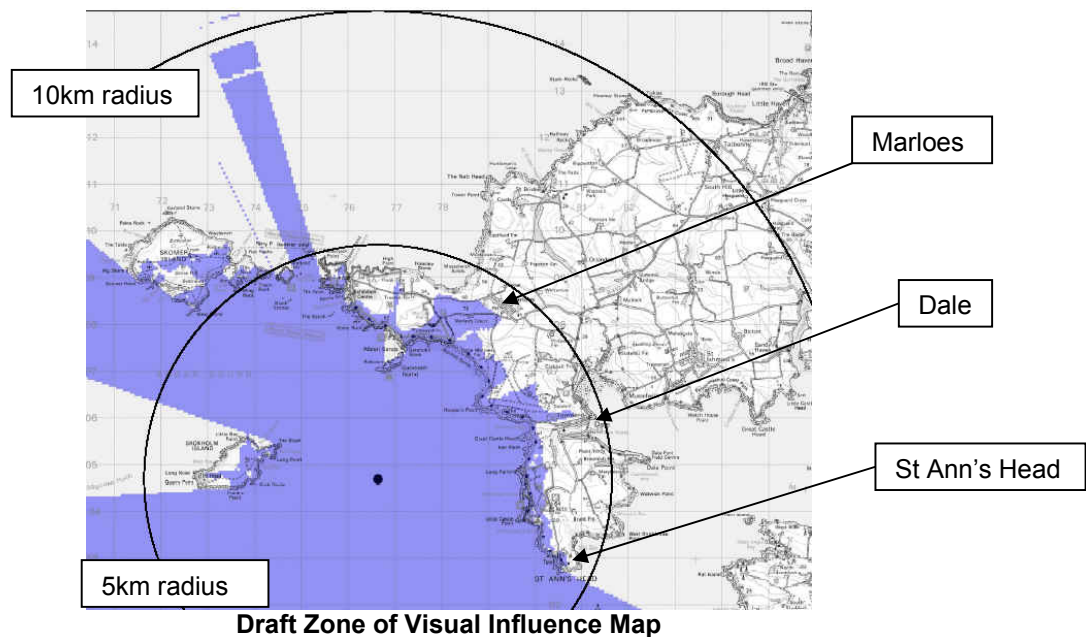
Preliminary Dimensions

The device is approximately the same area as Thorn Island at low tide, or is equivalent to 1/20th the area of Skokholm. However, when operating up to 75% of the device is under the water.

3. Progress to Date / Ongoing Work

The following work has been undertaken:

- Grid connection work has been initiated, and preliminary conclusions suggest that up to 3 candidate landfalls (Marloes Sands, Westdale Bay or Watwick Bay) may be viable, with a connection comprising buried cable from one of these locations to the connection point. The connection point has yet to be decided, but is likely to be near to the Total Refinery.
- Offshore geophysical survey, to create a “picture” of the seabed at the site. The final report, received in late February, concludes that much of the site is bare rock, with some infilled channels. Wave Dragon can now use this report to perform outline engineering design of the mooring system. A feature of this survey is the good working relationship with the local fisheries industry.
- Fisheries consultations have been initiated.
- Preliminary benthic ecology work has been undertaken following the geophysical survey, and more is planned for April 2006.
- A 2-week navigation survey using radar and AIS (automatic identification system) installed at St Ann’s Head has been initiated. Another 2-week survey campaign is scheduled for May 2006.
- Landscape work has been initiated – a draft Zone of Visual Influence map is shown below, the grey colour denoting the areas that one can in theory see the device from. The simulation is based on Ordnance Survey data, and does not take into account ground vegetation (hedges, etc).
- A Project Briefing and Public Exhibition are being held in the Marloes Community Hall in early March 2006. The objective of these events is for Wave Dragon to share their plans and to gain feedback from consultees, local organizations and the general public.
- A Project Web-Site (www.wavedragon.co.uk) is now established.
- Wave Dragon Wales Ltd expects shortly to sign a contract for moving their office to either Pembroke or Milford Haven.
- Wave Dragon has started investigations of using a floating barge as production platform for the casting of reinforced concrete. The barge is expected to be placed at the quay site in Pembroke Dock or Milford Haven. Other opportunities are considered, too



The following work is planned:

- Continuation of work already commissioned
- Archaeological appraisal of the site

- Navigation Risk Assessment, for commercial, fishing and leisure craft according to MCA Marine Guidance Note 275. This will include risk seminars with key consultees
- Coastal processes assessment, ie the effects of the device on waves, tides, currents and the consequential effects further a field
- Continued consultation and meetings

4. Outline Programme

Project Management Support Services (PMSS) have been commissioned by Wave Dragon to manage the Environmental Impact Assessment, and to consult with key local and national stakeholders.

It is proposed that the applications for consent will be submitted by mid 2006. Construction of the device is proposed to take place from autumn 2006, with installation from April 2007. This time schedule will be subject to change depending on consent and feasibility issues.

More information on the Wave Dragon project is available at www.wavedragon.co.uk, and information on the device in general may be obtained from www.wavedragon.net, on +45 35 36 02 19 or info@wavedragon.net.

For more information on the EIA process, please contact David Bean or Jamie May at PMSS on 01225 731 319, db@pmss.co.uk or jm@pmss.co.uk