Paul Hunt

From: Robert Hodges <rah@crossfield-consulting.co.uk>
Sent: 06 June 2024 14:08
To: Paul Hunt
Cc: James Fitz-Costa
Subject: RE: Worthing Road Southwater DISC/24/0064 - Condition 4 to approved application DC/22/0096

Our Ref. RAH/rah/CCL03455.028

Good afternoon Paul,

We have reviewed the comments from Horsham District Council and respond in blue as follows to the numbered points:

1. We note that one sample has been collected from each location and subject to a full suite of analysis. Given the variability of the made ground, as detailed in the logs for both investigations, we are however not convinced that this is sufficient and would question whether the sampling strategy is in accordance with BS 10175 (Investigation of potentially contaminated sites - Code of practice).

   Given the size, land use history and the proposed development, we consider that our sampling and testing strategy (number and lateral and vertical spacing of sample tested) meets the requirements of BS 10175. We consider that our sampling and testing strategy complies with both a non-targeted sampling strategy, given the number and spacing of the sampling and testing and a targeted (judgmental) sampling strategy in that the most likely source of contamination (area of former caravan repair and servicing workshop) has been targeted as has the most sensitive receptor areas (private gardens and managed soft landscaping areas).

2. We appreciate the land use history and the lack of any known significant sources of contamination. Significant depths of made ground have however been detected and given this and the fact that the proposed use is a use that is sensitive to the presence of contamination we are of the view the reports do not provide the LPA with sufficient confidence that the made ground soils on the site have been adequately characterised.

   Note our comments above and in relation to Point 4 below.

3. As discussed in previous comments site investigations undertaken on the site to date have found made ground soils, in our professional opinion a likely source of contamination, down to 1.30mbgl. The chemical testing of soils has however been mainly undertaken on soils recovered from between 0.15m and 0.40m.

   The Local Authority comment is repeated in Point 4 below and our comments are made with respect to Point 4.

4. With the above in mind the Remediation Strategy states that a clean cover system of 450mm is proposed in communal garden areas with a clean cover system of 600mm proposed in private garden areas. Whilst we are not against the principle of the proposed clean cover systems, our concern is that, as detailed above, the majority of the sampling has been undertaken between 0.15m and 0.40m, with one sample taken from 0.60m at DS1. Taking into account that a reduced dig exercise will take place to enable the cover systems to be installed the majority of made ground soils that have been subject to chemical testing will therefore be removed from the site. Given this and the fact that are pockets of made/reworked ground to 1.30m the cover system will be installed above made ground soils that, in our view, has not been subject to adequate investigation.

   Samples were taken at the depth indicated as this is the most likely depth range where soils could be disturbed in proposed soft landscaping and private garden areas.

It should also be noted that of all the samples tested only one sample (TP1 – 0.4 m) recorded any concentrations of contaminants above the site-specific assessment criteria for the proposed development. This sample was taken close to the northern boundary of the site in an area of proposed managed soft landscaping. The contaminants recorded slightly above the site-specific assessment criteria were the Polyaromatic Hydrocarbon (PAH) species, benzo(a)pyrene and dibenzo(ah)anthracene. These contaminants have both low solubility and mobility. It should be noted that no contaminants above the site-specific assessment criteria were recorded in the area where private gardens are proposed.

The provision of a clean cover system of 450 mm thickness in managed soft landscaping areas is designed to provide an effective barrier between end users of the development and the potential underlying Made Ground materials. As stated in our Ground Investigation and Supplementary Ground Investigation Reports, end users will not have rights to dig into or cultivate managed landscaping areas around the apartment block, such that end user exposure would only be associated with dust exposure pathways (if minimum topsoil thicknesses only were placed). The clean cover thickness proposed should ensure that there will be minimal mixing of the clean cover soils with the underlying Made ground materials, associated with the limited grounds maintenance work that will require to be undertaken by any landscape maintenance contractor. It is therefore considered that the provision of the clean cover system in managed soft landscaping areas will ensure that there will be no unacceptable risks to the health of end users of the apartment block associated with the underlying ground.

5. Of particular concern is the southern part of the site where TP7 and TP8 found made ground soils down to 1.0mbgl. Samples were taken from 0.30m in TP7 and 0.40 in TP8, the strata of made ground between 0.5m and 1.0m, which appears to be different from the made ground above, was however logged as containing brick and ash fragments and was not sampled. Given the remedial proposals this particular strata of made ground will remain on site beneath the proposed clean cover system.

   As stated above, no contaminants above the site-specific assessment criteria were recorded in the southern area of the site (DS1, DS6, TP7 & TP8) where private gardens are proposed.
   The provision of a 600 mm thick, clean capping layer in private garden area is precautionary given the more sensitive end-use and will also provide a better growing medium than the Made Ground, containing brick and concrete, identified near surface in this area.

   Whilst it is considered extremely unlikely that the retired residents of the proposed cottages would cultivate their gardens to 600 mm depth, a geotextile marker layer will also indicate the base of the clean cover system. It is therefore considered that the provision of the proposed clean cover system in private garden areas will ensure that there will be no unacceptable risks to the health of end users of the cottages associated with the underlying ground.

6. A clean cover system of 600mm may be sufficient to protect future site users in areas where it is placed directly on top of clean virgin material. Given the uncertainties regarding the quality of the made ground, as detailed above, a clean cover system of 600mm in areas of the site where deeper made ground is present, such as the southern part of the site, may not however provide sufficient protection to future site users.

   It is considered that the response to Point 5 above addresses this comment. The comment regarding the placement of a clean cover system on clean virgin material is not understood as a clean cover system would not be required if clean virgin material were present beneath.

   As detailed in previous comments, we appreciate the land use history and the lack of any known significant sources of contamination. However, given that significant depths of made ground have been detected and taking into account the fact that remedial proposals will result in material being left on site beneath the proposed clean cover systems that has not been subject to adequate investigations, we remain of the view that the made ground soils on the site have not been subject to sufficient investigation.

   We trust that the responses to the points above clarify our professional judgment that the provision of the stated clean capping systems will ensure that there will be no unacceptable risks to the health of end users of the development associated with the underlying ground.

7. Once sufficient ground investigations and chemical testing of soils has been undertaken on the site we will have further comments to make on the RMS. The applicant should be aware therefore that further revisions to the RMS may be required before the pre-commencement condition can be discharged.

   For the reasons given above, we consider that there will be no benefit in undertaking any additional sampling and testing of the deeper Made Ground materials and that the stated provision of the clean capping systems is entirely adequate to ensure that there will be no unacceptable risks to the health of end users of the development associated with the underlying ground.

We recommend that the above comments are forwarded to Horsham District Council. If the Environmental Officer, requires any additional clarification with respect to our responses, we are more than willing to discuss the matter further, by phone or a Teams meeting, to ensure that any issues are resolved in a timely manner.

If you would like to discuss any matters, please contact me.

Kind regards

Robert Hodges
Managing Director
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From: Paul Hunt <Paul.Hunt@crl.co.uk>
Sent: Wednesday, June 5, 2024 3:09 PM
To: Robert Hodges <rah@crossfield-consulting.co.uk>
Cc: James Fitz-Costa <James.Fitz-Costa@crl.co.uk>
Subject: FW: Worthing Road Southwater DISC/24/0064 - Condition 4 to approved application DC/22/0096

Hi Robert,

We have just received the email below, from the Planning dept dealing with Southwater.

Please can you urgently comment on the contents.

James will call you to discuss.

Best regards

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