

Phase 1 Contaminated Land Assessment

Project Title: Barn conversion – Barley Green Farm - Stradbroke
Client: Mr G Jones
Project Number: 2400

Phase 1 Desk study to support conversion of redundant barn to a single dwelling



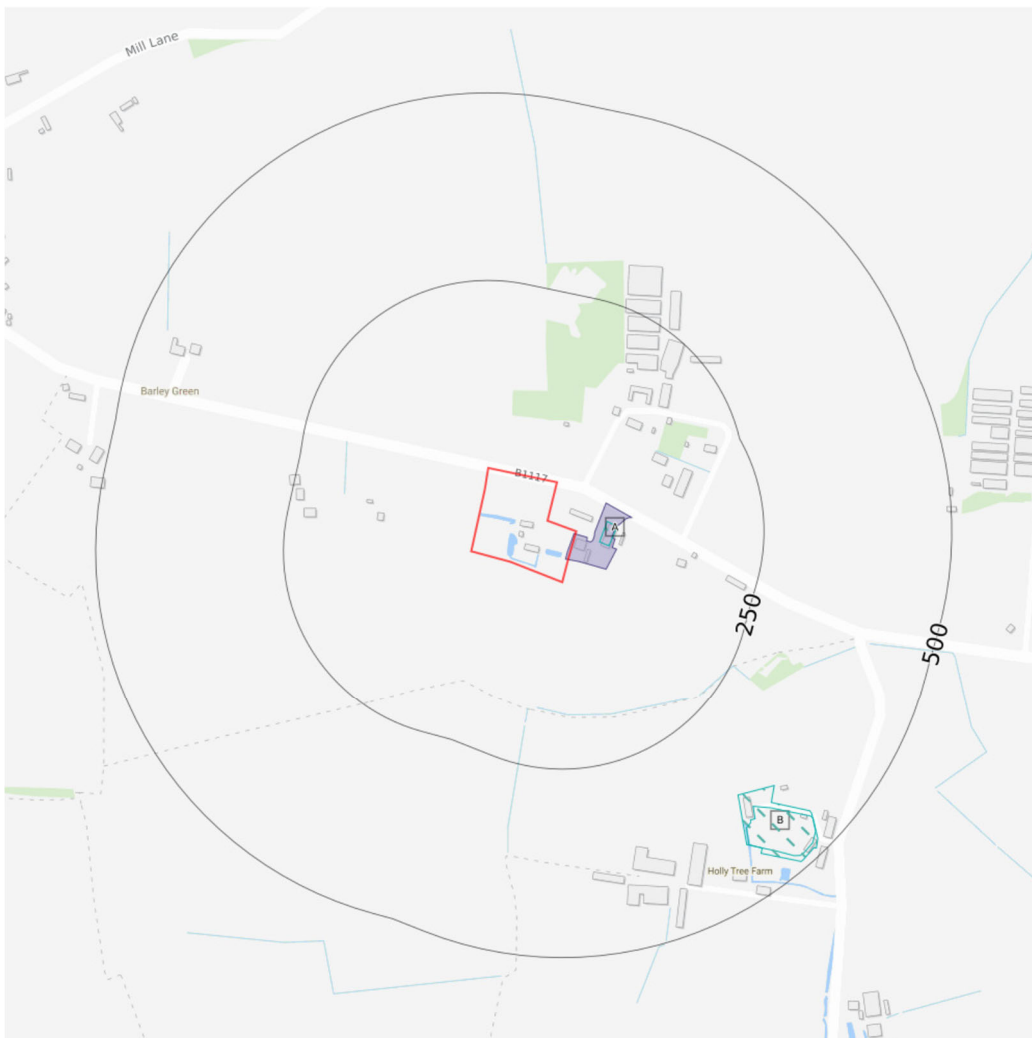
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1. Introduction

This report presents historical and environmental analysis of the environs along with details of a walkover survey of the site to ascertain the current condition of the site and its surrounding area. An environmental database report was commissioned to provide detailed background information on the historical uses in and around the site. A conceptual model has been developed on the basis of source-pathway-receptor to provide qualitative risk assessment of land contamination. A further walkover was undertaken Feb 26th 2024 to confirm the original findings unchanged.

2. Site Location

The site is located some 500m off Laxfield road in the Hamlet of Barley Green approx. 1.5km from the town of Stradbroke.



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3. Geology

BGS Geological mapping shows the bedrock to be CRAG GROUP – SAND and the superficial geology to be LOWESTOFT FORMATION DIAMICTON

The BGS maps show no boreholes with 50mm of the site and identify low to negligible risk of subsidence

4. Hydrology

The Cragg group is identified as a principal aquafer, while the superficial Lowestoft formation as a secondary, undifferentiated, aquafer of intermediate leaching potential. The site is not in a water source protection zone, the nearest abstraction point is a domestic supply 1.48km away.

There are no major surface water features in the vicinity, there are a number of ponds within the curtilage and on adjacent properties. These are covered in the environmental assessment which found significant numbers of roach and an absence of newts.

The site is not deemed as at risk from flood from rivers or sea, there are some records of surface water flooding on other properties within a 1km boundary.

5. Historical maps

The attached appendix shows some historical maps of the site from the earliest 1885 to date that the farmstead has remained in its current form except for the removal of a transverse wing to the East of the barn.

The reporting identifies an historical garage some 34m East of the site – no tanks are recorded within 500m of the site

Three Waste exemption sites are recorded ~ 400m South East and West of the site, there are no records of active or recent landfill

The reporting also identifies the historic Hoxne workhouse to the East now demolished.

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6. Hazardous gas sources

The BRE report - BR211 hazardous gas report indicates the site is not within an area where specific protection from Radon gas is required.

7. Current land uses around the site

With the exception of the garage to the East, the environmental database does not identify any uses which might have an effect on the site

8. Walkover

A walkover was conducted on the 23rd June 2020 to establish existing uses and details not evident from the environmental database search. A further walkover was undertaken Feb 26th 2024 to confirm the original findings unchanged.

Access to the site is via a shingle drive off Laxfield road. The site is predominately grass with a significant number of trees, the majority overgrown fruit trees. Grass around the barn and farmhouse is maintained and was visually in good health.

The interior of the barn has been used for domestic and garden storage, there was no evidence of staining on the floors from fuels of chemicals.

The ponds around the site show strong growth of vegetation and populations of fish.

No significant sources of contamination were identified during the walkover.

9. Preliminary conceptual model

The preliminary conceptual model collates the evidence gained from the environmental database and walkover to establish potential links which may exist between source/pathway/receptor – see over

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| Source of contamination | Pathway | Receptor | Probability | Consequence | Risk | Action |
|---|--|----------------------|--|--|----------|---|
| Potentially contaminated soils from recent and historical use | Contact, Inhalation, ingestion | End users | Low - Historic uses on site have generally been low risk, farming and domestic use | Medium - human end use in garden areas | Moderate | |
| | | Construction workers | | Mild - short term exposure during construction | Moderate | Diligence and observation during construction |
| | Percolation / migration of leachate / contaminants | Groundwater | Low - Historic uses on site have generally been low risk, farming and domestic use | Medium - principal and secondary aquifers unlay the site | Low | Diligence and observation during construction |
| | | Surface water | Low - Historic uses on site have generally been low risk, farming and domestic use - the ponds appear in good health | Medium - ponds and ditches on and around the site | Low | Diligence and observation during construction |
| | Direct contact | Buried concrete | Low - historic structures on site where removed some 60 years ago | Mild - robust receptor | low | Diligence and observation during construction |
| | | Water supply | Moderate - buried supplies could be contaminated by migrating leachates | Medium - potential of impact on potable water supplies | moderate | |
| Offsite uses | Gas / leachate migration | Human end users | Low - no tanks identified on adjacent garage site | Medium - chronic risk to human users | low | Diligence and observation during construction |
| | | Structures | | | low | Diligence and observation during construction |
| Radon gas | | Human end users | Low - site is outside risk of Radon | Medium - chronic risk to human users | low | |

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10. Conclusions

The environmental database, historic mapping and site walkover confirm the understanding that the site has been in use as a farmstead since the mid 1800's.

The database identifies one offsite potential source of contamination, the garage to the East which has no recorded tanks.

The above suggest the risk of contamination on the site is low. It is recommended that the builders carry out due diligence during any works on site to be aware of hidden potential contaminates and report and remediate same if they become evident during any works.