



Technical Note

Site: Woodcroft Phase 3

Ref: GE20772/TN/GR01/240809

Client: Grainger

Date: August 9, 2024

This technical note has been prepared in response to review of planning consultee responses from the Environment Agency and Portsmouth Water in relation to the proposed residential development at Woodcroft Phase 3, Lovedean.

Environment Agency ref. HA/2024/126105/01-L01 dated 30/07/2024

Condition 1

A ground investigation has been undertaken to target suspected solution features. Infiltration testing was undertaken as part of those works, together with intrusive investigation to assess the condition and extent of the features. Aside from poor results from infiltration testing, there is no intention to discharge, or recommend discharge, of storm water to these solution features and this reflects both protection of the underlying aquifer and geotechnical risks associated with localised discharge potentially reactivating solution features. Moreover, current geotechnical recommendations include installation of liners in basins to prevent infiltration to the ground.

There is a Discovery Strategy presented in the Ground Investigation Report (GE20772/GIR/DEC23/V1) and this sets out the basic process for notification and further assessment of any anomalous ground conditions, including solution features. The actual scope of further investigation and assessment would, to some degree, reflect the abnormal conditions encountered. There may be some merit in preparing a more detailed strategy in due course to reflect the EA comments and any specific requirements of a planning condition.

At the time of writing, it is understood that the drainage strategy comprises capture, storage and attenuation of storm water with disposal via the surface water network. This would be protective of the underlying aquifer, groundwater and the potable water resource, such that a detailed risk assessment might not be required.

The 'chalk pits' referred to in the EA's commentary appeared to coincide with the areas of the solution features. Based on targeted ground investigation of these features, it is considered that they are naturally occurring karstic weathering features (which include solution features) and not old pits. The features align with the head of a palaeo-valley feature. It is probable that the reference on historic maps to disused pits might be an erroneous description at the time of the original surveys (19th Century).

Condition 3

This relates to previously unidentified contamination being encountered. The investigations to date indicate that the site has not been the subject of any specific potentially contaminative activities and has remained fields and thus soil contamination is considered unlikely. Notwithstanding this, the Ground Investigation Report included as Discovery Strategy which must be employed throughout the course of any development on the site and this sets out the process to follow if any abnormal conditions (including potential contamination) were to be encountered.

Portsmouth Water ref. APP/24/00342 dated 21/06/2024

The requirement for a CEMP is noted and this should be prepared by the relevant competent person(s) in due course.

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The requirement for consultation during the detailed design of drainage and foundations is noted. Some element of design progression may be necessary to inform any such consultation.

PW's comments appear to reference the Ground Investigation Report as commenting on borehole soakaways. This isn't quite correct, the report referred to 'deeper' soakaways terminating in competent chalk. This was intended to suggest the use of deeper pits or chambers extending into the less weathered chalk and not a use of borehole soakaways. The current drainage strategy is understood to include storage and peak flow attenuation with discharge to surface watercourses and not discharge to the ground via soakaways. PW's comments regarding borehole soakaways are noted and there is no known intention to propose these on this site.

Comments relating to piling are relatively typical for sites in this area due to the sensitivity of the chalk aquifer and relatively short groundwater transit times to abstraction wells. At this stage, if piling is required, a continuous flight auger (CFA) pile would be recommended as the construction process does not create migration pathways and piles are constructed in a short time frame, such that the method of installation can be protective of the chalk aquifer and groundwater resource.

The comments regarding offsets from solution features are noted and it is presumed that these would be drawn into the evolution of the design and construction processes for this site.

PW comment on no storage of waste proximal to solution features and we would concur with this. Any waste storage should be remote from solution features and the solution features (especially the one into which water drains) will require protection, including sediment control aside from no wastes being stored on or near them.

The comments regarding land contamination are noted and a Discovery Strategy was presented in the Ground Investigation Report. There is no known proposal to fill any of the solution features, rather, they are understood to be incorporated as landscape features with some potentially comprising detention basins as part of the emerging drainage strategy. The Ground Investigation Report states that if any of the current surface depressions are to be used as basins, a liner must be installed to prevent surface water infiltrating the ground in these locations. This serves to mitigate potential risk of solution feature reactivation and also to mitigate risk of adverse impact to the aquifer or groundwater. Aso, as noted previously, the site appears to have been used as fields throughout its known history and thus the potential for contamination to be present would be considered very low.

Closure

We trust the above provides helpful commentary in response to the EA's and PW's planning consultee responses.

For and on Behalf of Geo-Environmental



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