



**BRASCOTE LANE, NEWBOLD VERDON
LLFA COMMENT RESPONSE
2025/0356/04/Fdis/R1
29.07.2025**

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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 2025/0356/04/Fdis/R1 for the Land East of the Windmill Inn, Brascote Lane, Newbold Verdon.

The additional information requested by the LLFA is summarised as below:

- Private drainage details including levels – **provided**
- Hydraulic calculations including a surcharged outfall scenario to reflect the conditions when the Thurlaston Brook is in flood – **provided**
- Catchment area plan – **provided**
- Flood flow routing plan including proposed levels, fall directions, finished floor levels etc. – **provided**
- Construction details of the proposed sustainable drainage features including attenuation basins, flow control chamber and permeable paving. Where the attenuation basins are set above the existing natural ground, details of the geotechnical design of the embankment. – **provided**
- Section 104 agreement (if relevant) – **provided**

The LLFA has provided the following comments with the design responses written in red.

- Private drainage levels for Plots 42 to 45 are below the top water level of the receiving manhole S20 (126.960mAOD). This includes ACO drainage set as low as 125.900mAOD, some 1.06m below the top water level and below the 1 in 30 level of 126.326mAOD. The finished floor level of Plot 42 is set at the same height as the top water level of S20.
External levels show plots 42-45 have higher levels than the TWL of receiving manhole S20.
- Private drainage levels for Plots 9 to 12 are below the top water level of the receiving manhole S14 (129.005mAOD). Finished floor levels of connecting plots are below the top water level including Plot 12 which is set to 127.950mAOD.
Rerouted private drainage for plots 9-12 to drain to manhole S2 with a lower TWL than S14.
- Private drainage levels for Plots 184 to 185 and 189 to 194 and are below the top water level of the receiving manhole S38 (127.872mAOD). Finished floor levels of connecting plots are below this level, being as low as 127.500 for Plot 185.
**Raised plot 184 by 50mm. Plot 184 and 185 private drainage rerouted to S60.
Plots 189-193 private drainage rerouted to S22.**
- Private drainage levels for Plots 231 to 233 are marginally lower than the top water level of the receiving manhole S16 (128.674mAOD). This is likely to result in flooding from a gully outside Plot 223 which is set to 128.550mAOD.
Raised FFLs for these plots by 150mm.
- Private drainage levels of Plot 217 and 218 (128.750mAOD) are below the top water level of the receiving manhole S36 (129.038mAOD).
Private drainage rerouted for these plots to S31.
- Private drainage levels of Plot 59 (garage) are lower than the top water level of the receiving manhole S65 (126.189mAOD). The ACO channel protecting the garage is set to 125.850mAOD posing a significant flood risk to the garage.
Private drainage rerouted to S67.
- Private drainage levels of Plot 82 to 86 are lower than the top water level of the receiving manhole S79 (127.978mAOD). This includes the finished floor levels of Plot 83 to 86 which are as low as 127.000mAOD. Levels here are also lower than the 1 in 30-year water level of 127.009mAOD.
Private drainage for these plots rerouted to S83.
- Private drainage levels of Plots 119 to 120 are lower than the top water level of the receiving manhole S61 (127.016mAOD). The finished floor level of both plots (126.900mAOD and 127.000mAOD) are also below the top water level.
Private drainage for these plots rerouted to S62.

Flood Routing:

- A large volume of flooding (43m³) is shown to flood from manhole S38 during the design flood event. When reviewing the flood flow routing plan, water is shown to flow uphill to the east of Plot 185. The LLFA is concerned at the risk posed to Plots 183 to 185 and Plots 145 to 150 which site lower than the height required for water to pass over the crest of the carriageway. Please review the flood flow routing plan and amend levels accordingly.
Although flooding is indicated at this location, both sides of the carriageway are protected by a 25mm bullnose kerb, which provides a containment measure within the highway corridor.

Additionally, the crossfall of the adjacent footpath falls towards the carriageway, directing any overland flow away from the plots mentioned above.

As a result, in the event of flooding, surface water will be contained within the carriageway and will not exceed the kerb line or cross outside the corridor. This should mitigate the risk identified by the LLFA, as the water will remain within the highway rather than overtopping towards the plots.

- Manholes S3 and S14 flood during the design flood event and the flood flow routing shows the water leaving the site. It is not permissible for water to leave the site by design in an uncontrolled manner during the design flood event. Please reduce the water level in the system. For S3 a revised flood flow routing plan showing where the 4.5m³ will be stored may suffice.
As requested by the LLFA, we have updated the flood flow routing plan to incorporate a small depression within the site where the 4.5m³ of flooding from manhole S3 will be contained during the design event.
Additionally, manhole S14 has been increased to a 1500mm diameter chamber. This additional storage capacity ensures that the small volume of flooding previously indicated at this location is now retained on site, preventing any uncontrolled discharge from the site during the design event.

Additional Points:

- The surface water drainage area schedule states a total drainage area of 4.755ha, but the two modelled networks include catchment areas of 2.563ha and 1.678ha respectively, giving a total 4.241ha. Please account for the missing areas.
Drainage Area Plan and drainage calculations have been updated to show the correct catchment areas. There is a very minor difference due to the rounding shown on the table.
- The hydraulic modelling does not include a surcharged outfall as previously requested.
I have provided hydraulic modelling showing a surcharged outfall as an additional measure. The results showing the surcharged outfall show increased surcharging to the low duration storms but fundamentally the calculations show no issue with the freeboard of the basin being sufficient and no flooding in the 1 year or 30-year storms.
I have also provided the calculations without the hydraulic modelling to show that without the surcharged outfall there is no surcharging to the 1 year storm event.
- Confirmation as to whether permeable paving is being used.
Permeable paving is not being used.