Risk Assessment and Method Working Statement for Garages in Parkside Crescent, Spalding, PE11 1RA

Planning Application no. H16-1245-16

1. Scope of Assessment and Remediation Working Statement

1.1 The assessments are based on a Southern Testing Site Investigation Report ref JN0699, dated 15th July 2015 and on a Southern Testing Waste Classification Letter ref JN0894, dated 8th March 2017 which included more soil testing. The site has not been visited by Stuart Guy, but there is sufficient information in these two reports to allow assessments of the risks identified and remediation that will attenuate such risks.

1.2 The site was very overgrown, apparently, in 2015 when the first investigation occurred. The garages were also on site and appeared to have cement stabilised fibrous sheeting as roofs (P7 of 2015 report), but the garages have been demolished and the vegetation trimmed (photos 1, 2 and 3) since both reports.

2. Assessment of Risks from Species Analysed

2.1 The investigations found little evidence for significant contamination with generally low levels of contaminants in all but two samples. Polycyclic aromatic hydrocarbons (PAH) were noted as being of concern. The assessment criteria were laid out, but in the last 10 years they have been reviewed and changed many times. Benzo(α)pyrene is generally used as the main criterion for assessing risk of harm from PAHs; however, in the 2015 report, one high value of 7.1 mg/kg is skewing the results (5 in total giving an average of 2.4 mg/kg) whilst a further 3 samples analysed in 2017 reported very low values. The borehole logs did report ashy materials in the upper soils, so the soil is not suitable for rear gardens and some remediation is necessary.

2.2 The presence of what was apparently a small fragment of asbestos insulation was noted as a potential contamination problem (no photograph was included in the report or any indication of size). However, no asbestos was detected in any of the other seven samples analysed, which indicates that asbestos contamination is not general as the fibres break up and disperse when significant quantities of asbestos are present on site. The risk of harm to the occupiers of the site and to the workers from asbestos fibres is not significant and the risk is acceptable.

3. Remediation Method Working Statement

3.1 The rear gardens should be excavated to approximately 600 mm and replaced with clean fill and topsoil. To produce the necessary verification report, photographs of the excavated gardens, transfer notes for the replacement fill and topsoil should be obtained and an analytical certificate relating to the soil.

3.2 Analytical information on the soils from the two reports by Southern Testing indicate that very little contamination is present that is of concern, except for the waste acceptance criteria (WAC) test. This found the loss on ignition (LOI) and the total organic content (TOC) was above the limits for inert materials, but within the parameters for non-hazardous waste. A landfill site that can accept the excavated materials should be located by submitting the analytical certificates in the two reports. Slightly elevated LOI and TOC are not of concern to many landfill sites as the quantity will not be large.

4. Conclusion

4.1 The samples of soil analysed from this site are not contaminated significantly, except for an isolated fragment of asbestos insulation and one elevated PAH concentration. However, the presence of ashy materials in much of the shallow ground raises concerns over potential PAH contamination on some other parts of the site, as well providing a very poor growing medium for rear gardens. Therefore, remediation of the rear gardens is necessary.

4.2 The WAC tests show the underlying natural ground can be classified as inert, but the made ground failed on TOC and LOI. The TOC value was very close to the allowed value and may not be a problem. It is probable that such very small quantities as will be removed from this site can go to many landfill sites as it will have little impact on such sites.

4.3 Those workers whose main job it is to grade sites or excavate significant quantities of soil could be subject to cumulative exposure to various substances on many sites and they should wear overalls and gloves, even if the soils do not present a significant risk to the health of the workforce. For example, the presence of water contaminated with Weil's disease is a small probability and working on many sites increases the risk of infection to a worker. Localised contamination from small amounts of chemicals that could have been discarded is an unlikely event, but if heavily discoloured, highly odorous or fibrous materials are encountered, then appropriate advice should be sought.

Stuart Guy BSC, PhD, C Chem (MRSC), C Eng (MIMMM)

Photo 1 Garages removed and being used as parking spaces



Photo 2 Overgrown areas in 2015 report have been trimmed



Photo 3 Grass neatly cut and maintained

