

HAVANT BOROUGH COUNCIL
Town & Country Planning Act 1990
Consultation on Planning Application

MEMORANDUM

From:	Environmental Health	To:	Development Control
Our Ref:	DCS/EH/JPD/140623001	Your Ref:	APP/13/00266
Ext. No:	6677	Date:	23/06/2014

DC Case Officer: Sally Smith
Application Number: APP/13/00266 (no condition discharge App submitted to date)
Site Address: Former Site of Havant Retail Park, Portsdown Hill Road, Havant
Proposed Development: Demolition of existing buildings and construction of 86 dwellings consisting of 9No. 1 bed flats, 28No. 2 bed flats, 24No. 3 bed houses, 21No. 4 bed houses and 4No. 5 bed houses with associated parking, landscaping and the provision of open space together with acoustic fencing and improvements to existing site access.

Observations / Comments:

Further to my response dated 23/06/2014 in relation to the discharge of c.15 (under APP/14/00600), I have now had opportunity to review the Geo-Environmental Supplementary Ground Investigation & Remediation Method Statement (Ref: GE9752-SGIR-140425 & GE9752-RMS-140507, respectively).

Summary

The conclusions of the investigations / assessments, and the proposed method statement provided are broadly agreed to be appropriate for the site.

No acute / gross contamination has been identified that could be effectively remediated by means of in-situ or ex-situ treatment, and the contamination identified has been shown to be relatively insoluble. Sporadic contamination has been identified that could represent a significant risk to individual plots, and therefore a barrier system is considered to be the most appropriate solution.

It is my understanding that there has been no application submitted in respect of c.12 (contamination investigation & remediation) to date. I would be in a position to support such an application on the basis of the submitted information, provided that the applicant can confirm that the soil specification will be amended to reflect the screening value used in the report for lead (200 mg/kg), and that the soil cover over the capillary break layer will be increased to allow for 300mm topsoil (450mm total – excluding the anti-mix geotextile / membranes, capillary break layer, and turf), in line with the implicit imported soil specification.

The verification plan (s.8 of the RMS) is agreed. It is recommended however that the backfill material verification (leachate / eluate sampling) data are included within the report.

I see no reason not to allow a Phased verification (as proposed) in this instance – the conditions would appear not to exclude the possibility, and there are no logistical or health reasons not to allow this approach.

Site Investigation, General

The supplementary ground investigation provides comprehensive site coverage with window samples on approximate 30m centres. This affords a detailed understanding of soil conditions (from trial hole logs & the screening of arisings), and has allowed a good coverage of broadly non-targeted sampling data.

The trial hole logs identify made ground with a heterogeneous composition, comprising predominantly silty/sandy/clayey materials, re-worked structureless & putty chalk (i.e. natural / stable / inert material) with rare inclusions of putrescible material. Descriptions including 'ash', 'clinker', 'black' (considered likely to represent combustion residues & unburned coal dust), and brick gravel / crushed brick are common. This description is broadly consistent with reported gas monitoring & chemical data.

Soil Gas

Spot gas monitoring & continuous gas monitoring data are presented, providing excellent baseline that allows a good degree of confidence in the results. The monitoring period included target / ideal climatic conditions (steep falling pressure events), and in general, the data shows a good pressure response (indicating good well integrity during monitored period). No results of particular concern were reported, and the 'green' classification (negligible risk / no gas mitigation measures necessary) is agreed.

Soil Quality

Site screening for total volatiles (using PID) returned 0ppm for all screened samples, indicating an absence of volatile compounds in a free-phase (liquid or vapour). However, soil sampling from within the made ground indicates widespread elevated PAH component species, and elevated aromatics & aliphatics (generally in the heavier range, C12-C35, comprising diesel, kerosene, gas oil, mineral & lube oils). Some exceedances of generic screening criteria (B(a)P and other PAH's) were identified among these results.

It is considered likely that the elevated compounds identified are generally associated with ash, clinker, occasional asphalt, and uncombusted fuel (within brick gravels & coal dust); and are therefore considered likely to be relatively immobile & non-volatile (confirmed by site screening).

There appears to be no particular correlation of results with any identified previous landuse, and I would therefore agree with the conclusions of the report, that the results are indicative contaminants present within made ground, rather than being associated with the former works (for example).

Whilst no 'gross' / bulk source of contamination has been identified, and it is accepted that the made ground is largely of inert nature; some samples (taken from within 1m of ground level) exceed generic health criteria, and given the sampling density (when considered as a volume, or area of total site) the possibility of more significantly contaminated material being present within the made ground cannot be ruled out. Some results are similarly suggestive of liquid hydrocarbon (fuel) contamination, though the occurrence does not appear to be common within the bulk of the fill material.

Whilst it is unlikely that the site as a whole could be considered to be statutorily 'contaminated', upon completion, it is possible that individual plots might meet the statutory definition of contaminated land. I would therefore agree that some remediation is likely to be necessary for the protection of human health.

Groundwater Quality

There is a significant unsaturated zone underlying the site, with groundwater levels being some 11m below existing ground level at the time of the investigation, and significantly deeper under summer conditions. No strata capable of acting an aquitard, or perched water were identified, and therefore any mobile (free-phase liquid or soluble) contamination associated with the soil is expected to readily migrate through the unsaturated zone with little attenuation.

No groundwater testing was possible, and so it is not possible to determine whether any groundwater impact has occurred. Leachate / eluate testing has however not identified any concentrations of concern. It is of note that the WAC sampling procedure (comprising the eluate tests) does not specifically include a screen for total aromatics or petroleum hydrocarbons – only 'total organic carbon', which is a significantly broader metric and is not comparable to any drinking water standard.

In general however, based upon the balance of information presented, it is agreed that the bulk material comprising the made ground is not likely to act as a significant source of contamination of the principle aquifer.

Remedial Method Statement

In consideration of the nature & extent of the elevated concentrations of contaminated substances at the site, I would agree that the risks to off site receptors & groundwater are limited. There is little evidence of concern with respect to vapour- or gaseous-phase contamination, and mobility would appear to be limited (contamination is largely absent in samples taken from natural strata, and eluate sampling has shown limited contaminant solubility).

There remains some uncertainty with respect to the existence of 'hot spots', being pockets of material with a significantly higher concentration than the typical fill. No 'hot spot' features have been specifically identified, but some results have been confirmed to be statistical outliers, and might represent such a feature.

There remains the possibility that the curtilage of a proposed dwelling, in the absence of any risk mitigation, could meet the definition of 'contaminated land', and some form of risk mitigation is therefore considered appropriate. The proposed barrier system is considered adequate to break the identified pathways of concern, and I can confirm that I am in agreement with the approach set out in the remediation method statement (in terms of the type of cover system to be used at the plot ranges indicated)

I am however concerned that the cover system outlined only proposes a cover depth of 300mm. This is considered to be within a depth range likely to be breached by general maintenance of boundary fences, through the installation of garden structures (pergola's etc.) or ponds / water features. The report acknowledges that the cover system will need to be deepened in the vicinity of proposed trees (installation of tree pits). My concern is that private garden areas are proposed, where there would be no controls over the scope either planting, use or development. In my view the proposed cover depth is likely to be breached by foreseeable activities, and through the growth of moderately sized garden shrubs. I also note that the topsoil specification is implicit that the topsoil standard should relate to the soils deposited between 0 & 300mm, and the proposals to utilise a sub-soil grade between 150mm & 300mm would therefore seem out of step with specification provided by Geo-Environmental.

Total cover depth should be increased to at least 450mm (prior to the laying of turf), in order to minimise the risk of damage to-, or penetration of- the cover system, allowing it to function as a medium-long-term risk mitigation solution.

The materials specification for imported fill is broadly agreed, with the exception of the proposed screening concentration for Lead (450 mg/kg). The value proposed relates to the withdrawn SGV, which is now considered likely to be insufficiently protective of human health. *This should be brought in to line with the screening values used in the report (200mg/kg).*

The back-fill / compaction method statement relating to the decommissioning of the existing soakaway chambers is broadly agreed, as are the screening values (comprising drinking water standards) for leachate quality.

Validation

Given the nature of the risk mitigation measures proposed (barrier system to break pollutant linkages for between the occupants of individual plots & relatively solid-phase contamination in soils); it not is considered inappropriate to allow a staged validation / sign-off (as proposed). This will allow occupation of units as and when they are completed. The logistics of formalising this arrangement are considered to be an issue for planning (i.e. whether partial discharge applications are required at each stage).

I note that the validation section of the RMS document (s.8) refers to a 'reduced dig operation' to expose made ground in soft landscape areas. Presumably this is for the purpose of ensuring that the finished ground levels upon completion fall within an acceptable range. The cover system (omitting the geotextile & capillary break) is still considered to be appropriate in this area, and as an area of managed planning, it is not considered inappropriate to maintain a standard depth of 300mm with 'tree-pits' installed as appropriate to support proposed planting.

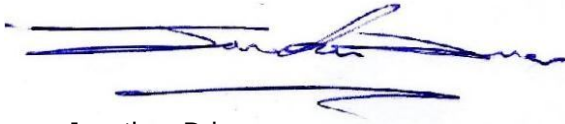
The contents of section 8.0 are taken to comprise the outline verification plan required by c.12(4). *I would suggest that the requirements of the specification for backfilling of soakaway chambers (backfill*

quality sampling) are also included in the report in order to address any potential issues with respect to groundwater pollution / contamination & associated liability.

Piling

A revised response with respect to piling methods will be provided under separate cover.

Best Regards,

A handwritten signature in blue ink, appearing to read 'Jonathan Driver', with a horizontal line drawn underneath it.

Jonathan Driver
Environmental Control Officer