

Essex County Council
**Development and Flood Risk
Environment and Climate Action,**
C426 County Hall
Chelmsford
Essex CM1 1QH



Julie Marcsik
Rochford District Council
Planning Services

Date: 19th July 2023
Our Ref: SUDS-006892
Your Ref: 23/00389/FUL

Dear Sir/Madam,

Consultation Response – 23/00389/FUL - Erection of an electrical substation

Thank you for your email which provides Essex County Council (ECC) with the opportunity to assess and advise on the proposed surface water drainage strategy for the aforementioned planning application.

As the Lead Local Flood Authority (LLFA) ECC provides advice on SuDS schemes for major developments. ECC have been statutory consultee on surface water since the 15th April 2015.

In providing advice this Council, and their appointed consultants, looks to ensure sustainable drainage proposals comply with the required standards as set out in the following documents:

- Non-statutory technical standards for sustainable drainage systems
- Essex County Council's (ECC's) adopted Sustainable Drainage Systems Design Guide
- The CIRIA SuDS Manual (C753)
- BS8582 Code of practice for surface water management for development sites.

Lead Local Flood Authority position

As we have been consulted on a minor application, we are assuming that there is a potential flood risk on site, therefore we are considering the impact of increased run off rates. The cumulative impacts of minor developments can increase flood risk in an area.

Current processes for assessing major applications cannot be applied in the same way to minor applications as reduced orifice sizing to meet the greenfield 1 in 1 rate can increase the risk of blockages and therefore flood risk.

The required storage volume and run off for the site can be calculated using the UK SUDS website.

Having reviewed the application, we wish to issue a holding objection based upon the following:

- Discharge rates should be limited to the greenfield 1 in 1 year rate or 1l/s, whichever is greater.
- Where it is not possible to meet the greenfield 1 in 1 rate, rainwater re-use should be used to reduce the run off rate from the site, it should be demonstrated why this is not feasible if it is not proposed.
- Please provide a detailed drainage layout including location of features, exceedance routes, finished floor levels, discharge locations (and rates).
- All areas of the site should receive sufficient water treatment and above ground features are preferable. At the full application stage it is expected that the simple index approach is used to ensure that there is sufficient treatment for the site.
- As the site is within the Combined Essex Management Catchment, a climate change allowance of 45% should be used.
- Please clarify what storage is proposed. Sufficient storage should be provided to ensure no internal flooding as a result of the development during all storm events up to and including the 1 in 30 year storm event and no off site flooding as a result of the development during all storm events up to and including the 1 in 100 year plus 45% climate change event. Please provide hydraulic modelling in line with the Drainage Calculations Guide: <https://www.essexdesignguide.co.uk/suds/further-guidance/drainage-calculations-guide/>
- Maintenance plan – Please provide the maintenance activities and frequencies for the permeable paving as well as who will be responsible for it's maintenance.
- Infiltration testing/ground investigation to assess the viability of using infiltration on site- please provide the WRAP map as stated in section 2.6.
- Engineering drawings should be provided detailing the SuDS components used within the drainage system.

We strongly recommend looking at the Essex Green Infrastructure Strategy to ensure that the proposals are implementing multifunctional green/blue features effectively. The link can be found below.

<https://www.essex.gov.uk/protecting-environment>

We recommend that a covenant should be included within the deed to the land to ensure SUDS features are maintained in the future.

Should you wish us to provide further comment additional information should be supplied to show how SUDS will be implemented on site.

Summary of Flood Risk Responsibilities for your Council

We have not considered the following issues as part of this planning application as they are not within our direct remit; nevertheless these are all very important considerations for managing flood risk for this development, and determining the safety and acceptability of the proposal. Prior to deciding this application you should give due consideration to the issue(s) below. It may be that you need to consult relevant experts outside your planning team.

- Sequential Test in relation to fluvial flood risk;

- Safety of people (including the provision and adequacy of an emergency plan, temporary refuge and rescue or evacuation arrangements);
- Safety of the building;
- Flood recovery measures (including flood proofing and other building level resistance and resilience measures);
- Sustainability of the development.

In all circumstances where warning and emergency response is fundamental to managing flood risk, ECC advise local planning authorities to formally consider the emergency planning and rescue implications of new development in making their decisions.

Should further correspondence be required, please contact the SuDS team directly using the below details.

Yours sincerely,

Anna Murphy

Development and Flood Risk Officer

Team: Green Infrastructure and Sustainable Drainage

Service: Climate Action and Mitigation

Essex County Council

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