

24 March 2015

Your ref:
Planning ref:
Our ref: J13126/DB/c05

Mr Jonathon Driver
Environmental Health
Public Service Plaza
Civic Centre Road
Havant
Hants
PO9 2AX



Dear Mr Driver,

**RE: MANOR FARM SITE AND COPSEYS NURSERY SITE, HAVANT, HAMPSHIRE
COMBINED REMEDIATION VALIDATION AND VERIFICATION REPORT**

Further to instruction from BDW Southampton, and following on from the recommendations contained within our Remediation Proposals Plan dated October 2013, together with subsequent emails and discussions with the Havant Borough Environmental Control Officer, Jonathon Driver, this letter provides our combined and collated remediation validation and verification update report for the two construction sites that are now being treated as a single development.

As part of the various phases of desk study and ground investigation carried out across this site, a number of apparently localised areas of concern were identified, some of which were investigated at the time, whilst some of which required post demolition inspection and sampling.

Original Ground Investigation

Guided by the desk study findings and site walkover, a pre-demolition ground investigation was carried out, which did not indicate the presence of widespread soil contamination and identified the requirement for further post-demolition in areas which were identified as being of potential concern with regards to ground contamination. These areas were highlighted on a plan that subsequently formed part of a remediation proposals summary

The results of the ground investigation phase soil contamination testing are enclosed with this letter together with a site plan indicating the sampling locations on the pre-demolition layout of the site, rather than the proposed development layout as indicated on the original site plan.

The locations of each of the apparently localised areas of concern are highlighted on the enclosed Remediation Areas Plan, and discussed in detail in the sections below;

Water Nutrient Dosing and Chemical Store

As part of the former operation of the northern part of this development site as a nursery growing cut flowers within a series of substantial glass houses, the rainwater falling upon the glass house roves was harvested and collected in a large above ground steel built water tank. This water was then dosed with nutrients and pH buffering chemicals in order to ensure that the water could then be used for irrigation within the glasshouses.

Whilst no hazardous or toxic chemicals are understood to have been used as part of this process, it was considered prudent to require an inspection of the ground floor slab of this area once demolition was completed. This inspection was subsequently carried out and no indications of any staining, residual odours or discoloration of the ground was noted such that a requirement for further work in this part of the site was not deemed necessary.

Domestic Oil Tank

The location of the former above ground heating oil tank was inspected and no indications of any staining, residual odours or discoloration of the ground was noted such that a requirement for further work in this part of the site was not deemed necessary.



Photograph showing area of former above ground heating oil tank

Area of Heating Oil Spillage

Localised oil spillage was identified as part of the site walk over survey in the area to the east of the main oil tanks, where a series of former single skin steel oil tanks were located. It is understood that the tanks in this area central eastern area may correspond with the former location of tanks identified on the historical mapping, although at the time of our investigation they were not actively used but appeared to contain oil residues.



Photograph showing some of the disused oil tanks located to the east of the main boiler house prior to demolition.

It is understood that at some point the oil residues or other inflammable substances caused a fire in this part of the site. Whilst it is likely that this would have combusted any of the oils present, it left a residue of ash and debris that required removal.

Following demolition and clearance of this part of the site, the ground level in this part of the site was reduced to remove any residues and the remaining soils inspected to confirm the absence of any staining, residual odours or discoloration of the ground was noted such that a requirement for further work in this part of the site was not deemed necessary.



Photographs showing the clearance of the area of waste oil spillage

Main Boiler House and Above Ground Oil Tanks

As outlined in our initial report, this site was heated by a pair of former marine ship's boilers located within a central boiler house supplied by two above ground tanks. The boilers used were fueled by Marine Bunker Oil, which is a very viscous oil with a treacle like consistency which is less dense than water and has to be preheated in order to be used as a fuel.

The tanks and the boilers were removed by the demolition contractors and the building demolished to ground slab level.

We subsequently attended site to carry out the removal of the floor slab under our inspection and supervision. The initial slab removal indicated the presence of potential asbestos containing materials incorporated into the base of the multi-layered concrete slab, although no indications of widespread hydrocarbon contamination was identified. The works were halted prior to the removal of the main base to the oil tanks as this was found to comprise a substantial concrete structure to ensure that the tanks remained stable.



Photographs showing oil tank base during the early stages of demolition



Photograph showing the removal of the base and short section of duct



Photograph showing presence of asbestos containing materials within the concrete slab of the boiler house



Photograph showing the waste materials from the excavation works



Photograph showing the eastern side of the tank base excavation



Photograph showing the southern side of the tank base
- note the limited relic oil stained clay to 0.25m



Photograph showing tank base prior to removal

Samples recovered from the sides and bases of the excavation to the oil tank area were submitted for laboratory analyses for the presence of hydrocarbons and asbestos fibres. The results of this work are enclosed and indicate that the soils that remain are clean and suitable for the proposed residential end use.

The tank base was removed as part of the road and drainage construction works by others and it is understood that there was no indication of ground contamination under the slab, which is consistent with the findings of our works

Former Brickworks Excavation

The area indicated on the enclosed plan forms part of an historical brickworks clay excavation pit, although it is apparent that this former brickworks excavation was not used for land filling but that limited soils may have accumulated within the reduced level ground. Houses constructed off site to the west are also formed at this reduced level.

This part of the site is currently in use as a site compound and car park, such that access is not currently available.

The proposed development will result in the raising of site levels in this part of the site. Prior to the placement of engineering fill, the surficial soils will be removed to natural clay. This work will be inspected and photographed on order to confirm removal.

Farmyard Oil Tank

The southwestern part of the overall site comprises an historical farmyard complex where a pair of above ground oil tanks were identified in the original ground investigation.

These tanks were removed as part of the site demolition and the ground beneath their former location was inspected as part of the construction of a new road as part of the residential redevelopment of the site



Photograph showing the tanks -note the adjacent ground investigation borehole that encountered low level hydrocarbon contamination



Photograph showing the former location of tank base excavation following removal

This inspection did not reveal any indications of staining, residual odours or discoloration of the ground was noted such that a requirement for further work in this part of the site was not deemed necessary.

Waste Disposal Documentation

Waste disposal documentation is enclosed for the removal of the residual oil remaining within the above ground oil tanks by the demolition contractor.

We are currently awaiting copies of the waste disposal documentation from the ground worker for the removal of the other wastes.

Conclusions

It is recognized that the work carried out to date does not include the initially proposed robust level of soil validation testing, we trust however that this letter provides a sufficient level of documentation and confidence to demonstrate that the identified issues of potential contaminated land concern identified at this site have been inspected and found to either not have resulted in ground contamination or where localised contamination has been encountered, this has been removed.

On the basis of this letter report we would be grateful if you could consider release of the contaminated land planning conditions for this site. In particular we would be grateful of your urgent consideration of the following plots, which are to be handed over to the housing association by the end of this month.

Copseys Nursery Site

Plot Nos 13 to 34, Plot Nos 64, 65 and 66 and Plot Nos 80 to 91

Manor Farm Site

Plot Nos 44 to 56, Plot No 60, Plot Nos 62 to 65, Plot No 71, 74 and 75 and Plot Nos 79 to 89.

We trust that this letter provides sufficient information although please do not hesitate to contact me should you have any queries or questions.

Yours sincerely
Wilson Bailey Partnership

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Encs