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Mark Kemp



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Date 21 August 2020

**RE: Preapp/2020/SADC/03 - Smallford Works, Smallford Lane, Smallford, St Albans**

Dear Rob,

Following our site visit on 12 August 2020 at Smallford Works, Smallford Lane, Smallford, St Albans, AL4 0SA, I am writing to provide written advice in respect of the proposed surface water management approach for this development.

We have reviewed the information submitted in support of a Surface Water Advisory Service enquiry for the site at Smallford Works, Smallford Lane, Smallford, St Albans, Hertfordshire, AL4 0SA for the redevelopment of the site including demolition of the existing buildings to provide up to 100 residential units.

We have reviewed the following information as part of this Surface Water Advisory Service request:

- RMA/LC1722\_2 – Smallford Works – Drainage Strategy Addendum Dated: 30th June 2020
- Greenfield Runoff Rate Estimation Tool Whole Site Ref: 1207649166 Dated: Jun 29 2020
- Basin Qbar 3 BASINQBAR.SRCX DATED: 19 Jun 2020
- Geocell Eastern GEOCELLEASTERN.SRCX Dated: 29 Jun 2020
- Geocell Village Green GEOCELLVILLAGEGREEN.SRXC Dated: 29 Jun 2020
- Outline Drainage Plan Project no: C1722c Dated: 29 Jun 2020

At present, the information submitted as part of the pre-application Surface Water Advisory Service review does not provide a suitable basis for assessment to be made of the flood risks arising from the proposed development. For the surface water drainage strategy to provide a suitable basis for assessment, please see the comments below on the information that will need to be included and the matters that will need to be resolved within the Flood Risk Assessment/Surface Water Drainage Strategy for the site. The four key areas of concern are as follows:

1. Identification of a suitable discharge mechanism.
2. Clarification of any connectivity from the identified ditch to an existing ordinary watercourse or main river.
3. Clarification of the overall capacity in the system and its ability to meet the national Non-Statutory Technical Standards for surface water drainage from new development.
4. Modification of the drainage system to remove the overreliance on below ground SuDS features.

**We have provided some explanatory notes in relation to the points set out above which are as follows:**

1. The drainage addendum states that the site currently has an existing connection via a 100mm diameter pipe to the ditch at the front of the site and bordering Smallford Lane. We visited the site on the 12<sup>th</sup> August 2020 and investigated the ditch on the eastern site boundary. At present we are of the view that this ditch has no onward connection to any existing watercourse and serves only as a highway ditch to manage road run-off. As such it is currently not a suitable discharge location as it is not clear how any water entering the ditch is discharged therefore it is likely to just accumulate until full and then could flood the road. We understand that drainage for the revised access arrangement for this site relies on drainage to this ditch and we are assuming that this was agreed as part of a S278 highways agreement, however, this consent does not constitute an agreement for a connection for a surface water discharge from a new residential development.

If the applicant can prove that there is a connection from this ditch to an existing watercourse then this position may change. However, it should be noted that agreement from the owner of the ditch would still be required for a modified connection from any surface water management system for the site. If this is in fact a highways ditch, then that consent to connect, and discharge would need to be obtained from the Highway Authority.

2. There is no visible outfall from the ditch, it is not clear where the water goes once the proposed development discharges here. In order to ascertain that this is a suitable discharge location for the development we require evidence to confirm a visible connection from the ditch to a watercourse or confirmation of infiltration through the base of the ditch at a suitable rate to manage any surface water discharge from the site.

The existing outfalls currently connected to the ditch from the new drainage for the highway appear to just be pipes protruding from the sides of the ditch with no constructed headwalls and remain exposed protruding into the ditch. The culverted section under the access road has grills installed at what appears to be the outlets. This will eventually result in blockage and poses an unnecessary risk to the operation of any flow within the ditch and will pose a risk that the channel will become blocked and flood in a storm event. There is no visible culvert underneath the existing bus stop which is situated in the ditch. It may be that the ditch would fill and overflow around the bus stop where there is a manhole structure. It is not clear what this manhole structure is, nor that there is a visible discharge location beyond

this point. We could not locate any culverts under the existing access road behind the bus stop.

In order to make an accurate assessment of the flood risks arising from the development the applicant must demonstrate that there is an outfall from the ditch, to ascertain a suitable discharge location. If this can be proven we would advise that there are improvements required to the connections from the road, the culverts and the banks of this ditch if permission is given by the owner for any connection from the site.

3. We acknowledge that the applicant intends to apply for outline planning permission, therefore confirmation of the attenuation volume required to achieve the discharge rate being proposed and evidence that this can be provided within the site is sufficient at this stage. However, we have some comments based on the indicated approach of predominantly using underground cellular storage as the main means of attenuation along with a final pond/basin. The use of underground storage is not considered to be a preferred SuDS approach and should only be used when other options have been discounted as not being viable. The applicant should explore the use of on surface storage and conveyance of surface water and should consider decentralising surface water storage to spread any residual risk of failure away from one or two large underground features. It should also be noted that collection of surface water into a predominantly piped system and storage in underground features does not provide any treatment and this would be a problem particularly for any road run-off that would need to have appropriate treatment before entering any watercourse or soakaway.

Confirmation of storage volumes to be provided to achieve the agreed run-off rates are suitable for the outline application but it should be accompanied with a commitment to explore on-surface storage and conveyance as part of the next stage of detailed design. Once completed this would then require appropriate modelling to demonstrate the feasibility of the scheme. An approach which spreads the storage around the site and implements appropriate source control measures would enable any residual storage features to be smaller and would allow for a significant reduction in the size and capacity of any underground cellular storage.

4. We acknowledge the revision of the strategy to achieve the greenfield Qbar rate of 4.4. l/s as the peak that the proposed development would discharge, however we would expect to see a greater use of above ground features on this site. We understand the applicant has stated that they will address the potential for above ground features at the detailed design stage *to offset the volume of storage provided in the basin and geocells such as (bioretention areas, rain gardens, tree pits)*, however these have not been included on the outline drainage plan, nor in the submitted drainage addendum. The proposed drainage design has an overreliance on a tank-based approach and does not utilise above ground SuDS features within the development such as the use of permeable paving and driveways to decentralise the risk across the site, as the LLFA we would expect to see this reflected in the final drainage strategy.

Further advice on what the LLFA expects to be included within the surface water drainage report to support a planning application can be found in our Developers Guide and Checklist on the surface water drainage webpage on the HCC website the reference is included below.

<https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/water/surface-water-drainage/>

If you would like us to review any additional pre-application information in response to the above required information before going through the formal process via the LPA, this will be subject to the £110+VAT hourly rate.

### **Please note**

Any advice given by Flood Risk Officers for pre-application enquiries does not constitute a formal response or decision with regards to future planning consents. This decision is the responsibility of the relevant local planning authority.

Any views or opinions expressed are given in good faith, and to the best of ability, without prejudice to the formal consideration of any planning application, which will be subject to public consultation and ultimately decided by the relevant local planning authority. The Flood Risk Management Team cannot guarantee that new issues will not be raised following submission of a planning application and consultation upon it.

You should be aware that officers cannot give guarantees about the final formal decision that will be made on your planning or related applications. However, the advice note will be taken into account by the Flood Risk Management Team in consideration of any future related formal planning application, subject to the provision that circumstances, and information may change or come to light that could alter the response.

It should be noted that the consideration given to pre-application advice may decline over time where more up to date data, new information and any change to industry best practice and national policy may occur.

Yours sincerely,

Lilly Varnham

Landscape / SuDS Officer  
Environmental Resource Planning