



Meridian Solar Farm

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Volume 8

Post-Submission
Application Documents

8.36 Post ISH1 Note –
Sequential and Exception
Tests

APFP Regulation 5(2)(q)

Infrastructure Planning (Applications:
Prescribed Forms and Procedure)
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1. Introduction

1.1. Overview

- 1.1.1. This Post ISH1 Note: Sequential and Exception Tests forms part of an application by Meridian Solar Farm Limited to the Secretary of State under the Planning Act 2008 (the 'Act') for a Development Consent Order (the DCO Application) for the Meridian Solar Farm ('Scheme'). It has been produced in response to Action Points 3, 7 and 8 following ISH1 [EV3-008].
- 1.1.2. The purpose of this note is to further explain how the Sequential Test was applied as part of Site selection, including the modelling relied upon, and detailed evidence of how the sequential approach has been applied to the layout and design of the Scheme. Furthermore, this note sets out how the Exception Test has been applied to the Scheme.
- 1.1.3. This document should be read alongside information that is contained within the other Application documents and plans.

1.2. Structure

- 1.2.1. This note is structured as follows:
 - Section 2: An overview of the policy context relevant to the application of the Sequential and Exception Tests.
 - Section 3: Details of how flood risk was considered at a strategic Site selection level, including details of how the search area for the Site was defined, and identification of the broad Solar Development Area.
 - Section 4: Application of the Sequential Test within the Site, including details of the hydraulic modelling used to inform flood risk within the Site.
 - Section 5: Application of the Exception Test for infrastructure proposed within Flood Zone 3a and 3b.
 - Section 6: Summary of the note.

2. Overview of the Policy Context

- 2.1.1. The Overarching National Policy Statement for Energy (EN-1)¹ paragraph 5.8.6 requires applicants to set out the 'sequential' approach taken to direct new energy infrastructure to areas with the lowest risk of flooding. Paragraph 5.8.7 of EN-1 goes on to state that only in 'exceptional' circumstances where it is necessary to site this infrastructure in areas of flood risk, the development has to be made safe for the duration of its lifetime without increasing flood risk elsewhere and should seek to reduce flood risk overall. It should also be designed and constructed to remain operational in times of flood.
- 2.1.2. The Flood Risk and Coastal Change section of Planning Practice Guidance (PPG)² sets out detailed guidance on the application of the Sequential Test in paragraphs 023 to, 029. Paragraph 024 requires applicants to steer new development to areas with the lowest risk of flooding from all sources. Where this is not possible, the Sequential Test should compare reasonably available sites within medium risk areas in the first instance, and then, only where there are no reasonably available sites in low and medium risk areas, within high-risk areas.
- 2.1.3. EN-1, paragraph 5.8.9 of states "*if, following application of the Sequential Test, it is not possible, (taking into account wider sustainable development objectives) for the project to be located in areas of lower flood risk, the Exception Test can be applied ... The test provides a method of allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available*". Guidance on the application of the Exception Test is provided within paragraphs 031 to 37 of Flood Risk and Coastal Change section of PPG.
- 2.1.4. In applying the above policy and guidance, the Applicant has considered the extent to which the Scheme could reasonably be directed to areas at lower risk of flooding having regard to the nature, scale and locational requirements of the Scheme. This has involved consideration of the availability of alternative locations within an appropriate geographical area of search, whether such alternatives would be capable of meeting the same development need, and whether they

¹ DESNZ (2025) Overarching National Policy Statement for energy (EN-1), 2025. Available at: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1-2025> [Accessed 5 October 2026]

² MHCLG and DHLUC (2025) Flood Risk and Coastal Change Planning Practice Guidance. Available at: <https://www.gov.uk/guidance/flood-risk-and-coastal-change> [Accessed 5 October 2026]

would have a reasonable prospect of being delivered within the same timeframe as the Scheme.

- 2.1.5. The Applicant has applied the Sequential Test at two levels. Firstly, at a strategic level through the identification and selection of the Solar Development Area. Secondly, within the Site itself through the iterative design process, including the placement of different elements of the Scheme having regard to flood risk, vulnerability and the findings of **ES Appendix 11-3: Flood Risk Assessment [REP1-050]**. The strategic application of the Sequential Test is considered in Section 3 of this note, with the application of the sequential approach within the Site addressed within Section 4. Section 5 provides a summary of how the Exception Test was applied.

3. Strategic Application of the Sequential Test

3.1. Defining the Search Area

- 3.1.1. The Applicant has had regard to the sequential approach to flood risk through the site selection and design of the Scheme. Paragraph 27a of the PPG advises that the area over which the Sequential Test is applied should reflect local circumstances, including the catchment area for the type and scale of development proposed and the need that the development is intended to address. The test should be applied proportionately and should focus on realistic alternatives in areas of lower flood risk that could meet the same development need. For infrastructure of regional or national importance, the area of search may extend beyond individual local planning authority boundaries.
- 3.1.2. At the strategic site selection stage, it would not have been proportionate to undertake detailed hydraulic modelling across the entirety of the potential area of search. The Applicant therefore relied upon the best publicly available information available at the time to identify land opportunities suitable for further consideration. In accordance with paragraph 024 of the PPG, the presence of existing flood risk management infrastructure was ignored at the strategic site selection stage and the Environment Agency's Flood Zone 2 and 3 extents (now available as part of the Environment Agency's Flood Map for Planning) were reviewed.
- 3.1.3. As outlined in **Post ISH1 Note: Strategic Site Selection** (Doc Ref. 8.35), the potential for this area was originally brought to the Applicant's attention in respect to availability and landowner interest at the area now captured within Land Parcel D. The Applicant subsequently sought a grid connection within the surrounding area. A grid connection offer was subsequently confirmed by NGET for a 750MW Point of Connection (PoC) within the approximate area between Spalding and Walpole, to be brought forward as part of the planned Grimsby to Walpole project.
- 3.1.4. As set out in the **Planning Statement Appendix D: Site Selection Report** [APP-264], the Applicant did not adopt a rigid search boundary because the precise location of the Weston Marsh substation had not been confirmed at that stage. It nevertheless undertook an appraisal of the initial Land Parcel D land, as well as considered the broader availability and suitability of land within approximately 15 km of the indicative PoC area.

- 3.1.5. The Applicant considered that this represented a realistic distance within which a grid connection could potentially be delivered. It also provided a sufficiently broad area within which to consider land availability and the distribution of environmental and physical constraints, including circumstances in which land closest to the emerging PoC was unavailable or materially constrained.
- 3.1.6. This search area was not defined by reference to local planning authority boundaries, which do not materially affect the physical ability to construct or operate the Scheme. Instead, it reflects a proportionate geographical area within which the Scheme could realistically connect to the PoC, while avoiding an unduly long transmission route.

3.2. Identification of the Solar Development Area

- 3.2.1. The vast majority of land near the PoC is identified as Flood Zone 3 as illustrated on Plate 3-1. While areas of Flood Zone 1 and Flood Zone 2 land exist within the search area, these are generally fragmented and dispersed.

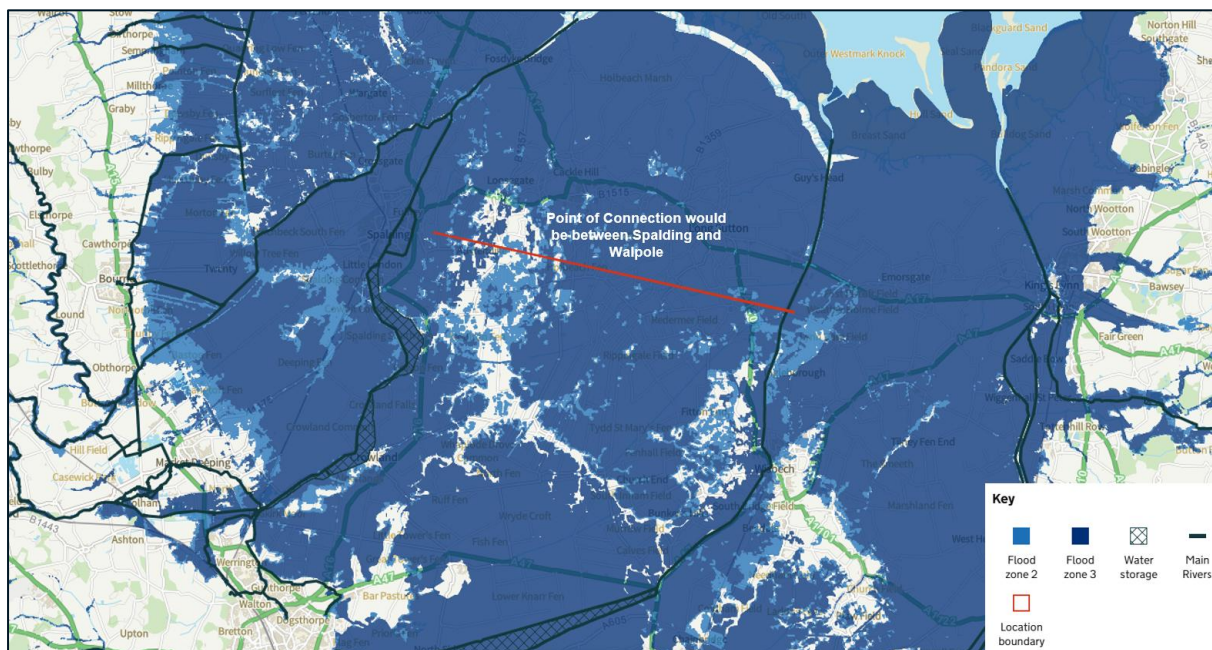


Plate 3-1 Flood Risk for Planning

- 3.2.2. In applying the Sequential Test, the PPG recognises that in some cases, it may be relevant to consider whether large scale development could be split across a number of alternative sites at lower risk of flooding but only where those alternative sites would be capable of accommodating the development in a way which would still serve its intended market(s) as effectively.

3.2.3. In terms of establishing what is a 'reasonably available' site, paragraph 028 of PPG states:

"Sites should be considered 'reasonably available' for the purposes of the sequential test if their location is suitable for the type of development proposed, they are able to meet the same development needs and they have a reasonable prospect of being developed at the same time as the proposal.

In considering whether alternative lower-risk sites (which could, where relevant, be a series of two or more smaller sites) would be capable of accommodating the proposed development, such alternative sites do not need to be owned by the applicant to be considered 'reasonably available'".

3.2.4. In this context, this required consideration of whether a combination of smaller sites within the search area could collectively:

- Accommodate the generating capacity necessary to meet the identified need (i.e. 750MW);
- Connect efficiently and in a deliverable manner to the proposed Weston Marsh substation;
- Accommodate the associated infrastructure, including substations and mitigation;
- Be assembled, consented and delivered within an equivalent programme; and
- Operate as an integrated Scheme without requiring an excessive or materially more disperse network of connecting infrastructure.

3.2.5. The Applicant did not conclude that lower-risk land to that initially identified in the "Land Parcel D" area was unavailable. Rather, the Applicant concluded that no lower-risk site, or combination of lower-risk sites, was identified that would provide a clearly preferable overall outcome when considered against the Scheme's generating capacity requirements, connection needs, land availability, environmental constraints and deliverability considerations.

3.2.6. To fulfil its objectives, the Applicant required approximately 1,000 – 1,200 hectares of land to form the Solar Development Area, to deliver 750MW within its grid connection offer. Not all land within the Solar Development Area ultimately becomes developable area. Environmental buffers, drainage features, landscaping, biodiversity enhancement areas, access tracks and electrical infrastructure all reduce the amount of land available for solar PV panels. The Applicant therefore required flexibility within the overall landholding to respond to constraints identified through survey work and detailed design.

- 3.2.7. Noting that paragraph 028 does not require alternative sites to be owned by an application, it is generally standard within the industry to secure the land for the Solar Development Area through voluntary agreement. This accords with guidance on the use of compulsory acquisition³, which encourages the securing of land by voluntary agreement, with compulsory acquisition relied upon should attempts to acquire land by agreement fail.
- 3.2.8. In this case, given the length of time the Solar Development Area would be required by the Applicant (up to 40 years), it does not seem reasonable to seek permanent acquisition of land without the agreement of the landowner, particularly when there are willing landowners with suitable sites available.
- 3.2.9. Whilst isolated areas of Flood Zone 1 are present within the wider search area, the Applicant did not identify any single contiguous area capable of accommodating the Scheme's land requirements. The Flood Zone 1 land is generally fragmented and dispersed across the wider landscape. The Applicant therefore considered whether a number of smaller areas could collectively provide a lower-risk alternative.
- 3.2.10. In doing so, it had regard to the requirement within paragraph 028 of the PPG for alternative sites to meet the same development need and have a reasonable prospect of being developed within the same timeframe. The Applicant concluded that a collection of smaller and geographically separated sites would not provide the same level of design flexibility, would require additional connecting infrastructure and land assembly, and would not represent a comparable alternative capable of delivering the Scheme at the proposed scale and programme.
- 3.2.11. A configuration relying upon multiple separated areas of lower-risk land would also need to address the additional connection infrastructure required between those areas and the Scheme's 400kV substation. Suitability of a site cannot therefore be determined solely by adding together the smaller areas of individual Flood Zone 1 parcels in the area of search.
- 3.2.12. Taking these factors into account, the Applicant concluded that there were no reasonably available alternative locations within the relevant search area that were at a lower risk of flooding to the Land Parcel D area (or its immediately surrounding area) which were capable of meeting the same development need

³ See paragraph 25 of DCLG (2013). Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land. Accessed September 2026.

within the same timeframe. The Applicant therefore proceeded to refine the design of the Scheme and apply the sequential approach within the identified Solar Development Area as detailed below.

4. Application of the Sequential Test within the Site

4.1. Overview

- 4.1.1. Following the strategic Site selection, it was evident that parts of the Site would fall within Flood Zones 2 and 3 as defined by the Environment Agency's Flood Map for Planning (FMfP)⁴. As such, in accordance with NPS EN-1 paragraphs 5.8.21 and 5.8.29, the sequential approach was applied to the development of the Scheme layout and design, taking into account flood risk from all sources, and the impacts of climate change.
- 4.1.2. Paragraph 5.8.29 sets out that:
- "vulnerable aspects of the development should be located on parts of the site at lower risk and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities should be taken to lower flood risk by reducing the built footprint of previously developed sites and using SuDS."*
- 4.1.3. Sections 5.7 and 5.8 of **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] demonstrate flood risk from surface water, groundwater, sewers and artificial sources as low across the Site for the siting of infrastructure. As such, the application of the sequential test relates to fluvial and tidal flood risk only.
- 4.1.4. The application of the sequential test for the fluvial and tidal flood risk at Site level was based on the site-specific flood risk assessment and detailed hydraulic modelling. The subsequent sections of this note describe the methodology and outputs of the detailed hydraulic modelling, which informed the siting and design of infrastructure within the Scheme (Section 4.2), and summarise how the sequential test was applied at Site level (Section 4.3).
- 4.1.5. The subsequent sections of this note should be read in conjunction with **ES Appendix 11-3: Flood Risk Assessment** [REP1-050], and alongside the following reference plans that identify the Site layout in relation to fluvial and tidal flood risk:
- Annex D: Drainage General Arrangement Drawing, of **ES Appendix 11-4: Outline Drainage Strategy** [APP-231];

⁴ Gov.UK Flood Map for Planning: <https://flood-map-for-planning.service.gov.uk/> [Accessed 5 October 2026]

- Figure 1-1 of Annex D: Flood Zones 3a and 3b, of **ES Appendix 11-3: Flood Risk Assessment** [REP1-049]; and
- Figures 15 – 18 of the River Welland Hydraulic Modelling Report, within Annex B of **ES Appendix 11-3 Flood Risk Assessment** [REP1-048].

4.1.6. It is noted that the Applicant has received comments from the Environment Agency on hydraulic modelling and is currently in the process of resolving these comments as part of the engagement for the **Statement of Common Ground with the Environment Agency** (Doc Ref. 8.12 Rev 2). The comments received, however, do not affect the extents of the Flood Zones shown in documents above.

4.2. Methodology for Hydraulic Modelling

Overview

Solar Development Area

- 4.2.1. With regard to the approach for assessing fluvial and tidal flood risk, **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] has not relied upon the FMfP, or mapping from the South East Strategic Flood Risk Assessments (SFRA)⁵ to develop the Scheme layout within the Solar Development Area. The infrastructure layout has, instead, been based upon detailed site-specific hydraulic modelling developed using current topographic, LiDAR, hydrological and hydraulic data, taking into account allowances for future climate change.
- 4.2.2. Table 5-8 of **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] presents the details of the hydraulic modelling undertaken for the Solar Development Area, noting the worst-case flood model for each Land Parcel and the mitigation proposed. The detailed model outputs provide a more accurate representation of the assessment of flood risk within the Solar Development Area than the FMfP and form the primary basis upon which the infrastructure has been sited against, demonstrating the Sequential Test principles have been applied, along with due consideration of flood risk from other sources.
- 4.2.3. For the design of the Scheme and proposed mitigation, the assessment has considered detailed modelling of flood risk for the 0.1% Annual Exceedance

⁵ South East Lincolnshire Joint Strategic Planning Committee (2017) South East Lincolnshire Strategic Flood Risk Assessment. March 2017. Available at:

[Accessed 5 October 2026]

Probability (AEP) (1 in 1,000 year) event with climate change, as required by the Environment Agency, and as also set out within the standing advice matrix, within Appendix C: Standing Advice, of the South East Lincolnshire SFRA⁶. The 0.1% AEP event in this case is more onerous than the 1% AEP (1 in 100 year) event usually required for modelling when assessing a development's design and layout to obtain planning consent, albeit the 1% AEP event with climate change has also been modelled for the Solar Development Area.

- 4.2.4. The 0.33% (1 in 30 year) extent has also been modelled for the undefended Postland Pumped Catchment and South Holland Main Drain, to provide the present day Flood Zone 3b extents.
- 4.2.5. Importantly, the Sequential Test has been informed by the consideration of both defended and undefended flood risk scenarios:
- Defended: River Welland; and
 - Undefended: Postland Pumped Catchment and South Holland Main Drain.
- 4.2.6. These model scenarios represent the principal design basis for the assessment and have been used to identify the spatial extent of flooding both under present-day conditions and when accounting for future climate change impacts over the operational lifetime of the Scheme.
- 4.2.7. The River Welland benefits from formal flood defences, as shown in **Figure 1-6 of ES Appendix 11-3 Flood Risk Assessment - Annex D** [REP1-049]. Adjacent to the Solar Development Area, these comprise the Crowland and Cowbit Washes Flood Storage Reservoir and associated embankments, which constitute a large raised reservoir under the Reservoirs Act 1975 (Act) (as amended). The defended floodplain is afforded a significant standard of protection (at least the 0.1% AEP plus 28% climate change event), i.e. with the flood defences in place, the Site would not flood up to the 0.1% AEP plus climate change event. However, it is recognised that a low residual flood risk exists from a breach. Accordingly, the assessment has considered breach modelling associated with the River Welland defences, in order to understand the potential consequences of a defence failure occurring during an extreme flood event and the impact of flood risk elsewhere.

⁶ South East Lincolnshire Joint Strategic Planning Committee (2017) Appendix C: South East Lincolnshire SFRA: [REDACTED] [Accessed 5 October 2026]

- 4.2.8. Under the Act, reservoirs are required to be maintained to a very high level, and are routinely inspected. The Crowland and Cowbit Washes reservoir is owned and maintained by the Environment Agency and is expected to be maintained to prevent a breach scenario from occurring. However, in the low risk residual event of a breach, mitigation for infrastructure within the breach extent has been provided, to ensure the Scheme remains operational in times of flood.

Grid Connection Route

- 4.2.9. With regards the Grid Connection Route (GCR), detailed hydraulic modelling has not been undertaken, other than for the 400kV Substation and BESS located in Land Parcel B, on the basis that the flood risk to steel lattice pylons within the GCR are at low residual risk of flooding during a breach of the River Welland flood defences, being elevated above ground and spaced approximately 350m apart. Adopting this proportionate approach to the GCR is considered reasonable, given the impact to and from pylons is negligible, as considered in paragraphs 5.4.1 to 5.4.7 of **ES Appendix 11-3: Flood Risk Assessment** [REP1-050], and that a detailed hydraulic model will likely be unable to discern any difference in flood depth between the baseline and with-Scheme modelled scenarios.
- 4.2.10. Notwithstanding the above, the Cable Sealing End Compound (CSEC) South is located at the extremity of Flood Zone 2 and 3, as shown on the FMfP, and any CSEC(s) located within Work No. 14 area would be located within the extent of Flood Zone 3. In the unlikely event of a breach of the defences, it is unlikely the CSEC(s) will be impacted; however, mitigation in the form of bunding or a wall has been proposed, as secured through the **Design Parameters** [REP1-055], to ensure they will remain operational in times of flood.

Hydraulic Modelling in Relation to Flood Zone 2

- 4.2.11. This distinction of Flood Zone 2 is important when discussing the assessment, as the 0.1% AEP plus climate change extent includes the Flood Zone 2 planning extent. Flood Zone 2 is defined within Table 1 of Annex F of the National Planning Policy Framework (NPPF)⁷, as:

⁷ MHCLG (2026) National Planning Policy Framework, Annex F: Managing flood risk and coastal change. Available at: <https://www.gov.uk/guidance/national-planning-policy-framework-annex-f-managing-flood-risk-and-coastal-change> [Accessed 5 October 2026]

“Land having between a 1% and 0.1% annual probability of river flooding; or land having between a 0.5% and 0.1% annual probability of sea flooding (land shown in light blue on the Flood Map for Planning).”

- 4.2.12. Therefore, the 0.1% plus climate change extent modelled for design and mitigation purposes already encompasses the entirety of the Flood Zone 2 envelope (i.e. the 0.1% extent without climate change). As a consequence, the modelled flood extents effectively supersede the Flood Zone 2 boundary for the purposes of the assessment, and a separate Flood Zone 2 extent has not been presented.
- 4.2.13. Furthermore, in the undefended scenario, land located beyond the modelled 0.1% AEP plus climate change flood extent is effectively analogous to Flood Zone 1 for the purposes of the Sequential Test assessment. This was discussed and agreed with the Environment Agency during a meeting on 16 September 2026.
- 4.2.14. As such, any infrastructure proposed outside the 0.1% AEP plus climate change extent is within areas of the lowest fluvial flood risk, thereby satisfying the Sequential Test with regards fluvial flood risk.

4.3. Application of the Sequential Test on Site

Siting of Infrastructure

Solar Development Area

- 4.3.1. The siting of the below Scheme components was considered in turn on the basis of their potential vulnerability to flood risk and their importance to the operation of the Scheme, to locate these components to areas of lower flood risk, where reasonably practicable:
- 400kV On-Site Substation and Battery Energy Storage System (BESS) Compound;
 - 132kV On-Site Substations;
 - Solar stations; and
 - Solar panels.

400kV On-Site Substation and BESS Compound

- 4.3.2. Priority was first given to the siting of the 400kV On-Site Substation and BESS Compound outside of flood risk extents, recognising this key infrastructure as the most critical operational component of the Scheme.

- 4.3.3. **ES Chapter 3: Alternatives and Design Evolution** [APP-054] describes the alternatives considered for the 400kV On-Site Substation and BESS Compound. The location of the 400kV On-Site Substation and BESS Compound was linked to the routing of the Grid Connection. The Grid Connection location was narrowed down to two potential corridors, a western corridor starting from Parcel B-5 and an eastern corridor starting from Parcel D-1. Consequently, Parcel B-5 and Parcel D-1 formed the main two options for the siting of the 400kV On-Site Substation and BESS Compound.
- 4.3.4. Hydraulic modelling subsequently demonstrated that Parcel D-1 is located within Flood Zone 3b associated with the South Holland Main Drain Gotts catchment (i.e. 0.33% AEP extent), whilst Parcel B-5 location is located outside the Flood Zone 3a and 3b extents of the South Holland Main Drain and Postland Catchment. Whilst Parcel B-5 is at a lower risk of flooding than Parcel D-1, flood mitigation would still be required within the design of the 400kV On-Site Substation and BESS Compound, as the location is within the River Welland breach extent and 0.1% AEP with climate change extent of the South Holland Main Drain.

132kV On-Site Substations

- 4.3.5. The 132kV substations were then reviewed to locate these other critical components of the Scheme outside of fluvial flood risk areas (and areas of lowest flood risk from all sources), where possible.
- 4.3.6. For instance, once the hydraulic modelling had been undertaken following Statutory Consultation, the On-Site 132kV substation which was previously located within Land Parcel B was moved further east into Land Parcel C. This was to minimise the overlap with the flood extents that could occur in the event of a breach of the River Welland flood defences (see Plate 4-1 and Plate 4-2 below).
- 4.3.7. As the entirety of Parcel A is within the River Welland breach extent, no alternative locations for the 132kV On-Site Substations within Parcel A were identified. For the 132kV On-Site Substation within Parcel D, a commitment was included within the **Design Parameters** [REP1-056], to confirm that *'No substation infrastructure would be located within the 0.1% AEP with 13% climate change allowance for South Holland Main Drain flood modelling extent in Land Parcel D'*.

Plate 4-1 Location of the 132kV Substation in Parcel B at Statutory Consultation

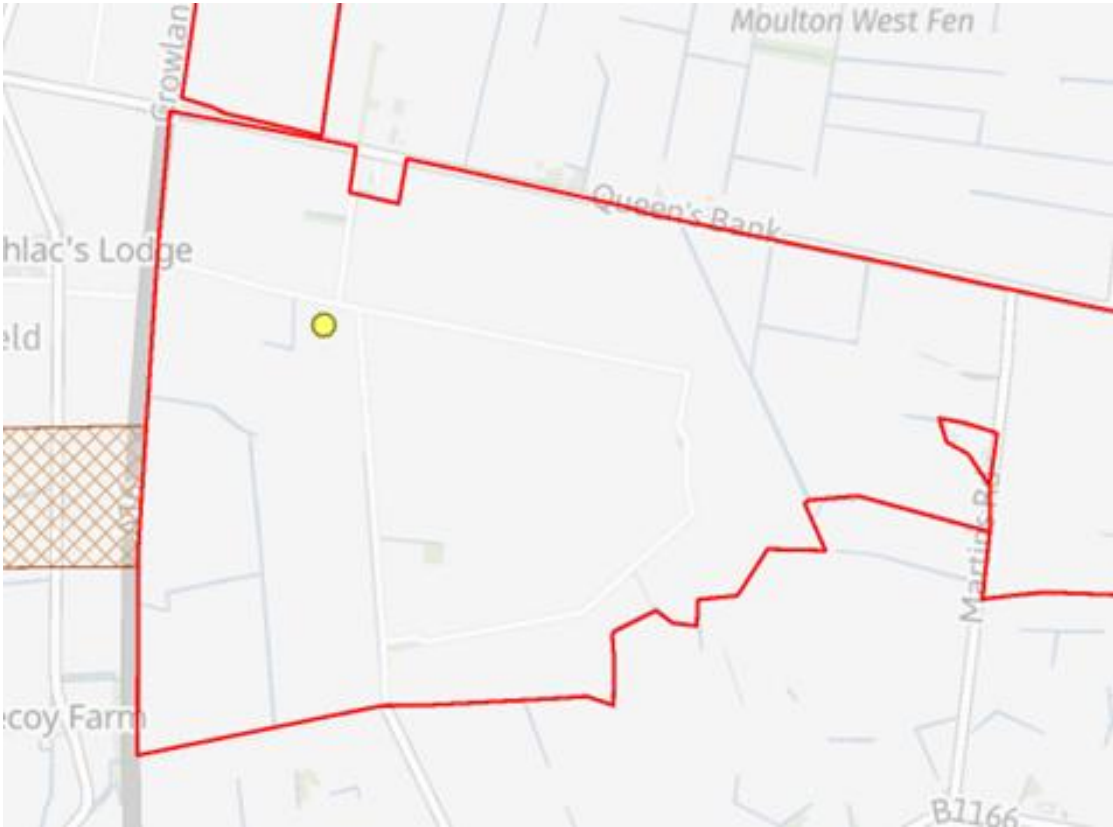
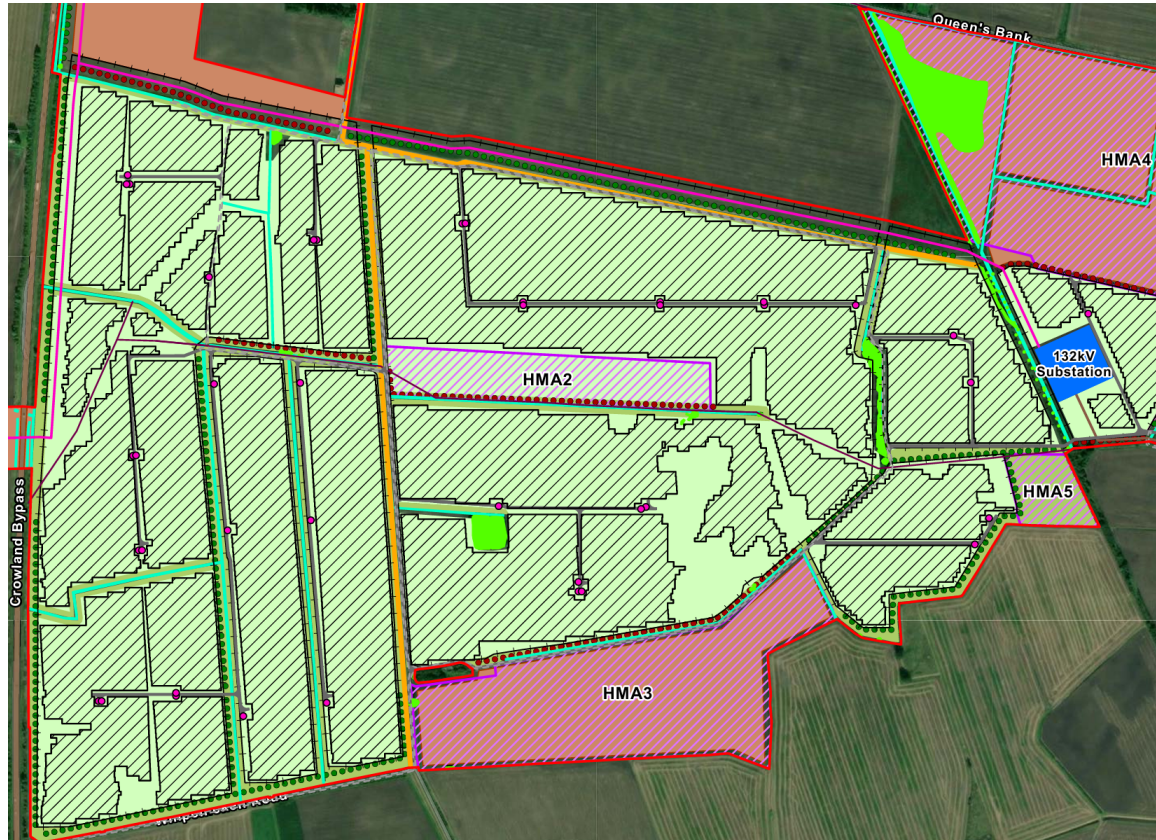


Plate 4-2 Final location of the 132kV Substation in Parcel C



Solar Stations

- 4.3.8. Following the identification of suitable locations for the 400kV On-Site Substation and BESS Compound, and the 132kV On-Site Substations, the locations of the solar stations were reviewed and refined with the same approach, seeking to avoid areas of critical flood risk and prioritising locations outside of fluvial and tidal flood risk up to the 0.1% AEP plus climate change extents. All solar stations (with the exception of the six solar stations within the South Holland Main Drain Gotts catchment) were located outside the areas of Flood Zone 3a and Flood Zone 3b associated with the Postland Catchment and the South Holland Main Drain in the illustrative design. This commitment is also secured within the **Design Parameters** [REP1-056], which states that: 'No solar stations would be located in areas of Flood Zone 3a or Flood Zone 3b, except for the Gotts catchment in Parcel D-1.'

Solar Panels

- 4.3.9. Only after these higher-value and more vulnerable infrastructure elements had been accommodated were solar panel arrays considered within the remaining available land.

- 4.3.10. Where practicable, the design for the solar panel arrays has avoided areas of Flood Zone 3a and 3b. Specifically, areas of land within larger areas of Flood Zone 3b in Land Parcel B and C are proposed to be used for habitat management instead, which is shown in the plates below. This includes Habitat Management Area (HMA) 3, HMA 4 and HMA 5 which together comprise 61 hectares. HMA 3 and HMA 4 are proposed to remain within arable use and will provide skylark plots, whilst HMA 5 is proposed to be managed as species rich grassland. Further details of the HMAs are set out within the **Outline Landscape and Ecology Management Plan (OLEMP)** [REP1-070].

Plate 4-3 Flood Zones 3a and 3b (extract of Figure 1-1 from Annex D [REP1-049])

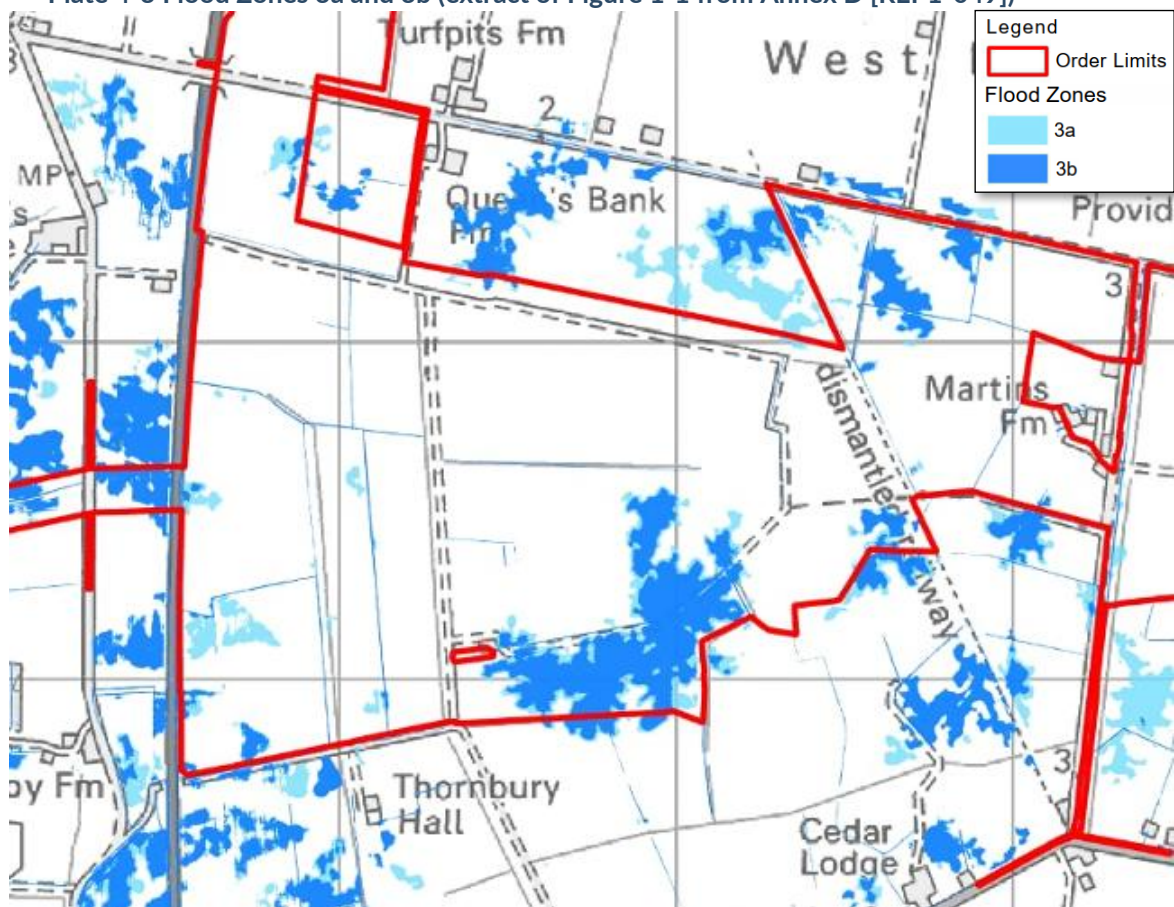
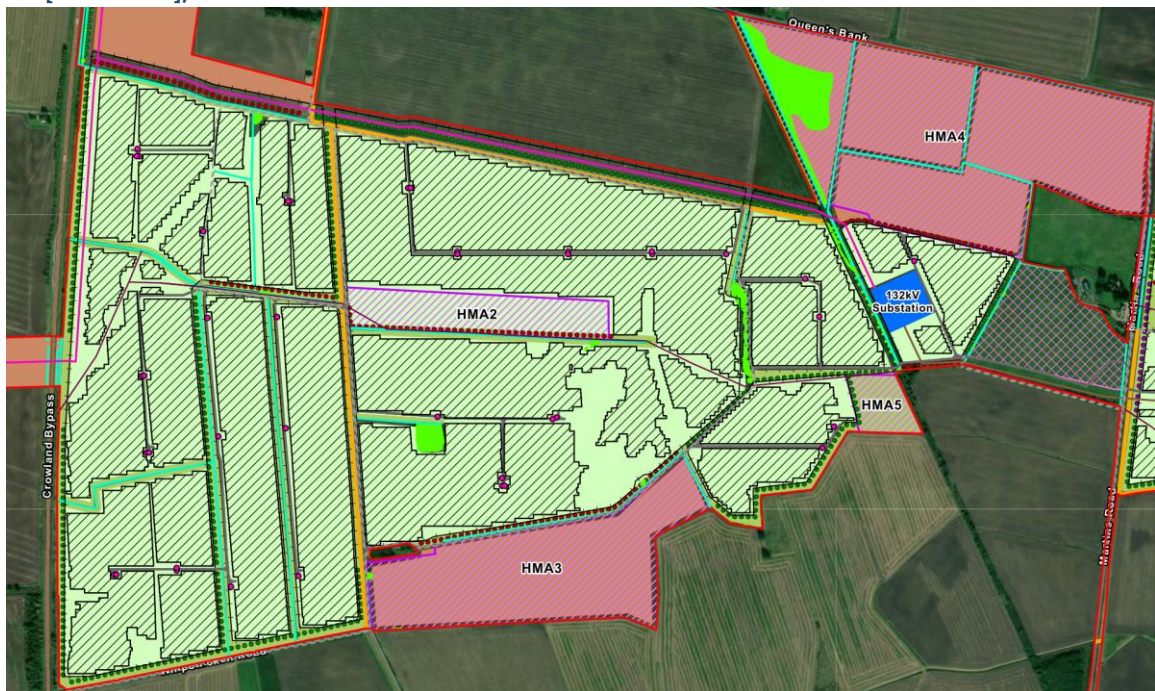
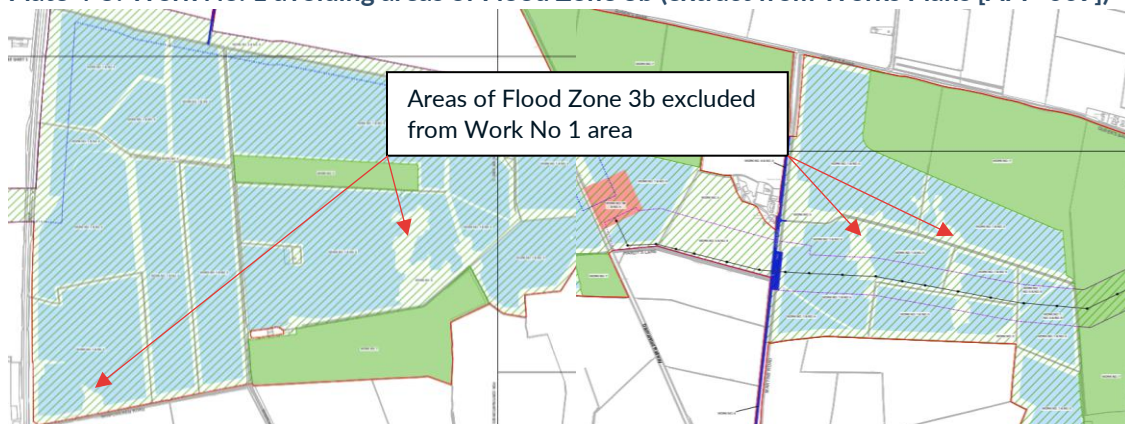


Plate 4-4 Habitat Management Areas within Land Parcel B and C (extract of ES Figure 2-2 [REP1-024])



4.3.11. Areas of Flood Zone 3b avoided by Work No. 1 (solar panels) can also clearly be evidenced from **Works Plans** [APP-009], see Plate 4-5 below.

Plate 4-5: Work No. 1 avoiding areas of Flood Zone 3b (extract from Works Plans [APP-009])



4.3.12. There are limited remaining areas of Flood Zone 3a and 3b which overlap with the areas of solar panels within the Site, as shown on **Annex D** of the **ES Appendix 11-4: Outline Drainage Strategy** [APP-231]. This has been considered acceptable where solar panels are considered the least vulnerable and most easily recoverable components of the Scheme.

Grid Connection Route

- 4.3.13. As set out in sections above, pylons associated with the 400kV overhead line are not sensitive to flooding and their impact on flood risk is negligible.
- 4.3.14. CSECs, associated with partial undergrounding of the Grid Connection, have been sited outside the Flood Zone 2 and 3 extents of the FMfP, where reasonably practicable (e.g. CSEC North is located within Flood Zone 1 in its entirety and CSEC South abuts the edge of Flood Zone 3 extent of the River Welland in the undefended scenario). Taking a precautionary approach, flood mitigation has been specified for CSEC South within the **Design Parameters** [REP1-056].
- 4.3.15. Within Work No. 14 area, the siting of any CSECs is to be determined as part of detailed design. However, the entirety of Work No 14 area is located within Flood Zone 3 extent associated with the River Welland in the undefended scenario. As such, flood mitigation has been specified for any CSEC(s), if required within the Work No 14 area as part of the **Design Parameters** [REP1-056].

Solar Development Area & Grid Connection Route Construction Compounds

- 4.3.16. Where reasonably practicable, temporary construction compounds will be located outside of areas of fluvial Flood Zones 2 and 3 including allowances for climate change. This is secured through the commitments included within Table 3-7 of the **Outline Construction Environmental Management Plan (OCEMP)** [REP1-061]. However, it is anticipated that some temporary construction compounds may be located in Flood Zone 2 and 3, where this is unavoidable, due to the entirety of the fields, where access to facilities and materials is required, being within Flood Zone 2 and 3 extents.
- 4.3.17. Within the Solar Development Area, all temporary construction compounds are located outside the Flood Zone 3a and 3b extents associated with the Postland Catchment and South Holland Main Drain, with the exception of two compounds within Parcel D-1, where the entirety of Parcel D-1 is included within Flood Zone 3b extent. The **OCEMP** [REP1-061] includes a specific commitment which states that '*No temporary construction compounds will be located within the flood extents of 1% AEP + 28% climate change of the Postland Catchment and 1% AEP + 13% climate change South Holland Main Drain Catchment (with the exception of the Gotts catchment)*'. Where temporary construction compounds are located within Parcel D-1, the **OCEMP** [REP1-061] states that safe refuge is to be provided at these compounds by locating a welfare cabin, either raised on a platform or stacked on top of the ground floor unit, set above 1% AEP + 13% climate change South Holland Main Drain flood depth at the location, with 300mm freeboard provided. No material storage would be provided within the Flood Zone 3b extent area.

- 4.3.18. Construction compounds within Solar Development Area Land Parcels A, B and C and the Grid Connection Route have been located outside Flood Zone 3a and 3b extents, however, fall within the 0.1% AEP with climate change extent associated with the River Welland and the Flood Zone 3 extent from FMfP (in the Grid Connection Route). Whilst such a layout would trigger a location within the scope of the sequential test, these locations still benefit from defences associated with the floodplain of the River Welland, resulting in actual low residual long term flood risk.
- 4.3.19. For certainty as to the safety of on-site construction staff in accordance with the NPS EN-1⁸ paragraphs 5.8.15, and 5.8.33 to 5.8.36, it is proposed that safe refuge is provided at these compounds by locating a welfare cabin, either raised on a platform or stacked on top of the ground floor unit, set above the relevant defended 0.1% AEP + 28% climate change River Welland breach flood depth at the location, with 300mm freeboard provided. This is secured within the **OCEMP** [REP1-061]. Furthermore, an **Outline Flood Emergency Response Plan** (Doc Ref. 7.10) has been prepared for Deadline 2 to be included as Appendix A to the **OCEMP** [REP1-061], to demonstrate safe access and egress routes to the Site.

Mitigation Embedded with Design

- 4.3.20. In addition to the siting of infrastructure within areas of lower flood risk, where reasonably practicable, the flood risk to Scheme's infrastructure has been assessed and appropriately mitigated through the design process. Mitigation in the form of bunding or flood defence walls and plinths for solar stations protects all critical infrastructure, with a minimum 300mm freeboard, to the 0.1% AEP event plus climate change. A 600mm freeboard has been afforded to Solar Stations within the Flood Zone 3b extent of the South Holland Main Drain (Gotts Catchment). A summary of the mitigation embedded within design is provided within Table 5-8 of **ES Appendix 11-3: Flood Risk Assessment** [REP1-050].
- 4.3.21. With this mitigation in place, detailed modelling (discussed in more detail in sections above) demonstrates that all critical electrical infrastructure remains protected against the fluvial flood risk on-site, including events up to and including the 0.1% AEP event with a 28% climate change allowance. Furthermore, assessment of the H++ climate change scenario and Credible Maximum Scenario

⁸ DESNZ (2025) Overarching National Policy Statement for energy (EN-1), 2025. Available at: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1-2025> [Accessed 5 October 2026]

indicates that critical infrastructure would remain unaffected and operational under these extreme conditions.

- 4.3.22. Additionally, a small proportion of the solar panel arrays is predicted to experience inundation under the breach scenario. However, the affected area comprises approximately 2.7ha, representing approximately 0.3% of the total solar panel area within the Solar Development Area. In these locations, only the lower panels would be submerged, with the upper panels remaining above flood levels and capable of continuing to generate electricity. Consequently, the Scheme would remain substantially operational during flood events, with a non-material temporary loss of generation capacity limited to a very small proportion of the overall capacity of the Scheme. This demonstrates that the residual flood risk does not compromise the functionality or resilience of the Scheme and that the development is capable of maintaining operation during extreme flood conditions while safeguarding all critical infrastructure.
- 4.3.23. Consequently, **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] demonstrates the Scheme layout has duly considered the sequential approach to siting of infrastructure and is also resilient not only to present-day flood risk but also to plausible future climate change and extreme-event conditions, thereby ensuring the long-term operational integrity of the development, demonstrating compliance with the application of the Sequential Test.

5. Application of the Exception Test

- 5.1.1. There are two limbs to the Exception Test within paragraph 031 of the PPG:
"It should be demonstrated that:
- *development that has to be in a flood risk area will provide wider sustainability benefits to the community that outweigh flood risk; and*
 - *the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and where possible, will reduce flood risk overall".*
- 5.1.2. In applying the Exception Test, Table 2 of Annex F of the NPPF classifies 'solar farms and essential utility infrastructure (including for generation)' as essential infrastructure, including the BESS. Table 3 of Annex F states the Exception Test must be applied to essential infrastructure sited in Flood Zone 3a or 3b where the Sequential Test has demonstrated that there are no reasonably available, lower risk sites, appropriate for the Scheme.
- 5.1.3. As the Applicant was unable to avoid all infrastructure within areas subject to the greatest risk of flooding (i.e. undefended Flood Zone 3a and Flood Zone 3b extents), it is required to apply the Exception Test to these areas. The overlap of the Scheme infrastructure with undefended Flood Zone 3a and 3b extents is shown by **Annex D** of the **ES Appendix 11-4: Outline Drainage Strategy** [APP-231].
- 5.1.4. Within Land Parcels A, B and C, solar panels occupy approximately 30.0ha within the Flood Zone 3a extent (approximately 3.5% of the total solar panel area in the Solar Development Area), associated with the Postland Pumped Catchment.
- 5.1.5. Within Land Parcel A only, solar panels occupy approximately 2.5ha within Flood Zone 3b (approximately 0.3% of the total solar panel area in the Solar Development Area).
- 5.1.6. Within Land Parcel D, the Gotts Catchment of South Holland Main Drain, solar panels (and the 6 solar stations) occupy approximately 34.6ha within Flood Zone 3a and 3b (approximately 3.8% of the total solar panel area in the Solar Development Area). Flood Zone 3a and 3b overlap in the entirety of the Gotts Catchment, there is no discernible difference in area to each of Flood Zone 3a or 3b. This area also includes two temporary construction compounds.

- 5.1.7. Avoiding siting infrastructure within these areas would require removing these land parcels from the Solar Development Area altogether, which would reduce the generating capacity and viability of the Scheme.
- 5.1.8. The compliance of the above areas of the Scheme with the policy limbs of the Exception Test are discussed in turn below.

Wider Sustainability Benefits

- 5.1.9. In response to the first limb, the Scheme would contribute to the UK's net zero and energy security goals at a national level as described in Section 4 of the **Planning Statement** [APP-260]. The Scheme is deemed to be a nationally significant infrastructure project due to its sizeable generation capacity, as well as critical national priority infrastructure, identified by UK Government as low carbon infrastructure which is critical to decarbonising the power system.
- 5.1.10. The primary aim of the Scheme is to generate low-carbon electricity over an operational period of approximately 40 years, helping to meet the UK's increasing demand for clean energy in line with the overarching ambition within EN-1. The UK's net zero targets principally arise from the Climate Change Act 2008. This commits the UK to reducing its greenhouse gas emissions to net zero by 2050 compared to 1990 levels in line with its obligations under international treaties, most notably the Paris Agreement signed in 2015. The Scheme would deliver up to 750 MW of low carbon electricity with co-located BESS. The Scheme also includes the high voltage transmission infrastructure required to transport the electricity to the NETS.
- 5.1.11. Further, a record rise in global energy prices has led to an increase in the cost of living in the UK. The UK is dependent on imported oil and gas which leaves it vulnerable to volatile pricing and supply. Further, electricity demand is forecast to surge in light of the AI revolution, with the electricity needs of data centres expected to rise four-fold by 2030. With the rising costs of fossil fuels, low-cost renewables have their role to play in the reduction of household bills and helping to increase security of domestic supply. Costs to deploy solar have fallen about 50% since 2016 and are estimated to be lower than that of fossil and other non-fossil sources.
- 5.1.12. The Scheme will also support resilience of the grid. EN-1, paragraphs 3.3.25 to 3.3.28 describe the importance of electricity storage in achieving net zero and providing flexibility within the energy system. It supports reduced costs of the electricity system and increases reliability through the storing of surplus electricity in periods of low demand and through the release of electricity when demand is higher.

5.1.13. The Scheme would also provide additional sustainability benefits to the community:

- Skills and employment generation; including through the implementation of a Skills, Supply Chain and Employment (SSCE) Plan to help local individuals and businesses access the SSCE benefits associated with the Scheme.
- A new permissive path connecting the Public Right of Way (PRoW) between Queens Bank and Shepeau Stow, following the boundary of the Settlement West of Cate's Cover Corner Scheduled Monument. The proposed permissive path will enhance public access across the landscape, supporting local green infrastructure strategies and planning policies which promote rural access and recreational amenity.
- Biodiversity and landscape enhancements, including deliver a Biodiversity Net Gain (BNG) in excess of 10% for area-based habitats and watercourses, and in excess of 400% for hedgerows.
- Recovery of agricultural land within the Solar Development Area.

Ensuring the Development will be safe for its lifetime, without increasing flood risk elsewhere

5.1.14. As demonstrated by **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] and explained within paragraph 4.3.22 of this technical note, where solar panels are sited within Flood Zone 3a and 3b areas, they would remain capable of continuing to generate electricity. Consequently, the Scheme would remain substantially operational during flood events, with a non-material temporary loss of generation capacity limited to a very small proportion of the overall capacity of the Scheme, associated with any inundated lower panels.

5.1.15. In addition, solar PV panel legs do not present a material impact to flood depths across the Scheme, with maximum flood depths in Land Parcel A of 1mm, where flood depths are up to 2.1m in the event of a residual breach of the River Welland. The total maximum potential depth of flooding across the Scheme is 10mm when panels are submerged. These impacts represent a non-material increase in flood risk, which the EA agreed in a meeting of 28 July 2026. Therefore, the immaterial impact of solar PV panels in the floodplain satisfies the Exception Test.

5.1.16. Notwithstanding the solar PV panels in the undefended Flood Zone 3a and 3b extents and critical infrastructure within pump failure extents previously discussed, the 6 Solar Stations that are required to be located within the Gotts Catchment of the South Holland Main Drain sit within the undefended Flood Zone 3b extent of the South Holland Main Drain. Whilst the precise locations of

these Solar Stations within the Solar Development Area remain indicative, the locations shown represent their likely siting based on the current proposed Scheme layout. These solar stations have a functional requirement to be situated within the Flood Zone 3b extent due to the panels proposed within the parcel to the north of the South Holland Main Drain.

- 5.1.17. In recognition of the flood risk constraints associated with this location, the design has incorporated appropriate mitigation measures, the effectiveness of which has been assessed and summarised within Table 5-8 and Section 8 of **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] by raising the 6 Solar Stations up to 1.35m, providing 600mm freeboard above the 1% AEP plus climate change extent. This is discussed in paragraphs 5.3.83 and 5.3.84 of **ES Appendix 11-3: Flood Risk Assessment** [REP1-050].
- 5.1.18. **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] assesses the impact on flood depths for the development within the Gotts Catchment, with the solar stations representing a non-material increase in flood depth of 0.7mm, which is considered beyond the capability of modelling software to represent in results, due to inherent tolerances within the models themselves.
- 5.1.19. Consequently, whilst a limited element of critical infrastructure is located within undefended Flood Zone 3b, the detailed assessment demonstrates that the residual impacts on flood risk are appropriately mitigated and managed. The infrastructure has been located within Flood Zone 3b only where this is necessary to facilitate the delivery of the Scheme and where no reasonably available lower-risk alternatives exist.
- 5.1.20. **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] confirms that the proposed layout would not materially increase flood risk within the Gotts Catchment, the wider South Holland Main Drain catchment, or elsewhere off-site. Furthermore, the assessment demonstrates that flood storage is maintained and that flood flows are not displaced in a manner that would adversely affect third-party land, existing receptors or surrounding infrastructure.
- 5.1.21. Opportunities to reduce flood risk overall have been explored. However, owing to the physical constraints of the Site and the surrounding floodplain, no additional practicable measures are available that would deliver a measurable reduction in flood depths across the floodplain without giving rise to disproportionate engineering intervention or consequential environmental effects.
- 5.1.22. In order to demonstrate the Scheme is safe for its users for the lifetime of the Scheme, an **Outline Flood Emergency Response Plan** (Doc Ref. 7.10) has been

prepared for Deadline 2, to be included as Appendix A to the **OCEMP** [REP1-061].

- 5.1.23. With no material increase in flood risk as a result of infrastructure within Flood Zone 3b, part 2 of the Exception Test is satisfied.

6. Summary of Sequential Test and Exception Test

- 6.1.1. The requirements of the sequential test have been considered as part of the strategic Site selection through a review of land areas outside the Flood Zones 2 and 3, as shown by the Environment Agency's FMfP, within a 15 km search area of the indicative location for point connection. Further details of the strategic Site selection are provided within the **Post ISH1 Note: Strategic Site Selection** (Doc Ref. 8.35).
- 6.1.2. Subsequently, the detailed modelling of the undefended and defended scenarios, alongside the proposed mitigation for the Scheme, ensures that the siting and design of critical infrastructure has been informed not only by present-day flood risk but also by the potential impacts of extreme future events and flood defence failure mechanisms, including residual risk.
- 6.1.3. The Sequential Test has been applied across the full range of flood risk mechanisms affecting the Scheme, including:
- Undefended flooding from the Postland Pumped Catchment;
 - Undefended flooding from the South Holland Main Drain;
 - The 0.1% AEP plus climate change design event required by the Environment Agency's regional guidance and South East Lincolnshire SFRA guidance;
 - Defended flood risk associated with the River Welland; and
 - Residual flood risk arising from a potential breach of the River Welland flood defences during the 0.1% AEP plus climate change event.
- 6.1.4. When considered alongside the assessment of the Postland Pumped Catchment, South Holland Main Drain and defended River Welland systems, the Sequential Test principles demonstrate that infrastructure has been directed to the lowest reasonably achievable flood risk locations available, having regard to the operational requirements of the Scheme, and being effectively outside Flood Zone 2 in the undefended scenarios, with suitable mitigation provided in the event of a residual breach event.
- 6.1.5. The Exception Test has been carried out for infrastructure located within Flood Zone 3a and 3b. The infrastructure located in Flood Zones 3a and 3b presents an immaterial impact to flood risk across the Scheme, or elsewhere, with embedded mitigation for solar panels and stations to ensure the infrastructure remains protected against flood risk and operational, and in the case of submerged panels,

they are raised sufficiently to allow upper panels to remain operational in the extreme residual risk breach scenario.

- 6.1.6. No evidence has been identified through this additional assessment that would incur any change to the conclusions of the Sequential Test and Exception Test presented within **ES Appendix 11-3: Flood Risk Assessment** [REP1-050]. Accordingly, the conclusions of the Sequential Test and Exception Test within **ES Appendix 11-3: Flood Risk Assessment** [REP1-050] remain robust and unchanged.

