
From:
Sent: 28 June 2022 13:50
To:
Cc:
Subject: SMD/2021/0491 - Land off Tenford Lane - LLFA Response (Rev 6)

Hi Chris,

Thank you for reconsulting us on the RM application SMD/2021/0491 – Land off Tenford Lane.

Staffordshire County Council Flood Risk Management Position

We have reviewed the submitted information and there is still some information required to fully demonstrate that an acceptable drainage strategy is proposed.

Please note this tends to be an iterative process where we require certain baseline details (i.e. a detailed drainage strategy) before we can review the more technical aspects and everything provided under Appendix A. Please also note that new documents often raise further questions so any list of requirements we provide may not be exhaustive. The list of current issues is below:

Drainage Strategy

The drainage strategy you have provided is outline and we need a detailed drainage design to secure the layout and to satisfy the requirements of the condition that drainage details be presented at reserved matters stage. I have screenshotted examples from the strategy that provides further evidence that this is not a detailed strategy.

During detailed design the infiltration basins will need to be adequately designed to consider things such as the requirement for forebays, etc.

It should be noted that while the infiltration basins have currently been designed as stand alone systems, there could be an opportunity to turn them into more of a feature by allowing water to cascade between the two systems on the southern boundary.

This could be done by providing an overflow and connecting swale, and should be explored at detailed design.

The current design has also been based on the assumption that the system will need to be adopted by the highway authority. Should this not be the case it may be possible to utilise further areas of permeable paving within the roadways to provide further water quality benefits.

Finally, for individual residential plots, other water saving features could be incorporated into the design, such as individual raingardens or water butts. Again, this is something that should be explored further as the scheme progresses.

- Please provide a detailed design plan for the finalised SuDS features and labelled detailed network plan to allow us to cross check the MicroDrainage calculations with the drainage plan i.e. pipe lengths, invert levels, slopes and diameters, we also need detailed designs of the swales and ponds to include levels.

- The GI report is still outstanding – we need to see this to determine if groundwater is sufficiently below the base of the infiltration features to allow them to operate correctly.

Calculations

- Microdrainage calculations should use the slowest of the 3 infiltration test readings - $0.0492\text{m/hr} = 0.00000137\text{m/s}$, all the infiltration features use a rate of 0.0718m/hr in the calculations. This is also the case with the permeable paving.
- Please provide the source control outputs for the permeable paving.
- Please confirm the reason for the pump in the microdrainage and where this features in your network.
- The calculations should show the half drain time of the network.
- Please include urban creep in your calculations as per your calcs below: the area that should be in the microdrainage is 12387m^2 i.e 1.24ha where it is currently 0.424ha .

Currently the site area that is being developed is approximately 4.3ha with the current proposal showing 40 residential units. This results in 9.3 houses per ha. As such the impermeable areas with allowances for 10% urban creep can be calculated as follows:

- Area A = 1142m^2
- Area B = 8125m^2
- Area C = 3120m^2

The allocated areas within the network file have also been increased by 10%.

Water Quality

We still need to understand where the 2 levels of treatment are coming from for the highway water as per the condition as this is not shown in the SIA.

Advice to LPA

Please re-consult us at flood.team@staffordshire.gov.uk when amended details are received. If you are minded to approve the application contrary to this advice, we request that you contact us again to allow further discussion.

Kind Regards
Roberta

Please note my working days are Monday to Wednesday.



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