

HAVANT BOROUGH COUNCIL

Town & Country Planning Act 1990

Consultation on Planning Application

MEMORANDUM

From: Environmental Health **To:** Development Control

Our Ref: CONS/20/00905 **Your Ref:** APP/20/00276

EH Case Officer Extn: 44 6677 **Date:** 05 May 2020

DC Case Officer: Tina Pickup

DC Case Officer Extn: 44 6461

Application Number: APP/20/00276

Site Address: Garage blocks, Willowdene Close, Havant, PO9

Proposed Development: Proposed change of use, conversion and extensions, including first floor addition to block B, of existing garage blocks to create 2No. three-bedroom detached dwellings with associated car parking, bin and bike storage, reconfiguration of existing vehicular access, new gate and new fencing and boundary treatments.

Observations / Comments:

I have reviewed the submitted Soils Limited Main Investigation Report Ref: 18189/MIR Dated March 2020. This report follows a Preliminary Investigation Report, which has not submitted in support of this application. As a result, it is unclear what quality of desk-based information was available to inform the main investigation report.

Scope of report

The report was intended both to inform the design of foundations for the proposed buildings, and to gather information to inform the contamination risk to future residents. T

The investigation was limited in spatial scope, as the garage blocks were occupied at the time of the investigation. WS3 & WS4 were well placed to target off-site oil storage areas, but the choice of samples scheduled for analysis have limited the usefulness of the data obtained for the purpose of human health risk assessment – all the shallow samples were scheduled for an asbestos screen only, and only WS1 provides a full set of results within the soil profile (depth, <1m) which is relevant to human health risk assessment.

Geotechnical lab samples collected were not analysed as in-situ tests indicated that shallow foundations are unsuitable for even lightly loaded single storey structures, and that samples from strata deeper than the limit of the submitted investigation, targeting the un-weathered London Clay formation.

A further phase of works is proposed to collect such samples.

Assessment of risks to controlled waters was outside of the scope of the investigation. The investigation encountered groundwater, but ignored it's potential contribution to the human health exposure model as a vector for contamination originating off-site. No detailed description of

groundwater encountered is included in the report, no trail holes were finished as wells, and no in-situ volatiles screening was undertaken in the open holes at the time of advancing.

Investigation Results

Black staining was noted in all trail holes, associated with either decomposing organic inclusions, or in association with oily odours.

Oily odours were noted within 1m of ground level at WS2 & WS4. Elevated PAH were noted in WS1, WS2, and WS4 – exceedances of general assessment criteria (GAC) were only noted at WS4. WS4 also returned elevated TPH results, consistent with mixed sources (fuels & waste lubricating oils) or representing weathered diesel / kerosene (proportion of >C21 is too high to represent fresh fuels). The method used for analysis (hexane extraction) does not provide an aliphatic / aromatic split, and may under-represent <C10 results, making source determination difficult, and undermining the inference drawn from these results as representing a low vapour risk.

Metals do not appear to be significantly elevated in any trail hole – though I would again highlight the samples selected for sampling, being at 0.7m, 1.1m, 1.9m & 2.2m depths – with results from only 0.7m depth being directly comparable to available GAC.

Asbestos screening was undertaken in all trail holes, and in all samples. Free fibres were identified in WS3 at 1.1m, apparently not associated with identifiable fragments of parent asbestos-containing construction material. The level was not quantified, and it is unclear if the quantity was quantifiable – the scheduled test aims to detect presence / absence & identification only.

Investigation Notes

It is noted that the levels at which groundwater was encountered differ significantly between trial holes, being 2.3m around the location of the former watercourse, and only around 1m to the South. This may be relevant to the conceptual source-pathway-receptor model for the site.

Controlled Waters & Related Risk

It is expected that the former watercourse was previously culverted within a 500mm diameter conduit, passing under the site between WS3 & WS4, and flowing east. It appears that this conduit is now abandoned, and the watercourse is expected to be routed around the north of the Sparshatts Premises, discharging to the Hermitage some 1.1km east. The former culvert is listed as 'public' 'abandoned', and shown disconnected from the downstream network.

The feature is expected to be capable of influencing contaminant distribution, but not to act as a direct conduit to a sensitive environmental receptor. Its slope & orientation is anticipated to communicate contamination to the carriageway of the Hulbert Road. Oil contamination which the investigation suggests is likely to be present at the site (expected to be originating from the Sparshatts Premises) may be present within &/or around that conduit, and may impact the site from a human health risk perspective in response to changing groundwater levels.

I note that the application form references surface water disposal via 'sustainable drainage system', but the application otherwise provides no additional detail. Disposal of surface water via infiltration is not recommended at this site, as a result of the contaminant mobilisation risk – specifically the risk of elevating lighter-than-water contaminants in the soil profile through influencing local groundwater levels.

I would agree with the conclusion that sufficient clay is likely to underlie the site so as to render the risk to the principal aquifer probably negligible. The risk of piles acting as preferential

migration pathways is similarly likely to be negligible, as available BGS records would suggest that clay is likely to be present to at least 20m below current ground levels.

Assessment Conclusions

The report concludes that the concentrations of contamination identified were either so low, or the >GAC levels were identified so deep so as to render the risk to the health of future occupants negligible.

It also assumes that all made soils within soft-landscaped garden areas will need to be removed and replaced, not due to contaminant concentrations, but for amenity purposes.

Health cautions in respect of construction workers & neighbours are also noted, and a loosely defined 'contamination discovery strategy' is noted to be prudent at section 6.11.

Section 6.5 notes that , *"...no realistic theoretical pathway has been established or confirmed in the context of the proposed development by this investigation"*, while seemingly recommending additional human health oriented sampling at 6.6.1 in contradiction to the above-quoted conclusion. Section 6.6 is written as a 'discussion of options', and it is assumed that the authors conclusion is better represented by section 6.5 (above quote) and the revised CSM (Appendix C, Table C.1.2).

I would disagree with the conclusion statement quoted above, and would regard the revised CSM presented at Table C.1.2 to be an over-extrapolation of an extremely limited number of relevant samples. Only 1 sample was analysed which is directly comparable to CLEA GAC, being WS1 @ 0.7m. Of the 3 others, one identified contaminants as being present, and hydrocarbon contamination was noted to be evident within the CLEA relevant soil profile, not tested. 1 of 8 asbestos screens identified presence of free fibres, and that it was located in this limited number of samples suggests that it may be present with reasonable prevalence within the made soils across the site.

Environmental Health Conclusions

I am concerned that such a limited sampling was undertaken in the soft-landscaped areas of the site, that the provision of clean growing medium in garden areas is so loosely defined, and that above ground oil stores have not been targeted where the investigation has indicated that groundwater levels may seasonally be within 1.0m of the finished ground surface (relevant to vapour and plant uptake pathways).

It is understood that there is some ambiguity as to whether the proposal represents a conversion of existing structures, or a demolition & re-build. The geotechnical work would suggest that a conversion will ultimately prove uneconomic relative to construction of new structures. Irrespective, it is anticipated that access will be available to the footprint of those structures at some point during the construction process.

I would consider that the level of sampling submitted is insufficient to justify the revisions to the conceptual site model, and I that in order to support consent for a residential landuse at the site, it would be necessary to better characterise the made soils within the CLEA relevant depth-range (1.0m depth). This is essentially in line with the recommendation at 6.1.1 and could be undertaken concurrently with the additional Geotechnical Site Investigation which section 3.1 indicates is necessary.

The scope of work should ideally;

- Include machine excavated trial pits to permit a broader visual inspection of the composition of made soils,

- aim to collect sufficient samples to support a statistical characterisation of material that is relevant to either the source materials or the exposure scenarios at the completed development (or both).
- include PID screening (e.g. of dynamic probe holes close to the boundary with Sparshatts, or otherwise within the footprint of proposed dwellings) to lend greater certainty to the vapour risk assessment
- Consider targeting the former fuel storage tank adjacent to the eastern boundary of the site (near no. 115 Hulbert Rd.)
- assess groundwater samples for light-non-aqueous phase / volatile liquids, especially where encountered at shallow levels.
- Include additional asbestos screening on made soils to lend greater weight to the presumption of ACM presence being an outlier, and not representative of the probability of inclusion.

Probably the greatest perceived risk is within the soft landscaped private garden area to the two-storey dwelling, as this is thought to be adjacent to the approximate position of multiple DERV & Gasoil tanks, close to dispensing pumps, and an internal 'oil store'. Made soils are an equivalent risk here as they are to the soft-landscaped areas to the single storey dwelling (as yet not inspected).

Indoor risks should not be ignored, as it is known that automotive service and repair activities were consented for some garage units on the Sparshatts site (precise location not known), though it is acknowledged that a risk assessment might reasonably be pragmatic in respect of the probability of occupants becoming exposed to contaminants beneath the footprint of buildings. It should be noted that NHBC guidelines do not regard a building to be a sufficiently robust barrier as to prevent exposure to pollutants which represent an acute exposure risk (e.g. asbestos).

Similarly, I'd highlight the potential for significant PAH contamination in the largely untested made soils at/to 'utilities installation depth' (0.4-0.75m), where penetration of potable water supply pipes (and subsequent human consumption of drinking water) represents a principal mode of chronic exposure. I note from logs to WS4 that 'pockets of tarmac' may be present in made soils, and that PAH's from such sources may be mobilised by the presence of elevated fuel-derived hydrocarbons in the soil matrix (or within/on perched groundwater) – evidence of 'staining around -' clasts of macadam in the available log suggests that this may be happening.

Recommendations

It is considered that there is a reasonable prospect that additional site investigation & worst case remedial or risk mitigation measures would not prejudice economic development of a high quality two-dwelling scheme, based upon the submitted investigation, the proposed scheme, and the available additional desk-based information – most notably ruling out a significant controlled waters risk and suggesting that exposures to vapours might not be a particularly significant concern.

Based upon the above, I am reasonably comfortable to raise no objection to the proposed scheme, subject to a suitable suite of conditions to secure further human health risk assessment & where necessary, the implementation of a remediation / risk mitigation scheme.

Conditions [1] & [2] are considered to be essential to support a positive determination of this application. Condition [3] is suggested wording to lend weight to consideration of the surface water disposal system – it may be omitted if other drainage conditions are to be applied which require approval of drainage layout, or if the planning service consider that an informative is a more appropriate means of communicating a presumption against infiltration drainage (pending more comprehensive site characterisation).

I have omitted an informative in respect of unexpected contamination, as the Soils Ltd. Report proposes that a watching brief is to be observed during development (albeit in loosely defined terms). I recommend that the Soils Ltd. Report is listed as an approved document on the decision notice, in order to secure this in principle as a 'formalisation' of the liability conferred to the developer & landowner under paragraph 179 of the NPPF 2019.

Contamination (bespoke – omitting EDS & long term) [1]

Prior to the commencement of any specific phase of development approved by this planning permission (other than demolition, site clearance, or any other date or stage in development as may be agreed in writing with the Local Planning Authority), an assessment of the nature and extent of contamination at the site, whether originating from within or outside the curtilage, shall be submitted to and approved in writing by the Local Planning Authority.

The assessment may comprise separate reports as appropriate, but shall be undertaken by competent persons and unless specifically excluded in writing by the Local Planning Authority, shall include;

- 1) An intrusive site investigation to complement the Soils Limited Main Investigation Report ref; 18189/MIR; to provide sufficient data and information to adequately identify & characterise any physical contamination on or affecting the site, and to inform an appropriate assessment of the risks to future occupiers of the development.*
- 2) The results of an appropriate risk assessment based upon (1), and where unacceptable risks are identified, a Remediation Strategy that includes;*
 - appropriately considered remedial objectives,*
 - an appraisal of remedial &/or risk mitigation options, having due regard to sustainability, and;*
 - clearly defined proposals for mitigation of the identified risks.*
- 3) A verification plan providing details of the information that will be collected in order to demonstrate that the works set out any Remediation Strategy required under (2) are complete, identifying any arrangements for contingency action.*

All elements shall be adhered to unless agreed in writing by the Local Planning Authority.

Reason: Contamination may be present at the site as a result of both previous & current land uses (&/or activities) that could pose a risk to future occupants of the development. This is in line with DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."

Verification (bespoke, omitting & long term) [2]

*Prior to the occupation of any relevant part of the permitted development, any verification report required in accordance with **condition [1]** shall be submitted to and approved in writing by the Local Planning Authority.*

The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan and must demonstrate that site remediation criteria have been met.

Reason: Contamination may be present at the site as a result of both previous & current land uses (&/or activities) that could pose a risk to future occupants of the development. This is in line with DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."

Restriction on Infiltration Drainage – Contamination [3]

Prior to the commencement of development, details of the proposed means of surface water disposal shall be submitted to, and approved in writing by, the Local Planning Authority. There should be a presumption against disposal by means of infiltration drainage unless compatible with the contamination assessment 'site conceptual model' & remedial / risk mitigation scheme.

Reason: *Desk based research indicates that a degree of contamination is likely to be present at the site as a result of both previous & current land uses (&/or activities). Use of infiltration drainage may alter the direction & rate of migration and could increase exposure risk to the occupants of the development. Having due regard to policies DM10 of the Havant Borough Adopted Core Strategy [2011] and DM17 of the Havant Borough Local Plan (Allocations) [2014] this condition aims to ensure that the adopted drainage strategy is compatible with the treatment of contamination risks at the site"*

Mr. Jonathan Driver
Environmental Control Officer