

Southcott Homes

Via email only: andy.southcott@southcotthomes.co.uk

13th May 2021

Our Ref.: 18935/RMSLR/RMS

Dear Andy

Re: Orchard Nursery Options RMS

It is understood that permission has been granted under reserved matters relating to the planning application for this site. Due to the number of reports that have been undertaken on the site for Crayfern Homes, from whom you have obtained Soils Limited's reports and liabilities, we have provided below a list of relevant reports in our possession along with a brief summary of each report content to assist in review and options appraisal in relation to the extant contaminated land conditions as expressed in DECISION NOTICE Application Ref: Y/18/20/PL dated 13th May 2020.

Phase 1 Desk Study on Land adjacent to Orchard Business Park, North End Road,
Yapton, West Sussex BN18 0GA
Report reference 16612/DS dated November 2017

The desk study identified a low to moderate risk of contamination on site from historical activities and a low gas risk from off-site sources in light of the proposed residential development. The report made recommendations to undertake a ground investigation to test the assumptions presented with the conceptual site model.

Phase II Ground Investigation Report at Land adjacent to Orchard Business Park, North End Road, Yapton,
West Sussex BN18 0GA
Report reference 16612/GIR dated November 2017

The report detailed the findings of a combined geotechnical and environmental investigation undertaken with 4No windowless sampler trial holes and 4No dynamic probes. Contamination analysis of 5No. samples revealed a Lead outlier in excess of the current C4SL generic guidance value of 200mg/kg. Locations were installed to consider and monitor the identified gas risk on a precautionary basis. The report noted that consideration would be required for possible remediation of the outlier area identified in WS3 at 0.20m.



Letter Report Soil Gas Risk Assessment Land adjacent to Orchard Business Park, North End Road, Yapton, West Sussex BN18 0GA Report reference 16612/SGRA dated February 2018

This letter report provides an assessment of ground gas conditions beneath the site based on six monitoring visits in line with current guidance recommendations for a low risk residential development over a range of pressures and conditions. Data quality is considered good for this report and did not determine or identify any requirement for gas protection to be emplaced as part of the development.

Options Appraisal

As expressed in the decision notice (Y/18/20/PL dated 13th May 2020) a review has been undertaken of the initial works and investigations to date in concert with the CDM designer (Vivid Design Studio) and an options appraisal as to the potential works and remediation required has been undertaken. The findings of the initial options appraisal process are summarised below for reference.

1. Lead in one of 5 No samples is technically in excess of the appropriate generic guideline value of 200mg/kg at WS 3 0.20m.
2. Soils Limited cannot 'prove' this is an outlier as a minimum of 10 no. data points are required to do that under current guidance. However, on the balance of probability, it appears to be an outlier.
3. No specific attempt to determine the nature and extent of the materials encountered was undertaken at the time of initial reporting, as this was considered beyond the scope of the then report.
4. However, on review, the elevated zinc and lack of significant associated PAH or TPH suggests the elevated Lead levels encountered are in fact an artifact, a piece of whitewash or some window glass or flashing.
5. At this concentration, such materials would be too small to see with the naked eye.
6. The relatively low Arsenic levels in the sample re-enforce the contention that this is not 'natural' Lead but processed.
7. If the Lead is processed, leachability and hence the bioavailability would usually be expected at or around the order of 0.1-2.5%.
8. Applying an appropriate modifier for the bioavailability as recommended in current guidance to derive a site-specific (DQRA) value would place the actual risk value at significantly below any of the current guidance values.
9. For comparison typically acceptable DQRA London remediation values are around 750mg/kg and based on mainly atmospheric (as opposed to processed) Lead which is even more accessible.
10. On this basis Soils Limited consider that this exceedance is not considered significant in context as it is an outlier artefact with little relationship to the site as a whole.
11. It could be (for example) that the investigation located the only piece of elevated lead concentration and by submitting it for analysis have already removed it from site.

Regulatory Comments to initial RMS

Comments were returned from the regulator in May 2021 and forwarded to Soils Limited following presentation of this initial RMS proposal in December 2020 to the regulator expressing our then position on the matter. In the response it was noted that:

In relation to the above application, I am able to advise that the information provided in Soils Ltd.'s Options Appraisal letter (ref.: 18935/RMSLR, dated 14 December 2020) is not considered sufficient in addressing the concerns relating to the 522mg/kg lead recorded at 0.2mbgl in WS3. Furthermore, our system notes from 2009 state that planning record Y/64/68 details a double boiler installation, which in turn may indicate the presence of diesel tanks on site however this anomaly has not, to my knowledge, been further explored/addressed. In addition, the above referenced submission does not constitute an Options Appraisal, therefore cannot be considered as such by this Department. Consequently, EH is not currently able to recommend discharge of the condition.

Remediation Strategy

Following appraisal and discussion with both the Client and the regulator, it was noted that removal of site surface materials to 0.30m was already required for operational and geotechnical reasons and that such actions were to be undertaken as groundworks. This proposed groundworks activity (already costed and anticipated in the development strategy and plans) would by default remove the identified elevated Lead level noted at 0.20m WS3. This would, by removal of source, break the potential human health pathway identified previously as requiring remediation.

As such works were already planned and costed into the development plan, this would clearly be the most sustainable and cost-effective option, rather than (for example), removing a 2m x 2m area as an isolated identified hotspot (in line with current guidance), the costs for which would have been additional to that anticipated. In addition such activity would have been unsustainable as the whole site would then have been cleared to -0.30m as part of the planned groundworks.

This action was further considered justified and the prudent risk averse course of action to undertake because the results to date strongly suggest that Lead at this site is likely to be present as isolate hotspots i.e. as microscopic fragments of ash, clinker, flashing, glass, paint, whitewash, etc. and as such could also be present in remaining surface material as relict fragments across the site from former use of this and adjacent sites as nurseries. As such this activity would be more sustainable in the longer term as it would also further reduce the potential for additional 'sources' to be located in surface materials that may then require further remediation.

This reasoning and proposed works having been informally agreed with all parties some additional works are proposed to validate and verify these proposed actions and activities. Following removal as groundworks, appropriately competent persons will undertake environmental sampling at the area of WS3 to provide 5no. samples (1 at WS3 0.30m and 4 no. at cardinal points 1m from that location) to a) provide appropriate validation data and b) to provide a total of 10no. samples so that the contention that the WS3 result was an outlier can be statistically confirmed. As Lead is the only identified 'contaminant of concern' in this case, this will be the only parameter tested for the validation samples.

Whilst the competent person is on site for the validation, they shall also undertake and report an audit, review and observation of the site in concert with the on-site operatives, to determine if any obviously deleterious materials have been exposed, encountered or disposed of as part of the clearance and groundworks activities. This will include consideration of any visible ACM, metals, wastes and oily materials as per the site Discovery Strategy and will also attempt to confirm, determine or deduce the location and possible presence of the supposed fuel tanks noted by the regulator in 2009 (planning record Y/64/68) but for which no evidence has yet been located by or presented to Soils Limited.

The Discovery Strategy requirement - with special emphasis on keeping an eye out for any evidence of a tank - will be emplaced throughout all of the site development activities and the findings and conclusions recorded and reported as part of the closure activities.

Conclusions

In summary it is therefore proposed that the following works are undertaken:

1. Site clearance be undertaken to 0.30m below current levels
2. Validation testing (5no samples Lead only) at location WS3 and at 1m cardinal points from WS3 following groundworks
3. Confirmation of no obvious deleterious materials encountered during clearance or remaining exposed on cleared site
4. Emplacement and confirmation of site Discovery Strategy - to include special reference to potential for Tanks and/or hydrocarbons
5. Requirement to report the above (with evidence) and confirm compliance with site Discovery Strategy (even if negative)

If you have any questions regarding the above, please contact the undersigned.

Yours sincerely



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Principal Geo-Environmental Engineer
For and on behalf of Soils Limited