

Springwell Solar Farm

Outline Written Scheme of Investigation (oWSI)

EN010149/APP/7.15
November 2024
Springwell Energyfarm Ltd

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(Applications: Prescribed Forms
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1. Introduction

- 1.1.1. This document is an outline Written Scheme of Investigation (oWSI) produced by Headland Archaeology on behalf of Springwell Energyfarm Ltd (hereafter “the Client”) for the Springwell Solar Farm (hereafter “the Scheme”) located in North Kesteven, Lincolnshire (Figure 1).
- 1.1.2. Desk-based assessment, aerial investigation and mapping, geophysical survey and targeted trial trenching (comprising a 2% sample of the option areas for the Project Substation, Battery Energy Storage System and Collector Compounds) have been carried out to inform the baseline of an ES Chapter in support of a Development Consent Order (DCO) application under the Nationally Significant Infrastructure Projects (NSIP) process.
- 1.1.3. This document sets out the outline scope of a proposed programme of further trial trenching evaluation for the Scheme to inform the detailed design and which will be secured as a DCO Requirement.
- 1.1.4. This document sets out the aims and objectives of the trial trenching, as well as the methodologies and standards to be used in undertaking the proposed works. It also sets out the potential for further archaeological investigations in advance of or during construction and the options for preservation in situ.
- 1.1.5. The document seeks to conform with current best practice, and to the guidance outlined in the following documents
- Management of Research Projects in the Historic Environment (MoRPHE) **[Ref. 1]**
 - Chartered Institute for Archaeologists (CIfA) Standards for Excavation **[Ref. 2]** Field Evaluation **[Ref. 3]** and Archaeological Monitoring and Recording **[Ref. 4]**
 - CIfA Guidance for Excavation **[Ref. 5]**, Field Evaluation **[Ref. 6]** and Archaeological Monitoring and Recording **[Ref. 7]**
- 1.1.6. It sets out a proportionate approach to evaluation in line with
- CIFA Standards and Guidance **[Ref. 2]**, **[Ref. 3]**, **[Ref.4]**, **[Ref. 5]**, **[Ref. 6]**, **[Ref. 7]**
 - The National Planning Policy Framework (NPPF) **[Ref. 8]**
 - the Overarching National Policy Statement for Energy EN-1 (NPS EN-1) **[Ref. 9]**
 - the National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) **[Ref. 10]**

- 1.1.7. This document should be read alongside the **Outline Construction Environment Management Plan (oCEMP) [EN010149/APP/7.7]**, which also sets out various measures that will ensure any potential effects on buried archaeology will be appropriately mitigated.
- 1.1.8. A professional, appropriately accredited and competent archaeological contractor will be appointed to deliver the work described within this Outline WSI.

2. DESCRIPTION OF THE SITE

- 2.1.1. The 1,280ha area ("the Site") is located c.1 km to the south of the village of Metheringham in the north and runs south-west to the village of Scopwick and over the A15. In total the Site measures c.19.9 km from its north-eastern tip at NGR TF 08641 60671 to the south-western end point at NGR TF 02905 52346. The Site sits entirely within Lincolnshire, 15 km south of Lincoln (NGR TF 05470 56654), post code LN4 3JE (Figure 1).
- 2.1.2. The Site is divided into three areas: Springwell East, Springwell Central and Springwell West, all of which are largely agricultural fields. The area is generally flat with a slight incline to the south-west; Springwell West lies approximately 48m above Ordnance datum (AOD), Springwell Central lies approximately 21m AOD and Springwell East lies approximately 19m AOD.
- 2.1.3. Springwell West is bounded to the north, west, south and east by agricultural fields it is traversed north-south by the A15 road. The north is also bounded by RAF Digby. To the south-west of the site sits Braucewell Quarry, an active limestone, sand and gravel quarry. Surrounded by Springwell West is the curtilage of Slate House, which is not included within the Site.
- 2.1.4. Springwell Central is bounded on all sides by agricultural fields but encircles the village of Scopwick. This area also contains the farm of Rowston Top and a water treatment plant which are excluded from the Site.
- 2.1.5. Springwell East is also bounded on all sides by agricultural fields but also by the villages of Blankney to the north and Scopwick and Kirkby Green to the south, as well as the Peterborough to Lincoln trainline to the east. There are numerous parts of this area which have been excluded, including woodland and Scopwick Low Field Farm.
- 2.1.6. There are a number of areas of woodland within the Site along with numerous hedges and other field boundaries. There is one watercourse that runs through the Site in Springwell Central to the water treatment plant. Scopwick Beck is the closest other watercourse that runs c.175m south of Springwell East.
- 2.1.7. At a wider topographic scale, the Site is located on relatively flat ground that is largely of agricultural use, with small nucleated villages dotted across the landscape.
- 2.1.8. The underlying solid geology is recorded by the British Geological Survey (BGS). There are 8 different bedrock geologies listed within the Site: Oxford Clay Formation, Kellaways Formation, Cornbrash Formation,

Blisworth Clay Formation, Blisworth Limestone Formation, Rutland Formation, Upper Lincolnshire Limestone Member, Lower Lincolnshire Limestone Member. Superficial deposits are recorded in the south-western corner of the Site. These are listed as Sleaford Sand and Gravel – sand and gravel and Head – clay, silt, sand and gravel. Both are sedimentary superficial deposits formed up to 2.588 million years ago, during the Quaternary period.

- 2.1.9. There are 13 boreholes recorded by the BGS within or in close proximity to the Site. 12 of these have publicly accessible records which show a stratigraphy of soil and gravel overlaying blue rock and limestone in places. A deposit model for the site is in preparation utilising information from ground investigations carried out for the Scheme.

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.1.1. A full description of the archaeological and historical background to the site is presented in the Desk-Based Assessment (**ES Volume 3, Appendix 9.1 [EN010149/APP/6.3]**). The known archaeological heritage assets within the Site are shown on Figures 2-4.
- 3.1.2. In summary there are three designated heritage assets, 71 previously recorded non-designated heritage assets and eight newly identified non-designated heritage assets within the Site.
- 3.1.3. The Brauncewell medieval village scheduled monument (NHLE 1018397) is partly within the Site at the southern edge where a permissive path is proposed. It is of high importance for its archaeological interest.
- 3.1.4. The Blankney Conservation Area includes a portion around St Oswald's Church that extends south of Oswald's Lane into the Site. The Site overlaps with the mapped extent of Scopwick Conservation Area, however this is considered to be due to differences in the map scale at which this was digitised as it follows property boundaries for buildings which are not part of the Site.
- 3.1.5. The Grade II listed milepost on the A15 (NHLE1061824) lies within the Site and is of medium importance for its architectural and historic interest. It appears to have been relocated at some point in the past as the listed building description notes that the inscriptions detailing the distances between Sleaford and Lincoln are on the opposite sides of the milepost to the corresponding directions.
- 3.1.6. With the exception of two World War II era aeroplane crash sites (Avro Lancaster crash site (Lincolnshire County Council HER "LHER" Ref: MLI25416) and Hawker Hurricane crash site (LHER Ref: MLI25417)), which being protected by legislation are of high importance, the non-designated heritage assets within the Site are generally considered to be of low importance.
- 3.1.7. The aerial investigation and mapping (**ES Volume 3, Appendix 9.3 [EN010149/APP/6.3]**) identified two previously unrecorded heritage assets within the Site. These were a possible barrow and an undated square enclosure.

Geophysical survey

- 3.1.8. The results of the survey largely corroborated, but also greatly expanded, the results of the Desk-Based Assessment. It is evident from the survey

results and information contained within the LHER, that there were significant levels of prehistoric activity within different areas of the geophysical survey area (GSA) from at least the Bronze Age, likely continuing through into the Iron Age, before the two Roman roads that theoretically bisect the site were constructed.

- 3.1.9. The main findings of the survey indicate several foci of archaeological activity ranging from ring ditches and likely round barrows, pit alignments and extended series and/or concentrations of ditches, enclosures and pit-like anomalies. These are located:
- at the southern extent of the GSA near Brauncewell Quarry,
 - to the north and south of Hall Farm (Bloxholm),
 - surrounding RAF Digby to the south, east and north-east,
 - north of Ashby de la Launde and Scopwick and
 - west of Brickyard Farm, where the archaeological potential must be considered very high.
- 3.1.10. The only findings of note from the subsequent survey for the cable route option were two possible pit alignments, one located adjacent to the A15 and the other south-west of RAF Digby which marked a continuation of a much longer pit alignment recorded in the original survey.
- 3.1.11. A regular gridded pattern of weakly magnetically enhanced, linear trend anomalies aligned north-west/south-east was identified in almost every field west of the B1191. Subsequent trial trenching confirmed that these were geological features.
- 3.1.12. Elsewhere, magnetic anomalies indicated:
- former ponds, buildings, pits and extraction sites,
 - agricultural trends including ridge and furrow and modern cultivation patterns,
 - former boundaries,
- 3.1.13. These are considered to represent heritage assets of at most low importance and in some cases of negligible importance. Other anomalies widely recorded across the GSA are interpreted as field drains, buried services and natural/geological variations.

Trial trenching

- 3.1.14. The work was undertaken to determine the presence, character and condition of previously identified or indicated features and the and potential for further sub-surface archaeological remains.

- 3.1.15. A total of 196 trenches were excavated across four separate locations within the Site (Figure 5). The trenches equated to around 2% of the sampled areas. The majority of features were recorded as ditches and pits, with periods from prehistoric to post-medieval represented. The main archaeological features identified were a pit alignment recorded in Area 7 of probable later prehistoric date, a series of ditches, post-holes and pits excavated in Area 4 which appear to represent part of an Iron Age or Romano-British settlement and a series of probable Roman ditches in Area 3 which formed the edge of a settlement identified by the geophysical survey to the west. Post-medieval field boundaries were identified in all areas trenched. In Area 4 finds likely to be associated with an aircraft crash on 11th March 1945 were recovered.

4. OUTLINE SCOPE OF WORK

Roles and Responsibilities

- 4.1.1. A number of different individuals / organisations will be involved in the project in different ways. A list of the key terminology is provided below.

Term used in this document	Individual / Organisation
Client / Applicant	Springwell Energyfarm Ltd
Principal Contractor	TBC
Archaeological Contractor	TBC
Curator	NKDC / LCC archaeological advisors
Determining Authority	Secretary of State for Energy Security and Net Zero (unless delegated to the LPA)

Further archaeological trial trenching

- 4.1.2. The trial trenching undertaken for the Scheme to date has found a strong correlation between the geophysical survey results, sites recorded from aerial photography and the identified below ground archaeological resource.
- 4.1.3. It is possible, although relatively unlikely, that further trial trenching work could reveal important buried archaeological remains. Therefore, where necessary and appropriate, further archaeological trial trenching will take place in advance of construction as part of the detailed design phase of the Scheme. Figure 7 identifies the areas where further trenching may be required (subject to the potential impacts of the Proposed Development).
- 4.1.4. This oWSI sets out the strategy for determining areas requiring further archaeological trial trenching to inform the detailed design and to determine appropriate mitigation measures for the solar array areas. In line with the approved methodology for the pre-determination trenching a 2% sample with a contingency for additional trenching is considered to be appropriate for the areas identified in Figure 7 as requiring additional trenching.
- 4.1.5. The overarching aim of the further archaeological trial trenching is to inform the detailed design of the Scheme by
- refining the indicative archaeological mitigation areas (Figure 6);

- minimizing the impact of the Scheme on the archaeological resource;
 - preserving important archaeological remains; and
 - securing measures to record archaeological features where preservation in situ is not necessary or feasible.
- 4.1.6. The detailed design for the Scheme has not yet been developed and thus the exact locations for cabling, Inverter Transformer Stations (ITS), temporary or permanent access roads or other substantive earthwork operations has not been determined. The Project Parameter Plans show the areas where these may occur as well as areas which will be used for ecological enhancements. The ecological enhancements proposed do not involve substantive earthworks or tree planting with the exception of hedgerows and therefore are not included in the scope of further archaeological trenching. If this parameter changes and earthworks (such as ponds, scrapes) or large areas of tree planting are proposed as part of the ecological enhancements this outline WSI will be updated to include proportionate evaluation of these areas.
- 4.1.7. Task specific WSIs will prepared in consultation with the Local Planning Authority's (LPA's) archaeological advisor prior to the carrying out of any archaeological trenching or investigation, which must take place prior to the commencement (as defined by the DCO) of the authorised development (as defined by the DCO).
- 4.1.8. This work will be instigated sufficiently in advance of the planned construction work to ensure the outcomes (i.e., the possible discovery of important buried archaeological remains) are appropriately considered and provided for in the detailed design for the Scheme. Thus, the results of the trial trenching will determine the scope of any further archaeological work and / or opportunities to minimise and avoid disturbance to any discovered remains via 'no-dig' construction methods or archaeological excavation (as described below).
- 4.1.9. Further details on the general methodological approach to the trial trenching and excavation is set out in Section 8 of this document, below.

Archaeological mitigation

- 4.1.10. The assessment work completed for the Proposed Development to date has identified 31 particular and discrete locations where important buried archaeological remains survive within the Site. Where these are located within areas of Solar PV development embedded mitigation in the design of the Scheme includes preservation in situ through the use of concrete feet or similar non-intrusive panel supports and routing of cables between arrays and Inverter Transformer Stations (ITS) above ground.

- 4.1.11. Where preservation in situ is not necessary (e.g. where impacts will be negligible) or is not feasible (e.g. where archaeological remains are present within the cable routes between Springwell West, Springwell Central and Springwell East and between the Springwell Substation and the National Grid Navenby Substation) targeted areas of archaeological excavation will form the mitigation.
- 4.1.12. The rationale for the selection of the types of archaeological remains that may be selected for specific mitigation measures is described below (Section 6).

5. STRATEGY FOR DEFINING TRIAL TRENCHING AREAS

- 5.1.1. The previous trial trenching has shown a strong correlation between the below ground archaeological remains and the evidence from the geophysical survey, aerial investigation and mapping and heritage assets identified through the desk-based assessment.
- 5.1.2. The following approach to defining the scope of trial trenching for task specific WSIs is considered proportionate – these areas are shown on Figure 7:
- Within cable route corridors where geophysical survey has identified archaeological remains – mitigation through targeted excavation (see Section 6)
 - Within cable route corridors where no geophysical anomalies have been identified – trial trenching along route of cable
 - Within solar array areas, where geophysical survey has identified archaeological remains – limited trial trenching to confirm: depth of archaeological remains below ground in order to determine if concrete feet (or similar) will be appropriate mitigation
 - Within solar array areas, where geophysical survey has not identified archaeological remains – targeted trenching focused on areas where excavation below 0.3 m will occur (e.g. ITS or where cables cannot be routed above ground)

6. ARCHAEOLOGICAL MITIGATION

6.1.1. The assessment work completed for the Proposed Development to date has identified 31 particular and discrete locations where important buried archaeological remains survive within the Site. These are as follows:

- WWII aeroplane crash sites (non-designated heritage assets MLI25416 and MLI25417)
- Probable prehistoric enclosure cropmarks north of Scopwick (non-designated heritage asset Lincolnshire County Council HER Ref: MLI87423)
- Possible prehistoric cropmark enclosure (non-designated heritage asset Lincolnshire County Council HER Ref: MLI87412),
- Probable prehistoric enclosures and trackway east of Heath Farm (non-designated heritage asset Lincolnshire County Council HER Ref: MLI86753),
- Cropmark undated rectangular enclosure, Scopwick (non-designated heritage asset Lincolnshire County Council HER Ref: MLI90987),
- Potential undated cropmark boundary ditch north of Scopwick Low Field Farm (non-designated heritage asset Lincolnshire County Council HER Ref: MLI87449),
- Probable prehistoric enclosure cropmarks north of Scopwick (non-designated heritage asset Lincolnshire County Council HER Ref: MLI87423),
- Possible prehistoric cropmarks north of Kirkby Green (non-designated heritage asset Lincolnshire County Council HER Ref: MLI87443),
- Possible undated cropmark north of Kirkby Green (non-designated heritage asset Lincolnshire County Council HER Ref: MLI87444),
- Human remains, north of Scopwick – found in 1983, undated (non-designated heritage asset Lincolnshire County Council HER Ref: 87383)
- Possible undated cropmark north of Kirkby Green (non-designated heritage asset Lincolnshire County Council HER Ref: MLI87445);
- Un-named farmstead (non-designated heritage asset Lincolnshire County Council HER Ref: MLI120843);
- Brauncewell deserted settlement (Lincolnshire County Council HER Ref: MLI 60733; associated with Scheduled Monument NHLE Ref: 1018397);
- Possible prehistoric cropmark enclosure, Scopwick (non-designated heritage asset Lincolnshire County Council HER Ref: 87411)

- Possible prehistoric settlement, Scopwick (non-designated heritage asset Lincolnshire County Council HER Ref: 87414)
- Prehistoric cropmark field system, north west of Scopwick (non-designated heritage asset Lincolnshire County Council HER Ref: 87417)
- Cropmark pit alignment, Ashby de la Launde and Bloxholm (non-designated heritage asset Lincolnshire County Council HER Ref: MLI84452)
- Prehistoric cropmarks near Long Plantation (non-designated heritage asset Lincolnshire County Council HER Ref: MLI83188);
- Linear ditch system west of A15 (non-designated heritage asset Lincolnshire County Council HER Ref: MLI81837)
- Cropmark undated linear features (non-designated heritage asset Lincolnshire County Council HER Ref: MLI90983 and MLI90986);
- Areas of high density archaeological remains in geophysical survey (HA31, HA36, HA42, HA44, HA51, HA55, HA56, HA60, HA638)

6.1.2. Of these, 13 are within areas of cable route corridor, the remaining 18 are within the solar array areas, areas of BESS, or substations.

6.1.3. During the detailed design process, any important remains identified during the trial trenching would be treated in the same manner as those 31 locations highlighted above. To avoid harm to heritage significance, two alternative mitigation solutions are available to be deployed in those areas of known or discovered buried archaeological remains: i) preservation in situ; or ii) archaeological excavation in advance of / during construction.

Preservation in situ

6.1.4. As recognised within EN-3, “solar PV developments may have a positive effect, for example archaeological assets may be protected by a solar PV farm as the site is removed from regular ploughing”.

6.1.5. For some especially rare and sensitive buried archaeological remains, the disturbance of piling could have a material effect. Particularly sensitive buried archaeological remains comprise:

- waterlogged remains, whereby the soil chemistry and conditions could be affected;
- human remains, whereby even minimal disturbance could result in a potentially disproportionate loss of archaeological evidence, alongside the ethical considerations; and

- complex structured deposits, such as those associated with burials but also structural remains such as floor surfaces.
- 6.1.6. For the avoidance of doubt, with the exception of two possible barrows, no evidence of remains like this has been identified in the work carried out to date. It is understood that the crew of the two WWII aircraft crashes were recovered at the time.
- 6.1.7. While the known buried archaeological remains within the Site are predominantly the remnants of prehistoric and Roman period settlements, our understanding of these asset types would suggest that human remains could be interred nearby. Therefore, additional means of mitigation can be employed as the nature of the Development allows for the detailed design process to avoid important archaeological remains. This can be achieved either by exclusion of development entirely or by limiting activities that would disturb the remains.
- 6.1.8. The first option is the simple exclusion of discrete, identified area(s) of buried archaeological remains (and an appropriate protective 'buffer') from the Solar PV Development. Associated with the specific exclusion of these areas from the erection of solar panels (and excavation of any cable routes), other proximate construction activities may need to be avoided, limited and/or controlled. These other activities could include construction of temporary access routes or haul roads, temporary storage areas and vehicle set down areas (compounds). The protection of these areas are detailed in the **Outline Construction Environment Management Plan (oCEMP) [EN010149/APP/7.7]**, with physical measures such as fencing and signposts, set out on the ground in advance of any construction activities. The measures to protect these areas, and the reasoning for them, will be communicated to the relevant staff via induction briefings and 'toolbox talks'.
- 6.1.9. The second option is the use of 'concrete-shoes' (or other non-piling, surface ballast techniques) for discrete areas within the areas of Solar PV Development. This option would be deployed on the assumption that the ground conditions are suitable, and compaction or vertical movement would be avoided. These 'no-dig' construction solutions would also necessitate the burying of cables only as deep as the ploughsoils i.e., outside (above) the horizons where buried archaeological remains survive or, avoiding trenching excavations altogether. Further to this, construction activities would be designed and implemented in such a way to avoid or greatly minimise ground disturbance from vehicular (plant) movements (i.e., avoiding rutting). These specific measures are set out in the **oCEMP [EN010149/APP/7.7]** which will be secured in the draft DCO as a requirement, following detailed design. It is feasible and potentially desirable, for both options ('exclusion areas' and 'no-dig construction') to be deployed separately or in combination as appropriate.

Archaeological excavation

- 6.1.10. At the 13 locations of known buried archaeological remains within the cable route corridors described above (paragraph 5.1.1) targeted archaeological excavations could take place. Excavation will also take place of the other 11 locations where the detailed design cannot avoid impacts and where the further trial trenching indicates a high potential for important archaeological remains.
- 6.1.11. These archaeological excavations would be directed and designed to achieve two interrelated objectives: (i) furthering our understanding of the past through expert investigation; and (ii) the communication of the findings to a wide audience.
- 6.1.12. Task specific WSIs would be developed for each area of archaeological mitigation. These will set out the particular research objectives for each programme of work. The research themes will be drafted in the context of the local / regional archaeological research frameworks (East Midlands Historic Environment Research Framework 2022 [Ref. 11]), and emerging ideas and theories presented by the work completed to date.
- 6.1.13. The task specific WSIs will also set out if/how the public will be given the opportunity to engage in the archaeological on-site work and the post-excavation process, alongside the means of communicating the findings of the work (via social media platforms, publications, community events and lectures, etc. as appropriate).
- 6.1.14. Further details on the general methodological approach to archaeological excavation is set out in Section 6 of this document, below. However, the methods deployed will be bespoke to each location and would be heavily influenced by the research objectives and community engagement programmes and any new information revealed by the further trial trenching and mitigation works.
- 6.1.15. The extent of areas requiring targeted archaeological excavation will be agreed by the Client, the determining authority and statutory consultees including the NKDC and LCC Archaeological Advisors and Historic England (as appropriate) in advance of construction following a review of the trial trench evaluation results and detailed design.
- 6.1.16. Task specific WSIs for the area of targeted excavation will be prepared by the Archaeological Contractor and submitted to the determining authority. The following areas may be suitable for excavation:
- Temporary construction compounds;
 - Collector Compound within Field By22 (due to presence of WWII crash sites in vicinity);

- BESS areas;
- Springwell Substation area; and
- Targeted areas within Solar PV development, where evaluation indicates archaeological remains of high sensitivity that cannot be avoided through design.

7. GENERAL METHODOLOGIES

7.1.1. The following methodologies will be applicable to all archaeological excavation, including trenching, and will be agreed upon and reflected in any task specific WSI(s) submitted.

Site Specific WSIs

7.1.2. Task specific WSIs will be agreed for each location or phase of archaeological trial trenching or excavation. The WSIs will follow the ClfA guidance document(s) referred to above and will conform to the requirements of the Lincolnshire Archaeological Handbook [Ref. 12]. These WSIs will set out any site-specific objectives and methodologies. They will contain the following as a minimum:

- Aims and objectives for each element of the archaeological works;
- A summary of the archaeological and historical background, including the results of the work undertaken to date (insofar as it is relevant to the works set out in the specific WSI);
- Detail the methodologies that will be implemented and form the central basis by which the investigation can be measured against its aims and objectives;
- Details on the provision of site welfare, plant equipment, in accordance with archaeological requirements and relevant Health and Safety legislation as appropriate;
- Details of a proposed timetable/programme to archaeological works, post-excavation and reporting following completion of works;
- Details of proposed archiving methods and repositories;
- Details of company Health and Safety Policy, evidence of insurance and a health and safety risk assessment and method statement (RAMS) for the project; and
- Details of any external specialists and other third parties to be used in the preparation of the fieldwork reports.

Programme

7.1.3. Prior to commencement of the archaeological works, a programme will be agreed between the Client / Principal Contractor, Curator and Archaeological Contractor. This programme will detail proposed start and end dates for on-site works. The programme will also account for any post-excavation assessment and reporting, as required to discharge any archaeological requirements of the DCO.

Access and Setting Out

- 7.1.4. Access will be arranged by the Applicant/ Principal Contractor in advance of all site works.
- 7.1.5. The location of each area subject to the relevant task specific WSI will be accurately set out by instrument survey and tied into the Ordnance Survey National Grid and Ordnance datum.

Machine and Hand Excavation

- 7.1.6. Machine excavation will be under the instruction of a sufficiently experienced and qualified archaeologist. Mechanical excavators will be equipped with a toothless ditching bucket and under constant archaeological supervision.
- 7.1.7. The archaeological features and deposits encountered will be excavated by hand.
- 7.1.8. All archaeological features will be investigated in accordance with the strategy set out in the relevant task-specific WSI.
- 7.1.9. The current outline proposals for excavation are detailed below:
- 100% of discrete features such as hearths, kilns and pits;
 - 100% of funerary features such as graves and cremations;
 - 50% of each discrete features of other types by area;
 - 15% of any linear features which form part of settlement activities or enclosure systems;
 - 10% of each simple linear feature within the whole stripped area; and
 - All terminals of linear features, as well as intersections between features.
- 7.1.10. In addition to all stratigraphic relationships, and where appropriate and necessary, sufficient soil samples for dating evidence and ecofactual analysis will be taken.
- 7.1.11. The depth and complexity of archaeological features and deposits within each area exposed will be ascertained, unless HS&E constraints deem otherwise. Where features cannot be hand excavated the Applicant and Curator will be consulted.
- 7.1.12. The full proposals will be detailed in consultation with the Applicant, Curator and may be subject to change. These works would be subject to

the relevant ClfA Standard [Ref. 2], [Ref. 3], [Ref.4] and Universal Guidance [Ref.5], [Ref. 6], [Ref. 7] for archaeological excavation.

Recording and Sampling

- 7.1.13. All excavated archaeological contexts will be recorded in full through provision of a detailed written context records, which will include details of extent, location, relationships, samples, finds, and cross-references to any relevant contexts.
- 7.1.14. All features will be planned at an appropriate scale, either digitally or by hand, as well as feature cross sections, and photographed accordingly. These plans and the photographic record will be presented in any final reporting.
- 7.1.15. In addition, all finds and environmental samples will be retained and recorded in order to provide dates and assist in the interpretation of form and function of any archaeological features or deposits identified.
- 7.1.16. All finds and samples will be collected and treated in accordance with the relevant guidance, including:
- ClfA's Guidance for the collection, documentation, conservation and research of archaeological materials [Ref. 13],
 - Museums and Galleries Commission's Standards in the Museum Care of Archaeological Collections [Ref. 14], and
 - Environmental Archaeology: a guide to theory and practice of methods, from sampling and recovery to post-excavation [Ref. 15].

WWII Crash Sites

- 7.1.17. Two WWII crash sites are recorded within the Site. Any archaeological work or other excavation (including development) within the area of the crash sites will require a licence from the MOD. This will be applied for by Archaeological Contractor and all conditions of the licence will be adhered to. Licences will be granted to a named individual (not to a group of individuals), who may ask other people to assist, but who themselves must be present during the entire excavation.

Health, Safety and Environment

- 7.1.18. The archaeological contractor will conduct all works in accordance with the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety Regulations 1992, and all other relevant Health and Safety legislation, regulations and codes of practice in force at the time for the fieldwork. Any client/developer/Principal Contractor policies and/or procedures will also be followed.

- 7.1.19. Prior to commencement, a health and safety Risk Assessment and Method Statement (RAMS) for the work will be prepared by the Archaeological Contractor and submitted to the Applicant for review and acceptance.

Artefacts

- 7.1.20. Finds will be routinely recorded by context and recorded 3-dimensionally where appropriate (i.e. where their position within a context can provide further significant information or the find is of particular significance). Any artefacts retrieved during the evaluation will be cleaned using appropriate techniques and packaged and stored in accordance with First Aid for Finds [Ref. 16].
- 7.1.21. All artefacts recovered during the evaluation will be cleaned, marked and catalogued.
- 7.1.22. Artefacts will be properly conserved and will be stabilised for storage where required. If necessary, a conservator will visit the site to undertake initial conservation treatment. If any of the trenches result in the recovery of unstable artefactual remains (e.g. metallic objects or preserved wood/leather), the Archaeological Contractor will seek the advice of the Historic England Regional Science Advisor regarding appropriate conservation measures.
- 7.1.23. All finds and samples will be processed (cleaned and marked), as appropriate. Each category of find will be examined by a suitably qualified archaeologist or specialist and the results incorporated into the post-excavation assessment report.
- 7.1.24. The analysis of ceramic finds will be carried out with reference to the Finds Type Series for Roman and Post-Roman ceramics (held at Lincoln City and County Museum) and the Rural Kesteven Type Series held by Heritage Lincolnshire.

Environmental remains

- 7.1.25. Archaeological deposits will be sampled where appropriate for environmental material and other finds (e.g. bone, pottery etc.). Bulk samples will be taken from selected deposits for wet sieving and floatation in order to recover any environmental material. A bulk sample will typically be 40 litres. However, where large deposits are encountered more than one bulk sample may be taken. Similarly, small deposits such as the fill of postholes may contain less than 10 litres of sediment and will be fully sampled. A representative proportion of samples taken on site will be processed and assessed with the results and recommendations for any further work included in the evaluation report.

- 7.1.26. Where waterlogged deposits are encountered (such as peat), appropriate sampling techniques will be employed so as to maximise the environmental information gained from such deposits. This may include the taking of monolith or core samples for pollen and non-pollen palynomorphs (e.g. testates and fungal spores) and large samples for plant macrofossil, wood (including waterlogged wood) and insect analyses.
- 7.1.27. As part of the task specific WSIs the Historic England Regional Science Advisor (Matt Nicholson) will be consulted with regard to developing an appropriate strategy for the recovery and sampling of environmental remains.

Treasure

- 7.1.28. In the event of discovery of artefacts covered or potentially covered by Treasure Act 1996 [Ref. 17], these will be removed and reported to the Client / Principal Contractor, NKDC, LCC and the Finds Liaison Officer and the Landowner. The local Coroner will be informed according to the procedures relating to the Treasure Act of 1996.

Human Remains

- 7.1.29. Any discovered human remains should, in the first instance be left in-situ, covered and protected. The Applicant / Principal Contractor should be informed immediately of such a discovery. The Curator and the local Coroner will also be informed immediately.
- 7.1.30. As excavation of all human remains requires a Ministry of Justice licence, in compliance with section 25 of the Burial Act 1857 and local environmental health regulations and the Disused Burial Grounds (Amendment) Act 1981, buried human remains will not be excavated unless removal is deemed necessary by either the Coroner or the Curator.
- 7.1.31. Although not anticipated (as it is understood that all remains were removed from the site at the time) any human remains associated with the two WWII crash sites shall additionally be subject to the requirements of the Protection of Military Remains Act licence (see below).
- 7.1.32. Any excavation of human remains will be carried out in accordance with the following guidance:
- APABE 2017 Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England (2nd edn) [Ref. 18]
 - Mitchell P & Brickley M (eds) 2017 Updated guidelines to the standards for recording human remains [Ref 19].

Post-Excavation Analysis

7.1.33. Post-excavation analysis and specialist reporting will be undertaken in accordance with the requirements of the ClfA's Standard for archaeological excavation [**Ref. 2**], Universal Guidance for archaeological excavation [**Ref. 5**] and Standard and guidance for the collection, documentation, conservation and research of archaeological materials [**Ref. 12**].

Reporting (academic and public dissemination)

7.1.34. Detailed reporting methods will be set out for each WSI. As a minimum, this is expected to include:

- Interim updates (site diary, weekly progress update during fieldwork, fortnightly during post-excavation phase)
- Fieldwork summary (basic results summing up the interim updates)
- Reporting (list of headings including updated project design if further detailed analysis is recommended by the arch contractor)

7.1.35. The draft report will be submitted in the first instance for review/comment to the Applicant and the archaeological advisors to NKDC and LCC and Historic England as required. In finalising the report, the Archaeological Contractor will take into account any comments made and remedy any faults identified prior to the finalised report being submitted for discharge of the DCO Requirement.

7.1.36. A note on the results will be produced for inclusion within an appropriate local archaeological journal(s).

7.1.37. Subject to any contractual constraints, a summary of information from the project will be entered onto the OASIS online database of archaeological projects in Britain. This will include a digital (pdf) copy of the final report, which will also appear on the Archaeology Data Service (ADS) website once the OASIS record has been verified.

Archive Preparation and Deposition

7.1.38. Adequate resources will be provided during fieldwork to ensure that records adhere to the ClfA's Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives [**Ref. 13**].

7.1.39. All artefacts and environmental samples will be processed, assessed, conserved and packaged in accordance with the archaeological

contractors technical manuals and the relevant recipient museum guidelines.

- 7.1.40. As part of the development of the SSWSIs, the archaeological contractor will make arrangements with Lincolnshire County Council Heritage Service for the deposition of the site archive and, subject to agreement with the legal landowner(s), the artefact collection.
- 7.1.41. Immediately upon completion of the finalised report, the report and any data or other documentation produced during the post-excavation assessment process will be integrated into the site archive.
- 7.1.42. An ordered, indexed, and internally consistent site archive will be prepared in accordance with the ClfA Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives [Ref. 13], the Archaeological Archives Forum guide to best practice [Ref. 20] and Europae Archaeologia Consilium (EAC) guidelines [Ref. 2], as well as the relevant recipient museum guidelines.
- 7.1.43. Depending on the nature and scope of any subsequent archaeological works required at the site, the project archive may be combined with that for any subsequent works and deposited as a single archive. Confirmation of this will be included in any further WSI(s).
- 7.1.44. The reports will be submitted to the Lincolnshire Historic Environment Record and uploaded to the archaeology data service via the online OASIS form at <http://oasis.ac.uk/> within 6 months of completion, subject to any privacy or security considerations. The Curator will validate the appropriate OASIS form.

Selection strategy

- 7.1.45. Artefacts from topsoil, subsoil and unstratified contexts will normally be noted but not retained unless they are of intrinsic interest (e.g. artefacts associated with the WWII aircraft crashes). All artefacts from stratified excavated contexts will be collected, except for large assemblages of post-industrial or modern material. Such material may be noted and not retained or, if appropriate, a representative sample may be collected and retained.
- 7.1.46. The material archive will be reviewed following analysis and reporting. Selection decisions will be based on the specialist reports and selection recommendations by the relevant museum and Curator. After discussion with the relevant museum curator and the archaeological contractor, it is possible that no material postdating AD 1800 will be retained for inclusion in the preserved archive.

Digital archive and Data Management

- 7.1.47. A digital archive will be deposited with the Archaeology Data Service (ADS). This archive will be compiled in accordance with the ADS Guidelines for Depositors.
- 7.1.48. All born-digital and digitally-transferred project data created during fieldwork and post-excavation (other than duplicated files) will be stored by the archaeological contractor. Upon project completion and deposition, the data will be transferred to a secure external server. Data will be selected for inclusion in the final digital archive, as detailed below. It is proposed that data selection will occur following completion of post-excavation work. Selected digital files will be transferred to the ADS, in line with the relevant guidance and standards. Digital photographs will be selected for inclusion in the archive in line with Digital Image Capture and File Storage: Guidelines for Best Practice (Historic England 2015).

Monitoring

- 7.1.49. Reasonable access will be afforded to the Curator for the purpose of monitoring the archaeological fieldwork. The client reserves the right to attend or nominate representatives for any such occurrence.

8. REFERENCES

Ref. 1 Historic England 2015 Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (2015) Available at: <https://historicengland.org.uk/images-books/publications/morphe-project-managers-guide/heag024-morphe-managers-guide/> (Accessed 22/08/2024)

Ref.2 Chartered Institute for Archaeologists 2023 Standard for archaeological excavation [Online] Available at:

[Redacted]

Ref. 3 Chartered Institute for Archaeologists 2023 Standard for archaeological field evaluation [Online] Available at:

[Redacted]

Ref. 4 Chartered Institute for Archaeologists 2023 Standard for archaeological monitoring and recording [Online] Available at:

[Redacted]

Ref. 5 Chartered Institute for Archaeologists 2023 Universal guidance for archaeological excavation [Online] Available at:

[Redacted]

Ref. 6 Chartered Institute for Archaeologists 2023 Universal guidance for archaeological field evaluation [Online] Available at:

[Redacted]

Ref. 7 Chartered Institute for Archaeologists 2023 Universal guidance for archaeological monitoring and recording [Online] Available at:

[Redacted]

Ref. 8 Ministry of Housing, Communities & Local Government National Planning Policy Framework [Online] Available at:

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Ref. 9 Department for Energy Security & Net Zero Overarching National Policy Statement for Energy (EN-1)

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Ref. 10 Department for Energy Security & Net Zero (2023) National Policy Statement for Renewable Energy Infrastructure (EN-3) [Online] Available at:

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Ref. 11 East Midlands Historic Environment Research Strategy
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Ref. 12 Lincolnshire County Council (2019) Archaeological Handbook [Online]
Available at: [redacted]
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Ref. 13 Chartered Institute for Archaeologists (CIfA) 2014 Standard and guidance for
the collection, documentation, conservation and research of archaeological materials
(updated October 2020) (Reading) Available at:
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Ref. 14 Museums & Galleries Commission (1992) Standards in the Museum Care of
Archaeological Collections [Online] Available at: [redacted]
[redacted] Accessed 22/08/2024)

Ref. 15 Campbell, G., Moffett, L. and Straker, V. (2011) A Guide to the Theory and
Practice of Methods, from Sampling and Recovery to Post-excavation (second edition).
Historic England [Online] Available at: [redacted]
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Ref. 16 Available at [redacted]
[redacted] (Accessed 22/08/2024)

Ref. 17 DCMS 2023 Treasure Act 1996: Code of Practice (3rd Revision) Available on
line [redacted] at:
[redacted] Accessed
22/08/2024

Ref. 18 APABE 2017 Guidance for Best Practice for the Treatment of Human Remains
Excavated from Christian Burial Grounds in England (2nd edn) Available at:
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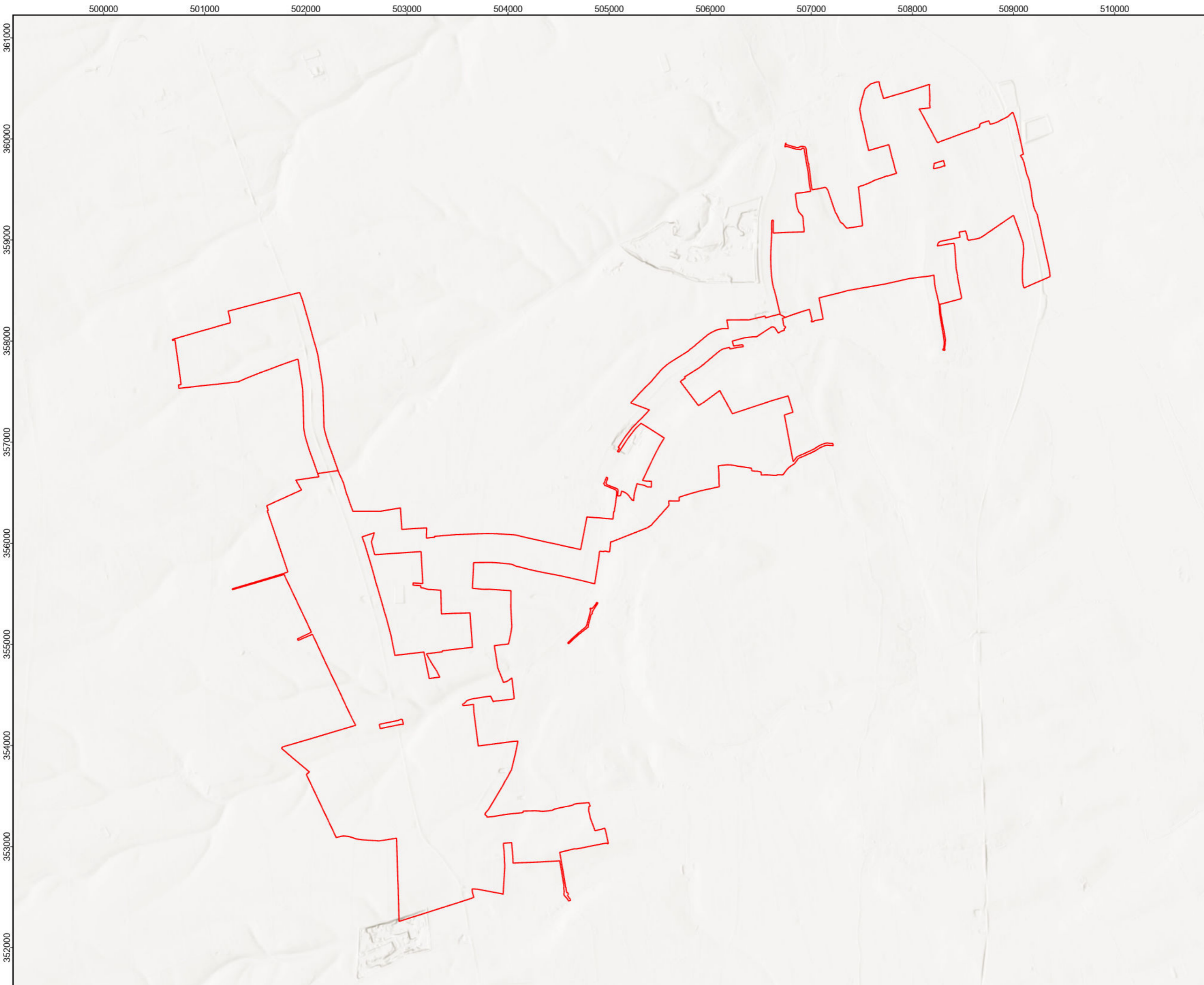
Ref. 19 Mitchell P & Brickley M (eds) 2017 Updated guidelines to the standards for
recording human remains. Available at [redacted]
[redacted] accessed 08/10/2024

Ref. 22 Archaeological Archives Forum (AAF) 2011 Archaeological Archives A guide to
best practice in creation, compilation, transfer and curation (2nd edn) (CIfA: Reading)
[redacted]
[redacted] accessed 14/08/2023

Ref. 21 Europae Archaeologia Consilium 2019 Standard and Guide to Best Practice
for Archaeological Archiving in Europe: EAC Guidelines 1

Figure 1 – Order Limits





LEGEND:

Order Limits

NOTES:

Coordinate System: British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1936
 Units: Meter



Rev	Date	Description	Dm	Chk	App
01	25/10/2024	DCO Submission	RSK	RSK	EDF

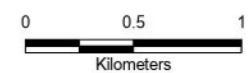
Springwell Solar Farm



DOCUMENT:
 outline Written Scheme of Investigation
 Regulation 5(2)(q)

TITLE:
 Figure 1: Order Limits

PINS REFERENCE NUMBER:
 EN010149/APP/7.15



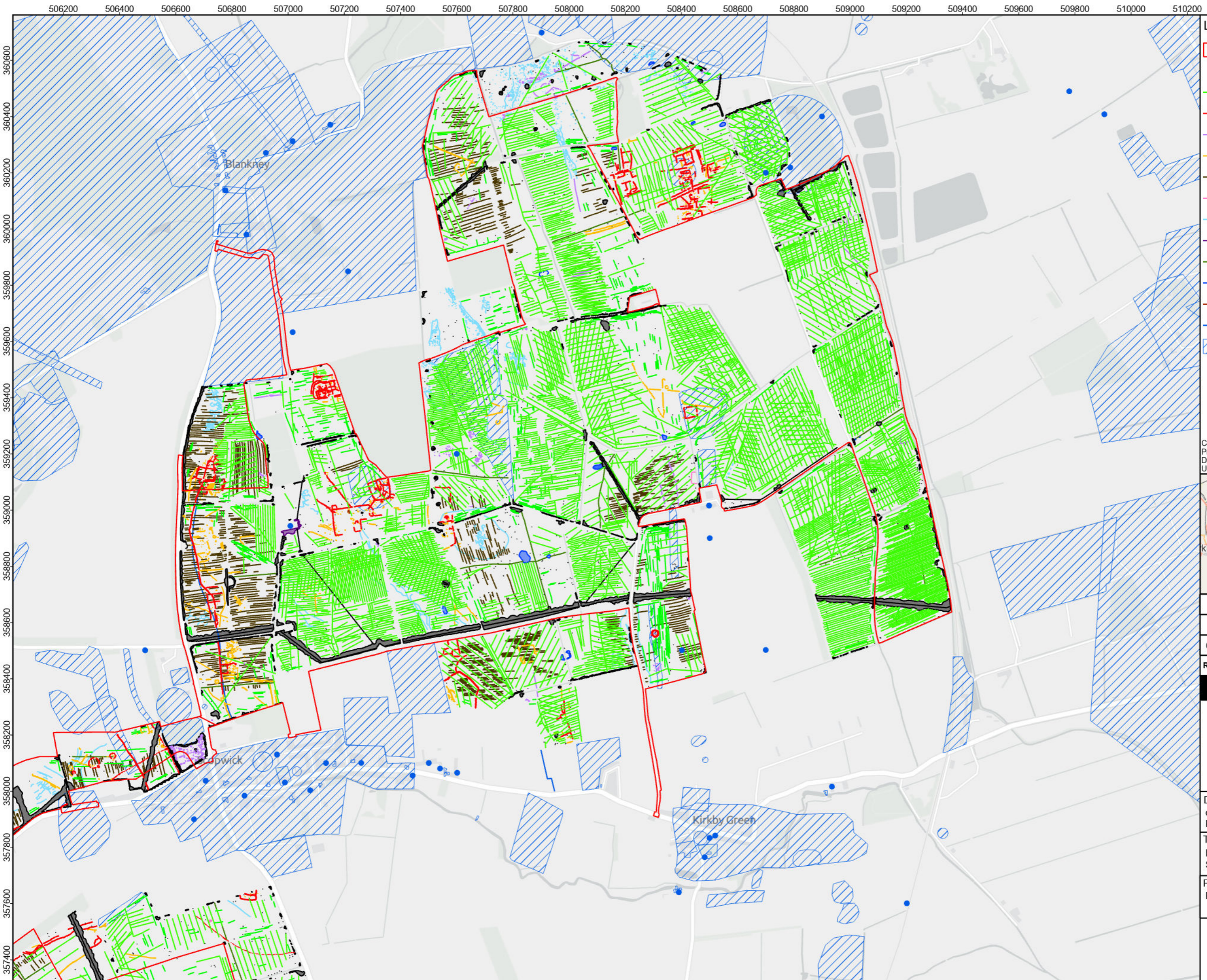
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REV 01

Figure 2 – Known Heritage Assets in Springwell East





- LEGEND:**
- Order Limits
 - HER data
 - agriculture
 - probable archaeology
 - uncertain
 - possible archaeology
 - ridge and furrow
 - quarrying
 - geology
 - former building
 - field boundary
 - pond
 - kiln / burning
 - HER data
 - HER data

Coordinate System: British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1936
 Units: Meter



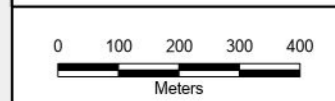
Rev	Date	Description	Dm	Chk	App
01	25/10/2024	DCO Submission	RSK	RSK	EDF

Springwell Solar Farm

DOCUMENT:
 outline Written Scheme of Investigation
 Regulation 5(2)(q)

TITLE:
 Figure 2: Known heritage assets in
 Springwell East

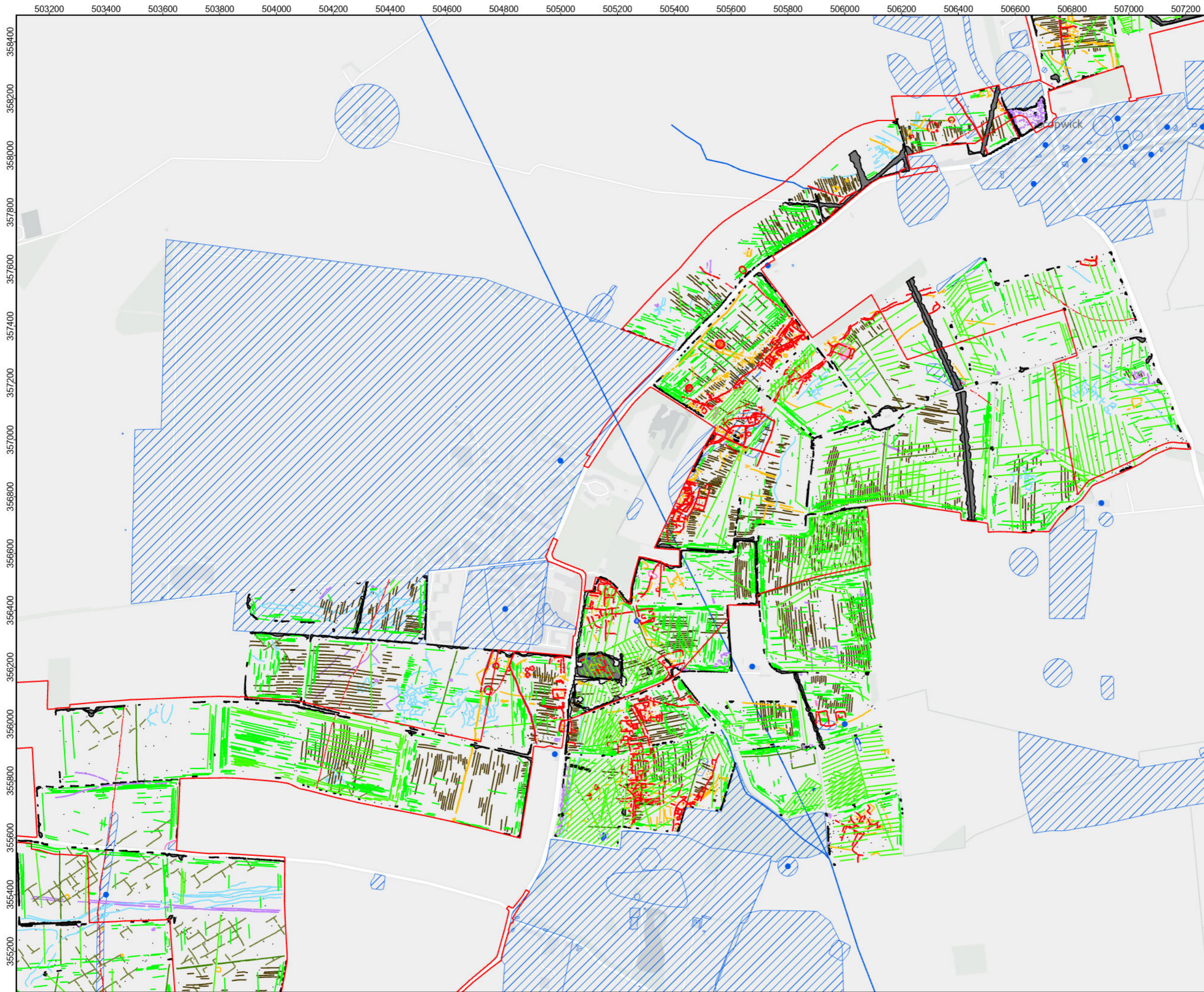
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 EN010149/APP/7.15



REV 01

Figure 3 – Known Heritage Assets in Springwell Central





- LEGEND:**
- Order Limits
 - HER data
 - agriculture
 - probable archaeology
 - uncertain
 - possible archaeology
 - ridge and furrow
 - quarrying
 - former building
 - field boundary
 - pond
 - kiln / burning
 - HER data
 - HER data

Coordinate System: British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1936
 Units: Meter



Rev	Date	Description	Dm	Chk	App
01	25/10/2024	DCO Submission	RSK	RSK	EDF

Springwell Solar Farm

DOCUMENT:
 outline Written Scheme of Investigation
 Regulation 5(2)(q)

TITLE:
 Figure 3: Known heritage assets in
 Springwell Central

PINS REFERENCE NUMBER:
 EN010149/APP/7.15

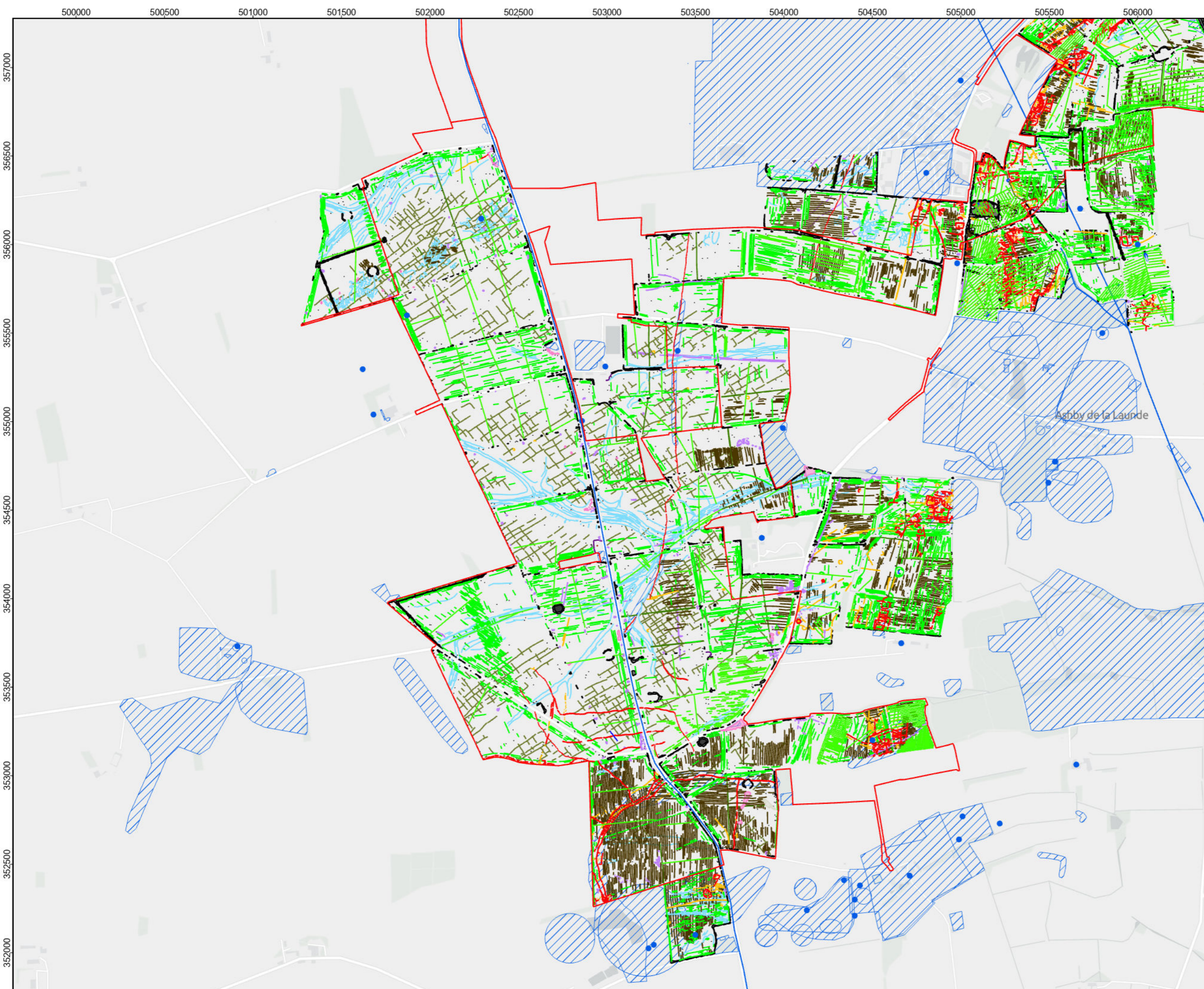
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REV 01

Figure 4 – Known Heritage Assets in Springwell West





- LEGEND:**
- Order Limits
 - HER data
 - agriculture
 - probable archaeology
 - uncertain
 - possible archaeology
 - ridge and furrow
 - quarrying
 - geology
 - former building
 - field boundary
 - pond
 - kiln / burning
 - HER data
 - HER data

Coordinate System: British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1936
 Units: Meter



Rev	Date	Description	Dm	Chk	App
01	25/10/2024	DCO Submission	RSK	RSK	EDF

Springwell Solar Farm

DOCUMENT:
 outline Written Scheme of Investigation
 Regulation 5(2)(q)

TITLE:
 Figure 4: Known heritage assets in
 Springwell West

PINS REFERENCE NUMBER:
 EN010149/APP/7.15

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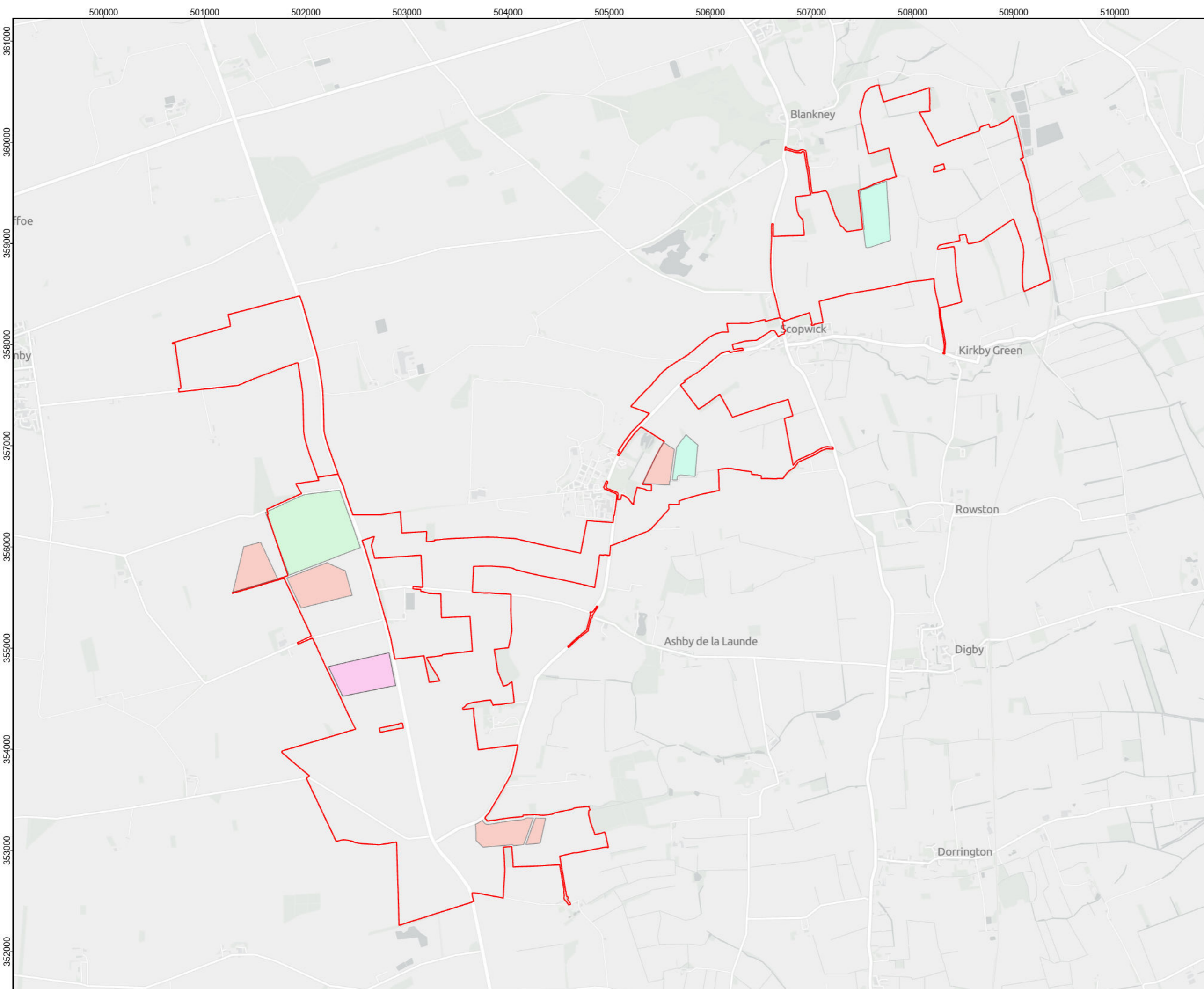
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REV 01

Figure 5 – Areas of Previous Trenching





- LEGEND:**
- previous potential BESS / compound area
 - Order Limits
 - Potential area for project substation
 - De-scoped
 - Potential areas for collector compounds

Coordinate System: British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1936
 Units: Meter



Rev	Date	Description	Drm	Chk	App
01	NOV 2024	DCO Submission	RSK	RSK	EDF

Springwell Solar Farm

DOCUMENT:
 outline Written Scheme of Investigation
 Regulation 5(2)(q)

TITLE:
 Figure 5: Areas of previous trenching

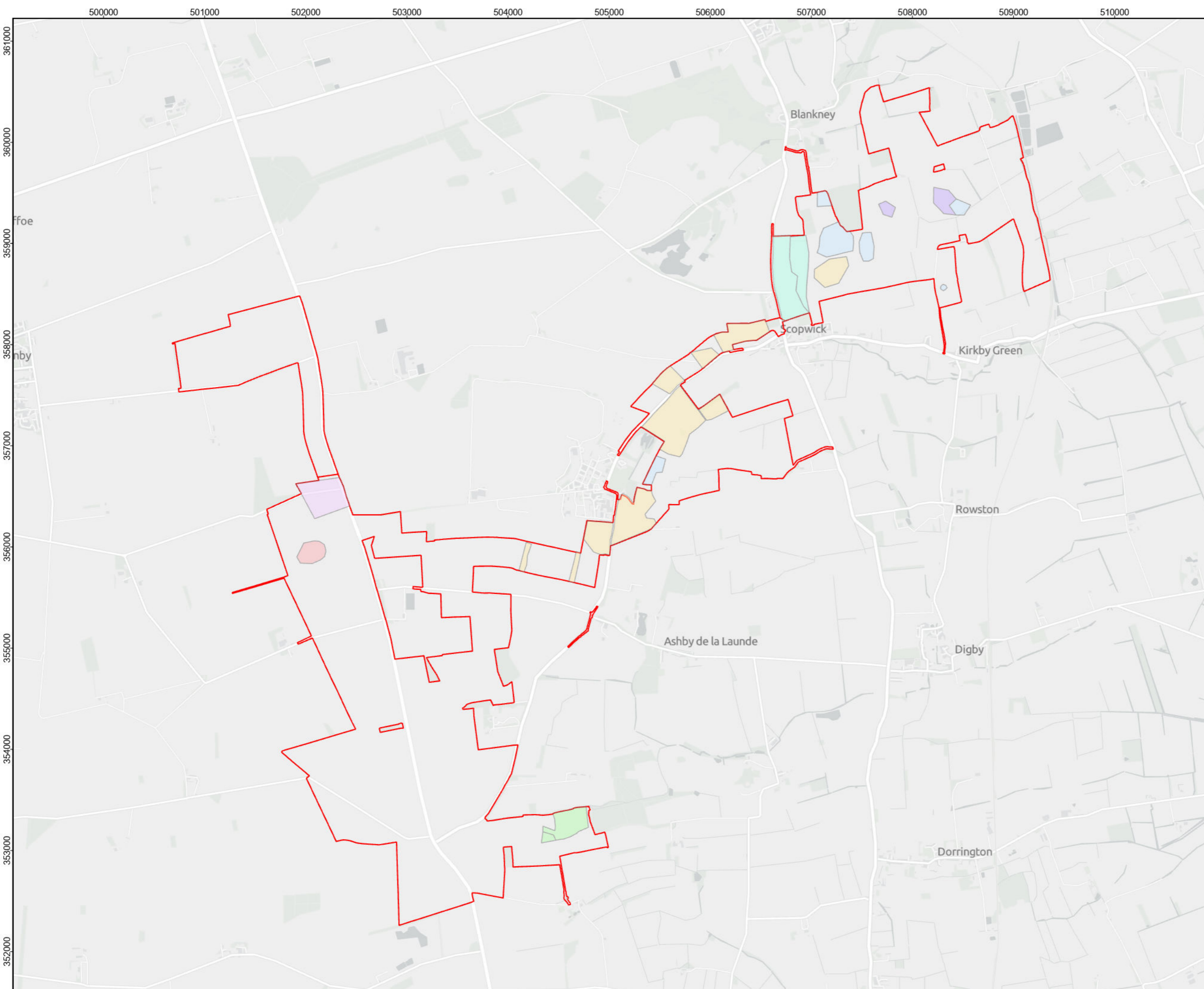
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REV 01

Figure 6 – Outline Mitigation Areas





LEGEND:

- preservation in situ - concrete feet
- preservation in situ - grassland
- previous trial trenching - no further work proposed
- targeted excavation - ITS
- targeted excavation - cables
- targeted excavation - site access / cables
- targeted excavation - substation and cables
- Order Limits

Coordinate System: British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1936
 Units: Meter



Rev	Date	Description	Drm	Chk	App
01	25/10/2024	DCO Submission	RSK	RSK	EDF

Springwell Solar Farm

DOCUMENT:
 outline Written Scheme of Investigation
 Regulation 5(2)(q)

TITLE:
 Figure 6: Outline mitigation areas

PINS REFERENCE NUMBER:
 EN010149/APP/7.15

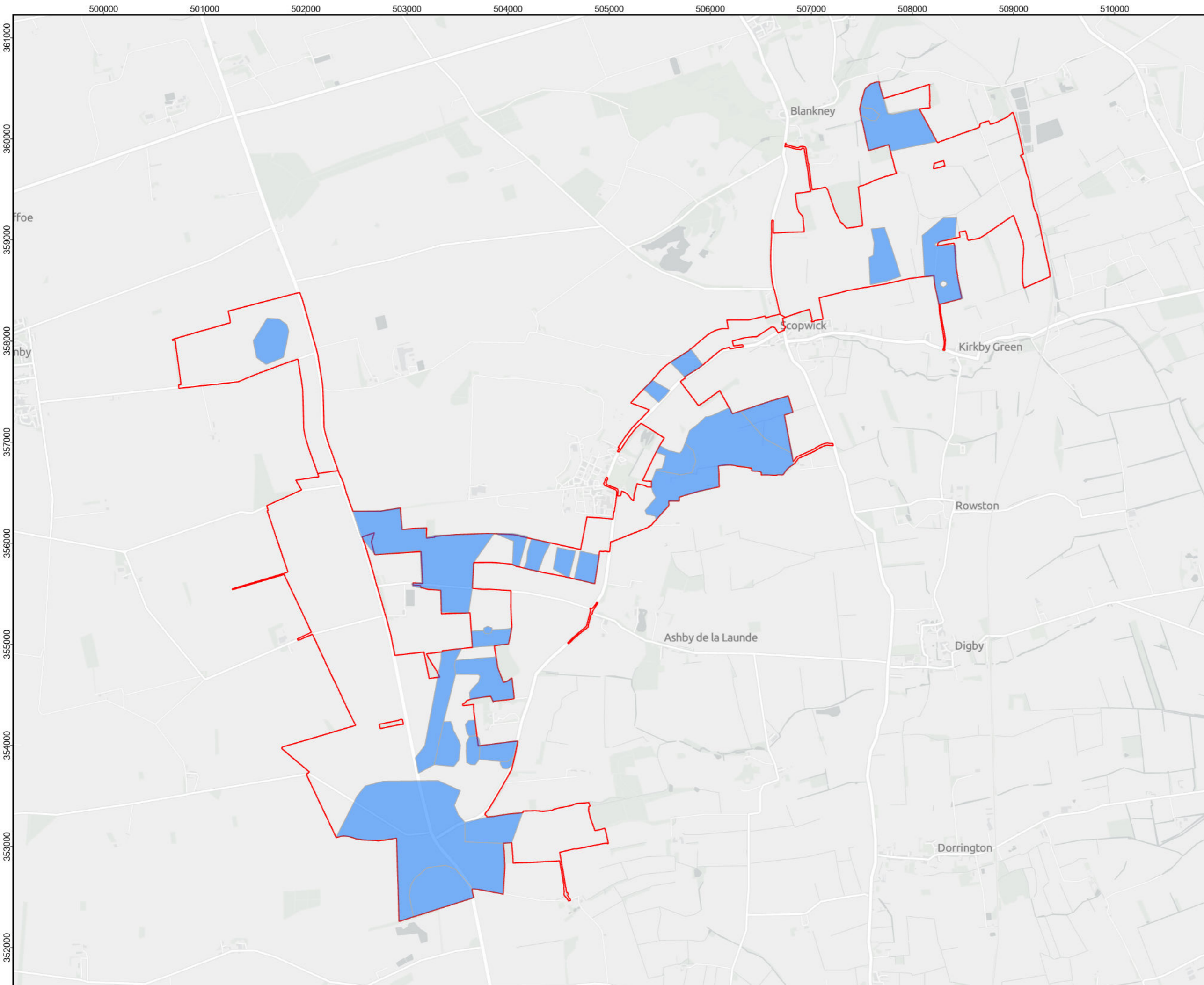
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REV 01

Figure 7 – Outline Areas for Further Trenching





- LEGEND:**
- Outline areas for trenching where excavation over 30 cm proposed
 - Order Limits

Coordinate System: British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1936
 Units: Meter



Rev	Date	Description	Drm	Chk	App
00	03/10/2022	First Draft	AA	AA	AA

Springwell Solar Farm

DOCUMENT:
 outline Written Scheme of Investigation
 Regulation 5(2)(q)

TITLE:
 Figure 7: Outline areas for further
 trenching

PINS REFERENCE NUMBER:
 EN010149/APP/7.15

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