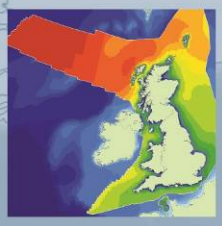
ABP

Construction and Operation Management Plan for the Port of Barry Solar Farm

Report R.2310

September 2014

Creating sustainable solutions for the marine environment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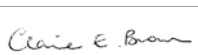
Project Director:	C E Brown		12.09.2014

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Construction and Operation Management Plan for the Port of Barry Solar Farm

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1. Introduction

This construction and operation management statement has been prepared to accompany the planning application for the Port of Barry Solar Farm. The proposed solar farm would comprise up to 1000 solar panels creating a maximum peak power capacity of up to 10MW. The proposed area for development is a brownfield site located on the port estate, the vast majority of which has been underutilised for a number of years. Further detail of the proposed work can be found in the design and access statement and additional documents accompanying this planning application.

This construction and operation management statement sets out the proposed access arrangements to the site, the construction programme, construction traffic, construction worker numbers and the construction hours. It also outlines the expected traffic and worker numbers during the operation life span of the proposed solar farm. It should also be noted that a Transport Statement accompanies this planning application and is referenced where necessary throughout this document.

2. Construction Traffic

2.1 Construction Programme

The construction of the solar farm is expected to last approximately 12 weeks including the following tasks:

- Commissioning;
- Site Setup and initial deliveries;
- Construction of the Perimeter Fence;
- Completion of the Earthworks;
- Construction of Mounting System;
- Mounting Modules;
- Deployment of Cabling;
- Construction of auxiliary infrastructure; and
- Site Completion.

Approximately four weeks may also be required for site preparation including levelling and vegetation clearance.

2.2 Hours of Construction

Construction of the solar farm is anticipated to be undertaken between the hours 0730 and 1730 Monday to Friday.

2.3 Access Routes

Vehicles will access the site via a single carriageway running along the northwest boundary of the proposed development site. Image 1 illustrates the main highway access points to the Port of Barry. As identified in the Transport Statement, two current access routes to the site area are proposed to be continued to be used, one along Atlantic Way and the other along Atlantic Crescent as shown in Figure 1. There is sufficient road infrastructure at the port and so existing roads will be utilised and no temporary access to the port required as a result of this proposed development.

As outlined above, the construction phase of the solar farm is expected to last approximately 12 weeks. It is expected that the materials associated with the development will be supplied from an existing stock within the U.K. The Port of Barry does not generally handle goods such as those required for the construction of this solar farm, instead it is a key chemical and metal port for the region. All materials are therefore likely to enter the site via road transport as shown in Figure 1.

Vehicles arriving will come off the M4 at Junction 33 on to the A4232 joining the A4050 at Culverhouse Cross to the Barry Docks Link Road where vehicles can enter the port estate via Wimbourne Road.

Construction and management staff are likely to arrive from local population centres such as Barry and Cardiff. During the construction period it is expected that between 10 and 30 staff will be on site depending on the phases of the construction schedule. It is expected that the majority of staff will travel to site in crew buses. At the peak of activity the maximum number of crew vehicles on site at any time could be 30.

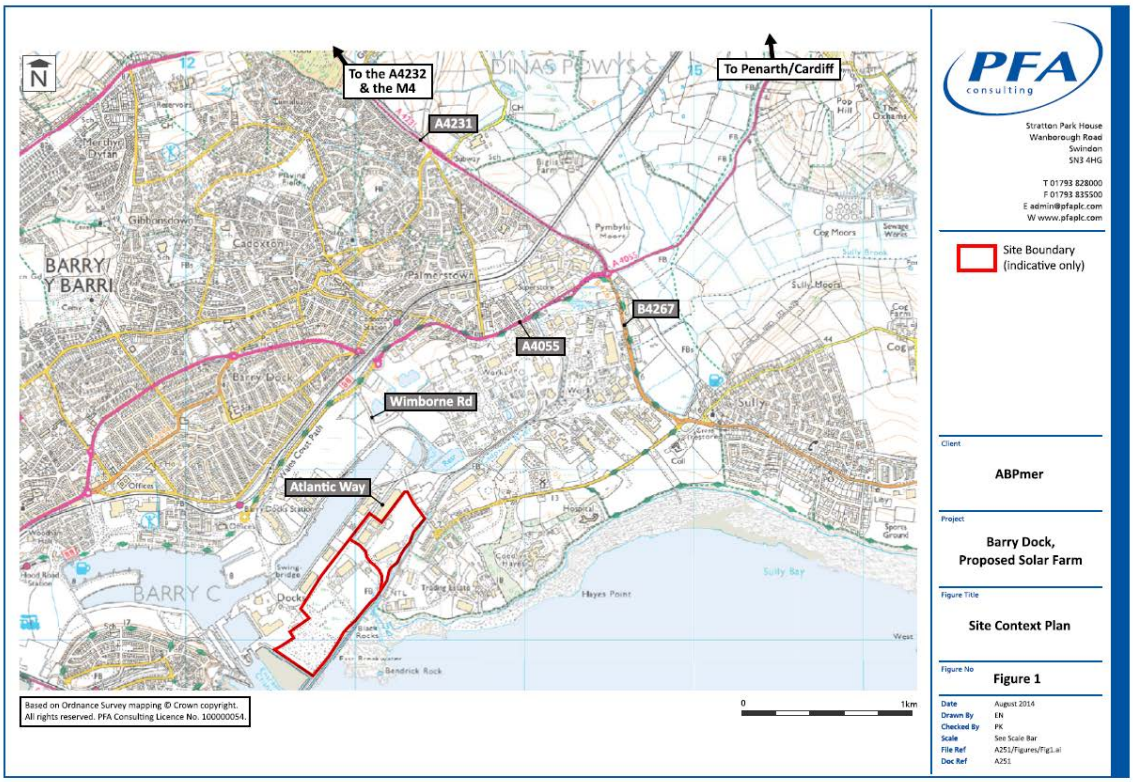

Image 1. Overview of access to the Port of Barry as detailed in the Transport Statement

2.4 Vehicle Types

The majority of HGVs arriving at the site are likely to be either be rigid lorries or articulated lorries. The construction of the auxiliary equipment such as switch gear containers may require the use of a mobile crane to be delivered on site.

2.5 Construction Vehicle Numbers

The number of vehicles accessing the site has been calculated in the Transport Statement which forms part of this application. The number of vehicle on site during the construction phase has been illustrated in Table 1. It has been estimated that over the 12 week construction period, 205 HGVs plus the staff vehicles are expected to access the site. This will result in a total of 410 HGV traffic movements (205 arrivals 205 departures). On the basis of working 5 days a week for the 12 week period this equates to 8 HGV movements per day, this can be compared to the current traffic movement to the Port of 200 movements per day. The construction of the solar farm will therefore not increase the traffic by a significant amount.

As reported in the Transport Statement the volume of traffic is likely to be constant throughout the construction period. The peak period of construction is estimated to be between weeks 3-10. During this period an estimated total of 150 HGVs are expected to require access to the site, resulting in 300 HGV movements.

During the construction period it is expected that between 10 and 30 staff members will be on site depending upon the phase of the construction programme. Whilst staff will be encouraged to car-share where possible, even as a worst case scenario using single occupancy for cars during the peak construction period, it would only result in 60 car movements to the site each day (30 arrivals, 30 departures). Due to the current operational nature of the port, 60 additional car movements are not considered a significant increase. The Port of Barry will endeavour to limit the number of car movements to the site by encouraging contractors to use crew buses and car sharing where practical.

Table 1. Summary of number of HGVs expected to access the site during the construction period (data taken from Transport Statement)

Vehicle Type	Number of Vehicles			Total number of HGVs entering site
	Weeks 1-2	Weeks 3-10	Weeks 11-12	
HGV	40	150	15	205

3. Operation Traffic

The vehicle operational and maintenance requirements of the solar park are expected to be very low, mainly only associated with the upkeep of the site. It has been predicted that during the operational lifespan of the project which is expected to be 25 years, approximately 10 to 20 vehicle trips a year are to be expected. As assessed in the Transport Statement, this low frequency is not predicted to have any impacts on the local highway network.

4. Conclusion

The construction of the solar farm would result in the temporary generation of construction and staff related traffic over an approximate 12 week construction period. No temporary access routes to the port will be required to facilitate the additional traffic to the site. The current access points to the site will continue to be used from Atlantic Way and Atlantic Crescent as indicated in Figure 1.

The construction of the solar farm will result in a total of 410 HGV traffic movements (205 arrivals, 205 departures) equating to an average of 8 HGV movements per day. On the basis of the traffic generated as a result of the construction of this solar farm as detailed above, it is not expected to cause any significant impact to the local highway network.

Traffic movements during the operational lifespan of the solar farm will be negligible as staff will only be accessing the site for maintenance and security purposes. The frequency of vehicle trips associated with the operation and maintenance of the site is expected to be about 10 to 20 times a year.

Figures

312500

313000

167000

N

PC

Warehouse

WB

ATLANTIC CRESCENT

Transit Shed

ATLANTIC WAY

QUEENS WAY

Tank

El

Depot

El

Track

0 0.05 0.1 0.2 km

Blue Line Boundary

Red Line Boundary

Indicative Location of Proposed Solar Panels

Indicative Fence Line

Site Access Points

Date	By	Size	Version
Sep 14	NMW	A3	1
Coordinate System	British National Grid		
Projection	Transverse Mercator		
Scale	1:2,500		
QA	FMM		
4233 Planning_2_Block_Plan.mxd			
Produced by ABPmer			

ABP mer
marine environmental research

Block Plan

Figure 1

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