

Lead Local Flood Authority Planning Application Response

Lead SCC Officer	Caroline Parkin
Local Planning Authority	Staffordshire Moorlands District Council (SMDC)
Planning application name	Erection of 12 no. Bungalows. Land at Bridge End, Macclesfield Road, Leek.
Planning application reference	FRM-SMD/2021/0113
Type of application	Full
Date consulted	21/12/2021
Date of response	10/01/2022

Disclaimer

This response is made by the County Council in its capacity as a Lead Local Flood Authority as a statutory consultee. As a Lead Local Flood Authority we respond to Planning Applications where resources allow and considering where development has the greatest ability to affect flood risk.

These comments should be taken as general comments on flood risk and drainage only. A detailed review of any technical methodology and results has not been undertaken by the Council. Liability for such technical work therefore rests with organisation(s) who have undertaken the said work.



General observations/ local flooding information

Flood Zone	The site is within Flood Zone 1
Surface water risk	No, the updated Flood Map for Surface Water (uFMfSW) does not affect the proposed site area.
Past flooding within 20m of site	Flooding hotspot instances on Macclesfield Road to the south of the development. Our information about past flooding is based on data that the Flood Risk Management team holds. Where other authorities (such as LPAs) have been made aware of issues, we cannot guarantee they have passed this information on to us.
Watercourse within 5m of site	None known.
Other observations	Reservoir (assumed disused) on site.



RESPONSE

Thank you for consulting us on this application for full planning permission. Our response is detailed below.

Staffordshire County Council Flood Risk Management position

We have reviewed the submitted information including the Flood risk Statement and Surface Water Management Report (Rev A, dated June 2021), and there is insufficient detail to fully demonstrate that an acceptable drainage strategy is proposed. We would therefore recommend that planning permission is not granted at this time. Our main concerns at this stage are as follows:

1. Site Boundary:

The Location Plan (Drg.No. HVBE 01 – Site Location) included with the application shows the site boundary to include both the access road and the existing private roadway down to Macclesfield Road. In comparison, the Surface Water Management Layout (Drg.No. 12553/30) only includes the main area of the site and does not include the access road or track. If the access road is included within the site boundary, proposals for the access track should be detailed within the information provided (including proposed drainage). Note that residents have reported incidents of flooding along the access road and this needs to be taken into account as part of the FRA, particularly if there are proposals to make alterations to the access road (refer to point 3).

2. Proposed point of Surface Water discharge:

The surface water drainage strategy proposes that surface water from the development will ultimately discharge to the River Churnet via an existing drainage system from the disused reservoir currently situated within the site. Section 9 of the FRA states that this system is 'believed' to flow into the River Churnet. Further evidence, such as CCTV, is required to confirm the connectivity, capacity and condition of the existing surface water system to ensure that the proposed point of discharge is viable. The plans provided indicate that the reservoirs were used for industrial water and effluent tanks suggesting possible contamination. Please provide further details regarding the previous use of the reservoirs, in particular potential contamination issues based on previous use. Also, please clarify the legal status for the overflow chamber and associated pipework, proposals for adoption or other arrangements to guarantee that this will be an effective discharge route for the lifetime of the development (refer to point 10 Management and Maintenance). If it is not possible to confirm the legal status of the proposed discharge route, an alternative may be required.

3. Existing Flood Risk:

Details provided as part of the consultation process have indicated that properties at Bridge End have experienced flooding from surface



water runoff from the adjacent cricket club, with water shown to flow down the track towards the houses. It is understood that a flood defence/drainage channel has been constructed along the existing road to protect properties at Bridge End. Any alteration to the access road/track may impact upon flood risk to the properties. The FRA should therefore take this into account and include details of any proposed changes to the access road/track and how the existing flood defence will be incorporated into the site design.

4. Drainage Layout Plan:

The drainage plans provided contain insufficient detail to determine how the drainage system is proposed to operate. For example, the main surface water network does not include cover levels, invert levels or details of proposed pipe sizes. Additional details for the proposed SuDS should also be outlined on the plan (e.g. pond base level, top water level, invert levels for existing drainage features such as the reservoir overflow chamber, details outlining how the filter drains will connect into the permeable paving etc). Plans provided should include sufficient detail to enable cross-referencing with the accompanying calculations.

5. Proposed Runoff Rates:

Section 12.4 states that post-development rates are restricted to the equivalent greenfield rates for each storm event using a complex flow control chamber. However, Section 12.5 of the FRA indicates that the surface water run-off volume for the 100-year, 6-hour storm event is greater than the greenfield volume for the same event.

According to the DEFRA non-statutory technical standards for SuDS, S4 *'where reasonably practicable, for greenfield development, the runoff volume from the development to any highway drain, sewer or surface water body in the 1 in 100 year, 6 hour rainfall event should never exceed the greenfield runoff volume for the same event'*.

S6, states that: *'Where it is not practicable to constrain the volume of runoff to any drain, sewer or surface water body in accordance with S4 or S5 above, the runoff volume must be discharged at a rate that does not adversely affect flood risk.'* Since criteria S4 for volume control is not being met, and long-term storage is not proposed within the site, to provide a betterment, runoff rates for all events should be no greater than the greenfield QBAR rate.

6. Attenuation Basin:

Please provide further details of the proposed attenuation basin such as base level for the pond, top water level, emergency overflow details etc. In line with SCC's Local Standard H, all surface water storage ponds should provide a 300mm freeboard above the predicted water level arising from a 1% Annual Exceedance Probability rainfall event inclusive of an allowance for climate change.

7. MicroDrainage Calculations:

MicroDrainage calculations have been provided to demonstrate the required storage volumes within the site, however no details have been included for the proposed surface water drainage network. Please provide calculations for the surface water network serving the properties to demonstrate it will operate as intended. Please ensure that references for the surface water drainage network can be easily cross-referenced with any drainage plans provided.

8. Impermeable Area Plan:

It is noted from the FRA that a total impermeable area of 0.463ha will be positively drained from the site and directed towards the proposed attenuation basin. Please provide an Impermeable Area Plan demonstrating contributing areas and their point of connection to cross-reference with MicroDrainage calculations. In addition, please confirm whether the proposed impermeable area includes an allowance for an increase in impermeable area to accommodate urban creep as set out in the SCC SuDS Handbook Local Standard F – Urban Creep.

9. Exceedance/Failure Plan:

Drg.No. 12553/30 - Surface Water Management Layout contains insufficient detail to confirm likely flow routes and therefore demonstrate that the proposal will be safe. Exceedance plans should include all key levels, such as ground levels, kerb heights/levels, cover levels, proposed finished floor levels etc. It is noted that the Surface Water Management Layout plan provided suggests that overland flow routes may go off site. Has consideration been given to the inclusion of a perimeter drain around the site to ensure runoff from the site is not increased?

10. Management & Maintenance Plan:

The current proposals raise several concerns over the management and maintenance of the proposed SuDS elements included within the drainage strategy:

- The current ownership of the overflow pipe from the existing reservoirs should be investigated as this appears to pass through multiple property boundaries prior to discharge into the River Churnet. As discussed in point 2, please clarify the legal status for the overflow chamber and associated pipework, proposals for adoption or other arrangements to guarantee that this will be an effective discharge route for the lifetime of the development.
- The overflow chamber for the existing reservoir is shown to be located within the rear garden of Plot 10. This is likely to prevent issues for access for inspection and maintenance.

- Similarly, whilst the attenuation basin is located in public open space to the east of the site, access for maintenance should be considered further and it should be demonstrated that reasonable sized machinery can access the pond safely for routine maintenance.
- It is noted that several of the proposed filter drains cross over property boundaries which may present issues of ownership and responsibility for maintenance.

A Management and Maintenance Plan should be included which clearly defines who will be responsible for the various SuDS included within the proposals. This should include contact details for the organisation responsible for carrying out the identified duties.

Reason

The proposed development may present risks of flooding on-site and/or offsite if surface water runoff is not effectively managed.

Please re-consult us at flood.team@staffordshire.gov.uk when amended details are received. Please note that the list of deficiencies above is not necessarily exhaustive. If you are minded to approve the application contrary to this advice, we request that you contact us again to allow further discussion.

Please contact us on flood.team@staffordshire.gov.uk if you have any queries about this response.

