

Rosefield Solar Farm

Applicant's Response to Action Point 7
from ISH1

EN010158/APP/8.19
May 2026
Deadline 3
Rosefield Energyfarm Limited



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1. Introduction

1.1. Purpose of the Note

1.1.1. This Note has been prepared on behalf of Rosefield Energyfarm Limited (the **Applicant**) in order to provide a single source of responses to the question by the Examining Authority at Issue Specific Hearing 1 (**ISH1**) in relation to why Fields E10 and E11 are an unsuitable location for the Battery Energy Storage System (**BESS**) (ISH1 Action Point 7).

1.1.2. This Note sets out the Applicant's response to the question raised, building on information contained in documents already submitted to the Examination.

1.1.3. This Note is structured as follows:

- Background
- Documents before the Examination
- Further evidence

2. Background

- 2.1.1. The **Design Approach Document [EN010158/APP/5.8.2] [REP1-018]** (particularly Section 5), **ES Volume 1, Chapter 4: Reasonable Alternatives Considered [EN010158/APP/6.1] [APP-047]** (including supporting **ES Volume 3, Figures 4.1 to 4.4 [EN010158/APP/6.3] [APP-064]**) and **Appendix 1 - Site Selection Report to the Planning Statement [EN010158/APP/5.7.3] [REP1-016]** all contain descriptions of how the design of the Proposed Development has evolved to accommodate the BESS, reflecting stakeholder feedback, technical surveys and design refinement.
- 2.1.2. **Appendix 1: Letter to Buckinghamshire Council on BESS locations** within the **Applicant's Response to Buckinghamshire Council's Local Impact Report [EN010158/APP/8.11] [REP2-085]** aimed to draw some of this information together into a single document to explain the rationale behind the proposed location of the BESS, with further responses to specific points raised by Buckinghamshire Council provided in the body of the **Applicant's Response to Buckinghamshire Council's Local Impact Report [EN010158/APP/8.11] [REP2-085]**.
- 2.1.3. Fields E10 and E11 are located within Parcel 3 of the Site. Parcel 3 was identified as a potential location for the BESS as part of the Stage 1 design for Phase One (non-statutory) consultation, for a variety of reasons including:
- Close proximity to the existing National Grid East Claydon Substation.
 - Close proximity to East Claydon Road, also an approved Abnormal Indivisible Load (AIL) route, to facilitate access and avoid traffic passing through the local villages such as Botolph Claydon, East Claydon, Steeple Claydon, Granborough, Quainton and Calvert.
 - The scale and topography of the landscape within Fields E10, E11, E20, E21, E22 and E23, which is larger and less intimate than other areas of the Site, and therefore more suited to large scale infrastructure.
 - The presence of existing infrastructure including prominent pylons.
 - Notably fewer PRoW than other areas of the Site.
- 2.1.4. The Stage 2 design refined the potential locations of the BESS. A potential location for the BESS was identified in Parcel 3, reduced in size from the potential BESS location indicated at Stage 1, within Field E23. However, in response to feedback received during the Phase Two Consultation, the BESS is no longer proposed in Field E23. The following sections explain why Fields E10 and E11 weren't taken forward as a potential location for the BESS within Parcel 3 at this point.

3. Documents before the Examination

3.1. Appendix 1: Letter to Buckinghamshire Council on BESS locations

3.1.1. Appendix 1: Letter to Buckinghamshire Council on BESS locations within the Applicant's Response to Buckinghamshire Council's Local Impact Report [EN010158/APP/8.11] [REP2-085] summarised the reasons for discounting BESS development in Fields E10 and E11 as follows:

- E11
 - Proximity to Sion Hill Farm and associated noise and visual impacts.
 - Offset requirements from overhead lines and pylons transecting the Field.
 - Presence of higher flood risk areas.
- E10
 - Presence of higher flood risk areas.
 - Offset requirements from overhead lines and pylons transecting the Field.

3.2. Applicant's Response to Buckinghamshire Council's Local Impact Report

3.2.1. The following paragraphs draw out relevant text in relation to Action Point 7 from Reference 2.16 and 2.17 of **Table 3-2: Need, Site Selection and Alternatives** of the **Applicant's Response to Buckinghamshire Council's Local Impact Report [EN010158/APP/8.11] [REP2-085]**. These were provided in response to paragraphs 4.2.26 to 4.2.30 of **Buckinghamshire Council's Local Impact Report [REP1-112]**.

3.2.2. As set out in the **Design Approach Document [EN010158/APP/5.8.2] [REP1-018]** and **ES Volume 1, Chapter 4: Reasonable Alternatives Considered [EN010158/APP/6.1] [APP-047]**, Rosefield Substation is proposed in Parcel 3. The location of Rosefield Substation was refined during design stages 2 and 3 to respond to further engagement with National Grid on the proposed replacement National Grid East Claydon Substation, landscape and visual assessments and noise modelling, and reduce the maximum possible length of the Grid Connection Cable Corridor between the Rosefield Substation and National Grid East Claydon Substation. Shorter distances have commercial and energy efficiency advantages and would also minimise environmental effects and temporary disruption associated with construction. Rosefield Substation is therefore proposed in Fields E11 and E20, with the maximum parameter in plan form allowing for the uncertainty of the location of the National Grid East Claydon Substation extension.

- 3.2.3. The extent of the area for Rosefield Substation shown on Sheet 7 of the **Illustrative Layout Plans and Sections [EN010158/APP/2.6.3] [REP1-007]** is subject to further discussion with National Grid, but is based on a current working layout for Rosefield Substation and indicates that it is likely that the substation will require both Fields E11 and E20 to accommodate it, within the 60,000m² footprint secured by the **Design Commitments [EN010158/APP/5.9.5]**. Given the constraints and design process that have been followed to locate the Rosefield Substation, Field E11 has been allocated for Rosefield Substation rather than BESS.
- 3.2.4. Locating the BESS within Fields E10 and E11 has the potential to cause significant adverse noise effects at Sion Hill Farm during the operation (including maintenance) phase of the Proposed Development. This would be a function of:
- the reduced separation distance to Sion Hill Farm (including fields used by livestock), relative to the current location;
 - the resultant increase in noise emitting infrastructure within Parcel 3, that would result in higher noise levels at Sion Hill Farm; and
 - the inter-project cumulative effects with other developments in the vicinity of Parcel 3, including the National Grid East Claydon Substation Extension and the East Claydon BESS.
- 3.2.5. The existing overhead lines and pylons are shown on the Ordnance Survey mapping of **ES Volume 3, Figure 1.2: Order Limits [EN010158/APP/6.3] [APP-061]** and the **Location, Order Limits and Grid Coordinate Plans [EN010158/APP/2.1.2] [AS-004]**. There is currently uncertainty related to the changes to the overhead lines that may result from the proposed National Grid East Claydon Substation extension. However, as is noted in **National Grid Electricity Transmission Limited (NGET)'s Written Representation [REP1-130]** and response to **Examining Authority's Requests for Information [AS-037]**, NGET requires an easement of 30m either side of a tower, its base and the overhead lines that run between them. This gives rise to a 60m easement in diameter from NGET's assets and this significantly reduces the capacity of Fields E10 and E11 to facilitate BESS development.
- 3.2.6. In terms of flood risk, **Annex 1: Proposed Development's spatial overlap with Flood Zone areas** and **Annex 2: Proposed Development's spatial overlap with Surface Water Flood Risk areas** to **Appendix 5 - Sequential and Exception Tests** of the **Planning Statement [EN010158/APP/5.7.3] [REP1-016]** spatially demonstrate the extent to which there is overlap between the operational elements of the Proposed Development and Flood Zone and Surface Water risk areas. This demonstrates the flood risk constraint on Field E10 and along the south eastern side of Field E11. For Field E10, the area outside the flood

risk constraint would be largely impacted by the pylon easements referred to above.

- 3.2.7. The scenario for BESS in Fields E10 and E11 has not been assessed in the Residential Visual Amenity Assessment for Sion Hill Farm. However, it is not considered that likely significant effects would vary from those as already reported in **ES Volume 4, Appendix 10.5: Residential Visual Amenity Assessment [EN010158/APP/6.4] [APP-114]**, which are assessed to be significant.
- 3.2.8. In terms of mitigation of visual impacts, following Phase Two Consultation, the allocation of Fields E11 and E20 was prioritised for the location of the Rosefield Substation, away from Fields E21-E23 in order to reduce visual impacts on users of the North Buckinghamshire Way/Midshires Way, local PRow and residents of Botolph Claydon. As referred to above, Field E11 has been allocated for Rosefield Substation rather than BESS.
- 3.2.9. As confirmed in **Appendix 1: Letter to Buckinghamshire Council on BESS Locations** of the **Applicant's Response to Buckinghamshire Council's Local Impact Report [EN010158/APP/8.11] [REP2-085]**, and expanded on above in relation to paragraphs 4.2.26 & 4.2.27 of the LIR (paragraphs 3.2.2 to 3.2.7 of this note), the constraints relating to locating the BESS in Fields E10 and E11 are set out in many of the DCO Application documents.
- 3.2.10. Parcel 3, as with much of the Site, lies within an area of *“rolling lowland and shallow valleys with relatively gentle variations in height ranging from between 90m AOD to 120m AOD”* as described at paragraph 10.5.10 of **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2.2] [REP2-029]**. As shown by **ES Volume 3, Figure 2.3: Topography Plan [EN010158/APP/6.3] [AS-020]**, Fields E10 and E11 are some of the lower lying areas of Parcel 3 and the Site as a whole. Higher ground to both the east and west would have views towards a BESS located in these fields, which would include locations around Granborough and East Clydon. In response to Buckinghamshire Council's assertion at paragraph 4.2.28 of the LIR that the BESS would be more visually contained within Fields E10 and E11, **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2.2] [REP2-029]** and the supporting **ES Volume 4, Appendix 10.4: Rosefield Viewpoint Analysis [EN010158/APP/6.4] [APP-113]** identify a number of locations where there would be visibility of construction and/or elements of the Proposed Development in Fields E10 or E11 with the current design.
- 3.2.11. In terms of sensitive residential receptors, as set out above in response to paragraphs 4.2.26 & 4.2.27 of the LIR, it is not considered that likely significant effects would vary from those as already reported for Sion Hill Farm in residential visual amenity terms, which are assessed to be significant. However, locating the BESS within Fields E10 and E11 has the

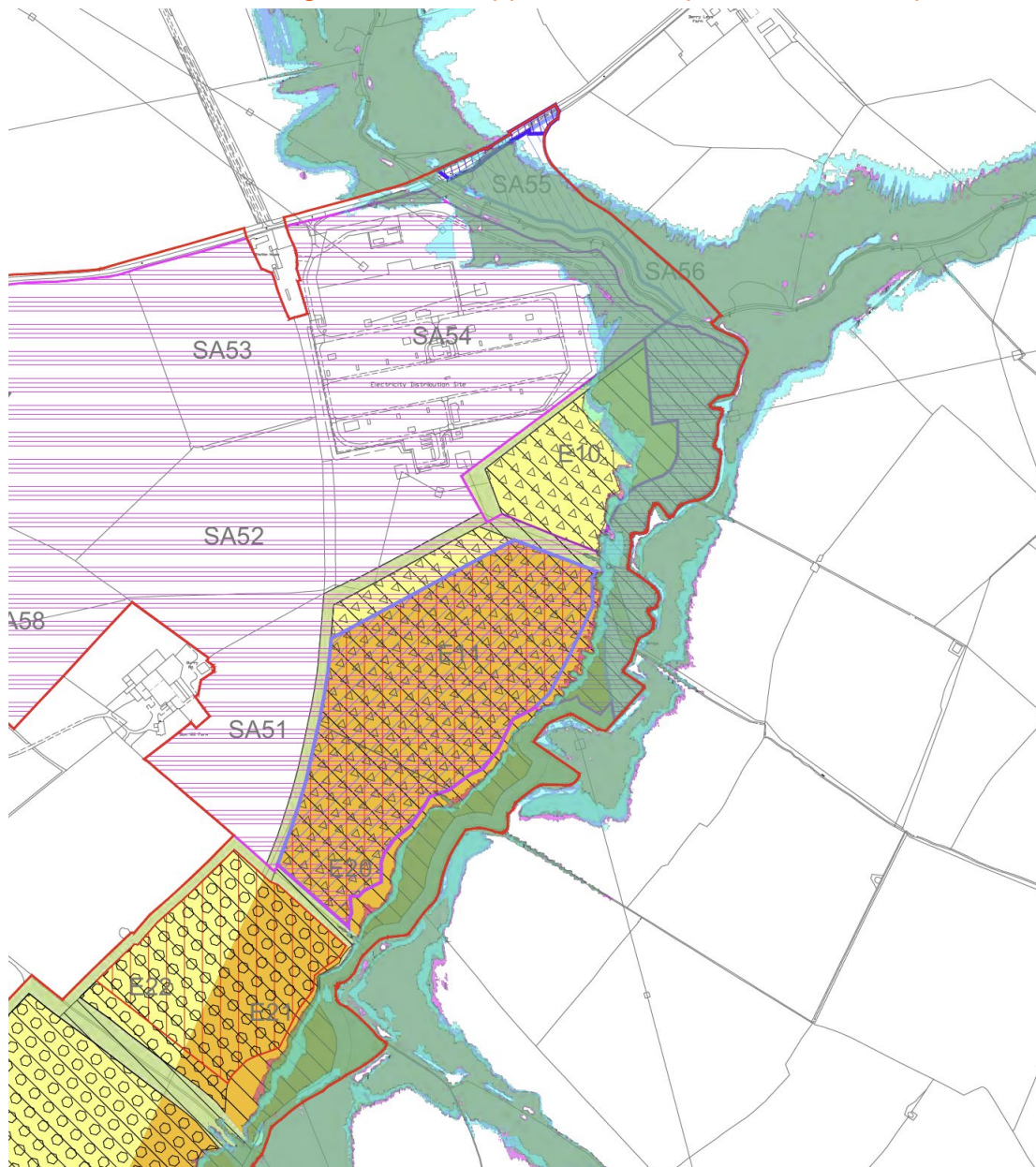
potential to cause significant adverse noise effects at Sion Hill Farm during the operation (including maintenance) phase of the Proposed Development.

4. Further evidence

- 4.1.1. As set out in **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1.2] [REP1-034]** and secured by the **Design Commitments [EN010158/APP/5.9.5]**, the footprint of the BESS compound will be no greater than 105,000m².
- 4.1.2. Figures 1 and 2 below provide extracts from **Annex 1: Proposed Development's spatial overlap with Flood Zone areas** and **Annex 2: Proposed Development's spatial overlap with Surface Water Flood Risk areas** to **Appendix 5 - Sequential and Exception Tests of the Planning Statement [EN010158/APP/5.7.3] [REP1-016]**. These have been zoomed in to Fields E10 and E11, to demonstrate the constraint on these fields as a result of flood zones and surface water flood risk.
- 4.1.3. Figure 3 below shows as black dashed lines the 30m offsets required by NGET either side of a tower, its base and the overhead lines that run between them. These have been overlaid on an extract from **ES Volume 3, Figure 3.5: Zonal Masterplan [EN010158/APP/6.3] [APP-063]**.
- 4.1.4. As set out a paragraphs 3.2.2-3.2.3 above, Rosefield Substation is proposed in Fields E11 and E20 and is likely to require both Fields E11 and E20 to accommodate it, within the 60,000m² footprint secured by the **Design Commitments [EN010158/APP/5.9.5]**. Consequently, only Field E10 would be available to accommodate the BESS. The area left in E10 once the constraints illustrated in Figures 1-3 below have been applied is less than 13,500m², which is less than 15% of the required footprint of the BESS compound.
- 4.1.5. In terms of noise data to further substantiate the points listed in paragraph 3.2.4 above, early quantitative noise modelling based on earlier scheme designs with BESS present in Field E23 demonstrated noise levels at Sion Hill Farm in excess of the criteria explained in **ES Volume 2, Chapter 13: Noise and Vibration [EN010158/APP/6.2.2] [REP1-040]**. Therefore, noise modelling of the latest BESS design located in any part of Fields E10 or E11 has not been undertaken, as its inclusion would be expected to result in an exceedance of the threshold criteria at Sion Hill Farm. However, if it was possible for the BESS to be located within Field E11, which, crucially, would require the assumption that the Rosefield Substation was not a constraint to locating the BESS in Field E11, the BESS would be up to 200m closer to Sion Hill Farm than the assessment made of BESS within Field E23 for the Phase Two Consultation. BESS located within Field E10 would be around 150m further from Sion Hill Farm than the assessment made of BESS within Field E23 for Phase Two Consultation. However, there would be insufficient space to locate the BESS in E10 as set out above. The noise prediction model assumes that noise will propagate from all sources simultaneously downwind, regardless

of receptor location. As a result, downwind propagation would be considered in all instances.

Figure 1: Extract from Annex 1: Proposed Development's spatial overlap with Flood Zone areas of Planning Statement Appendix 5: Sequential and Exception Tests



LEGEND: FLOOD ZONES


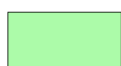

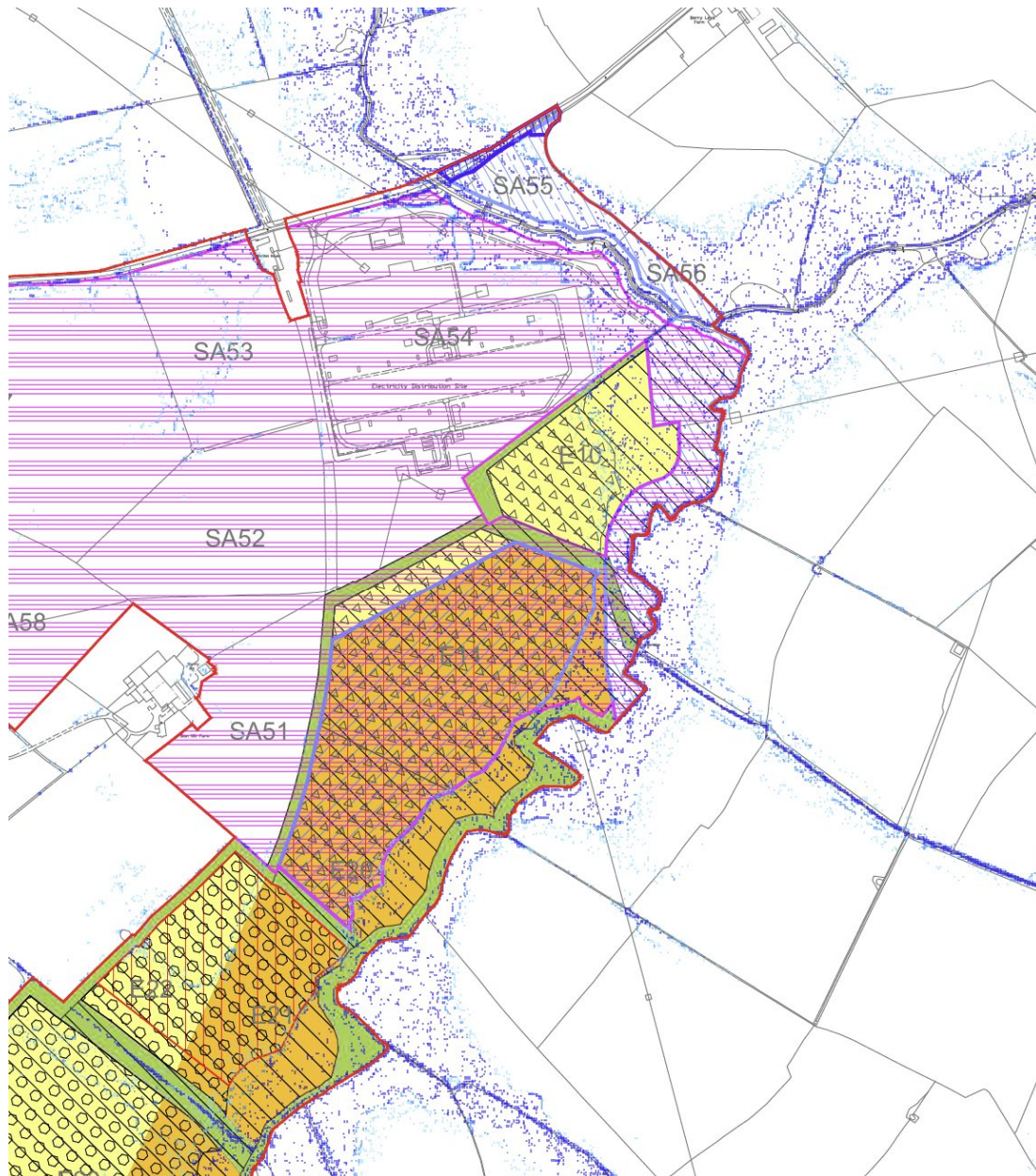
-  Flood Zone 2
-  Flood Zone 3B - 30Yr Fluvial Extent
-  Flood Zone 3A - 100 Yr Fluvial Extent

Figure 2: Extract from Annex 2: Proposed Development's spatial overlap with Surface Water Flood Risk areas of Planning Statement Appendix 5: Sequential and Exception Tests



LEGEND: SURFACE WATER




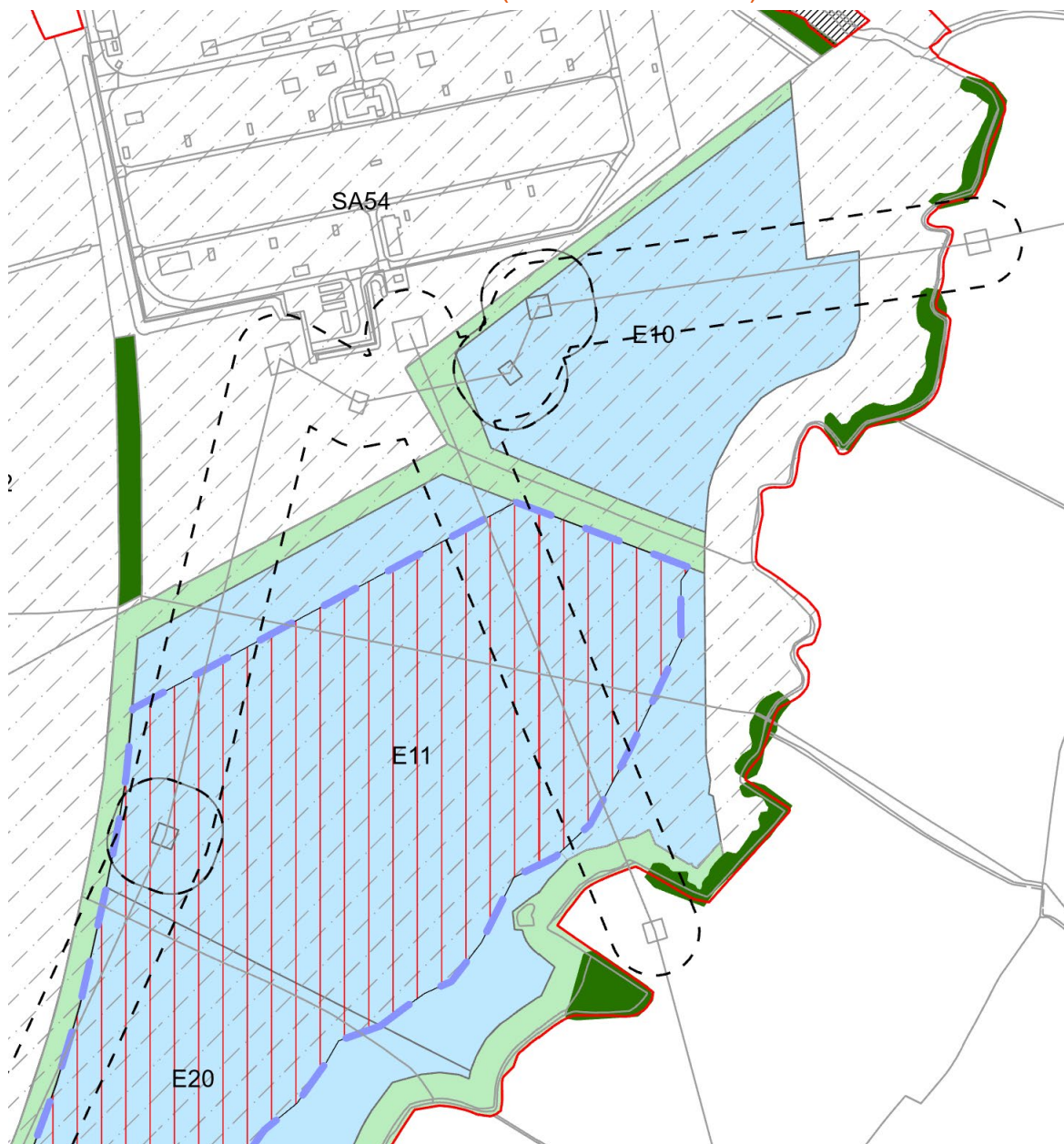
-  EA 3.3% SW Risk
-  EA 1.0% SW Risk
-  EA 0.1% SW Risk

Figure 3: Extract of Zonal Masterplan showing 30m offsets from existing pylons and overhead lines in Fields E10 and E11 (black dashed lines)





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