

via e-mail

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Your Ref: FUL/2021/0015
Date: 20 July 2021

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Dear Ralph,

Town and County Planning (Development Management Procedure) (England) Order 2015

Installation of a solar photovoltaic array/solar park with associated infrastructure at Aldeby landfill site, Common Road, Aldeby, Beccles, NR34 0BL

Thank you for your consultation on the above site, received on 19 July 2021. We have reviewed the application as submitted and wish to make the following comments.

Generally with a solar farm proposal, a portion of the site will comprise of proposed solar (PV) panels and energy storage facilities, whilst the remainder of the site comprises of the existing grassed spacing between rows and field margins. The design of photovoltaic (PV) panels means that the area represented by the proposed panels is not considered impermeable, as the ground beneath all panels will be grassed and as such remains permeable.

This common setup means sites are usually considered 95% permeable, but associated infrastructure like battery storage units, solar stations, substations, internal roads should be considered as fully impermeable.

It should also be noted however that panel arrays can sometimes be very long and also pitched together which needs to be assessed differently and may require a different drainage strategy. Also, some panel types have wide pad foundations which can affect overall PIMP of the site.

Rainfall will drain freely off the panels onto the ground beneath the panels where the surface remains permeable. Thus, the total surface area of the photovoltaic array is not considered to act as an impermeable area and the impact is assumed to be nil. However, the nature of the underlying groundcover and antecedent conditions can have a demonstrable influence on the surface water run-off characteristics of a site, i.e. if the

ground cover beneath panels is proposed as bare earth which is susceptible to hardening in summer months, then peak discharges can increase significantly. As such, it should be ensured as part of any proposed scheme that grass or wildflower cover will be well-maintained across the site to ensure that such proposed schemes will not increase the surface water run-off rate, volume or time to peak compared to the pre-development situation. This will also help provide net biodiversity gain.

You should satisfy yourself that the applicant has demonstrated compliance with;

- The National Planning Policy Framework (“NPPF”) paragraphs 155 - 165 by ensuring that the proposal would not increase flood risk elsewhere and will incorporate sustainable drainage systems.

The applicant should also demonstrate how the proposal accords with national standards and relevant guidance. If the proposal does not accord with these the applicant should state their reasoning and the implications of not doing so. The key guidance available is set out below;

- Planning Practice Guidance - Flood Risk and Coastal Change

To ensure that development is undertaken in line with Paragraph 163 and 165 of the NPPF the LLFA recommends that LPAs satisfy themselves of the following considerations prior to granting permission for major development below LLFA thresholds:

1. Is the development site currently at risk of flooding? The application submission should include a site specific assessment of the risk of flooding to the development site from all sources. The risk of flooding on the current site should be acknowledged using national flood risk datasets such as the EA’s Risk of Flooding from Surface Water maps. If any areas at risk of flooding are identified, development should avoid these areas in line with NPPF. Where this cannot be achieved a robust strategy should be provided that includes adequate flood resilience measures incorporated in the design. This may require an emergency flood plan where appropriate.
2. How does the site currently drain? The method through which the site currently drains should be described, such as whether there are existing infiltration features, ordinary watercourses within or at the boundary of the development, or existing surface water sewer infrastructure. Land drains are common, especially in previously agricultural land, and do not comply with good SuDS practise.
3. Restrict vehicular movements on site to designated access tracks. In doing so, the risk of soil compaction is minimised and limited to specific locations. The applicant should design the vehicular access tracks to be permeable (e.g. gravel medium) to mimic the existing surface conditions.
4. Rutting during the operation phase is also another common problem with solar farm sites, especially during intense storms at the foot of the panels. This can alter natural flow paths and should be avoided where possible.

5. Specify what type of vegetation will be planted across the site and how will it be managed/ maintained in perpetuity. The ideal situation is that vegetation is grassed and is kept reasonably high or grazed by livestock. Good vegetation cover will limit the transfer of sediments and slow the flow of water.
6. Where required a Drainage strategy should be provided for any large impermeable substation and compound areas.
7. If there are any concerns with residual risk, due to concentrated rainfall (flash events etc), then simple shallow features (e.g. 0.6m deep) like linear swales or filter drains could be proposed along the lowest parts of the site to capture any exceedance. No runoff should leave the site up to the 1% AEP+CC storm.
8. A Construction Environmental Management Plan (CEMP) should also be provided.

If you are aware of a particular surface water flooding issue at this location which requires further bespoke advice, please re-consult detailing the perceived nature of flooding or details of flooding that has occurred.

Further guidance for developers can be found on our website.

Yours sincerely,

Adam

Adam Coburn
Flood Risk Officer

Lead Local Flood Authority

Disclaimer

We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue.