



Phase I Geoenvironmental Assessment

Land South of Kelvedon Road,
Tiptree,
Colchester,
CO5 0LU

Strutt & Parker

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Land South of Kelvedon Road, Tiptree, Colchester, CO5 0LU

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY	
Project Details	Green Earth Management Company Limited (GEMCO) were commissioned by Strutt & Parker (the Client) to undertake a Phase I Geoenvironmental Assessment at Land South of Kelvedon Road, Tiptree, Colchester, CO5 0LU. The works were commissioned to support a planning application to redevelop the land to residential usage to include the construction of 107 (no.) two storey dwellings and 40 flats with associated infrastructure, access and soft landscaping.
Site Location	The site address is Land South of Kelvedon Road, Tiptree, Colchester, CO5 0LU centred upon approximate National Grid Reference (NGR) 588700, 217000.
Site Walkover Description	<p>The site is located south of Kelvedon Road and comprises 3 (no.) connecting parcels of land, totalling 5.15 ha in area.</p> <p>The first parcel of land comprised 2 (no.) single storey residential dwellings (Tower End and The Annexe) and associated front driveways / rear gardens, 1 (no.) stable block, 1 (no.) storeroom & courtyard, 1 (no.) single storey office and associated vehicular / pedestrian access & infrastructure. The rear of the property comprised a field split into a series of horse paddocks.</p> <p>The second parcel of land comprised 1 (no.) single storey residential chalet dwelling with single storey wooden extension, 1 (no.) single storey double height warehouse, 1 (no.) stable block, 1 (no.) place of worship and associated vehicular / pedestrian access & infrastructure.</p> <p>The third parcel of land comprised 2 (no.) fields. Field 1 was vegetated with heavily overgrown brambles / brush and has not been accessed in a number of years. Field 2's north western corner has been tarmacked/gravelled by the occupiers of the chalet for the use of vehicle and miscellaneous item storage. The rest of Field 2 is moderately well kept and has in the past been used as grazing pasture for horses/livestock.</p>
Site History	The earliest map available, dated 1874-1875, indicated the site was a set of agricultural fields, which by 1973 had been developed with Tower End, series of 3 (no.) buildings.
Published Geology	<p>Superficial Deposits: None.</p> <p>Bedrock: London Clay Formation (Clay, silt and sand)</p> <p>Nearby Deposits: The Superficial Deposits comprising the Glaciofluvial Deposits (Mid Pleistocene) run parallel with the eastern boundary and possibly outcrop in the north-eastern corner of site.</p>
Hydrogeology	<ul style="list-style-type: none"> • Superficial Deposits: Secondary A Aquifer. • Bedrock: Unproductive Strata. • The site is located within 3 (no.) Nitrate Vulnerable Zones, 2 (no.) for Surface Water and 1 (no.) for groundwater. • The site is located within a Drinking Water Protected Area and Drinking Water Safeguard Zone.

EXECUTIVE SUMMARY	
	<ul style="list-style-type: none"> The site is not located within a Source Protection Zone (SPZ). There are 29 (no.) OS Water Network lines within a 1 km radius.
Hydrology	<ul style="list-style-type: none"> Two surface water features were identified on site at Tower End in addition to a drainage ditch running along the eastern boundary; The nearest offsite surface water feature is located 227 m west and has been identified as an inland river on the ground surface; and The site has limited potential for groundwater flooding to occur.
Environmental Database Search	<ul style="list-style-type: none"> The nearest discharge consent is located 145 m southwest of site; There are no ground water abstraction licences within a 1 km radius of site; Potentially infilled land is located approximately 206 m southwest of the site; and A Public Right of Way runs along the southern boundary of site.
Preliminary Conceptual Site Model (CSM) and Risk Assessment	<p>In summary, the following potential contamination sources were identified:</p> <ul style="list-style-type: none"> On and Off-Site: Agricultural activities; construction and demolition activity; equine activities on-site. <p>The main potential receptors include future site users, site neighbours, construction workers and buried services.</p> <p>Low risks to human health were identified relating to general soil quality the potential for hazardous ground gases. This is considered a precautionary assessment.</p>
Conclusions and Recommendations	<p>On the basis of the Phase I Geoenvironmental Assessment, the site is considered suitable for the proposed residential end use, subject to the following recommendations:</p> <ul style="list-style-type: none"> Geotechnical investigation will be required to inform the civil and structural engineering of the proposed development; A limited geoenvironmental investigation is recommended with sample collection to confirm the assumptions and observations made during this phase of assessment. It would be prudent to carry this out in combination with the geotechnical investigation; and A discovery strategy (see Section 5.5) should be in place during all the development works. <p>A copy of this report should be forwarded to the Local Planning Authority in support of any application made.</p>
<p><i>This Executive Summary only provides a summary of the site data and its assessment. It does not provide a definitive environmental analysis and is for guidance purposes only. It is recommended that the reader reviews the reporting its entirety and any material referenced therein.</i></p>	

ACRONYMS AND ABBREVIATIONS

Acronyms and Abbreviations	
Acronym / Abbreviation	Definition
ACM or PACM	Asbestos or potential asbestos containing material
ADE	Average Daily Exposure
ASPT	Average Score Per Taxon
BOD	Biochemical Oxygen Demand
BGS	British Geological Survey
BH	Borehole
BS	British Standard
BTEX	Benzene, Toluene, Ethyl benzene and Xylenes
CAT	Cable avoidance tool
CIRIA	Construction Industry Research and Information Association
CLEA	Contaminated Land Exposure Assessment
CLR	Contaminated Land Research reports
Defra	Department of the Environment, Food and Rural Affairs (formerly the DoE and DETR)
DETR	Department of the Environment, Transport and the Regions (formerly the DoE and now Defra)
DO	Dissolved oxygen
DoE	Department of the Environment (then DETR and later Defra)
DQRA	Detailed quantitative risk assessment (Tier 2)
EA	Environment Agency
EPH	Extractable Petroleum Hydrocarbons
EQI	Environmental Quality Index
EQS	Environmental Quality Standards
FID	Flame ionisation detector
GAC	Generic assessment criteria
GC	Gas chromatography
GEMCO	Green Earth Management Co Ltd
GQA	General quality assessment
GQRA	Generic quantitative risk assessment (Tier 1)
ha	Hectare
HCV	Health criteria value
HHRA	Human health risk assessment
ICRCL	Interdepartmental Committee on the Redevelopment of Contaminated Land
ID	Index dose
LEL	Lower explosive limit
LOD	Limit of detection
m	Metres
mAOD	Metres above ordnance datum
mbgl	Metres below ground level
MCERTS	Monitoring Certification Scheme
MDI	Mean daily intake
MTBE	Methyl tertiary butyl ether

Acronyms and Abbreviations	
Acronym / Abbreviation	Definition
NGR	National grid reference
NHBC	National House Building Council
NRA	National Rivers Authority (now the Environment Agency)
PACM	Potentially asbestos containing material
PAH	Polyaromatic hydrocarbon (a.k.a. polynuclear aromatic hydrocarbon)
pH	A measure of the acidity or basicity of an aqueous solution. Defined as the negative logarithm of the concentration of hydrogen ions in a substance
PID	Photo Ionisation Detector
PPE	Personal Protective Equipment
RBCA	Risk-based contamination assessment
RMS	Remediation Method Statement
RQO	River Quality Objective
S4UL	Suitable for Use Level
SGV	Soil Guideline Value
SNIFFER	Scotland and Northern Ireland Forum for Environmental Research
SPT	Standard penetration test
SSTL	Site-specific target level
SVOC	Semi Volatile Organic Compounds
QRA	Quantitative risk assessment
TDI	Tolerable daily intake
TDSI	Tolerable daily soil intake
TP	Trial pit
TPH	Total petroleum hydrocarbon
TPHCWG	Total petroleum hydrocarbon criteria working group
TOX	CLR 9 Toxicological Reports
UKAS	United Kingdom Accreditation Service
USEPA	United States Environmental Protection Agency
UXB	Unexploded Bomb
VOC (TVOC)	Volatile Organic Compounds (Total VOC)
WHO	World Health Organisation
WQS	Water Quality Standards
WS	Window sample

1 INTRODUCTION

1.1. Project Details

Green Earth Management Company Limited (GEMCO) were commissioned by Strutt & Parker (the Client) Limited to undertake a Phase I Geo-environmental Assessment at Land South of Kelvedon Road, Tiptree, Colchester, CO5 0LU. The site location is shown in Figure 1.

1.2. Proposed Development

It is understood that the proposed development will comprise the construction of 107 (no.) two storey residential dwellings and 40 (no.) residential flats with associated landscaping, access and infrastructure. A copy of the proposed development plan is presented in Figure 2.

1.3. Objectives

The objectives of this Geoenvironmental Assessment are to:

- Carry out a review of the environmental setting of the site and surrounding area in order to determine any potentially significant pollution linkages relative to sensitive receptors identified;
- Prepare a preliminary conceptual site model;
- Provide recommendations for further works if necessary;
- Undertake all works in accordance with relevant statutory and local guidance as appropriate; and
- Produce a report for use by the Client.

1.4. Scope of Work

The scope of work for the Geoenvironmental Assessment has included the following:

- A desk-based review of available information obtained from an Envirocheck environmental database search report (R.1; included as Appendix 3) and other available sources of information;
- A site walkover survey;
- Provision of a preliminary conceptual site model, detailing all potential pollutant linkages; and
- Summary of any recommended additional work based on the findings of the Geoenvironmental Assessment.

1.5. Methodology

The methodology of assessment applied in the production of this report is in accordance with the current industry standards and supplementary guidance as appropriate, including CLR 11, Model Procedures produced by DEFRA and the EA (R.2), British Standard Code of Practice for Site Investigations BS5930: 2015 (R.3), British Standard Code of Practice for Investigation of Potentially Contaminated Sites BS10175:2011+A2:2017 (R.4). For the purposes of this report the word 'contamination' relates to the statutory definition of contaminated land under the Environmental Protection Act 1990 (R.5), unless otherwise stated.

With regard to groundwater, reference has been made to the Water Framework Directive (R.6) and the Water Supply Regulations (R.7). A list of references used in the production of the report is included in Section 6.

1.6. Terms of Reference

This desk study (herein referred to as the "Report"), has been prepared for Strutt & Parker (herein referred to as the "Client"), for the purposes agreed and in general accordance with the terms and conditions set out in proposal reference '1342 181205 GEMCO S&P Quotation' dated 5th December 2018 and the Agreement between Green Earth Management Co Ltd (the "Consultant") and The Client.

1.7. Report Limitations and Conditions

For the work, reliance has been placed on publicly and privately available data from the sources identified; the sources are not exhaustive, and further information relevant to the site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.

In addition to the above, GEMCO note that when investigating or developing land, it is important to recognise that sub-surface conditions may vary spatially and over time. Therefore, GEMCO cannot guarantee that conditions other than those discussed in the report do not occur elsewhere on the site.

New information, revised practices, or changes in legislation may necessitate the re-interpretation of the report, completely or in part.

Further detail regarding report conditions is included as Appendix 1.

2 SITE DETAILS

2.1. Site Setting

2.1.1. Site Location

The site is located at Land South of Kelvedon Road, Tiptree, Colchester, CO5 0LU and is centred upon approximate National Grid Reference (NGR) 645680, 258210. A site location plan is presented as Figure 1.

2.1.2. Site Description

GEMCO visited site on the 15th January 2019 to undertake a site walkover. The site layout at the time of the walkover is indicated on Figures 3-6 and a selection of photographs taken at this time are included in Appendix 2.

The development site was irregular in shape measuring approximately 5 ha in area and 270 m north-south by 205 m east-west at its widest points. The site comprised three connecting parcels of land, primarily composed of soft landscaping (disused fields, laid to grass) horse paddocks and residential dwellings bounded to the north by the B1203 Kelvedon Road, to the east by the residential dwelling Stourton, the accompanying rear garden and further disused fields, to the south by a public footpath and grassed fields and to the west by Coronation Cottages and Golden Warren residential properties, the Water Tower and grassed land.

Tower End & The Annexe

The first parcel of land consisted of two single storey residential dwellings (Tower End and The Annexe), which fronted onto gravel driveways accessed from the B1203 Kelvedon Road. The two properties were separated by a gated entrance that led to Tower End garden, stable block and paddocks. The rear garden of Tower End consisted of a tiled patio and lawn with large natural pond (well kept) and manmade pond (in a state of disarray and heavily vegetated). Both ponds drain into a heavily vegetated manmade ditch which ran along the eastern boundary of site to meet with the drainage network at the rear of the property.

The gravel driveway extended round the west of The Annexe to the rear of the property to form a small courtyard area with a storeroom structure. At the time of the walkover the courtyard was mostly used for the storage of a horse trailer, caravan, miscellaneous items and manure. From a gated entrance between the storeroom and the rear of the stable block, the horse paddocks and offices of Aquanera Construction Ltd could be accessed. The offices of Aquanera Construction Ltd were located behind the storeroom and comprise a single storey wooden structure. The rear grassed field had been divided into a number of horse paddocks with a couple of solitary wooden shelters. Some of the paddocks were occupied on the day of the site visit whilst others were used for storage of equine/equestrian equipment. A site layout plan for Tower End is presented in Figures 4 & 5.

Pony's Farm

The second parcel of land consisted of a single chalet type residential dwelling and adjoining caravan, both of which fronted onto a large gravel driveway accessed from the B1203 Kelvedon Road. The rest of the land associated with the chalet was accessed through a gated private concrete road, to the east of the property which eventually led to a field owned by a separate party, but used by the occupiers of

the chalet. A single storey wooden extension had been constructed to the rear of chalet, fronting onto the back grassed garden. Heading southwards on the property the concrete road led to a small hardstanding courtyard (used for the parking of vehicles) in front of a single storey double height warehouse building. No access at the time of the walkover was gained to this building. A series of brick built stables, associated concrete courtyard and wooden annexe (currently used as a place of worship) resided behind the warehouse. The concrete road turned to tarmac in front of the wooden annexe before leading to the wooden gated entrance of the field beyond.

A small area of the field had been tarmacked/gravelled by the occupiers of the chalet to enable the storage of caravans and other vehicles, plus a large spoil of gritting salt, previously the field has been used by them to graze/keep horses and livestock. A site layout plan for Ponys Farm is presented in Figure 6.

2 (no.) Fields

The third parcel of land consisted of two adjoining fields, owned by a separate party to Tower End and Pony's Farm. Field 1 fronted onto the B1023 to the north and is bounded by the residential properties of The Gables & Stourton and their associated rear gardens to the west and east respectively and to the south by Field 2. The northern boundary of Field 1 mostly consisted of heavily overgrown vegetation and a small private wooden access gate, in a state of disrepair. The field appeared to be heavily overgrown with brambles and other brush. Previously the field could be accessed from its southern boundary through Field 2 via a manmade walkway over a brook/pond feature but this has since been fenced off.

Field 2 is bounded by Field 1 and the rear gardens of The Gables and Stourton to the north, to the east by grassed fields, to the south by a public footpath and to the west by the land to the rear of the Water Tower. A site layout plan for Fields 1 & 2 is presented in Figure 7.

2.1.3. Topography

Topographically the site was moderately flat with a slight decline towards the east by approximately ~1 metre.

2.1.4. Surrounding Area

The surrounding area was primarily residential and commercial with agricultural land and fields laid to grass in the wider area.

2.2. Geological Setting

2.2.1. Geological Setting

The geological setting has been derived from the Envirocheck report (R.1) and British Geological Survey (BGS) online records.

2.2.2. Published Geology

The site is directly underlain by the bedrock of the London Clay Formation. Geological mapping indicates that the Glaciofluvial Deposits (Mid Pleistocene) run parallel with the sites eastern boundary and possibly outcrop in the north-western corner of site.

Online BGS records (R.10) show a borehole 600 m southeast of the site on Vine Road, identified as TL81NE78, which is within the same geological strata as the site. The stratigraphy encountered in that borehole is presented in Table 2.1.

Table 2.1 BGS Borehole Geology			
Classification	Lithology	Thickness (m)	Depth (m)
Glaciofluvial Deposits	Running Sand	0.79	2.70
	Gravel	1.57	4.60
London Clay & Oldhaven Beds	Clay	79.85	84.43
Weathered Reading Beds	Mottled Clay	3.66	88.08
	Sand & Clay	3.05	91.13
	Stone	1.22	92.35
	Sand & Clay	2.74	95.09
	Sand and Pebbles	2.13	97.23
Lower London Tertiaries	Black Sand & Clay	3.96	101.19
	Hard Sand	3.05	104.24
	Black Sand & Clay	12.50	116.73
	Clay	2.13	118.87
	Sand & Clay	1.83	120.69
	Sand Clay & Pebbles	1.22	121.91
	Brown Clay & Sand	0.91	122.83
Upper Chalk	Sand and Clay	1.52	124.35
	Chalk	59.13	183.48

Note: Water was encountered at 46.93 mbgl.
There is a possibility of fault repetition in the L.L. Tertiaries as they are anomalously thick. It is difficult to understand the section between the London Clay and the Chalk, as the details do not agree with what one would expect in the Lower London Tertiaries here.

2.2.3. Geological Hazards

The Envirocheck report indicates the following potential geological hazards:

Table 2.2 Geological Hazards	
Geological Hazard	Hazard Potential
Collapsible Ground	Very Low
Compressible Ground	No Hazard
Ground Dissolution Stability	No Hazard
Ground Stability (Landslides)	Very Low
Running Sand	Very Low
Shrinking or Swelling Clay	Moderate

2.2.4. Mining Records

The Envirocheck report did not identify any coal mining affected areas within 1 km of the site and identifies the site as in an area that might not be affected by coal mining. No hazard from non-coal mining is identified.

Mapping dated 1874-1875 identified an Old Gravel Pit (assumed Sand & Gravel workings) 200 m southeast of site, with more represented on the 1924 map approximately 50 & 100 m northeast and 150 m east and southeast. The pits are no longer labelled as such on the 1955 - 1958 maps, assumed infilled, but the outlines / impressions remained.

By 1973 a large 800 m x 400 m sand and gravel pit with associated infrastructure and buildings had been excavated 700 m south of site, however, this has since been infilled and restored as woodland and grassland.

2.2.5. Radon

The Envirocheck report states that information provided by the BGS and National Geoscience Information Service indicate that the site is in a lower probability radon area (less than 1% of homes are estimated to be at or above actionable level).

No radon protective measures are considered necessary in the construction of new dwellings or extensions.

2.3. Hydrogeological Setting

The bedrock of the London Clay is designated as Unproductive Strata. The Glaciofluvial Deposits that may outcrop in the north-eastern corner of site are designated as a Secondary A Aquifer.

The site is located within the G78 Sandlings and Chelmsford Nitrate Vulnerable Zone for groundwater and both the S431 Layer Brook and the S434 River Blackwater Nitrate Vulnerable Zone for surface water. The site is also located within the GB105037034130 - Layer Brook Drinking Water Protected Area and SWSGZ1023 Anglian, Stour and Abberton Drinking Water Safeguard Zone.

2.4. Hydrological Setting

The site walkover and a review of the Ordnance Survey mapping of the area identified a surface water features on the site - a pond.

There are 29 (no.) OS Water Network Lines within a 1 km radius of site within the Colne Essex and Chelmer catchment area, the closest being 227 m west of site.

There are no water abstraction licenses within 1 km. The closest is located 1351 m east of site and relates to General Agriculture: Spray Irrigation - Direct. These are not considered significant with respect to the site.

There are 24 (no.) discharge consents within 1 km. The closest is located 145 m southwest of site, registered to Anglian Water Services Limited, ref. Asenf12068 and relates to Trade Discharges - Process Effluent - Waster Company (Wtw) to a tributary for the River Blackwater. These are not considered significant with respect to the site.

The site has limited potential for groundwater flooding to occur.

Tiptree Pumping Station, located 150 m south of site is labelled on the 1955 Historical Mapping with a large reservoir of approximately 80 m x 80 m in size. It remains to this day, but is now labelled as a covered reservoir. A singular small reservoir is also located just north of Tiptree Pumping Station.

2.5. Site History

The purpose of determining the site history is to identify the past uses of the site, the potential for historic on- and off-site sources of contamination, changes in landform, site structures and construction and their potential impact on the geology, hydrogeology and hydrology. The site history will assist in the design of site investigations by identifying features that warrant a more detailed assessment.

A summary of the relevant site history derived from a review of the historical maps provided in the Envirocheck Report (R.1 and Appendix 3) is presented in Table 2.3.

Table 2.3 Historical Map Summary			
Maps Dated	On / Off Site	Description	Potential Contamination Sources
1874 - 1875 (1:2,500)	On-site	The site formed a series of agricultural fields with vegetated (tree) boundaries. A footpath runs along the rear boundary towards Perry Wood in the west.	Agricultural activities.
	Off-site	The surrounding area mostly comprises agricultural farm land. A depression marked Old Gravel Pit is located 200 m south east of site.	Agricultural activities. Quarrying and infilling activities.
1881 (1:10,560)	On-site	No significant changes.	No additional significant sources.
	Off-site	The surrounding area remains mostly agricultural farm land and wood. The village of Tiptree has been constructed by this time 250 m southeast of site.	Construction & Demolition activities. Infilling activities.
1897 (1:2,500) & 1898 (1:10,560)	On-site	No significant changes.	No additional significant sources.
	Off-site	Two properties have been constructed just west of site on the opposite side of the northern boundary road.	No additional significant sources.
1922 (1:2,500)	On-site	No significant changes.	No additional significant sources.

Table 2.3 Historical Map Summary			
Maps Dated	On / Off Site	Description	Potential Contamination Sources
& 1924 (1:10,560)	Off-site	The Kelvedon, Tiptree & Tollesbury Light Railway has been constructed by this time, running northwest to southeast and parallel with the southern boundary of site. A series of Old Gravel Pits are now depicted 50 & 100 m northeast, 150 m east and southeast of site within the Town of Tiptree. A series of residential properties and associated buildings have replaced the two original dwellings just west of site on the opposite side of the northern boundary road.	Construction & Demolition activities. Railway sidings.
1938 (1:10,560)	On-site	No significant changes.	No additional significant sources.
	Off-site	A pumping station has been constructed approximately 200 m south of site.	Construction & Demolition activities.
1945 (Aerial Photography)	On-site	No significant changes.	No additional significant sources.
	Off-site	A residential dwelling has been constructed between the two northern fields of site. Residential dwellings have been constructed adjacent to the western and eastern boundaries. The town of Tiptree has continued to expand in all directions during this time.	Construction & Demolition activities.
1954 (1:2,500) & 1955 - 1958 (1:10,000)	On-site	No significant changes.	No additional significant sources.
	Off-site	The road running parallel with the northern boundary is now labelled as Kelvedon Road (B1023) and Oak Road is now labelled at the T junction. A few properties have been constructed along Oak Road within 150 m of site. A small pond is labelled within a vegetated plot between the southern boundary and railway. The pumping station has been extended to include a trio of tanks, a large reservoir and series of auxiliary buildings. A smaller reservoir is labelled just east of the pumping station.	Construction & Demolition activities. Infilling activities.

Table 2.3 Historical Map Summary			
Maps Dated	On / Off Site	Description	Potential Contamination Sources
		The Old Gravel pits are no longer labelled as such, assumed infilled, but the outlines/impressions of several remain.	
1960 - 1973 (1:2,500)	On-Site	The north-western field has been developed with Tower End residential dwelling and 2 (no.) auxiliary buildings.	Construction & Demolition activities.
		<p>The properties built on the opposite side of Kelvedon Road are now labelled Sun House. A Coal Yard and Highland Nursery both with associated structures and buildings have been constructed on the opposite side of Kelvedon Road.</p> <p>The railway running along the southern boundary of site has been labelled as dismantled.</p> <p>The pumping station is now labelled as a Water Works and some of the associated buildings as Waterworks cottages. The road it fronts onto is now labelled as Grange Road. The small reservoir just east remains.</p>	Construction & Demolition activities.
1973 - 1975 (1:2,500) & 1978 - 1993 (1:2,500) & 1973-1974 (1:10,000)	On-site	Partial Map. The site has been developed into the modern day layout, with the majority of current day buildings and structures now constructed, including the pond in Tower End rear garden.	Construction & Demolition activities.
	Off-site	<p>Partial Map. An electrical substation has been constructed within the Water Works site boundary. Some of the dismantled railway remains along the southern boundary.</p> <p>A large 800 m x 400 m sand and gravel pit with associated infrastructure and buildings has been excavated 700 m south of site and just east of Tiptree Town.</p>	<p>Construction & Demolition activities.</p> <p>PCB's</p>
1982 (1:2,500)	On-site	No Map	No additional significant sources.
	Off-site	No Map	No additional significant sources.

Table 2.3 Historical Map Summary			
Maps Dated	On / Off Site	Description	Potential Contamination Sources
1993 (1:2,500) & 1999 (1:10,000) & 1999 (Aerial Photography)	On-site	No significant changes.	No additional significant sources.
	Off-site	<p>The railway has been completely dismantled and the sidings/embankments removed to return the land to agricultural fields.</p> <p>The construction of commercial / industrial park with associated access and infrastructure 50 m west has begun by this time.</p> <p>The sand and gravel pit remains, however much of the previously excavated area has now become surface water features (ponds). Much of the original infrastructure remains, with the addition of a saw mill and series of tracks running through the pit.</p>	<p>Construction & Demolition activities.</p> <p>Infilling activities.</p>
2006 (1:10,000)	On-site	The field on the eastern side of The Gables residential dwelling has been labelled as Ponys Farm.	No additional significant sources.
	Off-site	<p>The commercial / industrial park has been expanded to include the majority of current day buildings and structures.</p> <p>The sand and gravel pit has been restored with a series of vegetated areas and more surface water features.</p>	<p>Construction & Demolition activities.</p> <p>Infilling and restoration activities.</p>
2018 (1:10,000)	On-site	Tower End has seen the construction of Aquanera offices and store room, the creation of the second garden pond and the splitting of the rear field into a number of horse paddocks.	Construction & Demolition activities.
	Off-site	The sand and gravel pit is no longer labelled and the associated infrastructure has been removed, however the restored ground remains as an accessible woodland / heathland and surface water features for the public.	<p>Construction & Demolition activities.</p> <p>Infilling activities.</p>

3 ENVIRONMENTAL SEARCHES

3.1. Environmental Search Data

The next sections have been produced following a review of the Envirocheck environmental database search report (R.1; Appendix 3) unless otherwise indicated.

3.2. Environmental Permits, Pollution Incidents and Registers

The Envirocheck report identifies that within 1 km of the site there are:

- 24 (no.) Discharge Consents; the closest located 145 m southwest, with registered to Anglian Water Services Limited, at Tiptree Water Treatment Works, Highfield Lane, ref. Asenf12068 for the discharge of trade discharges - process effluent - water company (Wtw) into a tributary of the River Blackwater; and
- 1 (no.) Registered Waste Transfer Site, licenced to M. R Payne T/A M P Skips, located at Basket Works, Grange Road, ref. Eawml71261, authorised for household / commercial / industrial waste transfer.

None of these are considered significant with regard to the subject site.

3.3. Historical Landfill and Other Waste Sites

There are no historical or active landfill sites recorded within a 1 km radius of site. There are 6 (no.) records of Potentially Infilled Land (Non-water) and 9 (no.) records of Potentially Infilled Land (Water) within 1 km. The closest non-water infilled land feature is located 206 m southwest of site, recorded on the 1974 map referenced as an unknown filled ground (pit, quarry, etc.)

3.4. Current Industrial Land Use Data

The Envirocheck report identified 41 (no.) contemporary trade directory entries within a 1 km radius of site, with only a single entry listed as being historically operational on site; Tiptree Carriage Co. located at Tower End, a car dealership.

6 (no.) commercial Services, 7 (no.) manufacturing and production and 6 (no.) public infrastructure points of interest are located within a 1 km radius of site.

3.5. Environmentally Sensitive Areas

The site is located within the G78 - Sandlings and Chelmsford Nitrate Vulnerable Zone for groundwater and both the S431 Layer Brook and the S434 River Blackwater Nitrate Vulnerable Zone for surface water. The site has limited potential for groundwater flooding to occur.

Perrys Wood, located 188 m northwest and Inworth Wood, located 788 m north are labelled as areas of Ancient Woodland.

3.6. Air Quality Management Areas

On the basis of data Air Quality Management Area (AQMA) maps available on the Defra website (R.8), the site is not located within an AQMA.

4 PRELIMINARY RISK ASSESSMENT AND CONCEPTUAL SITE MODEL

4.1. Introduction

In order to determine if land contamination is present, a tiered risk assessment process is adopted to provide a robust approach to the management of risks due to land contamination. The risk assessment process can be highly detailed and there are a range of factors that need to be considered in assessing risks. The adoption of a staged approach is in line with current industry legislation and guidance. There are principally three tiers applied as follows:

- Tier 1: Preliminary Risk Assessment (PRA) (generally qualitative);
- Tier 2: Generic Quantitative Risk Assessment (GQRA); and
- Tier 3: Detailed Quantitative Risk Assessment (DQRA).

The purpose of the current work is to undertake a Tier 1 preliminary assessment.

Land is considered to be contaminated if significant **pollutant linkages**, comprising a source, pathway, and receptor are present. **Source, pathway, and receptor** can be defined as follows:

- **Source** (contaminant/pollutant) – “a substance [or range of chemically related substances] which is in or under the land and which has the potential to cause harm or to cause pollution of controlled waters.”
- **Pathway** One or more routes by which a receptor can be exposed to or affected by a contaminant.
- **Receptor** (target) – humans, living organisms, ecological systems, buildings, controlled waters.

Pollutant linkages are deemed significant if there is a significant potential of significant harm to a sensitive receptor being exposed to a specific contaminant(s) via an identified and active pathway.

4.2. Contamination Sources

The site has comprised undeveloped farmland / fields from the earliest available mapping, dated 1874, before being developed with residential properties, associated auxiliary buildings, infrastructure and access. Historically, the local surrounding area has been agricultural / heathland, residential with the wider area being used heavily for the quarrying of sands and gravels.

A summary of the potential contamination sources derived from the preliminary assessment is presented in Table 4.1:

Table 4.1 Potential Sources of Contamination		
Potential Source	Potential Contaminants	Probability
On Site & Off Site		
Agricultural Activity	Agrichemicals, fuel and oil hydrocarbons (TPH, PAH), heavy metals, asbestos, agrichemicals.	Low likelihood
Equine Centre Activity	Agrichemicals, fuel and oil hydrocarbons, (TPH, PAH), asbestos, sterilisation agents, disinfectants.	Low likelihood
Materials associated with construction & demolition activities.	Heavy metals, PAHs, asbestos, ground gases.	Low likelihood

4.3. Migration Pathways

The following potential migration pathways have been identified with regard to the site and the current development proposals:

- Direct contact with contaminated soil;
- Ingestion of contaminated soil or soil dust;
- Inhalation of contaminated soil dust or asbestos fibres;
- Uptake of contaminants by home-grown produce;
- Ingestion of contaminated vegetable produce;
- Ingress / accumulation of gas or vapours into buildings;
- Indoor and outdoor inhalation of ground gas or vapours;
- Potential leaching and migration of contaminants to and within surface waters and/or to ground groundwater and migration within the groundwater;
- Direct contact with underground services and other building material or leaching of contaminants into underground service corridors; and
- Uptake by fauna and flora.

Consideration of the pathways has been taken with respect to the boundaries and the development proposed on the site.

4.4. Receptors

The following sensitive receptors have been identified:

- Future site users;
- Site neighbours;
- Construction workers;
- Controlled Waters: Secondary A Aquifers in superficial geology and Principal Aquifer in bedrock geology;
- Future building(s) and building materials;

- Buried services; and
- Ecological receptors.

4.5. Preliminary Conceptual Site Model

The source-pathway-receptor linkages that are applicable are summarised in Table 4.2 below:

Table 4.2 Preliminary Conceptual Site Model

Source(s)	Pathway(s)	Receptor(s)	Risk ¹	Justification for Risk/ Comment
On and Off-Site Sources				
PPL A Potentially contaminating activities associated with farming and general agricultural usage (Heavy metals, fuel and oil hydrocarbons (TPH, PAH), asbestos, agrichemicals)	Direct contact with soils; ingestion of soil, or soil dust; ingestion of contaminated vegetable produce; Inhalation of dust, or asbestos fibres.	Future Site Users	PPL A-1-a Low	Contamination associated with farming unlikely to be present in concentrations which may affect future residents.
		Neighbouring Residents	PPL A-1-b Low	Contamination associated with farming unlikely to be present in concentrations which may affect neighbouring properties.
		Construction Workers	PPL A-1-c Very Low	With the use of appropriate controls and PPE.
	Leaching of contaminants; infiltration to groundwater; movement within the groundwater; runoff to surface waters.	Controlled Waters: Surface Waters	PPL A-2-a Low	Likelihood of significant contamination low; potential contaminants generally relatively insoluble.
		Controlled Waters: Groundwater (Secondary A Aquifer)	PPL A-2-b Low	Low likelihood of significant contamination low, potential contaminants generally relatively insoluble and likely significant depth to water table.
		Controlled Waters: Groundwater (Principal Aquifer)	PPL A-2-c Low	Low likelihood of significant contamination low, potential contaminants generally relatively insoluble and likely significant depth to water table.
	Outdoor inhalation of vapours and gases.	Future site users	PPL A-3-a Low	No evidence of a significant source of ground gas which would affect future site users.
		Neighbouring residents	PPL A-3-b Very Low	No evidence of a significant source of ground gas which would affect site neighbours.
	Ingress of vapours into buildings; inhalation of	Future Site Users	PPL A-4-a Very Low	No evidence of a significant source of ground gas which would affect future site users.

Table 4.2 Preliminary Conceptual Site Model				
Source(s)	Pathway(s)	Receptor(s)	Risk ¹	Justification for Risk/ Comment
	vapours (indoor) or explosion.	Neighbouring Residents	PPL A-4-b Very Low	No evidence of a significant source of ground gas which would affect site neighbours. Underlying clay geology will limit migration.
		Construction Workers	PPL A-4-c Very Low	No evidence of a significant source of ground gas. Use of appropriate controls and PPE.
		Future Buildings	PPL A-4-d Very Low	Low likelihood, no evidence of contamination from agricultural activity which may cause gas generation.
	Contact with building materials / services; leaching into services trenches.	Buried Services	PPL A-5-a Low	Low likelihood of damage being caused to buried services.
	Direct contact with soils / uptake by plants.	Ecological Receptors	PPL A-6-a Low	Low likelihood of damage being caused to ecological receptors.
PPL B Construction & Demolition related activities (Heavy metals, PAH, asbestos)	Direct contact with soils; ingestion of soil, or soil dust; ingestion of contaminated vegetable produce; inhalation of dust, or asbestos fibres.	Future Site Users	PPL B-1-a Low	Unlikely likelihood potential for contaminative materials to be present on site. Low likelihood of a significant amount of contamination from off-site construction and demolition affecting future site users.
		Neighbouring Residents	PPL B-1-b Low	Low likelihood of on-site construction and demolition materials migrating off-site.
		Construction Workers	PPL B-1-c Low ²	Assuming use of appropriate PPE and safe methods of work.
	Outdoor inhalation of vapours and gases.	Future Site Users	PPL B-3-a Low	Unlikely for gas generation potential from construction and demolition activities.
	Ingress of vapours into buildings; inhalation of	Future Site Users	PPL B-4-a Low	Unlikely for gas generation potential from construction and demolition activities.

Table 4.2 Preliminary Conceptual Site Model				
Source(s)	Pathway(s)	Receptor(s)	Risk ¹	Justification for Risk/ Comment
	vapours (indoor) or explosion.	Construction Workers	PPL B-4-c Low	Unlikely for gas generation potential from construction and demolition activities.
		Future Buildings	PPL B-4-d Low	Unlikely for gas generation potential from construction and demolition activities.
	Contact with building materials / services; leaching into services trenches	Buried Services	PPL B-5-a Low	Low likelihood of materials with the potential to leach onto site.
PPL C Potentially contaminating activities associated with equine activity and centre operations (Agrichemicals, fuel and oil hydrocarbons (TPH, PAH), asbestos)	Direct contact with soils; ingestion of soil, or soil dust; ingestion of contaminated vegetable produce; inhalation of dust, or asbestos fibres;	Future site users	PPL C-1-a Low	Low probability of contamination
		Neighbouring residents	PPL C-1-b Low	Unlikely that any contamination associated with the equestrian centre will affect neighbouring residents.
		Construction workers	PPL C-1-c Low ²	Assuming appropriate controls, PPE and safe methods of work.
	Leaching of contaminants; infiltration to groundwater; movement within the groundwater; runoff to surface waters	Controlled waters: surface waters	PPL C-2-a Low	Likelihood of significant contamination low due to geology present and depth to water table; potential contaminants generally relatively insoluble.
		Controlled waters: groundwater (secondary aquifer – undifferentiated)	PPL C-2-b Very Low	Likelihood of significant contamination low due to geology present and significant depth to water table likely.
	Outdoor inhalation of vapours and gases	Future site users	PPL C-3-a Low	Unlikely. No evidence of a significant source of ground gas.
		Neighbouring residents	PPL C-3-b Low	Unlikely. No evidence of a significant source of ground gas.

Table 4.2 Preliminary Conceptual Site Model				
Source(s)	Pathway(s)	Receptor(s)	Risk ¹	Justification for Risk/ Comment
	Ingress of vapours into buildings; inhalation of vapours (indoor) or explosion	Future site users	PPL C-4-a Low	Unlikely. No evidence of a significant source of ground gas.
		Neighbouring residents	PPL C-4-b Low	Unlikely. No evidence of a significant source of ground gas.
		Construction Workers	PPL C-4-c Low ²	Unlikely. No evidence of a significant source of ground gas. Use of appropriate controls and PPE.
		Future buildings	PPL C-4-d Low	Unlikely. No evidence of a significant source of ground gas.
	Contact with building materials / services; leaching into services trenches	Buried services	PPL C-5-a Low	Overall likelihood low
	Direct contact with soils / uptake by plants	Ecological receptors	PPL C-6-a Low	Low likelihood of contamination which may cause damage to ecological receptors.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary of Site Walkover and Desk Study Information

5.1.1. Site Description and Development History

GEMCO visited the site on the 15th January 2019 to undertake a site walkover. The site layout at the time of the walkover is presented in Figures 3 - 7 and a selection of photographs are included in Appendix 2.

At the time of the walkover the site was accessed from Kelvedon Road to the north of the site onto the private driveways of Tower End, The Annexe and Ponys Farm. The additional fields were accessed via a gated roadway along the southern boundary of Ponys Farm. The development site was irregular in shape measuring approximately 5.15 ha in area and 270 m north-south by 205 m east-west at its widest points. The site comprises three connecting parcels of land, primarily composed of soft landscaping (disused fields, laid to grass) horse paddocks and residential dwellings bounded to the north by the B1203 Kelvedon Road, to the east by the residential dwelling Stourton, the accompanying rear garden and further disused fields, to the south by a public footpath and grassed fields and to the west by Coronation Cottages and Golden Warren residential properties, the Water Tower and grassed land.

5.1.2. Surrounding Area

The surrounding area typically comprises residential, open field land and agricultural land use.

5.1.3. Geology, Hydrogeology and Hydrology

The published geology indicates that the site is underlain by the Bedrock comprising the London Clay Formation (clay, silt and sand).

Superficial Deposits comprising the Glaciofluvial Deposits (Mid Pleistocene) run parallel with the eastern boundary and possibly outcrop in the north-eastern corner of site.

The superficial Glaciofluvial Deposits are designated as a Secondary A aquifer underlain by bedrock of the London Clay Formation designated as Unproductive Strata.

Two surface water features were identified on site (ponds), both of which fed into a drainage ditch running along the eastern boundary to the field behind. The nearest off-site surface water feature is located 227 m west, identified as an inland river.

5.1.4. Environmental Searches

The Envirocheck report identifies that within 1 km of the site there are:

- 24 (no.) Discharge Consents, the closest being located 145 m southwest relating to the discharge of trade discharges - process effluent;
- The site and surrounding area are located within 3 (no.) Nitrate Vulnerable Zones (NVZ's);
- The site and surrounding area is located within a Drinking Water Protected Area and Drinking Water Safeguard Zone;
- There are 15 (no.) records of Potentially Infilled Land, 6 (no.) Non-Water and 9 (no.) Water;
- 1 (no.) Registered Waste Transfer Site, but there are no historical or active landfill activities; and

- There are 41 (no.) contemporary trade directory entries, with only a single entry listed as being historically active on site.

5.2. Summary of Preliminary Conceptual Site Model

The preliminary conceptual site model is presented in Table 4.5. In summary, the following potential contamination sources were identified:

- On-site and Off-site: agricultural and farming activities, construction and demolition activities and equine activities.

The sensitive receptors identified were future site users, site neighbours, future buildings, construction workers, ecological receptors and buried services. No significant plausible pollutant linkages were identified, the risks to receptors from potential sources was identified as low or very low.

5.3. Conclusions

The Phase I geoenvironmental assessment has identified low risks to human health and controlled waters relating to general soil quality and the potential for hazardous ground gases. This is considered a precautionary assessment.

On the basis of the findings of this Phase I Geoenvironmental Assessment, it is considered that the site is suitable for the proposed residential end use subject to the completion of the recommendations made in Section 5.4.

5.4. Recommendations

On the basis of the Phase I Geoenvironmental Assessment, the site is considered suitable for the proposed residential end use, subject to the following recommendations:

- Geotechnical investigation will be required to inform the civil and structural engineering of the proposed development;
- A limited intrusive geo-environmental investigation with sample collection is required to confirm the assumptions and observations made during this phase of assessment. It would be prudent to carry this out in combination with the geotechnical investigation; and
- A discovery strategy (see Section 5.5) should be in place during all the development works.

Discovery Strategy

Should any evidence of unexpected or otherwise exceptional contamination be identified works should be halted in that area, and the Local Authority informed. In the event of a discovery, the potential contamination should be inspected by a suitably qualified environmental consultant and any remediation measures required implemented to the satisfaction of the Local Authority and Building Warranty Provider.

5.5. Regulatory Liaison

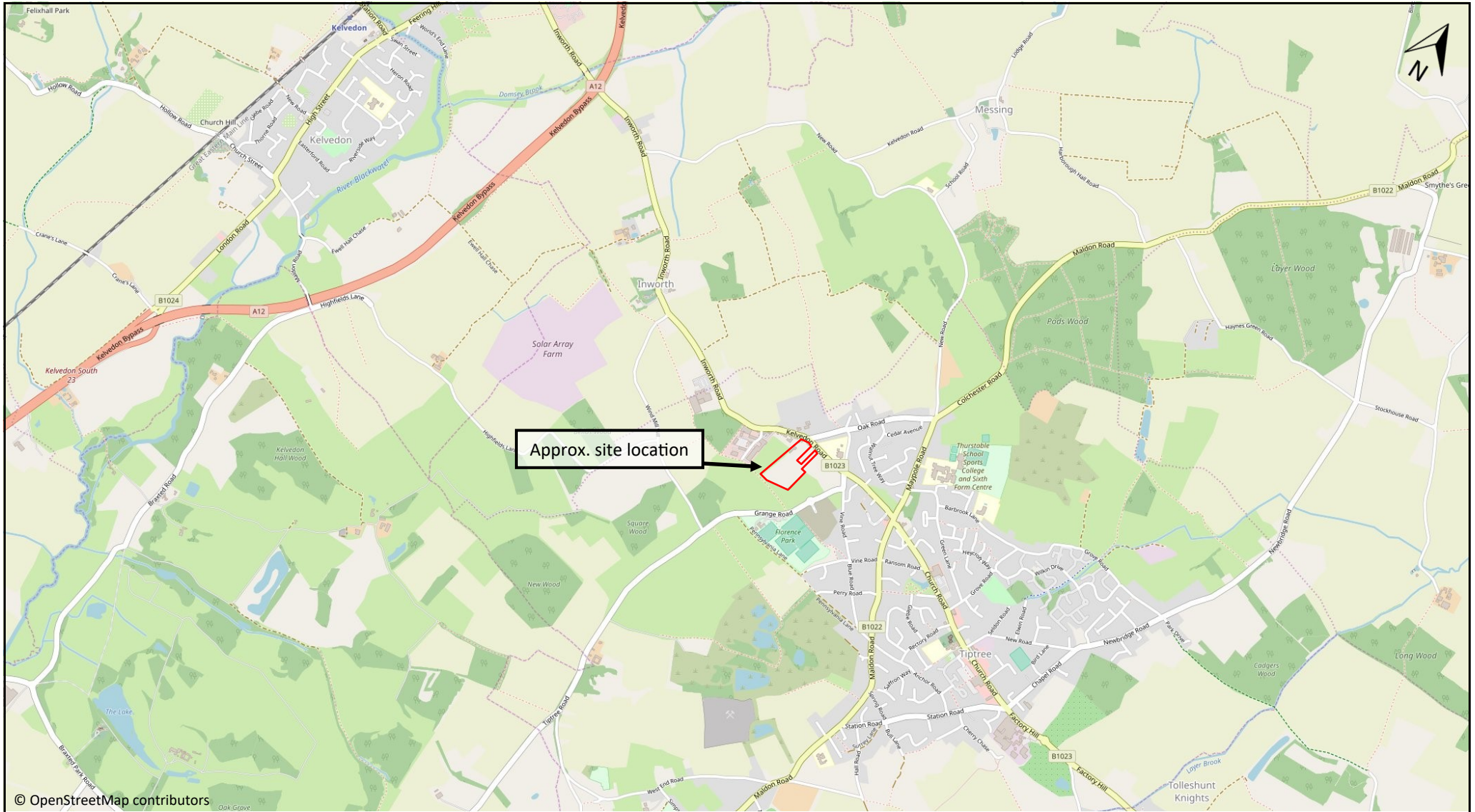
A copy of this report should be forwarded to the Local Planning Authority in support of any Planning Application made.

REFERENCES

- R.1. Envirocheck Report Ref. 190899269_1_1 dated 11th January 2019 (included as Appendix 3).
- R.2. Department of Environment, Food and Rural Affairs (DEFRA)/Environment Agency (EA), Model procedures for the Management of Land affected by Contamination. CLR 11, September 2004.
- R.3. British Standard, Code of Practice for Site Investigations BS 5930:2015.
- R.4. British Standard, Code of Practice for Investigation of Potentially Contaminated sites BS 10175:2011+A2:2017.
- R.5. Environmental Protection Act 1990: Part IIA, Contaminated Land Statutory Guidance, April 2012.
- R.6. Water Framework Directive 2000/60/EC.
- R.7. Water Supply Regulations 2010.
- R.8. Department of Environment, Transport and Rural Affairs (DEFRA) Air Quality Management Area (AQMA) maps - <https://uk-air.defra.gov.uk/aqma/maps>
- R.9. Environment Agency: Flood map for planning (2018) <https://flood-map-for-planning.service.gov.uk/>
- R.10. BGS Online Borehole Records (TL81NE78)

Figure 1

Site Location Plan



© OpenStreetMap contributors

Site:	Land South of Kelvedon Road	Date:	January 2019
Address:	Tiptree, Colchester	Scale:	Not to Scale
Post Code:	CO5 0ND	Drawing:	Figure 1
Grid Ref:	588700, 217000	Drawn by:	LEG
Title:	Site Location Plan	Checked by:	DR
Client:	Strutt & Parker	Project No:	1342

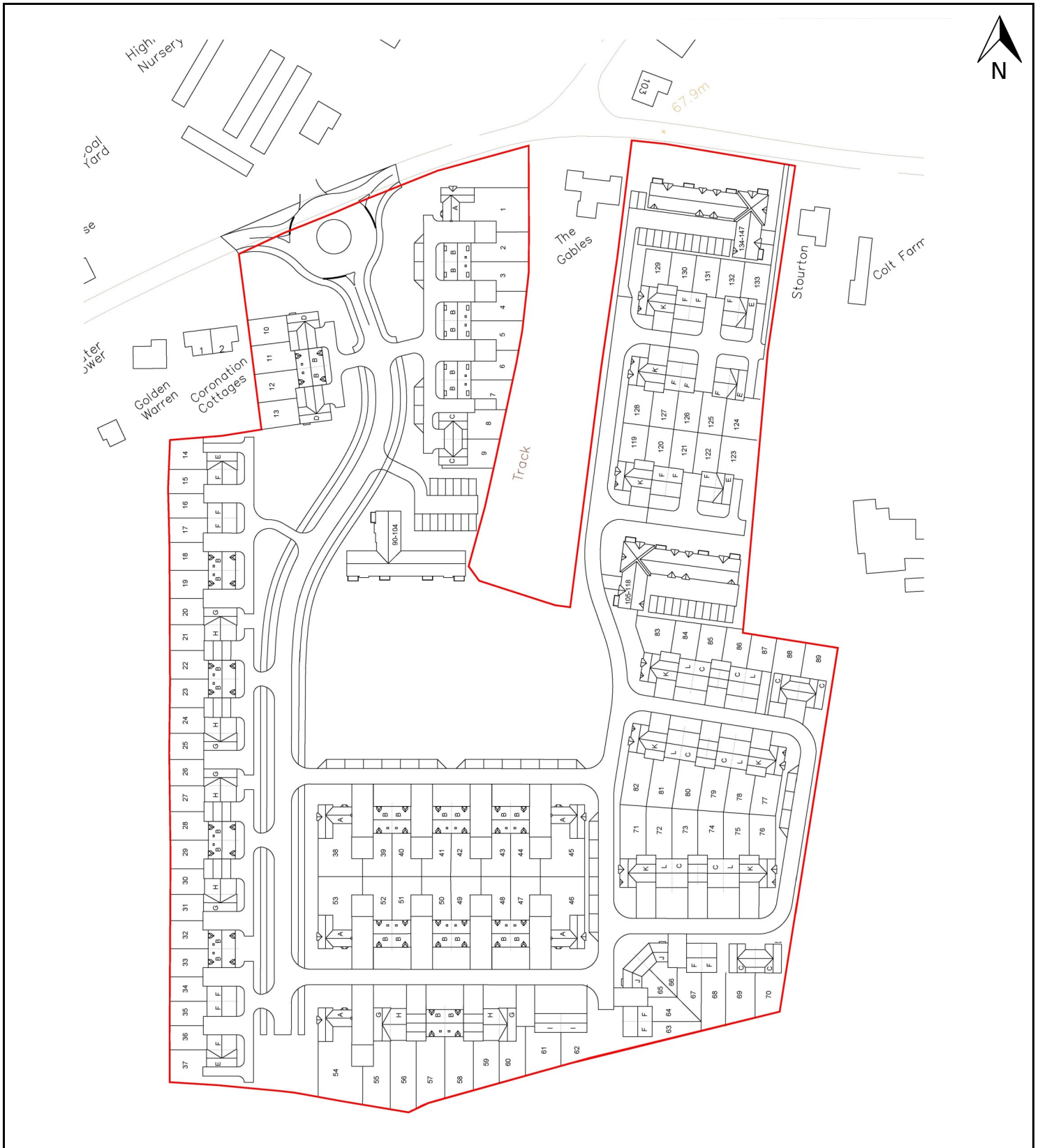
Legend:
 Site Boundary



Green Earth Management Co Ltd
 Broomfield Park
 Coggeshall Road
 Essex CO6 2JX
 Tel: 01245 206129
 www.gemcoltd.co.uk

Figure 2

Proposed Development Plan



Plan provided by Client



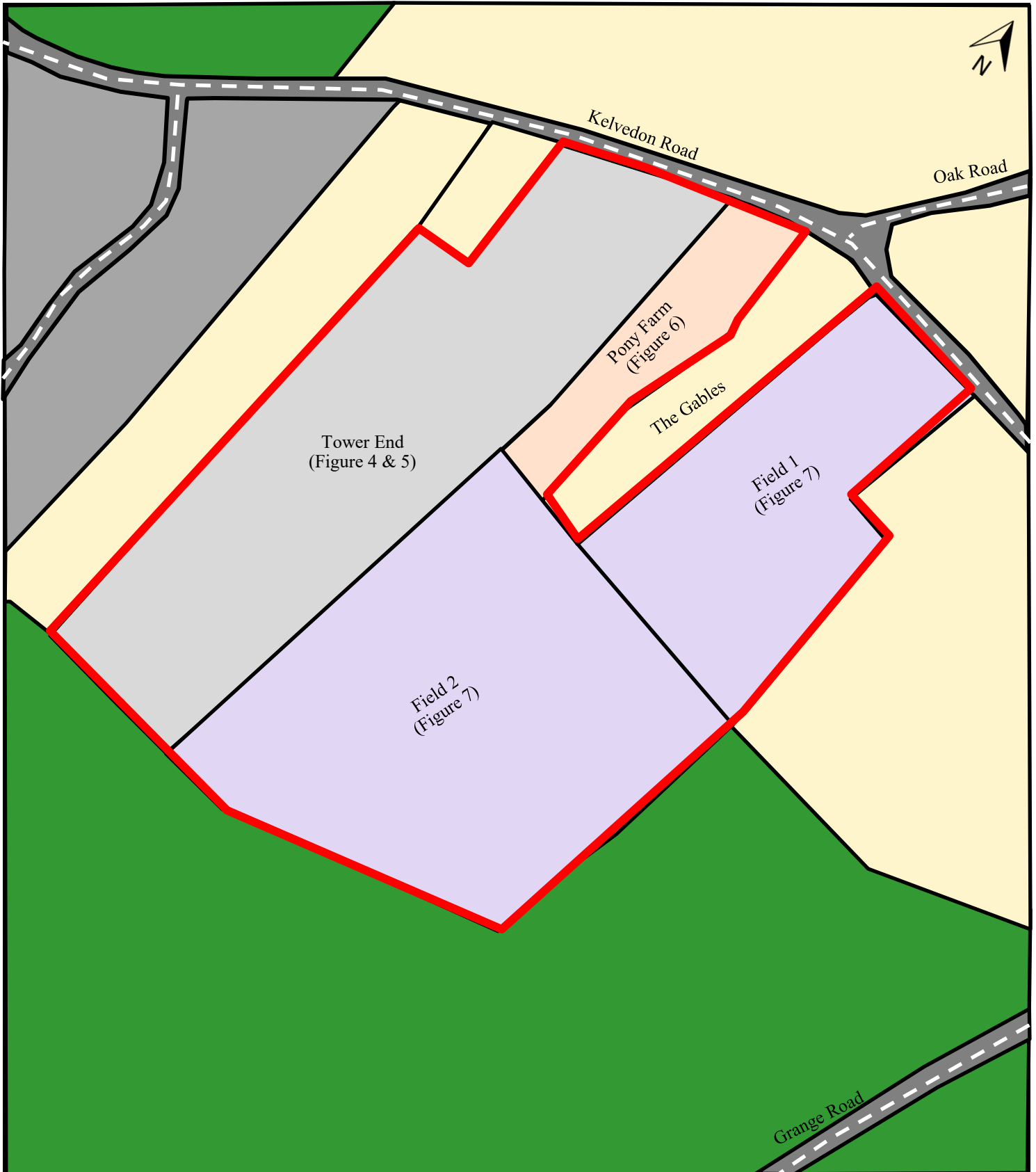
Site:	Land South of Kelvedon Road	Date:	January 2019	Legend:  Site Boundary	 REMEDIATION SPECIALISTS GEMCO Green Earth Management Co Ltd Broomfield Park Coggeshall Road Essex CO6 2JX Tel: 01245 206129 www.gemcoltd.co.uk
Address:	Tiptree, Colchester	Scale:	Not to Scale		
Post Code:	CO5 0ND	Drawing:	Figure 2		
Grid Ref:	588700, 217000	Drawn by:	LEG		
Title:	Proposed Development Plan	Checked by:	DR		
Client:	Strutt & Parker	Project No:	1342		

Figure 3

Site Layout Plan (Overview)





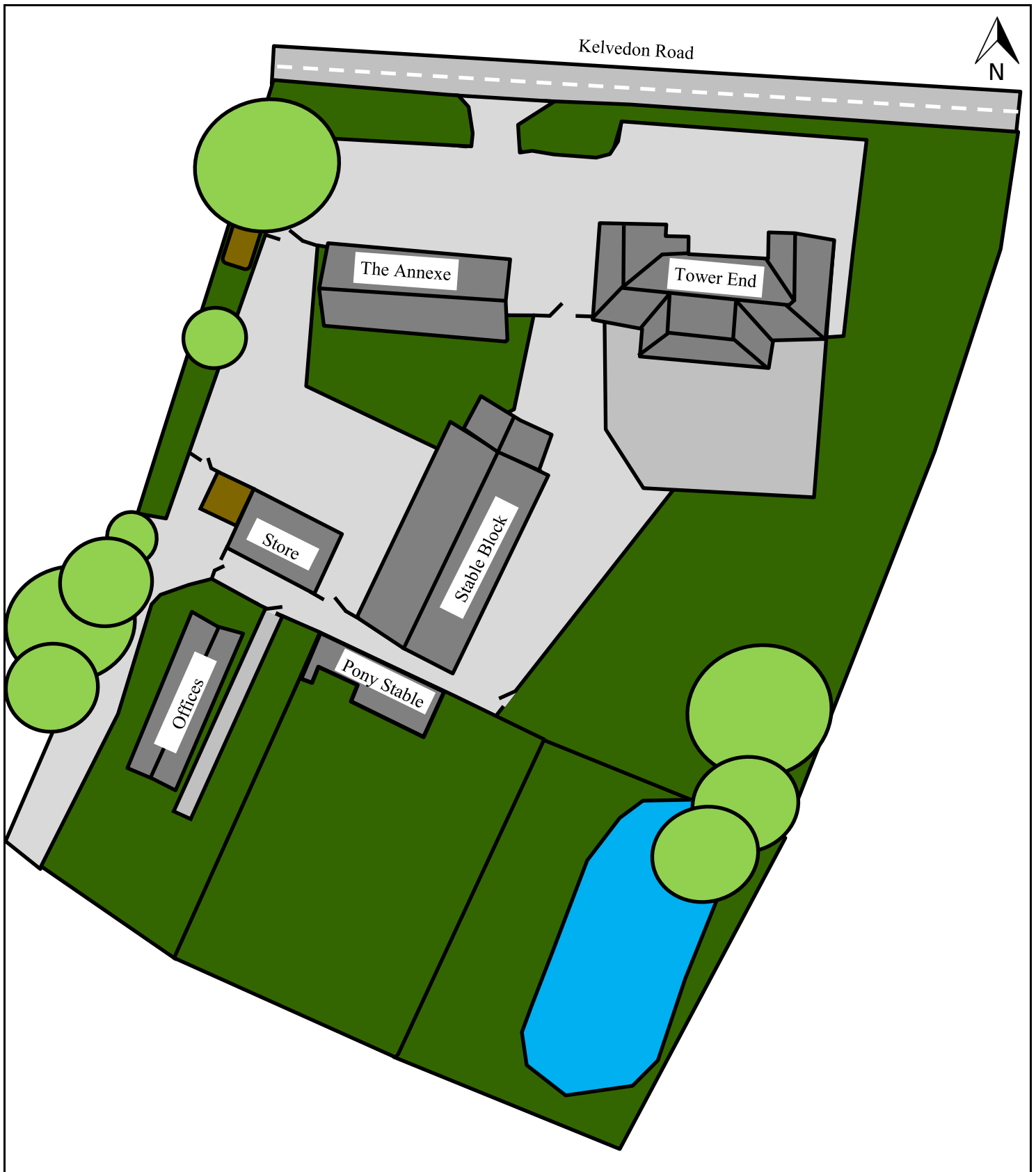
Site:	Land South of Kelvedon Road	Date:	January 2019	Legend:  Site Boundary	 REMEDIATION SPECIALISTS GEMCO Green Earth Management Co Ltd Broomfield Park Coggeshall Road Essex CO6 2JX Tel: 01245 206129 www.gemcoltd.co.uk
Address:	Tiptree, Colchester	Scale:	Not to Scale		
Post Code:	CO5 0ND	Drawing:	Figure 3		
Grid Ref:	588700, 217000	Drawn by:	LEG		
Title:	Site Layout Plan (Overview)	Checked by:	DR		
Client:	Strutt & Parker	Project No:	1342		

Figure 4

Tower End Layout Plan 1







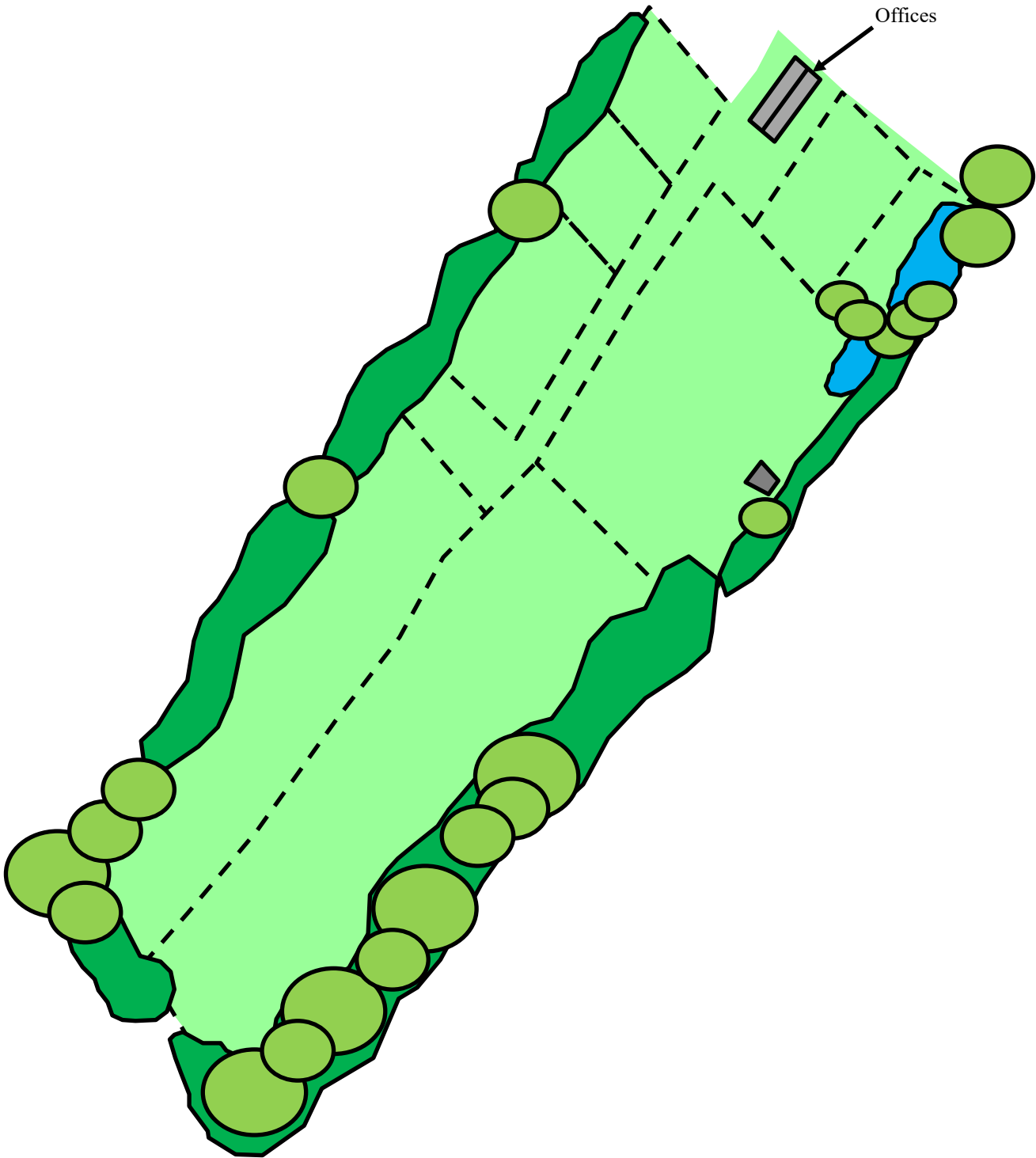
Site:	Land South of Kelvedon Road	Date:	January 2019	Legend:  Site Boundary  Tree  Pond
Address:	Tiptree, Colchester	Scale:	Not to Scale	
Post Code:	CO5 0ND	Drawing:	Figure 4	
Grid Ref:	588700, 217000	Drawn by:	LEG	
Title:	Tower End Layout Plan 1 (North)	Checked by:	DR	
Client:	Strutt & Parker	Project No:	1342	
				 REMEDIATION SPECIALISTS Green Earth Management Co Ltd Broomfield Park Coggeshall Road Essex CO6 2JX Tel: 01245 206129 www.gemcoltd.co.uk

Figure 5

Tower End Layout Plan 2








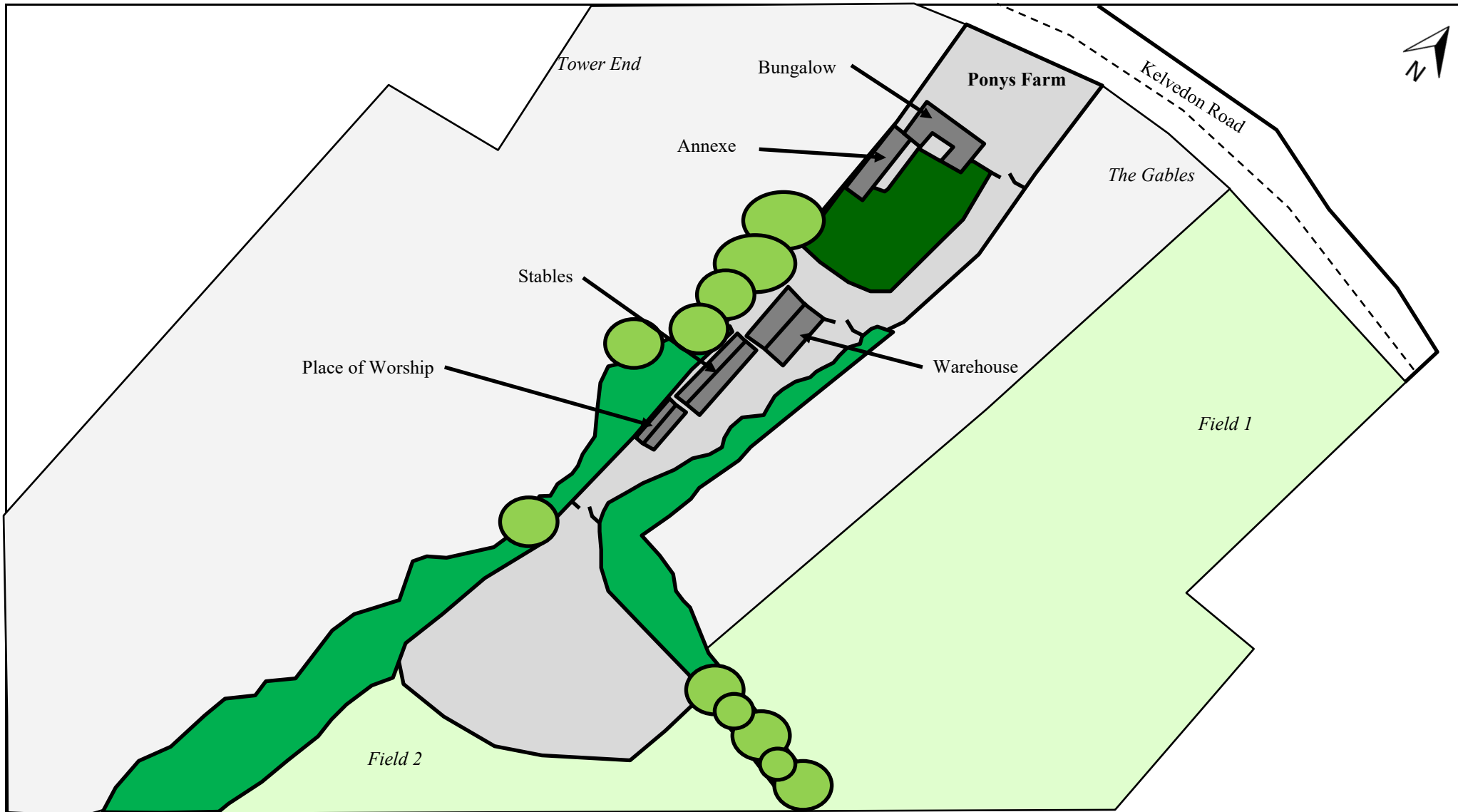
Site: Land South of Kelvedon Road	Date: January 2019	Legend:  Site Boundary  Tree  Pond  Paddock	 REMEDICATION SPECIALISTS Green Earth Management Co Ltd Broomfield Park Coggeshall Road Essex CO6 2JX Tel: 01245 206129 www.gemcoltd.co.uk
Address: Tiptree, Colchester	Scale: Not to Scale		
Post Code: CO5 0ND	Drawing: Figure 5		
Grid Ref: 588700, 217000	Drawn by: LEG		
Title: Tower End Layout Plan 2 (South)	Checked by: DR		
Client: Strutt & Parker	Project No: 1342		

Figure 6

Ponys Farm Layout Plan



Site:	Land South of Kelvedon Road	Date:	January 2019
Address:	Tiptree, Colchester	Scale:	Not to Scale
Post Code:	CO5 0ND	Drawing:	Figure 6
Grid Ref:	588700, 217000	Drawn by:	LEG
Title:	Ponys Farm Layout Plan	Checked by:	DR
Client:	Strutt & Parker	Project No:	1342

Legend:
Site Boundary
Tree
Vegetated Boundary

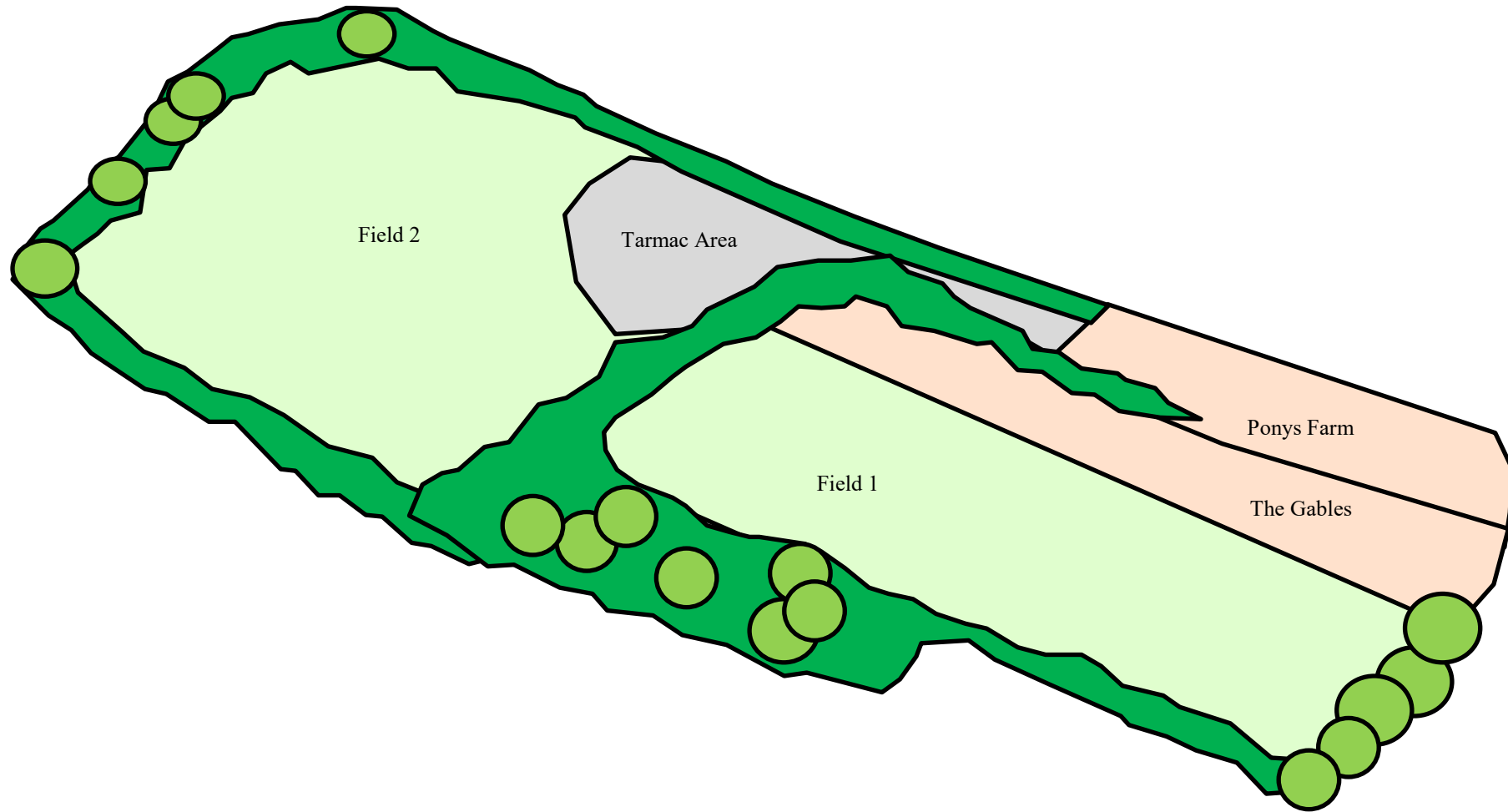


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Figure 7

Field 1 & 2 Layout Plan



Site: Land South of Kelvedon Road	Date: January 2019
Address: Tiptree, Colchester	Scale: Not to Scale
Post Code: CO5 0ND	Drawing: Figure 7
Grid Ref: 588700, 217000	Drawn by: LEG
Title: Field 1 & 2 Layout Plan	Checked by: DR
Client: Strutt & Parker	Project No: 1342

Legend:
 Site Boundary
 Tree
 Vegetated Boundary

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Appendix 1

Report Conditions

Report Conditions

Geoenvironmental Site Investigation

This report is produced solely for the benefits of the named Client and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

The report refers, within the limitations of the stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of the future changes of the site.

The report is based on a visual site inspection, reference to accessible referenced historical records, the physical investigation as detailed, information supplied by those parties referenced in the text, and preliminary discussions with local and statutory authorities. Some of the opinions are based on unconfirmed data and information and are presented as the best that can be obtained without further extensive research. The test results available can only be regarded as a limited but likely representative sample assessed against current guidelines. The impact of our assessment on other aspects of the development requires evaluation by other involved parties.

GEMCO takes no responsibility for conditions that have not been revealed by the borings, or which occur below or between the borings. The possibility of the presence of contaminants, perhaps in higher concentrations, elsewhere on site cannot be discounted. Whilst every effort has been made to interpret the conditions between investigation locations, such information is only indicative and liability cannot be accepted for its accuracy.

Groundwater and ground gas readings taken are those pertaining to the period of the investigation only. It should be noted that groundwater levels may be subject to tidal, seasonal and diurnal changes, whilst ground gas emission rates are affected by atmospheric pressure and groundwater levels.

With reference to ground contamination, whilst the findings detailed within this report reflect our best assessment, because there are no exact UK definitions of these matters, being subject to risk analysis, we are unable to give categorical assurances that they will be accepted by authorities or funds without question as such bodies have unpublished, more stringent objectives. The report is prepared and written for the purposed uses stated in the report and should not be used in a different context without reference to GEMCO in time, improved practises or amended legislation may necessitate a re-assessment.

The report is limited to the geotechnical and environmental aspects specifically reported on and is necessarily restricted and no liability is accepted for any other aspect especially concerning gradual or sudden pollution incidents. The opinions expressed cannot be absolute due to the limitations of time and resources imposed by the agreed brief, the nature of the geology and possibility of unrecorded previous use and abuse of the site and adjacent sites. The report concentrates on the site as defined in the report and provides an opinion on surrounding sites. If migrating pollution or contamination (past or present) exists, further research will be required before the effects can be better determined.

Risk Assessment and Risk Rating

Classification of Consequence		
Classification	Definition	Examples
Severe	Short term (acute) risk to human health likely to result in 'significant harm;' as defined by the Environmental Protection Act 1990, Part IIA. Short term risk if pollution (note: Water Resources Act does not contain provision for consideration of the significance of pollution) of sensitive water resource. A short-term risk to a particular ecosystem, or organism forming part of such an ecosystem. (note: the definition of ecological systems with the DEFRA Contaminated Land Statutory Guidance 2012)	High concentration s of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site to a controlled water. Explosion, causing building collapse (can also equate to short term human health risk if buildings are occupied).
Medium	Chronic damage to human health ('significant harm as defined DEFRA Contaminated Land Statutory Guidance 2012) Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such ecosystem. (note: the definition of ecological systems with the DEFRA Contaminated Land Statutory Guidance 2012)	Concentration of contaminant from the site exceeds the generic or site-specific assessment criteria. Leaching of contaminants from a site to a principal or secondary aquifer. Death of species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to buildings, structures, and crops. ('Significant harm' as defined in DEFRA Contaminated Land Statutory Guidance 2012 and EPA 1990 Part IIA. Damage to sensitive buildings/structures or the environment.	Pollution if non-classified groundwater. Damage to building, rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such a personal protective clothing etc.). Easily repairable effects of damage to buildings/structures	The presence of contaminants at such concentration is that protective equipment is required during the site works. The loss of plants in landscaping scheme. Discolouration of concrete.

Classification of Probability	
Classification	Definition
High Likelihood	There is a pollution linkage and an event which would either appear very likely in the short term and almost inevitable over the long term, or, there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely to occur over the long term.
Low Likelihood	There is pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate/Low risk
	Likely	High Risk	Moderate Risk	Moderate to low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

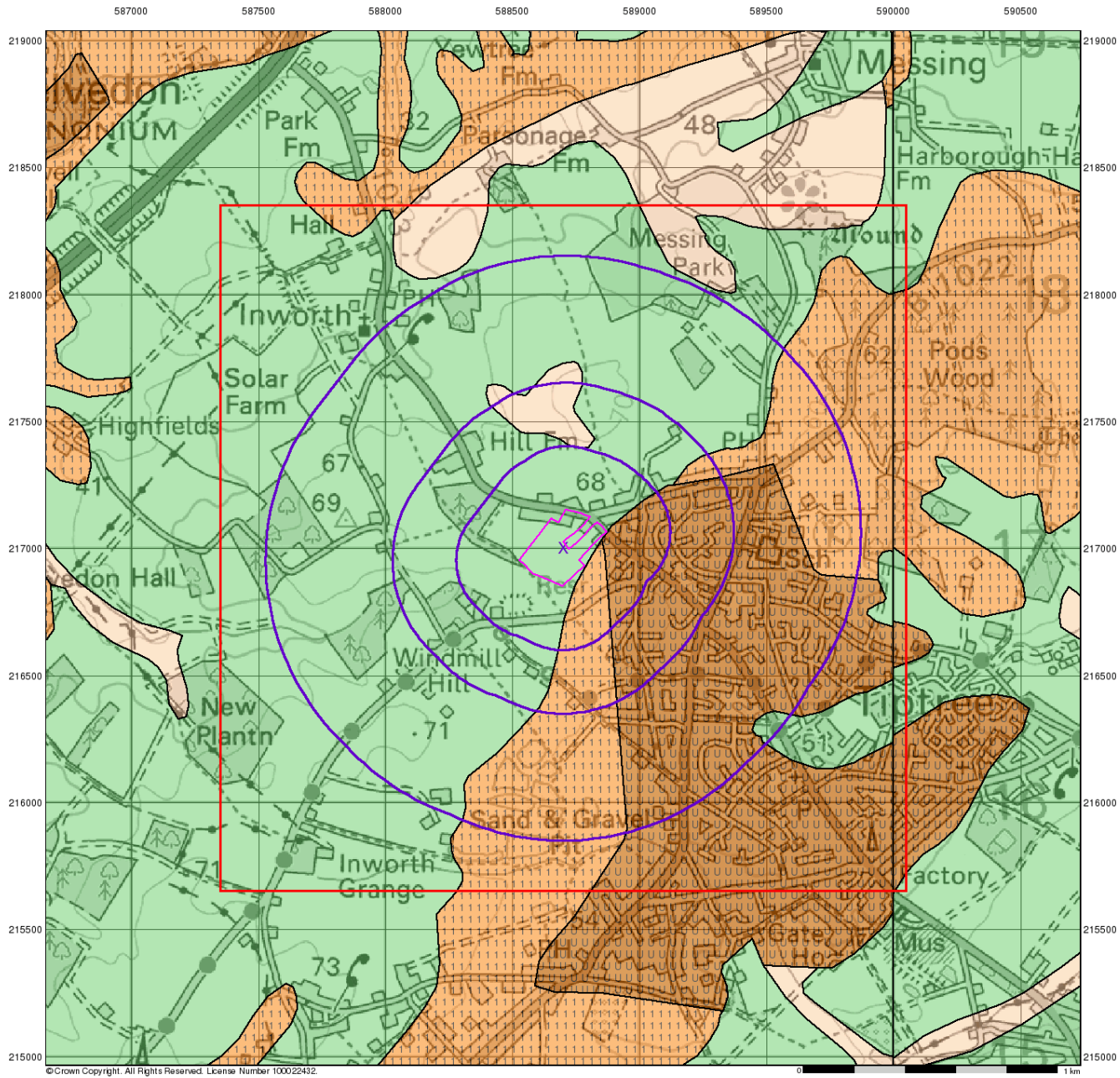
Risk classification framework taken from CIRIA C552, Section 6

Appendix 2

Selected Site Photographs

Appendix 3

Landmark Envirocheck Report



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0 1 km



Groundwater Vulnerability

General

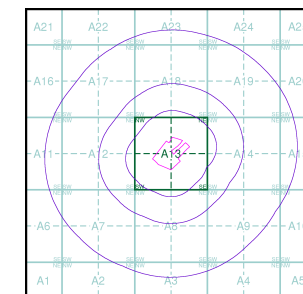
- ▭ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point
- ▭ Slice
- B Map ID

Agency and Hydrological

Geological Classes

- | | |
|---|--|
| Major Aquifer
(Highly Permeable) | High (H) 1, 2, 3, U |
| | Intermediate (I) 1, 2 |
| | Low |
| Minor Aquifer
(Variably Permeable) | High (H) 1, 2, 3, U |
| | Intermediate (I) 1, 2 |
| | Low |
| Non Aquifer
(Negligibly Permeable) | |
| Water or Sea | |
| Drift Deposit | |

Site Sensitivity Context Map - Slice A



Order Details

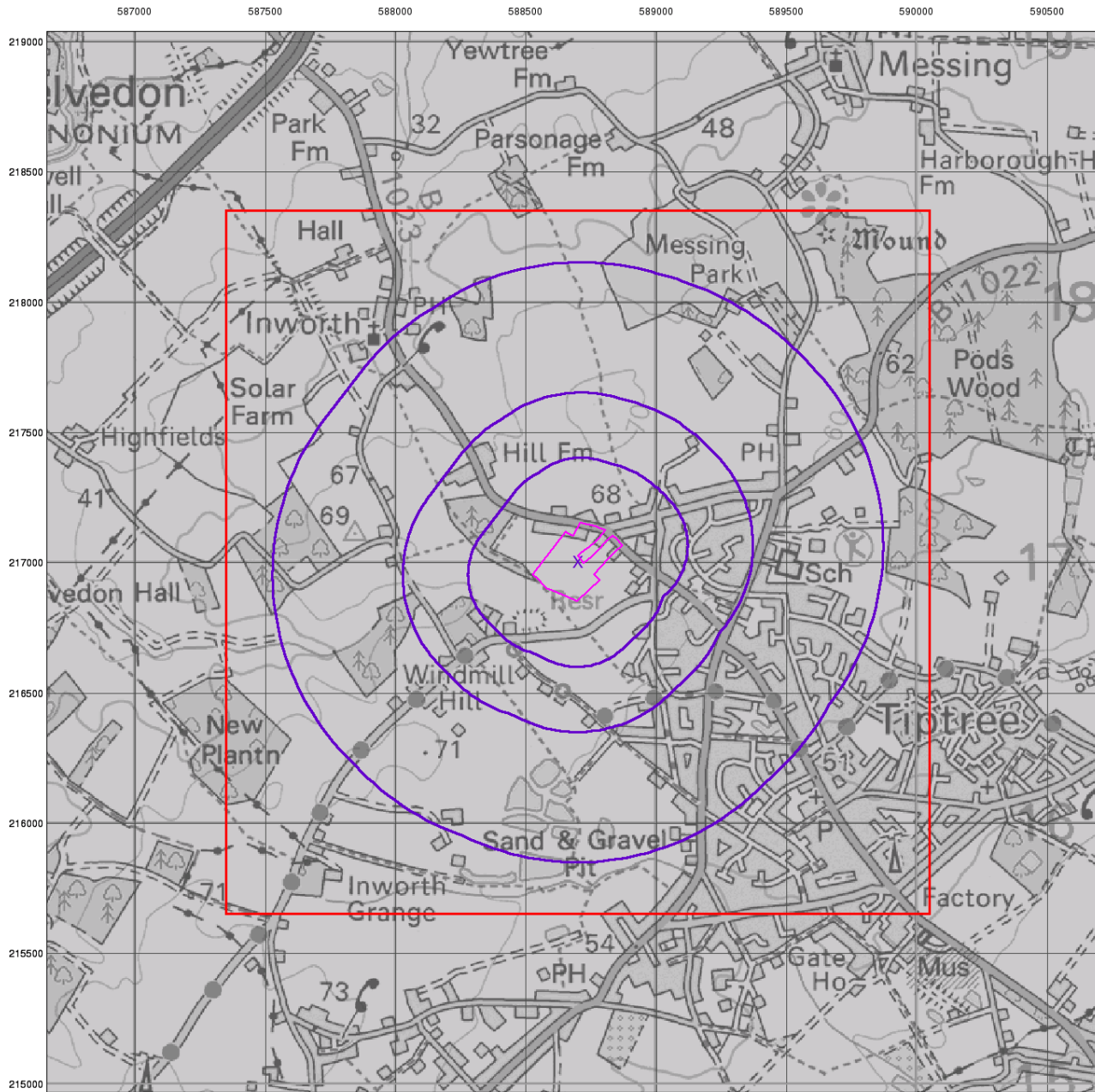
Order Number: 190899269_1_1
 Customer Ref: 1342
 National Grid Reference: 588700, 217000
 Slice: A
 Site Area (Ha): 5.15
 Search Buffer (m): 1000

Site Details

Land South of Kelvedon Road, Tiptree, COLCHESTER, CO5 0LU



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0 1 km



Bedrock Aquifer Designation

General

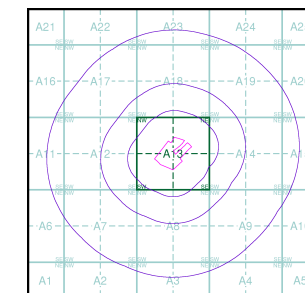
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

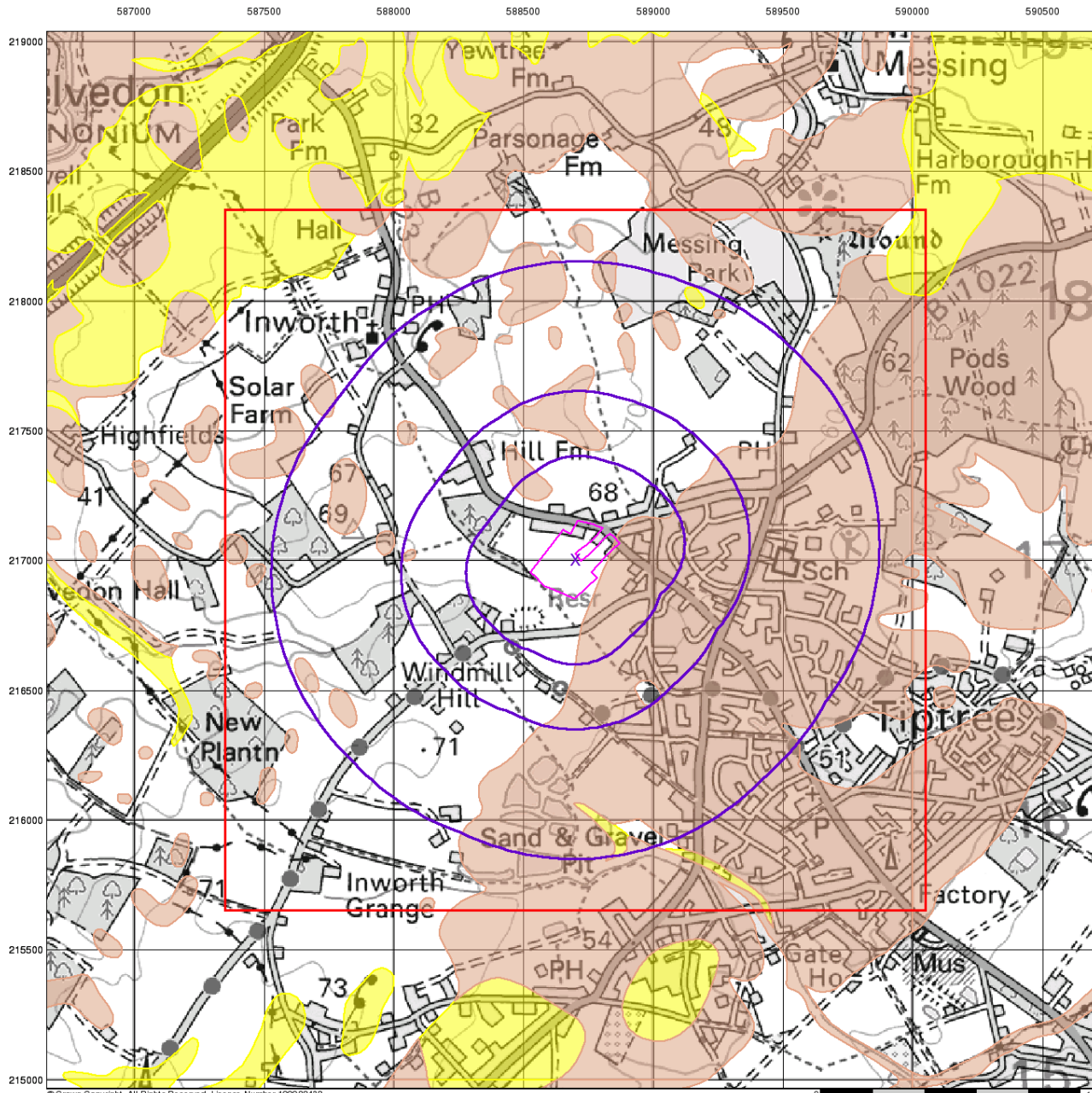
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 Customer Ref: 1342
 National Grid Reference: 588700, 217000
 Slice: A
 Site Area (Ha): 5.15
 Search Buffer (m): 1000

Site Details

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Superficial Aquifer Designation

General

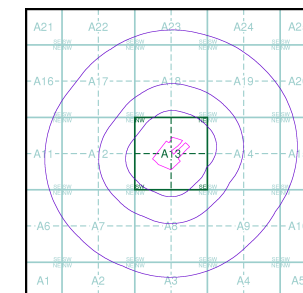
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

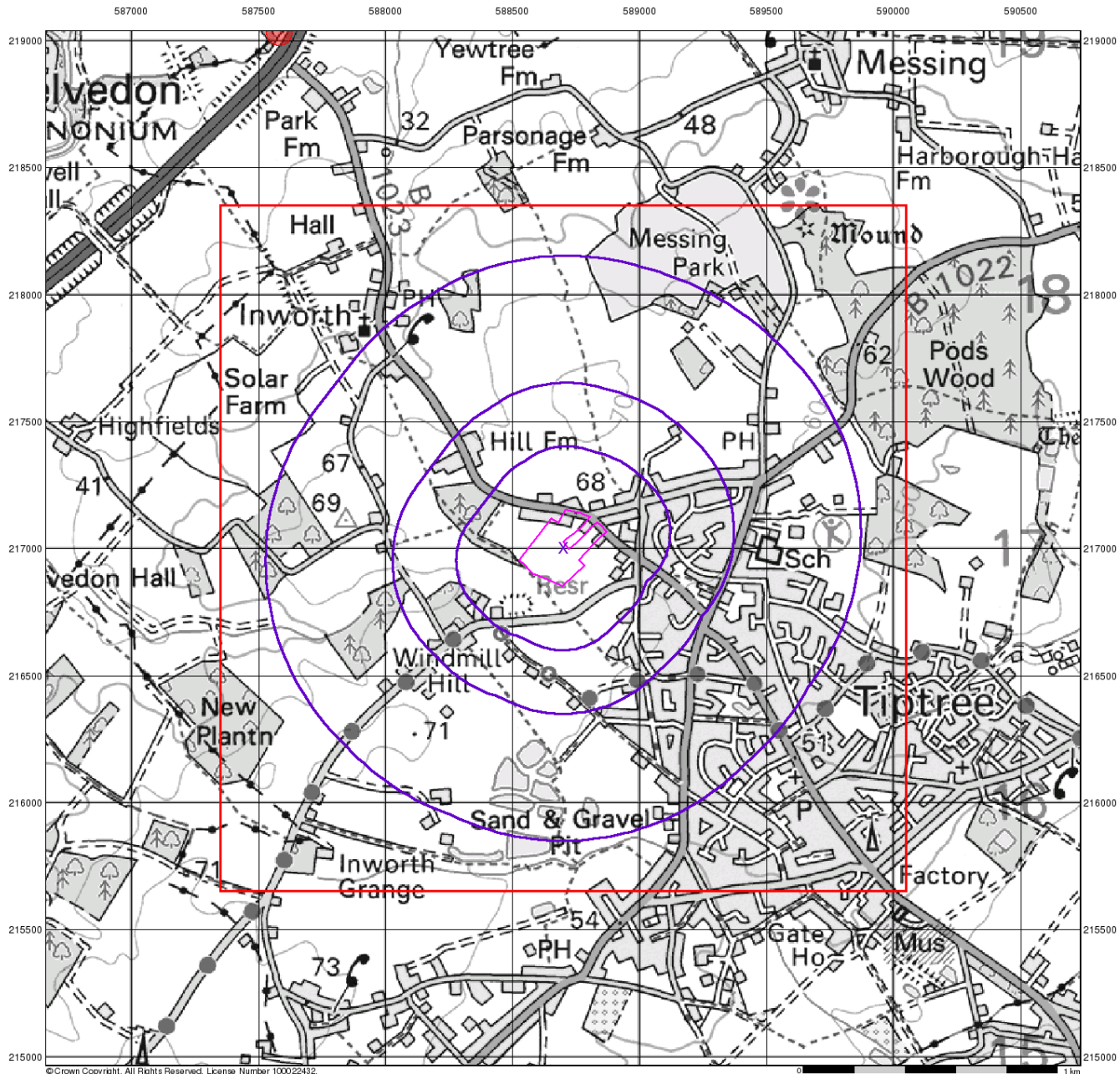
Order Number: 190899269_1_1
 Customer Ref: 1342
 National Grid Reference: 588700, 217000
 Slice: A
 Site Area (Ha): 5.15
 Search Buffer (m): 1000

Site Details

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Source Protection Zones

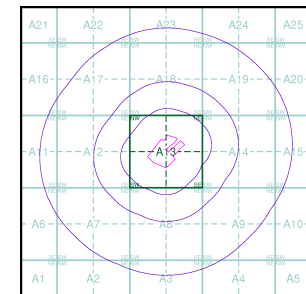
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



Order Details

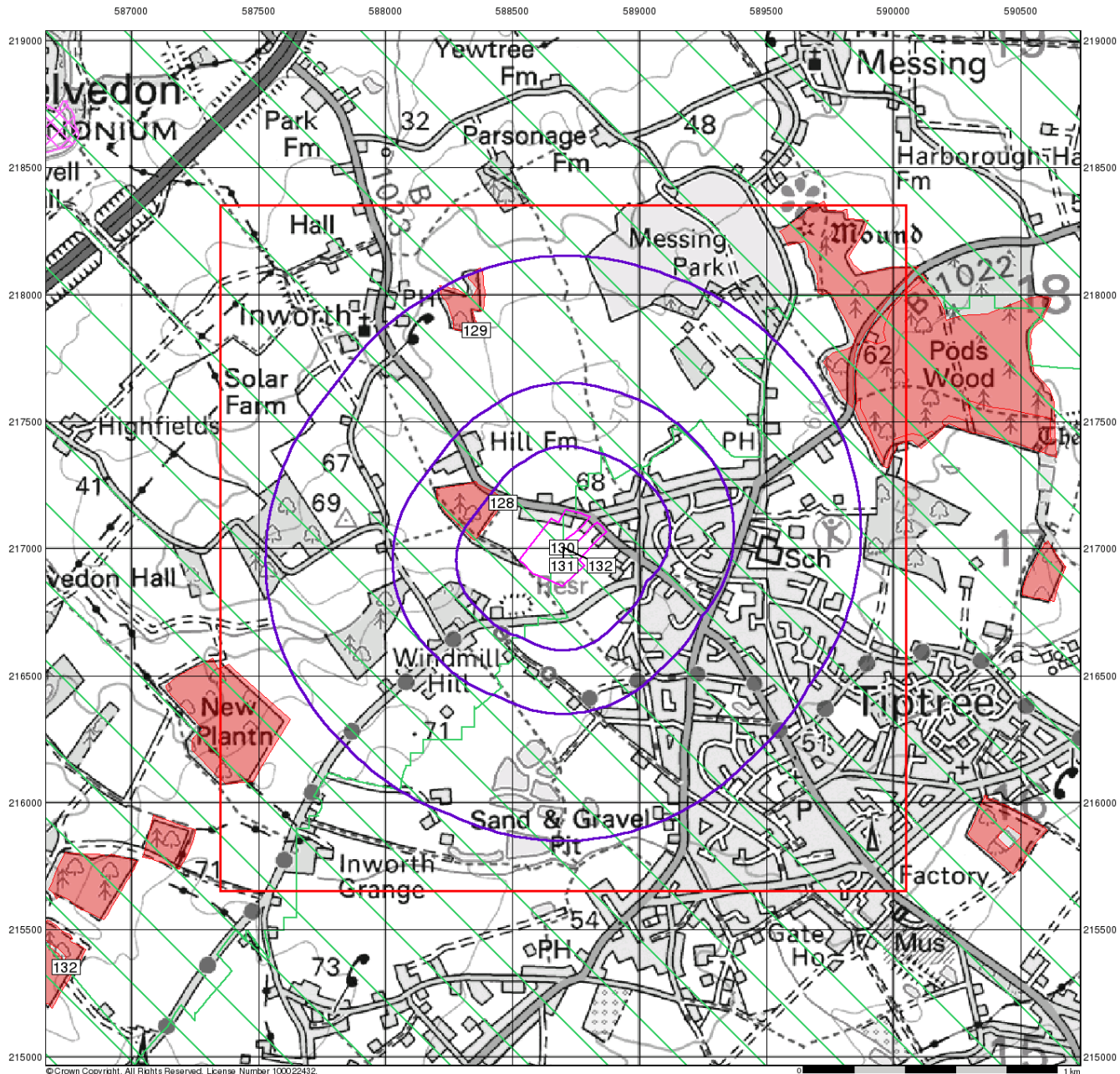
Order Number: 190899269_1_1
 Customer Ref: 1342
 National Grid Reference: 588700, 217000
 Slice: A
 Site Area (Ha): 5.15
 Search Buffer (m): 1000

Site Details

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Sensitive Land Uses

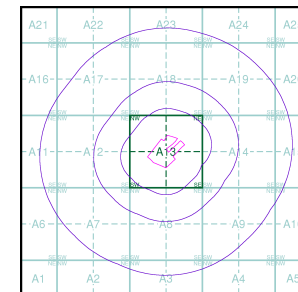
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



Order Details

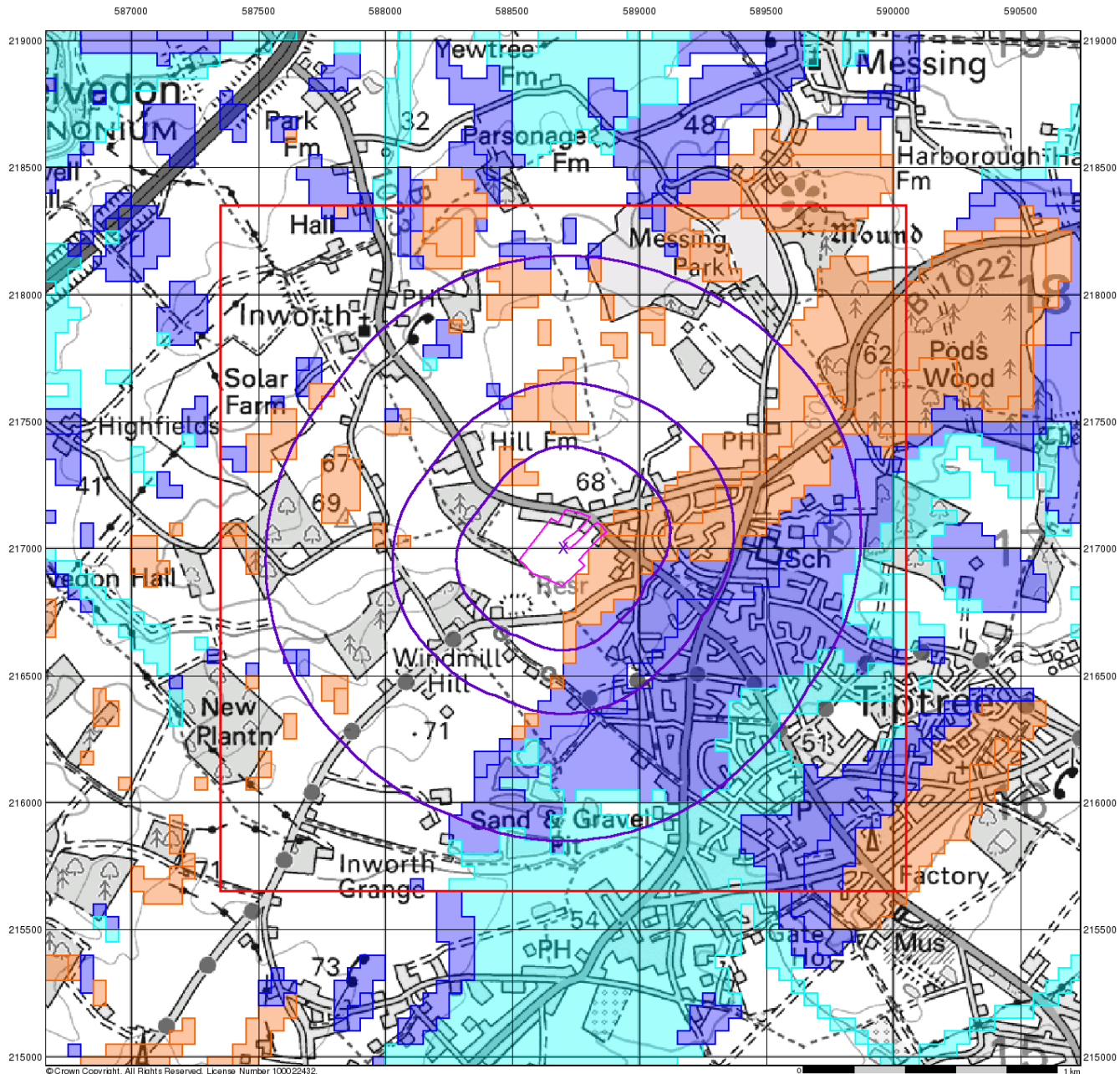
Order Number: 190899269_1_1
 Customer Ref: 1342
 National Grid Reference: 588700, 217000
 Slice: A
 Site Area (Ha): 5.15
 Search Buffer (m): 1000

Site Details

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BGS Flood GFS Data

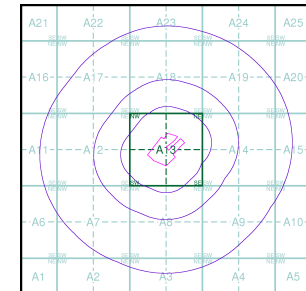
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 190899269_1_1
 Customer Ref: 1342
 National Grid Reference: 588700, 217000
 Slice: A
 Site Area (Ha): 5.15
 Search Buffer (m): 1000

Site Details

Land South of Kelvedon Road, Tiptree, COLCHESTER, CO5 0LU



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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

190899269_1_1

Customer Reference:

1342

National Grid Reference:

588700, 217000

Slice:

A

Site Area (Ha):

5.15

Search Buffer (m):

1000

Site Details:

Land South of Kelvedon Road

Tiptree

COLCHESTER

CO5 0LU

Client Details:

Mr C Duffield

Green Earth Management Ltd

Building 2

Broomfield Park

Coggeshall Road

Earls Colne

Essex

CO6 2JX

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	18
Hazardous Substances	-
Geological	20
Industrial Land Use	27
Sensitive Land Use	33
Data Currency	34
Data Suppliers	39
Useful Contacts	40

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		2	11	11
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 7				2
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 7	Yes			
Pollution Incidents to Controlled Waters	pg 7			3	8
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 9				(*19)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 14	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 14		1	8	20

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 18				2
Local Authority Landfill Coverage	pg 18	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 18		1	1	4
Potentially Infilled Land (Water)	pg 18			6	3
Registered Landfill Sites					
Registered Waste Transfer Sites	pg 19				1
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 20	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 20	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 24			4	5
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 25	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 25	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 26	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 26	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 27	1	17	2	21
Fuel Station Entries	pg 30				4
Points of Interest - Commercial Services	pg 30		2		4
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 31		4		3
Points of Interest - Public Infrastructure	pg 32				6
Points of Interest - Recreational and Environmental					
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 33		1		1
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 33	3			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	0	1	588800 217000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	0	1	588850 217050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	143	1	588600 217250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	160	1	588900 216800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	203	1	588500 217250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	296	1	588700 217450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	351	1	588700 216500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	363	1	588600 217500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	387	1	589150 216800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	430	1	588100 217005
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	448	1	588500 217550
1	Discharge Consents Operator: Anglian Water Services Limited Property Type: WTW/WATER COLLECTION/TREATMENT/SUPPLY Location: Tiptree Water Treatment Works Highfield Lane, Tiptree, Essex Authority: Environment Agency, Anglian Region Catchment Area: River Pant / River Blackwater Brook Reference: Asenf12068 Permit Version: 2 Effective Date: 17th May 1995 Issued Date: 17th May 1995 Revocation Date: 26th December 2003 Discharge Type: Trade Discharges - Process Effluent - Water Company (Wtw) Discharge Environment: Freshwater Stream/River Receiving Water: Tributary River Blackwater Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Manually corrected supplier location	A13SW (SW)	145	2	588520 216768
2	Discharge Consents Operator: Mrs G Fell And Mrs S Todd Property Type: Domestic Property (Single) Location: Gwynllian Kelvedon Road, Tiptree, Colchester, Essex, Co5 0lu Authority: Environment Agency, Anglian Region Catchment Area: Roman River / Abberton Reservoir Reference: Npswqd003568 Permit Version: 1 Effective Date: 6th August 2008 Issued Date: 6th August 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of The Layer Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13SE (E)	164	2	588976 216941

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	<p>Discharge Consents</p> <p>Operator: Essex Water Co Property Type: Not Supplied Location: Tiptree, Essex, Cm15 0ls Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr2nfe04961 Permit Version: 1 Effective Date: 26th June 1961 Issued Date: 26th June 1961 Revocation Date: 21st September 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Domsey Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m</p>	A12SE (SW)	275	2	588300 216800
4	<p>Discharge Consents</p> <p>Operator: Ronald Stephen Martin Property Type: Domestic Property (Single) Location: Primrose Lodge Grange Road, Tiptree, Colchester, Essex, Co5 0uh Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Prenf11002 Permit Version: 1 Effective Date: 25th July 1997 Issued Date: 25th July 1997 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary River Blackwater Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	284	2	588380 216700
5	<p>Discharge Consents</p> <p>Operator: Mr R. Martin Property Type: MAKING OF WOOD PRODUCTS/CORK/STRAW/SAWMILLING Location: Grange Road Tiptree, Colchester, Essex, Co5 0lt Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr2nfe13171 Permit Version: 1 Effective Date: 2nd November 1971 Issued Date: 2nd November 1971 Revocation Date: 14th September 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Layer Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m</p>	A13SE (SE)	285	2	589010 216760
6	<p>Discharge Consents</p> <p>Operator: Mr G H Coe & Mrs D C Coe Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Blackberries Grange Road, Tiptree, Colchester, Essex, Co5 0uh Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Prenf07956 Permit Version: 1 Effective Date: 10th December 1993 Issued Date: 10th December 1993 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Layer Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m</p>	A8NW (SW)	292	2	588430 216650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	<p>Discharge Consents</p> <p>Operator: Mr & Mrs Oliver Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Woodside Grange Road, Tiptree, Essex, Co5 0uh Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Prenf11284 Permit Version: 1 Effective Date: 23rd April 1998 Issued Date: 23rd April 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary River Blackwater Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m</p>	A8NW (SW)	321	2	588380 216650
7	<p>Discharge Consents</p> <p>Operator: J F & J A Elliot Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Sussex Grange Rd, Tiptree, Essex, Co5 0uh Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Prenf11298 Permit Version: 1 Effective Date: 8th May 1998 Issued Date: 8th May 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary River Blackwater Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m</p>	A12SE (SW)	306	2	588350 216700
8	<p>Discharge Consents</p> <p>Operator: Calmark Technical Services Ltd Property Type: MAKING OF COMPUTERS/ELECTRONICS/OPTICAL PRODUCTS Location: Pennsylvania Lane, Tiptree, Essex Authority: Environment Agency, Anglian Region Catchment Area: Roman River / Abberton Reservoir Reference: Pr2lfc484 Permit Version: 1 Effective Date: 12th October 1984 Issued Date: 12th October 1984 Revocation Date: 12th September 2001 Discharge Type: Trade Discharge - Process Water Discharge: Land/Soakaway Environment: Receiving Water: Into Land Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m</p>	A8NW (SW)	306	2	588510 216600
8	<p>Discharge Consents</p> <p>Operator: Calmark Technical Services Ltd Property Type: MAKING OF COMPUTERS/ELECTRONICS/OPTICAL PRODUCTS Location: Pennsylvania Lane, Tiptree, Essex Authority: Environment Agency, Anglian Region Catchment Area: Roman River / Abberton Reservoir Reference: Pr2lfc484 Permit Version: 1 Effective Date: 12th October 1984 Issued Date: 12th October 1984 Revocation Date: 12th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Land/Soakaway Environment: Receiving Water: Into Land Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 10m</p>	A8NW (SW)	306	2	588510 216600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	<p>Discharge Consents</p> <p>Operator: P A R E Ltd Property Type: Not Supplied Location: Land South-West Of Perrys Wood, Adjoining Kelvedon Road, Tiptree Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Prenf02959 Permit Version: 1 Effective Date: 12th June 1990 Issued Date: 12th June 1990 Revocation Date: 10th February 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib River Blackwater Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	324	2	588250 217120
10	<p>Discharge Consents</p> <p>Operator: Mr & Mrs G Larkins Property Type: Domestic Property (Single) Location: Vitkin Farm, Grange Rd, Tiptree, Co5 0uh Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Prenf08715 Permit Version: 1 Effective Date: 19th May 1994 Issued Date: 19th May 1994 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary River Blackwater Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m</p>	A7NE (SW)	412	2	588300 216600
11	<p>Discharge Consents</p> <p>Operator: Raoul And Alison Staff Property Type: Domestic Property (Single) Location: Little Oaks, Pennsylvania Avenue, Tiptree, Essex, Co5 0ue Authority: Environment Agency, Anglian Region Catchment Area: Roman River / Abberton Reservoir Reference: Npswqd010476 Permit Version: 1 Effective Date: 19th February 2010 Issued Date: 19th February 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Layer Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A8NE (S)	464	2	588793 216397
12	<p>Discharge Consents</p> <p>Operator: Mr & Mrs R P Ranson Property Type: Domestic Property (Single) Location: Newbarn Cottage No.1 Windmill Hill, Tiptree, Colchester, Essex, Co5 0us Authority: Environment Agency, Anglian Region Catchment Area: River Pant / River Blackwater Brook Reference: Pr2lfs06767 Permit Version: 1 Effective Date: 18th April 1967 Issued Date: 18th April 1967 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Land/Soakaway Environment: Receiving Water: Land Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	630	2	587968 217242

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<p>Discharge Consents</p> <p>Operator: Anglian Water Services Limited Property Type: WTW/WATER COLLECTION/TREATMENT/SUPPLY Location: Tiptree Water Treatment Works Highfield Lane, Tiptree, Essex Authority: Environment Agency, Anglian Region Catchment Area: River Pant / River Blackwater Brook Reference: Asen12068 Permit Version: 1 Effective Date: 11th May 1994 Issued Date: 11th May 1994 Revocation Date: 16th May 1995 Discharge Type: Trade Discharges - Process Effluent - Water Company (Wtw) Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary River Blackwater Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Manually corrected supplier location</p>	A12SW (W)	659	2	587870 216990
14	<p>Discharge Consents</p> <p>Operator: Graeme Biggs Property Type: Domestic Property (Single) Location: Woodview Farm, Colchester Road, Tiptree, Colchester, Co5 0eu Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Eprfb3592na Permit Version: 1 Effective Date: 31st January 2017 Issued Date: 31st January 2017 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Ditch Tributary To Layer Brook Status: New issued under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A14NE (E)	700	2	589557 217202
15	<p>Discharge Consents</p> <p>Operator: The Residents Property Type: Not Supplied Location: Res. Devlpt At Church/Maldon Road, Tiptree, Essex Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr2nfe34766 Permit Version: 1 Effective Date: 15th November 1966 Issued Date: 15th November 1966 Revocation Date: 3rd March 1993 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Layer Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m</p>	A9NE (SE)	753	2	589400 216500
16	<p>Discharge Consents</p> <p>Operator: The Residents Property Type: Not Supplied Location: Roads On An Estate At Maldon Road, Tiptree, Essex Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr2nfe02762 Permit Version: 1 Effective Date: 12th April 1962 Issued Date: 12th April 1962 Revocation Date: 8th March 1993 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Layer Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m</p>	A9SW (SE)	815	2	589300 216300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	<p>Discharge Consents</p> <p>Operator: Mr & Mrs D Cross Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Colchester Road Tiptree, Colchester, Essex, Essex, Co5 0eu Authority: Environment Agency, Anglian Region Catchment Area: Lower River Colne (Colchester) Reference: Prenf19094 Permit Version: 1 Effective Date: 10th January 2005 Issued Date: 10th January 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Layer Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A19SE (E)	889	2	589696 217394
18	<p>Discharge Consents</p> <p>Operator: Essex County Council(Highways Dept.) Property Type: Undefined Or Other Location: School Devlpt At Barbrook Road, Tiptree, Essex Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr2nfe06867 Permit Version: 1 Effective Date: 23rd May 1967 Issued Date: 23rd May 1967 Revocation Date: 12th February 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Layer Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Approximate location provided by supplier</p>	A8SE (S)	903	2	589000 216000
19	<p>Discharge Consents</p> <p>Operator: Essex County Council(Highways Dept) Property Type: EDUCATION/NURSERY/SCHOOL/COLLEGE/UNI/TRAINING VENUE Location: Milldene School Development Barbrook Lane, Tiptree, Colchester, Essex, Co5 0ef Authority: Environment Agency, Anglian Region Catchment Area: Roman River / Abberton Reservoir Reference: Pr2nfe06867 Permit Version: 1 Effective Date: 23rd May 1967 Issued Date: 23rd May 1967 Revocation Date: 12th February 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Layer Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m</p>	A15SW (E)	929	2	589755 216784
20	<p>Discharge Consents</p> <p>Operator: The Residents Property Type: Not Supplied Location: Res. Devlpt Off Barbrook Lane, Tiptree, Essex Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr2nfe03972 Permit Version: 1 Effective Date: 19th May 1972 Issued Date: 19th May 1972 Revocation Date: 4th March 1993 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Layer Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m</p>	A15SW (E)	945	2	589800 216900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	<p>Discharge Consents</p> <p>Operator: Daniel Cottee Property Type: Domestic Property (Single) Location: Woodside Colchester Road, Tiptree, Essex, Essex, Co5 0eu Authority: Environment Agency, Anglian Region Catchment Area: Lower River Colne (Colchester) Reference: Npswqd000106 Permit Version: 1 Effective Date: 14th January 2008 Issued Date: 14th January 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Layer Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A20SW (E)	981	2	589784 217422
22	<p>Discharge Consents</p> <p>Operator: Richard Martin Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Grange Road, Tiptree, Colchester, Essex, Co5 0qq Authority: Environment Agency, Anglian Region Catchment Area: Catchment 34 Unknown Detail Reference: Prefn20866 Permit Version: 1 Effective Date: 28th September 2007 Issued Date: 28th September 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Local Watercrse & Tiptree Lake Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A2NE (S)	1000	2	588264 215950
23	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Shell Tiptree Location: Maypole Road, TIPTREE, Essex, CO5 0EH Authority: Colchester Borough Council, Environmental Health Department Permit Reference: APA13/98 MAU 785 Dated: 23rd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Manually positioned to the address or location</p>	A14SW (E)	542	3	589346 216808
24	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Asda Tiptree, Fiveways Co-Op Supermarket, Location: Church Road, Tiptree, COLCHESTER, Essex, CO5 0LA Authority: Colchester Borough Council, Environmental Health Department Permit Reference: APA1/99 MAU 799 Dated: 11th August 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Automatically positioned to the address</p>	A14SW (SE)	596	3	589327 216684
	<p>Nearest Surface Water Feature</p>	A13NE (N)	0	-	588714 217061
25	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Chelmsford District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Tributary River Blackwater Incident Date: 23rd September 1992 Incident Reference: 1694 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12SE (SW)	275	2	588300 216800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Kelvedon District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Layer Brook Tributary Incident Date: 12th May 1992 Incident Reference: 1341 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	310	2	588500 216600
27	Pollution Incidents to Controlled Waters Property Type: Sewerage: Other Location: Chelmsford District Authority: Environment Agency, Anglian Region Pollutant: Sewage - Septic Tank Effluent Note: Tributary Of Blackwater Incident Date: 11th September 1996 Incident Reference: 3205 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Inadequate Construction Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	415	2	588300 216595
28	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Kelvedon District, TIPTREE Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Layer Brook Incident Date: 17th March 1999 Incident Reference: 3719 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Land Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	803	2	589600 217400
29	Pollution Incidents to Controlled Waters Property Type: Not Applicable Location: Kelvedon District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Natural Note: Layer Brook On Stream Impoundment Incident Date: 25th June 1996 Incident Reference: 2839 Catchment Area: Not Given Receiving Water: Into And/Or Watercourse Cause of Incident: Other Cause Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	815	2	589400 216400
30	Pollution Incidents to Controlled Waters Property Type: Aggregate (Sand/Gravel) Location: Kelvedon District Authority: Environment Agency, Anglian Region Pollutant: Oils - Gas Oil Note: Not Supplied Incident Date: 5th February 1997 Incident Reference: 3018 Catchment Area: Not Given Receiving Water: Into And/Or Watercourse Cause of Incident: Vandalism Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (S)	879	2	588500 215995
31	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Kelvedon District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Natural Note: Grove Lake Incident Date: 11th July 1995 Incident Reference: 2465 Catchment Area: Not Given Receiving Water: Into And/Or Watercourse Cause of Incident: Low Dissolved Oxygen Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	893	2	589500 216400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	Pollution Incidents to Controlled Waters Property Type: Road Location: Kelvedon District Authority: Environment Agency, Anglian Region Pollutant: Oils - Diesel (Including Agricultural) Note: Grove Pond Incident Date: 12th February 1996 Incident Reference: 2655 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	896	2	589500 216395
31	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Kelvedon District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Natural Note: Grove Lake Incident Date: 4th July 1997 Incident Reference: 3174 Catchment Area: Not Given Receiving Water: Into And/Or Watercourse Cause of Incident: Algal Bloom Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	900	2	589505 216395
32	Pollution Incidents to Controlled Waters Property Type: Not Applicable Location: Kelvedon District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Natural Note: Pond At Tiptree Incident Date: 8th September 1996 Incident Reference: 2902 Catchment Area: Not Given Receiving Water: Into And/Or Watercourse Cause of Incident: Low Dissolved Oxygen Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SE (SE)	956	2	589500 216300
33	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Kelvedon District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Fire water / Foam Note: Ditch Tributary Layer Brook Incident Date: 18th November 1998 Incident Reference: 3628 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Fire Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	977	2	588200 216000
	Water Abstractions Operator: MrsMrs V D Clarke Licence Number: 8/37/24/*S/0011 Permit Version: 103 Location: Trib Of Layer Brook, Tiptree Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 10th March 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15NE (E)	1351	2	590200 217300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>Water Abstractions</p> <p>Operator: Mr L P Clarke Licence Number: 8/37/24/*S/0011 Permit Version: 102 Location: Trib Of Layer Brook, Tiptree Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 22nd November 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A15NE (E)	1351	2	590200 217300
	<p>Water Abstractions</p> <p>Operator: Mrs E M Adams Licence Number: 8/37/24/*S/0011 Permit Version: 101 Location: Trib Of Layer Brook, Tiptree Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 10th January 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A15NE (E)	1351	2	590200 217300
	<p>Water Abstractions</p> <p>Operator: D Martin Licence Number: 8/37/24/*G/0065 Permit Version: 101 Location: Villa Farm, Tiptree Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Villa Fm West End Road Tiptree Essex Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 29th November 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A3SW (S)	1355	2	588600 215500
	<p>Water Abstractions</p> <p>Operator: G Martin & Son Licence Number: 8/37/24/*G/0065 Permit Version: 100 Location: Villa Farm, Tiptree Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Fluvial Sand and Gravel; Status: Perpetuity Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st May 1991 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A3SW (S)	1355	2	588600 215500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>Water Abstractions</p> <p>Operator: Essex County Council Licence Number: 8/37/33/1*/g204 Permit Version: Not Supplied Location: Borehole At, MESSING Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 18 Yearly Rate (m3): 3400 Details: Perpetuity; Glacial Sand & Gravel Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A24NE (NE)	1497	2	589510 218445
	<p>Water Abstractions</p> <p>Operator: Essex County Council Licence Number: 8/37/31*/G/0204 Permit Version: 101 Location: Borehole At Messing Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 12th November 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A24NE (NE)	1502	2	589510 218450
	<p>Water Abstractions</p> <p>Operator: Essex County Council Licence Number: 8/37/31*/G/0204 Permit Version: 100 Location: Borehole At Messing Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Glacial Sand and Gravel; Status: Perpetuity Authorised Start: 01 May Authorised End: 31 October Permit Start Date: 1st February 1997 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A24NE (NE)	1502	2	589510 218450
	<p>Water Abstractions</p> <p>Operator: P A Grover Licence Number: 8/37/31*/g/149 Permit Version: Not Supplied Location: Bore, Stonefields Farm, MESSING Authority: Environment Agency, Anglian Region Abstraction: Unspecified Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 5 Yearly Rate (m3): 91000 Details: Glacial Sand and Gravel; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A22NW (NW)	1604	2	588005 218595

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>Water Abstractions</p> <p>Operator: P A Grover Licence Number: 8/37/31/*g/149 Permit Version: Not Supplied Location: Bore, Stonefields Farm, MESSING Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 5 Yearly Rate (m3): 91000 Details: Glacial Sand and Gravel; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A22NW (NW)	1607	2	588000 218595
	<p>Water Abstractions</p> <p>Operator: P A Grover Licence Number: 8/37/31/*g/149 Permit Version: Not Supplied Location: Bore, Stonefields Farm, MESSING Authority: Environment Agency, Anglian Region Abstraction: Agriculture (General) Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 5 Yearly Rate (m3): 91000 Details: Glacial Sand and Gravel; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A22NW (NW)	1611	2	588000 218600
	<p>Water Abstractions</p> <p>Operator: D A Clough Licence Number: 8/37/24/*G/0025 Permit Version: 100 Location: Two Wells At Tiptree Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Fluvial Sand and Gravel; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1973 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	(S)	1631	2	589200 215300
	<p>Water Abstractions</p> <p>Operator: D A Clough Licence Number: 8/37/24/*G/0025 Permit Version: 100 Location: Two Wells At Tiptree Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Fluvial Sand and Gravel; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1973 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	(S)	1664	2	589300 215300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: J F And C M Strathern Licence Number: 8/37/24/*i/077 Permit Version: Not Supplied Location: Trib Of Layer Brook Kelvedon Authority: Environment Agency, Anglian Region Abstraction: Impounding Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(E)	1735	2	590600 217200
	Water Abstractions Operator: Wilkin & Sons Ltd., Licence Number: 8/37/24/*g/038 Permit Version: Not Supplied Location: Jam Factory, TIPTREE Authority: Environment Agency, Anglian Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 1 Yearly Rate (m3): 5680 Details: Fluvial Sand and Gravel; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5SW (SE)	1736	2	589900 215600
	Water Abstractions Operator: J F Strathern Licence Number: 8/37/24/*i/074 Permit Version: Not Supplied Location: Trib Of Layer Brook Authority: Environment Agency, Anglian Region Abstraction: Impounding Abstraction Type: Not Supplied Source: Unknown Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(E)	1746	2	590600 217300
	Water Abstractions Operator: J F Strathern Licence Number: 8/37/24/*S/0064 Permit Version: 100 Location: Haynes Green Fm, Layer Marney Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st April 1979 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(E)	1784	2	590600 217500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Wilkin & Sons Ltd Licence Number: 8/37/24/*S/0043 Permit Version: 100 Location: Trib Layer Brook, Birch Wood Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st April 1979 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A5NE (SE)	1893	2	590300 215800
	Water Abstractions Operator: Wilkin & Sons Ltd Licence Number: 8/37/24/*S/0043 Permit Version: 100 Location: Trib Layer Brook Tiptree Hall Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st April 1979 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1975	2	589000 214900
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 40 Thames Estuary Scale: 1:100,000	A13NE (E)	0	2	588700 217005
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13NE (E)	0	4	588700 217005
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (SE)	0	4	588806 216957
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 285.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Chelmer Primacy: 1	A12NE (W)	227	5	588325 217073
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 106.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Chelmer Primacy: 1	A12SE (SW)	265	5	588322 216788

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 30.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Chelmer Primacy: 1	A12SE (W)	268	5	588267 216891
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 98.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Chelmer Primacy: 1	A12NE (NW)	277	5	588342 217166
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1271.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Chelmer Primacy: 1	A12SE (W)	291	5	588250 216866
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A8NE (S)	447	5	588870 216439
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A8NE (S)	450	5	588889 216444
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A8NE (SE)	461	5	588933 216455
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A8NE (SE)	465	5	588948 216460
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 55.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A14NE (E)	685	5	589501 217333
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 190.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A14NE (E)	720	5	589546 217312

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 38.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A9NE (SE)	742	5	589407 216530
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 55.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A9NE (SE)	778	5	589429 216499
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A14NE (E)	789	5	589654 217155
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 159.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A8SE (S)	800	5	588729 216052
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A14NE (E)	810	5	589676 217138
50	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 18.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A14NE (E)	816	5	589684 217126
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 227.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A8SE (S)	825	5	589013 216089
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 64.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A9NE (SE)	829	5	589458 216451
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 68.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A14NE (E)	833	5	589701 217120

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A14SE (E)	860	5	589710 216881
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 134.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Chelmer Primacy: 1	A17NE (NW)	860	5	588067 217746
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 554.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A15SW (E)	868	5	589717 216877
57	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 25.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A9NE (SE)	884	5	589484 216393
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 199.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A15NW (E)	899	5	589767 217125
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 94.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A3NE (S)	900	5	588847 215963
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 219.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A9NE (SE)	907	5	589497 216373
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 98.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Colne Essex Primacy: 1	A3NE (S)	950	5	588907 215925
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 145.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Chelmer Primacy: 1	A17NW (NW)	990	5	587996 217858

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	Licensed Waste Management Facilities (Locations) Licence Number: 71261 Location: Basket Works, Grange Road, Tiptree, Essex, CO5 0QQ Operator Name: M P Skips Ltd Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Eastern Area Site Category: Household, Commercial And Industrial Transfer Stations Licence Status: Revoked Issued: 23rd October 2001 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: 2nd September 2010 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7SE (S)	937	2	588288 216008
63	Licensed Waste Management Facilities (Locations) Licence Number: 100008 Location: The Basket Works, Grange Road, Tiptree, Essex, CO5 0QQ Operator Name: G K L Holdings Ltd Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Eastern Area Site Category: Household, Commercial And Industrial Transfer Stations Licence Status: Transferred Issued: 14th September 2007 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	939	2	588280 216010
	Local Authority Landfill Coverage Name: Colchester Borough Council - Has no landfill data to supply		0	3	588700 217005
	Local Authority Landfill Coverage Name: Essex County Council - Has supplied landfill data		0	6	588700 217005
64	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1974	A13SE (SE)	206	-	589015 216871
65	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1974	A14NW (E)	405	-	589270 217128
66	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1974	A14SW (SE)	529	-	589294 216726
67	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1974	A9NW (SE)	634	-	589282 216540
68	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1974	A17NE (NW)	949	-	588061 217859
69	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1974	A4NW (S)	979	-	589068 215945
70	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (SE)	312	-	589023 216733
71	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14SW (SE)	384	-	589100 216716
72	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14SW (SE)	391	-	589149 216793

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A14NW (E)	392	-	589259 217119
74	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14SW (SE)	418	-	589175 216781
75	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A14SW (SE)	473	-	589187 216686
76	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A14NE (E)	537	-	589379 217239
77	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9NW (SE)	572	-	589259 216614
78	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9NW (SE)	628	-	589351 216663
79	Registered Waste Transfer Sites Licence Holder: M R Payne T/A M P Skips Licence Reference: Eawml71261 Site Location: Basket Works, Grange Road, Tiptree, Essex, Co5 0qq Operator Location: Basket Works, Grange Road, Tiptree, Essex, Co5 0qq Authority: Environment Agency - Anglian Region, Eastern Area Site Category: Transfer Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 23rd October 2001 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Household/Commercial/Industrial Waste (Inferred From Regis Listing) New Licence, Wastes Not To Hand	A7SE (SW)	952	2	588270 216000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Thames Group	A13NE (E)	0	1	588700 217005
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (E)	0	1	588700 217005
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A13SE (SE)	0	1	588806 216957
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A13NW (NW)	140	1	588577 217235
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A18SE (N)	276	1	588747 217427
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (SE)	405	1	588947 216532
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A12NE (W)	449	1	588084 217019

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A12SW (W)	528	1	588000 217000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A12NW (W)	536	1	588002 217059
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A18NE (N)	603	1	588907 217725
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A17SE (NW)	665	1	588078 217460
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A18NW (N)	666	1	588625 217814
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A12NW (W)	686	1	587891 217213

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel <15 mg/kg Concentration:	A18NW (N)	731	1	588447 217836
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel <15 mg/kg Concentration:	A19NW (NE)	737	1	589069 217812
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel <15 mg/kg Concentration:	A17NE (NW)	744	1	588199 217707
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel <15 mg/kg Concentration:	A18NE (N)	779	1	588870 217916
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	787	1	588700 216064
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel <15 mg/kg Concentration:	A18NW (N)	791	1	588472 217908

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A7NW (SW)	849	1	587836 216462
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A23SE (N)	886	1	588825 218032
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A7NW (SW)	919	1	587698 216560
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A19NW (NE)	921	1	589241 217935
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A17SW (NW)	976	1	587766 217564
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 40 - 60 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel <15 mg/kg</p> <p>Concentration:</p>	A16SE (W)	981	1	587655 217407

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A3NE (S)	999	1	589000 215900
80	BGS Recorded Mineral Sites Site Name: Tiptree Gravel Pits Location: Tiptree, Colchester, East Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 106119 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14SW (E)	261	1	589107 216957
81	BGS Recorded Mineral Sites Site Name: Tiptree Gravel Pits Location: Tiptree, Colchester, East Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 106121 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14SW (E)	277	1	589070 216875
82	BGS Recorded Mineral Sites Site Name: Tiptree Gravel Pits Location: Tiptree, Colchester, East Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 106120 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14NW (E)	432	1	589301 217090
83	BGS Recorded Mineral Sites Site Name: Tiptree Gravel Pits Location: Tiptree, Colchester, East Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 106122 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14SW (E)	432	1	589236 216838
84	BGS Recorded Mineral Sites Site Name: Tiptree Gravel Pits Location: Tiptree, Colchester, East Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 106123 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14SW (E)	550	1	589347 216794

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
85	BGS Recorded Mineral Sites Site Name: Tiptree Gravel Pits Location: Tiptree, Colchester, East Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 106124 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	591	1	589282 216615
86	BGS Recorded Mineral Sites Site Name: Tiptree Quarry Location: Tiptree, Colchester, East Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 106125 Type: Opencast Status: Ceased Operator: Bardon Aggregates - Southern Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8SW (S)	665	1	588581 216197
87	BGS Recorded Mineral Sites Site Name: Tiptree Quarry Location: Tiptree, Colchester, East Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 106127 Type: Opencast Status: Ceased Operator: Bardon Aggregates - Southern Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8SW (S)	870	1	588502 216004
88	BGS Recorded Mineral Sites Site Name: Inworth Gravel Pit Location: Inworth, Colchester, Essex Source: British Geological Survey, National Geoscience Information Service Reference: 180386 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Palaeogene Geology: London Clay Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	948	1	588058 217855
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	588700 217005
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	588700 217005
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	588700 217005
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	588700 217005

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	588700 217005
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	588700 217005
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	588700 217005
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	588700 217005

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
89	<p>Contemporary Trade Directory Entries</p> <p>Name: Tiptree Carriage Co Location: Tower End, Kelvedon Road, Tiptree, Colchester, Essex, CO5 0LX Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	0	-	588717 217133
90	<p>Contemporary Trade Directory Entries</p> <p>Name: M Garwood Location: Sun House, Kelvedon Road, Tiptree, Colchester, CO5 0LY Classification: Coal & Smokeless Fuel Merchants & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (N)	55	-	588662 217182
91	<p>Contemporary Trade Directory Entries</p> <p>Name: Tower Animal Feeds Location: Tower Business Park, Kelvedon Road, Tiptree, Colchester, CO5 0LX Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	58	-	588606 217150
91	<p>Contemporary Trade Directory Entries</p> <p>Name: P R S Pallets Ltd Location: Tower Business Park, Kelvedon Road, Tiptree, Colchester, CO5 0LX Classification: Pallets, Crates & Packing Cases Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	59	-	588606 217150
92	<p>Contemporary Trade Directory Entries</p> <p>Name: Mumford & Wood Location: Tower Business Park, Kelvedon Road, Tiptree, Colchester, CO5 0LX Classification: Window Frame Manufacturers' Equipment Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NW (W)	59	-	588527 217049
92	<p>Contemporary Trade Directory Entries</p> <p>Name: Chilled Distribution Location: Tower Business Park, Kelvedon Rd, Tiptree, Colchester, Essex, CO5 0LX Classification: Distribution Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A13NW (W)	59	-	588526 217048
93	<p>Contemporary Trade Directory Entries</p> <p>Name: James Brown Location: 95, Oak Road, Tiptree, Colchester, CO5 0NE Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	83	-	588916 217138
94	<p>Contemporary Trade Directory Entries</p> <p>Name: Colchester Reclaim Location: Tower House, Kelvedon Road, Tiptree, Colchester, Essex, CO5 0LX Classification: Reclamation Centres Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	108	-	588544 217152
94	<p>Contemporary Trade Directory Entries</p> <p>Name: Kelvedon Motor Co Commercial Centre Location: Kelvedon Rd, Tiptree, Colchester, Essex, CO5 0LX Classification: Commercial Vehicle Dealers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NW (NW)	122	-	588540 217170
95	<p>Contemporary Trade Directory Entries</p> <p>Name: D & S Location: Tower Business Park, Kelvedon Rd, Tiptree, Colchester, Essex, CO5 0LX Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A13NW (NW)	109	-	588519 217120
95	<p>Contemporary Trade Directory Entries</p> <p>Name: Used Cars Location: Tower Business Park, Kelvedon Rd, Tiptree, Colchester, Essex, CO5 0LX Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A13NW (NW)	109	-	588519 217120
95	<p>Contemporary Trade Directory Entries</p> <p>Name: Jenner (City Print) Ltd Location: Unit 1, Tower Business Park, Kelvedon Road, Tiptree, Colchester, CO5 0LX Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	109	-	588519 217120

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	<p>Contemporary Trade Directory Entries</p> <p>Name: J & M Motors Location: Unit 1, Tower Business Park, Kelvedon Road, Tiptree, Colchester, Essex, CO5 0LX Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	109	-	588519 217120
95	<p>Contemporary Trade Directory Entries</p> <p>Name: Essex Building Supplies Location: Kelvedon Rd, Tiptree, Colchester, Essex, CO5 0LX Classification: Builders' Merchants Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A13NW (NW)	109	-	588519 217120
95	<p>Contemporary Trade Directory Entries</p> <p>Name: Speedprint Uk Location: Tower Business Park, Kelvedon Road, Tiptree, Colchester, CO5 0LX Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	130	-	588497 217126
95	<p>Contemporary Trade Directory Entries</p> <p>Name: Tiptree Trading Co Location: Kelvedon Road, Tiptree, Colchester, Essex, CO5 0LX Classification: Builders' Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	161	-	588473 217145
96	<p>Contemporary Trade Directory Entries</p> <p>Name: Dairy Crest Location: Tower Business Park, Kelvedon Road, Tiptree, COLCHESTER, CO5 0LX Classification: Dairies Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (W)	115	-	588461 217056
96	<p>Contemporary Trade Directory Entries</p> <p>Name: Dairy Crest Ltd Location: Tower Business Park, Kelvedon Road, Tiptree, Colchester, CO5 0LX Classification: Dairies Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (W)	115	-	588461 217056
97	<p>Contemporary Trade Directory Entries</p> <p>Name: M J L Contracts Location: 30, Walnut Tree Way, Tiptree, Colchester, CO5 0NH Classification: Rubbish Clearance Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	274	-	589140 217019
98	<p>Contemporary Trade Directory Entries</p> <p>Name: Maldon Automotive Trading Location: Woodside, Grange Road, Tiptree, Colchester, CO5 0UH Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	336	-	588358 216650
99	<p>Contemporary Trade Directory Entries</p> <p>Name: Roy Terry Location: 14, Maldon Road, Tiptree, Colchester, CO5 0LL Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	532	-	589226 216637
99	<p>Contemporary Trade Directory Entries</p> <p>Name: Roy Terry Fireplaces Location: 14, Maldon Road, Tiptree, Colchester, CO5 0LL Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	536	-	589230 216636
99	<p>Contemporary Trade Directory Entries</p> <p>Name: Roy Terry Location: 14, Maldon Road, Tiptree, Colchester, Essex, CO5 0LL Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	536	-	589230 216636

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	Contemporary Trade Directory Entries Name: Shell Service Station Location: Maypole Road, Tiptree, Colchester, Essex, CO5 0EN Classification: Petrol Filling Stations Status: Active Positional Accuracy: Manually positioned to the address or location	A14SW (E)	552	-	589360 216812
100	Contemporary Trade Directory Entries Name: Shell Select Location: Maypole Road, Tiptree, Colchester, Essex, CO5 0EN Classification: Petrol Filling Stations Status: Active Positional Accuracy: Manually positioned to the address or location	A14SW (E)	553	-	589359 216808
101	Contemporary Trade Directory Entries Name: Heritage Remedial Preservation Co Location: 26, Blue Road, Tiptree, Colchester, CO5 0TY Classification: Damp & Dry Rot Control Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	596	-	589059 216378
102	Contemporary Trade Directory Entries Name: Underwoods Of Tiptree - Ford Location: 5, Church Road, Tiptree, Colchester, CO5 0LG Classification: Car Customisation & Conversion Specialists Status: Active Positional Accuracy: Automatically positioned to the address	A14SW (SE)	596	-	589327 216684
103	Contemporary Trade Directory Entries Name: Marsh Climate Location: Marsh House, Pennsylvania Lane, Tiptree, Colchester, CO5 0TU Classification: Air Conditioning Equipment & Systems Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	676	-	588991 216242
103	Contemporary Trade Directory Entries Name: Edpac Uk Location: Marsh House, Pennsylvania Lane, Tiptree, Colchester, CO5 0TU Classification: Air Conditioning Equipment & Systems Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	676	-	588991 216242
104	Contemporary Trade Directory Entries Name: R T Gas Location: 53, Blue Road, Tiptree, Colchester, Essex, CO5 0TX Classification: Boilers - Servicing, Replacements & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	810	-	589124 216163
104	Contemporary Trade Directory Entries Name: Combined Domestic Services Location: A, 52, Maldon Road, Tiptree, Colchester, CO5 0TT Classification: Washing Machines - Servicing & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	820	-	589161 216175
105	Contemporary Trade Directory Entries Name: Tiptree Fork Lifts Location: 48, Green Lane, Tiptree, Colchester, CO5 0DE Classification: Fork Lift Trucks Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NE (SE)	819	-	589533 216587
106	Contemporary Trade Directory Entries Name: Butterfield Training Services Location: 3, Heycroft Way, Tiptree, Colchester, CO5 0DG Classification: Fork Lift Trucks Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NE (SE)	851	-	589589 216612
107	Contemporary Trade Directory Entries Name: Tiptree Tractor Co Location: 6, Heaton Way, Tiptree, Colchester, CO5 0DZ Classification: Agricultural Machinery - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	866	-	589702 216828
108	Contemporary Trade Directory Entries Name: Asda Petrol Location: 25, Church Road, Tiptree, Colchester, CO5 0LA Classification: Petrol Filling Stations Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	883	-	589522 216449

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	Contemporary Trade Directory Entries Name: Frost Fencing Location: Grange Road, Tiptree, Colchester, CO5 0QQ Classification: Concrete Products Status: Inactive Positional Accuracy: Automatically positioned to the address	A7SE (SW)	938	-	588217 216035
110	Contemporary Trade Directory Entries Name: M & M Motor Repairs Location: 25, Heycroft Way, Tiptree, Colchester, CO5 0DN Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	941	-	589650 216541
111	Contemporary Trade Directory Entries Name: Togs Dry Cleaning Location: Church Rd, Tiptree, Colchester, Essex, CO5 0TJ Classification: Dry Cleaners Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A9NE (SE)	960	-	589532 216332
112	Contemporary Trade Directory Entries Name: R J Gower International Haulage Ltd Location: Grange Road, Tiptree, Colchester, CO5 0QQ Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A7SE (SW)	964	-	588257 215992
112	Contemporary Trade Directory Entries Name: Tiptree Sawmill Location: Grange Rd, Tiptree, Colchester, Essex, CO5 0QQ Classification: Sawmills & Wood Shavings Status: Inactive Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	964	-	588256 215992
113	Contemporary Trade Directory Entries Name: Young'S Of Tiptree Location: 59, Maldon Road, Tiptree, Colchester, CO5 0BW Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	985	-	589211 216011
114	Fuel Station Entries Name: Shell Tiptree Location: Maypole Road, Tiptree, Colchester, Essex, CO5 0EN Brand: SHELL Premises Type: Petrol Station Status: Open Positional Accuracy: Manually positioned to the address or location	A14SW (E)	552	-	589358 216808
115	Fuel Station Entries Name: Underwoods Garage Location: 5, Church Road, Tiptree, Essex, CO5 0LG Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A14SW (SE)	597	-	589327 216683
116	Fuel Station Entries Name: Asda Tiptree Automat Location: 25, Church Road, Tiptree, Colchester, Essex, CO5 0LA Brand: Asda Premises Type: Hypermarket Status: Open Positional Accuracy: Manually positioned to the address or location	A9NE (SE)	937	-	589529 216365
117	Fuel Station Entries Name: Youngs Of Tiptree Location: 59, Maldon Road, Tiptree, Essex, CO5 0BW Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A9SW (SE)	985	-	589211 216011
118	Points of Interest - Commercial Services Name: Chilled Distribution Location: Tower Business Park, Kelvedon Rd, Tiptree, Colchester, Essex, CO5 0LX Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13NW (W)	59	7	588526 217048

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
118	Points of Interest - Commercial Services Name: Tiptree Trading Location: Tower Business Park, Kelvedon Road, Tiptree, Colchester, CO5 0LX Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A13NW (W)	115	7	588461 217056
119	Points of Interest - Commercial Services Name: Shell Tiptree Location: Maypole Road, Tiptree, Colchester, CO5 0EH Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A14SW (E)	544	7	589366 216844
119	Points of Interest - Commercial Services Name: Car Wash Location: Maypole Road, Tiptree, Colchester, CO5 0EH Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A14SW (E)	552	7	589358 216808
120	Points of Interest - Commercial Services Name: Starternator Services Location: 4 Oak Road, Tiptree, Colchester, CO5 0NS Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	624	7	589448 217301
121	Points of Interest - Commercial Services Name: M & M Motor Repairs Location: 25 Heycroft Way, Tiptree, Colchester, CO5 0DN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (SE)	941	7	589650 216541
122	Points of Interest - Manufacturing and Production Name: Tank Location: CO5 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SW (SW)	145	7	588503 216778
122	Points of Interest - Manufacturing and Production Name: Tanks Location: CO5 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	147	7	588519 216767
122	Points of Interest - Manufacturing and Production Name: Tank Location: CO5 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SW (SW)	156	7	588502 216766
122	Points of Interest - Manufacturing and Production Name: Tank Location: CO5 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SW (SW)	165	7	588503 216755
123	Points of Interest - Manufacturing and Production Name: Tank Location: CO5 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	649	7	589517 217018
124	Points of Interest - Manufacturing and Production Name: Sand and Gravel Pit Location: CO5 Category: Extractive Industries Class Code: Sand, Gravel and Clay Extraction and Merchants Positional Accuracy: Positioned to an adjacent address or location	A8SW (S)	710	7	588553 216156
125	Points of Interest - Manufacturing and Production Name: Sand and Gravel Pit Location: CO5 Category: Extractive Industries Class Code: Sand, Gravel and Clay Extraction and Merchants Positional Accuracy: Positioned to an adjacent address or location	A3NW (S)	976	7	588431 215912

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
126	Points of Interest - Public Infrastructure Name: Shell Tiptree Location: Maypole Road, Tiptree, Colchester, CO5 0EH Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14SW (E)	551	7	589357 216810
126	Points of Interest - Public Infrastructure Name: Shell Service Station Location: Maypole Road, Tiptree, Colchester, CO5 0EN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14SW (E)	552	7	589360 216812
126	Points of Interest - Public Infrastructure Name: Shell Tiptree Location: Maypole Road, Tiptree, Colchester, CO5 0EH Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14SW (E)	552	7	589358 216808
126	Points of Interest - Public Infrastructure Name: Shell Tiptree Location: Maypole Road, Tiptree, Colchester, CO5 0EH Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14SW (E)	554	7	589360 216808
127	Points of Interest - Public Infrastructure Name: Asda Petrol Location: 25 Church Road, Tiptree, Colchester, CO5 0LA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NE (SE)	937	7	589529 216365
127	Points of Interest - Public Infrastructure Name: Asda Tiptree Automat Location: Church Road, Tiptree, Colchester, CO5 0LA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NE (SE)	937	7	589529 216365

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
128	Ancient Woodland Name: Perrys Wood Reference: 1116819 Area(m ²): 35789.44 Type: Ancient and Semi-Natural Woodland	A13NW (NW)	188	8	588463 217181
129	Ancient Woodland Name: Inworth Wood Reference: 1116820 Area(m ²): 22975.25 Type: Ancient and Semi-Natural Woodland	A17NE (N)	788	8	588357 217859
130	Nitrate Vulnerable Zones Name: River Blackwater Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NE (W)	0	4	588700 217005
131	Nitrate Vulnerable Zones Name: Layer Brook Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NE (E)	0	4	588700 217005
132	Nitrate Vulnerable Zones Name: Sandlings And Chelmsford Description: Groundwater Source: Environment Agency, Head Office	A13NE (E)	0	4	588700 217005

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Maldon District Council - Environmental Health Department Braintree District Council - Environmental Health Department Colchester Borough Council - Environmental Health Department	April 2014 January 2015 October 2013	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Anglian Region	October 2018	Quarterly
Enforcement and Prohibition Notices Environment Agency - Anglian Region	March 2013	Annual Rolling Update
Integrated Pollution Controls Environment Agency - Anglian Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - Anglian Region	October 2018	Quarterly
Local Authority Integrated Pollution Prevention And Control Braintree District Council - Environmental Health Department Colchester Borough Council - Environmental Health Department Maldon District Council - Environmental Health Department	August 2014 December 2014 June 2013	Variable Variable Variable
Local Authority Pollution Prevention and Controls Braintree District Council - Environmental Health Department Colchester Borough Council - Environmental Health Department Maldon District Council - Environmental Health Department	August 2014 December 2014 January 2015	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Braintree District Council - Environmental Health Department Colchester Borough Council - Environmental Health Department Maldon District Council - Environmental Health Department	August 2014 December 2014 January 2015	Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	September 2017	
Pollution Incidents to Controlled Waters Environment Agency - Anglian Region	September 1999	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Anglian Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters Environment Agency - Anglian Region	March 2013	Annual Rolling Update
Registered Radioactive Substances Environment Agency - Anglian Region	January 2015	
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - Anglian Region - Eastern Area	October 2018	Quarterly
Water Abstractions Environment Agency - Anglian Region	October 2018	Quarterly
Water Industry Act Referrals Environment Agency - Anglian Region	October 2017	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable

Agency & Hydrological	Version	Update Cycle
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	January 2018	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2018	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2018	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2018	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2018	Quarterly
Flood Defences Environment Agency - Head Office	August 2018	Quarterly
OS Water Network Lines Ordnance Survey	October 2018	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water Suitability Environment Agency - Head Office	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	July 2018	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Anglian Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Anglian Region - Eastern Area	July 2018	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Anglian Region - Eastern Area	October 2018	Quarterly
Local Authority Landfill Coverage Braintree District Council Colchester Borough Council - Environmental Health Department Essex County Council Maldon District Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Braintree District Council Colchester Borough Council - Environmental Health Department Maldon District Council - Environmental Health Department Essex County Council	May 2000 May 2000 May 2000 November 2004	Not Applicable Not Applicable Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Variable
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Braintree District Council Colchester Borough Council Essex County Council Maldon District Council	February 2016 February 2016 February 2016 February 2016	Variable Variable Variable Variable
Planning Hazardous Substance Consents Braintree District Council Colchester Borough Council Essex County Council Maldon District Council	February 2016 February 2016 February 2016 February 2016	Variable Variable Variable Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2018	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2018	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2018	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	September 2018	Quarterly
Points of Interest - Education and Health PointX	September 2018	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2018	Quarterly
Points of Interest - Public Infrastructure PointX	September 2018	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2018	Quarterly
Underground Electrical Cables National Grid	December 2015	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	August 2018	Bi-Annually
Areas of Adopted Green Belt Braintree District Council	August 2018	As notified
Areas of Unadopted Green Belt Braintree District Council	August 2018	As notified
Areas of Outstanding Natural Beauty Natural England	August 2018	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	August 2018	Bi-Annually
Marine Nature Reserves Natural England	January 2018	Bi-Annually
National Nature Reserves Natural England	August 2018	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
Ramsar Sites Natural England	August 2018	Bi-Annually
Sites of Special Scientific Interest Natural England	October 2018	Bi-Annually
Special Areas of Conservation Natural England	August 2018	Bi-Annually
Special Protection Areas Natural England	August 2018	Bi-Annually

A selection of organisations who provide data within this report




Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Colchester Borough Council - Environmental Health Department P O Box 889, Town Hall, Colchester, Essex, CO1 1FL	Telephone: 01206 282222 Fax: 01206 282598 Website: www.colchester.gov.uk
4	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	Essex County Council County Hall, Chelmsford, Essex, CM1 1YS	Telephone: 01245 492211 Website: www.essexcc.gov.uk
7	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
8	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk


Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Geology 1:50,000 Maps Legends


Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	LOFT	Lowestoft Formation	Diamicton	Not Supplied - Anglian
	LOFT	Lowestoft Formation	Sand and Gravel	Not Supplied - Anglian
	GFDMP	Glaciofluvial Deposits, Mid Pleistocene	Sand and Gravel	Not Supplied - Cromerian
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary
	RTD5	River Terrace Deposits, 5	Sand and Gravel	Not Supplied - Quaternary
	T4T5	River Terrace Deposits, 4 to 5	Sand and Gravel	Not Supplied - Quaternary
	RTD4	River Terrace Deposits, 4	Sand and Gravel	Not Supplied - Quaternary
	RTD3	River Terrace Deposits, 3	Sand and Gravel	Not Supplied - Quaternary
	RTD2	River Terrace Deposits, 2	Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	LC	London Clay Formation	Clay, Silt and Sand	Not Supplied - Ypresian



Geology 1:50,000 Maps

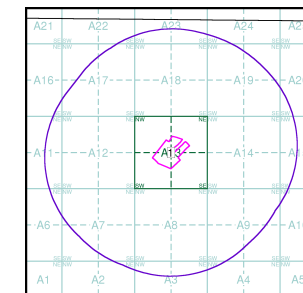
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	241
Map Name:	Chelmsford
Map Date:	1975
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A

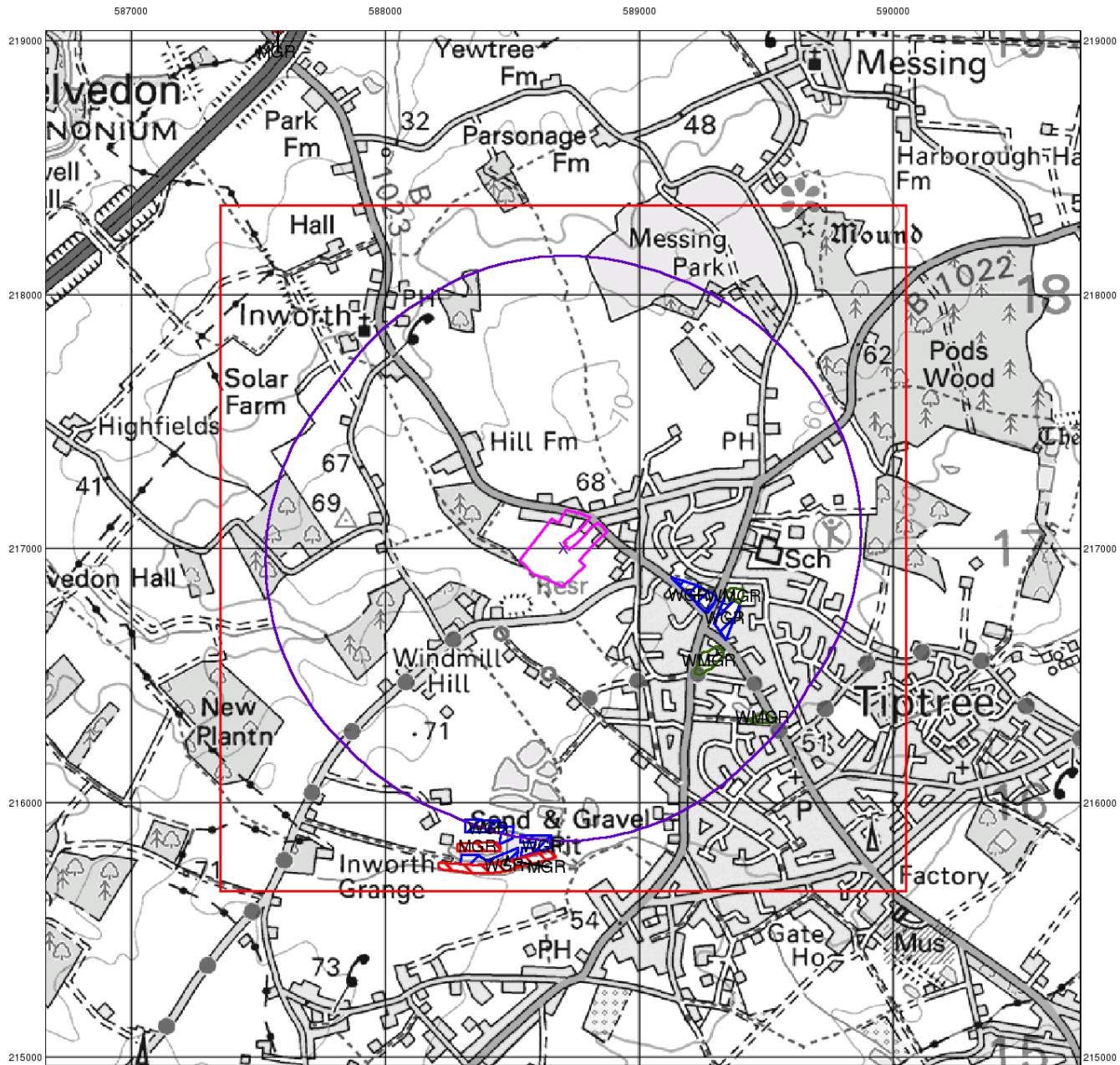


Order Details:

Order Number:	190899269_1_1
Customer Reference:	1342
National Grid Reference:	588700, 217000
Slice:	A
Site Area (Ha):	5.15
Search Buffer (m):	1000

Site Details:

Land South of Kelvedon Road, Tiptree, COLCHESTER, CO5 0LU



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Artificial Ground and Landslip

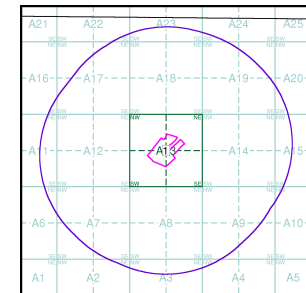
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



Order Details:

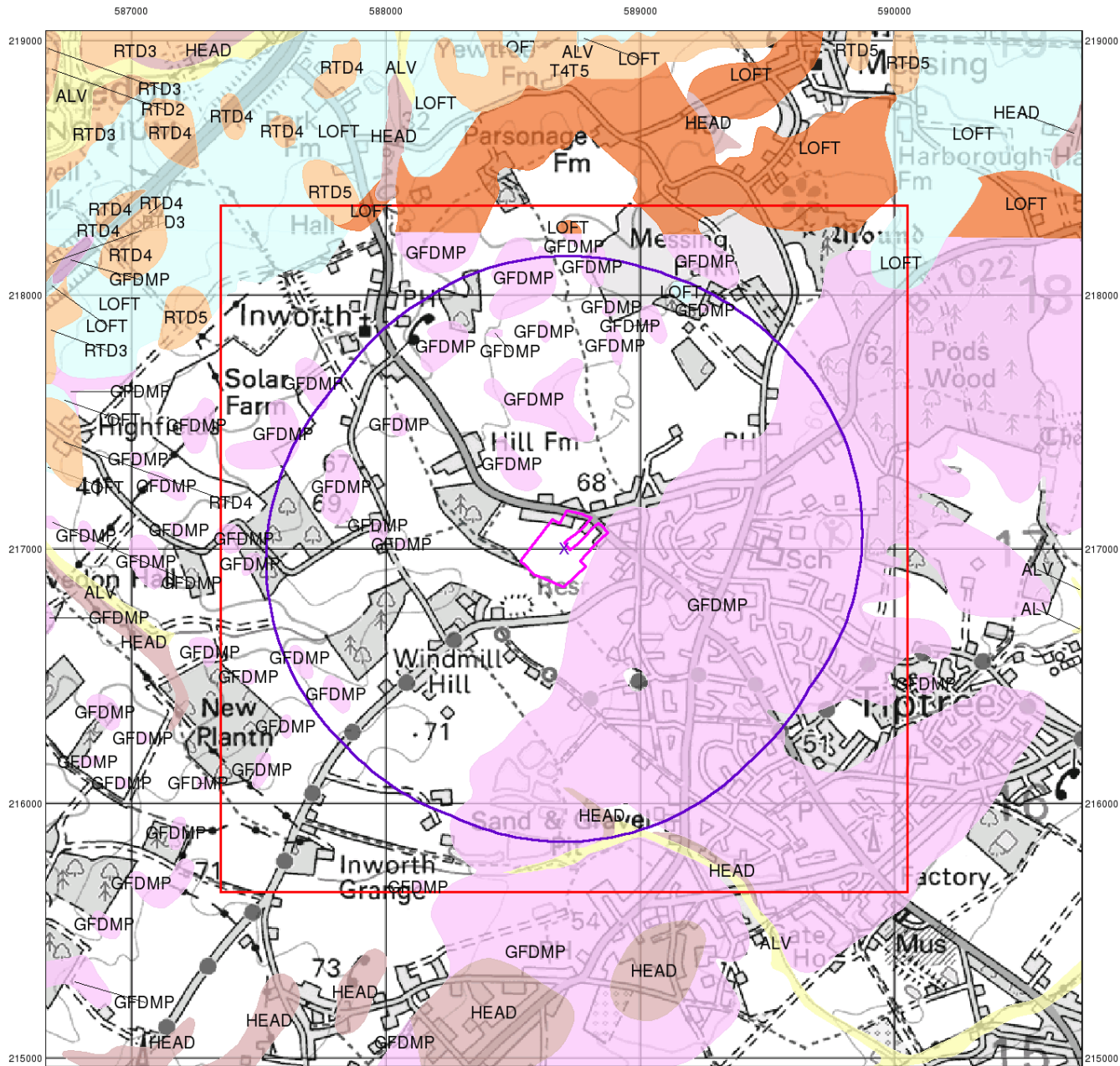
Order Number: 190899269_1_1
 Customer Reference: 1342
 National Grid Reference: 588700, 217000
 Slice: A
 Site Area (Ha): 5.15
 Search Buffer (m): 1000

Site Details:

Land South of Kelvedon Road, Tiptree, COLCHESTER, CO5 0LU



Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



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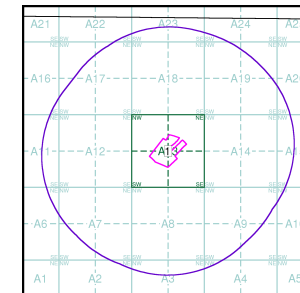
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

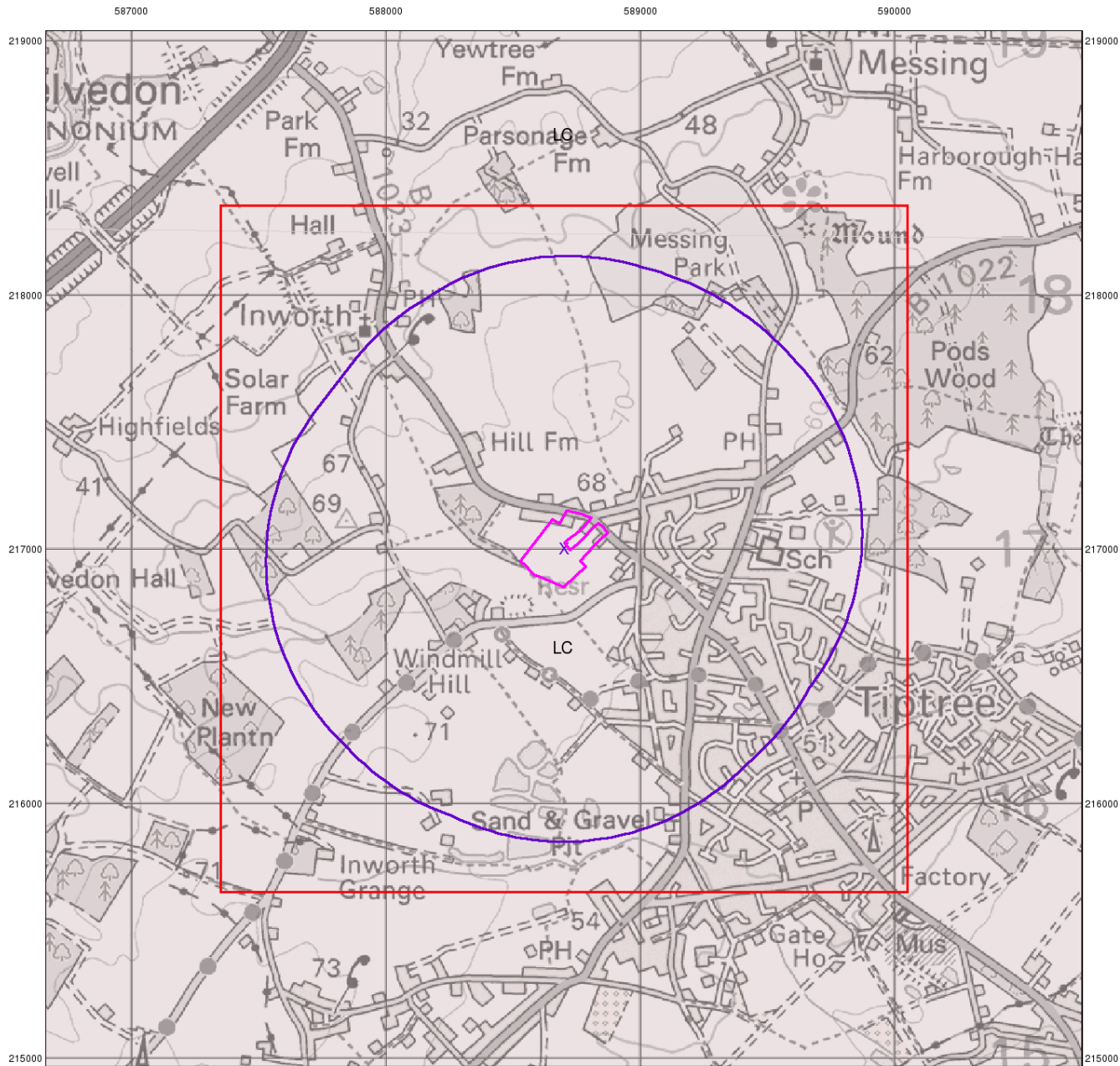
Order Number: 190899269_1_1
 Customer Reference: 1342
 National Grid Reference: 588700, 217000
 Slice: A
 Site Area (Ha): 5.15
 Search Buffer (m): 1000

Site Details:

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Bedrock and Faults

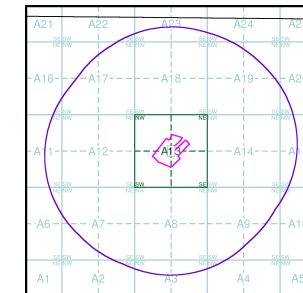
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

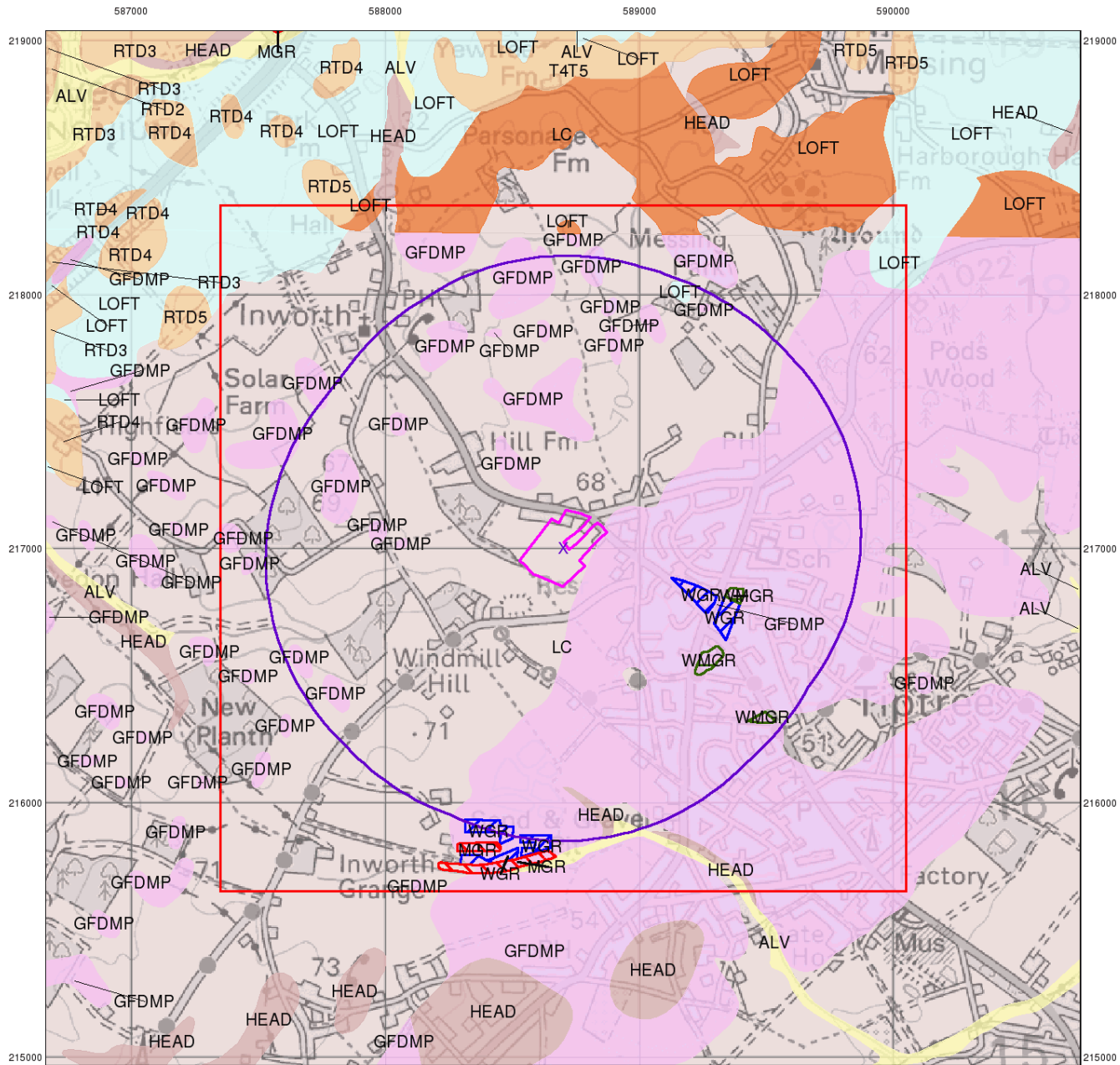
Order Number: 190899269_1_1
 Customer Reference: 1342
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 Slice: A
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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

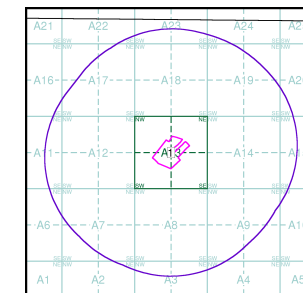
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
 Kingsley Dunham Centre
 Keyworth
 Nottingham
 NG12 5GG
 Telephone: 0115 936 3143
 Fax: 0115 936 3276
 email: enquiries@bgs.ac.uk
 website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

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