
From: Whittaker, Roberta (EXT)
Sent: 30 November 2022 15:56
To: Johnston, Christopher
Cc: Planning (SMDC)
Subject: SMD/2021/0491 - Land off Tenford Lane - LLFA Response (Rev 9)

Categories:

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 further information required on to demonstrate an acceptable drainage strategy, listed below.

Drainage Strategy

- Full calculations have not been provided, we have only been provided with some partial designs, we need to see the outputs as well.
- Can you resupply the source control outputs for the permeable paving as the configuration has been changed.
- Please provide an updated SIA for the site.
- Any maintenance strategy should be commensurate with the requirements in the SuDS Manual for infiltration features and include name and contact details for the person(s) responsible for each activity, please also include swale maintenance within any strategy.

Swales

Please provide further detail on the proposed swales:

- We assume they are conveyance swales?
- Are they non-infiltrating and if so how will this be achieved?
- Material for the swales (e.g. grass).
- Can we see detailed swale design and cross sections.

Design of the Infiltration Basins

- The GI report is still outstanding. While you have provided summer testing results, it was the GI report relating to the winter testing (November 2021) that we need. – we need to see this to determine if groundwater is sufficiently below the base of the infiltration features to allow them to operate correctly and to look at contamination, risk of collapse / other things in the SuDS manual listed below.

The following issues should be assessed as part of the design process for infiltration systems:

- risk of ground instability, subsidence or heave due to infiltration

Part D: Technical detail

CIRIA SuDS Manual 2015

- risk of slope instability or solifluction due to infiltration
 - risk of groundwater pollution from mobilising existing contaminants on the site
 - risk of pollution from infiltrating polluted surface water runoff from the site
 - risk of groundwater flooding due to infiltration
 - risk of groundwater leakage into the sewers, basements, tunnels or other structures due to promoting infiltration on the site.
- How will erosion be prevented in Basin 3 and how will pre-treatment be provided given there is no corresponding swale associated with this basin?
 - Need to see landscaping plans for the swale to ensure infiltration potential is optimised with planting and to show how erosion will be prevented.

Exceedance

- We need to see further details on the landscape bund or fencing on the Tenford Lane boundary and the exceedance arrangements as per the discussions at outline

7.0 Flood Routing and Exceedance

Due to the topography of the site the natural failure route should the system become inundated would be towards the southern boundary.

Initially it would be proposed to try and contain as much of the runoff within the carriageway which would direct it towards the undeveloped area to the west. A cut off drain should also be positioned along the southern boundary to capture and residual runoff, preventing it running into Tenford Lane, and directing it towards the infiltration basins to the west.

A bund should be positioned around the area of the infiltration basins to provide extra volume and allow water to be temporarily stored and infiltrate at a controlled rate.

As a test for how the system would perform during an extreme event, a simulation was run for the 1 in 1000 year event with no climate change. It was found that the system generally performed well with only a small amount of flooding, 6.179m³ being present at within Pipe 2.006 and 4.807m³ in pipe 2.007. It is anticipated that this could be temporarily stored within the grassed area to the east or designed out at detailed design stage through an adequately sized collection system.

A plan showing exceedance routes is included in Appendix N and this will need to be visited once the proposed level strategy has been finalised.

stage

- We also need to see FFLs on the plan

Please note that new documents often raise further questions so any list of requirements we provide may not be exhaustive.

Advice to LPA

Please re-consult us 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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