

STUART GUY CONSULTING

Report number 17-09-01

Date 22nd September 2017

Environmental Risk Assessment of Cedarwood

14 Churchgate, Whaplode, Spalding, PE12 6TA

Non - technical Summary

The site is located in a semi-rural setting with houses all around, a large factory building some distance from the site and land to the east marked as a landfill. The landfill near to the site is that marked as the piggery. Many buildings have been on the piggery site for 30 to 60 years and at least two look as if they have been on site for more than 80 years. If any putrescible materials had been present on the site before many of the houses had been constructed, then they would have decomposed many years ago and not produce landfill gases now. Therefore, the risk of harm from landfill gas is not an issue.

Cement stabilized fibrous sheeting was identified on the garage in this development. Prior to removing this type of sheeting, samples should be taken and analysed for the presence of asbestos fibres and if found the sheeting should be removed by a competent operator.

No further investigation is necessary for this site in absence of any potential sources of contamination that could present a significant risk of harm to the occupiers of the site or to the environment.

Stage One Environmental Desk Study of Cedarwood

14 Churchgate, Whaplode, Spalding, PE12 6TA

Planning Application No. H23-0668-12

1. Scope of the Risk Assessment

1.1 Under instructions from Peter Pitt of D Brown Building Contractors Limited, Seas End, Moulton Loosegate, PE12 6JX, I have prepared this risk assessment based on the following:

A Groundsure Report dated 2nd June 2014, reference GS-2391-1478414 which is part of the Goldfinch Environmental Ltd desk study, dated June 2014, ref 0225/1, for the development to the west.

A visit to the site on 12th September 2017

1.2 The purpose of this report is to assess whether this site, or potential contaminants from adjacent sites, could present a significant risk of harm to the occupiers of the site or to the environment.

2 Groundsure Report + Google Satellite Image

2.1 The Groundsure report searches features that are recorded on maps or in trade directories of the surrounding area and points to features that may be of concern. As with all automated systems, this tends to identify many features that are not relevant and therefore interpretation of the results is required. This report was part of the Goldfinch Environmental Desk Study for the site to the west and, as little has changed in that area, it was decided that this report would be adequate also for this site.

2.2 The Google satellite image shows that site is in a largely semi-rural setting with houses all around and a large factory to the east. Most houses had substantial gardens and fields were present to the south.

2.3 Under current land use for the site, nothing is noted.

2.4 Under current land use for the surrounding area, numerous discharge consents are located at about between 10 and 250 m in most directions but all have had their licenses revoked in the 1990s, a cycle shop had an obsolete fuel filling facility on it at about 120 m to the north, a vehicle repair and testing facility is located at about 160 m to the northwest, a factory or works is marked at about 120 m to the west, an electrical sub station is noted at about 220 m to the southwest and potential tanks are marked at about 230 m to the south.

2.5 Under historical land use for the site, nothing is noted.

2.6 Under historical land use for the surrounding area, two historical landfill sites are marked on the map as Piggery and Foundry House at about 10 and 150 m to the east.

2.7 Groundwater vulnerability is classified as non aquifer with negligibly permeable formations and soil leaching potential is not known. The nearest surface water feature is a ribbon of water at about 80 m to the northeast widening out a little at the east, but then disappearing.

2.8 Radon above the action level affects < 1 % of homes and no radon protection measures are recommended.

2.9 In summary, the site is in a semi-rural setting with a factory or works, garage services, landfill and obsolete fuel filling facility, groundwater vulnerability is classified as non aquifer and the nearest surface water feature is a ribbon of water some distance away.

3 Site Visit on 8th September 2017

3.1 The site was visited when the weather dry and sunny. It is situated on the corner of Churchgate and Cross Street immediately adjacent to a site that is being developed on the Cross Street (photo 1). The site comprises a wooden clad building (photo 2) with a drive to the front and side and rear gardens (photo 3). The gardens were very tidy and all trees and plants were growing very strongly. The garage to the northern end appears to have cement stabilised sheeting (photo 4) that should be tested for the presence of asbestos fibre prior to their removal.

3.2 A walk along Churchgate to the north found well-established houses with healthy looking trees and plants in all the gardens and one new construction that was directly onto the so-designated landfill site known as the 'Piggery' (photos 5 & 6). The map of 1888 on pages 28 and 29 of the Goldfinch desk study shows the middle of the site was called The Broads and appeared to be a body of water. There is no trace of this water on the new build site or on Middle Road on the southern perimeter of Piggery landfill. Off Middle Road were a couple of quite old buildings (photo 7) which corresponded to those on the 1888 map.

3.3 A walk along High Road from Malten Lane to Kirkgate passed by the former small fuel filling facility that is still in operation as a cycle shop. There was no sign of the fuel tank and the site appeared to be very clean and tidy. The former factory in Kirkgate (photo 8) appears to be multi use with various businesses using the site. The factory is very clean and does not appear to have any significantly contaminating uses.

3.4 The area to the south was walked over but no potentially contaminating activities were identified.

4. Conceptual Model

4.1 The site is in a semi-rural setting with houses all around, most with large gardens, and a new development to the west. A small cycle shop that had fuel filling facilities removed a long time ago is still operating, but presents no harmful impact to this site. To the east of

Churchgate road are two sites that are marked on the Groundsure report as having potential household waste deposited in the landfills, but only the nearest one could impact on this site. No other sources of potential contamination have been identified.

4.2 The site and the area surrounding it is level and flat, the ground under the site is impermeable and the nearest surface water feature should be an isolated body of water to the northeast, but its existence is in doubt after the site visit.

4.3 The suggested model of 'source, pathway, target' in which all three components have to be present will be considered for this site. In this context, the source will be a potential contaminant, the receptor will be human or environmental and the pathway will be some process whereby mass transfer from source to receptor occurs.

4.4 Possible pollutant linkages:

Contaminant	Pathway	Receptor
Landfill gases from the 'Piggery' landfill site	Production of methane and carbon dioxide flowing underground and emerging under new buildings	Occupiers of the buildings
Cement stabilized sheeting containing asbestos fibres	Inhalation of fibres of a restricted size range	Occupiers of site

5 Conclusions and Recommendations

5.1 The Piggery and Foundry House landfills have no information about them on the Environment Agency historical landfill sites website, other than they may have had household or other wastes deposited on them. No dates are given and the Piggery landfill site appears to cover the whole of the western end of the area encompassed by Churchgate, High Road and Middle Road. However the map of 1888 shows many buildings on these three roads with a structure on High Road/Churchgate that could be a piggery. On that map also was a large area of land that appeared to wetland called The Broads. This wetland has disappeared so it is possible that it was filled in with rubble to reclaim the land. In the absence of any information, the EA has suggested the possibility of household waste being deposited in this infilling operation. Many of the buildings on the perimeter of the Piggery are between 30 and 60 years old, especially those on High Road. Trees and plants in the gardens of the houses are growing very well and in very good condition which is not compatible with methane production. Therefore, the risk of harm from landfill gases to the new development is not significant and the risk is acceptable.

5.2 The potential cement stabilized asbestos fibres in the sheeting on the garage present a significant risk of harm to the occupiers of the developed site and analysis of samples of the sheeting should be undertaken prior to demolishing the garage. The soil in the garden may be suitable for use in the new buildings, but agreement to use that soil should be discussed with the land contamination officer.

5.3 No further site investigation is necessary for this development.

6 Summary

6.1 The site is located in a semi-rural setting with houses all around, a large factory building that is some distance from the site and the land to the east marked as a landfill. The landfill nearer to the site is that marked as the piggery. Many buildings have been on the piggery site for 30 to 60 years and at least two look as if they have been on site for more than 80 years. . If any putrescible materials had been present on the site before many of the houses had been constructed, then they would have decomposed years ago and not produce landfill gases now. Therefore, the risk of harm from landfill gas is not significant.

6.2 Cement stabilized fibrous sheeting was identified on the garage in this development. Prior to removing this type of sheeting samples should be taken and analysed for the presence of asbestos fibres and if found the sheeting should be removed by a competent operator.

6.3 No further investigation is necessary for this site in absence of any potential sources of contamination that could present a significant risk of harm to the occupiers of the site or to the environment.

6.4 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 but 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 or highly odorous materials are encountered, then appropriate advice should be sought.

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Photo 1 New semis next to Cedarwood to the right



Photo 2 Cedarwood with drive on Churchgate



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Photo 3 Side and rear gardens with new development on left



Photo 4 Cement stabilized fibre panels on garage at Cedarwood



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Photo 5 New construction just behind J R Cycles on High Road



Photo 6 Google satellite image showing site of new build south of J R Cycles



Photo 7 Old building on Middle Road corresponding to one on 1888 map



Photo 8 Factory in Kirkgate with apparently multiple business users

