LAND AT

GILLINGHAM

DORSET

NEWHOUSE FARM AND HAM FARM

GEOTECHNICAL INVESTIGATION AND CONTAMINATION ASSESSMENT REPORT

DECEMBER 2017

Ruddlesden geotechnical

Geotechnical Investigation and Contamination Assessment Report

Land at Gillingham, Dorset – Newhouse Farm and Ham Farm

Welbeck Land

December 2017

TB/SR/14114/GICAR/WL

REPORT CONTROL SHEET

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CONTENTS

APPENDICES

APPENDIX A **EXPLORATORY HOLE RECORDS AND FIELD DATA**
Trial Pit Logs (53 pages)
Soakaway Test Results (30 pages)

APPENDIX B **PHOTOGRAPHS (8 pages)**

APPENDIX C **LABORATORY TESTING RESULTS**
Geotechnical Laboratory Testing (9 pages)
Contamination Laboratory Testing (21 pages)
Generic Assessment Criteria (2 pages)

APPENDIX D **DESK STUDY INFORMATION**
Historical Ordnance Survey Maps (11 pages)
Geological Information (38 pages)
Environmental Information (50 pages)

APPENDIX E **SITE PLANS**
Site Location Plan (1 page)
Aerial Photograph (1 page)
Trial Pit Location Plan (1 page)
Proposed Site Masterplan (1 page)

EXECUTIVE SUMMARY

Proposals	It is proposed to develop the site for primarily residential purposes with the construction of residential housing and associated local centre, public open spaces and infrastructure.
Site History	Past edition Ordnance Survey maps showed the site has comprised many fields of varying sizes separated by hedgerows since first edition maps (late 1800s). Orchards were present in the northeast of the site and a 'smithy' was present off-site to the southeast of the site from the late-1800s until the mid-1900s.
Site Geology	The British Geological Survey (BGS) map of the area indicates the site to be underlain by Late Jurassic Kimmeridge Clay Formation, overlain by Quaternary Head deposits across much of the site, particularly around the site's periphery, and also overlain by Quaternary Alluvium adjacent to the stream and drainage channel. The Kimmeridge Clay is described as mudstones with thin siltstone and cementstone beds and locally sands and silts. The Head deposits are described as silty to sandy clay with angular clasts of local rock fragments up to boulder size. The Alluvium is described as clay, silt, sand and gravel.
Ground Conditions Encountered	Fifty-three trial pits typically encountered ground conditions of topsoil, underlain by firm to stiff silty clay, with occasional softer horizons and beds of (loose to medium dense) clayey sandy gravel. Groundwater was encountered in approximately 20% of the trial pits.
Foundations	The results of this investigation indicate that strip or trench-fill foundations are generally suitable to support the proposed structures. However, it is noted that the bearing capacity of the soils varies across the site. Similarly, the volume change potential of the soil varies across the site: although much of the site is underlain by clays of medium volume change potential, locally, soils of high and low volume change potential are also present. Prior to development, further, more intensive, investigation is recommended to confirm the bearing capacity and volume change potential of the soils in a particular area.
Buried Concrete	Elevated levels of soluble sulphate (exceeding 6,000mg/kg) have been recorded. Design Sulphate Class DS-4, Aggressive Chemical Environment for Concrete (ACEC) Class AC-4, is required for all buried concrete at this site.

Roads	From an assessment of the ground conditions encountered and laboratory testing results, a CBR value of 2% is recommended for road pavement design.
Soakaways	In-situ soakaway testing showed that the ground has a low permeability and is unsuitable for the use of soakaway drainage. Off-site discharge, possibly combined with on-site attenuation, is considered to be the most suitable drainage solution.
Contamination Risk Assessment	A contamination risk assessment has shown that the levels of contamination recorded in this investigation are not potentially harmful to human health given the proposed end use or to the water environment.
Contamination Remedial Measures	No further action or specific remedial measures are required given the proposed end use.
Radon / Ground Gas	No radon protection measures are required and no additional ground gas protection measures are considered to be necessary.

This executive summary is to be read in conjunction with, and not in isolation from, the full report text and appendices.

1 INTRODUCTION

1.1 General

In May and July 2014, a combined Phase 1 and Phase 2: Geotechnical Investigation and Contamination Assessment was undertaken by Ruddlesden geotechnical ltd on behalf of Welbeck Land at land at Gillingham, Dorset – Newhouse Farm and Ham Farm.

The investigation was undertaken to determine subsurface ground conditions, to provide recommendations for foundations and associated structures, and to assess the extent of any contamination at the site.

The investigation comprised a desk study and walkover survey followed by the formation of fifty-three trial pits with in-situ and laboratory testing.

It is noted that during the site works, a total of sixty-three trial pits were undertaken across the currently proposed development site, as well as within adjacent fields. Ten of these trial pits now fall outside of the proposed development area (TPs 01 to 06, 10, 11, 17 & 18) and have therefore not been referred to within this report. It is considered that the findings of these excluded trial pits, and all testing undertaken within them, do not have any significant impact on the currently proposed development site.

For clarity, the results of laboratory testing undertaken within these locations have been highlighted in the relevant appendices and these results should be disregarded.

In addition, the desk study information included within this report refers to the previous, larger, development area and therefore some information, primarily distances and site layouts, given within it may be incorrect.

1.2 Development Proposals

It is proposed to develop the site for primarily residential purposes with the construction of residential housing and associated local centre, public open spaces and infrastructure. The proposed site masterplan is presented in Appendix E of this report.

1.3 Scope of Investigation

The investigation covers geotechnical and contamination aspects relating to the development. The brief was understood to comprise the following:

- carry out a desk study and walkover survey;
- undertake exploratory holes;
- schedule geotechnical and contamination laboratory testing;
- establish the ground conditions across the site;
- make recommendations for foundation design;
- carry out in-situ CBR (TRL DCP method) testing and provide recommendations for road pavement design;
- carry out in-situ soakaway testing and provide recommendations for soakaway design;

- make recommendations covering other geotechnical aspects, including excavations and groundwater;
- undertake a contamination risk assessment;
- undertake a ground gas assessment; and
- provide details of any contamination remedial measure requirements.

1.4 Scope of Report

The report is presented as a description of the procedures employed and the data obtained. This is followed by a thorough description of the ground and groundwater conditions, together with an assessment of the ground profile. The final part of the report comprises analysis, recommendations and conclusions, which are provided in two separate parts: geotechnical and contamination.

The presence of asbestos containing materials (ACM) within buildings and invasive plants are outside the scope of this report and should be addressed by respective suitably qualified experts, if necessary.

2 THE SITE

2.1 Site Location

The site is located between Shaftesbury Road (to the east) and New Road (to the west), to the south of the town of Gillingham, in Dorset, see Appendix E (Dwg. Nos. 14114/01 and 14114/AP). The British National Grid Reference of the site is 318558, 125336, and the postcode is SP8 5JJ.

The site is located within a predominantly rural area, approximately 1.5km to the southeast of the town of Gillingham, Dorset. The surrounding topography is gently undulating.

Access to the site is gained via gates off the B3092 (New Road), to the west, Cole Street Lane, to the south, and Pheasant Way or The Meadows, to the north.

2.2 Site Description

The site is irregular in shape, measuring approximately 1km x 0.85km (85 hectares), and is slightly hilly with a slight overall slope down to the west.

The site comprises approximately 20 (twenty) fields, which are predominantly used for pastoral farming. The fields are separated, for the most part, by mixed deciduous hedgerows with occasional trees (typically no taller than approximately 20m). Some fields in the southwest of the site are bounded by wire or electric fences.

Gravel tracks are present in the southwest of the site, leading from Cole Street Lane to the western fields; these are used for driving cattle. A lane is also present in the northeast of the site, leading from Pheasant Way; this lane is used to gain access to the eastern fields. Gated entrances are present in most hedgerows to allow access between fields.

A natural stream meanders generally from the northeast to the southwest bounding the northwest of the site, with a man-made (or man-modified) irrigation ditch running to the natural stream in the west, from the fields in the south of the site.

An overhead electricity line runs from west to east across the centre of the site.

Much of the site (particularly the lower lying areas) was waterlogged in May 2014 and, anecdotally, for much of the early months of the year.

The site is bordered to north by Ham Common residential estate, to the northeast by commercial and industrial units, to the east by Shaftesbury Road, before commercial properties with associated parking, to the south by Cole Street Lane before arable farmland, to the west by the B3092 (New Road) before arable farmland and to the northwest by the River Lodden and pastoral fields before Lodden Lakes and commercial properties.

Photographs of the site are presented in Appendix B of this report.

3 DESK STUDY

3.1 General

A desk study was undertaken to provide background information, comprising the consultation of:

- historical Ordnance Survey maps;
- geological maps and information; and
- environmental information.

This information was used to produce a 'conceptual site model' so that an appropriate intrusive investigation could be carried out.

3.2 Site History

A full set of historical Ordnance Survey maps of the site was obtained as part of the desk study (Appendix D of this report). The salient points are listed below:

1886 The site comprises many fields of varying sizes, separated by hedgerows. Several footpaths cross the site with small bridges being shown to cross the stream which bounds the northwest of the site. The far northeast of the site is used as orchards and a 'smithy' is present off-site to the southeast of the site.

1890 Generally as 1886.

1902 Generally as 1890.

1938 Generally as 1902.

1956 Generally as 1938.

1988 Generally as 1956, although two lakes (Lodden Lakes, assumed to be flooded clay/ brick pits) are now present to the northwest of the site. The 'smithy' is no longer labelled and the orchards in the northeast of the site have been removed and replaced by fields.

1992 Generally as 1988.

2002 Generally as 1992.

2012 Generally as 2002.

In summary, the site has comprised many fields of varying sizes separated by hedgerows since first edition maps (late 1800s). Orchards were present in the northeast of the site and a 'smithy' was present off-site to the southeast of the site from the late-1800s until the mid-1900s.

3.3 Site Geology

The British Geological Survey (BGS) map of the area indicates the site to be underlain by Late Jurassic Kimmeridge Clay Formation, overlain by Quaternary Head deposits across much of the site, particularly around the site's periphery, and also overlain by Quaternary Alluvium adjacent to the stream and drainage channel.

The Kimmeridge Clay is described as mudstones with thin siltstone and cementstone beds and local sands and silts. The Head deposits are described as silty to sandy clay with angular clasts of local rock fragments up to boulder size. The Alluvium is described as clay, silt, sand and gravel.

The following additional information was also obtained from the GroundSure GeoInsight (Appendix D of this report):

- No artificial ground is recorded on-site. Made ground is recorded 64m to the west of the site (industrial estate).
- Historical ground workings (lakes) are shown to border the northwest of the site.
- A geological fault is shown to be present in the west of the site.
- The permeability of the bedrock geology is typically low to very low.

3.4 Environmental Information

The key environmental information contained within the Groundsure report (Appendix D of this report) is listed below:

- There are no recorded registered landfill sites within 1000m of the site.
- There are no recorded historical registered landfill sites within 1500m of the site.
- There are twenty records of potentially contaminative land uses within 250m of the site, the closest and most significant of which are considered to be:
    - 28m to the south; Newhouse Farm Dairy;
    - 58m to the west; electricity substation;
    - 90m to the south; slurry pit; and
    - 129m to west; Autotechnics (vehicle repair, testing and servicing).
- There are no records of petrol or fuel sites within 250m;
- The superficial deposits are classified as a Secondary A Aquifer. These are 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;
- The bedrock deposits are classified as an Unproductive Strata. These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow;
- There are no recorded groundwater abstraction points within 250m of the site;
- There are no recorded surface water abstraction points within 250m of the site;
- There are no recorded potable water abstraction points within 250m of the site;
- There are no recorded Source Protection Zones (SPZ) within 250m of the site;
- The nearest recorded surface water features are located on-site: unnamed tertiary river, unnamed culvert and primary river (River Lodden, adjacent to the northwest of the site).

3.5 Radon

Site-specific radon information (Appendix D of this report) and British Geological Survey (BGS) data indicate that between 1% and 3% of homes are above the Radon Action Level and that no radon protective measures are necessary in the construction of new properties and extensions.

3.6 Conceptual Site Model

3.6.1 Geotechnical Conceptual Site Model

From the historical data, the site has comprised farmland from first edition (1886) maps until the present day. Therefore, no significant made ground would be anticipated.

From the published information, the expected underlying geology is Late Jurassic Kimmeridge Clay Formation, overlain across much of the site, particularly around the site's periphery, by Quaternary Head deposits and, adjacent to the stream (River Lodden) and drainage ditch, by Quaternary Alluvium.

The Kimmeridge Clay should provide sufficient bearing capacity for the adoption of traditional strip or trench-fill foundations. However, if significant depths of soft/ loose superficial Head and/ or Alluvium deposits are encountered, foundations may require deepening, or an alternative foundation solution may be required.

The geological information indicates that the permeability of the bedrock geology is typically low to very low, i.e. is unlikely to be suitable for soakaway drainage. The observation that much of the site was waterlogged in May 2014 also indicates low permeability soil conditions and/ or a near surface groundwater table exists. The stream and drainage channel crossing the site also suggest that groundwater may be present near to the surface.

3.6.2 Contamination Conceptual Site Model

Source

From the historical data, the site has comprised farmland from first edition (1886) maps until the present day. Therefore, no significant contamination would be expected as a result of past or present on-site land uses.

There are several recorded potentially contaminative land uses within 250m of the site. However, given the localised nature of any potential contamination from these potential sources, and the distance from the site, it is considered that no significant contamination of the ground beneath the site is likely to have occurred as a result of past or present off-site land uses.

Pathway

In accordance with the CLEA model, a residential with home grown produce land use is considered to be most appropriate for this development and has been used in this risk assessment. The following exposure pathways potentially linking contamination to humans have been considered:

- direct soil and indoor dust ingestion;
- consumption of home grown produce;
- consumption of soil adhering to home grown produce;

- skin contact with soils and indoor dust; and
- inhalation of indoor and outdoor dust and vapours.

If present, groundwater flow within the underlying bedrock is considered to be the main migration pathway linking any contamination to the water environment.

Receptor

As a residential land use, end users are considered as potential receptors of any contamination, with a young female child (aged zero to six years old), being the critical receptor.

As there are no abstraction points within 250m of the site, the nearest water course, located on-site, and groundwater beneath the site are considered to be the main potential controlled waters receptors.

3.7 Sampling and Analysis Plan

In order to confirm the above conceptual site models, an intrusive ground investigation was undertaken.

Trial pits were considered to be the most suitable exploratory technique, as these would enable a large volume of the ground to be inspected and tested in-situ. The trial pits were located so as to provide a reasonable spread of information and an accurate representation of subsurface ground conditions.

In-situ soakaway testing was undertaken to assess the permeability and suitability of the ground for soakaway drainage.

Plasticity index/ particle size distribution tests were undertaken to determine the volume change potential of the soil for foundation design and pH and soluble sulphate testing was undertaken to determine concrete class requirements. Samples were taken for geotechnical testing from twenty-two different locations, at different depths.

Representative samples were taken and tested for general inorganics, heavy metals/ metalloids, speciated polyaromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH) and total phenols, which provides a broad and general range of contaminants that may be present. Should detectable levels of TPH be recorded, speciated TPH and monoaromatics testing would be undertaken, in line with current UK best practice (Environment Agency (2005): The UK Approach for Evaluating Human Health Risks from Petroleum Hydrocarbons in Soils).

Samples were selected for contamination testing from nineteen of the trial pits from a range of depths within the near surface deposits, as, in accordance with the CLEA model, contamination is assumed to be within the near surface deposits for most exposure pathways.

Samples were selected for testing to provide an accurate representation of ground conditions encountered.

4 FIELDWORK

4.1 General

All fieldwork was undertaken on 27 and 28 May 2014 and 09, 10 and 11 July 2014. The siting and setting out of all the trial pits was the responsibility of Ruddlesden geotechnical ltd, who also determined the extent of testing and sampling.

The fieldwork was undertaken in two phases and much of the site was waterlogged during the winter months or contained uncut grass. No access was possible in a small field in the east of the site, off Shaftesbury Road, as this was padlocked at the time of the investigation.

All fieldwork was undertaken in accordance with BS5930 (1999): British Standard Code of Practice for Site Investigation, British Standard BS10175 (2011): Investigation of Potentially Contaminated Sites – Code of Practice and Eurocode 7 (2007): Part 2 Ground Investigation and Testing.

4.2 Trial Pits

Fifty-three trial pits were excavated to depths of between 2.00m and 3.80m using a JCB 3CX (seven-tonne wheeled excavator).

Samples and observations were made from inside the pit to a depth of up to 1.20m, where safe to do so, from the surface and from samples recovered from the excavator bucket. The supervising geologist provided a detailed description of the ground conditions, groundwater and stability and also obtained samples at representative locations, which were placed into suitable containers. The trial pits were not shored.

In-situ shear vane testing was undertaken within suitable cohesive soils to obtain an estimate of undrained shear strength.

Details of ground and groundwater conditions encountered can be found on the trial pit logs (Appendix A) and photographs (Appendix B). The trial pit locations are shown on the trial pit location plan (Dwg. No. 14114/04, Appendix E).

4.3 Soakaway Testing

Ten soakaway tests were undertaken in general accordance with BRE 365 ‘Soakaway Design’.

The trial pit was excavated to a depth deemed sufficient to represent a section of the design soakaway. The vertical sides were trimmed square. A 1500-gallon water bowser was used to supply the large volumes of water required at a quick rate.

The pit was filled with water and allowed to drain. The fall in water level was recorded with time.

5 LABORATORY TESTING

5.1 General

All laboratory testing was scheduled by Ruddlesden geotechnical ltd and the results are presented in Appendix C of this report. Unless stated otherwise, the laboratory testing was UKAS accredited.

5.2 Geotechnical Testing

The programme of laboratory testing was carried out in accordance with BS 1377 (1990) 'Methods of Test for Soils for Civil Engineering Purposes'.

The following tests were carried out on twenty-two samples:

- water content;
- plasticity index/ particle size distribution;
- percentage passing 425µm sieve;
- pH value; and
- soluble sulphate content.

5.3 Contamination Testing

In order to test the conceptual site model (see section 3.6.2 of this report), nineteen soil samples were tested for the following suites of tests:

General Inorganics

pH, soluble sulphate, organic matter.

Heavy Metals/ Metalloids

Arsenic, boron, cadmium, chromium (VI), chromium (total), copper, lead, mercury, nickel, selenium, zinc.

Speciated Polyaromatic Hydrocarbons (PAH)

Acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h) anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene.

Total Phenols

Total Phenols (monohydric).

Petroleum Hydrocarbons

Total Petroleum Hydrocarbons (TPH).

6 RESULTS OF THE INVESTIGATION

6.1 General

The following sections provide a summary of ground conditions encountered, groundwater and laboratory testing. Further details are provided in the appendices of this report.

The results of this investigation broadly concur with the predicted conceptual site model.

6.2 Ground Conditions Encountered

6.2.1 Topsoil

Brown silty gravelly clay was typically encountered across the site to depths of between 0.20m and 0.60m below existing ground levels.

6.2.2 Made Ground

Beneath the topsoil in TP63, in the far south of the site, greyish brown slightly silty clay with rare ceramic fragments was encountered to a depth of 0.80m.

No other deposits of made ground were encountered across the site during the investigation.

6.2.3 Natural Geology

Beneath the topsoil and/ or made ground, firm to stiff yellowish brown/ grey silty clay and/ or firm to stiff bluish grey silty clay and/ or firm to stiff brown silty clay was generally encountered.

At fourteen locations across the site, (loose to medium dense) grey/ brown sandy clayey gravel was encountered below the yellowish brown/ grey silty clay and/ or above the bluish grey silty clay, to depths of between 0.50m and 2.70m.

At four locations across the site, soft to firm bluish grey silty very gravelly clay was encountered to depths of between 2.00m and 3.40m.

At eleven locations in the south of the site, stiff bluish grey/ very dark blue silty clay was encountered to depths of between 2.00m and to the base of trial pits.

Estimates of undrained shear strength obtained from in-situ shear vane testing typically ranged from 40kN/m^2 to 100kN/m^2 and from 60kN/m^2 to 120kN/m^2, at depths of 0.50m and 1.00m respectively.

The density of the granular deposits was estimated from a visual assessment only, i.e. ease of excavation and stability of trial pit sides.

6.3 Groundwater

Groundwater was encountered at the following depths during the course of the investigation:

Table 6.1: Occurrence of Groundwater

TP No.	Water Level (mBGL)	Rate of Inflow
TP08	2.60	Slight
TP13	0.90	Slight
TP19	2.10	Slight
TP20	1.90	Slight
TP27	1.80	Slight
TP30	2.50	Slight
TP39	2.20	Constant
TP44	2.50	Slight
TP49	2.60	Slight
TP54	2.00	Slight
TP62	2.50	Slight

6.4 Soakaway Testing

Full details of the soakaway testing results are provided in Appendix A of this report.

In summary, negligible rates of infiltration were recorded in all of the soakaway tests.

6.5 Geotechnical Laboratory Testing

All the geotechnical laboratory testing results are presented in Appendix C of this report. The results are summarised in the table below:

Table 6.2: Summary of Geotechnical Laboratory Testing Results (1 of 3)

	TP07 0.80m	TP08 2.00m	TP12 1.50m	TP15 2.00m	TP19 1.00m	TP22 1.00m	TP24 1.00m	TP26 1.00m	TP28 1.50m
Moisture content (%)	26.5	20.3	35.8	18.8	28.1	32.1	30.1	18.9	27.7
Liquid limit (%)	61	37	53	38	54	61	56	71	61
Plastic limit (%)	22	18	21	16	24	26	24	28	26
Plasticity index (%)	39	19	32	22	30	35	32	43	35
% passing 425µm sieve	100	99.6	100	100	100	100	100	24.6	100
Modified plasticity index (%)	39	19	32	22	30	29	32	11	35
Volume change potential	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Medium
pH value	7.7	6.1	6.7	6.3	6.7	6.7	5.7	5.8	6.4
Soluble sulphate content (mg/kg)	50	70	47	100	440	6200	340	400	590

Table 6.2: Summary of Geotechnical Laboratory Testing Results (2 of 3)

	TP30 1.00m	TP33 1.50m	TP35 1.50m	TP40 1.80m	TP41 1.50m	TP44 2.00m	TP47 1.50m	TP49 2.00m	TP50 1.00m
Moisture content (%)	28.5	24.7	24.7	14.0	26	26.8	29.0	16.0	21.0
Liquid limit (%)	51	55	55	-	-	56	60	-	57
Plastic limit (%)	22	22	22	-	-	26	24	-	24
Plasticity index (%)	29	33	33	-	-	30	36	-	33
%passing 425µm sieve	100	100	100	-	-	100	91.2	-	25.9
Modified plasticity index (%)	29	33	33	-	-	30	33	-	9
Volume change potential	Medium	Medium	Medium	Non-shrinkable	Non-shrinkable	Medium	Medium	Non-shrinkable	Low
pH value	6.4	6.1	7.1	7.8	8.0	7.4	7.5	7.8	7.9
Soluble sulphate content (mg/kg)	82	4600	590	110	1100	4200	4300	20	110

Table 6.2: Summary of Geotechnical Laboratory Testing Results (3 of 3)

	TP53 1.50m	TP56 1.50m	TP58 1.00m	TP62 1.25m
Moisture content (%)	31.6	29.1	31.8	31.8
Liquid limit (%)	60	56	68	62
Plastic limit (%)	25	23	25	25
Plasticity index (%)	35	33	43	37
%passing 425µm sieve	100	100	100	100
Modified plasticity index (%)	35	33	43	37
Volume change potential	Medium	Medium	High	Medium
pH value	7.8	6.7	6.8	7.4
Soluble sulphate content (mg/kg)	230	350	3300	40

6.6 Contamination Laboratory Testing

All the laboratory testing results, together with the Generic Assessment Criteria to which they have been compared, are presented in Appendix C of this report and the implications are discussed in section 8 of this report.

In summary, no significantly elevated levels of contamination were recorded in any of the nineteen soil samples tested.

7 GEOTECHNICAL ASSESSMENT

7.1 Proposals

It is proposed to develop the site for primarily residential purposes with the construction of residential housing and associated local centre, public open spaces and infrastructure. The proposed site master plan is presented in Appendix E of this report.

7.2 Ground Profile

The ground conditions encountered have been summarised in section 6 of this report and the individual trial pit logs, photographs and laboratory testing results should be referred to for further details. Within this section of the report the general ground profile is reviewed and the engineering significance of individual layers is discussed.

Made ground was encountered in TP63, in the far south of the site, to a depth of 0.80m. This deposit does not provide a suitable founding stratum due to its low and variable bearing properties and all foundations must be built below it.

Beneath a surface covering of topsoil and/ or made ground, firm to stiff yellowish brown/ grey silty clay and/ or firm to stiff bluish grey silty clay and/ or firm to stiff brown silty clay was typically encountered. Estimated undrained shear strengths, obtained from in-situ shear vane testing, of between 40kN/m^2 and 120kN/m^2 indicate that this deposit has sufficient bearing capacity to provide a suitable founding stratum. Laboratory testing revealed this deposit to typically be of medium volume change potential in accordance with NHBC Standards, Chapter 4.2, though soils of low volume change potential and, at one location (TP58), high volume change potential were recorded.

In several locations across the site, (loose to medium dense) grey/ brown, sandy clayey gravel was encountered beneath the firm to stiff yellowish brown/ grey silty clay. It is considered that this deposit also has sufficient bearing capacity to provide a suitable founding stratum. Laboratory testing indicated this deposit to be non-shrinkable in accordance with NHBC Standards, Chapter 4.2.

In a few locations across the site, soft to firm silty gravelly clay was occasionally encountered to various depths. Foundations may need to be deepened beneath these deposits or, depending on location-specific strengths, bearing capacities may have to be limited.

7.3 Foundations

7.3.1 General

The results of this investigation indicate that strip or trench-fill foundations are generally suitable to support the proposed structures.

However, it is noted that the bearing capacity of the soils varies across the site. Similarly, the volume change potential of the soil varies across the site: although much of the site is underlain by clays of medium volume change potential, locally soils of high and low volume change potential exist.

Prior to development, further, more intensive, investigation is recommended to confirm the bearing capacity and volume change potential of the soils in a particular area (as well as the inaccessible field in the east of the site).

7.3.2 Strip or Trench-Fill Foundations

It is considered that an allowable bearing pressure of 100kN/m^2 may be placed on the firm to stiff silty clay and/ or (loose to medium dense) clayey sandy gravel by strip or trench-fill foundations of least width 600mm at a minimum depth of 0.90m (assuming medium volume change potential soils are proven to be present) below existing or proposed ground levels, whichever is deepest.

Where building near trees, foundations should be deepened in accordance with NHBC Standards, Chapter 4.2, for soils of medium volume change potential, subject to more intensive testing confirming that high volume change potential soils do not exist in a particular area.

Where foundations are stepped to take account of the influence of trees they should be stepped gradually with no step exceeding 0.50m.

Where foundation depths exceed 1.50m due to NHBC building near tree requirements, heave precautions are required to protect the foundations from lateral soil heave movements. Suitable heave precautions for trench-fill foundations would be compressible material against the inside faces of all external wall foundations.

Foundations must also be built at least 0.20m below any superficial soft deposits and made ground.

It should be endeavoured to build foundations on like material. Where this is not possible, the boundary between the changes in strata, e.g. clay/ gravel, should be suitably reinforced.

Any soft or loose material in the base of foundation excavations should be removed and replaced with compacted lean mix concrete prior to pouring the foundations.

7.3.3 Ground Floor Slabs

Where NHBC building near trees requirements mean that foundation depths are greater than 1.50m, or where the depth of made ground is more than 600mm, fully suspended ground floor slabs are required.

Where NHBC building near trees requirements mean that foundation depths are less than 1.50m and where the depth of made ground is less than 600mm, ground bearing slabs may be adopted.

As laboratory testing has indicated the soils to be of medium/ high volume change potential, suspended ground floors with a minimum void dimension of 150mm should be used where ground floor construction is undertaken when soils are seasonally desiccated (i.e. during summer months and autumn).

7.3.4 Sulphate and pH Aggressivity

Elevated levels of soluble sulphate have been recorded, with the mean of the highest 20% being 3,110mg/kg.

The results of the pH and soluble sulphate tests have been compared to Table C1 of BRE Special Digest 1 “Concrete in Aggressive Ground”. This comparison indicates the Design Sulphate Class for the site to be DS-4. As the site is considered to be greenfield, groundwater can be treated as mobile and pH values greater than 5.5 were recorded, Aggressive Chemical Environment for Concrete (ACEC) class AC-4 is required for all buried concrete at this site, i.e. sulphate resistant concrete.

It is noted that the value of 3,110mg/kg only slightly exceeds the 3,000mg/kg limit for AC-3 design sulphate class. Therefore, it is considered that the above assessment may be able to be reassessed if additional testing were to be undertaken. This testing could be undertaken in conjunction with the additional volume change potential testing recommended previously in section 7.3.1.

7.3.5 Radon Protective Measures

BRE Report BR 211 'Radon: Guidance on Protective Measures for New Buildings' and British Geological Survey (BGS) information obtained as part of the desk study information (Appendix D of this report) indicate that no radon protection measures are required.

7.4 Groundwater and Excavations

Groundwater was encountered in eleven of the fifty-three trial pits, at depths of between 0.90m and 2.60m. Therefore, de-watering of temporary excavations is likely to be required.

It is noted that groundwater levels fluctuate according to the season and from year to year. In the weeks prior to the investigation the weather had been average for the time of year. Therefore, higher groundwater levels may be encountered during periods of wetter weather. Likewise though, lower groundwater levels may be encountered during the drier summer months.

Land drains were occasionally encountered during the trial pitting works. Land drains encountered during foundation construction should be intercepted and diverted to a suitable outfall to avoid potential softening of the strata beneath the foundations.

Slight collapse of trial pit sides was recorded in gravel strata during the investigation. Therefore, some shoring of temporary excavations may be required.

All slopes (temporary or permanent) should be designed in accordance with the recommendations provided in BS: 6031 (2009): Code of Practice for Earthworks. In particular, it should be noted that the stability of any cut slopes will be a function of both the shearing resistance of the soil and the angle of the slope.

No problems with excavatability are foreseen.

7.5 Roads

From an assessment of the trial pit logs and laboratory testing results, which classified the soils as being of high plasticity, it is recommended that a CBR value of 2% be used for road pavement design at this site.

Laboratory testing indicated that the soils are frost-susceptible.

If highways are to be adopted, additional in-situ CBR testing may need to be undertaken by the adopting authority along the line of the highway at and below road formation level to confirm the CBR value.

7.6 Soakaways

Ten in-situ soakaway tests were undertaken in accordance with BRE 365.

Water level falls of between 0.00m and 0.03m were recorded over the course of the day, indicating that the ground has a low permeability and is not suitable for the use of soakaway drainage.

The preferable drainage solution at this site would be to discharge into a sewer or suitable outfall.

If necessary, surface ponds and/ or underground storage tanks with a throttled outflow valve may be able to be installed to allow water to be discharged at an agreed rate with the relevant regulatory authority so that during storm periods discharge is not increased from the present situation.

8 CONTAMINATION ASSESSMENT

8.1 General

It is proposed to develop the site for primarily residential purposes with the construction of residential housing and associated local centre, public open spaces and infrastructure. The proposed site masterplan is presented in Appendix E of this report.

The contamination assessment has been carried out in accordance with the latest guidance using a source-pathway-receptor analysis method, to assess whether or not the recorded levels of contamination are safe and suitable for use and to determine the extent of any further assessment or remedial measures that might be necessary. In particular, reference has been made to the following documents:

- Defra (2014): SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report;
- Defra (2014): SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Policy Companion Document;
- Defra & Environment Agency (2004): CLR 11: Model Procedures for the Management of Land Contamination;
- Defra (2012): Environmental Protection Act 1990: Part 2A: Contaminated Land Statutory Guidance;
- Department for Communities and Local Government (2012): National Planning Policy Framework;
- Environment Agency (2005): The UK Approach for Evaluating Human Health Risks from Petroleum Hydrocarbons in Soils;
- Environment Agency (2006): Remedial Targets Methodology: Hydrogeological Risk Assessment for Land Contamination;
- Environment Agency (2009): Human Health Toxicological Assessment of Contaminants in Soil (SR2);
- Environment Agency (2009): Updated Technical Background to the CLEA Model (SR3); and
- LQM/ CIEH (2015): The LQM/ CIEH S4ULs for Human Health Risk Assessment. Publication No. S4UL3408.

8.2 Human Health Risk Assessment

8.2.1 Generic Assessment Criteria

A Generic Qualitative Risk Assessment (GQRA) has been undertaken to assess the level of risk posed to human health by soil contamination.

The results of the contamination laboratory testing have been compared to Generic Assessment Criteria (GAC) to aid the evaluation of the extent of contamination at the site. If any of the GAC are exceeded, this may be indicative of an unacceptable risk to the health of site users and that further investigation and/ or remediation is required.

The proposed end use of residential with home grown produce land use has been used in this risk assessment.

Suitable 4 Use Levels (S4ULs), published by Land Quality Management (LQM) and the Chartered Institute of Environmental Health (CIEH), have been used for comparison. The S4ULs have been derived in accordance with UK legislation and Environment Agency guidance using a modified version of the Environment Agency CLEA software. They are fully based on the concept of minimal or tolerable risk as described in SR2 (Environment Agency (2009): Human Health Toxicological Assessment of Contaminants in Soil). The S4ULs have adopted Defra's (2014) revised exposure assumptions and so are considered to be more applicable and up-to-date than the Soil Guideline Values (SGVs), published by Environment Agency (2009) and also derived from the CLEA model. The S4ULs are therefore considered to be applicable under the planning regime in demonstrating whether a site is safe and suitable for use.

In the absence of any other authoritative guidance for lead, the Category 4 Screening Levels (C4SL) for lead, published by Contaminated Land Applications in Real Environments (CL:AIRE), and supported by Defra, has been used for comparison. C4SLs are generic screening levels that are more pragmatic but still strongly precautionary compared to the existing SGVs and other similarly derived numbers. The C4SLs are cautious estimates of contaminant concentrations in soil that are still considered to present an acceptable level of risk, within the context of Part 2A, by combining latest information on human health toxicology, exposure assessment and normal ambient levels of contaminants in the environment.

8.2.2 Comparison of Testing Results to GAC

Of the nineteen soil samples tested, none of the Generic Assessment Criteria were exceeded for a residential with home grown produce land use.

8.3 Controlled Waters Risk Assessment

In order for land affected by contamination to cause harm, there must be a source of contamination, a receptor that can be harmed and a pathway by which the receptor can be exposed to the contamination.

As no significantly elevated levels of contamination were recorded (i.e. there is no source) and no groundwater was encountered (i.e. there is no pathway), it is considered that the levels of contamination recorded at this site are unlikely to cause significant pollution to the water environment.

8.4 Ground Gas Assessment

The desk study information indicates that no radon protective measures are required at this site.

In order to assess the risks posed by ground gas, the principles outlined in BS 8485 (2015) 'Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings' and NHBC Report No. 10627-RO1 (2007) 'Guidance on Evaluation of Development Proposals on Sites where Methane and Carbon Dioxide are Present' have been followed.

The breakdown of organic material in made ground can produce ground gas, though it may also be produced by other, natural, sources (e.g. coal, peat). The principal components of ground gas are methane (potentially explosive) and carbon dioxide (potential asphyxiant).

There are no recorded landfill sites within 250m of the site and no significant depths biogenic made ground were encountered.

Therefore, ground gas protection measures are not considered to be required at this site.

From an assessment of the ground conditions encountered and laboratory testing results, significant levels of Volatile Organic Compounds (VOCs) are unlikely to be present. A hydrocarbon vapour proof membrane is therefore not considered to be necessary.

8.5 Revised Conceptual Site Model

Prior to the investigation, it was considered unlikely that any significant contamination would be present as a result of past or present on- or off-site land uses.

The results of this investigation have indicated that the levels of contamination present are unlikely to be harmful to human health given the proposed end use and are unlikely to cause significant pollution to the water environment.

Therefore, there is no source-pathway-receptor linkage.

8.6 Discussion and Recommendations

The contamination risk assessments indicate that, due to the absence of a contamination source, the levels of contamination recorded in this investigation are not potentially harmful to human health given the proposed end use or to the water environment. Therefore, no further action or specific remedial measures are required for the proposed end use.

However, if any unexpected discoveries are encountered during construction activities (i.e. anything substantially different from the findings of this investigation), Ruddlesden geotechnical ltd should be contacted so that appropriate recommendations may be provided.

Also, in line with general good practice, comprehensive and accurate site records should be kept, including details of where soil has been moved to or from site and tip receipts.

If contamination aspects are a planning condition, these recommendations are subject to the approval of the local authority.

8.7 Water Pipe Selection Site Assessment

A site assessment has been undertaken in accordance with the UKWIR document ‘Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites’. Based on the desk study, exploratory hole logs and laboratory testing information, upgraded water supply pipes are not considered to be necessary at this site.

9 REFERENCES

- Brinch Hansen (1978), cited in Tomlinson (1995).
- British Standards Institution (1990): BS 1377 Methods of Test for Soils for Civil Engineering Purposes.
- British Standards Institution (2011): BS 10175: Investigation of Potentially Contaminated Sites – Code of Practice.
- British Standards Institution (2015): BS 5930: Code of Practice for Ground Investigations.
- British Standards Institution (2015): BS 8485: Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings.
- Building Research Establishment (2005): Special Digest 1: Concrete in Aggressive Ground.
- Building Research Establishment (2015): Report BR 211: Radon: Guidance on Protective Measures for New Buildings.
- Building Research Establishment (2016): DG 365: Soakaway Design.
- Defra & Environment Agency (2004): CLR 11: Model Procedures for the Management of Land Contamination.
- Defra (2012): Environmental Protection Act 1990: Part 2A: Contaminated Land Statutory Guidance.
- Defra (2014): SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report.
- Defra (2014): SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Policy Companion Document.
- Department for Communities and Local Government (2012): National Planning Policy Framework.
- Environment Agency (2005): The UK Approach for Evaluating Human Health Risks from Petroleum Hydrocarbons in Soils.
- Environment Agency (2006): Remedial Targets Methodology: Hydrogeological Risk Assessment for Land Contamination.
- Environment Agency (2009): Human Health Toxicological Assessment of Contaminants in Soil (SR2).
- Environment Agency (2009): Updated Technical background to the CLEA Model (SR3).
- Eurocode 7 (2007): Part 2 Ground Investigation and Testing.
- Highways Agency (2006): Design Guidance for Road Pavement Foundations (Draft HD 25). Interim Advice Note IAN 73/06.
- LQM/ CIEH (2015): The LQM/ CIEH S4ULs for Human Health Risk Assessment. Publication No. S4UL3408.
- NHBC (2016): NHBC Standards.
- NHBC (2007): Report No 10627-RO1: Guidance on Evaluation of Development Proposals on Sites where Methane and Carbon Dioxide are Present.

- Terzaghi and Peck (1979), cited in CIRIA Report 143 (2005).
- Tomlinson (1995): Foundation Design & Construction, 6th Edition.
- UKWIR (2011): Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites.

10 TERMS AND CONDITIONS

1. This report has been prepared for the sole use of the specified client in response to an agreed brief and for the stated purpose. The recommendations used in this report should not be used for any other schemes on or adjacent to this site without further reference to this company.

2. The copyright of this report is owned by Ruddlesden geotechnical ltd. With the exception of the named client, who may copy and distribute the report to deal with matters directly relating to its commission, this report may not be reproduced, published or adapted without written consent of the company.

3. 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, this report should be referred to Ruddlesden geotechnical ltd for reassessment and, if necessary, reappraisal.

4. The comments given in this report assume that ground conditions do not vary beyond the range revealed by the investigation. There may, however, be conditions at or adjacent to the site that have not been disclosed by the investigation and which, therefore, have not been considered in this report. Accordingly, a careful watch should be maintained during any future groundworks and the recommendations of this report reviewed as necessary.

5. Whilst confident in the findings of the report, the recommendations may not necessarily be accepted by other authorities without question. It is advisable that, where appropriate, the report be submitted to the relevant statutory authorities and approval obtained before detailed design, site works or other irrevocable action is undertaken.

6. All comments and recommendations are based on groundwater conditions encountered at the time of investigation. It should be noted that groundwater levels might fluctuate according to the season and from year to year. This may have implications on other recommendations, including foundations and excavations.

7. All third party data referred to in the report, e.g. environmental searches and laboratory testing, has been obtained in good faith from bona fide sources. Ruddlesden geotechnical ltd cannot be held liable for any incorrect information supplied to us.

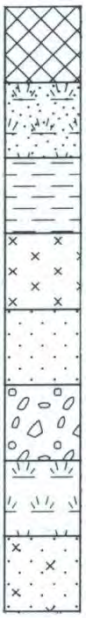
APPENDICES

APPENDIX A

EXPLORATORY HOLE RECORDS AND FIELD DATA

Key to Trial Pit and Borehole Logs (Common Symbols)

Strata legend



Made Ground

Topsoil

Clay

Silt

Sand

Gravel

Peat

Composite soil types will be signified by combined symbols, e.g. silty sand

Chalk

Limestone

Coal

Mudstone

Siltstone

Sandstone

Fine grained igneous rock (e.g. basalt)
Medium grained igneous rock (e.g. granite)

Fine grained metamorphic rock (e.g. slate)

Groundwater

Groundwater strike

Standing groundwater level

Installations

Cement seal

Bentonite seal

Filter pack (slotted pipe)

Samples

D	Small disturbed sample
J	Small disturbed sample (amber glass jar)
B	Disturbed bulk sample
U100	Undisturbed sample (100mm diameter)
W	Water sample

In-situ testing

SPT	Standard Penetration Test (split spoon sampler)
SPT(C)	Standard Penetration Test (solid cone)
V	Shear vane test
CBR	California Bearing Ratio

Rotary drilling

TCR	Total core recovery (%)
SCR	Solid core recovery (%)
RQD	Rock quality designation (%)
FI	Fracture index (fractures/m)
NI	Non-intact

SPT results (examples)

30	N-Value (blows recorded for 300mm penetration, following 150mm seating drive)
50/125	50 blows for 125mm penetration

Field Identification and Description of Soils (Based on Table 7 of BS 5930: 2015)

SOIL GROUP	Very coarse soils			Coarse soils						Fine soils					
PRINCIPAL SOIL TYPE	BOULDERS		COBBLES	GRAVEL			SAND			SILT			CLAY		
Particle size (mm)	Large boulder	Boulder	Cobble	Coarse	Medium	Fine	Coarse	Medium	Fine	Coarse	Medium	Fine			
	>630	630-200	200-63	63-20	20-6.3	6.3-2.0	2.0-0.63	0.63-0.2	0.2-0.063	0.063-0.02	0.02-0.0063	0.0063-0.002	<0.002		
Visual identification	Only seen complete in pits or exposures. Difficult to recover whole from boreholes.			Easily visible to naked eye; particle shape can be described; grading can be described.			Visible to naked eye; no cohesion when dry; grading can be described.			Only coarse silt visible with hand lens; exhibits little plasticity and marked dilatancy; slightly granular or silky to the touch; disintegrates in water; lumps dry quickly; possesses cohesion but can be powdered easily between fingers.			Dry lumps can be broken but not powdered between the fingers; dry lumps disintegrate under water but more slowly than silt; smooth to the touch; exhibits plasticity but no dilatancy; sticks to the fingers and dries slowly; shrinks appreciably on drying usually showing cracks.		
Density / Consistency	No terms defined. Qualitative description of packing by inspection and ease of excavation.			Classification of relative density on the basis of N-value, or field assessment using hand tests may be made. SPT N-values = 0 – 4 = Very loose 4 – 10 = Loose 10 – 30 = Medium dense 30 – 50 = Dense >50 = Very dense						Term	Very soft	Soft	Firm	Stiff	Very stiff
										Field test	Finger easily pushed in up to 25mm. Exudes between fingers.	Fingers pushed in up to 10mm. Moulded by light finger pressure.	Thumb makes impression easily. Cannot be moulded by fingers. Rolls to thread.	Can be indented slightly by thumb. Crumbles in rolling thread. Remoulds.	Can be indented by thumb nail. Cannot be moulded, crumbles.
Discontinuities	Describe spacing of features such as fissures, shears, partings, isolated beds or laminae, desiccation cracks, rootlets, etc. Fissured: breaks into blocks along unpolished discontinuities. Sheared: breaks into blocks along polished discontinuities.						Scale of spacing of discontinuities		Term	very widely	widely	medium	closely	very closely	extremely closely
									Mean spacing (mm)	>2000	2000-600	600-200	200-60	60-20	<20
Bedding	Describe thickness of beds in accordance with geological definition. Alternating layers of materials are inter-bedded or inter-laminated and should be described by thickness term if in equal proportions, or by a thickness of and spacing between subordinate layers where unequal.						Scale of bedding thickness		Term	very thickly bedded	thickly bedded	medium bedded	thinly bedded	very thinly bedded	thickly lami-nated / thinly lami-nated
									Mean thickness (mm)	>2000	2000-600	600-200	200-60	60-20	20-6 / <6
Colour	HUE can be preceded by LIGHTNESS and/ or CHROMA			Red/ Pink/ Orange/ Yellow/ Cream/ Brown/ Green/ Blue/ White/ Grey/ Black Light/ -/ Dark Reddish/ Pinkish/ Orangish/ Yellowish/ Brownish/ Greenish/ Bluish/ Greyish						Colours may be mottled More than 3 colours is multicoloured					
Secondary constituents	For mixtures including very coarse soils see section 33.4.4.2 of BS 5930 (2015).	Terms in coarse soils	slightly (sandy) B)	(sandy) B)	very (sandy) B)	SAND AND GRAVEL		Terms in fine soil	slightly sandy D)	(sandy) D)	very (sandy) F)	Silty CLAY Clayey SILT	Terms used to reflect secondary fine constituents where this is important		
		Proportion secondary A)	<5%	5-20% C)	>20% C)	About 50%		Proportion secondary A)	<35%	35-65% E)	>65% E)				
Mineralogy	Terms can include: glauconitic/ micaceous/ shelly/ organic/ calcareous. For example: slightly (glauconitic)/ (glauconitic)/ very (glauconitic). Carbonate Content: slightly calcareous – weak or sporadic effervescence from HCl/ calcareous – clear but not sustained effervescence from HCl/ highly calcareous – strong, sustained effervescence from HCl. Organic soils contain secondary finely divided or discrete particles of organic matter often with distinctive smell, might oxidise rapidly. For example: slightly organic-grey/ organic–dark grey/ very organic–black.														
Particle shape	Very angular/ Angular/ Sub-angular/ Sub-rounded/ Rounded/ Well-rounded A dominant shape can be described, for example: Cubic/ Flat/ Elongate														
PRINCIPAL SOIL TYPE	LARGE BOULDERS	BOULDERS	COBBLES	GRAVEL			SAND			SILT			CLAY		
Tertiary constituents	Example terms include: shell fragments/ pockets of peat/ gypsum crystals/ pyrite nodules/ calcareous concretions/ flint gravel/ brick fragments/ rootlets/ plastic bags. Qualitative proportions can be given: with rare/ with occasional/ with numerous/ frequent/ abundant. Proportions are defined on a site or material specific basis, or subjectively.														
Geological unit	Name in accordance with published geological maps, memoirs or sheet explanations. For example: River Terrace Deposits/ Glacial Sand And Gravel/ Made Ground/ Crackington Formation/ Weathered Heavitree Breccia Formation/ Meadfoot Group/ Upper Devonian Slates/ Alluvium/ Topsoil/ Laminated Beds/ Bude Formation/ Sherwood Sandstone Group.														

A) Percentage coarse or fine soil type assessed excluding cobbles and boulders.
B) Gravelly or sandy and/ or silty or clayey.
C) Can be described as fine soil depending on mass behaviour.
D) Gravelly and/ or sandy.
E) Can be described as coarse soil depending on mass behaviour.
F) Gravelly or sandy.

TRIAL PIT LOGS

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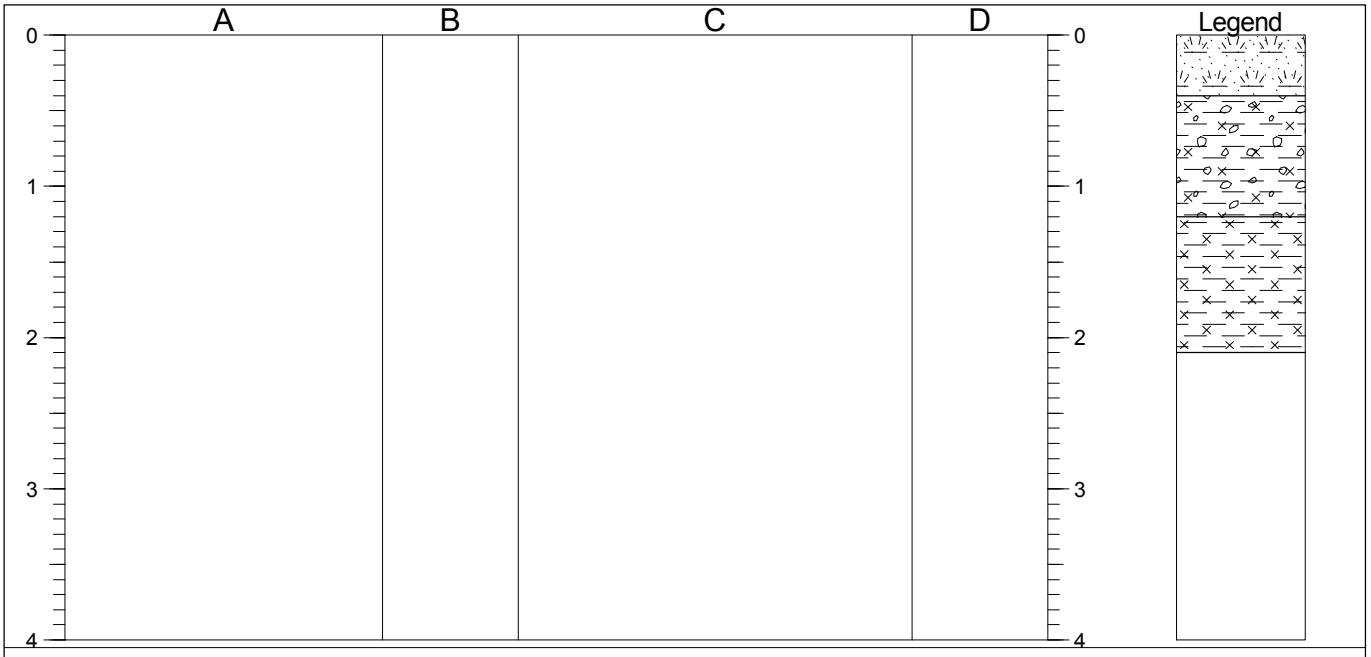
Telephone: 01392 678082

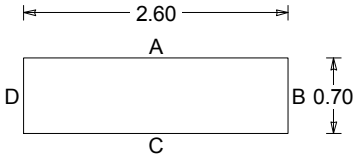
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP07**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.40-1.20		Firm yellowish brown/ grey gravelly silty CLAY. Gravel is fine to coarse subrounded to subangular of mixed lithologies.	0.50	VANE	60
		0.90 ...very gravelly	0.80	D	
			1.00	VANE	80
1.20-2.10		Firm bluish grey mottled brown silty CLAY with some mudstone lithorelic structures and rare shells.			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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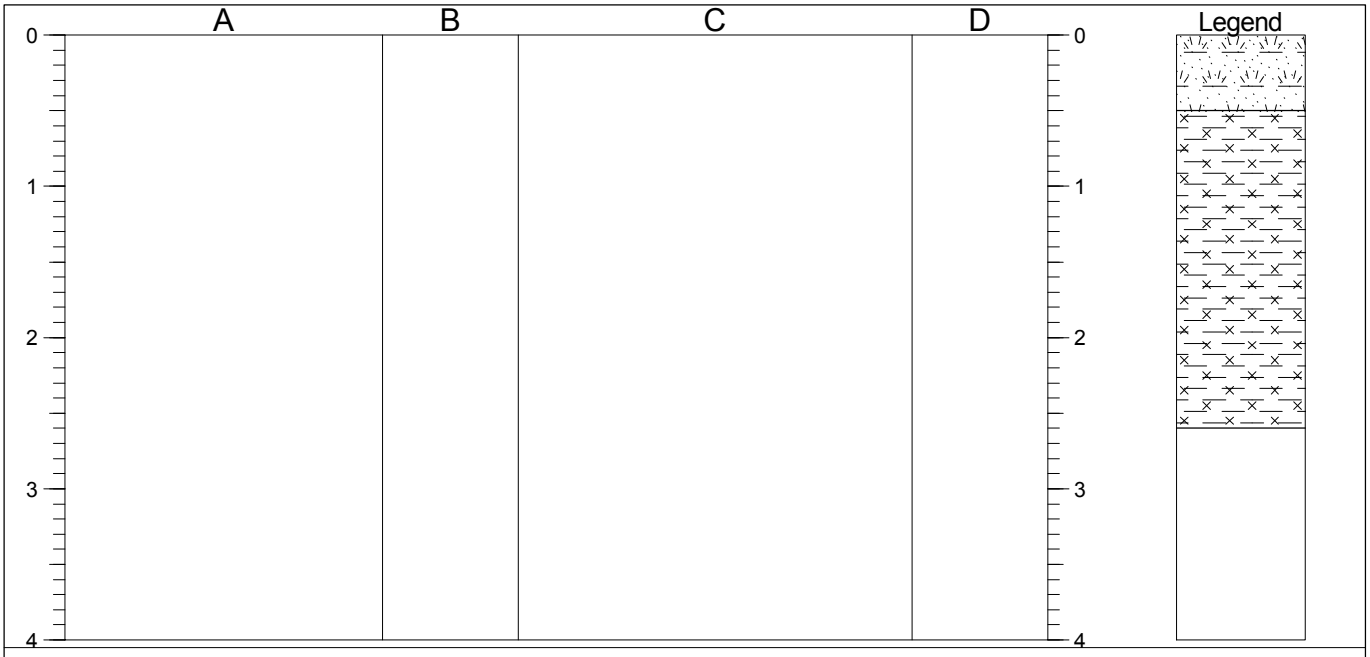
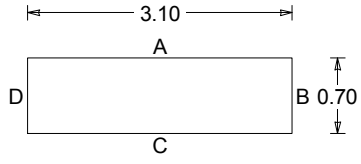
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP08**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets. Gravel is fine to coarse subangular to subrounded of mixed lithologies.			
0.50-2.60		Firm yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50	VANE	80
			1.00	VANE	80
			2.00	D	
		2.30 ...very gravelly very moist			

Shoring/Support: None.
Stability: Stable.
Groundwater: Slight seepage at base (2.60m).



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

Ruddlesden geotechnical ltd
The Stables, 65 Langaton Lane
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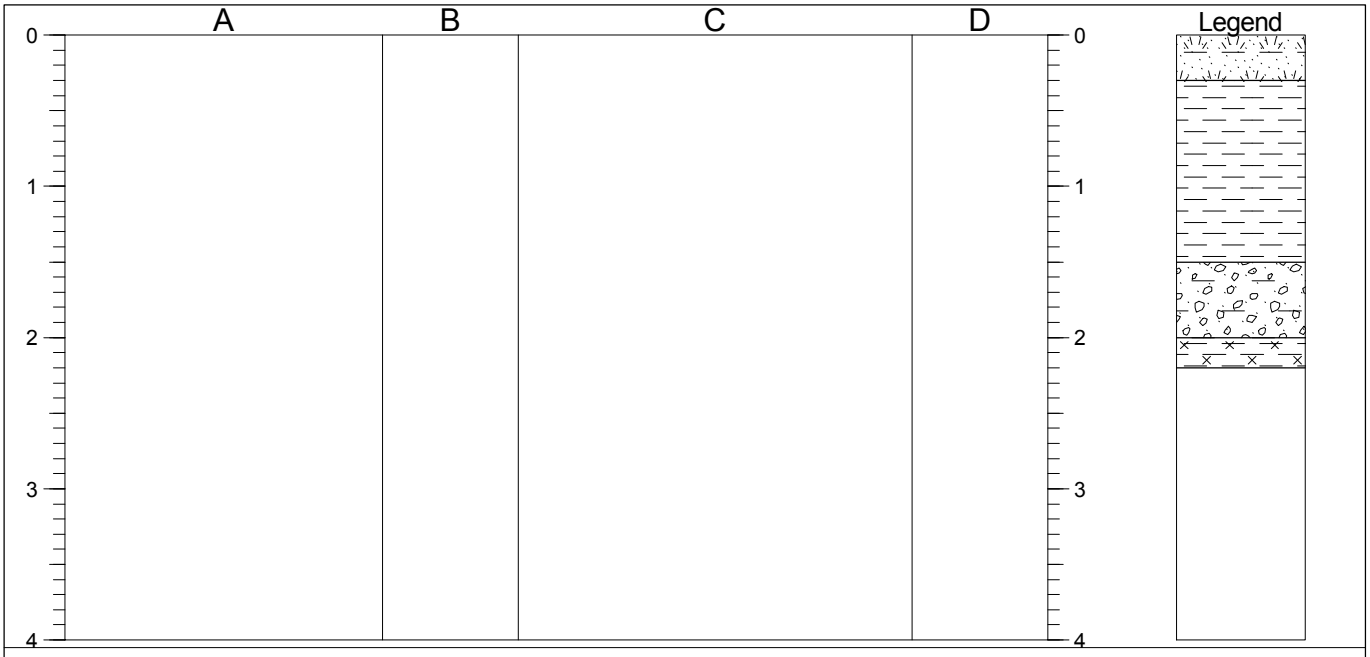
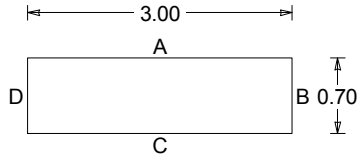
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP09**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.50		Firm to stiff yellowish brown/ grey slightly sandy silty CLAY with rare fine to medium subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50 0.50 1.00	J VANE VANE	 65 80
1.50-2.00		(Medium dense) yellowish brown/ grey sandy very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly mudstone and flint.			
2.00-2.20		Stiff bluish grey silty CLAY.			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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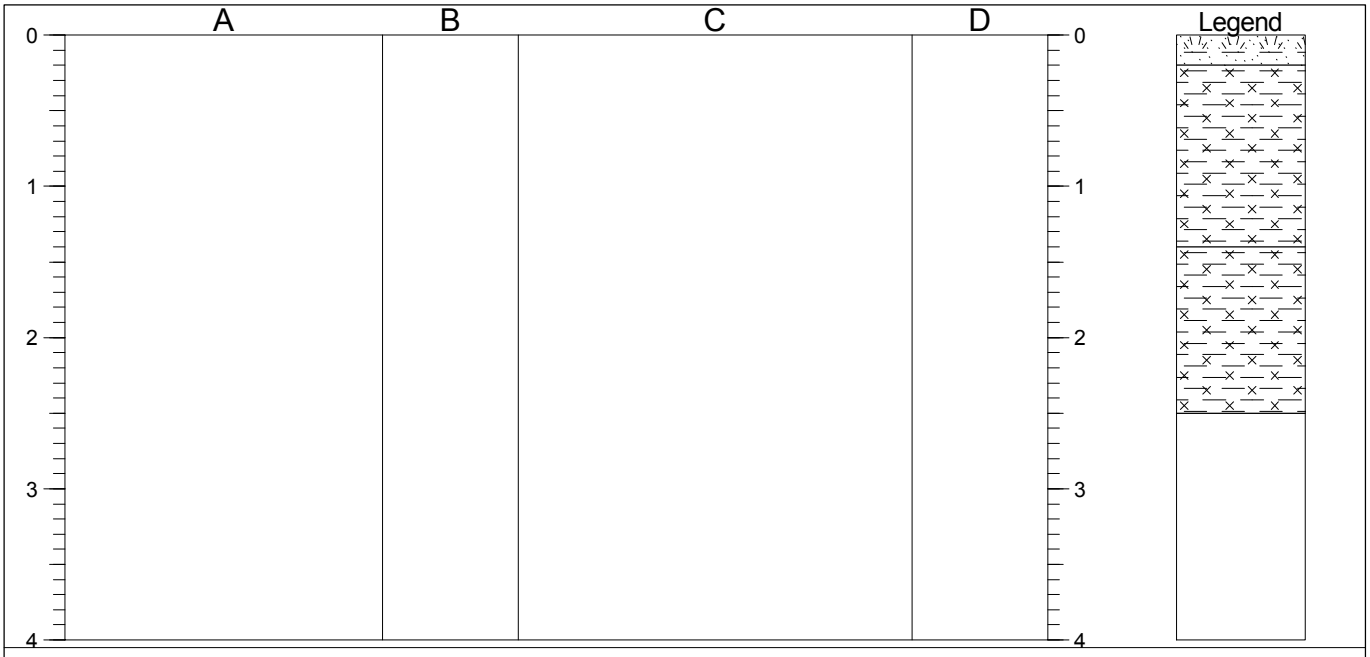
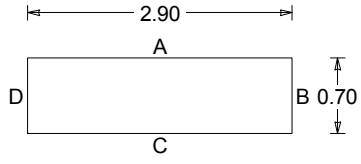
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP12**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown silty clay with frequent roots and rootlets.			
0.20-1.40		Firm brown silty CLAY with occasional roots and rootlets.	0.50	J	
			0.50	VANE	100
			1.00	VANE	100
1.40-2.50		Firm yellowish brown/ grey silty CLAY with rare rootlets.	1.50	D	

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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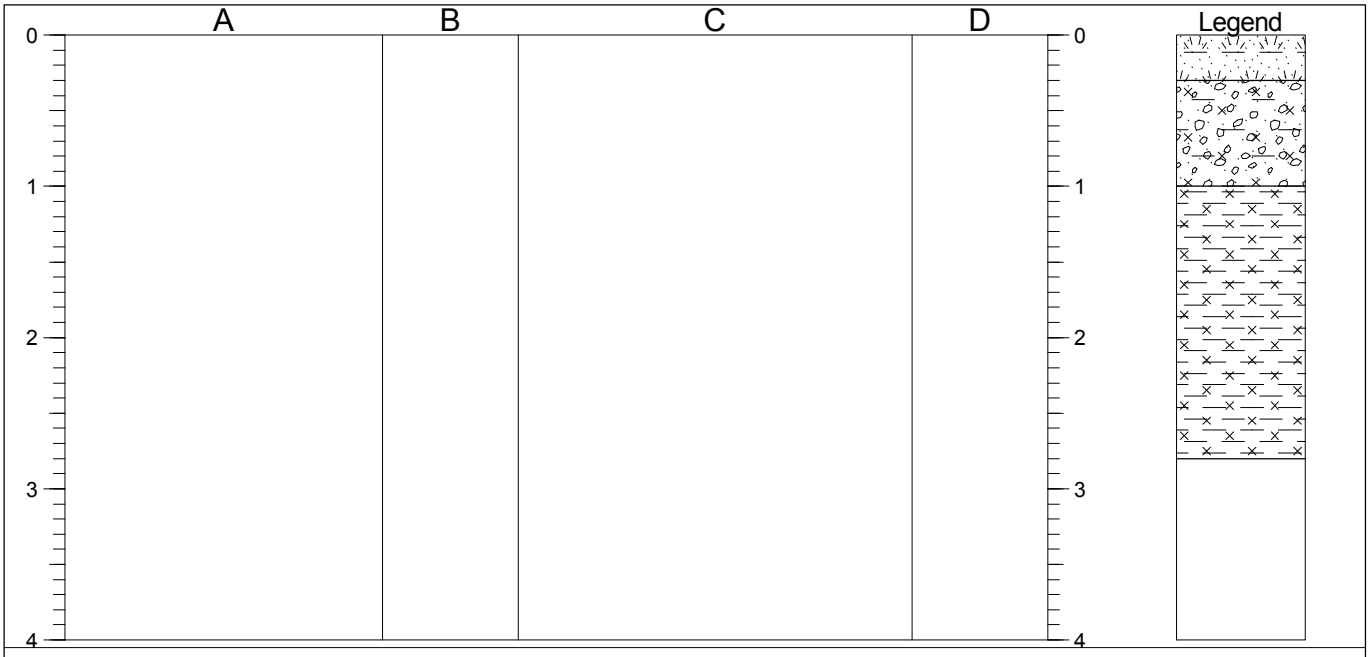
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP13
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1

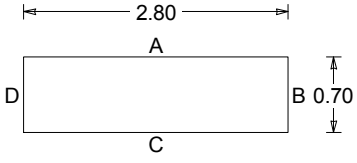


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.00		(Medium dense) light grey/ brown slightly sandy silty very clayey GRAVEL. Gravel is medium to coarse subrounded to subangular of mixed lithology.	0.50	VANE	too gravelly
1.00-2.80		Firm to stiff bluish grey mottled brown silty CLAY with rare organics and occasional gypsum crystals. 2.00 ...some mudstone lithorelic structures	1.00	VANE	too gravelly

Shoring/Support: None.
Stability: Some collapse of gravel stratum.
Groundwater: Slight seepage at 0.90m.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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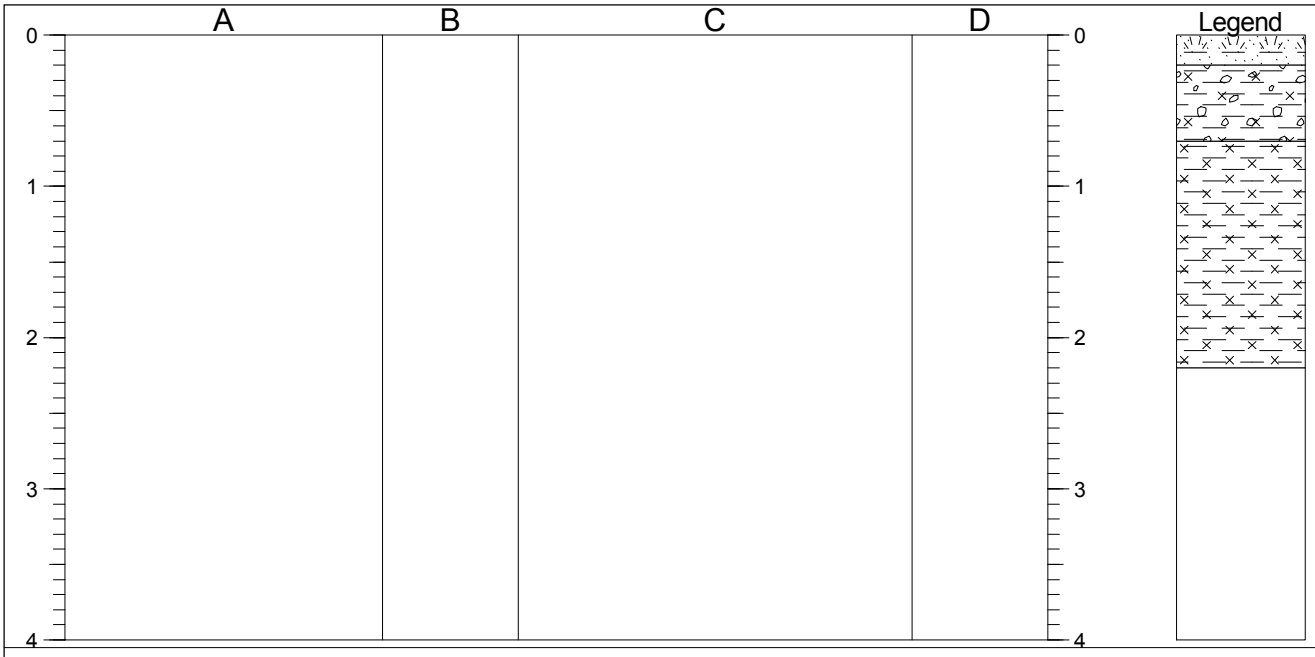
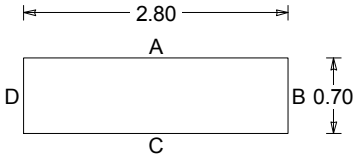
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP14**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown silty clay with frequent roots and rootlets.			
0.20-0.70		Firm yellowish brown/ grey gravelly silty CLAY with occasional rootlets. Gravel is fine to coarse subangular to subrounded of mixed lithologies.	0.30 0.50	J VANE	 60
0.70-2.20		Firm bluish grey mottled brown silty CLAY with occasional crystals of gypsum and organics. ...with shells and mudstone lithorelic structures	1.00	VANE	60

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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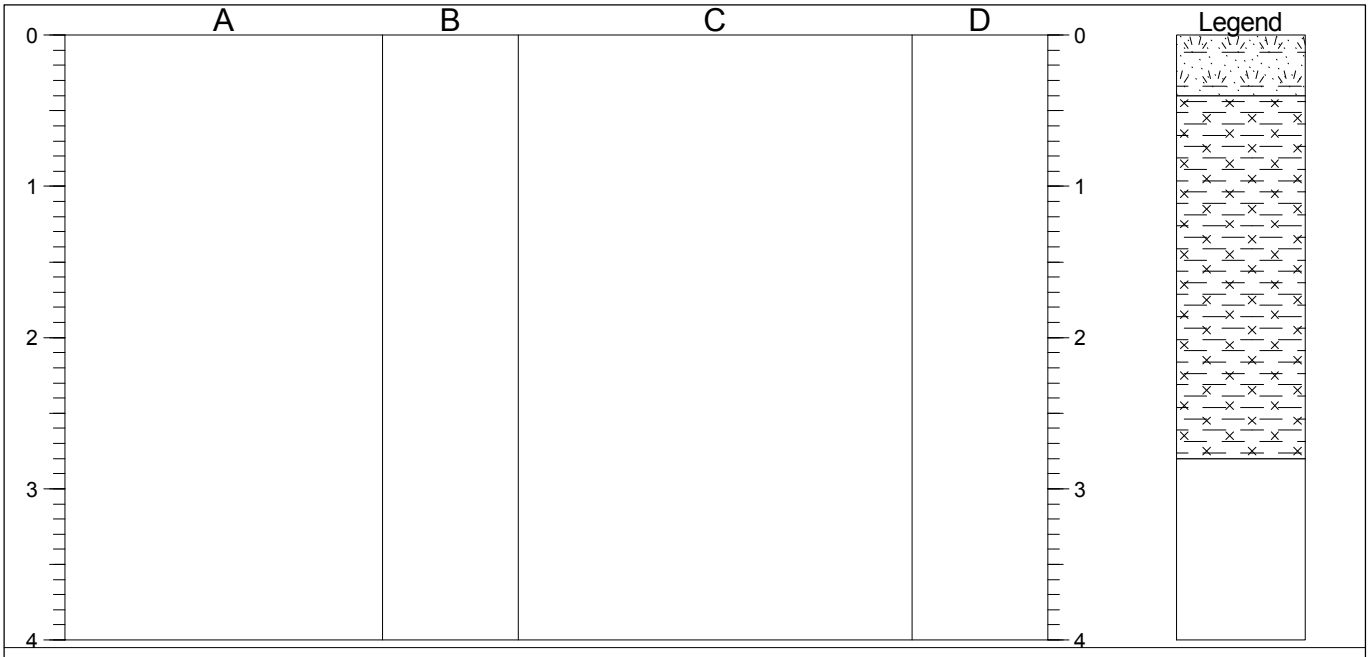
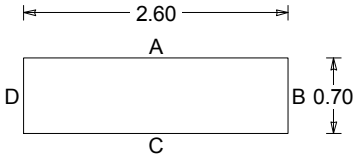
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP15**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.40-2.80		Firm yellowish brown/ grey silty CLAY with occasional roots and rootlets.	0.50	VANE	65
		0.60 ...land drain	1.00	VANE	95
			2.00	D	
		2.50 ...sandy			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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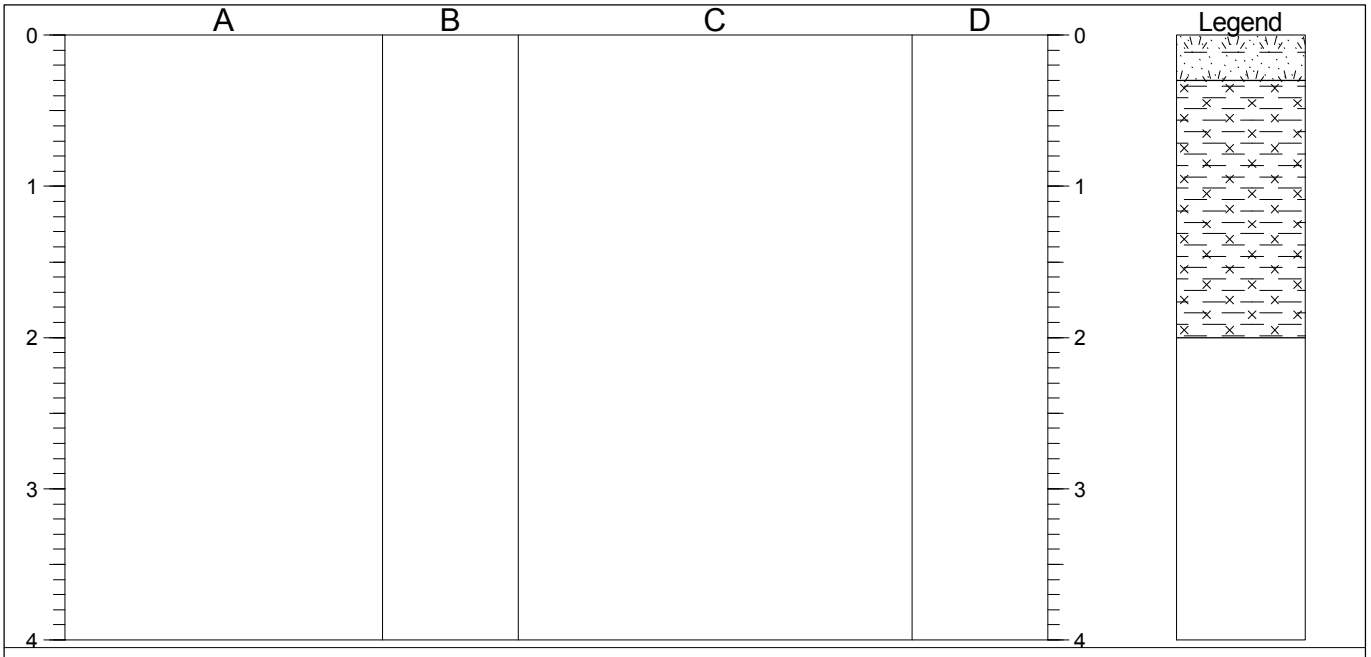
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP16**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



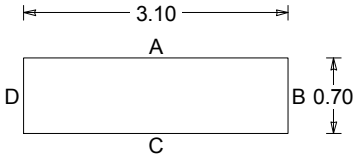
STRATA

Depth	No	DESCRIPTION
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.
0.30-2.00		Firm to stiff bluish grey mottled yellowish brown silty CLAY with rare fine to medium subangular to subrounded gravel of mixed lithology and organics (rootlets). 0.50 ...land drain

SAMPLES & TESTS

Depth	No	Remarks/Tests
0.50	VANE	60
0.75	J	
1.00	VANE	60

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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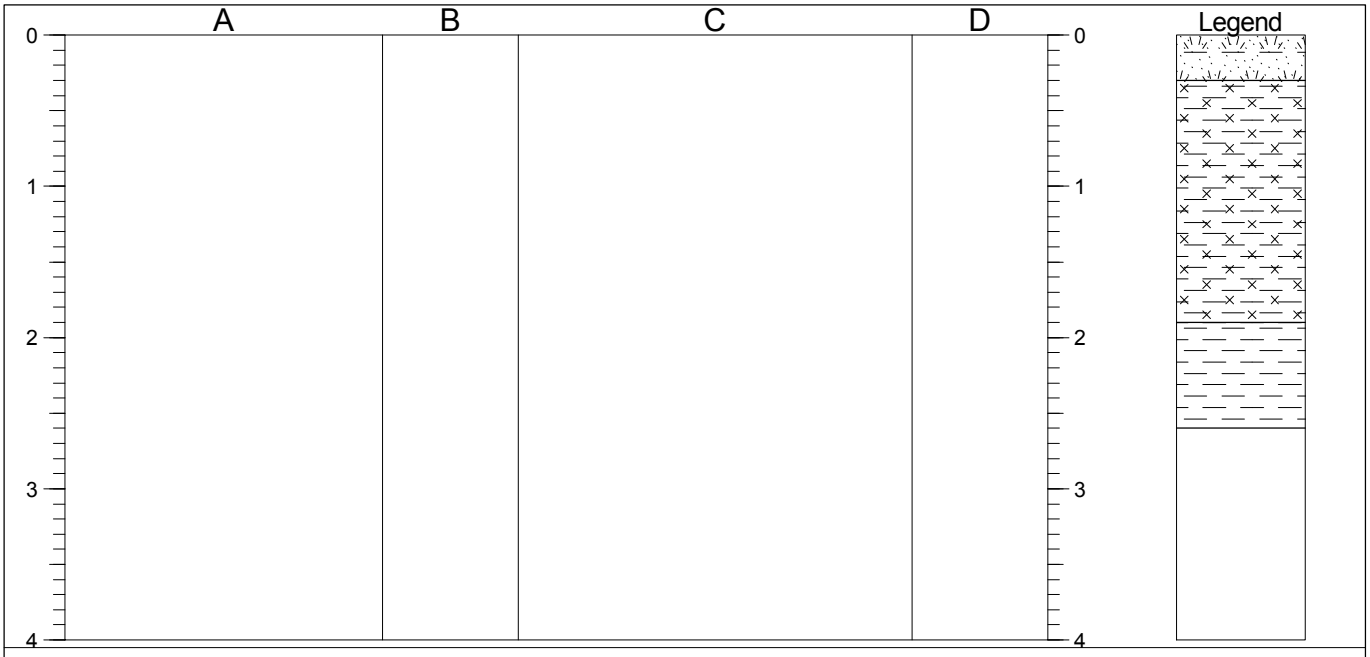
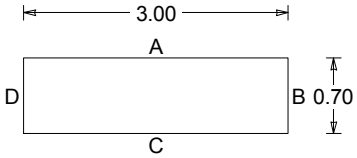
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP19**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown silty clay with frequent roots and rootlets.			
0.30-1.90		Firm to stiff brown silty CLAY.	0.50	VANE	90
			1.00	D	
			1.00	VANE	120
1.90-2.60		Stiff bluish grey mottled brown CLAY. 2.00 - 2.10 ...very gravelly. Gravel is fine to coarse subrounded to subangular of mixed lithologies (moist).			

Shoring/Support: None.
Stability: Stable.
Groundwater: Slight seepage at 2.10m.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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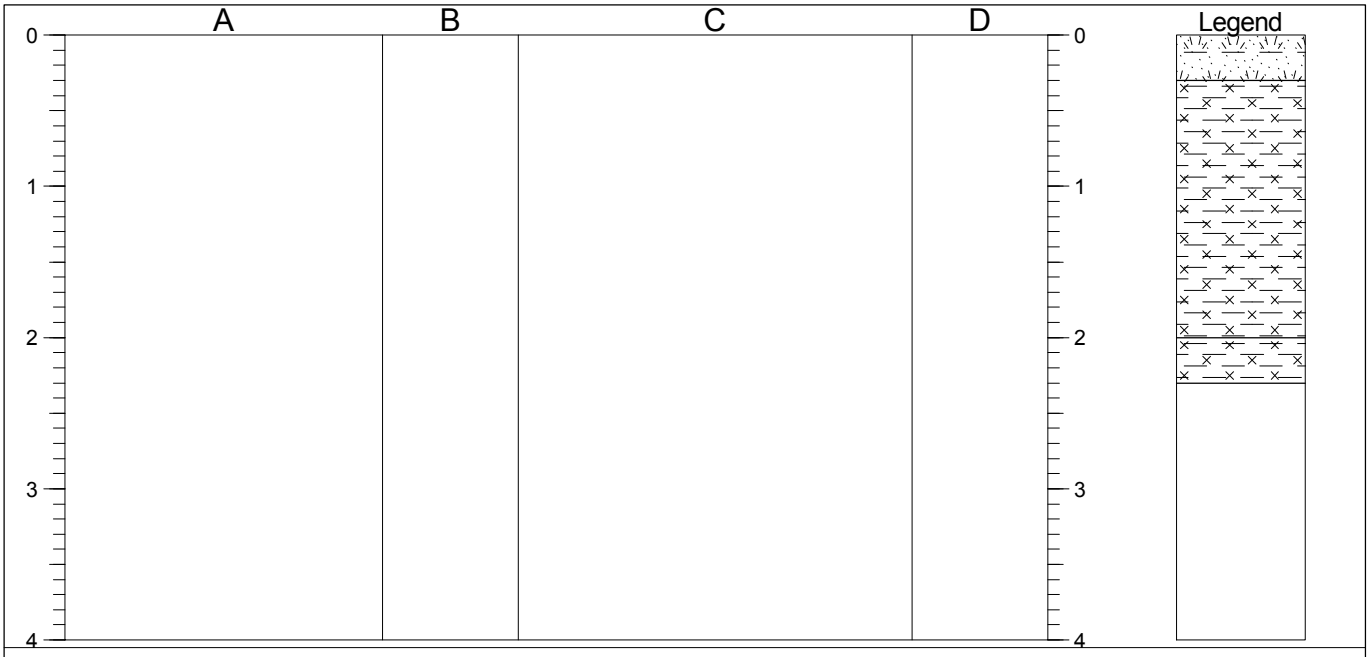
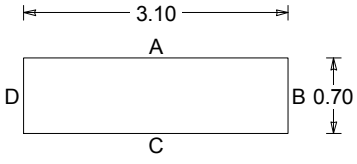
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP20**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown silty clay with frequent roots and rootlets.			
0.30-2.00		Firm yellowish brown/ grey silty CLAY with occasional rootlets.	0.50	J	
			0.50	VANE	70
			1.00	VANE	90
		1.50 ...very gravelly. Gravel is fine to coarse subangular to subrounded of mixed lithologies (moist)			
2.00-2.30		Firm to stiff bluish grey silty CLAY with rare gypsum crystals and some mudstone lithorelic structures and occasional shells.			

Shoring/Support: None.
Stability: Stable.
Groundwater: Slight seepage at 1.90m.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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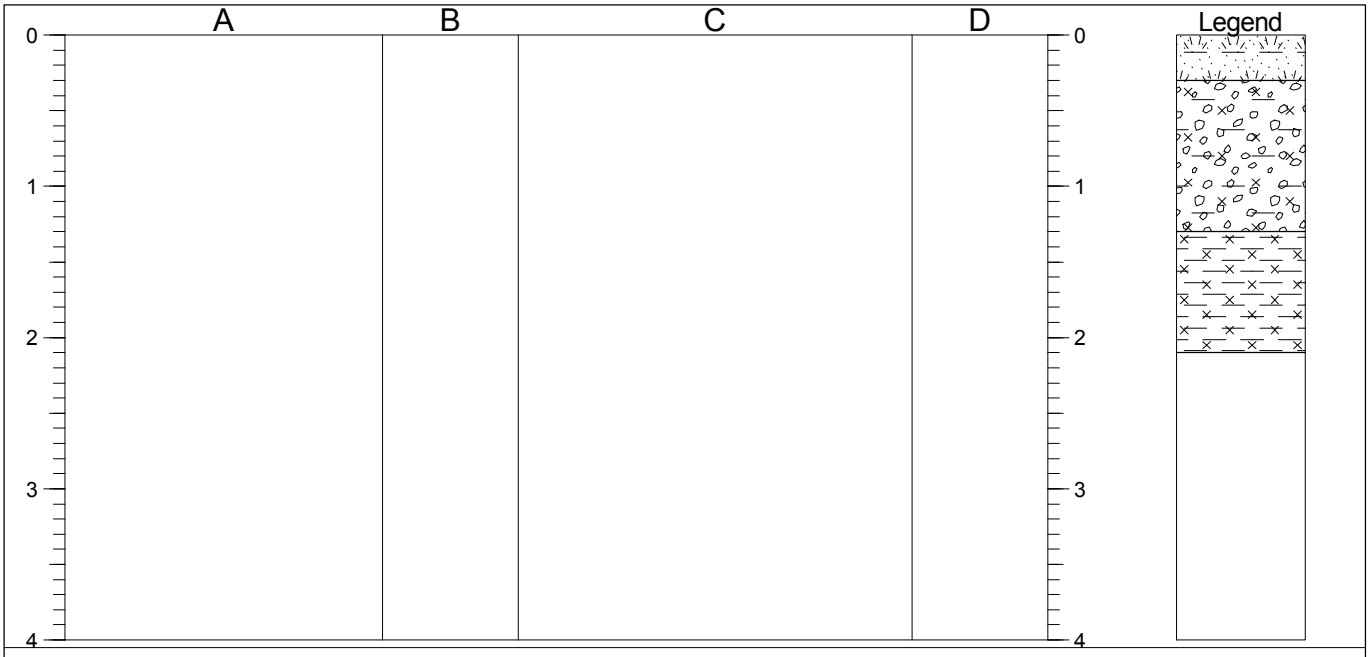
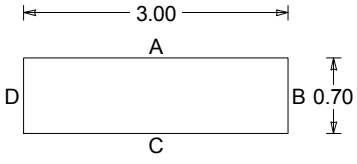
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP21
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.30-1.30		(Medium dense) grey/ yellowish brown silty very clayey GRAVEL occasionally very gravelly CLAY. Gravel is fine to coarse subangular to subrounded flint.	0.50	J	
			0.50	VANE	too granular
			1.00	VANE	too granular
1.30-2.10		Stiff bluish grey very silty CLAY with rare shell fragments and organics.			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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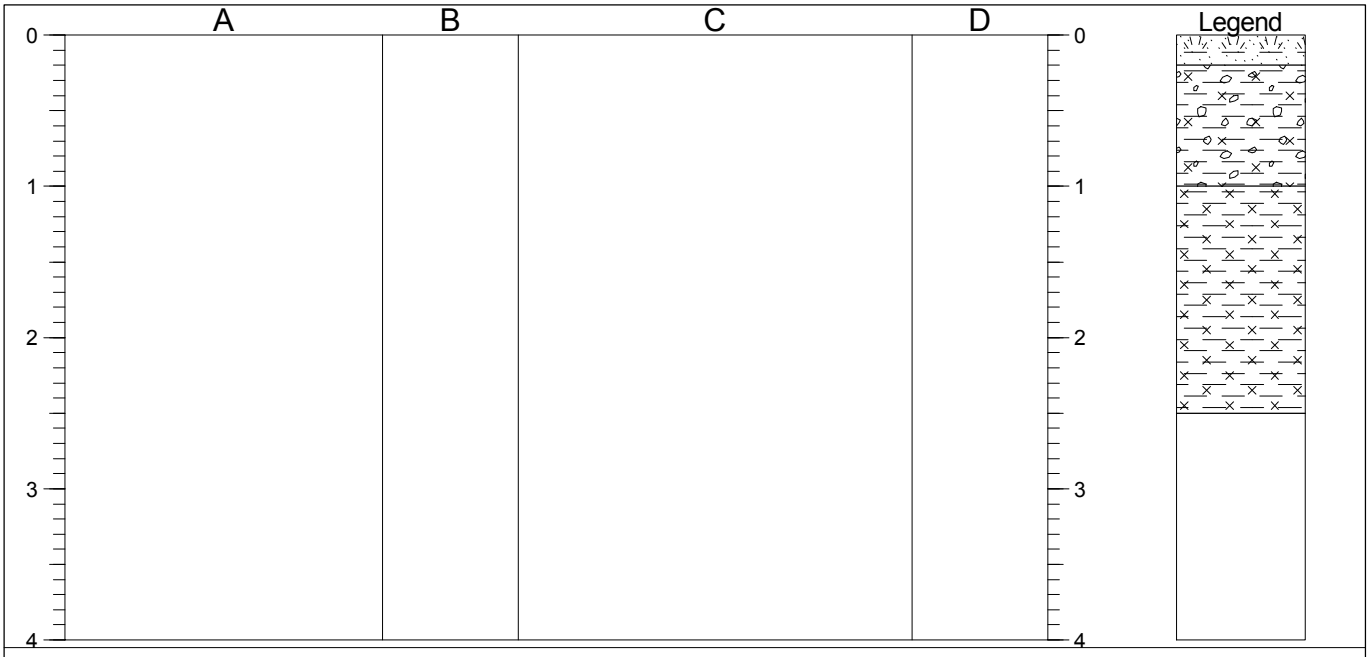
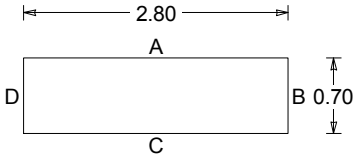
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP22**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown silty clay with frequent roots and rootlets.			
0.20-1.00		Firm yellowish brown/ grey gravelly silty CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies.	0.30	VANE	60
1.00-2.50		Firm bluish grey mottled brown silty CLAY with occasional gypsum crystals.	1.00	D	
		1.20 ...with some shells and mudstone lithorelic structures	1.00	VANE	75

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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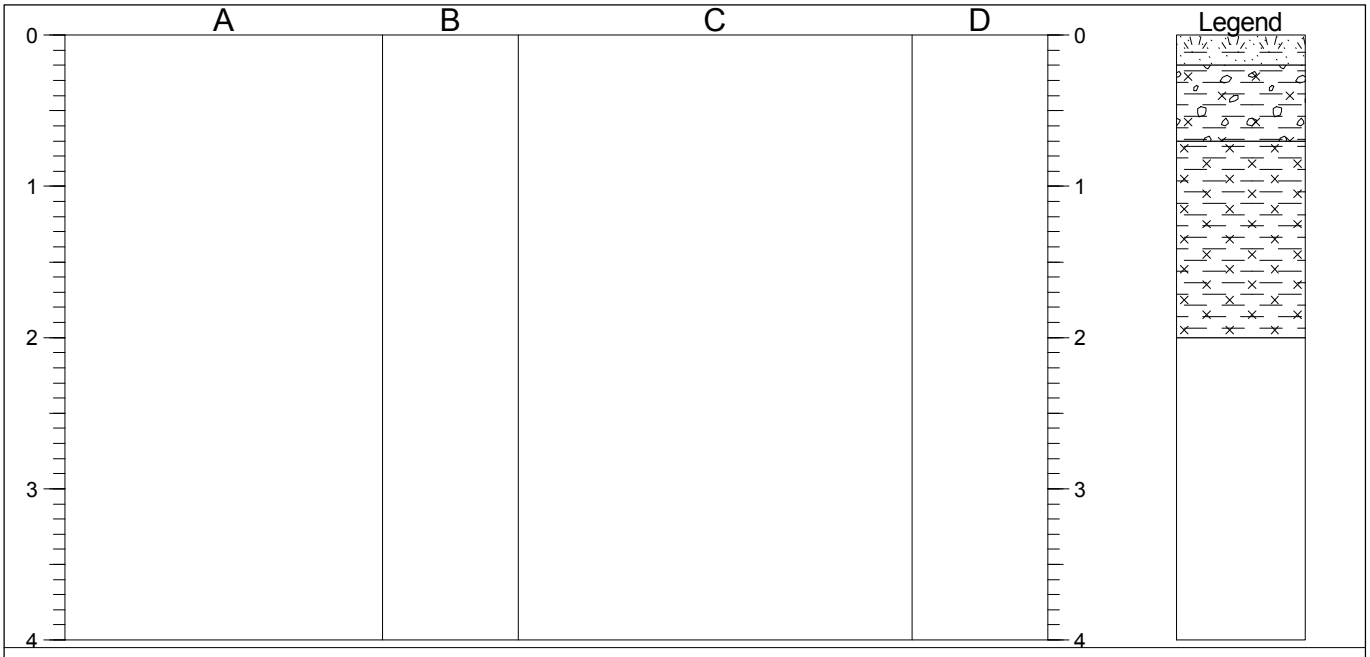
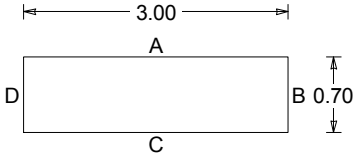
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP23**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-0.70		Firm to stiff yellowish brown/ grey silty gravelly CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint.	0.50	VANE	75
0.70-2.00		Stiff bluish grey very silty CLAY with occasional shell fragments and organics. 0.70 ...land drain 1.30 ...boulder of mudstone with calcite veins	0.60 1.00	J VANE	 75

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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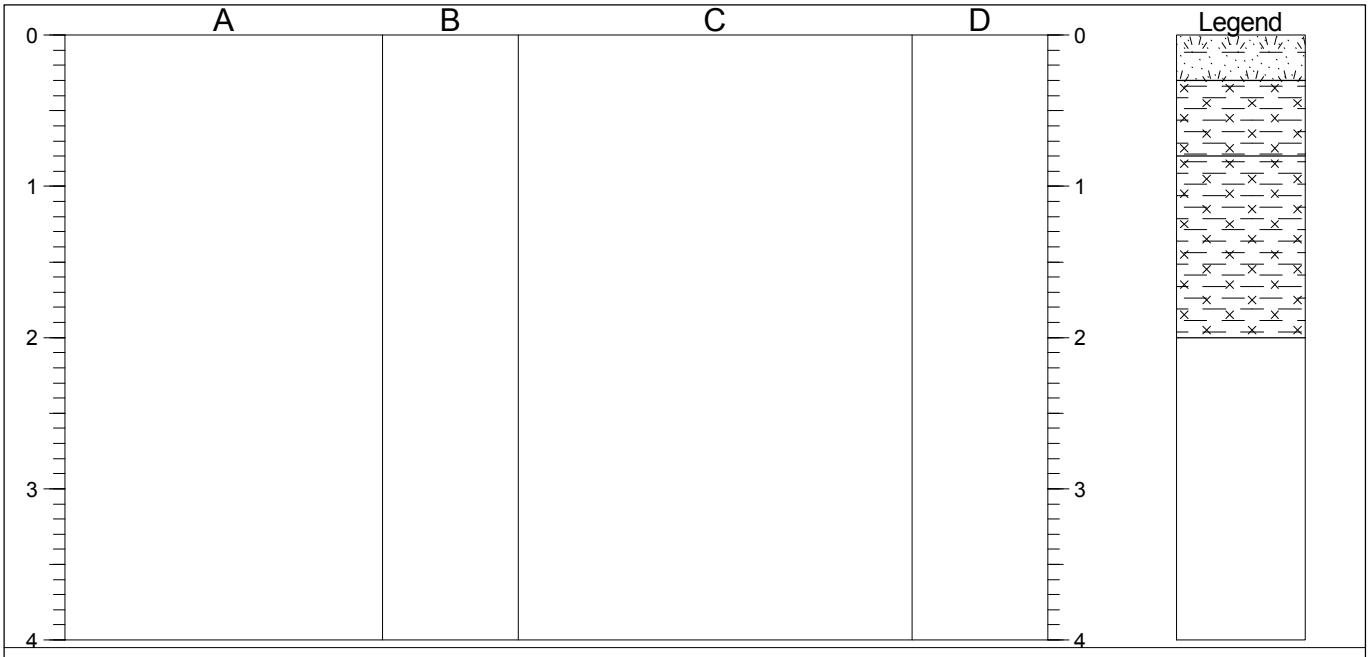
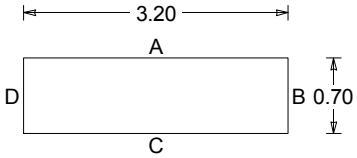
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP24**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-0.80		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint and sandstone.	0.50	VANE	80
0.80-2.00		Stiff bluish grey mottled yellowish brown very silty CLAY with occasional shell fragments and organics (rootlets).	1.00 1.00	J VANE	 90

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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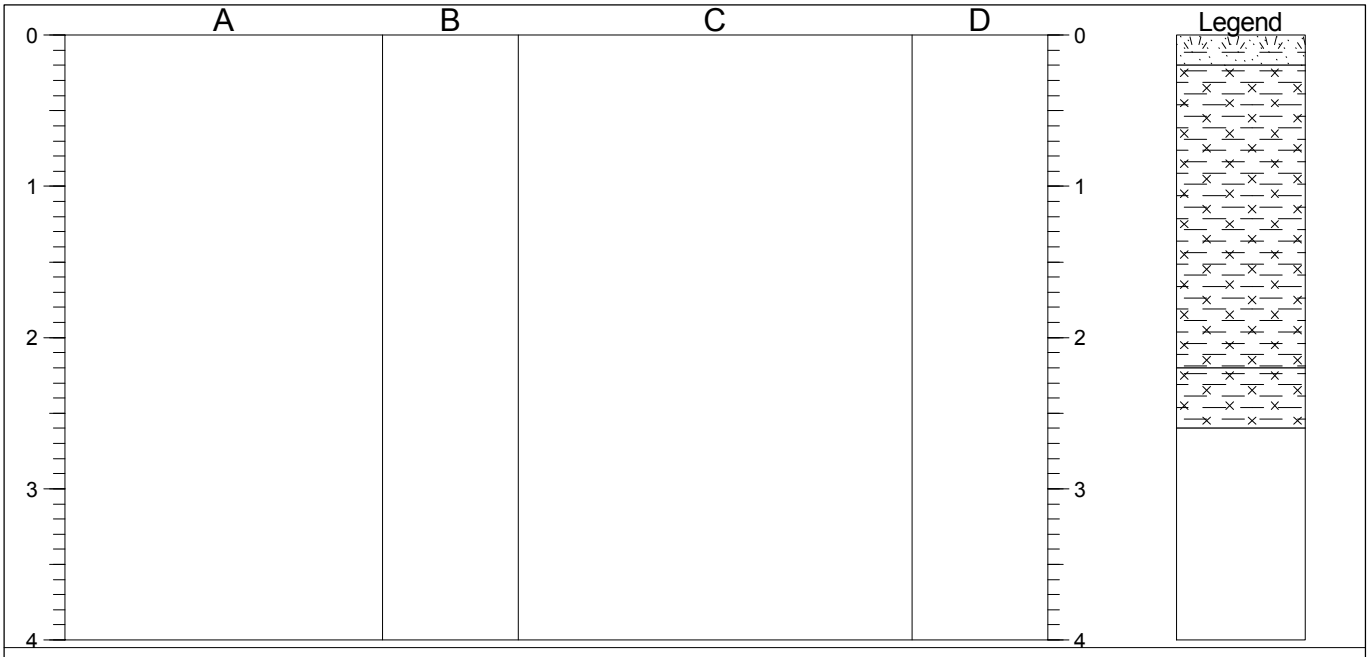
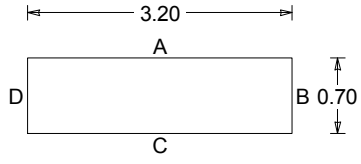
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP25**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.20-2.20		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to medium subangular to subrounded gravel of mixed lithologies predominantly mudstone and flint.			
		0.50 ...land drain	0.50	VANE	40
			1.00	VANE	50
		1.50 ...rare gypsum crystals			
2.20-2.60		Firm/ stiff very dark blue mottled brown slightly silty CLAY.	2.20	D	

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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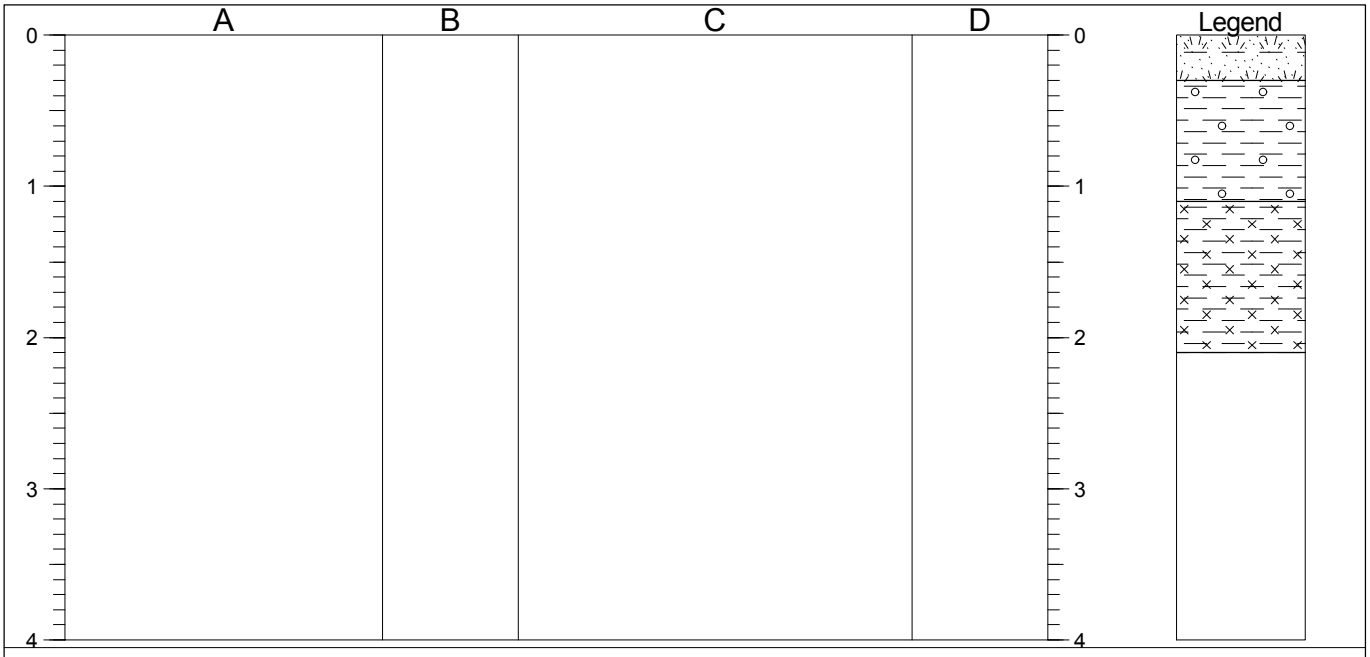
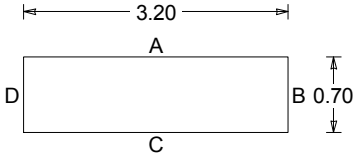
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP26**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.10		Firm yellowish brown/ grey silty gravelly CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint.	0.50	VANE	too granular
1.10-2.10		Stiff bluish grey/ very dark blue silty CLAY with occasional organics (rootlets).	1.00 1.00	D VANE	 too granular

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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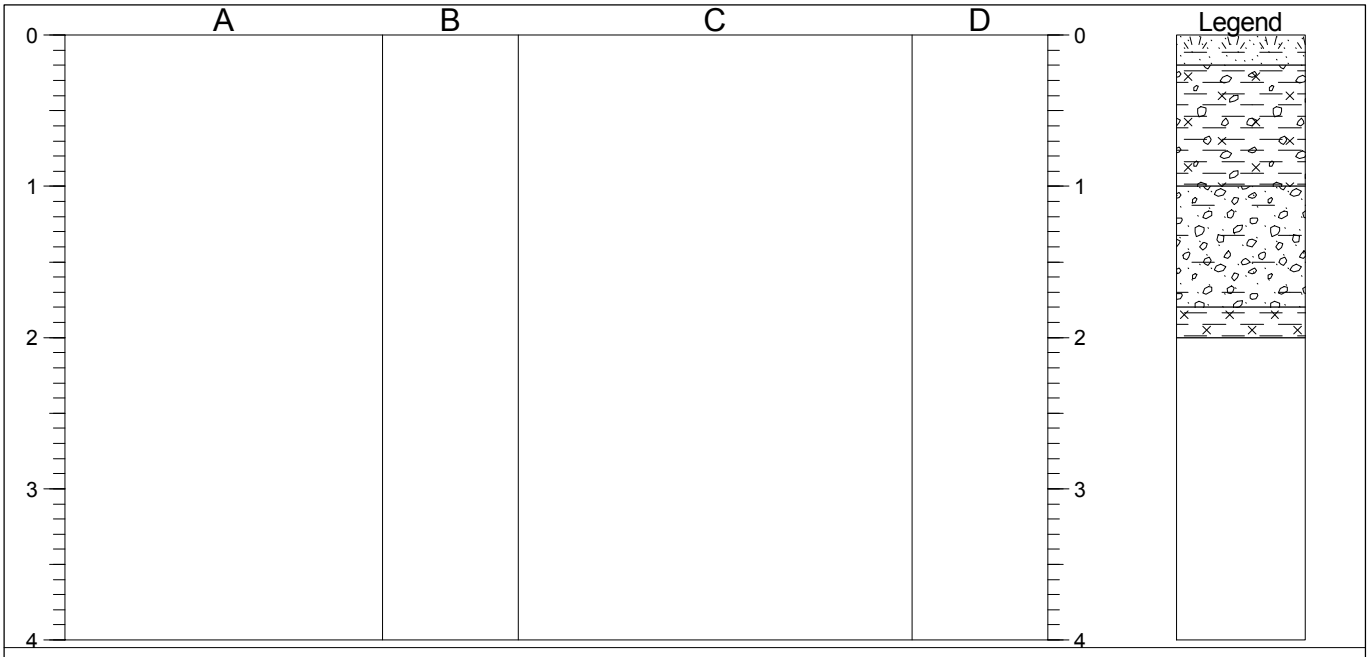
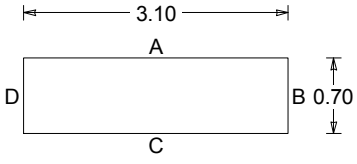
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP27
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-1.00		Firm to stiff yellowish brown/ grey slightly gravelly silty CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint.	0.30	J	
		0.40 ...land drain	0.50	VANE	65
1.00-1.80		(Medium dense) yellowish brown/ grey sandy very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint and sandstone.	1.00	VANE	65
1.80-2.00		Stiff bluish grey silty CLAY with occasional shell fragments.			

Shoring/Support: None.
Stability: Slight collapse in gravel.
Groundwater: Slight seepage at 1.80m.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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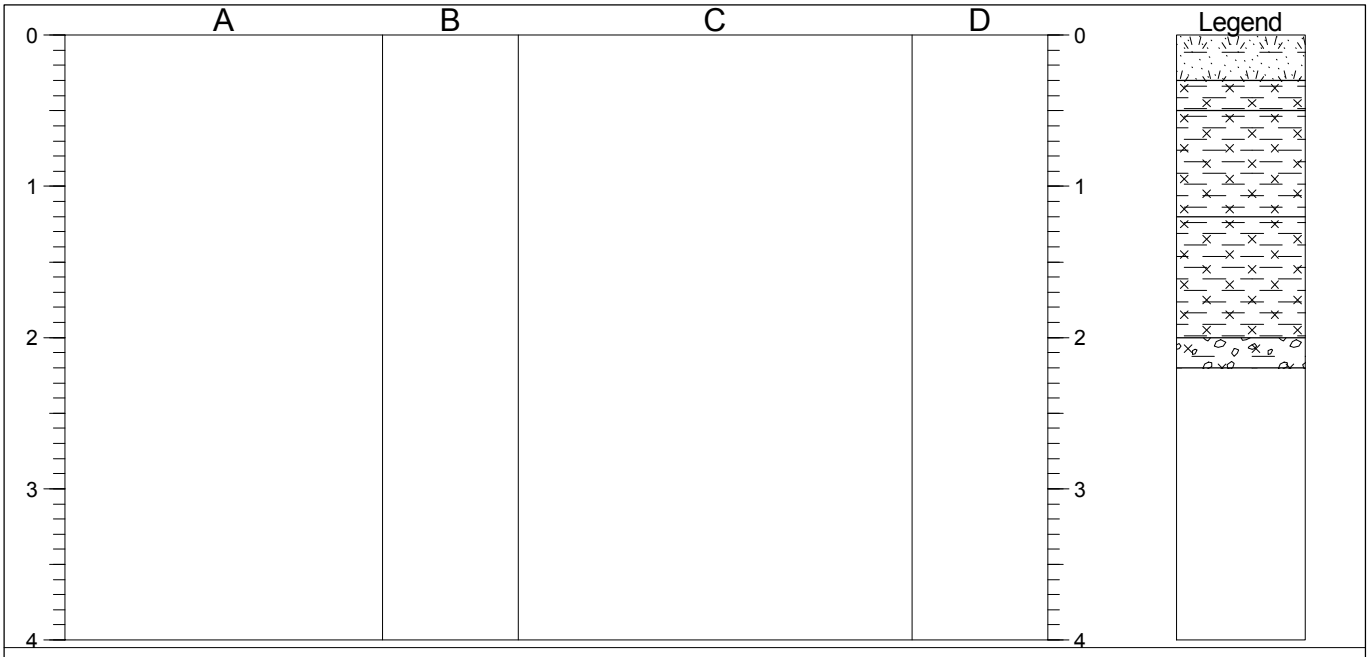
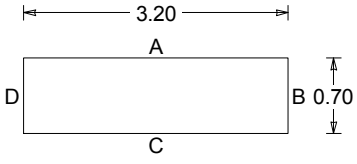
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP28**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-0.50		Firm brown silty CLAY with occasional roots (subsoil).			
0.50-1.20		Stiff brown very silty CLAY.			
			1.00	VANE	75
1.20-2.00		Firm to stiff yellowish brown/ grey silty CLAY.			
			1.50	D	
2.00-2.20		(Medium dense) yellowish brown/ grey silty very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded flint (moist).			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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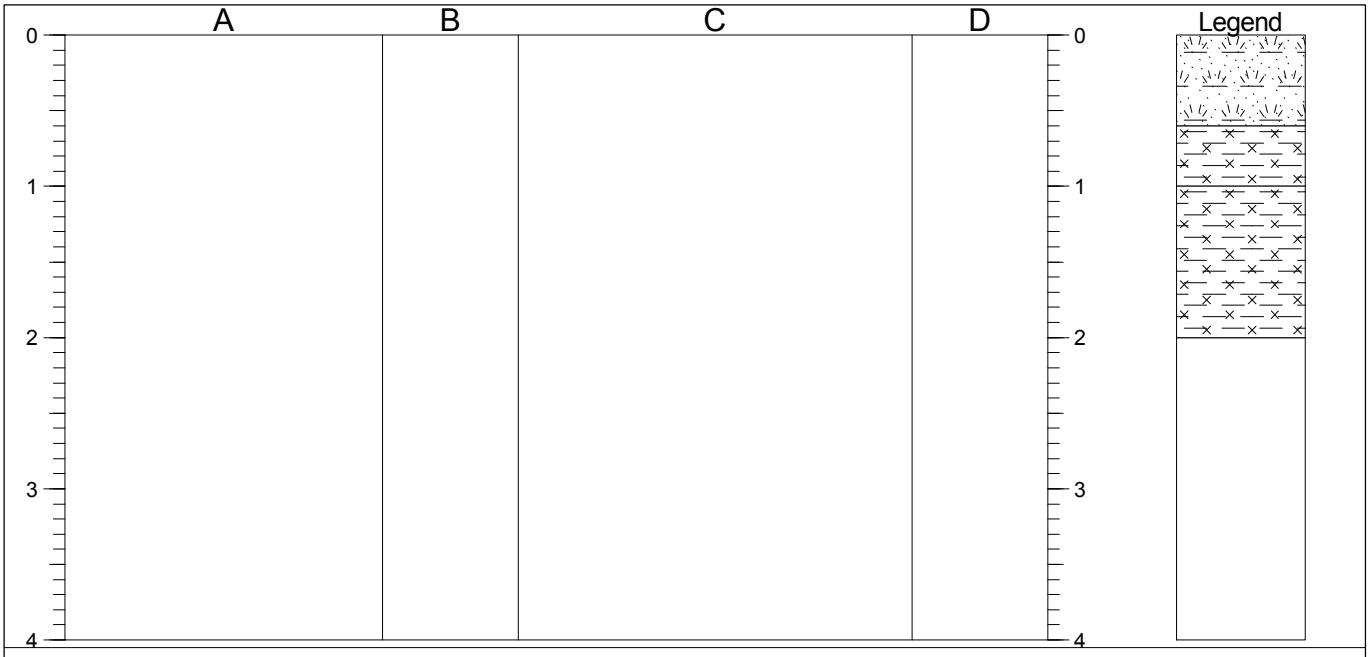
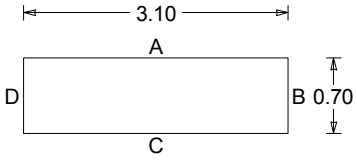
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP29**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.60		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.60-1.00		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of flint.	0.70	J	
1.00-2.00		Stiff bluish grey mottled yellowish brown silty CLAY with occasional shell fragments and gypsum crystals.	1.00	VANE	65

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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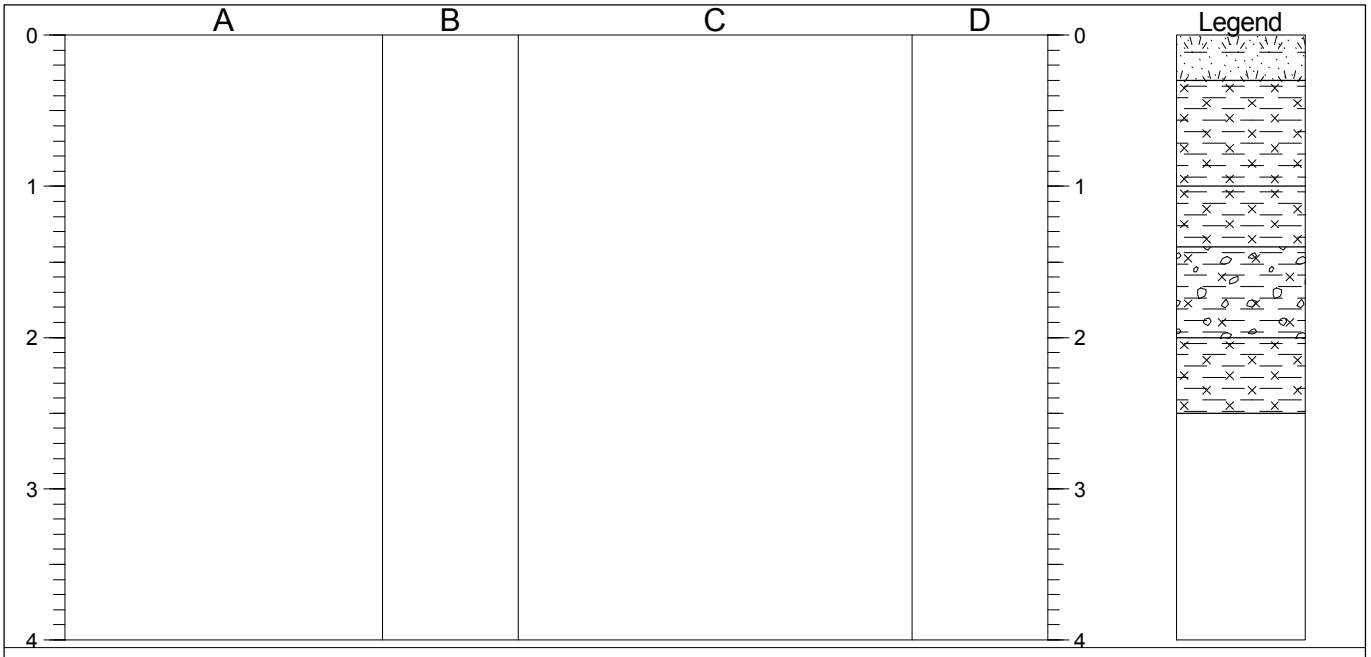
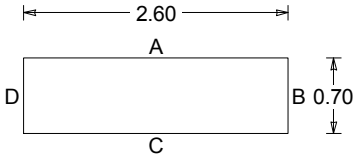
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP30**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	27-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.00		Firm brown silty CLAY with occasional rootlets.	0.50	VANE	90
1.00-1.40		Firm yellowish brown/ grey silty CLAY.	1.00 1.00	D VANE	 50
1.40-2.00		Firm grey/ dark brown silty very gravelly CLAY. Gravel is fine to coarse subangular of mixed lithologies.			
2.00-2.50		Firm bluish grey mottled brown silty CLAY with some mudstone lithorelic structures.			

Shoring/Support: None.
Stability: Stable.
Groundwater: Slight groundwater at base of pit (2.50m).



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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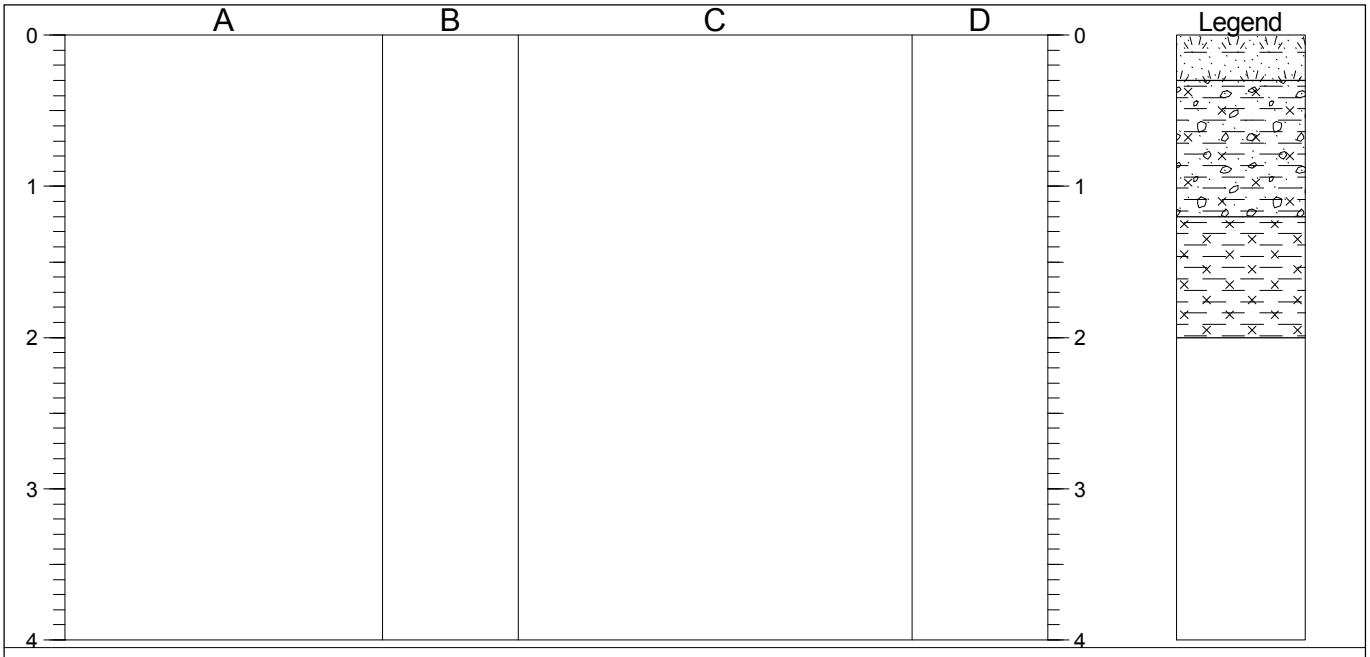
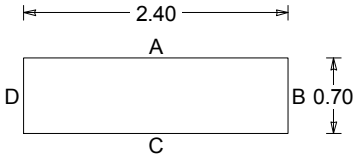
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP31**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown silty clay with frequent roots and rootlets.			
0.30-1.20		Soft to firm brown slightly sandy silty very gravelly CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies.	0.50	VANE	too granular
			1.00	VANE	too granular
1.20-2.00		Firm to stiff bluish grey mottled brown silty CLAY.			

Shoring/Support: None.
Stability: Slight collapse of gravelly clay stratum.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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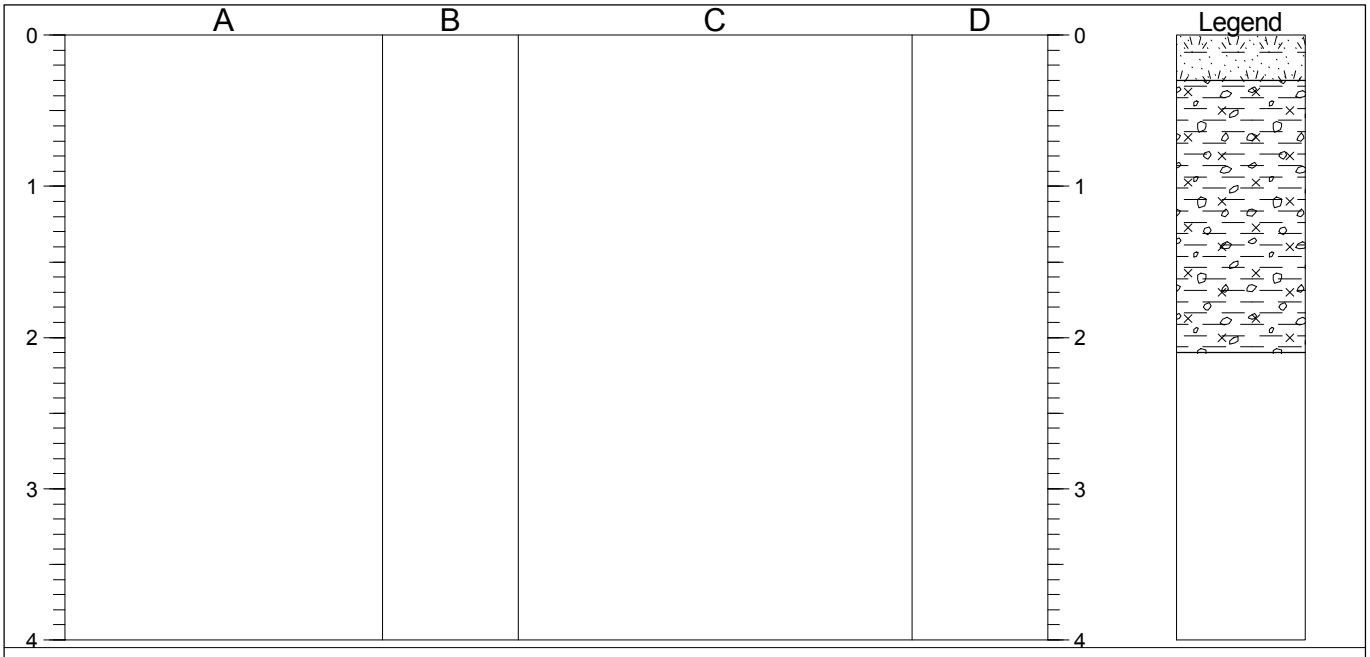
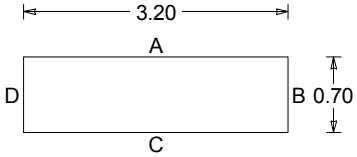
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP32
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-2.10		Firm to stiff grey mottled yellowish brown silty gravelly CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint. 0.60 - 0.90 ...bed of medium dense grey/ yellowish brown sandy silty very clayey fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint 1.10 ...occasional organics (rootlets) and gypsum crystals	0.50 0.60 1.00	VANE J VANE	too gravelly too gravelly

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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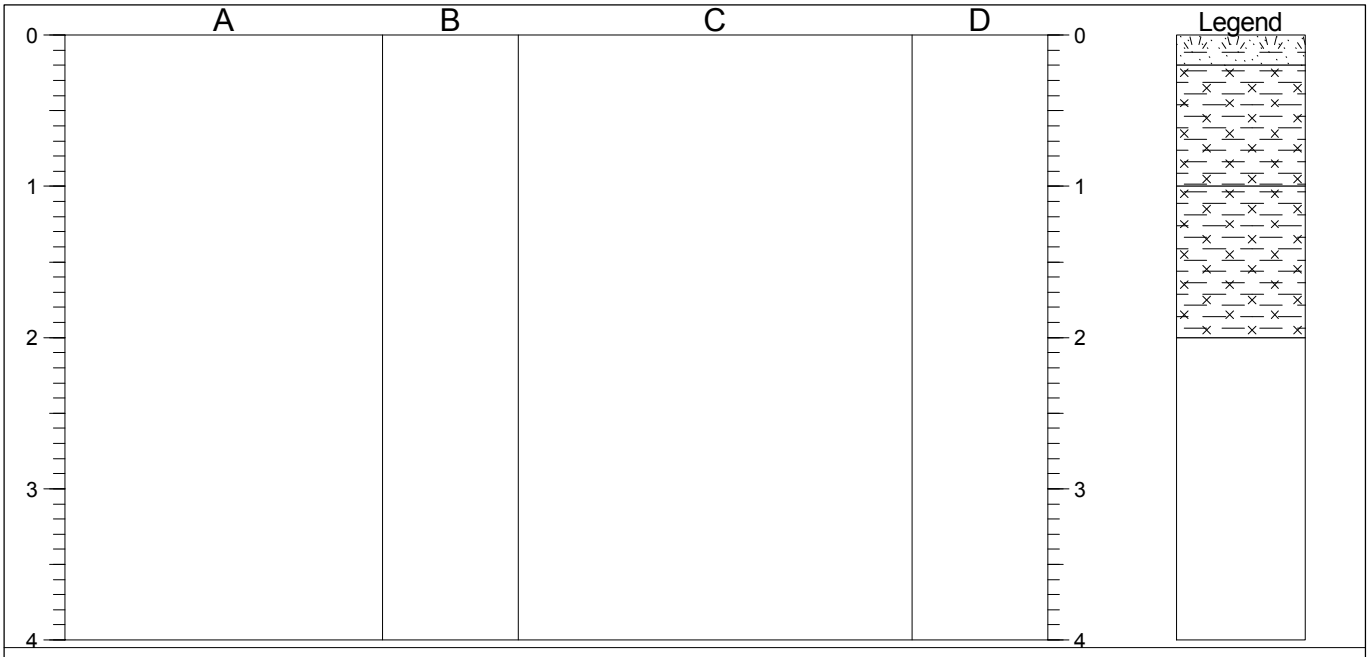
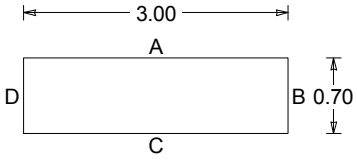
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP33**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-1.00		Firm to stiff grey/ yellowish brown silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50	VANE	55
1.00-2.00		Stiff bluish grey very silty CLAY with occasional shell fragments and gypsum crystals.	1.00	VANE	60
			1.50	D	

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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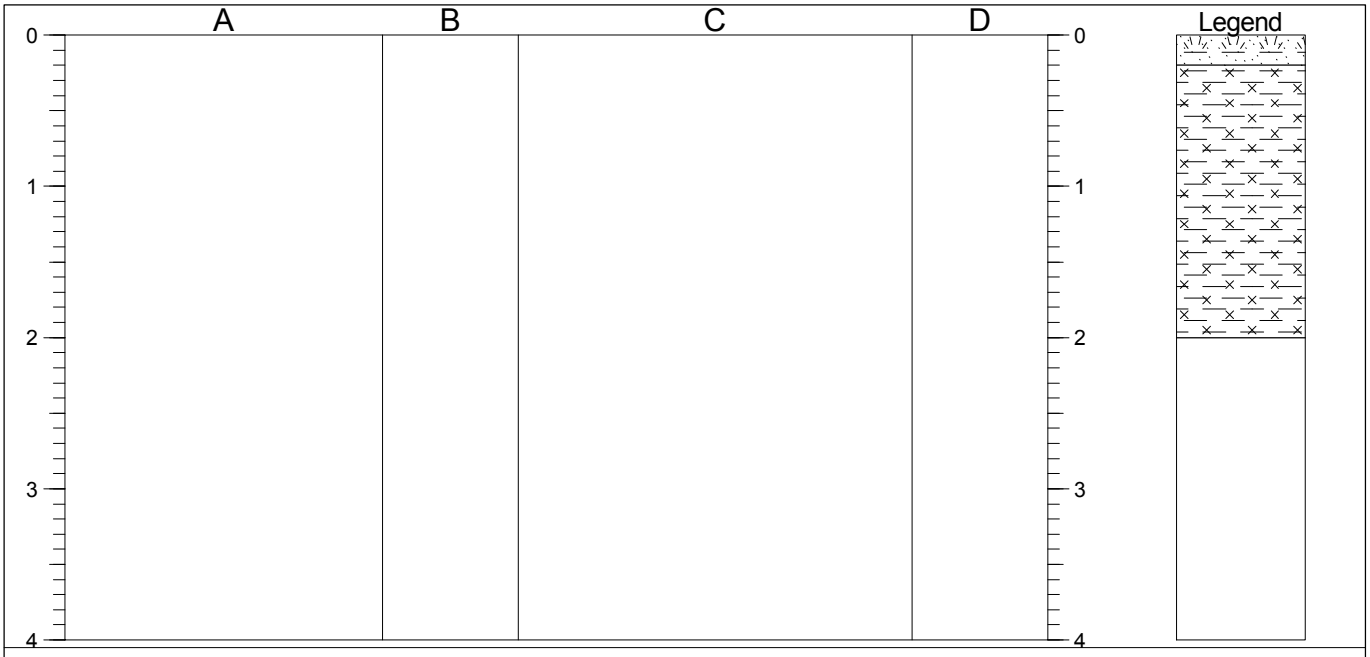
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP34**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1

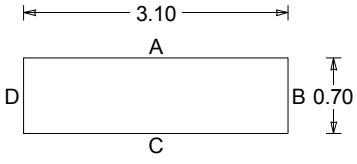


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-2.00		Stiff bluish grey mottled yellowish brown very silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies and roots.	0.30	J	
			0.50	VANE	80
			1.00	VANE	90
		1.20 ...with occasional shell fragments and gypsum crystals			
		1.60 ...very stiff			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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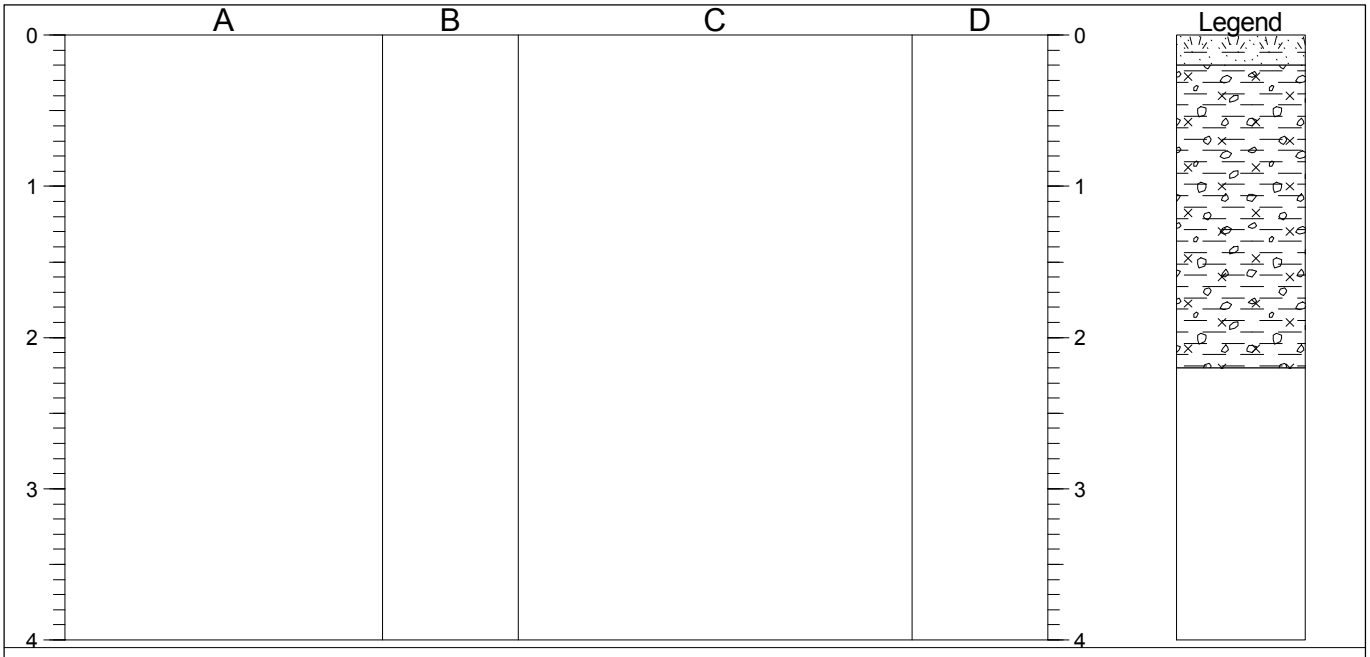
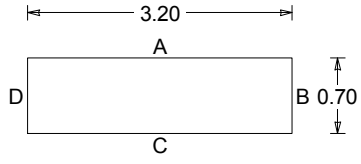
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP35**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-2.20		Firm to stiff grey/ yellowish brown gravelly silty CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint.	0.50	VANE	too granular
		0.80 ...grey mottled yellowish brown with frequent shell fragments and rare organics (rootlets)	1.00	VANE	70
			1.50	D	

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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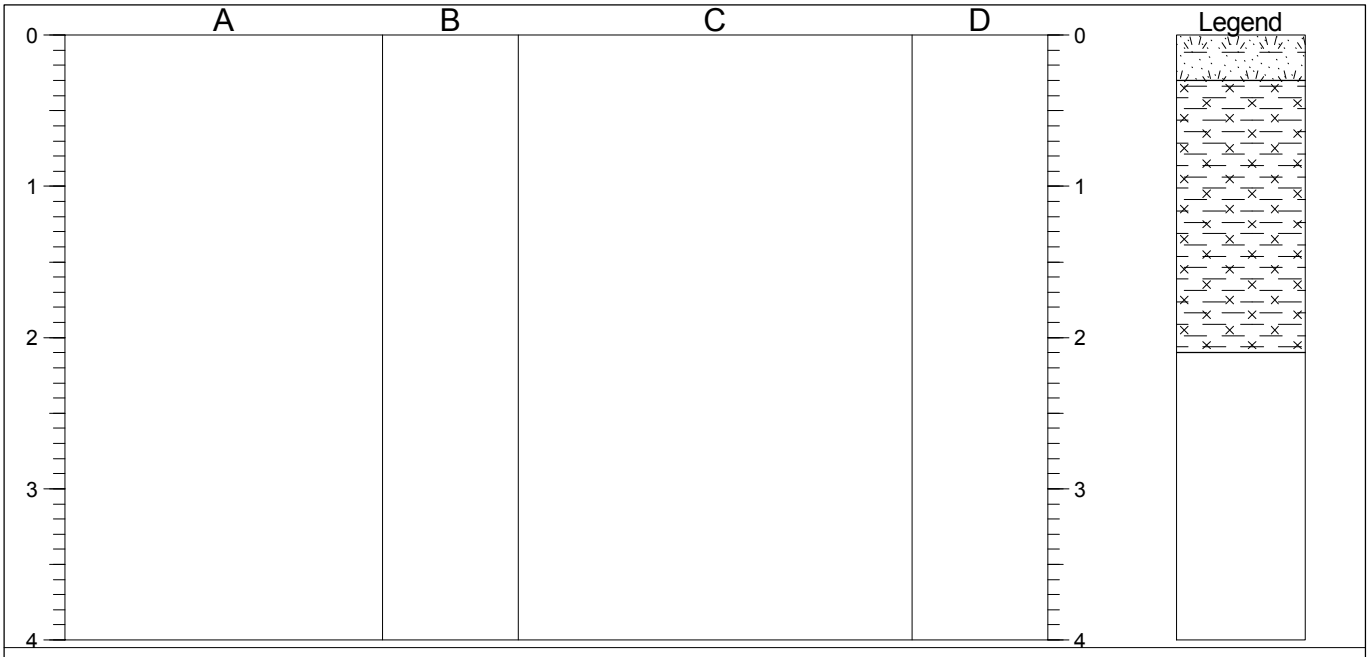
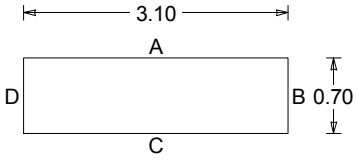
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP36**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-2.10		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to medium subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50	VANE	50
		1.00 ...shell fragments	1.00	VANE	70

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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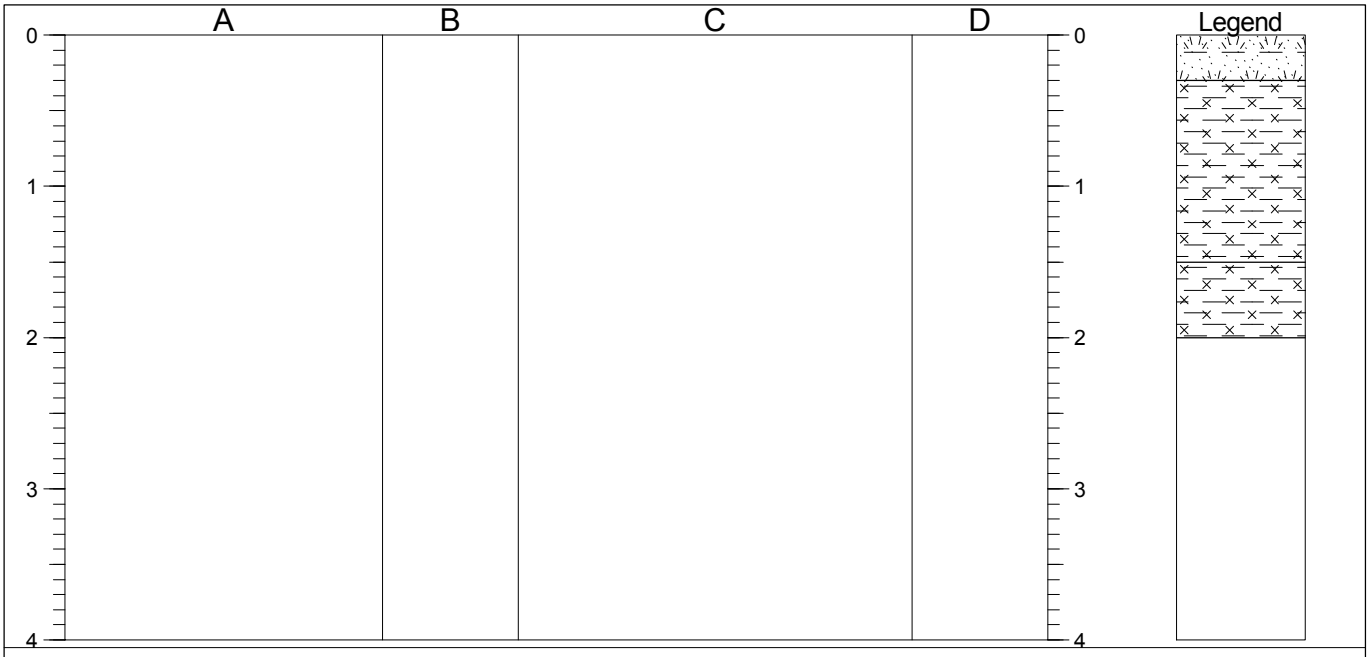
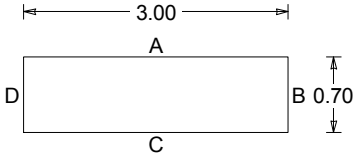
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP37
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.50		Firm to stiff grey mottled yellowish brown silty CLAY.	0.50	VANE	60
			1.00	VANE	60
1.50-2.00		Stiff dark blue silty CLAY. 1.70 ...frequent shell fragments			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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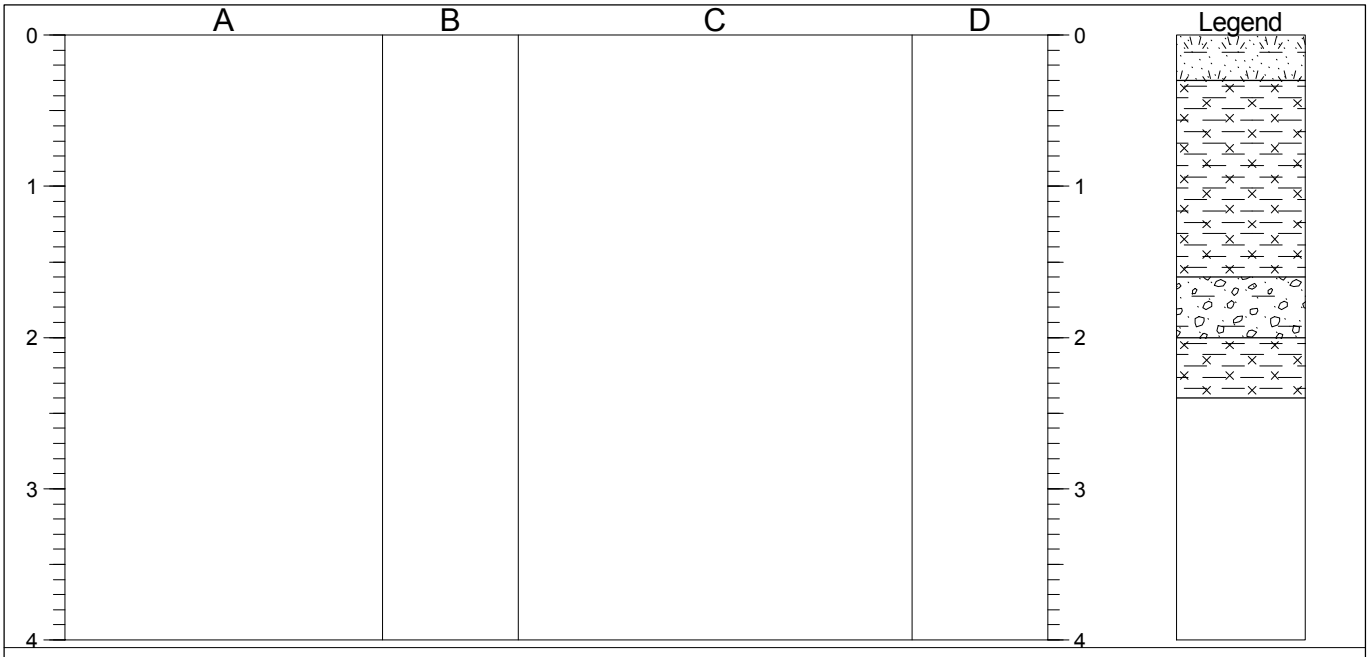
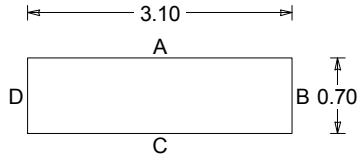
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP38**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.60		Firm to stiff yellowish brown/ grey silty CLAY with fine to medium subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50 0.50 1.00	J VANE VANE	 65 75
		1.30 ...gravelly			
1.60-2.00		(Medium dense) yellowish brown/ grey slightly sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint and mudstone.			
2.00-2.40		Stiff dark blue silty CLAY with occasional shell fragments.			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

Ruddlesden geotechnical ltd
The Stables, 65 Langaton Lane
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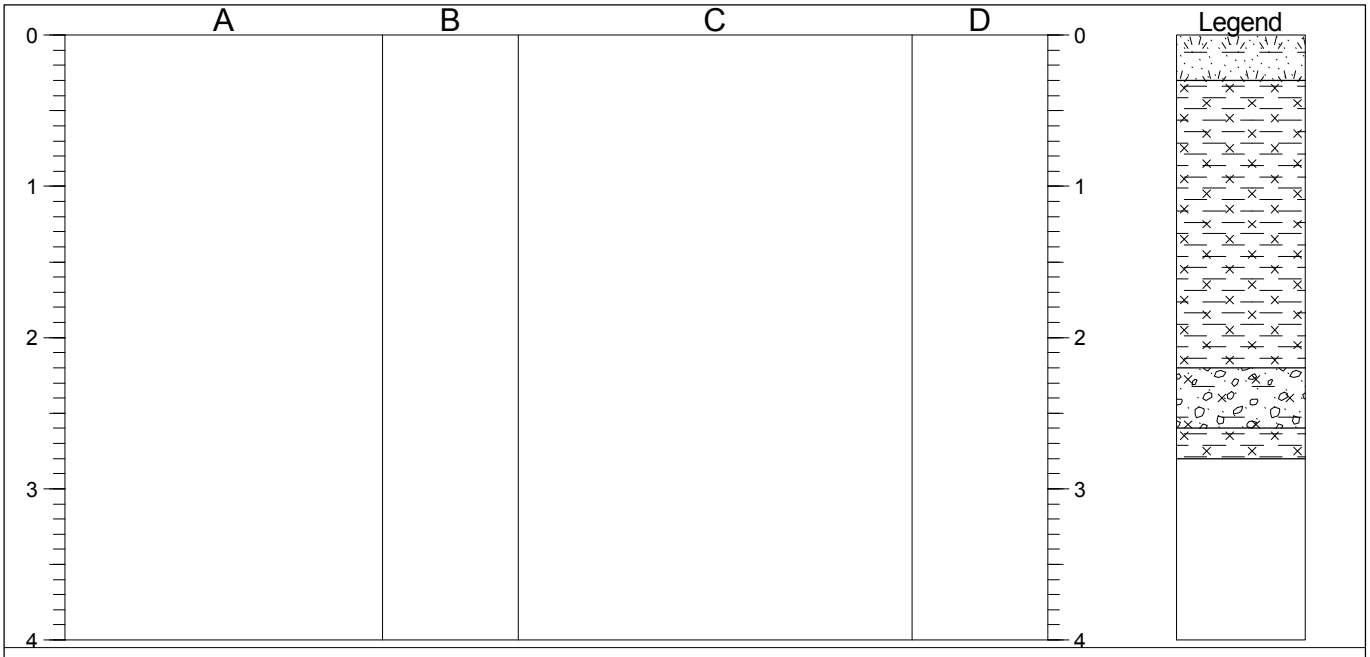
Telephone: 01392 678082

TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP39
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1

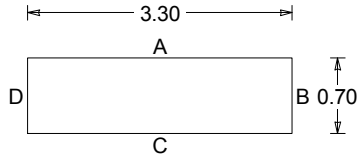


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.30-2.20		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of flint.	0.40 0.50 1.00	J VANE VANE	 80 90
2.20-2.60		(Medium dense) yellowish brown slightly sandy silty very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of flint (very moist).			
2.60-2.80		Stiff bluish grey silty CLAY.			

Shoring/Support: None.
Stability: Slight collapse in very gravelly bed.
Groundwater: Encountered at 2.20m constant flow.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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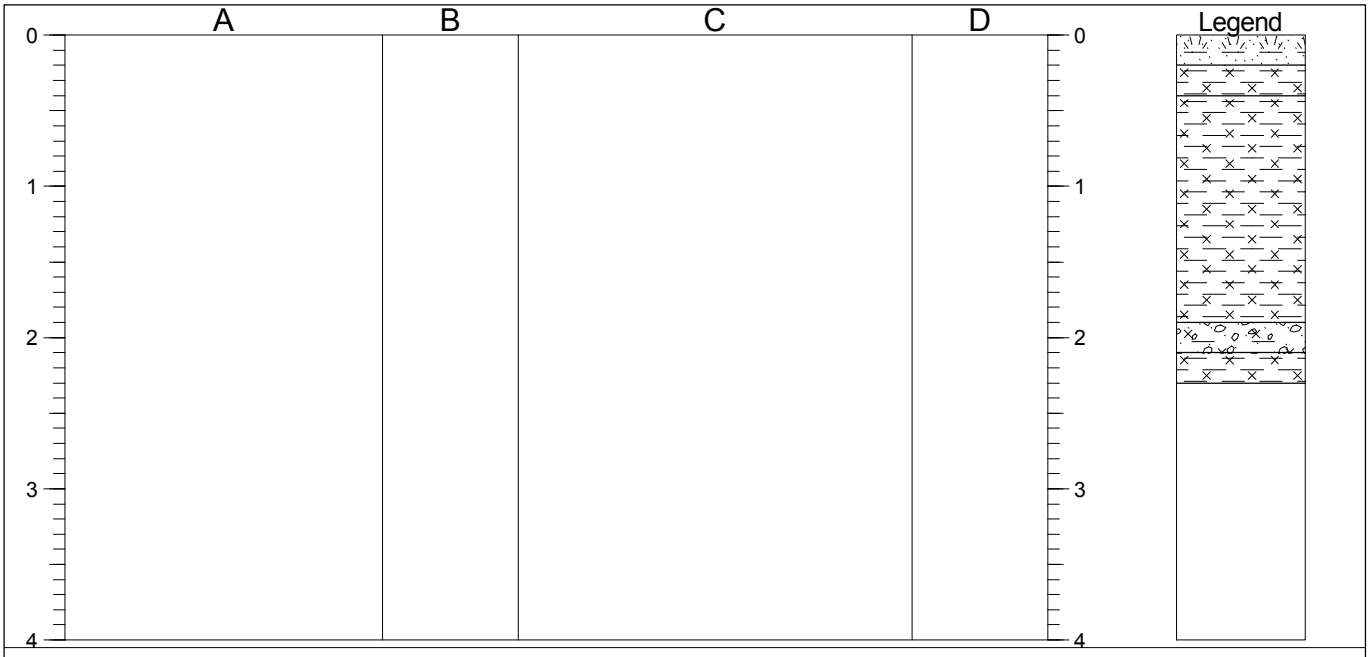
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP40**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1

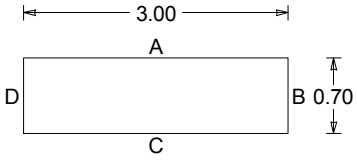


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-0.40		Firm brown silty CLAY with occasional roots and rootlets (subsoil).			
0.40-1.90		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of flint.	0.50	VANE	80
			1.00	VANE	80
1.90-2.10		(Medium dense) yellowish brown/ grey slightly sandy silty very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of flint.	1.80	B	
2.10-2.30		Stiff bluish grey silty CLAY.			

Shoring/Support: None.
Stability: Slight collapse in gravel.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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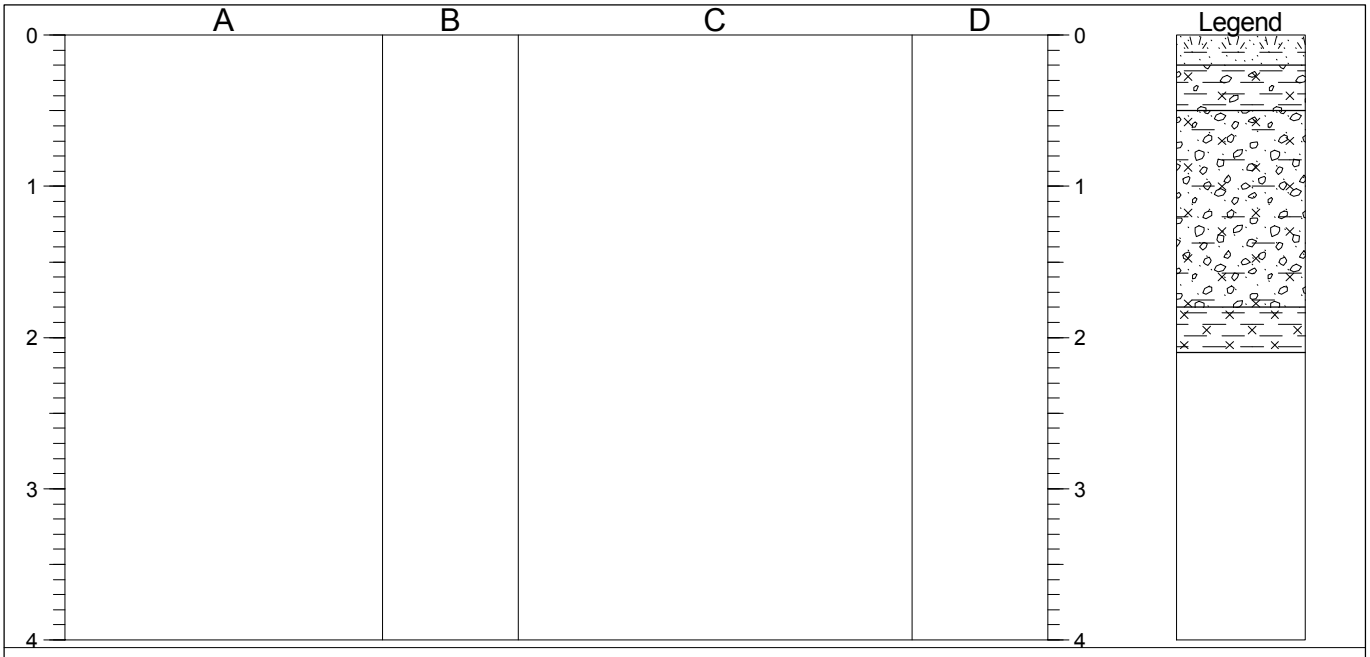
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP41
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1

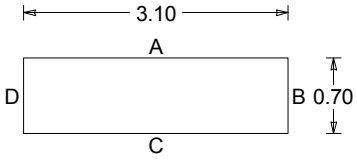


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-0.50		Firm to stiff yellowish brown/ grey silty gravelly CLAY.			
0.50-1.80		(Medium dense) yellowish brown/ grey slightly sandy silty very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint (moist).	0.50	VANE	85
			1.00	B	
			1.00	VANE	too granular
		1.50 ...bluish grey			
1.80-2.10		Stiff bluish grey very silty CLAY with frequent shell fragments and occasional organics (rootlets).			

Shoring/Support: None.
Stability: Slight collapse in gravel.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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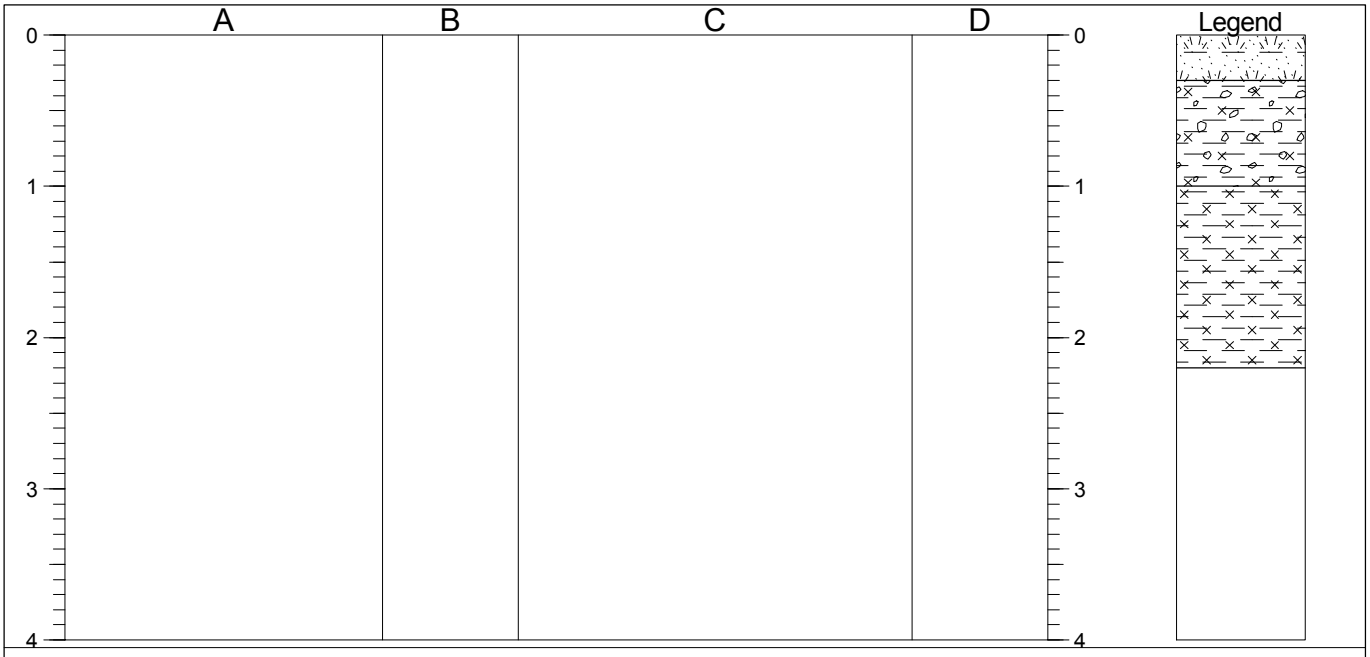
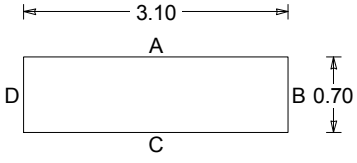
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP42**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.30-1.00		Firm yellowish brown/ grey gravelly silty CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies.	0.50	VANE	too gravelly
1.00-2.20		Firm bluish grey mottled brown silty CLAY. 1.70 ...with occasional shells and mudstone lithorelic structures	1.00	VANE	too gravelly

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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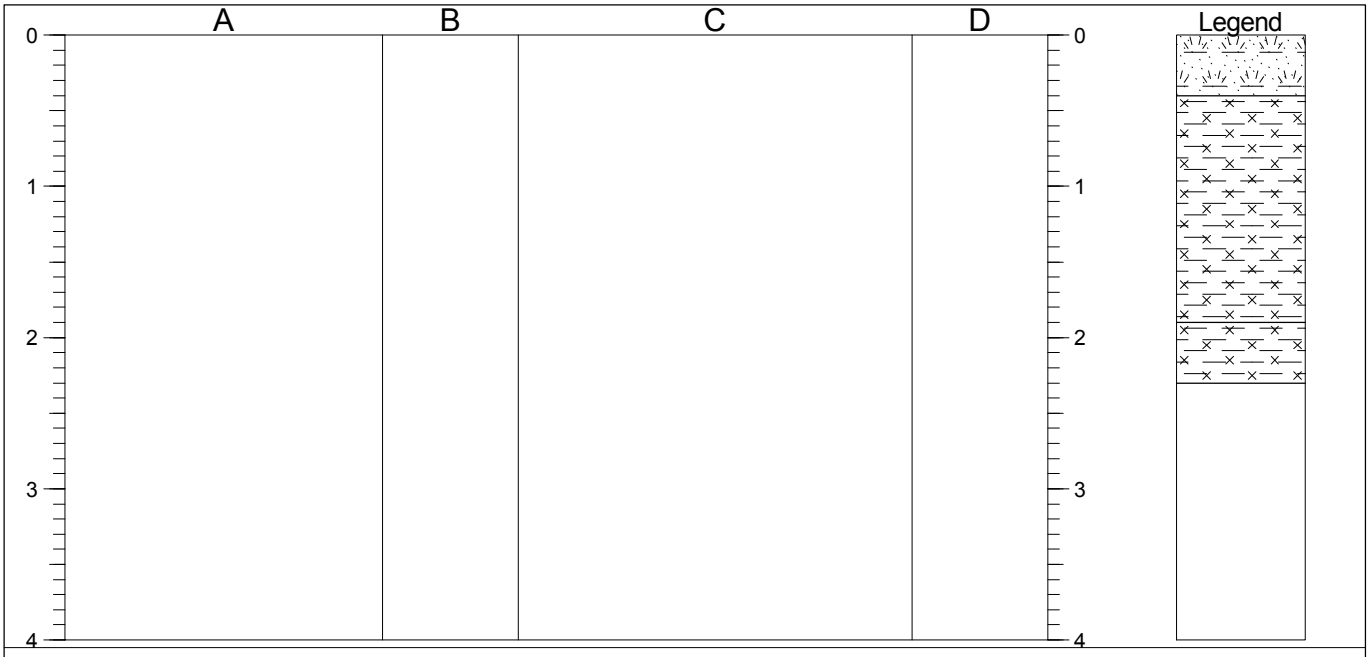
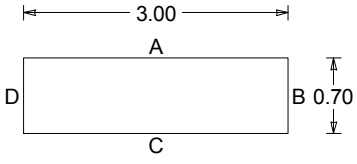
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP43**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	28-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		TOPSOIL: Brown silty clay with frequent roots and rootlets.			
0.40-1.90		Firm yellowish brown/ grey silty CLAY with occasional rootlets and rare gravel.	0.50	VANE	60
			0.70	J	
			1.00	VANE	80
1.90-2.30		Firm to stiff bluish grey mottled brown silty CLAY with frequent shells and mudstone lithorelic structures. 1.90 - 2.10 ...frequent cobbles and boulders of mudstone			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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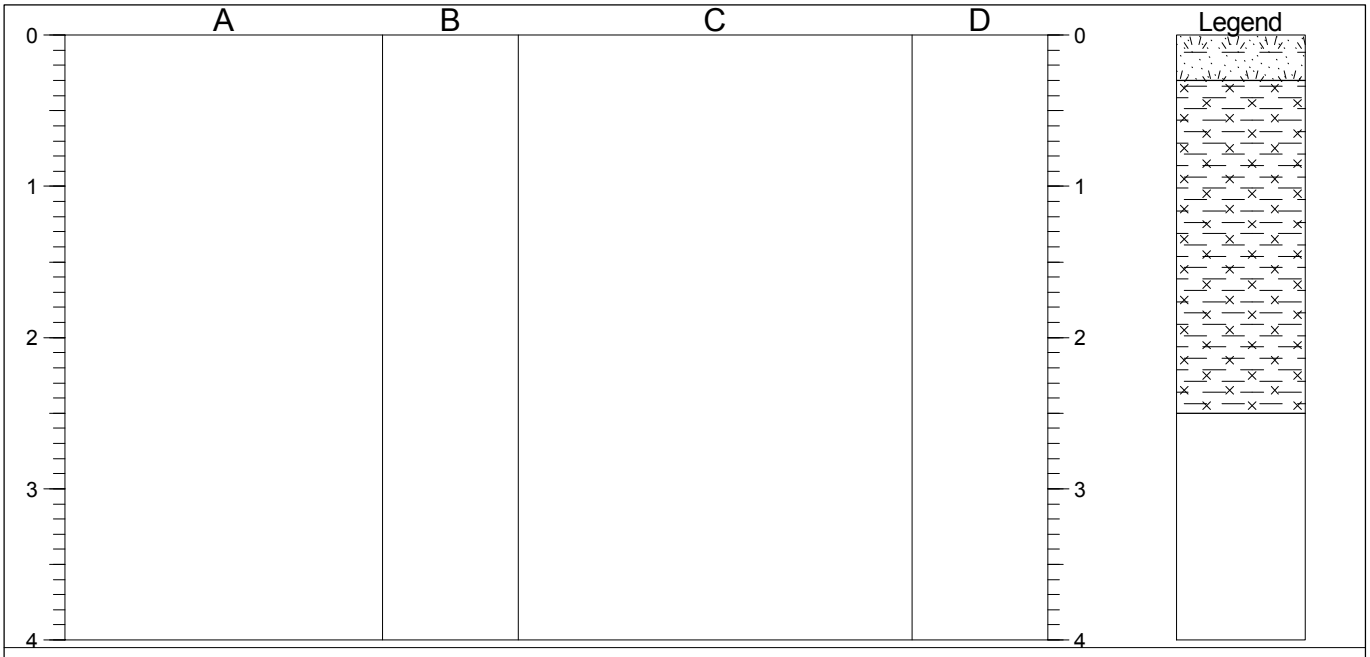
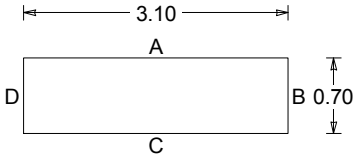
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP44**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-2.50		Firm to stiff grey mottled yellowish brown silty CLAY with rare fine to medium subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50	VANE	75
		1.10 ...frequent gypsum crystals	1.00	VANE	50
		1.60 ...stiff			
			2.00	D	

Shoring/Support: None.
Stability: Stable.
Groundwater: Slight seepage in base (2.50m).



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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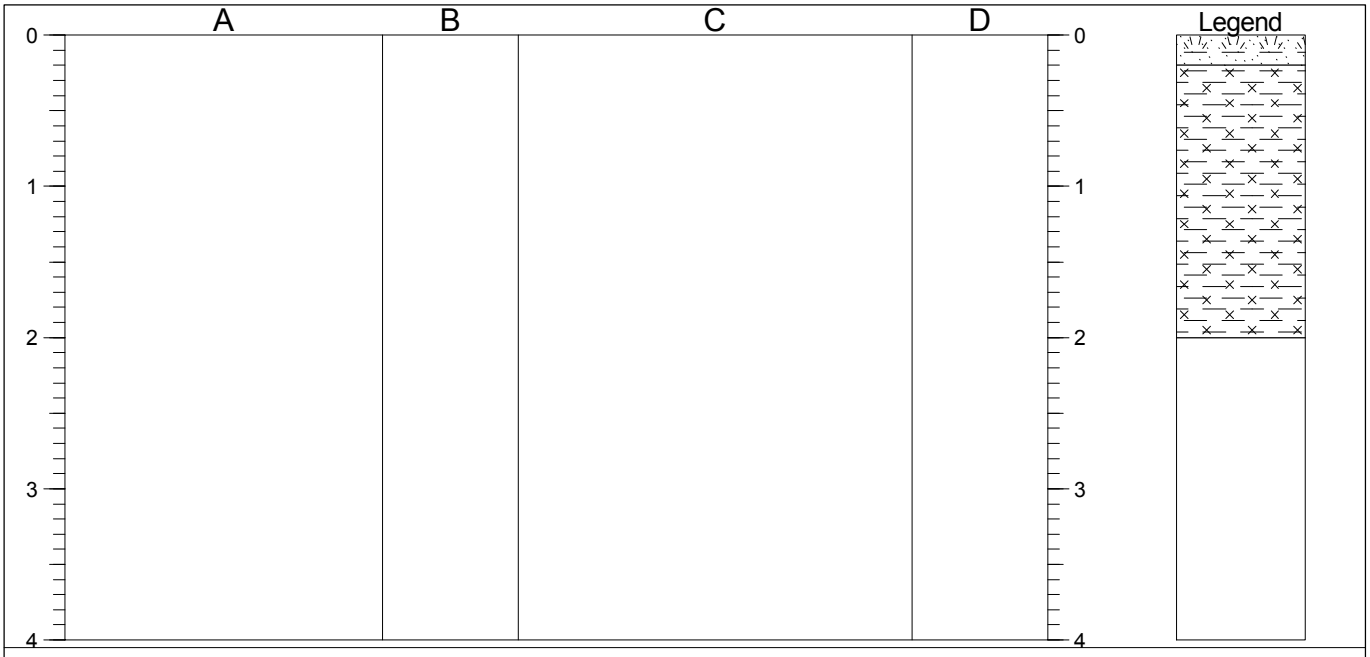
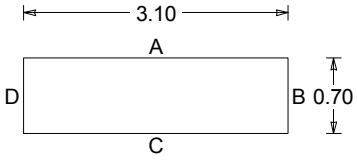
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP45**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-2.00		Firm to stiff grey mottled yellowish brown silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint.			
			0.50	VANE	70
		0.70 ...lense of gravel. Gravel is fine to coarse subrounded flint (~0.10m thick)			
			1.00	VANE	60
		1.60 ...occasionally sandy			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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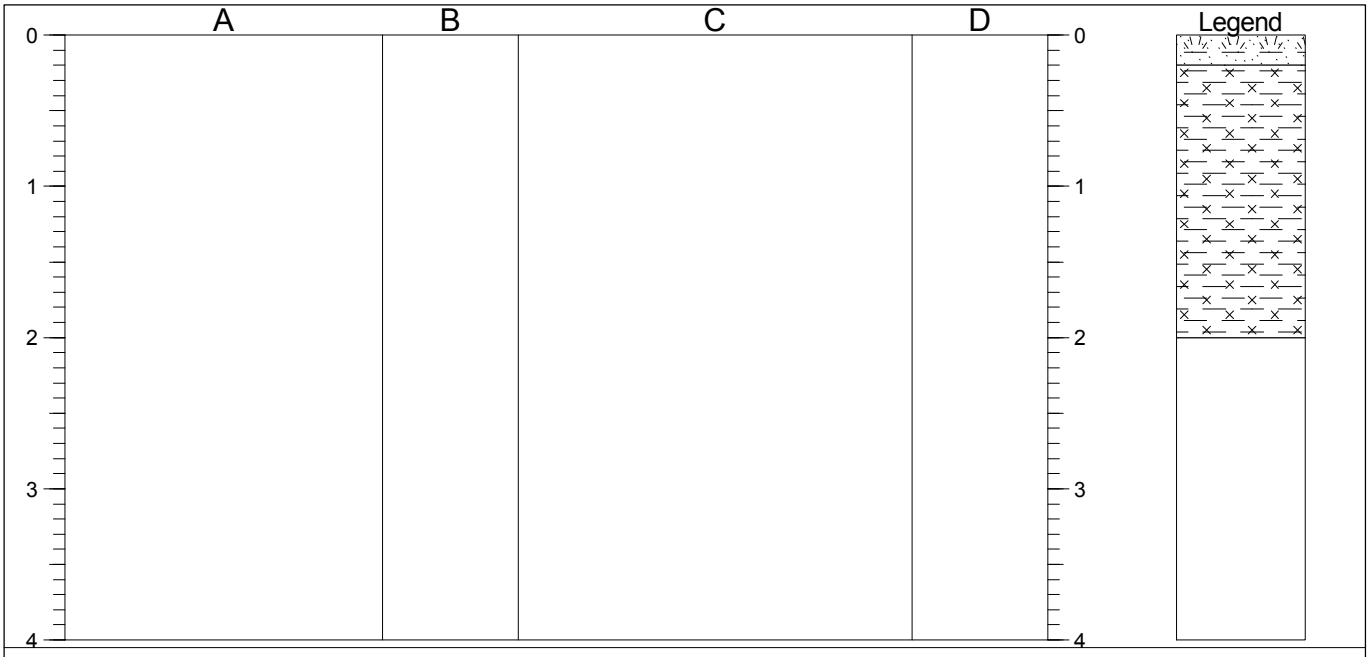
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP46**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1

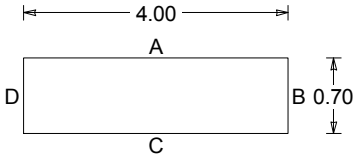


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-2.00		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint.			
			0.50	VANE	60
			0.75	J	
		1.00 ...with occasional organics (rootlets) and gypsum crystals	1.00	VANE	80

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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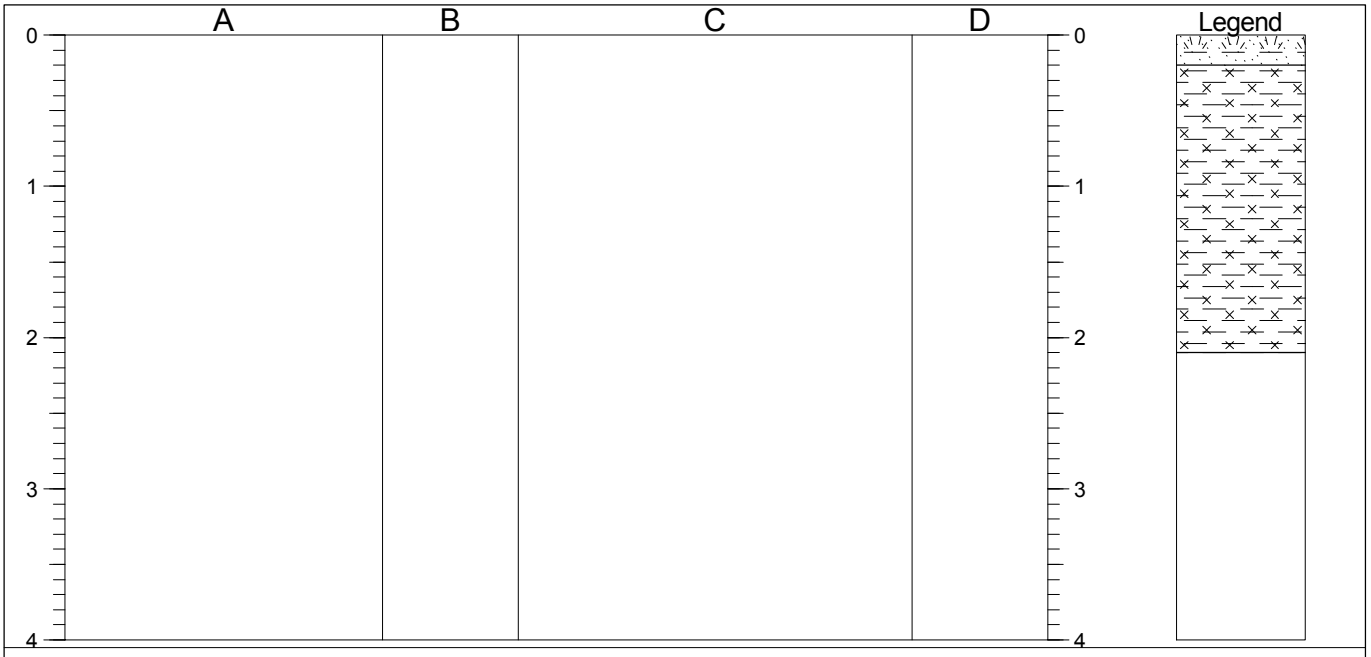
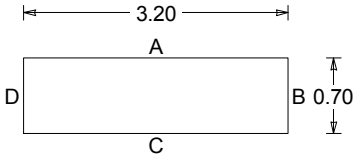
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP47**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-2.10		Firm yellowish brown/ grey silty CLAY with rare shell fragments.			
			0.50	VANE	55
		0.80 ...lenses of calcite gravel/ cobbles			
			1.00	VANE	70
		1.10 ...frequent shell fragments			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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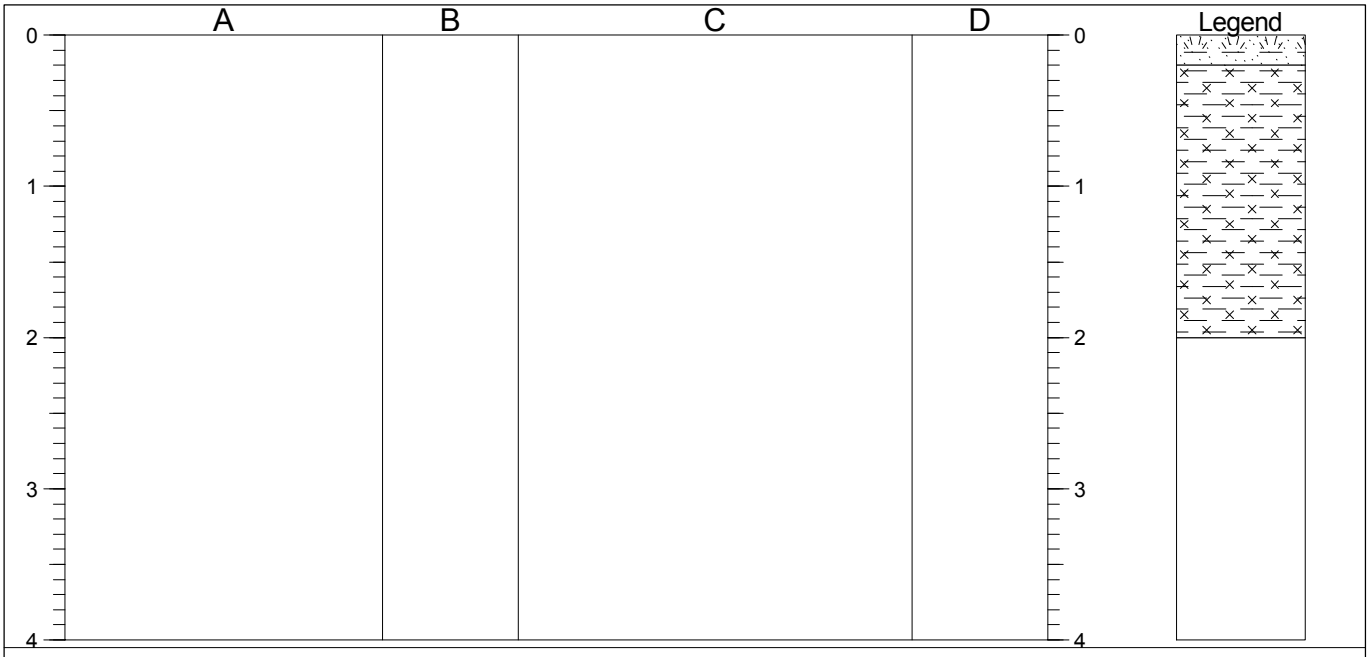
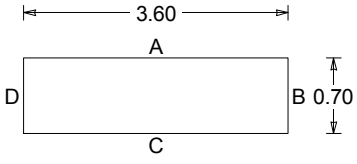
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP48**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-2.00		Firm to stiff yellowish brown/ grey silty CLAY.			
			0.50	VANE	60
			1.00	VANE	55
		1.60 ...grey with frequent shell fragments			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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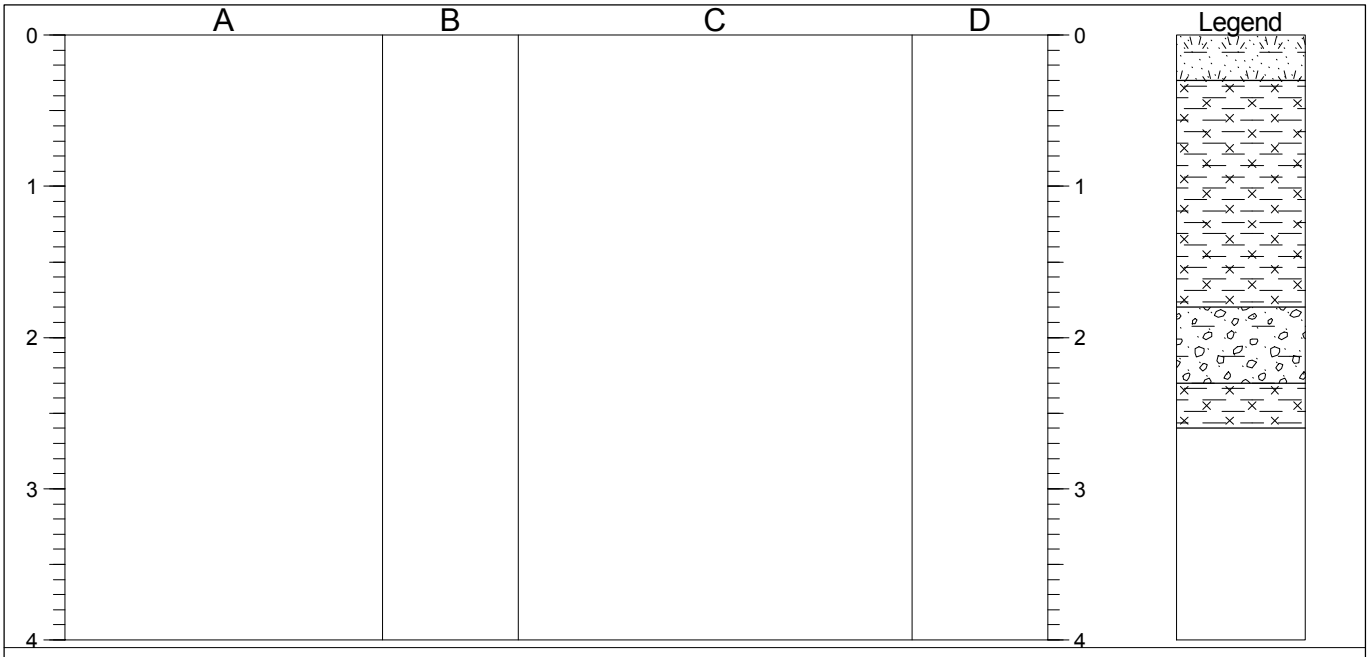
Telephone: 01392 678082

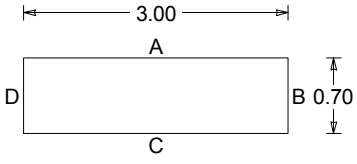
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP49
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.80		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50	VANE	70
			1.00	VANE	85
		1.20 ...rare lenses of black silty clay			
1.80-2.30		(Medium dense) yellowish brown/ grey slightly clayey sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of mixed lithologies, predominantly flint, mudstone and sandstone (moist).	2.00	B	
2.30-2.60		Stiff dark blue silty CLAY with rare shell fragments. 2.40 ...occasional mudstone lithorelic structures			

Shoring/Support: None.
Stability: Slight collapse.
Groundwater: Slight seepage in base (2.60m).



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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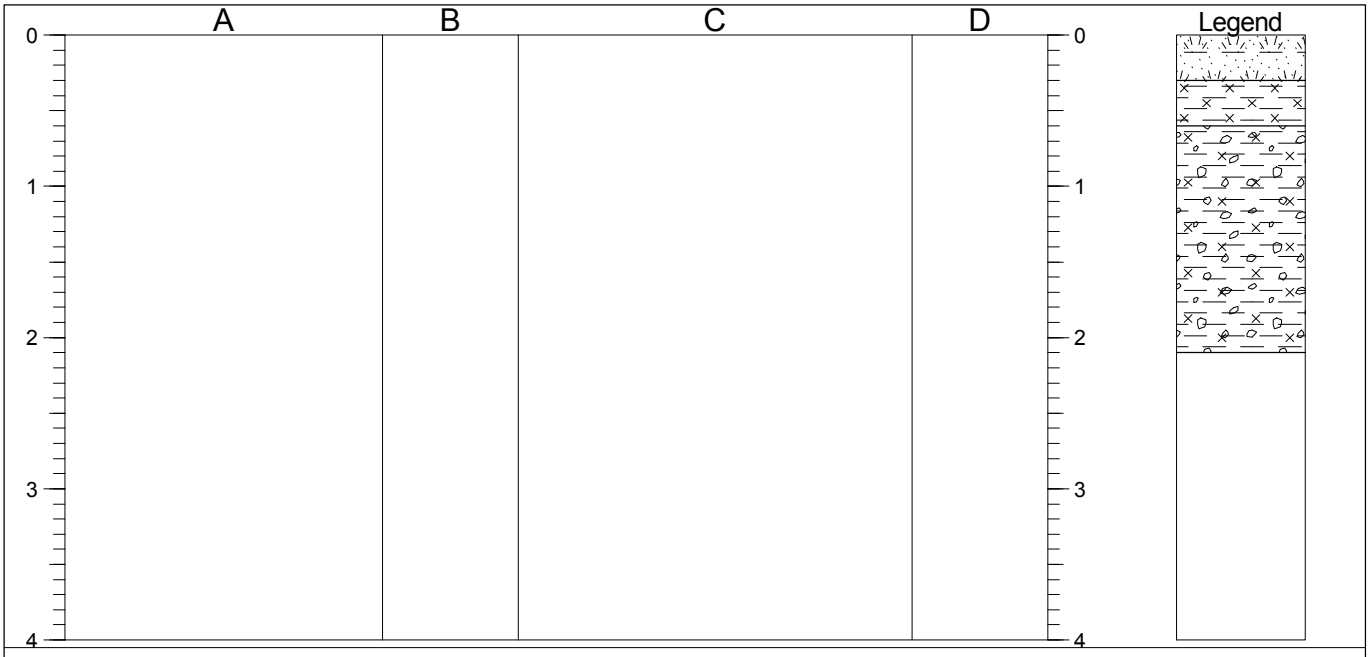
Telephone: 01392 678082

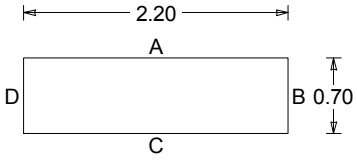
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP50**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-0.60		Firm brown silty CLAY (subsoil).			
0.60-2.10		Firm to stiff yellowish brown/ grey silty gravelly CLAY. Gravel is fine to coarse subangular to subrounded flint.			
		1.20 - 1.80 ...bed of slightly sandy silty very gravelly clay. Gravel is fine to coarse subangular to subrounded flint	1.00 1.00	D VANE	80
		1.80 ...stiff			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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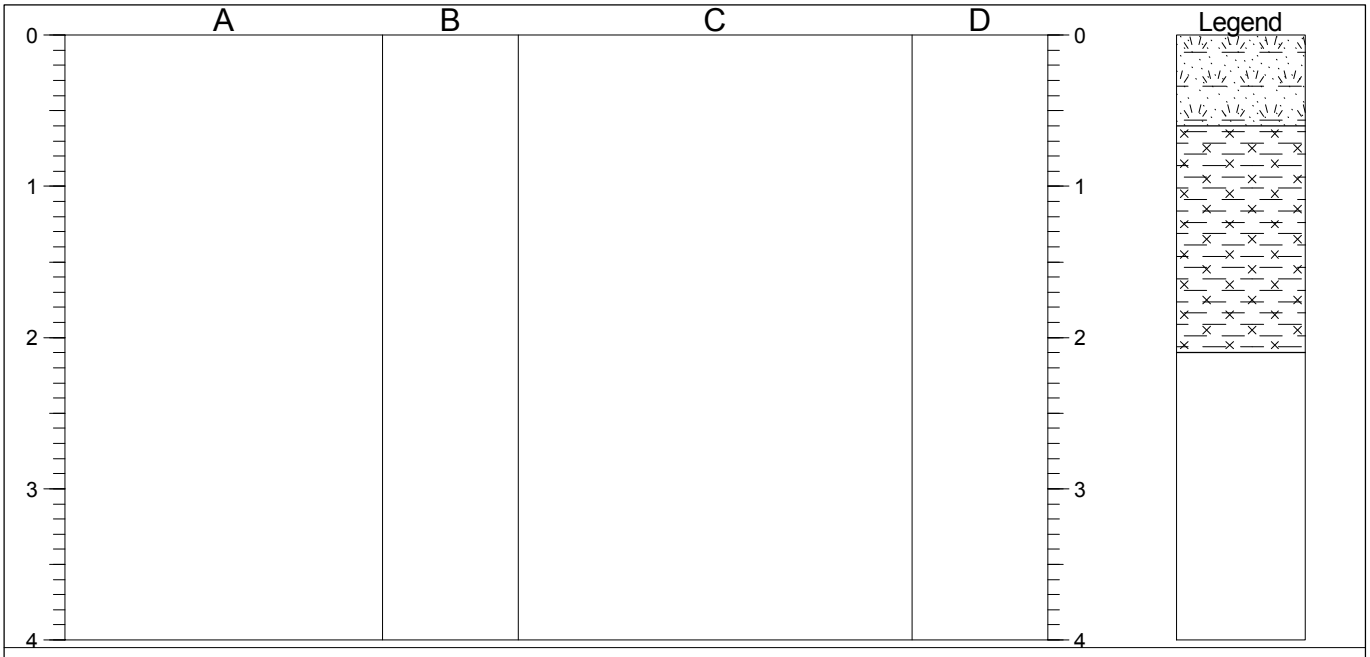
Telephone: 01392 678082

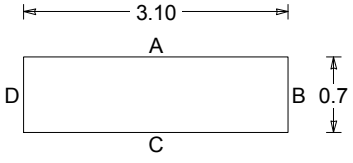
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP51**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.60		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets and occasional cobbles/ boulders.			
0.60-2.10		Firm to stiff grey/ yellowish brown silty CLAY.	1.00	VANE	80
		1.80 ...slightly sandy silty gravelly clay. Gravel is fine to coarse subangular to subrounded flint			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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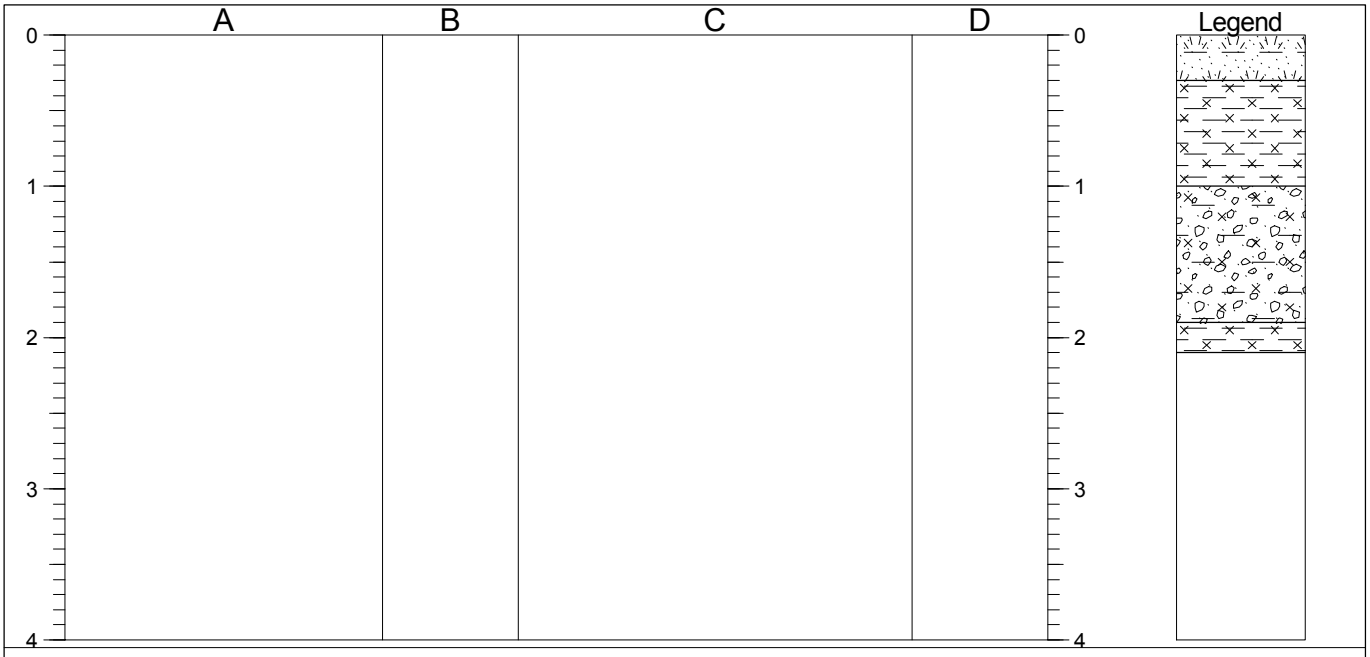
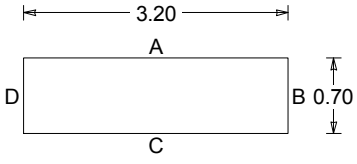
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP52**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.00		Stiff yellowish brown/ grey very silty CLAY with rare shell fragments and fine to coarse subangular to subrounded gravel of flint.	0.30 0.50	J VANE	 100
1.00-1.90		(Medium dense) yellow brown/ grey slightly sandy silty very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of flint (moist).	1.00	VANE	90
1.90-2.10		Stiff bluish grey very silty CLAY with rare shell fragments and fine to medium subangular to subrounded gravel of flint.			

Shoring/Support: None.
Stability: Slight collapse of gravel.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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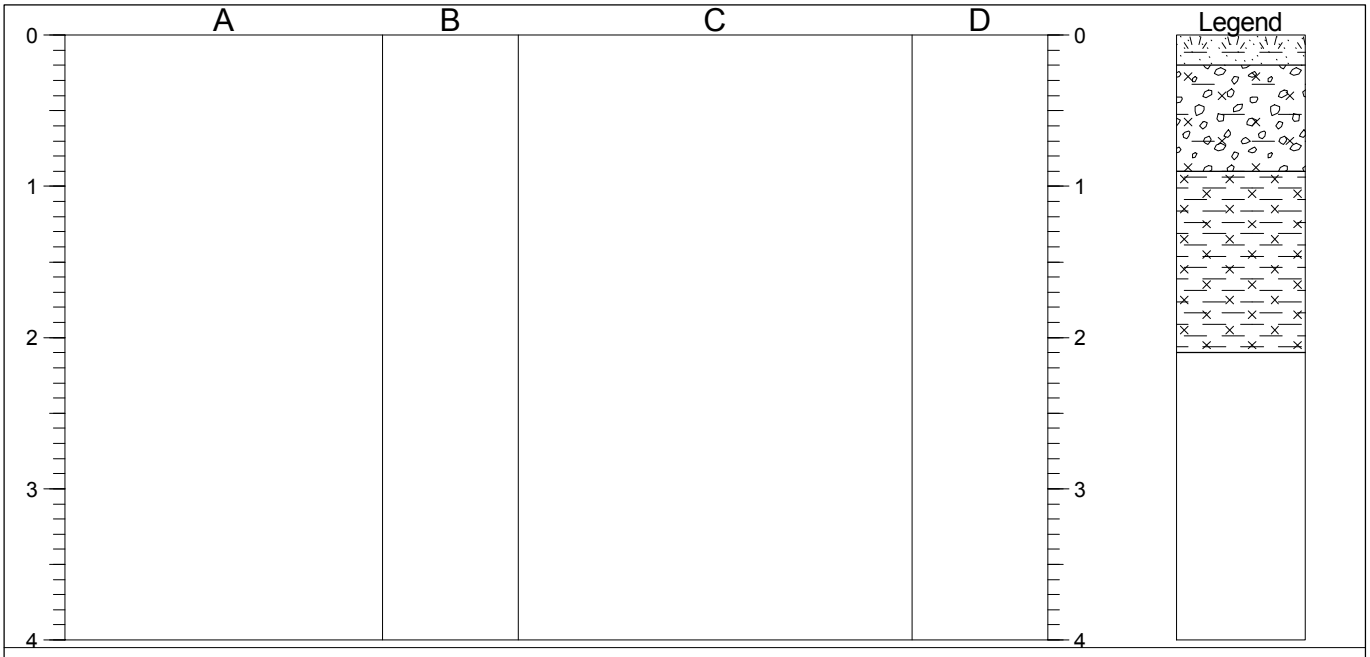
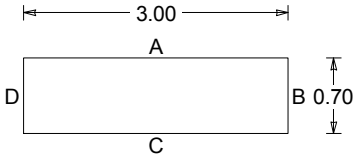
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP53
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.20-0.90		(Medium dense) yellowish brown/ grey silty very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded flint.	0.50	VANE	too granular
0.90-2.10		Firm to stiff bluish grey mottled yellowish brown silty CLAY with rare fine to medium subangular to subrounded gravel of flint.	1.00	VANE	too granular
			1.50	D	

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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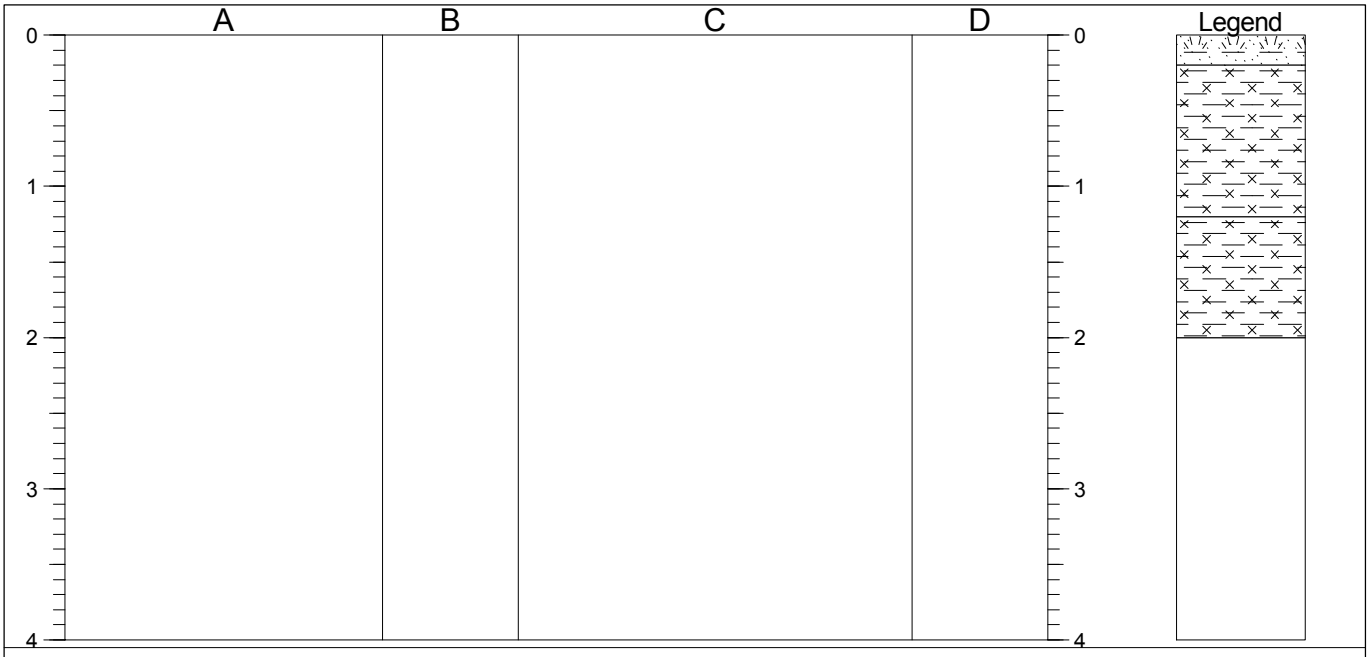
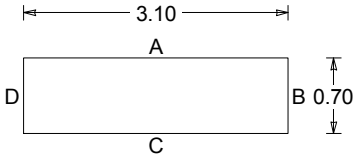
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP54**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-1.20		Stiff yellowish brown/ grey silty CLAY with rare black carbonaceous material.	0.30	J	
			0.50	VANE	90
			1.00	VANE	80
1.20-2.00		Stiff bluish grey mottled yellowish brown very silty CLAY with occasional shell fragments. 1.20 - 1.40 ...gravelly (moist)			

Shoring/Support: None.
Stability: Stable.
Groundwater: Slight groundwater at base (2.00m).



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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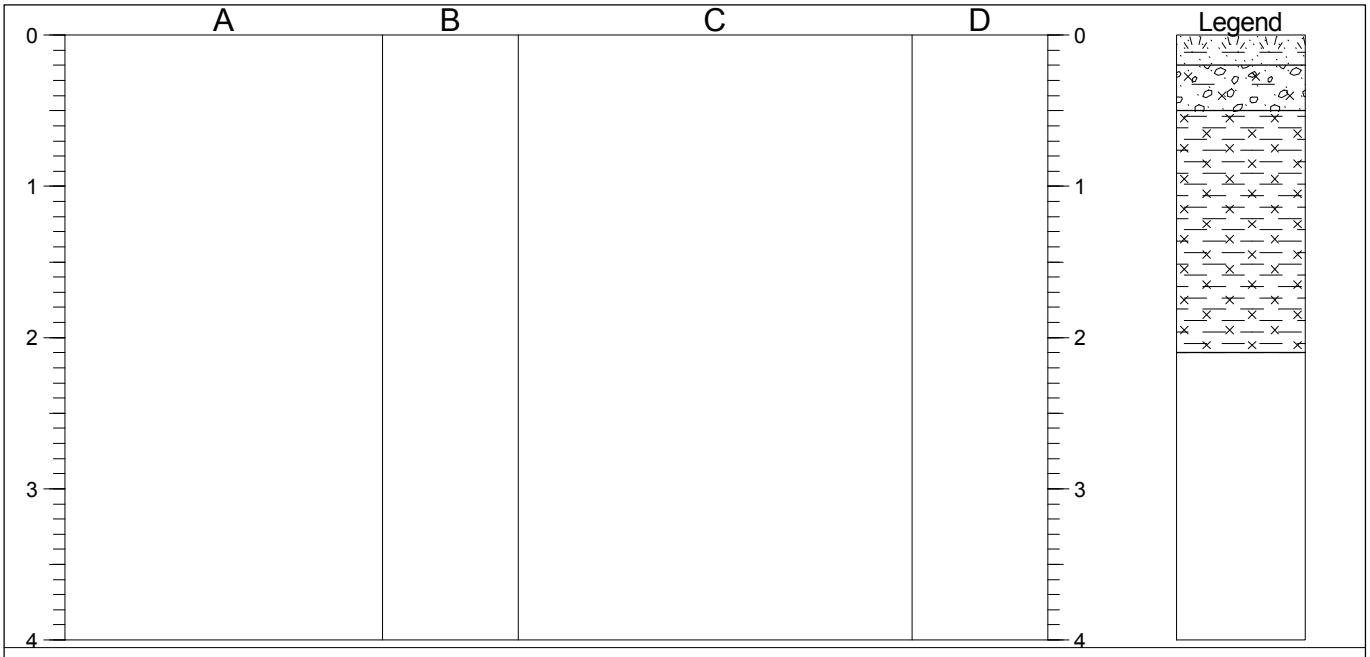
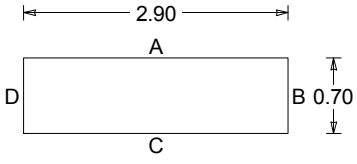
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP55**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.20-0.50		(Medium dense) yellowish brown/ grey slightly sandy silty very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded mixed lithologies predominantly flint.			
0.50-2.10		Firm to stiff bluish grey mottled yellowish brown very silty CLAY with occasional shell fragments and fine to coarse subangular to subrounded gravel of flint.	0.50	VANE	too granular
			1.00	VANE	65
		1.20 ...land drain			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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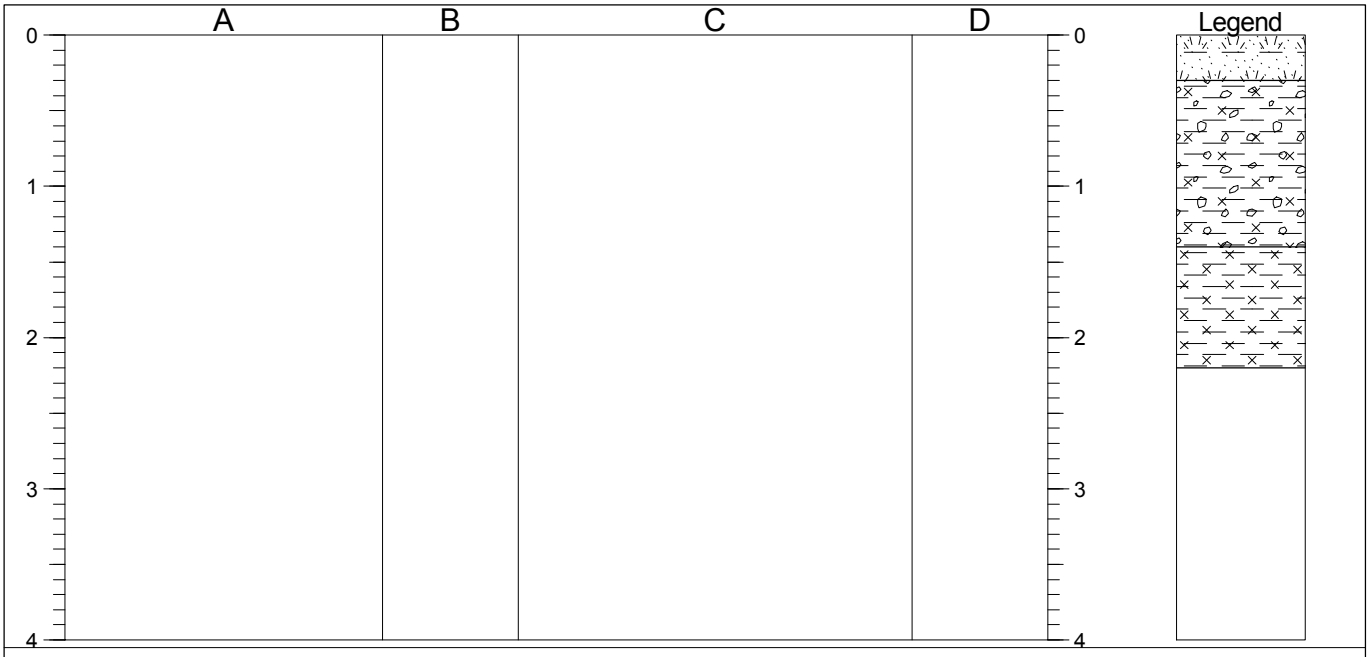
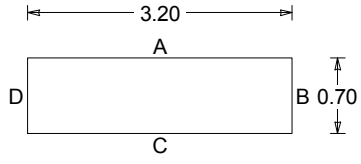
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP56**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-1.40		Firm to stiff grey mottled yellowish brown silty gravelly CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint. 0.50 - 0.80 ...bed of grey/ yellowish brown sandy silty very clayey gravel (moist)	1.00	VANE	100
1.40-2.20		Stiff very dark bluish grey mottled yellowish brown silty CLAY with frequent organics (rootlets) and frequent gypsum crystals (2mm to 60mm).	1.50	D	

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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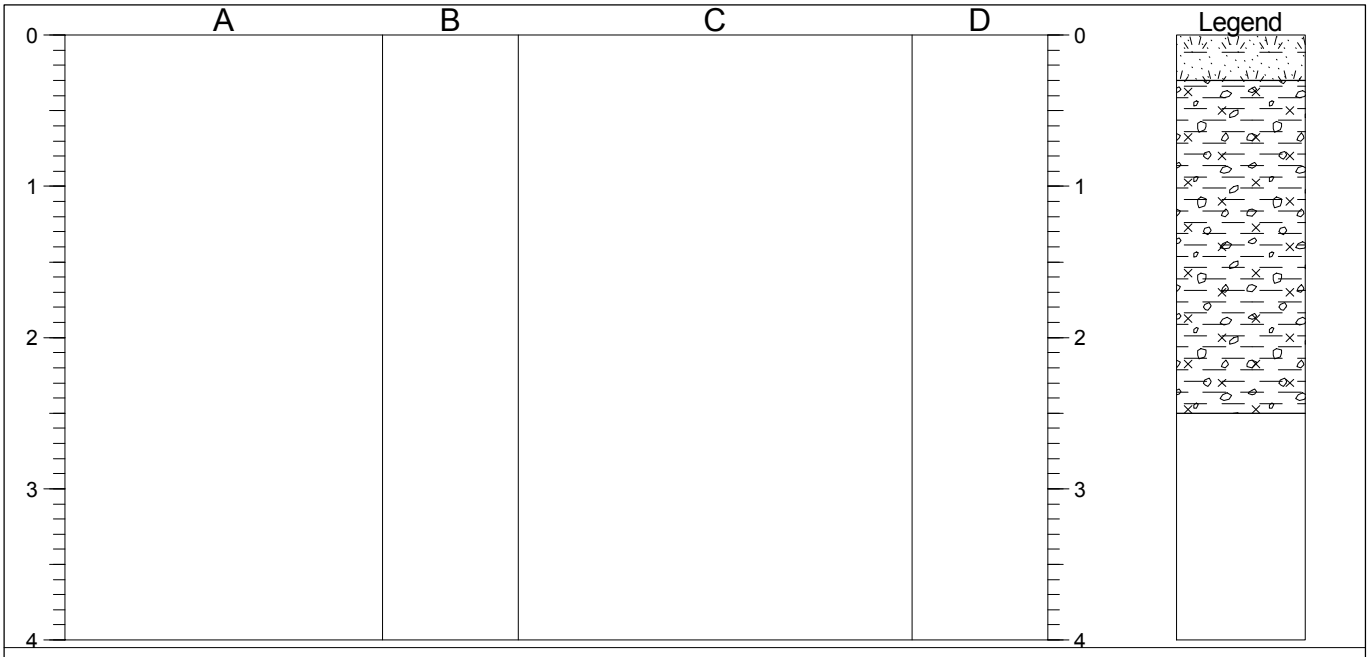
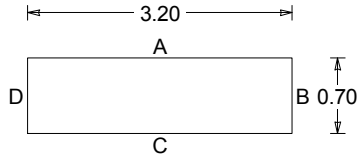
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				TP57
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-2.50		Firm to stiff grey/ yellowish brown gravelly silty CLAY. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint and mudstone.	0.50	VANE	70
		0.50 - 0.70 ...bed of sandy silty very clayey gravel. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint and mudstone	1.00	VANE	70
		1.90 ...with occasional organics (rootlets) and rare gypsum crystals			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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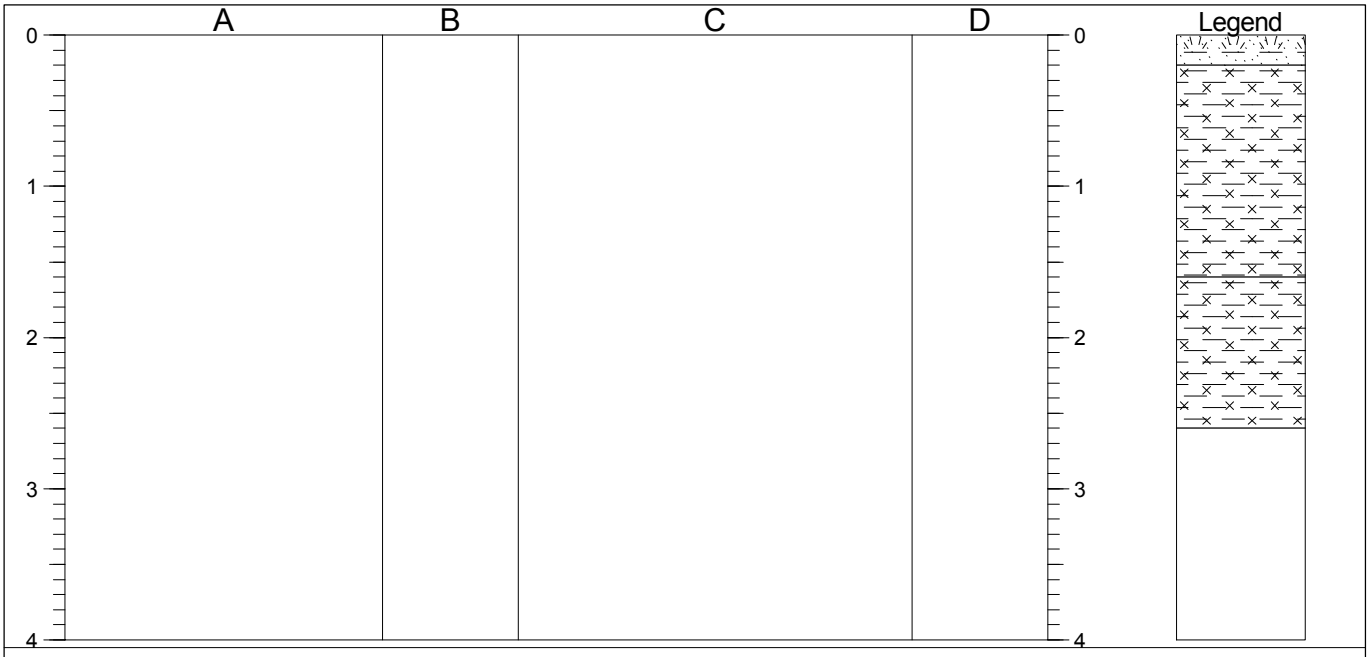
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP58**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1

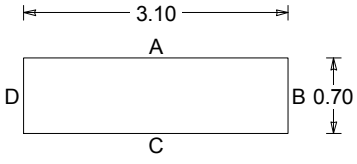


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.20-1.60		Firm to stiff yellowish brown/ grey silty CLAY.	0.30	J	
		0.50 ...land drain	0.50	VANE	55
			1.00	D	
			1.00	VANE	65
1.60-2.60		Stiff dark blue silty CLAY with occasional shell fragments. ...occasional mudstone lithorelic structures			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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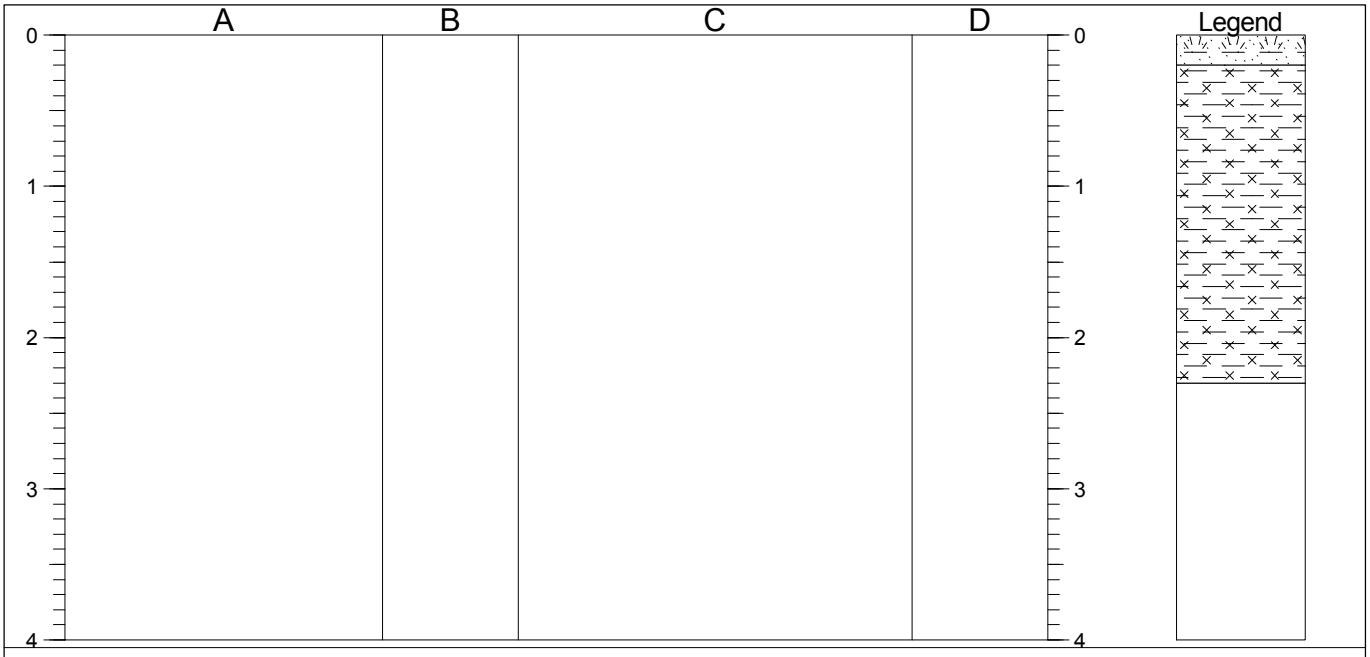
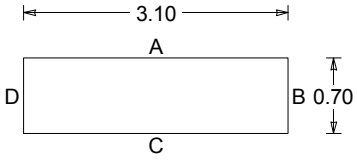
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP59**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	09-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.20-2.30		Firm yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50	VANE	50
			1.00	VANE	65
		1.60 ...grey with frequent shell fragments and occasional lithorelic structures			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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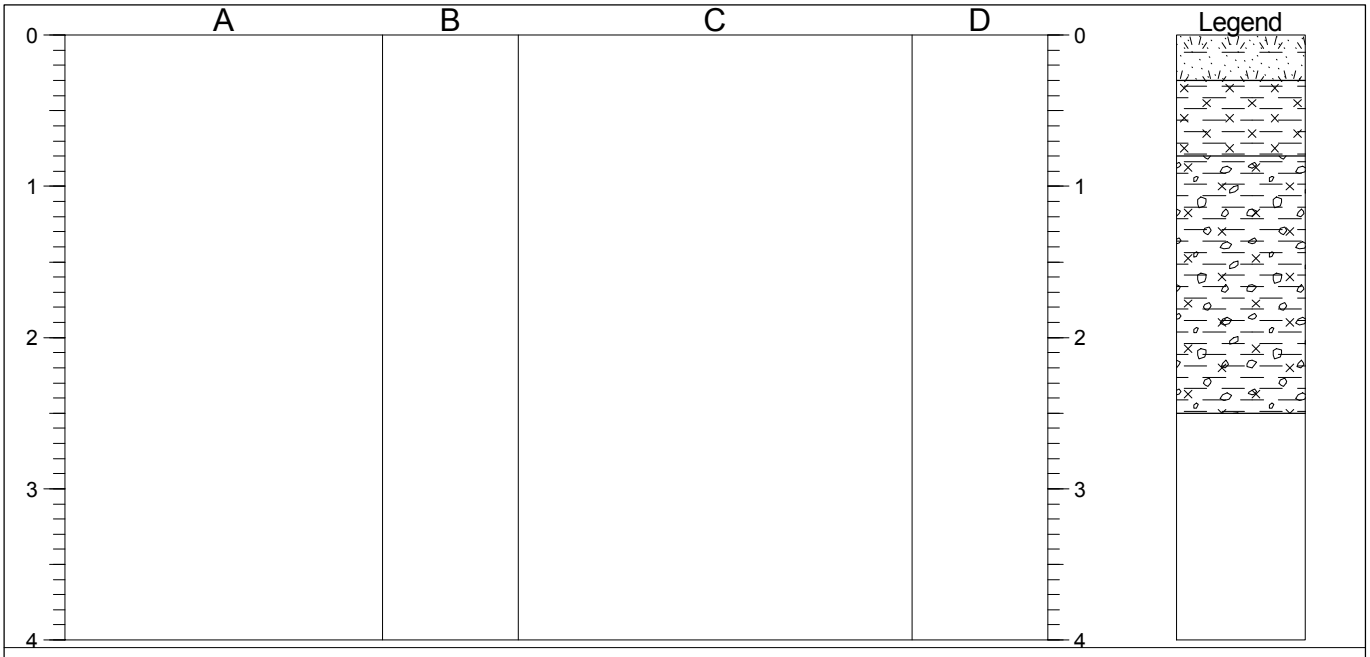
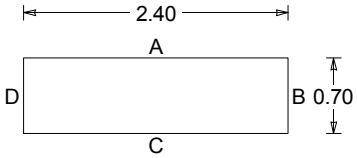
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP60**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	27-05-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown silty clay with frequent roots and rootlets.			
0.30-0.80		Firm yellowish brown/ grey silty CLAY. 0.60 ...land drain	0.50	VANE	70
0.80-2.50		Stiff grey mottled brown slightly gravelly silty CLAY with some shells. Gravel is fine to coarse subangular of mixed lithologies. 1.20 - 1.30 ...gravelly 1.90 ...with some mudstone lithorelic structures	1.00	VANE	125

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

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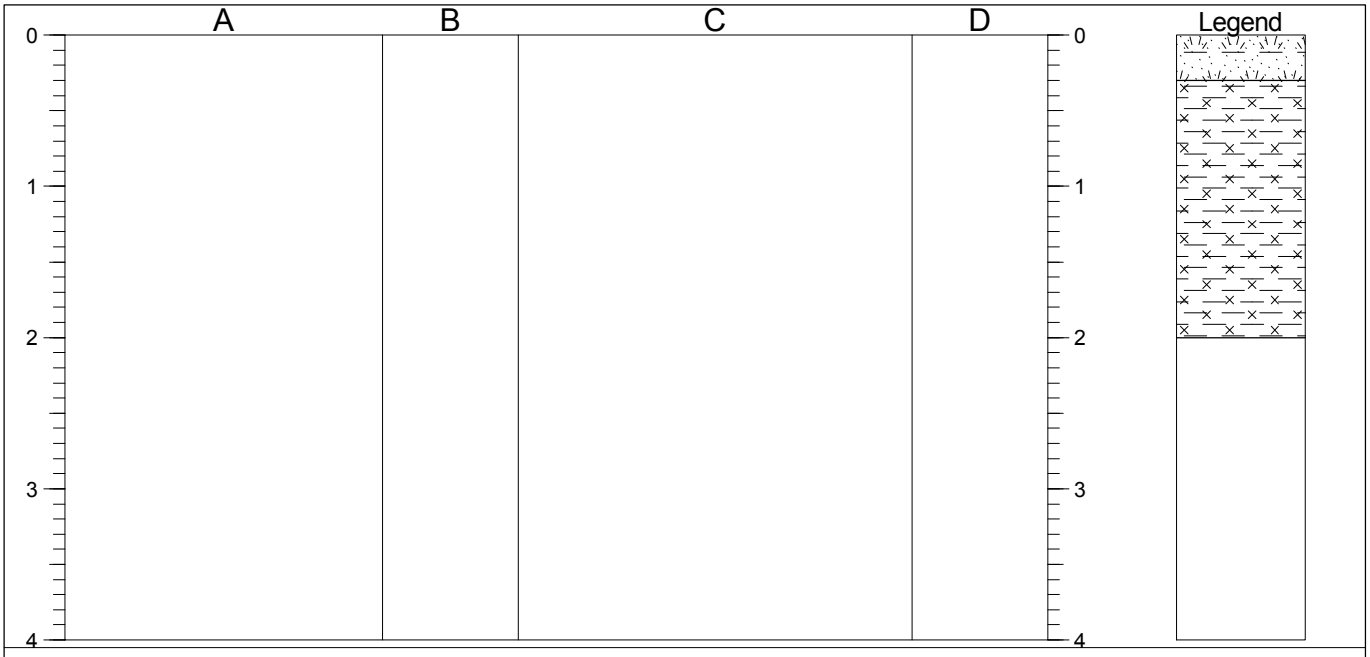
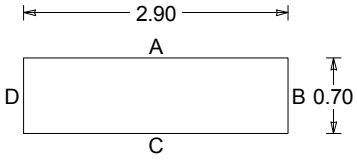
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP61**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.30-2.00		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of mixed lithologies predominantly flint.	0.50	VANE	70
			1.00	VANE	70
		1.60 - 1.80 ...bed of (medium dense) sandy silty very clayey gravel. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint (moist)			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

1. Density of granular deposits estimated from visual assessment only.

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

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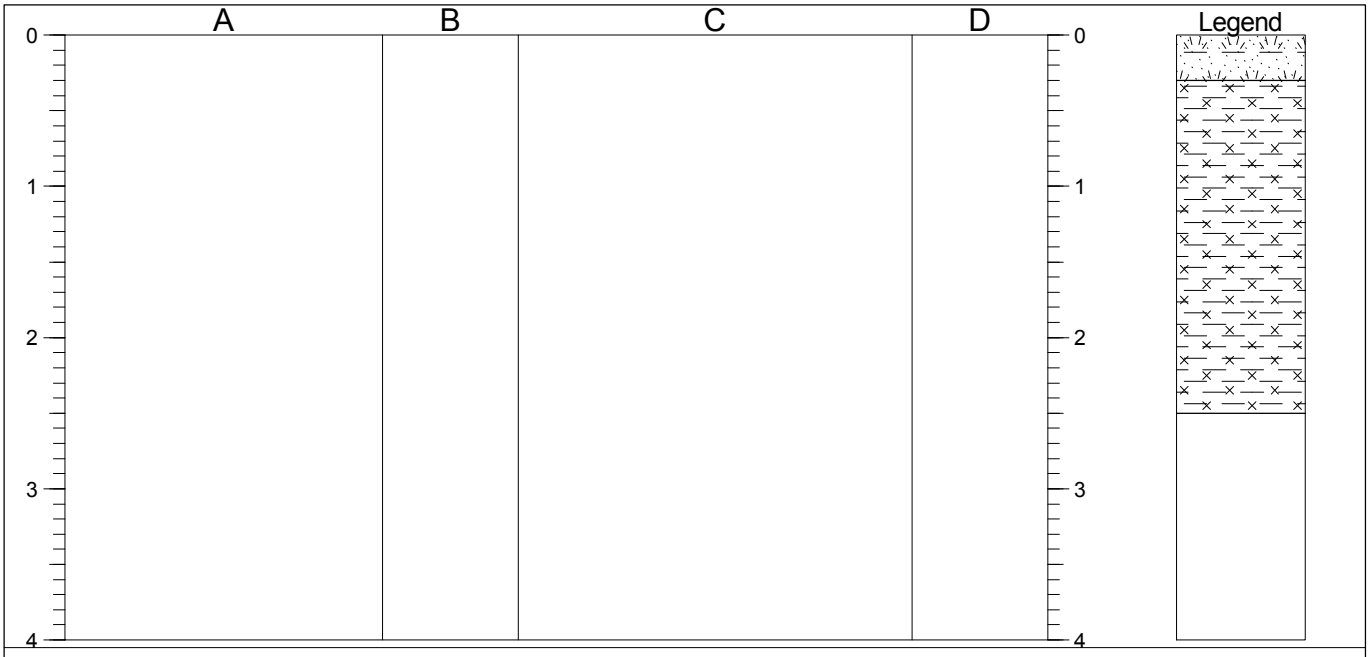
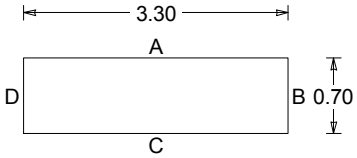
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP62**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown slightly gravelly silty clay with frequent roots and rootlets.			
0.30-2.50		Firm to stiff grey mottled yellowish brown silty CLAY.	0.50	VANE	100
			1.00	VANE	70
		1.30 - 1.50 ...bed of sandy silty very clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of mixed lithologies predominantly flint and mudstone	1.25	J	
		1.70 - 1.90 ...with occasional organics (rootlets)			
		2.10 ...with occasional shell fragments and gypsum crystals.			

Shoring/Support: None.
Stability: Stable.
Groundwater: Slight seepage at base (2.50m).



GENERAL REMARKS

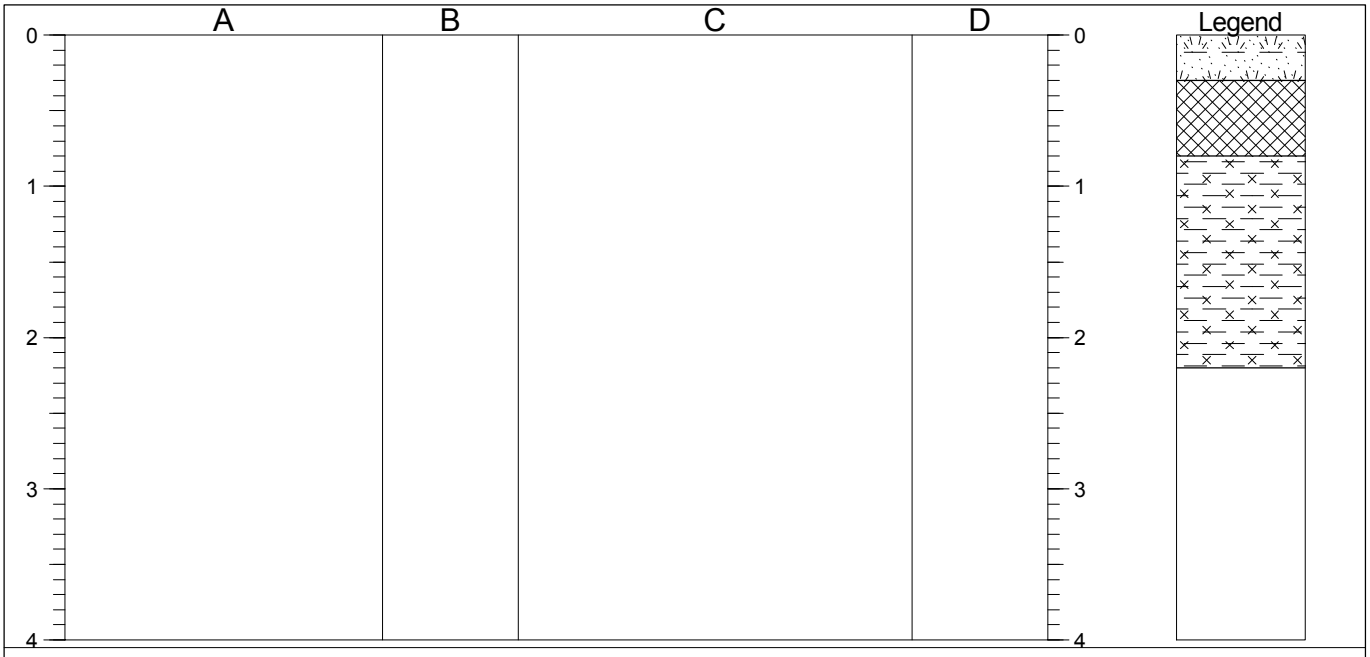
All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

Ruddlesden geotechnical ltd
The Stables, 65 Langaton Lane
Pinhoe, Exeter EX1 3SP
Telephone: 01392 678082

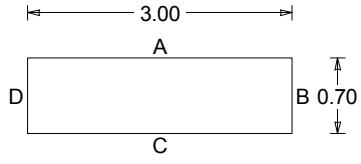
TRIAL PIT LOG

Project				TRIAL PIT No
Land South of Gillingham, Dorset				**TP63**
Job No	Date	Ground Level (m)	Co-Ordinates (BNG)	
14114	10-07-14			
Contractor	Method/ Plant	Energy Ratio		Sheet
	JCB 3CX			1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		TOPSOIL: Brown gravelly silty clay with frequent roots and rootlets.			
0.30-0.80		MADE GROUND: Greyish brown slightly silty clay with rare ceramic fragments.	0.50	J	
0.80-2.20		Firm to stiff yellowish brown/ grey silty CLAY with rare fine to coarse subangular to subrounded gravel of flint.	1.00	VANE	90
		2.00 ...stiff grey mottled yellowish brown			

Shoring/Support: None.
Stability: Stable.
Groundwater: None encountered.



GENERAL REMARKS

All dimensions in metres Scale 1:50	Client: Welbeck Land	Logged By TB

AGS3 UK TP 14114 - LAND TO THE SOUTH OF GILLINGHAM, DORSET.GPJ AGS 3_1.GDT 20/11/17

SOAKAWAY TEST RESULTS

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	Jul-14
Test No.	TP08

Trial Pit Dimensions

Length (m):	3.10
Width (m):	0.70
Depth (m):	2.60
Start Water Level (m):	1.00
Total Depth of Test	1.60

Field Results

Time (minutes)	Water Level (mBGL)
0	1.00
1	1.00
2	1.01
3	1.01
4	1.01
5	1.01
35	1.02
95	1.02
163	1.03
253	1.03
318	1.03

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 3.10 x 0.70 x 0.80

= 1.736 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.12 + 4.96 + 2.17

= 8.25 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.4

75% effective depth = 2.2

= - mins

= 0 mins

= 0 secs

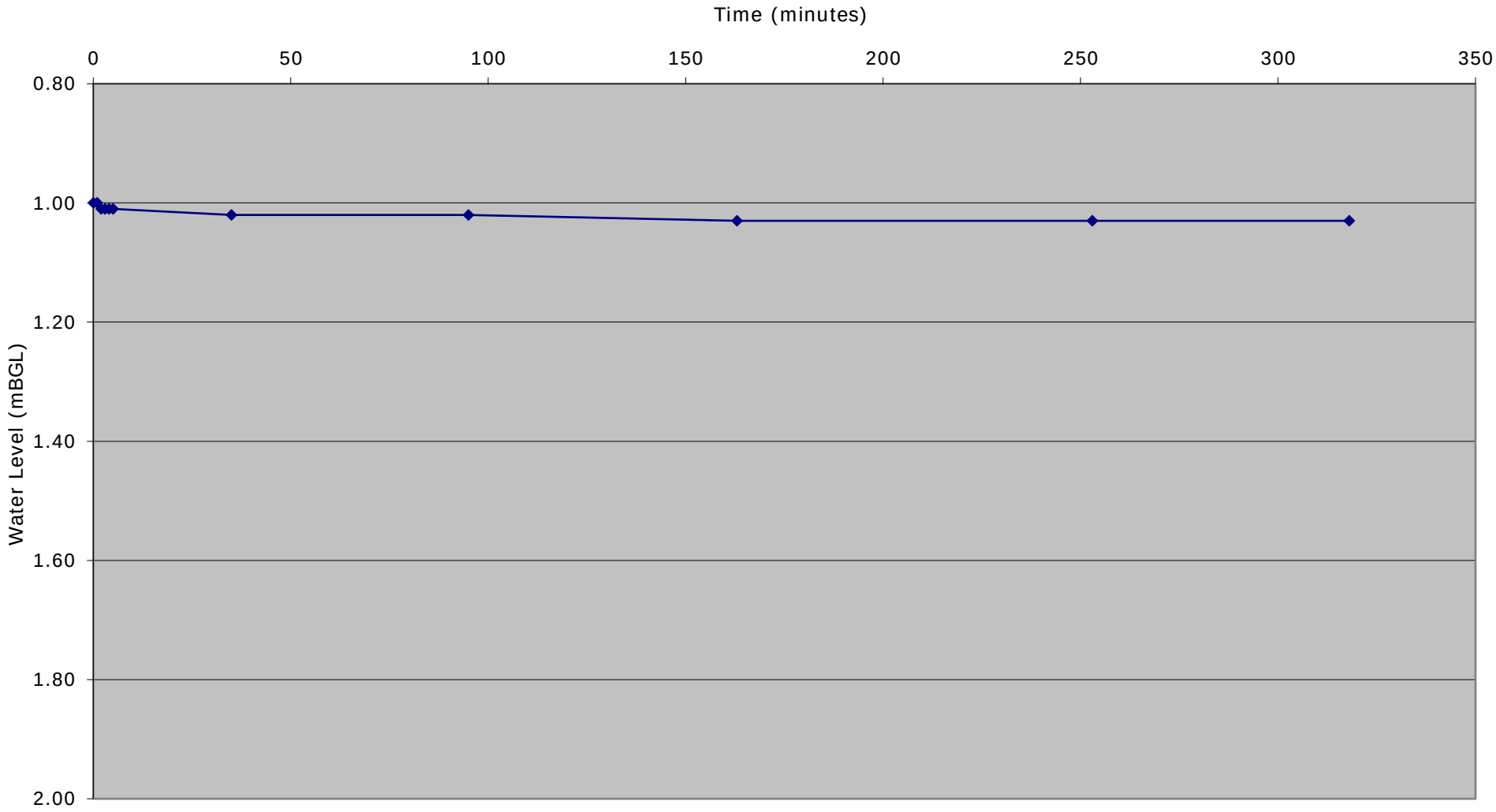
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.736 / 8.25 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP08



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	May-14
Test No.	TP12

Trial Pit Dimensions

Length (m):	2.90
Width (m):	0.70
Depth (m):	2.50
Start Water Level (m):	0.98
Total Depth of Test	1.52

Field Results

Time (minutes)	Water Level (mBGL)
0	0.98
30	0.98
52	0.98
70	0.98

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 2.90 x 0.70 x 0.76

= 1.5428 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.06 + 4.41 + 2.03

= 7.502 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.36

75% effective depth = 2.12

= - mins

= 0 mins

= 0 secs

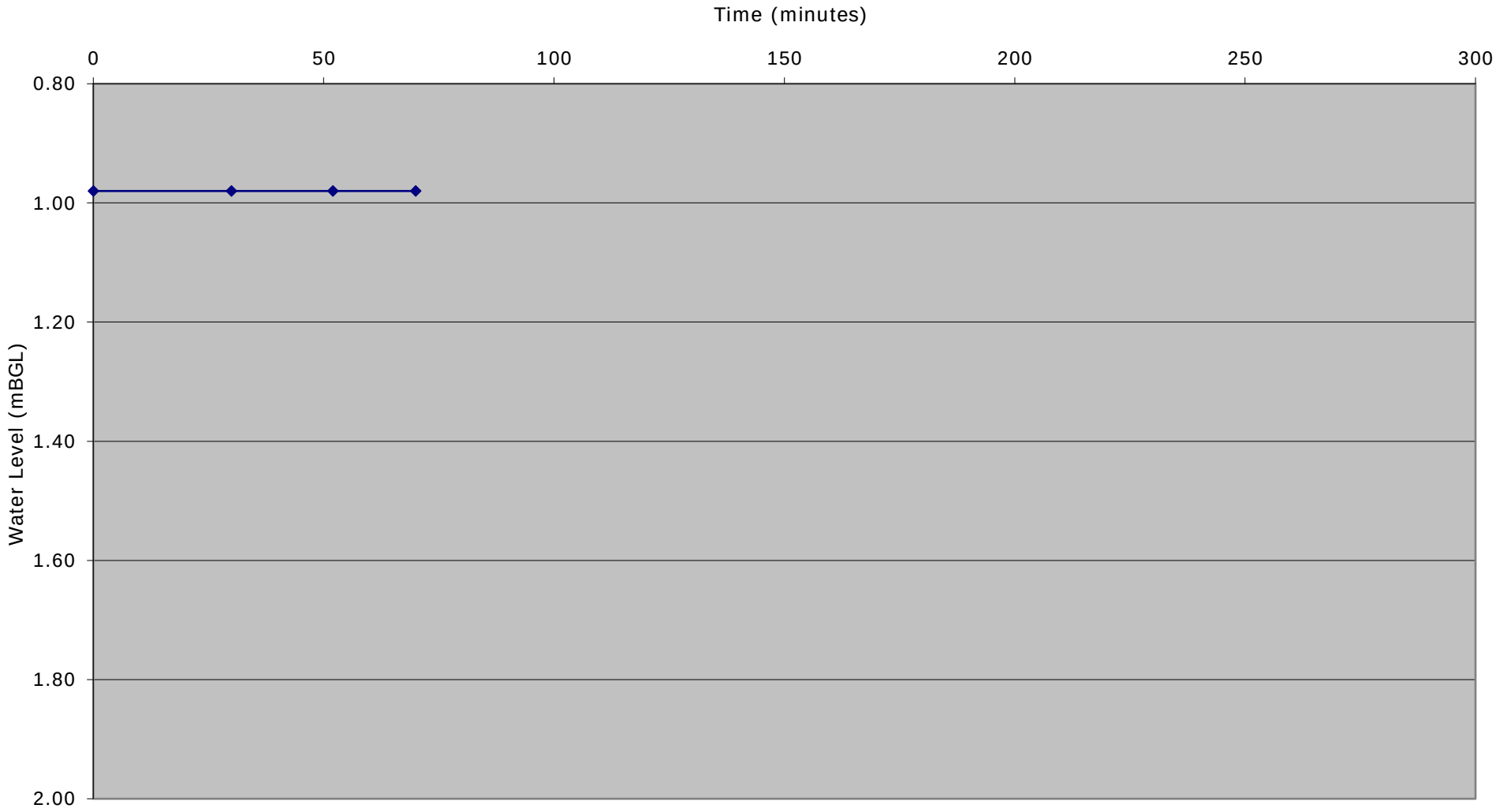
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.5428 / 7.502 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP12



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	May-14

Test No.	TP22

Trial Pit Dimensions

Length (m):	2.80
Width (m):	0.70
Depth (m):	2.50
Start Water Level (m):	0.95
Total Depth of Test	1.55

Field Results

Time (minutes)	Water Level (mBGL)
0	0.95
5	0.95
92	0.95
108	0.95
112	0.95

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 2.80 x 0.70 x 0.78

= 1.519 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.09 + 4.34 + 1.96

= 7.385 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.3375

75% effective depth = 2.1125

= - mins

= 0 mins

= 0 secs

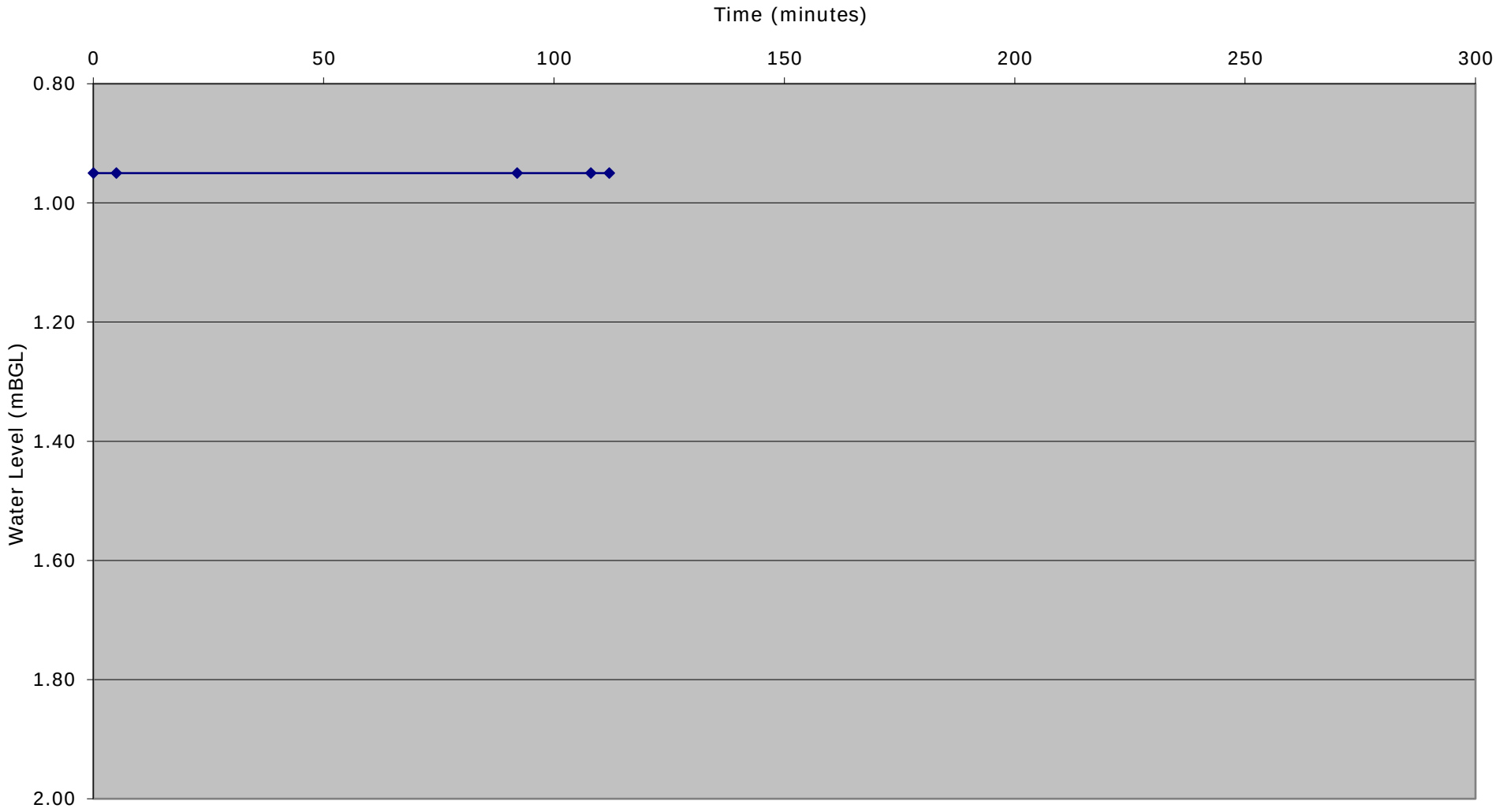
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.519 / 7.385 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP22



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	Jul-14

Test No.	TP25

Trial Pit Dimensions

Length (m):	3.20
Width (m):	0.70
Depth (m):	2.60
Start Water Level (m):	0.93
Total Depth of Test	1.67

Field Results

Time (minutes)	Water Level (mBGL)
0	0.93
1	0.93
2	0.93
3	0.93
4	0.93
5	0.94
13	0.94
63	0.94
71	0.94
131	0.94
221	0.95
291	0.95

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 3.20 x 0.70 x 0.84

= 1.8704 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.17 + 5.34 + 2.24

= 8.753 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.3475

75% effective depth = 2.1825

= - mins

= 0 mins

= 0 secs

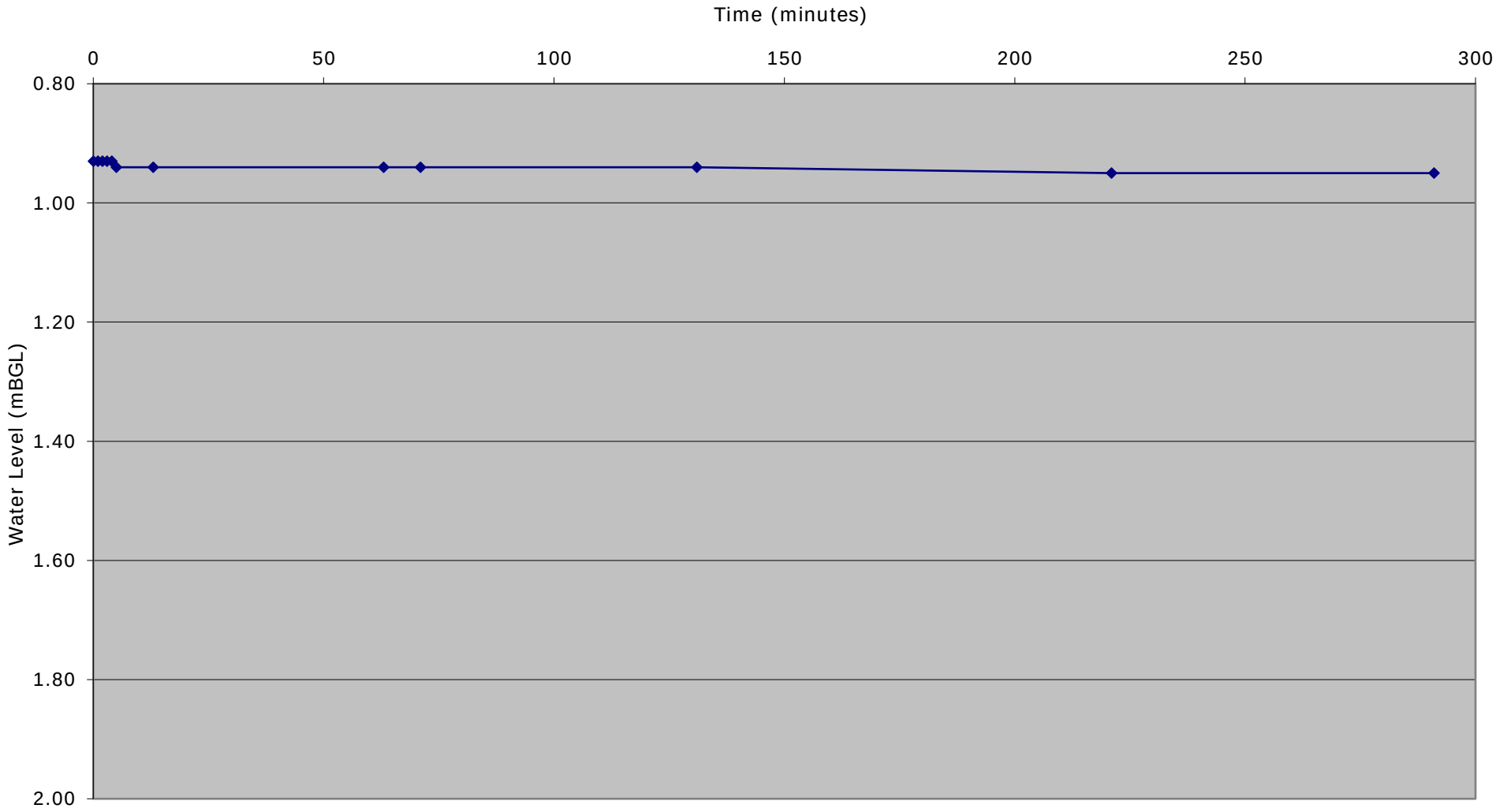
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.8704 / 8.753 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP25



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	May-14
Test No.	TP30

Trial Pit Dimensions

Length (m):	2.60
Width (m):	0.70
Depth (m):	2.50
Start Water Level (m):	1.02
Total Depth of Test	1.48

Field Results

Time (minutes)	Water Level (mBGL)
0	1.02
1	1.02
2	1.02
126	1.02

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 2.60 x 0.70 x 0.74

= 1.3468 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.04 + 3.85 + 1.82

= 6.704 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.39

75% effective depth = 2.13

= - mins

= 0 mins

= 0 secs

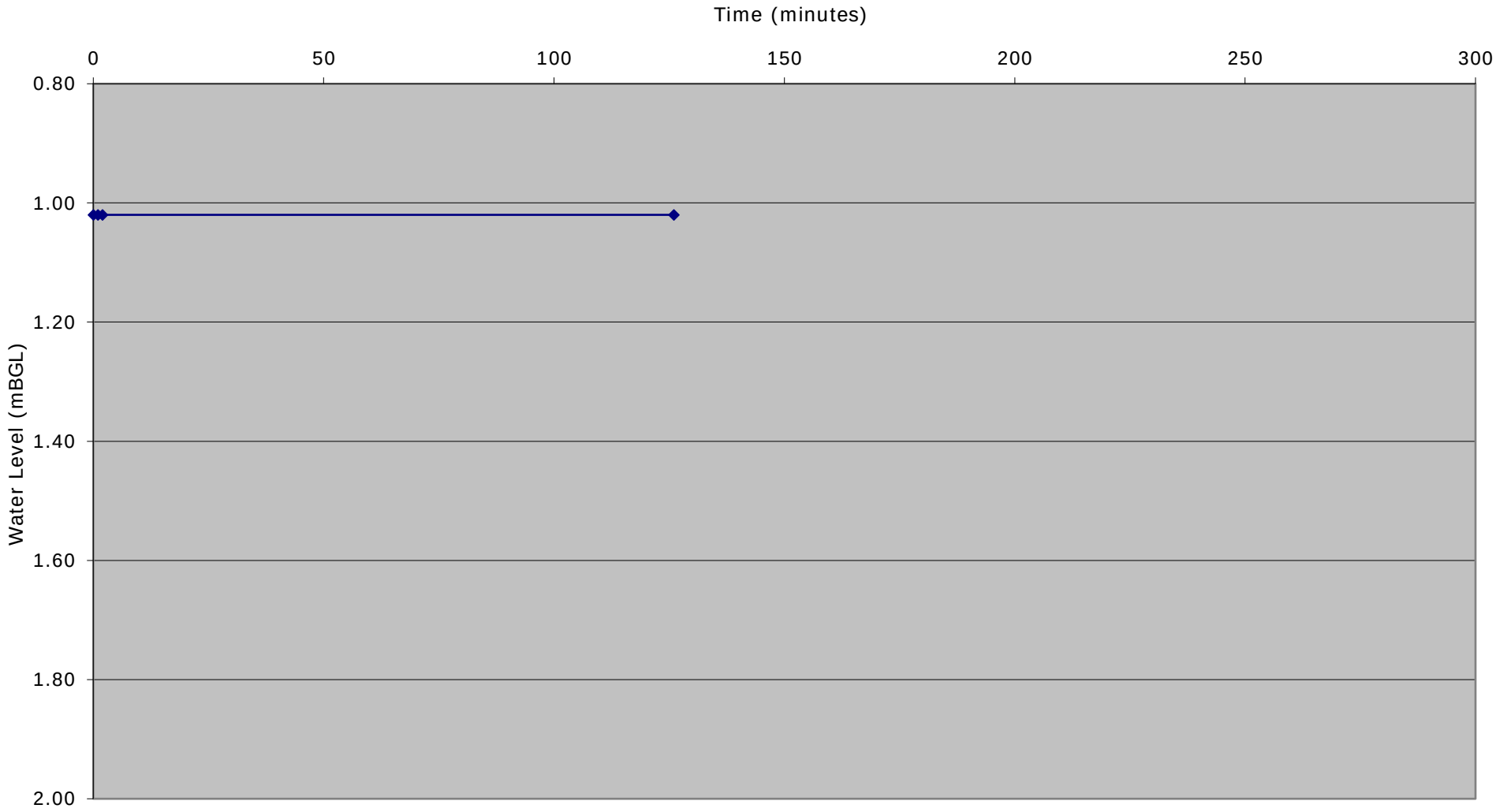
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.3468 / 6.704 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP30



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	Jul-14

Test No. TP44

Trial Pit Dimensions

Length (m):	3.10
Width (m):	0.70
Depth (m):	2.50
Start Water Level (m):	0.90
Total Depth of Test	1.60

Field Results

Time (minutes)	Water Level (mBGL)
0	0.90
1	0.90
2	0.90
3	0.90
4	0.90
5	0.90
75	0.91
150	0.91
225	0.91
295	0.91
355	0.91

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 3.10 x 0.70 x 0.80

= 1.736 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.12 + 4.96 + 2.17

= 8.25 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.3

75% effective depth = 2.1

= - mins

= 0 mins

= 0 secs

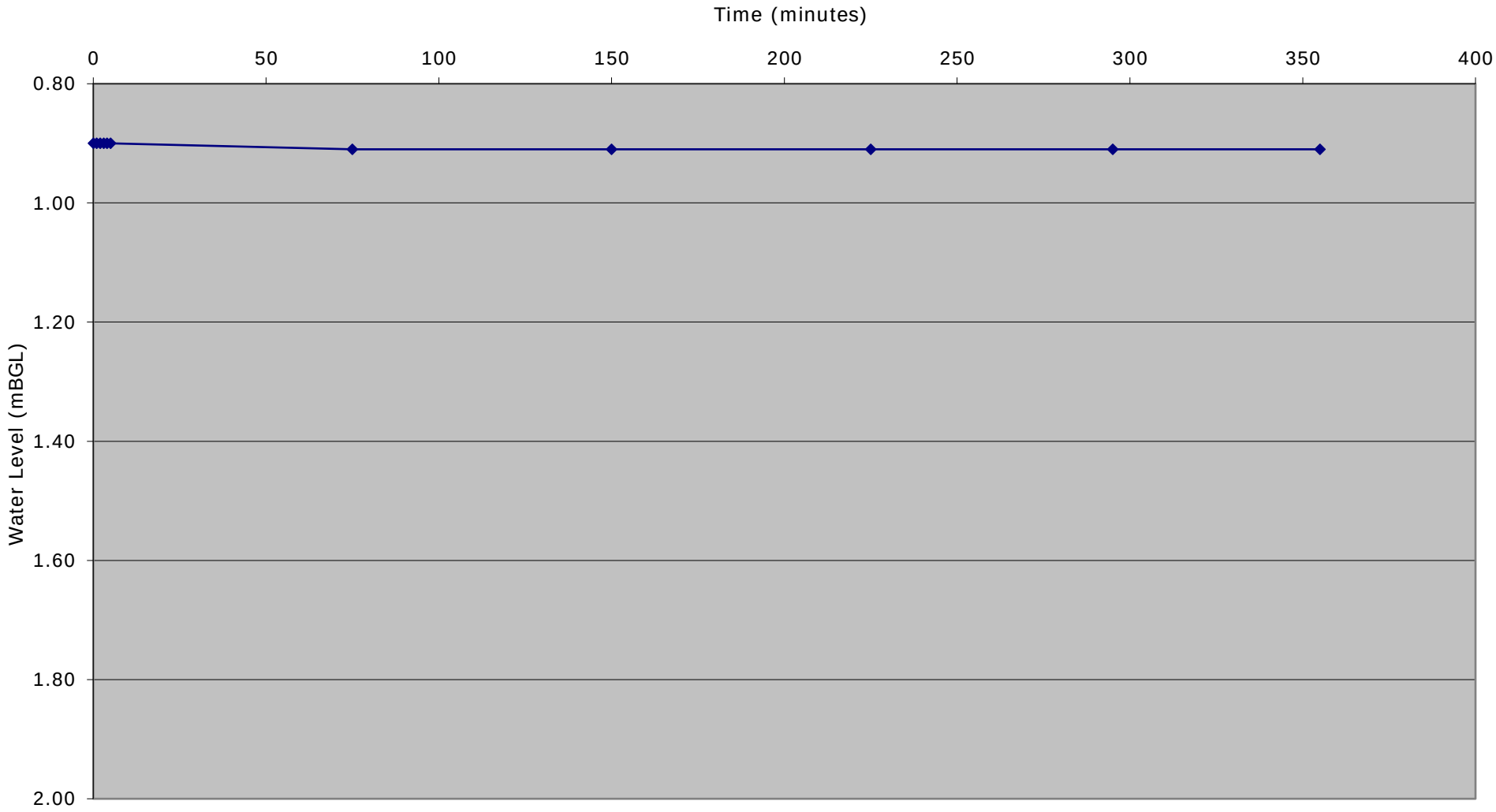
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.736 / 8.25 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP44



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	Jul-14

Test No. TP49

Trial Pit Dimensions

Length (m):	3.00
Width (m):	0.70
Depth (m):	2.60
Start Water Level (m):	0.99
Total Depth of Test	1.61

Field Results

Time (minutes)	Water Level (mBGL)
0	0.99
1	0.99
2	0.99
3	0.99
4	0.99
5	0.99
49	0.99
85	0.99
136	0.99
185	0.99
275	0.99

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 3.00 x 0.70 x 0.81

= 1.6905 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.13 + 4.83 + 2.10

= 8.057 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.3925

75% effective depth = 2.1975

= - mins

= 0 mins

= 0 secs

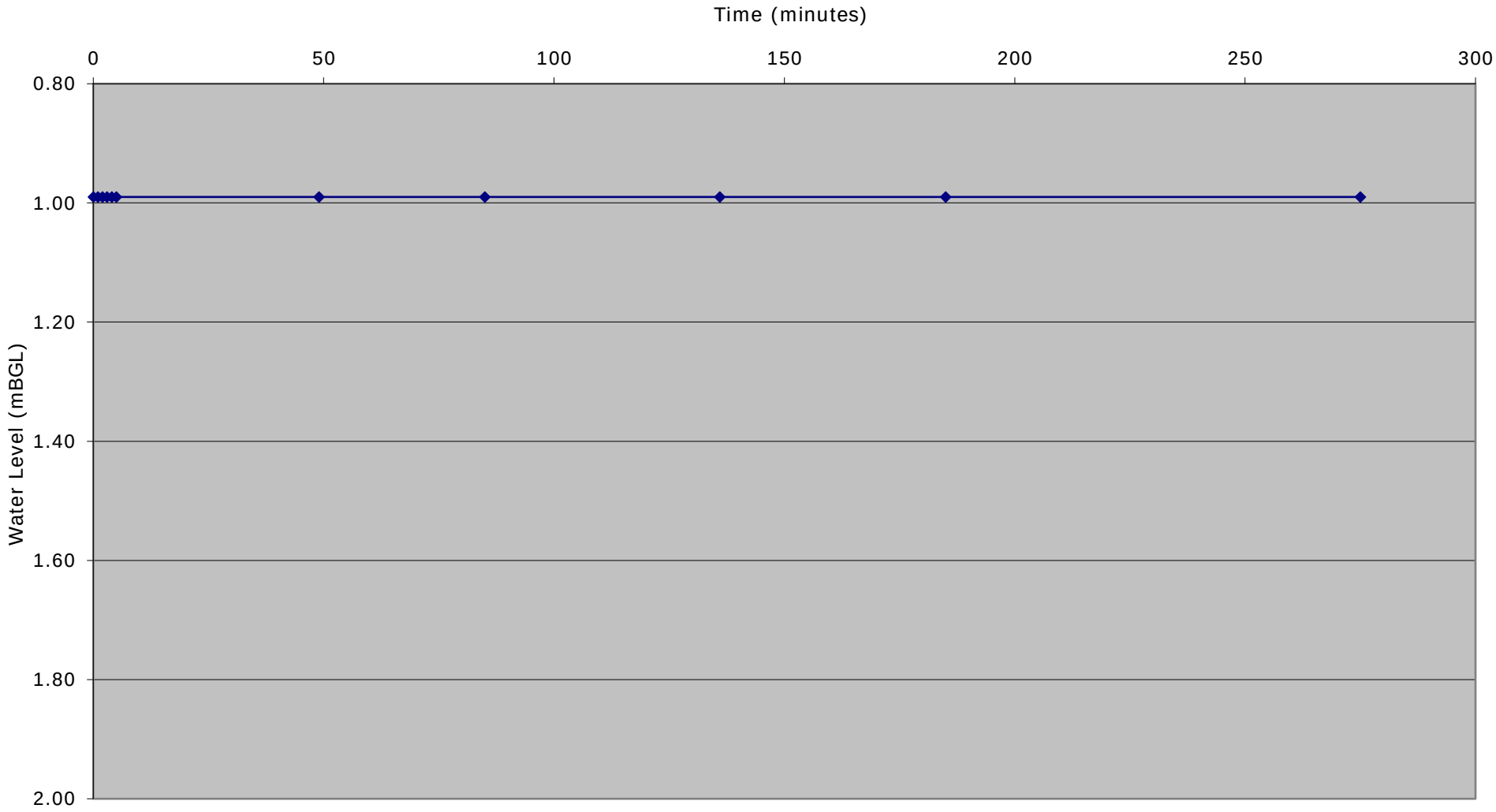
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.6905 / 8.057 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP49



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	Jul-14
Test No.	TP58

Trial Pit Dimensions

Length (m):	3.10
Width (m):	0.70
Depth (m):	2.60
Start Water Level (m):	1.00
Total Depth of Test	1.60

Field Results

Time (minutes)	Water Level (mBGL)
0	1.00
1	1.00
2	1.00
3	1.00
4	1.00
5	1.00
29	1.00
49	1.01
109	1.01
159	1.01
249	1.01

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 3.10 x 0.70 x 0.80

= 1.736 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.12 + 4.96 + 2.17

= 8.25 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.4

75% effective depth = 2.2

= - mins

= 0 mins

= 0 secs

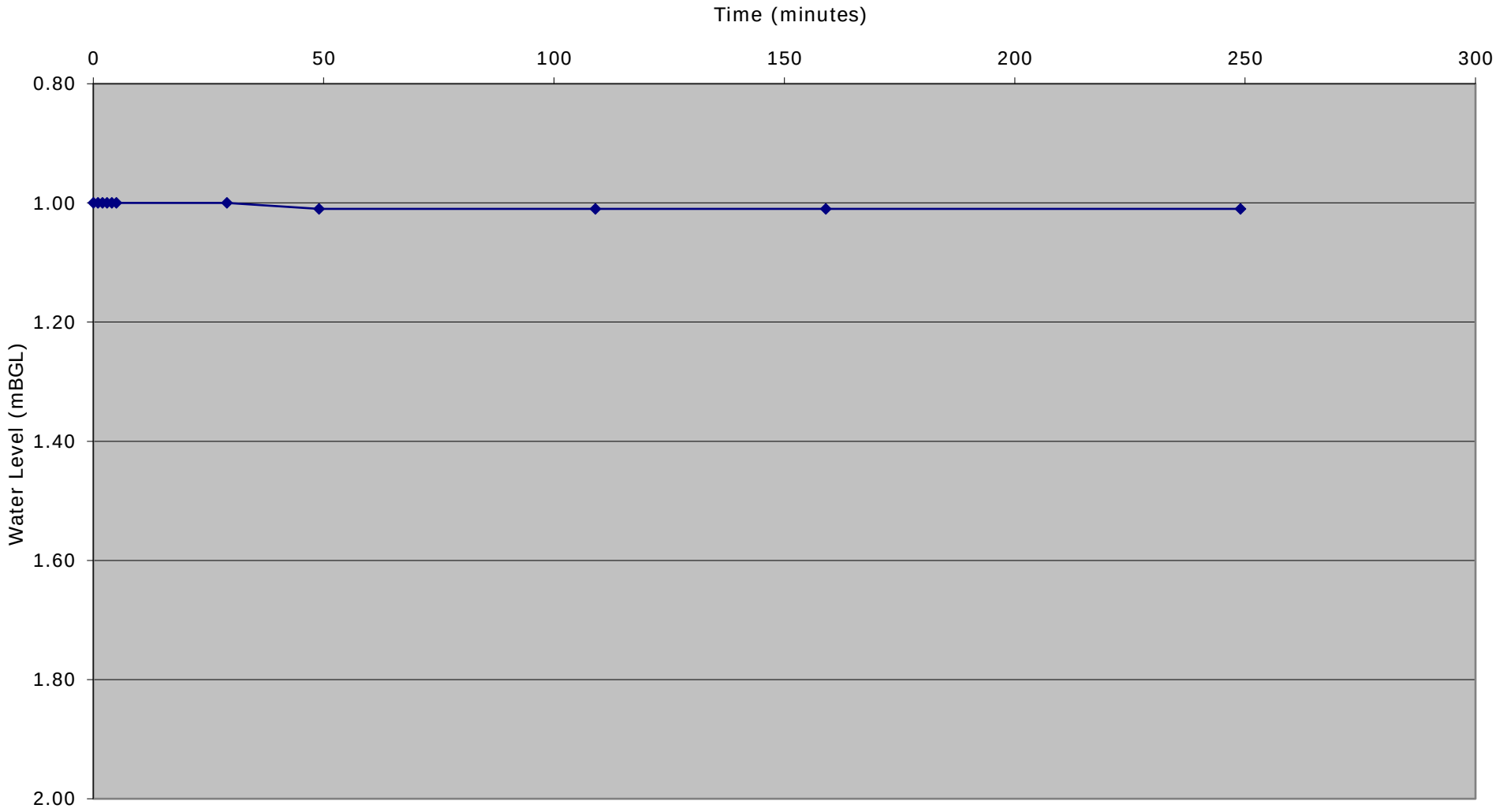
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.736 / 8.25 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP49



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	May-14

Test No.	TP60

Trial Pit Dimensions

Length (m):	2.40
Width (m):	0.70
Depth (m):	2.50
Start Water Level (m):	1.21
Total Depth of Test	1.29

Field Results

Time (minutes)	Water Level (mBGL)
0	1.21
1	1.21
2	1.21
154	1.21

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 2.40 x 0.70 x 0.65

= 1.0836 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 0.90 + 3.10 + 1.68

= 5.679 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.5325

75% effective depth = 2.1775

= - mins

= 0 mins

= 0 secs

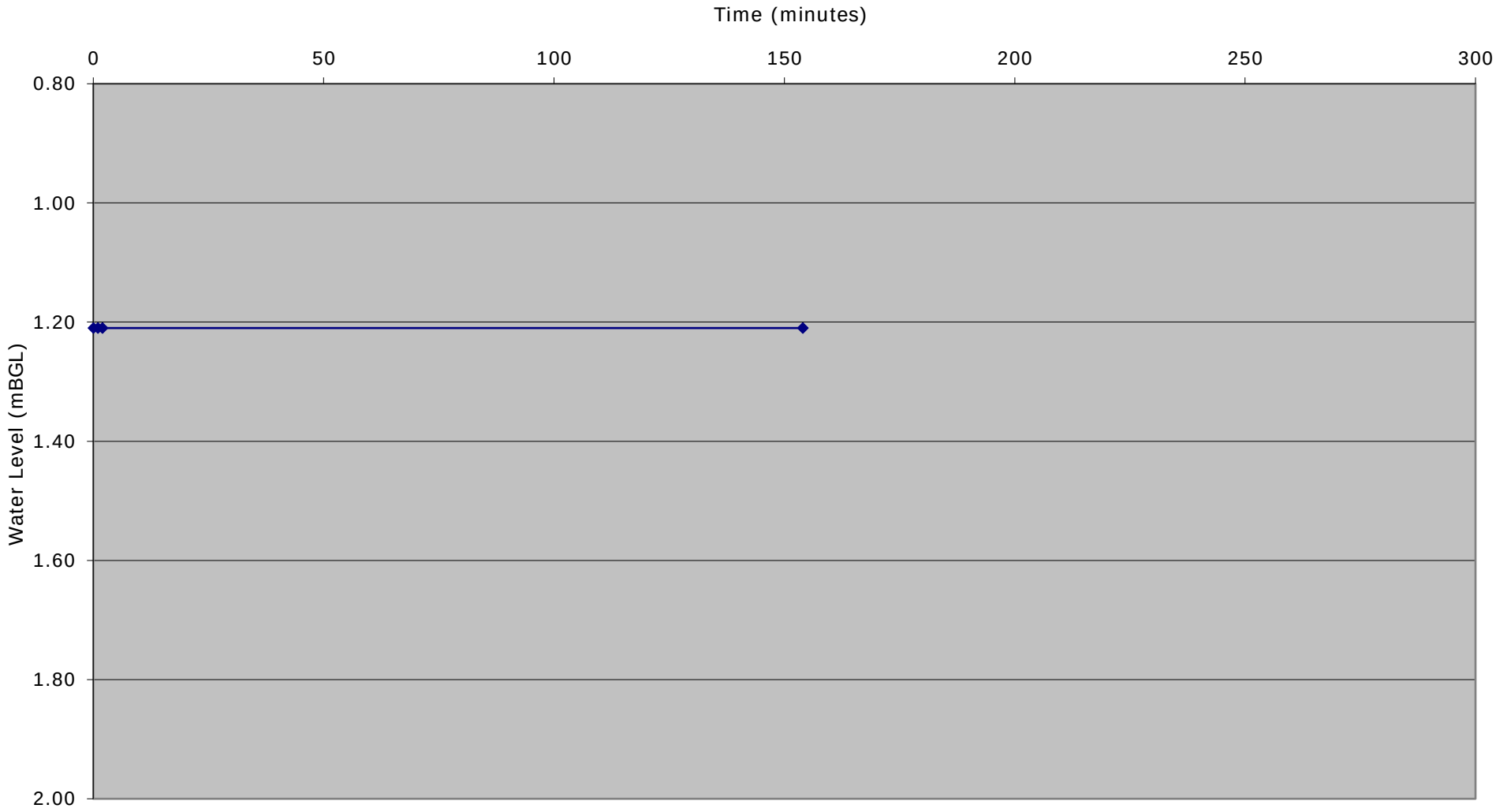
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.0836 / 5.679 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP60



Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Job Title:	South Gillingham Urban Expansion
Job No.:	14114
Client:	South Gillingham Consortium
Date:	Jul-14
Test No.	TP62

Trial Pit Dimensions

Length (m):	3.30
Width (m):	0.70
Depth (m):	2.50
Start Water Level (m):	0.94
Total Depth of Test	1.56

Field Results

Time (minutes)	Water Level (mBGL)
0	0.94
1	0.94
2	0.94
3	0.94
4	0.94
5	0.94
25	0.94
95	0.95
162	0.95
232	0.95
302	0.95
362	0.95

Soakaway Test Results
In Accordance with BRE 365 "Soakaway Design"

Calculations

Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

Where

V_{p75-25} = effective storage volume of water in the trial pit between 75% and 25% effective depth

= 3.30 x 0.70 x 0.78

= 1.8018 m^3

a_{p50} = internal surface area of the trial pit up to 50% effective depth and including the base area

= 1.09 + 5.15 + 2.31

= 8.55 m^2

t_{p75-25} = time for the water level to fall from 75% to 25% effective depth

25% effective depth = 1.33

75% effective depth = 2.11

= - mins

= 0 mins

= 0 secs

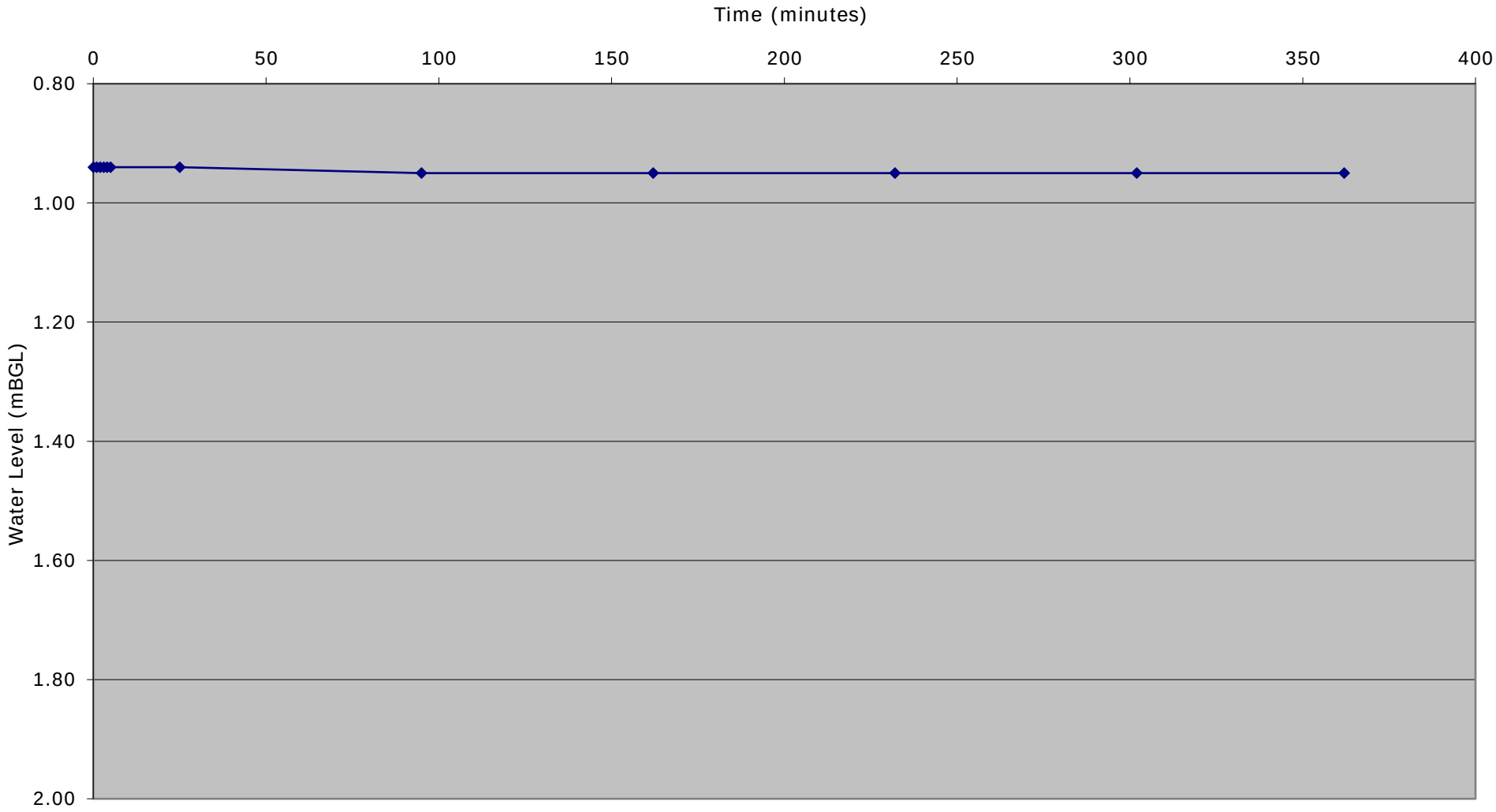
Soil Infiltration Rate (f) = $(V_{p75-25}) / (a_{p50} \times t_{p75-25})$

= 1.8018 / 8.55 x 0

= #DIV/0! m/s

OTHER NOTES:

Soakaway Test Results - TP62



APPENDIX B

PHOTOGRAPHS

Plate 1

The large field in the southeast of the site, viewed from the southeast.

Plate 2

The lane in the east of the site, used to access fields in the east and southeast of the site, viewed from the north.

Plate 3

The fields in the centre of the site, viewed from the northeast.

Plate 4

The fields in the south of the site, viewed from the north.

Plate 5

The fields in the southwest of the site, viewed from the south.

Plate 6

The fields in the west of the site, viewed from the south.

Plate 7

The fields in the north of the site, viewed from the west.

Plate 8

Ground conditions encountered in TP49, typical of the ground conditions encountered across the site.

APPENDIX C

LABORATORY TESTING RESULTS

GEOTECHNICAL LABORATORY TESTING

Summary of Index Property Test Results

Job: South Gillingham Urban Expansion
Client: Ruddlesden geotechnical ltd

Job No: 6345
Client Job No: 14114

Sample Reference	Natural MC (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	% Passing .425mm	Modified Plasticity Index (%)	Preparation Method	Description/ Remarks
TP02 1.00m (B)	28.8	56	23	33	100.0	33	Natural	Grey silty/sandy CLAY
TP06 2.00m (D)	27.9	56	23	33	100.0	33	Natural	Grey silty/sandy CLAY
TP07 1.00m (D)	26.5	61	22	39	100.0	39	Natural	Grey silty/sandy CLAY
TP12 1.50m (D)	35.8	53	21	32	100.0	32	Natural	Grey silty/sandy CLAY
TP15 2.00m (D)	18.8	38	16	22	100.0	22	Natural	Brown silty/sandy CLAY
TP17 1.50m (D)	30.7	61	26	35	100.0	35	Natural	Grey silty/sandy CLAY
TP19 1.00m (D)	28.1	54	24	30	100.0	30	Natural	Brown silty/sandy CLAY
TP22 1.00m (D)	32.1	61	26	35	100.0	35	Natural	Grey silty/sandy CLAY
TP30 1.00m (D)	28.5	51	22	29	100.0	29	Natural	Brown silty/sandy CLAY

Tests carried out in accordance with Clauses 3.2, 4.3, 5.3 and 5.4 of BS1377: Part 2: 1990

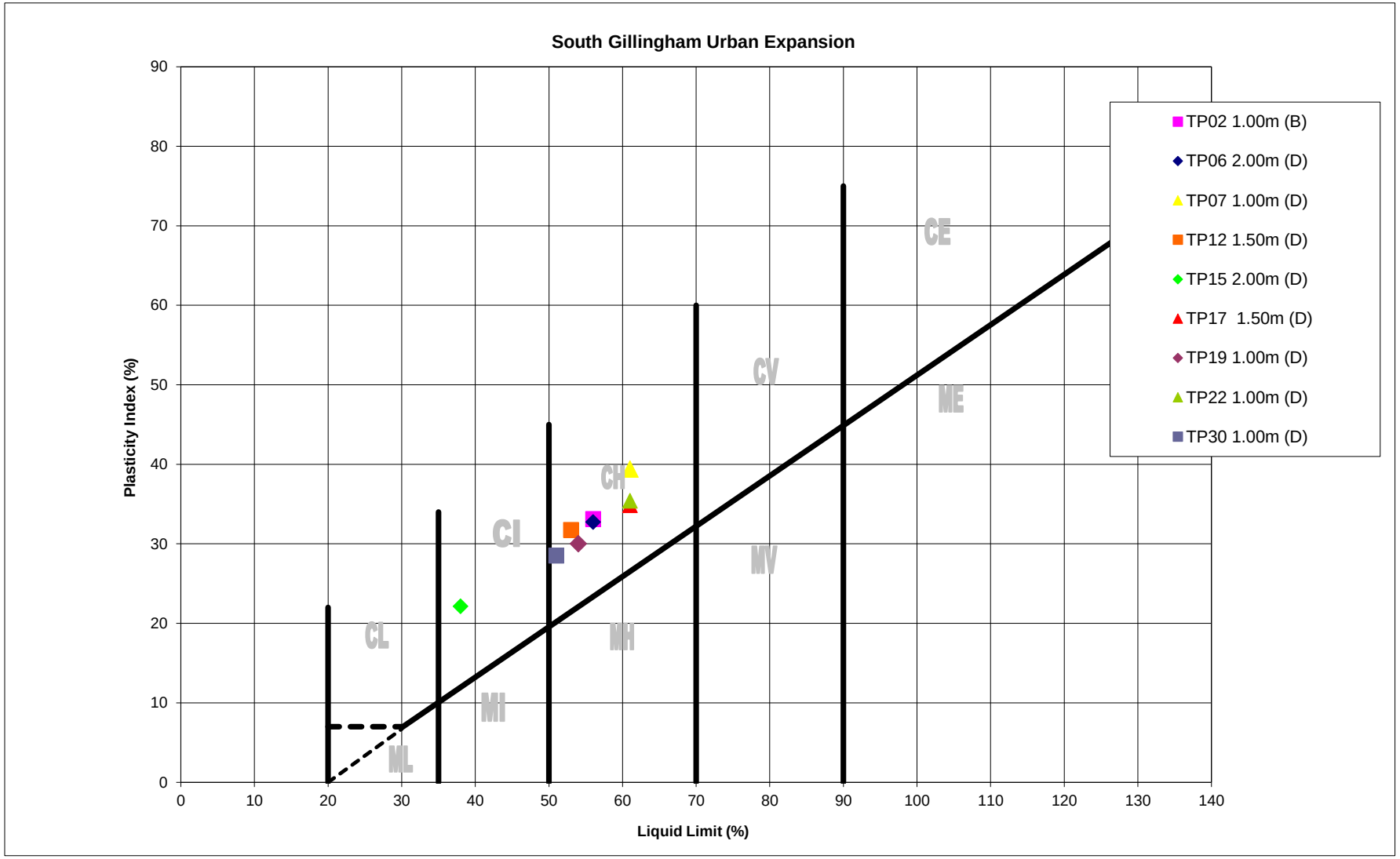
Modified Plasticity Index is defined in NHBC Chapter 4.2 as the PI multiplied by the percentage of particles passing the .425mm sieve.

Non-Modified Plasticity Indices plotted on the attached Casagrande Classification chart.

Prepared By: AS Date: 16/06/2014 *Processed By:* AS Date: 20/06/2014

Tested By LC Date: 17/06/2014 *Checked By:* EB Date: 23/06/2014

Summary of Index Property Test Results



CONTAMINATION LABORATORY TESTING

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Analytical Report Number : 14-55504

Project / Site name:	South Gillingham Urban Expansion	**Samples received on:**	09/06/2014
Your job number:	14114	**Samples instructed on:**	09/06/2014
Your order number:	14114	**Analysis completed by:**	17/06/2014
Report Issue Number:	1	**Report issued on:**	17/06/2014
Samples Analysed:	19 soil samples		

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

Signed:

Thurstan Plummer
Organics Technical 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

Excel copies of reports are only valid when accompanied by this PDF certificate.

Analytical Report Number: 14-55504

Project / Site name: South Gillingham Urban Expansion
Your Order No: 14114

Lab Sample Number				345020	345021	345022	345023	345024
Sample Reference				TP02	TP04	TP06	TP07	TP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	2.00	2.00	0.80	1.50
Date Sampled				27/05/2014	27/05/2014	27/05/2014	27/05/2014	27/05/2014
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	16	13	16	16	15
Total mass of sample received	kg	0.001	NONE	0.20	0.18	0.19	0.18	0.18
General Inorganics								
pH	pH Units	N/A	MCERTS	7.5	7.9	7.4	7.7	6.7
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	5.0	0.66	4.8	0.050	0.047
Water Soluble Sulphate as SO_4 (2:1)	mg/kg	2.5	MCERTS	5000	660	4800	50	47
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.5	0.33	2.4	0.025	0.024
Organic Matter	%	0.1	MCERTS	-	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	2	MCERTS	-	-	-	-	-
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	-	-	-	-	-

Analytical Report Number: 14-55504

Project / Site name: South Gillingham Urban Expansion
Your Order No: 14114

Lab Sample Number				345020	345021	345022	345023	345024
Sample Reference				TP02	TP04	TP06	TP07	TP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	2.00	2.00	0.80	1.50
Date Sampled				27/05/2014	27/05/2014	27/05/2014	27/05/2014	27/05/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
Petroleum Hydrocarbons								
TPH1 (C10 - C40)	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

Analytical Report Number: 14-55504

Project / Site name: South Gillingham Urban Expansion
Your Order No: 14114

Lab Sample Number				345025	345026	345027	345028	345029
Sample Reference				TP15	TP17	TP19	TP22	TP30
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00	1.50	1.00	1.00	1.00
Date Sampled				28/05/2014	27/05/2014	28/05/2014	28/05/2014	27/05/2014
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	15	20	17	19	19
Total mass of sample received	kg	0.001	NONE	0.17	0.20	0.19	0.18	0.20
General Inorganics								
pH	pH Units	N/A	MCERTS	6.3	7.3	6.7	6.7	6.4
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.10	0.66	0.44	6.2	0.082
Water Soluble Sulphate as SO_4 (2:1)	mg/kg	2.5	MCERTS	100	660	440	6200	82
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.052	0.33	0.22	3.1	0.041
Organic Matter	%	0.1	MCERTS	-	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	2	MCERTS	-	-	-	-	-
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	-	-	-	-	-

Analytical Report Number: 14-55504

Project / Site name: South Gillingham Urban Expansion
Your Order No: 14114

Lab Sample Number				345025	345026	345027	345028	345029
Sample Reference				TP15	TP17	TP19	TP22	TP30
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00	1.50	1.00	1.00	1.00
Date Sampled				28/05/2014	27/05/2014	28/05/2014	28/05/2014	27/05/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-

Petroleum Hydrocarbons

TPH1 (C10 - C40)	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

Analytical Report Number: 14-55504

Project / Site name: South Gillingham Urban Expansion
Your Order No: 14114

Lab Sample Number				345030	345031	345032	345033	345034
Sample Reference				TP01	TP03	TP05	TP10	TP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.60	0.50	0.40	0.50
Date Sampled				27/05/2014	27/05/2014	27/05/2014	27/05/2014	28/05/2014
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	12	13	19	23	20
Total mass of sample received	kg	0.001	NONE	0.48	0.46	0.52	0.46	0.47
General Inorganics								
pH	pH Units	N/A	MCERTS	7.1	7.7	7.7	6.9	6.5
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.046	0.028	0.14	0.15	0.018
Water Soluble Sulphate as SO_4 (2:1)	mg/kg	2.5	MCERTS	46	28	140	150	18
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.023	0.014	0.068	0.076	0.0089
Organic Matter	%	0.1	MCERTS	2.3	0.3	0.2	1.2	1.8
Total Phenols								
Total Phenols (monohydric)	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.4	11	11	13	7.4
Boron (water soluble)	mg/kg	0.2	MCERTS	1.2	1.2	1.7	1.4	1.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	0.2	< 0.2	< 0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	37	49	29	33
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17	28	20	14	21
Lead (aqua regia extractable)	mg/kg	1	MCERTS	46	11	9.7	13	15
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	38	21	13	20
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.3	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	49	61	47	47	64

Analytical Report Number: 14-55504

Project / Site name: South Gillingham Urban Expansion
Your Order No: 14114

Lab Sample Number				345030	345031	345032	345033	345034
Sample Reference				TP01	TP03	TP05	TP10	TP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.60	0.50	0.40	0.50
Date Sampled				27/05/2014	27/05/2014	27/05/2014	27/05/2014	28/05/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-

Petroleum Hydrocarbons

TPH1 (C10 - C40)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

Analytical Report Number: 14-55504

Project / Site name: South Gillingham Urban Expansion
Your Order No: 14114

Lab Sample Number				345035	345036	345037	345038	
Sample Reference				TP14	TP17	TP20	TP43	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				0.30	0.20	0.50	0.70	
Date Sampled				28/05/2014	27/05/2014	28/05/2014	28/05/2014	
Time Taken				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	20	19	16	15	
Total mass of sample received	kg	0.001	NONE	0.44	0.45	0.46	0.50	
General Inorganics								
pH	pH Units	N/A	MCERTS	6.2	6.7	6.7	6.8	
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.074	0.031	0.15	0.11	
Water Soluble Sulphate as SO_4 (2:1)	mg/kg	2.5	MCERTS	74	31	150	110	
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.037	0.016	0.075	0.055	
Organic Matter	%	0.1	MCERTS	1.6	2.9	1.0	1.0	
Total Phenols								
Total Phenols (monohydric)	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.28	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	0.88	< 0.10	< 0.10	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	0.10	< 0.10	< 0.10	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	2.2	< 0.10	< 0.10	
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.97	< 0.10	< 0.10	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	11	< 0.10	< 0.10	
Pyrene	mg/kg	0.1	MCERTS	< 0.10	10	< 0.10	< 0.10	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	7.1	< 0.10	< 0.10	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	7.9	< 0.05	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	12	< 0.10	< 0.10	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	4.1	< 0.10	< 0.10	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	8.9	< 0.10	< 0.10	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	5.9	< 0.10	< 0.10	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	1.3	< 0.10	< 0.10	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	6.1	< 0.05	< 0.05	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.6	79	< 1.6	< 1.6	
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	13	18	9.5	
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	1.3	0.9	0.3	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	0.4	0.4	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35	26	42	31	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	16	32	25	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	11	21	15	12	
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	33	69	41	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	48	77	79	64	

Analytical Report Number: 14-55504

Project / Site name: South Gillingham Urban Expansion
Your Order No: 14114

Lab Sample Number				345035	345036	345037	345038	
Sample Reference				TP14	TP17	TP20	TP43	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				0.30	0.20	0.50	0.70	
Date Sampled				28/05/2014	27/05/2014	28/05/2014	28/05/2014	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/kg	1	MCERTS	-	< 1.0	-	-	
Toluene	µg/kg	1	MCERTS	-	< 1.0	-	-	
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0	-	-	
o-xylene	µg/kg	1	MCERTS	-	< 1.0	-	-	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	-	

Petroleum Hydrocarbons

TPH1 (C10 - C40)	mg/kg	10	MCERTS	< 10	230	< 10	< 10	
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	-	< 0.1	-	-	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	-	< 0.1	-	-	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	< 0.1	-	-	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	-	-	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0	-	-	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	< 8.0	-	-	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	8.1	-	-	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	< 10	-	-	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	-	< 0.1	-	-	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	-	< 0.1	-	-	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	< 0.1	-	-	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	-	-	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	2.4	-	-	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	41	-	-	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	160	-	-	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	210	-	-	

Analytical Report Number : 14-55504

Project / Site name: South Gillingham Urban Expansion

* 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 topsoil/loam 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 2 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
345020	TP02	None Supplied	1.00	Grey clay and sand.
345021	TP04	None Supplied	2.00	Brown clay and sand.
345022	TP06	None Supplied	2.00	Grey clay and sand.
345023	TP07	None Supplied	0.80	Light brown clay and sand.
345024	TP12	None Supplied	1.50	Light brown clay and sand.
345025	TP15	None Supplied	2.00	Brown clay and sand.
345026	TP17	None Supplied	1.50	Brown clay and sand.
345027	TP19	None Supplied	1.00	Light brown clay and sand.
345028	TP22	None Supplied	1.00	Grey clay and sand.
345029	TP30	None Supplied	1.00	Light brown clay and sand.
345030	TP01	None Supplied	0.30	Brown clay and topsoil with gravel and vegetation.
345031	TP03	None Supplied	0.60	Light brown clay and sand.
345032	TP05	None Supplied	0.50	Light brown clay and sand.
345033	TP10	None Supplied	0.40	Light brown clay and sand.
345034	TP12	None Supplied	0.50	Light brown clay and sand.
345035	TP14	None Supplied	0.30	Light brown clay and sand.
345036	TP17	None Supplied	0.20	Brown clay and topsoil with gravel and vegetation.
345037	TP20	None Supplied	0.50	Light brown clay and sand.
345038	TP43	None Supplied	0.70	Light brown clay and sand.

Analytical Report Number : 14-55504

Project / Site name: South Gillingham Urban Expansion

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
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
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	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
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-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
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. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the 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 extraction with water followed by ICP-OES. Results reported corrected for extraction ratio (soil equivalent) as g/l and mg/kg; and upon the 2:1	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPH1 (Soil)	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method	L064-PL	D	MCERTS
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	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.

GENERIC ASSESSMENT CRITERIA

Residential with Home Grown Produce Land Use Generic Assessment Criteria (GAC)

Determinand	Unit	GAC	Highest Recorded Value	Location of Highest Recorded Value	No. of values exceeding GAC	Source of GAC
Phenols (total)	mg/kg	1% SOM: 120; 2.5% SOM: 200; 6% SOM: 380	<2.0	ALL	0 of 19	S4UL
Naphthalene	mg/kg	1% SOM: 2.3; 2.5% SOM: 5.6; 6% SOM: 13	<0.05	ALL	0 of 19	S4UL
Acenaphthylene	mg/kg	1% SOM: 170; 2.5% SOM: 420; 6% SOM: 920	<0.10	ALL	0 of 19	S4UL
Acenaphthene	mg/kg	1% SOM: 210; 2.5% SOM: 510; 6% SOM: 1100	<0.10	ALL	0 of 19	S4UL
Fluorene	mg/kg	1% SOM: 170; 2.5% SOM: 400; 6% SOM: 860	<0.10	ALL	0 of 19	S4UL
Phenanthrene	mg/kg	1% SOM: 95; 2.5% SOM: 220; 6% SOM: 440	<0.10	ALL	0 of 19	S4UL
Anthracene	mg/kg	1% SOM: 2400; 2.5% SOM: 5400; 6% SOM: 11000	<0.10	ALL	0 of 19	S4UL
Fluoranthene	mg/kg	1% SOM: 280; 2.5% SOM: 560; 6% SOM: 890	<0.10	ALL	0 of 19	S4UL
Pyrene	mg/kg	1% SOM: 620; 2.5% SOM: 1200; 6% SOM: 2000	<0.10	ALL	0 of 19	S4UL
Benzo(a)anthracene	mg/kg	1% SOM: 7.2; 2.5% SOM: 11; 6% SOM: 13	<0.10	ALL	0 of 19	S4UL
Chrysene	mg/kg	1% SOM: 15; 2.5% SOM: 22; 6% SOM: 27	<0.05	ALL	0 of 19	S4UL
Benzo(b)fluoranthene	mg/kg	1% SOM: 2.6; 2.5% SOM: 3.3; 6% SOM: 3.7	<0.10	ALL	0 of 19	S4UL
Benzo(k)fluoranthene	mg/kg	1% SOM: 77; 2.5% SOM: 93; 6% SOM: 100	<0.10	ALL	0 of 19	S4UL
Benzo(a)pyrene	mg/kg	1% SOM: 2.2; 2.5% SOM: 2.7; 6% SOM: 3.0	<0.10	ALL	0 of 19	S4UL
Indeno(1,2,3-cd)pyrene	mg/kg	1% SOM: 27; 2.5% SOM: 36; 6% SOM: 41	<0.10	ALL	0 of 19	S4UL
Dibenzo(a,h)anthracene	mg/kg	1% SOM: 0.24; 2.5% SOM: 0.28; 6% SOM: 0.30	<0.10	ALL	0 of 19	S4UL
Benzo(g,h,i)perylene	mg/kg	1% SOM: 320; 2.5% SOM: 340; 6% SOM: 350	<0.05	ALL	0 of 19	S4UL
Arsenic	mg/kg	37	22	TP21	0 of 19	S4UL
Boron (water soluble)	mg/kg	290	2.2	TP58	0 of 19	S4UL
Cadmium	mg/kg	11	0.5	TP21	0 of 19	S4UL
Chromium (total)	mg/kg	910	50	TP21	0 of 19	S4UL
Copper	mg/kg	2400	35	TP16	0 of 19	S4UL
Lead	mg/kg	200	31	TP63	0 of 19	C4SL
Elemental Mercury	mg/kg	1.2	<0.3	ALL	0 of 19	S4UL
Nickel	mg/kg	130	69	TP20	0 of 19	S4UL
Selenium	mg/kg	250	<1.0	ALL	0 of 19	S4UL
Zinc	mg/kg	3700	84	TP16	0 of 19	S4UL
Total TPH	mg/kg	10	<10	ALL	0 of 19	Screening Value

Key:

1. S4UL = Suitable for Use Level
2. C4SL = Category 4 Screening Level
3. Screening Value = Laboratory detectable level of Total TPH. If detectable levels of TPH are recorded, speciated TPH analysis is undertaken.

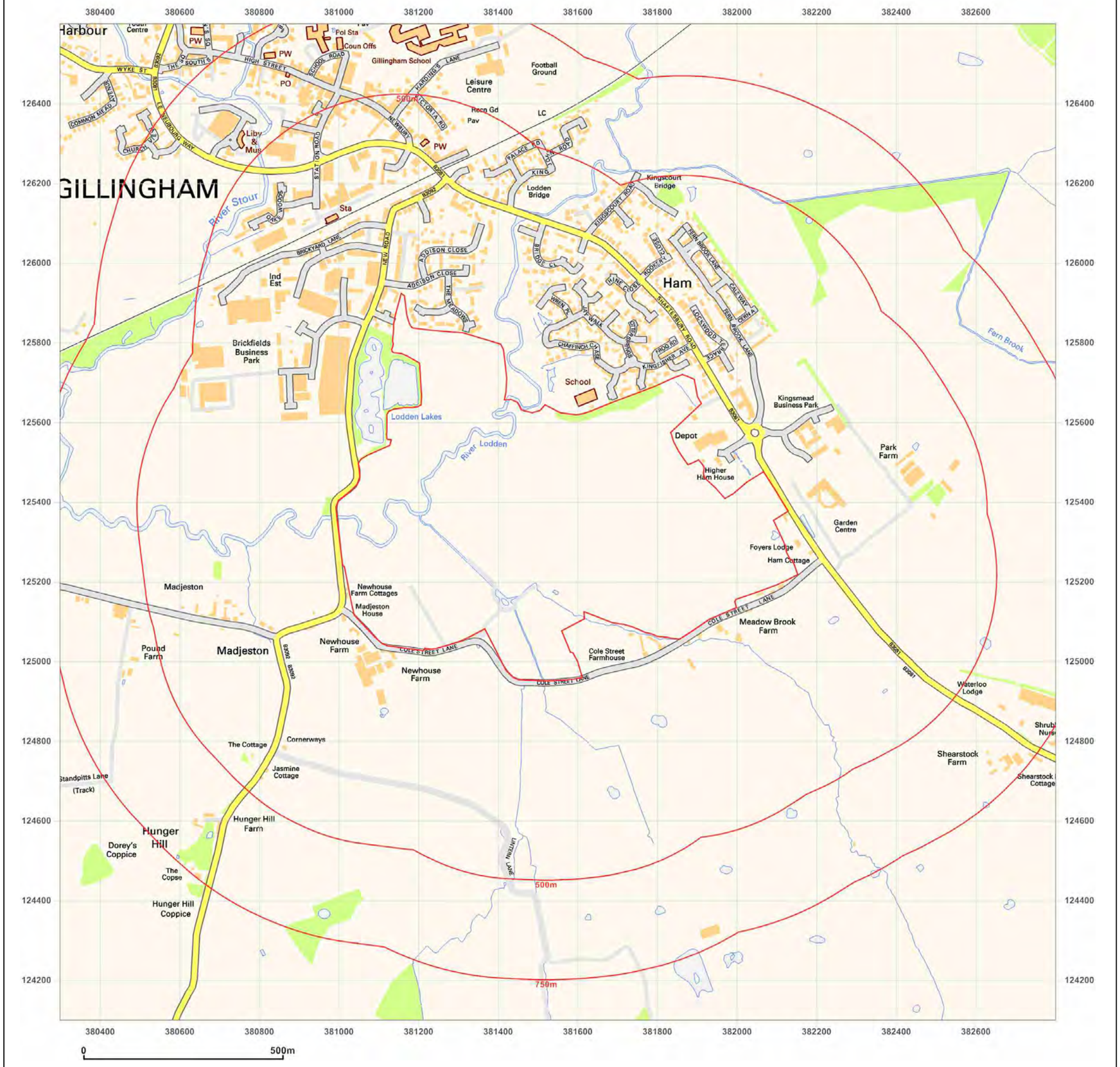
Notes:

1. *Italic* entries indicate GAC exceeded.
2. Based on a sandy loam soil, as defined in SR3 (Environment Agency (2009): Updated Technical background to the CLEA Model) and 6% SOM (unless otherwise stated).
3. S4ULs for phenols, polyaromatic hydrocarbons and total petroleum hydrocarbons will vary according to SOM for all land uses.
4. Values are rounded to two significant figures.
5. S4ULs assume that free phase contamination is not present.
6. S4ULs are based on a sub-surface soil to indoor air correction factor of 1.
7. For naphthalene, the S4UL is based on a comparison of inhalation exposure with the TDI_{inhal} for localised effects.
8. For chromium (VI), the S4UL is based on comparison of inhalation exposure with inhalation ID.
9. Exposure to all xylene isomers should be considered together, because the HCV is based on the intake of total xylene and not an individual isomer in isolation.

APPENDIX D

DESK STUDY INFORMATION

HISTORICAL ORDNANCE SURVEY MAPS



GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: National Grid

Map date: **2012**

Scale: 1:10,000

Printed at: 1:10,000

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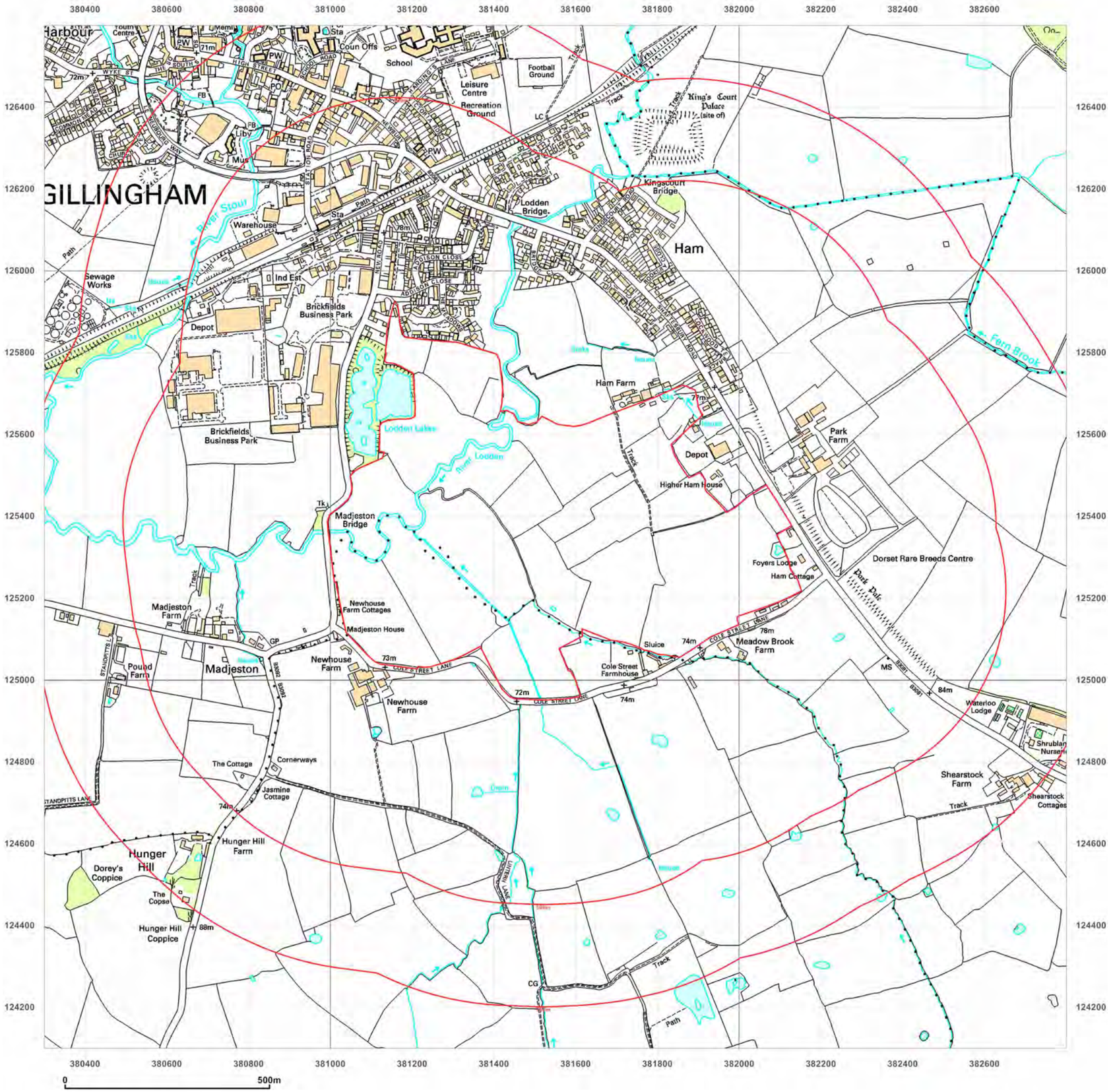
Ordnance Survey Licensed Partner

Produced by
GroundSure Environmental Insight
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

Production date: 05 March 2014

To view map legend click here *Legend*



GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

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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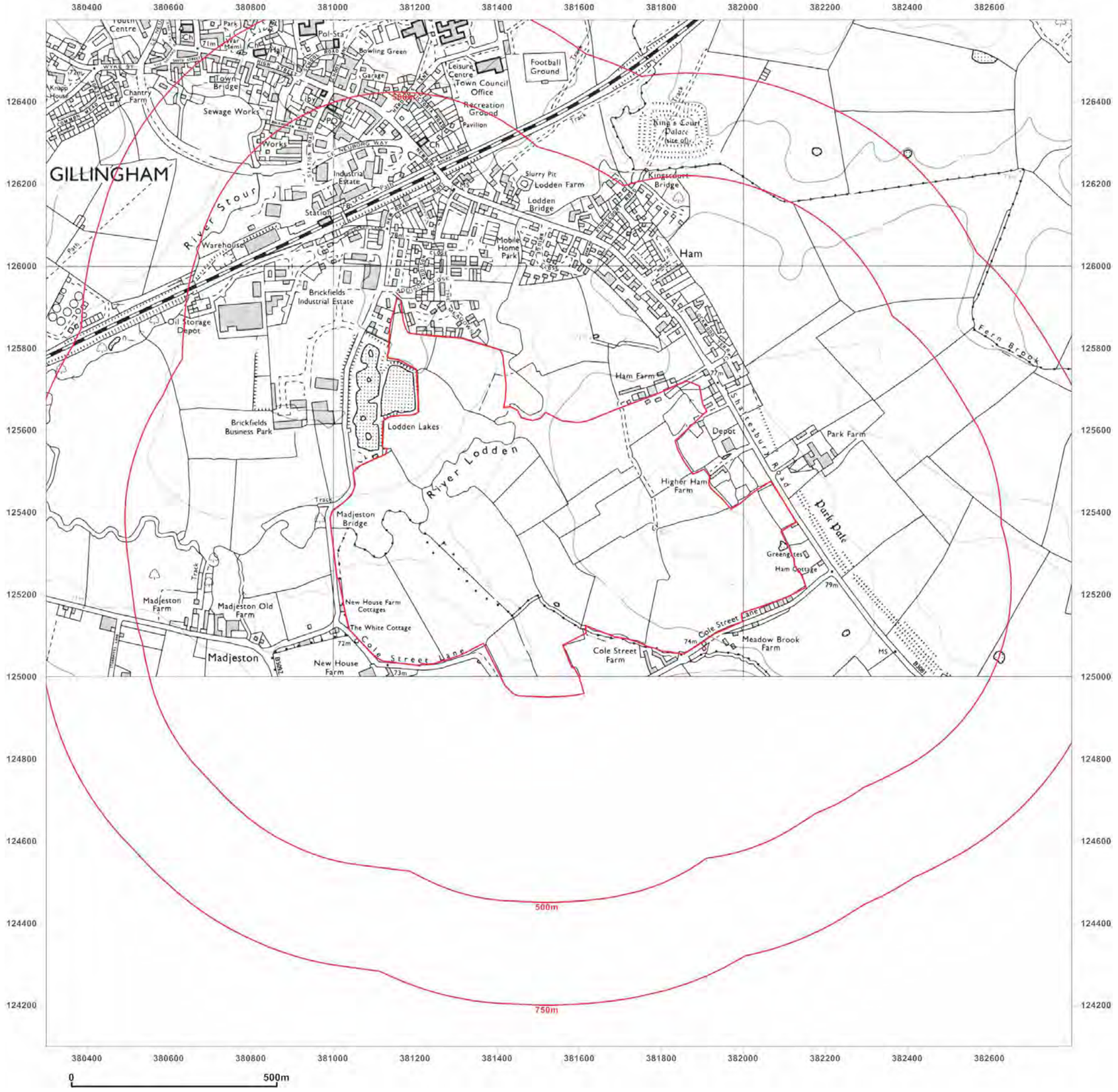

GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY
ROAD,GILLINGHAM,DORSET,
SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: National Grid

Map date: **1992**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1981
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

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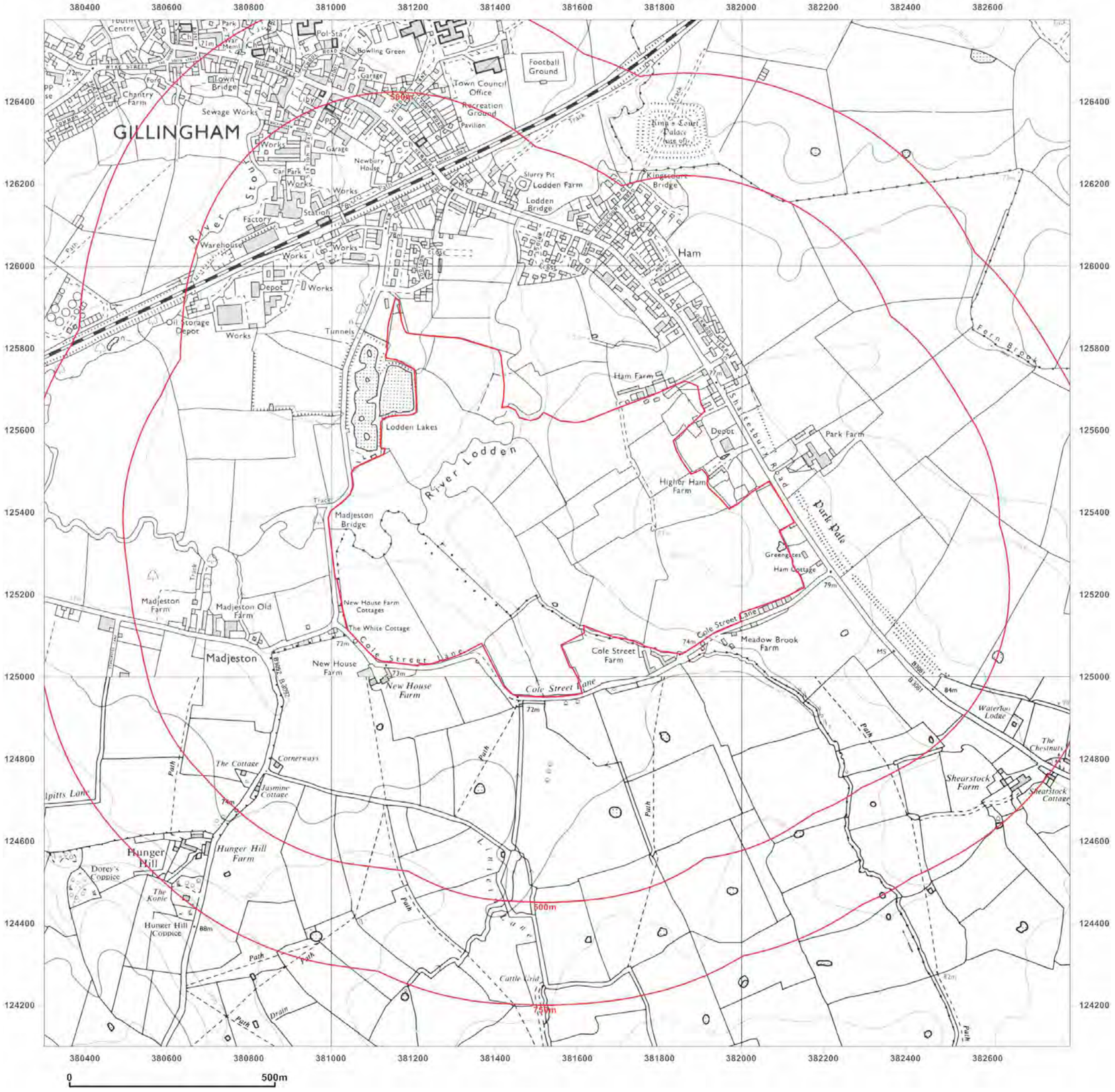
Production date: 05 March 2014

To view map legend click here *Legend*



GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY
ROAD,GILLINGHAM,DORSET,
SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: National Grid

Map date: **1983-1988**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1981
Revised 1983
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1965
Revised 1988
Edition N/A
Copyright N/A
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Production date: 05 March 2014

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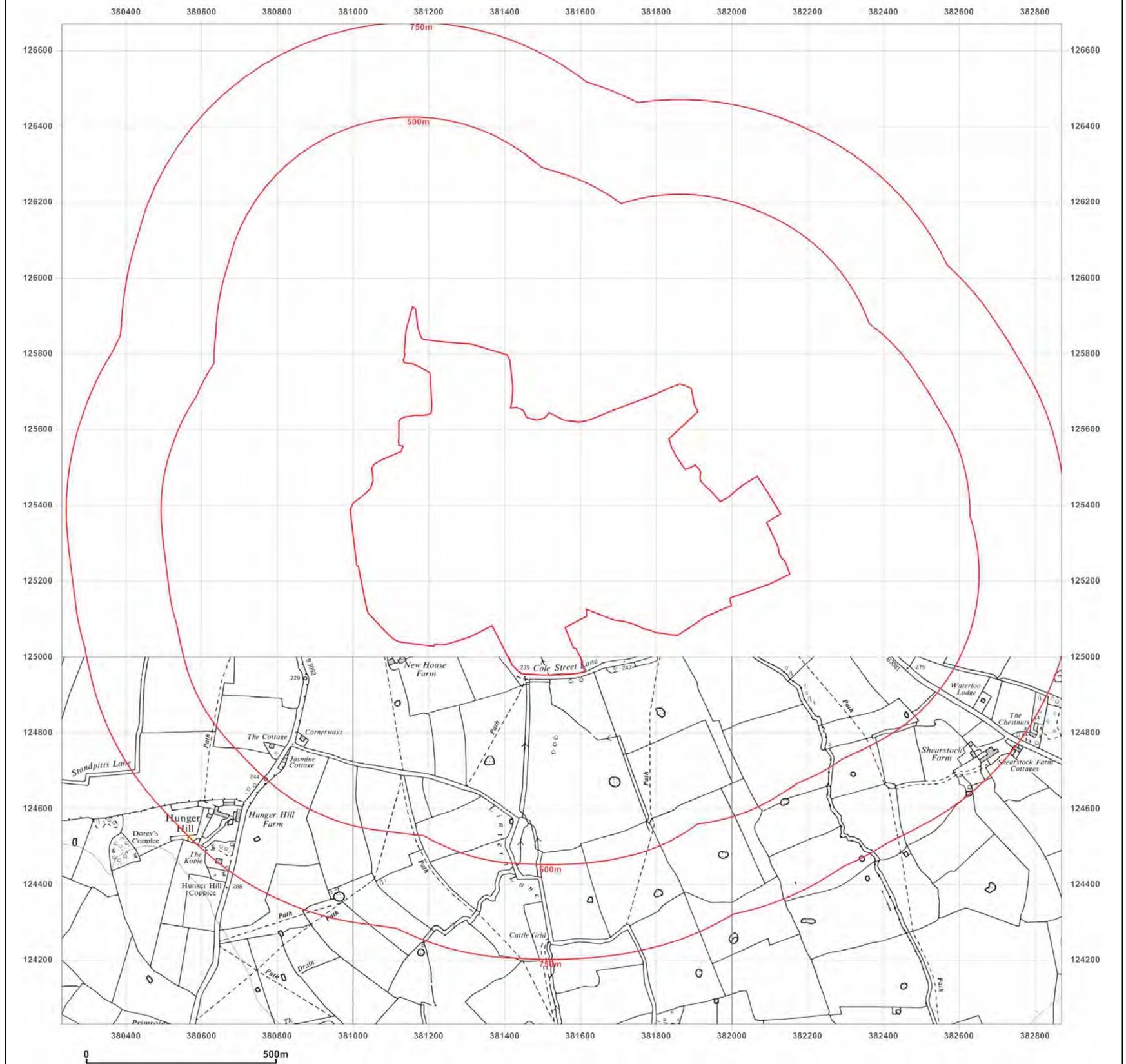

GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY
ROAD,GILLINGHAM,DORSET,
SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: Provisional

Map date: **1968**

Scale: 1:10,560

Printed at: 1:10,560

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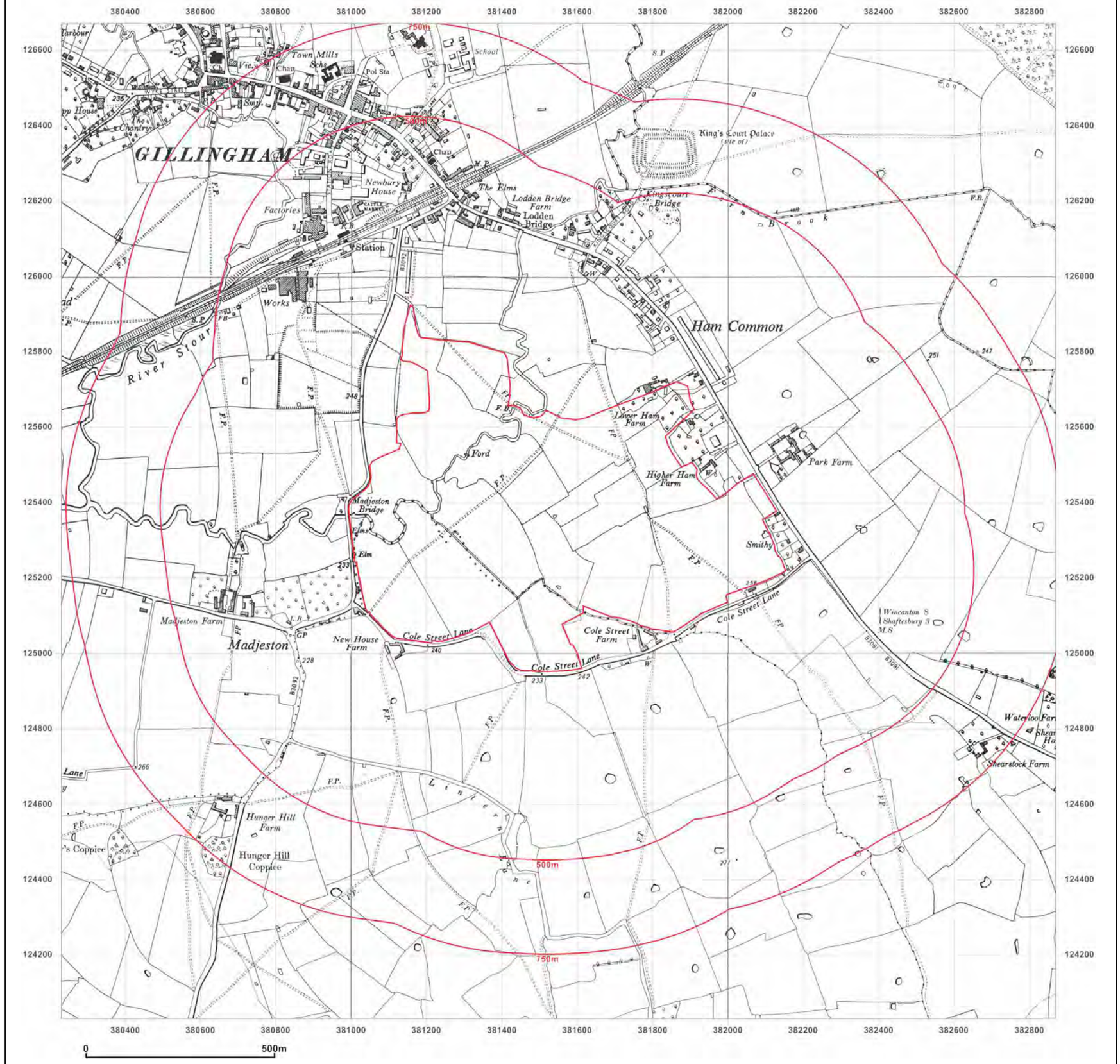
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

Production date: 05 March 2014

To view map legend click here *Legend*



GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY
ROAD,GILLINGHAM,DORSET,
SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: Provisional

Map date: **1956**

Scale: 1:10,560

Printed at: 1:10,560

N
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S

Surveyed 1956
Revised 1956
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1956
Revised 1956
Edition N/A
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Production date: 05 March 2014

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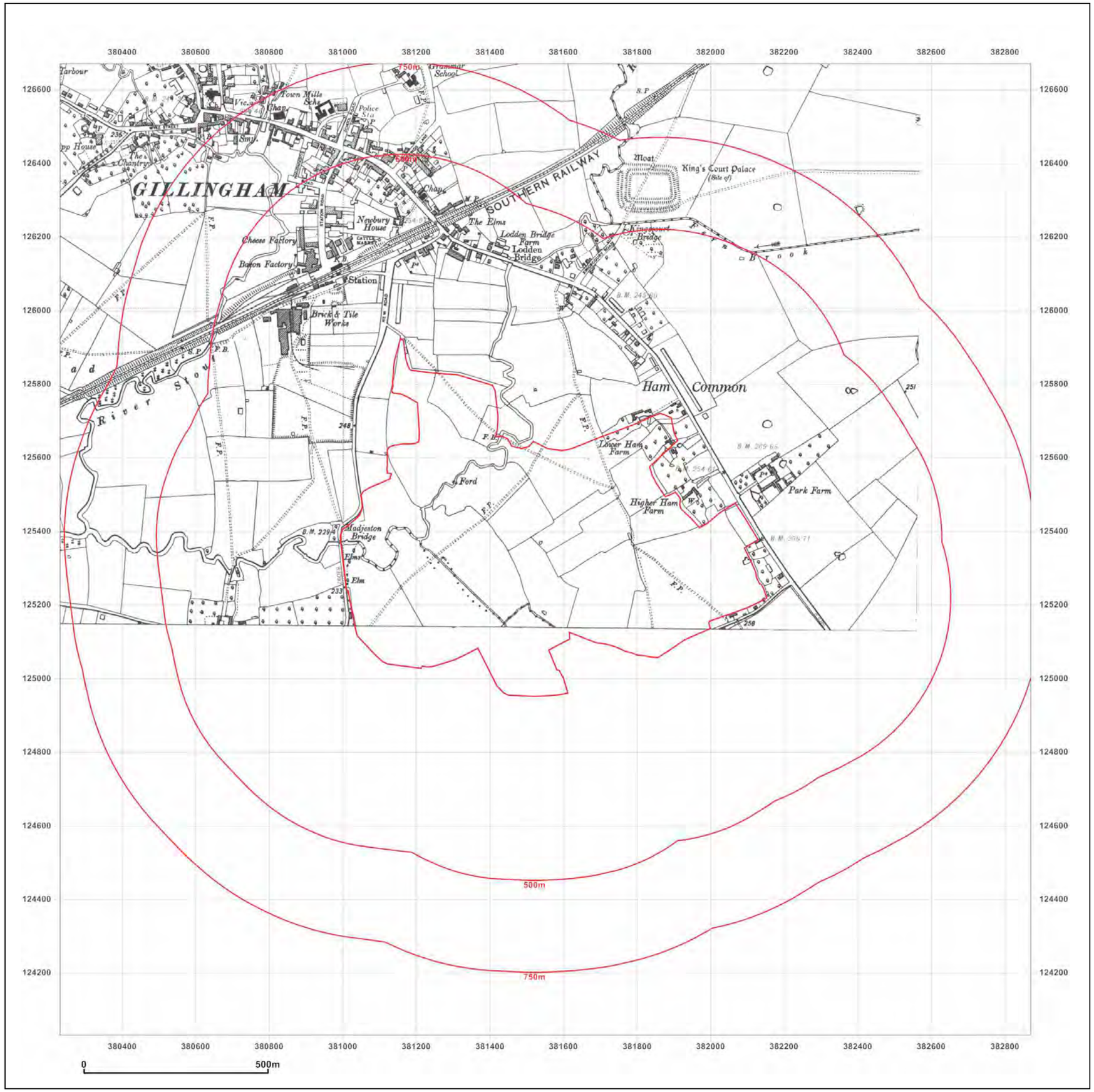

GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1938
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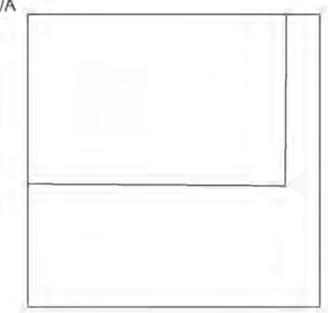

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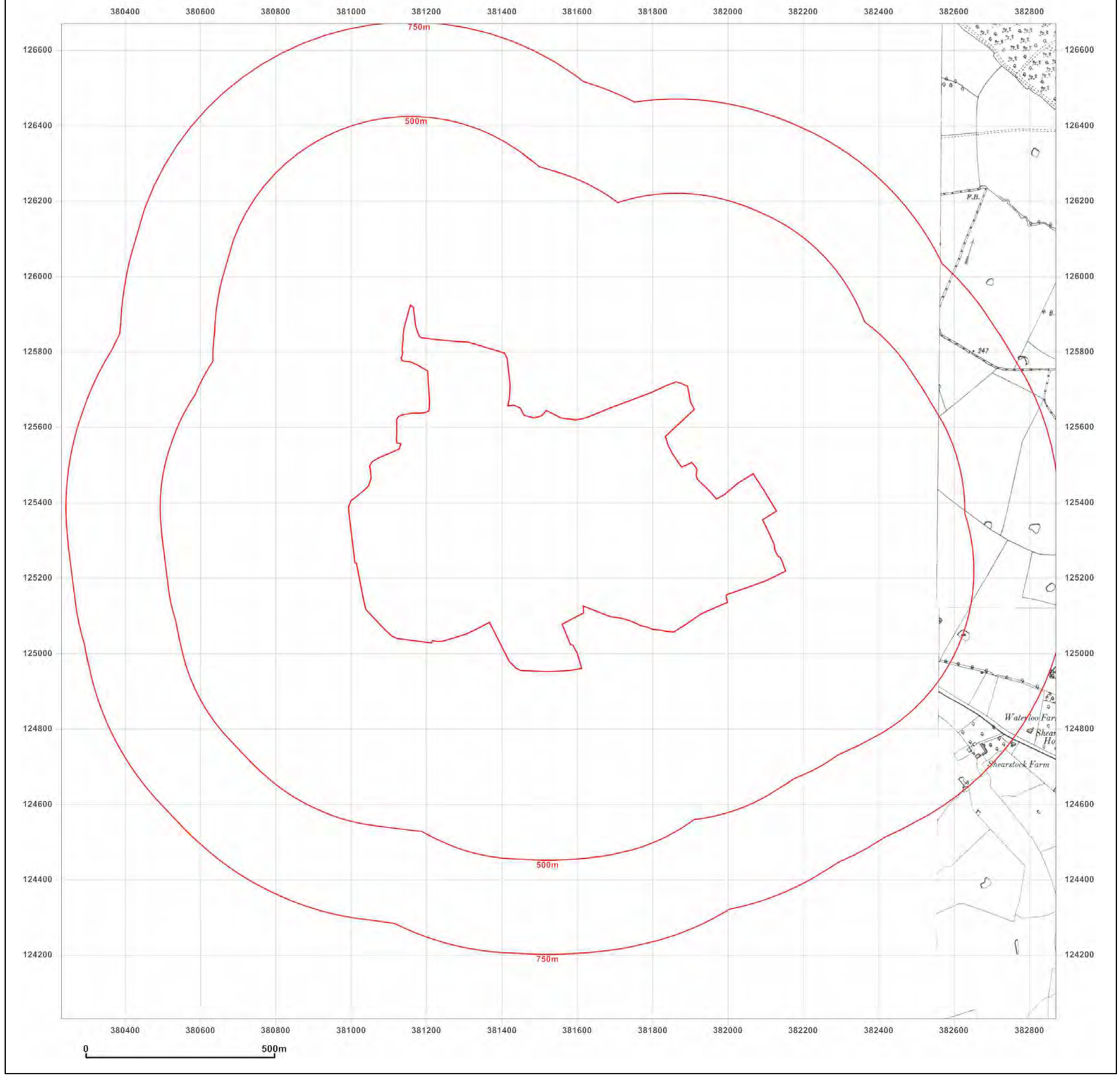

GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY
ROAD,GILLINGHAM,DORSET,
SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: County Series

Map date: **1930-1931**

Scale: 1:10,560

Printed at: 1:10,560

N
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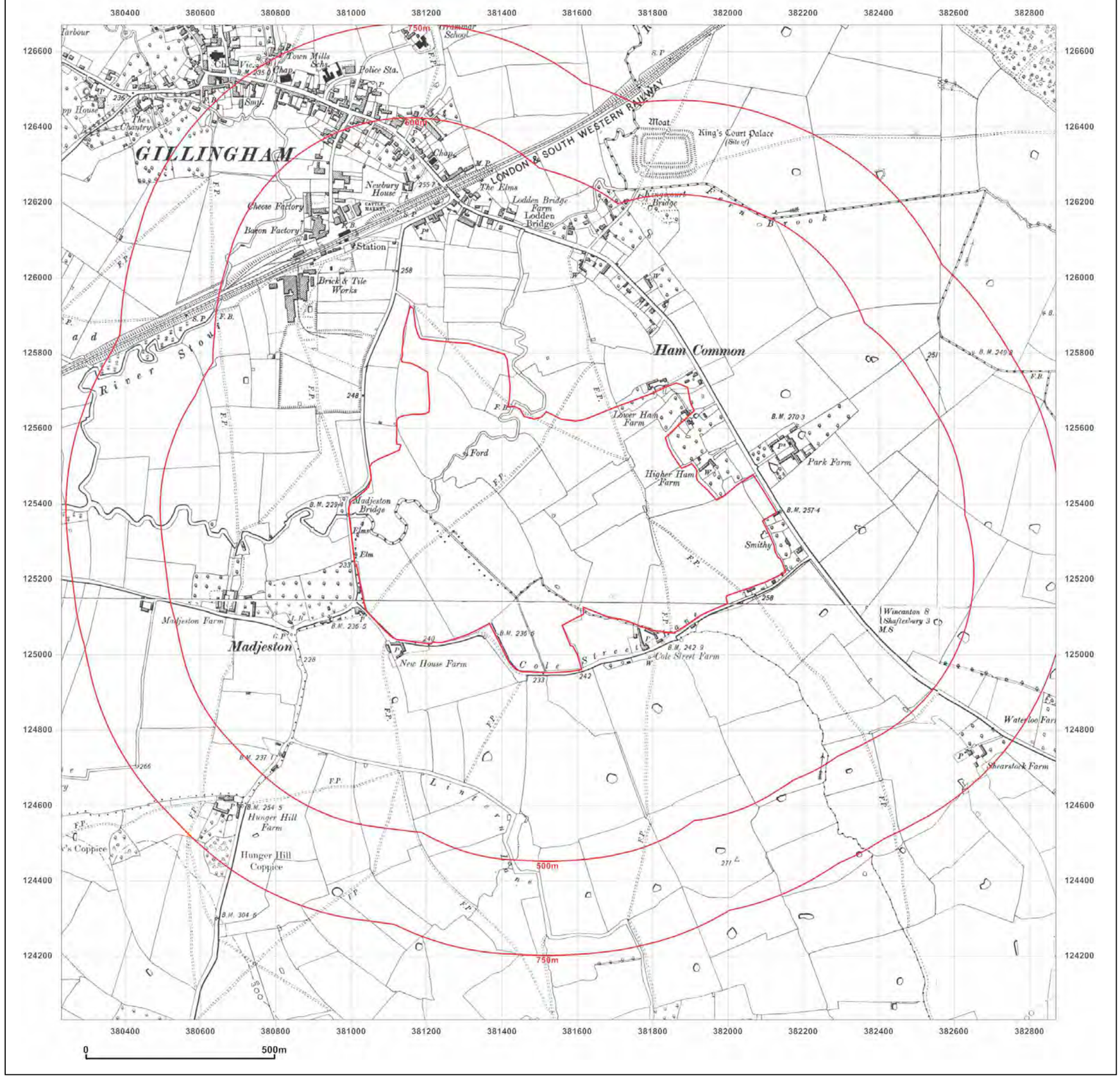

GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: County Series

Map date: **1900-1902**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1885
Revised 1900
Edition N/A
Copyright N/A
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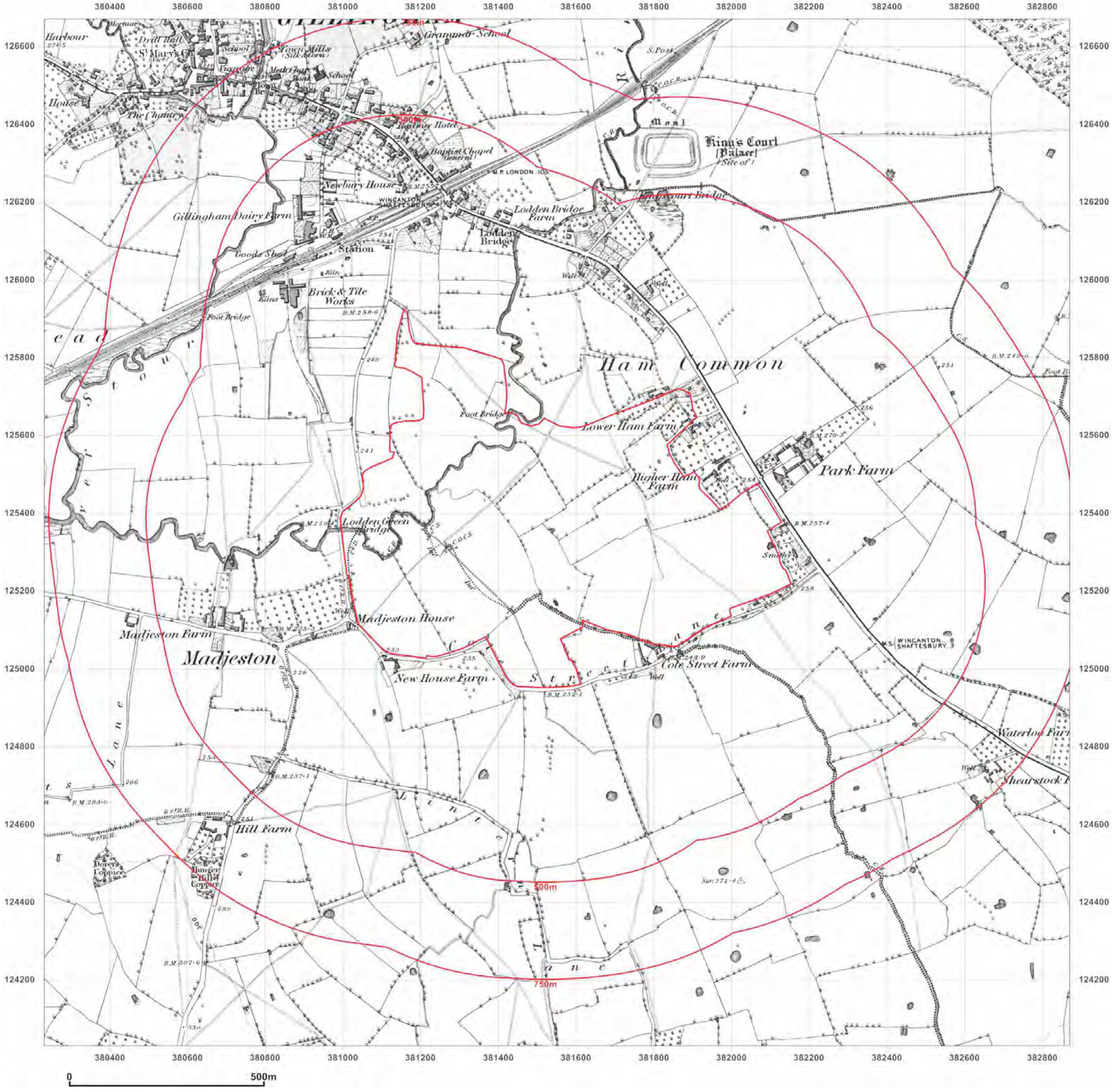

GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: County Series

Map date: **1890**

Scale: 1:10,560

Printed at: 1:10,560

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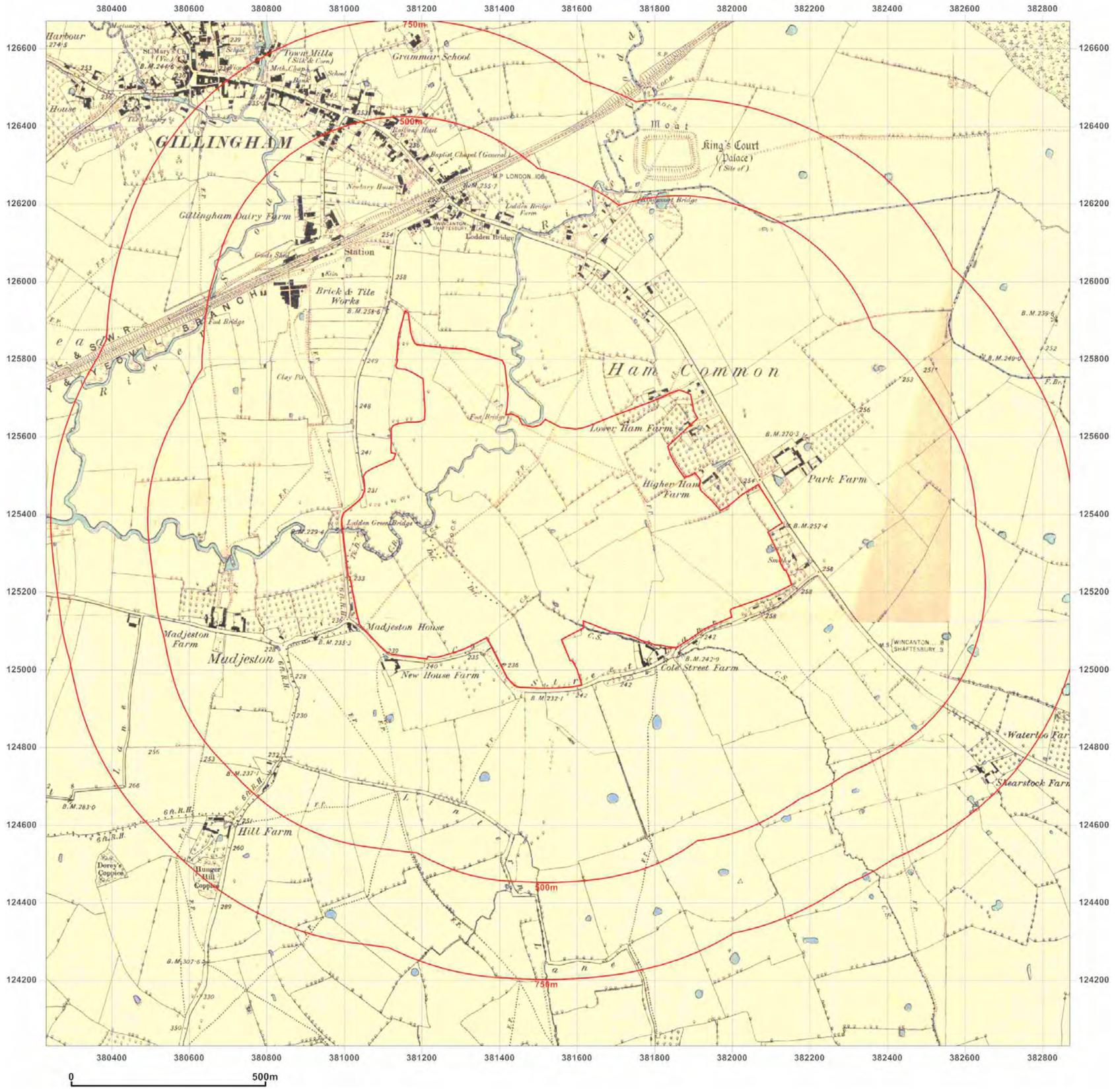

GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

SHAFTESBURY
ROAD,GILLINGHAM,DORSET,
SP8 4LL

Client Ref: 14114
Report Ref: HMD-411-1324029
Grid Ref: 381550, 125350

Map Name: County Series

Map date: **1886**

Scale: 1:10,560

Printed at: 1:10,560

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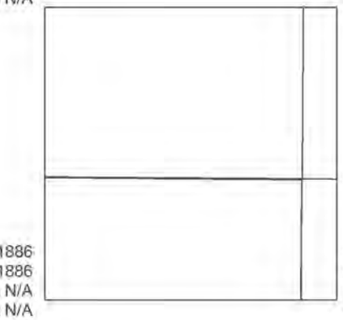
Revised 1886
Edition N/A
Copyright N/A
Levelled N/A



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Edition N/A
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Production date: 05 March 2014

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GEOLOGICAL INFORMATION

Ruddlesden Geotechnical

65, Langaton Lane,
Exeter, EX1 3SP

GroundSure Reference:	HMD-411-1324031
Your Reference:	14114
Report Date	4 Mar 2014
Report Delivery Method:	Email - pdf

GroundSure Geoinsight

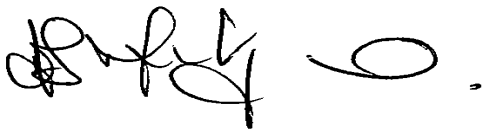
Address: SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL

Dear Sir/ Madam,

Thank you for placing your order with GroundSure. Please find enclosed the **GroundSure GeoInsight** 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,



Managing Director
Groundsure Limited

Enc.
GroundSure GeoInsight

GroundSure GeoInsight

Address:	**SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL**
Date:	**4 Mar 2014**
Reference:	**HMD-411-1324031**
Client:	**Ruddlesden Geotechnical**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	08-Oct-2009
Grid Reference:	381745,125252
Site Size:	62.50ha

Contents Page

Overview of Findings

The GroundSure GeoInsight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and GroundSure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the 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: Geology		
1.1 Artificial Ground	1.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?	Yes
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	Yes
	1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	1.2.4 Are there any records relating to permeability of landslips within the study site boundary?	No
1.3 Bedrock, Solid Geology & Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records relating to permeability of bedrock within the study site boundary?	Yes
	1.3.3 Are there any records of faults within 500m of the study site boundary?	Yes
1.4 Radon data	1.4.1 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
	1.4.2 Is the property in an area where Radon Protection Measures 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 2: Ground Workings	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	2	4	17	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	1	0	0
2.3 Current Ground Workings	0	0	0	1	2

Section 3:Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining	0	0	0	0	0
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0

Section 4:Natural Ground Subsidence	On-site
4.1 Shrink Swell Clay	Low
4.2 Landslides	Very Low
4.3 Ground Dissolution of Soluble Rocks	Null
4.4 Compressible Deposits	Moderate
4.5 Collapsible Deposits	Very Low
4.6 Running Sand	Low

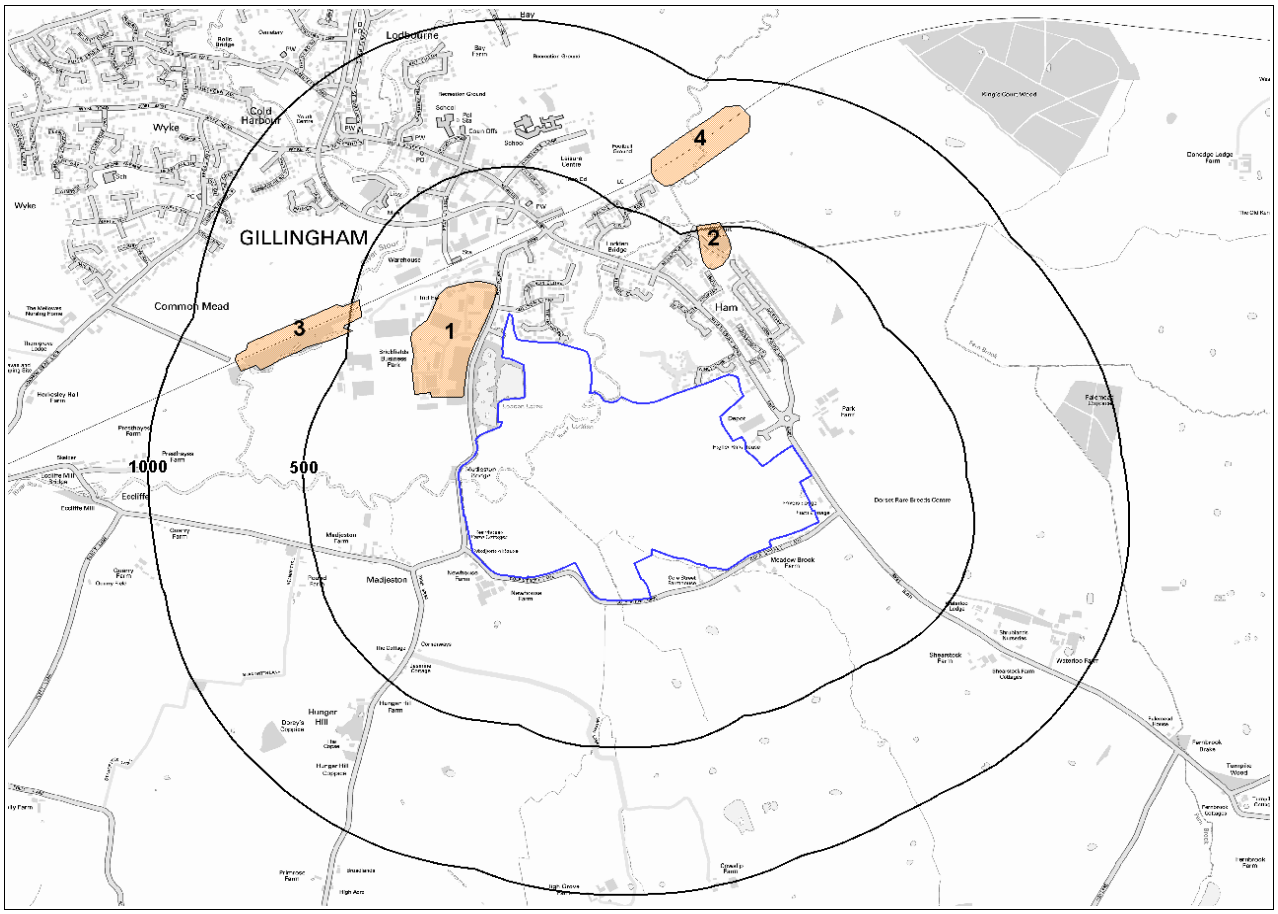
Section 5:Borehole Records	On-site	0-50m	51-250
5 BGS Recorded Boreholes	0	0	2

Section 6:Estimated Background Soil Chemistry	On-site	0-50m	51-250
6 Records of Background Soil Chemistry	21	4	24

1 Geology

1.1 Artificial Ground Map

NW N NE



W E

SW S SE

Artificial Ground Legend

Mapping sourced from Ordnance Survey®

Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

1 Geology

1.1 Artificial Ground

1.1.1Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:297

Are there any records of Artificial/Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	64.0	W	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	359.0	N	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	464.0	W	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

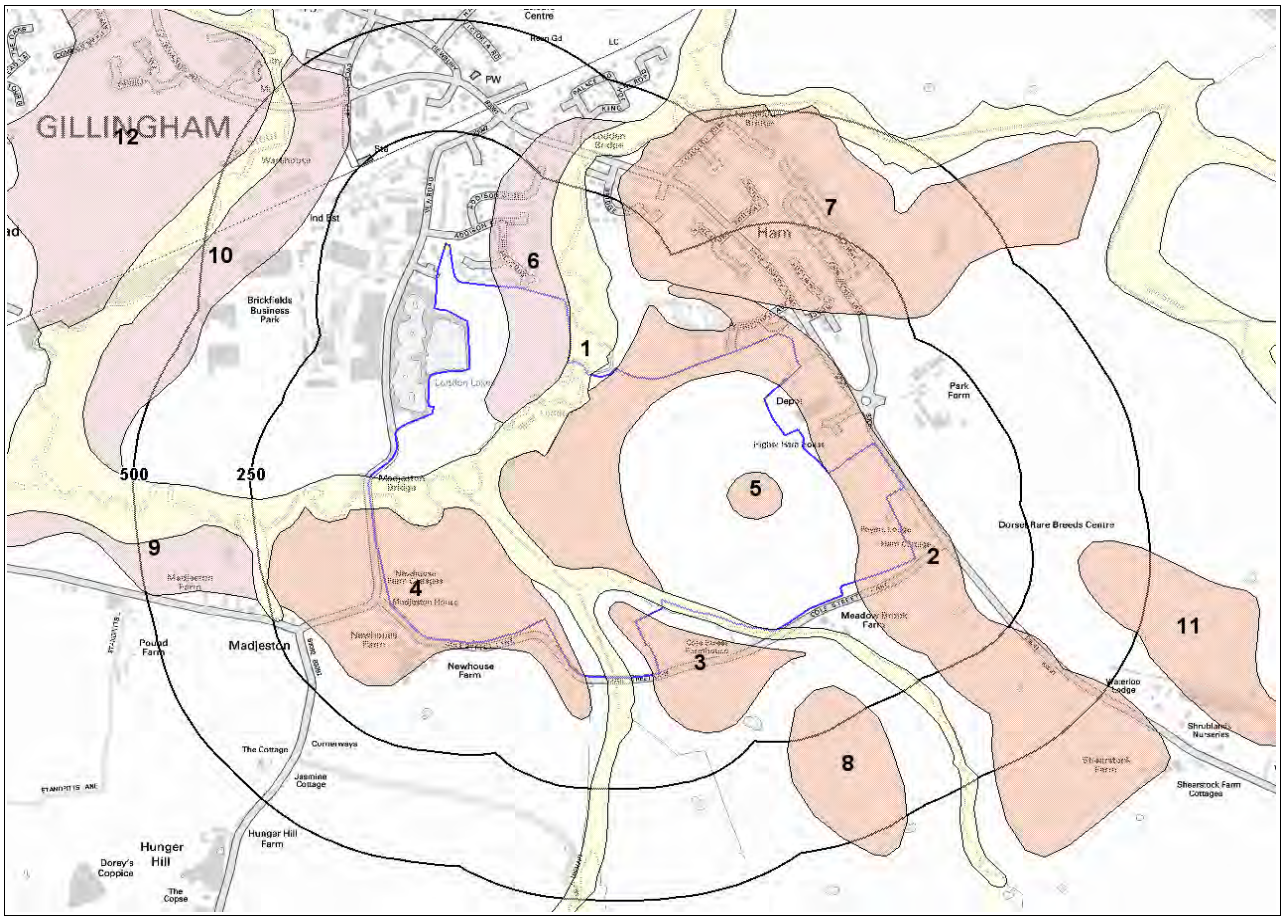
Database searched and no data found.

1.2 Superficial Deposits and Landslips Map

NW N NE

W E

SW S SE



Superficial Deposits and Landslips Legend

Mapping sourced from Ordnance Survey

Site Outline

500
1000
Search Buffers (m)

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	ALV-CSSG	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	0.0	On Site	HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
3	0.0	On Site	HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
4	0.0	On Site	HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
5	0.0	On Site	HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
6	0.0	On Site	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
7	62.0	N	HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
8	157.0	SE	HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
9	262.0	W	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
10	284.0	NW	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
11	345.0	E	HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
12	467.0	NW	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Very Low
0.0	On Site	Mixed	High	Very Low
0.0	On Site	Mixed	High	Very Low
0.0	On Site	Mixed	High	Very Low
0.0	On Site	Mixed	High	Very Low
0.0	On Site	Mixed	High	Very Low
0.0	On Site	Intergranular	High	Very Low
0.0	On Site	Intergranular	High	Very Low
0.0	On Site	Mixed	High	Very Low
39.0	S	Mixed	High	Very Low

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.2.4 Landslip Permeability

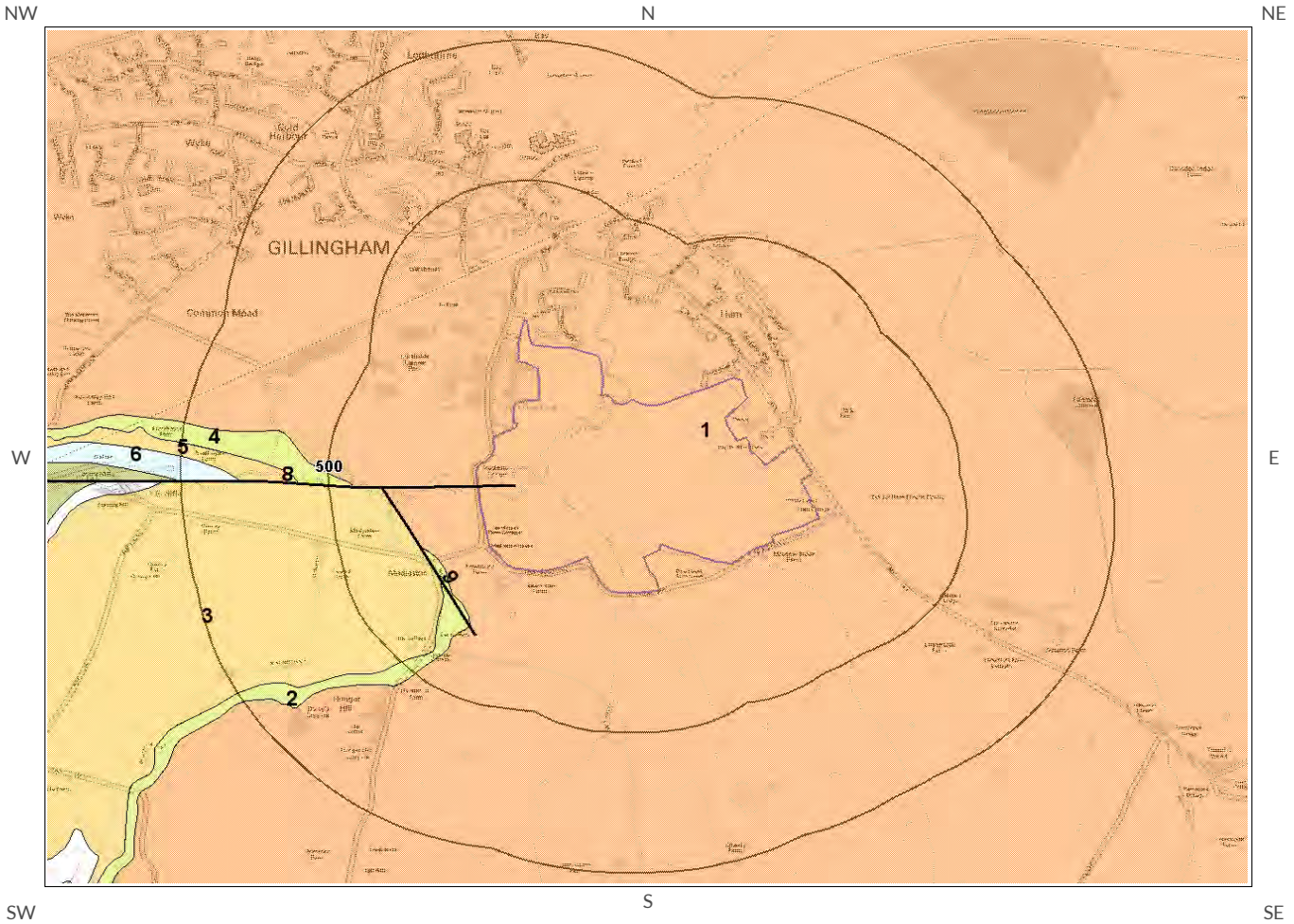
Are there any records relating to permeability of landslips within the study site* boundary? No

Database searched and no data found.

---

* This includes an automatically generated 50m buffer zone around the site

1.3 Bedrock and Faults Map



Bedrock and Faults Legend

Mapping sourced from Ordnance Survey

Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:297

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/ Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	KC-MDST	Kimmeridge Clay Formation - Mudstone	Kimmeridgian
2	172.0	SW	SFG-SDAR	Sandsfoot Grit Member - Interbedded Sandstone And [subequal/subordinate] Argillaceous Rocks	Oxfordian
3	203.0	SW	ECC-OOLM	Eccliffe Member - Ooidal Limestone	Oxfordian
4	419.0	W	SFG-SDAR	Sandsfoot Grit Member - Interbedded Sandstone And [subequal/subordinate] Argillaceous Rocks	Oxfordian

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Very Low
0.0	On Site	Fracture	Low	Very Low

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	Category Description	Feature Description
8	0.0	On Site	FAULT	Normal fault, inferred
9	203.0	SW	FAULT	Normal fault, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

* This includes an automatically generated 50m buffer zone around the site

1.4 Radon Data

1.4.1 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

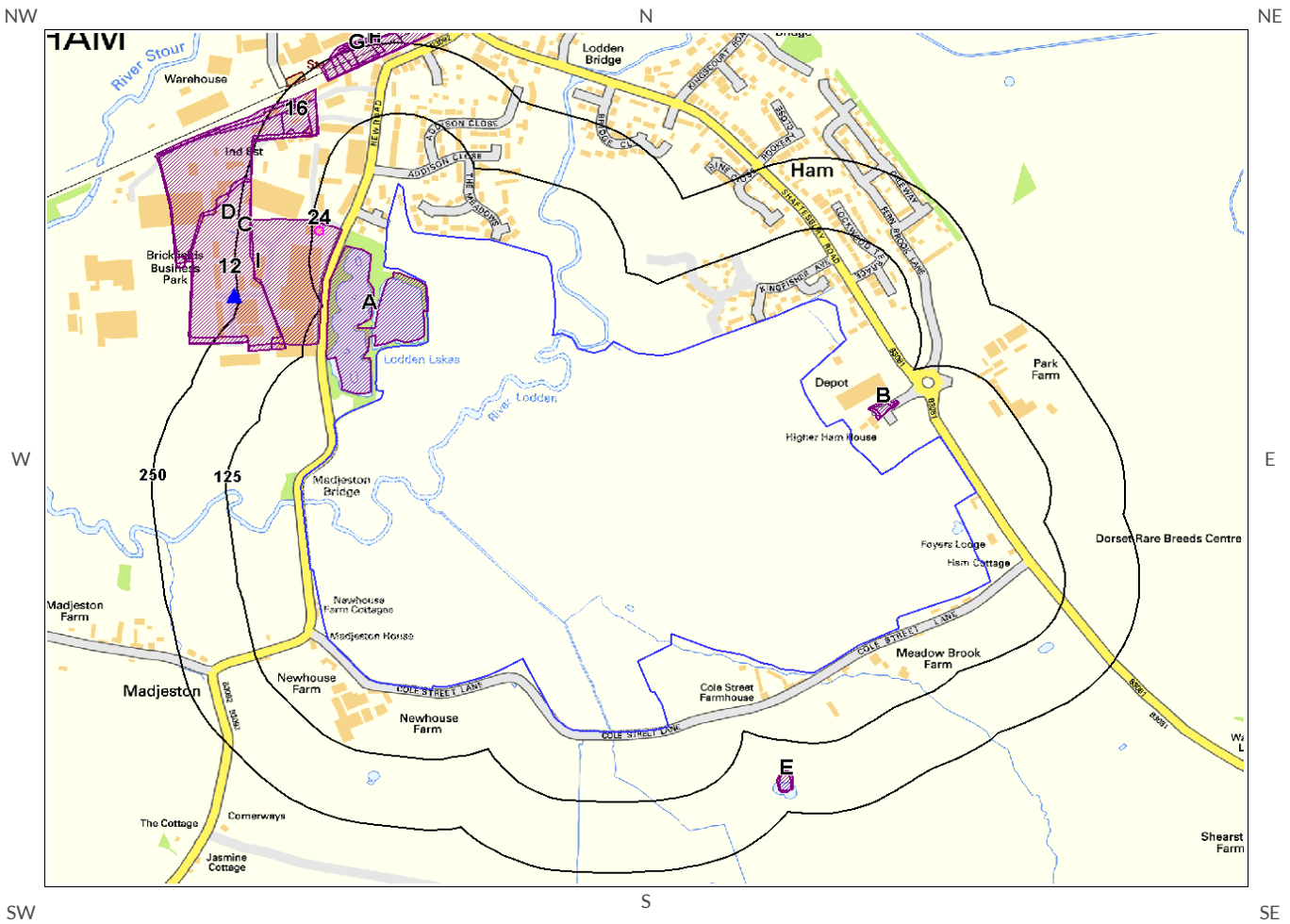
---

1.4.2 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

---

2 Ground Workings Map



Ground Workings Legend

Mapping sourced from Ordnance Survey®

Site Outline

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on GroundSure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
1A	0.0	On Site	381121 125684	Lakes	1983
2A	0.0	On Site	381121 125684	Lakes	1992
3B	44.0	NE	381971 125521	Ponds	1938
4B	44.0	NE	381971 125521	Ponds	1886
5B	50.0	NE	381973 125526	Ponds	1886
6B	50.0	NE	381973 125526	Ponds	1886
7I	75.0	W	380933 125787	Unspecified Pit	1938
8C	75.0	W	380907 125857	Brick and Tile Works	1938
9D	152.0	NW	380886 125860	Brick and Tile Works	1886
10C	152.0	NW	380886 125860	Brick and Tile Works	1886
11D	162.0	NW	380883 125852	Brick and Tile Works	1886
12	163.0	W	380883 125779	Clay Pit	1886
13E	178.0	S	381808 124865	Pond	1886
14E	178.0	S	381808 124865	Pond	1886
15E	179.0	S	381805 124864	Pond	1886
16	181.0	NW	380984 126034	Unspecified Pit	1938
17F	216.0	NW	381143 126172	Cuttings	1886
18F	216.0	NW	381143 126172	Cuttings	1886
19G	216.0	NW	381088 126150	Cuttings	1956
20G	217.0	NW	381066 126147	Cuttings	1983
21H	218.0	NW	381240 126218	Cuttings	1886

ID	Distance (m)	Direction	NGR	Use	Date
22G	224.0	N	381095 126160	Cuttings	1938
23H	247.0	N	381198 126203	Cuttings	1956

2.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the GroundSure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
24	106.0	W	381024 125842	Tunnels	1983

2.3 Current Ground Workings

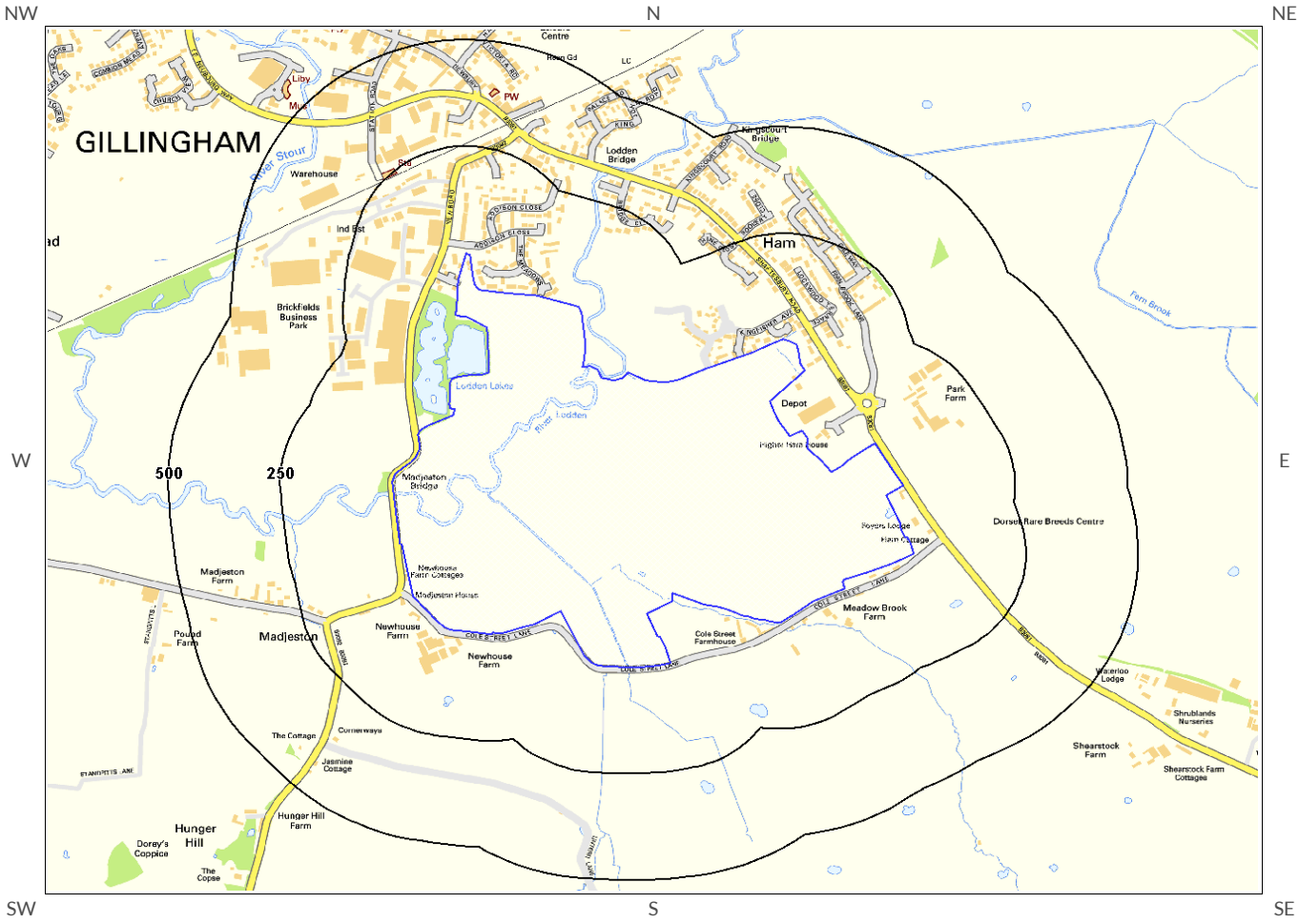
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
25I	258.0	W	380880 125726	Clay & Shale	Gillingham Brick & Tile Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	676.0	SW	380416 124852	Limestone	Standpitts Lane	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	997.0	SW	380147 124669	Limestone	Standpits Lane	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

3 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend

Site Outline

250
500
Search Buffers (m)

Historical Mining

Non-Coal Mining Cavities

Natural Cavities

Non-Coal Mining

Highly likely

Likely

Unlikely

Highly unlikely

Rare

3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from GroundSure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

3.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled "Review of mining instability in Great Britain, 1990" PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.7 Brine Extraction

This dataset provides information from the Brine Compensation Board which has been discontinued and is now covered by the Coal Authority.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level.

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.10 Clay Mining

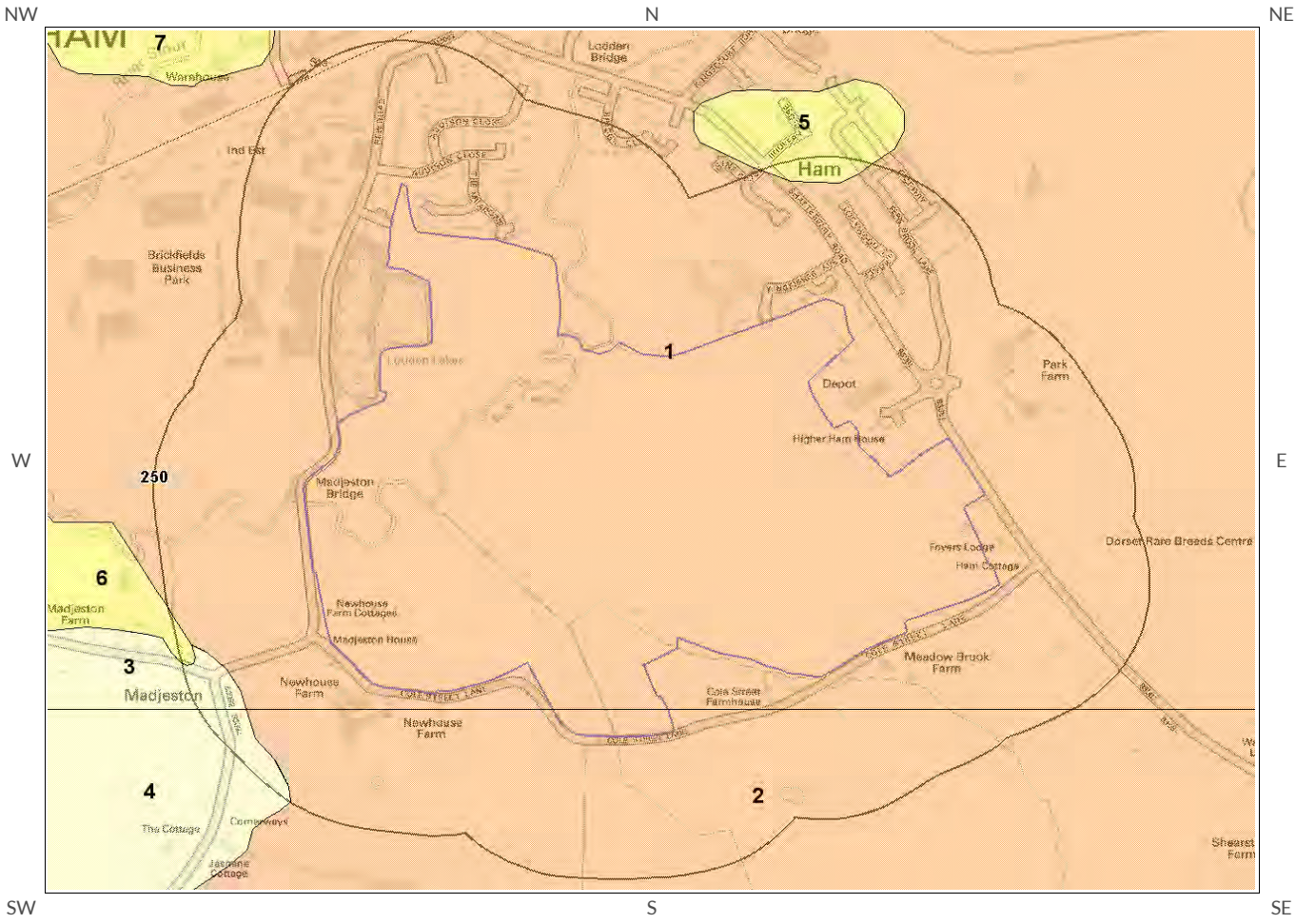
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

4 Natural Ground Subsidence

4.1 Shrink-Swell Clay Map



Shrink Swell Clay Legend

Mapping sourced from Ordnance Survey®

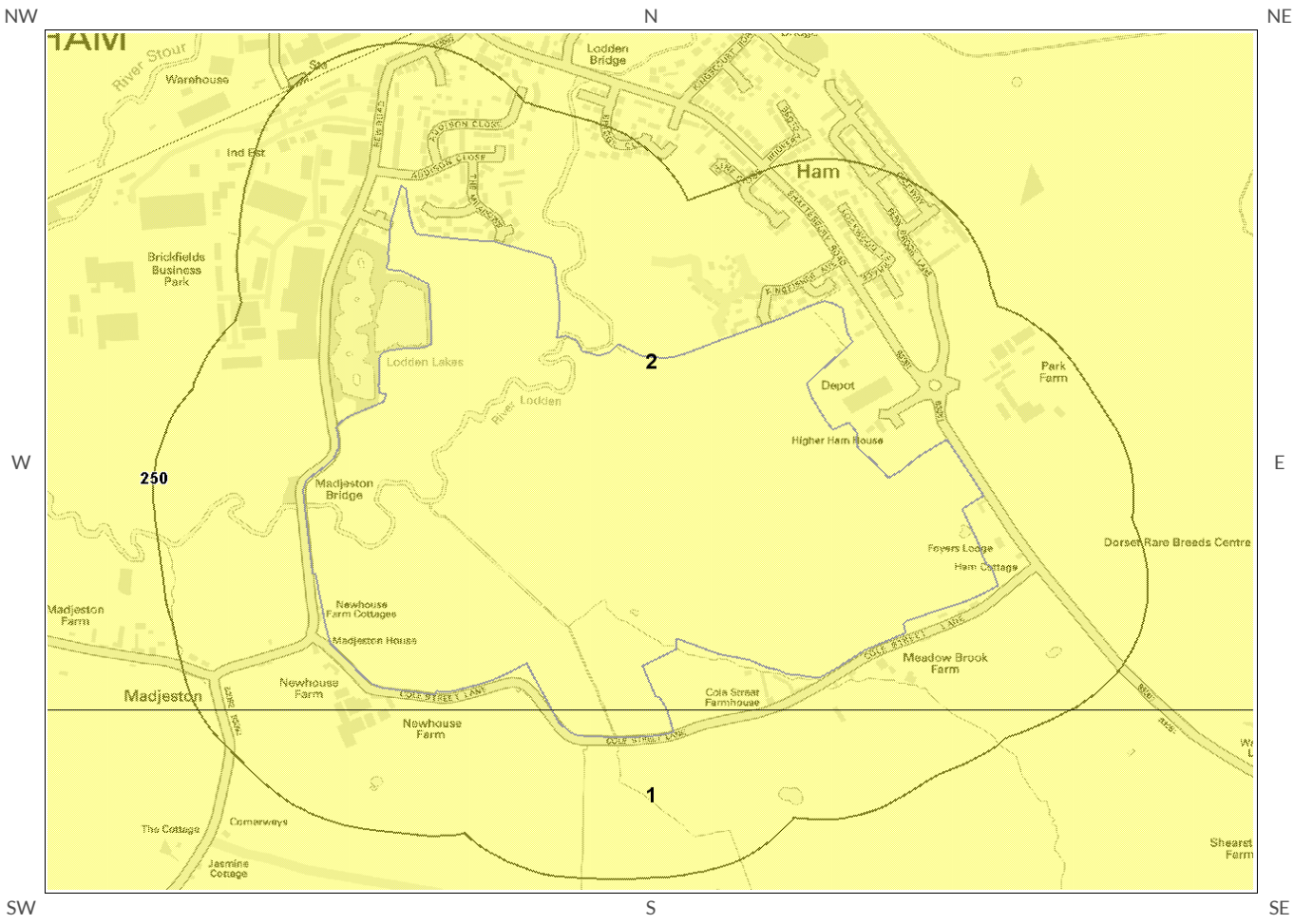
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

4.2 Landslides Map



Landslides Legend

Mapping sourced from Ordnance Survey

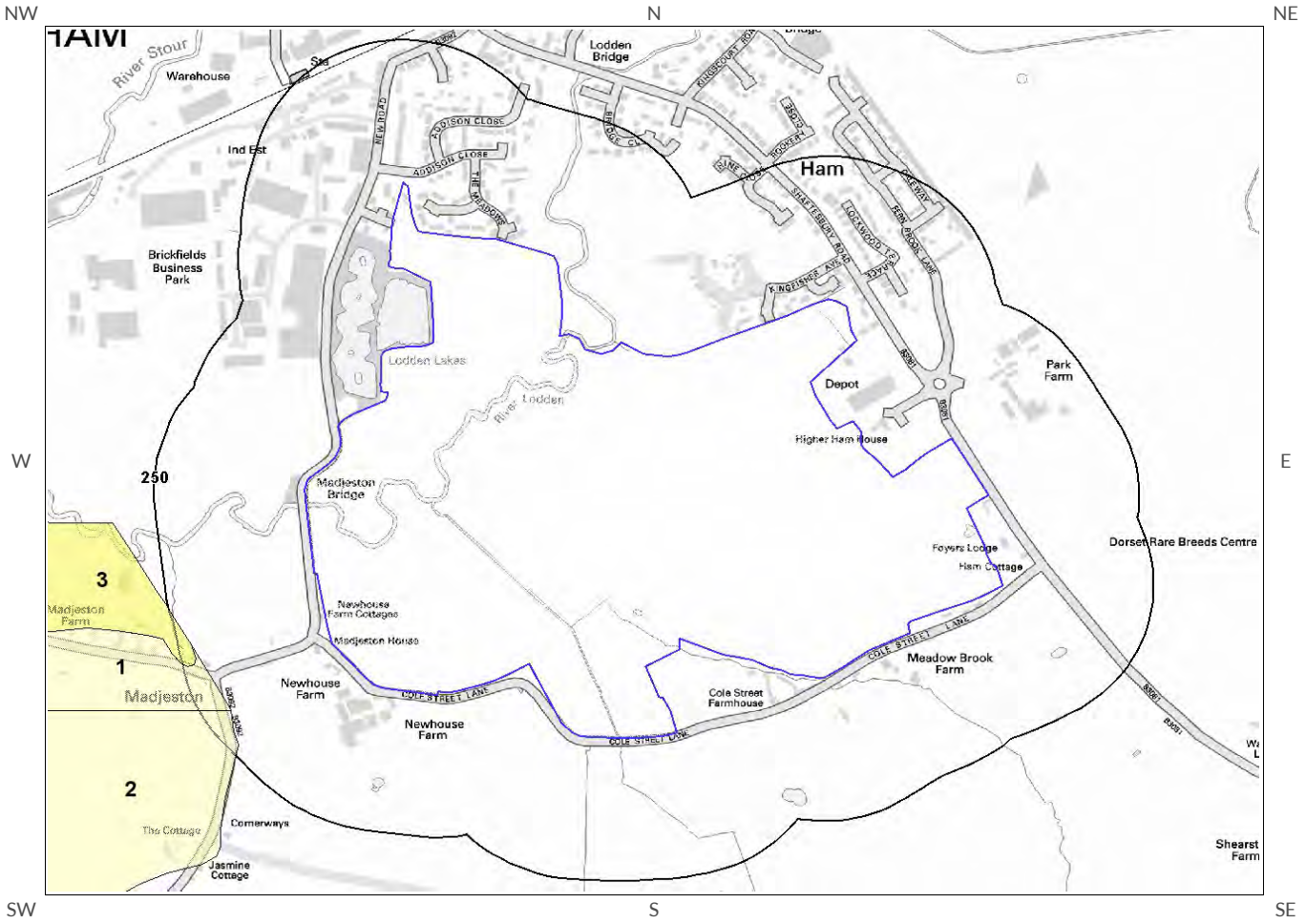
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

4.3 Ground Dissolution Soluble Rocks Map



Ground Dissolution Soluble Rocks Legend

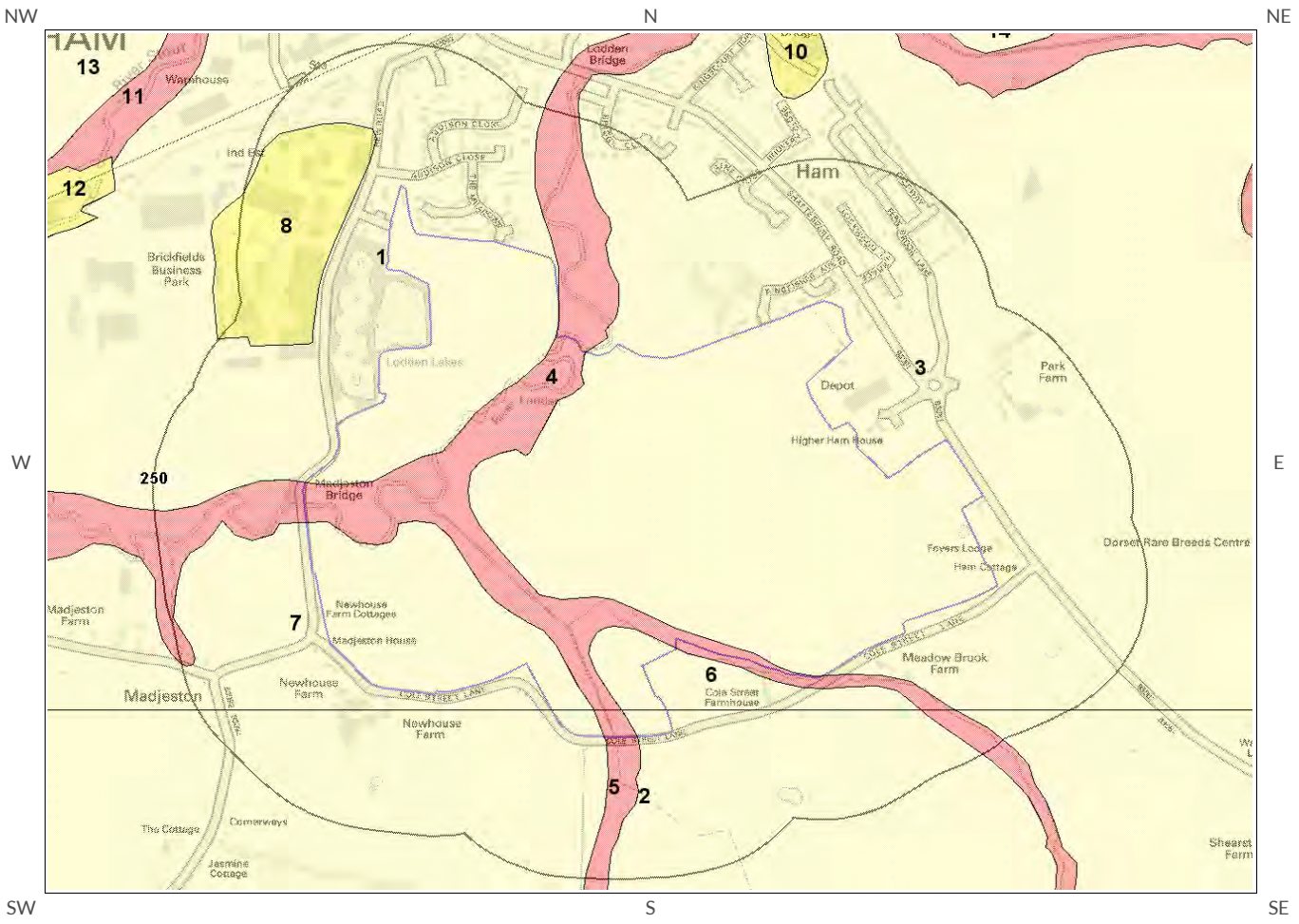
Mapping sourced from Ordnance Survey

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low
Low
Moderate
High

4.4 Compressible Deposits Map



Compressible Deposits Legend

Mapping sourced from Ordnance Survey

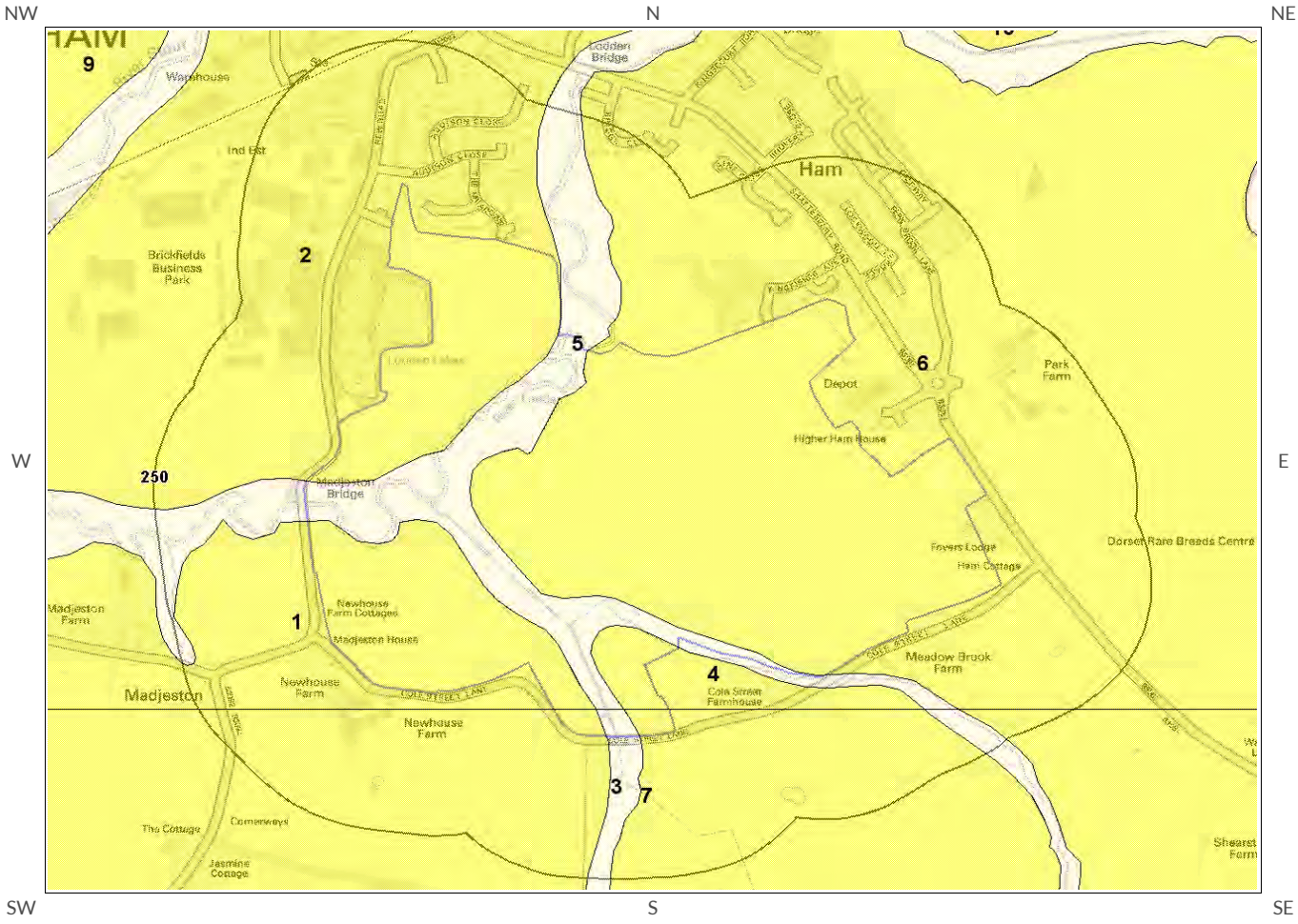
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

4.5 Collapsible Deposits Map



Collapsible Deposits Legend

Mapping sourced from Ordnance Survey

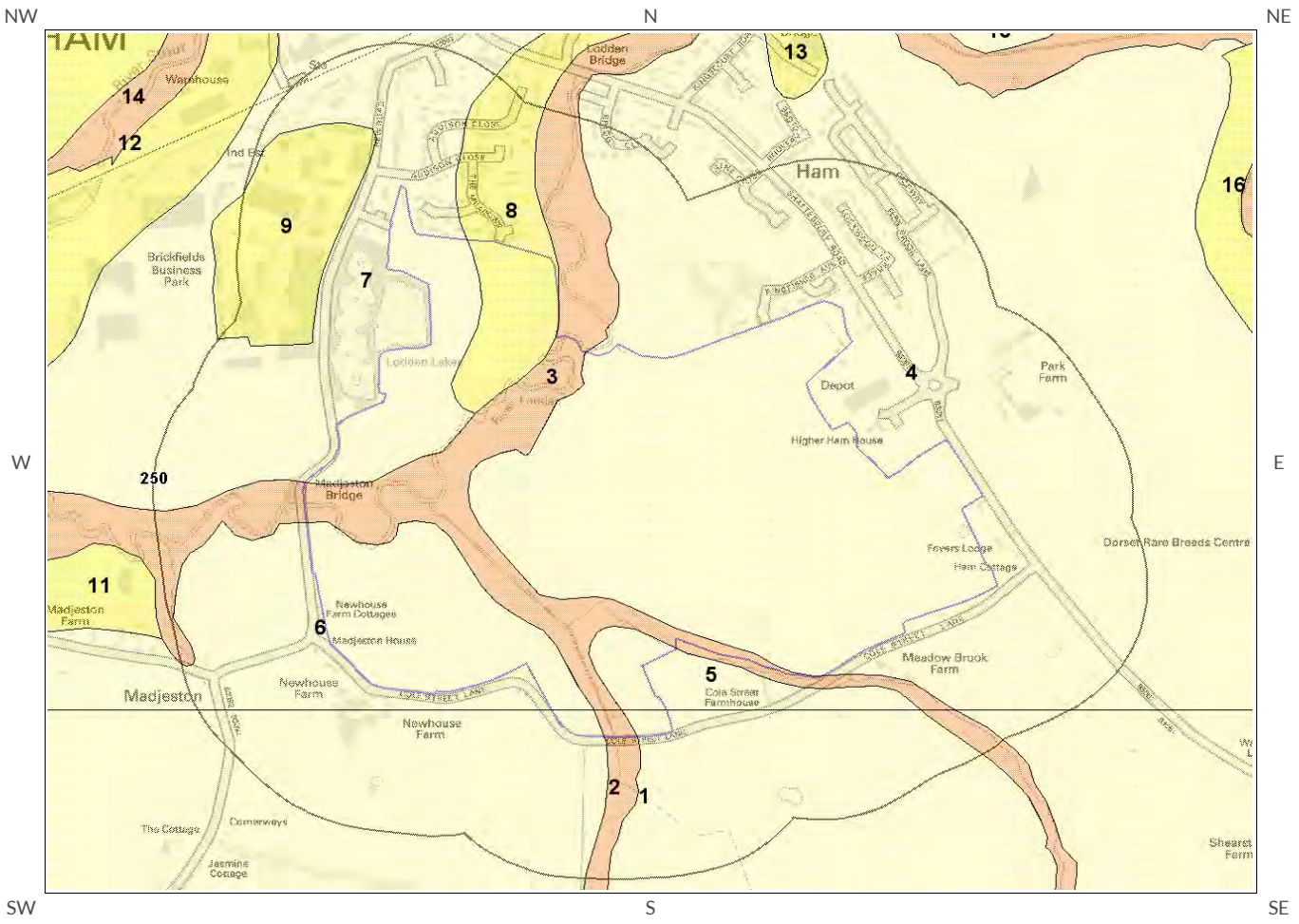
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

4.6 Running Sand Map



Running Sand Legend

Mapping sourced from Ordnance Survey

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

4 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site[*] boundary? Moderate

4.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.
2	0.0	On Site	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. 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.

* This includes an automatically generated 50m buffer zone around the site

ID	Distance (m)	Direction	Hazard Rating	Details
2	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. 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.

4.3 Ground Dissolution of Soluble Rocks

The following Compressible Deposits information provided by the British Geological Survey:

Distance (m)	Direction	Hazard Rating	Details
0	On site	Null-Negligible	Soluble rocks are not present in the search area. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	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.
2	0.0	On Site	Negligible	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.
3	0.0	On Site	Negligible	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.
4	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.
5	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.
6	0.0	On Site	Negligible	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.

ID	Distance (m)	Direction	Hazard Rating	Details
7	0.0	On Site	Negligible	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.

4.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	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.
2	0.0	On Site	Very Low	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.
3	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
4	0.0	On Site	Very Low	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.
5	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
6	0.0	On Site	Very Low	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.
7	0.0	On Site	Very Low	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.

4.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	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.

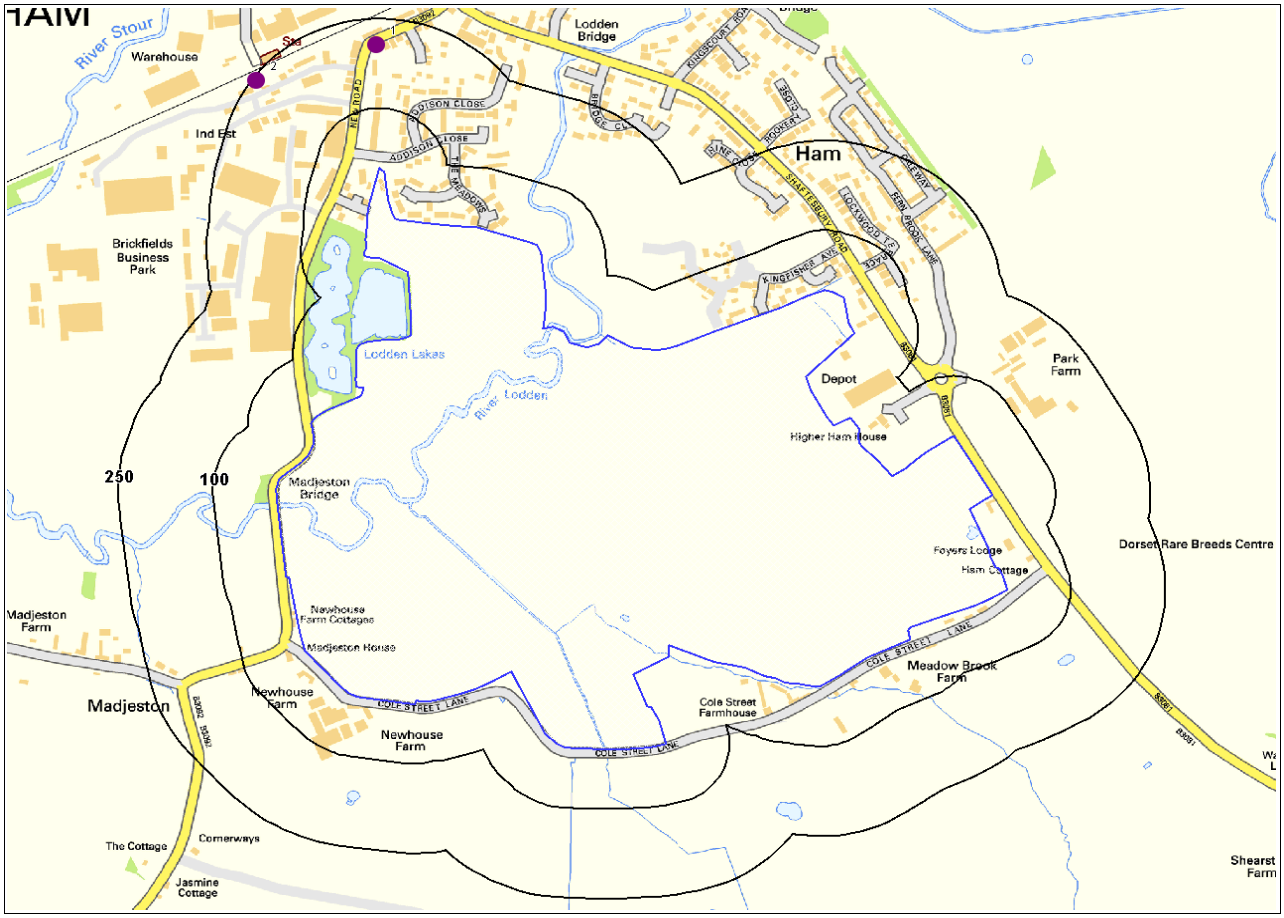
ID	Distance (m)	Direction	Hazard Rating	Details
2	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.
3	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.
4	0.0	On Site	Negligible	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.
5	0.0	On Site	Negligible	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.
6	0.0	On Site	Negligible	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.
7	0.0	On Site	Negligible	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.
8	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. 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.

5 Borehole Records Map

NW N NE

W E

SW S SE



Borehole Records Legend

Mapping sourced from Ordnance Survey

Site Outline

Borehole Locations

125
250
Search Buffers (m)

5 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary: 2

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	205.0	N	381150 126130	ST82NW5	45.72	GILLINGHAM 297/117
2	244.0	NW	380960 126070	ST82NW1	6.4	GILLINGHAM NO.1

Additional online information is available for the following boreholes listed above:

#1: scans.bgs.ac.uk/sobi_scans/boreholes/394974
#2: scans.bgs.ac.uk/sobi_scans/boreholes/394970

6 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary: 49

For further information on how this data is calculated and limitations upon its use, please see the GroundSure GeoInsight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
7.0	S	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
12.0	NE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
27.0	NE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
39.0	S	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
62.0	N	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
75.0	N	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
78.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
106.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
108.0	SW	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
123.0	NE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
125.0	NE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
126.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	<150 mg/kg
135.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
155.0	SW	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
157.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
159.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	<150 mg/kg
160.0	SW	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
172.0	SW	Sediment	<15 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	<150 mg/kg
173.0	NW	Sediment	<15 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	<150 mg/kg
184.0	SW	Sediment	<15 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	<150 mg/kg

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
187.0	N	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
191.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
203.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
204.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
209.0	N	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
209.0	S	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
227.0	W	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
239.0	NE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kgc

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

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:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0845 762 6848
DX 716176 Mansfield 5
www.coal.gov.uk

Public Health England

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

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DY5 3LH
Tel: +44 (0) 1384 262 000
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Website: **www.jpb.co.uk**

Ordnance Survey

Romsey Road
Southampton SO16 4GU
Tel: 08456 050505
Website: http://www.ordnancesurvey.co.uk/

Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website:**http://www1.getmapping.com/**

Peter Brett Associates

Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail:**reading@pba.co.uk**
Website:**http://www.peterbrett.com/home**

Standard Terms and Conditions

1 Definitions

In 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.

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

ENVIRONMENTAL INFORMATION

Ruddlesden Geotechnical

65, Langaton Lane,
Exeter, EX1 3SP

GroundSure Reference:	HMD-411-1324030
Your Reference:	14114
Report Date	4 Mar 2014
Report Delivery Method:	Email - pdf

GroundSure EnviroInsight

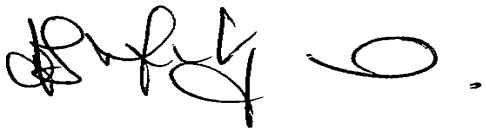
Address: SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL

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,



Managing Director
Groundsure Limited

Enc.
GroundSure EnviroInsight

GroundSure EnviroInsight

Address:	**SHAFTESBURY ROAD,GILLINGHAM,DORSET, SP8 4LL**
Date:	**4 Mar 2014**
Reference:	**HMD-411-1324030**
Client:	**Ruddlesden Geotechnical**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	08-Oct-2009
Grid Reference:	381745,125252
Site Size:	62.50ha

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: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
1.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
1.1.1 Records of historic IPC Authorisations	0	0	0	8
1.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	6
1.1.3 Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0
1.1.4 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0
1.1.5 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
1.1.6 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
1.1.7 Records of Part A(2) and Part B Activities and Enforcements	0	0	1	2
1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
1.1.9 Records of Licensed Discharge Consents	0	5	2	23
1.1.10 Records of Planning Hazardous Substance Consents and Enforcements	0	0	0	1
1.2 Records of COMAH and NIHHS sites	0	0	0	0
1.3 Environment Agency Recorded Pollution Incidents				
1.3.1 National Incidents Recording System, List 2	1	1	0	10
1.3.2 National Incidents Recording System, List 1	0	0	0	0
1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 2: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-5000
2.1 Landfill Sites						
2.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
2.1.2 Environment Agency Historic Landfill Sites	0	0	0	0	0	0
2.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
2.1.4 GroundSure Local Authority Landfill Sites Data	0	0	0	0	0	0
2.2 Landfill and Other Waste Sites Findings						
2.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	1	2	Not searched	Not searched
2.2.2 Environment Agency Licensed Waste Sites	0	0	1	0	0	0

Section 3: Current Land Use

	On-site	0-50m	51-250	251-500
3.1 Current Industrial Sites Data	0	3	28	Not searched
3.2 Records of Petrol and Fuel Sites	0	0	0	1
3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0

Section 4: Geology

4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
4.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 5: Hydrogeology and Hydrology

	0-500m
5.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes
5.2 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
5.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
5.7 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	Yes	Yes
5.8 Detailed River Network entries within 500m of the site	9	8	4	8	Not searched	Not searched
5.9 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

Section 6: Flooding

6.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes
6.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site?	Yes
6.3 Are there any Flood Defences within 250m of the study site?	No
6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
6.5 Are there any areas used for Flood Storage within 250m of the study site?	No
6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Very High
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	High

Section 7: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
7.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
7.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
7.5 Records of Ramsar sites	0	0	0	0	0	0
7.6 Records of Ancient Woodlands	0	0	0	0	1	1
7.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
7.8 Records of World Heritage Sites	0	0	0	0	0	0
7.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
7.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
7.11 Records of National Parks	0	0	0	0	0	0
7.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
7.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0

Section 8: Natural Hazards

8.1 What is the maximum risk of natural ground subsidence?	Moderate

Section 9: Mining

9.1 Are there any coal mining areas within 75m of the study site?	No
9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site?	Negligible
9.3 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. 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.

2. 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.

3. 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 underground oil and gas pipelines.

4. Geology

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

5. 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.

6. Flooding

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

7. 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.

8. 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.

9. Mining

Provides information on areas of coal and shallow mining.

10. 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.

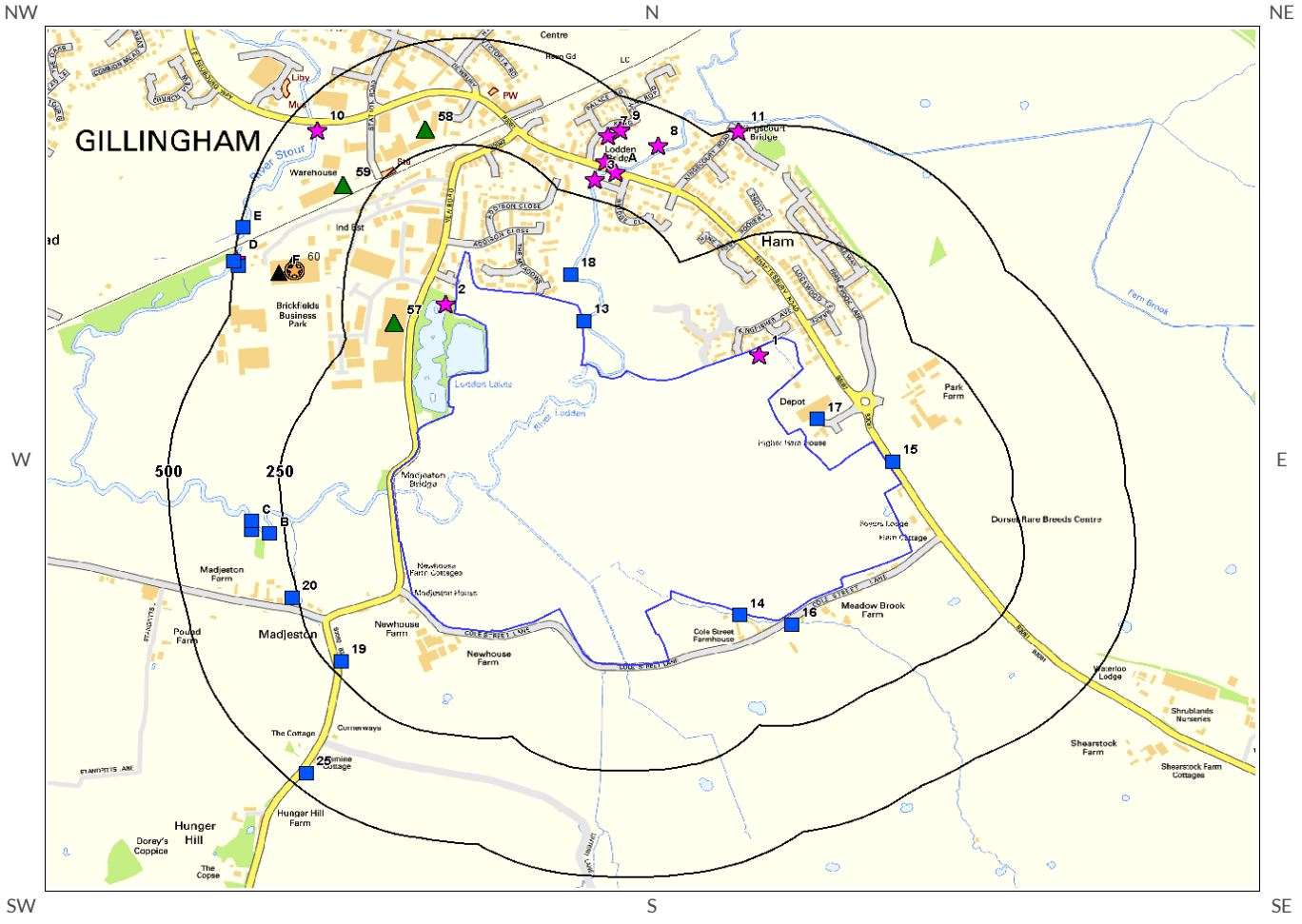
Note: Maps

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. Environmental Permits, Incidents and Registers Map



Environmental Permits, Incidents and Registers Legend

Mapping sourced from Ordnance Survey

- 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

1. Environmental Permits, Incidents and Registers

1.1 Industrial Sites Holding Licences and/or Authorisations

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

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

8

The following IPC Authorisations are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details	
67F	398.0	W	380740 125870	Operator: Sigma-aldrich Co Ltd Address: The Old Brickyard, New Road, Gillingham, Dorset, SP8 4JL Process: Manufacture And Use Of Organic Chemicals	Permit Number: BE0309 Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
68F	398.0	W	380740 125870	Operator: Sigma-aldrich Co Ltd Address: The Old Brickyard, New Road, Gillingham, Dorset, SP8 4JL Process: Manufacture And Use Of Organic Chemicals	Permit Number: AZ2201 Original Permit Number: IPCMAJVAR Date Approved: 10-11-1997 Effective Date: 17-11-1997 Status: Superseded By Variation
69F	398.0	W	380740 125870	Operator: Sigma-aldrich Co Ltd Address: The Old Brickyard, New Road, Gillingham, Dorset, SP8 4JL Process: Manufacture And Use Of Organic Chemicals	Permit Number: AX8942 Original Permit Number: IPCAPP Date Approved: 10-6-1997 Effective Date: 17-6-1997 Status: Superseded By Variation
70F	398.0	W	380740 125870	Operator: Sigma-aldrich Co Ltd Address: The Old Brickyard, New Road, Gillingham, Dorset, SP8 4JL Process: Manufacture And Use Of Organic Chemicals	Permit Number: BG4496 Original Permit Number: IPCMAJVAR Date Approved: 14-12-1999 Effective Date: 1-1-2000 Status: Superseded By Variation
71F	398.0	W	380740 125870	Operator: Sigma-aldrich Co Ltd Address: The Old Brickyard, New Road, Gillingham, Dorset, SP8 4JL Process: Manufacture And Use Of Organic Chemicals	Permit Number: BJ1427 Original Permit Number: IPCMINVAR Date Approved: 18-10-2000 Effective Date: 18-10-2000 Status: Superseded By Variation
72F	398.0	W	380740 125870	Operator: Sigma-aldrich Co Ltd Address: The Old Brickyard, New Road, Gillingham, Dorset, SP8 4JL Process: Manufacture And Use Of Organic Chemicals	Permit Number: BK8176 Original Permit Number: IPCMINVAR Date Approved: 13-8-2001 Effective Date: 1-9-2001 Status: Superseded By Variation
73F	398.0	W	380740 125870	Operator: Sigma-aldrich Co Ltd Address: The Old Brickyard, New Road, Gillingham, Dorset, SP8 4JL Process: Manufacture And Use Of Organic Chemicals	Permit Number: BU9793 Original Permit Number: IPCMINVAR Date Approved: 20-8-2003 Effective Date: 21-8-2003 Status: Superseded By Variation
74F	398.0	W	380740 125870	Operator: Sigma-aldrich Co Ltd Address: The Old Brickyard, New Road, Gillingham, Dorset, SP8 4JL Process: Manufacture And Use Of Organic Chemicals	Permit Number: BX3678 Original Permit Number: IPCMAJVAR Date Approved: 13-6-2004 Effective Date: 14-6-2004 Status: Revoked - Now Ippc

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

6

The following Part A(1) and IPPC Authorised Activities are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details	
61F	369.0	W	380770 125890	Operator: Sigma Aldrich Company Ltd Installation Name: Gillingham Fine Chemicals Process: SOLVENT EMISSIONS DIRECTVE; ACTIVITIES EXCEEDING SOLVENT THRESHOLD	Permit Number: PP3334GR Original Permit Number: KP3039LQ EPR Reference: - Issue Date: 23/1/2009 00:00:00 Effective Date: 23/1/2009 00:00:00 Last date noted as effective: 2014-01-01 Status: Effective
62F	369.0	W	380770 125890	Operator: Sigma Aldrich Company Ltd Installation Name: Gillingham Fine Chemicals Process: ASSOCIATED PROCESS	Permit Number: PP3334GR Original Permit Number: KP3039LQ EPR Reference: - Issue Date: 23/1/2009 00:00:00 Effective Date: 23/1/2009 00:00:00 Last date noted as effective: 2014-01-01 Status: Effective
63F	369.0	W	380770 125890	Operator: Sigma Aldrich Company Ltd Installation Name: Gillingham Fine Chemicals Process: SOLVENT EMISSIONS DIRECTVE; ACTIVITIES EXCEEDING SOLVENT THRESHOLD	Permit Number: KP3039LQ Original Permit Number: KP3039LQ EPR Reference: - Issue Date: 4/12/2006 00:00:00 Effective Date: 4/12/2006 00:00:00 Last date noted as effective: 2014-01-01 Status: Superceded
64F	369.0	W	380770 125890	Operator: Sigma Aldrich Company Ltd Installation Name: Gillingham Fine Chemicals Process: PHARMACEUTICALS; PRODUCING PHARMACEUTICALS USING CHEMICAL/BIOLOGICAL PROCESSES	Permit Number: PP3334GR Original Permit Number: KP3039LQ EPR Reference: - Issue Date: 23/1/2009 00:00:00 Effective Date: 23/1/2009 00:00:00 Last date noted as effective: 2014-01-01 Status: Effective
65F	369.0	W	380770 125890	Operator: Sigma Aldrich Company Ltd Installation Name: Gillingham Fine Chemicals Process: ASSOCIATED PROCESS	Permit Number: KP3039LQ Original Permit Number: KP3039LQ EPR Reference: - Issue Date: 4/12/2006 00:00:00 Effective Date: 4/12/2006 00:00:00 Last date noted as effective: 2014-01-01 Status: Superceded
66F	369.0	W	380770 125890	Operator: Sigma Aldrich Company Ltd Installation Name: Gillingham Fine Chemicals Process: PHARMACEUTICALS; PRODUCING PHARMACEUTICALS USING CHEMICAL/BIOLOGICAL PROCESSES	Permit Number: KP3039LQ Original Permit Number: KP3039LQ EPR Reference: - Issue Date: 4/12/2006 00:00:00 Effective Date: 4/12/2006 00:00:00 Last date noted as effective: 2014-01-01 Status: Superceded

1.1.3 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.

1.1.4 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.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

3

The following Part A(2) and Part B Activities are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details	
57	139.0	W	380997 125752	Address: Dextra Lighting, Brickfields Business Park, Gillingham, Dorset, SP8 4PX Process: Power Coating Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notfied Comment: No Enforcements Notified
58	296.0	N	381067 126207	Address: Po Baker & Sons, Station Road Garage, Gillingham, Dorset, SP8 4QA Process: Waste Oil Burning Process Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notfied Comment: No Enforcements Notified
59	312.0	NW	380884 126077	Address: Gillingham Rovers, Station Road, Gillingham, Dorset, SP8 4PY Process: Waste Oil Burning Process Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notfied Comment: No Enforcements Notified

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1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

30

The following Licensed Discharge Consents records are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details	
13	4.0	E	381420 125760	Address: Meadow Croft, New Road, Gillingham, Dorset Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: 040885 Permit Version: 1	Receiving Water: River Lodden Status: Lapsed Under Schedule 23 Environment Act 1995 Issue date: - Effective Date: 1/1/1989 Revocation Date: 1/10/1996
14	6.0	S	381768 125068	Address: Cole Street Farm, Cole Street Lane, Gillingham, Dorset, SP8 5JQ Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: NPSWQD003347 Permit Version: 1	Receiving Water: River Lodden Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 6/10/2008 Effective Date: 6/10/2008 Revocation Date: -
15	12.0	NE	382110 125430	Address: Garden Centre, Park Farm, Shaftesbury Road, Gillingham, Dorset, SP8 5JG Effluent Type: Sewage & Trade Combined - Unspecified Permit Number: 401737 Permit Version: 1	Receiving Water: Un-named Ditch Via Reed Bed Status: New Consent, By Application (wra 91, Section 88) Issue date: 26/8/2004 Effective Date: 26/8/2004 Revocation Date: -
16	25.0	SE	381884 125046	Address: Rose Cottage & Field View, Colestreet Lane, Gillingham, Dorset, SP8 5JQ Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 402300 Permit Version: 1	Receiving Water: Tributary Of River Lodden Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 21/5/2007 Effective Date: 21/5/2007 Revocation Date: -
17	43.0	NE	381940 125530	Address: Hudson And Martin Limited, Shaftesbury Road, Gillingham, Dorset, SP8 5JG Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 400667 Permit Version: 1	Receiving Water: Trib.r.lodden-partial Soakaway Status: New Consent, By Application (wra 91, Section 88) Issue date: 24/2/1999 Effective Date: 28/1/1999 Revocation Date: -
18	65.0	N	381390 125870	Address: New Road, Residential Development, (proposed), Gillingham, Dorset Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: 040332 Permit Version: 1	Receiving Water: River Lodden Status: Lapsed Under Schedule 23 Environment Act 1995 Issue date: - Effective Date: 1/10/1986 Revocation Date: 1/10/1996
19	223.0	SW	380880 124960	Address: New Farm House, Newhouse Farm, Cole Street Lane, Madjeston, Gillingham, Dorset, SP8 5JQ Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 400857 Permit Version: 1	Receiving Water: Trib/r.lodden/partial Soakaway Status: New Consent, By Application (wra 91, Section 88) Issue date: 28/2/2000 Effective Date: 25/1/2000 Revocation Date: -
20	263.0	W	380770 125110	Address: Barn 1, Adj To Madjeston Old Farm, Madjeston, Gillingham, Dorset Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 041317 Permit Version: 1	Receiving Water: Discharge To Soakaway Status: New Consent, By Application (wra 91, Section 113 & Sched 12) Issue date: - Effective Date: 1/11/1989 Revocation Date: -
21 B	285.0	W	380720 125260	Address: The Old Barn, Madjeston, Gillingham, Dorset, SP8 5JH Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 400361/PW/01 Permit Version: 1	Receiving Water: River Lodden Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 30/5/1997 Effective Date: 30/5/1997 Revocation Date: -

ID	Distance	Direction	NGR	Details	
22 B	285.0	W	380720 125260	Address: The Old Barn, Madjeston, Gillingham, Dorset, SP8 5JH Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 041653 Permit Version: 1	Receiving Water: River Lodden Status: Lapsed Under Schedule 23 Environment Act 1995 Issue date: - Effective Date: - Revocation Date: 1/10/1996
23 C	321.0	W	380680 125290	Address: Madjeston Farmhouse, Madjeston, Gillingham, Dorset, SP8 5JT Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 400615 Permit Version: 1	Receiving Water: Rlodden Via Part Soakaway Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: - Effective Date: 4/11/1998 Revocation Date: -
24 C	323.0	W	380680 125270	Address: Pelekas, Madjeston, Gillingham, Dorset, SP8 5JH Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 400764 Permit Version: 1	Receiving Water: River Lodden Status: New Consent, By Application (wra 91, Section 88) Issue date: 23/9/1999 Effective Date: 20/7/1999 Revocation Date: -
25	465.0	SW	380801 124697	Address: Jasmine Cottage, Hunger Hill, Madjeston, Gillingham, Dorset, SP8 5JR Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: 402154 Permit Version: 1	Receiving Water: Groundwater Via Soakaway Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 27/9/2006 Effective Date: 27/9/2006 Revocation Date: -
26 D	489.0	W	380650 125890	Address: Brickyard Pumping Station, Brickfields Industrial Estate, New Road, Gillingham, Dorset Effluent Type: Sewage Discharges - Pumping Station - Water Company Permit Number: 042429 Permit Version: 1	Receiving Water: Trib Of Upper Stour (s) Status: Revoked - Unspecified Issue date: - Effective Date: - Revocation Date: -
27 D	489.0	W	380650 125890	Address: Brickyard Pumping Station, Brickfields Industrial Estate, New Road, Gillingham, Dorset Effluent Type: Sewage Discharges - Stw Storm Overflow/storm Tank - Water Company Permit Number: 042429 Permit Version: 1	Receiving Water: Trib Of Upper Stour (s) Status: Revoked - Unspecified Issue date: - Effective Date: - Revocation Date: -
28 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Final/treated Effluent - Water Company Permit Number: 401739 Permit Version: 4	Receiving Water: River Stour (upper) (s) Status: Modified - (wra 91 Sched 10 - As Amended By Env Act 1995) Issue date: 31/3/2010 Effective Date: 31/3/2010 Revocation Date: -
29 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Stw Storm Overflow/storm Tank - Water Company Permit Number: 401739 Permit Version: 4	Receiving Water: River Stour (upper) (s) Status: Modified - (wra 91 Sched 10 - As Amended By Env Act 1995) Issue date: 31/3/2010 Effective Date: 31/3/2010 Revocation Date: -
30 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Final/treated Effluent - Water Company Permit Number: 401739 Permit Version: 5	Receiving Water: River Stour (upper) (s) Status: Varied By Application - (wra 91 Sched 10 - As Amended By Env Act 1995) Issue date: - Effective Date: - Revocation Date: -
31 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Final/treated Effluent - Water Company Permit Number: 401739 Permit Version: 2	Receiving Water: River Stour (upper) (s) Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 2/7/2008 Effective Date: 2/7/2008 Revocation Date: 31/3/2009
32 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Stw Storm Overflow/storm Tank - Water Company Permit Number: 401739 Permit Version: 2	Receiving Water: River Stour (upper) (s) Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 2/7/2008 Effective Date: 2/7/2008 Revocation Date: 31/3/2009

ID	Distance	Direction	NGR	Details	
33 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Final/treated Effluent - Water Company Permit Number: 401739 Permit Version: 3	Receiving Water: River Stour (upper) (s) Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: - Effective Date: 1/4/2009 Revocation Date: 30/3/2010
34 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Stw Storm Overflow/storm Tank - Water Company Permit Number: 401739 Permit Version: 5	Receiving Water: River Stour (upper) (s) Status: Varied By Application - (wra 91 Sched 10 - As Amended By Env Act 1995) Issue date: - Effective Date: - Revocation Date: -
35 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Final/treated Effluent - Water Company Permit Number: 401739 Permit Version: 1	Receiving Water: River Stour (upper) (s) Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 19/8/2004 Effective Date: - Revocation Date: 1/7/2008
36 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Stw Storm Overflow/storm Tank - Water Company Permit Number: 401739 Permit Version: 3	Receiving Water: River Stour (upper) (s) Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: - Effective Date: 1/4/2009 Revocation Date: 30/3/2010
37 E	493.0	W	380660 125980	Address: Gillingham Stw, Common Mead Lane, Gillingham, Dorset, SP8 4JN Effluent Type: Sewage Discharges - Stw Storm Overflow/storm Tank - Water Company Permit Number: 401739 Permit Version: 1	Receiving Water: River Stour (upper) (s) Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 19/8/2004 Effective Date: - Revocation Date: 1/7/2008
38 E	493.0	W	380660 125980	Address: Gillingham Stw, Dorset Effluent Type: Sewage Discharges - Stw Storm Overflow/storm Tank - Water Company Permit Number: 040035 Permit Version: 1	Receiving Water: - Status: Revoked - Unspecified Issue date: - Effective Date: 3/9/1985 Revocation Date: -
39 E	493.0	W	380660 125980	Address: Gillingham Stw, Dorset Effluent Type: Sewage Discharges - Final/treated Effluent - Water Company Permit Number: 040035 Permit Version: 1	Receiving Water: - Status: Revoked - Unspecified Issue date: - Effective Date: 3/9/1985 Revocation Date: -
40 D	500.0	W	380640 125900	Address: Brickyard Pumping Station, Brickfields Industrial Estate, New Road, Gillingham, Dorset Effluent Type: Sewage Discharges - Pumping Station - Water Company Permit Number: 042373 Permit Version: 1	Receiving Water: River Stour Status: Consent Expired - Time Limit Issue date: - Effective Date: - Revocation Date: -
41 D	500.0	W	380640 125900	Address: Brickyard Pumping Station, Brickfields Industrial Estate, New Road, Gillingham, Dorset Effluent Type: Sewage Discharges - Stw Storm Overflow/storm Tank - Water Company Permit Number: 042373 Permit Version: 1	Receiving Water: River Stour Status: Consent Expired - Time Limit Issue date: - Effective Date: - Revocation Date: -
42 D	500.0	W	380640 125900	Address: Brickyard Pumping Station, Brickfields Industrial Estate, New Road, Gillingham, Dorset Effluent Type: Sewage Discharges - Pumping Station - Water Company Permit Number: 401128 Permit Version: 1	Receiving Water: River Stour (s) Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 8/11/2001 Effective Date: - Revocation Date: -

1.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site: 1

The following records are represented as polygons on the Industrial Sites and Processes map:

ID	Distance	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
75F	364.0	W	2/1999/0739	380774.0 125878.0	Approved	18/10/1999	Sigma Aldrich, The Old Brickyard, New Road, Gillingham, Dorset, SP8 4FX	Application for deemed consent in accordance with The Planning Act 1990	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

1.2 Dangerous or Hazardous Sites

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

Database searched and no data found.

1.3 Environment Agency Recorded Pollution Incidents

1.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site: 12

The following NIRS List 2 records are represented as points on the Authorisations, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details	
1	0.0	On Site	381810 125680	Incident Date: 21/05/2003 Incident Identification: 159744 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	24.0	W	381110 125800	Incident Date: 08/07/2003 Incident Identification: 171963 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Algae	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3	295.0	N	381444 126094	Incident Date: 16/05/2001 Incident Identification: 5689 Pollutant: Agricultural Materials and Wastes Pollutant Description: Carcasses	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4A	324.0	N	381490 126110	Incident Date: 20/05/2003 Incident Identification: 159599 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
5A	324.0	N	381490 126110	Incident Date: 24/07/2002 Incident Identification: 94028 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Distance	Direction	NGR	Details	
6A	341.0	N	381467 126135	Incident Date: 25/10/2002 Incident Identification: 116723 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
7	402.0	N	381474 126197	Incident Date: 06/05/2001 Incident Identification: 4630 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
8	417.0	NE	381584 126174	Incident Date: 08/06/2003 Incident Identification: 164134 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
9	422.0	N	381500 126210	Incident Date: 22/05/2002 Incident Identification: 80346 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
10	437.0	NW	380824 126209	Incident Date: 20/11/2003 Incident Identification: 202586 Pollutant: Organic Chemicals/Products Pollutant Description: Surfactants and Detergents	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
11	496.0	N	381764 126207	Incident Date: 27/01/2003 Incident Identification: 133525 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
12D	497.0	W	380643 125906	Incident Date: 23/06/2002 Incident Identification: 86750 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

1.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site: 0

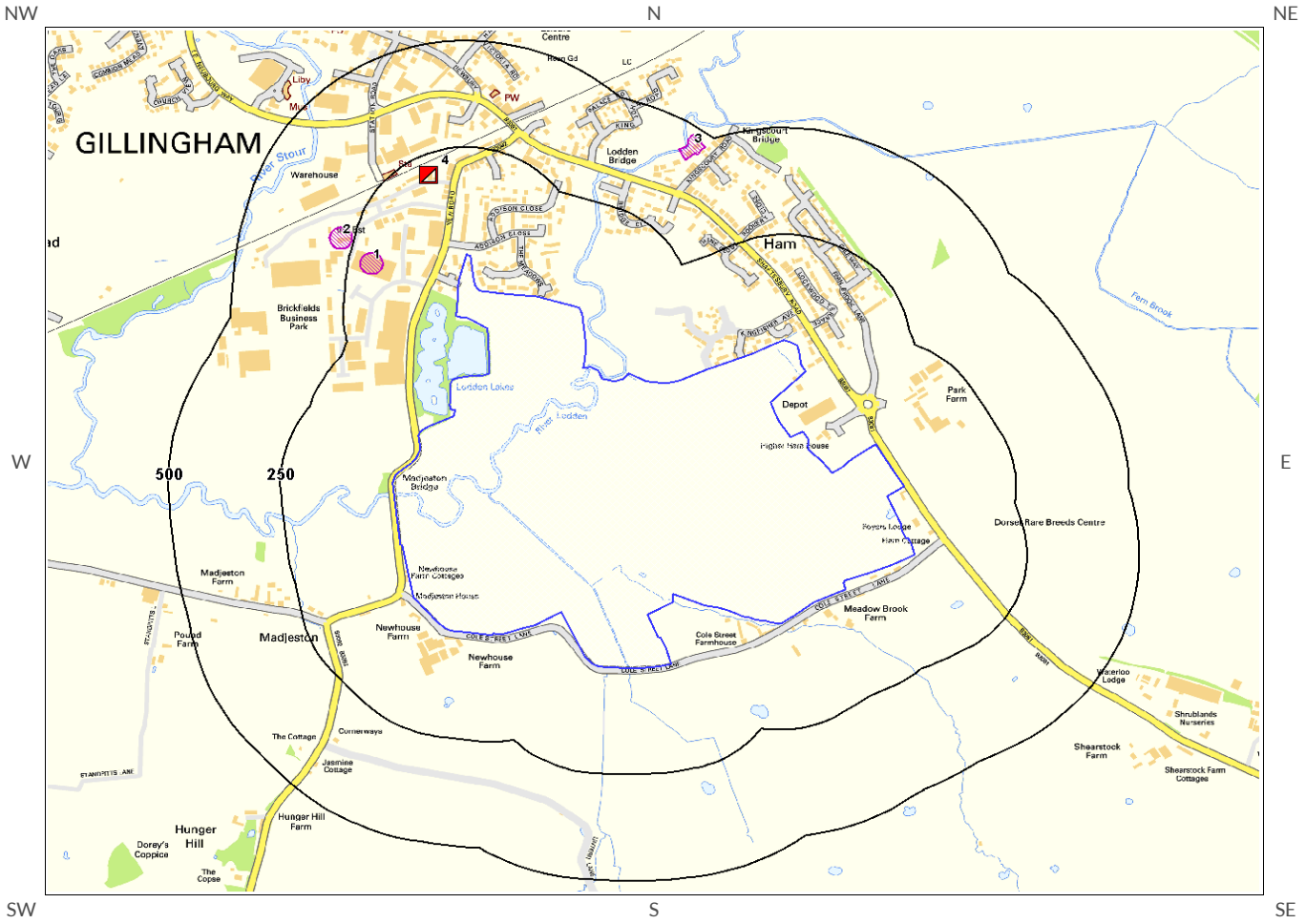
Database searched and no data found.

1.4 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.

2. Landfill and Other Waste Sites Map



Landfill and Other Waste Sites Legend

Mapping sourced from Ordnance Survey®

- Site Outline
- Search Buffers (m): 250, 500
- E.A. Active Landfill
- E.A. Historic Landfill
- Local Authority Landfill
- Historic and Planned Waste Sites
- E.A. Licensed Waste Site
- BGS / DoE Survey Landfill

2. Landfill and Other Waste Sites

2.1 Landfill Sites

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.1.4 Records of Local Authority landfill sites within 1500m of the study site:

0

Database searched and no data found.

2.2 Other Waste Sites

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

3

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR			Details
1	173.0	W	380944 125901	Type of Site: Waste Transfer Station Site Address: 8, Brickfield Industrial Estate, GILLINGHAM, Dorset, SP8 4	Planning Application Reference: *2/2005/0964 Date: -	Further Details: Scheme comprises proposed construction of waste transfer station. An application (ref: *2/2005/0964) for Detailed Planning permission was submitted to North Dorset D.C. on 30th September 2005. Data Source: Historic Planning Application Data Type: Point
2	254.0	W	380876 125961	Type of Site: Waste Transfer Station Site Address: Brickfields Industrial Estate, 8,Brickyard Lane, GILLINGHAM, Dorset, SP8 4JL	Planning Application Reference: 2/2010/0614/PLNG Date: 28/11/2010	Further Details: Scheme comprises change of use of general industrial building to reception building for waste sorting, expansion of waste transfer station and establishment of skip business. An application (ref: 2/2010/0614/PLNG) for detailed planning permission was granted by North Dorset D.C. A detailed planning application has been granted. Data Source: Historic Planning Application Data Type: Point
3	422.0	NE	381657 126175	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1981	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

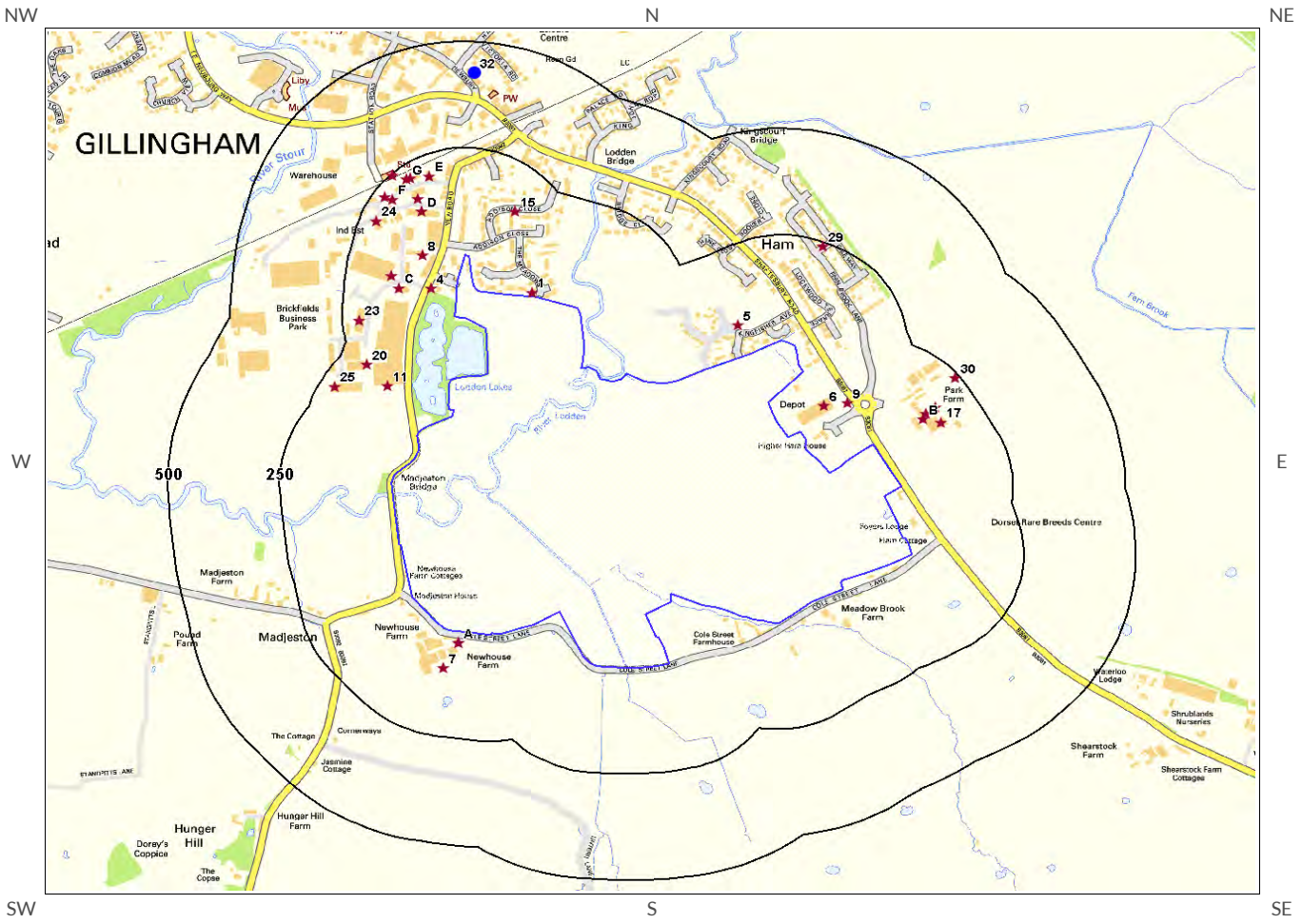
2.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

1

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
4	205.0	NW	381070 126111	Site Address: Unit 8, Brickfields Ind Est, Gillingham, Dorset, SP8 4JL Type: HCI Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TFB001 EPR reference: EA/EPR/MP3498VQ/A001 Operator: T F Builders Ltd Waste Management licence No: 101952 Annual Tonnage: 74999.0	Issue Date: 22/09/2010 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: T F Builders Ltd Correspondence Address: -, -

3. Current Land Use Map



Current Land Use Legend

Mapping sourced from Ordnance Survey

- Site Outline
- Search Buffers (m) — 250 / 500
- Current Industrial Sites
- Petrol & Fuel Sites
- Underground High Pressure Oil & Fuel Pipelines

3. Current Land Uses

3.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 31

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	7.0	N	Production Engineering Developments	381304 125833	24, The Meadows, Gillingham, SP8 4SP	Industrial Engineers	Engineering Services
2A	28.0	S	Newhouse Farm Dairy	381139 125009	New House Farm, Cole Street Lane, Gillingham, SP8 5JQ	Dairy Products	Foodstuffs
3A	28.0	S	R Pike & Son	381139 125009	New House Farm, Cole Street Lane, Gillingham, SP8 5JQ	Dairy Farming	Farming
4	58.0	W	Electricity Sub Station	381079 125844	SP8	Electrical Features	Infrastructure and Facilities
5	72.0	N	Electricity Sub Station	381763 125757	SP8	Electrical Features	Infrastructure and Facilities
6	80.0	NE	Depot	381955 125568	SP8	Container and Storage	Transport, Storage and Delivery
7	90.0	S	Slurry Pit	381106 124951	SP8	Waste Storage, Processing and Disposal	Infrastructure and Facilities
8	92.0	W	Brickfields Business Park	381060 125921	SP8	Business Parks and Industrial Estates	Industrial Features
9	114.0	NW	Tank	382007 125574	SP8	Tanks (Generic)	Industrial Features
10B	125.0	NE	Bio Heat Ltd	382177 125536	Unit 5 Kingsmead Business Park, Gillingham, SP8 5FB	Industrial Repairs and Servicing	Repair and Servicing
11	127.0	NW	Electricity Sub Station	380983 125614	SP8	Electrical Features	Infrastructure and Facilities
12C	129.0	W	Autotechnics	381008 125844	Unit 21, Brickfields Business Park, Gillingham, SP8 4PX	Vehicle Repair, Testing and Servicing	Repair and Servicing
13B	137.0	NE	Blackmore Vale Upholstery Ltd	382182 125549	Unit 12 Kingsmead Business Park, Gillingham, SP8 5FB	Furniture	Consumer Products
14D	139.0	NW	South West Packaging Ltd	381059 126024	Brickfield Industrial Estate, New Road, Gillingham, SP8 4LT	Packaging	Industrial Products
15	147.0	NE	Electricity Sub Station	381266 126025	SP8	Electrical Features	Infrastructure and Facilities
16C	149.0	W	Electricity Sub Station	380990 125873	SP8	Electrical Features	Infrastructure and Facilities
17	154.0	NE	La Chasse Ltd	382216 125529	Unit 9 Kingsmead Business Park, Gillingham, SP8 5FB	Catering and Non Specific Food Products	Foodstuffs

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
18B	162.0	NE	Gillingham Tyre Factory	382203 125563	Unit 15 Kingsmead Business Park, Gillingham, SP8 5FB	Vehicle Parts and Accessories	Motoring
19D	167.0	NW	Brickfield Industrial Estate	381050 126054	SP8	Business Parks and Industrial Estates	Industrial Features
20	190.0	W	Electricity Sub Station	380935 125665	SP8	Electrical Features	Infrastructure and Facilities
21E	200.0	NW	Bomic Ltd	381074 126107	Unit 1, Brickyard Lane, Gillingham, SP8 4JL	Precision Engineers	Engineering Services
22F	208.0	NW	C Heckford Car Repairs	380992 126053	Unit 3 Brickfield Trading Estate, Gillingham, SP8 4JL	Vehicle Repair, Testing and Servicing	Repair and Servicing
23	213.0	W	Molekula Ltd	380919 125768	Unit 35, Brickfields Business Park, Gillingham, SP8 4PX	Colours, Chemicals and Water Softeners and Supplies	Industrial Products
24	214.0	W	Sigma Engineering	380956 126002	Brickfield Industrial Estate, Gillingham, SP8 4LT	Vehicle Repair, Testing and Servicing	Repair and Servicing
25	216.0	NW	Mole Valley Systems Ltd	380864 125613	Unit 4, Brickfields Business Park, Gillingham, SP8 4PX	Industrial Repairs and Servicing	Repair and Servicing
26E	216.0	NW	Vitaltask Ltd	381033 126103	Unit 4-5, Brickyard Lane, Gillingham, SP8 4JL	Construction Completion Services	Construction Services
27G	219.0	NW	J & R Autos	381025 126100	Unit 6, Brickyard Lane, Gillingham, SP8 4JL	Vehicle Repair, Testing and Servicing	Repair and Servicing
28F	224.0	NW	F H Nutbeem	380975 126059	Unit 9, Brickyard Lane, Gillingham, SP8 4JL	Agricultural Contractors	Contract Services
29	239.0	N	Electricity Sub Station	381954 125942	SP8	Electrical Features	Infrastructure and Facilities
30	240.0	NE	Electricity Sub Station	382248 125633	SP8	Electrical Features	Infrastructure and Facilities
31G	247.0	NW	Gillingham Station	380992 126110	SP8	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure

3.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
32	426.0	N	381176 126351	Obsolete	W H Light Gillingham, Newbury Street, Newbury Street, Gillingham, Dorset, SP8 4QJ	Not Applicable	Obsolete

3.3 Underground High Pressure Oil and Gas Pipelines

Records of high pressure underground pipelines within 500m of the study site: 0

Database searched and no data found.

4. Geology

4.1 Artificial Ground and Made Ground

Database searched and no data found.

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

4.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
ALV-CSSG	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
HEAD1-CSSG	HEAD, 1	CLAY, SILT, SAND AND GRAVEL
HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL

4.3 Bedrock and Solid Geology

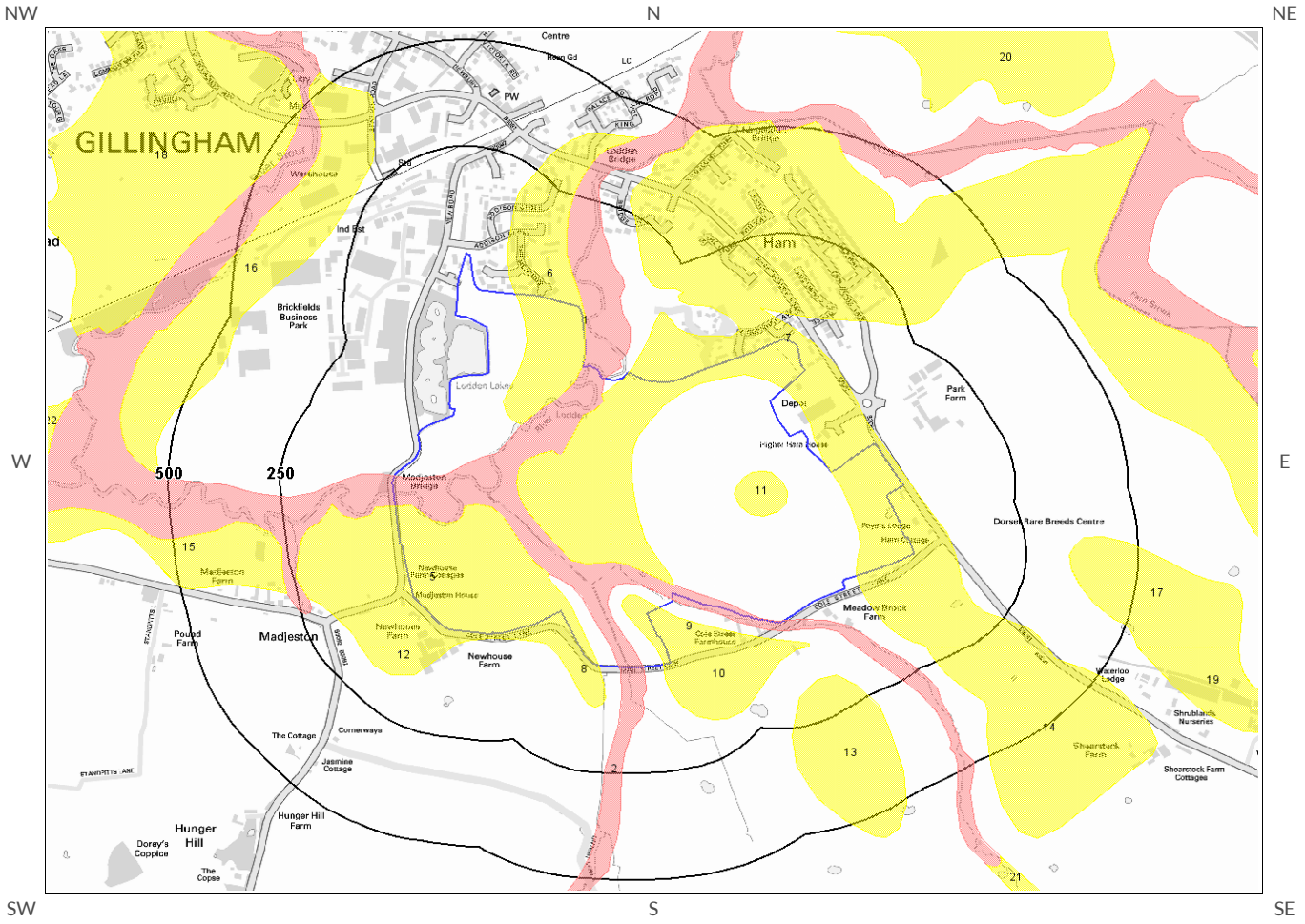
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
KC-MDST	KIMMERIDGE CLAY FORMATION	MUDSTONE

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

5. Hydrogeology and Hydrology

5a. Aquifer Within Superficial Geology



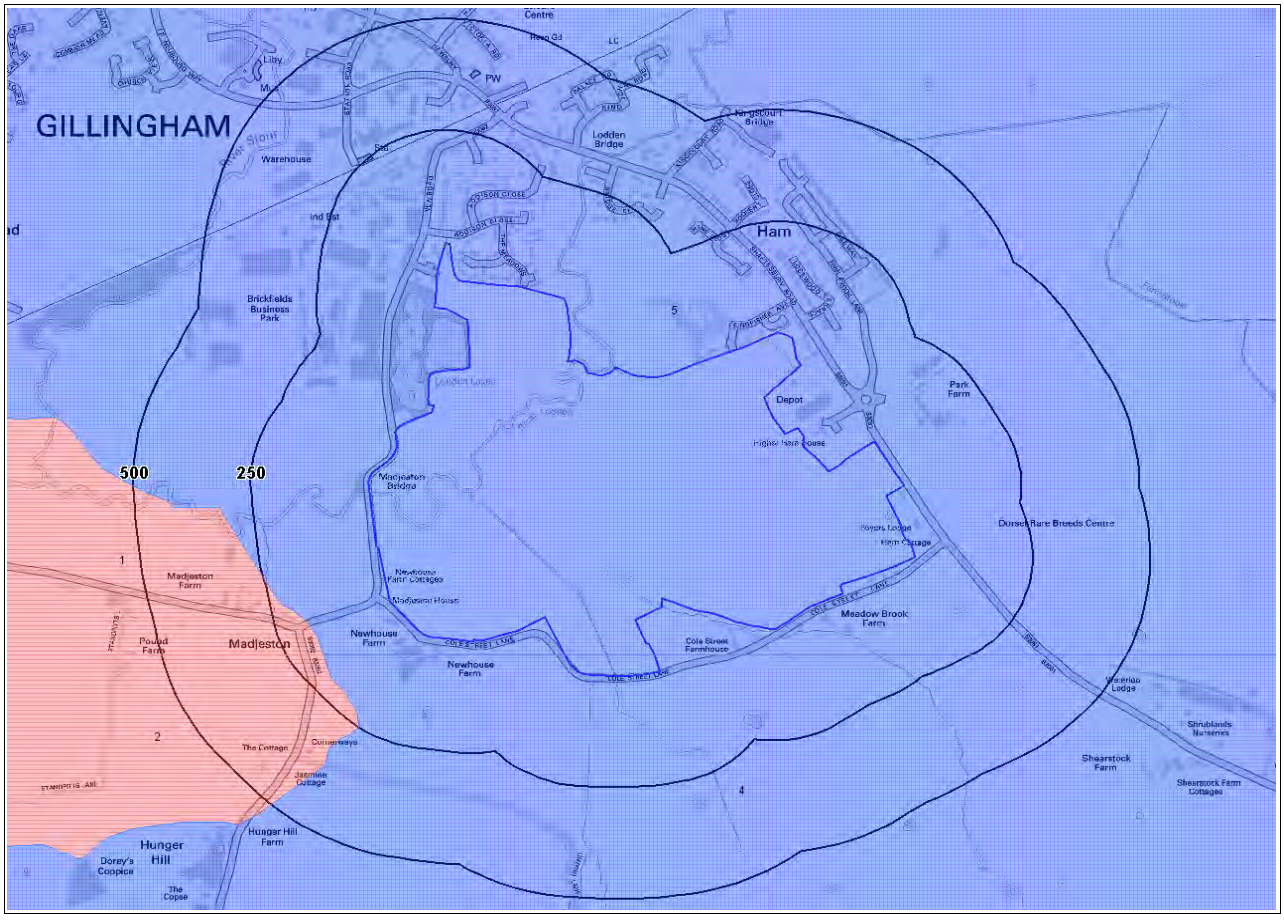
Map Legend

Mapping sourced from Ordnance Survey®

- Site Outline
- Search Buffers (m): 250, 500
- Principal Aquifer
- Secondary (A) Aquifer - Permeable Layers
- Secondary (B) Aquifer - Lower Permeability Layers
- Secondary Aquifer - Undifferentiated Layers
- Unproductive
- Unknown (lakes and landslip)

5b. Aquifer Within Bedrock Geology and Abstraction Licenses

NW N NE



W E

SW S SE

Map Legend

Mapping sourced from Ordnance Survey®

Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

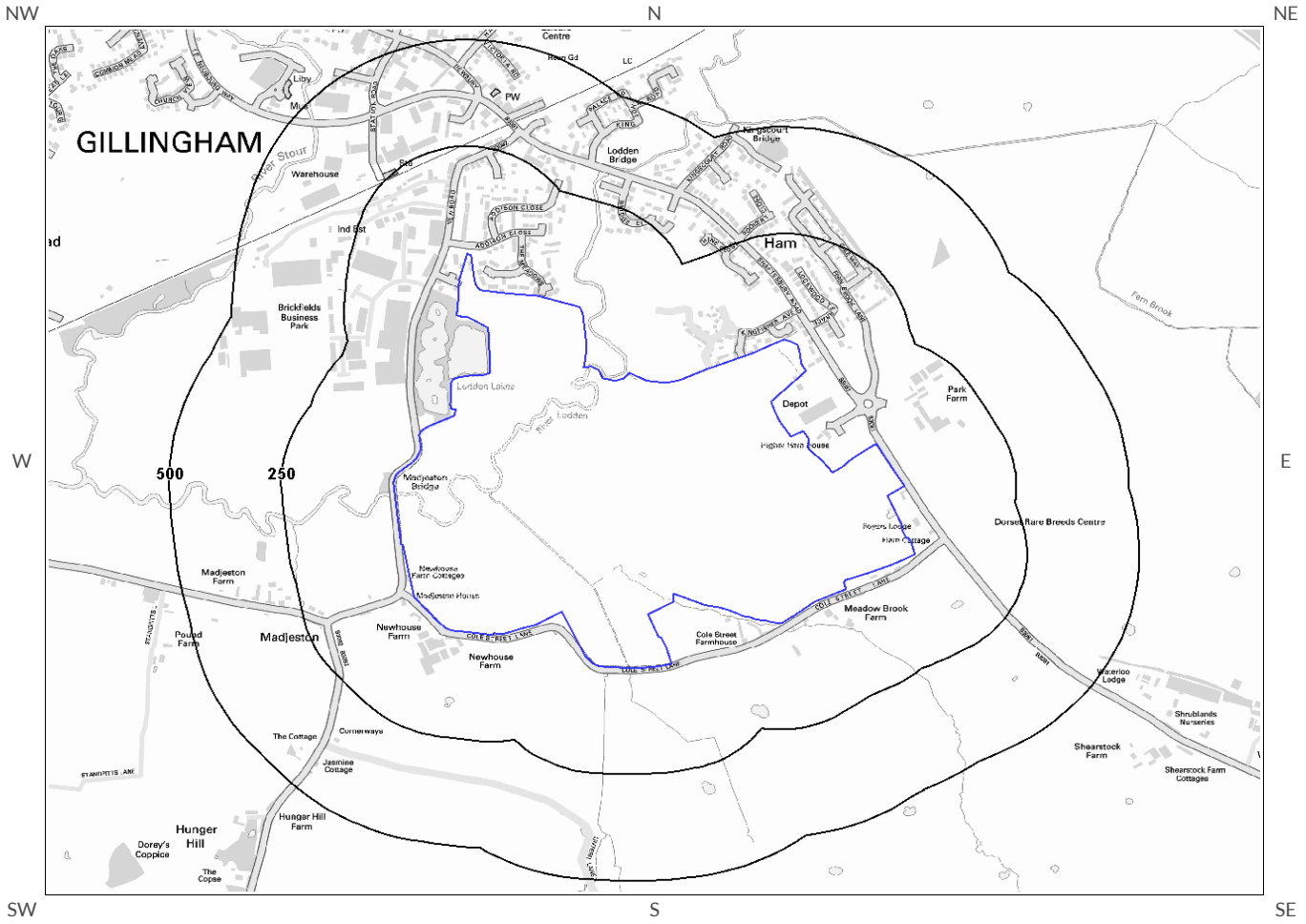
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



Map Legend

Mapping sourced from Ordnance Survey®

Site Outline

250
500
Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

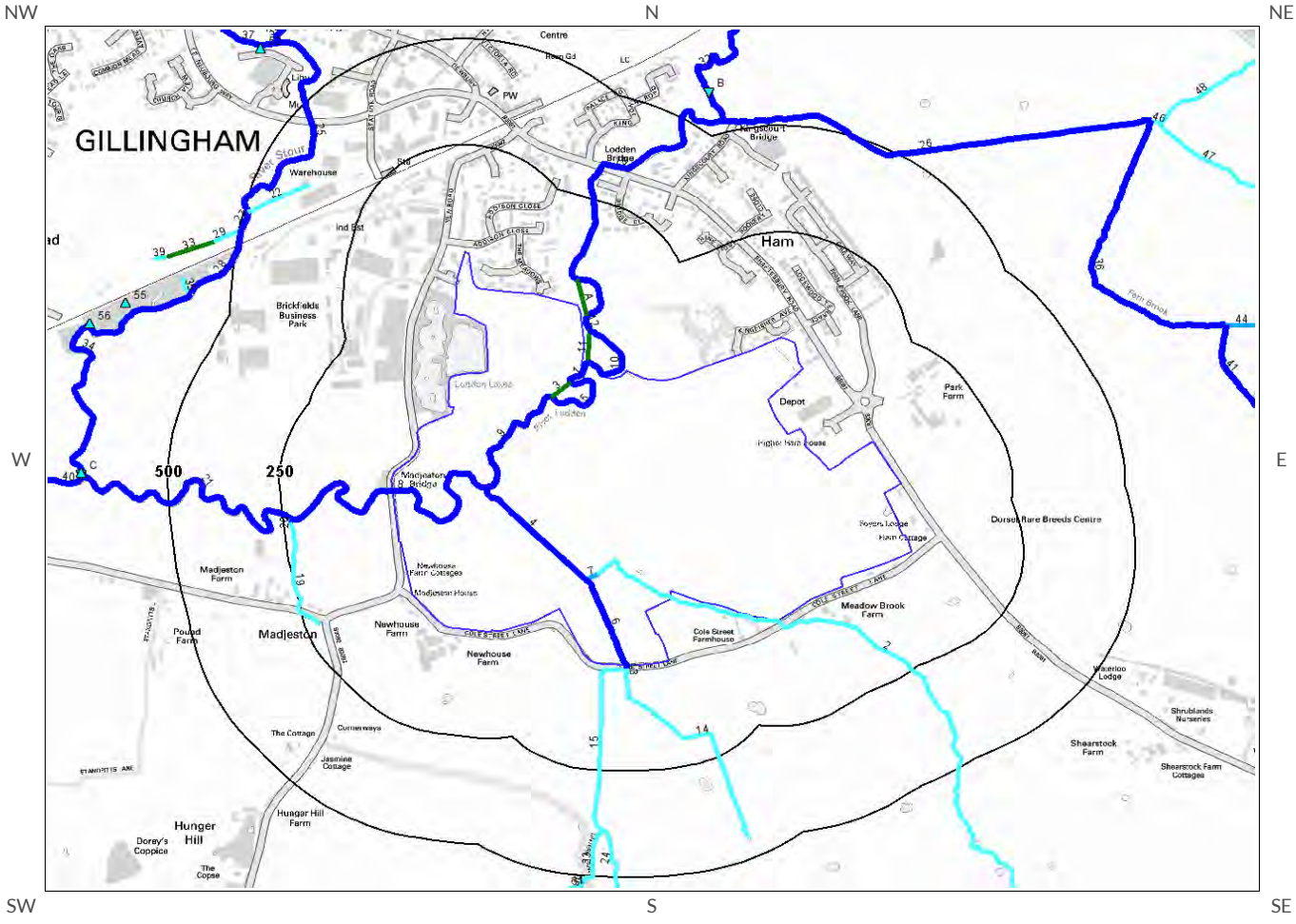
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

5d. Hydrology – Detailed River Network and River Quality



Map Legend

Mapping sourced from Ordnance Survey®

- Site Outline
- Search Buffers (m): 250, 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)

5. Hydrogeology and Hydrology

5.1 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 (5a):

ID	Distance (m)	Direction	Designation	Description
1	0.0	On Site	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
2	0.0	On Site	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
5	0.0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
6	0.0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
7	0.0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
8	0.0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
9	0.0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
10	0.0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
11	0.0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
12	39.0	S	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

ID	Distance (m)	Direction	Designation	Description
3	135.0	SE	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
13	157.0	SE	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
14	209.0	S	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
15	262.0	W	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
16	284.0	NW	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
17	345.0	E	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
18	467.0	NW	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

5.2 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 (5b):

ID	Distance (m)	Direction	Designation	Description
4	0.0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
5	0.0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
1	172.0	SW	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
2	184.0	SW	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

5.3 Groundwater Abstraction Licences

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

Database searched and no data found.

5.4 Surface Water Abstraction Licences

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

Database searched and no data found.

5.5 Potable Water Abstraction Licences

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

Database searched and no data found.

5.6 Source Protection Zones

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

Database searched and no data found.

5.7 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? Yes

5.7.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (5d):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
49B	583.0	NE	381700 126300	River Name: Lodden Reach: Ham Common-conf With Stour End/Start of Stretch: Start of Stretch NGR	B	B	C	C	C
50B	583.0	NE	381700 126300	River Name: Lodden Reach: Lr Mere Pk Fm-ham Common End/Start of Stretch: End of Stretch NGR	B	B	C	C	C
51C	692.0	W	380300 125400	River Name: Lodden Reach: Ham Common-conf With Stour End/Start of Stretch: End of Stretch NGR	B	B	C	C	C

5.7.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (5d):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
52	658.0	NW	380700 126400	River Name: Shreen Wtr Reach: Kendalls Mill-conf With Stour End/Start of Stretch: End of Stretch NGR	B	B	B	B	B
53C	692.0	W	380300 125400	River Name: Stour Reach: Conf With Lodden-eccliffe Mill End/Start of Stretch: Start of Stretch NGR	B	B	A	A	A
54C	692.0	W	380300 125400	River Name: Stour Reach: D/s Gillingham-conf With Lodden End/Start of Stretch: End of Stretch NGR	C	B	B	A	A
55	715.0	NW	380400 125800	River Name: Stour Reach: D/s Gillingham-conf With Lodden End/Start of Stretch: Start of Stretch NGR	C	B	B	A	A
56	764.0	NW	380318 125753	River Name: Stour Reach: D/s Gillingham-conf With Lodden End/Start of Stretch: Sample Point NGR	C	B	B	A	A
Not shown	1189.0	W	379804 125332	River Name: Stour Reach: Conf With Lodden-eccliffe Mill End/Start of Stretch: Sample Point NGR	B	B	A	A	A

5.8 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 (5d):

ID	Distance (m)	Direction	Details	
1	0.0	On Site	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
2	0.0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3	0.0	On Site	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
4	0.0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
5	0.0	On Site	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
6	0.0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
7	0.0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
8	0.0	On Site	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
9	0.0	On Site	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
10	3.0	N	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
11	3.0	N	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
12	9.0	E	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
13	10.0	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
14	12.0	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
15	12.0	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
16 A	12.0	E	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
17 A	14.0	E	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
18	60.0	N	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
19	220.0	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
20	233.0	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
21	233.0	W	River Name: River Lodden Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
22	379.0	NW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
23	391.0	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
24	391.0	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
25	412.0	NW	River Name: River Stour Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
26	486.0	NE	River Name: Motcombe Stream Welsh River Name: - Alternative Name: Fern Brook	River Type: Primary River Main River Status: Currently Undefined
27	489.0	W	River Name: River Stour Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
28	493.0	W	River Name: River Stour Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
29	494.0	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

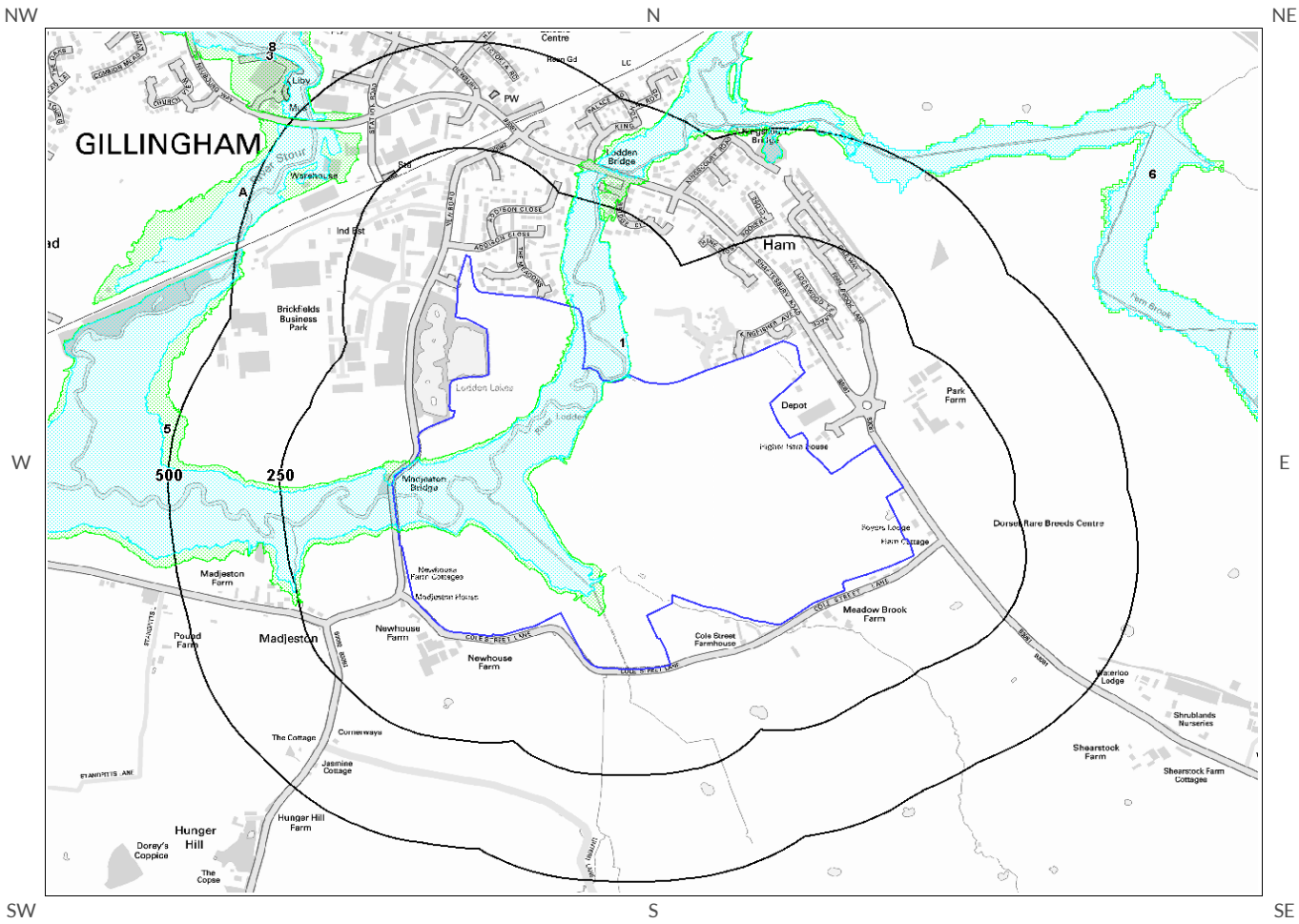
5.9 Surface Water Features

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
0.0	On Site
0.0	On Site
0.0	On Site
0.0	On Site
0.0	On Site
0.0	On Site
1.0	S
4.0	NW
8.0	W
9.0	W
12.0	S
12.0	S
15.0	SE
36.0	NE
86.0	E
89.0	E
90.0	SE
169.0	S
195.0	S
221.0	W
232.0	W
233.0	W

6. Environment Agency Flood Map for planning (from rivers and the sea)



Map Legend

Mapping sourced from Ordnance Survey

Site Outline

250
500
Search Buffers (m)

Zone 2 Floodplain

Zone 3 Floodplain

Flood Storage Area

Area Benefiting from Flood Defences

Flood Defences

6. Flooding

6.1 Zone 2 Flooding

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 1 – Environment Agency Flood Map for Planning:

Is the site within 250m of an Environment Agency Zone 2 floodplain? Yes

The following floodplain records are represented as green shading on the Flood Map:

ID	Distance (m)	Direction	Update	Type
1	0.0	On Site	27-Feb-2013	Zone 2 - (Fluvial Models)

6.2 Zone 3 Flooding

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 1 – Environment Agency Flood Map for Planning.

Is the site within 250m of an Environment Agency Zone 3 floodplain? Yes

The following floodplain records are represented as blue shading on the Flood Map:

ID	Distance (m)	Direction	Update	Type
5	0.0	On Site	27-Feb-2014	Zone 3 - (Fluvial Models)

6.3 Flood Defences

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

Database searched and no data found.

6.4 Areas benefiting from Flood Defences

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

6.5 Areas benefiting from Flood Storage

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

---

6.6 Groundwater Flooding Susceptibility Areas

6.6.1 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? Superficial Deposits 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).

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

Very High

6.7 Groundwater Flooding Confidence Areas

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

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.

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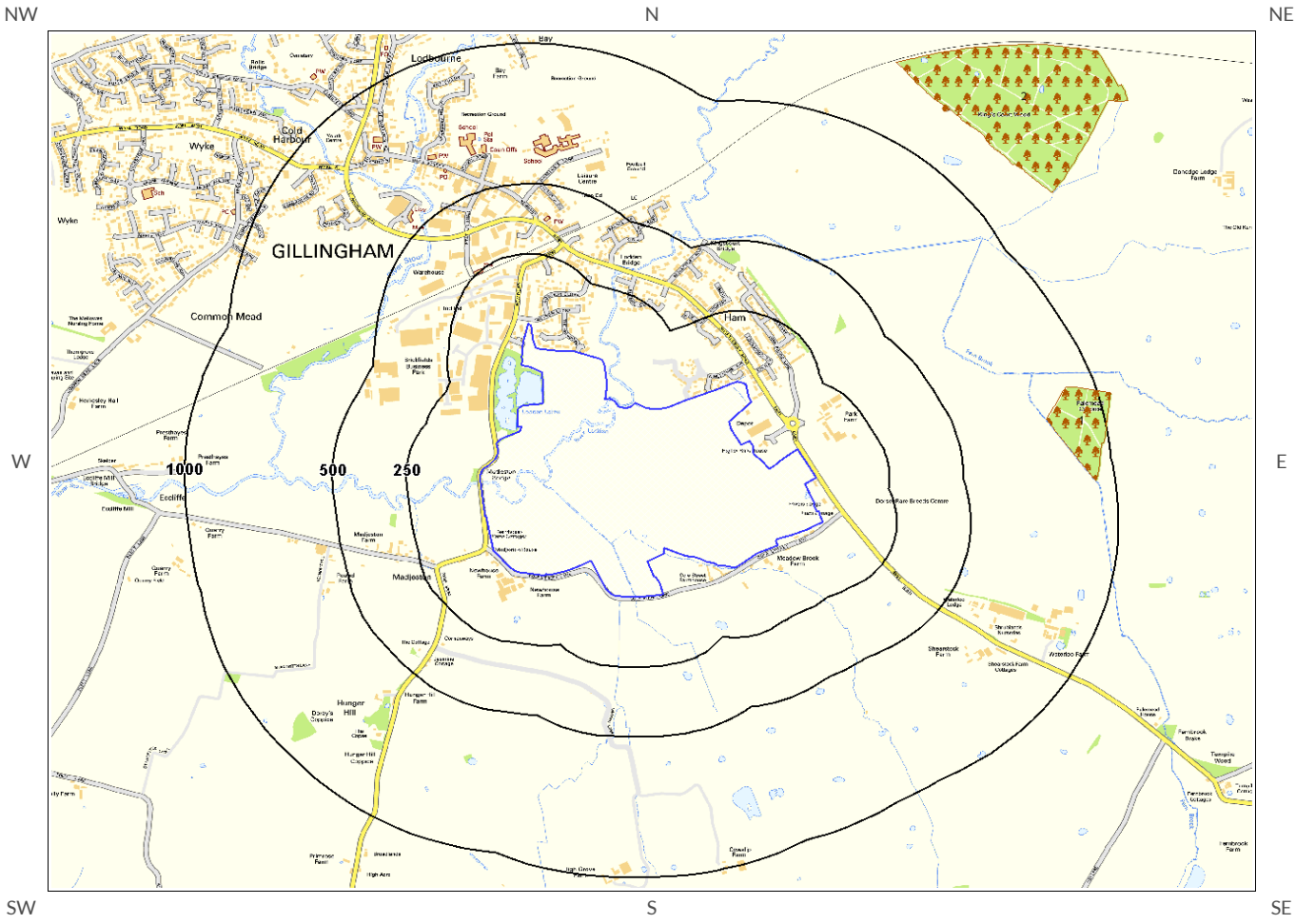
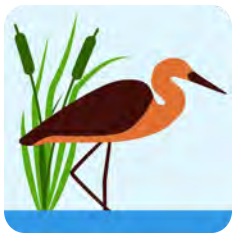
7. Designated Environmentally Sensitive Sites Map



Map Legend

Mapping sourced from Ordnance Survey®

- Site Outline
- SAC
- SSSI
- NNR
- World Heritage Sites
- Areas of Outstanding Natural Beauty
- SPA
- Ramsar
- LNR
- Environmentally Sensitive Areas
- Nitrate Vulnerable Zones
- Nitrate Sensitive Areas
- National Parks
- Ancient Woodlands



7. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?	No

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

2

The following Ancient Woodland records are supplied by English Nature/Scottish Natural Heritage/Countryside Council for Wales and are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
1	805.0	E	UNKNOWN	Ancient and Semi-Natural Woodland
2	1184.0	NE	KINGS COURT WOOD	Ancient and Semi-Natural Woodland

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

8. Natural Hazards Findings

8.1 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:

8.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Low

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

Hazard
Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

8.1.2 Landslides

What is the maximum Landslide* 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
Slope instability problems are unlikely to be present. 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.

8.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Null - Negligible

Soluble rocks are not present in the search area. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

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

8.1.4 Compressible Ground

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

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

Hazard
Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

8.1.5 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.

8.1.6 Running Sand

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

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

Hazard
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

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

9. Mining

9.1 Coal Mining

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

Database searched and no data found.

9.2 Shallow Mining

What is the subsidence hazard relating to shallow mining on-site*? Negligible

*Please note this data is searched with a 150m buffer.

9.3 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: enquiries@bgs.ac.uk
Web:www.bgs.ac.uk
BGS Geological Hazards Reports and general geological enquiries

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
https://www.gov.uk/government/organisations/public-health-england
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0845 762 6848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: North Dorset District Council
Phone: 01258 454 111
Web: www.dorsetforyou.com
Address: Nordon, Salisbury Road, Blandford Forum, Dorset, DT11 7LL

Gemapping PLC

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

Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, English Nature who retain the Copyright and Intellectual Property Rights for the data.

Standard Terms and Conditions

1 Definitions

In 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.

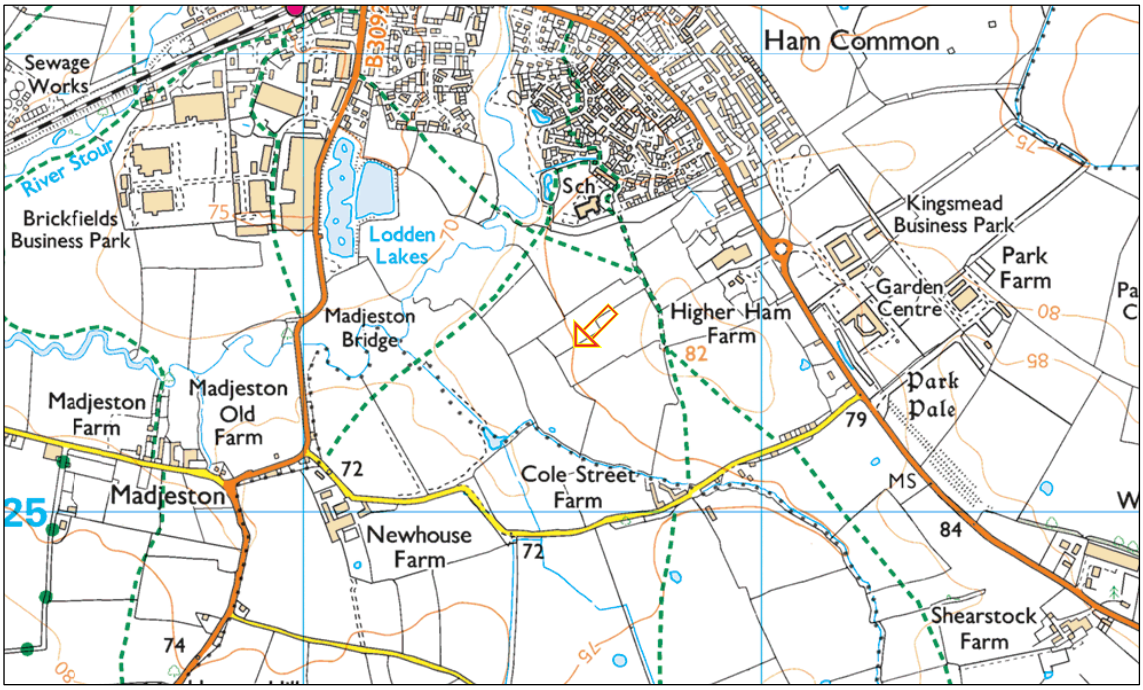
12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at GroundSure who will respond in a timely manner.

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 E

SITE PLANS

SITE LOCATION PLAN



Site Location Plan

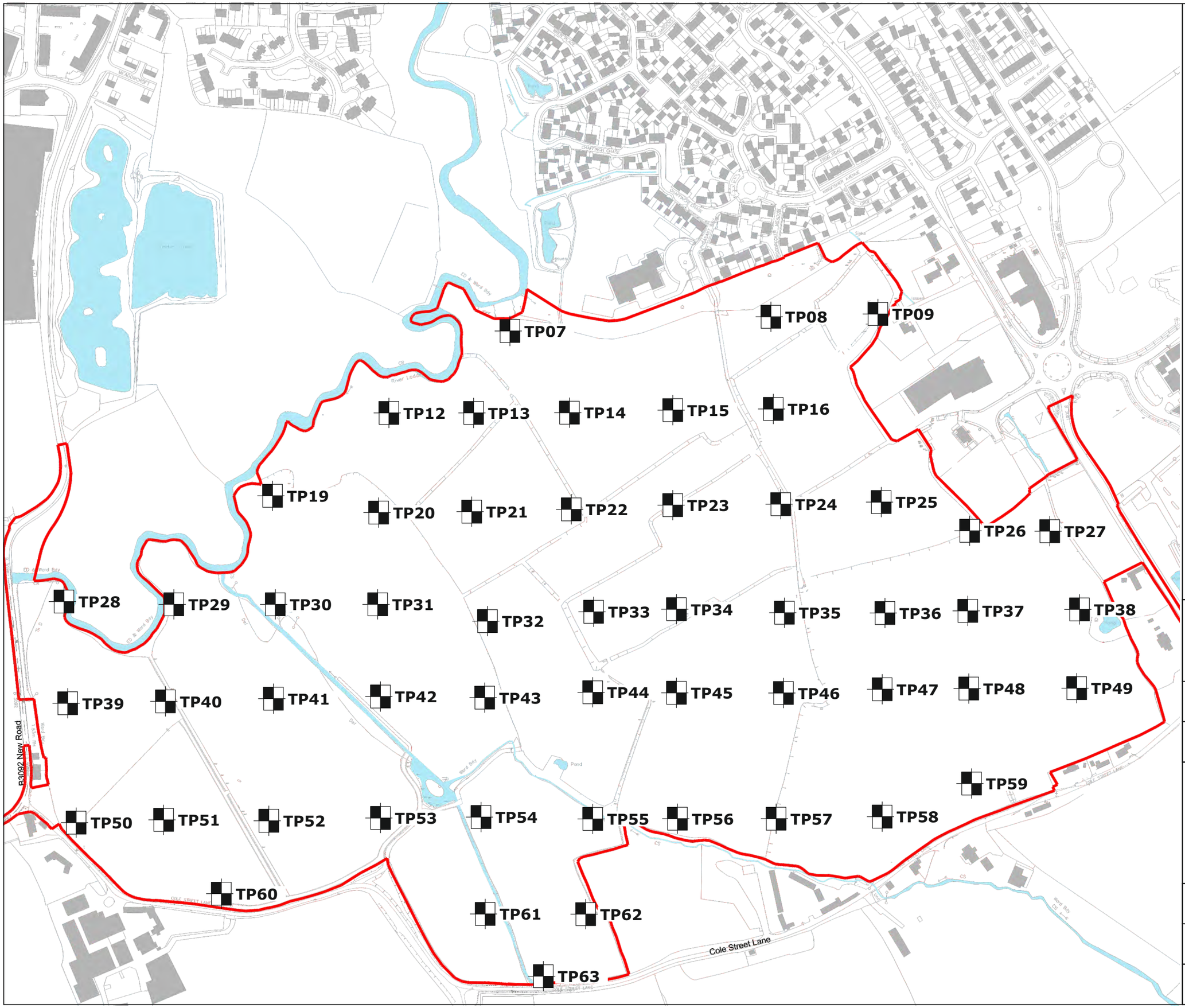
Dwg. No. 14114/01

AERIAL PHOTOGRAPH

Aerial Photograph
(Red line boundary outdated)

Dwg. No.
14114/AP

TRIAL PIT LOCATION PLAN



LEGEND:

Trial Pit

NOTES:

Drawn on plan supplied by client.
Locations are indicative only.
TPs 01 to 06, 10, 11, 17 & 18 fall outside the proposed development area and have therefore not been included.

Job Title:	LAND SOUTH OF GILLINGHAM DORSET
Drawing Title:	TRIAL PIT LOCATION PLAN
Client:	WELBECK LAND

Ruddlesden geotechnical ltd
The Stables
65 Langaton Lane
Pinhoe Exeter
EX1 3SP
www.ruddlesden.co.uk

Dwg. No:	14114/04
Date:	NOV-17
Scale:	NTS

PROPOSED SITE MASTERPLAN

Notes:
Do not scale from this drawing.
All contractors must visit the site and be responsible for taking and checking Dimensions.
All construction information should be taken from figured dimensions only.
Any discrepancies between drawings, specifications and site conditions must be brought to the attention of the supervising officer.

This drawing is for planning purposes only. It is not intended to be used for construction purposes. Whilst all reasonable efforts are used to ensure drawings are accurate, JTP accept no responsibility or liability for any reliance placed on, or use made of, this plan by anyone for purposes other than those stated above.

Key

- Application boundary
- Existing building
- Existing watercourse and water body
- Existing primary road
- Existing local road
- Proposed principal street
- 30m corridor for principal street*
- Indicative secondary street
- Indicative local street
- Indicative lane/ mews street/ private drive
- Existing hedgerow to be retained
- Exisitng hedgerow to be removed
- Existing tree to be retained (with 15m root protection area)
- Exising tree to be removed
- Residential development parcel
- Mixed use/Local centre (including independent living)
- Primary school extension
- Children's play area (NEAP) with 30m buffer
- Children's play area (LEAP) with 10m buffer
- Village square
- Formal sports pitch
- Indicative location for community building
- Informal kickabout area
- Allotment
- Proposed structural planting
- Informal public open space
- SuDS attenuation basin
- Proposed footpath
- Proposed cycle way
- Potential alternative/additional cycle route
- Proposed bus route
- Indicative location for bus stop
- 5 mins walking distance from bus stop (400m)
- Main vehicular access point
- Vehicular access point for limited number of vehicles or potential future access point
- Pedestrain/cycle only access point
- Key view to St. Mary's Church
- EA flood zone 3
- EA flood zone 2

*NOTE: *The alignment of principal street may deviate within the limits of the 30m corridor.*

Rev	Date	Description	Drawn	Chkd
D2	14.08.17	Amend red line, local centre, apply 15m standoff for trees	YQ	ECC
D1	20.06.17	Amend primary road, secondary road and junctions	JH/YQ	ECC
-	10.04.17	First issue	YQ	ECC

Drawing Status
DRAFT

Client
Welbeck Land

WELBECK LAND

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Project
Land South of Gillingham_Dorset

Drawing Title
Masterplan

Scale @ A1 1: 2000 Job Ref. 01050
Drawing No. 01050 _ MP01 Revision D2
Scale Bar 0 20 40 60 80 100m

LAND AT

GILLINGHAM

DORSET