PHASE I AND PHASE II INVESTIGATION

LAND OFF FEWCOTT ROAD, FRITWELL, OXFORDSHIRE. OX27 7QA

Prepared for: **Cala Homes (Chiltern) Ltd**

Report Reference: BC195 RE001

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The Brownfield Consultancy

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APPENDICES

PHASE I AND PHASE II SITE INVESTIGATION

LAND OFF FEWCOTT ROAD, FRITWELL, OXFORDSHIRE. OX27 7QA

1 INTRODUCTION

The Brownfield Consultancy was instructed by Cala Homes (Chiltern) Ltd to undertake a Desk Top Study and Contaminated Land Investigation at the above site.

The site comprises of a square plot of paddock land on the south eastern outskirts of Fritwell, Oxfordshire. Access is off Fewcott Road. The sites long axis orientates northeast-southwest. It is proposed to apply for planning permission for the construction of 28No. two storey houses with associated access roads, driveways, gardens and POS area excluding the area shown as paddock land hatch in blue. The proposed layout is included in Appendix A. The excluded land is discussed in Section 3 & 4.

The purpose of the desk top study and site investigation is to provide an assessment of the geotechnical engineering properties of the soils and the extent of any contamination at the site.

This report is subject to limitations which are set out in Appendix I. This report is provided in the context of the stated development proposals and should not be used in a different context.

2 SITE DESCRIPTION

The site comprises of a roughly square plot of land on the south eastern outskirts of Fritwell, Oxfordshire. Access is off Fewcott Road in the far northeast of the site. To the immediate northwest of the site entrance is a small triangular plot of land currently used as a storage area for a roofing company. In the northeast of the site, immediately off Fewcott Road, are two stable blocks. The ground surfacings in the stable area are tarmac and concrete.

The remainder of the site is grass covered with the exception of a rectangular riding arena on the central south-eastern boundary, which has an artificial covering of sand. A foul sewer crosses the site in a south-easterly direction, below the central southwestern portion of the site. A drawing showing the line of the foul sewer is denoted in the drawing overleaf.

The site is bounded to the south, east and north-east by agricultural fields. To the immediate North is an allotment with Fewcott Road and agricultural fields beyond. To the immediate west and northwest lie residential houses.

3 PREVIOUS INVESTIGATIONS

The site has been subject to 3No. site investigations by the Brownfield Consultancy. These are listed below, followed a short summary of the works and the findings.

3.1 Fewcott Road, Fritwell – Report on Ground Conditions (Ref: BC195 L001) 29/12/15.

The investigation comprised 14No. mechanically excavated trial pits denoted TP1-TP14 (incl.) to a maximum depth of 2.50m. Their locations are presented on the drawing overleaf.

Exploratory Hole Location Plan 2nd November 2015.

Line of sewer crossing east-west across the site.

Made Ground was encountered in TP7 and TP10 – TP14 (incl.) to a maximum depth of 1.80m in TP13. The thickest sequences of Made Ground were encountered along the south western boundary of the site. This raised area was associated with the line of the foul sewer.

Underlying Made Ground, limestone of the Great Oolite Group was encountered to the termination depth of the pits. Although a contamination investigation was not part of the brief, Made Ground in TP7 and TP10-TP13 (incl.) recorded localised occurrences of ash. Asbestos containing roof sheeting was identified in TP11 and TP13. A piece of suspected asbestos from TP11 was scheduled to analytical laboratory analysis and the sample was confirmed as chrysotile containing roof sheets. At the time, a more detailed contamination investigation was recommended.

Recommendations for foundations were included and these are reproduced in Section 14.

3.2 Fewcott Road, Fritwell – Desk Top Study and Contaminated Land Assessment (Ref: BC195 L002) 8/4/16.

The findings of the Desk Top Study are reproduced in Section 4 – 8 (incl.) below. Supplementary intrusive fieldwork was carried out on 4th March 2016 and comprised 15No. mechanically excavated trial pits denoted TP15-TP29 using a JCB 3CX. TP15, TP16 and TP17 comprised of trial trenches excavated in a northwest-southeast orientation. Their locations are presented on the drawing below:-

Exploratory Hole Location Plan 4th March 2016.

In trial trench TP15, rare fragments of ACM were observed. However 3No. tubs of soil matrix were submitted to analysis for asbestos at depths of 0.50m, 0.70m and 0.90m bgl from various lengths along the pit extending in a south-easterly direction. Asbestos fibres were not recorded.

Similarly, in trial trench TP16, rare fragments of ACM were observed yet 3No. tubs of soil matrix did not recorded asbestos at depths of 0.50m, 0.80m and 0.80 - 0.90m bgl from various lengths along the pit extending in a south-easterly direction.

Asbestos was not observed in TP17.

Asbestos was recorded in TP27 as 'Chrysotile - Hard Cement Type Material and Loose Fibres'. TP27 was excavated into a small 1m high stockpile of soil in the north western corner of the site. Numerous pieces of suspected asbestos sheeting were visually confirmed at this location.

TP28 and TP29 were excavated in a small triangular part of the site in the far northern corner, directly west of the site entrance, which was being used as storage for a roofing company. Samples of Made Ground from both pits were submitted to asbestos testing. Asbestos was absent in the sample from TP29. However 'Chysotile - Hard Cement Type Material' was recorded in TP28 at 0.05m bgl.

It was concluded that the deeper sequences of Made Ground were associated with the line of the foul sewer. The owner of the site stated that the source of the asbestos contaminated backfill was the due to the construction of the foul sewer which coincided with the construction of the housing estate to the west.

3.3 Fewcott Road, Fritwell – Results of Soakaway Testing (Ref: BC195 L003) 21/4/20.

Soakaway tests were undertaken within five trial pits denoted SA1, SA2, SA3, SA4 and SA6. The results were variable.

4 REPORT STRUCTURE

The sections that follow combine the results of both investigations and makes recommendations for further investigations. Further investigations are considered necessary due to gaps in the dataset, most notably the allotment area to the immediate north and northeast, which was only recently acquired and has, to date, not been subject to intrusive investigation. For ease, we will refer to this new area as 'Area B' and the main site, already subject to investigation, as 'Area A'. Additionally, the strip pf land along the southwestern boundary where asbestos impacts were recorded, is no longer to be redeveloped and will be retained by the current owner as Paddock Land.

A revised exploratory hole location plan over the new proposed layout is included in Appendix A. The trial pit locations in the strip of land being retained by the owner have been omitted from the latest / revised plan. However for completeness, all data, including soil descriptions, chemical analysis and interpretation are included in the following sections.

5 GEOLOGY, HYDROLOGY AND HYDROGEOLOGY

5.1 Geology

Reference to BGS online mapping indicates that the site is immediately underlain by the Great Oolite Group also known as White Limestone. Superficial deposits are not denoted. The following table details the risk of geological hazard potential on or underlying the site as identified in the Groundsure Enviroinsight Report included in Appendix C.

Geological Hazards

Hazard	Risk
Compressible ground	Negligible
Landslide ground	Negligible
Running sand	Negligible
Shrink and swell	Negligible
Collapsible Rocks	Very Low
Ground dissolution	Very Low
Coal Mining Area	No
Mining Area	No

Thus geological hazards are not considered to present a constraint to development.

5.2 Hydrology and Flood Risk

The closest surface water feature is a Tertiary River located 242m southwest of the site. There are no water quality records within 1500m of the site.

There are no surface water abstractions within 2000m of the site.

The site is not located within an area considered at risk of flooding from rivers or the sea. No further consideration of flood risk is undertaken in this report and specialist flood risk advice should be sought with regards to drainage and flooding.

5.3 Hydrogeology

The Groundwater Vulnerability map contained in the Groundsure Report indicates that the Great Oolite is designated as a 'Principal Aquifer' defined 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. These are generally aquifers formerly classified as minor aquifers'

No potable groundwater or groundwater abstraction licenses are recorded within 500m of the site.

6 SITE HISTORY

The history of the site and the surrounding area has been determined from historical map extracts. Copies of these extracts are included in Appendix B.

6.1 On Site History

The earliest historical map dated 1880 denotes the site as well as Area B as an open fields separated by field boundaries. There are no further significant changes.

The following information was provided by the current owner of the site:-

The stables at the north end of the site were constructed in the years, 1998, 1999 and 2000. The land has, since the early 1940's and possibly previous to that, been used as a paddock for livestock. Up to the 1980's it was used as a lairage for animals that were destined to go to the slaughter house. During the 1980's a pony was introduced. The slaughter house closed in the early 2000's and since then it has only been used for two horses.

Scrutiny of Google Earth historical satellite imagery from 1999 to present day indicates the following:-

2004 – Area B appears to be a planted allotment. Area A is an open field with some limited storage of materials in the northeast and around the entrance off Fewcott Road.

2006 – Area B no longer appears to be cultivated. There is a small rectangular structure in the southeast of Area B.
Area A is split into four separate paddocks/fields with a stable block and off road parking in the far northeast. A rectangular training arena with artificial surface is present in the in the central area adjacent to the southeast boundary.

2009 – Area B appears to be cultivated once again. In Area A the only addition is a track that leads from the stable block to the rectangular paddock in the southeast of the site.

2017 – the structure in the east of Area B is now removed but there is still evidence of material storage. A second smaller stable block has been constructed to the west of the existing block.

In 2015, during the investigation, the far south eastern part of Area B was being used as storage for a roofing company. We were not permitted entry into the western and central areas of Area B.

There are no further changes.

6.2 Off-Site History

Off site, the earliest historical map denotes the site as being immediately surrounded by agricultural fields with Fewcott Road to the immediate . A small quarry is denoted 110m south east of the site. The village of Fritwell is located 100m west of the site, comprising residential dwellings, a School and a Post Office running adjacent to the north-south trending 'East Street'. Residential dwellings are also located 500m northeast of the site.

The 1923 map denotes a Railway Line approximately 100m southwest of the site.

At some date between 1965 and 1976 the quarry is no longer denoted, presumably backfilled.

The 1976 map denotes some further residential expansion 50m to the northwest.

The 1981 map denotes further residential expansion of the village of Fritwell.

At some point between 1992 and 2002, houses have been constructed on land adjacent to the western boundary of the site.

There are no further changes.

7 INFORMATION HELD BY STATUTORY AUTHORITIES

This section details any relevant information held in the registers maintained by statutory bodies as identified in the Groundsure Enviroinsight Report in Appendix C.

7.1 Waste Management Facilities

The Groundsure Report identifies a landfill site 47m south east of the site at Lodge Farm, Fritwell. Materials deposited were 'inert'. There is no further information on this site. The historical maps indicate that the site was backfilled (completed) at some date between 1956 and 1976.

7.2 Historical Industrial Uses

There are no records of industrial or current potentially contaminative uses on the site.

7.3 Environmental Permits and Registers

There are no active permits and registers within 500m of the site.

7.4 Pollution Incidents to Controlled Waters

Records held by the Environment Agency identify no pollution incidents to controlled waters or land within 500m of the site.

7.5 Discharge Consents

The Groundsure Report identifies 1No. licensed discharge consent within 500m of the site. This is located at Fritwell Sewage Treatment Works, 431m and relates to storm overflow.

7.6 Fuel Sites

The Groundsure Report identifies no fuel station entries within 500m of the site.

7.7 Radon

The Groundsure Report indicates that no radon protection measures are necessary.

7.8 Environmentally Sensitive Areas

The site is located within a Nitrate Vulnerable Zone (NVZ).

8 UK CONTAMINATED LAND LEGISLATIVE FRAMEWORK

8.1 Legislation on Contaminated Land

Part IIA of the Environmental Protection Act, 1990, enacted by Section 57 of the Environment Act 1995 and the associated Contaminated Land (England) Regulations 2000 (SI 2000/227) was introduced on 1 April 2000.

Part IIA provides a statutory definition of contaminated land:

"any land which appears to the Local Authority in whose area it is situated to be in such a condition by reason of substances in, on or under the land, that significant harm is being caused, or that there is a significant possibility of significant harm being caused, or that pollution of controlled waters is being or is likely to be caused".

Controlled waters are considered to be all groundwaters, inland surface waters and estuarine and coastal waters.

To determine whether land falls under the Part IIA definition of contaminated land the site should be evaluated in the context of a risk based framework. The assessment of contaminated land is typically a two-phase process which is initially based on a qualitative assessment of the likelihood of complete pollution linkages, with a quantitative element which seeks to determine the degree and the significance of the harm. Land is only defined as 'Contaminated Land' if a "significant pollutant linkage" is present.

A pollutant linkage must comprise of the following:-

Source - a contaminant or substance which is located in, on or under the land and has potential to cause harm to human health, water resources or the wider environment.

Pathway - the means or route by which a source can migrate;

Receptor - something which could come to harm, including human health, water resources, surface water courses or the wider environment.

The responsible authority then needs to consider whether the identified pollution linkage:

is resulting in significant harm being caused to the receptor in the pollutant linkage;

presents a significant possibility of significant harm being caused to that receptor;

is resulting in the pollution of controlled waters, which constitute the receptor; or is likely to result in such pollution.

If a pollutant linkage is demonstrated, then the Part IIA legislation provides powers for remedial action to be enforced by the Local Authority in whose area the contaminated land is situated.

9 CONCEPTUAL MODEL

9.1 Potential Sources of Contamination

Potential On-site Sources of Contamination

- Prior to approximately 2000, Area A was agricultural and then it became a paddock and stables. Two stable blocks were erected in 2004 - 2006. These uses are a potential source of metals, hydrocarbons and asbestos.

- Since approximately 2000, Area B appears to have been an allotment with material storage in the east of the site used by a roofing company and a small structure which was subsequently removed. This is a source of metals, hydrocarbons and asbestos.

- The site walkover did not identify potentially polluting activities such as fuel storage containers/vehicles, agri-chemicals or waste storage facilities.

Potential Off-Site Sources of Contamination

- No potential off site sources have been identified. A small quarry was permitted to accept inert waste located 47m southeast of the site. However, the site was backfilled and completed at some point in between 1956 and 1976. Waste inputs during the period of filling may have included putrescible waste. However, any materials that could give rise to gas generation will long since have passed their peak gas generation phase. Further mitigation will be provided through the ventilation of suspended floors in all new build.

9.2 Receptors

The site is to be redeveloped for residential houses with private gardens. The site overlies a Principal Aquifer. However the former use of the site would not suggest that groundwater resources are at risk of impact. The primary receptors, considered to be potentially at risk from any identified contamination are as follows:-

Human Health

- Construction workers during the redevelopment phase.
- Residential end users.

9.3 Pathways

Potential contaminant migration pathways considered relevant to the site are:-

Human Health

- Ingestion of contaminated soils and dust particles.
- Direct physical contact with near surface soils and contaminated dust particles.
- Inhalation of wind blown contaminated dust.
- Inhalation of hydrocarbon vapours migrating vertically into the atmosphere.
- Inhalation of hydrocarbon vapours, migrating vertically into buildings and confined spaces.
- Cultivation and consumption of vegetables in contaminated soils.

Infrastructure

- Water supply pipework.

9.4 Pollutant Linkages

A 'pollutant linkage' describes the relationship between a contaminant, a pathway and a receptor, a 'pollutant' being the contaminant in a pollutant linkage. A contaminant, pathway and receptor must all be present for a pollutant linkage to exist, which forms the basis for determination that a piece of land is Contaminated Land. Potential sources, pathways and receptors have been assessed. The following table summarises the significant pollutant linkages potentially active at the site:-

Potential Source-Pathway-Receptor Linkages for Human Health Risk Assessment

Source	Pathway	Receptor
Contaminated soils	Ingestion of soil	On site female child: 0 - 6 yrs old
		On site construction worker
	Ingestion of household dust	On site female child: 0 - 6 yrs old
	Ingestion of contaminated vegetables	On site female child: 0 - 6 yrs old
	Ingestion of soil attached to vegetables	On site female child: 0 - 6 yrs old
	Dermal contact	On site female child: 0 - 6 yrs old
		On site construction worker
	Dermal contact with household dust	On site female child: 0 - 6 yrs old
	Inhalation of fugitive soil dust	On site construction worker
		On site female child: 0 - 6 yrs old
	Inhalation of fugitive household dust	On site construction worker
	Inhalation of vapours in outdoor air	On site female child: 0 - 6 yrs old
		On site construction worker
	Inhalation of vapours in indoor air	On site female child: 0 - 6 yrs old
	Contact with contaminated soils	Water supply pipework

Based on the sites former and current use, the overall risk from land contamination at the site is considered to be 'low to moderate'. However this would need to be confirmed by appropriate intrusive investigation, testing and assessment of the results of the investigation. It is considered unlikely that the site would be classified as Contaminated Land under Part 2A of the EPA 1990.

10 FIELDWORK

The fieldwork is summarised in Section 3 and comprised 29No. trial pits and 6No. soakaway pits. The soakaway report is presented in Appendix G.

The site work was undertaken by The Brownfield Consultancy, with the ground investigation procedures and sample descriptions based on BS 5930 (2015) 'Code of Practice for Site Investigations' and BS 10175 "Investigation of potentially contaminated sites - Code of Practice". The locations of the exploratory holes are shown on the Drawing on Page 3. A revised drawing denoting the pits excavated in the current proposal area is included in Appendix A.

11 LABORATORY TESTING

11.1 Environmental

A programme of chemical laboratory testing was scheduled by the Brownfield Consultancy on 23No. soil samples taken from various depths in the Made Ground recovered from the trial pits. The samples were placed into suitable containers for the required chemical analysis.

All samples were transported, on the day of collection to I2 in Watford which is accredited under UKAS and MCerts. The following table summarises the contaminants scheduled:-

Table 1 Summary of Soil Chemical Laboratory Testing Suites

Determinant	No
CLEA Metals	10
Polycyclic Aromatic Hydrocarbons	4
Asbestos	13
WAC	1

The results of the laboratory chemical testing are interpreted in Section 13 and presented in full in Appendix F.

12 GROUND AND GROUNDWATER CONDITIONS

The ground conditions encountered during the intrusive investigation were consistent with the published geological map. A variable thickness of Topsoil or Made Ground overlies weathered limestone (Great Oolite Group) grading into limestone bedrock.

A summary of the strata encountered during the investigation is described in the following sections but for full details of the strata encountered, samples taken, results of any in-situ testing and any other relevant information, reference should be made to the exploratory hole logs presented in Appendix D.

12.1 Topsoil

Topsoil was encountered in TP1-TP6 (incl.) and TP8 and TP9, TP18-TP22 (incl.), TP24 and TP26. Materials comprised soft dark brown clay with varying quantities of sand and gravel. Gravel comprised buff brown ooidal limestone.

12.2 Made Ground

During the preliminary geotechnical investigation, Made Ground was encountered in TP7 and TP10 – TP14 (incl.) to a maximum depth of 1.80m in TP13.

The Made Ground materials were variable comprising horizons of both soft and firm cohesive and loosely voided granular material, typical of a demolition derived fill material. Foreign objects included concrete slabs, red brick, plastic sheeting, aluminium, aluminium cans, tarmac and rope. Rare Small pieces of asbestos containing roof sheeting was identified in TP11 and TP13.

During the supplementary contamination investigation, Made Ground was encountered in TP15, TP16, TP17, TP23, TP25 and TP27-TP29 (incl.)

TP15, TP16 and TP17 were trial trenches with lengths of 17m, 7m and 8m respectively. The trenches were excavated to determine the extent of the previously identified Made Ground along the south west of the site. In general, the materials were similar to those encountered in TP10-TP14. Rare occurrences of suspected asbestos sheeting were recorded at various lengths across the trench in TP15 and TP16. In TP17 concrete was encountered at a depth of 0.80m bgl, tentatively identified as the foul sewer. The materials overlying the sewer comprised of granular reworked weathered oolite and were considered innocuous.

TP23 and TP25 were excavated to delineate the Made Ground recorded in TP7. Made Ground was encountered to a maximum depth of 0.60m in TP23 and materials comprised soft brown

clay with varying quantities of sand and gravel. Gravel comprised limestone and rare concrete and brick.

TP27 was excavated into a small 1m high stockpile of soil in the north western corner of the site. Made Ground materials comprised dark brown and grey gravel and cobble of limestone, brick and concrete with varying quantities of clay and sand. Numerous pieces of suspected asbestos sheeting were encountered.

TP28 and TP29 were excavated into a small triangular part of the site in the far northern corner, directly west of the site entrance, which has been used as storage for a roofing company. Made Ground was encountered to a maximum depth of 0.30m in TP29. Materials comprised loose black and grey slightly clayey very sandy gravel of tile, brick and concrete. Rare wire and a plastic bag was also recorded. Visible asbestos was not recorded in this area.

12.3 Great Oolite Group

The Great Oolite Group was encountered in all trial pit locations. The base of the Great Oolite Group was not encountered.

An upper (weathered) cohesive unit comprising of firm brown clay with varying quantities of sand and gravel was encountered in all exploratory hole locations. The unit was locally absent in locations where Made Ground was encountered namely TP7, TP10-TP14, TP15-TP17, TP23 and TP25.

Underlying the cohesive unit, the Great Oolite comprised of a weathered buff brown granular unit of gravel and cobbles of limestone in a clay matrix with varying quantities of sand. The base of this unit was encountered at depths ranging from 1.00m – 2.50m bgl.

Below this granular unit, Great Oolite bedrock was encountered. Each pit was terminated upon the instruction of the machine driver as further excavation may have damaged his bucket teeth. It must be noted that the term bedrock has been used to define stratum that a JCB 3CX was unable to penetrate. It is possible that a heavier excavator could penetrate this strata by exploiting joints or fissures within the limestone.

12.4 Groundwater

Groundwater was encountered in TP12 only. A moderate ingress was recorded at 2.35m bgl in the granular Great Oolite, immediately above the bedrock. After 30 minutes the water level was recorded at 2.30m bgl.

13 HUMAN HEALTH QUANTITATIVE RISK ASSESSMENT

Qualitative assessment of risks may be sufficient in many cases to eliminate the possibility of significant pollutant linkages. However, quantitative risk assessment is formally required to determine whether there is a 'significant possibility of significant harm being caused' (SPOSH). Part IIA of the Environmental Protection Act 1990 recommends that ‘authoritative and scientifically based guideline values for concentrations of the potential pollutants in or under the land’ be used to quantify the risk posed by contamination.

Under the Planning Regime a quantitative risk assessment can be used to decide whether the site is suitable for the proposed use. In addition, the National Planning Policy Framework (March 2012) also indicates that after remediation as a minimum land should not be capable of being determined as contaminated land under Part IIA.

13.1 Current UK Screening Values

The UK technical guidance for assessing risks to human health is issued from various UK bodies. New and updated screening values in the form of provisional Category four Screening Levels (C4SL) (published in 2014) and Suitable for Use Levels (S4UL) (published 2015) have been produced by DEFRA and CIEH / LQM respectively using the EA's Contaminated Land Exposure Assessment (CLEA) software.

13.2 C4SL

Revision to the statutory guidance in 2012 presented a four category system for considering contaminated land under the Part 2A regime.

The system comprises of four levels which range from category 4 where risk levels are considered acceptable (no risk of harm or possibility of significant harm) up to Category 1, where the risk of harm is unacceptably high. The decision to determine a site as contaminated land under Part 2A resides between Category 2 and Category 3.

The purpose of the C4SL is to provide a simple test for deciding that land is suitable for use and 'definitely not' contaminated land under Part IIA. They describe a level of risk that is above minimal but is still low.

Six contaminants have been assigned provisional C4SL: arsenic; benzene; benzo[a]pyrene; cadmium; chromium (VI) and lead for the standard land uses (residential with and without plant uptake, allotments, commercial and public open space (parks and residential). It is noted that no values have been published for Category 3 to Category 1 and that if recorded, an exceedance of C4SL does not necessarily indicate SPOSH.

13.3 S4UL

The LQM / CIEH S4UL represent generic assessment criteria based on minimal or tolerable risk that are intended to be protective of human health. They represent values above which further assessment of the risks or remedial actions may be needed. S4UL have been derived for a comprehensive list of organic and inorganic determinants.

14 SOIL CHEMISTRY

14.1 Results

The results of chemical testing of 23No. samples of near surface soils are compared with the S4UL and C4SL for a residential with plant uptake end use. These comparisons are summarised in the following table:-

Comparison of Soil Chemical Test Results with Guideline Values

Determinant	Maximum Measured Concentration (mg/kg)	LQM S4UL /C4SL Residential (mg/kg)	No. of tests carried out	No. of exceedences
Arsenic	19	37	10	0
Cadmium	0.4	11	10	0
Chromium (total)	27	910	10	0
Mercury	<0.3	1.2	10	0
Lead	120	200	10	0
Nickel	21	180	10	0
Selenium	2.7	250	10	0
Copper	34	2400	10	0
Zinc	210	3700	10	0

Determinant	Maximum Measured Concentration (mg/kg)	LQM S4UL /C4SL Residential (mg/kg)	No. of tests carried out	No. of exceedences
Naphthalene	<dl	2.3	4	0
Acenaphthylene	<dl	170	4	0
Acenaphthene	<dl	210	4	0
Fluorene	<dl	170	4	0
Phenanthrene	0.22	95	4	0
Anthracene	<dl	2400	4	0
Fluoranthene	0.41	280	4	0
Pyrene	0.37	620	4	0
Benzo(a)anthracene	0.28	7.2	4	0
Chrysene	0.23	15	4	0
Benzo(b)fluoranthene	<dl	2.6	4	0
Benzo(k)fluoranthene	<dl	77	4	0
Benzo(a)pyrene	0.20	2.2	4	0
Indeno(1,2,3-c,d)pyrene	<dl	27	4	0
Dibenzo(a,h)anthracene	<dl	0.24	4	0
Benzo(g,h,i)perylene	<dl	320	4	0

14.2 Interpretation

Elevated concentrations of metals and polycyclic aromatic hydrocarbons were not recorded above guideline values in the natural topsoil or in the Made Ground.

14.3 Asbestos

13No. samples of soil were submitted to an asbestos screen, across both investigations. In the preliminary geotechnical investigation, suspected asbestos containing roof sheeting was identified in TP11 and TP13. A piece of suspected asbestos from TP11 was scheduled to analytical laboratory analysis and the sample was confirmed as chrysotile.

In trial trench TP15, during the supplementary contamination investigation, rare fragments of ACM were observed. 3No. tubs of soil matrix were submitted to analysis for asbestos at depths of 0.50m, 0.70m and 0.90m bgl from various lengths along the trench extending in a south-easterly direction. Asbestos fibres were not recorded.

Similarly, in trial trench TP16, rare fragments of ACM were observed yet 3No. tubs of soil matrix did not recorded asbestos at depths of 0.50m, 0.80m and 0.80 - 0.90m bgl from various lengths along the trench. Asbestos was not observed in TP17.

Asbestos was recorded in TP27 as ‘Chrysotile - Hard Cement Type Material and Loose Fibres’. TP27 was excavated into a small 1m high stockpile of soil in the north western corner of the site. Numerous pieces of suspected asbestos sheeting were visually confirmed at this location.

TP28 and TP29 were excavated in a small triangular part of the site in the far northern corner, directly west of the site entrance, which was being used as storage for a roofing company. Samples of Made Ground from both pits were submitted to asbestos testing. Asbestos was absent in the sample from TP29. However ‘Chysotile - Hard Cement Type Material’ was recorded in TP28 at 0.05m bgl.

Photographs of the Trial Trenches and TP15, TP16, TP27, TP28 and TP29 are presented in Appendix H.

14.4 Water Pipeline Results and Assessment

Plastic water supply pipes are permeable to hydrocarbons such as petrol, diesel, heating fuel and white spirits. The site has not had a history of contaminative uses. A sample from TP26 at 0.90m was submitted to analysis for hydrocarbons. This depth is considered representative of the depth that the water supply pipework will be laid. Concentrations of hydrocarbons were not recorded above the laboratory analytical limit of detection. Additionally, hydrocarbon concentrations in the Made Ground were not sufficiently elevated to warrant protected pipework.

Based on the results of the chemical testing undertaken and our observations on site, there is no risk to plastic water pipes.

15 GEOTECHNICAL RECOMMENDATIONS

Further investigations are recommended in Area B, prior to the following conclusions being adopted site wide:-

- Shallow foundations are feasible, placed within the granular Great Oolite at a safe bearing capacity of 125kPa at a minimum founding depth of 0.75m bgl. Foundations should be taken through Made Ground and cohesive Great Oolite until granular materials are reached.
- Where necessary, heave precautions should be adopted against the sidewalls of the foundations in accordance with NHBC Chapter 4.2 'Building Near Trees'. The granular Great Oolite is non-shrinkable.
- In accordance with BRE SD1 (2005) "Concrete in aggressive ground" a Design Sulphate Class of DS1 with an ACEC of AC-1 would apply for buried concrete.
- It is considered necessary to assume a CBR of 1% for Made Ground along with proof-rolling of the formation, 4% in the cohesive Great Oolite and 10% in the granular Great Oolite.
- The soils immediately underlying the site are shrinkable and consequently have the potential for heave. Therefore a suspended floor should be used incorporating a suitable underfloor based on the recommendations in NHBC Chapter 4.2. The suspended floor should be ventilated as recommended in Section 9.1.
- All trial pits remained stable in virgin soils and Made Ground. It is possible that localised collapse may occur in the Made Ground during foundation excavation.

16 CONCLUSIONS AND RECOMMENDATIONS

16.1 Contamination

Area B has not yet been investigated and this is discussed further in Section 15.2. The investigations to date indicate that asbestos contamination is recorded in 2No. Locations within the revised redevelopment layout summarised as follows:-

- TP27 which relates to a small 1m high stockpile of soil in the north west of the site. Numerous pieces of suspected asbestos sheeting were visually confirmed at this location. There is approximately 7m^3 of material in this stockpile which will require removal.
- Made Ground at location TP28 (0.10m), directly west of the site entrance, which was being used as storage for a roofing company.

Remediation will be a requirement for both of these areas.

16.2 Further Investigations

The following works are recommended:-

1. Trial pits and soil analysis in Area B. A higher frequency of pits are required in the south-east of Area B. Ground conditions and foundations to be evaluated also.
2. Trial pits and soil analysis along the boundary of the omitted paddock area to determine the presence, or otherwise, of asbestos and the nature of any fill materials.
3. Trial pits and soil analysis into the existing stable area and the area immediately southwest where information is sparse. This investigation should be undertaken post-demolition.
4. Trial pits into the rectangular riding arena on the central south-eastern boundary.

The findings will allow a refinement of the conceptual site model which will be reported in a Supplementary Site Investigation Report and Remediation Strategy Report.

We understand that the existing foul sewer is being decommissioned and replaced slightly further to the north. The proposed new route is denoted on the Exploratory Hole Location Plan and the drawing entitled Preliminary Drainage Strategy in Appendix A. This will require disturbance of asbestos contaminated soil and thus a licensed asbestos contractor will be required to oversee this work.

We would recommend that this report is submitted to the Local Planning Authority for their consultation.

Prepared and Approved by

Jim Twaddle **CGeol**
Director

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APPENDIX A

Exploratory Hole Location Plan

Site Proposals

FEWCOTT ROAD, FRITWELL

EXPLORATORY HOLE LOCATION PLAN

REV	DATE	DESCRIPTION
M	13.01.21	Boundary line amended
L	08.01.21	Swale Added; Visitor Parking Relocated; Maisonettes replaced with Houses
K	18.12.20	House types replacement
J	21.02.20	Layout updated following pre application comments
H	10.02.20	Layout updated following pre application comments
G	12.09.19	Plots 3-11 moved north, footpath added adjacent to plots 26-27, hipped roofs removed and chimneys indicated
F	06.08.19	Shared surface adjacent to plots 27/28 widened to 4.8m
E	26.07.19	Additional landscape screening indicated to boundary
D	23.07.19	Plots 9-10 amended to indicate private tenure
C	11.07.19	Amends to graphical presentation
B	09.07.19	Parking arrangement updated
A	08.07.19	No. of dwelling reduced to 28 following comments

CALA HOMES
CALA GROUP LIMITED
Riverside House, Holtspur Lane, Wooburn Green
High Wycombe, Buckinghamshire, HP10 0DJ
Tel: 01628 536200 Fax: 01628 536201
DX: 123610 Wooburn Green E-mail: info@cala.co.uk

Fewcott Road, Fritwell

Illustrative Site Layout Plan

Scale: 1:500 @ A1	Dwg No.: PLN.02
Date: 21.02.2020	Rev: M
Drawn: JL, AW	

DO NOT SCALE

Indicative area for 4 no. gas storage tanks and compound.

18.0m x 17.0m x 1.0m Geocellular Storage Tank wrapped in an impermeable membrane to store and attenuate flows associated with storm events up to a 100-year return period with a further 40% allowance for future climate change

OPEN SPACE

El Sub Sta

EXISTING SEWER LINE TO PASS CENTRALLY THROUGH DRIVEWAY TO AVOID REQUIRING A BUILD-OVER AGREEMENT. DRIVEWAY WITH SEWER PASSING THROUGH SHOULD NOT BE PERMEABLE CONSTRUCTION, AS ANGLIAN WATER WILL NOT PERMIT THIS. EXACT ROUTE OF SEWER TO BE CONFIRMED BY TRIAL PIT.

Existing 300mm dia. surface water sewer to be diverted into proposed road network via a S185 agreement with Anglian Water.

Connection to the Existing Public Footpath

AREA EXCLUDED FROM THE DEVELOPMENT

RETAINED PADDOCK
NO CONTRUCTION WORKS

Existing 300mm dia. surface water sewer to be removed following completion of diversion.

SWALE

For details of foul water rising main connection to sewer, refer to inset. Route of rising main to be agreed and shall be treated as indicative for the purposes of this drawing.

Proposed private foul water pumping station. Pumping station sized to accommodate 24 hour emergency storage volume in line with recommendations of PDAS Group (September 2019). Tank invert to be confirmed at detailed design stage.

Flow control chamber to limit surface water flows to maximum allowable discharge rate of 4.8 l/s, for all analysed events up to and including the 1 in 100 year +40% climate change event, with a minimum 100mm orifice dia. to adoptable standards.

32m length swale for treatment, conveyance, and attenuation of runoff, prior to discharge to existing drainage ditch adjacent to site boundary.

Short length of gabion retaining wall around canopy of existing tree to increase available storage within swale.

2 no. parking bays to be relocated to allow area to be used for proposed swale. Suggested alternative location shown opposite.

Flow control chamber to limit surface water flows to maximum allowable discharge rate of 8.2 l/s, for all analysed events up to and including the 1 in 100 year + 40% climate change event.

New concrete headwall outfall to be fitted with non-return valve and grille cover to prevent blockage.

DRAINAGE STRATEGY LEGEND

- 150mm 1/100 — Surface water drain
- Surface water filter drain
- 150mm 1/100 — Foul water drain
- 300mm 1/196 — Existing surface water sewer
- Section of existing surface water sewer to be diverted
- 300mm 1/196 — Surface water sewer diversion route
- 150mm — Existing foul water sewer
- Surface water catchpit manhole
- Surface water flow control chamber
- Surface water manhole
- Foul water manhole
- Concrete headwall
- Denotes extent of permeable block paved driveway
- Denotes extent of 3m sewer easement zone either side of sewer
- Denotes extent of gabion retaining wall
- Denotes extent of swale
- Site Boundary.
- Proposed bank at maximum 1:3 gradient

Return Period	Greenfield		Post Development	
	Peak Runoff Rate (l/s)	6hr Runoff Volume (m^3)	Peak Runoff Rate (l/s)	6hr Runoff Volume (m^3)
1	5.8	142.2	5.7	108.7
QBAR	6.9	n/a	n/a	n/a
30	15.6	328.0	7.0	240.0
100	21.9	445.3	7.5	311.5
100 + 40% CC	n/a	n/a	8.2	451.3

Gravity connection to Anglian Water foul water sewer at manhole ref. 9102, via construction of new receiving manhole for rising main.

Ditch to be culverted beneath access road.

INSET – CONNECTION TO ANGLIAN WATER FOUL SEWER
Scale 1:500

P4	PLOT TYPES AND ROAD LAYOUTS UPDATED. DRAINAGE LAYOUT UPDATED TO SUIT.	JJH	22.01.21
P3	COVER LEVELS UPDATED FOR RAISED SITE.	GPH	09.11.20
P2	UPDATED FOR LATEST SITE PLAN LAYOUT.	GPH	07.10.20
P1	ISSUED FOR INFORMATION.	GPH	27.07.20
MK	REVISION.	BY	DATE

DRAWING STATUS

PRELIMINARY

DRAWING TITLE

PRELIMINARY DRAINAGE STRATEGY

PROJECT

LAND AT FEWCOTT ROAD FRITWELL

simpson | tws
8 Friday Street
Henley-On-Thames
Oxfordshire, RG9 1AH
T: 01491 576 221
E: mail@simpsoneng.com
W: www.simpsoneng.com
London, Henley-on Thames, Gloucester and Exeter

Drawn	Ch'kd	Scales	Date
BCT	GPH	1:250 @ A1	JULY 2020

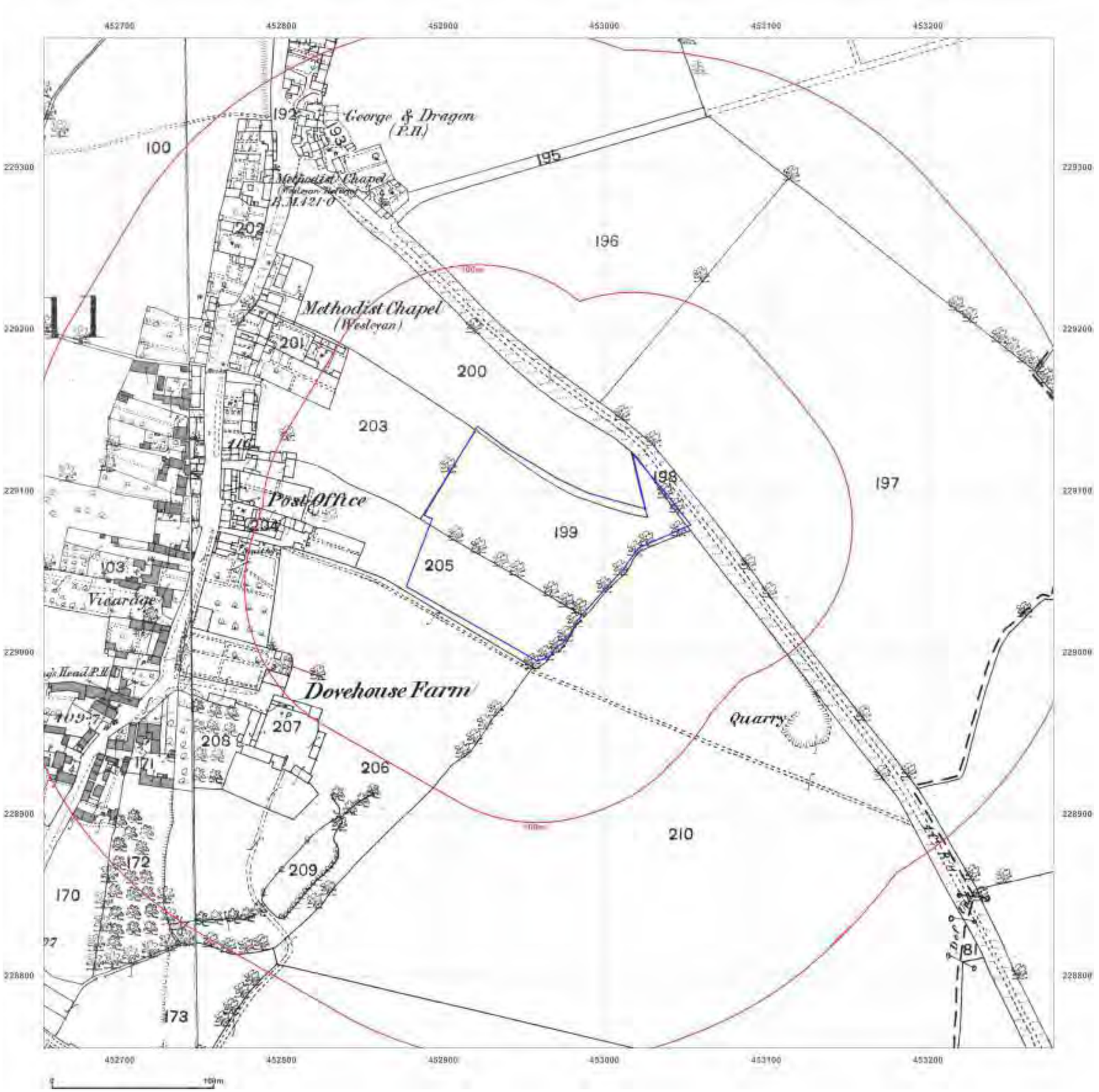
Purpose of Issue: INFORMATION

Project Number	Drawing Number	Revision
P18-654	SK01	P4

A1

APPENDIX B

Historical Map Extracts



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Grid Ref: 452965, 229068

Map Name: County Series

Map date: **1881**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1881
Revised 1881
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1880
Revised N/A
Edition 1881
Copyright N/A
Levelled N/A

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Production date: 07 March 2016

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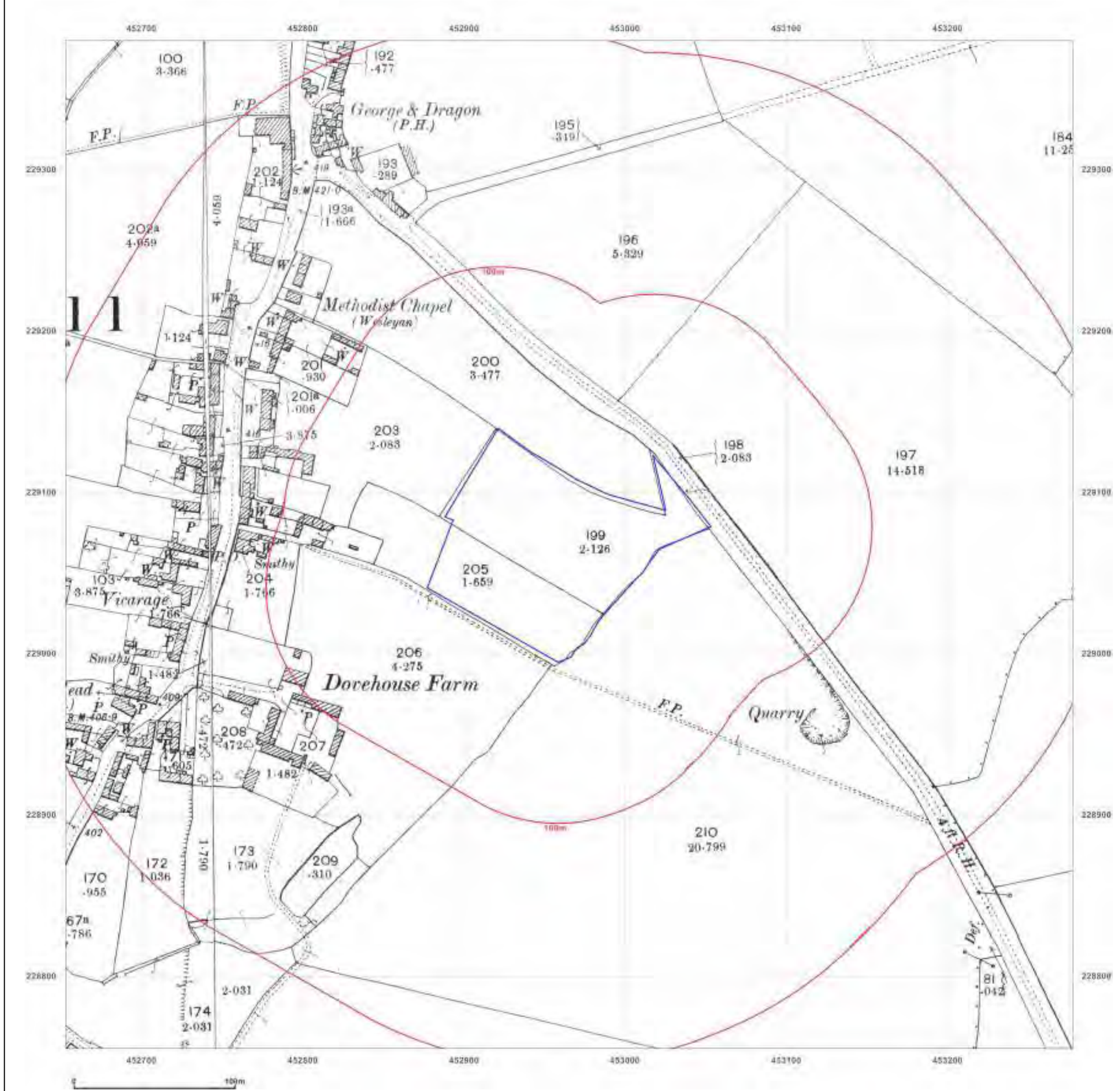

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Grid Ref: 452965, 229068

Map Name: County Series
Map date: **1900**
Scale: 1:2,500
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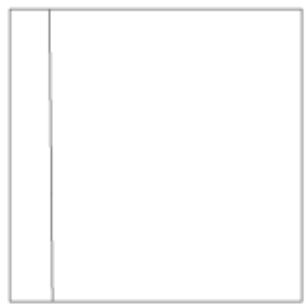
Surveyed 1900
Revised 1900
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1900
Revised 1900
Edition N/A
Copyright N/A
Levelled N/A

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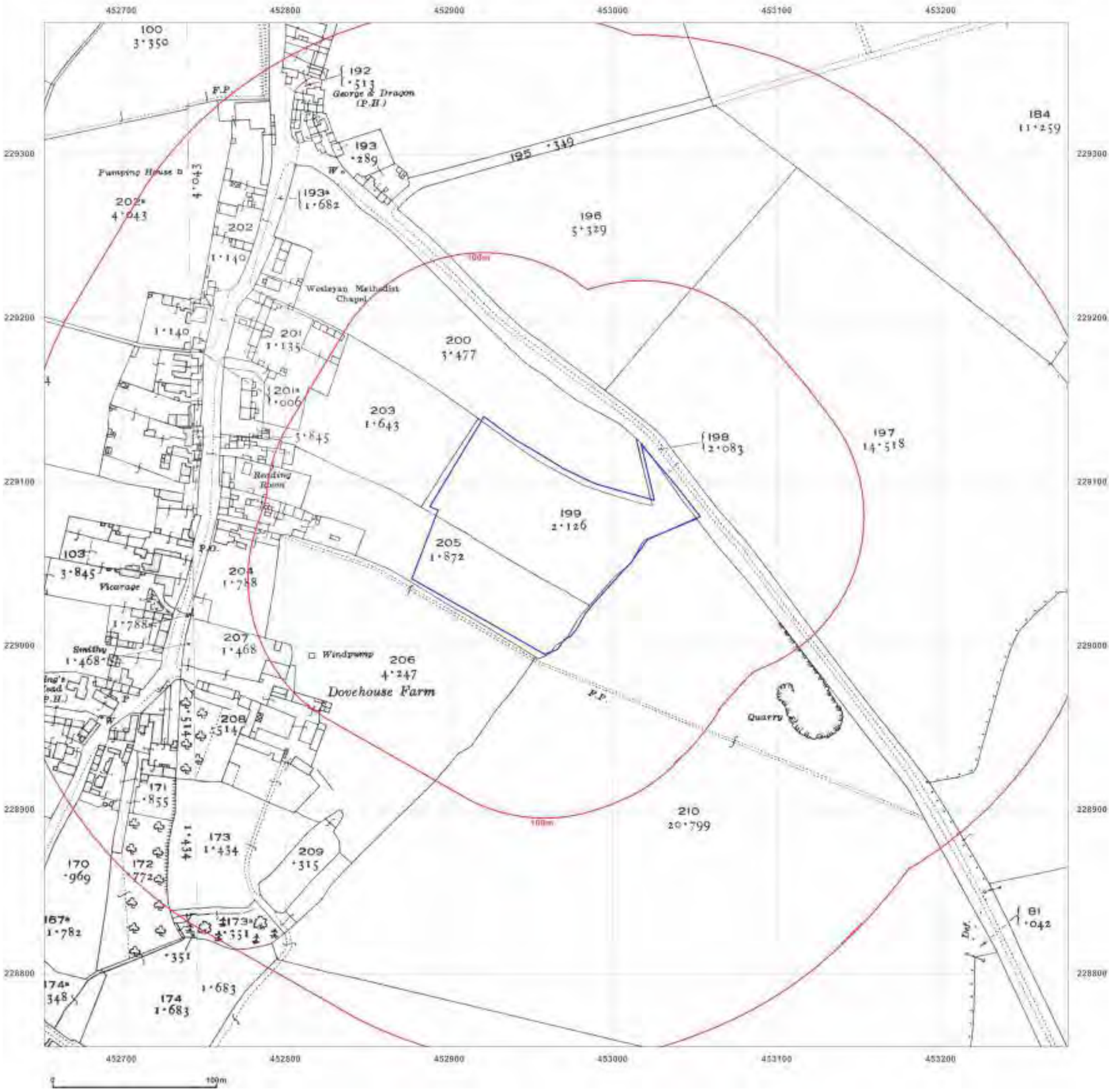

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Map Name: County Series

Map date: **1922**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
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Surveyed 1922
Revised 1922
Edition N/A
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Client Ref: BC195
Report Ref: GS-2803295
Grid Ref: 452965, 229068

Map Name: National Grid

Map date: **1975-1976**

Scale: 1:2,500

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Surveyed N/A
Revised 1975
Edition N/A
Copyright N/A
Levelled 1971

Surveyed 1976
Revised 1976
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1975
Edition N/A
Copyright 1976
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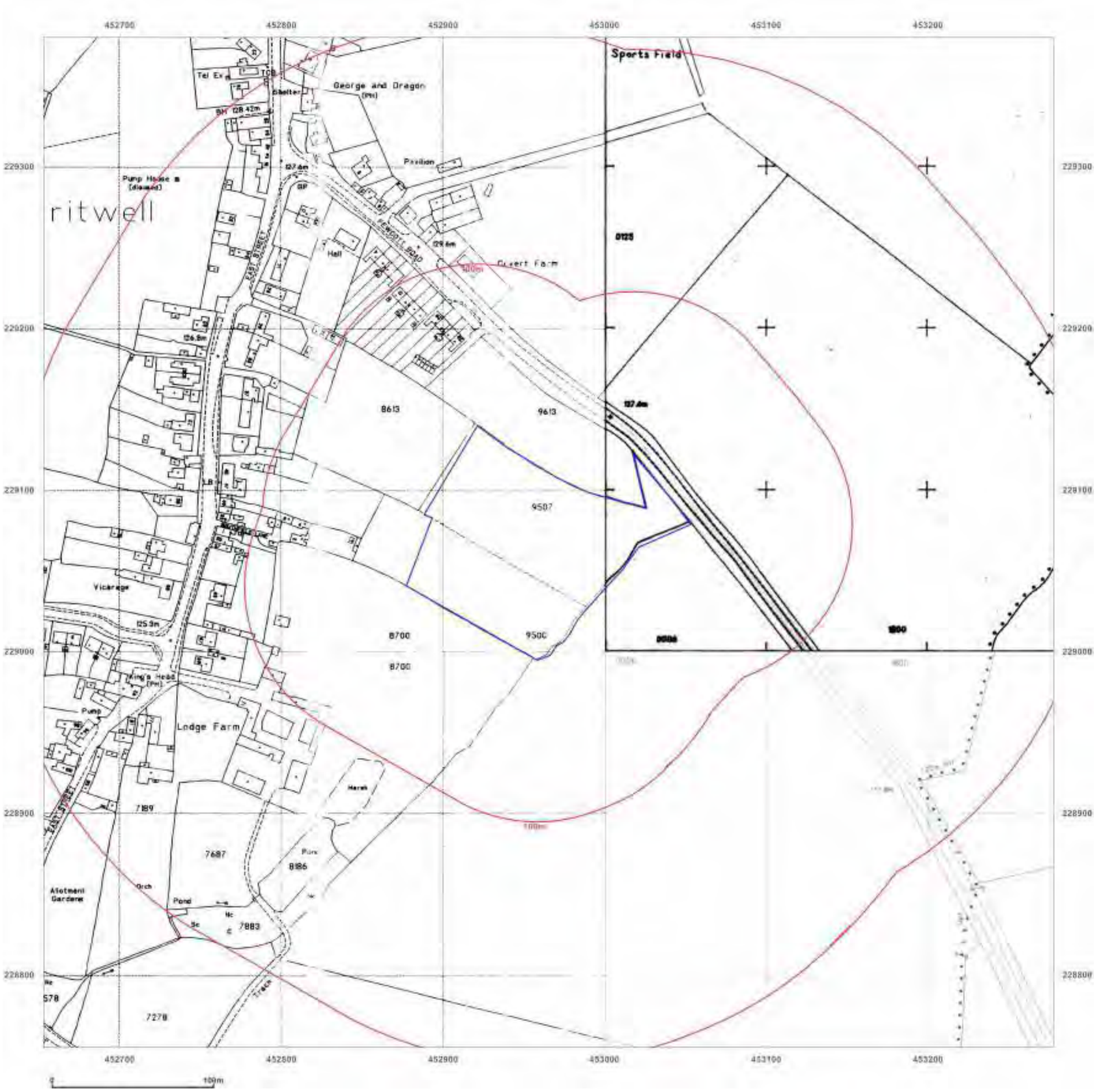

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Map Name: National Grid
Map date: **1992-1994**
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
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Surveyed 1992
Revised 1992
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Report Ref: GS-2803295
Grid Ref: 452965, 229068

Map Name: National Grid

Map date: **1994-1995**

Scale: 1:2,500

Printed at: 1:2,500

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Revised N/A
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Copyright 1994
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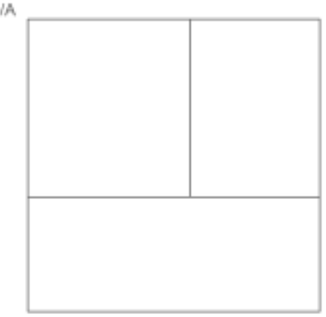

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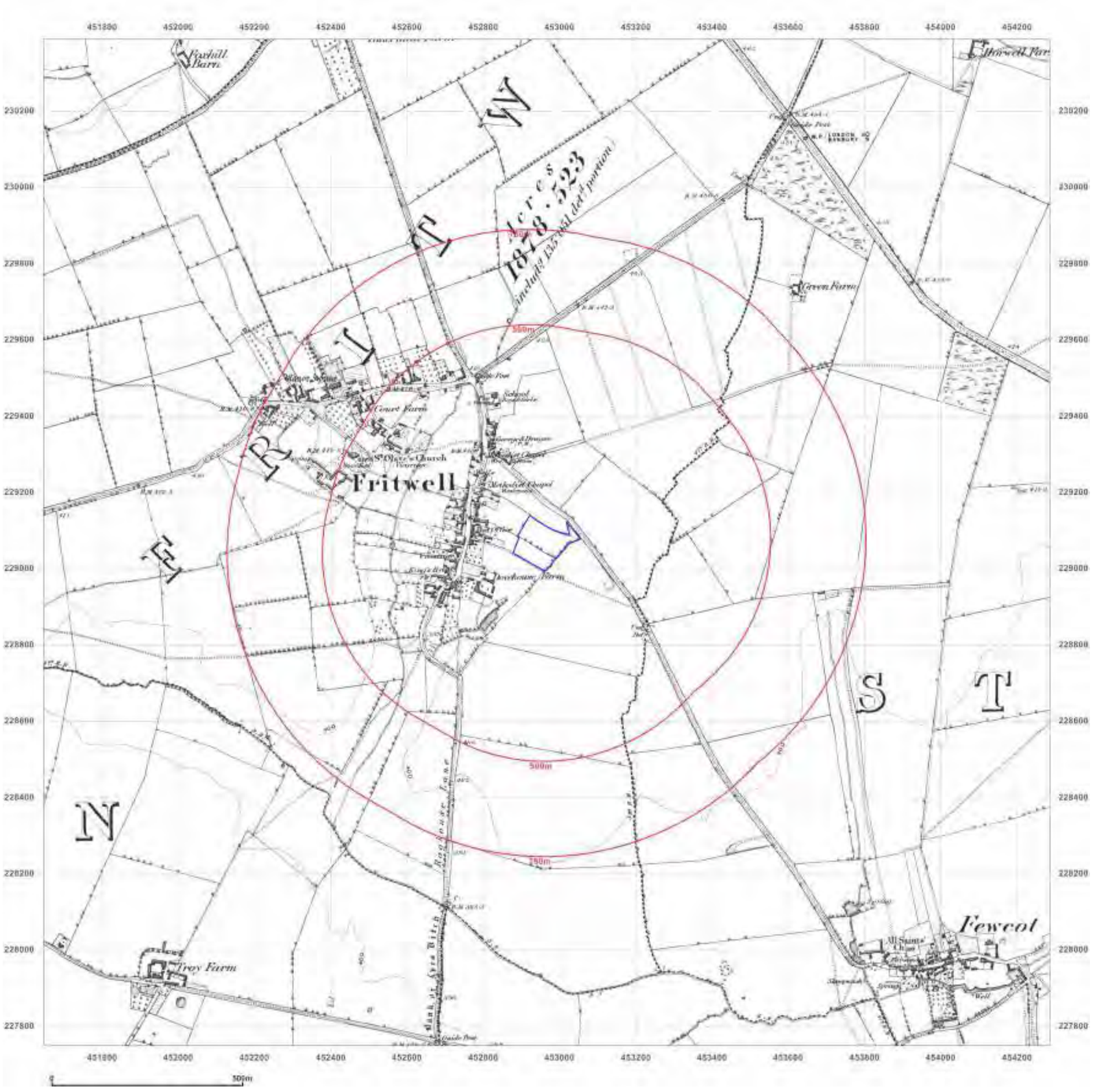

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Map Name: County Series

Map date: **1880**

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Printed at: 1:10,560

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Surveyed 1880
Revised 1880
Edition N/A
Copyright N/A
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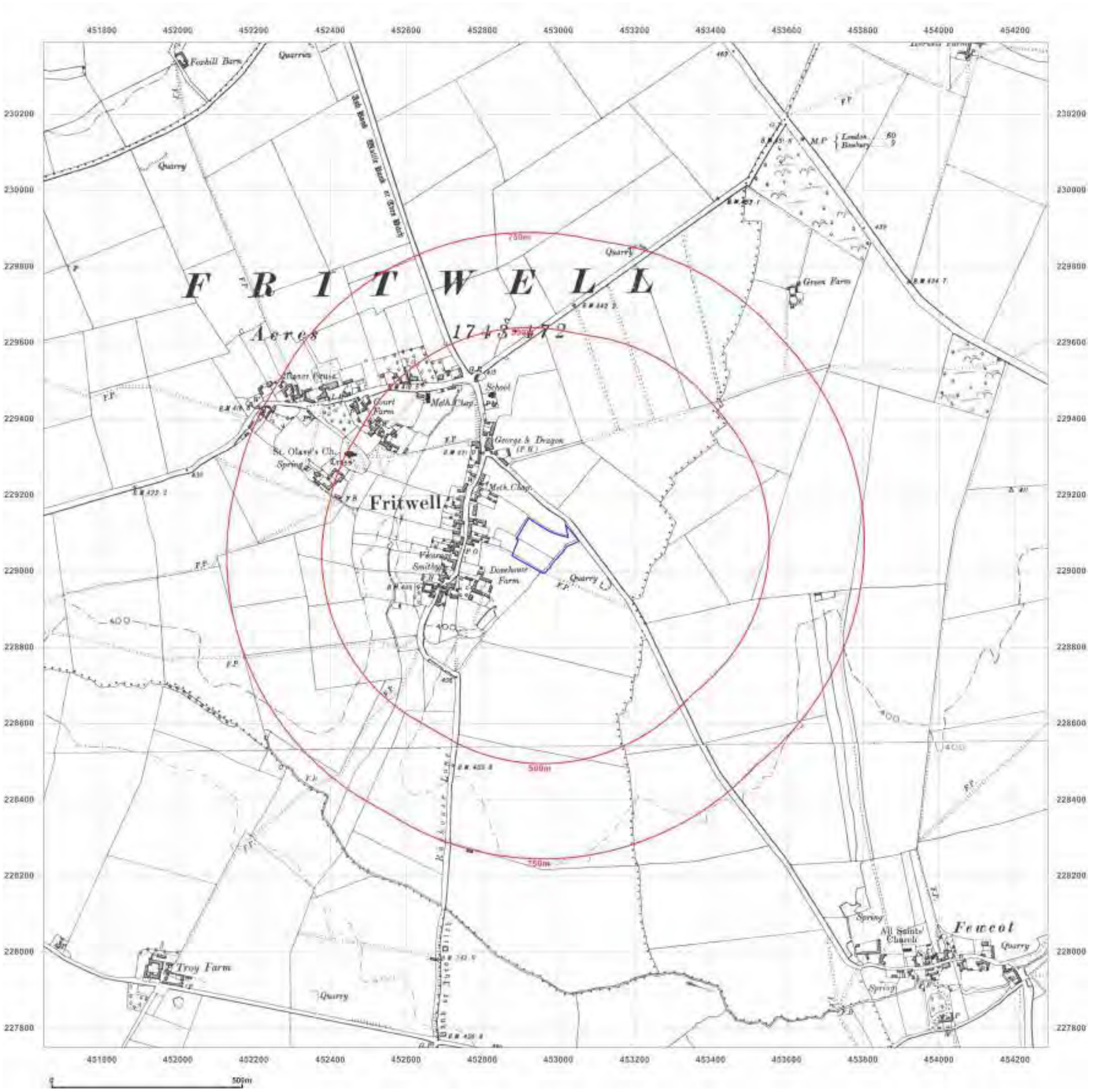

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Surveyed 1880
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Surveyed 1880
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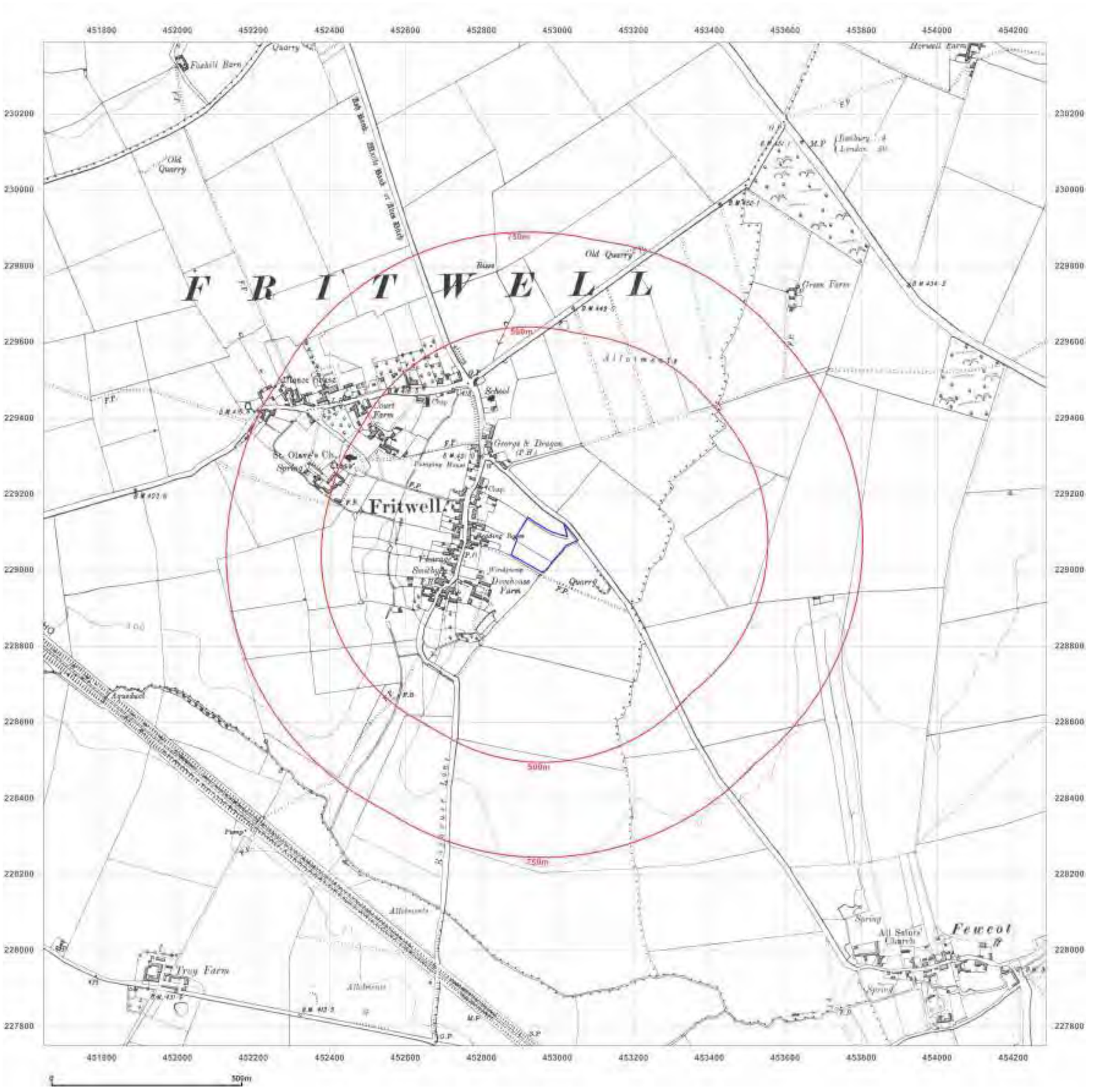

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Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1882
Revised 1923
Edition N/A
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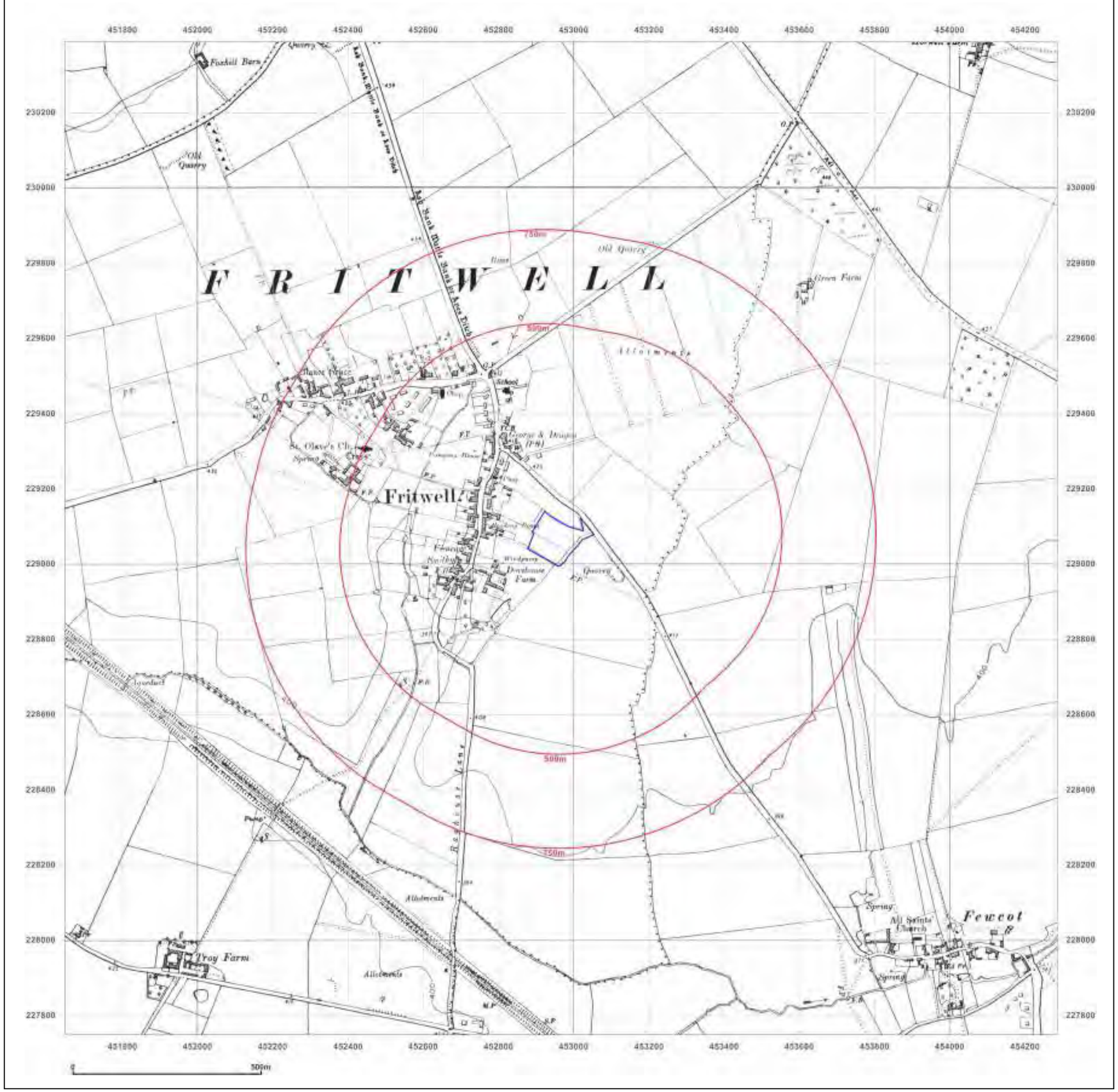

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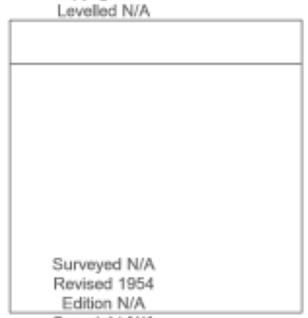
Revised 1954
Edition N/A
Copyright N/A
Levelled N/A



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Revised 1954
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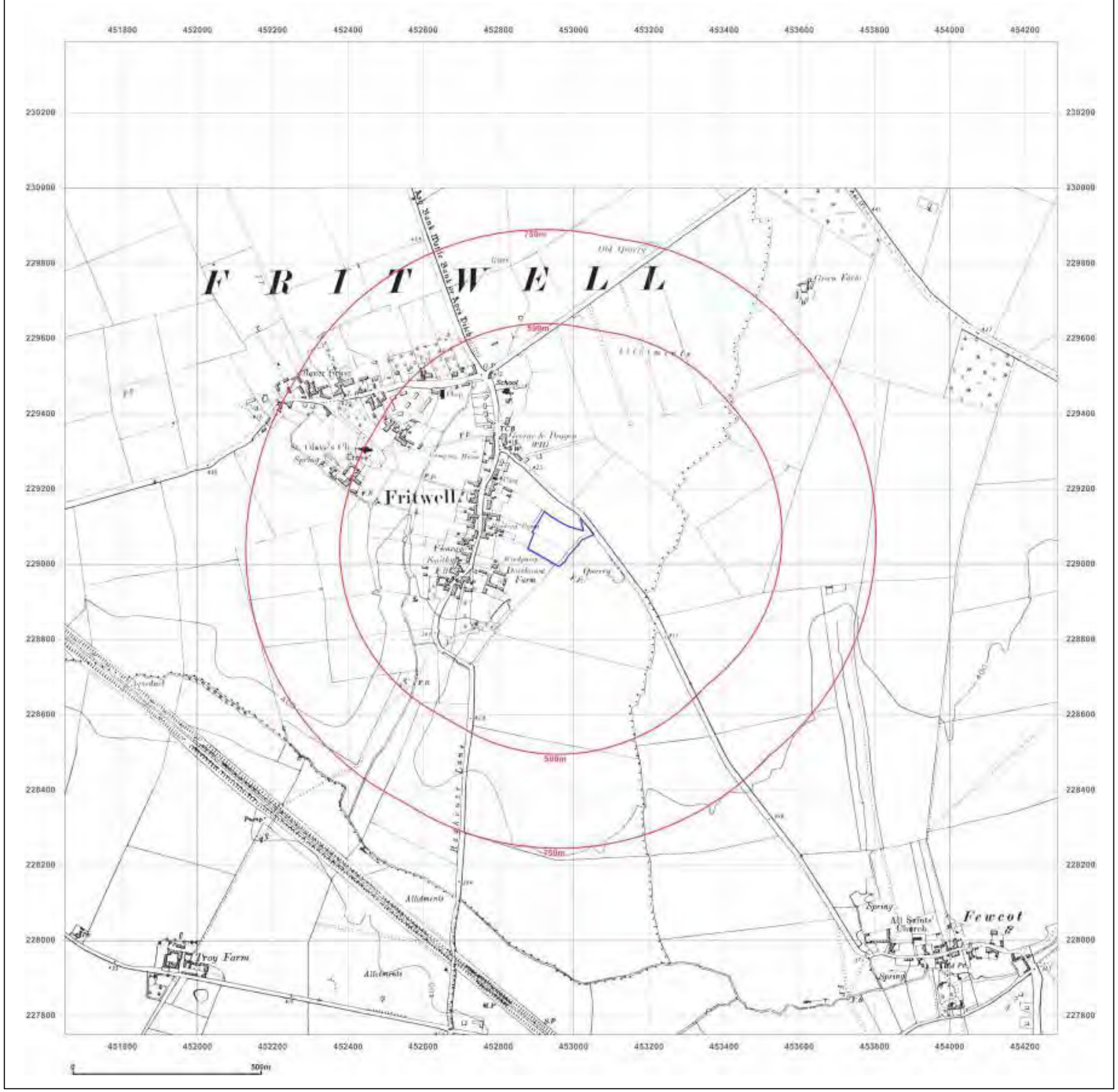

Groundsure INSIGHTS

Site Details:

30,FEWCOTT ROAD,FRITWELL,BICESTER, OX27 7QA

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Surveyed N/A
Revised 1965
Edition N/A
Copyright N/A
Levelled N/A

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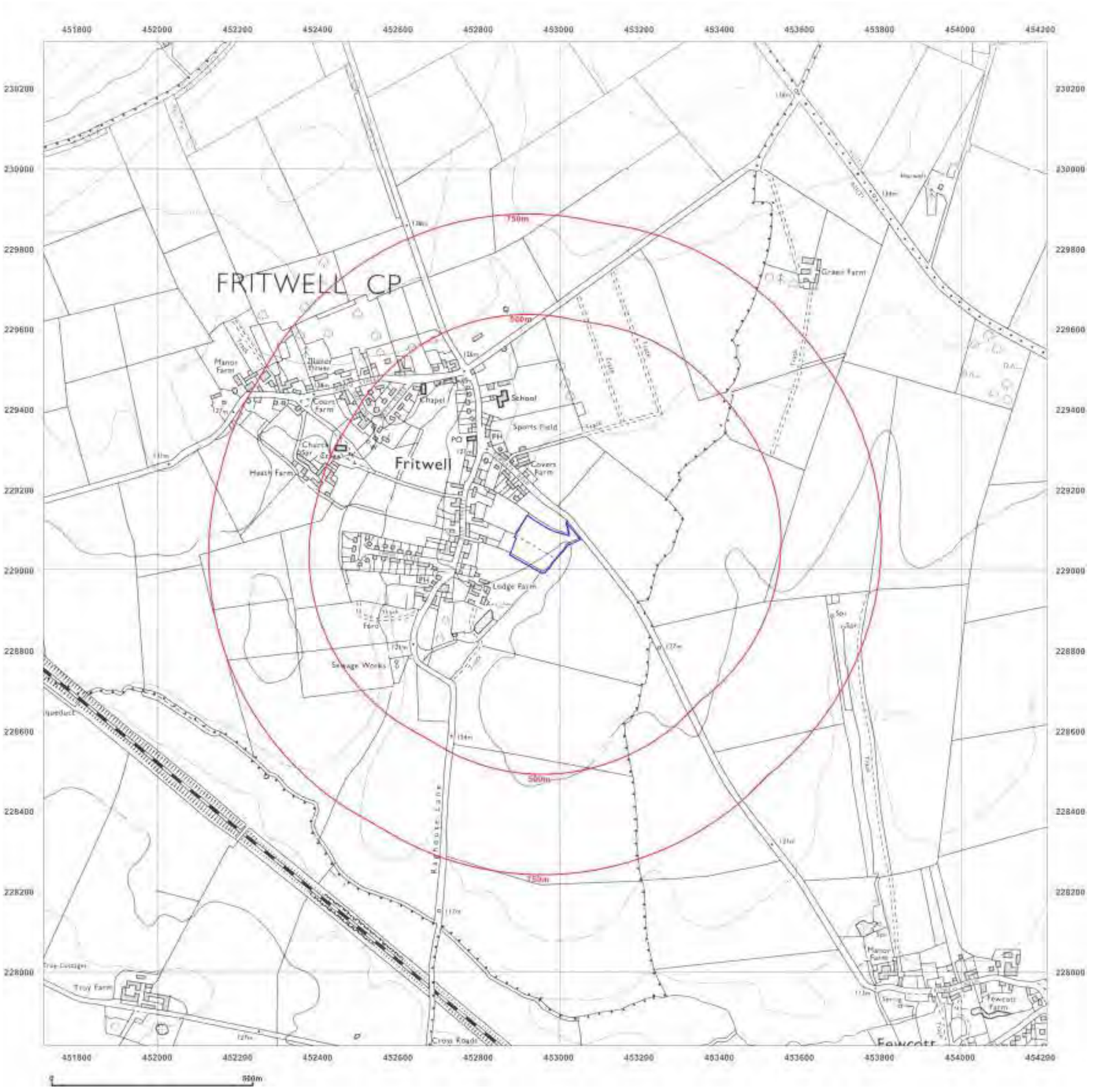

Groundsure INSIGHTS

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Map date: **1980-1981**

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Printed at: 1:10,000

N
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Surveyed 1977
Revised 1981
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1980
Edition N/A
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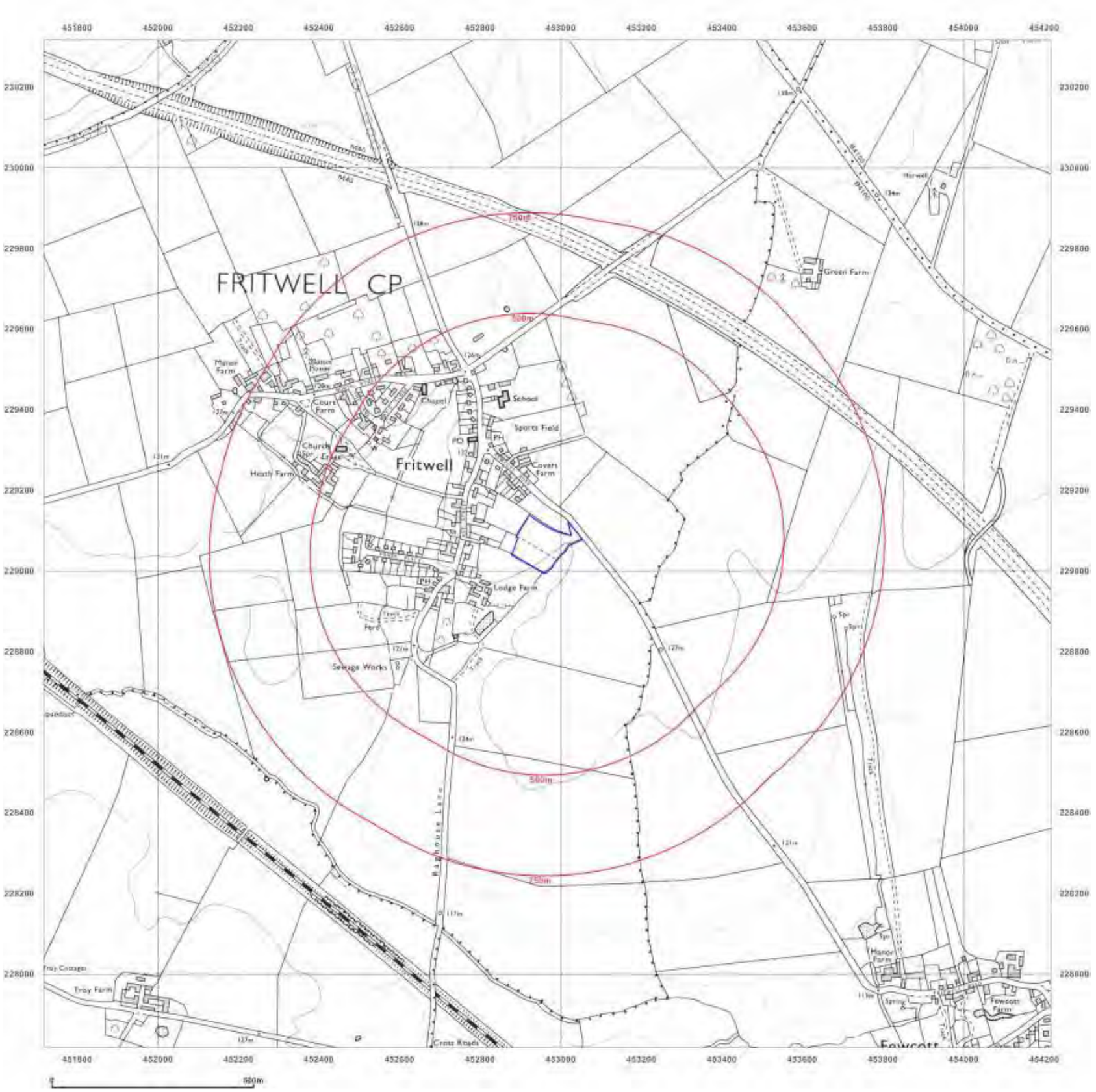
Production date: 05 March 2016

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

30,FEWCOTT ROAD,FRITWELL,BICESTER, OX27 7QA

Client Ref: BC195
Report Ref: GS-2803295
Grid Ref: 452965, 229068

Map Name: National Grid

Map date: **1992**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
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Surveyed 1977
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

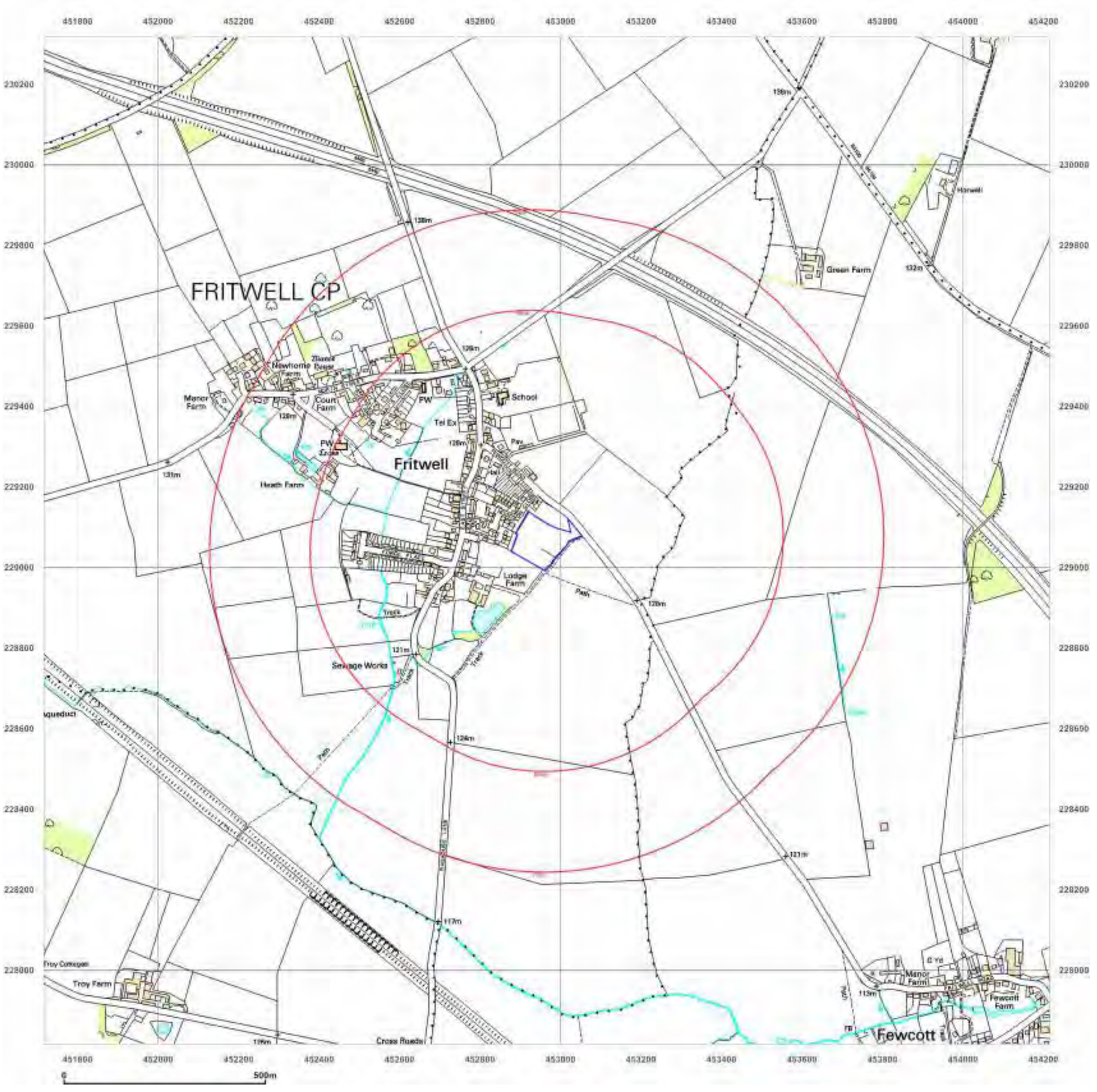
Surveyed 1975
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

Production date: 05 March 2016

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

30,FEWCOTT ROAD,FRITWELL,BICESTER, OX27 7QA

Client Ref: BC195
Report Ref: GS-2803295
Grid Ref: 452965, 229068

Map Name: 1:10,000 Raster
Map date: 2002
Scale: 1:10,000
Printed at: 1:10,000

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2002

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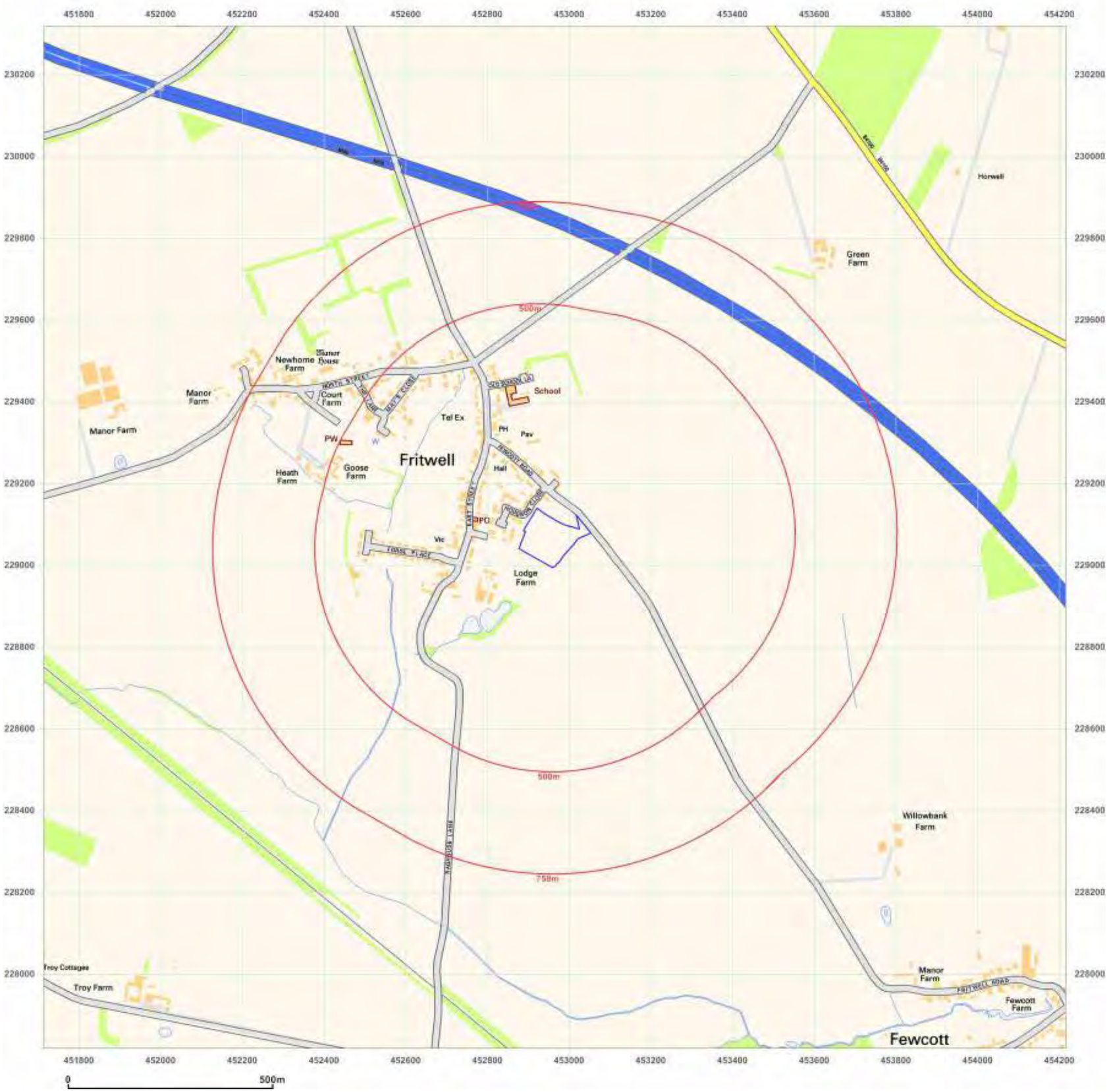
Production date: 05 March 2016

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

30,FEWCOTT ROAD,FRITWELL,BICESTER, OX27 7QA

Client Ref: BC195
Report Ref: GS-2803295
Grid Ref: 452965, 229068

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N
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2010

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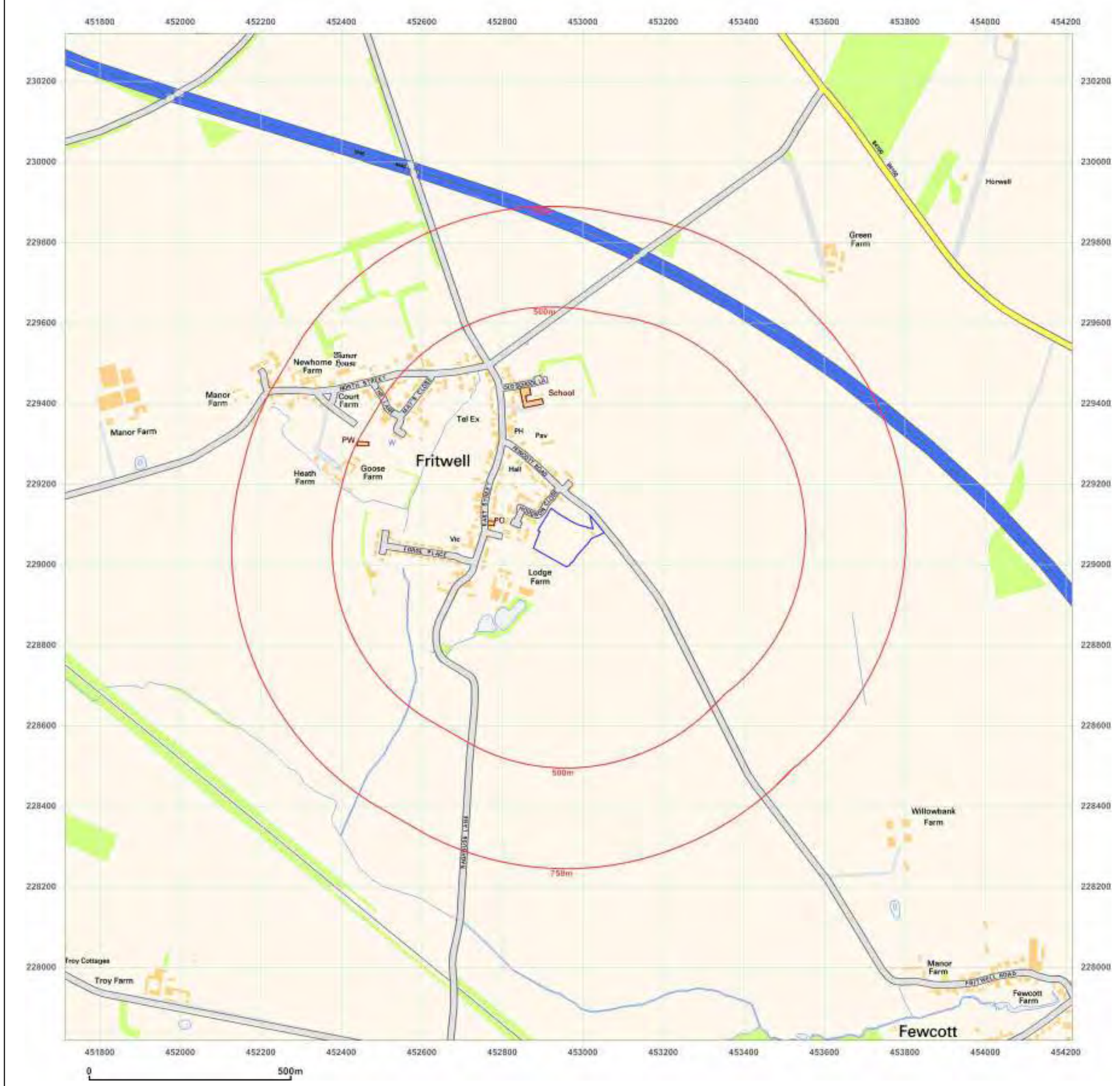
W: www.groundsure.com

Production date: 05 March 2016

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

30,FEWCOTT ROAD,FRITWELL,BICESTER, OX27 7QA

Client Ref: BC195
Report Ref: GS-2803295
Grid Ref: 452965, 229068

Map Name: National Grid
Map date: **2014**
Scale: 1:10,000
Printed at: 1:10,000

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2014

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E: info@groundsure.com
W: www.groundsure.com

Production date: 05 March 2016

To view map legend click here *Legend*

APPENDIX C

Envirosight Report

The Brownfield Consultancy

The Cottage, Mill Lane,
Southam, CV47 2YF

Groundsure Reference:	GS-2803296
Your Reference:	BC195
Report Date	5 Mar 2016
Report Delivery Method:	Email - pdf

Groundsure Enviroinsight

Address: 30,FEWCOTT ROAD,FRITWELL,BICESTER, OX27 7QA

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviroinsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

[redacted]

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Groundsure Enviroinsight

Address:	**30,FEWCOTT ROAD,FRITWELL,BICESTER, OX27 7QA**
Date:	**5 Mar 2016**
Reference:	**GS-2803296**
Client:	**The Brownfield Consultancy**

NW N NE

W E

SW S SE

Aerial Photograph Capture date: 12-Jun-2014
Grid Reference: 452946,229063
Site Size: 1.30ha

Report Reference: GS-2803296
Client Reference: BC195

Contents Page

Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	0	12	8
1.2 Additional Information – Historical Tank Database	0	0	0	6
1.3 Additional Information – Historical Energy Features Database	0	1	0	0
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Potentially Infilled Land	0	0	12	7

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	6
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	0
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency Historic Landfill Sites	0	1	0	0	0	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	0	0	0	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	1	3	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	3	12
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	0	Not searched	Not searched

	On-site	0-50m	51-250	251-500	501-1000	1000-1500

Section 6: Hydrogeology and Hydrology	0-500m					
6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	0	0	1	6	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding	
7.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	No
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	No
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	1	1
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	3
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	2	0	0	0	3	1
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Very Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Negligible
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Negligible
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Very Low
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Negligible
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier “A” on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as “Not Shown”.

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use

Site Outline

250
500
Search Buffers (m)

Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Tanks

Garages

1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 20

ID	Distance [m]	Direction	Use	Date
1A	68	SE	Unspecified Quarry	1923
2A	69	SE	Unspecified Quarry	1954
3A	80	SE	Unspecified Quarry	1923
4	122	NW	Pumping House	1923
5A	123	SE	Unspecified Quarry	1900
6F	130	SE	Unspecified Pit	1880
7B	132	W	Smithy	1923
8C	156	W	Smithy	1900
9B	181	W	Smithy	1923
10C	184	W	Smithy	1954
11	198	NW	Pumping House	1923
12	242	NW	Pumping House	1954
13D	356	SW	Sewage Works	1980
14D	356	SW	Sewage Works	1992
15D	382	SW	Unspecified Tanks	1980
16D	382	SW	Unspecified Tanks	1992
17H	423	NW	Grave Yard	1880
18E	428	NW	Unspecified Heap	1923
19E	431	N	Unspecified Heap	1880
20E	444	N	Unspecified Heap	1923

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary: 6

ID	Distance (m)	Direction	Use	Date
21D	377	SW	Unspecified Tank	1975
22D	380	SW	Unspecified Tank	1975
23D	385	SW	Unspecified Tank	1975

24D	387	SW	Filter Tanks	1975
25D	392	SW	Unspecified Tank	1975
26D	400	SW	Unspecified Tank	1975

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary: 1

ID	Distance (m)	Direction	Use	Date
27	11	NW	Electricity Substation	1999

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 0

Database searched and no data found.

1.6 Potentially Infilled Land

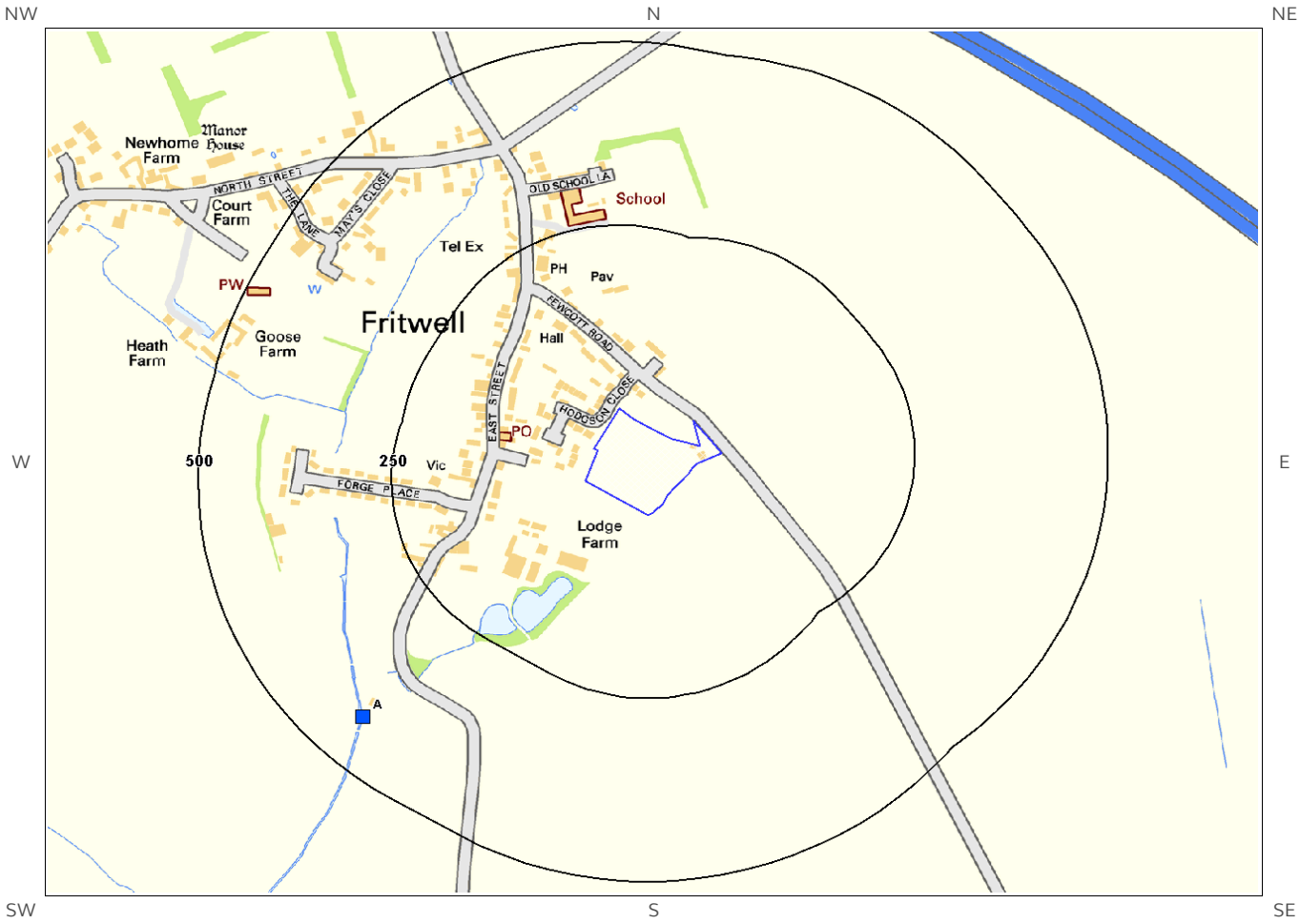
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 19

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
28A	68	SE	Unspecified Quarry	1923
29A	69	SE	Unspecified Quarry	1954
30A	80	SE	Unspecified Quarry	1923
31A	123	SE	Unspecified Quarry	1900

32F	130	SE	Unspecified Pit	1880
33G	138	SW	Pond	1900
34G	138	SW	Pond	1923
35G	139	SW	Pond	1954
36G	143	SW	Pond	1992
37G	143	SW	Pond	1980
38G	145	SW	Pond	1880
39G	150	SW	Pond	1923
40D	356	SW	Sewage Works	1992
41D	356	SW	Sewage Works	1980
42	359	SW	Ponds	1923
43H	423	NW	Grave Yard	1880
44E	428	NW	Unspecified Heap	1923
45E	431	N	Unspecified Heap	1880
46E	444	N	Unspecified Heap	1923

2. Environmental Permits, Incidents and Registers Map



- Site Outline
- Search Buffers (m) — 250 / 500
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- Hazardous Substance Consents and Enforcements

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

6

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
1A	431	SW	452590 228720	Address: FRITWELL STW, RAGHOUSE LANE, FRITWELL, BICESTER, OXON, OX27 7QG Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: AW1NF2895 Permit Version: 3	Receiving Water: Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2010 Effective Date: 31-Mar-2010 Revocation Date: -
2A	431	SW	452590 228720	Address: FRITWELL STW, RAGHOUSE LANE, FRITWELL, BICESTER, OXON, OX27 7QG Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: AW1NF2895 Permit Version: 2	Receiving Water: Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 24/09/2004 Effective Date: 24-Sep-2004 Revocation Date: 30/03/2010
3A	431	SW	452590 228720	Address: FRITWELL STW, RAGHOUSE LANE, FRITWELL, BICESTER, OXON, OX27 7QG Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: AW1NF2895 Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 26/04/1988 Effective Date: 26-Apr-1988 Revocation Date: 23/09/2004
4A	431	SW	452590 228720	Address: FRITWELL STW, RAGHOUSE LANE, FRITWELL, BICESTER, OXON, OX27 7QG Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: AW1NF2895 Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 26/04/1988 Effective Date: 26-Apr-1988 Revocation Date: 23/09/2004
5A	431	SW	452590 228720	Address: FRITWELL STW, RAGHOUSE LANE, FRITWELL, BICESTER, OXON, OX27 7QG Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: AW1NF2895 Permit Version: 2	Receiving Water: Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 24/09/2004 Effective Date: 24-Sep-2004 Revocation Date: 30/03/2010

ID	Distance (m)	Direction	NGR	Details	
6A	431	SW	452590 228720	Address: FRITWELL STW, RAGHOUSE LANE, FRITWELL, BICESTER, OXON, OX27 7QG Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: AW1NF2895 Permit Version: 3	Receiving Water: Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2010 Effective Date: 31-Mar-2010 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

2.3 Environment Agency Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

0

Database searched and no data found.

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

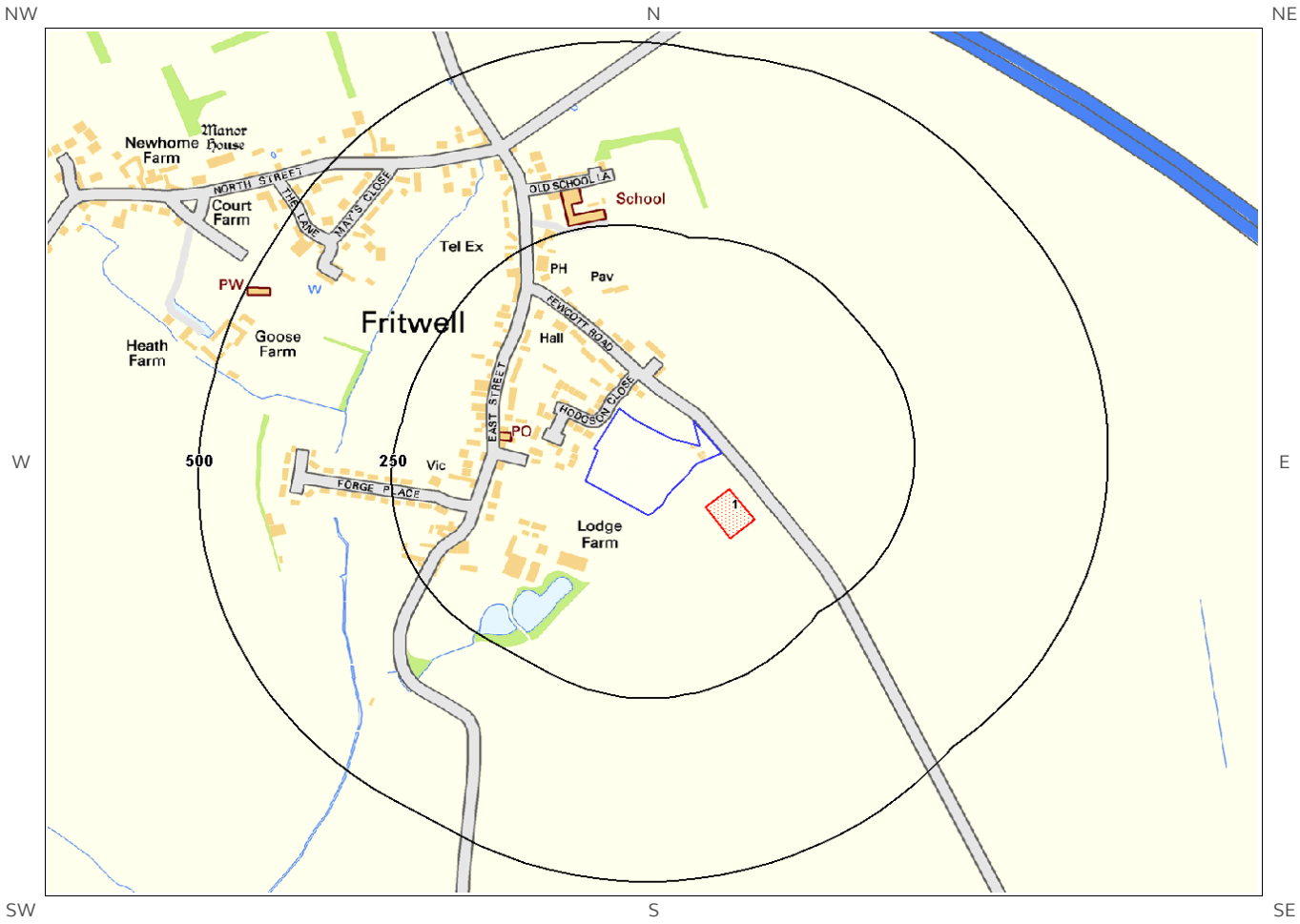
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site? 0

Database searched and no data found.

---

3. Landfill and Other Waste Sites Map



Site Outline

250 Search Buffers (m)
500

E.A. Active Landfill

E.A. Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

E.A. Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

1

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
1	47	SE	453000 228900	Site Address: Fritwell, Lodge Farm Waste Licence: - Site Reference: 1365329 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: - First Recorded: - Last Recorded: -

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

0

Database searched and no data found.

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

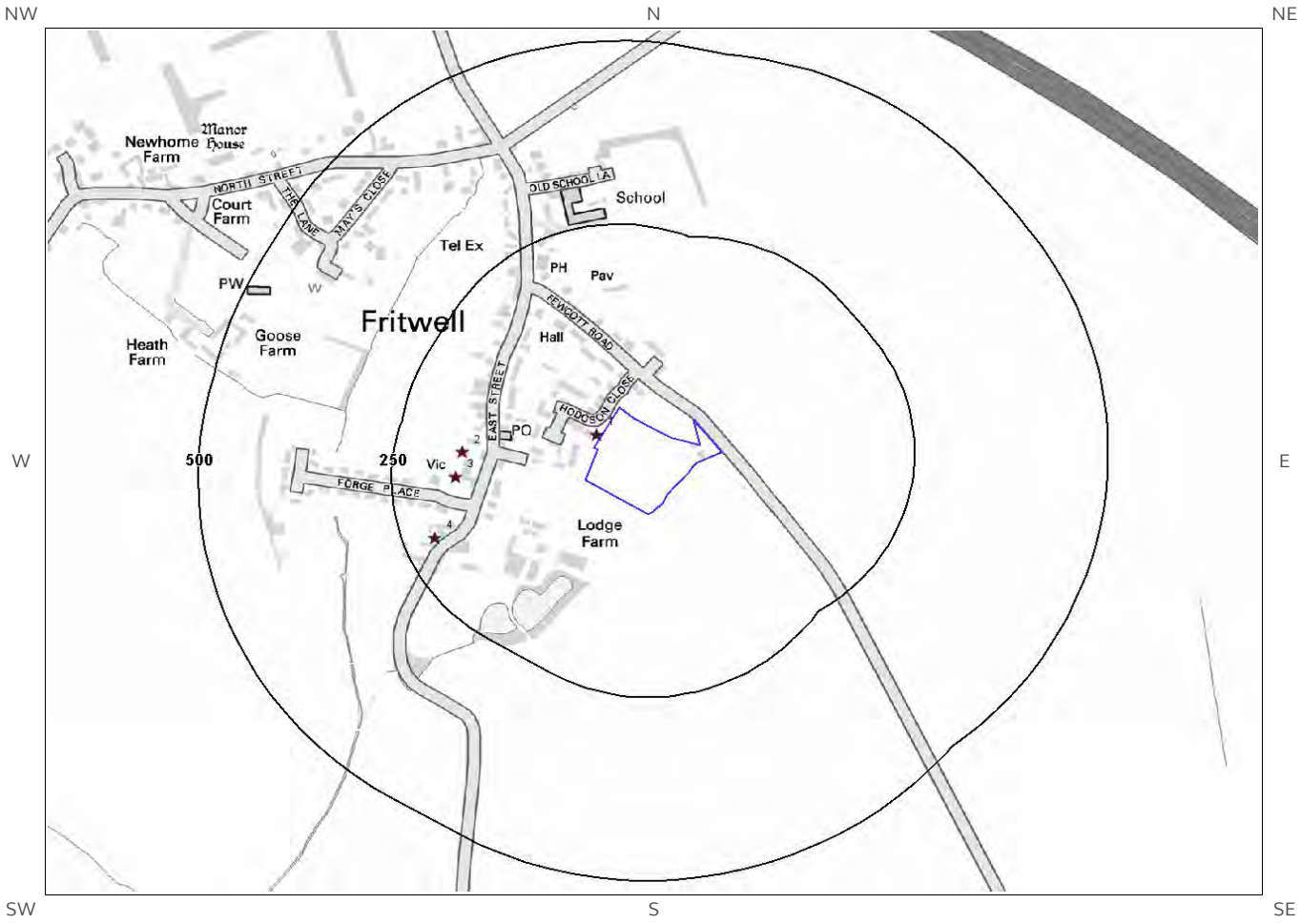
3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

0

Database searched and no data found.

---

4. Current Land Use Map



Site Outline

Search Buffers (m)

250

500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 4

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	6	NW	Electricity Sub Station	452892 229104	OX27	Electrical Features	Infrastructure and Facilities
2	164	W	Windsor Great Cars	452718 229080	82, East Street, Fritwell, Bicester, OX27 7QF	New Vehicles	Motoring
3	167	W	Mobile Recording Services	452709 229046	45, Forge Place, Fritwell, Bicester, OX27 7QQ	Recording Studios and Record Companies	IT, Advertising, Marketing and Media Services
4	209	W	Pump	452683 228963	OX27	Water Pumping Stations	Industrial Features

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
GOG-LMAR	GREAT OOLITE GROUP	LIMESTONE AND [SUBEQUAL/SUBORDINATE] ARGILLACEOUS ROCKS, INTERBEDDED

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology

Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

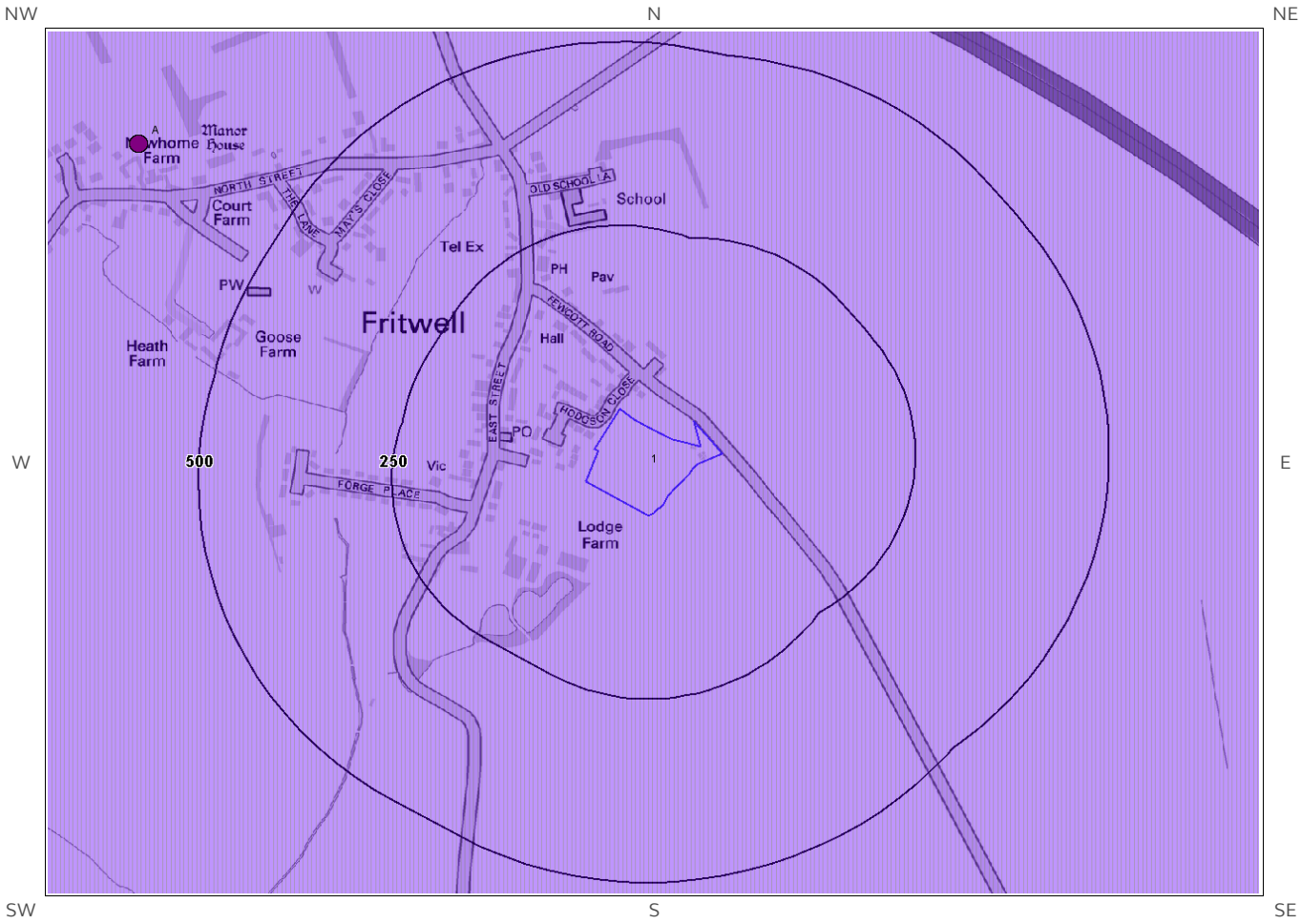
Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

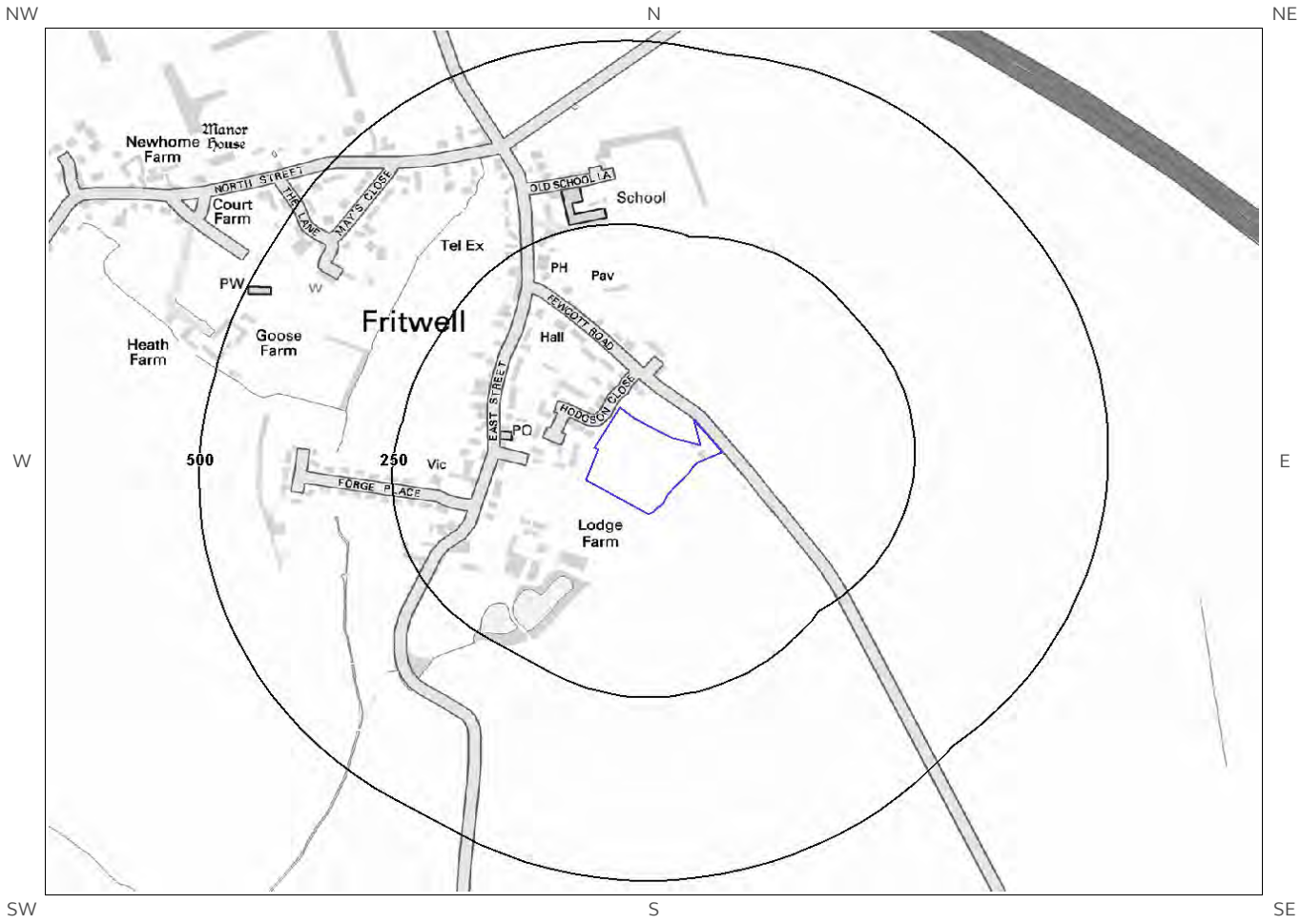
Unknown (lakes and landslip)

6b. Aquifer Within Bedrock Geology and Abstraction Licenses



Site Outline
250
500
Search Buffers (m)
Principal Aquifer
Secondary (A) Aquifer - Permeable Layers
Secondary (B) Aquifer - Lower Permeability Layers
Groundwater Abstraction Licence
Secondary Aquifer - Undifferentiated Layers
Unproductive
Unknown (lakes and landslip)
Surface Water Abstraction Licence

6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



Site Outline

250
500
Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

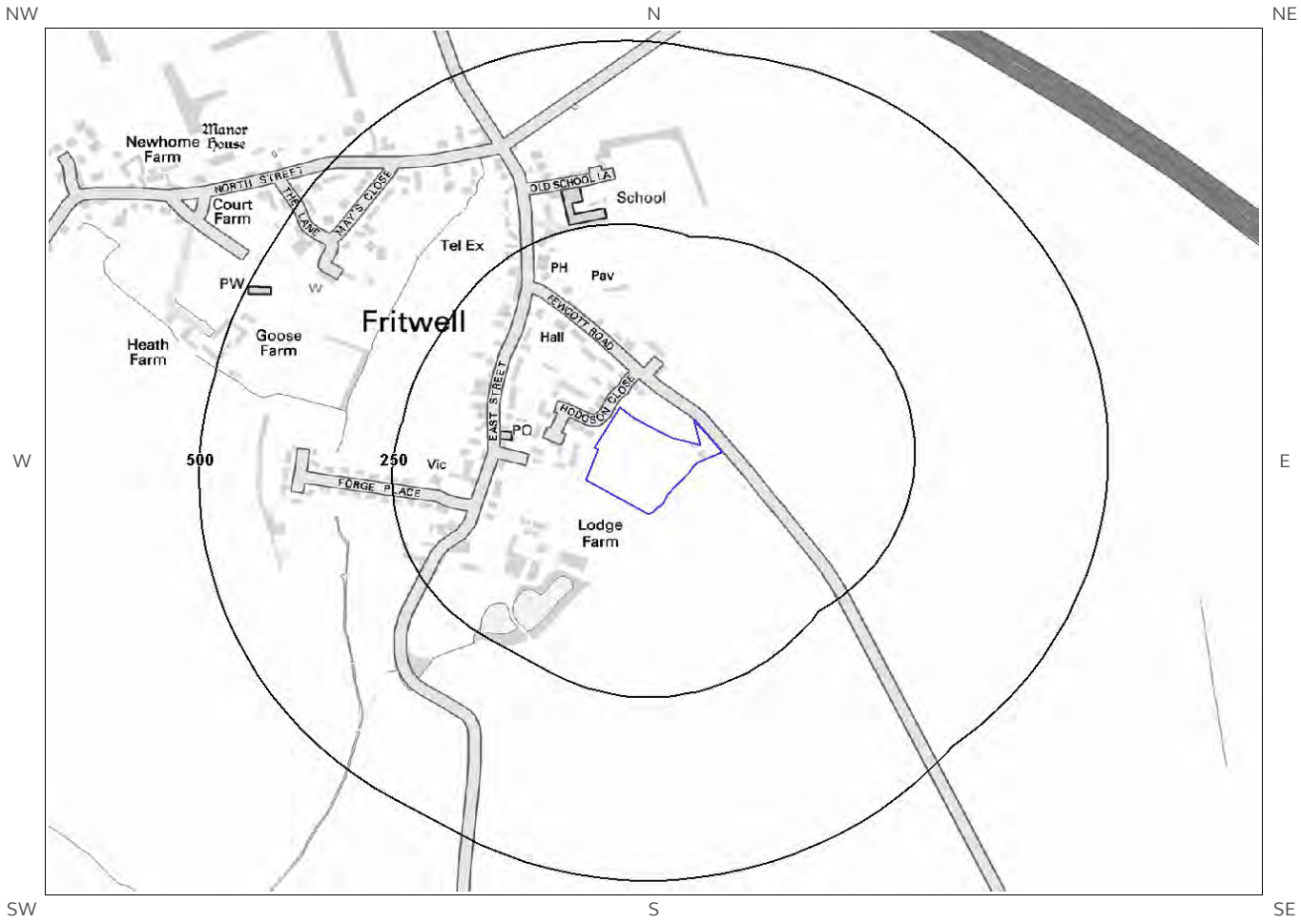
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

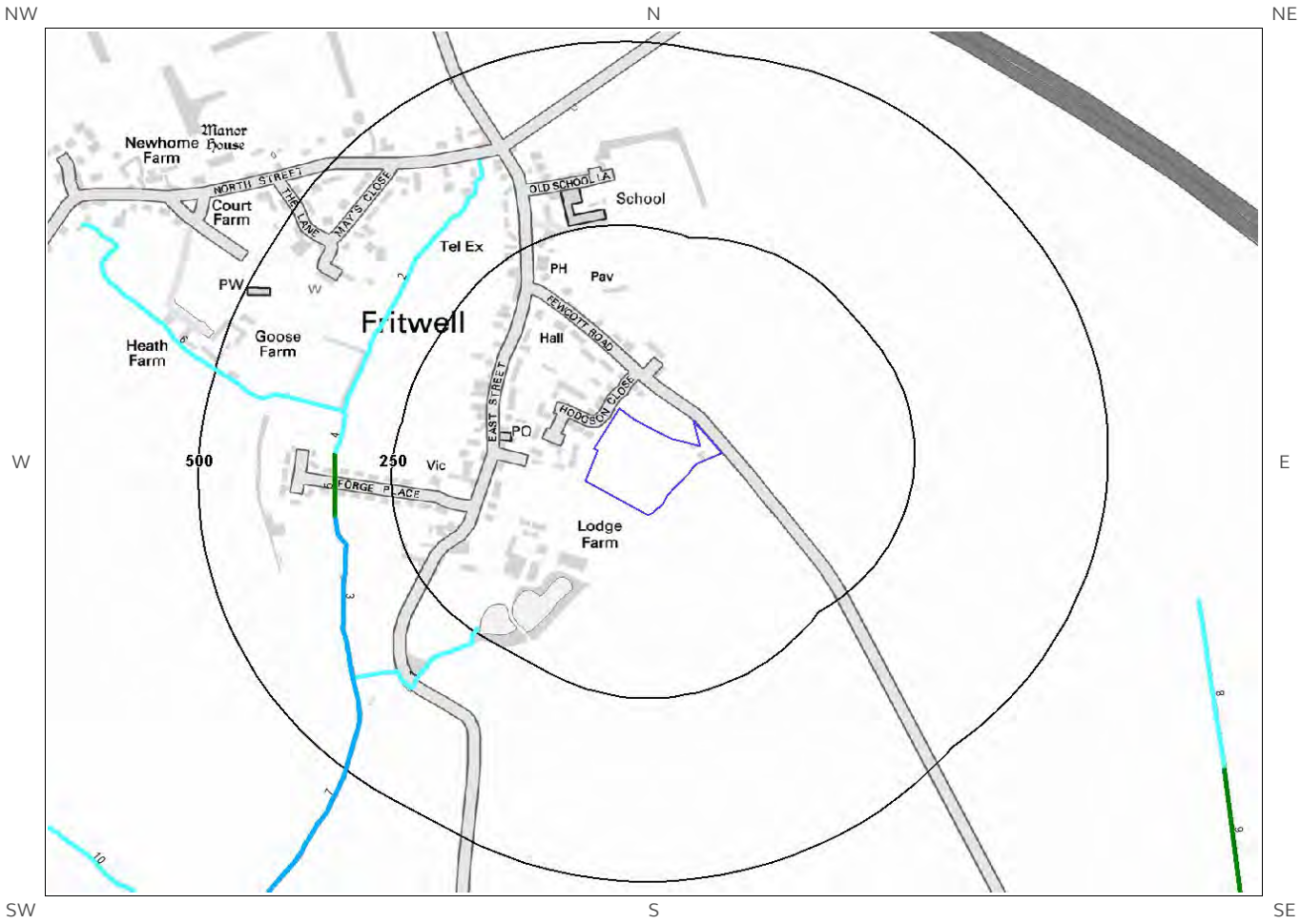
Source Protection Zone 3C - Total Catchment within Confined Aquifer

Site Outline

250
500
Search Buffers (m)

Potable Water Abstraction Licence

6e. Hydrology – Detailed River Network and River Quality



Site Outline

250 Search Buffers (m)
500

Primary River
Secondary River
Tertiary River
Lake/Reservoir
Underground River (inferred)
General Quality Assessment: Biology
General Quality Assessment: Chemistry

Canal
Canal Tunnel
Culvert
Multiple Channel Culvert
Underground River (Potential Sewer)
Underground River (local knowledge)

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	299	W	Secondary A	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. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
3A	718	NW	452300 229500	Status: Historical Licence No: 6/33/02/*G/0012 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Well At Fritwell Data Type: Point Name: DALTON	Annual Volume (m^3): 15092 Max Daily Volume (m^3): 41.36 Original Application No: - Original Start Date: 1/6/1967 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2008 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
4A	718	NW	452300 229500	Status: Historical Licence No: 6/33/02/*G/0012 Details: Spray Irrigation - Direct Direct Source: Ground Water Source Of Supply Point: Well At Fritwell Data Type: Point Name: DALTON	Annual Volume (m^3): 15092 Max Daily Volume (m^3): 41.36 Original Application No: - Original Start Date: 1/6/1967 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2008 Version End Date:
Not shown	820	NE	453600 229700	Status: Historical Licence No: 6/33/02/*G/0056 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Well At Green Farm Fritwell Data Type: Point Name: EVANS	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/6/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/6/1966 Version End Date:
Not shown	1223	S	452700 227800	Status: Historical Licence No: 6/33/02/*G/0092 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Borehole At Ardley Data Type: Point Name: PARKER	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/11/1967 Expiry Date: - Issue No: 100 Version Start Date: 1/3/1977 Version End Date:
Not shown	1328	N	452500 230400	Status: Historical Licence No: 28/39/14/0193 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Inkerman Farm, Souldern (a) Data Type: Point Name: J A HAZELL & SON	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.A/2368 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1977 Version End Date:
Not shown	1379	SE	453800 227900	Status: Historical Licence No: 6/33/02/*G/0091 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Well At Fewcott Data Type: Point Name: GODWIN	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: CV 3120 Original Start Date: 15/1/1968 Expiry Date: - Issue No: 102 Version Start Date: 21/11/2003 Version End Date:
Not shown	1476	SW	451940 227900	Status: Historical Licence No: 6/33/02/*G/0128 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Borehole At Somerton Data Type: Point Name: POWER	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/3/1994 Expiry Date: - Issue No: 100 Version Start Date: 1/3/1994 Version End Date:
Not shown	1476	SW	451940 227900	Status: Historical Licence No: 6/33/02/*G/0128 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water Source Of Supply Point: Borehole At Somerton Data Type: Point Name: POWER	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/3/1994 Expiry Date: - Issue No: 100 Version Start Date: 1/3/1994 Version End Date:
Not shown	1481	NW	452000 230300	Status: Historical Licence No: 28/39/14/0225 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Manor Farm, Souldern (d) Data Type: Point Name: W S DEELEY & SON	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.A/3668 Original Start Date: 12/6/1967 Expiry Date: - Issue No: 100 Version Start Date: 12/6/1967 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1533	NE	454000 230300	Status: Historical Licence No: 6/33/02/*G/0093 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Borehole At Horwell Farm Data Type: Point Name: RANSOM	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/1/1968 Expiry Date: - Issue No: 100 Version Start Date: 1/1/1968 Version End Date:
Not shown	1763	E	454790 229380	Status: Historical Licence No: 6/33/02/*G/0131 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water Source Of Supply Point: Borehole At Stoke Lyne Data Type: Point Name: CURTIS	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/6/1997 Expiry Date: - Issue No: 100 Version Start Date: 1/6/1997 Version End Date:
Not shown	1763	E	454790 229380	Status: Historical Licence No: 6/33/02/*G/0131 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Borehole At Stoke Lyne Data Type: Point Name: CURTIS	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/6/1997 Expiry Date: - Issue No: 100 Version Start Date: 1/6/1997 Version End Date:
Not shown	1835	N	452400 230900	Status: Historical Licence No: 28/39/14/0225 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Manor Farm, Souldern (c) Data Type: Point Name: W S DEELEY & SON	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.A/3668 Original Start Date: 12/6/1967 Expiry Date: - Issue No: 100 Version Start Date: 12/6/1967 Version End Date:
Not shown	1884	NW	451300 230100	Status: Historical Licence No: 28/39/14/0093 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Souldern Grounds, Nr Bicester (a) Data Type: Point Name: ABERNETHY	Annual Volume (m^3): 4546 Max Daily Volume (m^3): 22.73 Original Application No: WR.A/3570 Original Start Date: 14/11/1966 Expiry Date: - Issue No: 100 Version Start Date: 14/11/1966 Version End Date:
Not shown	1983	E	454900 229800	Status: Historical Licence No: 6/33/02/*G/0007 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Well At Baynard Green Data Type: Point Name: CURTIS	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/4/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/9/1966 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1476	SW	451940 227900	Status: Historical Licence No: 6/33/02/*G/0128 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water Source Of Supply Point: Borehole At Somerton Data Type: Point Name: POWER	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/3/1994 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1763	E	454790 229380	Status: Historical Licence No: 6/33/02/*G/0131 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water Source Of Supply Point: Borehole At Stoke Lyne Data Type: Point Name: CURTIS	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 1/6/1997 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.

6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? No

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	242	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2	318	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3	320	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
4	321	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
5	323	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
6	326	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
7	402	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

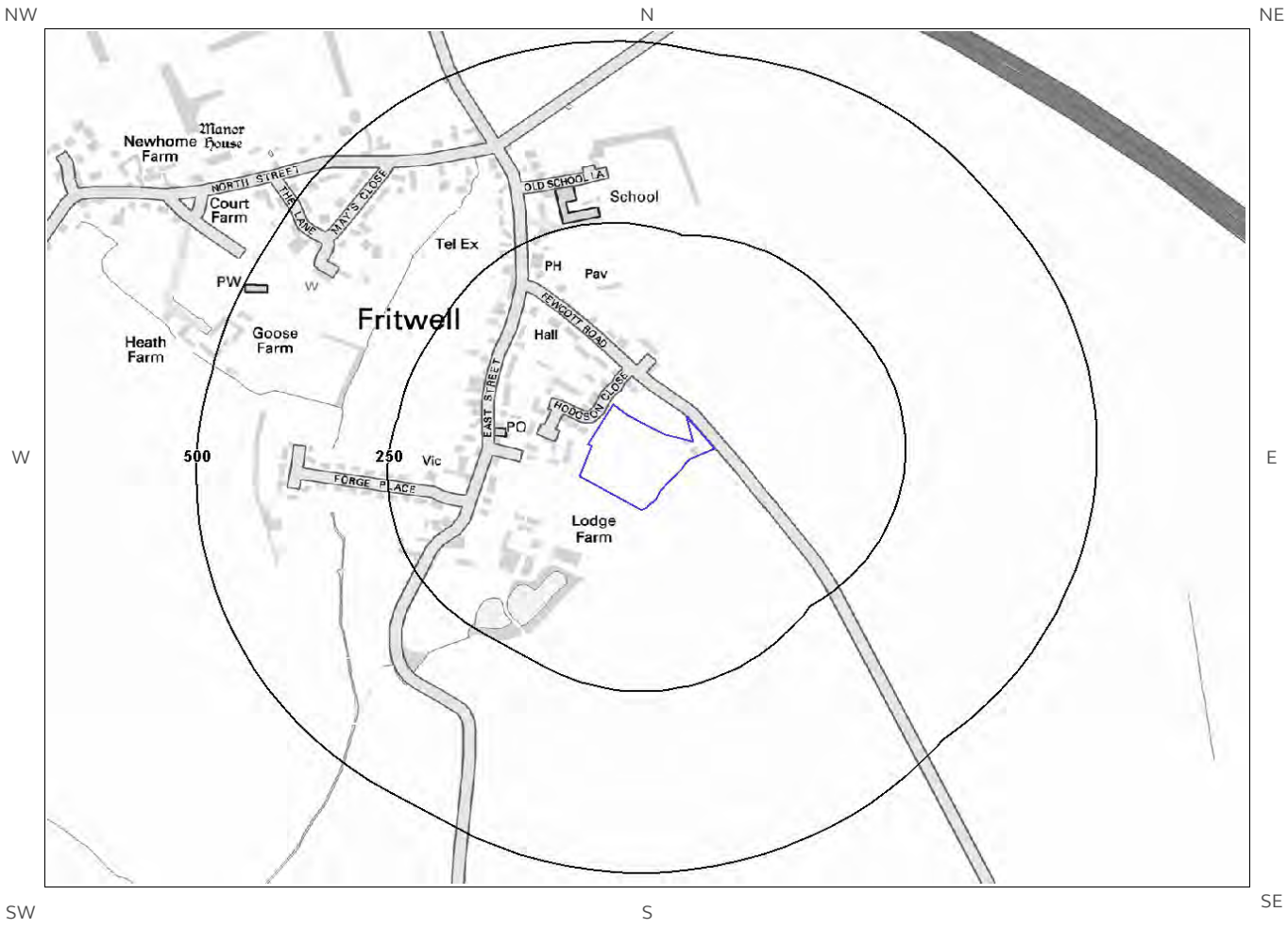
6.11 Surface Water Features

Are there any surface water features within 250m of the study site? Yes

The following surface water records are not represented on mapping:

Distance (m)	Direction
128	SW
199	SW
242	SW

7a. Environment Agency Flood Map for Planning (from rivers and the sea)



Site Outline

100
250
Search Buffers (m)

Zone 2 Floodplain

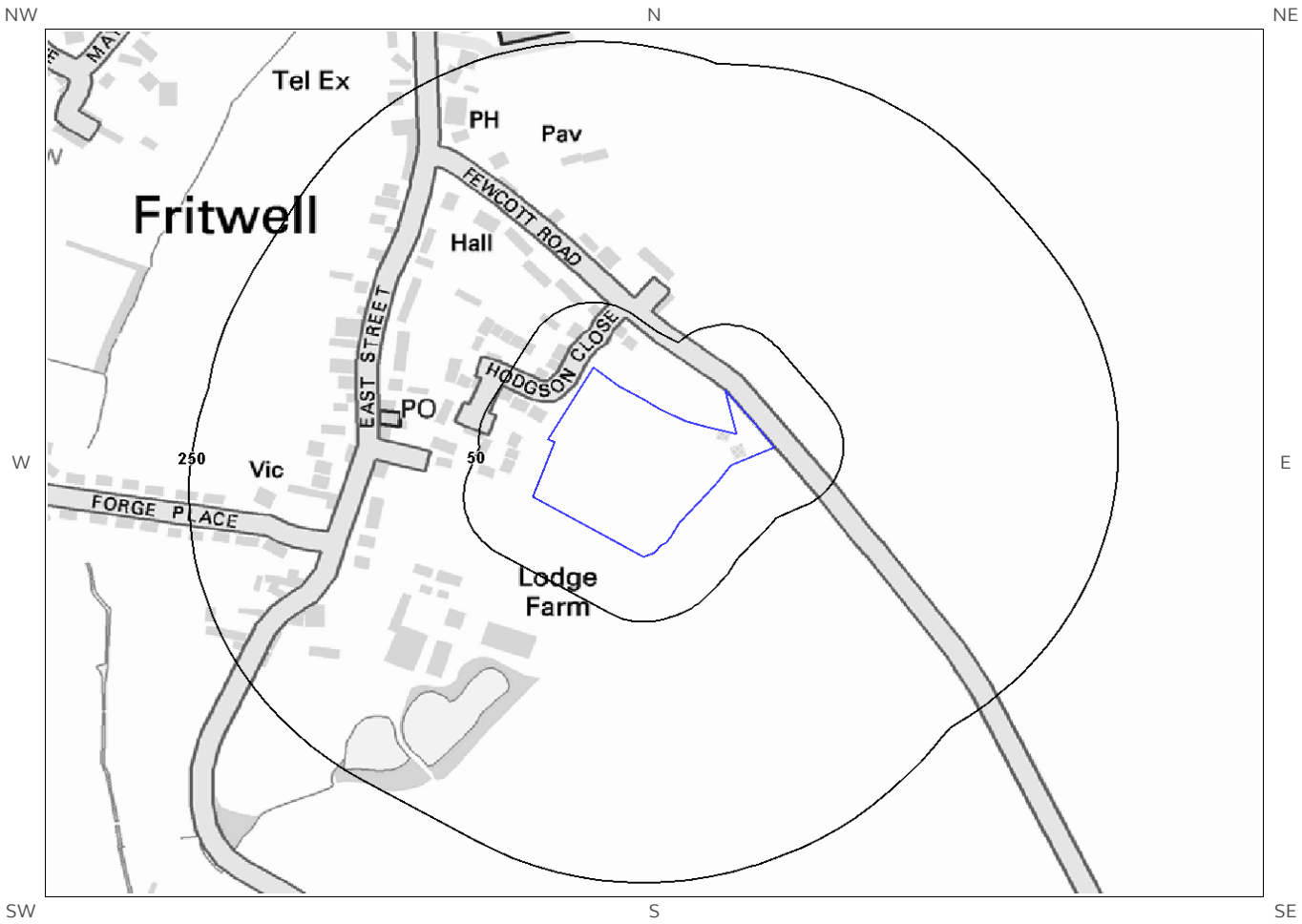
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



Site Outline

100
250
Search Buffers (m)

RoFRaS Rating

Very Low

Low

Medium

High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? No

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? No

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

Database searched and no data found.

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite? Very Low

The Environment Agency RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

7.8 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result? Low

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map

Site Outline

100 250 Search Buffers (m)

AONB

National Park

SSSI

Special Protection Areas

Nitrate Vulnerable Zones

Green Belt

Environmentally Sensitive Areas

Special Areas of Conservation

World Heritage Sites

Nitrate Sensitive Areas

Ancient Woodland

National Nature Reserve

Local Nature Reserves

Ramsar Sites

8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

2

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
1	941	SW	Ardley Cutting and Quarry	Natural England
Not shown	1756	S	Ardley Cutting and Quarry	Natural England

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

3

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1525	S	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1544	SE	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1573	S	UNKNOWN	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

6

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
3	0	On Site	Existing	DEFRA
4	0	On Site	Existing	DEFRA
5	860	N	Existing	DEFRA
6	860	N	Existing	DEFRA
7	960	NW	Existing	DEFRA
8	1039	NW	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a Groundsure GeoInsight, available from our website. The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell*[*] hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for slope instability identified. No special actions required to avoid problems due to landslides. No special ground investigation required and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing
ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506
Web:**www.environment-agency.gov.uk**
Email:**enquiries@environment-agency.gov.uk**

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Cherwell District Council
Phone: 01295 252 535
Web: http://www.cherwell-dc.gov.uk/
Address: Bodicote House, Bodicote, Banbury, Oxfordshire, OX15 4AA

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444

Standard Terms and Conditions

1 Definitions

I**n these terms and conditions unless the context otherwise requires:**

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with Groundsure.

"Commercial" means any building or property which is not Residential.

"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to Groundsure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"Groundsure" means Groundsure Limited, a company registered in England and Wales under number 03421028.

"Groundsure Materials" means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

"Services" means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested Groundsure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,

(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),

(iv) the first purchaser or first tenant of the Site, and

(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1Groundsure shall charge and the Client shall pay fees at the rate and

frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and

(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

(i) loss of profits;

(ii) loss of business;

(iii) depletion of goodwill and/or similar losses;

(iv) loss of anticipated savings;

(v) loss of goods;

(vi) loss of contract;

(vii) loss of use;

(viii) loss or corruption of data or information;

(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event

(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law.

APPENDIX D

Exploratory Hole Records

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

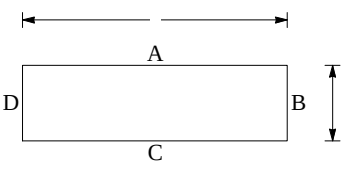
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP1**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.30			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.30-0.40			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.40-1.20			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			
1.20			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

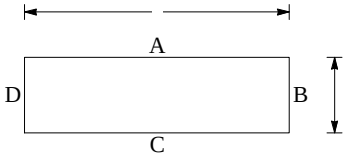
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP2**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.20-0.45			Firm dark brown slightly sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)	0.35	D	
0.45-1.20			Buff brown slightly clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			
1.20			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

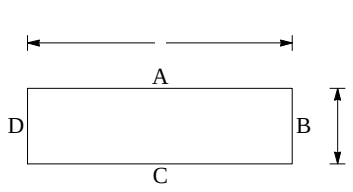
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				TP3
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.30			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL) 0.00 - 0.50 Live roots and rootlets.			
0.30-0.50			Firm brown sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.50-1.05			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			
1.05			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

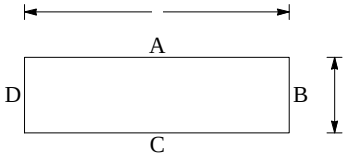
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP4**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.30			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.30-0.60			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)	0.50	D	
0.60-1.70			Buff brown slightly clayey locally clayey slightly sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)	0.70	B	
1.70			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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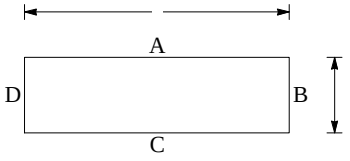
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP5**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.20-0.40			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.40-1.00			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded frequently tabular oolitic limestone. (OOLITE)	0.35	ES	
1.00			No further progress due to hard limestone.	1.00	ES	

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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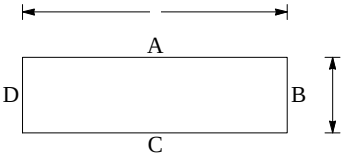
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP6**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.30			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.30-0.50			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.50-1.80			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded frequently tabular oolitic limestone. (OOLITE)			
1.80			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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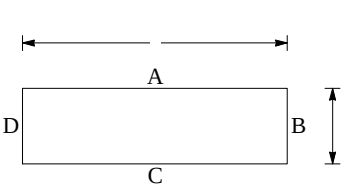
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				TP7
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-1.10			Grass over soft dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse limestone and red brick. Two boulder sized slabs of concrete in south west of pit. Extended pit in a northerly direction. (MADE GROUND)			
1.10-1.90			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded frequently tabular oolitic limestone. (OOLITE)			
1.90			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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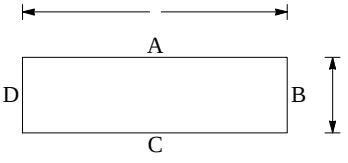
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP8**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.20-0.60			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.60-1.60			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)	1.50	B	
1.60			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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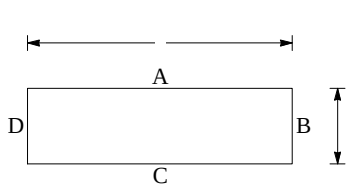
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP9**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.20-0.40			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. Locally a clayey gravel. (OOLITE)			
0.40-1.70			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)	0.60	ES	
1.70			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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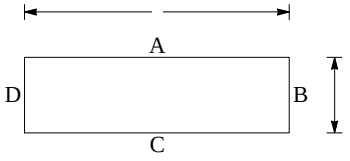
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP10**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.50			Grass over dark brown sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse limestone. Foreign objects comprise plastic bag, cobble of concrete slab, rusted can, aluminium and plastic sheeting. (MADE GROUND)			
0.50-0.80			Dark brown clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (MADE GROUND)			
0.80-1.60			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			
1.60			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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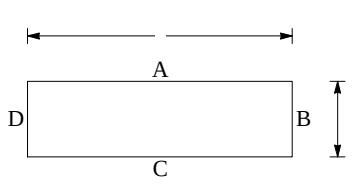
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP11**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.30			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (MADE GROUND)			
0.30-0.60			Dark brown very clayey slightly sandy gravelly COBBLES of subangular and subrounded limestone. (MADE GROUND)	0.50	ES	
0.60-1.00			Loose and voided brown very clayey slightly sandy, ashy demolition FILL. Foreign objects include plastic sheeting, rope, red brick, piece of brick walling, steel, timber, boulders of tabular tarmac, rare slate. Pice of tarmac (1.20m x 0.80m x0.50m). Suspected asbestos containing roofing board. (MADE GROUND)			
1.00-1.50			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			
1.50			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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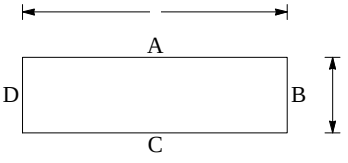
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP12**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.25			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone and rare red brick. (MADE GROUND)			
0.25-1.40			Dark brown very clayey slightly sandy gravelly COBBLES of subangular and subrounded limestone. Foreign objects include brick, timber tarmac, concrete, tile and boulder of limestone. Clay is soft and firm. (MADE GROUND)	1.00	D	
1.40-1.50			Firm light brown slightly sandy CLAY. (MADE GROUND)			
1.50-2.50			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE) 2.35 Water strike. Moderate ingress. Depth of water at 2.30m after 30 minutes.			
2.50			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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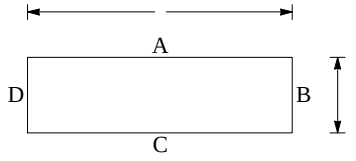
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP13**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Grass over dark brown sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (MADE GROUND)			
0.20-0.40			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone and rare concrete. (MADE GROUND)			
0.40-0.90			Brown very clayey slightly sandy GRAVEL & COBBLE of subangular and subrounded limestone. Foreign objects include red brick, plastic sheeting, concrete, plastic. Suspected asbestos containing roofing board. (MADE GROUND)			
0.90-1.80			Firm brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. Rare pockets of ash. Rare timber. Carbonaceous speckling. (MADE GROUND)	1.00	D	
1.80-2.00			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			
2.00			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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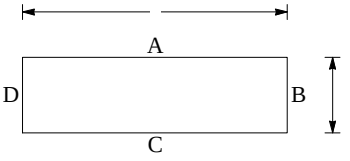
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP14**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	02-11-15			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Grass over dark brown sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (MADE GROUND)			
0.20-1.00			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (MADE GROUND)			
1.00-1.60			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			
1.60			No further progress due to hard limestone.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 6/11/15

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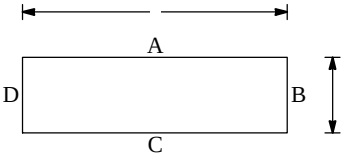
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				TP15
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-1.20			Trial trench excavated 17m long with its long axis trending northwest-southeast. Materials largely comprised reworked granular oolite to 0.90m. Horizon of dark brown ashy sandy slightly gravelly CLAY from 0.90-1.10m containing rare metal wire thinning towards the southeast. Rare fragments of asbestos sheeting. (MADE GROUND)	0.50	ES	
				0.70	ES	
				0.90	ES	
1.20-1.30			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. Materials recorded at 1.00m in far southeast of trial trench. (OOLITE)			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

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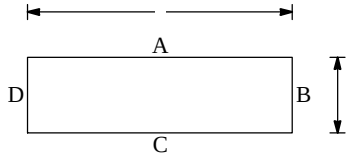
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP16**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-1.00			Trial trench excavated 7m long with its long axis trending northwest-southeast. Materials variable but generally comprised dark brown very clayey slightly sandy gravelly COBBLES of brick, tarmac, concrete, tile. Wire, timber, rusted metal sheeting. Steel pipe. Piece of masonry recovered 1.50m long by 1.00m wide. Rare fragments of asbestos sheeting. (MADE GROUND)	0.50	ES	
				0.80	ES	
				0.85	ES	
1.00-1.20			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. Materials recorded at 1.00m in far southeast of trial trench. (OOLITE)			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

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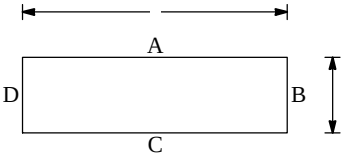
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				TP17
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.10			Grass over dark brown slightly sandy gravelly CLAY. (MADE GROUND)			
0.10-0.80			Trial trench excavated 8m long trending northwest-southeast. Materials comprised buff brown slightly clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. Rare subangular cobble of concrete and red brick. (MADE GROUND)	0.30	ES	
0.80			No further progress due to encountering concrete. Possible sewer.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

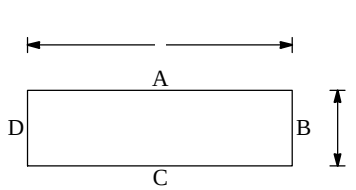
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP18**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Grass over dark brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)	0.10	ES	
0.20-0.40			Firm dark brown slightly sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.40-0.70			Buff brown slightly clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

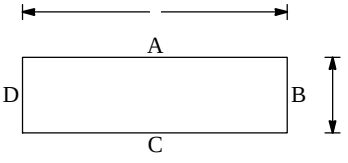
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP19**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.15			Grass over dark brown sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.15-0.40			Firm dark brown slightly sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.40-0.80			Buff brown very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)	0.35	ES	

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

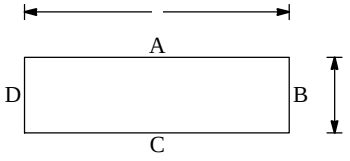
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				TP20
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.10			Grass over dark brown sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)	0.05	ES	
0.10-0.50			Firm dark brown slightly sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.50-0.70			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

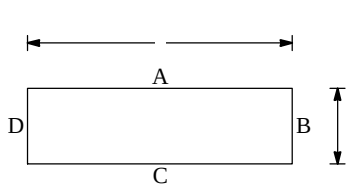
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				TP21
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.10			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.10-0.40			Firm dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.40-0.60			Buff brown clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)	0.40	ES	

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

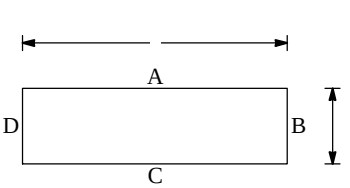
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP22**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.10			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.10-0.40			Firm dark brown slightly sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)	0.10	ES	
0.40-0.80			Buff brown slightly clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

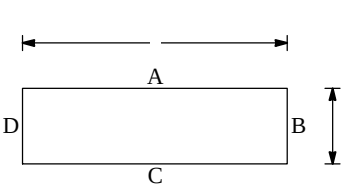
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				TP23
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.60			Grass over soft brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. Rare subangular cobble of concrete. (MADE GROUND)	0.50	ES	
0.60-0.80			Buff brown slightly clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

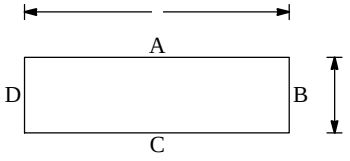
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP24**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)	0.10	ES	
0.20-0.50			Firm dark brown slightly sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.50-1.00			Buff brown slightly clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)	0.90	ES	
1.00			No further progress due to encountering hard bedrock.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

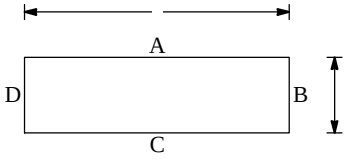
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP25**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.40			Grass over soft brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. Rare subangular cobble and boulder of concrete. Single whole red brick. (MADE GROUND)			
0.40-0.90			Buff brown slightly clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)	0.35	ES	

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

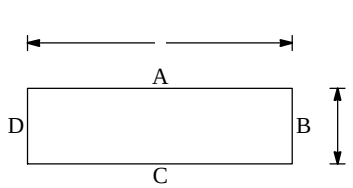
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP26**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.10			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.10-0.40			Firm brown sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)	0.15	ES	
0.40-0.90			Buff brown slightly clayey locally clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

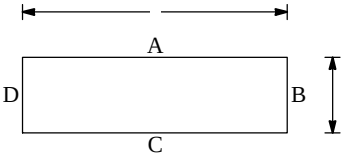
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				TP27
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.20			Loose dark brown locally black very sandy very clayey GRAVEL and COBBLE of aungular to subrounded limestone, concrete and red brick. Suspected asbestos sheeting. (MADE GROUND)			
0.20-0.75			Brown locally grey slightly clayey, sandy GRAVEL and COBBLE of aungular to subrounded limestone, concrete and red brick. Numerous pieces of suspected asbestos sheeting. (MADE GROUND)	0.25	ES	
0.75-0.90			Firm brown sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.90			Investigation of a small overgrown stockpile. Trial pit terminated in virgin soils. Depths are recorded from top of stockpile above ground level.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

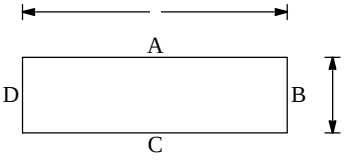
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP28**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.10			Loose black and grey slightly clayey very sandy GRAVEL of angular to subrounded fine to coarse brick, tile and concrete. Rare metal wire. (MADE GROUND)	0.05	ES	
0.10-0.70			Firm dark brown slightly sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
0.70			Trial pit excavated into an area formerly occupied by storage for a commercial roofer. Numerous tiles at the surface.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

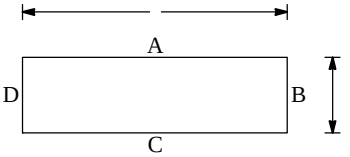
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				**TP29**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	04-03-16			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.30			Loose black locally grey slightly clayey very sandy GRAVEL of angular to subrounded fine to coarse tile, brick, concrete and glass. Rare metal pipe. Plastic bag. (MADE GROUND)	0.25	ES	
0.30-1.10			Firm dark brown slightly sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (OOLITE)			
1.10-1.30			Buff brown slightly clayey locally very clayey sandy GRAVEL & COBBLE of subangular and subrounded oolitic limestone. (OOLITE)			
1.30			Trial pit excavated into an area formerly occupied by storage for a commercial roofer. Numerous tiles at the surface.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings upon completion.

All dimensions in metres Scale 1:18.75	Client CALA HOMES	Method/ Plant Used JCB 3CX	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 7/4/16

APPENDIX E

Geotechnical Laboratory Results

Laboratory Report

2788

GEO Site & Testing Services Ltd

Contract Number: 29005

Client's Reference: **BC195**

Report Date: **30-11-2015**

Client **The Brownfield Consultancy Ltd**
Woodstock
Memorial Road
Fenny Compton
Warwickshire
CV47 2XU

Contract Title: **Fritwell**

For the attention of: **Jim Twaddle**

Date Received: **11-11-2015**

Date Commenced: **11-11-2015**

Date Completed: **30-11-2015**

Test Description	Qty
Moisture Content 1377 : 1990 Part 2 : 3.2 - * UKAS	4
4 Point Liquid & Plastic Limit (LL/PL) 1377 : 1990 Part 2 : 4.3 & 5.3 - * UKAS	4
PSD Wet Sieve method 1377 : 1990 Part 2 : 9.2 - * UKAS	2
Disposal of Samples on Project	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
 # - denotes test carried out by approved contractor
@ - denotes non accredited tests

Approved Signatories:
Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

GEO Site & Testing Services Ltd
Unit 4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN
Tel: 01554 784040 Fax: 01554 784041 info@geo.uk.com geo.uk.com

Client ref: BC195

Location: Fritwell

Contract Number: 29005-111115

Hole Number	Sample Number	Type	Depth (m)	Description of Sample*
TP2		D	0.35	Brown fine to medium gravelly fine to coarse sandy very silty CLAY.
TP4		D	0.50	Brown fine to coarse gravelly fine to coarse sandy silty CLAY.
TP12		D	1.00	Brown fine gravelly fine to coarse sandy silty CLAY.
TP13		D	1.00	Brown fine gravelly fine to coarse sandy silty CLAY.

Note: Results on this table are in summary format and may not meet the requirements of the relevant standards, additional information is held by the laboratory

GSTL
GEO SITE & TESTING SERVICES LTD

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)
Date: 30.11.15

[redacted]

UKAS TESTING
2788

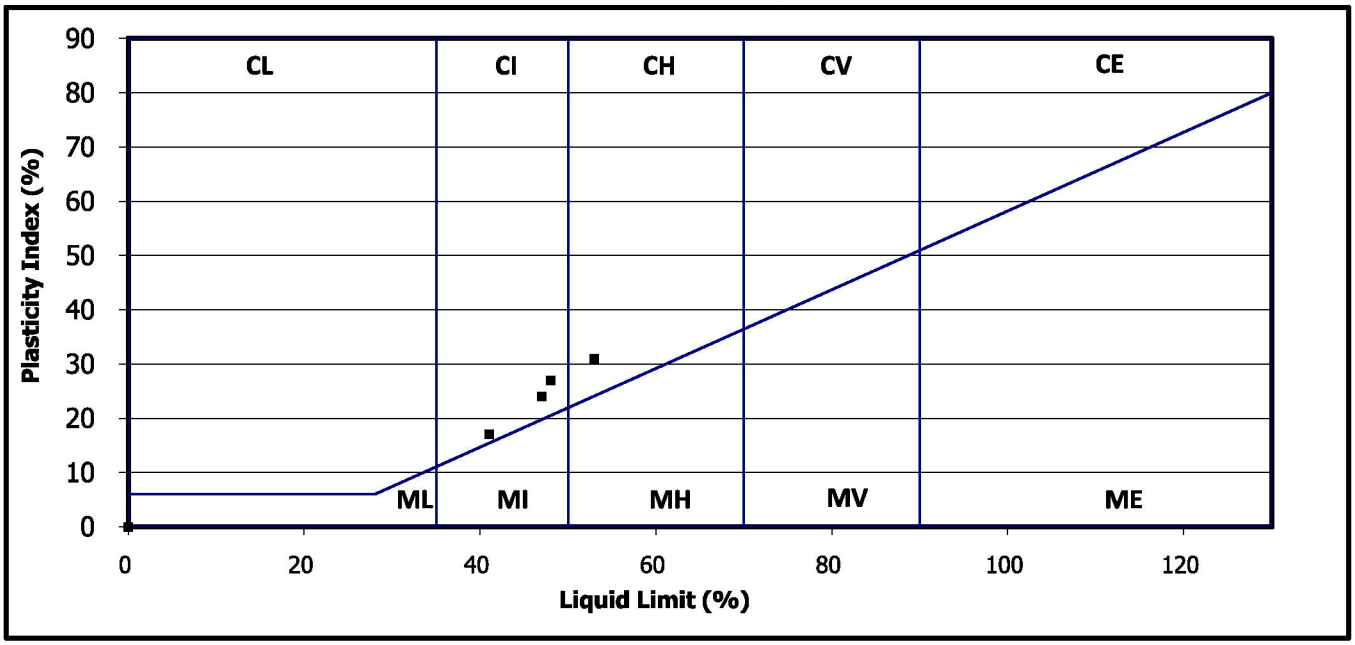
Test Report: **Method of the Determination of the plastic limit and plasticity index**
BS 1377 : Part 2 : 1990 Method 5

Client ref: **BC195**
Location: **Fritwell**
Contract Number: **29005-111115**

Hole/ Sample Number	Sample Type	Depth m	Moisture Content % Cl. 3.2	Liquid Limit % Cl. 4.3/4.4	Plastic Limit % Cl. 5.	Plasticity Index % Cl. 6.	% Passing .425mm	Remarks
TP2	D	0.35	19	41	24	17	75	CI Intermediate Plasticity
TP4	D	0.50	18	47	23	24	58	CI Intermediate Plasticity
TP12	D	1.00	21	48	21	27	87	CI Intermediate Plasticity
TP13	D	1.00	30	53	22	31	86	CH High Plasticity

Symbols: **NP : Non Plastic** **# : Liquid Limit and Plastic Limit Wet Sieved**

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.
BS 5930:1999+A2:2010



For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)
Date: 30.11.15

UKAS TESTING 2788

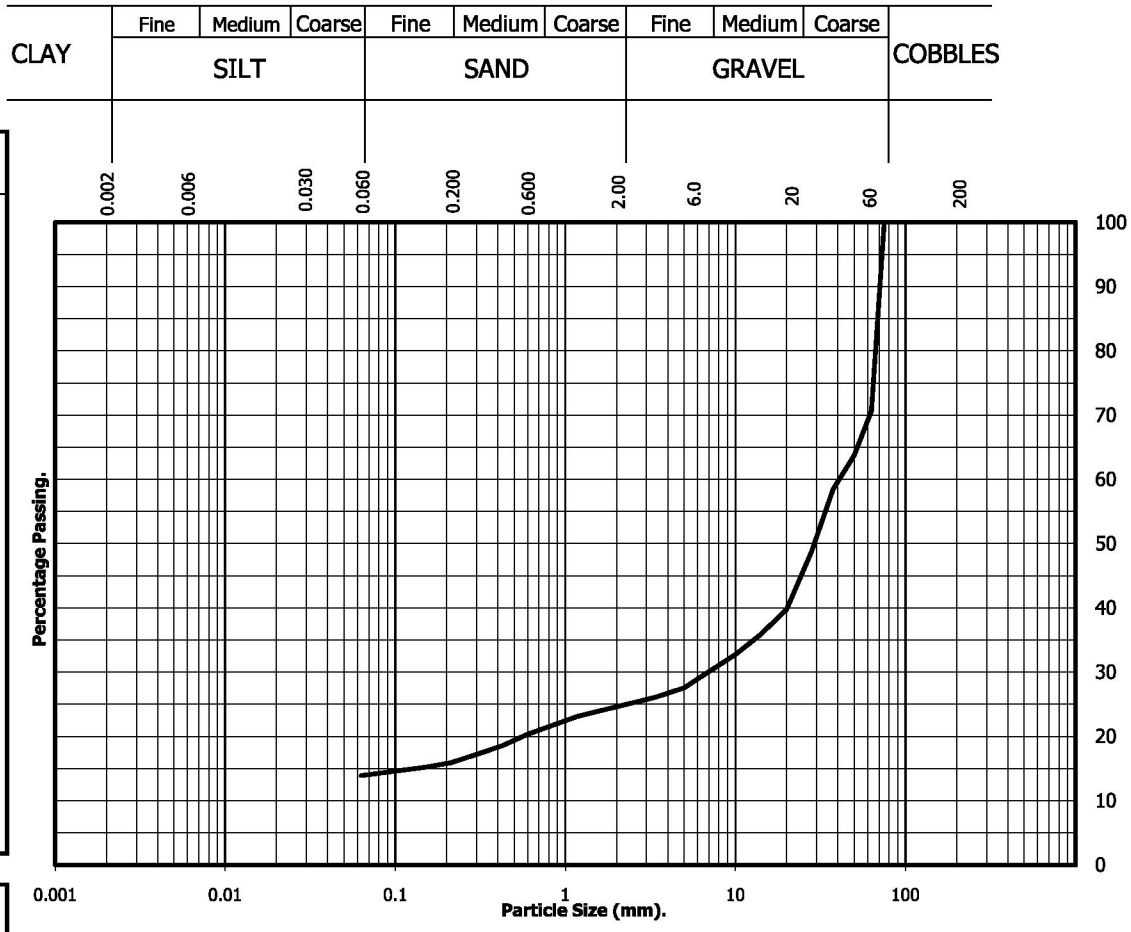
Test Report:

Particle Size Distribution Test
BS 1377 Part 2:1990.
Wet Sieve, Clause 9.2

Client ref: BC195
Contract Number: 29005-111115
Hole Number: TP4

Sample Number:
Depth from (m): 0.70
Depth to (m): 0.80
Sample Type: B

Location: Fritwell
Description: Brown silty sandy GRAVEL with cobbles



BS Test Sieve	% Passing
125	100
90	100
75	100
63	71
50	64
37.5	58
28	49
20	40
14	36
10	33
6.3	29
5.0	28
3.35	26
2.00	25
1.18	23
0.60	20
0.425	19
0.300	17
0.212	16
0.150	15
0.063	14

Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	14	11	46	29	Total Percentage

Remarks:
#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)

[redacted]

Date: 30.11.15

GSTL
GEO SITE & TESTING SERVICES LTD

UKAS TESTING
2788

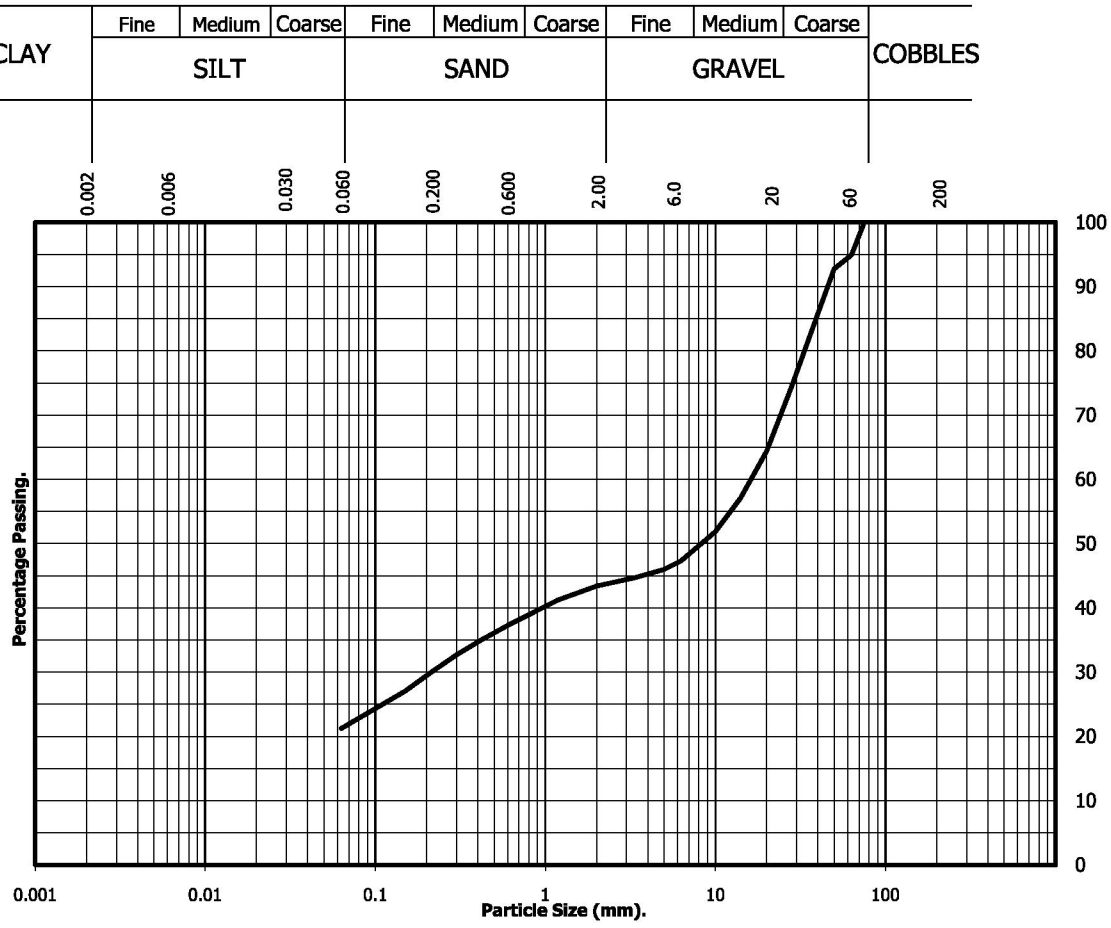
Test Report:

Particle Size Distribution Test
BS 1377 Part 2:1990.
Wet Sieve, Clause 9.2

Client ref: BC195
Contract Number: 29005-111115
Hole Number: TP8

Sample Number:
Depth from (m): 1.50
Depth to (m):
Sample Type: B

Location: Fritwell
Description: Brown silty sandy GRAVEL with cobbles



BS Test Sieve	% Passing
125	100
90	100
75	100
63	95
50	93
37.5	84
28	74
20	64
14	57
10	52
6.3	47
5.0	46
3.35	45
2.00	43
1.18	41
0.60	37
0.425	35
0.300	33
0.212	30
0.150	27
0.063	21

Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	21	22	52	5	Total Percentage

Remarks:
#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)

[redacted]

Date: 30.11.15

GSTL
GEO SITE & TESTING SERVICES LTD

UKAS TESTING
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APPENDIX F

Chemical Laboratory Results

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Analytical Report Number : 15-82288

Project / Site name:	Fritwell	**Samples received on:**	10/11/2015
Your job number:	BC195	**Samples instructed on:**	11/11/2015
Your order number:		**Analysis completed by:**	18/11/2015
Report Issue Number:	1	**Report issued on:**	19/11/2015
Samples Analysed:	3 soil samples, 1 buk sample		

Signed: [redacted]

Rexona Rahman
Reporting Manager
For & on behalf of i2 Analytical Ltd.

Signed: [redacted]

Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 15-82288

Project / Site name: Fritwell

Lab Sample Number				505622	505623	505624		
Sample Reference				TP5	TP5	TP9		
Sample Number				ES	ES	ES		
Depth (m)				0.35	1.00	0.60		
Date Sampled				02/11/2015	02/11/2015	02/11/2015		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	17	7.2	7.2		
Total mass of sample received	kg	0.001	NONE	0.18	0.57	0.43		
General Inorganics								
pH	pH Units	N/A	MCERTS	7.6	7.8	7.8		
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0098	0.0059	0.0079		

Analytical Report Number: 15-82288

Project / Site name: Fritwell

Lab Sample Number				505625				
Sample Reference				TP11				
Sample Number				ES				
Depth (m)				0.50				
Date Sampled				02/11/2015				
Time Taken				None Supplied				
Analytical Parameter (Bulk Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Asbestos Identification Name	Type	N/A	ISO 17025	Chrysotile-Hard/cement type material				

Analytical Report Number : 15-82288

Project / Site name: Fritwell

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
505622	TP5	ES	0.35	Brown loam and clay.
505623	TP5	ES	1.00	Light brown sandy loam with gravel.
505624	TP9	ES	0.60	Light brown sandy loam with gravel.

Analytical Report Number : 15-82288

Project / Site name: Fritwell

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Bulks	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	W	ISO 17025
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 16-12830

Project / Site name:	Fritwell	**Samples received on:**	08/03/2016
Your job number:	BC195	**Samples instructed on:**	08/03/2016
Your order number:		**Analysis completed by:**	17/03/2016
Report Issue Number:	1	**Report issued on:**	17/03/2016
Samples Analysed:	22 soil samples		

Signed: [redacted]

Rexona Rahman
Reporting Manager
For & on behalf of i2 Analytical Ltd.

Signed: [redacted]

Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 16-12830

Project / Site name: Fritwell

Lab Sample Number				546062	546063	546064	546065	546066
Sample Reference				TP17	TP18	TP19	TP20	TP21
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.10	0.35	0.05	0.40
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	19	20	20	22	17
Total mass of sample received	kg	0.001	NONE	0.37	0.41	0.18	0.34	0.38
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Acenaphthylene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Acenaphthene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Fluorene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Phenanthrene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Anthracene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Fluoranthene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Pyrene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Benzo(a)anthracene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Benzo(a)pyrene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	-	-	< 1.60	-	-
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	10	16	-	15	13
Boron (water soluble)	mg/kg	0.2	MCERTS	2.0	3.4	-	2.7	2.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	-	0.3	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	16	27	-	23	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17	25	-	21	22
Lead (aqua regia extractable)	mg/kg	1	MCERTS	26	37	-	42	30
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	21	-	19	18
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	63	71	-	79	52
Petroleum Hydrocarbons								
TPH5 (C6 - C10)	mg/kg	0.1	NONE	-	-	-	-	-
TPH5 (C10 - C20)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C20 - C30)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C30 - C40)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C6 - C40)	mg/kg	10	NONE	-	-	-	-	-

Analytical Report Number: 16-12830

Project / Site name: Fritwell

Lab Sample Number				546067	546068	546069	546070	546071
Sample Reference				TP22	TP23	TP24	TP25	TP26
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.50	0.10	0.35	0.15
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	-	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	-	15	19	11	13
Total mass of sample received	kg	0.001	NONE	-	0.42	0.42	0.18	0.39
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	-	Not-detected	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.1	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.1	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.1	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.1	MCERTS	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.1	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.1	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	-	-	-	-	-
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	13	17	15	15
Boron (water soluble)	mg/kg	0.2	MCERTS	-	2.3	3.4	4.1	4.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	0.2	0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	19	24	24	21
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	17	22	21	22
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	50	41	34	45
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	18	21	21	18
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	2.7	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	49	68	70	88
Petroleum Hydrocarbons								
TPH5 (C6 - C10)	mg/kg	0.1	NONE	-	-	-	-	-
TPH5 (C10 - C20)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C20 - C30)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C30 - C40)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C6 - C40)	mg/kg	10	NONE	-	-	-	-	-

Analytical Report Number: 16-12830

Project / Site name: Fritwell

Lab Sample Number				546072	546073	546074	546075	546076
Sample Reference				TP27	TP28	TP29	TP26	TP15
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.05	0.25	0.90	0.70
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	-	-	-	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	-	-	-	10	18
Total mass of sample received	kg	0.001	NONE	-	-	-	0.37	0.40
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile-Hard/Cement Type Material, Loose Fibres	Chrysotile-Hard/Cement Type Material	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	-	-	-	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	-	-	-	< 1.60	< 1.60
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	19
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-	2.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-	0.4
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	18
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	30
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	90
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	19
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	210
Petroleum Hydrocarbons								
TPH5 (C6 - C10)	mg/kg	0.1	NONE	-	-	-	< 0.1	-
TPH5 (C10 - C20)	mg/kg	10	NONE	-	-	-	< 10	-
TPH5 (C20 - C30)	mg/kg	10	NONE	-	-	-	< 10	-
TPH5 (C30 - C40)	mg/kg	10	NONE	-	-	-	< 10	-
TPH5 (C6 - C40)	mg/kg	10	NONE	-	-	-	< 10	-

Analytical Report Number: 16-12830

Project / Site name: Fritwell

Lab Sample Number				546077	546078	546079	546080	546081
Sample Reference				TP15	TP15	TP15	TP16	TP16
Sample Number				5	15	2	None Supplied	None Supplied
Depth (m)				0.50	0.90	0.70	0.50	0.80
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	-	-	-	-	-
Moisture Content	%	N/A	NONE	-	-	-	-	-
Total mass of sample received	kg	0.001	NONE	-	-	-	-	-
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.1	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.1	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.1	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.1	MCERTS	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.1	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.1	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	-	-	-	-	-
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Petroleum Hydrocarbons								
TPH5 (C6 - C10)	mg/kg	0.1	NONE	-	-	-	-	-
TPH5 (C10 - C20)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C20 - C30)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C30 - C40)	mg/kg	10	NONE	-	-	-	-	-
TPH5 (C6 - C40)	mg/kg	10	NONE	-	-	-	-	-

Analytical Report Number: 16-12830

Project / Site name: Fritwell

Lab Sample Number				546082	546083			
Sample Reference				TP16	TP16			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.85	0.80-0.90			
Date Sampled				Deviating	Deviating			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	-			
Moisture Content	%	N/A	NONE	17	-			
Total mass of sample received	kg	0.001	NONE	0.30	-			
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-			
Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	-			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	-			
Fluorene	mg/kg	0.1	MCERTS	< 0.10	-			
Phenanthrene	mg/kg	0.1	MCERTS	0.22	-			
Anthracene	mg/kg	0.1	MCERTS	< 0.10	-			
Fluoranthene	mg/kg	0.1	MCERTS	0.41	-			
Pyrene	mg/kg	0.1	MCERTS	0.37	-			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.28	-			
Chrysene	mg/kg	0.05	MCERTS	0.23	-			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	-			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	-			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.20	-			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	-			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	-			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	1.71	-			
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	-			
Boron (water soluble)	mg/kg	0.2	MCERTS	2.0	-			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	-			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	17	-			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	34	-			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	120	-			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	-			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	200	-			
Petroleum Hydrocarbons								
TPH5 (C6 - C10)	mg/kg	0.1	NONE	-	-			
TPH5 (C10 - C20)	mg/kg	10	NONE	-	-			
TPH5 (C20 - C30)	mg/kg	10	NONE	-	-			
TPH5 (C30 - C40)	mg/kg	10	NONE	-	-			
TPH5 (C6 - C40)	mg/kg	10	NONE	-	-			

Analytical Report Number : 16-12830

Project / Site name: Fritwell

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
546062	TP17	None Supplied	0.30	Brown clay and loam with gravel and vegetation.
546063	TP18	None Supplied	0.10	Brown loam and clay with gravel and vegetation.
546064	TP19	None Supplied	0.35	Brown loam and clay with gravel and vegetation.
546065	TP20	None Supplied	0.05	Brown loam and clay with gravel and vegetation.
546066	TP21	None Supplied	0.40	Brown loam and clay with gravel and vegetation.
546067	TP22	None Supplied	0.10	-
546068	TP23	None Supplied	0.50	Brown loam and clay with gravel and vegetation.
546069	TP24	None Supplied	0.10	Brown loam and clay with gravel and vegetation.
546070	TP25	None Supplied	0.35	Brown loam and clay with gravel and vegetation.
546071	TP26	None Supplied	0.15	Brown loam and clay with gravel and vegetation.
546072	TP27	None Supplied	0.25	-
546073	TP28	None Supplied	0.05	-
546074	TP29	None Supplied	0.25	-
546075	TP26	None Supplied	0.90	Light brown clay and sand with gravel.
546076	TP15	None Supplied	0.70	Brown loam and clay with gravel.
546077	TP15	5	0.50	-
546078	TP15	15	0.90	-
546079	TP15	2	0.70	-
546080	TP16	None Supplied	0.50	-
546081	TP16	None Supplied	0.80	-
546082	TP16	None Supplied	0.85	Brown loam and clay with gravel and vegetation.
546083	TP16	None Supplied	0.80-0.90	-

Analytical Report Number : 16-12830

Project / Site name: Fritwell

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
TPH5 (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 16-12831

Project / Site name:	Fritwell	**Samples received on:**	08/03/2016
Your job number:	BC195	**Samples instructed on:**	08/03/2016
Your order number:		**Analysis completed by:**	16/03/2016
Report Issue Number:	1	**Report issued on:**	16/03/2016
Samples Analysed:	1 wac multi sample		

Signed: [redacted]

Dr Irma Doyle
Senior Account Manager
For & on behalf of i2 Analytical Ltd.

Signed: [redacted]

Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Waste Acceptance Criteria Analytical Results

Report No:	**16-12831**						
					Client:	**BROWNFIELD**	
Location	**Fritwell**						
Lab Reference (Sample Number)	546084				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	Deviating				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP24						
Depth (m)	0.90						
Solid Waste Analysis							
TOC (%)**	0.4				3%	5%	6%
Loss on Ignition (%) **	1.8				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.30				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 1.6				100	--	--
pH (units)**	7.0				--	>6	--
Acid Neutralisation Capacity (mol / kg)	0.0000				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 3 preparation utilising end over end leaching procedure)	2:1	8:1		Cumulative 10:1	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
	mg/l	mg/l		mg/kg			
Arsenic *	< 0.010	< 0.010		< 0.050	0.5	2	25
Barium *	0.0061	0.011		0.10	20	100	300
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1	5
Chromium *	< 0.0010	< 0.0010		0.0072	0.5	10	70
Copper *	0.0033	< 0.0030		< 0.020	2	50	100
Mercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
Molybdenum *	< 0.0030	< 0.0030		< 0.020	0.5	10	30
Nickel *	< 0.0010	0.0019		0.018	0.4	10	40
Lead *	< 0.0050	< 0.0050		0.026	0.5	10	50
Antimony *	< 0.0050	< 0.0050		< 0.020	0.06	0.7	5
Selenium *	< 0.010	< 0.010		< 0.040	0.1	0.5	7
Zinc *	< 0.0010	< 0.0010		< 0.020	4	50	200
Chloride *	< 4.0	< 4.0		< 15	800	4000	25000
Fluoride	0.33	0.24		2.5	10	150	500
Sulphate *	3.6	1.7		19	1000	20000	50000
TDS	90	60		640	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
DOC	5.2	3.4		37	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.6						
Dry Matter (%)	90						
Moisture (%)	10						
Stage 1							
Volume Eluate L2 (litres)	0.33						
Filtered Eluate VE1 (litres)	0.25						

Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and I2 cannot be held responsible for any discrepencies with current legislation

*= UKAS accredited (liquid eluate analysis only)
** = MCERTS accrediited

Analytical Report Number : 16-12831

Project / Site name: Fritwell

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
546084	TP24	None Supplied	0.90	Light brown clay and sand with gravel.

Analytical Report Number : 16-12831

Project / Site name: Fritwell

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	W	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457-3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

Analytical Report Number : 16-12831

Project / Site name: Fritwell

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

APPENDIX G

Soakaway Results

The Brownfield Consultancy
Woodstock
Memorial Road
Fenny Compton.
CV47 2XU

Your Ref:

Our Ref: BC195 L.003 / JT

CALA Homes (Chiltern) Limited
Riverside House
Holtspur Lane
Wooburn Green
Buckinghamshire
HP10 0TJ

21st April 2020

For the attention of James Forbes

Dear James

FEWCOTT ROAD, FRITWELL. OX27 7QA
Results of Soakaway Testing

The Brownfield Consultancy was commissioned by CALA Chiltern to undertake trial pit soakaway testing in accordance with BRE 365 at the above site. The fieldwork was undertaken on 25th and 26th March 2020.

The site comprises of a square plot of paddock land on the south eastern outskirts of Fritwell, Oxfordshire. Access is off Fewcott Road. It is proposed to apply for planning permission for the construction of 32No. two storey houses with associated access roads, driveways and gardens. The site slopes gently from south to north. This report is subject to limitations which are presented in Appendix D.

A previous ground investigation was undertaken in November 2015 by The Brownfield Consultancy and reported in *'Fewcott Road, Fritwell – Report on Ground Conditions'* dated 29th December 2015. A second report entitled *'Desk Top Study and Contaminated Land Assessment'* was undertaken dated 8th April 2016.

1. FIELDWORK

Soakaway tests were undertaken within five trial pits denoted SA1, SA2, SA3, SA4 and SA6 as denoted on the exploratory hole location plan in Appendix A. The pits were excavated by a backhoe excavator, their dimensions carefully measured and then flooded using a mobile water bowser. The time for the water to drain was then measured.

2. GROUND CONDITIONS

The ground conditions encountered during the investigation were consistent with the published geological map and the findings of the previous investigations. A veneer of Topsoil or Made Ground overlies the Great Oolite Group described by the British Geological Survey as :-

'A variety of mudstone-dominated and ooidal, bioclastic and fine-grained limestone formations'.

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A summary of the strata encountered during the investigation is described in the following sections but for full details of the strata encountered, samples taken, results of any in-situ testing and any other relevant information, reference should be made to the exploratory hole logs presented in Appendix B.

Topsoil
Topsoil was encountered in SA1, SA3, SA4 and SA6 to depths varying between 0.30-0.45m bgl. Materials comprised dark brown clay with varying quantities of sand and gravel. Gravel comprised brown limestone.

Made Ground
Made Ground was encountered in SA2 and SA4 to depths of 0.30-0.40m. Materials were similar to the Tospoil with the inclusion of tile, red brick and string.

Great Oolite Group
The Great Oolite Group was encountered in all trial pit locations and comprised of brown gravel and cobbles of ooidal limestone in a clay matrix with varying quantities of sand. Occasionally, thin units of sandy gravelly clay were encountered. 'Bedrock' was encountered in SA3 at 1.40m and SA4 at 1.00m bgl where no further penetration was possible with the backhoe excavator.

Groundwater
Groundwater was encountered in trial pits SA1, SA2 and SA5. All three pits were located at the lowest level of the site (north). In SA1 soils were recorded as 'damp' from 1.40m to the base of the pit. Prior to the test, groundwater was recorded at 1.50m bgl. In SA2, soils were recorded as damp from 0.40-1.50m and a water seepage was recorded at 1.20m. Prior to flooding the pit, groundwater was recorded at 1.28m bgl. In SA5 a slow ingress of groundwater was encountered at 0.90m and the pit was abandoned and backfilled.

3. SOAKAWAY DRAINAGE

In accordance with the digest, three repeat tests were successfully undertaken in SA1, SA3 and SA4. A single successful test was undertaken in SA6. The test in trial pit SA2, which contained 22cm of groundwater at the start of the test, was not successful.

The following soil infiltration rates were obtained:

SA1 2.6×10^{-5}m/s, 4.6×10^{-5}m/s, 3.1×10^{-5}m/s

SA3 3.4×10^{-5}m/s, 1.5×10^{-5}m/s, 1.6×10^{-4}m/s

SA4 1.6×10^{-5}m/s, 1.2×10^{-5}m/s, 1.5×10^{-5}m/s

SA6 1.0×10^{-5}m/s

In accordance with BRE 365, it is recommended that the lowest infiltration rate of the three tests is taken as the design figure for each location. The full results of soakaway testing are presented in Appendix C.

Groundwater was encountered in SA1, SA2 and SA5 in the north of the site. A 'freeboard' of 1m is often required i.e. at least 1 metre clearance between the base of any soakaway and the top of the water table. Clearly this is not achievable in the north of the site. If soakaways are the only viable

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means of disposing of surface water at the site, then a number of boreholes will need to be installed across the site followed by the implementation of a groundwater level monitoring programme, to account for seasonal variations and extreme rainfall events.

We trust the above is satisfactory for your purposes. Should you have any queries please do not hesitate to contact me.

Yours sincerely

Jim Twaddle CGeol
Director

Appendix A	*Exploratory Hole Location Plan*
Appendix B	*Exploratory Hole Logs*
Appendix C	*Soakaway Test Calculations*
Appendix D	*Limitations*

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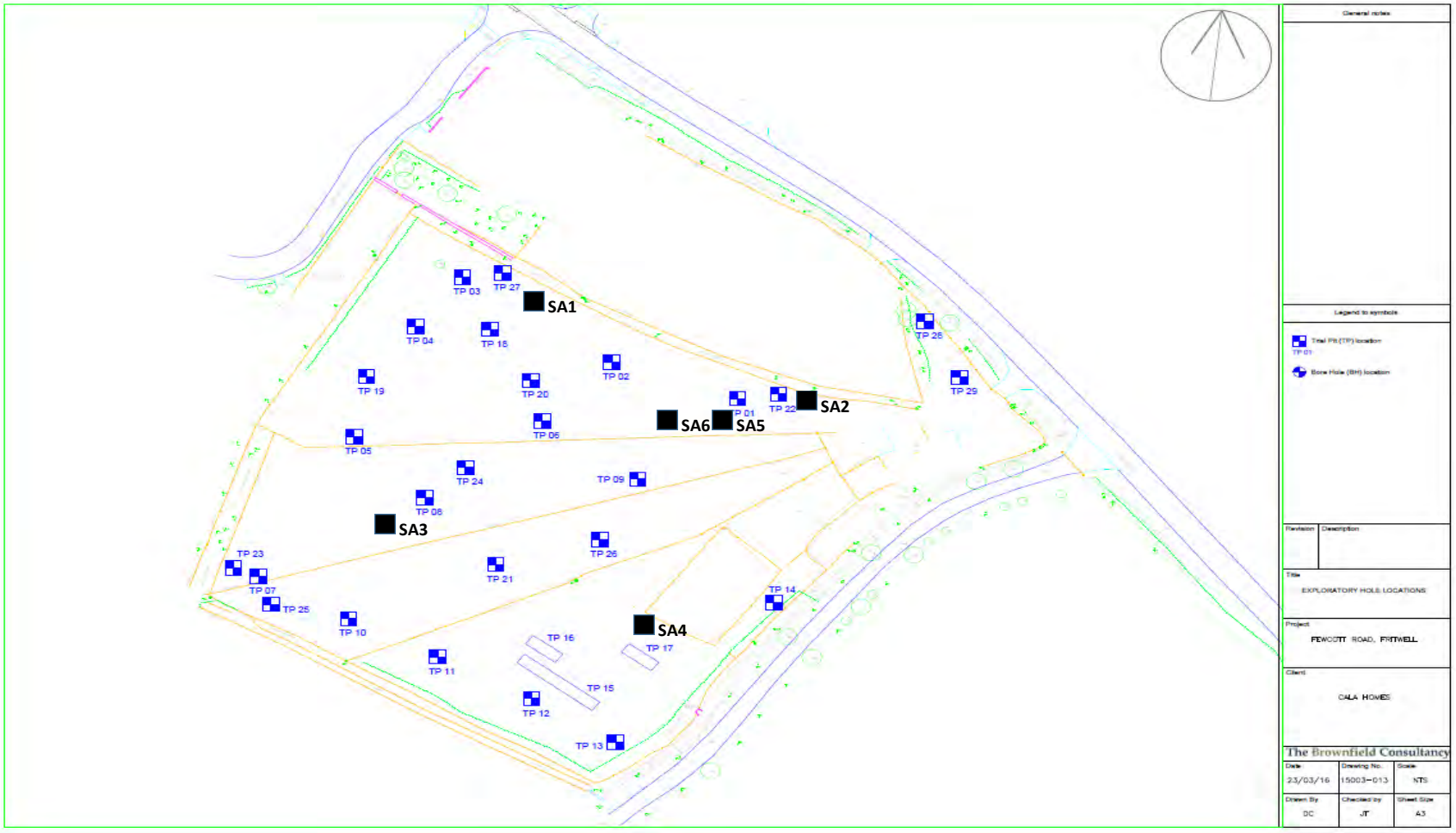
APPENDIX A

Exploratory Hole Location Plan

FRITWELL SOAKAWAY TESTS

Exploratory Hole Location Plan



APPENDIX B

Exploratory Hole Logs

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

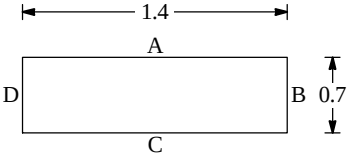
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				SA1
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	25-03-20			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.40			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.40-1.00			Buff brown sandy clayey locally very clayey GRAVEL of subangular and subrounded fine to coarse limestone with a low cobble content. Cobbles are limestone. (OOLITE)			
1.00-1.40			Buff brown slightly sandy slightly clayey GRAVEL of subangular and subrounded fine to coarse limestone with a low cobble content. Cobbles are limestone. (OOLITE)			
1.40-1.55			Damp buff brown sandy very clayey GRAVEL of subangular and subrounded fine to coarse limestone. (OOLITE)			
1.55			Trial pit terminated. Water level at 1.50m at the start of the soakaway test.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Soakaway test undertaken.
Backfilled with arisings.

All dimensions in metres Scale 1:18.75	Client CALA CHILTERN	Method/ Plant Used 5t excavator	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 21/4/20

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

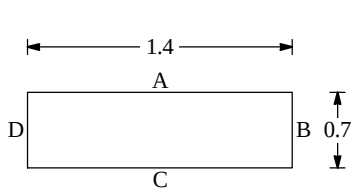
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				SA2
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	25-03-20			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.40			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to medium buff brown limestone, tile and red brick. (MADE GROUND)			
0.40-1.50			Damp buff brown slightly sandy clayey GRAVEL of subangular and subrounded fine to coarse limestone with a low cobble content. Cobbles are limestone. (OOLITE) 1.20 Seepage.			
1.50			Trial pit terminated. Water level at 1.28m bgl at the start of the soakaway test.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Soakaway test undertaken.
Backfilled with arisings.

All dimensions in metres Scale 1:18.75	Client CALA CHILTERN	Method/ Plant Used 5t excavator	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 21/4/20

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

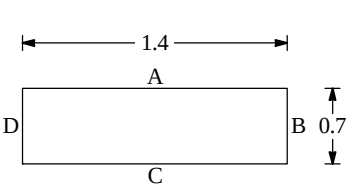
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				SA3
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	25-03-20			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.40			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.40-1.20			Buff brown sandy clayey GRAVEL of subangular and subrounded fine to coarse limestone with a low cobble content. Cobbles are limestone. (OOLITE)			
1.20-1.40			Buff brown SAND & GRAVEL. Gravel is subangular and subrounded fine to coarse limestone. (OOLITE)			
1.40			No further progress. Unable to penetrate bedrock. Groundwater not encountered.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Soakaway test undertaken.
Backfilled with arisings.

All dimensions in metres Scale 1:18.75	Client CALA CHILTERN	Method/ Plant Used 5t excavator	Logged By JT

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

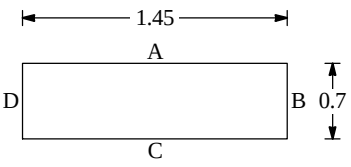
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				SA4
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	25-03-20			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.45			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.45-0.80			Buff brown sandy clayey locally very clayey GRAVEL of subangular and subrounded fine to coarse limestone with a low cobble content. Cobbles are limestone. (OOLITE)			
0.80-0.90			Firm brown sandy very gravelly CLAY. Gravel is subangular and subrounded fine to coarse limestone. (OOLITE)			
0.90-1.00			Buff brown slightly sandy slightly clayey GRAVEL of subangular and subrounded fine to coarse limestone with a high cobble content. Cobbles are limestone. (OOLITE)			
1.00			No further progress. Unable to penetrate bedrock. Groundwater not encountered.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Soakaway test undertaken.
Backfilled with arisings.

All dimensions in metres Scale 1:18.75	Client CALA CHILTERN	Method/ Plant Used 5t excavator	Logged By JT

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

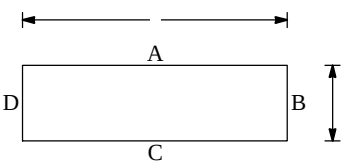
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				SA5
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	25-03-20			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.30			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to medium buff brown limestone, tile and pieces of orange string. (MADE GROUND)			
0.30-0.45			Firm brown sandy very gravelly CLAY. Gravel is angular to subrounded fine to coarse limestone. (OOLITE)			
0.45-0.90			Buff brown sandy clayey locally very clayey GRAVEL of subangular and subrounded fine to coarse limestone with a low cobble content. Cobbles are limestone. (OOLITE)			
0.90			Trial pit terminated. Slow ingress of groundwater at 0.90m.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Backfilled with arisings.

All dimensions in metres Scale 1:18.75	Client CALA CHILTERN	Method/ Plant Used 5t excavator	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 21/4/20

Brownfield Consultancy
The Cottage, Mill Lane
Fenny Compton, CV47 2YF
Phone: 07852881086

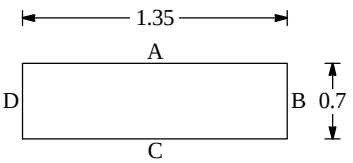
TRIAL PIT LOG

The Brownfield Consultancy

Project				TRIAL PIT No
Fewcott Road, Fritwell				SA6
Job No	Date	Ground Level (m)	Co-Ordinates ()	
BC195	25-03-20			
Contractor				Sheet
BROWNFIELD CONSULTANCY				1 of 1

STRATA				SAMPLES & TESTS		
				Depth	No	Remarks/Tests
Depth	No		DESCRIPTION			
0.00-0.30			Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse buff brown limestone. (TOPSOIL)			
0.30-0.40			Firm brown sandy very gravelly CLAY. Gravel is angular to subrounded fine to coarse limestone. (OOLITE)			
0.40-0.90			Buff brown sandy clayey locally very clayey GRAVEL of subangular and subrounded fine to coarse limestone with a low cobble content. Cobbles are limestone. (OOLITE)			
0.90			Trial pit terminated.			

Shoring/Support:
Stability: Sides stable.



GENERAL REMARKS

Soakaway test undertaken.
Backfilled with arisings.

All dimensions in metres Scale 1:18.75	Client CALA CHILTERN	Method/ Plant Used 5t excavator	Logged By JT

BROWNFIELD TP FRITWELL LOGS.GPJ GINT STD AGS 3_1.GDT 21/4/20

APPENDIX C

Soakaway Calculation Sheets

The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA1 Test No: 1 Date: 25.3.20

Water level during test

Time mins	Depth m bgl
0	0.740
22	1.270
36	1.330
55	1.360
65	1.380

Trial pit dimensions

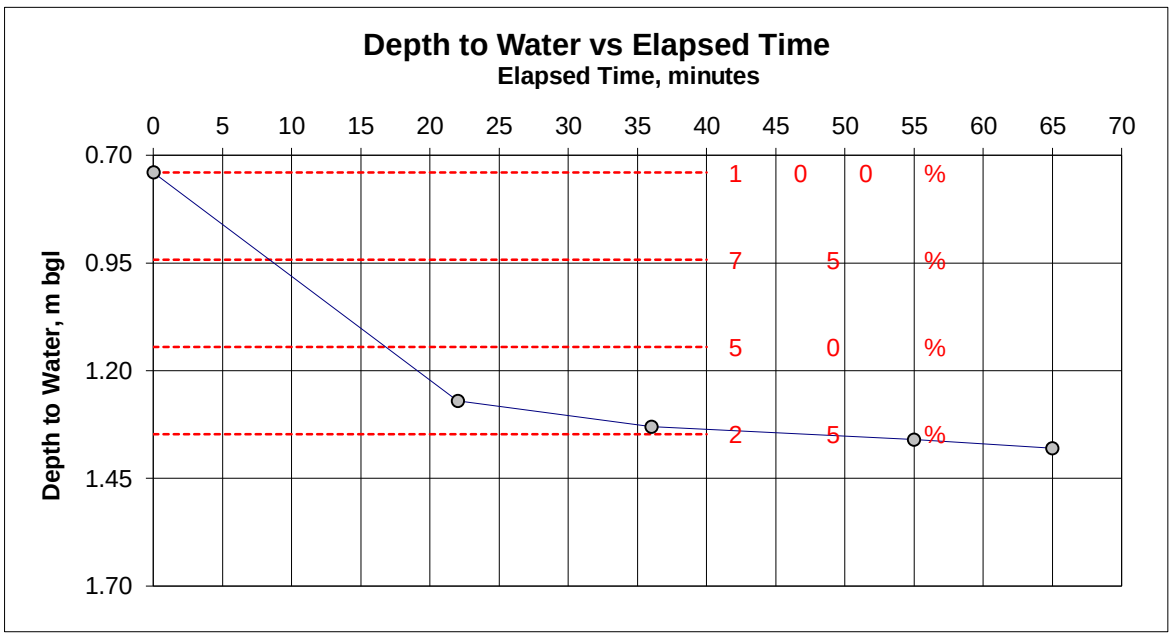
depth (m)	1.55
length (m)	1.40
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 8
time at 25% effective depth (mins) 50
(from graph)

Calculated Soil Infiltration Rate = 4.6E-05 m/sec



The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA1 Test No: 2 Date: 25.3.20

Water level during test

Time mins	Depth m bgl
0	0.700
15	1.150
37	1.290
87	1.350
99	1.350

Trial pit dimensions

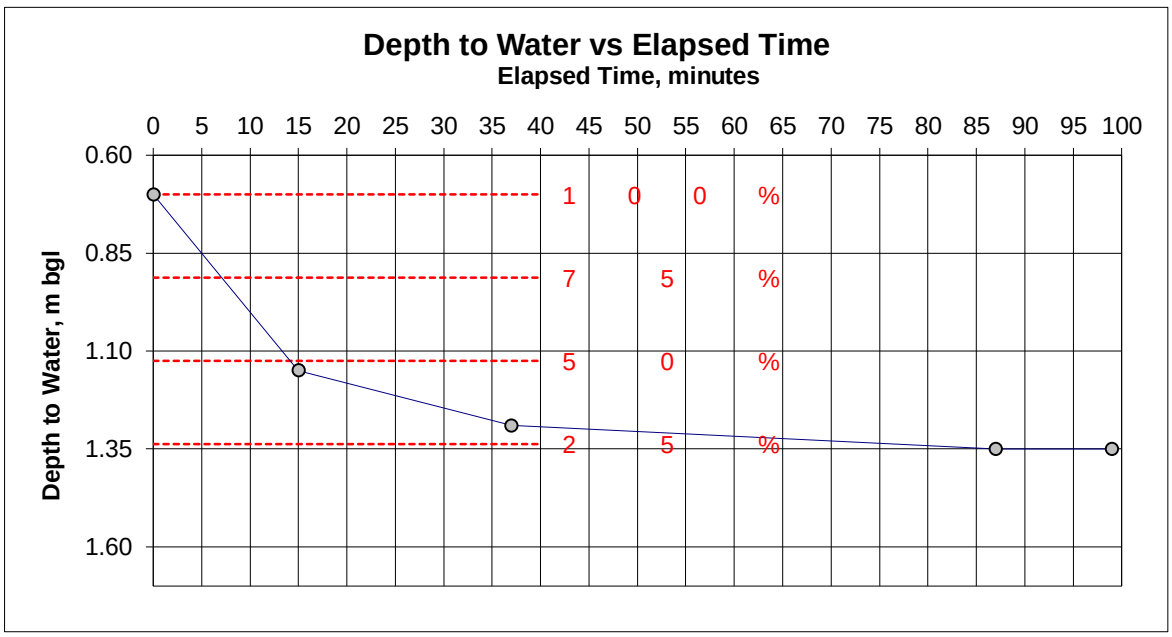
depth (m)	1.55
length (m)	1.40
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 7
time at 25% effective depth (mins) 80
(from graph)

Calculated Soil Infiltration Rate = 2.6E-05 m/sec



The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA1 Test No: 3 Date: 25.3.20

Water level during test

Time mins	Depth m bgl
0	0.700
37	1.290
62	1.330
77	1.350
87	1.360

Trial pit dimensions

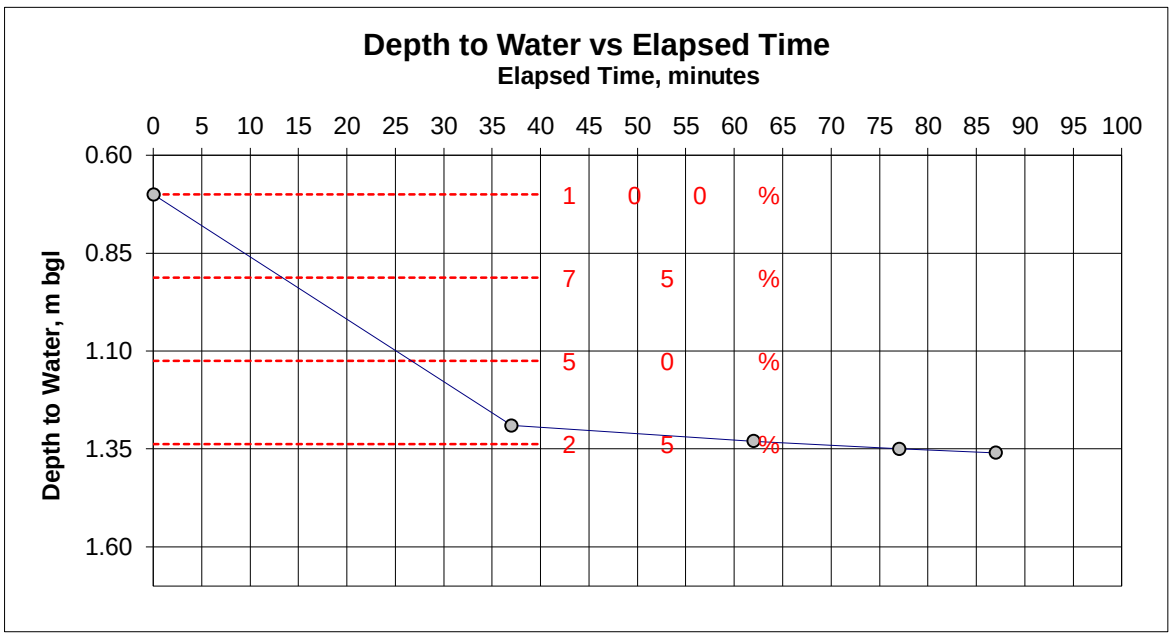
depth (m)	1.55
length (m)	1.40
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins)	13
time at 25% effective depth (mins) (from graph)	75

Calculated Soil Infiltration Rate = 3.1E-05 m/sec



The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA2 Test No: 1 Date: 25.3.20

Water level during test

Time mins	Depth m bgl
0	0.660
15	0.670
38	0.690
72	0.720
194	0.720
228	0.720

Trial pit dimensions

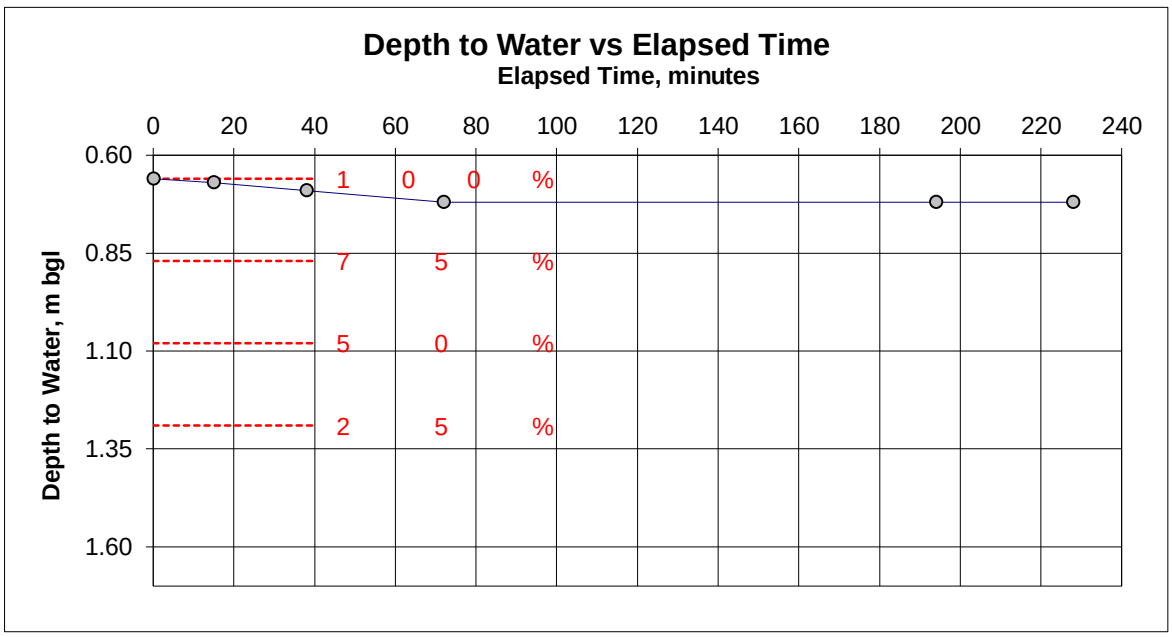
depth (m)	1.50
length (m)	1.40
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins)
time at 25% effective depth (mins)
(from graph)

Calculated Soil Infiltration Rate = - m/sec



The Brownfield Consultancy	SOIL INFILTRATION TEST
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA3 Test No: 1 Date: 25.3.20

Water level during test

Time mins	Depth m bgl
0	0.700
6	0.790
20	0.900
42	1.050
72	1.200
99	1.300
107	1.330

Trial pit dimensions

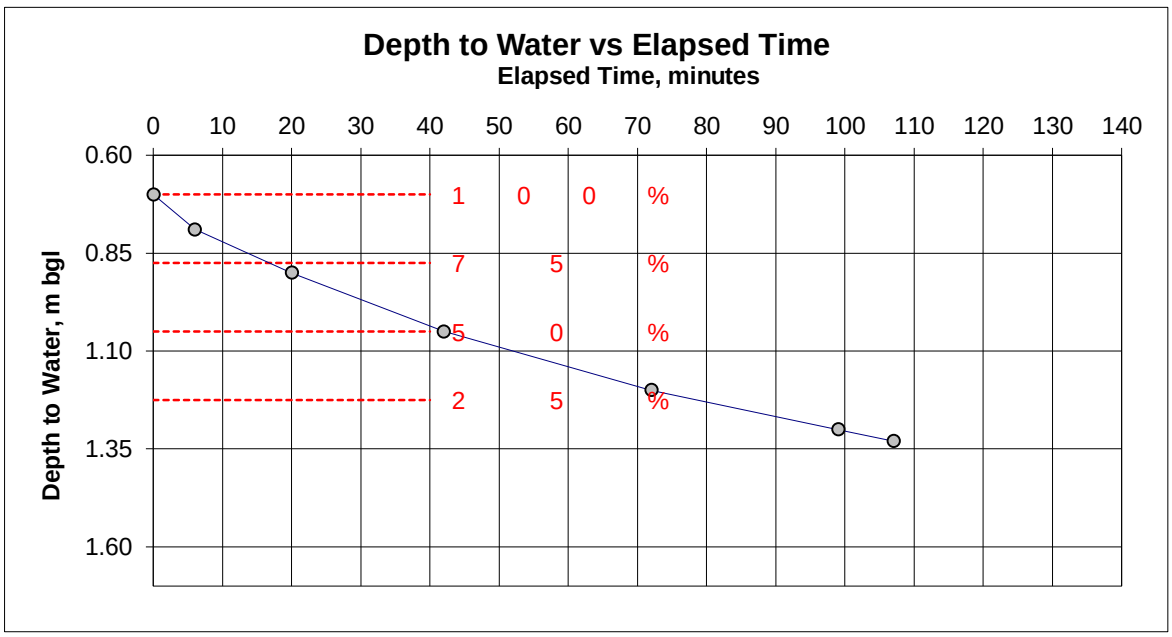
depth (m)	1.40
length (m)	1.40
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 18
time at 25% effective depth (mins) 80
(from graph)

Calculated Soil Infiltration Rate = 3.4E-05 m/sec



The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA3 Test No: 2 Date: 25.3.20

Water level during test

Time mins	Depth m bgl
0	0.450
10	0.530
25	0.700
40	0.780
70	0.900
82	0.930
135	1.100
159	1.150
176	1.180

Trial pit dimensions

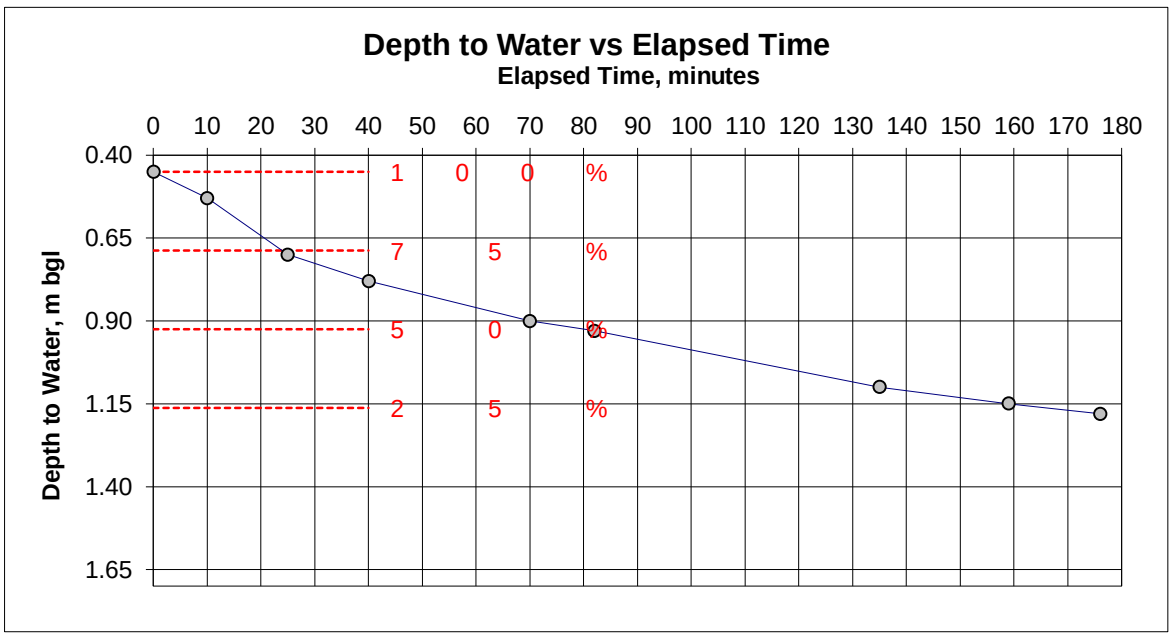
depth (m)	1.40
length (m)	1.40
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 25
time at 25% effective depth (mins) 160
(from graph)

Calculated Soil Infiltration Rate = 1.5E-05 m/sec



The Brownfield Consultancy	SOIL INFILTRATION TEST
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA3 Test No: 3 Date: 26.3.20

Water level during test

Time mins	Depth m bgl
0	0.550
7	0.700
22	1.150
37	1.400

Trial pit dimensions

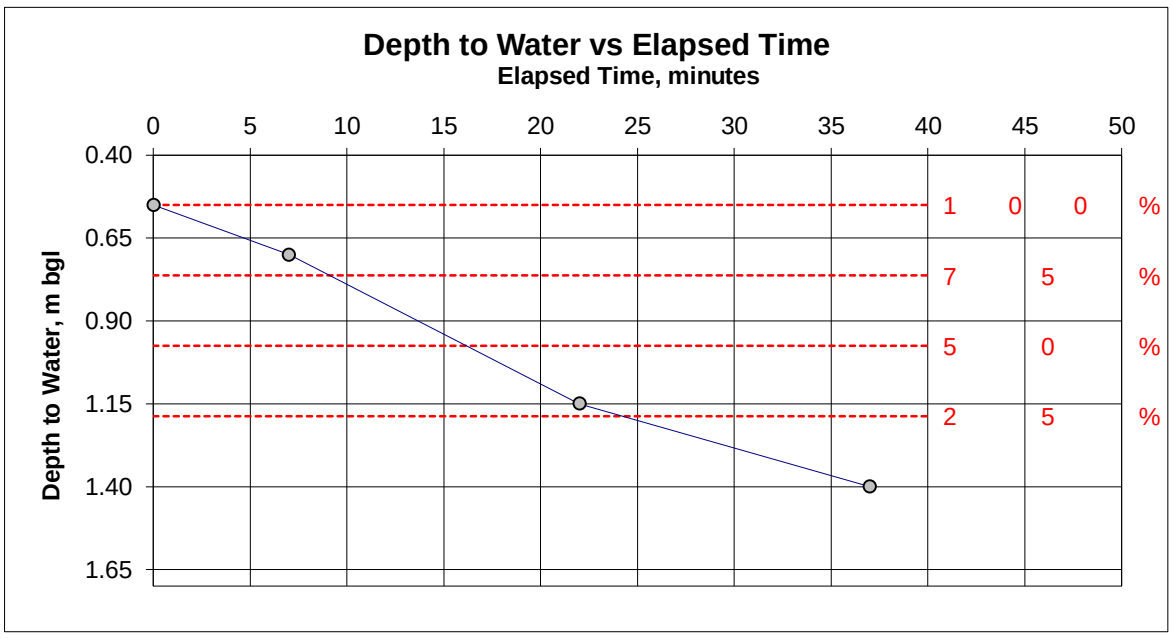
depth (m)	1.40
length (m)	1.40
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 8
time at 25% effective depth (mins) 24
(from graph)

Calculated Soil Infiltration Rate = 1.6E-04 m/sec



The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA4 Test No: 1 Date: 25.3.20

Water level during test

Time mins	Depth m bgl
0	0.300
4	0.350
12	0.400
36	0.530
49	0.590
63	0.640
82	0.700
121	0.800
145	0.850
158	0.880

Trial pit dimensions

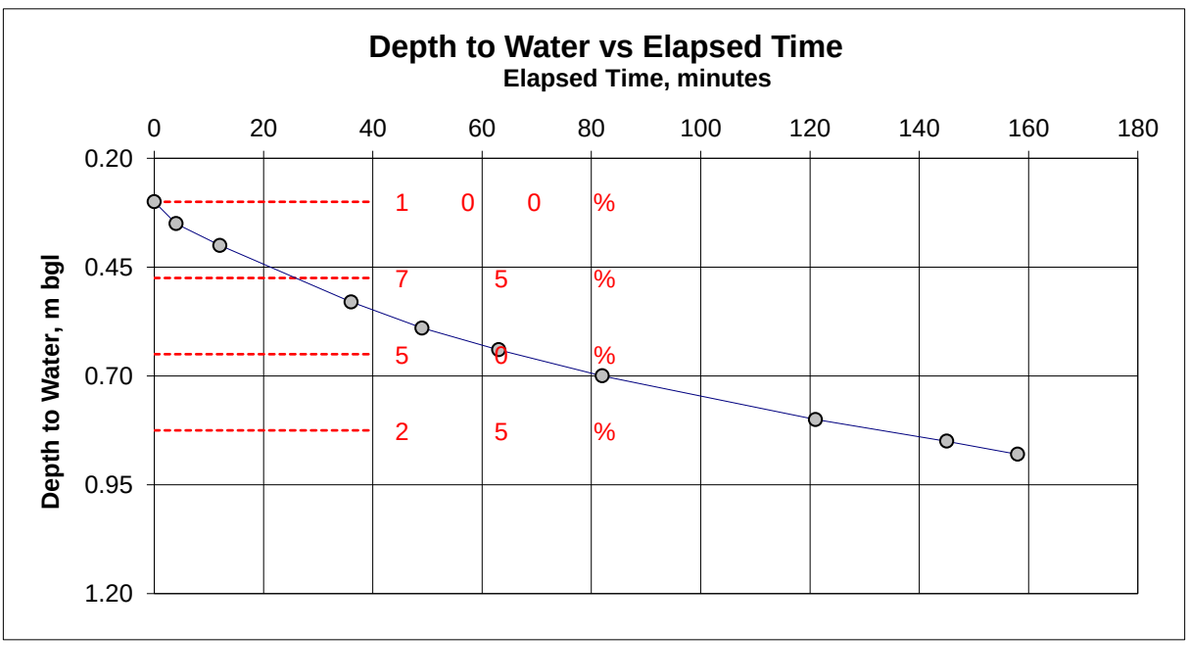
depth (m)	1.00
length (m)	1.45
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 25
time at 25% effective depth (mins) 144
(from graph)

Calculated Soil Infiltration Rate = 1.6E-05 m/sec



The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA4 Test No: 2 Date: 25.3.20

Water level during test

Time mins	Depth m bgl
0	0.400
20	0.500
34	0.530
62	0.610
84	0.670
119	0.730
157	0.790
178	0.830
204	0.880

Trial pit dimensions

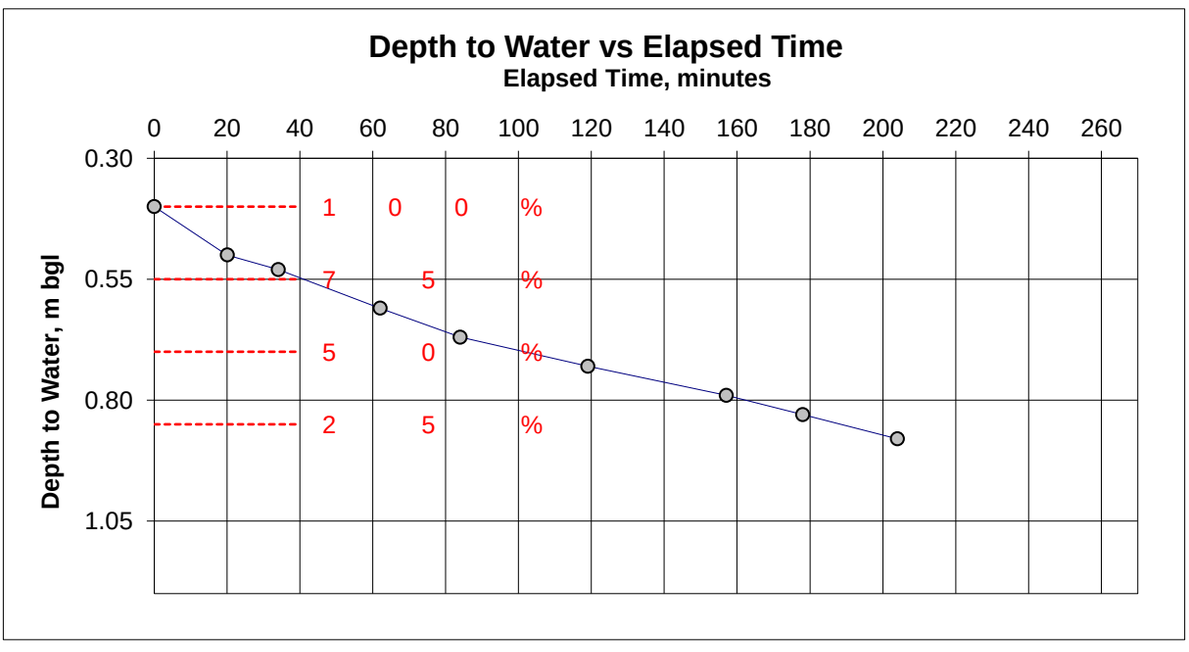
depth (m)	1.00
length (m)	1.45
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 40
time at 25% effective depth (mins) 185
(from graph)

Calculated Soil Infiltration Rate = 1.2E-05 m/sec



The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA4 Test No: 3 Date: 26.3.20

Water level during test

Time mins	Depth m bgl
0	0.500
37	0.630
58	0.700
92	0.790
155	0.900

Trial pit dimensions

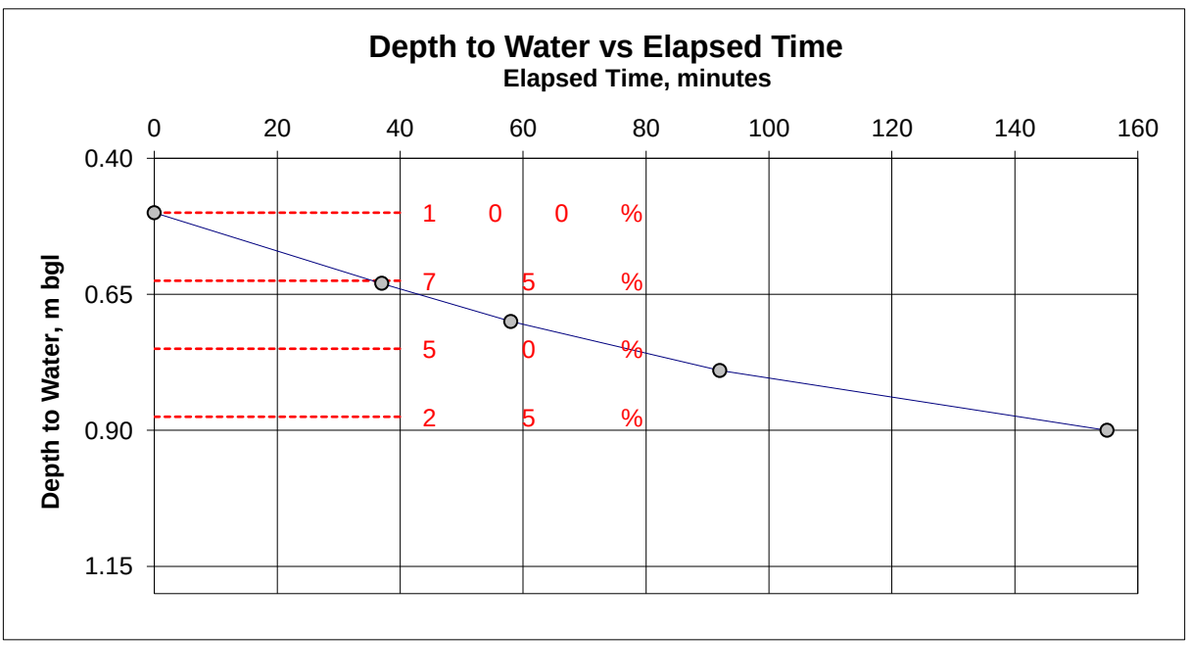
depth (m)	1.00
length (m)	1.45
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 38
time at 25% effective depth (mins) 150
(from graph)

Calculated Soil Infiltration Rate = 1.5E-05 m/sec



The Brownfield Consultancy	**SOIL INFILTRATION TEST**
Woodstock **Memorial Road** **Fenny Compton** **CV47 2XU** **Tel: 07852881086**	**Project:** Fewcott Road, Fritwell **Project No:** BC195

Test Location: SA6 Test No: 1 Date: 26.3.20

Water level during test

Time mins	Depth m bgl
0	0.290
6	0.350
31	0.450
53	0.500
65	0.530
108	0.600
123	0.630
140	0.660
171	0.710
189	0.740
203	0.770

Trial pit dimensions

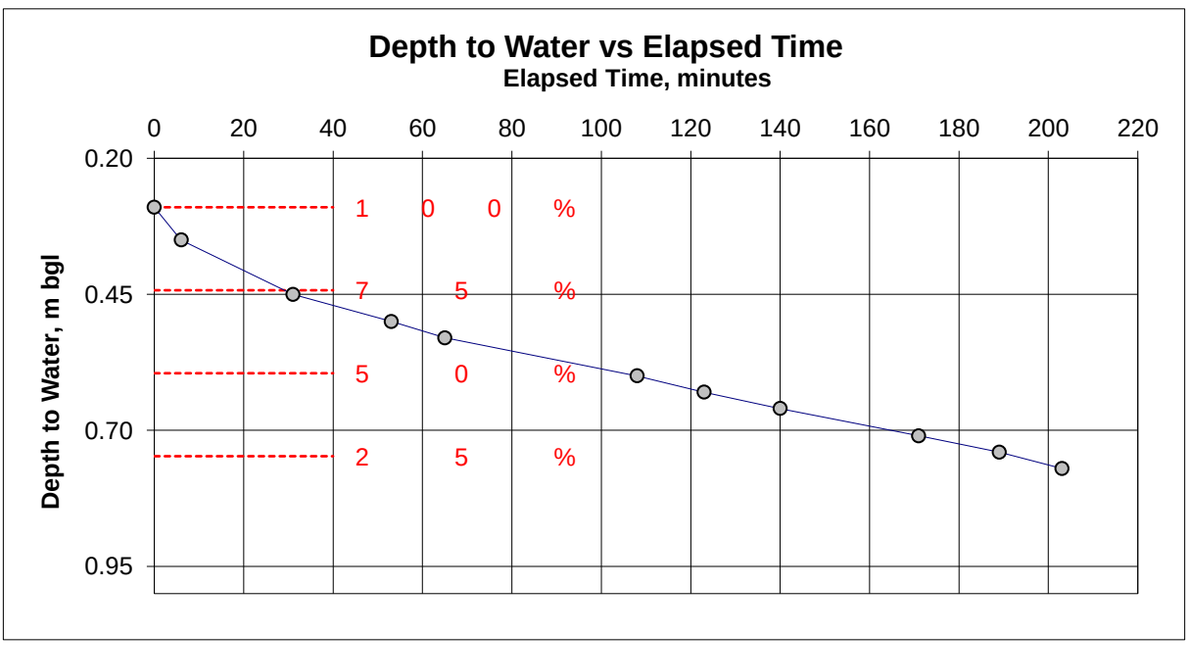
depth (m)	0.90
length (m)	1.35
width (m)	0.70

$$f = \frac{V_p}{\alpha_p \times t_p}$$

f = soil infiltration rate
Vp = volume of water from 75% to 25% effective depth
αp = Internal surface area at 50% effective depth
tp = time for the water level to fall from 75% to 25% effective depth

time at 75% effective depth (mins) 32
time at 25% effective depth (mins) 200
(from graph)

Calculated Soil Infiltration Rate = 1.0E-05 m/sec



APPENDIX D

Limitations

NOTES ON LIMITATIONS

This report has been prepared by the Brownfield Consultancy with all reasonable skill, care and diligence. This report is confidential and has been prepared solely for the benefit of the client as stated at the front of the report in relation to a specific development or scheme; and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from The Brownfield Consultancy; a charge may be levied against such approval. We accept no responsibility or liability for the consequences of this document being used for any purpose or project other than for which it was commissioned, and: this document to any third party with whom an agreement has not been executed.

Any comments given are based on the understanding that the proposed development will be as detailed. The Brownfield Consultancy warrants the accuracy of this report up to and including the published date. Additional information, improved practice or changes in legislation may necessitate this report having to be reviewed in whole or in part after that date.

This report is only valid when used it its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report. Whilst this report and the opinion made herein are correct to the best of our belief we cannot guarantee the accuracy or completeness of any information provided by third parties.

The opinions and recommendations expressed in this report are based on statute, guidance, and appropriate practice current at the date of its preparation. The Brownfield Consultancy does not accept any liability whatsoever for the consequences of any future legislative changes or the release of subsequent guidance documentation, etc. Such changes may render some of the opinions and advice in this report inappropriate or incorrect and we will be pleased to advise if any report requires revision due to changing circumstances. Following delivery of a report we have no obligation to advise the Client or any other party of such changes or their repercussions.

Phase 1 Reports

The work undertaken to provide the basis of a Phase I report comprised a study of available documented information from a variety of sources, together with (where appropriate) a brief walk over inspection of the site. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Historical maps and aerial photographs provide a “snap shot” in time about conditions or activities at the site and cannot be relied upon as indicators of any events or activities that may have taken place at other times.

Phase II Intrusive Investigations

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made. The conclusions and recommendations made in this site appraisal report and the opinions expressed are based on the information reviewed and/or the ground conditions encountered in exploratory holes and the results of any field or laboratory testing undertaken. There may be ground conditions at the site that have not been disclosed by the information reviewed or by the investigative work undertaken. Such undisclosed conditions cannot be taken into account in any analysis and reporting.

Some of the conclusions in this site appraisal report may be based on third party data. No guarantee can be given for the accuracy or completeness of any of the third party data used.

The evaluation and conclusions do not preclude the existence of contamination, which could not reasonably have been revealed by the current work. Given the discrete nature of sampling, no investigation technique is capable of identifying all conditions present in all areas. The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination where concentrations may be significantly higher than those actually encountered. Hence this report should be used for information purposes only and should not be construed as a comprehensive characterisation of all site conditions.

It should be noted that groundwater levels, groundwater chemistry, surface water levels, surface water chemistry, soil gas concentrations and soil gas flow rates can vary due to seasonal, climatic, tidal and man-made effects.

The interpretation carried out in this report is based on scientific and engineering appraisal carried out by suitably experienced and qualified technical consultants based on the scope of our engagement. We have not taken into account the perceptions of, for example, banks, insurers, other funders, lay people, etc., unless the report has been prepared specifically for that purpose. Advice from other specialists may be required such as the legal, planning and architecture professions, whether specifically recommended in our report or not.

The objectives of the investigation have been linked to establishing the risks associated with potential human targets, building materials, the environment (including adjacent land), and to surface and ground water. The amount of exploratory work and chemical testing undertaken has necessarily been restricted by the short timescale available, and the locations of exploratory holes have been restricted to areas unoccupied by the building(s) on the site and by buried services.

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APPENDIX H

Photographs

Trial Trench TP15 looking North West

Trial Trench TP15 looking South East

Suspected ACM - Trial Trench TP15

Trial Trench TP15 stockpiled arisings

Trial Trench TP16 arisings

Trial Trench TP16 arisings

Suspected ACM - Trial Trench TP16

Trial Trench TP16

Trial Trench TP16 – large piece of masonry

TP27 – Stockpile in North-West Corner

Location of TP28

TP29

TP29

APPENDIX I

Limitations

NOTES ON LIMITATIONS

This report has been prepared by the Brownfield Consultancy with all reasonable skill, care and diligence. This report is confidential and has been prepared solely for the benefit of the client as stated at the front of the report in relation to a specific development or scheme; and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed.

Should any third party wish to use or rely upon the contents of the report, written approval must be sought from The Brownfield Consultancy; a charge may be levied against such approval. We accept no responsibility or liability for the consequences of this document being used for any purpose or project other than for which it was commissioned, and: this document to any third party with whom an agreement has not been executed.

Any comments given are based on the understanding that the proposed development will be as detailed. The Brownfield Consultancy warrants the accuracy of this report up to and including the published date. Additional information, improved practice or changes in legislation may necessitate this report having to be reviewed in whole or in part after that date.

This report is only valid when used it its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report. Whilst this report and the opinion made herein are correct to the best of our belief we cannot guarantee the accuracy or completeness of any information provided by third parties.

The opinions and recommendations expressed in this report are based on statute, guidance, and appropriate practice current at the date of its preparation. The Brownfield Consultancy does not accept any liability whatsoever for the consequences of any future legislative changes or the release of subsequent guidance documentation, etc. Such changes may render some of the opinions and advice in this report inappropriate or incorrect and we will be pleased to advise if any report requires revision due to changing circumstances. Following delivery of a report we have no obligation to advise the Client or any other party of such changes or their repercussions.

Phase 1 Reports

The work undertaken to provide the basis of a Phase I report comprised a study of available documented information from a variety of sources, together with (where appropriate) a brief walk over inspection of the site. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Historical maps and aerial photographs provide a “snap shot” in time about conditions or activities at the site and cannot be relied upon as indicators of any events or activities that may have taken place at other times. Any borehole data from the British Geological Survey sources are included on the following basis: “The British Geological Survey accept no responsibility for omissions or misinterpretation of the data from their Data Bank as this may be old or obtained from non-BGS sources and may not represent current interpretation’’.

Phase II Intrusive Investigations

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made. The conclusions and recommendations made in this site appraisal report and the opinions expressed are based on the information reviewed and/or the ground conditions encountered in exploratory holes and the results of any field or laboratory testing undertaken. There may be ground conditions at the site that have not been disclosed by the information reviewed or by the investigative work undertaken. Such undisclosed conditions cannot be taken into account in any analysis and reporting.

Some of the conclusions in this site appraisal report may be based on third party data. No guarantee can be given for the accuracy or completeness of any of the third party data used.

The evaluation and conclusions do not preclude the existence of contamination, which could not reasonably have been revealed by the current work. Given the discrete nature of sampling, no investigation technique is capable of identifying all conditions present in all areas. The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination or different ground conditions where concentrations may be significantly higher than those actually encountered. Hence this report should be used for information purposes only and should not be construed as a comprehensive characterisation of all site conditions.

It should be noted that groundwater levels, groundwater chemistry, surface water levels, surface water chemistry, soil gas concentrations and soil gas flow rates can vary due to seasonal, climatic, tidal and man-made effects.

Exploratory hole locations provided in the report are generally established by tape measurement from existing features or boundaries. Hole locations are not accurately surveyed and ground levels at these locations are not obtained unless specifically requested.

The interpretation carried out in this report is based on scientific and engineering appraisal carried out by suitably experienced and qualified technical consultants based on the scope of our engagement. We have not taken into account the perceptions of, for example, banks, insurers, other funders, lay people, etc., unless the report has been prepared specifically for that purpose. Advice from other specialists may be required such as the legal, planning and architecture professions, whether specifically recommended in our report or not.

The objectives of the investigation have been linked to establishing the risks associated with potential human targets, building materials, the environment (including adjacent land), and to surface and ground water. The amount of exploratory work and chemical testing undertaken has necessarily been restricted by the short timescale available, and the locations of exploratory holes have been restricted to areas unoccupied by the building(s) on the site and by buried services.

New information, improved practices and legislation may necessitate an alteration to the report in whole, or in part, after its submission. Therefore with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to the Brownfield Consultancy Limited for re-assessment and, if necessary, re-appraisal.

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