



# Great Harmeston Solar Farm

## Environmental Statement

### Chapter 6 Cultural Heritage



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## 6. Cultural Heritage

### 6.1. Introduction

6.1.1. This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Development in relation to cultural heritage and archaeology. The 'cultural heritage and archaeology' EIA topic equates to the 'historic environment' in national and local policy terms.

6.1.2. The assessment has considered the potential effects of the Proposed Development on cultural heritage receptors (hereafter 'historic assets' in line with policy terminology), both during construction, operation and decommissioning.

6.1.3. This chapter is supported by the following technical appendices:

- Appendix 6.1 – Historic Environment Desk-Based Assessment: Great Harmeston, and
- Appendix 6.2 – Geophysical Survey Report: Great Harmeston Solar Farm

6.1.4. This chapter is supported by the following figures:

- Figure 6.1 – Preliminary Size Zoning: Archaeological Potential and Predicted impact
- Figure 6.2 – Assets assessed for effects due to setting change and screened ZTV.

6.1.5. This chapter should be read in conjunction with the following assessments chapters presented in ES Volume 1:

- Chapter 5- Landscape and Visual

### 6.2. Assessment Approach

#### Legislative and Policy Framework

6.2.1. The Historic Environment (Wales) Act (HEWA) 2023 forms the legislative framework for the management and protection of the historic environment. This Act refers to back to the UK Public General Acts, Town and Country Planning Act 1990, Section 314A of which provides statutory protection for Listed Buildings and their settings and Conservation Areas in Wales.<sup>1</sup>

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<sup>1</sup> Welsh Government, Historic Environment (Wales) Act 2023

6.2.2. The Well-being of Future Generations (Wales) Act 2015 aims to ensure future generations have at least the same quality of life as experienced now. It refers to 'heritage' as an element Act's "A Wales of vibrant culture and thriving Welsh language." Goal. The Act underpins how Welsh Government and other public bodies make decisions, including on DNS applications.

National Planning Policy

6.2.3. National policy for this topic is set out within Chapter 6 of Planning Policy Wales, Edition 12 (PPW12) which has the following objectives for the historic environment:

- Protect the Outstanding Universal Value of the World Heritage Sites;
- Conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy;
- Safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved;
- Preserve or enhance the character or appearance of Conservation Areas, while at the same time helping them remain vibrant and prosperous;
- Preserve the special interest of sites on the register of historic parks and gardens; and
- Protect areas on the register of historic landscapes in Wales.

6.2.4. These objectives cover both designated and non- designated assets. They are supported by asset-type specific policies in PPW12 and Technical Advice Note 24: The Historic Environment (TAN 24).

Future Wales 2040

6.2.5. Future Wales 2040: The National Plan lays out Welsh Government's national development plan. Policy 17 – Renewable and Low Carbon Energy and Associated Infrastructure – recognises Wales's commitments to renewable energy generation in the face of the climate emergency. It states that "decision-makers must give significant weight to the need to meet Wales' international commitments and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency". Policy 18 – Renewable and Low Carbon Energy Developments of National Significance – states that Developments of National Significance will be permitted subject to policy 17 and if they meet a series of criteria, Criterion 6 is that "there are no unacceptable adverse impacts on statutorily protected built heritage assets".

Local Planning Policy

6.2.6. Local policy for this topic is set out within GN.38 of Pembrokeshire County Council: Local Development Plan (adopted 28th February 2013).

6.2.7. Policy GN.38: Protection and Enhancement of the Historic Environment of the Adopted Local Plan states that development that affects historic assets<sup>2</sup> will only be permitted if it protects or enhances their character and integrity.

6.2.8. The local plan is currently under examination. The examination draft plan, Pembrokeshire County Council Local Development Plan 2 2017–2033 A new Local Development Plan 2, contains one policy relating to this topic. Policy GN 28 Protection and Enhancement of the Historic Environment states that development will only be supported where it conserves, protects, preserves or enhances designated historic assets and archaeological remains<sup>3</sup>.

### Guidance

6.2.9. The following topic guidance was relevant to the Proposed Development:

- Chartered Institute for Archaeologists (CIfA) (2020) Standard and guidance for historic environment desk-based assessment;
- IEMA, Institute of Historic Building Conservation (IHBC) and CIfA (2021) Principles of Cultural Heritage Impact Assessment in the UK (PCHIA);
- Cadw (2011) Conservation Principles for the sustainable management of the historic environment in Wales; and
- Cadw (2017) Setting of Historic Assets in Wales.

### **Methodology**

6.2.10. The assessment was undertaken in line with the guidance listed under 6.2.5 Legislation and Guidance above. The methodology is in accordance with that set out in the Scoping Report submitted to Pembrokeshire County Council (PCC) on 17<sup>th</sup> December 2025, as presented as Appendix 2.1. The Scoping Direction had not yet been received at the time of preparation of the PAC submission. There is no prescribed methodology for undertaking heritage assessments for the purposes of Environmental Impact Assessment. As such, the methodology has been created using professional judgement and experience and other published guidance relevant to these considerations.

### Study Area

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<sup>2</sup> The term 'historic' assets was not in common use in local policy in 2013 so the policy words this as "sites and landscapes of architectural and/or historical merit or archaeological importance, or their setting".

<sup>3</sup> Policy wording specifies Listed Buildings, Conservation Areas, Registered Historic Parks, Gardens and Landscapes; and Scheduled Ancient Monuments and Archaeological Remains.

6.2.11. The 1 km Study Area utilised for this assessment is consistent with that set out within the EIA Scoping Report, which was submitted to PCC on the 17<sup>th</sup> December 2025 (see Appendix 2.1). The Study Area allowed contextual understanding of asset which may experience direct physical effects and identification of assets which may be susceptible to effects related to setting change. The Study Area is shown on Figure 6.2.

Desk Study

6.2.12. A Historic Environment Desk-Based Assessment was produced in March 2026 (Appendix 6.1).

6.2.13. The following sources were used to inform the Baseline Conditions:

- Cadw data, comprising:
  - Listed Buildings;
  - Scheduled Monuments;
  - Conservation Areas;
  - Historic Parks and Gardens;
  - World Heritage Sites; and
  - Registered Historic Landscapes.
- Heneb Historic Environment Record (HER) data;
- Published information on registered historic landscapes available on the Cadw and Heneb websites;
- LiDAR data;
- Historic mapping;
- Recent digital aerial photography (available via Google Earth);

Surveys

6.2.14. A walkover survey of the application boundary was undertaken on the 20<sup>th</sup> June 2025. This reviewed the condition and nature of any known assets or HER entries. The walkover was also to identify any hitherto unrecorded assets. All assets noted during the walkover were subjected to a basic record (e.g. photography) which was used to inform the Historic Environment Desk Based Assessment (HEDBA). Assets identified as susceptible to effects related to setting change were also subjected to field visits to understand their setting. Selected images from the walkover and setting surveys will be used to illustrate the HEDBA.

6.2.15. A geophysical magnetometry survey was undertaken across the whole Site that commenced on 20<sup>th</sup> October 2025 and took four weeks to complete. Owing to waterlogged ground conditions c. 3.3ha area of Site as not surveyed. Anomalies were detected that were suggestive of an archaeological origin, which corresponded with former clawdd boundaries, a form of field boundary common to Wales that could range in date from the medieval to Post-medieval periods, as well as further linear and curvilinear anomalies suggestive of possible enclosure systems and ring ditches. Anomalies of an undetermined origin were also recorded as their provenance is ambiguous as a result of a combination of geological variations, agricultural processes, spreads of modern debris or buried ferrous debris. Agricultural activity has been identified across the entire Site with former field boundaries, possible ridge and furrow, and land drains recorded. Natural anomalies were detected that relate to variations in the underlying geological strata, and hydrological features including former marshland and a spring.

#### Modelling

6.2.16. Pegasus has prepared bare earth Zone of Theoretical Visibility (ZTV) and a 'screened' ZTV (taking into account screening features such as built form and vegetation) to inform assessment of scheme visibility (see Chapter 5 of this ES). These were used to assist in the assessment of effect upon historic assets. It is noted that these provide indications only of potential visibility as such have been utilised as a guide rather than to provide a definitive answer as to the level of visibility, or not, of the Scheme.

#### Cumulative Effects Assessment Methodology

6.2.17. There is no industry-wide accepted methodology for assessment of cumulative effects to historic assets in EIA. Assessment of cumulative effects will use the agreed list of cumulative schemes for the Proposed Development to identify whether any further effects (i.e. those not caused solely by the Development itself) will arise. This assessment will be undertaken and articulated in the same terms as the assessment of the effect of the Proposed Development in its own right.

### **Assessment of Effects**

6.2.18. Historic assets were considered in terms of their level of significance in line with Cadw Conservation Principles. To avoid confusion with use of the 'significance' in EIA practice to refer to the level of effect a receptor would experience as a result of a development, the significance of assets is referred to as 'historic significance'. The level of an asset's importance is termed 'value'. Value was ascribed using criteria given in Table 6.1:

**Table 6.1: Criteria for Receptor Value**

Value Criteria	Description of Criteria
High	Designated historic assets (Scheduled Monuments, Listed Buildings, Registered Historic Parks and Gardens, Registered Historic

Value Criteria	Description of Criteria
	Landscapes <sup>4</sup> ) and non-designated assets of demonstrably equivalent significance
Medium	Historic assets of regional significance – identified with reference to regional priorities, such as outlined in ‘A Research Framework for the Archaeology of Wales’
Low	Historic assets of local significance
Negligible	Historic assets of limited local importance

6.2.19. Effects were assessed in terms of how the Proposed Development would, either physically or through change in setting, affect the significance of the historic asset. This was explained in terms of how the change would affect the historic values detailed in Cadw’s Conservation Principles. In explaining effects, a description of the level of negative or positive change a historic asset will experience as a result of the Development is given, supported by an appropriate narrative linking this to how the asset will have its value changed. TAN 24 defines ‘preservation’ of assets as “To keep safe from harm<sup>5</sup>”. In the context of this chapter, negative change is referred to as ‘harm’ and positive change as ‘benefit’.

6.2.20. The criteria in Table 6.2 support the narrative on the level of negative or positive change. In all cases, change which affects the historic significance of an asset could arise from physical alteration or change in setting. In line with TAN 24, change in the setting of Scheduled Monuments, or other nationally important archaeological remains, which causes a significant adverse impact causing harm within the setting of the asset<sup>6</sup> constitutes a High level of change.

**Table 6.2: Criteria for Magnitude of Change**

Magnitude of change Criteria	Description of Criteria
Very high	Removal of the entire historic asset.
High	Change which either removes, or very much reduces, an asset’s historic significance. Change which greatly enhances, or much better reveals, an asset’s historic significance.
Medium	Change which affects key aspects of an asset’s historic significance but does not very much reduce significance. Change which affects key aspects of an asset’s historic significance but does not greatly enhance significance.
Low	Change which has a limited effect on an asset’s historic significance.

6.2.21. The criteria in Table 6.3 support the narrative statements on the effect of the Proposed Development.

**Table 6.3: Criteria for Effect Level**

<sup>4</sup> No other types of designated historic assets are present within the Study Area.

<sup>5</sup> TAN 24, Glossary, p.47.

<sup>6</sup> TAN 24, Para. 4.2.

Effect Criteria	Description of Criteria
Very high harm	The entire historic asset is removed.
High harm	The asset's historic significance is removed or very much reduced.
Medium harm	Key aspects of an asset's historic significance are affected but not very much reduced.
Low harm	A limited reduction of an asset's historic significance.
Neutral	No change to the asset's historic significance.
Low benefit	A limited enhancement of an asset's historic significance.
Medium benefit	Key aspects of an asset's historic significance are affected but not very much enhanced.
High benefit	The asset's historic significance is enhanced or much better revealed.

- 6.2.22. All narrative statements on the nature of effects close with a clear statement as to whether the effect is a significant effect in EIA terms. This is ascribed on an asset-by-asset basis owing to the unique nature of each historic asset. In general terms, a high level of harm to a designated historic asset such as a Scheduled Monument would be a significant effect in EIA terms. For assets with specific legislative tests, e.g. Listed Buildings and Conservation Areas, the closing statement will also state whether or not the test is fulfilled.

### Consultation

- 6.2.23. **Table 6.4** below describes the consultation that has been undertaken with respect to the assessment of the Proposed Development's likely significant cultural heritage effects.

**Table 6.4: Summary of Correspondence with Statutory Consultees**

Consultee	Summary of Comments	Applicants Response
Cadw	<p>Cadw comments received as part of the EIA Screening Direction on the 11<sup>th</sup> September 2025 (Volume 2 Appendix 1:1). Their opinion specifically focused on the potential impacts on designated and registered historic assets surrounding the Proposed Development.</p> <p>The screening opinion agreed with the assessment that the Scheduled Burnt Mound 170m S of Jubilee Cottages (PE476) and the Grade II Listed Upper Harmeston may be sensitive to development in the nearby parts of the Site through change in setting. The Proposed</p>	<p>A historic environment desk-based assessment has been produced (<b>Appendix 6.1</b>), and provides a full setting assessment for designated historic assets identified as being sensitive to changes in their setting caused by the Proposed Development.</p> <p>A geophysical survey has been undertaken on all areas able to be surveyed. The results of this survey are provided in Geophysical Survey Report: Great Harmeston Solar Farm (<b>Appendix 6.2</b>). This determined the presence or absence of possible below</p>

	<p>Development could have an adverse indirect impact on these historic assets but mitigation measures could be introduced, if necessary, so that impacts will be not significant.</p> <p>They also agreed that the settings of the remaining designated historic assets within 3 km Study Area were unlikely to be adversely affected. As such, in their opinion EIA was not required.</p> <p>They confirmed that a historic environment desk-based assessment, including a full setting assessment for the two identified designated historic assets identified, should be produced and submitted as part of the application, and that a geophysical survey be carried out to detect unknown archaeological sites, and that it may be necessary for additional archaeological works to be undertaken.</p>	<p>ground archaeological remains within the Site</p>
<p>Pembrokeshire County Council</p>	<p>A PreApp response was received from the Principal Planning Officer Development Management for Pembrokeshire County Council on the 2<sup>nd</sup> December 2025. This will form part of the forthcoming Consultation Report.</p> <p>This stated that Policy GN.38 (Protection and Enhancement of the Historic Environment) is pertinent to the development.</p> <p>It also stated that historic assets were identified in the EIA Screening Report that included Milford Haven Waterway</p>	<p>A historic environment desk-based assessment has been produced (<b>Appendix 6.1</b>), and provides a full setting assessment for designated historic assets identified as being sensitive to changes in their setting caused by the Proposed Development.</p>

	<p>Landscape of Outstanding Historic Interest, which abuts the Site to the south and nearby Scheduled Monuments but that these matters would be deferred to Cadw.</p> <p>The main concern was potential impacts to Listed Buildings, including at Great Harmeston and Upper Harmeston, and the Great Harmeston Registered Historic Park and Garden as a result of change in setting. The production and submission of an assessment of effects to these assets was welcomed.</p>	
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**Scoping Criteria**

Technical Scope

6.2.24. The following potential effects have the potential to arise as a result of the Proposed Development and were scoped in:

- Direct physical effects to historic assets within the Project arising during the construction period; and
- Indirect physical effects to historic assets adjacent to the Project arising during the construction period;
- Effects related to setting change for assets within the Study Area during the construction period.
- Effects related to setting change for assets within the Study Area during the operational period.

6.2.25. The following effects were scoped out:

- Direct physical effects during operation and maintenance – ground disturbance is envisaged only during construction so there is no source of impact once the Proposed Development is operational.
- Direct physical effects to assets beyond the Proposed Development during operation and maintenance – there will be no physical disturbance to assets lying outside of the Proposed Development so there is no source of impact when it is operational.

- Direct physical effects to assets beyond the land required for construction during the construction period – disturbance of ground beyond the footprint Proposed Development does not form part of the application so there is no source of impact.

Receptors

- 6.2.26. Receptors with potential for physical effects and effects due to setting change were considered for assessment.
- 6.2.27. Within the Site:
- Archaeological historic assets of probable Bronze Age to Roman period activity.
  - Archaeological historic assets of probable post-medieval farms and field boundaries.
- 6.2.28. Within the Study Area but beyond the Site:
- Burnt Mound 170m S of Jubilee Cottages Scheduled Monument
  - Milford Haven Waterway Landscape of Outstanding Historic Interest ('LOHI', RHL ref. HLW (D) 3)
  - Church of St Peter at Johnston (Grade II\*, LB ref. 11996), a medieval parish church c.410m north of the Site.
  - Upper Harmeston (Grade II, LB ref. 82698), a mid-19th century cottage adjacent to the site at the junction of the A477 and A4076;
  - Hayston Hall – three Grade II listed buildings:
    - Hayston Hall (LB ref. 83215), an early 19th century gentry house 210m south of the Site;
    - Lofted Outbuilding at Hayston Hall (LB ref. 83216), 230m south of the Site; and
    - Courtyard of Outbuildings at Hayston Hall (LB ref. 83217), 260m south of the Site;
  - Great Harmeston – two Grade II listed buildings:
    - Great Harmeston (LB ref. 13052), a gentry house of 16th century origin c.350m east of the western half of the Site;
    - Long Agricultural Range to W of Great Harmeston House, including Cartsheds and Food Processing Store (LB ref. 13053), 19th century outbuildings for Great Harmeston lying c.300m east of the western half of the Site;

- Hayston Bridge (Grade II, LB refs. 82524 & 83218), a late 18th century bridge adjacent to the Site which formerly carried the road from Johnston to Waterston over a stream;
- Milepost near Redstock Bridge, lies adjacent to the site boundary at Redstock (Grade II, LB ref. 82696).

### Limitations to the Assessment

6.2.29. To ensure transparency within the EIA process, the following limitations and assumptions have been identified.

- The conclusions presented within this Chapter are based upon the baseline conditions, which are derived in large part from the data held and supplied by Heneb HER. In establishing the baseline conditions, for the purposes of this Chapter, both the accuracy and currency of this data has necessarily been assumed.
- In relation to settings assessment, the inspection of historic assets identified as susceptible to non-physical impact was undertaken from the Site and publicly Baseline Conditions

### 6.3. Baseline Conditions

6.3.1. There are no designated historic assets wholly within the Site. A sliver of a Registered Historic Landscape (RHL), Milford Haven Waterway Landscape of Outstanding Historic Interest ('LOHI', RHL ref. HLW (D) 3), lies within the Site adjacent to Hayston Bridge. The boundaries of RHLs were originally drawn at quite large-scale so it is possible, as the boundary of this LOHI does not exactly follow boundaries shown on Ordnance Survey mapping and otherwise lies wholly south of the Site, that the LOHI was not intended to include the land which constitutes the Site.

6.3.2. The following designated historic assets, shown on Figure 6.2, are in the Study Area:

- One Scheduled Monument, Burnt Mound 170m S of Jubilee Cottages (SM ref. PE476), a later prehistoric mound which abuts the northern Site boundary.
- 10 Listed Buildings within a 1km radius of the site, as follows:
  - Church of St Peter at Johnston (Grade II\*, LB ref. 11996), a medieval parish church c.410m north of the Site.
  - Upper Harmeston (Grade II, LB ref. 82698), a mid-19th century cottage adjacent to the site at the junction of the A477 and A4076;
  - Hayston Hall – three Grade II listed buildings:
    - Hayston Hall (LB ref. 83215), an early 19th century gentry house 210m south of the Site;

- Lofted Outbuilding at Hayston Hall (LB ref. 83216), 230m south of the Site; and
- Courtyard of Outbuildings at Hayston Hall (LB ref. 83217), 260m south of the Site;
- Great Harmeston – two Grade II listed buildings:
  - Great Harmeston (LB ref. 13052), a gentry house of 16th century origin c.350m east of the western half of the Site;
  - Long Agricultural Range to W of Great Harmeston House, including Cartsheds and Food Processing Store (LB ref. 13053), 19th century outbuildings for Great Harmeston lying c.300m east of the western half of the Site;
- Hayston Bridge (Grade II, LB refs. 82524 & 83218), a late 18th century bridge adjacent to the Site which formerly carried the road from Johnston to Waterston over a stream;
- Milepost near Redstock Bridge, lies adjacent to the site boundary at Redstock (Grade II, LB ref. 82696).

6.3.3. Full detail on the archaeological and historic background of the Site and Study Area is presented in **Appendix 6.1** and a summary is presented here.

6.3.4. The Study Area has evidence for activity from at least the Bronze Age to the present day. Several Bronze Age burnt mounds exist within the Study Area. These include a Scheduled Monument adjacent to the northern boundary of the Site (Burnt Mound 170m S of Jubilee Cottages; SM ref. PE476). Geophysical survey of the Site found anomalies which appear characteristic of Bronze Age to Roman period activity across much of the Site. Concentrations of these exist in the northwest of the Site, close to the burnt mound Scheduled Monument, in the west near Deemshill, and in the east between Little Hayston and Hayston Mountain. Most anomalies appear to be related to settlement, such as enclosures, and field systems, mainly linear anomalies. There are some curvilinear anomalies in the northwest tip of the Site and south of Hayston Mountain which may derive from burial mounds. Some Roman activity is documented c.660m east of the Site, probably indicating ironworking/production.

6.3.5. There is some evidence of activity of early medieval date in the Study Area. Excavation in association with gas pipeline construction in the southwest of the Study Area found pits and a kiln cut into a Bronze Age burnt mound (HER refs. 125616, 106732).

6.3.6. The settlement of Johnston appears to have medieval origins. The core of this settlement is likely to have been around the parish church, St Peter's, c. 430m north of the Site. The church is largely late medieval in date and is a Grade II\* Listed Building (LB ref. 11996; HER ref. 3352). It remains at the core of the present village and is surrounded by buildings of varying date. It is possible that a farm or small settlement existed at Harmeston during this period as documentary evidence records early High Sheriffs of

Pembrokeshire coming from 'Hermanston' in the mid-16th century (HER ref. 10502). It is unclear, however, if the reference is to both Great Harmeston and Little Harmeston.

- 6.3.7. The Site and Study Area contain evidence for medieval landuse practices. It is likely that much of the landscape framework of the area originated in this period. The current field layout includes features, such as sinuous 'reverse-S' field boundaries indicative of the presence of open fields. These were fields farmed in common by the population of adjoining settlements.
- 6.3.8. The majority of HER entries within the Study Area are of post-medieval date and are records of buildings and features recorded on the First and Second Edition Ordnance Survey maps (1871 and 1908 respectively). The majority of these are farmhouses, cottages and other dwellings dating to between the 16th and 19th centuries. They include the farmsteads and estates with listed buildings discussed above at Great Harmeston and Hayston Hall as well as the listed cottage Upper Harmeston. Farmsteads and cottages adjacent to the Site at Deemshill, Redstock and Hayston Mountain are also recorded. With the exception of Harmeston and Hayston, the farmsteads in the Study Area appear to be of post-medieval origin. It is likely that they were established after enclosure of the open fields into fields owned by individual farmers. Historic maps indicate that the Site and Study Area were almost fully enclosed by the start of the 19<sup>th</sup> century. As such, it is likely that the majority of the fieldscapes of the Study Area are post-medieval in date. Surviving boundaries in the Site are a mix of hedges on low hedgebanks and Pembrokeshire hedges<sup>7</sup>.
- 6.3.9. The historic landscape of the Study Area is characterised by nucleated settlements (villages and hamlets) and scattered farmsteads set within post-medieval fieldscapes derived from open fields. Much of the area between Haverfordwest and Milford Haven has a similar historic landscape character. The more well-preserved and coherent sections of these form part of the Milford Haven Waterway LOHI, a section of which abuts the southern Site boundary (RHL Ref. HLW (D) 3). The LOHI is extensive, covering an area of c. 24,000Ha and includes the majority of land lying between Narberth, Wooltack Point, Haverfordwest and Pembroke. The LOHI is divided into 45 component Historic Landscape Character Areas (HLCAS). The Scoveston-Burton HLCA abuts the Site west of the A477 whilst the Rosemarket HLCA abuts the Site east of this road.
- 6.3.10. Both the A4076 and the A477 were modernised by Turnpike Trusts at the end of the 18th century (HER refs. 108714, 109056). Two assets from turnpiking lie adjacent to the Site, both are Grade II Listed Buildings. A milestone lies on the eastern side of the A4076 (LB Ref. 82696; HER Ref. 60482) at Redstock and is not in its original location, having been moved part of road modernisation in the mid-20<sup>th</sup> century. Hayston Bridge lies immediately west of the A477, it is bypassed by the main road following realignment of it during 1960s modernisation.

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<sup>7</sup> Hedges established on distinctive stone-faced banks. The stone facing usually tapers slightly from the base of the bank to its top resulting in a structure with a trapezoidal cross section.

- 6.3.11. Unlike many rural areas, the Site and Study Area have seen relatively limited change in response to transition to mechanised agriculture after World War Two. There has been a relatively low level of field boundary removal to create larger fields better suited to mechanised cultivation. Within the Site, boundary removal appears to have been confined to amalgamation of fields immediately west of Upper Harmeston and east of Hayston Mountain.
- 6.3.12. Energy generation and transmission infrastructure has been built in the Study Area since the late 20<sup>th</sup> century. Two electricity transmission lines cross the southern end of the Site at Hayston Bridge, a 132kv line and a 33kv line. An operational wind turbine lies west of the A4076, surrounded by the Site, but not within the redline boundary. A solar farm was built at Tierson, west of the Site, between 2013 and 2016. It is one of several solar farms built between Haverfordwest and Milford Haven since the early 2000s.

### Future Baseline

- 6.3.13. In the future, and in the absence of the Proposed Development, the existing cultural heritage and archaeology conditions within the Site and study may change in the following ways:
- New historic assets may be designated and / or currently designated historic receptors may be delisted;
  - New historic assets may be identified;
  - Upstanding remains pertaining to historic assets may be degraded by the impacts of climate change and the growth or proliferation of vegetation; and
  - Below ground archaeological remains may be disturbed or truncated by agricultural activities such as ploughing.

## 6.4. Assessment of Likely Significant Effects

### Effects during Construction

#### Direct physical effects

- 6.4.1. The following groundworks have the potential to result in below ground physical effects:
- Site Groundworks
  - Site Fencing
  - Panel Arrays
  - Substation
- 6.4.2. Review of the Site's archaeological potential was undertaken following geophysical survey. The Site has been zoned by both archaeological potential and the predicted level of impact from scheme groundworks, in line with the forthcoming guidance on

archaeology and solar development. **Figure 6.1** shows the preliminary site zoning by both archaeological potential and groundworks impact and will be used as a basis for further discussions on archaeological works associated with the scheme. Detail of the approach to zoning is presented in Appendix 6.1: Section 5. The areas of highest potential, containing concentrations of Bronze Age to Roman assets, lie mainly within panel arrays, i.e. where groundworks impact is predicted to be low. As such, they are predicted to experience limited disturbance.

- 6.4.3. Harm to these assets would arise through truncation or removal of archaeological deposits by groundworks.
- 6.4.4. The Site appears to contain hitherto unrecorded archaeological historic assets related to Bronze Age to Roman settlement, agricultural and, possibly, funerary activity. The value of any such assets is likely to be of **at least Low value**. The level of change is likely to be **Low** as the majority lie within the panel arrays. This would result in **Low harm** to a non-designated asset, **this is not a significant effect in EIA terms**.
- 6.4.5. The Site appears to contain archaeological historic assets related to post-medieval farming. The value of any such assets is likely to be of **at most Low value**. The level of change is likely to be at most of **Medium** as some lie within the areas of landscape planting. This would result in **Medium harm** to a non-designated asset, **this is not a significant effect in EIA terms**.
- 6.4.6. The section of the Site which overlaps the currently mapped boundary of the Milford Haven Waterway LOHI has no developed proposed within it. As such, there would be no change of effect to the LOHI.

### Indirect physical effects

- 6.4.7. Indirect physical effects could arise from harm to historic assets within or adjacent to the Site as a result of incidents. Sources of effects could include collisions with assets during vehicle movements or incidental burial or compaction of assets during vehicle or soil movements.
- 6.4.8. The Burnt Mound 170m S of Jubilee Cottages Scheduled Monument lies immediately adjacent to the northern boundary of the Site (SM ref. PE476). Groundworks for fencing and tracks are currently proposed c.10m south of the Scheduled Monument. Without implementation of control measures, it is possible that construction could result in incidental damage to the Scheduled Monument by, for example vehicle and spoil movements in the adjacent section of the Site. The OCEMP contains provisions to ensure no environmental damage occurs from construction of the project. Control measures to prevent damage to the Scheduled Monument will be included in the OCEMP. As such, no change nor effect would arise to the Scheduled Monument.

### Effects during Operation

#### Effects due to setting change

- 6.4.9. Harm stemming from setting change caused by the Proposed Development is likely to arise only to:
- Burnt Mound 170m S of Jubilee Cottages Scheduled Monument (SM ref. PE476); and
  - Upper Harmeston (Grade II Listed Building LB ref. 82698).
- 6.4.10. Harm to assets stemming from change in their setting harm would be reversed at the end of the Proposed Development's life (40 years) and removal and reinstatement of agricultural use of the land.
- 6.4.11. The site fence for the Proposed Development will be built c. 10m south of the Burnt Mound 170m S of Jubilee Cottages Scheduled Monument with panel arrays and associated tracks c.15m away at closest. As outlined above, the ability to appreciate the relationship of the burnt mound to the stream is an element of its setting which contributes to its significance. This is something that is currently appreciable only at very close range and would not be affected by the Proposed Development. This would not affect the Scheduled Monument's significance, merely how the asset and its significance can be appreciated. The level of change would be **Low**. This would result in **Low harm** to a Scheduled Monument, an asset of **High value, this would not be a significant effect in EIA terms**.
- 6.4.12. A panel array would be c. 20m west of Upper Harmeston Grade II Listed Building, on the opposite side of A4076, with a further array c. 120m east of the cottage. The arrays are unlikely to be visible from the cottage due to intervening hedges around and recent buildings. It is likely that the cottage would be experienced in combination with the panel arrays when approached from the north and south along the A4076. It is also possible that it may be experienced as backdropped by arrays when approached from the west. The proposed development would result in a change to its setting by converting fields which make a small contribution to the significance of the cottage. Accordingly, this change would result in some harm. The level of change would be **Low**. This would result in **Low harm** to a Listed Building, an asset of **High value, this would not be a significant effect in EIA terms**.

### Effects during Decommissioning

- 6.4.13. All potential effects during decommissioning are likely to be direct physical effects. The nature of effects would be dependent upon the methods used for removal of the panel arrays and associated infrastructure. Impacts could arise from compaction of archaeological deposits from heavy plant movements and disturbance of deposits from e.g. from pulling out support piles. The disturbance caused by such operations is likely to be minimal since removal groundworks are likely to be within areas already disturbed to an extent by construction.
- 6.4.14. The following archaeological historic assets may experience effects due to these processes:

- Bronze Age to Roman settlement, agricultural and, possibly, funerary activity – the level of change is likely to be **Low**. This would result in **Low harm** to a non-designated asset, **this is not a significant effect in EIA terms**.
- Post-medieval farming – the level of change is likely to be **Low**. This would result in **Low harm** to a non-designated asset, **this is not a significant effect in EIA terms**.

6.4.15. These effects would be a worst-case scenario.

### Summary of Significance of Effects (Before Mitigation)

6.4.16. Potential effects during the construction period are:

- Direct physical effects to archaeological historic assets:
  - Bronze Age to Roman settlement, agricultural and, possibly, funerary activity – assets of **at least Low value**, level of change is likely to be **Low** resulting in **Low harm**. **This would not be a significant effect in EIA terms**.
  - Post-medieval farming – harm is to these assets of **at most Low value** experiencing at most a **Medium** level of change resulting in **Medium harm**. **This would not be a significant effect in EIA terms**.

6.4.17. Predicted effects during the operational period are:

- Effects due to setting change:
  - Burnt Mound 170m S of Jubilee Cottages Scheduled Monument – asset of **High value** experiencing a **Low** level of change and **Low harm**. **This would not be a significant effect in EIA terms**.
  - Upper Harmeston Grade II Listed Building is an asset of **High value** and experiencing a **Low** level of change and **Low harm**. **This would not be a significant effect in EIA terms**.

6.4.18. Predicted effects during the decommissioning are:

- Direct physical effects to archaeological historic assets:
  - Bronze Age to Roman settlement, agricultural and, possibly, funerary activity – assets of **at least Low value** experiencing a **Low** level of change resulting in **Low harm**. **This would not be a significant effect in EIA terms**.
  - Post-medieval farming – harm is to these assets of at most **Low value** experiencing a **Low** level of change resulting in **Low harm**. This would not be a significant effect in EIA terms.

Table 6.5: Significance of Effects (before Mitigation)

Environmental Effect	Value of Receptor	Magnitude of change	Nature of Impact (Permanent/ Temporary)	Effect and Significance
<b>CONSTRUCTION</b>				
Archaeological historic assets of Bronze Age to Roman date	At least Low	Low	Permanent	Low harm (Not Significant in EIA terms)
Archaeological historic assets of post-medieval farming	Low	Medium	Permanent	Medium harm (Not Significant in EIA terms)
<b>OPERATION</b>				
Burnt Mound 170m S of Jubilee Cottages Scheduled Monument	High	Low	Temporary	Low harm (Not Significant in EIA terms)
Upper Harmeston Grade II Listed Building	High	Low	Temporary	Low harm (Not Significant in EIA terms)
<b>DECOMMISSIONING</b>				
Archaeological historic assets of Bronze Age to Roman date	At least Low	Low	Permanent	Low harm (Not Significant in EIA terms)
Archaeological historic assets of post-medieval farming	Low	Low	Permanent	Low harm (Not Significant in EIA terms)

## 6.5. Mitigation, Enhancement and Residual Effects

### Mitigation by Design

- 6.5.1. No measures to address direct physical effects to historic assets have been incorporated into the scheme design.
- 6.5.2. Panel arrays have been removed from the field immediately east of the Upper Harmeston Listed Buildings. This has lowered the likely visibility of the development in combination with the asset.

**Additional Mitigation**

6.5.3. Direct physical effects to archaeological assets can be addressed by a programme of archaeological works. Without prejudice to any strategy eventually agreed with the Heneb (acting as archaeological advisors to PCC), this is likely to comprise at least some of the following elements:

- Trial trench evaluation;
- Advance works, e.g. area excavation;
- Construction period monitoring, e.g. watching brief on ground works.

**Table 6.6: Mitigation**

Ref	Measure to avoid, reduce or manage any adverse effects and/or to deliver beneficial effects	How measure would be secured		
		By Design	By S.106	By Condition
1	Programme of archaeological works			X

**Enhancements**

6.5.4. The nature of effects means there are no enhancements relevant for the assets.

**Residual Effects**

**Table 6.7: Residual Significance of Effects (with Mitigation)**

Environmental Effect	Value of Receptor	Magnitude of change	Nature of Impact (Permanent/Temporary)	Residual Effect and Significance
<b>CONSTRUCTION</b>				
Direct physical effect – archaeological historic assets of Bronze Age to Roman date	At least Low	Low	Permanent	Low harm (Not Significant in EIA terms)

Direct physical effect – archaeological historic assets of post-medieval farming	Low	Medium	Permanent	Medium harm (Not Significant in EIA terms)
<b>OPERATION</b>				
Burnt Mound 170m S of Jubilee Cottages Scheduled Monument	High	Low	Temporary	Low harm (Not Significant in EIA terms)
Upper Harmeston Grade II Listed Building	High	Low	Temporary	Low harm (Not Significant in EIA terms)
<b>DECOMMISSIONING</b>				
Archaeological historic assets of Bronze Age to Roman date	At least Low	Low	Permanent	Low harm (Not Significant in EIA terms)
Archaeological historic assets of post-medieval farming	Low	Low	Permanent	Low harm (Not Significant in EIA terms)

**6.6. Cumulative Effects**

Cumulative Effects

6.6.1. The only cumulative scheme within the Study Area is the solar farm at Tierson. 13/O214/PA. This was built between 2013 and 2016 and has been operational since 2016. It forms part of the baseline conditions for assessment of the Proposed Development's effects to historic assets. As such, it has no potential for cumulative effects.

In-Combination Effects

6.6.2. The Scheme will not result in any in-combination effects.

**6.7. Summary**

6.7.1. In line with Scoping, the assessment has considered the potential for:

- Direct physical effects;
- Indirect physical effects; and
- Effects due to setting change.

## Introduction

6.7.2. The assessment has been carried out with relevant sector guidance:

- Chartered Institute for Archaeologists (CIfA) (2020) Standard and guidance for historic environment desk-based assessment;
- IEMA, Institute of Historic Building Conservation (IHBC) and CIfA (2021) Principles of Cultural Heritage Impact Assessment in the UK (PCHIA);[WR1.1][MC1.2]
- Cadw (2011) Conservation Principles for the sustainable management of the historic environment in Wales; and
- Cadw (2017) Setting of Historic Assets in Wales.

6.7.3. A 1km Study Area was used for baseline data gathering and the identification of assets susceptible to effects due to setting change.

## Baseline Conditions

6.7.4. The Study Area has evidence for activity from at least the Bronze Age to the present day. Geophysical survey of the Site in 2025 found anomalies which appear characteristic of Bronze Age to Roman period activity across much of the Site. Most anomalies appear to be related to settlement, such as enclosures, and field systems, mainly linear anomalies. There are some curvilinear anomalies in the northwest tip of the Site and south of Hayston Mountain which may derive from burial mounds. The Site also contains anomalies corresponding to the sites of post medieval farmsteads, plus contemporary field boundaries and tracks.

6.7.5. The following designated historic assets are in the Study Area:

- One Scheduled Monument, Burnt Mound 170m S of Jubilee Cottages (SM ref. PE476), a later prehistoric mound which abuts the northern Site boundary.
- 10 Listed Buildings within a 1km radius of the site, as follows:
  - Church of St Peter at Johnston (Grade II\*, LB ref. 11996), a medieval parish church c.410m north of the Site.
  - Milford Haven Waterway Landscape of Outstanding Historic Interest, RHL ref. HLW (D) 3).
  - Upper Harmeston (Grade II, LB ref. 82698), a mid-19th century cottage adjacent to the site at the junction of the A477 and A4076;
  - Hayston Hall – three Grade II listed buildings:
    - Hayston Hall (LB ref. 83215), an early 19th century gentry house 210m south of the Site;

- Lofted Outbuilding at Hayston Hall (LB ref. 83216), 230m south of the Site; and
- Courtyard of Outbuildings at Hayston Hall (LB ref. 83217), 260m south of the Site;
- Great Harmeston – two Grade II listed buildings:
  - Great Harmeston (LB ref. 13052), a gentry house of 16th century origin c.350m east of the western half of the Site;
  - Long Agricultural Range to W of Great Harmeston House, including Cartsheds and Food Processing Store (LB ref. 13053), 19th century outbuildings for Great Harmeston lying c.300m east of the western half of the Site;
- Hayston Bridge (Grade II, LB refs. 82524 & 83218), a late 18th century bridge adjacent to the Site which formerly carried the road from Johnston to Waterston over a stream;
- Milepost near Redstock Bridge, lies adjacent to the site boundary at Redstock (Grade II, LB ref. 82696).

### Likely Significant Effects

6.7.6. Potential effects during the construction period are:

- Direct physical effects to archaeological historic assets:
  - Bronze Age to Roman settlement, agricultural and, possibly, funerary activity – assets of at least Low value experiencing a very low level of harm. This would not be a significant effect in EIA terms.
  - Post-medieval farming – harm is to these assets of at most Low value experiencing a at most a medium level of harm. This would not be a significant effect in EIA terms.

6.7.7. Predicted effects during the operational period are:

- Effects due to setting change:
  - Burnt Mound 170m S of Jubilee Cottages Scheduled Monument – asset of High value experiencing a low level of harm. This would not be a significant effect in EIA terms.
  - Upper Harmeston is an asset of High value and harm is predicted to be of a low level. This would not be a significant effect in EIA terms.

6.7.8. Predicted effects during the decommissioning are:

- Direct physical effects to archaeological historic assets:
  - Bronze Age to Roman settlement, agricultural and, possibly, funerary activity – assets of at least Low value experiencing a very low level of harm. This would not be a significant effect in EIA terms.
  - Post-medieval farming – harm is to these assets of at most Low value experiencing a very low level of harm. This would not be a significant effect in EIA terms.

### **Mitigation, Enhancement, Residual Effects**

6.7.9. Direct physical effects to archaeological assets can be addressed by a programme of archaeological works. Without prejudice to any strategy eventually agreed with the Heneb (acting as archaeological advisors to PCC), this is likely to comprise at least some of the following elements:

- Trial trench evaluation;
- Advance works, e.g. area excavation;
- Construction period monitoring, e.g. watching brief on ground works.

### **Cumulative Effects**

6.7.10. No cumulative developments were identified which would give rise to effects to any historic assets affected by the scheme. As such, there are no cumulative effects to assets.

### **Conclusion**

6.7.11. The assessment has found limited effects to designated and non-designated historic assets.

6.7.12. Table 6.8 provides a summary of effects, mitigation and residual effects.

Table 6.8: Summary of Effects, Mitigation and Residual Effects

Receptor / Receiving Environment	Description of Effect	Nature of Effect	Receptor Value	Magnitude of Change	Significance of Effect	Mitigation / Enhancement Measures	Residual Effect
<b>Construction</b>							
Direct physical effect – archaeological historic assets of Bronze Age to Roman date	Truncation/removal of archaeological deposits	Permanent	At least Low	Low	Low harm (Not Significant in EIA terms)	Programme of archaeological works	Low harm (Not Significant in EIA terms)
Direct physical effect – archaeological historic assets of post-medieval farming	Truncation/removal of archaeological deposits	Permanent	Low		Medium harm (Not Significant in EIA terms)	Programme of archaeological works	Medium harm (Not Significant in EIA terms)
<b>Operation</b>							

Receptor / Receiving Environment	Description of Effect	Nature of Effect	Receptor Value	Magnitude of Change	Significance of Effect	Mitigation / Enhancement Measures	Residual Effect
Burnt Mound 170m S of Jubilee Cottages Scheduled Monument	Harm due to change in setting which affects the experience of the asset.	Temporary	High	Low	Low  (Not Significant in EIA terms)		Low  (Not Significant in EIA terms)
Upper Harmeston Grade II Listed Building	Harm due to change in setting which affects aspects of setting which contribute to significance.	Temporary	High	Low	Low  (Not Significant in EIA terms)		Low  (Not Significant in EIA terms)
Decommissioning							
Direct physical effect – archaeological historic assets of Bronze Age	Disturbance of archaeological deposits	Permanent	At least Low	Low	Low  (Not Significant in EIA terms)		Low  (Not Significant in EIA terms)

Receptor / Receiving Environment	Description of Effect	Nature of Effect	Receptor Value	Magnitude of Change	Significance of Effect	Mitigation / Enhancement Measures	Residual Effect
to Roman date							
Direct physical effect – archaeological historic assets of post-medieval farming	Disturbance of archaeological deposits	Permanent	Low	Low	Medium (Not Significant in EIA terms)		Medium (Not Significant in EIA terms)