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Hansons Garden Centre

Hanson Garden Centres Ltd

Phase 1 Environmental Desk Study

March 2013

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Prepared By:		Checked:	
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Rev No	Date	Description	By	Checked
0	01.03.13	Initial Issue	-	-

Contents

1 PURPOSE AND AIMS

The purpose of this report is to identify the results of a desk study to establish potential sources of contamination which may affect the redevelopment of the site for residential use. Any contaminants identified will be assessed against a conceptual model to identify if there is a potential linkage with potential receptors.

The aim of this report is to allow Ribble Valley Borough Council to assess the site in accordance with the National Planning Policy Framework published by the Department of Communities and Local Government.

2 SITE LOCATION AND LAYOUT

2.1 SITE LOCATION

The site is in a rural location approximately 2km south of Clitheroe at Ordnance Survey grid reference SD738388. The site is bounded to the east by Whalley Road, to the west by Clitheroe Golf Club and to the north and south by open grazing farmland.

The site location plan is shown in Figure 1.

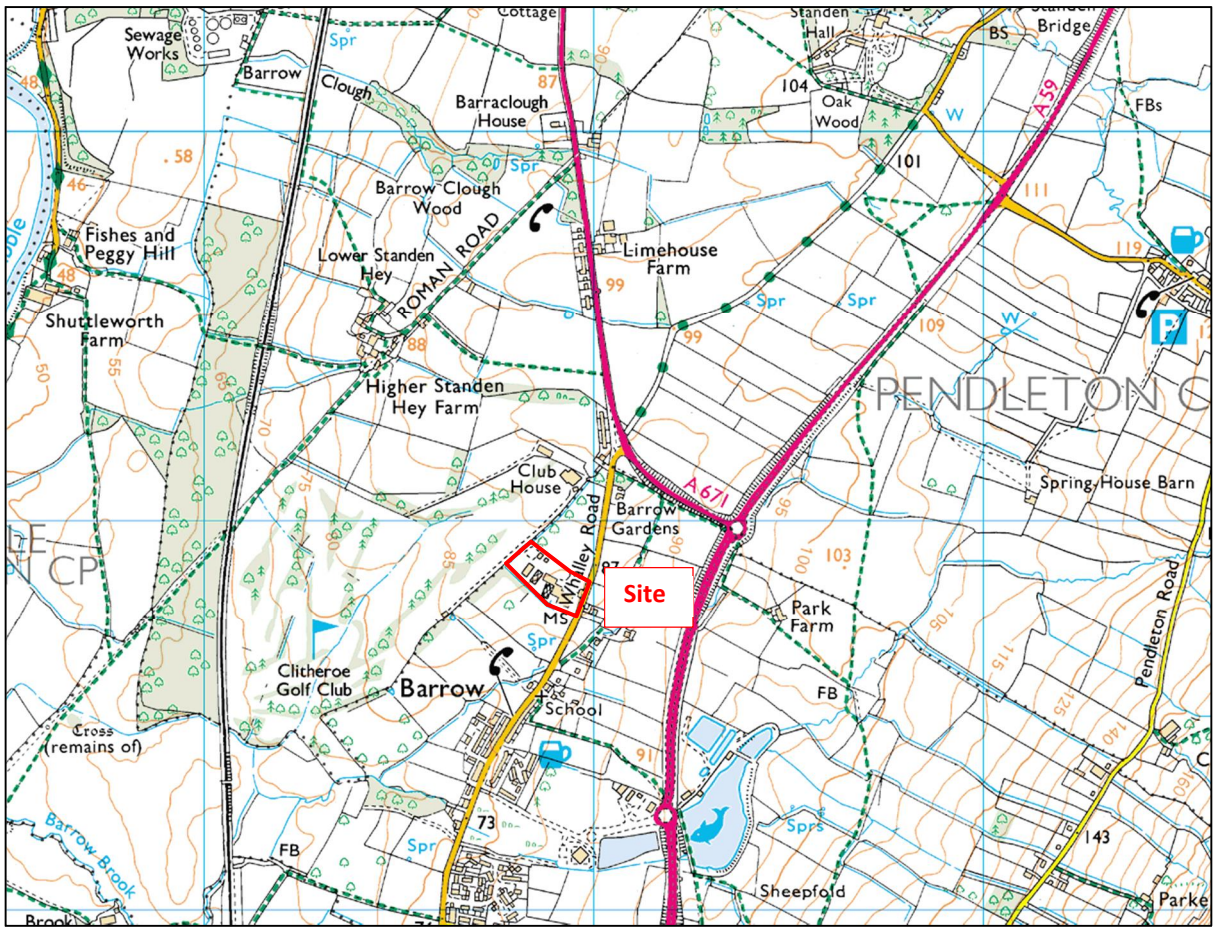

Figure 1. Site Location Plan (NTS)

2.1.1 Site Description

The site is currently occupied by Hansons Garden Centre which comprises a series of steel portal frame buildings, glasshouses and lightweight re-locatable buildings set within gravel and tarmac hardstandings.

The site falls down from the west and east boundaries towards the site centre and the general fall of the surrounding topography is down towards the south.

A topographical survey in included in Appendix A.

3 SITE HISTORY

A Landmark Information Group Envirocheck Report has been obtained for the site and is included in Appendix C. The earliest mapping available is the 1848 Lancashire and Furness County Series map at 1:10,560 scale

The site history is:

	On Site	Nearby
1848 1:10650 scale	Open farmland	Field immediately to south and field on north east side of Whalley Road described as 'nursery'. Drainage shown along field boundaries. Barrow Bridge Print Works approx. 300m to south
1893 1:2,500 scale	No change	Field immediately to south shown as partially wooded. Field to north east of Whalley road shown as part of 'Barrow Gardens'
1895	No change	Barrow Bridge Print Works now shown as Whalley Abbey Print Works
1912	No change	Little change. Field to south no longer shown as wooded
1932	No change	Well shown in southern part of field to south. Possible pond beyond north west boundary
1967	Barrow Nurseries shown on site. 'Issues' shown on site in north east quadrant.	Well in field to south now shown as a spring. Sinks shown beyond south east boundary. Possible pond beyond north west boundary no longer shown. 2 houses shown on south east side of Whalley Road. Field beyond north west boundary shown as Clitheroe Golf Club
1970	No change	Print works now shown as engineering works
1975	No change	A59 by-pass shown 300m to east
1983	No change	Little change (partial coverage)
1992	No change	Little change
1995	Additional building in north west quadrant	Little change (partial coverage)
2006	Extension shown to west of main buildings	Little change
2012	Extension shown to east of main buildings	Little change

4 ENVIRONMENTAL SETTING

4.1 GEOLOGY

A review of the BGS 1:50,000 scale geological map Sheet 68, Clitheroe shows the site is underlain by glacial till . The solid strata are recorded as Mudstones in the 'Clitheroe Limestone Formation and Hodder Mudstone Formation' which are undifferentiated. An extract from the geological map is shown in Figure 2.

There is a fault shown approximately 2km to the north west of the site trending NE to SW. There is a second fault shown approximately 700m south east of the site trending west to east. The western end of this fault terminates at the A59 by-pass.

There are no recorded landslips affecting the site.

The site is not in an area affected by coal mining.

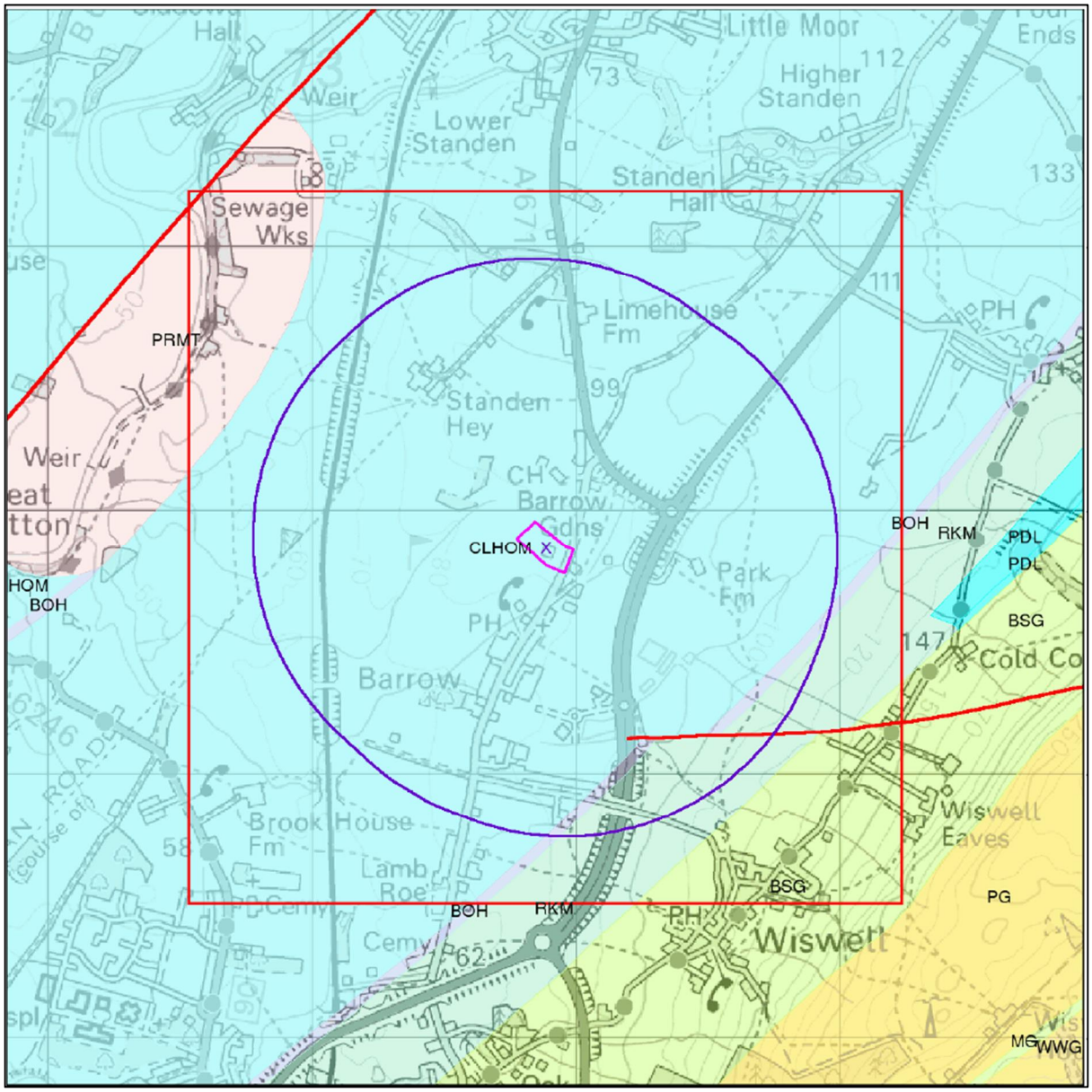

Figure 2. Site Geology

4.2 HYDROLOGY

Barrow Brook is approximately 100m to the south east and flows in a south westerly direction. There are issues, springs and field drains surrounding the site. The general flow of the surface water is in a south westerly direction.

4.2.1 Groundwater Vulnerability

The soils are classified as having a low leaching potential. As such any pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment.

4.2.2 Drift Deposits

The drift deposits are classified as having a low permeability

4.2.3 Aquifer Designations

The superficial aquifer is designated as unproductive. The bedrock aquifer is designated as a Secondary Aquifer – A. These are defined by the Environment Agency as *'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.'*

4.2.4 Water Abstractions

There are no recorded abstraction points within 500m of the site.

4.3 RADON

The site is not in an area where radon protection measures are required.

4.4 POLLUTION INCIDENTS AFFECTING CONTROLLED WATERS

There are no recorded pollution incidents to controlled waters on site. There are 3 pollution incidents within 100m of the site which affected Barrow Brook in 1992 and 1993, none of which would affect the site now. There has been no enforcement of prohibition notices within 1000m of the site.

4.5 DISCHARGE CONSENTS

There is one discharge consent for surface water from the site which was revoked in 1994. There are no other discharge consents within 500m of the site.

5 LAND USES

5.1 CURRENT SITE USES

The site is currently used as a garden centre comprising a series of steel portal frame buildings, glasshouses and lightweight re-locatable buildings.

Externally there are tarmac and gravelled car parking and display areas and an unmade storage area.

5.1.1 Site Reconnaissance

A site reconnaissance visit was made on 20th February 2013. Photographs are included in Appendix B.

The principal points identified in the site reconnaissance are:

1. There are two piles of demolition material in the rear storage area. These comprise masonry rubble, concrete roof tiles, timber, plasterboard and metal. There are also at least two old refrigerators in the area.
2. In the rear portal frame building is a preservative bath for dipping timber wall panels. The building has a concrete floor slab and there did not appear to be contamination arising from the dipping bath.
3. There are 3 fuel oil storage tanks on site. One by the rear glasshouse is a twin wall plastic tank; there are steel tanks inside masonry bunds adjacent to the main shop building and the front lightweight building.
4. There is a vented septic tank under the children's play area. There is a plastic drain outlet into the boundary ditch adjacent to the septic tank. It is not clear if the outlet is from the septic tank or the roof drainage from the adjacent buildings.
5. There is an old articulated lorry trailer in the side storage area.
6. There are a number of portable gas cylinders around the site.

5.2 HISTORICAL LAND USES

The historical mapping shows the site has been open farmland up until circa 1967. Since then it has been a garden centre which has gradually be extended.

5.3 SURROUNDING LAND USES

The site is in a rural location and is bounded to the east by Whalley Road, to the west by Clitheroe Golf Club and to the north and south by open farmland.

5.4 WASTE AND LANDFILL SITES

There are no registered historical or current landfill sites within 500m of the site.

5.5 POTENTIALLY CONTAMINATIVE TRADE USES

There are no potentially contaminative trade uses registered for the site. There is one contemporary trade directory entry within 250m of the site and another within 500m of the site. Neither are likely to affect the site.

5.6 POTENTIALLY CONTAMINATIVE ENERGY USES

There are no potentially contaminative energy uses on the site. The historical mapping does not show any sub-stations on or near the site.

5.7 PROPOSED SITE USE

It is proposed to develop the site for residential use. An outline development proposal was not available at the time this report was prepared. For the purposes of the conceptual model it is assumed that the development will comprise houses with gardens and public open space.

6 PRELIMINARY (QUALITATIVE) RISK ASSESSMENT

6.1 POTENTIAL SOURCES OF CONTAMINATION

With the exception of the present day garden centre, the site has been used as agricultural land and so the risk of contamination is considered to be very low.

The potential sources of on-site contamination identified are from any contaminants which may be present in the two piles of demolition material, although from brief a visual inspection it appears that the material is inert. The refrigerators and portable gas cylinders are not considered as sources of contamination as these are readily identifiable and removable. Although there was no evidence seen of fuel oil spillages, historical spillages cannot be ruled out.

6.2 POTENTIAL PATHWAYS

The pathways for the potential contaminants identified are, direct contact, ingestion or inhalation of solid or liquid contaminants.

6.3 POTENTIAL RECEPTORS

Potential receptors are the underlying aquifer, construction workers, future building occupiers, structures and services.

Conceptual Model

Hazard	Source	Pathway	Receptor	Risk
Solid contaminants	Hidden material not identified within the demolition material in the rear storage area	Direct contact, ingestion, inhalation	Construction workers	Very low
		Direct Contact	Structures and services	Very low
		Migration	Groundwater	Very low
		Direct contact	Landscaping	Very low
Liquid contaminants	Fuel oil spillages	Direct contact	Structures and services	Low
		Migration	Groundwater	Low
Landfill gasses	None	-	-	-
Radon	None	-	-	-

7 RECOMMENDATIONS FOR INTRUSIVE INVESTIGATIONS

This desk study indicates that the site can be considered to be uncontaminated and so no specific further investigations are required to assess contamination.

As part of the geotechnical investigations which will be required to determine the engineering properties of the underlying ground, it will be prudent to carry out screening tests for common contaminants. Close visual, olfactory monitoring and spot testing should be carried out in the areas of the fuel oil tanks to check for the presence of any fuel oil spillages.

8 GENERAL REMARKS

This report is for the sole use of Hanson Garden Centres Ltd and their immediate advisors in connection with the development of the subject site for residential use. It shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express permission of Avie Consulting Ltd. Avie Consulting Ltd shall have no liability for any use of this report other than for the purposes for which it was originally prepared.

APPENDIX A

Topographical Survey


Location Plan
Scale 1:2000
edward | architectural services ltd
Holden Surveys Ltd
Title. Site Plan
Site. Hanson Garden Centre
Whalley Rd
Barrow
BB7 9BA
Dwg No. EAS_12_Hanson
Sheet No. 1
COMPUTER GENERATED DRAWING - DO NOT ALTER
Lynfield
MS
Sinks
Track
374000m
373900m
373800m
438900m
438800m
87.2m

APPENDIX B

Site Reconnaissance Photos


1
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Photograph 1 Rear storage area

Photograph 4. Timber preservative bath

Photograph 2. Tipped demolition material

Photograph 5. Kitchen grease trap covers

Photograph 3. Tipped demolition material

Photograph 6. Twinwall plastic heating fuel tank

Photograph 7. Tarmac display area

Photograph 10. Septic tank covers in foreground

Photograph 8. Gravelled display area

Photograph 11. Septic tank vent between trees

Photograph 9. Steel heating fuel tank in bund behind timber enclosure by building

Photograph 12. Outfall pipe into ditch

Photograph 13. Side storage area

Photograph 16. Front car park

Photograph 14. Steel heating fuel tank inside bund

Photograph 17. Front car park

Photograph 15. Side access road

Photograph 18. Front car park

APPENDIX C

Landmark Information Group Data