

Proposed solar farm at West Farm, Cosheston, Pembrokeshire

NGR SM 9967 0400

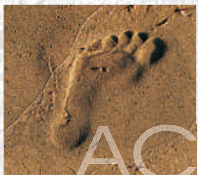
ASIDOHL2 assessment

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archaeology

**PROPOSED SOLAR FARM AT WEST FARM,
COSHESTON, PEMBROKESHIRE
(CENTRED ON SM 9967 0400)**

ASIDOHL2 ASSESSMENT

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1. INTRODUCTION

1.1 This assessment has been undertaken to establish the nature and significance of the effects of a proposed solar farm development on land at West Farm, Cosheston, Pembrokeshire (centred on SM 9967 0400) on the Milford Haven Waterway Landscape of Outstanding Historic Interest - HLW (D) 1. It has been prepared by AC archaeology on behalf of Kronos Solar GmbH during March 2012. The location of the site is shown on Fig. 1. The study will be submitted in support of a planning application for the installation of solar panels (PV modules), cables and other associated infrastructure.

1.2 The proposed application area lies in close proximity to the Pembroke Coast National Park, Cosheston Hall Registered Historic Park and Garden - PGW (Dy) 30 (PEM) and Cosheston Conservation Area. It also covers a small part of the Cosheston and Carew Milton and Nash Historic Landscape Character Areas.

1.3 Assessment methodology

The ASIDOHL2 methodology is set out in *'Guide to Good Practice on Using the Register of Historic Landscapes of Historic Interest in Wales in the Planning and Development Process –Technical Annex'*, Revised (2nd) Edition (Cadw, CCW & Welsh Assembly Government, 2007). It is based on the use of identified and described Historic Character Areas within a Registered Landscape.

The ASIDOHL assessment methodology comprises the following 5 stages:-

- Stage 1 – Compilation of an introduction of essential, contextual information;
- Stage 2 – Description and quantification of the direct, physical impacts of the development on the Historic Character Area(s) affected;
- Stage 3 – Description and quantification of the indirect impacts of development on the Historic Character Area(s) affected;
- Stage 4 – Evaluation of the relative importance of the Historic Character Area(s) or part(s) thereof directly and/or indirectly affected by the development in relation to:
 - a) The whole of the Historic Character Area(s) concerned, and/or
 - b) The whole of the historic landscape area on the register, followed by
 - c) An evaluation of the relative importance of the Historic Character Area(s) concerned in the national context, and a determination of the average overall value of all of the Historic Character Areas (or parts thereof) affected;
- Stage 5 – assessment of the overall significance of impact of the development, and the effects that altering the Historic Character Area(s) concerned has on the whole of the historic landscape area on the register.

1.4 Confidence levels

The Zone of Theoretical Visibility (ZTV) for the development has been established by a Landscape and Visual Impact Assessment prepared by Laurence Associates. It is recognised that the ZTV does not take into account tree cover, hedgerows and other landuse features and as a result can be considered worst-case. A recent site visit found the visual envelope to be more restricted than that presented in the ZTV; this area has therefore been further refined for the purposes of this assessment to those HLCAs areas, that lie within a 3km radius of the application area, and/or which may be intervisible with the proposed application area.

The information contained within this document regarding the Registered Landscapes has been taken from the Register of Landscapes of Outstanding Historic Interest in Wales (Cadw, CCW & ICOMOS UK 1998) and the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales: Carmarthenshire, Ceredigion and Pembrokeshire (Cadw, CCW & ICOMOS UK 2002). Data relating to the Historic Landscape Character Areas (HLCAs) is from the Dyfed Archaeological Trust's online website www.cambria.org.uk/.

1.5 Qualifications and experience

The ASIDOHL2 assessment has been carried out by Tanya James MIfA, Project Manager for AC archaeology. Tanya has a MA in Landscape Archaeology and has carried out a number of landscape assessments for AC archaeology.

2. CONTEXTUAL INFORMATION (STAGE 1)

2.1 Legislation, planning and guidance

The relevant protection, guidance and policies relating to the protection, maintenance and enhancement of archaeological sites and other aspects of cultural heritage may be summarised as follows:-

- The Ancient Monuments and Archaeological Areas Act (1979);
- The Planning (Listed Buildings and Conservation Areas) Act, 1990;
- The Planning (Listed Buildings and Conservation Areas) Regulations 1990, SI No. 1990/1519;
- The Hedgerow Regulations 1997, section 97 of the Environment Act 1995.
- Welsh Office Circular 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas;
- Welsh Office Circular 1/98 Planning and the Historic Environment: Directions by the Secretary of State for Wales; and
- Planning Policy Wales Edition 4 (adopted February 2011) set out the national framework for the management and conservation of the historic environment through the planning process;
- Welsh Office Circular 60/96: Planning and the Historic Environment: Archaeology;
- The Register of Landscapes of Outstanding Historic Interest in Wales (Cadw, CCW & ICOMOS UK 1998) and the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales: Carmarthenshire, Ceredigion and Pembrokeshire (Cadw, CCW & ICOMOS UK 2002); and,
- The Joint Unitary Development Plan for Pembrokeshire 2000-2016, adopted in July 2006.

2.2 Sources of contextual data

The scope of the assessment has included archaeological sites and finds (including Scheduled Monuments), historic buildings (including Listed Buildings), historic landscape areas (including Registered Parks and Gardens, Historic Landscapes, Historic Characterisation Areas) and other locally-designated features, or areas, of cultural heritage importance.

The following data sources from a c. 1km radius of the centre of the site have been examined:-

- Archaeological records, historic building information and other relevant cultural heritage data held by the Dyfed Archaeological Trust (DAT), Llandeilo and the National Monuments Record (NMR), Swindon;

- Historical cartographic and documentary information held by the National Library of Wales (NLW), Aberystwyth;
- The Register of Landscapes of Outstanding Historic Interest in Wales (Cadw, CCW & ICOMOS UK 1998) and the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales: Carmarthenshire, Ceredigion and Pembrokeshire (Cadw, CCW & ICOMOS UK 2002);
- Data relating to the HLCAs is from the Dyfed Archaeological Trust's online website www.cambria.org.uk/;
- Other relevant published or unpublished information; and,
- Data acquired from a site visit in March 2012.

2.3 Cultural heritage baseline

DAT PRN/Cadw reference numbers in the following account are only provided for the relevant key cultural heritage features affected by the scheme.

2.3.1 Identified cultural heritage assets

The following cultural heritage features have been identified within the study area:-

- **Listed Buildings** – the study area contains eight listed buildings; all are Grade II listed. The one in closest proximity comprises St Michael's Church. While Bangeston Hall lies 1km from the southern boundary of the application area, it is still clearly visible across Cosheston Pill;
- **The Cosheston Conservation Area** - the northern boundary of the conservation area lies c. 70m to the south of the eastern end of the application area;
- **Historic Parks and Gardens** - Cosheston Hall Registered Historic Park and Garden - PGW (Dy) 30 (PEM) lies less than c. 45m from the northern boundary of the application area;
- **National Park** - the northern boundary of the application area lies c. 45m south of a section of the Pembrokeshire Coast National Park, which covers the upper reaches of the Daugleddau estuary;
- **Milford Haven Waterway Landscape of Outstanding Historic Interest** - the proposed application area lies wholly within the Milford Haven Waterway Landscape of Outstanding Historic Interest - HLW (D) 3. This area contains 48 Historic Landscape Character Areas (HLCAs). The site lies within Cosheston and Carew Milton and Nash HLCAs; and,
- **Twenty-six records of recorded archaeological sites** – the majority relate to the Post Medieval and Modern periods and are further discussed below (Section 2.3.7).

2.3.2 Listed Buildings

The eight Grade II listed buildings/structures comprise the following:-

- St Michael's Church (Cadw No. 5955) – the earliest part of the church may be 13th century; the chancel, south transept, tower and north aisle all contain pre 17th century elements. The church's position at the very western end of the village some distance from the core of the village suggests that this was the historic core of the settlement;
- The Rectory in Cosheston (Cadw No. 17265) was largely rebuilt in the 19th century but still has late medieval vaulted rooms;
- Hill House (Cadw No. 5956) was built around 1800, with later alterations. The house is a rubble built, three storey structure with a part hipped slate roof;
- A funeral car tenement in Cosheston (Cadw No. 17267), which comprises a walled enclosure with steel gates hung on gate piers;
- Two limekilns (Cadw Nos. 17268 & 17269) in Woodfield Wood. They are shown on the 1841 tithe map as lying within an enclosure called 'Limekiln Green';

- Bangeston Hall (Cadw No. 6309) is a three storey early to mid 19th century mansion house with contemporary and later rear side wings. It is shown on the Ordnance Survey 6-inch map of 1869 as being surrounded by parkland and formal gardens with a lake on its eastern side; and,
- The Brewery Inn (Cadw No. 17266) is the site of the Cosheston brewery, which is known to have been trading by 1868.

St Michael's Church, the Rectory, Hill House, the funeral car tenement and the Brewery Inn are all within the Cosheston Conservation Area. Bangeston Hall (Cadw No. 6309) lies over 1km to the south of the application area, on the southern side of the Cosheston Pill. While the hall is partially screened by woodland, it still remains visible from the southern area of the west end of the application area. St Michael's Church (Cadw No. 5955) is the closest of the eight listed buildings, lying some 165m from the east end of the proposed solar farm. The tower is visible from the very east end of the application area over the modern roofline. The Rectory, Hill House, the funeral car tenement, the Brewery Inn and the two limekilns are not visible from the application area.

2.3.3 *Cosheston Conservation Area*

Cosheston Conservation Area encompasses most of the village of Cosheston, which is a small nucleated settlement, established on Cosheston Pill in the Post Conquest period. The grade II listed Church of St Michael (Cadw No. 5955) is the most prominent feature lying at the western end of the village. The village is situated within an area of agricultural land, with the parkland associated with Cosheston Hall lying to the northwest. The northern boundary of the conservation area lies c. 70m to the south of the east end of the application area.

2.3.4 *Cosheston Hall Registered Historic Park and Garden*

Cosheston Hall Registered Historic Park and Garden is on the CADW 2002 Register of Registered Landscapes, Parks and Gardens - PGW (Dy) 30 (PEM). It comprises an early 19th century garden and late 19th century parkland, which were established to complement the 19th century residence, Cosheston Hall (PRN 14692). Both the gardens and parkland have been somewhat altered during the last century to reflect changing landscape and gardening trends. The gardens are both formal and informal and include a walled kitchen garden. The later gardens are associated with landscaping to complement the mid nineteenth century re-build of the hall with further alterations during the 20th century. The parkland was added during the late 19th century. The small park occupies an area of about 13 acres mostly to the east and south of the Hall; whilst the garden area, of some 3.5 acres is to the south and west of the buildings.

The southern boundary of the Registered Historic Park and Garden lies some 45m to the north of the eastern end of the application area (Fig. 1). Views to and from the northern and eastern boundary of the park are largely screened by the very substantial hedgerow, which runs along the north and eastern boundaries of the application area (see also Section 9 below). This is further enhanced by tree cover associated with the park, which prevents any views of the main gardens and/or Cosheston Hall. Information contained with the Register of Parks and Gardens in Wales (Cadw, CCW & ICOMOS UK 2002) indicates that the significant views within the park are principally confined to those from the hall into the east and northeast areas of the main gardens. The gardens were not designed to be viewed from the south, and as such they have been deliberately screened from this area.

2.3.5 *Pembroke Coast National Park*

The Pembroke Coast National Park occupies a third of the county. It is the only National Park that is almost entirely coastal. The northern boundary of the application area lies some 45m south of a section of the Pembrokeshire Coast National Park, which surrounds the upper reaches of the

Daugleddau (Fig. 1). The National Park boundary runs along the road from Cosheston to Home Farm and then follows the trackway heading out to the estuary (Fig. 1). The boundary of the park is largely screened by the very substantial hedgerow, which runs along the north and east boundaries of the application area.

2.3.6 Historic Landscape Areas

Milford Haven Waterway Landscape of Outstanding Interest

The proposed application area lies wholly within the Milford Haven Waterway Landscape of Historic Outstanding Interest HLW (D) 3. The Milford Haven Waterway Registered Landscape is described as follows in the Register Landscape of Outstanding Interest in Wales (Cadw, CCW & ICOMOS UK 1998):-

The classic ria, drowned river valley and estuary in Wales, with an unsurpassed concentration of remains reflecting maritime conquest, settlement, commerce, fishing, defence and industry spanning the prehistoric to modern periods. The area includes Iron Age promontory forts, Early Christian and Viking place names; Norman coastal castle-boroughs; medieval castles and later gentry residences; Milford and Pembroke Dock planned settlements; recent and modern quays, jetties and landing places, coal mines, limestone quarries, military and naval fortifications, oil terminals, jetties, refineries and power stations.

The Milford Haven Waterway landscape area has been determined using Criteria 1 and 3. Criterion 1 relates to landscapes which have been intensively developed or extensively remodelled; Criterion 3 relates to landscapes which exhibit historic diversity or are multi period in date.

Historic Landscape Areas

The proposed application area lies partially within the Cosheston and Carew Milton and Nash HLCAs. While the application area is also theoretically visible from nine more HLCAs (see Fig. 2), only Houghton, Pembroke Dock, Neyland, are covered by this assessment as the view from the rest is considered to be distant and significantly restricted by existing hedgerows, tree cover and the natural topography. The key characteristics of the five HLCAs considered in this assessment are summarised below in Table 2.1 and their locations are shown on Fig. 2.

Historic Landscape Characterisation Areas	Key characteristics
Carew Milton and Nash	Carew Milton and Nash is a large agricultural historic landscape character area that contains several mansion houses set in parkland and gardens, many large farms and a scattering of smaller farms. Fields are large and are divided by hedges on banks. Woodland is a strong component of parts of the landscape.
Cosheston	Cosheston is a small historic landscape character area that is centred on the linear village of Cosheston. Most of the houses in the village date to the 19th century and 20th century and narrow strip fields surround the village. These narrow fields represent the enclosed open fields of the community.
Houghton	Houghton is a small historic landscape character area centred on the hamlet of that name and surrounded by an enclosed strip-field system – the old open fields of the community. The loosely clustered houses in the hamlet are of 19th century and 20th century date.
Pembroke Dock	Pembroke Dock historic landscape character area comprises the 19th century naval dockyards and the 19th century grid-pattern planned town. Included in this area are many 19th century worker and town houses, with 20th century housing and light industrial development on its outskirts.
Neyland	Neyland is a small urban historic landscape character area centred on the old port and railway station. The town expanded from this focus during the 19th century to include the former village of Great Honeyborough. Late 20th century housing and light industrial development lie on the outskirts of the town

Table 2.1: Summary of Historic Landscape Character Areas

2.3.7 Archaeological background

Some twenty-six archaeological sites and records have been recorded within the study area on the DATHER and NMR. Two of these sites lie within the proposed application area. These comprise a

possible fortified enclosure and an area of former open field (PRN Nos. 38318 & 4519), as indicated by cartographic and field name evidence and a former WWII barrage balloon site (PRN No. 26192).

Prehistoric

Two sites of a possible Prehistoric date are currently recorded within the study area. These include three plots at the western end of the application area, which are recorded as *West Castles*, *Middle Castles* and *Castles* in the Cosheston tithe apportionment of 1841 (PRN No. 4519) and a flint working site near Ferney Pits. While no traces of an enclosure have been recorded to date within the application area, elsewhere such field names can be indicative of the presence of a fortified enclosure. Another possibility is that the name is purely a topographical reference or that these plots were in some way originally associated with Pembroke Castle –the manor of Cosheston had a duty to provide a knight to protect Pembroke Castle. The location of the flint knapping site may be slightly erroneous as no flints were noted during a site visit in 1965. Mesolithic and later flint working sites are however a common occurrence along the Pembroke Coast and its estuaries.

Roman (AD 43-410)

No sites of a Roman date are currently recorded within the DATHER study area, however the NMR records a Roman find spot at Cosheston Rectory and the record may be erroneous.

Early Medieval (AD410-1066)

The only potential Early Medieval site recorded within the study area comprises the churchyard, which surrounds St Michael's Church (Cadw No. 5955). Possible evidence for a larger outer enclosure has been identified to the south of the church.

Medieval (AD 1066- 1540)

Sites of medieval date include the village of Cosheston, its associated open and strip fields, a possible holy well at Ringly Wells and the parish boundary between Cosheston and Pembroke St Mary. Cosheston is first recorded as '*Vill Costentini*' in 1228. It is a typical linear settlement which appears to have been planned in the immediate Post Conquest period. It lies within the former medieval manor of Cosheston and is recorded in the 13th century as a castle-guard fee of the Lordship of Pembroke (Cosheston had a duty to provide a knight to protect Pembroke Castle). The historic core appears to be located at the west end of the village around St Michael's Church (Cadw No. 5955). The piecemeal enclosure of strips within the former open fields, which would once have surrounded the settlement, has produced the distinctive narrow strip fields to the north and south of the village. There is also some evidence in the form of field names, which suggest the presence of an open field to the west of the village, within the application area (PRN No. 38318). Several of these fields retain curving field boundaries indicating that they were originally enclosed from strip fields. Cosheston had two shipbuilding yards in the 18th century and the small port is believed to have served the coal mines of the Pembrokeshire coalfield (Cadw 1998). St Michael's Church is known to 13th century elements, while the Rectory also retains late medieval features.

Post Medieval (AD 1540 - 1901)

Sites of Post Medieval date include Cosheston Hall (PRN No. 14692). There are 16th century references to a hall at Cosheston, but this is thought to have been in a different location. The present building is mid 19th century in date, and was briefly known as Woodfield in the later 19th century. Cosheston Hall is set in gently undulating land just over 100m north of Cosheston and is associated with Cosheston Hall Registered Historic Park and Garden (PGW (Dy) 30 (PEM)). A bath house is shown on the 1st edition 6-inch Ordnance Survey map of 1869. It was probably leisure feature linked to the estate, being built during the Allen family's tenure. A second mansion house, Bangeston Hall (Cadw No. 6309) lies to the south of Cosheston, on the south side of Cosheston Pill.

Folly House lies adjacent to the two Grade II listed limekilns in Woodfield Wood. It is not shown on the 1841 tithe map but reference is made to a well and the land is named as 'Limekiln Green' on the 1841 tithe map. The house is present on the 1st edition Ordnance Survey 6-inch map of 1869 adjacent to a trackway shown running from Cosheston Hall to a 'shipping place' near the water's edge. The presence of this dwelling by the late 1860s suggests the increased development of the location as a busy but small scale industrial complex on the edge of the Daugleddau.

Other sites of Post Medieval date comprise features associated with the crossing of Cosheston Pill. These include Cosheston Ford, Fox Hall Ford (and an associated building) and Cosheston Bridge. The remaining records relate to the two erroneously recorded locations of the National School in Cosheston, to the south of St Michaels' Church and a derelict stone built barn/cottage in Cosheston.

Modern (1901 to present)

Records of a modern date comprise military sites associated with either the WWI or WWII. A 'hutted' army camp known as 'The Camp' was located to the southwest of Home Farm between 1914 and 1918. No traces of the camp survive today.

A number of WWII air defence sites has been identified along Point Lane and in the vicinity of Home Farm. These include a former barrage balloon site (PRN 26192), which lies at the western end of the application area near Point Lane. The site has been demolished but originally it comprised a central cable loop set in a concrete block encircled at 45° intervals by eight tethering blocks. A second barrage balloon site was originally located to the northwest of Home Farm. A searchlight battery was originally located at Cosheston Point and a QF decoy command post once lay to the northwest of Cosheston Hall. These sites were strategically placed to protect the naval dockyards, which housed the flying boats and other military installations in Pembroke Dock.

Unknown Sites

A Bronze Age burnt mound or cooking hearth was recorded by TC Cantrill in the vicinity of Woodfield Wood. The area was augured as part of The Burnt Mounds of Dyfed Archaeological Assessment with negative results. A patch of dark soil was noted but no accompanying stone. The feature is thought to be natural.

Cartographic and documentary sources

A review of cartographic and documentary sources has demonstrated that the proposed application area lies within an area of land, which originally appears to have been an open field associated with Post Conquest settlement of Cosheston. This agricultural use appears to have remained unaltered since the late medieval period at least, with a brief intervention during WWII in form of a barrage balloon site (PRN 26192). Much of the central and eastern end of the application area retains elements of this former field system in the shape of slightly curving field boundaries, which are a characteristic of enclosed strip fields. These boundaries are not present at the west end of the site. This difference in field boundary characteristics corresponds with the boundaries of the Carew Milton and Nash and Cosheston HLCAs.

Previous fieldwork within the study area

The only formal programmes of archaeological work that appears to have taken place within the area under consideration comprise the following:-

- The 1997 Dyfed Archaeological Trust 'The Burnt Mounds of Dyfed Archaeological Assessment';

- The 1999 Milford Haven Historic Audit Part 1: Pembroke Ferry to Garron Pill Stage 1, data gathering;
- A watching brief was undertaken in 2008 during the extension to a house to the north of the church. No archaeological features were recorded and no finds were recovered; and,
- An evaluation in 2009 undertaken on land to the east of West Lane in Cosheston. The area was found to have been recently levelled. Only a 19th-20th drain and a Post Medieval pit/post hole were recorded, with no finds recovered.

3. ASSESSMENT OF DIRECT PHYSICAL IMPACTS OF THE DEVELOPMENT (STAGE 2)

3.1 Solar farm scheme details

The proposed development will involve limited ground disturbance, with the main groundworks being associated with the construction and subsequent removal of the following:-

- The installation of PV panels mounted on steel frames with steel supports (sigma poles) using shallow piles to a depth of 1.5-2.5m and their removal after 25 years. The number of poles will be between 12,000 and 15,000, depending upon the wind speed in the area. English Heritage Guidance (EH 2007) suggests an impact area of four times the area of the pile. This suggests that an area between *c.* 544m² and *c.* 692 m² will be directly affected;
- The construction of six site access routes leading into Plots 1-6 & 8 (Figs. 1 & 3). The route leading into Plot 8 runs very close to the Cosheston Conservation Area. These roads will be approximately *c.* 3.5m wide and *c.* 300-500mm deep (depending on thickness of topsoil layer) and constructed from permeable gravel. The surface area of the roads should not exceed 8,000m²;
- The construction of narrow cable trenches, on average 800mm deep and 600mm wide and *c.* 4,000-5,000m in length;
- The construction of eleven inverter and transformer stations on concrete slabs measuring 8m by 5m, and 800mm max. deep;
- The construction, of a centre station (substation) adjacent to the northern boundary of the application area (Fig. 3) consisting of three cabins of 3m by 3m, 5m by 3m and 1.5m by 1.5m with foundations *c.* 1m deep;
- The erection of a *c.* 2.5m high perimeter fence around the circuit of the proposed application area. Foundations will be up to 0.18m wide by 0.8–1m deep; and,
- A number of additional areas of tree planting have also been incorporated into the scheme around the perimeter of the application area in order to reduce the visual impact of the scheme upon the surrounding landscape (Fig. 3).

3.2 Direct physical impacts

The types of potential direct physical impact on the cultural heritage resource that may result from this proposed scheme are:-

- The disturbance, degradation or removal of archaeological deposits, during the pile installation and groundworks for the associated infrastructure, during their subsequent removal and the reinstatement of the site; and/or,
- The alteration of stable ground conditions resulting in the degradation of the quality of survival of buried archaeological remains.

3.3 Assessment of direct physical impacts

3.3.1 *Absolute direct impact – Cosheston & Carew Milton and Nash HLCA (Tables 3.1 & 3.2)*

While the proposed solar farm site covers an area of some 25ha, only c. 1ha of this area will entail a direct physical impact as result of the pile installation and groundworks for the associated infrastructure outlined in Section 3.1 above. This will equate to a less than 1% of Cosheston HLCA and Carew Milton and Nash HLCA. The absolute impact on both HLCAs is therefore anticipated to be **Very Slight** (0 – 4%).

3.3.2 *Relative direct impact – Cosheston HLCA (Table 3.1)*

The section of the proposed application area within Cosheston HLCA contains several curving hedgerows, which are indicative of their enclosure from a former open field. Cartographic evidence has demonstrated that the east end of the plot contained significantly more enclosed narrow strips, which have since been removed (PRN Nos 38138 & 6412). The whole area has therefore been subject to change within the last 100 years. The surviving curved field boundaries are a component of the Cosheston HLCA. The current development proposals will have no direct impacts upon these boundaries (see Table 3.1 below).

3.3.3 *Relative direct impact – Carew Milton & Nash HLCA (Table 3.2)*

The section of the application area within the Carew Milton and Nash HLCA contains field names which are indicative of a former open field and a possible Iron Age hillfort (PRNs 4519 & 38138). The hillfort has been identified on the basis of the field names 'Castles' and as such remain to be further investigated in the field. No evidence of any earthworks was noted during a site visit and it has been suggested that the name is a reference to the topographical location of the plots and/or a possible association with Pembroke Castle. The location of a former WWII barrage balloon site also lies within this area (PRN 26192). The site has since been demolished, although it is not known what associated features survive below the ground surface. The barrage balloon site is a characteristic component of the HLCA, which contains number of WWII military defence features.

The development proposals will have no direct impact upon the field name evidence – the presence of any hillfort remains to be determined, while the surviving field boundaries do not include the characteristic curves of those to the east, and are in fact typical of the large regular fields in the Carew Milton and Nash HLCA. The project may however have a very small direct impact upon any surviving subsurface features associated with the former barrage balloon site, if present.

3.3.4 *Landscape direct impact – Cosheston and Carew Milton & Nash HLCA (Tables 3.1 & 3.2)*

The proposed development contains two elements that relate to the characteristics of the Cosheston and Carew Milton and Nash HLCAs. These comprise the former site of former WWII barrage balloon site (PRN 26192) and the two broadly different types of field boundaries (PRN 38138). It is not possible to determine direct impacts upon the field name evidence (PRN 4519) and the presence of a hillfort has yet to be confirmed. Only the barrage balloon site could potentially directly affected. No above ground features have survived and the impact in the loss of elements in landscape terms is therefore considered to be negligible.

A summary of direct physical impacts is provided in Tables 3.1 & 3.2 below.

Cosheston HLCA				
Absolute impact (loss of area) >1% of total HLCA (166ha)		Magnitude & score Very slight - 1		
Relative and landscape impacts (loss of known elements or characteristics) scores				
Element % loss	Category	Magnitude	Landscape value	Landscape value effect
Shape of field boundaries suggests fields enclosed from former open field (PRNs 6412 & 38138) 0%	C-2	None - 0	Very Low - 1	None - 0
Overall Magnitude of Impact = 3/1= 3+1=4= Slight				

Table 3.1: Assessment of direct, physical impacts on Cosheston HLCA

Carew, Milton and Nash HLCA				
Absolute impact (loss of area) >1% of total HLCA (1986ha)		Magnitude & score Very slight - 1		
Relative and landscape impacts (loss of known elements or characteristics) scores				
Element % loss	Category	Magnitude	Landscape value	Landscape value effect
Fields enclosed from former open fields (PRN 38138) 0%	C -2	None – 0	Very Low - 1	None – 0
Possible Iron Age Hillfort (PRN 4519) 0%	U - 1	None – 0	None -0	None - 0
Former location of WWII barrage balloon site (PRN 26192) 1%	C -2	Very slight - 1	Very Low - 1	Very slightly reduced - 1
Overall Magnitude of Impact = 9/3 = 3 + 1 = 4 Slight				

Table 3.2: Assessment of direct, physical impacts on Carew, Milton and Nash HLCA

3.4 Overall Magnitude of Direct Impacts

In accordance with the methodology set out in ASIDOHL2 guidance, the **Overall Direct Impact** for Cosheston and Carew Milton and Nash HLCAs is **Slight**.

4. ASSESSMENT OF THE INDIRECT IMPACTS OF THE DEVELOPMENT (STAGE 3)

4.1 Indirect physical impacts

While the proposed application area lies within the Milford Haven Waterway Landscape of Outstanding Historic Interest and within the two HLCAs of Cosheston and Carew Milton and Nash, no additional indirect physical impacts are currently predicted upon these areas. Some tree planting will be undertaken as part of the scheme – it is not thought to have any significant indirect physical impacts, and will in fact be of visual benefit to the scheme, providing further screening of the proposed development.

4.2 Indirect visual impacts

The indirect visual impacts of the development have been examined in the Landscape and Visual Impact Assessment (LVIA) undertaken in parallel with the ASIDOHL2. The LVIA concluded that the principle visual impacts will be in the vicinity of Cosheston, along Point Lane, the upland areas of Mylett's Hill, Golden Hill, Little Mutton Hill and a small area in the vicinity of Upper Nash. Although the Pembroke Dock and Neyland HLCAs may be affected, the actual impact on the ground will not be significant because views are blocked by the buildings. The existing hedgerows and tree screening combined with additional planting proposals are considered to be beneficial in reducing visual impact to the north (hence the exclusion of the Benton, Lawrenny, West Williamston and Carew Newton, Scoveston and Burton HLCAs from this assessment). Further to this is the fact that the scheme will have a maximum height of c. 3m and so will not present a visual intrusion in terms of height.

The real impact will be upon the surface area of the Milford Haven Waterway Historic Landscape, and the Cosheston and Carew Milton and Nash HLCAs, which will be masked. This is particularly relevant in relation to the boundaries of Cosheston Hall Registered Historic Park and Garden (PGW (Dy) 30 (PEM) and the Pembroke Coast National Park, which lie some 45m from the northern boundary of the site. The east end of the application area is slightly intervisible with part of the Cosheston Conservation Area and the historic core of the village - the tower of St Michael's Church (Cadw No. 5955) is clearly visible over the roofline of the modern houses.

As discussed previously, the site will be visible from some locations in the wider landscape. The topography of the site, lying on a peninsula, which projects into the Daugleddau estuary means there are extensive views across Cosheston Pill and the hills rising opposite - Mylett's Hill/Golden Hill, Little Mutton Hill and Upper Nash. This means that there will be levels of intervisibility with parts of the wider registered landscape and other HLCAs (Fig. 2). While the ZTV model suggests that views of the scheme will be visible from parts of virtually every surrounding HLCA within a 5km radius of the application area, it does not take into account tree cover/hedgerows and therefore must be considered 'worst-case', with many views being generally distant in nature.

A recent site visit has demonstrated that the visual envelope of the scheme is more restricted than that presented in the ZTV, encompassing the majority of the high ground to the south and southwest of the site (Cosheston, Carew Milton and Nash and Pembroke Dock HLCAs), part of Neyland HLCA and possibly Houghton HLCA to the northwest. There will also be an indirect visual impact upon several plots immediately to the north and east of the application area, in the vicinity of Cosheston Hall Registered Historic Park and Garden (PGW (Dy) 30 (PEM), the boundary of the Pembroke Coast National Park, Cosheston Conservation Area and the core of the historic settlement. While the existing high northern field boundary impedes much of the north and northeast inward and outward views, the presence of the proposed application will have an indirect impact upon the overall settings of these landscape designations.

4.2.1 HLCAs to the north and northeast of the application area

As discussed previously ZTV has indicated that there may be an indirect visual impact upon a number of the surrounding HLCAs within a 5km zone surrounding the application area. The visual impact on the number of those HLCAs, which lie to the north and northeast of the application area is considered to be significantly mitigated by the existing hedgerows, woodland cover and proposed additional planting (see Section 7 below). The application area may be visible from high ground in the Houghton HLCA. This visibility is however limited due to screening by the northern hedgerow within the application area, and the group of conifers in the northwest corner of the western end of the application area. The magnitude of impact is therefore considered to be **Very Slight**. There will be a greater visual impact on the views from Neyland HLCA, which is clearly visible from the western end of the application area. However this may be limited and restricted due to the screening afforded by the northern boundary, the group of conifers in the northwest corner of the western end of the site, the Cleddau Bridge and existing buildings in Neyland. This area is a modern HLCA and the proposed scheme will not conflict with its historic character or degrade the understanding of its function. The magnitude of impact is therefore considered to be **Very Slight**.

Although the Benton, Waterston – Honeyborough, Scoveston and Burton, Lawrenny, West Williamston and Crew Newton HLCAs fall within the 5km radius ZTV zone (Fig. 2), they have not been further discussed as any intervisibility is considered to be very much reduced by the high northern hedgerow, existing tree cover and additional tree screening proposals, with any views therefore being distant and fragmented.

4.2.2 *HLCAs to the south, southeast and west of the application area*

The main visual envelope of the proposed scheme lies to the south and southwest of the application area and as such affects three HLCAs, Cosheston, Carew Milton and Nash and Pembroke Dock. The ZTV does indicate that technically the Pembroke and Hundleton and Maiden Wells HLCAs may also be affected. However the development is again to have a very limited impact on general views out from these character areas.

Cosheston HLCA

Within the Cosheston HLCA the proposed scheme may result in an alteration in the visual setting of Cosheston Conservation Area, the historic core of the medieval village of Cosheston (PRN 27080) and part of a former open field system associated with the medieval manor of Cosheston (PRN 38138). The proposed scheme will result in the introduction of a modern element into an essentially agricultural landscape and as such is out of keeping with this HLCA's key characteristics. The magnitude of impact upon the conservation area and historic core is considered to be **Moderate**, while the impact upon the former open fields is considered to be **Very Slight**. The tower of St Michael's Church (Cadw No. 5955) is also visible over the modern roofline from the east end of the application area. The scheme will not affect its historic character or degrade the understanding of its function, and the magnitude of impact is therefore considered to be **Very Slight**. There will be an impact on the views out from the southern section of the HLCA; this magnitude of impact is considered to be **Moderate**.

Carew Milton and Nash HLCA

The Carew Milton and Nash HLCA encircles the Cosheston HLCA and surrounds the west end of the application area (Fig. 2). A number of the elements of the HLCA lie in relatively close proximity to the proposed application area. These include Cosheston Hall Registered Historic Park and Garden (PGW (Dy) 30 (PEM)), which lies some 45m to the north of the application area and Bangeston Hall (Cadw No. 6309), which lies c. 1km to the south across the Cosheston Pill. The visual impact upon the setting of Cosheston Hall Registered Historic Park and Garden (PGW (Dy) 30 (PEM)) is considered to be **Moderate**, while there will be a **Very Slight** magnitude of impact upon the southern boundary of the Pembroke Coast National Park. The magnitude of impact upon Bangeston Hall concerns its outward views to the north, which are currently of an undeveloped rural landscape. The magnitude of impact is considered to be **Moderate**. Similarly there will also be an impact on the outward views from the southern section of the HLCA. This magnitude of impact is considered to be **Moderate**. The west end of the application area is recorded as having formerly been part of an open field system; the present field boundaries do not incorporate elements of this earlier system and any indirect visual impact created by the masking of their surface area is **Very Slight** – the boundaries will not be affected by the scheme.

Pembroke Dock HLCA

The ZTV has indicated that there may be some intervisibility between the proposed application area and the eastern end of Pembroke Dock, however this may be limited and restricted by buildings to those parts of the HLCA lying adjacent to Cosheston Pill and the Daugleddau. The proposed magnitude of impact is therefore **Very Slight**.

4.2.3 *Development form and appearance*

The proposed development will essentially comprise rows of south facing anti-glare PV modules with associated inverter and transformer stations, surrounded by a perimeter fence in what is predominantly a rural, agricultural area on the western fringe of the medieval village of Cosheston. While the essentially modern HLCAs of Neyland and Pembroke Dock lie to the west and northwest, and it could be argued that the surrounding landscape is both dynamic and changing,

the proposed application will introduce a temporary modern visual intrusion to the otherwise undeveloped peninsula. However the proposed scheme will have a duration of 25 years and is local in impact (i.e. its direct impacts relate to the 25ha area) and indirect visual impacts may be reduced by appropriate mitigation in the form of tall tree planting. On the basis of currently available information the magnitude of impact is considered to be **Severe**.

A summary of these impacts has been provided in Table 4.1 below.

Element and impact	Category & Score	Magnitude & score
HLCAs to the north and northeast of the application area		
<i>Houghton HLCA</i>		
Alteration to general views out from Houghton HLCA	A-4	Very slight – 1
<i>Neyland HLCA</i>		
Alteration to general views out from Neyland HLCA	A-4	Very Slight – 1
HLCAs to the south, southeast and west of the application area		
<i>Cosheston HLCA</i>		
St Michael's Church (Cadw No. 5955) - alteration of visual setting	A-4	Very slight – 1
Cosheston Conservation Area – alteration of visual setting	A-4	Moderate – 3
Historic settlement of Cosheston (PRN 27080) – alteration of visual setting	B-3	Moderate – 3
Fields enclosed from former open fields PRN 38138 - alteration of visual setting	C - 1	Very Slight - 1
Alteration to general inward and outward views from Cosheston HLCA & masking of landscape	A-4	Moderate – 3
<i>Carew Milton and Nash HLCA</i>		
Bangeston Hall (Cadw No. 6309) – alteration to general outward views	A-4	Moderate – 3
Cosheston Hall Registered Historic Park & Garden (PGW (Dy) 30 (PEM) - alteration of visual setting	A-4	Moderate – 3
Pembroke Coast National Park – alteration of visual setting	A-4	Very Slight – 1
Fields enclosed from former open fields associated with Cosheston (PRN 38138)	C - 1	Very Slight - 1
Alteration to general inward and outward views from Carew Milton and Nash HLCA & masking of landscape	A-4	Moderate – 3
<i>Pembroke Dock HLCA</i>		
Alteration to general views out from Pembroke Dock HLCA	A-4	Very Slight - 1
<i>The development</i>		
Proposed development form (45/13 = 3.5)	3.5	Severe - 5
Proposed development appearance (45/13 = 3.5)	3.5	Severe - 5
Overall magnitude of indirect visual impacts = $87/15 = 6 \times 28 = 168/20 = 9$		

Table 4.1: Summary of the indirect visual impacts of the development

4.3 Overall Magnitude of Indirect Impacts

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

- Indirect physical impact score = 0
- Indirect visual impact score = 6
- Combined score = 6
- Combined score multiplied by 28 then divided by 20 = 9

In accordance with the assessment scale set out in the ASIDOHL2 guidance (2007) the **Overall Magnitude of Indirect Impact** is therefore **Moderate**.

5. EVALUATION OF RELATIVE IMPORTANCE (STAGE 4)

5.1 Evaluation of Relative Importance – HLCAs affected

The Milford Haven Waterway Landscape of Outstanding Historic Interest is divided into 46 HLCAs. The proposed application area covers a small part of two HLCAs – Cosheston and Carew

Milton and Nash. The Overall Magnitude of Impact of the direct physical impacts upon Cosheston and Carew Milton and Nash HLCAs has been assessed as **Slight**.

The proposed application area may however have an indirect impact on the wider landscape and therefore three additional HLCAs have been identified as being impacted upon (Pembroke Dock, Neyland and Houghton). The Overall Magnitude of Impact of the indirect visual impacts upon the five HLCAs has been assessed as **Moderate**.

The same five HLCAs have been considered for this Stage 4 part of the ASIDOHL2 process – the Evaluation of Relative Importance. Brief descriptions of these HLCAs in the following account have been taken directly from the DAT online website www.cambria.org.uk. A discussion of their relative importance is provided, accompanied by Tables 5.1-5.14 which evaluate their Relative Importance in accordance with the guidance set out in Stage 4 of the ASIDOHL2 process.

Cosheston and Carew Milton and Nash HLCAs will be both directly and indirectly affected by the development proposals, where as the remaining three HLCAs of Pembroke Dock, Neyland and Houghton may be affected by indirect visual impacts. The nature of the development is such that the areas of indirect impact are based upon those areas which are clearly intervisible with the proposed application area and/or the ZTV models within a 3km radius of the application area.

5.1.1 *Carew Milton and Nash HLCA*

Carew Milton and Nash is a large agricultural historic landscape character area that contains several mansion houses set in parkland and gardens. These include Cosheston Hall (PRN No. 14692) and its Registered Historic Park and Garden (PGW (Dy) 30 (PEM), and Bangeston Hall (Cadw No. 6309). There are many large farms and a scattering of smaller farms. Fields are large and are divided by hedges on banks. Woodland is a strong component of parts of the landscape. Archaeological sites are varied, with most numerous being WWII defensive structures.

a) Evaluation of the Relative Importance of the part of Carew Milton and Nash HLCA directly affected by the proposed development (Table 5.1)

The proposed application area covers two large fields (Fig. 1), which are surrounded by well-maintained hedgerows on earthwork banks. Cartographic sources and field name evidence has indicated that these fields were enclosed from a former open field associated with the village of Cosheston (PRN 38318). These shape of the fields and the type of boundaries are characteristic of the HLCA; they do not retain any characteristics of enclosed strip fields. No traces of an Iron age hillfort have been identified and there can be no direct impact upon a field name.

The former WWII barrage balloon site (PRN 26192) is a characteristic element of the HLCA and technically has group value, however no above ground features have survived, therefore diminishing the physical group value. The localised area of the HLCA affected therefore does not contain a diverse range of elements or characteristics, which could be exploited for amenity value, it does not have any known associations and is of limited potential in terms of further investigation other than field investigations, particularly when compared to the whole of the Milford Haven Waterway landscape area. Some limited documentary sources still survive.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor
Score	5	4	3	2	1	5	4	3	2	1
Relative to	Carew Milton and Nash HLCA					Whole of Milford Haven Waterway landscape area				
Rarity					X					X
Representativeness					X					X
Documentation				X					X	
Group value					X					X
Survival					X					X
Condition					X					X
Coherence					X					X
Integrity					X					X
Potential					X					X
Amenity					X					X
Associations					X					X
Total score	12/55 x 100 = 22					12/55 x 100 = 26				

Table 5.1: Evaluation of the Relative Importance of the part of Carew Milton and Nash HLCA directly affected by the proposed development

b) *Evaluation of the Relative Importance of the part of Carew Milton and Nash HLCA indirectly affected by the proposed development (Table 5.2)*

The area affected is fairly extensive, comprising most of the upland areas of southern extent of the HLCA - Mylett's Hill, Golden Hill, Little Mutton Hill and Upper Nash, the north facing slopes of these hills, which includes Bangeston Hall (Cadw No. 6309), and a small area to the north of the application area near the boundaries of Cosheston Hall Registered Historic Park and Garden (PGW (Dy) 30 (PEM), Pembroke Coast National Park (Fig. 1). The east end of the application area is recorded as having formerly been part of an open field system; the present field boundaries do not incorporate elements of this earlier system and any indirect visual impact will be created by the masking of their surface area – the boundaries will not be affected.

The Carew Milton and Nash HLCA once lay within the medieval Lordship of Pembroke and medieval Barony of Carew and consequently a considerable amount of early documentation still survives. Most of the present farms and landholdings can still be identified with medieval manors. In addition, there are cartographic and documentary sources concerning Cosheston Hall, the Registered Historic Park and Garden (PRN No. 14692 & PGW (Dy) 30 (PEM) and Bangeston Hall (Cadw No. 6309). The land is generally agricultural with dispersed farmsteads/hamlets and the two historic mansion houses previously discussed. The extensive area therefore contains a number of key characteristics and elements that are typical of the HLCA, hence the relatively high score. The majority of the surviving elements are considered to have a generally low amenity value but do have high group value, survival, coherence and integrity. There is considerable scope for future landscape study analysis.

The relative importance of the area of Carew Milton and Nash HLCA in relation to the whole of the Milford Haven Waterway Registered Landscape is generally medium to high, with the known amount of documentation providing a high score. Very few of the elements or characteristic within the area are considered to have any amenity value.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor
Score	5	4	3	2	1	5	4	3	2	1
Relative to	Carew Milton and Nash HLCA					Whole of Milford Haven Waterway landscape area				
Rarity			X					X		
Representativeness		X						X		
Documentation		X					X			
Group value		X						X		
Survival		X						X		
Condition			X					X		
Coherence		X						X		
Integrity		X						X		
Potential		X						X		
Amenity				X						X
Associations		X						X		
Total score	40/55 x 100 = 73					32/55 x 100 = 59				

Table 5.2: Evaluation of the Relative Importance of the parts of Carew Milton and Nash HLCA indirectly affected by the proposed development

c) *Evaluation of the Relative Importance of Carew Milton and Nash HLCA as a whole in the National Context (Table 5.3)*

The Carew Milton and Nash HLCA is considered to be of a generally low importance in relation to the National Context because it is a largely agricultural landscape with limited historic diversity in terms of its elements and characteristics. By comparison, the majority of these elements and characteristics do not have a great amenity value, group value or survival. Its historic associations and later 19th estates provide good documentation.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/Poor
Score	5	4	3	2	1
Relative to	National Context				
Rarity				X	
Representativeness				X	
Documentation			X		
Group value					X
Survival					X
Condition				X	
Coherence				X	
Integrity				X	
Potential				X	
Amenity					X
Associations			X		
Total score	21/55 x 100 = 39				

Table 5.3: Evaluation of the Relative Importance of Carew Milton and Nash HLCA as a whole in the National Context

5.1.2 Cosheston HLCA

Cosheston is a small historic landscape character area centred on the linear village of Cosheston, which is believed to have been established in the Post Conquest period. Most of the houses in the village date to the 19th century and 20th century and narrow strip fields surround the village to the north and south. These narrow fields represent the enclosed open fields of the community. Archaeological site are few and do not form an important component of the landscape.

a) *Evaluation of the Relative Importance of the part of Cosheston HLCA directly affected by the proposed development (Table 5.4)*

The section of the proposed application area covers six plots of land (Fig. 1), which once formed part of an open field system associated with the medieval manor of Cosheston (PRN 38138). Several retain the slightly curving field boundaries. All boundaries comprise well-maintained hedgerows on earthwork banks; typical characteristics of the HLCA and have good survival, condition and coherence. Very little specific documentation survives relating to the area, which has a limited potential for further research. The elements within the area have no amenity value and no known associations, other than being land which belonged to the medieval Manor of Cosheston.

The relative importance of this part of the Cosheston in relation to the Milford Haven Waterway Registered Landscape is considered to be generally low as the localised rural area, on the fringe of a settlement does not contain a diverse range of historic elements or characteristics, and it has not been extensively redeveloped or remodelled.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor
Score	5	4	3	2	1	5	4	3	2	1
Relative to	Cosheston HLCA					Whole of Milford Haven Waterway landscape area				
Rarity					X				X	
Representativeness				X					X	
Documentation				X						X
Group value				X					X	
Survival			X						X	
Condition			X						X	
Coherence			X						X	
Integrity				X					X	
Potential					X					X
Amenity					X					X
Associations					X					X
Total score	21/55 x 100 = 39					18/55 x 100 = 33				

Table 5.4: *Evaluation of the Relative Importance of the part of Cosheston HLCA directly affected by the proposed development*

b) *Evaluation of the Relative Importance of the parts of Cosheston HLCA indirectly affected by the proposed development (Table 5.5)*

The areas affected comprise part of the land to the south of Point Lane, part of the Lane Head area of Cosheston to the west, a small area of land at the east end of the application area, adjacent to Cosheston Conservation Area and the historic core of Cosheston, which includes St Michael's Church (Cadw No. 5955). Lane Head is a modern northern extension of the village that lies outside the boundaries of the Cosheston Conservation Area. The east end of the application area is recorded as having formerly been part of an open field system; several of the present field boundaries incorporate elements of this earlier system.

These restricted areas contain several elements and characteristics that are typical of the HLCA; principally the curving field boundaries, which represent strips enclosed from the former open fields and the historic core of the village (PRN 27080). Both are considered to be important elements, which have documentation as a result the association with Pembroke Castle and the presence of the church. These elements and characteristics are in moderate condition, the majority are visible and retain some of their original character, hence the relatively high score. There is no scope for the development of the any of these elements for public or recreational activity.

The relative importance of this area of Cosheston HLCA in relation to the whole of the Milford Haven Waterway Registered Landscape is considered to be low because it is a generally undeveloped rural settlement and landscape, which contains a low range of historic elements and characteristics. It has not been extensively redeveloped or remodelled.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor
Score	5	4	3	2	1	5	4	3	2	1
Relative to	Cosheston HLCA					Whole of Milford Haven Waterway landscape area				
Rarity				X						X
Representativeness				X					X	
Documentation			X						X	
Group value				X						X
Survival			X						X	
Condition			X						X	
Coherence			X					X		
Integrity			X						X	
Potential				X					X	
Amenity					X					X
Associations			X							X
Total score	27/55 x 100 = 50					19/55 x 100 = 35				

Table 5.5: Evaluation of the Relative Importance of the parts of Cosheston HLCA indirectly affected by the proposed development

c) *Evaluation of the Relative Importance of Cosheston HLCA and as a whole in the National Context (Table 5.6)*

The Cosheston HLCA is considered to be of a generally low importance in relation to the National Context because it is a largely agricultural landscape with limited historic diversity in terms of its elements and characteristics and comparatively poor documentation. The majority of these elements and characteristics do not have a great amenity value and there are no known associations.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/Poor
Score	5	4	3	2	1
Relative to	National Context				
Rarity					X
Representativeness				X	
Documentation					X
Group value				X	
Survival				X	
Condition				X	
Coherence				X	
Integrity				X	
Potential				X	
Amenity					X
Associations					X
Total score	18/55 x 100 = 33				

Table 5.6: Evaluation of the Relative Importance of Cosheston HLCA as a whole in the National Context

5.1.3 Houghton HLCA

Houghton is a small historic landscape character area centred on the hamlet of that name, which is surrounded by an enclosed strip-field system – the old open fields of the community fields. The area occupies a distinct pocket suggesting that it may have been created from earlier common land. The loosely clustered houses in the hamlet are of 19th century and 20th century date. Only a small

proportion of the original elements – the long strip-shaped fields are present. The majority are now fairly regular in shape and approximate to a rectangle. There are only a few archaeological sites.

The ZTV has indicated that there may be some very limited intervisibility between the proposed application area and the high ground within the HLCA, however this may be very restricted and/or fragmented due to the screening by the existing high northern boundary and tree cover and will be further mitigated by tree planting proposals.

a) *Evaluation of the Relative Importance of the part of Houghton HLCA indirectly affected by the proposed development (Table 5.7)*

The surviving characteristics of the area affected are fairly commonplace throughout the HLCA. This area has no known historic associations, with the surviving characteristics (the field boundaries) having a very low potential for recreational amenity. Some modest research sources are still available, but the area has limited potential for further research. The historic themes are present but weak, although the surviving field boundaries retain much of their original character, providing group value.

The relative importance of the area of Houghton HLCA in relation to the whole of the Milford Haven Waterway Registered Landscape is considered to be low because it is a generally undeveloped small rural settlement and landscape, which contains a low range of historic elements and characteristics. It has not been extensively redeveloped or remodelled.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor
Score	5	4	3	2	1	5	4	3	2	1
Relative to	Houghton HLCA					Whole of Milford Haven Waterway landscape area				
Rarity					X					X
Representativeness				X						X
Documentation				X					X	
Group value				X					X	
Survival				X						X
Condition				X					X	
Coherence					X					X
Integrity			X							X
Potential					X					X
Amenity					X					X
Associations					X					X
Total score	18/55 x 100 = 33					14/55 x 100 = 26				

Table 5.7: *Evaluation of the Relative Importance of the part of Houghton HLCA indirectly affected by the proposed development*

b) *Evaluation of the Relative Importance of the parts of Houghton HLCA and as a whole in the National Context (Table 5.8)*

Houghton HLCA has a moderate to low significance in a National Context because it is a small rural area with little diversity in elements and characteristics. There remains some potential for further landscape research. Existing documentation is generally limited with the surviving elements having comparatively low group value and survival.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/Poor
Score	5	4	3	2	1
Relative to	National Context				
Rarity					X
Representativeness					X
Documentation				X	
Group value				X	
Survival				X	
Condition					X
Coherence					X
Integrity					X
Potential				X	
Amenity					X
Associations					X
Total score	15/55 x 100 = 28				

Table 5.8: Evaluation of the Relative Importance of Houghton HLCA as a whole in the National Context

5.1.4 Pembroke Dock HCLA

Pembroke Dock historic landscape character area comprises the 19th century naval dockyards and the 19th century grid-pattern planned town. Included in this area are many 19th century worker and town houses, with 20th century housing and light industrial development on its outskirts. The ZTV has indicated that there may be some intervisibility between the proposed application area and the eastern end of Pembroke Dock, however this may be limited and restricted by buildings to those parts of the HLCA lying adjacent to Cosheston Pill and the Daugleddau. The historic and archaeological elements and characteristics are restricted to the later 19th century and 20th military installations, the naval dockyards and the associated housing and private shipbuilding.

a) *Evaluation of the Relative Importance of the part of Pembroke Dock HLCA indirectly affected by the proposed development (Table 5.9)*

The possible area indirectly affected by the proposed development is considered not to be generally representative of the HLCA, with much of the land being occupied by modern housing, the Waterloo Industrial Estate, patches of agricultural land and a band of woodland along the shoreline with the Daugleddau. This area was formerly agricultural land. Some documentation survives due to the association of the area with medieval Lordship of Pembroke. The area affected does not contain elements or characteristics that are typical of the HLCA and therefore has little value in terms of group value, survival, condition, coherence and integrity.

The difference in scores, when the HLCA is assessed in relation to the whole of the Milford Haven Waterway Registered Landscape reflects the limited area affected versus the importance of the characteristic and elements within the whole of the HLCA.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor
Score	5	4	3	2	1	5	4	3	2	1
Relative to	Pembroke Dock HLCA					Whole of Milford Haven Waterway landscape area (b)				
Rarity					X		X			
Representativeness					X			X		
Documentation				X			X			
Group value					X			X		
Survival					X			X		
Condition					X			X		
Coherence					X			X		
Integrity					X			X		
Potential				X				X		
Amenity				X				X		
Associations			X					X		
Total score	16/55 x 100 = 29					35/55 x 100 = 64				

Table 5.9: Evaluation of the Relative Importance of the part of Pembroke Dock HLCA indirectly affected by the proposed development

b) Evaluation of the Relative Importance of the part of Pembroke Dock as a whole in the National Context (Table 5.10)

Pembroke Dock HLCA is considered to be of high significance in terms of the National Context due to its historical links with the Lordship of Pembroke and later 19th and 20th century naval and military heritage, which includes the dockyards, the RAF flying boat base, Pembroke fort and other associated military and naval structures.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/Poor
Score	5	4	3	2	1
Relative to	(c) Whole of Pembroke Dock HLCA in National Context				
Rarity			X		
Representativeness			X		
Documentation			X		
Group value			X		
Survival		X			
Condition		X			
Coherence		X			
Integrity		X			
Potential			X		
Amenity			X		
Associations	X				
Total score	39/55 X 100 = 71				

Table 5.10: Evaluation of the Relative Importance of Pembroke Dock HLCA as a whole in the National Context

5.1.5 Neyland

Neyland is a small urban historic landscape character area centred on the old port and railway station. The town expanded from this focus during the 19th century to include the former village of Great Honeyborough. Late 20th century housing and light industrial development lie on the outskirts of the town.

The ZTV has indicated that there may be some intervisibility between the proposed application area and the parts of Neyland lying in the combe and the shoreline adjacent to the Daugleddau. However these views may be limited and restricted due to the screening afforded by the northern boundary, the group of conifers in the northwest corner of the western end of the site, the Cleddau Bridge and existing buildings in Neyland.

a) *Evaluation of the Relative Importance of the parts of Neyland HLCA indirectly affected by the proposed development (Table 5.11)*

The possible area indirectly affected by the proposed development is considered to be generally representative of the HLCA, with much of the land being occupied by the core settlement of Neyland and the adjacent marina. The area is generally of low value in terms of documentation, group value, condition, coherence and integrity, with little potential for further research. There are no known associations and the surviving elements have little potential for further development in terms of amenity. The relative importance of the HLCA in relation to the whole of the Milford Haven Waterway Registered Landscape is considered to be similar, for the same reasons.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/ Poor
Score	5	4	3	2	1	5	4	3	2	1
Relative to	Neyland HLCA					Whole of Milford Haven Waterway landscape area				
Rarity					X					X
Representativeness				X						X
Documentation				X						X
Group value				X						X
Survival				X					X	
Condition				X					X	
Coherence					X					X
Integrity					X				X	
Potential					X					X
Amenity					X					X
Associations					X					X
Total score	16/55 x 100 = 29					14/55 x 100 = 26				

Table 5.11: *Evaluation of the Relative Importance of the parts of Neyland HLCA indirectly affected by the proposed development*

b) *Evaluation of the Relative Importance of the parts of Neyland HLCA as a whole in the National Context (Table 5.12)*

Neyland HLCA has low significance in a National Context because it is a largely urban area, with no known associations and little diversity in elements and characteristics. The surviving elements have limited group value, coherence and they are not always easy to interpret. There is little potential for further landscape research and little further amenity value.

Value/Criteria	V High/ V Good	High/ Good	Moderate/ Medium	Low	V Low/Poor
Score	5	4	3	2	1
Relative to	(c) Whole of Neyland HLCA in National Context				
Rarity					X
Representativeness				X	
Documentation				X	
Group value					X
Survival				X	
Condition				X	
Coherence					X
Integrity				X	
Potential					X
Amenity					X
Associations					X
Total score	16/55 x 100 = 30				

Table 5.12: *Evaluation of the Relative Importance of Neyland HLCA as a whole in the National Context*

5.2 Summary of evaluation scores

Using the conversion formula set out in ASIDOHL2 guidance, whereby the score for each stage of the assessment is expressed as a percentage of the final possible score (in this case 55) and then an average is taken of these percentages, the final **Overall Relative Importance** is **39%**. This equates to an **Overall Value of Relative Importance** of **Moderate** for the landscape elements and characteristics affected by the proposed development. The total % scores are summarised below in Table 5.15.

Table 1	Value measured	Score
5.1	Value of the Relative Importance of the part of Carew Milton and Nash HLCA directly affected relative to the whole of Carew Milton and Nash HLCA	22%
	Value of the Relative Importance of the part of Carew Milton and Nash HLCA directly affected relative to the whole of the landscape character area	22%
5.2	Value of the Relative Importance of the part of Carew Milton and Nash HLCA indirectly affected relative to the whole of Carew Milton and Nash HLCA	73%
	Value of the Relative Importance of the part of Carew Milton and Nash HLCA indirectly affected relative to the whole of the landscape character area	59%
5.3	Value of the Relative Importance of Carew Milton and Nash HLCA in a National Context	39%
5.4	Value of the Relative Importance of the part of Cosheston HLCA directly affected relative to the whole of Cosheston HLCA	39%
	Value of the Relative Importance of the part of the Cosheston HLCA directly affected relative to the whole of the landscape character area	33%
5.5	Value of the Relative Importance of the part of the Cosheston HLCA indirectly affected relative to the whole of Cosheston HLCA	50%
	Value of the Relative Importance of the part of the Cosheston HLCA indirectly affected relative to the whole of the landscape character area	35%
5.6	Value of the Relative Importance of Cosheston HLCA in a National Context	33%
5.7	Value of the Relative Importance of the part of Houghton HLCA indirectly affected relative to the whole of Houghton HLCA	33%
	Value of the Relative Importance of the part of Houghton HLCA indirectly affected relative to the whole of the landscape character area	26%
5.8	Value of the Relative Importance of Houghton HLCA in a National Context	28%
5.9	Value of the Relative Importance of the part of Pembroke Dock HLCA indirectly affected relative to the whole of Pembroke Dock HLCA	29%
	Value of the Relative Importance of the part of Pembroke Dock HLCA indirectly affected relative to the whole of the landscape character area	62%
5.10	Value of the Relative Importance of Pembroke Dock HLCA in a National Context	71%
5.11	Value of the Relative Importance of the part of Neyland HLCA indirectly affected relative to the whole of Neyland HLCA	29%
	Value of the Relative Importance of the part of the Neyland HLCA indirectly affected relative to the whole of the landscape character area	26%
5.12	Value of the Relative Importance of Neyland HLCA in a National Context	30%
Total		739/19 = 39 Moderate

Table 5.15: Summary of evaluation scores

6. ASSESSMENT OF OVERALL SIGNIFICANCE OF IMPACT (STAGE 5)

6.1 Assessment of overall significance of impact

Using the conversion formula set out in ASIDOHL2 guidance, the overall significance of the impact of the development on Milford Haven Waterway Landscape of Outstanding Historic Interest is **Slight**. The total scores are summarised below in Table 6.1.

HLCA affected	Value of HLCA	Impact of development	Reduction of the value of the historic landscape area on the register	Total score	Overall significance of impact on HLCA
Cosheston	5	1 – Very Low	1 – Very Low	7	Slight
Carew Milton & Nash	6	1 – Very Low	1 – Very Low	8	Slight
Houghton	3	1 – Very Low	1 – Very Low	5	Slight
Pembroke Dock	7	1 – Very Low	1 – Very Low	9	Slight
Neyland	4	1 – Very Low	1 – Very Low	6	Slight

Table 6.1: Assessment of overall significance of impact

7. MITIGATION

- 7.1 The only significant impact that has emerged is the potential for visual intrusion on parts of five of the HLCAs within a c. 3km radius of the application area. There will also be more localised indirect visual impacts upon the setting of Cosheston Hall Registered Historic Park and Garden (PGW (Dy) 30 (PEM)), Cosheston Conservation Area and the historic core of Cosheston (PRN 27080). The application area appears to be part of a former open field system; several of the field boundaries at the eastern end of the scheme are slightly curving, reflecting their enclosure from former strip fields. While the boundaries will be unaffected by the scheme, a small percentage of the Cosheston and Carew Milton and Nash HLCAs surface areas will be masked by the scheme.
- 7.2 Mitigation proposals include tall tree planting in particularly sensitive areas and a rearrangement in the configuration/layout of the PV panels adjacent to the southern boundary of the application area. Further to this is the fact that the scheme only has a duration of 25 years and as such these indirect visual impacts will be temporary and reversible.
- 7.3 The site of the barrage balloon is known to have been cleared of all above ground infrastructure, presumably to restore the plot to agricultural use following the end of the war. It is possible that associated sub-surface remains may still be present and that these will be disturbed by the piling for the PV panels and possible groundworks associated with the inverter and transformer stations (Figs. 1 & 2).
- 7.4 There remains some limited potential for the presence of hitherto unrecorded archaeological remains, which could be directly affected by the development. However the survival of any such deposits is questionable given the long period of agricultural use.

8. CONCLUDING STATEMENT

- 8.1 The impacts of the proposed solar farm on a c. 25ha area of agricultural land at West Farm, Cosheston are confined to those of an indirect visual nature. However these impacts will be temporary and reversible as the scheme will only be in place for 25 years. Physical impacts are

restricted to a very small surface area of the two HLCA affected – Cosheston and Carew Milton and Nash. No significant archaeological deposits have been indentified within these areas.

- 8.2 Consequently the proposed scheme is considered to have only a very slight impact upon the Milford Haven Waterway Landscape of Outstanding Historic Interest. The scheme will not prevent the understanding of the historic function of this landscape or its evolution and the fundamental characteristics and elements will not be significantly altered.
- 8.3 The scheme's indirect visual impacts do not apply to entire HLCA but rather those parts covered by the proposed scheme, or areas which are intervisible. Most of the historic landscape will be unaffected; much of the expansive environment will continue to be seen and interpreted despite the presence of the solar farm. It will only have limited impact on general views within the wider registered area.

9. REFERENCES

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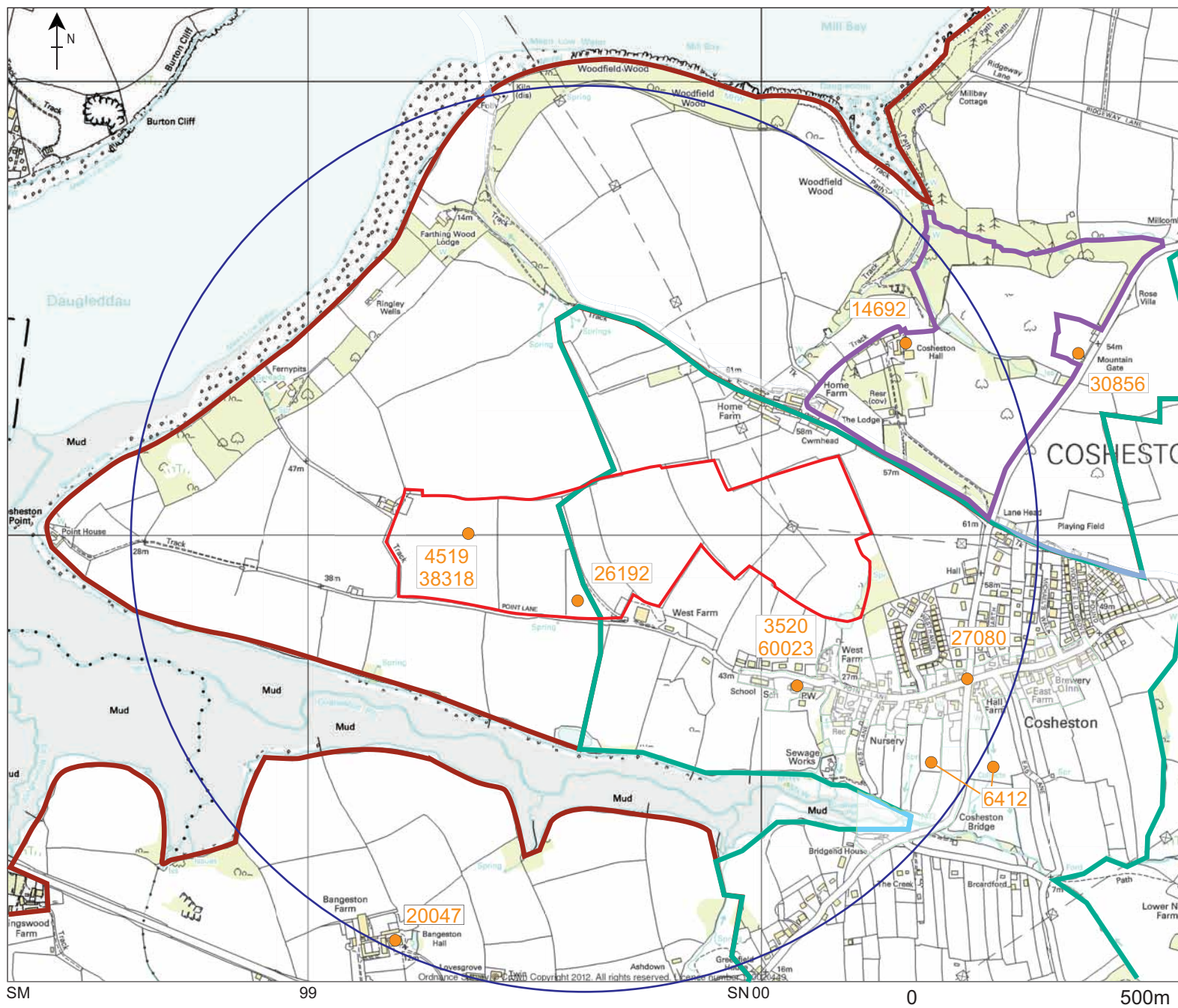
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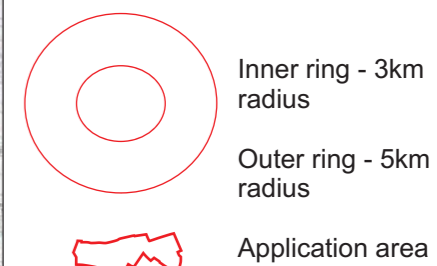
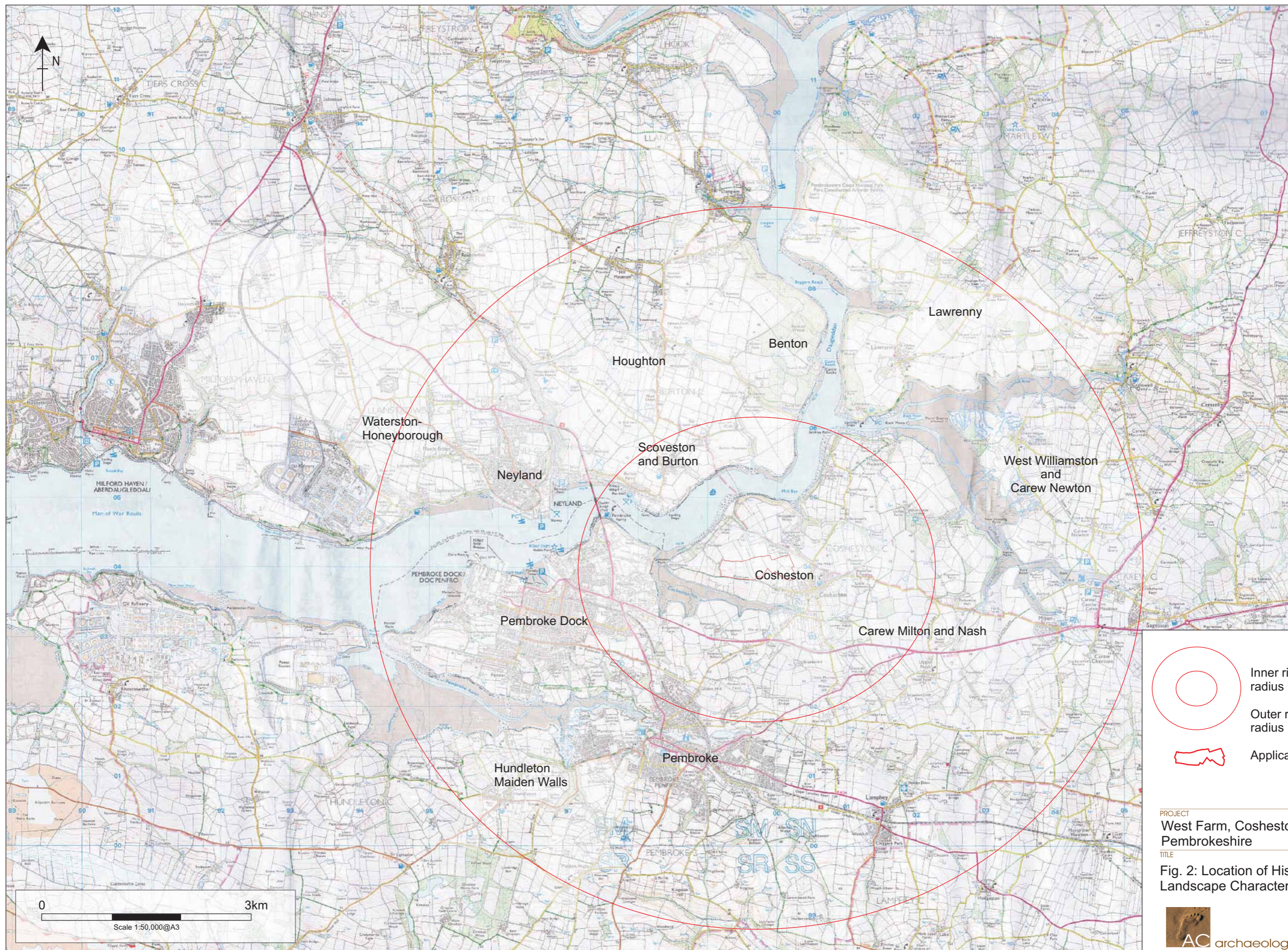
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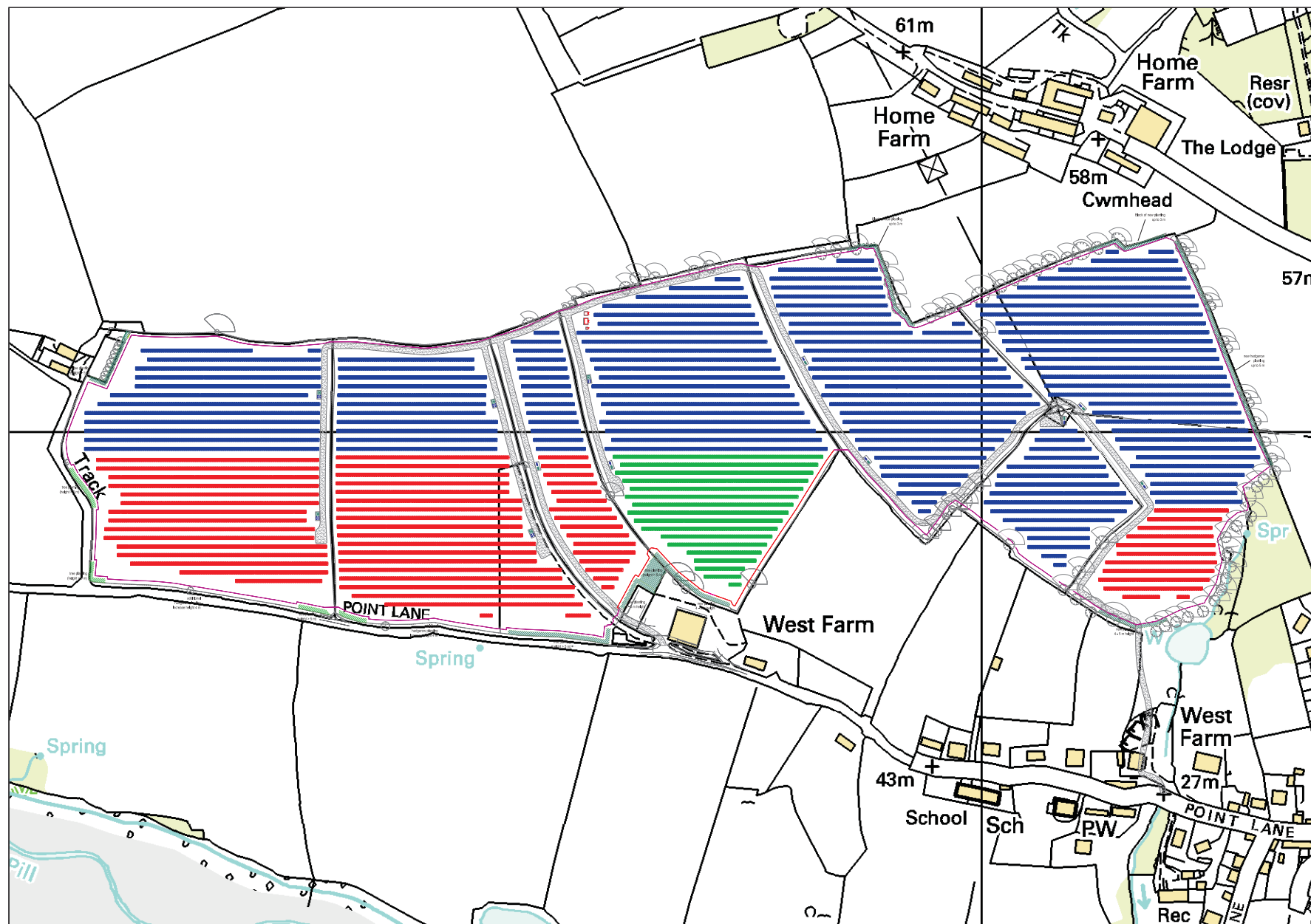
- Cosheston Conservation Area
- Cosheston Hall Historic Park &
- Pembrokeshire National Park
- Cosheston Historic Landscape Boundary
- Carew, Milton and Nash Historic Landscape Boundary
- Archaeological sites
- Application area

PROJECT
West Farm, Cosheston,
Pembrokeshire

TITLE
Fig. 1: Location of site and key
cultural heritage features







PROJECT
West Farm, Cosheston,
Pembrokeshire

TITLE
Fig. 3: Details of the
proposed development

Appendix 1

Milford Haven Waterway Landscape of Outstanding Historic Interest



MORYD ABERDAUGLEDDAU MILFORD HAVEN WATERWAY

*Moryd Aberdaugleddau.
Milford Haven waterway.*



Hawlfraint y Goron: CBHC / Crown Copyright RCAHMW.

Disgrifiad o'r tirwedd

Ria yw Aberdaugleddau, hynny yw, dyffryn a foddwyd ar ddiwedd Oes yr Ia ddiwethaf; mae ei dyfroedd dwfn ond cysgodol yn ymestyn 30km i mewn i'r tir o'i haber, cyn ymrannu yn Gledau Ddu a Chleddau Wen, sydd wedyn yn parhau fel afonydd llanw am beth ffordd. Mae isafonydd megis Penfro, Caerw a Cresswell a llawer o rai llai yn llifo i'r aber yn gwneud cryn dipyn i gynyddu hyd y glannau a'r ei harfordir troellog a rhychiog. Ar y naill ochr a'r llall, ac yn ymestyn i bentiroedd Dale ac Angle yng ngheg yr aber, anaml y cyfyd llwyfandir arfordirol isel de Sir Benfro yn uwch na 80m uwchben SO.

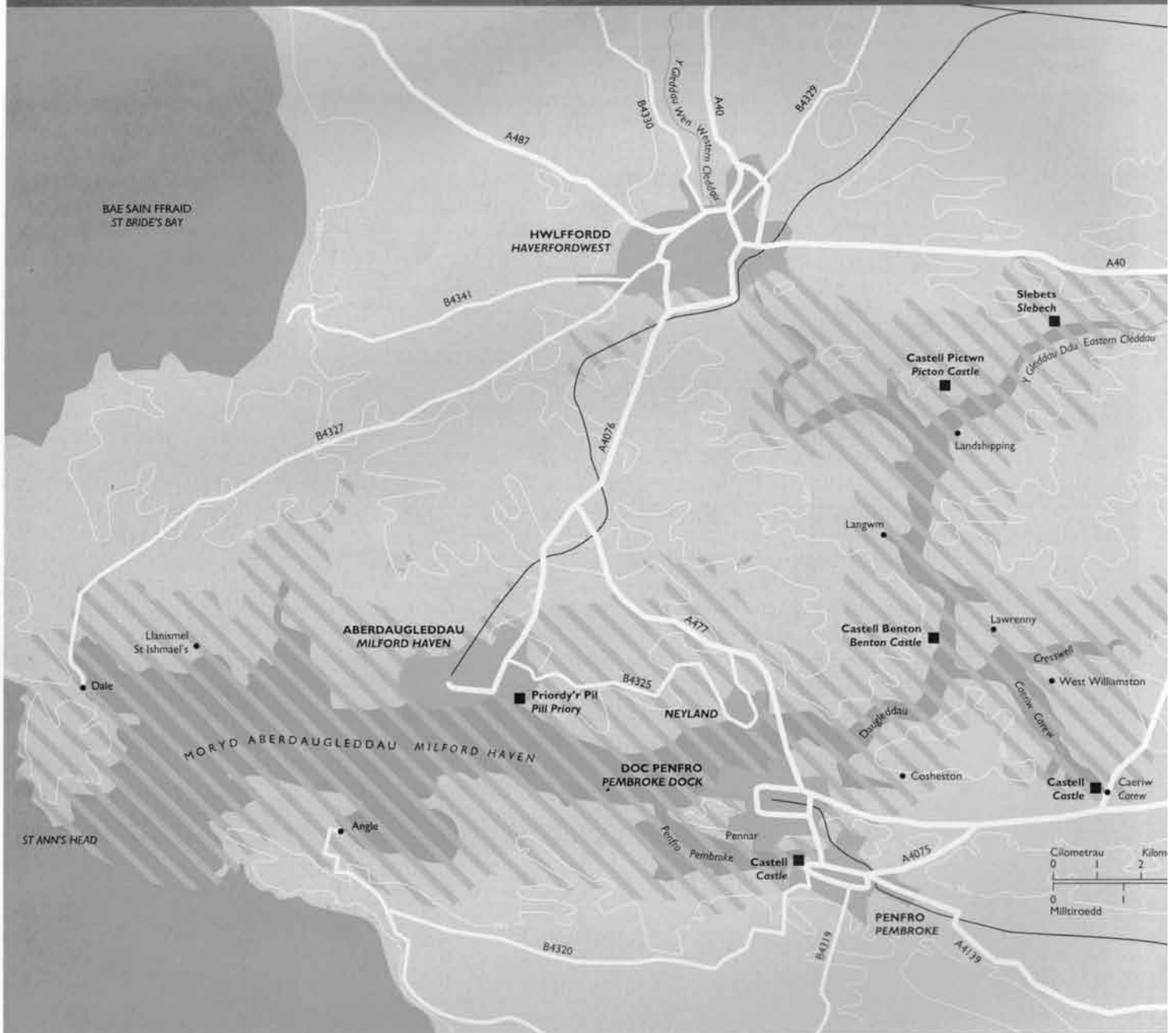
Mae tirwedd arfordirol Aberdaugleddau yn cwmpasu holl amred cronolegol gorchfygiad forwrol, aneddiadau, masnach, pysgota ac amddiffyn o'r 11fed ganrif i newidiadau'r 20fed

Landscape description

The Haven is a ria or drowned valley flooded after the end of the last Ice Age; its deep yet sheltered waters extend 30km inland of its mouth, before dividing into the Eastern and Western Cleddau which continue as tidal rivers for some distance. Tributaries such as the Pembroke, Carew and Cresswell Rivers and several smaller pills flowing into the Haven, significantly increase the length of its meandering and incised shore and coastline. On either side and extending to the Dale and Angle peninsulas at the Haven's mouth, the low coastal plateau of south Pembrokeshire seldom rises above 80m above OD.

The littoral landscape of Milford Haven encapsulates the whole chronological range of maritime conquest, settlement, commerce, fishing and defence from the 11th century to the

MORYD ABERDAUGLEDDAU
MILFORD HAVEN WATERWAY



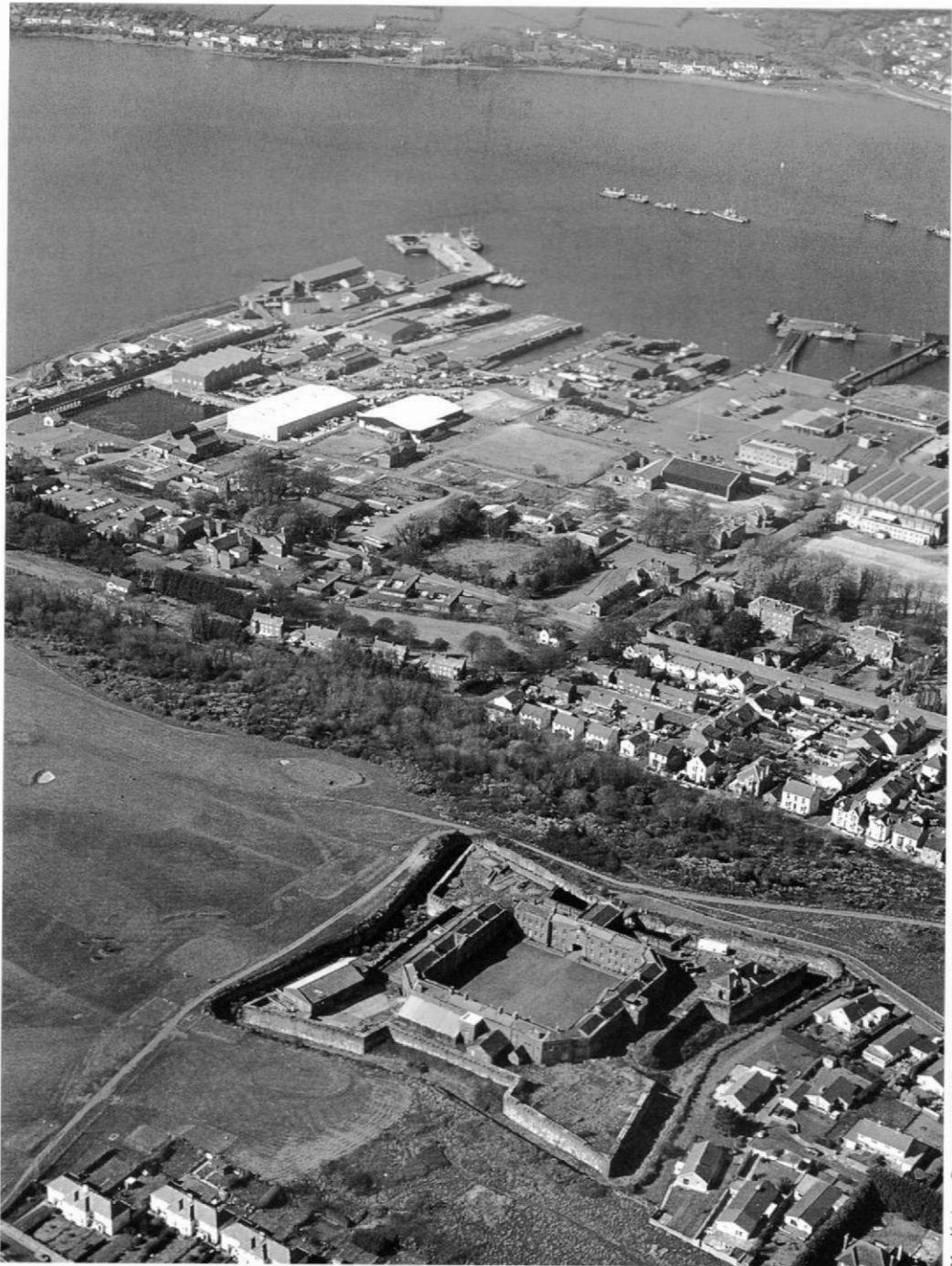
ganrif. Dyma dirwedd amlwg a gwahanol iawn, yn dir a môr; dyma hefyd ei hynodrwydd. Mae'n dangos parhad a'r gallu i addasu, ac o ran lleoliad ac amrywiaeth nodweddion, y mae'n unigryw yng Nghymru os nad ym Mhrydain. Ac eto, er iddo addasu'n rymus i weithrediadau morwrol y diwydiannau olew a phŵer, mae'r tirwedd arfordirol amlgyfnodol hwn hefyd yn dibynnu ar gadw ei elfennau hanesyddol.

Y mae caerâu pentir o Oes yr Haearn ar lawer o'r pentiroedd wrth fynedfa ac ar hyd yr aber a'r Daugleddau. Ceir tystiolaeth am safleoedd canoloesol cynnar, Cristnogol a Llychlynnaidd mewn enwau lleoedd, dogfennau ac arysgrifau, megis yr arysgrifau cofadeiliau Cerrig Cristnogol Cynnar, ond ni welir yr olion hyn bellach yn y tirwedd. Mewn gwrthgyferbyniad â hyn, mae olion y gorchfygiad Normanaidd, a gafwyd trwy leoli bwrdeistrefi cestyll mewn mannau strategol ar yr arfordir, yn dal yn ddramatig o bresennol ym Mhenfro, Hwlffordd, ac yng Nghaerw sydd

changing realities of the late 20th century. This is a highly articulate and distinctive land and seascape; its integrity is its highest factor. It exhibits both continuity and adaptation and its overall setting and range of features make it unique in Wales if not in Britain. Yet, despite its robust adaptation to the modern industrial and maritime operations of the oil and power industries, the integrity of this multiperiod coastal landscape also depends on the conservation of its historic elements.

Iron Age promontory forts are sited on several of the headlands at the entrance and along the course of the Haven and the Daugleddau. Early medieval, Christian and Viking sites are evidenced on place-name, documentary and epigraphic grounds, such as Early Christian Inscribed Stone monuments, but are no longer visible in the landscape. By contrast, the Norman conquest, achieved by coastally sited castle-boroughs, is still dramatically present at Pembroke, at Haverfordwest, and at Carew, all sited on the upper reaches of the rivers. Carew

*Doc Penfro.
Pembroke Dock.*



Hawlfraint y Goron: CBHC/Crown Copyright: RCAHMW.

oll ym mhen uchaf yr afon. Ni ddatblygodd Caeriw yn fwrdeistref, a dangosodd gwaith cloddio, ynghyd ag astudiaeth o dirwedd hanesyddol plwyf Caeriw, fod caer o'r Oesoedd Tywyll ac o bosibl, safle Brythonaidd-Rufeinig, yno cyn y castell Normanaidd, sydd, efallai, yn arwydd y bu canolfannau cyn-Normanaidd cyffelyb ym Mhenfro a Hwlfordd. Tyfodd y bwrdeistrefi hyn mor syfrdanol erbyn y 13edd ganrif yn rhannol oherwydd iddynt gael eu defnyddio fel mannau cychwyn i ymosodiadau'r Normaniaid ar yr Iwerddon.

Yn ddiweddarach, bu codi pont Cleddau yn derfyn ar gyfnod rhwydwaith o fferïau ar draws yr aber, sy'n esbonio patrwm hanesyddol tramwyfeydd ac aneddiadau ar lannau'r Daugleddau, sydd i'w gweld o hyd yn olion y glanfeydd, pieri a jetiau. Arweiniai'r llwybrau cynnar ar draws yr aber i Dyddewi a glanfeydd yr Oesoedd Tywyll. Ar droed y 18fed a'r 19edd ganrifoedd, codwyd dwy dref newydd, Aberdaugleddau ym 1790 gan Syr William Hamilton, a Doc Penfro ym 1802 pan

did not develop into a borough, and excavations, combined with a historic landscape study of Carew parish, has shown that a Dark Age stronghold and possible Romano-British site preceded the Norman castle, an indicator perhaps of similar pre-Norman foci at Pembroke and Haverfordwest. The precocious growth of these boroughs by the 13th century was partly because of their use as springboards for the Norman invasions of Ireland.

In more recent times, the construction of the Cleddau bridge marked the end of a network of cross-Haven ferries, which explains the historic pattern of communications and settlements on the shores of the Daugleddau still visible in surviving traces of landing places, piers and jetties. Early cross-Haven routes led to St Davids and Dark Age embarkation and landing points. At the turn of the 18th and 19th centuries, two new towns were constructed, Milford in 1790 by Sir William Hamilton, and Pembroke Dock in 1802 when the Royal Naval

drosglwyddwyd Dociau'r Llynges Frenhinol o Aberdaugleddau. Mae i'r ddwy dref gynllun rheolaidd; mae gan y naill a'r llall hanes o hawddfyd a dirwasgiad mewn adeiladu llongau a physgota, ac fel gorsafoedd terfynol i longau a rheilffyrdd. Er gwaethaf rhai newidiadau mawr yn niwedd yr 20fed ganrif, cadwodd y naill dref a'r llall eu trefweddau a'u glannau arbennig, ac erys llawer o Ddociau'r Llynges o hyd.

Golygodd newidiadau ym maint a thechnoleg llongau fod patrwm cynharach masnach arfordirol mwy gwasgaredig o lefydd megis Dale ac Angle yng ngheg yr aber wedi'i adleoli gyda chodi'r ddwy dref hon; digwyddodd hyn hefyd yn fwy graddol gyda masnach ym Mhenfro a Hwlfordd, a thueddwyd i ganolbwyntio ar y dociau newydd. I raddau, mae hyn wedi cadw, hyd yn oed wedi ffosileiddio, ceiau, jetiau a glanfeydd ac aneddiadau bach megis Pennar, Lawrenny, Landshipping neu Cosheston (lle 'roedd dwy iard longau yn y 18fed ganrif), sydd yn uwch i fyny'r afon. Arferai'r porthladdoedd bach hyn wasanaethu maes glo Sir Benfro, sydd ar lannau'r Daugleddau, a hefyd y chwareli calchfaen mawr yng Ngorllewin Trewiliam, lle'r oedd cyfres ryfeddol o gamlesi byr trwy wastadeddau'r llanw yn caniatáu i ysgraffiau fynd yn syth at wyneb y gwaith pan fo'r llanw'n uchel. Yr oedd porthladdoedd y Daugleddau yn llewyrchus yn yr 16fed, 17ail a'r 18fed ganrifoedd, ond bu iddynt ddal i weithio trwy gydol y 19edd ganrif, trwy newid i ddefnyddio ysgraffiau i gludo nwyddau i lawr yr afon ac i longau mwy yn y porthladdoedd yn is i lawr yr aber.

Trowyd y cestyll canoloesol ym mhen uchaf yr aber, megis Benton, Pictwn a Chaeriw, yn dai i'r uchelwyr. Mae sefydliadau eglwysig canoloesol, rhai bach yn bennaf, fel Priordy'r Pil neu Rhaglwyddoldy Slebech, yn furddunnod, neu fe'u trowyd yn dai. Castell Pictwn yn unig sydd â hanes di-dor o breswylad ac o gael ei droi yn blasdy helaeth gyda pharciau a gerddi oedd yn defnyddio blaendraeth cymerau'r Gledau Ddu a'r Gledau Wen. Ar y llaw arall, mae safleoedd gerddi a pharciau cynharach o'r 17ail ganrif, sydd wedi eu cadw'n dda ond wedi eu gadael yn segur, yn dal i gael eu darganfod, yr amlycaf yw gerddi terasog Tŷ Landshipping, nad yw'n bod mwyach.

Y mwyaf cyflawn o'r amddiffynfeydd milwrol a morwrol yn Aberdaugleddau yw Ceyrydd Palmerston, sy'n dyddio o ganol i ddiwedd y 19edd ganrif. Gellir gwerthfawrogi datblygiad amddiffynfeydd ac arfau'r Llynges yn ei gyflawnder trwy edrych ar y ceyrydd o'r môr ac o'r glannau, ynghyd â'r barics a'r ceyrydd mewndirol, y storffeydd a'r depos. Mae'r deinosoriaid milwrol hyn yn peri problemau cadwraeth a defnydd, ac y mae'r un tynged yn dechrau goddiwedd y rhan os nad y cyfan o etifeddiaeth diwedd yr 20fed ganrif i Aberdaugleddau, sef y jetiau o fewn a gweithfeydd prosesu'r diwydiannau o fewn a phŵer. Cyrhaeddodd y diwydiant hwn ei uchafbwynt yn y 1970au pan orfodwyd cwmnïau cludo o fewn gan anhawsterau cyflenwi yn y Dwyrain Canol i ddefnyddio llwybrau'r moroedd i'r CCE (Cludwyr Crai Enfawr). Yr oedd Moryd Aberdaugleddau, gyda'i dyfroedd dwfn a'i safle ar arfordir gorllewinol gogledd orllewin Ewrop, yn arbennig o addas ar gyfer hyn. O ran effaith weledol ar y tirwedd presennol, nid oes modd anwybyddu'r diwydiant o fewn a trefnau rheoli trafniadaeth y môr a redir gan Awdurdod Porthladd Aberdaugleddau.

Dockyard was transferred from Milford. Both towns have regular planned layouts, both have experienced a history of boom and slump in shipbuilding, fishing and as railheads and ocean terminals. Despite some major changes in the late 20th century, they both preserve distinctive townscapes and waterfronts and much still remains of the Naval Dockyard.

Changes in the ship sizes and technology meant that with the construction of these two towns, an earlier pattern of more dispersed coastal trade from places like Dale and Angle at the mouth of the Haven, and gradually from Pembroke and Haverfordwest, was relocated and concentrated in the new docks. This has to some extent preserved, even fossilized, quays, jetties and landing places and small settlements like Pennar, Lawrenny, Landshipping or Cosheston (which had two shipbuilding yards in the 18th century) further up river. These small ports served the coal mines of the Pembrokeshire coalfield located on both shores of the Daugleddau, and also the large limestone quarries at West Williamston, where a remarkable series of short canals through the tidal flats allowed direct barge access to the working faces at high tide. The Daugleddau ports flourished in the 16th, 17th and 18th centuries, but continued to work through the 19th century by changing to using barges to tranship cargoes down river to bigger vessels at the mid-Haven ports.

Medieval castles in the upper reaches of the Haven like Benton, Picton and Carew became transformed into gentry residences. Medieval ecclesiastical establishments, mainly small like Pill Priory or the Slebech Preceptory, survive as ruins or were adapted into residences. Only Picton Castle has an unbroken history of occupation and transformation into a great mansion with parks and gardens utilising the foreshore of the confluence of the Eastern and Western Cleddau Rivers. Conversely, well preserved sites of earlier, abandoned 17th century gardens and parks are still being recognized, notably the recently discovered terraced gardens of the vanished Landshipping House.

The most complete of the military and naval fortifications and service structures in the Haven are the mid to late 19th century Palmerstonian Forts. The development of naval defence and weaponry can be appreciated in its entirety by viewing the forts both from the waterway and from the shores together with barracks and inland forts, stores and depots. These military dinosaurs present problems of conservation and use, and the same fate is beginning to overtake some if not all of the late 20th century's legacy to the Haven, namely the jetties, oil terminals and shore processing facilities of the oil and power industries. This industry reached its zenith in the 1970s when Middle Eastern supply difficulties forced oil transport to use ocean routes in the VLCCs (Very Large Crude Carriers) for which the Haven, with its deep waters and westerly position on the north west European seaboard, was particularly suited. Visually, and in terms of the impact on the present landscape, the oil industry and the regulatory shore installations of traffic control and sea navigation systems run by the Milford Haven Port Authority cannot be ignored.

CRYNODEB

<i>Rhif cyf</i>	HLW (D) 3
<i>Rhif map mynegai</i>	5
<i>Map AO</i>	Landranger 157, 158
<i>Sir flaenorol</i>	Dyfed
<i>Awdurdod unedol</i>	Sir Benfro
<i>Prif ddynodiadau helaeth</i>	Mae rhannau o'r ardal yn Mbarc Cenedlaethol Arfordir Penfro. Mae ochr ogleddol Aberdaugleddau yn Ardal Amgylchedd Arbennig Preseli. Mae'r ardal yn cynnwys: Safleoedd o Ddiddordeb Gwyddonol Arbennig Bae Angle, Afonydd Caeriu a Cresswell, Chwareli Gorllewin Trewiliam, Coshaston Pill, Daugleddau, Aber Gann, Afon Penfro a Gwastadeddau Pwllcrochan; Ardaloedd Cadwraeth Aberdaugleddau, Caeriu, Hwlfordd, Llangwm, Neyland, Penfro a Doc Penfro (Dociau Brenhinol).
<i>Meini prawf</i>	1, 3
<i>Cynnwys ac arwyddocâd</i>	Y ria glasurol yng Nghymru, sef dyffryn ac aber afon wedi'u boddi, gyda chasgliad diguro o olion sy'n adlewyrchu gorchfygiad forwrol, aneddiadau, masnach, pysgota, amddiffyn a diwydiant o'r cyfnod cynhanesyddol hyd at y cyfnod cyfoes. Mae'r ardal yn cynnwys: caerau pentir o Oes yr Haearn; emwau lleoedd Cristnogol Cynnar a Llychlynnaidd; burdeistrefi castell arfordirol y Normaniaid; cestyll canoloesol a phlasau diweddarach y gwŷr bonedd; aneddiadau cynlluniedig Aberdaugleddau a Doc Penfro; ceiau, jetiau a glanfeydd, pyllau glo, chwareli calch, amddiffynfeydd milwrol a morwrol, terfynellau, purfeydd a glanfeydd olew, a gorsaf bwer diweddar a chyfoes.

SUMMARY

<i>Ref number</i>	HLW (D) 3
<i>Index map no.</i>	5
<i>OS map</i>	Landranger 157, 158
<i>Former county</i>	Dyfed
<i>Unitary authority</i>	Pembrokeshire
<i>Principal area designations</i>	Parts of the area are within the Pembrokeshire Coast National Park. The northern side of the Haven is within the Preseli Environmentally Sensitive Area. The area includes: Angle Bay, Carew and Cresswell Rivers, Coshaston Pill, Daugleddau, Gann Estuary, Pembroke River and Pwllcrochan Flats and West Williamston Quarries, Sites of Special Scientific Interest; Carew, Haverfordwest, Llangwm, Milford Haven, Neyland, Pembroke and Pembroke Dock (Royal Dockyard) Conservation Areas.
<i>Criteria</i>	1, 3
<i>Contents and significance</i>	The classic ria, drowned river valley and estuary in Wales, with an unsurpassed concentration of remains reflecting maritime conquest, settlement, commerce, fishing, defence and industry spanning the prehistoric to modern periods. The area includes: Iron Age promontory forts; Early Christian and Viking placenames; Norman coastal castle-boroughs; medieval castles and later gentry residences; Milford and Pembroke Dock planned settlements; recent and modern quays, jetties and landing places, coal mines, limestone quarries, military and naval fortifications, oil terminals, jetties, refineries and power station.

Ffynonellau detholedig / Selected sources

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- I. Soulsby, *The Towns of Medieval Wales* (Phillimore: Chichester 1983) Haverfordwest 139-142, Pembroke 214-217.

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