

Guidance: Solar Farms and Archaeology



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Appendix A: Flow chart for the Predetermination process

Appendix B: Flow chart for solar planning applications following consent

1. Introduction

- 1.1 Applications for solar farms have been increasing in recent years and are set to rise in the future as the UK aspires to realise targets for renewable energy. The need for guidance has been recognised to facilitate a standard and consistent approach for archaeological assessment and mitigation. When considering solar farms, the fundamental principle of understanding potential for archaeological deposits, their significance and the impact of a proposal is the same as more traditional types of development (e.g. residential). However, solar farms do have different characteristics and some nuanced types of impact, and a more bespoke approach to archaeological assessment and mitigation is sometimes required.
- 1.2 This guidance has been provided to outline good practice for consideration of archaeology in the context of solar farm development in Essex. The guidance aims to promote the best methods by which the potential and significance of archaeological deposits can be understood to facilitate an efficient and effective process for the determination of solar farm planning applications. This guidance is intended to sit below the National Good Practice Guide¹.
- 1.3 The guidance sets out Place Service's approach to solar farms and the archaeological advice we provide to local planning authorities. The understanding of the information requirements, outlined in this document, can aid archaeological consultants and contractors as well as solar farm developers in the planning process. Due to the nature of archaeology, it is not possible to provide an approach which will be identical for every application, but it is possible to provide a sequential process that can be broadly followed.
- 1.4 The technology and methods for solar farms are understood to be constantly advancing. Technology and techniques for archaeological investigation will also continue to improve over time. For these reasons, this guidance will be reviewed and updated when any major change occurs. This guidance will also be reviewed if new national guidance is published, or there is any fundamental change in planning policy and the National Planning Policy Framework.

¹ <https://www.archaeologists.net/sites/default/files/2026-04/Archaeology-and-Solar-Farms-GPG---FINAL-2026-04-14.pdf>

2. Principles & Approach

- 2.1 This section outlines our recommended approach for an efficient planning process which addresses archaeological potential as early as possible. This approach may, in some circumstances, facilitate minimal (or no) archaeological trenching of a site pre-determination.
- 2.2 It is recommended that archaeological consultants/contractors are included in the design team at the outset of a solar farm project.

Applicant Considerations

- 2.3 There are several aspects of a solar farm project that an applicant can consider at the outset which will aid an efficient process for understanding archaeological potential and any mitigation that may be required. This includes the production of adequate baseline information early in the process, and ideally at pre-application stage. The submission should also include an adequate level of design detail. It is understood that detailed design may not always be possible, but in these cases the applicant should expect there may be an increased possibility of the need for more archaeological assessment, and possibly intrusive fieldwork, pre-determination of an application.

Archaeological Desk Based Assessment and mitigation

- 2.4 The production of an Archaeological Desk-Based Assessment (DBA) is required with the submission of any planning application that may impact archaeological deposits. The National Planning Policy Framework (NPPF) is clear that:

Development proposals affecting heritage assets should be accompanied by an assessment of the significance of the assets affected (including any contribution made by their setting) and of the potential effect of the proposal on their significance. The level of detail should be proportionate to the assets' importance and no more than is necessary to understand the potential effect of the proposal on their significance. The relevant historic environment record should be referred to in making this assessment, and appropriate expertise employed where necessary.²

- 2.5 The NPPF also states that this may need to be supported by field evaluation:

Where a development proposal involves, or has the potential to involve, a heritage asset with archaeological interest, an appropriate desk-based assessment should be undertaken and, where necessary, a field evaluation. These should be used to help understand the asset's significance and the potential effect

² [National Planning Policy Framework](#)

of the proposal on this, which should inform the design, mitigation and implementation of the development³.

- 2.6 With regard to solar farms, whether field evaluation is undertaken at pre or post-determination stage is typically one of the areas of discussion. Trial trench evaluation can be useful for an applicant at pre-determination stage as it can confirm the archaeological mitigation required, thus permitting the cost and time to be allowed in the future budget and programme. There is however, understandably, sometimes a reluctance to commit investment in trial trenching (especially over larger sites) before a permission is granted.
- 2.7 The difference with solar farms, relative to most other types of development, is the level of impact which can result from their construction. There are some parts of a proposal which will usually be more intrusive (in terms of groundworks) such as compounds and sub stations, compared to the piled solar arrays that comprise the largest area of the development (Fig. 1). The need for trial trenching within the footprint of the arrays is typically the most discussed aspect of archaeological mitigation.
- 2.8 This guidance recommends an applicant provides a detailed Archaeological Desk-Based Assessment (DBA), the conclusions of which are informed and enhanced by non-intrusive survey(s), at the earliest stage in the project. Section 3 of this guidance outlines what sources we recommend are consulted in the county of Essex when undertaking a DBA, and Section 4 outlines

the non-intrusive evaluation that we also recommend are applied.

- 2.9 It is important that the DBA specifically addresses the individual facets of a solar farm proposal and the differing impacts these can have on archaeological significance. For this reason, there should be co-ordination between the archaeologist producing the DBA and the design team for the proposal.
- 2.10 Without the provision of adequate baseline archaeological information, there is increased possibility of the need for pre-determination trial trenching. The aim of the DBA (and the surveys that inform it) is to identify the nature, extent and significance of any unknown archaeology. The detailed DBA, and accompanying non-intrusive survey(s), would likely identify any substantial features (such as a settlement), and so in some circumstances it could facilitate the permission for trial trenching to be undertaken post-determination. However, a perceived absence of archaeology may not negate the need for archaeological mitigation.

³ [National Planning Policy Framework](#)



Figure 1 Example of solar panel arrays © *Places Services, ECC*

Fixed Design

- 2.11 Once the archaeological potential of a site has been understood, it is important to understand the impact of the proposed development. In solar farms there are items which typically involve more substantial groundworks which could truncate any extant archaeological deposits. In these areas of a scheme, there is an increased possibility for archaeological mitigation in the form of either archaeological trial trenching or monitoring.
- 2.12 It is recommended that these items are fixed (at least in location) early in the process so that the impact on archaeological significance can be sufficiently understood (as far as possible) and mitigation can be planned. Should items (such as the locations of sub stations and roads) be left to be resolved until post determination, then the requirement for pre-determination archaeological fieldwork may be increased.
- 2.13 It is important that the solar farm design, layout and locations of the different items of the proposal are informed by the Archaeological Desk-Based Assessment (DBA) and accompanying survey(s), to have minimal impact on any known features.
- 2.14 Details of items, the location or position of which are recommended to be resolved pre-determination, include:
- Roads
 - Substation
 - Inverters/Transformers
 - Cable routes

- Compounds
- Cables along array (above or below-ground)

Detailed Design

- 2.15 There are several facets of a solar farm where the specifics of their design are fundamental to understand the nature of their impact on any archaeological deposits. Lack of clarity around some of these items can increase the requirement for pre-determination intrusive field work. Examples of considerations early in the process include:
- Will the roads be excavated or 'made-up' above existing ground level?
 - Will the solar arrays be piled and what is the piling detail?
 - Will the cabling along the arrays be buried or surface mounted?
 - The location of the main cable from the grid connection to and through the solar farm.
 - Where will any construction compound be located?
- 2.16 These details should not be left to the post determination stage. It is important that they are adequately detailed, specifically cross-referenced and assessed in the DBA.

Flexible Design

- 2.17 The production of an Archaeological Desk-Based Assessment (DBA) is required with the submission of any planning application that may impact archaeological deposits.
- 2.18 There are benefits if a design is flexible, and in the case of solar farms the benefits are typically realised in the flexible placement of the arrays. However, there is a distinction between a design that is flexible and one that leaves many design items unresolved at determination stage, as these have potentially contrasting effects on the need for early intrusive archaeological investigation and fieldwork.
- 2.19 Flexibility should also be considered regarding the percentage of a site that is proposed to be utilised. For example, a proposal that requires the site to be fully utilised with arrays leaves little ability for reconfiguration of layout. In this circumstance, when archaeological mitigation (through preservation in-situ/layout modification) is not possible then there may be an increased need for pre-determination intrusive fieldwork.
- 2.20 It is recommended that early engagement is undertaken with the local planning authority, as flexibility in design (or substantial number of items that are not fixed design) can be problematic in resolving the impact on potential archaeological deposits. An application may then not be compliant with the NPPF.

3. Desk-based Assessment

3.1 An Archaeological Desk-Based Assessment (DBA) is required at the outset of all applications for solar farms. The main objective of the DBA is to understand the nature, extent and significance of the historic environment within the site and the impact of the proposed development. This will the permit adequate archaeological mitigation to be planned and undertaken.

3.2 the following guidance can be consulted:

The Chartered Institute for Archaeology (CIfA) produce guidance for undertaking DBAs which can be consulted:

[CIfA-SandG-DBA-2020.pdf](#)

Historic England produce guidance, about planning and archaeology, which can also be consulted:

[Planning and Archaeology | Historic England](#)

Should the proposal affect the setting of a Heritage Asset, Historic England Guidance should be consulted for methodology: [The Setting of Heritage Assets | Historic England](#)

Contents of a DBA

3.3 We recommend the DBA includes the following sections:

Introduction

- Authorship
- Why assessment is undertaken
- Site location and extent
- Scope of Study

Methodology

- Outline scope of assessment and guidance used
- What/who has been consulted
- Details of site visit

Baseline

- Relevant heritage assets identified (include Heritage Assets Maps and HER Maps)
- Overview-History by period, including HER Data and historic maps.
- Detail of site visit
- Include the non-intrusive surveys noted below and integrate the survey results.

Archaeological Potential and Significance

- By period and detailed to separate areas of the site.

Further Assessment/ Recommended Mitigation

- This should consider the specifics of the proposal and the details of the design that are available.

Appendices:

- Designation descriptions
- HER Data
- Guidance, Policy and Legislation
- Detailed information to support heritage baseline

Historic Environment Record (HER)

- 3.4 The Essex Historic Environment Record (EHER) is a database with integrated GIS material, containing information on a wide range of buildings, monuments, find spots, places, and landscapes. These are of archaeological, architectural, artistic or historic interest. The HER needs to be consulted for all DBA's and this is required by the NPPF. Place Services curates the HER for Essex (with exception of Colchester and Southend). Details how to consult the Essex HER can be found on Place Service's website: [Historic Environment | Place Services](#)
- 3.5 In addition to EHER data, the database also includes other sources that can inform understanding of the archaeological potential of an area. This includes data relating to Historic Landscape Characterisation, Historic Environment Characterisation, Palaeolithic potential and cropmarks. The spatial data is available in digital format (GIS shapefiles) for most areas.
- 3.6 Cropmark data, recorded as part of the National Mapping Programme, is available as graphic (non-digital) data. This data is available for information only and would require rectification from the original sources for intrusive fieldwork purposes. The EHER has an extensive collection of aerial photographs, the majority of which are specialist oblique images of archaeological features, particularly cropmarks, earthworks and soil marks. Since 2009 the EHER photographic collection has been fully digital with high resolution photography, prior to this the EHER holds hard copy prints, which can be scanned for mapping purposes.

Archives

- 3.7 There are many archives in Essex and the specific ones to be consulted will often depend on the location of the proposed development.
- 3.8 The Essex Record Office should be consulted for all applications in Essex: [Essex Record Office](#)

Historic Cartography

- 3.9 The Essex Record Office holds an extensive map collection and many can also be sourced online. We recommend the following maps are included in the DBA as a minimum:
- Chapman & Andre Map of Essex, 1777.
 - Tithe Map (and Tithe Apportionment), c.1840.
 - Historic Ordnance Survey. First Edition onwards, both 6-inch and 25-inch editions.

4. Non-Intrusive Survey Techniques

- 4.1 This section outlines additional surveys we recommend are completed to determine the nature, extent and significance of the historic environment within a site as efficiently and effectively as possible at an early stage. These surveys should be completed to inform the conclusions of the DBA.
- 4.2 Non-intrusive techniques can be utilised to identify and clarify the nature of potential archaeological features. Applying a range of techniques can provide more confidence in the assessment of archaeological potential and significance.
- 4.3 Developments in technology and innovation across the historic environment sector, and beyond, have increased the range of non-intrusive approaches available for use as archaeological research and evaluation tools. These techniques, such as drone LiDAR/airborne laser scanning and multi-spectral imaging, are not yet commonly used in archaeological assessment. They are not described here, but they may become more commonplace in the future.

Aerial Photography and LIDAR

- 4.4 The primary aim of any aerial photographic and lidar assessment should be to provide detailed accurate digital mapping of any known and hitherto unknown archaeological remains within the proposed development area, to inform a robust mitigation strategy.
- 4.5 The work should be completed to recognised Aerial Investigation and Mapping (AIM) standards, which includes the use of both aerial photographic sources and lidar (if available). The aerial investigation and mapping stage should include the analysis and mapping of archaeological features, to inform understanding and to provide information for the planning of archaeological mitigation. The work should be completed by an experienced aerial photographic interpreter using all available aerial photographic and lidar resources. Appropriate rectification software should be used.
- 4.6 Further information regarding these expected standards can be found in the Historic England technical review <https://historicengland.org.uk/research/results/reports/46-2019> and Standards for aerial investigation and mapping projects (Winton 2023).

- 4.7 The scope of the aerial investigation should include all buried (cropmarks and soilmarks) and surface archaeological remains (earthworks and structures), potentially dating from the Neolithic period to the mid-twentieth century, including industrial and military features.
- 4.8 All available aerial photographs and lidar should be consulted for the study. Where possible these sources should be used together.
- 4.9 The following sources should be consulted as a minimum for assessment:
- The Historic England Archive (HEA) collection of aerial photographs.
 - Essex Historic Environment Record (EHER) may hold relevant photographs. The EHER may contain aerial images from many different sources, however, only ECC copyright photographs can be supplied to contractors. Further information can be found here:
[Historic Environment Records | Place Services](#)
 - Historic England's aerial photograph explorer web page allows the exploration of Historic England Archive (HEA) collection, however, this web page does not show all the resources available from the HEA and aerial photographs should not be used for mapping purposes (<https://historicengland.maps.arcgis.com/>). The HEA will provide a cover search of the available aerial photographs they hold on request.

4.10 Many websites now offer seamless aerial photographic cover. These provide up to date colour photographs. However, these photographs cannot be viewed stereoscopically and the resolution, while mostly good, can be variable. These sources include:

- www.bing.com/maps/ Free internet service. Vertical photographs supplemented by oblique images in some areas.
- <http://earth.google.com> Free internet service with global coverage of varying quality/resolution. Note the Historic Imagery option allows access to multiple sets of images for many areas.

4.11 Additional sources that should also be consulted include soil/geology maps, historic maps, Historic Landscape Characterisation data and HER data.

Geophysics

4.11 The aim of any geophysical survey is to better understand the presence/absence and significance of heritage assets of archaeological interest within a site. This work is usually undertaken to inform a proposed development that will be subject to a planning application but can also be required as a first stage of archaeological work. Geophysical survey can determine the presence of anomalies which inform archaeological potential through measurement of one or more physical properties of the subsurface.

- 4.12 Geophysical survey can offer an effective way of assessing a site for archaeological potential, but the limitations of any survey methodology should be understood and acknowledged. No single non-intrusive survey technique will conclusively prove the absence of below-ground archaeological deposits.
- 4.13 It is the responsibility of the specialist to establish the most suitable survey technique for the site. While magnetometry/gradiometry is the most common form of geophysical survey, it may not be the most suitable for a site and it may be necessary to use more than one form of technique to obtain the best results. The geology of a site will influence the results of any surveys as techniques often rely on the contrasts between soils and archaeological features.
- 4.14 ClfA guidance ([ClfA-SandG-Geophysical-Survey-2020.pdf](#)) should be consulted and any surveys completed should comply with professional standards. The appointed contractor should be a specialist in archaeological geophysical survey techniques.
- 4.15 The survey should be conducted at a suitable resolution for the site. A high resolution survey (e.g. higher number of transects and an increased sample interval) could be considered to provide additional detail, where appropriate.
- 4.16 The survey grid must be independently re-locatable on the ground by a third party either by measurement to permanent features and/or by the use of Global Positioning System (GPS) coordinates, the latter being the typical requirement.
- 4.17 The interpretation of magnetometer data must endeavour to distinguish between anthropogenic and other causes of magnetic enhancement on the site. A full report should be submitted, rather than information limited to a greyscale image, and interpretation within a DBA.
- 4.18 A Written Scheme of Investigation (WSI) should be produced. This will outline the methodology, aims and outcomes of the project, including deposition of the archive and incorporation of data on the HER.
- 4.19 The report should include:
- A location plan of the site with scale showing the survey grid and 8 figure National Grid Reference;
 - Discussion about site geology and the reason for choosing the survey type;
 - Explanation of methodology used and recording procedures;
 - Discussion about the site and any archaeological/historical information available from the HER;
 - Image of minimally processed survey data;
 - Where appropriate, a trace (or X-Y) plot of raw magnetic data;
 - A greyscale plot, or dot density plot;
 - One or more interpretative plans or diagrams;

- Summary and discussion of results and interpretation of anomalies, conclusions and any recommendations for further work; and
- Contents and details for deposition of archive.

4.20 Any reference to negative evidence must be fully explained in the report. A lack of archaeological geophysical anomalies cannot always imply an absence of archaeological features.

Fieldwalking

- 4.21 Fieldwalking is based on the premise that human-made artefacts from archaeological features beneath the level of cultivation (usually referred to as ploughsoil) are sometimes brought to the surface by ploughing. By collecting these finds in a systematic manner, and then plotting them out on to distribution plans, it is sometimes possible to detect the approximate locations of archaeological sites.
- 4.22 Material in the ploughsoil also has potential to provide evidence of past human activity that may not survive in-situ below cultivation levels or has been truncated through ploughing and assimilated into the ploughsoil. Material from the ploughsoil can also provide evidence for the loss and potential burial of artefacts. (HE, 2018⁴)
- 4.23 Fieldwalking is a non-invasive (minimally intrusive) technique for investigating large areas of land relatively quickly. It can be used

to locate archaeological sites, to learn about previous land use, and to investigate known sites (like cropmark, lidar or geophysical features) in more detail.

- 4.24 Fieldwalking relies on the site for prospection being divided into grids and accurately located. The standard for Essex is 20m grid squares.
- 4.25 A c. 10% sample of surface finds is recovered by fieldwalking a c. 2m wide strip up the west side of each square in turn. The finds are bagged and labelled with the relevant grid square. The results are recorded on a record sheet for each hectare.
- 4.26 The finds are collected, washed and weighed. Specialist identification of any ceramic material is often required. A series of distribution plans are then produced by plotting out the finds by weight, date and type and applying statistical analysis. The distribution plans can be interpreted through comparison of the data with previous fieldwalking statistics collated from across the region. The definition of a site is statistical, with professional judgement and interpretation.
- 4.27 A Written Scheme of Investigation (WSI) should be produced. This will outline the methodology, aims and outcomes of the project, including deposition of the archive and incorporation of data on the HER.

⁴ historicengland.org.uk/images-books/publications/ourportablepast/heag177-our-portable-past/

4.28 A fieldwalking report should be produced and include:

- A location plan of site with scale showing the survey grid and 8 figure National Grid Reference;
- Aims, methodology used, and recording procedures;
- Discussion of the site and any archaeological/historical information available from the HER (see above for contact details);
- Finds distribution maps by period;
- Fieldwalking summary plan for whole site;
- Summary and discussion of results, conclusions and any recommendations for further work; and
- Contents and details for deposition of archive

4.29 Variations of the technique may be suitable providing they adhere to the principles and practice in Historic England guidance (HE, 2018)⁵

Metal detecting

4.30 Metal detecting may be an appropriate assessment technique on agricultural sites under arable cultivation where the recovery of material is restricted to the modern ploughzone and not from undisturbed contexts.

4.31 A structured programme of metal detecting can provide artefactual and dated evidence to augment other non-intrusive techniques and potential sites identified on the HER.

4.32 Metal detecting utilises a gridded and transect approach and could be combined with fieldwalking. The resolution of the grid must be appropriate to the type of site and the volumes of material anticipated.

4.33 Metal detecting should be undertaken by suitably experienced users using appropriate equipment. as part of a properly structured field survey project (HE, 2018)⁶

4.34 Surveys should comply with professional standards and demonstrate current standards of good practice (ClfA Code of Conduct, 2014 updated 2025) (ClfA,2014).

Standard and guidance for the collection, documentation, conservation and research of archaeological materials

4.35 A Written Scheme of Investigation should be produced. This will outline the methodology, aims and outcomes of the project, including deposition of the archive and incorporation of data on the HER.

4.36 As with fieldwalking, any survey which includes a collection strategy will require a finds processing, archiving and retention policy (Society of Museum Archaeologists, 1993).

⁵ historicengland.org.uk/images-books/publications/ourportablepast/heag177-our-portable-past/

⁶ historicengland.org.uk/images-books/publications/ourportablepast/heag177-our-portable-past/

4.37 A report should be produced and include:

- A location plan of site with scale showing the survey grid and 8 figure National Grid Reference;
- Aims, methodology used, and recording procedures;
- Discussion about the site and any archaeological/historical information available from the HER (see above for contact details);
- Finds distribution plans by period:
- Finds distribution plan for whole site;
- Summary and discussion of results, conclusions and any recommendations for further work; and
- Contents and details for deposition of archive.

Limitations of non-intrusive methods and implications for decision making

4.38 The limitations of non-intrusive techniques have implications for decision making where seemingly ‘blank areas’ (where no potential archaeological remains have been detected) can be perceived to indicate that no archaeological remains are present. It should be noted that an “absence of evidence is not evidence for absence” and there can be a number of reasons, , why the information presented with a planning application is unlikely to be a complete record of the archaeological remains that may be present within a development area.

4.39 Some limitations to note are that fieldwalking is an infrequently used methodology in current archaeological practice; however it is minimally intrusive and so benefits by lack of disturbance to the land. The technique is labour intensive and requires land to have been ploughed and harrowed to be effective.

4.40 Fieldwalking is dependent on a number of factors that may impact the retrieval of finds such as the quality of the survey (there is potential for erratic results and human error) and the visibility of finds including light levels and ground conditions. As a result of this, it cannot be assumed that if no finds are identified it confirms an absence of archaeological features. Both fieldwalking and metal detecting may not be suitable for the detection of all sites due to the nature of the material collected by these methods. This is dependent on the technologies available and how durable those artefacts are.

4.41 Non-intrusive methods such as geophysical survey and aerial assessment, by their nature, will typically identify archaeological features of a certain scale and type and the proportion of unidentified archaeological remains could be significant. These data types can also have a margin of error in how accurately they are located caused by factors relating to the techniques or reference points available in plotting the data (Fig. 2).

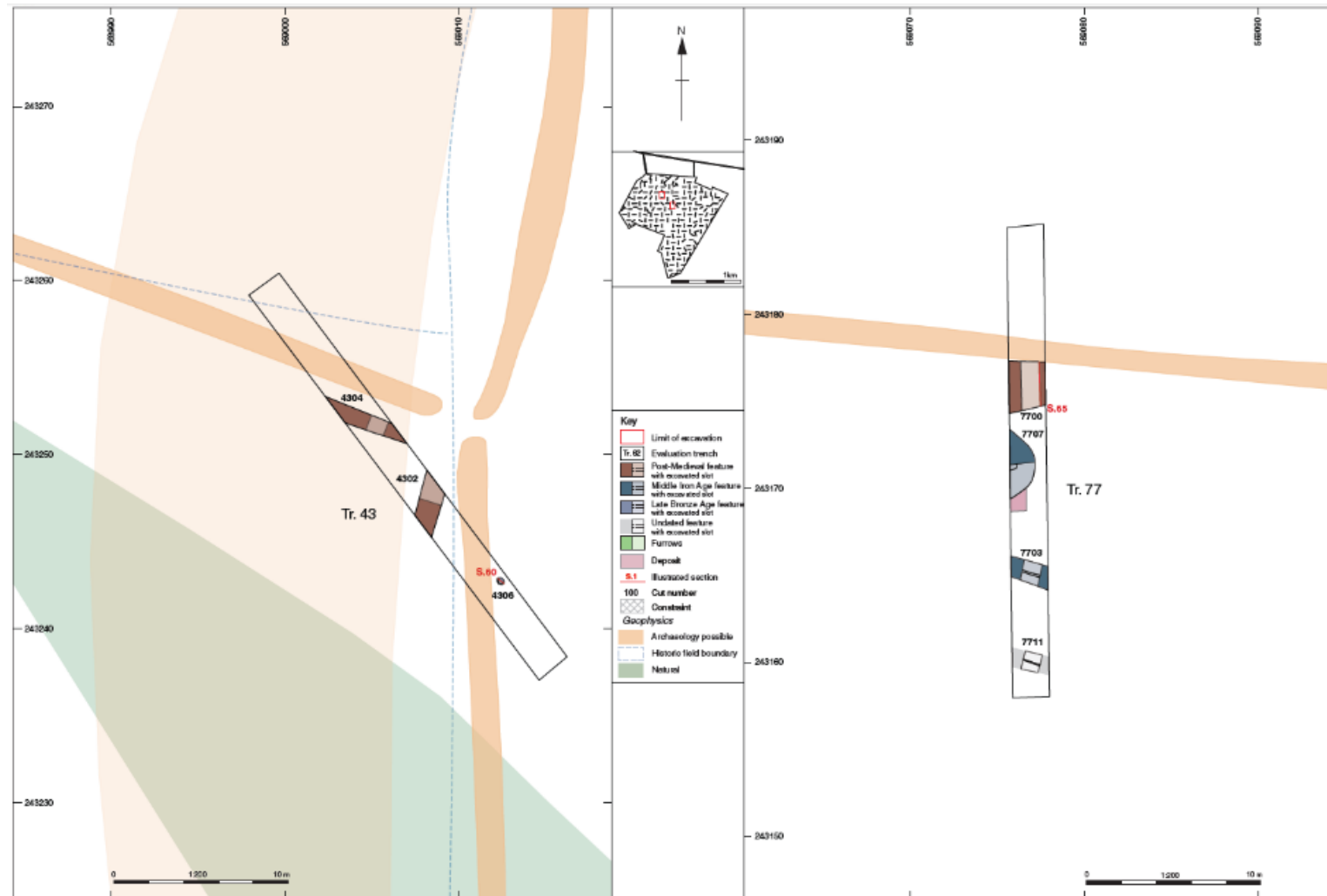


Figure 2 An example of a site where archaeological features were not detected through geophysical survey (Tr.77) and example of 'offset' between geophysical survey and archaeological feature (not to scale).

This figure is reproduced with permission from Oxford Archaeology. Originally published as Figure 4E. (Oxford Archaeology, 2025a). © Oxford Archaeology 2025

- 4.42 Non-intrusive surveys are unlikely to detect smaller features such as cremations, graves, pits and post-built structures (Fig. 3). Small or shallow cut features are also unlikely to be identifiable on surveys. The depth of the archaeological deposits will also influence whether the features are detected.
- 4.43 In most situations the timing of geophysical survey and fieldwalking will be dependent on the agricultural regime and will need to be planned in advance and co-ordinated with harvesting and/or access. Where an application has been submitted to the local authority without carrying out any non-intrusive techniques, this could result in delays within the planning application process.
- 4.44 The geology and ground conditions of a site will influence the results of both geophysical surveys and the type of features that are visible on aerial photographs. Within Essex the recorded distribution of archaeological cropmark features largely reflect the nature of the underlying geology. Cropmark features are most clear in free-draining, permeable geologies—particularly sand, gravel, and chalk. These substrates allow for dramatic moisture contrasts, which are essential for highlighting buried archaeological features. Soil types developed on clay geology do not readily lead to the development of cropmarks, and in consequence sites recorded on these soils tend to be both fewer in number and more scattered than those developed on the sands and gravels. Within these broader geological areas, the detailed soil types are important for cropmark development as it is highly dependent on the interaction between the type and the depth of soils, geology, climate and the type of crop.

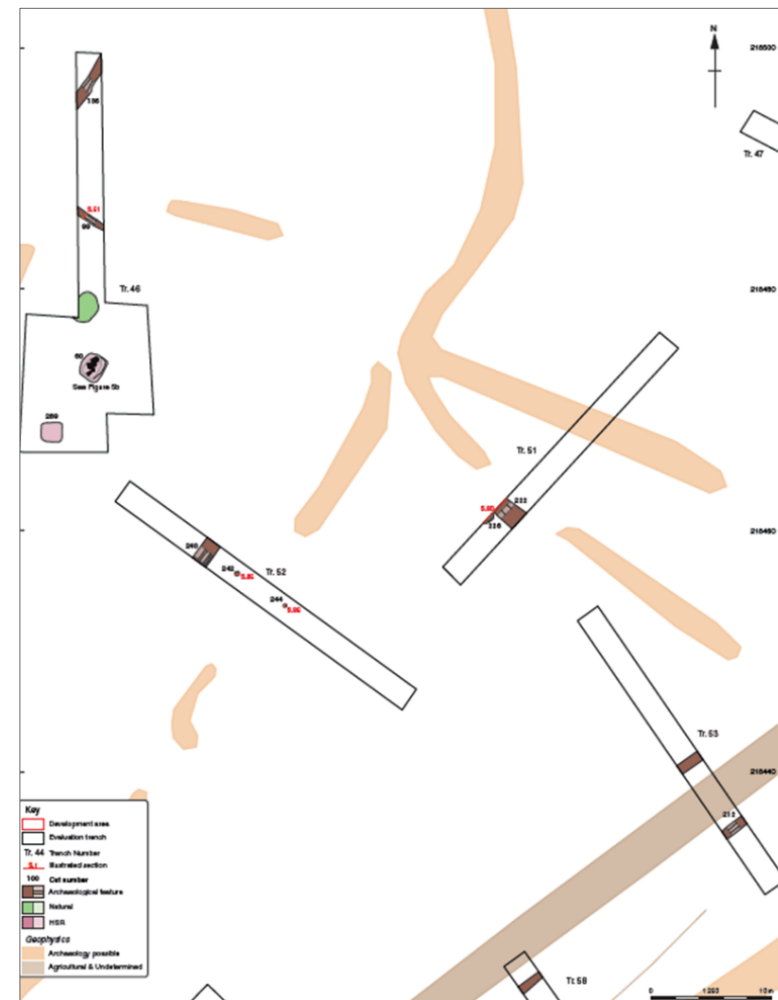


Figure 3 An example where geophysical survey did not detect a substantial grave feature with various grave goods (Tr 46) (not to scale).

This figure is reproduced with permission from Oxford Archaeology. Originally published as Figure 5a (Oxford Archaeology, 2025b). © Oxford Archaeology 2025

- 4.45 In Essex there are high concentrations of cropmarks on the Tendring plateau east of Colchester, in areas of Thurrock, along the Chelmer and Blackwater River valleys, with significant densities in the lower Stour valley, all of which are predominantly the areas of sands and gravels. There are also a significant number of sites on the Boulder Clays (a glacial till deposit), especially along the lower valleys. On the Boulder Clay recorded sites are more widely scattered, more likely to be isolated monuments or small groups of features.
- 4.46 Geophysical survey and a complete aerial and lidar assessment often complement each other as survey techniques. The use of these combined techniques often leads to a more comprehensive, detailed and accurate interpretation of the results given different details are visible via each technique, as was demonstrated at a site to the east of Chadwell St. Mary, Thurrock (Fig. 4).
- 4.47 However, no non-intrusive technique will give the complete picture. Excavations undertaken ahead of planned sand and gravel extraction have demonstrated that while archaeological cropmarks are crucial to the identification of sites, they rarely give a true indication of the number of archaeological features on a site. The archaeological cropmarks of an undated circular enclosure approximately 40m in diameter, some field boundaries and a possible incomplete sub-circular enclosure were identified and recorded during the Essex NMP at Mill House Farm, Chadwell St. Mary (Fig. 5). shows the excavation plan following work carried out ahead of gravel extraction (Archaeological Solutions 2017). This excavation identified an extensive archaeological landscape comprising in excess of 1000 features that were not indicated by non-intrusive survey.



Figure 4 Geophysical survey results from a site at Chadwell St. Mary (top) and the mapping showing the cropmark complex following an aerial and lidar assessment (bottom).

This figure (top) is reproduced with permission from Magnitude Surveys. Originally published as Figure 36. (Taiwo, F. and Russell, H., 2025) © Magnitude Surveys, 2025.



Figure 5 The archaeological cropmarks identified during the NMP at Mill House Farm, Chadwell St. Mary (right) with the final excavation plan of all features identified at the site.

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5. Intrusive Survey/Fieldwork

Trial trench evaluation

- 5.1 The previous section provided information about non-intrusive and minimally intrusive surveys that could be completed in support of a planning application to inform understanding of the potential for archaeological features and deposits. While desk-based and non-intrusive surveys may provide a suitable level of information about archaeology which may be present within the site, the significance of any remains also needs to be understood for policy compliant decision making.
- 5.2 National Planning Policy Framework (NPPF) requires an applicant to describe the significance of any heritage assets that may be affected by development. As a minimum, a planning application would be expected to include a desk-based assessment and the results of any non or minimally intrusive surveys. Where there is potential for heritage assets to be impacted, a field evaluation may also be required. This could include a programme of trial trench evaluation.
- 5.3 Evaluation by trial trenching can provide information on the presence/absence, form, function, date, depth and state of preservation of archaeological remains. ClfA, 2023)⁷. This detail cannot typically be achieved through non-intrusive surveys alone. Trial trenching may be required to verify the interpretation of the desk-based and survey work and to assess the significance of the remains.
- 5.4 An understanding of significance should stem from the interest(s) of the heritage asset, whether archaeological, architectural, artistic or historic, or a combination of these (HE, 2019 Statements of Heritage Significance)⁸.
- 5.5 Evaluation trial trenching will be required in areas where impact on potential archaeological remains is identified. This includes areas of higher impact such as where topsoil stripping is required or deeper excavations. Areas of lesser impact, such as within the area of PV arrays, may also require trial trench evaluation to determine the significance of any potential archaeological remains and the impact on these.
- 5.6 The significance and sensitivity of the archaeological remains needs to be understood and described to a level that is proportionate to their importance and sufficient to understand the potential impacts of the proposals on their significance, in order to determine an appropriate mitigation strategy. This is

⁷ https://www.archaeologists.net/sites/default/files/2024-11/ClfA-Universal-Guidance-Archaeological-Field-Evaluation_2023.pdf

⁸ [Statements of Heritage Significance: Analysing Significance in Heritage Assets](#)

irrespective of design flexibility. Evaluation through trial trenching may be required across the whole of the site in order to assess whether any mitigation will appropriately address any harm (Case Law- 2024)⁹.

- 5.7 A programme of trial trench evaluation may be carried out at any stage of the application process, pre-application, pre-determination and post-determination.
- 5.8 The applicant may choose to carry out a full or targeted programme of trial trench evaluation prior to an application being submitted to ensure that the impact on the archaeological resource is fully understood and can be considered in terms of costs and design. The programme of archaeological fieldwork would require the involvement of the local planning authority as part of the pre-application process and would be subject to the same requirements for any conditioned archaeological fieldwork such as a brief, WSI and site monitoring meetings. The results of the fieldwork would be submitted with the application to allow consideration of any required mitigation. Place Services provide early engagement advice, further details and fees can be found here:
[Early Stage Archaeological Pre-Application Advice | Place Services](#)

⁹ (Case Law- 2024 R (Low Carbon Solar Park 6 Limited) v Secretary of State for Levelling Up Housing and Communities Uttlesford District Council (Case No: AC-2023-LON-001889).

- 5.9 Evaluations should follow the ClfA Code of conduct and universal guidance for archaeological field evaluation:
<https://www.archaeologists.net/codes/cifa>

Pre-determination evaluation

- 5.10 Where a planning application fails to satisfy the requirements of the NPPF, further information may be requested in advance of determination of the application for decision-making purposes. (Box 1)
- 5.11 Pre-determination evaluation could include requests for non-intrusive surveys such as those listed above in Section 4. The type of non-intrusive evaluation technique would be specified in the archaeological adviser's consultation response to the local planning authority.

Evaluation

The applicant should complete an archaeological evaluation to establish the significance, nature and complexity of the surviving archaeological assets. This should be completed prior to determination of this application.

This work would permit the necessary consideration to be given to heritage assets affected and could lead to proposals for preservation in situ and/or the need for further investigation.

BOX 1. Example of Place Service's pre-determination evaluation recommendation to an LPA

- 5.12 The results of any non-intrusive surveys requested will be considered through re-consultation by the local planning authority to its archaeological advisor(s) to determine if sufficient information has been provided to satisfy the requirements of the NPPF.
- 5.13 Where the significance of any heritage assets, identified through non-intrusive surveys, cannot be determined in the decision-making process, and there is potential that the significance of the archaeological remains may be negatively impacted by the development, then there may be a requirement for intrusive evaluation through trial trench investigation (Box 2).
- 5.14 A planning application may not be determined until all evaluations are complete, in order to provide sufficient information on the nature, extent and significance of any heritage assets affected by the proposed development.

The objective of pre-determination evaluation is to establish whether any significant and/or sensitive archaeological remains are present that could preclude or modify the proposed development to an extent where the scheme could not be delivered.

BOX 2. Objective of pre-determination evaluation

5.15 Instances when this may be requested include (but are not limited to):

- The potential presence of heritage assets equivalent to national significance which must remain undeveloped to avoid harm. (HE, 2021)¹⁰. Should these be identified the non-designated heritage assets would be treated as equivalent to designated heritage assets under the NPPF and may require removal from the scheme.
- The presence of sensitive archaeological remains of high significance where mitigation by design may not be achievable and fieldwork could be cost-prohibitive. Examples could include ritual sites (e.g. Fig. 6), structural sites and complex settlement sites.
- Wide-spread and extensive archaeological remains of significance which would require preservation by record or through design. There could be a significant cost implication associated with both.

¹⁰ [Commercial Renewable Energy Development and the Historic Environment HEAN15](#)

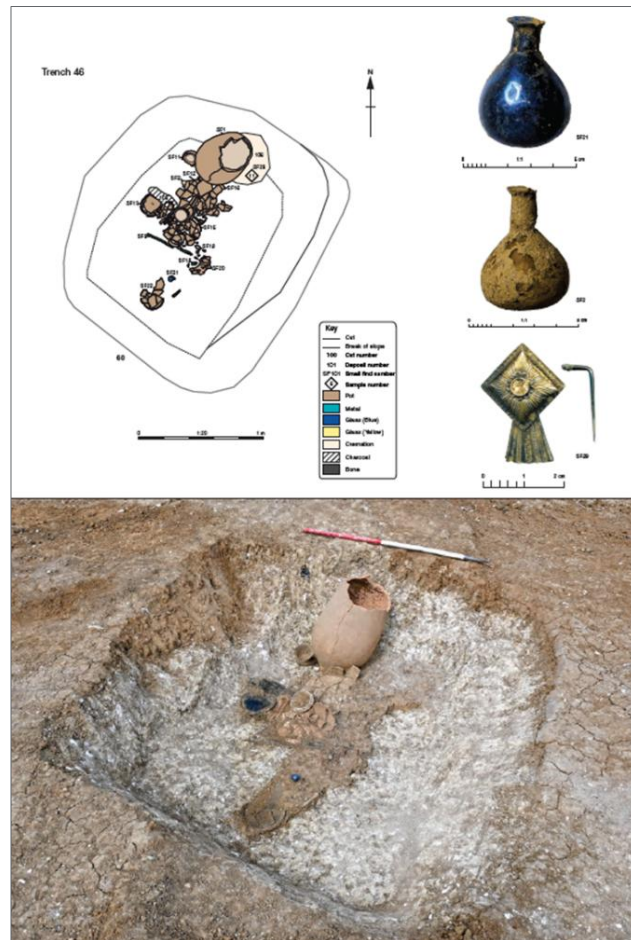


Figure 6 An example of archaeological remains that would be considered sensitive to impact from solar development which were first identified as part of a trial trench evaluation. This example includes an urn, glass vessels, silver brooch and cremation.

This figure is reproduced with permission from Oxford Archaeology. Originally published as Figure 5b (Oxford Archaeology, 2025b). © Oxford Archaeology 2025.

- 5.16 An archaeological evaluation would ideally be targeted (if evidence permits) and proportionate to the scale and extent of the heritage assets identified within the non-intrusive surveys or through other sources such as cartography, or the HER.
- 5.17 The coverage of area by trial trenching for a pre-determination evaluation is not 'fixed'; pre-determination trial trench evaluations (where informed by sufficient non-intrusive surveys) aim to investigate an adequate sample of potential archaeological features identified through non-intrusive surveys or historic mapping that have potential to be of significance or sensitive to impact. The evaluation would not necessarily require investigation or 'targeting' of all potential archaeological remains identified through non-intrusive surveys. The aims of pre-determination evaluation could be achieved by a trial trench evaluation as low as 1-2% of the total development area.
- 5.18 The coverage of pre-determination trial trenching will be dependent on the nature, extent and significance of potential archaeological remains within the site, quality of the non-intrusive survey data submitted and confidence with the methods used to provide that data. There would be a contingency to allow for investigation of unexpected archaeological remains and/or clarification of features uncovered within the planned trenches to aid understanding. It should be noted that evaluations may be requested for up to 4%-5% coverage.

- 5.19 Where pre-determination evaluation is undertaken, the results can be used to inform the design of the scheme at an early stage (HE, 2021)¹¹. The methodology for pre-determination evaluation would be set out in a programme of works (Written Scheme of Investigation) which would be submitted to the local planning authority to be carried out by a ClfA Registered Organisation (RO)¹².
- 5.20 Should trial trench evaluation not be achievable, prior to determination of the application, an Archaeological Management Plan (AMP) will need to be agreed and submitted to the local planning authority prior to determination.
- 5.21 The AMP should set out the principles for post determination evaluation, potential mitigation and protection of any archaeological remains within the site to be applied following the determination of the planning application. Areas of potential archaeological sensitivity, where archaeological remains have been identified through research or non-intrusive evaluation, should be agreed in advance (note: these areas will not be subject to any ground disturbance, including piling, until the significance of the archaeological remains has been established and mitigation proposed).
- 5.22 The mitigation proposed in the AMP may be reassessed following intrusive evaluation and the AMP may be replaced or revised to consider updated information.

Post determination evaluation

- 5.23 Where an appropriate level of information has been submitted to satisfy the NPPF an informed recommendation will be provided to the local planning authority. Should it be determined that there is likely to be a negative impact on archaeological remains, then permission for the scheme could be issued subject to conditions.
- 5.24 A set of conditions (See Box 3) would be recommended to the local planning authority. The conditions will include the requirement for evaluation fieldwork to be undertaken prior to the development commencing.
- 5.25 Further non-intrusive evaluations may be requested should these be deemed necessary. The results of these surveys would be used to inform a programme of trial trench evaluation, if required.
- 5.26 Trenches will be required to target areas of identified high impact and known or potential archaeological remains as identified through non-intrusive surveys. There should be a denser concentration of trial trenches in high impact areas. The remainder of the trial trenches required for evaluation should be distributed across the remainder of the site, including areas perceived to be 'blank' where no archaeological remains have been detected from previous surveys. Evaluation within these areas is needed to verify the results of the non-intrusive surveys and to investigate the potential for archaeological remains that

¹¹ [Commercial Renewable Energy Development and the Historic Environment HEAN15](#)

¹² [Find Registered Organisations | ClfA](#)

may not be detected through non-intrusive surveys, such as smaller pits, post holes, graves, cremations etc.

- 5.27 The majority of solar farms in Essex are within rural areas. It has been established through research (Hay and Lacey, 2001) that, in rural areas, trial trench evaluation should aim to cover 5% of the development area to provide the optimum assessment of a site and determine an appropriate mitigation strategy. As such, post determination trial trenching (where required) will be up to 5%. This decision will be bespoke to each site and based on the available information pertaining to the potential for archaeological features to be impacted.
- 5.28 Post determination trial trench evaluation coverage would typically consist of a ratio of a fixed proportion of trenches to a contingency proportion of trenches, which would total up to 5%, for instance 4% + 1% or 3.5% + 1.5% etc. The ratio of fixed to contingency would take into consideration the amount of information available through non-intrusive surveys and desk-based research. Where non-intrusive survey data provides good understanding of the character of the archaeological resource, including the form and extent (size, shape, direction etc), the fixed coverage by trial trenches may be reduced.

- 5.29 Trial trenches should aim to be 30m in length and c.1.8m width. Where trenches are located to target features identified from non-intrusive surveys, 50m length trenches may be appropriate. In areas where no archaeological remains have been detected the trenches should form a grid array where possible.
- 5.30 It is advised that the trench plan should be agreed at an early stage, the trial trench coverage should be based on the total development area.

Example Condition Wording

1. No development or preliminary groundworks of any kind shall take place until a programme of archaeological investigation has been secured in accordance with a Written Scheme of Investigation (WSI) which has been submitted by the applicant, for approval by the Local Planning Authority.
2. No development or preliminary groundworks of any kind shall take place until the completion of the programme of archaeological evaluation identified in the WSI defined in Part 1 and confirmed by the archaeological advisors to the Local Planning Authority.
3. No development or preliminary groundworks of any kind shall take place until the submission of a mitigation WSI and/or Archaeological Management Plan (AMP) detailing the excavation/ preservation strategy for approval by the Local Planning Authority.
4. No development or preliminary groundworks can commence on those areas containing archaeological deposits until the satisfactory completion of fieldwork, as detailed in the mitigation WSI, and approved by the Archaeological Advisors to the Local Planning Authority.
5. The applicant will submit a Post Excavation Assessment and/or Updated Project Design for approval by the Local Planning Authority. This shall be done within 6 months of the date of completion of the archaeological fieldwork unless otherwise agreed in advance in writing by the Local Planning Authority. This will result in the completion of post excavation analysis, preparation of a full site archive and report ready for deposition at the local museum, and submission of a publication report.

BOX 3. Example of condition wording for archaeological investigation post determination

6. Mitigation

- 6.1 Mitigation refers to the measures that can be taken to avoid or minimise the destruction of archaeological remains caused by development and is required by the NPPF. Appropriate mitigation can only be considered once there is sufficient evidence on which to determine the archaeological sensitivity of the remains revealed by trial trench evaluation. This is aided by evidence provided through non-intrusive evaluation methods and data gathering.
- 6.2 On completion of the trial trench evaluation and processing of finds and samples, a report should be produced. The report should provide the details of the trial trench evaluation, include an assessment of the success/failures of any non-intrusive surveys and plot the location of any archaeological remains by period with an indication of potential extent. The nature of the archaeological remains should be inferred from the results of the evaluation and previous surveys, including a statement of significance.
- 6.3 Where the trial trench evaluation demonstrates a dearth of archaeological evidence, or low levels of archaeological remains of less than local significance, no further mitigation may be required. Should any archaeological remains, identified through evaluation, be considered of significance and/or sensitive to impact then subsequent mitigation may be required.
- 6.4 Where negative impact is identified there may be opportunity to mitigate by design and preserve in-situ or mitigate by further fieldwork and preserve by record, in accordance with NPPF. All design details will need to be provided to determine a suitable mitigation strategy.
- 6.5 Mitigation would be proportionate to the level of impact within the scheme taking into consideration the significance and sensitivity of the archaeological remains identified.
- 6.6 The mitigation will consider the level of investigation previously undertaken (and the results), including non-intrusive and intrusive evaluation. The post determination trial trench strategy (ref to section 5.26) advises a denser concentration of trenches in areas of potential high impact. This would provide greater coverage and subsequently, information on the archaeological resource within those areas with the aim of reducing or removing the need for mitigation by record.
- 6.7 The completion of archaeological trial trench evaluation across areas of lower impact (eg the PV arrays) provides greater confidence in identifying features of archaeological sensitivity where preservation by design may be required as mitigation. Areas where 'no dig' solutions (eg use of concrete shoes to the PV arrays instead of piling) could be consolidated to smaller areas. This could result in a more positive environmental impact by reducing the requirement for materials (eg the concrete shoes) associated with 'no dig' solutions that need to be transported to / installed within the site.

6.8 Certain types of archaeological remains would be considered sensitive to any impact, including those from piling (Solar Energy UK 2024).¹³ These would include:

- Waterlogged remains, whereby the soil chemistry and ground conditions could be affected by piling.
- Human remains, whereby even minimal disturbance could result in a potentially disproportionate loss of archaeological evidence, alongside ethical considerations.
- Complex structured deposits, such as those associated with burials but also structural remains, such as floor surfaces.

6.9 Other types of archaeological remains that may be considered significant and/or sensitive may be specific to a region, such as a specific class of monument, or period. For instance, in Essex, Anglo-Saxon sites are considered of high significance and sensitive due to their rarity in the archaeological record and lack of survival of material remains. Early prehistoric sites indicated through in situ flint flakes may be considered of high significance due to the difficulties in identification of early prehistoric sites through lack of associated features or structures.

6.10 Mitigation in areas of higher impact from development is more likely to be through archaeological fieldwork unless mitigation by design can be achieved.

6.11 Mitigation by design is likely to be considered more practical in areas of lesser impact such as PV arrays.

Mitigation by design

6.12 Given the flexibility of the design elements within solar farms, preservation of archaeological remains should be the first consideration for mitigation. This is often, and ideally, considered in the pre-determination stage.

6.13 Where significant archaeological remains have been identified, mitigation by design could negate the requirement for further intrusive archaeological investigation within that area. This would be confirmed with the applicant who would provide appropriate design measures to ensure preservation in situ of the remains.

6.14 Preservation in situ can be achieved through avoidance and exclusion from the development area, and/or the use of non-intrusive techniques for mounting the solar arrays ('no dig').

6.15 Potential changes to the location of certain elements of the infrastructure such as inverters, substations, cable runs within the solar farm, and access roads should be considered to avoid areas of known archaeological sensitivity. Certain design elements will be less flexible and fixed design elements are less likely to facilitate preservation in situ.

¹³ [Position Statement: Solar farms and the assessment of buried archaeological remains](#)

6.16 Where there may be a requirement for large-scale alternative designs, to enable preservation by design, there may be cost implications. Where preservation by design is proposed, an Archaeological Management Plan (AMP) will need to be submitted to the local authority for agreement detailing how these aims will be achieved during the life of the project from construction through to decommissioning.

Archaeological Management Plans (AMP)

6.17 Where mitigation by design has been agreed with the local planning authority, an AMP will need to be submitted as a requirement of a planning condition (see Condition 3 in Box 3).

6.18 The AMP will be required to be submitted along with any mitigation strategy (if fieldwork is also proposed as mitigation). The AMP shall include details of precautionary measures to ensure the protection of archaeological features/deposits identified for preservation in situ, throughout the operation of the site, including construction, repairs and decommissioning, and including details of monitoring and enforcement measures.

6.19 The AMP should identify the areas clearly on a plan within the document (e.g. Fig. 7). The area for preservation in situ needs to be identified, the non-intrusive infrastructure to be installed in that area described, and the methodology by which that infrastructure will be sensitively installed and removed provided.

6.20 Dependant on the nature of the archaeological remains, the area of management should include a buffer of between 10-20m around known archaeological remains.

6.21 The AMP should be maintained, and the measures it contains adhered to. The AMP should conform with current best practice and take account of guidance outlined in:

- Ministry for Housing, Communities, & Local Government (MHCLG) (2021), National Planning Policy Framework (NPPF) and National Planning Practice Guidance;
- Chartered Institute for Archaeologists (CIfA) (2020), Standard and guidance for archaeological advice by historic environment services; and Historic England (HE) (2015); and
- Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide.

6.22 An AMP may have been produced and submitted as part of a planning application (see section 5) prior to any intrusive surveys. This may need to be revised and updated as the understanding of areas of sensitivity may have altered following the results of the fieldwork.

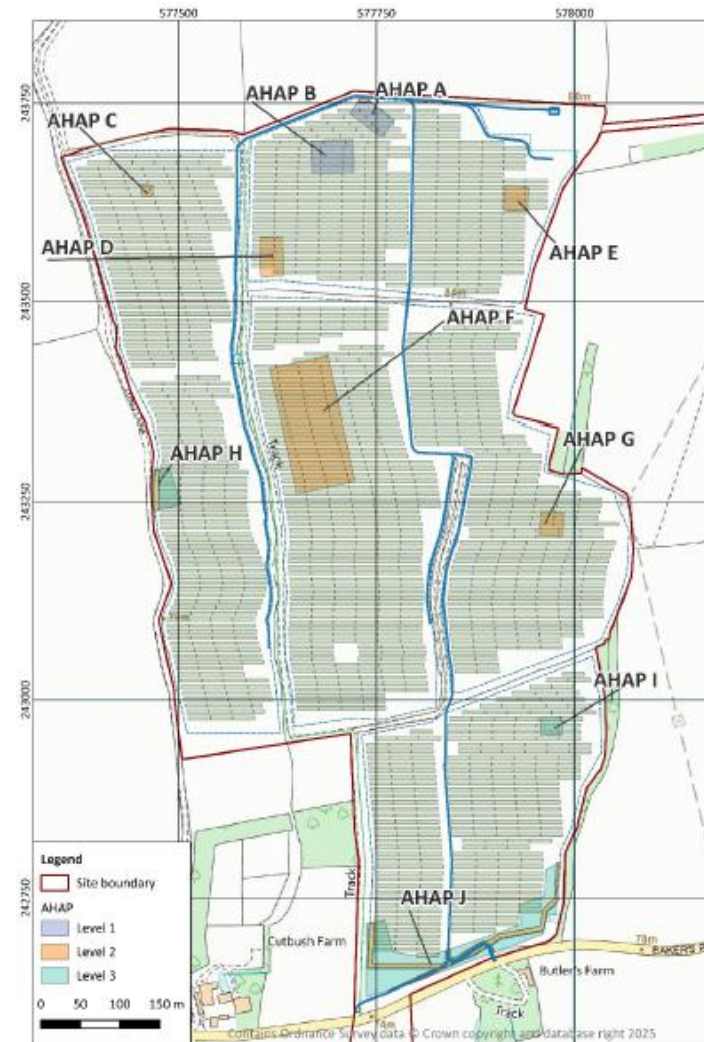


Figure 7 An example of an Archaeological Management Plan where areas of archaeological sensitivity are identified as Areas of High Archaeological Potential (AHAP's)

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Mitigation by record

- 6.23 Where mitigation by design is not achievable a further programme of intrusive archaeological investigation may be required in areas where there will be impact on the archaeological resource. Details would be outlined in a brief produced by the local authority archaeological advisor and/or through discussions with the applicant. Mitigation could include one or more of the fieldwork elements listed below:

6.23.1 Archaeological monitoring of groundworks

Archaeological monitoring and recording is a formal programme of observation, investigation and recording conducted during works carried out for non-archaeological reasons. (ClfA, 2023a)¹⁴. The method allows the development to proceed under the supervision of an archaeologist who is given reasonable access and time to record any archaeological features that are uncovered in the course of works. Monitoring would be required in areas where there is potential for impact on archaeological remains of low to moderate significance which may form discrete elements of archaeological activity within the site.

Fieldwork should be carried out in accordance with the ClfA Code of conduct and universal guidance for archaeological monitoring and recording:

<https://www.archaeologists.net/codes/cifa>.

6.23.2 Archaeological strip, map and sample

Excavation by strip map and sample may be required where archaeological remains of moderate to high significance have been identified through trial trench evaluation and fieldwork should be completed prior to development commencing. Machine stripping of topsoil would be carried out under archaeological supervision using a toothless ditching bucket. A sampling strategy would be agreed once all features were planned. This will be followed by a programme of selected or targeted excavation.

The ClfA Code of conduct and universal guidance for archaeological excavation is available here:

<https://www.archaeologists.net/codes/cifa>.

¹⁴ https://www.archaeologists.net/sites/default/files/2024-11/ClfA-Universal-Guidance-Archaeological-Monitoring-Recording_2023.pdf

6.23.3 Archaeological excavation

Excavation may be required in areas of high impact such as concrete bases, compounds etc where archaeological remains of high significance have been identified through trial trench evaluation and fieldwork should be completed prior to development commencing. The archaeological excavation will be carried out according to ClfA guidance (ClfA, 2023b)¹⁵. Topsoil would be removed under archaeological supervision by a mechanical excavator specific for the investigation. All features would be planned and excavated.

ClfA Code of conduct and universal guidance for archaeological excavation is available here:

<https://www.archaeologists.net/codes/cifa>

- 6.24 Where mitigation by record is required, the details will need to be submitted to the local planning authority in a mitigation Written Scheme of Investigation (WSI) to satisfy planning condition 3 (see Box 3).
- 6.25 Once the planning condition has been discharged, mitigation can proceed in the areas identified in the WSI.

- 6.26 Following completion of mitigation, a report will be required to satisfy the remaining element of the planning conditions. The scope of the report will be commensurate to the significance of the archaeological remains at the site. This will be agreed following fieldwork.
- 6.27 The report will need to be submitted to the planning authority to discharge the final planning condition (Condition 5 – see Box 3).
- 6.28 Where positive results have been gained from investigations, publication of any significant results may be required in an appropriate journal.
- 6.29 Outreach or community involvement should be considered where there is opportunity for public engagement. ClfA provide guidance:

[1.1 - Archaeology and public engagement | ClfA](#)

¹⁵ https://www.archaeologists.net/sites/default/files/2024-11/ClfA-Universal-Guidance-Archaeological-Monitoring-Recording_2023.pdf

7. Setting of Heritage Assets

7.1 The NPPF defines the setting of a heritage asset as:

The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.¹⁶

7.3 Historic England's Setting of Heritage Asset guidance states:

Heritage assets that comprise only buried remains may not be readily appreciated by a casual observer. They nonetheless retain a presence in the landscape and, like other heritage assets, may have a setting.

7.5 An archaeological feature may be designated as a Scheduled Monument or considered a non-designated heritage asset under the NPPF. The impact on the setting and significance of a heritage asset should be considered as part of a planning application, this is required by the NPPF. Guidance for the assessing the setting of heritage assets is published by Historic England: <https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/>

7.4 The setting assessment should be provided in advance of application. The assessment should form part of a Heritage Statement.

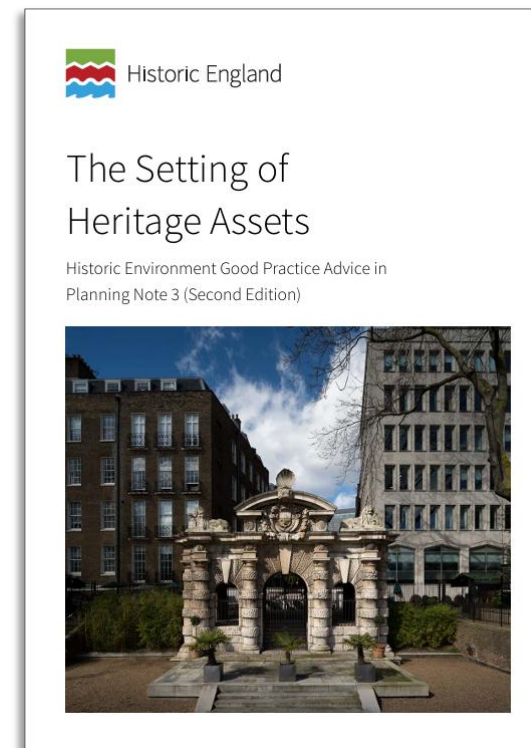


Figure 8 Historic England: The Setting of Heritage Assets Guidance

¹⁶ [National Planning Policy Framework - Annex 2: Glossary - Guidance - GOV.UK](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/612342/NPPF_Annex_2_Glossary_Guidance.pdf)

8. Bibliography

Guidance and policy:

Archaeology and Solar Farms: Good Practice Guide:

<https://www.archaeologists.net/sites/default/files/2026-04/Archaeology-and-Solar-Farms-GPG---FINAL-2026-04-14.pdf>

Archaeological Solutions, 2017. Mill House Farm, Chadwell St Mary, Essex, archaeological assessment and updated project design. Unpublished report.

Armour Heritage Ltd, 2025. Knowl Green Solar Park, Bakers Road, Belchamp St. Paul, Essex: Archaeological Mitigation Strategy (AH2233). Unpublished report.

Chartered Institute for Archaeologists (January 2017), *Standard and Guidance: Desk Based Assessments*

https://www.archaeologists.net/sites/default/files/2024-11/CIfA-Universal-Guidance-Archaeological-Field-Evaluation_2023.pdf

Chartered Institute for Archaeologists (2026), *Find Registered Organisations* [Find Registered Organisations | CIfA](#)

Department for Communities and Local Government (2026), *National Planning Policy Framework Annex 2: Glossary - Guidance* [National Planning Policy Framework - Annex 2: Glossary - Guidance - GOV.UK](#)

Department for Communities and Local Government (2026). *National Planning Policy Framework* [National Planning Policy Framework](#)

Historic England, April 2008. *Conservation Principles, Policies and Guidance for the sustainable management of the historic environment* <https://historicengland.org.uk/images-books/publications/conservation-principles-sustainable-management-historic-environment/conservationprinciplespoliciesandguidanceapril08web/>

Historic England, 2015. *The Historic Environment in Local Plans: Historic Environment Good Practice Advice Note 1* historicengland.org.uk/images-books/publications/gpa1-historic-environment-local-plans/gpa1/

Historic England, 2015. *Decision-Taking in the Historic Environment: Historic Environment Good Practice Advice Note 2* [Managing Significance in Decision-Taking in the Historic Environment](#)

Historic England, December 2017. *The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition)* [The Setting of Heritage Assets](#)

Historic England, (February 2018). *Our Portable Past Guidance for Good Practice* historicengland.org.uk/images-books/publications/ourportablepast/heag177-our-portable-past/

Historic England, 2019. *Statements of Heritage Significance: Analysing Significance in Heritage Assets - Historic England Advice Note 12* [Statements of Heritage Significance: Analysing Significance in Heritage Assets](#)

Historic England (February 2021) *Commercial Renewable Energy Development and the Historic Environment - HEAN 15* [Commercial Renewable Energy Development and the Historic Environment HEAN15](#)

Oxford Archaeology, 2025a Land West of Hill Lane, Sturmer, Essex.
OA Report No.: 2942

Oxford Archaeology, 2025b Parkgate Solar Farm, Rivenhall,
Essex:Archaeological Evaluation Report. OA Report No.: 2896

Royal Courts of Justice Case Law (2024) *R (Low Carbon Solar Park 6 Limited) v Secretary of State for Levelling Up Housing and Communities Uttlesford District Council* (Case No: AC-2023-LON-001889). [High Court Judgment Template](#)

Solar Energy UK *Position Statement Solar farms and the assessment of buried archaeological remains* [Position Statement: Solar farms and the assessment of buried archaeological remains](#) (June 2024)

Taiwo, F., and Russell, H., 2025, Geophysical Survey Report Of Land East of Chadwell St Mary, Essex, Magnitude Surveys MSTQ1920. Unpublished report.

Winton, H., 2023, *Standards for aerial investigation and mapping projects*, Historic England technical guide [Aerial Investigation: Using Aerial Sources to Map Archaeology and Landscapes | Historic England](#)

Appendix A: Flow chart for the Predetermination process



Predetermination Process Flowchart

Archaeological Desk Based Assessment (DBA) undertaken at outset of project. This should take account of the specific design of the proposal.



Early consultation with Place Services to discuss the conclusions of the DBA and need for any further work. Place Services can be consulted through the early engagement pre-application advice service:

[Early Stage Archaeological Pre-Application Advice | Place Services](#)



Undertake non/minimal intrusive survey. A brief can be provided by Place Services and a Written Scheme of Investigation (WSI) agreed.



Predetermination trial trenching requested.
A brief can be provided and WSI reviewed and agreed. This may be targeted to identified features.



Report outcomes of surveys/trial trenching to inform required mitigation. An Archaeological Management Plan may be produced at this point.



Conditions advised by Place Services for any post consent works.



* All steps above should be completed in consideration of the specific design of the proposal and differing impacts which occur from items within solar farm development.

Appendix B: Flow chart for solar planning applications following consent



Flow chart for solar planning applications following consent.



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