

HAVANT BOROUGH COUNCIL

Town & Country Planning Act 1990

Consultation on Planning Application

MEMORANDUM

From:	Environmental Health	To:	Development Control
Our Ref:	CONS/22/02004	Your Ref:	APP/19/00854
EH Case Officer Extn:	44 6677	Date:	23 September 2022
DC Case Officer:	Mr G Christie		
DC Case Officer Extn:			
Application Number:	APP/19/00854		
Site Address:	31A North Street, Emsworth, PO107DA		
Proposed Development:	Demolition of the existing factory offices and out-buildings and construction of 6 No. Dwellings (consisting of 1No. 3 Bedroom House, 2 No. 2 Bedroom Houses, 1No. 2 Bedroom flat and 2No. 1 Bedroom Flats) with associated out buildings and parking (30.03.2021). Request to discharge condition nos 4 and 8 (15.2.22). Request to discharge conditions 5,7 and 9 (04.05.22).		

Discharge of Condition 7 (Contamination)

Observations / Comments:

I have reviewed the submitted documentation, as listed below. I am also aware that development has commenced at the site against the requirements of c.7, and that there is a need to regularise the progress to date against the current consent.

- RSK – 305019 R01 (00) Preliminary Risk Assessment (Jul 2018) [Reviewed at application stage for APP/19/00854]
- RSK – 305019 R02 (00) Geo-environmental Site Assessment (Sept 2018)
- GCC – JJ22-014-R01 (1.0) Geotechnical Design Report
- GCC – JJ22-014-R02 (1.0) Remediation Strategy (30/03/2022)

RSK – 305019 R02 (00) Geo-environmental Site Assessment (Sept 2018)

It should also be noted that the RSK site assessment report has been written on the assumption that the consented scheme would omit private soft-landscaped amenity spaces, which I note that APP/22/00492 seeks consent for.

The report has found that some heavy metal determinants exceed generic assessment criteria (GAC) against a slightly lower-risk exposure scenario than is being sought under the amended scheme. Some Poly-Aromatics are also elevated relative to Human Health assessment criteria, and relative to WRAS guidelines for avoiding penetration of standard potable water supply pipe materials.

It is noted that whilst section 3.1.4 refers to groundwater monitoring & Appendix G refers to the application of soil vapour GAC – neither chemical sampling of groundwater, nor any speciated soil vapour monitoring has been undertaken with a view to assessing the risk to the development from

sources external to the development land (e.g. via a groundwater vector). The report does not specifically seek to compare site data to the Appendix G criteria, however PID (total volatile compounds, tVOC) readings are given on the borehole logs. It is noted that a 6.3 ppm value corresponds to a Benzene equivalent of $>20 \text{ mg/m}^3$, 4 orders of magnitude in excess of the health criteria value, and one order of magnitude in excess of the corresponding GAC. It is unclear why section 5.2.2 concludes that a comparison reports no exceedances, as the report does not make any specific comparisons.

All soils BTEX results have returned values below the limit of detection, and no VOC suite was scheduled, so it is not possible to determine which compound(s) are likely to comprise the measured tVOC. The logs suggest that the tVOC is elevated as a result of contaminants local to the site (i.e. those present in shallow soils), but the sampling methodology would not have been capable of identifying elevated volatiles associated with contaminants moving with groundwater, as no PID screening of natural soils was undertaken, and the soil gas monitoring regime did not include collection of tVOC data from trail holes.

The lack of analysis of groundwater samples, coupled with the absence of tVOC monitoring alongside the soil gas monitoring, deprives the assessment of key information which would be required to quantitatively dismiss the risk to the development from off-site contamination sources – e.g. / in particular the nearby gas manufacturing site.

I also note that sections 5.2.1 & 8.1.1 unjustifiably refer to elevated sample results within made soils as being representative of possible 'hot-spots' – it is considered that there is insufficient data to support this conclusion, and this interpretation is not accepted. I consider the results to be a limited representative sample of the made soils at the site, with insufficient data presented to justify sample grouping by soil description, under the spatial conceptual site (CSM) model, or through the statistical identification of outliers.

The soil gas assessment is accepted, as is the discovery strategy outlined at Appendix M, and the Council trusts that the applicant and their contractors have observed the provisions of this strategy during development works completed to date.

GCC – JJ22-014-R01 (1.0) Geotechnical Design Report (March 2022)

Three additional trial holes were advanced in support of the geotechnical design. No visual or olfactory evidence of contamination was identified within soils or groundwater encountered. Groundwater was encountered at the base of made soils / on the surface of natural Clay. This contrasts with the RSK report, and it is possible that the reason for this difference is the interpretation (by GCC) of re-worked natural soils as 'made ground', and/or the interpretation (by GCC) of all natural clayey soils as 'Clay', where RSK differentiate more finely (noting 3 distinct units - Alluvium, Head, and London Clay).

The report recommends shallow foundations and suspended floor construction.

GCC – JJ22-014-R02 (1.0) Remediation Strategy (March 2022)

Several recommendations of the RSK report are superseded by the GCC Remediation Strategy, principally due to the combined effect of the Geotechnical Design Report recommendations & the amended form of development (in particular, now including private rear garden areas).

The GCC report does not present any additional empirical data or risk assessment - we are reliant upon the RSK report for the establishment of the baseline conditions, and as a result, the Remediation Strategy does not respond to the omissions in the data collected, or the weaknesses in the overall CSM. This is particularly relevant to the vapour exposure risk.

The proposed remedial / risk mitigation work aims to address the risks from exposure to contaminants in/adhered to soil, comprising a mix of excavation/disposal, clean cover, and clean service corridors. The strategy does not propose any specific measures under buildings for permanent hardstandings*. As a result, the remediation scheme design does not address the potential for a material vapour risk to exist, and we are unable to dismiss that risk directly on the basis of the available empirical data.

In addition to the above measures, the report includes a 'discovery strategy' at Appendix 3, alongside a 'best practice' communication strategy (under section 6.0) which aims to ensure that future occupants are aware of the cover design, even where property is acquired through a secondary private sale on the open market.

Notes;

- (*) I would highlight that it would be the Council's expectation that 'parking areas' & 'pedestrian access routes' could be treated as 'permanent hardstanding', but 'patio' and other 'amenity hardstanding' could not)
- Section 4.3.5 refers to chemical standards for imported soil material – mostly derived from human health risk assessments. I would object to direct application of the high concentrations listed for low-toxicity substances (e.g. aliphatic compounds >C16) – BS 3882:2015 criteria should take precedence over the Appendix 2 screening criteria, and ideally, an amenity standard should be adopted that precludes the possibility of free-phase hydrocarbons being present on the 'clean side' of the cover system – e.g. nominally 5,000 mg/kg TPH as an overriding upper-limit (as 'sum-of-fractions').

Discussion

Given the proximity of potentially significant offsite contamination sources, I am uncomfortable with the omission from the assessment of either groundwater chemical quality data, or borehole tVOC results (derived by PID). I would ordinarily reject the assessment as being insufficient to meet the NPPF requirement stated at para. 183 c), and would require additional sampling to resolve this uncertainty. However, I am aware of the delay in making a determination to this application, and that the development has commenced against the requirements of c.7.

Taken together, I'd consider that this warrants a more detailed consideration of the site conceptual model, using information contained within the submitted reports alongside additional information resources available to the Council.

To this end, I have plotted the groundwater data from the RSK gas monitoring record, and have calculated the groundwater surface slopes for each monitoring visit. This has been compared with the topographical data from LIDAR as a high-level assessment of the likelihood of an active transport pathway between the known off-site sources (on Palmers Road, and South of Seagull Lane).

Groundwater levels from the first monitoring visit are heavily influenced by WS1 being dry, indicating that the site is directly down-hydraulic-gradient of the former gasworks site & Industrial premises at Seagull Ln. This is anomalous to the following 3 visits & topography, and on the strength of these data, I am inclined to discount it.

The site appears to be located at near to the peak elevation of a 'ridge' that exists between two watercourses (the Ems & The West Brook). Hydraulic gradients appear likely to follow topography to the NE & E, and to follow what is likely to be represent the topographic surface of natural alluvial deposits in the NW-SW arc. Locally, it would appear that there is a hydraulic gradient from SE to NW across the site, placing it down-hydraulic gradient of some of the industrial units on Palmers Rd. On closer inspection of the topography, there is a minimum fall of 1.8m in the SE direction from the site, and in practice therefore, the ground levels preclude an active pathway from these potential sources to the site. It is considered that the plotted groundwater data is capturing a highly localised groundwater slope that is unlikely to persist over distances greater than 20m or so – again, probably

influenced by the topography of the covered natural deposits.

Taken with the consistent reporting from the drilling engineers that there were no visual or olfactory signs of contamination being present within/on the ground water surface, I am satisfied on these bases that the vapour risk to future occupants from off-site sources is acceptably low. For this reason, it is probably not justifiable to require that additional groundwater samples are collected, or that soil vapour within the trial holes should be quantified.

The above doesn't address the risk from on-site soils. This is a semi-quantified risk, rather than a theoretical one, and the remedial strategy doesn't address it. I am mindful that the BTEX analyses all returned <LOD results, and that speciated hydrocarbon analyses did not detect any measurable hydrocarbons lighter than C8. These results are insufficient to explain the vapour results, and may be explained in one of two ways – i) sampling losses (vapour lost to atmosphere between sample excavation & encapsulation / analysis) or ii) the source material is a VOC compound not included within the test suite. Both are possible (e.g. under-representation of a VOC compound within general speciated hydrocarbon results, due to sampling losses).

There are three possible ways to address this residual on-site risk;

- 1) Additional sampling / monitoring to characterise the vapour risk, explicitly considering on-site made-soils PID readings against the RSK vGAC values presented in Appendix G
- 2) Precautionary incorporation of building vapour protection within the proposed buildings,
- 3) Precautionary provision for enhanced ventilation of the sub-floor void (e.g. design for enhanced passive ventilation, and provide for retrofit of active ventilation where required) – undertake vapour monitoring of the sub-floor void post completion, and implement enhanced ventilation if results indicate that it is necessary.

Option 1) would probably result in a recommendation to refuse to discharge c.7, on the basis that insufficient information has been submitted to derive a comprehensive remedial strategy. Commencement (continuation of active construction) would not be permitted as a result.

Options 2) & 3) would require amendment of the remediation strategy. It would be possible to issue a partial discharge of c.7 (parts a) & b)), however parts c) & d) would be need to be retained / remain in force, and it would unfortunately still not be possible to agree to commencement (/recommencement or continuation) of development under the general provision (*'Before the development... or any other date or stage in development as may be agreed...'*) without a further application to discharge c.7 part c). This is because the opportunity to address vapour risks as a built-solution exists in the early stages of construction, and so permitting commencement risks the physical works on site progressing beyond the point at which precautionary mitigation could be designed-in & constructed (i.e. the measures may have to be implemented as retrofit).

The wording of c.7 differs from the typical condition structure used – this is the result of another officer responding to the 2019 application as part of their professional development. The practical effect of this is that c.7 part d) cannot be discharged until completion of the verification report – necessarily following construction of at least a weathertight building envelope. We are therefore unable to avoid the issuing of a partial discharge, and the issue is principally one of the point at which the LPA can agree commencement (/recommencement).

Recommendations

For all practical planning purposes, it is immaterial whether a partial discharge of c.7, to include parts a) & b) (but to *excluding* parts c) & d)) is issued in recognition of the work undertaken to date & submitted in support of the current application, or whether we refuse the application (on the basis that we can't at this stage support commencement, so the partial discharge has no practical effect for the applicant). Refusal would retain dismissal of risk as an option for the applicant (by additional site sampling – e.g. Option 1), whereas partial discharge would probably encourage a precautionary response (e.g. Options 2 or 3). *Development Control to decide the preferred response.* This

notwithstanding;

- Any decision notice issued should be worded in a way which makes clear that it *should not be interpreted as consent from the LPA to commence/re-commence construction activity* at the site.
- (if we are rejecting the need for additional site investigation & risk assessment – which I'd recommend-) The applicant should at their convenience arrange for an amendment to the GCC – JJ22-014-R02 (1.0) Remediation Strategy, to include:
 - a) Insert a section between 2.3.3 & 2.4 to cover vapour risk from local soil(s).
 - b) Insert a section at 4.4 describing how vapour risks will be addressed as a remedial action. It is acceptable for 'post-construction monitoring & informed response' to be a 'remedial' step. Preparatory steps should be included.
 - c) Insert a section (A) after 5.1 describing how clean service corridors will be verified.
 - d) Insert a section (B) after 5.1(A) describing how the need (or otherwise) for precautionary vapour protection will be verified, and how any required (planned-for-) mitigation measures will be verified following their implementation.
 - e) Insert a section (C) after 5.1(B) explaining how the communication strategy (currently outlined at section 6) will be verified/demonstrated – e.g. include copy of statement, an explain how the H&S file will be flagged to future buyers, as process flow if it is not possible to demonstrate that the document has been formally included within the conveyance pack.
- (if we are requiring additional site investigation & risk assessment, or the applicant prefers this approach – the feasibility of which depends on the availability & condition of suitable extant wells on site, and given this uncertainty, an approach I'd probably advise against) The applicant should at their convenience arrange for additional site investigation / data collection & risk assessment to include;
 - a) Collection of local groundwater samples, to be scheduled for a VOC suite
 - b) Undertaking of vapour monitoring from wells located at the development land, and
 - c) Arrange for either an update of the RSK 305019 R02 (00) report, or the authoriing of an addendum-/letter- report to document the additional works, the results obtained, and to provide an informed consideration of risk, and;
 - d) arrange for an amendment to the GCC – JJ22-014-R02 (1.0) Remediation Strategy, in line with the point above (omitting point d)).

Mr. Jonathan Driver
Environmental Control Officer