



SKETCHLEY LANE, BURBAGE
LLFA COMMENT RESPONSE
21/01131/OUT
28/04/2025

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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 21/01131/OUT for the land south of Sketchley Grange Hotel, Sketchley Lane, Burbage.

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

- **Flood flow routing comment 1 – Satisfied by exception by the LLFA 25/04/25LLFA 30/09/24**
- 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.

TB Response 01/11/24

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.

LLFA 11/11/24

- The response from Travis Baker does not address the issue raised by the LLFA. Whilst additional gullies within the Section 184 extent will provide benefit during more frequent rainfall events, they will be completely ineffective during the design flood event if they are connected to manhole S1. As stated previously, they will have the opposite effect and their lower cover levels will cause water to flood from the development drainage network. Please explore upsizing the pipe sizes downstream of S1 to reduce water levels and prevent water from flooding from connecting highway drainage. Please provide a copy of the Section 184 drainage plan. National Planning Policy Framework requires that new development does not increase flood risk elsewhere and this needs to be evidenced by ensuring flood flow routing does not leave the site boundary during the design flood event.

TB Response 08/01/25

S184 drawing provided as requested.

The private drainage has been revised to redirect flow to the downstream pipe, reducing the volume at S1. Corresponding updates have been made to the drainage area plan and calculations to reflect these changes.

We explored the option of upsizing the pipe; however, this does not fully mitigate flooding, as the site is elevated compared to the existing Sketchley Lane.

We've included calculations for a 1-in-40-year event, demonstrating that no flooding will occur under these conditions. We kindly ask the LLFA to adopt a pragmatic approach to the small volume of flooding indicated.

LLFA 31/01/25

- The issue remains as the TWL for S2 is 118.096mAOD with connecting private drainage as low as 117.150mAOD. The 1 in 30-year modelled water level is 117.495mAOD which means water will flood from private drainage during this event which is not permitted. S1 is still shown to flood with water falling to two gullies which feed back into S1. Water will leave the site during the design flood event which is not allowable under the NPPF.

TB Response 26/03/25

The bell mouth access gullies have been removed from the development drainage system. These will instead connect into the existing highway drainage provision in Sketchley Lane. The amended gully connections are now reflected on the S278 drawings which are being audited by LCC Highways.

The drainage catchment for S1 has been reduced along with the quantum of anticipated flooding in the 100yr +cc critical event.

As the site frontage of Sketchley Lane falls towards the existing highway, we have carried out a greenfield run-off assessment of the contributing flood volume originating from the site in the 100yr return period to understand how this compares to the predicted volume anticipated from S1. The assessment is submitted with this response and confirms that the predevelopment flood volume is higher than that predicted in the post development scenario, as therefore does not represent an increased flood risk to the surrounding area.

Private drainage connecting into S2 has been designed to be surcharged, which complies with acceptable design standards. The cover levels for these connections are maintained at a higher level than the flood TWL, therefore no flooding will occur as a consequence of the TWL in S2.

The removal of the gullies at the bell mouth from the main development drainage system and a reduction in contributing flows to manhole reference S1 has largely resolved the significant volume of exceedance flow from S1. Whilst 1.49m³ remains during the 1 in 100 year (plus 40% climate change), the LLFA considers this to be minor and acknowledges that this flow will be intercepted by drainage on Sketchley Lane.

Recognising the constraints and with consideration of the impact to third parties, the LLFA accepts this approach by exception.

- **Flood flow routing comment 2 – Not adequately addressed**

1. LLFA 30/09/24

- 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.

TB Response 01/11/24

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.

LLFA 11/11/24

- Please include the land drain on the drainage layout drawing. This may be ineffective during the design flood event and as with manhole S1 may act as an outlet to the wider surface water network during the design flood event. The Travis Baker response may be acceptable for smaller volumes, but this is 80m³ and to suggest it will soakaway into POS without supporting evidence is not acceptable. Please consider whether this volume can be reduced by increasing the size of the drainage network.

TB Response 08/01/25

Land drain shown on drainage layout as requested.

Local levels updated to decrease the level of flooding going into the POS areas.

LLFA 31/01/25

- The land drains are showing no connectivity and there are no details shown. The LLFA is not satisfied that the land drains will have the capacity for 80m³ of exceedance flows. Please provide a plan showing where this volume will be stored without leaving the site boundary.

TB Response 26/03/25

Land drain details are included in this response, illustrating the connections and providing the relevant sections.

The flood route plan indicates the floodwater will not exit the site; the footpath levels are slightly elevated, and boundary levels are higher than what is shown in the POS area. This forms a depression, ensuring that excess flow is contained on site during flood events.

LLFA Response 25/04/25

The changes undertaken as part of the latest design review have resulted in an increase in volumes flooding from the system during the design flood event to over 130m³. The flood flow routing plan includes superseded volumes. Whilst the LLFA accepts flooding is allowable during the design flood event, this must be in a controlled manner. The exceedance flow volumes are exceptionally high and the LLFA remains dissatisfied with the evidence presented to assure that the significant volumes can be safely contained within the carriageway or public open space. As previously requested, please show the location where this water will be safely stored (ideally a hatched area on the updated flood flow routing plan). Please include depth and area.

Additionally, please assess flood flow routing at the raised tables. Will flows build up and leave the carriageway or overtop the raised tables? Where this significant volume cannot be safely stored above ground, changes to the drainage should be made to reduce this volume to a level which can be safely routed and stored.

TB Response 28/04/25

Further to the above LLFA comment, the following changes have been made to drawing 23053/172/D:

- Stated flood volumes from the chambers correspond to the current hydraulic model outputs for the critical 100yr+40% Climate change events, as issued on 26/03/25.
- Hatched areas indicate the three potential areas of localised flooding in the public open spaces south of the new housing development. Maximum flood depth and flood volumes are stated on the drawings. The extents shown only seek to demonstrate that the highlighted areas can safely accommodate the predicted flood volumes, these are not the maximum volumes that could potentially be stored in these areas, should the site be subject to more extreme rainfall over and above the maximum design storms required under current planning policy.
- Flood routing over raised tables and shared surfaces assessed and are considered suitable under the current design. Longitudinal gradients are sufficient to direct all predicted flood flows away from new dwellings.

• **Private Drainage comments – Satisfied 25/04/25**

2. LLFA 30/09/24

- 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.

LLFA 11/11/24

- The LLFA review was based on the documents uploaded to the Hinckley & Bosworth planning portal on 5th September 2024. None of the comments were outdated. Please review the



documents on the planning portal and ensure the LLFA has access to the latest drawings. Please update FFLs on the drainage plan if they are outdated. Finally, no details have been submitted on the management of surface water on site during construction of the development, so the final bullet point remains unchanged.

TB Response 08/01/25

LLFA response shows documents in the planning portal has not been updated and drawings shown are not the latest.

LLFA 31/01/25

- It is not clear if Travis Baker have attempted to resolve the private drainage issues as no cover letter was provided. Whatever changes were made to the hydraulic calculations have made little difference and have made the issue affecting Plot 44 worse. Please consider upsizing the pipe network as the water level in the network is too high and impacting private plots.

TB Response 26/03/25

External levels for Plot 44 have been raised by 150mm, ensuring that the lowest external level now exceeds the TWL of the connecting manhole (S21).

The previously noted comments for the other plots have also been addressed.

LLFA 23/04/25

Floor levels and private drainage levels of Plot 44 are now adequately raised above the top water level of the system.

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, provide further evidence to demonstrate that flood flow routing will not impact third parties or proposed dwellings.