

Harrison, Liz

From: Panza, Yacklin
Sent: 24 December 2024 09:31
To: Development Management
Cc: Harrison, Liz
Subject: FLYCATCHER ROAD, BOTLEY - External Consultation HCC/2024/0665 - Additional Ground Investigation Information submitted

Dear Planning Team,

Thanks for consulting EBC Pollution Team regarding the above application for the construction of a new two storey school for 125 pupils with Social Emotional and Mental Health (SEMH) needs, with associated external play areas and parking and drop off facilities at Luminous Oak SEMH School, Flycatcher Road, Boorley Gardens, Hedge End, Botley SO32 2FG.

I have reviewed the following documents in relation land contamination:

- Terra Firma (October 2023). Ground Investigation Report. Proposed Educational Development Boorley Gardens, Hampshire. Report Number PO-23-014. Revision 01.
- Terra Firma (26/06/2024). Technical Note. Boorley Gardens School Supplemental Contamination Investigation. Reference PO-23-014. TN01, V01

Please see my comments below:

Ground Investigation Report

The Ground Investigation Report (October 2023) indicates:

- A site walkover was undertaken on 15/06/2023, during which site was described as overgrown side field. Photographs taken during the visit shows some earth bunds in several areas of the site.
- The report also includes a summary of the previous investigation undertaken for the larger site (Boorley Gardens) by BRD in 2017, which was discussed in previous consultation.
- The report informs that an intrusive ground investigation undertaken in July 2023, comprising 3x cable percussive boreholes to a depth of 17mbgl with installation of monitoring wells, 4x windowless sampling boreholes to a depth of 5mbgl, and 2x hand excavated pits to a depth of 0.30mbgl.
- The ground conditions encountered were topsoil up to 0.5mbgl at the north/ northwest part of the site and made ground up to 2.80mbgl across the site, overlying sandy silty clay of the Wittering Formation up to 17mbgl. Visual and olfactory evidence of contamination was encountered at WS02 between 0.30 and 0.45 mbgl (very strong hydrocarbon odour).
- Soil samples were collected for laboratory testing and results were screened against POS – Residential use CLEA scenario. The results indicate that only one exceedance of PAH was detected at WS102. A deeper sample collected at WS02 at 0.80mbgl returned without exceedances. The consultant considered location WS02 is a hotspot; however, no recommendations for remediation was described.
- It is noted that all samples collected are deviated due to sample age exceeds stability time (sampling to extraction), that potentially compromised the results. Can the applicant provide a justification on why they consider the results as representative of the conditions of the site despite deviations?
- No groundwater samples collected to assess controlled waters risk.
- Ground gas was monitored in 4 occasions between August and October 2023 including periods of low/ falling atmospheric pressure. Concentrations of methane and CO2 were below 0.1% in all occasions, with no measurable flows. However, it is noted that groundwater was consistently above the response zone. The consultant has not included a justification on the effects of groundwater in the results and whether they consider these results as representative of site conditions.
- Annex A – feasibility report summarises the environmental setting of the site, and identify potential on/off site sources of contamination, however, a conceptual site model was not produced (including potential receptors and pathways), nor a preliminary risk assessment, in accordance Land Contamination Risk Management guidance.

- The report does not include conclusions and recommendations.

Technical note

The Technical Note refers to a ground investigation report V02 dated March 2024, which we have not received (as mentioned above, I have reviewed version V01 of this report). This report indicates:

- The findings of an additional ground investigation conducted on June 2024, targeting some former areas of stockpile, crushing and sweeper pit, comprising 5x windowless sample boreholes up to a depth of 4mbgl. Location of borehole WS7 seems to be missing in Figure 2: Exploratory Hole Location Plan.
- The ground conditions encountered were made ground up to 0.60mbgl overlying Wittering Formation (generally comprising sand, sandy clay). No groundwater was recorded. A fertilizer odour noted between 0.0mbgl and 0.6mbgl at WS4 (the location of the previously recorded contamination WS102).
- A total of 12 soil samples were collected for laboratory analysis. Results were compared against Residential without plan uptake CLEA scenario (different from POS – residential scenario used in previous ground investigation).
- The report indicates that although total PAH exceeded the GAC in WS4, individual PAHs were found not to exceed GAC values. Additionally, although nominal concentrations of heavy fraction hydrocarbons were recorded in WS4 @ 0.2mbgl and lighter fractions in WS7 @ 0.5mbgl, these concentrations were below GAC for human health guidelines. The presence of hydrocarbons in these locations suggest that some residual contamination remains on site. Despite this, all measured contaminants were recorded to effectively be below the appropriate guidance values and the site can be considered acceptable for its proposed use as a school.
- The report concludes that no further investigations or remediation is required at the site.
- No updated conceptual site model (CSM) or preliminary risk assessment was included.

In summary, the submitted reports require updates to align with LCRM guidance, which include:

- a comprehensive CSM (source-pathway-receptor linkages) and preliminary risk assessment;
- clear conclusions and recommendations based on the findings (i.e. re-use of soils on site, discovery strategy for unexpected contamination, etc);
- Provide a justification for the representativeness of soil sample results given deviations;
- Include an assessment of the impact of groundwater on ground gas monitoring results;
- Ensure all referenced documents (e.g., Ground Investigation Report V02) and figures are complete and accurate.

I trust the above information is of assistance. If you have any further queries, please do not hesitate in contacting us.

Best regards,

Yacklin

Yacklin Panza

Pollution Control Specialist

Planning & Environment - Pollution

Ext.: 8058

Mobile: 07557 327776