

Standing Advice – Solar Panels (PV) and Solar Farms

Introduction

Suffolk County Council as Lead Local Flood Authority (LLFA) has identified the need for additional guidance and clarification in relation to planning application for Solar Panels (PV) and Solar Farms relating to flood risk and surface water drainage. This builds on principles established by Solar Arrays which have formed part of Nationally Strategic Infrastructure Projects and neighbouring counties flood risk and SuDS guidance with respect to solar arrays.

Flood Risk

It is generally accepted that PV panels and the associated auxiliary buildings/structures have a limited impact on flood risk due to their comparatively small footprint and lack of ground contacting surfaces. However, it does not mean that this does not need to be fully considered. The LLFA will still expect a site-specific flood risk assessment (FRA) to be submitted with every PV application that is more than 1 hectare in size or is in a flood risk area. If the site is within a area at risk of flooding, the flood risk sequential and exception test maybe applied by the local planning authority.

There are several flood risks that need to be assessed, including.

- Fluvial (river)/ Tidal (sea)
- Pluvial (surface water)
- Reservoir
- Groundwater
- Foul/Sewer Flooding

The FRA should include reference to any historical flood instances that have been recorded.

For flood incident records, please contact the lead local flood authority by emailing them floods@suffolk.gov.uk .

If you need assistance with understanding what is required this is the current guidance [Flood risk assessments if you're applying for planning permission - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/flood-risk-assessments-if-youre-applying-for-planning-permission) .

Surface Water Drainage

The density, height and number of PV panels will dictate the type of surface water management system that is required by the LLFA.

This can be done by utilising perimeter swales or filter strips every 5th row of PV panels.

Auxiliary buildings, depending on where they are located, and their plan area can normally have the surface water drainage design/built in accordance with Building Regulations Part H. However, a surface water drainage strategy utilising SuDS principles may be required if the LLFA believe this is necessary depending on the site.

Below Panel Maintenance

As below the panel will normally be laid to grass or pastureland, the type of maintenance will vary depending on how the ground below and around the panels is to be utilised.

Grass

If the area is to be laid to grass, it is recommended that a seed mix is used which provides a ratio of approximately 80/20% grass/wildflower seeds to allow for biodiversity enhancement/net gain. The management of this area should then be carried out in accordance with a management plan that focuses on the target species that are to benefit of the grass and wildflower areas, such as invertebrates and birds. Careful consideration shall be given to the use of wheeled machinery to avoid soil compaction.

Pastureland

If the area below the panels is to be used for pastureland or grazing land, consideration should be given to

- Choice of species of grazing stock (usually sheep)
- Density of livestock stocking (this would usually be expected to be at a low density)
- Intensity of grazing (intermittent conservation grazing would usually be expected)
- Avoidance of soil compaction caused by grazing

Surface Water Flow Routes

Existing flood flow routes or blue corridors should be maintained.

Ordinary Watercourses

If you want to do works to a watercourse in Suffolk, it is likely that you will need to be granted consent by either SCC LLFA, an Internal Drainage Board, or the Environment Agency.

Main rivers are the responsibility of the Environment Agency, and [applications to work on main rivers](#) must be submitted to them. You can [use this map](#) created by the Environment Agency to find out whether or not the application in question is on a main watercourse.

The responsibility to manage flood risk from ordinary watercourses (streams and ditches, etc) in Suffolk rests with us, as the Lead Local Flood Authority (LLFA). Therefore, anyone who intends to carry out works in, over, under or near an ordinary watercourse in Suffolk must contact us to obtain Land Drainage Consent before starting the work. The reason for this is to ensure that any works do not endanger life or property by increasing the risk of flooding, or cause harm to the water environment.

More details can be found [here](#)