Nottinghamshire County Council

Local Impact Report

Great North Road Solar and Biodiversity Park

Project Reference EN010162

10th December 2025

Nottinghamshire County Council

Contents

1. Introduction

1.1. Nottinghamshire County Council (NCC) has prepared this report in accordance with the advice and requirements set out in the Planning Act 2008 and the Nationally Significant Infrastructure Projects: Advice for Local Authorities published by the Planning Inspectorate in August 2024.

1.2. The gudiance states that when the Planning Inspectorate decides to accept an application for a Development Consent Order (DCO) it will invite the relevant local authorities to prepare a Local Impact Report (LIR). The LIR should give details of the likely impact of a project on the local authority's area and should indicate where the local authority considers that the proposed development would have a positive, negative or neutral effect on their area.

1.3. The LIR may include any topics that the local authority considers to be relevant to the impact of the development within its administrative area and is a means by which its existing body of knowledge and evidence on local issues can be fully and robustly reported. It is intended to be a technical assessment of impact and does not attempt to conclude on the acceptability of the proposals. The LIR therefore neither sets out objection or support for the application.

1.4. In producing the LIR, the County Council has not sought the views of local parish councils and local interest groups as to any particular matters that should be reflected in the report because the parish councils and other local interest groups have the opportunity to make their observations direct to the Examining Authority (ExA) by registering as an Interested Party.

1.5. The LIR only covers matters and issues where NCC has a statutory function or holds expertise at an officer level, supplemented by external advice as needed. The topics covered are listed below. For all other matters not listed below, NCC will defer to Newark and Sherwood District Council (NSDC) as the relevant Local Planning Authority (LPA) for the area in which project is located.

- Historic Environment
- Ecology and Biodiversity
- Flood Risk and Drainage
- Transport and Access
- Public Rights of Way
- Minerals and Waste

1.6. For each matter above, the LIR will comment upon the adequacy of the assessment work and proposed mitigation with reference to the Environmental Statement (ES) and associated technical appendices and management plans. The LIR will comment upon the impact the Development would have on the area, either positive, negative or neutral and the magnitude of that effect.

1.7. In addition, NCC would wish to emphasise the potential significant impacts upon the landscape, loss of agricultural land, fire hazard and pollution to air, land and water. NCC defers to NSDC, the Environment Agency (EA), and Nottinghamshire Fire and Rescue Service (NFRS) with respect to technical comments on these matters, which should be scrutinised thoroughly by the ExA.

1.8. NCC would also highlight that there are several other nationally significant solar development proposals within a short distance of the proposed order limits of this project. Within Nottinghamshire, this includes One Earth Solar Farm (2.36km from the order limits) and Steeple Renewables Project (15.00km from the order limits), both of which are at examination stage.

1.9. Further nationally significant solar developments have been approved in Lincolnshire which involve underground cabling to the connect to substations in Nottinghamshire, including Gate Burton, Cottam, West Burton and Tillbridge Solar Projects. There are also many solar projects which have been proposed through applications submitted to the LPA under the TCPA 1990.

1.10. A plan of proposed and permitted solar developments within Nottinghamshire is **appended**. We cite these projects to illustrate the scale of solar development in the locality. The Great North Road Solar and Biodiversity Park must be considered having regard to the overall impact of the widespread developments planned within the area. It cannot be viewed entirely in isolation.

1.11. The new administration of the County Council, elected in May 2025, continues to be pro-environment, pro the creation of secure, affordable and safe energy. However, the administration takes issue with the concept of "net zero" the legally binding target to reach net zero greenhouse gas emissions by 2050 which is driving the Government's aim of delivering clean power by 2030 through low carbon power sources producing most electricity generation in Great Britain. It continues the stance of the previous administration in being against the development of large amounts of agricultural land for ground mounted solar. It should be noted that for nationally significant solar farms, the National Policy Statement for Renewable Energy Infrastructure (EN-3) advises that such solar farms should be sited on previously developed and non-agricultural land.

1.12. It is recognised that the proliferation of these projects in Nottinghamshire and Lincolnshire is due to a combination of the legally binding target for "net zero" and easy access to the grid connections at the former cold-fired power stations. NCC is however concerned by the way in which the cumulative impact of this growing list of projects will change the face of the wider Trent Valley area and impact on the way the valley is perceived. Whilst there have always been elements of non-agricultural industry in the Nottinghamshire countryside, these proposals are resulting in the wholesale transformation of green fields into glass and steel. We acknowledge that such projects are seen as temporary and reversable but the impact on local people will be felt for several generations. These opening remarks serve to illustrate the wider impact of this proposal.

2. Project Proposal

2.1. The order limits of the 'Great North Road Solar and Biodiversity Park' (the Development) consists of approximately 1765 hectares (ha) of land comprising agricultural fields interspersed with occasional woodlands and rural roads and footpaths that connect small villages and hamlets.

2.2. The Order Limits of the Development are to the west of the A1, north of the A617, east of Eakring, and south of Egmanton, occupying two main areas to the north and north-west of Staythorpe. The eastern side of the Development runs from the north of North Muskham to Egmanton in the north. The western side of the Development runs northwest from Staythorpe Power Station and then splits at Maplebeck, with spurs running to Eakring in the north-west and Kneesall to the north-northeast, then connecting with the eastern side of the Development.

2.3. The project comprises the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating facility. The project will comprise an array of solar PV modules, battery energy storage and associated development infrastructure, together with an export connection to the National Grid at Staythorpe. The Development would also comprise biodiversity enhancements including 64500 trees and 50km of new hedgerow as well as 32.6km of new recreational routes, through a proposed network of 27 new permissive footpaths.

2.4. The construction is anticipated to take place in at least five phases lasting for a period of 2 years in total. The Development is expected to be operational for up to 40 years from full operation being first achieved. Decommissioning would be expected to take between 18 and 24 months.

2.5. The Development comprises Environmental Impact Assessment (EIA) development as defined in the Infrastructure Planning (EIA) Regulations 2017 and is therefore supported by an Environmental Statement which explains the likely environmental effects and measures proposed to protect the environment during construction, operation and decommissioning.

2.6. To allow flexibility for the final design to be confirmed post consent, the applicant has applied the principles of the 'Rochdale Envelope' to inform the environmental assessment work. This involves the technical assessments being undertaken and based on a defined 'envelope' within which the project will be delivered, featuring maximum and minimum design parameters, so that an assessment of the reasonable 'worst case scenario' can be undertaken. Each environmental topic has used the worst-case parameters within the 'Rochdale Envelope' to determine the potential for significant effects and identify suitable mitigation measures.

3. Relevant Planning History

3.1. NCC is the Minerals and Waste Planning Authority for Nottinghamshire and is therefore responsible for determining planning applications for such developments. There are no active minerals and waste sites within the proposed order limits. There is an active mineral extraction site within close vicinity of the order limits (Cromwell Quarry), but this site is located to the east of the A1 and the opposite side of Cromwell Village and therefore the proposed development would not interfere directly with the operations of the quarry site. It is however noted that the planning application for the proposed southern extension to the quarry has been identified within the ES as having a potential cumulative environmental effect, which has been considered.

3.2. NCC is also responsible for determining applications submitted for its own developments, though there are no such planning applications or permissions within the vicinity of the order limits.

3.1. NCC would emphasise that there are several other nationally significant solar development proposals within a short distance of the proposed order limits of this project, together with many solar projects which have been proposed through applications submitted to the LPA under the TCPA 1990. This has been outlined in Chapter 1 and a composite plan of proposed and permitted solar developments within Nottinghamshire is **appended** to demonstrate the cumulative impact.

4. Planning Policy Context

4.1. The Secretary of State (SoS) is required to have regard to any relevant national policy statement (NPS), amongst other matters, when deciding whether to grant a DCO. Where there is a relevant NPS in place DCO applications are determined in line with Section 104 of the Planning Act 2008.

4.2. The following NPSs are considered relevant to the determination of this DCO Application and set out the assessment principles for judging impacts of energy projects:

- EN-1 – Overarching National Planning Policy Statement for Energy
- EN-3 – National Planning Policy Statement for Renewable Energy Infrastructure

4.3. The Development Plan Framework for the impacted area of Nottinghamshire includes the:

- Newark and Sherwood Amended Core Strategy (March 2019) and Allocations and Development Management Development Plan Document (July 2013)
- Nottinghamshire Minerals Local Plan (March 2021)
- Nottinghamshire and Nottingham Waste Local Plan (September 2025)

4.4. The subsequent section on the assessment of impacts will refer to relevant national and local policies, as far as they relate to the matters which are covered within this LIR. Other relevant polices from the development plan framework will be referred to within the District Council LIR.

5. Assessment of Impacts

This section of the report provides comments from specialist service areas on the technical assessments within the Environmental Statement (ES) submitted with the application and the likely impacts of the proposed development upon Nottinghamshire, focussing on the issues relevant to NCC.

5.1. Historic Environment

5.1.1. Local Policy:

- Newark and Sherwood Amended Core Strategy
  - Core Policy 14: Historic Environment

5.1.2. National Policy:

- Section 5.9 of EN-1 (Historic Environment) acknowledges that the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment above, at and below the surface of the ground (5.9.1);
- Sections 5.9.16 to 5.9.21 presents requirements for mitigation of development impacts on archaeology identified within the order limits.
- Additional guidance for Renewable Infrastructure and Cultural Heritage is presented at Sections 2.10.107 to 2.10.119 of EN-3 and expands slightly on guidance from EN-1.
- Section 2.10.112 and Footnote 94 of EN-3 require assessment to be include information on the Historic Environment Record (HER) and the results of pre-determination evaluation and that this in turn should inform design of the scheme.

5.1.3. NSDC's LIR has comprehensively responded to the impact of the Development in relation to impacts upon built heritage assets and therefore NCC defers to NSDC in relation to impacts on built heritage assets. However, NCC wishes to draw particular attention to the impact on Ossington RAF WW2 Battle Headquarters, which does not appear to have been given sufficient consideration within the documentation, or referenced by NSDC. The asset is situated West of Ossington in the grounds of Ossington Hall and is within the order limits. NCC is in the process of enhancing the records for the site within its Historic Environment Record and is undertaking further research to identify the precise extent and nature of the remains. Therefore, the applicant should engage with NCC to discuss the location of solar arrays within the site.

5.1.4. The following comments within this section of the report are concerned with buried heritage (archaeology) related to the Development, which is not covered in the NSDC LIR.

5.1.5. The applicant has presented their assessment of archaeological potential and related development impacts at Chapter 11 of their Environmental Statement (APP-054) and figures in appendices APP-158 to APP-161. Technical reports including the desk-based assessment (DBA), geophysics report and trial trenching reports are provided at documents APP-251 to APP-267 and an outline mitigation strategy has been submitted at APP-268.

5.1.6. It is the Council's position that to properly assess the impact of a development upon archaeology, the applicant should provide sufficient desk-based research, non-intrusive survey and intrusive field evaluation to adequately understand the archaeological resource within the

scheme and detail the proposed development impacts upon it. This is necessary to design an agreeable Archaeological Mitigation Strategy (AMS) to limit as far as possible the proposed development impacts. The ES must present the full range of findings from this archaeological work and provide an evidential basis for at least an Outline Archaeological Mitigation Strategy (OAMS) for consideration at Examination.

5.1.7. We welcome the archaeological assessment work undertaken to date and broadly welcome the approach undertaken by the applicant. The desk-based assessment (DBA) covers the full site, and the geophysical survey has been undertaken on the majority of the order limits. This has been largely sufficient to provide an acceptable level of data to inform the baseline for the Environmental Statement and an initial phase(s) of trial trench evaluation.

5.1.8. The limited evaluation trenching has targeted areas of higher potential identified in the DBA and geophysics data and some areas where the previous techniques indicated a lack of archaeological activity. However, the applicant acknowledges that the geophysics results have not been tested in their entirety (Para. 48) which we consider a serious limitation when undertaking an appropriate assessment and gathering sufficient data to inform significance and impact. However, the OAMS has made provision for post consent geophysics and trial trench evaluation work that will potentially resolve the above issue if implemented appropriately. The OAMS has left the scope of this work to be agreed.

5.1.9. We appreciate that solar farm development differs slightly from other development types and that some elements will not be fixed until post consent. While we maintain our position that the assessment work should be completed as part of the application/examination process to inform design, we accept that some evaluation work could be left until the detailed design has been fixed and when areas of higher impact can be properly targeted for intrusive evaluation. For instance, panel arrays may have a relatively low impact if cables are clipped up behind rather than buried in trenches behind, and details on this will help influence the level of intrusive evaluation required to characterise the archaeology and assess impact.

5.1.10. During the examination period, we would expect to further refine the OAMS in consultation with the applicant and their consultants and agree an outline programme for the post-consent completion of the assessment work. There will also need to be specific wording included in the DCO with respect to the archaeology requirement which secures completion of the assessment work and provision for an updated AMS and its timely implementation prior to any construction work being undertaken. NCC will recommend more specific wording for the archaeology requirement that relates to the level of progress made with the applicant.

5.1.11. In summary, based upon the work completed to date and subject to the applicant refining the details of the post-consent trenching and OAMS to our satisfaction, the impact of the Development on buried heritage would be neutral. However, without an agreed scheme for the post consent geophysics and trial trench evaluation work, the harm to buried heritage could be significant.

5.2. Ecology and Biodiversity

5.2.1. Local Policy:

- Newark and Sherwood Amended Core Strategy:
  - Core Policy 12: Biodiversity and Green Infrastructure

5.2.2. National Policy:

- Section 5.4 of EN-1 makes clear that the ES should clearly set out any effect on designated sites of ecological importance, protected species and habitats and other species identified as being of principal importance. The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity conservation interests and include appropriate avoidance, mitigation, compensation and enhancement measures as an integral part of the development.
- Section 2.10.75 of EN-3 provides additional guidance on ecological risks associated with renewable energy infrastructure and particular issues that should be considered by the applicant. Section 2.10.89 confirms that solar farms have potential to increase biodiversity value of a site and should aim to achieve biodiversity net gain by maintaining, extending, or creating new important habitats.

5.2.3. NCC has reviewed the ES and associated documents in relation to ecology for the proposed development and has generally found the survey effort to be adequate. However, there are several clarifications sought, and further information is requested, as detailed under each relevant heading below. The applicant should address these shortcomings.

Wildlife Movement

5.2.4. Further information in relation to fencing and wildlife movement is sought from the applicant as not enough detail has been provided. The ES chapter states that all perimeter fencing will have "*a means to allow terrestrial animal species up to the size of an adult badger to move freely within their home ranges and to disperse without impediment*". With section 8.5.12.6 mentioning mammal gates. No additional information has been provided in the OLEMP or OCEMP. Fences should not be gated to allow smaller mammals such as brown hare and hedgehog to move around the Site. In addition, a plan showing the fencing and proposed location of all fence gaps/movement corridors will allow better understanding of the proposed free movement for terrestrial mammals across the site.

Designated Sites for Nature Conservation

5.2.5. Paragraph 8.8.4.3 of the ES states: "*Effects arising during decommissioning are likely to be similar in character, albeit of lower magnitude (i.e. negligible), to those during construction and subject to similar environmental controls through the Outline DRP (TA A5.6 [EN010162/APP/6.4.5.6]). It is assumed that the decommissioning phase, and its potential ecological effects, will be appropriately mitigated in line with the prevailing baseline conditions, guidance and policies such that they are acceptable. No significant effects are predicted*".

5.2.6. This statement suggests that the decommissioning impacts for sites designated for nature conservation have been assessed in line with the current baseline of the site, when the impacts should be assessed for the future baseline at the site. The land use of the site and species/habitats which currently utilise the site are expected to change over the lifetime of the development, thus impacting potentially more sensitive and rarer species. Further details are sought from the applicant to justify this predicted outcome of the decommissioning phase for sites designated for nature conservation.

5.2.7. In addition, the Outline Decommissioning and Restoration Plan does not provide any details in relation to designated sites of nature conservation, whereas there is some limited information provided for the survey of habitats prior to the decommissioning phase. This document should include reference to update desk study and where necessary habitat/species surveys in relation to the potential impacts to designated sites in the future as its is likely these sites will change over the next 40 years.

Fish

5.2.8. Specific fish surveys have not been undertaken at the Site, but the desk study identified the following*: "Of the 16 records associated with watercourses directly linked to the Order Limits, most were from The Beck, the largest watercourse within the Order Limits, and European eel was the most frequently recorded, plus one record of brown trout and two of bullhead. River lamprey, sea lamprey and Atlantic salmon have been recorded in the wider catchment".*

5.2.9. Therefore, the ES chapter concluded that fish have been assumed in all watercourses and appropriate mitigation measures outlined within the OCEMP, with Horizontal Direct Drilling (HDD) proposed as a mitigation method under the most sensitive watercourses, which is considered to be the most appropriate method.

5.2.10. No timings have been provided to undertake these works, and mitigation should include the avoidance of spawning season or any additional timings sensitive to fish species to prevent any disturbance.

5.2.11. A5.3.11.11.3 Mitigation section defines mitigation measures for the potential effects on fish. The timing of works to avoid sensitive times of year includes a suggestion of the Autumn migration of eels, but no further details have been provided. Given the presence of fish within the watercourses is unknown, further mitigation is required. Therefore, specific times of the year when works can be undertaken, such as outside of the spawning season should be provided. The mitigation measures for HDD will also need to be updated to including timings as outlined above.

Breeding Birds

5.2.12. A number of rarer and scare breeding bird species were identified breeding within the order limits. The proposed mitigation will be undertaken in a phased approach to provide compensatory habitat prior to the start of works is considered well thought through and a commendable approach. We have not had sight of the breeding bird survey results appendix and therefore will provide further comments on receipt of this information from the applicant.

5.2.13. Our main queries prior to this are:

- Were specific nightjar and other crepuscular species surveys undertaken, given the sites location within Sherwood Forest ppSPA.

- The ES chapter claims the surveys were undertaken in line with best practice guidelines and references, but this survey methodology requires a minimum of 6 surveys, and not four which the applicant has undertaken. In addition, this survey methodology also states: "*Any deviation in the number of surveys must be supported with detailed and robust justification. Additional survey effort may need to be considered for large-scale projects with the potential to have significant impacts on birds, and/or for high profile, sensitive projects*". Further justification for the level of survey effort undertaken is therefore sought.

- The site has been assessed as regional value to breeding birds with SPI, LBAP, LWS-qualifying species and Schedule 1 WCA species recorded. Should further analysis of this be undertaken given the potential qualification of a LWS feature.

Outline LEMP

5.2.14. The outline Landscape and Ecological Management Plan (OLEMP) provides recommended species to be planted as part of the habitat creation and enhancement works. As these are all recommendations at this stage, we will provide further comments once the finalised species lists and creation works are known.

5.2.15. Within the OLEMP a number of wildlife boxes and refugia are proposed. Given the overall scale of the order limits a total of 23 bat boxes and 21 bird boxes including 2 barn owl boxes is not considered sufficient.

Invasive Non-Native Species

5.2.16. Outline Construction Environmental Management Plan (OCEMP) details measures to be undertaken if an Invasive Non-Native Species (INNS) is identified within a working area only, but three INNS were identified as part of the baseline habitat surveys (6.4.8.3 Environmental Statement Volume 4 – Technical Appendices Technical Appendix A8.3 – Habitats and Vegetation Baseline - Rev 1) including Himalayan balsam, Japanese knotweed and giant hogweed. With four stated to be present within the ES (in addition New Zealand pygmy weed) The Himalayan balsam was recorded along the Beck which is within the order limits and along the River Trent. No plans showing the locations of these have been provided which would be helpful to understand the locations of these species. In addition, no mitigation other than the management of invasive species has been provided, with only biosecurity measures to prevent and manage species within a working area provided.

5.2.17. With the limited information provided within the reports, NCC cannot determine where the INNS are located within the order limits. Further clarification is sought from the applicant as well as a commitment to control and remove these species, as they are likely to spread both within the order limits and outside of the order limits over the 40 year lifespan of the proposals.

Water course crossings

5.2.18. Table A5.3.11 Cable Crossings within Work no. 2 Cable. This provides an overview of the watercourse and methods as well as the rationale for the method of crossing use. In terms of ecological reasoning only the habitat type, whether the watercourse will impact a designated site of nature conservation or if the watercourse is a WFD or supports water vole are given for justification of use if HDD. The rest of the watercourses, although I am aware may not all be suitable, but there does appear to be a large amount subject to open trench methods. Other species appear not to be included within this justification i.e. fish which are impacted through these methods. Further justification for the use of Open Trench methods needs to be sought from the applicant for the watercourses subject to this method.

American Mink

5.2.19. American mink has been recently recorded within 2km of the order limits, as provided by the desk study information. It is understood that no evidence of this invasive species has been identified within the order limits as part of the water vole surveys, but the known presence of this species within the wider area could threaten the population of water vole within the order limits. A commitment to regular monitoring of the site in relation to the water vole population and control of American Mink should they be identified would be a welcomed as addition to the solar parks biodiversity commitments. This would also positively boost wider efforts such as the reintroduction of water vole in northern Nottinghamshire and other solar parks commitments to the control of this invasive species.

5.2.20. Decommissioning impacts

5.2.21. A5.6.2.3 Vegetation Planning states: "*21 Woodland and hedgerows (except those created to form a second hedge alongside a permissive route) will be retained, as will the community orchard".* Further clarification should be sought from the application on the proposed removal of any second hedgerows. Hedgerows are valuable resources for wildlife, and the removal of established hedgerows should not be undertaken.

5.2.22. In relation to section A5.6.6.6 Management of Sediment and Surface Water. This section provides details of silt traps, silt matting, check dams. However, the wording within this section of the Outline DRP suggests that the check dams will be installed in drainage ditches – these could potentially hold protected species and therefore require either no impacts to the ditches or protected species surveys prior to the installation of these features. No information about the removal of the silt traps, silt matting, check dams and lagoons once the decommissioning has been undertaken has been provided.

5.2.23. Biodiversity Net Gain

5.2.24. As BNG is not a mandatory requirement for NSIPs, NCC has not reviewed the supporting information for this element in great detail. NCC is aware that colleagues within NSDC are providing comments in relation to this and support their comments in this aspect.

Summary

5.2.25. **The assessment methodology and proposed mitigation in relation to ecology is largely adequate, however there are several clarifications required with respect to the assessment work and refinements to the managements plan, as referred to above. Subject to implementation of these recommendations and the agreement of a suitable scheme of BNG, it is not considered that the Development would have a detrimental impact upon ecology.**

5.3. Flood Risk and Drainage

5.3.1. Local Policy:

- Newark and Sherwood Amended Core Strategy
  - Core Policy 10: Climate Change

5.3.2. National Policy:

- Section 5.8.15 of EN-1 includes assessment principles for judging impacts of energy projects on flood risk and sets out the minimum requirements for Flood Risk Assessments.
- Further advice on potential impacts of solar farms is provided in Sections 2.10.75-92 of EN-3. This confirms that the FRA should consider the impact of drainage but notes that as solar panels drain to the existing ground, the impact will not, in general, be significant.
- Given the temporary nature of solar farms, EN-3 advises sites should be configured or selected to avoid the need to impact on existing drainage systems and watercourses.

5.3.3. NCC is the Lead Local Flood Authority (LLFA) for the proposal site and is responsible for the management of food risk from local sources including surface water, ordinary watercourses and groundwater. In its capacity as the LLFA, NCC has commissioned AECOM to review the applicant's flood risk assessment (FRA) and surface water drainage strategy, examining their methodologies and consistency with relevant policies and guidance such as the NPPF/PPG, DEFRA's Non-statutory SuDS Standards, CIRIA C753, and NCC's Local Flood Risk Management Strategy (LFRMS) Part 5.2. It also assesses the potential impact on local flood risk, considering surface water, ordinary watercourses, and groundwater. The review has covered the following:

- APP-028 Location plan
- APP-052 ES Chapter 9 (water resources) – relating to surface water and flood risk only
- APP-148 to APP-153 ES Chapter 9 figures
- APP-228 ES Appendix A9.1 Flood Risk Assessment

5.3.4. The review has found that the information provided in the FRA and supporting drainage documentation is sufficient to outline the overall strategy. However, there are areas where information is limited or missing, which makes it difficult to confirm full compliance with agreed design parameters. A full report outlining our comment and recommendations to the applicant is provided in a table which is **appended** to this LIR and NCC would strongly encourage the applicant to review the appended advice in detail. However, in summary, NCC would request the following information from the applicant in order to ensure compliance:

- Provide meeting minutes from consultation with the LLFA, the Environment Agency and any other relevant stakeholders
- Provide details of existing drainage across the site including BESS's and substation.
- Undertake a site wide hydraulic model to better understand how water flows across the site.
- Include an assessment of a fluvial defence breach scenario to provide a complete understanding of flood risk.
- Provide appropriately scaled flood mapping (e.g. 1:30,000 on A3) to enable a more robust review.
- Provide drawings showing what is proposed in each work area.
- Assess compensatory flood storage requirements, particularly within the substation area, to address any loss of floodplain storage
- Evaluate the increase in flood risk from new impermeable areas and crossings and clearly specify proposed surfacing types.
- Provide a site wide layout plan showing all catchments, SuDS features, discharge points, exceedance flow paths, and connectivity to receiving watercourses. Overlay with flood depth mapping to verify separation from high risk areas.
- Confirm the drainage system can operate under surcharged outfall conditions.
- Design attenuation basins at the BESS area to consider either the 1 in 2-year storm with firewater or the 1 in 100-year storm with climate change. Further details of the basin should also be provided, including water depth, outfall, storage capacity, and modelling results.
- Provide an assessment of potential water quality effects.
- Site wide exceedance routing plan to confirm protection of sensitive infrastructure and no predicted impacts to third parties.
- The applicant should provide quantitative evidence to show that the solar arrays will not increase runoff with the proposed berms and filter drains. Further detail is needed on the design and function of the filter drains, including storage, infiltration, and outfall arrangements, as well as how runoff will be collected, conveyed, controlled, and discharged.
- Resilience of solar panels and infrastructure to lateral flood flows is assessed to ensure stability and minimise flood damage.
- Provide a maintenance plan that includes all SuDS features.
- Recommended that a soil management plan is prepared to mitigate compaction risks during construction through defined haul routes, suitable machinery, phasing, and decompaction.
- The applicant should show how groundwater depth has been considered in the basin design, assess seasonal changes, and commit to monitoring.
- Recommended that the drainage strategy is revised to fully consider SuDS that integrate with the overall drainage scheme and are not bolted on.
- Provide details of all proposed watercourse crossings, including confirmation of design flood standards, soffit levels, and arrangements to maintain existing flows.
- Confirm and agree the assessment epoch with the Environment Agency to ensure coverage of the full decommissioning and demobilisation period.

5.3.5. **In summary, should the recommendations within this report (as detailed in the appendix) be implemented it is anticipated that the impact upon local flood would be neutral, however**

the impacts are currently uncertain as the Flood Risk Assessment and associated Drainage Strategy is presently inadequate and, as such, the project has the potential to have a negative impact if further assessment work and mitigation is not addressed.

5.4. Traffic and Transport

5.4.1. Local Policy:

- Newark and Sherwood Amended Core Strategy
  - Spatial Policy 7: Sustainable Transport

5.4.2. National Policy:

- EN-1 Section 5.14 acknowledges that the transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks (5.14.1). The statement sets out that the ES should be supported by a transport appraisal and that appropriate mitigation should be identified having regard to the needs of freight at all stages in the construction and operation of the development.
- EN-3 provides further guidance on the assessment of impacts and potential mitigations in relation to construction traffic associated with solar farms. Paragraph 2.10.141 states that where cumulative effects on the local road network or residential amenity are predicted from multiple solar farm developments, it may be appropriate for applicants for various projects to work together to ensure that the number of abnormal loads and deliveries are minimised, and the timings of deliveries are managed and coordinated to ensure that disruption to residents and other highway users is reasonably minimised.

<u>General</u>

5.4.3. Please note that many of the documents submitted cannot be viewed on NCC computers due to memory being exceeded. Due to this, it is currently not possible to manipulate, measure or view many of the documents and therefore comments are limited to visual appraisal. Only a few of the access drawings have been seen. We would request that applicant optimise/compress or split the PDF documents, so that these can be downloaded.

5.4.4. It would be helpful when referring to appendices or figures throughout the Transport Assessment (TA) to reference the particular part in which they are found.

<u>Study Area</u>

5.4.5. The response document has not acknowledged the key matter of the study area. Whilst A14.1.1.5 of TA states that the general scope of assessment was agreed in principle with NCC, this is not the case and we remain concerned that, whilst the TA now acknowledges that some traffic will arrive from the west, it is stated that this will be minimal, but provides no evidence to support this. Furthermore, this approach appears to be contrary to the Travel to Work Areas diagram in Figure 13.1.

5.4.6. This means that routes including the A616 and A617 to the A614 have not been considered and whilst Paragraph 41 of CH14 suggests that the approach taken provides a worst case scenario by routing all traffic from the A1, this is considered neither reasonable nor realistic and ignores the possible impacts on the A616/A617/A614 to the west of the study area as currently presented.

5.4.7. Furthermore, acknowledging that some traffic is likely to arrive from the west but not considering it properly could make enforcement of use of the prescribed routes problematic. Forcing vehicles arriving from the west to use the prescribed route along the A1 would increase journeys from the A614 by around half an hour and 30 miles, which, contrary to the referenced 'efficient transport routes' is neither reasonable, practical nor within the spirit of sustainable transport.

5.4.8. Furthermore, it is stated that assigning all traffic from the A1 provides a robust assessment, but applying the 'Rochdale Envelope' principle in this light would also suggest a requirement to test the outcome if all traffic approached from the west.

Phasing

5.4.9. The application documents refer to phasing and intentions of phasing, but the draft DCO identifies that phasing is to be a matter for subsequent approval. The DCO does not specify a minimum number of phases, and this should be amended to reflect the transport assessment work.

5.4.10. The TA has considered traffic within what it states to be the most cumulatively concentrated phases; phases 1 and 3 which are stated to represent the southern phases, with the northern phases 2 and 4 having less traffic. It is claimed that the worst-case scenario assumes the 3 southern phases being built concurrently followed by the 2 northern phases would be the worst case.

5.4.11. However, a condition application could be made for phases 3 and 4 followed by phase 1, 2 and 5, for example and phases 3 and 4 are the most traffic-heavy, meaning that the most intensive potential phasing has not been considered.

5.4.12. Compounding this, in Appendix F of the TA the phases are described as PH1 – south PH2 – southwest, PH3 – northwest and PH4 – north, which would mean that phases 1 and 2 would be the southern phases and phases 3 and 4 the northern phases – the latter two being the most traffic-heavy.

5.4.13. It is considered therefore that the TA may not have assessed impact in line with the Rochdale Envelope principles and as such the submitted information should be reviewed for consistency, with any discrepancies addressed.

5.4.14. A drawing identifying the phase locations would also give greater clarity.

5.4.15. The impact assessment does not appear to consider phasing. It would be helpful to provide diagrams showing the traffic proposed on the links and from which phase.

Trip Generation

5.4.16. Whilst the calculations for HGV loads appear conservative, the operative trip generation has been calculated against an assumption of 50% travelling by shuttle bus, alongside a car share ratio of 1.5 These assumptions appear to be very optimistic, and whilst travel planning measures may be included in the draft Travel Plan, it may not be considered reasonable to force staff to travel by a specified means. If applying the Rochdale Envelope approach therefore, it is not thought appropriate to apply such optimistic discounts.

Access

5.4.17. There is inconsistency across the submission in respect to the number of accesses. The TA in paragraph 136 refers to a total of 41 accesses, The Outline Construction Traffic Management Plan and Site Access Location drawings identifies 43 accesses and the DCO lists 19 permanent accesses in Schedule 4 Part 1. Schedule 6 of the DCO identifies 32 permanent accesses and whilst 16(b) of the DCO refers to temporary means of access to works being within Part 2 of Schedule 6, there is no Part 2. Furthermore, paragraph 138 of the TA states that all access locations will be retained for continual use during the operational phase suggesting that none are temporary. Clarity is therefore required over these discrepancies.

5.4.18. The TA refers to an overview of the accesses being shown on Figure 14.7. However, a figure with this number has not been able to be located within the submitted documents. It is thought that it may have been intended to refer to the 4 drawings in Appendix A, 14.1.7NE 14.1.7NW 14.1.7SE 14.1.7SW. As detailed above these show 19 primary accesses and 24 secondary accesses.

5.4.19. We seek clarification over secondary accesses where these form the only access to a parcel as it is unclear how these can be considered secondary. It would appear counter-intuitive for an HGV to turn into an opposite parcel to enable it to turn around to cross over using a secondary access, the turning movements would require a large area of hardstanding and likely jet washing of wheels prior to re-entering the public highway (SA8/9 and SA22 being examples where clarification is sought).

5.4.20. We previously requested that each access point was justified alongside the numbers of vehicles using them. Whilst this is stated to be clarified, it is not clear where, or the information given is unclear. Table A14.1.3 provides information on construction traffic on links rather than accesses. We would specifically question why PA5 and PA6 are both required.

5.4.21. Paragraph 126 identifies that the hierarchy of roads to provide access has been adopted as the SRN and A roads are designed to handle higher volumes of traffic to ensure that congestion on localised roads is minimised to ensure a smoother traffic flow. This approach does not recognise that more traffic would be held up on the A roads, many of which form part of Nottinghamshire's Major Road Network, potentially creating greater disruption. There are 3 accesses proposed on A roads.

5.4.22. No consideration to the form of access appears to have been given. The overall traffic information supplied identifies that some of the accesses trigger the requirement in DMRB CD123 for further assessment of junction type, during both the construction and operational

phase. Where only occurring in the construction phase if there are any temporary accesses, mitigation in the form of traffic management may be acceptable so it should be identified which accesses are proposed to be temporary and those which are to be kept for the operational phase, with a review of the need to provide further assessment in accordance with CD123 and consideration given to the outcome of that assessment.

5.4.23. Whilst a statement is made that the access drawings are outline drawings and detailed designs will be forthcoming at the appropriate time, NCCs view is that the principle of acceptability needs to be established at this stage. There are a number of accesses, either proposed or amended (with increased usage) which have apparent highway safety concerns. The Nottinghamshire Highway Design Guide (NHDG) states that all new accesses or where there is an increase in use of existing accesses will be supported where there is not a road safety problem of where a road safety problem can be removed (Part 1.2 of the NHDG).

5.4.24. Visibility splays are not shown on all accesses, and forward visibility (over 1.5x SSD) is not shown on any, meaning that it is unclear whether visibility can be achieved either within highway or within the order limits. These should be established to identify areas where splays are required to be cleared and then maintained, not just during construction but also operational phases, particularly if they fall outside of the highway boundary. These may also require removal of hedgerows. There is a concern that there appear to be a number junctions where splays would fall outside of the DCO extents and therefore it is unclear what powers the applicant would have to clear or maintain them.

5.4.25. NCC would require drawings including visibility splays (both junction and forward) at all junctions along with swept paths. All new or amended accesses should be subject to a Stage 1 Road Safety Audit as part of this process.

5.4.26. Other issues include crossroad layouts which are contrary to highway safety principals, access formed at oblique angles to the highway as opposed to 90° which impact visibility, visibility splays not shown at all primary junctions, only one visibility at a secondary access is shown and forward visibility splays not considered at all. Whilst it is noted that the secondary accesses are stated to be used as crossover points with banksmen employed during the construction phase, the TA states that all accesses will become operational accesses and visibility should therefore be established.

5.4.27. Specific issues that have been able to be identified at this stage include:

- visibility from PA10 crosses SA16 which is a safety issue.
- SA15 appears to have poor visibility in both vertical and horizontal planes and visibility would conflict with an existing field access. Others show conflicts with proposed accesses/crossings and existing roads/accesses.
- where new accesses replace existing ones, works to reinstate the replaced access should be included.

5.4.28. Please note that as previously highlighted, where an access is proposed off a private lane, the closest access to highway is required to be assessed.

Routing

5.4.29. The proposed routing only identifies the primary routes and does not identify any secondary routes. It is unclear if this is because it is intended to only use the primary accesses from the highway network and use secondary accesses as crossing points only, but this is not made clear as secondary accesses are referred to as primarily being used as crossing points, rather than only being used as crossing points.

Accesses – DCO

5.4.30. The access numbering convention between the DCO and the TA/OTCMP is different, and it is not therefore easy to relate between the documents. This should be rationalised with a single numbering convention used throughout to ensure clarity between the documents.

5.4.31. It appears that there are a number of the access drawings referred to in the DCO where the full extents of highway where works are required is not identified. The applicant should acquire details of the highway boundary and ensure that the drawings are adequate.

5.4.32. Furthermore, as previously identified it appears that all accesses where works are required are not listed in the schedules. We would also expect drawings to identify all works required such as vegetation management for visibility splays.

5.4.33. Further concerns/inconsistencies are raised within the 'Access' section above.

5.4.34. Schedule 4 Part 2 refers only to temporary passing places, so clarity is sought over where any temporary accesses are proposed that are referred to and under what powers they are to be constructed/improved or maintained during the construction phase.

Passing Places

5.4.35. A written rationale for provision of passing places is given, but is not clear how it has been applied practically, nor demonstrated in terms of intervisibility. Whilst A14.1.5.6 states that the need for passing places has been based on swept path analysis, this has not been shared. Whilst reference is made to use of existing passing places, the locations of these and spacing between these and/or those proposed has not been confirmed. Figures 14.5 are too small a scale to be able to consider this properly but in the main appear to be existing farm accesses, which are not passing places and are not based on any geometric considerations

5.4.36. It is requested that the applicant provide clear defined information on where both the existing and proposed passing places referred to are, in conjunction with evidence on spacing and intervisibility. To assist, NCC consider the standards set out in 'HS2 Rural Road Design Criteria' to be suitable to apply here.

5.4.37. As highlighted above, the drawings demand too much memory to open simultaneously with other relevant drawings and manipulate/measure and it would be helpful for them to be split.

5.4.38. Please note that all passing places should be permanent and this should be reflected in the DCO which currently identifies some as temporary and some as permanent.

Abnormal Load Routes

5.4.39. Trent Lane/Kelham Lane to the south of South Muskham is not suitable for abnormal loads. More suitable routes are available from the A616 linking to Kelham.

Outline Construction Traffic Management Plan

5.4.40. The above document references enforcement and that the contractor is responsible for enforcing it, but as the eventual CTMP is to be based on it, the means to enforce should be outlined.

5.4.41. As identified in the comments on the study area, the routing purely from the A1 to the east is not thought to be reasonable.

Travel Plan

5.4.42. The travel plan relates to construction traffic only, which should be stated within the TP.

- The construction is only 24 months; however, it is phased. We suggest monitoring tied to phases so that lessons can be applied as the development progresses.
- The on-site and off-site locations which shall be served by the proposed shuttle bus should be stated.
- Full contact details of the sitewide TPC should be supplied to NCC now. This can be an interim TPC (e.g. a representative of the developer or their agent) until such a time as a permanent TPC is appointed. The TP should commit to updating NCC should the SWTPC's (or any of the Phase TPCs') name or contact details change for whatever reason. (it's not clear if one TPC will cover all phases; this should be confirmed).
- The TPC should commit to liaising with the planning authority (Newark & Sherwood District Council) in addition to NCC (the highway authority).
- The amount of car parking that will be provided and the proportion of spaces that will be allocated to motorcycles, disabled users, car share users, visitors and staff is not clear.
- A schedule for the implementation of phase Travel Plans should be provided, specifically relating to the number of TPs that will be required and their estimated commencement dates.
- Final targets should be provided now, not following the initial staff travel survey, and be based on the estimates provided in the Transport Assessment.
- Primary targets should be based upon trip generation. The TA / TS associated with the proposal should have provided an estimate of trips associated with the site, and therefore this is the basis on which targets should be set (i.e. include one table showing the values used in the TA / TS, and a further table showing the target trip generation with the Travel Plan in place). Mode share targets should then be used as a secondary target.
- Targets should not be changed or updated without discussion with, and agreement of, NCC. This should be stated.
- The Travel Plan should aim for 100% TP awareness as a secondary target.
- In addition to the measures included within the Travel Plan, the following should also be included:

- The car share service shouldn't be dependant on the shuttle bus proposals – a car share service should be an independent and key measure (given comments on active modes and traditional PT).
- Given the comments made on active modes and traditional PT services, more consideration should be given to firming up off-site shuttle bus commitments, including costs for staff.
- On-site showering and changing facilities and lockers should be made available for cyclists (& motorcyclists).
- Personal Travel Planning should be offered to any employee who requests it.
- Monitoring reports should be published for each phase and supplied to NCC within 1 month of collating data.
- In addition to annual travel surveys, we would expect traffic counts to be conducted for each phase.
- Firm commitments to all measures, monitoring and targets should be provided (things "will" happen instead of "would/should").
- The Travel Plan should commit to remedial measures if the TP fails to achieve its targets for each phase – i.e. roll lessons into subsequent phases.

5.4.43. In summary, the Council is concerned about the adequacy of the Transport Assessment, in particular with respect to the study area, which does not consider the impact of construction traffic accessing the site from the West, or adequately take account of different phasing scenarios, in accordance with the principles of the Rochdale Envelope. It also has concerns about the safety, suitability and form of the proposed site accesses as well as passing places, which have not been demonstrated to be acceptable in principle. At this time, it is concluded that the proposal could have a significant negative impact on the highway network and further assessment work, and evidence is needed to address the issues raised in this report.

5.5. Public Rights of Way

5.5.1. Public Rights of Way (PROW) are the minor highway element of the public highway network and are afforded the same level of protection and control as the major highway network. As Local Highway Authority, NCC is responsible for managing and protecting the PROW network.

5.5.2. The following comments relate purely to the definitive PROW network, their locations and potential extinguishment or diversion. Comments on the visual impacts or landscape are not part of this consideration (such issues will be addressed by NSDC), nor are any comments provided on the permissive network proposed by the applicant, although it is appreciated that permissive paths are proposed for the benefit of the public. The applicant is aware of the legal process available to ensure that they cannot be claimed as public in the future and remain permissive and temporary, unless in decommissioning, the routes are dedicated formally by the landowner at that time.

5.5.3. Generally, the PRoW network has been considered and managed well, with the majority of paths not physically affected by the development, which is appreciated. Only seven paths are proposed to be diverted, and these are commented on below, with one temporary closure.

5.5.4. Generally, the PRoW network has been considered and managed well, with the majority of paths not physically affected by the development, which is appreciated. Only seven paths are proposed to be diverted, and these are commented on below, with one temporary closure.

5.5.5. The following comment relates to Technical Appendix A18.1 of the ES titled Outline Recreational Routes Management Plan (Document Reference EN010162/APP/6.4.18.1):

- A18.1.4 - Please note the following: A cycle track is not part of the RoW network and sits within the adopted highway envelope if properly recorded. A Restricted Byway is for all public access with the exception of road legal motorised vehicles

- A18.1.5.2 Signage - Signage, detailed plans of dates etc should be in consultation/agreement with NCC (not NSDC) as the highways authority to ensure awareness and management with other closures in the area that may impact

- A18.1.5.3. Management of closures - Does the DCO give the ability to arrange temporary closures with the alternative route that is not on a highway. This is not normally the case unless the landowner agrees to take on the responsibility for the safety of the public when on a route that is not on a highway.

- A18.1.5.6 Diversions - Once a path is diverted under a legal order (not a temporary order) it is permanent. The statement that the path may be moved back on decommissioning is unexpected. We would question whether the DCO would allow this to happen. This is not the case under for any diversions under Town and Country Planning Act 1990 or Highways Act 1980 so this should be clarified.

- A18.1.5.7 Enhancement - While the interpretation boards and picnic area are recognised as an enhancement, the location of these is paramount as is the clarification of maintenance during the development and what happens on decommissioning.

- 18.1.5.8 Safety measures - We are pleased to see that all measures are being taken to keep the public safe and avoid the use of limitations such as stiles or gates on the RoW network

5.5.6. The following comment relates to Technical Appendix A4.1 of the ES titled Public Rights of Way Strategy (Document reference – EN010162/APP/6.4.4.1):

- A4.1.5 Approach to diversions of PRoW - The DCO (Sec 14(4) & (5)) states that the order shall provide enough detail for the surveying authority (NCC) to modify the definitive map of rights of way. The specific details of the information required must be clarified as the details currently in the DCO is not sufficient.

- A4.1.7 Temporary closures - See comments stated in RRMP above (A18.1.5.2 Signage)

5.5.7. The table below includes comments on the proposed diversions referred to in Chapter 18 (Recreation) of the ES (Document reference – EN010162/APP/6.2.18).

Diversion No	*PROW*	*NCC Comments*
1	Averham FP 6	Both the exits to the road should be retained as part of the diversion
2	Carlton on Trent FP 6 & 10	This is a diversion of FP 6 and the almost full extinguishment of FP 10 (the remaining 20m being the link to Ossington Road from the diverted FP 6?). Please can this be clarified. The diversion of FP 6 should be extended to meet the end point of FP 10 to provide a safe exit to the same point without having to use the road
3	Laxton & Moorhouse FP 11	Acceptable
4	Weston FP10	Acceptable
5	Eakring FP 13	The diversion will connect to FP 15 & 14 not FP16
6	Eakring FP 14	Acceptable
7	Kelham FP 7A	Acceptable

5.5.8. Although not proposed to be diverted, clarity is sought with respect to Bathley FP8, which is located partially within the land set aside for the community orchard. A short section of the footpath crosses through the orchard on the northern edge. The planting should be set back from the footpath to ensure there is no encroachment. The Outline LEMP should specify the width along the footpath which will be safeguarded from planting or grassland maintenance.

5.5.9. It is accepted that there will be minimal disruption to other RoW during construction, operation and decommissioning but these seem to be understood and plan to be manged with minimal disruption to the access.

5.5.10. Generally, the proposal has managed the RoW to an acceptable standard and subject to clarification of the issues raised above, the impact on the network would be neutral.

5.6. Minerals and Waste Planning

5.6.1. Local Policy:

- Nottinghamshire and Nottingham Waste Local Plan
  - SP1 – Waste Prevention and Re-Use
- Nottinghamshire Minerals Local Plan
  - SP7: Minerals Safeguarding, Consultation Areas and Associated Mineral Infrastructure

5.6.2. National Policy:

- EN-1 states that proposals should ensure that sustainable waste management is implemented through the waste hierarchy and that disposal of waste should only be considered where other waste management options are not available. The applicant

should set out the arrangements that are proposed for managing any waste produced and should include information on how re-use and recycling will be maximised in addition to proposed waste recovery and disposal.

5.6.3. NCC is the Mineral and Waste Planning Authority for the proposal site and provides comments in relation to the impact of the proposal on minerals extraction and waste management.

Minerals

5.6.4. NCC considers that the assessment methodology for assessing impacts on minerals by the proposed development is adequate. The applicant for the DCO has undertaken a Minerals Resource Assessment to consider the impacts on the sand and gravel and brick clay resource as well as the permitted Egmanton Oil well sites. As noted in our pre-application comments, we agree with the conclusion that the development will not cause a sterilisation of the mineral resources as the development is of a temporary nature with all elements being, or able to be, removed following the decommissioning of the proposal site. NCC considers that the assessment work undertaken by the applicant to assess the impact on minerals is sufficient and does not have any outstanding concerns and thus the impact would be considered neutral.

Waste

5.6.5. The applicant has assessed the impacts on waste within Chapter 16 of the ES (Miscellaneous Issues). NCC raised previously that the applicant should consider a worst-case scenario whereby waste, particularly at the decommissioning stage, may need to be disposed of to understand potential impact on landfill need and capacity. NCC also requested the potential cumulative impacts to be assessed for this application with other similar developments within the area. The applicant addresses these comments in paragraph 233 – 237 of section 16.7 in Chapter 16. It states that since a recycling industry for PV solar panels will likely be well developed by 2069, the time of decommissioning, and that additional landfill capacity will be made available or alternatives developed, the effect of the development on landfill capacity is negligible and therefore not significant.

5.6.6. Whilst NCC agrees that it would be preferable for materials to be handled higher up the waste hierarchy and so recycled, the industry and technology at the scale required, for this project and others in the area, is currently not established. As noted in the Solar Roadmap: United Kingdom Powered by Solar (June 2025) by the Department for Energy Security & Net Zero, the industry for recycling solar panels is small, with advanced techniques which recover >65% of a panels mass and value at a very small scale. Significant investment and advancement are therefore required, without such there will be a large volume of waste at the decommissioning phase. As the applicant identifies, the landfill capacity in Nottinghamshire is limited, however the assumed ability to add further capacity for landfill, particularly non-hazardous, in Nottinghamshire is constrained due to the geology of the area and wider environmental constraints. Other similar applications for DCOs, including the Gate Burton Energy Park and One Earth Solar Farm, have therefore considered an absolute worse-case scenario to consider the potential impacts on waste on landfill capacity within the region.

5.6.7. Other applications have also considered the cumulative effect of the impacts on waste from proposals within the area, especially as they are anticipated to be decommissioned on a similar timescale. The applicant for this DCO does not appear to have undertaken such an assessment.

5.6.8. NCC would therefore consider that the applicant has not fully assessed the impacts of the proposal on waste, in terms of landfill and cumulative impacts. NCC considers that the applicant should have considered a worst-case scenario in that waste, particularly at the decommissioning phase, may need to be landfilled. The cumulative impact of this proposal with other similar schemes in the area should also have been assessed. This would have ensured that the impact of the proposal on landfill capacity, with this identified as the sensitive receptor for waste, has been fully considered and assessed if capacity to enable the recovery and recycling of solar panels is not developed.

5.6.9. **It is therefore concluded that the impact on waste management is uncertain at this stage, pending completion of the recommended assessment work as described above, but that the project has the potential to have a negative impact upon future landfill capacity if capacity to enable the recovery and recycling of solar panels is not developed.**

6. Development Consent Order

6.1. NCC has reviewed the draft DCO and has the following comments to make, however these are not exhaustive and NCC may have further comments to make during the examination process.

Part 3 - Streets

6.2. The County Council is the Local Highway Authority (LHA) for the order limits of the proposed project. The following comments are made with respect to PART 3 of the Draft DCO (STREETS).

6.3. Article 10 allows the undertaker to perform street works on any of the streets specified in Schedule 3, subject to the NCC Permit Scheme Order 2020. This will ensure the LHA is able retain coordination and control of road works to reduce disruption for road users.

6.4. Article 11 allows the undertaker to carry out alterations or works to any of the streets specified in Schedule 4. Please note that the alterations described in Schedule 4 are not currently agreed because the transport assessment methodology is yet to be agreed (see Section 5.4). Furthermore, NCC would require such works to be subject to full technical approval from the street authority with the costs to the street authority to be covered by the undertaker.

6.5. Schedule 4 Part 2 (Temporary Alteration of Layout) refers to temporary passing places – these should be permanent and therefore included at Part 1 (Permanent Alteration of Layout).

6.6. Article 12 states that alterations to each of the streets specified in Schedule 4 would be completed to the reasonable satisfaction of the street authority. This is agreed to be necessary.

6.7. Article 16 allows the undertaker to form and lay out temporary and permanent means of access at the locations described at Schedule 6. The proposed accesses are not currently agreed, as explained at Section 5.4. Furthermore, such works should be subject to full technical approval from the street authority with the costs to the street authority to be covered by the undertaker. Please note that Article 16 refers to Part 1 (permanent access) and Part 2 (temporary access) of Schedule 6, but Schedule 6 appears to be a single entity with no parts.

6.8. Article 13 allows the undertaker to temporarily close the PROWs described in Schedule 5. It is noted that this would be subject to first consulting the street authority. Where a PROW is to be permanently closed under Article 14, Paragraph 4 and 5 states that the diversion order shall provide enough detail for the surveying authority (NCC) to modify the definitive map of rights of way. The specific details of the information required must be clarified – this could be set out within the oCTMP or oPROWMP.

6.9. Article 17 allows the undertaker to temporarily place traffic signs and signals in the extents of the road as described in Schedule 8 and to impose traffic regulation measures, with the written consent of the traffic authority. NCC would seek clarity on the proposed procedure for consultation and approval of any TTRO and recommend that this is agreed with NCC and described within the oCTMP. Whilst the requirement to publish the proposed measure in one or more local newspaper is noted, it is standard practice within Nottinghamshire for a bulletin to be issued to relevant stakeholders. NCC would request the cooperation of the undertaker

in this respect, by either directly issuing the bulletin itself or by supplying the dates/times, locations and diversions and contact numbers for the LHA to issue a 'roadworks bulletin'.

6.10. In addition, Schedule 1 (Authorised Development) describes the works (i.e., 'Works No.8') to facilitate access to Work Nos. 1 to 7. This includes creation of accesses, creation and maintenance of visibility splays, works to widen and surface existing highways, and making passing places. It is unclear if Works No.8 could be delivered within the order limits as the visibility splays are not drawn and as such the extents to which the maintenance is required is unknown. As the DCO only confers powers within the order limits, it is unclear under what powers the visibility splays would be maintained, should they exceed the order limits. This same principle also applies to the widening of carriageways as without swept paths it is not known what maintenance is required and whether this is achievable within the order limits.

Schedule 2 – Requirements

6.11. It is noted that the 'county authority' is the discharging authority for several of the requirements in Schedule 2 including: Fire Safety Management (7) (via Nottinghamshire FRS), Archaeology (11) and Construction Traffic Management Plan (14).

6.12. NCC recommends that it is also responsible for discharging Surface and Foul Water Drainage (10), in its capacity as the Lead Local Flood Authority, and Recreational Enhancement and Routes (18), in its capacity as the Local Highway Authority which is responsible for management of the Public Rights of Way (PRoW) impacted by the project. It is understood that in all other cases the district 'planning authority' would be the discharging authority. NCC may wish to comment further on the wording of the requirements during the examination.

6.13. In Nottinghamshire, proposals are being developed to reorganise local government which, if implemented, would result in a single tier of local government. Therefore, the dDCO should enable any of the requirements in Schedule 2 to be discharged by a superseding local authority, if necessary.

Schedule 14 – Procedure for Discharge of Requirements

6.14. NCC notes that where an application to discharge a requirement is made a fee is to apply and must be paid to the relevant discharging authority for each application. It is noted that in relation to those requirements where NCC would be the relevant planning authority, a fee of £2535 applies for the first application for each requirement. This includes 7 (fire safety management), 10 (surface and foul water drainage), 14 (construction traffic management plan) and 18 (recreational enhancements and routes). NCC would request this fee also applies to 11 (archaeology) given the scale of work involved and considers the proposed fee of £145 to be too low for this requirement. The costs to the council should be adequately covered and the fees should be index linked from the date of the DCO.

6.15. NCC considers that notification of a decision within 10 weeks as a standard approach is insufficient. NCC is particularly concerned with the resourcing of such requirements and therefore consider that a more appropriate default period equating to Major Environment Impact Assessment development for a planning application of 16 weeks is more appropriate. Whilst NCC note that Schedule 14 includes for the ability to agree an alternate period, the

expectation for 10 weeks would be set by its inclusion in the standard wording. The project is significant in size and scale and the information submitted for many of the requirements is likely to involve a significant amount of information and an appropriate time period must be afforded for NCC to consider this, including time to consult with other relevant organisations. This issue would be compounded by the combination of other NSIP projects within the county, should they gain development consent. These projects follow a similar timeline and will place cumulative pressure on the statutory functions of the planning department.

7. Summary

7.1. This LIR has undertaken an assessment of the likely issues and impacts that NCC considers will arise from the construction and operation of the Great North Road Solar and Biodiversity Park with respect to its areas of expertise and statutory responsibility. This LIR therefore does not cover all relevant environmental matters and should be read alongside Newark and Sherwood District Council's LIR, as well as representations made by other statutory bodies including the Environment Agency, Natural England and Nottinghamshire Fire and Rescue Service.

7.2. This LIR has identified several negative or inconclusive effects at this stage which NCC believes should be further addressed by the applicant, through further assessment work, evidence and mitigation measures. The main areas of concern relate to impact upon traffic and local flood risk, which in our view have not been assessed to the required standard or adequately mitigated.

7.3. NCC also remains concerned about the cumulative impact upon the local landscape and the loss of agricultural land arising from this proposal and other nationally significant proposals for ground mounted solar within the county, further evidence on which is covered in the NSDC LIR.

7.4. NCC is willing to continue to work with the applicant during the examination period to overcome the issues raised within this report as far as possible and to agree the content of the outline management plans and draft DCO. The applicant should report progress on these matters through a Statement of Common Ground with NCC, which will be updated throughout examination.

7.5. NCC may wish to make further representations as appropriate during the examination and at issue specific hearings particularly with regard to environmental matters discussed within this report. Therefore, the comments contained above are provided without prejudice to the future views that may be expressed by the County Council as an Interested Party in the examination process.

8. Appendices

Appendix 1 – Solar Development Plan of Nottinghamshire

Appendix 2 – Detailed Review of Flood Risk Assessment and Drainage Strategy

PLEASE NOTE:
The boundaries of the schemes have been plotted to align with the limits of the planning application or development consent order which may encompass other works which are ancillary to the solar farms, such as battery energy storage, underground cable corridors or biodiversity offsetting. Where the proposal is under consideration, the boundaries of the scheme may be subject to change

Project: Steeple Renewables Project
Order Limits: 888 hectares
Electricity Generation: 400MW
Point of Connection: West Burton

Project: Gate Burton Energy Park
Order Limits: 834 hectares
Electricity Generation: 500MW
Point of Connection: Cottam

Project: Tillbridge Solar Project
Order Limits: 1660 hectares
Electricity Generation: 500MW
Point of Connection: Cottam

Project: Cottam Solar Project
Order Limits: 1499 hectares
Electricity Generation: 600MW
Point of Connection: Cottam

Project: West Burton Solar Project
Order Limits: 891 hectares
Electricity Generation: 480MW
Point of Connection: West Burton

Project: One Earth Solar Farm
Order Limits: 1409 hectares
Electricity Generation: 740MW
Point of Connection: High Marnham

Project: Great North Road Solar Park
Order Limits: 1764 hectares
Electricity Generation: 800MW
Point of Connection: Staythorpe

West Burton

Cottam

High Marnham

Staythorpe

0 10
kilometres

Solar - Nationally Significant Infrastructure Project (NSIP)
Permitted
Proposed
Substation

Locally Determined Infrastructure Project
Permitted
Proposed

National Significant Infrastructure Project (NSIP) and Solar Farm Applications Map

Nottinghamshire County Council

Table 2.1: Review Comments

Subject	Summary	Comment	Recommendation
APP-228 EN010162-000120-GNR_6.4.9.1_ES_TA_A9.1_Flood_Risk_Assessment			
Stakeholder Consultation	It is noted within the Flood Risk Assessment that the Environment Agency (EA) and Nottinghamshire County Council (NCC), in its role as Lead Local Flood Authority (LLFA), were consulted during the preparation of the assessment. However, the documentation of this consultation is limited. While Appendix A includes some correspondence with the EA, no detailed meeting records are provided, and no minutes of consultation with the LLFA are included.	The stakeholder consultation presented in the FRA is limited, making it difficult to fully assess the extent and content of correspondence undertaken. The Trent Valley Internal Drainage Board (TVIDB) is referenced in Appendix A as having management responsibilities within part of the study area, yet no evidence of direct consultation with the TVIDB has been presented in the report.	The FRA should include the referenced meeting minutes from consultation with the LLFA and the Environment Agency, and evidence of direct consultation with the Trent Valley Internal Drainage Board (TVIDB) should also be provided. This is vital to ensure design parameters have been adhered to such as climate change allowances.
Constraints	The report summarises the principal constraints: • Topography: The site lies to the west of the River Trent and extends across a wide area from Staythorpe in the south to Weston in the north. While parts of the site are close to the Trent, much of it is set back from the river. Ground levels are lowest adjacent to the Trent, around 6.85 m AOD, and rise gradually to the west, where the majority of the development area is located. The River Trent is bordered by naturally higher ground and engineered embankments that act as flood defences. • Geology: Infiltration testing results show that the site is underlain by the mercia mudstone group, comprising predominantly red mudstones with occasional green-grey mudstones, siltstones, and localised halite-bearing units. No superficial deposits are recorded across the site. Ground investigations identified a thin layer of topsoil (approximately 0.25–0.35 m) over firm, reddish-brown or mottled silty clay derived from weathered mudstone. In places, the clay is very gravelly, with occasional weak mudstone fragments encountered at depth. Overall, the geology indicates low permeability ground conditions. • Hydrology: The site generally drains eastwards toward the River Trent and its tributaries, though much of the development area lies away from the immediate river	The assessment of constraints is broadly sound and identifies the key physical characteristics of the site. Land levels fall gradually eastwards towards the River Trent, with the lowest ground adjacent to the floodplain and higher ground across the main development area. Much of the site lies within Flood Zone 1, though areas closer to the Trent fall within Flood Zones 2 and 3 and are protected by embankments. The underlying Mercia Mudstone provides low permeability conditions, confirmed by infiltration testing, meaning that reliance on infiltration drainage is not appropriate. There is evidence of localised pluvial flooding linked to the poor infiltration capacity of the soils.	No recommendations

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	corridor. Approximately 90% of the site is within Flood Zone 1, with the remaining areas falling within Flood Zones 2 and 3. Along this stretch, the River Trent is contained by naturally elevated ground and engineered flood embankments. Localised pluvial flooding has also been recorded within the catchment, reflecting the low permeability of the underlying soils and the reliance on surface water conveyance.		
Existing drainage	The FRA does not explicitly describe how the site currently drains	The document doesn't state how this site drains; this could be due to the size and spread of this site. It would be useful to have a section on any existing drainage infrastructure such as culverts, outfalls, or other drainage assets. There is no mention any interaction with the proposed infrastructure and existing drainage features. Given the rural setting, it is unlikely that existing infrastructure would prevent the drainage strategy from being implemented as proposed.	Provide details of existing drainage across the site including BESS's, Substation etc
Flood Risk	The majority of the site (around 90%) lies within Flood Zone 1 and is therefore at low risk of fluvial or tidal flooding. Limited areas along the eastern edge, closer to the River Trent, extend into Flood Zones 2 and 3, but no new above ground infrastructure (solar PV, substations, BESS) is proposed in these higher-risk areas.	The flood risk assessment considers all relevant sources of flooding, each of which is addressed and discussed in the flood risk section of the report.	Recommendations are summarised below:
	The agreed design fluvial event is the 1 in 100 year flood (1% AEP) with a 23% climate change allowance (Higher Central uplift for essential infrastructure in the 2050s epoch), with the FRA adopting a 30% allowance as a conservative proxy in the absence of EA model outputs	The FRA makes use of Environment Agency RoFSW mapping and targeted 2D pluvial modelling for certain communities, but it does not include a full site wide direct rainfall model across the PV fields. In addition, no sensitivity testing has been undertaken for longer duration storm events (e.g. 6 or 12 hours). A high level, site wide pluvial modelling exercise would provide additional confidence that localised flow routes or ponding have not been overlooked.	A full site wide hydraulic model should be carried out to assess flood risk across the entire development. This will give a better understanding of how water flows across the site and help identify any combined or cumulative flood risks.
	The Tidal Trent modelling shows the site would remain safe under the 0.5% AEP tidal flood and breach scenarios, with no flooding expected during the scheme's lifetime. Only a small part of Work Area 3 (mitigation land) would be affected in the extreme 1% AEP + 62% climate change scenario, with shallow flooding up to 0.6 m, which is acceptable as this land will be managed as grassland. No operational areas of the development fall within the tidal flood extents.	The FRA only assessed tidal defence breach and did not consider the implications of a fluvial defence breach.	The applicant should include an assessment of a fluvial defence breach scenario to provide a more complete understanding of flood risk to the site.
	Flood Zone 3b (functional floodplain) has been defined using the defended 1 in 30 year event (3.33% AEP), which shows that all proposed above-ground infrastructure lies	It is difficult to understand the overall flood risk to the site due to the absence of appropriately scaled flood mapping. The current drawings do not provide a clear overview of flood extents throughout the site. As a result, the summary appears disjointed and there is an increased risk of misinterpretation when assessing individual sections in isolation.	The applicant should provide mapping at more appropriate extents for review, such as at a scale of approximately 1:30,000 on A3. This will enable a more robust assessment of the overall flood risk to the site.

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	outside this extent. Residual risk from a breach of the River Trent defences has been modelled and would affect parts of the mitigation land only, with no critical infrastructure at risk. Surface water flood risk is low, with most predicted pluvial depths less than 0.3–0.5 m, and infrastructure such as PV arrays, substations, and the BESS raised above these levels. Groundwater risk has been classed as negligible, with boreholes striking groundwater at shallow depths but no evidence of persistent emergence. Reservoir breach flooding is largely confined to the River Trent corridor and poses only a very low residual risk, while sewer flood risk has been scoped out given the rural setting. Overall, the flood risk to the site is low, with only limited areas of mitigation land affected during extreme fluvial or tidal events. Operational infrastructure is located outside functional floodplain and raised above predicted surface water levels, ensuring the development will be safe for its lifetime and will not increase flood risk elsewhere.	It is not clear from the report what is actually proposed within the development area. No proposed layout or design drawings have been provided for the identified work areas, making it difficult to understand the nature and extent of the proposed works. As a result, it is not possible to determine the potential flood risk associated with the development. There is no mention of compensatory flood storage within the report. This is particularly important in the substation area, where existing floodplain storage will be lost due to the proposed works. The flood risk chapter focuses only on the existing fluvial and pluvial flood risks. It does not assess how the proposed development could increase flood risk through the introduction of new hard standings, impermeable areas, or watercourse crossings. In addition, there is no information on the type of surfacing proposed, which is critical for understanding how surface water will be managed. The FRA only includes localised flood modelling for certain areas. It does not provide a full site wide assessment, so it is difficult to understand how flooding may move across the whole site or how different areas might affect each other during a flood. There has been no consideration of the potential increase in flood risk during the construction phase of works. Construction activities and temporary works may alter surface water flow paths, increase runoff, or reduce floodplain storage. It is unclear why the Consented BESS within Work Area 7 and the existing infrastructure within Work Area 6 are being assessed as part of this FRA. Work Area 7 already has consent, and Work Area 6 relates to existing National Grid infrastructure. The inclusion of these areas in the assessment requires clarification.	The applicant should include clear drawings showing what is proposed in each work area. This will help to understand the development and assess any potential flood risk. The applicant should include an assessment of compensatory storage requirements across the site, especially for the substation area, to ensure that any loss of floodplain storage is appropriately mitigated. The applicant should include an assessment of the potential increase in flood risk from the proposed development, considering new impermeable areas and crossings. Also, clearly specify the proposed surfacing types to allow a proper understanding of drainage and flood risk impacts.

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Drainage Design Strategy	The design strategy for various elements is summarised below: • **Solar Panel Areas** – The solar panel areas are designed to allow runoff to infiltrate naturally into the ground, replicating existing conditions. Rainfall drains through gaps between the panels, spreading across underlying grassland vegetation. The panels are raised a minimum of 500mm from the ground. Swales and filter drains will be implemented to slow flow down in areas where there is a ground slope steeper than 6%. • **BESS** – The Battery Energy Storage System (BESS) will drain to a lined detention basin, designed to restrict discharge to 4 l/s, in line with the site's greenfield runoff rate. Fire water will also be routed to this basin, which incorporates a Hydrobrake flow control. The basin is sized to accommodate the 1% AEP + 40% CC event together or a fire water volume of 228 m³. A penstock will be installed on the outlet of the SuDS structure and will be closed in the event of a fire suppression incident, remaining shut until the captured water has been tested. Depending on the results, water will either be tankered offsite to a licensed facility or discharged to the adjacent unnamed field drain, subject to agreement with the Environment Agency. • **Substation** - Surface water from the substations in Work Areas 4 and 5b will be managed in the same way as the BESS (Work Area 5a), with drainage designed to attenuate the 1% AEP + 40% CC event. Infiltration testing confirmed that infiltration is not feasible due to underlying clays and mudstone. As such, SuDS systems will discharge at greenfield (QBAR) rates to nearby watercourses or field drains, in line with the SuDS hierarchy.	The drainage strategy lacks many details which will be discussed further below: There is no single plan showing the full drainage layout across the entire site. This would be valuable to understand connectivity between catchments, location of SuDS features, exceedance flow paths, and interaction with topography. The basin has been sized either for firewater or for the 1 in 100-year storm event, however, a more robust approach would be to model the more frequent 1 in 2 year storm combined with firewater, or the 1 in 100 year storm including climate change, whichever is the greatest. No further details of the basin/attenuation have been provided, such as water depth, outfall arrangements, storage capacity, or supporting modelling results. No assessment has been provided of potential water quality effects. It is unclear whether the basin will mitigate pollution using the SuDS mitigation index approach (SIA), or whether any of the other proposed SuDS features will provide this function. In addition, no site arrangement plan has been included, and there is no reference to the permeability of the access tracks. This will therefore need to be assessed in relation to both water quality and surface water runoff mitigation. The document also does not explain what would happen in the event of a larger storm. There is no mention of exceedance flows, how water would safely flow across the site if the drainage system was overwhelmed. Guidance from the LLFA and IDB usually expects clear plans for this, to make sure floodwater is routed away from sensitive equipment or areas and does not cause new risks off site. The strategy also does not explain what would happen if a flow control device became blocked, which is a realistic risk in practice. Some explanation of mitigation measures (for example, emergency spillways, bypasses or inspection regimes) would be expected.	Recommendations are summarised below: Provide a drainage layout plan showing all catchments, SuDS features, discharge points, exceedance flow paths, and connectivity to receiving watercourses. Overlay with flood depth mapping to verify separation from high risk areas. The basin design should consider either the 1 in 2-year storm with firewater or the 1 in 100-year storm with climate change. Further details of the basin should also be provided, including water depth, outfall, storage capacity, and modelling results. The applicant should provide an assessment of potential water quality effects, confirming whether the basin or other SuDS features will mitigate pollution using the SuDS mitigation index approach. A site arrangement plan should also be included, along with details on the permeability of access tracks, to address both water quality and surface water runoff mitigation. Applicant to produce a site wide exceedance routing plan showing primary and secondary flow paths, measures to protect sensitive infrastructure, and ultimate discharge locations. Consider exceedance where surcharging may occur.

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		The strategy assumes solar arrays will not increase runoff due to proposed berms and filter drains, but no quantitative evidence is provided. Key uncertainties remain around the design and function of filter drains, including storage, infiltration, and outfall arrangements. Without this, there is a risk of channelised flow increasing flood risk under exceedance conditions. The drainage strategy also lacks sufficient detail on runoff collection, conveyance, construction, materials, lining, and flow control, making it unclear how the system will operate in practice.	The applicant should provide quantitative evidence to show that the solar arrays will not increase runoff with the proposed berms and filter drains. Further detail is needed on the design and function of the filter drains, including storage, infiltration, and outfall arrangements, as well as how runoff will be collected, conveyed, controlled, and discharged.
		No consideration has been given to whether the solar panels and associated structures can withstand the impacts of lateral flood flows, which is essential to ensure structural stability and prevent damage during flood events.	It is recommended that the design of the solar panels and associated infrastructure includes an assessment of resilience to lateral flood flows to ensure structural stability and minimise the risk of damage during flood events.
		There is no section on maintenance provided, elements such as swales, ditches, or filter drains will be managed. Without specific maintenance requirements, there is a risk that these features could lose effectiveness over time through siltation, vegetation overgrowth, blockages, or structural deterioration. This lack of detail creates uncertainty over the long-term resilience and performance of the proposed drainage system.	The applicant should provide a maintenance plan for SuDS features such as swales, ditches, ponds, and filter drains. This should set out specific requirements to prevent issues like siltation, overgrowth, blockages, or structural deterioration and ensure long-term system performance.
		The current documentation does not explain how compaction of the ground during construction activities will be managed. At present, the ground is relatively undisturbed, but sustained traffic from excavators, delivery wagons, and dumpers over the course of the works is likely to compact soils. This compaction could significantly reduce infiltration potential and increase surface water runoff compared to existing conditions, thereby undermining the performance of SuDS features and increasing flood risk.	It is recommended that a soil management plan is developed to address the risk of compaction during construction. This should include measures such as limiting construction traffic to defined haul routes, using low ground pressure machinery where feasible, phasing works to minimise disturbance, and undertaking soil decompaction.

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		The drainage strategy indicates groundwater has been identified locally in boreholes southeast of Work Area 5a at depths between 1.8–3.0 m BGL. It is unclear whether this has been fully considered in the design of the basin, particularly with respect to their storage capacity, and potential groundwater surface water interactions. No assessment has been provided on seasonal fluctuations, nor has any commitment been made to ongoing monitoring.	The applicant should show how groundwater depth has been considered in the basin design, assess seasonal changes, and commit to monitoring.
		The purpose of the proposed SuDS features is unclear, as they are not connected to any defined drainage system and there is no evidence of catchments discharging into them. The drainage strategy also lacks the necessary detail to demonstrate how the system will operate in practice. Key information is missing, including how runoff will be collected and conveyed to filter drains, how water will enter and pass through these features, the proposed surface materials for the BESS compound and substation areas, whether all the features will be lined, details of penstocks or other flow control structures, and adequately detailed long sections, cross sections, and construction details	It is recommended that the Drainage Strategy is updated to demonstrate the purpose and benefits of the SuDS features and how they integrate with the overall drainage strategy. We would like to see outline engineering detail of all proposed drainage and SuDS features. This should include catchment and collection arrangements, inlet and outlet structures, confirmation of pond lining, penstock and flow control details, and clear long sections, cross sections, and typical details for swales, filter drains, ditches, ponds, and associated infrastructure.
		A site layout has not been provided, making it unclear whether the scheme involves any watercourse crossings or where any outfalls are connecting into. Without this information, it is not possible to determine the extent of consultation required, and these topics are not addressed elsewhere in the report.	The applicant should provide details of proposed water course crossings.
		Greenfield runoff rates have been calculated using the ICP SuDS method /IH 124 FEH methods are typically preferred, however this method is commonly used.	
Design Parameters	The report states the following design parameters were used: • The design parameter for fluvial risk is the 1 in 100 year event with a 23% climate change allowance (2050s epoch, Higher Central), with a higher proxy	The design parameters appear to be reasonable, however without direct minutes from consultation, it is difficult to conclude if these have been agreed with the relevant stakeholders. Additionally without modelling results for the	It is recommended that all meeting minutes and agreed design parameters are provided.

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	allowance used where 23% data is unavailable, and a 38% allowance applied as a validation check. • The design parameter for tidal flooding is the 1 in 100 year event with a 39% climate change allowance (2050s epoch), with a 62% allowance (2080s epoch) applied as a validation check. • The design parameter for pluvial flooding is the 1 in 100 year event with a 25% climate change rainfall allowance for the 2070s epoch, in line with EA guidance. • A 1 in 100 year (1% AEP) storm with 40% climate change allowance will has been defined for the design of SuDS features, in line with LLFA requirements.	proposed SuDS, its not possible to review if the SuDS have been designed in line with requirements. The report states that decommissioning "may" start in 2069. However, the assessment does not clearly cover the full demobilisation phase, which could extend beyond this date.	It is recommended that modelling results for SuDS are provided. The applicant should confirm and agree the assessment epoch with the Environment Agency to ensure it fully covers the decommissioning and demobilisation period.

APP-052 EN010162-000197-GNR_6.2.9_ES_Ch_09_Water_Resources

The Water Resources chapter of the Environmental Statement for the Great North Road Solar assesses how the project may affect hydrology, hydrogeology, flood risk, and water quality during construction, operation, and decommissioning. Potential construction impacts include soil compaction, erosion, sedimentation, and pollution from fuels or chemicals. During operation, the main risks are related to runoff management and possible pollution from firewater at the BESS, though increased vegetation under the solar arrays is expected to reduce runoff, sediment, and nutrient transfer compared with existing agricultural practices. Decommissioning impacts are anticipated to mirror construction risks. Embedded mitigation is set out in the Outline Construction Environmental Management Plan and Flood Risk Assessment. This includes standard good practice, pollution prevention measures, watercourse buffers, firewater containment, surface water management through SuDS, avoidance of inappropriate culverts. Additional measures include monitoring of settlement lagoons and surface water quality during construction and maintaining access to flood defences. With these measures in place, the assessment concludes that residual impacts on water quality, hydrology, and flood risk will be negligible or minor, and therefore not significant.