LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Feltham Construction Ltd

Ground Investigation

Monks Lane
Newbury
Berkshire
RG14 7TD

Report No: 19.12.021
February 2020

MAIN OFFICE & LABORATORIES
Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northamptonshire. NN12 8QD
Telephone: (01327) 860060 Fax: (01327) 860430 Email: info@listersgeotechnics.co.uk

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

DOCUMENT RECORD

Report Title	Ground Investigation Report
Development	New Residential Development
Project Address	Monks Way, Newbury, Berkshire, RG14 7TD
Project Number	19.12.021
Client	Feltham Construction Ltd

Prepared By

Signed.....

Jane Taylor
Senior Geoenvironmental Engineer
MSci (Hons), MSc, MCIWEM

Checked By

Signed.....

Amanda David
Technical Director
BSc (Hons), MSc, FGS

Approved By

Signed.....

Ian Evetts
Managing Director
MSc, HNC, FGS, CGeol

For and on behalf of ListersGeo, trading name of Listers Geotechnical Consultants Ltd

Issue No	Date	Status
1	6th March 2020	Draft
2	9th April 2021	Final

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

EXECUTIVE SUMMARY

Project Reference	19.12.021
Site Location	Monks Lane, Newbury, Berkshire, RG14 7TD
OS Grid Reference	447200, 165220
Development Proposals	Construction of ten residential houses, with associated gardens, and a block of six flats with associated access roads, car parking, soft landscaping, and an amenity area.
Current Site Usage	Public open space crossed by a footpath
Existing Buildings	None
Topography	The general area slopes gently down to the north and south towards the River Kennet in the north and River Enborne in the south, with the site itself generally flat lying. Two large steep vegetated embankments extend into the west and north of the site.
Vegetation	The site is predominantly rough grassland with trees on the northern bank and recently felled trees in the south.
Published Geology	The site is shown to be underlain by superficial Silchester Gravel Member (River Terrace Deposits) over London Clay Formation, which is subdivided into an upper, sand layer and a lower clay layer.
Site History	The site has never been developed and is thought to have previously formed part of an estate's grounds. The earth embankments were formed in the early 2000s.
Unexploded Ordnance	There is considered to be a low risk of encountering Unexploded Ordnance (UXO) at the site.
Hydrology	The nearest watercourse is a tributary of the River Enborne located approximately 250m southwest of the site (downgradient) and flowing southwards.
Hydrogeology	The Silchester Gravel Member is classified as a Secondary (Undifferentiated) Aquifer, the upper London Clay Formation (sand) is a Secondary A Aquifer, and the lower London Clay Formation (clay) is Unproductive Strata. There are no groundwater abstraction licences within 1km of the site, however the site does lie within a broad Zone 3 groundwater Source Protection Zone (SPZ).
Potential Contamination Sources	Potential sources of contamination include the Made Ground associated with the on-site vegetated embankments and footpath.
Ground Conditions Encountered	Topsoil was encountered to between 0.2m and 0.5m below ground level (bgl), over Silchester Gravel Member to between 0.6m and the base of CT03 at 3.5m bgl, underlain by London Clay Formation from between 0.6m and 0.9m bgl to the base of the boreholes at 6.0m bgl.
Groundwater Encountered	Groundwater level was highly variable and was struck from 0.1m to 3.0m bgl during the intrusive works and recorded standing at 0.26m bgl (121.4m AOD) and above ground level during subsequent monitoring.
Risks to Human Health	No significant risks to human health were identified by this investigation.
Ground Gas Risks	No potential sources of ground gas were identified at the site.
Risks to Controlled Waters	No significant risks to Controlled Waters were identified by this investigation.
Remediation Required	None
Chemical Attack on Buried Concrete	A Design Sulphate (DS) class of DS-1 and Aggressive Chemical Environment for Concrete (ACEC) class of AC-1 is considered appropriate for the site.
Geotechnical Hazards	The London Clay Formation is of 'Medium' volume change potential.
Foundations	Shallow strip foundations may be suitable founded in either the superficial Silchester Gravel Member or London Clay Formation.

Allowable Bearing Pressure	An allowable bearing pressure of 150 kPa should be achievable at not less than 1.0m bgl or 0.2m into either the Silchester Gravel Member or London Clay Formation.
Floor Slabs	Ground bearing floor slabs may be suitable within the Silchester Gravel Member, however suspended floor slabs should be used in the London Clay Formation due to the potential for volume change.
Roads and Hardstanding Design	A provisional CBR of 10% is likely to be appropriate for preliminary design purposes for pavement founding on the Silchester Gravel Member.
Infiltration Measures	Soil infiltration testing indicated rates in the order of 10^5 to 10^6 at the locations requested by the Client, however shallow groundwater may preclude the effective use of Sustainable Drainage Solutions (SuDS).
Waste Soil Classification	Site soils have been characterised as non-hazardous waste suitable for inert landfill. Topsoil is unlikely to be suitable for disposal at inert landfill due to its organic content.
Recommendations	Groundwater was recorded to be shallow and early discussion with the EA is recommended for their approval should their use be pursued.

This executive summary should be read in conjunction with the main report.

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

CONTENTS

APPENDICES

APPENDIX A – PLANS AND PHOTOGRAPHS

- Site Location Plan
- Exploratory Hole Location Plan - Existing Site Layout
- Exploratory Hole Location Plan - Proposed Site Layout
- Site Photographs

APPENDIX B – FIELDWORK AND TESTING

- Trial Pit Logs
- Hand Pit Logs
- Continuous Tube Sampler Logs
- Super Heavy Dynamic Probe Results
- Dynamic Plate Testing Records
- Soil Infiltration Testing Results
- Gas and Groundwater Monitoring Results

APPENDIX C – LABORATORY TESTING RESULTS AND TABLES

- Geotechnical Laboratory Testing Results
- Chemical Analysis Testing Results

APPENDIX D – CONTAMINATION RISK ASSESSMENT METHODOLOGY

- Contaminated Land Risk Assessment Methodology

APPENDIX E – GEOTECHNICAL PLOTS AND TABLES

- SPT and Undrained Shear Strength vs Depth Plot

APPENDIX F – WASTE CLASSIFICATION

- HazWasteOnline Report
- WAC Testing Results

APPENDIX G – ENVIROCHECK DESK STUDY INFORMATION

- Site Sensitivity Report
- Geology Report
- Mining and Ground Stability Report
- Historical Ordnance Survey and National Grid Maps

INTRODUCTION

A Phase 1 and 2 Ground Investigation has been undertaken for a proposed new residential development on land adjoining Monks Way, Newbury, Berkshire, RG14 7TD. A Site Location Plan is provided in Appendix A. The Ordnance Survey National Grid reference for the approximate centre of the site is 447200, 165220.

Instructions to undertake the investigation were received from the Client, Feltham Construction Ltd, in their email dated 20th December 2019.

This report describes the desk study and intrusive site investigation activities carried out by ListersGeo in order to provide an evaluation of the ground conditions and the extent of any soil, gas or groundwater contamination present on the site. The report presents initial human health and groundwater risk assessments based on the findings of the desk study information and subsequent contamination laboratory testing. Geotechnical implications are discussed with regard to the proposed development based on the findings of the fieldwork and subsequent laboratory testing.

It is understood that the site has not been subject to any previous investigations.

This report has been prepared for the sole use of the client and their professional advisors. This report shall not be relied upon by third parties without the express written authority of ListersGeo. If an unauthorised third party comes into possession of this report they must not rely on it and the authors owe them no duty of care and skill.

SCOPE OF THE INVESTIGATION

The scope of the investigation, as requested by the Client, was to undertake a desk study and walkover survey, and provide an assessment of the geotechnical engineering properties of the ground and the extent of any soil, gas or groundwater contamination on the site.

A contaminated land risk assessment was undertaken based on the Contaminated Land Exposure Assessment (CLEA) and Environment Agency (EA) Remedial Targets Methodology (RTM) guidelines using the source-pathway-receptor risk assessment methodology.

The investigation also includes a preliminary assessment of the feasibility of adopting a soakaway drainage solution at the site, as well as providing parameters to aid pavement design.

PROPOSALS

It is proposed to develop the site to accommodate ten residential houses, with associated gardens, and a block of six flats with associated access roads, car parking, soft landscaping, and an amenity area. It is understood that the public footpath currently crossing the site will remain but be rerouted to accommodate the development. A proposed site layout plan is provided in Appendix A.

If the proposed end use, site levels or layout should alter significantly following issue of this report, then the contents will require re-evaluation.

SITE INFORMATION AND WALKOVER SURVEY

A walkover survey of the site and its immediate surrounds was undertaken on 15th January 2020, preceding the fieldwork. A selection of site photographs is presented in Appendix A along with a plan showing the existing site layout.

The site lies in a predominantly residential area and is currently occupied by an area of public open space. Access to the site was afforded via an unnamed road off Monks Lane.

The site consists of an irregularly-shaped parcel of land, measuring approximately 150m by 55m and covering approximately 0.6 ha in area.

The general topography of the area slopes gently down to the north and south towards the River Kennet in the north and River Enborne in the south. The site itself is generally flat lying with the exception of two steep vegetated embankments in the west and north of the site.

The site is bordered by:

Direction	Feature
North	Vegetated embankments immediately adjacent followed by Monks Lane with residential housing beyond (60m N).
East	Public house immediately adjacent to the southeast. Residential housing (100m E) followed by retail parks (200m NE & E) and a hotel (300m SE).
South	Nursery school immediately adjacent and Newbury College (100m S) with public open space beyond.
West	Agricultural fields.

The site itself comprised an area of rough hummocky grassland with steep vegetated embankments to the north and west, partially extending to within the site bounds. A compacted hardcore footpath crossed the site from the south to northeast of the site where it joins with Monks Lane.

At the time of the walkover the ground was very soft due to recent heavy rains, particularly in the west at the foot of the vegetated bank where standing water was present.

Semi-mature trees were present on the northern vegetated bank and a number of recently felled semi-mature trees were lying on the ground in the south of the site.

The site was open to the north and west and had a wooden post and rail fence along the eastern site boundary, with the adjacent public house, and a close-boarded fence in the south around the adjacent nursery school.

A possible ground ventilation pipe was observed in the east of the site, adjacent to the boundary with the public house (see photo in Appendix A).

No evidence of spills or gross contamination was observed.

DESK STUDY AND BACKGROUND INFORMATION

A desk study review of the site and its history has been undertaken to determine the former land usage and the potential for any historically derived sources of chemical contamination, as well as provide information to aid assessment.

The information provided in the desk study is obtained from independent third-party sources but no guarantee can be given for the accuracy or completeness of the third-party data used. It should be appreciated that such data is not exhaustive and is constantly being updated and reviewed in light of new information and procedures. Therefore, improved practices, technology, and new information may affect the conclusions and hence this report should be referred back to ListersGeo for reassessment if new data comes to light, or changes in legislation/best practise is identified prior to development. Similarly, should the development commence after expiry of one year from publication of this report, then it is recommended that this report is referred back to ListersGeo for reassessment.

The desk study comprises a review of the following consultations and information sources:

- Environment Agency (EA)
- Natural England
- National Geoscience Information Service
- Public Health England
- Centre for Ecology & Hydrology
- British Geological Survey (BGS)
- Contemporary Trade Directories
- Historical Ordnance Survey maps
- Aerial Imagery
- Unexploded Ordnance (UXO) maps

A copy of the desk study information obtained from Landmark is presented in Appendix G of this report.

Information from the above referenced sources has been utilised to develop a conceptual model of the site for use in the geotechnical appraisal and source-pathway-receptor risk assessment.

GEOLOGY

Published Geology

Reference to the BGS 1:50,000 scale map, Sheet 267 for Newbury, dated 2006, and other published geological information on the area indicates that the site is underlain by superficial geology of the Silchester Gravel Member of the Quaternary period above bedrock geology of the London Clay Formation of the Palaeogene period.

Landscaped ground (poorly defined worked and made ground) is mapped approximately 250m east of the site and worked ground mapped approximately 470m to the south-east.

Superficial Deposits

The Silchester Gravel Member is the sixth terrace of the River Terrace Deposits associated with the Kennet and proto-Kennet corridor. It is generally represented by variably clayey and sandy coarse-grained gravel. Beneath the site itself, the deposit is anticipated to be around 5m in thickness.

Bedrock

The London Clay Formation is generally represented by bluish grey, weathering orangish brown, silty clays with the upper layer comprising a bed of sand up to 20m thick. Beneath the site itself, the formation is anticipated to be up to 50m thick in total.

Historical Boreholes

The BGS holds records of historical exploratory holes put down during previous investigations. The records of three historical boreholes, put down approximately 350m north, 550m west, and 580m east of the site within the same geology, have been reviewed to aid the preliminary assessment of the ground conditions.

The boreholes east and west of the site, put down in 1978, recorded clayey gravel to 3.6m and 4.3m below ground level (bgl) over silt of the Bagshot Beds (now regarded as the upper layer of the London Clay Formation) proven to 5m bgl. The borehole north of the site was put down in the early 1900s and encountered Bagshot Beds and London Clay Formation, described as shelly blue clay, to its base at 9.1m bgl. Groundwater was not encountered.

HISTORY OF THE SITE

The history of the site has been assessed by reviewing available historical Ordnance Survey and National Grid maps and aerial imagery of the area. This has established the following:

Time Period	Historical Site Usage	Historical Usage of the Surrounding Area
1880 - 1882	The site is shown to be within a large plot thought to comprise the grounds of the Sandleford Estate.	The surrounding area comprises predominantly large undeveloped plots thought to be agricultural or associated with the Sandleford Estate. Much of the existing main road network is shown to be present (excluding A339) with Monks Lane then known as Monkey Lane. A workhouse is located approximately 280m north of the site. A small old gravel pit is labelled to be present approximately 580m southeast of the site. A large gravel pit is also present approximately 700m northeast of the site.

Time Period	Historical Site Usage	Historical Usage of the Surrounding Area
1899 - 1900		A gravel pit is mapped approximately 440m north of the site and the large gravel pit to the northeast has been extended further towards the site. The old gravel pit southeast of the site is no longer labelled but the pit appears to remain.
1911 - 1913		The gravel pit 440m north of the site appears to have been redeveloped.
1932 - 1938		Residential development has occurred from 80m north of the site beyond Monks Lane, which is now labelled as Monk's Lane, and 480m west of the site. The small old gravel pit southeast of the site is no longer mapped.
1947	Aerial imagery shows the plot of land within which the site lies to be split evenly into four fields with the site comprising the centre of the northeastern plot.	Aerial imagery shows residential development all along Monks Road, north and northwest of the site.
1961-1966		Significant residential development has occurred with the whole area between Monks Lane and Newtown Road, north of the site, now infilled. The workhouse is now labelled as Sandleford Hospital. The large pit 700m northeast of the site is no longer labelled as such and is shown to contain several ponds.
1970 - 1977		A Gravel Grading & Crushing Plant is mapped 680m southeast of the site, near to the former 'old gravel pit', indicating that an unmapped quarry may be present. A number of houses are also shown approximately 430m southeast of the site.
1982		The A339 (road) northeast of the site is mapped with residential expansion eastwards.
1990 - 1991		A superstore and associated petrol filling station are mapped from 270m east of the site. A small pit is shown approximately 340m southeast of the site.
1993 - 1996		A large disused pit is mapped adjacent to the Gravel Grading & Crushing Plant approximately 490m southeast of the site. It is labelled to be a caravan park.
1999	Aerial imagery shows the large plot to no longer be subdivided. It appears to comprise grass and is crossed by two footpaths from southeast to north.	A large retail park is present from approximately 210m northeast of the site.
2003 - 2006	Aerial imagery shows the path across site in its current configuration. The vegetated	Aerial imagery shows the existing college south of the site along with the nursery building immediately adjacent to the site and the access roads.

Time Period	Historical Site Usage	Historical Usage of the Surrounding Area
2009 - 2014	embankments in the north and west of the site also appear to be present along with four smaller mounds in the east of the site and immediately to the southeast.	The large disused pit 490m southeast of the site has been redeveloped as residential housing. A balancing pond is shown in the location of the small pit 340m southeast of the site.
2017 - 2020	The smaller mounds are no longer visible on aerial imagery and the site is shown as present day.	The existing pub immediately east of the site is now mapped.

INTERVIEWS

Discussion with the client's architect's representative on site, indicated that the vegetated embankments are likely to comprise natural ground excavated during construction of the adjacent college in the early 2000s.

UNEXPLODED ORDNANCE AND BOMB SITES

The Zetica bomb risk map shows that the site is located in an area where there is a low risk of unexploded ordnance. Low-risk regions are those with a bombing density of up to 15 bombs per 1,000 acres and there is a low potential for encountering UXO on the site. Works can normally proceed without any special precautions.

HYDROLOGY

The nearest watercourse is a tributary of the River Enborne located approximately 250m southwest of the site (downgradient) and flowing southwards.

The EA's Catchment Data Explorer indicates that the site lies within the 'Kennet and Trib' Management Catchment of the Thames river basin. The nearest downgradient stretch of river tested is the River Enborne, approximately 1.2 km south of the site, which has an overall water body classification of 'Moderate', as recorded in 2016.

The Envirocheck data indicates that the site lies outside of any surface water flood impact zones and is in an area with 'Limited' potential for groundwater flooding to occur. However, this information does not constitute a site-specific Flood Risk Assessment (FRA). It is therefore recommended that further enquiries are made to determine if such an assessment is required to support the planning application for the site.

There are two potentially-active surface water abstractions licensed within 1000m of the site. These relate to abstractions for filling spray irrigation reservoirs at Sandleford Farm, approximately 740m and 800m southwest of the site.

HYDROGEOLOGY

The aquifer designation data is based on geological mapping provided by the BGS. The maps are divided into two different types of aquifer designation:

- **Superficial** - the youngest geological deposits formed during the Quaternary period, resting on Bedrock geology.
- **Bedrock** – the main mass of rocks forming the Earth and present everywhere, either exposed at surface or concealed by Superficial Deposits or water.

For each type there are classifications of Principal, Secondary A and Secondary B Aquifers and Unproductive Strata, each with a decreasing rank of importance.

Information obtained from the EA indicates that the underlying Silchester Gravel Member is classified as a Secondary (Undifferentiated) Aquifer, the upper London Clay Formation (sand) is a Secondary A Aquifer, and the lower London Clay Formation (clay) is Unproductive Strata.

There are no groundwater abstraction licences recorded within 1000m of the site.

According to information provided by the EA the site is located within a broad Zone 3 Source Protection Zone (SPZ) protective of potable groundwater abstractions located approximately 2.5 km northwest, 3 km southeast, and 3.5 km southwest of the site. An SPZ is divided into three zones defined as follows:

- **Zone 1** – Travel time (of water) of 50 days or less to the groundwater source.
- **Zone 2** – Either 25% of the source area or a travel time of 400 days whichever is the greater.
- **Zone 3** – The total area needed to support the discharge and abstraction from the protected groundwater source.

WASTE TREATMENT AND LANDFILL SITES

Reference to records from the EA and the Local Authority indicates that there are three historical landfill disposal sites adjacent to each other, approximately 310m east, 420m east, and 620m northeast of the site. The nearest two landfills are recorded to have accepted a wide range of unrestricted wastes between 1970 and 1990. The further of the three is recorded to have accepted inert and industrial wastes between 1977 and 1980.

The landfill sites are considered to have represented the phased infilling of a quarry within the Silchester Gravel Member. Given the wide range of waste types potentially present, the age of last deposition, and the potential geological connectivity with the site, it is considered possible that these sites have potential to impact the site, particularly the nearer of the three.

Reference to records from the BGS, the EA and the Local Authority indicates that there is one waste transfer site and one waste management facility within 500m of the site area. It is considered unlikely that any of these facilities would significantly affect the site area, as the nearest is an incinerator 310m away.

No other waste sites are recorded within 500m of the site.

ENVIRONMENTAL PERMITS, INCIDENTS AND REGISTERS

There have been no recorded pollution incidents to controlled waters within 250m of the site.

There are two potentially-active discharge consents recorded within 1000m of the site. These relate to discharge of treated sewage effluent to groundwater via soakaways at a commercial property 430m southeast of the site, and a domestic property 610m to the southeast.

There are two Local Authority Pollution Prevention and Control licences and one Integrated Pollution Prevention and Control (IPPC) licence within 2000m of the site. The nearest is for a former petrol filling station 140m northeast of the site.

INDUSTRIAL USAGE SITES

There are five past or present Contemporary Trade Directory entries within 250m from the site. These are all inactive and include a domestic appliance servicer (90m NE), car dealers (140m NE), cleaners (200m NE), and an electricity company (250m NE).

The nearest active fuel filling station is identified as the Tesco filling station on Pinchington Road approximately 340m to the east of the site. Obsolete filling stations are also recorded approximately 90m northeast, 140m northeast, and 340m east of the site.

Historical and Current Site Usage

With the exception of placement of the vegetated embankments in the west and north of the site in the early 2000s, the site is understood to have never been developed. It is understood that these embankments are likely to comprise natural ground excavated during the construction of the adjacent college in the early 2000s and, as such, contamination is unlikely.

WORKED OUT GROUND/MADE GROUND

Worked out ground is recorded 440m north, 340m, 490m, and 580m southeast, and 700m northeast of the site. Evidence of infilling in these areas is shown on the historical mapping for some but not all of these areas.

No other Made Ground is mapped to be present within 1000m of the site.

RADON GAS

Desk study information indicates that the site lies within an area where less than 1% of homes exceed the action level of 200 Bq/m^3 for radon gas. Therefore, in accordance with BR 211, 'Radon: guidance on protective measures for new dwellings', radon protection measures are not necessary in the construction of new dwellings or extensions without underground rooms on this site.

GEOTECHNICAL HAZARDS

Geological

The risk of naturally occurring geotechnical hazards at the site is recorded in the Envirocheck report to be as follows:

Ground Stability Hazard	Hazard Potential Rating
Running sand	Very Low to Low
Shrinking and swelling clays	No Hazard to Low
Collapsible deposits	Very Low
Landslides	Very Low
Compressible deposits	No Hazard
Ground dissolution from soluble rocks	No Hazard

Mining and Man-Made Cavities

The desk study information identified that the site does not lie within an area likely to be affected by coal mining or non-coal mining.

BACKGROUND SOIL CHEMISTRY

Information from the BGS is provided in the table below listing the background soil chemistry of some commonly occurring heavy metals in the natural soils in the site area:

Heavy Metal	Level in Rural Soil (mg/kg)
Arsenic	<15
Cadmium	<1.8
Chromium	60 - 90
Lead	<100
Nickel	15 - 30

These concentrations indicate that there are no naturally-elevated background concentrations in the area.

POTENTIALLY SENSITIVE LAND USES

The site is not located in close proximity to any environmentally sensitive land uses.

CONCEPTUAL SITE MODEL

A qualitative Preliminary Risk Assessment (PRA) has been undertaken in line with the EA's new online guidance, Land Contamination: Risk Management (LCRM), published in June 2019. The new guidance is based upon the principles of the EA's CLR11 guidance, *Model procedures for the management of land contamination*, published in 2004.

Potential sources of contamination and potential receptors have been assessed using the source-pathway-receptor principle to create a Conceptual Site Model (CSM). This takes into account the fact that a complete pathway must exist between a potential source of contamination and a potential receptor for there to be considered a risk.

It is understood that the development proposals are for ten residential houses, with associated gardens, and a block of six flats with associated access roads, car parking, soft landscaping, and an amenity area.

POTENTIAL CONTAMINATION SOURCES

Potential Solid-, Liquid- and Vapour-phase Contamination Sources

The results of the desk study and walkover indicate that the following potential sources of soil or groundwater contamination are present at, or in close proximity to, the site:

- Made Ground associated with the on-site vegetated embankments and footpath

Potential Ground Gas Contamination Sources

In consideration of the source-pathway-receptor methodology for ground gas risk assessment set out in CIRIA C665, the sensitivity of the proposed residential development is considered to be high.

The site lies within the potential influence of a historical landfill site. Therefore, the following potential ground gases have been identified for the site:

- Migrating carbon dioxide and methane gases
- Explosive gases

POTENTIAL RECEPTORS

The following potential receptors have been identified at or in close proximity to the site:

Human Health – Long Term Exposure

- End users of the site - the future residents and users of the rerouted footpath crossing the site
- Staff and children at the adjacent nursery school
- Staff and customers of the adjacent public house
- Surrounding residents

Human Health – Short Term Exposure

- Construction workers

Controlled Waters and Environment

- Groundwater of the underlying Silchester Gravel Member - Secondary (Undifferentiated) Aquifer
- Groundwater of the upper layer of the underlying London Clay Formation - Secondary A Aquifer

Infrastructure

- Substructures
- Water supply pipes

POTENTIAL PATHWAYS

It is considered that the following potential pathways may exist between the potential sources and receptors identified above. The viability of these pathways is discussed in the PRA which follows.

Human Health

- Direct soil ingestion in areas of exposed soil
- Ingestion of soil attached to homegrown produce
- Ingestion of homegrown produce with contamination uptake
- Inhalation of indoor and outdoor vapours and dust
- Dermal contact with contaminated soil
- Inhalation of soil gases or vapours migrating through permeable strata into the building

Controlled Waters and Environment

- Migration/leaching of contaminants through the unsaturated zone
- Migration of contaminants through the groundwater
- Movement of contaminants through drains or services runs

Infrastructure

- Direct contact with leachable or corrosive contaminants within the soil
- Direct contact with leachable or corrosive contaminants within the groundwater

PRELIMINARY RISK ASSESSMENT

Based on the desk study research, the following potentially-complete pollutant linkages have been assessed and, in accordance with CIRIA 552, a consequence and probability rating has been applied to each potential contamination source to create an overall risk rating. The results are presented in the following table. Risk to construction workers assumes that appropriate Personal Protective Equipment (PPE) is worn at all times.

ON-SITE SOURCES

Potential Source	Pathway	Potential Receptor	Probability of risk occurring	Consequence of risk occurring	Risk Classification	Explanation
Contaminants within the Made Ground - *Including: heavy metals, PAH, petroleum hydrocarbons, asbestos*	• Ingestion • Dermal Contact • Inhalation	• End Users - residents	Low likelihood	Medium	Moderate / Low	On-site contamination is anticipated to be minimal and much of the site will be surfaced with hardstanding with soft landscaping limited to garden areas and the amenity area.
		• End Users - public • Nursery School • Public House • Surrounding Residents	Unlikely	Medium	Low	
		• Construction Workers	Low likelihood	Mild	Low	Exposure to maintenance and construction workers can be mitigated by use of appropriate PPE and maintaining good hygiene levels.
	• Migration through unsaturated zone • Migration through groundwater • Migration through drains or service runs	• Secondary (Undifferentiated) Aquifer	Low likelihood	Mild	Low	There are no known abstractions within 1000m of the site.
		• Secondary A Aquifer	Low likelihood	Mild	Low	

Potential Source	Pathway	Potential Receptor	Probability of risk occurring	Consequence of risk occurring	Risk Classification	Explanation
	• Direct contact	• Substructures • Water supply pipes	Low likelihood	Mild	Low	The London Clay Formation is known to potentially contain sulphates at concentrations that may accelerate the degradation of buried concrete but anticipated depth to bedrock indicates that foundations are unlikely to extend this far. Limited contamination which may impact pipes is anticipated.

OFF-SITE SOURCES

Potential Source	Pathway	Potential Receptor	Probability of risk occurring	Consequence of risk occurring	Risk Classification	Explanation
Unrestricted and industrial landfills 310m to the east	• Inhalation	• End Users	Low likelihood	Medium	Moderate / Low	It is possible that gases could migrate to the site but are likely to disperse before they reach the site. The possible soil vent pipe identified in the east of the site indicates a potential risk.
	• Accumulation of gases	• On-site buildings	Low likelihood	Severe	Moderate	

The geoenvironmental investigation and risk assessment detailed in the remainder of this report have been conducted to validate this CSM.

GEOTECHNICAL CONCEPTUAL SITE MODEL

Anticipated geology suggests that shallow foundations may be a suitable option, dependent on the strength of the Silchester Gravel Member. Founding on the underlying bedrock, particularly with regard to the block of flats may be necessary due to the increased load.

Historical investigation indicates deep groundwater, however standing water was observed during the site walkover suggesting shallow groundwater may be present. It is therefore considered possible that groundwater may flood excavations and/or affect stability during groundworks.

It is unlikely that the underlying geology will be amenable to conventional Sustainable Drainage Systems (SuDS) given the standing water observed during the site walkover.

The intrusive investigation has been implemented to address these main issues and establish any potential problems for foundations and the general development of the site.

EXPLORATION AND IN-SITU TESTING

A total of twelve exploratory holes were formed at the site on 15th January 2019. These included six machine excavated trial pits, one hand-excavated trial pit, and three continuous tube sample boreholes, two of which had adjacent dynamic probe tests.

Exploratory Hole Type	Reference
Continuous tube sampler boreholes	CT01 to CT03
Dynamic probe tests	SHDP01 to SHDP02
Machine excavated trial pits	TP01 to TP05 and DP02
Hand excavated trial pits	HP01

The positions of all exploratory holes undertaken at the site as part of this investigation can be seen on the Exploratory Hole Location Plans in Appendix A. Logs of all the exploratory holes, including the results of in-situ testing, are provided in Appendix B and the results of geotechnical laboratory testing are provided in Appendix C.

The exploratory excavations were surveyed using a handheld GPS device to the nearest 5m. Elevations have been approximated from a topographic survey drawing by Mitcham Surveys (drawing no 2, dated October 2018) provided by the Client.

Gas and groundwater monitoring was undertaken on two occasions over the first six weeks following the fieldwork. The monitoring results are provided in Appendix B.

Conclusions given in this report are based on data obtained from these sources but it should be noted that variations, which affect these conclusions, may inevitably occur between and beyond the test locations.

SAMPLING STRATEGY

The investigation was undertaken in accordance with the scope of works agreed with the Client. The positions of the trial pits used for dynamic plate tests and soil infiltration testing were selected by the Client. The remaining exploratory holes were selected by ListersGeo to provide a wide coverage of information on the site area based on the proposed site layout at the time of investigation (Pro Vision, drawing no P1-02, dated November 2019) as included in Appendix A.

At the time of the intrusive works, the ground was observed to be saturated in places, particularly towards the base of the western embankment, and exploratory excavations were therefore limited to drier areas where plant access was possible. Access was also limited in the northeast of the site where the bank was densely vegetated. As a result of these access issues, trial pits TP04 and TP05, excavated into the vegetated embankments for waste classification purposes, were located just north of the site boundary.

Additionally, a pressurised sewer was known to cross the site diagonally, and as such a 10m easement within which no exploratory holes were put down was implemented (as shown on drawing in Appendix A).

METHODOLOGY

Prior to commencement, in order to minimise the dangers from/to buried services, the proposed locations were scanned using a Cable Avoidance Tool. At the borehole and probe locations, a service avoidance pit was dug using insulated hand tools to a depth of around 1.2m below ground level (bgl).

Six trial pits were excavated with an 8-tonne rubber-tyred backhoe excavator to depths under the supervision of a geotechnical engineer who made a record of the arisings. Disturbed samples were taken at selected depths down to the base of the holes for subsequent laboratory testing and inspection.

Trial pits TP01 to TP03, located within the centre of the site in the proposed access road, were excavated to depths of between 1.9m and 3.5m bgl. Trial pits TP04 and TP05 were excavated horizontally into the vegetated embankments to 0.5m extent to obtain samples for waste classification purposes only. Shallow trial pit HP01, located in the northeast of the site, was excavated by using insulated hand tools to a depth of 1.0m bgl.

In-situ Dynamic Plate testing was undertaken in TP03 and an additional shallow trial pit, DP02, using a Light Weight Deflectometer (LWD) to provide indicative CBR values for pavement design.

On completion, all trial pits were carefully backfilled with arisings in thin layers, ensuring that excavated material was replaced in the same order as it had been removed.

Infiltration testing was undertaken in trial pits TP01 and TP02 in accordance with BRE Digest 365 ‘Soakaway Design’.

Continuous tube sampler boreholes CT01 to CT03 were put down using an Archway Competitor Dart rig to a maximum depth of 6.0m or upon ‘refusal’ on hard strata (CT01, 2.5m bgl; CT03, 3.5m bgl). A near continuous core sample, decreasing from 87mm to 57mm diameter with depth, was recovered for subsequent examination and sub-sampling.

Prior to sampling, dynamic probe tests, SHDP01 to SHDP02, were performed (using the ‘Super Heavy B’ specification) adjacent to the positions of CT01 and CT02 respectively to provide a relative penetration resistance of the ground to a maximum depth of 10.0m or upon ‘refusal’ on hard strata. Standard Penetration Tests (SPTs) were taken at 1.0m intervals down to 3.5m depth during the drilling of CT03.

On completion of the intrusive works, borehole CT02 and trial pit HP01 were installed as monitoring wells with a 50mm diameter slotted uPVC response zone from 1.0m to 4.0m bgl in CT02 and 0.5m to 1.0m bgl in HP01. The slotted section of the standpipe was surrounded with pea gravel and sealed with expansive bentonite. The standpipes were finished with a rubber bung and stopcock cover concreted flush with ground level.

GROUND CONDITIONS

The intrusive investigation determined that the general succession of strata was represented by a layer of topsoil above Silchester Gravel Member overlying the London Clay Formation to the full depth of the investigation at 6.0m.

The Ground Model for the site is summarised in the table below and each strata is described in detail in the following sections.

Stratum	Locations encountered	Top (m bgl)	Base (m bgl)	Average Thickness (m)
Topsoil	All	Ground Level	0.2 - 0.5	0.4
Silchester Gravel Member	All	0.2 - 0.5	0.6 - >3.5	N/A
London Clay Formation	CT02	0.6 - 0.9	>3.5 - >6.0	N/A

TOPSOIL

Topsoil was encountered at each exploratory location from ground level down to depths of between 0.2m and 0.5m bgl, with an average thickness of 0.4m. It comprised soft, dark brown, variably sandy and gravelly, organic clay with occasional rootlets.

SILCHESTER GRAVEL MEMBER

The superficial Silchester Gravel Member was encountered at each exploratory location from between 0.2m and 0.5m depth, down to depths of between 0.6m and the base of CT03 at 3.5m bgl.

The Silchester Gravel Member was represented in general by grey brown, orange brown, or yellow cream, clayey sands and gravels. Gravel was fine to coarse, angular to rounded flint and quartzite.

In the trial pits, the Silchester Gravel Member was assessed to be loose due to the ease of excavation, stability of the trial pit sides and water ingress.

Full laboratory sieve analyses revealed gravel contents between 60% and 78%, sand contents between 13% and 24% and fines (silt/clay) contents between 6% and 27%. Water content ranged from 7% to 26%.

The SPT field 'N' values recorded at CT03 have been corrected to 'N_{60}' values for the effects of energy delivery, in line with the recommendations given in BS EN ISO 22476-3:2005+A1:2011, Annex A. The field 'N' values and the corrected 'N_{60}' values are summarised in the following table.

Test	Range	Comments
SPT Field 'N' Value	16 to >50	Variable with depth
SPT 'N_{60}' Value	18 to >50	

The results of the dynamic probing at CT01 below 1.0m bgl indicate that the penetration resistance of the Silchester Gravel Member varied with depth and the results are interpreted to indicate generally dense soils with a general increase of density with depth and localised denser strata.

LONDON CLAY FORMATION

Bedrock of the London Clay Formation was encountered at TP03 and CT02, in the west of the site, from 0.6m and 0.9m bgl respectively down to the base of the exploratory holes at 3.5m and 6.0m bgl.

The London Clay Formation was found to comprise orange brown mottled grey, locally gravelly, sandy clay. Gravel was fine to coarse, angular to rounded flint and quartzite.

Laboratory testing determined the following results:

Parameter	Range	Comments
Water Content (%)	19 to 29	Typical values
Liquid Limit (%)	38 to 44	CLAY of INTERMEDIATE plasticity (BS5930 Casagrande)
Plastic Limit (%)	17 to 20	
Plasticity Index (%)	19 to 27	
Modified Plasticity Index (%)	13 to 25	Shrinkable soil of LOW / MEDIUM Volume Change Potential (NHBC Standards)
Retained on 425µm sieve (%)	0 to 49	Representing the 'coarse soil' fraction (BS1377)
Passing 63µm sieve (%)	43 to 87	Representing the fines (silt/clay) fraction

The field Pocket Penetrometer tests provided approximate shear strengths of 45 to 120 kPa (conversion factor of 30) indicating 'Medium' to 'High' strength.

The results of the dynamic probing of the London Clay Formation are interpreted to indicate generally high to extremely high strength soils, with a general increase of strength with depth.

OBSERVED SOIL CONTAMINATION

No olfactory or visual evidence of contamination was encountered during the sitework.

GROUNDWATER

Groundwater was encountered in all of the exploratory holes during the intrusive works, as summarised in the following table.

Location	Strike Depth (m bgl)	Standing Level	Stratum
CT01	1.4	1.4	Silchester Gravel Member
CT02	0.1	0.3	Topsoil
CT03	3.0	2.5	Silchester Gravel Member
HP01	0.5	N/A	Silchester Gravel Member

Location	Strike Depth (m bgl)	Standing Level	Stratum
TP01	1.7	N/A	Silchester Gravel Member
TP02	1.9	N/A	Silchester Gravel Member
TP03	2.0	N/A	London Clay Formation

Longer term monitoring recorded a standing groundwater level for a single well (CT02) screened within the London Clay Formation of 0.26m bgl (121.4m above Ordnance Datum; AOD) during the first monitoring visit. During the second monitoring visit, the site was experiencing severe waterlogging following recent storms and the monitoring wells and local area were recorded to be flooded.

CALIFORNIA BEARING RATIO (CBR) TESTS

In-situ Dynamic Plate testing was undertaken in two trial pits using a Light Weight Deflectometer (LWD) at depths of between 0.5m (DP1) and 0.6m (DP2). Result of the testing recorded corresponding equivalent CBR values of 10.9% (DP1) and 8.0% (DP2).

SULPHATE AND PH TESTS

Sulphate and pH analysis was carried out on ten soil samples recovered from the exploratory holes across the site. The values recorded are summarised in the following table:

Stratum	No. of Samples	Water-soluble Sulphate (g/l)	pH	Total Sulphur (%)	Acid-soluble Sulphate (%)
Silchester Gravel Member	5	0.011 - 0.12	6.2 - 8.2	-	-
London Clay Formation	5	0.04 - 0.06	6.2 - 6.9	<0.001	<0.001

INFILTRATION TESTING

Infiltration testing was undertaken in the Silchester Gravel Member encountered at the site, at depths of between 0.9m and 2.0m in TP01 and TP02 in general accordance with BRE Digest 365 ‘Soakaway Design’.

Due to the introduction of water to the loose soils and the suspected gradual ingress of groundwater, the trial pits caved in during testing resulting in a shallower effective depth and affecting the calculated results. At TP02 this is likely to be the reason that the first test was unable to run to completion. For this test, the infiltration rate has been extrapolated, however it should be noted that this is not in line with BRE DG 365 and results should be used with caution. At TP01 effective shallowing of the pit is likely to be at least partly responsible for the fact that the test did not demonstrate sufficient infiltration to provide even an extrapolated infiltration rate.

Location	Test No.	Test Depth (m bgl)	Soil Infiltration Rate (m/s)
TP01	1	0.93 - 1.70	N/A
TP02	1	0.91 - 1.95*	6.7×10^{-6}*
	2	0.87 - 1.78	3.0×10^{-5}

** Rate extrapolated from incomplete test data. Use with caution.*

Infiltration rates generally reduce as the soil become saturated and the worst-case infiltration rate for each test should be used for design.

Full results are included in Appendix B.

GROUND GAS

Ground gas monitoring was carried out at monitoring wells installed in boreholes CT02 and HP01 on two occasions using a Geotech GA 5000 gas analyser.

During the first monitoring visit, groundwater was recorded to be above the top of the response zone at CT02 meaning that the gas results were representative of stagnant gas in the well casing, rather than soil-borne ground gas. During the second monitoring visit on 21st February 2020, the site was observed to be experiencing severe waterlogging following recent storms whereby CT02 was full of water to just above ground level and gas monitoring was not possible for this well.

The results of the monitoring are summarised in the table below:

Parameter	Range	Comments
Oxygen *(%v/v)*	8.3 - 21.4	Minimum at HP01 on 21/02/2020
Carbon Dioxide *(%v/v)*	0.1 - 2.5	Maximum at HP01 on 21/02/2020
Methane *(%v/v)*	<0.1 - 0.1	Maximum at HP01 on 21/02/2020
Flow rate *(l/h)*	0.3	

The generally low methane and carbon dioxide concentrations are indicative of the soils encountered which did not include any significant thicknesses of Made Ground or have any significant quantities of organic matter or materials which can decay. The abnormally low oxygen concentration and higher carbon dioxide and methane concentrations encountered during the second visit on 21st February 2020 are considered to be due to the severe waterlogging impeding the natural gas migration at the site.

Weather reports for the time preceding the testing indicated that rising pressure conditions were encountered prior to the both monitoring visits.

Full monitoring results are provided in Appendix B.

GROUND CONTAMINATION ASSESSMENT

The contamination risk assessment has been undertaken in line with the EA's new online guidance, Land Contamination: Risk Management (LCRM), published in June 2019. The new guidance is based upon the principles of the EA's CLR11 guidance, Model procedures for the management of land contamination, published in 2004.

The assessment has been undertaken in order to validate the PRA using a Generic Quantitative Risk Assessment (GQRA), which is followed by a Detailed Quantitative Risk Assessment (DQRA) if any significant risks are identified.

SOIL TESTING

In total, ten shallow soil samples collected on site during this investigation (three of the Topsoil, five of natural ground, and two of the soils making up the vegetated embankments) were tested for a range of Constituents of Potential Concern (CoPC).

The suite of testing carried out on the samples was decided upon following consultation of R&D CLR Publications, published as part of the CLEA guidelines, a joint venture between the Department for Environment, Food and Rural Affairs (DEFRA) and the EA.

The test suite included a range of:

- Inorganic substances, including metals and metalloids
- Speciated Polycyclic Aromatic Hydrocarbons (PAH)
- Total Petroleum Hydrocarbons (TPH), with eight band split
- Asbestos screening

Unless explicitly stated on the laboratory report, the soil samples were tested to obtain 'Total' values within the soil.

RISK ASSESSMENT GUIDELINES – HUMAN HEALTH

The human health risk assessment has been undertaken using the guidance provided in the EA's LCRM guidance, published in June 2019, and the CLEA guidelines. This assesses risks associated with the ingestion, dermal contact, and vapour inhalation pathways related to contaminated soils and groundwater. Risks associated with the inhalation of Ground Gas, for example that resulting from landfill, is not addressed by LCRM and assessment has been dealt with separately in the Ground Gas Risk Assessment section of this report.

Human health assessment criteria used are based upon the proposed final land use of the site. As the site is proposed to be redeveloped to accommodate residential houses the Generic Assessment Criteria (GAC) for 'Residential with Homegrown Produce' is therefore considered to be representative of the future site usage.

Consideration has also been given to potential risks to groundworkers coming into contact with the soil during demolition or construction phases.

The results of the soil samples tested have been compared to the following published assessment criteria:

Category 4 Screening Levels (C4SLs)

Published in March 2014 by DEFRA, a limited number of generic Category 4 Screening Levels (C4SLs) were produced to support the revised Statutory Guidance to support Part 2A of the Environmental Protection Act 1990, which was published in April 2012. This Guidance introduced a new four-category system for classifying land under Part 2A for cases of a Significant Possibility of Significant Harm to human health, where Category 1 includes land where the level of risk is clearly unacceptable and Category 4 includes land where the level of risk posed is acceptably low.

Although not the primary purpose, the DEFRA letter dated 3rd September 2014 from Lord de Mauley established that the C4SLs are also suitable for use in planning situations, as did the Department for Communities and Local Government (DCLG)'s 'Planning Portal' document from June 2014.

Suitable 4 Use Levels (S4ULs)

To supplement the limited number of C4SLs, a set of generic Suitable for Use Levels (S4ULs) were produced by Land Quality Management (LQM) and the Chartered Institute of Environmental Health (CIEH) in 2015 using the EA's CLEA software, version 1.06 released in 2009, and the revised assumptions used in deriving the C4SLs.

The S4ULs are generally more conservative than the C4SLs and are derived to represent the minimal levels of risk to human health as described in the EA's SR2 guidance, with the intention of confirming the land 'suitable for use' under planning.

For S4ULs, a range of generic values have been published for the organic CoPCs based on the soil's organic matter content (1%, 2.5%, and 6%). As the site-specific soil organic content was not determined for the site, where S4ULs have been adopted for the organic CoPCs, analytical results have been compared to the most conservative value, those for 1% soil organic matter (SOM), as a preliminary screening tool.

RISK ASSESSMENT GUIDELINES – GROUNDWATER

The Controlled Waters risk assessment has been undertaken following procedures set out in the EA's RTM, *Hydrogeological risk assessment for contaminated land*, published in 2006.

Controlled Water GAC are based upon the receiving water body and comprise UK Drinking Water Standards (UKDWS), as set out in The Water Supply (Water Quality) Regulations 2016, for potable groundwater receptors and Environmental Quality Standards (EQS), as set out in the Water Framework Directive 2015 (WFD), for a surface water receptor. UKDWS refer to the water directly coming from a consumers tap and EQS refer to water directly discharging into a watercourse.

RESULTS OF SOILS ANALYSIS

Screening for the presence of asbestos did not detect any asbestos containing material (ACM) or fibres in the soil sample tested as part of this investigation.

Certain PAH were detected at concentrations marginally in excess of their GAC protective of human health in a residential setting (benzo[b]fluoranthene: 3.1 mg/kg compared to a S4UL of 2.6 mg/kg; dibenz[a,h]anthracene: 0.29 mg/kg compared to an S4UL of 0.24 mg/kg). These were detected in the sample from TP03 in the centre of the site and were significantly higher than concentrations elsewhere on the site, indicating an isolated hotspot as opposed to elevated levels sitewide.

HUMAN HEALTH RISK ASSESSMENT

The following Generic Quantitative Risk Assessment (GQRA) has been carried out using the source-pathway-receptor principle. Relevant potential sources of contamination identified in the CSM and PRA have been assessed using the CLEA guidelines which takes into account the fact that a complete pathway must exist between a potential source of contamination and a potential receptor for there to be considered a risk.

The potential long-term human receptors evaluated for their individual risk are:

- End users of the site - the future residents and users of the rerouted footpath crossing the site
- Staff and children at the adjacent nursery school
- Staff and customers of the adjacent public house
- Surrounding residents

Risk to construction workers (short-term risk) is discussed separately.

SOIL RISK ASSESSMENT

The soil contamination analysis carried out at this site has detected concentrations of PAH at the interface between the Topsoil and Silchester Gravel Member marginally in excess of their relevant GAC protective of human health in a 'Residential with Homegrown Produce' setting by up to 1.2 times.

The origin of the PAH in the soil can be inferred by the use of a double ratio plot, whereby the ratio of benzo(a)anthracene to chrysene is plotted against the ratio of fluoranthene to pyrene. This analysis indicates that the source of the elevated PAH in this sample is likely to be coal-derived and is therefore attributed to the possible presence of ash or carbonaceous material within the Topsoil.

The main pathway through which these PAH pose a risk to human health is ingestion. This pathway is generally only considered to be present within 0.6m of the final ground level, within which depth contact can be made during play and gardening activities and plant uptake can occur. As this sample location was within the proposed access road, there is no history of potential contamination at the site, and all other testing detected significantly lower concentrations, this pathway is considered not to be applicable in this instance.

As such, there is considered to be no significant possibility of significant harm (SPOSH) to long-term human receptors from PAH at the site.

GROUND GAS RISK ASSESSMENT

In accordance with CIRIA Report C665, the preliminary ground gas risk assessment indicated a potential source of migrating carbon dioxide and methane gases and explosive gases due to nearby landfills.

The results of the gas monitoring identified concentrations of carbon dioxide up to 2.5% v/v and methane up to 0.1% v/v are being produced in the ground. Absolute flow rates of up to ±0.3 l/hr were recorded.

The low concentrations are indicative of the soils encountered which did not include any significant thicknesses of Made Ground or have any significant quantities of organic matter or materials which can decay.

Ground Gas Screening Values

In accordance with BS 8485:2015+A1:2019, the hazardous gas flow rates have been calculated for each monitoring event for each monitoring well separately and compared and considered in relation to the proposed development and conditions observed during monitoring. The calculated rates ranged significantly from <0.001 to 0.008 l/hr, with the highest recorded during a period of severe waterlogging when gas migration is impeded, and are therefore not considered to be consistently representative of the gas regime at the site. Given this, it is recommended that further testing is carried out when water levels have dropped.

In the absence of further monitoring, it is considered that the worst-case hazardous gas flow rate should be adopted as the Ground Gas Screening Value (GSV) for the site, in accordance with the guidance provided in BS 8485:2015+A1:2019. This is calculated using the overall maximum carbon dioxide or methane reading of 2.5% v/v and overall maximum absolute flow rate of 0.3 l/hr to provide a worst-case hazardous gas flow rate of 0.008 l/hr.

Characteristic Situation Classification

Classification of the Characteristic Situation (CS) of the site is dependent on a number of factors including the calculated GSV, maximum concentrations detected, potential perceived risk, and sensitivity of the site.

Whilst a GSV of 0.008 l/hr on its own classifies the site as CS1 and 'Green' with reference to the NHBC Traffic Light system for residential properties, due to the abnormal conditions experienced during the second monitoring round and in the absence of further monitoring, it is considered pertinent to raise the classification to CS2 as a precautionary measure, especially in the block of flats where residents will be living entirely on the ground floor.

Gas Protection Measures

For housing (Type A building) and blocks of flats (Type B building), the gas protection measures required for CS2 must score a total of 3.5 in accordance with Table 4 of BS 8485:2015+A1:2019. This means a combination of two or more of the following gas protection measures should be incorporated in the building construction to achieve a total score of 3.5, with reference to Tables 5, 6, and 7 of BS 8485:2015+A1:2019.

a) Structural barrier - for appropriate types see Table 5 of BS 8485:2015+A1:2019
b) Ventilation measures - for appropriate types see Table 6 of BS 8485:2015+A1:2019
c) Gas resistant membrane - for appropriate types see Table 7 of BS 8485:2015+A1:2019

Advice from a specialist should be sought in selecting the appropriate combination and design for each type of building within the proposed development. The gas protection measures will also need to be approved and verified by an independent body.

It should be noted that it is possible that some of the above criteria may be inherently fulfilled by existing building design proposals and that minimal alterations to existing designs may need to be made in order to comply.

Decommissioning of Monitoring Wells

At present, the gas and groundwater monitoring wells are located outside of the footprints of any proposed buildings. However, in the event that the site layout is altered and buildings are proposed over the position of any monitoring well, it should be decommissioned using low permeability cement grout or similar to prevent leaving a preferential pathway for any ground gases to the buildings.

Radon Gas

The BGS advises that radon gas protection measures are not required for buildings without underground rooms at this site.

ADDITIONAL CONSIDERATIONS

Construction Workers

For construction and maintenance workers that are exposed to the ground, there is a short-term exposure risk (at each site they attend contributing to an overall lifetime exposure risk) and the pathways of primary concern are ‘direct soil ingestion’ and ‘dermal contact’. Protective measures that are different to those taken to protect the long-term exposure receptors discussed above (such as end users of the site) are therefore required.

In order to reduce the risks posed from contaminated to as low as reasonably practicable for the site workers it is recommended that appropriate health and safety measures be implemented along with the use of Personal Protective Equipment (PPE). All personnel coming into contact with the soil, ground workers in particular, should be instructed to use gloves when on site to avoid dermal contact and restrict inadvertent hand-to-mouth ingestion. Hand washing facilities should be provided for the site staff and these should be used prior to eating or smoking. Reference should be made to the HSE Document, “Protection of Workers and the General Public during Development of Contaminated Land” (HSE 66, 1991).

Regulatory Approval

It is recommended that the findings of this report, including any additional contamination identified during groundworks, are approved by the Local Authority and building warranty provider prior to any development taking place in order to reduce potential delays to the development should they require any further clarification of this report.

CONTROLLED WATERS RISK ASSESSMENT

The following Controlled Waters risk assessment has been carried out in accordance with the procedures set out in the EA's Remedial Targets Methodology RTM *Hydrogeological risk assessment for contaminated land*, published in 2006. Using the source-pathway-receptor principle, this takes into account the fact that a complete linkage must exist between a potential source of contamination and a potential receptor for there to be considered a risk.

The potential Controlled Waters receptors considered during this risk assessment were:

- Groundwater of the underlying Silchester Gravel Member - Secondary (Undifferentiated) Aquifer
- Groundwater of the upper layer of the underlying London Clay Formation - Secondary A Aquifer

DISCUSSION

The PRA assessed that viable source-pathway-receptor linkages were of low risk, primarily due low likelihood of significant contamination and absence of recorded groundwater abstractions within 1000m of the site.

Given the concentrations of CoPCs detected in the shallow soils, it is considered unlikely that CoPCs are present in significant enough concentrations to migrate from soils into groundwater of the Secondary Aquifers underlying the site and reach the groundwater abstractions over 1000m away, with respect to GAC protective of human health (UKDWS).

There is therefore considered to be no significant risk to Controlled Waters from the site.

REGULATORY APPROVAL

It is recommended that the findings of this report, including any additional contamination identified during groundworks, are approved by the Local Authority prior to any development taking place in order to reduce potential delays to the development should they require any further clarification of this report.

REVISED CONCEPTUAL SITE MODEL

Following GQRA, the CSM has been updated and the Relevant Pollutant Linkages (RPLs) are presented in the following tables.

ON-SITE SOURCES

Potential Source	Pathway	Potential Receptor	Probability	Consequence	Risk Classification	Remediation / Further Investigation Required
Contaminants within the Made Ground - *Including: heavy metals, PAH, petroleum hydrocarbons, asbestos*	• Ingestion • Dermal Contact • Inhalation	• End Users - residents	Unlikely	Medium	Low	None, based on findings from accessible areas investigated.
		• End Users - public • Nursery School • Public House • Surrounding Residents	Unlikely	Medium	Low	None
		• Construction Workers	Low likelihood	Mild	Low	None
	• Migration through unsaturated zone • Migration through groundwater • Migration through drains or service runs	• Secondary (Undifferentiated) Aquifer	Unlikely	Mild	Very Low	None
		• Secondary A Aquifer	Unlikely	Mild	Very Low	None
	• Direct contact	• Substructures • Water supply pipes	Low likelihood	Mild	Low	None

OFF-SITE SOURCES

Potential Source	Pathway	Potential Receptor	Probability	Consequence	Risk Classification	Remediation / Further Investigation Required
Unrestricted and industrial landfills 310m to the east - *Including: CO_2, CH_4*	• Inhalation	• End Users	Unlikely	Medium	Low	Further investigation is recommended when water levels are lower in order to confirm whether CS2 gas protection measures are necessary or whether it could be decreased to CS1.
	• Accumulation of gases	• On-site buildings	Unlikely	Severe	Moderate / Low	

GEOTECHNICAL ENGINEERING CONCLUSIONS

The proposed development is understood to comprise construction of ten residential houses, with associated gardens, and a block of six flats with associated access roads, car parking, soft landscaping, and an amenity area. A plan showing the development proposal is included in Appendix A.

The exploratory and laboratory work from this investigation has proven the general strata sequence to comprise topsoil above loose to dense, clayey sands and gravels of the Silchester Gravel Member overlying clay bedrock of the London Clay Formation, proven to 6.0m bgl.

Laboratory testing undertaken on samples from this investigation indicate that the London Clay Formation underlying the site should be considered as a shrinkable soil of medium volume change potential and intermediate plasticity.

Depth to groundwater varied significantly across the site with groundwater encountered as shallow as 0.1m depth, within the Topsoil, during intrusive works and at above ground level and at a depth of 0.26 bgl (121.4m AOD) during longer term monitoring.

SITE EXCAVATION

Conventional hydraulic plant should be satisfactory for excavating foundation and service trenches within the Silchester Gravel Member and shallow London Clay Formation.

In line with HSE guidelines, all excavations requiring personnel access should be adequately supported to avoid the risk of collapse. Consideration should also be given to the stability of open trenches where personnel are working in close proximity. Excavations below 0.5m in the Silchester Gravel Member were recorded to be unstable and trenches extending beyond these depths will require some side support. During the fieldwork, excavation within the London Clay Formation (TP03) remained stable for the short time that the trial pit was open.

Groundwater could be encountered at any depth below ground level and dewatering is likely to be required. It should be noted, however, that this investigation was undertaken during the winter months and that seasonal variations in groundwater level may exist. It would be prudent to carry out all ground works in the late summer or autumn when groundwater levels and flows are usually at their lowest.

With regard to dewatering, conventional pumping from sumps is unlikely to be successful therefore the installation of a well point system or use of sheet piles may be required. The advice of a specialist dewatering contractor should be obtained. The effects of dewatering on adjacent structures will need to be taken into account as dewatering could result in settlement and induce localised instability. It would be useful to undertake a trial before any final decisions are made.

It should be noted, however, that this investigation was undertaken during the winter months and that seasonal variations in groundwater level may exist. It would be prudent to carry out all ground works in the late summer or autumn when groundwater levels and flows are usually at their lowest.

Consideration should be given to the effects of trees and shrubs on service runs that cross the site. Soil movements brought on by the influence of vegetation can severely disrupt the drain runs and mains services, and measures should be incorporated into the excavations to allow for future ground movements.

It was noted during siteworks that a number of trees had recently been removed from the site. Care should be taken to ensure the root ball of each tree is completely removed from the ground in order to minimise the development of localised areas of soft organic soils due to weathering of remnant root fragments. Where new foundations are placed over a felled tree, consideration should be given to spanning these features to ensure no soft spots result in localised settlement.

FOUNDATION SOLUTIONS

Shallow Foundations

The Silchester Gravel Member and London Clay Formation are considered to be suitable bearing strata for conventional strip foundations at not less than 1.0m bgl or 0.2m into the top of the formation, whichever is the deeper. At this depth, an allowable bearing pressure (or net loading intensity increase) of 150 kPa may be adopted for a strip foundation of 1m width. This allows for a factor of safety of 3.0 and differential and total vertical settlements under these conditions not exceeding 25mm, the majority of which would occur during the construction period within the Silchester Gravel Member and over a number of years within the London Clay Formation. Caution should be taken if using an alternative foundation width, as increased width causes reduction in allowable bearing capacity, and decreased width causes increases potential settlement; either of which may take the development beyond acceptable limits.

Given the plastic nature of the clay soils at founding depth, they may be prone to rapid softening when wetted up. In the event that any delays occur between excavating any foundations within clay strata (likely to be encountered in the west of the site), and pouring of the concrete, a blinding layer of concrete should be placed in the base of the open excavations to prevent the occurrence of localised softening.

Additionally, the clay soils should be considered as being of medium volume change potential and where foundations are sited within clay strata or within influencing distance, in accordance with NHBC Standards, Chapter 4.2, a proprietary compressible layer such as Claymaster or Clayshield should be placed along the sides of foundation excavations in order to accommodate heave forces in the ground.

Care should be taken to ensure that any new planting in the development will not affect the new foundations. Where foundations are to be constructed within the vicinity of trees or shrubs on this site then they will require

GROUND FLOOR SLABS

Provided all the Topsoil is stripped off, ground bearing floor slabs could be constructed on the Silchester Gravel Member placed on a layer of well compacted coarse-grained fill. However, where the London Clay Formation is found to be shallow, it is recommended that the ground floor should be suspended due to the potential for shrinkable soils, in accordance with NHBC guidelines. A void should be left below the floor slab to

accommodate future moisture content related soil movements. This may be achieved by use of a proprietary compressible material such as Clay board or Cellcore.

SUBSURFACE CONCRETE

The concrete design mix recommendations for subsurface concrete have been assessed in terms of BRE Special Digest 1 (SD1; 2005).

The site has no known history of industrial development and may therefore be considered as a natural ground location for the purposes of this assessment. As groundwater is likely to be above foundation depth, the groundwater is considered 'mobile'.

The underlying London Clay Formation is considered to potentially contain sulphates which are aggressive to concrete, however chemical analysis in accordance with BRE SD1, has indicated no significant oxidisable sulphides content and therefore pyrite is considered unlikely to be present. As such, the assessment is based on the presence of 'non-pyritic' ground.

Chemical testing has recorded a characteristic soil soluble sulphate concentration of 100 mg/l which corresponds to a Design Sulphate (DS) Class of DS-1. The characteristic pH was 6.2 which, when considered in combination with the DS Class, corresponds to an Aggressive Chemical Environment for Concrete (ACEC) class of AC-1.

ACCESS ROADS AND PARKING

The structural design of a road or hard standing is based on the strength of the subgrade, which is assessed on the California Bearing Ratio (CBR) scale.

With reference to Transport and Road Research Laboratory Report, LR1132, the in-situ test results, and the laboratory classification tests it is recommended that for formation prepared in the Silchester Gravel Member, a subgrade CBR value of 10% is adopted for preliminary design purposes. The site conditions should be reassessed at the time of construction and the CBR/pavement design updated accordingly if considered necessary.

Any areas of soft or deleterious material should be excavated and replaced with a properly compacted coarse-grained fill.

The London Clay Formation is unlikely to be frost susceptible, however the Silchester Gravel Formation is and a suitable minimum pavement thickness will therefore need to be specified for pavement founding on this stratum depending upon the proposed pavement usage.

INFILTRATION MEASURES

Appropriately designed Sustainable Drainage Systems (SuDS) are more sustainable than using piped drainage to local sewer systems. However, infiltration measures close to buildings may result in undermining of foundations and softening of soils leading to instability. Attenuation measures should be located at suitable

distances from foundations (minimum 5m; NHBC, 2020) and infrastructure and consideration given to the effects on slopes, flooding, and mobilisation of contaminants.

Infiltration rates generally reduce as the soil become saturated and the worst-case infiltration rate for each test should be used for design. Due to the presence of shallow groundwater and loose strata, limited infiltration data was able to be obtained, however they indicate infiltration rates of 6.7×10^{-6} m/s to 3.0×10^{-5} m/s, with the slower of these extrapolated from incomplete data. The worst-case infiltration rate (6.7×10^{-6} m/s), indicates soils of medium to low permeability comprising poor infiltration media in accordance with CIRIA C753.

Ideally a buffer of 1m of unsaturated soils are required beneath the base of SuDS, however standing groundwater was recorded at a maximum depth of 0.26m bgl and the site was flooded on another occasion.

As such, the shallow groundwater levels may preclude the effective use of SuDS and early discussion with the EA is recommended for their approval should their use be pursued.

UNDERGROUND SERVICES

It should be noted that the utility companies often have their own local guidelines and standards on levels of shallow soil contamination in the ground that may or may not be acceptable for the installation of below ground services. These standards are different to those specified for assessing risks to human health and groundwater.

The local requirements should be obtained from the particular service supply company as soon as possible to avoid unexpected delays or additional development costs.

Approval from the local water company should be sought for the type of pipes proposed before they are installed.

RE-USE AND DISPOSAL OF ARISINGS

It is likely that the excavations on site from foundation and services trenches may produce arisings, some of which may be able to be re-used on-site and some of which will be surplus to requirement.

RE-USE OF MATERIAL ON SITE

Currently, if surplus arisings are 'fit for re-use' on the site and have not been treated, its re-use is allowed within the planning law. If it needs treating prior to re-use, exemptions can be sought from the EA to allow this activity.

A recent voluntary code of practice published by CL:AIRE, in conjunction with the EA, (the Definition of Waste: Development Industry Code of Practice, Version 2) endorses the re-use of arisings on and off the site of origin without the need for exemptions from the EA, dependent on whether it is "fit for purpose".

Based upon the human health and Controlled Waters risk assessments, the soils on this site are considered to be suitable to be re-used on site for soft-landscaping, subject to agreement of the Local Authority, or for earthworks purposes, subject to appropriate compaction testing results.

WASTE CLASSIFICATION

Under current waste management legislation any arisings that are surplus to requirement is classed as waste and needs disposing to a licensed facility. Records must be kept of where the waste is taken upon leaving site and its final destination.

The classification is a two-fold process using the soil chemical testing results and the European Waste Catalogue for removal from the site, followed by testing under the Waste Acceptance Criteria (WAC) specifically for landfill disposal.

EUROPEAN WASTE CATALOGUE DETERMINATION

Soils

Any soil classified as waste requires classification of the chemical constituents prior to leaving site in accordance with the European Waste Catalogue.

The 'Total' soil contamination test results from this investigation, excluding asbestos, have been used in conjunction with the HazWasteOnline spreadsheets and the Technical Guidance WM3 published by the EA in order to determine whether the waste soils are deemed hazardous or non-hazardous.

All of the soils tested have been classified as 'Non-hazardous' waste.

The assessment report is provided in Appendix F.

Asbestos

No obvious visual evidence of asbestos containing material (ACM) was noted in the soils during the fieldwork nor was any detected during laboratory analysis.

Technical Guidance WM3 states that 'if the waste contains fibres that are free and dispersed then the waste will be hazardous if the waste as a whole contains 0.1% w/w or more asbestos'. It also states that 'where the waste contains identifiable pieces of asbestos (i.e. any particle of a size that can be identified as potentially being asbestos by a competent person if examined by the naked eye), then the waste is hazardous if the concentration of asbestos in the pieces alone is 0.1% or more'.

In soils where asbestos pieces visible by the naked eye are encountered, this soil is considered as mixed waste and must be separated whenever possible and each separate waste stream classified accordingly.

WASTE ACCEPTANCE CRITERIA (WAC) TESTING RESULTS

If it is decided that the surplus arisings will be disposed of at a landfill facility, the implementation of the Landfill Directive means that the waste soil requires additional classification under the Waste Acceptance Criteria (WAC) to determine whether it should be destined for an Inert, Non-Hazardous, Stable Non-Reactive Hazardous, or Hazardous landfill, or whether an alternative disposal method must be sought.

WAC testing has been carried out on one representative sample of the shallow Silchester Gravel Member collected from 0.5m bgl in TP02 and from the two soil vegetated embankments in the west and north of the site (TP04 and TP05 respectively). The laboratory testing results are presented in Appendix F.

The samples were initially classified as 'Non-Hazardous' waste and the WAC testing indicates that the soil passes the criteria to be acceptable at 'Inert' landfill. Topsoil is unlikely to be accepted at 'Inert' landfill due to its organic content.

Waste Stream	EWC Classification	Landfill Category	Comments
Embankment soils	Non-hazardous	Inert	
Topsoil	Non-hazardous	Non-hazardous	Due to organic content
Silchester Gravel Member	Non-hazardous	Inert	
London Clay Formation	Non-hazardous	Inert*	*If clearly separated and uncontaminated, otherwise WAC testing required.

Analytical results relevant to the materials being disposed of should be provided to the waste management contractors and landfill operators to confirm whether it meets their license agreements and to confirm tipping costs.

Different categories of waste soils must not be mixed. The action of mixing hazardous waste with non-hazardous waste to dilute hazardous concentrations or to dispose of one waste type as/with another is illegal.

Should any soils be encountered that differ from those encountered during this investigation, further testing and waste classification of those soils will be required. It is recommended that when access allows and/or prior to disposal, the embankment soils are investigated further to confirm their content. Dependant on the amount requiring disposal, additional WAC tests may also be required at this time.

Uncontaminated soil and stones, including naturally occurring sands and clays, may be accepted in an inert landfill without testing, provided that it is not topsoil or peat and excludes soil from contaminated sites. Inert waste should not undergo change, will not burn, react, biodegrade or adversely affect human health or the environment. It should not contain metals or plastics.

LANDFILL DISPOSAL

Landfill disposal costs have risen considerably in recent years. With this in mind, alternative foundation solutions, that produce less waste, may be more cost-effective than significant landfill disposal.

Waste Treatment

The Landfill Regulations dictate that all waste must be treated before going to landfill. This treatment should fulfil all of the following three criteria:

- Physical, thermal, chemical or biological process including sorting.
- Change the characteristics of the waste.
- Reduce the volume, reduce the hazardous nature, facilitate its handling or enhance its recovery.

The most basic method of pre-treatment is sorting of the waste and re-cycling any possible materials, many waste disposal companies will have on-site recycling facilities that will be able to undertake this process at the landfill site. However, if treatment would not reduce its quantity or the hazards it poses to human health or the environment, then all three steps may not be necessary. The exception is inert waste for which treatment may not be technically feasible.

The EA expect all landfill operators to obtain written evidence that the waste they accept has been pre-treated. It is recommended that a signed certificate should be obtained describing the treatment to give to the receiving landfill. Further testing may be required after the treatment before the soil is accepted by the relevant landfill.

It should be noted that in May/June 2012, HMRC issued Briefs 15/12 and 18/12 clarifying how construction spoil and excess soils will be assessed for landfill tax purposes. Detailed accurate descriptions of waste are required for all wastes to support the landfill tax assessment. Uncontaminated naturally occurring soils will remain inert by default and eligible for the lower rate of landfill tax. Similarly, ‘reworked soils’ and demolition ‘stone’ comprising ONLY materials listed in the Schedule of the Landfill Tax (Qualifying Material) Order 2011 (SI 2011/1017) will also be eligible for the lower rate of landfill tax.

RECOMMENDATIONS

No significantly elevated concentrations of contaminants were recorded by this investigation and based on the findings discussed herein, there is considered to be no significant risk of significant harm from contamination to the identified human health and controlled waters receptors.

Whilst there is considered to be a low risk of contamination at this site, it is prudent to bear in mind that some areas of the site have not been investigated. Soil is a heterogeneous material and variations, which affect the conclusions, may inevitably occur between and beyond the test locations. Should ground conditions vary noticeably from the Ground Model, particularly with respect to the earth embankments, then it is recommended that work is ceased until further assessment by a suitably qualified person has been carried out.

Alternatively, to reduce the risks of encountering unexpected contamination, supplementary investigation would be undertaken when the water levels have sufficiently subsided and clearance has been carried out on the embankments to allow greater site access.

Additional gas and groundwater monitoring is recommended to confirm the need for gas protection measures at the site. If this is not undertaken, it is recommended that gas protection measures suitable for a CS2 site are installed. It should be noted that it is possible that some of the required deign measures may be inherently fulfilled by existing building design proposals and that minimal alterations to existing designs may need to be made in order to comply.

Depending on the volume of soil to be disposed from the site, particularly with regard to the embankments, additional waste classification may be required.

Groundwater was recorded to be shallow and any SuDS will require considered design by a drainage engineer.

REFERENCES

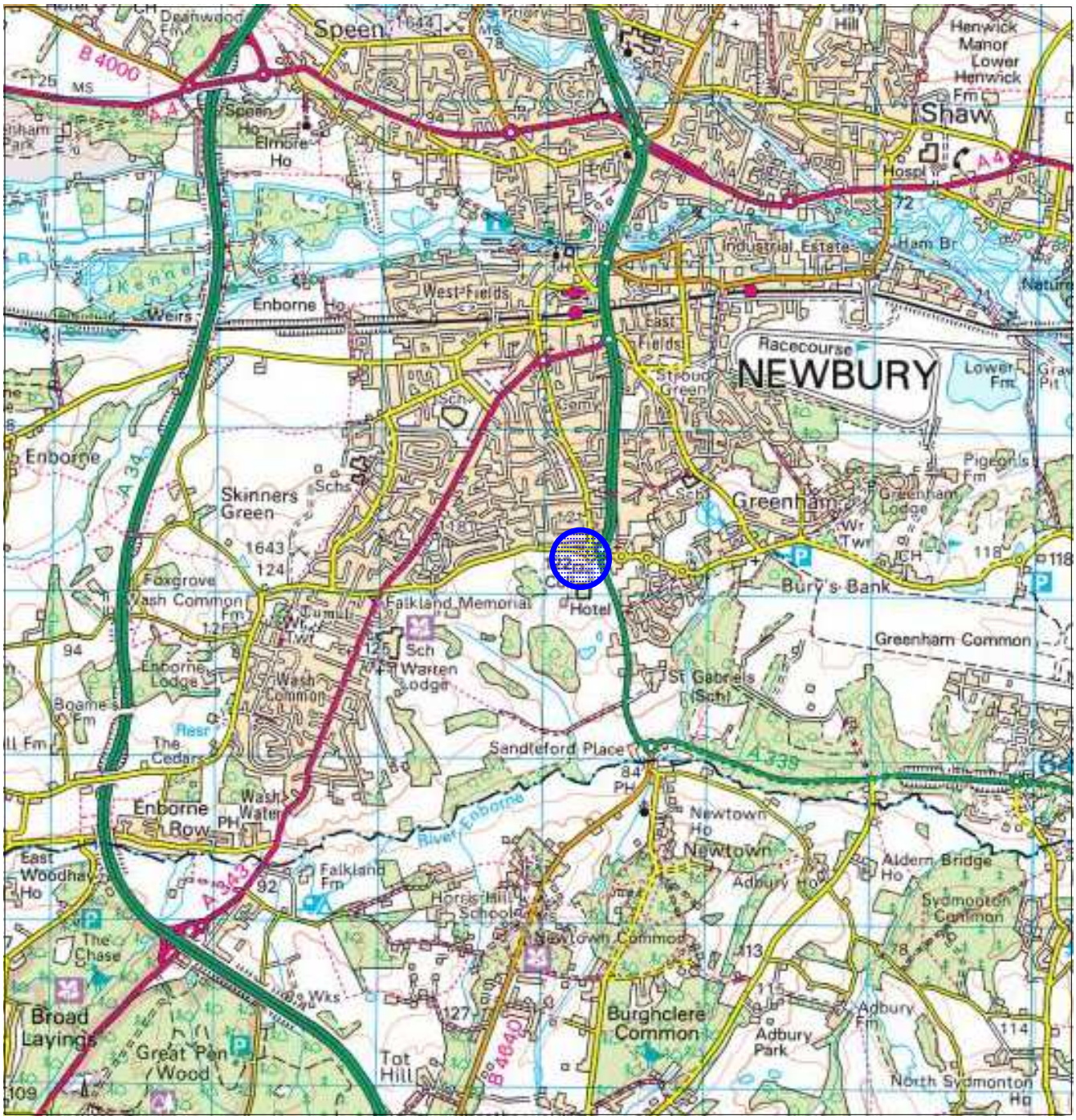
1. British Standards Institution (BSI), Site Investigations: Code of Practice, BS 5930:2015, 2015.
2. BSI, Investigation of Potentially Contaminated Sites: Code of Practice, BS 10175:2011+A2:2017, 2017.
3. Association of Geotechnical and Geoenvironmental Specialists (AGS), Site Investigation Asbestos Risk Assessment, AGS Interim Guidance, 2013.
4. CIRIA, Asbestos in soil and made ground: good practice site guide, C765, 2017.
5. BRE, Radon: Guidance on Protective Measures for New Buildings, BR 211, 2015.
6. BRE, Reducing Radon: Underground Rooms – Cellars and Basements, Quick Guide 7, 2015.
7. NHBC, NHBC Standards, Chapter 4.2 Building Near Trees, 2020.
8. NHBC, NHBC Standards, Chapter 4.1 Land Quality – Managing Ground Conditions, 2020.
9. Environment Agency (EA), Land contamination: risk management, *https://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks*, LCRM, 2019.
10. CIRIA, Contamination Land Risk Assessment – A Guide to Good Practice, C552, 2001.
11. EA, Human Health Toxicological Assessment of Contaminants in Soil, SR2, 2009.
12. Department for Environment, Food and Rural Affairs (DEFRA), SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document, 2014.
13. Land Quality Management (LQM), The LQM/CIEH S4ULs for Human Health Risk Assessment, S4UL3032, 2015.
14. Health and Safety Executive (HSE), Protection of Workers and the General Public during Development of Contaminated Land, HS(G) 66, 1991.
15. EA, Remedial Target Methodology, Hydrogeological Risk Assessment for Contaminated Land, 2006.
16. The Water Supply (Water Quality) Regulations 2016.
17. The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.
18. World Health Organisation (WHO), Guidelines for drinking-water quality, 4th edition, 2017.
19. WHO, Guidelines for drinking-water quality: Petroleum Products in Drinking Water, 2008.
20. BSI, Soils for Civil Engineering Purposes, BS 1377-1:2016, 2016.
21. BSI, Foundations, BS 8004:2015, 2015.
22. CIRIA, Control of groundwater for temporary works, R113, 1986.
23. BRE, Soakaway design, DG 365, 2016.

24. CIRIA, The SuDS Manual, C753, 2015.
25. Card G, Wilson S, Mortimer S, A Pragmatic Approach to Ground Gas Risk Assessment, CL:AIRE Research Bulletin RB17, 2012.
26. CIRIA, Assessing Risks Posed by Hazardous Ground Gases to Buildings, C665, 2007.
27. BSI, Guidance on investigations for ground gases – Permanent gases and Volatile Organic Compounds (VOCs), BS 8576:2013, 2013.
28. BSI, Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings, BS 8485:2015+A1:2019, 2019
29. NHBC, Guidance on Evaluation of Development Proposals on Sites Where Methane and Carbon Dioxide are Present, Report 04, 2007.
30. EA, Technical Guidance WM3, Waste Classification - Guidance on the classification and assessment of waste, 1st Edition v.1.1, 2018.
31. BRE, Concrete in Aggressive Ground, BRE Special Digest 1, 2005.
32. Transport and Road Research Laboratory (TRRL), The Structural Design of Bituminous Roads, Report 1132, 1984.
33. UK Water Industry Research (UKWIR), Guidance for the Selection of Water Supply Pipes to be Used in Brownfield Sites, 10/WM/03/21, 2010.

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

APPENDIX A
PLANS & PHOTOGRAPHS

Extract of 1:50,000 Ordnance Survey Explorer Map



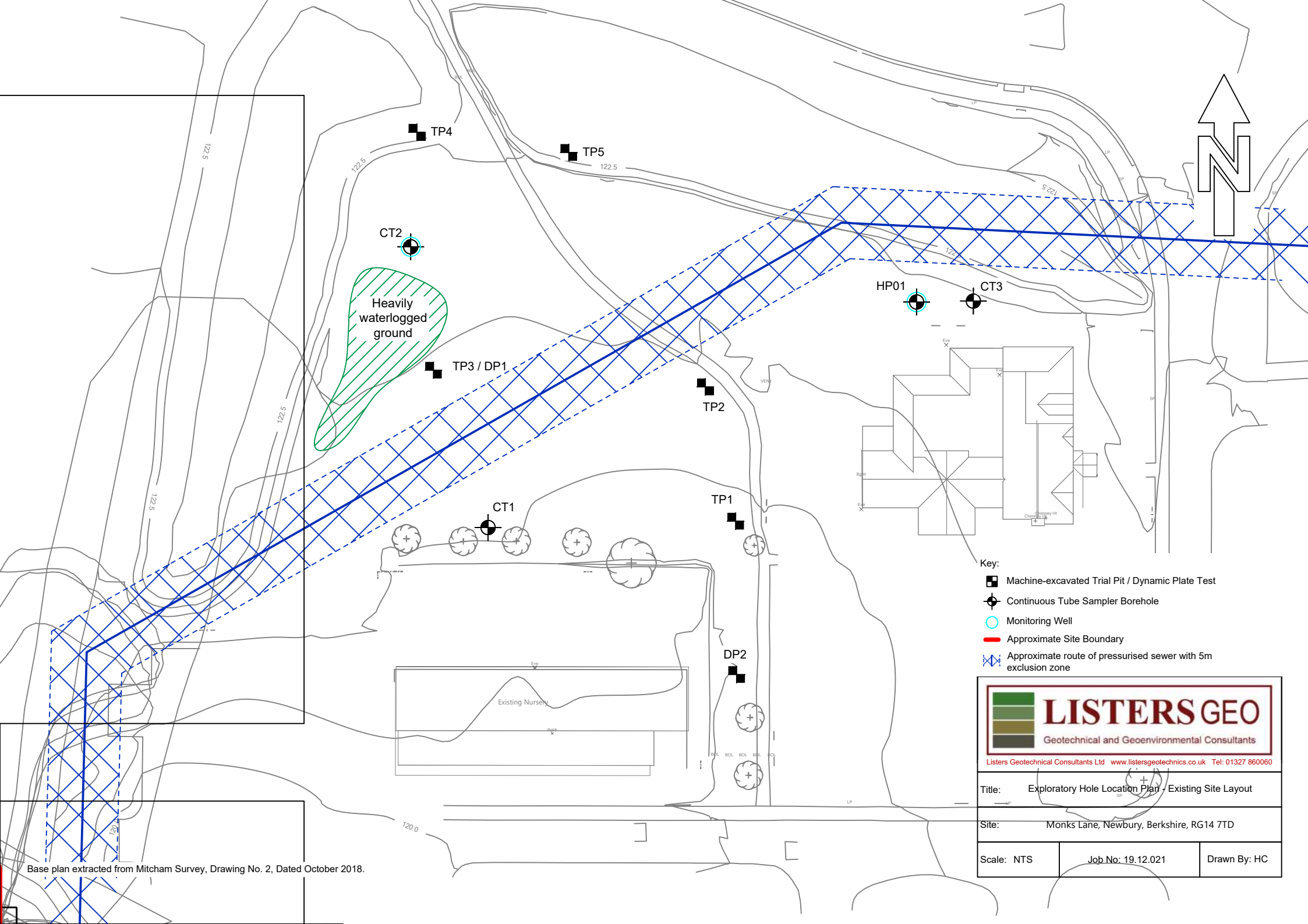
Reproduced from Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office. Crown Copyright reserved (Licence No: 100006010)

Key: Approximate Site Location

LISTERS GEO
Geotechnical and Geoenvironmental Consultants
Listers Geotechnical Consultants Ltd www.listersgeotechnics.co.uk Tel: 01327 860060

N

Title:	Site Location Plan	
Site:	Monks Lane, Newbury, Berkshire, RG14 7TD	
Scale: NTS	Job No: 19.12.021	Drawn By: HC



Key:

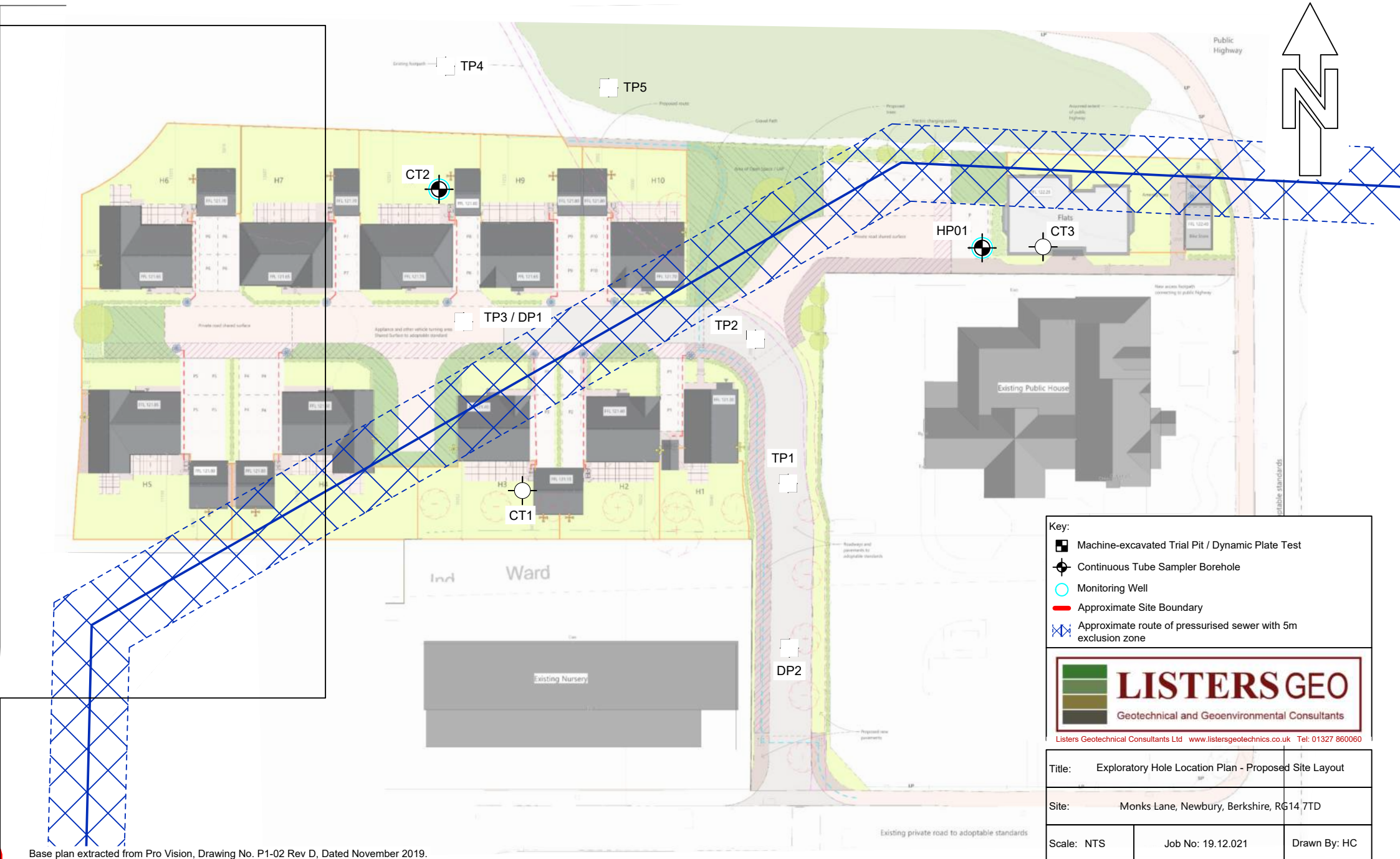
- Machine-excavated Trial Pit / Dynamic Plate Test
- Continuous Tube Sampler Borehole
- Monitoring Well
- Approximate Site Boundary
- Approximate route of pressurised sewer with 5m exclusion zone

Base plan extracted from Mitcham Survey, Drawing No. 2, Dated October 2018.

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Listers Geotechnical Consultants Ltd www.listersgeotechnics.co.uk Tel: 01327 860060

Title:	Exploratory Hole Location Plan - Existing Site Layout	
Site:	Monks Lane, Newbury, Berkshire, RG14 7TD	
Scale: NTS	Job No: 19.12.021	Drawn By: HC



Key:

- Machine-excavated Trial Pit / Dynamic Plate Test
- Continuous Tube Sampler Borehole
- Monitoring Well
- Approximate Site Boundary
- Approximate route of pressurised sewer with 5m exclusion zone

LISTERS GEO
Geotechnical and Geoenvironmental Consultants
Listers Geotechnical Consultants Ltd www.listersgeotechnics.co.uk Tel: 01327 860060

Title:	Exploratory Hole Location Plan - Proposed Site Layout	
Site:	Monks Lane, Newbury, Berkshire, RG14 7TD	
Scale: NTS	Job No: 19.12.021	Drawn By: HC

Base plan extracted from Pro Vision, Drawing No. P1-02 Rev D, Dated November 2019.

View south towards entrance from eastern site boundary (note recently felled trees)

View along southern site boundary with nursery school (view to west)

Site Photographs	Report No. 19.12.021

Land to rear of adjacent public house in northeast of site (view to east)

View of northern vegetated bank from top of western bank (view to northeast)

Site Photographs	Report No. 19.12.021

View across site from top of western bank showing public house (left) and waterlogged ground (centre)

View across site from top of western bank showing adjacent nursery school with college beyond

Site Photographs

Report No.
19.12.021

Gas vent pipe observed on eastern site boundary (view to south)

Severe waterlogging during second monitoring round (CT02)

Site Photographs	Report No. 19.12.021

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

APPENDIX B
FIELDWORK AND TESTING

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

LEGEND - Soils

 Made Ground

 Topsoil

 Sand

 Silt

 Boulders and Cobbles

 Clay

 Gravel

 Peat

LEGEND - Rocks (Sedimentary)

 Chalk

 Siltstone

 Limestone

 Mudstone

 Sandstone

 Coal

 Conglomerate

 Breccia

LOG ABREVIATIONS

W	Water Sample	▽	Water Strike
B	Bulk Sample	▼	Water (Standing Level)
D	Disturbed Sample	PP	Pocket Penetrometer
J	Jar Sample	HV	Hand Vane
U	Undisturbed Sample	SPT	Standard Penetration Test
(No. of blows shown in brackets for U100 samples)		CPT	Cone Penetration Test
WAC	Waste Acceptance Criteria Sample	CBR	California Bearing Ratio
		*	Extrapolated Value

Pocket penetrometer testing provides values of unconfined compressive strength. The results have been converted to an approximate equivalent shear strength which should be used with due circumspection. As the pocket penetrometer tends to overestimate shear strength, we have used an appropriate reduction factor.

LOG KEY

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Trial Pit Log

Trial Pit No. TP 01

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447221E - 165206N

Level: 120.80 m AOD

Dates: 15/01/2020

Project Number: 19.12.021

Logged By: Jane Taylor to BS 5930:2015

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	(kPa)				
	0.10	D					TOPSOIL Soft dark brown slightly gravelly organic CLAY.
				0.30	120.50		
	0.50	D					SILCHESTER GRAVEL MEMBER (Loose) brown slightly sandy clayey GRAVEL. Gravel is medium to coarse angular to rounded flint and quartzite.
				0.70	120.10		
	1.00	D					SILCHESTER GRAVEL MEMBER (Loose) yellow cream slightly clayey very sandy GRAVEL. Gravel is fine to coarse sub-angular to rounded flint and quartzite.
▼	1.50	D					
	2.00	D		2.00	118.80		End of Trial Pit at 2.00m

1 2 3 4

Method of excavation: 360 Excavator

Stability: Collapsing in from 0.7m and caving in at sides

Groundwater: Water seepage at 1.7m bgl

Trial Pit Dimensions: 0.5m x 1.6m x 2.0m

Remarks: Co-ordinates provided to nearest 5m and 0.1m AOD

QMS ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Trial Pit Log

Trial Pit No.
TP 02

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447216E - 165225N
Level: 121.30 m AOD
Dates: 15/01/2020

Project Number: 19.12.021
Logged By: Jane Taylor to BS 5930:2015

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	(kPa)				
	0.20	D		0.20	121.10		TOPSOIL Soft dark brown slightly gravelly organic CLAY.
	0.50	D		0.50	120.80		SILCHESTER GRAVEL MEMBER (Loose) brown slightly sandy clayey GRAVEL. Gravel is medium to coarse angular to rounded flint and quartzite.
	1.00	D					SILCHESTER GRAVEL MEMBER (Loose) yellow cream clayey sandy GRAVEL. Gravel is fine to medium angular to rounded flint and quartzite.
	1.50	D					
▼				1.90	119.40		End of Trial Pit at 1.90m

1
2
3
4

Method of excavation: 360 Excavator

Stability: Collapsing and caving in on sides from 0.5m

Groundwater: Water ingress at base

Trial Pit Dimensions: 0.6m x 1.7m x 1.9m

Remarks: Co-ordinates provided to nearest 5m and 0.1m AOD

QMS ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Trial Pit Log

Trial Pit No. TP 03

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447178E - 165227N

Level: 121.50 m AOD

Dates: 15/01/2020

Project Number: 19.12.021

Logged By: Jane Taylor to BS 5930:2015

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	(kPa)				
	0.10	D		0.20	121.30		TOPSOIL Soft dark brown gravelly organic CLAY with rootlets. Gravel is fine to medium sub-angular to sub-rounded flint and quartzite.
	0.50	D		0.60	120.90		SILCHESTER GRAVEL MEMBER (Loose) brown sandy very clayey GRAVEL. Gravel is fine to medium sub-angular to sub-rounded flint and quartzite.
	1.00	D					LONDON CLAY FORMATION Firm orange mottled light grey slightly sandy slightly gravelly CLAY. Gravel is medium to coarse sub-rounded to rounded flint and quartzite. Becoming less gravelly with depth.
	1.50	D					
▼	2.00	D					
	2.50	D					
	3.00	D					
	3.50	D		3.50	118.00		End of Trial Pit at 3.50m

1 2 3 4

Method of excavation: 360 Excavator

Stability: Sides Stable

Groundwater: Water ingress from 2.0m bgl

Trial Pit Dimensions: 0.6m x 1.6m x 3.5m

Remarks: Co-ordinates provided to nearest 5m and 0.1m AOD

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Trial Pit Log

Trial Pit No.
TP 04

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447176E - 165261N
Level: N/A
Dates: 15/01/2020

Project Number: 19.12.021
Logged By: Jane Taylor to BS 5930:2015

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	(kPa)				
	0.50	D					MADE GROUND Soft dark brown very gravelly CLAY with rootlets. Gravel is fine to coarse sub-angular to rounded flint and quartzite. End of Trial Pit at 0.50m

1
2
3
4

Method of excavation: 360 Excavator

Stability: N/A

Groundwater: N/A

Trial Pit Dimensions: N/A

Remarks: Pit exacavated horizontally into embankment
Co-ordinates provided to nearest 5m

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Trial Pit Log

Trial Pit No.
TP 05

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447197E - 165258N
Level: N/A
Dates: 15/01/2020

Project Number: 19.12.021
Logged By: Jane Taylor to BS 5930:2015

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	(kPa)				
	0.50	D					MADE GROUND Soft dark brown gravelly CLAY with rootlets. Gravel is fine to coarse sub-angular to rounded flint and quartzite. End of Trial Pit at 0.50m

1
2
3
4

Method of excavation: 360 Excavator

Stability: N/A

Groundwater: N/A

Trial Pit Dimensions: N/A

Remarks: Pit exacavated horizontally into embankment
Co-ordinates provided to nearest 5m

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Continuous Tube Sampler Log

Borehole No.
HP 01

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447246E - 165237N

Level: 121.90 m AOD

Dates: 15/01/2020

Project Number: 19.12.021

Logged By: Jane Taylor to BS 5930:2015

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	(kPa)	Depth (m)	Level (m)	Legend	Stratum Description
						121.90		(Loose) dark brown sandy gravelly organic CLAY with rootlets. Gravel is fine to coarse angular to rounded flint and quartzite.
					1.00	120.90		End of Borehole at 1.00m

1
2
3
4

Borehole Diameter: 100mm

Groundwater: None encountered

Instrumentation: Gas monitoring well with response zone 0.5m to 1.0m bgl

Remarks: Co-ordinates provided to nearest 5m and 0.1m AOD

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Continuous Tube Sampler Log

Borehole No. CT 01

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447186E - 165205N

Level: 120.90 m AOD

Dates: 15/01/2020

Project Number: 19.12.021

Logged By: Jane Taylor to BS 5930:2015

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	(kPa)	Depth (m)	Level (m)	Legend	Stratum Description
		0.10 - 0.50	D					TOPSOIL Soft dark brown sandy very gravelly organic CLAY with occasional rootlets. Gravel is fine to coarse angular to rounded flint and quartzite.
		0.50 - 1.00	D		0.50	120.40		SILCHESTER GRAVEL MEMBER Medium dense becoming dense brown clayey very sandy GRAVEL. Gravel is fine to coarse angular to rounded flint and quartzite.
		1.00 - 1.50	D					
	▼	1.50 - 2.00	D					
		2.00 - 2.40	D					*Between 2.0m and 2.4m; sandy clayey GRAVEL.*
		2.40 - 2.50	D					*From 2.4m; grey brown.*
					2.50	118.40		End of Borehole at 2.50m

1 2 3 4 5 6 7

Borehole Diameter: 87mm - 67mm

Groundwater: Groundwater struck at 1.4m bgl, standing at 1.4m bgl

Instrumentation: Backfilled with arisings

Remarks: Borehole collapsed in to 1.4m bgl upon completion
Co-ordinates provided to nearest 5m and 0.1m AOD

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Continuous Tube Sampler Log

Borehole No. CT 02

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447175E - 165245N

Level: 121.70 m AOD

Dates: 15/01/2020

Project Number: 19.12.021

Logged By: Jane Taylor to BS 5930:2015

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	(kPa)	Depth (m)	Level (m)	Legend	Stratum Description
		0.20 - 0.50	D					TOPSOIL Soft dark brown sandy gravelly organic CLAY with occasional rootlets. Gravel is fine to coarse angular to rounded flint and quartzite.
		0.50 - 0.90	D		0.50	121.20		SILCHESTER GRAVEL MEMBER (Loose) grey brown clayey sandy GRAVEL. Gravel is fine to coarse angular to rounded flint and quartzite.
					0.90	120.80		LONDON CLAY FORMATION (Stiff) orange brown mottled grey slightly sandy gravelly CLAY. Gravel is fine to coarse angular to rounded flint and quartzite.
		1.00 - 1.20	D					LONDON CLAY FORMATION Stiff becoming firm to stiff orange brown mottled grey slightly sandy CLAY.
		1.20 - 1.50	D		1.20	120.50		
		1.25	PP	120				
		1.50 - 2.00	D					
		1.50	PP	105				
		1.75	PP	90				
		2.00 - 2.50	D					
		2.00	PP	68				
		2.25	PP	60				
		2.50 - 3.00	D					
		2.50	PP	60				
		2.75	PP	60				
		3.00 - 3.50	D					
		3.00	PP	60				
		3.25	PP	52				
		3.50 - 4.00	D					
		3.50	PP	45				
		3.75	PP	52				
		4.00 - 4.50	D					
		4.00	PP	52				
		4.25	PP	52				
		4.50 - 5.00	D					
		4.50	PP	60				
		4.75	PP	60				
		5.00 - 5.50	D					
		5.00	PP	60				
		5.25	PP	52				
		5.50 - 6.00	D					
		5.50	PP	45				
		5.75	PP	52				
		6.00	PP	60	6.00	115.70		End of Borehole at 6.00m

1 2 3 4 5 6 7

Borehole Diameter: 87mm - 57mm

Groundwater: Water struck at 0.1m bgl, standing at 0.3m bgl

Instrumentation: Groundwater monitoring well with response zone 1.0m to 4.0m bgl

Remarks: Co-ordinates provided to nearest 5m and 0.1m AOD

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Continuous Tube Sampler Log

Borehole No. CT 03

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

Co-ords: 447254E - 165237N

Level: 122.00 m AOD

Dates: 15/01/2020

Project Number: 19.12.021

Logged By: Jane Taylor to BS 5930:2015

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	(kPa)	Depth (m)	Level (m)	Legend	Stratum Description
		0.10 - 0.50	D					TOPSOIL Soft dark brown sandy very gravelly organic CLAY with occasional rootlets. Gravel is fine to coarse angular to rounded flint and quartzite.
		0.50 - 1.00	D		0.50	121.50		SILCHESTER GRAVEL MEMBER (Loose) brown silty GRAVEL. Gravel is fine to coarse sub-angular to sub-rounded flint and quartzite.
		1.00 - 1.20	D		1.00	121.00		SILCHESTER GRAVEL MEMBER Firm brown mottled orange brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse angular flint and quartzite.
		1.00	SPT(S)	N=16 (4/3,3,4,6)				
		1.20 - 1.50	D		1.20	120.80		SILCHESTER GRAVEL MEMBER Medium dense orange brown mottled grey brown clayey sandy GRAVEL. Gravel is fine to coarse angular to rounded flint.
		1.50 - 2.00	D					
		2.00 - 2.50	D		2.00	120.00		SILCHESTER GRAVEL MEMBER Very dense becoming dense grey brown clayey very sandy GRAVEL. Gravel is fine to coarse angular to sub-rounded flint and quartzite.
		2.00	SPT(S)	N=82 (27/22,21,20,19)				
	▼	2.50 - 3.00	D					
		3.00 - 3.50	D					
		3.00	SPT(S)	N=47 (16/11,12,11,13)				
		3.50	SPT(S)	27 for 75mm (32/27,0 for 0mm)	3.50	118.50		End of Borehole at 3.50m

Borehole Diameter: 87mm - 57mm

Groundwater: Groundwater struck at 3.0m bgl, standing at 2.5m bgl

Instrumentation: Backfilled with arisings

Remarks: Refusal at 3.5m bgl on hard strata
Co-ordinates provided to nearest 5m and 0.1m AOD

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

DPH and SHDP DYNAMIC PROBING

This is a simple test consisting of driving a rod with an oversize point at its base into the ground. A uniform, regular, hammer blow is used. The blow count is recorded for every 100mm of driving (N_{100}) and the results presented as a plot of blow count against depth.

Outside the UK this type of testing has been used extensively in a wide range of formats (ie. various hammer weights, hammer drops, point sizes, etc.) for many years. Since 1985 Dynamic Probing has become widely accepted in this country and the first British Standard for this test was published in 1990.

The standard equipment is a petrol powered unit using a 50kg hammer dropping through 0.50m 32mm diameter rods and a 15cm^2 area cone. This is the Heavy Dynamic Probe (DPH) and the equipment has been selected for general use as giving a good compromise between sensitivity in loose materials and penetration rates in denser materials. A sacrificial cone is used for each probing. A damper is used between the hammer and anvil.

The Super Heavy Dynamic Probe (DPSH) is a heavier version, using a 63.5kg hammer dropping through 0.75m, 32mm diameter rods and a 20cm^2 area cone.

The hammer operation is automated and driving is carried out as a continuous operation from ground level without a borehole. The test therefore not only provides a continuous record for the full depth penetration but also avoids many of the problems associated with poor operator technique when carrying out SPTs in boreholes.

Dynamic Probing provides an excellent method for locating boundaries between strata of differing density and driving resistance as well as comparative assessments of a single strata across a site. Comparisons between Dynamic probing results, SPT values and other soil parameters are given in DIN4094. Information on UK practice and correlation data in UK soils was published at the ICE Conference on Penetration Testing in 1988.

The complete machine weights 140kg stands 2.5m high and measures 750mm wide x 850mm deep when erected. For movement between positions the mast is lowered and the machine wheeled on an integral axle. Probing can be carried out within 300mm of a vertical wall.

References:

1. Subsoil; exploration by penetration tests -DIN4094. December 1990 (Standard and supplement)
2. Soils for civil engineering purposes. In-situ tests. - BS1377 Part 9 1990
3. Penetration testing in the UK. (Proceedings of the geotechnology conference organised by the Institution of Civil Engineers and held in Birmingham 6-8 July 1988)
4. Code of Practice for Site Investigations – BS5930:2015 Section 4

DPH and SHDP DYNAMIC PROBING INFORMATION

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Super Heavy Dynamic Probe

Borehole No.
SHDP 01 (CT 01)

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

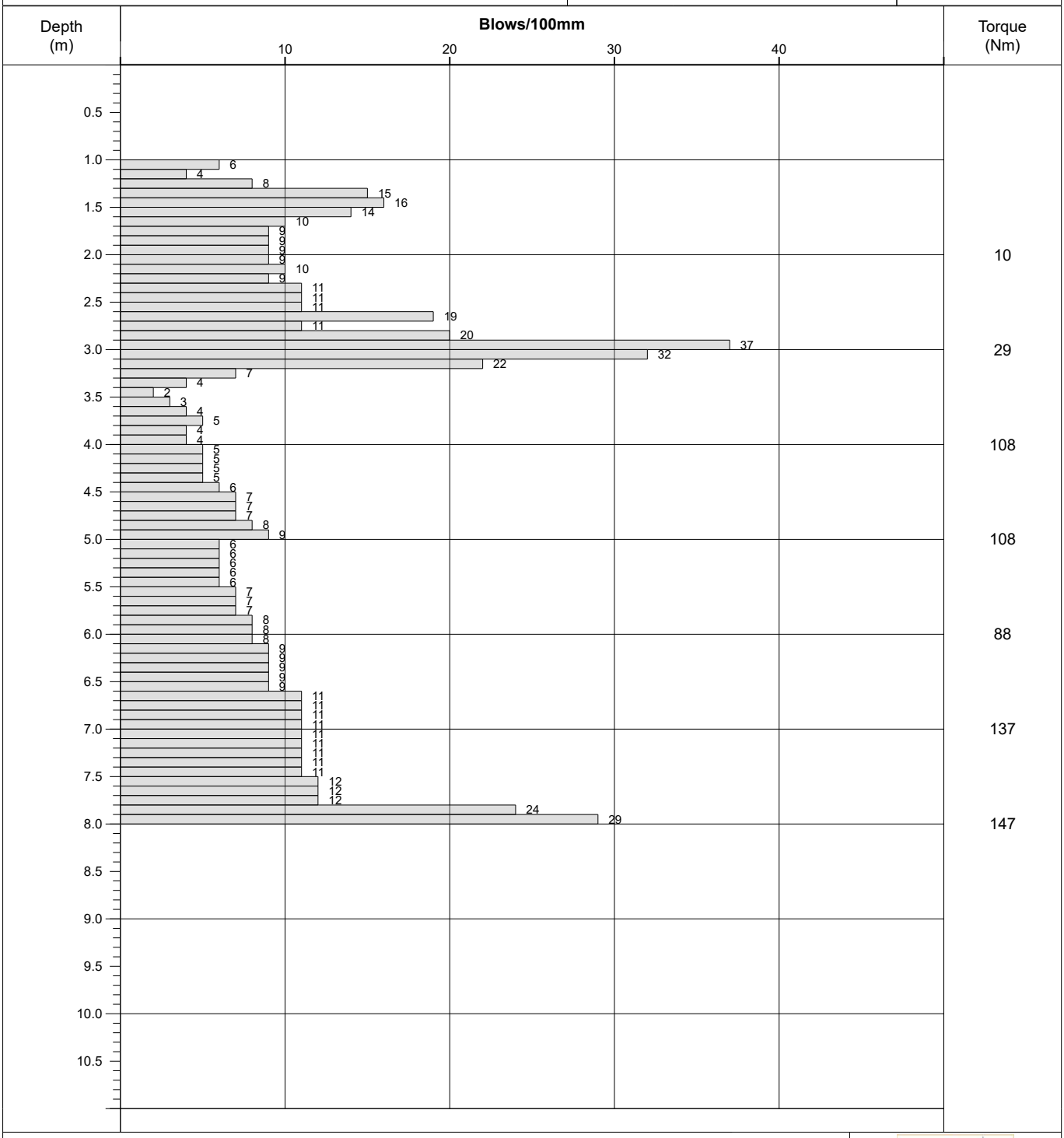
Co-ords: 447186E - 165205N

Level: 120.90 m AOD

Dates: 15/01/2020

Project Number: 19.12.021

Hole Type: SHDP - B



Hammer Weight: 63.5kgs **Fall Height:** 0.75m **Cone Area:** 20cm²

Remarks: Co-ordinates provided to nearest 5m and 0.1m AOD

* = settled under own weight

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Super Heavy Dynamic Probe

Borehole No.
SHDP 02 (CT 02)

Project Location: Monks Lane, Newbury, Berkshire, RG14 7TD

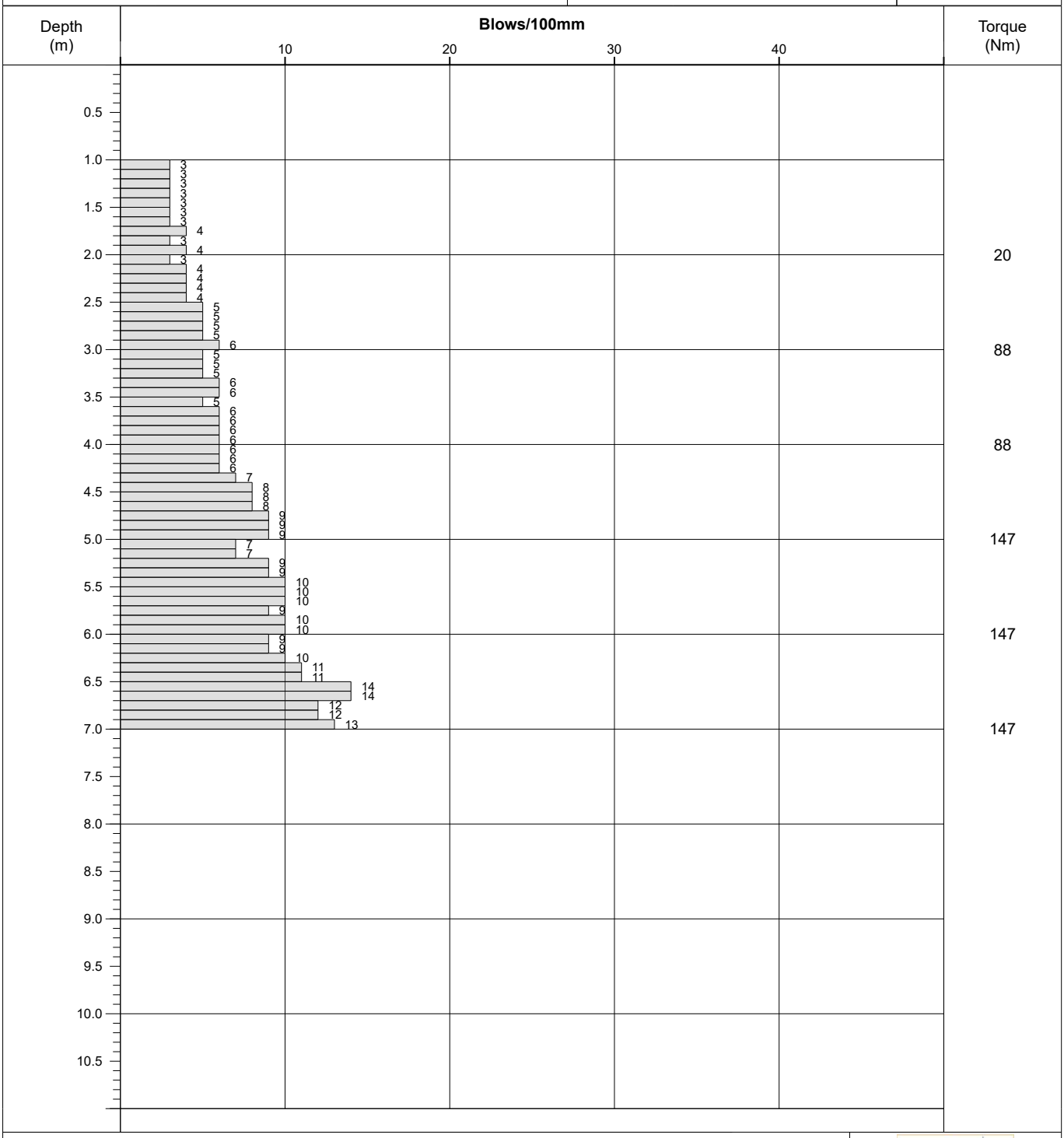
Co-ords: 447175E - 165245N

Level: 121.70 m AOD

Dates: 15/01/2020

Project Number: 19.12.021

Hole Type: SHDP - B



Hammer Weight: 63.5kgs **Fall Height:** 0.75m **Cone Area:** 20cm²

Remarks: Co-ordinates provided to nearest 5m and 0.1m AOD

* = settled under own weight

ISO 9001 REGISTERED FIRM

AGS Association of Geotechnical & Geoenvironmental Specialists

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Report No: 19.12.021
Site: Monks Lane, Newbury, Berkshire RG14 7TD

Test Details

Test Location Reference	DP1	
Test Number	1	
Depth of test	0.50m	**m below Ground Level**
Plate size	300	**mm diameter circular**
Sample reference	N/A	
Sample depth	0.50m	**m (below Ground Level)**
Technician	JH	
Date of test	15/01/2020	
Weather	Sunny, dry	

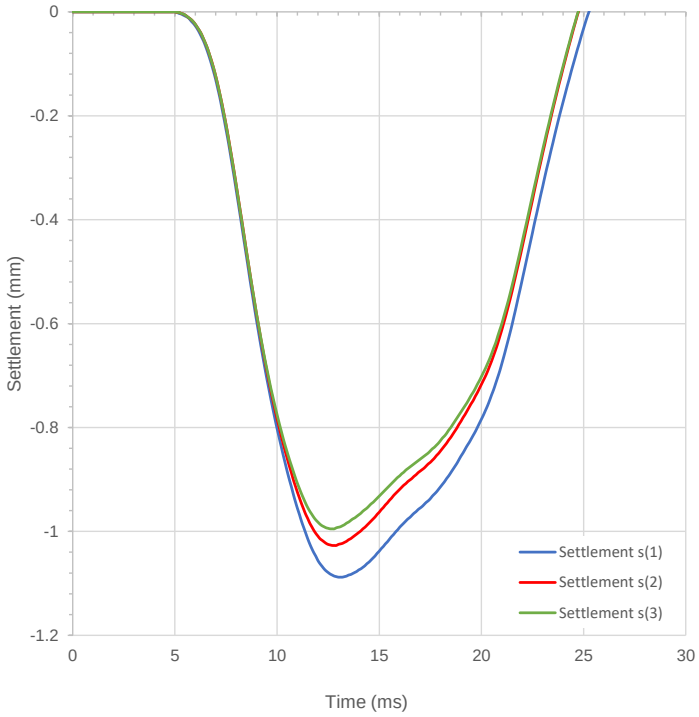
Description of test stratum/strata

(Loose) brown clayey GRAVEL. Gravel is fine to medium, sub-angular to sub-rounded flint and quartzite.

Test Record

Device No.	8342	
Measuring Series	14	
Plate diameter	300	**mm**
Mass of drop weight	10	**kg**
Height of drop	1,135	**mm**
Max impact force	7070	**N**
Duration of impact	18	**ms**

Plot of Time against Settlement



Max Settlement (mm)	Max Velocity (mm/s)
s(1) = 1.088 mm	v(1) = 254.6 mm/s
s(2) = 1.027 mm	v(2) = 252.7 mm/s
s(3) = 0.995 mm	v(3) = 251.2 mm/s

Mean Settlement (mm)	Mean Velocity (mm/s)
s(m) = 1.037 mm	v(m) = 252.8 mm/s

Calculation and Result

Dynamic compactness ratio, s/v =	0.004	
Dynamic Modulus of Deformation, Evd =	21.70	MPa
Equivalent CBR value	**10.9**	**%**

Remarks: None

DYNAMIC PLATE LOADING TEST CERTIFICATE

TP BF-StB, Part B 8.3. Technical specification for soil and rock in road construction, Dynamic Plate Loading Test, German Road and Transportation Research Association, 2003

Report No.: 19.12.021

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Report No: 19.12.021
Site: Monks Lane, Newbury, Berkshire, RG14 7TD

Test Details

Test Location Reference	DP2	
Test Number	1	
Depth of test	0.60m	**m below ground level**
Plate size	300	**mm diameter circular**
Sample reference	N/A	
Sample depth	N/A	**m (below ground level)**
Technician	JH	
Date of test	15/01/2020	
Weather	Sunny, dry	

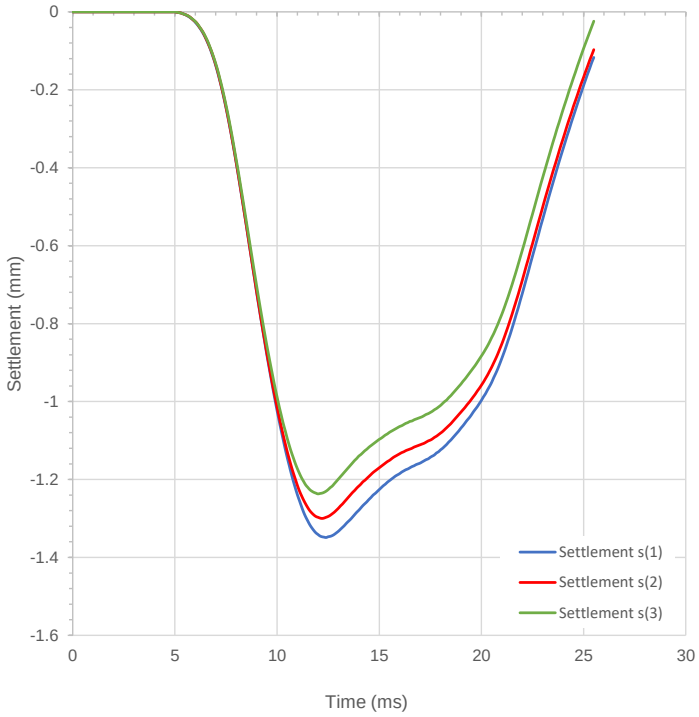
Description of test stratum/strata

Soft, dark brown, sandy, gravelly CLAY with rootlets. Gravel is fine to medium, sub-angular to sub-rounded flint and quartzite.

Test Record

Device No.	8342	
Measuring Series	15	
Plate diameter	300	**mm**
Mass of drop weight	10	**kg**
Height of drop	1,135	**mm**
Max impact force	7070	**N**
Duration of impact	18	**ms**

Plot of Time against Settlement



Max Settlement (mm)	Max Velocity (mm/s)
s(1) = 1.349 mm	v(1) = 336.2 mm/s
s(2) = 1.300 mm	v(2) = 335.5 mm/s
s(3) = 1.237 mm	v(3) = 327.9 mm/s

Mean Settlement (mm)	Mean Velocity (mm/s)
s(m) = 1.295 mm	v(m) = 333.2 mm/s

Calculation and Result

Dynamic compactness ratio, s/v =	0.004	
Dynamic Modulus of Deformation, Evd =	17.38	MPa
Equivalent CBR value	**8.0**	**%**

Remarks: None

DYNAMIC PLATE LOADING TEST CERTIFICATE

TP BF-StB, Part B 8.3. Technical specification for soil and rock in road construction, Dynamic Plate Loading Test, German Road and Transportation Research Association, 2003

Report No.: 19.12.021

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

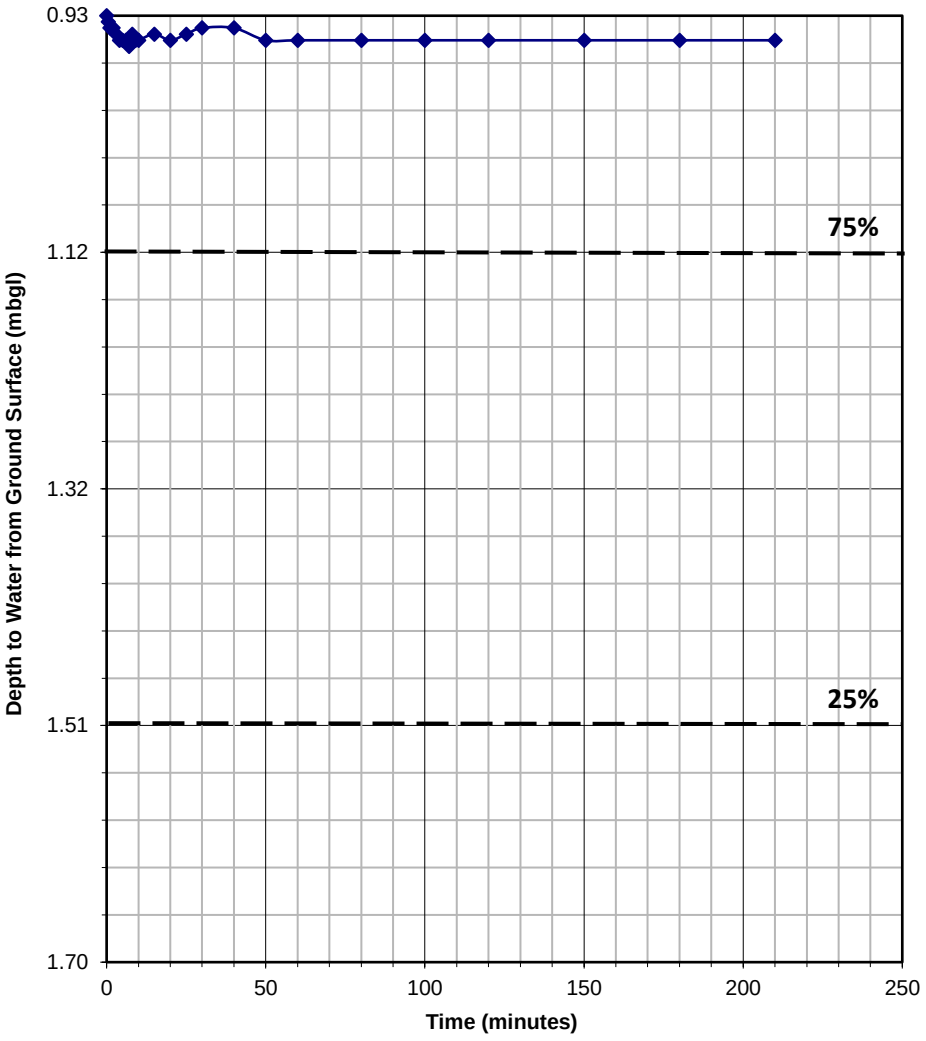
Client: Feltham Construction Ltd
Site: Monks Lane, Newbury, RG14 7TD

Report No: 19.12.021
Date Tested: 15/01/2020
Test Location: TP01 Test 1

Groundwater: unknown
Dimensions: 0.6m W x 1.6m L x 1.70m D

Soil Description - test response zone:
0.7 - 2.0m - (Loose) slightly clayey very sandy GRAVEL.

Time (mins)	Depth BGL
0	0.93
0.5	0.94
1	0.94
2	0.94
3	0.95
4	0.95
5	0.95
6	0.95
7	0.96
8	0.95
9	0.95
10	0.95
15	0.95
20	0.95
25	0.95
30	0.94
40	0.94
50	0.95
60	0.95
80	0.95
100	0.95
120	0.95
150	0.95
180	0.95
210	0.95



Soil inflitration rate could not be calculated (0.02m drop in 210 minutes).

Remarks: Suspected groundwater ingress during test and pit collapse.

TRIAL PIT INFILTRATION TESTING to BRE Digest 365	Report: 19.12.021

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

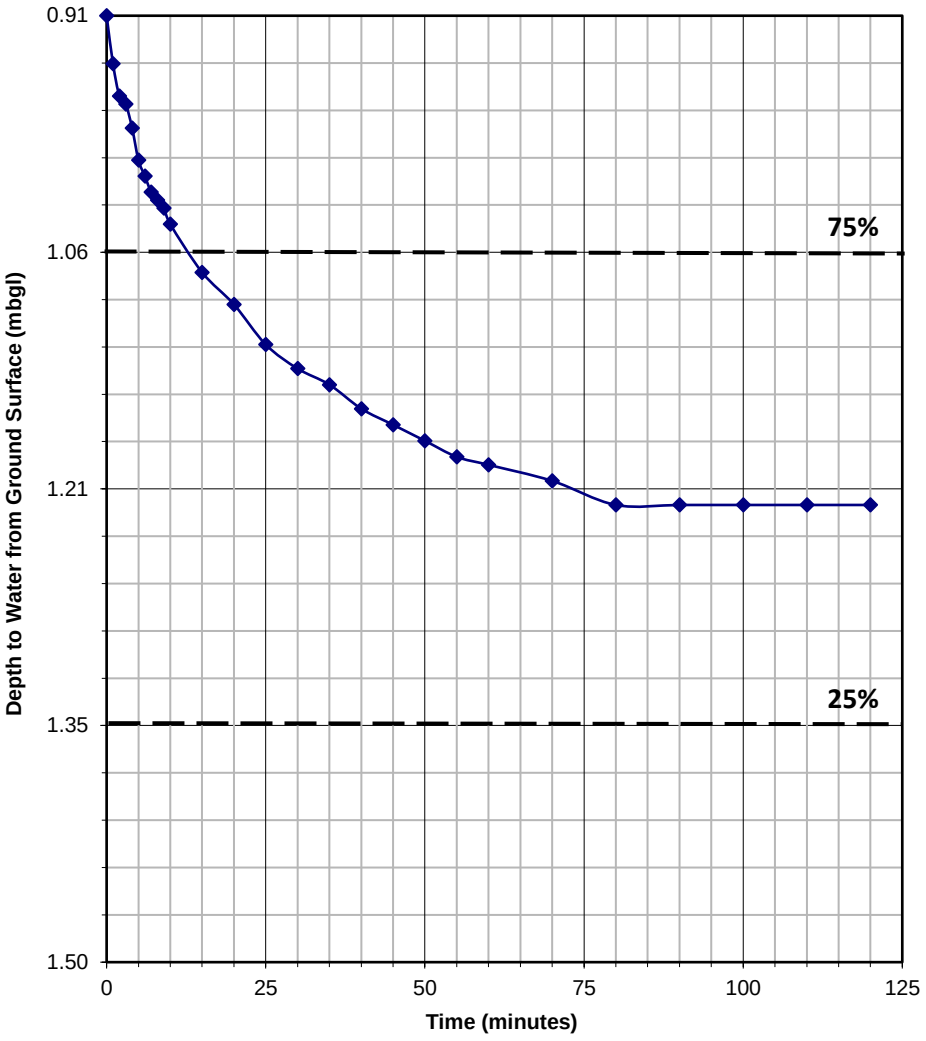
Client: Feltham Construction Ltd
Site: Monks Lane, Newbury, RG14 7TD

Report No: 19.12.021
Date Tested: 15/01/2020
Test Location: TP02 Test 1

Groundwater: 1.50 m (before start of test)
Dimensions: 0.5m W x 1.6m L x 1.95m D

Soil Description - test response zone:
0.5m - 1.9m - Clayey sandy GRAVEL.

Time (mins)	Depth BGL
0	0.91
1	0.94
2	0.96
3	0.97
4	0.98
5	1.00
6	1.01
7	1.02
8	1.03
9	1.03
10	1.04
15	1.07
20	1.09
25	1.12
30	1.13
35	1.14
40	1.16
45	1.17
50	1.18
55	1.19
60	1.19
70	1.20
80	1.22
90	1.22
100	1.22
110	1.22
120	1.22



Extrapolated Soil Infiltration Rate = 6.7x10^{-6} m/s
Result calculated from extrapolated data: GUIDE ONLY

TRIAL PIT INFILTRATION TESTING to BRE Digest 365	Report: 19.12.021

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

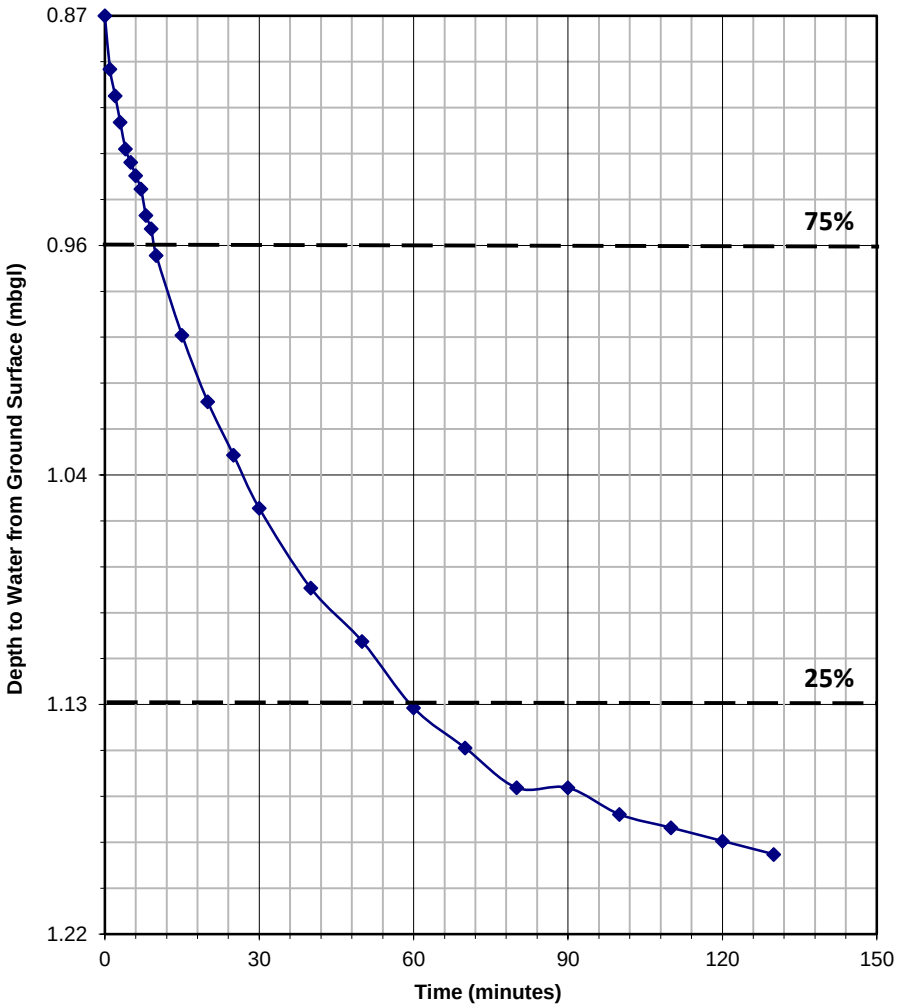
Client: Feltham Construction Ltd
Site: Monks Lane, Newbury, RG14 7TD

Report No: 19.12.021
Date Tested: 15/01/2020
Test Location: TP02 Test 2

Groundwater: 1.22 m (before start of test)
Dimensions: 0.5m W x 1.6m L x 1.78m D

Soil Description - test response zone:
0.5m - 1.9m - Clayey sandy GRAVEL.

Time (mins)	Depth BGL
0	0.87
1	0.89
2	0.90
3	0.91
4	0.92
5	0.93
6	0.93
7	0.94
8	0.95
9	0.95
10	0.96
15	0.99
20	1.02
25	1.04
30	1.06
40	1.09
50	1.11
60	1.13
70	1.15
80	1.16
90	1.16
100	1.17
110	1.18
120	1.18
130	1.19



Calculated Soil Infiltration Rate = 3.0×10^{-5} m/s

TRIAL PIT INFILTRATION TESTING to BRE Digest 365	Report: 19.12.021

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Project:	Monks Lane, Newbury, RG14 7TD

Date:	28/01/2020	**Ambient air temperature (°C):**	6
Time:	From 11:33 to 11:43	**Barometric pressure (mB):**	982
Recorded by:	CR	**Barometric trend:**	Rising
Equipment:	Geotech GA5000 gas monitor and dip-meter	**Weather conditions:**	Sunny

Groundwater monitoring

Hole ID	Ground level (m aOD)	Water depth (m bgl)	Water level (m aOD)	Depth of well base (m bgl)	Remarks
CT02	+121.7	0.26	+121.4	4.00	
HP01	+121.9	0.98	+120.9	1.01	

Gas monitoring

Hole ID	Methane CH_4 (%v/v)	Carbon Dioxide CO_2 (%v/v)	Oxygen O_2 (%v/v)	Flow Rate (l/h)	Well Pressure (mBar)	PID* (ppm)	Remarks
CT02	<0.1	0.1	21.4	0.3	0.03		Response zone fully saturated
HP01	<0.1	0.4	18.7	0.3	0.03		

SUMMARY OF GAS & GROUNDWATER MONITORING - 28 Jan 20	**Report No.** 19.12.021

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Project:	Monks Lane, Newbury, RG14 7TD

Date:	21/02/2020	**Ambient air temperature (°C):**	7
Time:	From 09:58 to 10:03	**Barometric pressure (mB):**	1009
Recorded by:	PH	**Barometric trend:**	Rising
Equipment:	Geotech GA5000 gas monitor and dip-meter	**Weather conditions:**	Cloudy

Groundwater monitoring

Hole ID	Ground level (m aOD)	Water depth (m bgl)	Water level (m aOD)	Depth of well base (m bgl)	Remarks
CT02	+121.7	-0.01	+121.7	4.00	Borehole completely flooded
HP01	+121.9	DRY	<120.89	1.01	

Gas monitoring

Hole ID	Methane CH_4 (%v/v)	Carbon Dioxide CO_2 (%v/v)	Oxygen O_2 (%v/v)	Flow Rate (l/h)	Well Pressure (mBar)	PID* (ppm)	Remarks
CT02	N/A	N/A	N/A	N/A	N/A		Borehole flooded
HP01	0.1	2.5	8.3	0.3	0.17		

SUMMARY OF GAS & GROUNDWATER MONITORING - 21 Feb 20	**Report No.** 19.12.021

APPENDIX C
LABORATORY TESTING RESULTS AND TABLES

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone:- 01327 860947/860060 Fax:- 01327 860430 Email: groundtech@listersgeotechnics.co.uk

PROJECT INFORMATION		SAMPLE INFORMATION		
Site Location:-	Monks Lane Newbury RG14 7TD	**Laboratory Tests Undertaken:-**		
		TEST TYPE	**TEST METHOD**	**TESTED**
		Natural Water Contents (WC%)	(BS 1377:Part 2:1990 Clause 3.2)	✓
		Liquid Limits (%)	(BS 1377:Part 2:1990 Clause 4.3)	✓
		Plastic Limits (%)	(BS 1377:Part 2:1990 Clause 5.3)	✓
		Plasticity Index (%)	(BS 1377:Part 2:1990 Clause 5.4)	✓
		Linear Shrinkage (%)	(BS 1377:Part 2:1990 Clause 6.5)	
		PSD - Wet Sieving	(BS 1377:Part 2:1990 Clause 9.2)	✓
Client Reference:-	-	Engineering Sample Descriptions	(BS 5930 : Section 6)	
		Passing 425/63 (μm)	-	✓
		Hydrometer	(BS 1377:Part 2:1990 Clause 9.5)	
Date Samples Received:-	16th January 2020	Loss on Ignition (%)	-	
Date Testing Completed:-	31st January 2020	Soil Suctions (kPa)	BRE Digest IP 4/93, 1993	
		Bulk Density (Mg/m^3)	(BS 1377:Part 2:1990 Clause 7.2)	
		Strength Tests	(BS 1377:Part 7:1990 Clause 8 & 9)	
		Soluble Sulphate Content (SO_4g/l)	(BS 1377:Part 3:1990 Clause 5.3)	✓
		pH value	(BS 1377:Part 3:1990 Clause 9.4)	✓
		California Bearing Ratios (CBR)	(BS 1377:Part 4:1990 Clause 7)	
		Compaction Tests	(BS 1377:Part 4:1990 Clauses 3.0-3.6)	
The results relate only to the samples tested				

Laboratory testing in accord with BS EN ISO/IEC 17025-2000 and Quality Management in accord with ISO 9001

Signed on behalf of GroundTech Laboratories:- Jane Taylor **Technical Signatory**

Quality Assured to ISO 9001

GEOTECHNICAL LABORATORY TEST RESULTS

Report No: 19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD
Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured to ISO 9001

SAMPLES				CLASSIFICATION TESTS							CLASSIFICATION TESTS							STRENGTH TESTS					CHEMICAL TESTS	
Test Location	Sample Type	Sample Depth -m	Test Type	WC %	LL %	PL %	PI %	Passing 425 µm %	Modified PI %	Class	Passing 63 µm %	WC/ LL	PL+ 2%	Liquidity Index	Loss on Ignition %	Soil Suction kPa	Bulk Density Mg/m³	Test Type	Cell Pressure kN/m²	Deviator Stress kN/m²	Apparent Cohesion kN/m²	ϕ	pH Value	Soluble Sulphate Content SO4 g/l
CT 01	D	0.10		28																				
	D	0.50	PSD	11																				
	D	1.00		6.7																			7.8	0.12
	D	1.50		7.2																				
	D	2.00		14																				
	D	2.40	PSD	8.9																				
CT 02	D	0.20		11																				
	D	0.50	PSD	9.6																				
	D	1.00	PI/63	25	43	18	25	51	13	CI	43	0.58	20	0.28										
	D	1.20		28																			6.9	0.06
	D	1.50		25																				
	D	2.00	PI/63	27	38	18	20	100	20	CI	80	0.71	20	0.45										
	D	2.50		28																				
	D	3.00		29																				
	D	3.50		27																			6.2	0.06
	D	4.00	PI/63	27	39	20	19	100	19	CI	70	0.69	22	0.37										
	D	4.50		27																				
	D	5.00		29																				
	D	5.50	PI/63	28	43	18	25	100	25	CI	87	0.65	20	0.40										
CT 03	D	0.10		13																				
	D	0.50		10																			6.4	0.08
	D	1.00	PI/63	14	26	14	12	67	8	CL	36	0.54	16	0.00										
	D	1.20		12																				

Symbols:

U	Undisturbed Sample	R	Remoulded	PI	Plasticity Index	T	Triaxial Undrained	L	100mm specimen
D	Disturbed Sample	63	Passing 63µm	F	Filter Paper Suction Tests	M	Multistage Triaxial	S	38mm specimen
B	Bulk Sample	H	Hydrometer	CC	Continuous Core	HP	Hand Penetrometer		
W	Water Sample	PSD	Wet Sieving			V	Vane Test		

LABORATORY TEST RESULTS

Project Reference
19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD
Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured to ISO 9001

SAMPLES				CLASSIFICATION TESTS							CLASSIFICATION TESTS							STRENGTH TESTS					CHEMICAL TESTS	
Test Location	Sample Type	Sample Depth -m	Test Type	WC %	LL %	PL %	PI %	Passing 425 µm %	Modified PI %	Class	Passing 63 µm %	WC/ LL	PL+ 2%	Liquidity Index	Loss on Ignition %	Soil Suction kPa	Bulk Density Mg/m³	Test Type	Cell Pressure kN/m²	Deviator Stress kN/m²	Apparent Cohesion kN/m²	ϕ	pH Value	Soluble Sulphate Content SO4 g/l
CT 03	D	1.50	PSD	8.5																				
	D	2.00		8.1																				
	D	2.50		11																				
	D	3.00	PSD	16																				
TP 01	D	0.10		24																				
	D	0.50		12																				
	D	1.00		19																			6.7	0.04
	D	1.50	PSD	11																				
	D	2.00		9.7																				
TP 02	D	0.20		26																				
	D	0.50		11																				
	D	1.00	PSD	13																				
	D	1.50		11																				
TP 03	D	0.10		19																				
	D	0.50	PSD	14																				
	D	1.00	PI/63	26	44	17	27	84	23	CI	72	0.59	19	0.33										
	D	1.50		18																				
	D	2.00		27																				
	D	2.50	PI/63	28	39	20	19	100	19	CI	83	0.72	22	0.42									6.2	0.04
	D	3.00		29																				
	D	3.50	PI/63	27	38	19	19	99	19	CI	67	0.71	21	0.42										
TP 04	D	0.50		13																				
TP 05	D	0.50		14																				

Symbols:

U	Undisturbed Sample	R	Remoulded	PI	Plasticity Index	T	Triaxial Undrained	L	100mm specimen
D	Disturbed Sample	63	Passing 63µm	F	Filter Paper Suction Tests	M	Multistage Triaxial	S	38mm specimen
B	Bulk Sample	H	Hydrometer	CC	Continuous Core	HP	Hand Penetrometer		
W	Water Sample	PSD	Wet Sieving			V	Vane Test		

LABORATORY TEST RESULTS

Project Reference
19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured ISO 9001

Site: Monks Lane, Newbury, RG14 7TD

Test Location: CT 01

Sample Depth: 0.50m -1.00m

Sample Description:

Hydrometer No.:

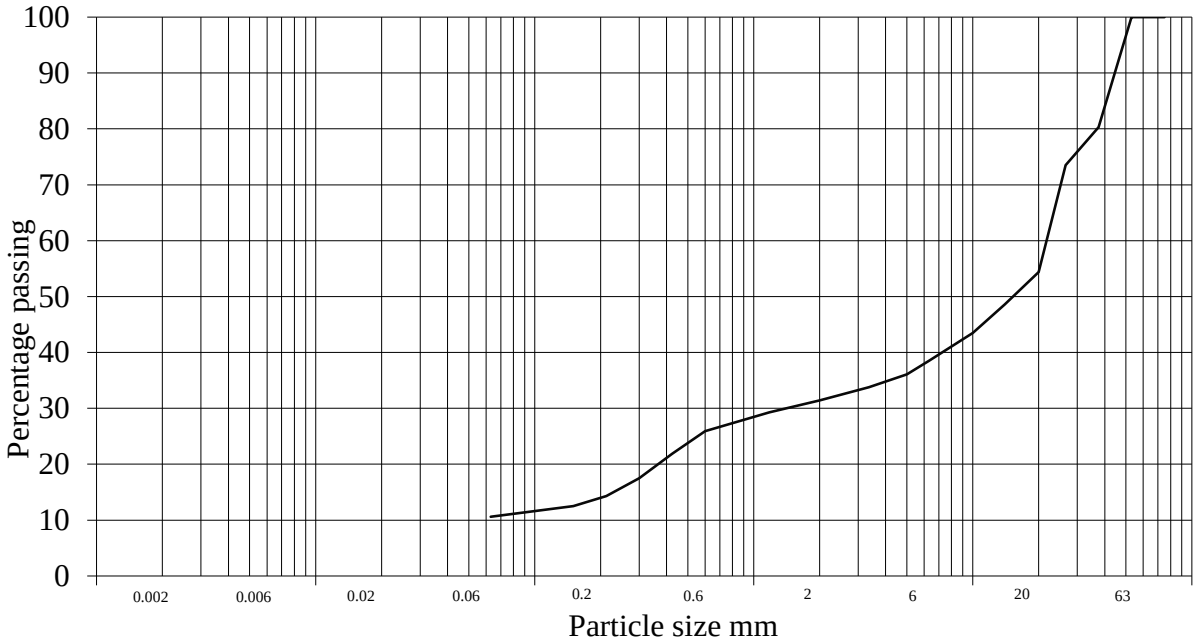
SG Gs:

Water Visc. (N):

Dry Mass of Soil after pretreatment (g):

Test Method: BS 1377 : Part 2 : 1990 : 9.2

BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
75mm	100.00		
63mm	100.00		
50mm	100.00		
37.5mm	80.30		
26.5mm	73.50		
20mm	54.40		
14mm	48.60		
10mm	43.50		
6.3mm	38.50		
5mm	36.10		
3.5mm	33.80		
2mm	31.40		
1.18mm	29.30		
600µm	25.90		
425µm	21.90		
300µm	17.50		
212µm	14.30		
150µm	12.50		
63µm	10.60		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
11%				21%			69%			0%

PARTICLE SIZE DISTRIBUTION

Project Reference
19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured ISO 9001

Site: Monks Lane, Newbury, RG14 7TD

Test Location: CT 01

Sample Depth: 2.40m -2.50m

Sample Description:

Hydrometer No.:

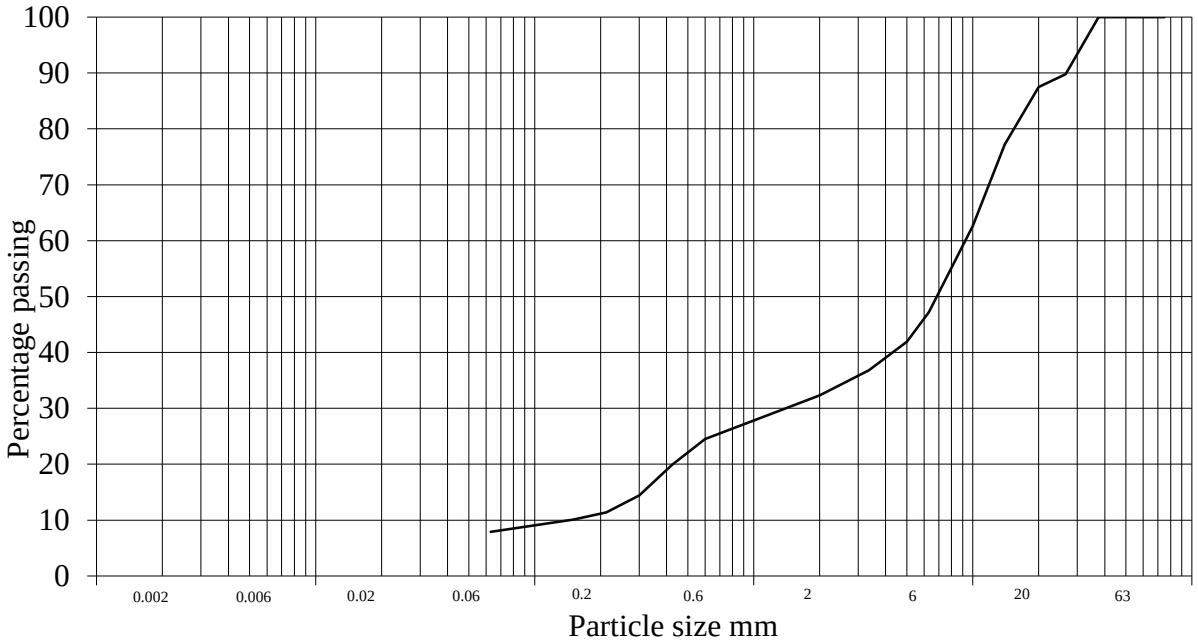
SG Gs:

Water Visc. (N):

Dry Mass of Soil after pretreatment (g):

Test Method: BS 1377 : Part 2 : 1990 : 9.2

BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
75mm	100.00		
63mm	100.00		
50mm	100.00		
37.5mm	100.00		
26.5mm	89.80		
20mm	87.50		
14mm	77.20		
10mm	62.60		
6.3mm	47.20		
5mm	41.90		
3.5mm	36.80		
2mm	32.30		
1.18mm	28.90		
600µm	24.50		
425µm	19.90		
300µm	14.40		
212µm	11.40		
150µm	10.10		
63µm	7.90		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
8%				24%			68%			0%

PARTICLE SIZE DISTRIBUTION

Project Reference 19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD
Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured ISO 9001

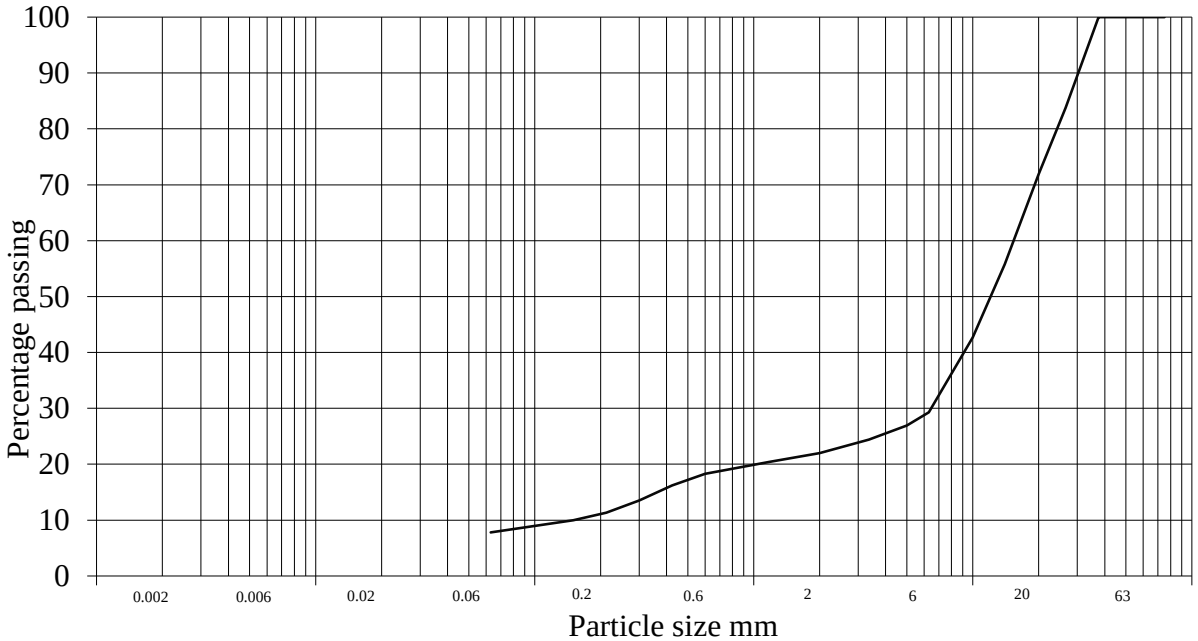
Site: Monks Lane, Newbury, RG14 7TD

Test Location: CT 02
Sample Depth: 0.50m -0.90m
Sample Description:

Hydrometer No.:
SG Gs:
Water Visc. (N):
Dry Mass of Soil after pretreatment (g):

Test Method: BS 1377 : Part 2 : 1990 : 9.2

BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
75mm	100.00		
63mm	100.00		
50mm	100.00		
37.5mm	100.00		
26.5mm	83.80		
20mm	71.90		
14mm	55.80		
10mm	42.70		
6.3mm	29.30		
5mm	26.90		
3.5mm	24.40		
2mm	22.00		
1.18mm	20.40		
600µm	18.30		
425µm	16.20		
300µm	13.50		
212µm	11.30		
150µm	10.00		
63µm	7.80		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
8%				14%			78%			0%

PARTICLE SIZE DISTRIBUTION

Project Reference
19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured ISO 9001

Site: Monks Lane, Newbury, RG14 7TD

Test Location: CT 03

Sample Depth: 1.50m -2.00m

Sample Description:

Hydrometer No.:

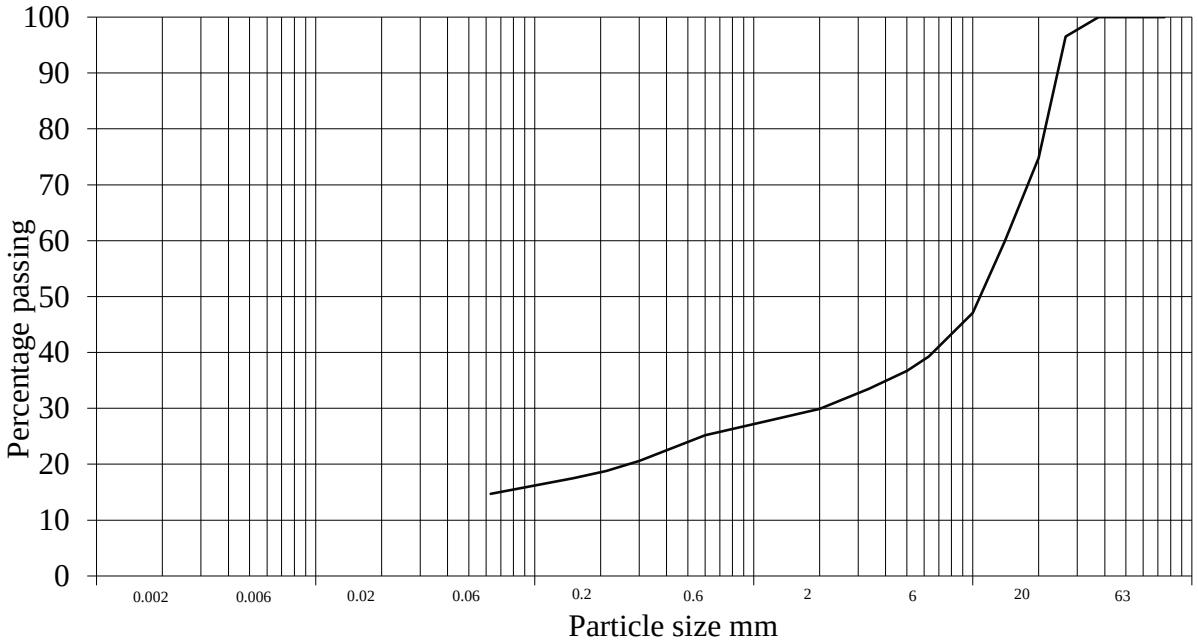
SG Gs:

Water Visc. (N):

Dry Mass of Soil after pretreatment (g):

Test Method: BS 1377 : Part 2 : 1990 : 9.2

BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
75mm	100.00		
63mm	100.00		
50mm	100.00		
37.5mm	100.00		
26.5mm	96.50		
20mm	74.80		
14mm	59.90		
10mm	47.10		
6.3mm	39.30		
5mm	36.70		
3.5mm	33.50		
2mm	29.90		
1.18mm	27.80		
600µm	25.20		
425µm	22.90		
300µm	20.60		
212µm	18.80		
150µm	17.50		
63µm	14.70		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
15%				15%			70%			0%

PARTICLE SIZE DISTRIBUTION

Project Reference 19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured ISO 9001

Site: Monks Lane, Newbury, RG14 7TD

Test Location: CT 03

Sample Depth: 3.00m -3.50m

Sample Description:

Hydrometer No.:

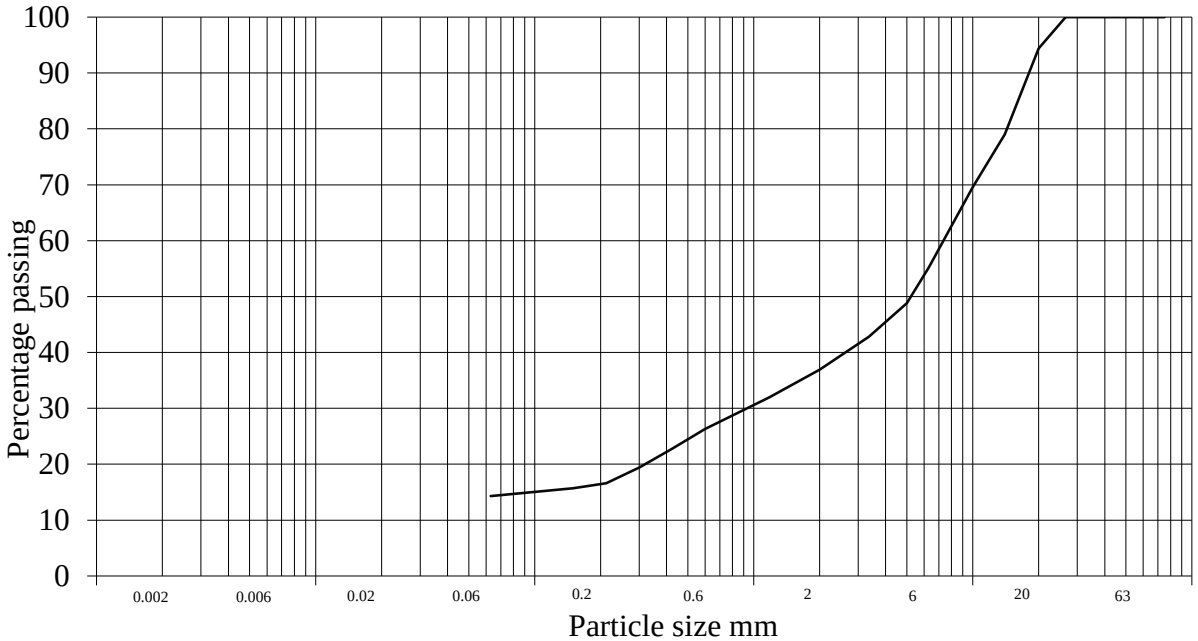
SG Gs:

Water Visc. (N):

Dry Mass of Soil after pretreatment (g):

Test Method: BS 1377 : Part 2 : 1990 : 9.2

BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
75mm	100.00		
63mm	100.00		
50mm	100.00		
37.5mm	100.00		
26.5mm	100.00		
20mm	94.40		
14mm	79.00		
10mm	69.60		
6.3mm	55.20		
5mm	48.80		
3.5mm	42.80		
2mm	36.90		
1.18mm	32.00		
600µm	26.30		
425µm	22.80		
300µm	19.40		
212µm	16.60		
150µm	15.70		
63µm	14.30		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
14%				23%			63%			0%

PARTICLE SIZE DISTRIBUTION

Project Reference
19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured ISO 9001

Site: Monks Lane, Newbury, RG14 7TD

Test Location: TP 01

Sample Depth: 1.50m

Sample Description:

Hydrometer No.:

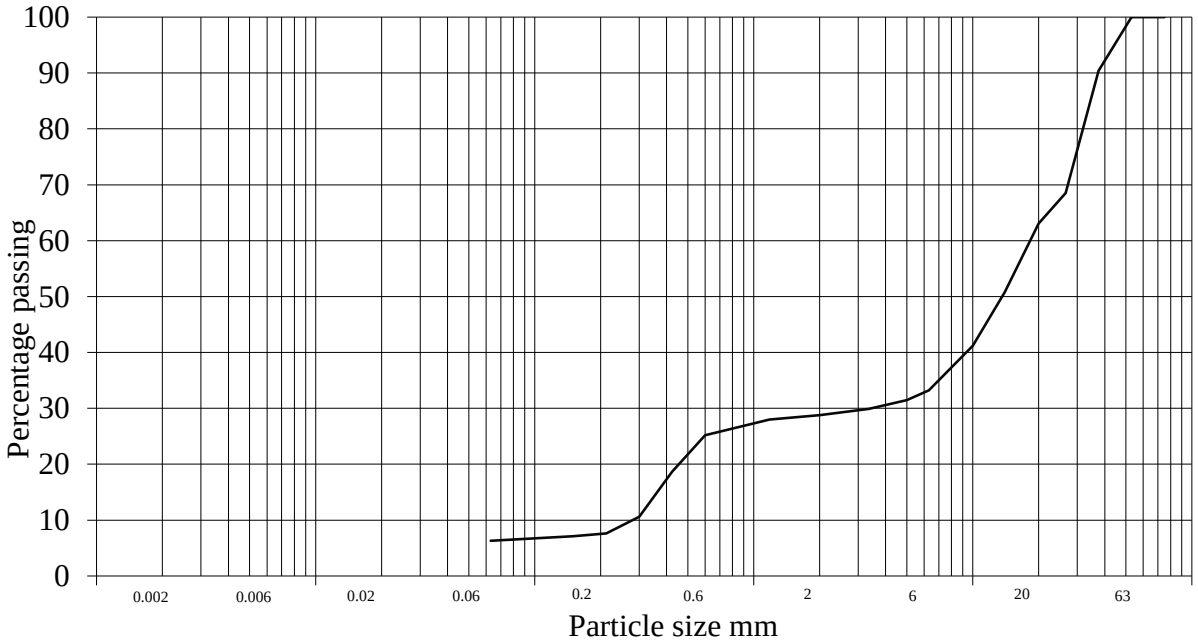
SG Gs:

Water Visc. (N):

Dry Mass of Soil after pretreatment (g):

Test Method: BS 1377 : Part 2 : 1990 : 9.2

BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
75mm	100.00		
63mm	100.00		
50mm	100.00		
37.5mm	90.40		
26.5mm	68.50		
20mm	63.10		
14mm	50.80		
10mm	41.20		
6.3mm	33.20		
5mm	31.50		
3.5mm	29.90		
2mm	28.80		
1.18mm	28.00		
600µm	25.20		
425µm	18.70		
300µm	10.60		
212µm	7.60		
150µm	7.10		
63µm	6.30		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
6%				23%			71%			0%

PARTICLE SIZE DISTRIBUTION

Project Reference
19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured ISO 9001

Site: Monks Lane, Newbury, RG14 7TD

Test Location: TP 02

Sample Depth: 1.00m

Sample Description:

Hydrometer No.:

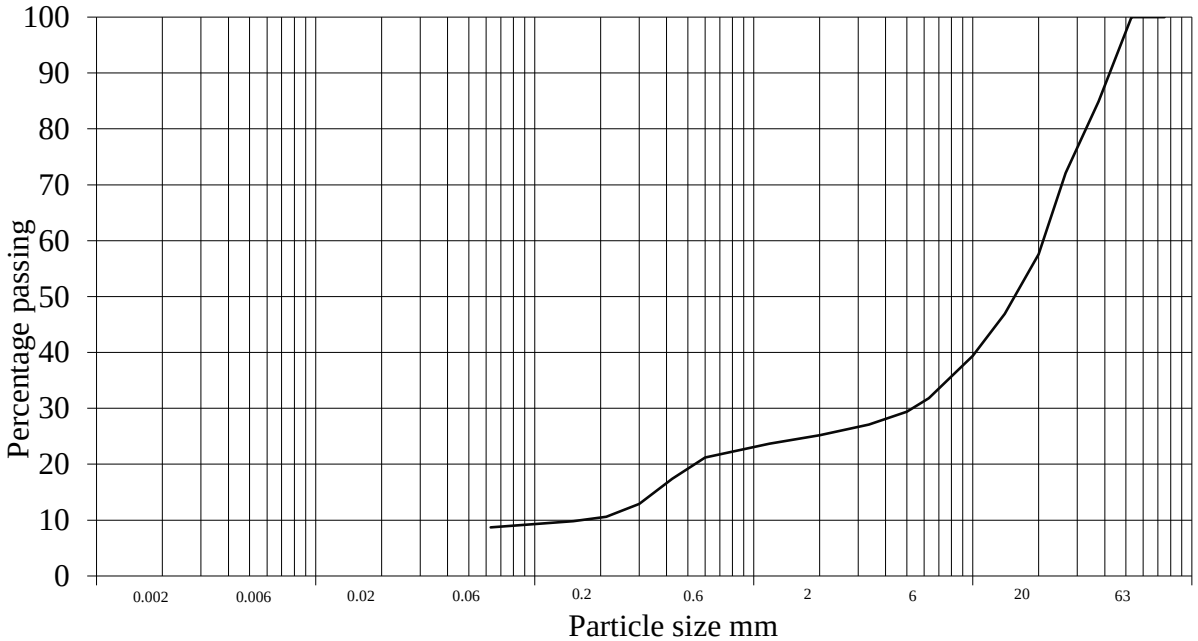
SG Gs:

Water Visc. (N):

Dry Mass of Soil after pretreatment (g):

Test Method: BS 1377 : Part 2 : 1990 : 9.2

BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
75mm	100.00		
63mm	100.00		
50mm	100.00		
37.5mm	84.90		
26.5mm	72.10		
20mm	57.60		
14mm	46.90		
10mm	39.40		
6.3mm	31.80		
5mm	29.40		
3.5mm	27.10		
2mm	25.20		
1.18mm	23.70		
600µm	21.20		
425µm	17.40		
300µm	12.90		
212µm	10.60		
150µm	9.80		
63µm	8.70		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
9%				17%			75%			0%

PARTICLE SIZE DISTRIBUTION

Project Reference
19.12.021

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured ISO 9001

Site: Monks Lane, Newbury, RG14 7TD

Test Location: TP 03

Sample Depth: 0.50m

Sample Description:

Hydrometer No.:

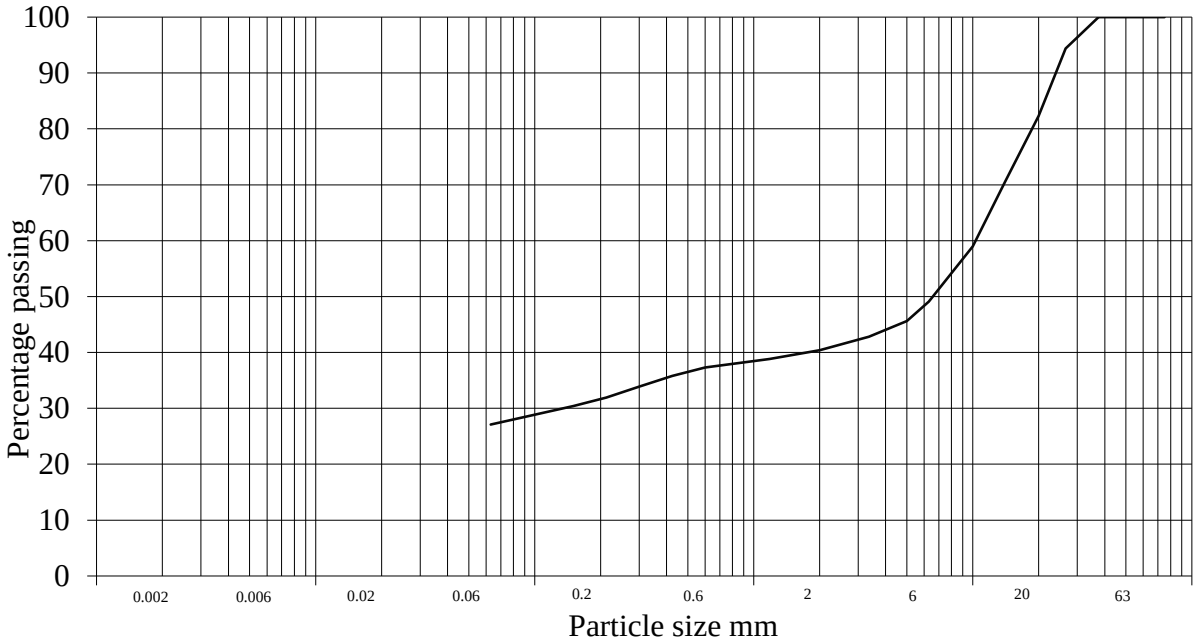
SG Gs:

Water Visc. (N):

Dry Mass of Soil after pretreatment (g):

Test Method: BS 1377 : Part 2 : 1990 : 9.2

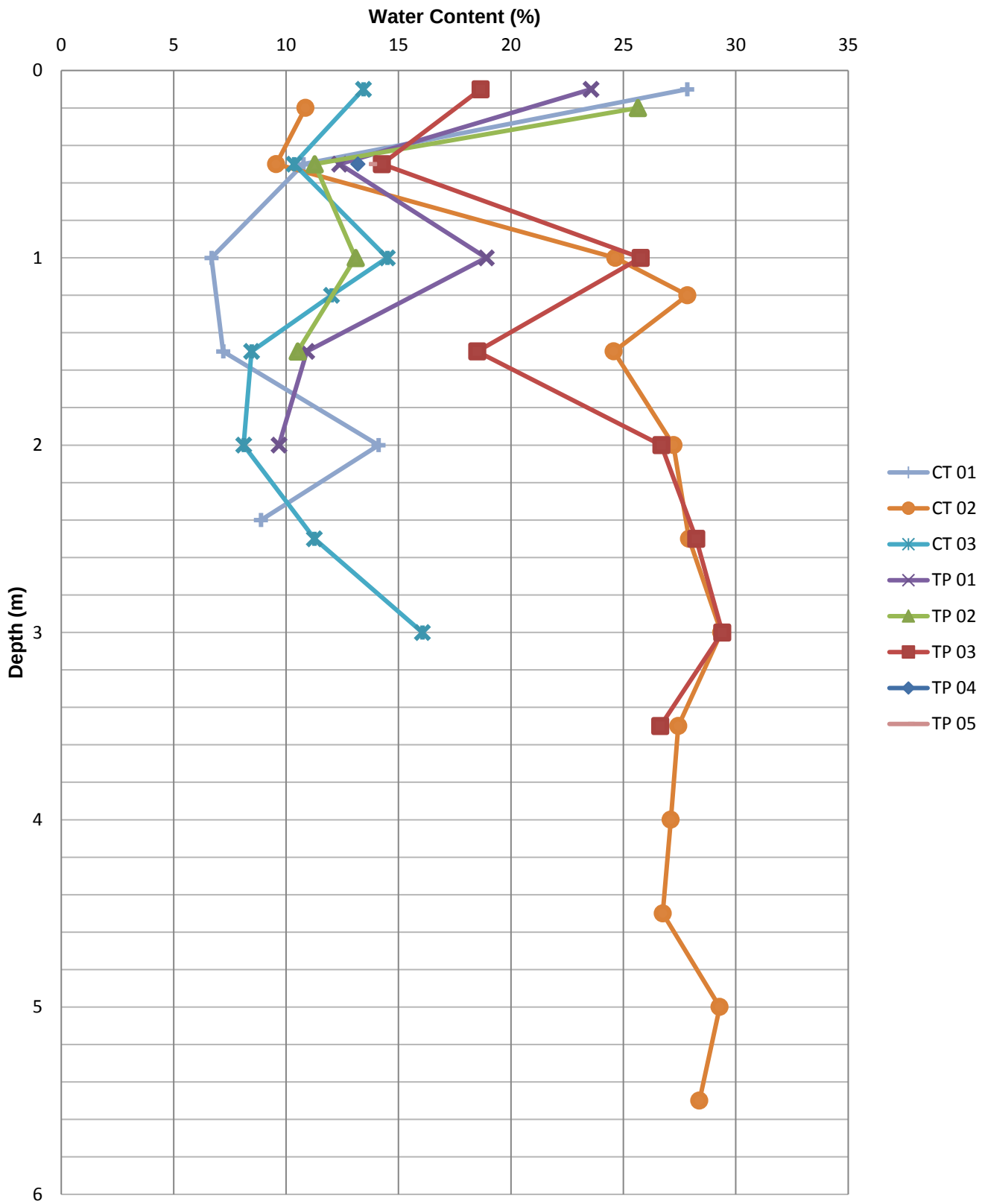
BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
75mm	100.00		
63mm	100.00		
50mm	100.00		
37.5mm	100.00		
26.5mm	94.40		
20mm	82.30		
14mm	70.40		
10mm	59.00		
6.3mm	49.10		
5mm	45.60		
3.5mm	42.80		
2mm	40.40		
1.18mm	38.80		
600µm	37.30		
425µm	35.80		
300µm	33.90		
212µm	31.90		
150µm	30.40		
63µm	27.10		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
27%				13%			60%			0%

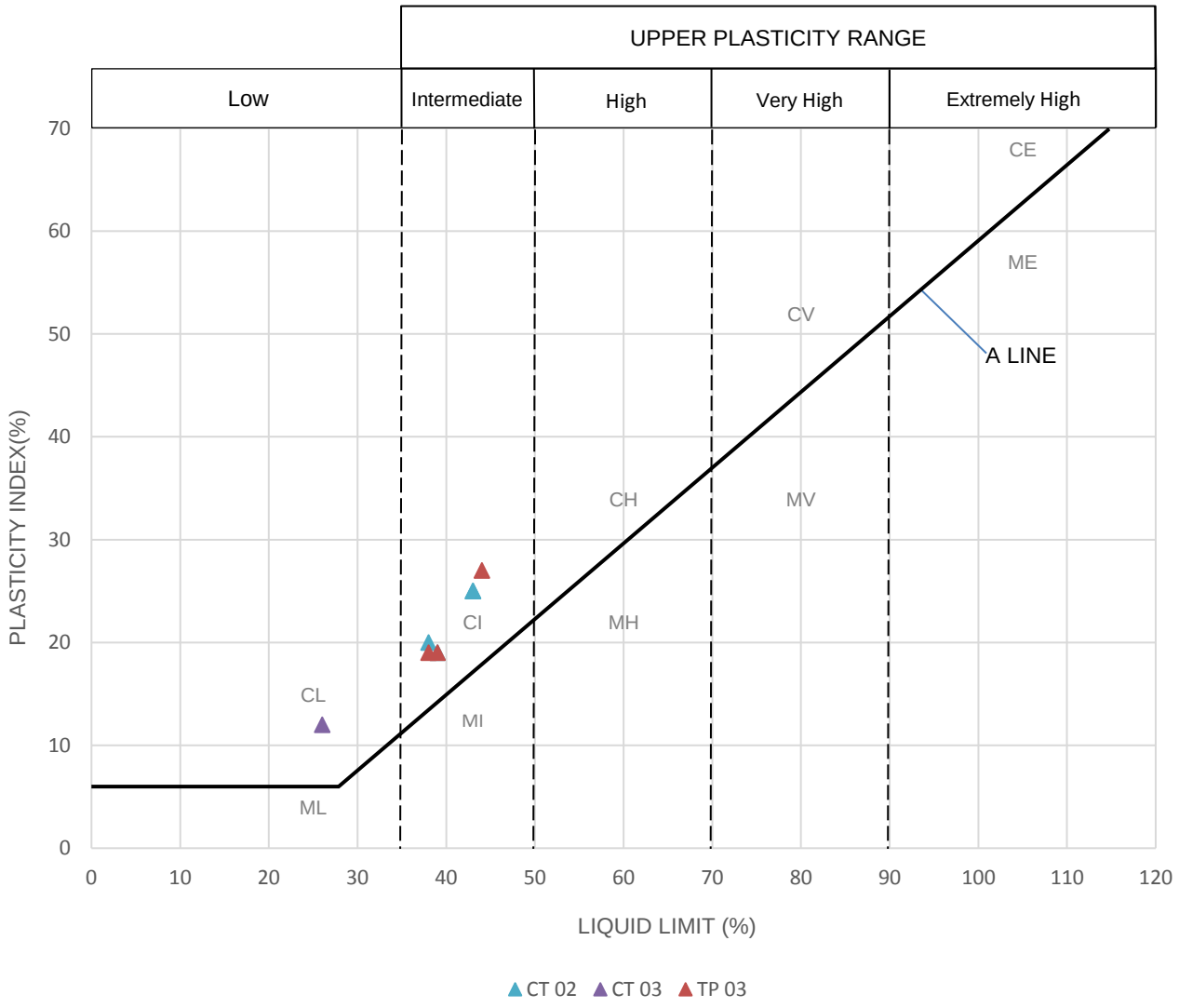
PARTICLE SIZE DISTRIBUTION

Project Reference
19.12.021



WATER CONTENT v DEPTH

Report:
19.12.021



PLASTICITY CHART

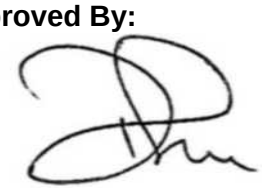
Report:
19.12.021

Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	20-01583-1		
Initial Date of Issue:	24-Jan-2020		
Client	Listers Geotechnical Consultants		
Client Address:	Slapton Hill Barn, Blakesley Road Slapton Towcester Northamptonshire NN12 8QD		
Contact(s):	Jane Taylor		
Project	19.12.021 Newbury		
Quotation No.:	Q18-12046	**Date Received:**	20-Jan-2020
Order No.:	19.12.021/254	**Date Instructed:**	20-Jan-2020
No. of Samples:	10		
Turnaround (Wkdays):	5	**Results Due:**	24-Jan-2020
Date Approved:	24-Jan-2020		

Approved By:



Details: Darrell Hall, Director

Chemtest
The right chemistry to deliver results

Results - Soil

Project: 19.12.021 Newbury

Client: Listers Geotechnical Consultants				**Chemtest Job No.:**	20-01583	20-01583	20-01583	20-01583	20-01583	20-01583	20-01583	20-01583
Quotation No.: Q18-12046				**Chemtest Sample ID.:**	955705	955706	955707	955708	955709	955710	955711	955712
Order No.: 19.12.021/254				Client Sample Ref.:	WAC	WAC	WAC	MG				
				Sample Location:	TP02	TP04	TP05	TP01	CT01	CT02	CT03	TP03
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.5			0.5	0.1	0.2	0.1	0.2
				Bottom Depth (m):					0.5	0.5	0.5	
				Date Sampled:	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020
				Asbestos Lab:				LIVERPOOL				
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A				-				
Asbestos Identification	U	2192	%	0.001				No Asbestos Detected				
ACM Detection Stage	U	2192		N/A				-				
Moisture	N	2030	%	0.020	13	10	10	7.8	9.6	27	14	19
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached
pH	U	2010		4.0	8.3	8.1	8.2	8.2	7.6	8.0	8.0	6.2
Magnesium (Water Soluble)	N	2120	g/l	0.010								
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010	0.029	< 0.010	< 0.010	0.015	< 0.010	< 0.010	< 0.010	0.011
Total Sulphur	U	2175	%	0.010								
Sulphate (Acid Soluble)	U	2430	%	0.010								
Arsenic	U	2450	mg/kg	1.0	10	7.6	4.5	4.3	5.4	4.5	2.8	4.6
Cadmium	U	2450	mg/kg	0.10	0.21	0.10	0.11	0.14	0.18	< 0.10	< 0.10	0.13
Chromium	U	2450	mg/kg	1.0	14	17	14	10	12	19	15	9.3
Copper	U	2450	mg/kg	0.50	13	11	8.4	7.9	8.0	6.5	6.2	7.0
Mercury	U	2450	mg/kg	0.10	0.23	0.12	< 0.10	0.11	0.13	< 0.10	< 0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	11	8.4	8.1	6.6	7.0	12	9.1	5.7
Lead	U	2450	mg/kg	0.50	35	27	28	24	30	7.0	14	24
Selenium	U	2450	mg/kg	0.20	< 0.20	0.32	< 0.20	< 0.20	< 0.20	0.21	< 0.20	< 0.20
Zinc	U	2450	mg/kg	0.50	45	31	20	21	24	11	12	22
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TPH >C6-C8	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C12-C16	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C16-C21	N	2670	mg/kg	1.0	6.3	6.5	3.6	4.2	3.5	2.8	3.2	2.3
TPH >C21-C25	N	2670	mg/kg	1.0	7.1	6.3	6.3	4.1	5.3	6.8	5.2	5.3
TPH >C25-C35	N	2670	mg/kg	1.0	26	14	6.4	9.7	9.6	9.2	9.6	5.5
TPH >C35-C40	N	2670	mg/kg	1.0	9.4	1.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total TPH >C6-C40	U	2670	mg/kg	10	49	29	16	18	19	19	18	13
Naphthalene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.95
Fluorene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1
Phenanthrene	U	2800	mg/kg	0.10	1.3	0.81	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	6.1
Anthracene	U	2800	mg/kg	0.10	0.19	0.18	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.8

Chemtest
The right chemistry to deliver results

Results - Soil

Project: 19.12.021 Newbury

Client: Listers Geotechnical Consultants			**Chemtest Job No.:**		20-01583	20-01583	20-01583	20-01583	20-01583	20-01583	20-01583	20-01583
Quotation No.: Q18-12046			**Chemtest Sample ID.:**		955705	955706	955707	955708	955709	955710	955711	955712
Order No.: 19.12.021/254			Client Sample Ref.:		WAC	WAC	WAC	MG				
			Sample Location:		TP02	TP04	TP05	TP01	CT01	CT02	CT03	TP03
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.5			0.5	0.1	0.2	0.1	0.2
			Bottom Depth (m):						0.5	0.5	0.5	
			Date Sampled:		15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020	15-Jan-2020
			Asbestos Lab:					LIVERPOOL				
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Fluoranthene	U	2800	mg/kg	0.10	1.5	2.2	0.26	< 0.10	< 0.10	< 0.10	< 0.10	7.9
Pyrene	U	2800	mg/kg	0.10	1.3	1.8	0.22	< 0.10	< 0.10	< 0.10	< 0.10	6.1
Benzo[a]anthracene	U	2800	mg/kg	0.10	0.35	0.72	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.9
Chrysene	U	2800	mg/kg	0.10	0.32	0.72	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.4
Benzo[b]fluoranthene	U	2800	mg/kg	0.10	0.36	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.1
Benzo[k]fluoranthene	U	2800	mg/kg	0.10	< 0.10	0.25	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2
Benzo[a]pyrene	U	2800	mg/kg	0.10	0.28	0.62	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.4
Indeno(1,2,3-c,d)Pyrene	U	2800	mg/kg	0.10	0.13	0.36	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.29
Benzo[g,h,i]perylene	U	2800	mg/kg	0.10	0.19	0.48	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	5.9	9.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	39

Chemtest
The right chemistry to deliver results

Results - Soil

Project: 19.12.021 Newbury

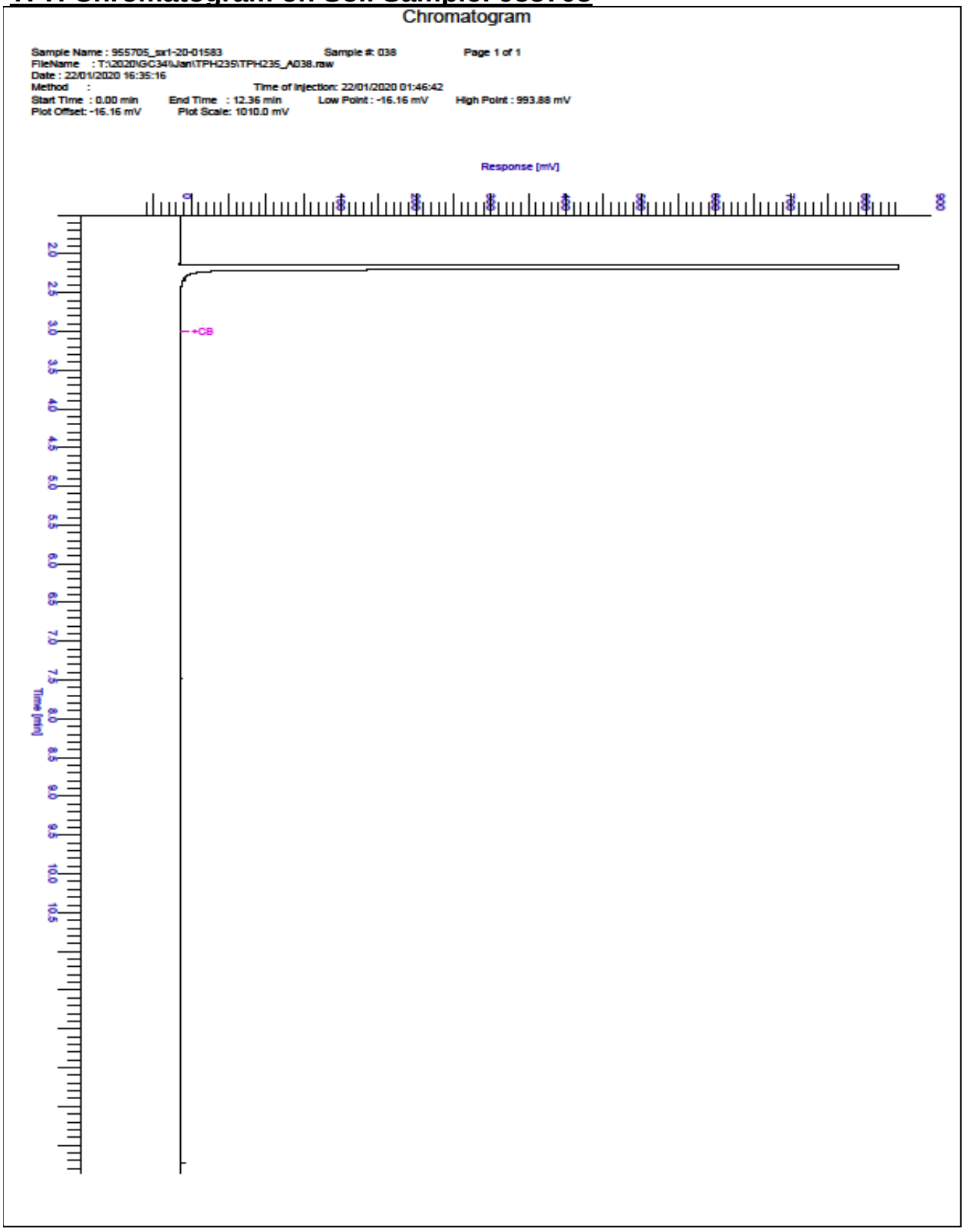
Client: Listers Geotechnical Consultants			**Chemtest Job No.:**		20-01583	20-01583
Quotation No.: Q18-12046			**Chemtest Sample ID.:**		955713	955714
Order No.: 19.12.021/254			Client Sample Ref.:			
			Sample Location:		TP03	CT02
			Sample Type:		SOIL	SOIL
			Top Depth (m):		1.0	1.2
			Bottom Depth (m):			1.5
			Date Sampled:		15-Jan-2020	15-Jan-2020
			Asbestos Lab:			
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A		
Asbestos Identification	U	2192	%	0.001		
ACM Detection Stage	U	2192		N/A		
Moisture	N	2030	%	0.020	17	18
Chromatogram (TPH)	N			N/A		
pH	U	2010		4.0		
Magnesium (Water Soluble)	N	2120	g/l	0.010	< 0.010	< 0.010
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010		
Total Sulphur	U	2175	%	0.010	< 0.010	< 0.010
Sulphate (Acid Soluble)	U	2430	%	0.010	< 0.010	< 0.010
Arsenic	U	2450	mg/kg	1.0		
Cadmium	U	2450	mg/kg	0.10		
Chromium	U	2450	mg/kg	1.0		
Copper	U	2450	mg/kg	0.50		
Mercury	U	2450	mg/kg	0.10		
Nickel	U	2450	mg/kg	0.50		
Lead	U	2450	mg/kg	0.50		
Selenium	U	2450	mg/kg	0.20		
Zinc	U	2450	mg/kg	0.50		
Chromium (Hexavalent)	N	2490	mg/kg	0.50		
TPH >C6-C8	N	2670	mg/kg	1.0		
TPH >C8-C10	N	2670	mg/kg	1.0		
TPH >C10-C12	N	2670	mg/kg	1.0		
TPH >C12-C16	N	2670	mg/kg	1.0		
TPH >C16-C21	N	2670	mg/kg	1.0		
TPH >C21-C25	N	2670	mg/kg	1.0		
TPH >C25-C35	N	2670	mg/kg	1.0		
TPH >C35-C40	N	2670	mg/kg	1.0		
Total TPH >C6-C40	U	2670	mg/kg	10		
Naphthalene	U	2800	mg/kg	0.10		
Acenaphthylene	N	2800	mg/kg	0.10		
Acenaphthene	U	2800	mg/kg	0.10		
Fluorene	U	2800	mg/kg	0.10		
Phenanthrene	U	2800	mg/kg	0.10		
Anthracene	U	2800	mg/kg	0.10		

Results - Soil

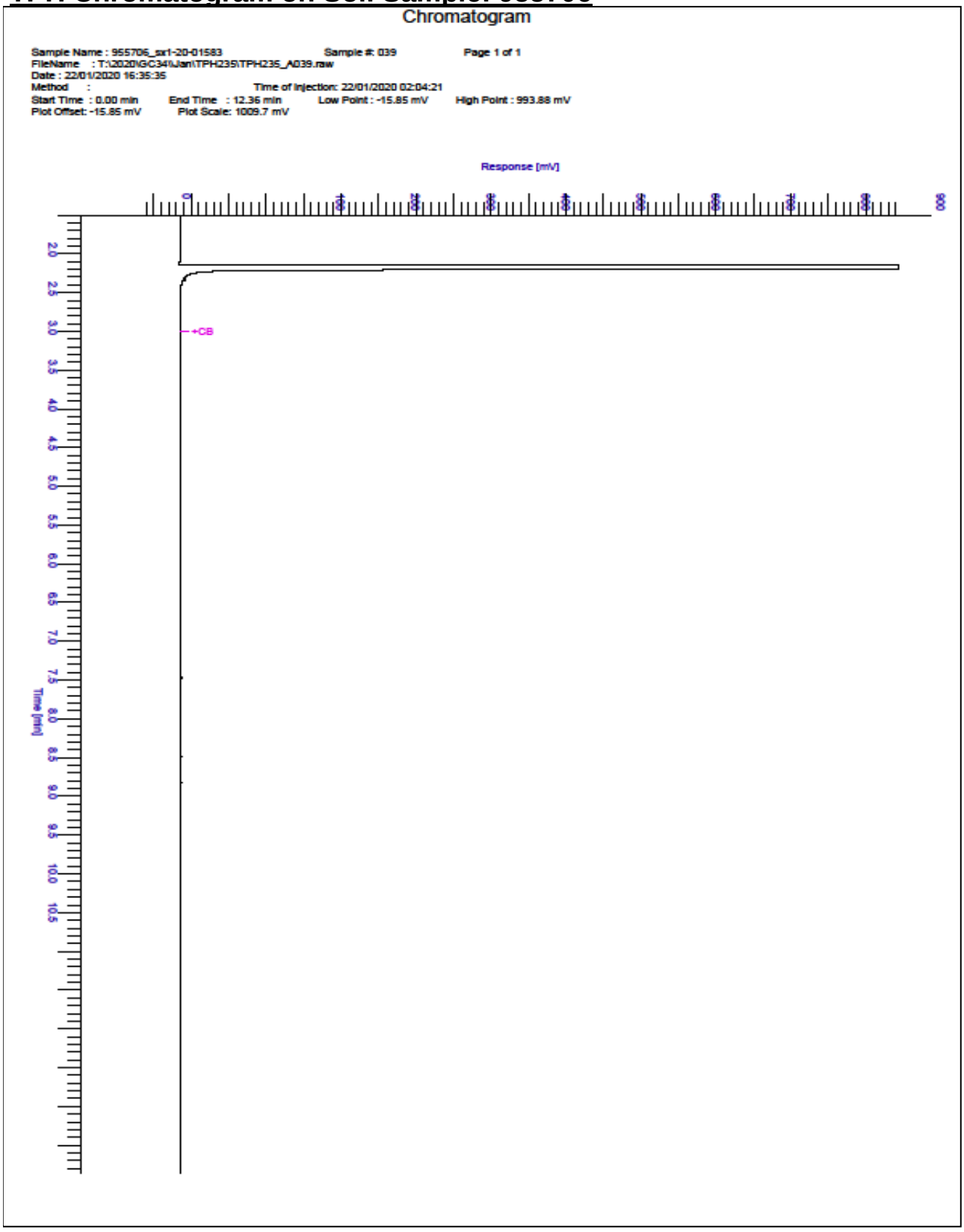
Project: 19.12.021 Newbury

Client: Listers Geotechnical Consultants			**Chemtest Job No.:**		20-01583	20-01583
Quotation No.: Q18-12046			**Chemtest Sample ID.:**		955713	955714
Order No.: 19.12.021/254			Client Sample Ref.:			
			Sample Location:		TP03	CT02
			Sample Type:		SOIL	SOIL
			Top Depth (m):		1.0	1.2
			Bottom Depth (m):			1.5
			Date Sampled:		15-Jan-2020	15-Jan-2020
			Asbestos Lab:			
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Fluoranthene	U	2800	mg/kg	0.10		
Pyrene	U	2800	mg/kg	0.10		
Benzo[a]anthracene	U	2800	mg/kg	0.10		
Chrysene	U	2800	mg/kg	0.10		
Benzo[b]fluoranthene	U	2800	mg/kg	0.10		
Benzo[k]fluoranthene	U	2800	mg/kg	0.10		
Benzo[a]pyrene	U	2800	mg/kg	0.10		
Indeno(1,2,3-c,d)Pyrene	U	2800	mg/kg	0.10		
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		
Benzo[g,h,i]perylene	U	2800	mg/kg	0.10		
Total Of 16 PAH's	N	2800	mg/kg	2.0		

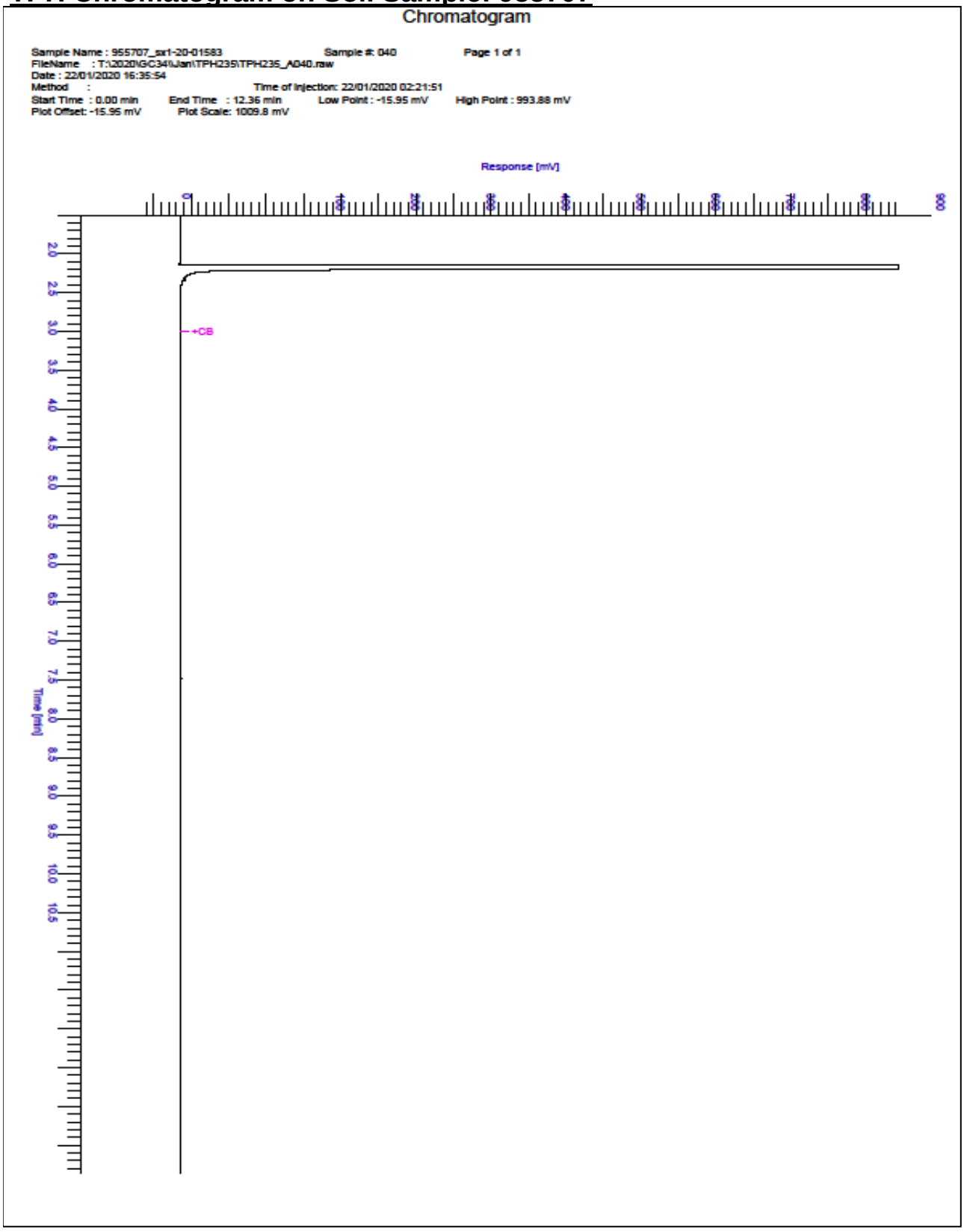
TPH Chromatogram on Soil Sample: 955705



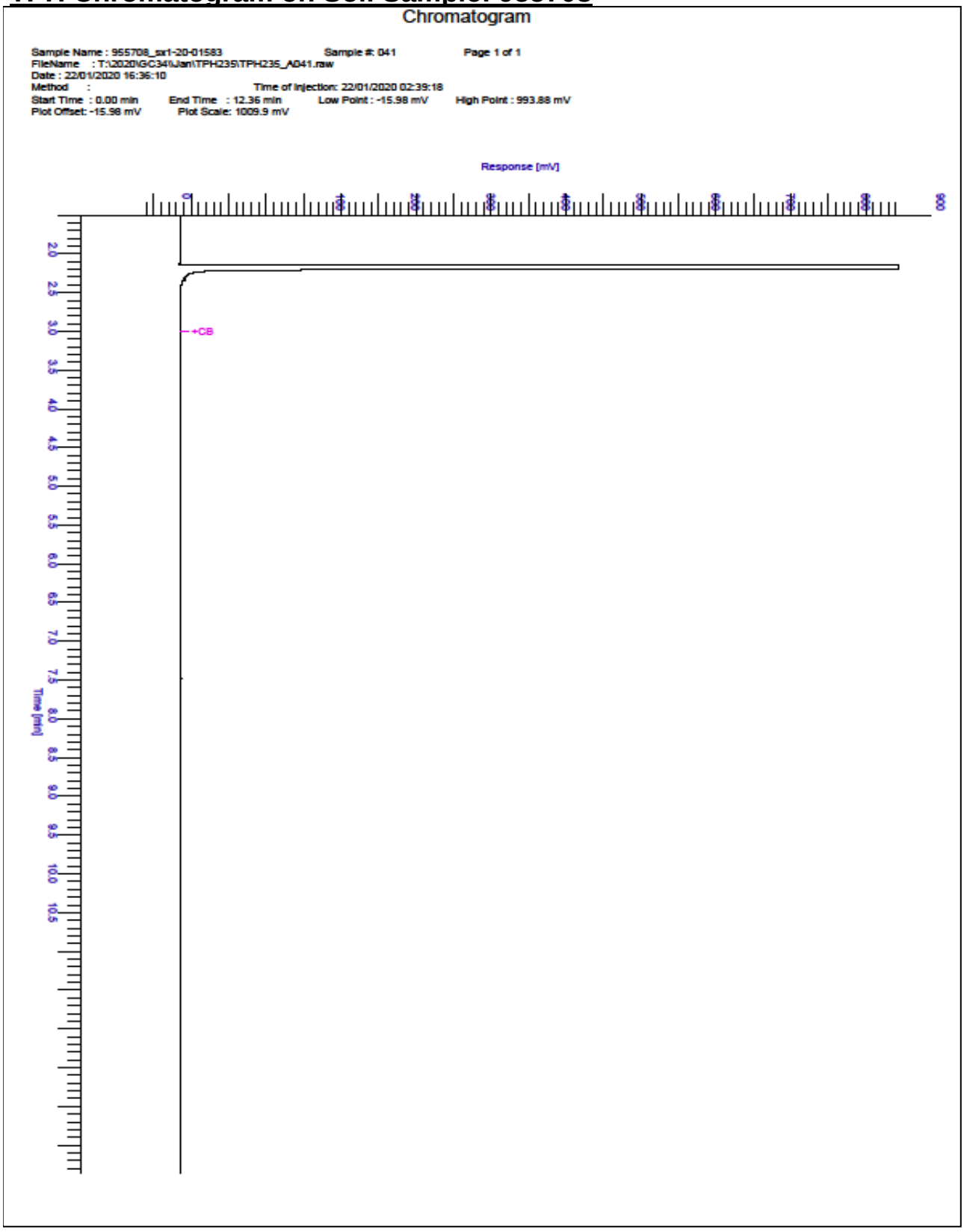
TPH Chromatogram on Soil Sample: 955706



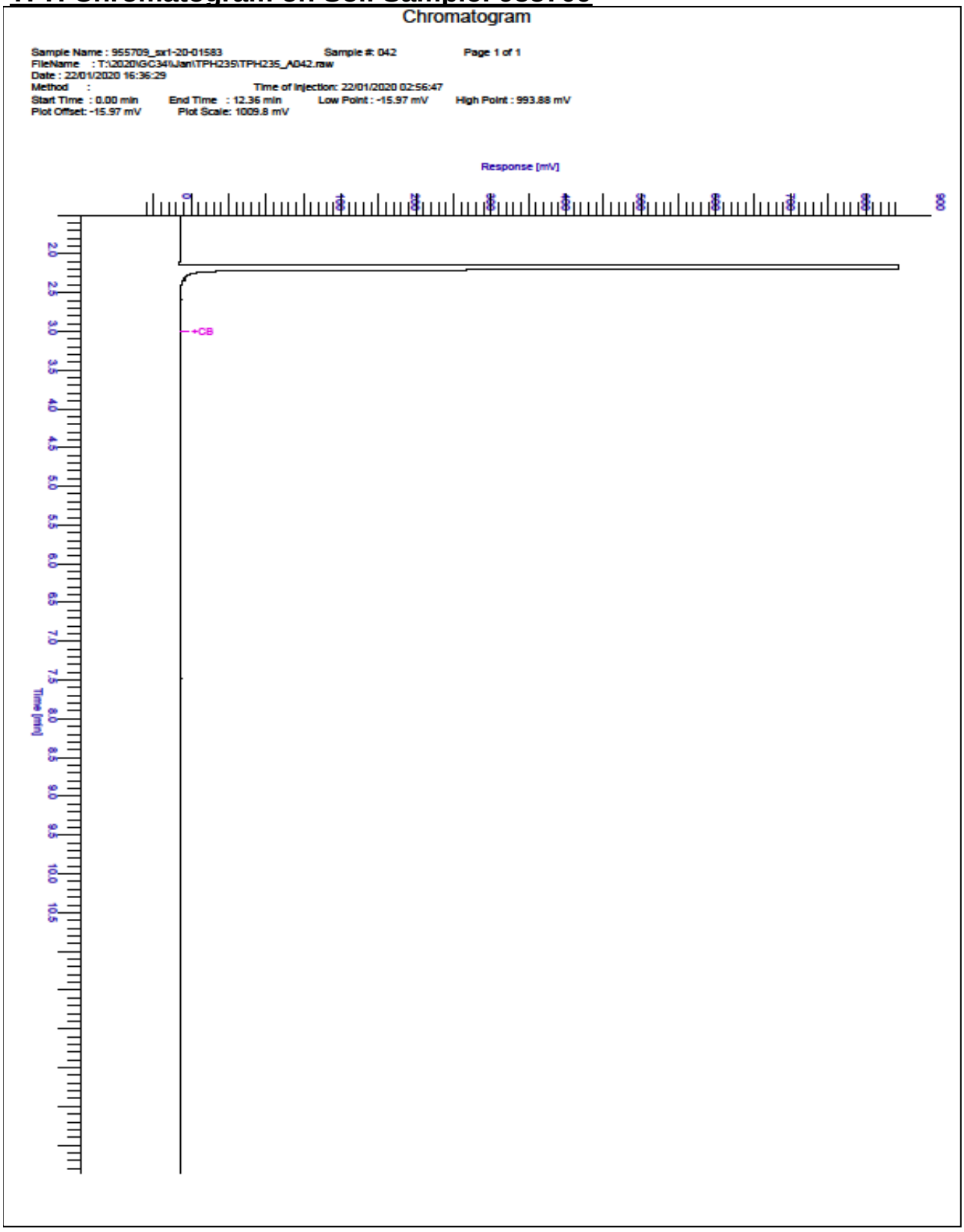
TPH Chromatogram on Soil Sample: 955707



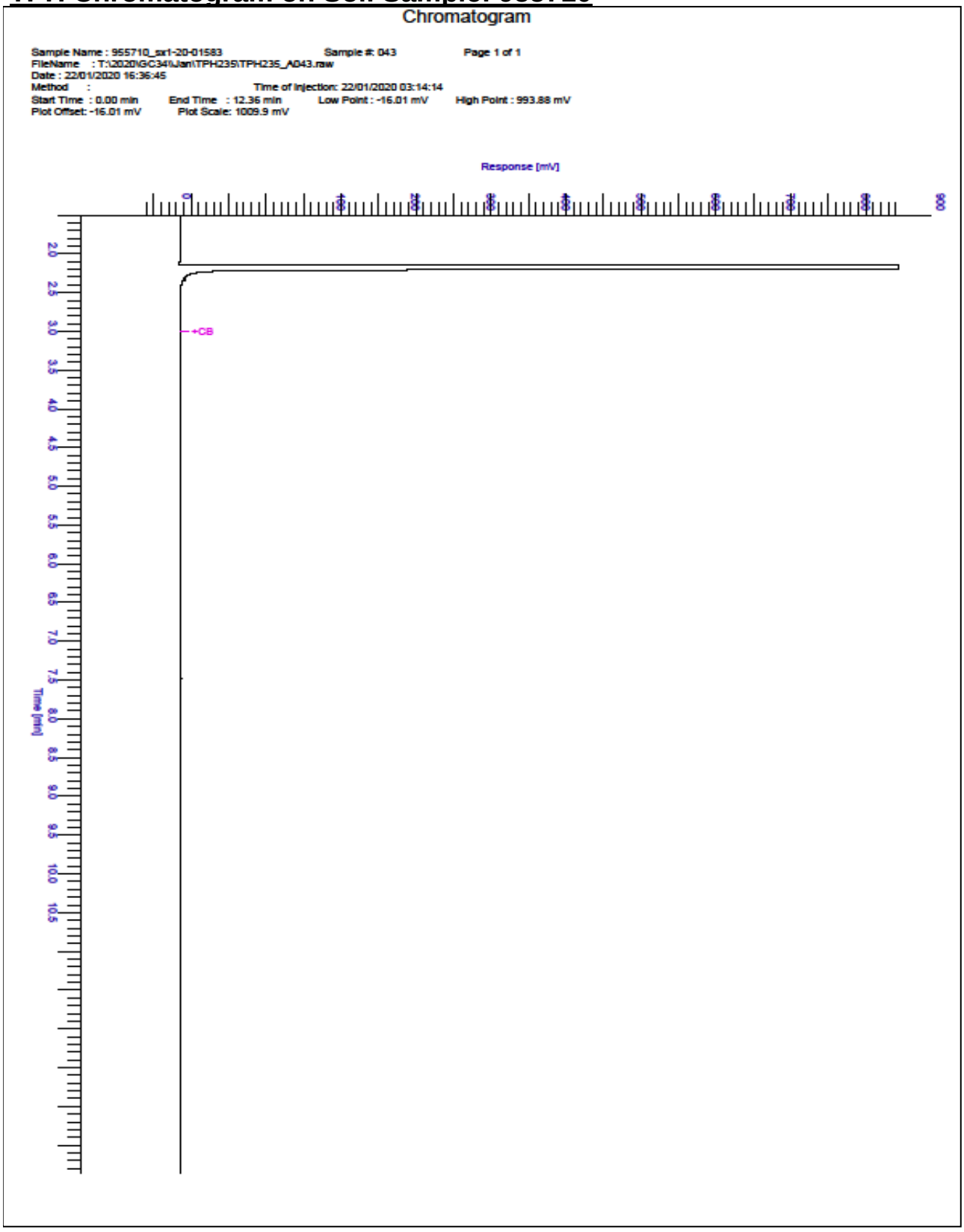
TPH Chromatogram on Soil Sample: 955708



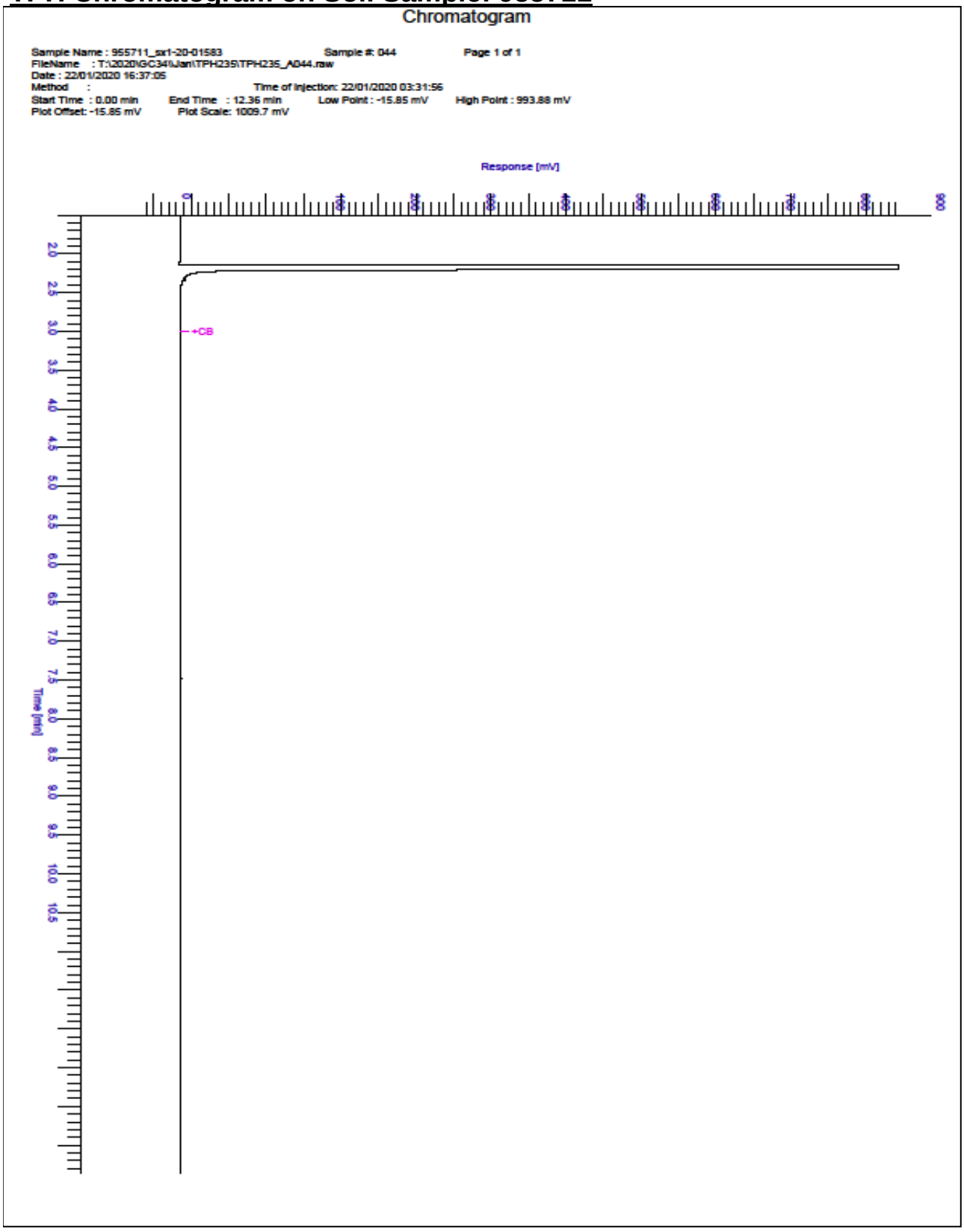
TPH Chromatogram on Soil Sample: 955709



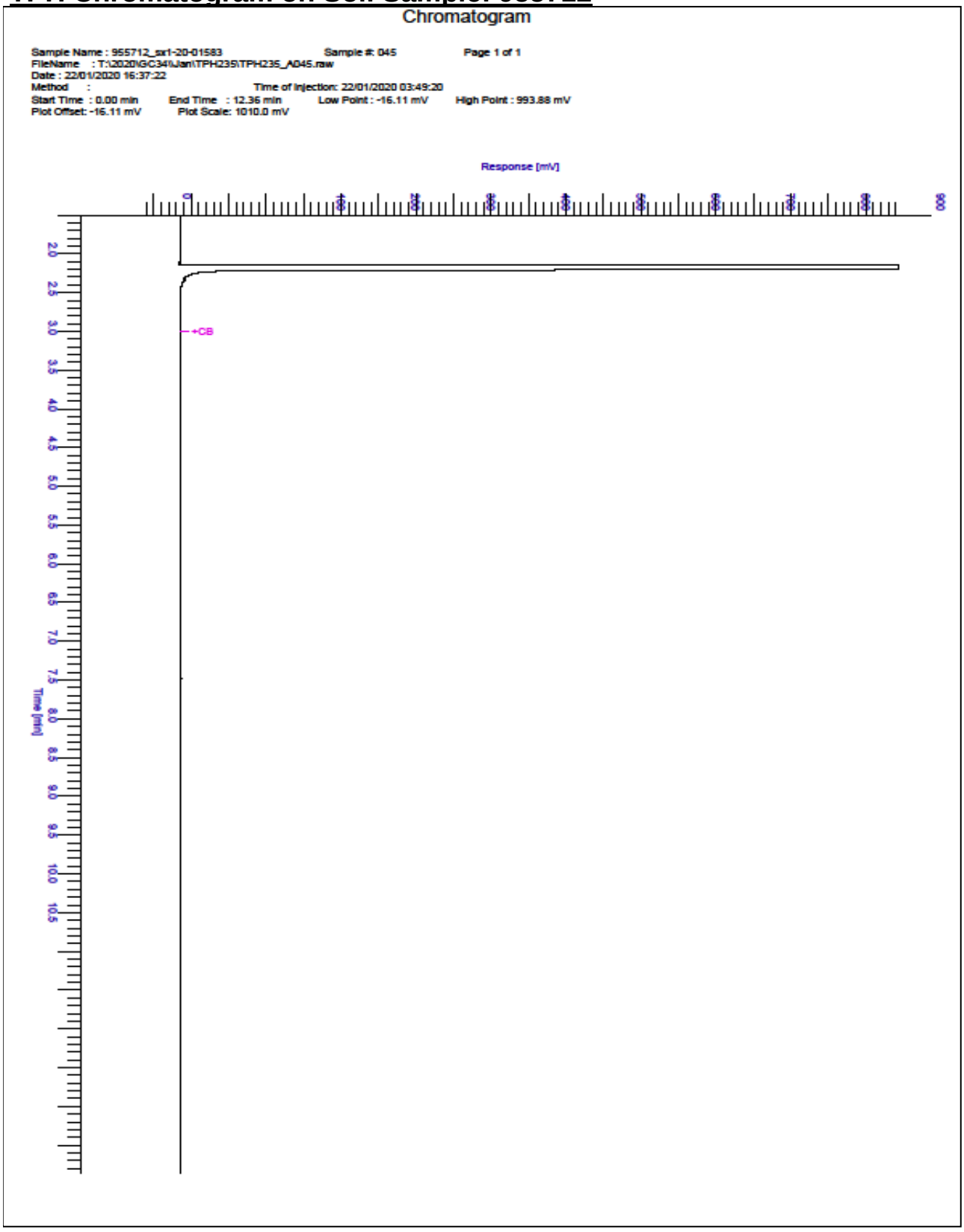
TPH Chromatogram on Soil Sample: 955710



TPH Chromatogram on Soil Sample: 955711



TPH Chromatogram on Soil Sample: 955712



Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

APPENDIX D
CONTAMINATION RISK ASSESSMENT METHODOLOGY

Contaminated Land Risk Assessment – Definition of Methodology

The Contaminated Land Risk Assessment methodology followed in this report is based on Environment Agency's (EA) online guidance, Land Contamination: Risk Management (LCRM), published in June 2019. The new guidance is based upon the principles of the EA's CLR11 guidance, Model procedures for the management of land contamination, published in 2004.

The preliminary Conceptual Site Model (CSM) has been assessed using the methodology set out in CIRIA C552, Contaminated Land Risk Assessment - A Guide to Good Practice, published in 2001, as detailed below.

Risk evaluation determines the magnitude of risks present by assessing the likelihood of a particular risk being present alongside the severity of the consequence, should that event occur. The overall risk classification is a combination of the two and provides a qualitative assessment upon which to base any further work or remedial measures, where deemed necessary.

Where complete pollutant linkages are present, the probability of a contamination risk occurring at the site has been classified in accordance with the terms listed and defined in the table below.

Classification	Definition of Probability
High Likelihood	An event appears very likely in the short term and almost inevitable in the long term; or there is evidence at the receptor that harm or pollution is occurring.
Likely	It is probable that an event will occur, however, the event is not inevitable. It is possible in the short term and is likely over the long term.
Low Likelihood	Circumstances are possible under which an event could occur. However, it is uncertain that the event would occur even over a longer period and even less likely in the short term.
Unlikely	Circumstances are such that it is improbable that an event would occur even in the very long term.

The magnitude of the consequence of a contamination event occurring at this site is classified in accordance with the definitions listed in the following table. The classification of the consequence does not take into account the probability of the consequences being realised.

Classification	Definition of Consequence	Examples
Severe	Short term (acute) risk to human health likely to result in "significant harm" as defined by the Environment protection Act (1990), Part IIA. Short term risk of pollution of controlled waters. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion causing building collapse (can also equate to a short-term human health risk if buildings are occupied.).
Medium	Chronic damage to Human Health ("significant harm"). Pollution of controlled waters. A significant change in a particular ecosystem, or organism forming part of such ecosystem.	Concentrations of contaminants from site exceeding generic or site-specific screening criteria. Leaching of contaminants into a major or minor aquifer. Death of species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment	Pollution of 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 measures such as protective clothing etc). Easily reparable effects of damage to buildings, structures and services	The presence of contaminants at such concentration that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discolouration of concrete.

Once the probability and consequence of each pathway has been classified, the potential overall risk classification can be evaluated using the following matrix.

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/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

The definitions of the risk categories provided in CIRIA C552, together with actions that are likely to be necessary, are presented below.

Classification	Definition of Risk and Likely Actions Required
Very high Risk	• High probability that severe harm could arise or that severe harm is already occurring • This risk, if realised, is likely to result in a substantial liability • Urgent investigation and remediation are likely to be required
High Risk	• Harm is likely to arise • The risk, if realised, is likely to present a substantial liability • Urgent investigation is required and remediation may be necessary in the short term and likely over the longer term
Moderate Risk	• It is possible that harm could arise, however, it is unlikely that any harm would be severe and more likely it would be relatively mild • Investigation is likely to be required to clarify the risk and determine potential liability • Some remediation may be required in the longer term
Low Risk	• It is possible that harm could arise, but is likely that this harm, if realised, would be mild at worst
Very low Risk	• There is a low possibility that harm could arise • If realised, such harm is not likely to be severe

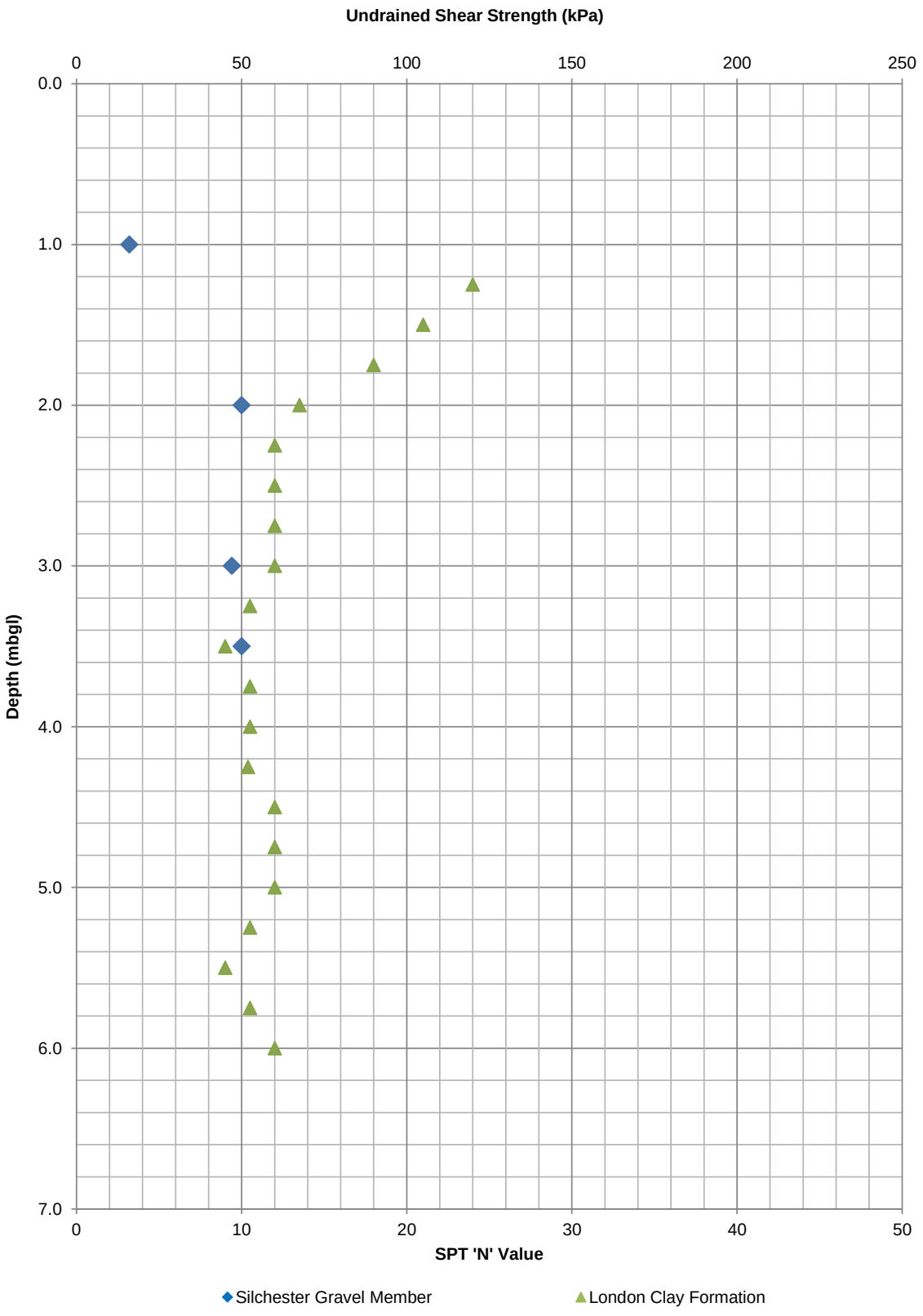
Reference:

Rudland, D J, Lancefield, R M, Mayell, P N, Contaminated land Risk Assessment. A guide to Good Practice, CIRIA Report C552, 2001.

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

APPENDIX E
GEOTECHNICAL PLOTS AND TABLES

LISTERS GEO
Geotechnical and Geoenvironmental Consultants



SPT 'N' VALUES AND UNDRAINED SHEAR STRENGTH AGAINST DEPTH	Report Number 19.12.021

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

APPENDIX F
WASTE CLASSIFICATION

Waste Classification Report

7YQAH-HAAJ4-P7YBB

Job name

19.12.021

Description/Comments

Project

New residential development

Site

Monks Lane, Newbury, Berkshire, RG14 7TD

Related Documents

#	Name	Description

None

Waste Stream Template

ListersGeo Basic Suite WM3 v1.1

Classified by

Name:
Amanda David
Date:
19 Feb 2020 16:50 GMT
Telephone:
01327 860060

Company:
Listers Geotechnical Consultants
Slapton Hill Barn, Blakesley Road
Slapton,
Towcester
NN12 8QD

HazWasteOnline™ Training Record:

Course	Date
Hazardous Waste Classification	08 Jun 2016
Advanced Hazardous Waste Classification	09 Jun 2016

Report

Created by: Amanda David
Created date: 19 Feb 2020 16:50 GMT

Job summary

Classification of sample: TP02

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP02
Sample Depth:
0.5 m
Moisture content:
13%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.3	pH		8.3	pH	8.3 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10	mg/kg	1.32	11.487	mg/kg	0.00115 %	✓	
3	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.21	mg/kg	1.285	0.235	mg/kg	0.0000183 %	✓	
4	chromium { chromium(III) oxide }		215-160-9	1308-38-9		14	mg/kg	1.462	17.802	mg/kg	0.00178 %	✓	
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		13	mg/kg	1.126	12.734	mg/kg	0.00127 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.23	mg/kg	1.353	0.271	mg/kg	0.0000271 %	✓	
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		11	mg/kg	1.579	15.116	mg/kg	0.00151 %	✓	
8	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	35	mg/kg	1.56	47.496	mg/kg	0.00305 %	✓	
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3				45	mg/kg	2.774	108.608	mg/kg	0.0109 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		49	mg/kg		42.63	mg/kg	0.00426 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	phenanthrene		201-581-5	85-01-8		1.3	mg/kg		1.131	mg/kg	0.000113 %	✓	

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
17	anthracene	204-371-1	120-12-7		0.19	mg/kg		0.165	mg/kg	0.0000165 %	✓	
18	fluoranthene	205-912-4	206-44-0		1.5	mg/kg		1.305	mg/kg	0.000131 %	✓	
19	pyrene	204-927-3	129-00-0		1.3	mg/kg		1.131	mg/kg	0.000113 %	✓	
20	benzo[a]anthracene	200-280-6	56-55-3		0.35	mg/kg		0.305	mg/kg	0.0000305 %	✓	
	601-033-00-9											
21	chrysene	205-923-4	218-01-9		0.32	mg/kg		0.278	mg/kg	0.0000278 %	✓	
	601-048-00-0											
22	benzo[b]fluoranthene	205-911-9	205-99-2		0.36	mg/kg		0.313	mg/kg	0.0000313 %	✓	
	601-034-00-4											
23	benzo[k]fluoranthene	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-036-00-5											
24	benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		0.28	mg/kg		0.244	mg/kg	0.0000244 %	✓	
	601-032-00-3											
25	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
26	dibenz[a,h]anthracene	200-181-8	53-70-3		0.13	mg/kg		0.113	mg/kg	0.0000113 %	✓	
	601-041-00-2											
27	benzo[ghi]perylene	205-883-8	191-24-2		0.19	mg/kg		0.165	mg/kg	0.0000165 %	✓	
									Total:	0.0246 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because WM3 states that soil is a solid wastes with no liquid phase.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00426%)

Classification of sample: TP04

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP04
Moisture content:
10%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.1	pH		8.1	pH	8.1 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.6	mg/kg	1.32	9.031	mg/kg	0.000903 %	✓	
3	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.1	mg/kg	1.285	0.116	mg/kg	0.000009 %	✓	
4	chromium { chromium(III) oxide }		215-160-9	1308-38-9		17	mg/kg	1.462	22.362	mg/kg	0.00224 %	✓	
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		11	mg/kg	1.126	11.146	mg/kg	0.00111 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.12	mg/kg	1.353	0.146	mg/kg	0.0000146 %	✓	
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		8.4	mg/kg	1.579	11.941	mg/kg	0.00119 %	✓	
8	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	27	mg/kg	1.56	37.904	mg/kg	0.00243 %	✓	
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.32	mg/kg	2.554	0.735	mg/kg	0.0000735 %	✓	
10	zinc { zinc chromate }	024-007-00-3				31	mg/kg	2.774	77.399	mg/kg	0.00774 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		29	mg/kg		26.1	mg/kg	0.00261 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	phenanthrene		201-581-5	85-01-8		0.81	mg/kg		0.729	mg/kg	0.0000729 %	✓	
17	anthracene		204-371-1	120-12-7		0.18	mg/kg		0.162	mg/kg	0.0000162 %	✓	

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
18	fluoranthene				2.2	mg/kg		1.98	mg/kg	0.000198 %	✓	
		205-912-4	206-44-0									
19	pyrene				1.8	mg/kg		1.62	mg/kg	0.000162 %	✓	
		204-927-3	129-00-0									
20	benzo[a]anthracene				0.72	mg/kg		0.648	mg/kg	0.0000648 %	✓	
	601-033-00-9	200-280-6	56-55-3									
21	chrysene				0.72	mg/kg		0.648	mg/kg	0.0000648 %	✓	
	601-048-00-0	205-923-4	218-01-9									
22	benzo[b]fluoranthene				1.1	mg/kg		0.99	mg/kg	0.000099 %	✓	
	601-034-00-4	205-911-9	205-99-2									
23	benzo[k]fluoranthene				0.25	mg/kg		0.225	mg/kg	0.0000225 %	✓	
	601-036-00-5	205-916-6	207-08-9									
24	benzo[a]pyrene; benzo[def]chrysene				0.62	mg/kg		0.558	mg/kg	0.0000558 %	✓	
	601-032-00-3	200-028-5	50-32-8									
25	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
		205-893-2	193-39-5									
26	dibenz[a,h]anthracene				0.36	mg/kg		0.324	mg/kg	0.0000324 %	✓	
	601-041-00-2	200-181-8	53-70-3									
27	benzo[ghi]perylene				0.48	mg/kg		0.432	mg/kg	0.0000432 %	✓	
		205-883-8	191-24-2									
									Total:	0.0192 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because WM3 states that soil is a solid wastes with no liquid phase.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00261%)

Classification of sample: TP05

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP05
Moisture content:
10%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.2	pH		8.2	pH	8.2 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4.5	mg/kg	1.32	5.347	mg/kg	0.000535 %	✓	
3	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.11	mg/kg	1.285	0.127	mg/kg	0.0000099 %	✓	
4	chromium { chromium(III) oxide }		215-160-9	1308-38-9		14	mg/kg	1.462	18.416	mg/kg	0.00184 %	✓	
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		8.4	mg/kg	1.126	8.512	mg/kg	0.000851 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		8.1	mg/kg	1.579	11.515	mg/kg	0.00115 %	✓	
8	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	28	mg/kg	1.56	39.307	mg/kg	0.00252 %	✓	
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3				20	mg/kg	2.774	49.935	mg/kg	0.00499 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		16	mg/kg		14.4	mg/kg	0.00144 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
17	anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
18	fluoranthene				0.26	mg/kg		0.234	mg/kg	0.0000234 %	✓	
		205-912-4	206-44-0									
19	pyrene				0.22	mg/kg		0.198	mg/kg	0.0000198 %	✓	
		204-927-3	129-00-0									
20	benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-033-00-9	200-280-6	56-55-3									
21	chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-048-00-0	205-923-4	218-01-9									
22	benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-034-00-4	205-911-9	205-99-2									
23	benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-036-00-5	205-916-6	207-08-9									
24	benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-032-00-3	200-028-5	50-32-8									
25	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-893-2	193-39-5									
26	dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-041-00-2	200-181-8	53-70-3									
27	benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-883-8	191-24-2									
									Total:	0.0136 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because WM3 states that soil is a solid wastes with no liquid phase.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00144%)

Classification of sample: TP01

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP01
Sample Depth:
0.5 m
Moisture content:
7.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.2	pH		8.2	pH	8.2 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4.3	mg/kg	1.32	5.235	mg/kg	0.000523 %	✓	
3	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.14	mg/kg	1.285	0.166	mg/kg	0.0000129 %	✓	
4	chromium { chromium(III) oxide }		215-160-9	1308-38-9		10	mg/kg	1.462	13.476	mg/kg	0.00135 %	✓	
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		7.9	mg/kg	1.126	8.201	mg/kg	0.00082 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.11	mg/kg	1.353	0.137	mg/kg	0.0000137 %	✓	
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		6.6	mg/kg	1.579	9.612	mg/kg	0.000961 %	✓	
8	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	24	mg/kg	1.56	34.516	mg/kg	0.00221 %	✓	
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3				21	mg/kg	2.774	53.713	mg/kg	0.00537 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		18	mg/kg		16.596	mg/kg	0.00166 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
17	anthracene											
		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
18	fluoranthene											
		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
19	pyrene											
		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
20	benzo[a]anthracene											
	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
21	chrysene											
	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
22	benzo[b]fluoranthene											
	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
23	benzo[k]fluoranthene											
	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
24	benzo[a]pyrene; benzo[def]chrysene											
	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
25	indeno[123-cd]pyrene											
		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
26	dibenz[a,h]anthracene											
	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
27	benzo[ghi]perylene											
		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
									Total:	0.0131 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because WM3 states that soil is a solid wastes with no liquid phase.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00166%)

Classification of sample: CT01

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
CT01
Sample Depth:
0.1 m
Moisture content:
9.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.6	pH		7.6	pH	7.6 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.4	mg/kg	1.32	6.445	mg/kg	0.000645 %	✓	
3	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.18	mg/kg	1.285	0.209	mg/kg	0.0000163 %	✓	
4	chromium { chromium(III) oxide }		215-160-9	1308-38-9		12	mg/kg	1.462	15.855	mg/kg	0.00159 %	✓	
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		8	mg/kg	1.126	8.142	mg/kg	0.000814 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.13	mg/kg	1.353	0.159	mg/kg	0.0000159 %	✓	
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		7	mg/kg	1.579	9.995	mg/kg	0.001 %	✓	
8	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	30	mg/kg	1.56	42.302	mg/kg	0.00271 %	✓	
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3				24	mg/kg	2.774	60.188	mg/kg	0.00602 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		19	mg/kg		17.176	mg/kg	0.00172 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
17	anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		204-371-1	120-12-7									
18	fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-912-4	206-44-0									
19	pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		204-927-3	129-00-0									
20	benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-033-00-9	200-280-6	56-55-3									
21	chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-048-00-0	205-923-4	218-01-9									
22	benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-034-00-4	205-911-9	205-99-2									
23	benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-036-00-5	205-916-6	207-08-9									
24	benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-032-00-3	200-028-5	50-32-8									
25	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-893-2	193-39-5									
26	dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-041-00-2	200-181-8	53-70-3									
27	benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-883-8	191-24-2									
									Total:	0.0147 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because WM3 states that soil is a solid wastes with no liquid phase.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00172%)

Classification of sample: CT02

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
CT02
Sample Depth:
0.2 m
Moisture content:
27%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 27% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8	pH		8	pH	8pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4.5	mg/kg	1.32	4.337	mg/kg	0.000434 %	✓	
3	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.1	mg/kg	1.285	<0.129	mg/kg	<0.00001 %		<LOD
4	chromium { chromium(III) oxide }		215-160-9	1308-38-9		19	mg/kg	1.462	20.272	mg/kg	0.00203 %	✓	
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		6.5	mg/kg	1.126	5.342	mg/kg	0.000534 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		12	mg/kg	1.579	13.836	mg/kg	0.00138 %	✓	
8	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	7	mg/kg	1.56	7.971	mg/kg	0.000511 %	✓	
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.21	mg/kg	2.554	0.391	mg/kg	0.0000391 %	✓	
10	zinc { zinc chromate }	024-007-00-3				11	mg/kg	2.774	22.276	mg/kg	0.00223 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		19	mg/kg		13.87	mg/kg	0.00139 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
17	anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		204-371-1	120-12-7									
18	fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-912-4	206-44-0									
19	pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		204-927-3	129-00-0									
20	benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-033-00-9	200-280-6	56-55-3									
21	chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-048-00-0	205-923-4	218-01-9									
22	benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-034-00-4	205-911-9	205-99-2									
23	benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-036-00-5	205-916-6	207-08-9									
24	benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-032-00-3	200-028-5	50-32-8									
25	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-893-2	193-39-5									
26	dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-041-00-2	200-181-8	53-70-3									
27	benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-883-8	191-24-2									
									Total:	0.00873 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because WM3 states that soil is a solid wastes with no liquid phase.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00139%)

Classification of sample: CT03

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
CT03
Sample Depth:
0.1 m
Moisture content:
14%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8	pH		8	pH	8pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		2.8	mg/kg	1.32	3.179	mg/kg	0.000318 %	✓	
3	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.1	mg/kg	1.285	<0.129	mg/kg	<0.00001 %		<LOD
4	chromium { chromium(III) oxide }		215-160-9	1308-38-9		15	mg/kg	1.462	18.854	mg/kg	0.00189 %	✓	
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		6.2	mg/kg	1.126	6.003	mg/kg	0.0006 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		9.1	mg/kg	1.579	12.361	mg/kg	0.00124 %	✓	
8	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	14	mg/kg	1.56	18.78	mg/kg	0.0012 %	✓	
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3				12	mg/kg	2.774	28.629	mg/kg	0.00286 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		18	mg/kg		15.48	mg/kg	0.00155 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
17	anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		204-371-1	120-12-7									
18	fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-912-4	206-44-0									
19	pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		204-927-3	129-00-0									
20	benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-033-00-9	200-280-6	56-55-3									
21	chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-048-00-0	205-923-4	218-01-9									
22	benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-034-00-4	205-911-9	205-99-2									
23	benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-036-00-5	205-916-6	207-08-9									
24	benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-032-00-3	200-028-5	50-32-8									
25	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-893-2	193-39-5									
26	dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
	601-041-00-2	200-181-8	53-70-3									
27	benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		205-883-8	191-24-2									
									Total:	0.00989 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because WM3 states that soil is a solid wastes with no liquid phase.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00155%)

Classification of sample: TP03

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP03
Sample Depth:
0.2 m
Moisture content:
19%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		6.2	pH		6.2	pH	6.2 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4.6	mg/kg	1.32	4.92	mg/kg	0.000492 %	✓	
3	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.13	mg/kg	1.285	0.135	mg/kg	0.0000105 %	✓	
4	chromium { chromium(III) oxide }		215-160-9	1308-38-9		9.3	mg/kg	1.462	11.01	mg/kg	0.0011 %	✓	
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		7	mg/kg	1.126	6.384	mg/kg	0.000638 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		5.7	mg/kg	1.579	7.293	mg/kg	0.000729 %	✓	
8	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	24	mg/kg	1.56	30.323	mg/kg	0.00194 %	✓	
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3				22	mg/kg	2.774	49.435	mg/kg	0.00494 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		13	mg/kg		10.53	mg/kg	0.00105 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		0.95	mg/kg		0.77	mg/kg	0.000077 %	✓	
15	fluorene		201-695-5	86-73-7		1.1	mg/kg		0.891	mg/kg	0.0000891 %	✓	
16	phenanthrene		201-581-5	85-01-8		6.1	mg/kg		4.941	mg/kg	0.000494 %	✓	

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
17	anthracene											
		204-371-1	120-12-7		1.8	mg/kg		1.458	mg/kg	0.000146 %	✓	
18	fluoranthene											
		205-912-4	206-44-0		7.9	mg/kg		6.399	mg/kg	0.00064 %	✓	
19	pyrene											
		204-927-3	129-00-0		6.1	mg/kg		4.941	mg/kg	0.000494 %	✓	
20	benzo[a]anthracene											
	601-033-00-9	200-280-6	56-55-3		2.9	mg/kg		2.349	mg/kg	0.000235 %	✓	
21	chrysene											
	601-048-00-0	205-923-4	218-01-9		2.4	mg/kg		1.944	mg/kg	0.000194 %	✓	
22	benzo[b]fluoranthene											
	601-034-00-4	205-911-9	205-99-2		3.1	mg/kg		2.511	mg/kg	0.000251 %	✓	
23	benzo[k]fluoranthene											
	601-036-00-5	205-916-6	207-08-9		1.2	mg/kg		0.972	mg/kg	0.0000972 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene											
	601-032-00-3	200-028-5	50-32-8		2.4	mg/kg		1.944	mg/kg	0.000194 %	✓	
25	indeno[123-cd]pyrene											
		205-893-2	193-39-5		0.29	mg/kg		0.235	mg/kg	0.0000235 %	✓	
26	dibenz[a,h]anthracene											
	601-041-00-2	200-181-8	53-70-3		1.6	mg/kg		1.296	mg/kg	0.00013 %	✓	
27	benzo[ghi]perylene											
		205-883-8	191-24-2		1.2	mg/kg		0.972	mg/kg	0.0000972 %	✓	
									Total:	0.0142 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because WM3 states that soil is a solid wastes with no liquid phase.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00105%)

Appendix A: Classifier defined and non CLP determinands

- **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

- **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462
Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Repr. 1B H360FD , Skin Sens. 1 H317 , Resp. Sens. 1 H334 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302 , Acute Tox. 4 H332

- **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Aquatic Chronic 2 H411 , Repr. 2 H361d , Carc. 1B H350 , Muta. 1B H340 , STOT RE 2 H373 , Asp. Tox. 1 H304 , Flam. Liq. 3 H226

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 1 H310 , Acute Tox. 1 H330 , Acute Tox. 4 H302

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 2 H411 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Skin Irrit. 2 H315 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Carc. 2 H351 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2 H351

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on risk phrases

cadmium {cadmium sulfide}

Worst case species based on risk phrases

chromium {chromium(III) oxide}

No CrVI detected (<0.50 mg/kg)

copper {dicopper oxide; copper (I) oxide}

Most likely common species

mercury {mercury dichloride}

Worst case species based on risk phrases

nickel {nickel dihydroxide}

Worst case species based on risk phrases

lead {lead chromate}

Worst case species based on risk phrases

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species based on risk phrases

zinc {zinc chromate}

Worst case species based on risk phrases

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2020.44.4173.8310 (14 Feb 2020)
HazWasteOnline Database: 2020.44.4173.8310 (14 Feb 2020)

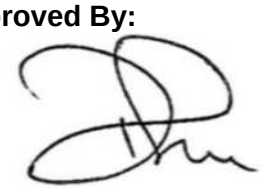
This classification utilises the following guidance and legislation:
WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	20-01588-1		
Initial Date of Issue:	27-Jan-2020		
Client	Listers Geotechnical Consultants		
Client Address:	Slapton Hill Barn, Blakesley Road Slapton Towcester Northamptonshire NN12 8QD		
Contact(s):	Jane Taylor		
Project	19.12.021 Newbury		
Quotation No.:	Q18-12046	**Date Received:**	20-Jan-2020
Order No.:	19.12.021/254	**Date Instructed:**	20-Jan-2020
No. of Samples:	3		
Turnaround (Wkdays):	5	**Results Due:**	24-Jan-2020
Date Approved:	27-Jan-2020		

Approved By:



Details: Darrell Hall, Director

Results - Single Stage WAC

Project: 19.12.021 Newbury

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	20-01588						
Chemtest Sample ID:	955743						
Sample Ref:	WAC						
Sample ID:							
Sample Location:	TP02						
Top Depth(m):	0.5						
Bottom Depth(m):							
Sampling Date:	15-Jan-2020						
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	M	%	1.5	3	5	6
Loss On Ignition	2610	M	%	4.9	--	--	10
Total BTEX	2760	M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg	< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	M	mg/kg	27	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg	11	100	--	--
pH	2010	M		8.8	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.012	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0047	< 0.050	0.5	2	25
Barium	1450	U	0.011	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.010	0.04	1	5
Chromium	1450	U	0.0027	< 0.050	0.5	10	70
Copper	1450	U	0.0041	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.0014	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	< 0.050	0.4	10	40
Lead	1450	U	0.0065	0.065	0.5	10	50
Antimony	1450	U	< 0.0010	< 0.010	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0032	< 0.50	4	50	200
Chloride	1220	U	2.0	20	800	15000	25000
Fluoride	1220	U	0.24	2.4	10	150	500
Sulphate	1220	U	3.1	31	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	8.7	87	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	8.9

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 19.12.021 Newbury

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	20-01588						
Chemtest Sample ID:	955744						
Sample Ref:	WAC						
Sample ID:							
Sample Location:	TP04						
Top Depth(m):							
Bottom Depth(m):							
Sampling Date:	15-Jan-2020						
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	M	%	0.46	3	5	6
Loss On Ignition	2610	M	%	2.5	--	--	10
Total BTEX	2760	M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg	< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	M	mg/kg	18	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg	8.1	100	--	--
pH	2010	M		8.3	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.022	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0027	< 0.050	0.5	2	25
Barium	1450	U	0.0066	< 0.50	20	100	300
Cadmium	1450	U	0.00020	< 0.010	0.04	1	5
Chromium	1450	U	0.0025	< 0.050	0.5	10	70
Copper	1450	U	0.0034	< 0.050	2	50	100
Mercury	1450	U	0.00063	0.0063	0.01	0.2	2
Molybdenum	1450	U	< 0.0010	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	< 0.050	0.4	10	40
Lead	1450	U	0.0038	0.038	0.5	10	50
Antimony	1450	U	< 0.0010	< 0.010	0.06	0.7	5
Selenium	1450	U	0.0016	0.016	0.1	0.5	7
Zinc	1450	U	0.0044	< 0.50	4	50	200
Chloride	1220	U	1.9	19	800	15000	25000
Fluoride	1220	U	0.76	7.6	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	64	640	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	11	110	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	6.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 19.12.021 Newbury

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	20-01588						
Chemtest Sample ID:	955745						
Sample Ref:	WAC						
Sample ID:							
Sample Location:	TP05						
Top Depth(m):							
Bottom Depth(m):							
Sampling Date:	15-Jan-2020						
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	M	%	0.94	3	5	6
Loss On Ignition	2610	M	%	3.0	--	--	10
Total BTEX	2760	M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg	< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	M	mg/kg	33	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg	< 2.0	100	--	--
pH	2010	M		7.9	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.012	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0022	< 0.050	0.5	2	25
Barium	1450	U	0.0052	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.050	0.5	10	70
Copper	1450	U	0.0023	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	< 0.0010	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	< 0.050	0.4	10	40
Lead	1450	U	0.0015	0.015	0.5	10	50
Antimony	1450	U	< 0.0010	< 0.010	0.06	0.7	5
Selenium	1450	U	0.0011	0.011	0.1	0.5	7
Zinc	1450	U	0.0017	< 0.50	4	50	200
Chloride	1220	U	1.2	12	800	15000	25000
Fluoride	1220	U	0.42	4.2	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	48	470	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	7.2	72	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

APPENDIX G
ENVIROCHECK DESK STUDY INFORMATION

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
230178532_1_1

Customer Reference:
19.12.021

National Grid Reference:
447200, 165220

Slice:
A

Site Area (Ha):
0.61

Search Buffer (m):
1000

Site Details:

Newbury College, Monks Lane
NEWBURY
RG14 7TD

Client Details:

Mrs J Taylor
Listers Geotechnical Consultants Ltd
Slapton Hill Barn
Blakesley Road
Slapton
Towcester
Northants
NN12 8QD

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Contents

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.

Report Version v53.0

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Summary

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		n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			3	5
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 3				3
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 3		1	1	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 3		Yes		
Pollution Incidents to Controlled Waters	pg 4				2
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 4				4 (*7)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 7	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 7	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 7	Yes	n/a	n/a	n/a
Source Protection Zones	pg 7	1			
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 7		1	2	24

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Summary

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	pg 11			2	1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 11			1	4
Local Authority Landfill Coverage	pg 12	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 12			1	1
Potentially Infilled Land (Water)	pg 12				3
Registered Landfill Sites	pg 13			1	1
Registered Waste Transfer Sites	pg 14				5
Registered Waste Treatment or Disposal Sites	pg 16			1	2
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					

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Summary

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 18	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 18	Yes			
BGS Recorded Mineral Sites	pg 18			1	6
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 19	Yes	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 19	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 20	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 20	Yes	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 21		5	24	26
Fuel Station Entries	pg 25		2	2	
Points of Interest - Commercial Services	pg 26			3	11
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 27				3
Points of Interest - Public Infrastructure	pg 27			5	9
Points of Interest - Recreational and Environmental	pg 28		3	7	7
Gas Pipelines					
Underground Electrical Cables					

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 31		1	2	4
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 31				1
Ramsar Sites					
Sites of Special Scientific Interest	pg 31				1
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	A13NW (SW)	0	1	447203 165221
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (S)	167	1	447203 165000
1	**Discharge Consents** Operator: B R Feltham Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 40 And 41 Monks Lane Newbury Berkshire Rg14 7he Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Cawm.0244 Permit Version: 1 Effective Date: 11th October 2000 Issued Date: 31st October 2000 Revocation Date: 20th February 2002 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: A Tributary Of River Enborne **Status:** **Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 10m	A13SW (W)	261	2	446870 165180
1	**Discharge Consents** Operator: Mr And Mrs G Smith Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 40 And 41 Monks Lane Newbury Berkshire Rg14 7he Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Cawm.0244 Permit Version: 1 Effective Date: 11th October 2000 Issued Date: 31st October 2000 Revocation Date: 20th February 2002 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: A Tributary Of River Enborne **Status:** **Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 10m	A13SW (W)	261	2	446870 165180
2	**Discharge Consents** Operator: Ms Tracy Reilly Property Type: REAL ESTATE ACTIVITIES/BUYING/SELLING/RENTING Location: Household Waste Recycling Centre Newtown Road Newbury Berkshire Rg20 9ay Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Npswqd000879 Permit Version: 1 Effective Date: 20th March 2008 Issued Date: 20th March 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Ground Waters Via Soakaway **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	A8NE (SE)	431	2	447442 164796
3	**Discharge Consents** Operator: Ghe Homes Limited Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 9 Houses Sandleford Farm Newton Road Newbury Berkshire Rg20 9bb Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Epreb3097nw Permit Version: 2 Effective Date: 21st July 2017 Issued Date: 21st July 2017 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Groundwater **Status:** **Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	613	2	447560 164655

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: Uk Waste Management Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Newbury Civic Amenity Centre, Pinchington Lane, Newbury, Berks Authority: Environment Agency, Thames Region Catchment Area: Not Given Reference: CTWC.2410 Permit Version: 1 Effective Date: 10th May 1988 Issued Date: 10th May 1988 Revocation Date: 30th June 2009 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Tribof River Enborne **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A14SE (E)	664	2	447901 165001
5	**Discharge Consents** Operator: Ghe Homes Limited Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 9 Houses Sandleford Farm Newton Road Newbury Berkshire Rg20 9bb Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Epreb3097nw Permit Version: 1 Effective Date: 1st June 2017 Issued Date: 11th May 2016 Revocation Date: 20th July 2017 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Groundwater **Status: New issued under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	698	2	447593 164575
6	**Discharge Consents** Operator: A & J Bull (Solent) Ltd Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Waste Storage Building Pinchington Lane, Greenham, Near Newbury, Berkshire Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Cawm.0115 Permit Version: 1 Effective Date: 20th January 2000 Issued Date: 27th January 2000 Revocation Date: 24th January 2014 Discharge Type: Trade Effluent Discharge-Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Lake Tributary River Enborne **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	717	2	447950 164980
7	**Discharge Consents** Operator: Trustees For The Time Being Of St. Gabriel'S Property Type: EDUCATION/NURSERY/SCHOOL/COLLEGE/UNI/TRAINING VENUE Location: St Gabriels School, Sandleford Priory, Newbury, Berks Authority: Environment Agency, Thames Region Catchment Area: Not Given Reference: CTCR.2065 Permit Version: 1 Effective Date: 2nd December 1983 Issued Date: 2nd December 1983 Revocation Date: 7th June 2004 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of Enborne **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A3NE (S)	983	2	447400 164200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Integrated Pollution Prevention And Control** Name: Cleansing Service Group Limited Location: Csg Newbury Treatment Plant, Csg, Pinchington Lane,,Greenham, THATCHAM, Berkshire, RG19 8SR Authority: Environment Agency - South East Region, West Thames Area Permit Reference: CP3031FW Original Permit Ref: Cp3932md Effective Date: 30th October 2013 **Status:** **Surrender Effective** Application Type: Surrender App. Sub Type: Whole Positional Accuracy: Automatically positioned to the address Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N Activity Code: 5.3 A(1) (B) Activity Description: Other Waste Disposal; Waste Oils Greater Than 10T/Day Primary Activity: Y	A14SW (E)	602	2	447872 165133
8	**Integrated Pollution Prevention And Control** Name: Cleansing Service Group Ltd Location: Pinchington Lane, Greenham, Thatcham, Berkshire, RG19 8SR Authority: Environment Agency, Thames Region Permit Reference: CP3932MD Original Permit Ref: Cp3932md Effective Date: 19th October 2007 **Status:** **Effective** Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 5.3 A(1) (B) Activity Description: Other Waste Disposal; Waste Oils Greater Than 10T/Day Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N	A14SW (E)	602	2	447872 165133
8	**Integrated Pollution Prevention And Control** Name: Cleansing Service Group Ltd Location: Csg Newbury Treatment Plant, Csg, Pinchington Lane,,Greenham, THATCHAM, Berkshire, RG19 8SR Authority: Environment Agency - South East Region, West Thames Area Permit Reference: CP3932MD Original Permit Ref: Cp3932md Effective Date: 19th October 2007 **Status:** **Superseded By Variation** Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 100m Activity Code: 5.3 A(1) (B) Activity Description: Other Waste Disposal; Waste Oils Greater Than 10T/Day Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N	A14SE (E)	635	2	447900 165100
9	**Local Authority Pollution Prevention and Controls** Name: Parkhouse Motor Company Location: Newtown Road, NEWBURY, Berkshire, RG14 7EX Authority: West Berkshire Council, Environmental Health Department Permit Reference: Not Given Dated: 28th January 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status:** **Authorisation revoked** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	140	3	447321 165380
10	**Local Authority Pollution Prevention and Controls** Name: Tesco Stores Ltd Location: Pinchington Lane, NEWBURY, Berkshire, RG14 7HB Authority: West Berkshire Council, Environmental Health Department Permit Reference: Vr18 Dated: 28th January 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status:** **Permitted** Positional Accuracy: Manually positioned to the address or location	A14SW (E)	329	3	447602 165169
	Nearest Surface Water Feature	A13SW (W)	245	-	446904 165106

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: GREENHAM Authority: Environment Agency, Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: 5th January 1993 Incident Reference: WE930006 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	711	2	447951 165001
12	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: NEWBURY Authority: Environment Agency, Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 22nd January 1992 Incident Reference: WE920054 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	771	2	448000 164960
13	**Water Abstractions** Operator: Sandleford Estate Partnership Licence Number: 28/39/22/0482 Permit Version: 101 Location: Trib Of Enborne At Sandleford Farm 'A' Authority: Environment Agency, Thames 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: Reservoir 'A' At Sandleford Farm Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st April 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	739	2	446700 164600
13	**Water Abstractions** Operator: Sandleford Estate Partnership Licence Number: 28/39/22/0482 Permit Version: 100 Location: Trib Of Enborne At Sandleford Farm 'A' Authority: Environment Agency, Thames Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 909 Yearly Rate (m3): 32004 Details: Reservoir 'A' At Sandleford Farm Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st February 1987 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	739	2	446700 164600
14	**Water Abstractions** Operator: Sandleford Estate Partnership Licence Number: 28/39/22/0482 Permit Version: 101 Location: Trib Of Enborne At Sandleford Farm 'B' Authority: Environment Agency, Thames 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: Reservoir 'B' At Sandleford Farm Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st April 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	805	2	446500 164700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Water Abstractions** Operator: Sandleford Estate Partnership Licence Number: 28/39/22/0482 Permit Version: 100 Location: Trib Of Enborne At Sandleford Farm 'B' Authority: Environment Agency, Thames 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: Reservoir 'B' At Sandleford Farm Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st February 1987 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	805	2	446500 164700
	Water Abstractions Operator: Crest Homes (South) Ltd Licence Number: 28/39/22/0606 Permit Version: 1 Location: Former Sunlight Laundry, York Road, Maidenhead Authority: Environment Agency, Thames Region Abstraction: Environmental: Pump & Treat: Pollution Remediation Abstraction Type: Water may be abstracted from any point within an area Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Former Sunlight Laundry, York Road, Newbury Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 5th June 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A24SW (N)	1373	2	447680 166560
	Water Abstractions Operator: The Newbury Racecourse Plc Licence Number: 28/39/22/0131 Permit Version: 100 Location: Newbury Racecourse Authority: Environment Agency, Thames Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 909 Yearly Rate (m3): 68190 Details: Newbury Racecourse Authorised Start: 01 March Authorised End: 30 November Permit Start Date: 24th January 1994 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A25NW (NE)	1899	2	448500 166700
	Water Abstractions Operator: Newbury & Crookham Golf Club Licence Number: 28/39/22/0641 Permit Version: 1 Location: Newbury & Crookham Golf Club - Borehole Authority: Environment Agency, Thames Region Abstraction: Golf Courses: 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: 1st August 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1927	2	449200 165400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Newbury & Crookham Golf Club Licence Number: 28/39/22/0641 Permit Version: 1 Location: Newbury & Crookham Golf Club - Borehole Authority: Environment Agency, Thames Region Abstraction: Golf Courses: Spray Irrigation - Storage 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 January Authorised End: 28 February Permit Start Date: 1st August 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1927	2	449200 165400
	Water Abstractions Operator: Newbury & Crookham Golf Club Licence Number: 28/39/22/0633 Permit Version: 101 Location: Newbury & Crookham Golf Club - Borehole Authority: Environment Agency, Thames Region Abstraction: Golf Courses: Spray Irrigation - Storage 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 January Authorised End: 28 February Permit Start Date: 1st January 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1927	2	449200 165400
	Water Abstractions Operator: Newbury & Crookham Golf Club Licence Number: 28/39/22/0633 Permit Version: 101 Location: Newbury & Crookham Golf Club - Borehole Authority: Environment Agency, Thames Region Abstraction: Golf Courses: 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: Newbury & Crookham Golf Club Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 1st January 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1927	2	449200 165400
	Water Abstractions Operator: Newbury & Crookham Golf Club Licence Number: 28/39/22/0568 Permit Version: 100 Location: Newbury & Crookham Golf Club Authority: Environment Agency, Thames Region Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 160 Yearly Rate (m3): 19200 Details: Newbury & Crookham Golf Club Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 14th March 1997 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1927	2	449200 165400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Mixed Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: No Data	A13NW (SW)	0	4	447203 165221
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (SW)	0	4	447203 165221
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (SW)	0	4	447203 165221
15	**Source Protection Zones** Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A13NW (SW)	0	2	447203 165221
	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				
16	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 201.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A13SW (W)	245	5	446904 165106
17	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 136.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A13SW (SW)	269	5	446951 165001
18	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 115.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A8NW (SW)	390	5	446929 164866

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A8NW (SW)	503	5	446891 164758
20	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 130.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A8NW (SW)	550	5	446887 164707
21	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A18SW (NW)	641	5	446893 165848
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A8NW (SW)	671	5	446882 164577
23	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 87.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A18NW (NW)	698	5	446899 165912
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 380.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NE (SW)	714	5	446766 164586
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NE (SW)	715	5	446766 164586
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NE (SW)	715	5	446815 164557
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 616.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7SE (SW)	725	5	446866 164526

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A14SE (SE)	736	5	447923 164878
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A9NE (SE)	749	5	447900 164814
30	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 24.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A9NE (SE)	751	5	447899 164811
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A9NE (SE)	755	5	447889 164788
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 66.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A9NE (SE)	757	5	447888 164784
33	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 32.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A9NE (SE)	758	5	447921 164831
34	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 75.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A9NW (SE)	774	5	447861 164723
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 88.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A18NW (NW)	803	5	446872 166014
36	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 269.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Brown's Pond Catchment Name: Thames Primacy: 1	A9NW (SE)	817	5	447855 164649

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 213.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A19NW (NE)	820	5	447558 166018
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A17NE (N)	890	5	446850 166098
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 95.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A17NE (N)	901	5	446846 166109
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A8SE (S)	944	5	447402 164240
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 85.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A3NE (S)	984	5	447403 164200
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 230.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A9SW (SE)	1000	5	447859 164395

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Historical Landfill Sites** Licence Holder: A E Genet (Berkshire) Limited Location: Greenham, Berkshire Name: Pinchington Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD13782 First Input Date: 31st December 1970 Last Input Date: 31st December 1990 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste, and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 0340/0386 BGS Ref: Not Supplied Other Ref: NEW29, TP0055, 54/12/4/136	A14NW (E)	307	2	447585 165266
44	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Greenham, Berkshire Name: Pinchington Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD13784 First Input Date: 31st December 1970 Last Input Date: 31st December 1990 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste, and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 0340/0393 BGS Ref: Not Supplied Other Ref: WDA338, TP0055, NEW29, 54/12/4/136	A14NW (E)	419	2	447698 165260
45	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Greenham, Berkshire Name: SCC Pyle Hill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD13781 First Input Date: 31st December 1977 Last Input Date: 31st December 1980 Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 0340/0384 BGS Ref: Not Supplied Other Ref: NEW30, 54/12/4/54, TP0064	A19SW (NE)	617	2	447774 165614
46	**Licensed Waste Management Facilities (Locations)** Licence Number: 100435 Location: Newton Road H W R C, Newtown Road, Newbury, Berkshire, RG20 9BB Operator Name: Veolia E S West Berkshire Ltd Operator Location: Not Supplied Authority: Environment Agency - South East Region, West Thames Area Site Category: Household Waste Amenity Sites **Licence Status: Modified** Issued: 24th September 2008 Last Modified: 7th August 2009 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NE (SE)	498	2	447446 164722
47	**Licensed Waste Management Facilities (Locations)** Licence Number: 86043 Location: Pinchington Lane, Greenham, Newbury, Berkshire, RG19 8SR Operator Name: Cleansing Service Group Ltd Operator Location: Not Supplied Authority: Environment Agency - Thames Region, West Area Site Category: Physical Treatment Facilities **Licence Status: Revoked** Issued: 8th April 1991 Last Modified: 30th June 1997 Expires: Not Supplied Suspended: Not Supplied Revoked: 24th February 2010 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (E)	602	2	447872 165132

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	**Licensed Waste Management Facilities (Locations)** Licence Number: 86006 Location: Civic Amenity Site, Pinchington Lane, Newbury, Berkshire, RG14 7HB Operator Name: U K Waste Management Ltd Operator Location: Not Supplied Authority: Environment Agency - South East Region, West Thames Area Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Surrendered** Issued: 28th April 1993 Last Modified: 16th June 2000 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 28th January 2009 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14SE (E)	635	2	447900 165100
47	**Licensed Waste Management Facilities (Locations)** Licence Number: 86009 Location: Oak Tree Edge, Pinchington Lane, Newbury, Berkshire, RG14 7SR Operator Name: W Boulton Operator Location: Not Supplied Authority: Environment Agency - South East Region, West Thames Area Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Surrendered** Issued: 20th July 1992 Last Modified: 13th June 1995 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 23rd July 1999 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14SE (E)	635	2	447900 165100
48	**Licensed Waste Management Facilities (Locations)** Licence Number: 101898 Location: Monks Lane, Newbury, Berkshire, RG14 7RW Operator Name: Earthline Ltd Operator Location: Not Supplied Authority: Environment Agency - South East Region, West Thames Area Site Category: Use of waste in a deposit for recovery op **Licence Status: Issued** Issued: 22nd March 2011 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 100m	A12SW (W)	662	2	446500 165000
	Local Authority Landfill Coverage Name: West Berkshire Unitary Council - Has no landfill data to supply		0	3	447203 165221
49	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A14NW (NE)	448	-	447680 165443
50	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A11NE (W)	987	-	446189 165508
51	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A18NE (N)	750	-	447229 166004
52	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A18NE (N)	844	-	447430 166077
53	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1932	A17SW (NW)	887	-	446399 165741

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	**Registered Landfill Sites** Licence Holder: A E Genet (Berkshire) Ltd Licence Reference: 54/12/4/136 Site Location: North Side, Pinchington Lane, Newbury, Berkshire Licence Easting: Not Supplied Licence Northing: Not Supplied Operator Location: Mead Lane, CHERTSEY, Surrey, KT6 8NL Authority: Environment Agency - Thames Region, West Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 6th August 1981 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate Authorised Waste: Animal Processing Wastes Asbestos Cellulose Wastes (Natural/Synth.) Commercial Waste Contaminated Rubbish/Bags/Sacks Distillation Residues Empty Used Containers Excavated Natural Materials $ Food Processing Wastes/Starch Glue Wastes Hardcore And Rubble Household Waste Industrial Wastes Iron Compounds Metal Scrap Mineral Processing Wastes Other Industrial Wastes Other Inorganic Materials Other Non-Toxic Metal Compounds Paint Waste $ Pharmaceutical/Cosmetic Products Silt And Dredgings Slag, Boiler/Flue Cleanings Soaps & Detergents Tar, Pitch, Bitumen, Asphalts Waste Treated Timber	A14NW (E)	304	2	447583 165260
55	**Registered Landfill Sites** Licence Holder: Surrey C.C. Licence Reference: 54/12/4/ 54 Site Location: Pyle Hill, Newbury, Berkshire Licence Easting: 447900 Licence Northing: 165650 Operator Location: As Site Address Authority: Environment Agency - Thames Region, West Area Site Category: Landfill Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: Not Supplied Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Inert Waste Old Licence - Wastes Not To Hand	A19SE (NE)	741	2	447900 165650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	**Registered Waste Transfer Sites** Licence Holder: A E Genet (Berkshire) Ltd Licence Reference: 54/12/4/138 Site Location: Pinchington Lane, Newbury, Berkshire Operator Location: Mead Lane, CHERTSEY, Surrey, KT6 8NL Authority: Environment Agency - Thames Region, West Area Site Category: Civic Amenity Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 6th August 1981 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Civic Amenity/Refuse Amenity Waste	A14NW (E)	524	2	447800 165300
57	**Registered Waste Transfer Sites** Licence Holder: C A & W C Boulton t/a Boulton Bins Licence Reference: 54/12/4/264 Site Location: Oak Tree Edge, Pinchington Lane, NEWBURY, Berkshire, RG14 7SR Operator Location: As Site Address Authority: Environment Agency - Thames Region, West Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence has completion certificateSurrendered Dated: 20th July 1992 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: House, Com + Ind.Waste Max.Storage Max.Waste Permitted By Licence Prohibited Waste: Carcasses And Flesh Clinical - As In Coll/Disp.Regs Of '88 Contaminated Soil Liquid/Sludge Wastes May React Give Danger -Fire/Explos/Gas Special Wastes Waste N.O.S. Waste With Flash Pt < 40 C	A14SE (E)	636	2	447900 165095
58	**Registered Waste Transfer Sites** Licence Holder: Uk Waste Management Ltd Licence Reference: 54/12/4/272 Site Location: Pinchington Lane, Newbury, Berkshire, Rg14 7hb Operator Location: Rixton Old Hall, Manchester Road, Rixton, WARRINGTON, Cheshire, WA3 6EW Authority: Environment Agency - Thames Region, West Area Site Category: Civic Amenity - with transfer Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 16th June 1999 Preceded By Licence: 54/12/4/272 Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Dry, Solid Commercial & Industrial Waste Maximum Waste Permitted By Licence Prohibited Waste: Clinical - As In Control.Led Waste Regs 1992 Other Waste/Waste Not Otherwise Specified Special Waste (As In Epa 1990:S62 Of 1996 Regs)	A14SE (E)	641	2	447890 165040

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
58	**Registered Waste Transfer Sites** Licence Holder: Uk Waste Management Ltd Licence Reference: 54/12/4/272 Site Location: Pinchington Lane, Newbury, Berkshire, Rg14 7hb Operator Location: Windsor House, 1270 London Road, Norbury, LONDON, Greater London, SW16 Authority: Environment Agency - Thames Region, West Area Site Category: Civic Amenity - with transfer Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 28th April 1993 Preceded By Licence: 54/12/5/ 33 Superseded By Licence: 54/12/4/272 Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Dry, Solid Com./Ind. Waste Max.Waste Permitted By Licence Refuse Amenity Act'78 Waste Prohibited Waste: Clinical - As In Control.Waste Regs'92 Difficult Wastes (As In Wmp.26) Special Wastes Environment Agency must give specific authorisation for this waste to be acceptedWaste requires prior approval: Household Waste Not Deliv.By Public	A14SE (E)	641	2	447890 165040
58	**Registered Waste Transfer Sites** Licence Holder: Berkshire C.C. Licence Reference: 54/12/5/ 33 Site Location: Pinchington Lane (South Side), Newbury, Berkshire Operator Location: Shire Hall, Shinfield Park, READING, Berkshire, RG2 9XG Authority: Environment Agency - Thames Region, West Area Site Category: Civic Amenity Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 1st February 1988 Preceded By Licence: Not Given Superseded By Licence: 54/12/4/272 Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Cans For Recycling Civic Amenity/Refuse Amenity Waste Dom./Com./Ind.Waste Deliv'D By Public Glass For Recycling Hard Asbestos Oil For Recycling Paper For Recycling Rags For Recycling Selected Com./Ind. Waste Ex Local Trad Prohibited Waste: Difficult Wastes Special Wastes	A14SE (E)	641	2	447890 165040

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	**Registered Waste Treatment or Disposal Sites** Licence Holder: West Berkshire Priority Care Servs. Licence Reference: 54/12/4/294 Site Location: Sandleford Hospital, 214 Newtown Road, Newbury, Berkshire Operator Location: Prospect Park Hospital, Honey End Lane, READING, Berkshire, RG3 4EJ Authority: Environment Agency - Thames Region, West Area Site Category: Incineration - with transfer Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st August 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Ash/Residues From On-Site Incin. Clinical - As In Control.Waste Regs'92 Confidential Paper/Cardboard/Plastic Household Waste From Within Hosp. Pharmaceuticals Inc. Controlled Drugs Prohibited Waste: Liquid Waste Other Than Clinical Radioactive Wastes Special Wastes Other Than Clinical Waste Not Permit.Under Epa Auth'N Waste- Danger By Fire/Explos./Fume/Gas Environment Agency must give specific authorisation for this waste to be acceptedWaste requires prior approval: Waste N.O.S.	A13NE (N)	305	2	447310 165550
60	**Registered Waste Treatment or Disposal Sites** Licence Holder: Cleansing Service Group Ltd Licence Reference: 54/12/4/232 Site Location: CSG at Pinchington Lane, NEWBURY, Berkshire, RG14 7SR Operator Location: Grange Road, Botley, SOUTHAMPTON, Hampshire, SO3 2GD Authority: Environment Agency - Thames Region, West Area Site Category: Transfer - with treatment Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st June 1997 Preceded By Licence: 54/12/4/232 Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Acid Anhydrides Aliphatic Acids Alkali Metal Oxides/Hydroxides Ammonia Aromatic Acids Food Processing Wastes/Starch Hydrochloric Acid Interceptor Pit Wastes Landfill Leachates Max.Storage In Licence Max.Waste Permitted By Licence Mildly Acidic Wastes Mildly Alkaline Wastes Oil/Water Mixtures (Special 1996 Regs) Other Alkalis Other Industrial Wastes Paint Waste Phosphoric Acid Soaps & Detergents Sulphuric Acid Tank Cleaning Sludge Tanker Cleaning Sludges/Solids Water (Contaminated) Prohibited Waste: Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste N.O.S.	A14SE (E)	729	2	447970 165000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	**Registered Waste Treatment or Disposal Sites** Licence Holder: Cleansing Service Group Ltd Licence Reference: 54/12/4/232 Site Location: CSG at Pinchington Lane, NEWBURY, Berkshire, RG14 7SR Operator Location: Grange Road, Botley, SOUTHAMPTON, Hampshire, SO3 2GD Authority: Environment Agency - Thames Region, West Area Site Category: Recovery - Oil Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 8th April 1991 Preceded By Licence: Not Given Superseded By Licence: 54/12/4/232 Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Acid Anhydrides Aliphatic Acids Alkali Metal Oxides/Hydroxides Ammonia Aromatic Acids Food Processing Wastes/Starch Hydrochloric Acid Interceptor Pit Wastes Max.Storage In Licence Max.Waste Permitted By Licence Oil/Water Mixtures Other Alkalis Other Industrial Wastes Paint Waste Phosphoric Acid Soaps & Detergents Sulphuric Acid Tank Cleaning Sludge Water (Contaminated) Prohibited Waste: Waste With Ph < 3 Waste With Ph > 13 Environment Agency must give specific authorisation for this waste to be acceptedWaste requires prior approval: Waste N.O.S.	A14SE (E)	729	2	447970 165000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Thames Group	A13NW (SW)	0	1	447203 165221
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment 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	A13NW (SW)	0	1	447203 165221
61	**BGS Recorded Mineral Sites** Site Name: Workhouse Gravel Pit Location: Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141917 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A18SE (N)	448	1	447333 165692
62	**BGS Recorded Mineral Sites** Site Name: Greenham Hill Gravel Pit Location: Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141918 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	624	1	447729 165678
63	**BGS Recorded Mineral Sites** Site Name: Greenham Hill Gravel Pit Location: Greenham, Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141921 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	714	1	447900 165597
64	**BGS Recorded Mineral Sites** Site Name: Sandleford Priory Pit Location: Greenham, Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141932 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Palaeogene Geology: London Clay Formation Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	754	1	447942 164875

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	**BGS Recorded Mineral Sites** Site Name: Greenham Hill Gravel Pit Location: Greenham, Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141920 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	819	1	447989 165652
66	**BGS Recorded Mineral Sites** Site Name: Lodge Gravel Pit Location: Greenham, Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141919 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14SE (E)	910	1	448188 165191
67	**BGS Recorded Mineral Sites** Site Name: Edgecombe Brick Works Location: Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141866 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Palaeogene Geology: London Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A11NE (W)	996	1	446181 165514
	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	A13NW (SW)	0	1	447203 165221
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	32	1	447187 165151
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	197	1	447112 165000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	250	1	447518 165316
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	447197 165235
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	192	1	447318 165000
	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	A13NW (SW)	0	1	447203 165221
	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	A13NW (SW)	0	1	447203 165221

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	**Contemporary Trade Directory Entries** Name: Olive Of Newbury Location: 4, Sandleford Parade, Newtown Road, Newbury, Berkshire, RG14 7EY Classification: Domestic Appliances - Servicing, Repairs & Parts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	94	-	447328 165327
69	**Contemporary Trade Directory Entries** Name: Alan Gibson Ltd Location: Newtown Rd, Newbury, Berkshire, RG14 7EX Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	136	-	447319 165377
69	**Contemporary Trade Directory Entries** Name: A4 Location: The Showroom, Newtown Road, Newbury, RG14 7EX Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	140	-	447327 165378
70	**Contemporary Trade Directory Entries** Name: Newbury Cleaners Location: 2, Rokeby Close, Newbury, Berkshire, RG14 7EU Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	196	-	447311 165440
71	**Contemporary Trade Directory Entries** Name: Powerhouse Location: Unit 3, Newbury Retail Park, Pinchington Lane, Newbury, Berkshire, RG14 7HU Classification: Electricity Companies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	249	-	447469 165405
71	**Contemporary Trade Directory Entries** Name: P R G Powerhouse Location: Unit 5, Newbury Retail Park, Pinchington Lane, Newbury, Berkshire, RG14 7HU Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	277	-	447472 165445
72	**Contemporary Trade Directory Entries** Name: Jp Of Newbury Location: Newtown Rd, Newbury, Berkshire, RG14 7ER Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (N)	294	-	447274 165542
72	**Contemporary Trade Directory Entries** Name: Sandleford Hospital Location: 214, Newtown Road, Newbury, Berkshire, RG14 7ED Classification: Hospitals **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	316	-	447315 165561
73	**Contemporary Trade Directory Entries** Name: Air Tempretures Controled Ltd Location: Santon, Chandos Road, Newbury, Berkshire, RG14 7EP Classification: Air Conditioning Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	313	-	447214 165567
74	**Contemporary Trade Directory Entries** Name: Tesco Petrol Filling Station Location: Newbury Retail Park, Pinchington Lane, NEWBURY, Berkshire, RG14 7HU Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	328	-	447576 165094
75	**Contemporary Trade Directory Entries** Name: Tesco Petrol Station Location: Pinchington Lane, Newbury, Berkshire, RG14 7HB Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	336	-	447605 165154

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	**Contemporary Trade Directory Entries** Name: Currys Pc World Location: Unit 11, Newbury Retail Park, Pinchington Lane, Newbury, RG14 7HU Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	366	-	447635 165329
77	**Contemporary Trade Directory Entries** Name: Ridgeway Audi Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	368	-	447645 165192
77	**Contemporary Trade Directory Entries** Name: Marshall Volkswagen Newbury Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	368	-	447645 165192
78	**Contemporary Trade Directory Entries** Name: Mitsubishi Motors Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (E)	420	-	447689 165142
79	**Contemporary Trade Directory Entries** Name: Think Ford Location: The Triangle, Newbury, RG14 7HT Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	426	-	447678 165083
79	**Contemporary Trade Directory Entries** Name: Gowrings Ford Of Newbury Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	429	-	447682 165085
79	**Contemporary Trade Directory Entries** Name: Gowrings Of Newbury Location: The Triangle, NEWBURY, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	429	-	447682 165085
79	**Contemporary Trade Directory Entries** Name: Rapid Fit Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	429	-	447682 165085
79	**Contemporary Trade Directory Entries** Name: Gowrings Of Newbury Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	429	-	447682 165085
80	**Contemporary Trade Directory Entries** Name: Volkswagen Group Uk Ltd Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (E)	426	-	447696 165144
80	**Contemporary Trade Directory Entries** Name: City Renault Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (E)	431	-	447701 165145
80	**Contemporary Trade Directory Entries** Name: Marshall'S Newbury Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	472	-	447738 165122

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	**Contemporary Trade Directory Entries** Name: Fawcetts Honda Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	434	-	447712 165195
81	**Contemporary Trade Directory Entries** Name: Fawcett'S Garage Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	434	-	447712 165195
81	**Contemporary Trade Directory Entries** Name: Fawcett'S Garage Location: The Triangle, Newbury, RG14 7HT Classification: Car Customisation & Conversion Specialists **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	437	-	447714 165191
81	**Contemporary Trade Directory Entries** Name: Snows Peugeot Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A14SW (E)	437	-	447714 165191
82	**Contemporary Trade Directory Entries** Name: Motorline Nissan Location: The Triangle, Newbury, Berkshire, RG14 7HT Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	489	-	447766 165185
83	**Contemporary Trade Directory Entries** Name: Stonecraft Drives Ltd Location: Unit 1 ,Monks Lane Service Station, Newbury, Berkshire, RG14 7ER Classification: Asphalt & Coated Macadam Laying Contractors **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12NE (W)	499	-	446632 165216
84	**Contemporary Trade Directory Entries** Name: Lushglen Exterior Furniture Renovation Services Location: 5, The Halters, Newbury, Berkshire, RG14 7XF Classification: Furniture - Repairing & Restoring **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	513	-	447737 165476
85	**Contemporary Trade Directory Entries** Name: Absolute Cleaning Ltd Location: 38, Christie Heights, Newbury, Berkshire, RG14 7UR Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	532	-	447722 165540
85	**Contemporary Trade Directory Entries** Name: Absolute Cleaning Ltd Location: 38, Christie Heights, Newbury, Berkshire, RG14 7UR Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	532	-	447722 165540
86	**Contemporary Trade Directory Entries** Name: Newbury Honda Location: The Triangle, Newbury, RG14 7HT Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	550	-	447825 165166
87	**Contemporary Trade Directory Entries** Name: M C Autos Location: Thatcham, RG19 8SR Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	574	-	447840 165112
87	**Contemporary Trade Directory Entries** Name: Cleansing Service Group Ltd Location: Pinchington Lane, Greenham, Thatcham, Berkshire, RG19 8SR Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	600	-	447871 165133

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	**Contemporary Trade Directory Entries** Name: Cleansing Service Group Ltd Location: Pinchington Lane, Greenham, Thatcham, RG19 8SR Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	601	-	447872 165133
88	**Contemporary Trade Directory Entries** Name: Cleanrug Location: 31, Sandleford Lane, Greenham, Thatcham, Berkshire, RG19 8XQ Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	584	-	447812 164996
89	**Contemporary Trade Directory Entries** Name: Pirouet T R Location: 11, Croft Road, Newbury, Berkshire, RG14 7AL Classification: Farriers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	586	-	446883 165783
90	**Contemporary Trade Directory Entries** Name: Coolglaze Ltd Location: 12, Three Acre Road, Newbury, Berkshire, RG14 7AN Classification: Window Film Manufacturers and Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	623	-	446726 165720
91	**Contemporary Trade Directory Entries** Name: Newbury Steam Team Location: 11, Hamilton Court, Newbury, Berkshire, RG14 7UH Classification: Ironing & Home Laundry Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	629	-	447497 165837
92	**Contemporary Trade Directory Entries** Name: Spectank Location: Sandleford, Newtown, Newbury, Berkshire, RG20 9BB Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A9NW (SE)	638	-	447575 164635
93	**Contemporary Trade Directory Entries** Name: Spectank Ltd Location: 4, Sandleford, Newtown, Newbury, RG20 9BB Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	641	-	447521 164599
94	**Contemporary Trade Directory Entries** Name: C M A Cleaning Services Location: 34, Sayers Close, Newbury, Berkshire, RG14 7UU Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	647	-	447849 165550
95	**Contemporary Trade Directory Entries** Name: Stephen Pummell Antique Furniture Restorations Location: 16, Meadow Road, Newbury, Berkshire, RG14 7AH Classification: Furniture - Repairing & Restoring **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (NW)	705	-	446890 165917
96	**Contemporary Trade Directory Entries** Name: John French Location: Unit 167 Greenham Air Base,Greenham Common, Newbury, Berkshire, RG14 7JH Classification: Screen Process Printers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	747	-	448014 165376
97	**Contemporary Trade Directory Entries** Name: Rivar Sand & Gravel Ltd Location: Pinchington Lane, Greenham, Thatcham, Berkshire, RG19 8SR Classification: Sand, Gravel & Other Aggregates **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	750	-	447998 165022

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
98	**Contemporary Trade Directory Entries** Name: Hampton Ventilation Ltd Location: 129, Andover Road, Newbury, Berkshire, RG14 6JJ Classification: Ventilators & Ventilation Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	774	-	446440 165580
99	**Contemporary Trade Directory Entries** Name: Country Helpline Location: 171, Greenham Road, Newbury, Berkshire, RG14 7TA Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	808	-	447859 165809
99	**Contemporary Trade Directory Entries** Name: Hands On Cleaning Co Location: 171, Greenham Road, Newbury, Berkshire, RG14 7TA Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	808	-	447859 165809
100	**Contemporary Trade Directory Entries** Name: Recycling Solutions Location: 10, Night Owls, Greenham, Thatcham, Berkshire, RG19 8SB Classification: Reclaiming - Waste Products **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	827	-	448105 165299
101	**Contemporary Trade Directory Entries** Name: Greenwood Garages Location: 6, The Cedars, Newbury, Berkshire, RG14 7AA Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	876	-	448155 165287
102	**Contemporary Trade Directory Entries** Name: Pestuk Newbury Location: 15, Paddock Road, Newbury, Berkshire, RG14 7DL Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	887	-	446907 166114
103	**Contemporary Trade Directory Entries** Name: Wheeler Pumps & Equipment Ltd Location: 3, Courtlands Road, Newbury, RG14 7LA Classification: Pump Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	916	-	447643 166087
104	**Contemporary Trade Directory Entries** Name: Creases Complete Ironing Service Location: 19, Montgomery Road, Newbury, Berkshire, RG14 6HT Classification: Ironing & Home Laundry Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	976	-	446279 165710
105	**Contemporary Trade Directory Entries** Name: D F S Restorations Ltd Location: 12, Porchester Road, Newbury, RG14 7QJ Classification: Furniture - Repairing & Restoring **Status: Active** Positional Accuracy: Automatically positioned to the address	A23SW (N)	980	-	447144 166238
106	**Fuel Station Entries** Name: Newtown Road Service Station Location: Newtown Road , , Newbury, West Berkshire, RG14 7ER Brand: Bp Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	89	-	447282 165336
107	**Fuel Station Entries** Name: Newtown Road Filling Station Location: Newtown Road , , Newbury, West Berkshire, RG14 7EX Brand: Total Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	140	-	447321 165380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	**Fuel Station Entries** Name: Gowrings Of Newbury Ltd Location: Greenham Road , , Newbury, West Berkshire, RG14 7HR Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A14SW (E)	336	-	447605 165153
108	**Fuel Station Entries** Name: Tesco Newbury Extra Location: Pinchington Lane , Greenham , Newbury, West Berkshire, RG14 7HB Brand: Tesco Extra Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A14SW (E)	338	-	447607 165153
109	**Points of Interest - Commercial Services** Name: City Motor Holdings Location: The, Triangle, Newbury, RG14 7HT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	423	6	447676 165087
109	**Points of Interest - Commercial Services** Name: Rapid Fit Location: The Triangle, Newbury, RG14 7HT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	429	6	447682 165085
110	**Points of Interest - Commercial Services** Name: Fawcett's Garage Location: The Triangle, Newbury, RG14 7HT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	437	6	447714 165191
111	**Points of Interest - Commercial Services** Name: M C Autos Location: Deadmans Lane, Greenham, Thatcham, RG19 8XS Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	573	6	447839 165113
111	**Points of Interest - Commercial Services** Name: M C Autos Location: Pinchington Lane, Greenham, Thatcham, RG19 8SR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	574	6	447840 165112
112	**Points of Interest - Commercial Services** Name: Pirouet T R Location: 11 Croft Road, Newbury, RG14 7AL Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A18SW (NW)	586	6	446883 165783
113	**Points of Interest - Commercial Services** Name: Empire Windscreens Location: Unit 4 Old Buildings Sandleford Farm, Newtown Road, Newtown, Newbury, Berkshire, RG20 9BB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	621	6	447549 164638
113	**Points of Interest - Commercial Services** Name: Empire Windscreens Ltd Location: Unit 3-4, Sandleford, Newtown, Newbury, RG20 9BB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (SE)	622	6	447539 164631
114	**Points of Interest - Commercial Services** Name: Greenwood Location: 6 The Cedars, Newbury, RG14 7AA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	876	6	448155 165287

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
114	**Points of Interest - Commercial Services** Name: Greenwood Garages Location: 6 The Cedars, Newbury, RG14 7AA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	876	6	448154 165286
115	**Points of Interest - Commercial Services** Name: Thirsty Beasts Location: 29 Priory Road, Newbury, RG14 7QS Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NE (N)	882	6	447325 166128
116	**Points of Interest - Commercial Services** Name: Pestuk Newbury Location: 15 Paddock Road, Newbury, RG14 7DL Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A18NW (N)	887	6	446907 166113
116	**Points of Interest - Commercial Services** Name: G K E Sampson & Sons Location: 22 Paddock Road, Newbury, RG14 7DG Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A17NE (N)	945	6	446856 166159
116	**Points of Interest - Commercial Services** Name: G K E Sampson & Sons Location: 22 Paddock Road, Newbury, RG14 7DG Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A17NE (N)	945	6	446856 166159
117	**Points of Interest - Manufacturing and Production** Name: Tanks Location: RG19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	627	6	447892 165103
118	**Points of Interest - Manufacturing and Production** Name: Tank (Covered) Location: RG14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	881	6	446332 164827
119	**Points of Interest - Manufacturing and Production** Name: Tank Location: RG20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	971	6	447429 164218
120	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Filling Station Location: Newbury Retail Park, Pinchington Lane, Newbury, RG14 7HU Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14SW (E)	328	6	447576 165094
120	**Points of Interest - Public Infrastructure** Name: Tesco Filling Station Location: Pinchington Lane, Newbury, RG14 7HB Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14SW (E)	336	6	447605 165154
120	**Points of Interest - Public Infrastructure** Name: Tesco Newbury Extra Location: Pinchington Lane, Greenham, Newbury, RG14 7HU Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14SW (E)	338	6	447607 165153
121	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: RG19 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	397	6	447492 164875

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
122	**Points of Interest - Public Infrastructure** Name: Recycling Centre Location: Nr Newtown Road, RG20 Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A8NE (SE)	445	6	447434 164775
123	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: RG19 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	524	6	447613 164816
124	**Points of Interest - Public Infrastructure** Name: Cleansing Service Group Ltd Location: Pinchington Lane, Greenham, Thatcham, RG19 8SR Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A14SW (E)	600	6	447871 165133
124	**Points of Interest - Public Infrastructure** Name: Cleansing Service Group Ltd Location: Pinchington Lane, Greenham, Thatcham, RG19 8SR Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A14SW (E)	602	6	447872 165133
124	**Points of Interest - Public Infrastructure** Name: Refuse Tip (Public) Location: RG19 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	635	6	447888 165054
125	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: RG19 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	621	6	447772 164856
126	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: RG19 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A14SE (SE)	716	6	447908 164892
127	**Points of Interest - Public Infrastructure** Name: Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	924	6	447017 166174
127	**Points of Interest - Public Infrastructure** Name: Cemetery Location: RG14 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	941	6	446981 166185
128	**Points of Interest - Public Infrastructure** Name: Sewage Filter Bed Location: RG20 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	967	6	447446 164226
129	**Points of Interest - Recreational and Environmental** Name: Playground Location: The Oaks, RG14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NW (N)	149	6	447155 165407
129	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	188	6	447168 165445

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
129	**Points of Interest - Recreational and Environmental** Name: Playground Location: The Oaks, RG14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NE (N)	217	6	447207 165471
130	**Points of Interest - Recreational and Environmental** Name: Playground Location: Jago Court, RG14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A18SE (NE)	323	6	447378 165554
131	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	391	6	447491 165575
131	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Bodin Gardens, RG14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A18SE (NE)	392	6	447495 165574
132	**Points of Interest - Recreational and Environmental** Name: Playground Location: Springfield Lane, RG14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	470	6	447475 165674
132	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	474	6	447482 165675
133	**Points of Interest - Recreational and Environmental** Name: Playground Location: Montague Drive, RG19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	473	6	447689 164997
133	**Points of Interest - Recreational and Environmental** Name: Playground Location: Montague Drive, RG19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14SW (SE)	481	6	447704 165008
134	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	543	6	447643 165649
134	**Points of Interest - Recreational and Environmental** Name: Playground Location: The Nightingales, RG14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A19SW (NE)	545	6	447648 165647
135	**Points of Interest - Recreational and Environmental** Name: Playground Location: Hamilton Court, RG14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A18SE (NE)	652	6	447475 165869
135	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	655	6	447475 165872

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
136	**Points of Interest - Recreational and Environmental** Name: Playground Location: Haysoms Drive, RG19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14NE (E)	716	6	447994 165278
137	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	725	6	447697 165838
137	**Points of Interest - Recreational and Environmental** Name: Playground Location: Austen Gardens, RG14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	725	6	447697 165838

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
138	**Ancient Woodland** Name: Crooks Copse Reference: 1495092 Area(m²): 23109.07 Type: Ancient and Semi-Natural Woodland	A13SW (SW)	184	7	446970 165110
139	**Ancient Woodland** Name: High Wood Reference: 1495474 Area(m²): 89238.89 Type: Ancient and Semi-Natural Woodland	A8NW (S)	391	7	447048 164813
140	**Ancient Woodland** Name: High Wood Reference: 1495473 Area(m²): 26795.45 Type: Ancient and Semi-Natural Woodland	A7NE (SW)	470	7	446850 164823
141	**Ancient Woodland** Name: High Wood Reference: 1495472 Area(m²): 2729.87 Type: Ancient and Semi-Natural Woodland	A7NE (SW)	627	7	446713 164732
142	**Ancient Woodland** Name: Not Supplied Reference: 1495577 Area(m²): 25463.74 Type: Ancient and Semi-Natural Woodland	A7NE (SW)	786	7	446693 164546
143	**Ancient Woodland** Name: Barn Copse Reference: 1495471 Area(m²): 24511.05 Type: Ancient and Semi-Natural Woodland	A7NW (SW)	807	7	446490 164710
144	**Ancient Woodland** Name: West Wood Reference: 1495487 Area(m²): 52262.19 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	1000	7	448117 165792
145	**Nitrate Vulnerable Zones** Name: Berkshire Downs Description: Groundwater Source: Environment Agency, Head Office	A18NW (N)	764	4	446983 166007
146	**Sites of Special Scientific Interest** Name: Greenham And Crookham Commons Multiple Areas: Y Total Area (m2): 2804834.870000001 Source: Natural England Reference: 1003118 Designation Details: Site Of Special Scientific Interest Designation Date: 16th March 1994 Date Type: Notified	A9NE (SE)	804	7	447929 164760

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Basingstoke And Deane Borough Council - Environmental Health	January 2020	Annual Rolling Update
West Berkshire Council - Environmental Health Department	November 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - Thames Region	October 2019	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Thames Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - Thames Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Environment Agency - South East Region - Solent & South Downs Area	October 2019	Quarterly
Environment Agency - South East Region - West Thames Area	October 2019	Quarterly
Environment Agency - Thames Region	October 2019	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Basingstoke And Deane Borough Council - Environmental Health	June 2014	Variable
West Berkshire Council - Environmental Health Department	June 2015	Variable
Local Authority Pollution Prevention and Controls		
Basingstoke And Deane Borough Council - Environmental Health	June 2014	Annual Rolling Update
West Berkshire Council - Environmental Health Department	June 2015	Not Applicable
Local Authority Pollution Prevention and Control Enforcements		
Basingstoke And Deane Borough Council - Environmental Health	June 2014	Variable
West Berkshire Council - Environmental Health Department	June 2015	Variable
Nearest Surface Water Feature		
Ordnance Survey	October 2019	
Pollution Incidents to Controlled Waters		
Environment Agency - Thames Region	September 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Thames Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - Thames Region	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Environment Agency - Thames Region	June 2016	
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 - South East Region - Solent & South Downs Area	October 2019	Quarterly
Environment Agency - South East Region - West Thames Area	October 2019	Quarterly
Environment Agency - Thames Region - South East Area	October 2019	Quarterly
Environment Agency - Thames Region - West Area	October 2019	Quarterly
Water Abstractions		
Environment Agency - Thames Region	October 2019	Quarterly
Water Industry Act Referrals		
Environment Agency - Thames Region	October 2017	Quarterly
Groundwater Vulnerability Map		
Environment Agency - Head Office	June 2018	As notified
Groundwater Vulnerability - Soluble Rock Risk		
Environment Agency - Head Office	June 2018	As notified

Data Currency

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	October 2019	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2019	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2019	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2019	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2019	Quarterly
Flood Defences Environment Agency - Head Office	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	October 2019	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

Data Currency

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	October 2019	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Thames Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - South East Region - Solent & South Downs Area	November 2019	Quarterly
Environment Agency - South East Region - West Thames Area	November 2019	Quarterly
Environment Agency - Thames Region - South East Area	November 2019	Quarterly
Environment Agency - Thames Region - West Area	November 2019	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - South East Region - Solent & South Downs Area	October 2019	Quarterly
Environment Agency - South East Region - West Thames Area	October 2019	Quarterly
Environment Agency - Thames Region - South East Area	October 2019	Quarterly
Environment Agency - Thames Region - West Area	October 2019	Quarterly
Local Authority Landfill Coverage		
Basingstoke And Deane Borough Council - Environmental Health	May 2000	Not Applicable
Hampshire County Council - Minerals and Waste Planning	May 2000	Not Applicable
West Berkshire Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Basingstoke And Deane Borough Council - Environmental Health	May 2000	Not Applicable
Hampshire County Council - Minerals and Waste Planning	May 2000	Not Applicable
West Berkshire Council - Environmental Health Department	May 2000	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 - Thames Region - South East Area	March 2003	Not Applicable
Environment Agency - Thames Region - West Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Thames Region - South East Area	March 2003	Not Applicable
Environment Agency - Thames Region - West Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Thames Region - South East Area	March 2003	Not Applicable
Environment Agency - Thames Region - West Area	March 2003	Not Applicable

Data Currency

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	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Basingstoke And Deane Borough Council	February 2016	Variable
Hampshire County Council - Minerals and Waste Planning	February 2016	Variable
West Berkshire Council	February 2016	Variable
Planning Hazardous Substance Consents		
Basingstoke And Deane Borough Council	February 2016	Variable
Hampshire County Council - Minerals and Waste Planning	February 2016	Variable
West Berkshire Council	February 2016	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	October 2019	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

Data Currency

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	October 2019	Quarterly
Fuel Station Entries Catalist Ltd - Experian	December 2019	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	December 2019	Quarterly
Points of Interest - Education and Health PointX	December 2019	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2019	Quarterly
Points of Interest - Public Infrastructure PointX	December 2019	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2019	Quarterly
Underground Electrical Cables National Grid	December 2015	

Data Currency

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	August 2018	Bi-Annually
Areas of Adopted Green Belt		
Basingstoke And Deane Borough Council	November 2019	As notified
West Berkshire Council	November 2019	As notified
Areas of Unadopted Green Belt		
Basingstoke And Deane Borough Council	November 2019	As notified
West Berkshire Council	November 2019	As notified
Areas of Outstanding Natural Beauty		
Natural England	June 2019	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	March 2019	Bi-Annually
Marine Nature Reserves		
Natural England	July 2019	Bi-Annually
National Nature Reserves		
Natural England	July 2019	Bi-Annually
National Parks		
Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones		
Environment Agency - Head Office	December 2017	Bi-Annually
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	
Ramsar Sites		
Natural England	April 2019	Bi-Annually
Sites of Special Scientific Interest		
Natural England	March 2019	Bi-Annually
Special Areas of Conservation		
Natural England	June 2019	Bi-Annually
Special Protection Areas		
Natural England	April 2019	Bi-Annually

Data Suppliers

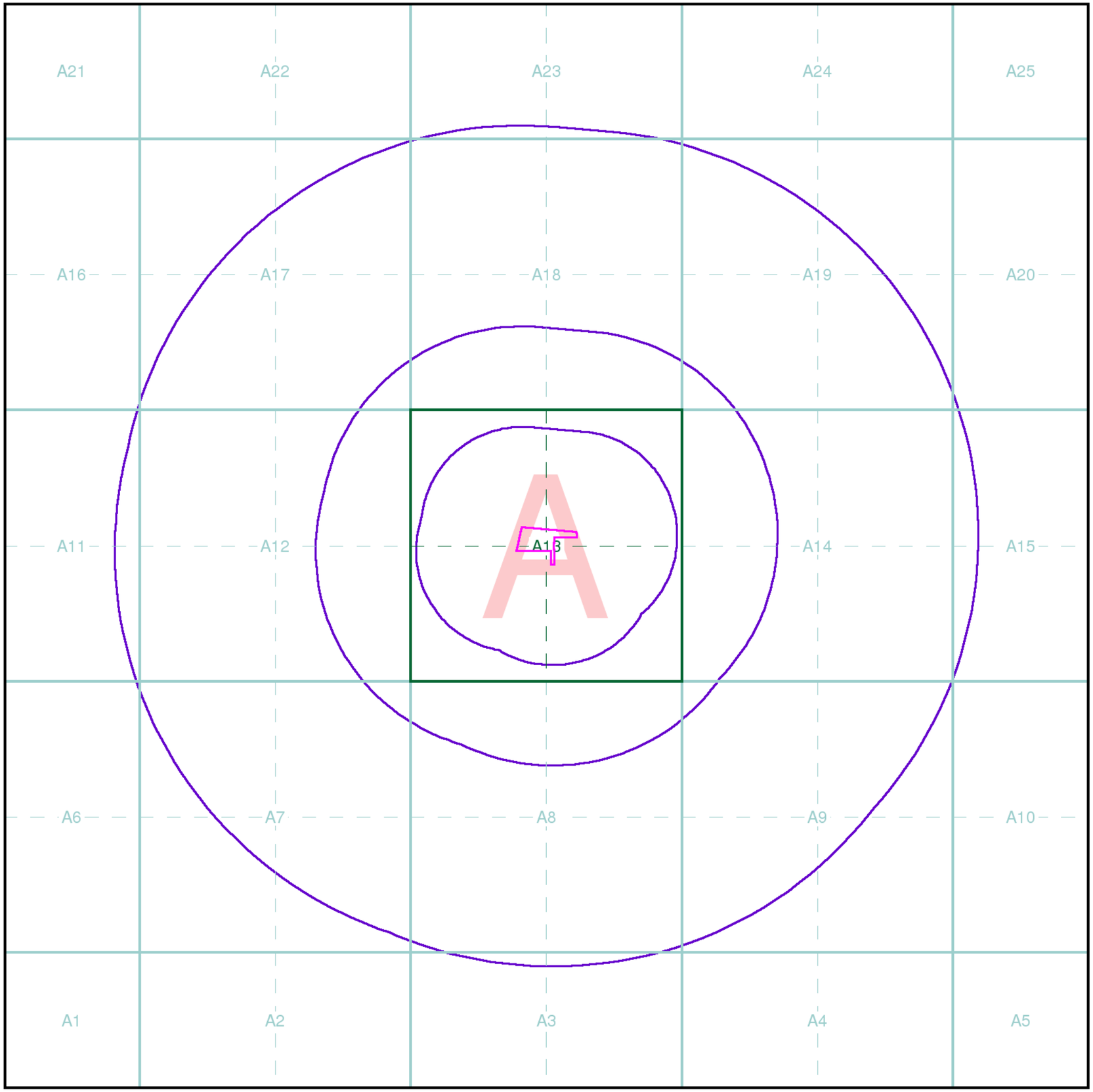
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPA Scottish Environment Protection Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturiol Cymru Natural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Peter Brett Associates	pba peterbrett

Useful Contacts

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	**West Berkshire Council - Environmental Health Department** Council Offices, Faraday Road, Newbury, Berkshire, RG14 2AF	Telephone: 01635 551111 Fax: 01635 519431 Website: www.westberks.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	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
7	**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.



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data
British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL
Environment Agency
NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mrs J Taylor, Listers Geotechnical Consultants Ltd, Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants, NN12 8QD

Order Details

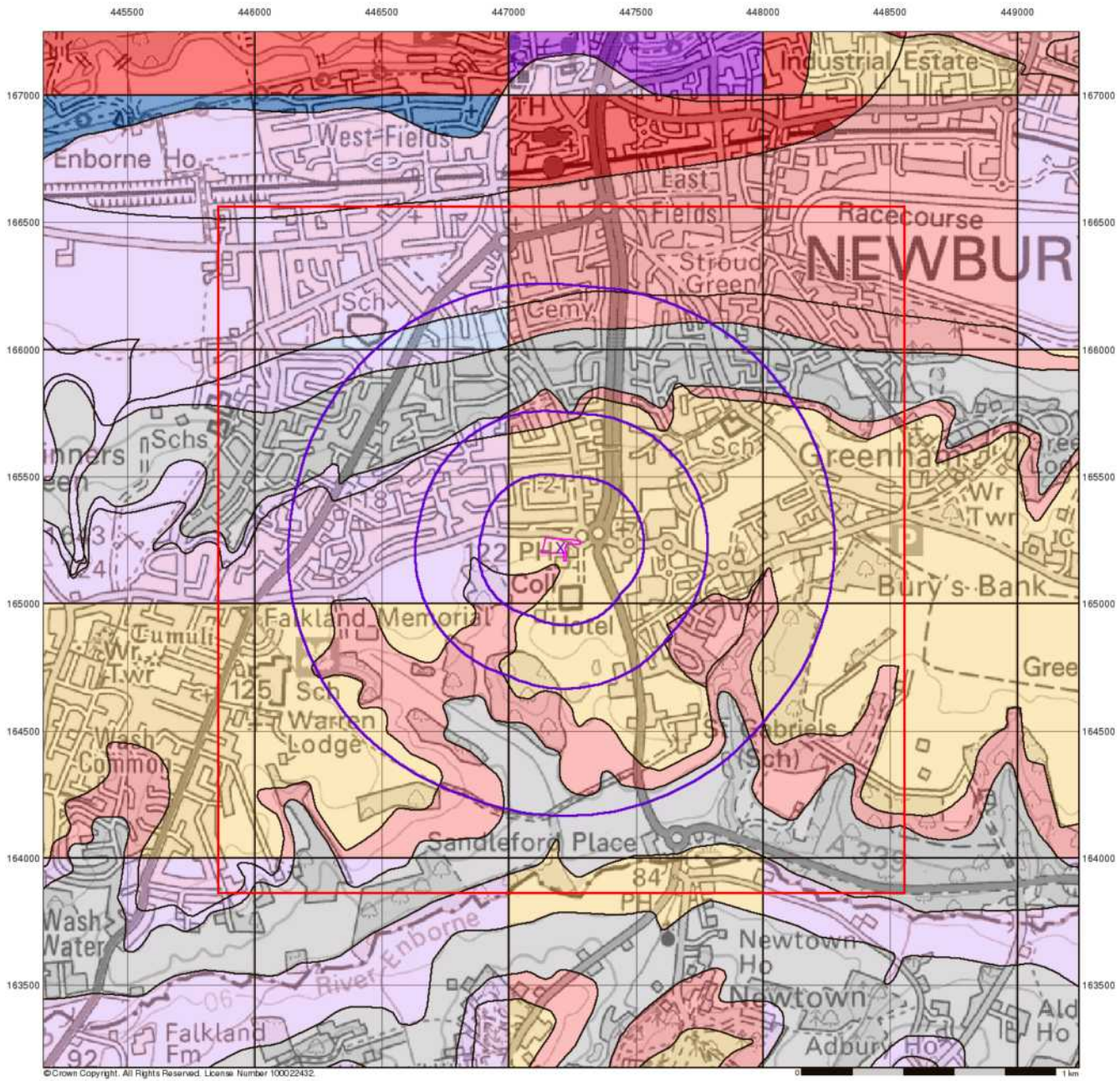
Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447190, 165230
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Full Terms and Conditions can be found on the following link:
http://www.landmarkinfo.co.uk/Terms/Show/515

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Groundwater Vulnerability

General

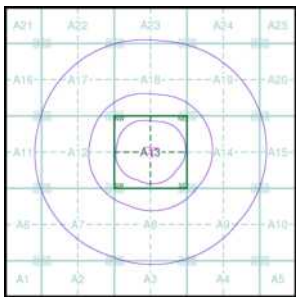
Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer
Soluble Rock

Site Sensitivity Context Map - Slice A

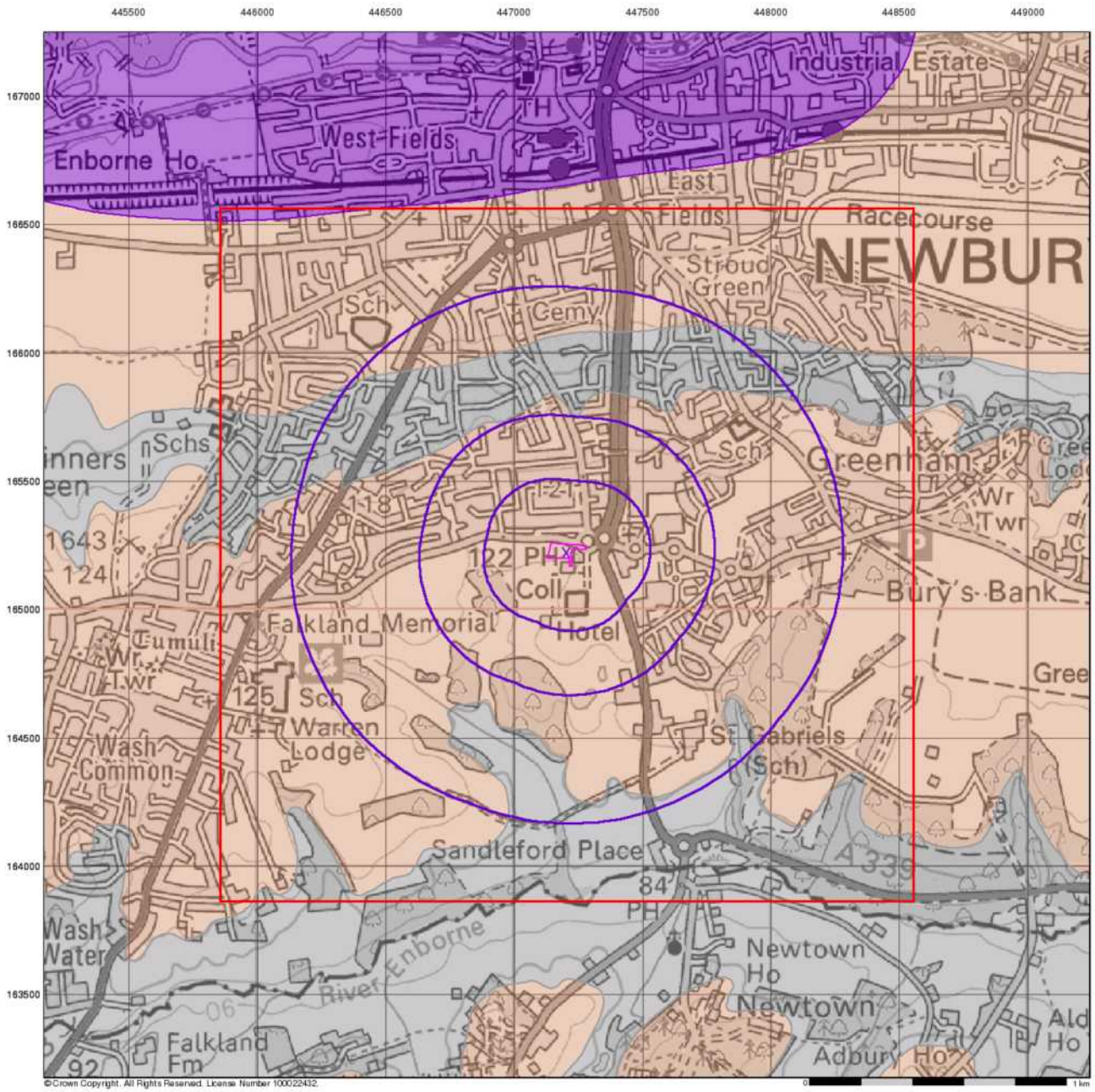


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Bedrock Aquifer Designation

General

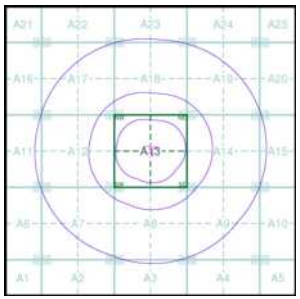
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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

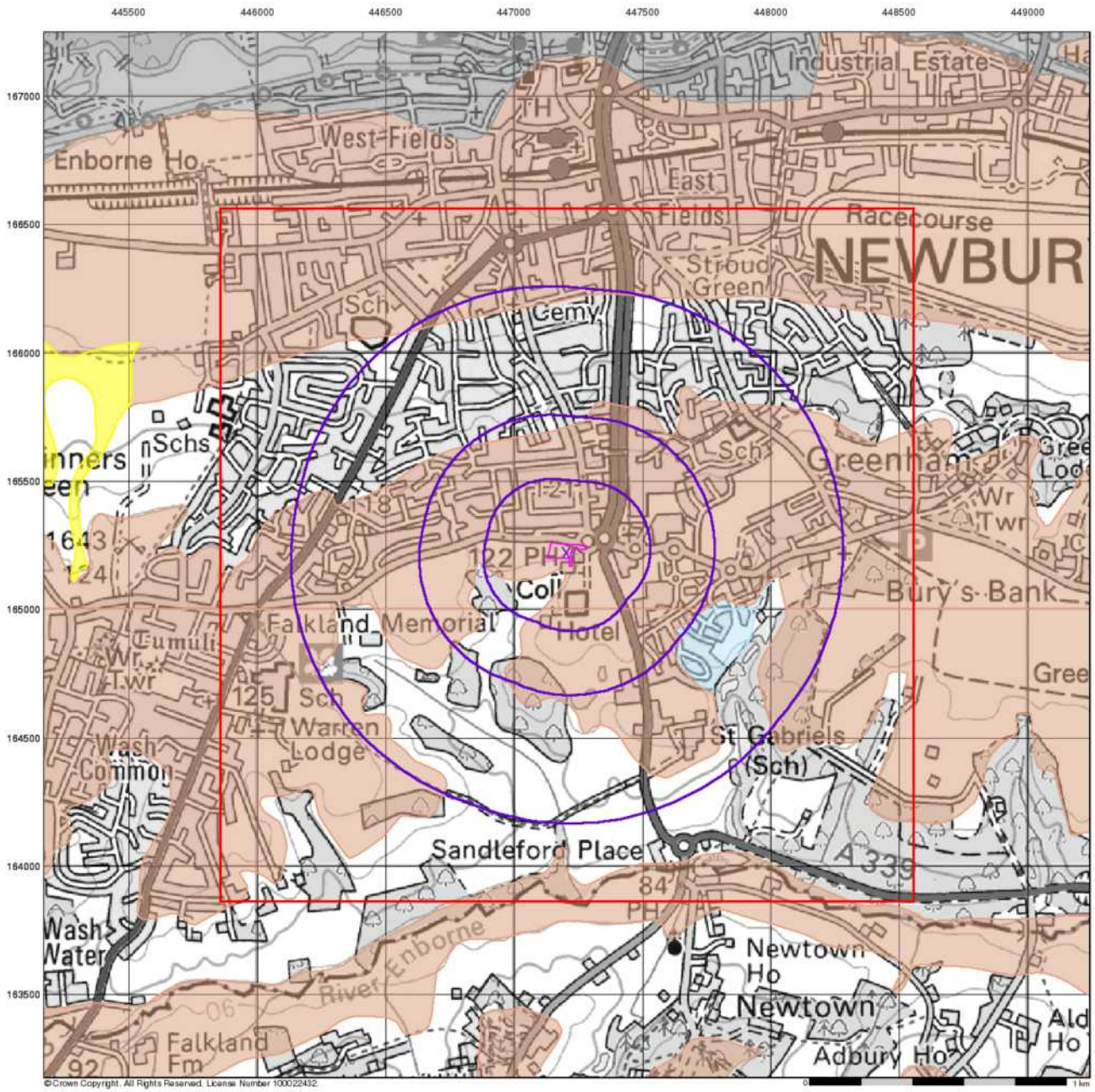


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Superficial Aquifer Designation

General

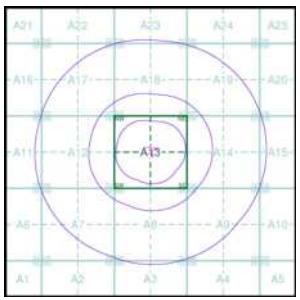
Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

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

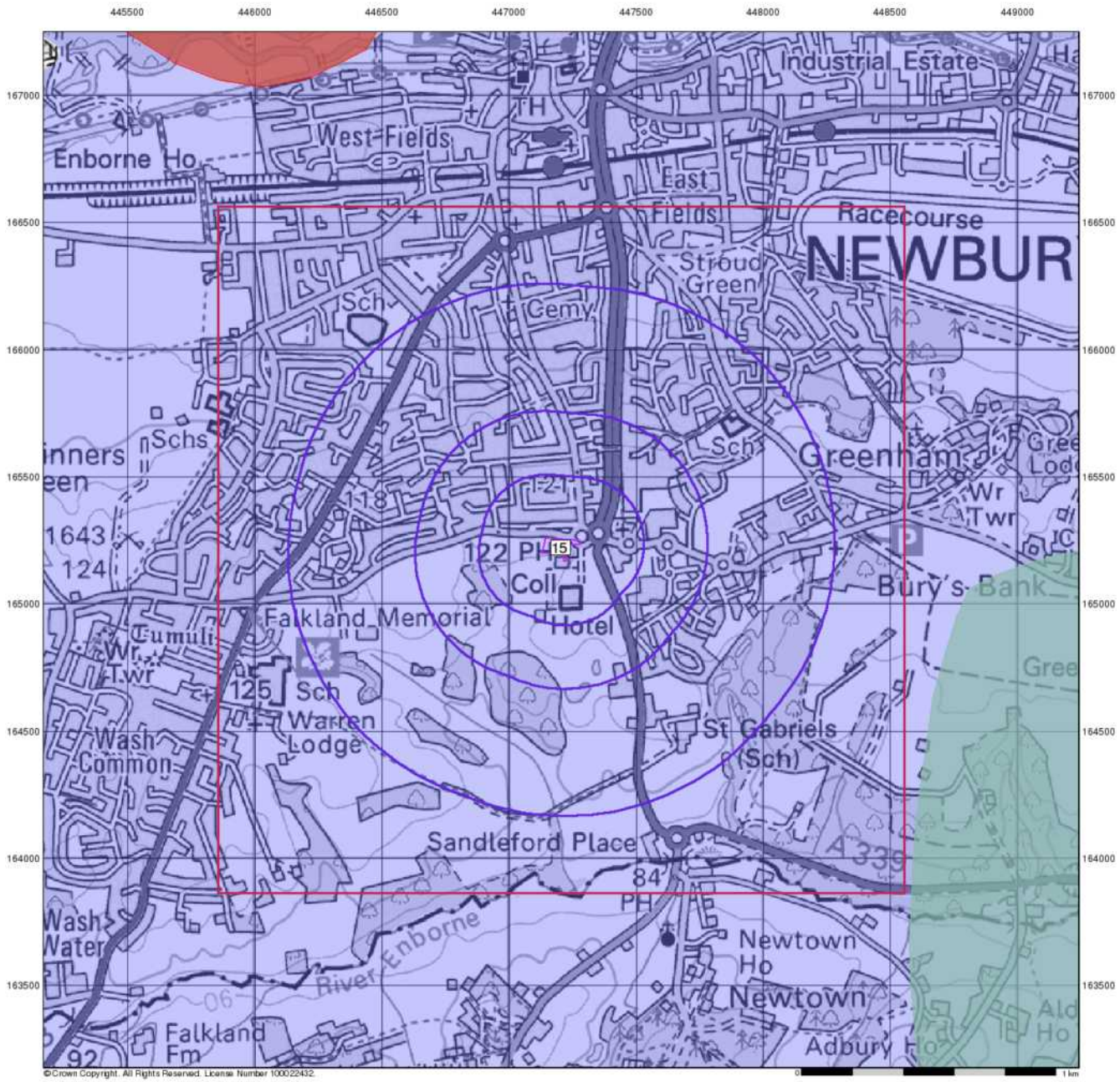


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Source Protection Zones

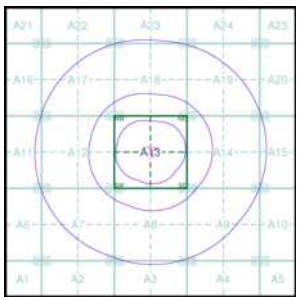
General

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

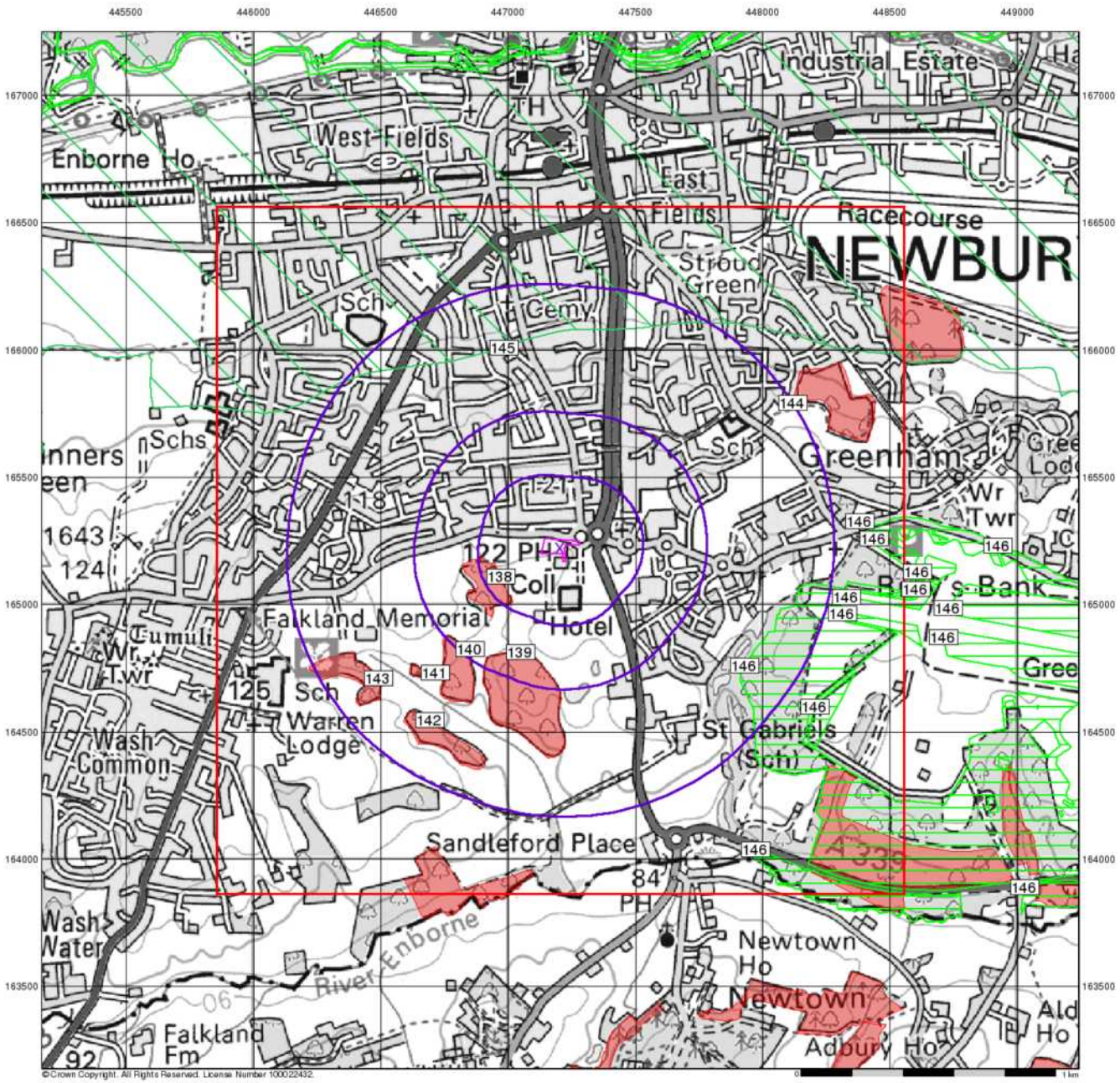


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Sensitive Land Uses

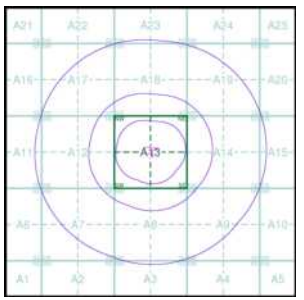
General

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

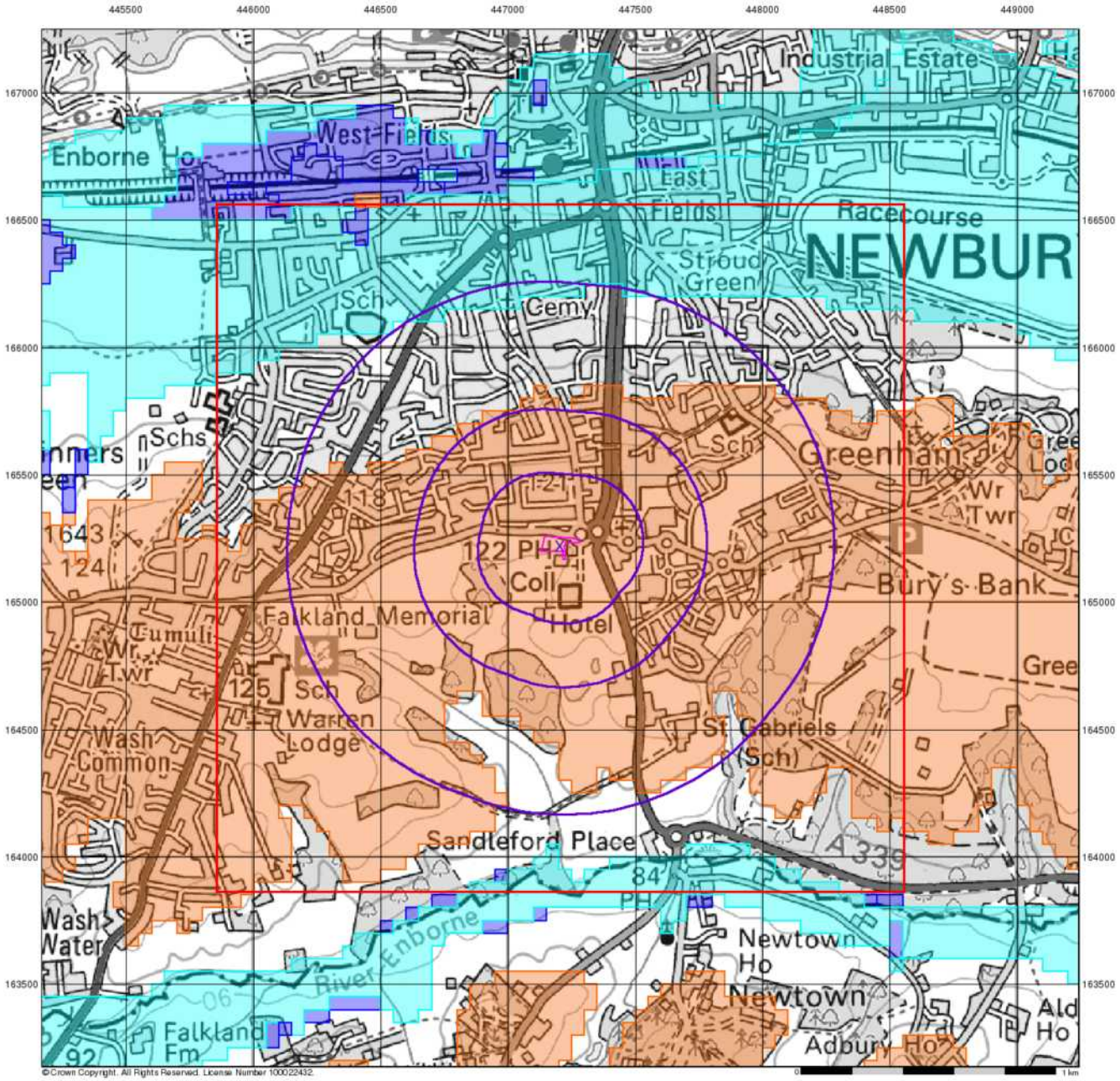


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

BGS Flood GFS Data

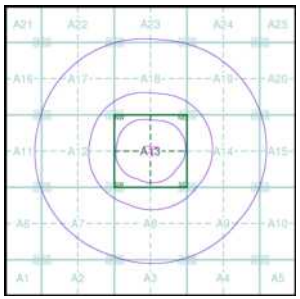
General

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

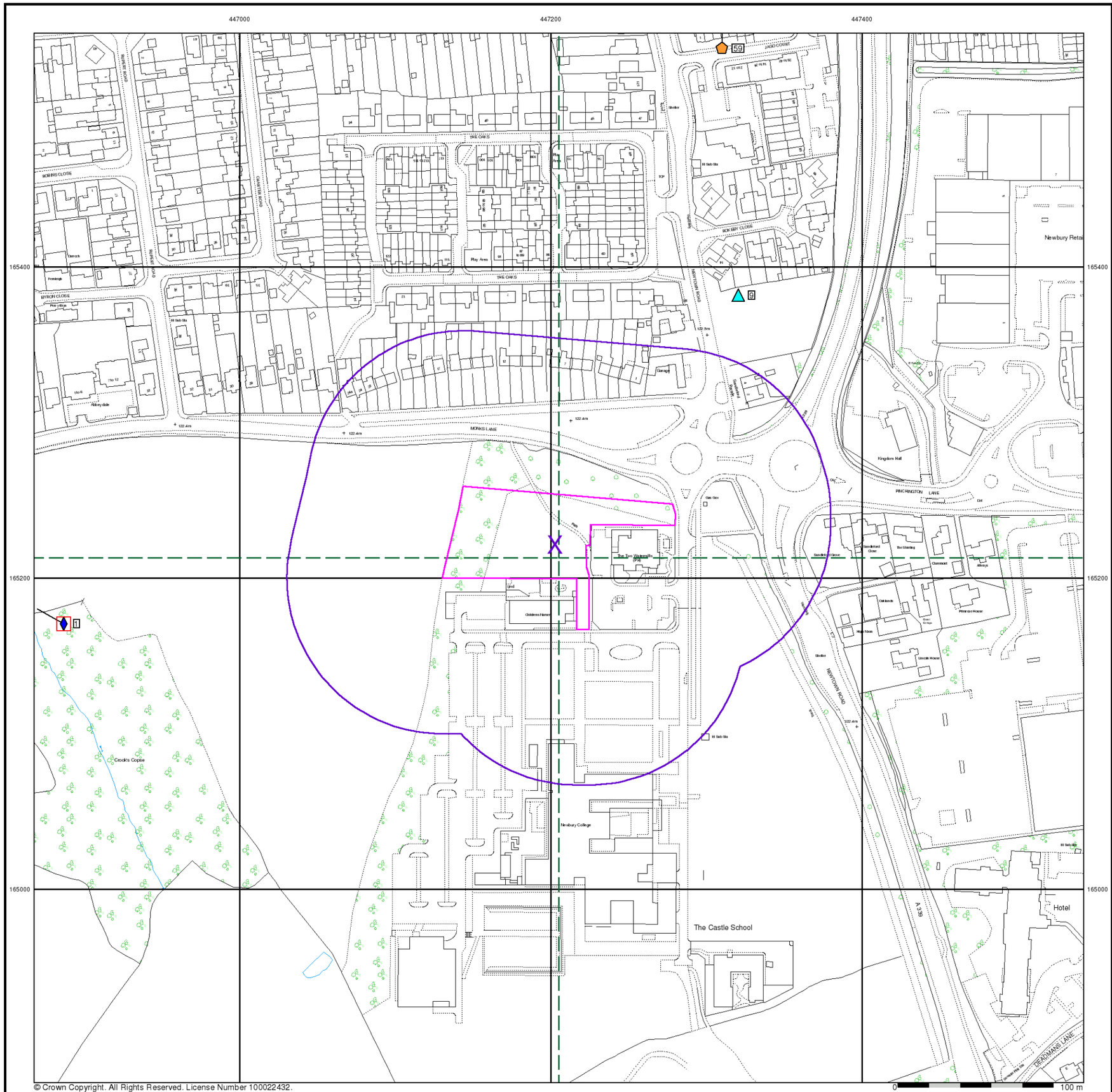


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

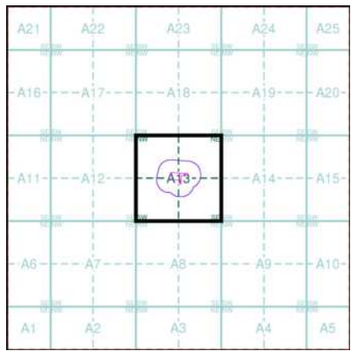
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



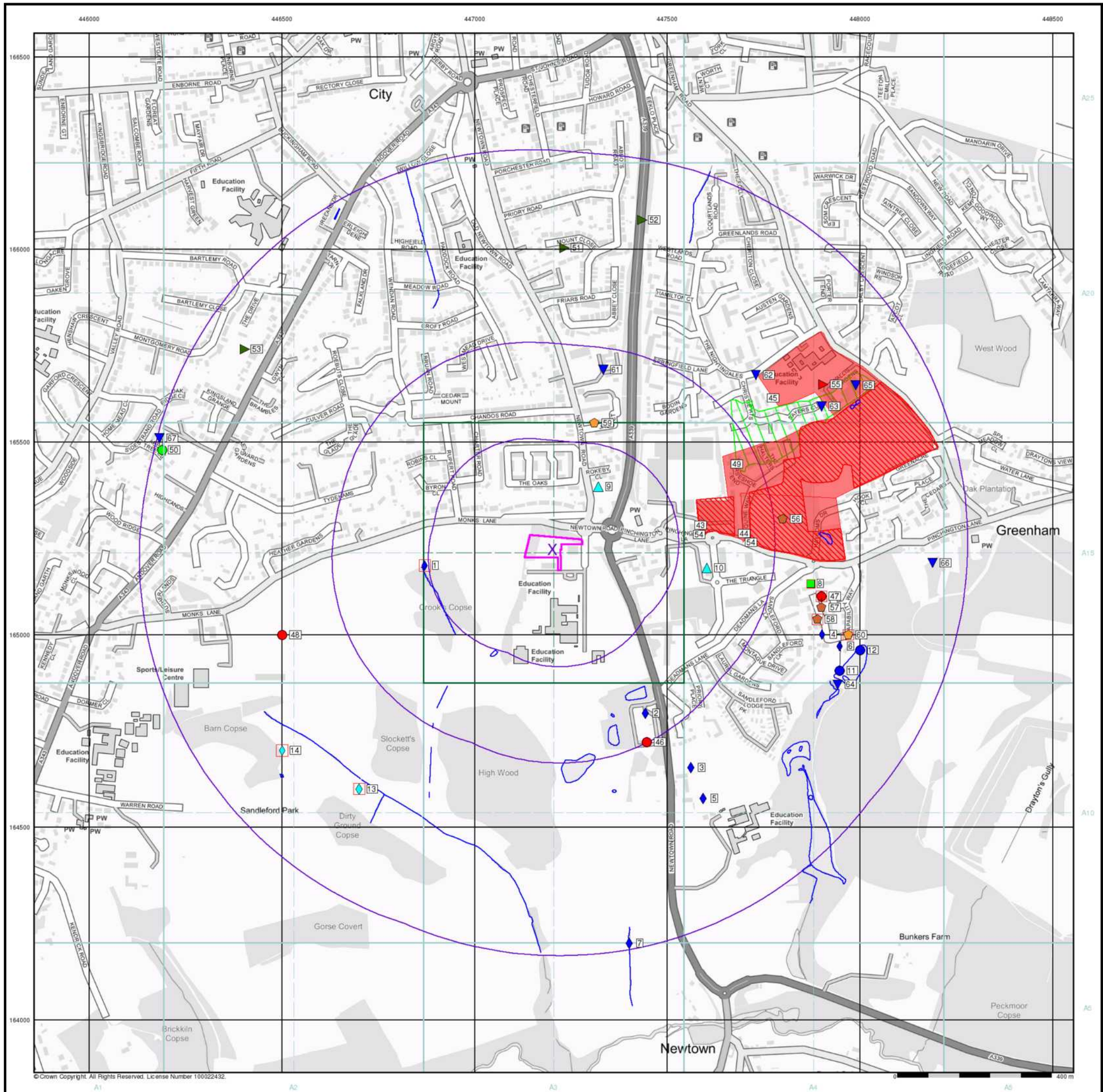
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Plot Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General
Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID
Several of Type at Location

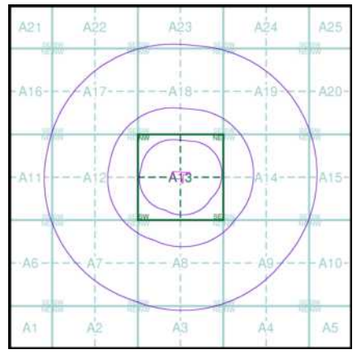
Agency and Hydrological
- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances
COMAH Site | Explosive Site | NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Geological
- BGS Recorded Mineral Site

Waste
- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details
Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Industrial Land Use Map

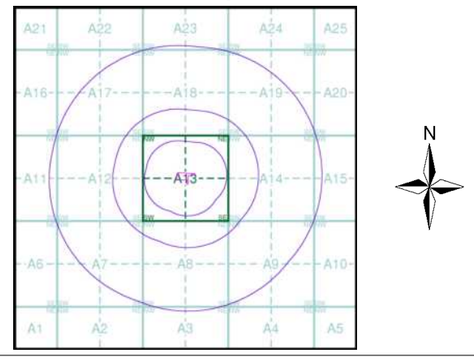
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A

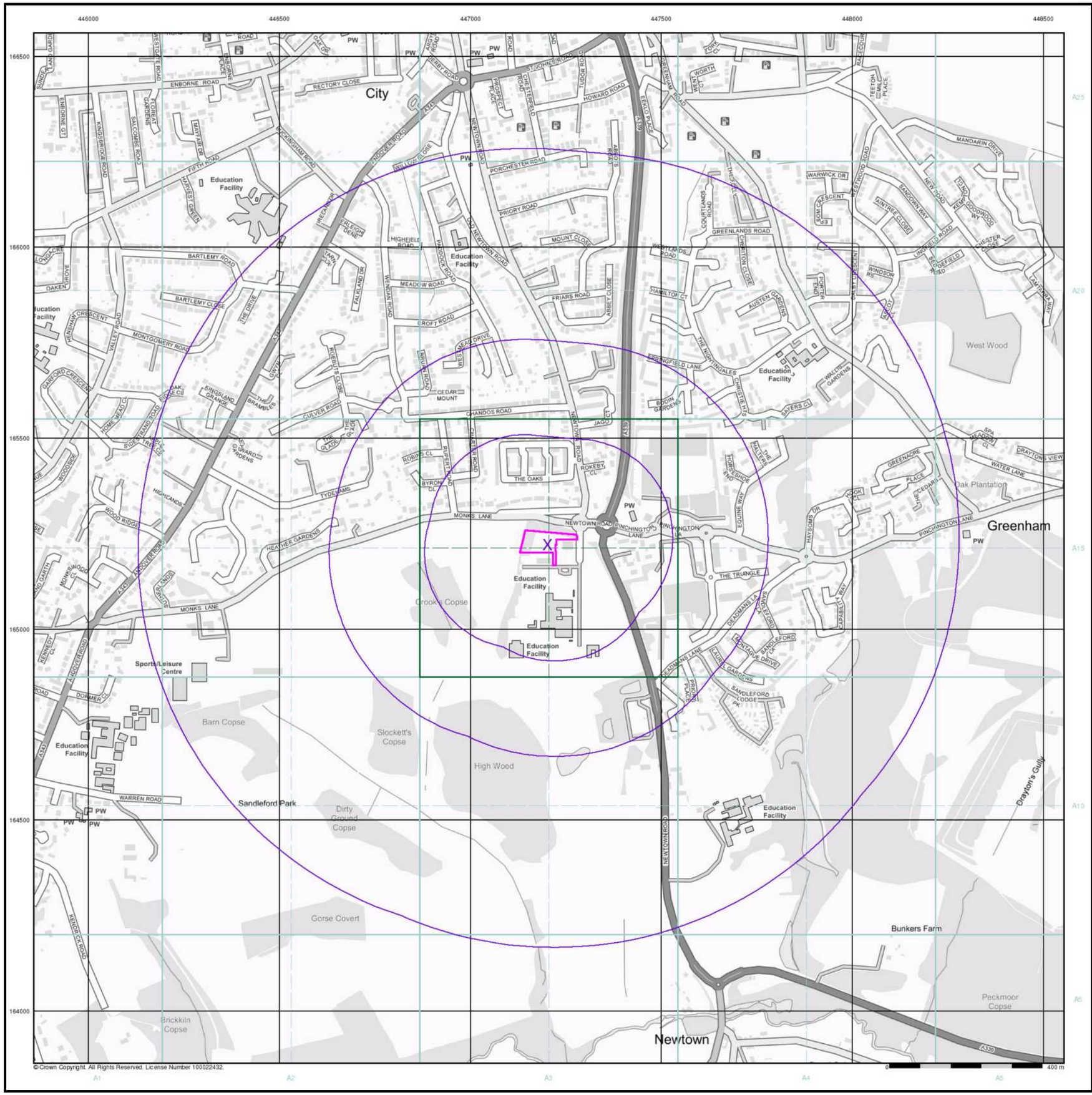


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

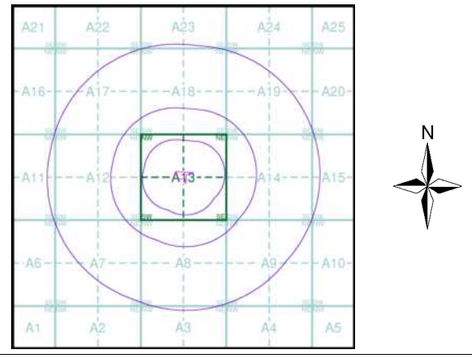
General

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

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



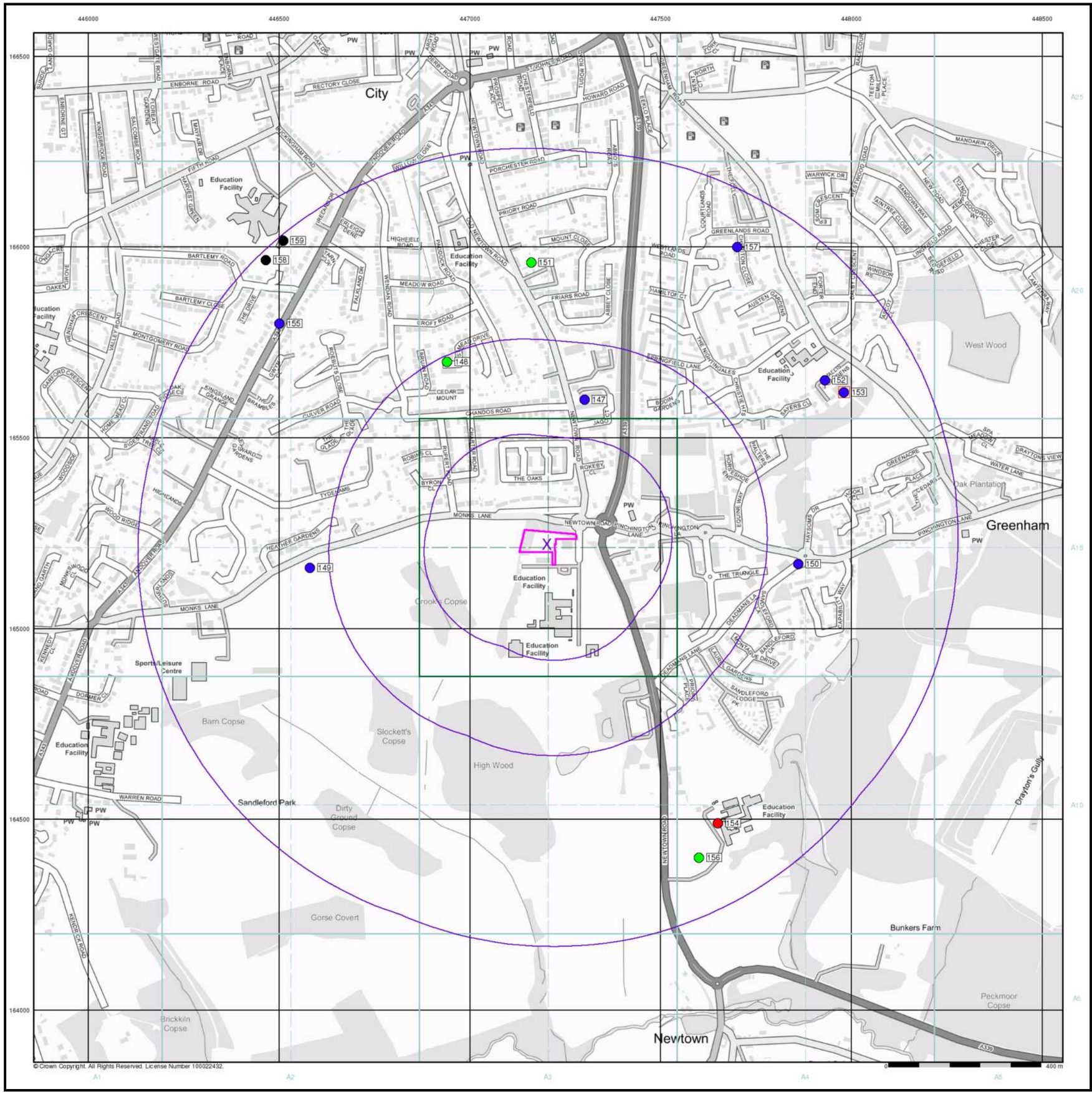
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

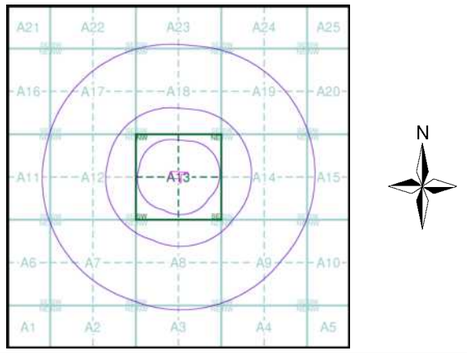
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A

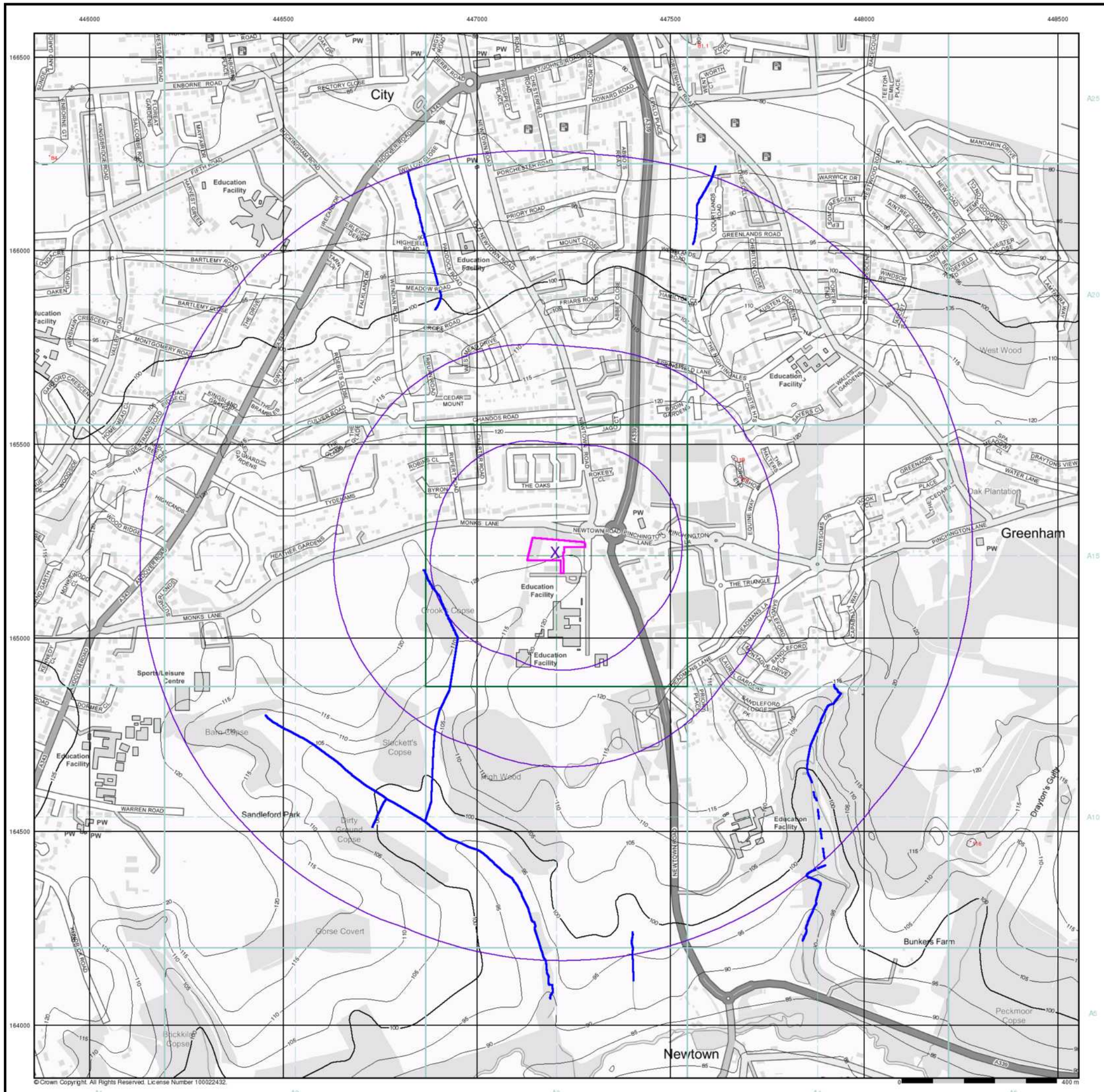


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

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

OS Water Network Data

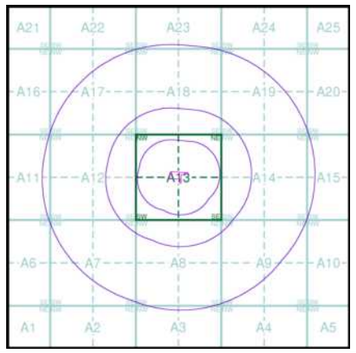
- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

Standard Contour 105 100 95
Master Contour
Spot Height *167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



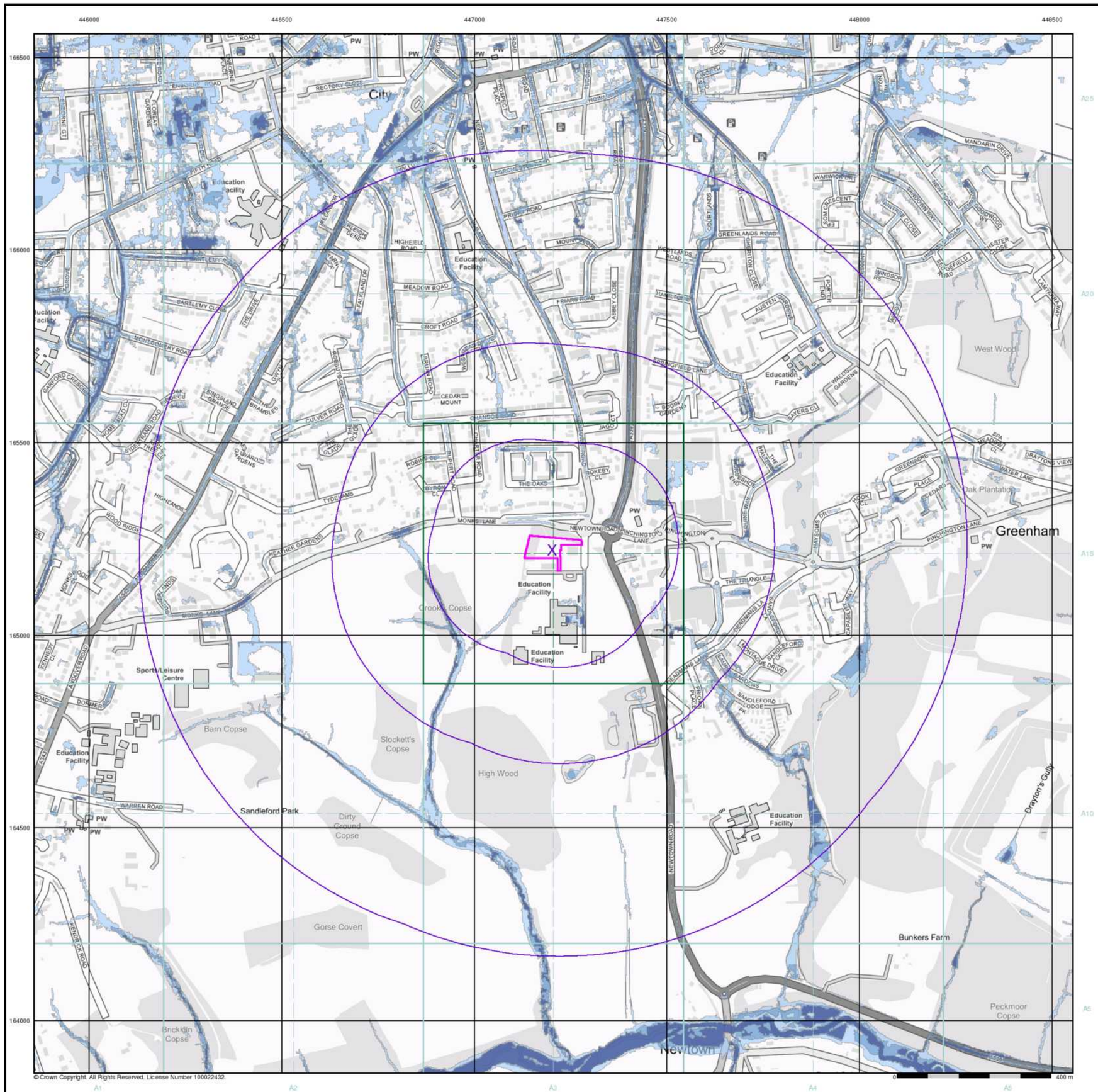
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

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

Risk of Flooding from Surface Water

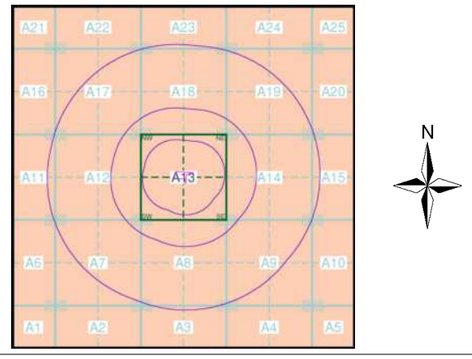
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



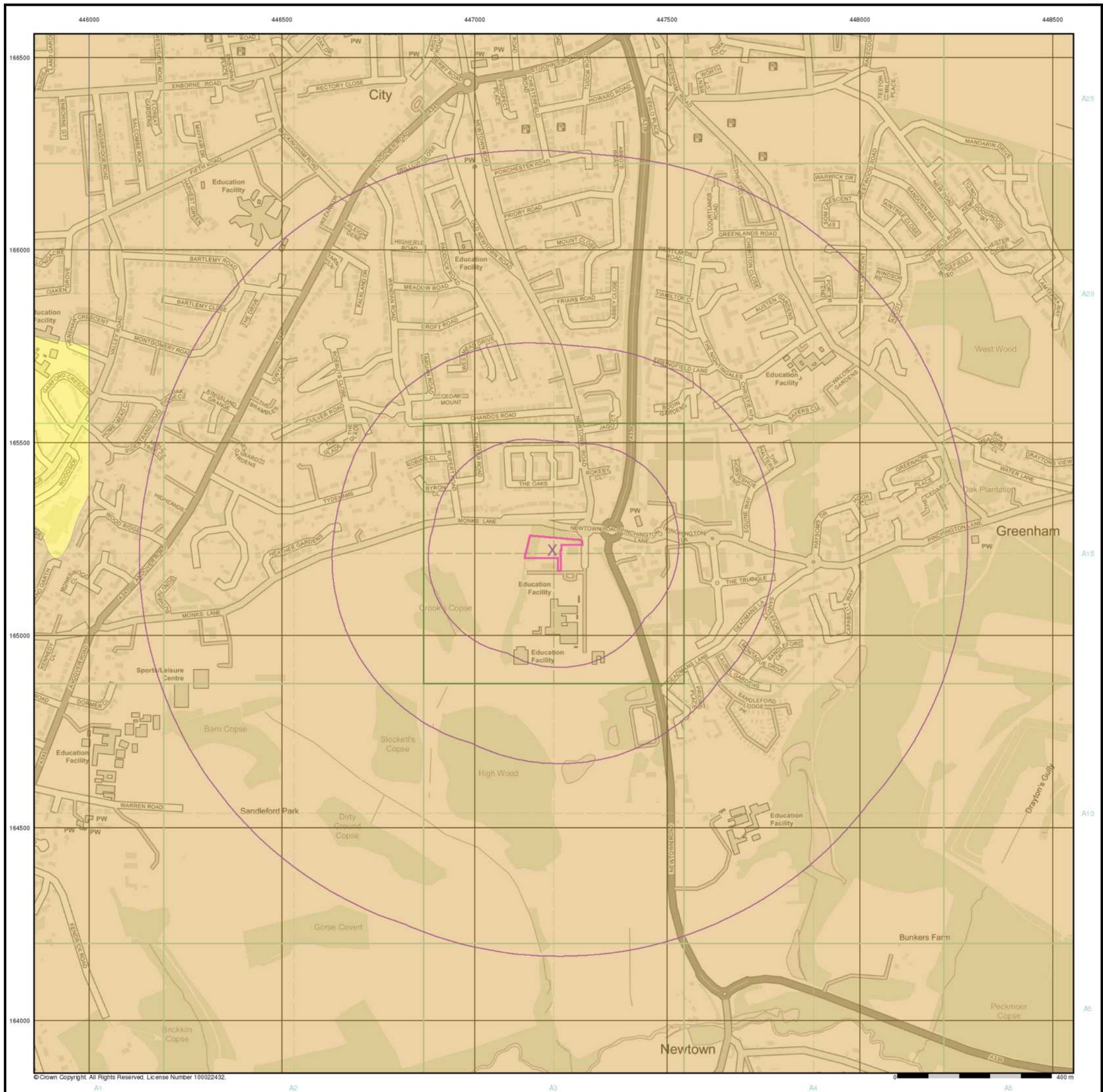
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

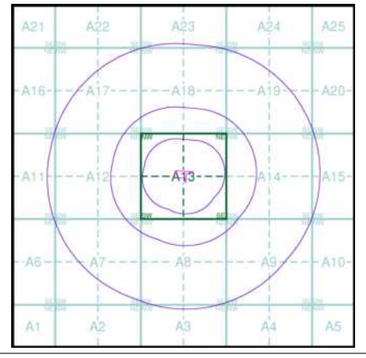
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

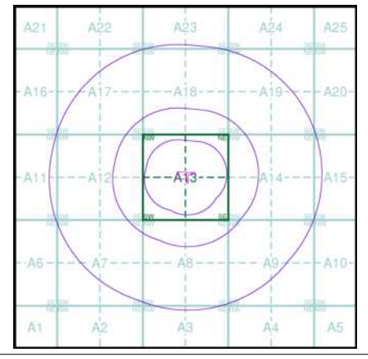
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



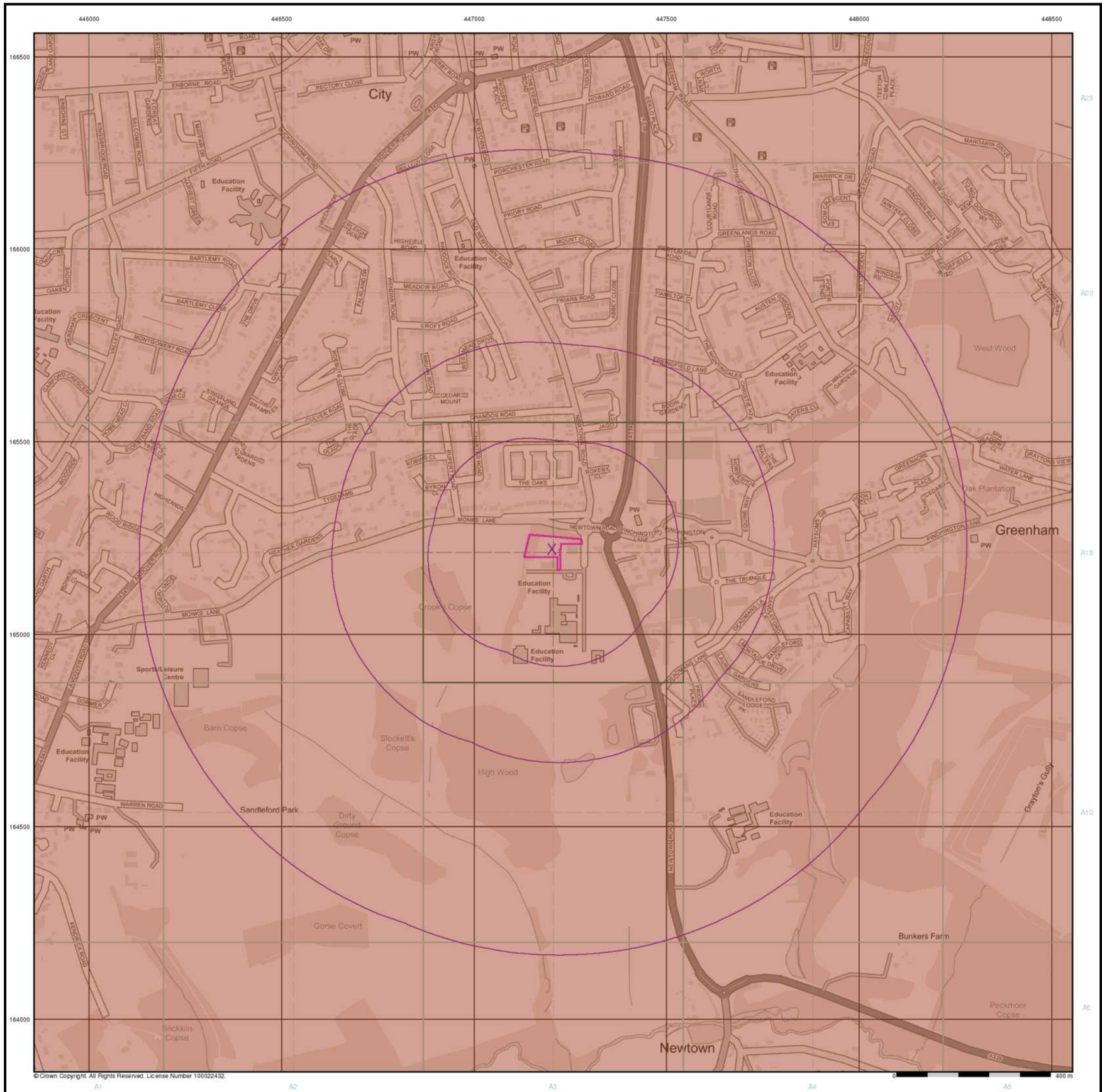
Order Details

Order Details:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

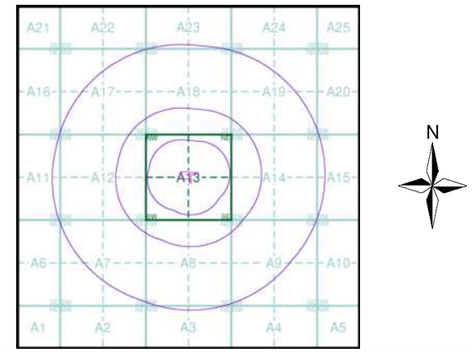
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



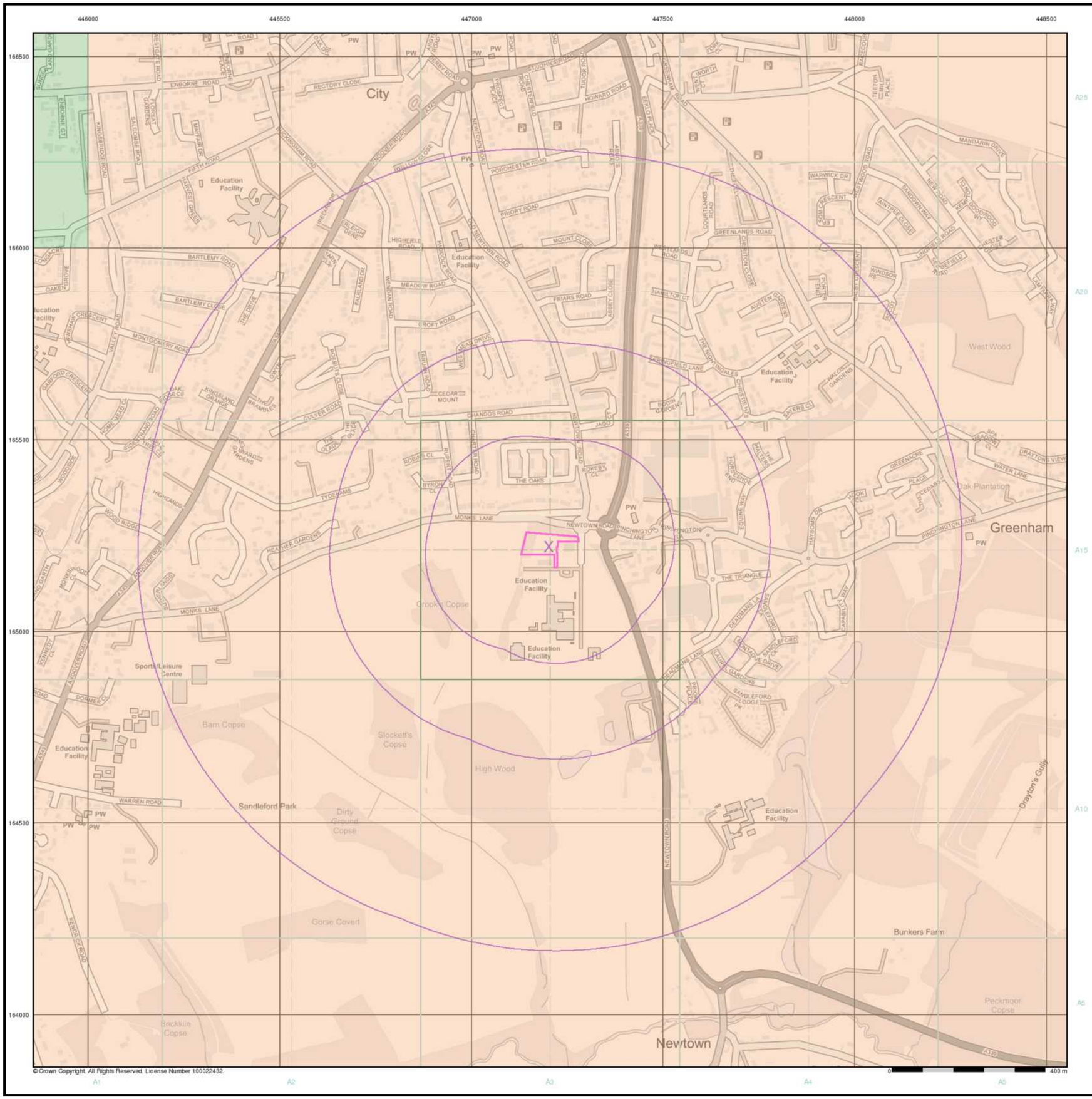
Order Details

Order Details:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

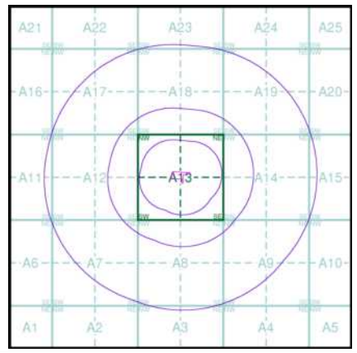
Specified Site Specified Buffer(s) X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



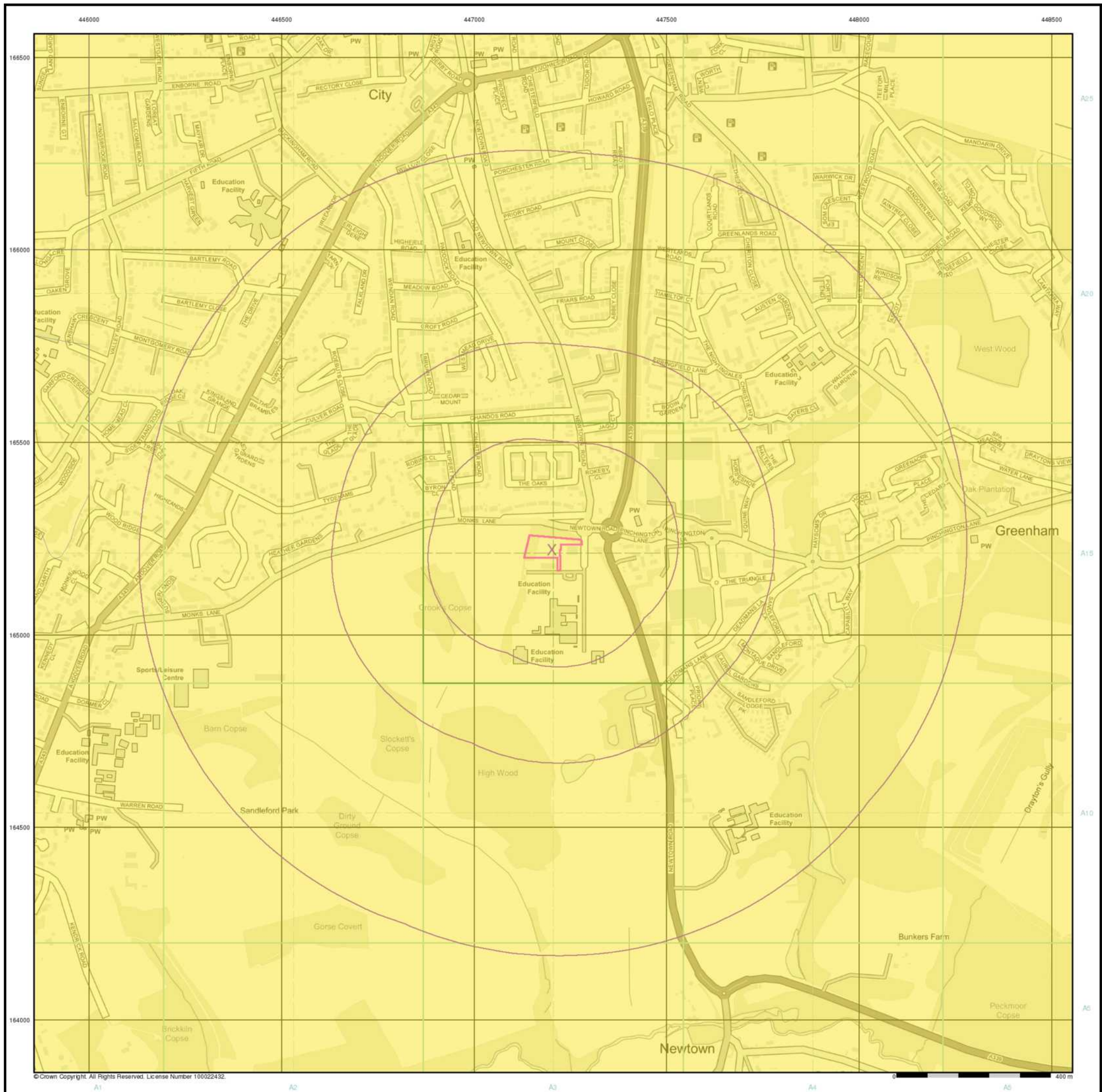
Order Details

Order Details:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

General

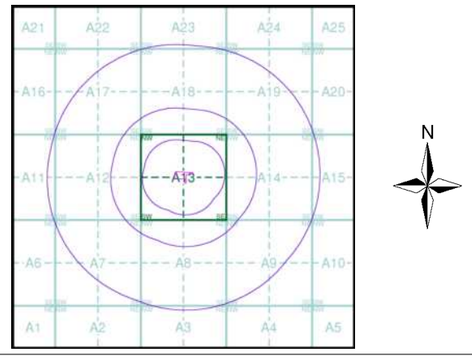
Specified Site Specified Buffer(s) X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	LSGR	Landscaped Ground (Undivided)	Artificially Modified Ground	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene
	WMGR	Infilled Ground	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
	T1T2	River Terrace Deposits, 1 to 2	Sand and Gravel	Not Supplied - Holocene
	BGGR	Beenham Grange Gravel Member	Sand and Gravel	Not Supplied - Devensian
	THGRL	Lower Thatcham Gravel	Sand and Gravel	Not Supplied - Wolstonian
	THGRU	Upper Thatcham Gravel	Sand and Gravel	Not Supplied - Wolstonian
	SIGR	Silchester Gravel Member	Sand and Gravel	Not Supplied - Anglian
	PEAT	Peat	Peat	Not Supplied - Quaternary
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary
	T6T8	River Terrace Deposits, 6 to 8	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	Sand	Not Supplied - Ypresian
	LC	London Clay Formation	Clay, Silt and Sand	Not Supplied - Ypresian
	LMBE	Lambeth Group	Clay, Silt and Sand	Not Supplied - Thanetian
	SECK	Seaford Chalk Formation	Chalk	Not Supplied - Coniacian

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

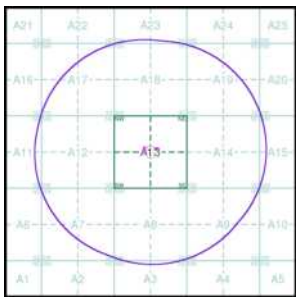
Geology 1:50,000 Maps

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:	**267**
Map Name:	**Newbury**
Map Date:	**2006**
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

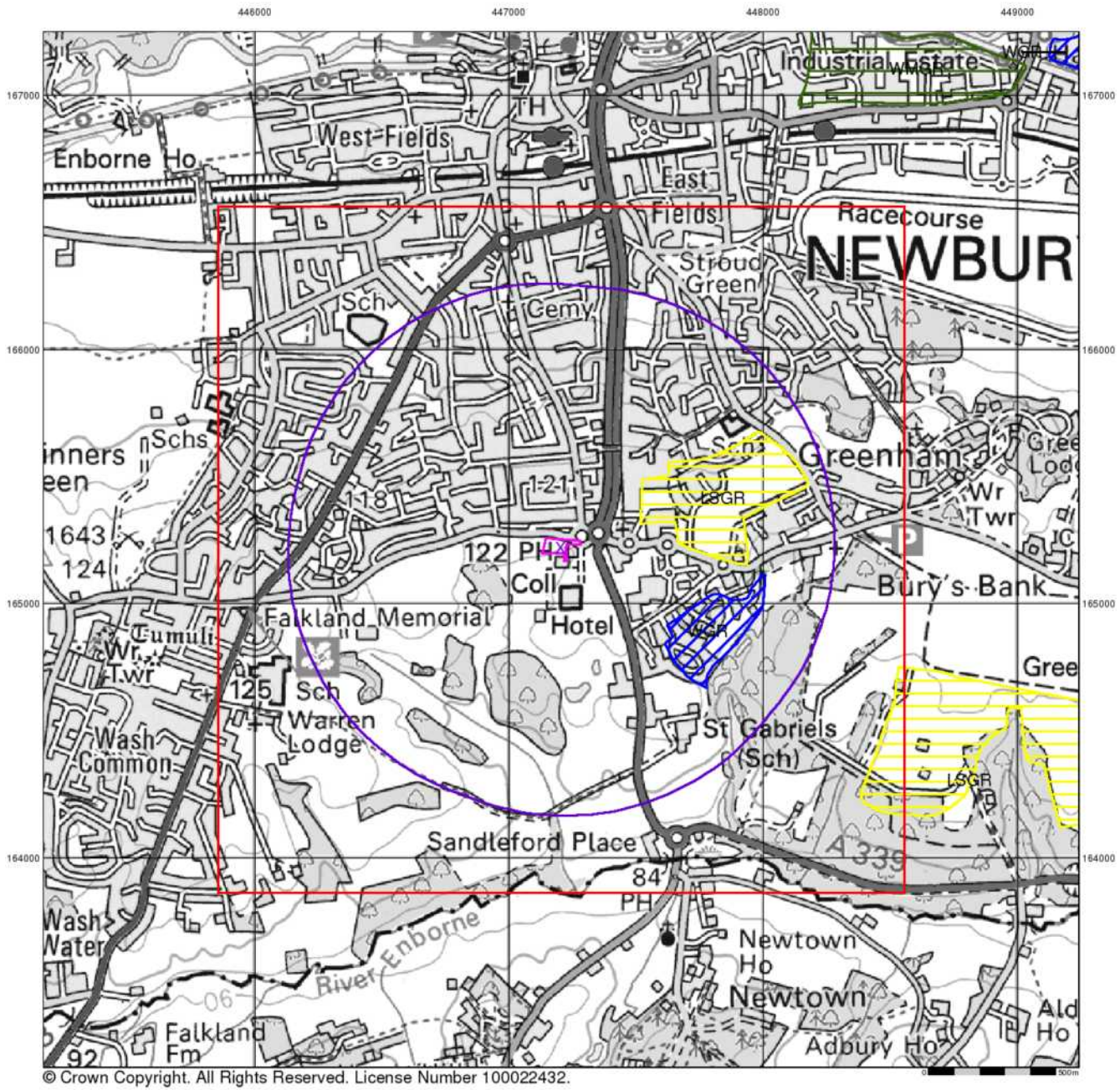


Order Details:

Order Number:	230178532_1_1
Customer Reference:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details:

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Artificial Ground and Landslip

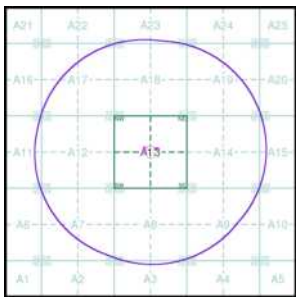
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

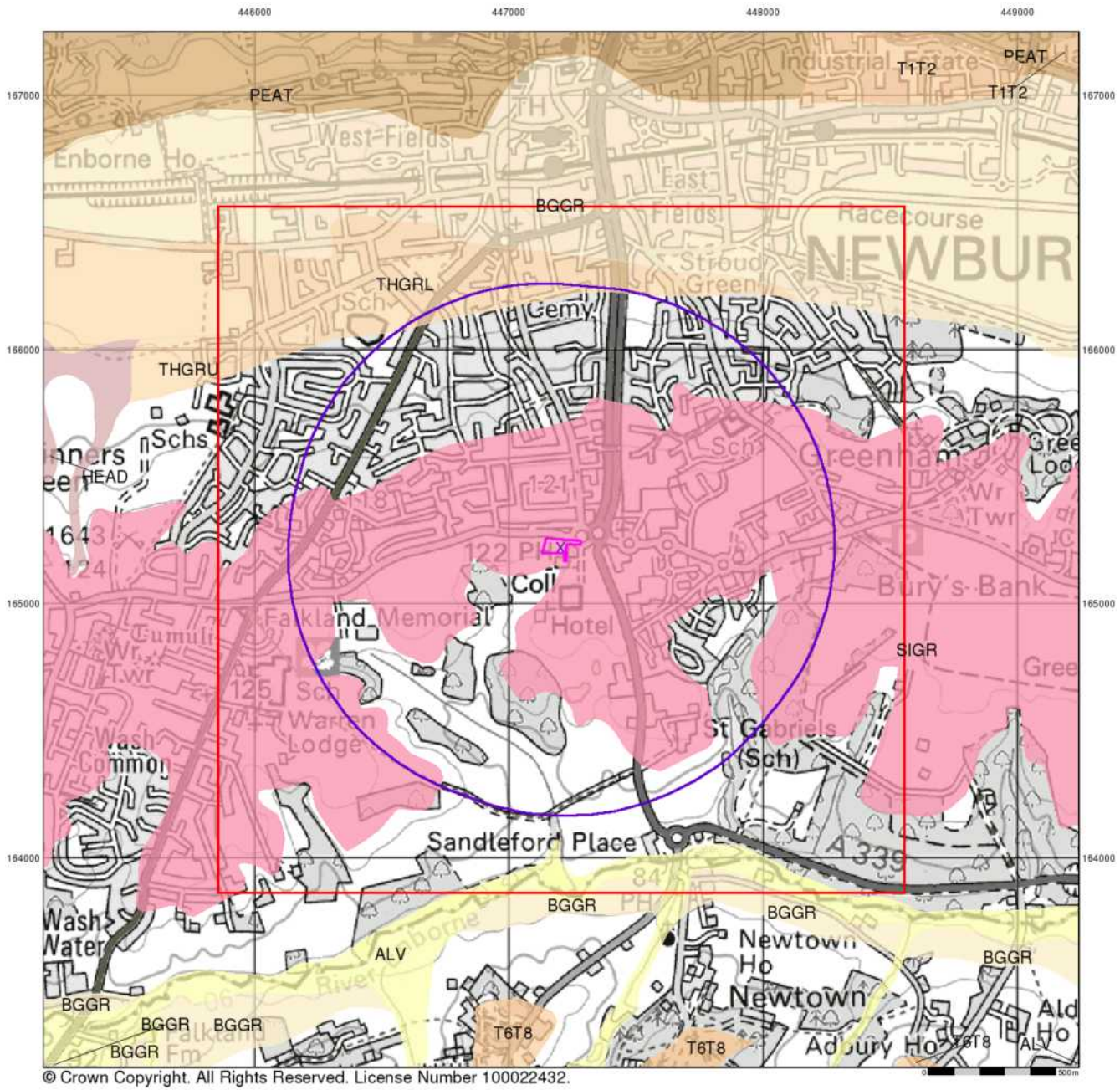


Order Details:

Order Number:	230178532_1_1
Customer Reference:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details:

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

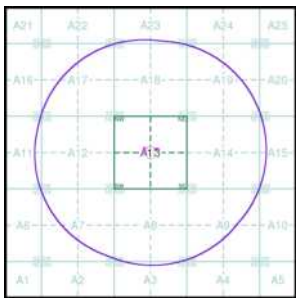
Superficial Geology

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

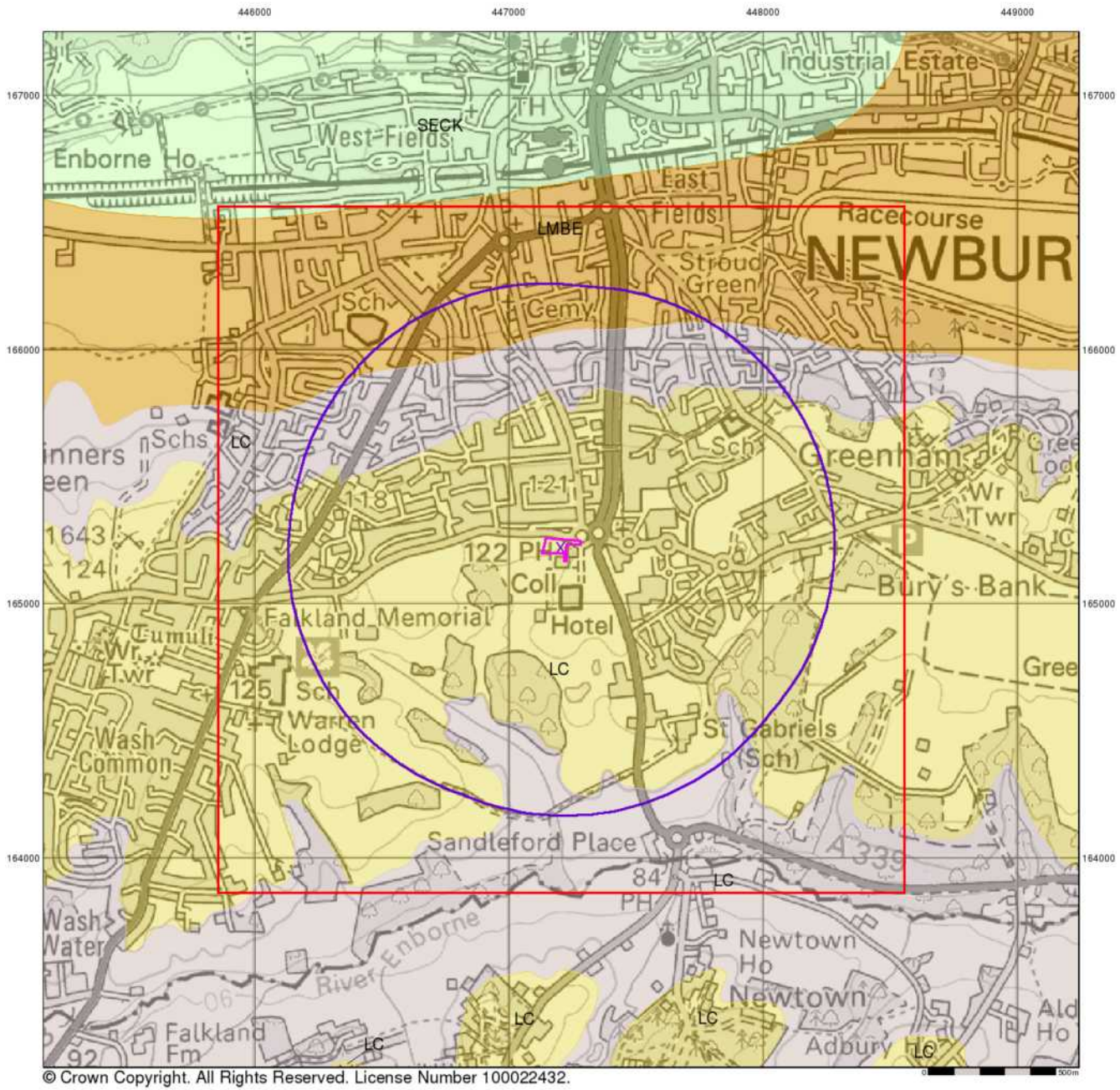


Order Details:

Order Number:	230178532_1_1
Customer Reference:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details:

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Bedrock and Faults

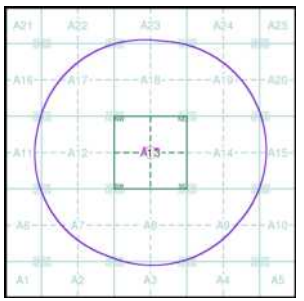
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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



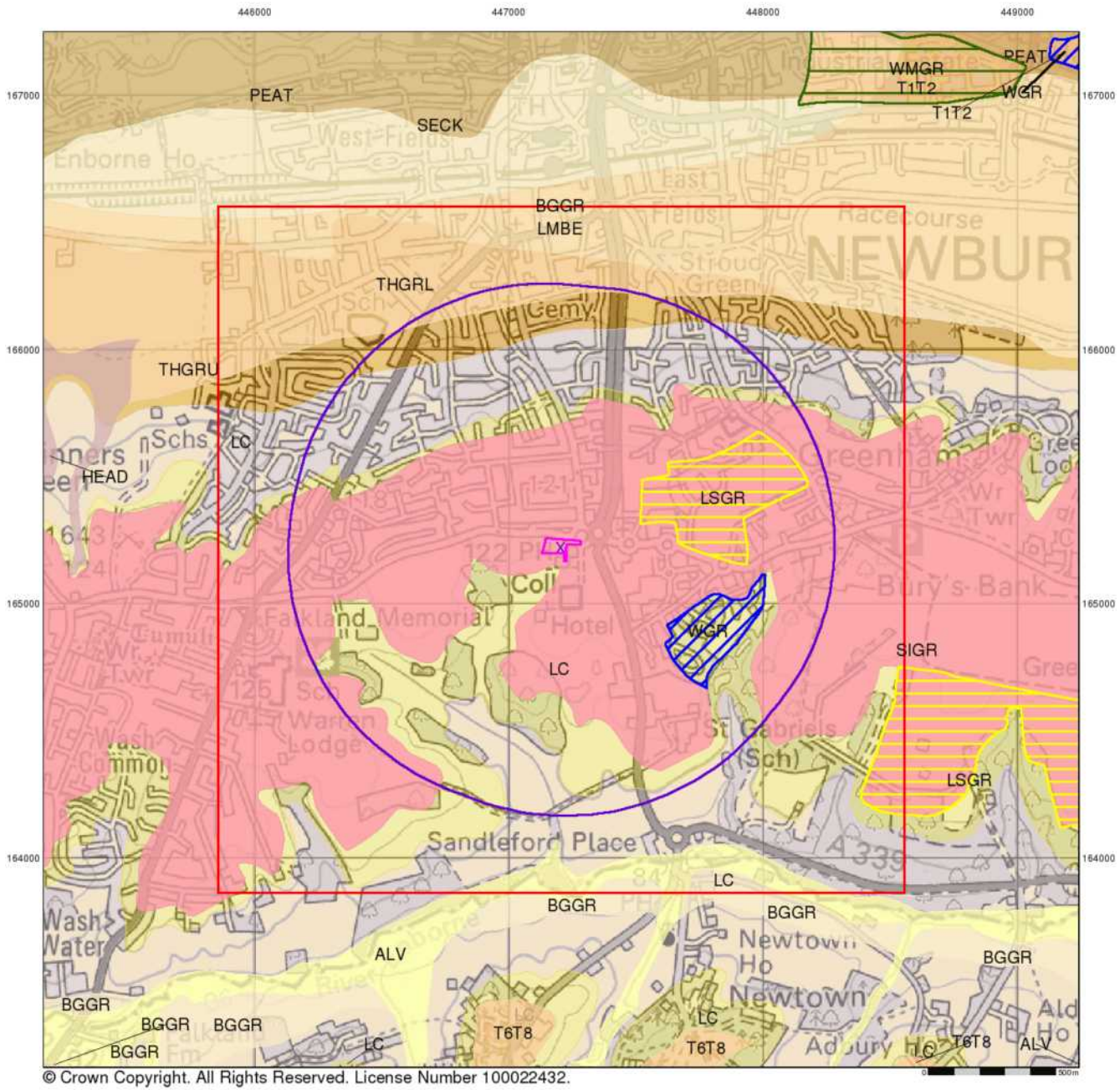
Order Details:

Order Number:	230178532_1_1
Customer Reference:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details:

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

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.

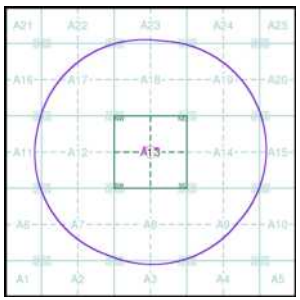
Additional Information

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:

Order Number:	230178532_1_1
Customer Reference:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details:

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
230178532_1_1

Customer Reference:
19.12.021

National Grid Reference:
447200, 165220

Slice:
A

Site Area (Ha):
0.61

Search Buffer (m):
1000

Site Details:

Newbury College, Monks Lane
NEWBURY
RG14 7TD

Client Details:

Mrs J Taylor
Listers Geotechnical Consultants Ltd
Slapton Hill Barn
Blakesley Road
Slapton
Towcester
Northants
NN12 8QD

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Contents

Report Version v53.0

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1			1	6
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability			n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)				n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents					
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits	pg 3			3	3
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 3			1	1
Potentially Infilled Land (Water)	pg 3				3
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Salt Mining Related Features					

Summary

Report Version v53.0

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Workhouse Gravel Pit Location: Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141917 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A18SE (N)	448	1	447333 165692
2	**BGS Recorded Mineral Sites** Site Name: Greenham Hill Gravel Pit Location: Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141918 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	624	1	447729 165678
3	**BGS Recorded Mineral Sites** Site Name: Greenham Hill Gravel Pit Location: Greenham, Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141921 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	714	1	447900 165597
4	**BGS Recorded Mineral Sites** Site Name: Sandleford Priory Pit Location: Greenham, Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141932 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Palaeogene Geology: London Clay Formation Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	754	1	447942 164875
5	**BGS Recorded Mineral Sites** Site Name: Greenham Hill Gravel Pit Location: Greenham, Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141920 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	819	1	447989 165652
6	**BGS Recorded Mineral Sites** Site Name: Lodge Gravel Pit Location: Greenham, Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141919 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Silchester Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14SE (E)	910	1	448188 165191

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**BGS Recorded Mineral Sites** Site Name: Edgecombe Brick Works Location: Newbury, Berkshire Source: British Geological Survey, National Geoscience Information Service Reference: 141866 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Palaeogene Geology: London Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A11NE (W)	996	1	446181 165514
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1993	A8NE (SE)	349	-	447389 164860
9	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1913 - 1961	A14NW (NE)	448	-	447680 165443
10	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1991	A14SW (SE)	464	-	447617 164917
11	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1900	A19SW (NE)	585	-	447720 165629
12	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1900	A14SE (E)	911	-	448189 165191
13	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1913 - 1938	A11NE (W)	987	-	446189 165508
14	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A14NW (NE)	448	-	447680 165443
15	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A11NE (W)	987	-	446189 165508
16	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A18NE (N)	750	-	447229 166004
17	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A18NE (N)	844	-	447430 166077
18	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1932	A17SW (NW)	887	-	446399 165741

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
19	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
20	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
21	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
22	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
23	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
24	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	32	1	447187 165151
25	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
26	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	197	1	447112 165000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	250	1	447518 165316
27	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	447203 165221
28	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	167	1	447203 165000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	447197 165235
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	192	1	447318 165000

Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Ordnance Survey Plan	SU4664	1970
Ordnance Survey Plan	SU4764	1970
Ordnance Survey Plan	SU4765	1970

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Hampshire & Isle Of Wight	002_00	1877
Hampshire & Isle Of Wight	003_00	1877
Berkshire	042_00	1877
Berkshire	043_00	1877
Hampshire & Isle Of Wight	002_SE	1896
Hampshire & Isle Of Wight	003_SW	1896
Berkshire	042_NE	1900
Berkshire	042_SE	1900
Berkshire	043_NW	1900
Berkshire	043_SW	1900
Hampshire & Isle Of Wight	002_SE	1912
Berkshire	042_SE	1912
Hampshire & Isle Of Wight	003_SW	1913
Berkshire	042_NE	1913
Berkshire	043_NW	1913
Berkshire	043_SW	1913
Berkshire	043_NW	1932
Hampshire & Isle Of Wight	002_SE	1938
Hampshire & Isle Of Wight	003_SW	1938
Berkshire	042_NE	1938
Berkshire	042_SE	1938
Berkshire	043_SW	1938
Ordnance Survey Plan	SU46NE	1961
Ordnance Survey Plan	SU46SE	1961
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SU46NE	1991
Ordnance Survey Plan	SU46SE	1993

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2019	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Man Made Mining Cavities Peter Brett Associates	July 2019	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	July 2019	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	March 2019	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	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
Brine Subsidence Solution Area Johnson Poole & Bloomer	January 2015	Annual Rolling Update

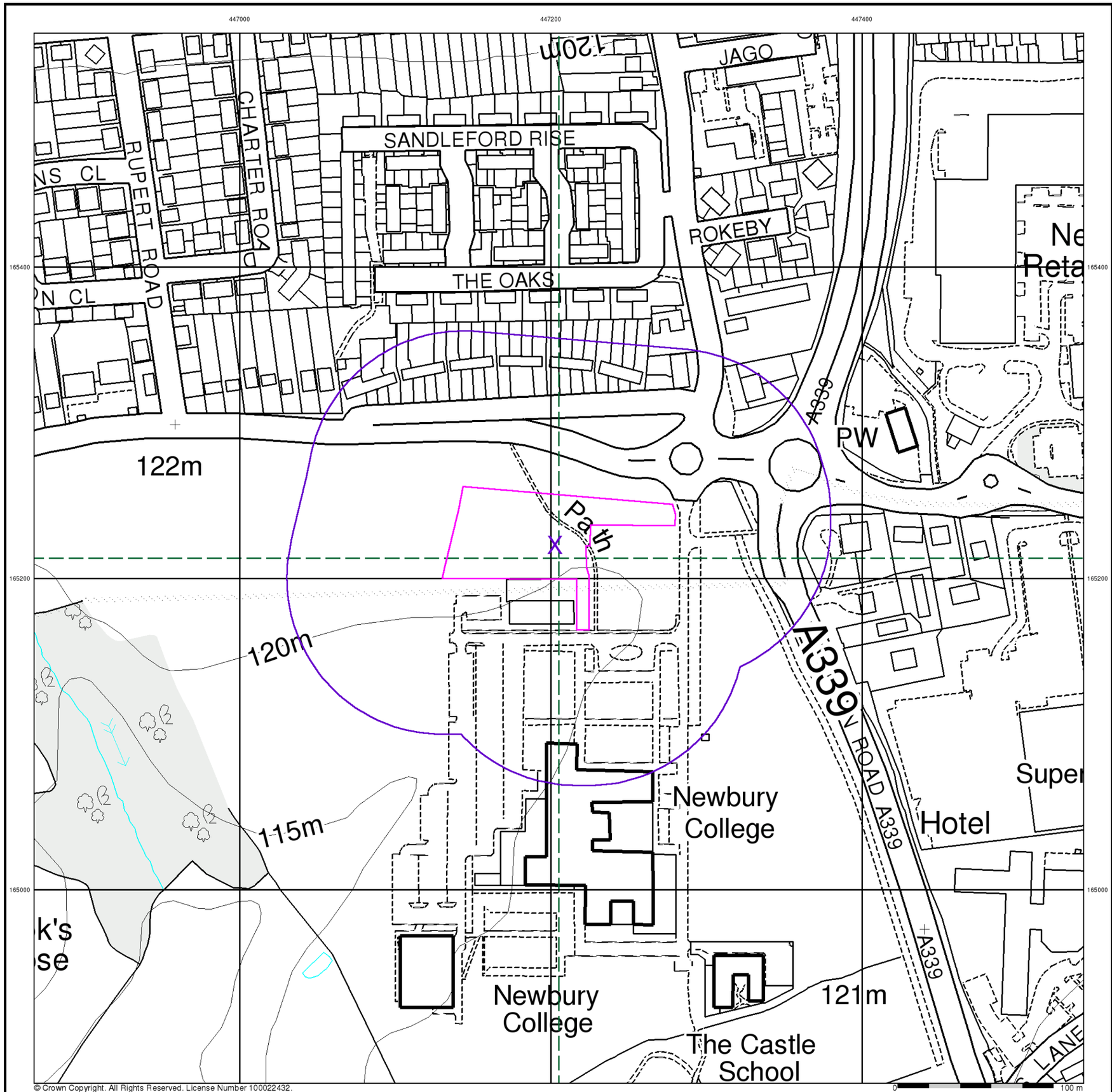
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey, Natural Environment Research Council
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Peter Brett Associates	pba peterbrett
Wardell Armstrong	wardell armstrong, your earth our world
Johnson Poole & Bloomer	JPB

Useful Contacts

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
-	**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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID
Several of Type at Location

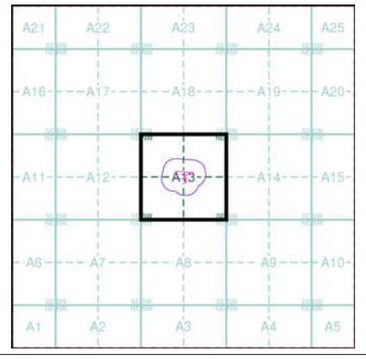
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▤
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A13



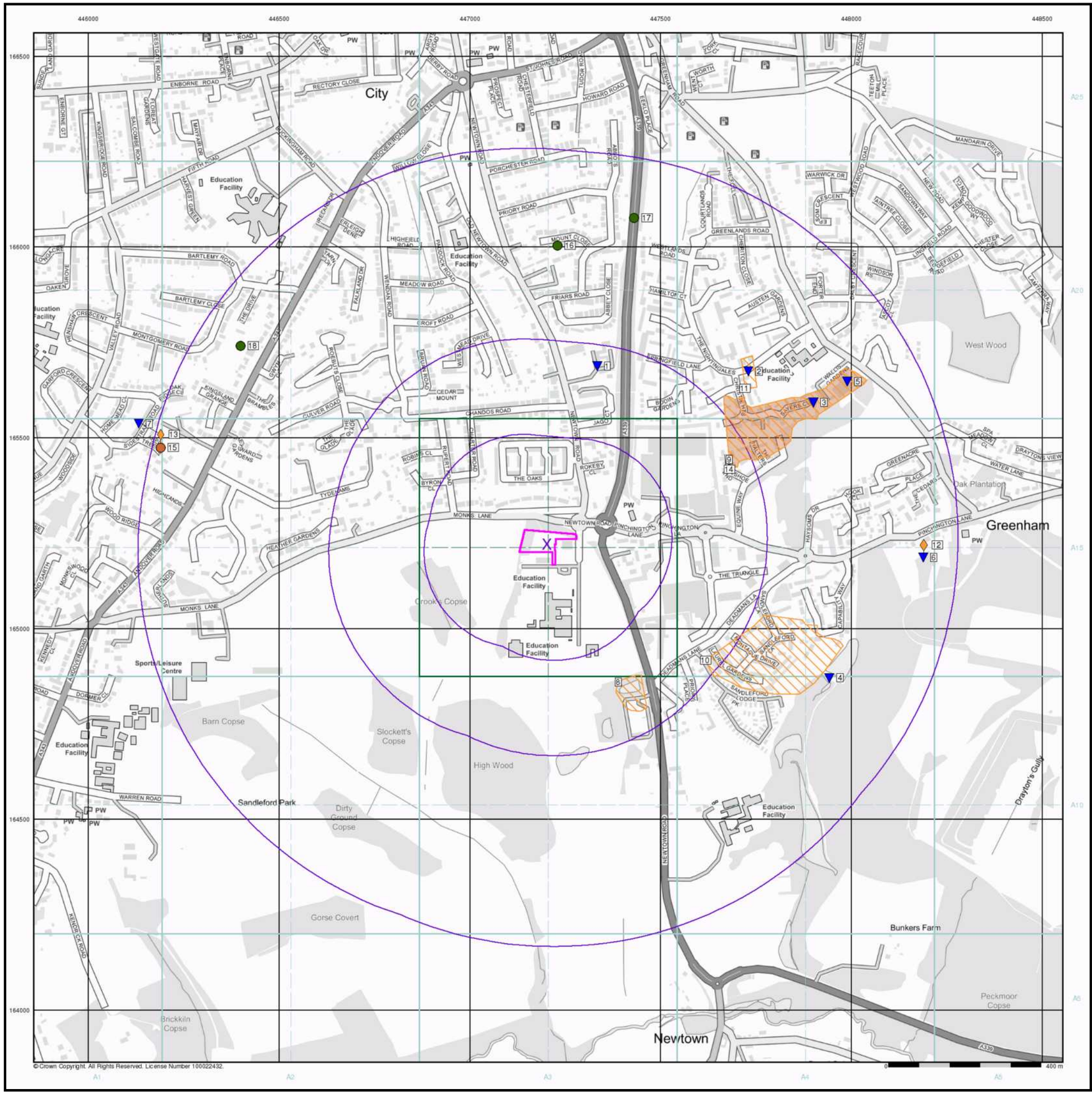
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Plot Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Historical Land Use Information (1:10,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID
Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

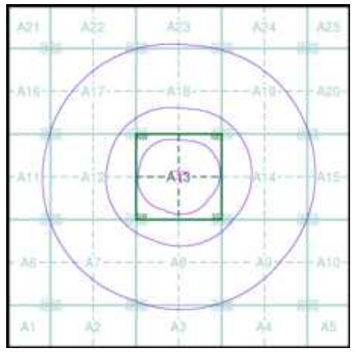
Historical Land Use

	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

Mining Data

Potential Mining Area
BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



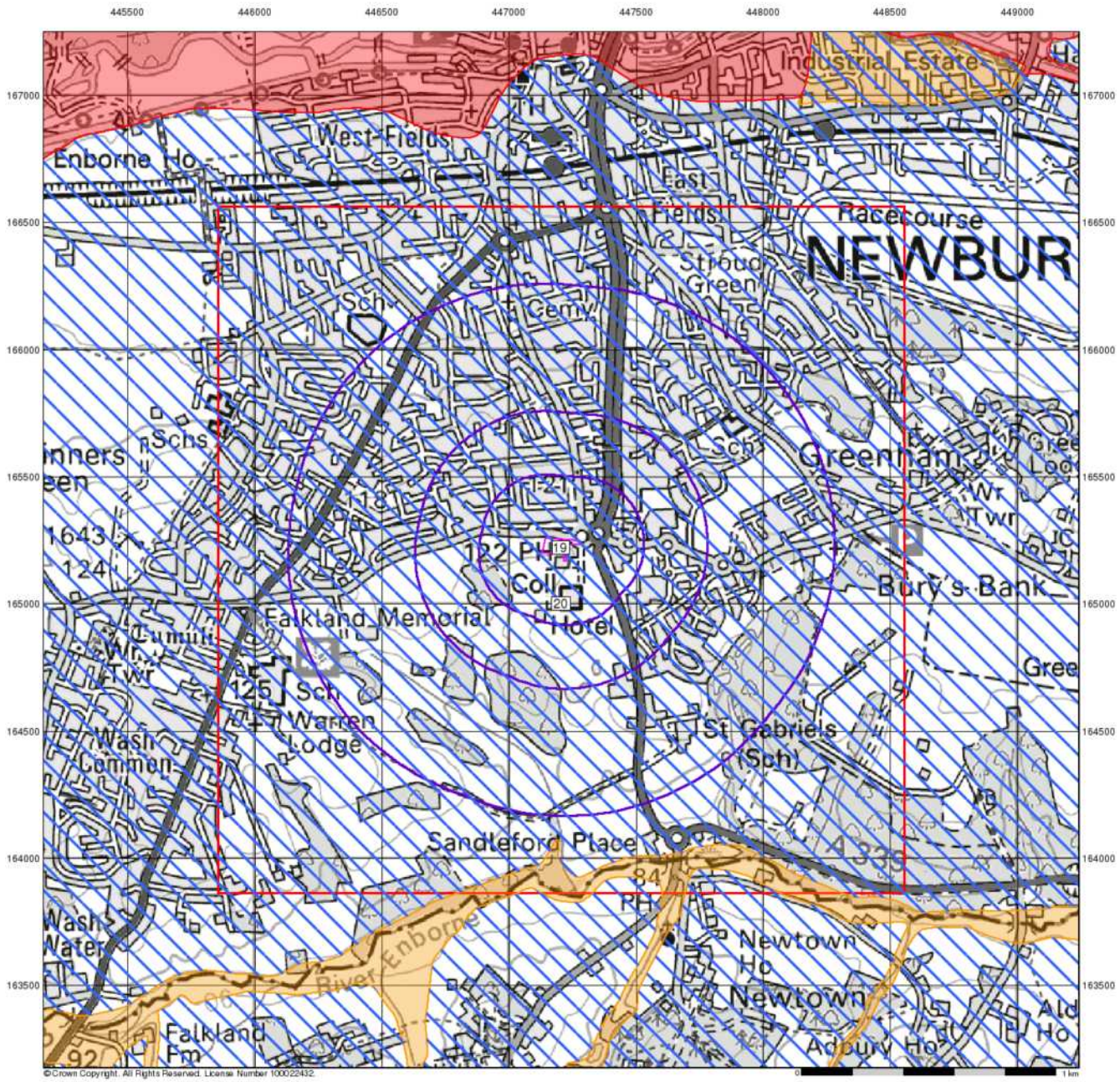
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Ground Stability Data (1:50,000)

General

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

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

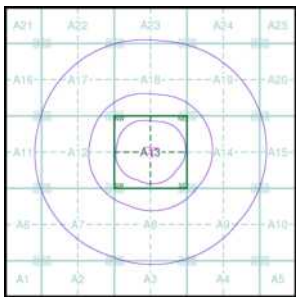
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice A

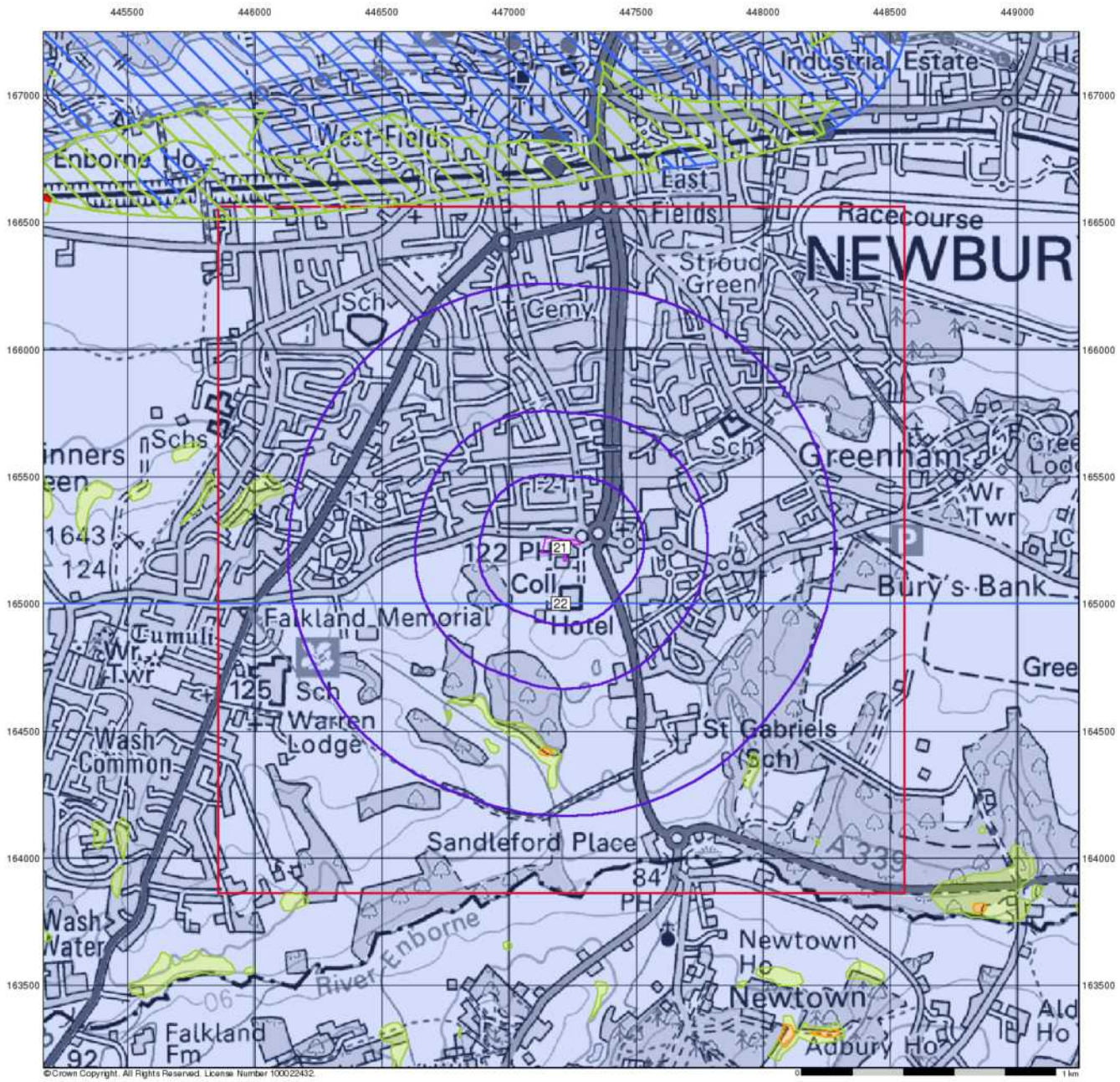


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Ground Stability Data (1:50,000)

General

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

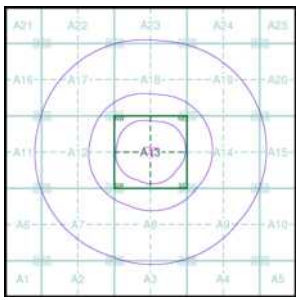
Potential for Landslide Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice A



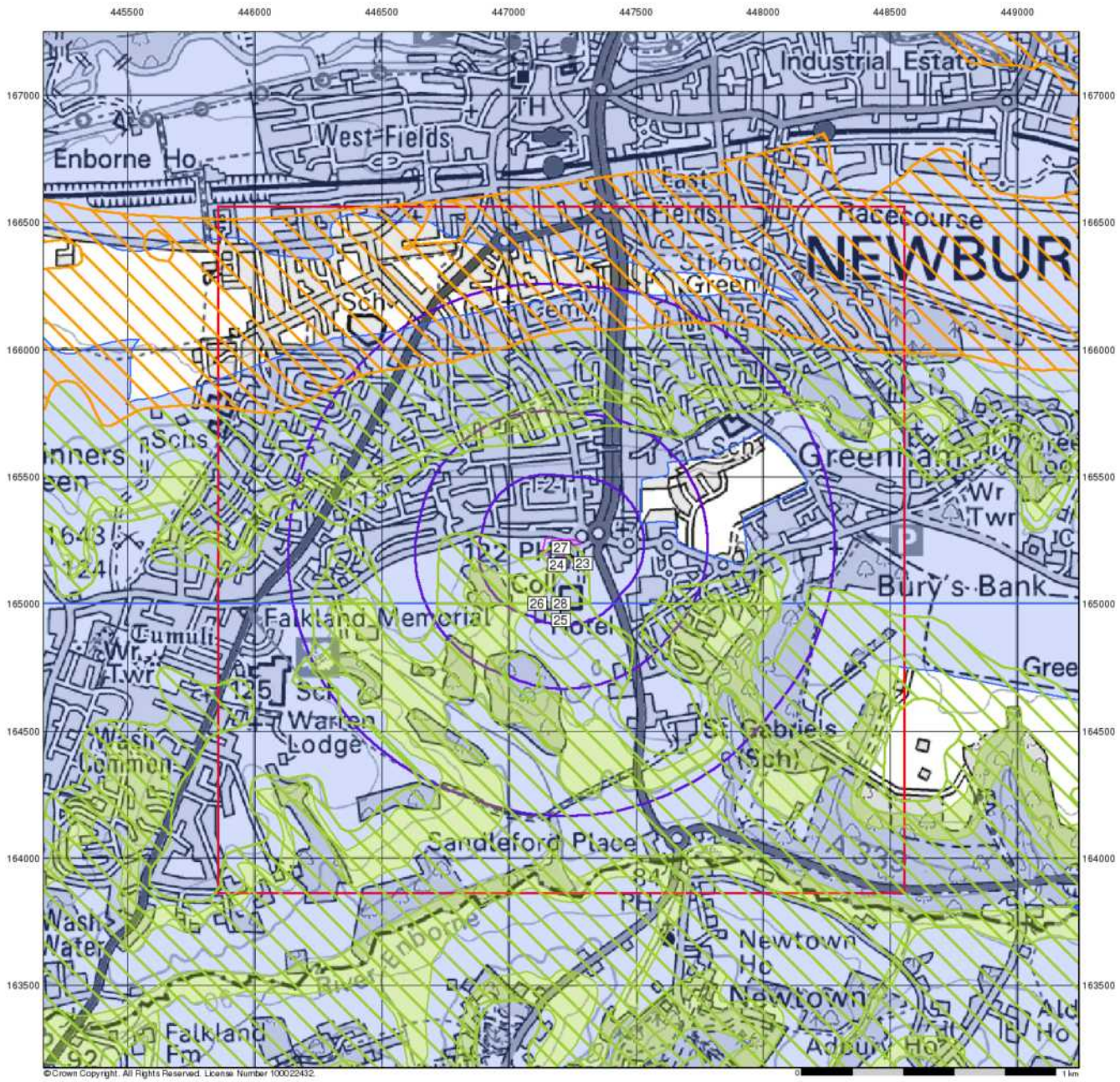
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Ground Stability Data (1:50,000)

General

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

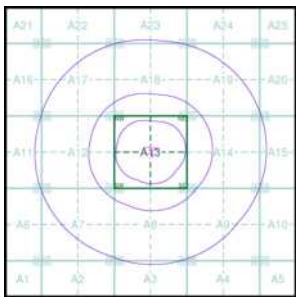
Potential for Running Sand Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

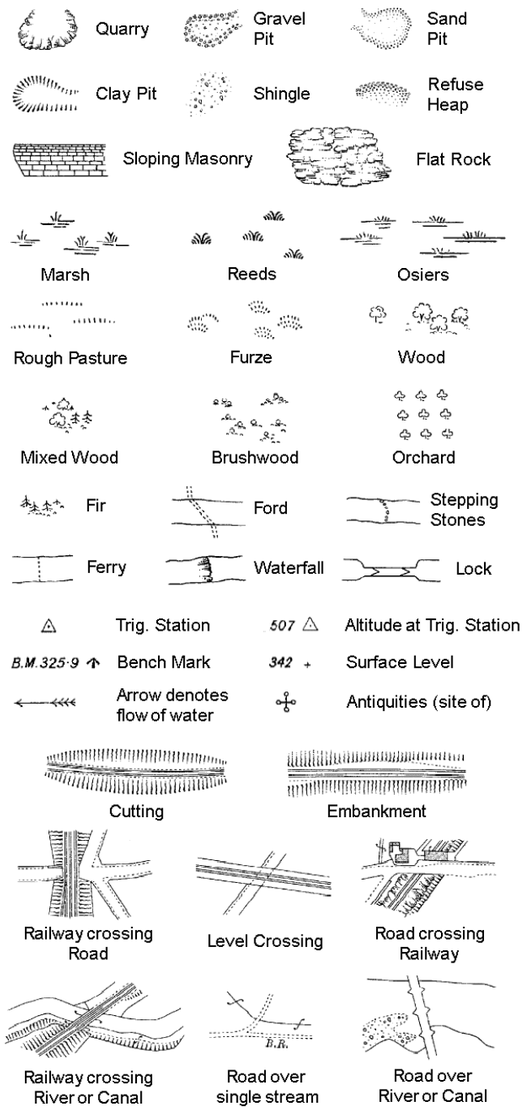
Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)

County & Civil Parish Boundary

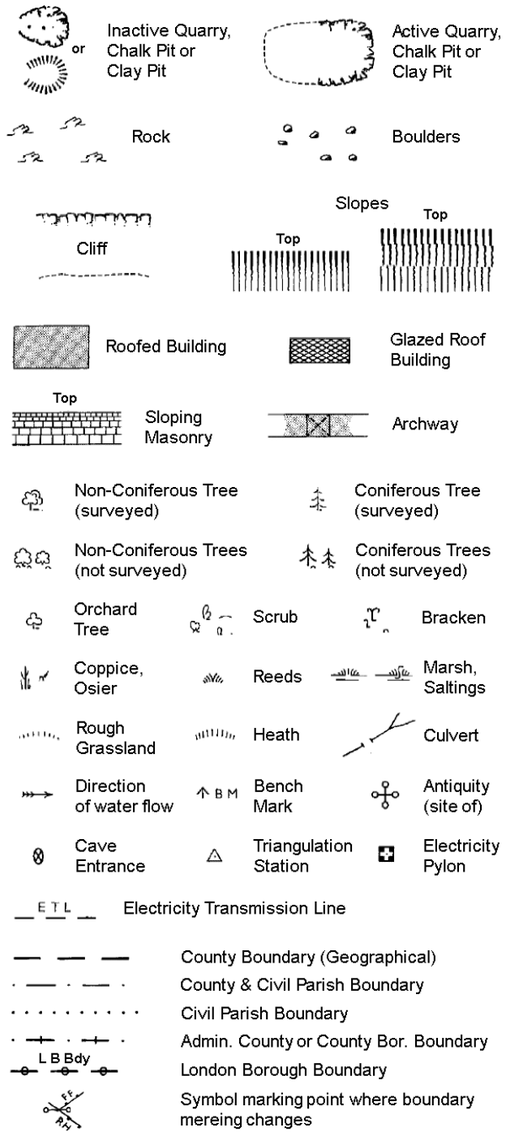
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

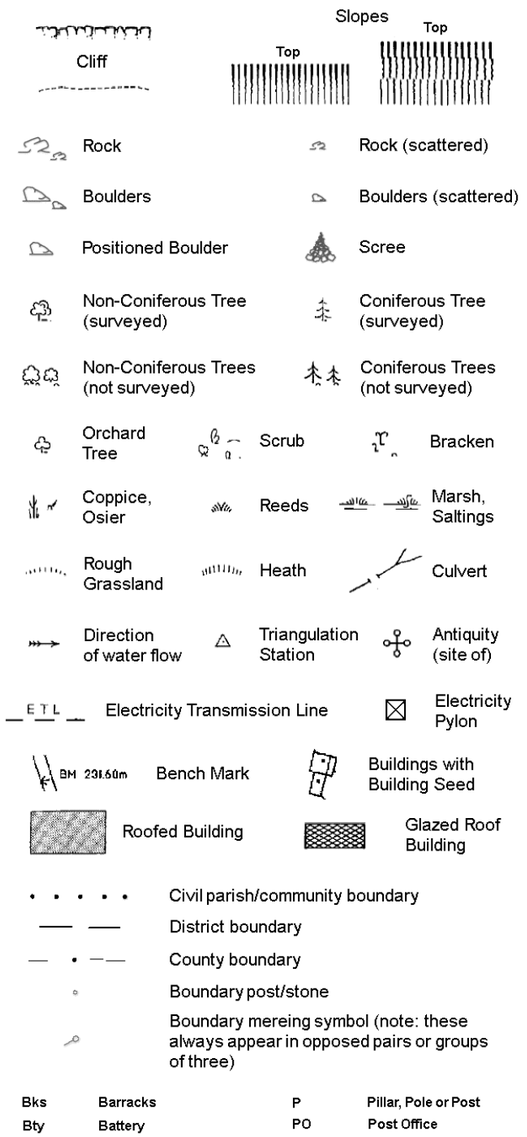
Admin. County or County Bor. Boundary

L B Bdy London Borough Boundary

Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary

District boundary

County boundary

Boundary post/stone

Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

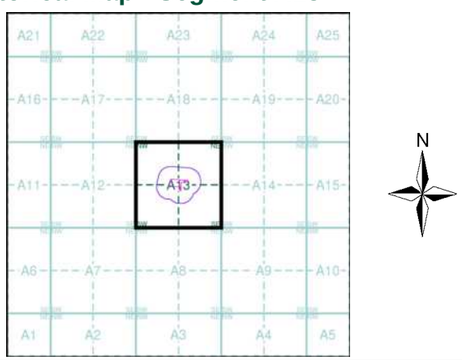
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Berkshire	1:2,500	1880	2
Berkshire	1:2,500	1899	3
Berkshire	1:2,500	1911	4
Berkshire	1:2,500	1934	5
Ordnance Survey Plan	1:1,250	1966	6
Ordnance Survey Plan	1:2,500	1970	7
Additional SIMs	1:2,500	1970 - 1990	8
Ordnance Survey Plan	1:1,250	1971 - 1977	9
Supply of Unpublished Survey Information	1:1,250	1973 - 1974	10
Supply of Unpublished Survey Information	1:2,500	1974	11
Additional SIMs	1:1,250	1977 - 1990	12
Additional SIMs	1:1,250	1977 - 1990	13
Additional SIMs	1:1,250	1990	14
Large-Scale National Grid Data	1:1,250	1994	15
Large-Scale National Grid Data	1:2,500	1994	16
Large-Scale National Grid Data	1:1,250	1996	17
Historical Aerial Photography	1:2,500	1999	18

Historical Map - Segment A13



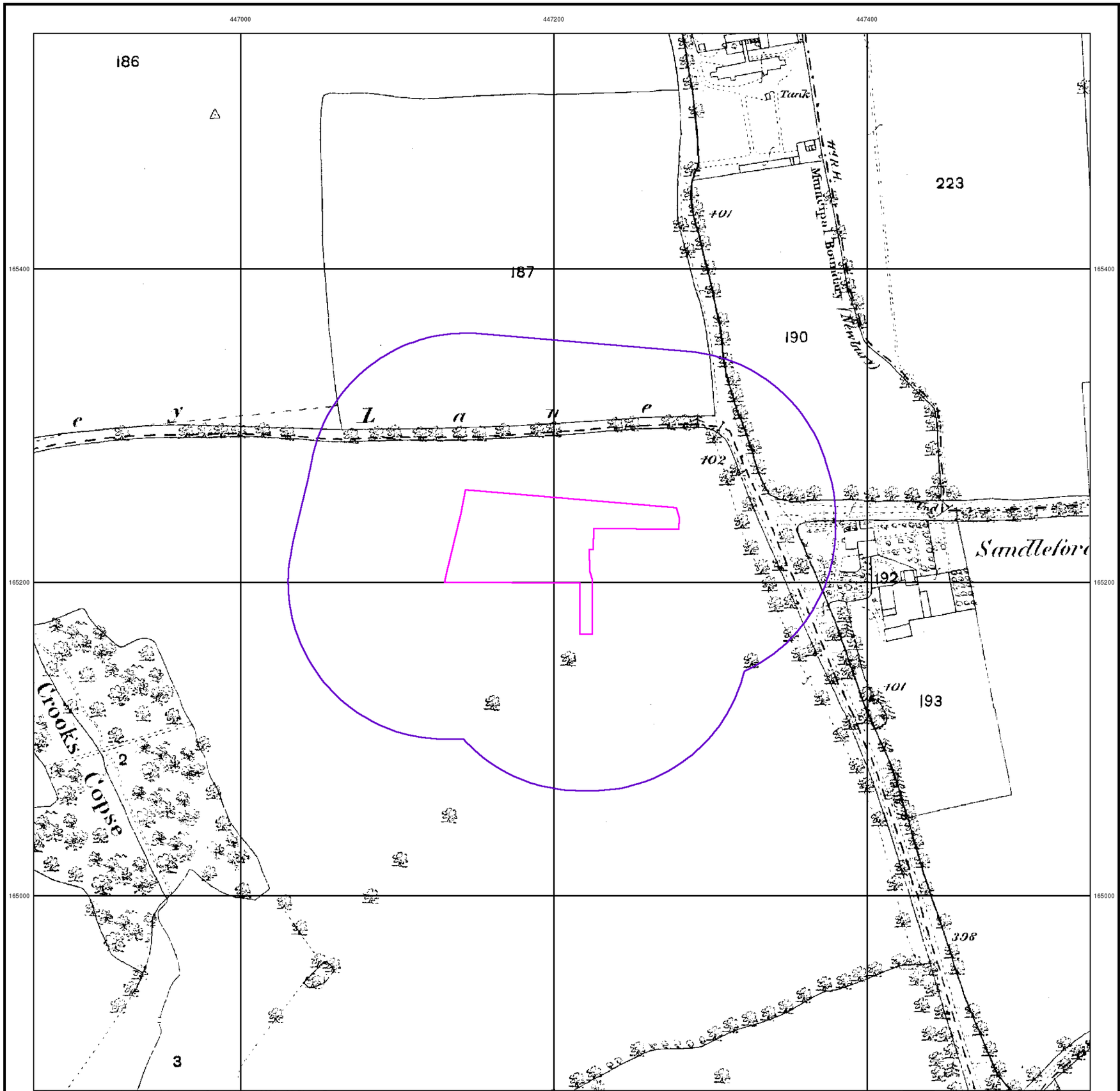
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



0 100 m

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

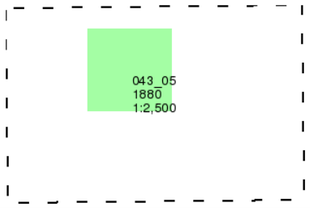
Berkshire

Published 1880

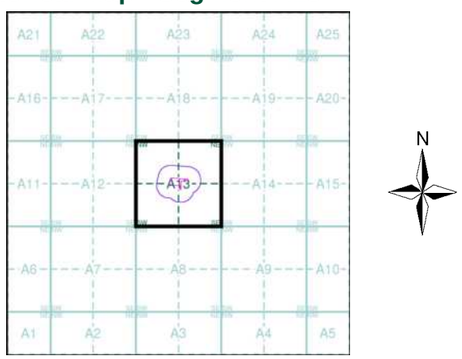
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



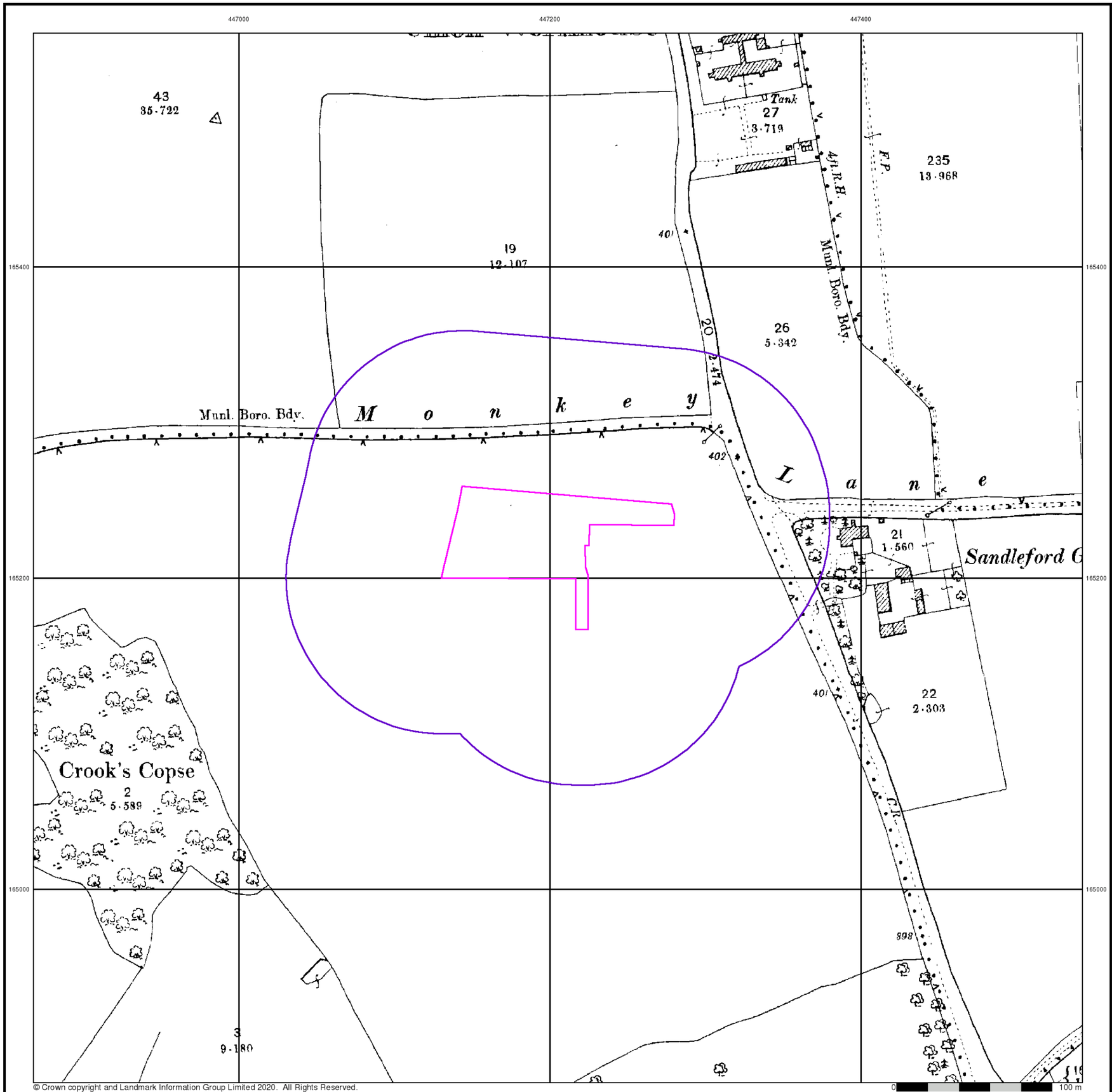
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

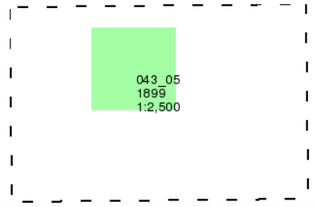
Berkshire

Published 1899

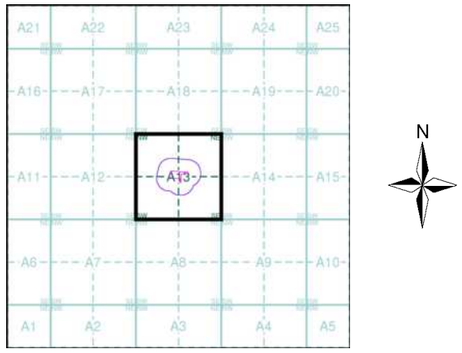
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



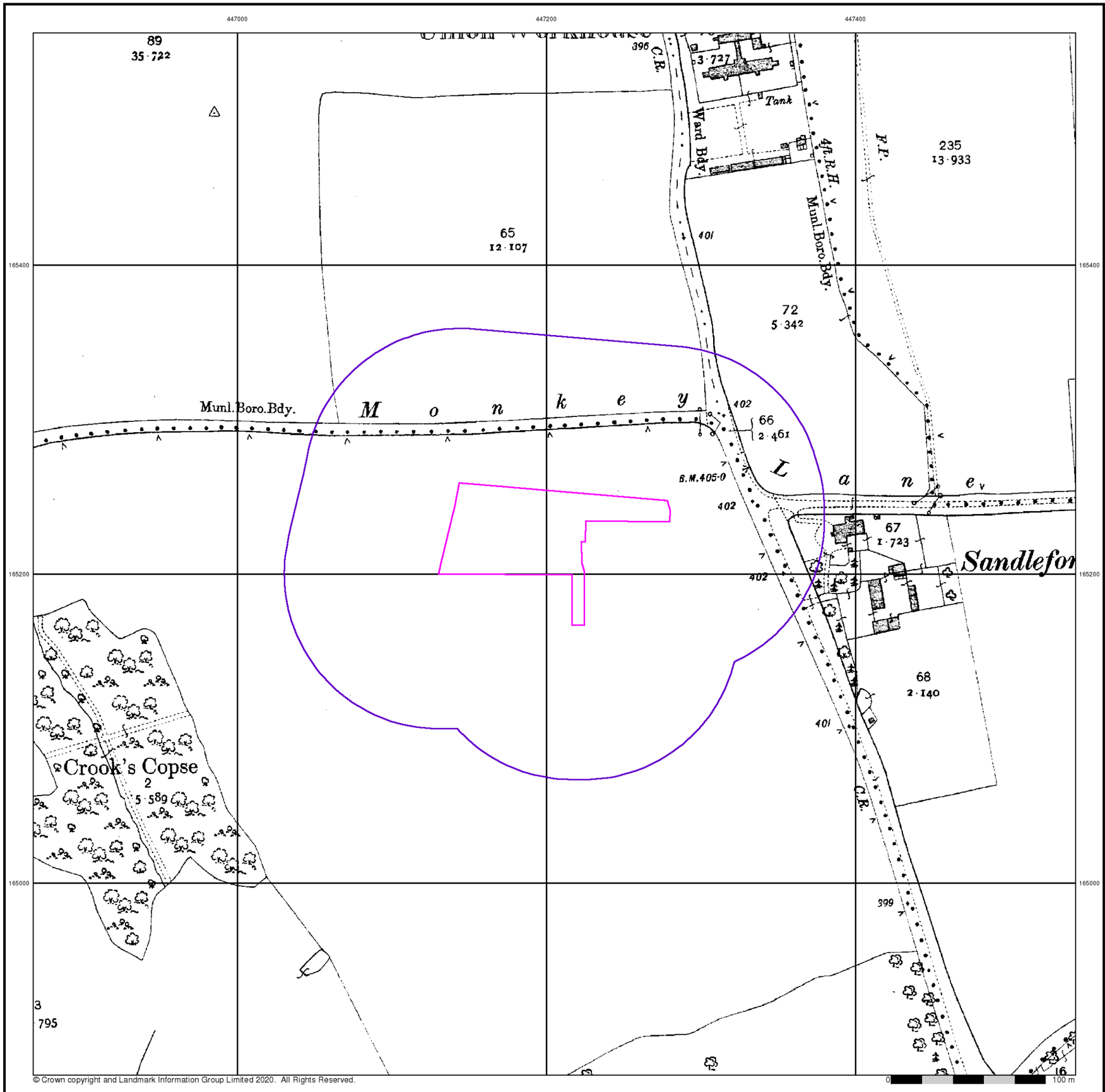
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

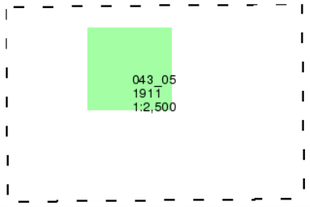
Berkshire

Published 1911

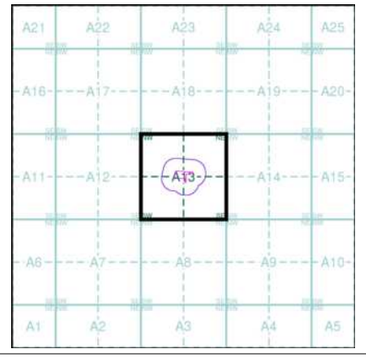
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



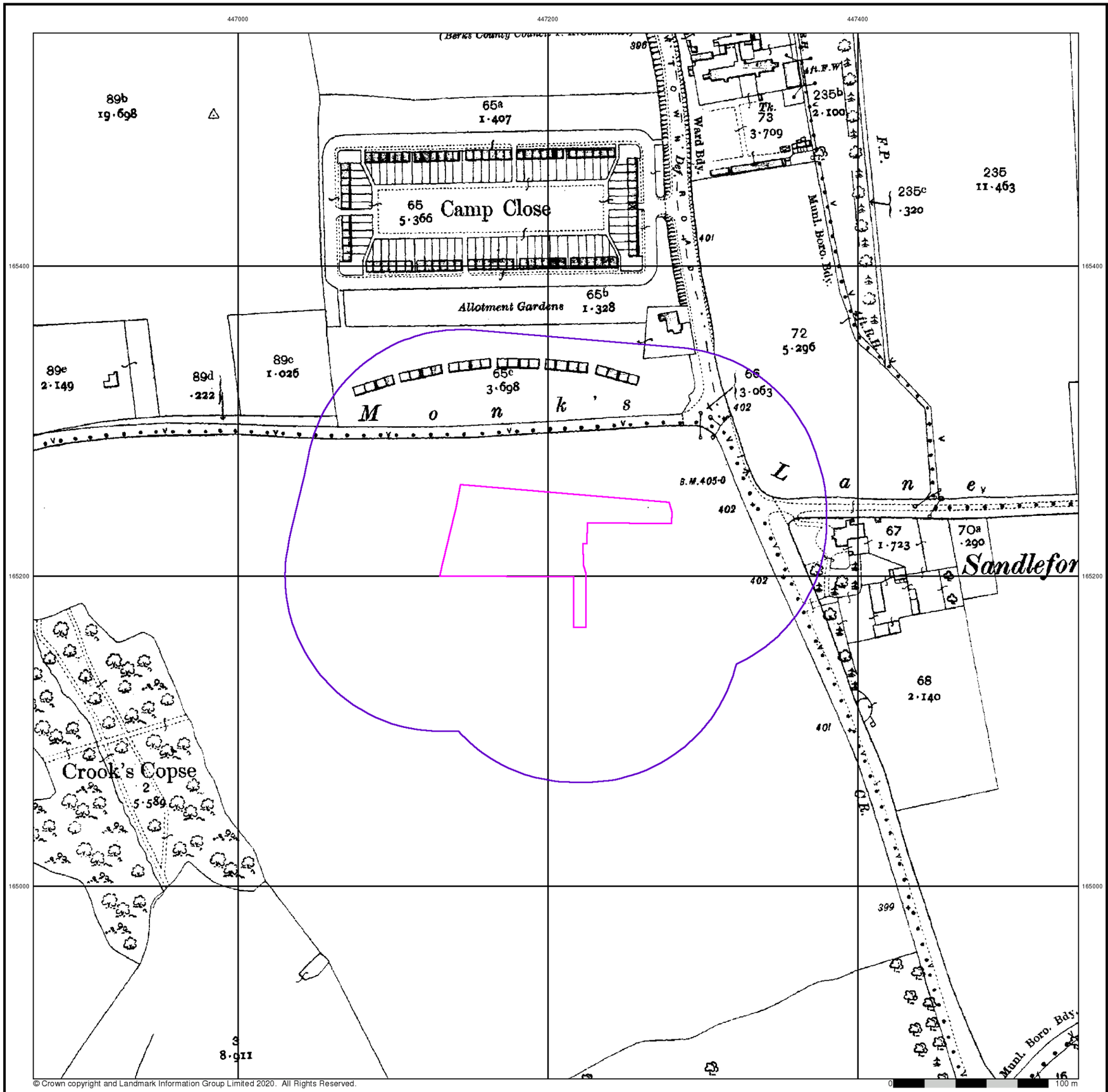
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

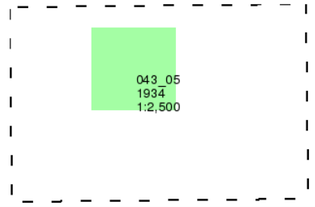
Berkshire

Published 1934

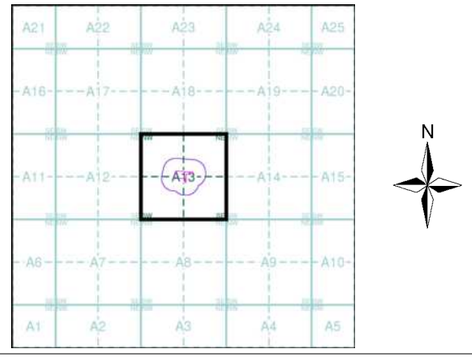
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



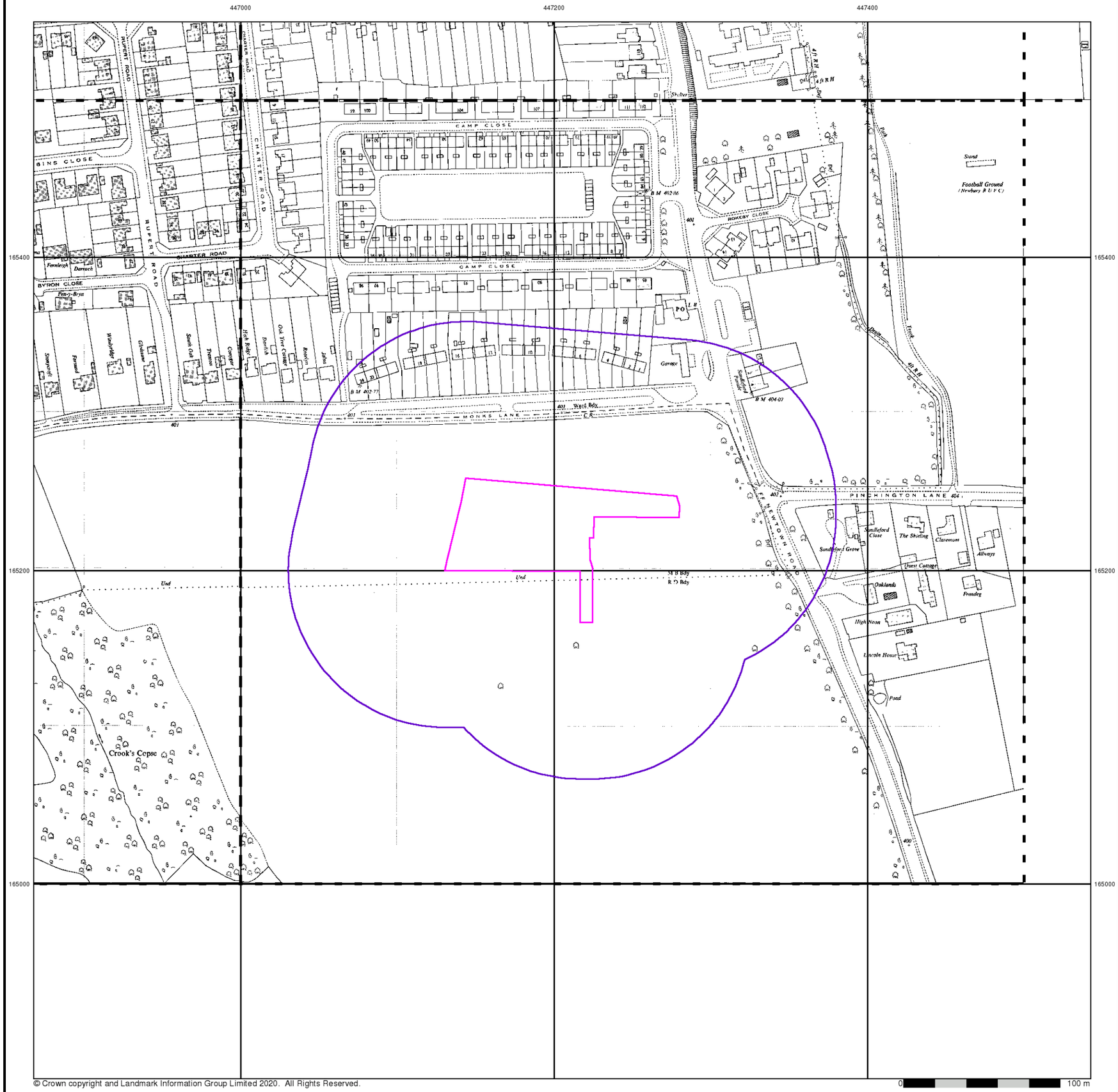
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

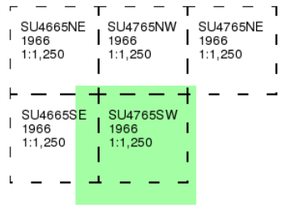


LISTERS GEO
Geotechnical and Geoenvironmental Consultants

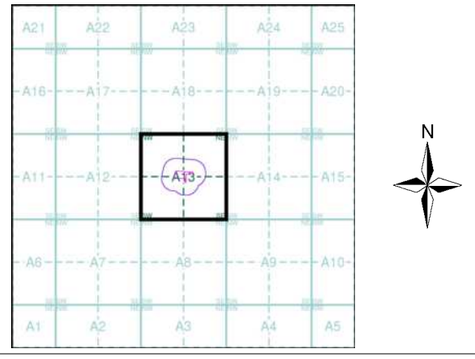
Ordnance Survey Plan
Published 1966
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



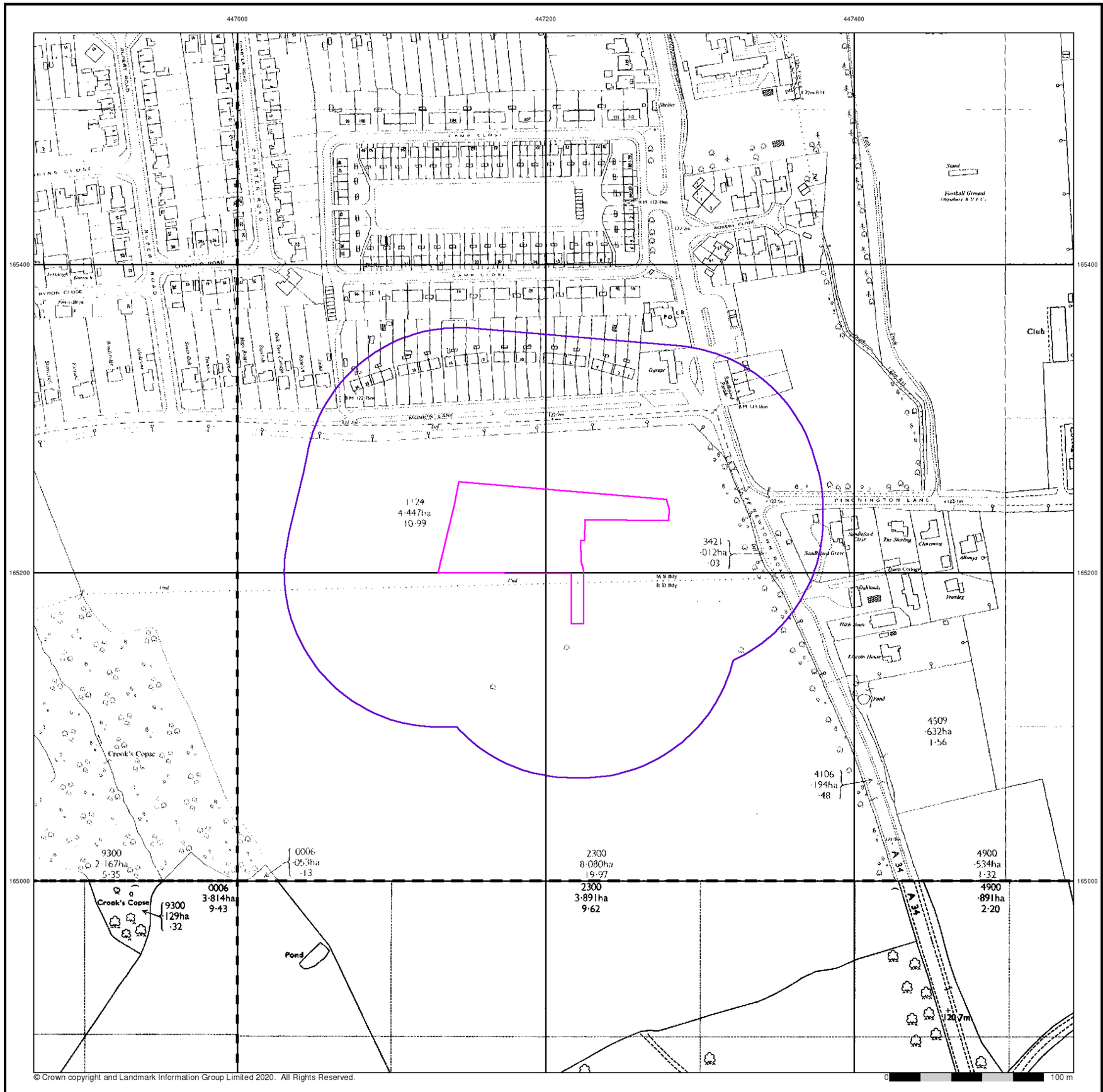
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

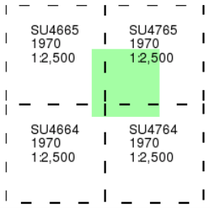
Ordnance Survey Plan

Published 1970

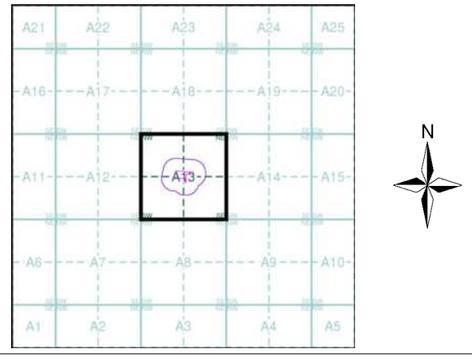
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



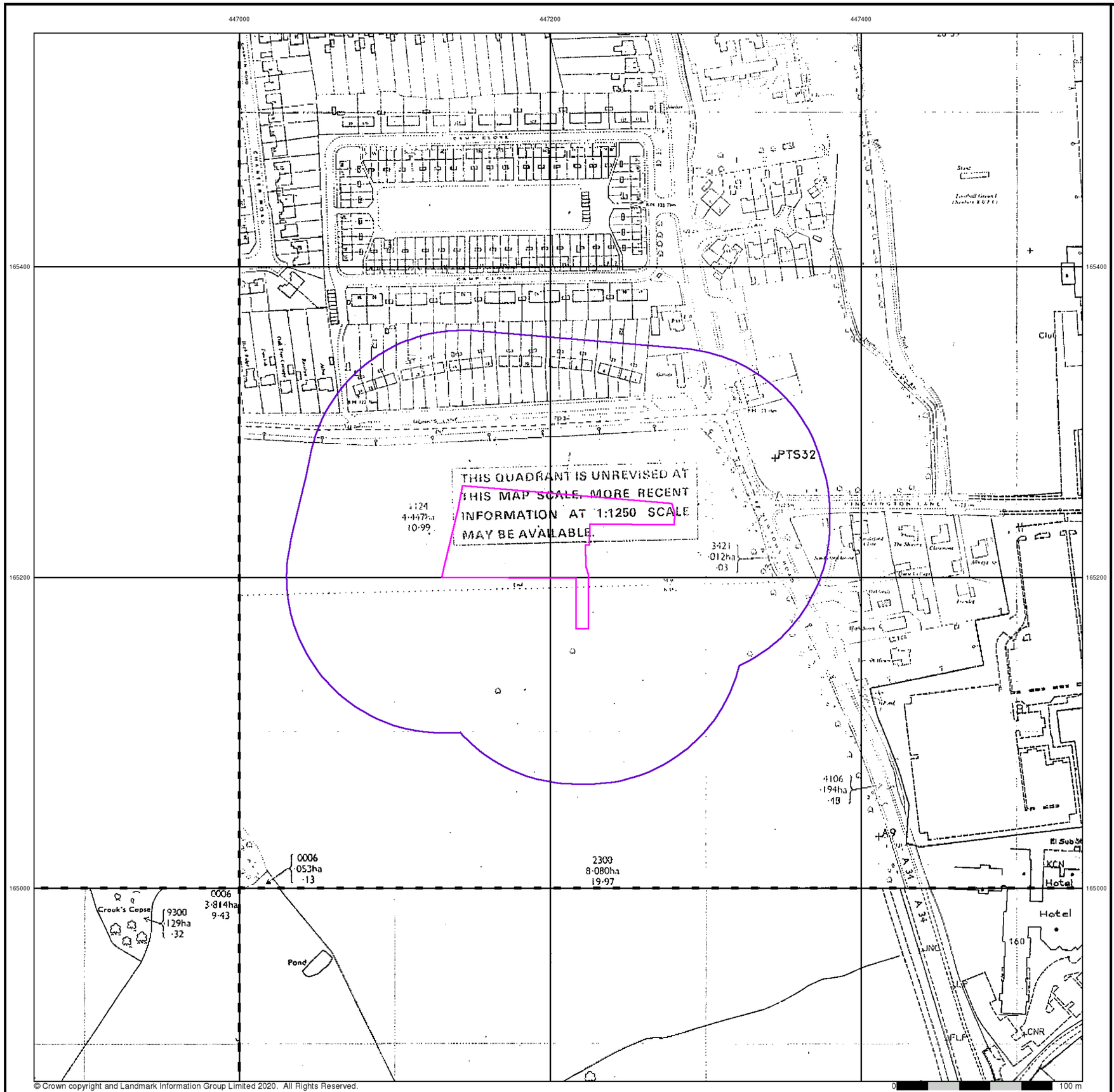
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

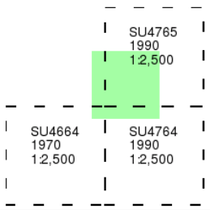
Additional SIMs

Published 1970 - 1990

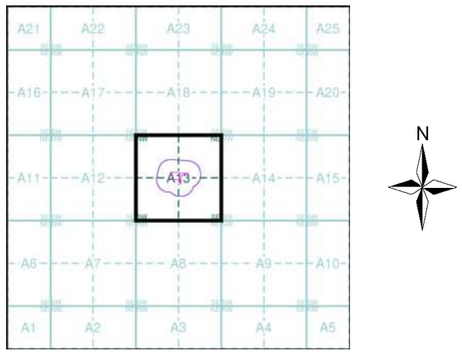
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Ordnance Survey Plan

Published 1971 - 1977

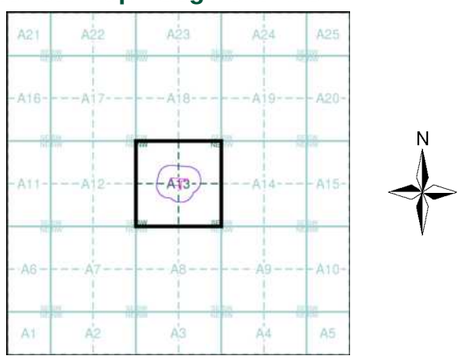
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SU4665NE 1975 1:1,250
SU4765NW 1971 1:1,250
SU4765NE 1975 1:1,250
SU4765SW 1977 1:1,250

Historical Map - Segment A13



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

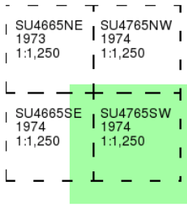
Supply of Unpublished Survey Information

Published 1973 - 1974

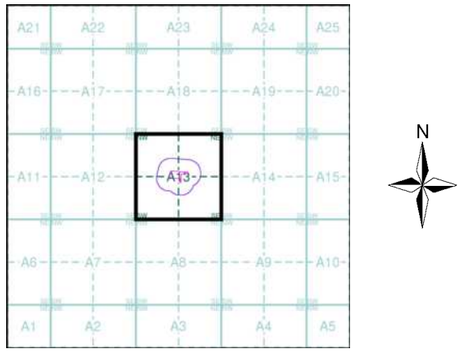
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



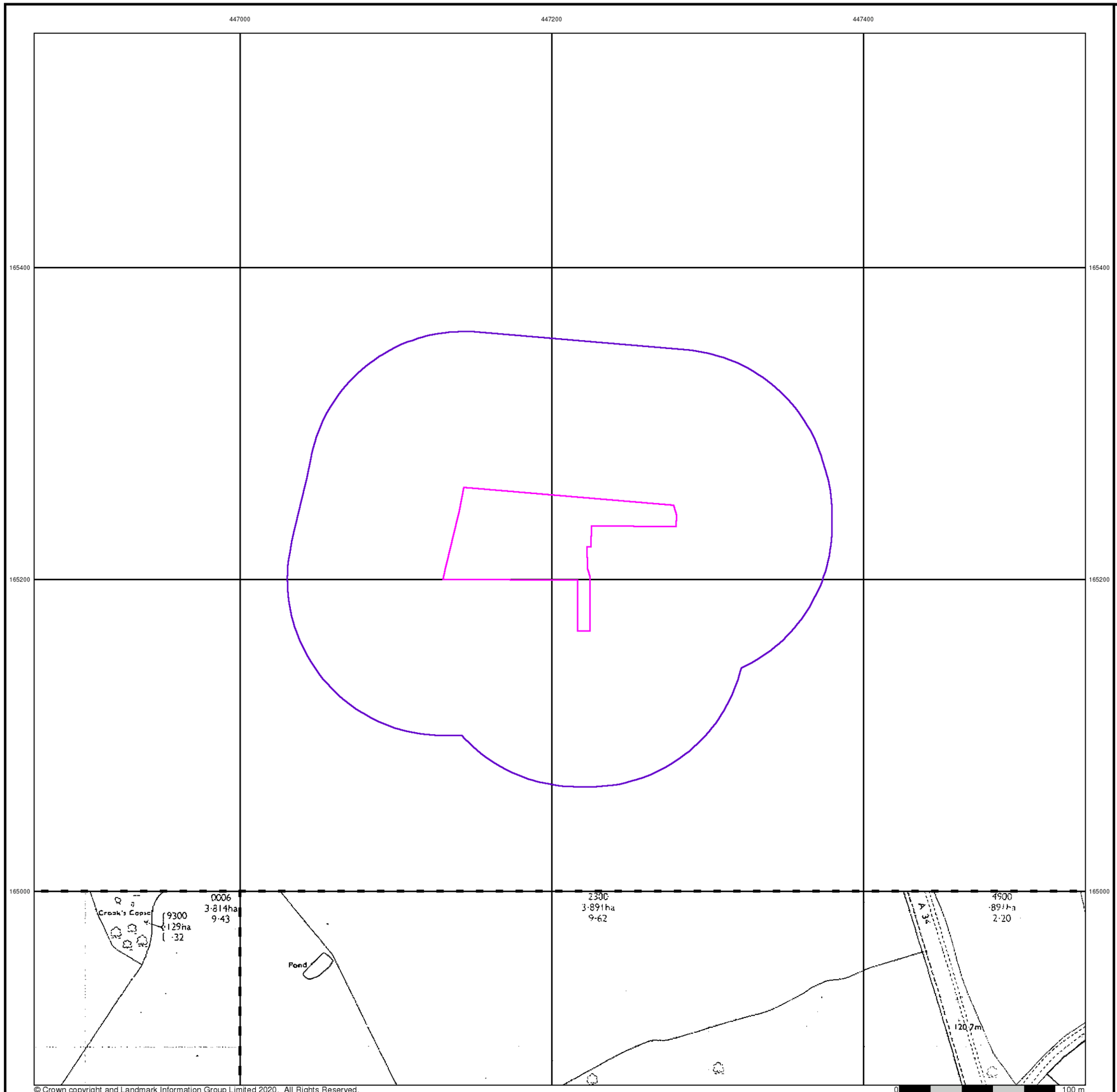
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

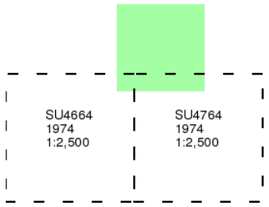
Supply of Unpublished Survey Information

Published 1974

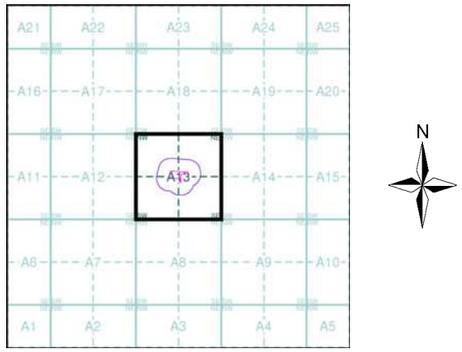
Source map scale - 1:2,500

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

0 100 m

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

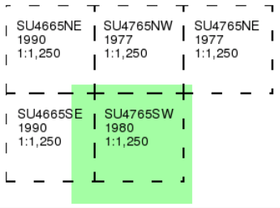
Additional SIMs

Published 1977 - 1990

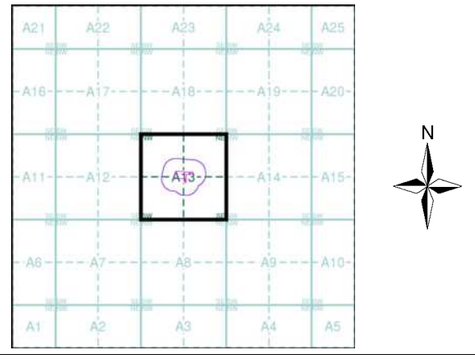
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Additional SIMs

Published 1977 - 1990

Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

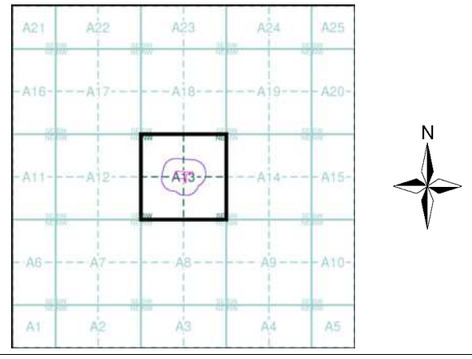
Map Name(s) and Date(s)

SU4765NW 1980 1:1,250

SU4765NE 1977 1:1,250

SU4765SW 1990 1:1,250

Historical Map - Segment A13



Order Details

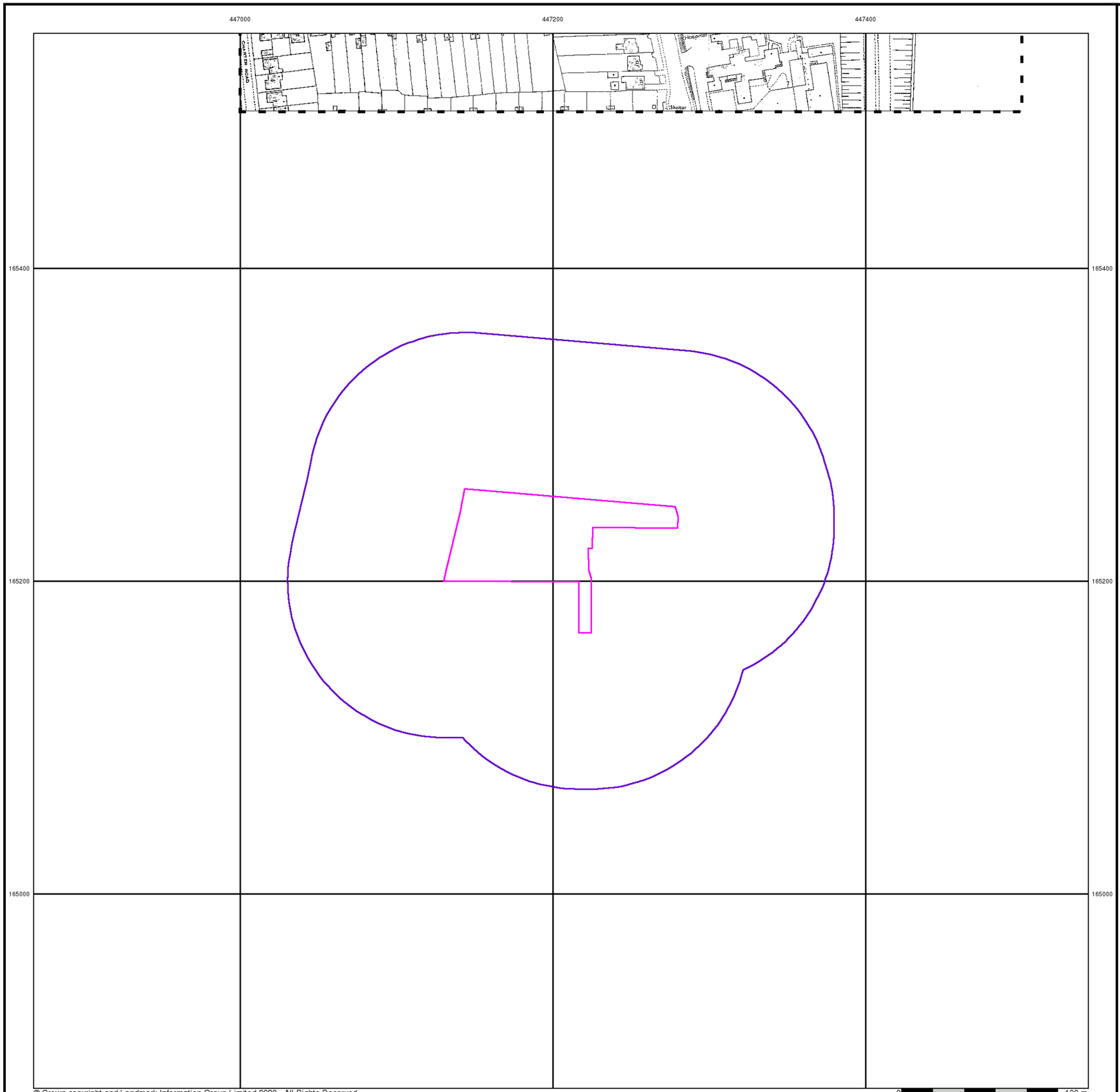
Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Landmark INFORMATION GROUP

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

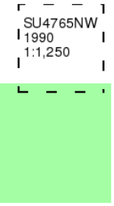
Additional SIMs

Published 1990

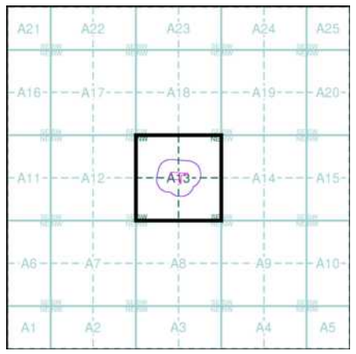
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



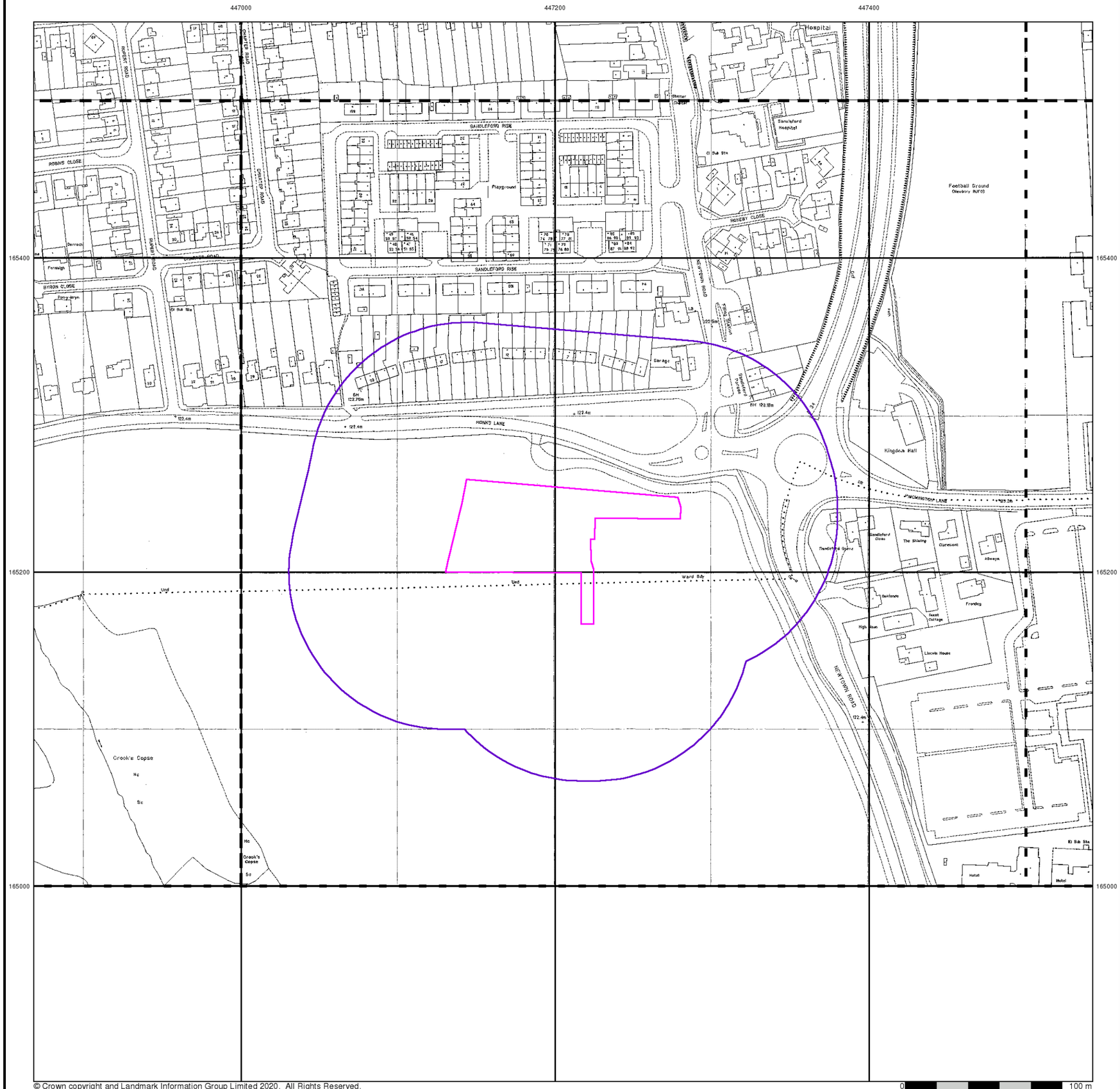
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

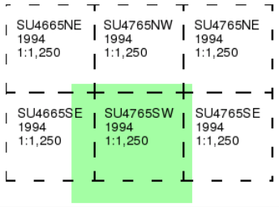
Large-Scale National Grid Data

Published 1994

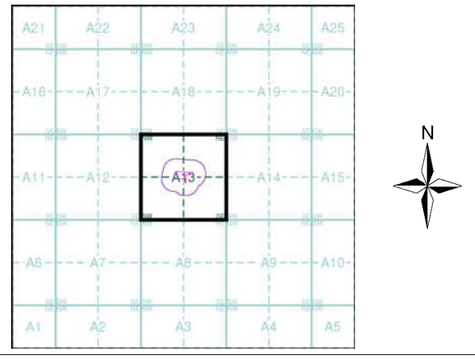
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



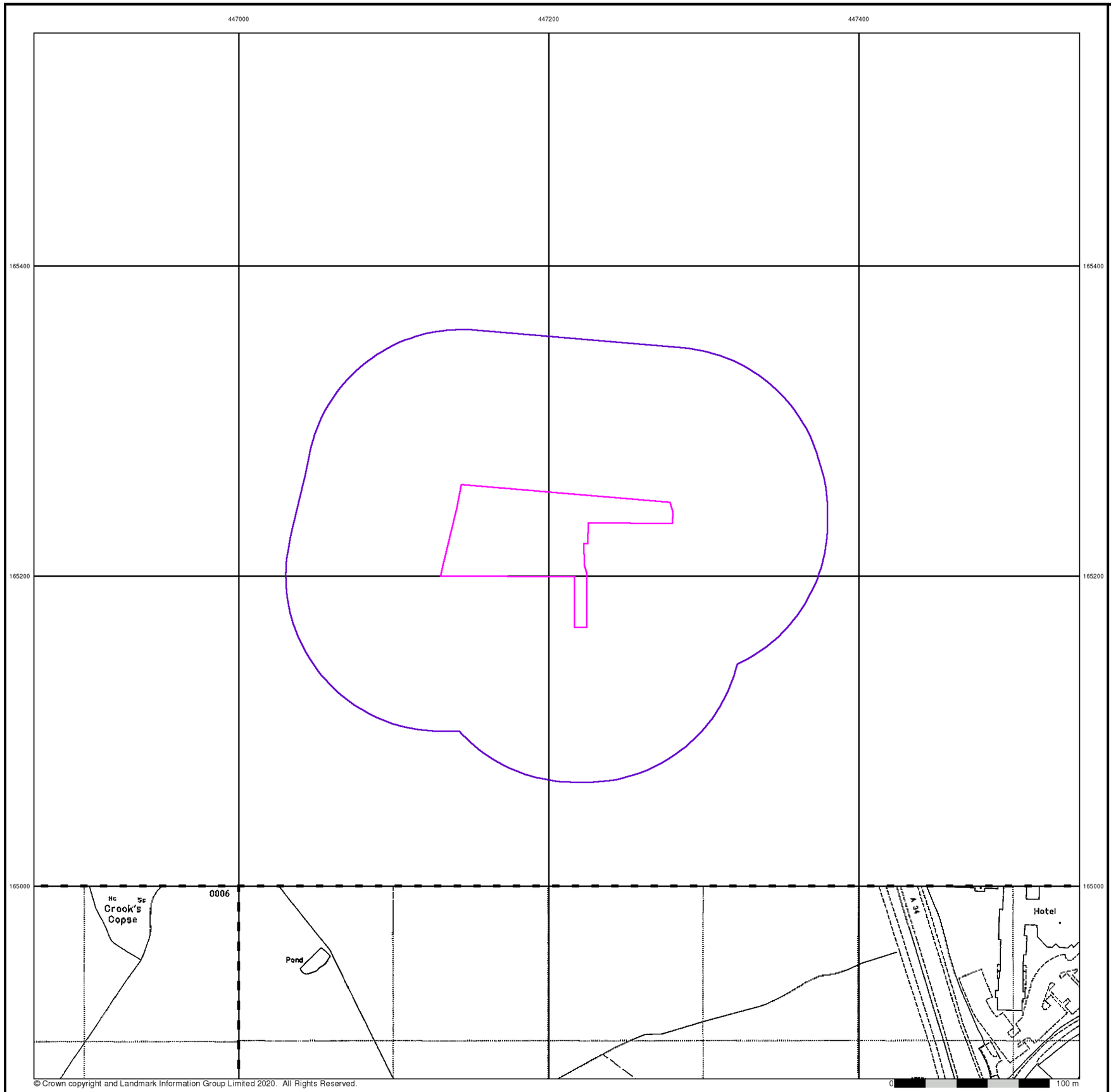
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

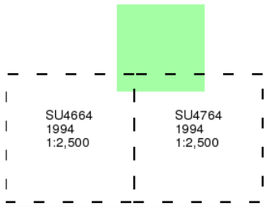
Large-Scale National Grid Data

Published 1994

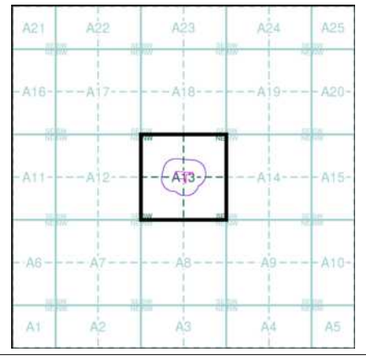
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



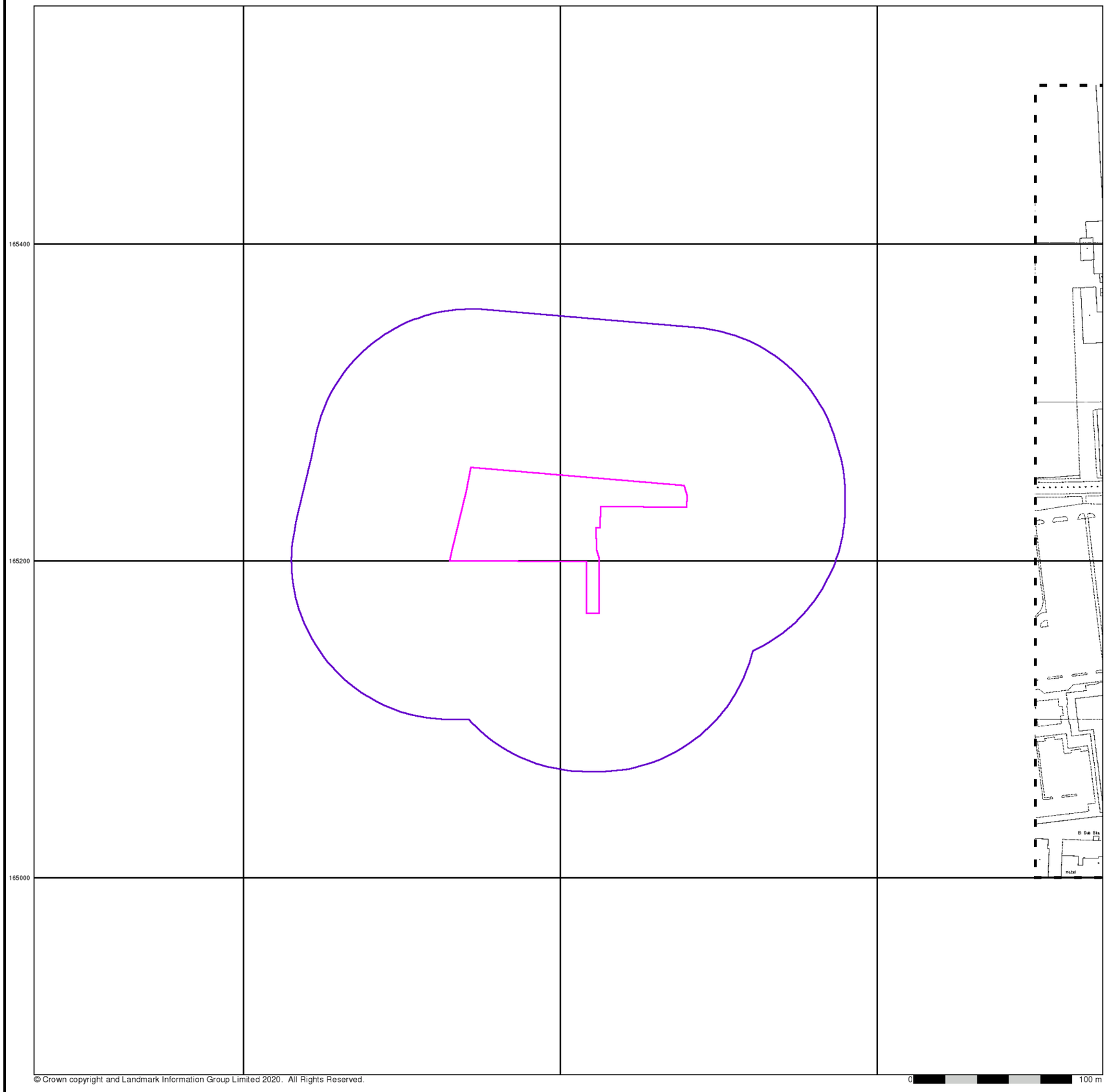
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

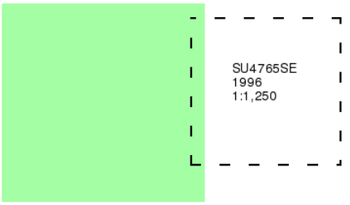
Large-Scale National Grid Data

Published 1996

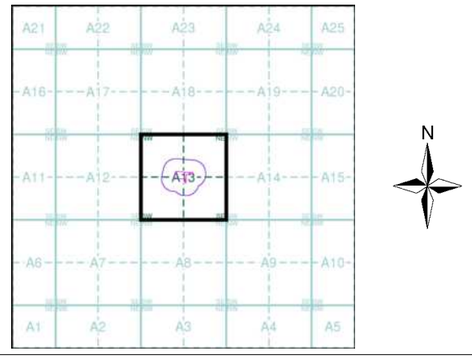
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

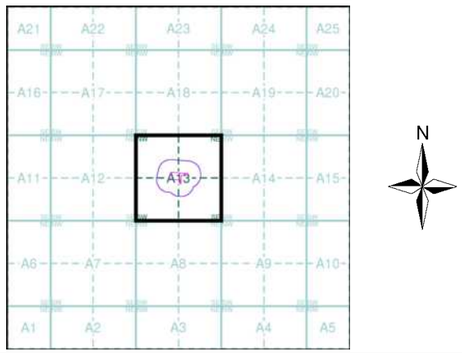
LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Historical Aerial Photography

Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

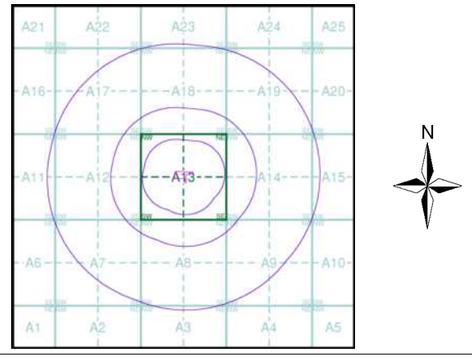
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Hampshire & Isle Of Wight	1:10,560	1877	2
Berkshire	1:10,560	1882	3
Hampshire & Isle Of Wight	1:10,560	1896	4
Berkshire	1:10,560	1900	5
Berkshire	1:10,560	1912 - 1913	6
Berkshire	1:10,560	1932	7
Berkshire	1:10,560	1938	8
Ordnance Survey Plan	1:10,000	1961	9
Ordnance Survey Plan	1:10,000	1966	10
Ordnance Survey Plan	1:10,000	1974 - 1976	11
Ordnance Survey Plan	1:10,000	1982	12
Ordnance Survey Plan	1:10,000	1991 - 1993	13
10K Raster Mapping	1:10,000	1999	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2019	16

Historical Map - Slice A



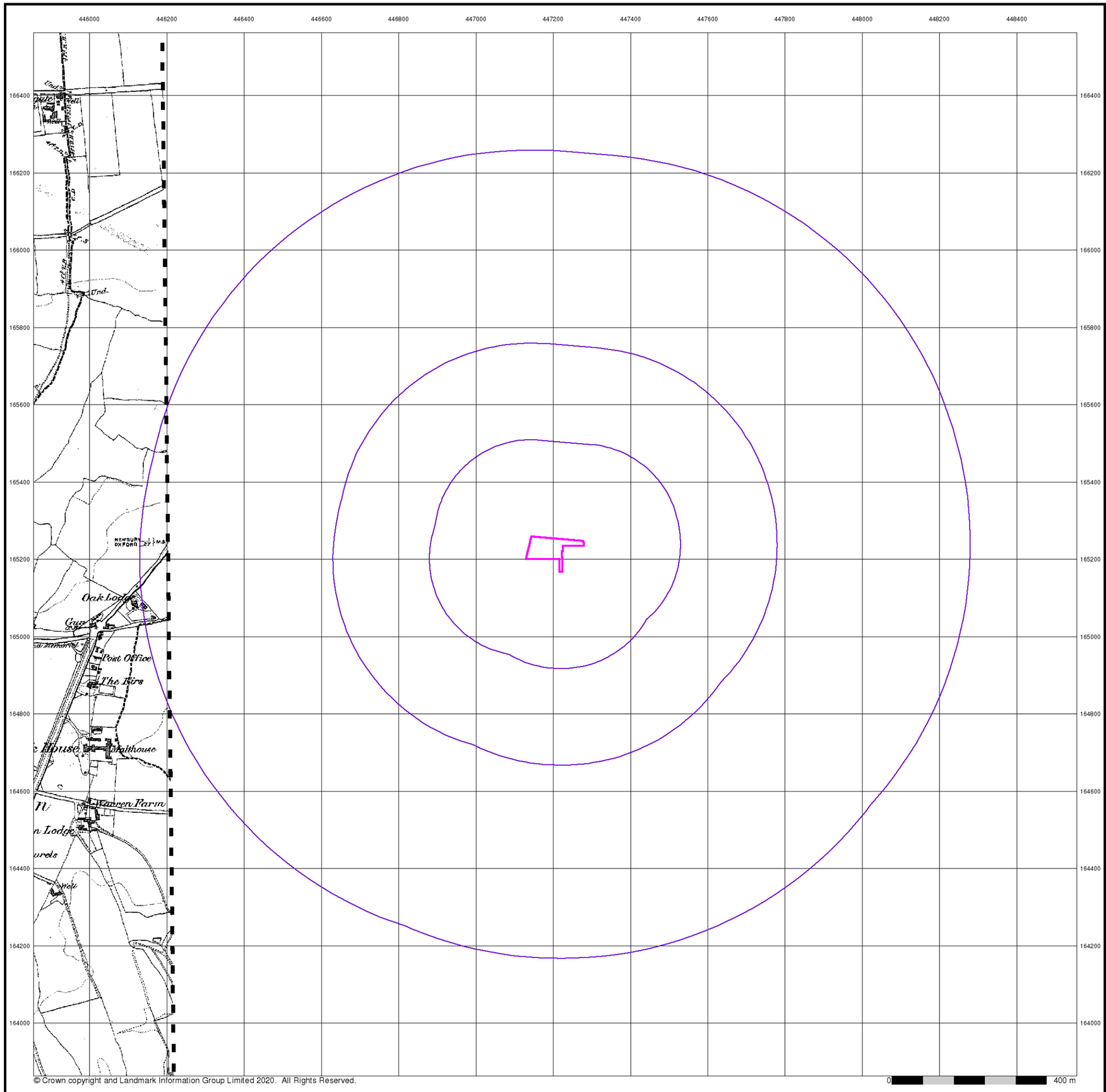
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

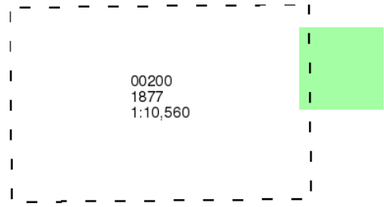
Hampshire & Isle Of Wight

Published 1877

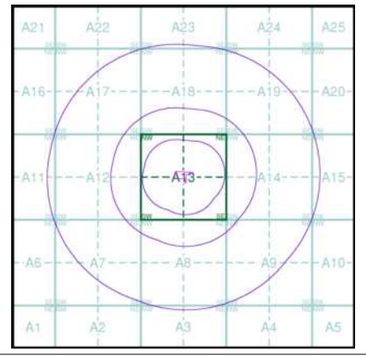
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



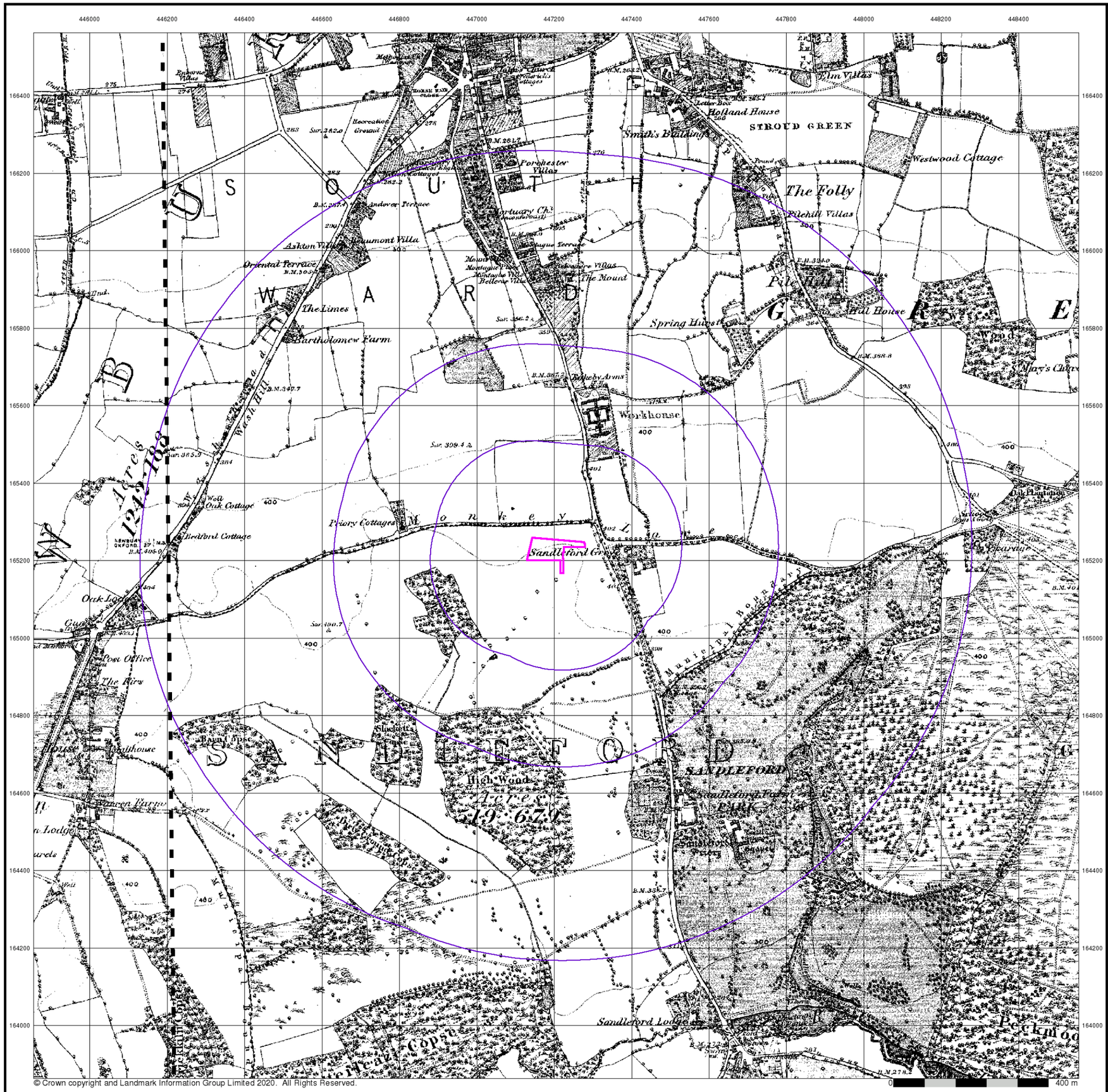
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

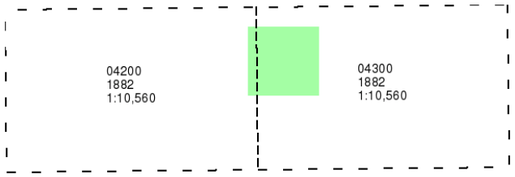
Berkshire

Published 1882

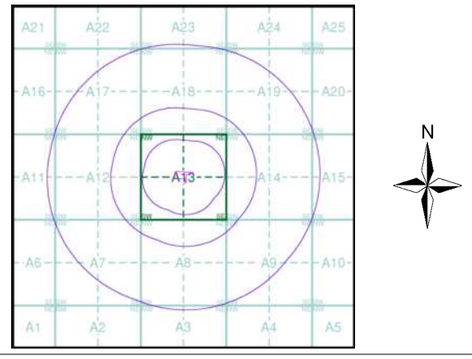
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

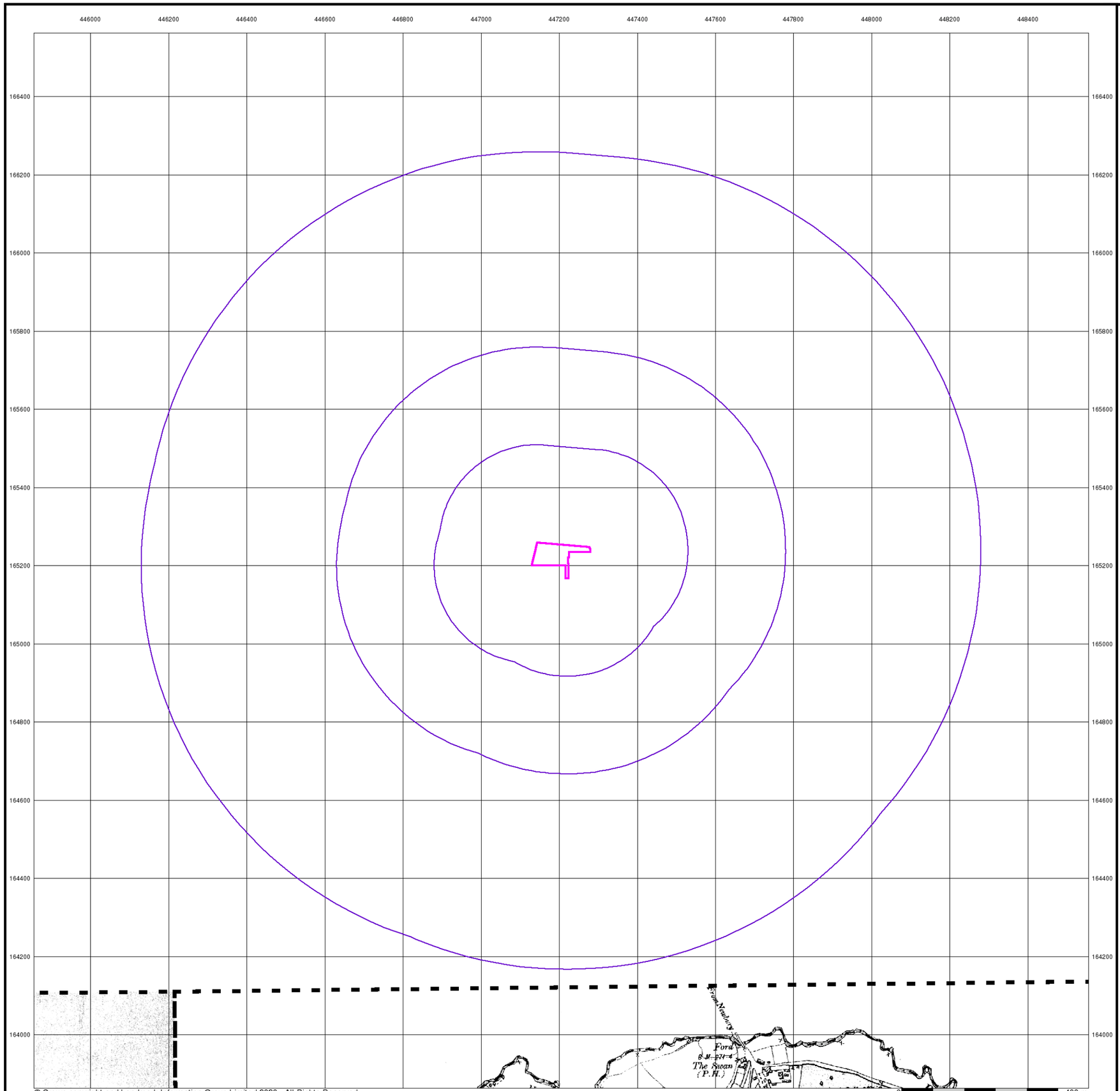
Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Landmark INFORMATION GROUP

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

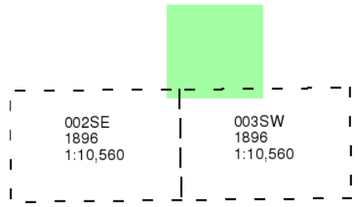
Hampshire & Isle Of Wight

Published 1896

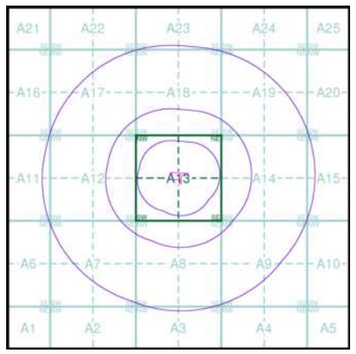
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



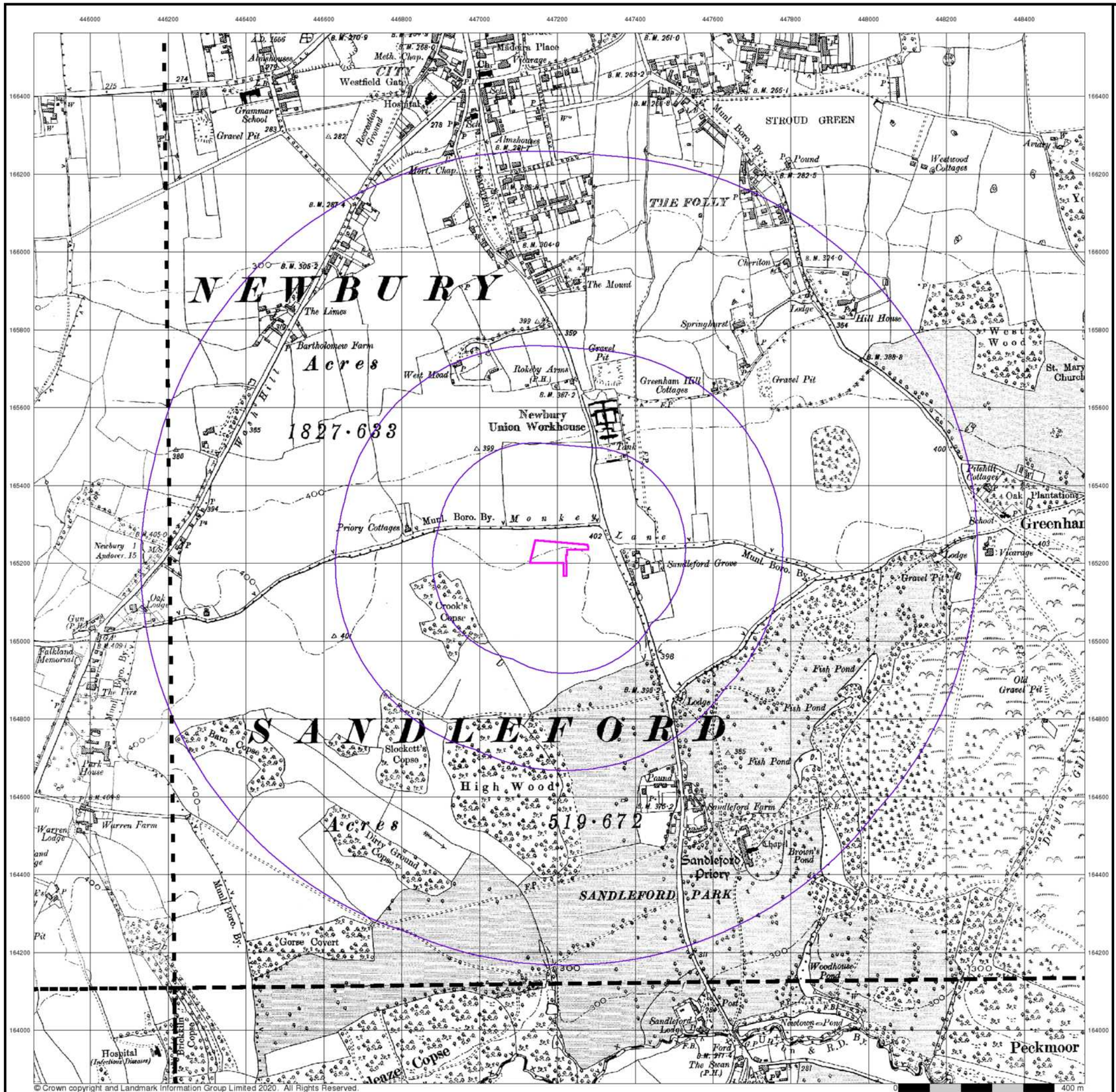
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

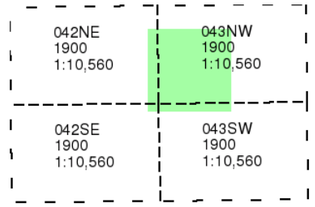
Berkshire

Published 1900

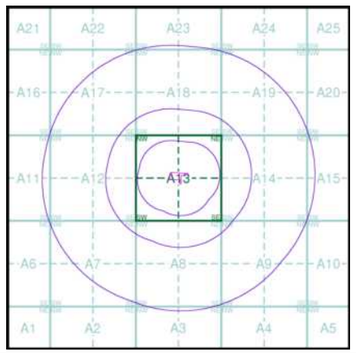
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

0 400 m

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Berkshire

Published 1912 - 1913

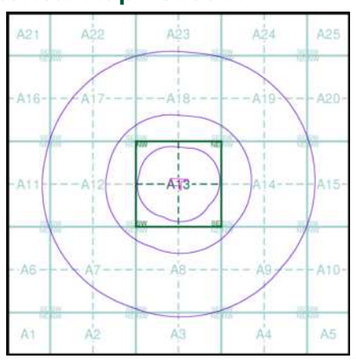
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

042NE 1913 1:10,560	043NW 1913 1:10,560
042SE 1912 1:10,560	043SW 1913 1:10,560

Historical Map - Slice A



N

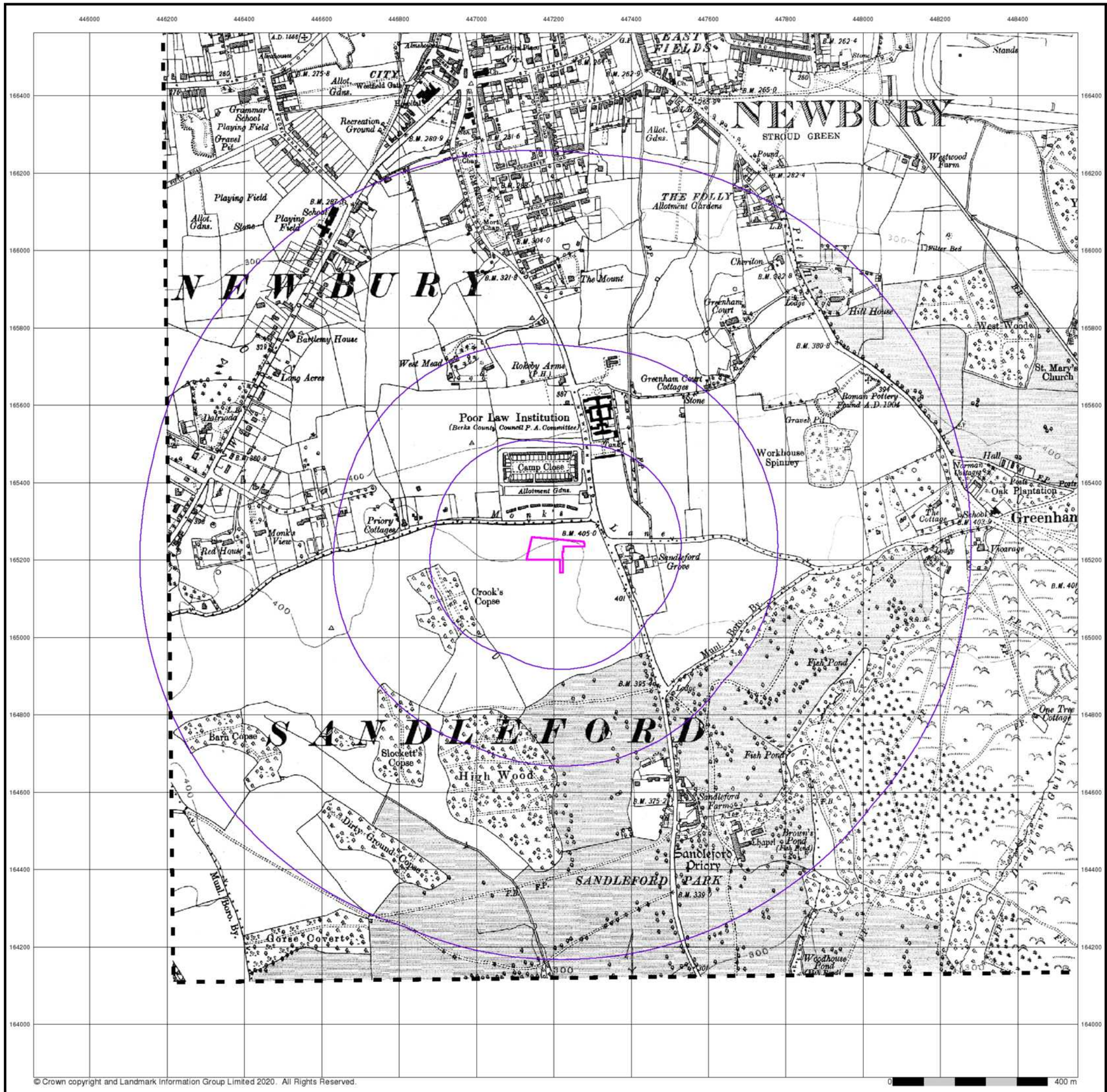
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

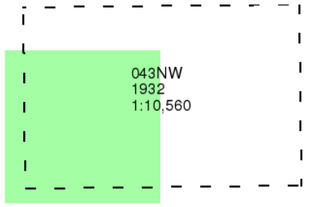
Berkshire

Published 1932

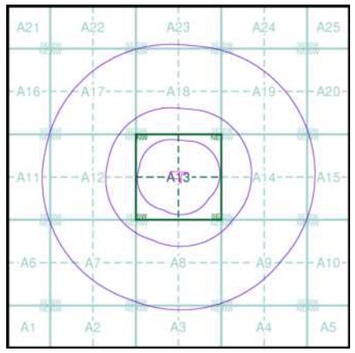
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



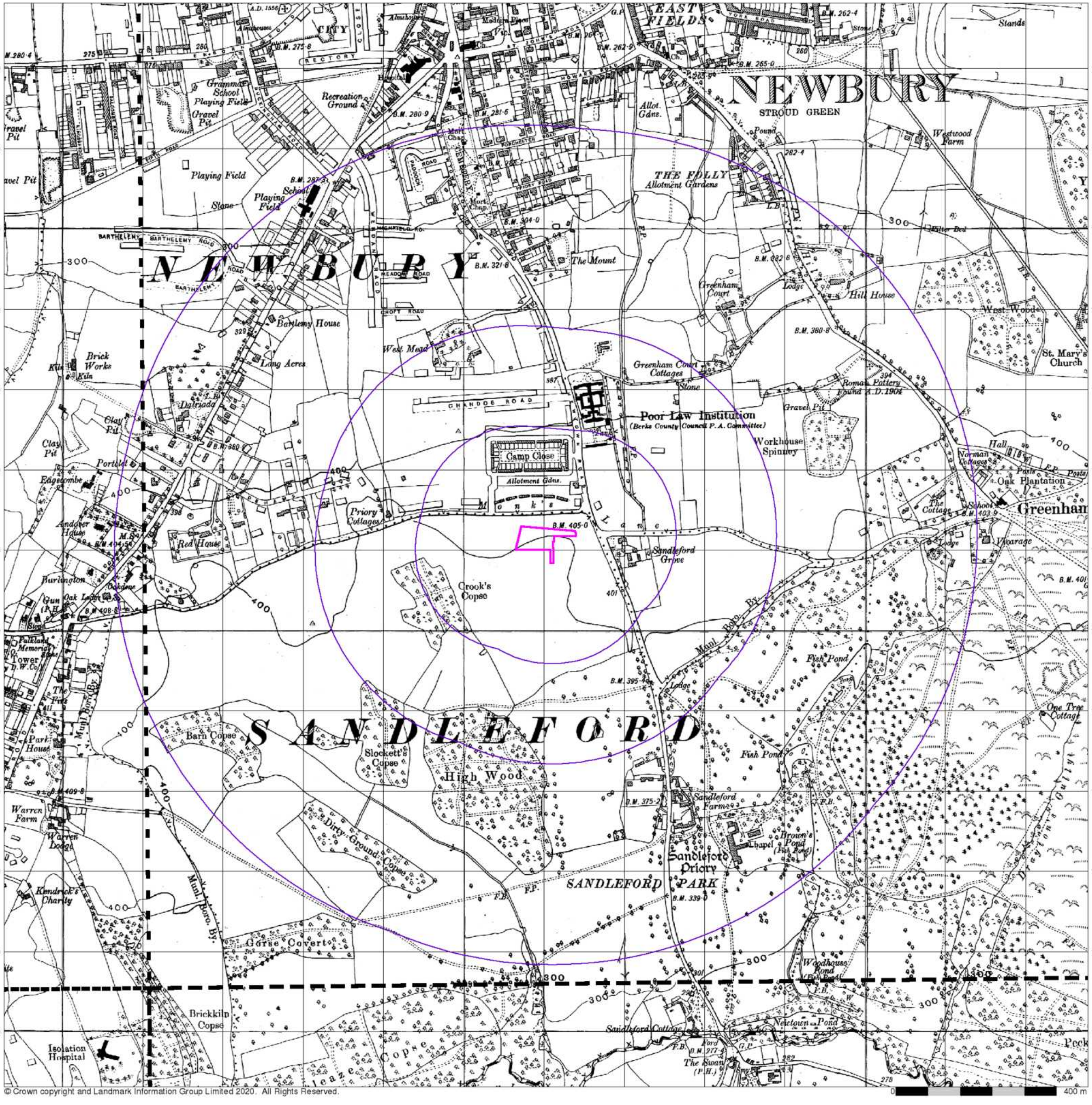
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

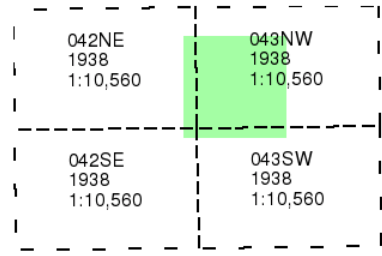
Berkshire

Published 1938

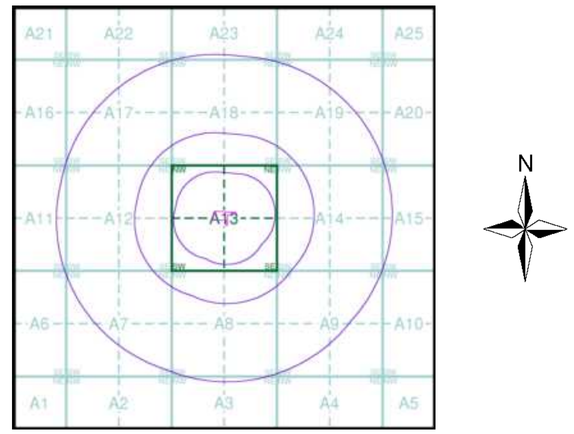
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

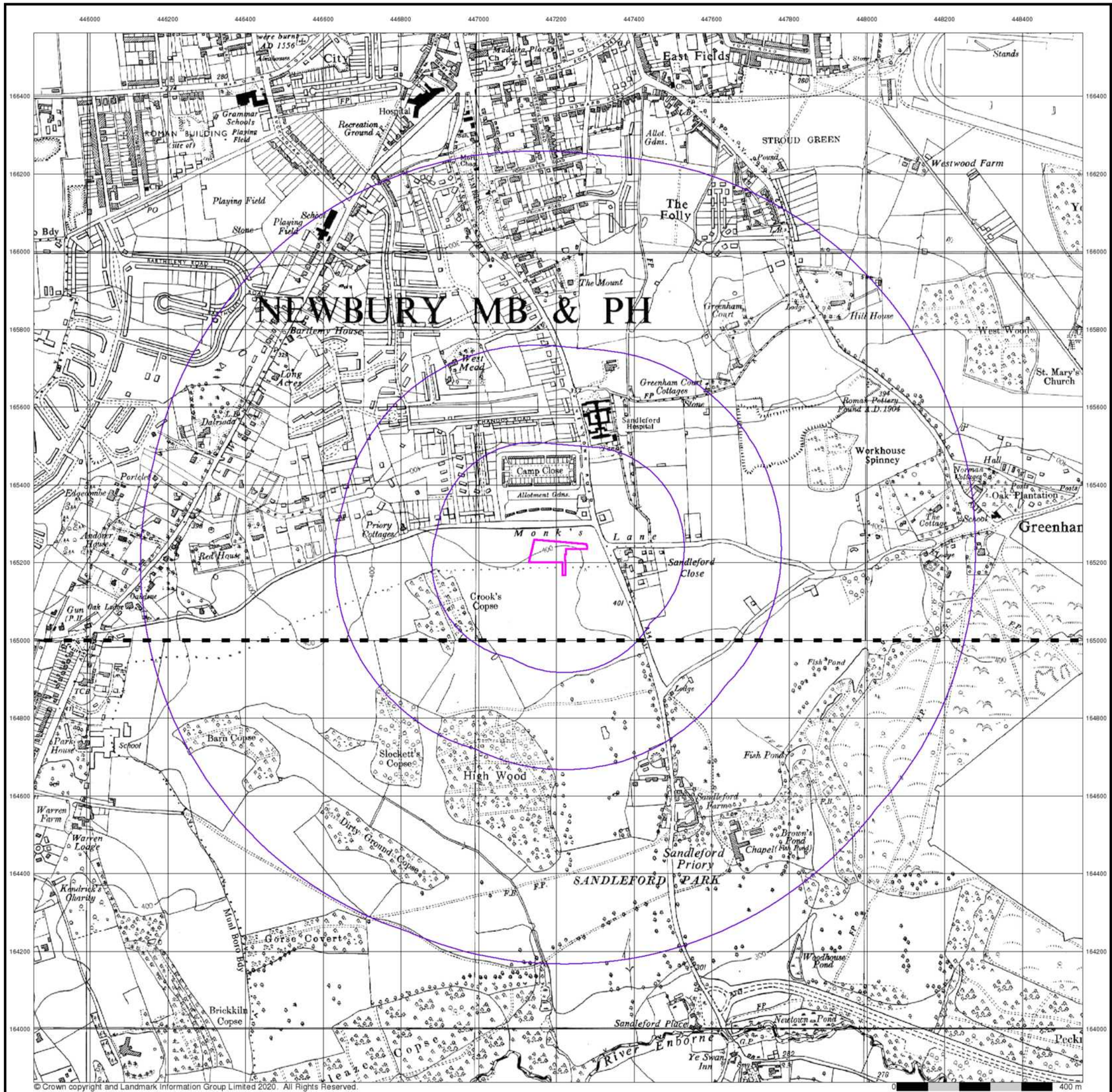
Order Number: 230178532_1_1
Customer Ref: 19.12.021
National Grid Reference: 447200, 165220
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Landmark INFORMATION GROUP

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Ordnance Survey Plan

Published 1961

Source map scale - 1:10,000

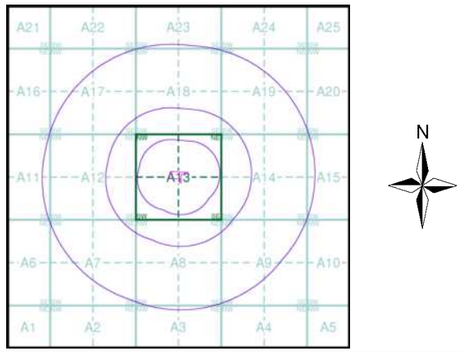
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SU46NE
1961
1:10,560

SU46SE
1961
1:10,560

Historical Map - Slice A



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

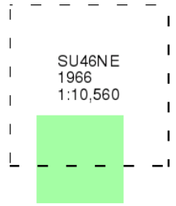
Ordnance Survey Plan

Published 1966

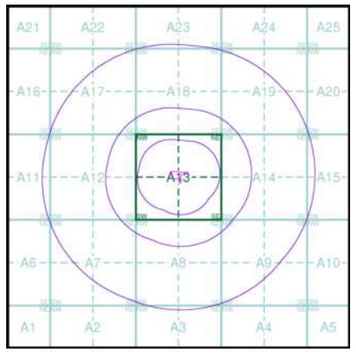
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



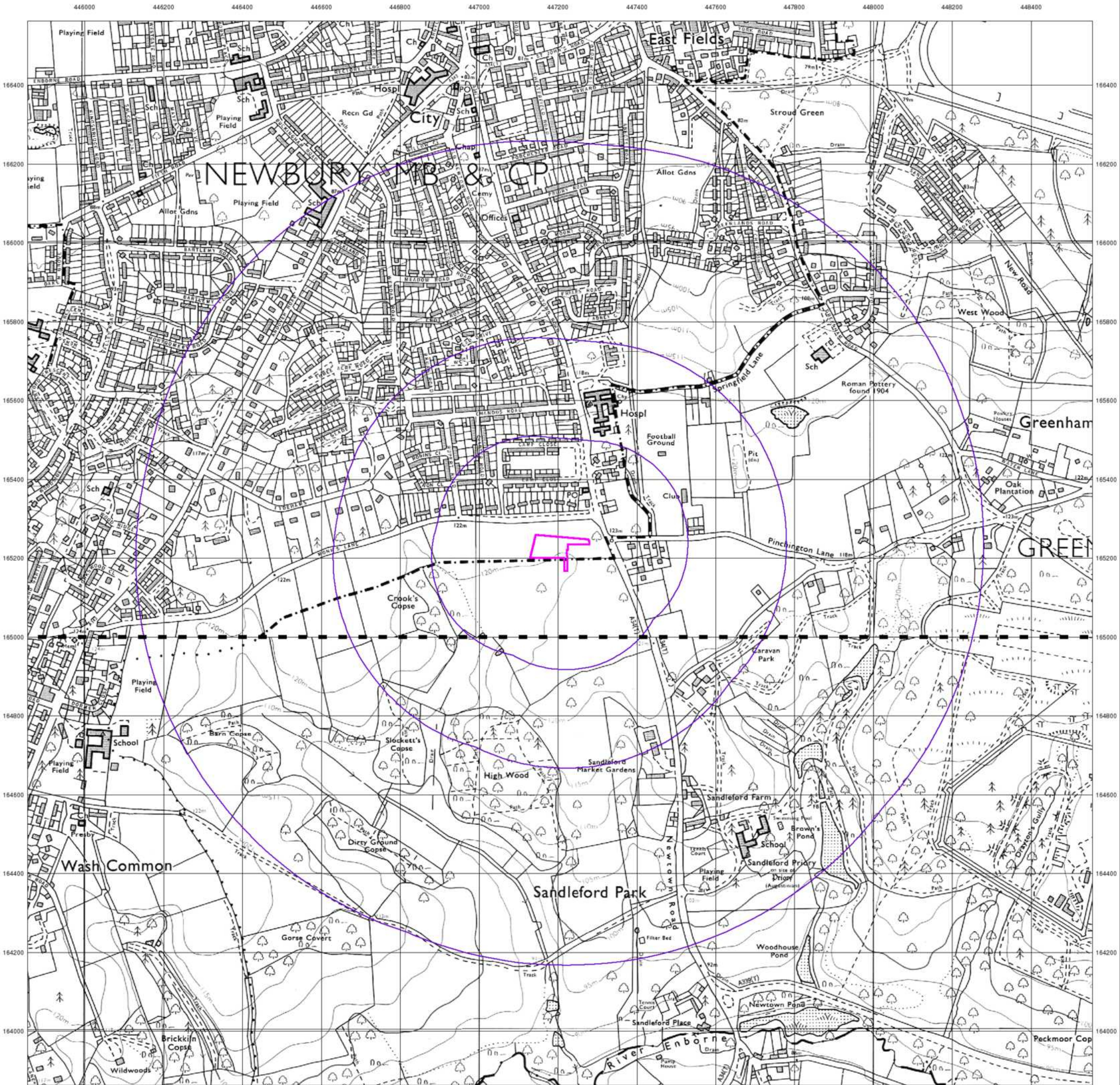
Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Ordnance Survey Plan

Published 1974 - 1976

Source map scale - 1:10,000

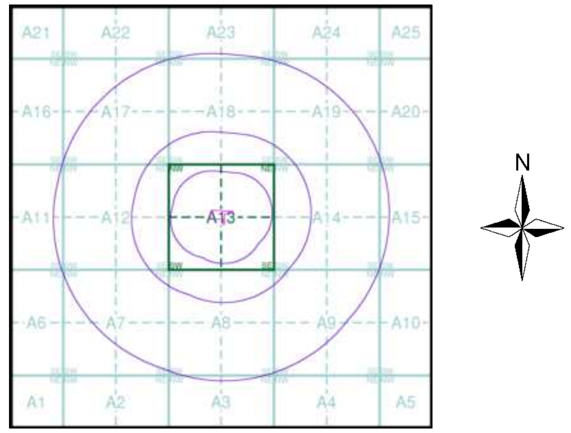
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SU46NE
1974
1:10,000

SU46SE
1976
1:10,000

Historical Map - Slice A



Order Details

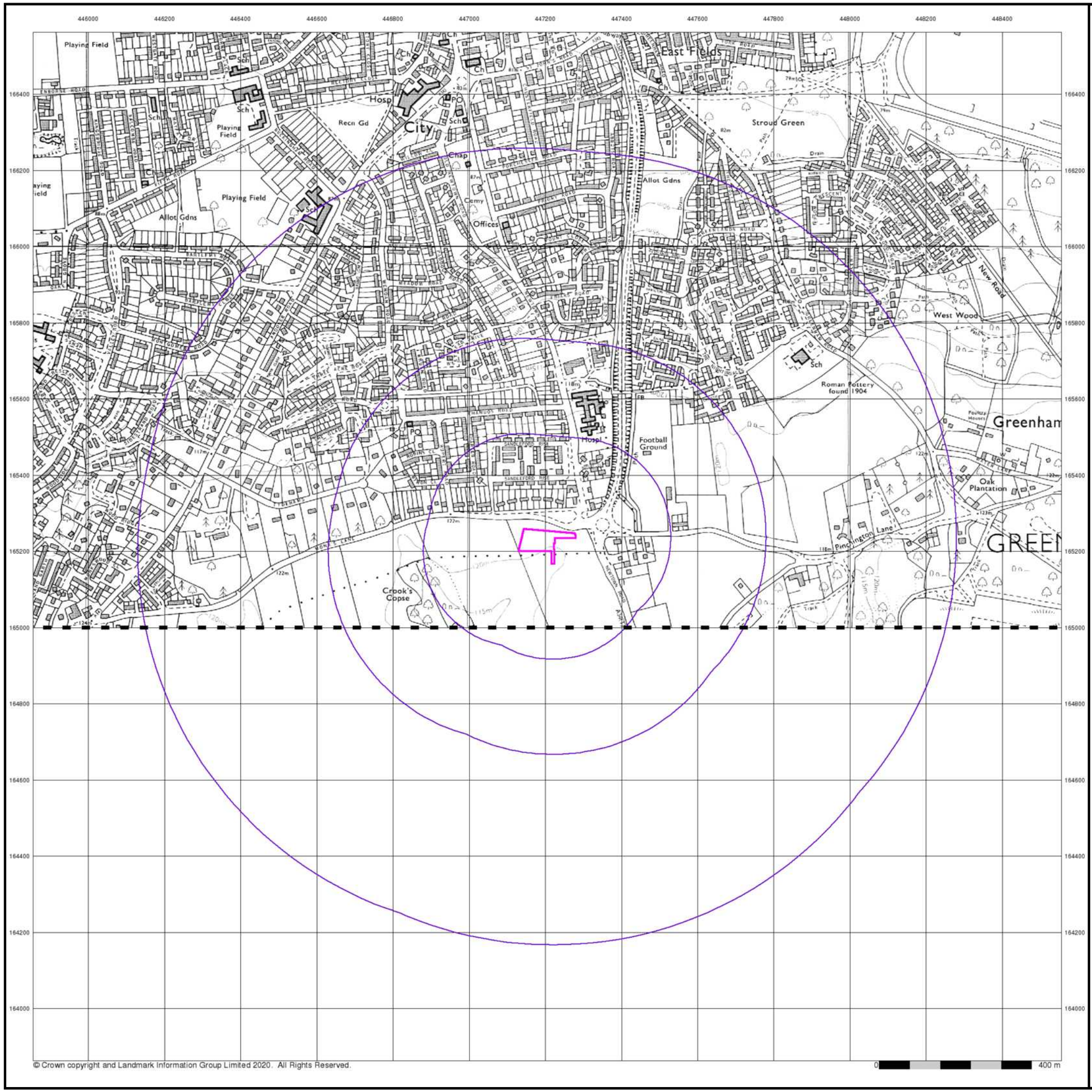
Order Number: 230178532_1_1
Customer Ref: 19.12.021
National Grid Reference: 447200, 165220
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Landmark INFORMATION GROUP

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

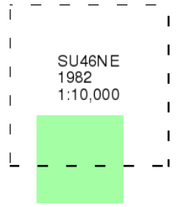
Ordnance Survey Plan

Published 1982

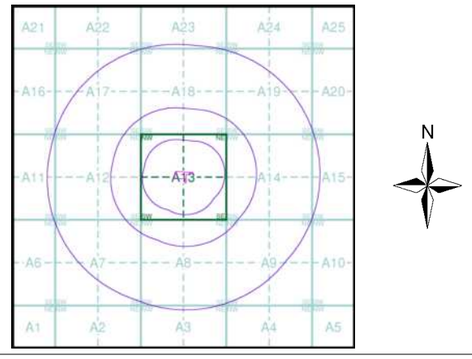
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A

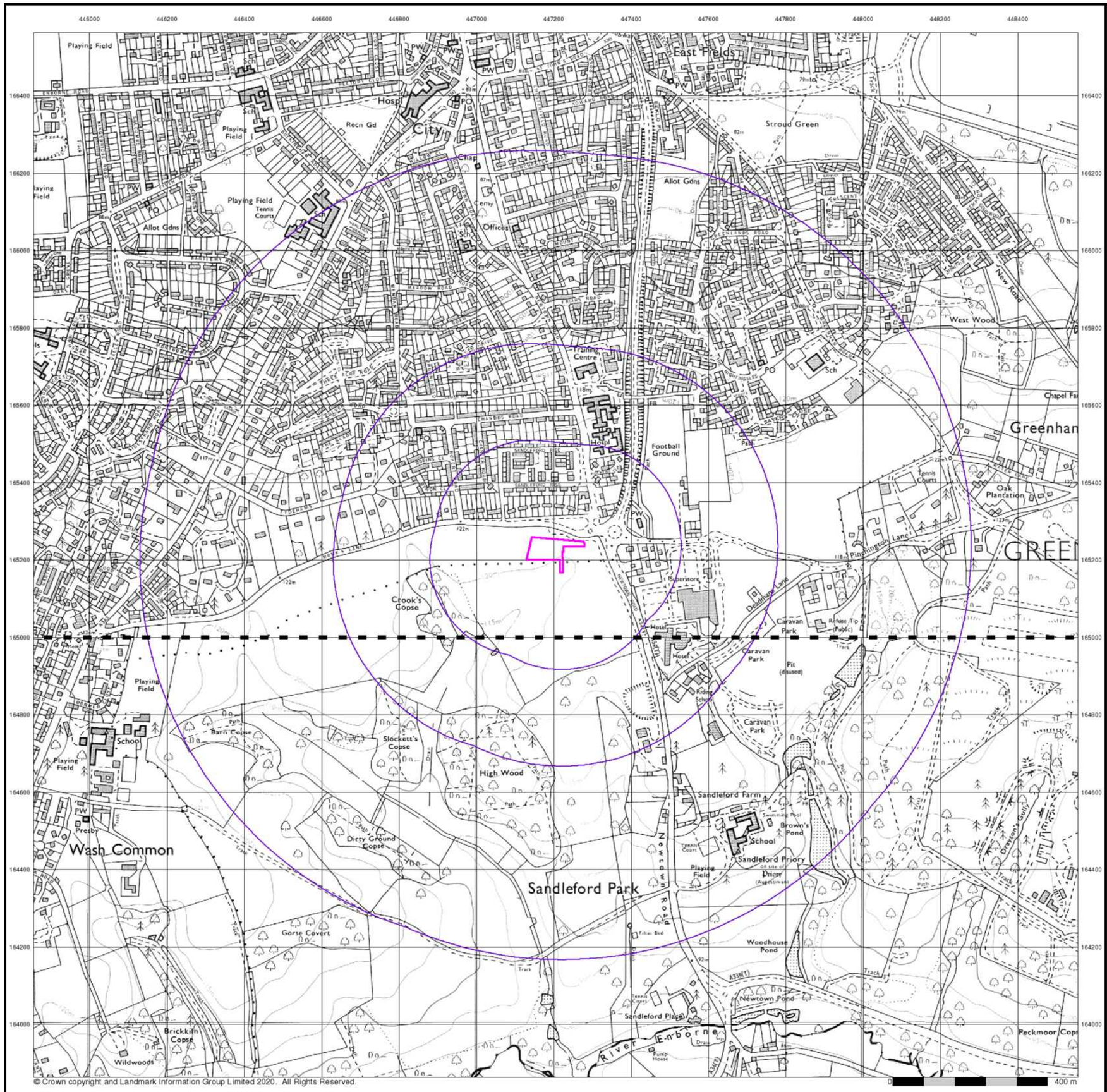


Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

Ordnance Survey Plan

Published 1991 - 1993

Source map scale - 1:10,000

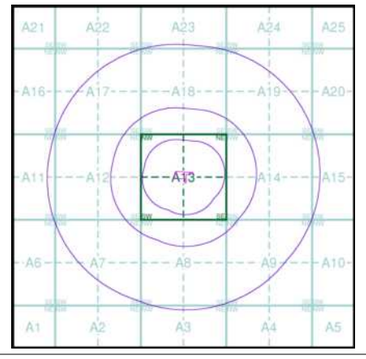
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SU46NE
1991
1:10,000

SU46SE
1993
1:10,000

Historical Map - Slice A



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

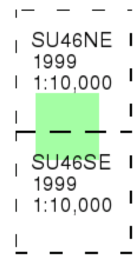
10k Raster Mapping

Published 1999

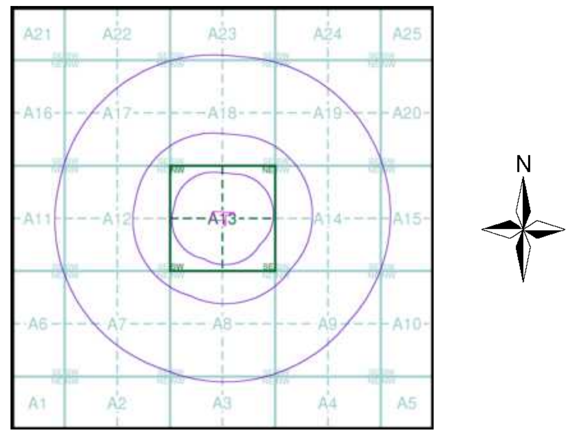
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 230178532_1_1
Customer Ref: 19.12.021
National Grid Reference: 447200, 165220
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Landmark INFORMATION GROUP

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

LISTERS GEO
Geotechnical and Geoenvironmental Consultants

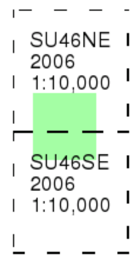
10k Raster Mapping

Published 2006

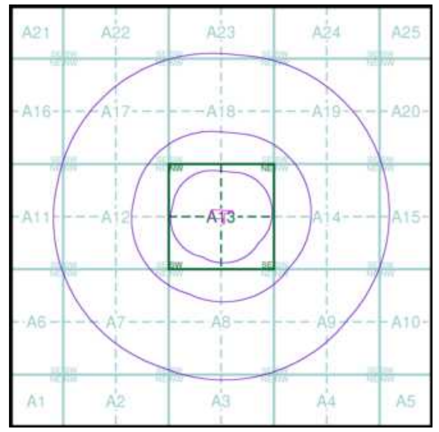
Source map scale - 1:10,000

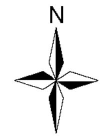
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A





Order Details

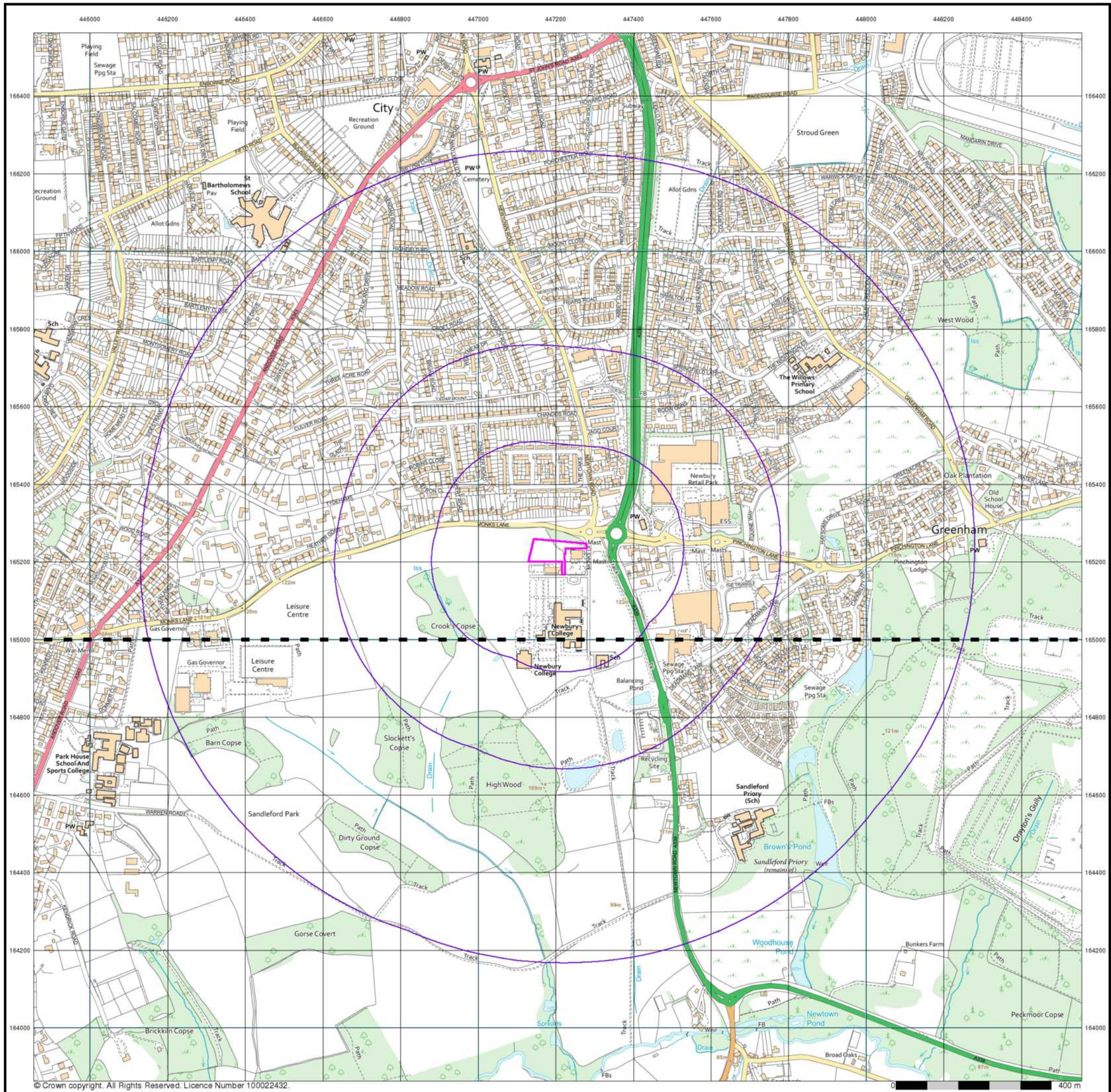
Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

Landmark INFORMATION GROUP

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



LISTERS GEO
Geotechnical and Geoenvironmental Consultants

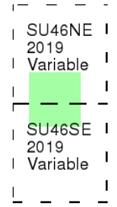
VectorMap Local

Published 2019

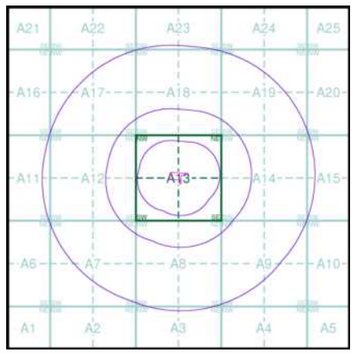
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	230178532_1_1
Customer Ref:	19.12.021
National Grid Reference:	447200, 165220
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

Site Details

Newbury College, Monks Lane, NEWBURY, RG14 7TD

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