

Nottinghamshire County Council
Addendum to Local Impact Report (Flood Risk)
One Earth Solar Farm EN010159

1. Nottinghamshire County Council (NCC) submitted its Local Impact Report to the Examining Authority on 29th July 2025. The LIR confirmed that NCC has commissioned a review of the application documents in relation to local flood risk and is proposing to submit an addendum at a later deadline.
2. NCC is the Lead Local Flood Authority (LLFA) for the majority of the land within the order limits and is responsible for the management of food risk from local sources including surface water, ordinary watercourses and groundwater. It should be noted that the Environment Agency (EA) is the body responsible for managing flood risk from main rivers and therefore because much of this project lies in the river valley flood plain advice relating to flood risk will also be the responsibility of the EA.
3. In its capacity as the LLFA, NCC has commissioned AECOM to review the applicant's Flood Risk Assessment (FRA) and Drainage Strategy for the One Earth Solar Farm (NSIP EN010159). The review evaluates the FRA and surface water drainage strategy, examining the methodology and consistency with relevant policies and guidance. It also assesses the potential impact on local flood risk, considering flood risk from surface water, ordinary watercourses and groundwater.
4. The review was undertaken examining the following documentation:
 - APP-012 Location Plan
 - APP-017 Outline Surface Water Drainage Strategy Plans
 - APP-036 ES Chapter 7 (Hydrology and Hydrogeology) – as relevant to surface water drainage and flood risk only
 - APP-052 ES Figures 7.1 to 7.17
 - APP-095 ES Appendix 7.2 Flood Risk Assessment and Outline Drainage Strategy
 - APP-096 ES Appendix 7.3 Consultation Comments and Meeting minutes
5. Regarding the flood risk impact to the site, the information provided in the Flood Risk Assessment is sufficient to outline the general approach to flood risk mitigation for the proposals, and no major concerns were flagged in the review. The documentation provided outlines how the proposed development has been assessed for its impacts on hydrology, flood risk and drainage. Though the River Trent is the main source of potential flooding, smaller watercourses and field drains also contribute to local drainage. The design minimises flood risk by keeping sensitive infrastructure out of flood zones where possible, raising equipment above flood levels, and managing runoff through SuDS features to limit flows to greenfield rates. Overall, the assessment finds that with the inclusion of the planned mitigation and drainage measures, the project will have a negligible impact on flood risk, drainage and water resources, meaning effects are neutral or minor, but not significant.
6. The approach to assessing flood risk at the site is reasonable and proportionate for the planning stage, and the approach for managing solar panel runoff is consistent with industry practice. Multiple flood sources are considered such as fluvial, pluvial, groundwater and sewer with the level of detail suitable for this stage of the project. The

BESS and substation drainage strategy also appear appropriate with adequate consideration for both rainfall and firewater scenarios.

7. Though the information provided is adequate to satisfy us of the general impact of solar panels on the flood risk of the site, further information is required before NCC can be fully satisfied in respect of the flood risk assessment work, as follows:
 - a) The FRA indicates that flood risk activity permits (FRAPs) and ordinary watercourse consents (OWCs) will be disapplied providing protective provisions are in place, which is indicated to be finalised in the detailed design stage. If FRAPs and OWCs are to be disapplied, it is expected that further information regarding design of the works and protective provisions would be available at this stage for review.
 - b) The report provides an adequate planning stage overview of the site's topography, geology and hydrology, detailing the site's location on the River Trent floodplain with several nearby watercourses. The ground is mostly clay, reducing the likelihood of infiltration as a means of discharge, and the River Trent strongly influences the site's hydrology. The drainage strategy incorporates attenuation basins sized to accommodate extreme pluvial flood events. The information provided is adequate for early planning stages but more detailed land surveys, infiltration testing and groundwater monitoring would normally be expected to inform the design process.
 - c) The document provides only a general overview of site drainage and lacks detailed information on existing infrastructure; inclusion of a plan clearly marking existing drainage features such as ditches, watercourses or crossing points would offer clarity.
 - d) The applicant needs to confirm that the access track catchment has been explicitly included in the hydraulic modelling and pollution mitigation strategy; if necessary, the applicant should also assess the need for additional SuDS features or ditch capacity to accommodate runoff.
 - e) The attenuation modelling is based on FEH 2022 rainfall data and a 40% climate change uplift. Basin depths, freeboard and flow control arrangements appear suitable for the planning stage but the design does not achieve half drain within 24 hours.
 - f) For the attenuation calculations, runoff coefficients of 0.75 (summer) and 0.84 (winter) for impervious areas are used. The drained areas are stated to be 100% impermeable and therefore a higher value closer to 1.0 would give a more accurate estimate in line with actual site conditions
 - g) Greenfield runoff rates have been calculated using the ICP SuDS method. FEH methods are typically preferred however this method is commonly used. However, it is unclear whether the LLFA's request to account for the hydraulic contribution of the access track (7m indicative width) has been incorporated into the catchment modelling.
 - h) Exceedance flow routes are described in principle but are not presented via a drawing or diagram. A site wide exceedance route plan is recommended to show how flows will be directed away from sensitive infrastructure using swale corridors and low points towards discharge points, especially where surcharging may occur.
 - i) Maintenance requirements are mentioned but not set out in detail. A plan should be provided, specifically covering inspections and clearance of flow controls (hydrobrakes or underdrains), pipework, penstock valves and SuDS features, as well as frequency and the who is responsible for the ongoing maintenance for the lifetime of the development.

NCC trusts that these comments will assist with the examination and provides confirmation of its position on drainage and flood management following Issue Specific Hearing 2.

Submitted 16th September 2025 (Deadline 3)