

Agricultural & Environmental

BUSINESS CONSULTANTS

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Report: Desk top study (Phase I) report

Location: Land off Lucks Bridge
Spalding Common
Spalding PE11 3AY

Client: Remway Design Ltd
Jason Wilson

Report by: Jeremy Stock MBPR

Revision	Dated	Report Issue
0	5 th November 2020	Draft report
1	24 th November 2020	Lab test results added
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3	20 th December 2020	Report Issued

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Basis soil & water management No SW/255

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1. Introduction

Jeremy Stock of Agricultural & Environmental Business Consultants has been instructed by Mr M Wilson and Remway Design Ltd, to conduct a Desk top study and prepare a subsequent report.

The subject of this report is a site/ land located to the East of South Drove, off Littleworth Drove, Lucks Bridge, Spalding Common, Spalding PE11 3AY.

Mr Wilson obtained outline planning consent for the erection of 9 x 1.5 storey houses detailed in a decision notice issued by South Holland District Council on 11th January 2018 under reference number H16-0621-17. A copy of the decision notice is attached to this report and can be found in Appendix II.

2. Report Objectives

The primary objective of this report is on the basis of meeting the requirements and the conditions of the local planning authority, particularly in relation to paragraph 5 of the planning decision notice in respect of potential sources of contamination and the impacts on human health, land and /or controlled waters relevant and those in close proximity to the site.

'The development hereby permitted shall not be commenced until a scheme to deal with any contamination of land or pollution of controlled waters has been submitted to and approved in writing by the Local Planning Authority (LPA) and until the measures approved in that scheme have been implemented. The scheme shall include all of the following measures:
i) a desk-top study carried out to identify and evaluate all potential sources of contamination and the impacts on land and/or controlled waters, relevant to the site. The desk-top study shall establish a 'conceptual site model' and identify all plausible pollutant linkages. Furthermore, the assessment shall set objectives for intrusive site investigation works/Quantitative Risk Assessment (or state if none required)'
Two full copies of the desk- top study and a non-technical summary shall be submitted to the LPA without delay upon completion.

In publishing the report, the author has referred to guidance given by the Environmental Protection Act 1990, Part 11A. In addition, consideration has been given to documents provided by the local Environmental Health Department titled 'Developing Land within Lincolnshire'.

3. Background

The development land in question is located within a semi-rural position to the south of Spalding town centre close to the junction of the B1172 where the road meets the A1175 and is positioned just to the east of South Drove and Littleworth drove.

The site is rectangular in shape and measures approximately 125m x 62m totalling around 0.75 hectares. It is bordered on three sides by hedge and is positioned behind existing dwellings on the road frontage.

The site is level and is partly occupied by building materials on the westerly end with the rest of the area a field.

Research indicates that the site has been in the present family's' possession for over 40 years. When originally purchased, the land was a field and in regular cultivation. More recently the westerly end of the area has been used for the temporary storage of building materials.

Positioned on the north westerly boundary is 4 small buildings of timber construction. See appendix III – Site plan

Previous land use indicates that area was used for cultivation and growing crops.

On the 29th October 2020, Jeremy Stock visited the site and conducted a site walk over.

The prevailing weather conditions were bright and dry at the time of the visit.

4. Method of Assessment

4.1 Site Walk Over

For the purposes of this report it is assumed that the main area of interest is outlined in red on the accompanying site plan and detailed in appendix III.

The site walk over was conducted on the 29th October 2020. The initial objective being to familiarise the author with the site and confirm previous and current land use. In addition, to determine evidence of fuel storage, oil storage, evidence of soil staining and asbestos containing materials or any activity likely to give rise to the possibility of contamination.

Particular attention was given to the perimeter and the general location of the garages on the north western boundary.

During the visit, there was no evidence of fuel/ oil storage facilities. There was no evidence of fuel/ oil staining noted.

4.2 Previous Site Use

Local research and discussions with the current owner and family members confirms that prior to their purchase over 40 years ago (pre 1960) the field was in an arable rotation and used for purpose of farming.

In the intervening years, the land has remained under the plough with an area to the western boundary used for the temporary storage of building materials.

An Environmental Site check search was commissioned by the author on the property and was reported on 24th November 2020. (See appendix IX) The report concludes that there are no significant contaminant linkages identified.

Risks associated with agriculture and aligned activities include the storage and use of fuel/ oils for the purpose of heating and possibly as storage of fuel for vehicles.

It is for this reason; samples were taken at the time of the site visit. See soil sampling plan appendix V.

4.3 Risk Assessment

A conceptual model has been developed and can be found in appendix IV of this report.

The model summarises the plausible pollutant linkages (based on the source – pathway – receptor principles) for the site. Identification of potential contamination associated with the previous land/ site use, the likely future receptors and the possible pathways between them.

From the site visit it is noted that there is a ditch located on the eastern boundaries. The area falls within a flood risk area with intrinsically high groundwater levels.

At the time of the visit there was no evidence of storage facilities (above or below ground), sewage facilities or plant and equipment.

Four garages/ structures were noted on the north western boundary. Materials used in their construction include bonded sheeting. See accompanying photographs in appendix VIII.

4.4 Soil Testing

A total of two soil samples were taken from the site at two locations. One to the western end of the site where building materials are stored and the other to the eastern end of the field. (Appendix V – site sampling plan). A total of 4 cores were taken, to a depth of 250 to 350 mm and consolidated into 2 soil samples.

The samples were sent to a UKAS accredited laboratory for analysis; the results are attached to this report, (Appendix VI – NRM soil test results).

The samples sent for analysis were inspected visually for obvious signs of contamination including discolouring and odour. None was obvious during inspection.

Due to the possible risks associated with such a site and its' previous use, the samples were sent for analysis of **Potentially Toxic Elements (PTE's)** and Petro - hydrocarbons to establish levels of potential contaminants.

The results of the samples have been compared to Soil Guideline Values and these can be found in appendix VII of this report.

5. Initial Conclusions

5.1 Site walkover

During the site visit, there was no evidence of fuel and oil storage tanks.

During walkover there was no evidence of below ground or above ground storage.

No obvious spillages or soil staining was noted. There was no evidence of odour noted at the time of soil sampling.

At the time of inspection, there was no evidence of contamination. Vegetation and plant material growing on site and site boundary appeared healthy although much had been cleared prior to the site visit.

5.2 Soil test results

The soil test results are recorded in appendix VI of this report. These have been analysed by a UKAS accredited laboratory.

Results from the soil analysis have been compared to Soil Guideline Values and can be found in appendix VII of this report.

The results indicate that although heavy metals are present, they exist at levels similar to or less than background levels intrinsic to the local area and below that of recommended SGV's.

Levels of Extractable Petroleum Hydrocarbons (EPH) are recorded at levels of 673 to 790 mg/kg. Research indicates that there is no evidence of Petro hydrocarbon use / storage on site and therefore at these levels, suggests that these are intrinsic to the soils within the geographic area.

5.3 Asbestos materials

During the site visit, it was noted there was four small garages located on the north western boundary. It is assumed that for the development to complete, the garages will be removed from site.

Materials used in their construction include cement bonded sheeting. No testing on this material has been carried out. The developer should satisfy themselves of the materials composition before removal and safe disposal.

If in the process of redevelopment, asbestos is identified, work should cease, and its presence reported to the LPA.

6. Conclusion/ Recommendations

- 6.1 The samples have been sent for analysis by a UKAS/MCERT accredited laboratory. The results have been summarised in appendix VI of this report.
- 6.2 Results indicate that at recorded levels, these are within acceptable levels when compared to the Soil Guideline Values.
- 6.3 In those areas sampled, there is no visual signs of contamination nor evidence of odour.
- 6.4 During work to re develop the site, should any evidence of contamination come to light during the process, work should stop to seek further advice from the LPA or the local authority environmental department.
- 6.5 Installation of additional water supply pipes to the redeveloped site should be protected either using 'clean' soil or Pea gravel to backfill the trench notwithstanding criteria required under building regulation standards.
- 6.6 If and when the garages are removed from the north eastern boundary, any evidence of contamination becomes apparent, the local planning authority should be notified. This includes asbestos containing materials and fuels or oils.
- 6.7 It is noted that the site falls within a flood risk area. It is therefore likely that the site levels will be increased; possibly using imported 'fill' material. If this is the case, the site should be registered with the Environment Agency for an exemption.

Furthermore, the 'fill' material should be inert and free from potential sources of contamination.

JMS
20th December 2020

