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The Heritage Dimension of Commercial Renewable Energy Development in Planning

Dated: January 2021

Quick Reference Table

IDENTIFIERS			
Project Name	The Heritage Dimension of Commercial Renewable Energy Development in Planning Research Project		
Data Source	BEIS Renewable Energy Planning Database (June 2020)		
Authors	Hana Morel PhD & Daniel Phillips ACIFA		
Selection Range	2015-2019	Total No. Entries after filters	458

HERITAGE IDENTIFICATION					
% of Application Considering Heritage	62%	Heritage Identified by	Contractor	LPA Team	Historic England
		App No.	50%	6%	1%

HERITAGE IMPACT									
Type of Assessments (%) (*these may overlap*)					Heritage Impact of Proposal	No Change	Low	Medium	High
DBA	Heritage Statement	Geophysics Survey	LVIA	EIA	Contractor	5%	22%	5%	2%
44%	10%	18%	47%	16%	LPA Heritage Team	5%	14%	12%	10%

Heritage Asset Considered (%)			Nature of Impact Assessed (%)		
Designated	Undesignated	Both Considered	Direct	Setting	Both Considered
55%	51%	45%	6%	11%	28%

CONSULTATION			
Known Responses from LPA Heritage Team/Historic England		Heritage Put Forward as Objection or Included in Refusal Notice	
LPA Team	Historic England	Heritage as Objection	Heritage as Refusal
50%	25%	7%	5%

Application w/ Designated Assets	Listed Building	Scheduled Monument	Conservation Area	Registered Parks and Garden	Registered Battlefield	WHS
App No.	51%	31%	26%	10%	1%	2%

DECISION			
Application Status		Heritage in Approved Decision and/or as Condition	
Approved	Refused	Included	Excluded
61%	17%	29%	40%

** The above percentages are derived from the total number of applications (n=458) and thus should be considered as a minimum due to the high percentages of applications marked as 'NA'.*

Executive Summary

1. While a heritage dimension is regularly considered in renewable energy planning applications, the quality of any accompanying heritage assessment will impact the degree of pre-determination work required, as well as the response and further request for work by the LPA Heritage team further down the planning process.

2. Desk Based Assessments are by far the most popular type of assessment undertaken to explore both designated and undesignated heritage assets. All DBAs provided policy guidance and references, used HERs, and explored both direct and indirect impact. Geophysical surveys were usually accompanied by a DBA, although not necessarily at the same stage of the application process.

3. The research showed that it was the heritage expert who predominantly identified heritage through their assessment. In some cases further inclusions were added by the LPA heritage team and/or Historic England, or clarifications on the level of impact.

4. There was a clear discrepancy between the impact assessment provided by the heritage expert and the LPA heritage team, with the former assessing lower impacts than the latter.

5. Whether pre-application advice was sought could not be reliably ascertained by the documentation. In many application entries, this information was not explicitly acknowledged. However it is the view of the researchers that in order for some details (i.e. scope of study area) to have been decided, pre-application advice would have needed to be sought.

6. The heritage dimension is not a barrier to renewable energy development, nor does it obstruct the process. Through the correspondence documentations and/or Delegate Report, it was clear that LPA Heritage teams are flexible and proactive to ensure that the development can be approved where possible. It is in rare occasions that heritage is used as an objection or to refuse an application.

7. It is clear that at present, a case-by-case pre-determination phased approach works well and allows the LPA heritage team to work with the clients and mitigate harm to heritage early on in the process so that (a) it gives time to mitigate through design; (b) allows work to be done during pre-determination.

8. There is still a lack of clarity on how to interpret and assess indirect impact of renewable energy alongside heritage, as well as how to assess direct impact through a development's footprint.

9. Future focused research would provide opportunities to answer some of the unknowns produced by this survey as well as providing a basis for a more efficient assessment process between heritage expert and the LPA heritage team.

Table of Content

TABLE OF FIGURES

1. Introduction

1.1 Pilot Study on Heritage and Renewable Energy Planning

1.1.1 This report presents the findings of a pilot research project in which *drp archaeology* was commissioned by Historic England to review the BEIS Renewable Energy Planning Database (June 2020) with regard to heritage implications.

1.1.2 The objective of this research is to provide an initial and basic overview of how Historic England might better understand the consideration of heritage within the planning process in relation to renewable energy applications.

1.1.3 As this project is a loose continuation of a previous Historic England commission, *Heritage Dimension of Planning Applications*, drp archaeology has adopted the definition of 'heritage dimension' defined as: where a heritage asset, designated or non-designated was directly under consideration as part of the application, but has broadened this to include both direct and indirect (setting) impact.

1.1.4 Without filtration, the BEIS Renewable Energy Planning Database (June 2020) has exactly 5,946 entries. These were filtered to 458 through the following selections:

- **Region focus** England only
- **Technology Type:** Solar Photovoltaics, Energy from Waste (EfW) incineration, Biomass (dedicated), Wind (Offshore & Onshore)
- **Date:** July 2015- December 2019

1.1.5 Relevant data was recorded into a spreadsheet designed to answer a set of questions provided from the Historic England brief (Brief for Renewables and Heritage Project, September 2020; see Chapter 2) on the heritage dimension of the planning applications.

1.1.6 The Research Questions of the brief were set widely to explore the feasibility, duration and barriers of carrying out a potential full-scale research project. As such, this is a small-scale preliminary study which will highlight challenges and feed recommendations into the design of any future work.

1.2 Background

1.1.1 Climate Change is one of the biggest challenges of our time, of which this was acknowledged in the landmark binding Paris Agreement (UNFCCC 2016), which was adopted by 196 Parties at COP 21 in Paris. Following, relevant National Policy Statements were released to set out national policy in England, which included the Overarching National Policy Statement for Energy (EN-1), the National Policy Statement for Renewable Energy Infrastructure (EN-3) and the National Policy Statement for Electricity Infrastructure (EN-5) (Department of Energy & Climate Change 2011c; 2011b; 2011a). Both the EN-1 and EN-3 have sections on the 'Historic Environment': within the former, the NPS states that a non-designated heritage asset 'should be considered subject to the same policy considerations as those that apply to designated heritage assets' as

absence of designation does not indicate lower significance (EN-1, Pg. 5.8.5) while the latter adds the importance of avoidance as mitigation (EN-3, Pg. 2.6.145). Meanwhile, the 2015 Ministerial statement's reference to wind energy development stresses that 'local people have the final say on wind farm applications' (Commons Debates 2015). Since, the United Kingdom has committed to addressing this issue by becoming the first major global economy to sign up to achieving net zero greenhouse gas emissions by 2050 with its amendment of the Climate Change Act 2008 (BEIS 2019). The importance and growth of the renewable energy sector in the United Kingdom in order to achieve this goal has been set out in the Energy White Paper (BEIS 2020c) published by the UK Department for Business, Energy and Industrial Strategy following the Prime Ministers' Ten Point Plan for a Green Industrial Revolution (BEIS and Prime Minister's Office 2020).

1.1.2 Hugh McNeal, Chief Executive at Renewable UK said.

> *Today's white paper provides greater clarity to the companies investing across the UK to deliver our net zero emissions target. Wind and renewable energy will be at the centre of our future energy system, providing the clean electricity and green hydrogen we need to decarbonise our economy. The next generation of onshore and offshore wind farms will bring tens of billions of pounds of investment to support a green recovery and create thousands of jobs across the country as we transition away from fossil fuels. To meet the goals set out in the white paper, it's clear that we have to double-down on renewables as the main source of energy for our homes, transport and industry (Norris 2020).*

1.1.3 As a result of the UK and other global initiatives, there is likely to be many planning applications related to renewable energy in the coming months and years, and the expectation is that the numbers will increase, a point also mentioned in Box 1 in the closed Historic England Advice Note on Commercial Renewable Energy Development and the Historic Environment (Historic England 2020) . Given the scale of this type of development and the potential perception that heritage can be a barrier to granting planning consent, this work was conducted to better understand the relationship between heritage and renewables applications.

1.1.4 Understanding the relationship between heritage content in the assessment of impact would provide Historic England with data on how existing renewable energy applications are currently considered across England to inform current work and potential advisory priorities.

1.1.5 This report will help determine whether the freely available data from BEIS is sufficient to answer key questions relating to the planning process and the role of heritage impact in decision-making.

2. Methods and Methodology

2.1 Research Questions

2.1.1 The Research Questions that were agreed in the Brief provided by Historic England are summarised below and have subsequently been divided into four broad groups:

1. **Heritage Identification**

- Were heritage dimensions identified and considered as part of the application?
- Where heritage dimensions were identified, who where they identified by (local authority or applicant).

2. **Heritage Impact**

- Where heritage was considered, how was it considered? Does the application include a pre-determination heritage assessment of the site such as a Desk-Based Assessment, Heritage Statement, heritage chapter in an Environmental Impact Assessment or a Landscape Visual Impact Assessment and/or geophysical survey?
- Are both designated and non-designated heritage assets included as part of the heritage assessment of an application?
- Where designated heritage assets were considered, what designation types were identified?
- Were there any undesignated heritage assets identified of national significance?
- Was the assessed nature of heritage impact direct and/or indirect, ie setting?
- What conclusions were reached by such assessments and how do these compare with that of the local authority advisor/Historic England.

3. **Consultation**

- Was statutory consultation sought by the Local Planning Authority (LPA)?
- What was the level of predicted historic environment impact by all stakeholders?
- Was further pre-determination work requested by the local authority advisor/Historic England to assist in decision making?
- Was an identified heritage dimension identified as a reason for objection by the local authority advisor/Historic England?

4. **Decision**

- What proportion of renewable energy planning applications are approved compared to those that are refused?
- How many of the approved renewable energy applications contained a heritage dimension as part of the decision notice or as a condition?
- Of the applications that were refused, how many included a heritage dimension as a reason for refusal?
- From registration of a planning application to decision date, was this entire process carried out within the nationally set planning timeframe?

2.2 Research Design and Analysis

2.2.1 This section introduces the sampling strategy and case study selection, and how they are recorded in the spreadsheet.

2.2.2 The 'drp, 202101 Renewable Energy Planning Database' Excel spreadsheet (or Renewable Energy Table, from here on 'RAT') is designed so that each column answers the questions from the brief. Available and relevant data was recorded into the spreadsheet designed to answer the set of questions on the heritage dimension of planning applications.

2.2.3 The categories of the spreadsheet are presented below.

Categories Found in the RAT

THEME	SUBJECT	CATEGORIES
Planning/Development Details		*Ref ID*
		Technology Type
		Development Status
		County
		Region
		Planning Authority
		Planning Application Reference
		Year
Application Process		*Pre-Application Sought? (Y/N)*
	Timeline (dd/mm/yyyy)	*Planning Application Submitted*
	Timeline (dd/mm/yyyy)	*Planning Decision Date*
		Within Consultation Deadline
Heritage Consultation		*Consideration of Heritage Assets? (Y/N)*
		First Identified By?
Heritage Impact	Types of Heritage Assessment	*DBA, HS, Geophysical Survey, EIA, SIA/LVIA*
		NPS included?
	Considered Heritage Assets in study area (<5km)	*Nature of Impact (setting, direct impact, both)*
		Designated
		Undesignated
		Type of Designated Asset
Decision	Level of Impact: Final Decision	*Applicant/Heritage Expert*
		LPA Historic Environment
		LPA Conservation
		Historic England
		Relationship between Expert/Council Impact Assessment
	Consultation Correspondence/Comms	*Additional Work Requested Prior to Decision*
		LPA Archaeologist
		LPA Conservation
		Historic England

	Decision Notice and Officer Report	*Heritage mentioned in decision and/or applied as condition*
		Heritage included in objection/ by whom?
		Heritage included in rejection. (and which policy mentioned)
Additional Notes		*Case Study*
		Notes
		Link

2.2.4 Below introduces each column and how they were interpreted.

2.2.5 The terms *heritage contractor*, *heritage expert* or *consultant* are defined here as an external person, organisation or company contracted to conduct heritage work as part of the planning application on behalf of the applicant.

2.2.6 The terms LPA Heritage team, LPA Archaeologist/Archaeology Officer or LPA Conservation Officer are defined here as an employee of the Local Planning Authority who considers the heritage dimension in planning applications. The distinction between archaeology officer and conversation officer changes according to Local Authority: sometimes this role is combined despite their having different functions; otherwise the archaeological officer focuses on archaeological remains/archaeology management and the conservation officer may focus on historic buildings, designated assets (eg listed buildings, conservation areas, scheduled monuments).

2.2.7 Responses in the Historic England category signals to any documentation which suggests a representative from Historic England has been involved in the application. In London this may not be accurately recorded as there was no explicit acknowledgement of advice coming from Historic England, or GLAAS.

2.2.8 In cases where there was a clear indication through documented evidence that the answer was Yes, 'Y' was used. 'N' (No) was used in cases where a negative response was found; 'NA' (Not Available was used when evidence was not available and the query could not be answered. The lack of evidence will cause limitation in the analysis.

2.2.9 Technology Type: the responses to this column-category were provided by the BEIS database and fall into five categories: Solar Photovoltaics, Biomass (dedicated), EfW Incineration, Wind Onshore and Wind Offshore.

2.2.10 Development Status: the provided options were Abandoned, Application Refused, Application Submitted, Application Withdrawn, Awaiting Construction, Operational, Planning Permission Expired, Under Construction.

2.2.11 Development Status (Short): to accommodate the research questions, development status categories Awaiting Construction, Operational, Planning Permission Expired and Under Construction were understood as applications which had Permission Granted. Application Refused, Application Withdrawn and Abandoned remain as is.

2.2.12 It is important to recognise that the Development Status categories Abandoned and Application Withdrawn *may* have had permission granted. It should not be assumed that permission was not granted.

2.2.13 The County, Region and Planning Authority columns identify the geographic location of the planning application. The Planning Application Reference was used to pinpoint the application details and documents through using each LPA's online planning portal service. The inconsistency between Planning Authority services and provisions is noticeable, with some making all documents available and easily searchable, while others did not have any relevant documents available and/or label them in a way that allowed documents to be recognisable without detailed research.

2.2.14 In some instances, a low number (e.g. approx. 10 documents) were available whereas in other situations this number may have been closer to 200 documents.

2.2.15 Application Process/ Pre-App Sought: This column was added to research whether pre-application advice was sought. It was abandoned after the interim report as it was clear this information was not readily available nor reliable. The researchers needed to depend on heritage assessment documents to highlight whether they sought pre-application advice, which was usually omitted. In many applications it became apparent pre-application was likely to have been sought, although the documented evidence to support this was scarce. A case in point would be a Desk Based Assessment submitted alongside a Geophysics Survey.

2.2.16 Application Process/ Planning Application Submitted and Planning Decision Date: It was realised early on that the planning application submission date used may be either the date that the applicant submitted the documents *or* the date that the Local Authority acknowledged the receipt of the application documents. In some cases these two activities could vary weeks. The Planning Decision was usually found.

2.2.17 Application Process/ Within Consultation Deadline: According to the MHCLG Determining a Planning Application Guidance, the 'statutory time limits are usually 13 weeks for applications for major developments and 8 weeks for all other types of development (unless an application is subject to an Environmental Impact Assessment, in which case a 16 week limit applies' (MHCLG 2014).

2.2.18 Heritage Consultation/ Consideration of Historic Heritage Assets: In this category, the researchers responded 'Yes' if there was any indication in an application that heritage was considered, even if as a few paragraphs within a Landscape and Visual Impact Assessment (LVIA).

2.2.19 Historic Environment Impact/ Type of Heritage Statement / Desk Based Assessment (DBA), Heritage Statement (HS), Geophysical Survey, Environmental Impact Assessment (EIA), Setting Impact Assessment or Landscape and Visual Impact Assessment (SIA/LVIA): This section had some complications for a number of reasons. Due to the lack of standardised nationally set terminology it was sometimes difficult to assess what type of assessment had been undertaken. Further large documents were often broken up into smaller parts in order to be uploaded onto the planning portal, which again made identification problematic. Therefore these results should be viewed with caution, but are accurate enough for the use of this Pilot Study.

2.2.20 In some applications, the term 'Heritage Statement' was used to imply Desk Based Assessment for example. For the purposes of this project, we have interpreted a Heritage Statement as a document which explicitly focuses on designated heritage assets and may or may not include consultation with the HER. A DBA is defined as anything which deals with both designated and non-designated heritage assets and includes consultation with the HER,

2.2.21 Geophysical Survey was marked as 'Y' regardless of when this activity took place in the process. Surveys in some instances were undertaken as part of the initial DBA; in other instances they were requested as further work by the LPA Heritage team prior to making a decision.

2.2.22 The Environmental Impact Assessment was marked as 'Y' for any application that stated the application required an EIA. In these cases, the consultation period is extended to 16 weeks.

2.2.23 In the interim report, it is noted that very rarely are National Policy Statements EN1, EN3 or EN5 included in Heritage Assessments. However it should be noted that these statements may have been incorporated into Local Plans and should not suggest the content of the statements are not considered. For future work, it may be worth acknowledging such content in Local Plans into account. As such, this column-category was rarely answered.

2.2.24 Historic Environment Impact/ Considered Heritage Assets in Study Areas: this section focused on the entire study area rather than the proposed development area (PDA). In this investigation study areas varied on a case by case basis, with the potential of up to 5 kilometres in distance from the PDA.

2.2.25 Historic Environment Impact/ Considered Heritage Assets in Study Areas/ Nature of Impact: This section responded to whether the impact *considered* or addressed a potential impact as direct, related to setting or both. In most circumstances, both were considered as part of the assessment.

2.2.26 Type of Designated Asset: the options here were listed building, scheduled monument, conservation area, registered parks and garden, registered battlefield and World Heritage Site. Note that although marked as singular in the spreadsheet, the quantity may (and is likely) to have been more than one. Also note that no column was included for assets of local significance which may be included for future work.

2.2.27 Decision/ Level of Impact: Final Decision: This section outlines how the heritage impact was assessed by the Heritage Expert, LPA Archaeologist, LPA Conservation Officer, and Historic England to explore whether there is any discrepancy in assessment. Since it is difficult to define impact at a singular level as sites may contain varying levels of impact between direct and indirect impact as well as designated and non-designated heritage assets, this column-category would benefit from expanding to differentiate between different assets. Further complication in this assessment relates to impact verses significance: the latter was not assessed as part of this study).

2.2.28 In some cases, a response such as Low-Medium will be used which may mean that one of the assets was assessed as low and the other medium. For future work, this can be revised to provide more detail.

2.2.29 Four grades of magnitude have been adopted: No Change, Negligible-Low, Medium, High. The impact categories are outlined below in relation to magnitude and sensitivity.

Magnitude	**High**	Slight/Moderate	Moderate/Large	Large/ V. Large
	Medium	Slight	Moderate	Moderate/Large
	Negligible- Low	Neutral/Slight	Neutral/Slight	Slight/Moderate
	No change	Neutral	Neutral	Neutral
		Low	**Medium**	**High**
	Sensitivity →			

Figure 1. Impact categories in relation to magnitude and sensitivity used in the research analysis

2.2.30 High Magnitude is defined as where the development is assessed as having a total loss or major alteration to the existing landscape.

2.2.31 Medium Magnitude is defined as where the development would have a distinctly noticeable impact on the landscape and result in a partial loss of or alteration to the landscape as is.

2.2.32 Negligible and Low are used interchangeably in the research to describe the development having a minor or very minor loss or alteration to the existing landscape which may be barely noticeable.

2.2.33 No Change is defined as the development having no direct or indirect effect on the existing landscape resulting in no alternation.

2.2.34 Decision/ Consultation Response-Communication/ Additional Work Requested Prior to the Decision: this category is used to highlight when there is evidence that the LPA Heritage team requested further work to explore and efficiently assess the impact the development would have on the heritage. This acknowledges a phased heritage approach to predetermination.

2.2.35 Decision/ Consultation Response-Communication/LPA Archaeologist, Conservation, Historic England: These categories acknowledge whether there was any documented correspondence between the heritage bodies during the application. It may relate to correspondence directly with the client/heritage expert, or as a consultee for the application proposal. In some instances, this correspondence was only evidenced in the Officer's Report, with no other supporting documents to acknowledge communication.

2.2.36 Decision/ Decision Notice and Officer Report/ Heritage interest mentioned in decision and/or condition applied: this column-category details whether heritage in *any* capacity was included in the decision notice: this may be as reference or as a condition. For future work it is worth differentiating the two.

2.2.37 Decision/ Decision Notice and Officer Report/ Heritage included in objection (and by whom): on the occasion that an Officer Report was available, it is possible to explore whether or not heritage representatives objected to the development. This was noted here when possible. On some occasions a 'holding objection' or proposed refusal may have been put forward, providing

the opportunity to mitigate harm by the client and the objection/refusal to be revised/removed. Only final decisions were recorded in the spreadsheet.

2.2.38 Decision/ References / Heritage interest included in Refusal: this was marked if the refusal referred in any way to the heritage dimension. The references to NPPF, Local Plan and other were not accurately recorded as it is difficult to interpret without further research. For example, the NPPF and Local Plan would likely be referenced within the decision notice/refusal notice, but not necessarily relate directly to the heritage dimension.

2.3 Sample Selection

2.3.1 The sample selection of this report was determined by Historic England: this report has only used an extract of the Renewable Energy Planning Database provided by BEIS as BEIS track the progress of new renewable energy projects moving through the planning system. The extract was downloaded in October 2020 and thus the original spreadsheet provided went up to June 2020. As indicated on the www.gov.uk website, the results of BEIS's renewable project monitoring work are recorded each quarter.

2.3.2 Without filtration, the BEIS Renewable Energy Planning Database (June 2020) has exactly 5,946 entries. These were filtered to 458 through the following selections:

- **Region focus** England only
- **Technology Type:** Solar Photovoltaics, EfW incineration, Biomass (dedicated), Wind (Offshore & Onshore)
- **Date:** July 2015- December 2019

2.3.3 Offshore is classified as a region since all offshore is decided by the Planning Inspectorate. However, Offshore Wind and Onshore Wind is also classified as technology types, and the two 'offshores' categorisations (region and technology type) should not be confused.

2.3.4 The sample selection provided by BEIS provides data which permit us to identify planning application details using all local authority planning portals. Through these planning portals, there is an opportunity to scrutinise the planning process in more detail with available documentation. Details that were found through a quick pilot study were then translated into the spreadsheet provided. We discuss the limitations of this method below: the limitations and challenges of this study are noticeable and should be considered at all times when looking through the findings.

2.4 Case Study Selection

2.4.1 Due to the nature of the planning process, such as the discretionary case-by-case considerations, important details are lost in the spreadsheet provided.

2.4.2 Losses include discussions between heritage contractors and LPA heritage teams, changes in considerations or evidence of impact, flexibility and willingness of LPA teams, and detailed rationale behind conditions, objections and refusals. These nuances shape the nature of the heritage assessment, its process and the outcomes.

2.4.3 As such, we have selected a range of case studies to detail these considerations. We have tried to provide a good representation of case studies which may draw out future research questions.

2.5 Design Limitations, Challenges and Other Considerations

2.5.1 This pilot research was conducted to explore the opportunities and limitations of potential research designs using publicly available work.

2.5.2 The researchers came across a range of limitations. The most relevant is the lack of available data for all the column-categories designed in response to the brief. Other relevant challenges include subjective interpretations of the categories, such as perceived heritage assessments from the LPA heritage team interpreted through email correspondence or Officer's reports, and the lack of national standardisation of Local Authority planning interfaces.

2.5.3 Some of the limitations may be addressed with more focused research.

2.5.4 Below we have provided some initial feedback regarding complications and challenges, which are largely due to (a) documents not being made available; (b) the need for greater in-depth analysis as many applications have approximately 80 or more documents (in many cases these documents are not well presented, making it difficult to ascertain the details of the process without a significant amount of time investment, not suitable for a pilot study); (c) lack of terminology standardisation.

	Research Questions	**Findings of Feasibility to Address**
1.	Were heritage assets considered within the application?/ what proportion of applications was a heritage dimension identified?	This question is straight-forward, but our findings demonstrate that while heritage is considered in 76% of applications, it is the detail and accuracy of consideration outlined in the assessment that is more crucial.
2.	Where heritage assets were identified and considered as part of the application what type of assessment was undertaken? and did these consider both designated and non-designated heritage assets?	The distinction between assessments are not clear cut in the online planning portals. Often, a DBA might be part of a larger document such as an EIA, but uploaded as a separate document which takes more time to distinguish, if possible at all. Non-standardised terminologies usage for assessment (DBA versus HS) need to be clarified, or; geophysics surveys can be done for natural heritage assessments. Different documents may have assessed different heritage dimensions, some in line with NPPF requirements, others less efficient.
3.	Was heritage identified by the application or the local authority? Is there a consultation response from a local authority heritage expert and/or Historic England?	This is incredibly difficult to identify without in-depth research. First recorded identification of heritage is generally noted through evidence of an assessment, although this does not identify pre-application discussions/requests. Some documents may have been revised but not documented; some contractors may have/have not discussed heritage dimensions with local authority heritage teams.
4.	Have they been considered with reference to the NPPF, NPS, or Local Plan?	During the interim report is was noted that heritage documents all referenced the NPPF and Local Plans, many in template-form at the start. The search for reference to NPSs (EN1, EN3, EN5) are irrelevant unless

		one knows how these have been adopted into the Local Plan, where renewable energy policies are more likely to be referenced. The researchers stopped looking for NPSs in heritage assessments as it was uncommon in its national form. That is not to say reference to green energy was not included.
5.	The level of discrepancy observed between local authority heritage expert and applicant	Where we have managed to identify the local authority correspondence, we have answered this question. The staged approach to impact assessments, however, is not documented in the spreadsheet e.g. LPA heritage teams may change their assessment with more evidence throughout the planning process.
6.	Is there any undesignated heritage assets identified of national significance?	Heritage assets of local significance were identified, or undesignated prehistoric assets which were rated as highly significant. This may be identified with more detailed work.
7.	Where a heritage dimension was identified what was the nature of that impact (e.g. setting, direct impact)? In what proportion did that interest include designated assets?	During the pre-determination process, generally both setting and direct impact are considered in some capacity. Due to the large research area for such sites (≤5km), setting is almost always considered.
8.	Was pre-application sought?	This question will not yield relevant results. It is our assumption that many DBAs and geophysical surveys *would* require prior advice, or form of communication with the LPA heritage team. In some cases this is acknowledged in the assessment, but many times not. The results are not reliable.
9.	Where a heritage dimension was included was that identified as a reason for objection	This question is possible *only* if a Consultee/Delegate Report is available online (sometimes it is not). Future work would benefit from analysing the process, eg on some occasions heritage was an objection, which was then removed after further negotiation. This is relevant alongside current Planning Reform proposals.
10.	In what proportion of applications were heritage dimensions included in reasons for refusal? Where they were included, what was the nature of the impact?	We have put this in the spreadsheet, and further exploration on nature of impact will be highlighted in case studies. For future work, it would be useful to distinguish between decision and appeal. In this report we have looked at original decision rather than appeal.
11.	Is the reason for objection the reason for refusal?	This question can be addressed, however in many (refused) cases the documentation is not available.

2.5.5 Overall: not all desired data can be yielded for each entry as details held within local planning authority planning portals online vary quite significantly. The researchers found that some Councils do not label or catalogue documentation in an accessible way, making it time consuming or impossible to find relevant information. There may be on average 80 documents, which for this pilot study we have decided to sieve through rather than spend excessive time on each application, so that we can quickly assess the core aim of this project, on whether heritage disrupts or causes delay to the planning process for renewable energy.

3. Analysis: Renewable Energy Planning and Heritage Considerations

3.1 Introduction

3.1.1 The analysis presented below is based on the RAT delivered alongside this report, using both simple and comparative data analysis. The findings provide a clear indication of the kind of information and evidence that can be yielded from the availability of planning application documents.

3.1.2 It is essential to acknowledge the limitations outlined in Section 2.5 which surfaced from this pilot study.

3.1.3 However, having acknowledged limitations, the results of this study do present some initial clear observations, which are explored further in focused case studies. These observations are summarized below.

- Heritage is usually a consideration in this sector (63%), with the exception of solar panels installed on roofs or applications with focus on the natural environment eg within the Green Belt.
- Heritage assessment of sites is almost always undertaken in some degree of desk-based research and at a pre-determination stage. Only 13.7% of all applications were marked 'NA' or 'N' for *all* assessments (NA=58 apps; N=5 apps).
- Most geophysical surveys as part of the pre-determination assessment were linked with a desk-based assessment in order to assess the heritage dimension of a planning application. 66 of 83 geophysical surveys (80%) had DBAs submitted too.
- While LVIAs are in the lead for assessments (*n*=215), 73% of these were submitted with a Desk Based assessment. Submitted for 44.3% of applications, DBAs are the preferred desk based assessment, which identifies both designated and non-designated heritage assets and with consultation with the local HER.
- Desk-based assessments on these types of sites encompass a very large study zone and thus almost always capture designated heritage assets.
- The researchers have observed a discrepancy in the understanding and interpretation of 'setting' between experts and LPA Heritage teams. Experts generally interpret setting largely through direct visibility to and from a development, while conservation officers include experiential impact (see Case Study 1 below).
- A substantial discrepancy between the assessment of heritage impact between the applicant's heritage expert and the local authority advisors was noted at 44% (NA not included in total).
- It is clear that local authority heritage experts are keen to negotiate and mitigate so that heritage is not a barrier. An observation is that local authority heritage teams do work positively towards ensuring that heritage in not an objection to planning permission.
- An observation is that planning applications often require specific case-by-case negotiation between the applicant and the local heritage advisors in order to mitigate harm on the (natural and historic) environment.

- As an observation, in order to identify impact and make an evidence-based decision, a phased approach is often taken whereby the LPA heritage team request a desk-based assessment, possibly followed by (based on DBA conclusions) a geophysics survey, evaluation or other options for mitigation.
- This type of phased approach on a case-by-case basis often allows room for mitigation through design and other measures earlier on in the process.
- Renewable energy planning applications incorporate specific nuances that are not present in most regular planning applications and which require additional heritage considerations. These include:
    - the temporary nature of renewable energy structures, which generally have a shelf life of approximately 25-40 years;
    - the level of direct development impact which is often set at 1% of a site due to small piling, but one which covers a large geographical area.
    - The level of impact remediation will cause to return a site back to its original state.
- A lack of national standardisation for planning applications and the information available to the public.

3.1.4 Of the applications in which the objection/refusal right is used, its justification is often due to the lack of appropriate heritage assessment required from the applicant as required under the NPPF, which is easily remedied with appropriate consultation and the delivery of necessary evidence. For example, in 2015 a Solar Photovoltaics application submitted to North Lincolnshire Council was refused: heritage was not included in the Refusal Notice, however the Heritage officers advised 'a HOLDING OBJECTION until further information is provided regarding the potential impact' and if not obliged should be refused *or* permitted with 'conditions securing agreed mitigation measures…' (Row 189, RAT, Committee Report).

3.1.5 Numbers and percentages are taken from the total number of applications, that is, 458 entries. NA should be not interpreted as a definite yes or no, as the absence of information should not suggest a negative response. It is possible with more in-depth analysis some of these blanks could be resolved, and with a larger sample may be able to show clear relationships between variables.

CASE STUDY 1

Region	West Midlands
Planning Authority	Newcastle Under Lyme Borough Council
Technology Type	Wind (Onshore)
Planning Status	Awaiting Construction

Case Study Highlight: *The heritage nuances of renewable energy planning applications.*

Details
A 2018 planning application for two onshore wind turbines in Staffordshire was submitted to the LPA. The site lay adjacent to a Grade II* listed building, which itself was located in a Grade II Registered Park and Garden, which in turn was in a conservation area.

While both Historic England and the LPA Conservation Officer identified a high level of impact on the setting of these designated heritage assets, particularly with regard to the height of the development. Historic England additionally noted that the *"repetitive movement of the blades within an otherwise static rural landscape would inevitably draw the eye and cause incongruous and inappropriate intrusion to the historic landscape".*

This is the only occasion in the study where operational "movement" of a proposed development was taken into account during the assessment of heritage impact. This highlights the nuances that can be associated with heritage assessment on renewable energy planning applications, which often require considerations beyond a standard DBA.

Application in RAT Database:
Row: 367
Date: 2018
Planning App Ref: 18/00933/FUL

3.2 Region-based and Renewable Energy Planning Applications

3.2.1 From the sample of renewable energy planning applications, the region with the highest application number is the East Midlands (81), followed by the South West (77) and then North West (73). London (5) and the South East (61) combined follows. The North East has the lowest number at 19 (see Figure 2).

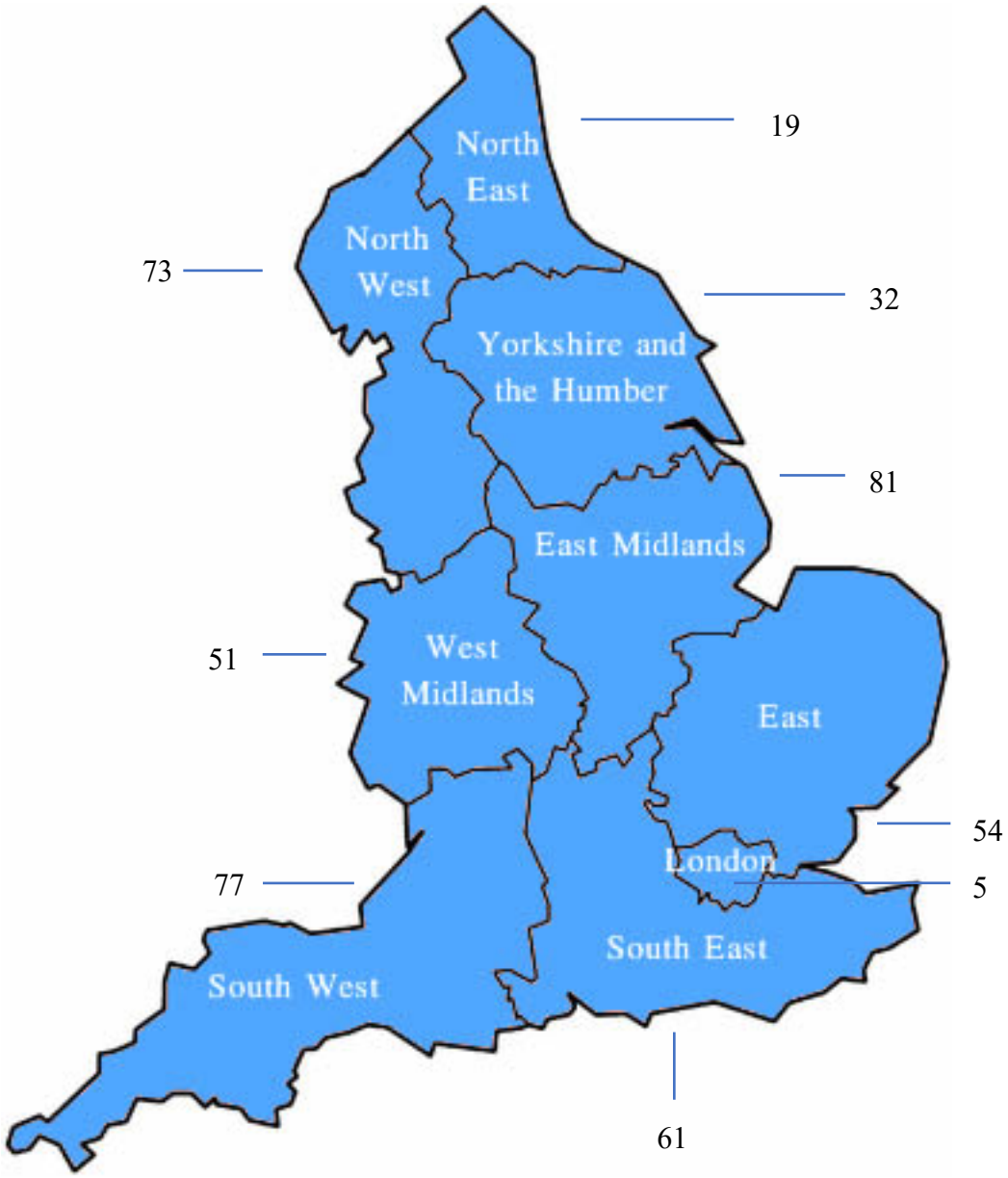

Figure 2 Regional representation of total number of applications

3.2.2 In relation to approved versus refused applications, of the total applications there is a 61% approval rate and a 17% refusal rate. If we consider *only* approved and refused applications (*n*=357), then 78% were approved. According to MHCLG, on general planning applications, granted permissions for applications in 2018-2019 were approximately 88% for England only (MHCLG 2020).

3.2.3 Yorkshire and the Humber had an approval percentage of 68.8% followed by the North East (68.4%), South West (67.5%) and then the South East and London with 65.2%. The lowest approval rate is for Offshore Wind at 20%, followed by the next lowest, the North West (50.7%) and then West Midlands (58.8%) (see Figure 3).

3.2.4 The highest region for refusal rates is the East Midlands (21%), followed by Offshore (20%), the South East (19.7%) and North West (19/.2%). The lowest refusal rate is the North East (5.3%) followed by Yorkshire and the Humber (12.5%).

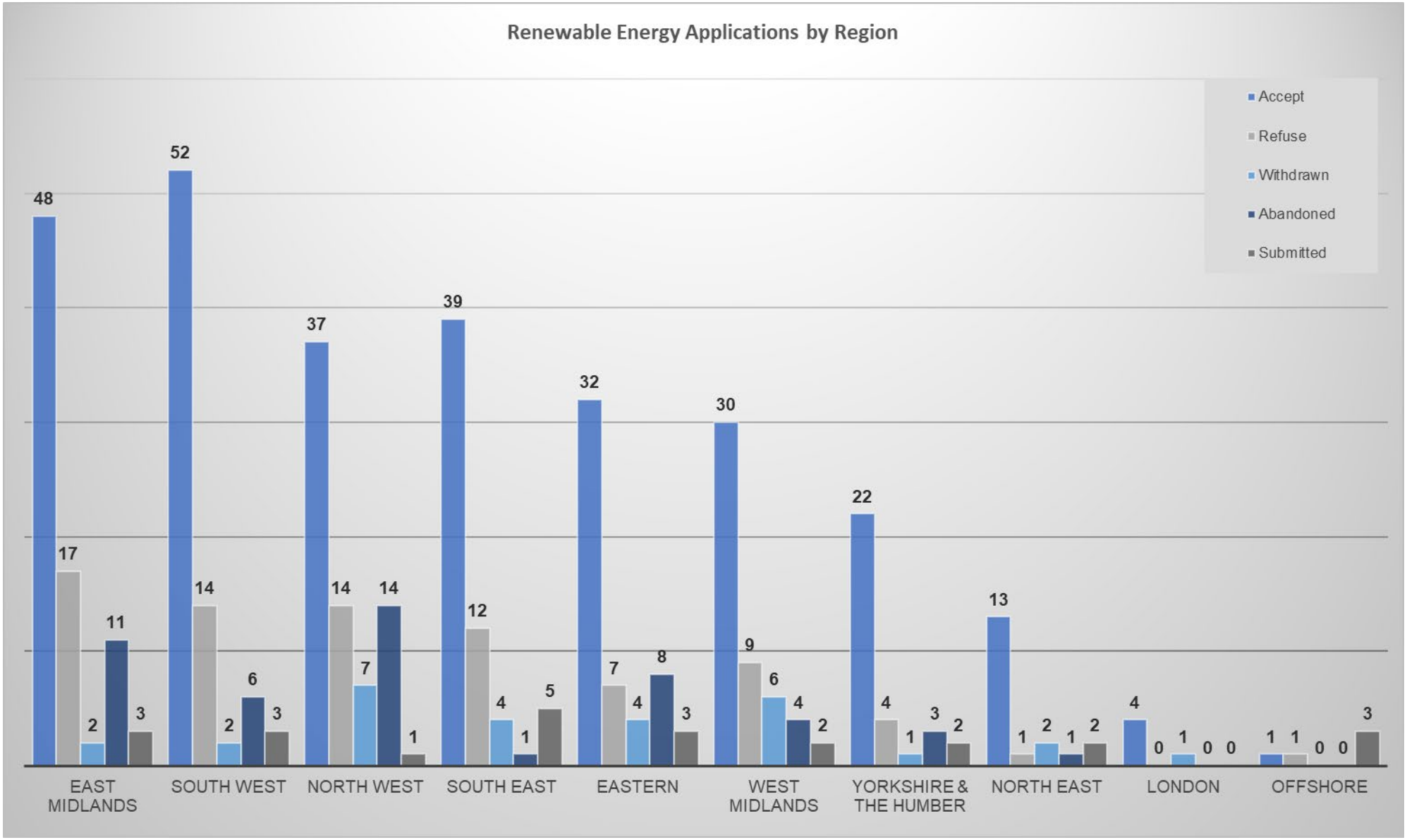

Figure 3 Renewable energy applications by region organised according to highest-lowest (left to right) overall number of applications

3.2.5 Looking at these numbers in terms of Technology Types, we know that renewable energy generation produces approximately 47% of total electricity produced in the UK (BEIS 2020a).

3.2.6 Between 2015 and 2019, solar photovoltaics were the most popular renewable energy application out of total reviewed. 'In 2019, around 1% of global energy came from solar technologies' (Ritchie and Roser 2017). In the UK, the solar capacity 'increased from 5,488.6MW in 2014 to 13,259MW in June 2019' which pushed the UK as third for solar generation in the EU (GreenMatch 2020).

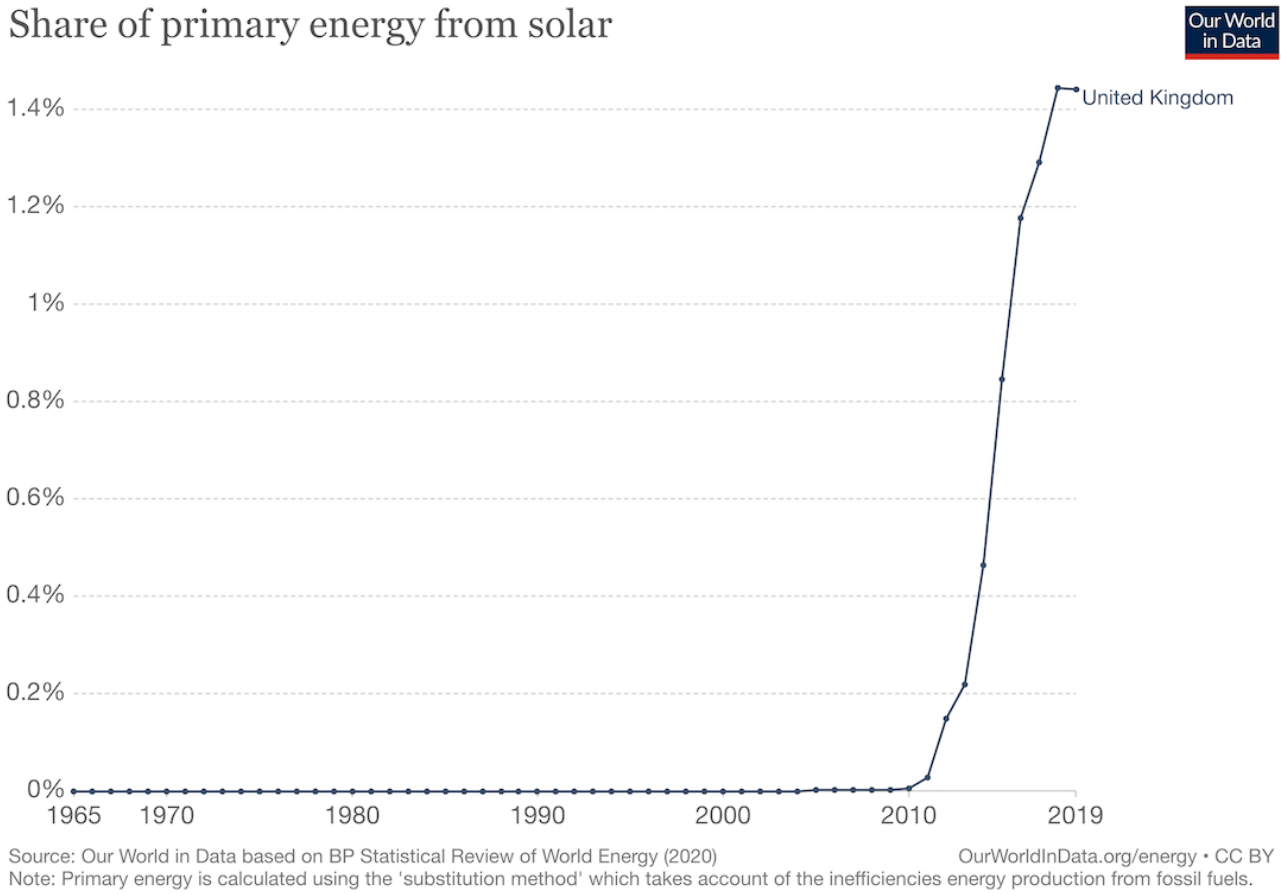

Figure 4 Solar power generation: electricity generation from solar, measures in terawatt-hours (TWh) per year. In the UK. Source: Ritchie and Roser 2017

3.2.7 Below, Figure 5 presents a visualization of the total number of applications categorised according to technology type alongside their development status, i.e. the application has been approved, refused, withdrawn, abandoned or submitted.

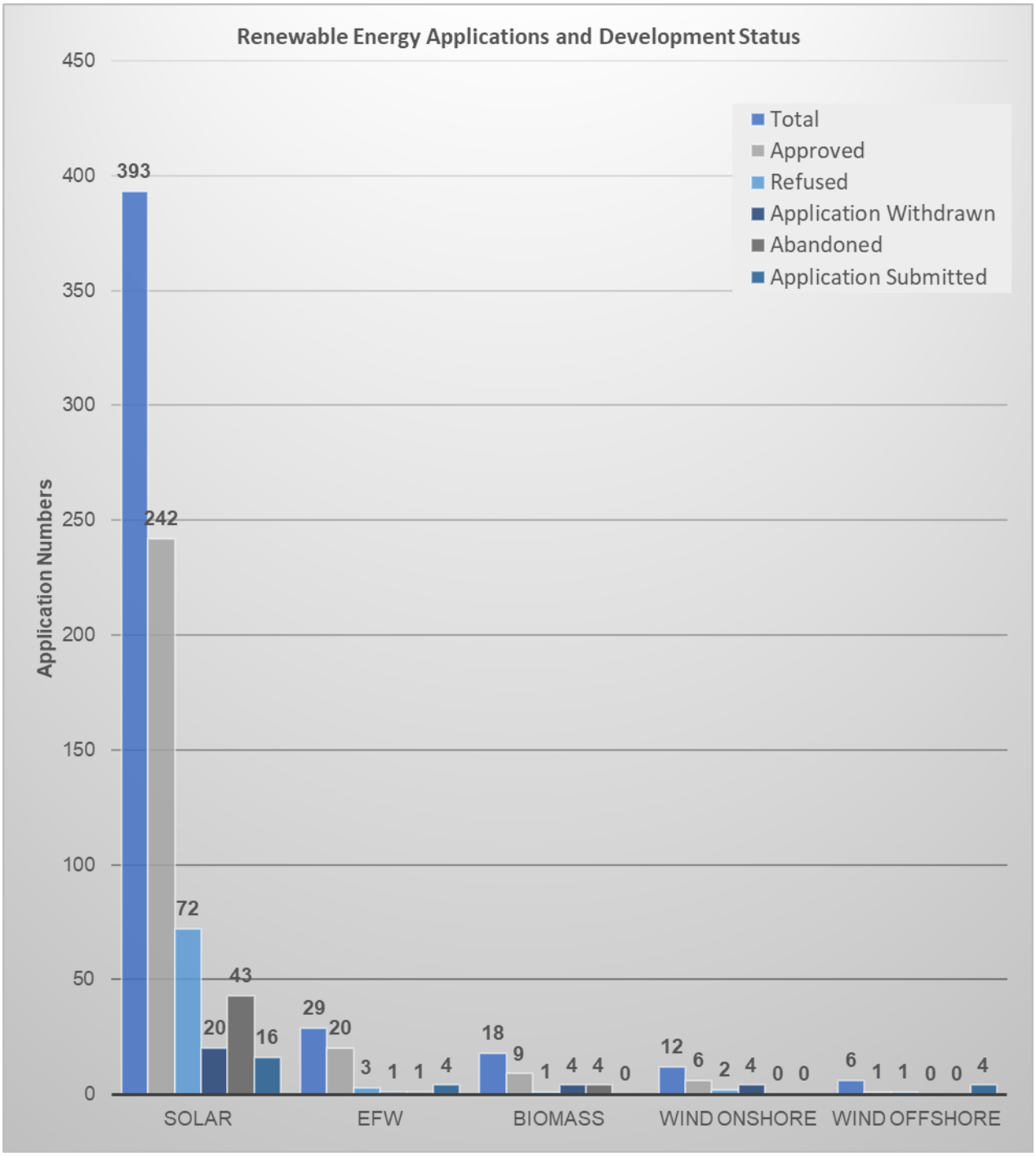

Figure 5. Renewable energy application by technology type and development status

3.2.8 With the applications for Solar Photovoltaics far outweighing all other renewable energy options in numbers, it has one of the highest refusal rates out of all other technology types at 18.3%. This percentage represents refusal out of the total number of *solar photovoltaic applications only,* rather than the total number of applications (*n*=458). The total number of approved applications from 458 is 278 (60.7%), and the total number of refused applications is 79 (17.2%). Below is the technology type percentage set within the total number of applications approved plus the total refused number (*n*=357). Wind Onshore and Offshore are merged as into one technology type category.

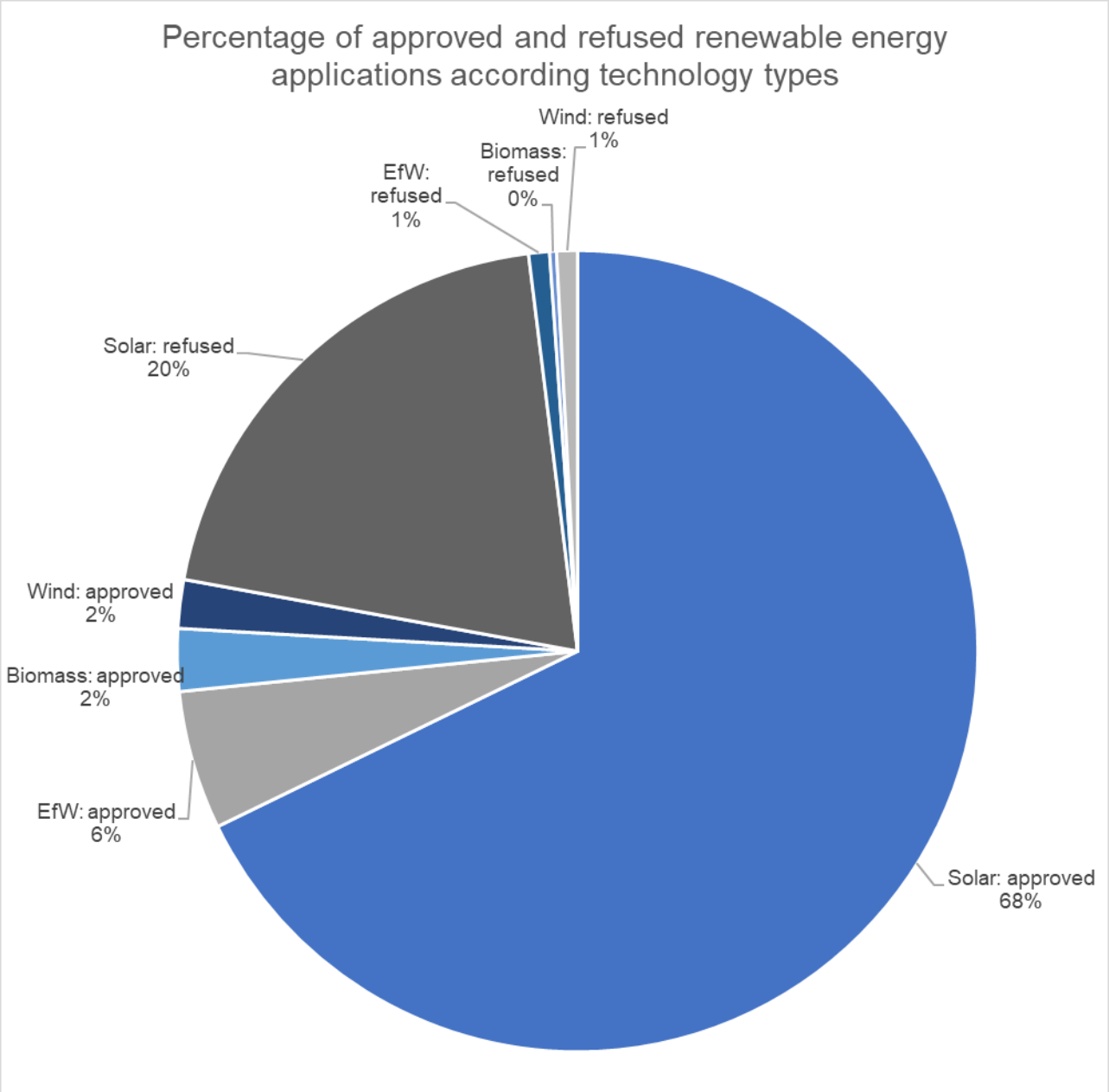

Figure 6. Percentage of approval and refusal rating against total number of approved/refused applications (n=357)

3.2.9 The pie graphs above in Figure 6 show the approval and refusal percentage against all approved and refused applications only (*n*=357). We can see just how popular solar photovoltaics are here.

3.2.10 From the table below (Figure 7) we can see that in relation to Solar Photovoltaics, the East Midlands has received the most applications, followed closely behind by the South West and North West regions. For EfW Incineration, Yorkshire and the Humber has received the most, followed close both the North West and South East. Applications for Biomass (dedicated) are spread across the East Midlands, East, West Midlands, and Yorkshire and the Humber, followed very closely behind by the South West and North West.

Region/Tech	Biomass	EfW	Solar	Wind Offshore	Wind Onshore
East Midlands	3	2	74	0	2
South West	2	0	71	1	3
North West	2	5	62	0	4
South East	1	5	55	0	0
Eastern	3	2	48	0	1
West Midlands	3	4	43	0	1
Yorkshire & The Humber	3	7	22	0	0
North East	1	3	14	0	1
London	0	1	4	0	0
Offshore	0	0	0	5	0
Total Application	**18**	**29**	**393**	**6**	**12**

Figure 7 The relationship between region and technology type. The regions are listed as least applications (bottom) to most (top).

3.2.11 Government documents highlight renewable capacity by English region and technology, which is a useful tool for forecasting regional support and guidance. It is worth pointing out regions signaled with the highest capacity (including PV) are: Yorkshire and the Humber, East of England, and the South East (BEIS 2020b, 48).

3.3 Heritage Consideration in Renewable Energy Planning

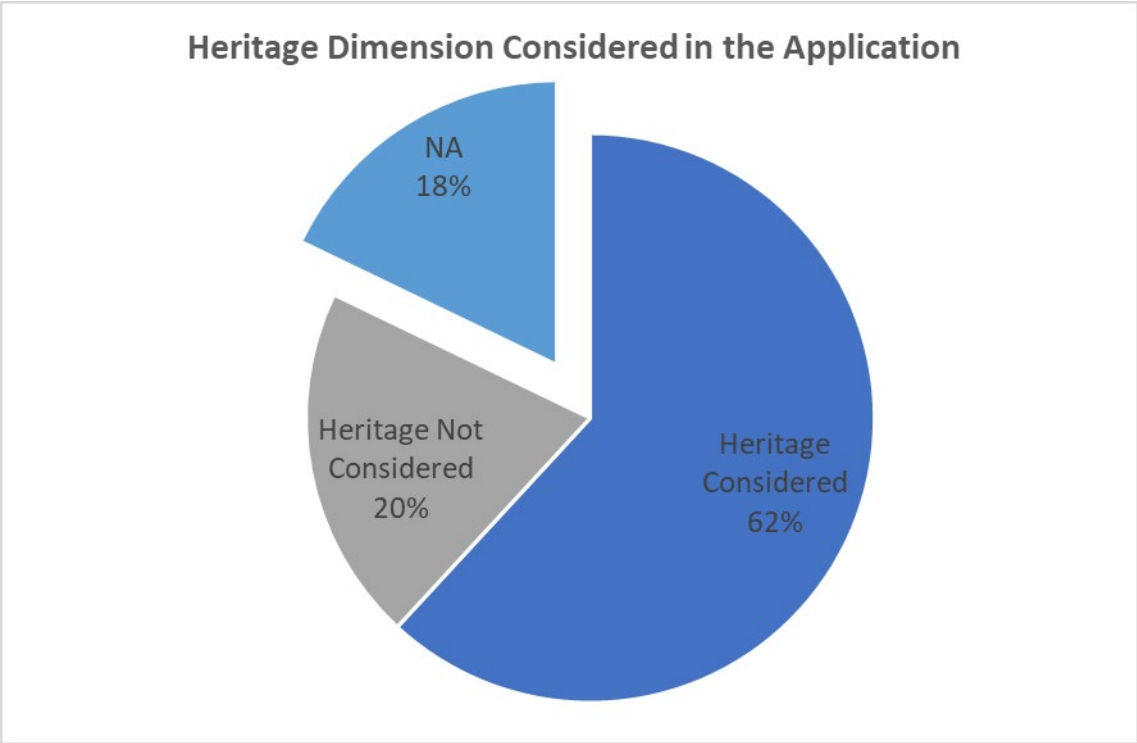

Figure 8. A heritage dimension is almost always considered within a planning application.

3.3.1 A total of 289 applications (62%) considered a heritage dimension. Cases in which heritage was not considered included applications related to a number of specific factors including a dominance of natural environment related issues such as green belt or solar panel applications for roofs of buildings, of which most were on contemporary industrial buildings such as supermarkets. In some cases, the reason why heritage was not considered was unknown (see Case Study 2). 'NA' in this regard might mean that details related to the application were simply not available rather than not considered.

CASE STUDY 2

Region	Humberside
Planning Authority	East Riding Yorkshire Council
Technology Type	Solar
Planning Status	Awaiting Construction

Case Study Highlight: *Non-consideration of heritage dimensions of planning applications.*

Details

A planning application was submitted in 2019 for the construction of 960 ground mounted solar panels within a farming estate on arable land. No heritage assessment was undertaken by the applicant, nor was consultation sought or provided by the LPA heritage advisors. There was also no mention of heritage referenced in either the Delegate Report nor final planning approval.

A rudimentary study of DEFRAs MAGIC indicates that the site lay adjacent to a Grade II Listed Building and approximately 1km from a SM of an Augustinian Priory.

Application in RAT Database:
Row: 453
Date: 2019
Planning App Ref: 19/04018/PLF

3.3.2 Although as stated in Section 3.1 that DBAs are the main assessment used, this could have been uploaded to the planning portal in a number of ways: as a Desk-Based Assessment, a Chapter, an Appendix or even unlabeled. Figure 9 below is just one of the ways heritage assessments could be presented in an online planning portal.

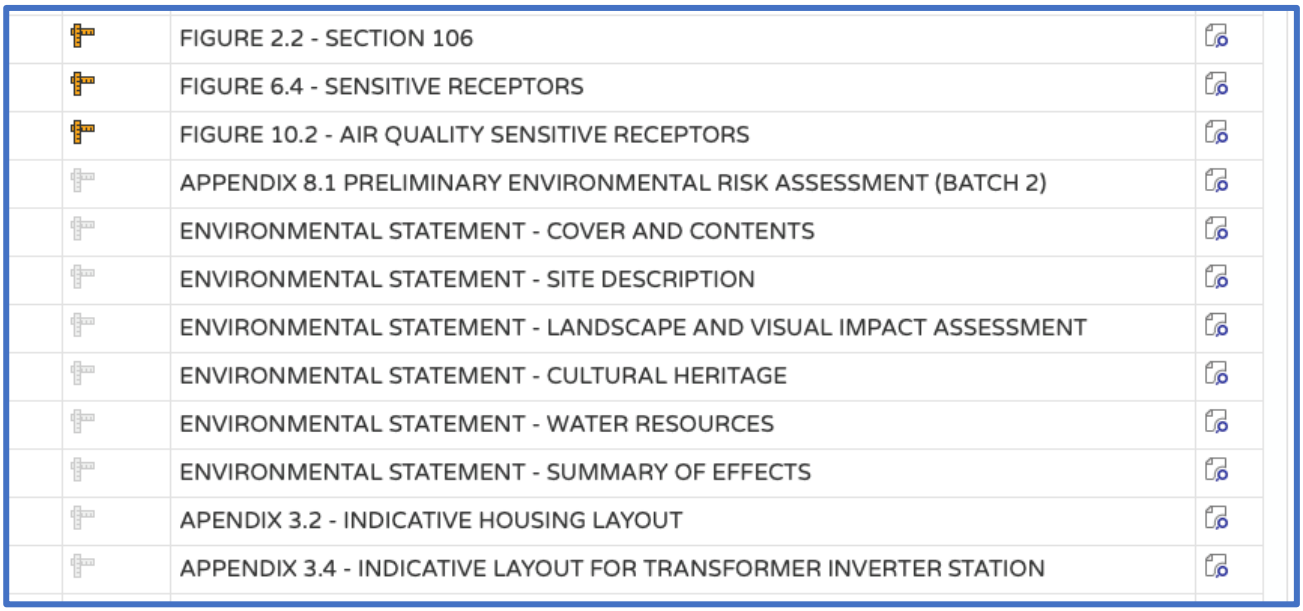

Figure 9 An image of just one of the ways a heritage assessment could be presented

3.3.3 As mentioned in the Methods and Methodology chapter, it was also noted that titles for these statements varied due to a lack of standard sector wide terminology. Examples included a Heritage Statement, Heritage Asset Assessment, Heritage Impact Assessment, Desk Based Assessment, Heritage Chapter, Cultural Heritage Assessment or a Desk Based Archaeological Investigation.

Type of Heritage Assessment	DBA	HS	Geo-physical Survey	EIA	LVIA
App. No	203	43	83	73	215
Percentage	**44%**	**10%**	**18%**	**16%**	**47%**

Figure 10 Application number and percentage of heritage assessment out of the total number of applications (*n*=458). These may overlap.

3.3.4 Above in Figure 10 we see that DBAs make up 44% of the heritage assessments. If we look at mixtures in applications, applications with both a DBA and a Geophysical survey adds to 66 of applications submitted, and DBAs submitted with LVIAs adds to 156 of applications submitted.

3.3.5 Ultimately what emerged was the importance of the *quality* of the research and final impact assessment. It is evidenced in the research that heritage assessments produced by contracted experts tend to under-assess the impact of the development on the heritage. For example, in 2015 a solar photovoltaics application submitted to Torridge District Council (Row 256, RAT, Historic England Response-01 Feb 2016): a consultation response letter from Historic England (dated 29 Jan 2016) added:

> *The Cultural Heritage Assessment, included as part of Environmental Statement, undertakes an assessment of the potential impact on the setting of the barrows and St James Church. It is not clear as to why St Michael's Church has been discounted and why no grade II listed structures have been considered as part of the assessment, which we note are present with in the locality (Para 128, NPPF).*

3.3.6 These sorts of comments are usual, in that the lack of content is questioned in such a way. Alternative approaches include something similar to the refused solar photovoltaics application to Bolsover District Council (Row 224, RAT, Conservation-22 Nov 2015) in which the Conservation officer commented:

> *The Heritage Statement submitted with the application does not thoroughly investigate the potential impacts upon the heritage assets as required in NPPF para.128. The photomontages only cover partial views of/from heritage assets and are not extensive… There may be an impact upon other heritage assets but this cannot be assessed as they have not been explored in the heritage statement (a list of these are included above).*

3.3.7 Of the applications that could be assessed, it was observed that both direct and indirect impact were generally considered, even if only a slight consideration. Figure 11 presents both the applications numbers and percentage found (the percentage is of the total number of applications (*n*=458).

App consideration	Direct Only	Setting Only	Both
App No.	28	51	130
Percentage	6.1%	11.1%	28.4%

Figure 11 Consideration of direct and indirect heritage impact

3.3.8 Moving to designation type, between 45 to 55% of all applications considered heritage assets in either a designated or undesignated capacity (see Figure 12). Figure 13 goes further to explore what type of designated heritage assets are more commonly included: 50.2% of all applications included listed buildings, followed by scheduled monuments at 30.4% and conservation areas at 25.8%. Applications could include multiple designated assets combined together, or as standalones.

Application consideration	Designated	Undesignated	Both
Yes	252	234	208
No	25	28	6
Not Available	178	192	170

Figure 12 Consideration of designated and non-designated heritage assets

App includes Designated Asset	Listed Building	Scheduled Monument	Conservation Area	Registered Parks and Garden	Registered Battlefield	WHS	NA
App No	230	139	118	42	4	10	202
Percentage	50.2%	30.4%	25.8%	9.2%	0.9%	2.2%	44.1%

Figure 13 Consideration of designated heritage type

3.3.9 An example of a non-designated heritage asset that was considered is from another Solar Photovoltaics application to Mid Devon District Council in 2015 that was refused (Row 117, RAT). Unfortunately, at time of writing the online Mid Devon Planning Portal was inaccessible. However, provided notes with the application state that the Appeal was dismissed on archaeological grounds despite an email from the County Archaeologist stating that now a geophysical survey had taken place they can rescind their original objection/refusal. The previous objection was put in place due to the high potential for survival and national significance of below ground archaeological deposits associated with the known prehistoric and Romano-British activity in the vicinity. The Historic Environment Team objected to the development due to an 'absence of sufficient archaeological information' and only if further information on the impact of the development upon the archaeological resource were to be submitted would the objection/refusal be rescinded.

3.3.10 Figure 14 highlights the various impact assessments made for applications where documents were provided. As explained by Figure 1, the researchers assessed both the heritage expert's assessment and the LPA Heritage teams assessment (via correspondence) through four grades: no change, negligible-low, medium and high. As demonstrated from the Figure below, it is clear that heritage expert's assessment as 'low-negligible' far outweighed all other grades.

3.3.11 Out of 157 applications ranked as either the magnitude of No Change, Negligible-Low, Medium or High in impact, 80% was assessed as either No Change or Negligible-Low by heritage contractors. For comparison with the LPA heritage team (Archaeologist or Conservation Officer), their assessment of heritage assets as No Change or Negligible-Low out of the 179 times that they commented, is 45% (and that includes possible duplication between Archaeologist and Conservation Officer). The graph below reflects this discrepancy.

3.3.12 Anecdotally we have found that the under-assessing impact is one of LPA's biggest challenges, especially when capacity and resources are tight. See Case Study 3 as an example.

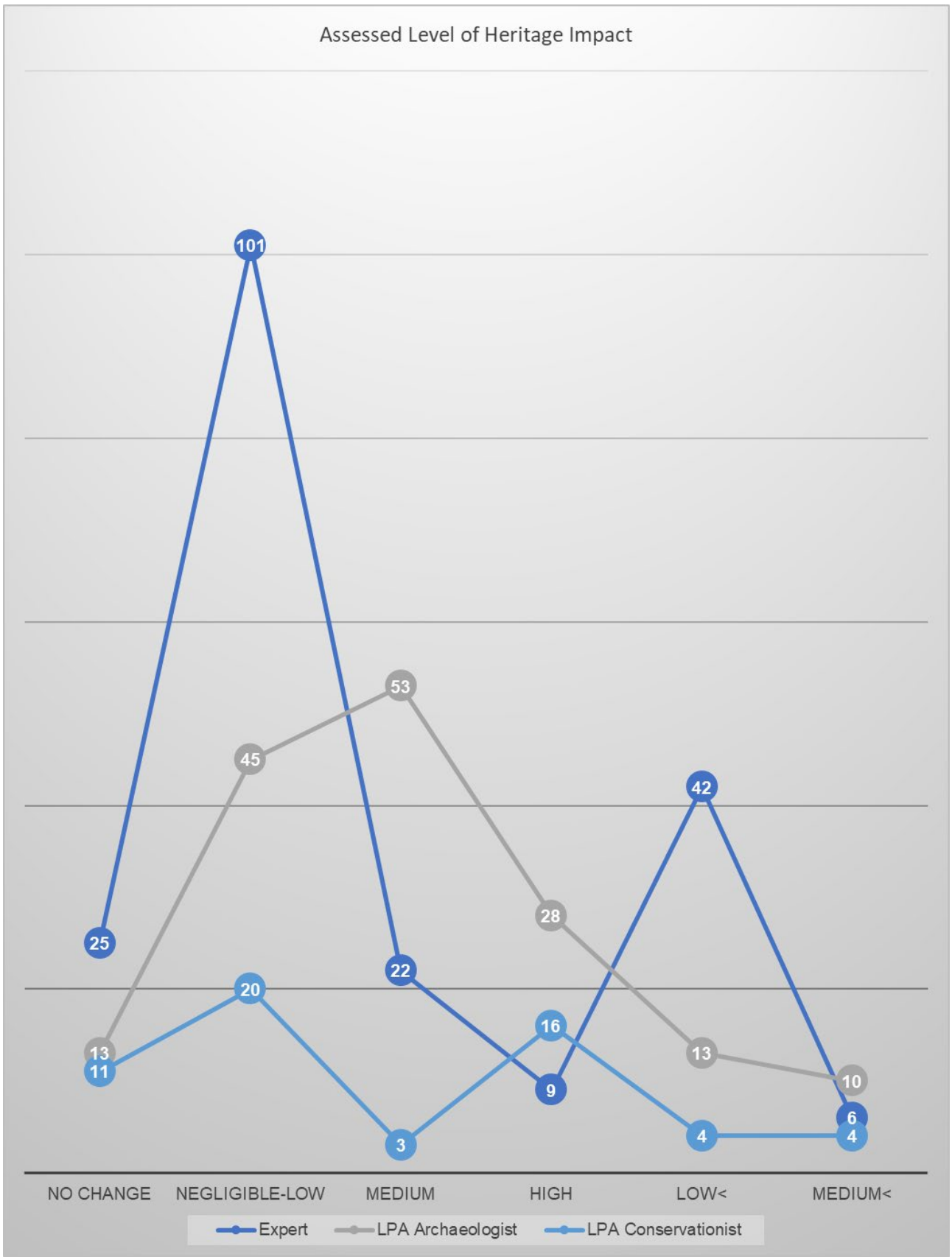

Figure 14 This graph shows in more detail the impact assessment of experts, archaeology officers and conservation officers

CASE STUDY 3

Region	South West
Planning Authority	North Dorset District Council
Technology Type	Solar
Planning Status	Refused

Case Study Highlight: *The discrepancy between expert and LPA assessment of impact.*

Details

In 2019 an application was submitted for the construction of a solar farm in North Dorset. The site lay between three conservation areas, all of which contain listed buildings between grades I to II. A DBA was submitted by the applicant along with an LVIA, which concluded that there would be "NO Harm to the significance or setting of any designated heritage assets". This assessment of impact (specifically focusing on setting) was disputed by both Historic England and the LPA's Conservation Officer.

Unusually, as a result of this antithetical verdict, an independent third-party was commissioned to undertake their own assessment of the site. Their assessment challenged the findings of the original applicant's document, concluding that there would indeed be an impact onto the designated heritage assets. Both Historic England and the LPA's Conservation Officer concurred with the findings of this subsequent independent assessment.

While this is the only example of a third party being invited to revisit impact, the notion of disagreement between the initial assessment from the heritage contractor and the views of the LPA heritage team are not unusual. The RAT demonstrates that undervaluing of heritage out of all entries where analysis is possible (n=188), this occurs 41% of the time.

Anecdotally, LPA heritage advisors have cited this as one of their biggest complaints.

Application in RAT Database:
Row: 306
Date: 2016
Planning App Ref: WSCC/062/16/NH

3.3.13 While this discrepancy does not necessarily cause a delay in the planning process, it has at times been a cause for objections. As stated earlier, evidence suggests insufficient or inaccurate assessments can lead to requests for revision or further work needs to be conducted to determine the heritage impact in line with the requirements of the NPPF.

3.3.14 This can also cause concern for Local Authorities who do not have the resources nor capacity to question assessments and accept impact assessments as face value. This in fact is precisely what assessments are for, but in light of the recognition that assessment impacts are prone to assessing most developments as 'No Change' or 'Negligible-Low', this could potentially cause harm to heritage. (see Case Study 4).

CASE STUDY 4

Region	East Midlands
Planning Authority	East Lindsey District Council
Technology Type	Solar
Planning Status	Permission Granted

Case Study Highlight: *Potential delays caused by requirement for more heritage information.*

Details

A 2017 application for a solar farm was submitted with a Heritage Desk Based Assessment at the pre-determination stage. Consultation response was provided by the LPA Archaeological Officer who concluded that the heritage assessment did not provide sufficient information to *allow for recommendation for planning determination to be made.* A recommendation was made for refusal *until such time as there is sufficient information*.

Whilst this lack of information may not have directly held up the development application process, by the time the final decision was made nearly seven months had elapsed meaning that the application had not been approved within the designated timescale.

In this particular case the DBA assessed a low-negligible impact level, which was contested by the LPA heritage advisors. A condition was set on planning approval in the form of an archaeological evaluation. The evaluation found evidence of Iron Age occupation. This evaluation led to a SMR revealed evidence of an Anglo-Saxon settlement

Application in RAT Database:

Row: 315
Date: 2017
Planning App Ref: S/051/00772/17

3.3.15 The graph below (Figure 15) shows the application numbers for when heritage experts and LPA heritage officers are in agreement (*n*=105); when heritage experts assess impact *higher* than LPA heritage officers (*n*=6); and when they assess impact *lower* than LPA heritage officers (*n*=77).

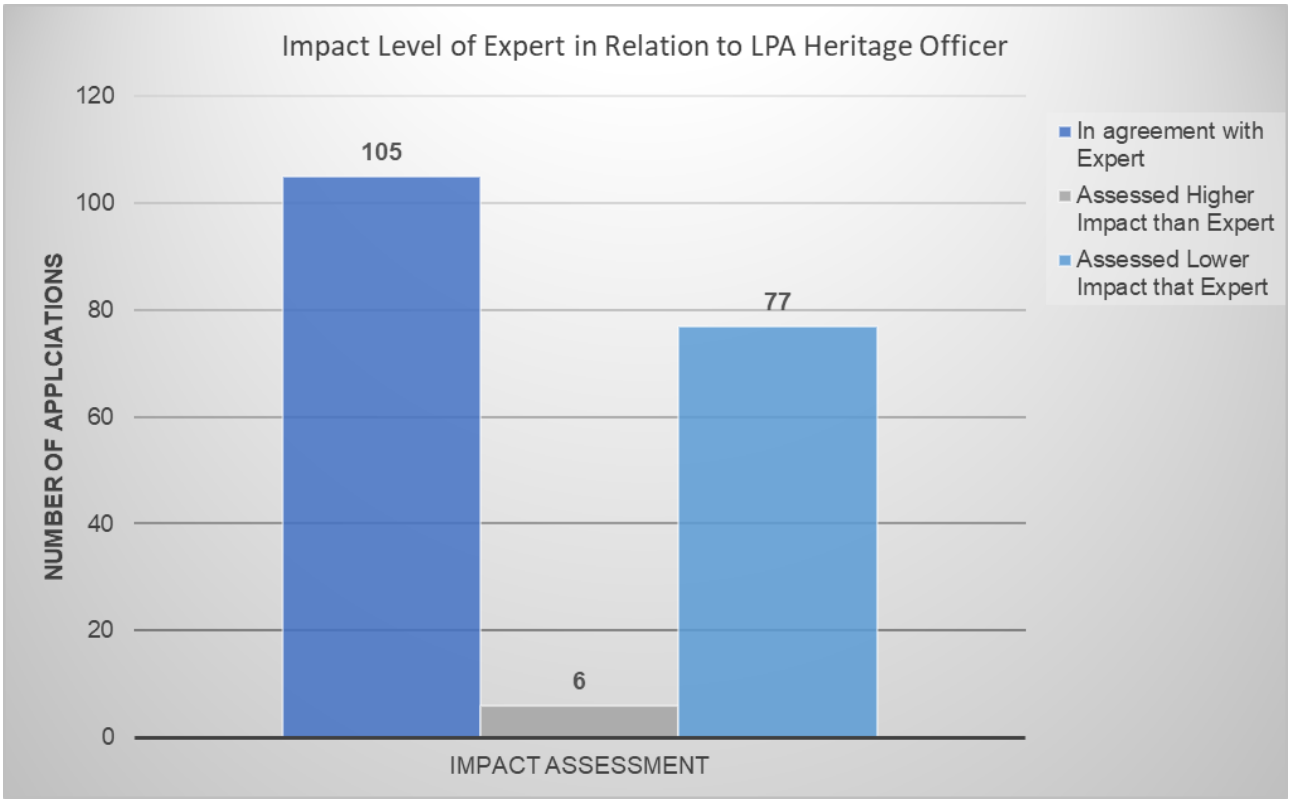

Figure 15 The impact level of contracted experts in relation to LPA Heritage Teams.

3.3.16 What is key here but lost in the RAT is the heritage consultation period which is dependent on correspondence and communication between the LPA team and the client and/or planning team.

3.3.17 It should also be noted that this pilot study was unable to provide reliable and robust detail concerning pre-application advice. It is the researchers' understanding that in most cases pre-application was sought prior to producing heritage assessments to, for example, use appropriate study areas as may be requested by the LPA heritage team.

3.3.18 An interesting example, however, of a solar photovoltaics approved application to Durham County Council (Row 64, RAT, Claire Henderson-13 Oct 2015) raises many points outlined in this report, including in relation to pre-application advice. She states:

> *The submitted Heritage Assessment does not make reference to the fact the consultant spoke with me about the likely archaeological requirements for this site and was informed that we routinely ask that a geophysical survey be carried out pre-determination where a solar farm site covers 1 hectare or greater of greenfield land. They were informed that this was based on DCC canvassing opinion on national 'best practice' in relation to the impact of solar farms on the archaeological resource, principally from the SW, Wales and other regions where solar farms are more abundant. Guidance sourced on the treatment of archaeology on proposed solar farm sites was sent to the consultant, to explain the position we take on such application (available on request)…*
> *It is of concern to me that whilst the sensitivity of the area is acknowledged the report makes no recommendation for mitigating potential harm to buried archaeological features, stating rather presumptuously in the absence of any field evaluation that they are not likely to be of higher than regional significance and are likely to be plough truncated (the latter point seems to be based entirely upon the fact the burials on Andrew's Hill were plough-damaged, and is in fact an inaccurate generalisation of the results of work in this*

area).To conclude therefore, I find that the submitted information is contrary to para. 128 of the NPPF as the area has high potential for heritage assets with archaeological interest to be present and neither this potential nor the harm posed by development, can be fully understood through desk-based assessment alone.

3.3.19 The South West has the highest response number of responses from the LPA Heritage team, which is in the top three regions for the highest approval percentage (Figure 3). This relationship, however, is not robust in this pilot study but can lead to further work. It is possible that consultation/communication from LPA heritage teams was not found in the documentation but was made. This is evidenced by on occasion finding clear consultation in Delegate Reports but not in other documentation.

Region	Response from LPA Team	Response from Historic England	No Response from LPA team	NA Response from LPA team
South West	44	34	1	33
East Midlands	35	18	2	44
North West	34	12	0	39
Eastern	28	16	1	25
West Midlands	28	9	3	20
South East	28	8	0	38
Yorkshire & The Humber	19	12	1	12
North East	13	6	1	5
London	0	0	0	5
Offshore	0	1	0	4
Total Application	**229**	**116**	**9**	**219**
Percentage	**50%**	**25%**	**2%**	**48%**

Figure 16 Recorded consultation through correspondence or other communication from LPA Heritage Officers/Teams

3.3.20 Figure 16 shows that all the 458 applications, there is a 50% response rate from the LPA heritage team. Responses from Historic England (25%) may overlap with responses from LPA heritage officers. In many instances, Historic England 's correspondence is a generic style of commenting on heritage assets in relation to the development in question, and the suggesting the case be reviewed by the LPA heritage team (see below).

Thank you for your letter of 23 December 2015 notifying us of the application for planning permission relating to the above site. We do not wish to comment in detail, but offer the following general observations.

Historic England Advice
The applicant has submitted an archaeological desk-based assessment in addition to an Environmental Statement. I am satisfied with the assessment of impact on the designated assets, namely Hylton Castle and Penshaw Monument.

There may, however, be a need for further archaeological work in the area of the proposed development and I would urge you to you liaise with the Tyne and Wear County Archaeologist in respect of any works that they may feel are needed in relation to the proposed development.

3.3.21 It is, however, worth pointing out London as an example for caution: it is unlikely that the ten London applications had no input from an LPA heritage team, yet the data does not indicate details. Again, caution is advised when making interpretations from the data yielded.

3.4 Decision Making and Heritage in Renewable Energy Planning

3.4.1 Exploring whether a response from the LPA heritage team corresponded with the approval or refusal rating would require further exploration, however Figure 17 and Figure 18 present these comparisons for interest.

3.4.2 There does not appear to be any correlation between heritage advice and the final decision, however, again this may be due to the small sample size.

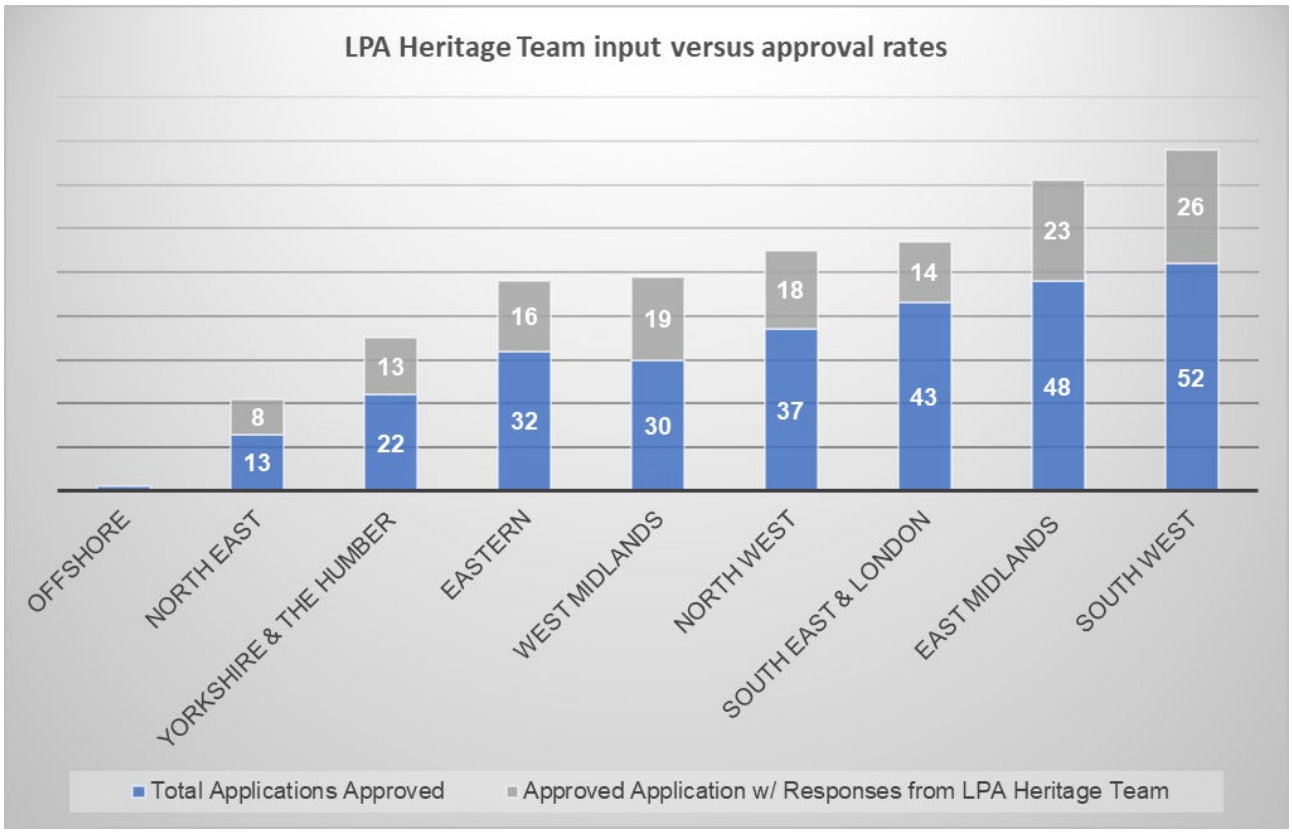

Figure 17 LPA Heritage team identified correspondence versus approval rates

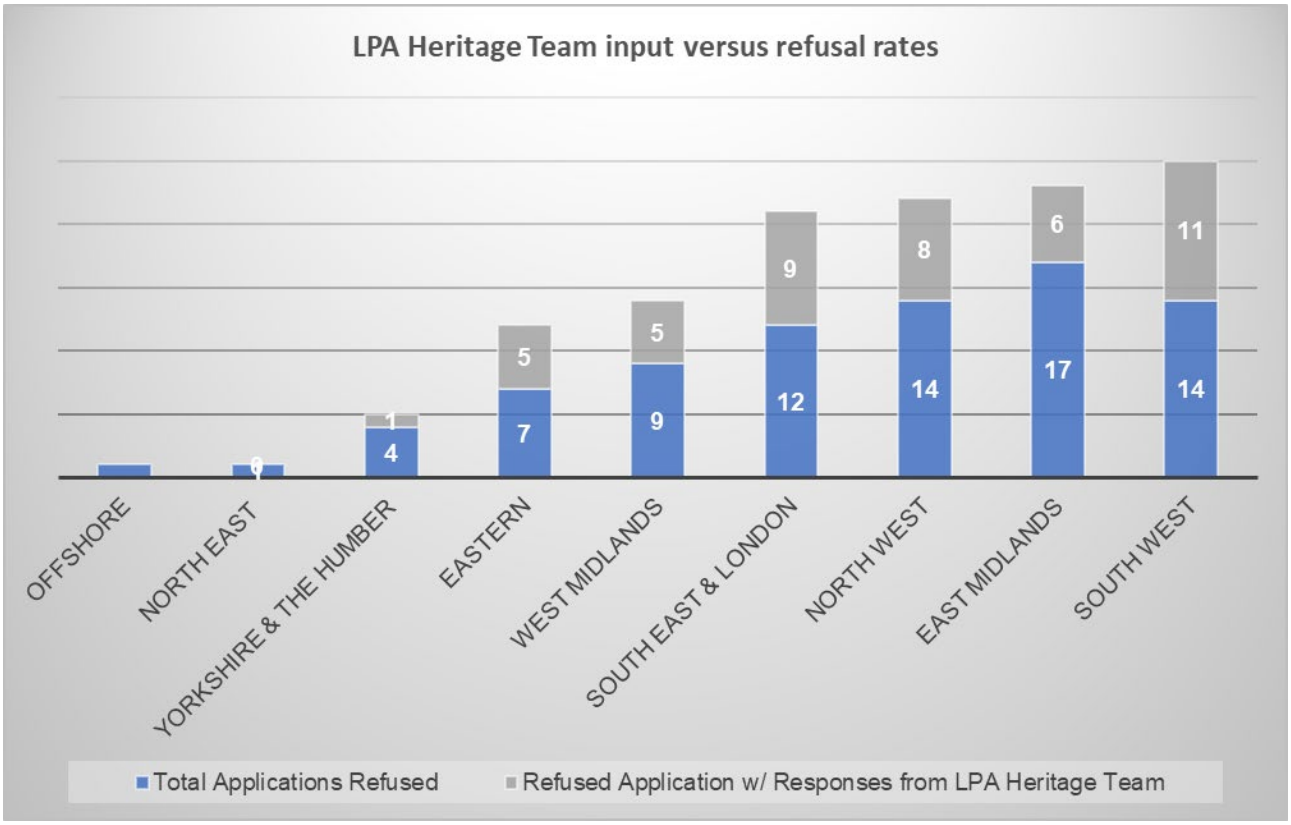

Figure 18 LPA Heritage team identified correspondence versus refusal rates

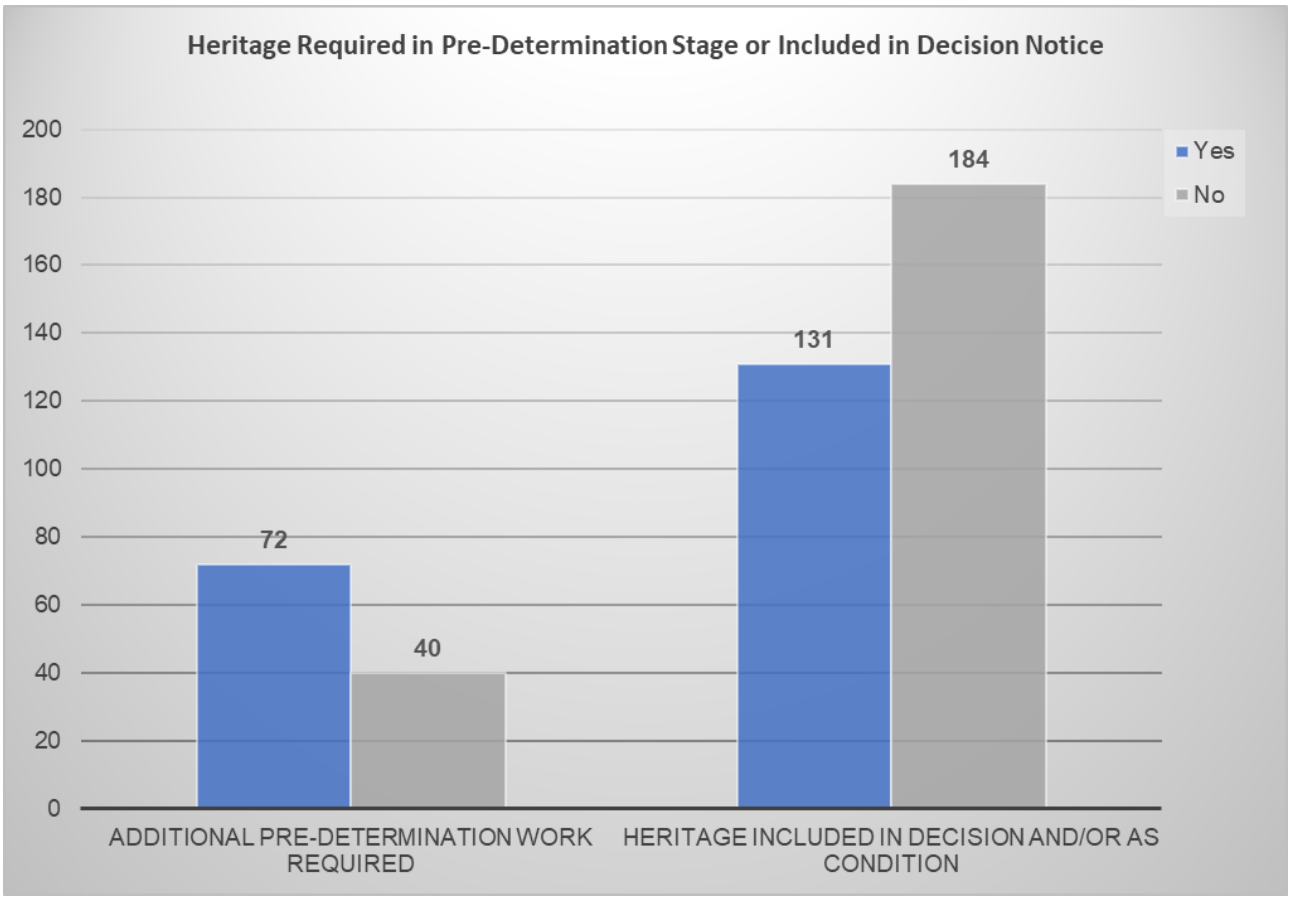

Figure 19 These two bar graphs show the frequency of additional work required in the pre-determination stage and a heritage reference and/or condition in the approved decision notice. 'NA' not included.

3.4.3 Figure 19 presents the results for both additional pre-determination work that was required by the LPA heritage team (e.g. a geophysical survey, trial trenching, evaluation) and whether any heritage dimension was included in the approved planning condition as either a reference or as a condition.

3.4.4 Our observation is that the LPA heritage team explores heritage more during pre-determination where harm to heritage may be identified and mitigated through design, for example, at a stage early enough for this to still be possible.

3.4.5 This approach often formed part of a multi-phased approach adopted by the LPA heritage teams which ran from pre-determination through to post-determination in order to achieve a successful outcome. An example of this is outlined in Case Study 5.

CASE STUDY 5

Region	South East
Planning Authority	Test Valley Borough Council
Technology Type	Solar Photovoltaics
Planning Status	Approved

Case Study Highlight: *The benefit of phased pre-determination assessment to ensure sustainable development.*

Details
An application in 2019 for a solar farm in Hampshire identified heritage dimensions through a DBA in the form of high probability for Romano-British settlement and in particular a potential villa. The subsequent geophysics survey confirmed the presence of a villa and additionally identified a possible trackside settlement. This multi-phased pre-determination work led to a reduction by the applicant of the development footprint in order to avoid these sensitive areas and allow for preservation in-situ. This was welcomed by the LPA archaeological advisor. The information from this phased approach also allowed for the LPA archaeological advisor to make a determination on the remainder of the site, through a condition.

Due to the often large footprint of such sites, heritage is almost always encountered and impacted in some form. The need for phased pre-determination archaeological investigation and especially a combination of a full desk based assessment, followed by a geophysics survey and potential trial-trenching allow for a full assessment of a site, where significant heritage can be identified prior to application and allowing for conservation by preservation in-situ whilst still facilitating development and a positive outcome for both the applicant and historic environment.

Application in RAT Database:
Row: 460
Date: 2019
Planning App Ref: 19/03043/FULLN

3.4.6 Our analysis shows that only 13 applications had both a heritage objection that was then translated into part of the cause for an application refusal. Our observation is that objections were put in place predominantly as a holder to flag that an assessment for heritage needed to be

carried out. In one instance, an objection based on heritage grounds was mistranslated into the Officer's Report and ignored in the planning decision (Row 77, RAT). The Conservation Officer had not explicitly said 'Objection' but this was certainly implied in the content of response, which was not then included as objection in the Delegate Report.

3.4.7 Documentation for refused applications are largely unavailable on Planning Portals, making it impossible to understand details of such applications.

3.4.8 Figure 20 presents the total number of applications for each development status alongside data which highlights whether heritage was considered as an objection or as a part of the rationale for refusal.

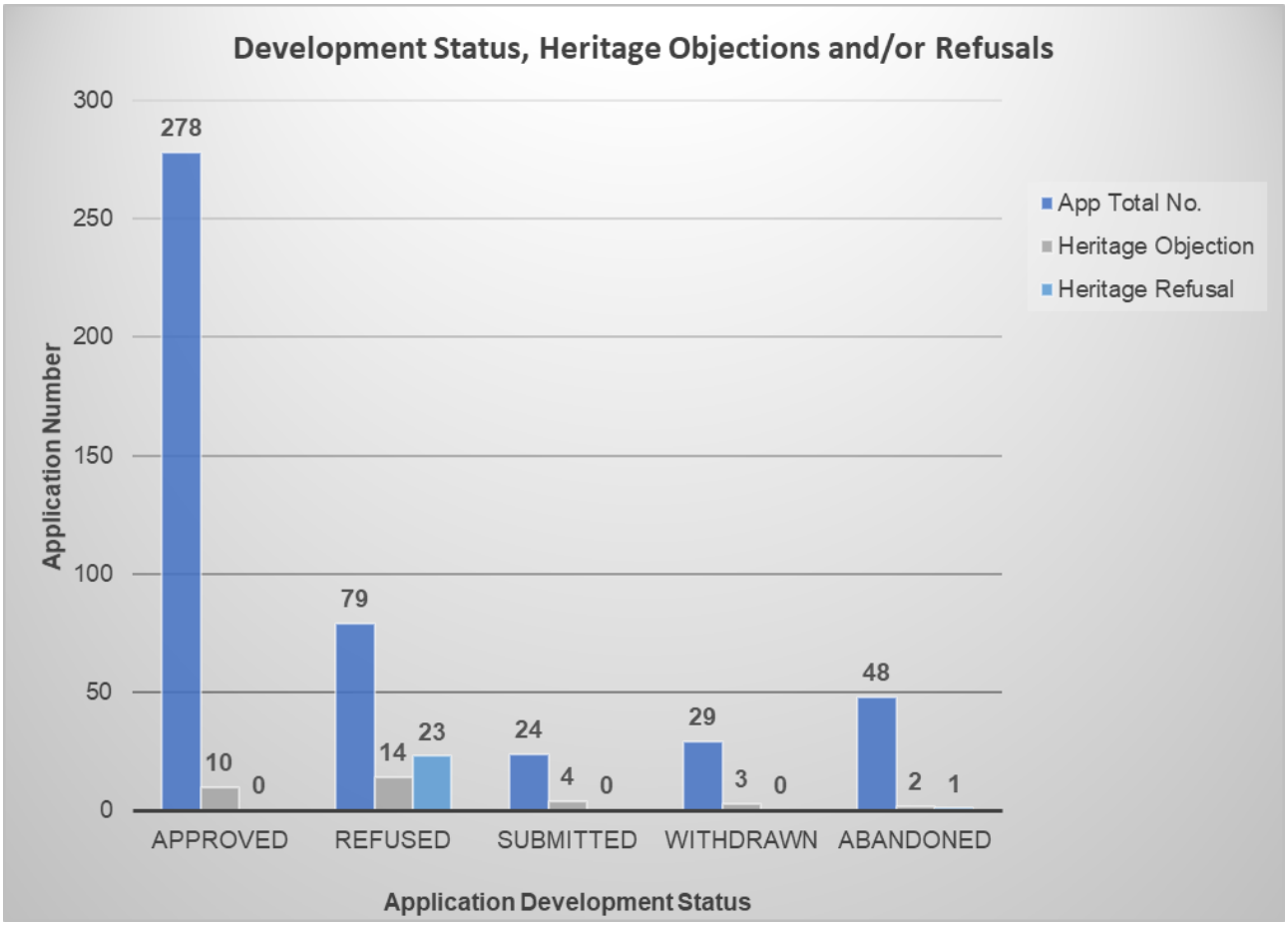

Figure 20 Development status of applications alongside heritage objections and/or refusals

3.4.9 While heritage is featured only slightly in most of the development status types as an objection or refusal, we can see from the chart that it is highest in applications that have been refused, with 2.8% of all refusals having heritage as an objection, and 5% as part of the refusal.

3.4.10 As we see in Figure 21, heritage as an objection *and* refusal only happens 13 times out of 458 applications. This suggests that heritage should not be considered as a prominent barrier to development.

3.4.11 Also observed is that out of 79 refusals, heritage was included in 14 objections and 23 refusals. However this does not necessarily suggest it is the only and primary reason for refusal. As this report has indicated, such details are lost in the RAT.

3.4.12 Further analysis between the consultation period was conducted: 187 applications were within the nationally set planning period while 212 applications were delayed and marked as out of the time bracket. Not that applications with EIAs allow for more time (16 weeks).

3.4.13 Figure 22 presents findings on applications that were within consultation time frames and those that were delayed, and presents it alongside approval and refusal rates *and* heritage objections or inclusions in refusal. There does not appear to be a relationship between the two, those debunking the popular assumption that heritage acts as a barrier to successful development.

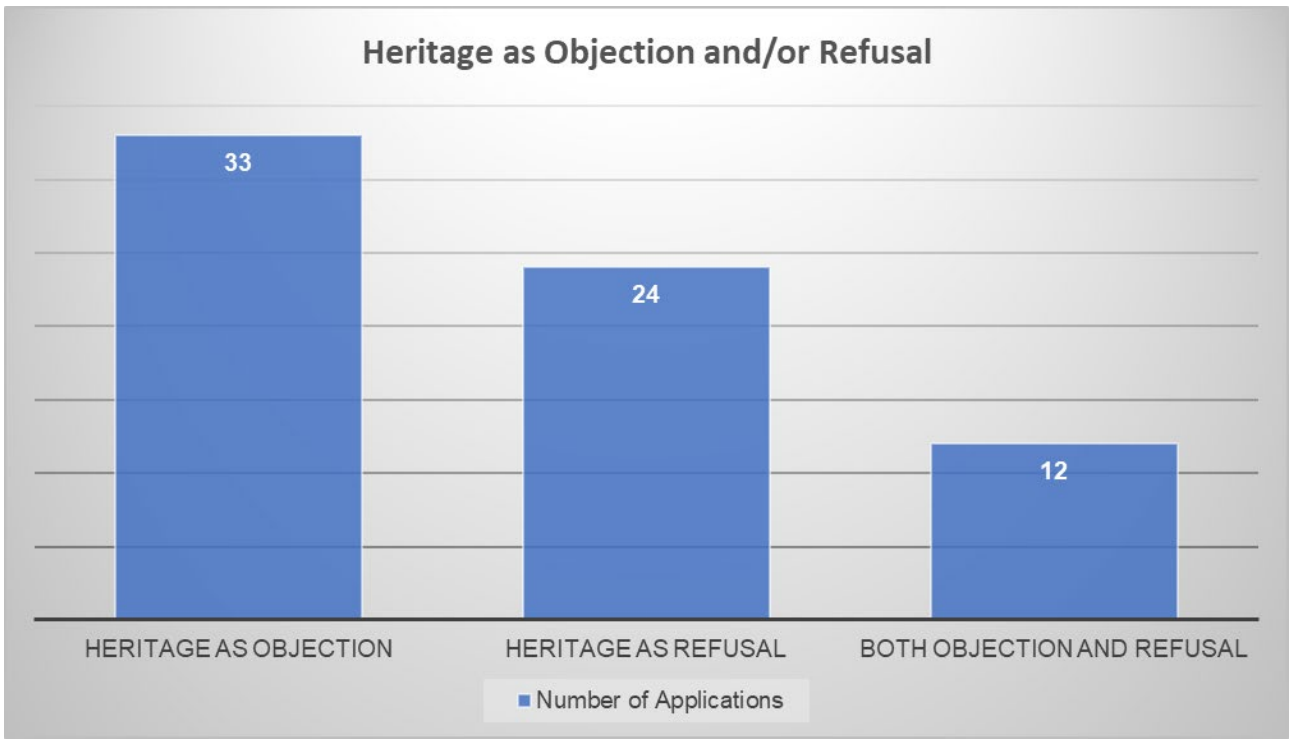

Figure 21 Heritage as objection, refusal and both

Consultation Period	Within Time Limits	Outside of Time Limits
Approved Applications	136	120
Approved with Heritage Objection	2	8
Refused Applications	25	47
Refused with Heritage Included	5	17

Figure 22 Consultation periods and relationship to development status

3.4.14 Lastly, an analysis to see whether there is a relationship between heritage assessments and the inclusion of heritage in the final decision was explored. Because this pilot study did not detail the level of reference, i.e. whether it was a condition and what specific condition was required (e.g. evaluation or design considerations), this cannot be accurately explored here but would be of interest for further work. However it is clear from Figure 23 that applications which had additional work/heritage assessments carried out in the pre-determination phase required less consideration afterwards.

Heritage Assessment and Approved Final Decision	**Response from LPA Team**
Application with DBA and heritage reference in final decision	95
Application with DBA and heritage reference **not** in final decision	104
Application with DBA & Geophysics Survey and heritage reference in final decision	37
Application with DBA & Geophysics Survey and heritage reference **not** in final decision	29
Application requiring additional work and in final decision	46
Application requiring additional work and **not** in final decision	26

Figure 23 Considering phased work and its outcome

4 Reflections

4.1 Heritage Considerations

4.1.1 The study has identified that heritage dimensions of renewable energy planning applications were considered 63% (or more) of the time as part of the planning process from inception to construction, which should be viewed positively. Where documents were available, it was noted that a large proportion of the applications not considered are related to solar panel applications for roofs of contemporary industrial buildings, which may naturally result in far lower impact to heritage. Additionally, 17% of applications were marked as 'NA', which does not suggest heritage was not considered. As such the 63% should be viewed as a minimum.

4.1.2 Specifically, it has been identified that a rigorous process of pre-determination assessment, often undertaken in a multi-phased approach, is regularly adopted either by applicants themselves or at the recommendation of the LPA heritage advisors. From the documentation, we can see that in at least 50% of the time, a representative from the LPA heritage team consulted with the application. Historic England was documented as 25%. Of course, these two may overlap. As such, it is clear that most applications of this nature will have input from the planning authority for consultation by either an archaeological officer, a conservation officer or Historic England and that in many cases multiple reflections are provided. It is often the case that these consultees will not work in isolation but instead reference each other's recommendations or defer certain considerations to the appropriate specialist, such as indirect (setting) impacts to the conservation officer and direct impacts to the archaeological officer.

4.1.3 With regard to the types of heritage dimensions which are considered and the nature of potential impact, the data shows that both designated and non-designated heritage assets are regularly considered. Due to the scale of such developments which regularly exceed 50 hectares (equivalent to 125 standard football pitches), it is almost impossible that the study radius for assessments which can reach up to 5km not capture designated heritage assets, which features listed buildings the most.

4.2 Heritage Impact

4.2.1 The assessment of potential impact on the historic environment provides for one of the most revealing elements of this study. From early on it became apparent that there was a noticeable discrepancy between the level of potential impact identified by the applicant's heritage expert and that of the LPA heritage advisors. This finding requires further investigation as it consequently may highlight the importance of heritage assessments conduct in the pre-determination phase to appropriately mitigate harm to heritage.

4.2.2 Further, whilst most desk based assessments identified designated and non-designated heritage assets and considered both direct and indirect impacts, the overall quality and content of these documents varied greatly. On many occasions' criticisms were noted in consultee responses

about the rigorousness of these assessments, the lack of understanding about setting and values and the general undervaluing of heritage. Anecdotally, many LPA archaeological advisors contacted as part of this study noted that one of the biggest issues encountered was the quality and verdicts of the expert-produced desk-based assessments. Whilst such discrepancy may not delay or prohibit a development, it clearly slows the process as poor assessments often leads to addition information be requested by the LPA advisor.

4.2.3 It is also noted that on average the first 15-20 pages of a desk based assessment are dominated by policy, guidance and regulation recognition (likely as a template format) before the actual heritage research is undertaken and that this section is often shorter than that which proceeded it.

4.2.4 Through observation, a number of very specific nuances related to the consideration of heritage for renewable energy planning applications was identified. The nature of some renewable energy applications mean that development is likely to be based in rural fields, where a limited amount of archaeological work has been undertaken, reflected in a lack of data within the HERs. This has been identified by the LPA heritage advisors but generally either not picked up by the heritage expert or used to mitigate down the level of impact. This lack of HER is then used to argue a low potential impact, despite a lack of data not equating to a lack of heritage. The temporary nature of renewable energy structures, which generally have a shelf life of between 25-40 years is also used as an instrument in planning decisions. Whilst some LPA Heritage Officers have noted that the life period of renewable energy infrastructure represents a generation and cannot be considered as temporary; in the context of affecting the setting of a listed building for instance, the heritage expert has equally used this to argue the impermanence of the development and its significant impact or harm as limited in time. If such sites are considered temporary in planning terms, then there is the potential impact from the remediation of such sites at the end of their life to restore a site back to its original state. In this research, this has been identified by the LPA Heritage Officers but was not observed by the heritage expert. The level of direct development impact is also often contested. With solar for instance, the overall development footprint caused by small pilled rods supporting the panels which is often set at 1% of a site is often suggested by the applicant as having a low direct impact. However, some LPA heritage officers have noted that the impact is spread across a large area and could potentially cause substantial harm to buried archaeology.

4.3 Heritage Consultation

4.3.1 The study has identified that the consultation process on renewable energy planning applications, which often requires a process that includes what is considered major developments, covering large geographical areas, where in excess of 200 planning documents can be submitted per application ,requires bespoke and continued dialogue between the LPA, their advisors and the applicant. Whilst the LPA heritage advisors often opt for a standard phased approach to assessing the potential impacts on heritage dimensions, which can be broken down into desk-based research, geophysics survey and archaeological evaluation by trial trenching as pre-determination; and archaeological evaluation, archaeological monitoring and preservation in situ as post-determination, this process can only be achieved by consideration on a case-by-case basis.

4.4 Decision

4.4.1 The research clearly identifies foremost that heritage is not a barrier to renewable energy development. Of the applications where documentation was available, only 5% of refused applications had heritage referenced in the refusal notice. Whilst approval rate is approximately 40% lower for renewables than general development (MCHLG, 2020), the research has demonstrated that only 5% of refused applications had heritage referenced in the refusal reason.

4.4.2 The observation from this pilot study is that LPA heritage teams work positively and proactively to facilitate renewable energy development and by regular dialogue, phased assessment and pragmatism.

4.4.3 As demonstrated by the research, only 13 applications of 458 had both a heritage objection *and* refusal.

4.4.3 The study also identified that the incorrect use of planning terminology by LPA heritage advisors could work against their advice when challenged by an applicant's expert. Whilst it is positive to identify that LPA heritage advisors are often pragmatic in their approach in order to facilitate development, they must be more robust and confident to refuse inappropriate development. See Case Study 6.

CASE STUDY 6

Region	South West
Planning Authority	Swindon Borough Council
Technology Type	Solar
Planning Status	Awaiting Construction

Case Study Highlight: *Policy interpretation*

Details

In 2019 an application was submitted for the construction of solar panels on the roof of an industrial building in Wroughton, Swindon. The building lay to the northwest of a Scheduled Monument of a hillfort and bowl barrow. Whilst the supporting Heritage Statement identified that no harm would be caused to the designated heritage asset, this was disputed by Historic England who cited harm to the setting of the assets.

However, since Historic England's consultation response explicitly said "*that the harm would not be increased [by the proposal] although existing harm would exist" [from previous development]*, the applicant was able to suggest that Historic England's language suggested that this was interpreted as less than substantial harm.

Overall our observation is that the flexibility can be used by both parties to argue their own cases and interpret in a way that best suits their cause. These include the NPPF, PPGs, Local Policy documents and in regard to renewable energy specifically climate-related policy, including the Climate Change Act 2019.

Up-to-date and in-depth knowledge of all policy is needed in order that decision making is thoroughly backed up and cannot be challenged.

Application in RAT Database:

Row: 387
Date: 2019
Planning App Ref: S/19/0229

5 Future Research Opportunities and Recommendations

5.3 This pilot study of the heritage dimension of Renewable Energy Planning Applications has answered a number of broad questions posed by the *brief* and concludes that heritage is indeed largely considered in the renewable energy sector and that that consideration for the majority of sites follows a standard process of assessment, investigation and mitigation in order to facilitate renewable energy development. It concludes that this process is only achievable through continual dialogue between all stakeholders. It demonstrates that the heritage dimensions of a renewable energy planning application do not present a barrier to development.

5.4 However, more focused research is needed in order to fully explore the nuances that could not be addressed in this pilot study but have been highlighted throughout the report. This section presents some of these potential research opportunities.

5.5 It would be useful to explore the relationship between renewable energy production and its development footprint and potential historic environment impact. The study found that 85% of all renewable energy planning applications were for solar, yet solar currently only produces approximately 6% of the UK energy generation, behind biomass at approximately 12% and wind at 20% (2019). Further research may also incorporate Government documents which highlight best regional positioning for specific renewable technologies.

5.6 A lot of information regarding how the planning process and decision making was negotiated is lost in the quantification of the data. It would be useful for future work to explore the phased approach and how assessments and expert insights from LPA heritage teams were negotiated.

5.7 The quality of heritage assessments were not assessed in this pilot study, however this seems key in understanding how heritage is processed within planning applications and whether it becomes a cause for objection or not.

5.8 Further consideration for guidance on what direct and indirect impact might mean in different settings, e.g. urban, rural, industrial and so on might be relevant. It was noted during the research that an LPA Heritage Team representative commented,

> *At present, there is no specific guidance published for large solar array developments constructed within the setting of designated heritage assets. However the setting of the monuments is discussed in Microgeneration and the Historic Environment (Historic England 2008), which outlines Historic England's policy regarding the installation of small-scale renewable energy equipment within or in the vicinity of designated heritage assets. The guidance states that the installation of freestanding equipment 'within scheduled areas, close to listed buildings, sites included in the register of historic parks and gardens' will be acceptable if 'the appearance or setting of the site or building is not compromised'.*

5.9 Further work needs to be undertaken on the decommissioning of renewable energy sites to assess the level of impact on the historic environment.

5.10 Another observation in some of the applications was the sheer amount of public engagement (i.e. through support or opposing consultation responses). It is often suggested that the public can use and weaponise heritage as a reason to oppose development. Many of these opposing letters are found online. Public arguments on heritage grounds were often dismissed, overlooked or counter argued by the applicant and/or the LPA. It would be interesting to read the content of these letters to explore whether, in fact, heritage is used as a tool for opposition or not.

5.11 Further detailed work can be conducted to explore renewable energy policy more widely. While this pilot study did not find direct references to EN-1, EN-3 and EN-5, it was clear that considerations of renewable energy/electricity and reference to climate were being acknowledged (particularly in Delegate Reports), however these were done so by using Local Plans and specific references. With more understanding of Local Plan specifics can these inclusions be better understood.

5.12 There is a predominance for renewable energy to be located in rural areas, which are likely to encounter unknown below ground heritage assets. London has only accounted for five individual projects in the past five years. There is now defined policy area to decentralise renewables and invest in urban renewable energy generation as seen through the GLA Solar Opportunity Map (Mayor of London 2020). Greater investigation of the feasibility of urban renewable energy generation and its impact on heritage dimensions needs to be explored in urban landscapes.

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