

Growth & Environment

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Contact: SuDS and Watercourses Team
FRMConsultations@hertfordshire.gov.uk

Your ref: 26/01499/SO
Date: 14 August 2026

Dear Naomi

RE: Screening Opinion: Proposed solar photovoltaic farm and associated infrastructure - Land between Knebworth Golf Club and A1M Old Knebworth Lane Knebworth Hertfordshire

Thank you for your consultation on the above site, received on 23 June 2026.

The LLFA have reviewed the documentation (EIA Screening Letter by DWD, 10 June 2026, Ref 18089) and would like to offer some guidance in relation to the flood risk and surface water drainage that may concern the proposed site.

The site is located west of Stevenage brook and entirely placed in Flood zone 1. LLFA has noted that the access to the site is planned through the north of the site off Knebworth Lane and this area is in low risk of surface water flooding.

Flood Risk on and off site:

- There is a surface water flow path along the site at near to the north part of the redline boundary and some surface water ponding too throughout western boundary of the site. The other part of the site is at low risk of flooding.
- Due to the size of the site and the presence of surface water flow path, an up-to-date full Flood Risk Assessment should be submitted to support any planning application. This should include information on all sources of flooding.
- The Site is in Environment Agency Source Protection Zone 3 – Total catchment - This zone is defined as the total area needed to support the abstraction or discharge from the protected groundwater source. The protection of the Source Protection Zone should be considered in the proposed drainage for the site and additional treatment steps be implemented where necessary.

Drainage Strategy:

- A detailed drainage strategy for the site should be submitted to support any planning application. This should take into consideration all proposed impermeable areas and changes to existing drainage paths due to changes in topography and concentration of flows due to the proposals.
- The drainage design should apply and evidence the discharge location hierarchy and include open above ground SuDS features comprehensively throughout the proposals. The four pillars of SuDS should be met or sufficiently evidence as to why they cannot be met.
- According to Wallingford HydroSolutions (the consultancy part of HR Wallingford), even though the impacts might not be severe from the solar farms, a drainage scheme is still needed and can use SuDS features such as swales. The drainage scheme should be designed for a range of storms up to and including the 1% AEP plus climate change allowance, to ensure there are no detrimental impacts of flooding at the site or to adjacent areas (<https://www.hydrosolutions.co.uk/2017/12/11/here-comes-the-sun/>).
- Research¹ has also shown that if there is good maintenance of ground cover between the solar panels, there should be limited impacts. However, it has been shown that if the panels are too close together, have a steep angle and have no buffer strip nor gravel base, the potential for soil erosion can be 10 times that of the rainfall event. Hence, runoff management, land management and erosion control should be implemented.
- We would expect that investigation into infiltration to be undertaken in accordance with the BRE 365 method (or equivalent) to demonstrate if infiltration is favourable. If Infiltration is not favourable, the other SuDS features need to be planned to maintain the discharge rate to that of the greenfield runoff rate.
- The drainage strategy must provide evidence that the site's final discharge rate will be limited to the Qbar and provide evidence and consent from the relevant authority for any proposed connections.
- The LLFA would need to see a maintenance and management plan for all surface water drainage components onsite. This should outline the responsibility of maintenance, action of maintenance and frequency of maintenance.
- A detailed surface water drainage assessment should be carried out to demonstrate that the proposed development will not create an increased risk of flooding from surface water to the development site and the surrounding area for the critical storm up to and include the 1 in 100 (1%) AEP plus climate change event. This should be done in accordance with the National Planning Policy Framework (NPPF) and Planning Policy Guidance (PPG) along with the Hertfordshire drainage proforma.
 - 1 in 100 (1% AEP) rainfall event plus climate change shall not leave the application boundary or flood any buildings within the development boundary. Flows and volumes surcharged from the drainage network between the 1 in 30

(3.33% AEP) rainfall event plus climate change and the 1 in 100 (1% AEP) rainfall event plus climate change should be sustainably managed and stored within the application boundary.

- 1 in 30 (3.33% AEP) rainfall event plus climate change shall not flood outside the drainage network which is designed to hold water.
- The correct parameters (FEH2013/FEH2022 rainfall data) should be used in calculations. Additionally, CV values of 1 should be applied.
- The correct climate change allowance should be applied to the 1% AEP and 3.33% AEP event.
- The drainage network calculation must evidence that considering the urban creep 0 allowance and the half drain time for the storage features must be within or less than 24 hrs for the safety of the development.
- The proposed buildings should have sufficient freeboard from both proposed external ground levels and the maximum design water level from any source to ground floor finished floor level. This is to provide residual risk mitigation from exceedance events.
- Exceedance flow paths need to be submitted as part of the application, and these should take into consideration the layout of the development and any ground levels to ensure these events are safely managed and do not enter properties.
- A high-level construction phase surface water management plan should be submitted in support of any planning application.
- Layout and/or drainage layout drawings need to show all the drainage features (storage and conveyance), with labels the same as those in the submitted supporting calculations.
- The LLFA need drawings of cross sections and long sections of all the SuDS features which includes network and structures such as ponds, basins and swales need to be supplied.

Informative:

For further advice on what we expect to be contained within the FRA and/ or a Drainage Strategy to support a planning application, please refer to the Validation List and Proforma on our surface water drainage webpage <https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/water/surface-water-drainage/surface-water-drainage.aspx> this link also includes HCC's Flood Risk Management policies on SuDS in Hertfordshire. We do expect the Validation List to be submitted to the Local Planning Authority and LLFA to show you have provided all information and the Proforma to the LLFA to summarise the details of the proposed development.

Both FEH13 and FEH22 are currently accepted to support drainage modelling calculations. For the avoidance of doubt the use of FSR and FEH1999 data has been superseded and therefore, use in rainfall simulations are not accepted.

Please note if, you the Local Planning Authority review the application and decide to grant planning permission, notify the us (the Lead Local Flood Authority), by email at FRMConsultations@hertfordshire.gov.uk.

Yours sincerely

Aswathi

Aswathi Haridasan
SuDS and Watercourses Support Officer
Growth and Environment

Annex

The following documents have been reviewed.

- EIA Screening letter, DWD, 10 June 2026, Ref:18089.