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PRELIMINARY INVESTIGATION REPORT

Contract: 52562

Date: November 2016

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PRELIMINARY INVESTIGATION REPORT

carried out at

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Prepared for

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EXECUTIVE SUMMARY

On the instructions of NLD.London, a Preliminary Investigation in the form of a desk study and site reconnaissance has been carried out in order to assess the potential hazards on and adjacent to the site and prepare a risk assessment for further consideration.

The site, which is proposed to be developed for a residential end use, is situated at 2 Park Lane, approximately 28m to the northwest of Knebworth train station, and may be located by Grid Reference TL 248 202.

Historic maps indicate the site to have been first developed by c. 1898 with a structure in the north western corner and a row of structures trending north-south across the centre of the site. Additional development in the form of an extension to the structures in the north western corner of the site and the construction of a small structure in the south western corner are indicated to have occurred by c. 1923. The small structure was demolished by c.1937.

The eastern area of the site was developed by c. 1960 with a structure parallel to the northern boundary of the site, and was extended southward by c. 1970. The historic maps indicate the extension to the structure in the northwest corner of the site may have been demolished and rebuilt between c. 1960 and c. 1970.

By c. 1970, a tank present on maps from c. 1898 and located some 70m to the north of the site was no longer shown. A coal yard associated with the railway was present approximately 70m to the northeast from c. 1970, as well as an electricity substation 105m to the southeast of the site. The coal yard to the northeast is no longer present from c. 1983, from which time the eastern area of the site is labelled as a builder's yard.

Geological maps pertaining to the area indicate the site to be underlain by superficial Glaciofluvial Deposits, designated a Secondary A aquifer by the Environment Agency, subsequently underlain by undifferentiated deposits of the Lewes Nodular and Seaford Chalk Formations, designated a Principal aquifer. The site is located within a Zone 1 groundwater Source Protection to a public supply well.

Geotechnical hazards identified by the research include a moderate to high risk associated with the potential for ground dissolution associated with the underlying chalk, largely driven by the presence of ten solution pipes located some 18m to the northeast of the site, and a low to moderate risk of volume change potential associated with the underlying superficial deposits.

The following potential sources of contamination which may form part of a pollutant linkage are considered to potentially impact on the site:

- Contamination associated with Made Ground due to previous development of the site.
- Contamination associated with previous use of the site as a builder's yard/joinery.
- The potential migration of contamination from the historic tank 70m to the north of the site.
- The potential migration of contamination associated with the railway some 20m to the east of the site.

The research has identified evidence of potential hazards associated with underlying ground conditions, either natural or man-made, together with a number of potential pathways which are relevant to the potential sources of contamination identified above and may form part of a pollutant linkage. Therefore it is recommended that further work be carried out to confirm the presence, nature or extent of those hazards anticipated to impact on the site

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1.0 INTRODUCTION

1.1 General

1.1.1 On the instructions of NLD.London, a Preliminary Investigation in the form of a desk study and site reconnaissance has been carried out in order to assess the potential hazards on and adjacent to the site and prepare a risk assessment for further consideration.

1.1.2 It is understood that the proposed development comprises the demolition of the majority of the structures on the site, followed by the construction of one block containing nine flats, two semi-detached cottages, and the conversion of an existing structure for a flat with ground floor parking, together with thirteen car parking spaces.

1.1.3 This report has been prepared for the sole use of the Client for the purpose described and no extended duty of care to any third party is implied or offered. Third parties using any information contained within this report do so at their own risk.

1.1.4 It is recommended that a copy of this report be submitted to the relevant authorities to enable them to carry out their own site assessment and provide any comments.

1.1.5 The comments given in this report and the opinions expressed herein are based on the information obtained from the desk study and site reconnaissance. No intrusive investigation has been carried out to confirm the actual ground or environmental conditions.

1.1.6 Any risks identified in this report are perceived risks based on information reviewed. Actual risks can only be assessed following a physical investigation of the site.

1.1.7 This report has been based, in part, on information supplied by others. The report has been prepared on the basis of that information being accurate.

1.1.8 The conclusions presented in this report are based on the guidance available at the time of preparation of the report. No liability can be accepted for the retrospective effects of any changes or amendments to legislation or guidance.

1.1.9 This Preliminary Investigation has been conducted in general accordance with CLR 3, ref. 7.1, CLR 11, ref 7.2, BS 10175, ref 7.3, and GPLC 1, ref 7.4.

2.0 SITE

2.1 Site Location

2.1.1 The site is situated at 2 Park Lane, approximately 28m to the northwest of Knebworth train station, and may be located by Grid Reference TL 248 202. Site location plans and an aerial photograph are included in Appendix 1, Figures A1.1 and A1.2.

2.2 Site Walkover and Description

2.2.1 A walkover survey of the site was conducted on 8 November 2016. The walkover was carried out in general accordance with CLR 2, ref. 7.5.

2.2.2 The site was roughly rectangular in shape, occupying an area of some 0.14Ha.

2.2.3 At the time of the walkover survey, the site was accessed from Park Lane, and was developed with four permanent structures in the west and two temporary timber clad structures in the east, all with associated car parking and areas of hardstanding. There were no significant differences between the conditions observed on site and the aerial photograph.

2.2.4 The structures on site and within the local area were in good condition, with no evidence of any damage arising from adverse ground conditions.

2.2.5 The surrounding area gently sloped toward the southeast at an approximate angle of 6°. A wall retaining some 1.3m of material was present in the south western corner of the site, creating a level parking area. There were no signs of any ground movements on the site, or on similar ground nearby. A small depression in the ground was present in the south western area of the site.

2.2.6 There were no springs, ponds or other watercourses observed on or near the site at the time of the walkover.

2.2.7 Bushes were present adjacent to the western edge of the southern boundary of the site, obscuring part of the aforementioned retaining wall, along with Ivy bushes in the northern area of the site and several trees and other vegetation adjacent to the north eastern corner of the site. There were no trees or other vegetation within the site boundaries.

2.2.8 There was evidence of existing services on the site at the time of the walkover survey, inferred from the presence of manhole covers, a disconnected gas meter, and fully serviced structures occupying the site.

2.2.9 There were no sources of contamination observed on or near to the site at the time of the walkover. However, given the age of the structures on site, it is considered that as yet unidentified asbestos is likely to be present in some form within the site boundaries.

2.2.10 The site is situated at an approximate altitude of 102mAOD.

2.2.11 Photographs from the walkover survey are included within Appendix 2, Figures A2.1 to A2.4. A site plan is included in Appendix 1, Figure A1.3.

2.3 Historical Maps

2.3.1 A review of the history of the site has been conducted based on readily available historical maps. Details of the findings are provided in the table below. All maps are provided in Appendix 4.

Map, Date and Scale	Site Description	Regional Setting
Hertfordshire 1881 1:2500	The site is undeveloped and situated within an agricultural field.	The area surrounding the site is largely undeveloped comprising agricultural land. A road is present adjacent to the southern boundary of the site, and a north-south trending railway is present some 20m to the east of the site. An old gravel pit is indicated some 200m to the northwest of the site.
Hertfordshire 1884 1:10560	No significant changes from previous maps.	The railway to the east is named the Great Northern Railway.
Hertfordshire 1898 1:2500	The site is developed with a structure along part of the northern and western boundary of the site, and a row of up to three structures trending north-south along the centre of the site.	Several structures have been developed to the west of the site, along with the construction of Knebworth Station some 30m to the southeast. A tank is indicated approximately 70m to the north of the site. Several residential properties have been constructed 120m to the east of the site. An old chalk pit with an associated lime kiln is present some 375m north of the site.
Hertfordshire 1899 1:10560	No significant changes from previous maps.	Several old chalk pits are indicated in the surrounding area, located at 550m southwest, 850m southwest, 850m southeast, 900m east, 1400m southeast and 1.5km southeast. An active chalk pit is indicated some 550m north of the site. An old gravel pit is present approximately 1km to the northeast of the site. Old clay pits and an associated brick works are shown approximately 1.5m to the southwest of the site.
Hertfordshire 1923 1:2500	The structure in the north western corner of the site appears to have been extended by this time. A small, single, unlabelled structure has been developed in the south western corner of the site.	The surrounding area has become increasingly developed.
Hertfordshire 1925 1:10560	No significant changes from previous maps.	The old chalk pits, gravel pits and clay pits are no longer labelled. The surrounding area has become increasingly developed.

Map, Date and Scale	Site Description	Regional Setting
Hertfordshire 1937 1:2500	The small structure in the south western corner of the site is no longer present.	The surrounding area has become increasingly developed.
Hertfordshire 1946 – 1950 1:10560	No significant changes from previous maps.	The surrounding area has become increasingly developed. A chemical works is shown some 1.4km to the southeast.
Ordnance Survey Plan 1960 1:10000	The eastern area of the site has been developed with a structure running parallel to the northern boundary of the site.	The surrounding area has become increasingly developed. The brick works to the southwest of the site is no longer present. The chemical works to the south of the site is labelled as a works.
Ordnance Survey Plan 1964 1:10000	No significant changes from previous maps.	The A1(M) has been constructed some 600m to the west of the site.
Ordnance Survey Plan 1970 1:2500	A further structure has been constructed adjacent to the eastern edge of the structures across the centre of the site, and is shown to be connected to the building in the northern area of the eastern part of the site. The extension to the structures in the north western corner of the site appears to have been demolished and rebuilt by this time.	The surrounding area has become increasingly developed. The tank to the north of the site is no longer present. A coal yard is present some 70m to the northeast of the site. An electricity substation is present 105m to the southeast of the site.
Ordnance Survey Plan 1970 – 1975 1:10000	No significant changes from previous maps.	The surrounding area has become increasingly developed.
Supply od Unpublished Survey Information 1974 1:2500	No significant changes from previous maps.	The surrounding area has become increasingly developed.
Ordnance Survey Plan 1975 1:10000	No significant changes from previous maps.	No significant changes from previous maps.

Map, Date and Scale	Site Description	Regional Setting
Additional SIMs 1978 – 1991 1:2500	The site is shown on part of the map dated 1978. No significant changes from previous maps.	The surrounding area has become increasingly developed.
Ordnance Survey Plan 1983 – 1989 1:2500	The eastern area of the site is occupied by a builder's yard at this time. A small unlabelled structure is present in the centre of the eastern area of the site.	The surrounding area has become increasingly developed. The coal yard to the northeast of the site is no longer present.
Additional SIMs 1986 – 1990 1:2500	The site is shown on part of the map dated 1990. No significant changes from previous maps.	The surrounding area has become increasingly developed.
Ordnance Survey Plan 1987 – 1989 1:10000	No significant changes from previous maps.	The surrounding area has become increasingly developed.
Large-Scale National Grid Data 1993 1:2500	No significant changes from previous maps.	The surrounding area has become increasingly developed.
Additional SIMs 1993 1:2500	No significant changes from previous maps.	The surrounding area has become increasingly developed.
Ordnance Survey Plan 1993 1:10000	No data available.	Limited data available. No significant changes from previous maps.
Large-Scale National Grid Data 1996 1:2500	No significant changes from previous maps.	The surrounding area has become increasingly developed.
10k Raster Mapping 1999 1:10000	No significant changes from previous maps.	The surrounding area has become increasingly developed.
Historical Aerial Photography 1999 1:10000	No significant changes from previous maps.	The surrounding area has become increasingly developed.

Map, Date and Scale	Site Description	Regional Setting
10k Raster Mapping 2006 1:10000	No significant changes from previous maps.	The surrounding area has become increasingly developed.
VectorMap Local 2016 1:10000	No significant changes from previous maps.	No significant changes from previous maps.

2.4 Summary

2.4.1 The earliest historic map pertaining to the area, dated c. 1881, indicate the site to have been undeveloped and situated within an agricultural field, with the Great Northern Railway some 20m to the east. The site was first developed by c. 1898 with a structure in the north western corner and a row of structures trending north-south across the centre of the site. At this time, a tank related to the railway was shown some 70m to the north of the site.

2.4.2 By c. 1923, the structure occupying the north western corner of the site was extended and a further small unlabelled structure was constructed in the south eastern corner of the site, which was subsequently demolished by c. 1937.

2.4.3 A structure was constructed parallel to the northern boundary in the eastern area of the site by c. 1960, and by c. 1970, this was extended southward parallel to the structures across the centre of the site. Furthermore, it is possible that the extension to the structure in the north western corner of the site was demolished and rebuilt between c. 1960 and c. 1970.

2.4.4 The tank present to the north of the site was no longer present from maps dated c. 1970. However, a coal yard was shown some 70m to the northeast of the site, and an electricity substation 105m to the southeast.

2.4.5 The eastern area of the site was labelled as a builder's yard by c. 1983, and a small unlabelled structure was shown in the centre of the eastern area of the site. The coal yard to the northeast of the site was no longer shown from this time.

3.0 SITE SETTING

3.1 Geological Setting

3.1.1 Details of the geology underlying the site have been obtained from the relevant geological map of the area, ref. 7.6.

3.1.2 The geological map indicates the site to be underlain by superficial Glaciofluvial Deposits, comprising sand and gravel. Furthermore, the Clay-with-Flints Formation is shown to be present in close proximity to the site, and may be present underlying the site.

3.1.3 The superficial deposits are underlain by undifferentiated deposits of the Lewes Nodular and Seaford Chalk Formations.

3.1.4 Although not indicated as present on the site from the geological maps, there is the possibility that Made Ground may exist on the site due to the previous development of the site.

3.1.5 A local existing borehole close to the site indicates 1.40m of Made Ground, underlain by superficial deposits to 2.55m below ground level (bgl), subsequently underlain by Chalk to the full depth of the borehole at 15.45m bgl.

3.2 Hydrogeological Setting

3.2.1 The hydrogeological records, provided by the Environment Agency, indicate that the site is situated above a Secondary A aquifer relating to the variably permeable Glaciofluvial Deposits.

3.2.2 Under the same classification system, the hydrogeological records indicate the highly permeable underlying Chalk is designated a Principal aquifer.

3.2.3 The Environment Agency defines Principal aquifers as 'layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale'.

3.2.4 The Environment Agency defines Secondary A aquifers as 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers'.

3.2.5 The Envirocheck vulnerability map indicates the soil to be of intermediate leaching potential.

3.2.6 Soils of intermediate leaching potential are soils that can possibly transmit a wide range of pollutants.

3.2.7 The site is located within a groundwater source protection zone 1 (inner protection zone), defined as ‘the 50-day travel time from any point below the water table to the source’. The zone has a minimum radius of 50 metres.

3.2.8 There are no licensed groundwater abstractions within 500m of the site. There are six licensed abstractions from 606m to the east of the site, all for public potable supply.

3.3 Hydrological Setting

3.3.1 There are no major surface watercourses within 1km of the site.

3.3.2 There is a pond located 367m to the northeast of the site.

3.3.3 The site is not situated within an area defined by the Environment Agency as being at risk of flooding from rivers or the sea.

3.3.4 There are no licensed surface water abstractions within 2km of the site.

3.4 Radon

3.4.1 The British Geological Survey, in conjunction with the Radiation Protection Division of the Health Protection Agency, ref. 7.7, indicates the site to lie within an area where there is a probability of <1% of present or future homes being above the action level of 200Bq/m^3.

3.4.2 As such, the site is not classified as a Radon Affected Area and no radon protective measures are deemed necessary for the proposed development. This is confirmed by the Building Research Establishment, Report BR211, ref 7.8.

3.5 Soil Geochemistry

3.5.1 The British Geological Survey data indicates the following concentrations of naturally occurring metals to be representative of background levels in natural soil underlying the site. The levels are based on those present in rural soils and are not necessarily representative of levels within Made Ground which may be encountered on site:

Element	Concentration (mg/kg)
Arsenic	25-25
Cadmium	<1.8
Chromium	60-90
Lead	<100
Nickel	15-30

4.0 ASSESSMENT OF GEOTECHNICAL RISK

4.1 Geological Constraints

4.1.1 The following are brief findings relating to factors identified during the research from the Envirocheck data that may have a potential impact upon the engineering of the proposed development.

Potential Hazard	Assessed Risk	Comment
BGS Recorded Mineral Sites	Low	There are three BGS recorded mineral sites within 500m, the closest of which is situated some 167m to the northwest of the site and relates to opencast abstraction of the underlying chalk. The assessed risk is considered to be low.
Other shallow mine workings	Very Low	No other economic minerals are known to have been worked locally.
Man-Made Cavities	Very Low	There are no known man-made cavities either on or within the vicinity of the site.
Collapsible Ground	Very Low	The Envirocheck data indicates a very low risk of collapsible ground stability hazards.
Compressible Ground	Low	Naturally occurring poorly consolidated and highly compressible soils are not indicated to underlie the site. However, it is thought that Made Ground is likely to be present to an unknown depth. As such, a low risk level has been assigned.
Ground Dissolution	Moderate to High	The Envirocheck data indicates a very low risk. However, there are ten recorded solution pipes some 18m to the northeast of the site. As such, it is considered that there is a moderate to high risk of dissolution as there is no change in the geological sequence between the site and the locality of the dissolution features.
Landslide	Very Low	The site is essentially level.
Running Sand	Very Low	The Envirocheck data indicates a very low risk of running sand stability hazards.
Shrinking or Swelling Clay	Low to Moderate	There is the possibility that the Clay-with-Flints Formation is present underlying the site. Should this be the case, there is considered to be risk to future developments on the site. As such, a low to moderate risk level has been assigned.
Unconsolidated Made Ground	Low	There is no evidence for any extensive upfilling.
Bearing Pressure	Low	Weak soils in the form of Made Ground are anticipated at shallow depth with potentially low bearing pressures.

Potential Hazard	Assessed Risk	Comment
Aggressive conditions for construction materials	Very Low	The anticipated geological sequence is not known to contain potentially high concentrations of sulphates and sulphides.
Shallow or high groundwater table	Very Low	There is limited potential for groundwater flooding to occur within the vicinity of the site.

4.2 Geotechnical Risk Assessment

4.2.1 An assessment of the main hazards associated with the site is detailed below. Unless stated otherwise, the presence of such hazards are based on information from the research or reconnaissance and have not been confirmed by an intrusive investigation.

- Soil Conditions

  The possible presence of plastic cohesive soils, in this instance, the Clay-with-Flints Formation, represents a risk to structures. Volume changes brought about by shrinkage and swelling of the cohesive soil, exacerbated by the presence of trees, could result in structures supported on this stratum experiencing differential settlement. The associated risk is considered to be low to moderate, and may result in either deeper trench fill foundations or even piled foundations being employed.

  The presence of ten solution pipes some 18m to the northeast of the site, coupled with the presence of chalk underlying the site, is considered to represent a moderate to high risk of ground dissolution, despite the Envirocheck data indicating a very low risk.

  The previous development on the site is considered to represent a low risk due to the unknown nature of the material used to backfill potential excavations. There is no evidence for any extensive upfilling, however, such material may be both highly compressible and variable, potentially leading to excessive total and differential settlements.

  Should the superficial deposits be of a relatively fine nature (i.e. a sand), then a high groundwater table may cause subsidence due to running sand. It is considered the risk associated with this is very low.

  The presence of a significant thickness of granular made ground or granular superficial deposits, particularly if they are water bearing, may cause instability in excavations for foundations or services trenches.

- Topography

  The Envirocheck data provided indicates only a very low risk of landslip subsidence.

- Previous Use

  Historical mapping indicates previous development on the site including structural and infrastructure changes. Therefore, the presence of buried structures such as services, basements and old foundations is a potential risk.

4.3 Conclusions of Geotechnical Risk Assessment

4.3.1 The research has identified evidence of potential hazards associated with underlying ground conditions, either natural or man-made, and therefore it is recommended that further work be carried out to confirm the presence, nature or extent of those hazards anticipated to impact on the site.

5.0 ENVIRONMENTAL SEARCHES

5.1 Potential Sources of Contamination

5.1.1 A search was made of records held by the various regulatory authorities and other statutory bodies to determine the presence or otherwise of past and current activities on or within 500m of the site which have the potential to give rise to the presence on site of contaminants. The findings are given in the table below:

Activity	On Site	Off Site (distance / direction)	Detail
Contaminated Land Register Entries	None	None within 500m	
Discharge Consents	None	None at within 250m, four at 251-500m	Closest at 476m north of sewage discharges into land soakaway.
Integrated and Local Authority Pollution Prevention and Controls	None	One at 282m east	Relates to a LAPPC for a dry cleaners, dated February 1 2007, activity currently permitted.
Pollution Incidents to Controlled Waters	None	None within 500m	
Prosecutions Relating to Authorised Processes or Controlled Waters	None	None within 500m	
Registered Radioactive Substances	None	None within 500m	
Substantiated Pollution Incident Register	None	None within 500m	
Water Abstractions	None	None within 500m	
BGS Recorded Landfill Sites	None	None within 500m	
Historical Landfill Sites	None	None within 500m	
Licenced Waste Management Facilities	None	None within 500m	
Local Authority Recorded Landfill Sites	None	None within 500m	
Registered Landfill Sites	None	None within 500m	
Registered Waste Transfer Sites	None	None within 500m	
Registered Waste Treatment or Disposal Sites	None	None within 500m	
Hazardous Substances	None	None within 500m	
Explosive Sites	None	None within 500m	

Activity	On Site	Off Site (distance / direction)	Detail
Contemporary Trade Entries	One	Twelve at 1-250m, fourteen at 251-500m	Trade entry on-site relates to former builders yard; remainder relate to a wide range of commercial and retail activities commonplace in an urban setting.
Fuel Station Entries	None	None within 500m	

5.2 Green Belt Areas

5.2.1 There is a designated area of Adopted Green Belt land approximately 289m to the east of the site.

5.2.2 Green Belt Areas are generally areas that are designated as being under special consideration for development. Local Authorities may restrict the type of development, place particular planning constraints on proposed developments, or potentially restrict any development within a designated Green Belt area.

5.3 Designated Sites

5.3.1 A review of the MAGIC (MultiAgency Geographic Information for the Countryside) website, ref www.magic.gov.uk, was undertaken to assess whether there were any Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) or Local Nature Reserves (LNR) which may be impacted by the development.

5.3.2 The enquiries indicated there are no SSSIs, NNRs or LNRs within 1km of the site.

5.4 Nitrate Vulnerable Zone

5.4.1 The site is located within an area designated as a nitrate vulnerable zone.

5.4.2 The Nitrates Directive defines a nitrate vulnerable zone as:

a) Surface freshwater which contains or could contain, if preventative action is not taken, nitrate concentrations greater than 50mg/l.

b) Groundwater which contains or could contain, if preventative action is not taken, nitrate concentrations greater than 50mg/l.

c) Natural freshwater lakes or other freshwater bodies, estuaries, coastal waters and marine waters, which are eutrophic or may become so in the near future if protective action is not taken.

5.5 Contemporary Trade Entries

5.5.1 There are twenty-seven contemporary trade entries recorded within 500m of the site.

5.5.2 The records indicate a builder's yard specialising in joinery was present on the site, currently recorded as inactive.

5.5.3 The next closest contemporary trade entry to the site is located some 144m northeast of the site and relates to a car engine tuners and diagnostic services, currently recorded as inactive.

5.5.4 The remainder of the trade entries relate to a wide range of commercial and retail activities commonplace in an urban setting.

ASSESSMENT OF GEOENVIRONMENTAL RISK

5.6 General

5.6.1 The definition of 'contaminated land', along with the relevant details on legislation and guidance is set out in Appendix 3.

5.6.2 The assessment of potential risk has been based on the guidelines given in CIRIA report C552, ref 7.9. These guidelines are summarised in Appendix 3.

5.6.3 The assessment of environmental risk is aimed at identifying the possible risk, if any, arising from substances used or deposited on the site, or from any other sources of land contamination, based on the principles of the pollutant linkage.

5.6.4 The assessment is based on the proposed development end use, taking account of present and previous use. It is based only on a review of historical maps, desk based data and site reconnaissance; therefore it contains some elements of conjecture based on professional judgement. A comprehensive risk assessment can only be made following an intrusive investigation and testing regime.

5.6.5 The proposed development comprises the demolition of the majority of the structures on site, followed by the construction of one block containing nine flats, two semi-detached cottages, and the conversion of an existing structure for a flat with ground floor parking, together with car parking spaces.

5.7 Potential Sources of Contamination Identified

5.7.1 The research has identified the following potential sources of contamination which may form part of a pollutant linkage:

- Contamination associated with Made Ground due to previous development of the site.
- Contamination associated with previous use of the site as a builder's yard/joinery.
- The potential migration of contamination from the historic tank 70m to the north of the site.
- The potential migration of contamination associated with the railway some 20m to the east of the site.

5.8 Potential Pathways Identified

5.8.1 The research has identified a number of potential pathways which are relevant to the potential sources of contamination identified above and may form part of a pollutant linkage.

5.8.2 Those identified are detailed within the Conceptual Site Model, along with the receptors relevant to the development on a site specific basis.

5.9 Hazard Identification

5.9.1 The research has identified a number of potential sources and pathways which are considered 'likely' to be present which, taking into account the potential receptors identified, form potential pollutant linkages and have been used in the formulation of the Conceptual Site Model.

5.10 Hazard Assessment

5.10.1 An assessment of the main sources of contamination and the potential for unacceptable risk to receptors is detailed below. Unless stated otherwise, it is considered 'likely' that a potential source is present at this stage, in order to provide a preliminary estimation of the risk and therefore determine the need for further work.

- Human Health

  There is the potential for contamination associated with any Made Ground encountered on the site. The main receptor is anticipated to be site end-users and there is considered to be a low to moderate risk.

  There is the potential for contamination associated with previous builder's yard/joinery recorded on the site. The main receptor is anticipated to be site end-users and there is considered to be a low to moderate risk.

  There is the potential for the migration of contamination from the historic tank located 70m to the north of the site. The main receptor is anticipated to be site end-users and there is considered to be a low risk.

  There is the potential for the migration of contamination from the railway some 20m to the east of the site. The main receptor is anticipated to be site end-users and there is considered to be a low risk.

- Construction Material

  There is considered to be a moderate to low risk due to chemical attack on construction materials emplaced within the Made Ground. If PAH's are present in any form, there is likely to be a risk to water supply pipes.

- Controlled Waters

  The site is located on a Secondary A Aquifer, which is further underlain by a Principal Aquifer, and as such, any consequence of contamination to the water environment is considered to be moderate, and therefore a very low risk level has been assigned.

  The site lies within a zone 1 source protection zone to a public supply well, and as such, there is considered to be a high risk from any potential contamination on the site.

5.11 Conceptual Site Model

5.11.1 The research has therefore identified the following pollutant linkages that require further consideration and have been used to formulate the Conceptual Site Model.

Source	Potential Contaminants of Concern	Potential Pathways	Receptor Group	Risk
Made Ground and previous builder's yard/joinery	Heavy Metals PAHs TPHs Asbestos	Ingestion of contaminated soil by direct contact Ingestion of vegetables grown in contaminated soil Entry of contaminants by skin or eye contact with contaminated soils or dust Inhalation of contaminated dust Inhalation or migration of toxic/explosive gases/vapours	Humans • Site users • Construction workers • Neighbouring site users Water Environment • Groundwater • Surface Water Buildings, Materials and Services • Concrete • Plastic pipes and services	Low/Moderate Negligible[1,2] Negligible[2] Low/Moderate Negligible Low/Moderate Low/Moderate
Historic tank to the north of the site	TPHs		Humans • Site users • Construction workers • Neighbouring site users Buildings, Materials and Services • Concrete • Plastic pipes and services	Low Negligible[1,2] Negligible[2] Low Low
Railway to the east of the site	Heavy Metals PAHs TPHs		Humans • Site users • Construction workers • Neighbouring site users Buildings, Materials and Services • Concrete • Plastic pipes and services	Low Negligible[1,2] Negligible[2] Low Low

[1] – Assumes that PPE is worn at all times
[2] – Pathway exists only during the construction period

5.12 Conclusions of Geoenvironmental Risk Assessment

5.12.1 The research has identified evidence of potential sources of contamination on or which may impact on the site, with plausible pathways to the likely receptors, and therefore potential pollutant linkages have been suggested.

5.12.2 It is recommended that further work be carried out to confirm the presence, nature or extent of any contamination which is anticipated to impact on the site.

5.13 Consultation

5.13.1 During development, consultation may be required for a number of reasons with a number of regulatory Authorities. The following provides an indication as to the most likely Authorities with which consultation may be required:

- **Local Authority.** There may be a planning condition regarding contamination and consultation will be required with a designated Contaminated Land Officer within the Environmental Health Department. The Local Authority is generally concerned with human health risks.

- **Environment Agency.** Where a site is within a groundwater protection zone or has been designated as a special site, the Environment Agency is likely to be involved to ensure that controlled waters are protected.

- **National House Building Council, NHBC.** Section 4.1 of the NHBC Standards, ref 7.10, requires land management to be addressed. For a new housing development to be approved by the NHBC, any contamination will require remediation accompanied by a validation report.

5.13.2 Based on the results of any consultation, there may be specific investigation and/or remediation requirements imposed by one or more of the Authorities.

6.0 RECOMMENDATIONS

6.1 Further Work

6.1.1 An intrusive investigation should be undertaken to address the issues raised in Chapter 4.0 and Chapter 0.

6.1.2 The following scope of works is suggested in order to collect the required data:

- The sinking of boreholes for the recovery of samples for geotechnical and chemical contamination analysis.
- The installation and monitoring of gas and groundwater monitoring standpipes.

6.2 Other Considerations

6.2.1 There are several other areas of research which are beyond the scope of this report. All or none of the following may be applicable to the site, either on the outcome of consultation with a regulatory body or as a result of the research for this Preliminary Investigation. They include:

- **Archaeology.** Should the site be situated on or within an area of archaeological sensitivity, the advisor to the relevant local authority should be consulted. The requirement for an archaeological report may be identified within a planning condition, if appropriate, for the site.
- **Ecology.** There may be a requirement for a detailed ecological report, dependant on the type or size of the development, or due to evidence identified during the site reconnaissance or desk study. This requirement may be identified within a planning condition, or recommended within Section 6.0.
- **Unexploded Ordnance (UXO).** There may be a requirement for a UXO report, dependant on the site location, historical use and surrounding site history, as well as the type or size of the development. Areas of low potential for UXO may include rural greenfield sites, well away from any military installations; however this does not mean there is no risk in such areas. The risk increases within urban areas, particularly those with wartime installations and infrastructure (e.g. power stations, industrial centres). Clearly wartime military establishments and their close surroundings have to be classed as high risk. This requirement may be identified within a planning condition.

7.0 REFERENCES

7.1 CLR 3, '*Documentary research on industrial sites*', Report by RPS Consultants Ltd, DoE, 1994

7.2 CLR 11, '*Model Procedures for the Management of Land Contamination*' Report by Defra and the Environment Agency, 2004

7.3 BS 10175: 2011 '*Investigation of potentially contaminated sites. Code of practice*', British Standards Institute, 2011

7.4 GPLC1, *'Guiding principles for land contamination'*, Environment Agency, 2010

7.5 CLR 2, '*Guidance on preliminary site inspection of contaminated land*', Report by Applied Environmental Research Centre Limited, DoE, 1994

7.6 British Geological Survey, Sheet No. 221, 'Hitchin', solid and drift edition, 1:50000 scale, published 1995

7.7 HPA-RPD-033, '*Indicative Atlas of Radon in England and Wales*', Health Protection Agency, 2007

7.8 BR211, '*Radon: Protective measures for new dwellings*'. BRE, 2007

7.9 C552, '*Contaminated Land Risk Assessment, A Guide to Good Practice*', CIRIA, 2001

7.10 Standards, *'Land Quality – Managing Ground Conditions'*, Chapter 4, NHBC, 2010

7.11 The Environmental Protection Act, Part IIA, Section 78, 1990

7.12 Environment Act 1995, Section 57, DoE, 1995

7.13 Water Environment and Water Services (Scotland) Act, 2003

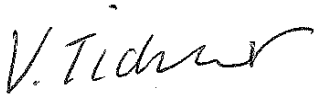
7.14 Planning Policy Statement 23: Planning and Pollution Control, ODPM, 2004

7.15 Science Report SC050021/SR2, '*Human health toxicological assessment of contaminants in soil*'. Environment Agency, 2009

7.16 Science Report SC050021/SR3, '*Updated technical background to the CLEA model*'. Environment Agency, 2009

For and on behalf of Ian Farmer Associates (1998) Limited





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Geotechnical Engineer

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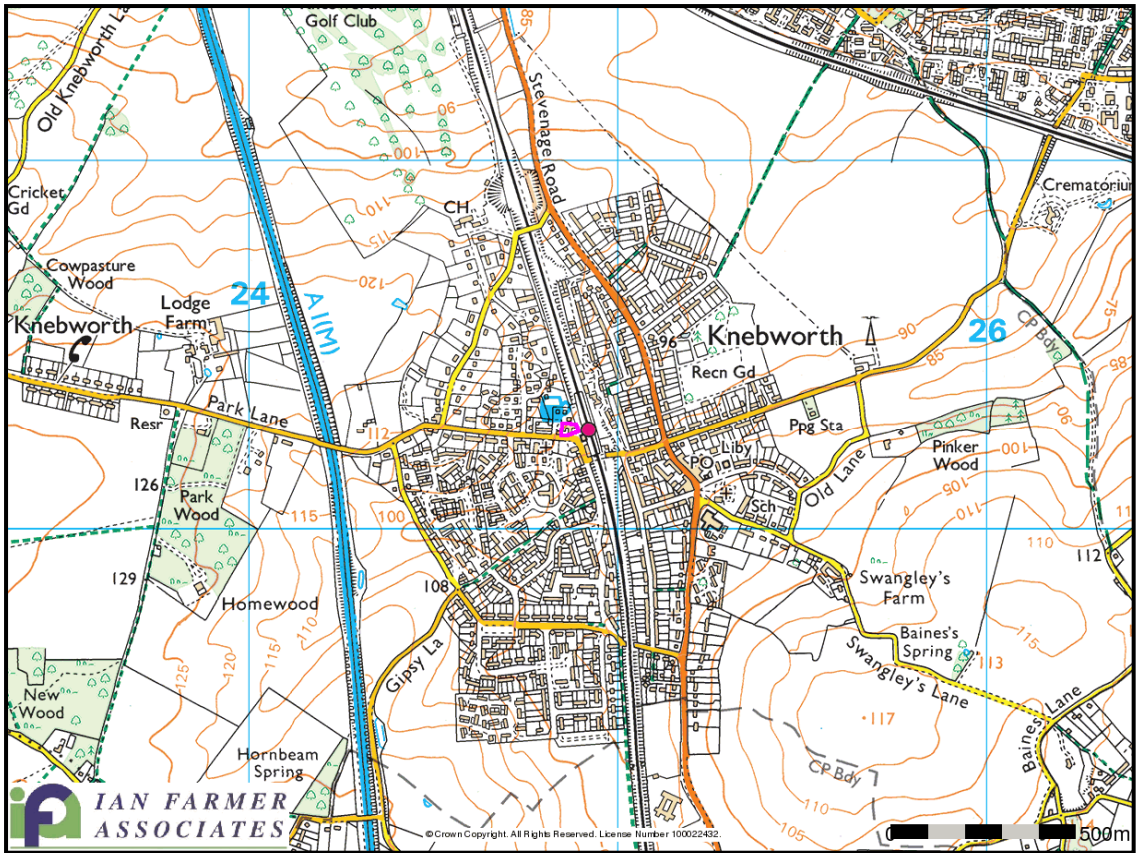
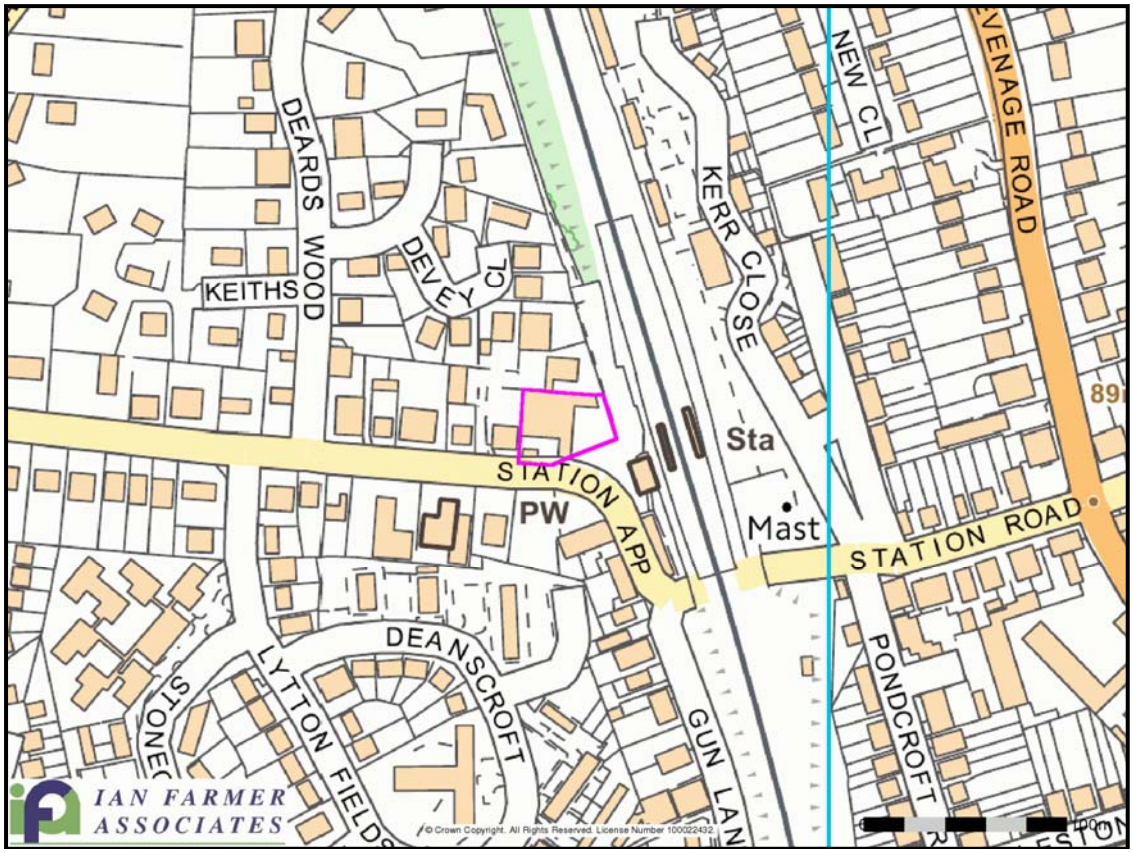
Principal Environmental Engineer

APPENDIX 1

DRAWINGS





IAN FARMER ASSOCIATES Geotechnical & Environmental Specialists	**SITE LOCATION PLANS**	Job no. 52562
	2 Park Lane, Knebworth, Hertfordshire, SG3 6PJ	Fig. A1.1



IAN FARMER ASSOCIATES Geotechnical & Environmental Specialists	**AERIAL PHOTOGRAPH**	Job no. 52562
	2 Park Lane, Knebworth, Hertfordshire, SG3 6PJ	Fig. A1.2



IAN FARMER ASSOCIATES Geotechnical & Environmental Specialists	**PROPOSED DEVELOPMENT PLAN**	Job no. 52562
	2 Park Lane, Knebworth, Hertfordshire, SG3 6PJ	Fig. A1.3

APPENDIX 2

SITE WALKOVER PHOTOGRAPHS



Photograph 1 – Retaining wall in south western corner of the site.



Photograph 2 – Looking north toward the site.

IAN FARMER ASSOCIATES Geotechnical & Environmental Specialists	**SITE PHOTOGRAPHS**	Job no. 52562
	2 Park Lane, Knebworth, Hertfordshire, SG3 6PJ	Fig. A2.1



Photograph 3 – Temporary structures in the eastern area of the site.



Photograph 4 – Structure in north western corner of the site.

IAN FARMER ASSOCIATES Geotechnical & Environmental Specialists	**SITE PHOTOGRAPHS**	Job no. 52562
	2 Park Lane, Knebworth, Hertfordshire, SG3 6PJ	Fig. A2.2



Photograph 5 – Evidence of services within site boundaries.



Photograph 6 – Gas meter in southern area of the site.

IAN FARMER ASSOCIATES Geotechnical & Environmental Specialists	**SITE PHOTOGRAPHS**	Job no. 52562
	2 Park Lane, Knebworth, Hertfordshire, SG3 6PJ	Fig. A2.3



Photograph 7 – Looking northeast toward access to the eastern area of the site.



Photograph 8 – Looking west across eastern area of the site.

IAN FARMER ASSOCIATES Geotechnical & Environmental Specialists	**SITE PHOTOGRAPHS**	Job no. 52562
	2 Park Lane, Knebworth, Hertfordshire, SG3 6PJ	Fig. A2.4

APPENDIX 3

ENVIRONMENTAL RISK

APPENDIX 3

ENVIRONMENTAL RISK ASSESSMENT

A3.1 STATUTORY FRAMEWORK AND DEFINITIONS

A3.1.1 The statutory definition of 'contaminated land' is defined in Part IIA of the Environmental Protection Act 1990, ref 7.11, which was inserted by Section 57 of the Environment Act 1995, ref 7.12, and came into force in England in 2000, as;

'any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

(a) significant harm is being caused or there is a significant possibility of such harm being caused; or

(b) pollution of controlled waters is being, or is likely to be, caused'.

A3.1.2 In Scotland, this has been amended by the Water Environment and Water Services (Scotland) Act 2003, ref 7.13, to '*significant pollution of the water environment is being caused or there is a significant possibility of such pollution being caused'*.

A3.1.3 The purpose of Part IIA was to help address the problems caused by historical contamination, with the voluntary remediation of such land encouraged without the use of the Act. The planning regime assists in this, with Planning Policy Statement 23: Planning and Pollution Control (PPS23), ref 7.14, published in 2004, setting out the minimum requirements for the remediation of land affected by contamination as '*after carrying out the development and commencement of its use, the land should not be capable of being determined as contaminated land under Part IIA of the EPA 1990*'.

A3.1.4 The UK guidance on the assessment of contaminated has developed as a direct result of the introduction of these two Acts. The technical guidance supporting the legislation was originally summarised in a number of key documents collectively known as the Contaminated Land Reports (CLRs), a proposed series of twelve documents. Seven were originally published in March 1994, four more were published in April 2002, while the final guidance document, CLR 11 was published in 2004. CLR7 to 10 were withdrawn in 2008, with CLR 9 and 10 effectively replaced by the Environment Agency in the form of Science Reports SR2, ref 7.15 and SR3, ref 7.16.

A3.1.5 CLR11 remains valid and sets out the framework of the investigation process, with the overall approach one of risk management, with risk given the definition of '*a combination of the probability or frequency, of occurrence of a defined hazard and the magnitude of the consequences of the occurrence*'. In establishing whether a site fulfils the statutory definition of 'contaminated land' it is necessary to identify whether the three essential elements of risk exist. These are defined as:

- A contaminant - a substance which is in, on or under the land and has the potential to cause harm or to cause pollution of controlled waters;
- A receptor - something which could be adversely affected by a contaminant, such as people, an ecological system, property or a water body; and
- A pathway – a route or means by which a receptor can be exposed to, or affected by, a contaminant.

A3.1.6 A *'pollutant linkage'* may be defined as the link between a contaminant *'source'* and a *'receptor'* by means of a *'pathway'*. There may be none, one or many pollutant linkages

existing on a site, which may utilise the same or different sources, pathways and receptors, which may change over the passage of time.

A3.1.7 Each pollutant linkage that exists in respect of the land in question must fulfil one or more of the following criteria:

- significant harm is being caused to the receptor in the pollutant linkage,
- there is a significant possibility of significant harm being caused to that receptor,
- there is (significant) pollution of controlled waters (the water environment) which constitute the receptor, or
- pollution of controlled waters is likely to be caused
- (there is a significant possibility of such pollution being caused).

A3.1.8 A pollutant linkage indicates that all three elements have been identified. The site can only be defined as 'Contaminated Land' under Part IIA if a pollutant linkage exists and the criteria above are met.

A3.1.9 The main potential receptors include:

1) Humans – current site occupants, construction workers, future site users and neighbouring site users.

2) Controlled Waters – surface water and groundwater resources

3) Property – including buildings, crops, livestock and pets

4) Ecological systems – including current/future site and neighbouring vegetation

A3.1.10 The main potential pathways to be considered include:

a) Ingestion and/or inhalation.

b) Uptake of contaminants via cultivated vegetables.

c) Dermal contact

d) Migration through permeable strata

e) Drains or services

f) Direct contact with building materials and services

g) Fire and explosion

A3.2 ASSESSMENT METHODOLOGY

A3.2.1 The guidance proposes a four-stage assessment process for identifying potential pollutant linkages on a site. These stages are set out in the table below:

No.	Process	Description
1	Hazard Identification	Establishing contaminant sources, pathways and receptors (the conceptual model).
2	Hazard Assessment	Analysing the potential for unacceptable risks (what linkages may be present and what could be the effects?).
3	Risk Estimation	Trying to establish the magnitude and probability of the possible consequences (what degree of harm might result and to what receptors, and how likely is it).
4	Risk Evaluation	Deciding whether the risk is unacceptable.

A3.2.2 Stages 1 and 2 develop a *'conceptual model'* based upon information collated from desk based studies, and reconnaissance of the site (a walkover survey). The walkover survey should be conducted in general accordance with CLR 2. The formation of a conceptual model is an iterative process and as such, it should be updated and refined throughout each stage of the project to reflect any additional information obtained.

A3.2.3 The extent of the desk based research and enquiries to be conducted should be in general accordance with CLR 3. The information from these enquiries is presented in a preliminary investigation report with recommendations, if necessary, for further work based upon the conceptual model. In the absence of specific information on contamination anticipated to be encountered, specific DoE 'Industry Profiles' provide guidance on the nature of contaminants relating to a variety of industrial processes and should be used as the basis for determining which contaminants are more likely to be present on a site.

A3.2.4 If potential pollutant linkages are identified within the conceptual model, an intrusive ground investigation and report will be recommended. The investigation should be planned in general accordance with CLR 4, and BS10175. The number of exploratory holes and samples collected for analysis should be consistent with the size of the site and the level of risk envisaged. This will enable a generic quantitative risk assessment (GQRA) to be conducted, at which point the conceptual model can be updated and relevant pollutant linkages can be identified.

A3.2.5 A two-stage investigation may be more appropriate where time constraints are less of an issue. The first stage investigation may be conducted as an initial assessment for the presence of potential sources, with the second being more refined in order to delineate or further characterise any contamination or the physical properties of the site.

A3.3 RISK EVALUATION

A3.3.1 The risk evaluation is a qualitative method for interpreting the data from the hazard estimation stage. It involves the classification of the:

- magnitude of the potential 'consequence' (severity) of the risk occurring and:
- magnitude of the 'probability' (likelihood) of the risk occurring.

A3.3.2 These are defined in the following sections:

A3.4 CLASSIFICATION OF CONSEQUENCE

Classification	Definition	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 (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definitions of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).	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' as defined in DETR, 2000). Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution). A significant change in a particular ecosystem, or organism forming part of such ecosystem, (note: the definitions of ecological systems within Draft Circular on Contaminated Land, DETR, 2000).	Concentrations of a contaminant from site exceed the generic, or site-specific assessment criteria. Leaching of contaminants from a site to a major or minor aquifer. Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in the *Draft Circular on Contaminated Land*, DETR 2000). Damage to sensitive buildings/ structures/services or the environment.	Pollution of non-classified ground water. Damage to building rendering it unsafe to occupy (eg foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in landscaping scheme. Discoloration of concrete

A3.4.1 In theory, both severe and medium classification can result in death. The differential is that severe relates to short term risk while medium relates to long-term risk. Therefore, the classification of severe requires urgent action while medium may require urgent action but usually long term action would be sufficient.

A3.5 CLASSIFICATION OF PROBABILITY

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

A3.5.1 For the purposes of this preliminary investigation, any source of contamination that has been identified by professional judgement as potentially impacting on the site has been classified as being 'likely' to be present, unless proven otherwise by intrusive investigation.

A3.6 COMPARISON OF CONSEQUENCE AGAINST PROBABILITY

A3.6.1 These classifications are compared to indicate the risk presented by each pollutant linkage. Once the consequence and probability have been classified they can be used to produce a risk category as below:

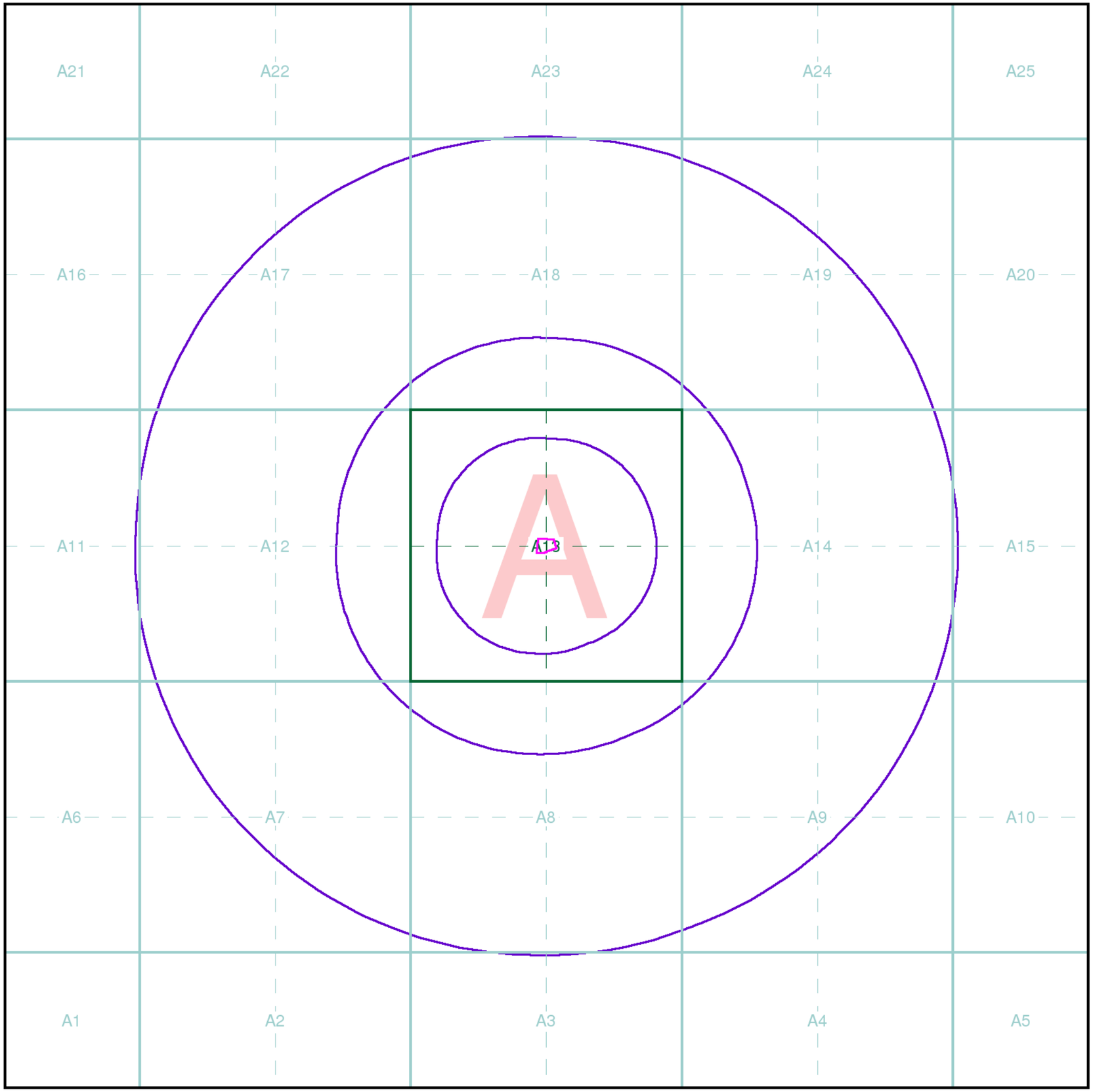
		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

A3.6.2 The action required for the classified risks are as follows:

Very high risk	There is a high probability that severe harm could a risk to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

APPENDIX 4

ENVIROCHECK REPORT



IAN FARMER ASSOCIATES

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

Ms V Tickner, Ian Farmer Associates, 1A Batford Mill,
Lower Luton Road, Harpenden, Hertfordshire, AL5 5BZ

Order Details

Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

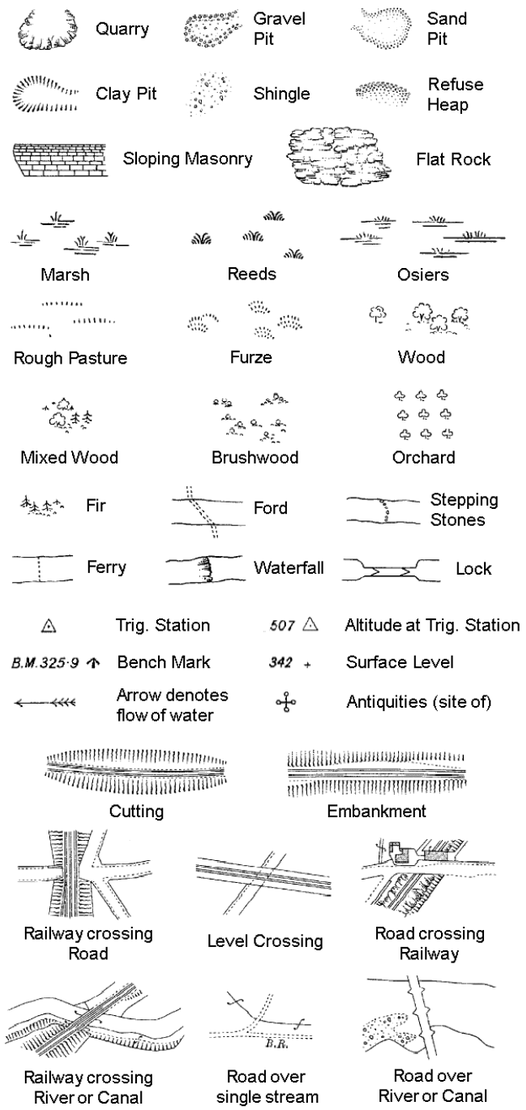
2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ

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

Historical Mapping Legends

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



County Boundary (Geographical)

County & Civil Parish Boundary

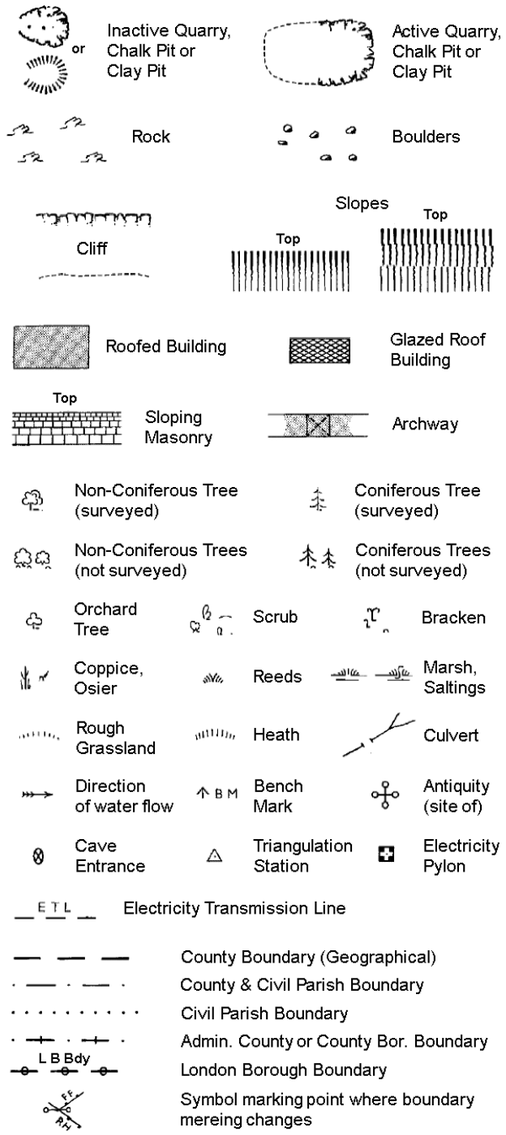
Administrative County & Civil Parish Boundary

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	St.	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

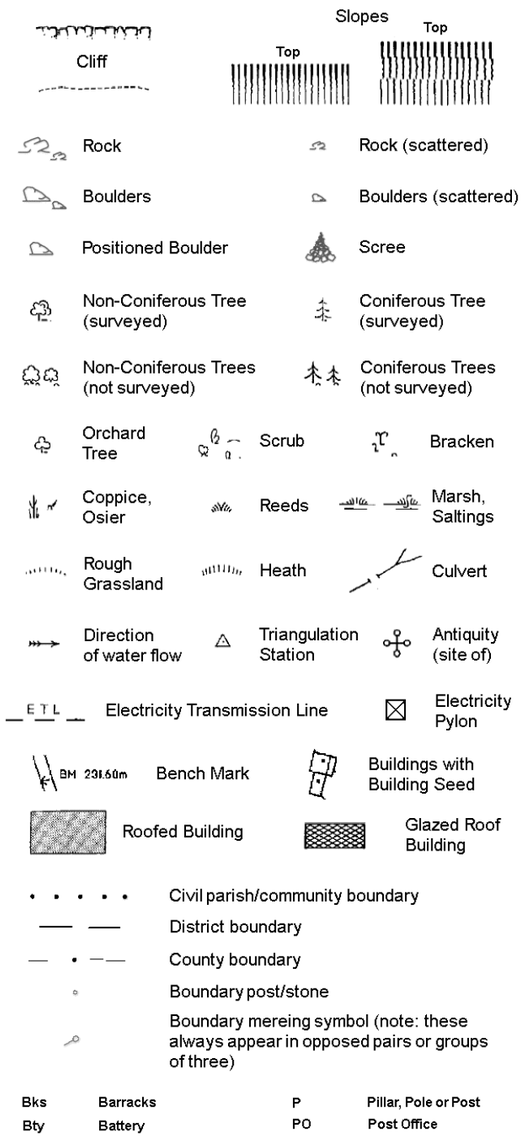
Admin. County or County Bor. Boundary

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)

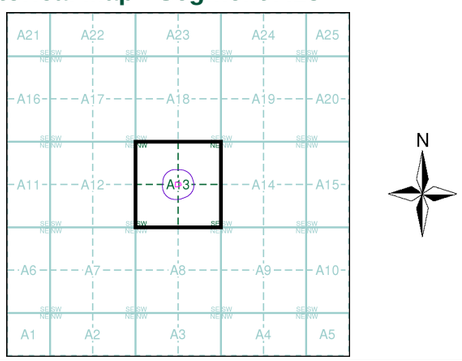
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity 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

IAN FARMER ASSOCIATES

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Hertfordshire	1:2,500	1881	2
Hertfordshire	1:2,500	1898	3
Hertfordshire	1:2,500	1923	4
Hertfordshire	1:2,500	1937	5
Ordnance Survey Plan	1:2,500	1970	6
Supply of Unpublished Survey Information	1:2,500	1974	7
Supply of Unpublished Survey Information	1:2,500	1974	8
Additional SIMs	1:2,500	1978 - 1991	9
Ordnance Survey Plan	1:2,500	1983 - 1989	10
Additional SIMs	1:2,500	1986 - 1990	11
Large-Scale National Grid Data	1:2,500	1993	12
Additional SIMs	1:2,500	1993	13
Large-Scale National Grid Data	1:2,500	1996	14
Historical Aerial Photography	1:2,500	1999	15

Historical Map - Segment A13



Order Details

Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	100

Site Details

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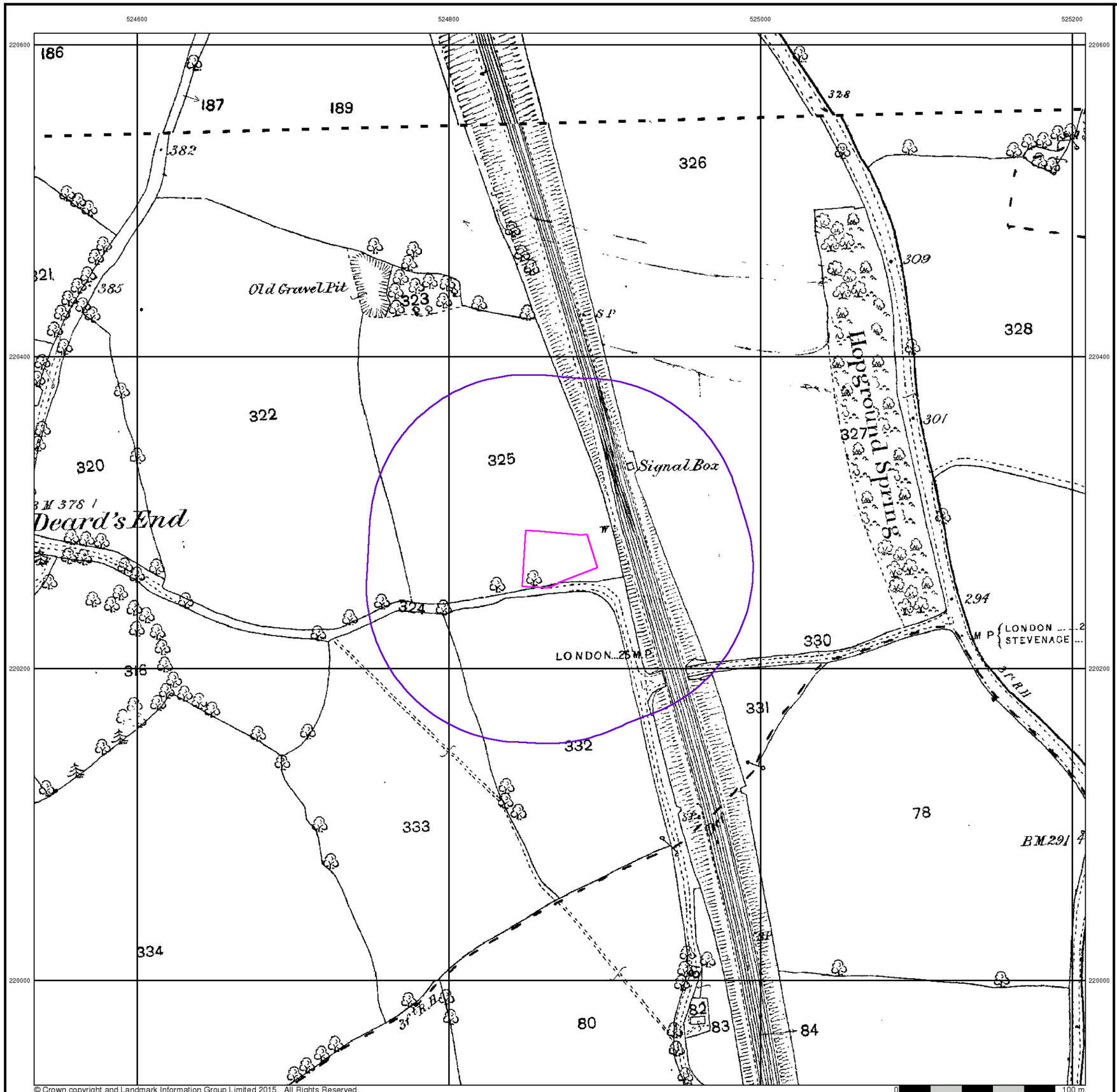

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0 100 m

IAN FARMER ASSOCIATES

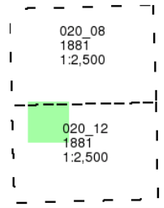
Hertfordshire

Published 1881

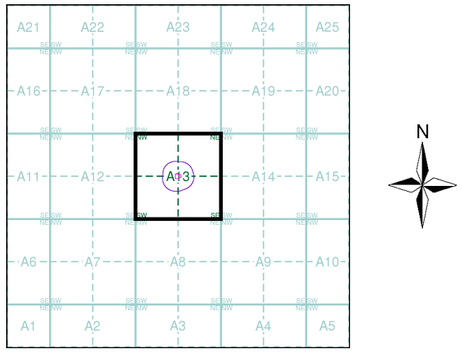
Source map scale - 1:2,500

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:	103612904_1_1
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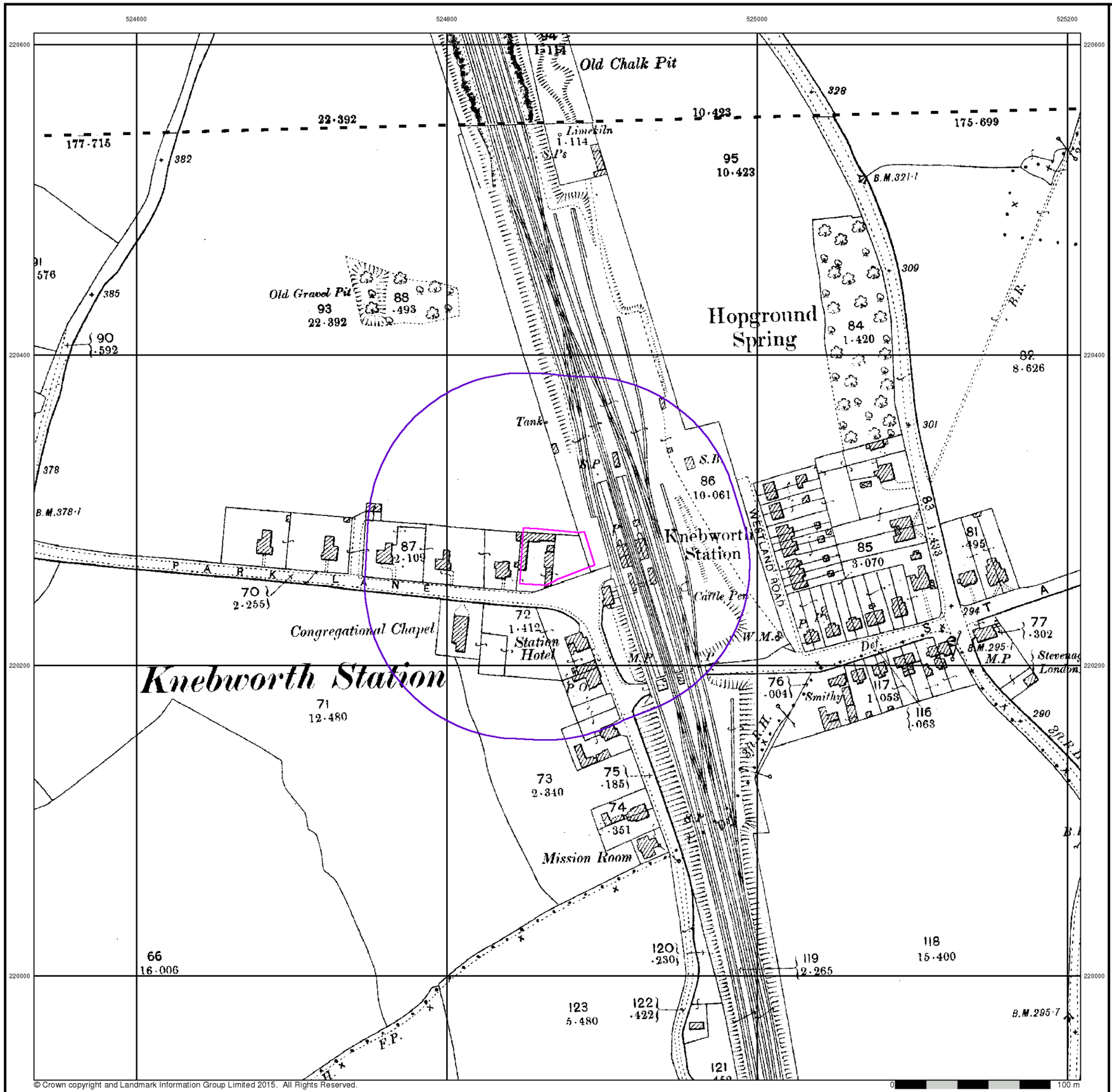


IAN FARMER ASSOCIATES

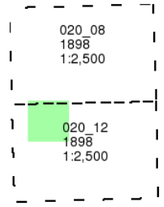
Hertfordshire

Published 1898

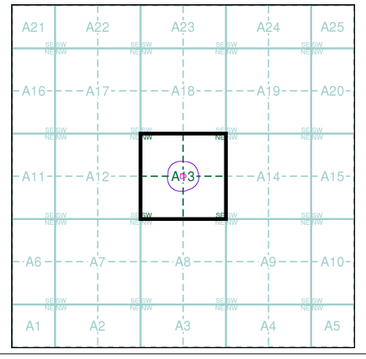
Source map scale - 1:2,500

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

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Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	100

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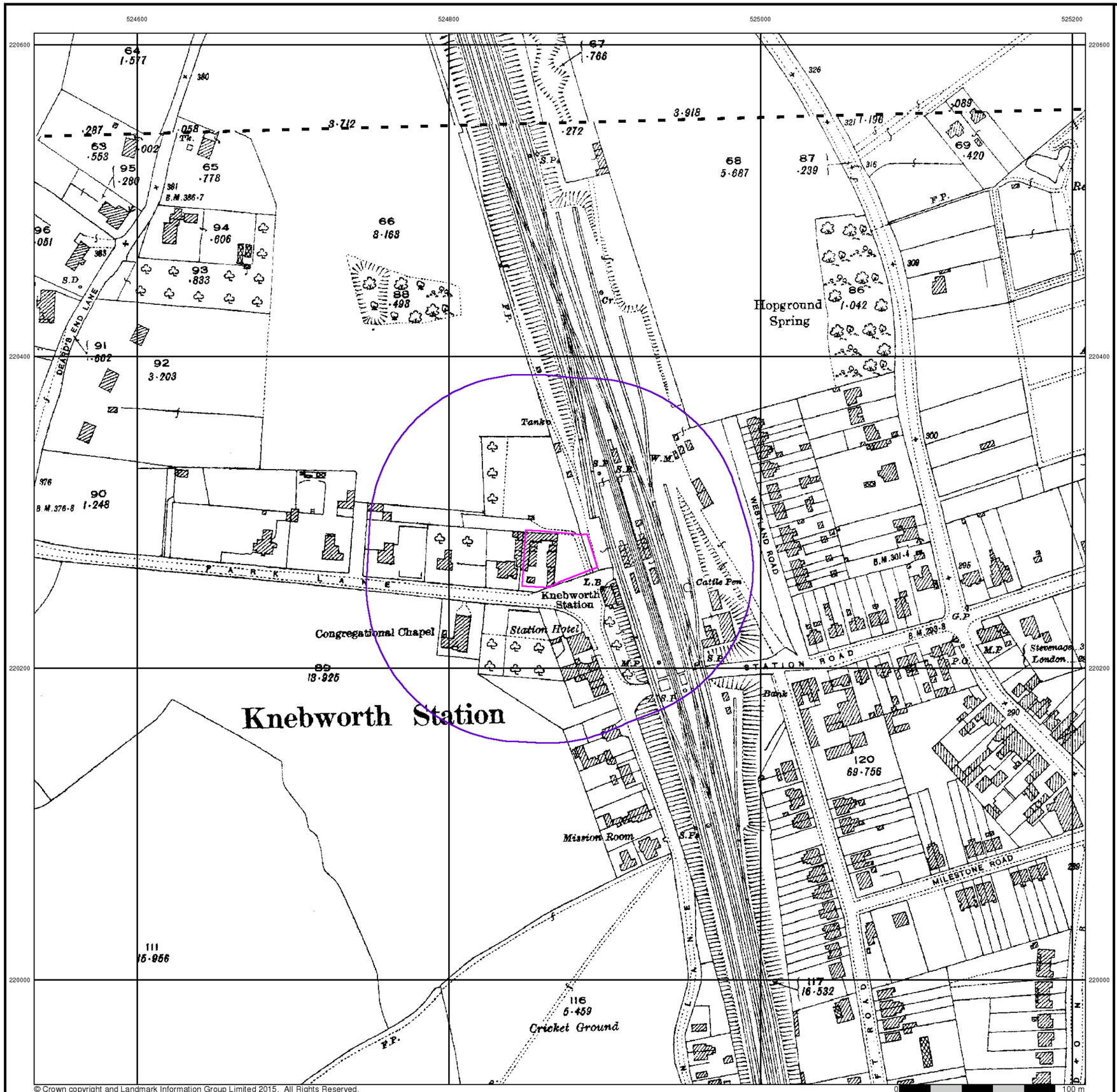

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0 100 m

IAN FARMER ASSOCIATES

Hertfordshire

Published 1923

Source map scale - 1:2,500

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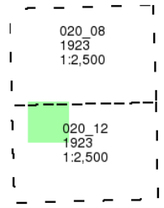
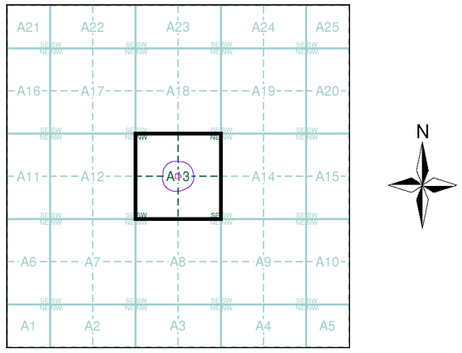
Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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National Grid Reference:	524870, 220270
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Search Buffer (m):	100

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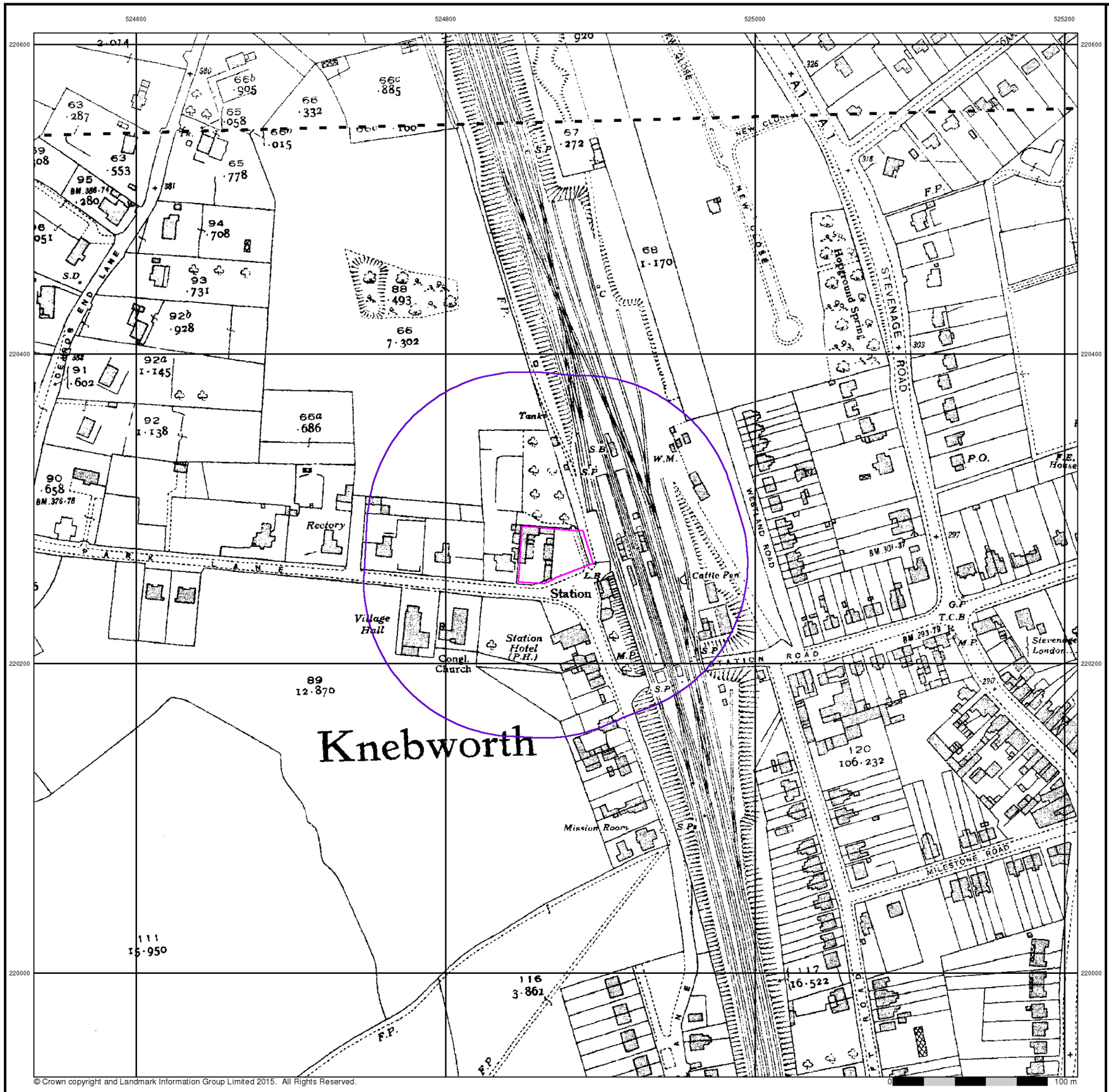


IAN FARMER ASSOCIATES

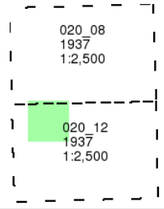
Hertfordshire

Published 1937

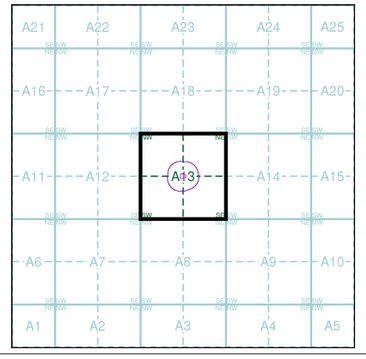
Source map scale - 1:2,500

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:	103612904_1_1
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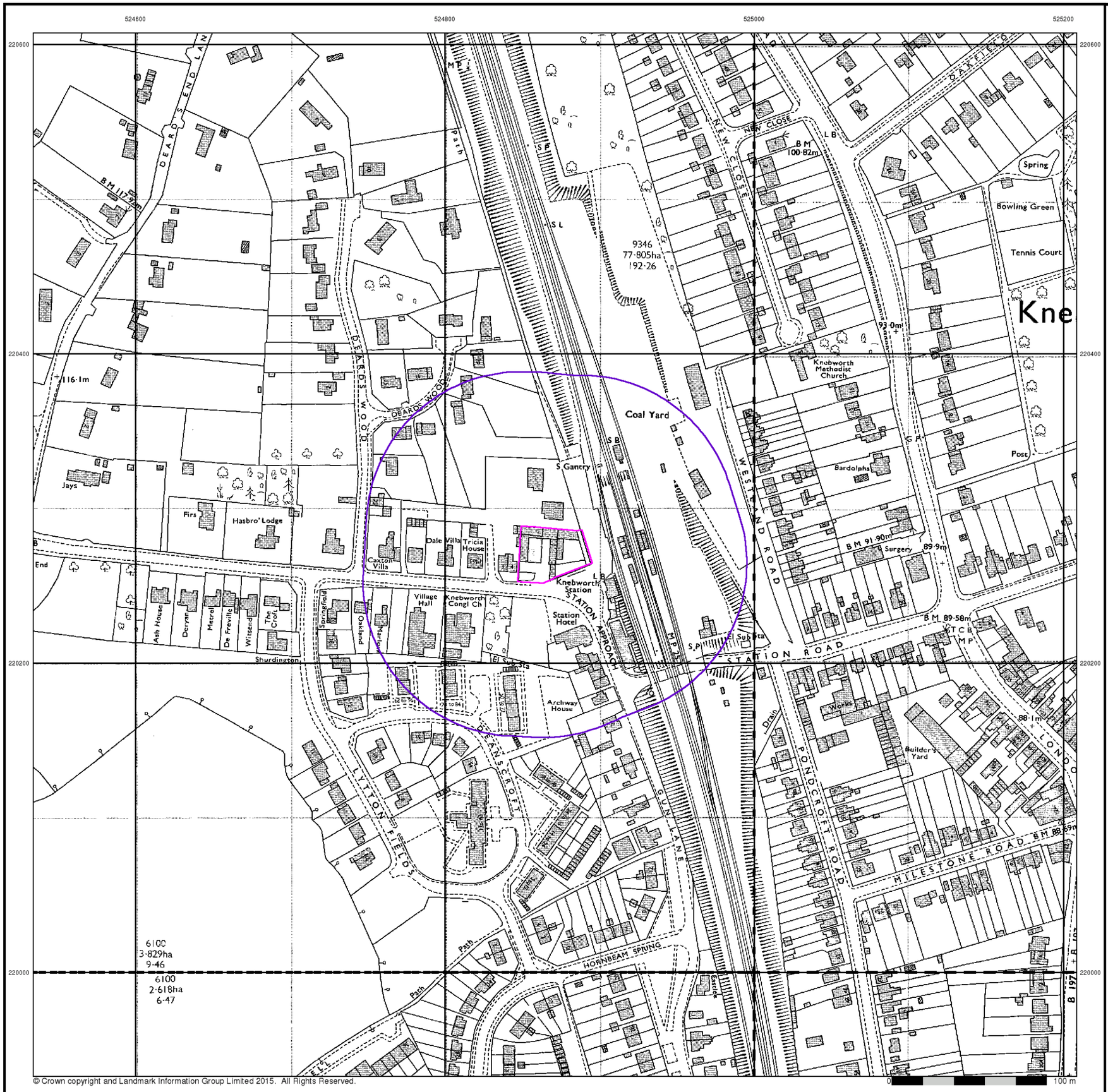

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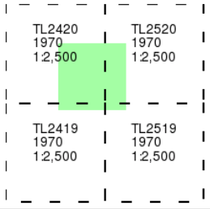
Ordnance Survey Plan

Published 1970

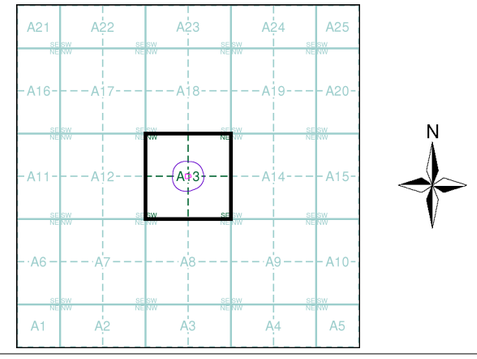
Source map scale - 1:2,500

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:	103612904_1_1
Customer Ref:	52562
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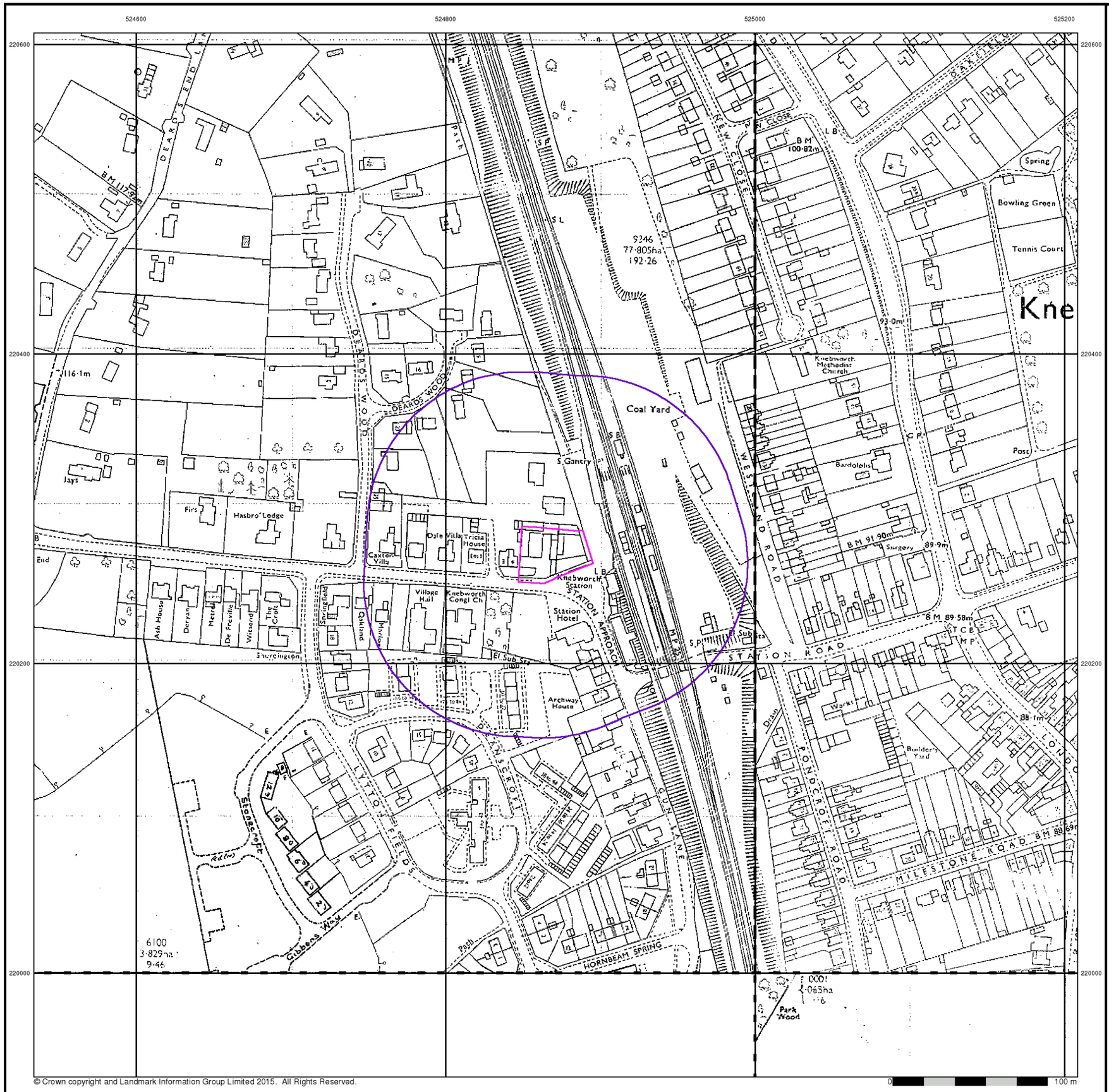

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IAN FARMER ASSOCIATES

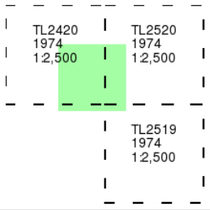
Supply of Unpublished Survey Information

Published 1974

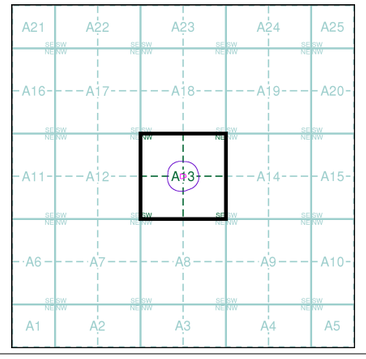
Source map scale - 1:2,500

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:	103612904_1_1
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National Grid Reference:	524870, 220270
Slice:	A
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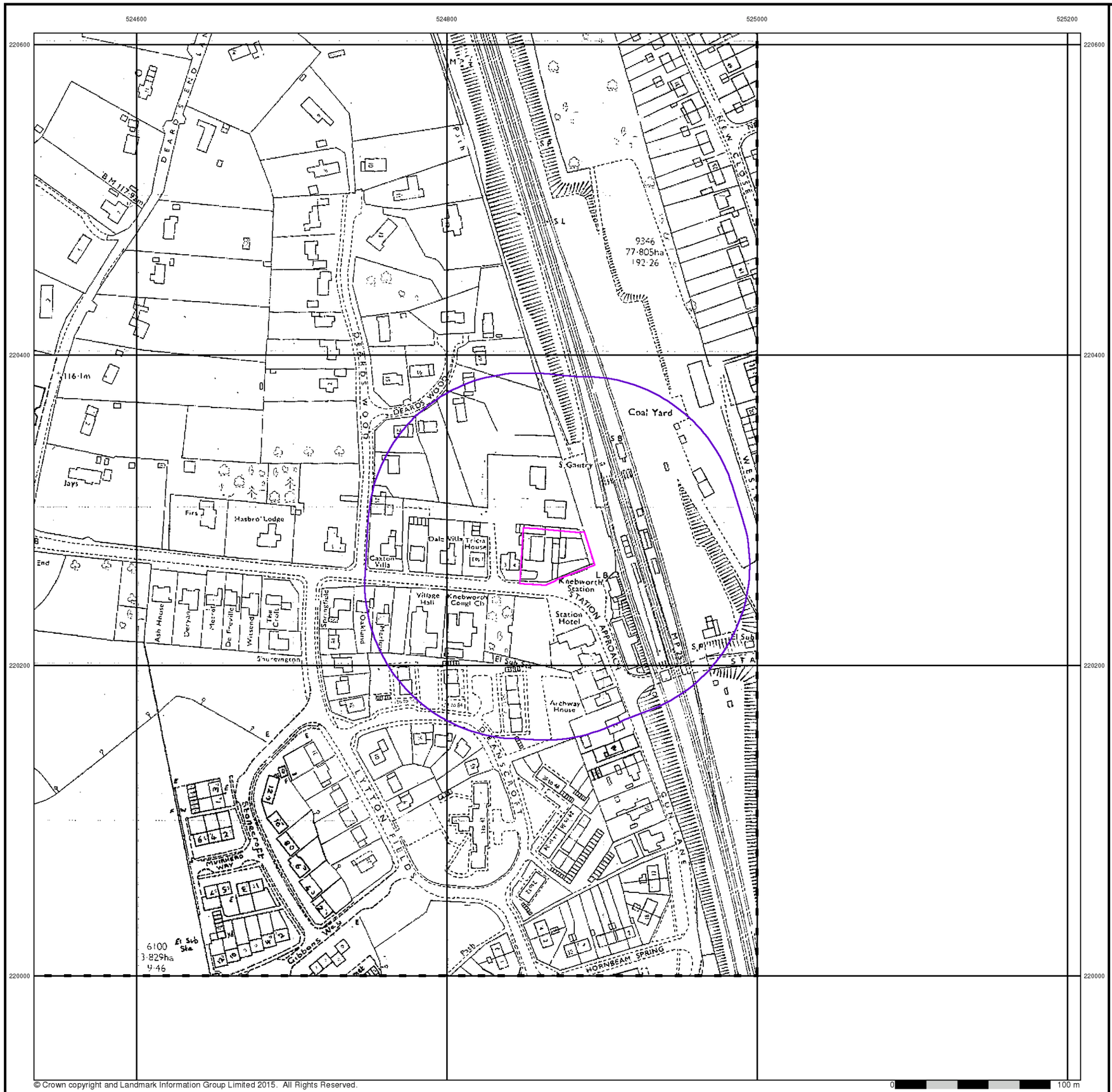


IAN FARMER ASSOCIATES

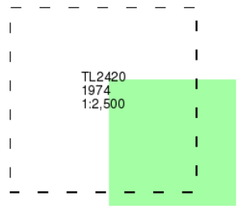
Supply of Unpublished Survey Information

Published 1974

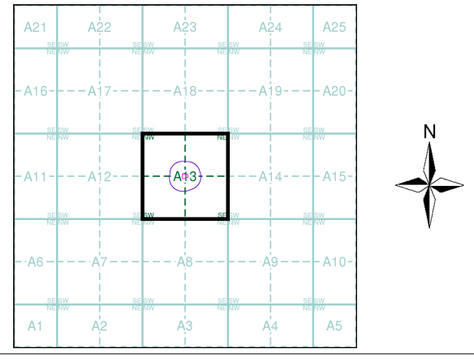
Source map scale - 1:2,500

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

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Site Details

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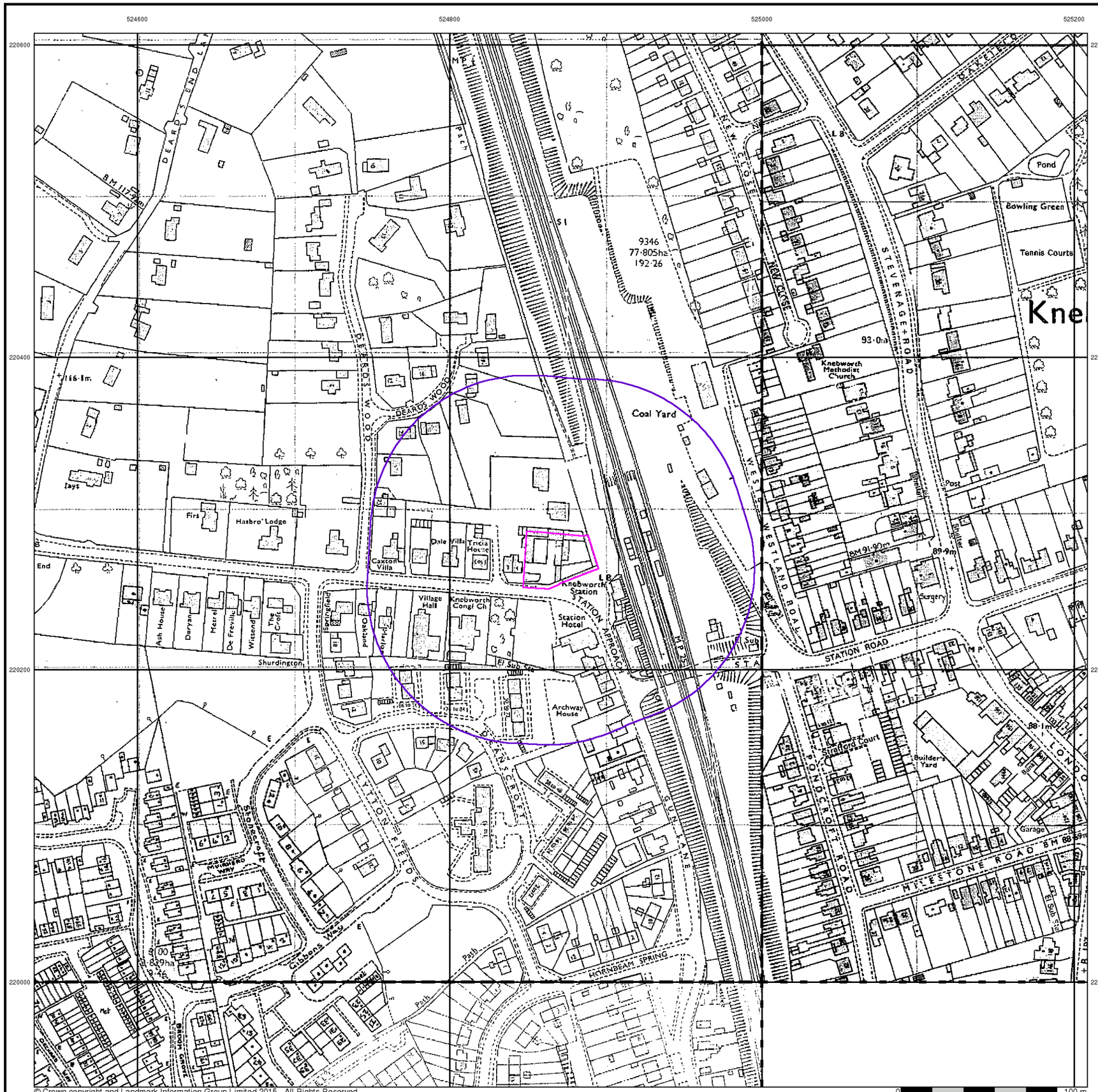

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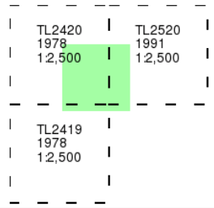
Additional SIMs

Published 1978 - 1991

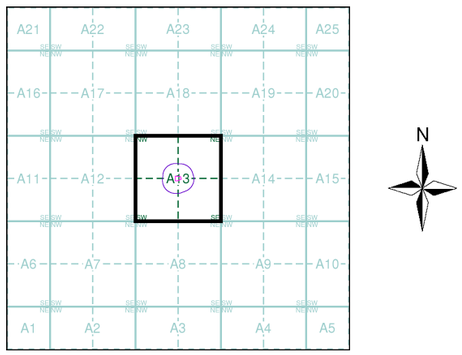
Source map scale - 1:2,500

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

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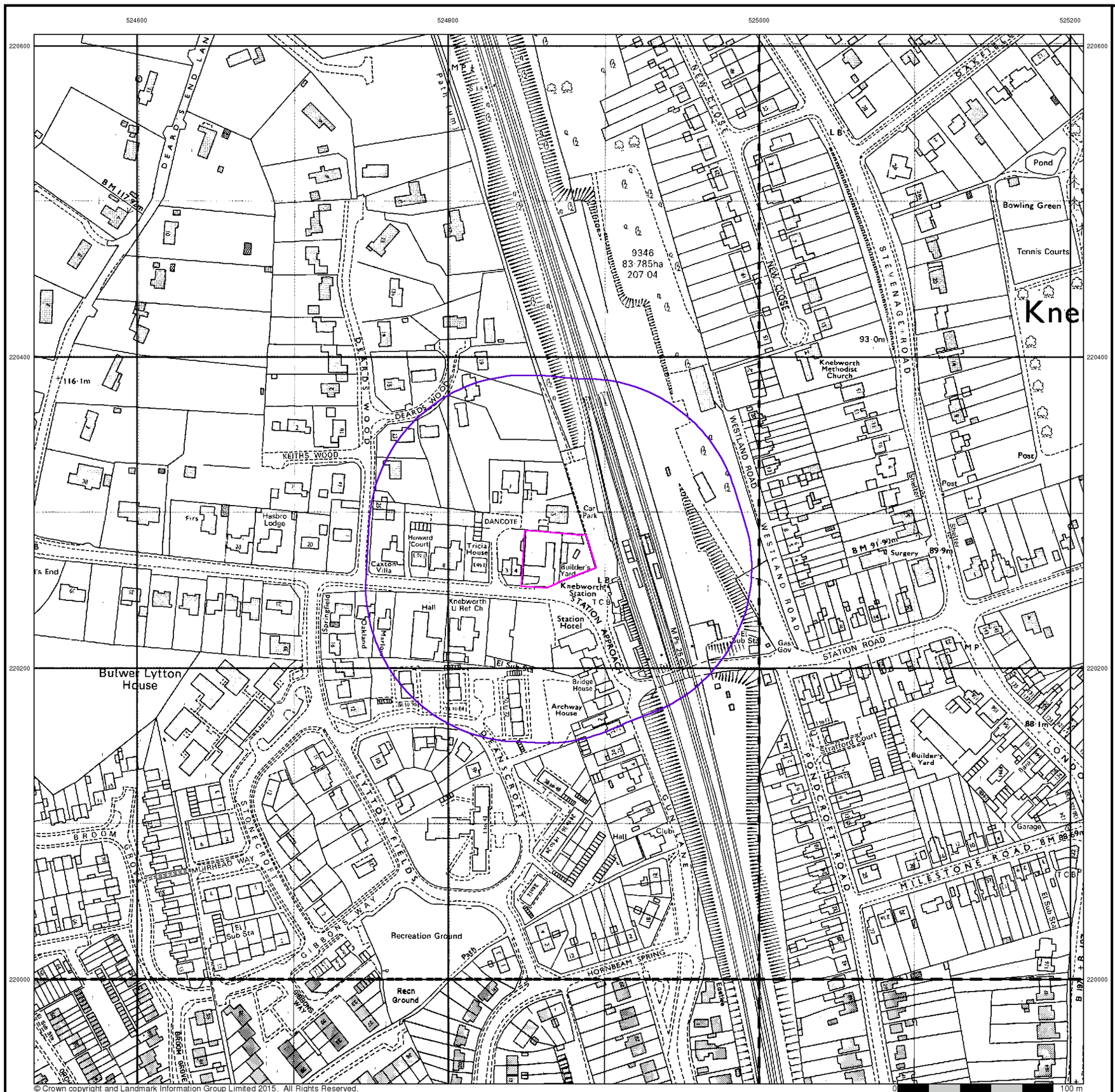

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Ordnance Survey Plan

Published 1983 - 1989

Source map scale - 1:2,500

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Map Name(s) and Date(s)

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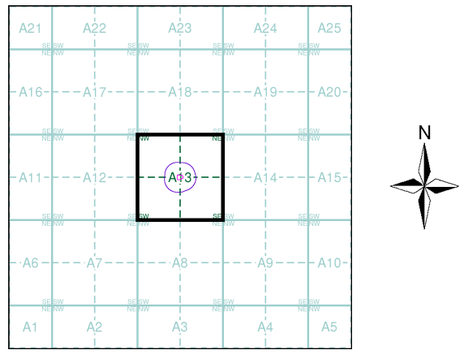
TL2419 1989 1:2,500	TL2519 1989 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
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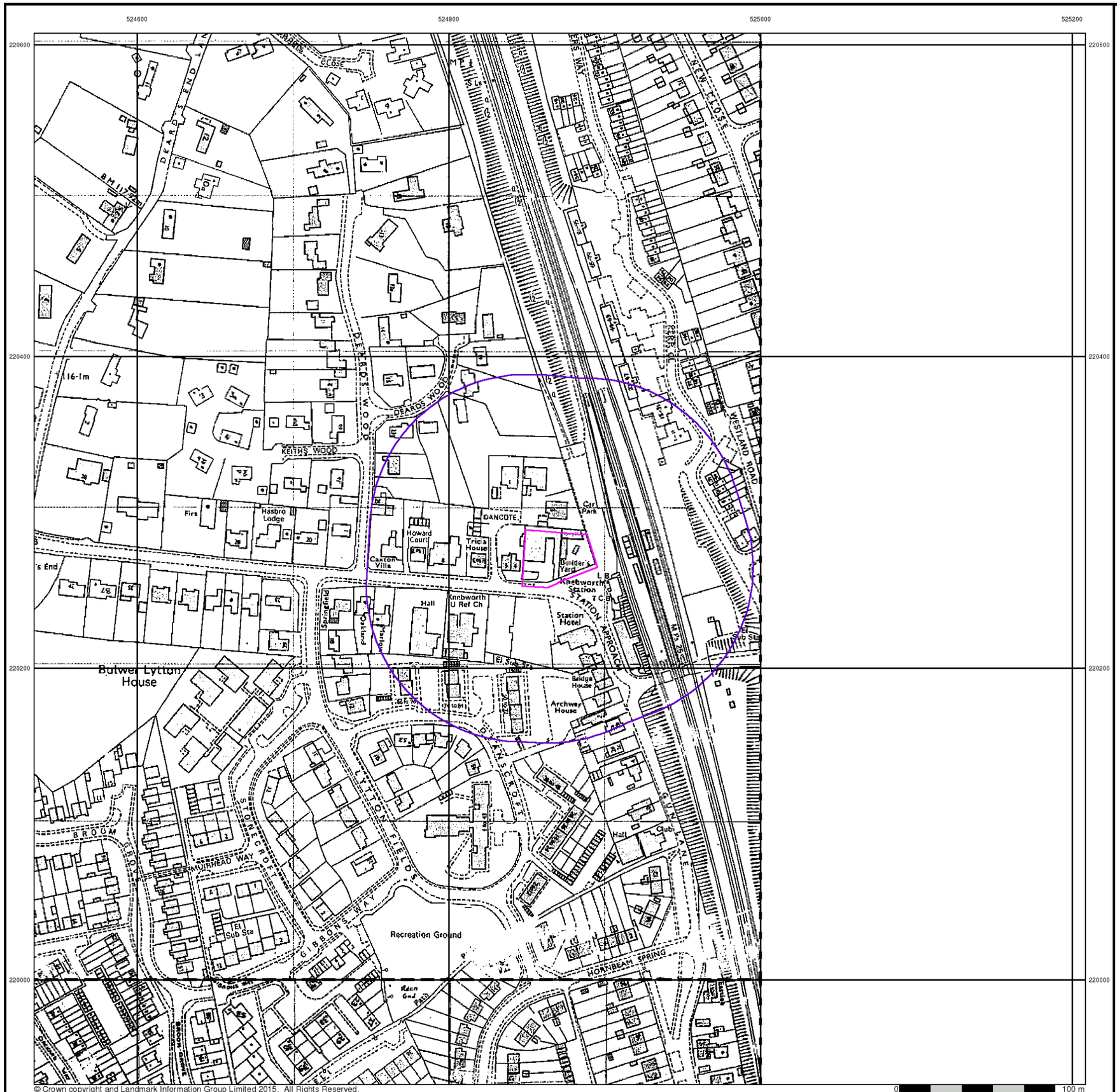

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IAN FARMER ASSOCIATES

Additional SIMs

Published 1986 - 1990

Source map scale - 1:2,500

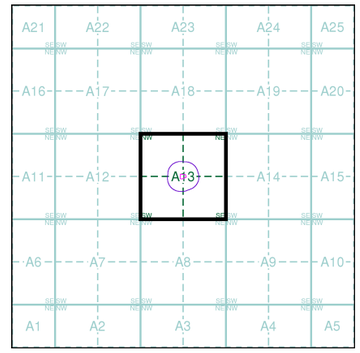
The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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

Map Name(s) and Date(s)

TL2420
1990
1:2,500

TL2419
1986
1:2,500

Historical Map - Segment A13



Order Details

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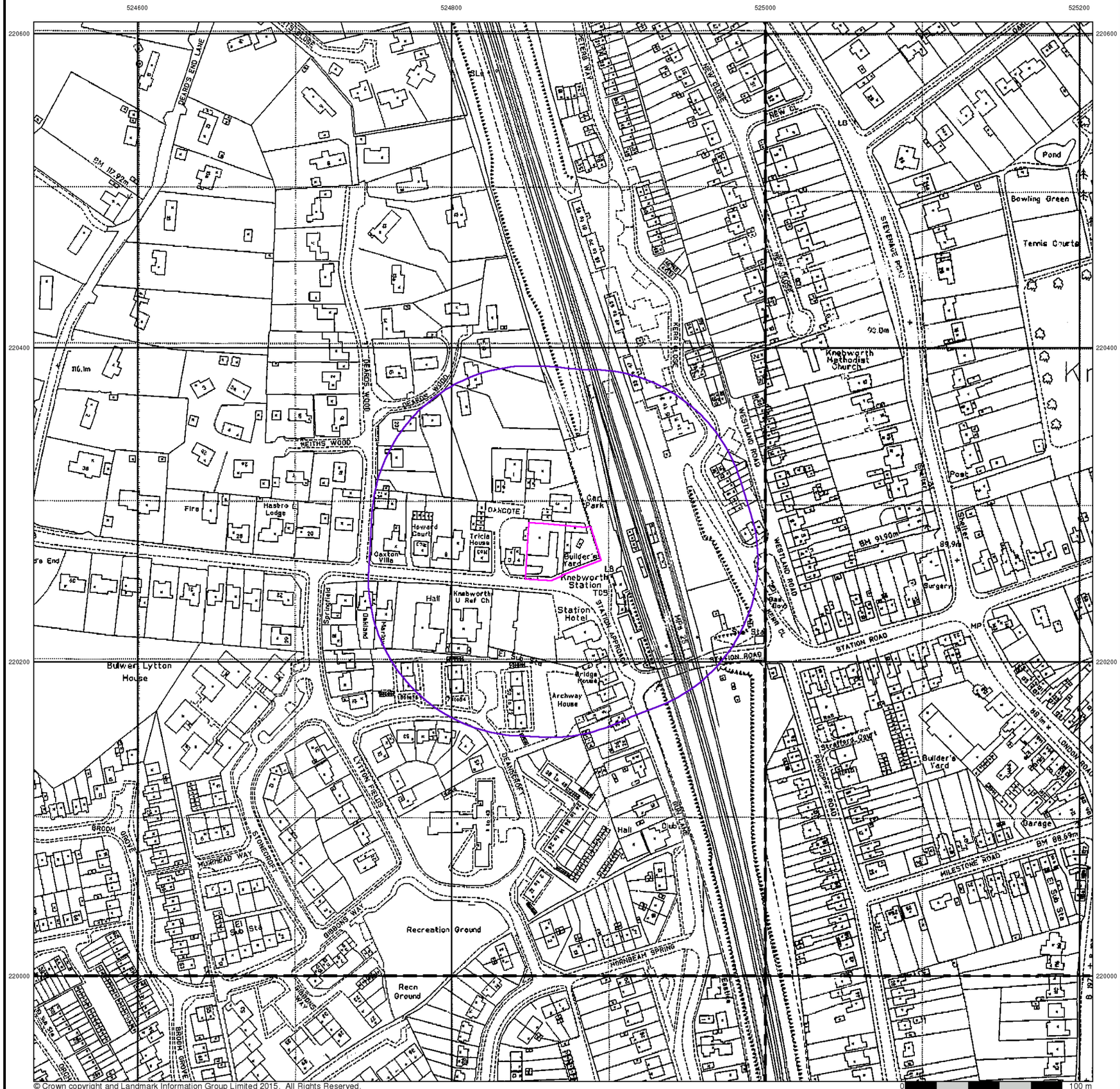


IAN FARMER ASSOCIATES

Large-Scale National Grid Data

Published 1993

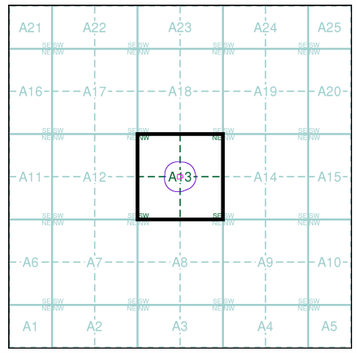
Source map scale - 1:2,500

'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)

TL2420 1993 1:2,500	TL2520 1993 1:2,500
TL2419 1993 1:2,500	TL2519 1993 1:2,500

Historical Map - Segment A13



Order Details

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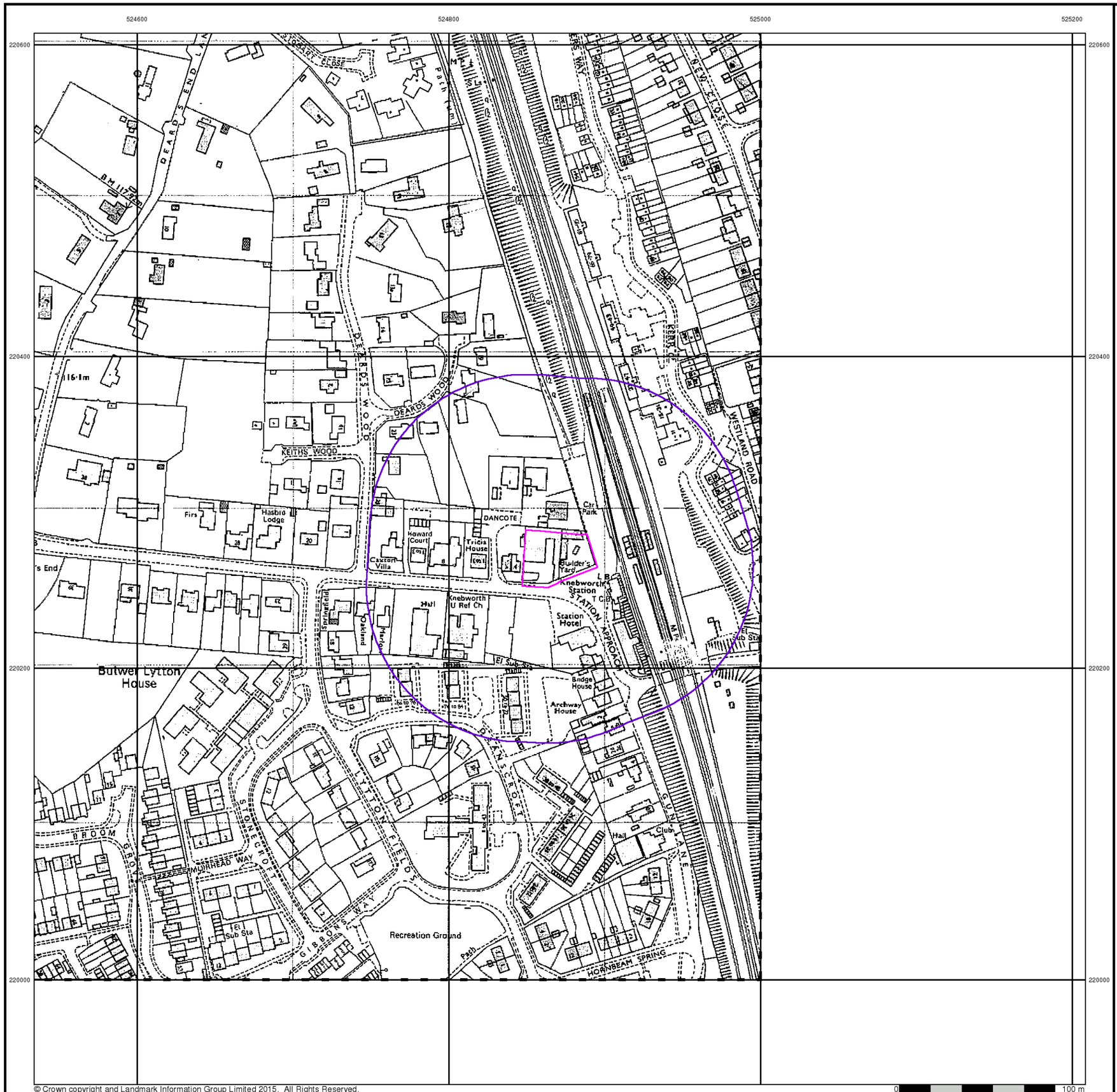


IAN FARMER ASSOCIATES

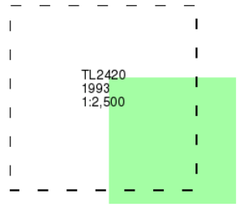
Additional SIMs

Published 1993

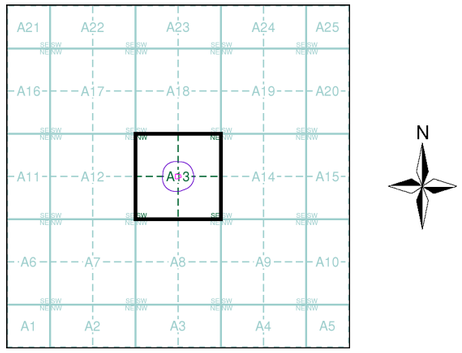
Source map scale - 1:2,500

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

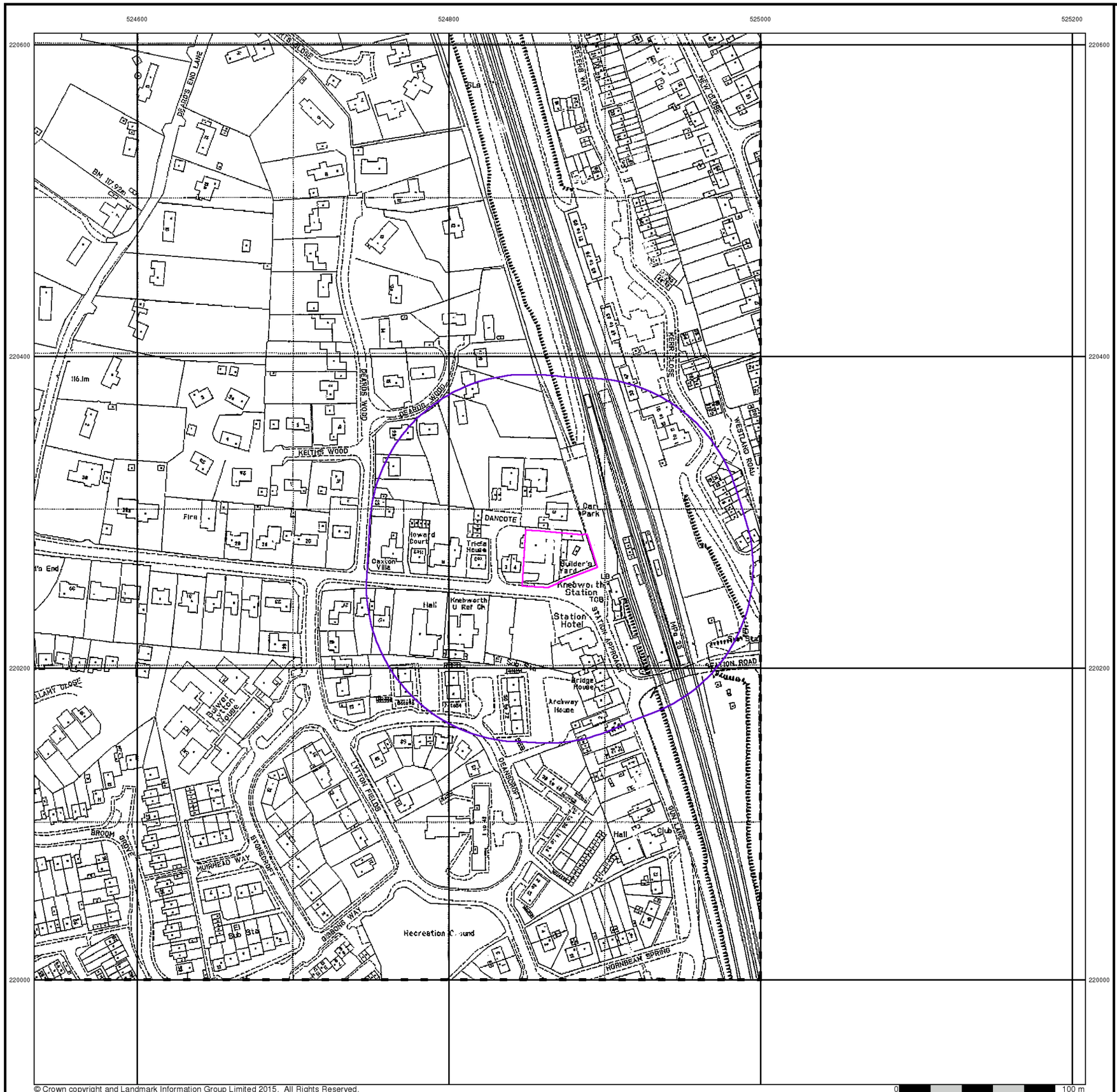
Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	100

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ

Landmark INFORMATION GROUP

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



IAN FARMER ASSOCIATES

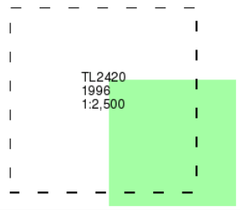
Large-Scale National Grid Data

Published 1996

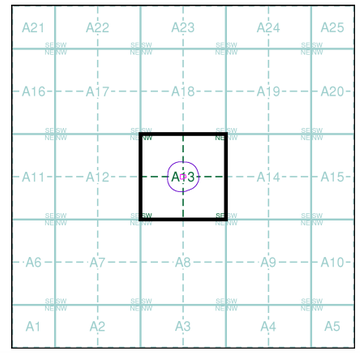
Source map scale - 1:2,500

'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



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National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	100

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ



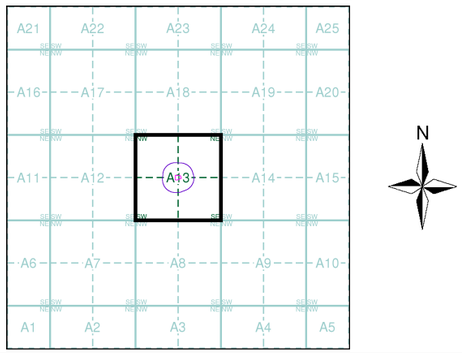
IAN FARMER ASSOCIATES

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:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	100

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ



IAN FARMER ASSOCIATES

General

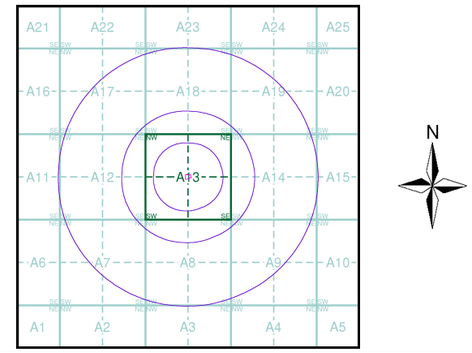
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ

Landmark INFORMATION GROUP

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Fax: 0844 844 9951
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IAN FARMER ASSOCIATES

General

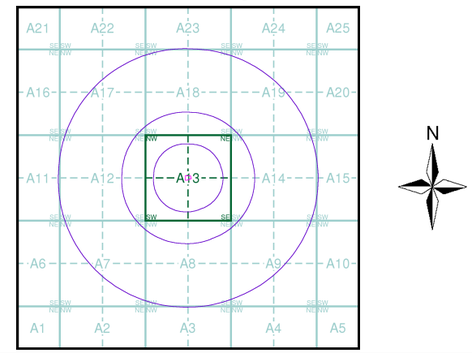
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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:	103612904_1_1
Customer Ref:	52562
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Slice:	A
Site Area (Ha):	0.14
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IAN FARMER ASSOCIATES

General

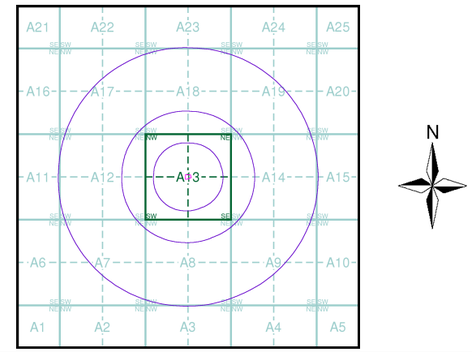
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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



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IAN FARMER ASSOCIATES

General

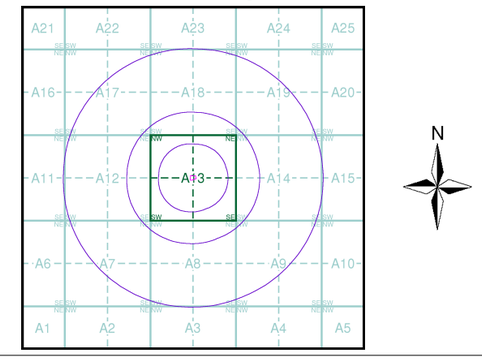
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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

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Slice:	A
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IAN FARMER ASSOCIATES

General

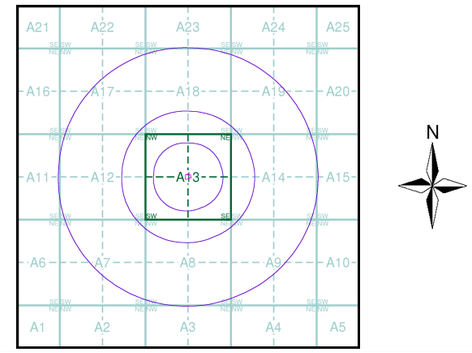
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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



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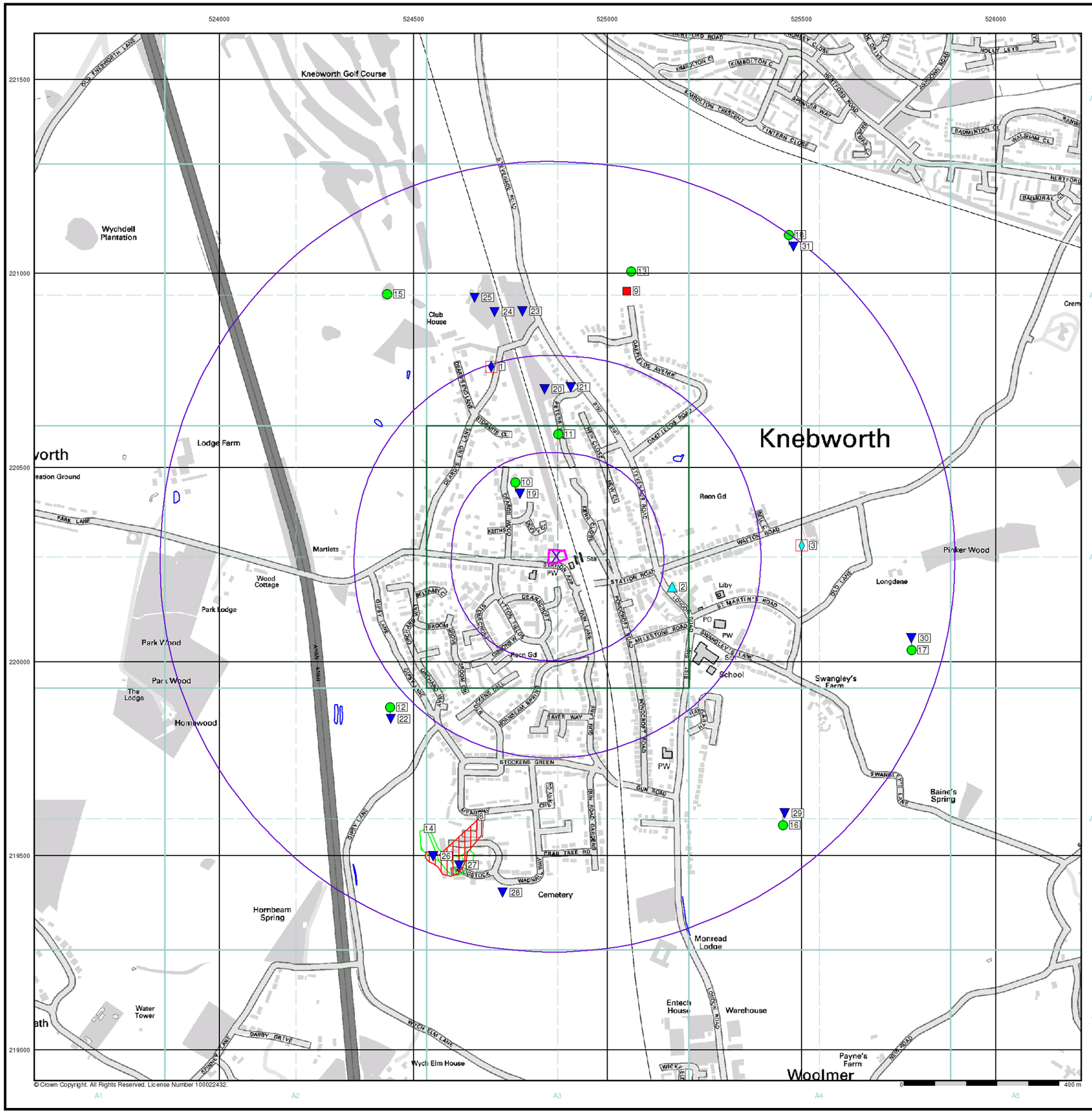

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IAN FARMER ASSOCIATES

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

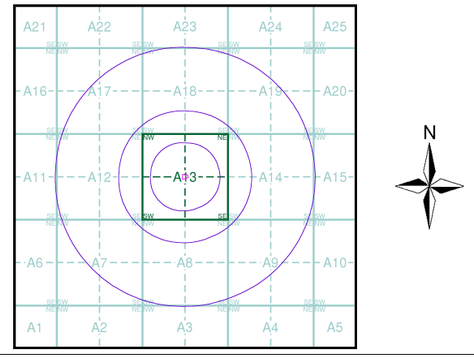
Geological

- 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:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ

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Web: www.envirocheck.co.uk



IAN FARMER ASSOCIATES

Industrial Land Use Map

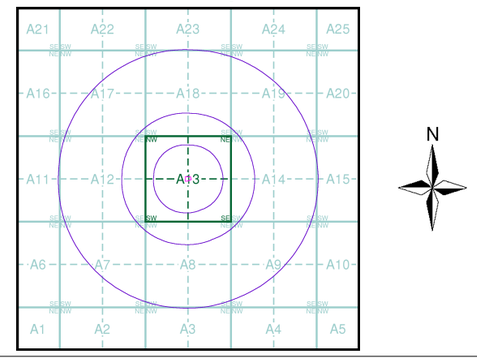
General

- 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

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National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ

Landmark INFORMATION GROUP

Tel: 0844 844 9952
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524000
524500
525000
525500
526000
221500
221000
220500
220000
219500
219000
A25
A20
A15
A10
A5
Knebworth Golf Course
Wychdell Plantation
Club House
Lodge Farm
Knebworth
Recn Gd
Martlets
Wood Cottage
Park Lodge
Park Wood
The Lodge
Homewood
Hornbeam Spring
Water Tower
Wych Elm House
Cemetery
Pinker Wood
Longdene
Swangley's Farm
Baine's Spring
Monread Lodge
Entech House
Warehouse
Payne's Farm
Woolmer
School
Liby
PO
PW
STEVENAGE ROAD
STATION ROAD
WELWYN ROAD
OLD KNEBWORTH LANE
PARK LANE
GIPSY LANE
DARBY DRIVE
WATTON ROAD
OLD LANE
MILLSTONE ROAD
LONDON ROAD
GUN LANE
GUN ROAD
STOCKENS GREEN
SAWYER WAY
MEADWAY
CRABTREE RD
WOODSTOCK
WADNALL WAY
SWANGLEYS LANE
DEANSCROFT ROAD
DEANS FIELD LANE
OAKFIELDS AVENUE
OAKFIELDS ROAD
PETERS WAY
WEST CLOSE
KEITH CLOSE
KIMBOLTON CL
KIMBOLTON CRESCENT
TINTERN CLOSE
BEARTON ROAD
SPENCER WAY
ASHDOWN ROAD
HOLLY LEYS
BADMINTON CL
WALSHAM CL
BALMORAL CL
HEREFORD
BEARTON CL
BEAUMONT CLOSE
BEAUMONT DRIVE
BEAUMONT AVENUE
BEAUMONT GDNS
BEAUMONT CRESCENT
BEAUMONT WAY
BEAUMONT CL
BEAUMONT RISE
BEAUMONT GROVE
BEAUMONT ROAD



IAN FARMER ASSOCIATES

General

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

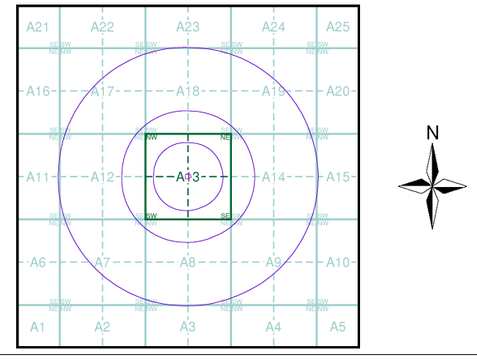
Agency and Hydrological (Boreholes)

- 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

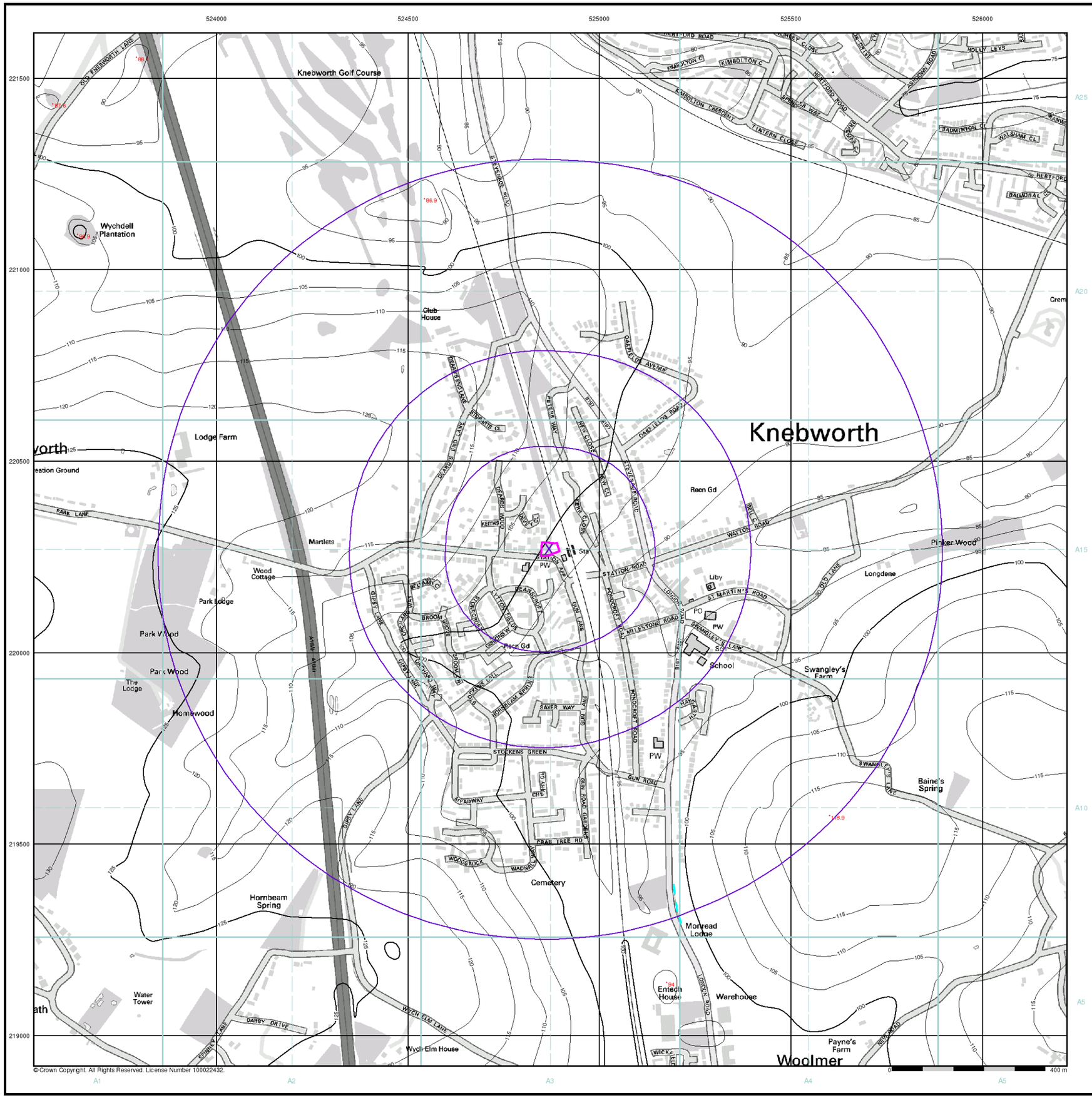


Order Details

Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ



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IAN FARMER ASSOCIATES

General

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

Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Offline Drainage Feature
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature

Contours (height in metres)

Standard Contour 105 100 95

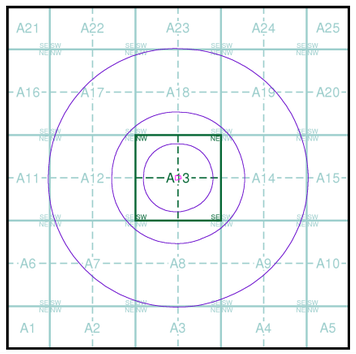
Master Contour

Spot Height *167.3

MLWS Mean Low Water

MHWS Mean High Water

EA/NRW Detailed River Network Map - Slice A



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Slice:	A
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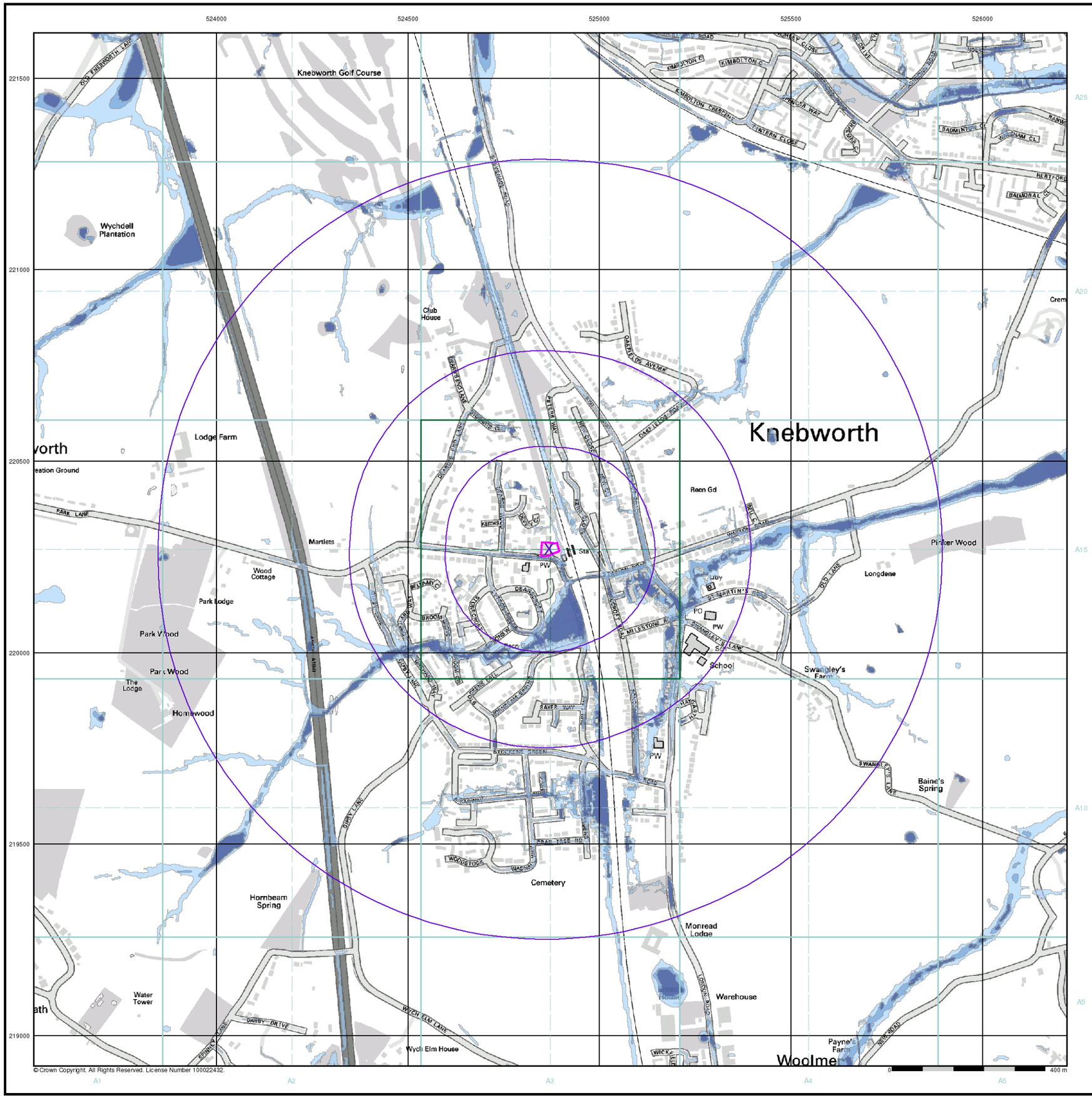

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IAN FARMER ASSOCIATES

General

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

Risk of Flooding from Surface Water

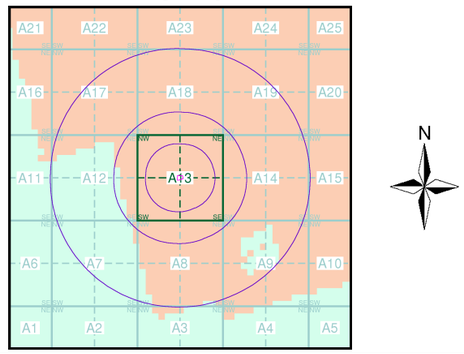
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

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



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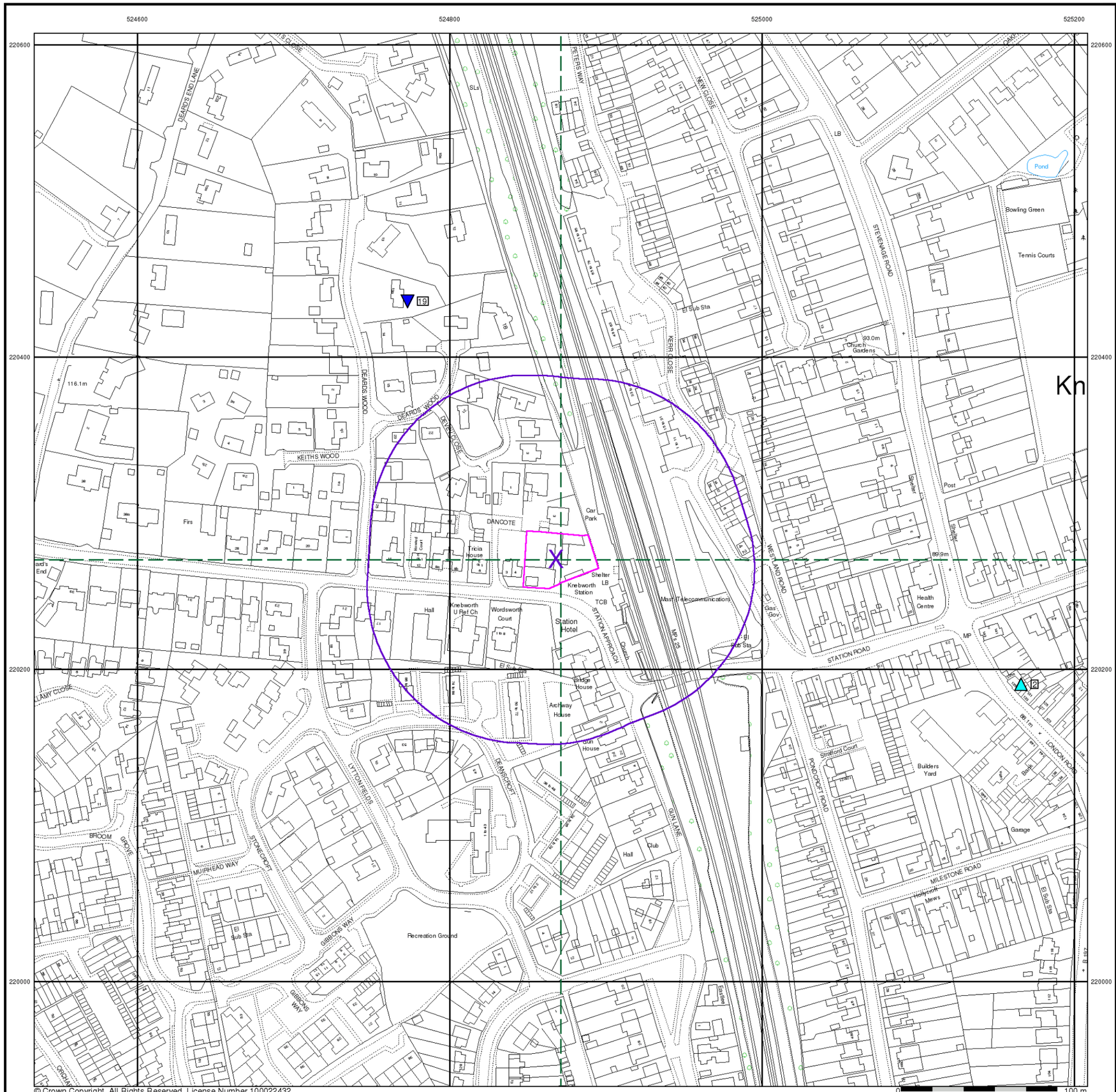


IAN FARMER ASSOCIATES

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

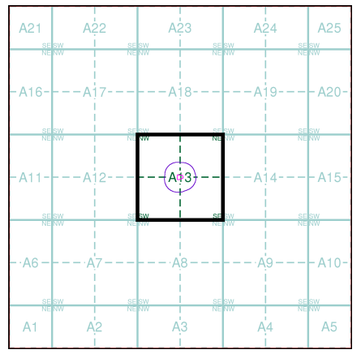
Geological

- 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:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Plot Buffer (m):	100

Site Details

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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

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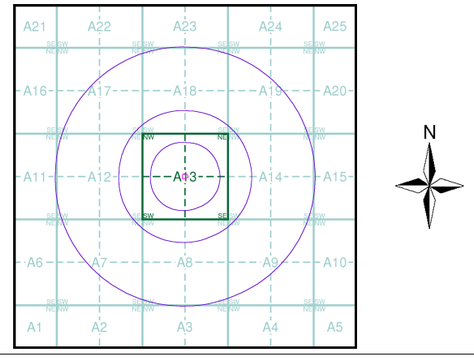
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Hertfordshire	1:10,560	1884	2
Hertfordshire	1:10,560	1899	3
Hertfordshire	1:10,560	1925	4
Hertfordshire	1:10,560	1925	5
Hertfordshire	1:10,560	1946 - 1950	6
Hertfordshire	1:10,560	1950	7
Ordnance Survey Plan	1:10,000	1960	8
Ordnance Survey Plan	1:10,000	1964	9
Ordnance Survey Plan	1:10,000	1970 - 1975	10
Ordnance Survey Plan	1:10,000	1975	11
Ordnance Survey Plan	1:10,000	1987 - 1989	12
Ordnance Survey Plan	1:10,000	1993	13
10K Raster Mapping	1:10,000	1999	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2016	16

Historical Map - Slice A



Order Details

Order Number: 103612904_1_1
Customer Ref: 52562
National Grid Reference: 524870, 220270
Slice: A
Site Area (Ha): 0.14
Search Buffer (m): 1000

Site Details

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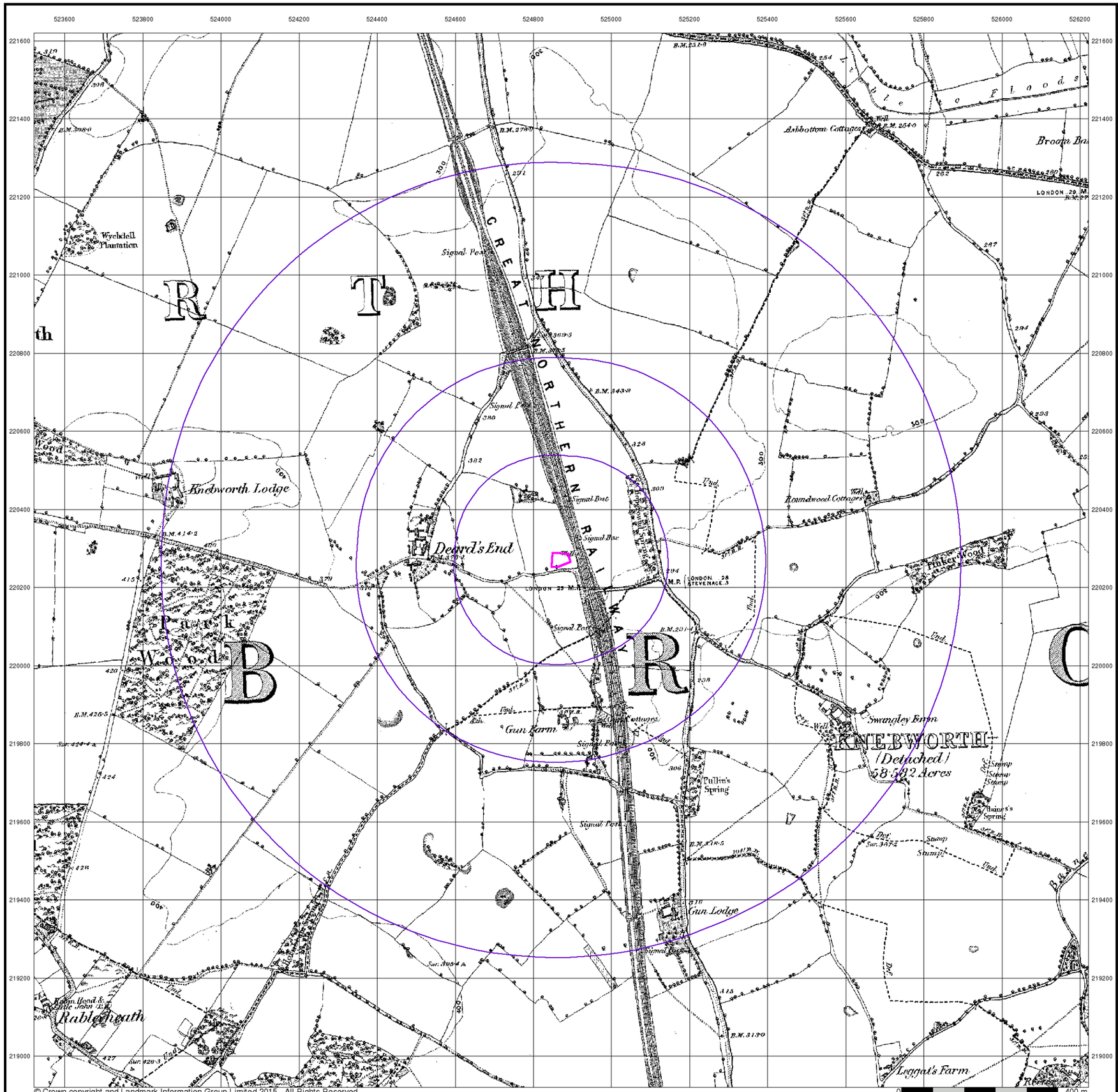

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Hertfordshire

Published 1884

Source map scale - 1:10,560

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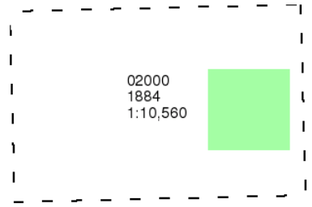
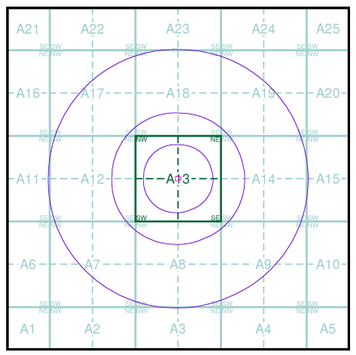
Map Name(s) and Date(s)



Historical Map - Slice A



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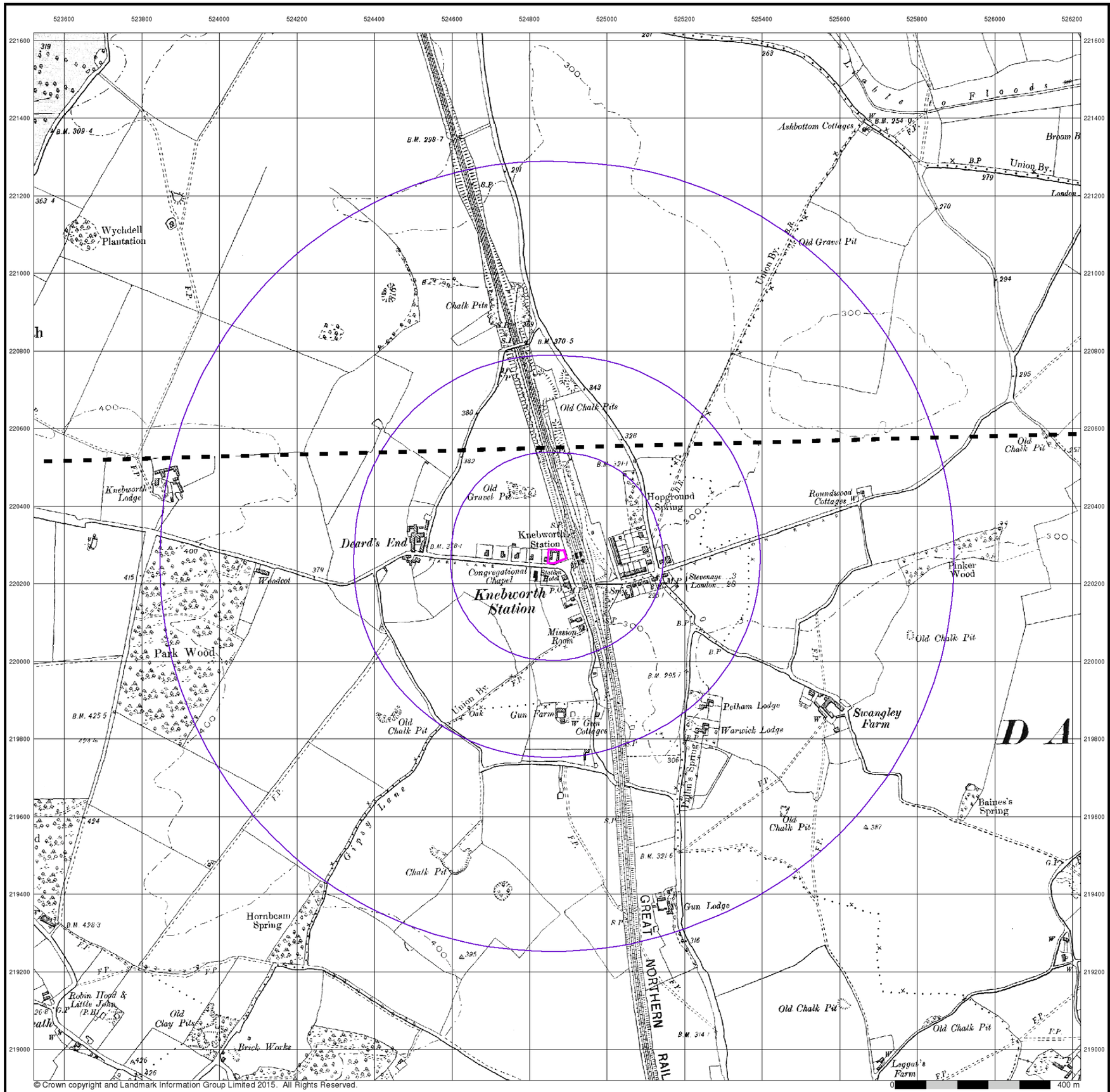

IAN FARMER ASSOCIATES

Hertfordshire

Published 1899

Source map scale - 1:10,560

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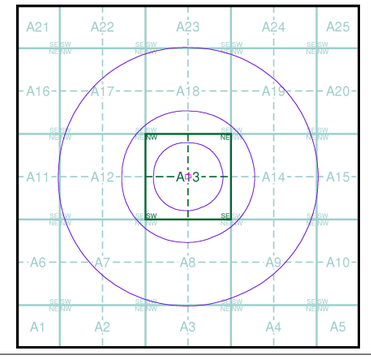
Map Name(s) and Date(s)

020NE
1899
1:10,560

020SE
1899
1:10,560

Historical Map - Slice A



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Hertfordshire

Published 1925

Source map scale - 1:10,560

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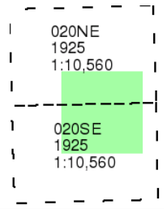
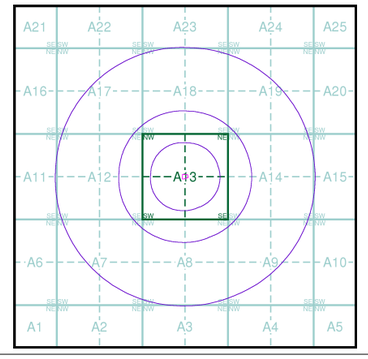


Historical Map - Slice A



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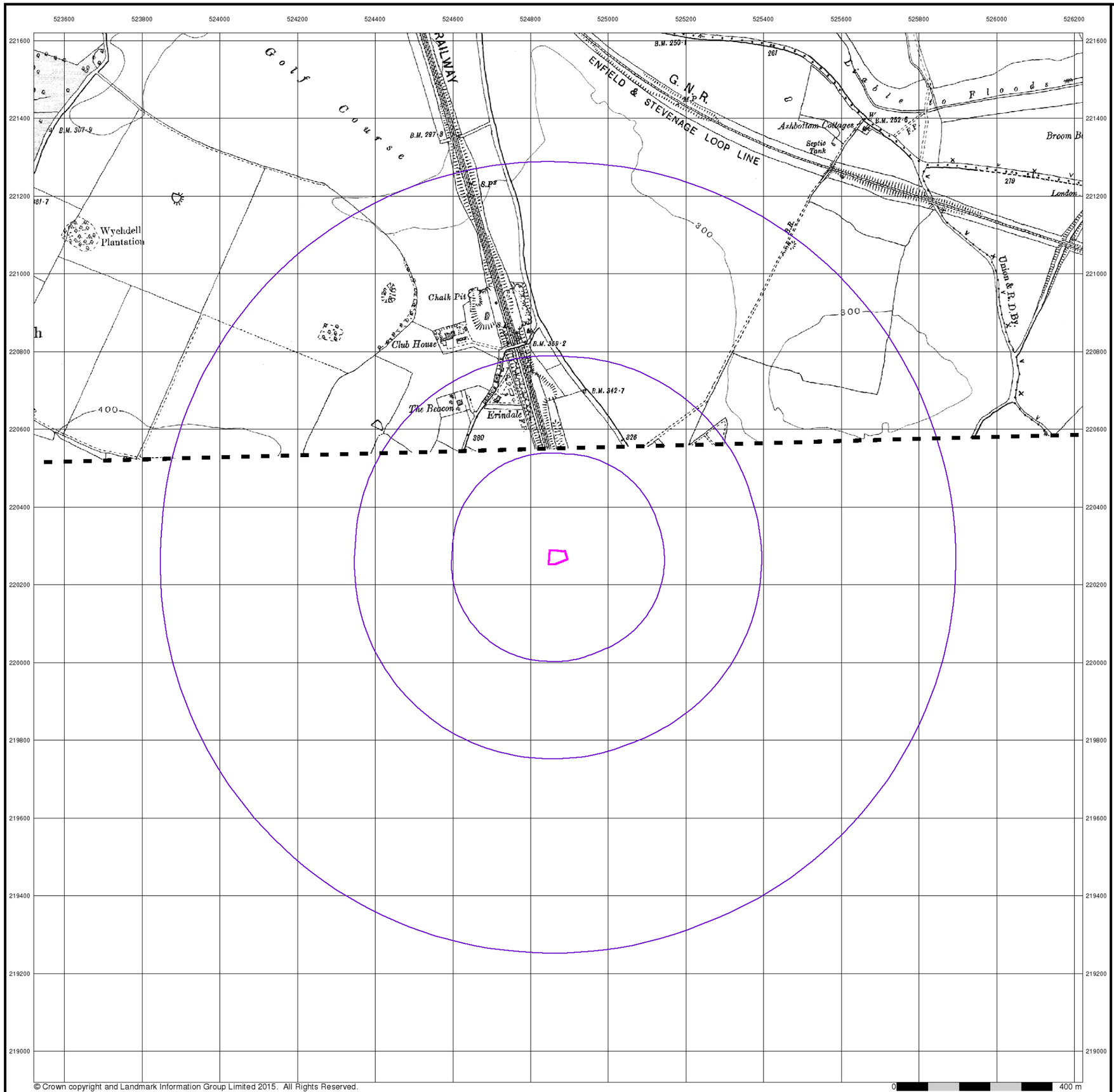

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Hertfordshire

Published 1925

Source map scale - 1:10,560

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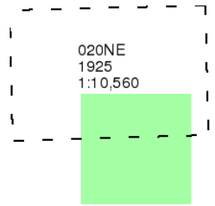
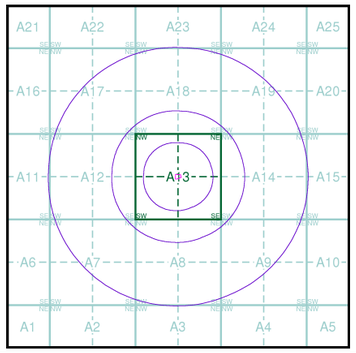


Historical Map - Slice A



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IAN FARMER ASSOCIATES

Hertfordshire

Published 1946 - 1950

Source map scale - 1:10,560

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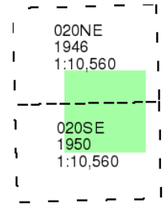
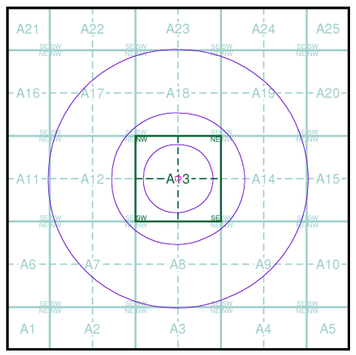


Historical Map - Slice A



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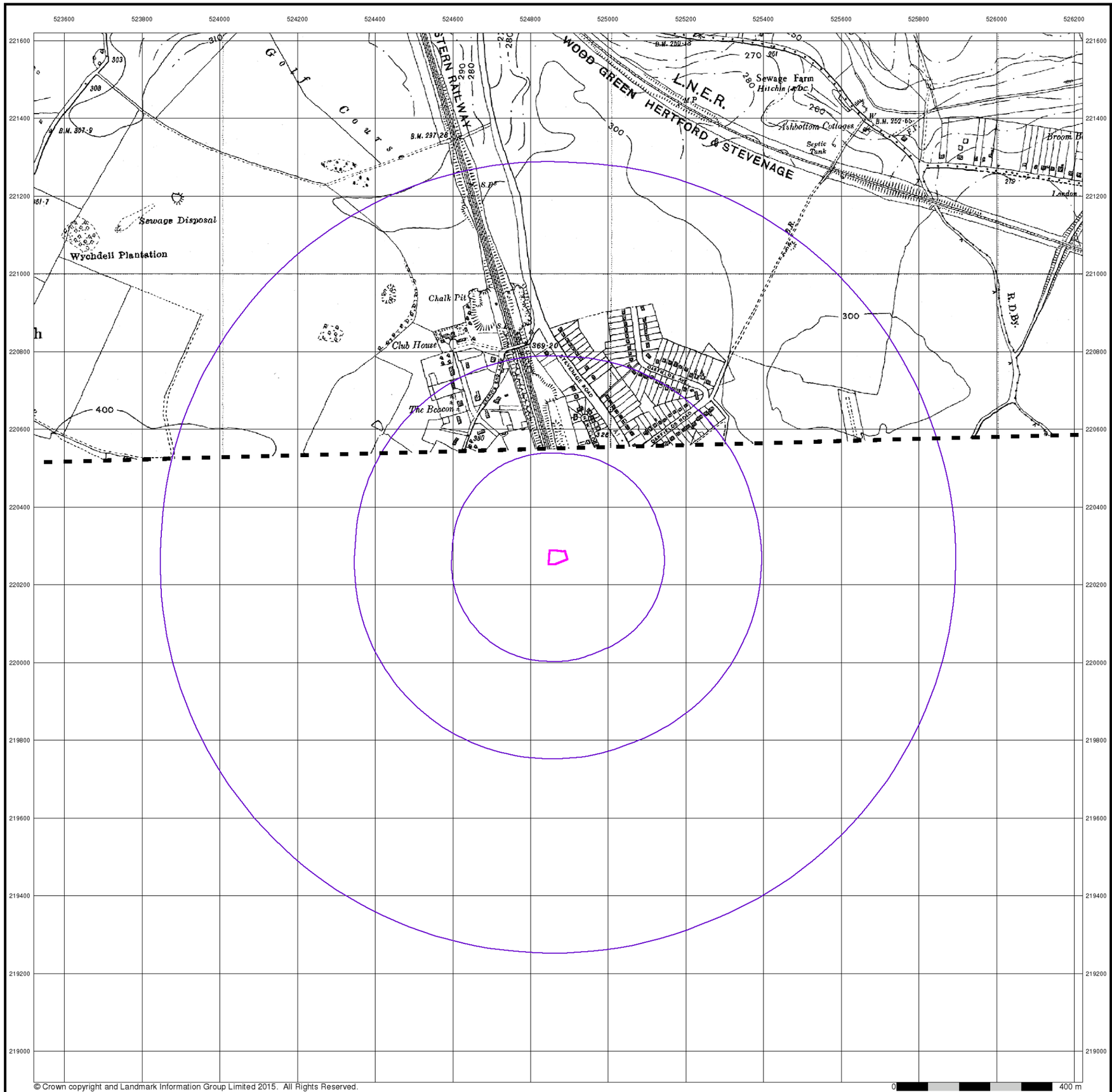

IAN FARMER ASSOCIATES

Hertfordshire

Published 1950

Source map scale - 1:10,560

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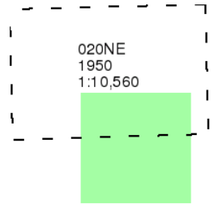
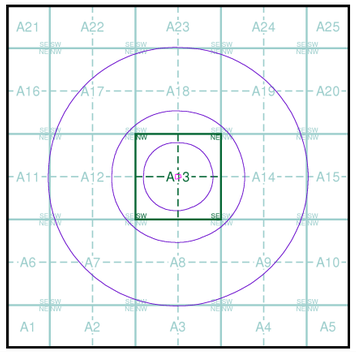
Map Name(s) and Date(s)



Historical Map - Slice A



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Site Area (Ha):	0.14
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Ordnance Survey Plan

Published 1960

Source map scale - 1:10,000

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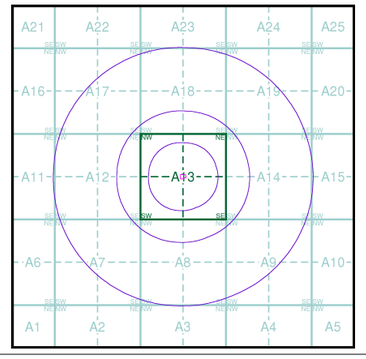
Map Name(s) and Date(s)

TL22SW 1960 1:10,560	TL22SE 1960 1:10,560
TL21NW 1960 1:10,560	TL21NE 1960 1:10,560

Historical Map - Slice A



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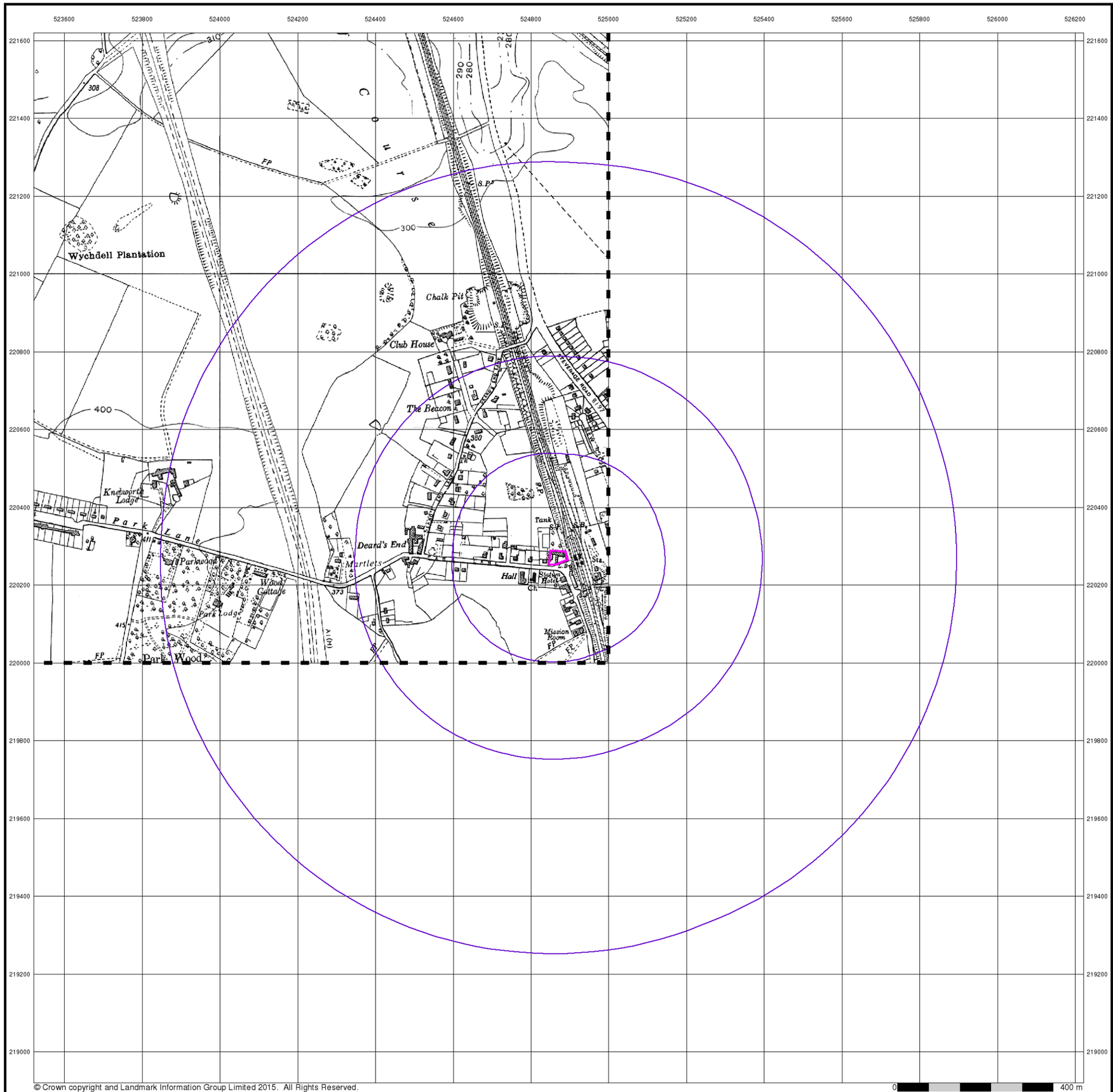

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Ordnance Survey Plan

Published 1964

Source map scale - 1:10,000

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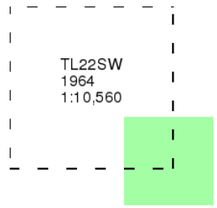
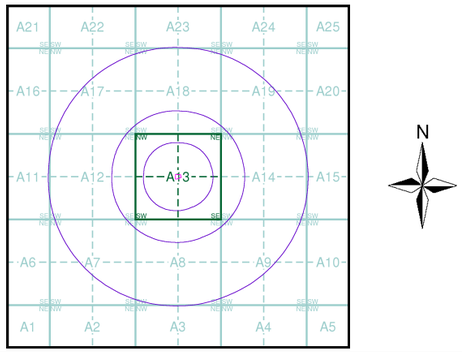


Historical Map - Slice A



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Ordnance Survey Plan

Published 1970 - 1975

Source map scale - 1:10,000

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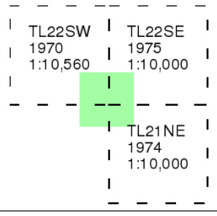
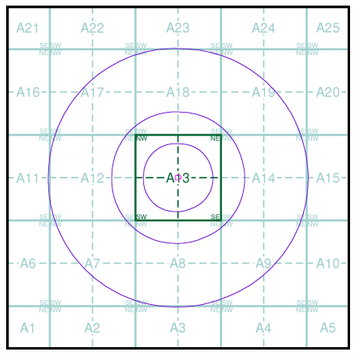


Historical Map - Slice A



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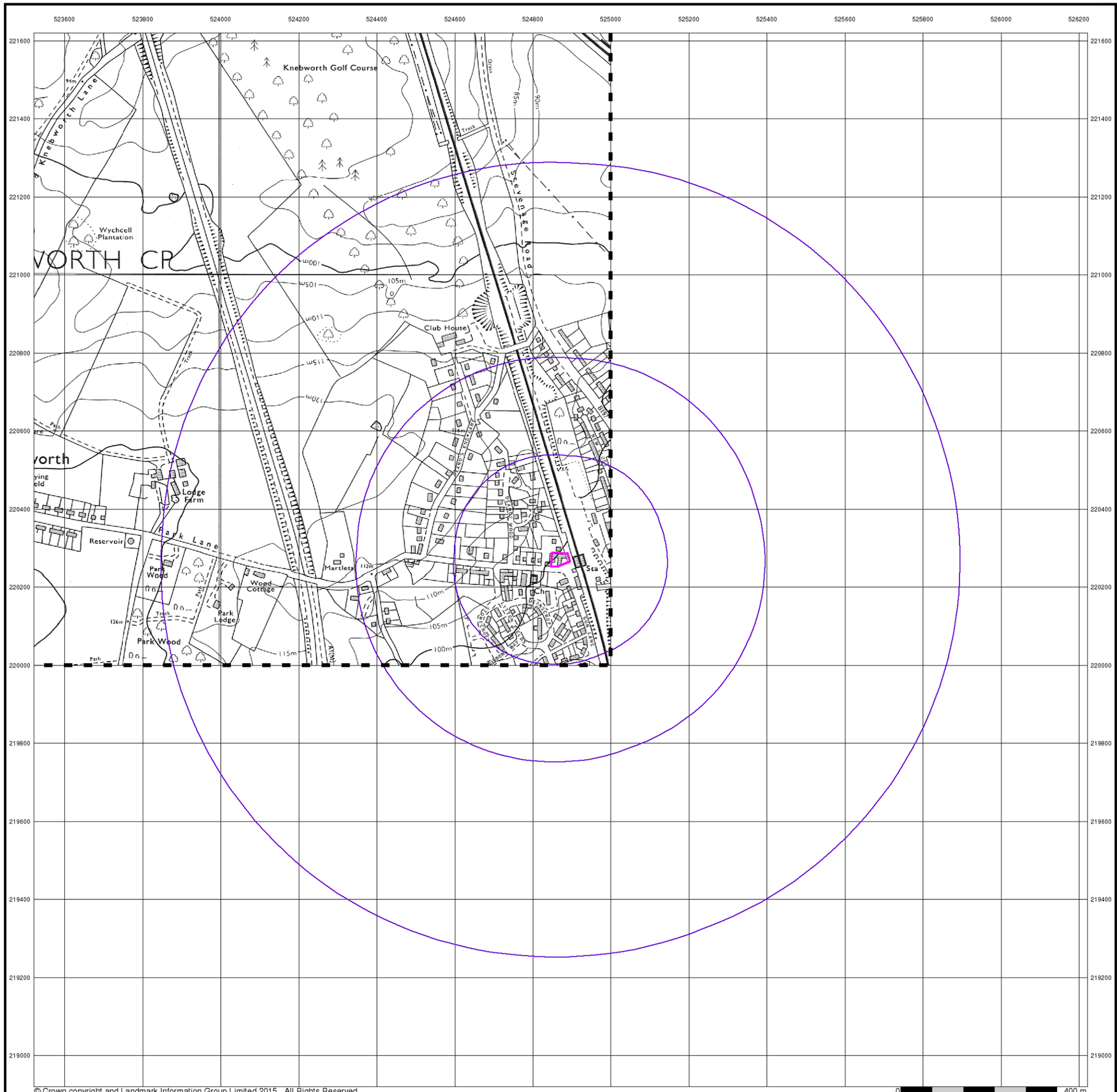

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Ordnance Survey Plan

Published 1975

Source map scale - 1:10,000

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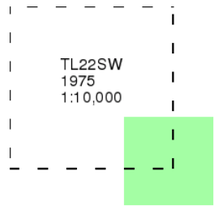
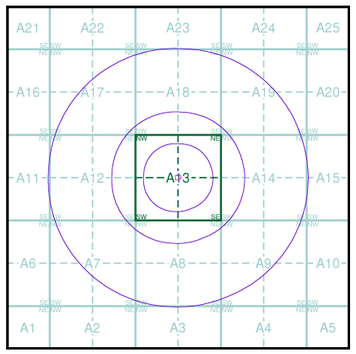
Map Name(s) and Date(s)



Historical Map - Slice A



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Site Details

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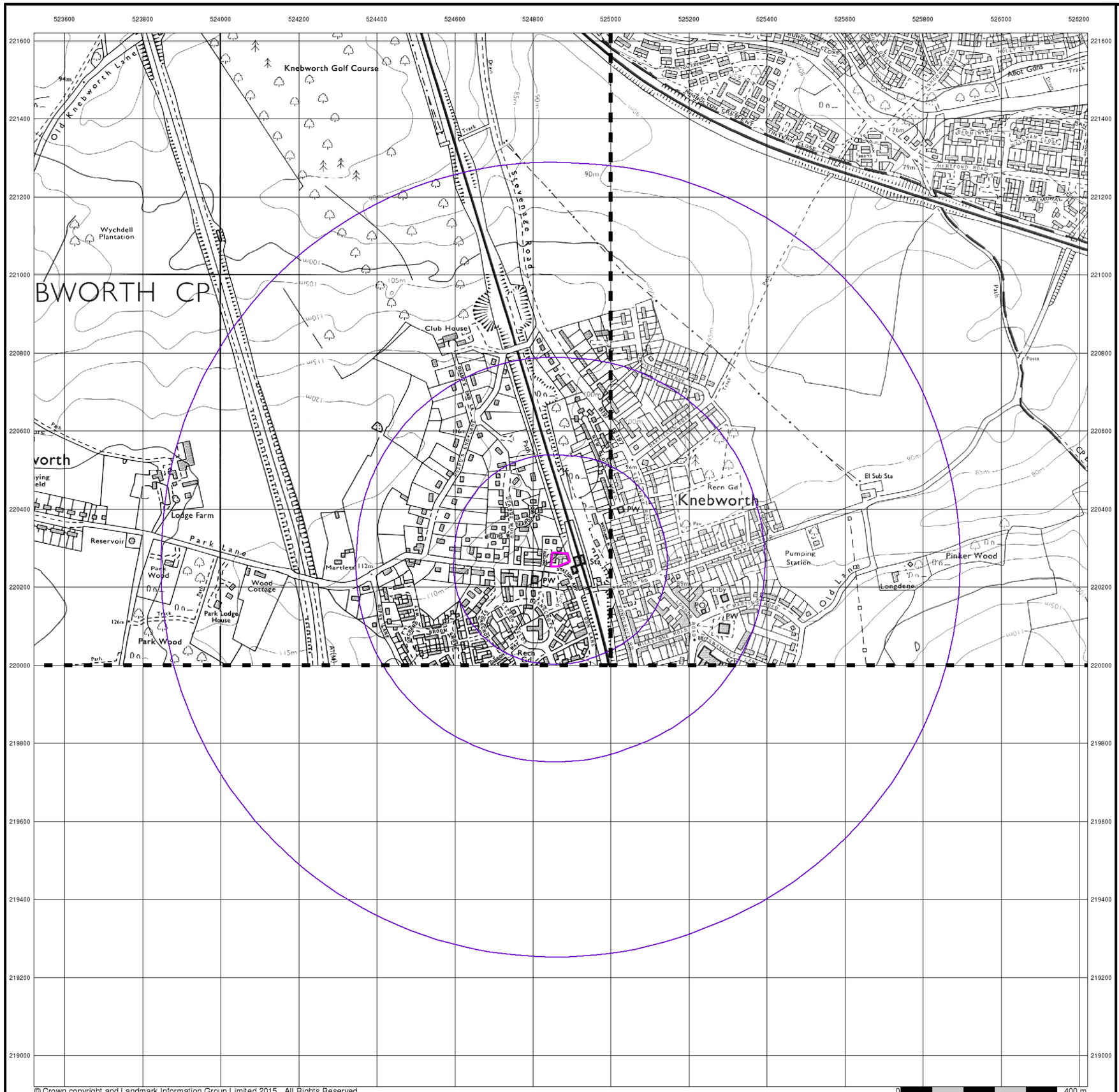
Landmark INFORMATION GROUP

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



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IAN FARMER ASSOCIATES

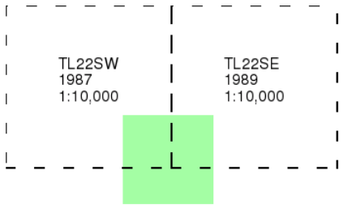
Ordnance Survey Plan

Published 1987 - 1989

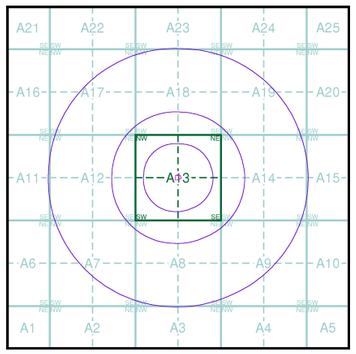
Source map scale - 1:10,000

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:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

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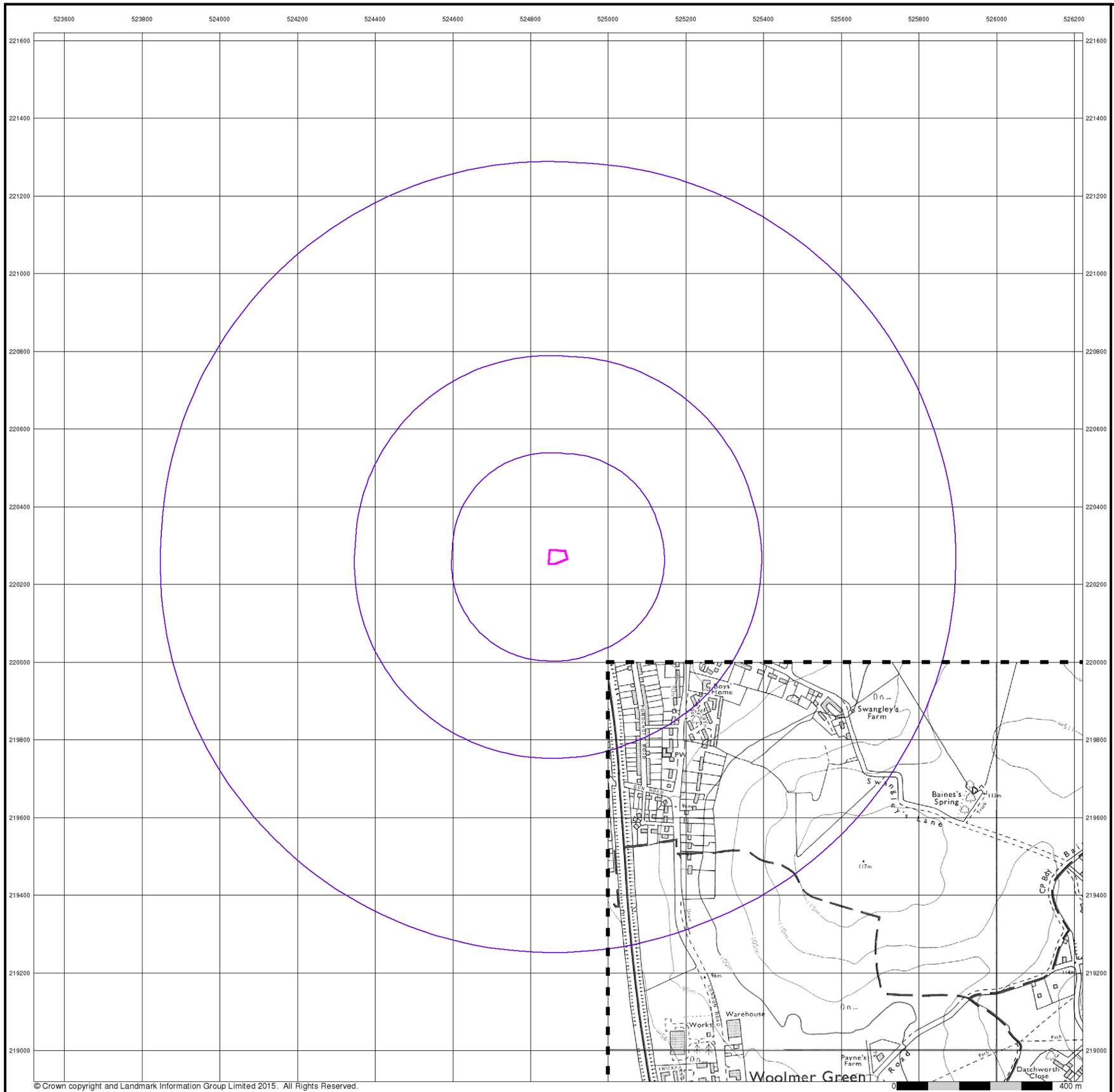

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Ordnance Survey Plan

Published 1993

Source map scale - 1:10,000

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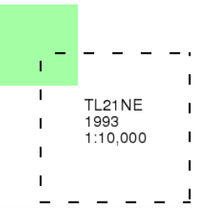
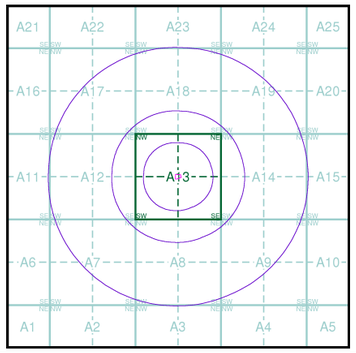
Map Name(s) and Date(s)



Historical Map - Slice A



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10k Raster Mapping

Published 1999

Source map scale - 1:10,000

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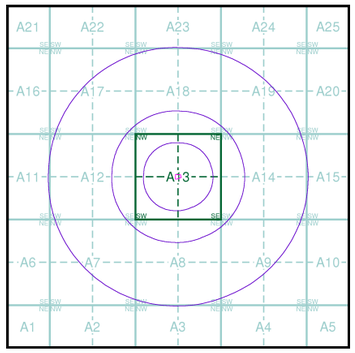
Map Name(s) and Date(s)

TL22SW 1999 1:10,000	TL22SE 1999 1:10,000
TL21NW 1999 1:10,000	TL21NE 1999 1:10,000

Historical Map - Slice A



Order Details

Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
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10k Raster Mapping

Published 2006

Source map scale - 1:10,000

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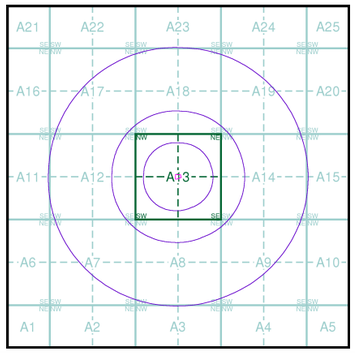
Map Name(s) and Date(s)

TL22SW 2006 1:10,000	TL22SE 2006 1:10,000
TL21NW 2006 1:10,000	TL21NE 2006 1:10,000

Historical Map - Slice A



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Site Area (Ha):	0.14
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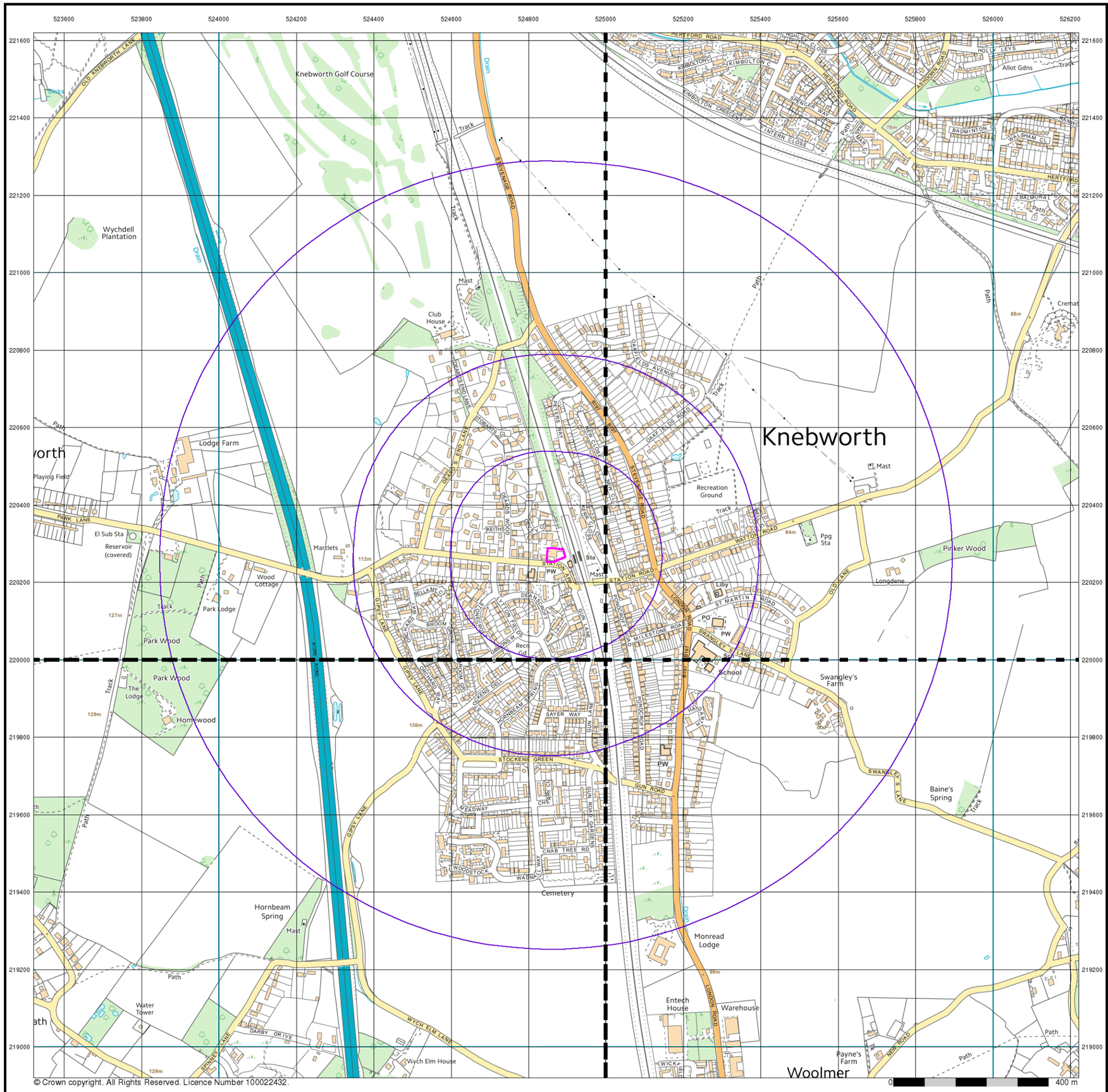
Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ



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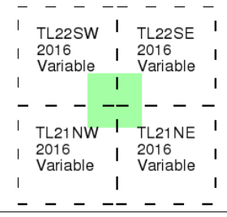
VectorMap Local

Published 2016

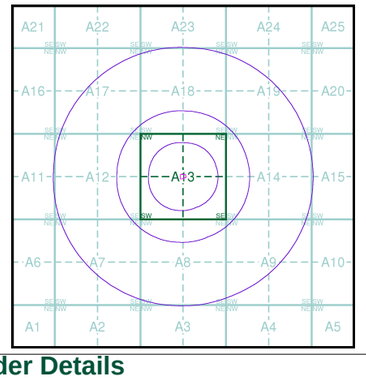
Source map scale - 1:10,000

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



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Envirocheck® Report:

Datasheet

Order Details:

Order Number:
103612904_1_1

Customer Reference:
52562

National Grid Reference:
524870, 220270

Slice:
A

Site Area (Ha):
0.14

Search Buffer (m):
1000

Site Details:

2
Park Lane
KNEBWORTH
Hertfordshire
SG3 6PJ

Client Details:

Ms V Tickner
Ian Farmer Associates
1A Batford Mill
Lower Luton Road
Harpenden
Hertfordshire
AL5 5BZ

IAN FARMER ASSOCIATES

Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
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Industrial Land Use	13
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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 the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Radon Potential dataset Copyright Notice

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Report Version v50.0

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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	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			4	
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 2			1	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2			Yes	
Pollution Incidents to Controlled Waters					
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 2				5
Water Industry Act Referrals					
Groundwater Vulnerability	pg 3	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Source Protection Zones	pg 3	3			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
Detailed River Network Lines					n/a
Detailed River Network Offline Drainage					n/a

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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					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 5	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 5				2
Potentially Infilled Land (Non-Water)	pg 5		1	1	7
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

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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 6	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 6	Yes	Yes		Yes
BGS Recorded Mineral Sites	pg 7		1	2	10
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			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	pg 10		1		
Non Coal Mining Areas of Great Britain	pg 10	Yes	Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 10	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 10		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 10	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 11	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 11	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 11		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 13	1	12	14	6
Fuel Station Entries					
Points of Interest - Commercial Services	pg 15		2	9	3
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 16				5
Points of Interest - Public Infrastructure	pg 17		2		2
Points of Interest - Recreational and Environmental					
Gas Pipelines					
Underground Electrical Cables					

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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 18				1
Areas of Adopted Green Belt	pg 18			1	1
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 18	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	0	2	524868 220271
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	105	2	525000 220271
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (S)	252	2	524868 220000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	285	2	525000 220000
1	**Discharge Consents** Operator: Mr. R. Hammond Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 20a Deards End Lane, Knebworth,Herts Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Ctlu.0701 Permit Version: 2 Effective Date: 21st December 2012 Issued Date: 21st December 2012 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	A18SW (N)	476	3	524700 220740
1	**Discharge Consents** Operator: Mr. R. Hammond Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 20a Deards End Lane, Knebworth,Herts Authority: Environment Agency, Thames Region Catchment Area: Not Given Reference: CTLU.0701 Permit Version: 1 Effective Date: 18th February 1981 Issued Date: 18th February 1981 Revocation Date: 20th December 2012 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Groundwater **Status: Transferred from Water Resources Act 1963** Positional Accuracy: Located by supplier to within 100m	A18SW (N)	476	3	524700 220740
1	**Discharge Consents** Operator: Mr. S.J. Elms Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 20 Deards End Lane, Knebworth, Herts Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Ctlu.0702 Permit Version: 2 Effective Date: 21st December 2012 Issued Date: 21st December 2012 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	A18SW (N)	495	3	524700 220760

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Mr. S.J. Elms Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 20 Deards End Lane, Knebworth, Herts Authority: Environment Agency, Thames Region Catchment Area: Not Given Reference: CTLU.0702 Permit Version: 1 Effective Date: 18th February 1981 Issued Date: 18th February 1981 Revocation Date: 20th December 2012 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Groundwater **Status: Transferred from Water Resources Act 1963** Positional Accuracy: Located by supplier to within 100m	A18SW (N)	495	3	524700 220760
2	**Local Authority Pollution Prevention and Controls** Name: Rainbow Dry Cleaners Location: 135b London Road, Knebworth, Sg3 Authority: North Hertfordshire District Council, Environmental Health Department Permit Reference: EPA/16807/06/P2 Dated: 1st February 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A13SE (E)	282	4	525166 220189
	Nearest Surface Water Feature	A13NE (NE)	367	-	525170 220520
3	**Water Abstractions** Operator: Affinity Water Limited Licence Number: 29/38/03/0001 Permit Version: 102 Location: Watton Pumping Station Authority: Environment Agency, Thames Region Abstraction: Public Water Supply: Potable Water Supply - 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 January Authorised End: 31 December Permit Start Date: 14th November 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NW (E)	606	3	525500 220300
3	**Water Abstractions** Operator: Veolia Water Central Limited Licence Number: 29/38/03/0001 Permit Version: 101 Location: Watton Pumping Station Authority: Environment Agency, Thames Region Abstraction: Public Water Supply: Potable Water Supply - 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 January Authorised End: 31 December Permit Start Date: 1st April 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NW (E)	606	3	525500 220300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Water Abstractions** Operator: Three Valleys Water Plc Licence Number: 29/38/03/0001 Permit Version: 100 Location: Watton Pumping Station Authority: Environment Agency, Thames Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 5682 Yearly Rate (m3): 1659290 Details: Chalk (Undifferentiated) Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th November 1965 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NW (E)	606	3	525500 220300
3	**Water Abstractions** Operator: Affinity Water Limited Licence Number: 29/38/03/0001 Permit Version: 103 Location: Borehole At Watton Road Pumping Station - 'B' Authority: Environment Agency, Thames Region Abstraction: Public Water Supply: Potable Water Supply - 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 April Authorised End: 31 March Permit Start Date: 13th August 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14NW (E)	633	3	525526 220310
3	**Water Abstractions** Operator: Affinity Water Limited Licence Number: 29/38/03/0001 Permit Version: 103 Location: Watton Road Pumping Station 'A' Authority: Environment Agency, Thames Region Abstraction: Public Water Supply: Potable Water Supply - 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 April Authorised End: 31 March Permit Start Date: 13th August 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14NW (E)	635	3	525529 220304
	Groundwater Vulnerability Soil Classification: Soils of Intermediate Leaching Potential (I1) - Soils which can possibly transmit a wide range of pollutants Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	A13NW (NW)	0	3	524868 220271
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A13NW (NW)	0	2	524868 220271
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (NW)	0	2	524868 220271
4	**Source Protection Zones** Name: Various 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 (NW)	0	3	524868 220271
5	**Source Protection Zones** Name: Watton Road Source: Environment Agency, Head Office Reference: Th208 Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	A13NW (NW)	0	3	524868 220271

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Source Protection Zones** Name: Watton Road Source: Environment Agency, Head Office Reference: Th208 Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	A13NW (NW)	0	3	524868 220271
7	**Source Protection Zones** Name: Watton Road Source: Environment Agency, Head Office Reference: Th208 Type: Groundwater Source	A14NW (E)	616	3	525510 220300
	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				
	Detailed River Network Lines None				
	Detailed River Network Offline Drainage None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Hertfordshire County Council - Has supplied landfill data		0	5	524868 220271
	Local Authority Landfill Coverage Name: North Hertfordshire District Council - Has supplied landfill data		0	4	524868 220271
	Local Authority Landfill Coverage Name: Welwyn Hatfield Council - Has no landfill data to supply		758	6	525023 219512
8	**Local Authority Recorded Landfill Sites** Location: Deards End Farm, Knebworth Reference: 215 Authority: Hertfordshire County Council, Spatial Planning and Economy Unit **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A8NW (S)	674	5	524675 219602
9	**Local Authority Recorded Landfill Sites** Location: North Of Knebworth Reference: 214 Authority: Hertfordshire County Council, Spatial Planning and Economy Unit **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A18NE (N)	688	5	525049 220955
10	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1987	A13NW (NW)	175	-	524761 220439
11	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1987	A13NE (N)	299	-	524872 220587
12	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A7NE (SW)	570	-	524439 219855
13	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989	A18NE (N)	740	-	525060 221006
14	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A8SW (SW)	749	-	524541 219570
15	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1987	A17NE (NW)	780	-	524432 220947
16	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9NW (SE)	861	-	525452 219608
17	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989	A14SE (E)	911	-	525783 220059
18	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989	A19NW (NE)	977	-	525466 221074

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: White Chalk Subgroup	A13NW (NW)	0	2	524868 220271
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 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 (NW)	0	2	524868 220271
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 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 (NW)	46	2	524809 220309
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	64	2	524944 220318
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (N)	117	2	524854 220405
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 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	A13SE (SE)	149	2	524991 220151
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (N)	191	2	524878 220478

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	601	2	524956 219659
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 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	A19NW (NE)	945	2	525507 221000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 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	A17NE (N)	971	2	524504 221196
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 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	A8SE (S)	1000	2	525000 219262
19	**BGS Recorded Mineral Sites** Site Name: Knebworth Station Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166813 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	167	2	524773 220437
20	**BGS Recorded Mineral Sites** Site Name: Knebworth Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166883 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18SW (N)	418	2	524837 220706

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**BGS Recorded Mineral Sites** Site Name: Knebworth Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166886 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18SE (N)	439	2	524894 220725
22	**BGS Recorded Mineral Sites** Site Name: Gun Farm Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166814 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	567	2	524441 219857
23	**BGS Recorded Mineral Sites** Site Name: Knebworth Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166885 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18SW (N)	623	2	524780 220907
24	**BGS Recorded Mineral Sites** Site Name: Knebworth Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166884 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18SW (N)	633	2	524708 220905
25	**BGS Recorded Mineral Sites** Site Name: Knebworth Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166887 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18SW (N)	682	2	524657 220942
26	**BGS Recorded Mineral Sites** Site Name: Gun Farm Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166824 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A8SW (S)	802	2	524562 219504

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	**BGS Recorded Mineral Sites** Site Name: Gun Farm Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166823 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A8SW (S)	807	2	524617 219480
28	**BGS Recorded Mineral Sites** Site Name: Gun Farm Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166850 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A8SW (S)	851	2	524729 219410
29	**BGS Recorded Mineral Sites** Site Name: Swangley Farm Chalk Pit Location: , Datchworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166817 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	859	2	525455 219614
30	**BGS Recorded Mineral Sites** Site Name: Pinker Wood Chalk Pit Location: , Knebworth, Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166816 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A14SE (E)	909	2	525782 220065
31	**BGS Recorded Mineral Sites** Site Name: Ashbottom Cottage Gravel Pit Location: , Stevenage, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 166882 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	984	2	525478 221074
	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				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Natural Cavities Easting: 524900 Northing: 220300 Distance: 18 Quadrant Reference: A13 Quadrant Reference: NE Bearing Ref: NE Cavity Type: Solution Pipe x 10 Solid Geology Detail: Chalk Group Superficial Geology Detail: Brickearth/head	A13NE (NE)	18	7	524900 220300
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	2	524868 220271
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	105	2	525000 220271
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	2	524868 220271
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	105	2	525000 220271
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	2	524868 220271
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	7	2	524898 220279
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	97	2	524932 220175
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	105	2	525000 220271
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	132	2	525000 220185
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	2	524868 220271
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	2	524852 220276
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	46	2	524809 220309
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	78	2	524774 220308
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	81	2	524867 220368
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	105	2	525000 220271
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	150	2	525032 220204
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	151	2	525006 220163
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	190	2	524962 220087

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	191	2	524878 220478
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	224	2	524887 220509
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	2	524868 220271
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	102	2	524848 220390
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	105	2	525000 220271
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	117	2	524854 220405
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	191	2	524878 220478
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	193	2	524877 220480
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	204	2	524721 220093
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	2	524868 220271
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	46	2	524809 220309
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	105	2	525000 220271
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	2	524868 220271
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	46	2	524809 220309
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	64	2	524944 220318
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	105	2	525000 220271
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	106	2	525000 220277
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	120	2	524979 220179
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	125	2	525000 220197
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	149	2	524991 220151
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	150	2	525000 220158

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	191	2	524878 220478
	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 (NW)	0	2	524868 220271
	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 (NW)	0	2	524868 220271

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	**Contemporary Trade Directory Entries** Name: City Joinery Ltd Location: Builders Yard, Station Approach, Knebworth, SG3 6AT Classification: Joinery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	0	-	524874 220272
33	**Contemporary Trade Directory Entries** Name: Tom Luther Location: 38, Kerr Close, Knebworth, SG3 6AB Classification: Car Engine Tuning & Diagnostic Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	144	-	524958 220411
34	**Contemporary Trade Directory Entries** Name: Phillips Electrical Location: 1, Station Road, Knebworth, Hertfordshire, SG3 6AP Classification: Domestic Appliances - Servicing, Repairs & Parts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	153	-	525026 220187
34	**Contemporary Trade Directory Entries** Name: Potstop Location: 11c, Station Road, Knebworth, Hertfordshire, SG3 6AP Classification: Ceramic Manufacturers, Supplies & Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	176	-	525056 220195
34	**Contemporary Trade Directory Entries** Name: Woodpecker Blinds Location: C, 7, Station Road, Knebworth, Hertfordshire, SG3 6AP Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	176	-	525056 220195
34	**Contemporary Trade Directory Entries** Name: The Artful Potter Ltd Location: 11c, Station Road, Knebworth, Hertfordshire, SG3 6AP Classification: Ceramic Manufacturers, Supplies & Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	176	-	525056 220195
34	**Contemporary Trade Directory Entries** Name: Paragon Euro Imports Ltd Location: 9, Station Road, Knebworth, Hertfordshire, SG3 6AP Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	184	-	525066 220196
34	**Contemporary Trade Directory Entries** Name: M D M Blinds Location: 15, Station Road, Knebworth, Hertfordshire, SG3 6AP Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	197	-	525082 220202
34	**Contemporary Trade Directory Entries** Name: M D M Blinds Ltd Location: 15, Station Road, Knebworth, Hertfordshire, SG3 6AP Classification: Blinds, Awnings & Canopies **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SE (E)	197	-	525082 220202
35	**Contemporary Trade Directory Entries** Name: Fuel Savers International Location: 2, Pondcroft Road, Knebworth, Hertfordshire, SG3 6DB Classification: Fuel Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	176	-	525017 220139
36	**Contemporary Trade Directory Entries** Name: The Fire Protection Co Location: 12, Deanscroft, Knebworth, Hertfordshire, SG3 6BB Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	202	-	524852 220051
37	**Contemporary Trade Directory Entries** Name: A M T Fastener Co Location: 31, Park Lane, Knebworth, Hertfordshire, SG3 6PH Classification: Fasteners & Fixing Devices **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (W)	213	-	524635 220241

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	**Contemporary Trade Directory Entries** Name: A L F Cleaning Services Location: 21, Station Road, Knebworth, Hertfordshire, SG3 6AP Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	225	-	525114 220215
39	**Contemporary Trade Directory Entries** Name: Chas Lowe & Son Builders Merchants Ltd Location: 156, London Road, Knebworth, Hertfordshire, SG3 6HA Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	271	-	525150 220173
39	**Contemporary Trade Directory Entries** Name: Rainbow Dry Cleaners Knebworth Ltd Location: 135b, London Road, KNEBWORTH, Hertfordshire, SG3 6EX Classification: Dry Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	281	-	525167 220195
39	**Contemporary Trade Directory Entries** Name: Triographics Printers Ltd Location: 121, London Road, Knebworth, SG3 6EX Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	316	-	525193 220162
40	**Contemporary Trade Directory Entries** Name: Dor 2 Dor Location: Pondcroft Rd, Knebworth, Hertfordshire, SG3 6DB Classification: Distribution Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	294	-	525064 220025
41	**Contemporary Trade Directory Entries** Name: Laser Active Ltd Location: 50, New Close, Knebworth, Hertfordshire, SG3 6NU Classification: Electrolysis **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	304	-	524988 220573
42	**Contemporary Trade Directory Entries** Name: J Jackson & Partner Location: 124, London Road, Knebworth, Hertfordshire, SG3 6EY Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	334	-	525187 220103
43	**Contemporary Trade Directory Entries** Name: David Smith Location: 20, Stockens Dell, Knebworth, Hertfordshire, SG3 6BG Classification: Farriers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	360	-	524726 219914
43	**Contemporary Trade Directory Entries** Name: Kevin Jarvis Location: 44, Hornbeam Spring, Knebworth, Hertfordshire, SG3 6BE Classification: Boilers - Servicing, Replacements & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (S)	395	-	524739 219874
44	**Contemporary Trade Directory Entries** Name: T-Fast Location: 44, Gun Lane, Knebworth, Hertfordshire, SG3 6BH Classification: Fasteners & Fixing Devices **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	374	-	524940 219886
44	**Contemporary Trade Directory Entries** Name: A O G Support Structures (Uk) Ltd Location: 8, Sayer Way, Knebworth, Hertfordshire, SG3 6BN Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	378	-	524893 219876
45	**Contemporary Trade Directory Entries** Name: Nobilla Machine Tools Location: Deards End La, Knebworth, Hertfordshire, SG3 6NL Classification: Tool Design, Manufacturers & Makers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13NW (NW)	377	-	524608 220578

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	**Contemporary Trade Directory Entries** Name: A C S Environmental (Uk) Ltd Location: Glacier House,London Rd, Knebworth, Hertfordshire, SG3 6EX Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	393	-	525208 220027
47	**Contemporary Trade Directory Entries** Name: Vehicle Solutions Location: 101, Orchard Way, Knebworth, Hertfordshire, SG3 6BT Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	427	-	524427 220177
48	**Contemporary Trade Directory Entries** Name: Elite Vehicle Recovery Location: Gipsy La, Knebworth, Hertfordshire, SG3 6PL Classification: Breakdown and Recovery **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12SE (SW)	467	-	524506 219934
49	**Contemporary Trade Directory Entries** Name: Scuff Off Location: 17, Haygarth, Knebworth, SG3 6HE Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	533	-	525259 219876
50	**Contemporary Trade Directory Entries** Name: Antique & Modern Restoration By Richard Parsons Location: 27, St. Martins Road, Knebworth, Hertfordshire, SG3 6ER Classification: Furniture - Repairing & Restoring **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	585	-	525468 220148
51	**Contemporary Trade Directory Entries** Name: A & Dg Transport Location: 10a, Swangleys Lane, Knebworth, Hertfordshire, SG3 6AA Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	595	-	525409 219967
52	**Contemporary Trade Directory Entries** Name: First Call Location: 37, Cherry Close, Knebworth, Hertfordshire, SG3 6DS Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	620	-	524890 219633
53	**Contemporary Trade Directory Entries** Name: Hayden Engineers Location: Swangleys Farm, Swangleys Lane, Knebworth, Hertfordshire, SG3 6QX Classification: Lawnmowers & Garden Machinery - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	811	-	525597 219859
53	**Contemporary Trade Directory Entries** Name: Hayden Location: Swangleys Farm, Swangleys Lane, Knebworth, Hertfordshire, SG3 6QX Classification: Engineering Machine Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	811	-	525597 219859
54	**Points of Interest - Commercial Services** Name: Tom Luther Location: 38 Kerr Close, Knebworth, SG3 6AB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NE)	143	8	524960 220409
55	**Points of Interest - Commercial Services** Name: Dor 2 Dor Location: 10 Pondcroft Road, Knebworth, SG3 6DB Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13SE (SE)	206	8	525027 220107
56	**Points of Interest - Commercial Services** Name: J Jackson & Partner Location: 124 London Road, Knebworth, SG3 6EY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (SE)	334	8	525187 220103

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	**Points of Interest - Commercial Services** Name: J Jackson & Partner Location: 124 London Road, Knebworth, SG3 6EY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (SE)	334	8	525187 220103
57	**Points of Interest - Commercial Services** Name: David Smith Location: 20 Stockens Dell, Knebworth, SG3 6BG Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A8NW (S)	360	8	524726 219914
57	**Points of Interest - Commercial Services** Name: David Smith Location: 20 Stockens Dell, Knebworth, SG3 6BG Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A8NW (S)	360	8	524726 219914
58	**Points of Interest - Commercial Services** Name: A O G Support Structures UK Ltd Location: 8 Sayer Way, Knebworth, SG3 6BN Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8NE (S)	378	8	524893 219876
58	**Points of Interest - Commercial Services** Name: Tom Luther Location: 26 Sayer Way, Knebworth, SG3 6BN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (S)	406	8	524820 219848
58	**Points of Interest - Commercial Services** Name: Tom Luther Location: 26 Sayer Way, Knebworth, SG3 6BN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (S)	406	8	524818 219848
58	**Points of Interest - Commercial Services** Name: Tom Luther Location: 26 Sayer Way, Knebworth, SG3 6BN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (S)	406	8	524820 219848
59	**Points of Interest - Commercial Services** Name: Tom Luther Location: 1 Sayer Way, Knebworth, SG3 6BN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (S)	420	8	524936 219839
60	**Points of Interest - Commercial Services** Name: Scuff Off Location: 17 Haygarth, Knebworth, SG3 6HE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	533	8	525259 219876
61	**Points of Interest - Commercial Services** Name: A & Dg Transport Location: 10a Swangleys Lane, Knebworth, SG3 6AA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14SW (SE)	595	8	525409 219967
61	**Points of Interest - Commercial Services** Name: A & Dg Transport Location: 10a Swangleys Lane, Knebworth, SG3 6AA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14SW (SE)	595	8	525409 219967
62	**Points of Interest - Manufacturing and Production** Name: Tank Location: SG3 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NW (E)	642	8	525535 220316

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	**Points of Interest - Manufacturing and Production** Name: Tank Location: SG3 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NW (E)	644	8	525537 220312
62	**Points of Interest - Manufacturing and Production** Name: Tank Location: SG3 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NW (E)	646	8	525539 220307
62	**Points of Interest - Manufacturing and Production** Name: Tanks Location: SG3 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	659	8	525552 220315
63	**Points of Interest - Manufacturing and Production** Name: Tank Location: SG3 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	749	8	525537 219880
64	**Points of Interest - Public Infrastructure** Name: Knebworth Rail Station Location: SG3 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A13SE (E)	26	8	524920 220258
64	**Points of Interest - Public Infrastructure** Name: Knebworth Station Location: Station Approach, SG3 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A13SE (E)	26	8	524920 220258
65	**Points of Interest - Public Infrastructure** Name: Cemetery Location: SG3 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	815	8	524897 219438
65	**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	A8SE (S)	816	8	524891 219437

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
66	**Ancient Woodland** Name: Park Wood Reference: 1116103 Area(m²): 83221.69 Type: Ancient and Semi-Natural Woodland	A12NW (W)	851	9	523997 220281
67	**Areas of Adopted Green Belt** Authority: North Hertfordshire District Council Plan Name: North Hertfordshire District Local Plan **Status: Adopted** Plan Date: 30th April 1996	A13NE (E)	289	10	525176 220333
68	**Areas of Adopted Green Belt** Authority: Welwyn Hatfield District Council Plan Name: Welwyn Hatfield Local Plan **Status: Adopted** Plan Date: 15th April 2005	A8SE (S)	755	11	525021 219514
69	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A13NW (NW)	0	14	524868 220271

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Welwyn Hatfield District Council - Environmental Health Department	August 2013	Annual Rolling Update
East Hertfordshire District Council - Environmental Health Department	January 2013	Annual Rolling Update
Stevenage Borough Council - Environmental Health Department	January 2015	Annual Rolling Update
North Hertfordshire District Council - Environmental Health Department	October 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - Anglian Region	October 2016	Quarterly
Environment Agency - Thames Region	October 2016	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Thames Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Thames Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Thames Region	July 2016	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Stevenage Borough Council - Environmental Health Department	April 2015	Annual Rolling Update
East Hertfordshire District Council - Environmental Health Department	January 2014	Annual Rolling Update
Welwyn Hatfield District Council - Environmental Health Department	May 2012	Annual Rolling Update
North Hertfordshire District Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Stevenage Borough Council - Environmental Health Department	April 2015	Annual Rolling Update
East Hertfordshire District Council - Environmental Health Department	January 2014	Annual Rolling Update
Welwyn Hatfield District Council - Environmental Health Department	May 2012	Annual Rolling Update
North Hertfordshire District Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Stevenage Borough Council - Environmental Health Department	April 2015	Annual Rolling Update
East Hertfordshire District Council - Environmental Health Department	January 2014	Annual Rolling Update
Welwyn Hatfield District Council - Environmental Health Department	May 2012	Annual Rolling Update
North Hertfordshire District Council - Environmental Health Department	September 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - Anglian Region	September 1999	Not Applicable
Environment Agency - Thames Region	September 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Thames Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Thames Region	March 2013	As notified
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 - Thames Region - North East Area	October 2016	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	July 2016	Quarterly
Environment Agency - Thames Region	July 2016	Quarterly
Water Industry Act Referrals		
Environment Agency - Thames Region	July 2016	Quarterly

Data Currency

Agency & Hydrological	Version	Update Cycle
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	October 2016	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	October 2016	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	October 2016	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	October 2016	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	October 2016	Quarterly
Flood Defences Environment Agency - Head Office	October 2016	Quarterly
Detailed River Network Lines Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Thames Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Thames Region - North East Area	August 2016	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Thames Region - North East Area	July 2016	Quarterly
Local Authority Landfill Coverage		
East Hertfordshire District Council - Environmental Health Department	May 2000	Not Applicable
Hertfordshire County Council - Spatial Planning and Economy Unit	May 2000	Not Applicable
North Hertfordshire District Council - Environmental Health Department	May 2000	Not Applicable
Stevenage Borough Council - Environmental Health Department	May 2000	Not Applicable
Welwyn Hatfield District Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
East Hertfordshire District Council - Environmental Health Department	May 2000	Not Applicable
Hertfordshire County Council - Spatial Planning and Economy Unit	May 2000	Not Applicable
North Hertfordshire District Council - Environmental Health Department	May 2000	Not Applicable
Stevenage Borough Council - Environmental Health Department	May 2000	Not Applicable
Welwyn Hatfield District 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 - North East Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Thames Region - North East Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Thames Region - North East Area	June 2015	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	July 2016	Bi-Annually
Explosive Sites		
Health and Safety Executive	September 2016	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
East Hertfordshire District Council	April 2015	Annual Rolling Update
Hertfordshire County Council - Spatial Planning and Economy Unit	February 2016	Annual Rolling Update
North Hertfordshire District Council	February 2016	Annual Rolling Update
Stevenage Borough Council	February 2016	Annual Rolling Update
Welwyn Hatfield District Council	February 2016	Annual Rolling Update
Planning Hazardous Substance Consents		
East Hertfordshire District Council	April 2015	Annual Rolling Update
Hertfordshire County Council - Spatial Planning and Economy Unit	February 2016	Annual Rolling Update
North Hertfordshire District Council	February 2016	Annual Rolling Update
Stevenage Borough Council	February 2016	Annual Rolling Update
Welwyn Hatfield District Council	February 2016	Annual Rolling Update

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	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
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	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	October 2016	Quarterly
Fuel Station Entries Catalist Ltd - Experian	July 2016	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	September 2016	Quarterly
Points of Interest - Education and Health PointX	September 2016	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2016	Quarterly
Points of Interest - Public Infrastructure PointX	September 2016	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2016	Quarterly
Underground Electrical Cables National Grid	January 2016	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	August 2016	Bi-Annually
Areas of Adopted Green Belt		
East Hertfordshire District Council	September 2016	As notified
North Hertfordshire District Council	September 2016	As notified
Stevenage Borough Council	September 2016	As notified
Welwyn Hatfield District Council	September 2016	As notified
Areas of Unadopted Green Belt		
East Hertfordshire District Council	September 2016	As notified
North Hertfordshire District Council	September 2016	As notified
Stevenage Borough Council	September 2016	As notified
Welwyn Hatfield District Council	September 2016	As notified
Areas of Outstanding Natural Beauty		
Natural England	April 2016	Bi-Annually
Environmentally Sensitive Areas		
Natural England	September 2016	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	April 2016	Bi-Annually
Marine Nature Reserves		
Natural England	September 2016	Bi-Annually
National Nature Reserves		
Natural England	September 2016	Bi-Annually
National Parks		
Natural England	August 2016	Bi-Annually
Nitrate Sensitive Areas		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites		
Natural England	April 2016	Bi-Annually
Sites of Special Scientific Interest		
Natural England	April 2016	Bi-Annually
Special Areas of Conservation		
Natural England	April 2016	Bi-Annually
Special Protection Areas		
Natural England	April 2016	Bi-Annually
World Heritage Sites		
English Heritage - National Monument Record Centre	September 2015	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

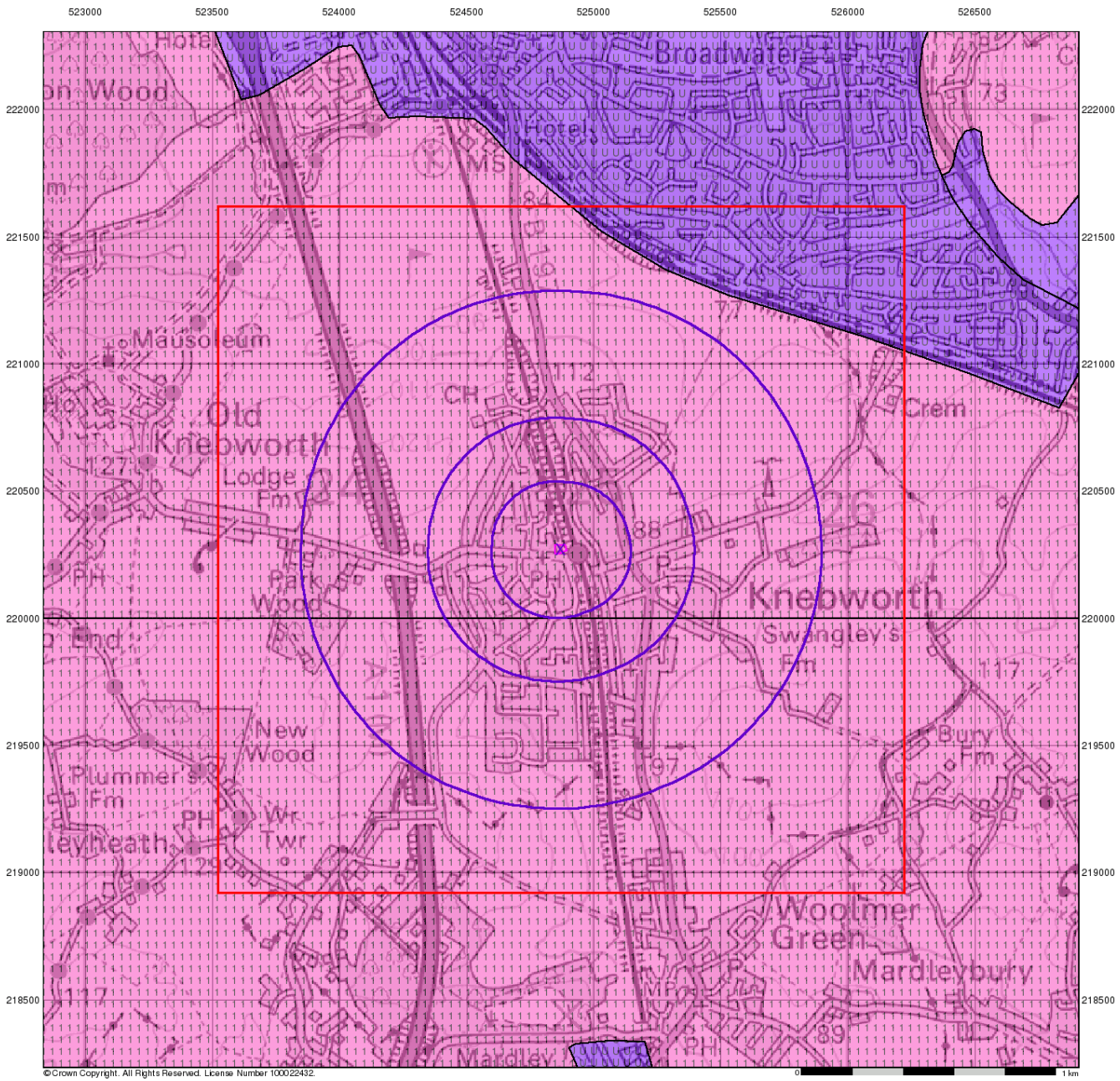
Useful Contacts

Contact	Name and Address	Contact Details
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	**North Hertfordshire District Council - Environmental Health Department** Council Offices, Gernon Road, Letchworth, Hertfordshire, SG6 3JF	Telephone: 01462 474000 Fax: 01462 474559 Website: www.north-herts.gov.uk
5	**Hertfordshire County Council - Spatial Planning and Economy Unit** County Hall, Hertford, Hertfordshire, SG13 8DN	Telephone: 01992 556266 Fax: 01992 556015 Email: spatialplanning@hertfordshire.gov.uk Website: www.hertsdirect.org
6	**Welwyn Hatfield District Council - Environmental Health Department** Council Offices, Campus East, Welwyn Garden City, Hertfordshire, AL8 6AE	Telephone: 01707 357000 Fax: 01707 375490 Website: www.welhat.gov.uk
7	**Peter Brett Associates** Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN	Telephone: 0118 950 0761 Fax: 0118 959 7498 Email: reading@pba.co.uk Website: www.pba.co.uk
8	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
9	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
10	**North Hertfordshire District Council** Council Offices, Gernon Road, Letchworth, Hertfordshire, SG6 3JF	Telephone: 01462 474000 Fax: 01462 474558 Website: www.north-herts.gov.uk
11	**Welwyn Hatfield District Council** Council Offices, Campus East, Welwyn Garden City, Hertfordshire, AL8 6AE	Telephone: 01707 357000 Fax: 01707 375490 Website: www.welhat.gov.uk
12	**East Hertfordshire District Council** Wallfields, Pegs Lane, Hertford, Hertfordshire, SG13 8EQ	Telephone: 01279 655261 Fax: 01992 552280 Website: www.eastherts.gov.uk
13	**Stevenage Borough Council** Daneshill House, Danestrete, Stevenage, Hertfordshire, SG1 1HN	Telephone: 01438 242242 Fax: 01438 740296 Website: www.stevenage.gov.uk
14	**Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)** Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	Telephone: 0113 2613333 Fax: 0113 230 0879
15	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409

Useful Contacts

Contact	Name and Address	Contact Details
-	**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.



IAN FARMER ASSOCIATES

Groundwater Vulnerability

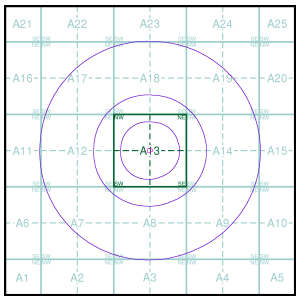
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A

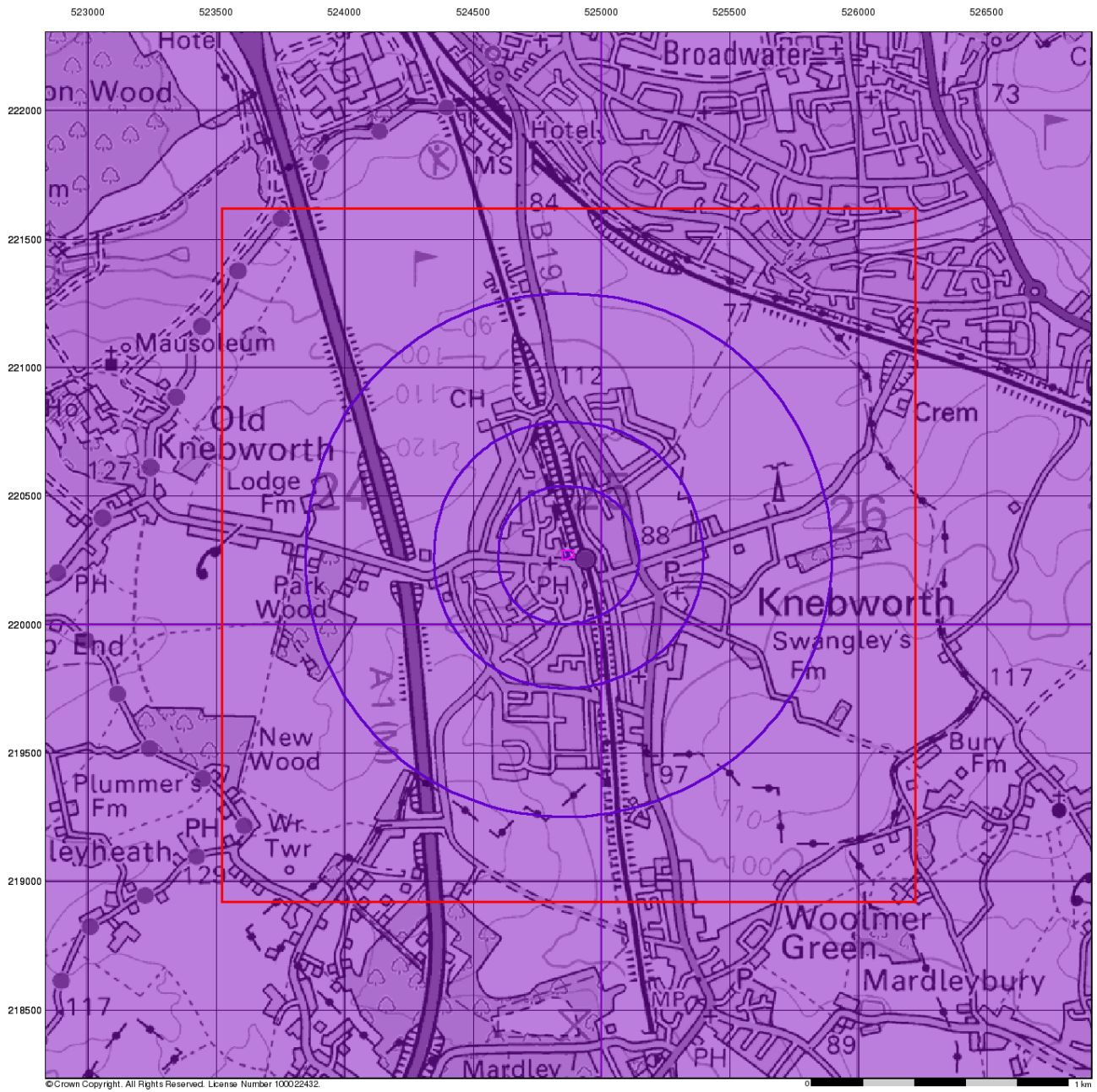


Order Details

Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ



IAN FARMER ASSOCIATES

Bedrock Aquifer Designation

General

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

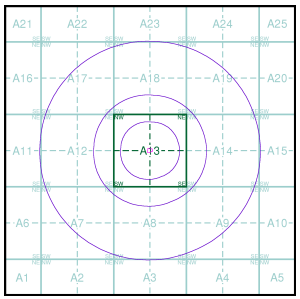
Slice | Map ID

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

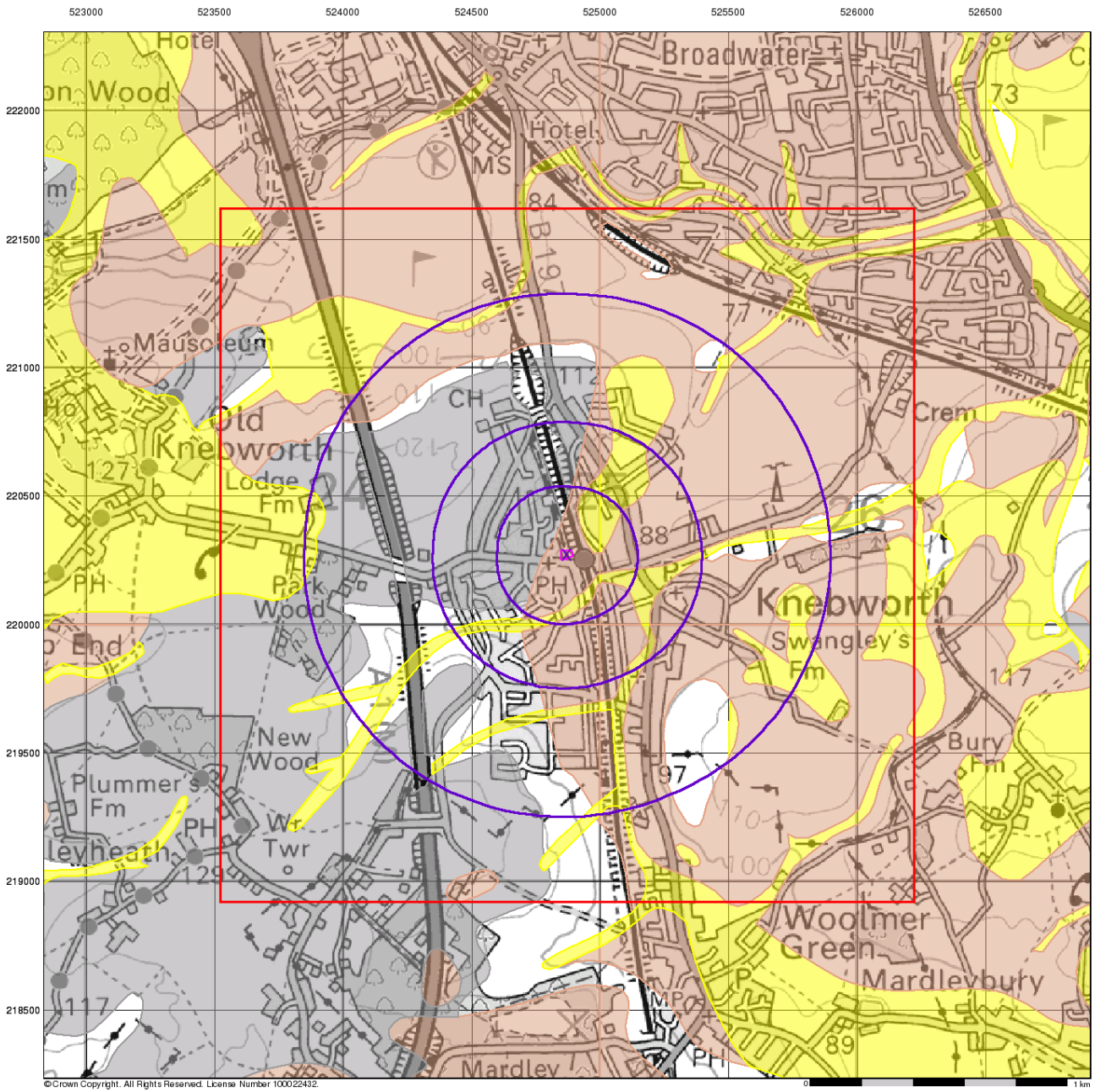


Order Details

Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ



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Superficial Aquifer Designation

General

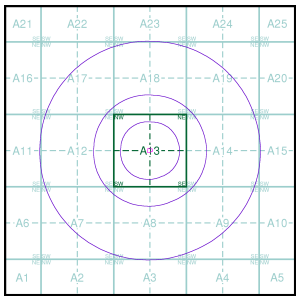
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A

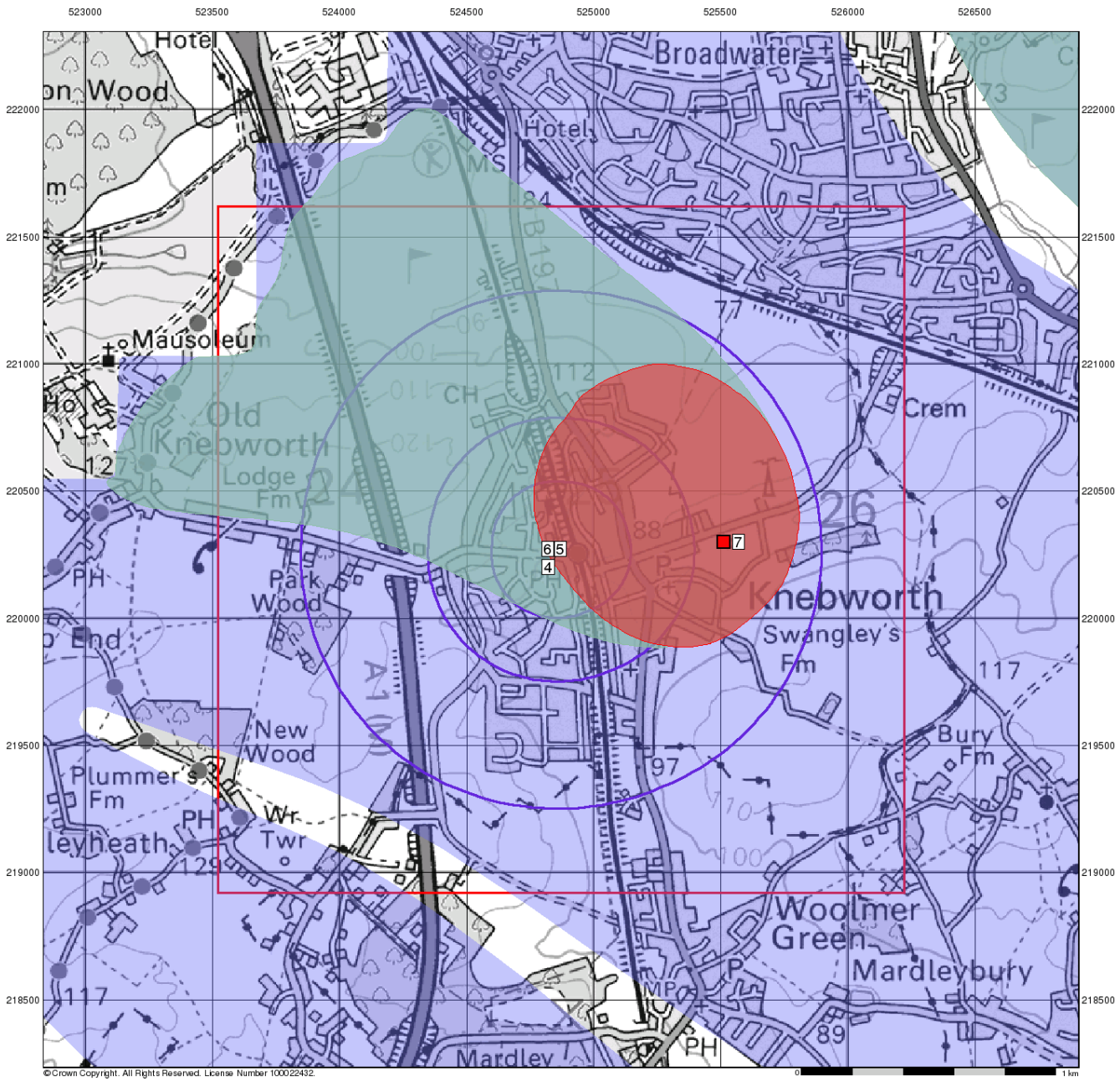


Order Details

Order Number:	103612904_1_1
Customer Ref:	52562
National Grid Reference:	524870, 220270
Slice:	A
Site Area (Ha):	0.14
Search Buffer (m):	1000

Site Details

2, Park Lane, KNEBWORTH, Hertfordshire, SG3 6PJ



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Source Protection Zones

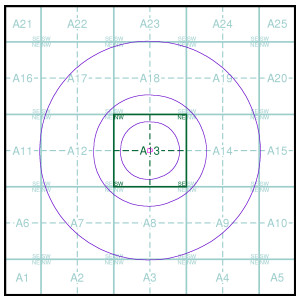
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



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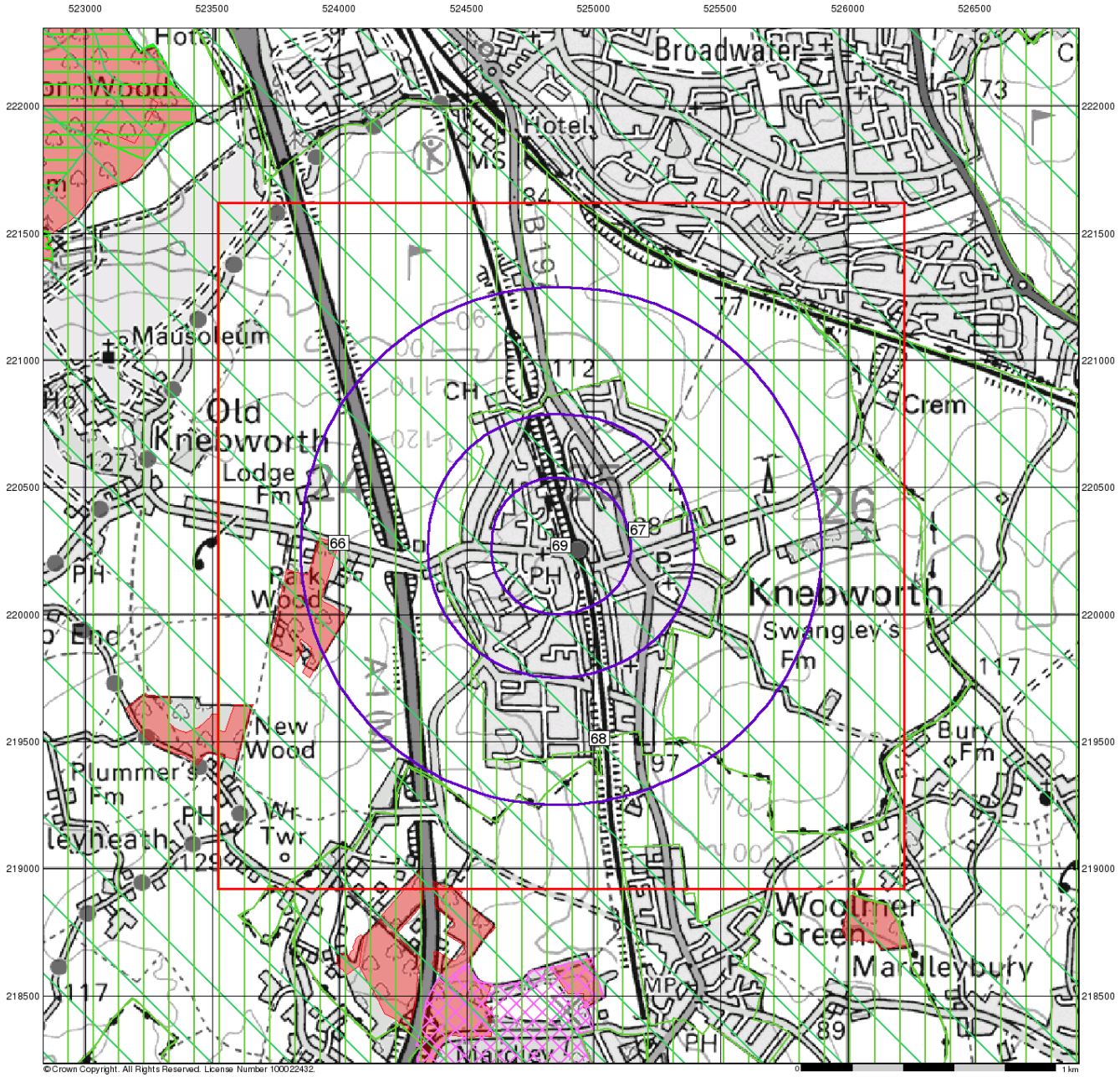
Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Sensitive Land Uses

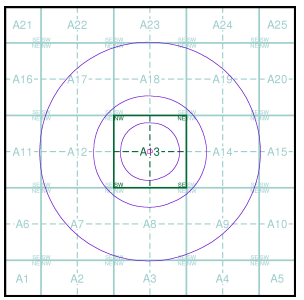
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



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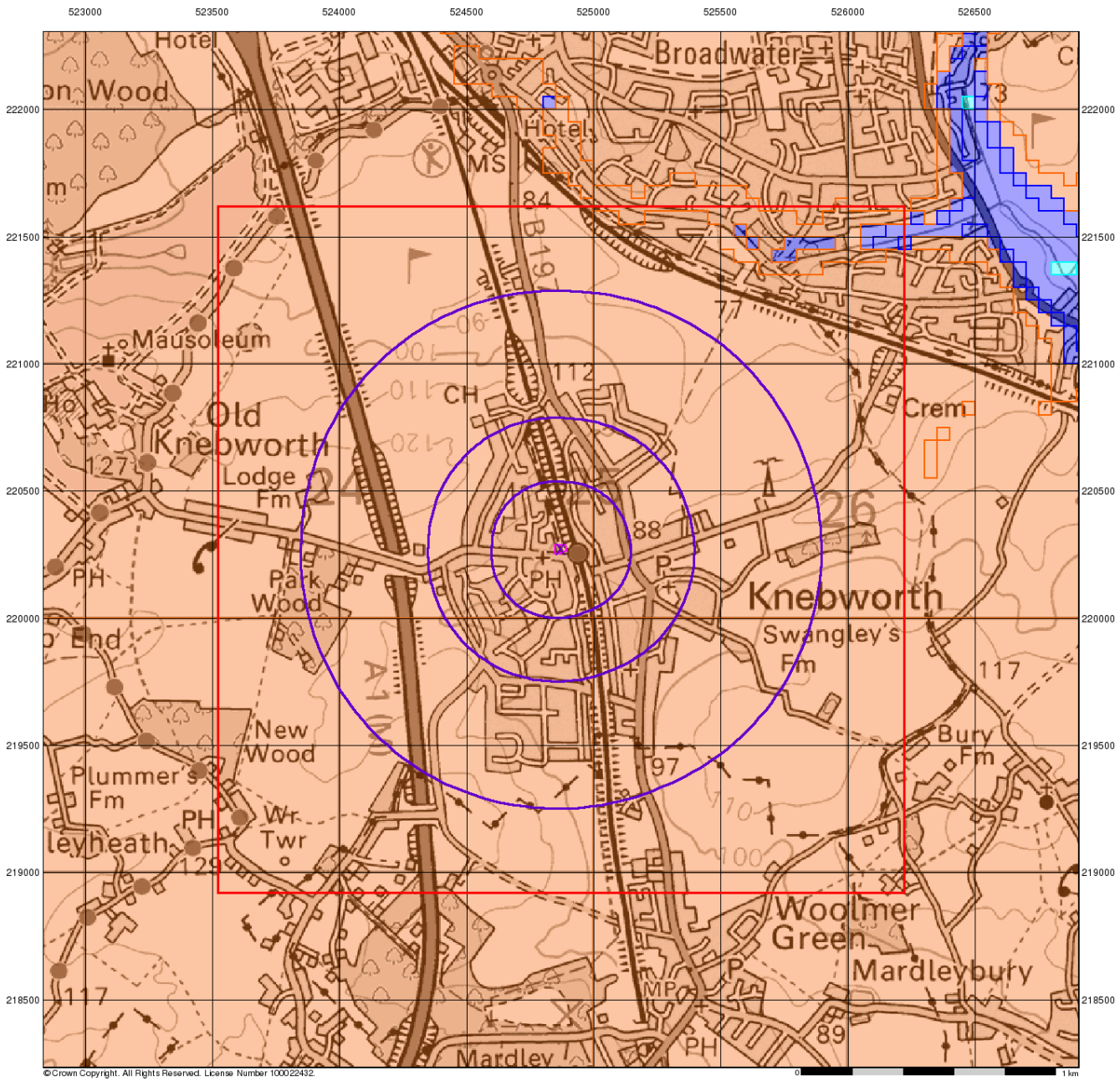

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BGS Flood GFS Data

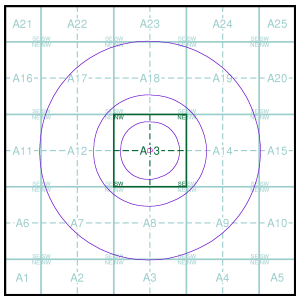
General

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

Agency and Hydrological (Flood)

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

Site Sensitivity Context Map - Slice A



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Site Details

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- Geotechnical Investigation and Advice
- Environmental Investigation and Advice
- Structural and Condition Surveys
- Desk Studies
- Compliance Testing of Material
- Concrete Technology
- Asbestos Survey and Management
- Insitu Testing
- Archaeological Studies and Surveys



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