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Our Ref: CCC/2023/095115
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Application No: CA/23/00484

Location: Land At The Hill, Bekesbourne Lane, East Of Bekesbourne Hill, Bekesbourne, Canterbury, CT4 5EA

Proposal: Outline planning application for up to 300 residential dwellings (including affordable housing and older person accommodation), a new community hub, introduction of structural planting and landscaping, informal public open space and children's play area and surface water flood mitigation and attenuation. All matters reserved except for access.

Thank you for your consultation on the above referenced planning application. Kent County Council as Lead Local Flood Authority have reviewed the Flood Risk Assessment and Outline Surface Water Drainage Strategy report (February 2023) and have the following comments to provide the Local Planning Authority:

The LLFA understand from the report that existing desk top study of existing flood maps from the Environment Agency does not show the site to be at risk from fluvial flooding. Surface water flood mapping highlights a small portion of the site to be at "low" (0.1% annual probability) risk. This is likely attributed to the existing watercourse along the north eastern boundary.

Surface water runoff from the new housing development is proposed to be attenuated through the provision of two on site attenuation basins that discharge into the existing watercourse. With the topography of the site being split and the southern part of the site falling away from the watercourse, it is proposed to not include this catchment area within allowable discharge rate (Contributing catchment 6.3 ha- Qbar 21.4 l/s).

Whilst the surface water drainage principles have been set out within the document, there are several concerns that we would view are essential to be considered and investigated further. These can be found below:

- As mentioned above and in the report, surface water runoff is proposed to be discharged into an existing watercourse at the north eastern boundary of the site. This watercourse is connected into a 225mm pipe that is presumed to flow through Littlebourne and eventually into the Nailbourne.

The Nail Bourne is designated as a chalk stream and therefore carries significant ecological value, in part due to the scarcity of these features. Whilst pollution

mitigation measures have been outlined that accord to the requirements set out within the CIRIA SuDS Manual (2015), there is concern as to the impact that the resultant waters will have on this stream.

To further safeguard the stream from pollution impacts, we would request additional proprietary systems are also installed upstream of the SuDS features. The reason for this is because the effectiveness of these features can reduce over time due to a gradual build up of contaminants. Therefore, the sole reliance on these features may not provide the level of treatment required throughout the developments lifetime.

- It is understood that the calculation of the greenfield runoff rate has been based upon the direct contributing area (6.3 ha) to the watercourse and as such the discharge rate has been limited to the Qbar rate of 21.4 l/s for all return period events.

Whilst not published on the Canterbury City Council's website, the LLFA are aware that the LPA does have supplementary guidance known as the Surface Water Drainage Pro Forma. The guidance includes the assessment of runoff/ greenfield rates used for new developments. Two methods of calculation are presented that set out either greenfield calculations using hydrological assessment or the application of a fixed rate, divided into four zones (Zone 4- 0.5 l/s per hectare).

As stated within the report, the obtaining of the 21.4 l/s runoff rate has been obtained using the IH124 methodology. A comparison of this against HR Wallingfords online calculator using the same area (6.3 ha) and method (IH124) produces hugely different rates compared to those shown in table 8.2. The Qbar rate obtained on the calculator is only 10.72 l/s and 9.11 l/s for the 1 year return period.

In view of this difference in numbers, we would seek further clarification as to the methods used in the calculation of the discharge rate. This would include the soil type and SPR value used or whether the application of a different methodology is more applicable in this setting (FEH).

- Point 2 above regarding flows, leads into the further concern surrounding the existing culvert from the site to the Nailbourne. The route, capacity and condition of this culvert is unknown at present and as such further investigation is needed.

The LLFA would seek for these investigations to be made at this stage as opposed to reserved matters or any detailed design stage. This is to ensure that this outfall is able to receive these flows without increasing flood risk offsite/ downstream. Should it be identified that this outfall is not able to receive these flows, alternatives would need to be explored.

- To support the preliminary design of the attenuation basins, Microdrainage Source Control has been used. The LLFA understands that the FSR Rainfall Methodology has been applied and a default M5-60 value of 20.00mm used. As per KCC Drainage and Planning Policy Statement (2019), the LLFA would request for either the FEH 2013 Methodology to be used or for the M5-60 value to be uplifted to 26.25mm.

With the points above, the LLFA would currently object to the development proposal.

This response has been provided using the best knowledge and information submitted as part of the planning application at the time of responding and is reliant on the accuracy of that information.

Yours faithfully,

Daniel Hoare
Flood Risk Project Officer
Flood and Water Management