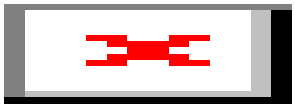
Dear Claire,
Having received the below email and updated drainage plan from the engineer, please see the attached response for 24/00015/FUL.
Please can the email below and the updated drainage plan be uploaded to the public access planning portal as they contain information imperative to our approval subject to conditions.
Kind regards,
Gemma

Gemma Parson (she/her)
Development and Flood Risk Officer
Environment Climate Action | Climate & Adaptation | GI & SuDS
Adr: E1 County Hall, Chelmsford, Essex, CM1 1QH

https://flood.essex.gov.uk
https://www.essexdesignguide.co.uk/suds
www.essex.gov.uk



From: James Everitt <James.Everitt@createce.co.uk>
Sent: Monday, July 29, 2024 3:10 PM
To: Suds <suds.mail@essex.gov.uk>
Cc: Claire Burroughs <claire.burroughs@createce.co.uk>; Katie Hutchings <katie.hutchings@sphere25.co.uk>
Subject: FAO: Gemma Parson - RE: The Foundry Building C - LLFA holding objection - 24/00015/FUL (SUDS-007417)

Dear Gemma Parson,

Thank you for your letter on the 18th July 2024 regarding the planning application SUDS-007417 and the proposed SuDS network for the development. We have taken your comments in term and we hope the our response ensures your objection can be removed.

- *Please demonstrate that all discharge options via a gravity system have been explored in accordance with the drainage hierarchy. Section 6.41 mentions the presence of a watercourse to the south/west.*
    - All outfall options for the surface water network were assessed in line with the drainage discharge hierarchy and our engineering decisions were presented in the report. To provide more clarity, the watercourse mentioned in Section 6.41 and described in the being of the report is approximately 700m south of the site. This is not located on the site and access to it would be through third party land. This is not a viable discharge location option for development.
    - The design of the surface water network is predominantly a gravity network. However, a basement is proposed for the development which will be used for car parking which requires to be formally drained and have appropriate water quality treatment. It has been proposed to attenuate all surface water at basement level, allow for water quality improvements at this level and then pumped the surface water back up to surface level for a gravity connection to the adopted sewer. This

was the most efficient solution to collect and treat the surface water for the entire site in one area.
    - Design of attenuation tanks at ground level was undertaken but due to the required cover, depth of the attenuation tanks, the connecting pipe runs of the network, result in levels below the adopted manhole inert levels. A gravity connection is not viable with the attenuation at ground level. A pumped solution is still required to meet the adopted manhole invert level.
    - The proposed SuDS solution also reduces the number of required treatment devices and allows for a less complicated build out at surface level with regards to the foul system and other services e.g. electricals by reducing potential clashes.
- *The FRA notes that in the event of pump failure for the 1 in 30 year plus 35% climate change, 200 m3 of flooding occurs from the basement nodes. Please provide the associated flood volume and depth predicted for the 1 in 100 year plus 45% climate change event. The measures in place in the event of pump failure e.g. telemetry and warning system should also be discussed.*
  https://www.essexdesignguide.co.uk/suds/rates-and-storage/greenfield-runoff-rates/ - see section entitled Discharge Via Pump.
    - The predicted flood volume for the 1in100+CC event, following the same methodology as previously stated (50% storage available etc) is 362m3. This would result in a maximum depth of 0.19m over the area of the basement.
    - Measures regarding the exact set up of the pump system will be specified at detailed design stage. Typical measures can include but not limited to a duty / standby arrangement, battery backup and early warning systems.
- *Further information is required in terms of water quality. It is unclear from the drainage plan where the Aqua Swirl treatment device will be located, and this is identified as the form of treatment for the site in Section 6.32. From the drainage plan sections of the site are currently receiving insufficient treatment. Runoff from the roof also requires treatment. Please review and confirm the sites pollution hazard level, as in accordance with the National Trip Analysis the number of car parking spaces would create over 300 traffic movements daily and the site has a commercial element. The drawing by cad surveys titled Â‘Building 3 South West Facing ElevationÂ’ shows a motor service unit. If the proposed development includes units where chemicals and fuels are to be delivered, handled, stored, used or manufactured, treatment mitigation would be required for a High pollution hazard level and for the indices to be updated accordingly.*
    - It is proposed to have two Aqua swirls (or other proprietary treatment devices tbc at detailed design stage) which are noted on the plan, denoted by the prefix AS_XXX. We have updated our plan drawing to make this clearer. All surface water is treated prior to entering the attenuation tank.
    - The cad surveys drawings are the topographic survey of the current site. The motor service unit is to be removed as part of the planning application. The proposed uses of the development within the commercial units are to be Class E (largely retail / office based).
    - The run-off from the roof is treated first by the surrounding permeable paving and then also by the proprietary treatment device. Some areas of the roof will also be percolating through the green roofs which also act as a treatment too.
    - Pending confirmation of the proposed commercial units, if required the treatment devices could be upgraded to full interceptors, however as these areas will not be collecting surface water (as within the basement / under cover) they could be routed to the foul sewer in the event of spillage etc.

We hope this email has been able to clarify any areas of concerns and ensures the LLFA find the proposed SuDS acceptable.
Kind regards,

James Everitt MEng (Hons), MCIWEM
Senior Flood Risk Engineer
t. 01603 877 010 m. 07740 174 940 w. www.createce.co.uk