



SKETCHLEY LANE, BURBAGE
LLFA COMMENT RESPONSE
2024/0847/04/Fdis
01/11/2024

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This document has been prepared in response to the Local Lead Flood Authority (LLFA) requirements outlined by Leicestershire County Council (LCC) concerning planning application reference 24/00847/DISCON for the land south of Sketchley Grange Hotel, Sketchley Lane, Burbage.

The LLFA's comments, dated 30.09.24, address the discharge of Condition 15 (Surface Water Drainage).

- The requested additional information is summarized as follows:
- Correct discrepancies in manhole cover levels.
Provided
- Catchment area plan to support hydraulic calculations.
Provided
- Flood-flow routing plan.
Provided
- Further construction details of the proposed attenuation basin.

The LCC document makes the following comments, with the responses below, in red:

A new flood flow routing plan has been submitted showing the path surface water takes during a blockage or exceedance event. The LLFA can provide the following comments:

- Manhole S1 shows 34m³ of flooding during the design flood event (1 in 100-year plus 40% climate change scenario). The applicant has provided additional gullies to address these exceedance flows, but they all feed back into the flooded manhole so will have little to no effect. Conversely, the gully at approximately 117.70mAOD is lower than manhole S1 (117.858mAOD) itself, so will cause water to flood from the network earlier. Also note that the location of S1 and associated gullies and their connections varies across drawings. Based on the proposed highway contour plan, water will leave the red line boundary and flow onto Sketchley Lane, contrary to the requirements of the National Planning Policy Framework. The peak design surface water level within S1 should not exceed the level of any connecting gully in the peak design event. The level of these gullies should be clarified to aid review.

The road was designed so that the initial section slopes downward toward Sketchley Lane.

To prevent runoff from affecting the existing road on Sketchley Lane, additional drainage measures were incorporated as part of the S184 agreement.

These drainage measures include gullies and channels to capture runoff before it reaches the existing road.

The collected water is then directed into the developer's drainage system, mitigating the risk of surface water accumulation and ensuring compliance with local authority requirements for highway drainage.

This approach not only supports effective water management but also minimizes potential impacts on third party infrastructure along Sketchley Lane.

- Flooding from manholes S21A, S25, S25A, S31 and S32 showing to flow to open space. The collective volume is significant during the design flood event(80m³). Please provide further detail on what happens to flow at this point as the ground appears to slope towards existing houses on Kensington Avenue and the A5.

To address potential flooding in these areas, a land drain is planned along the POS pathway, which will link back into the primary drainage network to effectively manage excess water.

Additionally, trial pit results from the recent site investigation indicate that the ground has sufficient permeability to support surface water infiltration.

It's also important to note that boundary levels on the southern side, where existing properties along Kensington Avenue are situated, are higher than those of the POS. This elevation difference should further support effective surface water management within the site.

As stated in the LLFA's previous response, the design top water level of the attenuation basin is above the existing and proposed surrounding ground level, meaning the embankments of the basin needs to be constructed appropriately to retain water and mitigate the risk of collapse. Whilst a cross-sectional drawing of the basin has been provided, please provide further details of the construction of the bund which should have a clay core and be compacted in layers (or other suitable mitigation). Please provide additional basin construction details ensuring its core is designed to serve as a water retaining structure. The LLFA have reviewed the private drainage levels and can provide the following comments:

- Plot 44 external levels are marginally lower (113.85mAOD) than the top water level (113.937mAOD) of the receiving modelled manhole (reference S21). Please review and comment.

Comment seems to be outdated. Current level design discharged this.

- Plots 32 and 33 have external ground levels (117.25mAOD down to 116.70mAOD (garage)) lower than the top water level (117.420mAOD) of the receiving modelled manhole (reference S20). Please review and comment.

Level information has been updated. Private drainage has been rerouted to drain into manhole S4 instead.

- Plots 123, 124, 125 and 126 have external ground levels lower than the top water level of the receiving modelling manhole (reference S2). Please review and comment.

The flood route plan for these plots may be outdated, as the finished floor levels for these plots are higher than the top water level of manhole S2.

- Finished Floor Level of Plot 120 (117.70mAOD) is lower than the receiving modelling manhole (reference S2A) (117.75mAOD). Additionally external levels for both plots 119 and 120 are lower than the modelled top water level. Please review and comment.

The external levels for plots 119 and 120 are outdated. This has since been updated so that they are above the modelled top water level.

Rerouted the private drainage for plot 120 to drain to S4.

The LLFA advises the LPA that the application documents as submitted are insufficient for the LLFA to provide a substantive response at this stage in relation to Condition 15. To provide a substantive response, the following information is required:

- Provide further evidence to demonstrate that flood flow routing will not impact third parties. Refer to comments about.
- Further construction details of the proposed attenuation basin as detailed above.
- Amend drainage design or external levels to ensure private drainage does not flood prior to the Section 104 drainage during the design flood event.
- Details of the management of surface water on site during construction of the development.