

Steeple Renewables Project

Flood Risk Sequential Assessment and Exception Test

May 2025

Document Reference: EN010163/APP/7.5

Revision: 2

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009 - Regulation 5(2)(q)



Flood Risk Sequential Assessment and Exception Test

Document Properties		
Prepared By – Pegasus Group	The Steeple Renewables Project Consultant Team	
Version History		
Version	Date	Version Status
EN010163/APP/7.5	March 2025	Rev 1
EN010163/APP/7.5	May 2025	Rev 2

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1. Introduction and Site Location

- 1.1. This Flood Risk Sequential Assessment and Exception Test report has been written on behalf of Steeple Solar Farm Ltd (the applicant) and accompanies a Development Consent Order (DCO) application, to be submitted under Section 37 of the Planning Act 2008, for a 450MW solar and battery development at land around Sturton-le-Steeple in Nottinghamshire.
- 1.2. A full description of the DCO proposals is provided within the accompanying Environmental Statement (ES) Chapter 3: Site Description, Site Selection and Iterative Design Process, Scheme Description [reference EN010163/APP/6.2.3].
- 1.3. With a total proposed generating and storage capacity in the region of 450 megawatts (MW), the Scheme is defined as a Nationally Significant Infrastructure Project (NSIP) under Sections 14(1)(a) and 15(2) of the Planning Act 2008 (Ref.4), as it is an onshore generating station in England with a capacity of more than 50 MW.
- 1.4. The extent of the DCO Order Limits is described and explained within Chapter 3, section 3.2 of the accompanying ES.
- 1.5. The purpose of this Assessment is to evidence that the Sequential Test has been applied to the proposed siting of the development, and that alternative sites have been considered on a sequential basis, prior to applying the Exception Test to justify the proposed development in a flood risk area. The Sequential Test has been applied against relevant national planning policy and guidance for DCO's in the National Policy Statements and the NPPG, it has considered all sources of flooding and wider sustainability matters of siting a development, including constraints related to habitat/ecology, valued landscape character and cultural heritage.
- 1.6. The Exception Test element of the report assesses if the proposed development can be made safe for its operational lifetime for a 'design' flood event, and that through the careful design and mitigation of new drainage measures, the development would not increase the risk of flooding both on the site and elsewhere in the neighbouring land around the site. The Exception Test also considers the wider sustainable benefits of the proposed development, including renewable energy generation benefits, ecological benefits and surface water drainage benefits.

2. National Planning Policy Requirements

National Policy Statements

- 2.1. National Policy Statements (NPSs) form the overarching policy documents when determining NSIP applications and should form the basis for determination of decisions. They comprise the Government's objectives for the development of nationally significant infrastructure.
- 2.2. They also include any other policies or circumstances that Ministers have to consider when determining NSIP schemes.
- 2.3. A DCO submission for ground mounted solar with battery storage and associated grid connection cable must therefore demonstrate accordance with the relevant aspects of the following NPSs:
 - National Policy Statement for Energy (EN-1);
 - National Policy Statement for Renewable Energy Infrastructure (EN-3);
 - National Policy Statement for Electricity Networks (EN-5).

National Policy Statement for Energy (EN-1), November 2023

- 2.4. National Policy Statement EN-1 is the overarching National Policy Statement for Energy and covers all aspects of Nationally Significant Infrastructure energy projects, including solar and battery storage developments.
- 2.5. Section 5.8 of EN-1 sets out the policy approach for flood risk matters with NSIP energy schemes. Whilst the entire content of this chapter has been considered for the purposes of producing this Sequential Assessment and Exception Test Report, we consider that the following paragraphs of EN-1 are particularly pertinent to the Project.
- 2.6. *5.8.2 – The effects of weather events on the natural environment, life and property can be increased in severity both as a consequence of decisions about the location, design and nature of settlement and land use, and as a potential consequence of future climate change. Having resilient energy infrastructure not only reduces the risk of flood damages to the infrastructure, it also reduces the disruptive impacts of flooding on those homes and businesses that rely on that infrastructure. Although flooding cannot be wholly prevented, its adverse impacts can be avoided or reduced through good planning and management.*

- 2.7. *5.8.5 Climate change is already having an impact and is expected to have an increasing impact on the UK throughout this century. The UK Climate Projections 2018212 show an increased chance of milder, wetter winters and hotter, drier summers in the UK, with more intensive rainfall causing flooding. Sea levels will continue to rise beyond the end of the century, increasing risks to vulnerable coastal communities. Within the lifetime of energy projects, these factors will lead to increased flood risks in areas susceptible to flooding, and to an increased risk of the occurrence of floods in some areas which are not currently thought of as being at risk. A robust approach to flood risk management is a vital element of climate change adaptation; the applicant and the Secretary of State should take account of the policy on climate change adaptation in Section 4.10.*
- 2.8. *5.8.6 sets out the 'sequential' approach to direct new energy development proposals to the lowest possible area of flood risk from all sources of flooding. "The aims of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to steer new development to areas with the lowest risk of flooding."*
- 2.9. *5.8.7 of EN-1 does explain that in 'exceptional' situations, where it is necessary to site energy infrastructure in areas of flood risk, the development has to be made safe for the duration of its lifetime without affecting flood risk elsewhere and should seek to reduce flood risk overall. "Where new energy infrastructure is, exceptionally, necessary in flood risk areas (for example where there are no reasonably available sites in areas at lower risk), policy aims to make it safe for its lifetime without increasing flood risk elsewhere and, where possible, by reducing flood risk overall. It should also be designed and constructed to remain operational in times of flood."*
- 2.10. *5.8.9 – 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 as defined in <https://www.gov.uk/guidance/flood-risk-and-coastal-change#table2>. 214 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. Therefore, the Exception Test must be undertaken in accordance with the relevant guidance in the NPPG.*
- 2.11. *5.8.10 The Exception Test is only appropriate for use where the Sequential Test alone cannot deliver an acceptable site. It would only be appropriate to move onto the Exception Test when the Sequential Test has identified reasonably available, lower risk sites appropriate for the proposed development where, accounting for wider sustainable development objectives, application of relevant policies would*

provide a clear reason for refusing development in any alternative locations identified. Examples could include alternative site(s) that are subject to national designations such as landscape, heritage and nature conservation designations, for example Areas of Outstanding Natural Beauty (AONBs), SSSIs and World Heritage Sites (WHS) which would not usually be considered appropriate. The applicant notes that the last part of paragraph 5.8.10 is not an exhaustive list and is used as examples ('for example'). The applicant considers that features such as Registered Parks and Gardens and locally important landscape areas of great value (as defined and designated in a recently adopted Local Plan), would also be constraints that would need to be taken account of when considering the wider sustainability of any alternative sites, as part of the Sequential Test.

- 2.12. *5.8.11 – Both elements of the Exception Test will have to be satisfied for development to be consented. To pass the Exception Test it should be demonstrated that:*
 - *the project would provide wider sustainability benefits to the community that outweigh flood risk; and*
 - *the project 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.*
- 2.13. *5.8.12 – Development should be designed to ensure there is no increase in flood risk elsewhere, accounting for the predicted impacts of climate change throughout the lifetime of the development. There should be no net loss of floodplain storage and any deflection or constriction of flood flow routes should be safely managed within the site. Mitigation measures should make as much use as possible of natural flood management techniques.*
- 2.14. EN-1 explains that for NSIP sites in Flood zones 2 and 3 in England, a Flood Risk Assessment (FRA) should be carried out. The FRA for Steeple Renewables Project is included at Document 5.3 of the DCO submission.
- 2.15. EN1- sets out that Flood Risk Assessments should “*identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.*”
- 2.16. From paragraph 5.8.24 to 5.8.35, EN-1 explains what mitigation measures should be carried out to manage flood risk.
- 2.17. *5.8.26 – Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.to manage flood risk.*

- 2.18. 5.8.27 – *The surface water drainage arrangements for any project should, accounting for the predicted impacts of climate change throughout the development's lifetime, be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect.*
- 2.19. 5.8.29 – *The sequential approach should be applied to the layout and design of the project. 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.*
- 2.20. 5.8.32 – *Where development may contribute to a cumulative increase in flood risk elsewhere, the provision of multifunctional sustainable drainage systems, natural flood management and green infrastructure can also make a valuable contribution to mitigating this risk whilst providing wider benefits.*
- 2.21. 5.8.35 – *Flood resistant and resilient materials and design should be adopted to minimise damage and speed recovery in the event of a flood.*
- 2.22. For decision making by the Secretary of State, EN1 sets out the following important considerations for determining energy NSIP schemes:
- 2.23. 5.8.36 *In determining an application for development consent, the Secretary of State should be satisfied that where relevant:*
- *the application is supported by an appropriate FRA*
 - *the Sequential Test has been applied and satisfied as part of site selection*
 - *a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk*
 - *the proposal is in line with any relevant national and local flood risk management strategy*
 - *SuDS (as required in the next paragraph on National Standards) have been used unless there is clear evidence that their use would be inappropriate*
 - *in flood risk areas the project is designed and constructed to remain safe and operational during its lifetime, without increasing flood risk elsewhere (subject to the exceptions set out in paragraph 5.8.42)*

- the project includes safe access and escape routes where required, as part of an agreed emergency plan, and that any residual risk can be safely managed over the lifetime of the development
- land that is likely to be needed for present or future flood risk management infrastructure has been appropriately safeguarded from development to the extent that development would not prevent or hinder its construction, operation or maintenance

- 2.24. 5.8.38 – In addition, the Development Consent Order, or any associated planning obligations, will need to make provision for appropriate operation and maintenance of any SuDS throughout the project's lifetime. Where this is secured through the adoption of any SuDS features, any necessary access rights to property will need to be granted.
- 2.25. 5.8.39 – Where relevant, the Secretary of State should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. Responsible bodies could include, for example the landowner, the relevant lead local flood authority or water and sewerage company (through the Ofwat approved Sewerage Sector Guidance), or another body, such as an Internal Drainage Board.

**National Policy Statement for Renewable Energy Infrastructure (EN-3),
November 2023**

- 2.26. National Policy Statement EN-3 covers NSIP policy matters for all various types of renewable energy generation development. Fundamental policy consideration for the proposed development in terms of flood risk and sequential approach under EN-3 include the following paragraphs. Key policy in sections 2.3 (Factors influencing site selection and design), 2.4 (Climate change adaption and resilience) and 2.10 (Solar photovoltaic generation).
- 2.27. 2.3.9 – As most renewable energy resources can only be developed where the resource exists and where economically feasible, and because there are no limits on the need established in Part 3 of EN-1, the Secretary of State should not use a consecutive approach in the consideration of renewable energy projects (for example, by giving priority to the re-use of previously developed land for renewable technology developments).
- 2.28. 2.4.2 Section 4.10 of EN-1 sets out generic considerations that applicants and the Secretary of State should take into account to help ensure that renewable energy infrastructure is safe and resilient to climate change, and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.

- 2.29. *2.4.11 – Solar photovoltaic (PV) sites may also be proposed in low lying exposed sites. For these proposals, applicants should consider, in particular, how plant will be resilient to:*
- increased risk of flooding; and*
 - impact of higher temperatures.*
- 2.30. *2.8.59 – Applicants should consider important issues relating to network connection at Section 4.10 of EN-1 and in EN-5. In particular, and where appropriate, applicants should proceed in a manner consistent with the regulatory regime for offshore transmission networks established by Ofgem, details of which are set out in EN-5.*
- 2.31. *2.10.22 – Many solar farms are connected into the local distribution network. The capacity of the local grid network to accept the likely output from a proposed solar farm is critical to the technical and commercial feasibility of a development proposal.*
- 2.32. *2.10.23 – Larger developments may seek connection to the transmission network if there is available network capacity and/or supportive infrastructure.*
- 2.33. *2.10.24 – In either case the connection voltage, availability of network capacity, and the distance from the solar farm to the existing network⁸¹ can have a significant effect on the commercial feasibility of a development proposal.*
- 2.34. *2.10.25 – To maximise existing grid infrastructure, minimise disruption to existing local community infrastructure or biodiversity and reduce overall costs applicants may choose a site based on nearby available grid export capacity.*
- 2.35. *2.10.25 Where this is the case, applicants should consider the cumulative impacts of situating a solar farm in proximity to other energy generating stations and infrastructure.*

National Policy Statement for Electricity Networks (EN-5)

- 2.36. National Policy Statement EN-5 covers matters for NSIP schemes relating to electricity network infrastructure. For the proposals at Sturton-le-Steeple, EN-5 is relevant as the proposed development requires inverters, substations and network connection to the West Burton Substation, sited within the former Weston Burton Power Station site. Grid capacity from the former coal-fired power station provides a key opportunity for renewable forms of energy development to replace that of the former coal-fired West Burton site, which was a 2000MW producing station.

- 2.37. Relevant policy in EN-5 for the Sequential Assessment is contained within sections 2.2 (Factors influencing site selection and design), 2.3 (Climate change adaption and resilience), 2.4 (Consideration of good design for energy infrastructure) and 2.10 (mitigation). Relevant policy from EN-5 for the Sequential Assessment includes the following paragraphs.
- 2.38. 2.3.2 – *As climate change is likely to increase risks to the resilience of some of this infrastructure, from flooding for example, or in situations where it is located near the coast or an estuary or is underground, applicants should in particular set out to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it has been designed to be resilient to:*
- *flooding, particularly for substations that are vital to the network; and especially in light of changes to groundwater levels resulting from climate change;*
 - *the effects of wind and storms on overhead lines;*
 - *higher average temperatures leading to increased transmission losses;*
 - *earth movement or subsidence caused by flooding or drought (for underground cables); and*
 - *coastal erosion – for the landfall of offshore transmission cables and their associated*
- 2.39. 2.3.3 Section 4.10 of EN-1 advises that the resilience of the project to the effects of climate change must be assessed in the Environmental Statement (ES) accompanying an application. For example, future increased risk of flooding would be covered in any flood risk assessment (see Sections 5.8 in EN-1). Consideration should also be given to coastal change (see sections 5.6 in EN1). substations in the inshore and coastal locations respectively.
- 2.40. 2.10.1 – *The applicant should consider and address routing and avoidance/minimisation of environmental impacts both onshore and offshore at an early stage in the development process.*

National Planning Policy Framework (NPPF) (December 2024)

- 2.41. The National Planning Policy Framework (NPPF) outlines the policy requirements in relation to flood risk when determining planning applications that are non-NSIP projects. Whilst the policy content of the NPPF is not specific to the determination of a DCO application, nonetheless, we have contained references to the NPPF on flood risk and sequential approach, as the NPPF was recently updated by the current Government in December 2024 and therefore shows an up-to-date

picture of how the current Government wants to approach flood risk and the associated sequential approach to the siting of new development. We have simply included references here for completeness and to ensure a comprehensive approach is taken to the application of the Sequential and Exception Tests for the proposed NSIP development at Sturton-le-Steeple, which is consistent with both relevant policy and the direction of thought from the current Government.

- 2.42. Annex 3 of the NPPF is also aligned to the Flood Risk and Coastal Change chapter of the National Planning Practice Guidance (NPPG), and the NPPG is referred to in the National Policy Statements. Annex 3 of the NPPF contains the flood risk vulnerability classification, which identifies solar farm development as forming 'Essential Infrastructure' in the flood risk vulnerability classification.
- 2.43. Paragraph 174 of the Framework states that *"the aim of the sequential test is to steer new development to areas with the lowest risk of flooding from any source."*
- 2.44. Paragraph 177 explains that *"If it is not possible for development to be located in areas with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification set out in Annex 3."*
- 2.45. Paragraph 178 states that *"to pass the Exception Test it should be demonstrated that:*
- a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and*
- b) 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."*
- 2.46. Paragraph 181 stipulates that:
- "When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where supported by a site-specific flood risk assessment following the Sequential Test, and if required the Exception Test, it can be demonstrated that:*
- a) Within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and*

b) the development is appropriately flood resilient and resistant, such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;

c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;

d) any residual risk can be safely managed; and

e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan."

National Planning Practice Guide – Flood Risk and Coastal Change chapter NPPG

2.47. The NPPG says the following on the aims of the Sequential Assessment for flood risk – *"The approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. This means avoiding, so far as possible, development in current and future medium and high flood risk areas considering all sources of flooding including areas at risk of surface water flooding. Avoiding flood risk through the sequential test is the most effective way of addressing flood risk because it places the least reliance on measures like flood defences, flood warnings and property level resilience features. Even where a flood risk assessment shows the development can be made safe throughout its lifetime without increasing risk elsewhere, the sequential test still needs to be satisfied. Application of the sequential approach in the plan-making and decision-making process will help to ensure that development is steered to the lowest risk areas, where it is compatible with sustainable development objectives to do so, and developers do not waste resources promoting proposals which would fail to satisfy the test. Other forms of flooding need to be treated consistently with river and tidal flooding in mapping probability and assessing vulnerability, so that the sequential approach can be applied across all areas of flood risk.*

2.48. In terms of identifying reasonably available sites, this is explained in the NPPG (Paragraph: 028 Reference ID: 7-028-20220825) – *What is a "reasonably available" site? The NPPG states that "Reasonably available sites' are those in a suitable location for the type of development with a reasonable prospect that the site is available to be developed at the point in time envisaged for the development. These could include a series of smaller sites and/or part of a larger site if these would be capable of accommodating the proposed development. Such lower-risk sites do not need to be owned by the applicant to be considered 'reasonably available'."*

- 2.49. Whilst the applicant acknowledges this content within the NPPG of what is a 'reasonably available' site, it is not viable to split electricity generating development into smaller sites which are far apart from each other, this is simply not viable like it may be for other forms of development. This approach has been acknowledged in other approved DCO schemes for generating electricity, including the West Burton Solar DCO. Paragraphs 2.1.19 and 2.1.20 of the approved Site Selection Assessment for the West Burton DCO explained that it would not be viable to split the proposal into multiple smaller land parcels too far apart from each other, and what the minimum land parcel size needed to be for project viability.
- 2.50. The NPPG contains a table ('table 2') for flood risk vulnerability and flood zone incompatibility. The proposed NSIP development for photovoltaics panels and battery storage is classed as 'Essential Infrastructure' in flood risk planning terms. Only parts of development sited within Flood Zone 3a are considered to require the application of the Exception Test in this table, as shown in Figure 1 below.
- 2.51. The key to 'table 2' explains that the cross symbol means the following – “*†*” *In Flood Zone 3a, essential infrastructure should be designed and constructed to remain operational and safe in times of flood.*” Information of how the proposals have been designed to remain operational in times of a 'design' flood event are set out in the second part of the Exception Test of this report.

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	X	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	X	X	X	✓ *

Key:

✓ Exception test is not required

Figure 1 – Table 2 from the Flood Risk and Coastal Change Chapter of the NPPG.

3. Flood Risk within the proposed site area

- 3.1. The land around Sturton-le-Steeple forming the proposed DCO Order Limits is affected by fluvial flood risk (zones 2 and 3) and patches of 'high chance' of surface water flood risk. There is no risk to the proposed site area from reservoirs when river levels are 'normal'.
- 3.2. The latest Environment Agency (EA) published Flood Zone mapping, included in Chapter 8, Figure 8.2 of the accompanying Environment Statement, shows that the western c.50% of the site lies within Flood Zone 1, representing a less than 1 in 1000 annual probability of fluvial or tidal flooding. A central band of the Site (affecting approximately 5% of the Site) lies within Flood Zone 2, representing a 1 in 100 to 1 in 1000 annual probability of fluvial flooding or a 1 in 200 to 1 in 1000 annual probability of tidal flooding. The eastern part of the Site (approximately 45% of the

Site) falls within Flood Zone 3 with a greater than 1 in 100 annual probability of fluvial flooding or a greater than 1 in 200 annual probability of tidal flooding.

- 3.3. When considering the risk of flooding from all possible sources, the site is affected by 2 out of the 3 possible source areas. These three overall sources being fluvial (rivers and sea), surface water (rainwater run-off and associated ground saturation) and reservoir overflow.

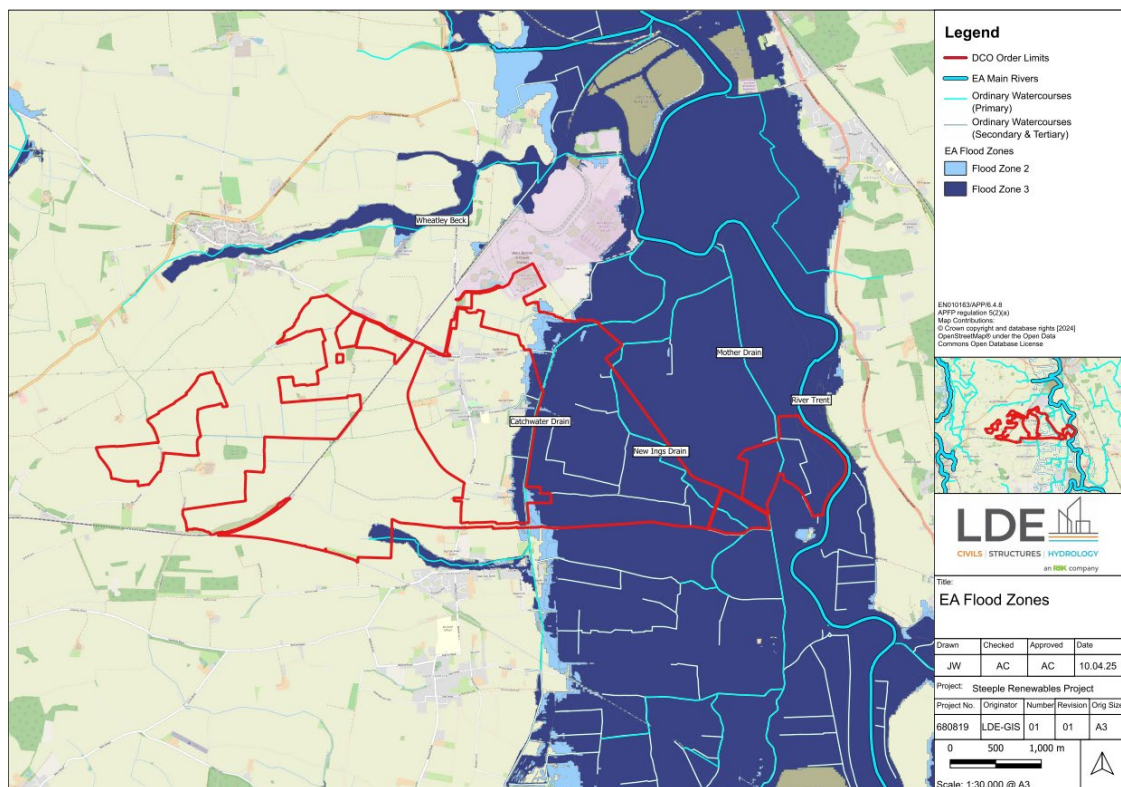


Figure 2 – Proposed Site on the fluvial flood risk map for the area, indicating parts of the site in Flood Zones 2 and 3, particularly to the eastern side of the site. Zone 2 is light blue, dark blue is Flood Zone 3, land not shaded in is Flood Zone 1. A larger version of this plan is included at Appendix 1.

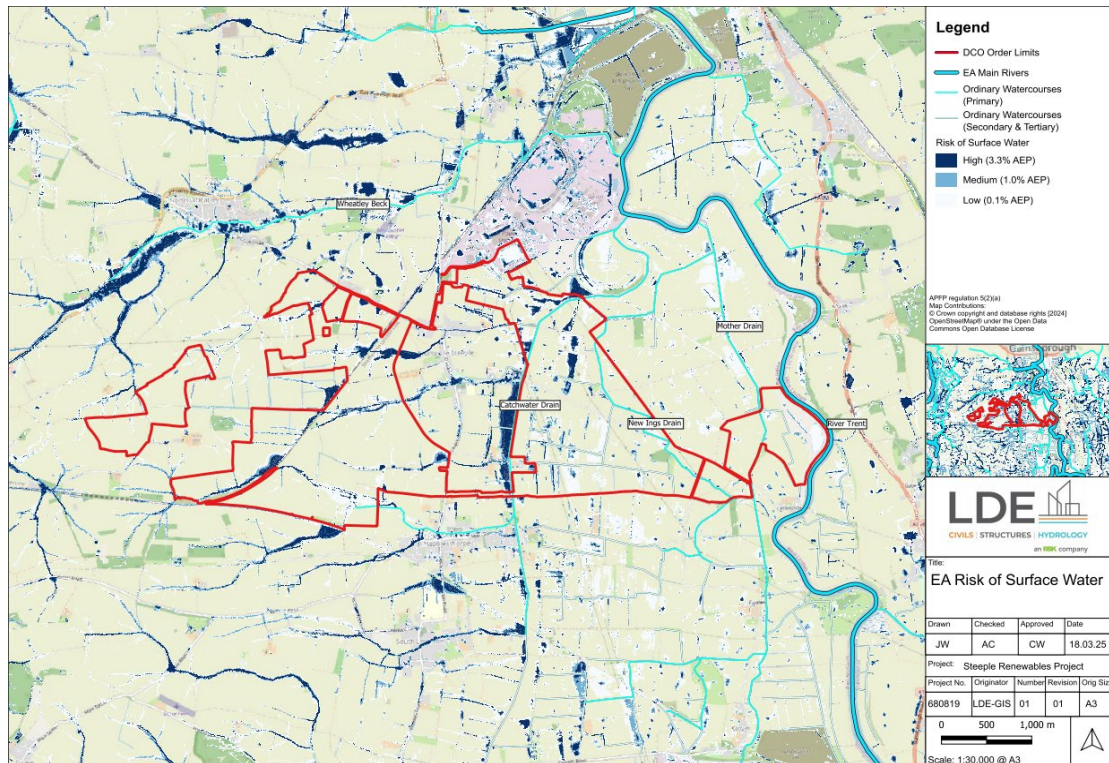


Figure 3 – Surface water flood risk map, showing pockets of high chance surface water flood risk to the DCO site area. A larger version of this plan is included at Appendix 2

- 3.4. Surface Water flood risk of the Site is very dispersed and isolated to smaller concentrated areas of a 'high chance' within the site. As can be seen in Figure 3 above, the area forming part of the site is mostly not at risk from surface water flooding.

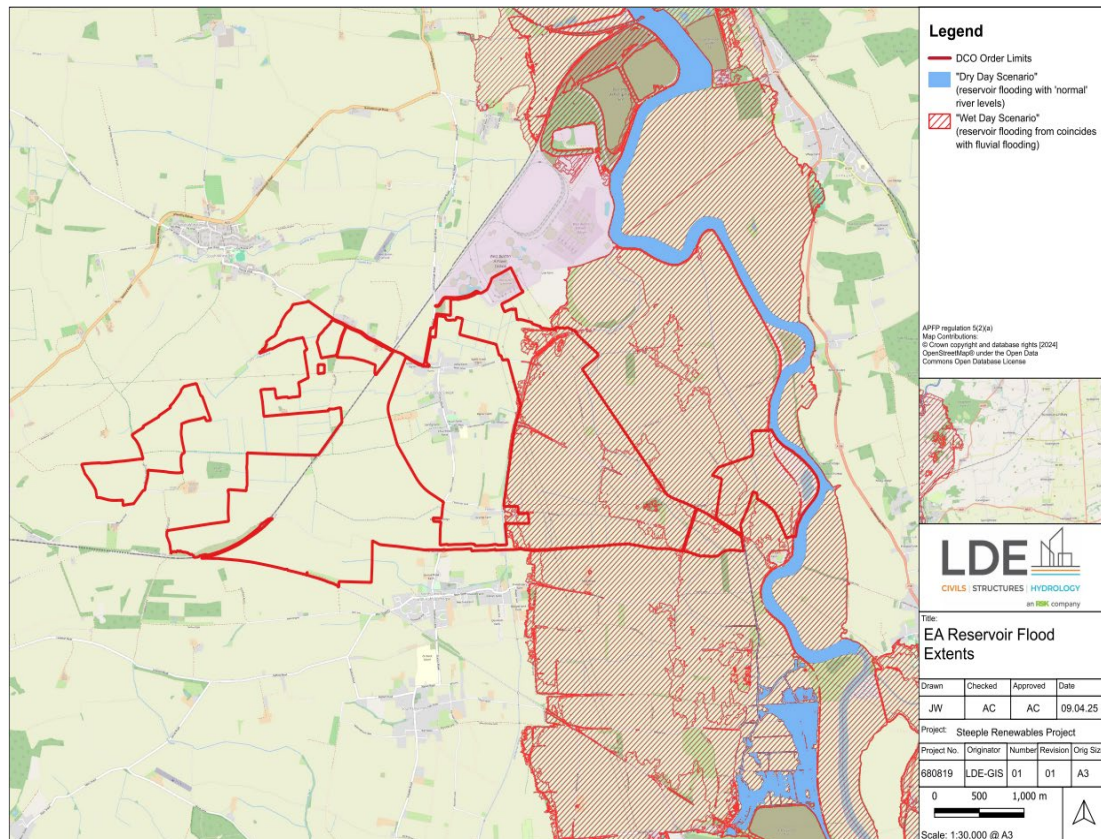


Figure 4 – Reservoir flooding map for the proposed DCO site area. A larger version of this plan is included at Appendix 3

- 3.5. Note in Figure 4 that the red hashed shading means that flooding in this area would only occur when there is also flooding from rivers (fluvial flooding). The light-blue shows flooding from reservoirs when river levels are normal, and the site area is not affected by this, as it closely follows the extent of the River Trent.
- 3.6. The DCO site area would not be affected by reservoir flooding when river levels are 'normal'.

4. Area of search for alternative sites

- 4.1. The methodology for the Sequential Test has sought to identify whether there are any alternative, 'reasonably available sites', within a 15km radius of the proposed point of grid connection (POC) at the former West Burton Power Station, which are sequentially preferable in flood risk terms when considering all sources of flooding. The Sequential Test has also considered other planning constraints which may

cause wider sustainability issues with the development proposal, as per the policy approach prescribed by the NPS and NPPG.

- 4.2. A 15km radius from the POC was considered to be a suitable extent for alternative site search. Beyond 15km, it would not be viable to connect a solar farm proposal of this scale. For the consented West Burton Solar Farm DCO (approved 24 January 2025), which will utilise the same POC, it was considered appropriate to apply a 15km radius for the alternative site search and the Sequential Test applied to the Weston Burton Solar DCO site.
- 4.3. To form an effective cluster of PV arrays to generate a similar amount of power as the proposed DCO site, the alternative site search has considered that the following parameters would be required to be an effective comparison to the proposed DCO site area.
- 3 x 3 adjoining land parcels of a minimum of 60.7Ha;
 - Then each cluster being within 5km of one another.
- 4.4. This has resulted in identifying three alternative sites to the DCO site area, as shown in on the Alternative Sites Plan in Appendix 4. These three sites are labelled as follows
- Site A – land between Worksop and Retford
 - Site B – land south of Gringley on the Hill
 - Site C – Land around Northorpe
- 4.5. One alternative site immediately north-east and east of Gainsborough, was discounted as a significant amount of the site is situated within an area designated as being a landscape of 'Great Value' in the adopted Central Lincolnshire Local Plan (April 2023).
- 4.6. All other alternative sites within 15km, were discounted for being too small, as they didn't meet the criteria of being 3 x 3 adjoining land parcels of a minimum of 60.7Ha, as a suitable size alternative to the Site.

Site A – Land between Worksop and Retford

- 4.7. Site A is 1408.3Ha and is located approximately 12.3km from the point of connection at West Burton Power Station at the closest point to the site boundary, when taking a straight-line measurement on GIS mapping. It should be noted that the connection cable would not be straight and would need to be longer than this distance.

Site B – Land south of Gringley on the Hill

- 4.8. Site B is approximately 754.5Ha in size and located 5.6km from the point of connection at West Burton Power Station at the closest point to the site boundary, when taking a straight-line measurement on GIS mapping. It should be noted that the connection cable would not be straight and would need to be longer than this distance.

Site C – Land around Northorpe

- 4.9. Site C is approximately 1159Ha in size and is located 11.5km away from the point of connection at West Burton Power Station from the closest point to the site boundary, when taking a straight-line measurement on GIS mapping. It should be noted that the connection cable would not be straight and would need to be longer than this distance.
- 4.10. Site C is also in a neighbouring authority area in the West Lindsey District of Lincolnshire. Therefore, as per policy in the NPS, we have considered Alternative Sites that are beyond the administrative boundary of the authority where the proposed Site is located, which is within the Bassetlaw District of Nottinghamshire.
- 4.11. Having identified all alternative sites within a 15km radius of the POC, other planning constraints have been overlayed within the 15km search to reflect whether or not these sites are reasonable alternatives to the proposed site for the DCO in wider sustainable development terms. The other constraints which have been mapped on the alternative Site Search plan are as follows:
- Special Area of Conservation
 - Special Protection Area
 - National Nature Reserve
 - Local Nature Reserve
 - SSSI
 - Country Park
 - Parks and Gardens
 - Ancient Woodland

- Scheduled Ancient Monument
- Registered Common Land
- RSPB Reserve
- RSPB – Important Bird Area (IBA)
- Central Lincolnshire Local Plan – Area of Great Landscape Value
- Cumulative Schemes
- Surface Water Flood Risk for Low, Medium and High Areas
- Flood Zone 2
- Flood Zone 3
- Listed Building
- ECR – accepted to connect
- Overhead Lines at 132kv and 33kv
- National Grid Overhead Lines
- National Grid Buried Cables
- National Grid Substations
- National Grid Gas Pipelines
- National Grid Gas Site
- Grade I Agricultural Land
- Grade 2 Agricultural Land
- Urban Land

5. Suitability of alternative sites

Site A (land between Worksop and Retford)

- 5.1. Alternative Site 'A' is affected by fluvial flood risk, zones 2 and 3, surface water high chance pockets and reservoir flood risk when river levels are 'normal.'
- 5.2. The degree and amount for fluvial and surface water is less than the proposed DCO site areas, but nonetheless, the site area is still at risk from these sources, as shown in the Figures below.

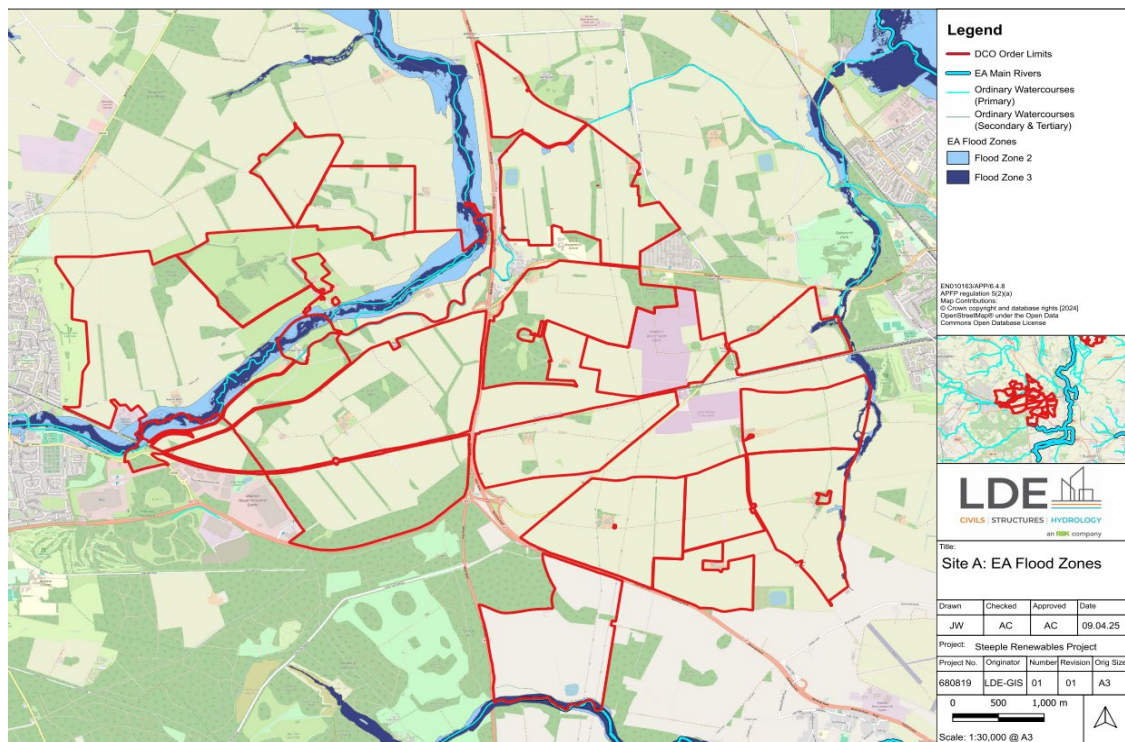


Figure 5 – Fluvial flood risk map showing parts of Site A in Flood Zones 2 and 3. A larger copy of this plan is included at Appendix 5

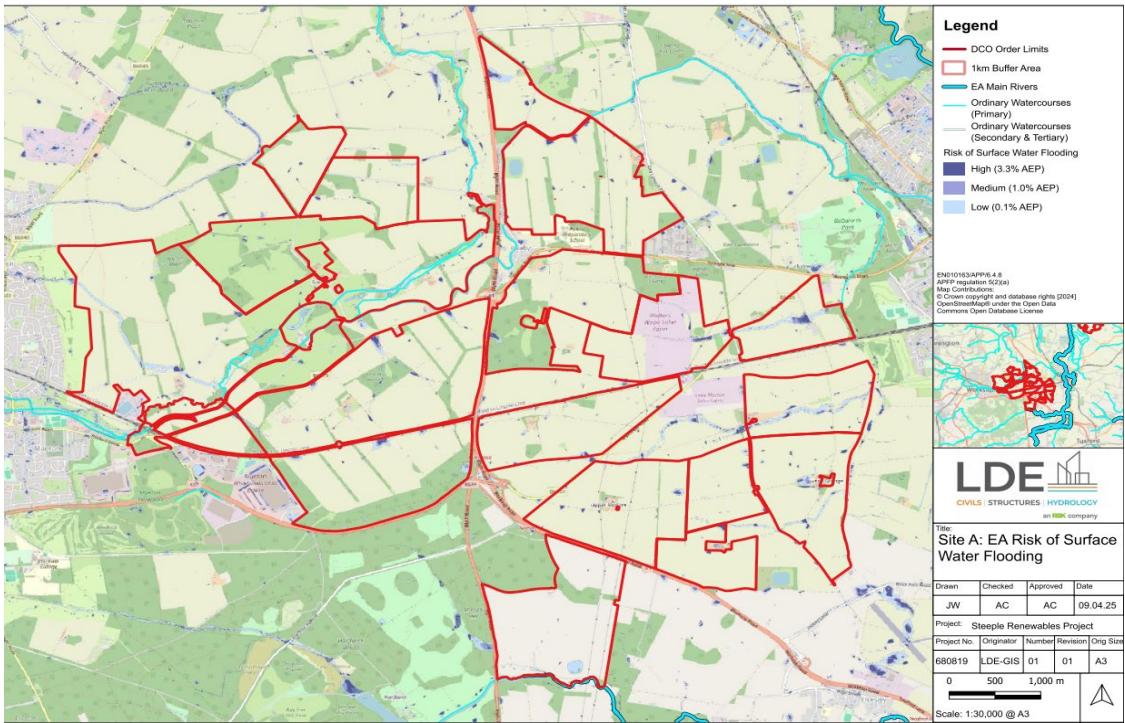


Figure 6 – Surface Water flood risk map for Site A, showing a number of small, localised pockets of high risk of surface water flooding. A larger copy of this plan is included at Appendix 6

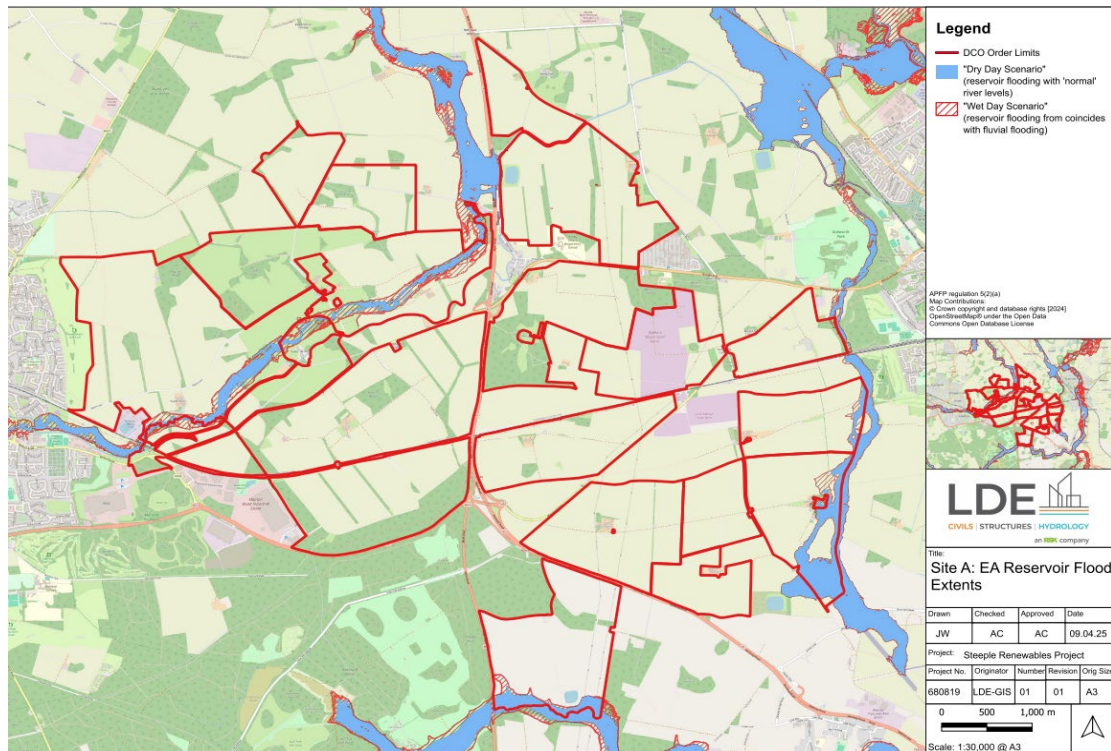
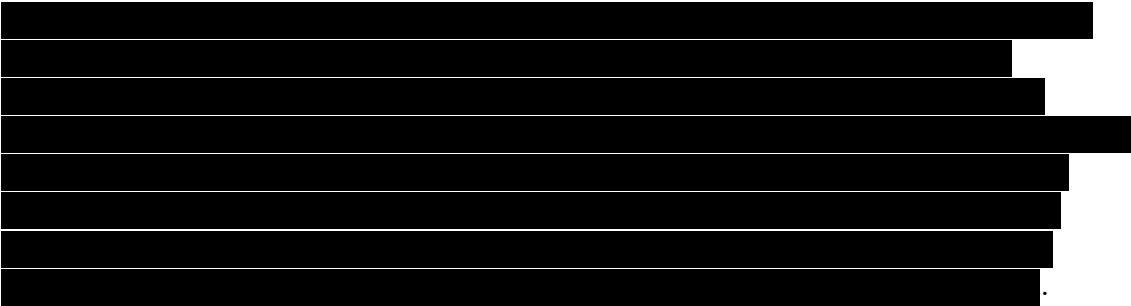


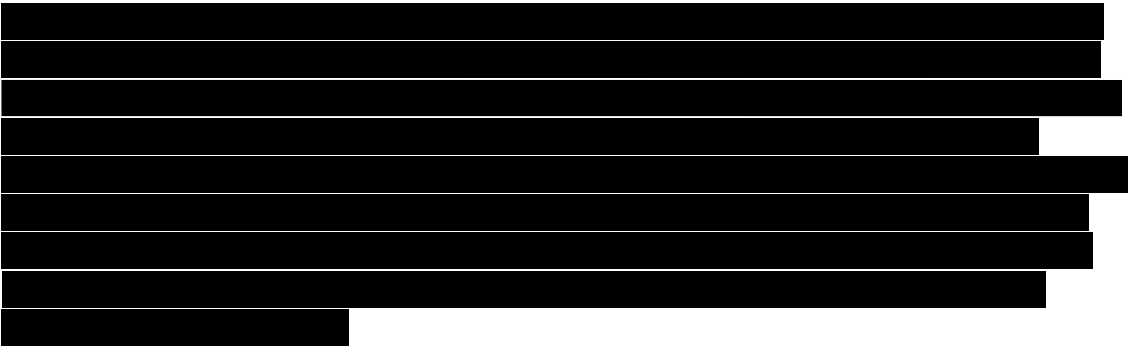
Figure 7 – Flooding from Reservoir sources for Site A, showing parts of the site at risk when river levels are 'normal'. A larger copy of this plan is included at Appendix 7

- 5.3. Site A is affected by flooding from all three sources, fluvial, surface water and from reservoirs when river levels are normal, whereas the DCO site is not affected by flooding from reservoirs when river levels are 'normal'. Therefore, Site A has a further potential source of flooding than the DCO site, and is not sequentially preferable when considering all sources of flooding.
- 5.4. In a fluvial sense there are smaller areas of Flood Zones 2 and 3 covering the site when compared to the proposed DCO site.
- 5.5. For surface water, like the DCO site, there are sporadic pockets of areas of 'high chance' of flooding from surface water. But these areas are fewer within Site A.
- 5.6. When considering other wider sustainable development issues with Site A, the most southern land parcel of Site A, set to the south of Apleyhead Wood, adjoins Clumber Park.
- 5.7. Clumber Park is a Grade I Registered Park and Garden, owned by the National Trust. A historic parkland of 'exceptional' national interest given its highest grading, which is visited by thousands of visitors every year.

- 5.8. Site A is also within Bassetlaw District, like the DCO site is. Bassetlaw have a recently adopted Local Plan (May 2024), which recognises the importance and significance of Clumber Park to tourism in the District.
- 5.9. The north-east boundary of Site A also adjoins Babworth Hall Registered Park and Garden which is Grade II listed, situated on the western fringe on Retford. Babworth Park also contains 6no. Grade II Listed Buildings and the Grade I Listed Church of All Saints, which all have group value together with the Registered Park and Garden. The setting of these heritage assets also has the potential to be affected in setting by a development proposal of this scale in such close proximity.
- 5.10. Given both the heritage significance of the historic parkland at Clumber Park and Babworth Hall and the associated tourism importance of Clumber Park being a National Trust owned site, Site A is not considered to be a suitable alternative site in a sequential sense to the proposed DCO site. Developing Site A has significant potential to affect the immediate setting and landscape context of Clumber Park (Grade I) and the parkland to Babworth Hall (Grade II).
- 5.11. 
- 5.12. Clumber Park is also designated as an Important Bird Area (IBA) by the RSPB. The RSPB state that *"the IBA Programme of BirdLife International is a worldwide initiative aimed at identifying and protecting a network of sites, critical for the conservation of the world's birds. These sites were selected on the basis of the bird numbers and species complements they hold. IBAs are particularly important for species that congregate in large numbers, such as wintering and passage waterbirds and breeding seabirds. Many sites have also been identified for species of global, and European/EU conservation concern."*
- 5.13. Paragraph 5.8.10 of NPS EN-1 clearly sets out that 'wider sustainable development objectives' must be considered when looking at alternative sites as part of the Sequential Test for flood risk.
- 5.14. Siting a 450MW solar farm and battery energy storage scheme immediately adjacent to a National Trust owned Grade I Registered Park and Garden and designated SSSI important to breeding and wintering birds, has significant potential to introduce harm to both these important designations, and significant weight

would have to be afforded to the degree of heritage and ecological harm such a development would have at Site A as a result.

5.15.



Site B (land south of Gringley on the Hill)

5.16.

Site B is land located south of Gringley on the Hill. Site B is affected by both fluvial sources and surface water flood risk (as shown in the Figures below). The site is not affected by flooding from reservoirs.

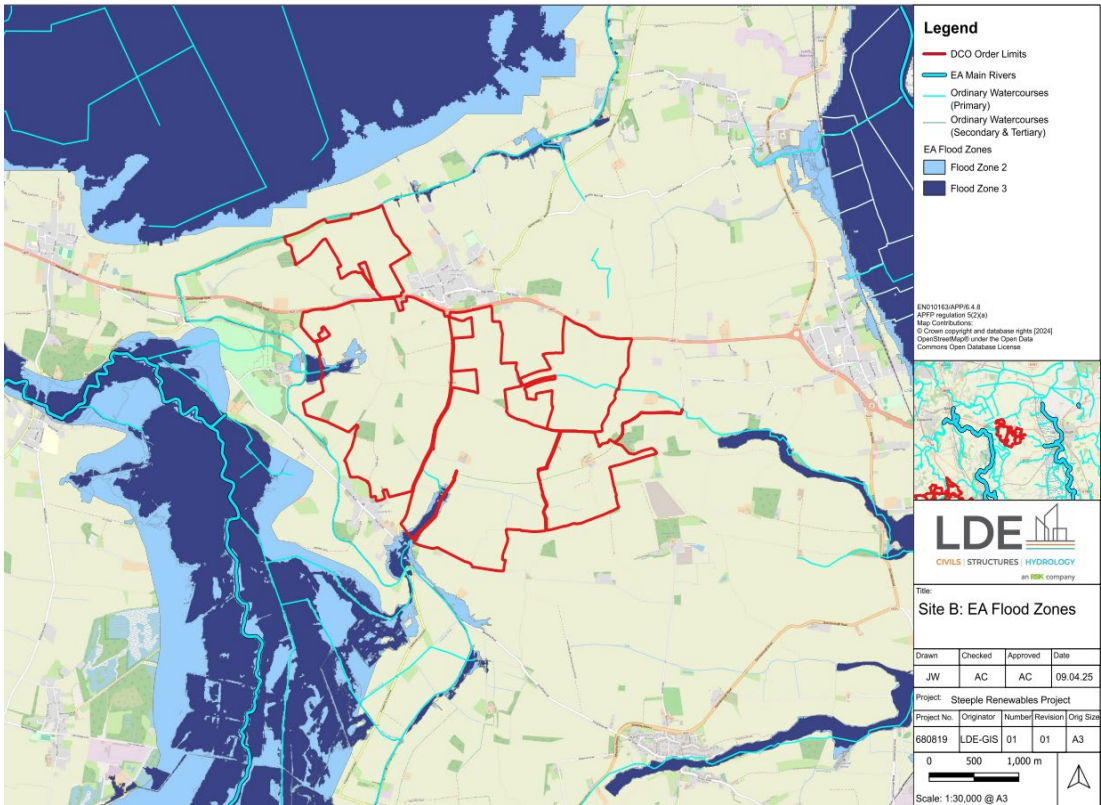


Figure 8 – Fluvial flood risk map for site B, showing two parts of the site affected by flood zones 2 and 3. A large copy of this plan is included at Appendix 8

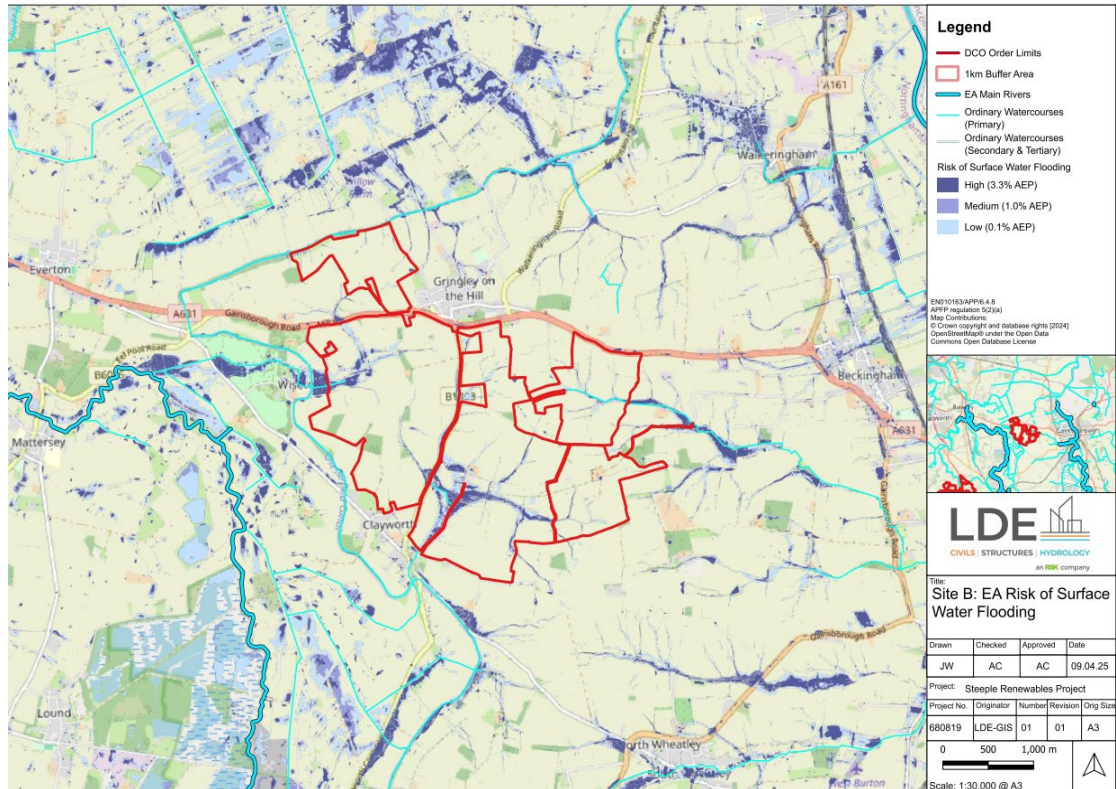


Figure 9 – Surface water flood risk map for site B, showing that the site is affected by areas of ‘high chance’ of surface water flood risk. A large copy of this plan is included at Appendix 9

- 5.17. Like the proposed DCO site, Site B is only affected by fluvial and surface water sources. However, in a sequential sense, the fluvial flood risk to Site B is considerably less than it is to the proposed DCO site, with only a small part of Site B being situated within Flood Zone 3. When only considering fluvial sources of flood risk, Site B is sequentially preferable to the DCO site. However, it must be noted that all sources of flooding must be considered in the application of the Sequential Test.
- 5.18. In surface water flood risk terms, the site is no better than the proposed DCO site, as there are large, concentrated areas of ‘high chance’ of surface water flooding. When considering only surface water flood risk, Site B is not sequentially preferable to the DCO site.
- 5.19. A copy of the reservoir flood risk map for Site B is included at Appendix 10, this shows no risk from reservoir flooding to Site B.

5.20.





- 5.21. Site B is also located centrally between three settlements which are all protected with designated Conservation Areas. This includes Conservation Areas for Gringley on the Hill (north of the site), Clayworth (south of the site) and Wiseton/Drakeholes (west of the site).
- 5.22. The Gringley and Clayworth Conservation Area boundaries immediately adjoin the Site B boundary, and the western boundary of Site B is approximately 165m from the eastern boundary of the Wiseton/Drakeholes Conservation Area.
- 5.23. The Clayworth and Gringley Conservation Areas are more confined to the built development within each settlement, and each of these Conservation Areas holds a large concentration of Listed Buildings, including a Grade I listed church in Clayworth and a Grade II* listed church in Gringley, both of which are dedicated to St. Peter.
- 5.24. The Conservation Area for Wiseton/Drakeholes covers a large area of historic parkland and garden to the Wiseton Hall estate. The Hall was lost to demolition clearance works in 1960, but several listed buildings from the estate remain, including a Grade II listed Gardener's Cottage, Ice House, Wiseton Top Bridge and Gate Piers and Walls. These buildings and the former historic parkland to the Wiseton Hall Estate have significant group character value to the Wiseton Conservation Area. The parkland setting and designed vistas in and out of this parkland form a key part of the special significance of the character and setting of the Wiseton/Drakeholes Conservation Area.
- 5.25. Developing the proposed solar farm DCO between these three Conservation Areas, which each contain high concentrations of Listed Buildings, has significant potential to affect the immediate rural setting of all three Conservation Areas, as well as the setting of the Listed churches and historic parkland to the Wiseton Hall Estate.
- 5.26. The NPS and congruent guidance in the NPPG clearly sets out that all sources of flooding must be considered, including surface water sources in 'current high-risk areas'. Whilst the site may be sequentially preferable in fluvial flood risk terms, it is not sequentially preferable when considering flooding from surface water, and following the guidance that all sources of flooding must be considered, Site B is not sequentially preferable of all sources of flooding.

5.27.

[REDACTED]

5.28.

This site was also discounted as a suitable alternative to the recently consented West Burton Solar DCO, mainly due to a major landowner confirming they did not wish to see their land developed for a large-scale solar farm. Paragraphs 3.310 and 3.3.11 of the Site Selection Assessment for the West Burton approved DCO state the following for why an alternative site area, covering the same land parcels as Alternative Site B in this DCO submission, was discounted for the West Burton Solar DCO approval:

"3.3.10 Following identification of the site through land agents, The RAG assessment highlighted SSSI's associated with the disused quarries in close proximity to the south west of the site, a Grade I listed Church and other grade II listed buildings at Clayworth that it was considered inappropriate to surround with development.

3.3.11 The north-east land parcel was found to be highly visible on visiting the site and the landowner was unsure whether they wished to allow development on this area. The south eastern land parcel appeared to be fairly unconstrained but the landowner confirmed they did not wish to allow development on this area. The land did not perform better than the Scheme in the RAG assessment and it was therefore discounted."

5.29.

Additionally, as a final point on Alternative Site B, the area of Site B is 754.5Ha in total, whereas the proposed DCO Site is 888.31 Ha. Therefore, Site B could not offer the same area for development and mitigation measures as the proposed DCO site by approximately 133.81Ha.

5.30.

Given all the above points in combination, Site B has been discounted as a suitable alternative site.

Site C (land around Northorpe)

- 5.31. Site C consists of land parcels around the small village of Northorpe in neighbouring Lincolnshire (West Lindsey District), approximately 12.5km away from the grid connection point at West Burton Power Station.
- 5.32. Site C, like the proposed DCO site, is only affected by fluvial flood risk and surface water flood risk sources, it is not affected by flooding from reservoirs.

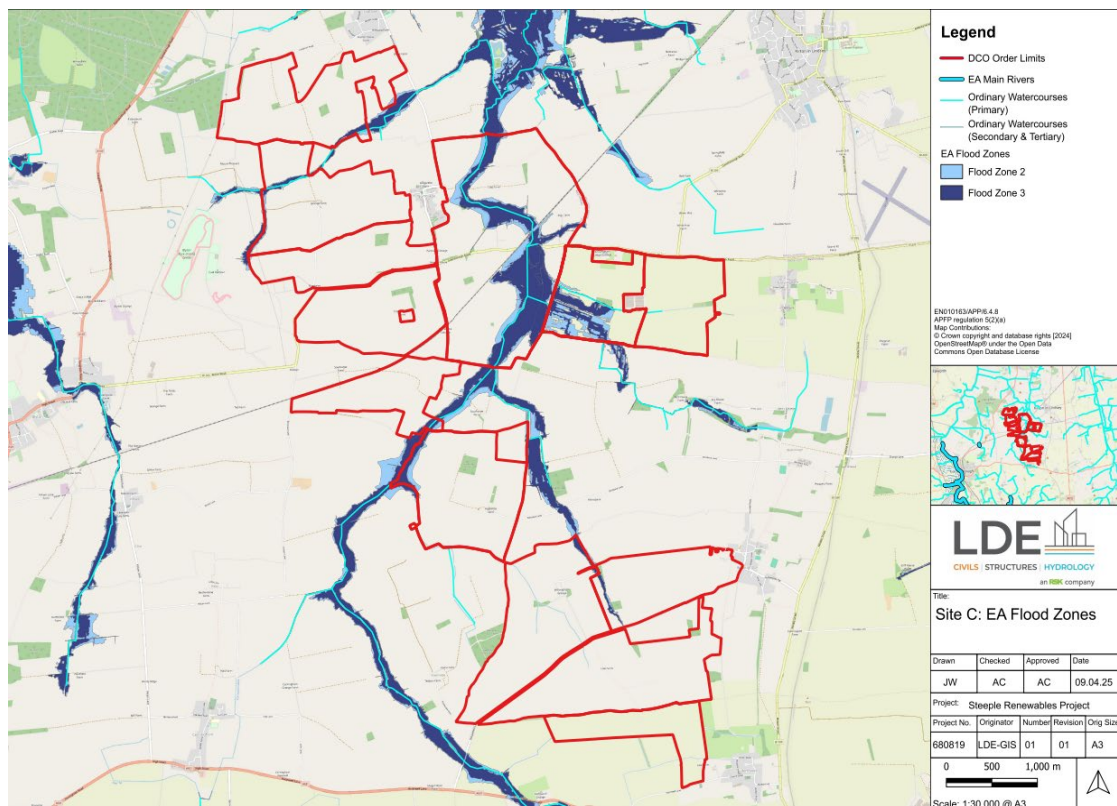


Figure 10 – Fluvial flood risk map for Site C showing parts of the site area in Flood Zones 2 and 3. A larger copy of this plan is included at Appendix 11.

- 5.33. The fluvial flood risk to Site C is sequentially preferable to the proposed DCO site area, with less of the overall site area being affected by Flood Zone 3.

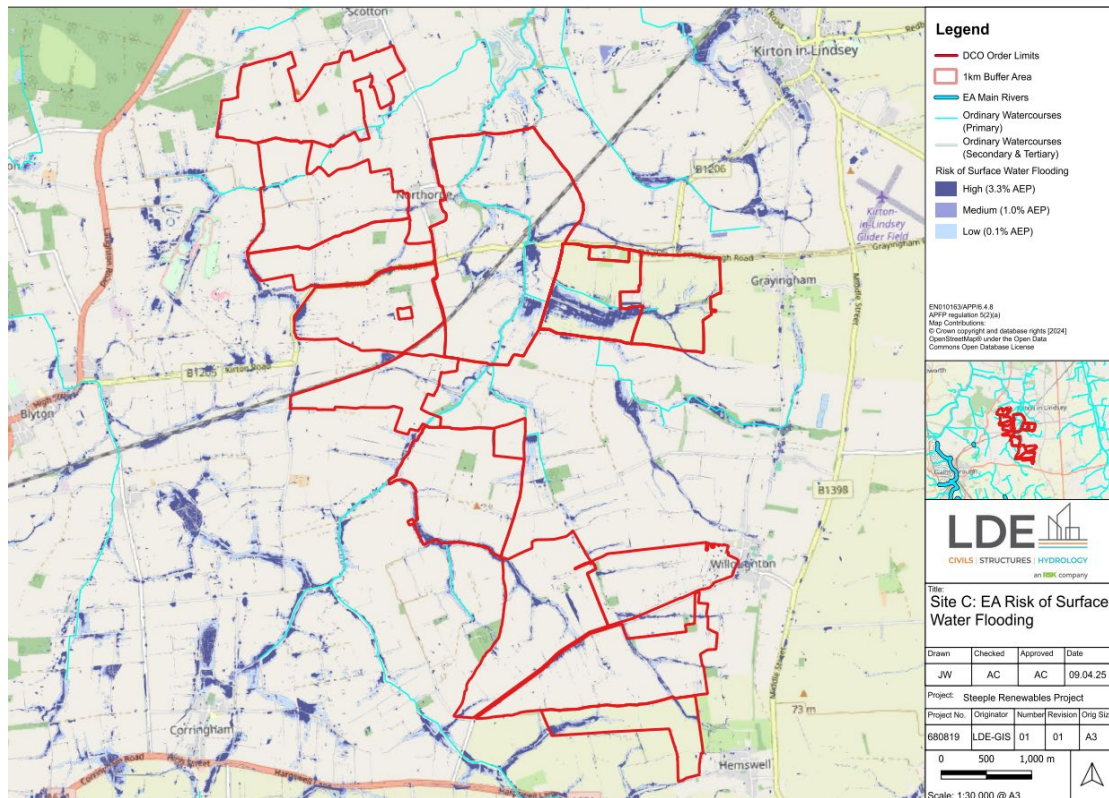


Figure 11 – Surface water flood risk map for site C area showing several large pockets of high chance of surface water flooding. A larger copy of this plan is included at Appendix 12

- 5.34. The level of surface water risk to Site C is very similar to that of the proposed DCO site, there are a number of concentrated pockets of 'high chance' of surface water flooding present across Site C. When considering surface water flood risk, Site C is not sequentially preferable.
- 5.35. Site C is not affected by flooding from reservoirs. A copy of the reservoir flood risk map for the Site C area is included at Appendix 13, showing no risk.
- 5.36. The land around Northorpe is located within the West Lindsey District of Lincolnshire, on the eastern side of the River Trent. As per what is set out in the NPS documents, this Sequential Assessment has considered cross authority boundaries with the proposed DCO site being located in the Bassetlaw District of Nottinghamshire.
- 5.37. Site C is located centrally between three areas which are designated in the Central Lincolnshire Local Plan (adopted April 2023), as being 'Areas of Great Landscape Value.' The northern and eastern boundaries of Site C would abut the designated Great Landscape Value Areas at Laughton Woods and Scotton Common, as well as

the Lincolnshire Cliff Scarp Slope (north). There is also a third area of Great Landscape Value located slightly to the southwest of Site C which sites on the north-eastern fringe of Gainsborough.

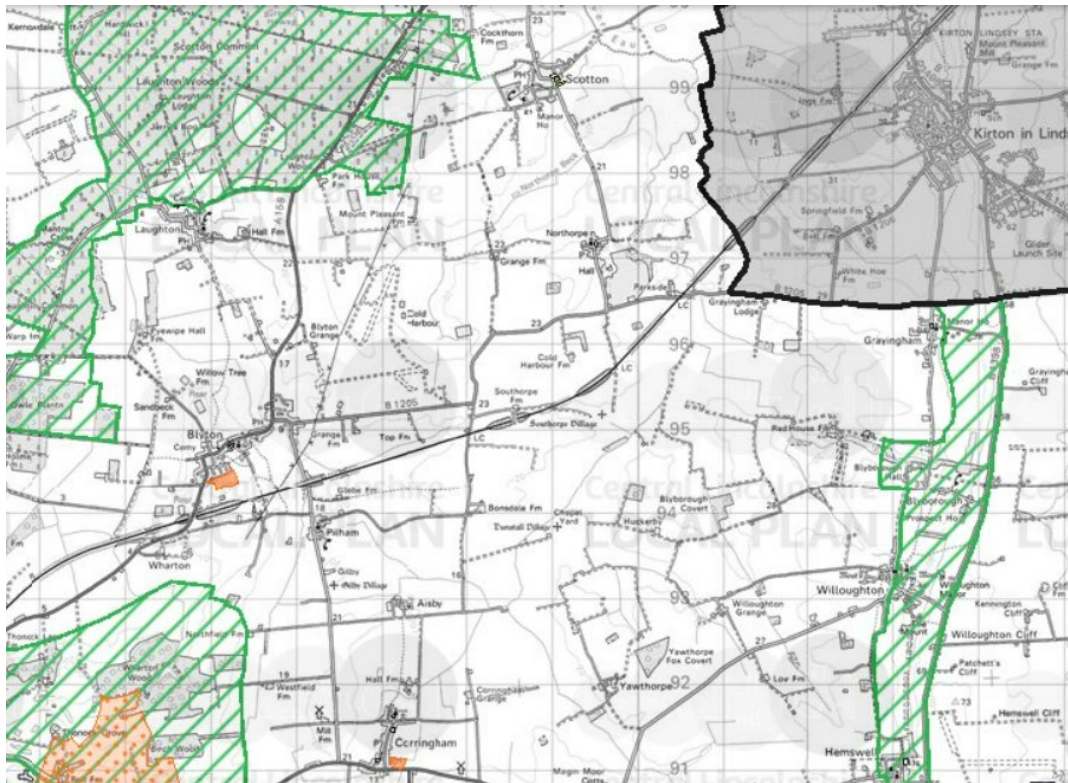


Figure 12 – Extract taken from the policies map of the Central Lincolnshire Local Plan (2023), the green diagonal hatched areas show the three areas of Great Landscape Value mentioned above, with Site C being situated centrally between these three designated landscape areas.

- 5.38. Policy S62 of the Central Lincolnshire Local Plan (2023) which relates to “Areas of Great Landscape Value” states the following for local decision making:

“Areas of Great Landscape Value (AGLV) are locally designated landscape areas recognised for their intrinsic character and beauty and their natural, historic and cultural importance. A high level of protection will be afforded to AGLV reflecting their locally important high scenic quality, special landscape features and sensitivity. Development proposals within, or within the setting of, AGLV shall:

e) conserve and enhance the qualities, character and distinctiveness of locally important landscapes; and

f) protect, and where possible enhance, specific landscape, wildlife and historic features which contribute to local character and landscape quality; and

g) maintain landscape quality and minimise adverse visual impacts through high quality building and landscape design; and

h) demonstrate how proposals have responded positively to the landscape character in relation to siting, design, scale and massing and where appropriate have retained or enhanced important views, and natural, historic and cultural features of the landscape; and

i) where appropriate, restore positive landscape character and quality.

Where a proposal may result in adverse impacts, it may exceptionally be supported if the overriding benefits of the development demonstrably outweigh the harm – in such circumstances the harm should be minimised and mitigated through design and landscaping.”

5.39. The ‘Great Value’ landscape areas are protected in decision making within West Lindsey District, for their higher degree of special landscape character and appearance, through an examined evidence base that was accepted as being sound for recent adoption in April 2023. Siting the DCO proposal at Site C has significant potential to affect the appearance, character and setting of all three parts of the Great Landscape Character designations mentioned above

5.40. The north-west boundary of Site C adjoins both the Scotten Beck Fields and Scotton Common SSSI's. The Scotton Common SSSI area is also owned by the Lincolnshire Wildlife Trust as a visitor wildlife reserve. There are also two further SSSI designations to the Laughton woodland area, Laughton Common SSSI and Scotton and Laughton Forest Ponds SSSI. These habitats are listed as being important for heathland and the wetland areas. No protected species are listed on the Natural England Records for these SSSI's. [REDACTED]
[REDACTED]
[REDACTED] Having the DCO proposals in such close proximity to a group of four SSSI areas, two immediately adjoining the site boundary, immediately adjacent to a Lincolnshire Wildlife Trust Reserve site, and an area that is designated by the RSPB as an IBA, has the potential to introduce harm to the immediate environment surrounding these habitat designations.

5.41. On a wider sustainability basis of landscape sensitivity in this area as well as the sensitive habitat and wildlife designations at Laughton Forest (4no. SSSI sites and the large IBA), Site C is not considered to be sequentially preferable as a suitable alternative site, and has therefore been discounted. This is in addition to Site C not

being sequentially preferable when considering flood risk from surface water sources, and that Site C is affected by a significant amount of fluvial flood risk from Flood Zone 3 (despite the extent of Flood Zone 3 within Site C being less than the DCO site).

6. Conclusions To Sequential Assessment for Flood Risk

6.1. This Sequential Assessment has demonstrated the following points, when considering all sources of flooding and other planning constraints that would affect the sustainable delivery of the proposed NSIP development:

- The DCO site is at risk from both fluvial and surface water flooding sources.
- Alternative and viable sites identified are also at risk from flooding, some sources at the alternative sites are sequentially preferable (fluvial sources), others, such as surface water and flooding from reservoirs when river levels are 'normal', are not sequentially preferable to the DCO site.
- The alternative sites which have been assessed are more constrained by close proximity of other designations than the proposed DCO Order Limits are.
- The DCO site does have a SSSI nearby, to the south of the DCO Order Limits, the Clarborough Tunnel SSSI. Natural England records for the Clarborough Tunnel SSSI indicate that the only habitat/species of special interest to the destination is Lowland Calcareous Grassland, which would not be affected directly by the proposed development. [REDACTED]
[REDACTED] and is therefore not as sensitive to a proposed development of this kind, as other SSSI's which are in close proximity to the identified alternative sites, as mentioned in section 5 of this report.
- Site A is affected by the immediate setting of a Grade I listed Registered Park and Garden and SSSI at Clumber Park, which receives high volumes of visitors. Clumber Park is also designated as a SSSI and IBA. Site A is also affected by all three sources of flooding (fluvial, surface water, reservoirs when river levels are normal), rather than just two sources of flooding like

the DCO site is. Although it is to a lesser degree than the DCO site, Site A is still affected by areas of Flood Zone 3 fluvial risk.

- Site B is surrounded on three sides by three designated Conservation Areas, each with a high concentration of Listed Buildings. Site B also forms a wider lowland wet area with larger concentrations of high risk of surface water flooding. [REDACTED]
[REDACTED]. Site B is not sequentially preferable in surface water flood risk terms. Site B has far less flood zone 3 area than the DCO site but is still affected in part by a small area of Flood Zone 3 near Clayworth.
- Site B is not large enough to accommodate the whole proposed DCO development, and from evidence on the consented West Burton Solar DCO, large parts of Site B were discounted as part of the Sequential Assessment due to the landowner not wanting large scale solar development on their land, as referenced in section 5 of this report.
- Finally, Site C is surrounded on all sides by areas designated in the Central Lincolnshire Local Plan as being of 'Great Value' for landscape character. Site C is also affected by the immediate and very close proximity of four SSSI sites and the IBA at Laughton Forest and Scotton Common. In surface water flood risk terms, Site C is not sequentially preferable. The degree of fluvial flood risk to Site C is less than the DCO site, however, Site C is still affected by a significant amount of Flood Zone 3.
- Whilst some flood risk matters may be sequentially preferable at the identified alternative sites (fluvial sources), no alternative site is without some degree of flood risk, when all sources of flooding are considered, as set out in the NPPG. However, the DCO site is more sequentially preferable in wider sustainable development terms, as it is not affected by heritage constraints, habitat and ecology constraints and landscape constraints to the same degree and close proximity as the alternative sites assessed are.
- The proposed DCO development has sited the eastern wildlife mitigation area within Flood Zone 3, so that a greater proportion of solar development is in a lower area of flood risk, adopting a sequential approach in the siting of the proposals.
- It is therefore concluded that the Sequential Test is passed, but as a proportion of the DCO Order Limits is located in Flood Zone 3, in accordance with relevant policy in paragraph 5.8.9 of EN-1, the Exception Test must be applied to the development in accordance with the guidance on how the Exception Test is to be applied in the NPPG.

7. Exception Test

- 7.1. Paragraph 5.8.9 of EN-1 explains that – *“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 as defined in <https://www.gov.uk/guidance/flood-risk-and-coastal-change>. (The NPPG).*
- 7.2. The National Policy Statement refers to the NPPG for how to apply the Exception Test, which is set out in Paragraph: O32 Reference ID: 7-O30-20220825, last updated on 25th August 2022.
- 7.3. The NPPG explains that *“The Exception Test requires two additional elements to be satisfied before allowing development to be allocated or permitted in situations where suitable sites at lower risk of flooding are not available following application of the Sequential Test.*

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.”*

Below, we have set out how both parts of the Exception Test would be met. Part 1 focuses on the wider sustainable benefits associated with the proposal, then Part 2 sets out how the development has been designed to remain operational in a ‘design’ flood event and how the development would not increase the risk of flooding elsewhere through the design of new sustainable drainage measures.

Part 1 of the Exception Test – The Wider Sustainable Benefits to the Community presented by the development

Renewable Energy Generation benefits

- 7.4. Reducing Carbon Dioxide emissions is enshrined in UK legislation in the Climate Change Act (2008). Following the Paris Climate Change Agreement in 2015, the UK government amended the Climate Change Act (2008) in 2019, by introducing a target of at least a 100% reduction in the net UK territorial carbon account by 2050. This is otherwise known as the “Government Net Zero Target”.

- 7.5. The UK Government has adopted a suite of policies in order to reach net zero, set out in two strategy publications: the Net Zero Strategy (2021) and Powering Up Britain: The Net Zero Growth Plan (2023). The UK has also committed to a 68% reduction in carbon emissions from 1990's levels by 2030 as part of its Nationally Determined Contribution (NDC) to the Paris Agreement.
- 7.6. The Government's Climate Change Committee published their annual progress report in July 2024 and set out that the new Labour Government "*will have to act fast to hit the country's commitments*". It notes that low-carbon technologies are becoming cheaper, although uptake remains low, and there is an increasing need to focus on how the UK adapts to climate changes that have already happened.
- 7.7. The 2024 Climate Change Committee Progress Report (July 2024) sets out 10 priority actions for 2025, with a strong focus on the following areas:
- making electricity cheaper
 - reversing the policy rollbacks of the previous Government
 - accelerating decarbonisation
 - strengthening adaptation
- 7.8. As referenced in chapter 2 of this report, the new Labour Government has placed a greater degree of weight on the importance of renewable energy development, clearly setting out that Local Planning Authorities should "*give significant weight to the benefits associated with renewable and low carbon energy generation and the proposal's contribution to a net zero future.*" This was a clear shift in national policy and gives a clear indication on the weight that the current Government expects to be afforded to sustainable proposals for renewable energy development.
- 7.9. On 11th March 2025, the Labour Government also published the Planning and Infrastructure Bill, which is seeking to make amendments to the Planning Act 2008 to speed up the DCO regime, and also prioritising clean energy schemes which are ready to connect to the grid, such projects are seen as a priority of the current Government to meet the demand of increased needs of further energy production from renewable sources.
- 7.10. A House of Common Paper on the current 'energy crisis' with supply and global prices that was published on 25th February 2025 reports that "*global prices for gas, electricity, oil and other fuels started to increase from summer 2021 when economies began opening up after pandemic related-lockdowns. This underlying increase was magnified by reduced supply of fuels from some producers and increased tensions between Russia and Ukraine. Prices increased further in late*

2021/early 2022 and spiked after Russia launched a full-scale invasion of Ukraine on 24 February 2022."

- 7.11. The above described market conditions for energy prices caused a 54% increase in the UK energy price cap in April 2022. This significant increase in wholesale energy prices has led the UK Government to develop medium to long-term strategies to reduce dependence on imported fossil fuels and generate more of our own energy from renewable sources.
- 7.12. In response to the Russian Invasion of Ukraine and the impact this had on the global energy market, the Government published 'Powering Up Britain: Energy Security Plan in April 2023. This paper sets out that *"energy security necessarily entails the smooth transition to abundant, low-carbon energy. If we do not decarbonise, we will be less energy secure. We want our energy to be cheap, clean and British. Cheap, clean, and secure energy is not pursued as an end in itself. It is essential for enabling economic growth. Businesses and jobs in all sectors are dependent on energy. Britain led the world with the industrial revolution, off the back of a plentiful supply of coal. A future of abundant and clean energy will help to boost our economic prosperity, attract future investment and support our industrial heartlands. The cheaper our energy, the greater the competitive advantage we have."*
- 7.13. The generation of 450MW from the proposed DCO solar farm will make a contribution towards national energy security for the UK and decarbonising our energy generation in accordance with the policy aims of the previous and current Governments. This is a significant benefit of the scheme.
- 7.14. The Government's Clean Power 2030 Action Plan sets out the importance of renewable energy and battery storage schemes in getting consumer energy bills down. The Action Plan States that *"a significant increase in short-duration flexibility of 29-35 GW across battery storage, consumer-led flexibility and interconnection capacity from 2023 levels is possible and can play a role in achieving clean power in 2030. The opportunity is huge, as battery storage and consumer-led flexibility are scalable and could be relatively quick to deploy. Their deployment could not only cut bills for consumers but minimise the amount of more costly generation and associated network infrastructure that needs to be built, whilst maintaining security of supply."*
- 7.15. The proposed DCO scheme will make a contribution towards the Government's clean energy strategy to reduce consumer bills in the long-term.
- 7.16. Although the NPPF (December 2024 version) is not a relevant policy document for the consideration of DCO schemes, it does set out the current Government's planning policy thoughts on energy schemes, through changes it made to the

previous version of the NPPF. The latest NPPF at paragraph 168 makes it clear that all forms of renewable and low carbon energy schemes should not require applicants to demonstrate the need for such development, and that significant weight should be afforded to such proposals for the contribution they will make towards a net zero future. For major scale energy projects that meet the DCO threshold, it is also considered that significant weight must be placed on the associated renewable energy benefits in climate change terms, as well as benefits of energy security and working towards reducing household bills.

Wildlife mitigation and Biodiversity Net Gains Benefits

- 7.17. The development proposals include habitat enhancement mitigation, within the proposed Eastern and Western Biodiversity Mitigation Areas, which will include measures that complement the interest of existing wildlife and habitat near the site area. The measures will include enhancement of arable, arable field margins, watercourses, standing water, flood-plain grassland, hedgerows and other habitats. Further areas of wetland, species-rich grassland, woodland and hedgerows will be created adjacent to Local Wildlife Sites which will provide further enhancement.
- 7.18. As set out in the Ecology and Biodiversity Chapter (EN010163/APP/6.2.7) with mitigation in place, no significant adverse effects on designated nature conservation sites or important habitats are likely. The Habitats Regulations Assessment for the proposed development concludes that the DCO scheme will give rise to no appreciable effect on internationally designated sites of nature conservation interest.
- 7.19. Ecological mitigation and enhancement will be delivered throughout the proposed DCO development with significant areas of habitat created, enhanced and managed including areas of wetland in the Eastern Biodiversity Mitigation Areas adjacent to the River Trent. The scheme will also achieve 10%+ in Biodiversity Net Gains, as confirmed in Appendix 7.12 of the ES – Biodiversity Net Gain Report (EN010163/APP/6.3.7).
- 7.20. The proposed DCO development has sited the eastern wildlife mitigation area within Flood Zone 3, so that a greater proportion of solar development is in a lower area of flood risk, adopting a sequential approach in the siting of the proposals.

Surface Water Drainage Improvements

- 7.21. The applicant has considered whether there are any additional opportunities for the Proposed Development to contribute to a positive reduction in flood risk within the local area. Surface water flooding issues have been reported within the village

of Sturton-le-Steeple in previous years. Following discussions with local residents, this flooding is understood to occur following periods of heavy rainfall when runoff from the fields to the west of the village runs off the fields via drainage ditches and overland flow towards the village, accumulating at the junction of Cross Street and Leverton Road in the centre of the village.

- 7.22. To help alleviate this flooding issue, two large detention basins have been strategically placed within the Proposed Development on land to the west (up-gradient) of Sturton-le-Steeple. Their location and sizes have been carefully designed to intercept overland flows generated up-gradient of the Site, with water proposed to be held within the basins prior to release at a controlled rate to the existing drainage ditches following the peak of the rainfall event. Full details of their design can be found in the Drainage Strategy report [ENO10163/APP/6.3.8].
- 7.23. The basins will be maintained as part of the maintenance strategy for the drainage system for the Proposed Development, although it should be noted that these two basins are not part of the drainage mitigation required for the Proposed Development, but instead, comprise an additional voluntary measure that aims to provide additional benefits to the wider community. This voluntary benefit of improving community surface water flood risk in Sturton-le-Steeple should be afforded weight in application of the Exception Test.

Economic Benefits

- 7.24. The construction and decommissioning of the proposed development would generate a significant amount of temporary construction work. It is estimated in the Socio-Economic Chapter of the ES (ENO10163/APP/6.2.10) that the construction phase would generate in the region of £29.5million in Gross Value Added (GVA), which would cause an uplift in around 16.3% of total construction GVA for Bassetlaw District. The Socio-Economic chapter considers that the construction phase alone is considered to be a 'major beneficial' economic benefit which is 'significant' in EIA terms. This significant weight of the associated economic benefits identified in the Socio-Economic Chapter of the ES should be afforded weight in applying the Exception Test.

Part 2 of the Exception Test – How the development will be made safe from flood risk, level of vulnerability of users/workers, how the development will remain operational in a ‘design’ flood event, and how the development has sought to improve flood risk locally

- 7.25. Part 2 of Chapter 7 of this document demonstrates how the development will be made safe from flooding, so that the development can remain operational in the event of a ‘design’ flood, and how surface water drainage will be carefully managed to ensure flood risk from surface water is not increased off-site.
- 7.26. A Flood Risk Assessment (FRA) has been undertaken to support the application and should be referenced for full details of flood risk in relation to the Proposed Development. The FRA has been compiled in consultation with the relevant stakeholders (Environment Agency, Nottinghamshire County Council Lead Local Flood Authority and Trent Valley Internal Drainage Board). It assesses the flood risk to the Proposed Development from all sources of flooding, taking account of the effects of climate change over the lifetime of the Development. It also describes the mitigation measures that have been committed to in order to provide an overall reduction in flood risk as a result of the Development.
- 7.27. The Site is shown to be located partially within fluvial Flood Zones 2 and 3 on the Environment Agency (EA) Flood Map for Planning. However, this mapping does not take into account the presence of flood defences along the River Trent. Given the protection afforded by the River Trent flood defences, the ‘design’ defended fluvial flood outline affects a much-reduced area in the eastern part of the Site close to the River Trent. No proposed infrastructure associated with the Proposed Development falls within the defended flood outline, taking into consideration the effects of climate change over the lifetime of the Development. Therefore, there is a low risk of fluvial flooding from the River Trent affecting the Development. No mitigation measures are required to protect the Development or its occupants during a ‘design’ flood event, as the proposed infrastructure will remain unaffected and safe access routes will be available for any personnel attending the Site. The operator will be registered with the EA to receive flood warnings so that advance warning will be available enabling any personnel in attendance to leave the Site.
- 7.28. An assessment has been made of the fluvial flood risk associated with the smaller watercourses that are not included in the EA’s River Trent fluvial flood model. These watercourses have been assessed as representing a low risk to the Development. No significant risks have been identified to the Proposed Development from other sources of flooding. Localised areas of surface water flood risk (overland flow paths) exist throughout the Site, but depths are generally expected to be shallow (less than 0.2m) and all sensitive equipment will be raised above expected flood levels.

- 7.29. In relation to the impact of the Proposed Development on flood risk elsewhere, the FRA demonstrates that there will be no appreciable off-site displacement of floodwater as all built development is proposed outside the design fluvial flood extent for the River Trent and outside any areas at significant risk of flooding from other sources. The impact on flood storage of solar panel supports within areas of potential shallow, localised flooding close to the Ordinary Watercourses is considered negligible. Any bridging or culverting of watercourses to provide access for the Development will be designed to ensure existing flows are accommodated. Development-free easements have been allowed each side of the watercourses (dependent on LLFA/IDB requirements) to ensure access is available for future maintenance of watercourses.
- 7.30. A surface water drainage strategy is proposed that will ensure runoff from the BESS and Substation is controlled via attenuation basins and discharged at a rate no greater than in the pre-development scenario. Runoff from other aspects of the scheme will also be controlled by linear drainage features. As an additional measure for the benefit of the wider community, it is proposed to install two surface water detention basins to help retain runoff from the fields to the west (upgradient) of the site that currently overwhelms drainage ditches during extreme events and causes flooding in Sturton-le-Steeple village. These basins do not form part of the drainage strategy for the Proposed Development but are proposed as a voluntary additional feature with the aim of reducing known flood risk issues in the local area.
- 7.31. Overall, the FRA demonstrates that the Proposed Development will remain safe for its lifetime, taking account of all sources of flooding and the vulnerability of users. It also demonstrates that there will be no increase in flood risk as a result of the Development, and that a reduction in flood risk will be achieved through the voluntary introduction of two surface water detention basins to hold back runoff from higher in the catchment and alleviate the known flooding issues in Sturton-le-Steeple village.

Conclusions to the Exception Test

- 7.32. Information set out above within chapter 7 of this report clearly indicates that the DCO proposals holds a number of significant wider sustainable public benefits. The following conclusions can be drawn for the Exception Test:
- Generation and storage of renewable energy for the National Grid supply, assisting to reduce carbon emissions, assist towards an increase in renewable energy production, in line with national targets and legislation.
 - A contribution towards greater national energy security and affordability of energy prices for consumers.

- Generation of further renewable energy to meet an increasing future demand for electricity.
- The development will achieve 10%+ in BNG and includes wildlife enhancement areas.
- The Flood Risk Assessment and Surface Water Drainage Strategy submitted in support of this DCO demonstrates that the development can be made safe for a 'design' flood event and will not increase the risk of surface water run-off flooding around Sturton-le-Steeple.
- The development would lead to significant temporary uplifts for the construction and decommissioning stages of the solar farm, as assessed in the Socio-Economic Chapter of the ES (ENO10163/APP/6.2.10).

- 7.33. Part 2 of Chapter 7 demonstrates how the development will be made safe from flooding, so that the development can remain operational in the event of a 'design' flood, and how surface water drainage will be carefully managed to ensure flood risk from surface water is not increased off-site.
- 7.34. The development proposals include two voluntary community drainage attenuation basins to improve surface water flood risk in and around the village of Sturton-le-Steeple. They do not form part of the required drainage measures for the proposed development. They will be maintained as part of the drainage mitigation required for the proposals. This represents a significant flood risk improvement and community benefit to Sturton-le-Steeple village to make the area more resistant to heavy rainfall events where surface water flooding has affected the area in more recent years.
- 7.35. Given that the scheme presents a number of public benefits and direct benefits to the local community, would improve surface water flood risk in and around Sturton-le-Steeple with the two additional community basins, as well as being engineered to remain safe and operational in the event of a 'design' flood, it is concluded that the terms of the Exception Test have been met for this DCO proposal.