

6th November 2014

Your ref: HA/2014/116069/01-L01
Our ref: GE9752/GR05/141106



Verity Giles
Planning Advisor
Environment Agency
Romsey Depot Canal Walk
Romsey
Hampshire
SO51 8DU

Dear Verity,

RE: HAVANT RETAIL PARK PORTSDOWN HILL ROAD, HAVANT, HAMPSHIRE, PO9 3NA

Further to receipt of your letter ref. HA/2014/116069/01-L01 dated 15th September 2014 and our subsequent email correspondence of 22nd September 2014, we write to provide clarification for the comments set out in your letter. As such, this letter should be read as an addendum to the assessment as set out in the Supplementary Ground Investigation Report, ref. GE9752-SGIR-140425.

Whilst writing, it is also noted that other application references relate to this site, e.g. APP/14/00600 and APP/14/00842, and thus it is requested that where the following comments may be of relevance, the EA consider these against any such additional application references.

Water records within boreholes BH101 at 11m bgl and BH102 at 10m bgl were recorded during drilling. The drilling works were undertaken using cable percussion techniques with clean water added to aid the boring process. Thus, it was considered that these water records related to drilling water rather than groundwater, i.e. given the absence of water within these wells following their completion. Groundwater monitoring was undertaken as part of the routine gas monitoring on 26/03/14, 03/04/14, 08/04/14, 15/04/14 and 22/04/14. Groundwater was not encountered in any monitoring well (including the three deep wells BH101-103) during these visits. Water was encountered, as a limited volume in monitoring well 'D' during previous monitoring as detailed in GE8756-GIR-AUG12, but this was considered to be perched water, thus discontinuous and not representative of the true groundwater body within the chalk.

The intrusive investigation was undertaken following an extended period of prolonged rainfall which had resulted in significantly elevated groundwater elevations elsewhere, including groundwater flooding in chalk downland valleys, e.g. around Hambledon and Rowlands Castle. As such, it was considered that the monitoring was undertaken during a period when groundwater would have been anticipated to be at or above a 'normal' seasonal high. Nonetheless, groundwater was not encountered during monitoring, as noted above.

In your letter you note 'serious concerns' regarding hotspots identified at WS9 and WS10 (as part of the initial investigation reported in GE8756-GIR-AUG12) and specifically to risks to groundwater associated with the use of soakaways in proximity to these locations.

Exceedances were identified (against drinking water standards) in WS9 at 0.2m, benzo(a)pyrene, and at 1.0m, a wider range of PAH compounds. Whilst the Made Ground soils in WS9 at 0.2m were described as a silty sand, this stratum was underlain by putty chalk Made Ground. The exceedances identified in the sample from WS9 at 1.0m were from a clayey Made Ground which was described as containing charcoal. The presence of putty chalk and clayey Made Ground soils were considered to inhibit any potential migration of these exceedance compounds. In addition, the source of the PAH

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exceedances in the sample from WS9 at 1.0m was considered most likely to be from the charcoal entrained within the clayey Made Ground mass and thus not in a readily leachable form in the ground.

An exceedance (against drinking water standards) of leachable TPH was identified at WS10 at 1.0m bgl from within a chalk fill material underlain by putty chalk Made Ground. Here again, the presence of putty chalk would be considered to act to inhibit migration through the ground. No free product or gross impact of soils was evident. This was supported by further investigation in this area of the site which did not identify any gross contamination.

Whilst the exceedances identified were within clayey and/or putty chalk Made Ground, it should also be noted that soakaways on this site would discharge only in to in-situ blocky chalk. No soakaways are to discharge into Made Ground due to the risk of collapse/inundation settlement. As such, there is no plausible mechanism whereby soakaways would mobilise potentially leachable compounds from shallow depth.

Contaminant exceedances identified in WS112, WS113 and WS126 related to 'total' concentrations of lead and/or PAH compounds in Made Ground soils between 1.0m and 3.0m bgl. These exceedances were determined through statistical assessment to be sporadic in occurrence. The form of pile construction on this site, as set out in the reports, was to utilise CFA techniques. The key benefits of this form of construction are that as the auger advances through the ground any contaminated soil is carried up the flight stem and out of the ground and thus potential contamination is not 'dragged down' with the advancing pile/borer (as may be the case for driven or some bored piles). In addition, concrete is pumped at pressure in to the pile column from the base upwards, i.e. as the flight stem is withdrawn. Here again, this element of the construction technique prevents 'during construction' migration either from contaminants falling down a pile shaft bore or from migration of shallow water/fluids to depth. Construction times are quick and the pile concrete is cast in-situ and under pressure against the surrounding ground thereby resulting in intimate contact between the pile shaft and surrounding ground. Thus post construction there is no scope for contaminant migration down the pile shaft annulus. Therefore, the use of CFA piles was considered to mitigate risk to the chalk and groundwater from any near surface soil contamination. On this bases there seems no benefit in the removal of localised exceedances at 1.0-3.0m bgl to protect groundwater which monitoring did not identify within the 20m of ground level.

In accordance with your letter HA/2014/116069/02-L01 dated 7th October, it is understood that the EA's concerns have now been resolved and that the EA is now in a position to recommend the Discharge of Condition 12 and Condition 15 of Planning Permission APP/13/00266. Should you have any queries please do not hesitate to contact us.

Yours sincerely
For and on Behalf of Geo-Environmental



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