

My reference GK/LV8000

ask for Graham Kean

date 1 March 2022

MEMORANDUM

Mrs C Turner, Planning

Wealden District Council

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your reference

Planning Application WD/2021/2198/MAO – Second Reconsultation Land at Bird-in-Eye Farm, south of Bird-in-Eye Road, Uckfield

I write further to your e-mail of 1 February 2022 regarding the above planning application and I would have the following comments. I previously commented on this application on 25 October and 26 November 2021. This memorandum is in reply to the applicant's two responses of January 2022.

Flood Risk

As previous.

Surface Water Drainage

There are no adopted, public, surface water sewers in the vicinity of the site, so this method of surface water drainage cannot be used.

The initial proposed drainage strategy was to discharge into a watercourse, in this case the Framfield Stream. However, this discharge would be through an ancient woodland and is therefore unacceptable.

This now means that the applicants are now looking at infiltration as another possible drainage method for the site. As previously noted, the Geological Map states that the northern end of the site (which is the only half being considered here) is on the Lower Tunbridge Wells Sand Formation of sandstones, siltstones and mudstones, thus giving some theoretical infiltration possibility. The trial pits confirmed this geology.

Test pitting was carried out across the site in January 2022 by Stantec and my comments are based on the Technical Note provided by that company dated 28 January 2022 and the following Technical Note by on the revised drainage design dated January 2022. Unhelpfully, neither technical note provides a plan to show the location of the test pits.

The test pit results suggest that the majority of the area has infiltration potential which is too poor to be acceptable. The exceptions were test pit 7 (location unknown) and test pit 5 on the site of the proposed attenuation pond under the previous scheme. Although test pit 5 was able to be tested three times as recommended, test pit 7 only achieved two fills with a noticeably poorer result on the second fill, suggesting its possible use is marginal at best.

A deeper pit to test for groundwater was also carried out at test pit 5 which suggested the presence of groundwater at about 3.0 metres below ground level.

The report concludes (and I would agree) that:-

“Surface water drainage using shallow infiltration systems (“soakaways”) is unlikely to be suitable across the majority of the site at the near surface soils owing to the very low infiltration rate observed at the weathered near surface soils.”

“However, shallow infiltration may provide a suitable drainage solution for the proposed drainage basin within the less weathered Tunbridge Wells Sand Formation in the southern part of the site as recorded in Trial Pit TP05. Based on the infiltration test results it is recommended that a soil infiltration rate of 1.0×10^{-5} m/s is used for the design of infiltration basin.”

“It is likely that the LLFA will require at least 1 m of unsaturated zone between the base of the infatuation (sic) basin and the highest groundwater level at this location. It is recommended that a groundwater monitoring well is installed at this location with groundwater monitoring undertaken during the winter months to confirm the long term groundwater level at this location.”

In essence, this summarises the problem of using infiltration at this location and the risk to the applicants in committing to this solution without the full groundwater data. It needs to be deep enough to work (and provide sufficient attenuation) whilst not being so deep that groundwater fills the base of the soakaways. The Council would agree that long-term groundwater monitoring is required rather than a single test-pit for a single day.

In view of the poor infiltration results under the relevant parts of the site, the areas of permeable paving can only be used for storage and cleansing, not as a means of water disposal and the calculations must reflect this.

In considering the drainage principles proposed for the site, the Lead Local Flood Authority, ESCC, will require full detail in the drainage calculations used to design the system and Wealden, as the planning authority, would support this request. The calculations should prove that the final design can accommodate the site runoff rates for the standard 1 in 100 year rainfall event plus 40% climate change allowance plus urban creep.

In regard to adoption, there is virtually no chance of Southern Water adopting an infiltration based scheme. I do not know the views of the alternative companies such as ICOSA on such systems. It is therefore likely that a Management Company will be needed to maintain the system for the lifetime of the development. A generic maintenance schedule is provided but the Council would expect to see details of a site specific maintenance plan in due course when a surface water drainage scheme is finalised and before first occupation.

Notes

Provision of the foul sewage arrangements is for Southern Water to comment on. It is noted that an upgrade to the existing system is required to accommodate flows from this site.

Conclusion

If you are minded to grant permission for this application, I would wish to see the following **conditions** applied namely:-

“No development shall take place until full details of the surface water drainage scheme, have been submitted to and approved in writing by the local planning authority. The surface water drainage scheme should be confirmed as deliverable by an assessment of the site's potential for disposing of surface water by means of a sustainable drainage system. The submitted details shall include the following:

- i. Supply detailed plans, layouts and sections of the proposed drainage system and pollution/silt control and water cleansing devices and construction details of any non-standard features.
- ii. Provide a full management and maintenance plan for the development which shall include written confirmation of adoption or the setting up of any necessary company to secure the operation of the scheme throughout its lifetime.
- iii. Supply full hydraulic calculations to the correct level of climate change (40%), to the satisfaction of the Lead Local Flood Authority, based on the real soakage rates obtained from the on-site infiltration testing. The areas of permeable paving can only be used for storage and not as a means of infiltration.
- iv. Provide proof by means of site specific groundwater monitoring as to the maximum groundwater level and that this leaves sufficient room for a 1.0m vertical separation between the base of the soakaway and the top of the highest groundwater level recorded.

NOTE: Attention should be given to [non-statutory technical standards for sustainable drainage systems](#), the ESCC “Guide to Sustainable Drainage Systems in East Sussex” and the total costs of implementing the drainage scheme, that is design, construction and maintenance costs.

REASON: To reduce the risk of flooding, both on and off site, to improve and protect the water quality and improve habitat and amenity having regard to the guidance set out in the National Planning Practice Guidance and at paragraphs 163 and 165 of the NPPF and any local plan policies where appropriate according to the local planning authority, for example WCS14 of CSLP, saved policy CS2 of the Wealden Local Plan.”

Please contact Graham Kean if you wish to discuss the matter further or to meet on site.

Graham Kean

Engineer and Countryside Officer