

# Rhoscrowther | Wind Farm



## Environmental Statement Volume III: Technical Appendices

### Appendix 8.1 – ASIDHOL

October 2021

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## **Appendix 8.1**

### **ASIDOHL**

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## 1 Introduction

This Assessment of the Significance of the Impact of Development on Historic Landscape (ASIDOHL) has been undertaken for the proposed Rhoscrowther Wind Farm (the Development). It provides an assessment of potential effects on the *Milford Haven Waterway (Moryd Aberdaugleddau)* Landscape of Outstanding Historic Interest, referred to as the historic landscape area (HLA). This assessment is intended to be read in conjunction with Chapter 8 of the Environmental Statement (ES) for the Development.

The Development involves the construction of 5 turbines with site tracks, associated crane pads, and grid cables. The Development will also involve the establishment of an electrical substation with control building and temporary construction compound. Connection to the National Grid will be via a teed connection on site. The majority of land within the development site boundary and all proposed turbine locations are within the edge of the designated historic landscape.

The aim of the assessment is to provide more detailed information on the extent and nature of effects on the designated historic landscape which would be expected to result from construction and operation of the wind farm.

Planning Policy Wales (paragraph 6.5.25) states that:

*Information on the historic landscapes in the second part of the Register should be taken into account by local planning authorities in considering the implications of developments which are of such a scale that they would have a more than local impact on an area on the Register*

ASIDOHL2 is the recommended method which is set out in guidance<sup>1</sup> to establish the extent of any likely impact on landscapes within the register and responses to the scoping report for the Development confirmed that this was required to address the potential for effects on Milford Haven Waterway historic landscape. This assessment has been made according to the scope established scope set out in the scoping report.

The Milford Haven area has been subject to an Historic Landscape Assessment, undertaken by GAT (2001). As part of this, the area was divided into Historic Landscape Character Areas (HLCAs), the boundaries of which are not generally consistent with the designated boundary of the *Milford Haven Waterway* historic landscape. The Development site intersects one HLCA –Rhoscrowther (341).

There may be both direct and indirect effects on this HLCA and the assessment is made accordingly<sup>2</sup>. A further six HLCAs fall wholly or partly within 5 km radius of proposed turbines, the established scope and also within (or partly within) the designated boundary of Milford Haven Waterway historic landscape, where the potential for effects is limited to indirect visual effects.

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<sup>1</sup> CADW/CCW 2007 Guide to Good Practice on using The Register of Landscapes of Historic Interest in Wales in the Planning and Development Process Revised (2nd) Edition

<sup>2</sup> A further HLCA, Garn Fach, lies on the site boundary and the drawing of the two boundaries overlap slightly, although no development will occur within this HLCA and it has been taken as falling entirely outwith the site.

The location of the Development site boundary, the study area used for this assessment (discussed below) and the extent of HLCAs referenced herein are shown on Figure 8.1 in Volume II of the ES. HLCAs are consistently referenced in the text using their allotted HLCA reference number.

## 2 Contextual Information (Stage 1)

### *2.1 Proposed Development and Site*

The Development comprises five three-bladed wind turbines, each with a tip height of 100m, with associated crane pads and access tracks. In addition to this, there will be an electrical substation, control building and temporary storage compound. Underground cabling will link turbines to the electrical substation.

The Development site comprises agricultural land under mostly improved pasture with some arable. It encompasses land on either side of a small east-west aligned valley between approximately 15m to 60m AOD in which lies a small stream; the majority of the Development site and turbine locations on the south-facing slope. Fields are generally quite large and broadly regular in shape, although a number of smaller enclosures are evident within the lower parts of the site, clustered around a former farmstead. Field boundaries are mostly hedges on banks and generally are well-maintained. There are small areas of poorly maintained woodland and scrub almost exclusively in the valley bottom. The development site is bound by unclassified roads along most of its north and west and part of its south boundaries, with the remainder of the southern boundary following the course of the stream. Further farmland of similar character extends to the east. The development site can be accessed at several points, although the access to the Development is from the north; the same road which serves the oil refinery.

### *2.2 Legislation and Policy*

#### *2.2.1 National Policy*

Policy guidance on how cultural heritage should be treated in Wales is given in Chapter 6 of Planning Policy Wales (PPW) (Edition 5 - November 2012). This states the Welsh Assembly's objectives to '*...preserve or enhance the historic environment...*', to '*...protect archaeological remains, which are a finite and non-renewable resource...*' and to ensure the protection of historic buildings and conservation areas.

Further advice on planning and the historic environment is given in Welsh Office (W.O.) Circular 61/96: Planning and the Historic Environment: Historic Buildings and Conservation Areas (and amendment Circular 1/98).

In light of broader changes to the way that the historic environment is treated at a legislative level in the UK, the Welsh Assembly Government through Cadw, published, in March 2011, Conservation Principles for the Sustainable Management of the Historic Environment in Wales. This document, based on English Heritage's Conservation Principles (2008), sets out Cadw's approach to the protection and management of the historic environment in Wales and will '*guide Cadw in applying its principles to its role in the development process, and in managing the sites in its care*'. The document is also

intended to inform and guide the approach of other organisations such as local authorities, individuals, property owners, developers and their advisors in their decision making in respect of the historic environment.

Conservation Principles is not intended to be a formal planning policy document but rather, as the title suggests, is a statement of principles against which decisions will be made. As such, it does not replace Planning Policy Wales or the WO Circulars, though it is intended that it will help to guide the development of historic environment policy in the future.

TAN8 identifies the key issues to be assessed and taken into account with respect to wind farm proposals. It sets out strategic areas for onshore wind farms and the methodology adopted for identifying them. The strategic locations avoid a number of constraints that include sites of cultural heritage interest such as registered parks and gardens and Heritage Coastlines.

Development Plan policy relevant to the scope of this assessment is provided in the Local Development Plan (LDP, adopted February 2013). Policy GN38: *Protection and Enhancement of the Historic Environment*, in the LDP states that:

*Development that affects sites and landscapes of architectural and/or historical merit or archaeological importance, or their setting, will only be permitted where it can be demonstrated that it would protect or enhance their character and integrity.*

## 2.2.2 Legislation

Heritage assets that are deemed to be of particular importance are given legal protection through legislation. The Ancient Monuments and Archaeological Areas Act 1979 provides for a schedule of monuments which are protected.

Similarly, Sections 66 and 72 of the Planning (Listed Buildings and Conservation Areas) Act 1990 provides for the definition and protection of listed buildings and their settings and for conservation areas. The treatment of the historic environment in the development process is dealt with in accordance with local and regional guidance, as well as relevant legislation.

Under the relevant legislation, specific consent is normally required for works which directly affect scheduled monuments or listed buildings.

## 2.3 Confidence Level

The information used for this assessment has been appropriate and adequate for the requirements of the study undertaken. The primary source of data on the HLCAs was obtained from the character descriptions undertaken by Dyfed Archaeological Trust (DAT), with further information on designated features (such as scheduled monuments and listed buildings) obtained from Cadw, the Welsh Historic Monuments Agency. As can be seen on Figure 8.1, the designated boundary of the historic landscape does not accord with the mapped extents of the HLCAs; where this is pertinent to parts of the assessment, the boundary which has been used is made clear. Further information on non-designated features for land within the vicinity of the Development site was also obtained from the Historic

Environment Record (HER), maintained by DAT and sources held at the National Monuments Record (NMR).

### *2.4 Assessment Team*

This study was undertaken by Robert Johns BA(Hons) AIFA. Robert is a qualified archaeologist with extensive experience in assessing wind farms and other developments in Wales and elsewhere.

## 3 Methodology

### *3.1 General*

The ASIDOHL methodology adopted in this study has followed that set out in the Guide to Good Practice on using The Register of Landscapes of Historic Interest in Wales in the Planning and Development Process Revised (2<sup>nd</sup>) Edition 2007 (hereafter referred to as the ASIDOHL2 guidance). This involves a staged process aimed at arriving at a quantified assessment of the extent to which the Development may affect the historic character area on the register. The following stages of assessment are involved:

- Assessment of direct, physical impacts of development;
- Assessment of indirect impacts of development;
- Evaluation of relative importance;
- Assessment of overall significance of impact.

Within the assessment, a scoring system is adopted in which each value is given a score, and therefore each impact is quantified in terms of the importance of the element or feature affected and the magnitude of the predicted impact.

The scoring system used is prescribed within the ASIDOHL2 guidance.

### *3.2 Assessment of Direct, Physical Impacts of Development (Stage 2)*

This stage of the ASIDOHL process quantifies the direct and physical impact on the HLCAs.

The assessment is quantified and expressed in three forms:

#### *3.2.1 Absolute Terms*

This is a simple expression of the proportion of the HLCA which will be lost to development. For the purpose of this assessment, the area to be lost is taken as the total footprint of the Development. The development footprint includes turbine foundations, crane pads, cables, site roads, sub-station and construction compound.

### 3.2.2 Relative Terms

This is an expression of the extent of the identified resource which would be lost to the Development. In order to quantify this loss, the importance of each element of the resource is identified and set out according to the following scale. The score for each category is included in brackets:

Category A Sites and Monuments of National Importance (4);

Category B Sites and Monuments of Regional Importance (3);

Category C Sites/Features of Local Importance (2);

Category D Minor and Damaged Sites/Features (1);

Category U Sites/Features Needing Further Investigation (1).

The degree to which each feature will be affected is then assessed according to the following scale:

- Very Severe (6);
- Severe (5);
- Considerable (4);
- Moderate (3);
- Slight (2);
- Very Slight (1).

### 3.2.3 Landscape Terms

This involves the assessment of the effect of the loss of the identified features on the HLCA as a whole. Key to this is an appreciation that the character of an area is derived from a sum of its part, which will be of greater value than the different parts considered individually.

This assessment comprises two parts. In the first part the value or importance of each feature or characteristic is assessed in terms of the contribution it makes to the area as a whole. This is done in accordance with the following scale:

- Very High (6);
- High (5)
- Considerable (4);
- Medium (3);
- Low (2);
- Very Low (1).

Following the extent, the extent to which these features would be affected by the development is also assessed on the following scale:

- Lost (6);
- Substantially Reduced (5);
- Considerably Reduced (4);
- Moderately Reduced (3);
- Slightly Reduced (2);
- Very Slightly Reduced (1).

This stage of the assessment process (Stage 2) has only been undertaken for 341 Rhoscrowther HLCA as this is the only HLCA which intersects with the Development and is therefore the only one which will be subject to direct physical impact.

### *3.3 Assessment of Indirect Impacts of Development (Stage 3)*

The ASIDOHL guidance requires an assessment of indirect impacts of development, including physical and visual impacts.

#### **3.3.1 Indirect, physical impacts**

Indirect, physical impacts may involve:

- i) An increased risk of exposure, erosion, disturbance, decay, dereliction or any other detrimental physical change to elements, during or consequent to development.
- ii) Related to (i), the likelihood of increased management needs to maintain elements as, for example, through altered habitats, water levels, increased erosion, new access provision etc., during or consequent to development.
- iii) The severance, fragmentation, dislocation or alteration of the functional connections between related elements, for example, a field system becomes 'severed' from its parent farmstead by an intervening development.
- iv) The frustration or cessation of historic land use practices, for example, it becomes more difficult or impossible to manage an area in a traditional manner as a result of development.
- v) The frustration of access leading to decreased opportunities for education, understanding or enjoying the amenity of elements, during or consequent to development.

As for the assessment of direct physical impacts, the method requires a description of the importance of each element or feature involved, followed by an assessment of the magnitude of any predicted effect on these. A scoring system is adopted in which each value is given a score, and therefore each impact is quantified in terms of the importance of the element or feature affected and the magnitude

of the predicted impact. These scores are aggregated to provide an overall value of the predicted indirect physical impact.

The importance of features which may be affected, and the extent of any effect are scored in accordance with the same scales as for direct, physical impacts as set out in Section 3.2.2. For each feature, the scores are combined and an average for the area calculated.

### 3.3.2 Indirect Visual Impacts

The ASIDOHL guidance states that indirect visual effects can occur as a result of:

- i) Visual impacts on elements from which a development can be seen (considered up to its maximum height). The impact might be on 'views to' or 'views from' these elements and it should be assessed with reference to key historic viewpoints and essential settings. These should be considered in relation to a site's original character and function, as well as to the vantage points and visual experience of a visitor today.
- ii) Impact on the visual connections between related elements, by occlusion, obstruction, etc., for example, an essential line of sight between historically linked defensive sites will become blocked or impaired by an intervening development.
- iii) Conversely, the creation of inappropriate visual connections between elements not intended to be inter-visible originally, by the removal of intervening structures, barriers, shelters, screening or ground.
- iv) Visual impact of the development itself considering:
  - Its form — the scale, number, density, massing, distribution etc. of its constituent features;
  - Its appearance — the size, shape, colour, fabric etc. of its constituent features, in relation to the existing historic character of the area.

The importance of features which may be affected, and the extent of any effect are scored in accordance with the same scales as for direct, physical impacts as set out in Section 3.2.2-3. For each feature, the scores are combined and an average for the area calculated.

The scores are then added to the scores for the indirect physical impacts to provide an overall magnitude of indirect impacts on the following scale.

- Very Severe (21-24)
- Severe (17-20)
- Considerable (13-16)
- Moderate (9-12)
- Slight (5-8)
- Very Slight (1-4)

The potential for indirect visual effects to occur, and their likely magnitude depends on a number of factors including the nature of the historic elements affected, the scale and nature of Development and the form of the landscape in which they sit. Distance is also a factor, as with increasing distance between the Development and an historic element the magnitude of any change will tend to decline. This is because the Development would appear as a less prominent feature, there will be a greater degree of visual separation and also a greater likelihood that views will be obstructed by intervening topography.

This ASIDOHL has considered potential effects on all of the defined HLCAs within the designated historic landscape which fall within the scope of the assessment as set out in the scoping report and in line with consultation responses received, which are detailed in the Historic Environment chapter of the Environmental Statement. These are:

- 306 Pembroke Dock;
- 313 Pembroke Power Station;
- 314 Texaco<sup>3</sup> Oil Refinery;
- 338 Carew Milton and Nash;
- 340 Hundleton and Maiden Wells;
- 341 Rhoscrowther; and
- 342 Angle.

For each HLCA which may be indirectly affected, the importance of relevant features or elements was identified, followed by an assessment of the magnitude of the predicted impact. The scores are aggregated to provide an overall predicted magnitude of effect.

For this study, the assessment of the magnitude of visual impacts was based on the criteria outlined above, and determined by a process involving:

- A review of the ZTV map (Figure 8.1 of Volume II of the ES) to identify the extent of the visibility of the wind farm in relation to HLCAs and key features (such as scheduled monuments);
- A review of wireframe illustrations and photomontages from key locations;
- Site visits to review the current condition of the landscape areas, the settings of key features (such as scheduled monuments) and consider the likely magnitude of any changes.

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<sup>3</sup> Now Valero Oil Refinery, although the HLCA name is used as given.

The potential for significant effects on the following HLCAs north of Milford Haven Waterway have been scoped out of the assessment, in line with the scoping report. Nevertheless, further information on these HLCAs is given as part of the assessment, which seeks to confirm the validity of the scope:

- 307 Milford Haven;
- 308 Neyland;
- 310 Gulf Oil Refinery;
- 311 Esso Oil Refinery;
- 322 Scoveston and Burton;
- 344 Liddeston; and
- 348 Waterston – Honeyborough.

While the northern boundary of HLCA 343 Angle Airfield and the southern boundary to Milford Haven Waterway HLA do not match precisely, the HLCA is to all intents and purposes outside designated area and is not considered in this assessment. Similarly, a small part of HLCA 352 West Angle to Freshwater West Coastal Strip falls within 5km of proposed turbines, although where it does so it is outside the extent of the designated HLA; these coincide over 6km west of the Development. That part of the HLA within the extended study area is almost entirely outside the ZTV.

### *3.4 Evaluation of Relative Importance (Stage 4)*

The fourth stage of the ASIDOHL process evaluates the relative importance of the HLCAs (or parts thereof) directly and/or indirectly affected by development. This is done in relation to:

the whole of the HLCA;

the whole of the Historic Landscape Area on the Register (i.e. Milford Haven Waterway historic landscape); and

- an evaluation of the relative importance of the HLCA concerned in the national context.

These considerations correspond to items a), b) and c) in the ASIDOHL guidance. Item a) stipulates will only be relevant to HLCA341 Rhoscrowther, as this is the only HLCA where part will be directly affected.

The results of this stage are recorded in tabular form, with assessment based on the following criteria:

- Rarity - in terms of period or date, and as a component of the landscape. This should be expressed in relation to what survives today, since elements of a once common landscape may now be rare;

- Representativeness - this should be considered because a landscape that is common can still be of national importance if, in the light of other criteria, it contains a particularly representative range of elements;
- Documentation - the survival of the documentation that increases our understanding of the landscape will raise its importance;
- Group value - this relates to diversity (or similarity) of elements including the structural and functional coherence;
- Survival - relates to the degree of survival of elements in the landscape;
- Condition - relates to the condition of elements in the landscape;
- Coherence - relates to how well the historic meaning and significance of the landscape is articulated by the historic themes (that is the historical processes and patterns that have created the individual elements within it);
- Integrity - the importance of a landscape may be enhanced by its integrity that relates to the survival of its original character or form;
- Potential - relates to the potential within the landscape for future historic landscape analysis;
- Amenity - relates to the potential value of elements to be developed as a public educational and recreational amenity;
- Associations - a landscape might have important historic associations with particular figures or institutions.

These criteria are graded according to the following scale, with scores allocated to each criteria:

- Very High/Very Good (5);
- High/Good (4);
- Moderate/Medium (3);
- Low (2);
- Poor/None (1).

The scores are then aggregated and then converted to a % value to quantify the overall importance of each of the HLCAs according to the following scale:

- Very High (80-100)
- High (60-79)
- Considerable (40-59)

- Moderate (20-39)
- Low (5-19)
- Very Low (1-4)

### ***3.5 Assessment of Overall Significance of Impact (Stage 5)***

The final stage as set out in the ASIDOHL guidance requires a combination of the results from previous stages to produce an overall assessment of the significance of effects on the historic landscape area. This is based on a consideration of:

- Value of Character Areas (Stage 4);
- Impact of Development (Stages 2 and 3);
- Reduction of Value of the Historic Landscape Area.

In each the value is scored according to the following scale:

- Very High (9 or 10);
- High (7 or 8);
- Medium (4, 5 and 6);
- Low (2 or 3);
- Very Low (1).

The assessment scores from stages 2 to 4 are used only as a guide to professional judgement at this stage. The results are aggregated and presented in tabular form to provide an overall assessment according to the following scale:

- Very Severe (26-30)
- Severe (21-25)
- Fairly Severe (16-20)
- Moderate (10-15)
- Slight (4-9)
- Very Slight (0-3)

## **4 Assessment of Direct Physical Impacts of Development (Stage 2)**

The nature of a wind farm development is that the submitted application boundary may encompass a large tract of land, although the proportion of land within that boundary which will be disturbed is very small. The footprint of the Development will comprise turbine foundations, crane pads, access tracks

(including turning heads), the temporary site compound and substation<sup>4</sup> and cover a total of ~3.06%<sup>5</sup> of land within the Development site<sup>6</sup>. Direct physical impacts could also occur as a result of habitat mitigation/ enhancement measures entailed in the scheme, where these involve direct impacts such as changes to the hydrological regime (blocking drains). Historic environment features have been taken into account in the design of such measures, such that these could be considered to have an effect on the landscape, but will cause no direct impact to known features.

#### 4.1 HLCA 341 Rhoscrowther

This extensive HLCA, covering some 2,079.3ha, encompasses the Development site. **The Development site covers approximately 3.86% of the HLCA<sup>[sc1]</sup>.**

Rhoscrowther is described as '*...a large historic landscape area that stretches along the southern banks of the Milford Haven waterway from Hundleton in the east to the far west of the Castlemartin Peninsula. Although it includes the mud, marsh and rocks along the foreshore of the waterway, the main bulk of this area comprises an agricultural landscape lying across gently undulating hills that rise to 60m to 70m above sea level.*'

##### 4.1.1 Absolute Impact

Direct physical impacts of the Development within the HLCA will include the construction of five turbines, associated crane pads, access tracks, temporary site compound, electrical substation and control building. **The footprint of the development within the HLCA (at ~2<sup>[sc2]</sup>.46ha), represents only 0.12% of land in the HLCA as a whole (2079.3ha).** The absolute impact of the Development on the HLCA will therefore be **Very Slight (0-4%)**.

##### 4.1.2 Relative Impact

The HLCA encompasses, or intersects with 10 scheduled monuments (as shown on Figure 8.1, Volume II of the ES), although six of these lie outside the extent of the designated historic landscape and one outside the scope of the assessment (outside the 5km extended study area). These are mostly prehistoric monuments, including a number of prehistoric round barrows (burial mounds) (PE059; PE060; PE064), Devil's Quoit Burial Chamber (PE020) and two Iron Age coastal prehistoric enclosures (PE262; PE400) and West Pickard Camp Promontory Fort (PE167). They also include Eastington Manor House (PE263) to the north-west of the site and an area of early medieval settlement west of Angle (PE554, outside the 5km extended study area), as well as a later anti-aircraft battery (PE494). The surviving scheduled monuments are by definition of national importance - **Category A**.

There are 22 listed buildings within the HLCA, including the Grade I listed Tower at Eastington Manor House (6594, also a scheduled monument, see above) and Grade I listed Church of St Decumanus

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<sup>4</sup> Area of disturbance caused by cable trenches not included in calculation: these will commonly be adjacent to, or underneath, the access track, although even if there are not they would be likely to amount to less than 0.1 ha of additional disturbance and would not alter the conclusions of the assessment.

<sup>5</sup> Total ~2.46 ha of ~80.3 ha within the site.

<sup>6</sup> Assuming standard construction methodologies as outlined in the ES.

(6591) at Rhoscrowther, and the Grade II\* listed former Church of St Mary at Pwllcrochan (6587). Other buildings are listed Grade II and are mostly farm buildings and dwellings, including a number in Rhoscrowther and Pwllcrochan. Four of the Grade II listed buildings lie outside the extent of the designated historic landscape. The higher graded listed buildings within the HLCA are of national importance, where as the Grade II listed buildings, while nationally designated, can be regarded as being of local importance – **Category C**.

None of these designated features is within the development site boundary and therefore no direct physical impacts will occur on any of the scheduled monuments as a result of the Development.

Non-designated cultural heritage features within the HLCA and the Development site are recorded on the HER and discussed in the HLCA description. There are a number of entries recorded on Dyfed HER within the development site boundary. The subsurface remains of a ditched enclosure of possible Iron Age date were recorded in 2015 during archaeological evaluation in connection with the previous wind farm application on the site (HER 110477). Two flint-working sites (HER 3235; 3236) were recorded on a map of 1963 and have been allotted a Neolithic/Mesolithic date in the HER, although no further details are recorded. The sites of three burnt mounds (HER 3231; 3233; 3234) are also recorded within and adjacent to the development site. These were first recorded in a journal in 1911 and are also recorded on an OS list of 1965. The possible sites of a standing stone (HER 4508) and medieval cross (HER 3078) are also recorded from place-name evidence.

A number of features were also recorded within the Development site during the desk-based assessment undertaken as part of the ES. These were all noted on historic maps and include former farmsteads, springs and wells. The only one which has a landscape presence is the former Chevaralton Farmstead.

There are numerous archaeological sites recorded within the HLCA, including other prehistoric sites in addition to those described above, as well as medieval and post medieval settlements and farmsteads. The HLCA description states that *“There are numerous archaeological sites within this area, but they are not prominent landscape features and therefore do not form major components of the historic landscape.”* Other features of historic environment interest include the built remains of farmsteads, old cottages, limekilns and quarries, as well as 20<sup>th</sup> century defensive structures. Although not specifically identified as assets in the HLCA description, other historic landscape elements such as field/hedge banks, drystone walling (this element not common) and green lanes can also be considered to be of historic environment interest.

Some of the prehistoric sites within the Development site, such as the possible Iron Age enclosure and the possible standing stone identified by a field name, may be of regional importance - **Category B**. Other features within the site are likely to be of local importance - **Category C**. However, other than the enclosure, there is little firm evidence of any surviving archaeological remains within the development site and therefore those which are likely to have been excavated or lost, such as the finds of worked flints, can be categorised as **Category D** Minor and Damaged Sites/Features. The only feature affected by the Development is the possible Iron Age enclosure but this survives entirely below ground and therefore makes no contribution to historic landscape character. No other effects on these

known or suspected historic environment features have been identified as a result of the Development.

Direct physical impacts of construction will be limited to the loss of small sections of hedge banks, totalling not more than 150m in length<sup>[SC3]</sup>. Relative impacts on constituent features of the HLCA will therefore be **Very Slight (0-4%)**.

#### 4.1.3 Landscape Impact

The Development site encompasses a relatively small area within the HLCA and land within it is generally well described by the stated characterisation, excepting obvious references to features outside the development site such as the foreshore. The extrinsic importance of visible landscape features which, within the Development site, lend this HLCA its character - the post-medieval settlement and enclosure of the landscape - is judged to be **Considerable-4**, as these are archetypal of this element of the character of the HLCA, although they are both of relatively low status and are common and extensive features.

The principal effect of the Development on this landscape will be the introduction of the turbines, which will be incongruous to the existing character, although will not directly cause the loss of any elements of the landscape. The effect on elements of the historic landscape will therefore be restricted to the loss of small sections of enclosure banks within the development site. This will not alter the course of such features or the general organisation pattern of land within the Development site, and will not cause them to be less legible in the landscape. It is therefore concluded that the overall landscape value of the HLCA will be **Slightly Reduced**.

**Table 4.1 Stage 2: Assessment of Direct Physical Impacts on HLCA 341 Rhoscrowther**

Absolute Impacts (Loss of Area)		Magnitude and Score		
2.46ha = 0.12 <sup>[SC4]</sup> % area		Very Slight -1		
Relative and Landscape Impacts (Loss of Known Elements or Characteristics) and Scores				
Element	Category	Magnitude	Landscape Value	Landscape Value Effect
Post medieval field enclosures	C - 2	Very Slight-1	Considerable - 4	Slightly Reduced - 2
<b>Overall Score 2+1+4+2 = 9 = Moderate</b>				

## 5 Assessment of Indirect Impacts of Development (Stage 3)

### 5.1 Indirect, physical impacts

There will be no indirect, physical impacts on the historic landscape and so this stage is omitted. In each case, the score for indirect, physical impacts taken forward to the overall assessment will be zero.

### 5.2 Indirect Visual Impacts

The potential for effects on HLCA is discussed in numbered order and not distance from the Development, or the magnitude of the effect.

The assessment concentrates on those parts of the HLCA which fall within the extended study area of 5km from turbines, established as part of the scoping exercise; however, the assessment attempts to take into account effects of the whole HLCA, so as not to skew the results of the assessment.

#### 5.2.1 HLCA 306 Pembroke Dock

HLCA 306 comprises the town of Pembroke Dock and is entirely an urban HLCA. The HLCA also incorporates Pembroke Dock Conservation Area, and while these areas are not coterminous, they describe a similar heritage resource. The HLCA extends some distance to the east, to include the Cleddau Bridge and Waterloo area of Pembroke Dock. The majority of the HLCA and conservation area falls outside the established scope of the assessment, as well as outside the ZTV (discussed further below), although the key elements of the HLCA and conservation area are discussed to give adequate context.

Pembroke Dock is a 'Garrison' town established in the early 19<sup>th</sup> century following the Admiralty's decision to relocate their dockyards from Milford Haven to a new site at Paterchurch in 1812. By the mid 19<sup>th</sup> century the grid pattern of the town had been established. Pembroke Dock derives its heritage value from its historical and architectural interest as a Royal Ship building location, a former departure point for steam packets to Ireland (now a Ferry departure point), a garrison army base and as an RAF base for flying boat operations during the Second World War. The Royal Dockyard boasted 13 building slips, which made it the nation's principal building yard for over a century, during which nearly 250 warships and other vessels were launched. Many Georgian and Victorian buildings survive, including the scheduled (PE379) and Grade II\* listed (6448; 14371; 14372) Victorian *Defensible Barracks* and dock buildings, as well as churches and chapels, shop fronts, public houses, Victorian school buildings and other civic or keystone buildings, most of which fall outside the scope of this assessment, which form part of the special interest of the town.

The draft *Pembroke Dock Conservation Area Character Appraisal* (Pembrokeshire County Council, September 2012) lists elements that contribute to the special interest and character of the conservation area. These are:

- A long history of ship building from the 19<sup>th</sup> century, and to the establishment of the ferry port.

- Natural characteristics of the coastal landscape and underlying landform that have influenced the plan form of the town as a whole.
- Architecturally distinctive landmark buildings.
- Significant views into, out of and within the Conservation Area.
- A diverse mix of building style and type, with the majority comprising 19<sup>th</sup> century buildings.
- Listed buildings and unusual buildings worth of note.

The Conservation Area Character Appraisal also defines four character zones, although the mapped extent of these has not been established by this study. These are:

- Retail areas;
- the Royal Dockyard;
- residential areas; and
- Llanion Hill.

The coastal area of Pennar Park, which extends to the south-west of the conservation area, could be added to the above list for the HLCA (Pennar itself would fit under 'residential areas').

The Royal Dockyard is the only character area which falls squarely within the scope of the assessment, as well as the ZTV, although parts of the town which fall within the scope of the assessment also have residential elements. The bulk of the HLCA and conservation area falls outside the ZTV, including clusters of listed buildings at the margins of the dockyard around The Terrace and The Port Hotel, as well as those in the town, such as the Church Street/Laws Street/Meyrick Street area.

There are two elevated areas within the HLCA. These are Barrack Hill, the site of the *Defensible Barracks* to the south of the dockyard, and Llanion Hill, which sits on a steep south-west facing slope to the north-east of the HLCA (and thus outside the scope of the assessment). Llanion Hill provides views along the waterway to the west, over it to the north and southwards over the town. The Conservation Area Character Appraisal goes on to identify other key views and vistas within the conservation area, which include views within the town provided by the wide streets laid out in a grid pattern by the Admiralty, as well as views across the waterway from Prospect Place, Meyrick Street and Church Street: These lie outside the scope of the assessment although illustrate the importance of views over the town and waterway; however, these views are to the north, away from the Development.

Views from Llanion Hill include those along the waterway and many of the former military buildings in this area are orientated so as to take in these views. Pembroke Power Station and the Valero Oil Refinery are also clear in these views. The introduction of turbines into these views, which will sit behind the power station and adjacent to the oil refinery in the view, will have little bearing on the special interest of the HLCA or the conservation area.

The Royal Dockyard sits mainly along a flat valley adjacent to the water side encompasses a number of designated features, which include:

- The scheduled *South West Martello Tower, Fort Road (W End)* (PE332), also listed Grade II\* (14353);
- the *Defensible Barracks*, scheduled monument (PE379) which includes three constituent Grade II\* listed buildings (6448; 14371; 14372);
- *The Graving Dock including bollards and capstans*, listed Grade II\* (14393);
- *The Old Storehouse (formerly listed as Main Stores of R Hayes Investments Ltd), The Dockyard*, listed Grade II\* (6441);
- *Former Guard House, The Dockyard*, listed Grade II\* (6436, on the edge of the ZTV); and
- a number of Grade II listed buildings.

A larger number of listed buildings including seven listed at Grade II\* and a further seven at Grade II, lie outside the ZTV to the south-east in the vicinity of The Terrace. In general, the buildings within the Dockyard walls have been retained, although the slips, graving docks and quays were gradually dismantled from the 1950's onwards. Buildings are constructed of high quality dressed limestone with sandstone detailing, Victorian iron framed roof trusses to support roof timbers and slate roof coverings. An exception is the Paterchurch Tower, medieval in origin, which is a scheduled monument (PE380) and Grade I listed building (14341), and lies outside the ZTV. The Royal Dockyard, in common with the HLCA as a whole, is of heritage value primarily from its historical and architectural interest. Views from within the Royal Dockyard make a positive contribution to these interests, while there are few views from individual buildings which are likely to impact on their heritage value. Views along Milford Haven Waterway to the west are also seen in the context of modern development, including large industrial installations on either side of the waterway.

The *Defensible Barracks* was built by the MOD between 1841 and 1846 (the key stone over entrance reads 1844). It is sited at the top of the steep and wooded Garrison Hill, overlooking the town from the south, and was constructed to overlook the Royal Dockyard in order to guard and defend it from land attack. A large area of land to the west of the Defensible Barracks was part of the military land ownership and was kept free of development in order that troops could be mobilised, although it is now utilised as a golf course with a series of public footpaths around the periphery. The elevated situation of the barracks, and consequent views, contribute to its heritage value. The focus of these views is over the Dockyard, although given its situation views along the waterway to the west are clearly also relevant.

Two Martello towers were built at the Royal Dockyard in the mid 19<sup>th</sup> century when the then Prime Minister, Lord Palmerston ordered a building programme to strengthen Britain's coastal defences, because of the continued perceived threat of French invasion after the Napoleonic Wars. That to the north of the Dockyard falls outside the ZTV. The *South West Martello Tower, Fort Road (W End)* (PE332; 14353) enjoys open views along the waterway to the west, which form an important part of its heritage value.

Photomontage Viewpoint 10 of the LVA (Figure 5.52) shows the impact on the view from Military Road, beneath Barrack Hill.

While ship building activity in the 19<sup>th</sup> and early 20<sup>th</sup> centuries saw enormous growth and prosperity, the fortunes of the area went into decline after the Second World War when the Army, Navy and RAF left the area. Much of the focus of the conservation area designation and the appraisal concentrates in the historic building stock and the degradation which has been caused to this by loss of traditional architectural detailing and the inappropriate use of modern materials. This has been fairly effectively halted by a successful Townscape Heritage Initiative and key among the aims of conservation area proposals is the control of new development and the continued restoration and repair of historic buildings.

The assessment of indirect visual impacts set out in Table 5.1 considers the Royal Dockyard an asset of national importance (Category A) for its historic interest and the presence of a number of highly designated assets. Other areas within the HLCA are defined as being of regional and local importance. As shown on the ZTV, and discussed above, turbines are likely to be visible from much of the Dockyard at distances of nearly 4.5km, while much of the HLCA and many of the heritage designations it encompasses fall outside the ZTV. Where turbines will be visible from other areas, such as Llanion Hill, this will be over a distance of over 5.5km. Turbines will be seen, where views are available, in the context of several modern industrial installations, adjacent to and in scale with Valero Oil Refinery and beyond Pembroke Power Station. No visual impact is predicted on historic environment features in retail areas.

**Table 5.1 – Stage 3: Assessment of indirect visual impacts on HLCA 306 Pembroke Dock**

Impact	Category and Score (X)	and Magnitude and Score (Y)	Score (X+Y)
Visual impact of turbines in views from the Royal Dockyard, including the <i>South West Martello Tower</i>	A-4	Slight-2	6
Visual impact of turbines in views from the <i>Defensible Garrison</i>	A-4	Slight-2	6
Visual impact of turbines in views from Llanion Hill	B-3	Slight-2	4
Visual impact of turbines in views from residential areas	C-2	Very Slight-1	3
Development Form	3.25	Slight-2	4
Development Appearance	3.25	Slight-2	4
Average indirect visual impact score:			<b>4.5</b>

The following presents the calculations of the overall magnitude of indirect impacts:

- Indirect, physical impact score = 0;

- Indirect visual impact score = 4.5;
- Combined score = 4.5;
- Combined score multiplied by 28 then divided by 20 = 6.3

In accordance with the assessment scale set out in the guidance, the **Magnitude of Indirect Impacts** is therefore Slight.

### 5.2.2 HLCA 307 Milford Haven

The HLCA is entirely urban and comprises the eponymous town. This has a late 18<sup>th</sup> century and 19<sup>th</sup> century core, based on a grid pattern, located between Hubberston Pill and Castle Pill and inland for no more than 500m. However, the 20<sup>th</sup> century town also includes the older settlements of Priory (Pill Priory), Hubberston and Steynton. It contains a large number of highly graded assets.

While the boundary of the HLCA is within 3km of the Development at its nearest point, visual impacts will be seen in the context of and behind Pembroke Power Station. It is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

### 5.2.3 HLCA 308 Neyland

Neyland is an urban historic landscape area, where the oldest parts are Great Honeyborough and settlements along the bank of the Milford Haven waterway at Hazelbeach, Llanstadwell, Neyland and Burton Ferry. It comprises a number of listed buildings and two conservation areas, although archaeology is not a strong component of this area<sup>7</sup>.

While the HLCA lies some 4.2km from the Development at its nearest point, the town of Neyland is some 5.5km away, on the opposing side of the waterway from Pembroke Dock. Visual impacts would be seen in the context of the intervening urban and industrial development and it is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

### 5.2.4 HLCA 310 Gulf Oil Refinery

Gulf Oil Refinery was constructed from 1966. Apart from a very narrow strip of land comprising sea cliffs and cliff top, this historic landscape character area is entirely taken up by an oil refinery and a small industrial estate. Prior to construction of the oil refinery this was an agricultural landscape, almost entirely lying within Llanstadwell parish.

The only component of the landscape not altered as part of the construction of the refinery is a small area of sea cliff and cliff top between the refinery and the sea. There are no designated historic environment features within the HLCA and the description records no features of archaeological or historic environment interest.

As there are no visible historic assets within this area it is not possible to complete the assessment of indirect visual impacts on individual assets. In addition to this, the nature of the historic landform has

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<sup>7</sup> <http://www.dyfedarchaeology.org.uk/HLC/milford/area/308.htm>

been almost entirely lost. Therefore, whilst the Development will be visible from this area at a distance of nearly 2.8km, it is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

### 5.2.5 HLCA 311 Esso Oil Refinery

The HLCA encompasses the site of the former Esso Oil Refinery, which was instigated in 1957, although is now closed and has been dismantled.

The only notable heritage feature within the HLCA is South Hook Fort, which was built between 1859 and 1865 as part of a defensive scheme for the Milford Haven Waterway and is a scheduled monument (PE337), and incorporates the Grade II\* listed *defensible barracks at South Hook Fort* (82593). This lies outside the established scope of the assessment.

As there are no visible historic assets within this area it is not possible to complete the assessment of indirect visual impacts on individual assets. It is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

### 5.2.6 HLCA 313 Pembroke Power Station

This HLCA is relatively small, being defined entirely by Pembroke Power Station, on the southern side of Milford Haven Waterway. The original power station was commissioned in the early 1960s and decommissioned in the 1990s. The HLCA description was written at the time the original power station was being demolished (c. 2001), although the new Pembroke B Power Station, a natural gas-fired power station, was officially opened on 19 September 2012. This is the largest gas-fired power station in Europe.

The HLCA lies within the eastern half of Pwllcrochan parish, whose church in the medieval period was a possession of the Benedictine Monkton Priory at Pembroke. The HLCA description records that land within the HLCA may have been part of the greater Manor of Castlemartin, a demesne manor of the Lordship of Pembroke, and the most important holding appurtenant to Pembroke Castle.

Prior to the construction of the power station much of the area was occupied by an inlet and was intertidal, comprising mudflats and saltmarsh, with the remainder being farmland. The HLCA description records that the inlet was stable through the historic period and this must presumably have contained remains of archaeological interest. However, a large area was terraced into the farmland and the resulting upcast used to build up land within the inlet and provide a level platform for the Power Station. There appears to be little undisturbed land within the HLCA and there are no visible heritage features.

The character of the power station contrasts sharply with surrounding farmland, although this is one of a number of large industrial installations along Milford Haven Waterway, with the HLCA of Texaco Oil Refinery some 600m to the west. As there are no visible historic assets within this area it is not possible to complete the assessment of indirect visual impacts on individual assets. Therefore, whilst the ZTV indicates that both turbines will be theoretically visible from the majority of the HLCA at a minimum distance of some 1.1km, it is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

### 5.2.7 HLCA 314 Texaco Oil Refinery

Almost the whole HLCA is occupied by an oil refinery and oil pumping station. A jetty and the pumping station was built by BP in 1960, with the oil refinery built by Texaco in 1963, opening in 1964. It is now known as Valero Oil Refinery.

Prior to the construction of the oil industry installations the landscape consisted of farms and regularly shaped fields within Rhoscrowther and Pwllcrochan parishes. Land within the oil refinery can be assumed to have been fairly extensively disturbed, although despite the construction of the oil pumping station, refinery and associated jetties, the coastal fringe of the HLCA has considerable archaeological potential. Fort Popton, which is both a scheduled monument (PE446) and a Grade II\* listed building (17168) occupies Popton Point on the north-east of Angle Bay, while West Popton Camp, a promontory fort which is also scheduled (PE264), lies on the north side of the HLCA, overlooking Milford Haven.

Fort Popton was built 1859-64 to act in conjunction with Fort Hubberston on the opposite shore of the Milford Haven waterway. It comprised a casemated battery of 31 guns and included a defended barracks with accommodation for 10 officers and 240 men. The fort is largely outside the ZTV, and while turbines may be visible from the more elevated parts of the fort, these will be seen through oil refinery structures. The Pembrokeshire Coast path follows the headland and allows close views of the fort, although the turbines will not be visible in these. In long range views from the opposite side of the waterway, in which the fort can be seen as a distant feature, turbines will be visible, although beyond and smaller in scale than oil refinery structures.

West Popton Camp is an Iron Age promontory fort, which survives as earthwork remains. It is almost entirely outside the ZTV and no views of turbines are expected from it. The Pembrokeshire Coast path in this location is also outside the ZTV and the monument cannot be appreciated from the opposite side of the waterway and therefore no effect is predicted.

**Table 5.2 – Stage 3: Assessment of indirect visual impacts on HLCA 314 Texaco Oil Refinery**

<b>Impact</b>	<b>Category Score (X)</b>	<b>and Magnitude and Score (Y)</b>	<b>Score (X+Y)</b>
Visual impact of turbines in views of and from Fort Popton (PE446; 17168)	A-4	Slight-2	6
Visual impact of turbines in views of and from West Popton Camp (PE264)	A-4	Very Slight-1	5
Development Form	4	Very slight-1	5
Development Appearance	4	Very slight-1	5
Average indirect visual impact score:			<b>5.25</b>

The following presents the calculations of the overall magnitude of indirect impacts:

- Indirect, physical impact score = 0;
- Indirect visual impact score = 5.25;
- Combined score = 5.25;
- Combined score multiplied by 28 then divided by 20 = 7.35

In accordance with the assessment scale set out in the guidance, the **Magnitude of Indirect Impacts** is therefore Slight.

### 5.2.8 HLCA 322 Scoveston and Burton

This is a very extensive HLCA, which extends from the town of Milford Haven in the west, along the northern shore of the waterway past Neyland and up to and past the village of Llangwm. This is a remarkably coherent landscape consisting of large farms, dispersed houses and large and regular fields. Despite containing a large number of archaeological sites, these do not greatly characterise the landscape<sup>8</sup>. The majority of the HLCA also falls outside the designated historic landscape area and does not characterise this well.

While the boundary of the HLCA is within 3km of the Development at its nearest point, the vast majority of the HLCA falls more than 5km from the Development and outside the ZTV, as well as outside the scope of the assessment. Visual impacts would be seen in the context of the intervening urban and industrial development and it is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

### 5.2.9 HLCA 338 Carew Milton and Nash

The HLCA describes a large tract of land covering nearly 2000ha, which incorporates ecclesiastical parishes of Pembroke St Mary, Coshaston, Monkton, Nash and Upton, all of which lay within the medieval Lordship of Pembroke, and Carew parish, of the medieval Barony of Carew. The vast majority of the HLCA lies between 5km and 14km from the Development. The only part of the HLCA within the scope of the assessment is a long narrow area of land covering some 50ha on the north side of Pembroke River, between this and the residential area of Pennar on the south side of Pembroke Dock.

The HLCA is described as an agricultural landscape of large, dispersed farms and large fairly regular fields, although also includes mud flats, marsh and the rocky foreshore along the Milford Haven waterway. The HLCA description does not specifically mention that part along the Pembroke River, which falls within the scope of this assessment. This is an area of open fields and the intertidal area beyond, within which there are no designated heritage features and the only visible historic asset is

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<sup>8</sup> <http://www.dyfedarchaeology.org.uk/HLC/milford/area/322.htm>

the modern metalled Ferry Road, a path which leads down to the river and presumably was formerly the route to a ferry crossing.

There are a number of designated heritage features in that part of the HLCA outside the scope of the assessment, although the undulating nature of land within the HLCA is such that the majority, including most of these heritage designations, fall outwith the ZTV. These include the historic parks and gardens of Cosheston Hall and Upton Castle, as well as their constituent listed buildings. Carew and Carew Chilton Conservation Areas, and the scheduled monument of Carew Castle (PE001) lie at the edge of the ZTV, such that at this distance of c. 13km views of turbines are likely to be hard to achieve. The nearest scheduled monument to the Development, Monkton Priory Dovecot (PE415), which is also a Grade II\* listed building (6327), lies within the ZTV, although at 6.1km it is expected that views of turbines will be effectively screened by intervening hedgerows and built development.

The lack of visible historic assets within this area is such that it is not possible to complete the assessment of indirect visual impacts on individual assets. Therefore, whilst turbines will be visible from that part of the HLCA within the extended study area, it is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

#### 5.2.10 HLCA 340 Hundleton and Maiden Wells

This HLCA lies on the southern bank of the Pembroke River and is characterised by undulating land that rises steadily from the shore southwards to over 80m above sea level. It is essentially an agricultural area, divided into small regular fields generally by embanked hedges.

The HLCA is within the parishes of Hundleton, which lies at the edge of the HLA of Milford Haven Waterway and Monkton, some distance to the east and outside the scope of this assessment. The village of Maiden Wells lies to the south of the HLCA, outside the HLA and the defined scope of the assessment.

There are two Grade II listed buildings within the HLCA which coincide with the HLA. One of these, *Warehouse on bank of Pembroke River Estuary, Bentlass Hill, Bentlass* (6562) is within the 5km extended study area. The other is a limekiln (6570) on a slope overlooking Quoits Water Pill. Nondesignated features of interest which survive as visible features within the scope of the assessment include a number of 19<sup>th</sup> century buildings in Bentlass, as well as the route of a road off Bentlass Hill which is recorded as being of medieval origin. The only scheduled monument within the HLCA is a prehistoric enclosure known as Bowett Wood Camp (PE057), which overlooks Quoits Water some 5.5km from turbines, outside the HLA and also the ZTV.

The settlement at Bentlass was an early landing stage associated with the ferry crossing to Pennar. Features of interest identified in Bentlass are of architectural and historical interest, and given their historical context, as well as the situation of the small settlement, it is views across the Pembroke River which contribute most to the heritage importance of the features, as well as close views within the settlement. Bentlass lies within the ZTV, although it is quite enclosed, such that identified outward views are from the intertidal area. The proposed turbines will be seen from this area, although in the same view as and in scale with Valero Oil Refinery and Pembroke Power Station.

The historic core of Hundleton village consists of a group of 19<sup>th</sup> century stone built, cement rendered, and slate-roofed two storey vernacular houses and single storey cottages which are of some architectural and historical interest, although none of these is listed. The village has been considerably expanded by mid- and late-20<sup>th</sup> century residential development and associated buildings. No apparent outward views have been identified which may be affected by the Development.

The assessment of indirect visual impacts set out in Table 5.5 summarises an assessment on the effects on the heritage features at Bentlass (as a group) and Hundleton Village, which are both of local importance (Category C).

**Table 5.3 – Stage 3: Assessment of indirect visual impacts on HLCA 340 Hundleton and Maiden Wells**

Impact	Category and Score (X)	Magnitude and Score (Y)	Score (X+Y)
Visual impact of turbines in views of and from historic environment features in Bentlass	C-2	Slight-2	4
Visual impact of turbines in views from historic environment features in Hundleton	C-2	Very Slight-1	3
Development Form	2	Slight-2	4
Development Appearance	2	Moderate-3	5
Average indirect visual impact score:			<b>4.9</b>

The following presents the calculations of the overall magnitude of indirect impacts:

- Indirect, physical impact score = 0;
- Indirect visual impact score = 4.9;
- Combined score = 4.9;
- Combined score multiplied by 28 then divided by 20 = 3.5.

In accordance with the assessment scale set out in the guidance, the **Magnitude of Indirect Impacts** is therefore **Slight**.

### 5.2.11 HLCA 341 Rhoscrowther

The character of this HLCA and the constituent heritage features which contribute to its historic environment interest is described in Section 3. It is predominantly an agricultural landscape, although also includes parts of the foreshore of Milton Haven Waterway.

The HLCA encompasses, or intersects with 10 scheduled monuments, although six of these lie outside the extent of the designated historic landscape and one outside the established scope of the

assessment. These are mostly prehistoric monuments, including a number of prehistoric round barrows (burial mounds) (PE059; PE060; PE064), *Devil's Quoit Burial Chamber* (PE020) and two Iron Age coastal prehistoric enclosures (PE262; PE400) and *West Pickard Camp Promontory Fort* (PE167). They also include *Eastington Manor House* (PE263) to the north-west of the site and an area of early medieval settlement west of Angle (PE554, outside the 5km extended study area), as well as a later anti-aircraft battery (PE494). The surviving scheduled monuments are by definition of national importance - **Category A**. Those within the HLA and the scope of this assessment are assessed below. An assessment of the potential effect of the Development on those outside the HLA is made in Chapter 8 of the Environmental Statement.

There are 22 listed buildings within the HLCA, including the Grade I listed *Tower at Eastington Manor House* (6594, also a scheduled monument, see above) and Grade I listed *Church of St Decumanus* (6591) at Rhoscrowther, and the Grade II\* listed *former Church of St Mary at Pwllcrochan* (6587). Other buildings are listed Grade II and are mostly farm buildings and dwellings, including a number in Rhoscrowther and Pwllcrochan. Four of the Grade II listed buildings lie outside the extent of the designated historic landscape and are therefore not assessed below. Generally the higher graded listed buildings within the HLCA are of national importance – **Category A**, whereas the Grade II listed buildings, while nationally designated, are regarded as being of local importance – **Category C**. Where a designated feature is both scheduled and listed, it is assessed on its highest designation.

Non-designated cultural heritage features within the HLCA and the Development site are recorded on the HER and discussed in the HLCA description. These are summarized in Section 3.1.2, above. There are a number of entries recorded on Dyfed HER within the development site boundary, although none of these have a distinct landscape presence and most are known from documentary sources only.

A number of features were also recorded within the Development site during the desk-based assessment undertaken as part of the ES. The only one which has a landscape presence is the former Chevaralton Farmstead, which is regarded as being a minor site in terms of its heritage value – **Category D**.

There are numerous archaeological sites recorded within the HLCA outside the Development site, including other prehistoric sites in addition to those designated features described above, as well as medieval and post medieval settlements. The HLCA description states that “*There are numerous archaeological sites within this area, but they are not prominent landscape features and therefore do not form major components of the historic landscape.*” Other features of historic environment interest include the built remains of farmsteads, old cottages, limekilns and quarries, as well as 20<sup>th</sup> century defensive structures. Although not specifically identified as assets in the HLCA description, other historic landscape elements such as field/hedge banks, drystone walling (this element not common) and green lanes can also be considered to be of historic environment interest. As the more important features within the HLCA and within villages such as Rhoscrowther are scored separately, these features are regarded to be of local importance – **Category C**. Individual elements of the organization of the historic landscape, such as hedgerows, could be regarded as being minor sites in isolation, although as a whole fit best with **Category C**.

The assessment of indirect visual impacts set out in Table 5.4 summarises an assessment on the effects on the settings of **Category A, B and C** assets within the HLCA. The ZTV indicates that both turbines will be theoretically visible from all of the assets within this area, though in places this will be limited to blade tips.

**Table 5.4 – Stage 3: Assessment of indirect visual impacts on HLCA 341 Rhoscrowther**

Impact	Category and Score (X)	Magnitude and Score (Y)	Score (X+Y)
Visual impact of turbines in views of and from PE263 <i>Eastington Manor House</i>	A-4	Considerable-4	8
Visual impact of turbines in views of and from PE400 <i>Enclosure &amp; Earthworks at Lewiston Hall</i>	A-4	Very Slight-1	5
Visual impact of turbines in views of and from PE064 <i>Wallaston Round Barrows</i>	A-4	Slight-2	6
Visual impact of turbines in views of and from PE264 <i>West Popton Camp</i>	A-4	Very Slight-1	5
Visual impact of turbines in views of and from PE262 <i>West Pennar Camp</i>	A-4	Very Slight-1	5
Visual impact of turbines in views from PE020 <i>Devil's Quoit Burial Chamber</i>	A-4	Slight-2	6
Visual impact of turbines in views from PE059 <i>Corston Beacon Round Barrow</i>	A-4	Moderate-3	7
Visual impact of turbines in views from PE060 <i>Dry Burrows Round Barrows</i>	A-4	Slight-2	6
Visual impact of turbines in views from Grade II listed buildings at Old Henllan, Pwllcrochan	C-2	Slight-2	4
Visual impact of turbines in views of and from <i>Church Hall, Rhoscrowther School</i> (LB 6593)	C-2	Slight-2	4
Visual impact of turbines in views of and from <i>Shaft and base of churchyard cross to N of parish church</i> (LB 6592)	B-3	Slight-2	5
Visual impact of turbines in views of and from Grade II listed buildings at Hilton Farmhouse, Rhoscrowther	C-2	Moderate-3	5
Visual impact of turbines in views of and from <i>Church of St. Decumanus, Rhoscrowther</i> (LB 6591)	A-4	Considerable-4	8

Visual impact of turbines in views of and from <i>Former Church of Saint Mary, Pwllcrochan</i> (LB 6587)	A-4	Very Slight-1	5
Visual impact of turbines in views of and from <i>Former National School Building, Pwllcrochan</i> (LB 6588)	C-2	Slight-2	4
Visual impact of turbines in views of and from <i>Eastington Farmhouse including range of outbuildings to SE, Rhoscrowther</i> (LB 6595)	C-2	Slight-2	4
Visual impact on Grade II listed buildings more than 2km from the Development site	C-2	Very Slight-1	3
Visual impact of turbines in views of and from nondesignated historic environment features within the Development site	D-1	Severe-5	6
Visual impact of turbines on standing non-designated discrete heritage assets outside the Development site	C-2	Slight-2	4
Visual impact on historic landscape features not covered by the above assets	C-2	Very Slight-1	3
Visual impact of turbines on the visual links between standing burial mounds in the HLCA	A-4	Very Slight-1	5
Visual impact of turbines on the visual links between Iron Age forts and defended enclosures within the HLCA	A-4	Very Slight -1	5
Development Form	3.1	Moderate-3	6.1
Development Appearance	3.1	Moderate-3	6.1
Average indirect visual impact score:			<b>5.22</b>

The following presents the calculations of the overall magnitude of indirect impacts:

- Indirect, physical impact score = 0;
- Indirect visual impact score = 5.22;
- Combined score = 5.22;
- Combined score multiplied by 28 then divided by 20 = 7.31.

In accordance with the assessment scale set out in the guidance, the **Magnitude of Indirect Impacts** is therefore **Slight**.

### 5.2.12 HLCA 342 Angle

Angle HLCA<sup>9</sup> lies at the western tip of the south Pembrokeshire peninsula and comprises Angle village and its associated field system, which lies along the floor and sides of an open valley, whose western end terminates at the exposed beach and sea cliffs of West Angle Bay and at its eastern end runs into

<sup>9</sup> <http://www.dyfedarchaeology.org.uk/HLC/milford/area/342.htm>

the marsh and mud flats of the sheltered Angle Bay. Angle is also covered by an extensive conservation area, which covers a large part of the HLCA as well as coinciding with HLCA 352 West Angle to Freshwater West Coastal Strip, where it extends into West Angle Bay.

Angle Conservation Area Proposals, published by Pembrokeshire Coast National Park Authority<sup>10</sup> represents Supplementary Planning Guidance to the Local Development Plan for the Pembrokeshire Coast National Park.

Angle is a planned village probably post-dating the Norman Conquest, presumably closely contemporary with the establishment of the manor in c.1100 AD. The main street appears to have been a primary feature, flanked by burgage plots and outlying stripfields. This planned row is still represented by straight co-axial field boundaries north of the main street.

The importance of the medieval settlement is attested by surviving medieval buildings, including the Church of St Mary, listed Grade II (5921); St Anthony's Chapel, listed Grade I as *Sailors' Chapel* (17149); Angle Tower or Pele Tower, scheduled (PE068) and listed Grade I (5923), the dovecote, also scheduled (PE067) and listed Grade II\* (5922); and the Almshouse, also scheduled (PE069) and listed Grade II\* (17149). In the 18<sup>th</sup> and 19<sup>th</sup> centuries, Angle was an important economic centre, with a quay at East Angle and a brickworks and limekiln at West Angle. The village was extensively redeveloped in the late 19<sup>th</sup> century by Colonel Mirehouse, a local landlord, who promoted Angle as a holiday resort, remodelling the houses in an unusual colonial style. Therefore the settlement presents a predominantly 19<sup>th</sup> century streetscape with most buildings fronting the village street, although with a loose clustering of houses at the eastern end at Angle Bay.

Other than the medieval stone buildings, a number of the buildings along the main street are listed Grade II. These are mostly of cement rendered stone, although at least one 19<sup>th</sup> century house is of painted brick. Twentieth century houses are in a variety of styles and materials, of one and two storeys. These are interspersed with older properties and most blend in well, although some are fairly incongruous and detract from the quality of the streetscape.

The regular linear character of the village, and its situation in a broad valley, is such that there are views over the village from the valley flanks and especially from the B4320 to the south, of the village street interspersed with prominent buildings such as the church, dovecote and tower intact. Angle Conservation Area Proposals identifies a number of important open spaces, including East Angle Bay. It also sets out a number of important views and vistas, which include views into and across the town. Important views include those over Angle Bay out into Milford Haven Waterway, although views in the direction of the Development are not identified as important.

The proposals document also includes a map showing outlying areas to the conservation area which are important to the setting and character of the conservation area in terms of history, archaeology and local landmarks. One of these is Angle Bay, including the mudflats, which are identified as providing a fine coastal setting for the village. The document goes on to state that "*The impact on the setting of*

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<sup>10</sup> PCNPA, adopted October 2011

*the Conservation Area will be a consideration for proposals which would have a major impact on or introduce incongruous elements into the surrounding landscape.”*

The cliff-top fort, Chapel Bay Fort, the last of the large forts designed to protect the Milford Haven waterway, was built on land acquired in 1861 by the War Department. The fort is a scheduled monument (PE333) and Grade II listed building (17165). It lies outside the established scope of the assessment, although in any case faces away from proposed turbines and is largely outside the ZTV.

The HLCA also has archaeological interest. This is highlighted in the HLCA, particularly the massive Chapel Bay Fort, other military installations including searchlight batteries, gun emplacements and lookout posts, as well as post medieval industrial remains. The medieval archaeological interest of the HLCA is also of considerable value, although other than the designated standing buildings most sites comprise buried remains. There are also a number of prehistoric flint working sites, evidenced by artefact finds.

The assessment of indirect visual impacts set out in Table 5.4 summarises an assessment on the effects on the settings of assets within the HLCA. The principal features of heritage value within the HLCA are the standing buildings, where those of higher grades are normally considered to be of National importance –**Category A**, whereas the Grade II listed buildings, while nationally designated, are regarded as being of local importance – **Category C**. Where a designated feature is both scheduled and listed, it is assessed on its highest designation. Visual effects on the *Remains of old wind mill* (adapted as machine-gun post, LB 5926), in the south-east of the HLCA are considered to be neutral and are therefore not included in Table 5.4.

The historically interesting and relatively well preserved settlement of Angle, which is also designated as a conservation area, can be considered to be of Regional importance –**Category B**. Views identified into, from or within the conservation area, as identified in Angle Conservation Area Proposals, can also be considered to be of this level of importance and are assessed as such in Table 5.4. The Development will not be directly within most key views identified, nor will proposed turbines feature within views from most of the individual designated features. The main view which will be affected is that from the north-east of the village in the vicinity of the creek and over Angle Bay. Turbines will be clearly visible at the furthest extent of these views, although in the context of Valero Oil Refinery. Photomontage Viewpoint 11 (Figure 5.54) of the ES gives a fair impression of the worst case visibility of turbines in clear views from this location. Turbines will be seen over some 4.5km and the dominant presence of the oil refinery is a substantial mitigating factor. Turbines will be clearly visible at the margins of other views over the village, although from these locations the context of the existing oil refinery structures is such that the presence of turbines will be a marginal factor.

**Table 5.5 – Stage 3: Assessment of indirect visual impacts on HLCA 342 Angle**

Impact	Category and Score (X)	Magnitude and Score (Y)	Score (X+Y)
Visual impact of turbines in views of and from PE068 <i>The</i>	A-4	Considerable-4	8

<i>Tower</i>			
Visual impact of turbines in views of and from PE069	A-4	Very Slight-1	5
<i>Angle Castle</i>			
Visual impact of turbines in views of and from PE067	A-4	Very Slight-1	5
<i>Angle Dovecot</i>			
Visual impact of turbines in views of and from <i>Sailors' Chapel</i> (LB17147)	A-4	Very Slight-1	5
Visual impact of turbines in views of and from Grade II listed buildings within Angle Village (mostly on the main street)	C-2	Very Slight-1	3
Key views from the north of the CA	B-3	Moderate-3	6
Key views from the CA over Angle Bay to Milford Haven	B-3	Moderate-3	6
<i>Waterway</i>			
Key views from the CA over Angle Bay from foreshore	B-3	Considerable-4	7
Glimpses of objects/landmarks/points of interest within the village	B-3	Very Slight-1	4
General views over the CA from the south (B4320)	C-2	Moderate-3	5
Visual impact on outlying areas important to the CA – Angle Bay	C-2	Considerable-4	6
Visual impact on outlying areas important to the CA – Angle Bay/Fields at North Hill/Ellens Well	C-2	Slight -2	4
Visual impact on outlying areas important to the CA – Parkland surrounding Angle Hall	C-2	Moderate-3	5
Development Form	2.92	Slight-2	4.92
Development Appearance	2.92	Moderate-3	5.92
Average indirect visual impact score:			<b>5.12</b>

The following presents the calculations of the overall magnitude of indirect impacts:

- Indirect, physical impact score = 0;
- Indirect visual impact score = 5.12;
- Combined score = 5.12;
- Combined score multiplied by 28 then divided by 20 = 7.17.

In accordance with the assessment scale set out in the guidance, the **Magnitude of Indirect Impacts** is therefore **Slight**.

### 5.2.13 HLCA 344 Liddeston

This is a relatively small HLCA lying to the west and north of the town of Milford Haven and to the east of a dismantled oil refinery. Archaeological sites do not strongly characterise the area and there are no listed buildings.

Visual impacts would be seen in the context of the adjacent industrial site, over Milford Haven and industry along the waterway. Whilst the Development will be visible from this area this will be at a distance of a minimum of 4.2km and it is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

### 5.2.14 HLCA 348 Waterston – Honeyborough

This small HLCA consists of the remains of enclosed strip fields that survive to the north of Neyland, together with the village of Waterston and the hamlet of Little Honeyborough. Archaeological sites are limited and there are no listed buildings. The majority of the HLCA lies more than 5km from the Development and it is outside the scope of this assessment.

The HLCA lies on the far side of the Gulf Oil Refinery from the Development and visual impacts would be seen in the context of both this and Valero Oil Refinery, as well as other industry along the waterway. Whilst the Development will be visible from this area at a distance of a minimum of 3.8km, it is concluded that the overall **Magnitude of Indirect Impacts** will be **Very Slight**.

## 6 Evaluation of Relative Importance (Stage 4)

The only HLCA directly affected by the Development is HLCA341 Rhoscrowther. Therefore, this is the only HLCA where the relative importance of the directly affected part of the HLCA needs to be considered in relation to the whole of the HLCA (stage a). For other HLCA's, where the historic landscape and potential impacts considered are indirect visual impacts only, stage a) is omitted.

Each HLCA is considered in turn.

### 6.1 HLCA 306 Pembroke Dock

This HLCA comprises the town of Pembroke Dock and is entirely an urban HLCA. Part of the HLCA is the Royal Dockyard, which contains a number of scheduled monuments and highly graded listed buildings. Pembroke Dock is also a Conservation Area. The Royal Dockyard, the associated planned town and garrisons are well documented historically, has generally good survival and is important in the national history of Wales.

**Table 6.1 – Stage 4: Assessment of Relative Importance of HLCA 306 Pembroke Dock**

Value	V High/ V Good	High/ Good	Mod	Fair/ Low	Poor/ None	Low			
						V High/ Good	High/ Good	V Mod/ Med	Poor/ None

In relation to:	(b) Whole of historic landscape area					(c) National context				
CRITERION:										
Rarity	✓					✓				
Representativeness				✓						✓
Documentation		✓					✓			
Group Value					✓					✓
Survival		✓					✓			
Condition		✓					✓			
Coherence		✓						✓		
Integrity		✓					✓			
Potential					✓					✓
Amenity				✓				✓		
Associations	✓					✓				
<b>Overall Score</b>	<b>78/110 = 71%: High</b>									

## 6.2 HLCA 313 Pembroke Power Station

This HLCA is relatively small, being defined entirely by Pembroke Power Station, now the location of the largest gas-fired power station in Europe. Land within the HLCA was extensively re-modelled for the construction of the original power station and this HLCA stands in sharp contrast to surrounding farmland, although is one of a number of large industrial installations along Milford Haven Waterway.

**Table 6.2 – Stage 4: Assessment of Relative Importance of HLCA 313 Pembroke Power Station**

Value										
	V High/ V Good	High/ Good	Mod	Fair/ Low	Poor/ None	V High/ Good	High/ Good	V Mod/ Med	Low	Poor/ None
In relation to:	(b) Whole of historic landscape area					(c) National context				
CRITERION:										
Rarity	✓							✓		
Representativeness					✓					✓
Documentation				✓						✓
Group Value					✓					✓

Survival				✓					✓
Condition			✓						✓
Coherence	✓						✓		
Integrity			✓						✓
Potential				✓				✓	
Amenity				✓					✓
Associations					✓				✓
<b>Overall Score</b>	<b>43/110 = 39%: Moderate</b>								

### 6.3 HLCA 314 Texaco Oil Refinery

Almost the whole HLCA is occupied by an oil refinery and oil pumping station, now Valero Oil Refinery. Prior to the construction of the oil industry installations the landscape consisted of farms and regularly shaped fields within the historic Rhoscrowther and Pwllcrochan parishes. Land within the oil refinery can be assumed to have been fairly extensively disturbed, although despite the construction of the oil pumping station, refinery and associated jetties, the coastal fringe of the HLCA has considerable archaeological potential. Fort Popton, which is both a scheduled monument (PE446) and a Grade II\* listed building (17168) occupies Popton Point on the north-east of Angle Bay, while West Popton Camp, a promontory fort which is also scheduled (PE264), lies on the north side of the HLCA, overlooking Milford Haven.

**Table 6.3 – Stage 4: Assessment of Relative Importance of HLCA 314 Texaco Oil Refinery**

Value	V High/ V Good	High/ Good	Mod	Fair/ Low	Poor/ None	Low				
						V High/ Good	High/ Good	V Mod/ Med		Poor/ None
In relation to:	(b) Whole of historic landscape area					(c) National context				
CRITERION:										
Rarity			✓						✓	
Representativeness			✓							✓
Documentation			✓						✓	
Group Value		✓							✓	
Survival				✓						✓
Condition		✓						✓		
Coherence		✓						✓		

Integrity	✓	✓
Potential	✓	✓
Amenity	✓	✓
Associations	✓	✓
<b>Overall Score</b>	<b>57/110 = 51%: Considerable</b>	

#### 6.4 HLCA 338 Carew Milton and Nash

The HLCA describes a large tract of land covering nearly 2000ha, although a very small part of this lies within the scope of the assessment. The HLCA is described as an agricultural landscape of large, dispersed farms and large fairly regular fields, although also includes mud flats, marsh and the rocky foreshore along the Milford Haven waterway. It incorporates ecclesiastical parishes of Pembroke St Mary, Cosheston, Monkton, Nash and Upton, which have medieval origins. The HLCA contains a number of designations including those at Upton Castle, Cosheston Hall, Carew Castle and Carew Cheriton; moreover, it contains a wide range of historic environment features, from Second World War military installations and industrial sites, through post medieval and medieval architecture, medieval archaeological sites and prehistoric monuments. The HLCA is therefore one of the more varied and diverse in the study area, although its overall character is rural, rather than industrial.

**Table 6.4 – Stage 4: Assessment of Relative Importance of HLCA 338 Carew Milton and Nash**

Value	V High/ V Good	High/ Good	Mod	Fair/ Low	Poor/ None	V High/ V Good	High/ Good	Mod/ Med	Low	Poor/ None
In relation to:	b) Whole of historic landscape area		(c) National context CRITERION:							
Rarity			✓						✓	
Representativeness		✓							✓	
Documentation		✓					✓			
Group Value		✓					✓			
Survival		✓					✓			
Condition		✓					✓			
Value	V High/ V Good	High/ Good	Mod	Fair/ Low	Poor/ None	V High/ V Good	High/ Good	Mod/ Med	Low	Poor/ None
Coherence		✓					✓			
Integrity	✓						✓			

Potential	✓	✓
Amenity	✓	✓
Associations	✓	✓

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**Overall Score**      **85/110 = 77% High**

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### 6.5 HLCA 340 Hundleton and Maiden Wells

This HLCA lies on the southern bank of the Pembroke River in the parishes of Hundleton and Monkton. It is characterised by undulating land at the edge of the Milford Haven Waterway, with much of the HLCA extending outside this. It contains some diversity of landscape type and use, although is essentially rural and agricultural in nature, with some historical industrial elements.

**Table 6.5 – Stage 4: Assessment of Relative Importance of HLCA 340 Hundleton and Maiden Wells**

Value	b) Whole of historic landscape area					c) National context				
	V High/ V Good	High/ Good	Mod	Fair/ Low	Poor/ None	V High/ Good	High/ Good	V Mod/ Med	Low	Poor/ None
In relation to: CRITERION:	b) Whole of historic landscape area					c) National context				
Rarity				✓						✓
Representativeness			✓					✓		
Documentation			✓					✓		
Group Value			✓					✓		
Survival		✓						✓		
Condition		✓						✓		
Coherence		✓						✓		
Integrity		✓						✓		
Potential			✓						✓	
Amenity				✓					✓	
Associations				✓						✓

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**Overall Score**      **61/110 = 56% Considerable**

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## 6.6 HLCA 341 Rhoscrowther

Rhoscrowther is an extensive HLCA stretching along the southern banks of the Milford Haven Waterway from Hundleton in the east to the far west of the Castlemartin Peninsula. It comprises mainly an agricultural landscape lying across gently undulating hills, although also includes the mud, marsh and rocks along the foreshore of the waterway. The HLCA contains historic settlements including Eastington, Rhoscrowther and Pwllcrochan, much affected by industry, although the industrial features it contains are defined mostly by smaller scale, more historical industries. The HLCA contains quite a large number of prehistoric monuments, many scheduled monument, including a number of prehistoric round barrows (burial mounds) (PE059; PE060; PE064), the Neolithic *Devil's Quoit Burial Chamber* (PE020), two Iron Age coastal prehistoric enclosures (PE262; PE400) and West Pickard Camp Promontory Fort (PE167). It also includes Eastington Manor House (PE263) to the north-west of the site and an area of early medieval settlement west of Angle (PE554, outside the 5km extended study area), as well as a later anti-aircraft battery (PE494). The HLCA also contains medieval and post medieval settlements and farmsteads, old cottages, limekilns and quarries, as well as 20<sup>th</sup> century defensive structures. The HLCA description states that *"There are numerous archaeological sites within this area, but they are not prominent landscape features and therefore do not form major components of the historic landscape."* Although not specifically identified as assets in the HLCA description, the character of the other historic landscape owes much to elements such as field/hedge banks, drystone walling (this element not common) and green lanes.

**Table 6.6 – Stage 4: Assessment of Relative Importance of HLCA 341 Rhoscrowther**

Value	V High/ V Good	High/ Good	Mod	Fair/ Low	Poor/ None	V High/ Good	High/ Med	Mod/ Low	V Good	Poor/ None	V High/ V Good	High/ Good	Mod/ Med	Low	Poor/ None
In relation to: CRITERION:	(a) Area affected by Development in relation to whole of historic character area					(b) Whole of historic landscape area					(c) National context				
Rarity				✓					✓						✓
Representativeness			✓				✓						✓		
Documentation			✓				✓						✓		
Group Value				✓					✓						✓
Survival		✓					✓						✓		
Condition		✓					✓								✓
Coherence		✓					✓						✓		
Integrity		✓					✓					✓			
Potential				✓					✓				✓		
Amenity				✓					✓				✓		
Associations					✓				✓						✓
<b>Overall Score</b>	<b>100/165 = 60% High</b>														



## 6.7 HLCA 342 Angle

Angle HLCA lies at the western tip of the south Pembrokeshire peninsula. It is centred on Angle village, its associated field system and a coastal area on Milford Haven Waterway, encompassing Angle Bay and West Angle Bay. Angle is a planned village of medieval date, with a considerable 19<sup>th</sup> century component. It comprises a main street on an east-west alignment, flanked by burgage plots and outlying stripfields. There are a number of surviving medieval buildings within the village, variously listed and scheduled, including the Church of St Mary, St Anthony's Chapel -*Sailors' Chapel*, Angle Tower or Pele Tower, Angle Dovecote and the Almshouse. The HLCA includes the remains of 18<sup>th</sup> and 19<sup>th</sup> century industry and commerce, as well as the cliff-top Chapel Bay Fort, the last of the large forts designed to protect the Milford Haven waterway, which is scheduled monument and Grade II listed building. Some archaeological records of prehistoric date, although no upstanding remains, are also known.

**Table 6.7 – Stage 4: Assessment of Relative Importance of HLCA 342 Angle**

Value										
	V High/ V Good	High/ Good	Mod	Fair/ Low	Poor/ None	V High/ Good	High/ Good	V Mod/ Med	Low	Poor/ None
In relation to: CRITERION:	(a) Whole of historic character area/ area under assessment					(c) National context				
Rarity			✓							✓
Representativeness		✓						✓		
Documentation		✓					✓			
Group Value			✓					✓		
Survival		✓						✓		
Condition			✓					✓		
Coherence	✓						✓			
Integrity		✓						✓		
Potential			✓					✓		
Amenity		✓								✓
Associations		✓						✓		
<b>Overall Score</b>	<b>74/110 = 67% High</b>									

## 7 Assessment of Overall Significance of Impact (Stage 5)

In accordance with the ASIDOHL guidance, the results of the Stage 2, 3 and 4 assessments have been incorporated into an overall assessment of the effects of the proposed scheme on the historic

landscape. The assessment scores derived from Stages 2, 3 and 4 form the basis of professional judgement as set out in Section 3.5, and the results of the assessment are summarised in Table 7.1.

**Table 7.1 – Historic Landscape Character Overall Assessment Summary**

<b>HLCA</b>	<b>Value (Stage 4)</b>	<b>Impact (Stages 2 and 3)</b>	<b>Reduction of Value</b>
HLCA 306 Pembroke Dock	<p>HIGH</p> <p>The HLCA contains The Royal Dockyard, which is key to the importance of Milford Haven historic landscape as a whole, while it does not contain the representative diversity of the historic landscape character.</p> <p>Score: 8</p>	<p>LOW</p> <p>No direct impact. Turbines are likely to be visible the Dockyard at distances of nearly 4.5km, while much of the HLCA fall outside the ZTV. Turbines will be seen, where views are available, in the context of several modern industrial installations and adjacent to and in scale with Valero Oil Refinery.</p> <p>Score: 2</p>	<p>LOW</p> <p>The relationship between the key features of interest and the quality and extent of views from them will only be marginally affected.</p> <p>Score: 2</p>
<p>Total Score: 12</p> <p>Overall Significance of Impact: Moderate</p>			
HLCA 313 Pembroke Power Station	<p>LOW</p> <p>Whilst unique to this historic landscape it is one component of many which comprise the industrial legacy of the historic landscape and has no other value.</p> <p>Score: 2</p>	<p>LOW</p> <p>The nature of this HLCA means that it is not sensitive to the nature of changes involved in the Development.</p> <p>Score: 1</p>	<p>VERY LOW</p> <p>This HLCA is included in the historic landscape as an industrial installation and the introduction of turbines does not represent an incongruous development.</p> <p>Score: 1</p>
<p>Total Score: 4</p> <p>Overall Significance of Impact: Slight</p>			
HLCA 314 Texaco Oil Refinery	<p>MEDIUM</p> <p>Whilst the oil refinery has removed almost all other historic landscape features within its footprint, this forms part of the character of the historic landscape in its own right and the HLCA also contains designated historic environment features.</p>	<p>VERY LOW</p> <p>The only features within the HLCA not contained by the oil refinery lie on the margins of the ZTV –if turbines are visible in any views from these they will be seen through, and smaller in scale than, oil refinery structures.</p>	<p>VERY LOW</p> <p>The introduction of turbines adjacent to the oil refinery and the change to this HLCA will result in very little change to the historic landscape.</p>

Score: 5

Score: 1

Score: 1

Total Score: 7

Overall Significance of Impact: Slight

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HLCA 338 Carew Milton  
and Nash

HIGH

The HLCA is extensive and quite diverse, containing a number of highly designated historic environment features.

VERY LOW

While turbines will be visible from parts of the HLCA within closest proximity to the development, a large part of the HLCA falls outside the ZTV. Most designated features are either outside the ZTV or a considerable distance from the

VERY LOW

The impact on the historic landscape will be limited to views of turbines from less sensitive areas of the HLCA, Turbines will only be visible in the context of modern industrial installations flanking the waterway.

		Development, such that little or no effect is predicted.	
	Score: 7	Score: 1	Score: 1
Total Score: 9	Overall Significance of Impact: Slight		
HLCA 340 Hundleton and Maiden Wells	MEDIUM This HLCA is fairly representative of some of the character aspects of the historic landscape, although contains relatively few elements which are key to its importance.  Score: 5	LOW The Development will be visible from parts of the HLCA and will be incongruous to its character, although will be seen in the context of Valero Oil Refinery and will not affect sensitive views.  Score: 2	VERY LOW That part of the HLCA within the historic landscape has few designated assets, which may be considered to be more sensitive. All views of turbines will be in the context of the existing oil refinery.  Score: 1
Total Score: 8	Overall Significance of Impact: Slight		
HLCA 341 Rhoscrowther	HIGH This HLCA encompasses a number of elements which are important to the historic landscape and also retains a number of highly designated historic environment features.  Score: 7	LOW While there are currently few incongruous features within the HLCA, there are a number of adjacent modern industrial installations and the visual impact of turbines is considerably reduced by their position in close proximity to Valero Oil Refinery. The direct impact of the development will cause little change to the importance of the HLCA.  Score: 3	LOW The footprint of the Development is very small in terms of the historic landscape area. The visual impact on the HLCA will be further reduced in terms of the historic landscape as a whole given the industrial elements within it and the reversibility of the Development.  Score: 3
Total Score: 13	Overall Significance of Impact: Moderate		
HLCA 342 Angle	HIGH The HLCA encompasses many elements of importance to the historic landscape and contains a number of highly designated historic environment features, many of which still form part of a medieval settlement which is of historic interest.  Score: 8	LOW Turbines will not be visible from within the majority of Angle Village and most of the key views and vistas over and within the HLCA will not be affected. The only impact at a slightly higher level is that over Angle Bay.  Score: 2	LOW The relationship between the key features of interest will be unaffected. The impact is slightly higher than it may otherwise be as from this HLCA the Development will be seen as <i>slightly</i> more separate from Valero Oil Refinery than is the case from other areas.  Score: 3
Total Score: 12	Overall Significance of Impact: Moderate		

## 8 Concluding Statement

This ASIDOHL has sought to assess the effects of the proposed Rhoscrowther Wind Farm on *Milford Haven Waterway* Landscape of Outstanding Historic Interest. The Development lies on the southern edge of the designated historic landscape, on the south side of the waterway and adjacent to the Valero Oil Refinery (HLCA 314 Texaco Oil Refinery).

The assessment has considered the direct, physical impacts on the historic landscape as a result of the Development. The Development affects only one historic character area within the historic landscape –that of HLCA 341 Rhoscrowther –and the impact on this will be slight as the Development entails a small footprint. The only features of historic landscape interest affected will be restricted to a small proportion of hedge banks within the Development site, which will not affect the organisation or legibility of the landscape.

Consideration has been given to the potential for indirect, physical impacts such as severance, increased risk of exposure or erosion, or frustration of historic land use practices. There is no reason to believe that the proposed wind farm would affect the management or use of the historic landscape and so it is concluded that indirect, physical impacts will not occur.

The bulk of the assessment therefore concentrates on the potential for indirect, visual impacts resulting from the visibility of turbines in views of and from locations within the historic landscape. The nature of Milford Haven Waterway historic landscape is that its interest comprises diverse elements of the landscape, including prehistoric monuments, early and later historic development, defence and industrial installations, all overlain on the geological interest of the classic Welsh ria: drowned river valley and estuary. Thus the modern industrial installations form not just part of the baseline, but part of the character which is being assessed; part of the value of the landscape.

This diversity of character and the continued legibility of many of the earlier elements of the landscape is such that the scoring of effects on it could lead to a false impression of the degree of impact which is posed by the Development. This is due to the interplay of the defined historic character areas (HLCAs) and the description of the overall significance of the landscape, where many of the HLCAs contain a number of elements which give the historic landscape its value. Even where individual character areas do not exhibit such diversity, components such as modern industrial development are seen to add to the value of the landscape character. Therefore the overall value of individual character areas tends to be quite high, perhaps in comparison to other defined historic landscapes on the register, where modern changes and intrusions into the landscape are not seen to detract from its character. Consequently, scores of the overall significance of the impact of the development, made in the final stage of assessment (Stage 5) according to the proper criteria of the ASIDOHL2 guidance, will tend to be higher than may otherwise be the case. Nevertheless, the assessment has found that of the seven HLCAs brought forward for assessment, the overall impact on three of these will be **Moderate**, while the impact on the other four will be **Slight** and the overall impact of the Development on Milford Haven Waterway is therefore concluded to be **Slight**. Intuitively, the introduction of the proposed turbines into this landscape, in such close proximity to Valero Oil Refinery, which contains some of the tallest and most prominent of industrial features along the waterway, cannot be judged to cause more than a **Slight** impact. It is judged, on the basis of this assessment, that a greater level of impact could only be concluded were the Development to comprise a greater number of turbines, in a more prominent location separated from other industrial features in such a location as made a substantial difference to the spread of industrial activity along the waterway and thereby changing the extent of the various character areas within it.

Overall, the impact of turbines in this landscape, especially given their position, will be seen in the context of the nature of the dynamic historic landscape, which has seen dramatic changes at a number of points in history, resulting in considerable historical depth. The landscape is perhaps both less sensitive and more resilient to change as a result. The nature and appearance of the Development is not particularly at odds with the character of prominent naval fortifications and dominant industrial infrastructure along the waterway. Owing to its lack of physical impact this also

allows the continued legibility of the landscape; it will not change our capacity to understand and appreciate the landscape's historical meaning and significance and therefore will not fundamentally reduce its overall value. Moreover, such effects are entirely reversible on the decommissioning of the wind energy development, which given the 25 year term of the application is a relatively short length of time in view of the longevity of buildings, and particularly of monuments, in the vicinity of the Development, and changes wrought on the landscape during this time.

The conclusions reached in the assessment also support the scope used in this and the ES. The character areas to the north of the waterway contain much the same elements as those to the south, albeit that here is a greater amount of urban and industrial development and, arguably, slightly less diversity, certainly along the coastal area north of the Development. As such, the individual assessments of the character of HLCAs north of the waterway and potential indirect visual impacts would be unlikely to alter any conclusions reached as to the effect of the Development, although the overall scoring would be likely to be reduced, with the turbines being more distant and from most areas seen behind the tall structures of Valero Oil Refinery.