



Planning Report

APP/18/01090: Condition 2 and 3 Mitigation Measures

12th November 2019

Critchley Architecture And Design Ltd,
The Old Brewery,
15E South Street,
Havant,
PO9 1BU

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1.0 Generally

- 1.1 This Planning Report has been prepared in association with Apple Environmental Ltd, to explain the current situation in relation to the Approval of Matters Reserved by Conditions No.2 and No.3 of Planning Approval APP/18/01090.
- 1.2 No other purpose is anticipated or accepted. Copyright of this report remains with **Critchley Architecture And Design Ltd.**
- 1.3 The presence of contaminated material on the site is not disputed. This reports sets out a robust methodology to record and assess the degree of contamination, and a mitigation strategy to deal with the contaminated materials.

2.0 Assessment and Analysis

- 2.1 The Site Investigation Report has shown the proposed garden area to have elevated levels of PAHs and lead, as well as chrysotile asbestos residue. Of these, the asbestos is anticipated to be confined to the ground area close to the building, (The likely source of asbestos being previous building materials). The PAH and lead contamination is more likely to be widespread, deriving from agricultural and animal husbandry practices.
- 2.2 The suggested course of action is to use an incremental approach of sequential testing and material removal. This contains the amount of material to be disposed of, to that which is shown to be contaminated. A more 'wholesale' removal of material would lead to uncontaminated material to be disposed of, being mixed with the contaminated material. The careful incremental approach, although slower is more sustainable and environmentally sustainable than wholesale removal.

- 2.3 The basis of an incremental approach is to remove material in shallow layers, with testing of samples from each layer, down to a clean datum. This will allow excavation and material removal to different depths as required across the site, and for the contaminated material to be separated from the PAH material, for separate disposal

3.0 Process and Mitigation Measures

- 3.1 Firstly, to scrape-back the soil across the entire garden area to a depth of 150mm, all of which has shown to be contaminated, and to dispose of the spoil. Secondly to excavate the localised area around the corner of the building where asbestos residue was detected, down to a depth of at 600mm. This spoil will be removed for disposal.
- 3.2 Having removed the material known to be contaminated, proceed to sample the newly exposed surface of the substrate for the determination of asbestos, PAHs and lead. This will delineate any areas where there may be an unacceptable level of contamination requiring disposal. Those areas testing 'clean' can remain and will not require further excavation.
- 3.3 Those areas that still show contamination be excavated a further 150mm, and again removed for off-site disposal. The test sampling of the exposed surface will be repeated.
- 3.4 In any area where contamination continues to exist this procedure should continue, to a depth of 450mm and then to a maximum depth of 600mm. At this depth, if any contamination material remains, It will be encapsulated and left in-situ. The excavation will be lined with a geo-membrane (Terram or similar) to the base and sides, and protected with 100mm of granular material, prior to backfilling with 'clean' soil.
- 3.5 Where the material is found to be contaminated by PAHs only, this will be stockpiled elsewhere on the farm, onto an impermeable base and allowed to bio-remediate. There are established techniques for remediation using introduced fungal elements. Following successful bioremediation the resultant soil can be beneficially used elsewhere on the farm. This clearly will substantially minimise the material for off-site disposal.
- 3.6 All soil removed from the site for disposal will be subject to WAC testing (Waste Acceptance Criteria), which with the contamination test results, will be used to determine an appropriate waste classification (by means of applying the HazWaste model). This procedure optimises the various levels of contamination in the waste material and allows the most economic and effective disposal.
- 3.7 Remediation and backfilling – levels below 450mm infill with DoT Type 2 (or reject stone) lightly compacted, overlay with geo-textile. Back fill to design ground level with selected topsoil.

4.0 Compliance

- 4.1 As above, at each level of excavation and 'clean' testing, the end result will be a contour map showing the total removal of the contaminated material. The remaining material can be shown to be 'clean' from the final test results, and recorded as such in a closing report.
- 4.2 Outside supervision of the removal and testing procedure can easily be undertaken, noting a two week turn round on the laboratory testing, between each layer of removal.
- 4.3 For the vehicle movements to remove the contaminated material from site, the measures appended below in our practice note for protection against Mud Transfer and heel washing
- 4.4 Personal protection measures for operatives will be the responsibility of the appointed contractors
- 4.5 All imported soil to be fit for residential garden use, and comply with the British Standard BS3882.
- 4.6 As above, a final Report will be prepared to include a schedule of test results, plans and sections of the treated areas, and details of material disposals.

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