

9 HERITAGE

- 9.1 This assessment was prepared by Philip Poucher and Charlotte James-Martin, both Members of the Chartered Institute for Archaeologists each with over 15 years of experience as professional/commercial archaeologists, as well as James Evans a Practitioner of the Chartered Institute for Archaeologists who has nearly 5 years of commercial archaeological experience and specialises in Desk-based studies.

INTRODUCTION

- 9.2 This chapter of the Environmental Statement assesses the likely significance of the effects of the Proposed Development on the environment with respect to archaeology and heritage.
- 9.3 The Assessment has collated details of the known archaeological and historic sites and features, or 'heritage assets', and considered the potential for the presence of unknown or unrecorded heritage assets incorporating the results of a palaeoenvironmental survey (Appendix 9.3). This information was used to produce an assessment of the historic environment of the area within which the Proposed Development lies.
- 9.4 The Assessment considers the likely significant effects of the Proposed Development on all of these heritage assets, including archaeological sites, features and artefacts, historic buildings and historic landscapes. Both potential 'direct' and 'indirect' effects on the historic environment are considered. Where likely significant adverse effects are identified, mitigation measures to prevent, reduce, or offset them are proposed, and likely residual effects remaining after mitigation are determined.

SYNOPSIS

- 9.5 The only likely significant effects highlighted during this assessment are Moderate indirect effects on the Historic Landscape Character Areas 006 and 008 that form part of the Gwent Levels Historic Landscapes of Outstanding Interest.
- 9.6 The potential heritage receptors can be broken down into three sub-categories. **Archaeological Remains, Historic Buildings and Historic Landscapes.**
- 9.7 Out of the **Archaeological Remains** receptors only one site was regarded as having a Major impact by the proposed development, that of the Pill Farm enclosure (08960g/NPRN 309437). The recommended mitigation for this asset would be an agreed programme of targeted archaeological watching brief in the vicinity of the feature during construction. Provided this is carried out the significance of the effect is Slight/Moderate (**Not Significant**). The proposed development was assessed as having a Moderate/Slight level of effect (**Not Significant**) on Wilcrick Hill Camp (MM127) due to the change to the view from this monument for the lifespan of the scheme, however this effect is reversible. The magnitude of impact on the remainder of the archaeological remains

varied between **Negligible** to **Minor** all recording a Neutral/Slight to Slight level of effect (**Not Significant**).

- 9.8 With regards to the **Historic Buildings**, the proposed development will not affect the setting of these buildings due to the intervening topography and built landscape. The magnitude of potential impact for all the listed buildings is **Negligible**. Therefore, the effect of the development would be **Not Significant** on this category.
- 9.9 Within the **Historic Landscapes** category there were five Historic Landscape Character Areas (HLCAs) all part of the Caldicot area of the Registered Historic Landscape of the Gwent Levels (HLW (Gt) 2) as well as the Redwick Conservation Area. The only **Significant** effects noted in this category were those of the **Moderate** indirect effect on the HLCAs 006 and 008, this is due to the change of setting and landuse within these areas. The effect however is reversible. The proposed development would have a Slight indirect effect on HLCAs 005, 009 and 010 during the lifetime of the solar park but be reversible in nature. In spite of its proximity, the flat landscape does not afford views across it to any great degree due to tree planting, hedgerows and buildings to The Redwick Conservation Area and have a Minor Short Term (**Not Significant**) indirect effect caused by the construction of the proposals.
- 9.10 The palaeoenvironmental survey identified deposits relating to the estuarine landscape prior to and post Romano British drainage and reclamation of the levels. This included prehistoric estuarine silts and peat deposits. Overlying these deposits were alluvial clays representative of the reclaimed agricultural land that has built up since the levels were drained in the Romano-British period. These were encountered at varying depths across the site making some areas more likely to be affected by the groundworks than others (Figure 9.1). The direct impact on buried archaeological remains from the groundworks is Permanent but is Negligible (**Not Significant**) as the physical impact of the groundworks is minimal with appropriate mitigation.
- 9.11 The potential for piling causing desiccation (drying out) of the waterlogged deposits underlying the site has been investigated using evidence from historical borehole logs (ST48NW39)¹. This has shown that the saturated nature of the tidal flat deposits means there would be no alteration to the degree of saturation. Therefore, there would be no change to the quality of preservation of the peat as a result of piling for the proposed solar park.

CONSULTATION

- 9.12 The intended methodology for assessment of effects was presented to the Planning Inspectorate and consulted upon with Cadw in early 2019. The assessment methodology is set out in Appendix

¹ BGS Geology of Britain viewer, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

3.1 Scoping Report (pages 41 – 46). The Planning Inspectorate responded through the publication of a Scoping Direction which can be found at Appendix 3.2. The process of scoping and subsequent consultation with Cadw updated the intended scope set out for this topic in the Scoping Report as shown in Appendix 3.1.

Table 9-1 EIA related consultation

Consultee, date and format of consultation (written correspondence, meeting/s, discussions, site visit)	Details (e.g. request to include more views, include a new receptor)	Action taken in this assessment and signposting.
GGAT's Archaeological Planning Department, October 2018, email	To obtain approval for a WSI for the DBA (to ensure quality and scope).	A 1.5km radius from the centre of site was decided for non-designated sites and a 5km radius for designated sites which formed the baseline for the impact on the historical resource.
GGAT -HER	To obtain baseline heritage data within the 1.5km study area from the regional HER.	Information used in producing baseline
Cadw	To obtain scheduled ancient monument and Listed Building data within the wider 5km study area.	Information used in producing baseline
GGAT's Archaeological Planning Department, October-December 2019, email discussions	Consult on content of DBA and EIA scoping. An auger survey was recommended to identify peat levels and the potential impact the development may have.	An auger survey was undertaken in September 2020, on a 100m grid, across an area measuring approximately 84ha. The results of this survey are included in this assessment in Appendix 9.3. Peat levels were identified along with other deposits with archaeological potential within the impacted area of development.
Cadw, February 2019, Scoping Direction	The SM of Wilcrick Hill Camp (MM127) and Listed Building of the Church of St Thomas (LB2940) were scoped in and specifically highlighting that the ASIDOHL will need to only consider the direct impact on Character Areas 6 and 8 using the area covered by panels rather than ground disturbance area and the indirect impacts on the surrounding Character Areas 9 and 10.	An ASIDOHL2 was carried out and is included in this assessment in Appendix 9.2. Consideration was given to the direct impact on Character Areas 6 and 8 in Section 3.2 of the ASIDOHL and bases the impact on the area of the panel coverage (121.7ha). Section 4.2 addresses the indirect impact on Character Areas 5, 6, 8, 9 and 10.

Table 9-1 EIA related consultation

Consultee, date and format of consultation (written correspondence, meeting/s, discussions, site visit)	Details (e.g. request to include more views, include a new receptor)	Action taken in this assessment and signposting.
<p>Rob Dunning, GGAT, 9 November 2020, Initial DNS Pre-Application Consultation</p>	<p>Response received stating, “The proposal is located in an area of high archaeological potential and sensitivity, accordingly an archaeological desk-based assessment has been compiled by Archaeology Wales and incorporated into the ES. Furthermore a palaeoenvironmental auger survey has also conducted by Archaeology Wales. The survey has determined the depths of archaeologically significant deposits below the current ground surface across the proposed development area.</p> <p>The next step is to cross-reference the depths of these deposits with the depths of the various ground-intrusion works required for the development. This will provide information on the potential impact of the proposals and allow a targeted mitigation strategy to be devised. This mitigation strategy and programme of archaeological work would be detailed in a Written Scheme of Investigation (WSI) and could be secured via a condition.”</p>	<p>Further consultation has taken place with GGAT to develop and agree a targeted mitigation strategy for the site. This is discussed at 9.51 and includes a targeted watching brief on the areas of higher archaeological potential and a further, more dense palaeoenvironmental survey to map and sample the underlying peat deposits.</p>

LEGISLATION AND POLICY

9.13 National Policies relating to archaeology and cultural heritage include the following:

- Ancient Monuments and Archaeological Areas Act 1979;
- Planning (Listed Buildings and Conservation Areas) Act 1990;
- Planning Policy Wales (Edition 10, 2018), Section 6;

- Technical Advice Note (TAN) 24: The Historic Environment, 2017
- 9.14 The Application Site lies within an area covered by the Newport Local Development Plan (LDP) 2011 – 2026, adopted January 2015.
- 9.15 Strategic Policies relating to cultural heritage within the LDP include:
- **SP9 Conservation of the Natural, Historic and Built Environment**
 - **CE3 Environmental Spaces and Corridors (The Historic Environment)**
 - **CE4 Historic Landscape, Parks, Gardens and Battlefields**
 - **CE5 Locally Listed Buildings and Sites**
 - **CE6 Archaeology**
 - **CE7 Conservation Areas**

ASSESSMENT METHODOLOGY

- 9.16 The primary objective is to assess the impact of the development proposals on the historic environment. The aim is to make full and effective use of existing information in establishing the archaeological significance of the Application Site, to elucidate the presence or absence of archaeological material, its character, distribution, extent, condition and relative significance.
- 9.17 An archaeological desk-based assessment of the Application Site was undertaken by in 2018, an ASIDOHL2 study in 2019 and a palaeoenvironmental survey in 2020; these reports are included as Appendix 9.1², 9.2³ and 9.3⁴. The baseline for this chapter is derived from the information collected during these assessments and aim to provide information of sufficient detail to allow informed planning decisions to be made which can safeguard the archaeological resource.
- 9.18 The ASIDOHL2 was carried out in accordance with the Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process⁵.

² Nikolic, L & Barrett, D. 2018. *Rush Wall Solar Farm, Summerleaze, Newport: Archaeological Desk Based Assessment*. AW Report No. 1735

³ Poucher, P. 2020. *Rush Wall Solar Farm, Redwick, Newport ASIDOHL2*. AW Report No. 1866

⁴ Philp, R. 2020. *A Palaeoenvironmental Survey at Rush Wall Solar Farm, Redwick, Newport*. AW Report No. 1921

⁵ Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process⁵ (Revised 2nd Edition, 2007), jointly published by Cadw, the Countryside Council for Wales (CCW); now Natural Resources Wales) and the Welsh Assembly Government (now the Welsh Government)

- 9.19 The palaeoenvironmental survey was undertaken in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (2014⁶ & 2020⁷) and following Guidelines for Environmental Archaeology (2002⁸). Likewise, the desk-based assessment confirmed to the Standard and Guidance for Archaeological Desk Based Assessment⁹.
- 9.20 The scoring system for assessing the magnitude of impact of the proposed development is based on the Design Manual for Roads and Bridges (DMRB)¹⁰. The DMRB is the established good practice guidance for assessing the impact of the effects of the Proposed Development on the cultural heritage resource, which it divides into three sub-topics: **Archaeological Remains**, **Historic Buildings** and **Historic Landscapes (Annexes 5-7)**.
- 9.21 **Archaeological Remains** are the materials created or modified by past human activities that contribute to the study and understanding of past human societies and behaviour. Archaeology can include the study of a wide range of artefacts, field monuments, structures and landscape features, both visible and buried. For the purposes of the [DMRB] guidance the sub-topic generally excludes historic buildings and historic landscapes, always accepting there may be important archaeological aspects to these sub-topics.
- 9.22 **Historic Buildings** are architectural or designed or other structures with a significant historical value. These may include structures that have no aesthetic appeal, and the sub-topic includes, in addition to great houses, churches and vernacular buildings, some relatively modern structures, such as WWII and Cold War military structures, early motorway service stations, industrial buildings, and sometimes other structures not usually thought of as ‘buildings’, such as milestones or bridges.
- 9.23 **Historic Landscapes** are defined by perceptions that emphasise the evidence of the past and its significance in shaping the present landscape. The definition encompasses all landscapes, including the countryside, townscapes and industrial landscapes as well as designed landscapes, such as gardens and parks. As the whole of the UK’s (and most of the world’s) landscape has been modified by past human activities, it all has an historic character. However, just as all old materials are not necessarily archaeologically significant merely by virtue of their age, so not all landscapes are equally historically significant.

⁶ Chartered Institute for Archaeologists, 2014. Standards and guidance for the collection, documentation, conservation and research of archaeological materials.

⁷ Chartered Institute for Archaeologists, 2020, Standard and Guidance for Archaeological Field Evaluation.

⁸ English Heritage, 2002. Guidelines for Environmental Archaeology.

⁹ Chartered Institute for Archaeologists, 2014, Standard and Guidance for Desk Based Assessments

¹⁰ DMRB, Volume 11 Environmental Assessment, Section 3 Environmental Topics, Part 2, Cultural Heritage), which is published by the UK Government on behalf of the Highways Agency, Transport Scotland, Welsh Assembly Government (Llywodraeth Cynulliad Cymru) and the Department for Regional Development Northern Ireland

- 9.24 As the site lies within the Gwent Level Landscape of Outstanding Historic Interest (HLW (Gt) 2) within the Register of Landscape of Historic Interest in Wales¹¹, the Historic Landscapes are assessed as part of an ASIDOHL2 study, included as an Appendix 9.2. ASIDOHL2 studies use a different set of assessment categories to those recommended within the DMRB, therefore summaries of the ASIDOHL2 study are provided within this chapter and the results are be cross-referenced with the DMRB categorises.
- 9.25 The value or sensitivity of a receptor is categorised using its designation and importance internationally, nationally, regionally, or locally. These are scored using professional judgement guided by legislation, policy and acknowledged standards. The value of the assets within these three sub-topics: **Archaeological Remains**, **Historic Buildings** and **Historic Landscapes** are identified in the DMRB Annexes 5-7 (Tables 5.1, 6.1 and 7.1).
- 9.26 Magnitude of effect is also assessed using the guidelines set out in the DMRB (Annexes 5-7 (Tables 5.3, 6.3 and 7.3)). This assessment is made without regard to the value of the resource, so the total destruction of a low value site is considered as the same magnitude of effect as the destruction of a high value asset. The effect can be either 'direct' or 'indirect'. A direct effect is where there is a physical impact on a heritage asset, typically during the construction phase. Indirect is when there is a visual effect on the asset or its setting. In the broadest terms, the setting of an asset comprises the objects and conditions around it, and within which it is perceived; and in this sense all assets have settings. Not all settings, however, contribute to the value of the assets they encompass. The setting will be a combination of views, other historic features and their relationships to the asset, ambience (topography, vegetation, sound, and other sensual experiences) and context (what is known or thought about the asset, but not immediately experienced through the senses).
- 9.27 The impact could be permanent or temporary in nature:
- Permanent impacts are where recovery is not possible within a reasonable timescale or where mitigation measures cannot reverse it. This type of impact typically comprises of loss of archaeological features, the effects of which are mitigated by means of on-site recording, change of design, etc.
 - Temporary impacts are where recovery is possible naturally over a short period of time or where mitigation measures can be effective at reversing the impact. These impacts typically comprise of visual or other indirect effects but can also include other impacts such as a change of historic land-use. Temporary impacts typically can be reversable if required, although this is not always the case.

¹¹ Cadw, CCW & ICOMOS. 1998. The Register of Landscapes of Outstanding Historic Interest in Wales.

- 9.28 Impact timescales are based on the following:
- Short-term 0-5 years (typically construction impacts)
 - Medium-term 5-20 years
 - Long-term 20 years +
- 9.29 Significance of effect is assessed by combining the value of the resource and the predicted magnitude of effect likely to arise, as per the matrix within the DMRB (Vol.II, Sect.3, Pt.2, Chap.5 – Table 5.1).
- 9.30 For the purposes of the EIA¹² only moderate, moderate/ large, large/ very large or very large effects are considered significant.

BASELINE

Previous Archaeological Studies

- 9.31 The area is included in the Gwent Level Landscape of Outstanding Historic Interest (HLW (Gt) 2) within the Register of Landscape of Historic Interest in Wales. As such, the Application Site and the area around it has been assessed, with the Application Site itself lying within Historic Landscape Character Areas 006 Redwick/Magor/Undy and 008 Northern Redwick. The area has also been assessed as part of LANDMAP, which includes an assessment of the Historic Landscape (NWPRTL018 Redwick & NWPRTL019 Whitson), based around similar boundaries and the same reasoning as the HLCAs.
- 9.32 Studies have been undertaken in association with the proposed development. These include a Desk Based Assessment undertaken by AW in 2018, which examined the potential for archaeological remains to exist on the Application Site and included a search area of 1.5km from the centre of the site. The results of this Assessment have been used to help inform this ES Chapter.
- 9.33 An ASIDOHL2 study was undertaken by AW in 2019. This study examined the impact on the Historic Landscapes. The results of which are summarised and incorporated into this assessment.
- 9.34 An auger survey was undertaken in September 2020, on a 100m grid, across an area measuring approximately 84ha. The results of this survey are included in this assessment in Appendix 9.3. Peat levels were identified along with other deposits with archaeological potential within the impacted area of development.

¹² based on guidance in Welsh Office Circular 11/99 Environmental Impact Assessment, paragraphs 32-47

- 9.35 A wide number of other archaeological assessments and investigations have been undertaken within the wider area, which are detailed within the Desk Based Assessment. Several are of particular note for this Application Site, including an archaeological evaluation in 2013¹³ and watching brief in 2015¹⁴ on an adjacent wind turbine development along Longlands Lane. These works recorded a modern culvert, post-medieval field enclosures, drainage ditches and trackways, medieval reën, a natural palaeochannel and a layer of mixed clayey-peat recorded at a depth of 2.2m.
- 9.36 The building of Gwent Europark and Tesco Depots 500m to the northwest were preceded and accompanied by a variety of archaeological investigations between 1992 and 2006, including three DBAs, eight evaluations, three Watching Briefs, one excavation and a borehole survey. Recorded archaeological features include Bronze Age ritual deposits, a Roman quay, boat and land surfaces, medieval ditches, roads, and stone structures, post-medieval farmstead and drainage ditches and peat extraction pits.
- 9.37 Work in and around Magor to the northwest has uncovered evidence of Prehistoric, Roman and medieval activity in the vicinity. Medieval and post-medieval activity and artefacts have also been uncovered in a number of watching briefs undertaken in and around Redwick to the southwest.
- 9.38 The study area has also been the subject to a number of surveys and large area assessments, including the Newport Landscapes - Landscape Strategy DBA and Survey (GGATE002401), The Rural Settlement of Roman Britain study (GGATE005431), the Rapid Coastline Zone Assessment (GGATE006100) and DBAs on Legend Court, Newport (GGATE002186), the Second Severn Crossing (GGATE001482) and an Appraisal at Magor and Caldicot (GGATE004862).

Site, Monument, Building and Landscape Designations

- 9.39 In order to assess the historic environment, Scheduled Monuments (SMs), Historic Parks and Gardens, Registered Historic Landscapes, Conservation Areas, and Listed Buildings were examined within 5km around the proposed development to assess the impact on these assets.
- 9.40 Within the 5km search area twenty-one SMs were identified. None of these sites lie within the Application Site. These sites are considered to be of High value.
- 9.41 Within the 5km search area 64 Listed Buildings were identified, 13 are located within 1.5km of the proposed development site. None of these sites lie within the proposed development site. Of the 13 Listed Buildings within 1.5km, two are Grade I Listed, two are Grade II* Listed, and these are

¹³ Thomas, S, 2013, Longlands Lane, Newport, Archaeological Evaluation, Archaeology Wales

¹⁴ Poucher, P, 2015, Longlands Lane, Newport, Archaeological Watching Brief, Archaeology Wales

considered to be of High value. The remaining listed buildings are Grade II Listed, and these are considered to be Medium value.

- 9.42 There are three Registered Parks and Gardens within 5km of the proposed development site. These are considered to be of High value.
- 9.43 The site lies within the Caldicot area of the Registered Historic Landscape of the Gwent Levels (HLW (Gt) 2). The landscape is considered to be of High value.
- 9.44 The northern part of the site lies within Northern Redwick Historic Landscape Characterisation area (HLCA008), the remainder is within Redwick Historic Landscape Characterisation area (HLCA006). These are considered to be of High value.
- 9.45 The Redwick Conservation Area lies, at its closest, 150m to the southwest of the site. This is considered to be of High value.
- 9.46 Within 1.5km of the proposed development site there are 32 records in the Historic Environment Record (HER). Two of these sites are located within the proposed development site; within the northern part of the site is Pill Farm enclosure (PRN 08960g/NPRN 309437). This is recorded as an incomplete round-angled, sub rectangular ditched and banked enclosure, c.55m ENE-WSW by 45m N-S, overlain & obscured by ridge and furrow cultivation and associated boundaries. Originally identified from aerial photography, the site has been re-examined during recent studies, and the feature is no longer visible on recent aerial photography, Lidar data or at ground level and is therefore assumed to be poorly preserved. The second site is that of Greenstreet Common (06219g), recorded as a funnel-shaped common. This is noted in the southern part of the area not subject to development. These are considered to be of Low value.
- 9.47 The desk-based assessment highlighted further potential archaeological features within the proposed development site. This included the ridge and furrow identified overlying the Pill Farm enclosure. There is no longer any evidence of these remains however, and it is considered to be of Negligible value. The field enclosures themselves were highlighted as archaeological features in themselves, comprising ditches, reens and some scrubby hedgerows. These are considered to be of Low individual value. A further site identified in the desk-based includes a possible enclosure which was detected on LiDAR in the southern area of the proposed development site (Fields 14 & 18), with clear ridge and furrow. The boundary of which did not respect the medieval/post medieval field system, although a remnant of it was part of the field boundaries seen on the tithe. The ridge and furrow appear to pass over the boundary of this enclosure suggesting an earlier date for this feature. This is also assessed as being of Low value.
- 9.48 The palaeoenvironmental survey identified deposits that may contain evidence of archaeological significance. Very little evidence of archaeological remains was identified within the upper alluvial clays, with the exception of patchy charcoal between 0.5-1m below the surface and a rubble deposit just below the surface near the centre of the proposed development. In terms of prehistoric deposits, across the centre of the site, where the later alluvial deposits have built up to their thickest,

most of the peat layers are encountered beneath the 2.5m limit of development. A potentially later prehistoric peat layer is identified in two of the auger positions but has not been identified in the surrounding auger positions. However, at the far north west and east of the site, the alluvial overburden is thinner meaning the prehistoric peat deposits are higher in the sequence and may therefore be encountered by the development. Overlying minerogenic clays also sit within the level of development across the majority of the site, these too have the potential for archaeological evidence to be encountered. These were encountered at varying depths across the site making some areas more likely to be affected by the groundworks than others (Figure 9.1). The concern was not just that archaeological remains are disturbed in the specific area of the piles, which would be relatively limited, but the potential impact of piling altering the saturation levels which maintains the peat in a condition whereby archaeological remains are well preserved. This could adversely impact the proven preservation qualities of the deposits. However, the potential for piling causing desiccation (drying out) of the waterlogged deposits underlying the site has been investigated using evidence from historical borehole logs (ST48NW39). This has shown that the saturated nature of the tidal flat deposits means there would be no alteration to the degree of saturation. Therefore, there would be no change to the quality of preservation of the peat as a result of piling for the proposed solar park.

THE PROPOSAL RESPONDS TO ITS UNIQUE LOCATION

Primary (embedded) mitigation

- 9.49 The Gwent Levels is a unique and ancient landscape designated as a Site of Special Scientific Interest (SSSI) for its ecological richness and diversity, much of which is associated with the presence of and maintenance regime associated with the drainage system which constitutes a network of ditches, referred to locally as reens.
- 9.50 It is recognised that physical changes as a result of a solar park development in this location, such as changes in views or ground disturbance, would result from the proposal. These changes are referred to as impacts. The design and layout of the solar park has responded to the location's value and sensitivities in order to reduce the magnitude of such impacts through primary (embedded) mitigation, as detailed within 'Responding to the Environmental Sensitivity of the Site', in paragraphs 2.41 and 2.42 of Chapter 2.

Secondary Mitigation

- 9.51 As a secondary mitigation measure, an archaeological watching brief would be required in the vicinity of Pill Farm enclosure, PRN 08960g/NPRN 309437 and in areas where peat deposits are likely to be encountered at the trench excavation depth. This would be guided by the results of the palaeoenvironmental survey (Appendix 9.3). Due to the nature of the works this will not include piling but in the areas of open works such as the trenching cables or topsoil removal. The impact on the remainder of the peat deposit would be mitigated by means of a further palaeoenvironmental auger survey focussed on those areas of shallower peat deposits and would include environmental

sampling of the peat layer. . The details of the mitigation should be outlined in a written scheme of investigation following a review of detailed development proposals in reference to the areas of archaeological potential highlighted in the palaeoenvironmental survey and desk based assessment.

Efficacy of the secondary mitigation proposed

- 9.52 While an archaeological watching brief on the open excavation areas can help to avoid archaeological features, and preservation *in situ* would always be the preference, it is more likely that any features of archaeological significance would be recorded and removed (preservation by record) as to mitigate the impact on the archaeological resource.

ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

Sources of Potential Effects

- 9.53 The working practices during site preparation and construction (Short to Medium term) that have the potential to generate direct effects on heritage assets, and which have been considered in the Assessment are noted in paragraph 2.44 of Chapter 2.
- 9.54 Operational effects that have the potential to generate indirect effects on heritage assets, and which have been considered in this Assessment, include:
- Alteration to the visual setting or tranquillity of heritage assets; and
 - Alteration to the visual setting or tranquillity of the more holistic ‘historic landscapes’.
- 9.55 These are considered to be Long term indirect effects associated with the completed development.

Archaeological Remains

- 9.56 The assessment has determined that there are no designated archaeological remains within the Application Site.
- 9.57 Consultation of the regional Historic Environment Record, maintained by GGAT in Swansea, has identified two undesignated sites within the proposed development site. This include the remains of the Pill Farm enclosure (08960g/NPRN 309437) and Greenstreet Common (06219g), as described in 9.46, considered to be of Low value. Given the unknown current state of preservation, the development could potentially have a Major impact upon the site of Pill Farm enclosure and a **Negligible** impact on Greenstreet common due to the asset’s location in the southern part of the development area.
- 9.58 Recent assessment of the proposed development area has also identified an area of former ridge and furrow, as described in 9.47, considered to be of **Negligible** value. The field enclosures themselves are considered to be of Low individual value the development could potentially have a **Minor** impact on the site. A possible enclosure also described in 9.47 is likewise assessed as being

of Low value with the development having a **Negligible** due to the asset's location in the southern part of the development area.

- 9.59 Further afield twenty-one Scheduled Monuments (SM) have been identified in this study area, and three are located within 1.5km of the proposed development site. As SMs these features are of High value. The closest is 990m north-east and consists of the remains of a building of 14th century date and traditionally known as the Procurator's House (MM180). Another consists of two medieval cross bases in the churchyard of St. Mary's church (MM314). The view from the south side of Magor towards the site is obscured by both later housing, planting and an embanked railway line therefore the impact it considered to be **Negligible**. The final SM is located 1.38km to the north of the proposed development site, is Wilcrick Hill Camp (MM127), the remains of a hillfort which probably dates to the Iron Age. Wilcrick Hill Camp has a view over the development however a large part of the view encompasses later development. Although the proposals will create a change to the view and therefore the setting to this monument, this has already been altered by recent buildings; it will not however, restrict the views over the levels which is a more important component of its setting, and should not further alter the significance of this monument. Therefore, the impact can be said to be **Minor**.
- 9.60 The palaeoenvironmental survey identified deposits that may contain evidence of archaeological significance. In terms of prehistoric deposits, across the centre of the site, where the later alluvial deposits have built up to their thickest, most of the peat layers are encountered beneath the 2.5m limit of development. However, at the far north west and east of the site, the alluvial overburden is thinner meaning the prehistoric peat deposits are higher in the sequence and may therefore be encountered by the development. Overlying minerogenic clays also sit within the level of development across the majority of the site, these too have the potential for archaeological evidence to be encountered.
- 9.61 The potential for piling causing desiccation (drying out) of the waterlogged deposits underlying the site has been investigated using evidence from historical borehole logs (ST48NW39)¹⁵. This has shown that the saturated nature of the tidal flat deposits means there would be no alteration to the degree of saturation. Therefore, there would be no change to the quality of preservation of the peat as a result of piling for the proposed solar park.

Historic Buildings

- 9.62 No archaeological assets have been identified as Historic Buildings within the proposed development area that may be either directly or indirectly affected. A total of 64 Listed Buildings have been identified within a 5km radius of proposed development area, and 13 of those buildings

¹⁵ BGS Geology of Britain viewer, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

are located within 1.5km of the proposed development area. The development may indirectly affect those 13 buildings.

- 9.63 There are two Grade I Listed buildings within 1.5km of the proposed development site. The Church of St Mary (LB N^o: 2928) is located approximately 970m north-east of the development site, close to the centre of Magor. The other Grade I Listed building is Church of St Thomas (LB N^o: 2940) is located approximately 540m south-west of the development site. As Grade I Listed Buildings they considered to be of High value. The proposed development will not affect the setting or views of this asset due to the intervening topography and built landscape, therefore the impact is considered to be **Negligible**.
- 9.64 There is also a Grade II* Listed Building. Magor Mansion (also known as the Procurator's House) (LB N^o: 16064) this is the same asset as SM180 (see paragraph 9.59)
- 9.65 The remaining Listed Buildings are all Grade II Listed (LB N^{os}: 16062, 16063, 2906, 16067, 16065, 2930, 16066, 2931, 16068, 3060). These are considered to be of Medium value. The proposed development will not affect the setting of these buildings either, due to the intervening topography and built landscape. Therefore, the impact is considered to be **Negligible**.

Historic Landscapes

- 9.66 The site lies within the Caldicot area of the Registered Historic Landscape of the Gwent Levels (HLW (Gt) 2). Cadw has designated this landscape as Outstanding and is a uniquely rich archaeological and historical resource in Wales, and of international importance and significance. The levels are one of four non-statutory Archaeologically Sensitive Areas, determined by the Local Authority.
- 9.67 The northern part of the site lies within Northern Redwick Historic Landscape Characterisation area (HLCA008), the remainder is within Redwick Historic Landscape Characterisation area (HLCA006).
- 9.68 The direct impact of the Proposed Development is described and assessed in the accompanying ASIDOHL2 study (Appendix 2), which has six grades of impacts, ranging from Very Slight to Very Severe. These grades of impact do not necessarily equate with those used in the DMRB, so should not be considered as having values corresponding to similar terms used in this statement.
- 9.69 The overall magnitude of the direct physical impact on the two HLCAs is considered to be Moderate. The overall magnitude of indirect impact on HLCA 006 and HLCA 008 was scored as Considerable, HLCA 010 Magor Lower Grange was scored as Slight, HLCA 009 Green Moor and HLCA 005 Redwick Village was scored as Very Slight, with the impact on the latter being so minimal it was excluded from the remaining assessment.
- 9.70 An evaluation of the relative importance of the HLCA, and the parts within them that are affected by the proposed development considers the overall value of all four HLCAs to be Considerable.
- 9.71 Converting the ASIDOHL2 study grades to those used in the DMRB guidance is not straightforward, as the ASIDOHL2 study uses calculations based on a wide range of criteria to determine the value

of each individual HLCA. The DMRB provides more simplified criteria, with all areas being considered to be of High value as they lie within the registered Historic Landscape of Outstanding Interest. In terms of the magnitude of impact the ASIDOHL2 study utilises six different grades of impact, based on a scoring system between 0 to 28. The DMRB effectively uses four different grades of impact (the fifth being No Change), which when divided into an equivalent scoring system suggests that the direct impact on HLCA 006 and HLCA 008 would be **Minor**. The of indirect impact on HLCA 006 and HLCA 008 would be **Moderate** and HLCA 010 Magor Lower Grange, HLCA 009 Green Moor and HLCA 005 Redwick Village would be scored as **Negligible**

- 9.72 The Redwick Conservation Area lies, at its closest, 150m to the southwest of the site. In spite of its proximity, the flat landscape does not afford views across it to any great degree due to tree planting, hedgerows and buildings and are therefore will not be permanently impacted directly or indirectly by the proposals. They may, however, be temporarily impacted during the construction phase by works traffic and noise. The conservation area is regarded as being of Medium value and the impact of the development would be short term **Minor** impact.

Table 9-2 Assessment of effects

Receptor / resource	Phase	Value of receptor/ resource	Nature of Potential Impact on receptor / resource	Secondary mitigation	Magnitude of potential impact	Level of effect	Significant / not significant
Pill Farm enclosure, PRN 08960g/NPRN 309437	Construction	Low	Removal archaeological remains during excavations	Targeted watching brief in area of the feature	Major-Direct	Slight/Moderate Direct Adverse Permanent Long Term	Not Significant
Greenstreet Common (06219g)	Operation	Low	Change in the value of the asset/change in the setting		Negligible-Indirect	Neutral/Slight Indirect Adverse Temporary Long term	Not Significant
Area of former ridge and furrow	Construction	Negligible	Removal archaeological remains during excavations		Minor-Direct	Neutral/Slight-Direct Adverse Permanent Long term	Not Significant
Peat deposits	Construction	High	Removal of buried archaeological deposits	Targeted watching brief on areas of potential archaeology where open excavations to be carried out such as trenching or ground reduction.	Negligible-Direct	Slight Direct Adverse Permanent Long Term	Not Significant
Field enclosures comprising ditches, reens and hedgerows.	Construction, Operation & Decommissioning	Low	Change to the setting of the asset Change in the value of the asset		Minor-Direct	Neutral/Slight Direct Adverse Temporary Long term	Not Significant
Possible enclosure within Fields 14 & 18	Operation	Low	Change in the value of the asset/change in the setting		Negligible- Indirect	Neutral/Slight-Indirect Adverse Temporary Long term	Not Significant

Rush Wall Solar Park – Environmental Statement

Scheduled Monument - Procurator's House (MM180)/LB No 16064	Operation	High	Change of setting specifically the visual impact		Negligible- Indirect	Slight Indirect Adverse Temporary Long term	Not Significant
Scheduled Monument - Churchyard Crosses (MM314)	Operation	High	Change of setting specifically the visual impact		Negligible- Indirect	Slight Indirect Adverse Temporary Long term	Not Significant
Scheduled Monument - Wilcrick Hill Camp (MM127)	Operation	High	Change of setting specifically the visual impact		Minor- Indirect	Moderate/Slight Indirect Adverse Temporary Long term	Not Significant
Church of St Mary, LB No 2928	Operation	High	Change of setting specifically the views from the church		Negligible- Indirect	Slight Indirect Adverse Temporary Long term	Not Significant
Church of St Thomas, LB No 2940	Operation	High	Change of setting specifically the views from the church		Negligible- Indirect	Slight Indirect Adverse Temporary Long term	Not Significant
Grade II Listed Buildings 1.5km from site; LB No 16062, 6063, 16065-16068, 2906,2930, 2931, 3060	Operation	Medium	Change in the setting specifically the visual impact		Negligible- Indirect	Neutral/ Slight Indirect Adverse Temporary Long term	Not Significant
Conservation Area- Redwick	Construction	Medium	Change in the setting		Minor- Indirect	Slight Indirect Adverse Temporary Short Term	Not Significant

HLCA 005 – Part of the Gwent Levels Historic Landscape	Operation	High	Change of setting		Negligible- Indirect	Slight Indirect Adverse Temporary Long term	Not Significant
HLCA 006 – Part of the Gwent Levels Historic Landscape	Construction & Operation	High	Disturbance of historic landuse, Change of setting and integrity of landscape.		Minor-Direct Moderate-Indirect	Moderate/Slight-Direct Moderate/Large-Indirect Adverse Temporary Long term	Not Significant-Direct Significant - Indirect
HLCA 008 – Part of the Gwent Levels Historic Landscape	Construction & Operation	High	Disturbance of historic landuse, Change of setting and integrity of landscape.		Minor-Direct Moderate-Indirect	Moderate/Slight-Direct Moderate/Large-Indirect Adverse Temporary Long term	Not Significant-Direct Significant - Indirect
HLCA 009 – Part of the Gwent Levels Historic Landscape	Operation	High	Change of setting		Negligible-Indirect	Slight Indirect Adverse Temporary Long term	Not Significant
HLCA 010 – Part of the Gwent Levels Historic Landscape	Operation	High	Change of setting		Negligible-Indirect	Slight Indirect Adverse Temporary Long term	Not Significant

Likely significant effects

- 9.73 The only likely significant effects highlighted in the assessment **Error! Reference source not found.** are the indirect effects on the Historic Landscape Character Areas 006 and 008 that form part of the Gwent Levels Historic Landscapes of Outstanding Interest.

Delivery of mitigation

- 9.74 To mitigate the effect of the development on the buried archaeological resource an agreed programme of targeted archaeological watching brief would be carried out during the groundworks depending on their location and type. Areas of open trenching would be monitored by an archaeological watching brief in the vicinity of Pill Farm enclosure, PRN 08960g/NPRN 309437 and in areas where peat is likely to be encountered at the trench excavation depth. This would be guided by the results of the palaeoenvironmental survey (Appendix 9.3). The impact on the remainder of the peat deposit would be mitigated by means of a further palaeoenvironmental auger survey focussed on those areas of shallower peat deposits and would include environmental sampling of the peat layer. The details of this would be outlined in a written scheme of investigation.
- 9.75 Measures have been taken to reduce the direct effect of the development on the HLCAs namely the field patterns, drainage features and boundaries, will remain intact and unaffected. The development will however be a distinct visual change, potentially fragmenting the continuous agricultural landscape currently visible. That being said, significant viewpoints are limited, long distance views across the landscape are soon obscured by boundary vegetation. Steps have been taken to reduce visual impacts, through positioning development back from the main publicly accessible thoroughfares, creating buffer zones around ditches and reens, and retaining existing boundary vegetation.

OPPORTUNITIES FOR ENHANCEMENT

- 9.76 There could be some options for opportunities for enhancement to the historic resource or landscape, these are described below:
- An interpretation board could be installed that would provide further information on Black Wall track for the local community or visitors to the area.
 - The data of both paleoenvironmental auger surveys would contribute to the wider study of environmental archaeology, and it could also contribute to the Research Framework for the Archaeology of Wales. This area has the potential to inform us on human activity in the Mesolithic, Neolithic, Bronze Age, Iron Age and even the Roman period. In particular, the Research Framework for the Archaeology of Wales state that the evidence from the prehistoric periods,

mentioned above, has a limited amount of data available and this needs to be supplemented by new research¹⁶.

CUMULATIVE EFFECTS

1.6km Rail Formation by Transport for Wales

NCC application 18/1109 on land adjacent and north of Branch Railway Line, Seven Stiles Avenue, Newport

- 9.77 A DBA written by the Mott MacDonald Group concluded that there would be no impact upon any designated asset. However, a letter from Glamorgan-Gwent Archaeological Trust – Archaeological Planning Management (GGAT-APM) dated 12/12/2018 stated that the DBA did not meet the current professional standards and could not be accepted as it was not written by a registered organisation or by a Member of ClfA (MCIfA). Therefore, it is difficult to conclude the cumulative effects. As this is the only report available for the development, we must conclude that the cumulative effects are regarded as **Minor** and permanent. This would be a **Not Significant** effect.

Hybrid application for 155 dwellings by Bovis Homes

MCC application DM/2019/01937 on land at Vinegar Hill

- 9.78 An Archaeological and Heritage Assessment that accompanied this application concluded that there would be a **Negligible** permanent and **Not Significant** effect on any designated asset or landscape.

Residential and Employment Units by Bovis Homes

MCC application DC/2016/00883 and DM/2018/01606 on land at Rockfield Farm

- 9.79 This development would have a **Minor** permanent and **Not Significant** effect on the Medieval Moated Site 400m N of Undy Church (MM198) and Standing Stone 252m South of Bencroft Lane (MM068), due to intervening topography and the built landscape.

¹⁶ Research Framework for the Archaeology of Wales, 2017, *A Research Framework for the Archaeology of Wales: Final Paper*

Erection of Sixteen Fermentation Vessels, with Associated Structures and Works by AB InBev UK Limited

MCC application DM/2020/00103 at Magor Brewery, Newport Road, Magor Caldicot, Monmouthshire, NP26 3RA

- 9.80 The proposals for this scheme assess the impact as having a **Negligible** permanent and **Not Significant** effect on any designated asset or landscape.