Millbrook Power Project

Preliminary Environmental Information Report (2017) – Appendices

Volume H

Ground Conditions

On behalf of **Millbrook Power Ltd**

Project Ref: 40334 | Rev: 1.0 | Date: May 2017

Office Address: 16 Brewhouse Yard, Clerkenwell, London EC1V 4LJ
T: +44 (0)207 566 8600 E: london@peterbrett.com

Contents – Volume H – Ground Conditions Appendices

Ground Conditions Appendices

10.1- PBA Phase 1 Ground Condition Report

Millbrook Power Project

Phase 1 Ground Condition Assessment

(Contamination and Ground Stability)

On behalf of **Millbrook Power Ltd**

Project Ref: 31116 | Rev: 1 | Date: December 2014

Office Address: Caversham Bridge House, Waterman Place, Reading, RG1 8DN
T: +44 (0)1189 500 761 E: reading@peterbrett.com

Document Control Sheet

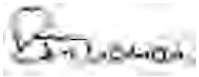
Project Name: **Millbrook Power Project**

Project Ref: **31116**

Report Title: **Phase 1 Ground Condition Assessment (Contamination and Ground Stability)**

Doc Ref: **Rev1**

Date: **December 2014**

	Name	Position	Signature	Date
Prepared by:	James Godfrey	Senior Engineer		18.12.14
Reviewed by:	Paul Jeffery	Senior Associate		18.12.14
Approved by:	Richard Thomas	LLP Director		18.12.14
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
00	30.09.14	FINAL	JG	PJ	RHT
01	12.12.14	SECTION 4 ADDED	JG	PJ	RHT

Contents

Tables

Figures

Appendices

1 Introduction

1.1 Preamble

Peter Brett Associates LLP (PBA) has been instructed by Millbrook Power Ltd (the Client) to undertake a Phase 1 Ground Condition Assessment for an area of land that lies within and around the Rookery South clay pit, approximately 1km to south of the village of Stewartby, in Marston Vale, Bedfordshire. This report has been prepared to support a Development Consent Order (DCO) application to develop the application area for the construction of a proposed gas fired electricity peaking plant.

1.2 Background

The Rookery South clay pit (comprising an area of approximately 95 ha) and adjoining Rookery North clay pit (approximately 70 ha), were previously used for clay extraction from the Oxford Clay Formation to use in brick manufacture at the Stewartby Brickworks. The former clay pits have been largely worked out, with basal levels in the Rookery South pit left largely as they were after excavation apart from some minor areas of reworked ground and partial buttressing of the pit edge side slopes to improve their stability. At the time of writing this report the Rookery South pit was disused and partially flooded. A site layout plan is presented as Figure 2.

Clay extraction ceased in 1986 and a programme of restoration has been proposed for the Rookery South pit as a whole by the current site owner O&H Properties Limited. The proposed low level restoration scheme (LLRS) will be implemented prior to the development of the site and will involve the use of soils, overburden and a proportion of the remaining clay reserves to re-profile the base of the pit, and buttress the side slopes to improve their stability. These restoration works are described in more detail in Section 1.5 below.

The wider site area has been the subject of several previous ground investigations and reports compiled by PBA and others. The following sections of the report draw upon previous studies and site investigation information primarily from the following reports:

- CLA 2000. Ground Investigation – Rookery South Proposed Landfill Site, Bedfordshire. Report no: 2690072. March 2000. CL Associates.
- TC 2001. Terraconsult. Slope stability and Uplift Assessment Rookery South Landfill Site, Bedfordshire. May 2001. Ref. 00/039-1.
- PBA 2003 Peter Brett Associates. Slope stability Review, Rookery South. Letter to O+H Hampton Ltd, dated 9 December 2003. Reference 14051/002/SNK/KB/DA.
- PBA 2005. Peter Brett Associates. Strategic Slope Stability Review, November 2005. Reference 13231/CHB/KB/RHT.
- PBA 2008. Peter Brett Associates. Rookery Pit (North and South) – Low Level Restoration Scheme – Geoenvironmental and Geotechnical Desk Study and Phase 1 Ground Condition Assessment. December 2008. Reference 14081 Geo Phase 1/rev 1.
- PBA 2009. Peter Brett Associates. Rookery Pit – Low Level Restoration Scheme – Engineering Statement. April 2009. Reference 14081EngStat R2.
- PBA 2009a. Peter Brett Associates Proposed Resource Recovery Centre – Rookery South, Stewartby. Geoenvironmental and Geotechnical Desk Study and Phase 1 Ground Condition Assessment. Ref 21780/016/DTS/Rev1.

- PBA 2009b. Peter Brett Associates. Proposed Resource Recovery Centre – Rookery South, Stewartby. Report on Geotechnical and Geoenvironmental Ground Investigation. Ref 21780/016/GI/Rev1.

- PBA 2011. Peter Brett Associates. Rookery Pit Low Level Restoration Scheme Planning Permission Ref BC/CM/2000/8 Site Environmental Management Plan. Ref 14081/052/Rev 1.

1.3 Objectives

This report presents a Phase 1 ground condition assessment comprising a desk study, site walkover and Tier 1 preliminary qualitative contamination risk assessment and land instability appraisal.

The objective of the Phase 1 is to identify the likely ground conditions and environmental setting that might have associated environmental liabilities or which may affect redevelopment, as well as appraising the likely geological or geotechnical hazards at the site. The Phase 1 desk study and site inspection report is the minimum requirement under the National Planning Policy Framework for land potentially affected by contamination or instability. This will be considered a brownfield development.

It should be noted that this Phase 1 assessment is a land condition assessment and does not purport to be an ecological, flood risk or archaeological survey and additional specific surveys may be required to support a planning application. Guidance on the use of this report is provided in Section 8.

1.4 Site Location and Setting

The application land area lies partly within and to the south of the Rookery South clay pit, approximately 1km to south of the village of Stewartby, in Marston Vale, Bedfordshire.

The application area includes a section of land within the Rookery South clay pit that it is understood will house the power generating equipment (The Generating Equipment Site). Adjacent to the north of this there is a small temporary Laydown area that will be used during the construction process. The total Operation and Laydown (Construction) area is around 13 hectares.

The application area also includes a vehicular access corridor road (The Access Route). It runs in a southerly direction from Green Lane along the western perimeter of the Rookery North pit and then descends via an access ramp in the north-western corner of Rookery South pit. It then traverses south at a low level within the base of Rookery South pit to meet the northern boundary of the Generating Equipment Site. The road will be some 1.5km in length.

A large parcel of agricultural land bounding the south of the clay pit is included within the wider application area. This land comprises approximately 215 hectares that will be utilised for a Electrical Connection to the existing 400kV overhead line and a link to the National Transmission System (NTS) gas pipeline, located some 1.2km to the southeast of the Generating Equipment Site site (The Electrical Connection Area). The Electrical Connection routes have not been fully defined and will occupy narrow corridors of land somewhere within this Electrical Connection area.

The remaining parts of the wider Rookery South clay pit bound the immediate northern and eastern boundaries of the operation area, with agricultural land located further to the east of the London to Sheffield (mainline) railway that bisects the site running in a north to south direction. The western boundary of the wider application site is largely bounded by the Bedford to Bletchley (‘Marston Vale’) railway line and Marston Vale Millennium Country Park, with Millbrook Vehicle Proving Ground located further to the south west.

South Pillinge Farm is located to the immediate southwest of the Generating Equipment Site.

This site is currently accessed via a track leading from Green Lane 1.2km to the north of the proposed Generating Equipment Site. The Operation area is centred at National Grid Reference (NGR) TL 012 406. A site location plan is presented as **Figure 1**.

A site layout plan, annotated with features discussed in this report is presented as **Figure 2**.

1.5 Low Level Restoration Scheme (LLRS)

Before development of the subject site it is understood that the proposed LLRS for Rookery South will be implemented and will therefore form the baseline conditions for the Project Site. Planning Permission has been granted for the LLRS under application numbers BC/CM/2000/9 and BC/CM/2000/8. In summary the LLRS for the Rookery South pit will comprise:

1) Topsoil stripping from an area to the immediate south of Rookery South pit to enable further overburden and clay extraction from this area.

2) Excavation of soils, overburden and clay from the southern area to provide engineered clay fill and restoration soils for the re-profiling and buttressing works around the pit edges.

3) Re-profiling of the base of Rookery South pit, graded to falls, utilising clay won from the southern area, resulting in topographic levels in the vicinity of the proposed Generating Equipment Site of approximately 30m – 31m AOD.

4) Construction of a new vehicular access track into the southwestern corner of the pit to provide low level access to the pit.

5) Buttressing of slopes on the southern, eastern and northern sides of the Rookery South pit to provide a slope stabilisation solution to existing slopes.

6) Provision of surface water management ditches in the reprofiled pit base discharging to an attenuation pond located in northwest corner of Rookery South pit. The surface water ditches and attenuation pond will include habitat mitigation and enhancement measures.

7) Provision of pumping station to enable discharge of collected waters from the attenuation pond to Stewartby Lake with additional provision of a pumped emergency flow to Rookery North and reverse flow drainage

1.6 Proposed Development

It is understood the project site will comprise:

- A new Power Generation Plant in the form of a Simple Cycle Gas Turbine (SCGT) peaking power generating station, fuelled by natural gas with a rated electrical output of up to 299 Megawatts (MW). The Power Generation Plant comprises:

    1. Generating equipment including up to five gas turbine generators, up to five exhaust gas flue stacks and balance of plant, which are located within the Generating Equipment Site (together the "Generating Equipment");

    2. A new purpose built access road from Green Lane to the Generating Equipment Site (the "Access Road");

    3. A temporary construction compound required during construction only (the "Laydown Area");

- A new purpose built access road from Green Lane to the Generating Equipment Site (the "Access Road");
- A temporary construction compound required during construction only (the "Laydown Area");
- A new gas connection to bring natural gas to the Generating Equipment from the National Transmission System (NTS) (the "Gas Connection"); and

The Generating Equipment, Access Road and Laydown Area are together known as the "Power Generation Plant", and are located within the Power Generation Plant Site

The Power Generation Plant, Gas Connection, and Electrical Connection, together with all access requirements are referred to as the 'Project' and are all integral to the generation of electricity and subsequent export of that electricity to the NETS. The land upon which the Project would be developed, or which would be required in order to facilitate the development of the Project, is referred to as the 'Project Site' The Project is described in more detail in Section 2, including the options currently under consideration for the Gas Connection and Electrical Connection.

The Power Generation Plant Site is located primarily on land within former clay pits known as 'The Rookery', with the Gas and Electrical Connections extending from The Rookery into adjacent agricultural land.

1.7 Methodology and Report Format

The PBA methodology for ground condition contamination assessment is presented in **Appendix 1**.

The underlying principle is the evaluation of *pollutant linkages* in order to assess whether the presence of a source of contamination could potentially lead to harmful consequences. A pollutant linkage consists of the following three elements:

- A source of contamination or hazard that has the potential to cause harm or pollution;
- A pathway for the hazard to move along / generate exposure; and
- A receptor which is affected by the hazard.

For each potential pollutant linkage identified the risk is estimated through consideration of the magnitude of the potential consequences and the likelihood or probability of an event occurring.

This report is divided into chapters identifying potential sources (hazard identification), potential pathway and receptor identification and risk estimation and assessment.

The ground stability assessment includes a review of all the available historical ground investigation information relating to the proposed application site and published information relating to the geoenvironmental setting. The primary geotechnical objective of this study was to undertake an assessment of the geotechnical constraints present at the proposed application site in accordance with NPPF in order to assist with informing the DCO application for future redevelopment of the site.

1.8 Sources of Information

Information within PBA archives (See Section 1.2 above) and that readily available in the public domain has been reviewed in order to identify the likely ground conditions at the proposed application site and in the surrounding area.

The following additional sources of information were used in the preparation of this report:-

- Emap Groundsure Report and historical maps (Emap 2014)
- PBA walkover inspection on 4th August 2014 – photographic plates are presented in Appendix 2.
- BGS Geology Map held by PBA
- PBA Cavity Databases (non-coal mining and natural cavities)
- Millbrook Power Project, Environmental Impact Assessment Scoping Report, produced by Orbis Power Ltd (Ref: Orbis P1078/04/01 Rev 09).

2 Land Use Information

2.1 Introduction

This section presents a summary of current and historical land uses on and immediately adjacent to the Project Site. Land use is used to inform the hazard identification element of the risk assessment.

The current land use information is based on a walkover inspection undertaken by PBA on the 4th August 2014. Photographs taken during the site walkover (Plates 1 to 6) are presented in **Appendix 2**.

The historical land use information is based largely on archive information held by PBA, supplemented by Ordnance Survey maps and aerial photography provided by Landmark and presented in **Appendix 3**.

The main features noted during the site walkover are marked on the Site Layout Plan (**Figure 2**).

For simplicity and ease of reading, the site descriptions have been split into three sections; the site of the generating equipment and laydown area (Generating Equipment Site) in the base of the Rookery South Pit, the Access Route providing connectivity between the Generating Equipment Site and Green Lane, and the area of the Electrical Connections adjacent to the south of the clay pit (Electrical Connection Area).

2.2 Current Land Use

2.2.1 On-Site – Generating Equipment Site (Generating Equipment Site, Laydown Area)

The Generating Equipment Site of the site lies within the base of the Rookery South clay pit. The pit is currently some 15m lower than the natural surrounding ground level. The base of the pit in this area is roughly level and sparsely vegetated, with no features of note observed within the excavation. The southern part of the site area includes the southern bank of the clay pit, which is again sparsely vegetated. The western bank lies immediately beyond the western boundary of this part of the site, and comprises a split level pit edge slope.

2.2.2 On-site – Access Route

The Access Route to the Generating Equipment Site is located in the base of the Rookery South pit at its southernmost extent. The access road then turns west and curves to the north and runs along the western site boundary between Rookery North Pit lake and the Bedford to Bletchley railway line, that is currently occupied by an access track and a hedgerow running alongside the railway line. The Access Route meets Green Lane at its northernmost extent.

2.2.3 On-Site – Electrical Connection Area

The section of the site currently comprises agricultural land located adjacent to the south and southeast of the Rookery South clay pit. The land comprises around sixteen discrete fields. At the time of the walkover the land was mainly cropped with wheat.

The land rises to the crest of a hill some 600m to the south of the clay pit with maximum elevation of around 71 mAOD. This higher ground generally runs in a northwest/southeast direction, with land falling to the north towards the clay pit.

The London, Midland and Scottish mainline railway line runs through the central parts of this site area in a north-south direction. Millbrook Road also crosses the eastern portion of this site

area, orientated in a northeast-southwest direction; Millbrook Road crosses the mainline railway some 400m to the north of the southern site boundary.

33kV electricity pylons cross part of the Electrical Connection area. These enter along the central southern boundary of the site some 100m to the west of the railway. The pylons run in a north-westerly direction and exit the site boundary immediately to the south of South Pillinge Farm.

Two small watercourses (drainage ditches) are marked on the OS map as flowing through this land, one parallel to the west of the railway and another 500m to the west of the railway

2.2.4 Off-Site Generating Equipment Site

- North: The remainder of the Rookery South clay pit bounds the north of the Generating Equipment Site site, beyond which is the Rookery North pit, Green Lane and the redundant Stewartby Brickworks site. Stewartby Village lies adjacent to the north of the Rookery North pit some 1200m to the north of the Generating Equipment Site.

- East: The remainder of the Rookery South Pit bounds the east of the Generating Equipment Site, beyond which is a railway line and agricultural land.

- West: The western edge of the Rookery South Pit bound the west of the Generating Equipment Site, beyond which there is a railway line and the Marston Vale Millennium Country Park.

- South: The south of the Generating Equipment Site is bound by the Electrical Connection area that largely comprises the southern edge of the Rookery South pit and agricultural land.

2.2.5 Off-Site - Generating Electrical Connection Area

- North: Generating Equipment Site comprising the Rookery South pit and agricultural land to the east of the railway.

- East: Predominantly agricultural land

- South: Predominantly agricultural land

- West: South Pillinge Farm, Station Lane, immediately beyond which Millbrook Vehicle Proving Ground is situated.

2.3 Summary of On-Site Historical Land Use

2.3.1 Electrical Connection Area

- The earliest available historical map (1883/1884) shows the Electrical Connection area to be undeveloped and comprise around twenty agricultural fields. The London, Midland and Scottish Railway is shown to bisect the eastern part of this land orientated in a north-south direction. Millbrook Road is marked within the eastern part of this area crossing the railway line via a bridge within the southeast corner. A small house and a well are marked close to the southern boundary adjacent to the east of Millbrook Road. Several drains running along field boundaries and tracks cross the area as well as two footpaths. An area of woodland in the south-western quadrant occupies approximately a fifth of the site area. Around eight small ponds are present within the eastern third of the site, possibly for livestock purposes.

- The next available map dated 1901 shows few on-site land-use changes. A small (70m x 100m) area of raised land labelled as ‘Rises’ is marked adjacent to the west of the railway line, close to the Millbrook Road bridge crossing. It is unclear from the map what this is used for.

- No further on-site land-use changes could be identified until the map dated 1978, whereby electricity pylons and associated cables are marked crossing this part of the site. The route of the pylons enters the site along the central part of the southern boundary and exits along the western boundary, 200m to the south of South Pillinge Farm.

- On the map dated 1990 the small ponds are no longer marked, and are assumed to have been infilled

- The 2006 map indicates that some of the field boundaries have been removed to make way for larger fields. The field drainage is more clearly marked with a drain running from close to the railway bridge in a northerly direction to the edge of the Rookery South clay pit, then tuning in a westerly direction towards South Pillinge Farm.

- The 2014 map shows no changes in land-use except for a 'mast' that is shown to have been erected adjacent to the east of the railway in the north of the site area.

2.3.2 Generating Equipment Site

- The earliest available map indicates this area of the site falls within the boundaries of four agricultural fields. Two farm tracks originating from South Pillinge Farm cross this area.

- No land use changes are marked in this area of the site until the map dated 1982. This map shows that this part of the site and the extreme north of the Electrical Connection area is occupied by a clay pit, extending beyond the north of the site area and forming part of the wider Rookery South clay pit.

- By 2006 the clay pit is marked as disused with no features whatsoever marked within this part of the site, understood to now occupy part of the base of the clay pit.

2.3.3 Access Road

- The earliest available map (1883) shows the proposed route of the access road to run alongside the Bedford Branch of the London and Northwest Railway, through four agricultural fields. No further features of note are marked within this site area.

- No changes in on-site land use are marked until the map dated 1982. This area of the site now lies wholly within the clay pits of Rookery South and Rookery North (marked as disused). A conveyor and an access track are marked running along the western pit boundary, these fall within the boundary of the access road where it follows this part of the site. An electrical substation is also marked within this area located some 300m to the south of Green Lane adjacent to the access track.

- The Map dated 2006 indicates that the part of the site which falls within the Rookery North pit is occupied by water, expected to be the flooded base of the clay pit. The conveyor remains along the western boundary although it is now shown to run in an easterly direction at the junction of the Rookery South and Rookery North pits. The base of the Rookery South pit is not shown to be flooded at this time.

- The next available map (2014) shows little change in the land use of this part of the site. Some water is now shown within the base of the Rookery South pit, and this is shown to underlie the eastern extent of this access road.

2.4 Summary of Notable Off-Site Historical Land Uses

- The earliest available Ordnance Survey maps from 1889 – 1892 show that the proposed application site was situated in open agricultural land. The railway lines that border the Rookery Pits were already constructed at this time and Millbrook Station had been developed (700m to the southwest of the Generating Equipment Site) in association with the western railway line. The

Morteyns Arms Inn was also present adjacent to the station at this time. The settlement of 'Wooton Pillinge' is marked approximately 1.2km north of the proposed application site, and to the north of that, the early stages of the Pillinge Brickworks are shown (approx 1.8km N of the Generating Equipment Site). A group of buildings labelled as 'Pillinge Farm South' were located 400m to the southwest of the Generating Equipment Site and 'Magpie Hall' was situated 400m to the east of the Generating Equipment Site. A number of footpaths and land drains ran across the area.

- The maps from 1901 show some small developments at the Millbrook Station with construction of a 'goods shed'. The 'Pillinge Brickworks' are shown to have undergone expansion, with two new clay pits shown adjacent to the railway line. Two semi-detached properties, marked as 'Pillinge Cottages, are also shown on the 1901 maps approximately 150m south of Pillinge Farm South.

- A 'Brickworks' is first noted on the 1902 map approximately 500m to the north of the Green Lane. Expansion of this brickworks site takes place over the subsequent decades, with an engine house marked by 1927. The clay pits adjacent to the west of the brickworks site are shown to have expanded and have reached their maximum extent by 1927. Significant expansion of the site is shown on the map dated 1938 with the Pillinge Brickworks site now renamed as the Stewartby Brickworks occupying a large area of land to the north of Green Lane. Continued expansion is shown up until the map dated 1983. By 1983 the site occupies an area of some 700m x 1800m with numerous chimneys, tanks kilns and conveyors marked. The Brickworks site now bounds the land adjacent to the north of Green Lane, some 50m to the north of the northern boundary of the proposed access road for the subject site.

- The 1938 maps show the start of construction of the village of Stewartby immediately to the north of Rookery North (1.2km N of the Generating Equipment Site).

- The commencement of clay extraction from Rookery North occurred in around 1960 with excavations starting in the north and progressing southwards. The excavations within Rookery North were nearing completion at the southern extent of the pit by the early 1970's. Further excavations progressed on the southern side of the central causeway within the Rookery South Pit and continued up until about 1986.

- Station Road was constructed in the early 1970s, connecting the town of Millbrook (to the south of the Generating Equipment Site) with Millbrook Station (to the southwest of the Generating Equipment Site).

- South Pillinge Farm was extended with construction of seven new outbuildings in the late 1970s. Pillinge Cottages (two semi detached properties), situated 140m south of the farm buildings, and an electrical sub-station, situated 250m north of the farm buildings, were also constructed at this time.

- Anecdotal accounts and review of historical aerial photographs suggest that the Rookery North pit was partially backfilled during the period from about 1971 to 1997. The Envirocheck report has indicated that the Rookery North pit was licensed as a 'co-disposal landfill'. Further details provided by the Environment Agency have indicated that non-hazardous organic waste from a variety of local industrial sources were mixed with surface waters from the Rookery Pit and 'Callow' deposits (see Section 5) and pumped into the base of the pit. The licensed area for these operations covered all of the Rookery North pit and the northern third of the Rookery South pit. A copy of the Environment Agency plan showing the extent of the licence boundary shows details of the waste sources as follows: non-notifiable mineral wastes (including 'neosid' ferrite sludge, lime and water from water softening treatments and Hargreaves fertiliser waste), food wastes (from Coca Cola, Rosa Poultry, Telfers and Unilever), leather wastes and gelatine wastes from 'Croda'.

- The 1983 maps show expansion of the village of Stewartby and the Stewartby Brickworks, to the north of the proposed application site. The brick pit adjacent to the Stewartby Brickworks is now shown to be partly occupied by land .and development of a large open area marked as a 'vehicle proving ground' 750m to the southwest of the proposed application site. The pits previously excavated to the northwest of the proposed application site are shown to be flooded and are

marked as ‘Stewartby Lake’. Just to the south of Stewartby Lake, and to the west of the proposed application site, an additional lake is present. This area was further altered in the period between 1999 and 2008 when additional lakes had been created as wetland habitats (the ‘Marston Vale Millennium Country Park’).

- An engineering works is noted some 250m to the southeast of the site boundary of the Electrical Connection area, marked within Reddings’s Wood. Further expansion is shown on the map dated 1978 along with a factory. By 1990 several new buildings have been constructed, with the site now marked as an Engineering Research Establishment.

3 Environmental Setting

3.1 Geology

3.1.1 Geological Map and Regional Geology

According to the British Geological Survey (BGS) Geological Maps (1:50,000 Sheet 203 and 1:10,000 Sheet TL 04 SW) the solid geology of the area generally consists of the following sequence of strata:

- The Peterborough Member of the Oxford Clay Formation (highly plastic fossiliferous clay);
- Underlain by the Kellaways Formation (sandy clays and clayey sands of the Kellaways Sand Member with an underlying stiff shelly clay called the Kellaways Clay Member);
- Underlain by the Cornbrash Formation (limestone) and the Blisworth Clay Formation and Blisworth Limestone Formation at depth.

In the area of the proposed electrical Electrical Connection apparatus in the south of the site the geological map records unworked Oxford Clay comprising the Stewartby Member and the Weymouth Member which underlies the vast majority of this area. The Peterborough Member of the Oxford Clay is shown to outcrop in the northwest corner of the Electrical Connection area.

Small sections of the site area are indicated by the map as having superficial Quaternary Valley Gravel and Alluvium present, associated with former and current streams adjacent to the east of the railway line, albeit some of these deposits may have been removed by the more recent clay extraction works. A further tract of alluvial deposits is shown on the geological map being present adjacent to the east of South Pillinge Farm. Quaternary head deposits comprising clay, silt, sand and gravel are also marked in some parts of the site, namely along the southwestern boundary adjacent to south Pillinge Farm and another area in the southeast of the Electrical Connection area adjacent to Millbrook Road, and along Ampthill Road.

Superficial Deposits and weathered Oxford Clay were unsuitable for the brickmaking process and this material was removed and cast back into the pit. Locally it was called Callow and for the purposes of this report is called Callow, when in-situ, and Callow Clay Fill, when disturbed and placed at a new location. The Callow Clay Fill sometimes contains brick fragments because broken brick rubble was used for making temporary pads and machinery stands. Generally excavations left around 0.5 to 1.0m of remnant Oxford Clay in the base of the pit overlying the Kellaways Sand, although this was dependant on the workmanship of the machine operators and in places the layer of remnant clay is thicker or absent.

The unweathered Oxford Clay was called Knotts by the local brickmaking industry. The Oxford Clay Formation supported a major brickmaking industry locally because its high organic content reduced the amount of fuel required to ‘fire’ the clay, and its carbonate content was ideally suited to brickmaking.

Historical clay extraction from the Rookery Pit has resulted in ground levels in the base of the pit some 15m – 25m lower than the surrounding ground.

3.1.2 Site Specific Ground Conditions from Previous Ground Investigations

Information on the ground conditions from within the site have been taken from CL Associates (2000) and with reference to wider BGS records, and other studies undertaken by PBA in the vicinity of the site within Rookery South and North pits including PBA (2009b) and PBA (2011).

Copies of the exploratory hole records that fall within or close to the site area are presented in **Appendix 4**.

Electrical Connection Area

Exploratory hole records for this area are only present in the northwestern corner of this part of the site. The records from within this area confirm the presence of 'reworked topsoil' comprising soft brown slightly sandy slightly gravelly clay to around 0.2m bgl. This was reportedly underlain by weathered Oxford Clay comprising soft and firm light orange brown mottled slightly sandy clay proven to around 3.5m bgl . This was underlain by Oxford Clay recorded as firm dark green brown laminated very silty clay proven in the boreholes to depths of between 13.8m bgl (BH4) and 20.5m bgl (BH6). The Kellaways Formation was identified underlying the Oxford Clay, recorded as interbedded dark grey sand and firm grey green clay with occasional shell fragments. The Kellaways Formation was proven to between 19.75m bgl and 24.65m bgl in the areas investigated. The Cornbrash Formation recorded as dark grey fine to medium grained muddy limestone was identified underlying the Kellaways Formation, and was proven to a maximum depth of 24.9m bgl (BH6).

Generating Equipment Site and Access Road

On the basis of the available exploratory hole records, the strata thicknesses in the base of the pit are expected to be variable, although consistent in terms of sequencing. Made Ground in the form of Callow Clay fill was reported in several of the exploratory holes proven to a maximum depth of 4.70m in TP14, the base of the Made Ground was not proven in this location. In general the thicknesses of Made Ground (recorded as reworked clay comprising firm grey brown slightly gravelly cobbly clay) appear to be greater towards the centre of the pit. Where the exploratory holes are closer to the edges of the pit, the thicknesses of Made Ground are less or it is altogether absent. In BH13 Made Ground was recorded to a depth of 0.45m bgl, underlain by Oxford Clay proven to a depth of 4.0m bgl. This was underlain by the Kellaways Formation proven to 8.4m bgl, and then by the Cornbrash Formation proven to a depth of 8.8m bgl. The base of the Cornbrash was not proven.

Since the base of the pit is roughly level, on the basis of the exploratory hole records it is anticipated to be underlain by a thickness of either around 4m of Callow Clay or remnant Oxford Clay or a combination of the two depending on the location within the base of the pit.

3.1.3 Slope Stability

Rookery South

At the time of the site walkover the majority of the western face of the Rookery South pit was observed to be formed at angles of 1Vertical(V):2Horizontal(H) to 1V:3H. The slope here rises from the base of the pit at approximately 26m AOD to 28m AOD to a bench level at approximately 38m AOD. The upper bench is approximately 30m in width, with a second slope further westwards rising to the perimeter level at approximately 42m AOD at an angle of approximately 1V:2.5H.

On the northern section of the western face, in the vicinity of the proposed access ramp, the slope profile is formed at characteristically lower gradients. The toe of the slope is situated along the same alignment as the section further south but the width of the upper bench is reduced from 30m to approximately 12m. The resultant slope is at a lower gradient than that further south and is formed at angles of 1V:3.5H to 1V:4H.

Inspection of the western pit face has not revealed the presence of significant failures other than minor slope wash and sloughing in the exposed face in places.

Rookery North

Within the Rookery North pit the southern and eastern pit faces have all been modified by the placement of sludge fill material covered with Callow Clay Fill in the base of the pit, forming shallow gradient slopes of around 1V:16H, that fan out from apparent deposition locations in

the south-eastern parts of the pit. These deposits typically extend part way up the pit faces but in the south-eastern corner of the pit, the bank of deposits extends up to the level of the central causeway at approximately 52m AOD. The western and north-western faces, where they boarder to the access road, appear to be at their as cut angles of approximately 1V:2H to 1V:3H. However, the full height of these faces is obscured by the water body in the pit and only the Callow faces can be seen.

Several small scale failures were noted within the exposed Callow faces along the central parts of the northern wall, i.e to the east of the new junction and access road. These small scale features have resulted in near vertical back scars of typically 1m – 2m in height. These failures coincide with the water levels within the lake and appear to represent a wave cut platform formed as a result of wave erosion affecting the stability of the Callow material.

3.1.4 Naturally Occurring Geological Hazards

An assessment of potential geological hazards that may give rise to instability or adverse foundation or construction conditions as supplied by the British Geological Survey (BGS) from their National Geoscience Information Service (NGIS) are presented in the Envirocheck Report reproduced in **Appendix 3**. The generic assessment is generated automatically based on digital geological maps and the scope and the accuracy is limited by the methods used to create the dataset and the excavations and landform modifications undertaken at the site. The BGS dataset is therefore only relavent for the search area.

The information contained in the Groundsure Report has been reviewed and where considered necessary reassessed considering the specific information available for the site. The modified assessment of the potential for geological hazards to be present on the site is summarised in **Table 3.1** below.

Table 3.1 Summary of Geological Hazards from Groundsure Report

Hazard	BGS-NGIS Assessed Hazard Potential	PBA Assessment
Coal Mining Affected Areas	Not Affected	Agree
Collapsible Ground Stability Hazards	Very Low	Agree
Compressible Ground Stability Hazards	Very Low to Moderate	Agree – see below
Dissolution Hazard	No Hazard	Agree
Landslide Ground Stability	Very Low to Moderate	Agree – see below
Running Sand	No Hazard to Very Low	Agree
Shrinking or Swelling Clay	Moderate	Agree

PBA would generally agree with the above assessments indicating that the site generally has a low or very low potential for being affected by the majority of geological hazards.

The exceptions to this are hazards associated with landslide ground stability which are anticipated to be related to the slopes of the Rookery South clay pit that cross part of the subject site.

Given the implementation of the Low Level Restoration Scheme before commencement of the project, this risk will be reduced to the level of very low through the regrading of the side slopes of the pit to a slope angle that will provide long term stability.

Compressible ground stability hazards are highlighted as moderate owing to the presence of callow clay fill within the base of the clay pit. Some of this fill will be in its ‘as placed’ un-engineered condition and will be susceptible to long term consolidation settlement under its self-weight and/or any surface applied loads. Some engineered fill will be placed over the areas of callow clay fill to deliver the LLRS. PBA would tend to agree with this assessment on the basis of the exploratory hole records present within the site footprint, that suggest variable

proportions of compressible callow clay fill up to 4m thick may underlie parts of the Generating Equipment Site.

3.1.5 Radon

The Indicative Radon Atlas of England from Public Health England indicates the site is located in an area where no radon protective measures are necessary in the construction of new dwellings or extensions.

3.1.6 Natural and Non-Coal Mining Cavity Records – Cavity Searches

A search of the PBA Natural and Non-Coal Mining Cavities Databases indicates that there are no known cavity locations within 2000m of the site boundary.

3.2 Hydrogeology

According to the Environment Agency website, the Oxford Clay, Kellaways Clay and the Blisworth Clay Formations are classified as Unproductive Strata, with the Cornbrash Formation a Secondary A Aquifer and the Blisworth Limestone Formation and Kellaways Sand a Principal Aquifer.

The clayey deposits of the Callow Clay Fill, Oxford Clay, Kellaways Clay and Blisworth Clay Formation have been shown to be of extremely low permeability and can be considered as being aquicludes. Whilst the Kellaways Sand and Cornbrash Formation are classified as Minor Aquifers, they have been shown by extensive investigation for the brickmaking, landfill/waste deposition industry and other developments, to be insignificant for water resources purposes in this region due to their limited thickness, low permeability and poor water quality. These formations are considered herein to act as aquitards. The Blisworth Limestone Formation has been shown to be of a slightly higher permeability but also of naturally poor water quality.

The elevation of the base of the pit inside the development area is between 27m and 30m AOD, and once the LLRS has been implemented the base of the pit is expected to lie between 31.6m and 31.0m AOD. Piezometric levels underlying the pit floor have been recorded at approximately 28m AOD to 29.5m AOD in the Kellaways Sand, approximately 27m AOD – 29.5m AOD in the Cornbrash Formation and approximately 30m AOD – 32m AOD in the Blisworth Limestone Formation. Although there is no evidence at all to suggest that hydraulic uplift (or heave) caused by groundwater pressures has occurred in the pit base in the past, assessments of the potential for hydraulic uplift have shown that the factor of safety is acceptable and there is no risk of heave occurring once the LLRS has been implemented. These assessments are given in PBA 2009 and PBA 2009b.

A summary of the permeabilities of the strata underlying the site and the respective groundwater elevations are presented in Table 3.2 below.

Table 3.2 Summary of Hydrogeological Information (Data from PBA 2009a)

Strata	Recorded Groundwater Elevation (mAOD)	Recorded Permeability Range K (m/s) from PBA 2009b
Callow Clay Fill	Limited perched water only	1.5×10^{-10} to 9.5×10^{-11}
Oxford Clay Formation Knotts		1.1×10^{-10} to 5.2×10^{-11}
Kellaways Sand	28.36m to 29.71 mAOD	1.1×10^{-6} to 1.1×10^{-10}
Kellaways Clay		4.2×10^{-11}
Cornbrash Formation	29.41 to 26.84 mAOD	$<9.4 \times 10^{-8}$ to 5×10^{-9}
Blisworth Clay Formation		5.7×10^{-11} to 6.1×10^{-12}
Blisworth Limestone Formation	30.46 to 32.63 mAOD	1.1×10^{-6} to 7.7×10^{-7}

3.3 Groundwater Conditions

Refer to Section 4 (Baseline Conditions)

3.4 Hydrology – Summary of Surface Water Monitoring Results

Assessment of the quality of the surface water bodies in the vicinity of Rookery Pit has been undertaken since 1999. During this time surface water samples have been taken from the lakes in Rookery South and Rookery North, Harrowden Brook, Elstow Brook, the drainage ditches to the south (the Mill Brook tributary) and west (Mill Brook watercourse) of the site and Stewartby Lake to the west of the proposed application site. A summary of the historical data is presented in the PBA (2009b) report.

Monitoring of the surface water quality within the lake in Rookery South, previously undertaken by CLA in 1999 – 2000, recorded elevated sulphate levels (1,500mg/kg – 2,000mg/kg) and electrical conductivity levels (2,800µS/cm – 3050µS/cm) but no other determinants tested were significantly elevated against the screening criteria such as cyanides, metals and potential organic contaminants. Similar conditions were recorded within the lake in the Rookery North pit at the same time. Monitoring of the surface waters within the ditches and brooks surrounding the Rookery Pits, undertaken at the same time, recorded similar conditions, albeit that the sulphate concentrations and electrical conductivity values were generally lower than within the lakes.

Monitoring of the surface water quality within Elstow Brook and the lakes in the Rookery North and Rookery South pits and the Stewartby Lake has been undertaken on four occasions by PBA (in June – August 2008, January 2009 and April 2011) as part of a study of the wider Marston Vale area. Water samples were analysed for suspended soils, copper, lead, zinc, phosphorus, dissolved oxygen, Biological Oxygen Demand, sulphate, ammonia, chloride, electrical conductivity, nitrate, pH and Total Petroleum Hydrocarbons. The results showed similar characteristics as the data collected previously by CLA, with electrical conductivity levels and sulphate concentrations elevated within the lakes on the Rookery North and Rookery South pits but lower concentrations within the surrounding water bodies. Based upon the recorded BOD and ammonia results, water quality would be classified as Class A (very good) according to the Environment Agency GQA scheme.

3.5 Landfill Records

According to the Envirocheck Report there is a landfill marked within the footprint of the Rookery North and the northern third of the Rookery South pits. The licence is held by London Brick Landfill Ltd at Rookery Clay Pit. Input dates were between 1971 and 1987 with deposited waste including industrial and household waste and liquid sludge. No other landfills are noted within 500m of the site boundary.

Previous investigations confirm that the Rookery South pit was not used for landfilling of household waste or liquid sludge, although the base of the pit has been proven to be underlain by a variable thickness of reworked clay in the form of Callow Clay Fill. It is understood a small area in the northeast corner of the Rookery South pit is underlain by a greater thickness of reworked clay that forms a lobe shaped feature. Extensive investigation of this feature (PBA 2011) suggests that it is inert and comprises reworked Callow Clay Fill, and does not include liquid wastes, sludges or household waste. Its origins are not entirely clear; however it is possible that this feature formed as a result of a land slip or from deposited clay overburden.

Previous testing undertaken on the Callow Clay fill and lobe feature in Rookery South (PBA 2011) indicates that the materials are inert in nature with low concentrations of potential contaminants with regard to the proposed end-use.

The Stewartby Landfill site is marked some 50m to the northwest of the location of the access road. EA records suggest this site last received waste in 1986 and the site received inert, household, industrial, commercial and special wastes.

3.6 Substantiated Pollution Incidents

The Envirocheck Report records one pollution incident to controlled waters approximately 250m to the northeast of the site boundary; none are recorded on-site. The incident is recorded as a Category 2 (minor incident) where treated sewage effluent affected Boiling Pot Brook.

3.7 Controlled Waters - Groundwater

The following table summarises information recorded in the Envirocheck report regarding hydrogeology and groundwater vulnerability.

Table 3.3 Summary of Hydrogeology and Groundwater Vulnerability Related Information

Item	Details
Aquifer Classification	Bedrock (Oxford Clay) – Unproductive Strata Kellaways Sand – Secondary A Aquifer Cornbrash Formation – Secondary A Aquifer Superficial (Valley Gravel) – Secondary Aquifer Blisworth Limestone – Principal Aquifer
Depth to Groundwater	Measured at 31.2m OD on 04/08/14 (BH12)
Groundwater Flow Direction	Unknown
Source Protection Zone (SPZ)	Not within 500m of a SPZ
Groundwater Abstraction	None recorded within 1km of the site boundary

3.8 Controlled Waters - Surface Water

The following table summarises the information recorded in the Envirocheck Report regarding hydrology.

Table 3.4 Summary of Surface Water Related Information

Item	Description
Name	Unnamed drains on-site classed as Tertiary Rivers. No Primary Rivers within 500m of the site boundary.
Quality	Unknown
Abstraction	One recorded on-site operated by R J Parish & Son for general agricultural use from a catch-pit at Ampthill. Two other abstractions for agricultural use are recorded off-site within 1km of the site boundary.
Pollution Incidents	See Section 3.4
Discharge Consents	One recorded on-site licensed to London Brick Company Ltd for the domestic discharge of treated effluent to a tributary of the Elstow Brook. Four other discharge consents are recorded within 500m of the site boundary, primarily associated with treated effluent. It is understood that a second discharge consent is also in force See Section 3.9 for further information.
River Flood Risk *	Site is not within a flood zone
Groundwater Flood Risk*	Unknown
* The scope of this report does not include a flood risk assessment.	

3.9 Discharge Consents

The Envirocheck report details one discharge consent within the site boundary. The consent is related to discharge of final effluent from 3 Pillinge Cottages to a freshwater stream within the site boundary. The receiving water is noted to be a tributary of the Elstow Brook.

It is understood that a second consent is also active within the site boundary associated with the Rookery Pits, although this record is not identified within the Envirocheck Report. Details of this “trade effluent” discharge consent relating to the Rookery South and Rookery North pits have been previously supplied by the current landowners. The consent understood to be

currently in force, allows for pumping “trade effluent” (accumulated waters) from the Rookery Pits into the Mill Brook culvert beneath the railway line to the west of Rookery South and into Stewartby Lake. The points of note relating to this discharge consent are detailed below:

- The discharge must not contain any poisonous, noxious or polluting matter, or solid matter greater than 40mg/l;
- The discharge takes place through a brick lined channel into a partly culverted ditch leading to Stewartby Lake through an outlet at national Grid Reference TL 0112 4131;
- Whilst pumping is underway from the Rookery pits, sulphate and suspended solids concentrations are to be measured once a week (albeit that no constraints on concentrations are identified on the formal consent); and,
- The maximum volume of discharge is not to exceed 2,000m3 in a 24 hour period.

3.10 Ecological Systems

The Magic Map website provides geographic information about the natural environment from across government bodies and is managed by Natural England. The website confirms that there are no statutory designated ecological systems on-site or within 500m of the site boundary.

4 Baseline Conditions - Groundwater Analysis

4.1 Introduction

On the 18th and 19th November 2014 the Project Site was visited to obtain surface water and groundwater samples from several locations in order to assess the surface water and groundwater quality.

Samples were obtained from the following locations and strata/source:

- BH102 (Kellaway Sands)
- BH103 (Kellaway Sands)
- BH104 (Kellaway Sands)
- BH105B (Kellaway Sands)
- BH206 (Cornbrash Formation)
- BH5 (Kellaway Sands)
- BH6 (Kellaway Sands)
- BH12 (Kellaway Sands)
- Rookery South Pit (Surface Water)
- Rookery North Pit (Surface Water)
- Western Ditch (Surface Water)

It was not possible to obtain water samples from boreholes BH8, BH2, BH3 and BH4, because the installations at these locations were lost/destroyed and consequently samples could not be recovered.

4.2 Rationale

4.2.1 Laboratory Selection

Geoenvironmental testing was performed by Derwentside Environmental Testing Services (DETS). The designated laboratory is one of two approved by PBA and which holds UKAS certification and has MCERTS and/or ISO accreditation for the majority of tests scheduled.

Analytical testing for potential contaminants that might be associated with the past use of the site were scheduled on groundwater and surface water samples recovered from the site. In addition reference was also made with the historic testing undertaken at the site to

A total of 12 water samples were taken from the nine boreholes and three surface water locations. Table 5.2 details the geoenvironmental water testing scheduled by PBA.

Table 4.1 Summary of Groundwater Analysis Scheduled

Number of Tests	Description
12	**Metals:** Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Zinc, Mercury
12	**PAH:** Speciated Poly-aromatic Hydrocarbons (PAH)
12	**EPHe:** Extractable Petroleum Hydrocarbons
12	**General Suite:** BOD, COD, Conductivity, Nitrate as NO3, Sulphate, DO, EC Chloride, Phosphate, Ammoniacal Nitrogen, TOC, TDS, TSS, Phenols and Total Cyanide

4.2.2 QA/QC Measures for Groundwater Sampling

A dedicated length of 13mm Waterra tubing was used in each of the boreholes sampled to mitigate the potential for cross contamination.

The standpipes were purged (where possible) to ensure representative sampling of the groundwater body by removing three well volumes; this included both the volume of water within the standpipe itself and the volume contained within any filter pack placed around the standpipe.

Each groundwater sample consisted of two glass vials, a one litre glass bottle and a one litre plastic bottle.

As the water samples being obtained were considered to potentially contain volatile hydrocarbons, contact time with air was kept to a minimum. The sample was immediately sealed with no headspace and stored in a cool box.

The water samples were stored in cool boxes containing ice packs pending transportation.

The samples were transported to the laboratory (by overnight courier) on the day after collection.

4.3 Hydrogeological Conditions

4.3.1 Groundwater Levels

Table 4.2 summarises the groundwater elevations recorded in the boreholes during the most recent monitoring rounds.

Table 4.2 Summary of Groundwater Elevations

BH No	Borehole Elevation (mAOD)	March 2009	November 2009	November 2014	
		Groundwater Elevation (mAOD	Groundwater Elevation (mAOD)	Depth to Groundwater (m bgl)	Groundwater Elevation (mAOD)
BH102	38.41	30.84	-	8.465 [OC]	29.945
BH103	28.94	28.71	-	0.315 [MG]	28.625
BH104	28.89	28.59	-	0.395 [MG]	28.495
BH105B	28.96	28.79	-	1.210 [MG]	27.750
BH206	28.90	23.80	-	5.410 [KS]	23.490
BH5	49.097	-	39.92	9.884 [OC]	39.213
BH6	47.282	-	34.28	13.800 [OC]	33.482
BH12	43.667	-	32.06	12.318 [OC]	31.349

In general the groundwater elevations within the Kellaway Sands are broadly similar to the available historic data. The groundwater elevations in the base of the pit are around 28.7mAOD and are consistent with the previous records. In BH102 which is located on the split level pit edge slope, the groundwater elevations recorded in November 2014 are around 0.9m lower than those recorded during the last monitoring visit in 2009.

BH206 which is screened within the Cornbrash Formation in the base of the pit recorded a broadly similar elevation to that recorded in 2009 at around 23.5m AOD.

Boreholes BH5, BH6 and BH12 are located around the perimeter of the Rookery South pit and are screened within the Kellaways Sand. The recent groundwater elevations recorded are around 0.7m lower during the recent round than the elevations recorded in 2009, although are broadly comparable.

4.4 Review of Groundwater Chemical Testing Results

4.4.1 Selection of Tier 2 Assessment Criteria

The rationale for selection of generic assessment criteria routinely used by PBA has been used and a copy is presented in Appendix 5.

The groundwater bodies underlying the site locally are not abstracted for potable use and the site is subsequently not within a groundwater source protection zone. Test 2 Screening criteria for groundwater have therefore been selected as the screening criteria for groundwater impacts on a surface water body.

4.4.2 Review of Historical Testing Results

In general, groundwater quality in the Kellaways Sand, the Cornbrash Formation and the Blisworth Limestone Formation in the region has been identified as being poor with saline conditions reported from the majority of reports and investigations (PBA, 2009b).

Historical monitoring of water quality within the Kellaways Formation and the Blisworth Limestone Formation (undertaken on 15 occasions during the period February 2000 – November 2002 by CLA within the monitoring boreholes installed as part of the CLA (2000) investigations) has confirmed that the quality of the groundwater within the Kellaways Formation and the Blisworth Limestone Formation is similar in nature, and is generally poor with elevated concentrations of electrical conductivity, chloride, sulphate, ammoniacal nitrogen, boron and zinc when compared to the relevant assessment criteria at the time.

The historical groundwater monitoring data was supplemented by groundwater samples taken from the Kellaways Formation as part of the PBA 2010 investigation from a total of three locations on two occasions. In general, the recent 2010 quality data was similar to that previously recorded by CLA. During the PBA 2010 investigation, hydrocarbon analysis of the groundwater retained from the Kellaways Formation from BH103 (on one occasion) recorded a concentration of 0.026mg/l. A subsequent sample was taken from the same borehole and the result showed a concentration below the detection limit. It is likely that the initial concentration was the result of remnant dilute drilling fluid within the borehole at the time of sampling on the first occasion, which has now been removed by the sampling and purging process.

4.4.3 Review of Recent Testing Results

The recent laboratory data, following a comparison with the screening criteria, is summarised in Table 4.3.

Table 4.3 Summary of Groundwater and Surface Water Chemistry Data

Determinand	Concentration Range (µg/l)	Assessment Criterion (µg/l) Test 2 Minimum	Exceedances Identified
Arsenic	0.78 – 2.7 (BH105B)	51.6	No
Cadmium	<0.03 – 0.06 (BH105B)	0.2	No
Chromium	<0.25 – 0.59 (BH206)	5	No
Lead	<0.09 – 0.65 (BH206)	7.3	No
Mercury	<0.01	1	No
Selenium	<0.25 – 1.4 (BH12)	-	-
Nickel	<0.5 – 14 (BH102)	20.2	No
Zinc	20 – 226 (BH103)	414	No
Copper	0.6 – 2.2 (West Ditch)	10.1	No
Total PAH	<0.04 – 15 (BH206)	-	-
Anthracene	<0.01 – <0.05	0.1	No
Benzo(a)pyrene	<0.01 – <0.05	-	-
Naphthalene	<0.01 – 0.49 (BH206)	2.4	No
Fluoranthene	<0.01 – 3.4 (BH206)	0.1	Yes (BH206)
TPH/EPH	25 – 2739 (BH206)	-	-
Phenol	<0.5	15.2	No

The results from the recent groundwater monitoring are included within Appendix 5. In general, the recent groundwater quality data is broadly similar to the available historic data from 2010 with the exception of BOD, COD, Total Suspended Solids, Total Dissolved Solids, EPH and PAH concentrations which were all generally higher in BH103, BH104 and BH105 and during the recent sampling round.

- Generally the samples had low concentrations of inorganics with none of the samples exceeding any of the adopted screening criteria.
- One concentration of Flouranthene within BH206 exceeded the adopted screening criterion for the protection of controlled waters.
- Concentrations of Extractable Petroleum Hydrocarbons (EPH) were generally recorded at low concentrations at the site (<100µg/l). The exceptions to this are slightly elevated EPH concentrations within BH5, BH102 and particularly within BH206 which recorded an EPH concentration of 2739µg/l. BH206 is screened within the Cornbrash Formation and the sample contained a very high sediment content reflected by a suspended solids concentration of 100000mg/l. It is expected that this entrained sediment content has originated from the organic rich Oxford Clay, and consequently this is reflected in the results. There are no known hydrocarbon sources in the vicinity of the site and as such the slightly elevated EPH concentrations in these boreholes are not expected to be noteworthy or reminiscent of anthropogenic contamination within the groundwater beneath the site.
- Concentrations of individual PAH compounds were generally not recorded above the laboratory method detection level in any of the samples analysed. The one exception to this is a concentration of Fluoranthene (3.4µg/l) in BH206 that exceeded the screening criterion of 0.1µg/l. This sample also contains and elevated EPH concentration expected to be a result of a high sediment content entrained within the sample. It is not expected that this exceedance is significant or noteworthy.

In summary, the quality of the groundwater recorded is considered to be naturally occurring and typical of baseline conditions in similar geological settings. There are no indicators of anthropogenic contamination.

5 Tier 1 Preliminary Risk Assessment

5.1 Introduction

The methodology developed and adopted by PBA for the assessment of ground conditions is presented in **Appendix 1**. In accordance with guidance presented in CLR 11 (EA Model Procedures for the Management of Land Contamination) we adopt a staged approach to risk assessment and this report presents a preliminary Tier 1 assessment.

The underlying principle to ground condition assessment is the identification of *pollutant linkages* in order to evaluate whether the presence of a source of contamination could potentially lead to harmful consequences.

5.2 Conceptual Site Model

The Tier 1 Preliminary Risk Assessment includes the development of a conceptual site model (CSM). The CSM describes the types and locations of potential contamination sources, the identification of potential receptors and the identification of potential transport/migration pathways.

For a pollutant linkage to be identified a connection between all three elements (source-pathway-receptor) is required.

5.3 Geoenvironmental Hazard Identification

5.3.1 On-Site - Electrical Connection Area

This part of the site is currently occupied by agricultural farmland, and historical map evidence suggests this has always been the case. Given the intended use of this part of the site to provide an electrical and gas Electrical Connection there are not anticipated to be any pollutant linkages present, since no significant plausible contamination sources have been identified and the end use will not introduce any new receptors.

The risk assessment has therefore only been taken forward for the Generating Equipment Site and the Access Road, where new plant, infrastructure and potential human heath receptors are expected to be introduced.

5.3.2 On-site – Generating Equipment Site and Access Road

The site is in the southwest corner of a much larger former clay pit. The brickworks manufacturing operation was located approximately 1.3km north of the site, and consequently any potential contamination sources linked to the process of manufacturing and firing of bricks are expected to be located far enough away to not affect the subject site.

A notable thickness of Callow Clay Fill (CCF) typically around 2.5m thick, but possibly in excess of 4.7m thick has been confirmed to be present across the Generating Equipment Site. This CCF has been recorded to take the form of reworked clay with occasional brick fragments and is consequently not expected to contain any significantly elevated concentrations of potential contaminants. Whilst contamination testing data is not available from the exploratory holes within the Generating Equipment Site itself, data is available from other exploratory holes within the Rookery South pit. The results of contamination testing undertaken by both CLA 2000 and by PBA 2009b for the consented Covanta RRF scheme are considered to be representative of the Generating Equipment Site because the historical and geographical setting of the Generating Equipment Site is identical to that of the wider pit area. Testing from the exploratory holes immediately adjacent to the Generating Equipment Site did not show any evidence of elevated concentrations of potential contaminants.

Whilst there is the potential for small pockets of sporadic and discreet localised contamination to be present within the CCF, it is considered that the frequency and magnitude of any such localised contamination will be very small based upon the currently available information.

Experience in contaminated land assessment by PBA of many other brickmaking sites from the same era in the former London Brick Company (LBC) landholding has indicated that the historical industrial activity of clay excavation and casting back of overburden, with reprofiling/landscaping carried out at these sites does not in itself give rise to significant levels of land contamination.

The potential for contamination to be present based on the past and present site use is assessed as classification score '1'; **Very Low**. (see Table 1, **Appendix 1**).

5.3.3 Ground gases

The previous ground investigations have not encountered any significant quantities of organic materials within the deposits underlying the proposed application site; however the Oxford Clay Formation is known to contain clay of a high organic content. Together with the presence of CCF beneath the site area, there is expected to be a potential for the low concentrations of ground gases in the form of carbon dioxide. However, due to the very low permeability of the Oxford Clay Formation, the potential for any ground gases to migrate to the surface, or laterally, is considered to be low.

5.3.4 Groundwater

In general, groundwater quality in the Kellaways Sand, the Cornbrash Formation and the Blisworth Limestone Formation in the region has been identified as being poor with saline conditions reported from the majority of reports and investigations. In particular the Environmental Quality Standard (EQS) screening criteria have been exceeded for Ammoniacal Nitrogen, Boron, conductivity and Chloride. The concentrations recorded are considered to be naturally occurring and typical of baseline conditions in similar geological settings, and not a result of the on-site ground conditions. There are no indicators of anthropogenic contamination, and hydrocarbons have not been recorded above the screening criteria in the more recent analyses undertaken.

5.3.5 Surface Water

Similarly, previous testing undertaken on the surface waters that form part of the wider site area indicate that elevated sulphate and electrical conductivity levels are present in the surface waters at the site. These were the only parameters that exceeded the screening criteria, and based on the results of the BOD and ammonia results the surface water quality would be assessed a Class A (Very Good) according to the Environment Agency CQA Scheme.

In general, the surface water monitoring data largely reflects the chemistry of the groundwater data and shows that whilst naturally occurring substances are elevated within any relatively static water bodies (e.g Rookery North and Rookery South lakes), no significant anthropogenic contamination of the surface waters is occurring.

5.3.6 Off-Site

The application area lies within a predominantly agricultural setting and consequently potential off-site sources of contamination were generally not identified. The exception to this is the Pillinge (Stewartby) Brickworks site and the Stewartby Landfill (which lie adjacent to the northern site boundary of the access road), the railway lines and sidings and South Pillinge Farm.

Millbrook Vehicle Proving Ground is located adjacent to the southwest boundary of the Electrical Connection area; however there are no records of any pollution incidents arising

from this facility within the Envirocheck Report. Furthermore, the distance of these sources from the site boundary in conjunction with the expected low permeability of the underlying geology means that any off-site contamination (if present) is not likely to affect the subject site, because there are not expected to be any feasible transmission pathways.

Given the observations made during the previous investigations and the groundwater and surface water quality data that has been previously collected from the wider Marston Vale area, it is considered that the risk to the application site associated with potential off-site contamination to be present based on the past and present off-site land-use is assessed as classification score '1'; **Very Low**. (see Table 1, **Appendix 1**).

5.3.7 Summary of Potential Contaminants of Concern within Generating Equipment Site and Access Road Site Area

- Ground Gases – Carbon Dioxide

5.4 Hazard Assessment

In order to determine whether the identified hazards pose a risk it is necessary to identify the presence of potential receptors and pathways by which they can be exposed to the hazard.

5.4.1 Identification of Potential Receptors

Potential receptors identified by this assessment and determination of the sensitivity/value are presented in Table 5.1 below.

Table 5.1 – Potential Receptors

Item	Comment	Receptor/Sensitivity
Human Health Current	Undeveloped – Receptors not Present	No - Eliminated
Human Health Future	Commercial /Industrial	Yes – 4
Neighbouring Human Health	None Nearby	No – Eliminated
Construction Workers	Construction Activities Expected	Yes – 4
Groundwater	Underlying aquifers shown not be chemically affected by on-site ground conditions, however site development may introduce preferential pathways into the underlying ground depending on the adopted foundation solution.	Yes – 3
Surface Water	Yes – Surface water in the base of the pit will be managed	Yes – 3
Construction Materials	Services and Foundations	Yes – 2
Animals and crops	No animal/crops and no foreseeable change	No – Eliminated
Ecological Systems	No designated sites within 500m	No - Eliminated
Historical / Archaeological	No identified sites within 250m	No - Eliminated

5.4.2 Identification of Potential Pathways and Pollutant Linkages

Table 2 in the PBA methodology describes possible pathways for each receptor type. The assessment of the potential pollutant linkages identified using information on potential sources, receptors and exposure pathways is presented as a table within **Appendix 6.**

5.5 Risk Estimation

Risk estimation involves predicting the likely consequence (what degree of harm might result) and the probability that the consequences will arise (how likely the outcome is). The table in **Appendix 6** summarises the estimated risks for the identified pollutant linkages.

When there is a pollutant linkage (and therefore some measure of risk) it is necessary to determine whether the risk matters and therefore whether further action is required. Risk estimation involves predicting the likely consequence (what degree of harm might result) and the probability that the consequences will arise (how likely the outcome is).

The table in **Appendix 6** presents an assessment of consequence and probability for each potential pollutant linkage identified. Based on the information available, and assuming a worst case scenario, the estimated risks have been designated as follows:

- Human Health Future Users – Very Low
- Human Health Construction Workers – Very Low
- Groundwater – Very Low
- Surface Water – Very Low
- Buildings / Services – Very Low

During construction phase the underlying ground will be exposed and there is an enhanced short term risk.

The highest estimated risk of Very Low for human health is a function of:

- The relative absence of any likely potential sources of contamination.
- The relativeley low sensitivity of the proposed end use with regard to human health.
- The low sensitivity of the environmental setting surrounding the site.

A very low risk is defined as where ‘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.’

5.5.1 Ground Gases

It is anticipated that the risks to human health arising from naturally occurring ground gases in the clay beneath the site will be low to moderate, and it is anticipated (subject to testing) that any confined spaces may require gas protection measures and/or passive ventilation.

5.6 Risk Evaluation

Possible pollutant linkages are determined using professional judgement. If a linkage is considered possible, it is considered that this represents a potentially ‘unacceptable risk’ and therefore requires further consideration. This may be through remediation or mitigation or through further tiers of assessment.

5.7 Confidence and Uncertainty

Based on the known current and historical land uses, the overall potential for significant or widespread contamination to be present on the site is considered to be **Very Low**. Based on the available information on ground conditions, the potential for any deleterious material producing hazardous ground gases to be present is considered to be **Low** to **Moderate**.

The assessment presented herein is based on publically available land use and third party reports on intrusive investigations. Whilst the third party reports provide comfort that there is not likely to be site-wide gross contamination it is considered plausible, but unlikely, that there may be potential small scale, sporadic and discrete localised sources of contamination present on site that have not been identified as part of the current and previous studies. An intrusive investigation would be required to provide actual ground condition data to confirm the presence/absence of contamination.

6 Preliminary Geotechnical Assessment

6.1 Introduction

The following assessments have been undertaken in accordance with the NPPF, in order to determine whether the land is potentially unstable and identify any appropriate remedial, preventative or precautionary measures, as required. The assessments include consideration of the potential for unstable slopes, ground compression and shrinkage/heave in the context of the proposed development and the local geographical environment.

The following sections of the report are based upon the geological / geotechnical information that has been collated from previous ground investigations and published information.

6.2 Implications of Proposed Low Level Restoration Scheme (LLRS)

It is recognised that the proposed LLRS will take place prior to commencement of the development. The LLRS will include regrading levels within the base of the pit by cut and placement of engineered fill, including the winning of clay fill from parts of the wider area. The earthworks in the base of the pit will be undertaken by placing Oxford Clay Fill in layers to raise ground levels and produce a fall across the pit towards an attenuation pond in the northern part of the Rookery South pit. It is proposed that the resulting topographic levels beneath the Generating Equipment Site will be approximately 31.8m AOD – 31.2m AOD, which equates to a limited thickness of fill above current levels of circa 0.5m in places and cut of up to 1.2m.

6.3 Potential Ground Settlement

Historically the Callow Clay Fill was placed in the base of the pit without any compaction or surcharge control measures having been implemented, and will have settled under its self-weight ever since. Parts of the Rookery South Pit have previously become inundated with water, albeit these are largely located in areas away from the proposed Generating Equipment Site, but may affect the access route in the base of Rookery South pit. These deposits may therefore currently be present in a relatively soft and compressible nature. Any new fill placed in the base as part of the LLRS will therefore induce additional consolidation settlement of the underlying historical Callow Clay Fill.

PBA have previously undertaken detailed research and analysis of the potential for settlements to be induced by loading of historical Callow Clay Fill in the base of similar pits excavated in the Oxford Clay. Assessments have included one dimensional consolidation analysis in the laboratory and monitoring of in-situ settlements caused by surcharge loading. Results of one-dimensional consolidation testing showed M_v values, which describe the total magnitude of settlement, generally in the range 0.3 m^2/MN to 0.4 m^2/MN. Corresponding C_v values, which describe the time required for settlement to occur, ranged from 0.2 m^2/year to 1.4 m^2/year. It has, however, been recognised that the C_v values from consolidation tests show considerable variation and estimates of the time required for settlement to occur are sensitive to these variations. Back-analysis of the in-situ settlement recorded in association with the construction of an earth embankment over Callow Clay Fill estimated actual C_v values in the range 1.6 m^2/year to 3 m^2/year.

Utilising relatively conservative values, with an Mv value of 0.4 m2/Mn and a Cv value of 2 m2/year, preliminary calculations show that for 0.5m of engineered fill placed over 2.5m Callow Clay Fill total settlements of about less than 20mm can be expected. In areas where thicker deposits of Callow Clay Fill have been recorded, or alternatively where thicker deposits of engineered fill will be placed, larger settlements will take place. It is, however, recognised that some areas of relatively thick Callow Clay Fill form topographic high points and will therefore require less engineered fill in order to produce the required platform levels.

The currently envisaged programme for the placement of engineered fill as part of the LLRS and the subsequent development works suggests that construction will commence almost immediately after completion of the earthworks for the LLRS in the Generating Equipment Site and will be largely completed within 12 months. Given this timescale, settlement of the Callow Clay Fill induced by placement of any residual engineered fill will not be fully mobilised prior to construction and recognition of such should therefore be made in respect of the design of hard-surfacing and infrastructure not founded upon deeper naturally occurring materials, particularly in respect of any differential settlement that might occur. It may be necessary to incorporate mitigation measures into the design such as ground improvement or geogrid re-inforcement to stiffen the ground present.

Particular attention will need to be given to any areas where the characteristics and thicknesses of the underlying deposits vary across short distances such as at the edges of the pit. Here, there may be a considerable thickness on unimproved Callow Clay Fill banked against the relatively incompressible natural ground forming the steep original pit edge. Infrastructure such as roads, pavements and utilities could be at risk from unacceptably high magnitudes of differential settlement and careful consideration should be made of this risk in their design.

6.4 Access Road and Green Lane Junction

The proposed development includes for provision of a new vehicular access junction from Green Lane into the existing open access area adjacent to the north-western corner of the Rookery North pit. In order to facilitate the required turning arcs for large construction vehicles the access road may pass relatively close to the perimeter crest of the pit. The design of the access road must therefore include assessment of the slope angle, the distance between the road and the slope and the resultant slope stability.

Improvements to the slope profile within Rookery North pit in the north-western corner following further bathymetric surveys and stability analysis have been submitted and approved as part of the discharge of the LLRS planning conditions.

6.5 Foundations

The ground conditions on the proposed application site are, in general, expected to form a suitable platform for the construction of proposed facility. For very lightly loaded elements of the proposed facility and elements that are able to tolerate differential movements, shallow spread footings constructed within the remaining Oxford Clay, and possibly in the overlying Callow Clay Fill and engineered development platform fill, could be an appropriate option.

6.6 Floor Slabs and Pavements

Based upon the expected ground conditions present on the Generating Equipment Site, comprising Callow Clay Fill overlain by a limited thickness of engineered fill placed in the base of the pit as part of the LLRS, it is expected that lightly loaded ground bearing floor slabs and pavements constructed on a suitable depth of capping/sub-base and reinforced by geogrid as necessary will prove adequate.

However, given the relatively soft nature of the Callow Clay Fill, any heavily loaded floor slabs will either need to be suspended on to piles or the ground will require improvement before the slabs are cast. Potential ground improvement techniques could include preloading and surcharging of the Callow Clay Fill in order accelerate the settlements, or improvement of soft materials by in-situ ground improvement techniques, such as the installation of vibratory stone or concrete columns. It should be recognised; however, that surcharging is a process that requires a certain period of time for porewater pressures to dissipate and for primary settlements to take place and it may be necessary to install additional drainage such as vertical sand drains for this to take place during an acceptable timescale.

6.7 Clay Volume Change Potential

Due to the highly plastic nature of the Oxford Clay, and the Callow deposits derived from it, the soils are liable to shrink or swell in response to changes in moisture content. Such changes in moisture content can occur due to seasonal or climatic effects but more commonly structural damage can occur when trees and hedgerows remove moisture from the soil at depth. Conversely removal of trees can cause swelling and structural damage as the soils re-saturate.

Guidance on foundation design in such circumstances is given in BRE Digests 240, 241, 242, 298 and 412, and also in NHBC Standards Chapter 4.2, which can be applied as equally as appropriate to industrial buildings as houses. The historical laboratory testing on the soils present indicates that the in-situ Callow deposits exhibit a high volume change potential whilst the Callow Clay Fill and the Knotts exhibit a generally moderate volume change potential. It is recommended that a high volume change potential is assumed for those fill deposits that will be placed into the base of the pit as part of the LLRS. Particular attention will need to be given to the design of any foundations within the tree root zone of influence of the extensive tree screen proposed as part of the landscaping of the proposed application site.

NHBC Chapter 4.2 recommends that for foundations outside of the zone of influence of any proposed trees or shrubs a minimum foundation depth of 1.0m should be adopted for high volume change potential soils. For any foundations inside the potential zone of influence of any proposed trees or shrubs foundation depths of 1.5m are appropriate, providing that absolute limits are agreed within the planting schedules to exclude any tree planting a certain distance to the foundations. The reader is referred to the NHBC guidance for further details regarding the zone of influence identified for a variety of different tree species.

6.8 Chemical Attack on Buried Concrete

It should be recognised that the Oxford Clay is known to be sulphate and pyrite bearing and can therefore be corrosive to buried concrete. Groundwater and surface water monitoring data has also indicated that the waters present at the proposed application site are characterised by high chloride and high sulphate concentrations. It is recommended that checks on site specific conditions should be made prior to construction and the mix design of buried concrete should follow the recommendations of BRE Special Digest 1: Concrete in Aggressive ground (2005). Generally a design sulphate class of DS4 is required in Oxford Clay terrain and subject to groundwater considerations an ACEC class of AC-4 is adopted for mobile groundwater conditions.

6.9 Slope Stability

A number of both small scale and large scale instability features have been noted within the Callow and Knotts slopes of the strata in the side walls of the Rookery South pit. The length of side wall adjacent to the proposed location of the Generating Equipment Site is however formed at slacker angles with a bench of 30m width formed part-way down the slope. Here the original pit edges have been modified in the earlier stages of a former restoration programme that was not fully implemented. The gradient of the slopes on this face are formed at angles of approximately 1V:3H to 1V:2H . The overall profile is formed at approximately 1V:4.5H.

The results of a survey of the slope condition on motorway earthworks (Perry, 1989) indicates that slopes greater than 2.5m high, constructed using material sourced from the Oxford Clay Formation, should have a gradient no steeper than 1V:3.5H to limit the risk of slope failure to less than 1 per cent within 20 years of construction. Where the slopes are formed at a gradient steeper than 1V:3.5H, weathering and progressive softening of the near-surface soils on the slope may result in shallow translational and flow movements through the soils near the base of the root system of the vegetation on the slope. For slopes at about 1V:2.5H, the risk of such failures occurring within about 10 years of construction was reported to be about 20%.

In the western parts of the Generating Equipment Site, the proposed slope gradient as a result of the LLRS earthworks will provide a resultant slope gradient equivalent to approximately 1V:3.5H.

6.10 Potential for Hydraulic Uplift

When the piezometric pressure in a relatively permeable stratum exceeds the confining overburden pressure of the relatively impermeable strata overlying it, then there is a theoretical risk of heave or hydraulic uplift. However, the inherent strength and cohesion of the confining strata (rather than just its downward acting mass) can also contribute to the resisting downward forces acting against the uplift. Therefore with essentially impermeable deposits (remnant Oxford Clay and Callow Clay Fill) overlying slightly more permeable deposits (Kellaways Sand), and with relatively high piezometric levels recorded in boreholes around the perimeter of the proposed application site, there might be a risk that hydraulic uplift may occur in the pit base where the thickness of the overlying impermeable deposits has been reduced by excavation works and overburden pressures therefore reduced. It should be noted that hydraulic uplift has not occurred in this pit although the theoretical possibility remains.

Previous groundwater monitoring undertaken at the proposed application site has shown that piezometric levels within the Kellaways Sand are at, or close to, the topographic levels currently present within the base of the pit. However, the permeability of the Kellaways Sand has been shown by historical investigations to be relatively low (2.4×10^{-6} m/s to 5.1×10^{-7} m/s) and the potential for significant hydraulic pressure to build up is therefore considered to be very low.

Calculations of the potential for basal heave have been undertaken using stratigraphical information collected during historical ground investigations undertaken at the proposed application site by CL Associates in 2000 (CLA, 2000) and maximum recorded piezometric levels based on hydrogeological information collected during groundwater monitoring undertaken by CLA between 2000 and 2002 and by PBA in June and September 2008. The factor of safety against the potential for heave to occur as a result of piezometric pressures within the Kellaways Sand, Cornbrash Formation and the Blisworth Limestone Formation, has been calculated by comparing the uplift pressure from each respective groundwater body, measured at boreholes located within the base of the pit, to the vertical overburden pressure applied by the overlying deposits based on the proposed basal formation levels at these locations. The results show that a factor of safety against basal heave of 1.5 or more is present and basal heave is therefore considered unlikely to occur.

The proposed regrading works included as part of the LLRS will result in a platform at approximately 31m AOD – 31.8m AOD. These works will effectively require placement of up fill in places but removal of soil in other areas where ground levels are currently slightly higher than the proposed platform levels. In general, comparing the depth to the Kellaways Sand Formation, recorded during previous ground investigations, with the proposed development platform level indicates that the Kellaways Sand will be overlain by approximately 5m – 10m of very low permeability in-situ Oxford Clay and re-worked Callow Clay fill and basal heave is considered highly unlikely to occur.

6.11 Surface Water Disposal

The Oxford Clay and underlying Kellaways Sand are of a very low permeability and there is therefore no scope for the use of infiltration drainage within the proposed application site. As a result, the LLRS includes development of a surface water attenuation pond and associated pumping station in order to control the surface waters within the pits.

It is understood that the drainage of the proposed application site will be via a series of surface water interceptor channels flowing under gravity to the surface water attenuation pond. Levels within the attenuation pond will be controlled by stage pumping any accumulated waters via an existing culvert into Mill Brook and ultimately Stewartby Lake.

7 Conclusions and Recommendations

7.1 Conclusions

The Project Site spans several different parts of the Rookery South site, and includes a large Electrical Connection area that falls outside the clay pit adjacent to the south of the pit. The Generating Equipment Site of the site falls within the southwest corner of the Rookery South clay pit that provided clay to the nearby Stewartby brickworks. It is understood that clay extraction from this area ceased in 1986. The remaining parts of the Project Site lie to the south of the clay pit and comprise agricultural land that forms part of the Electrical Connection area. Evidence from historical maps suggests that this land has always been in agricultural use.

From a review of the available desk based information it is likely that Callow Clay Fill in the form of reworked clay underlies the base of the clay pit in the Project Site. Indications are that this could be in excess of 4.5m deep in some parts although more typically around 2.5m thick. Chemical testing data is not available on this from within the actual site area, although records from samples taken elsewhere within the wider confines of Rookery South Pit indicate that the material is typical of reworked clay with rare inclusions of brick, and consequently this is not expected to represent a potential source of contamination.

With regard to the Electrical Connection area, there are not expected to be any new receptors introduced, since the area will only be used to provide a below ground gas and above ground electricity Electrical Connection. Furthermore there are not expected to be any notable on-site or plausible off-site sources of contamination in this area, potential hazards associated with ground contamination have therefore not been identified in this part of the site, and hence the risk assessment for this area has not been taken forward.

Whilst it is possible that the reworked Callow Clay Fill within the base of the clay pit may contain isolated, discrete and localised elevated concentrations of potential contaminants, this is considered unlikely on the basis of the testing carried out elsewhere on the site. Furthermore the low sensitivity of the proposed end-use in this area means that even if any localised contamination were present, it is unlikely that any pollutant linkages between the end-users and the ground will be active.

Nevertheless, the presence of Callow Clay fill and the organic rich Oxford Clay Formation could represent a possible low level Carbon Dioxide ground gas source that could migrate to the ground surface via permeable pathways in the reworked ground, or via anthropogenic caused during construction.

Potential pollutant linkages have been identified within the Generating Equipment Site of the site only. Using the information on potential sources (contaminant types), receptors and exposure pathways the estimated risks for the identified pollutant linkages have been assessed as Very Low in all cases (human health and controlled waters). The exception to this is risk associated with naturally occurring ground gas (carbon dioxide) within the underlying clay, further investigation will be required to assess this risk, and it should not be ruled out that some form of mitigation in the form of gas protection measures may be required.

It is therefore considered that the site is unlikely to be designated as “contaminated land” under Part IIA.

Possible pollutant linkages have been identified in the Generating Equipment Site and Access Road only, but these risks have been assessed to be Very Low. It is considered that the risks can be managed and reduced to an acceptable level through a combination of mitigation, remediation, design and adoption of good practice measures during construction.

7.2 Geotechnical Conclusions

It is recognised that the proposed LLRS will take place prior to commencement of the development. The LLRS will include regrading levels within the base of the pit by cut and placement of engineered fill, including the winning of lay fill from parts of the wider site area. The earthworks in the base of the pit will be undertaken by placing Oxford Clay Fill in layers to raise ground levels and produce a fall across the pit towards an attenuation pond in the northern part of the Rookery South pit. It is proposed that the resulting topographic levels beneath the Generating Equipment Site will be approximately 31.8m AOD – 31.2m AOD, which equates to a limited thickness of fill above current levels of circa 0.5m in places and cut of up to 1.2m. In the western parts of the Generating Equipment Site, the proposed slope gradient as a result of the LLRS earthworks will provide a resultant slope gradient equivalent to approximately 1V:3.5H to limit the risk of slope failure to less than 1 per cent within 20 years of construction.

The ground conditions on the proposed application site are, in general, expected to form a suitable platform for the construction of proposed facility. For very lightly loaded elements of the proposed facility and elements that are able to tolerate differential movements, shallow spread footings constructed within the remaining Oxford Clay, and possibly in the overlying Callow Clay Fill and engineered development platform fill, could be an appropriate option.

It should be recognised that the Oxford Clay is known to be sulphate and pyrite bearing and can therefore be corrosive to buried concrete. Generally a design sulphate class of DS4 is required in Oxford Clay terrain and subject to groundwater considerations an ACEC class of AC-4 is adopted for mobile groundwater conditions.

7.3 Recommendations

It is recommended that a Geotechnical Ground Investigation is carried within the Generating Equipment Site to inform the foundation design of the proposed infrastructure within the Generating Equipment Site of the site. The ground investigation should primarily target the parts of the site that fall within the base of the clay pit to ascertain the nature and extent of the Callow Clay Fill present.

Given the anticipated low level of contamination risk throughout the application area and its proposed end-use, it is anticipated that the requirement to carry out a bespoke Phase 2 geoenvironmental intrusive investigation is not required. It is not expected that a ground investigation of any type will be required for the Electrical Connection area owing to the lack of feasible contamination hazards and receptors within this part of the site.

It may however be prudent to obtain soil samples for geoenvironmental screening during the geotechnical ground investigation in the Generating Equipment Site, and to simultaneously install groundwater/gas monitoring standpipes during these works. This should be followed up by a robust groundwater/gas monitoring programme. It is expected that any requirement for contamination testing be satisfactorily dealt with by planning conditions incorporated in any granted Outline Planning Consent.

It is nevertheless recommended that a programme of groundwater and surface water monitoring is carried out for the site to provide information on the current baseline conditions prior to construction at the site.

8 Essential Guidance for Report Readers

This report has been prepared within an agreed timeframe and to an agreed budget that will necessarily apply some constraints on its content and usage. The remarks below are presented to assist the reader in understanding the context of this report and any general limitations or constraints. If there are any specific limitations and constraints they are described in the report text.

The opinions and recommendations expressed in this report are based on statute, guidance, and best practice current at the time of its publication. Peter Brett Associates LLP (PBA) does not accept any liability whatsoever for the consequences of any future legislative changes or the release of subsequent guidance documentation, etc. Such changes may render some of the opinions and advice in this report inappropriate or incorrect and the report should be returned to us and reassessed if required for re-use after one year from date of publication. Following delivery of the report PBA has no obligation to advise the Client or any other party of such changes or their repercussions.

Some of the conclusions in this report may be based on third party data. No guarantee can be given for the accuracy or completeness of any of the third party data used. Historical maps and aerial photographs provide a “snap shot” in time about conditions or activities at the site and cannot be relied upon as indicators of any events or activities that may have taken place at other times.

The conclusions and recommendations made in this report and the opinions expressed are based on the information reviewed and/or the ground conditions encountered in exploratory holes and the results of any field or laboratory testing undertaken. There may be ground conditions at the site that have not been disclosed by the information reviewed or by the investigative work undertaken. Such undisclosed conditions cannot be taken into account in any analysis and reporting.

This report has been written for the sole use of the Client stated at the front of the report in relation to a specific development or scheme. The conclusions and recommendations presented herein are only relevant to the scheme or the phase of project under consideration. This report shall not be relied upon or transferred to any other party without the express written authorisation of PBA. Any such party relies upon the report at its own risk.

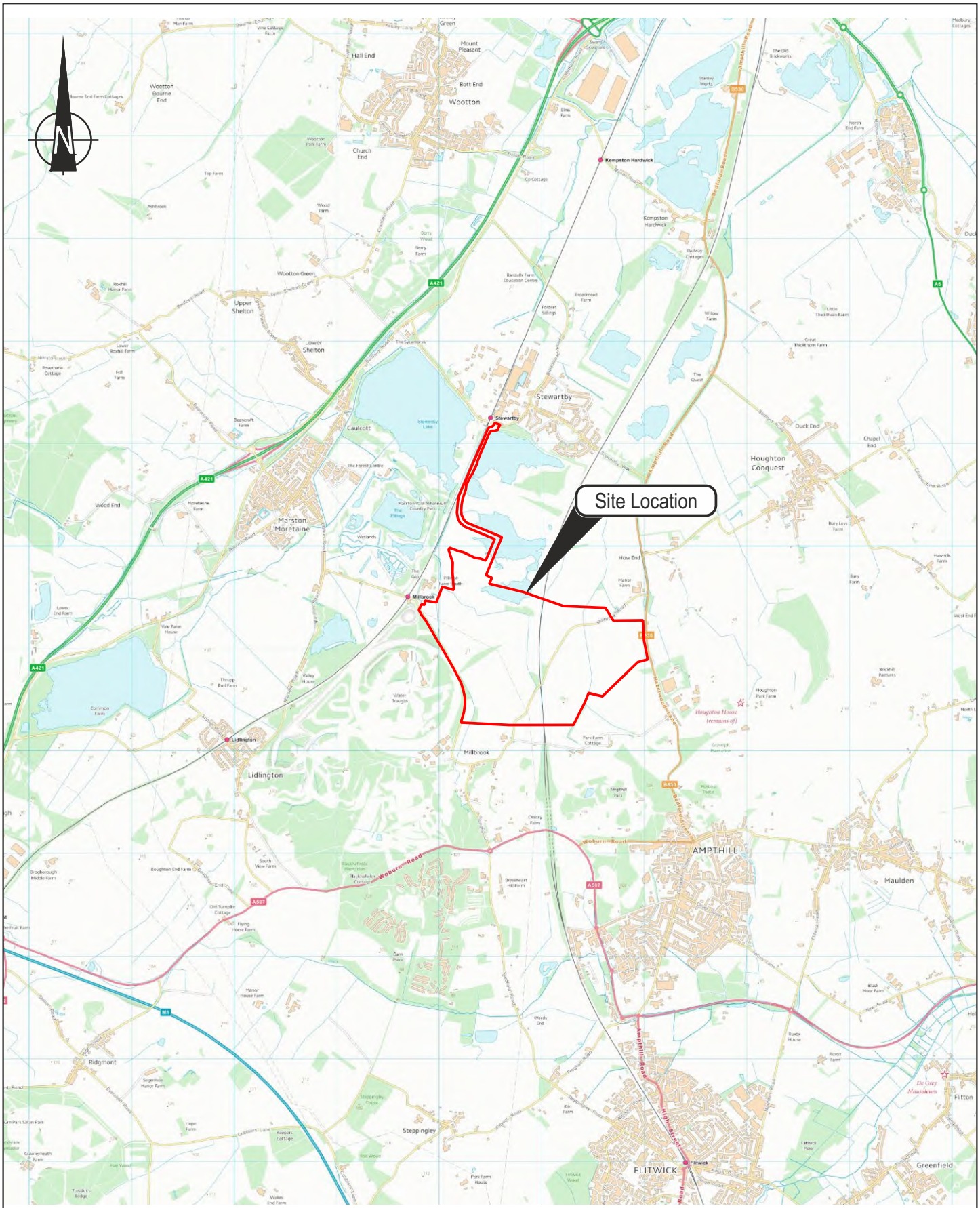
The interpretation carried out in this report is based on scientific and engineering appraisal carried out by suitably experienced and qualified technical consultants based on the scope of our engagement. We have not taken into account the perceptions of, for example, banks, insurers, other funders, lay people, etc, unless the report has been prepared specifically for that purpose. Advice from other specialists may be required such as the legal, planning and architecture professions, whether specifically recommended in our report or not.

Public or legal consultations or enquiries, or consultation with any Regulatory Bodies (such as the Environment Agency, Natural England or Local Authority) have taken place only as part of this work where specifically stated.

9 References

- EA, 2004 The Model Procedures for the Management of Land Contamination CRL 11 published by the Environment Agency (EA)
- EA, 2010 Guiding Principles for Land Contamination GPLC 1 to 3. Environment Agency (EA)
- EA, 2013 Groundwater protection: principles and practice V1.1 (GP3)
- Landmark, 2014. Envirocheck Report and Historical Maps. Ref 58806135_1_1, 29th July 2014.
- CLA 2000. Ground Investigation – Rookery South Proposed Landfill Site, Bedfordshire. Report no: 2690072. March 2000. CL Associates.
- TC 2001. Terraconsult. Slope stability and Uplift Assessment Rookery South Landfill Site, Bedfordshire. May 2001. Ref. 00/039-1.
- PBA 2003 Peter Brett Associates. Slope stability Review, Rookery South. Letter to O+H Hampton Ltd, dated 9 December 2003. Reference 14051/002/SNK/KB/DA.
- PBA 2005. Peter Brett Associates. Strategic Slope Stability Review, November 2005. Reference 13231/CHB/KB/RHT.
- PBA 2008. Peter Brett Associates. Rookery Pit (North and South) – Low Level Restoration Scheme – Geoenvironmental and Geotechnical Desk Study and Phase 1 Ground Condition Assessment. December 2008. Reference 14081 Geo Phase 1/rev 1.
- PBA 2009. Peter Brett Associates. Rookery Pit – Low Level Restoration Scheme – Engineering Statement. April 2009. Reference 14081EngStat R2.
- PBA 2009a. Peter Brett Associates Proposed Resource Recovery Centre – Rookery South, Stewartby. Geoenvironmental and Geotechnical Desk Study and Phase 1 Ground Condition Assessment. Ref 21780/016/DTS/Rev1.
- PBA 2009b. Peter Brett Associates. Proposed Resource Recovery Centre – Rookery South, Stewartby. Report on Geotechnical and Geoenvironmental Ground Investigation. Ref 21780/016/GI/Rev1.
- PBA 2011. Peter Brett Associates. Rookery Pit Low Level Restoration Scheme Planning Permission Ref BC/CM/2000/8 Site Environmental Management Plan. Ref 14081/052/Rev 1.

FIGURES



Approximate Site Boundary

Grid Ref: TL 013 411

pba peterbrett

Offices throughout the UK and continental Europe.

www.peterbrett.com

Client

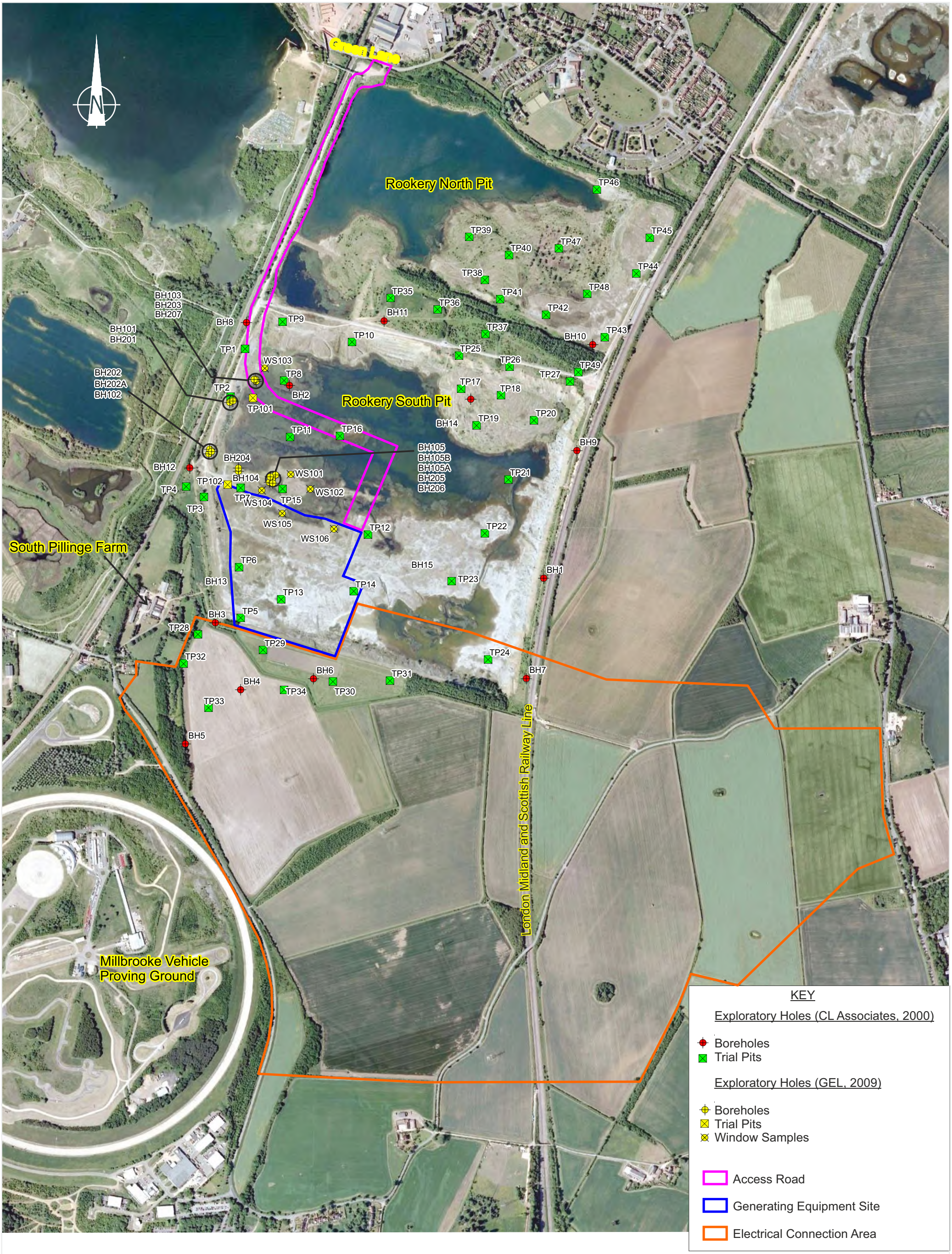
Millbrook Power Ltd

MILLBROOK POWER PROJECT

SITE LOCATION PLAN

Date	30.09.2014
Scale	1:50 000
Drawn by	davco
Checked by	JG
Revision	0

FIGURE 1



Offices throughout the UK and continental Europe.
www.peterbrett.com

Client
Millbrook Power Ltd

Google Earth
© 2014 Infoterra Ltd & Bluesky

Imagery Date: June 2009

MILLBROOK POWER PROJECT

SITE LAYOUT AND EXPLORATORY HOLE LOCATION PLAN

Date	30.07.2014
Scale	1:10 000
Drawn by	davco
Checked by	JG
Revision	0

FIGURE 2

J:\31116 (Millbrook Environmental)\3009 - Geo Phase 1\04 CAD & Graphics\COREL

APPENDIX 1

PBA Methodology for Assessing Land Contamination in England

1 Introduction

This document defines the approach adopted by PBA in relation to the assessment of land contamination in England. The aim is for the approach to (i) be systematic and objective, (ii) provide for the assessment of uncertainty and (iii) provide a rational, consistent, transparent framework.

When preparing our methodology we have made reference to various technical guidance documents and legislation referenced in Section 7 of which the principal documents are (i) Contaminated Land Statutory Guidance (Defra 2012), (ii) the Model Procedures for the Management of Contamination (CLR 11) (EA 2004), (iii) Contaminated land risk assessment: A guide to good practice (C552) (CIRIA 2001) and (iv) National Planning Policy Framework (DCLG 2012).

2 Dealing with Land Contamination

Government policy on land contamination aims to prevent new contaminated land from being created and promotes a risk based approach to addressing historical contamination. With regard to historical contamination, regulatory intervention is held in reserve for land that meets the legal definition and cannot be dealt with through any other means, including through planning. Land is only considered to be "contaminated land" in the legal sense if it poses an unacceptable risk.

UK legislation on contaminated land is principally contained in Part 2A of the Environmental Protection Act, 1990 (which was inserted into the 1990 Act by section 57 of the Environment Act 1995). Part 2A was introduced in England on 1 April 2000 and provides a risk-based approach to the identification and remediation of land where contamination poses an unacceptable risk to human health or the environment. In 2004 the Model Procedures for the Management of Contamination (CLR 11) were published providing guidance on how the statutory requirements were to be delivery. The approach, concepts and principles for land contamination management promoted by CLR 11 are applied to the determination of planning applications.

Other legislative regimes may also provide a means of dealing with land contamination issues, such as the regimes for waste, water, environmental permitting, and environmental damage. Further, the law of statutory nuisance may result in contaminants being unacceptable to third parties whilst not attracting action under Part 2A or other environmental legislation.

2.1 Part 2A

The Regulations and Statutory Guidance that accompanied the Act, including the Contaminated Land (England) Regulations 2006, has been revised with the issue of The Contaminated Land (England) (Amendment) Regulations 2012 (SI 2012/263) and the Contaminated Land Statutory Guidance for England 2012.

Part 2A defines contaminated land as "*land which appears to the Local Authority in whose area it is situated to be in such a condition that, by reason of substances in, on or under the land that significant harm is being caused, or there is a significant possibility that such harm could be caused, or pollution of controlled waters is being, or likely to be, caused*".

Harm is defined as "*harm to the health of living organisms or other interference with the ecological systems of which they form part, and in the case of man, includes harm to his property*".

For the purposes of Part 2A, land is contaminated if it poses a significant possibility of significant harm (SPOSH).

Part 2A provides a means of dealing with unacceptable risks posed by land contamination to human health and the environment, and under the guidance enforcing authorities should seek to find and deal with such land. It states that "*under Part 2A the starting point should be that land is not contaminated land unless there is reason to consider otherwise. Only land where unacceptable risks are clearly identified, after a risk assessment has been undertaken in accordance with the Guidance, should be considered as meeting the Part 2A definition of contaminated land*". Further the guidance makes it clear that *"regulatory decisions should be based on what is reasonably likely, not what is hypothetically possible".*

The overarching objectives of the Government's policy on contaminated land and the Part 2A regime are:

"(a) To identify and remove unacceptable risks to human health and the environment.
(a) To seek to ensure that contaminated land is made suitable for its current use.
(b) To ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development".

The enforcing authority may need to decide whether and how to act in situations where decisions are not straight forward, and where there is uncertainty. "*In so doing, the authority should use its judgement to strike a reasonable balance between: (a) dealing with risks raised by contaminants in land and the benefits of remediating land to remove or reduce those risks; and (b) the potential impacts of regulatory intervention including financial costs to whoever will pay for remediation, health and environmental impacts of taking action, property blight, and burdens on affected people".* The authority is required to "*take a precautionary approach to the risks raised by contamination, whilst avoiding a disproportionate approach given the circumstances of each case".* The aim is "*that the regime produces net benefits, taking account of local circumstances*".

The guidance recognises that *"normal levels of contaminants in soils should not be considered to cause land to qualify as contaminated land, unless there is a particular reason to consider otherwise".*

Normal levels are quoted as:
"a) natural presence of contaminants' such as from underlying geology *'that have not been shown to pose an unacceptable risk to health and the environment*
b) …low level diffuse pollution, and common human activity…"

Similarly the guidance states that significant pollution of controlled waters is required for land to be considered contaminated and the "*fact that substances are merely entering water"* or "*where discharge from land is not discernible at a location immediately downstream"* does not constitute contaminated land.

To help achieve a more targeted approach to identifying and managing contaminated land in relation to the risk (or possibility) of harm to human health, the revised Statutory Guidance presented a new four category system for considering land under Part 2A, ranging from Category 4, where there is no risk that land poses a significant possibility of significant harm (SPOSH), or the level of risk is low, to Category 1, where the risk that land poses a significant possibility of significant harm (SPOSH) is unacceptably high.

For land that cannot be readily placed into Categories 1 or 4 further assessment is required. If there is a sufficiently strong case that the risks are of sufficient concern to cause significant harm/pollution or have the significant possibility of significant harm/pollution the land is to be placed into Category 2. If the concern is not met land is considered Category 3.

The technical guidance clearly states that the currently published SGV and GAC's represent *"cautious estimates of level of contaminants in soils"* which should be considered *"no risk to health or, at most, a minimal risk"*. These values do not represent the boundary between categories 3 and 4 and "*should be considered to be comfortably within Category 4".*

At the end of 2013 technical guidance in support of Defra's revised Statutory Guidance (SG) was published (CL:AIRE 2013) which provided:

- A methodology for deriving C4SLs for four generic land-uses comprising residential, commercial, allotments and public open space; and
- A demonstration of the methodology, via the derivation of C4SLs for six substances – arsenic, benzene, benzo(a)pyrene, cadmium, chromium (VI) and lead.

2.2 Planning

The Local Planning Authority (LPA) is responsible for the control of development, and in doing so it has a duty to take account of all material considerations, including contamination.

Section 11, Paragraph 109 of the National Planning Policy Framework (NPPF) (DCLG 2012) states the planning system should contribute to and enhance the natural and local environment by *"preventing both new and existing developments from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water pollution"* and *"remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate"*. Paragraphs 120 and 121 describe the policy considerations the Government expects LPA to have in regard to land affected by contamination when preparing policies for development plans and in taking decisions on applications.

For planning purposes, the NPPF requires that the assessment of risks arising from contamination and remediation requirements should be considered on the basis of the current environmental setting, the current land use, and the circumstances of its proposed new use The NPPF stipulates that planning policies and decisions should ensure that "the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation"; and that "after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990; and adequate site investigation information, prepared by a competent person, is presented."

The level at which contamination is deemed to be unacceptable, or, gives rise to adverse effects under a planning context has not been identified but is envisaged to be more precautionary than the level required to detrmine land as contaminated under Part 2A.

In paragraph 121 the developer is required to ensure that land, after development, is not capable of being determined as contaminated land under Part 2A of the EPA 1990.

The principal planning objective is to ensure that any unacceptable risks to human health, buildings and other property and the natural and historical environment from the contaminated condition of the land are identified so that appropriate action can be considered and taken to address those risks. In order to grant a planning permission the Local Planning Authority (LPA) has to be satisfied that there is sufficient information about the condition of the land, its impacts and the availability of viable remedial options. NPPF Paragraph 21 states that *"planning policies and decisions should also ensure that adequate site investigation information, prepared by a competent person, is presented".* Site investigation information is further defined in the NPPF Glossary page 56 and that also states that investigations should be carried out in accordance with established procedures, including BS10175 (BSI 2011) that in turn links procedure to the requirements of CLR11.

A key distinction between the Soil Guideline Values (SGVs) and the C4SLs is the level of risk that they describe. As described by the Environment Agency (2009a):

"SGVs are guidelines on the level of long-term human exposure to individual chemicals in soil that, unless stated otherwise, are tolerable or pose a minimal risk to human health."

A letter from Lord de Mauley dated 3rd September 2014 provides more explicit direction to local authorities on the use of the C4SL in a planning context. The letter identifies four key points:

1) that the screening values were developed expressly with the planning regime in mind
2) their use is recommended in DCLG's planning guidance
3) soil concentrations below a C4SL limit are considered to be 'definitely not contaminated' under Part llA of the 1990 Environmental Protection Act and pose at most a 'low level of toxicological concern' and
4) exceedance of a C4SL screening value does not mean that land is definitely contaminated, just that further investigation may be warranted.

2.3 Building Control

The building control department of the local authority or private sector approved inspectors are responsible for the operation and enforcement of the Building Regulations (DCLG 2010) to protect the health, safety and welfare of people in and around buildings. Approved Document C requires the protection of buildings and associated land from the effects of contamination, to be applied (non-exclusively) in all changes of use from commercial or industrial premises, to residential property.

3 Approach

CLR 11 recommends a phased or tiered approach to risk assessment with the three tiers being:-

- Tier 1 - preliminary – a qualitative assessment forming part of a Phase 1 report,
- Tier 2 - generic - a quantitative assessment using published criteria to screen site specific ground condition data forming part of a Phase 2 report
- Tier 3 - detailed – a quantitative assessment involving the generation of site specific assessment criteria

Each tier of risk assessment comprises the following four stages:-

1. Hazard Identification – identifying potential contaminant sources on and off site;
2. Hazard Assessment – assessing the potential for unacceptable risks by identifying what pathways and receptors could be present, and what pollutant linkages could result (forming the Conceptual Site Model (CSM));
3. Risk Estimation – estimating the magnitude and probability of the possible consequences (what degree of harm might result to a defined receptor and how likely); and
4. Risk Evaluation – evaluating whether the risk needs to be, and can be, managed.

A PBA Phase 1 report normally comprises a desk study, walkover and Tier 1 risk assessment (the project specific offer defines the actual scope of work). This is the minimum requirement as defined by the NPPF, pp56. At Tier 1 the PBA approach to risk estimation involves identifying the magnitude of the potential consequence (taking into account both the potential severity of the hazard and the sensitivity of the receptor) and the magnitude of the likelihood i.e. the probability (taking into account the presence of the hazard and the receptor and the integrity of the pathway). This approach is promoted in current guidance such as R&D 66 (NHBC 2008).

The PBA approach is that if a pollution linkage is identified then it represents a potential risk which requires further consideration and either (1) remediation / direct risk management or (2) further tiers of assessment.

A PBA preliminary Phase 2 report comprises an intrusive investigation to collect site specific information, a Tier 2 quantitative generic risk assessment and a refinement of the CSM using the site specific data. Depending on the findings further investigation and/or progression to Tier 3 risk assessment and the generation of site specific assessment criteria may be required.

The PBA methodology provides an estimate of the level of risk, it does not identify a risk level at which the risk is considered “significant” and/or “unacceptable” as this is dependant on the view of the individual / stakeholder. For example; to a risk adverse stakeholder even a risk level of “very low” may be considered unacceptable and as such this stakeholder may require risk management options to be implemented.

4 Identification of Pollutant Linkages and Conceptual Site Model (CSM)

For all Tiers the underlying principle to ground condition assessment is the identification of *pollutant linkages* in order to evaluate whether the presence of a source of contamination could potentially lead to harmful consequences. A pollutant linkage consists of the following three elements:-

- A source/hazard – a substance or situation which has the potential to cause harm or pollution;
- A pathway – a means by which the hazard moves along / generates exposure; and
- A receptor/target – an entity which is vulnerable to the potential adverse effects of the hazard.

The *Conceptual Site Model* identifies the types and locations of potential contaminant sources/hazards and potential receptors and potential migration/transportation pathway(s). The CSM is refined as the assessment progresses through the Tiers.

4.1 Hazard Identification

A hazard is a substance or situation that has the potential to cause harm. Hazards may be chemical, biological or physical (e.g. explosive gases).

At Tier 1 the potential for hazards to be present is determined from consideration of the previous or ongoing activities on or near to the site in accordance with the criteria presented in the **Table 1**.

Based on the land use information Potential Contaminants of Concern (PCOC) are identified. The PCOC direct the scope of the collection of site specific data and the analytical testing selected for subsequent Tiers.

At Tier 2 the site specific data is screened using published assessment criteria (refer to PBA document entitled Rationale for the Selection of Tier 2 Assessment Criteria). In general, published criteria have been developed using highly conservative assumptions and therefore if the screening criterion is not exceeded then the PCOC is eliminated as a potential Hazard. It should be noted that exceedance does not necessarily indicate that a site is contaminated and/or unsuitable for use only that the PCOC is retained as a potential Hazard. Published criteria are generated using models based on numerous and complex assumptions. Whether or not these assumptions are appropriate in a site-specific context requires confirmation on a project by project basis and would form part of a Tier 3 assessment.

When reviewing or assessing site specific data PBA utilise published guidance on comparing contamination

data with a critical concentration (CL:AIRE/CIEH 2008) which presents a structured process for employing statistical techniques for data assessment purposes. The benefit of the statistical tool is uncertainty is quantified and decisions are made knowing the strength of the evidence. Correct decision probability is a function of sample size, difference in the mean and the critical concentration, variation in measured values and the significance level.

4.2 Receptor and Pathway Identification

For all Tiers the potential receptors (for both on site and adjoining land) that will be considered are:

- Human Health – including current and future occupiers, construction and future maintenance workers, and neighbouring properties/third parties;
- Ecological systems; *[1]
- Controlled waters *[2] – including surface water and groundwater;
- Property, Animal or Crop (existing or proposed) - including buildings, service lines and pipes, crops, livestock, pets, woodland; and
- Archaeological sites and ancient monuments.

*[1] International or nationally designated sites (as defined in the statutory guidance (Defra Circular 04/12)) "in the local area" will be identified as potential ecological receptors. A search radius of 1, 2 or 5km will be utilised depending on the site specific circumstances (see also pathway identification). The Environment Agency has published an ecological risk assessment framework (EA 2008) which promotes (as opposed to statutorily enforces) consideration of additional receptors to include locally protected sites and protected or notable species. These additional potential receptors will only be considered if a Phase 1 habitat survey, undertaken in accordance with guidance (JNCC 1993), is commissioned and the data provided to PBA. It should be noted that without such a survey the Tier 1 risk assessment may conclude that the identification of potential ecological receptors is inconclusive (refer to PBA Specification for Phase 1).

*[2] the definition of "pollution of controlled water" was amended by the introduction of Section 86 of the Water Act 2003. For the purposes of Part 2A groundwater does not include waters above the saturated zone and our assessment does not therefore address perched water other than where development causes a pathway to develop.

If a receptor is taken forward for further assessment it will be classified in terms of its sensitivity, the criteria for which are presented in **Table 2**. Table 2 has been generated using descriptions of environmental receptor importance/value given in various guidance documents including R&D 66 (NHBC 2008) and Transport Analysis Guidance (based on DETR 2000). Human health and buildings classifications have been generated by PBA using the attribute description for each class.

The exposure pathway and modes of transport that will be considered are presented in **Table 3**.

4.3 Note regarding Ecological Systems

The Environment Agency (EA) has developed an ecological risk assessment framework which aims to provide a structured approach for assessing the risks to ecology from chemical contaminants in soils (EA 2008). In circumstances where contaminants in water represent a potential risk to aquatic ecosystems then risk assessors will need to consider this separately.

The framework consists of a three tiered process:-

- Tier 1 is a screening step where the site soils chemical data is compared to a soil screening value (SSV)
- Tier 2 uses various tools (including surveys and biological testing) to gather evidence for any harm to the ecological receptors
- Tier 3 seeks to attribute the harm to the chemical contamination

Tier 1 is preceded by a desk study to collate information about the site and the nature of the contamination to assess whether pollutant linkages are feasible. The framework presents ten steps for ecological desk studies and development of a conceptual site model as follows.

1 Establish Regulatory Context
2 Collate and Assess Documentary Information
3 Summarise Documentary Information
4 Identify Potential Contaminants of Concern
5 Identify Likely Fate Transport of Contaminants
6 Identify Potential Receptors of Concern
7 Identify Potential Pathways of Concern
8 Create a Conceptual Site Model
9 Identify Assessment and Measurement Endpoints
10 Identify Gaps and Uncertainties

The information in a standard PBA Phase 1 report covers Steps 1 to 4 inclusive. Step 5 considers fate and transport of contaminants and it should be noted that our standard report adopts a simplified approach considering only transport mechanisms. A simplified approach has also been adopted in respect of Steps 6 and 7 receptors (a detailed review of the ecological attributes has not been undertaken) and pathways (a food chain assessment has not been undertaken).
Step 9 is outside the scope of our standard Phase 1 report.

It should be noted that the Tier 1 assessment for ecological systems (i.e. where designated sites are identified) as part of a Phase 1 report will assess the viability of the mode of transport given the site specific circumstances not specific pathways.

The Tier 1 risk assessment may conclude that the risk to potential ecological receptors is inconclusive (see PBA Specification for Phase 1).

4.4 Note regarding Controlled Waters

Controlled Waters are rivers, estuaries, coastal waters, lakes and groundwaters, but not perched waters.

The Water Framework Directive (WFD) (2000) aims to protect and enhance the quality of surface freshwater, groundwaters and dependent eco systems, estuaries and coastal waters. The WFD was transposed into UK law in 2003 (Statutory Instruments 2003). Member states must aim to reach good chemical and ecological status as defined in the Directive by 2015.

The Ground Water Daughter Directive (GWDD) was enacted by the Groundwater Regulations (2009), which were subsumed by the Environmental Permitting Regulations (2010) which provide essential clarification including on the four objectives specifically for groundwater quality in the WFD:-

- Achieve 'Good' groundwater chemical status by 2015, commonly referred to as 'status objective';
- Achieve Drinking Water Protected Area Objectives;
- Implement measures to reverse any significant and sustained upward trend in groundwater quality, referred to as 'trend objective'; and
- Prevent or limit the inputs of pollutants into groundwater, commonly referred to as 'prevent or limit' objectives

The Water Act 2003 (Commencement No.11) Order 2012 amends the test for 'contaminated land' which relates to water pollution so that pollution of controlled waters must now be "significant" to meet the definition of contaminated land.

River Basin Management Plans (RBMP) have been developed for the 11 River Basin Districts in England and Wales. These were released by Defra in 2009 (Defra 2009).

These RBMP's establish the current status of waters within the catchments of the respective Districts and the current status of adjoining waters identified. As part of a Tier 2 risk assessment water quality data is screened against the WFD assessment criteria. Compare to the RBMP's current status of waters for the catchment under consideration would form part of a Tier 3 assessment.

5 Risk Estimation

Risk estimation classifies what degree of harm might result to a receptor (defined as consequence) and how likely it is that such harm might arise (probability).

At Tier 1 the consequence classification is generated by multiplying the hazard classification score and the receptor sensitivity score. This approach follows that presented in the republished R&D 66 (NHBC 2008).

The criteria for classifying probability are set out in **Table 4** and have been taken directly from Table 6.4 CIRIA C552 (CIRIA 2001). Probability considers the integrity of the exposure pathway.

The consequence classifications detailed in **Table 5** have been adapted from Table 6.3 presented in C552 and R&D 66 (Annex 4 Table A4.3).

The Tier 1 risk classification is estimated for each pollutant linkage using the matrix given in **Table 6** which is taken directly from C552 (Table 6.5). Subsequent Tiers refine the CSM through retention or elimination of potential hazards and pollutant linkages.

6 Risk Evaluation

In order to put the Tier 1 risk classification into context the likely actions are described in **Table 7** which is taken directly from C552 (Table 6.6). Subsequent Tiers identify potential risk management options through remediation and/or mitigation measures.

Unless the initial assessment clearly demonstrates that the risk from contamination can be satisfactorily reduced to an acceptable level, further site investigations and risk assessment will be needed before the application can be determined.

7 References

BSI 2007 BS 8485 Code of Practice for characterisation and remediation from ground gas in affected developments.
BSI 2011 BS 10175 (2011) Code of practice - Investigation of potentially contaminated sites

CIRIA 2001: Contaminated land risk assessment – a guide to good practice C552.

CIRIA 2008: Assessing risks posed by hazardous ground gases to buildings C655

CL:AIRE/EIH 2008 Guidance on Company Soil Contamination Data with a Critical Concentration. Published by Contaminated Land: Applications in Real Environments (CL:AIRE)

CL:AIRE 2013 SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report published by Contaminated Land: Applications in Real Environments (CL:AIRE) 20th December 2013

DCLG 2010 Building Regulations 2010 Approved Document C Site preparation and resistance to contaminants and moisture.

DCLG 2012 National Planning Policy Framework.

DETR 2000 Methodology for Multi Modal Studies. Volume 2 Section 4. The Environmental Objective.

Defra Circular 01/2006

Defra Circular 04/2012 Environmental Protection Act 1990: Part 2A. Contaminated Land Statutory Guidance.

DEFRA, 2006 The Contaminated Land (England) Regulations 2006.

DEFRA, 2012 The Contaminated Land (England) (Amendment) Regulations 2012 (SI2012/263).

DEFRA, 2012 Environmental Protection Act 1990: Part 2A. Contaminated Land Statuary Guidance. April 2012.

DEFRA, 2013 Environmental Damage (Prevention and Remediation) Regulations 2009: Guidance for England and Wales

Defra '2009 Water for Life and Livelihoods. River Basin Management Plan. (11 Districts: Anglia, Dee, Humber, Northumbria, Northwest, Severn, Solway and Tweed, Southeast, Thames, Western Wales) December 2009

EA 2004: The Model Procedures for the Management of Land Contamination CRL 11 published by the Environment Agency (EA).

EA 2008 Ecological Risk Assessment Science Report Series SC070009 published by the Environment Agency (EA).

European Community 2000 Water Framework Directive (2000/60/EC)

JNCC 1993 Handbook for Phase 1 Habitat Survey – A Technical for Environmental Audit prepared by the Joint Nature Conservancy Council (JNCC)

NHBC/EA/CIEH 2008: R&D Publication 66 Guidance for the safe development of housing on land affected by contamination.

Statutory Instrument 2003 No. 3242 Water Resources, England and Wales. The Water Environment (Water Framework Directive) Regulations 2003.

Table 1: Criteria for Classifying Hazards / Potential for Generating Contamination

Classification/Score	Potential for generating contamination/gas based on land use
Very Low 1	Land Use: greenfield Contamination: None. Gas generation potential : Inert Made Ground
Low 2	Land Use: residential, retail or office use, recent small scale industrial. Contamination: None or locally slightly elevated concentrations. Gas generation potential : Shallow thickness of Alluvium
Moderate 3	Land Use: railway yards, collieries, scrap yards, light industry, engineering works. Contamination: Locally elevated concentrations. Gas generation potential : Dock silt and substantial thickness of organic alluvium/peat
High 4	Land Use: gas works, chemical works, heavy industry, non-hazardous landfills. Contamination: Possible widespread elevated concentrations. Gas generation potential : Shallow mine workings Pre 1960's landfill
Very High 5	Land Use: hazardous waste landfills. Contamination: Likely widespread elevated concentrations. Gas generation potential : Domestic landfill post 1960

"Greenfield" is land which has not been developed including not used for crop production or animal husbandry and no contamination source therefore no pollutant linkages.

Table 2: Criteria for Classifying Receptor Sensitivity/Value

Classification/Score	Definition
Very Low 1	Receptor of limited importance Groundwater: Non aquifer Surface water: GQA Grade F Ecology: No local designation Buildings: Replaceable Human health: Unoccupied/limited access
Low 2	Receptor of local or county importance with potential for replacement Groundwater: Secondary aquifer Surface water: GQA Grade D/E Ecology: local habitat resources Buildings: Local value Human health: Minimum score 4 where human health identified as potential receptor
Moderate 3	Receptor of local or county importance with potential for replacement Groundwater: Principal aquifer Surface water: GQA Grade B/C Ecology: County wildlife sites, Areas of Outstanding Natural Beauty (AONB) Buildings: Area of Historic Character Human health: Minimum score 4 where human health identified as potential receptor
High 4	Receptor of county or regional importance with limited potential for replacement Groundwater: Source Protection Zone 2 Surface water: GQA Grade A Ecology: SSSI, National or Marine Nature Reserve (NNR or MNR) Buildings: Conservation Area Human health: Minimum score 4 where human health identified as potential receptor
Very High 5	Receptor of national or international importance Groundwater: Source Protection Zone 1 Surface water: GQA Grade A Ecology: Special Areas of Conservation (SAC and candidates), Special Protection Areas (SPA and potentials) or wetlands of international importance (RAMSAR) Buildings: World Heritage site Human health: Residential, open spaces and uses where children are present

Table 3: Exposure Pathway and Modes of Transport

Receptor	Pathway	Mode of transport
Human health	Ingestion	Fruit or vegetable leaf or roots
		Contaminated water
		Soil/dust indoors
		Soil/dust outdoors
	Inhalation	Particles (dust / soil) – outdoor
		Particles (dust / soil) - indoor
		Vapours – outdoor - migration via natural or anthropogenic pathways
		Vapours - indoor - migration via natural or anthropogenic pathways
	Dermal absorption	Direct contact with soil
		Direct contact with waters (swimming / showering)
		Irradiation
Groundwater	Leaching	Gravity / permeation
	Migration	Natural – groundwater as pathway Anthropogenic (e.g. boreholes, culverts, pipelines etc.)
Surface Water	Direct	Runoff or discharges from pipes
	Indirect	Recharge from groundwater
	Indirect	Deposition of wind blown dust
Buildings	Direct contact	Sulphate attack on concrete, hydrocarbon corrosion of plastics
	Gas ingress	Migration via natural or anthropogenic paths
Ecological systems	See Notes	Runoff/discharge to surface water body
	See Notes	Windblown dust
	See Notes	Groundwater migration
	See Notes	At point of contaminant source
Animal and crop	Direct	Wind blown or flood deposited particles / dust / sediments
	Indirect	Plants via root up take or irrigation. Animals through watering
	Inhalation	By livestock / fish - gas / vapour / particulates / dust
	Ingestion	Consumption of vegetation / water / soil by animals

Table 4: Classification of Probability

Classification	Definition
High likelihood	There is a pollution linkage and an event either appears very likely in the short-term and almost inevitable over the long-term, or there is already evidence at the receptor of harm / 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.

Table 5: Classification of Consequence (score = magnitude of hazard Table 1 and sensitivity of receptor Table 2)

Classification / Score	Examples
Severe **20-25**	Human health effect - exposure likely to result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Equivalent to EA Category 1 incident (persistent and/or extensive effects on water quality leading to closure of potable abstraction point or loss of amenity, agriculture or commercial value. Major fish kill. Ecological effect - short-term exposure likely to result in a substantial adverse effect. Catastrophic damage to crops, buildings or property
Medium **13-19**	Human health effect - exposure could result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - equivalent to EA Category 2 incident requiring notification of abstractor Ecological effect - short-term exposure may result in a substantial adverse effect. Damage to crops, buildings or property
Mild **6-12**	Human health effect - exposure may result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - equivalent to EA Category 3 incident (short lived and/or minimal effects on water quality). Ecological effect - unlikely to result in a substantial adverse effect. Minor damage to crops, buildings or property. Damage to building rendering it unsafe to occupy (for example foundation damage resulting in instability).
Minor **1-5**	No measurable effect on humans. Protective equipment is not required during site works. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects to crops, buildings or property. The loss of plants in a landscaping scheme. Discolouration of concrete.

Table 6: Classification of Risk (Combination of Consequence Table 5 and Probability Table 4)

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

Table 7: Description of Risks and Likely Action Required

Risk Classification	Description
Very high risk	There is a high probability that severe harm could arise 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 is likely to be required in the short term.
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 2

Plate 1 - Rookery South Pit looking southwest

Plate 2 - Location of proposed access road looking north

Offices throughout the UK and continental Europe.
www.peterbrett.com

Client
Millbrook Power Ltd

MILLBROOK POWER PROJECT

SITE WALKOVER PHOTOGRAPHS

Date	01.10.2014
Scale	na
Drawn by	davco
Checked by	JG
Revision	0

APPENDIX

Plate 3 - Grid Connection Area looking southwest

Plate 4 - Site of proposed Operation Area looking northeast

Offices throughout the UK and continental Europe.
www.peterbrett.com

Client
Millbrook Power Ltd

MILLBROOK POWER PROJECT

SITE WALKOVER PHOTOGRAPHS

Date	01.10.2014
Scale	na
Drawn by	davco
Checked by	JG
Revision	0

APPENDIX

Plate 5 - Rookery South Pit looking east

Plate 6 - Grid Connection Area looking northwest

APPENDIX 3

Envirocheck® Report:

BGS Boreholes Datasheet

Order Details:

Order Number:
60770728_1_1

Customer Reference:
31116

National Grid Reference:
501510, 239960

Slice:
A

Site Area (Ha):
240.61

Borehole Search Buffer (m):
50

Site Details:

Millbrook Power Project
Green Lane
Stewartby

Client Details:

Ms K Riley
Brett Consulting Ltd
Caversham Bridge House
Waterman Place
Reading
Berkshire
RG1 8DN

BGS Boreholes Summary

Data Type	Page Number	On Site	0 to 50m
BGS Boreholes (50m)	pg 1	37	7

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 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.

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

Report Version v49.0

BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	**BGS Boreholes** BGS Reference: TI03nw57 Drilled Length (m): 38 Borehole Name: Wheelers Hill 1/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/522854/	A11SW (W)	0	4	501200 239970
48	**BGS Boreholes** BGS Reference: TI03nw58 Drilled Length (m): 37 Borehole Name: Wheelers Hill 7/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/522855/	A11SW (W)	0	4	501310 239930
49	**BGS Boreholes** BGS Reference: TI03nw59 Drilled Length (m): 24 Borehole Name: Wheelers Hill 8/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/522856/	A10SE (SW)	0	4	501190 239790
50	**BGS Boreholes** BGS Reference: TI03nw61 Drilled Length (m): 32 Borehole Name: Wheelers Hill 10/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/522858/	A10SE (W)	0	4	501090 239980
51	**BGS Boreholes** BGS Reference: TI04sw64 Drilled Length (m): 35.97 Borehole Name: Lbc Rookery Field 32 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524418/	A15NE (N)	0	4	501540 240980
51	**BGS Boreholes** BGS Reference: TI04sw84 Drilled Length (m): 54.9 Borehole Name: Lbc Rookery Field 8/51 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524438/	A15NE (N)	0	4	501540 240980
52	**BGS Boreholes** BGS Reference: TI04sw67 Drilled Length (m): 15.85 Borehole Name: Lbc Rookery Field 35 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524421/	A15SE (N)	0	4	501550 240420
52	**BGS Boreholes** BGS Reference: TI04sw143 Drilled Length (m): 24.69 Borehole Name: Lbc Wheeler Mill 4/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524497/	A15SW (N)	0	4	501530 240450
53	**BGS Boreholes** BGS Reference: TI04sw68 Drilled Length (m): 14.94 Borehole Name: Lbc Rookery Field 36 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524422/	A10NE (NW)	0	4	501190 240300
54	**BGS Boreholes** BGS Reference: TI04sw70 Drilled Length (m): 32 Borehole Name: Lbc Rookery Field 38 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524424/	A15SW (N)	0	4	501370 240640
55	**BGS Boreholes** BGS Reference: TI04sw79 Drilled Length (m): 28.65 Borehole Name: Lbc Rookery Field 2/51 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524433/	A15NW (N)	0	4	501220 240850
56	**BGS Boreholes** BGS Reference: TI04sw82 Drilled Length (m): 16 Borehole Name: Lbc Rookery Field 6/51 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524436/	A14NE (NW)	0	4	501110 240870

BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
57	**BGS Boreholes** BGS Reference: TI04sw135 Drilled Length (m): 18.59 Borehole Name: Lbc Wheelers Mill 2/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524489/	A11NW (NW)	0	4	501260 240220
58	**BGS Boreholes** BGS Reference: TI04sw136 Drilled Length (m): 27.43 Borehole Name: Lbc Wheelers Mill 3/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524490/	A11NW (NW)	0	4	501380 240130
59	**BGS Boreholes** BGS Reference: TI04sw137 Drilled Length (m): 29.26 Borehole Name: Lbc Wheelers Mill 4/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524491/	A11NE (N)	0	4	501560 240180
60	**BGS Boreholes** BGS Reference: TI04sw138 Drilled Length (m): 35.97 Borehole Name: Lbc Wheelers Mill 5/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524492/	A11SE (NE)	0	4	501610 240040
61	**BGS Boreholes** BGS Reference: TI04sw139 Drilled Length (m): 32 Borehole Name: Lbc Wheelers Mill 6/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524493/	A11SW (NW)	0	4	501450 240000
62	**BGS Boreholes** BGS Reference: TI04sw141 Drilled Length (m): 29.26 Borehole Name: Lbc Wheelers Mill 2/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524495/	A12NW (NE)	0	4	501910 240330
63	**BGS Boreholes** BGS Reference: TI04sw142 Drilled Length (m): 26.21 Borehole Name: Lbc Wheeler Mill 3/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524496/	A11NE (NE)	0	4	501740 240380
64	**BGS Boreholes** BGS Reference: TI04sw144 Drilled Length (m): 26.21 Borehole Name: Lbc Wheeler Mill 5/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524498/	A11NW (N)	0	4	501480 240350
65	**BGS Boreholes** BGS Reference: TI04sw147 Drilled Length (m): 15.62 Borehole Name: Lbc Wheeler Mill 8/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524501/	A14SE (NW)	0	4	500920 240390
66	**BGS Boreholes** BGS Reference: TI04sw149 Drilled Length (m): 17.14 Borehole Name: Lbc Wheeler Mill 10/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524503/	A10NE (NW)	0	4	500980 240180
67	**BGS Boreholes** BGS Reference: TI04sw150 Drilled Length (m): 15.62 Borehole Name: Lbc Wheeler Mill 11/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524504/	A10NE (NW)	0	4	500970 240250
68	**BGS Boreholes** BGS Reference: TI04sw151 Drilled Length (m): 23.24 Borehole Name: Lbc Wheeler Mill 12/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524505/	A15SW (N)	0	4	501340 240560

BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	**BGS Boreholes** BGS Reference: Tl04sw152 Drilled Length (m): 27.76 Borehole Name: Lbc Wheeler Mill 13/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524506/	A14SE (NW)	0	4	501190 240610
69	**BGS Boreholes** BGS Reference: Tl04sw514 Drilled Length (m): 27 Borehole Name: Wheelers Hill Stewartby 4/80 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524868/	A14SE (NW)	0	4	501190 240610
70	**BGS Boreholes** BGS Reference: Tl04sw153 Drilled Length (m): 30.86 Borehole Name: Lbc Wheeler Mill 14/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524507/	A15NW (N)	0	4	501240 240730
71	**BGS Boreholes** BGS Reference: Tl04sw158 Drilled Length (m): 33.83 Borehole Name: Lbc Wheeler Mill 5/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524512/	A15SW (N)	0	4	501420 240710
72	**BGS Boreholes** BGS Reference: Tl04sw159 Drilled Length (m): 33.83 Borehole Name: Lbc Wheeler Mill 6/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524513/	A15NW (N)	0	4	501490 240830
73	**BGS Boreholes** BGS Reference: Tl04sw164 Drilled Length (m): 18.59 Borehole Name: Lbc Wheeler Mill 11/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524518/	A14NE (N)	0	4	501110 240950
74	**BGS Boreholes** BGS Reference: Tl04sw169 Drilled Length (m): 18.59 Borehole Name: Lbc Wheeler Mill 16/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524523/	A11NW (NW)	0	4	501210 240250
75	**BGS Boreholes** BGS Reference: Tl04sw170 Drilled Length (m): 15.54 Borehole Name: Lbc Wheeler Mill 17/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524524/	A10NE (NW)	0	4	501040 240340
76	**BGS Boreholes** BGS Reference: Tl04sw171 Drilled Length (m): 12.5 Borehole Name: Lbc Wheeler Mill 18/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524525/	A14SE (NW)	0	4	501130 240490
77	**BGS Boreholes** BGS Reference: Tl04sw172 Drilled Length (m): 21.64 Borehole Name: Lbc Wheeler Mill 19/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524526/	A11NW (NW)	0	4	501300 240320
78	**BGS Boreholes** BGS Reference: Tl04sw177 Drilled Length (m): 23.16 Borehole Name: Lbc Wheeler Mill 3/68 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524531/	A15SW (N)	0	4	501220 240680
79	**BGS Boreholes** BGS Reference: Tl03nw60 Drilled Length (m): 41 Borehole Name: Wheelers Hill 9/71 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/522857/	A11SW (W)	0	4	501250 239910

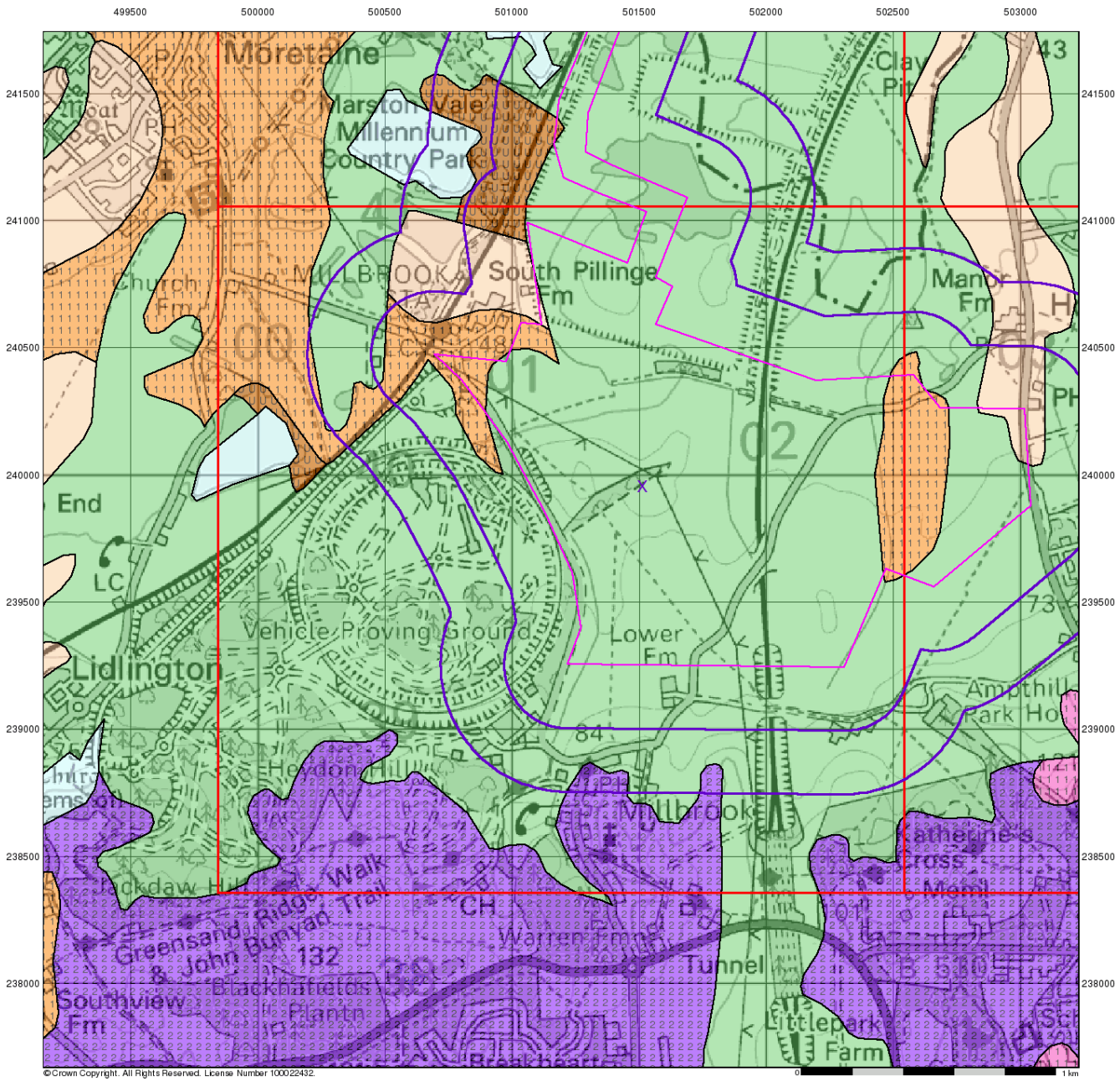
BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	**BGS Boreholes** BGS Reference: Tl04sw173 Drilled Length (m): 18.59 Borehole Name: Lbc Wheeler Mill 20/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524527/	A14SE (NW)	0	4	501160 240540
81	**BGS Boreholes** BGS Reference: Tl04sw176 Drilled Length (m): 35.36 Borehole Name: Lbc Wheeler Mill 2/68 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524530/	A15NW (N)	1	4	501340 240880
82	**BGS Boreholes** BGS Reference: Tl04sw178 Drilled Length (m): 30.78 Borehole Name: Lbc Wheeler Mill 4/68 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524532/	A15SE (N)	11	4	501600 240590
83	**BGS Boreholes** BGS Reference: Tl04sw140 Drilled Length (m): 27.74 Borehole Name: Lbc Wheelers Mill 1/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524494/	A16SW (NE)	28	4	501940 240490
84	**BGS Boreholes** BGS Reference: Tl04sw160 Drilled Length (m): 32.31 Borehole Name: Lbc Wheeler Mill 7/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524514/	A15SE (N)	32	4	501750 240560
85	**BGS Boreholes** BGS Reference: Tl04sw148 Drilled Length (m): 14.1 Borehole Name: Lbc Wheeler Mill 9/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524502/	A14SE (NW)	36	4	500980 240550
86	**BGS Boreholes** BGS Reference: Tl04sw248 Drilled Length (m): 32.92 Borehole Name: Gt Ouse R.A/Cegb Site Invest 11 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524602/	A16SW (NE)	43	4	501870 240530
87	**BGS Boreholes** BGS Reference: Tl04sw175 Drilled Length (m): 38.4 Borehole Name: Lbc Wheeler Mill 1/68 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524529/	A15NE (N)	50	4	501680 240750

Data Currency and Contact Details

BGS Boreholes	Version	Update Cycle
BGS Boreholes British Geological Survey - National Geoscience Information Service	August 2014	Quarterly

Contact Details	Contact Logo
4 **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	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
- **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	LANDMARK® Information Group



pba peterbrett

Groundwater Vulnerability

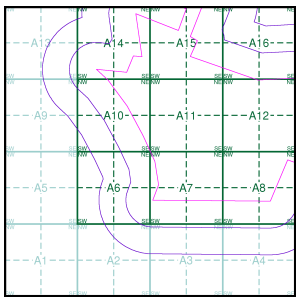
General

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



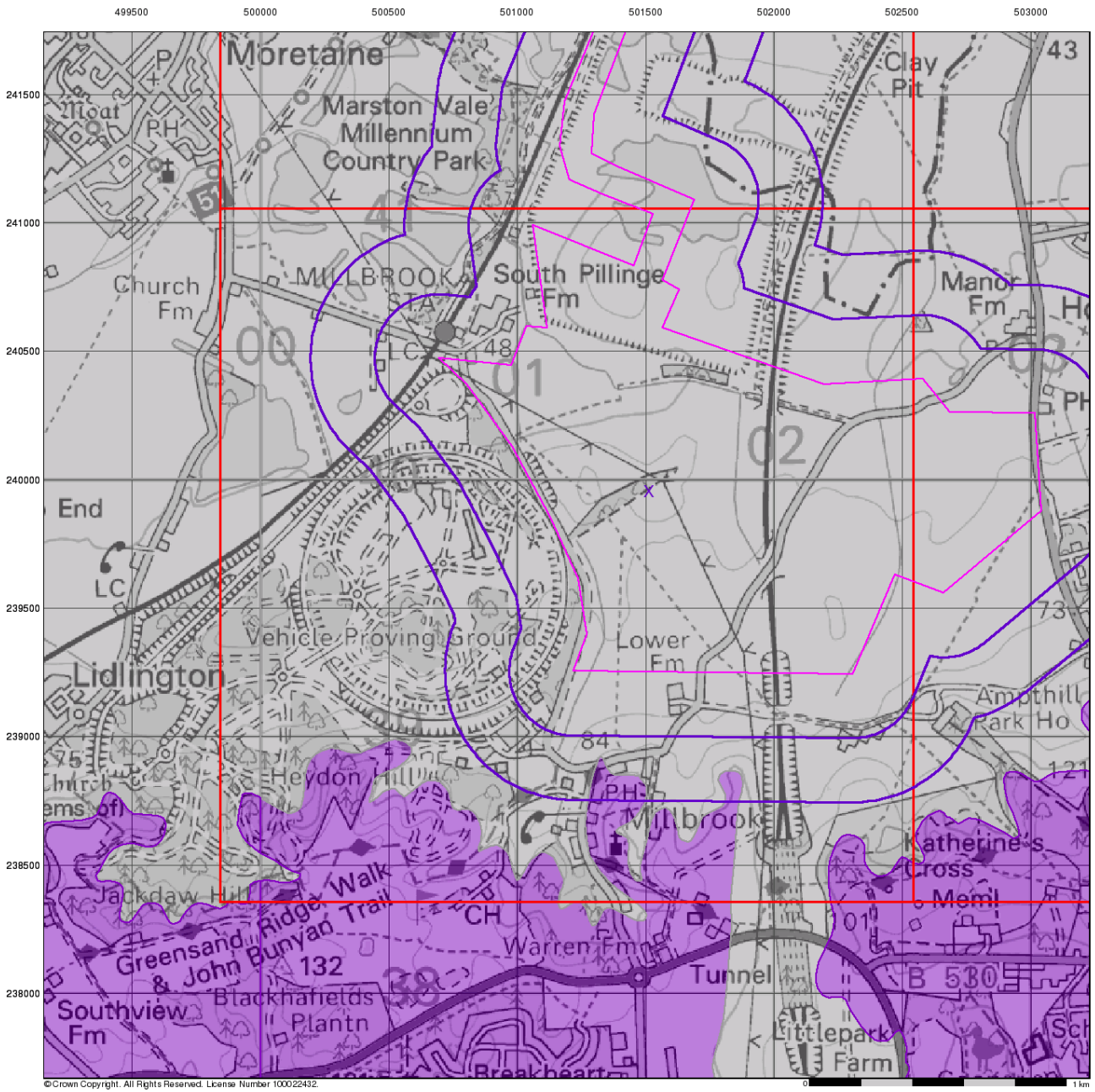
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Bedrock Aquifer Designation

General

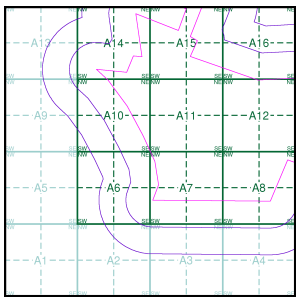
Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



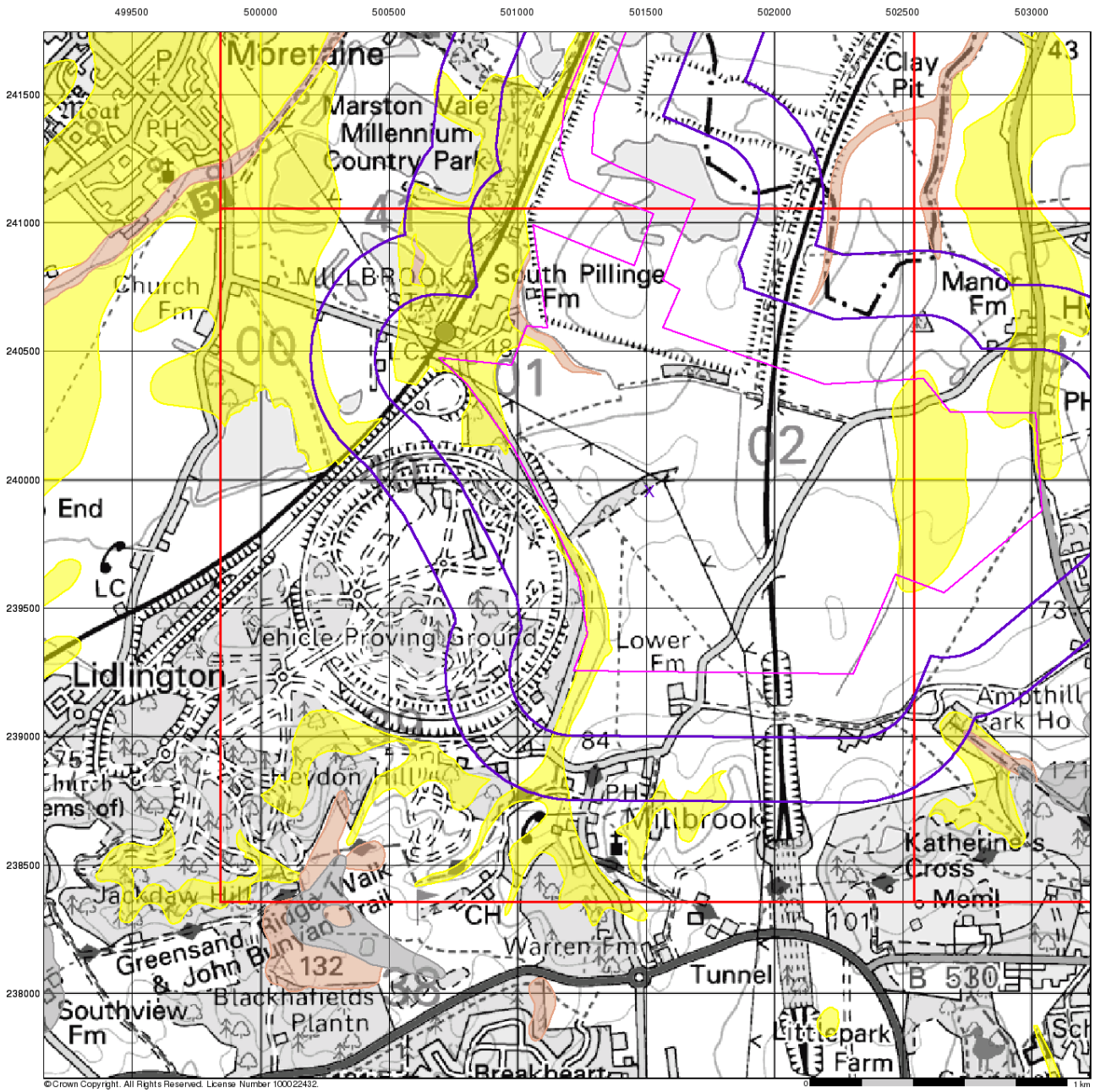
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



Superficial Aquifer Designation

General

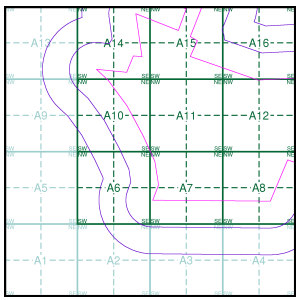
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



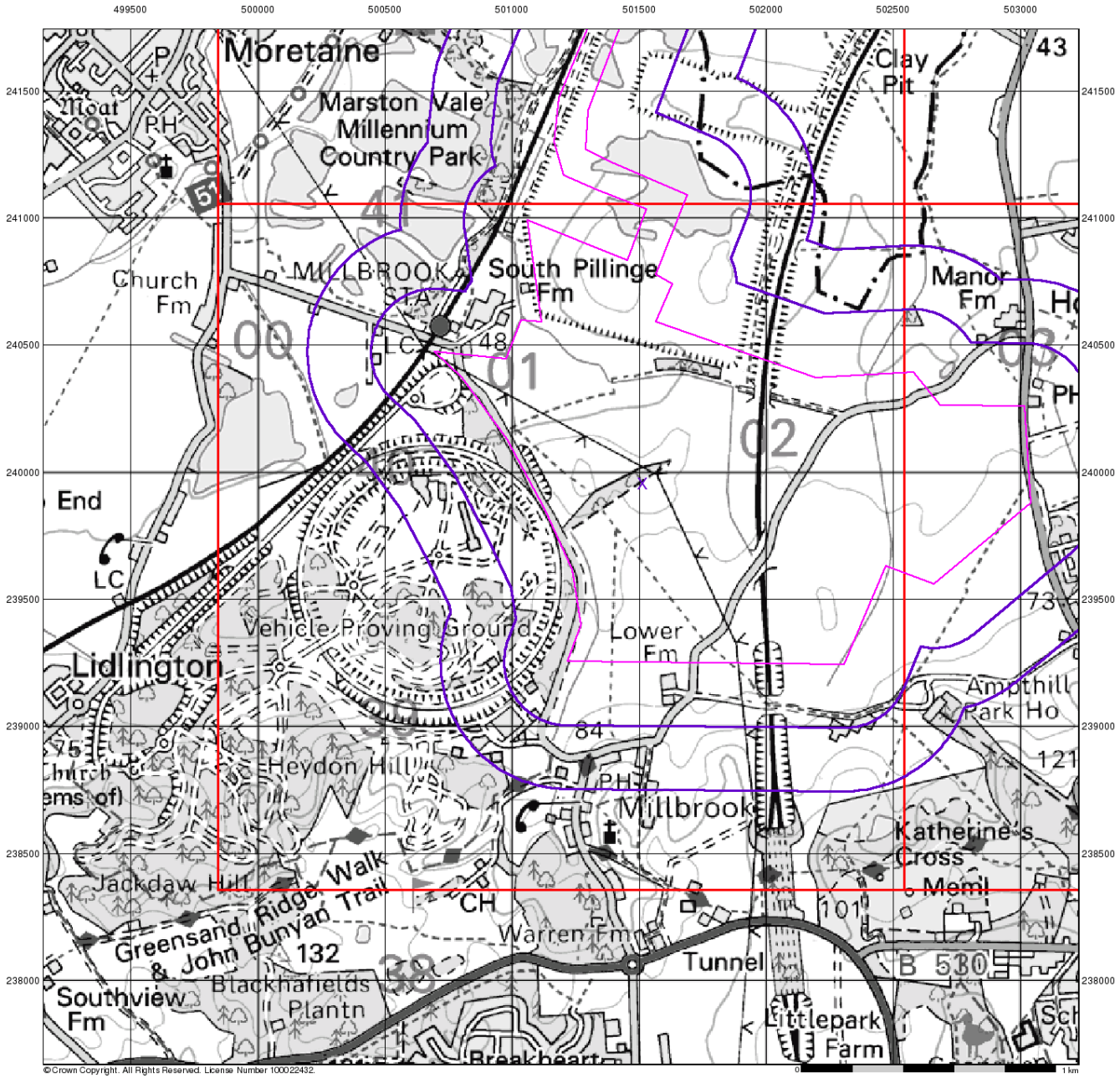
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



Source Protection Zones

General

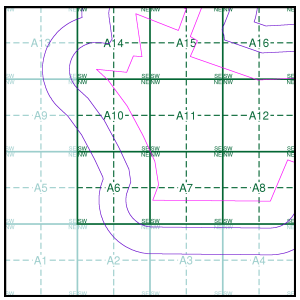
Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



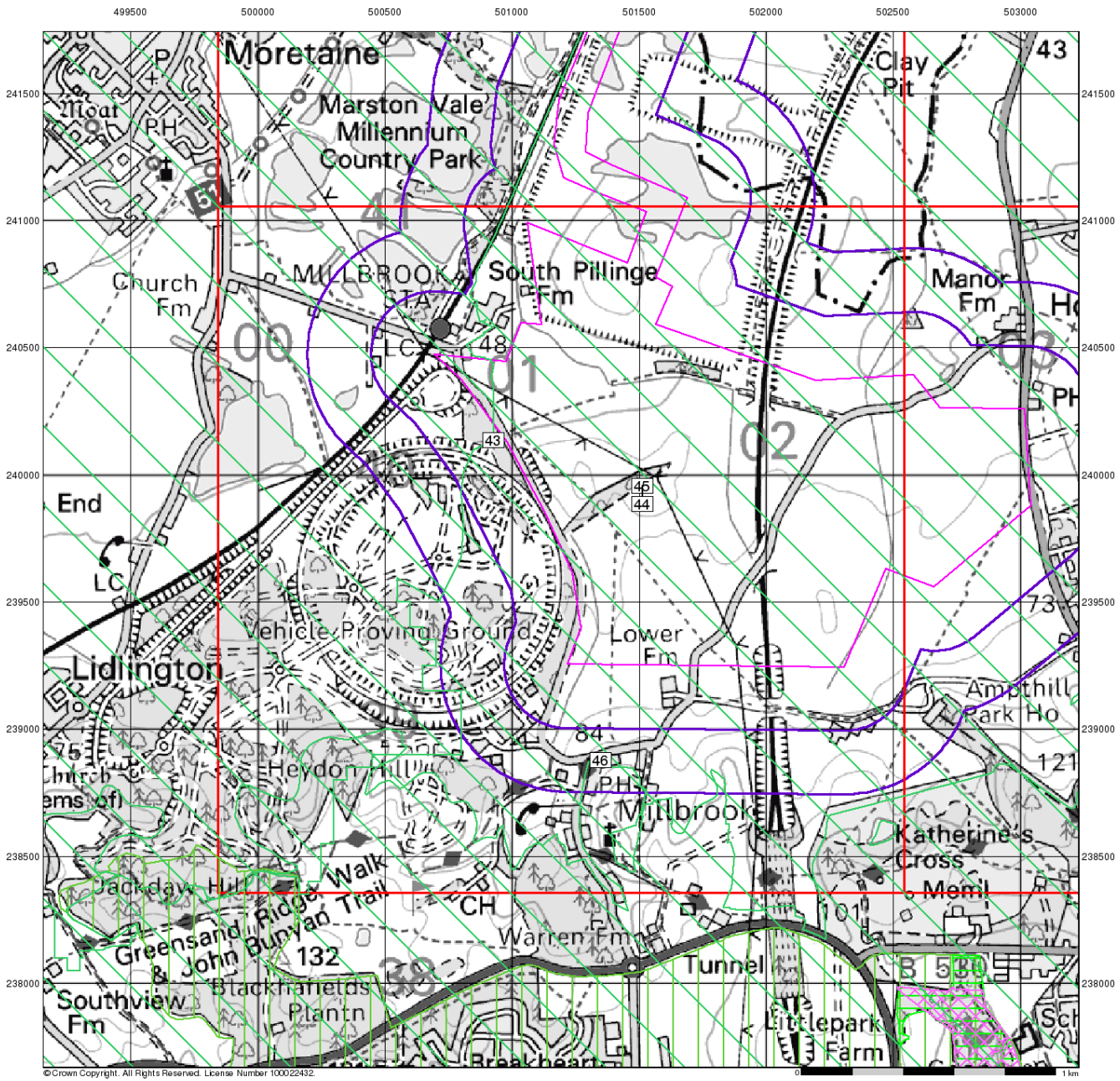
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Sensitive Land Uses

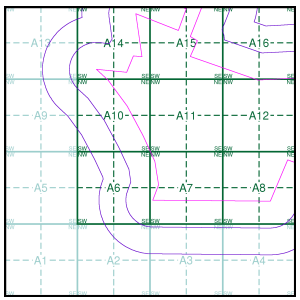
General

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

Sensitive Land Uses

- 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

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
58806135_1_1

Customer Reference:
31116

National Grid Reference:
501510, 239960

Slice:
A

Site Area (Ha):
240.61

Search Buffer (m):
500

Site Details:

Veolia Environmental Services, Green Lane
Stewartby
BEDFORD
MK43 9LY

Client Details:

Ms K Riley
Brett Consulting Ltd
Caversham Bridge House
Waterman Place
Reading
Berkshire
RG1 8DN

Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency 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.

Copyright Notice

Natural England Copyright Notice

Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v47.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Agency & Hydrological				
Contaminated Land Register Entries and Notices				
Discharge Consents	pg 1	3		7
Enforcement and Prohibition Notices				
Integrated Pollution Controls				
Integrated Pollution Prevention And Control	pg 3		1	
Local Authority Integrated Pollution Prevention And Control				
Local Authority Pollution Prevention and Controls	pg 3		1	
Local Authority Pollution Prevention and Control Enforcements				
Nearest Surface Water Feature	pg 3	Yes		
Pollution Incidents to Controlled Waters	pg 3			1
Prosecutions Relating to Authorised Processes				
Prosecutions Relating to Controlled Waters				
Registered Radioactive Substances				
River Quality				
River Quality Biology Sampling Points				
River Quality Chemistry Sampling Points				
Substantiated Pollution Incident Register				
Water Abstractions	pg 4	1		1 (*1)
Water Industry Act Referrals				
Groundwater Vulnerability	pg 4	Yes	n/a	n/a
Bedrock Aquifer Designations	pg 5	Yes	n/a	n/a
Superficial Aquifer Designations	pg 5	Yes	n/a	n/a
Source Protection Zones				
Extreme Flooding from Rivers or Sea without Defences				n/a
Flooding from Rivers or Sea without Defences				n/a
Areas Benefiting from Flood Defences				n/a
Flood Water Storage Areas				n/a
Flood Defences				n/a
Detailed River Network Lines	pg 5	Yes	Yes	Yes
Detailed River Network Offline Drainage	pg 10			Yes

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Waste				
BGS Recorded Landfill Sites				
Historical Landfill Sites	pg 11	1		
Integrated Pollution Control Registered Waste Sites				
Licensed Waste Management Facilities (Landfill Boundaries)				
Licensed Waste Management Facilities (Locations)				
Local Authority Recorded Landfill Sites				
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				
Geological				
BGS 1:625,000 Solid Geology	pg 12	Yes	n/a	n/a
BGS Estimated Soil Chemistry	pg 12	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 18	1		
BGS Urban Soil Chemistry				
BGS Urban Soil Chemistry Averages				
Brine Compensation Area			n/a	n/a
Coal Mining Affected Areas			n/a	n/a
Mining Instability			n/a	n/a
Man-Made Mining Cavities				
Natural Cavities				
Non Coal Mining Areas of Great Britain				n/a
Potential for Collapsible Ground Stability Hazards	pg 19	Yes		n/a
Potential for Compressible Ground Stability Hazards	pg 19	Yes	Yes	n/a
Potential for Ground Dissolution Stability Hazards				n/a
Potential for Landslide Ground Stability Hazards	pg 19	Yes	Yes	n/a
Potential for Running Sand Ground Stability Hazards	pg 20	Yes		n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 20	Yes		n/a
Radon Potential - Radon Affected Areas			n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Industrial Land Use				
Contemporary Trade Directory Entries (50m)	pg 22		1	n/a
Fuel Station Entries				
Sensitive Land Use				
Areas of Adopted Green Belt				
Areas of Unadopted Green Belt				
Areas of Outstanding Natural Beauty				
Environmentally Sensitive Areas				
Forest Parks				
Local Nature Reserves				
Marine Nature Reserves				
National Nature Reserves				
National Parks				
Nitrate Sensitive Areas				
Nitrate Vulnerable Zones	pg 23	3		1
Ramsar Sites				
Sites of Special Scientific Interest				
Special Areas of Conservation				
Special Protection Areas				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: London Brick Company Limited Property Type: Domestic Property (Single) Location: 3 Pillinge Cottages Station Road, Millbrook, Bedford, Mk45 2jh Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Prcnf03360 Permit Version: 2 Effective Date: 24th January 1992 Issued Date: 24th January 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Elstow Brook **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A14SW (NW)	0	2	500800 240430
1	**Discharge Consents** Operator: London Brick Property Property Type: Domestic Property (Single) Location: 3 Pillinge Cottages Station Road, Millbrook, Bedford, Mk45 2jh Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Prcnf03360 Permit Version: 1 Effective Date: 28th August 1990 Issued Date: 28th August 1990 Revocation Date: 23rd January 1992 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Elstow Brook **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A14SW (NW)	0	2	500800 240430
2	**Discharge Consents** Operator: Millbrook Proving Ground Ltd Property Type: Manufacture Of Motor Vehicles & Engines Location: Millbrook Bedfordshire, Millbrook, Bedford, Mk45 Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Pr1nf2148 Permit Version: 1 Effective Date: 17th September 1985 Issued Date: 17th September 1985 Revocation Date: Not Supplied Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Trib Elstow Brook **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A7NW (S)	0	2	501300 239400
3	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: Sewage Disposal Works - Water Company Location: Millbrook Stw Sandhill Close, Millbrook, Bedford, Mk45 2jd Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Aw1nf792 Permit Version: 3 Effective Date: 15th June 1985 Issued Date: 15th June 1985 Revocation Date: 15th August 1991 Discharge Type: Unknown Discharge Environment: Freshwater Stream/River Receiving Water: Boiling Pot Br Elstow Br River **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A3NW (S)	355	2	501200 238900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Anglian Water Services Ltd. Property Type: Undefined Or Other Location: Millbrook Stw Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Aw1nf792 Permit Version: 1 Effective Date: 15th June 1985 Issued Date: 15th June 1985 Revocation Date: 15th August 1991 Discharge Type: Unknown Discharge Environment: Freshwater Stream/River Receiving Water: Boiling Pot Br Elstow Br River **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A3NW (S)	355	2	501200 238900
3	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: Sewage Disposal Works - Water Company Location: Millbrook Stw Sandhill Close, Millbrook, Bedford, Mk45 2jd Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Aw1nf792 Permit Version: 2 Effective Date: 21st October 1981 Issued Date: 21st October 1981 Revocation Date: 14th June 1985 Discharge Type: Unknown Discharge Environment: Freshwater Stream/River Receiving Water: Boiling Pot Br Elstow Br River **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A3NW (S)	355	2	501200 238900
3	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: Sewage Disposal Works - Water Company Location: Millbrook Stw Sandhill Close, Millbrook, Bedford, Mk45 2jd Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Awcnf10501 Permit Version: 3 Effective Date: 1st January 2010 Issued Date: 24th September 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Boiling Pot Brook **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A2NE (S)	389	2	501160 238870
3	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: Sewage Disposal Works - Water Company Location: Millbrook Stw Sandhill Close, Millbrook, Bedford, Mk45 2jd Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Awcnf10501 Permit Version: 2 Effective Date: 27th June 1995 Issued Date: 27th June 1995 Revocation Date: 31st December 2009 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Boiling Pot Brook **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A2NE (S)	389	2	501160 238870

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: Sewage Disposal Works - Water Company Location: Millbrook Stw Sandhill Close, Millbrook, Bedford, Mk45 2jd Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Awcnf10501 Permit Version: 1 Effective Date: 15th August 1991 Issued Date: 15th August 1991 Revocation Date: 26th June 1995 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Boiling Pot Brook **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A2NE (S)	389	2	501160 238870
4	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: Sewage Disposal Works - Water Company Location: Millbrook Stw Sandhill Close, Millbrook, Bedford, Mk45 2jd Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Aw1nf792 Permit Version: 1 Effective Date: 31st December 1970 Issued Date: 31st December 1970 Revocation Date: 20th October 1981 Discharge Type: Unknown Discharge Environment: Freshwater Stream/River Receiving Water: Boiling Pot Br Elstow Br River **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A3NW (S)	455	2	501200 238800
5	**Integrated Pollution Prevention And Control** Name: Covanta Energy Limited Location: Rookery Pit 3 Energy From Waste Facility, Rookery South Pit, Nr Stewartby, Bedford, Bedfordshire Authority: Environment Agency, Anglian Region Permit Reference: NP3030TV Original Permit Ref: Np3030tv Effective Date: Not Supplied **Status: Valid** Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 100m Activity Code: 5.1 A(1) (C) Activity Description: Incineration Of Non Hazardous Waste Greater Than 1 T/Hr Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N	A15NW (N)	100	2	501280 241010
6	**Local Authority Pollution Prevention and Controls** Name: Millbrook Proving Ground Location: Station Road, Millbrook, BEDFORD, Bedfordshire, MK45 2JQ Authority: Central Bedfordshire Council, Environmental Health Department Permit Reference: EP/CB/44 Dated: 1st July 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A10NW (W)	143	3	500786 240153
	Nearest Surface Water Feature	A14SE (NW)	0	-	500976 240444
7	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Bedford District, MILLBROOK, Bedfordshire Authority: Environment Agency, Anglian Region Pollutant: Sewage - Treated Effluent Note: Boiling Pot Brook Incident Date: 29th January 1999 Incident Reference: 4434 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Other Cause Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3NE (S)	251	2	501600 239000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Water Abstractions** Operator: R J Parrish & Son Licence Number: 6/33/12/*S/0067 Permit Version: 100 Location: Catchpit At Ampthill Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st November 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	0	2	501300 239500
9	**Water Abstractions** Operator: R J Parrish & Son Licence Number: 6/33/12/*S/0067 Permit Version: 100 Location: Catchpit At Ampthill Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st November 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	281	2	501100 239000
	Water Abstractions Operator: Messrs A J Woodward And Co Licence Number: 6/33/12/*s/028 Permit Version: Not Supplied Location: Elstow Brook At, MILLBROOK Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 11 Yearly Rate (m3): 245450 Details: Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3NW (S)	555	2	501200 238700
	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	A12SE (E)	0	2	502429 240002
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	A11SW (W)	0	2	501512 239957
	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	A10SE (W)	0	2	500965 240001
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	(E)	0	2	502836 240244

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	A14SE (NW)	0	2	501148 240568
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	A14NE (NW)	0	2	501058 240915
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A11SW (W)	0	4	501512 239957
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A11SW (N)	0	4	501512 240001
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A15SW (NW)	0	4	501324 240410
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A12SE (E)	0	4	502463 239948
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A11SW (SW)	0	4	501228 239726
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A12SE (E)	0	4	502475 240001
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(E)	0	4	502829 240270
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A10NE (W)	0	4	500972 240126
	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				
10	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10SE (SW)	0	2	501179 239768

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10NE (W)	0	2	500991 240105
12	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A8NE (SE)	0	2	502418 239463
13	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10NE (W)	0	2	501004 240077
14	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A12NE (E)	0	2	502427 240108
15	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A11SE (E)	0	2	501854 239936
16	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10NW (NW)	0	2	500798 240378

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A11SW (SW)	0	2	501209 239720
18	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10NE (W)	0	2	500928 240174
19	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SW (NW)	0	2	500796 240429
20	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SE (NW)	8	2	501030 240601
21	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SE (NW)	9	2	500885 240462
22	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SW (NW)	16	2	500784 240479

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10NE (W)	16	2	500928 240174
24	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	A8NE (SE)	18	2	502418 239463
25	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	A16SW (NE)	128	2	502050 240557
26	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14NW (NW)	199	2	500852 241031
27	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SW (NW)	219	2	500835 240681
28	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10SW (W)	233	2	500783 240005

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SW (NW)	247	2	500787 240711
30	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10SW (W)	411	2	500737 239714
31	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A10SW (W)	411	2	500737 239714
32	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A6NW (W)	444	2	500727 239662
33	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A2NE (S)	456	2	501191 238800
34	**Detailed River Network Lines** River Type: Secondary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14NW (NW)	460	2	500595 240920

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A2NE (S)	462	2	501192 238794
36	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A6NW (W)	466	2	500683 239699
37	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A9NE (W)	474	2	500188 240351
38	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A6NW (SW)	484	2	500715 239595
39	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	A6NE (SW)	263	2	500911 239697

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	**Historical Landfill Sites** Licence Holder: London Brick Landfill Limited Location: Stewartby, Bedford, Bedfordshire Name: Rookery Clay Pit Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD01024 First Input Date: 1st January 1971 Last Input Date: 1st April 1987 Specified Waste Type: Deposited Waste included Industrial and Household Waste, and Liquid Sludge EA Waste Ref: 75174 Regis Ref: AX1/L/LON010 WRC Ref: 0200/0045 BGS Ref: Not Supplied Other Ref: 8/1977, PIT 80	A16NW (N)	0	2	501929 240987
	Local Authority Landfill Coverage Name: Mid Bedfordshire District Council - Has supplied landfill data		0	10	501512 239957
	Local Authority Landfill Coverage Name: Bedfordshire County Council - Has no landfill data to supply		0	9	501512 239957
	Local Authority Landfill Coverage Name: Bedford Borough Council - Has supplied landfill data		11	11	502210 240716

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Oxford Clay and Kellaways Beds	A11SW (W)	0	4	501512 239957
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SW (SW)	0	5	501227 239725
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10SE (W)	0	5	501000 240034
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SW (E)	0	5	502000 240000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14NE (NW)	0	5	501031 241000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10NE (W)	0	5	500971 240125
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11NW (N)	0	5	501450 240155

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SE (E)	0	5	502474 240000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A15NW (N)	0	5	501512 241000
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SW (W)	0	5	501512 239957
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SE (E)	0	5	502462 239947
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SW (E)	0	5	502000 239957
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14SE (NW)	0	5	501140 240487

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SW (N)	0	5	501512 240000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A15SW (NW)	0	5	501323 240409
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14NE (NW)	28	5	501000 240788
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10SE (W)	28	5	501000 240000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14SE (NW)	29	5	501000 240581
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14SE (NW)	30	5	501000 240688

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10SE (W)	44	5	501000 239957
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14NE (NW)	61	5	501000 241000
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8SE (SE)	63	5	502390 239279
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10SE (W)	77	5	500963 240000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	(NW)	209	5	500799 241079
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A3NE (S)	221	5	501837 239023

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A16SW (NE)	228	5	502000 240681
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A4NW (SE)	245	5	502000 239000
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A3NE (S)	248	5	501797 239000
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A4NW (SE)	248	5	501921 239000
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A3NW (S)	249	5	501512 239000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A3NW (S)	255	5	501204 239000

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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A4NW (SE)	260	5	502150 238913
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A2NE (S)	268	5	501135 239000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A16SW (NE)	272	5	502137 240679
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14NW (NW)	286	5	500637 240752
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A16NW (NE)	311	5	502000 241000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A9NE (W)	325	5	500472 240236

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: 40 - 60 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A3NW (S)	333	5	501323 238920
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A2NE (SW)	335	5	501000 239000
	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: 40 - 60 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A3NE (S)	385	5	501795 238864
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A16NW (NE)	408	5	502087 241000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A2NE (SW)	500	5	501000 238804
41	**BGS Recorded Mineral Sites** Site Name: Rookery Clay Pit Location: , Stewartby, Bedford Source: British Geological Survey, National Geoscience Information Service Reference: 35590 Type: Opencast **Status: Ceased** Operator: London Brick Co Ltd Operator Location: London Brick Co Ltd, Arden House, West Street, Leighton Buzzard, Bedfordshire, Lu7 7dd Periodic Type: Jurassic Geology: Oxford Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A15NW (N)	0	4	501510 240915
	BGS Measured Urban Soil Chemistry No data available				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (W)	0	4	501512 239957
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	4	501512 240000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A15SW (NW)	0	4	501323 240405
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A15SW (NW)	0	4	501323 240405
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	4	501026 240000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (W)	0	4	501512 239957
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	4	501512 240000
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	11	4	501149 239783
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	4	501512 240000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (W)	0	4	501512 239957
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	4	501967 240446
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A15SW (N)	0	4	501458 240480
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A15SE (NE)	0	4	501715 240405
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	4	501625 240431
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	4	501324 239872
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	4	501088 239942
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12NW (NE)	0	4	501952 240361
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	4	501667 240407

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	4	501512 240000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	4	501333 240121
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (W)	0	4	501512 239957
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (SW)	39	4	501197 239572
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	102	4	501140 239527
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A8SW (SE)	146	4	502008 239101
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A6SE (SW)	164	4	501062 239196
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A6SE (SW)	180	4	501042 239218
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A6SE (SW)	205	4	501021 239199
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A3NE (S)	250	4	501780 238999
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12SE (E)	0	4	502466 240000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12SE (E)	0	4	502461 239942
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	4	501225 239729
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A15SW (NW)	0	4	501323 240405
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	0	4	501184 239698
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	4	501512 240000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (W)	0	4	501512 239957
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	4	501026 240000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A14SW (NW)	70	4	500660 240551
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	4	501539 240691
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	4	501512 240000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SW (W)	0	4	501512 239957
	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	A11SW (W)	0	4	501512 239957
	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	A11SW (N)	0	4	501512 240001
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A11SW (W)	0	4	501512 239957
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	4	501512 240001

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**Contemporary Trade Directory Entries** Name: Select Engineering Location: Moreteyne House, Station Lane, Millbrook, Bedford, MK45 2JH Classification: Sheet Metal Work **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (NW)	8	-	500713 240478

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Eutrophic Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A10NE (W)	0	8	500926 240134
44	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A11SW (W)	0	8	501512 239957
45	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Groundwater Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A11SW (W)	0	8	501512 239957
46	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Groundwater Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A3NW (S)	375	8	501349 238878

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Central Bedfordshire Council - Environmental Health Department	December 2013	Annually
Bedford Borough Council - Environmental Health Department	February 2013	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	July 2008	Not Applicable
Discharge Consents		
Environment Agency - Anglian Region	May 2014	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Anglian Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Anglian Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Anglian Region	May 2014	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	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
Prosecutions Relating to Authorised Processes		
Environment Agency - Anglian Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Anglian Region	March 2013	As notified
Registered Radioactive Substances		
Environment Agency - Anglian Region	May 2014	Quarterly
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Central Area	May 2014	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	April 2014	Quarterly
Water Industry Act Referrals		
Environment Agency - Anglian Region	May 2014	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	January 2011	Not Applicable

Agency & Hydrological	Version	Update Cycle
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	October 2012	Annually
Superficial Aquifer Designations		
British Geological Survey - National Geoscience Information Service	October 2012	Annually
Source Protection Zones		
Environment Agency - Head Office	April 2014	Quarterly
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	May 2014	Quarterly
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	May 2014	Quarterly
Areas Benefiting from Flood Defences		
Environment Agency - Head Office	May 2014	Quarterly
Flood Water Storage Areas		
Environment Agency - Head Office	May 2014	Quarterly
Flood Defences		
Environment Agency - Head Office	February 2014	Quarterly
Detailed River Network Lines		
Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage		
Environment Agency - Head Office	March 2012	Annually
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Anglian Region - Central Area	May 2014	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Anglian Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Anglian Region - Central Area	February 2014	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Central Area	May 2014	Quarterly
Local Authority Landfill Coverage		
Bedford Borough Council - Environmental Health Department	May 2000	Not Applicable
Bedfordshire County Council (now part of Central Bedfordshire Council)	May 2000	Not Applicable
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Bedford Borough Council - Environmental Health Department	April 2003	Not Applicable
Bedfordshire County Council (now part of Central Bedfordshire Council)	May 2000	Not Applicable
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	May 2000	Not Applicable
Registered Landfill Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	March 2014	Bi-Annually
Explosive Sites		
Health and Safety Executive	November 2013	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Bedford Borough Council	April 2013	Annual Rolling Update
Central Bedfordshire Council - Planning Department	August 2013	Annually
Bedfordshire County Council (now part of Central Bedfordshire Council)	July 2008	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council)	May 2008	Not Applicable
Planning Hazardous Substance Consents		
Bedford Borough Council	April 2013	Annual Rolling Update
Central Bedfordshire Council - Planning Department	August 2013	Annually
Bedfordshire County Council (now part of Central Bedfordshire Council)	July 2008	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council)	May 2008	Not Applicable
Geological	**Version**	**Update Cycle**
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
BGS Estimated Soil Chemistry		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	April 2014	Bi-Annually
Brine Compensation Area		
Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Mining Report Service	December 2013	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	February 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	May 2014	Quarterly
Fuel Station Entries Catalist Ltd - Experian	March 2014	Quarterly
Sensitive Land Use	**Version**	**Update Cycle**
Areas of Adopted Green Belt Central Bedfordshire Council - Planning Department Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	May 2011 May 2014	As notified As notified
Areas of Unadopted Green Belt Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	May 2014	As notified
Areas of Outstanding Natural Beauty Natural England	January 2014	Bi-Annually
Environmentally Sensitive Areas Natural England	July 2013	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	March 2014	Bi-Annually
Marine Nature Reserves Natural England	July 2013	Bi-Annually
National Nature Reserves Natural England	March 2014	Bi-Annually
National Parks Natural England	January 2014	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	July 2014	Annually
Ramsar Sites Natural England	March 2014	Bi-Annually
Sites of Special Scientific Interest Natural England	March 2014	Bi-Annually
Special Areas of Conservation Natural England	March 2014	Bi-Annually
Special Protection Areas Natural England	March 2014	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	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Central Bedfordshire Council - Environmental Health Department** Priory House, Monks Walk, Chicksands, Shefford, Bedfordshire, SG17 5TQ	Telephone: 0300 300 8000 Email: info@centralbedfordshire.gov.uk Website: www.centralbedfordshire.gov.uk
4	**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
5	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmark.co.uk Website: www.landmarkinfo.co.uk
6	**Central Bedfordshire Council - Planning Department** Priory House, Monks Walk, Chicksands, Shefford, Bedfordshire, SG17 5TQ	Telephone: 0300 300 8000 Email: info@centralbedfordshire.gov.uk Website: www.centralbedfordshire.gov.uk
7	**Natural England** Suite D, Unex House, Bourges Boulevard, Peterborough, Cambridgeshire, PE1 1NG	Telephone: 0845 600 3078 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
8	**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
9	**Bedfordshire County Council (now part of Central Bedfordshire Council)** County Hall, Cauldwell Street, Bedford, Bedfordshire, MK42 9AP	Telephone: 01234 363222 Fax: 01234 228656 Website: www.bedfordshire.gov.uk
10	**Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department** 23 London Road, Biggleswade, Bedford, Bedfordshire, SG18 8ER	Telephone: 01767 313137 Fax: 01767 316717 Website: www.midbeds.gov.uk
11	**Bedford Borough Council - Environmental Health Department** Town Hall, St Pauls Street, Bedford, Bedfordshire, MK40 1SJ	Telephone: 01234 267422 Fax: 01234 325671 Email: enquiries@bedford.gov.uk Website: www.bedford.gov.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

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
Pylon
Electricity Transmission Line
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

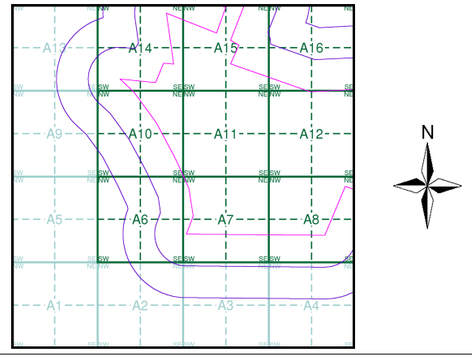
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Mud
Sand
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or 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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:10,560	1883 - 1884	2
Buckinghamshire	1:10,560	1885	3
Bedfordshire	1:10,560	1901 - 1902	4
Bedfordshire	1:10,560	1927	5
Bedfordshire	1:10,560	1938 - 1947	6
Bedfordshire	1:10,560	1947 - 1948	7
Ordnance Survey Plan	1:10,000	1960	8
Ordnance Survey Plan	1:10,000	1978	9
Ordnance Survey Plan	1:10,000	1982 - 1983	10
Ordnance Survey Plan	1:10,000	1990	11
10K Raster Mapping	1:10,000	2006	12
VectorMap Local	1:10,000	2014	13

Historical Map - Slice A



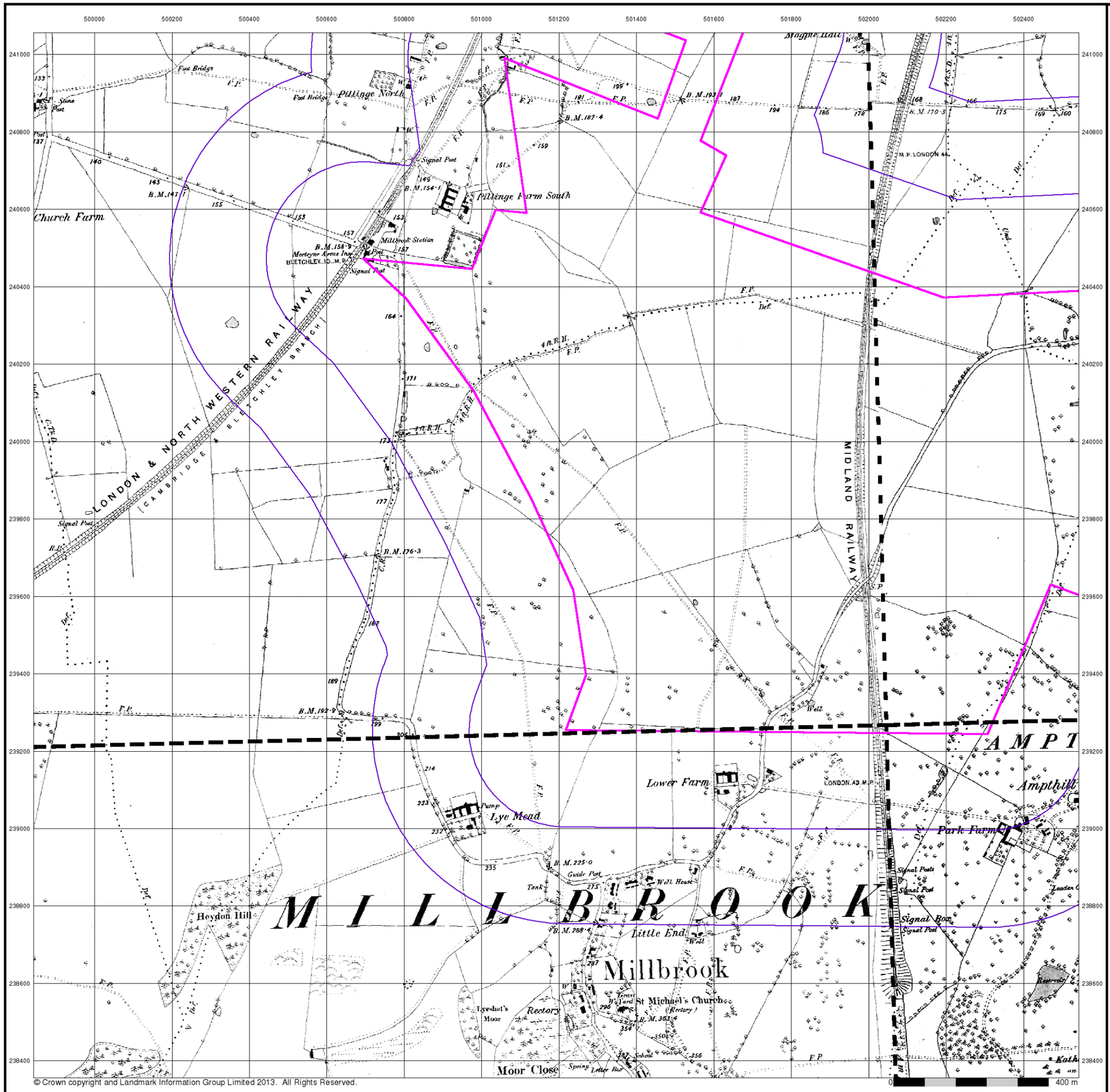
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 501510, 239960
Slice: A
Site Area (Ha): 240.61
Search Buffer (m): 500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

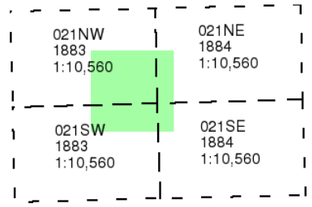
Bedfordshire

Published 1883 - 1884

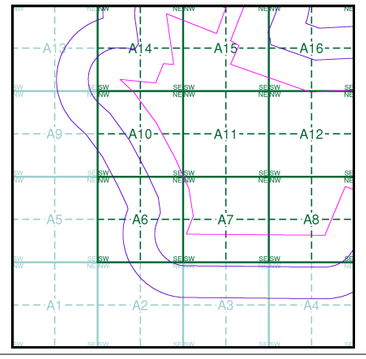
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

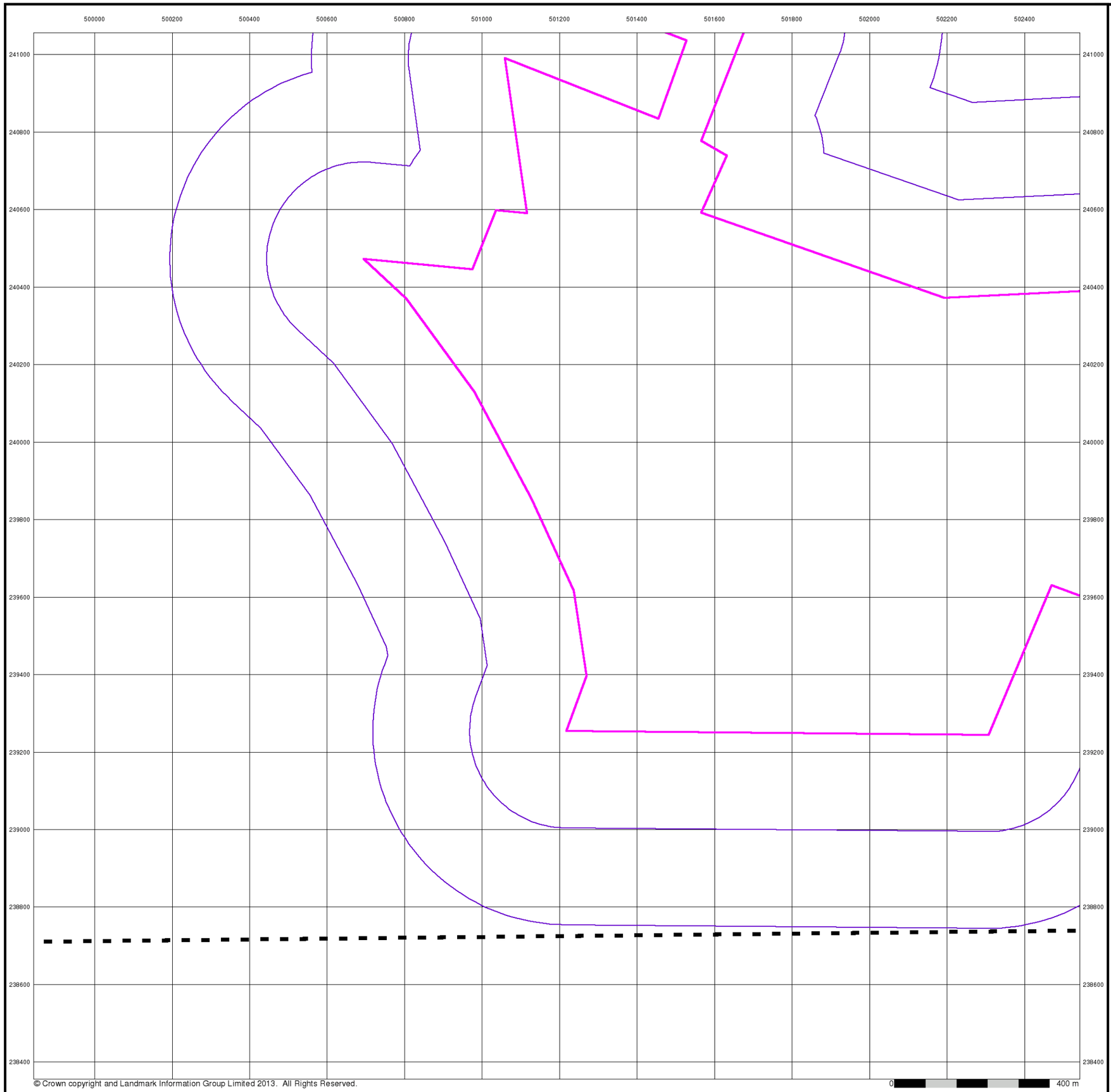
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

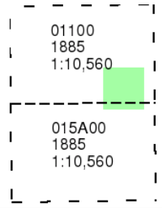
Buckinghamshire

Published 1885

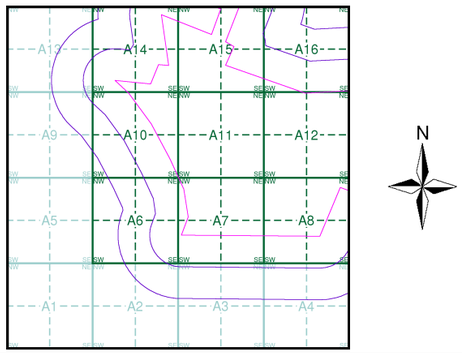
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

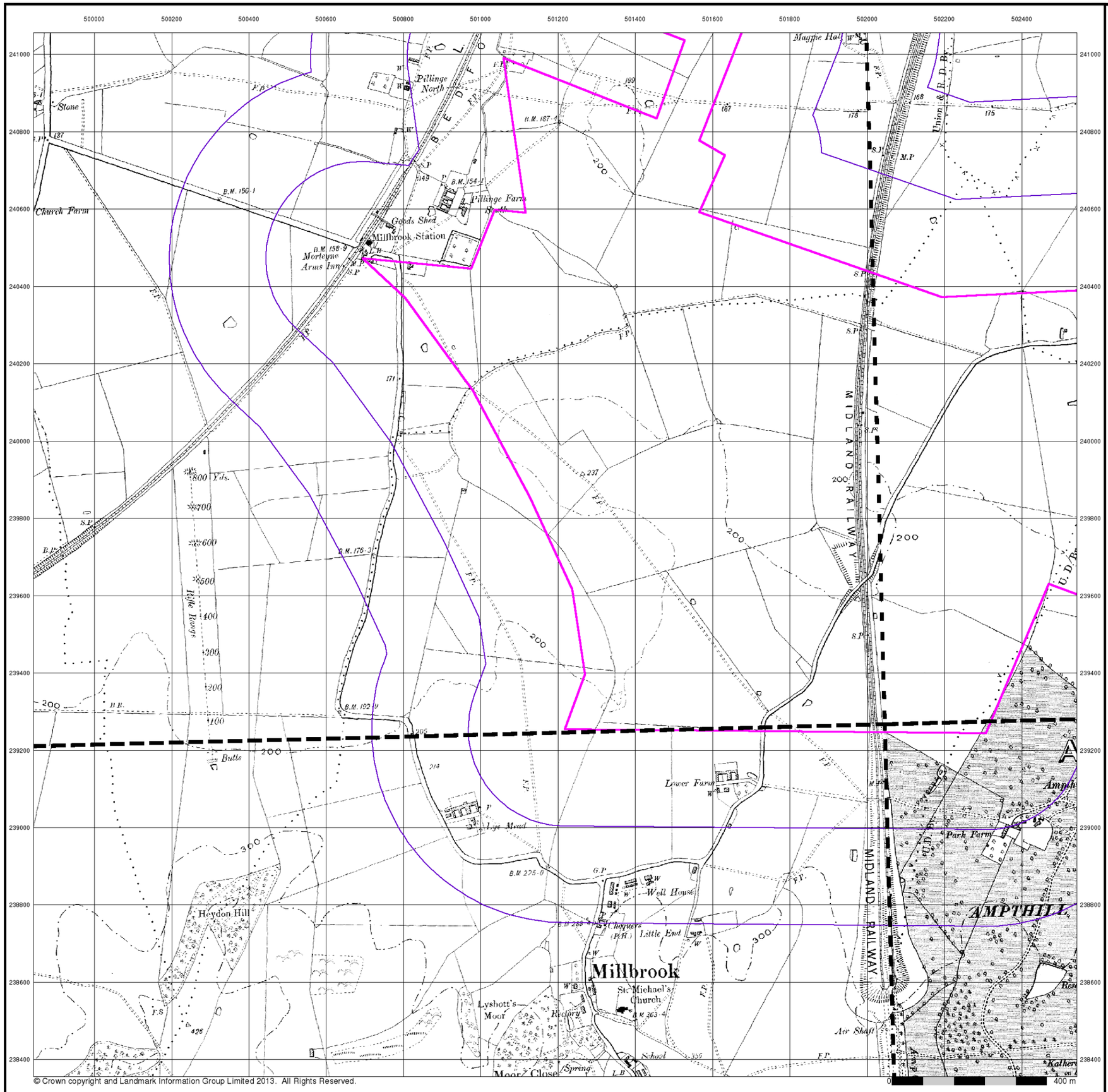
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group

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



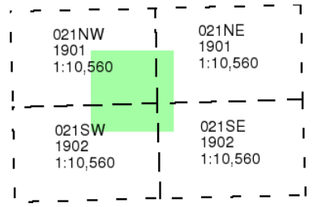
Bedfordshire

Published 1901 - 1902

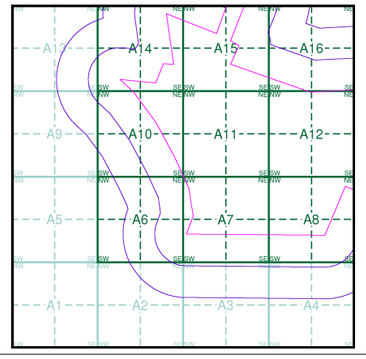
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



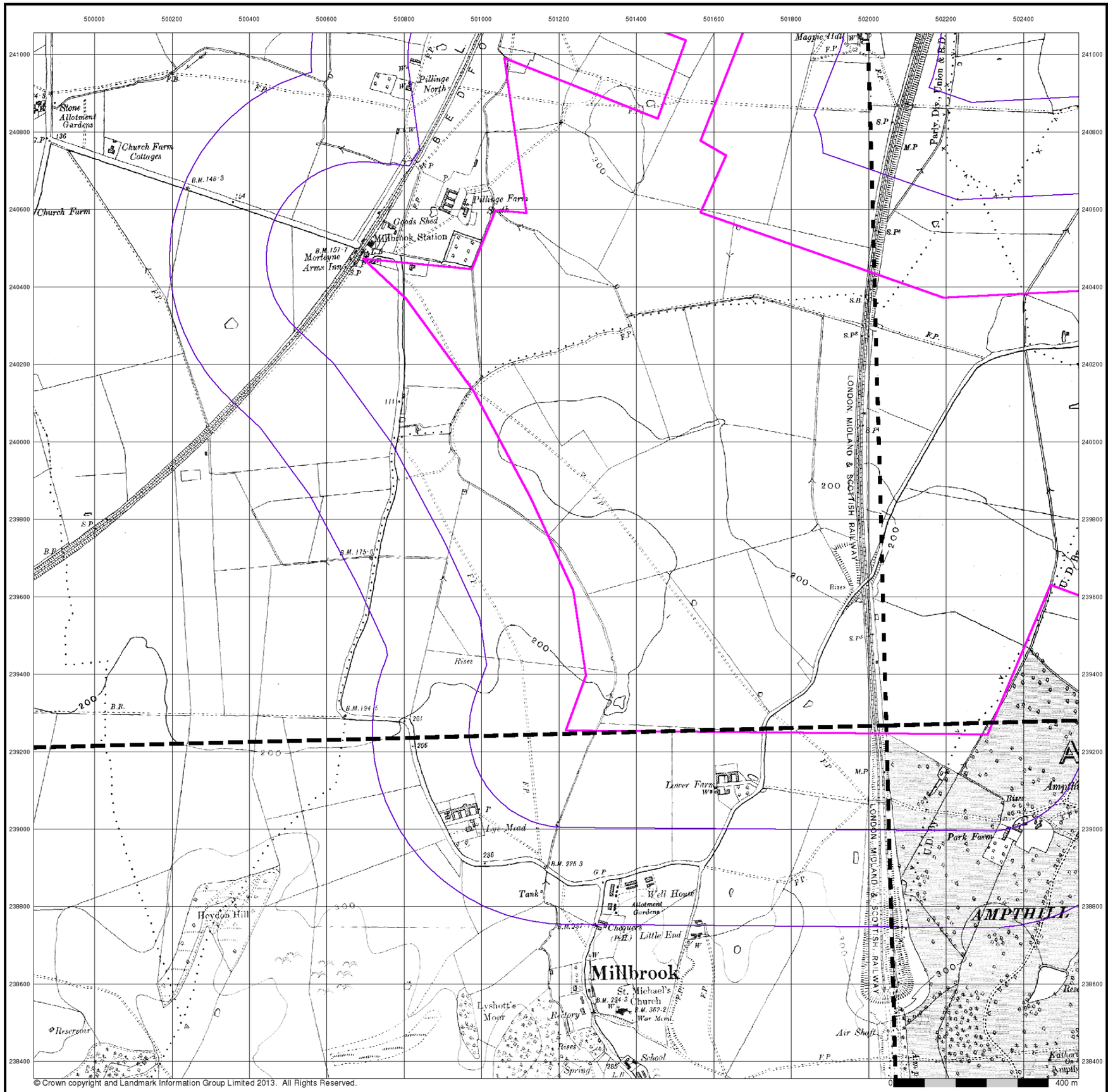
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

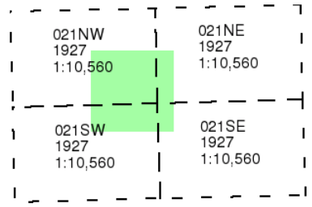
Bedfordshire

Published 1927

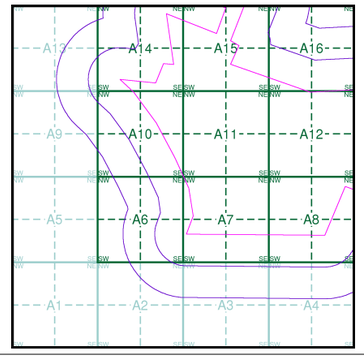
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

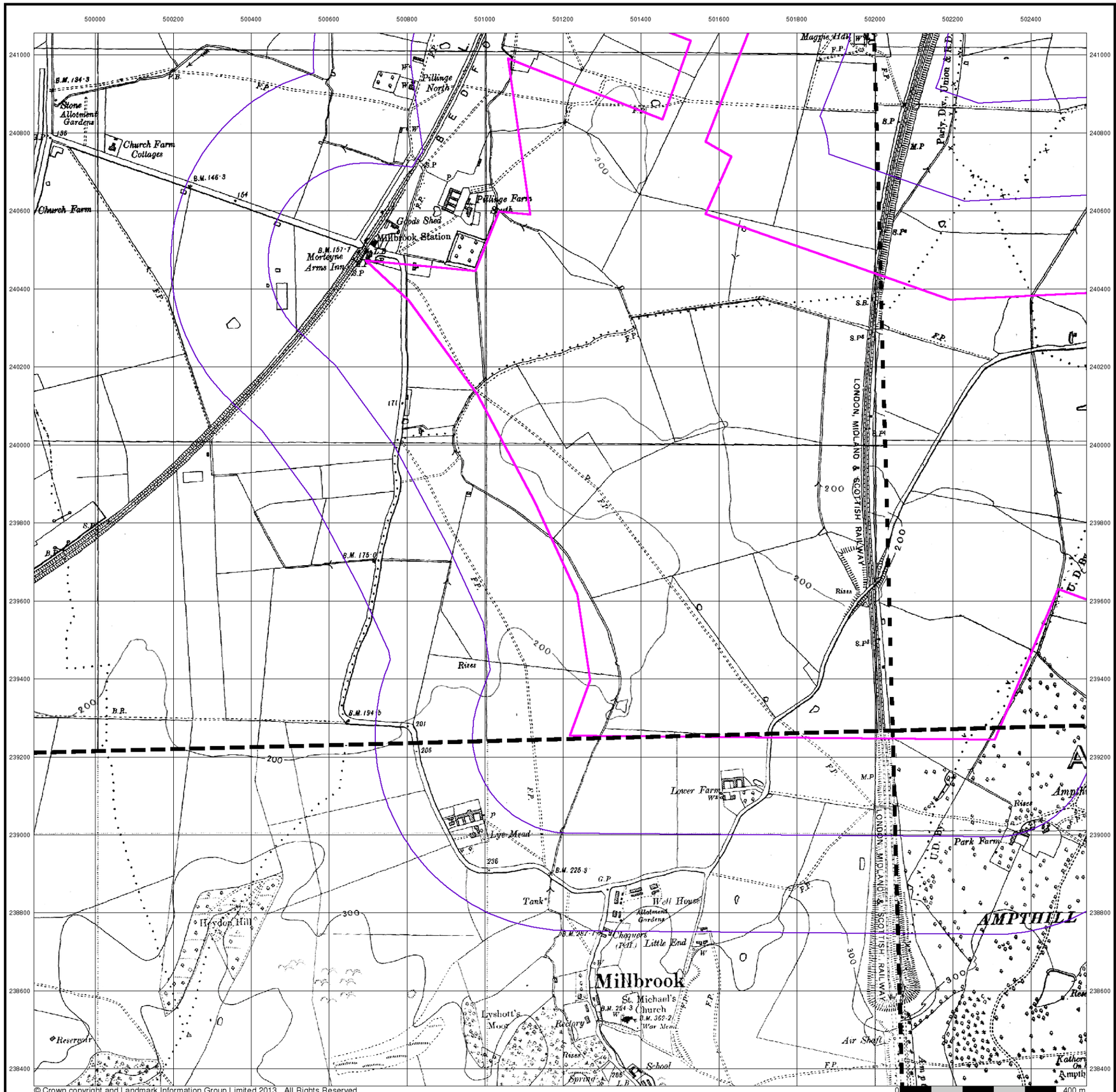
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

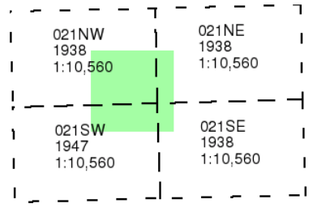
Bedfordshire

Published 1938 - 1947

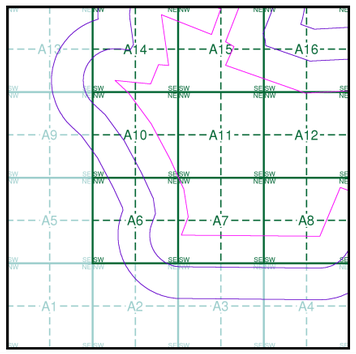
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



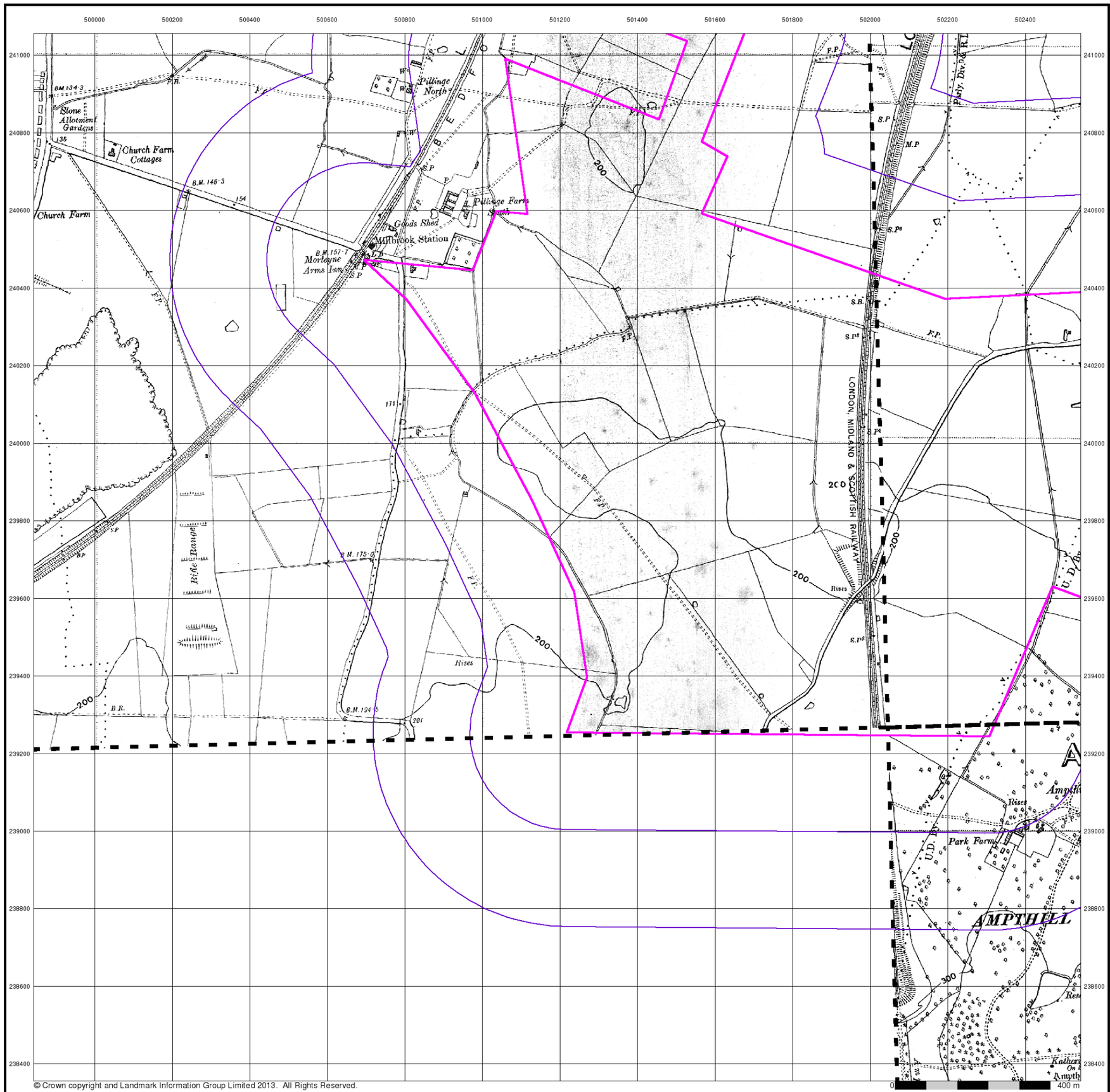
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

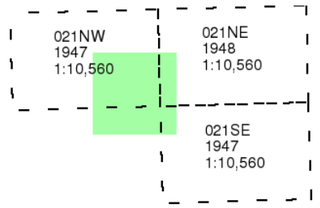
Bedfordshire

Published 1947 - 1948

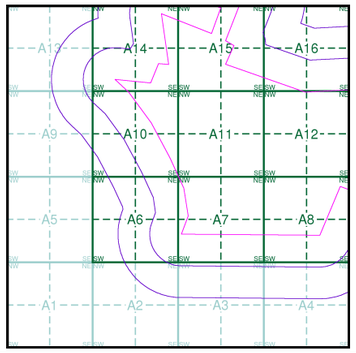
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

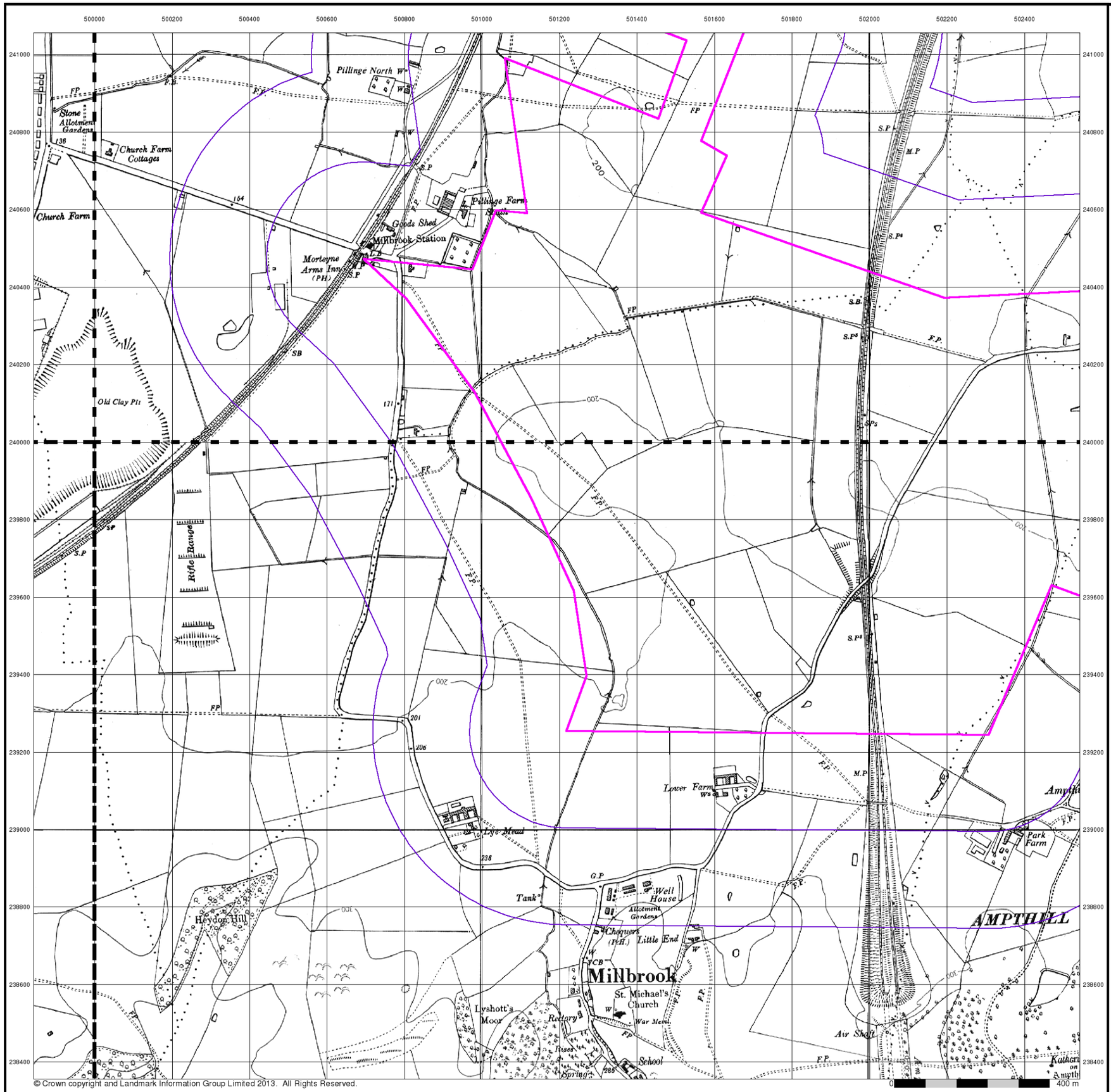
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

Ordnance Survey Plan

Published 1960

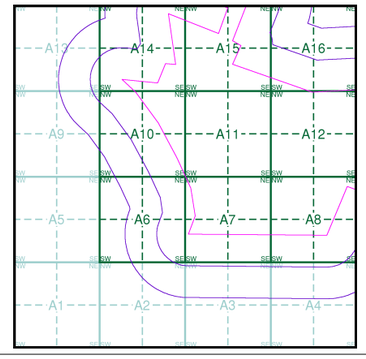
Source map scale - 1:10,000

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)

SP94SE 1960 1:10,560	TL04SW 1960 1:10,560
SP93NE 1960 1:10,560	TL03NW 1960 1:10,560

Historical Map - Slice A



Order Details

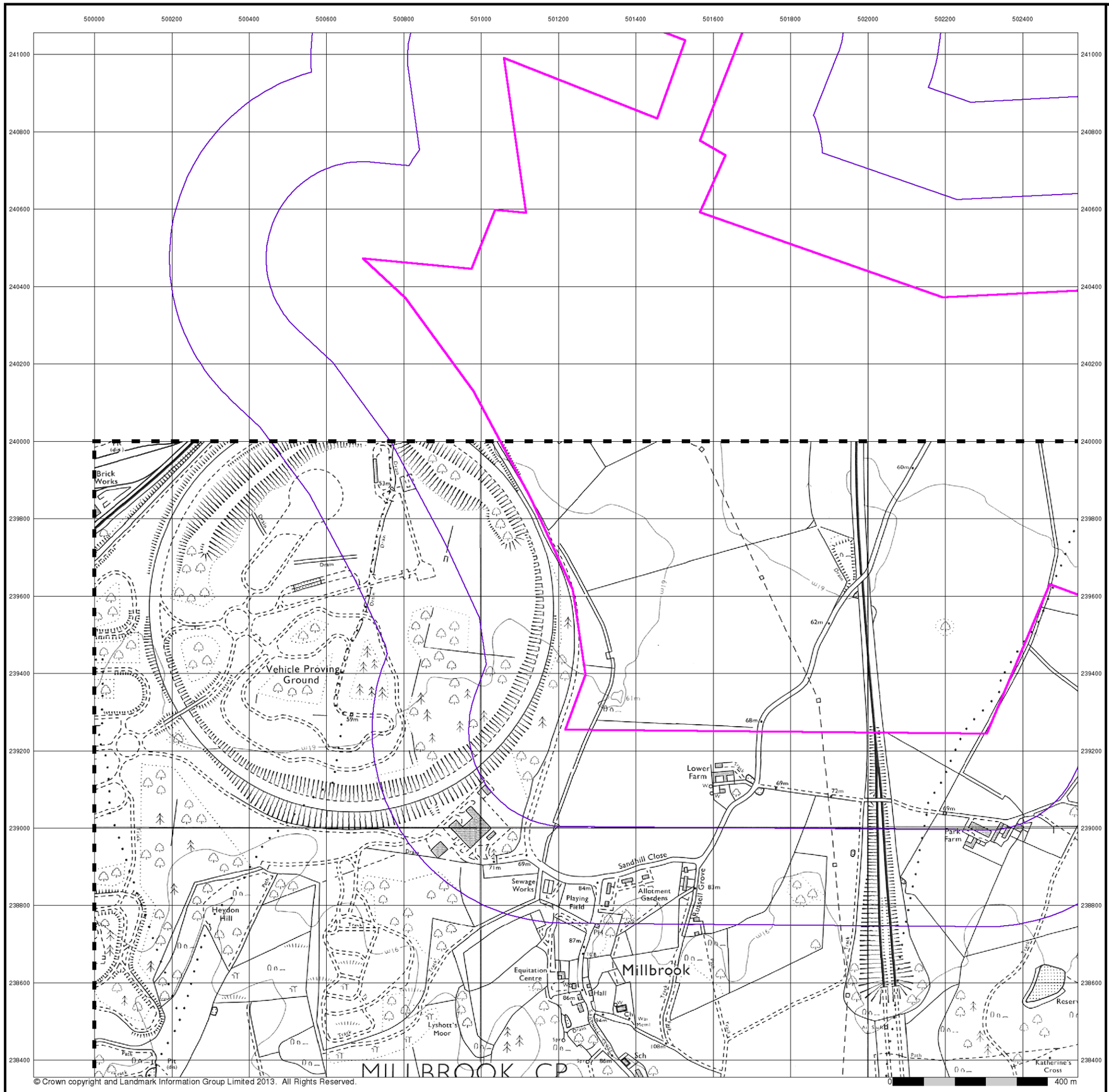
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



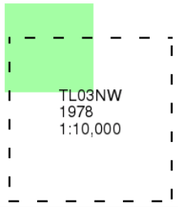
Ordnance Survey Plan

Published 1978

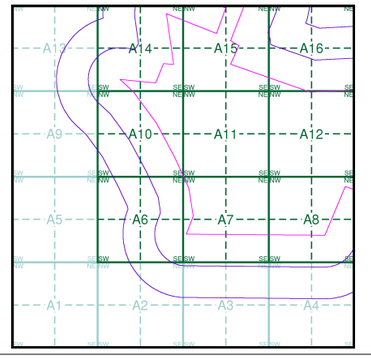
Source map scale - 1:10,000

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



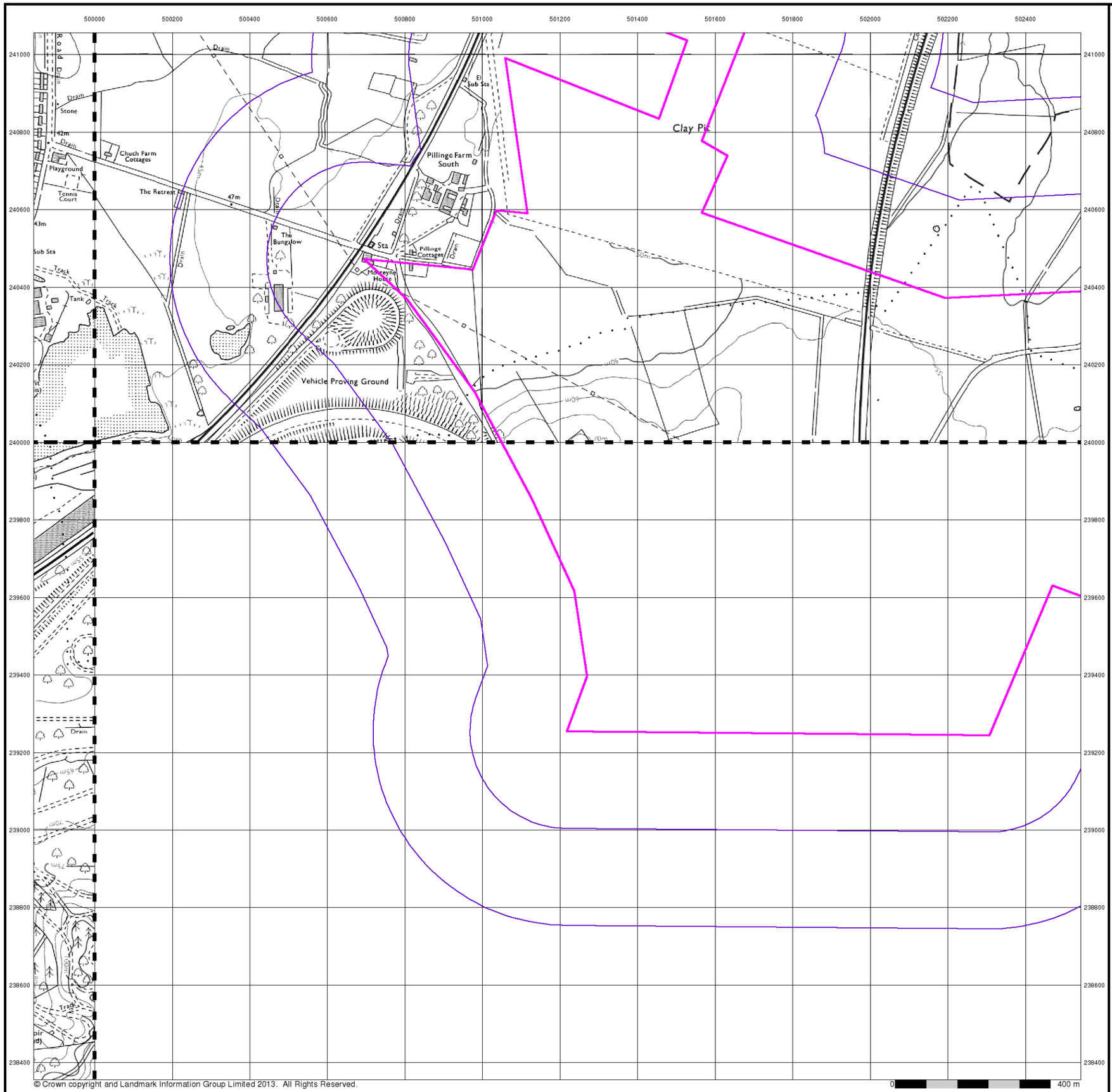
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

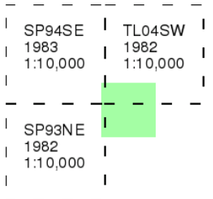
Ordnance Survey Plan

Published 1982 - 1983

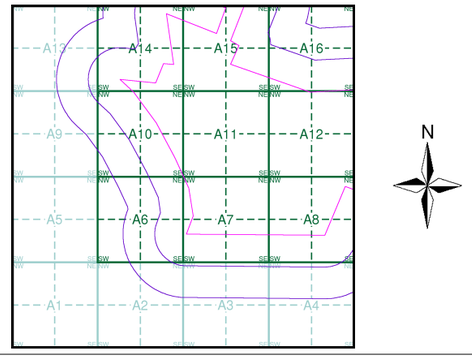
Source map scale - 1:10,000

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

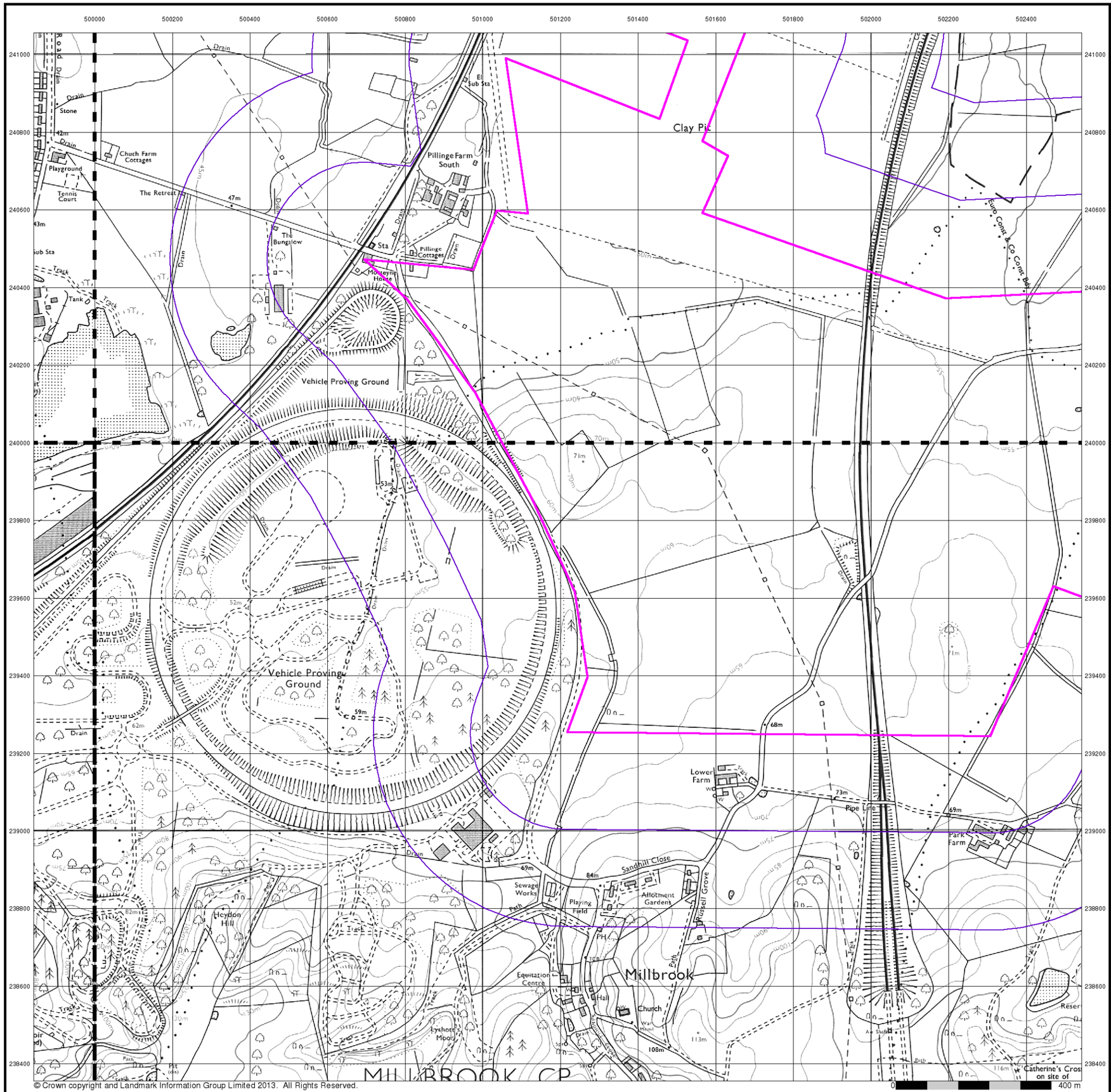
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

Ordnance Survey Plan

Published 1990

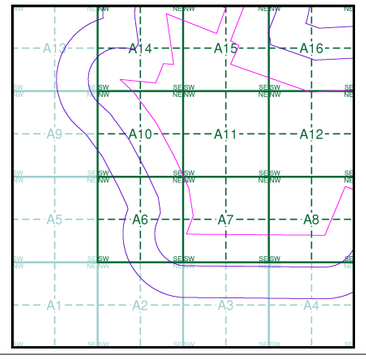
Source map scale - 1:10,000

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)

SP94SE 1990 1:10,000	TL04SW 1990 1:10,000
SP93NE 1990 1:10,000	TL03NW 1990 1:10,000

Historical Map - Slice A



Order Details

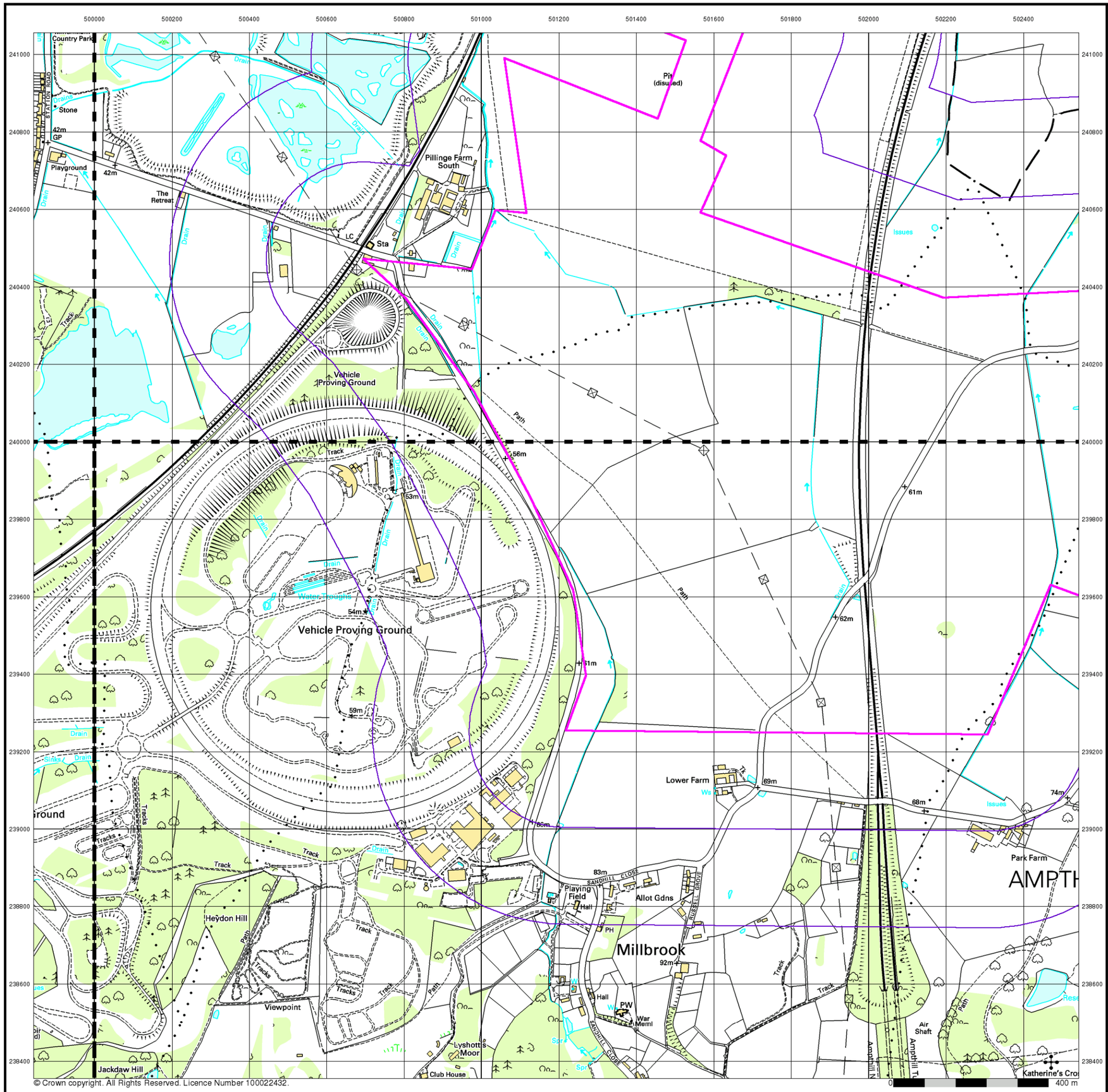
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

10k Raster Mapping

Published 2006

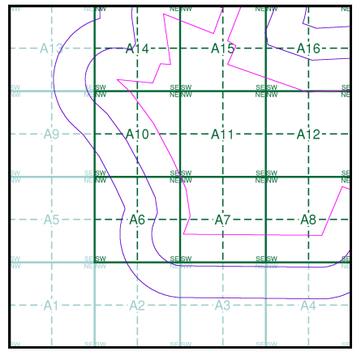
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SP94SE 2006 1:10,000	TL04SW 2006 1:10,000
SP93NE 2006 1:10,000	TL03NW 2006 1:10,000

Historical Map - Slice A



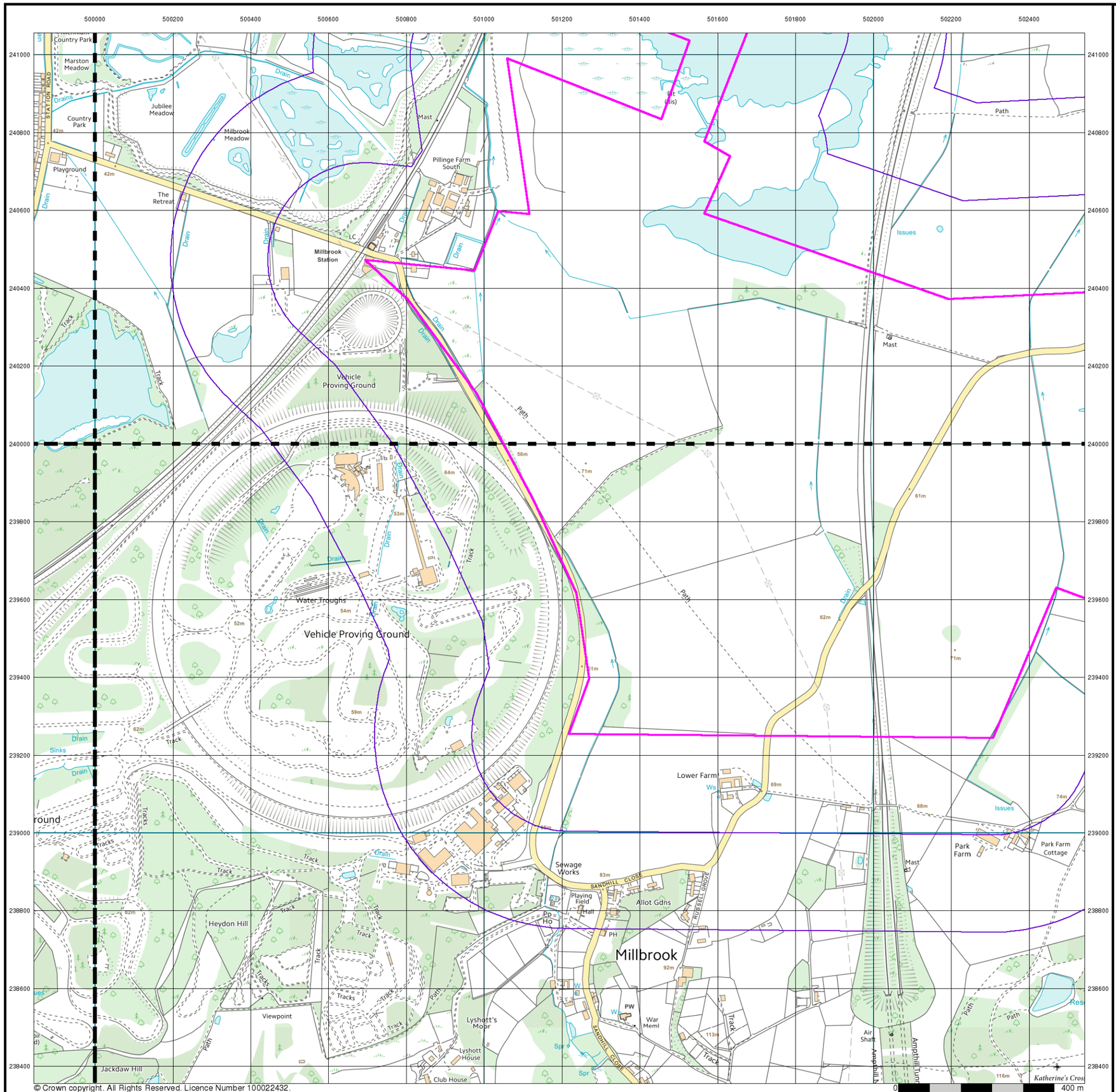
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

VectorMap Local

Published 2014

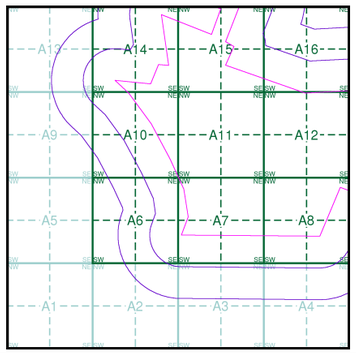
Source map scale - 1:10,000

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)

SP94SE 2014 Variable	TL04SW 2014 Variable
SP93NE 2014 Variable	TL03NW 2014 Variable

Historical Map - Slice A



Order Details

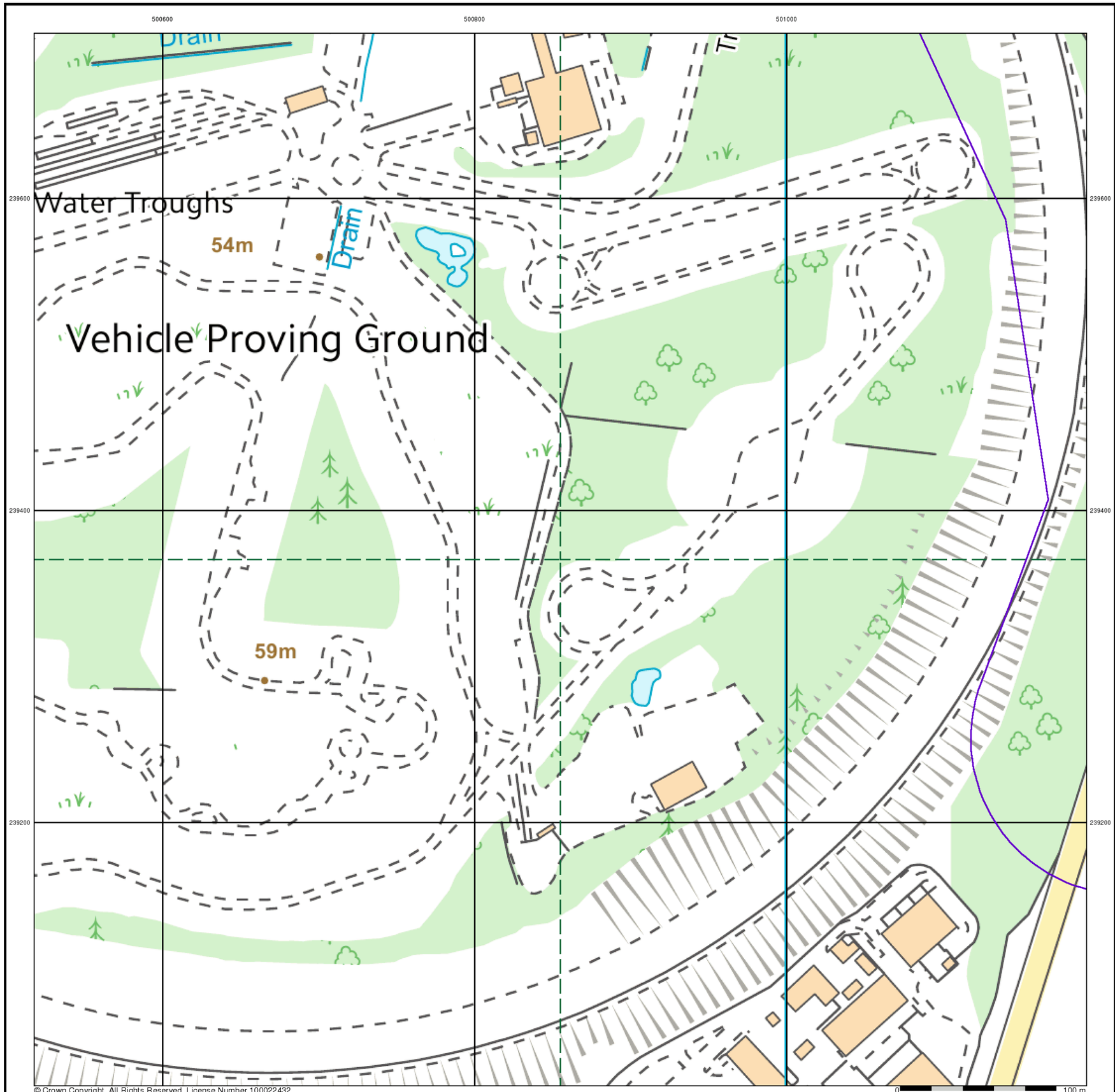
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

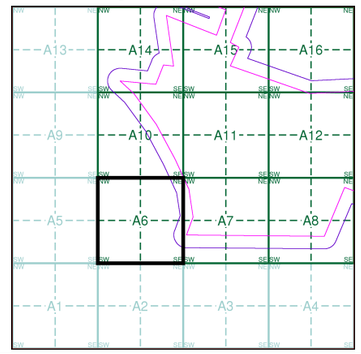
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment A6



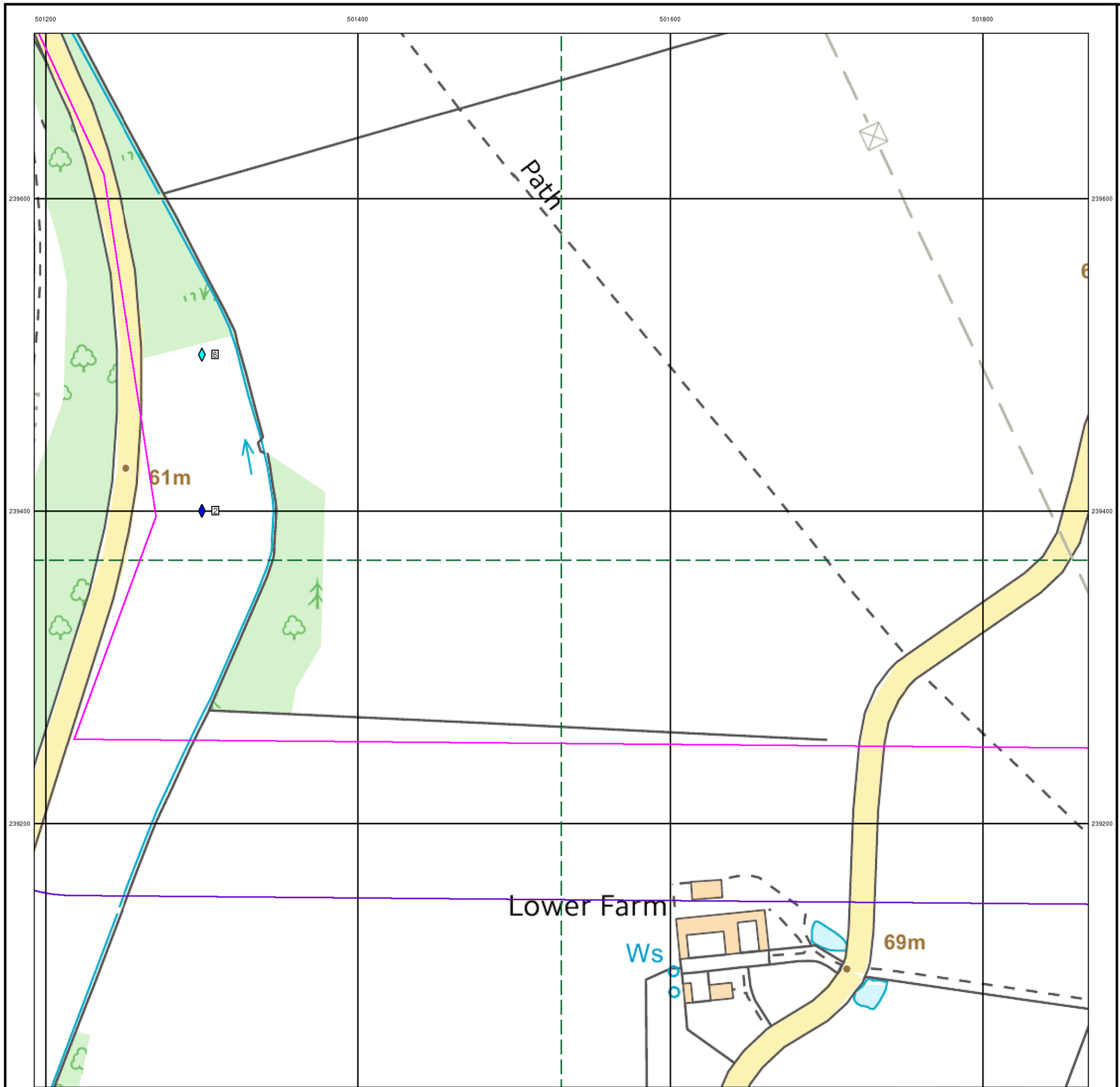
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

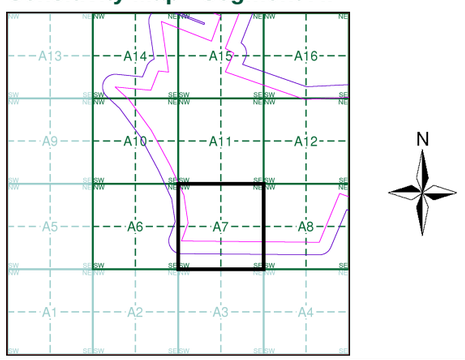
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment A7



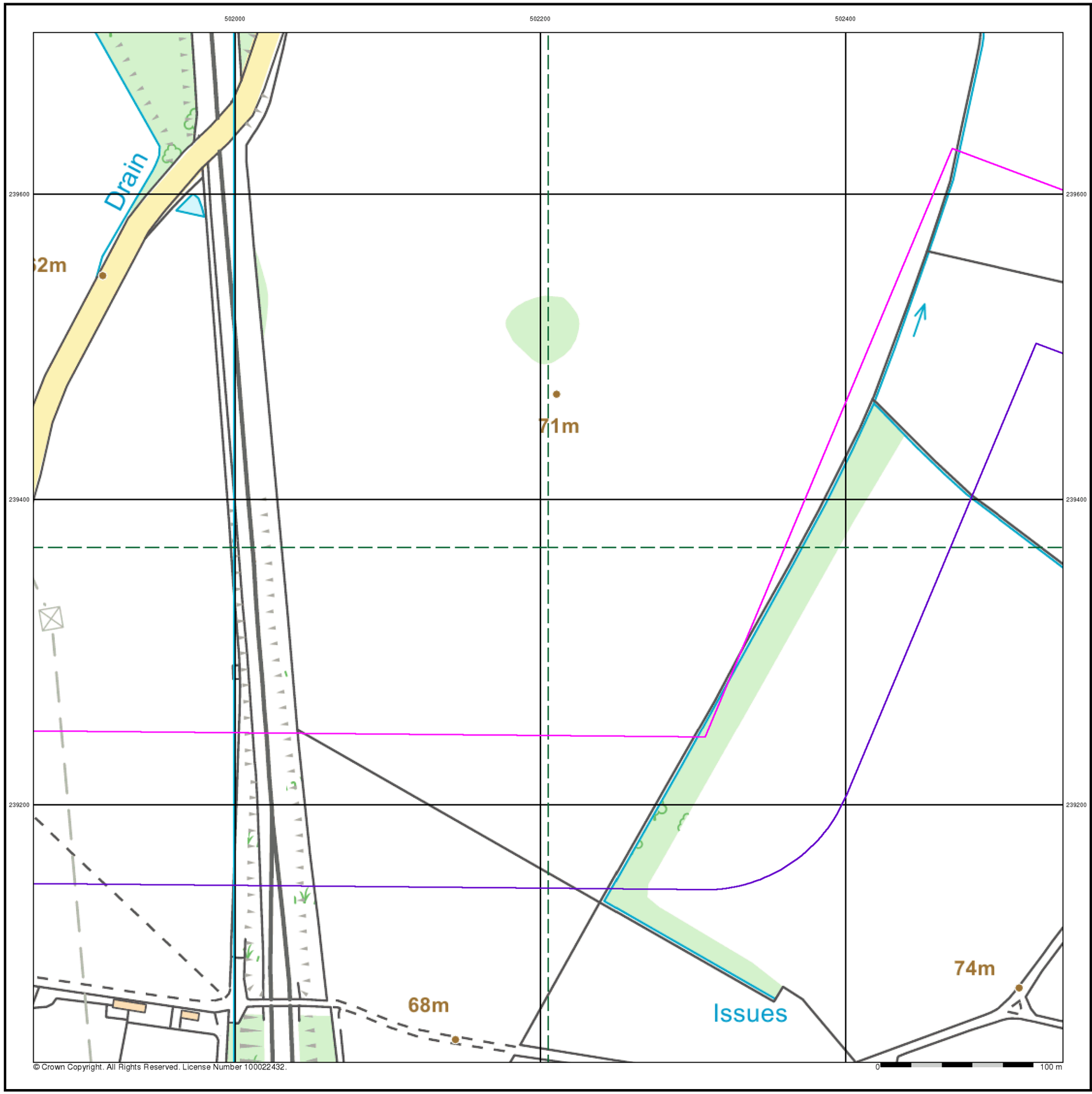
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

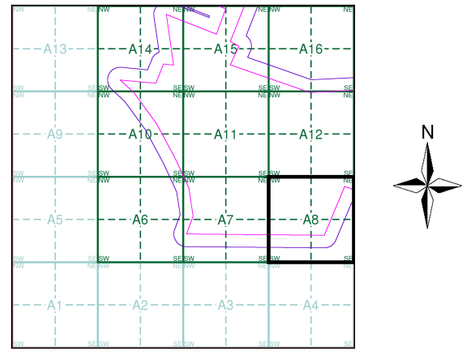
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment A8



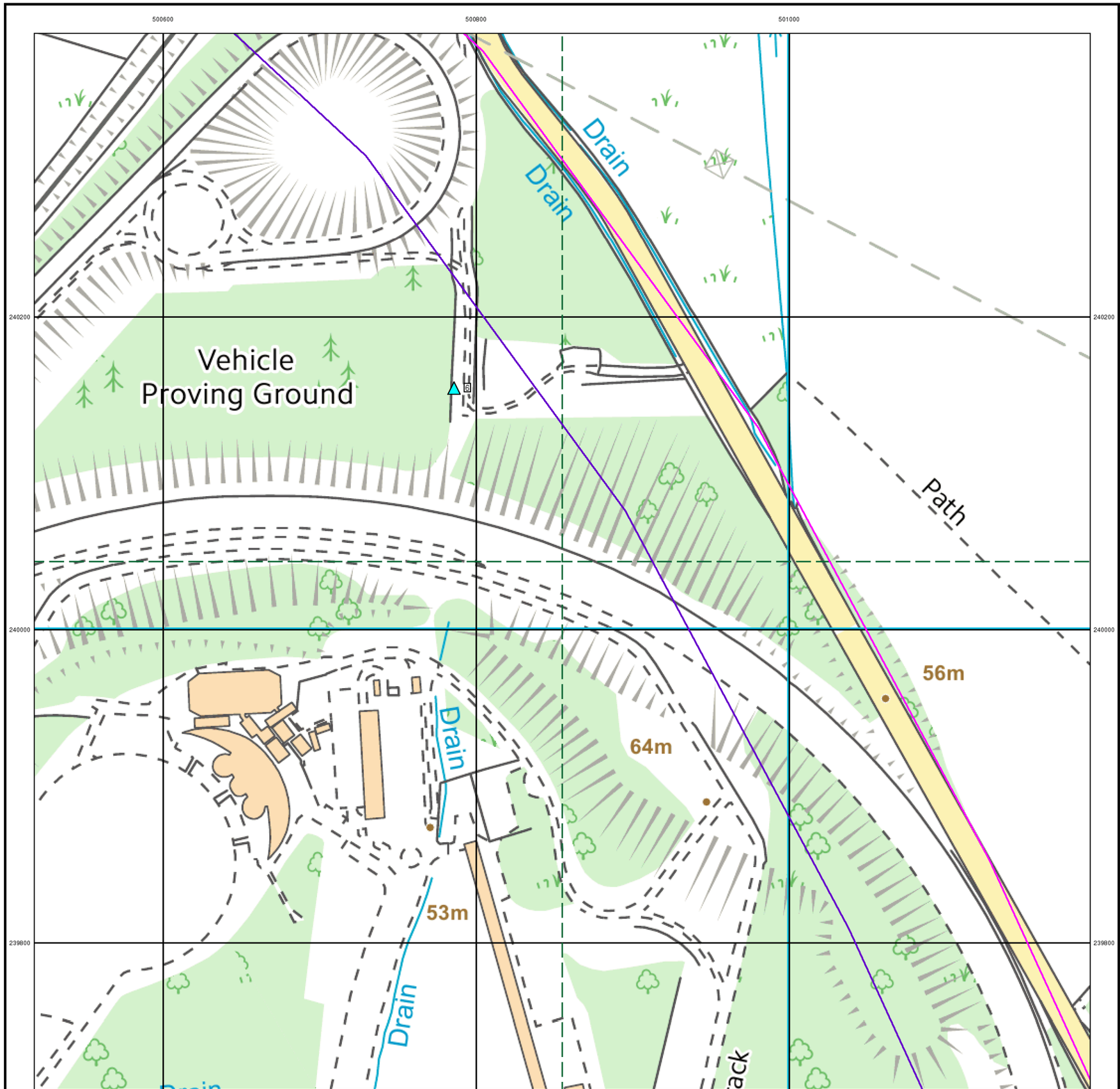
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

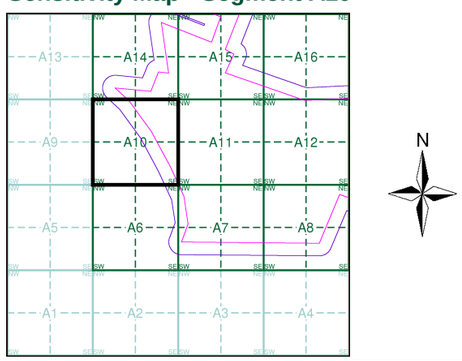
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment A10



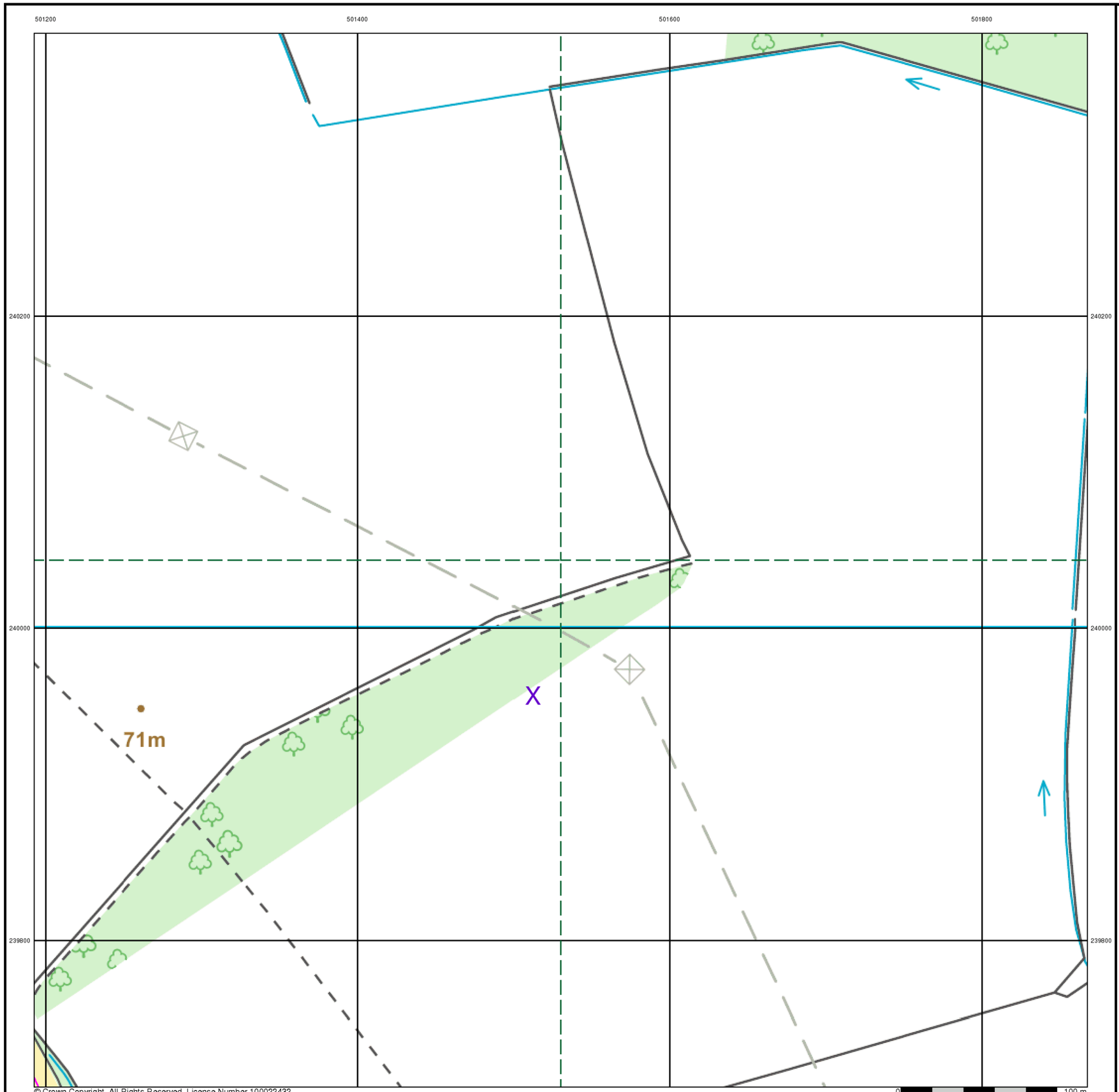
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

BGS Recorded Mineral Site

Industrial Land Use

Contemporary Trade Directory Entry
Fuel Station Entry

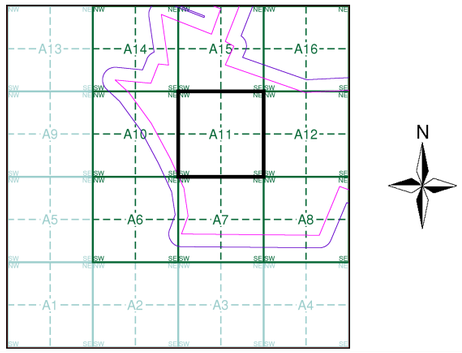
Waste

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
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

Hazardous Substances

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

Site Sensitivity Map - Segment A11



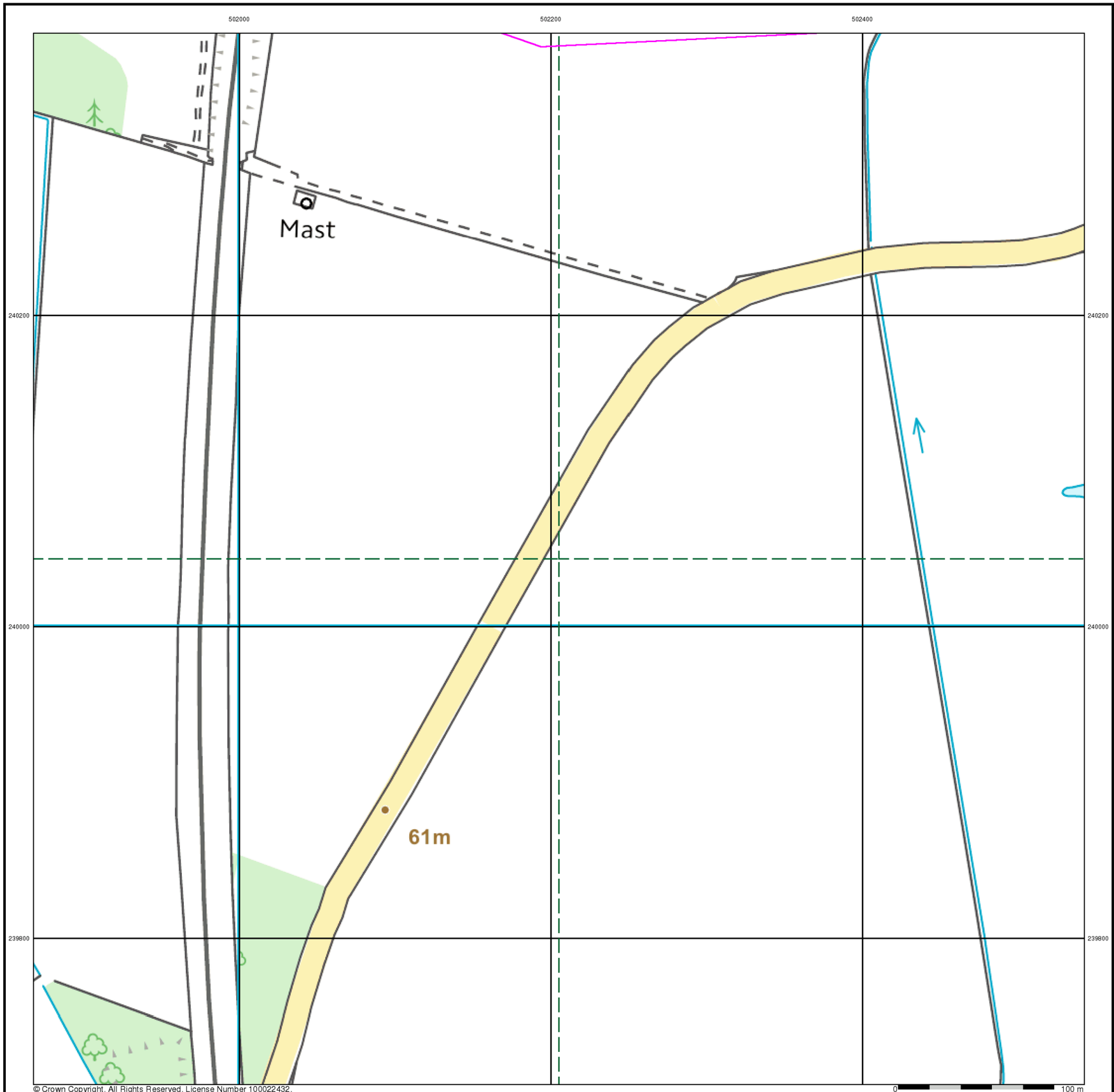
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

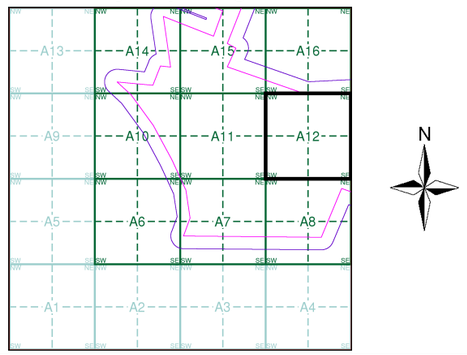
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment A12



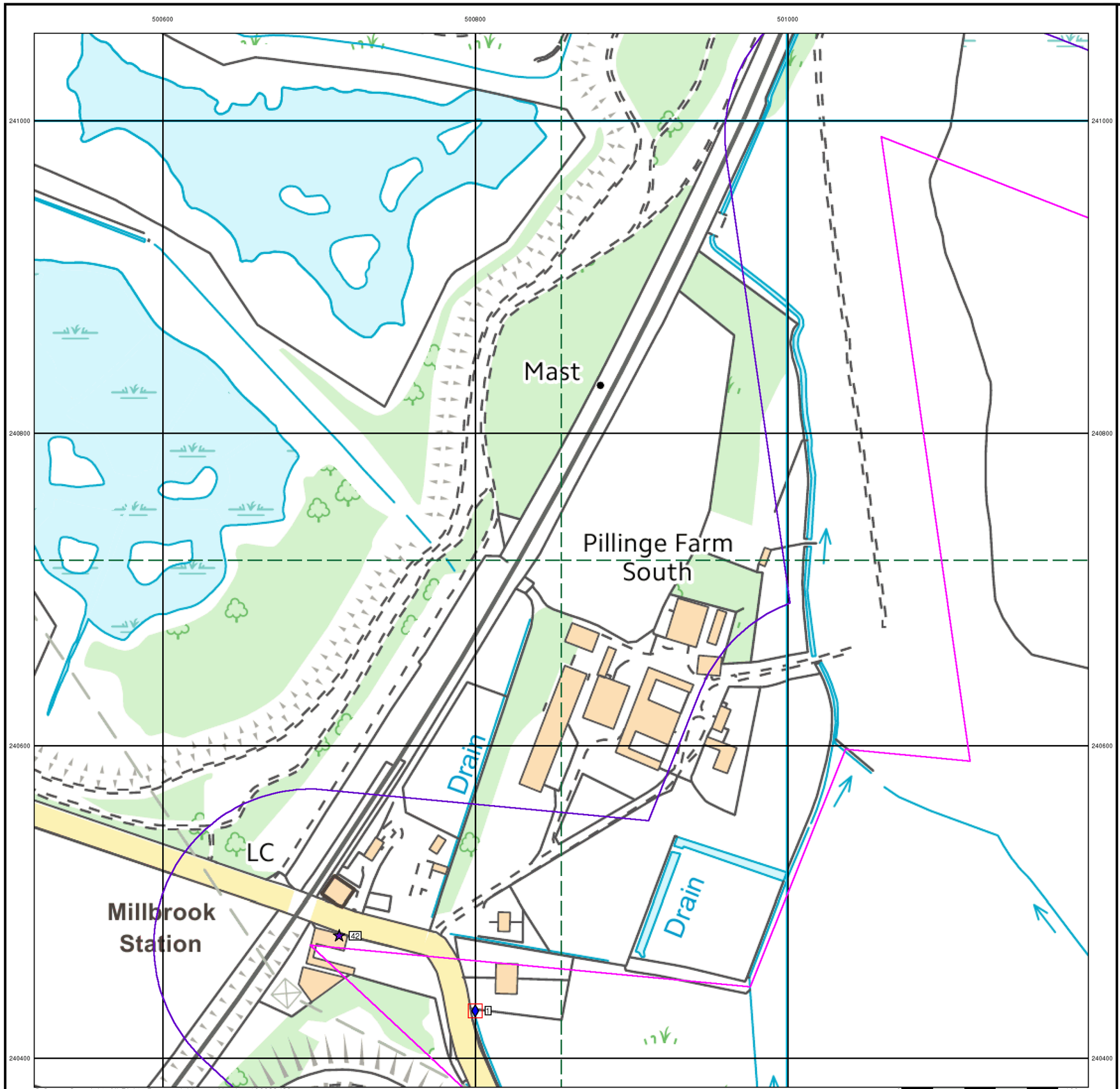
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

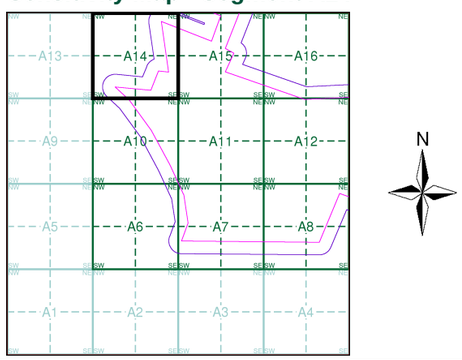
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment A14



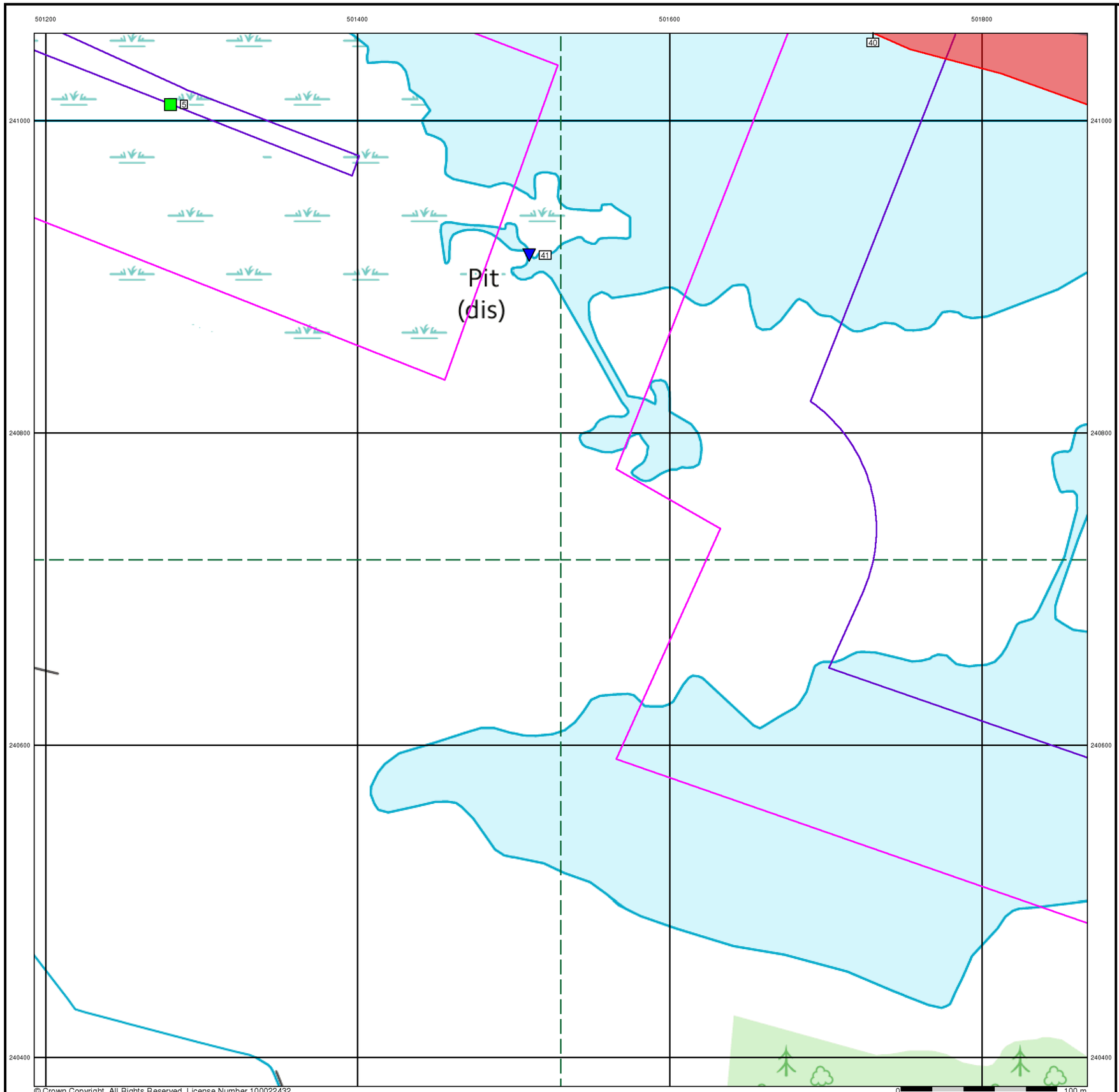
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

BGS Recorded Mineral Site

Industrial Land Use

Contemporary Trade Directory Entry
Fuel Station Entry

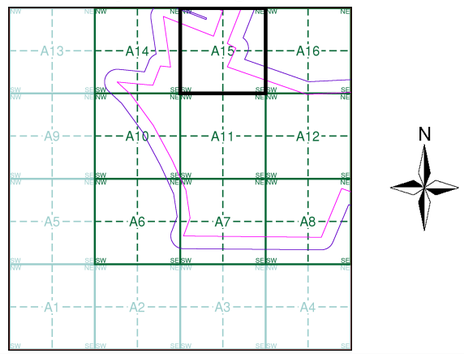
Waste

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
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

Hazardous Substances

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

Site Sensitivity Map - Segment A15



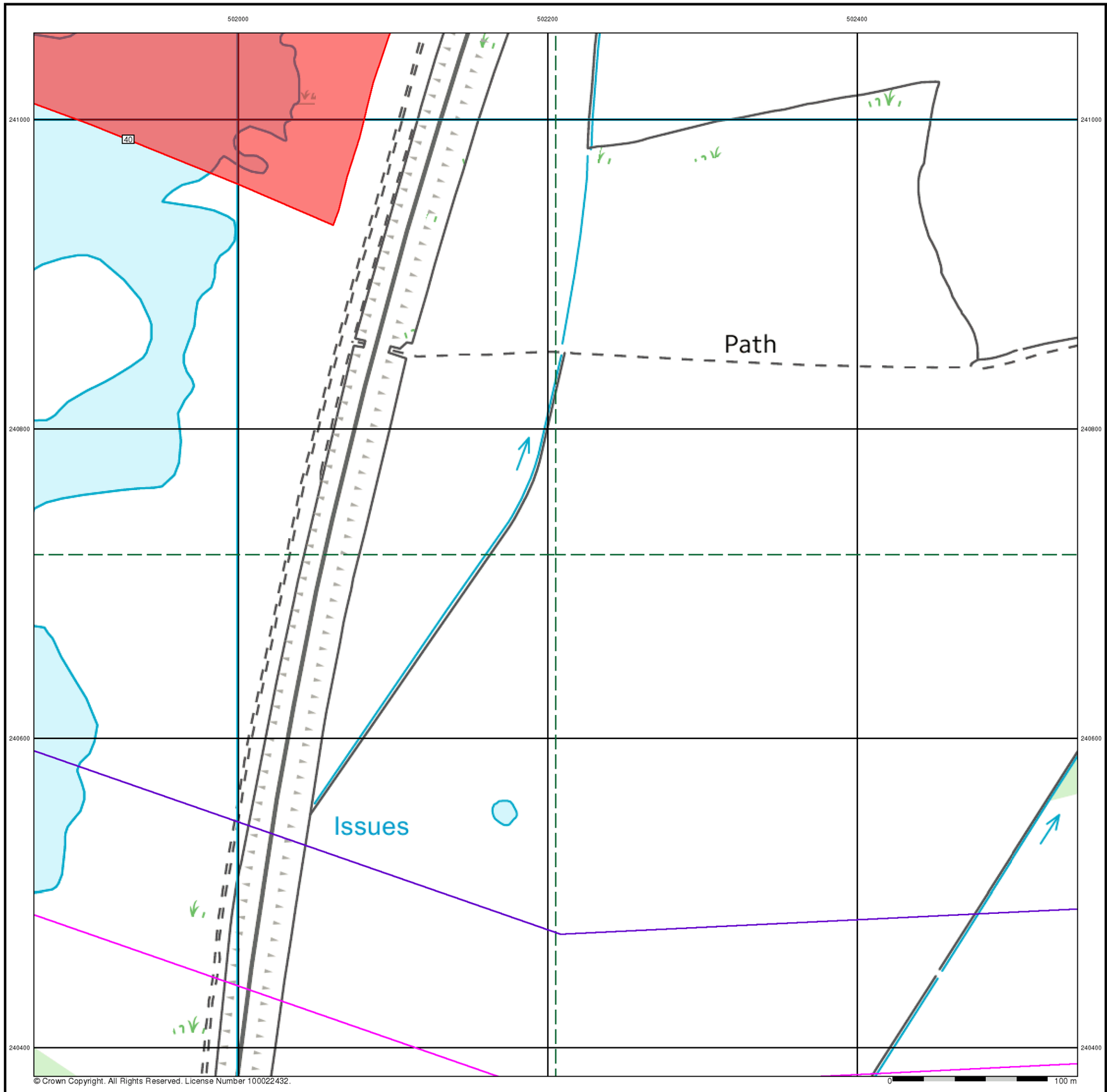
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

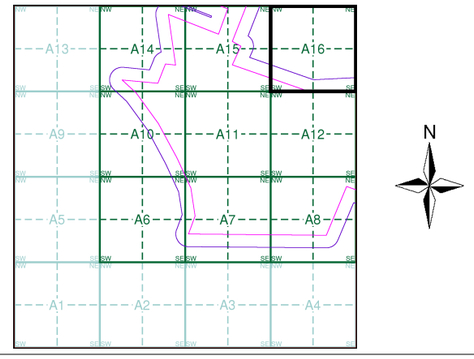
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment A16



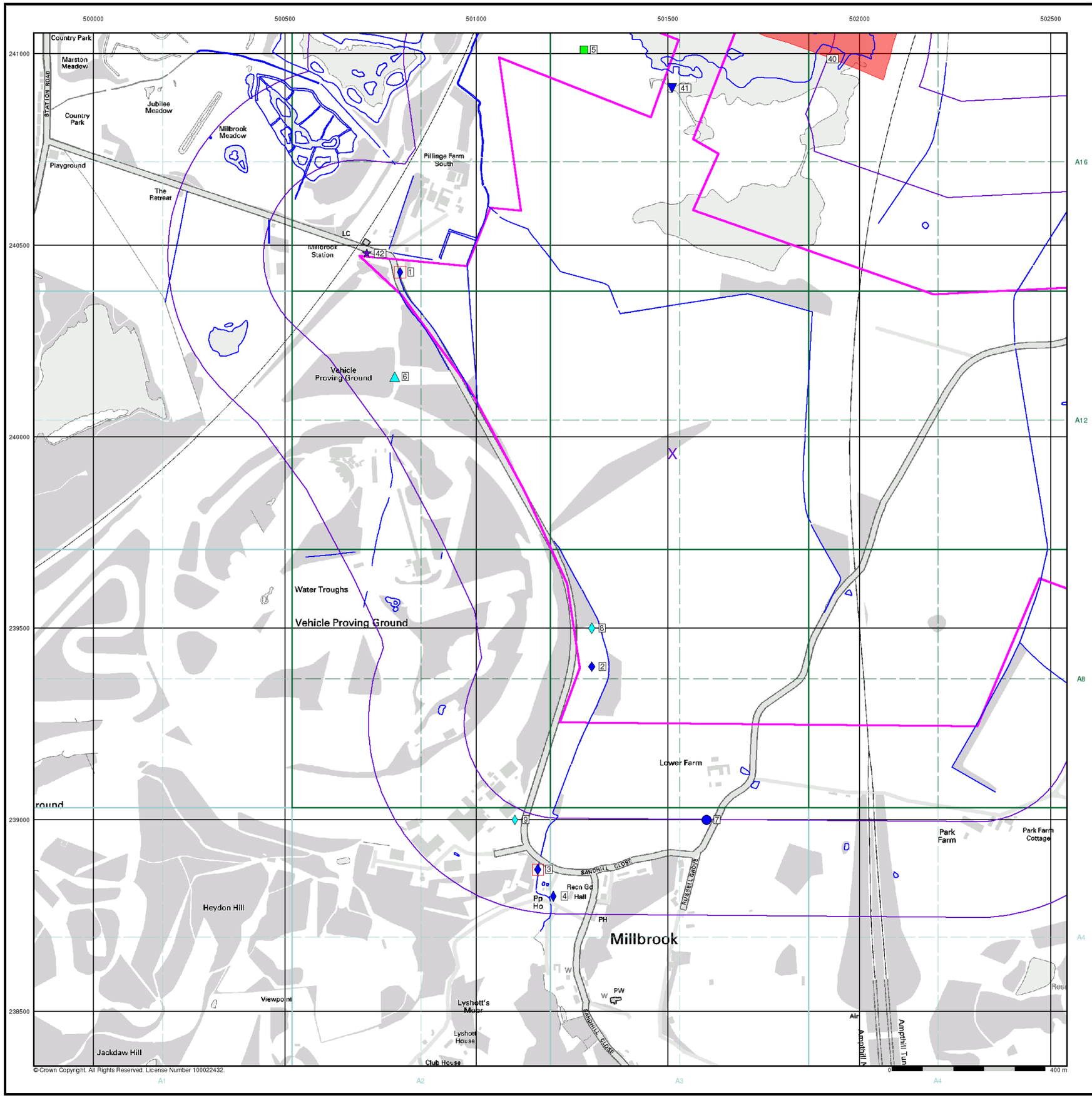
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

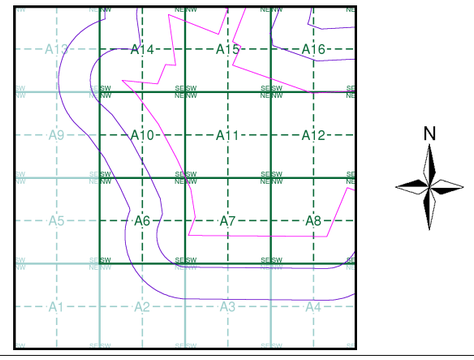
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Slice A



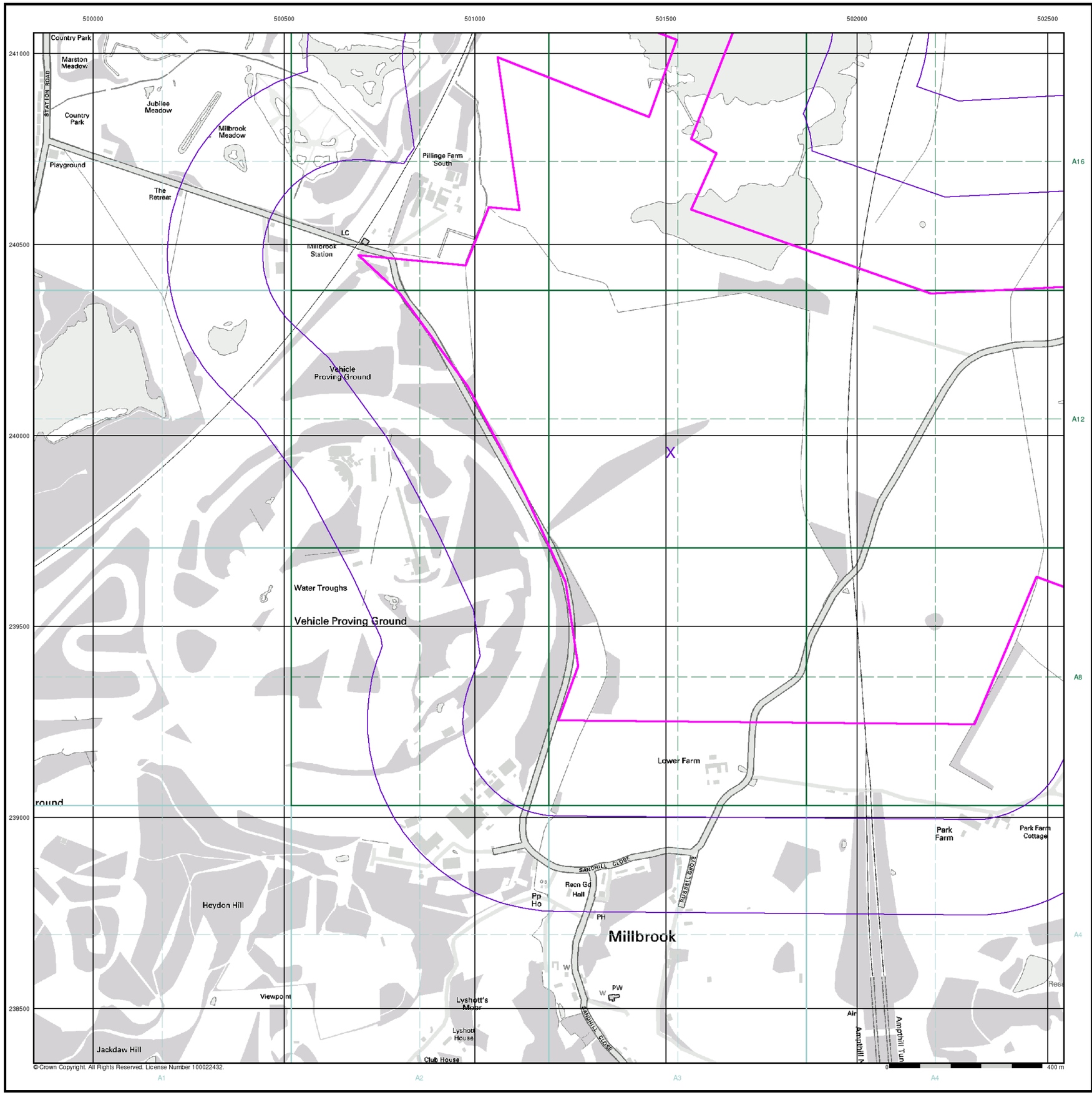
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



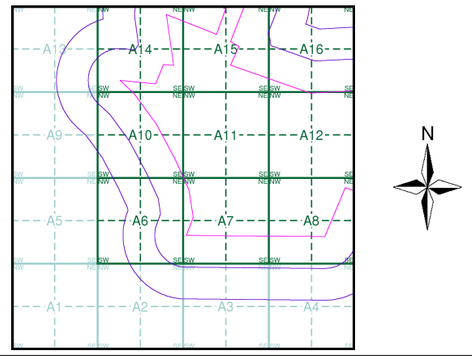
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A



Order Details

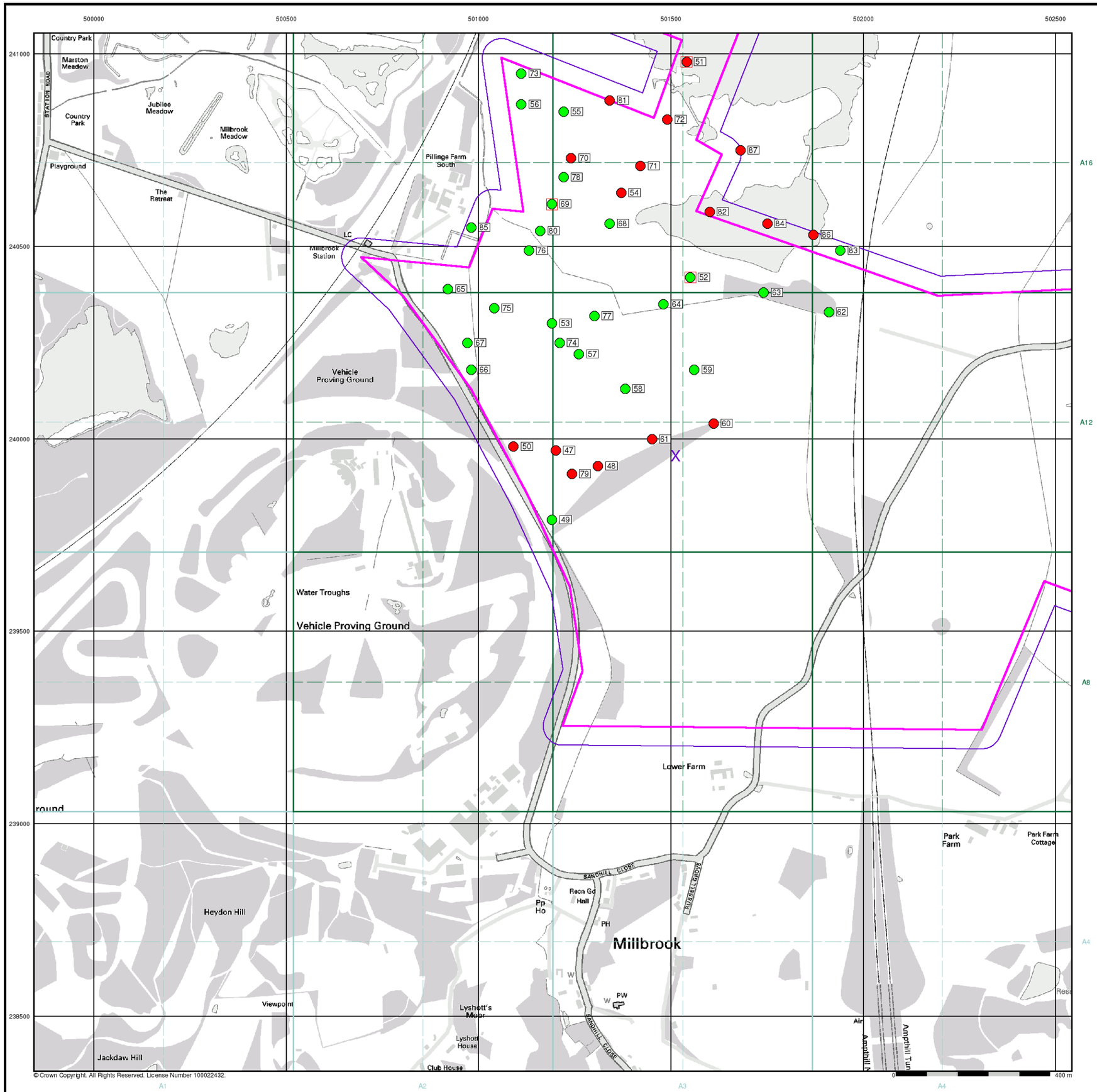
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



General

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

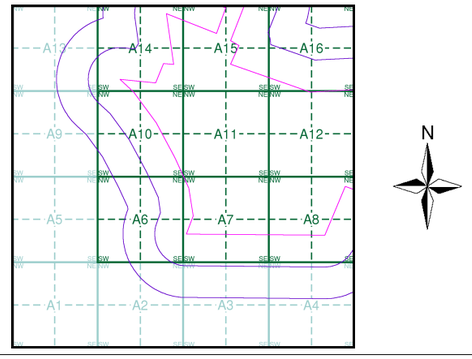
Agency and Hydrological (Boreholes)

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

For Borehole information please refer to the Borehole datasheet 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



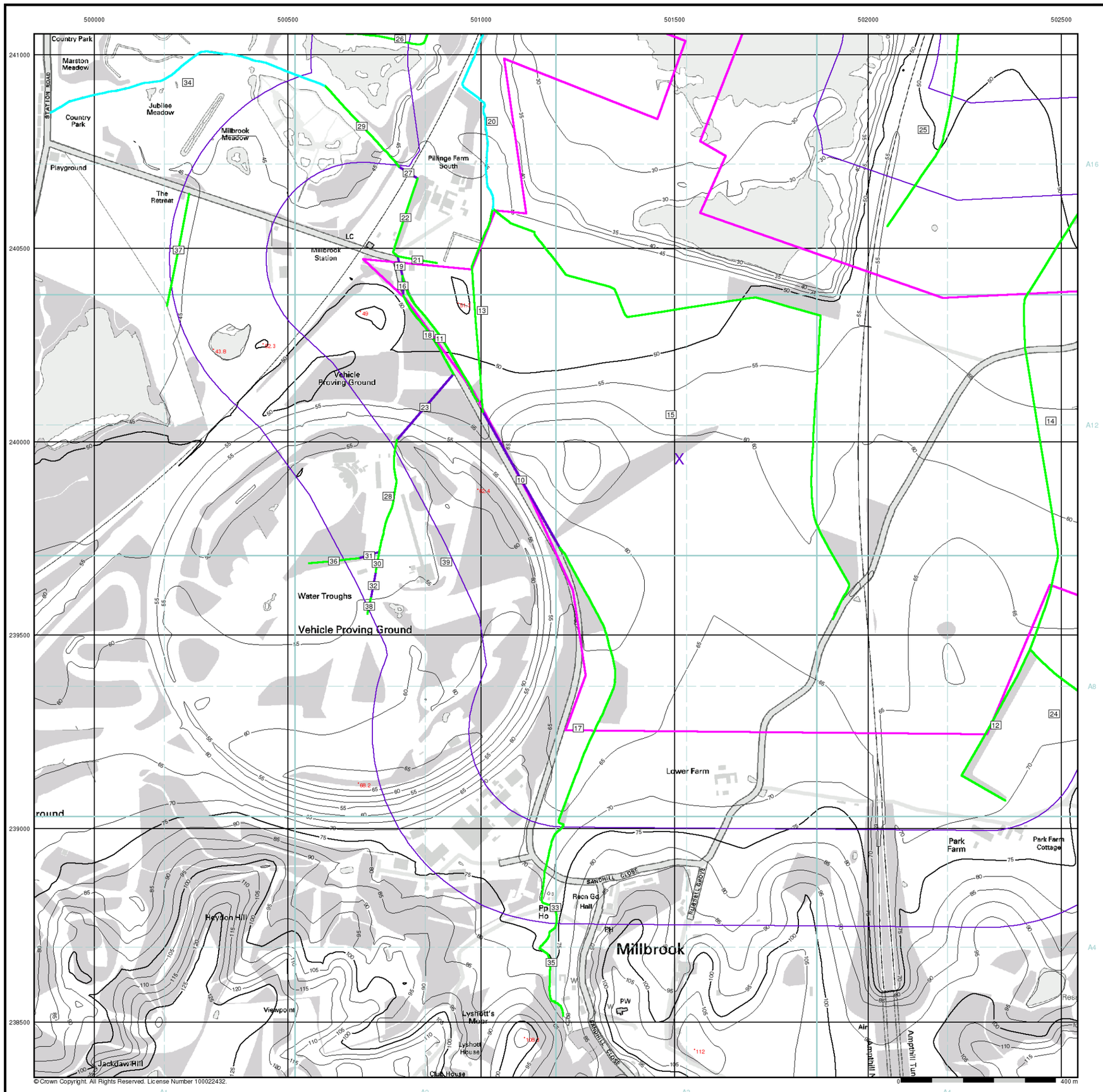
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

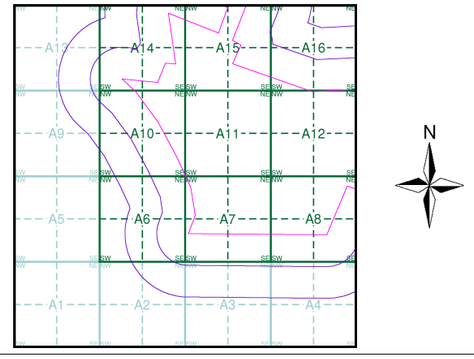
Master Contour 100

Spot Height *167.3

MLWV Mean Low Water

MHWV Mean High Water

EA/NRW Detailed River Network Map - Slice A



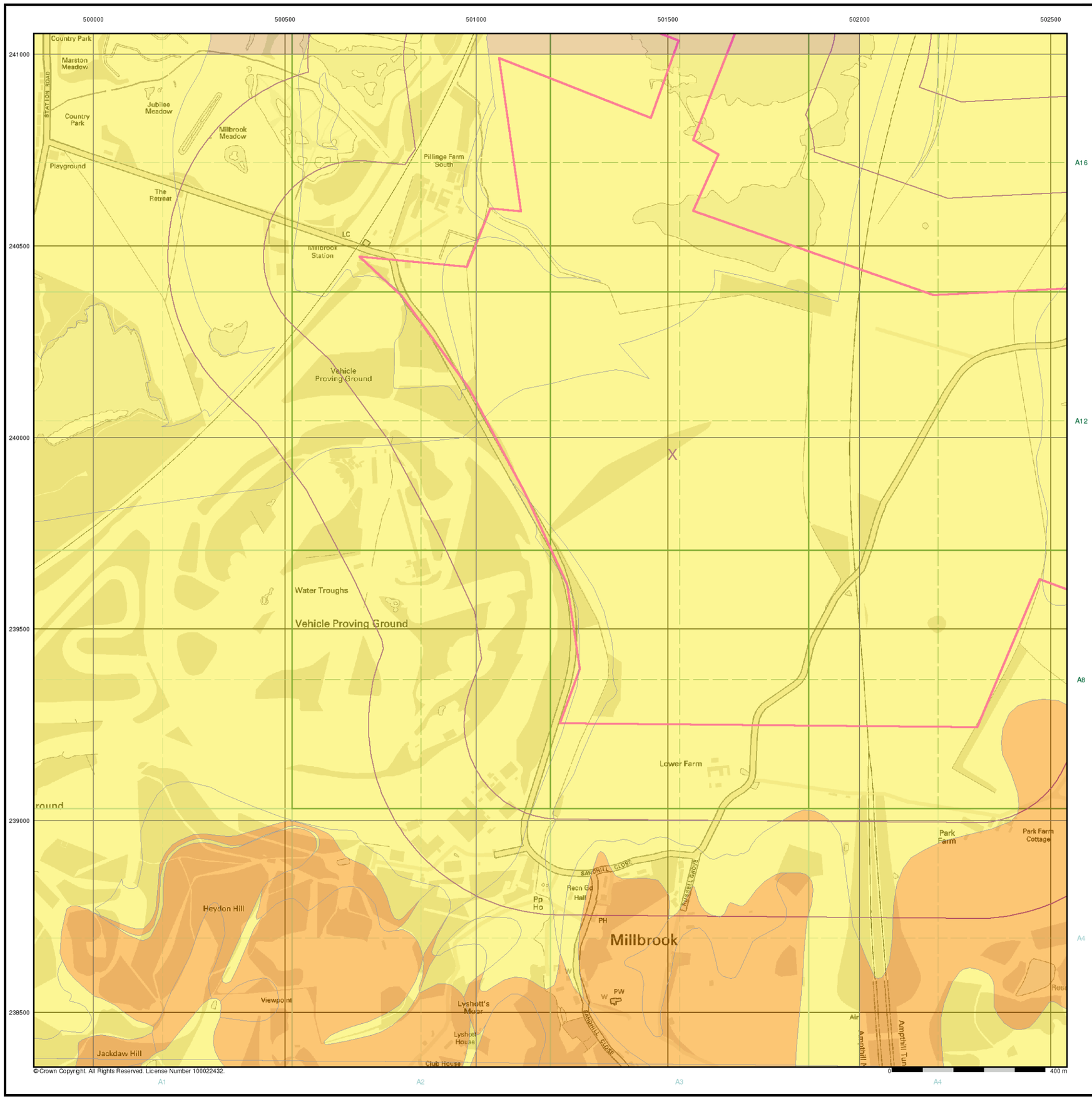
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

General

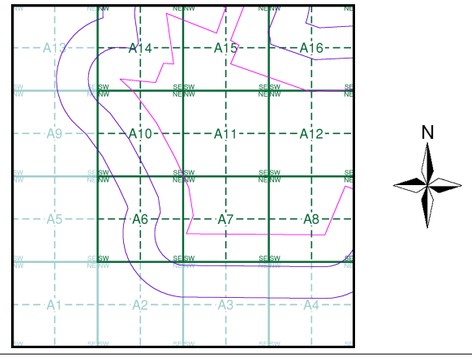
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group

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

General

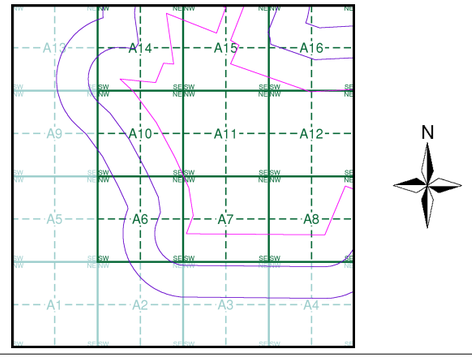
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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



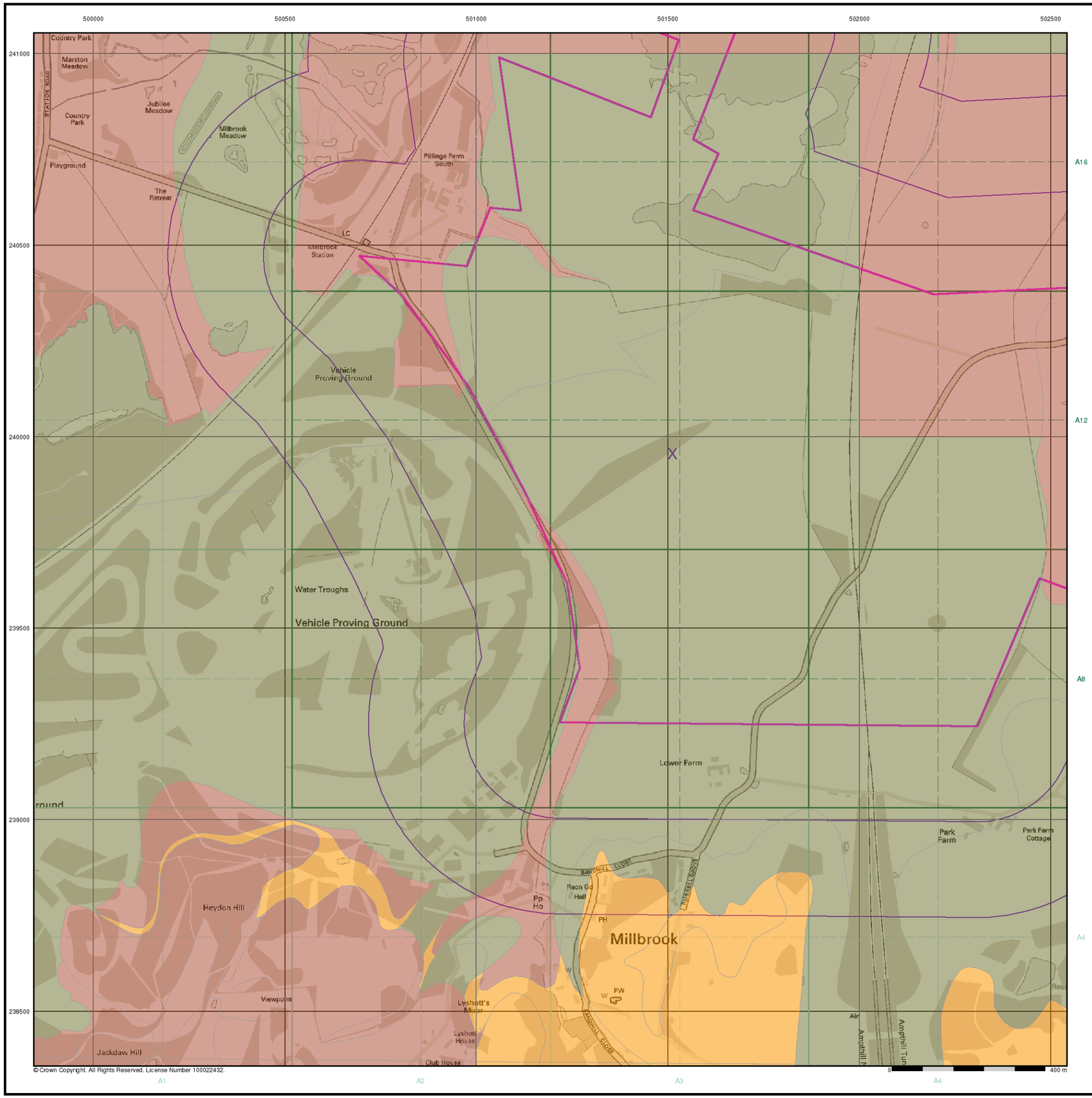
Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



General

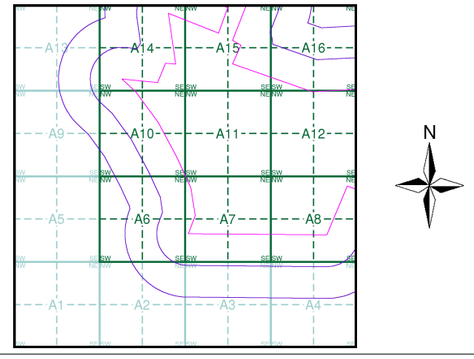
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

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

Estimated Soil Chemistry Chromium - Slice A



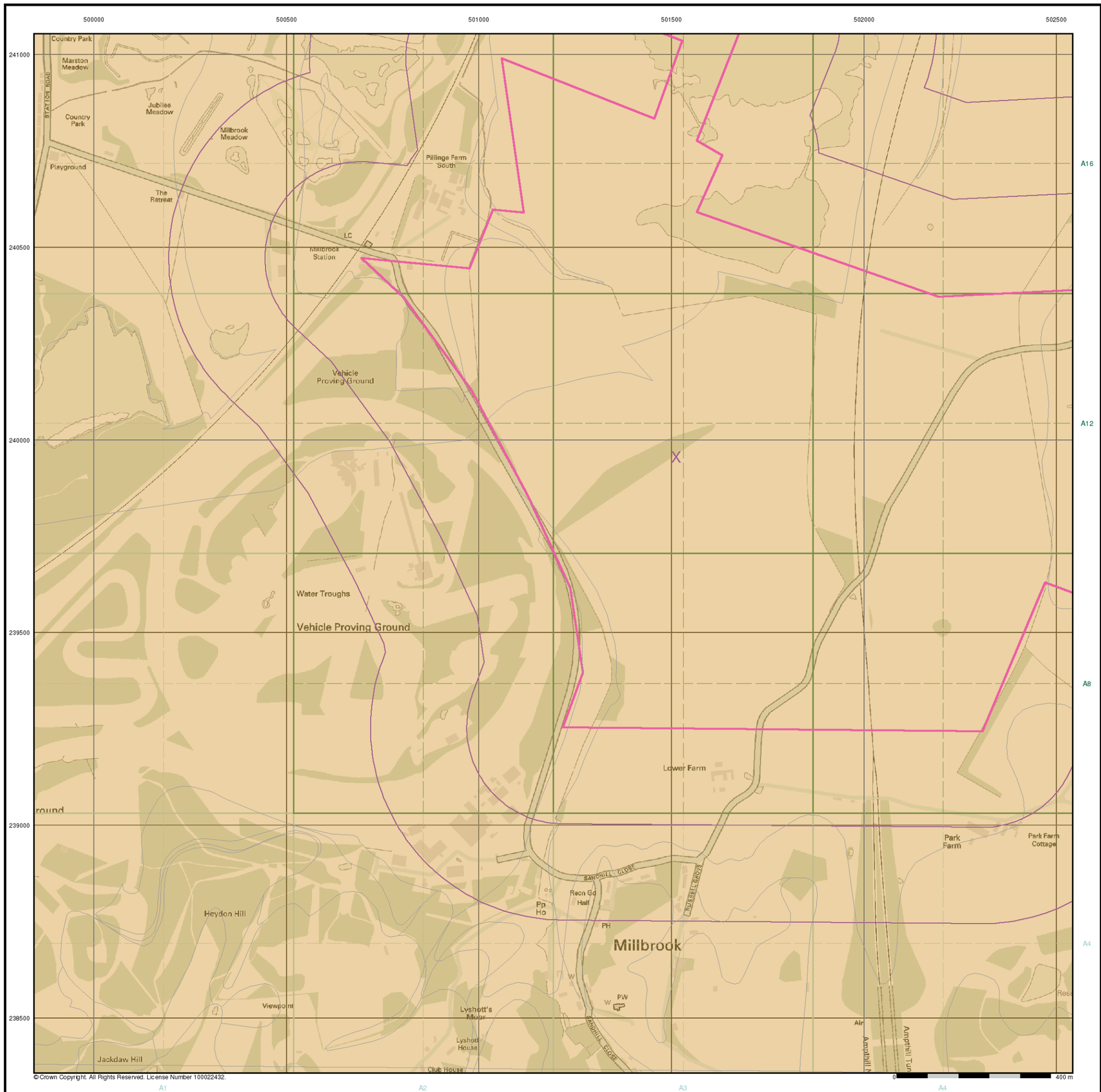
Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



General

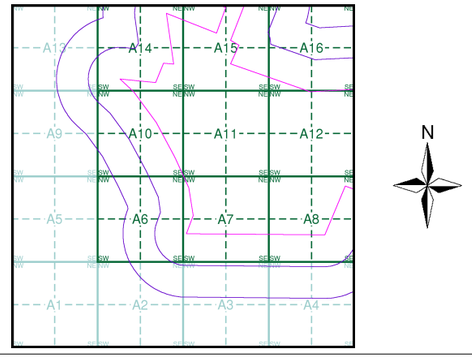
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- < 150
- 150 - 300
- 300 - 600
- 600 - 900
- > 900

Estimated Soil Chemistry Lead - Slice A



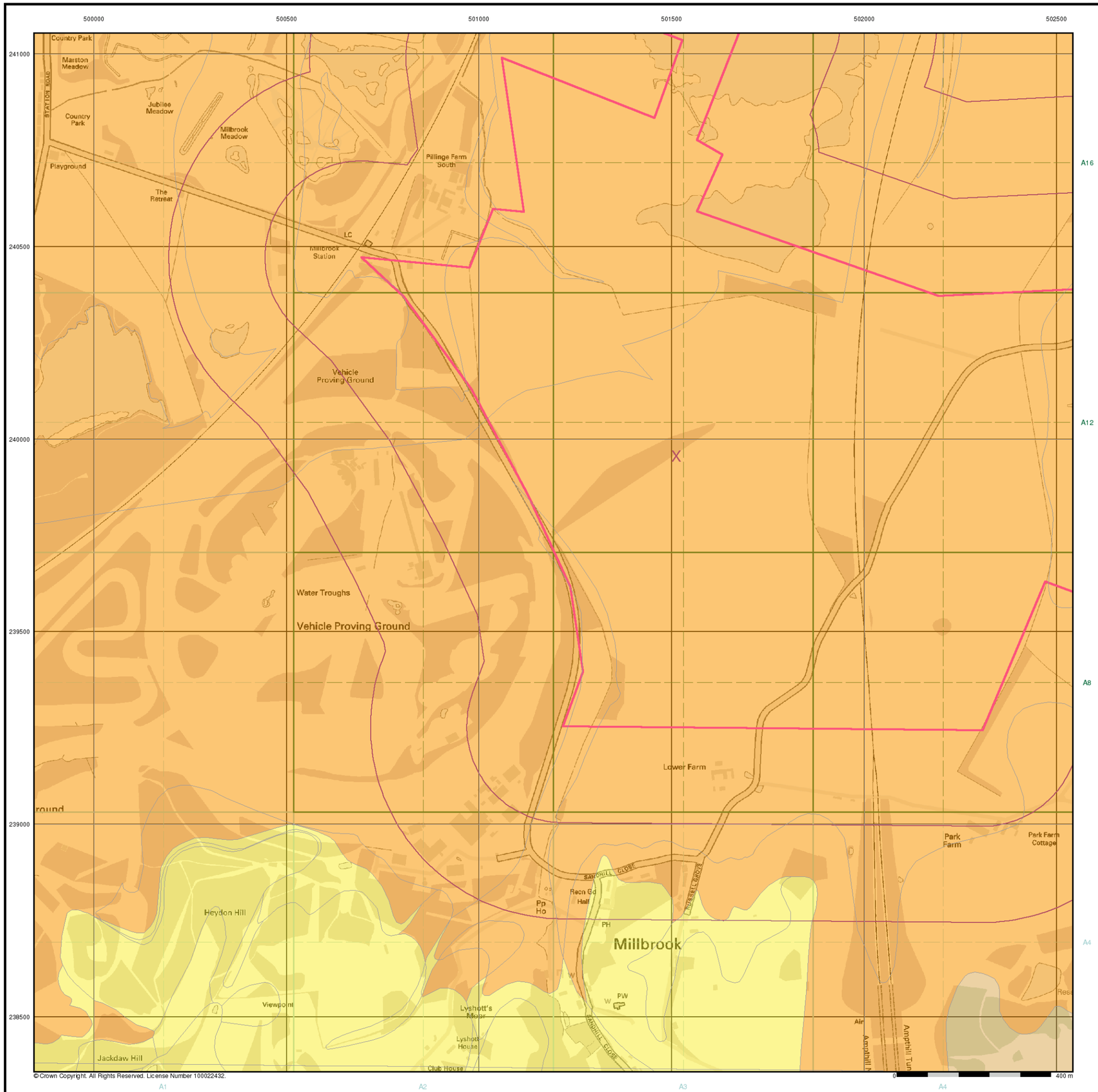
Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



General

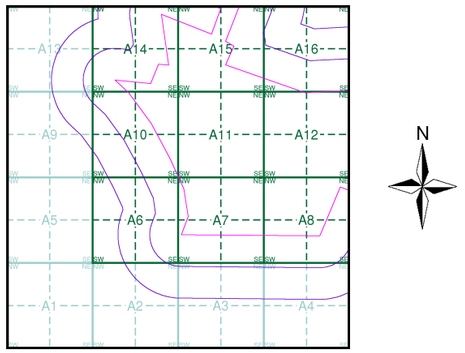
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

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

Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	500

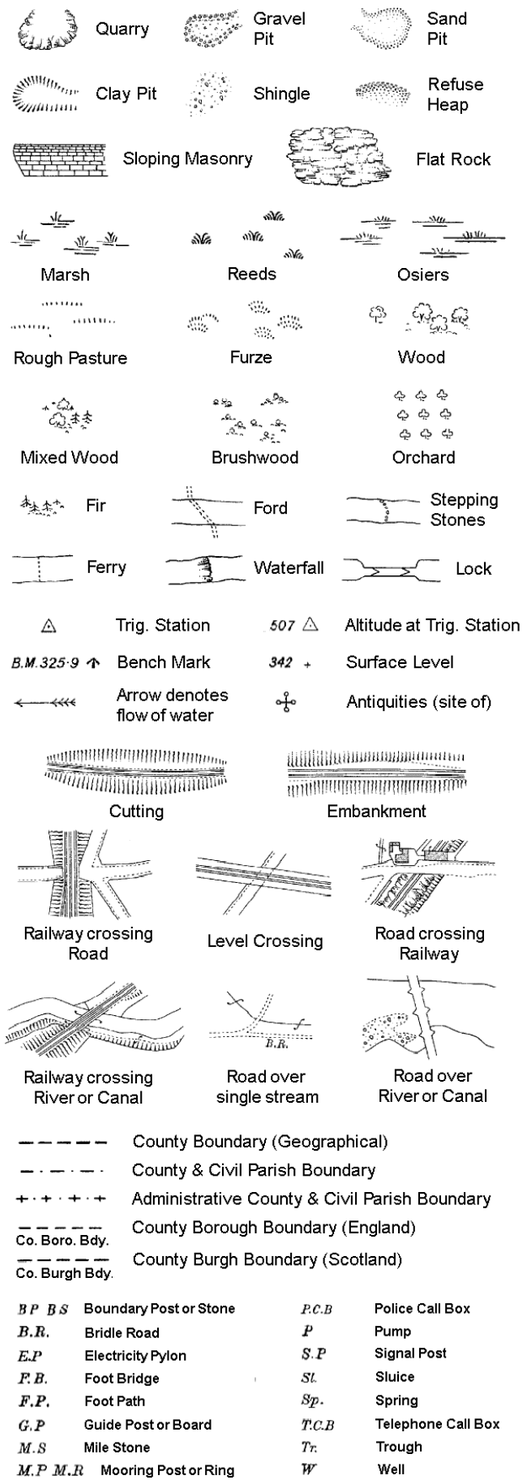
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

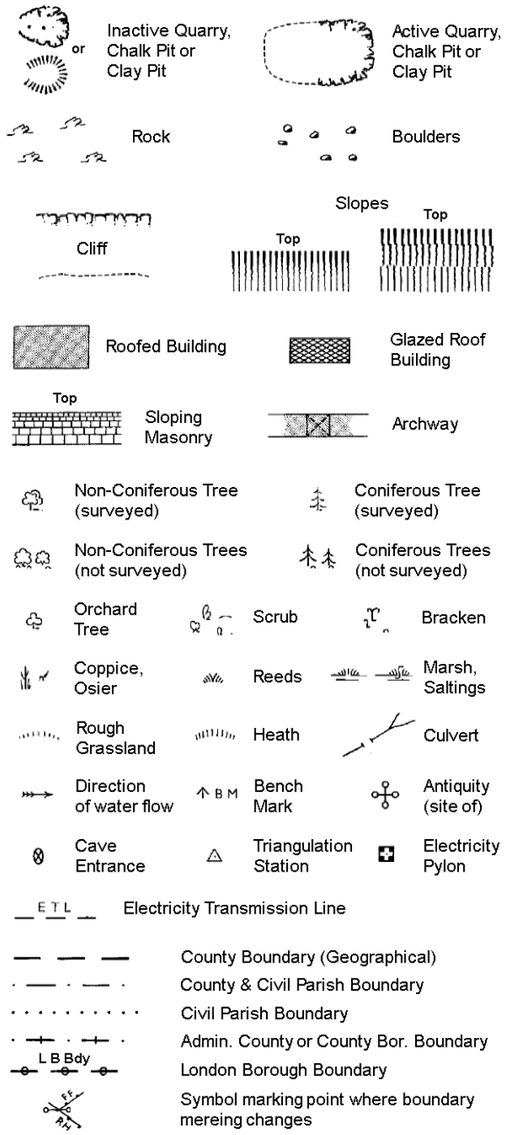
Historical Mapping Legends

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



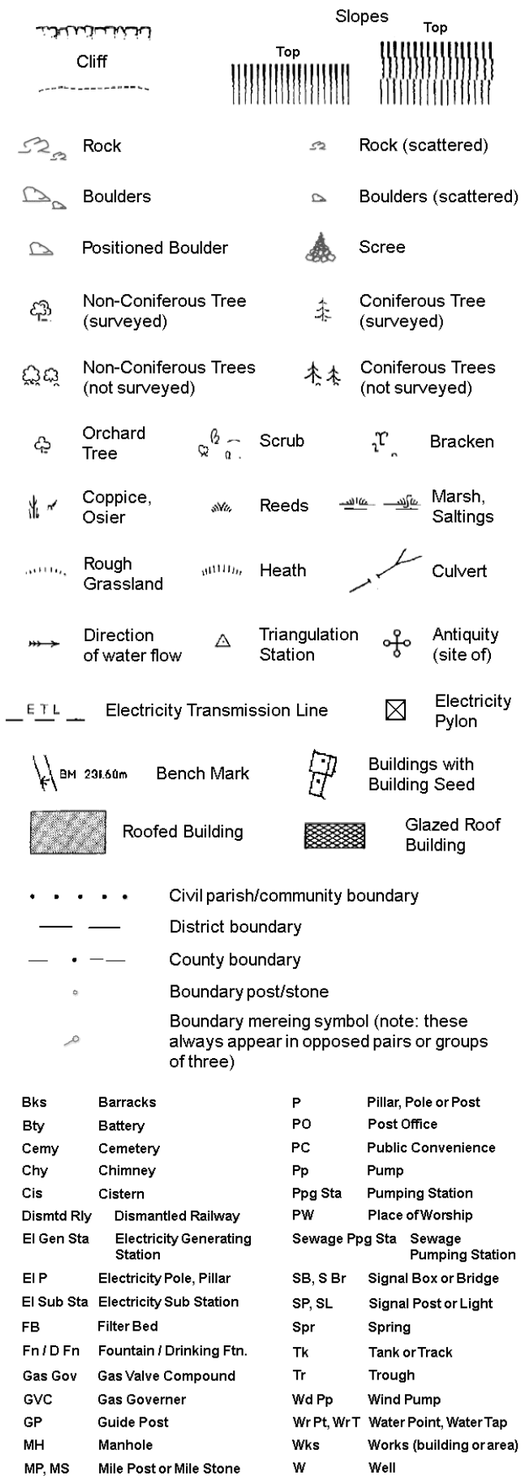
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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



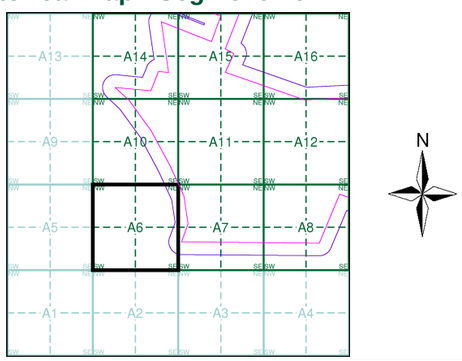
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1972	5
Supply of Unpublished Survey Information	1:2,500	1976	6
Large-Scale National Grid Data	1:2,500	1993	7

Historical Map - Segment A6



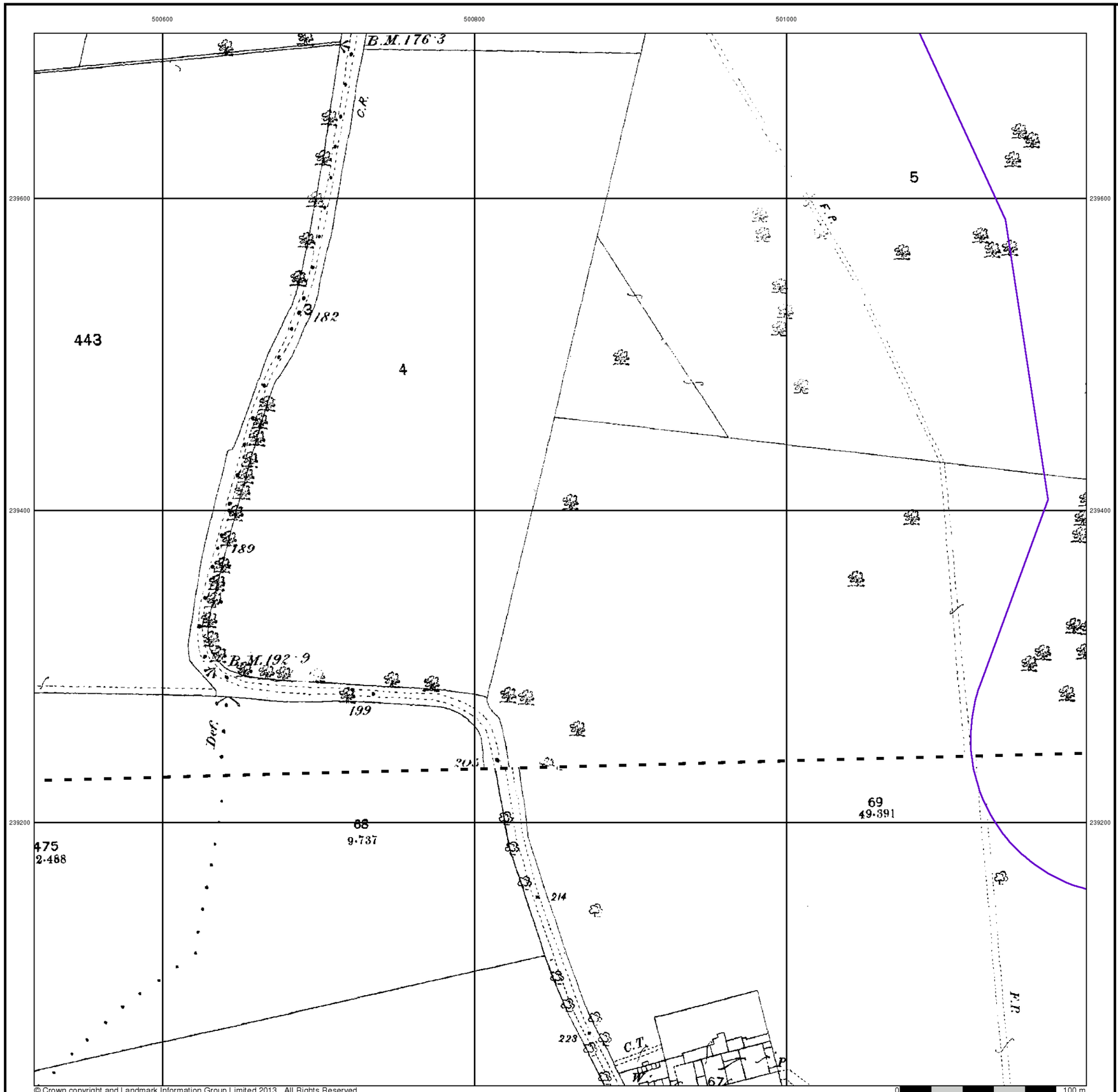
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



pba peterbrett

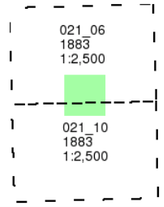
Bedfordshire

Published 1883

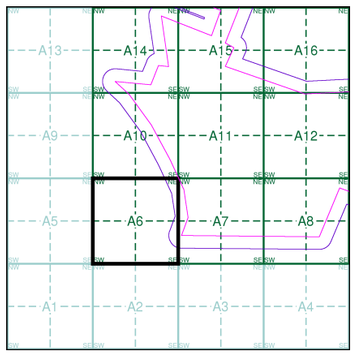
Source map scale - 1:2,500

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 A6



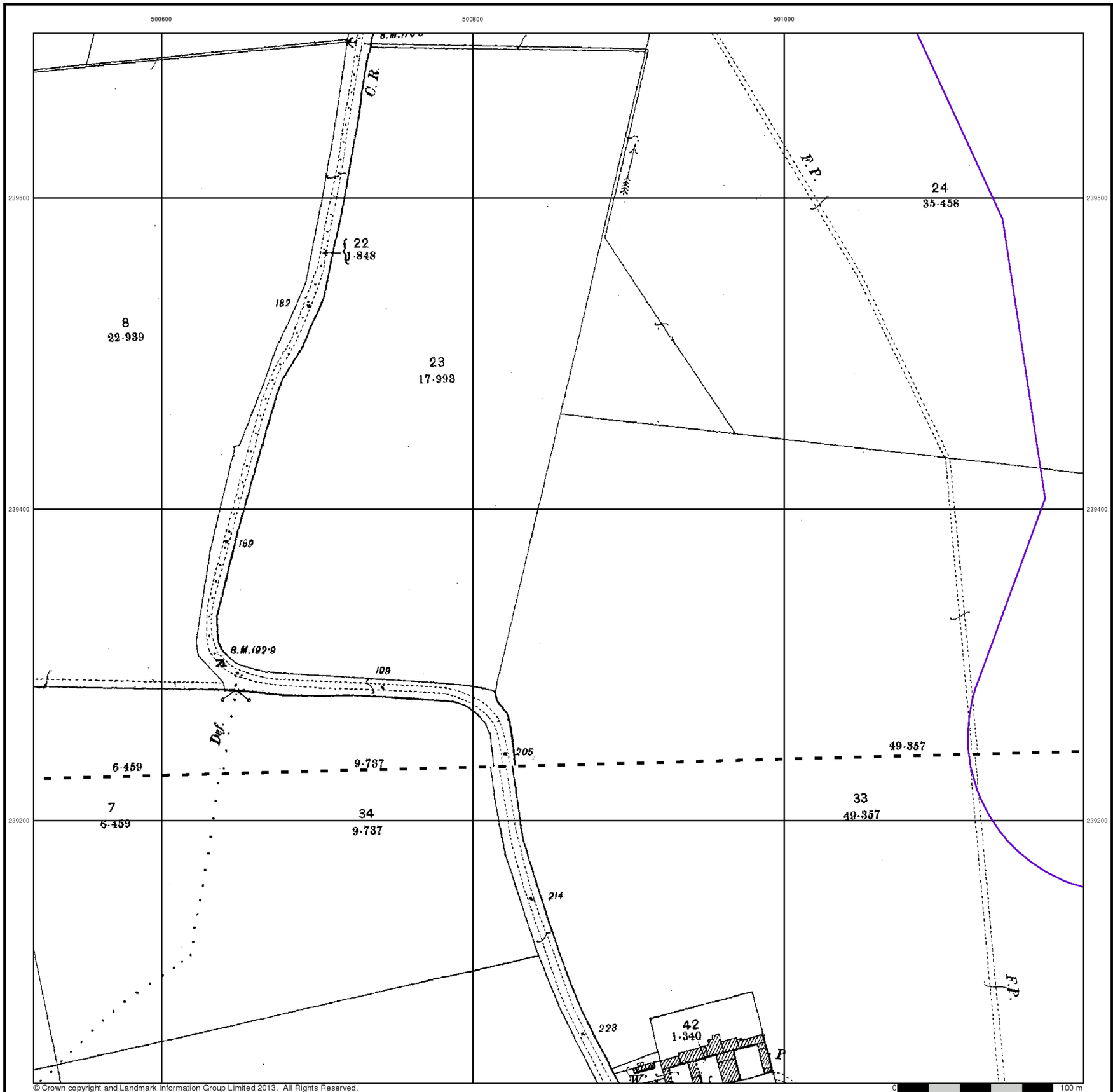
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



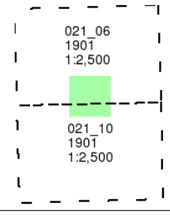
Bedfordshire

Published 1901

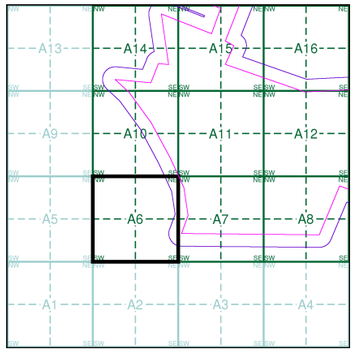
Source map scale - 1:2,500

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 A6



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

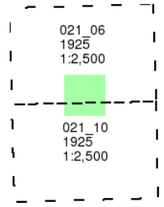
Bedfordshire

Published 1925

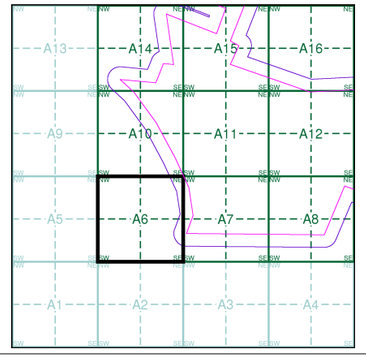
Source map scale - 1:2,500

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 A6



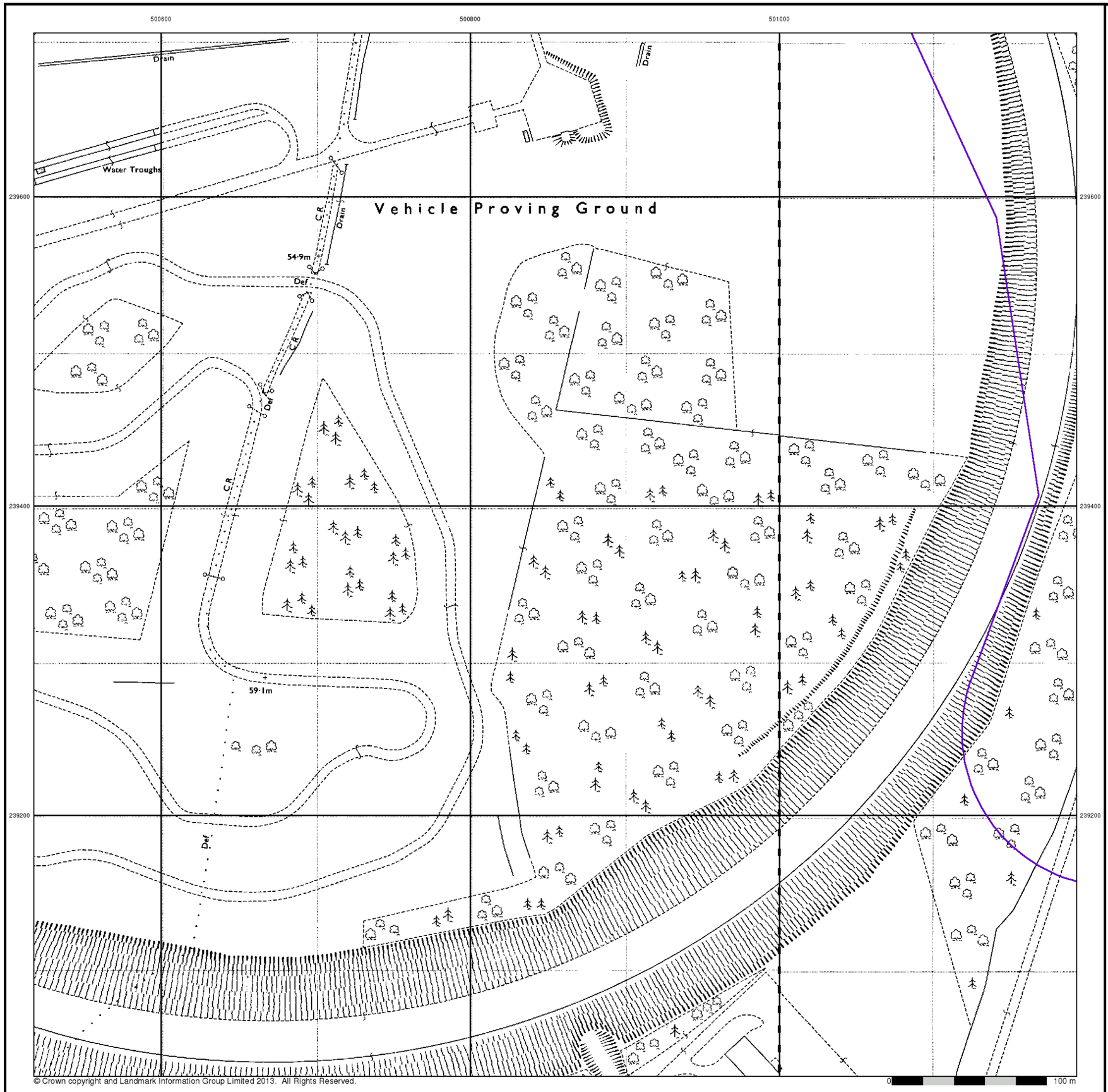
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

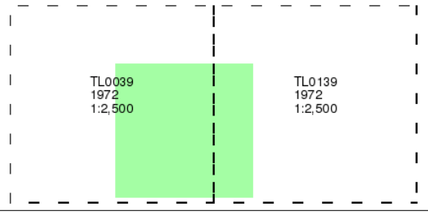
Ordnance Survey Plan

Published 1972

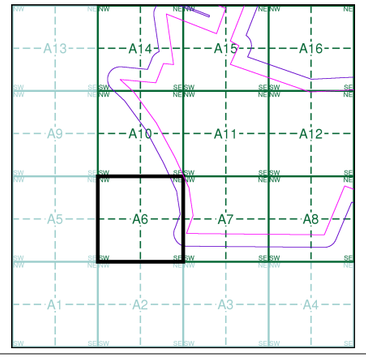
Source map scale - 1:2,500

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 A6



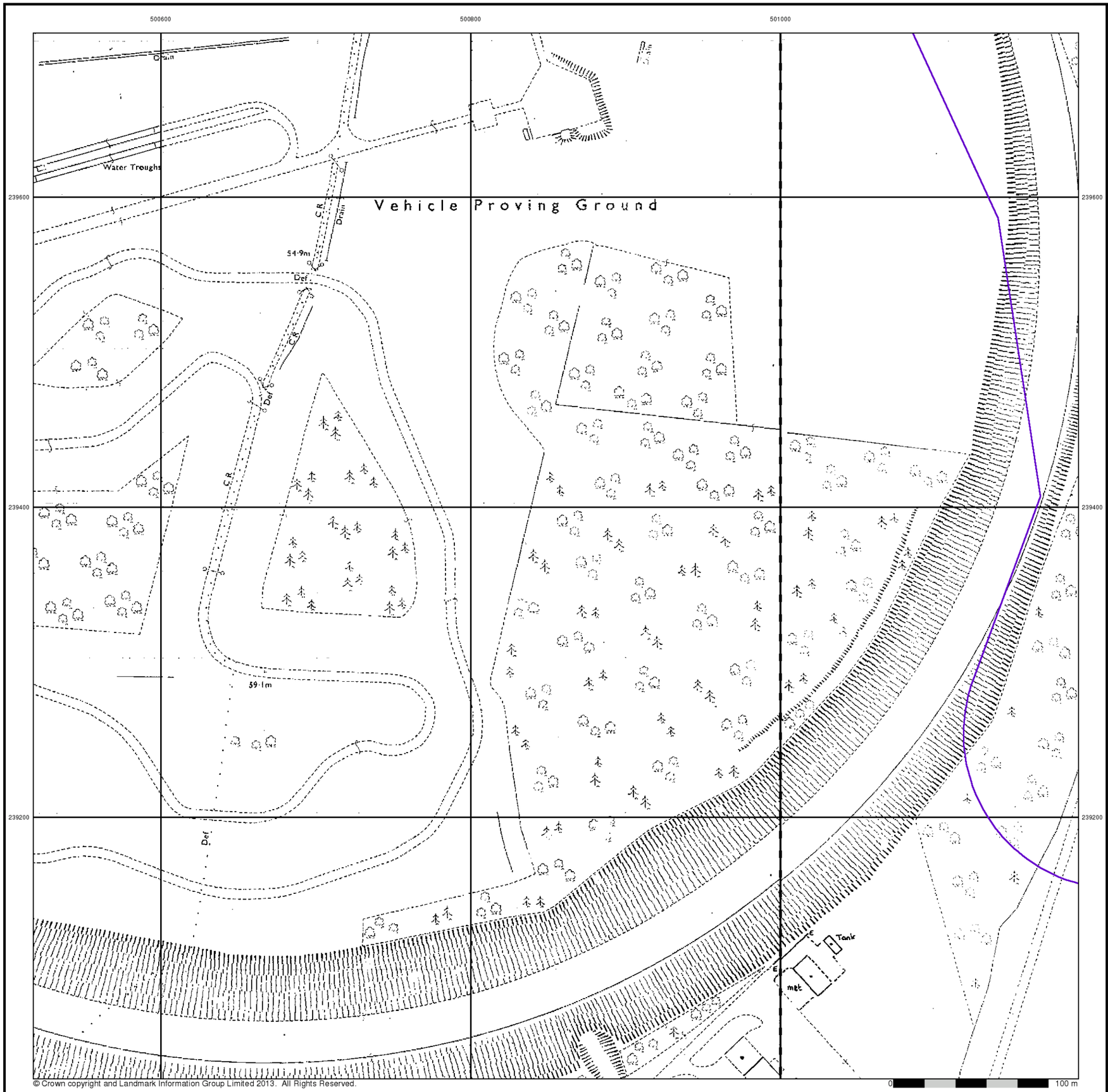
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

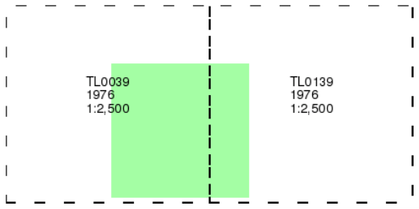
Supply of Unpublished Survey Information

Published 1976

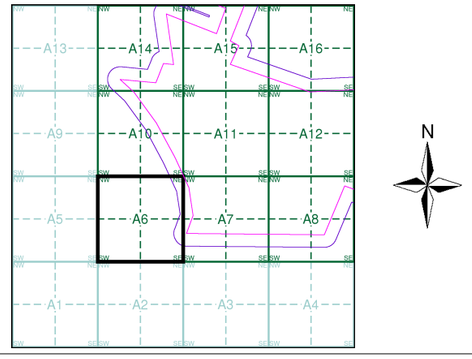
Source map scale - 1:2,500

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 A6



Order Details

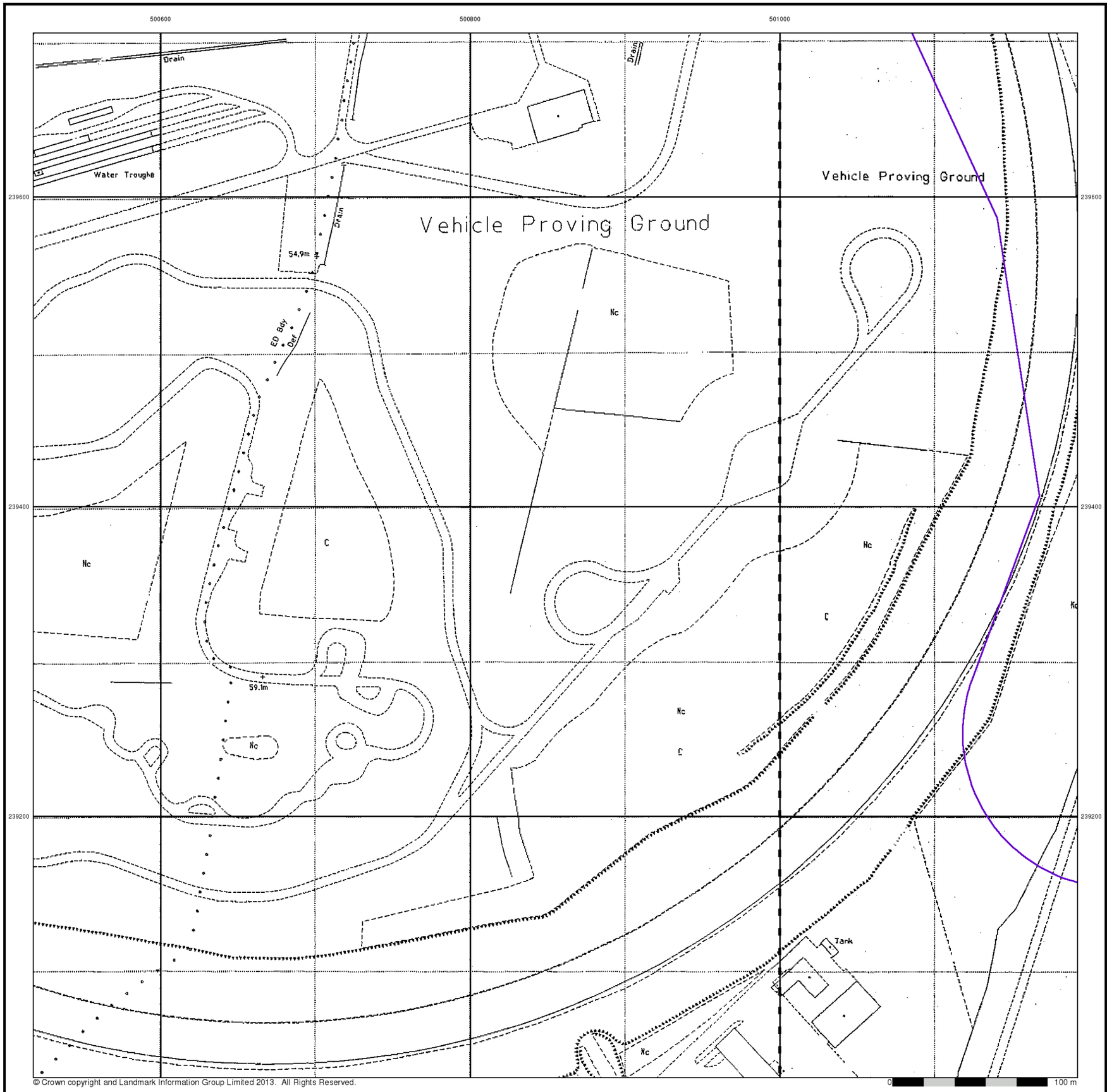
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



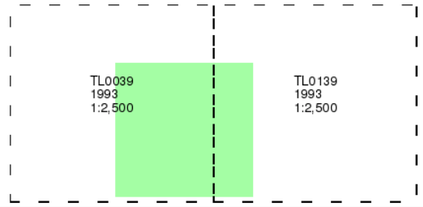
Large-Scale National Grid Data

Published 1993

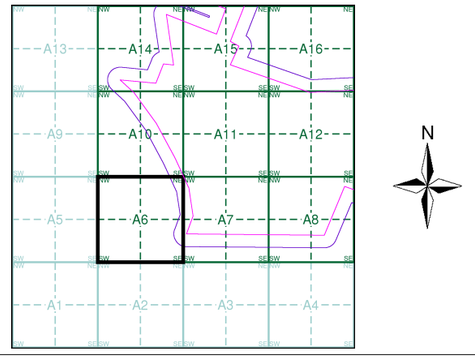
Source map scale - 1:2,500

'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)



Historical Map - Segment A6



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

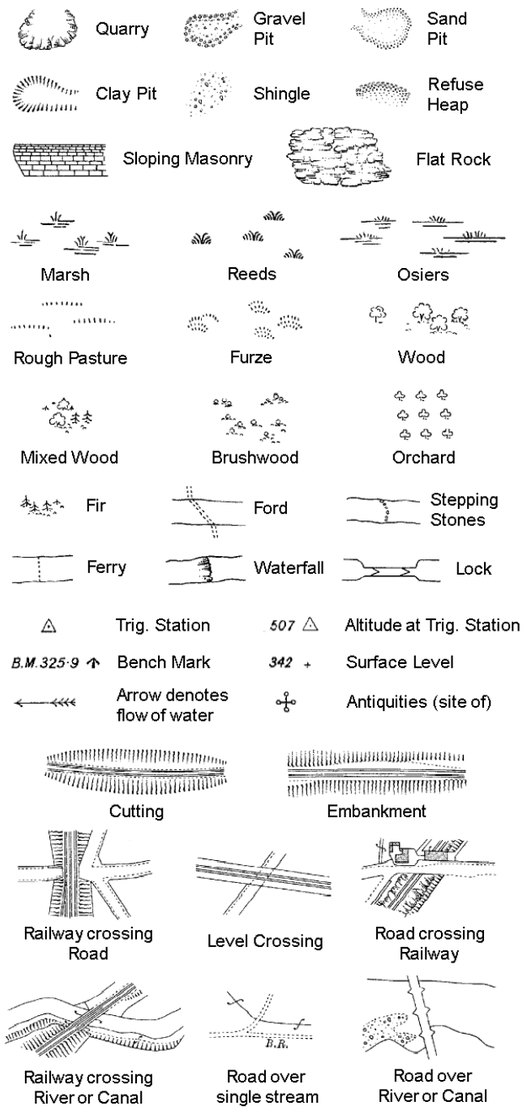
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

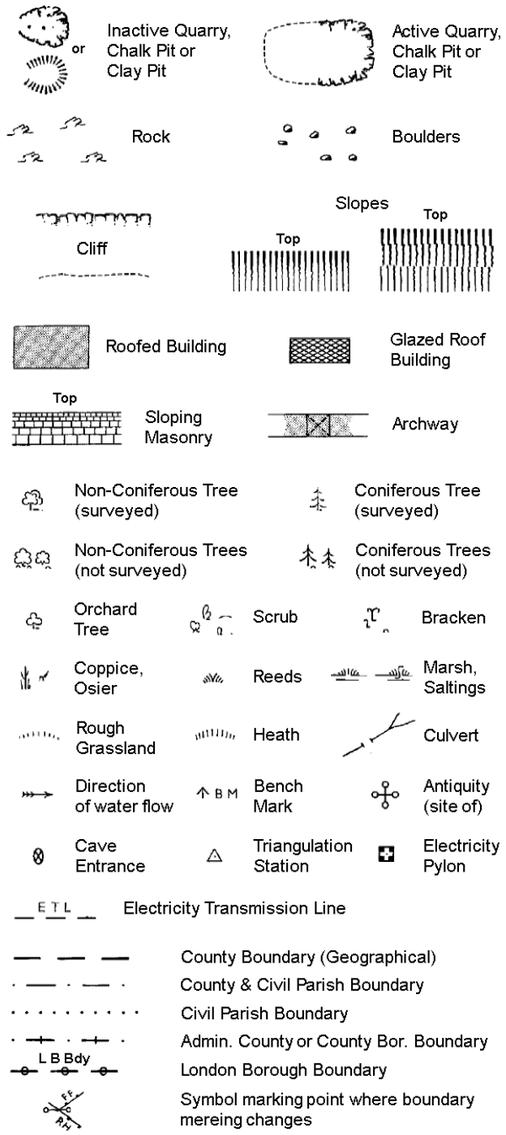
Historical Mapping Legends

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



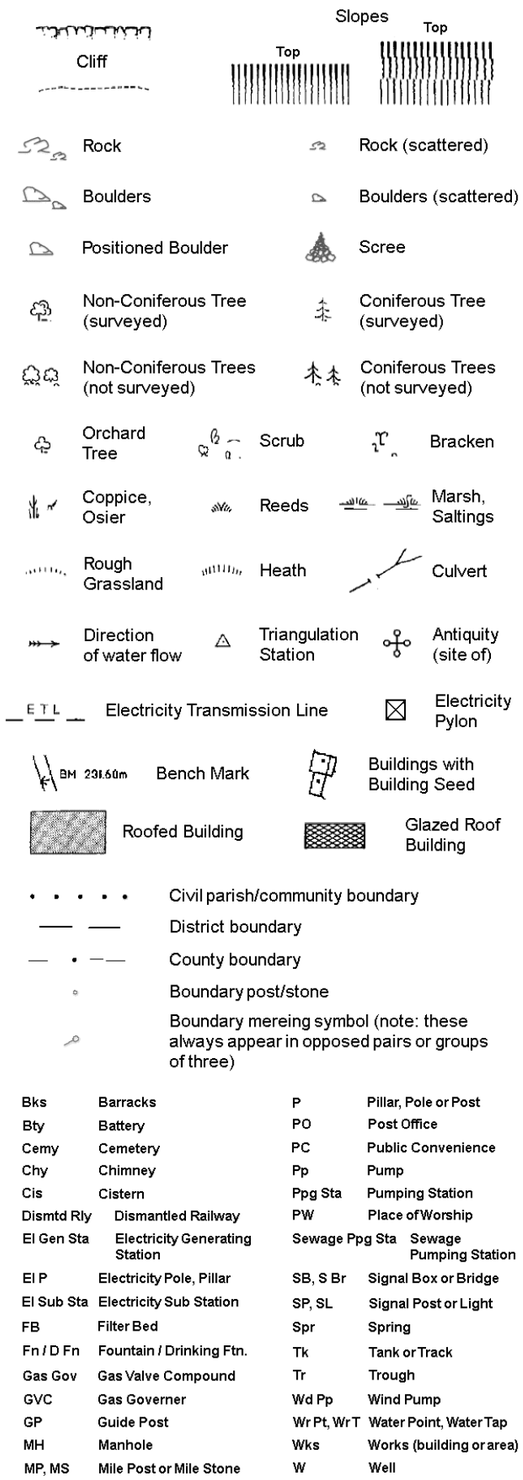
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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



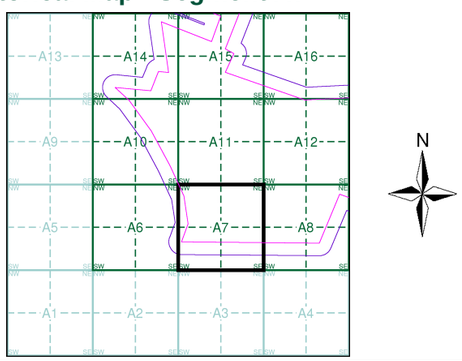
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1972	5
Supply of Unpublished Survey Information	1:2,500	1976	6
Large-Scale National Grid Data	1:2,500	1993	7

Historical Map - Segment A7



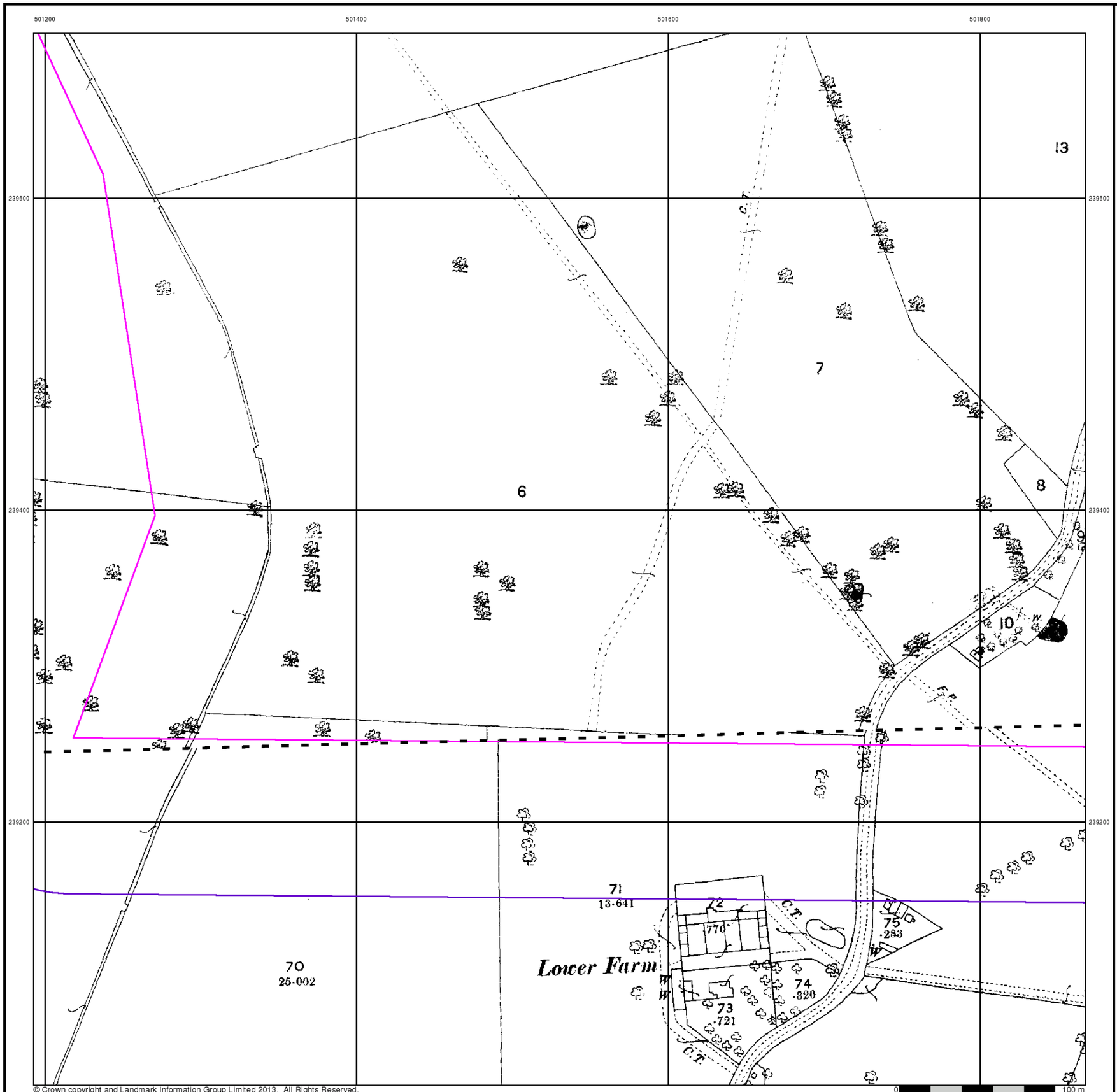
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 501510, 239960
Slice: A
Site Area (Ha): 240.61
Search Buffer (m): 100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



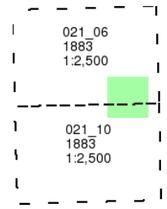
Bedfordshire

Published 1883

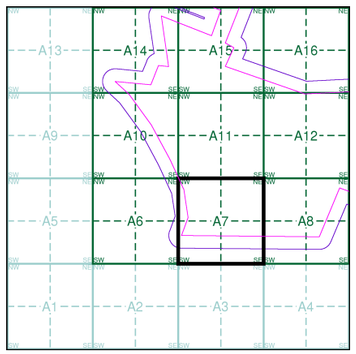
Source map scale - 1:2,500

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 A7



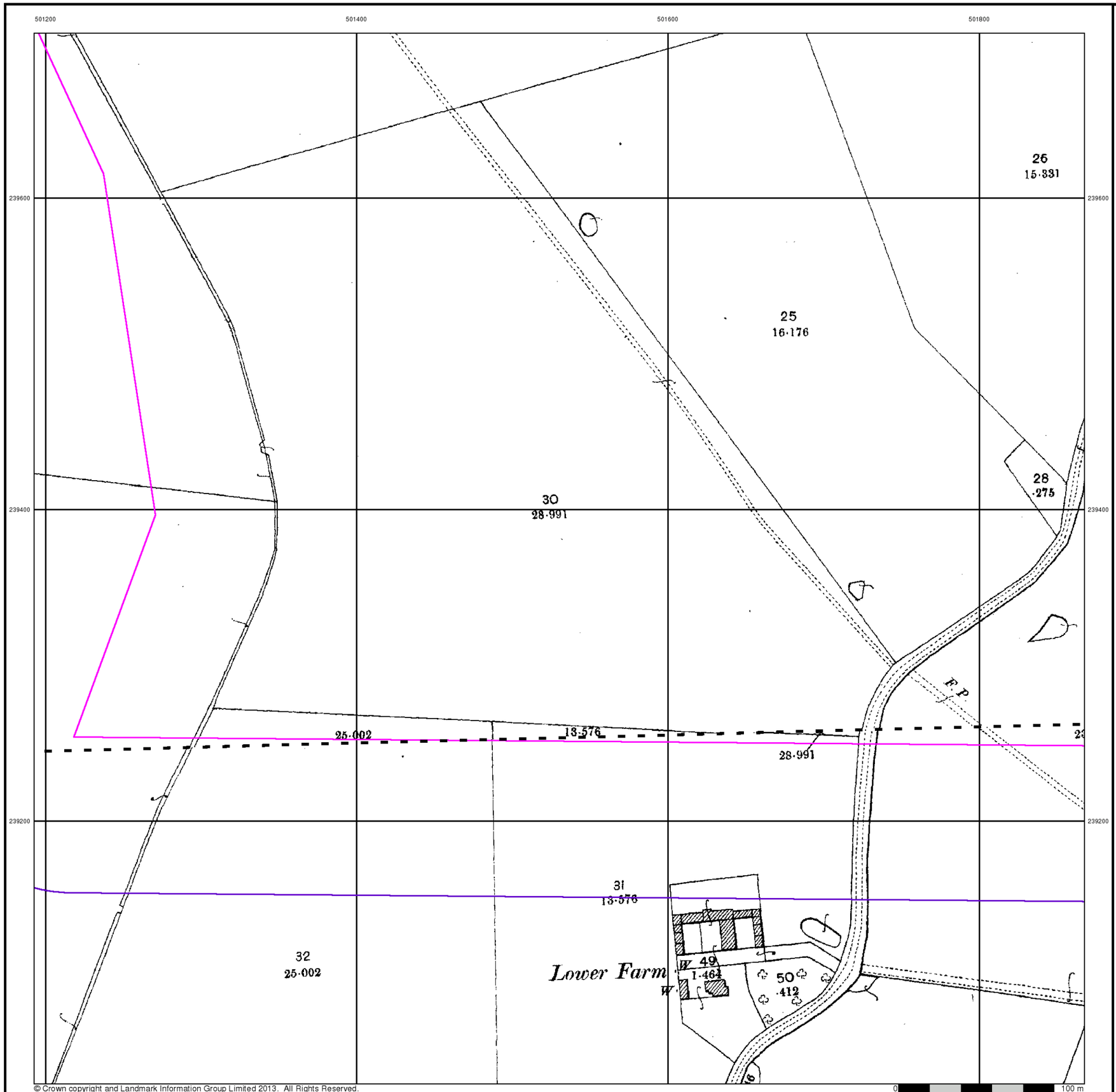
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



0 100 m

pba peterbrett

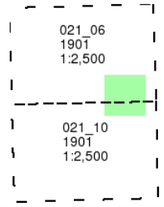
Bedfordshire

Published 1901

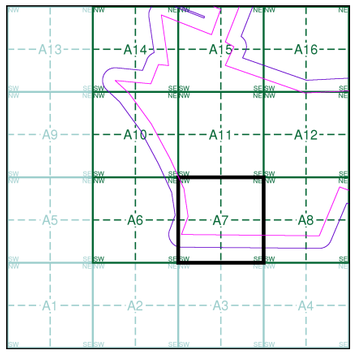
Source map scale - 1:2,500

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 A7



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

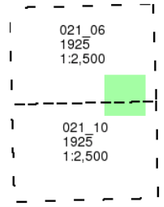
Bedfordshire

Published 1925

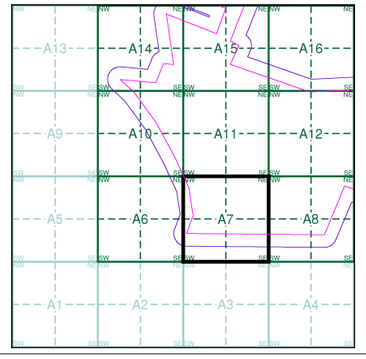
Source map scale - 1:2,500

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 A7



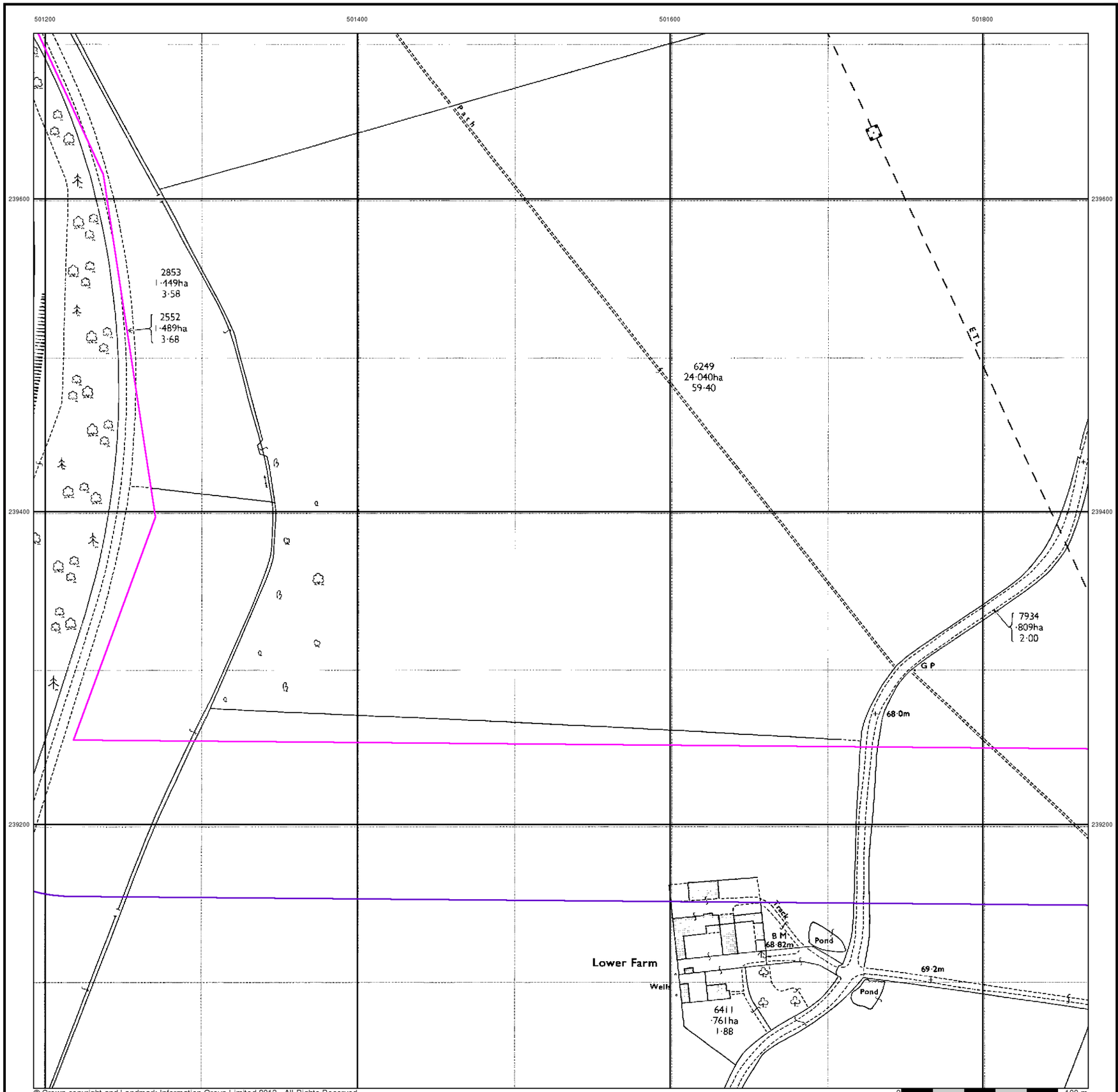
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

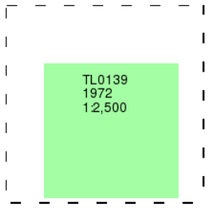
Ordnance Survey Plan

Published 1972

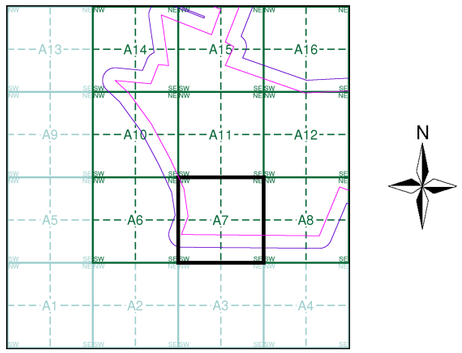
Source map scale - 1:2,500

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 A7



Order Details

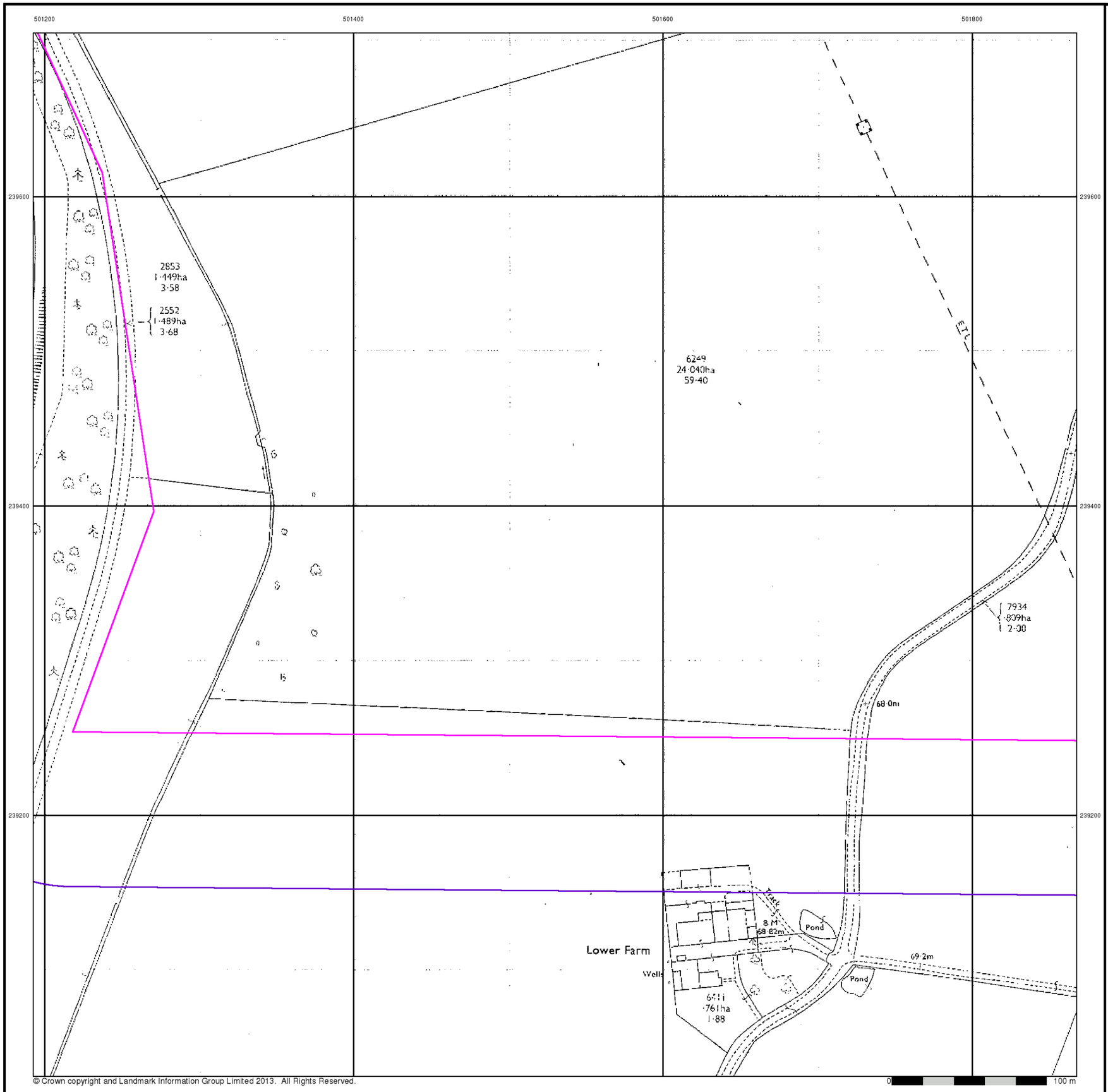
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

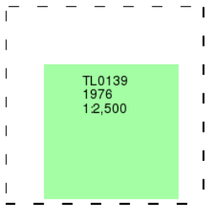
Supply of Unpublished Survey Information

Published 1976

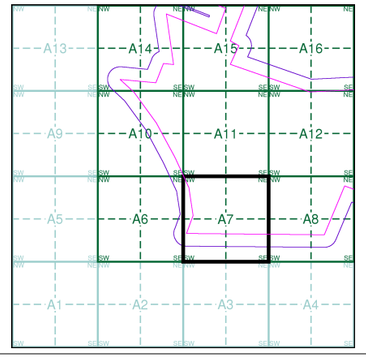
Source map scale - 1:2,500

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 A7



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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

501200 501400 501600 501800

239600 239400 239200

6249

+60.9m

ETL

Lower Farm

Track

Pond

69.4m

BM 68.84m

Wells

Orch

6411

Pond

70.2m

0 100 m

pba peterbrett

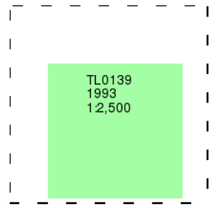
Large-Scale National Grid Data

Published 1993

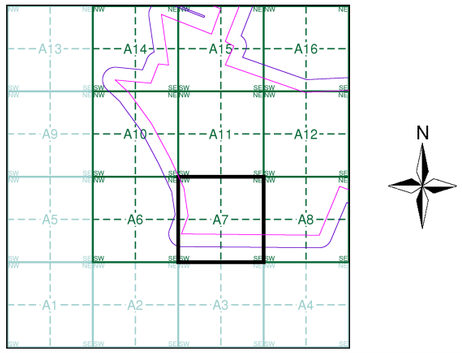
Source map scale - 1:2,500

'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)



Historical Map - Segment A7



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

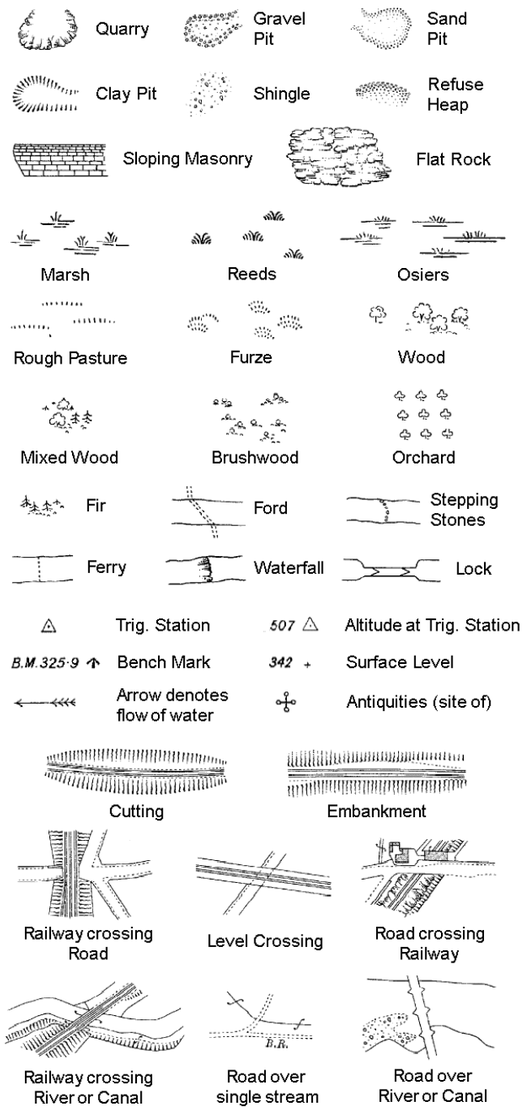
Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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

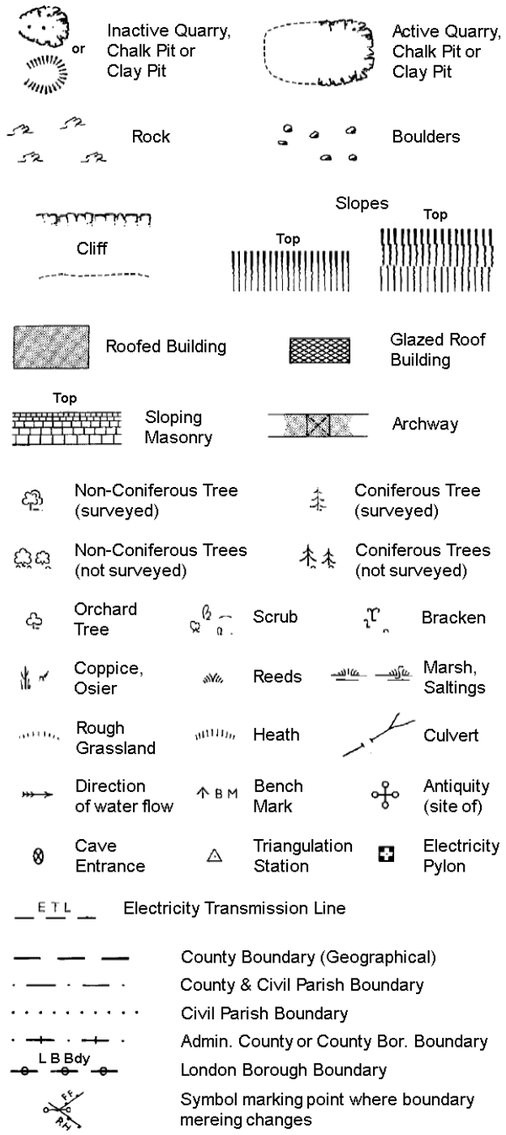
Historical Mapping Legends

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



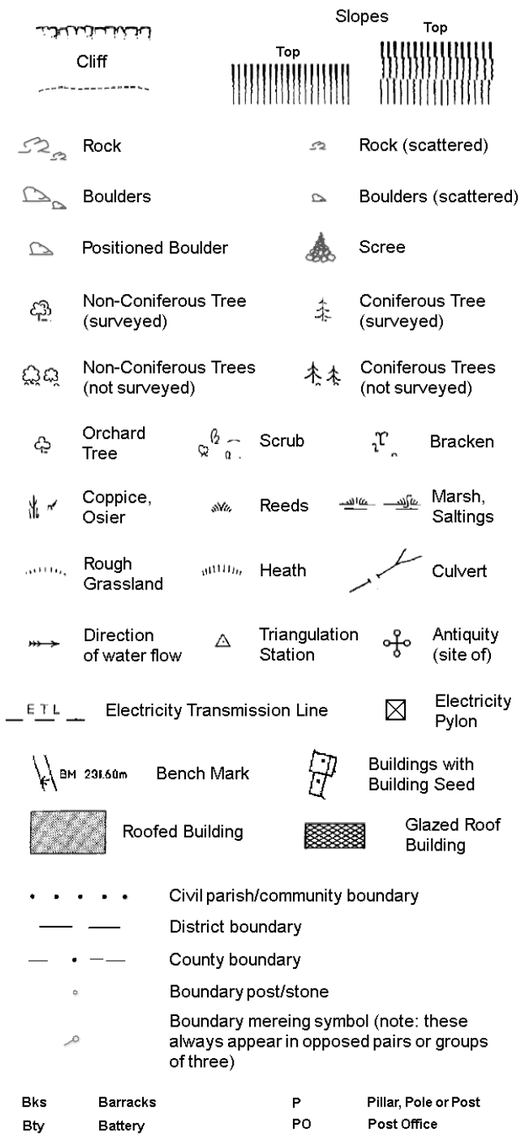
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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



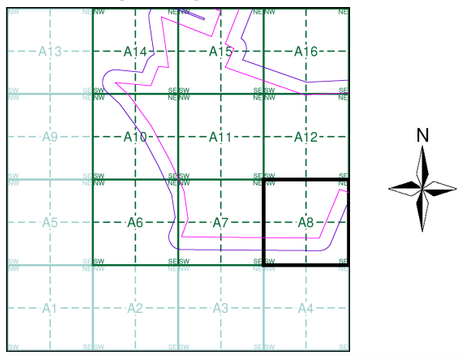
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1972	5
Supply of Unpublished Survey Information	1:2,500	1976	6
Large-Scale National Grid Data	1:2,500	1993	7

Historical Map - Segment A8



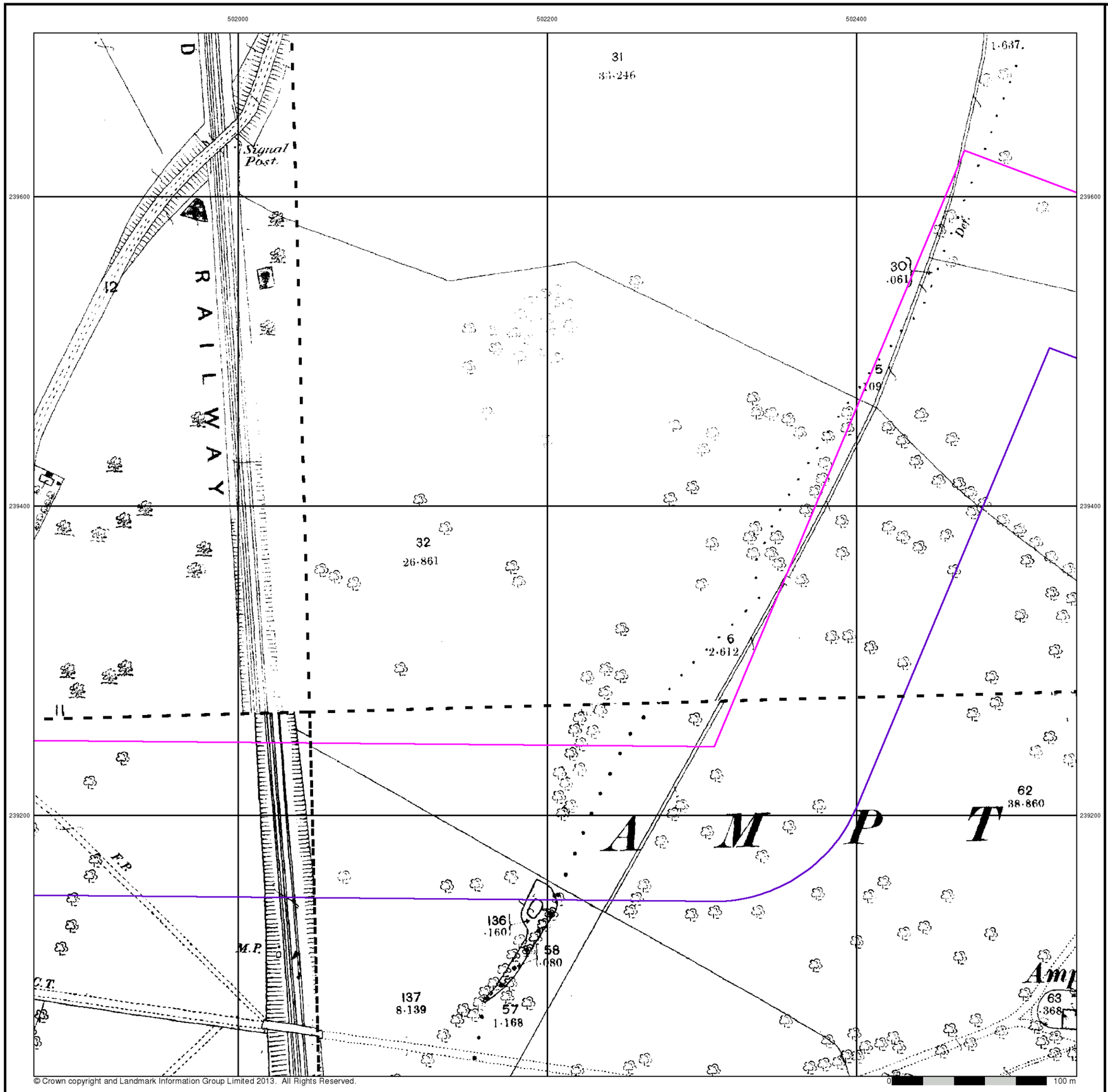
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 501510, 239960
Slice: A
Site Area (Ha): 240.61
Search Buffer (m): 100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



pba peterbrett

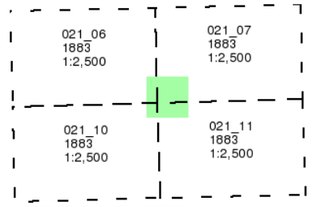
Bedfordshire

Published 1883

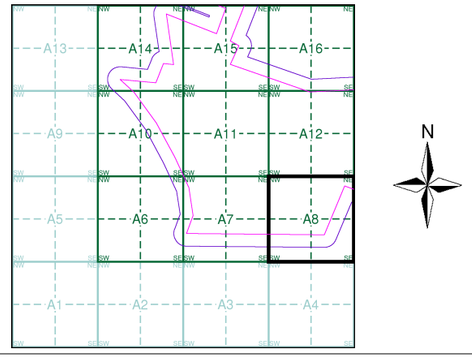
Source map scale - 1:2,500

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 A8



Order Details

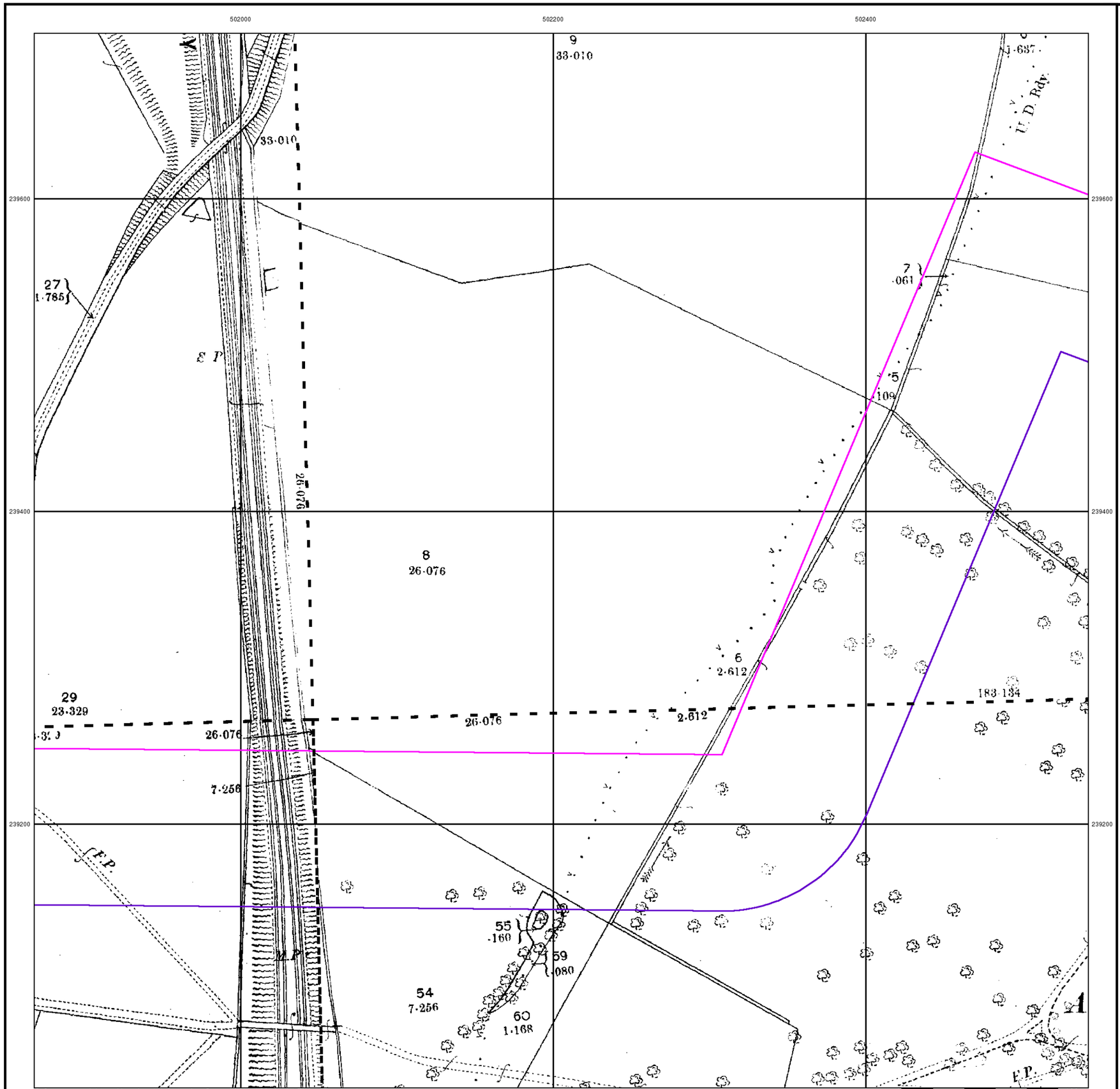
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

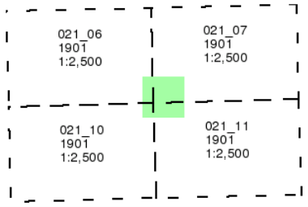
Bedfordshire

Published 1901

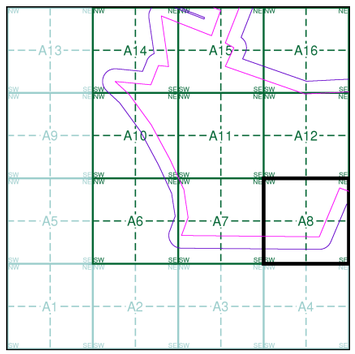
Source map scale - 1:2,500

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 A8



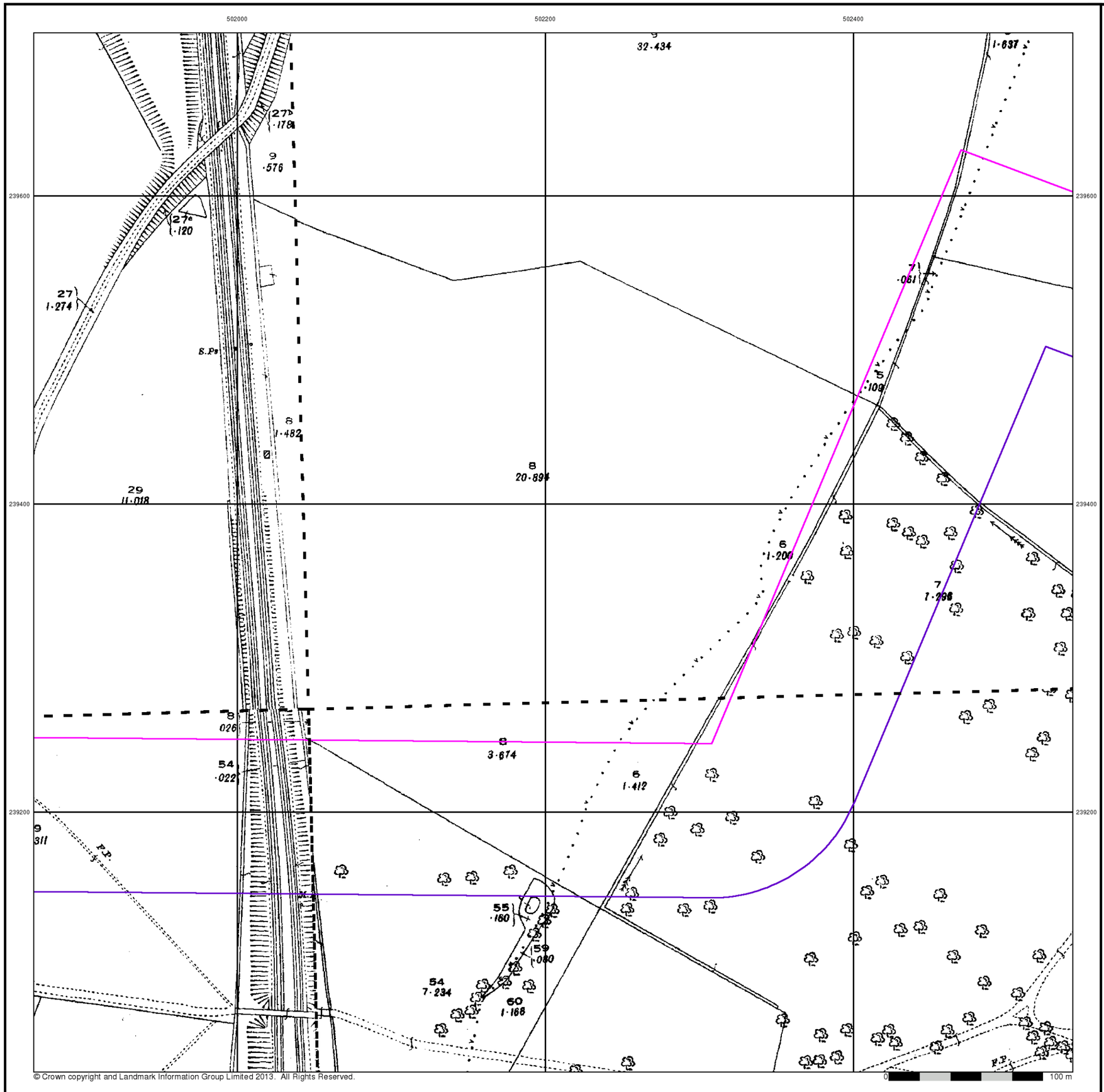
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

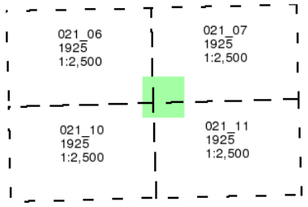
Bedfordshire

Published 1925

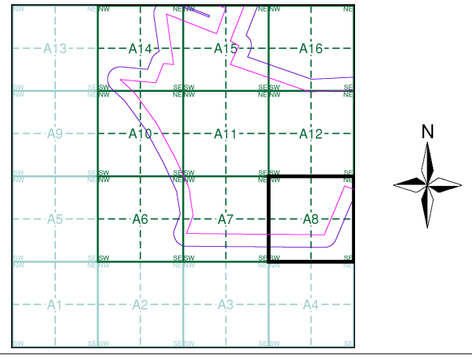
Source map scale - 1:2,500

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 A8



Order Details

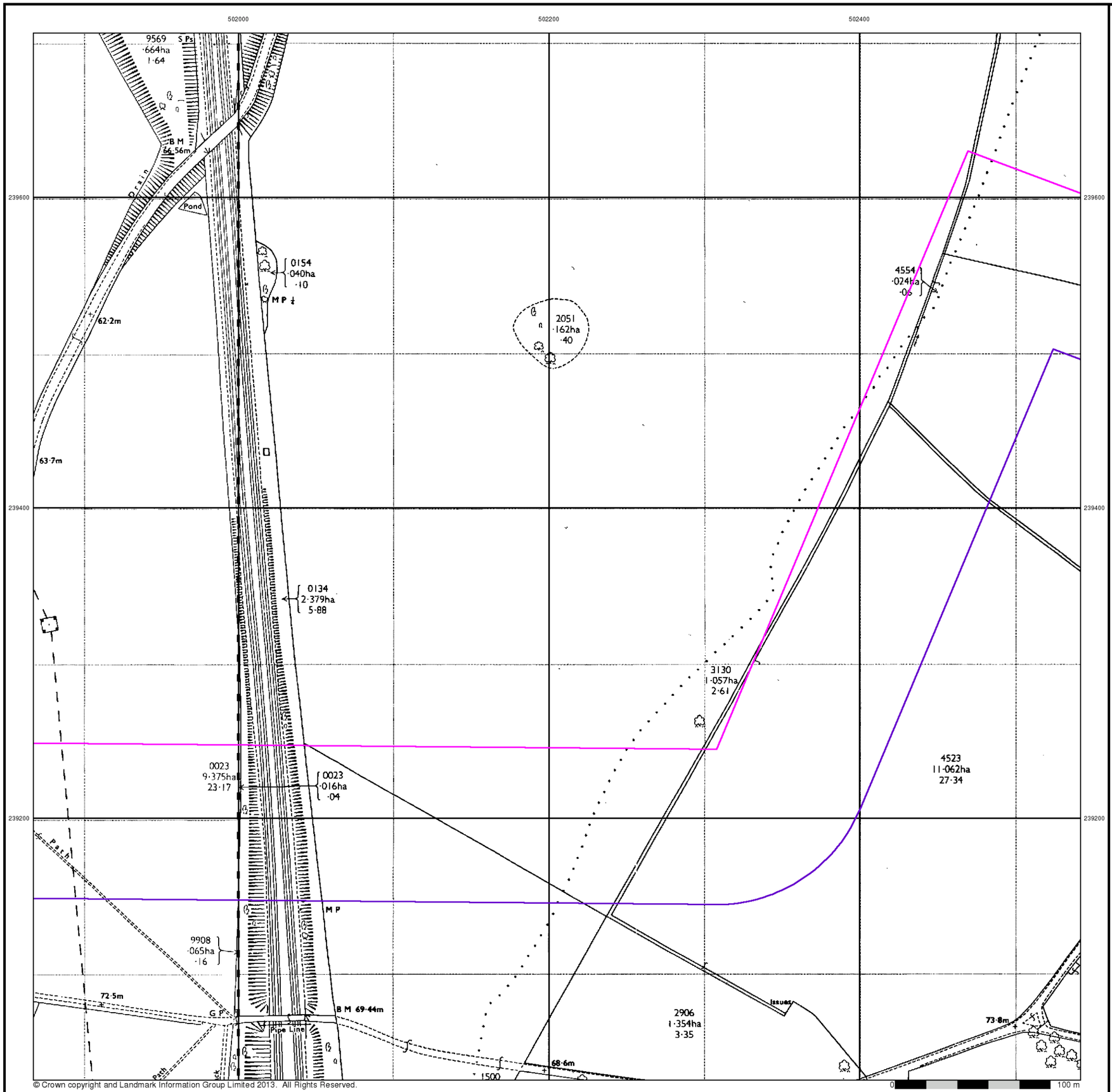
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

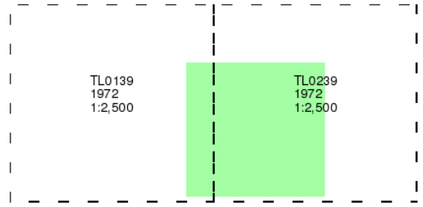
Ordnance Survey Plan

Published 1972

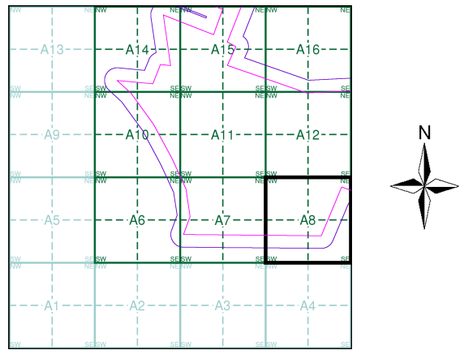
Source map scale - 1:2,500

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 A8



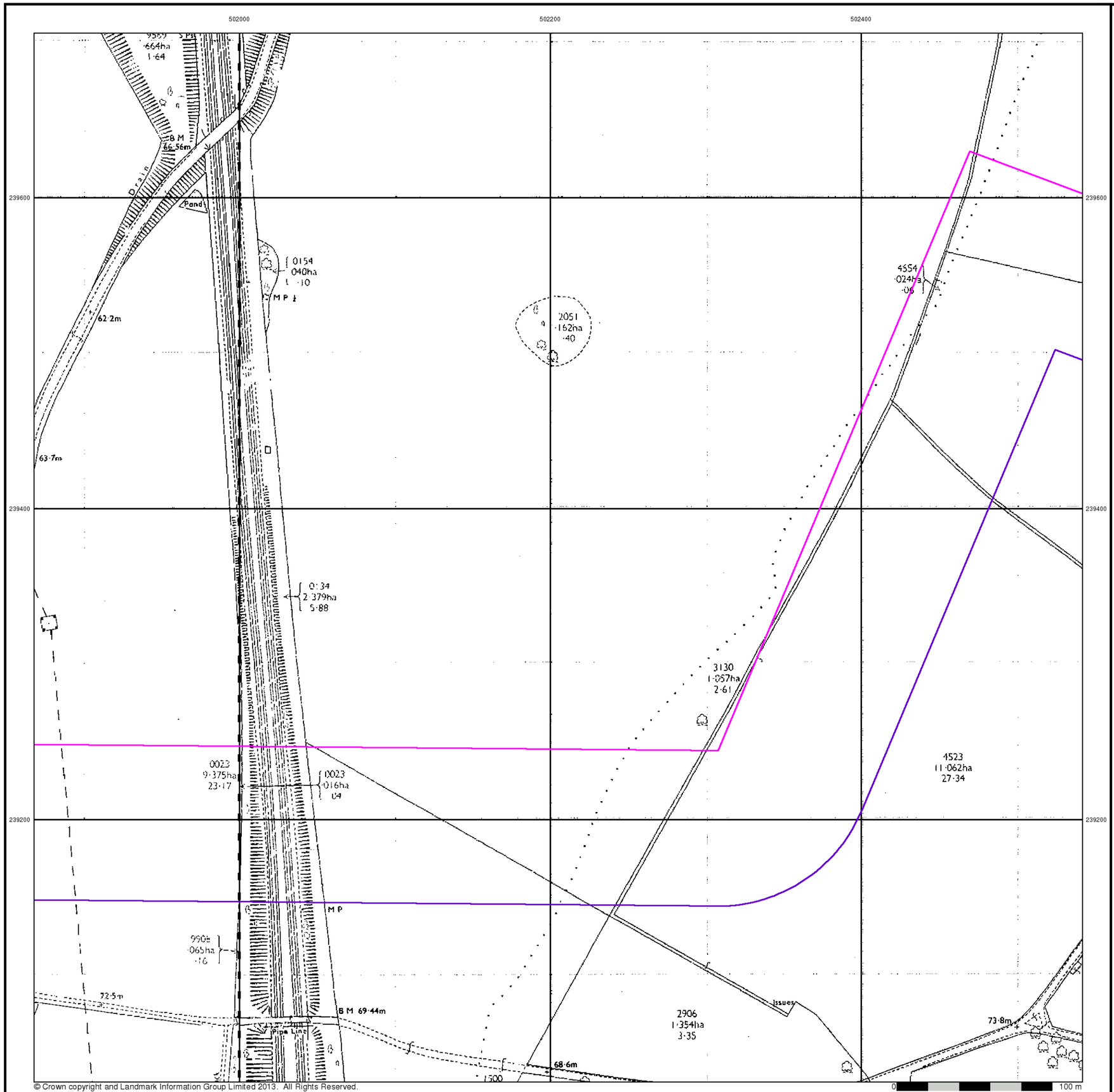
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

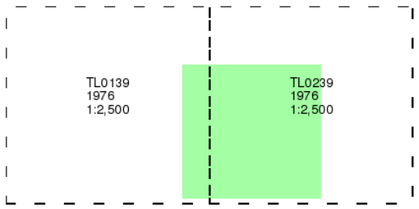
Supply of Unpublished Survey Information

Published 1976

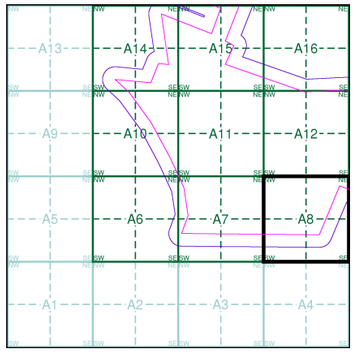
Source map scale - 1:2,500

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 A8



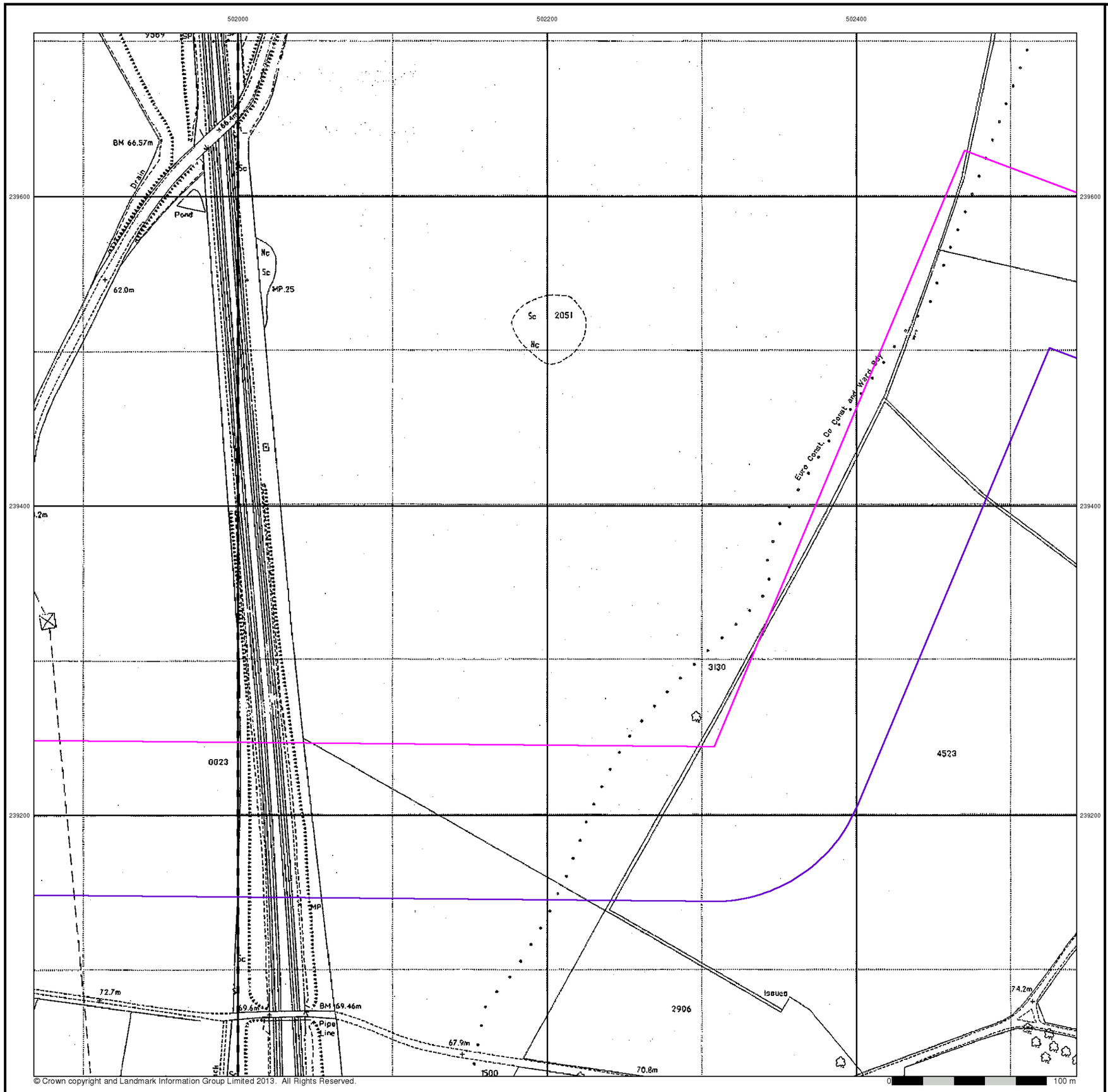
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

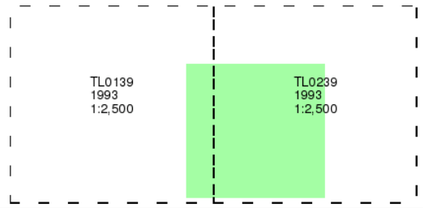
Large-Scale National Grid Data

Published 1993

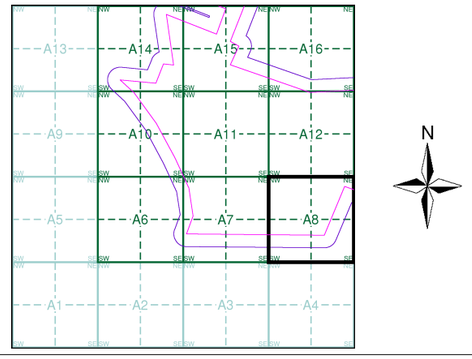
Source map scale - 1:2,500

'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)



Historical Map - Segment A8



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

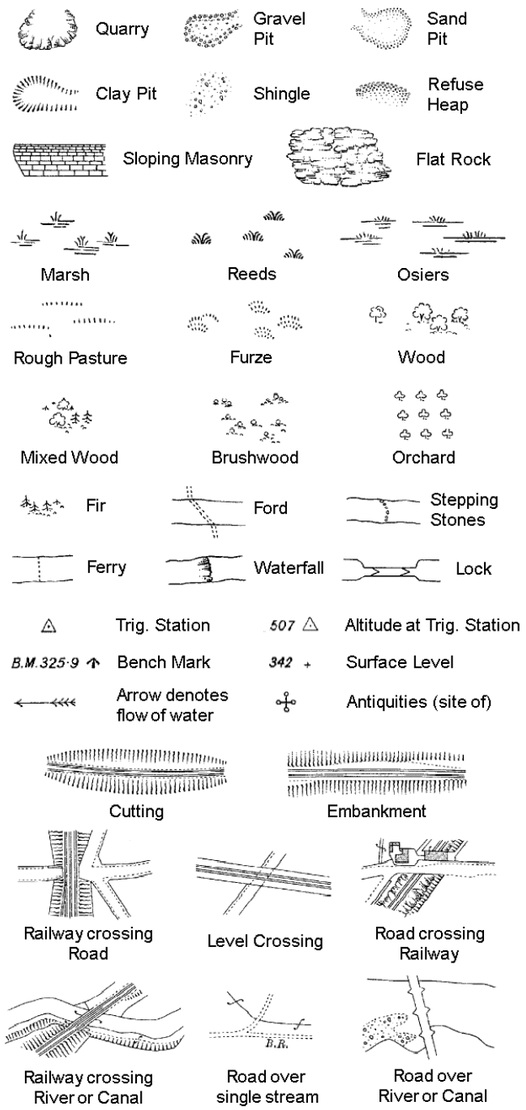
Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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

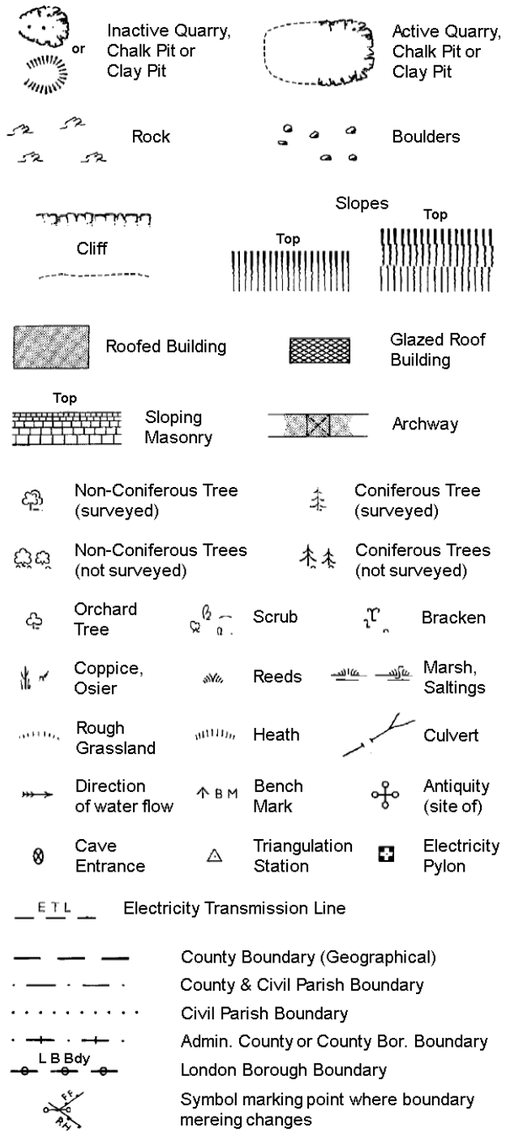
Historical Mapping Legends

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



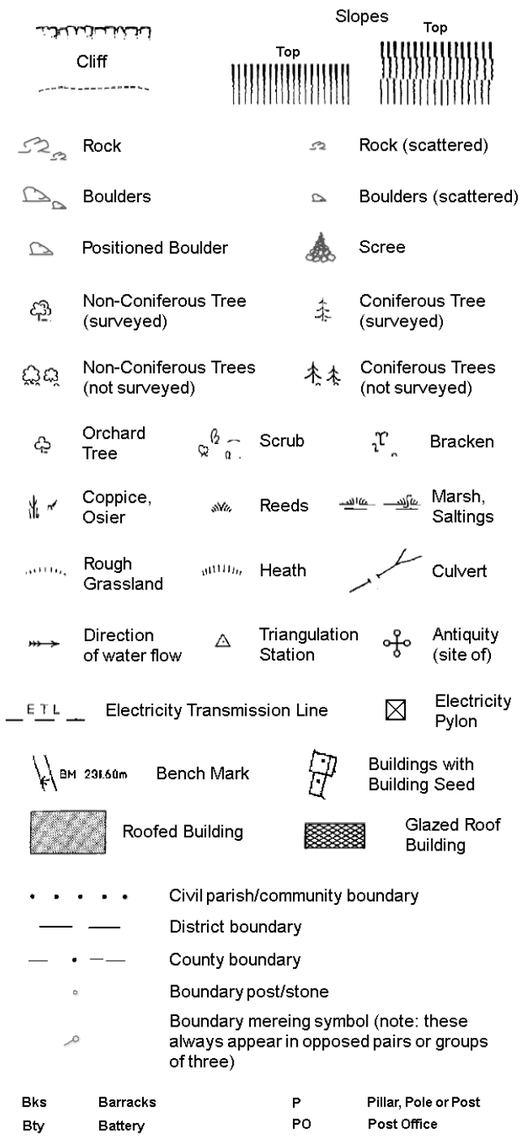
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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



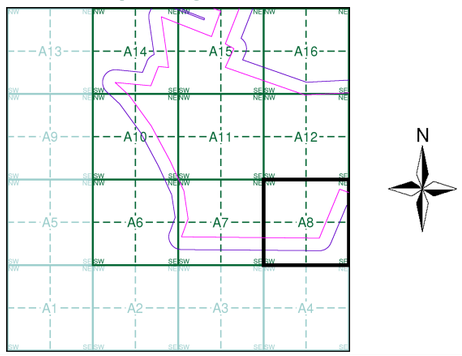
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1972	5
Supply of Unpublished Survey Information	1:2,500	1976	6
Large-Scale National Grid Data	1:2,500	1993	7

Historical Map - Segment A8



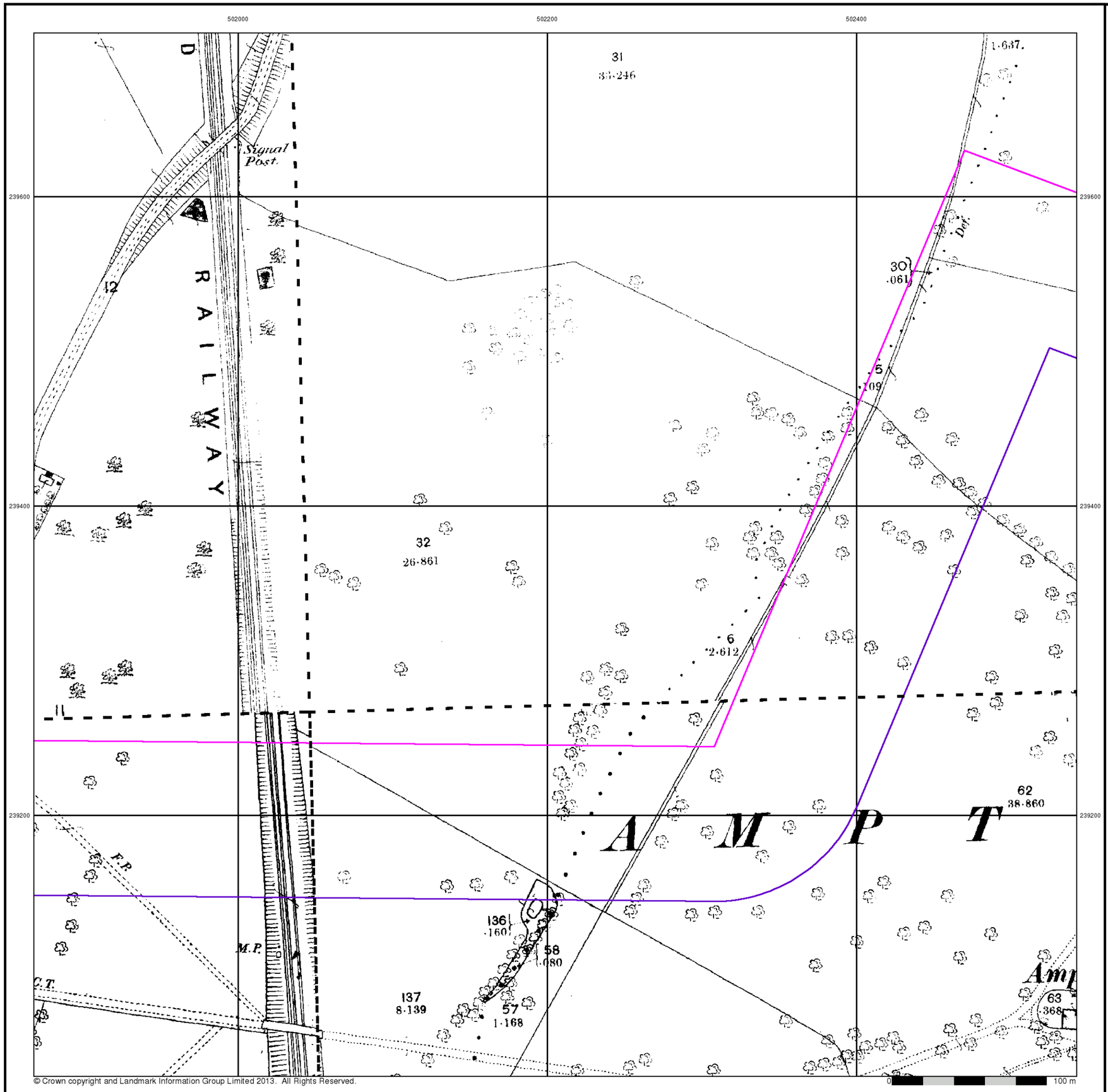
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 501510, 239960
Slice: A
Site Area (Ha): 240.61
Search Buffer (m): 100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



pba peterbrett

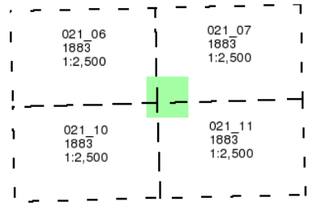
Bedfordshire

Published 1883

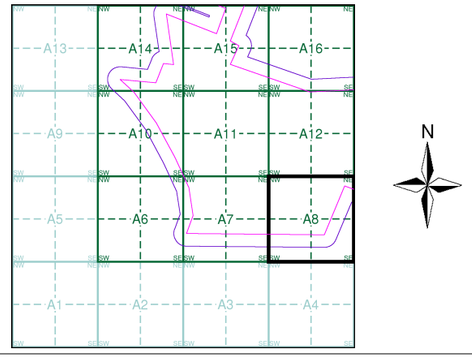
Source map scale - 1:2,500

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 A8



Order Details

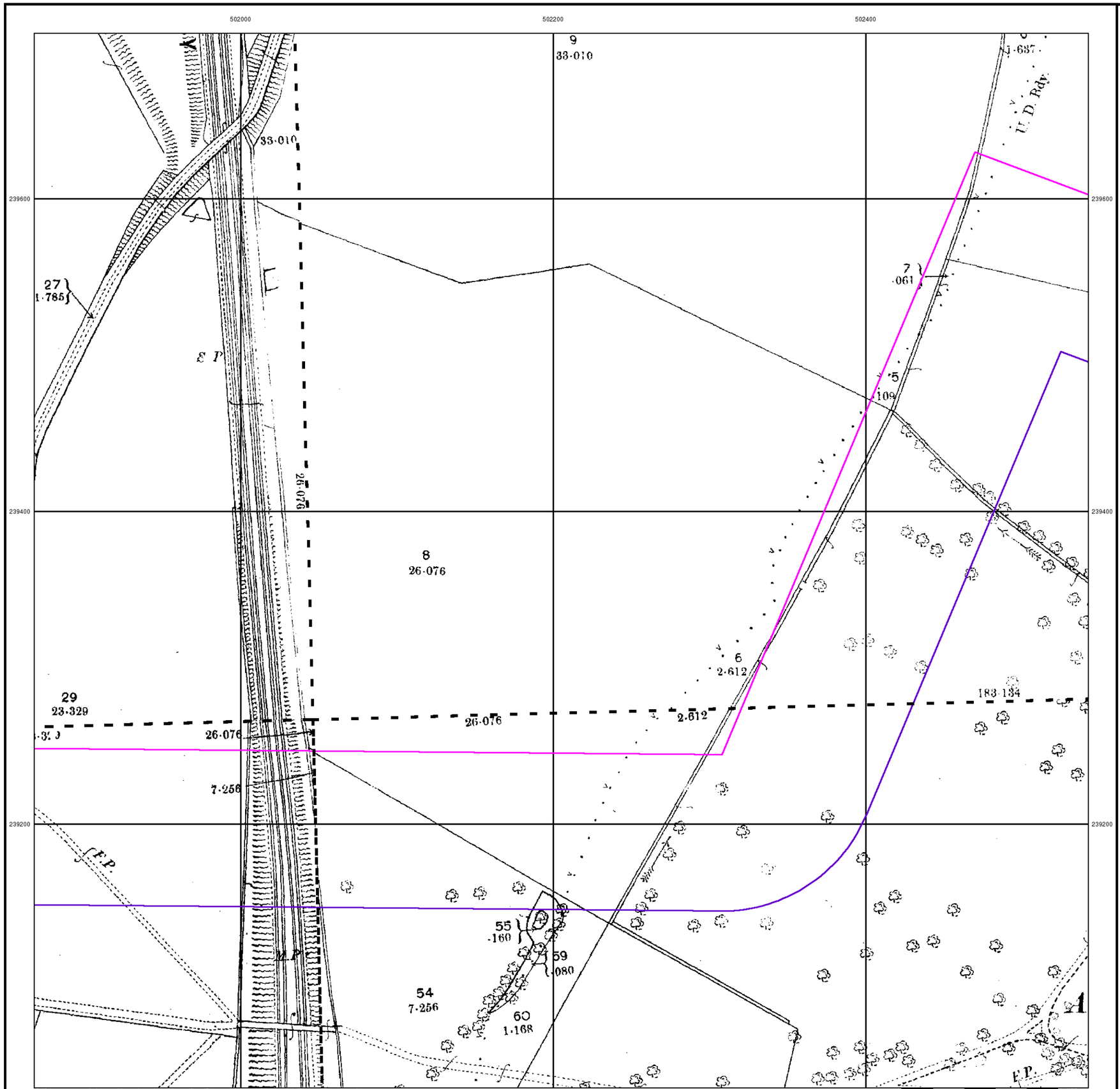
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

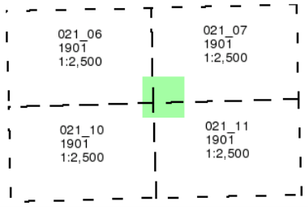
Bedfordshire

Published 1901

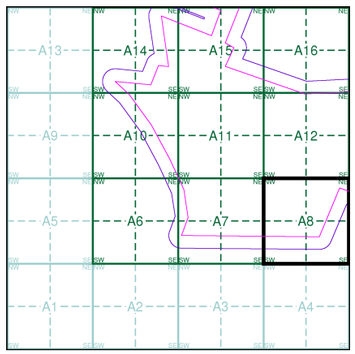
Source map scale - 1:2,500

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 A8



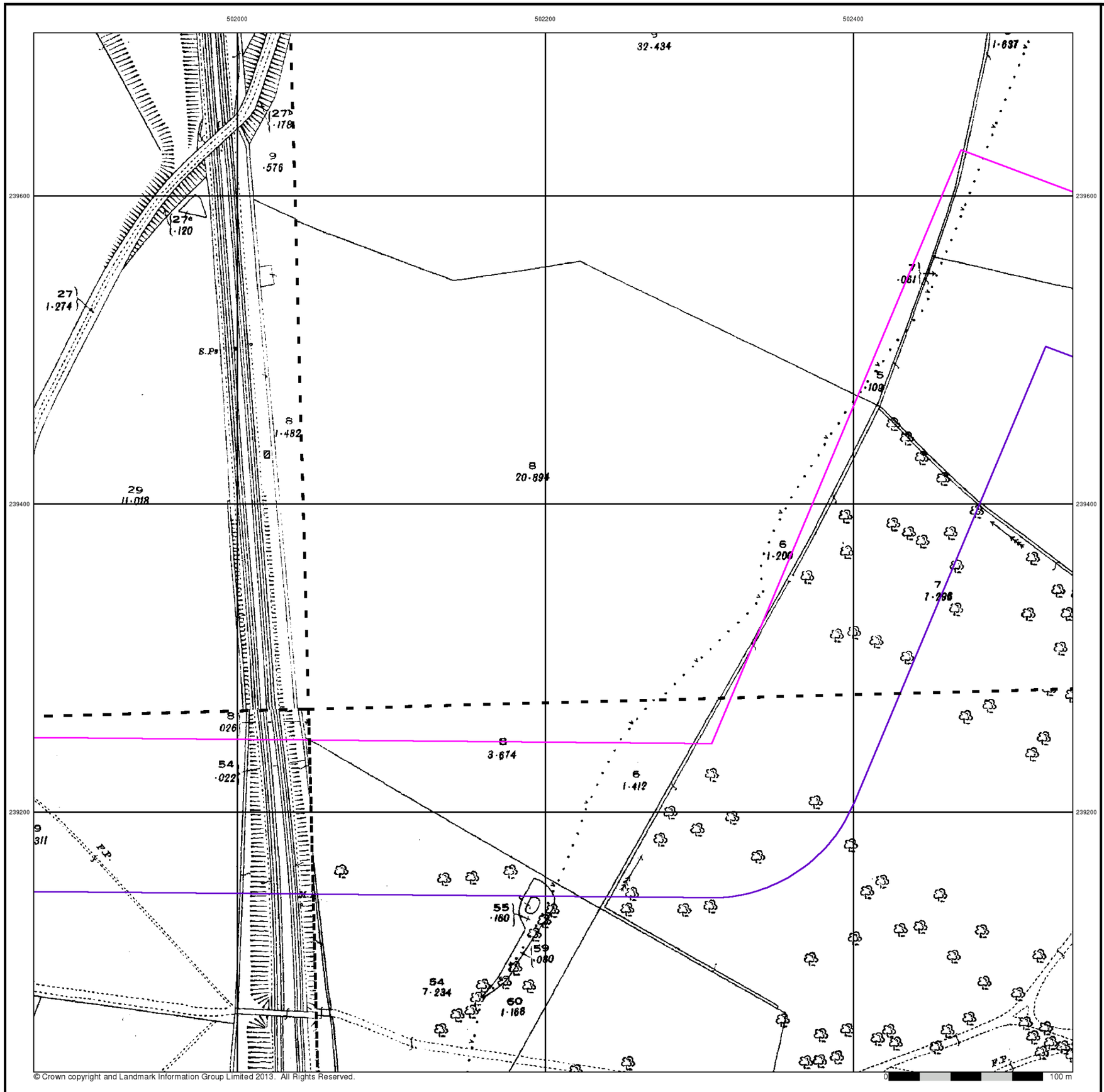
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

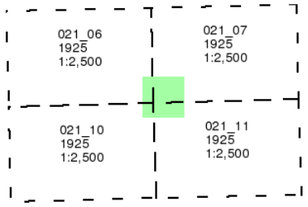
Bedfordshire

Published 1925

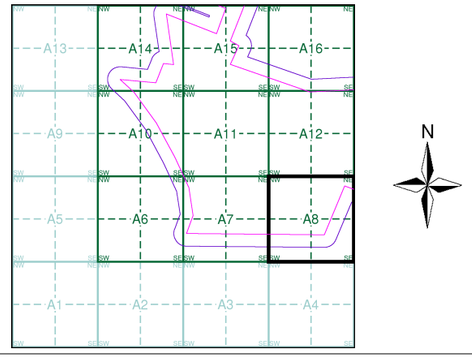
Source map scale - 1:2,500

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 A8



Order Details

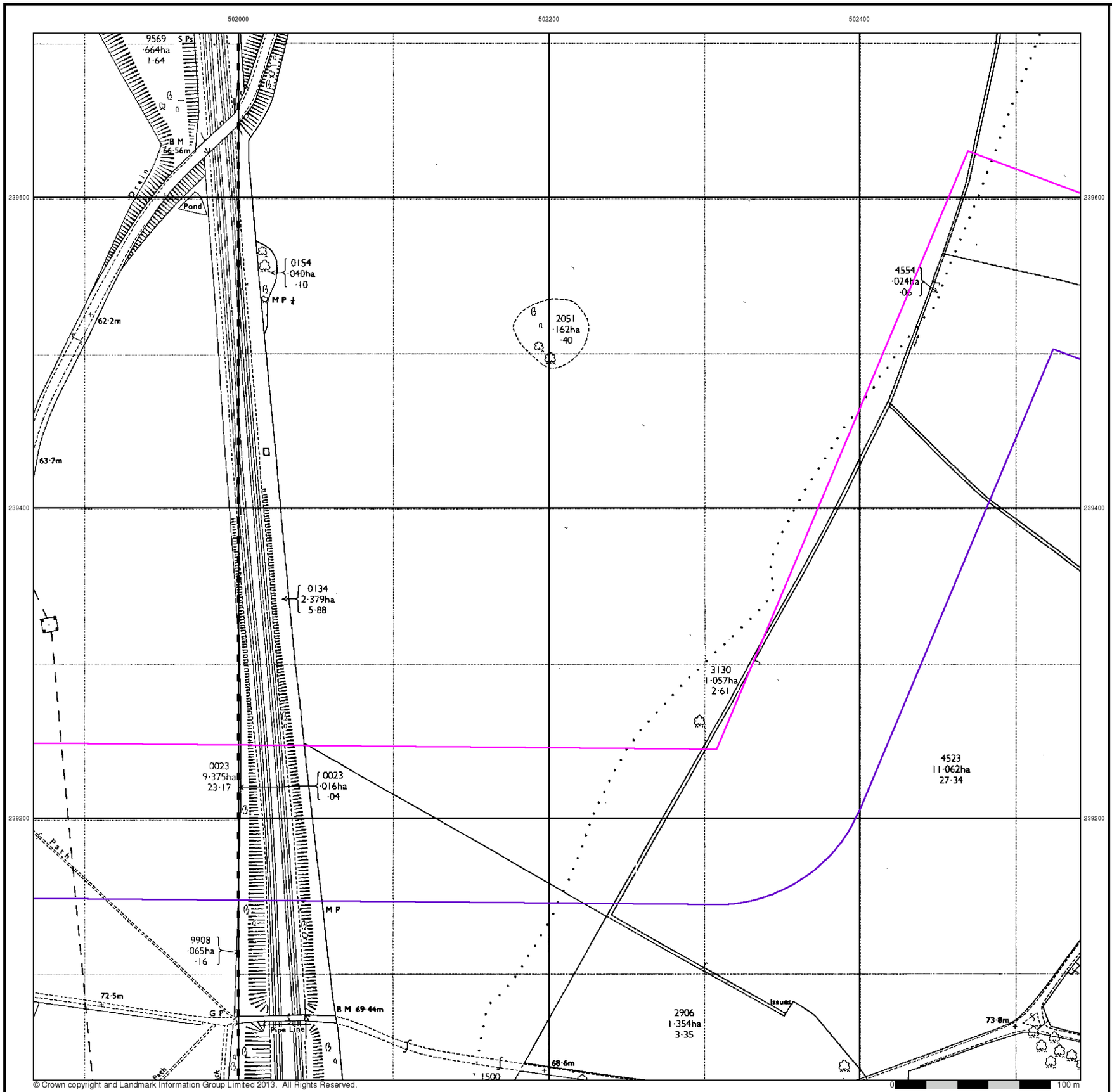
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

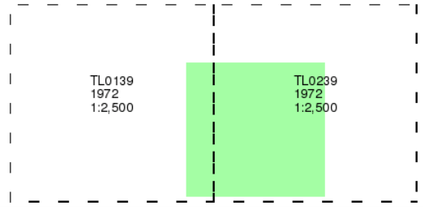
Ordnance Survey Plan

Published 1972

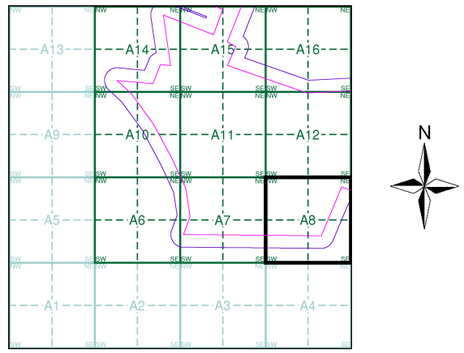
Source map scale - 1:2,500

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 A8



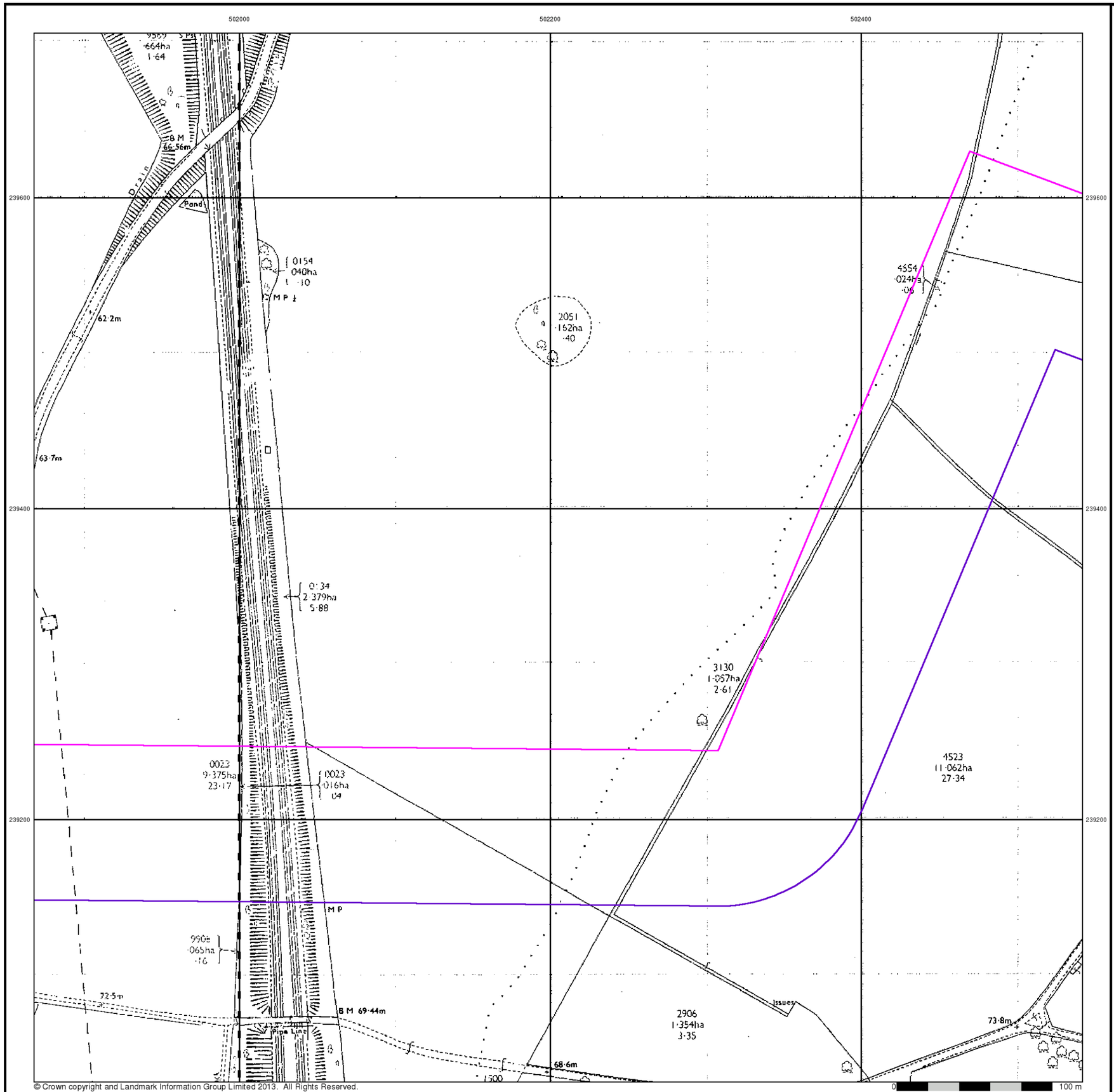
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

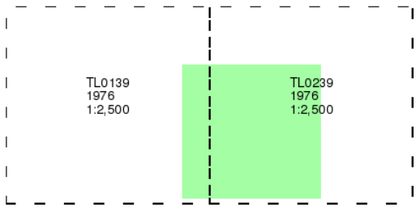
Supply of Unpublished Survey Information

Published 1976

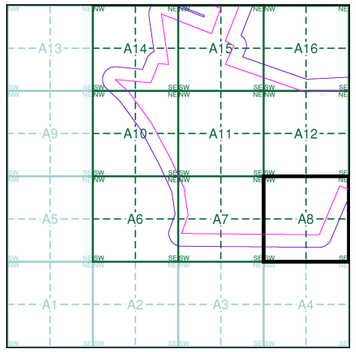
Source map scale - 1:2,500

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 A8



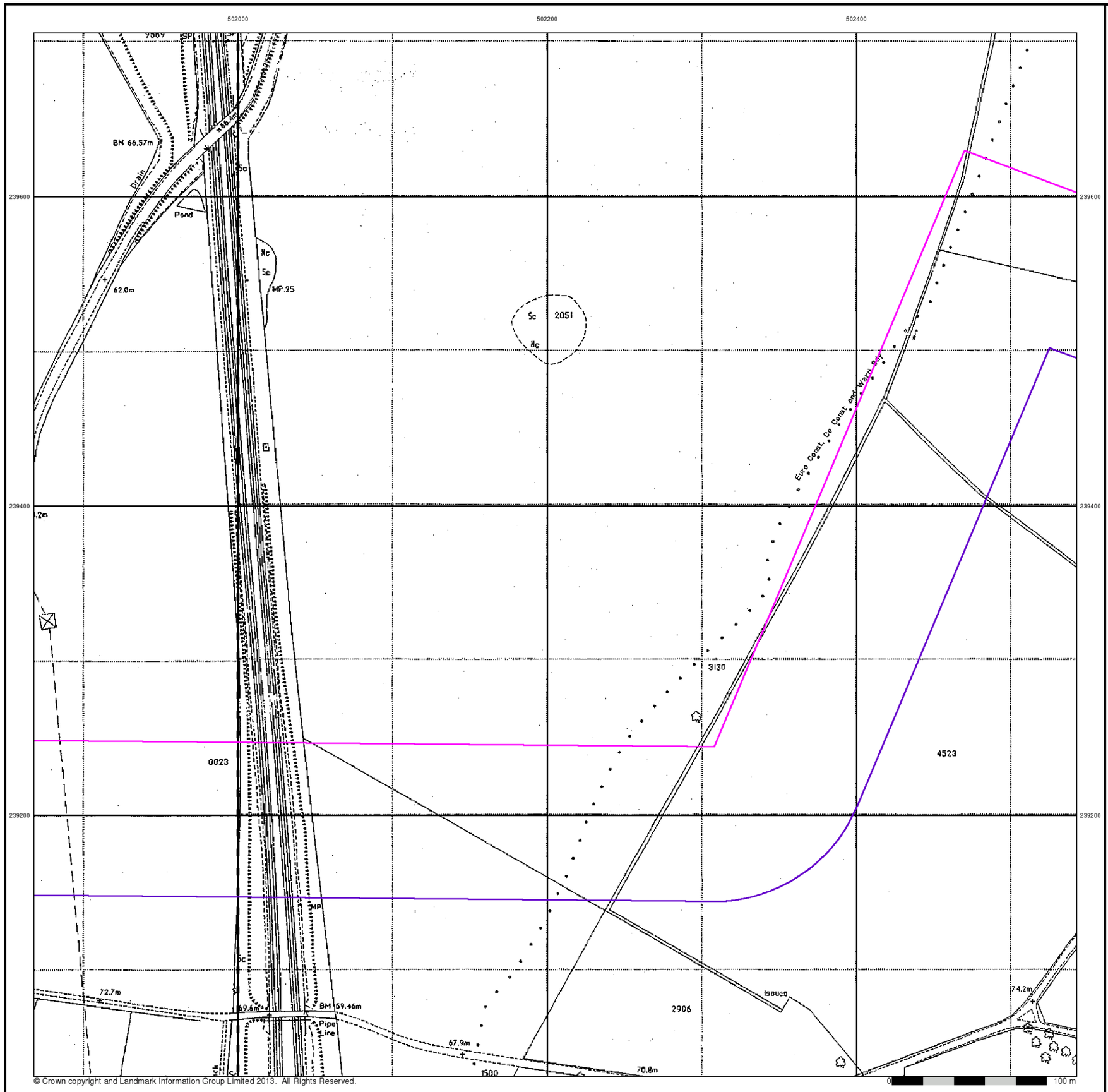
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

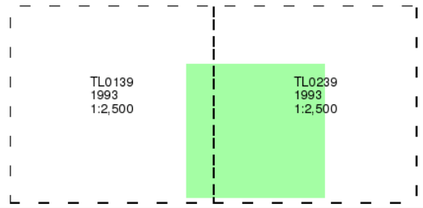
Large-Scale National Grid Data

Published 1993

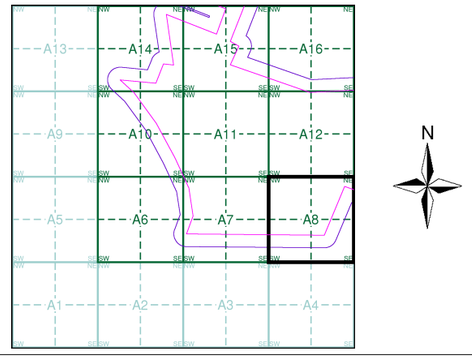
Source map scale - 1:2,500

'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)



Historical Map - Segment A8



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

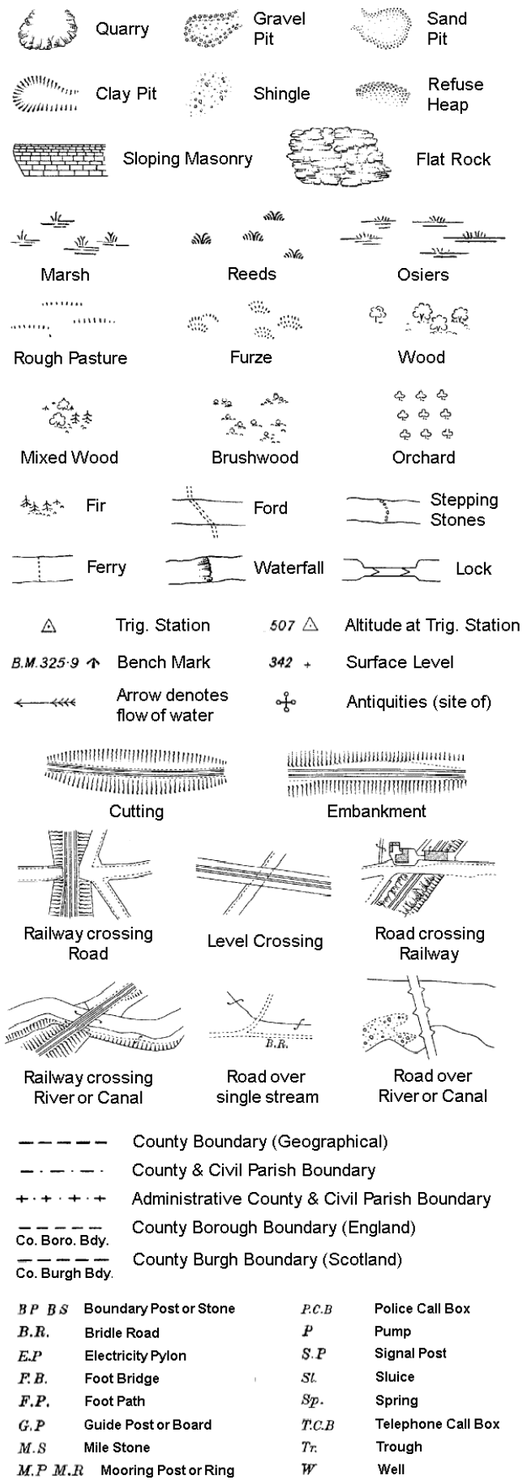
Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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

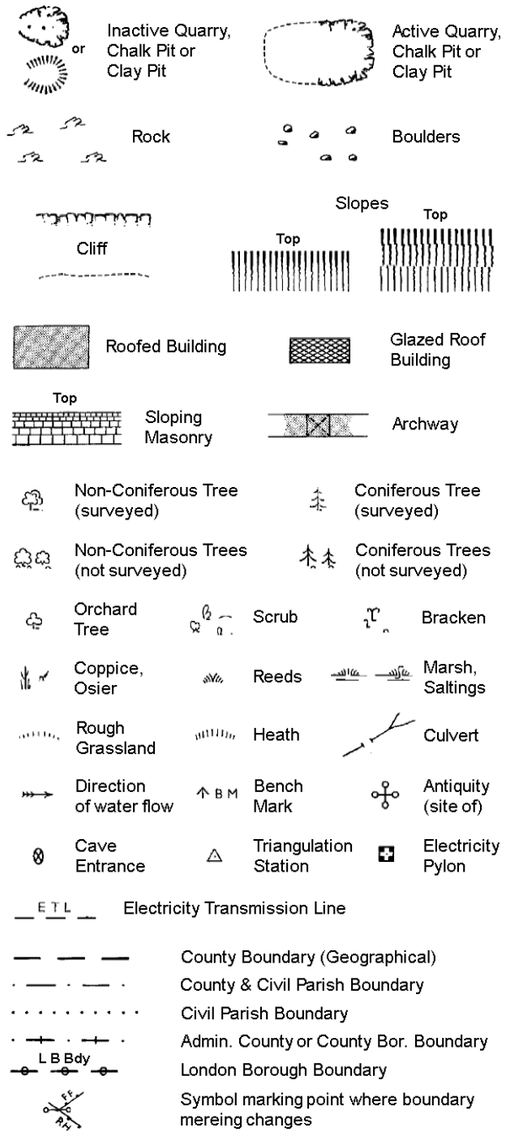
Historical Mapping Legends

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



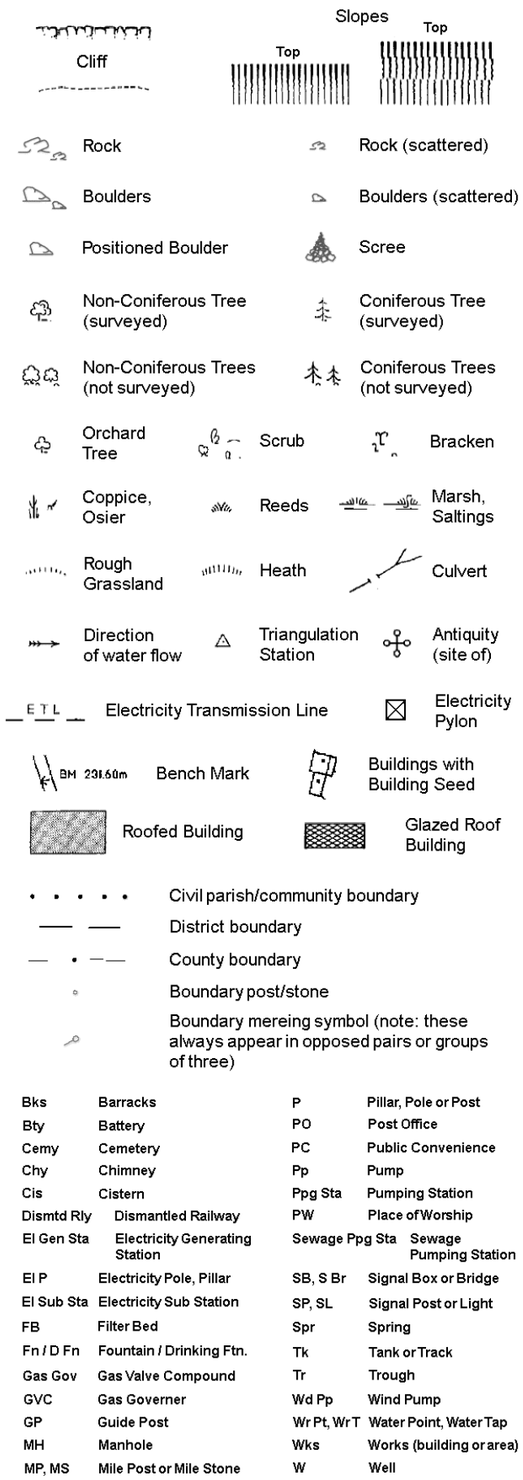
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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

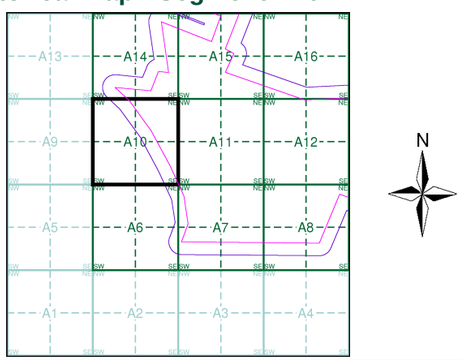


Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Historical Map - Segment A10



Order Details

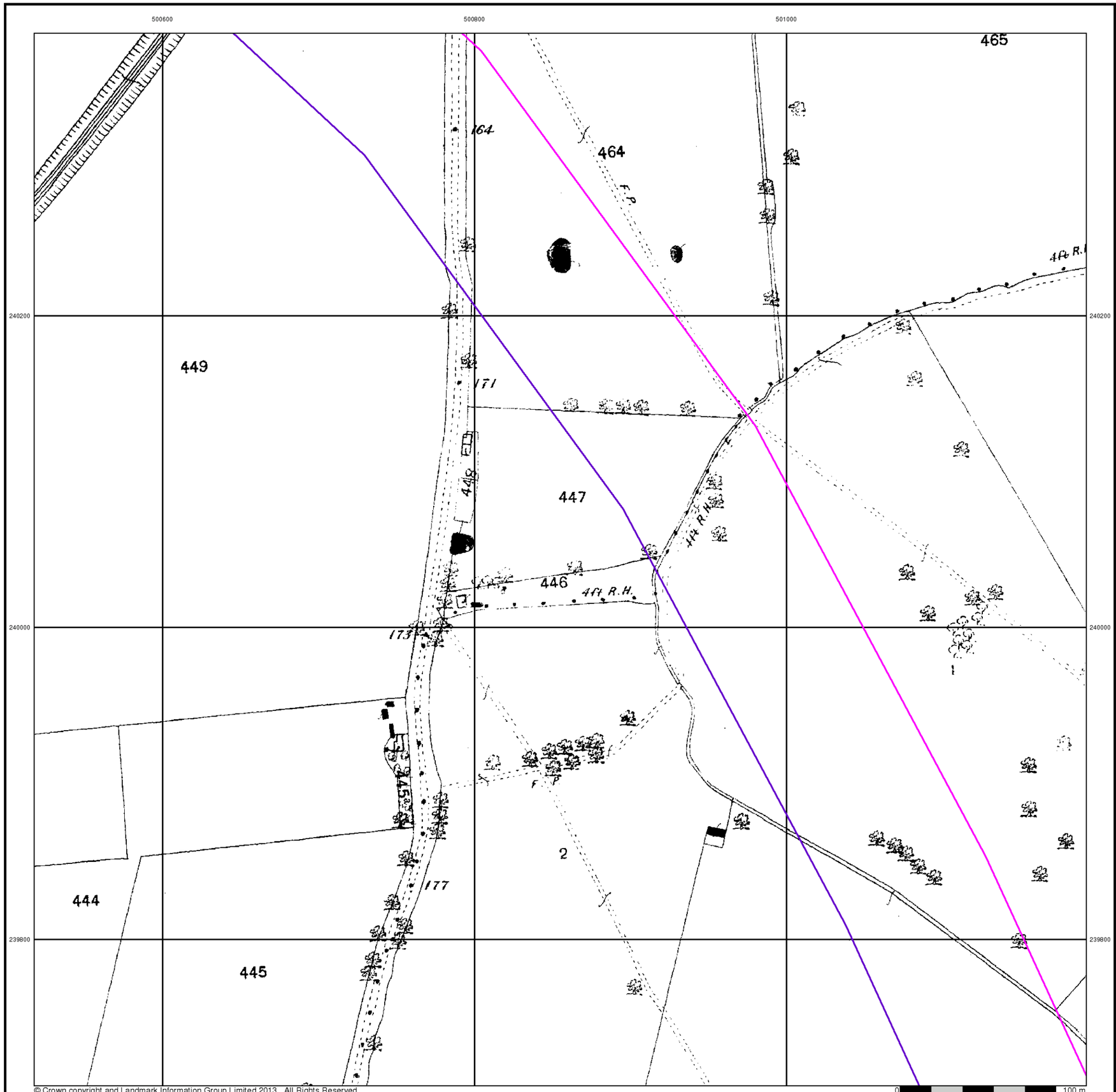
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group

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



pba peterbrett

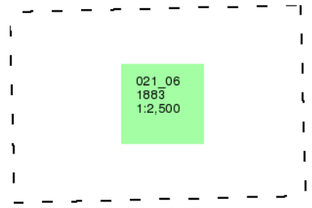
Bedfordshire

Published 1883

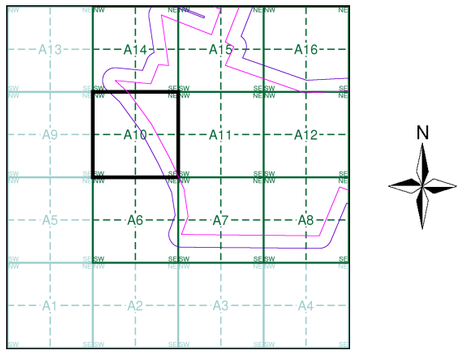
Source map scale - 1:2,500

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 A10



Order Details

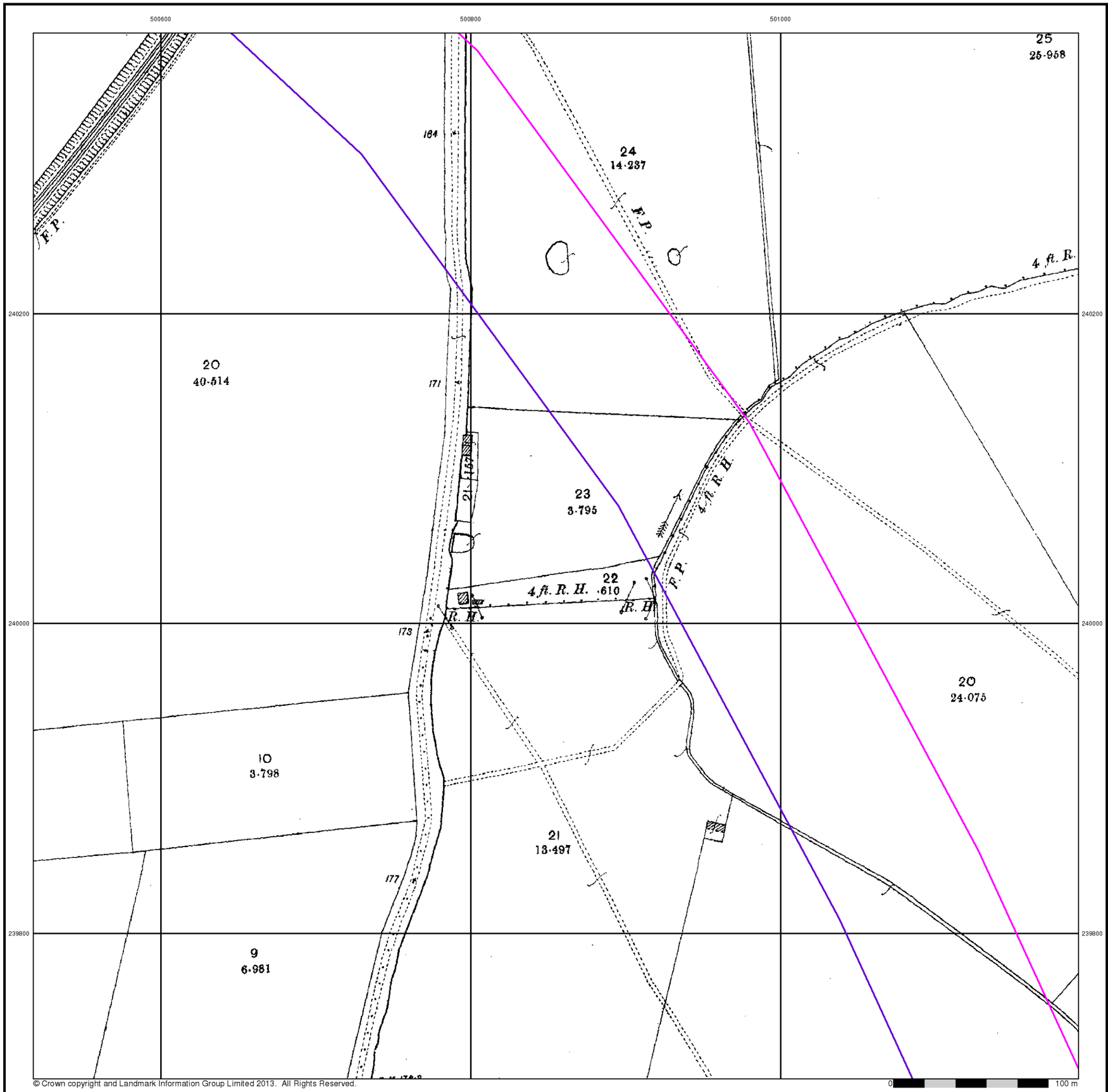
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



0 100 m

pba peterbrett

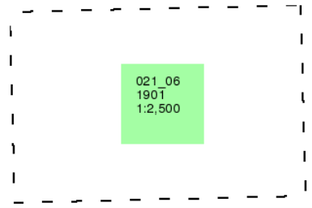
Bedfordshire

Published 1901

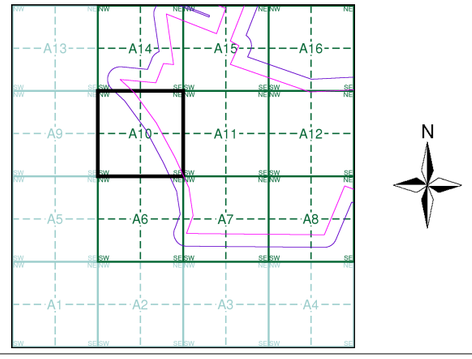
Source map scale - 1:2,500

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 A10



Order Details

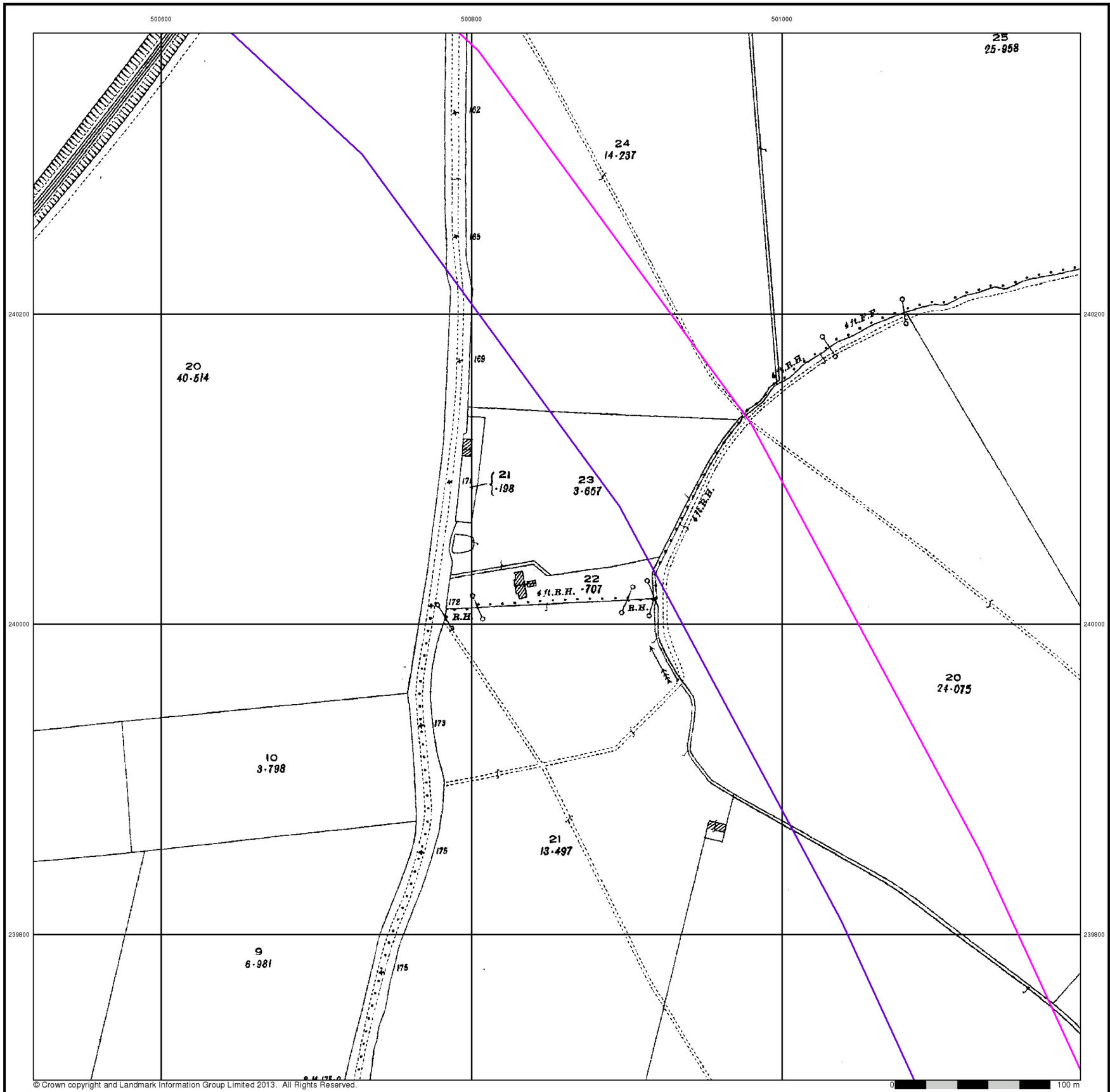
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

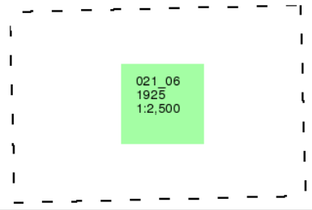
Bedfordshire

Published 1925

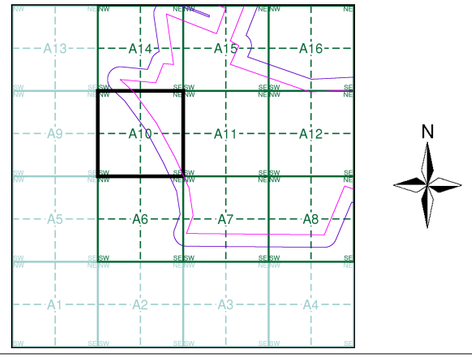
Source map scale - 1:2,500

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 A10



Order Details

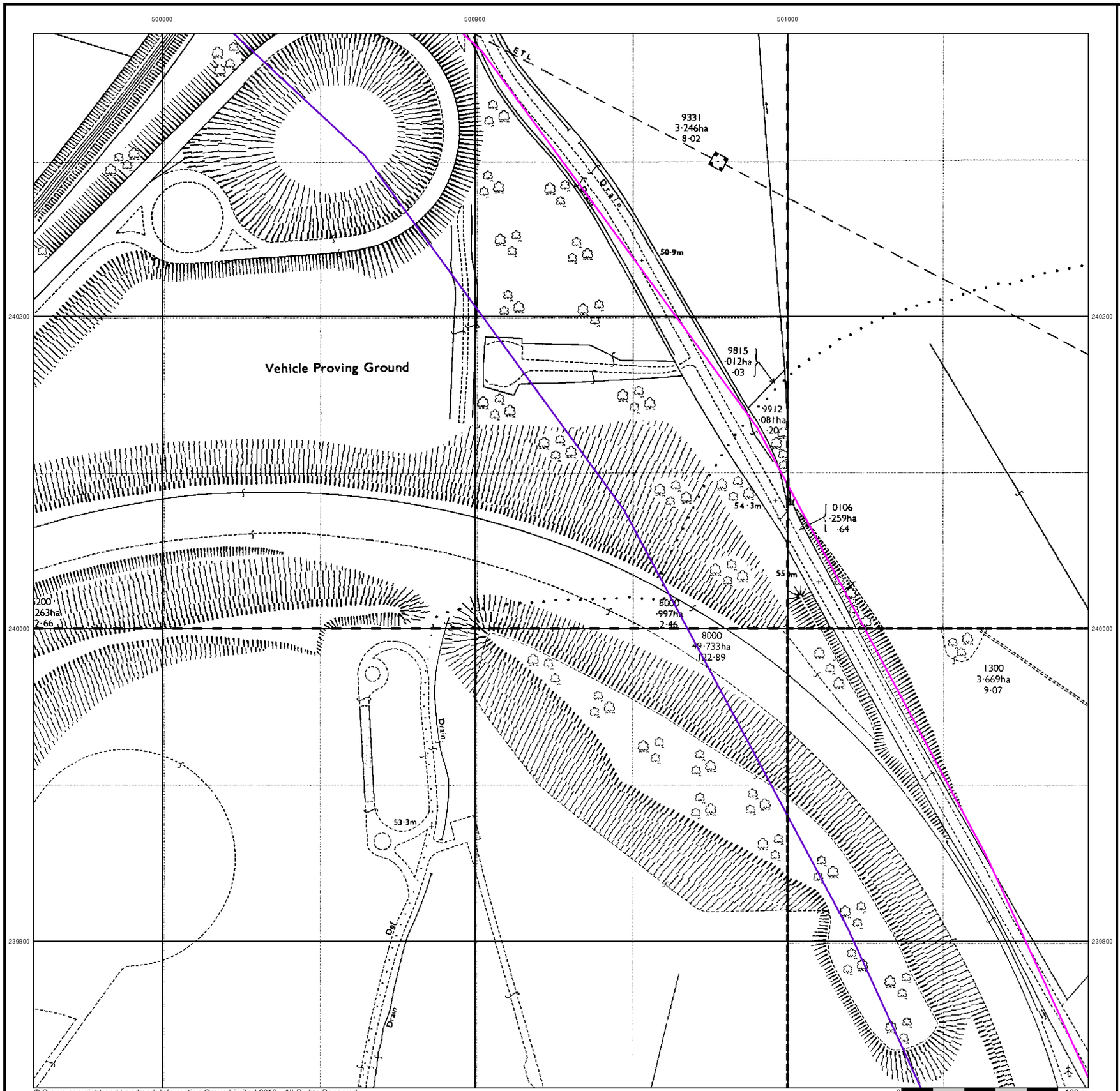
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

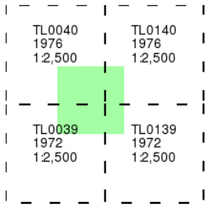
Ordnance Survey Plan

Published 1972 - 1976

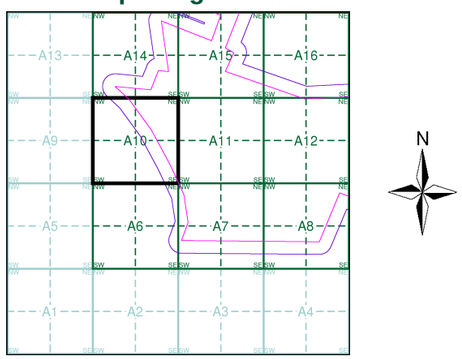
Source map scale - 1:2,500

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 A10



Order Details

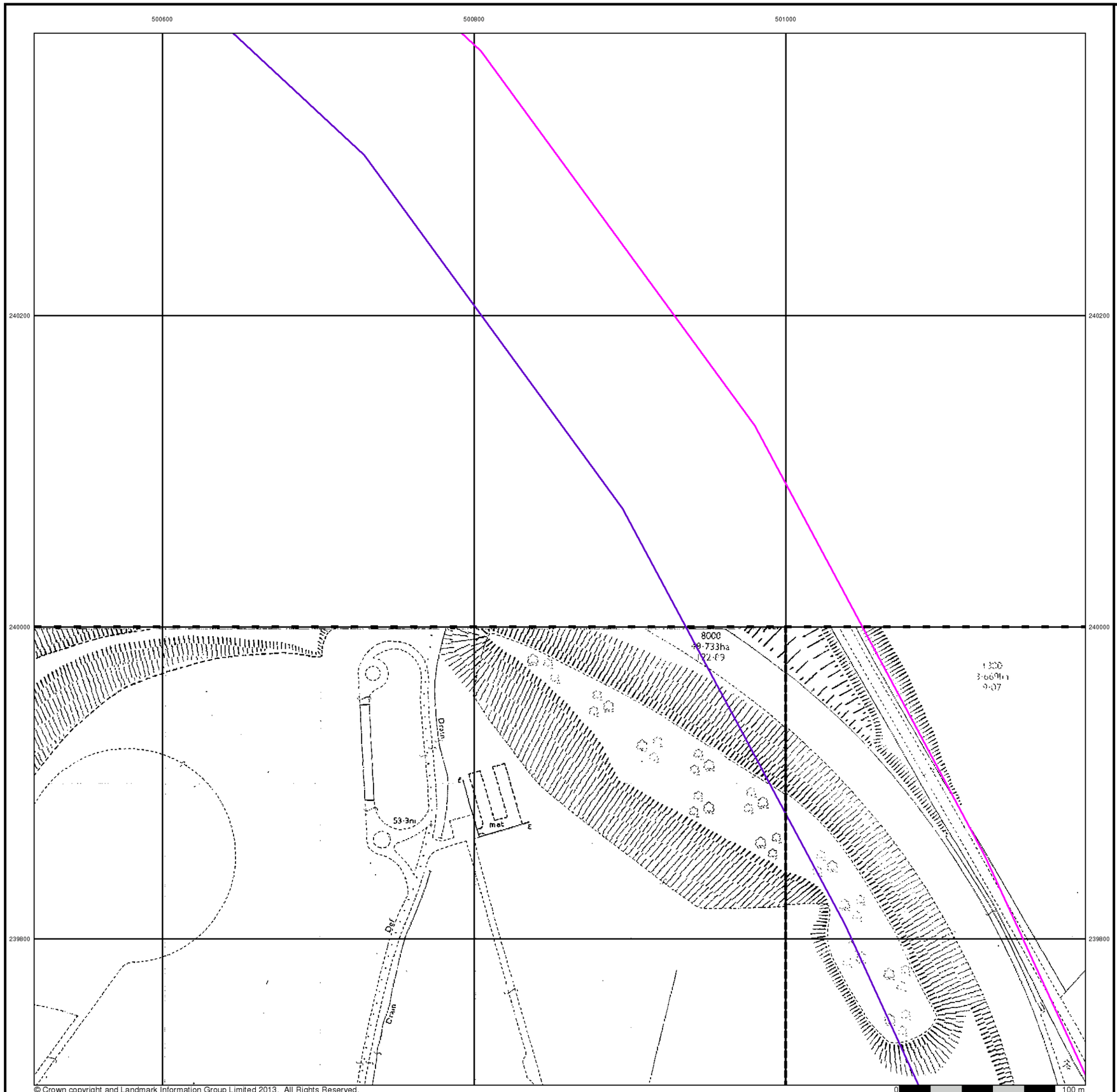
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



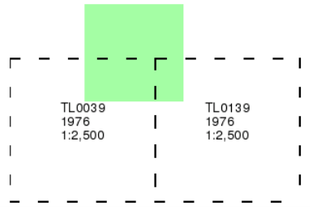
Supply of Unpublished Survey Information

Published 1976

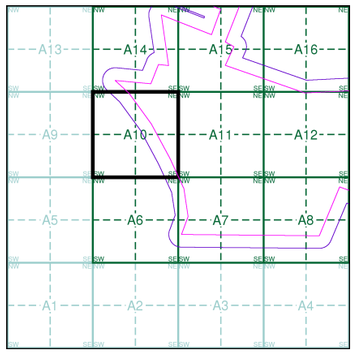
Source map scale - 1:2,500

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 A10



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

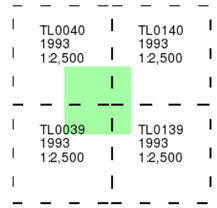
Large-Scale National Grid Data

Published 1993

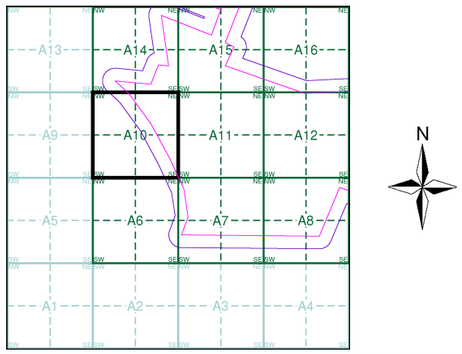
Source map scale - 1:2,500

'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)



Historical Map - Segment A10



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

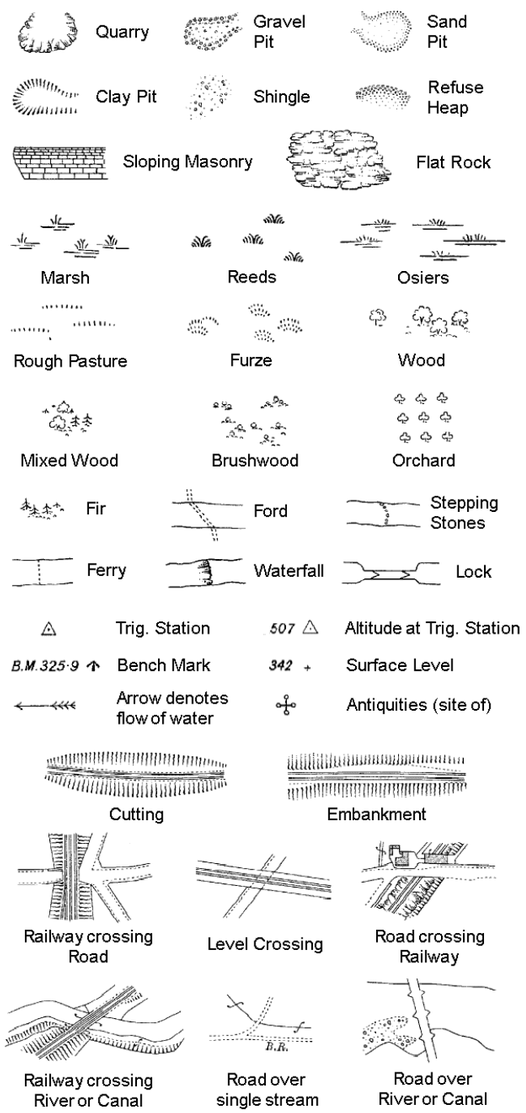
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

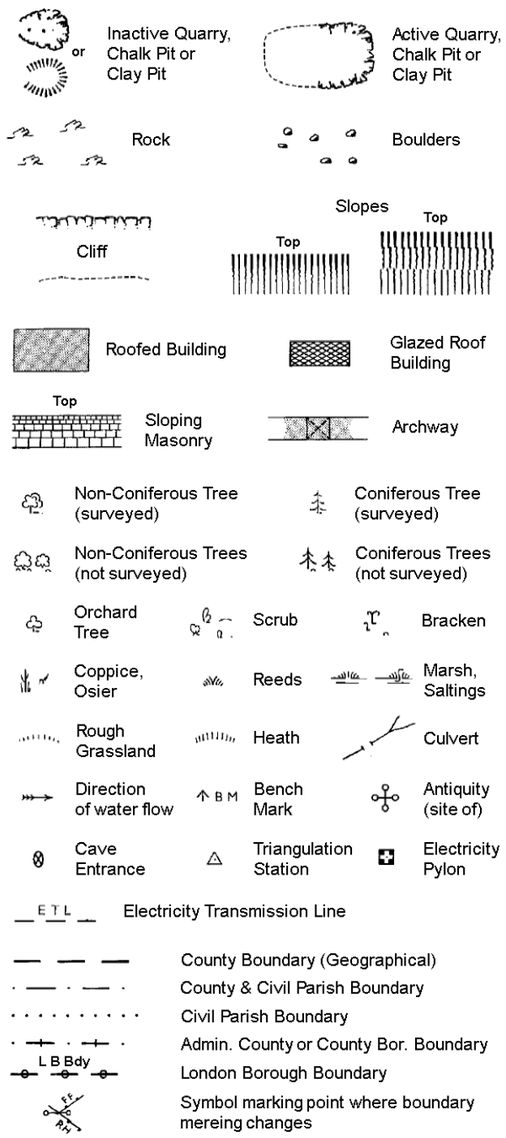
Historical Mapping Legends

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



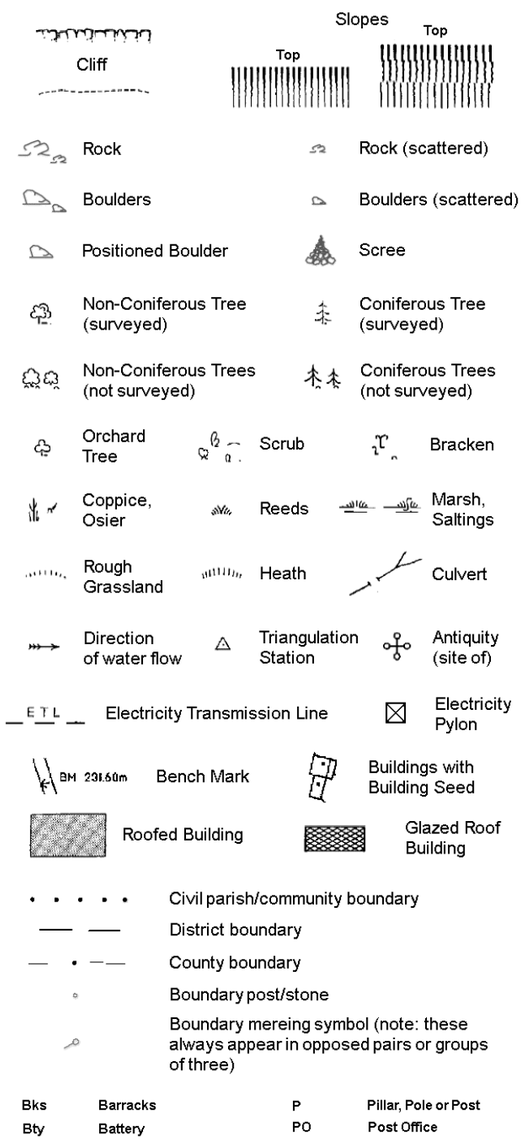
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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



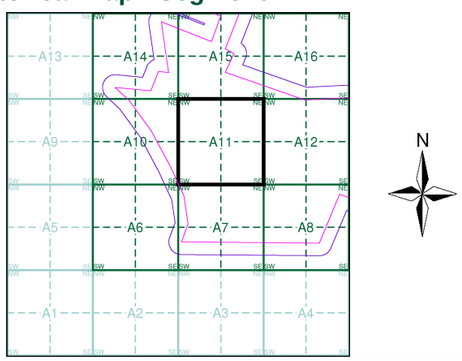
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1972 - 1976	5
Supply of Unpublished Survey Information	1:2,500	1976	6
Large-Scale National Grid Data	1:2,500	1993	7

Historical Map - Segment A11



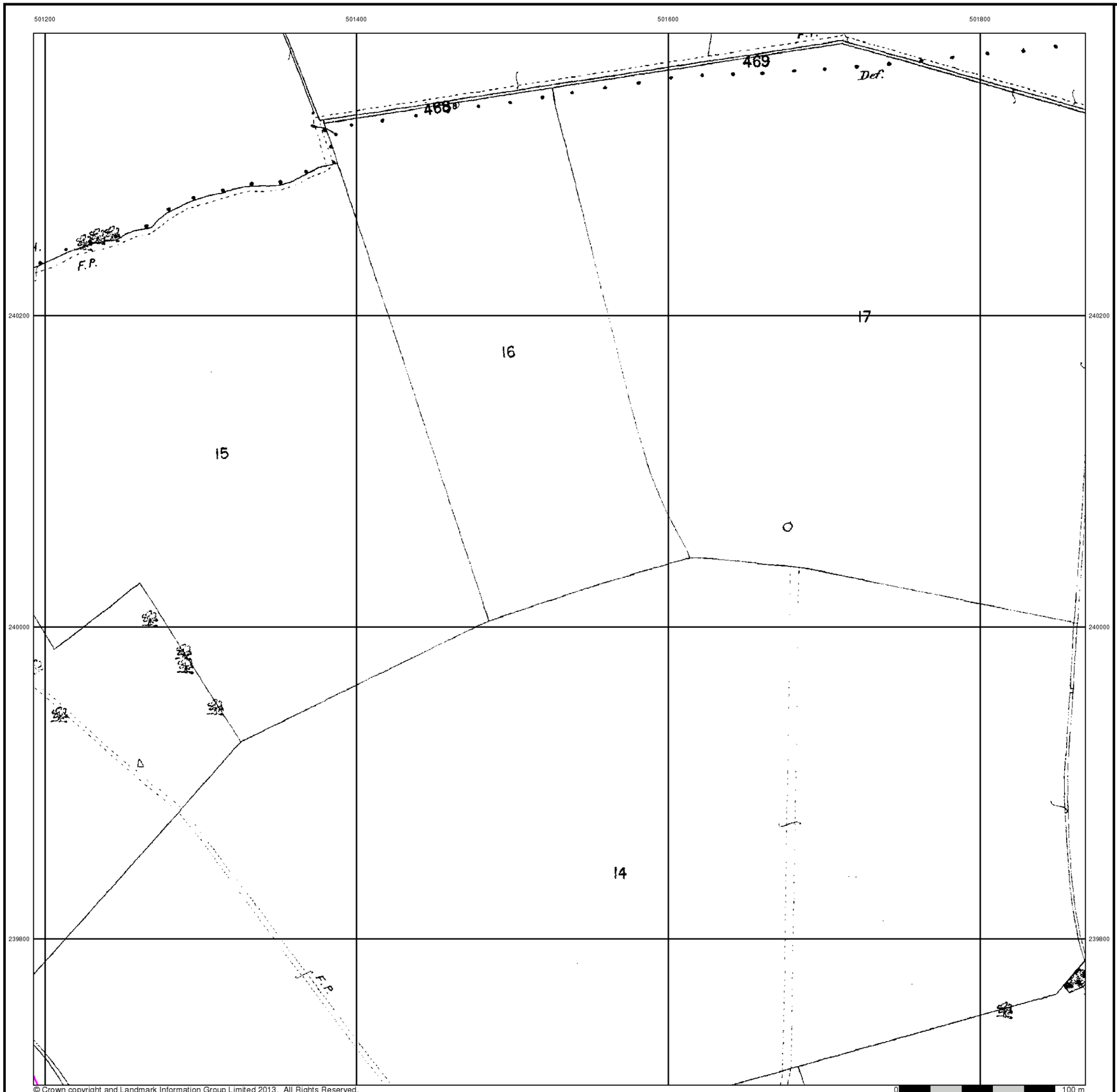
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 501510, 239960
Slice: A
Site Area (Ha): 240.61
Search Buffer (m): 100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



pba peterbrett

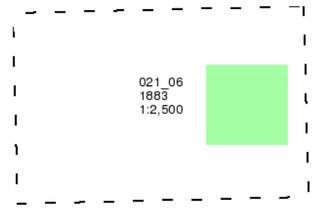
Bedfordshire

Published 1883

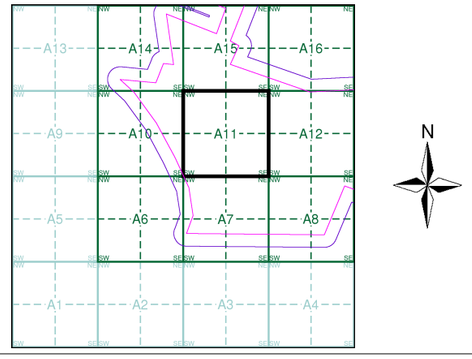
Source map scale - 1:2,500

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 A11



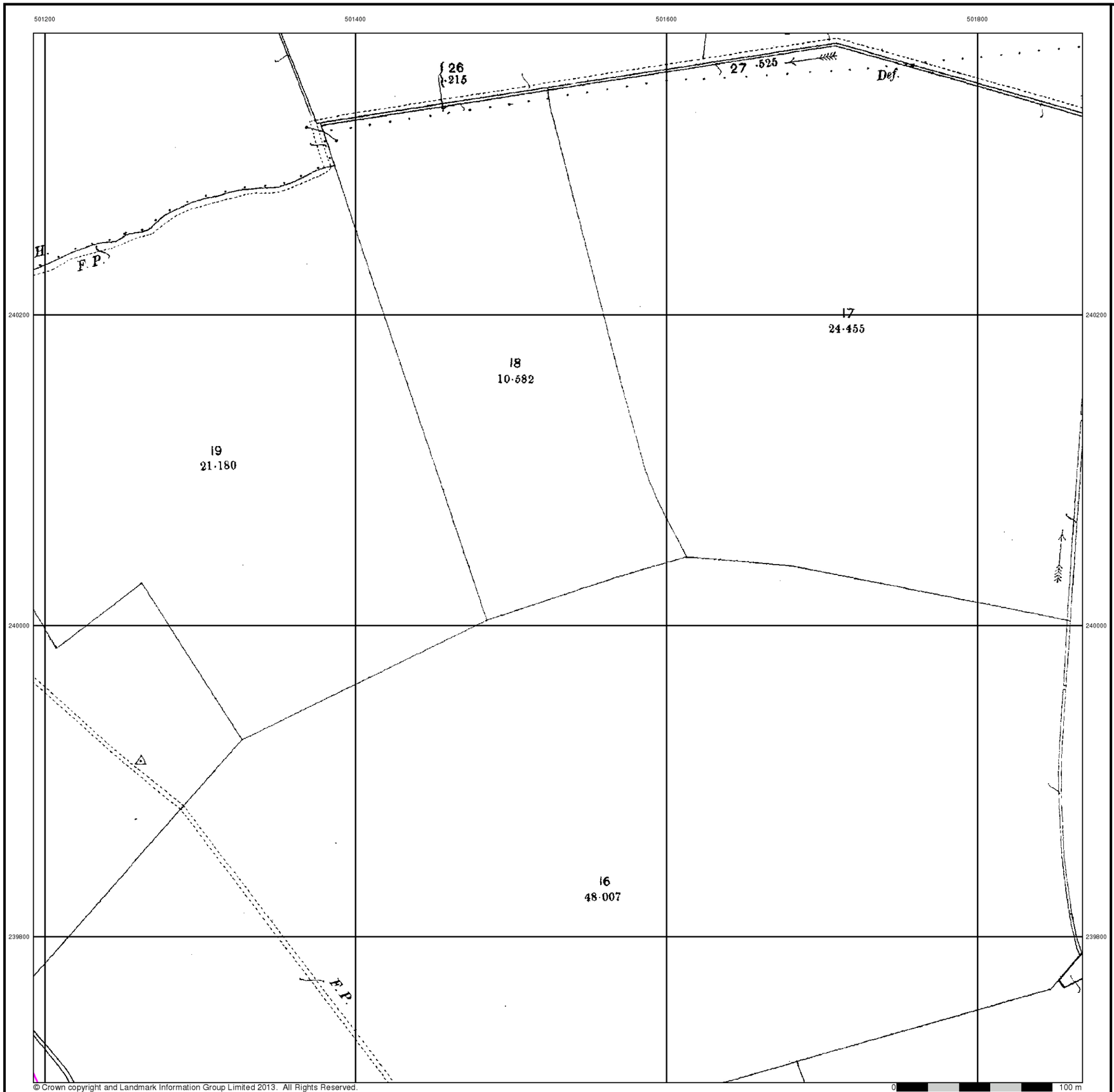
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



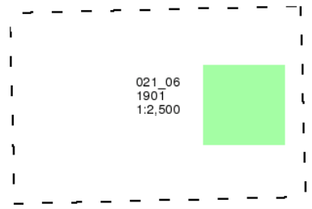
Bedfordshire

Published 1901

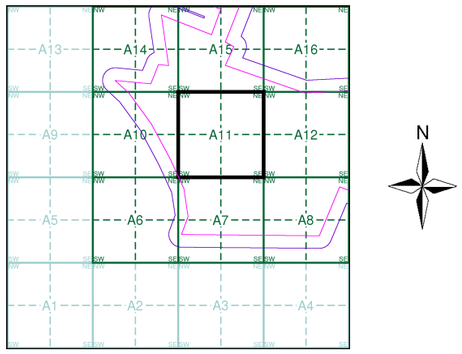
Source map scale - 1:2,500

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 A11



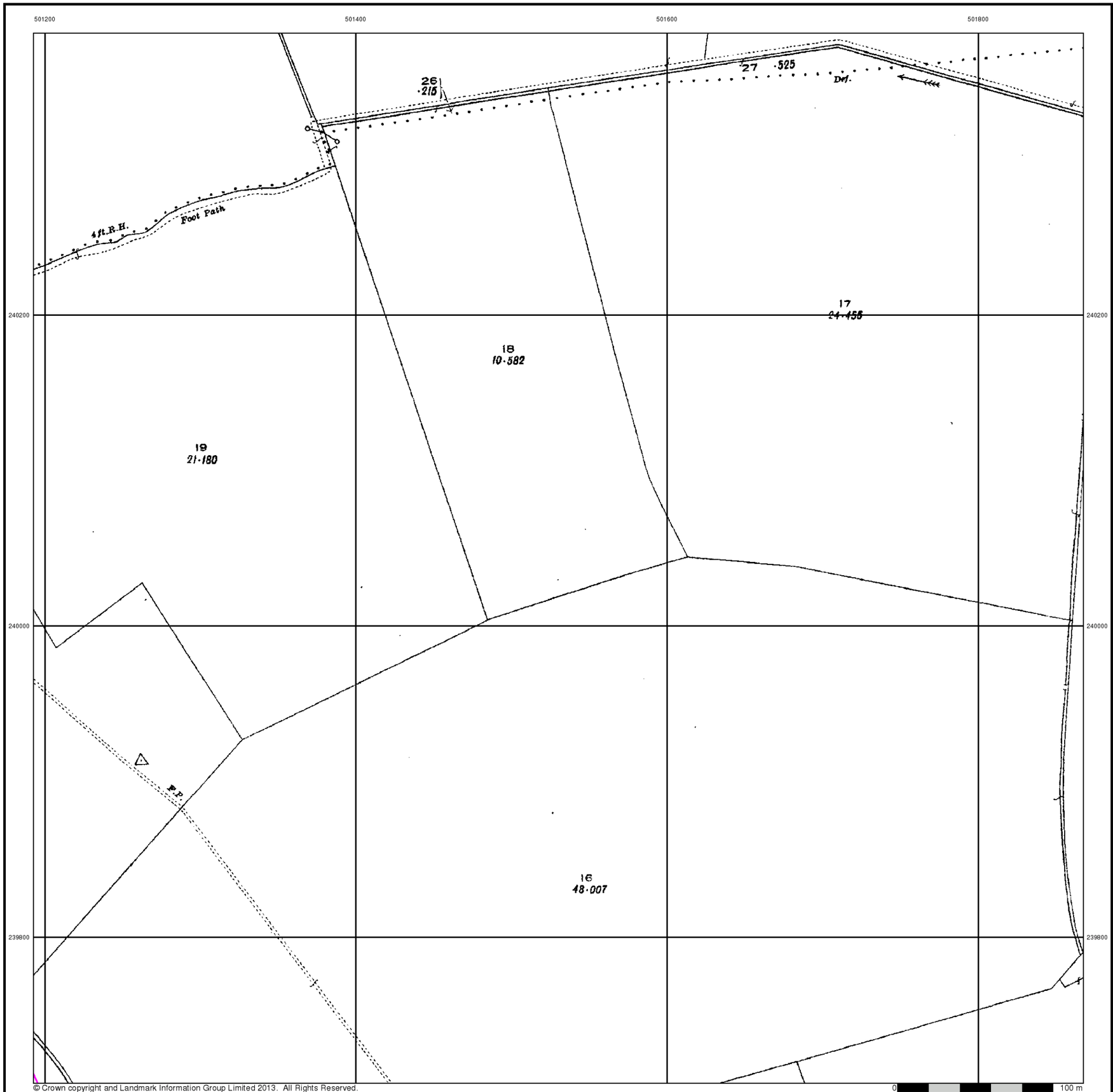
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

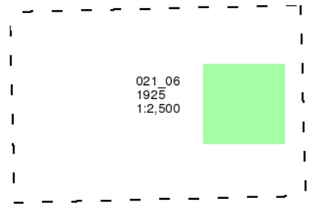
Bedfordshire

Published 1925

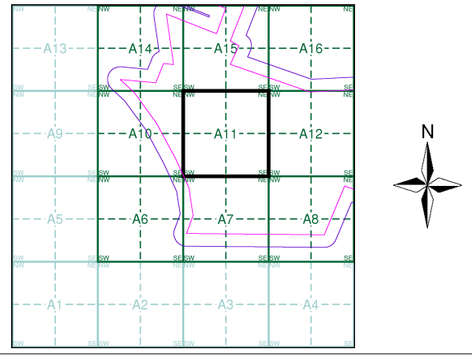
Source map scale - 1:2,500

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 A11



Order Details

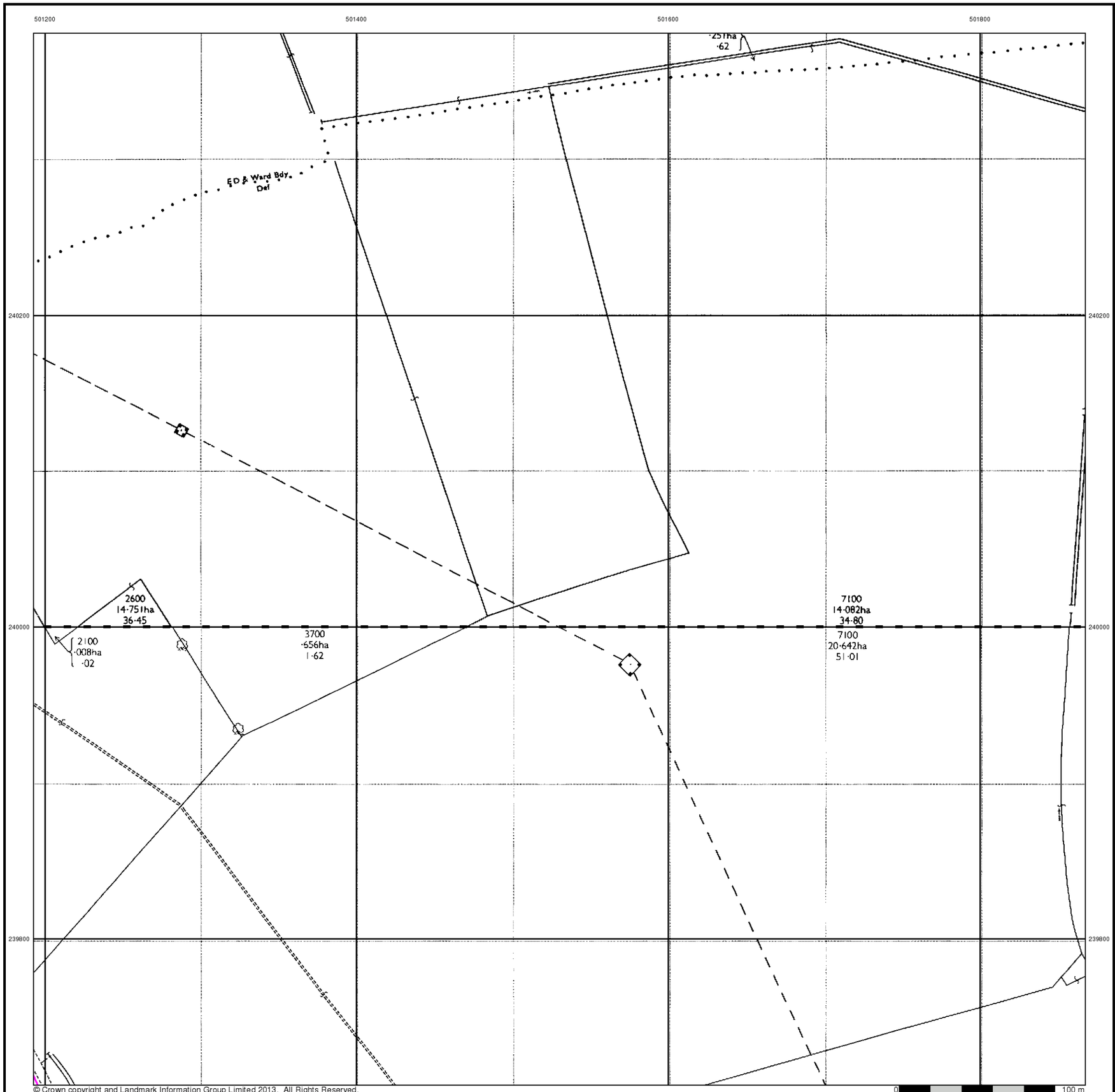
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

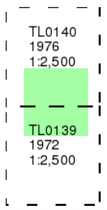
Ordnance Survey Plan

Published 1972 - 1976

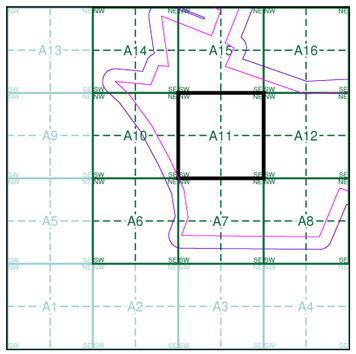
Source map scale - 1:2,500

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 A11



Order Details

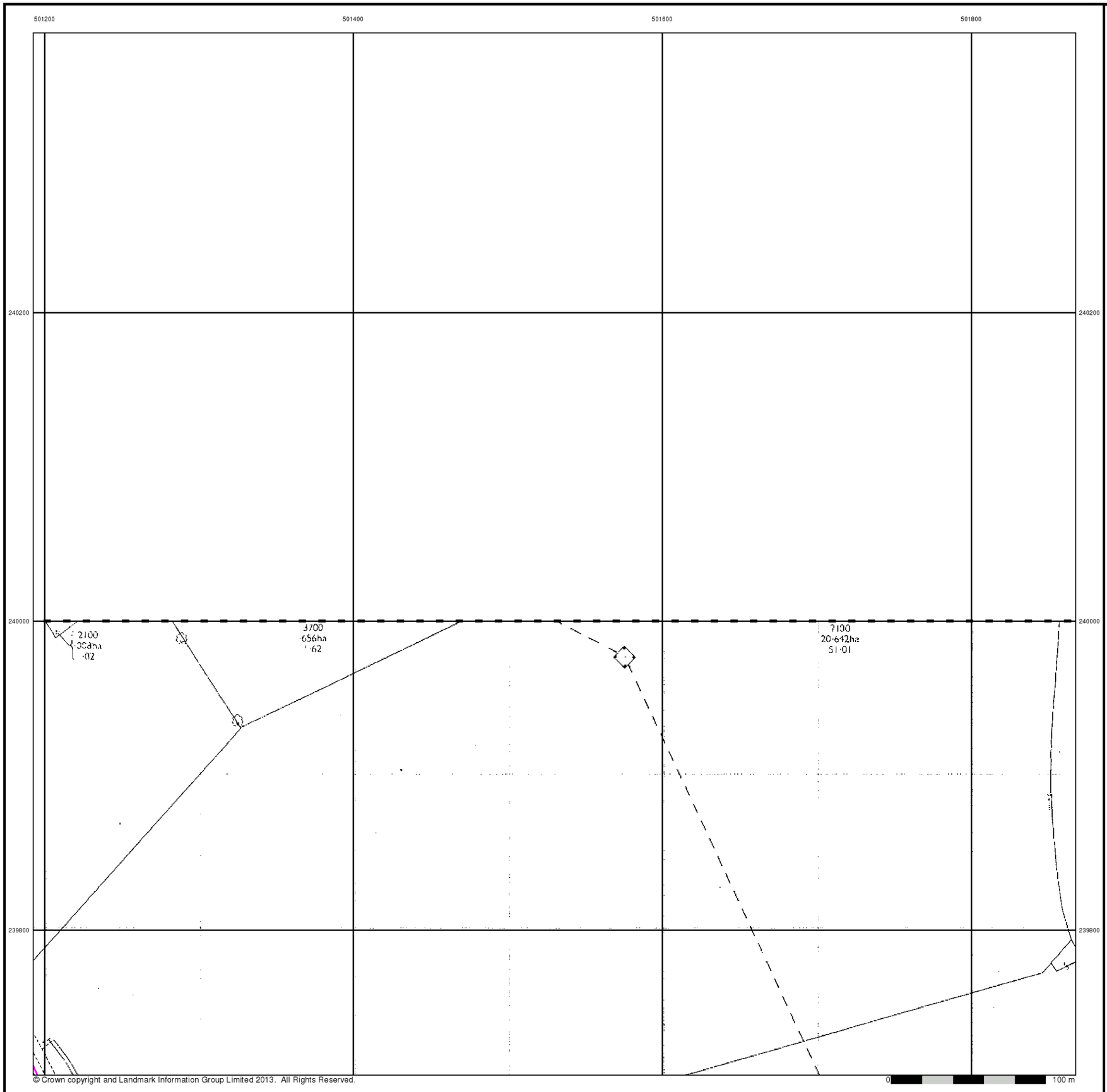
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



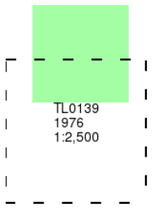
Supply of Unpublished Survey Information

Published 1976

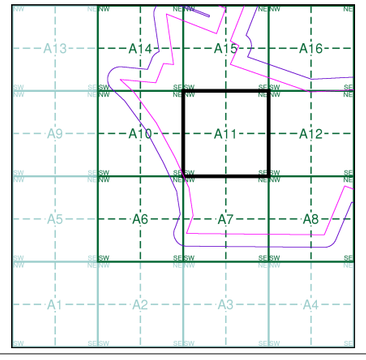
Source map scale - 1:2,500

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 A11



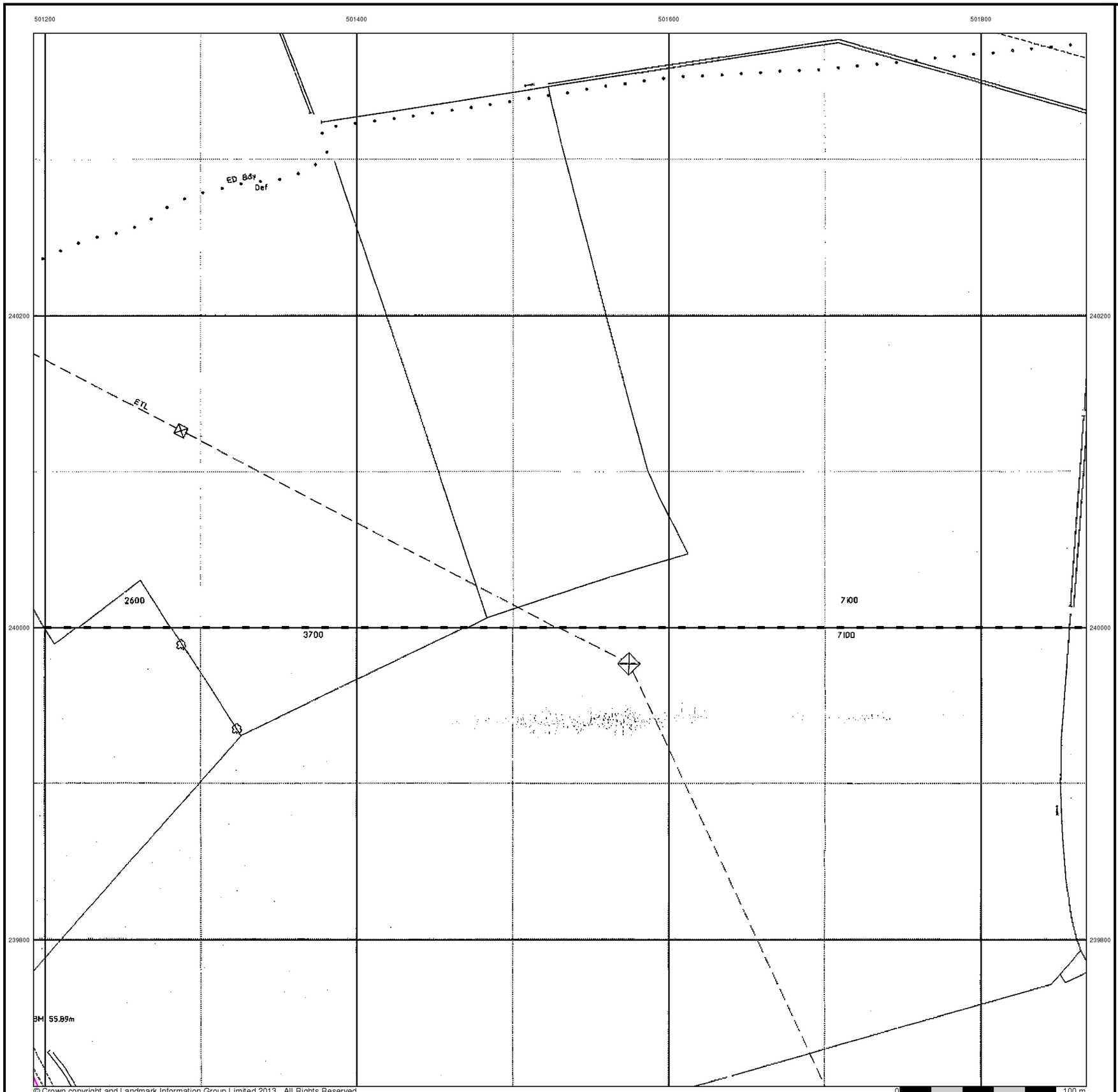
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

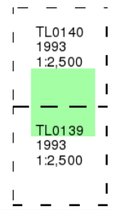
Large-Scale National Grid Data

Published 1993

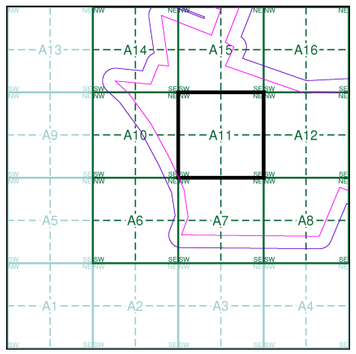
Source map scale - 1:2,500

'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)



Historical Map - Segment A11



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

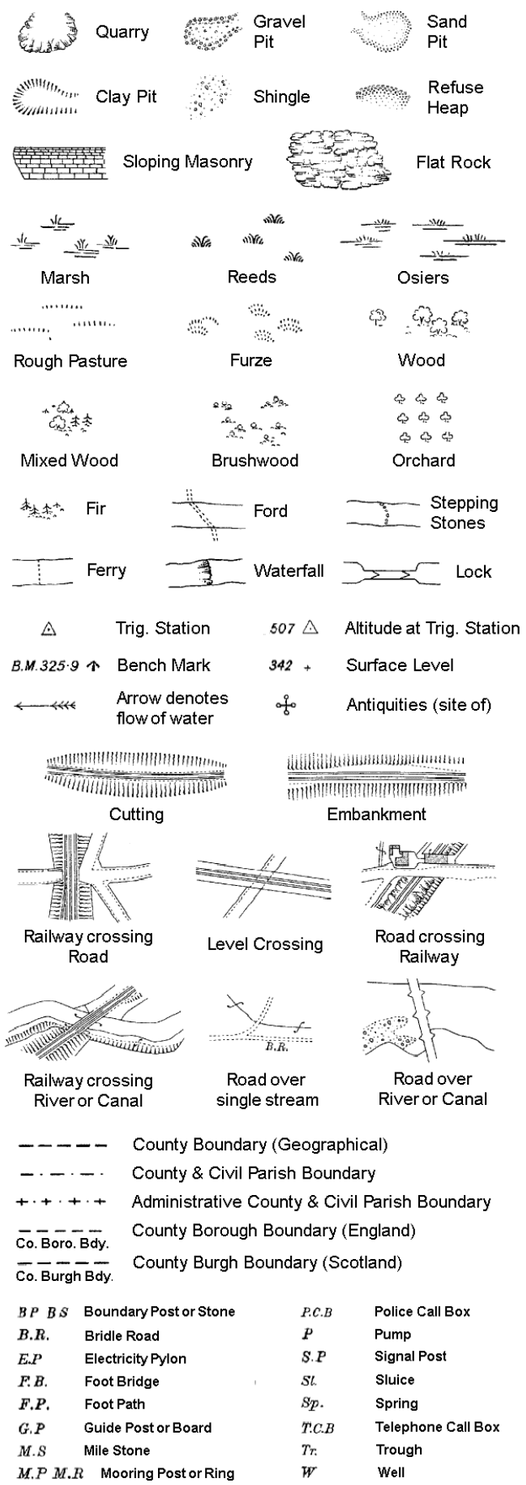
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

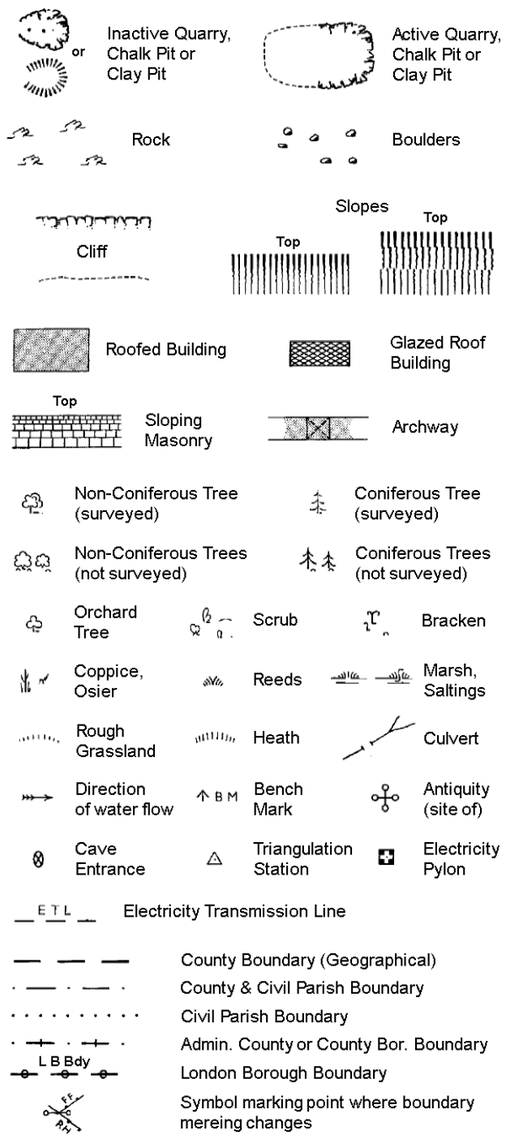
Historical Mapping Legends

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



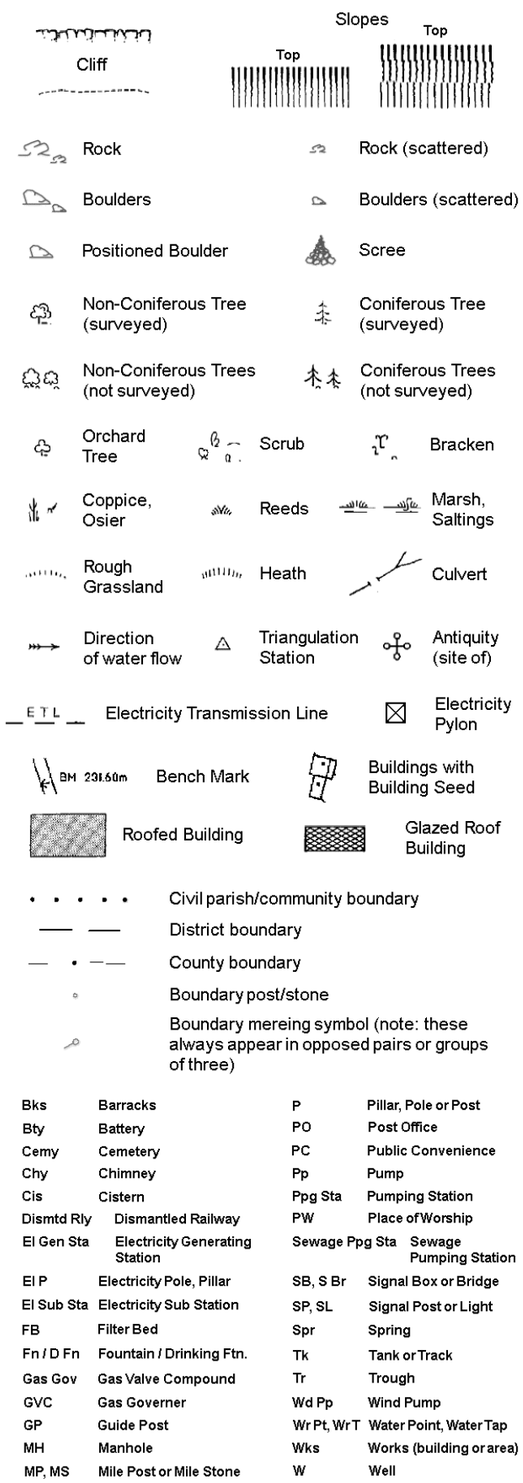
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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



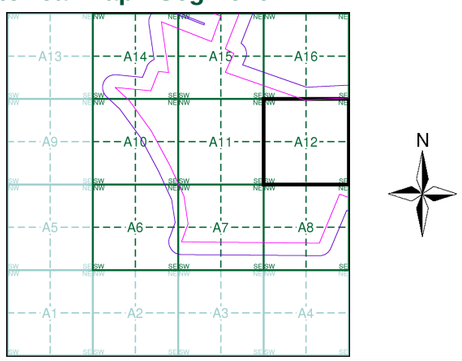
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1972 - 1976	5
Supply of Unpublished Survey Information	1:2,500	1976	6
Large-Scale National Grid Data	1:2,500	1993	7

Historical Map - Segment A12



Order Details

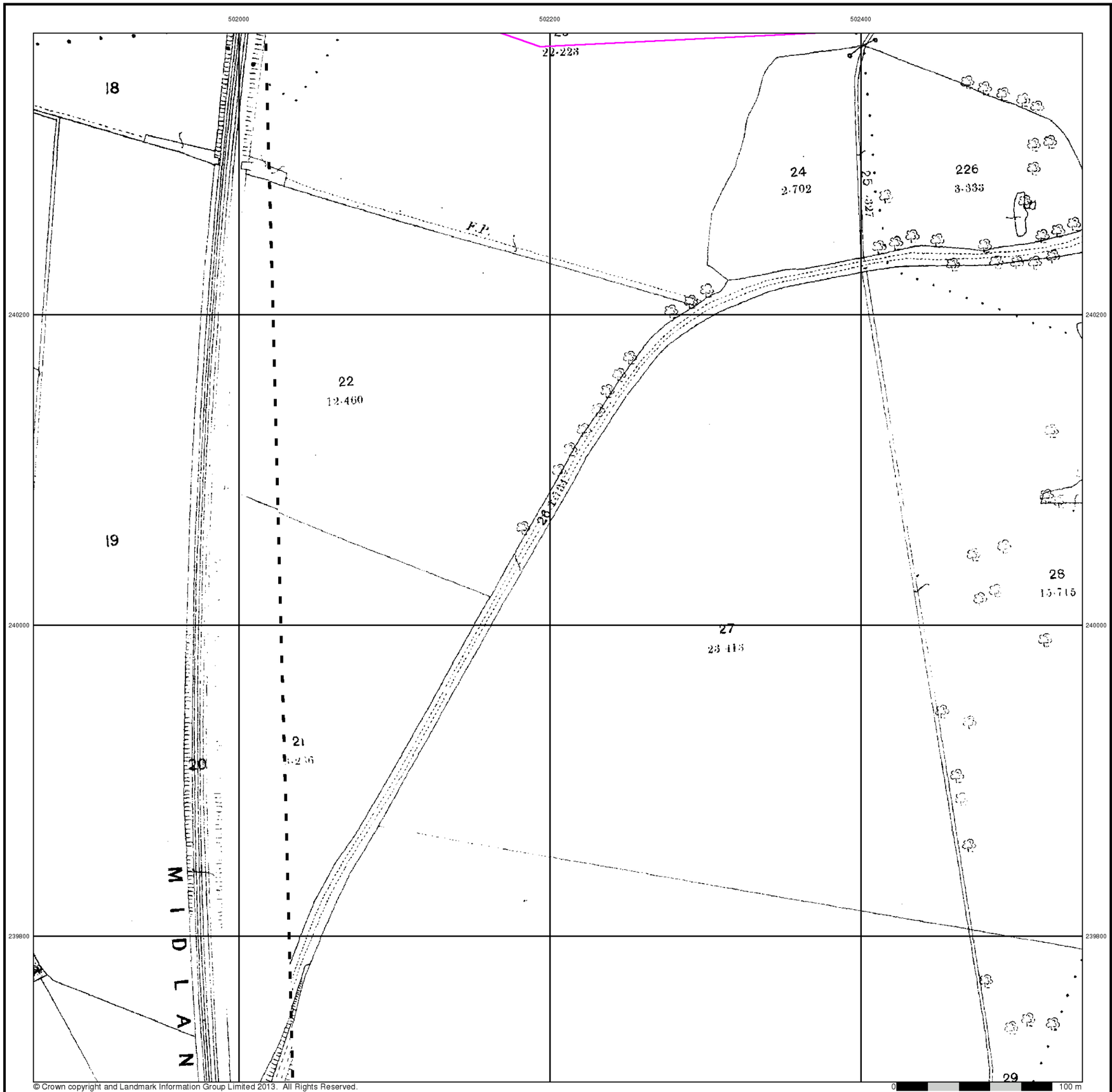
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group

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



pba peterbrett

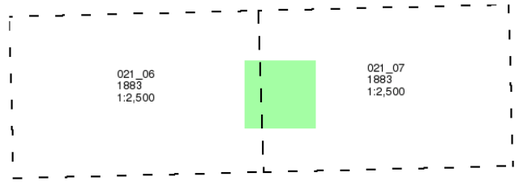
Bedfordshire

Published 1883

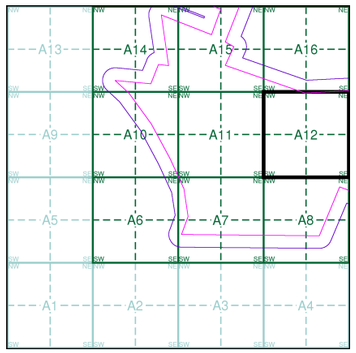
Source map scale - 1:2,500

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 A12



Order Details

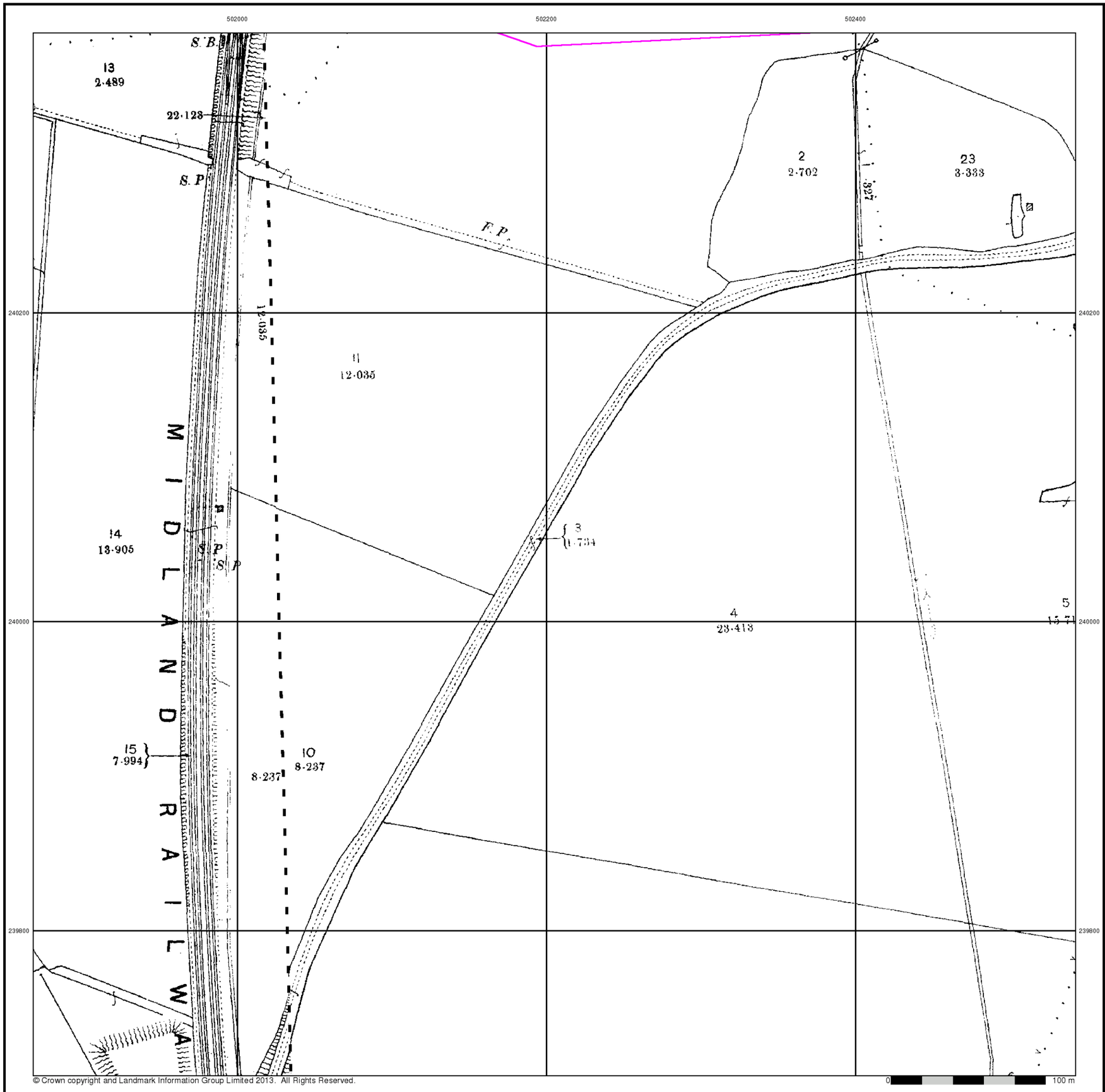
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

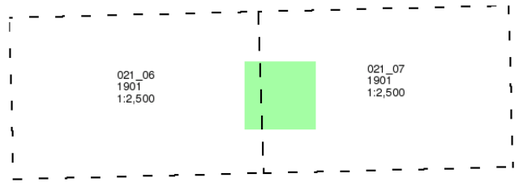
Bedfordshire

Published 1901

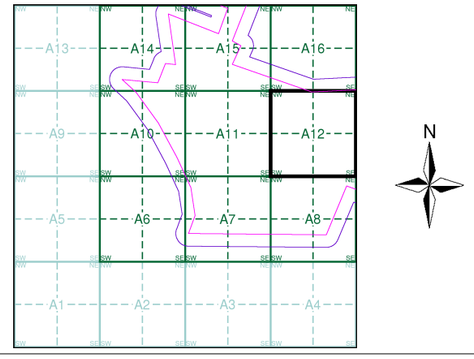
Source map scale - 1:2,500

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 A12



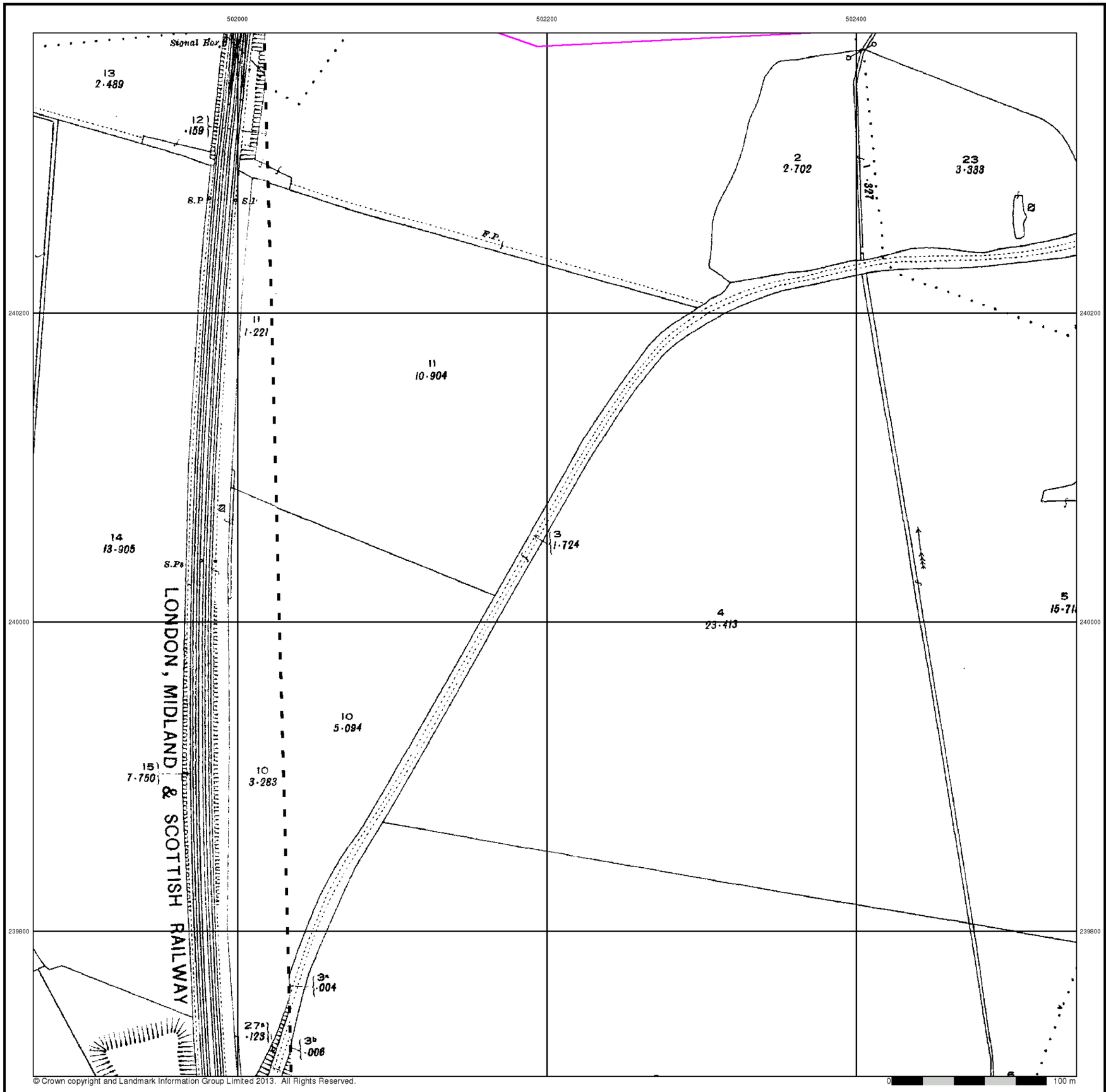
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



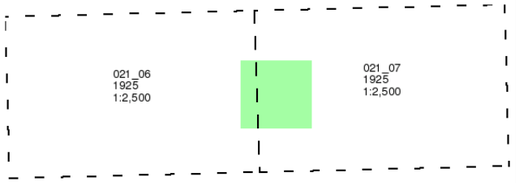
Bedfordshire

Published 1925

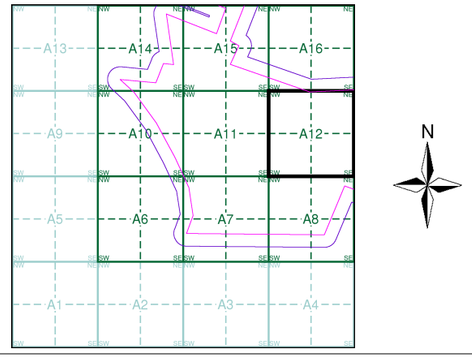
Source map scale - 1:2,500

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 A12



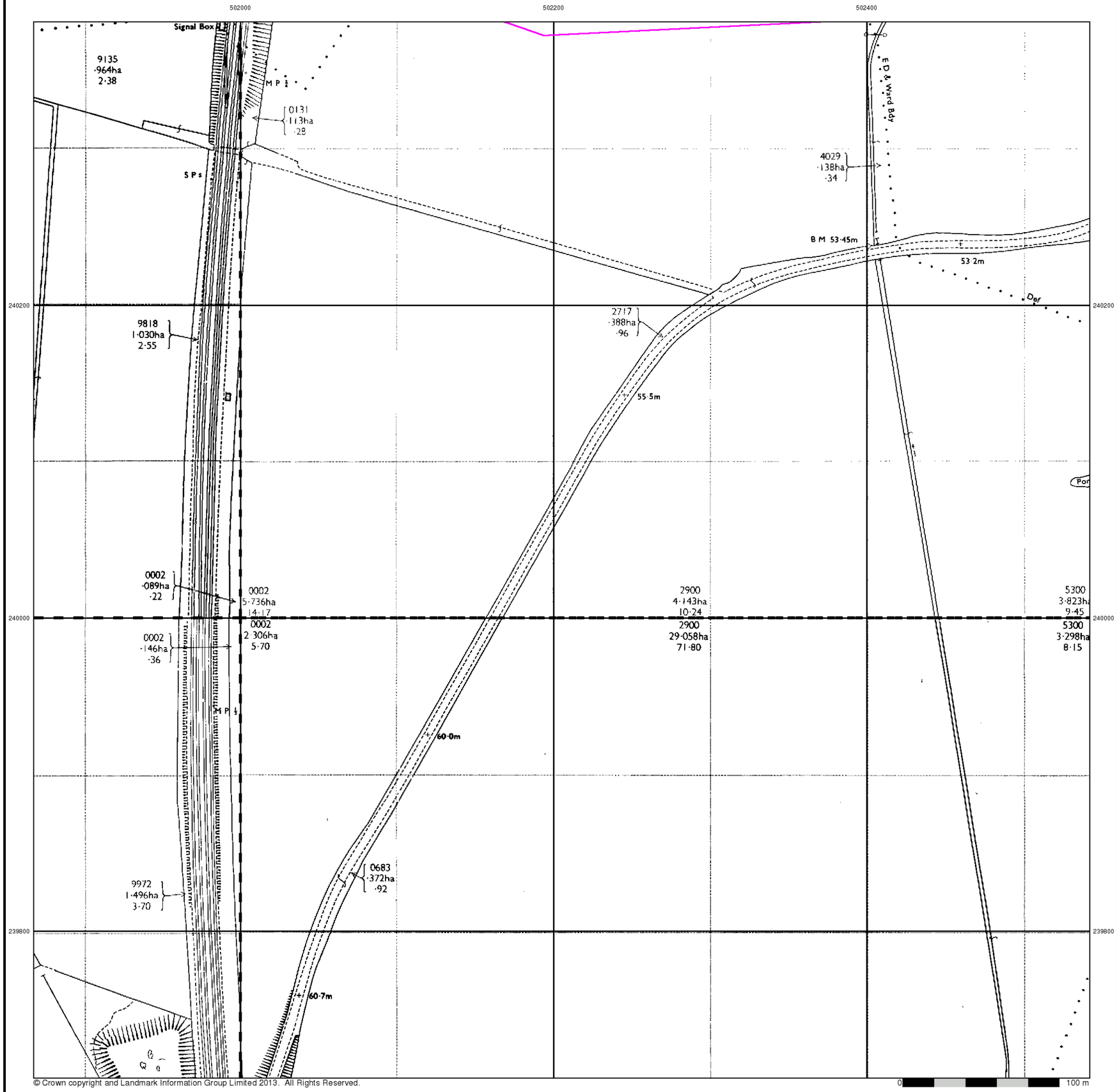
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

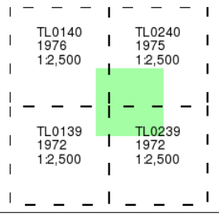
Ordnance Survey Plan

Published 1972 - 1976

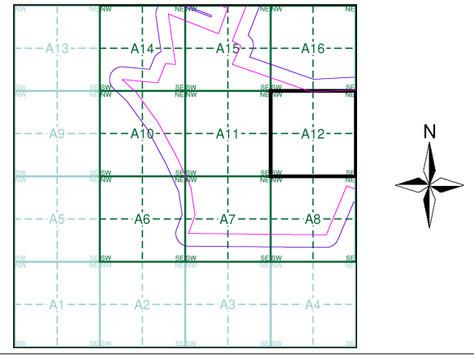
Source map scale - 1:2,500

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 A12



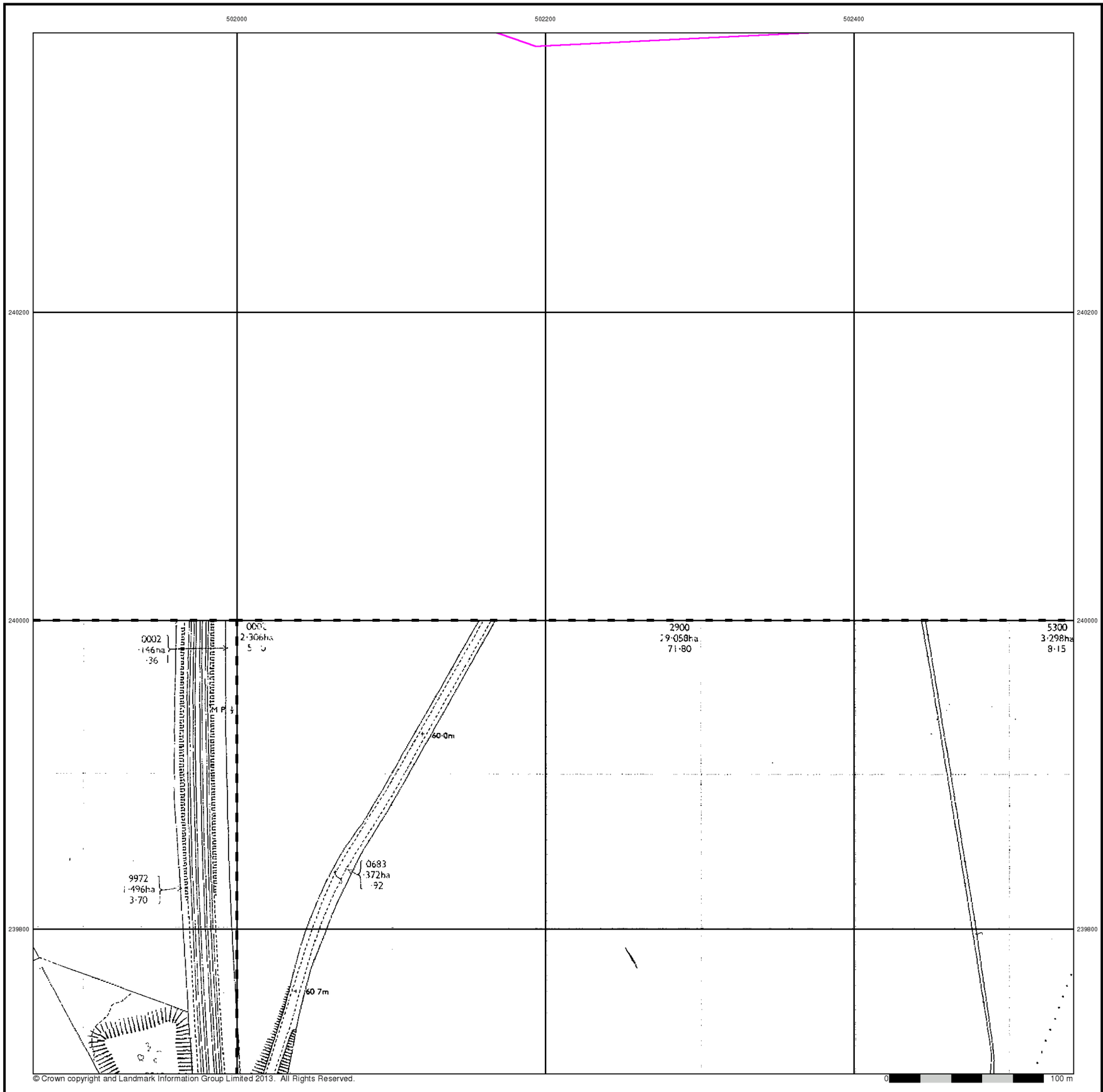
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



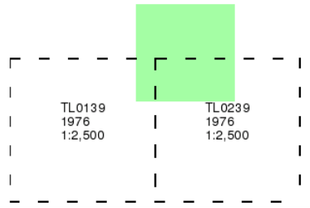
Supply of Unpublished Survey Information

Published 1976

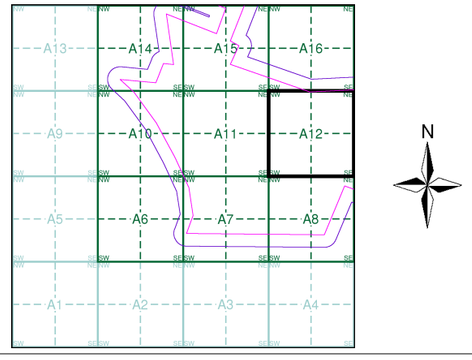
Source map scale - 1:2,500

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 A12



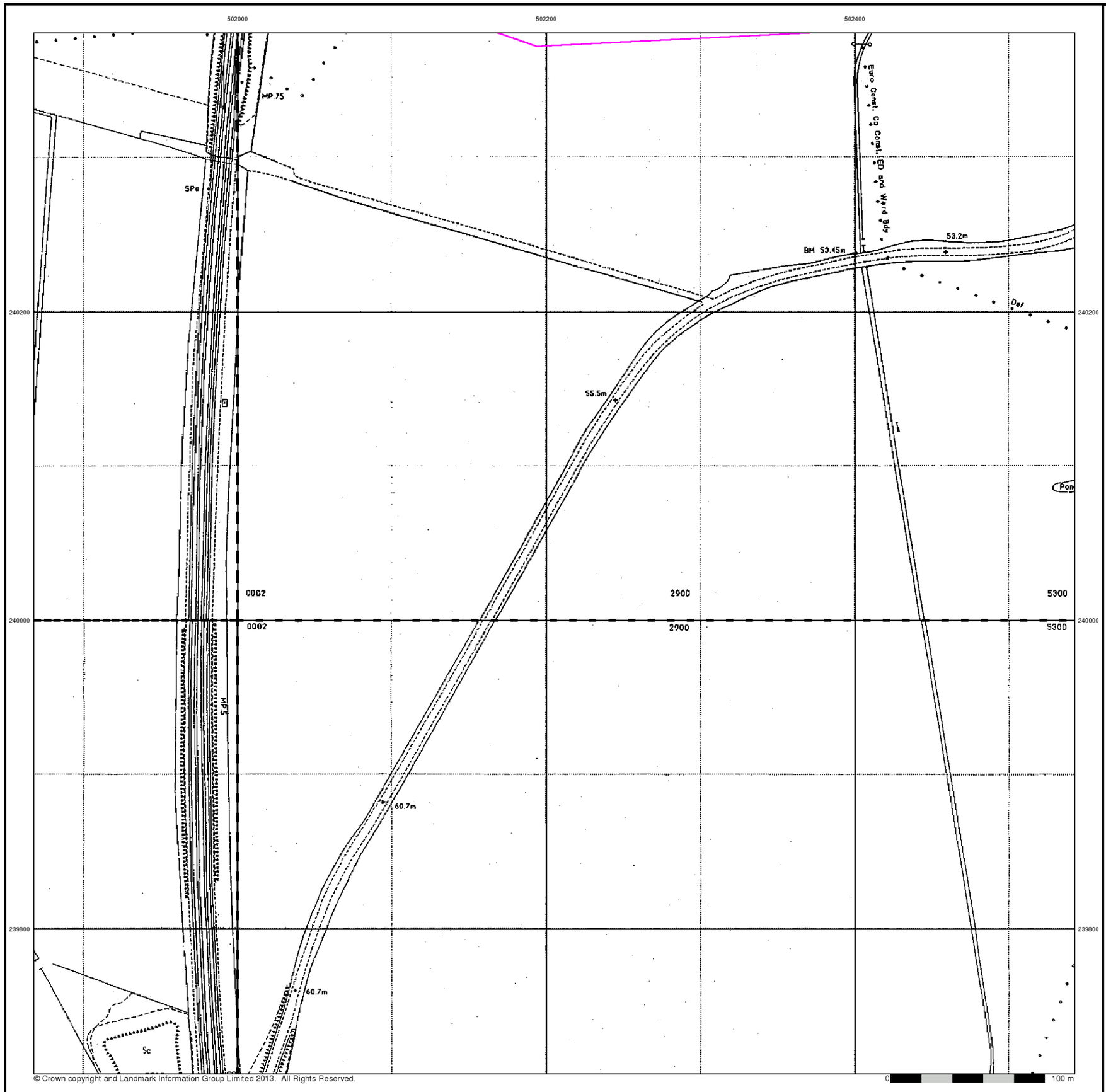
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

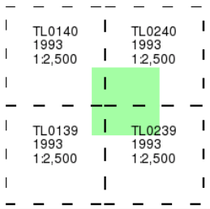
Large-Scale National Grid Data

Published 1993

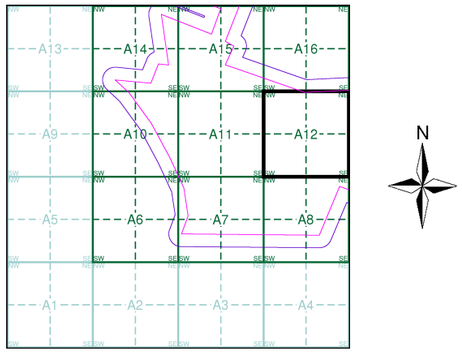
Source map scale - 1:2,500

'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)



Historical Map - Segment A12



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

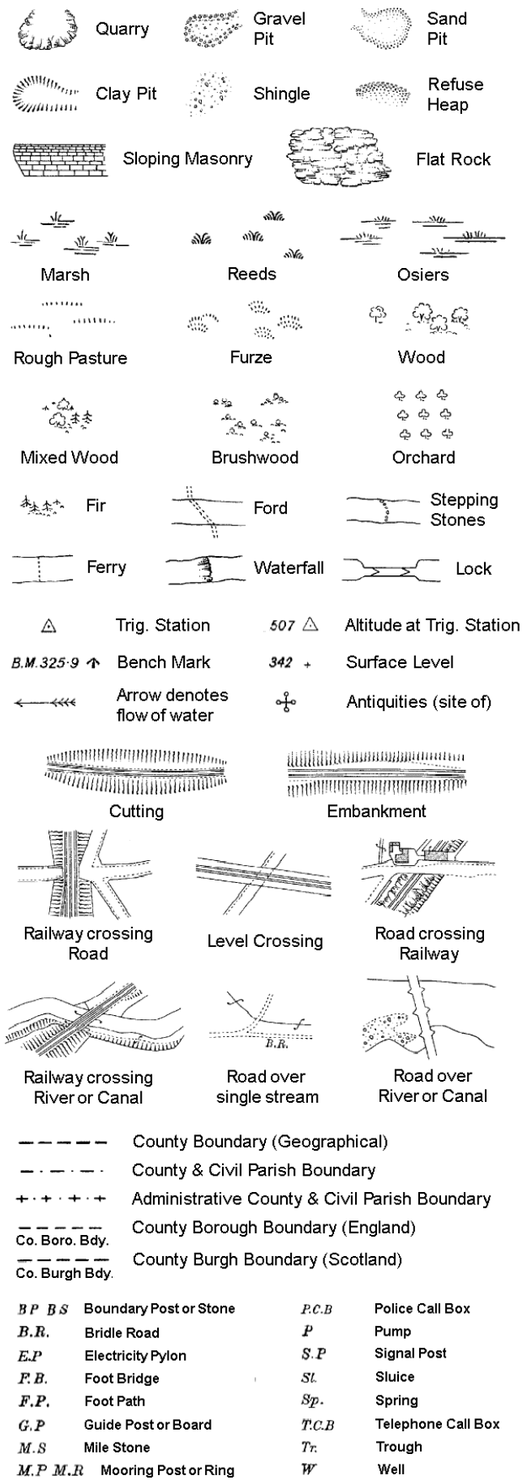
Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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

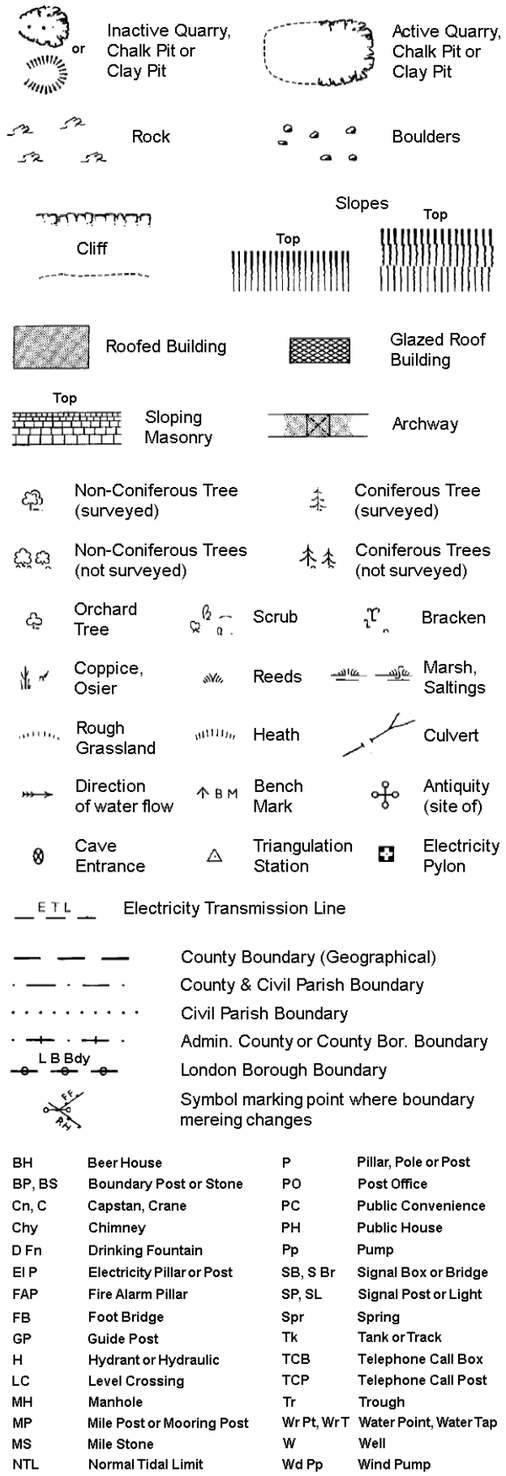
Historical Mapping Legends

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



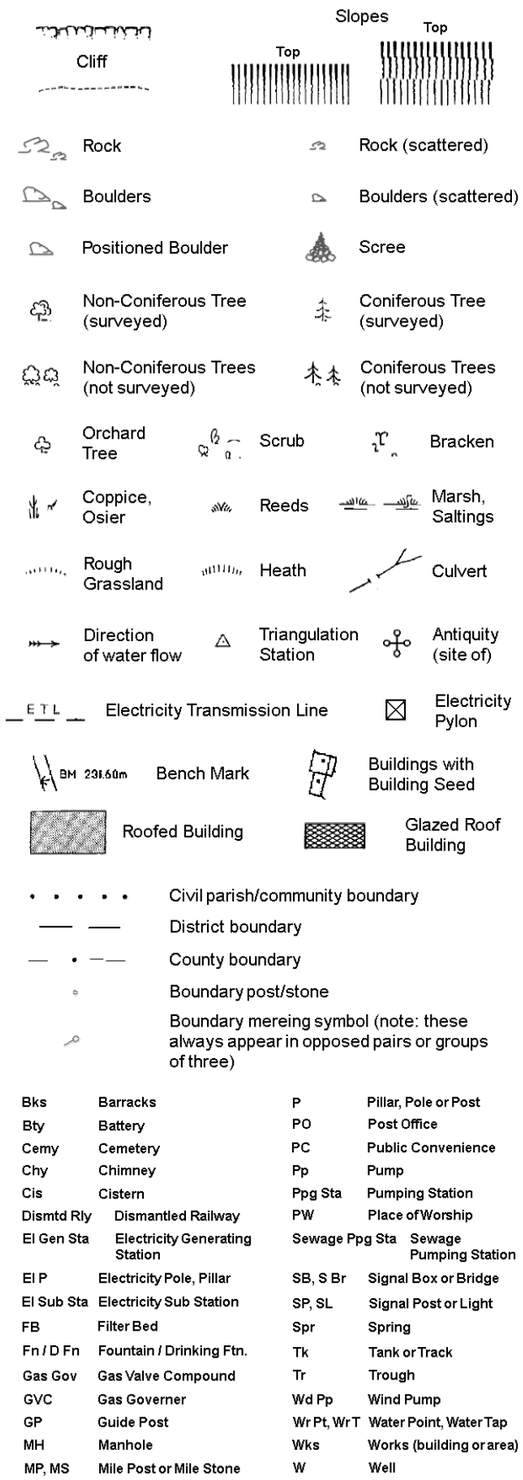
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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



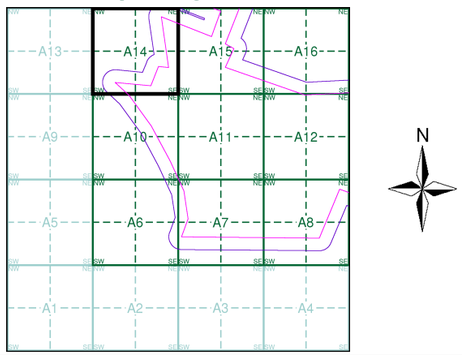
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1976	5
Large-Scale National Grid Data	1:2,500	1993	6

Historical Map - Segment A14



Order Details

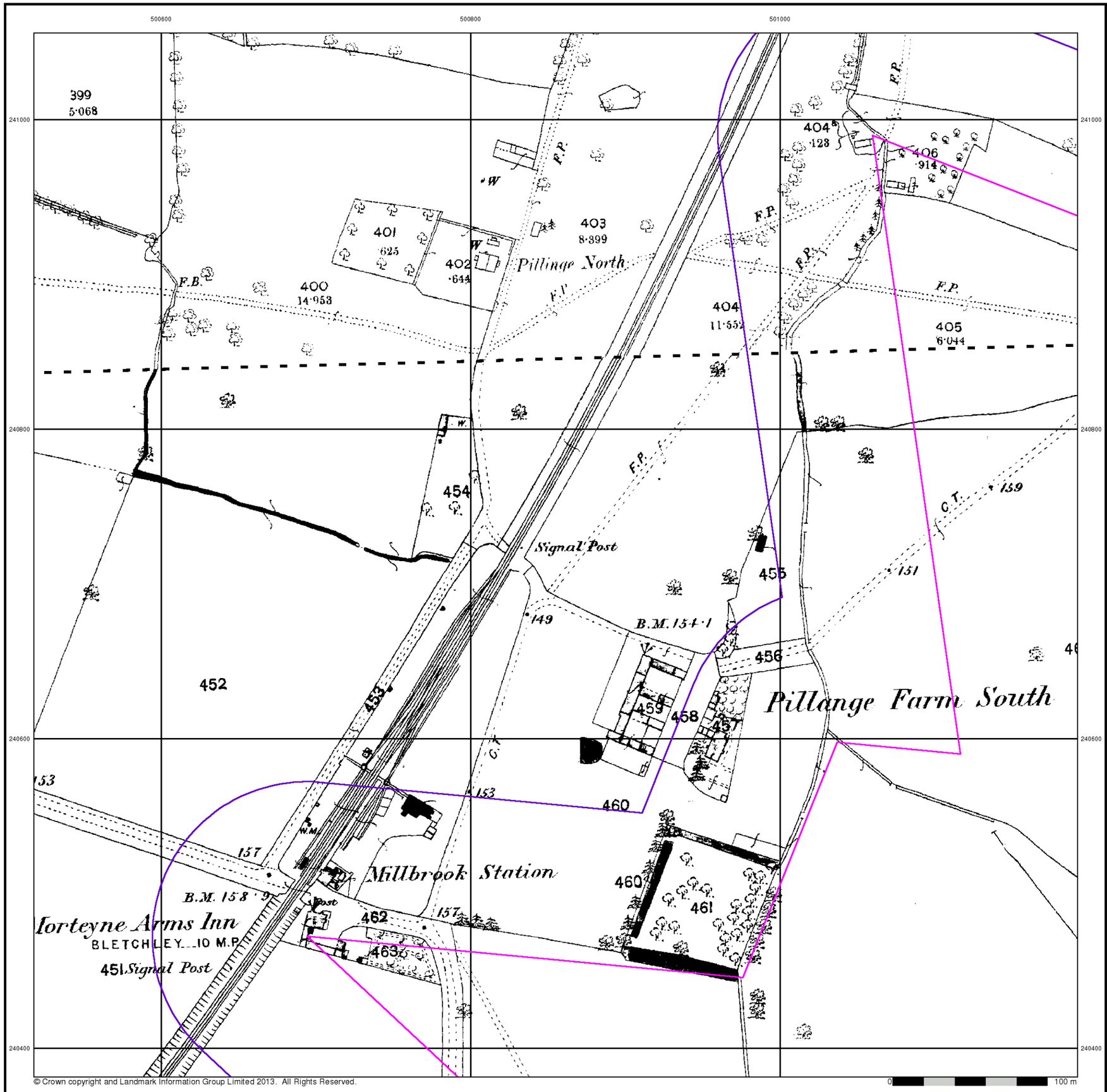
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group

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



pba peterbrett

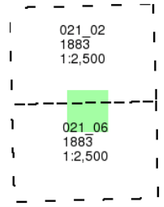
Bedfordshire

Published 1883

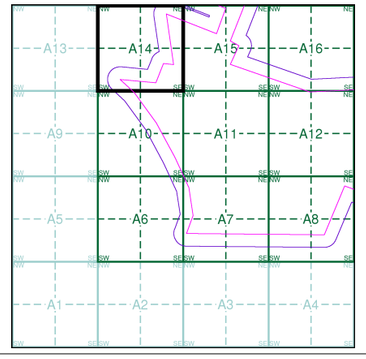
Source map scale - 1:2,500

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 A14



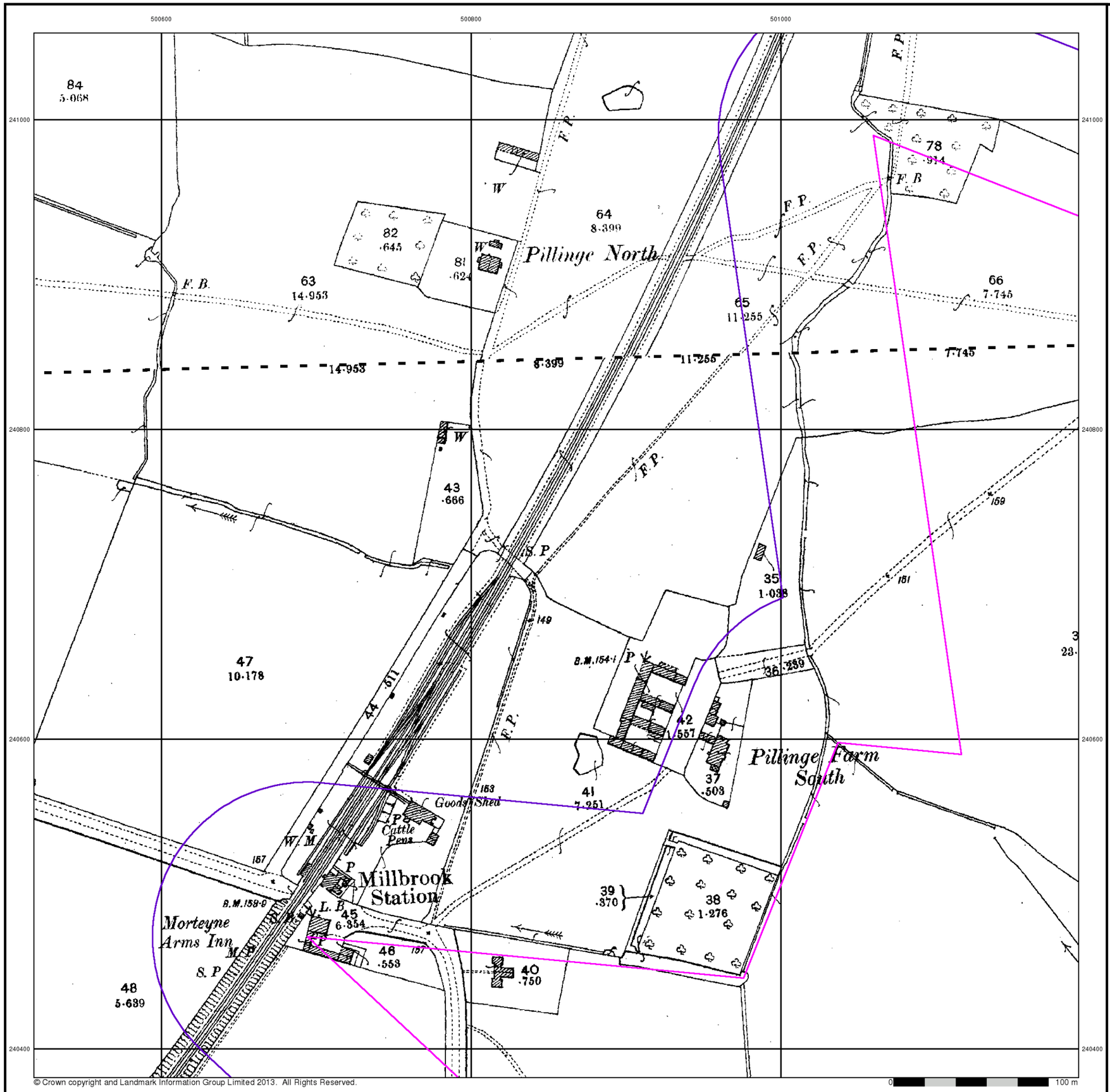
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

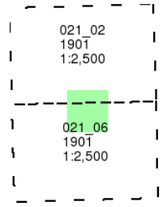
Bedfordshire

Published 1901

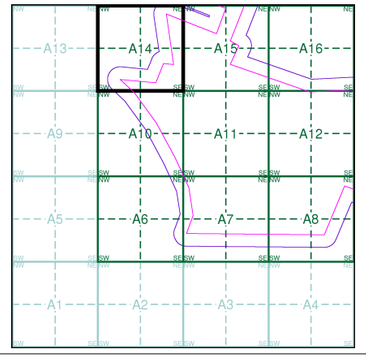
Source map scale - 1:2,500

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 A14



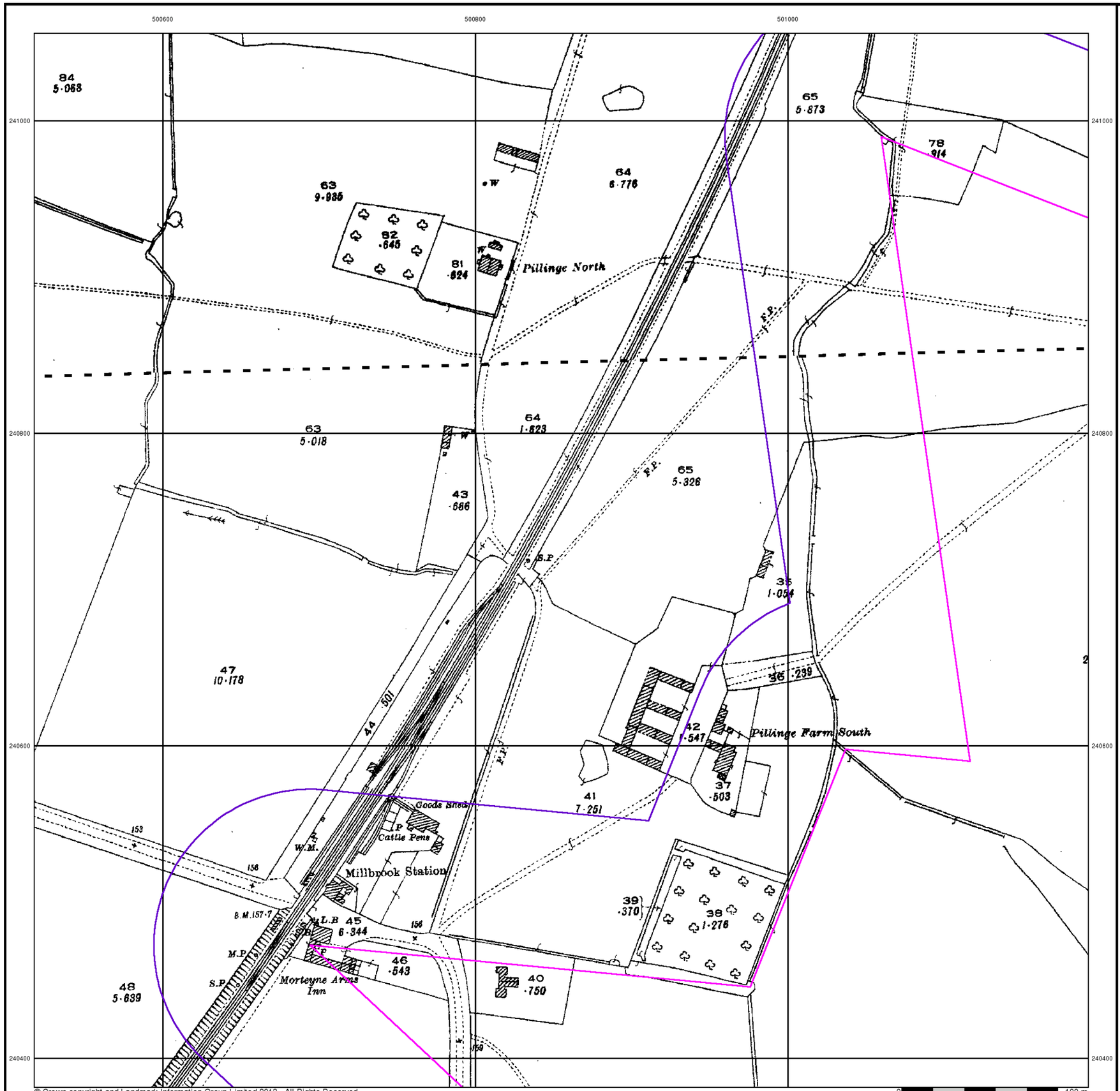
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

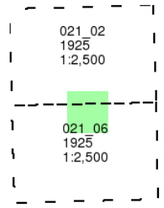
Bedfordshire

Published 1925

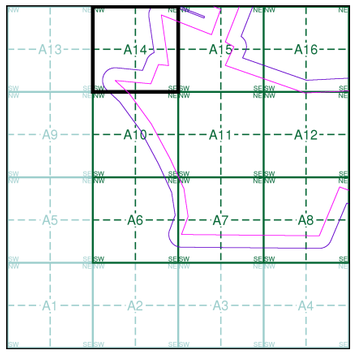
Source map scale - 1:2,500

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 A14



Order Details

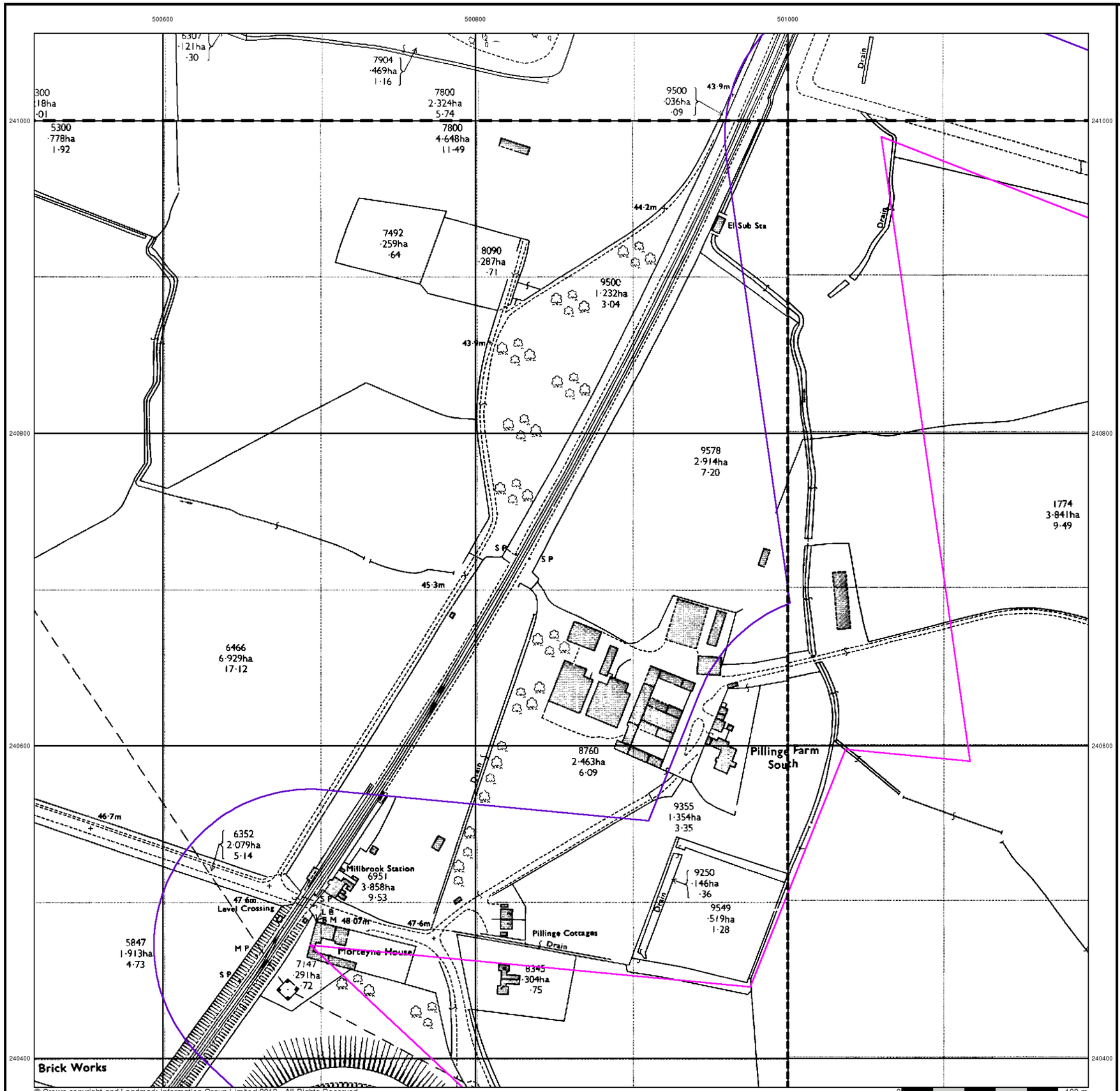
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

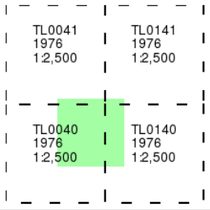
Ordnance Survey Plan

Published 1976

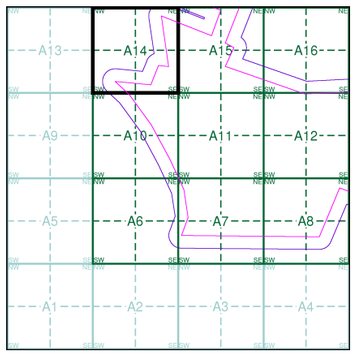
Source map scale - 1:2,500

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 A14



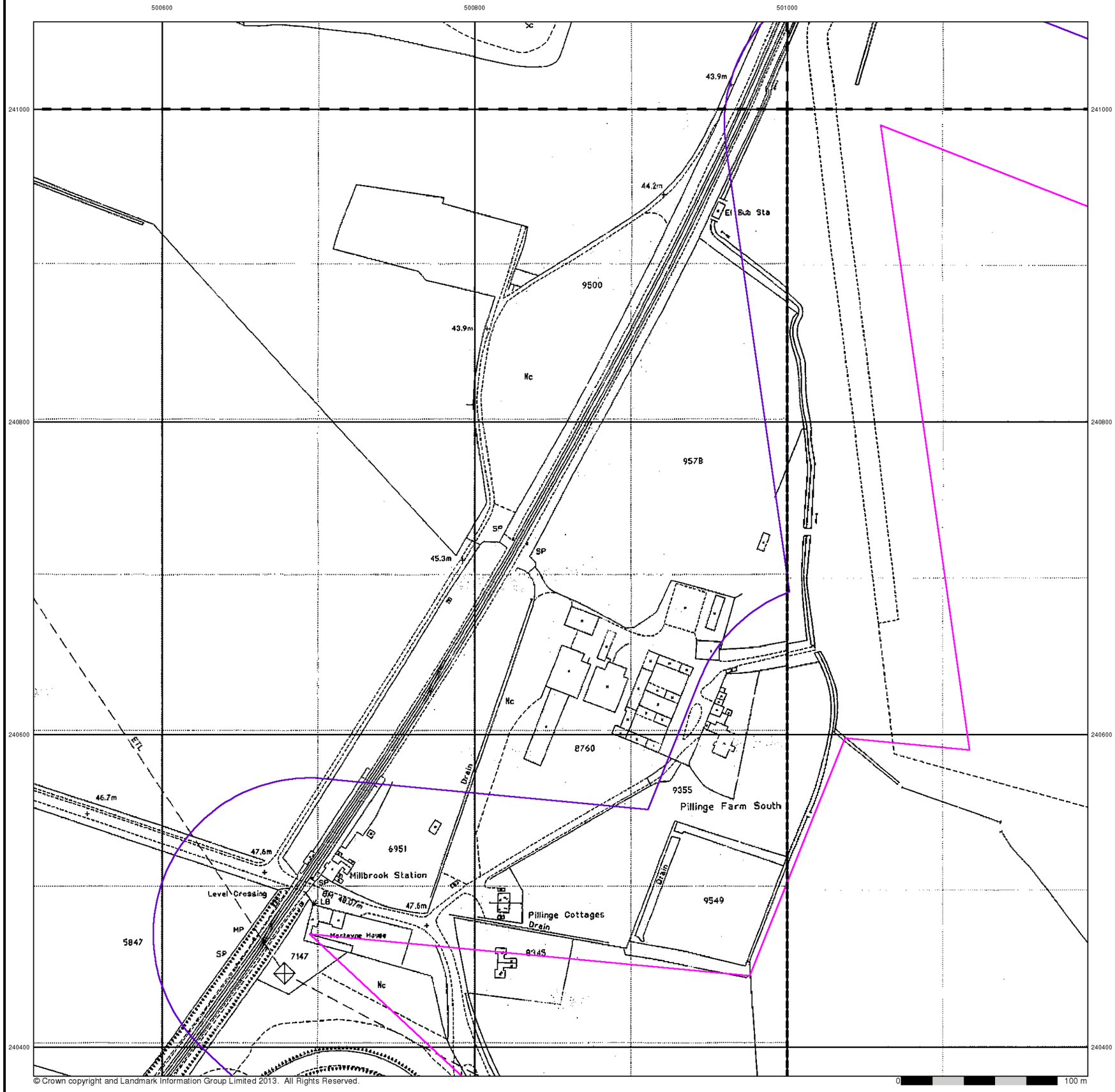
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Large-Scale National Grid Data

Published 1993

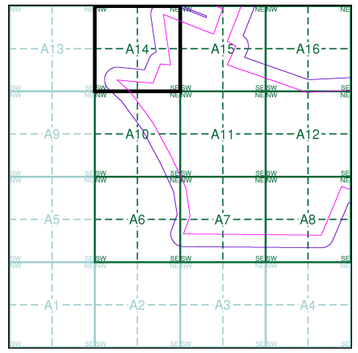
Source map scale - 1:2,500

'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)

TL0041 1993 1:2,500	TL0141 1993 1:2,500
TL0040 1993 1:2,500	TL0140 1993 1:2,500

Historical Map - Segment A14



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

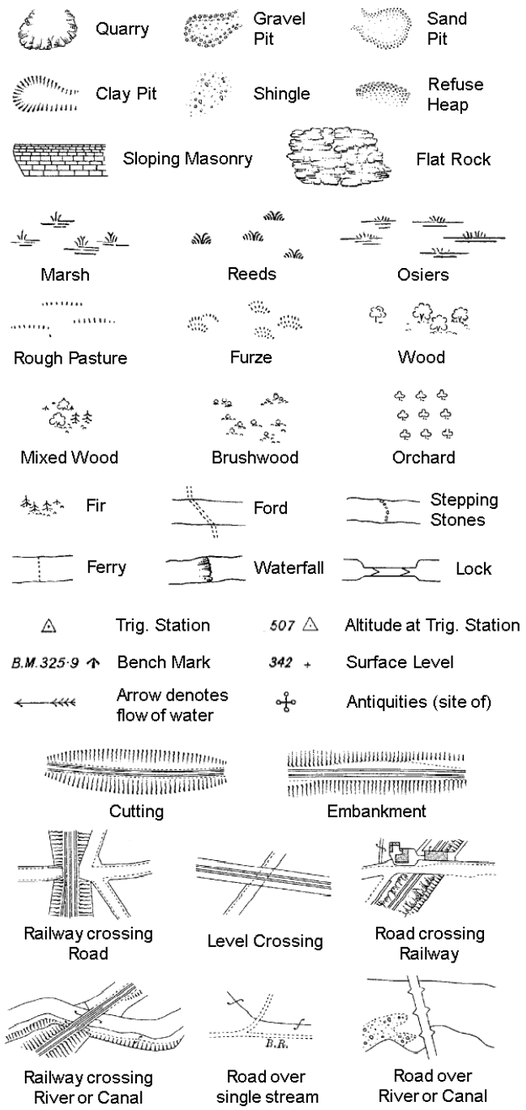
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

Historical Mapping Legends

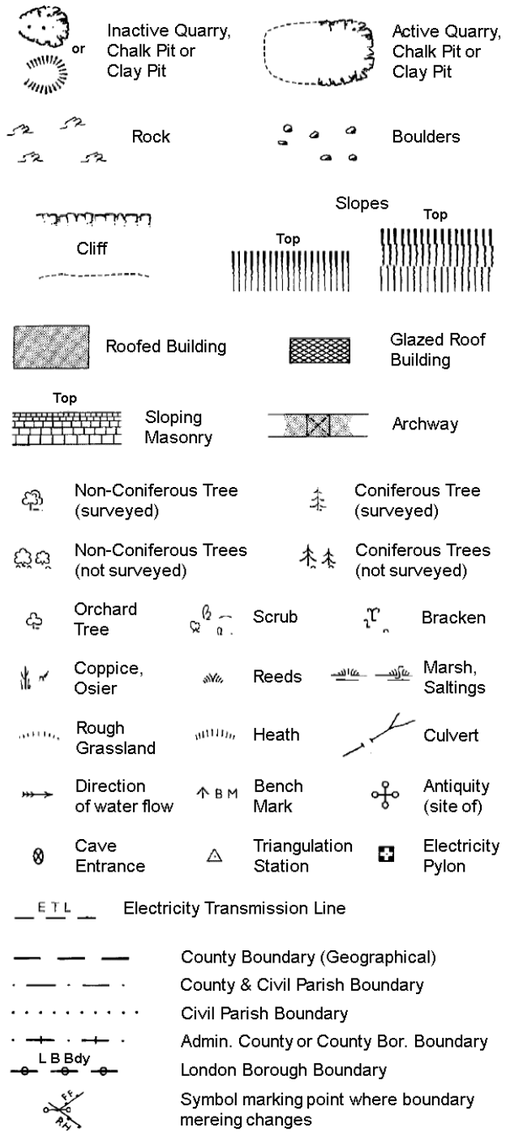
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

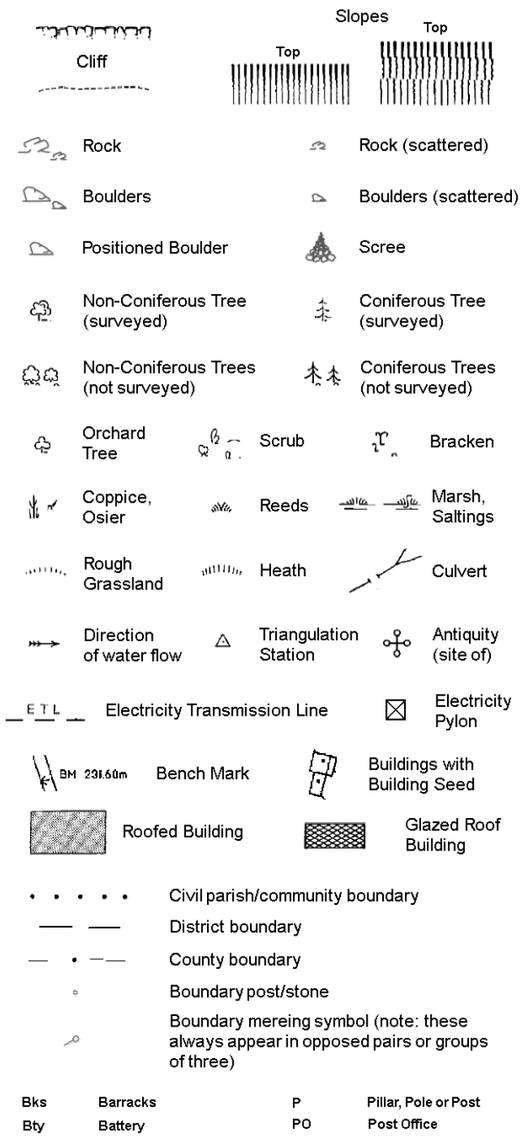
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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



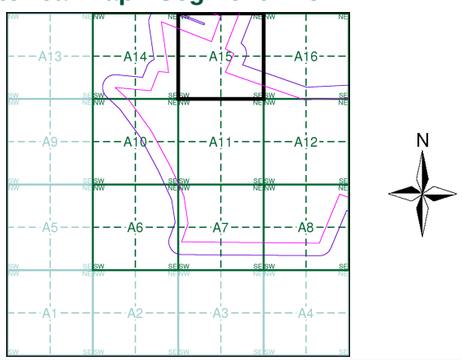
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

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

pba peterbrett

Historical Mapping & Photography included:

Historical Map - Segment A15



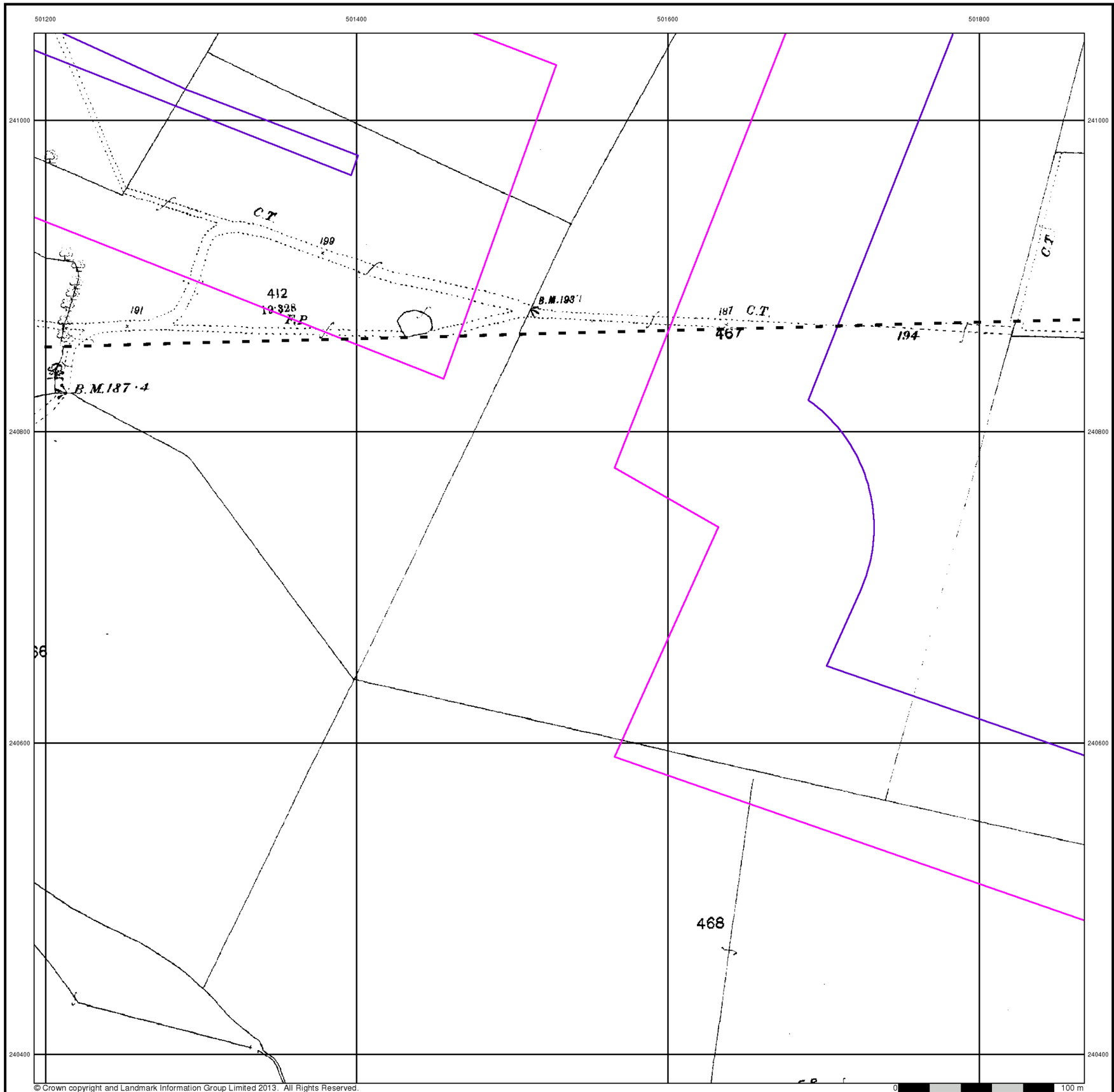
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



0 100 m

pba peterbrett

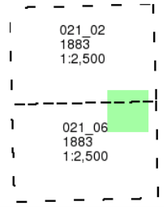
Bedfordshire

Published 1883

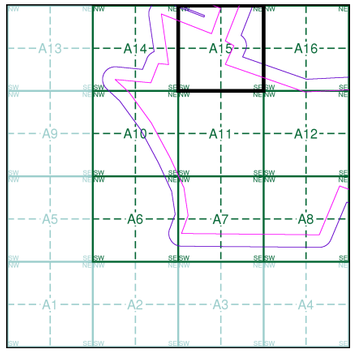
Source map scale - 1:2,500

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 A15



Order Details

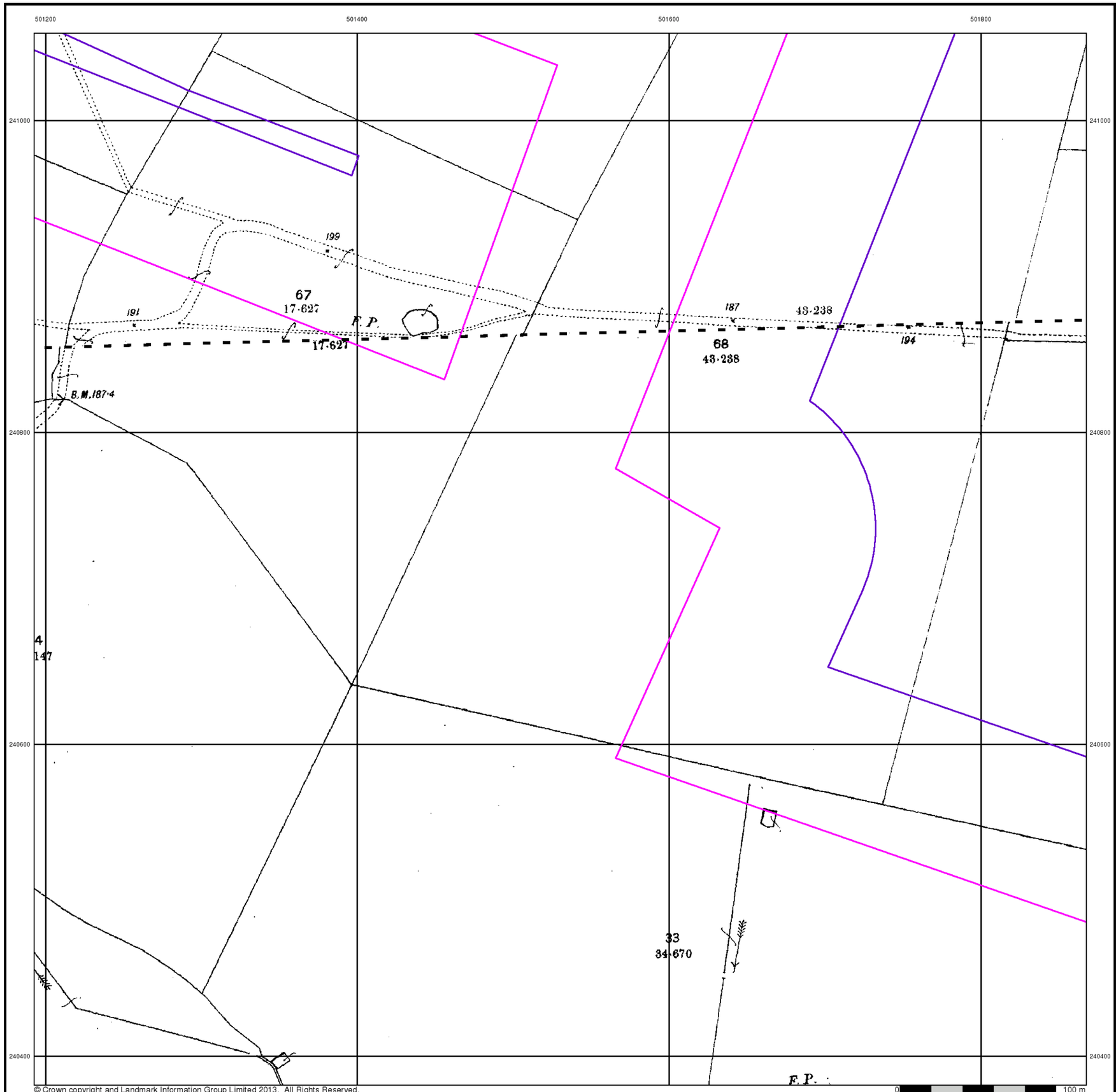
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

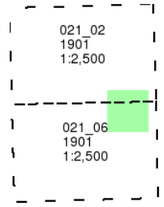
Bedfordshire

Published 1901

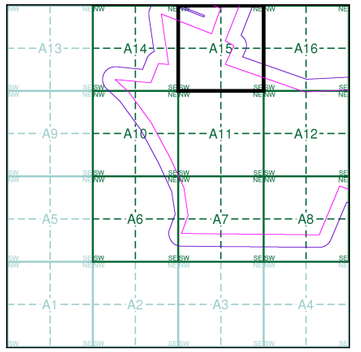
Source map scale - 1:2,500

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 A15



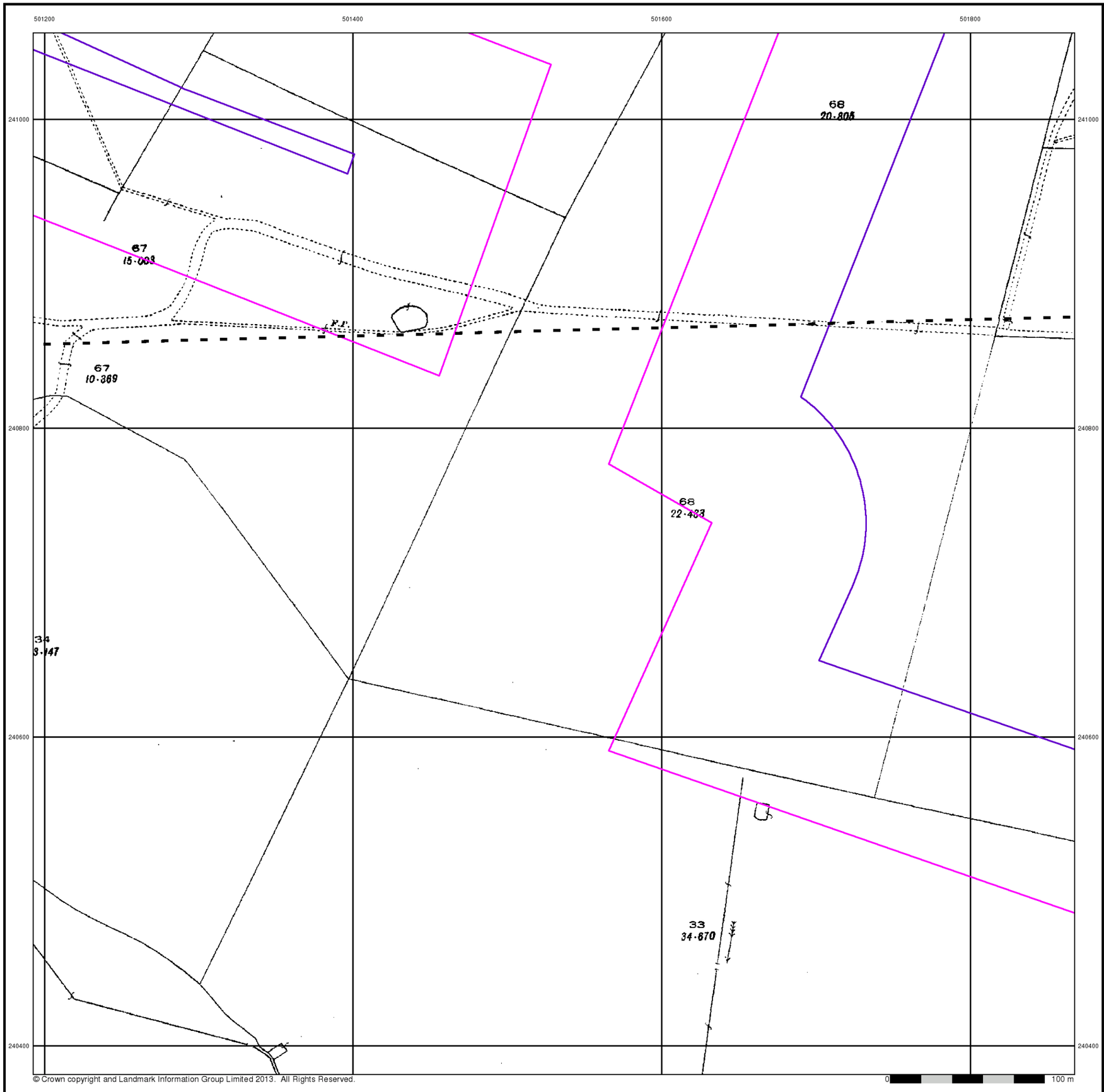
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

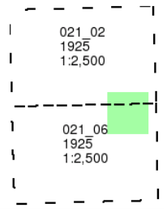
Bedfordshire

Published 1925

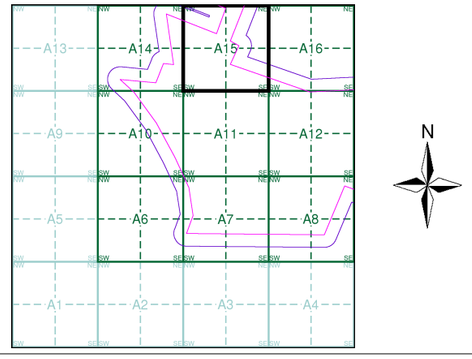
Source map scale - 1:2,500

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 A15



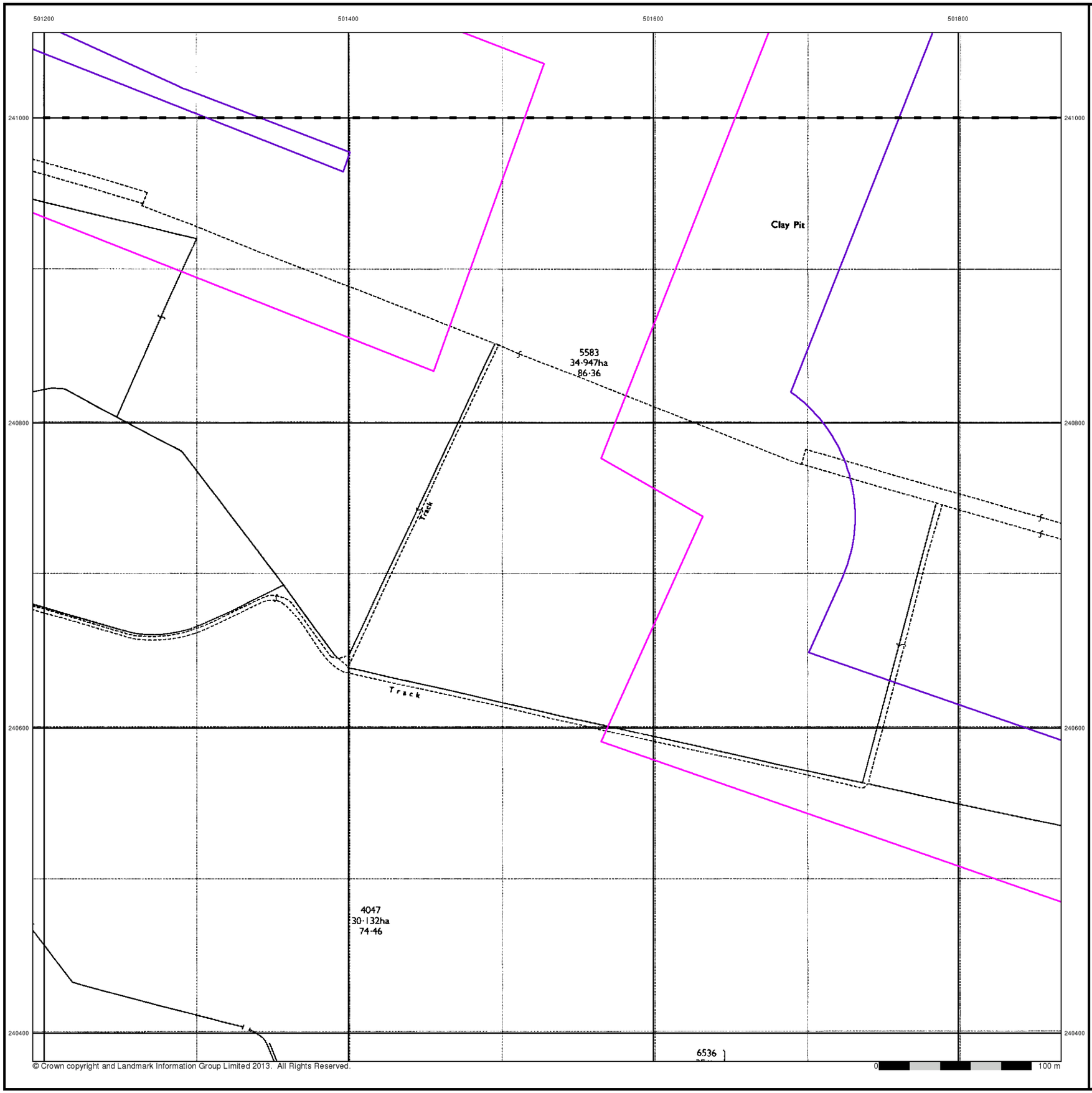
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

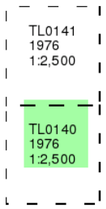
Ordnance Survey Plan

Published 1976

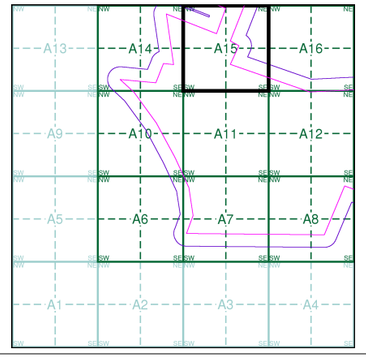
Source map scale - 1:2,500

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 A15



Order Details

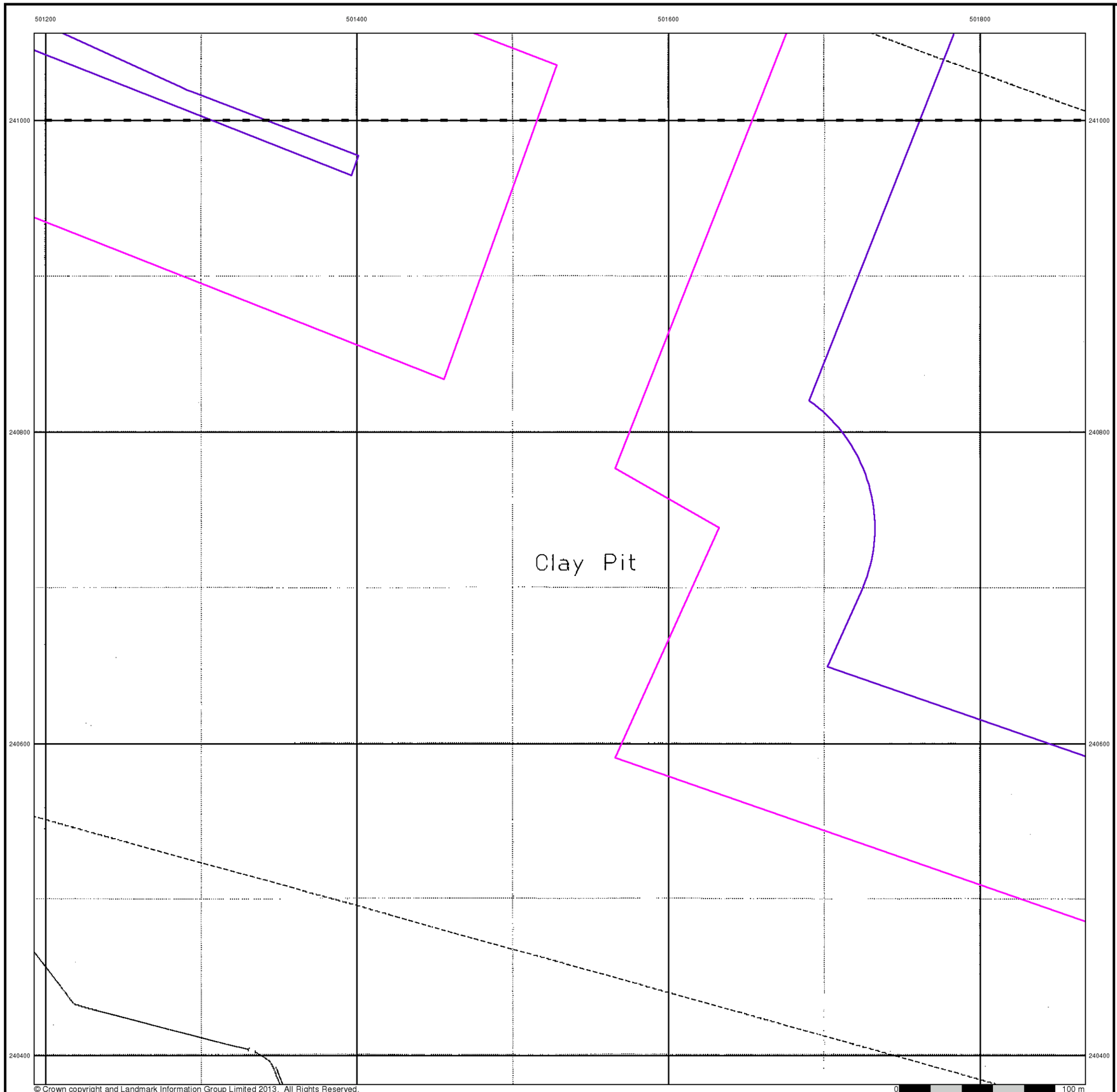
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

Large-Scale National Grid Data

Published 1993

Source map scale - 1:2,500

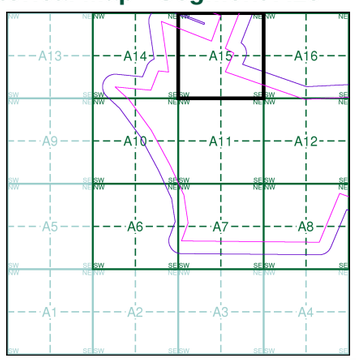
'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

TL0141
1993
1:2,500

TL0140
1993
1:2,500

Historical Map - Segment A15



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

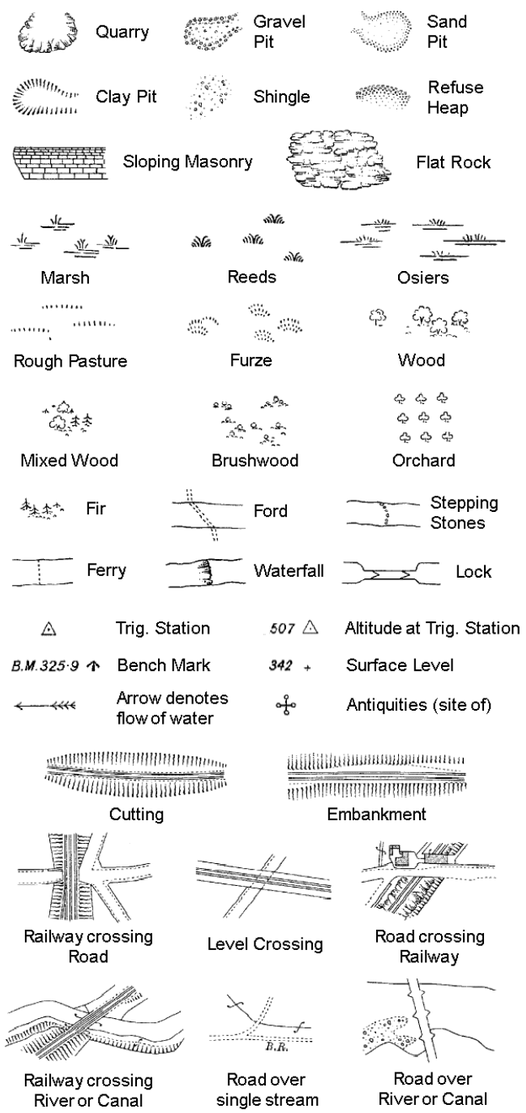
Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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

Historical Mapping Legends

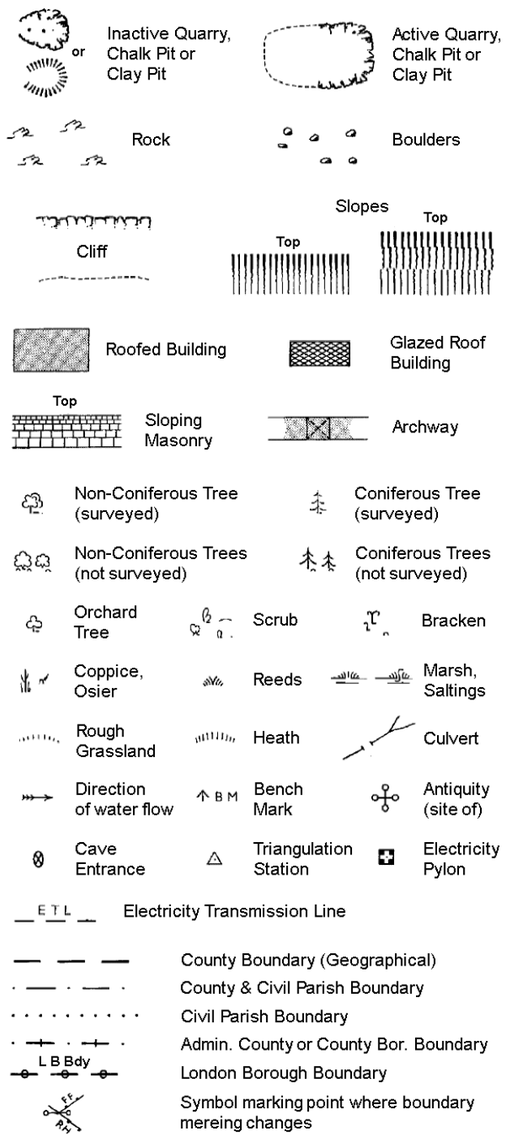
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

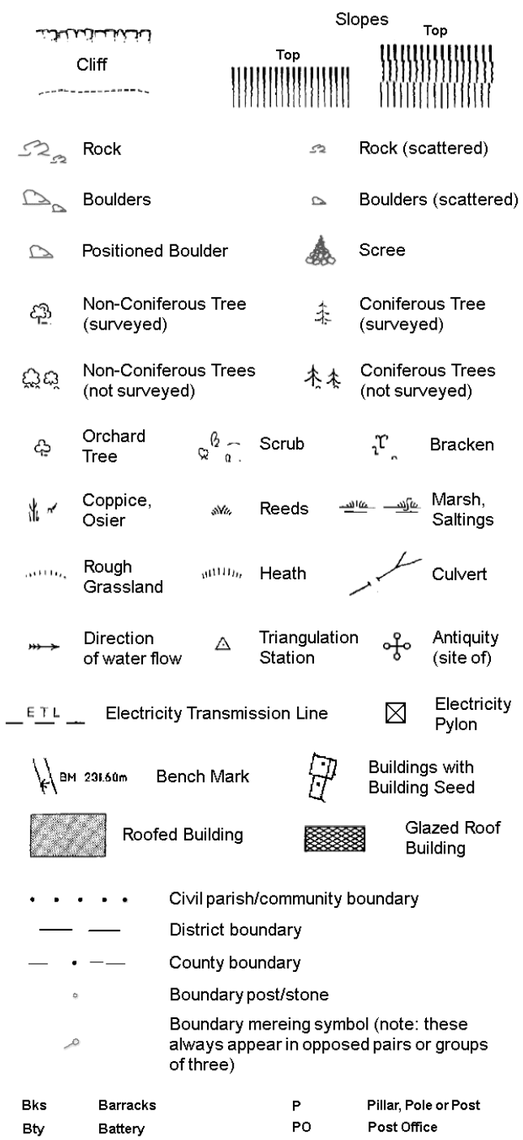
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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)

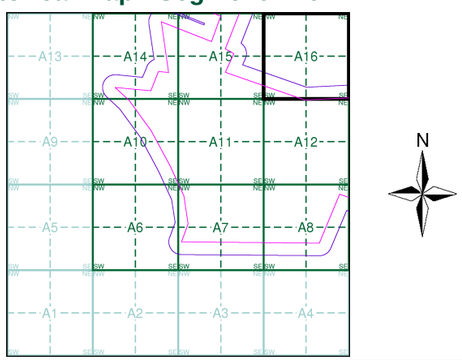
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1975 - 1976	5
Large-Scale National Grid Data	1:2,500	1993	6

Historical Map - Segment A16



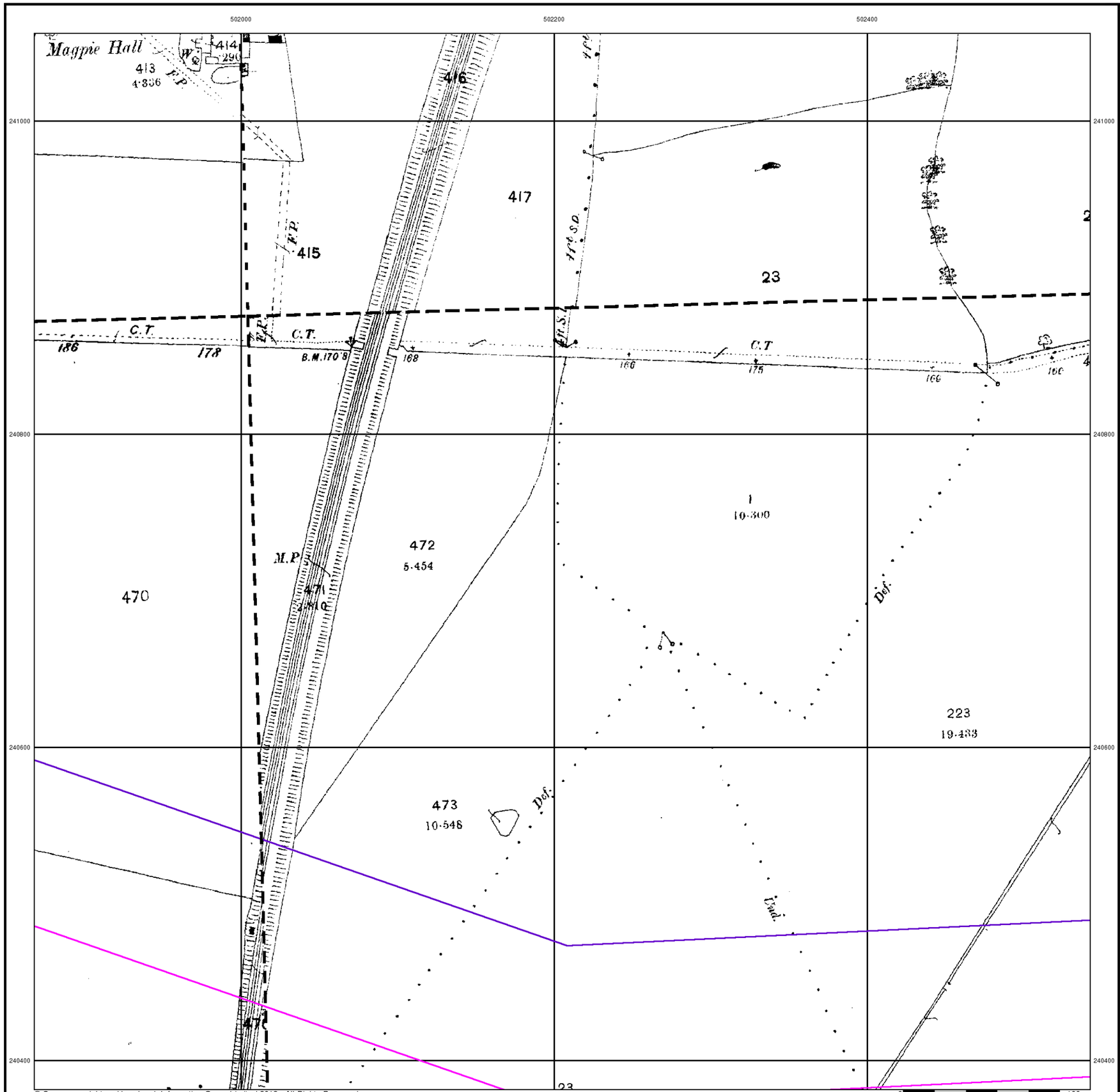
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 501510, 239960
Slice: A
Site Area (Ha): 240.61
Search Buffer (m): 100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



pba peterbrett

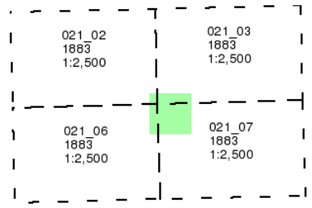
Bedfordshire

Published 1883

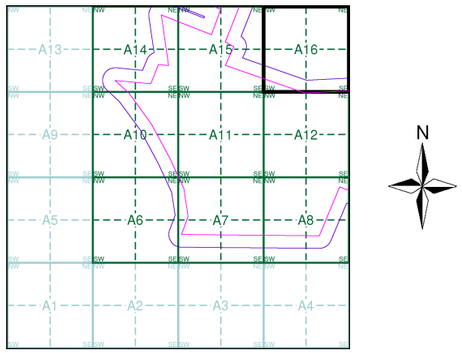
Source map scale - 1:2,500

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 A16



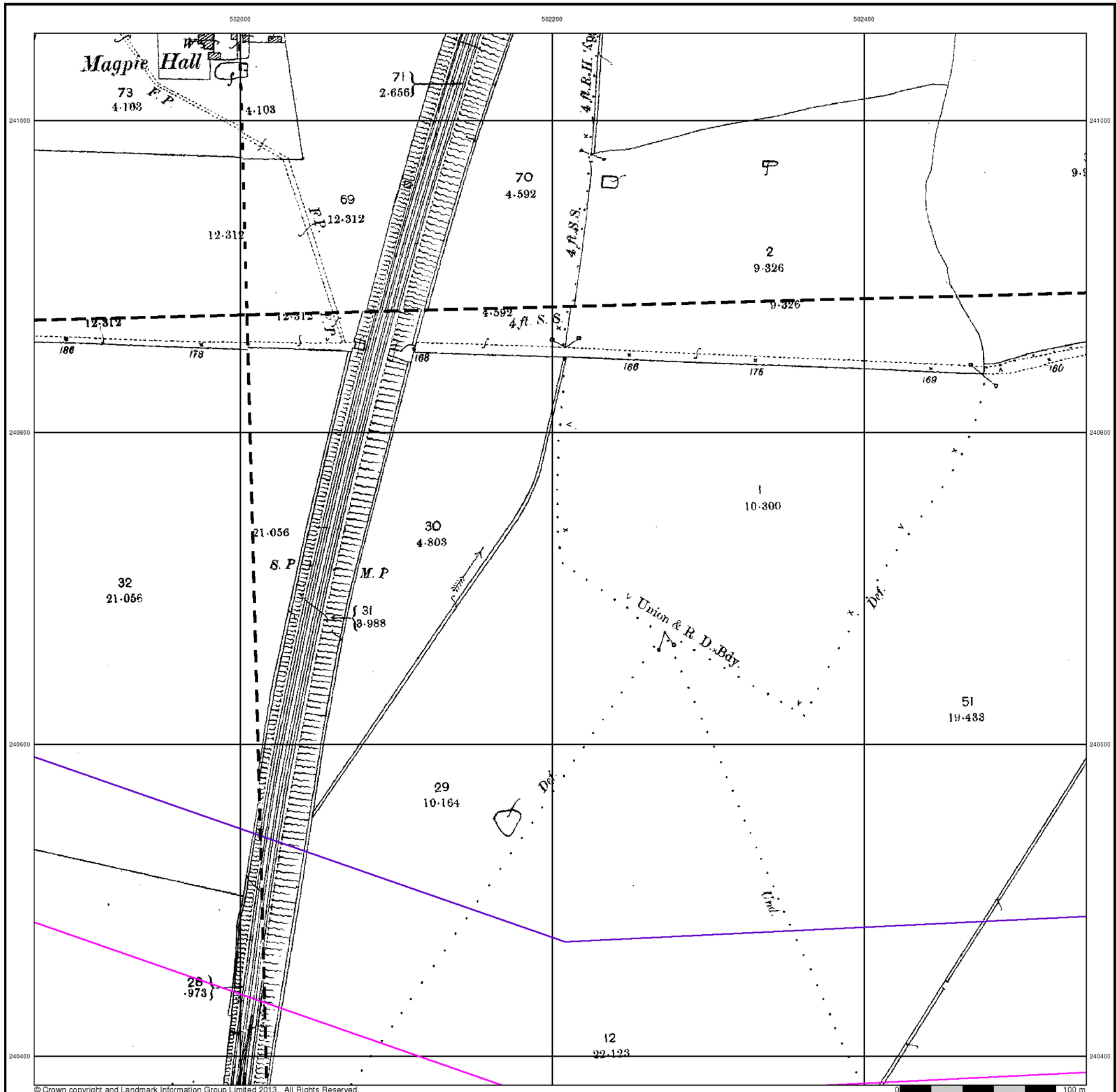
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

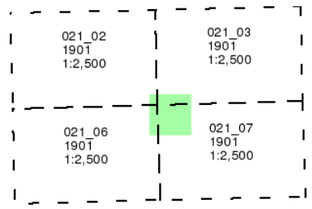
Bedfordshire

Published 1901

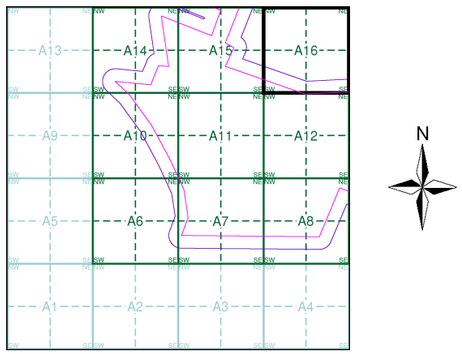
Source map scale - 1:2,500

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 A16



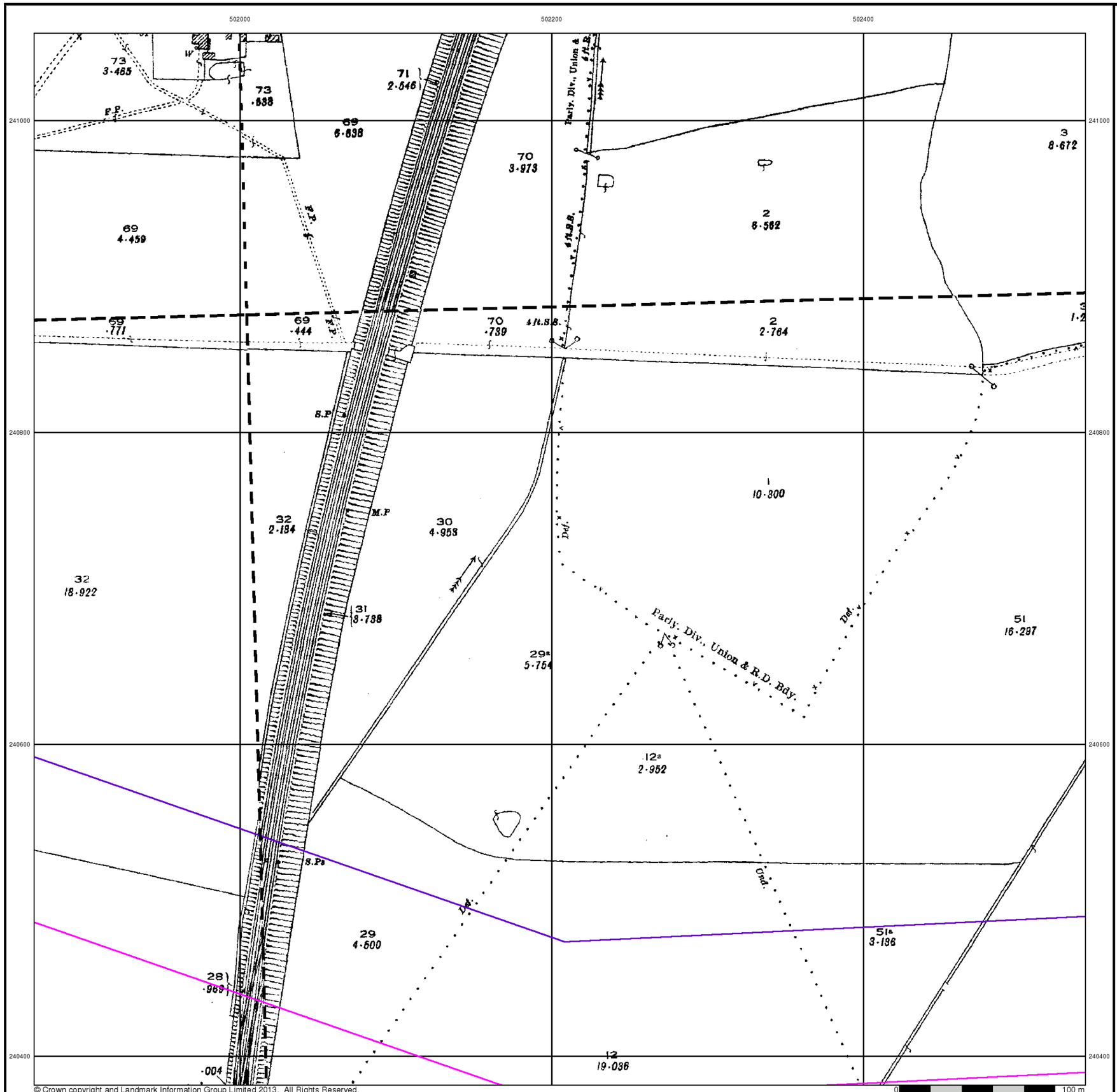
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

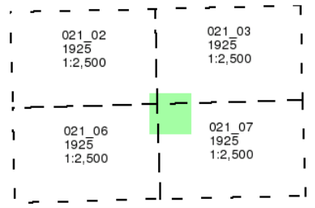
Bedfordshire

Published 1925

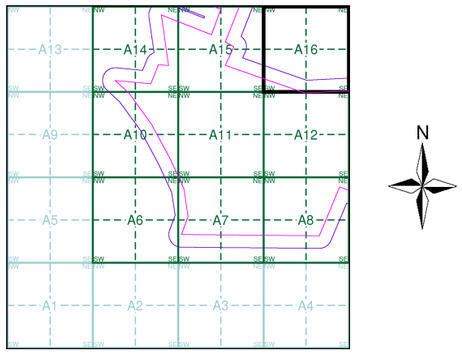
Source map scale - 1:2,500

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 A16



Order Details

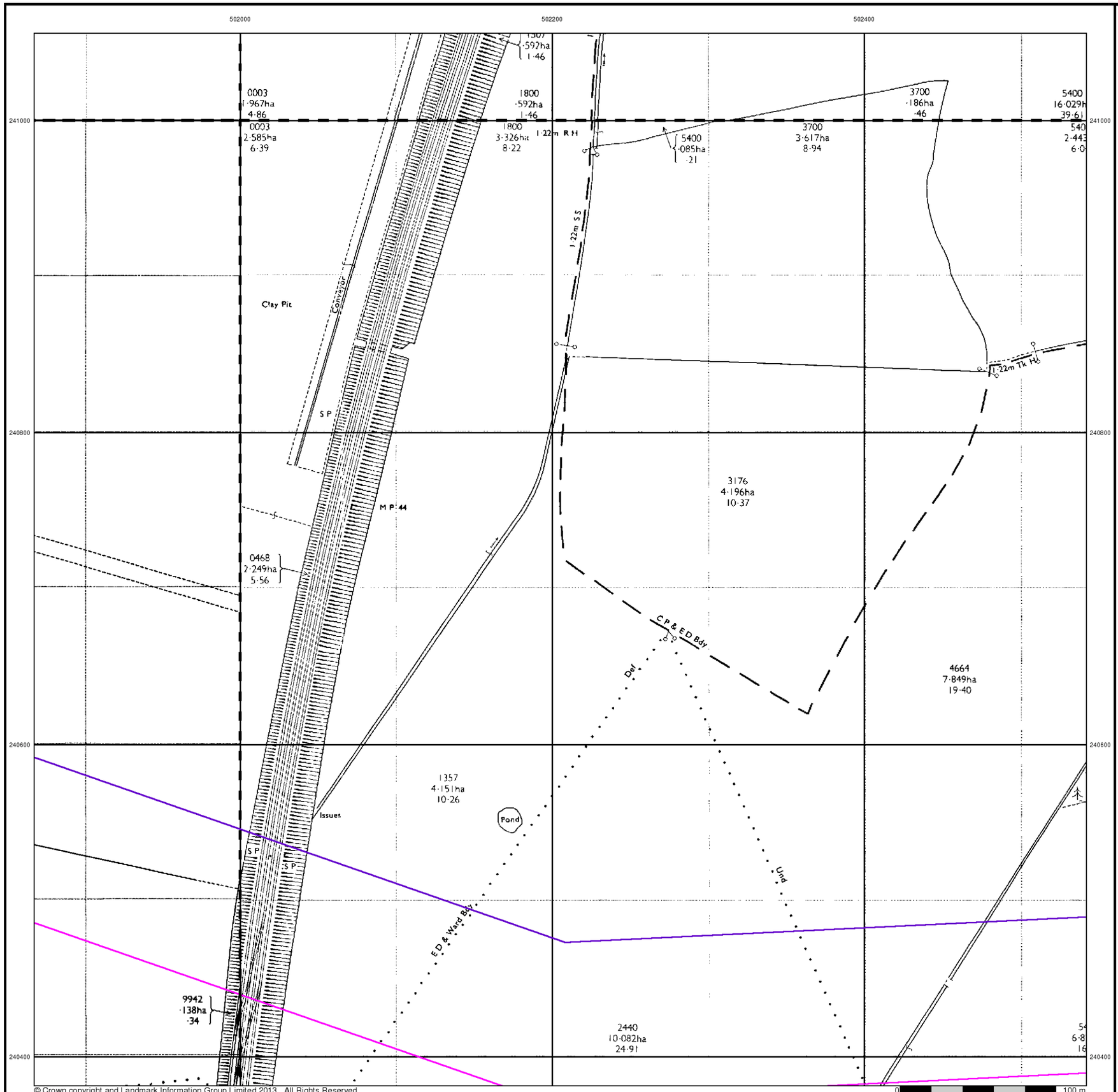
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

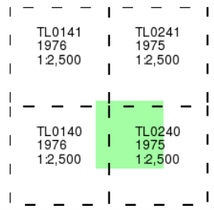
Ordnance Survey Plan

Published 1975 - 1976

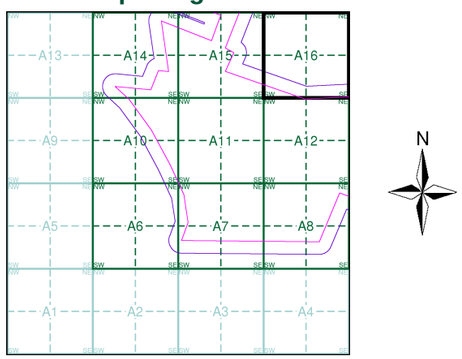
Source map scale - 1:2,500

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 A16



Order Details

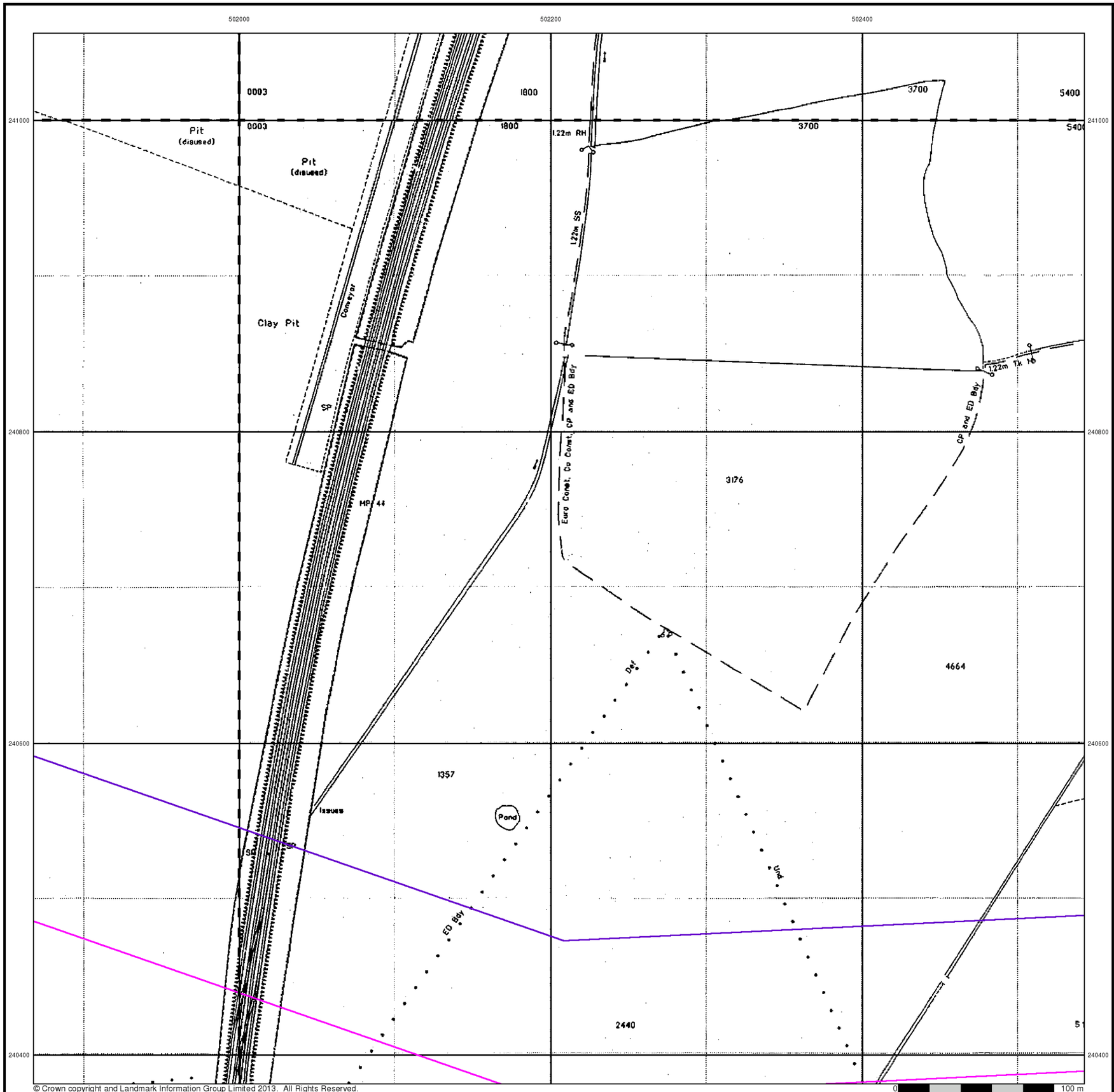
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

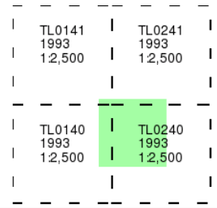
Large-Scale National Grid Data

Published 1993

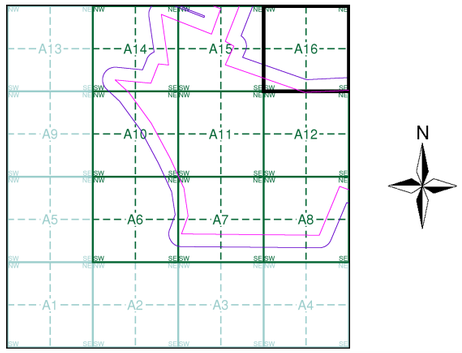
Source map scale - 1:2,500

'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)



Historical Map - Segment A16



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501510, 239960
Slice:	A
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

Envirocheck® Report:

BGS Boreholes Datasheet

Order Details:

Order Number:
60770728_1_1

Customer Reference:
31116

National Grid Reference:
502970, 239970

Slice:
B

Site Area (Ha):
240.61

Borehole Search Buffer (m):
50

Site Details:

Millbrook Power Project
Green Lane
Stewartby

Client Details:

Ms K Riley
Brett Consulting Ltd
Caversham Bridge House
Waterman Place
Reading
Berkshire
RG1 8DN

BGS Boreholes Summary

Data Type	Page Number	On Site	0 to 50m
BGS Boreholes (50m)	pg 1	1	1

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 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.

Copyright Notice

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

Report Version v49.0

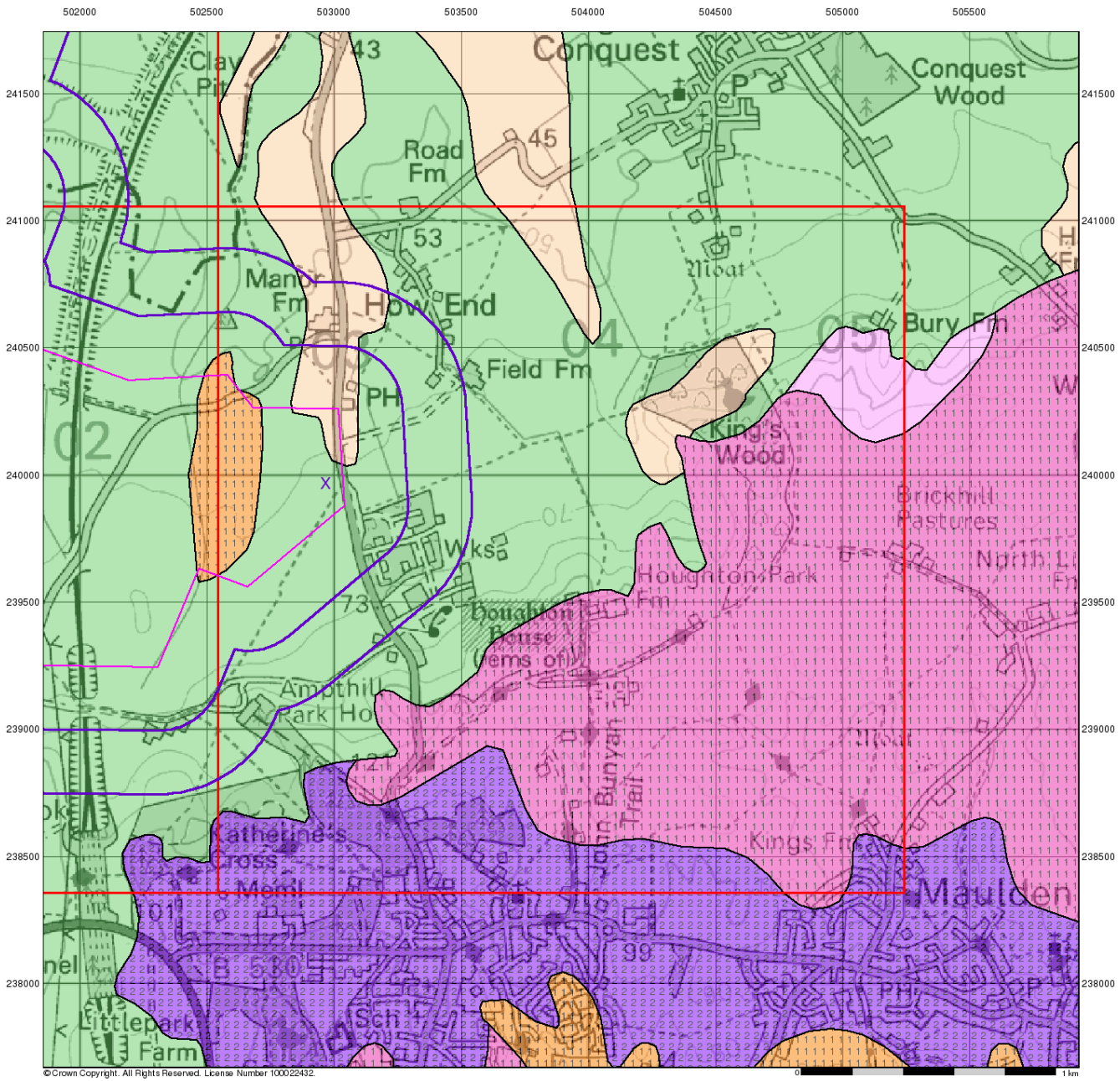
BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**BGS Boreholes** BGS Reference: TI04sw3 Drilled Length (m): 3.1 Borehole Name: Ampthill By-Pass 1 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524357/	B9NW (NW)	0	4	502560 240270
27	**BGS Boreholes** BGS Reference: TI04sw5 Drilled Length (m): 5.3 Borehole Name: A418 Crossing 18 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524359/	B9NE (NE)	22	4	503050 240070

Data Currency and Contact Details

BGS Boreholes	Version	Update Cycle
BGS Boreholes British Geological Survey - National Geoscience Information Service	August 2014	Quarterly

Contact Details	Contact Logo
4 **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	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
- **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	LANDMARK® Information Group



pba peterbrett

Groundwater Vulnerability

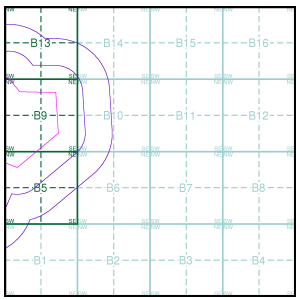
General

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 B



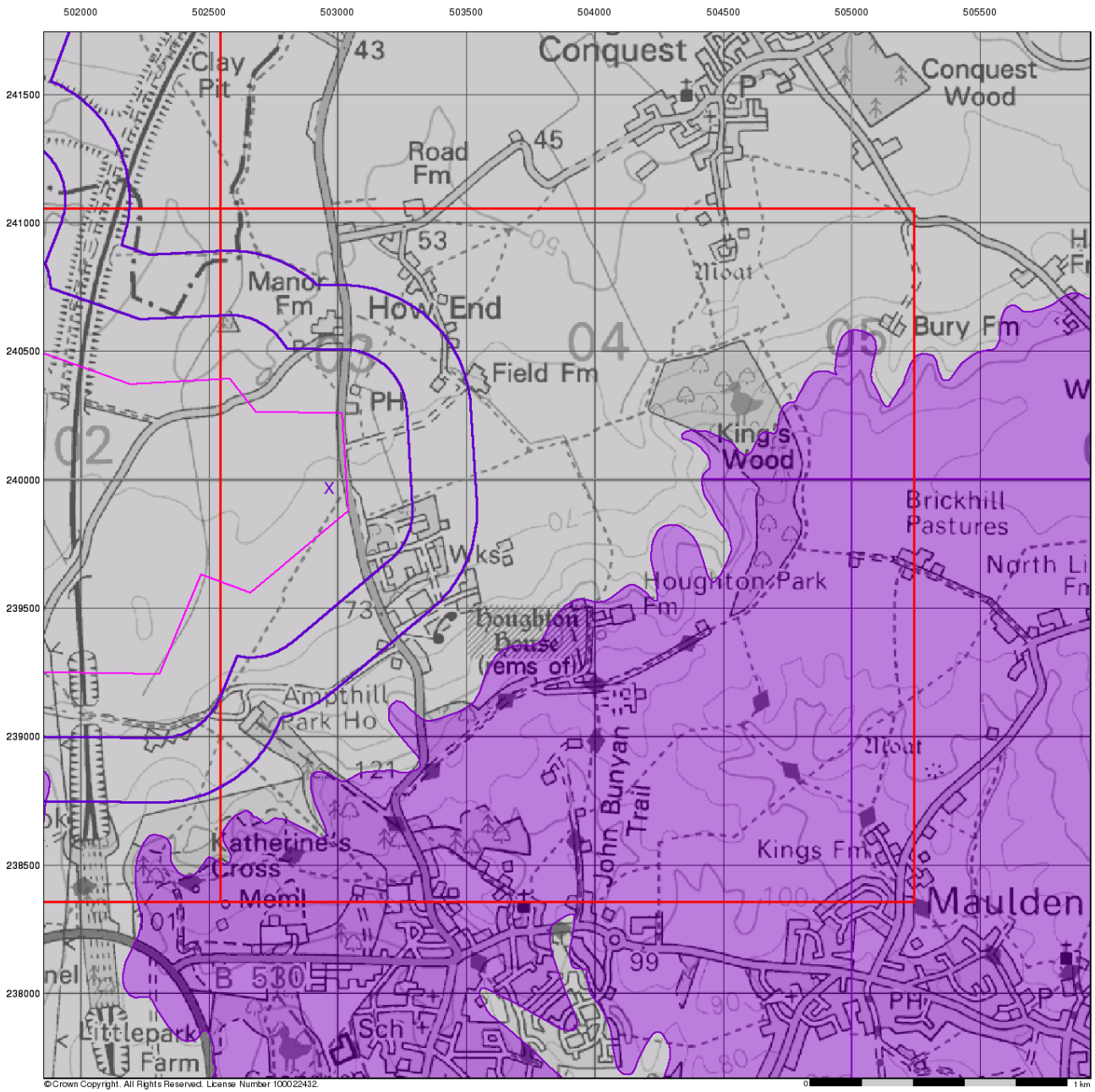
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Bedrock Aquifer Designation

General

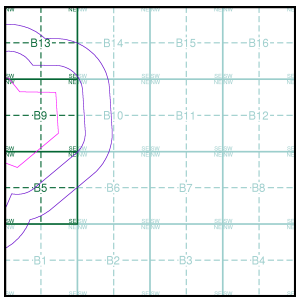
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice B



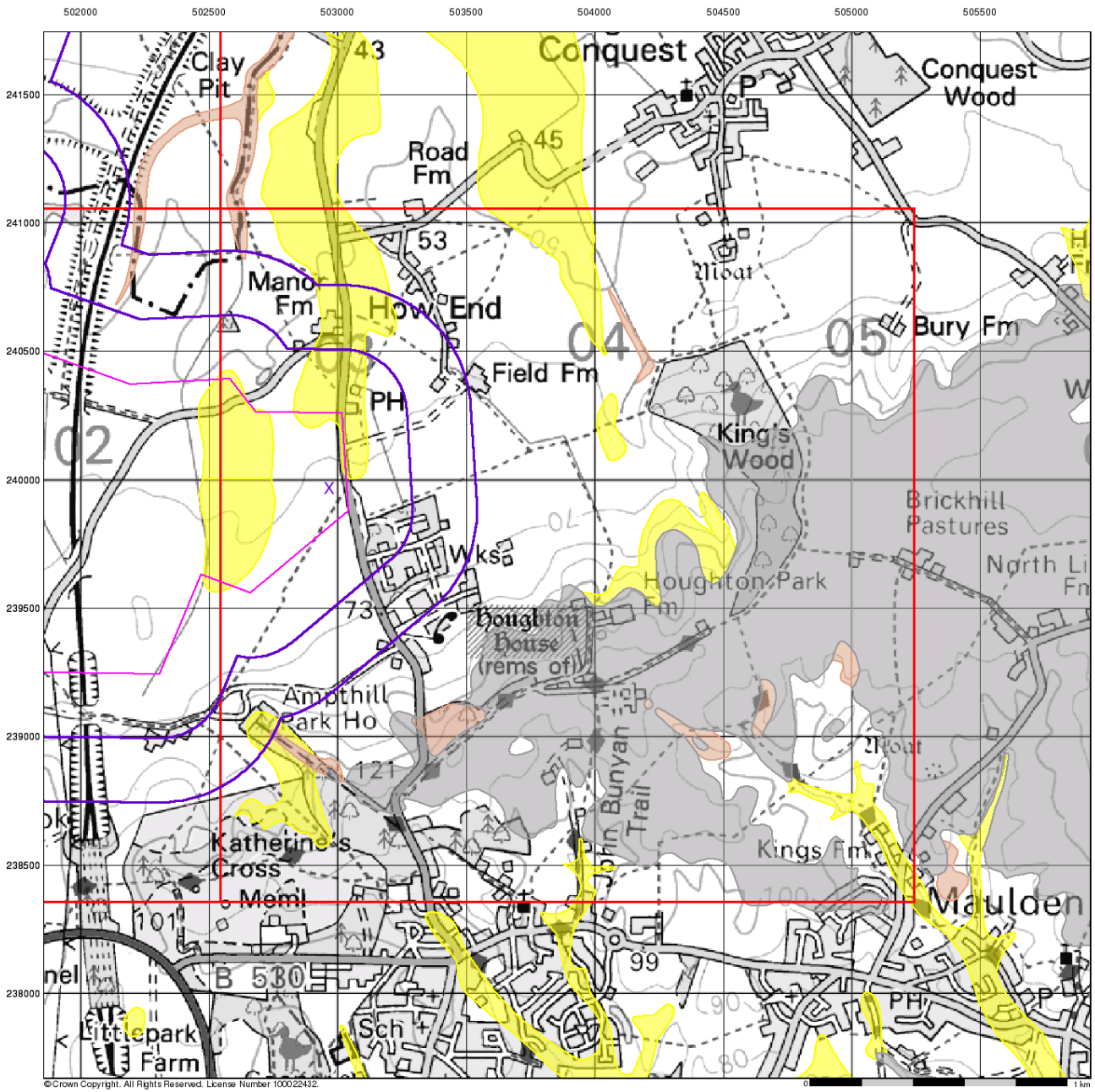
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Superficial Aquifer Designation

General

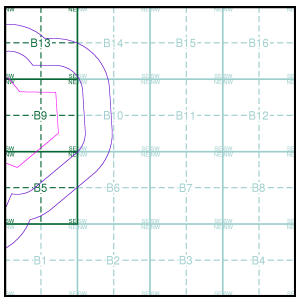
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice B



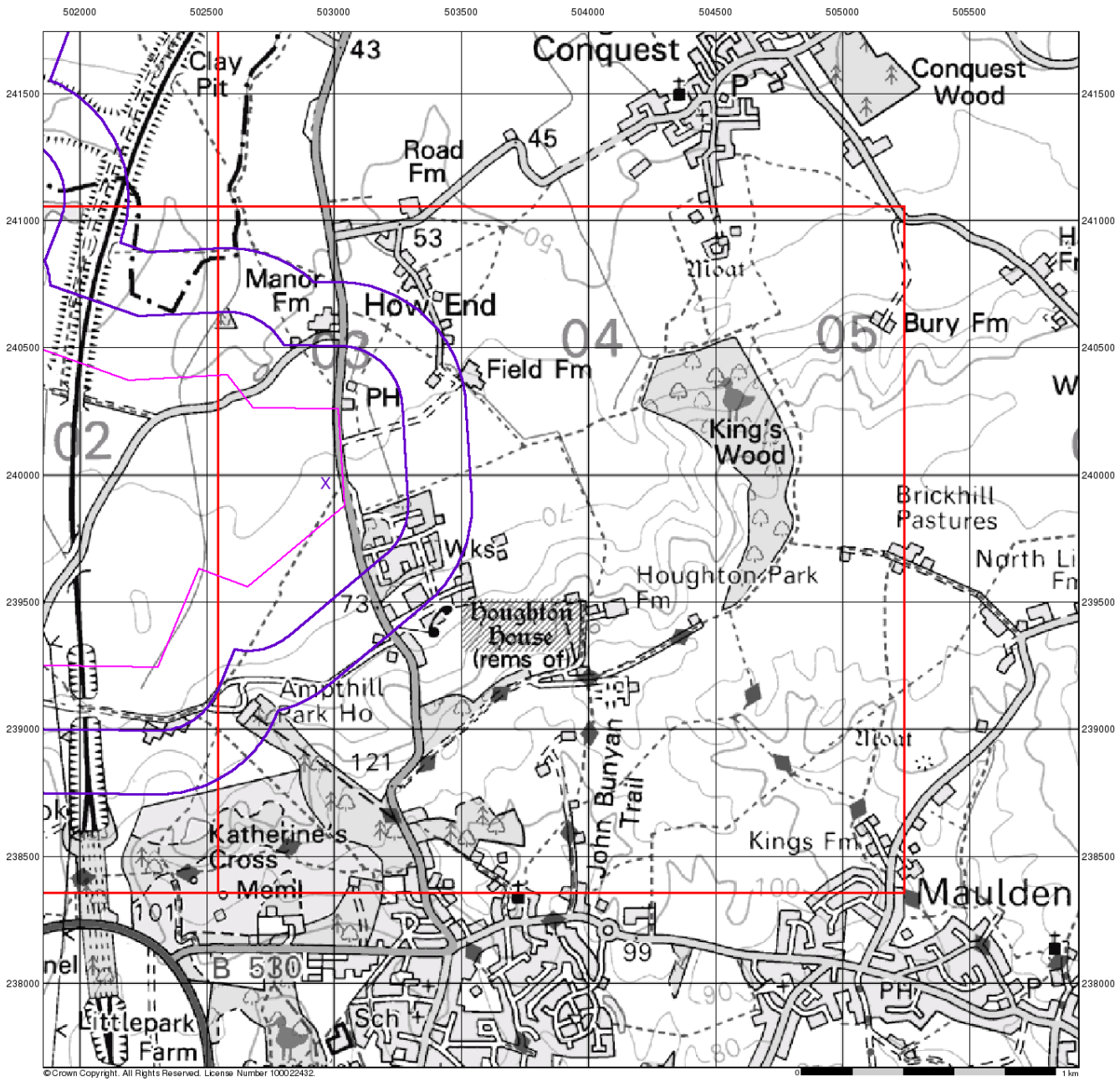
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Source Protection Zones

General

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

Slice | Map ID

Agency and Hydrological

Source Protection Zone I

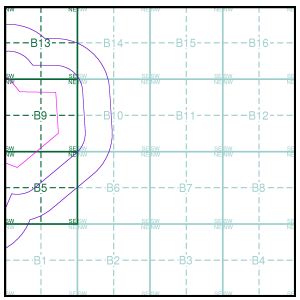
Source Protection Zone II

Source Protection Zone III

Zone of Special Interest

Source Protection Zone Borehole

Site Sensitivity Context Map - Slice B



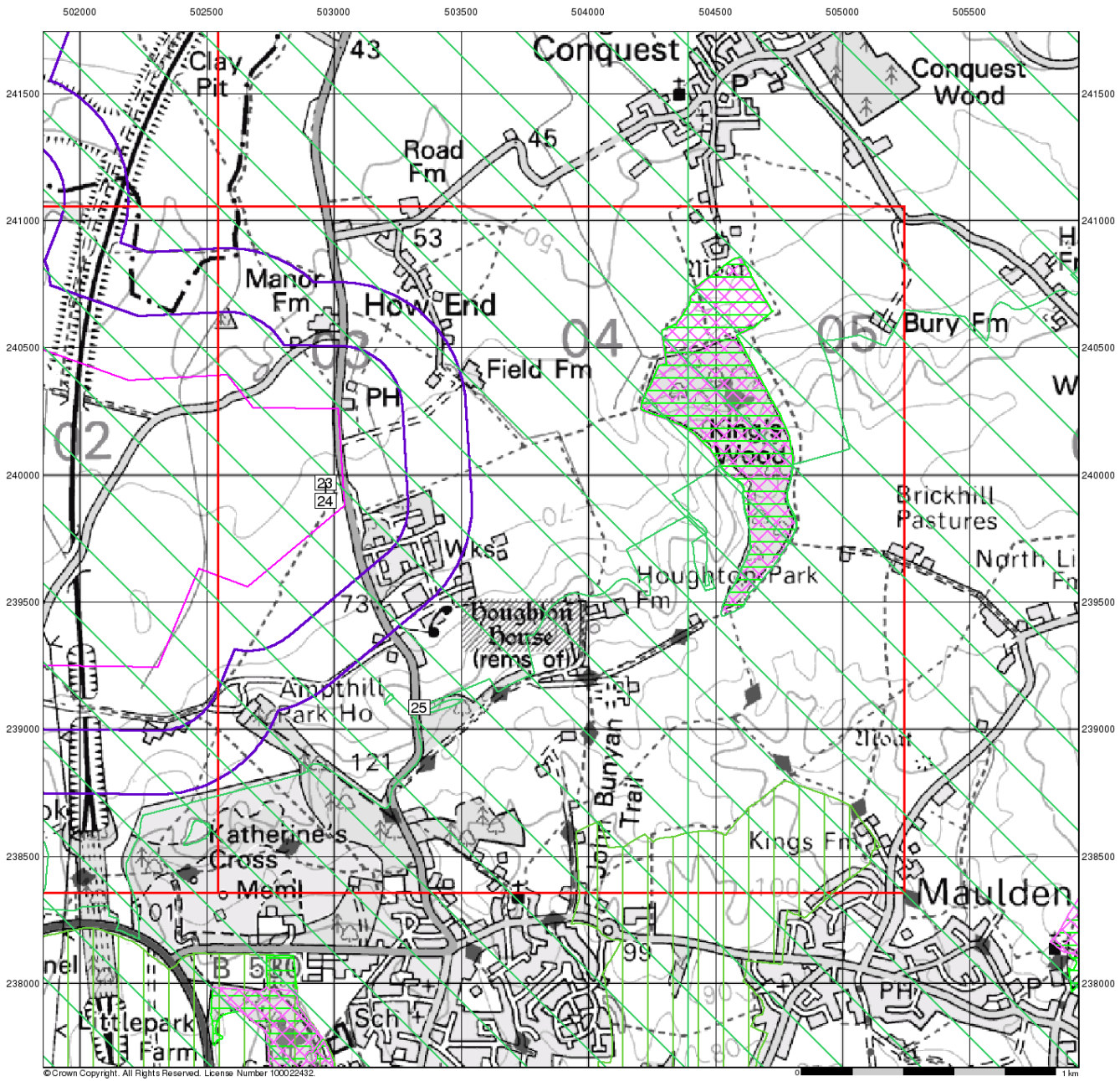
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Sensitive Land Uses

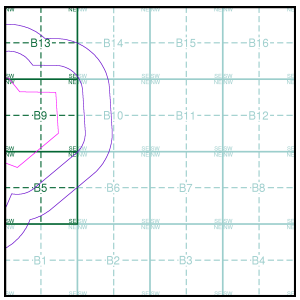
General

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

Sensitive Land Uses

- 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

Site Sensitivity Context Map - Slice B



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
60770728_1_1

Customer Reference:
31116

National Grid Reference:
502970, 239970

Slice:
B

Site Area (Ha):
240.61

Search Buffer (m):
500

Site Details:

Millbrook Power Project
Green Lane
Stewartby

Client Details:

Ms K Riley
Brett Consulting Ltd
Caversham Bridge House
Waterman Place
Reading
Berkshire
RG1 8DN

Contents

Introduction

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

In 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.

Copyright Notice

Natural England Copyright Notice

Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v49.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Agency & Hydrological				
Contaminated Land Register Entries and Notices				
Discharge Consents	pg 1		1	
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 1			6
Local Authority Pollution Prevention and Control Enforcements				
Nearest Surface Water Feature	pg 2	Yes		
Pollution Incidents to Controlled Waters				
Prosecutions Relating to Authorised Processes				
Prosecutions Relating to Controlled Waters				
Registered Radioactive Substances				
River Quality				
River Quality Biology Sampling Points				
River Quality Chemistry Sampling Points				
Substantiated Pollution Incident Register				
Water Abstractions	pg 2	1	2	
Water Industry Act Referrals	pg 2			2
Groundwater Vulnerability	pg 3	Yes	n/a	n/a
Bedrock Aquifer Designations	pg 3	Yes	n/a	n/a
Superficial Aquifer Designations	pg 3	Yes	n/a	n/a
Source Protection Zones				
Extreme Flooding from Rivers or Sea without Defences				n/a
Flooding from Rivers or Sea without Defences				n/a
Areas Benefiting from Flood Defences				n/a
Flood Water Storage Areas				n/a
Flood Defences				n/a
Detailed River Network Lines	pg 3	Yes	Yes	Yes
Detailed River Network Offline Drainage				

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
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 Recorded Landfill Sites				
Registered Landfill Sites				
Registered Waste Transfer Sites				
Registered Waste Treatment or Disposal Sites				
Hazardous Substances				
Control of Major Accident Hazards Sites (COMAH)				
Explosive Sites	pg 8			1
Notification of Installations Handling Hazardous Substances (NIHHS)				
Planning Hazardous Substance Consents				
Planning Hazardous Substance Enforcements				
Geological				
BGS 1:625,000 Solid Geology	pg 9	Yes	n/a	n/a
BGS Estimated Soil Chemistry	pg 9	Yes	Yes	Yes
BGS Recorded Mineral Sites				
BGS Urban Soil Chemistry				
BGS Urban Soil Chemistry Averages				
Brine Compensation Area			n/a	n/a
Coal Mining Affected Areas			n/a	n/a
Mining Instability			n/a	n/a
Man-Made Mining Cavities				
Natural Cavities				
Non Coal Mining Areas of Great Britain				n/a
Potential for Collapsible Ground Stability Hazards	pg 12	Yes		n/a
Potential for Compressible Ground Stability Hazards				n/a
Potential for Ground Dissolution Stability Hazards				n/a
Potential for Landslide Ground Stability Hazards	pg 12	Yes		n/a
Potential for Running Sand Ground Stability Hazards	pg 12	Yes		n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 12	Yes		n/a
Radon Potential - Radon Affected Areas			n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Industrial Land Use				
Contemporary Trade Directory Entries (50m)				n/a
Fuel Station Entries				
Sensitive Land Use				
Areas of Adopted Green Belt				
Areas of Unadopted Green Belt				
Areas of Outstanding Natural Beauty				
Environmentally Sensitive Areas				
Forest Parks				
Local Nature Reserves				
Marine Nature Reserves				
National Nature Reserves				
National Parks				
Nitrate Sensitive Areas				
Nitrate Vulnerable Zones	pg 14	2		1
Ramsar Sites				
Sites of Special Scientific Interest				
Special Areas of Conservation				
Special Protection Areas				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Frontline Inns Limited Property Type: Sewage Disposal Works - Other Location: The Chequers Public House Ampthill Road, Houghton Conquest, Bedford, Beds, Mk45 3jp Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Prcnf17990 Permit Version: 1 Effective Date: 21st May 2007 Issued Date: 5th March 2007 Revocation Date: 21st May 2019 Discharge Type: Sewage And Trade Combined - Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Seasonal Soakaway **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	B9NE (N)	53	2	503070 240255
2	**Local Authority Pollution Prevention and Controls** Name: Lockheed Martin Uk Insys Ltd Location: Reddings Wood, AMPTHILL, MK45 2HD Authority: Central Bedfordshire Council, Environmental Health Department Permit Reference: Ppc/Mb/62 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG4/1 Processes for the surface treatment of metals **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	B6NW (SE)	294	3	503246 239667
2	**Local Authority Pollution Prevention and Controls** Name: Lockheed Martin Uk Insys Ltd Location: Reddings Wood, Ampthill, BEDFORD, Bedfordshire, MK45 Authority: Central Bedfordshire Council, Environmental Health Department Permit Reference: Ppc/Mb/21 Dated: 1st March 1994 Process Type: Local Authority Pollution Prevention and Control Description: PG6/23 Coating of metal and plastic **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	B6NW (SE)	300	3	503242 239655
2	**Local Authority Pollution Prevention and Controls** Name: Hunting Engineering Plc Location: Ampthill, MK45 Authority: Central Bedfordshire Council, Environmental Health Department Permit Reference: Epa/Mb/31 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: Part B - General Coating Process (No Specific Reference) **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	B6NW (SE)	307	3	503258 239661
2	**Local Authority Pollution Prevention and Controls** Name: Insys Ltd Location: Reddings Wood, Ampthill, BEDFORD, Bedfordshire, MK45 Authority: Central Bedfordshire Council, Environmental Health Department Permit Reference: EPA/MB/21A Dated: 1st March 1994 Process Type: Local Authority Air Pollution Control Description: PG6/32 Adhesive coating **Status: Site Closed** Positional Accuracy: Manually positioned to the address or location	B6NW (SE)	317	3	503251 239641
2	**Local Authority Pollution Prevention and Controls** Name: Lockheed Martin Uk Insys Ltd Location: Reddings Wood, Ampthill, Mk45 2hd Authority: Central Bedfordshire Council, Environmental Health Department Permit Reference: PPC/MB/62 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG4/1 Processes for the surface treatment of metals **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	B6NW (SE)	345	3	503257 239609

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Local Authority Pollution Prevention and Controls** Name: Lockheed Martin Uk Insys Ltd Location: Reddings Wood, Ampthill, Mk45 2hd Authority: Central Bedfordshire Council, Environmental Health Department Permit Reference: PPC/MB/21 Dated: 5th November 2008 Process Type: Local Authority Pollution Prevention and Control Description: PG6/32 Adhesive coating **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	B6NW (SE)	347	3	503254 239604
	Nearest Surface Water Feature	B5NW (SW)	0	-	502657 239673
3	**Water Abstractions** Operator: R J Parrish & Son Licence Number: 6/33/12/*S/0067 Permit Version: 100 Location: Pond At Ampthill Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st November 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B5NW (SW)	0	2	502700 239695
4	**Water Abstractions** Operator: R J Parrish & Son Licence Number: 6/33/12/*S/0067 Permit Version: 100 Location: Pond At Ampthill Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st November 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13SW (N)	139	2	502800 240400
5	**Water Abstractions** Operator: R J Parrish & Son Licence Number: 6/33/12/*S/0067 Permit Version: 100 Location: Pond At Ampthill Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st November 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13SE (N)	241	2	502900 240500
6	**Water Industry Act Referrals** Name: Lockheed Martin Uk Insys Ltd Location: LOCKHEED MARTIN UK INSYS LTD, REDDINGS WOOD, REDDINGS WOOD, AMPTHILL, BEDFORDSHIRE, MK45 2HD Authority: Environment Agency, Anglian Region Permit Reference: Bu3833 Dated: 28th February 2003 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Authorisation either revoked or cancelledCancelled** Positional Accuracy: Manually positioned to the address or location	B10SW (SE)	310	2	503313 239730

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Water Industry Act Referrals** Name: Lockheed Martin Uk Insys Ltd Location: LOCKHEED MARTIN UK INSYS LTD, REDDINGS WOOD, AMPTHILL, BEDFORD, BEDFORDSHIRE, MK45 2HD Authority: Environment Agency, Anglian Region Permit Reference: CB0803 Dated: 16th January 2007 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Application cancelled** Positional Accuracy: Automatically positioned to the address	B6NW (SE)	345	2	503256 239608
	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	B9SW (W)	0	2	502711 239987
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	B9SE (E)	0	2	502966 239968
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	B9NE (N)	0	2	503000 240052
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	B9SE (E)	0	4	502966 239968
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	B9SE (N)	0	4	502966 240001
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	B9SW (W)	0	4	502754 239933
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	B9SW (W)	0	4	502745 240001
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	B9SE (NE)	0	4	503031 240018
	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				
8	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	(W)	0	2	502464 239885

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B9SE (NE)	0	2	503022 240006
10	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B9SE (NE)	1	2	503040 240002
11	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B9NE (N)	3	2	503022 240230
12	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	(SW)	18	2	502522 239371
13	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B9NE (N)	38	2	503021 240295
14	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B9NE (E)	85	2	503192 240046

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B13SW (NW)	105	2	502719 240384
16	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B13SE (N)	141	2	503010 240398
17	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B13SW (NW)	254	2	502579 240645
18	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B13SE (N)	269	2	503014 240527
19	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B13SE (N)	290	2	503053 240545
20	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B13SE (N)	316	2	503043 240572

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B14SW (NE)	425	2	503418 240398
	Detailed River Network Offline Drainage None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Mid Bedfordshire District Council - Has supplied landfill data		0	11	502966 239968
	Local Authority Landfill Coverage Name: Bedfordshire County Council - Has no landfill data to supply		0	10	502966 239968
	Local Authority Landfill Coverage Name: Bedford Borough Council - Has supplied landfill data		11	12	502363 240620

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	**Explosive Sites** Name: Ampthill/Insys Ltd Location: Reddings Wood, AMPTHILL, Bedfordshire, MK45 2HD **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	B6NW (SE)	406	5	503375 239647

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Oxford Clay and Kellaways Beds	B9SE (E)	0	4	502966 239968
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SE (NE)	0	6	503000 240000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SE (N)	0	6	502966 240000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9NE (N)	0	6	502907 240202
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SE (NE)	0	6	503030 240017
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SW (W)	0	6	502744 240000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SW (W)	0	6	502754 239933

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SE (E)	0	6	502966 239968
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SE (E)	0	6	503000 239968
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SE (E)	37	6	503070 240000
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B5SE (S)	63	6	502999 239301
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B1NW (S)	260	6	502652 239000
	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: 40 - 60 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	B5SW (S)	391	6	502720 239091

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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B5SE (S)	416	6	503000 239301
	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: 40 - 60 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	B1NW (S)	422	6	502741 239000
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B13NW (N)	449	6	502755 241000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B13NW (N)	470	6	502639 240857
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B1NW (S)	487	6	502755 239019
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	B1NW (S)	498	6	502787 239000
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	4	502966 239968
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (N)	0	4	502966 240000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	4	502966 239968
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (N)	0	4	502966 240000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (N)	0	4	502966 240000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	4	502966 239968
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (N)	0	4	502966 240000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	4	502966 239968
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (W)	0	4	502748 240000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (W)	0	4	502750 239956
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (NE)	0	4	503028 240013
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (N)	0	4	502966 240000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	4	502966 239968
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B9SE (N)	0	4	502966 240000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	4	502966 239968
	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	B9SE (E)	0	4	502966 239968
	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	B9SE (N)	0	4	502966 240001
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	4	502966 239968

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	B9SE (N)	0	4	502966 240001

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	B9SE (E)	0	9	502966 239968
24	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Groundwater Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	B9SE (E)	0	9	502966 239968
25	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Groundwater Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	B6SW (SE)	375	9	503337 239085

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Central Bedfordshire Council - Environmental Health Department	December 2013	Annually
Bedford Borough Council - Environmental Health Department	February 2013	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	July 2008	Not Applicable
Discharge Consents		
Environment Agency - Anglian Region	August 2014	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Anglian Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Anglian Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Anglian Region	August 2014	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	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
Prosecutions Relating to Authorised Processes		
Environment Agency - Anglian Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Anglian Region	March 2013	As notified
Registered Radioactive Substances		
Environment Agency - Anglian Region	August 2014	Quarterly
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Central Area	August 2014	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	July 2014	Quarterly
Water Industry Act Referrals		
Environment Agency - Anglian Region	August 2014	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	January 2011	Not Applicable

Agency & Hydrological	Version	Update Cycle
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	October 2012	Annually
Superficial Aquifer Designations		
British Geological Survey - National Geoscience Information Service	October 2012	Annually
Source Protection Zones		
Environment Agency - Head Office	August 2014	Quarterly
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2014	Quarterly
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2014	Quarterly
Areas Benefiting from Flood Defences		
Environment Agency - Head Office	August 2014	Quarterly
Flood Water Storage Areas		
Environment Agency - Head Office	August 2014	Quarterly
Flood Defences		
Environment Agency - Head Office	August 2014	Quarterly
Detailed River Network Lines		
Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage		
Environment Agency - Head Office	March 2012	Annually
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Anglian Region - Central Area	May 2014	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Anglian Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Anglian Region - Central Area	August 2014	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Central Area	August 2014	Quarterly
Local Authority Landfill Coverage		
Bedford Borough Council - Environmental Health Department	May 2000	Not Applicable
Bedfordshire County Council (now part of Central Bedfordshire Council)	May 2000	Not Applicable
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Bedford Borough Council - Environmental Health Department	April 2003	Not Applicable
Bedfordshire County Council (now part of Central Bedfordshire Council)	May 2000	Not Applicable
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	May 2000	Not Applicable
Registered Landfill Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	August 2014	Bi-Annually
Explosive Sites		
Health and Safety Executive	November 2013	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Bedford Borough Council	April 2013	Annual Rolling Update
Central Bedfordshire Council - Planning Department	August 2013	Annually
Bedfordshire County Council (now part of Central Bedfordshire Council)	July 2008	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council)	May 2008	Not Applicable
Planning Hazardous Substance Consents		
Bedford Borough Council	April 2013	Annual Rolling Update
Central Bedfordshire Council - Planning Department	August 2013	Annually
Bedfordshire County Council (now part of Central Bedfordshire Council)	July 2008	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council)	May 2008	Not Applicable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
BGS Estimated Soil Chemistry		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	April 2014	Bi-Annually
Brine Compensation Area		
Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Mining Report Service	December 2013	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	July 2014	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	August 2014	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2014	Quarterly
Sensitive Land Use	**Version**	**Update Cycle**
Areas of Adopted Green Belt Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department Central Bedfordshire Council - Planning Department	August 2014 May 2011	As notified As notified
Areas of Unadopted Green Belt Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	August 2014	As notified
Areas of Outstanding Natural Beauty Natural England	August 2014	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2014	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	October 2014	Bi-Annually
Marine Nature Reserves Natural England	July 2013	Bi-Annually
National Nature Reserves Natural England	September 2014	Bi-Annually
National Parks Natural England	August 2014	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	July 2014	Annually
Ramsar Sites Natural England	March 2014	Bi-Annually
Sites of Special Scientific Interest Natural England	September 2014	Bi-Annually
Special Areas of Conservation Natural England	March 2014	Bi-Annually
Special Protection Areas Natural England	September 2014	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	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Central Bedfordshire Council - Environmental Health Department** Priory House, Monks Walk, Chicksands, Shefford, Bedfordshire, SG17 5TQ	Telephone: 0300 300 8000 Email: info@centralbedfordshire.gov.uk Website: www.centralbedfordshire.gov.uk
4	**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
5	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
6	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmark.co.uk Website: www.landmarkinfo.co.uk
7	**Central Bedfordshire Council - Planning Department** Priory House, Monks Walk, Chicksands, Shefford, Bedfordshire, SG17 5TQ	Telephone: 0300 300 8000 Email: info@centralbedfordshire.gov.uk Website: www.centralbedfordshire.gov.uk
8	**Natural England** Suite D, Unex House, Bourges Boulevard, Peterborough, Cambridgeshire, PE1 1NG	Telephone: 0845 600 3078 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
9	**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
10	**Bedfordshire County Council (now part of Central Bedfordshire Council)** County Hall, Cauldwell Street, Bedford, Bedfordshire, MK42 9AP	Telephone: 01234 363222 Fax: 01234 228656 Website: www.bedfordshire.gov.uk
11	**Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department** 23 London Road, Biggleswade, Bedford, Bedfordshire, SG18 8ER	Telephone: 01767 313137 Fax: 01767 316717 Website: www.midbeds.gov.uk
12	**Bedford Borough Council - Environmental Health Department** Town Hall, St Pauls Street, Bedford, Bedfordshire, MK40 1SJ	Telephone: 01234 267422 Fax: 01234 325671 Email: enquiries@bedford.gov.uk Website: www.bedford.gov.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

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

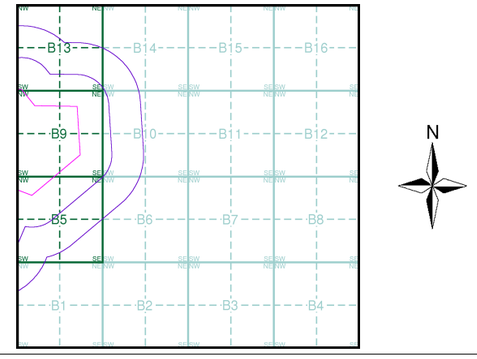
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community 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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:10,560	1884	2
Buckinghamshire	1:10,560	1885	3
Bedfordshire	1:10,560	1901 - 1902	4
Bedfordshire	1:10,560	1927	5
Bedfordshire	1:10,560	1938	6
Bedfordshire	1:10,560	1947 - 1948	7
Ordnance Survey Plan	1:10,000	1960	8
Ordnance Survey Plan	1:10,000	1975 - 1978	9
Ordnance Survey Plan	1:10,000	1979	10
Ordnance Survey Plan	1:10,000	1982	11
Ordnance Survey Plan	1:10,000	1990 - 1991	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2014	14

Historical Map - Slice B



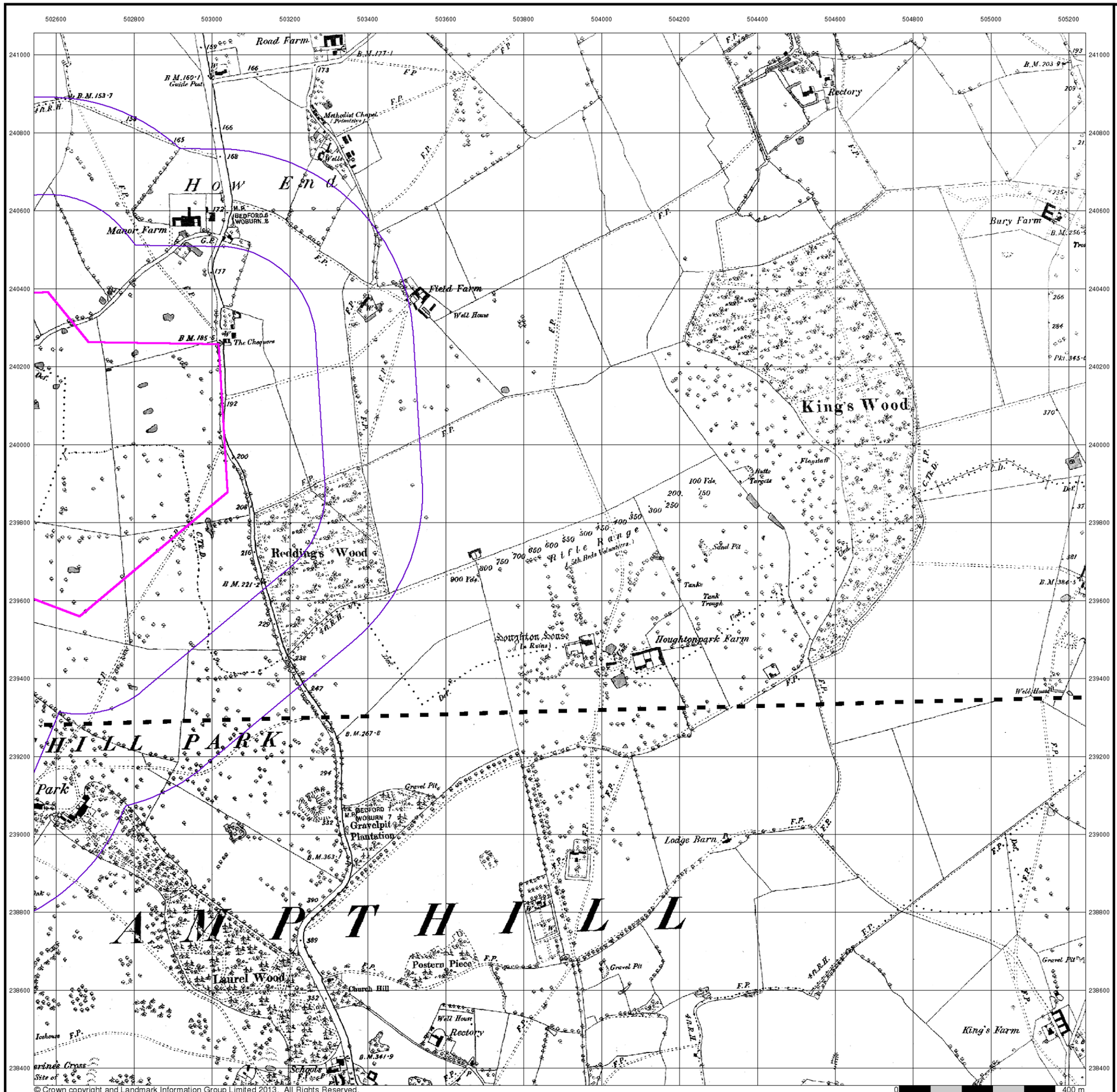
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 502970, 239970
Slice: B
Site Area (Ha): 240.61
Search Buffer (m): 500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Bedfordshire

Published 1884

Source map scale - 1:10,560

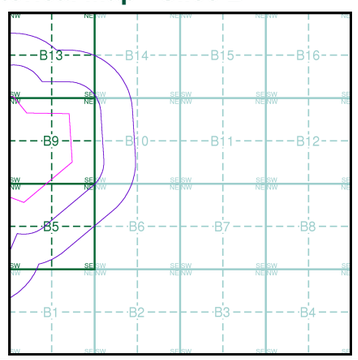
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

021NE
1884
1:10,560

021SE
1884
1:10,560

Historical Map - Slice B



Order Details

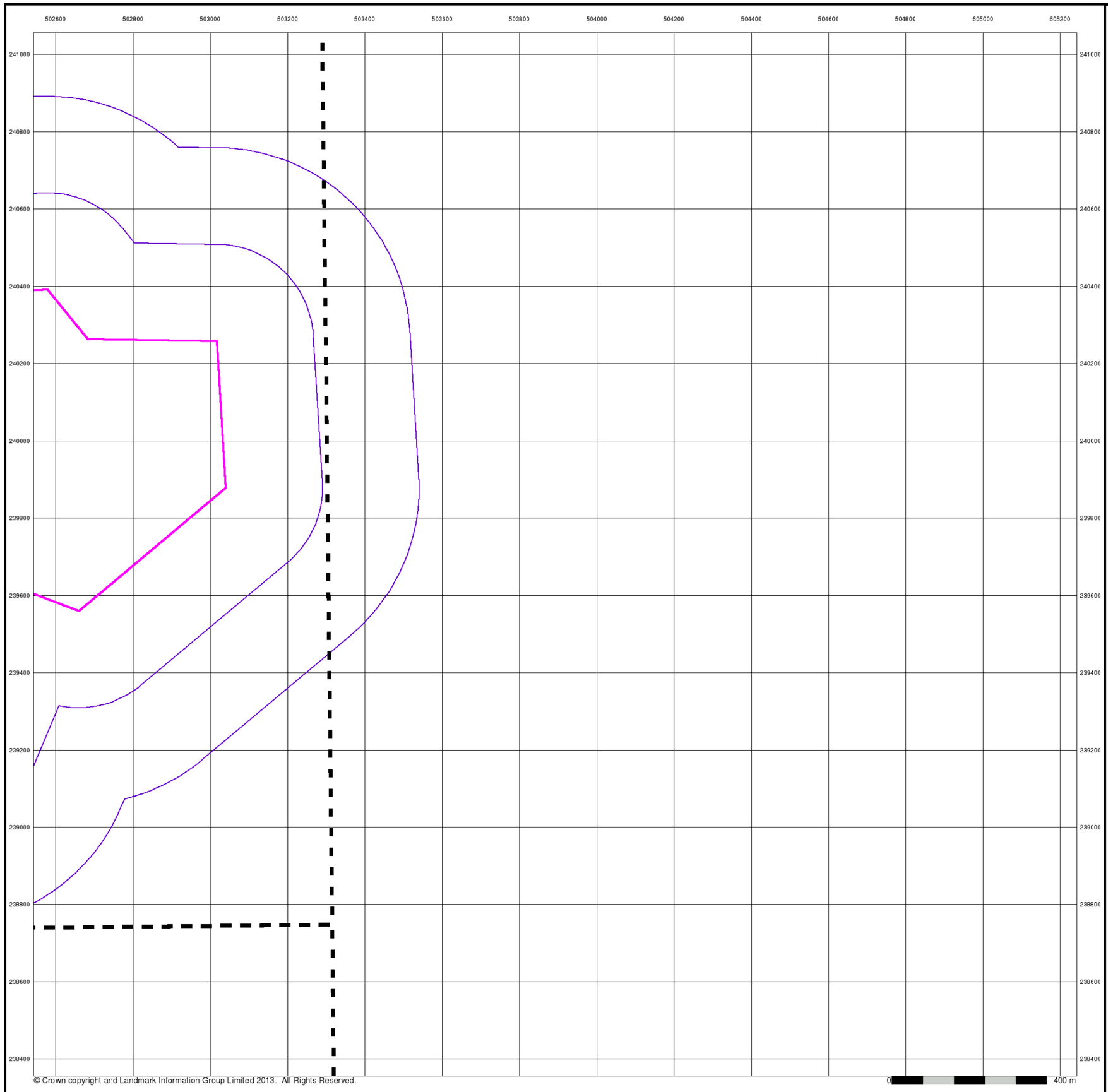
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



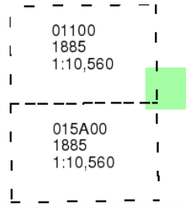
Buckinghamshire

Published 1885

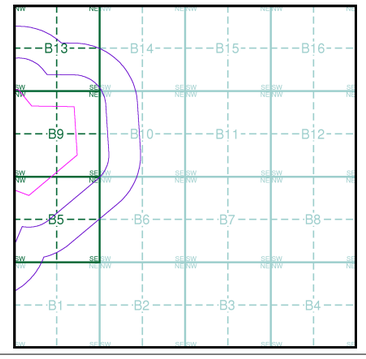
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



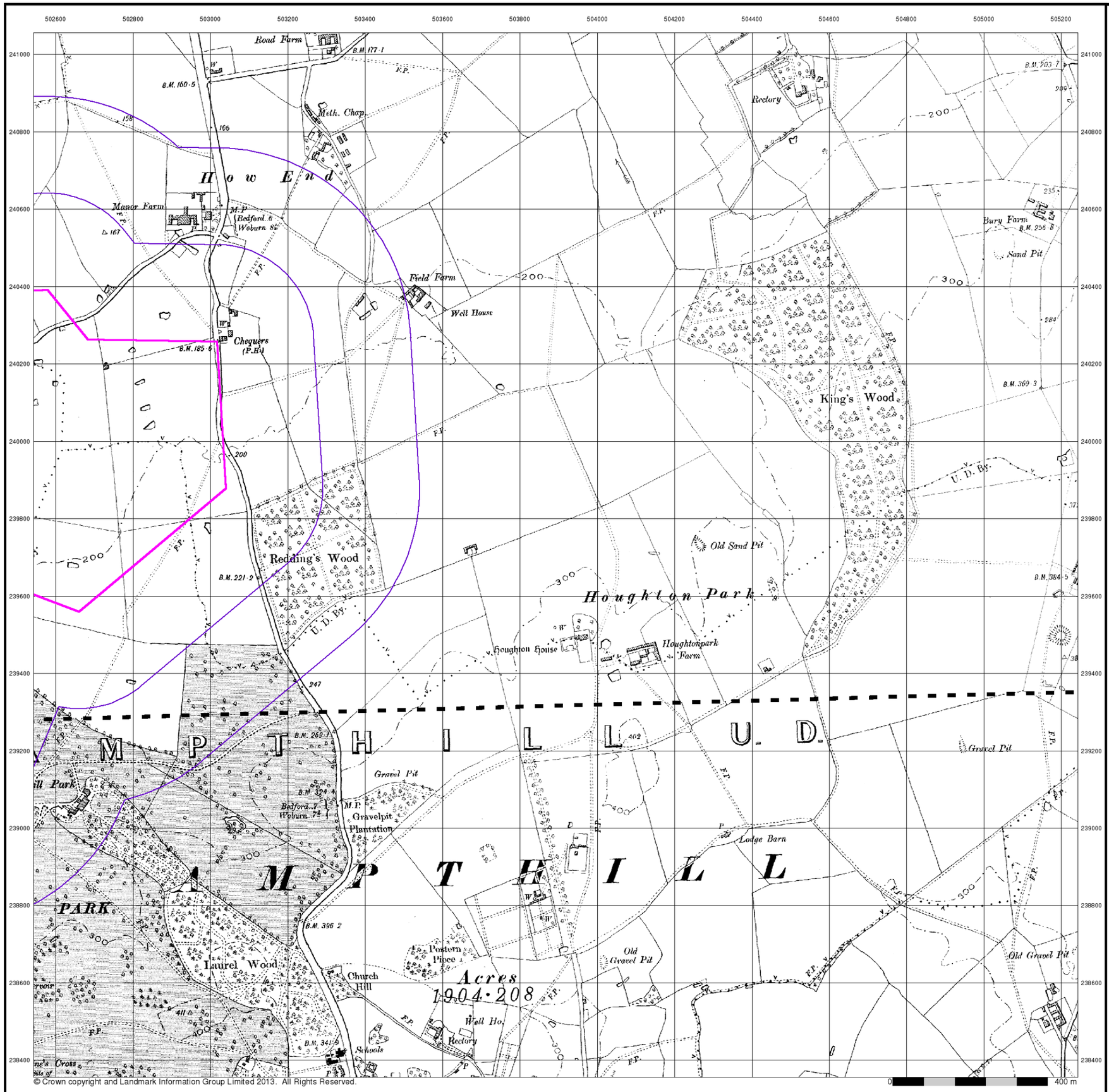
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



Bedfordshire

Published 1901 - 1902

Source map scale - 1:10,560

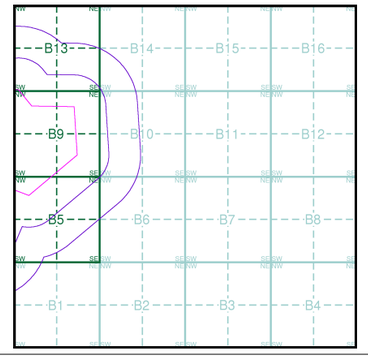
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

021NE
1901
1:10,560

021SE
1902
1:10,560

Historical Map - Slice B



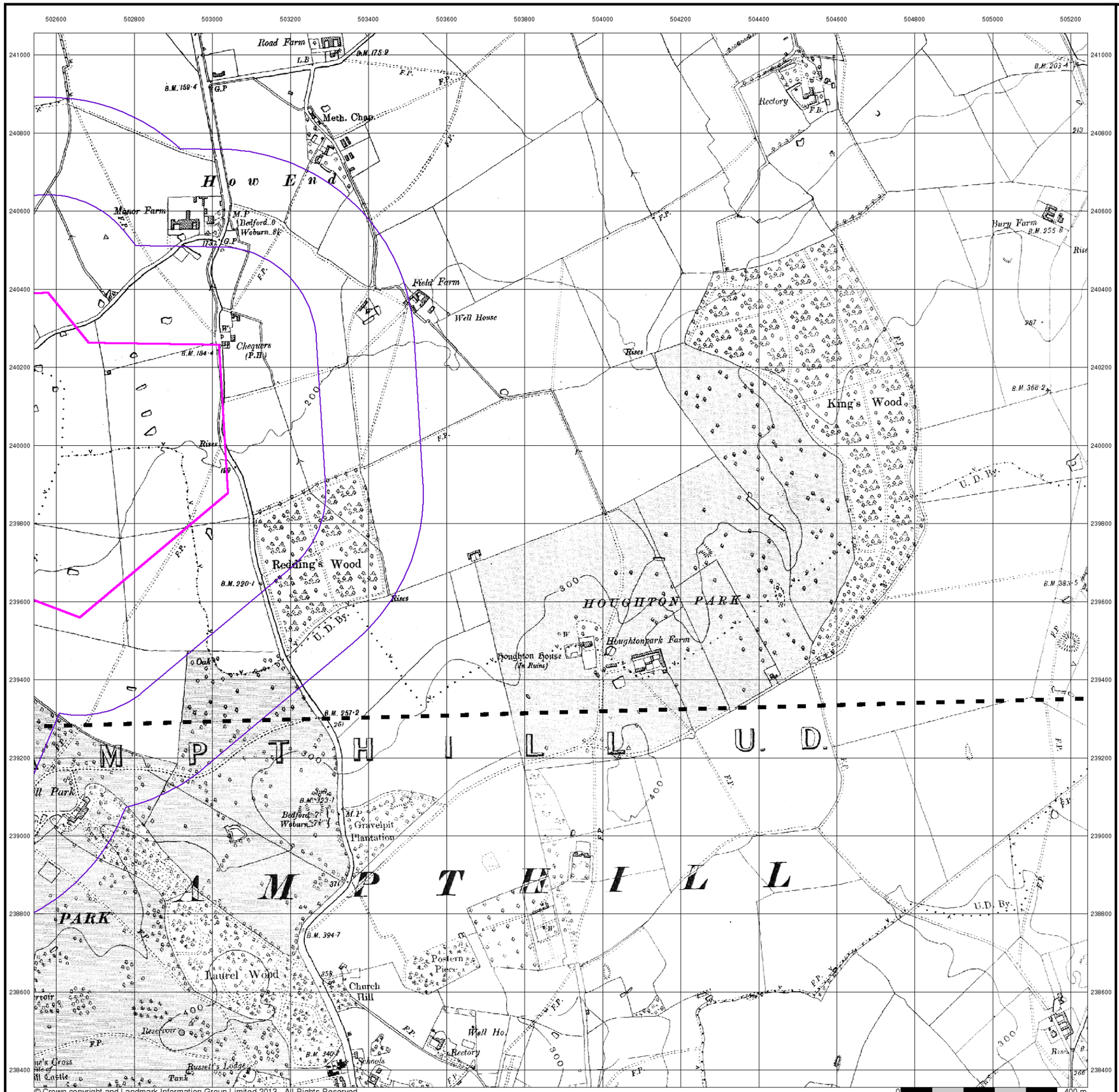
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Bedfordshire

Published 1927

Source map scale - 1:10,560

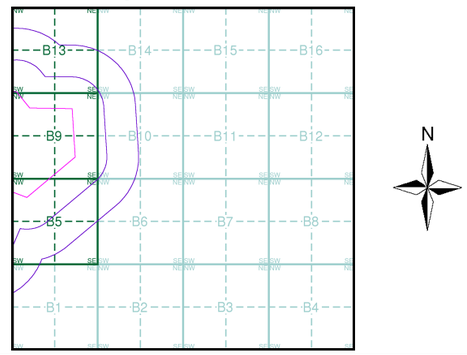
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

021NE
1927
1:10,560

021SE
1927
1:10,560

Historical Map - Slice B



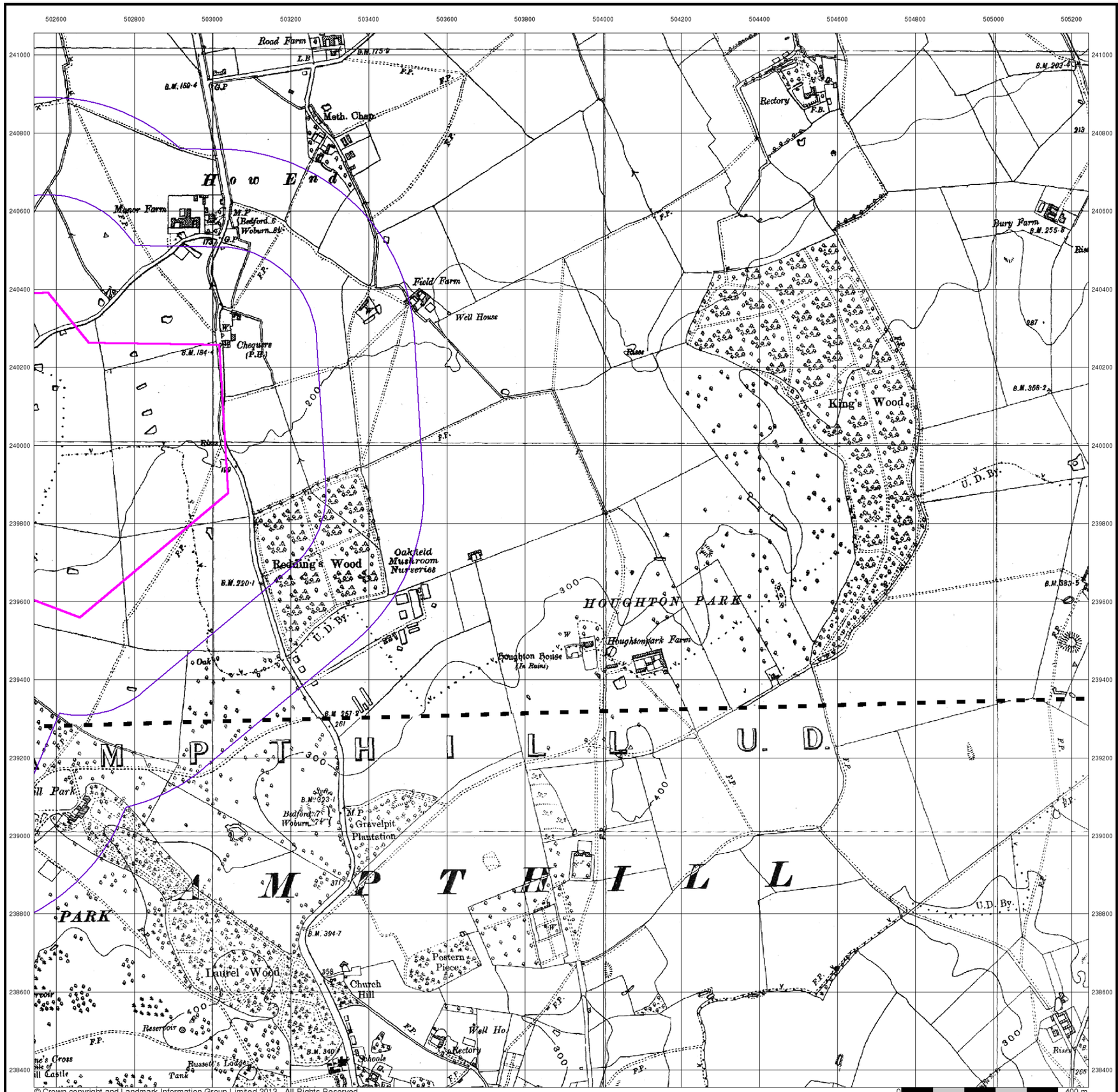
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



Bedfordshire

Published 1938

Source map scale - 1:10,560

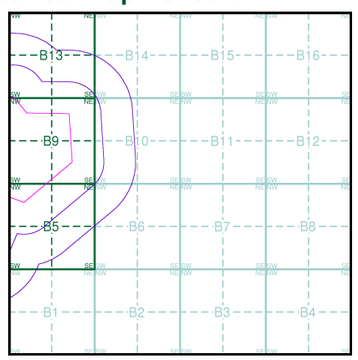
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

021NE
1938
1:10,560

021SE
1938
1:10,560

Historical Map - Slice B



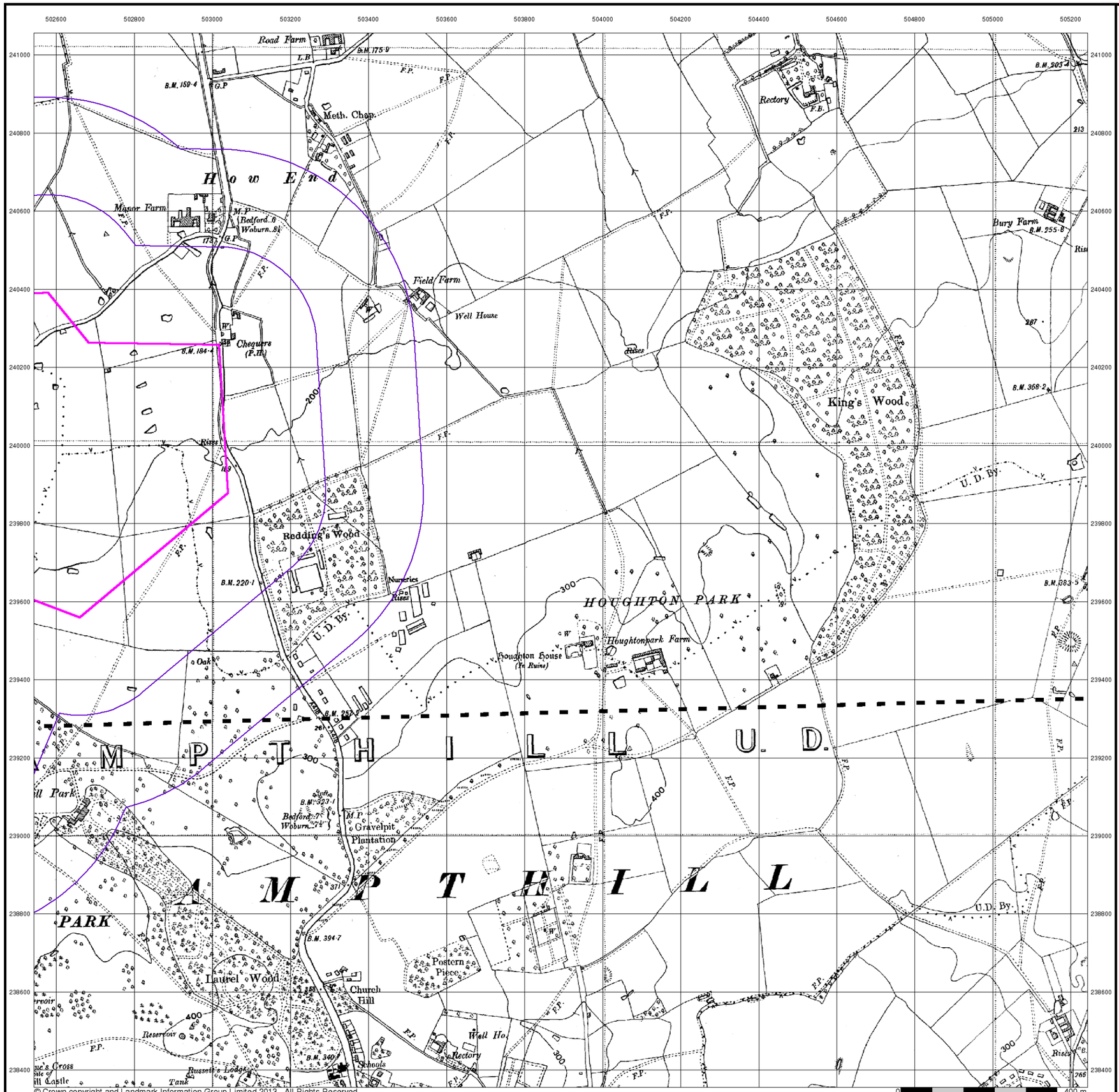
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

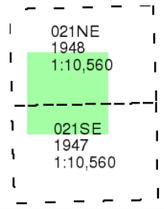
Bedfordshire

Published 1947 - 1948

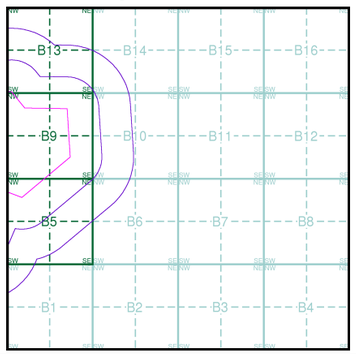
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



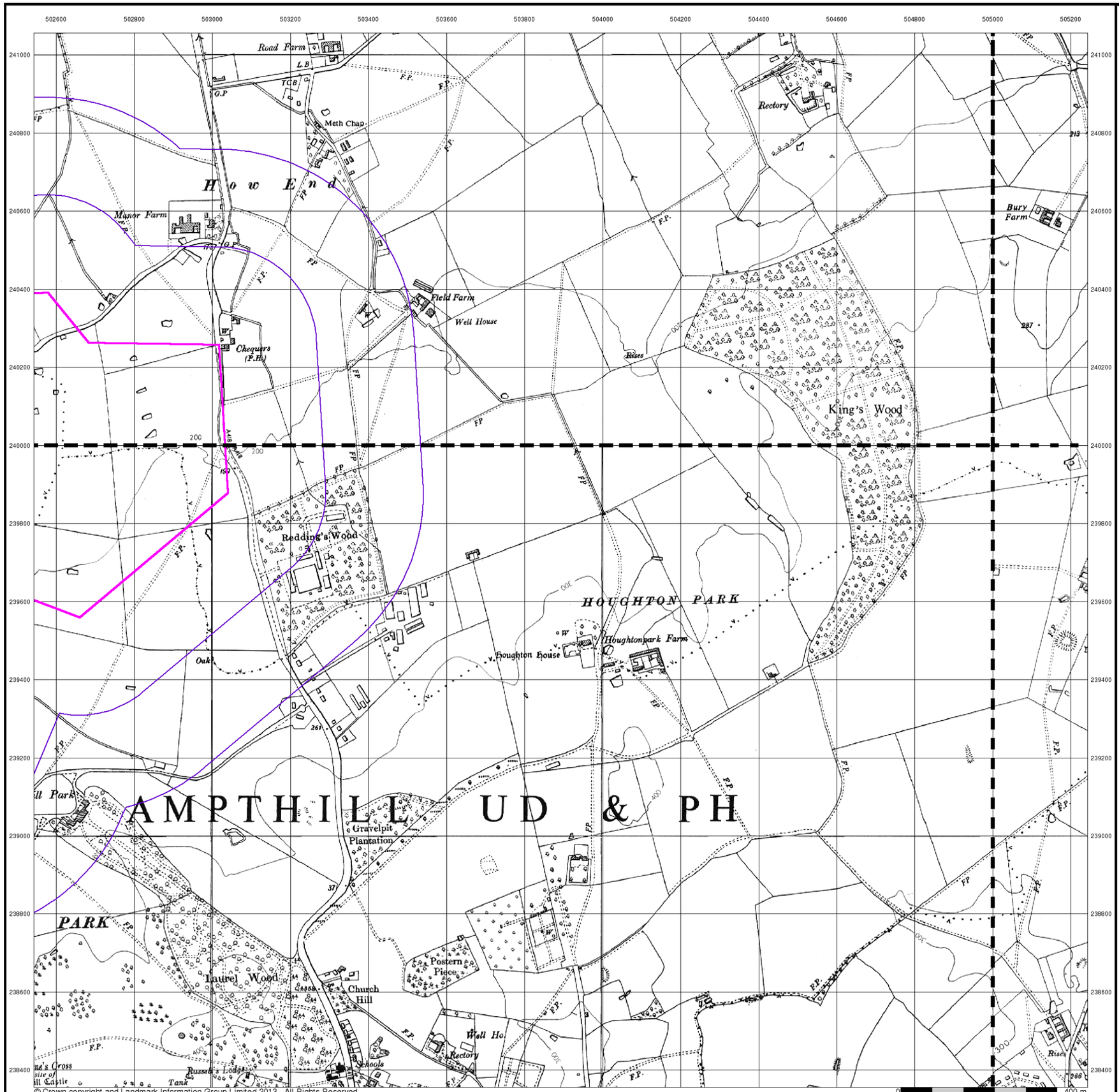
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Ordnance Survey Plan

Published 1960

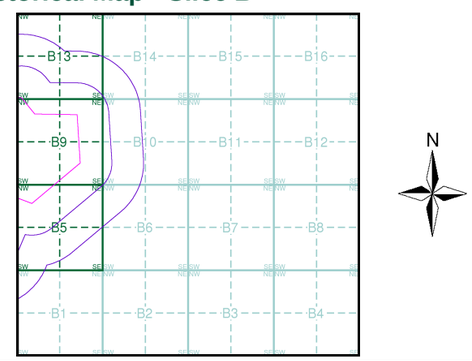
Source map scale - 1:10,000

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)

TL04SW 1960 1:10,560	TL04SE 1960 1:10,560
TL03NW 1960 1:10,560	TL03NE 1960 1:10,560

Historical Map - Slice B



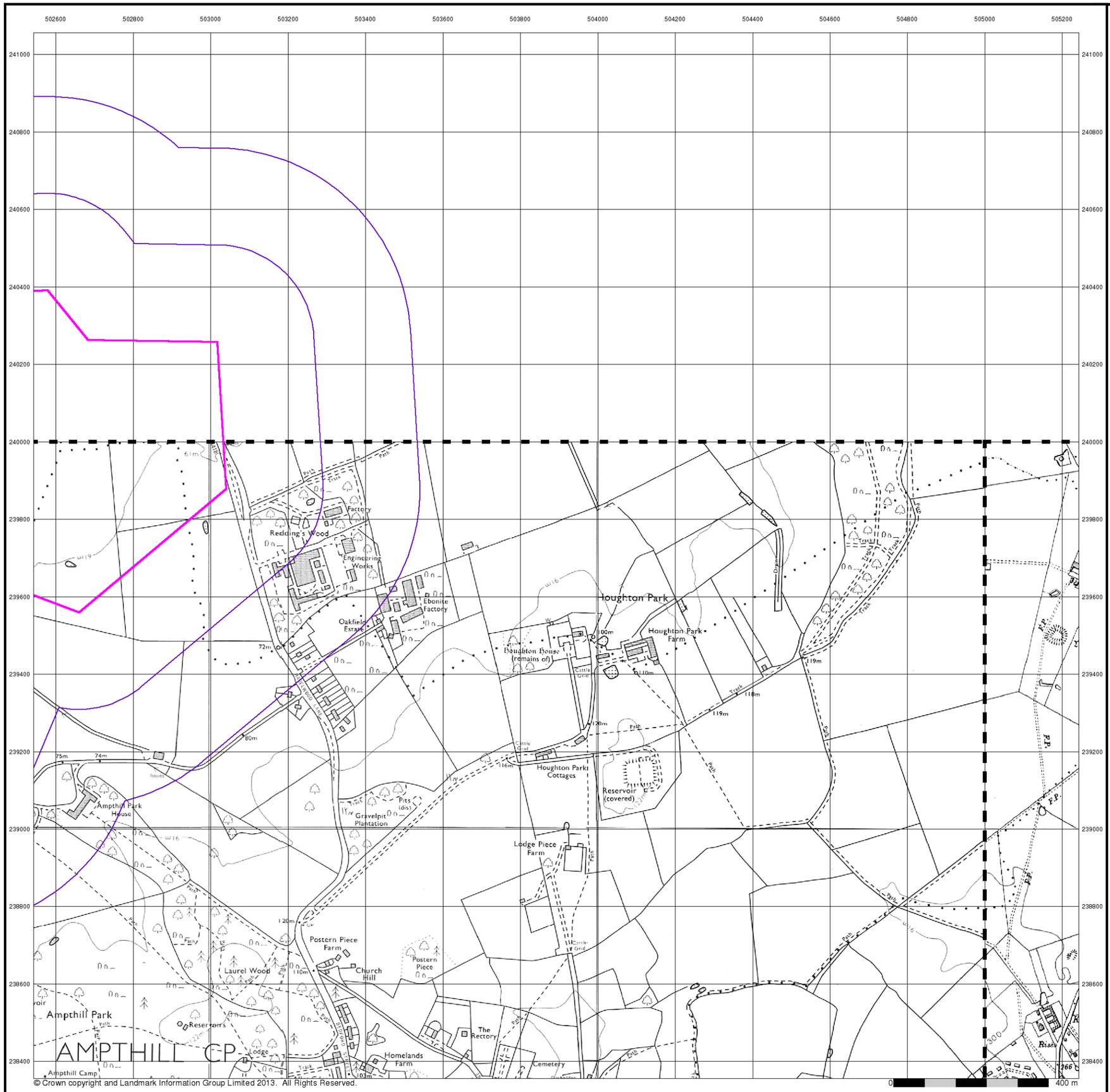
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

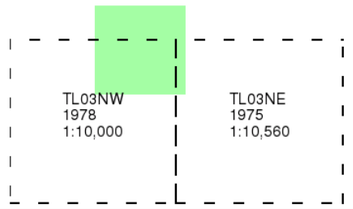
Ordnance Survey Plan

Published 1975 - 1978

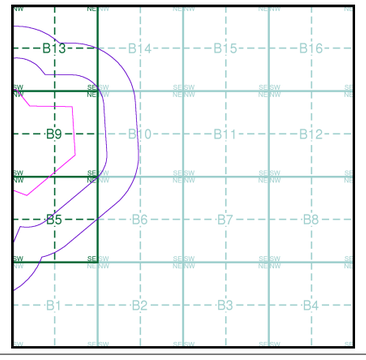
Source map scale - 1:10,000

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 B



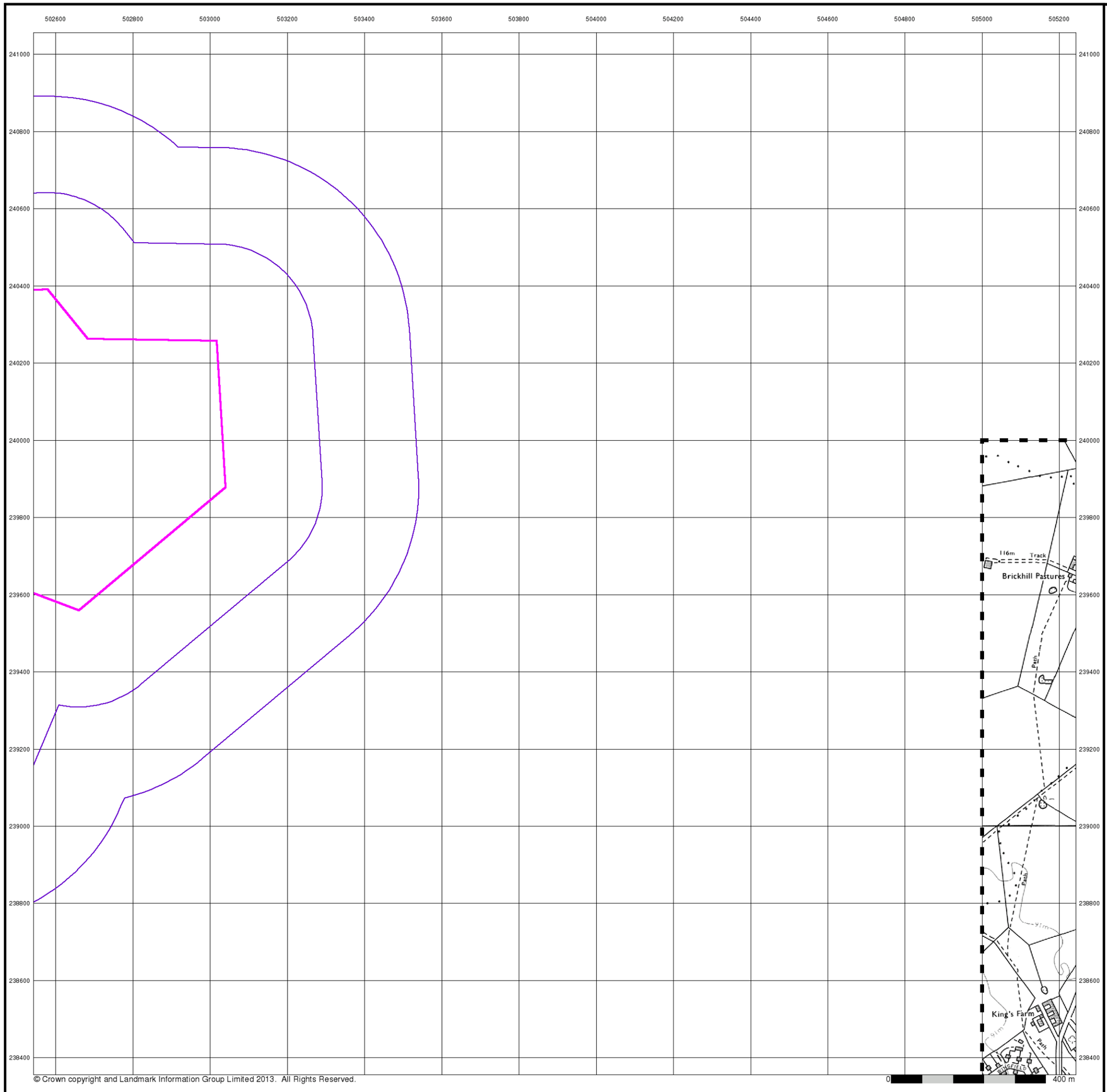
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

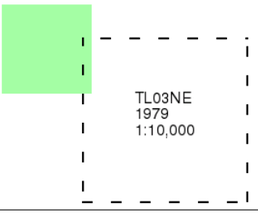
Ordnance Survey Plan

Published 1979

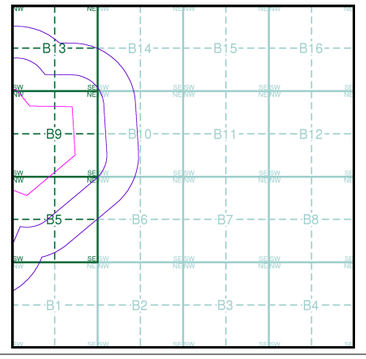
Source map scale - 1:10,000

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 B



Order Details

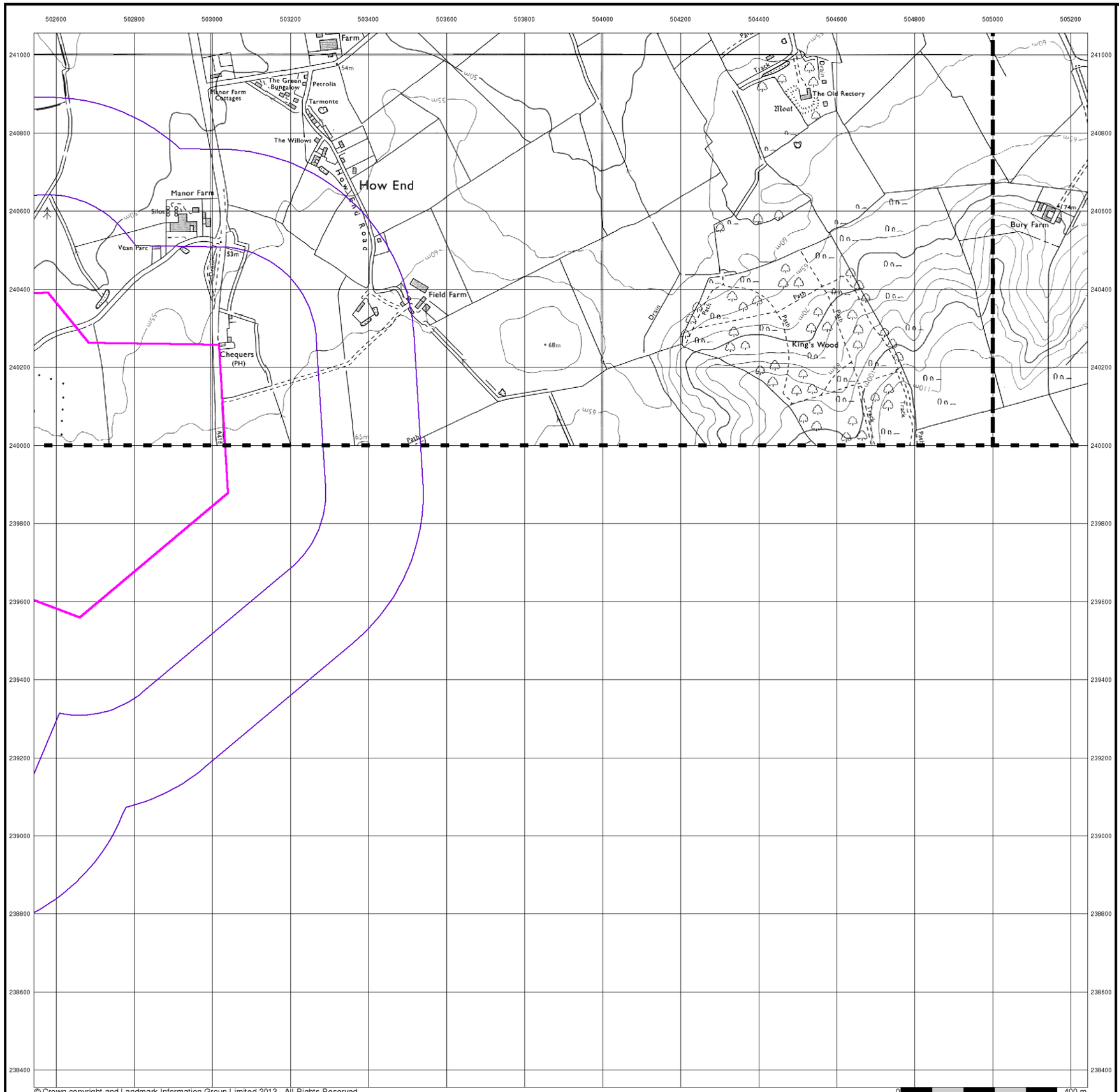
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

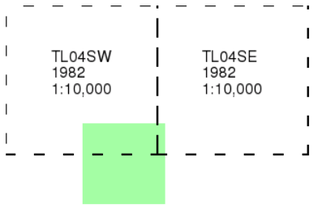
Ordnance Survey Plan

Published 1982

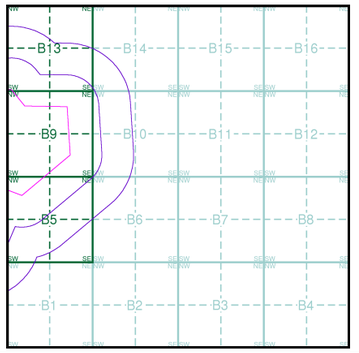
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

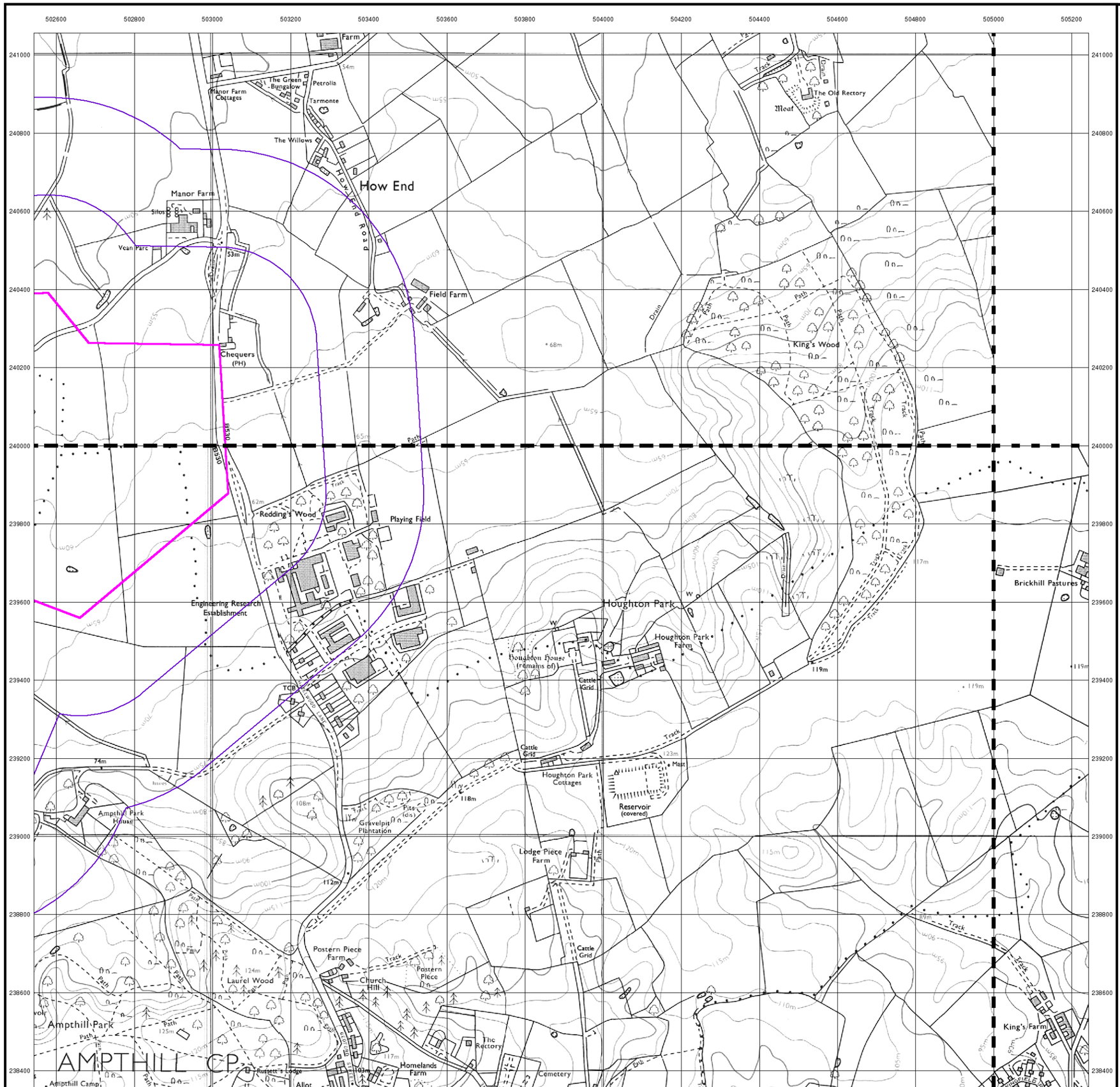
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

Ordnance Survey Plan

Published 1990 - 1991

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.

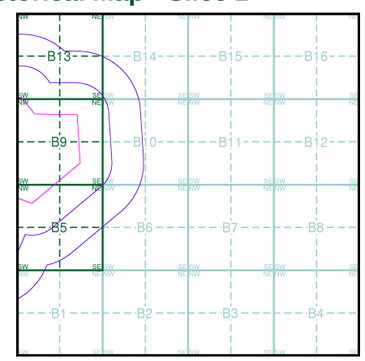
Map Name(s) and Date(s)

TL04SW
1990
1:10,000

TL03NW
1990
1:10,000

TL03NE
1991
1:10,000

Historical Map - Slice B



Order Details

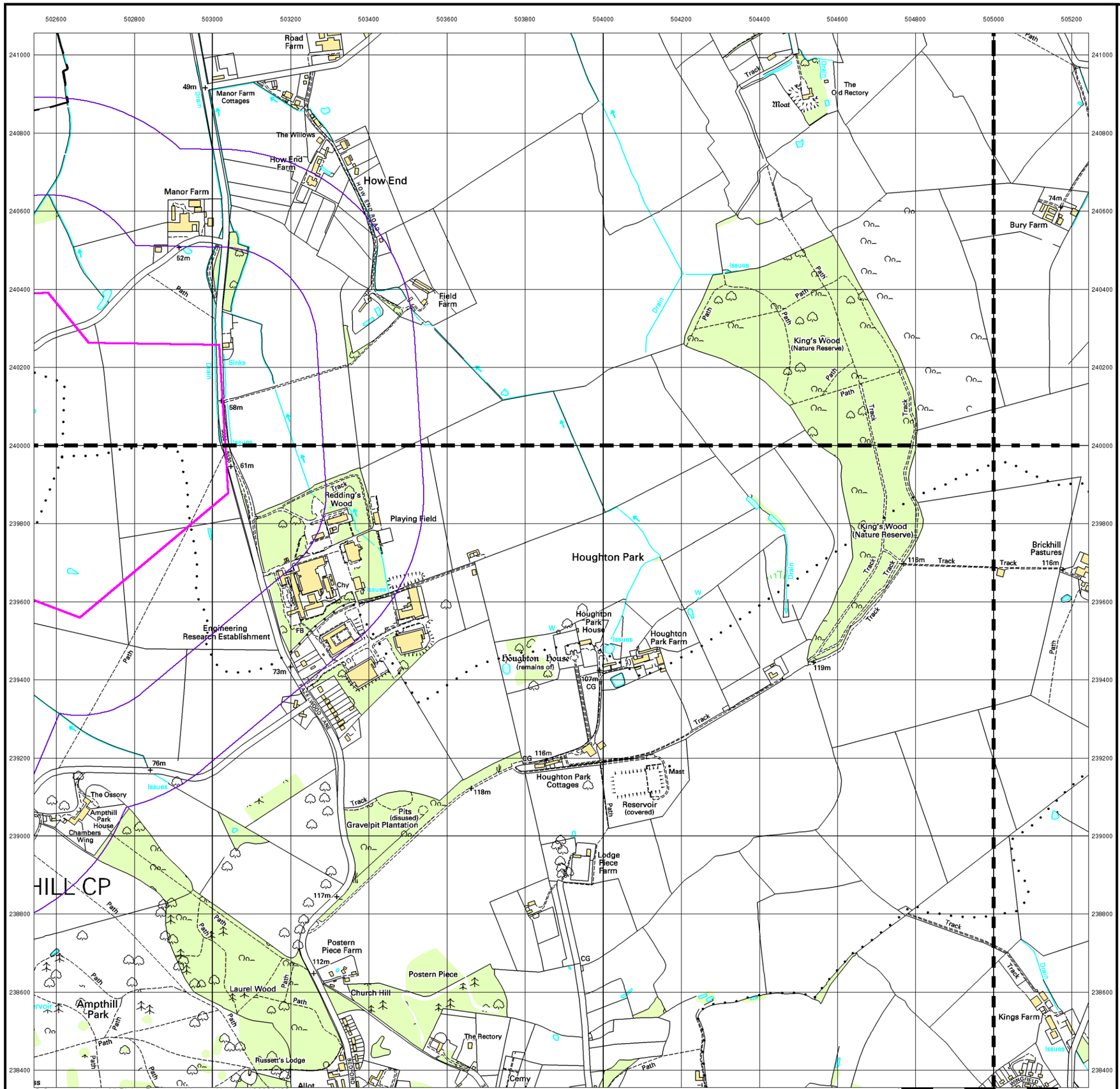
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

10k Raster Mapping

Published 2006

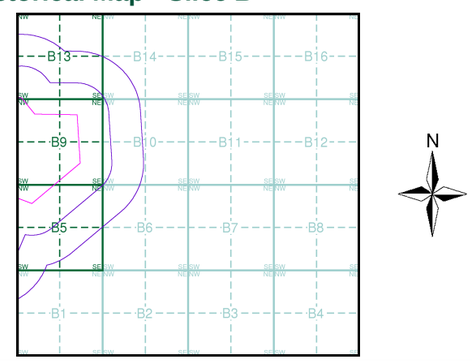
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

TL04SW 2006 1:10,000	TL04SE 2006 1:10,000
TL03NW 2006 1:10,000	TL03NE 2006 1:10,000

Historical Map - Slice B



Order Details

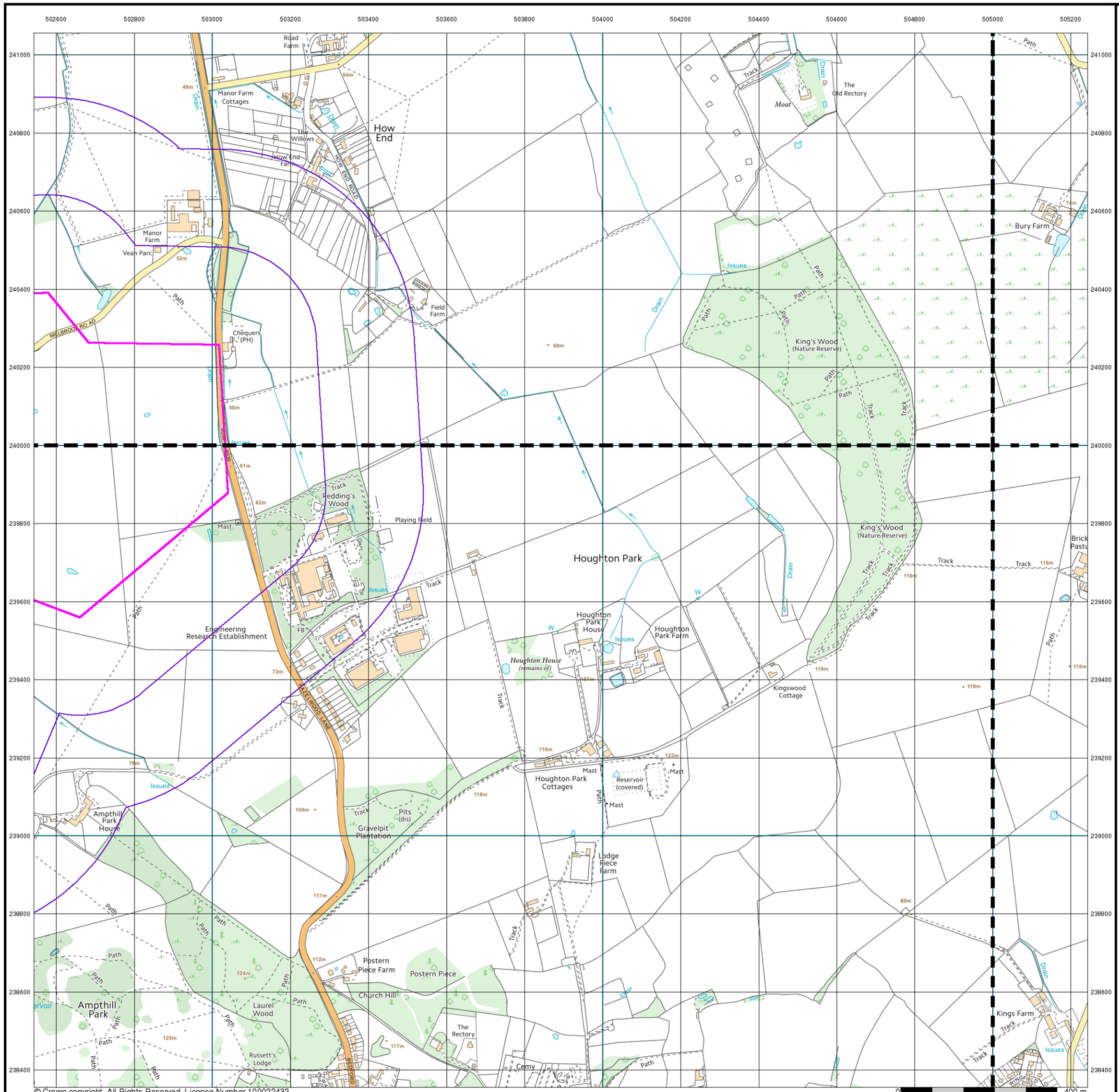
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

VectorMap Local

Published 2014

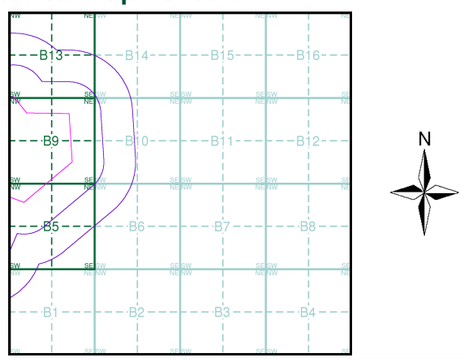
Source map scale - 1:10,000

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)

TL04SW 2014 Variable	TL04SE 2014 Variable
TL03NW 2014 Variable	TL03NE 2014 Variable

Historical Map - Slice B



Order Details

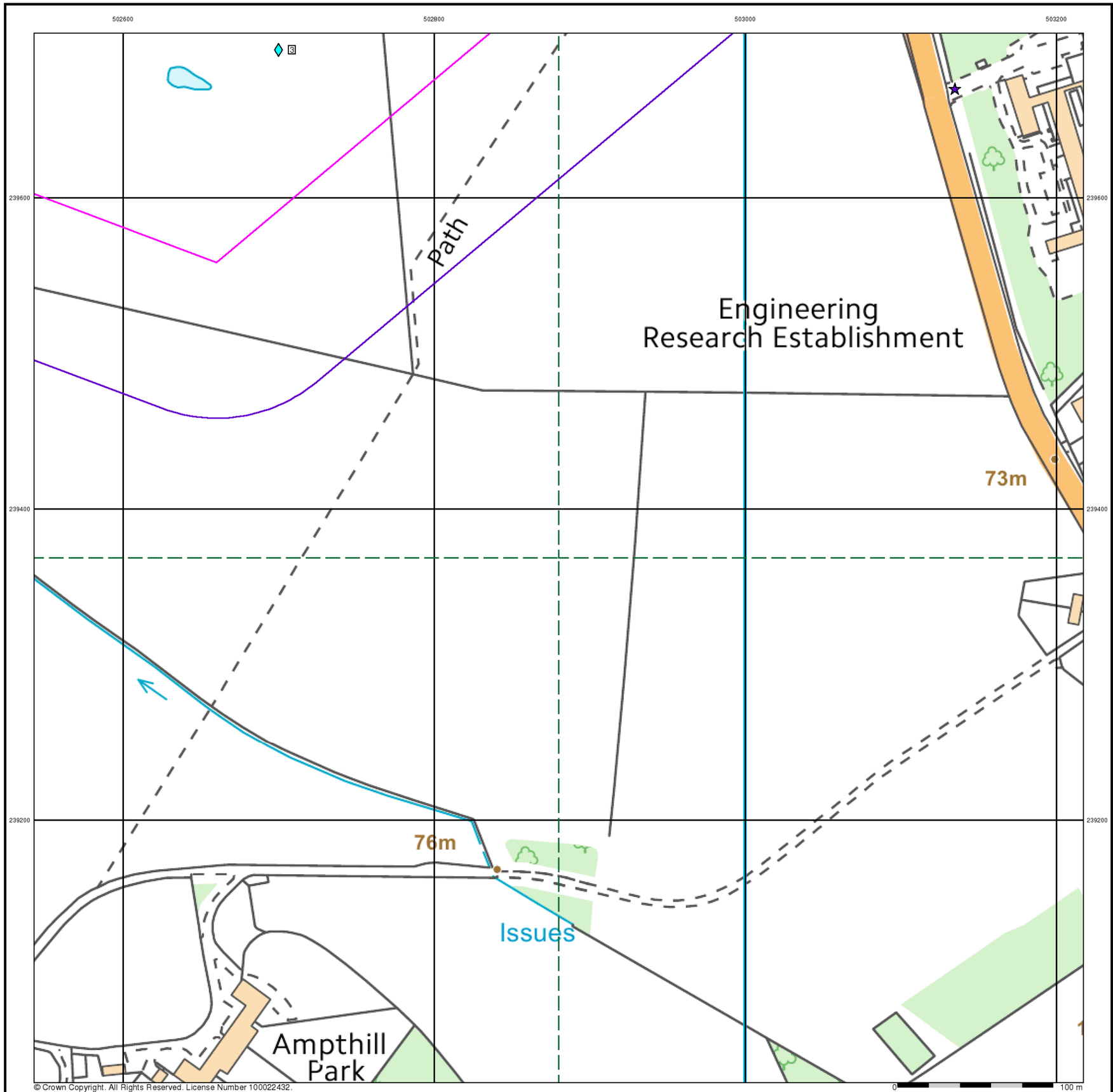
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

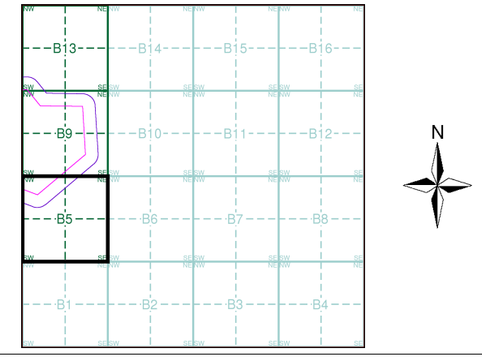
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment B5



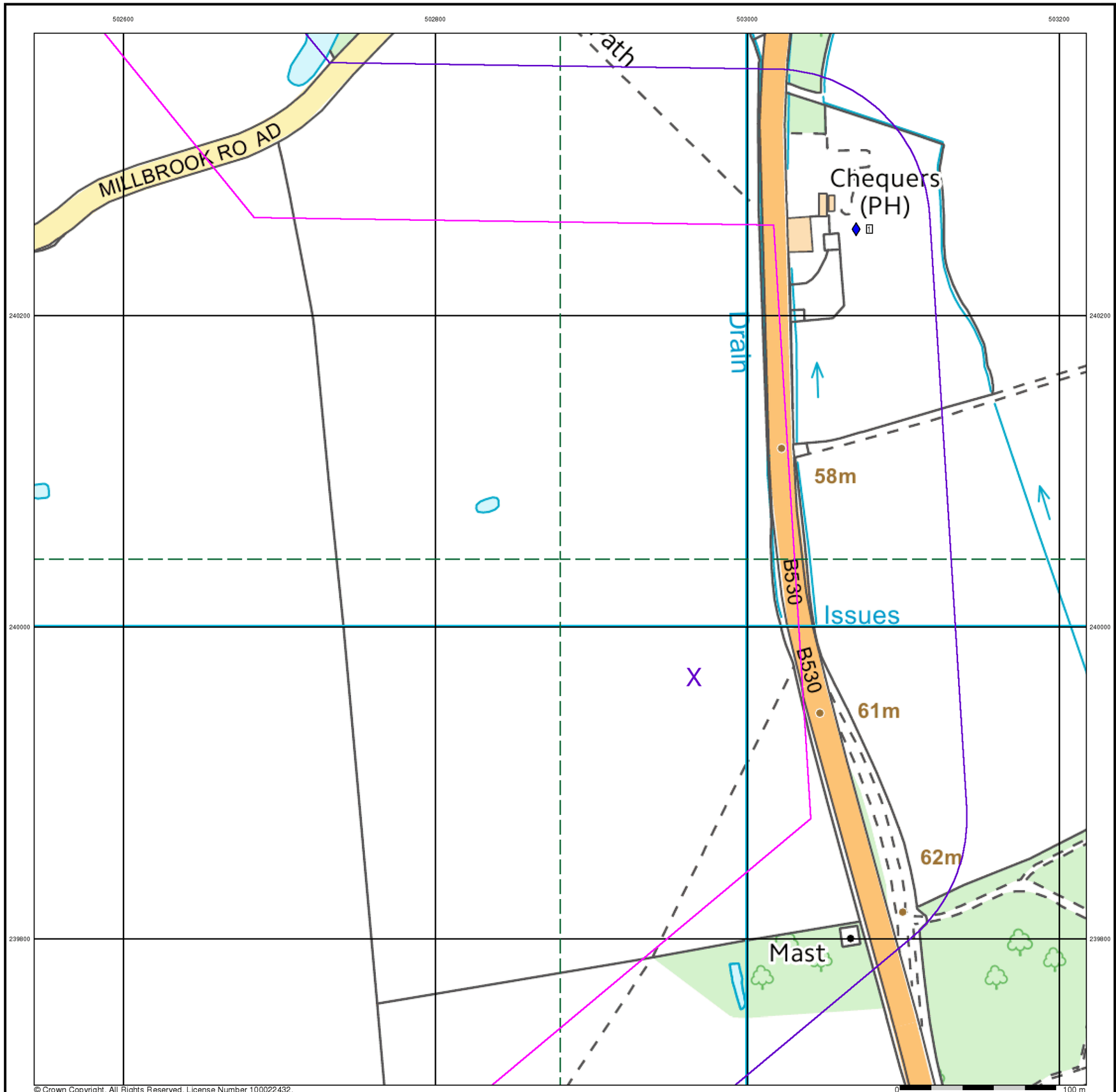
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

BGS Recorded Mineral Site

Industrial Land Use

Contemporary Trade Directory Entry
Fuel Station Entry

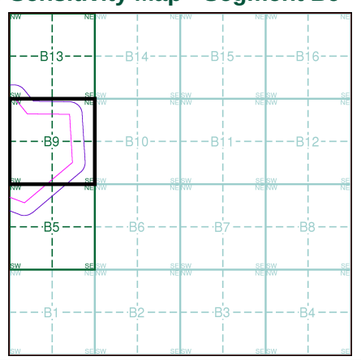
Waste

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
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

Hazardous Substances

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

Site Sensitivity Map - Segment B9



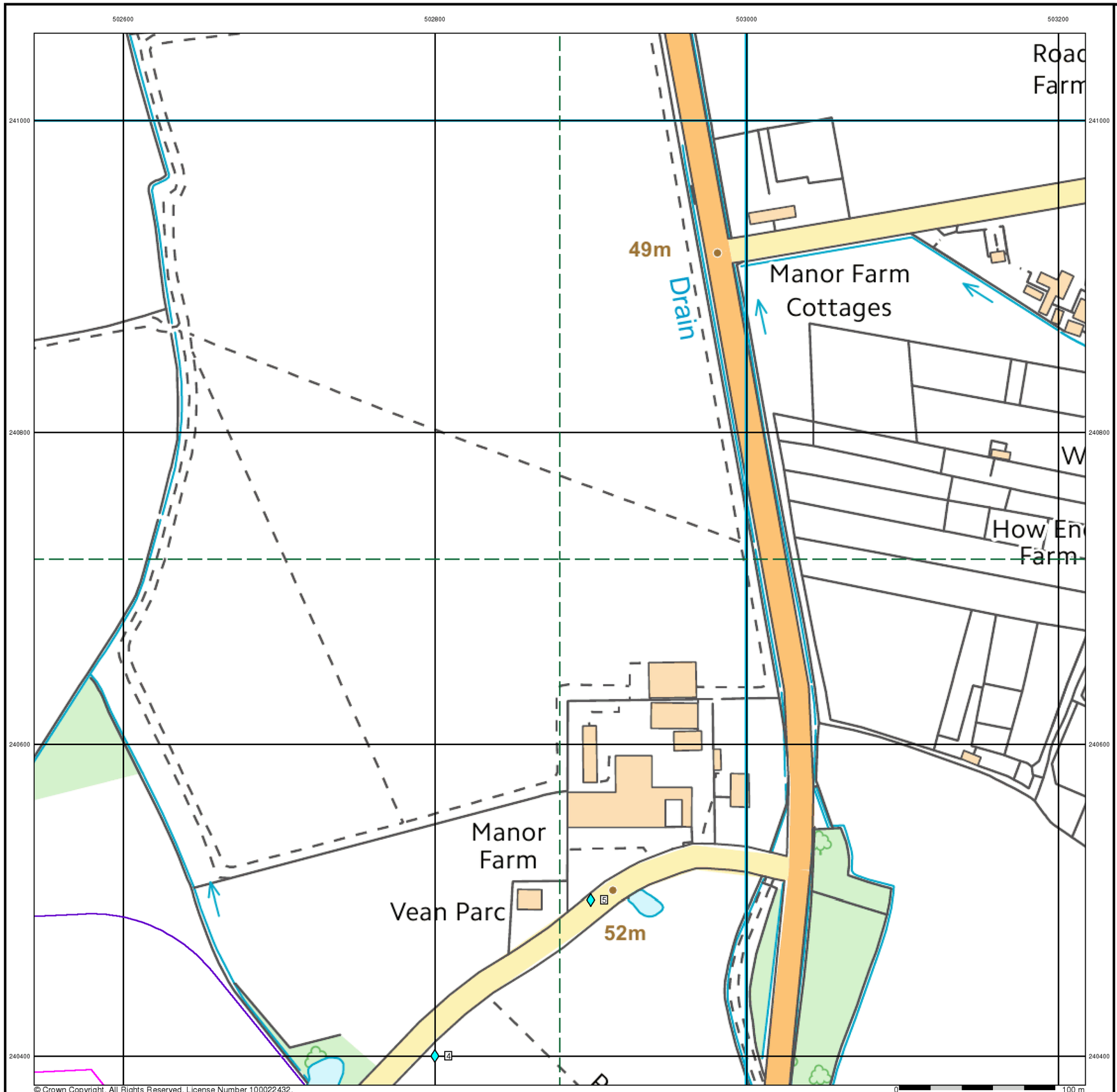
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

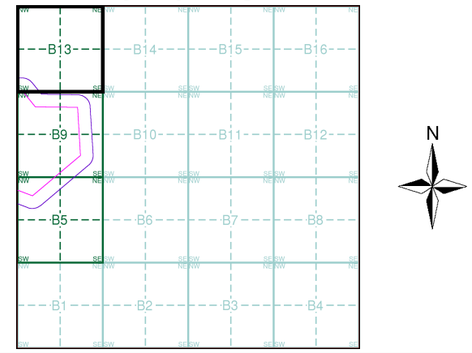
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment B13



Order Details

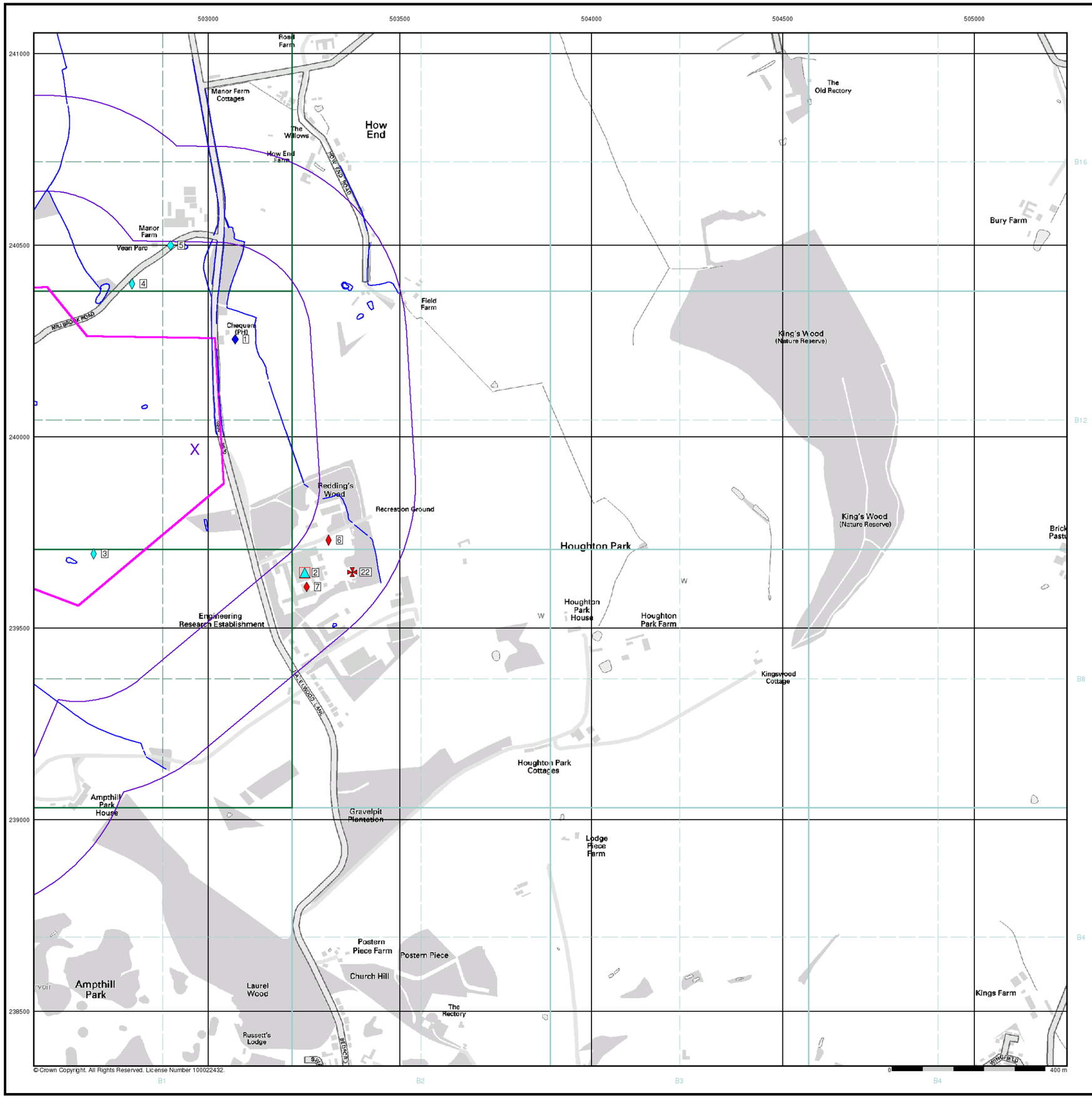
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

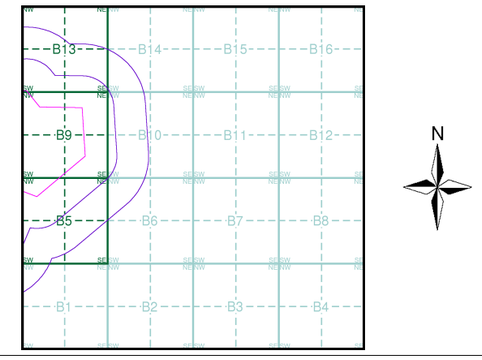
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Slice B



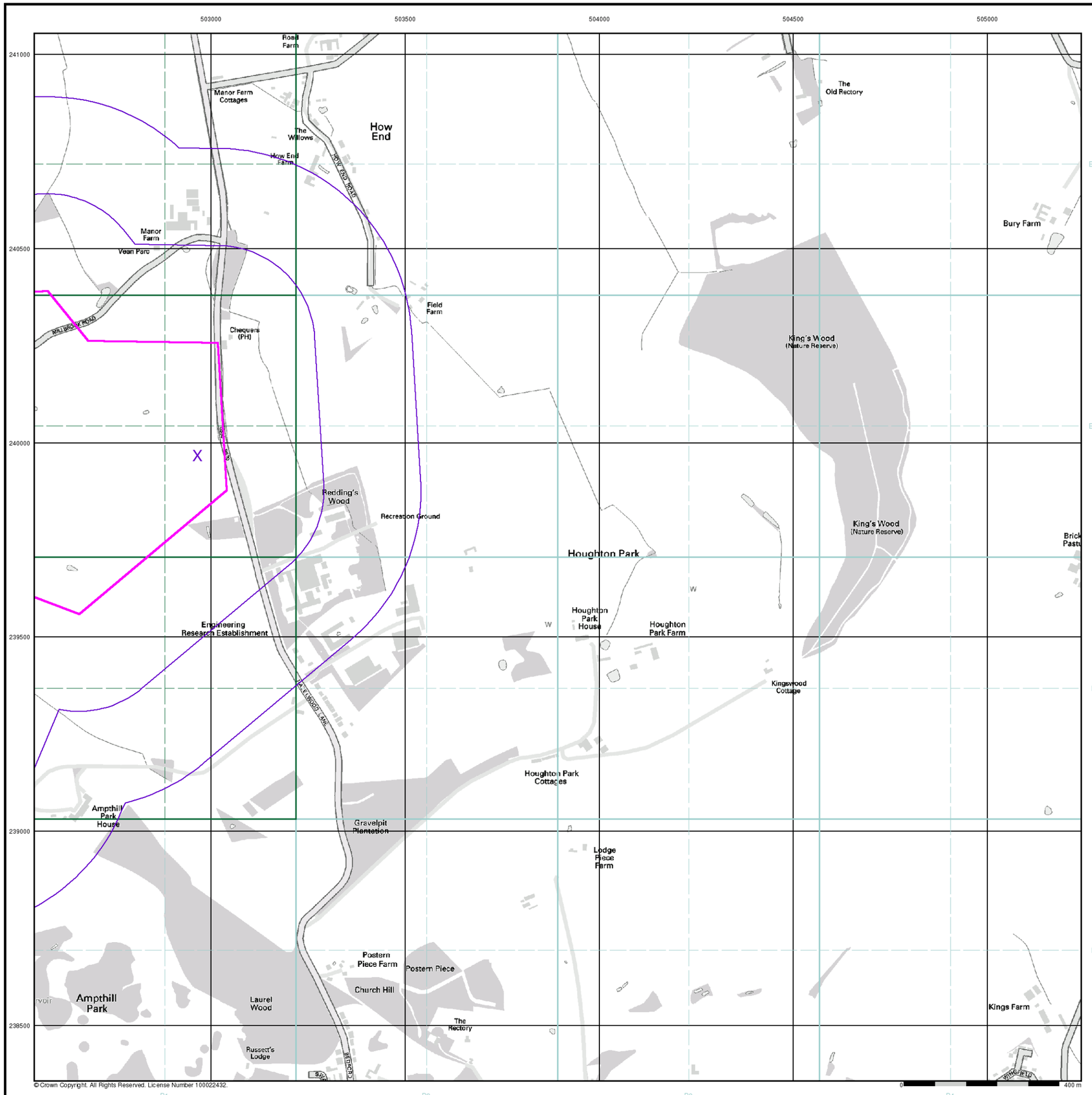
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



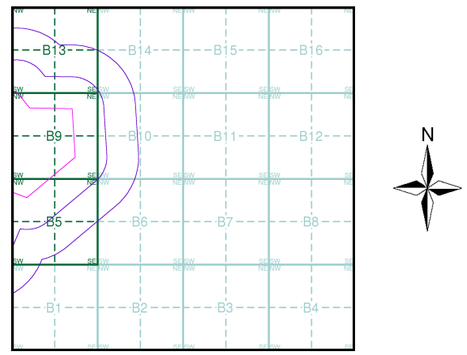
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice B



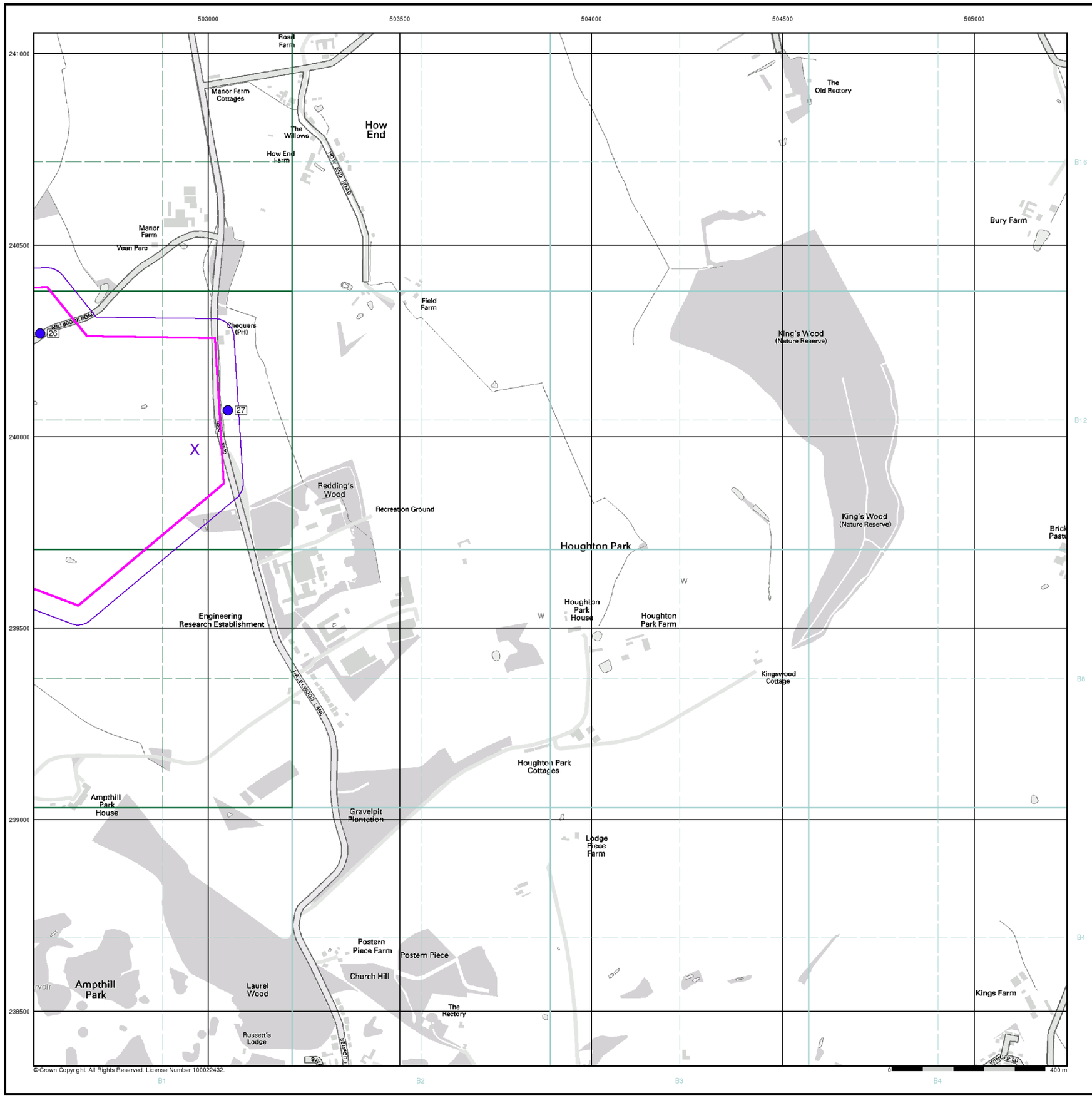
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



General

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

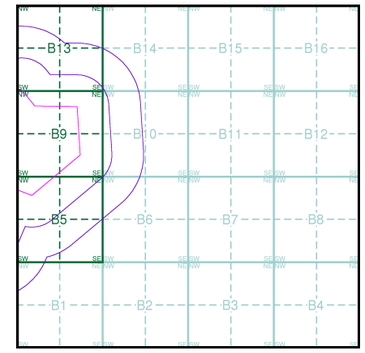
Agency and Hydrological (Boreholes)

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

For Borehole information please refer to the Borehole datasheet 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 B

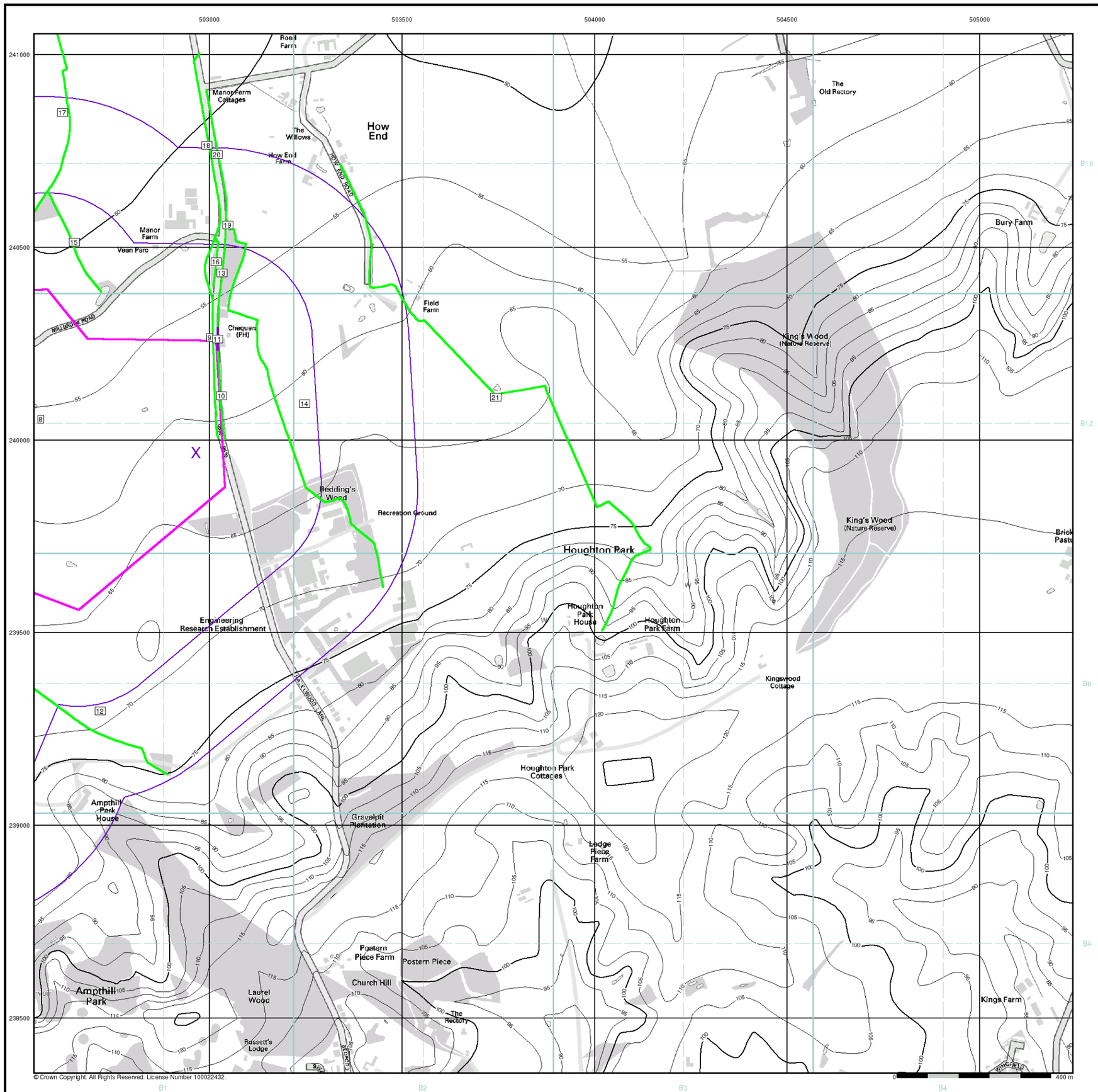


Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby



General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- 8 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

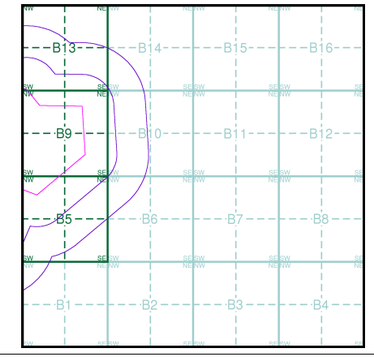
Master Contour 100

Spot Height *167.3

MLWV Mean Low Water

MHWV Mean High Water

EA/NRW Detailed River Network Map - Slice B



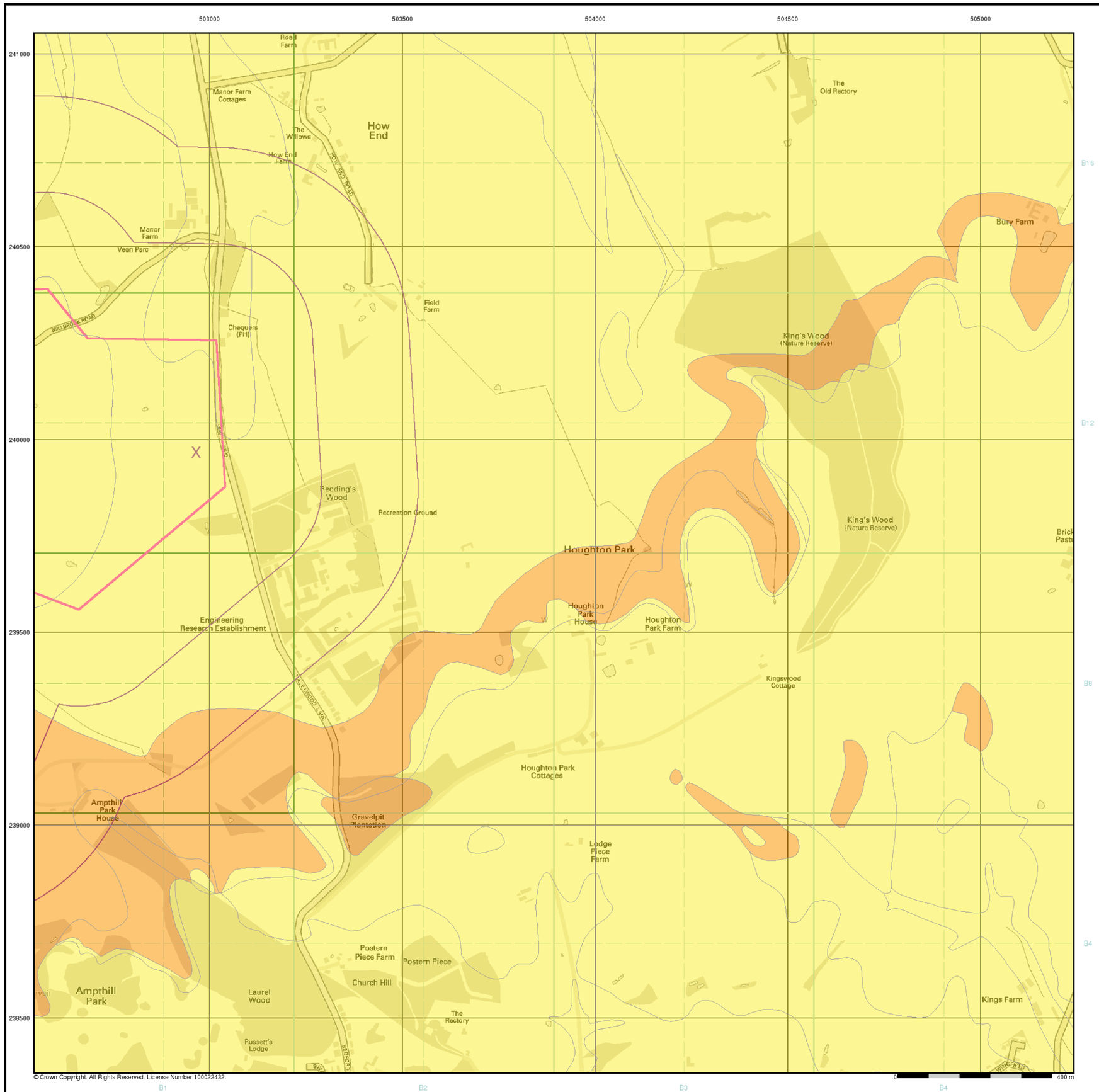
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

General

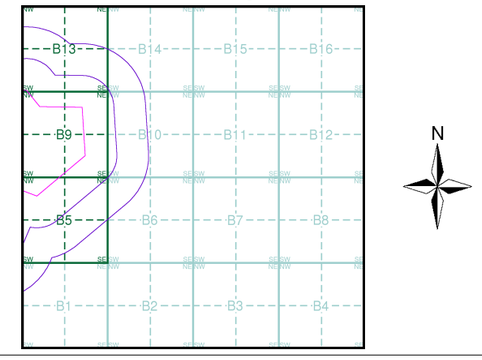
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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 B



Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

General

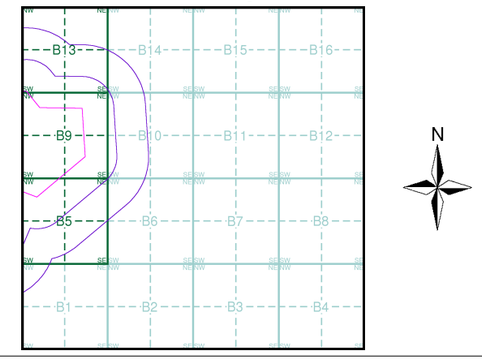
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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 B



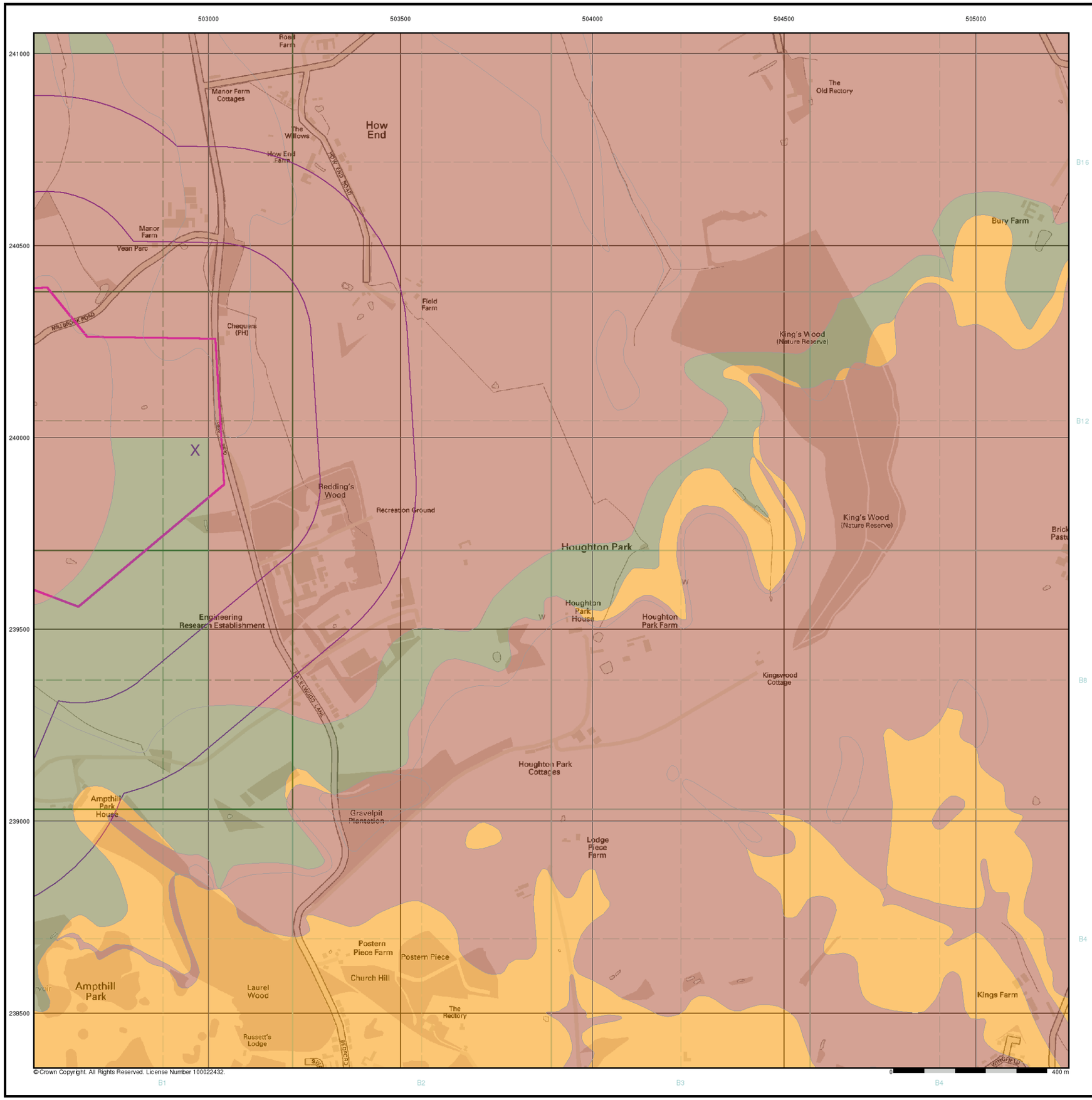
Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



General

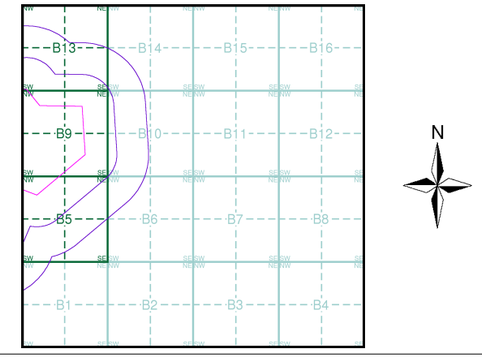
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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 B



Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

General

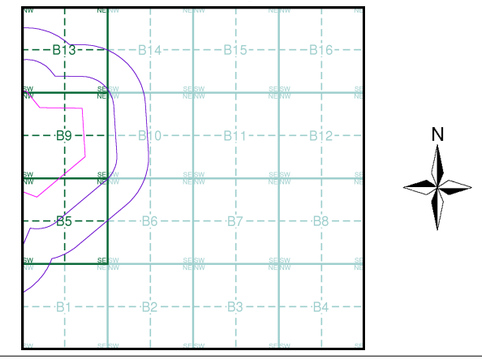
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- < 150
- 150 - 300
- 300 - 600
- 600 - 900
- > 900

Estimated Soil Chemistry Lead - Slice B



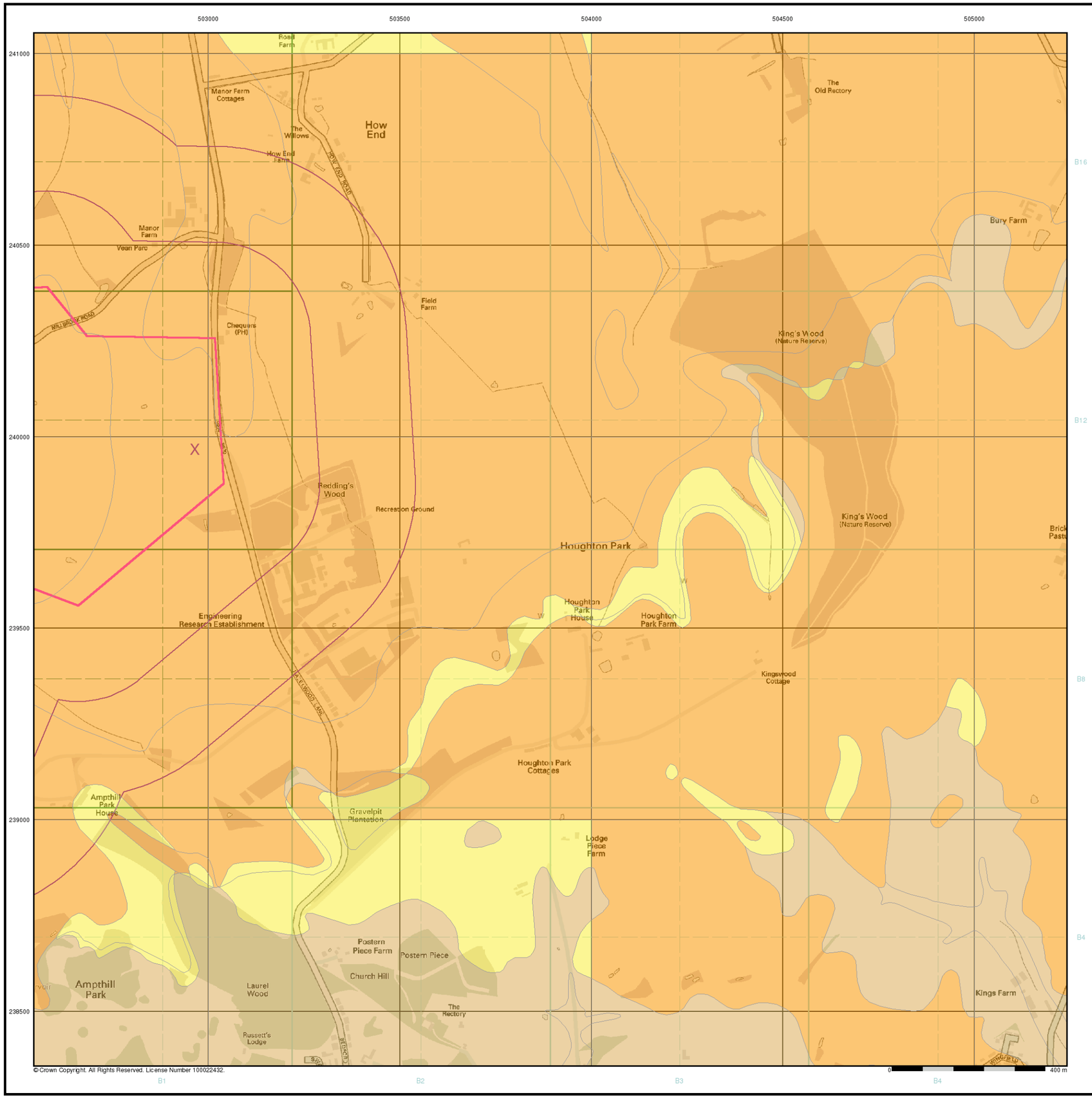
Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



B1 B2 B3 B4

pba peterbrett

General

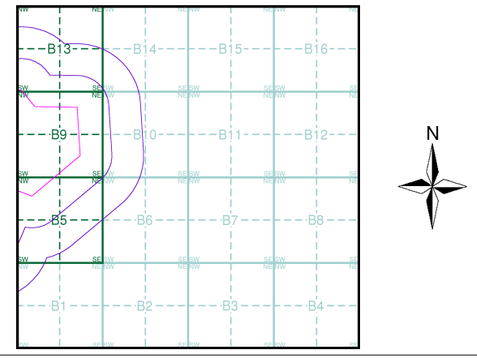
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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 B



Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	500

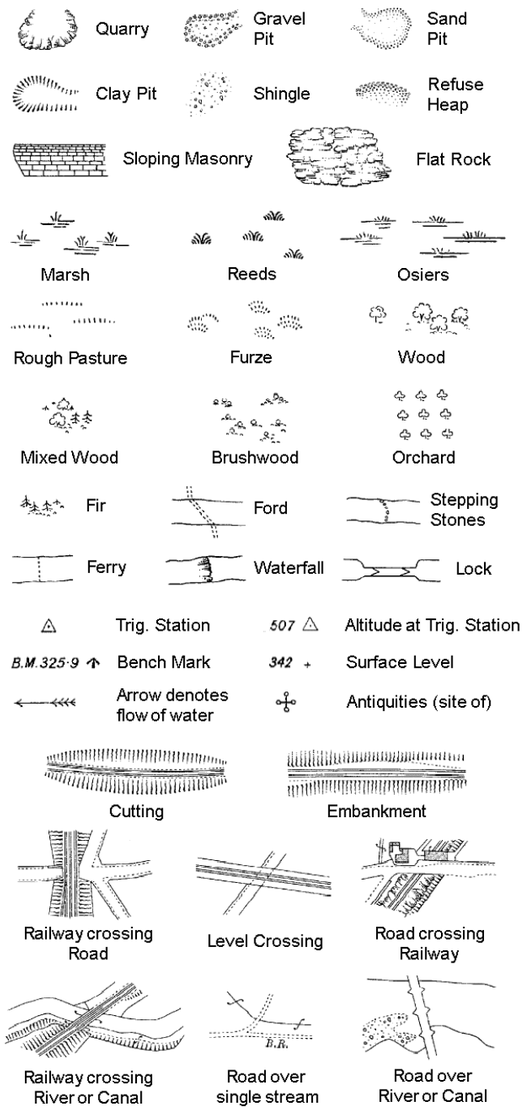
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

Historical Mapping Legends

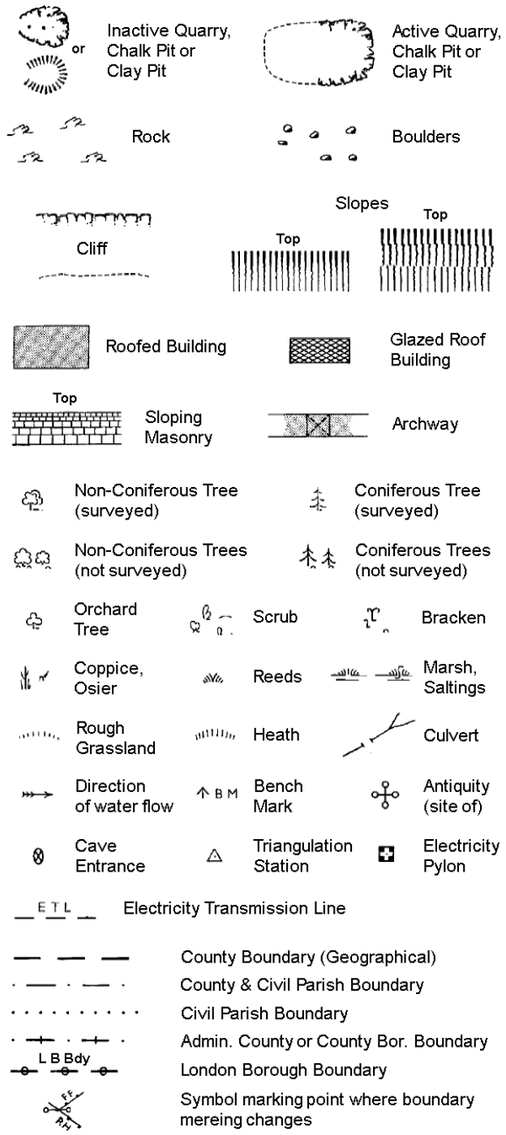
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

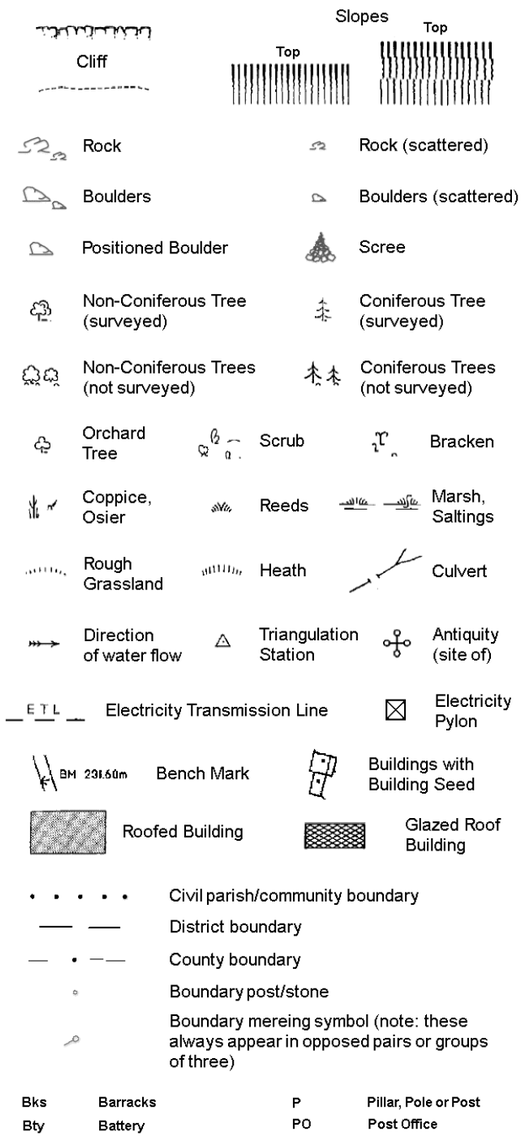
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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)

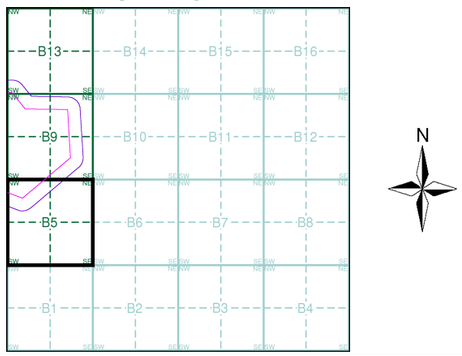
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1972	5
Supply of Unpublished Survey Information	1:2,500	1976	6
Additional SIMs	1:2,500	1984	7
Large-Scale National Grid Data	1:2,500	1993	8

Historical Map - Segment B5



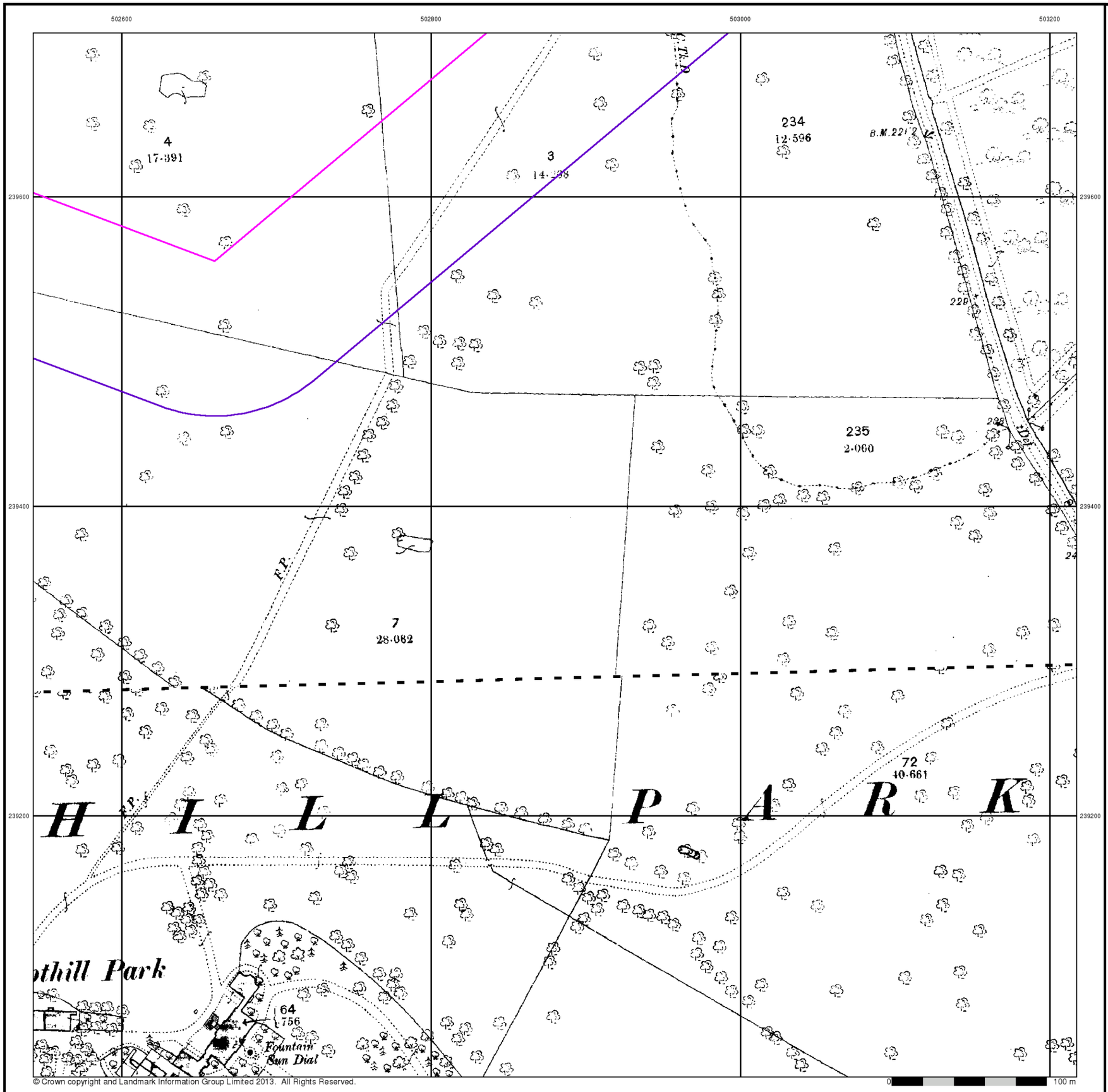
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



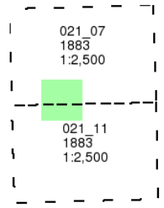
Bedfordshire

Published 1883

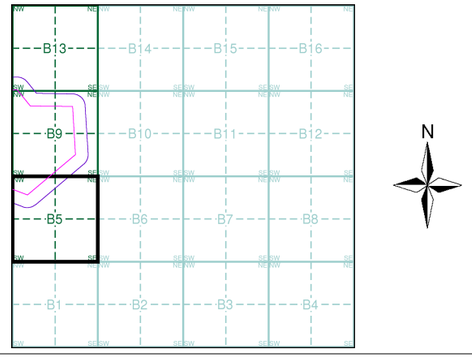
Source map scale - 1:2,500

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 B5



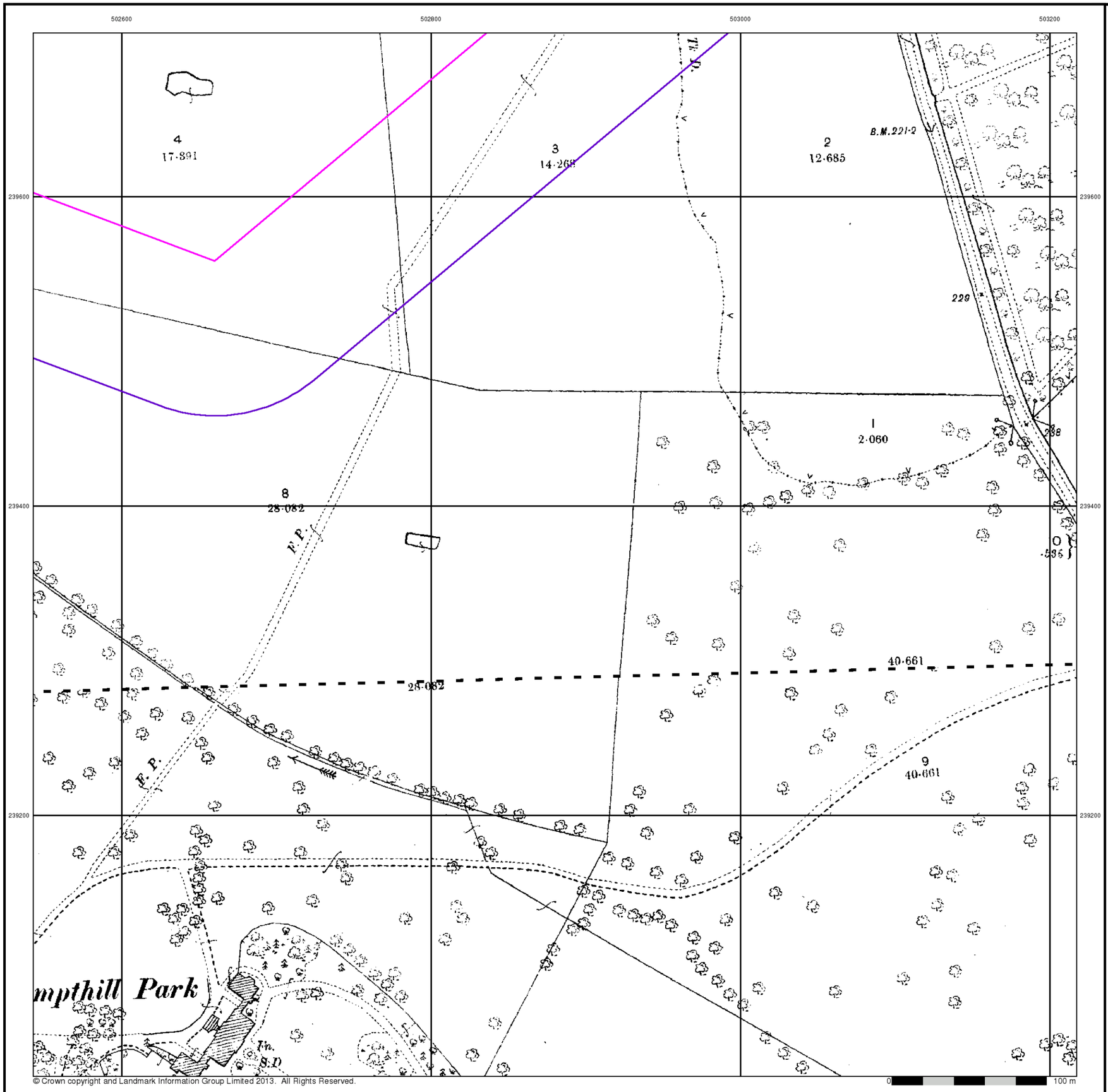
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

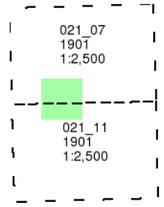
Bedfordshire

Published 1901

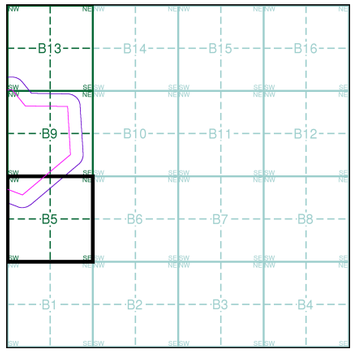
Source map scale - 1:2,500

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 B5



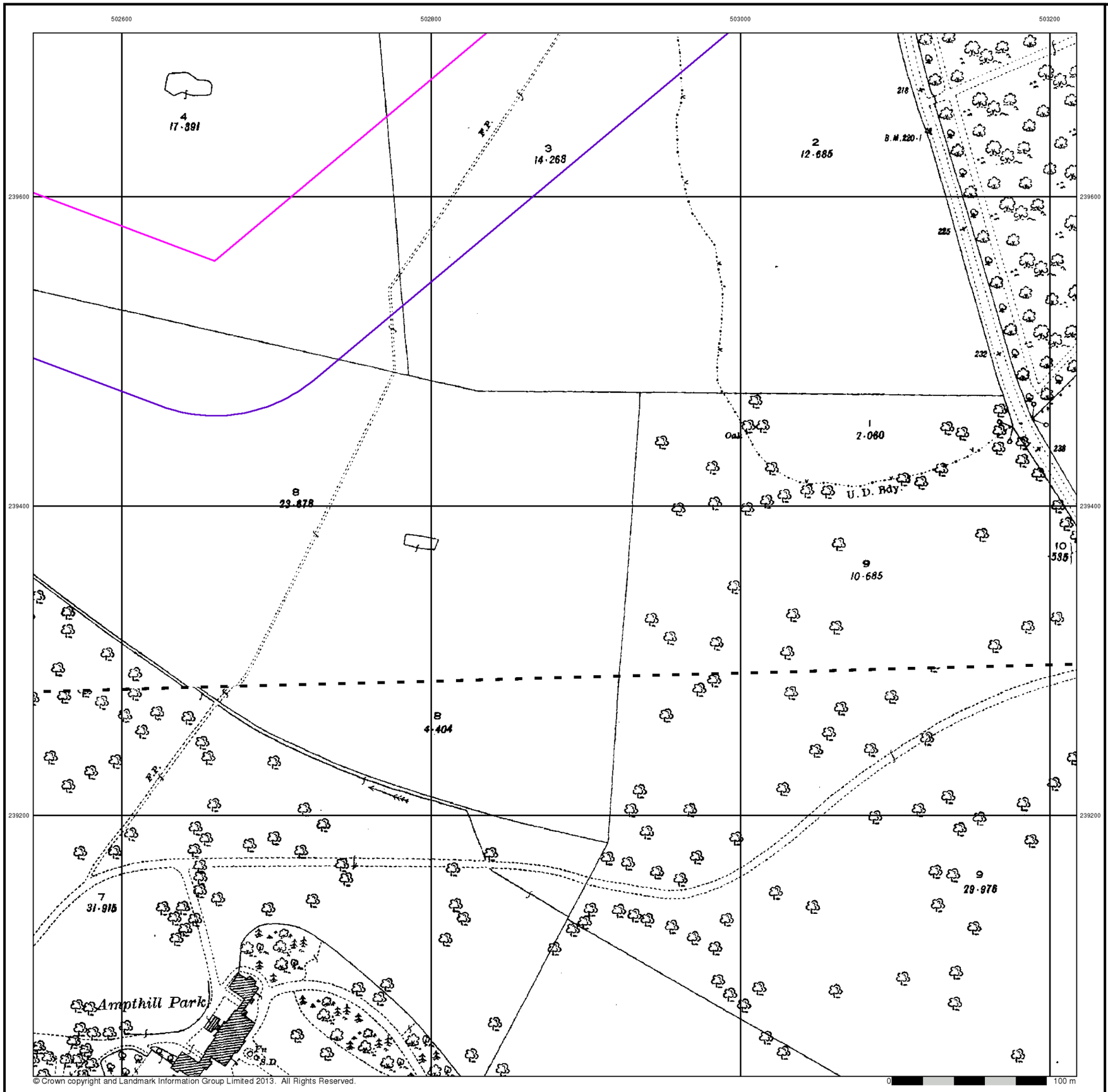
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

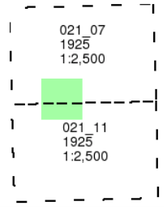
Bedfordshire

Published 1925

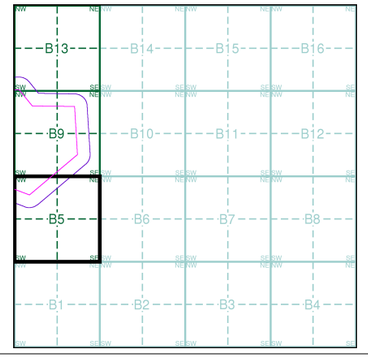
Source map scale - 1:2,500

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 B5



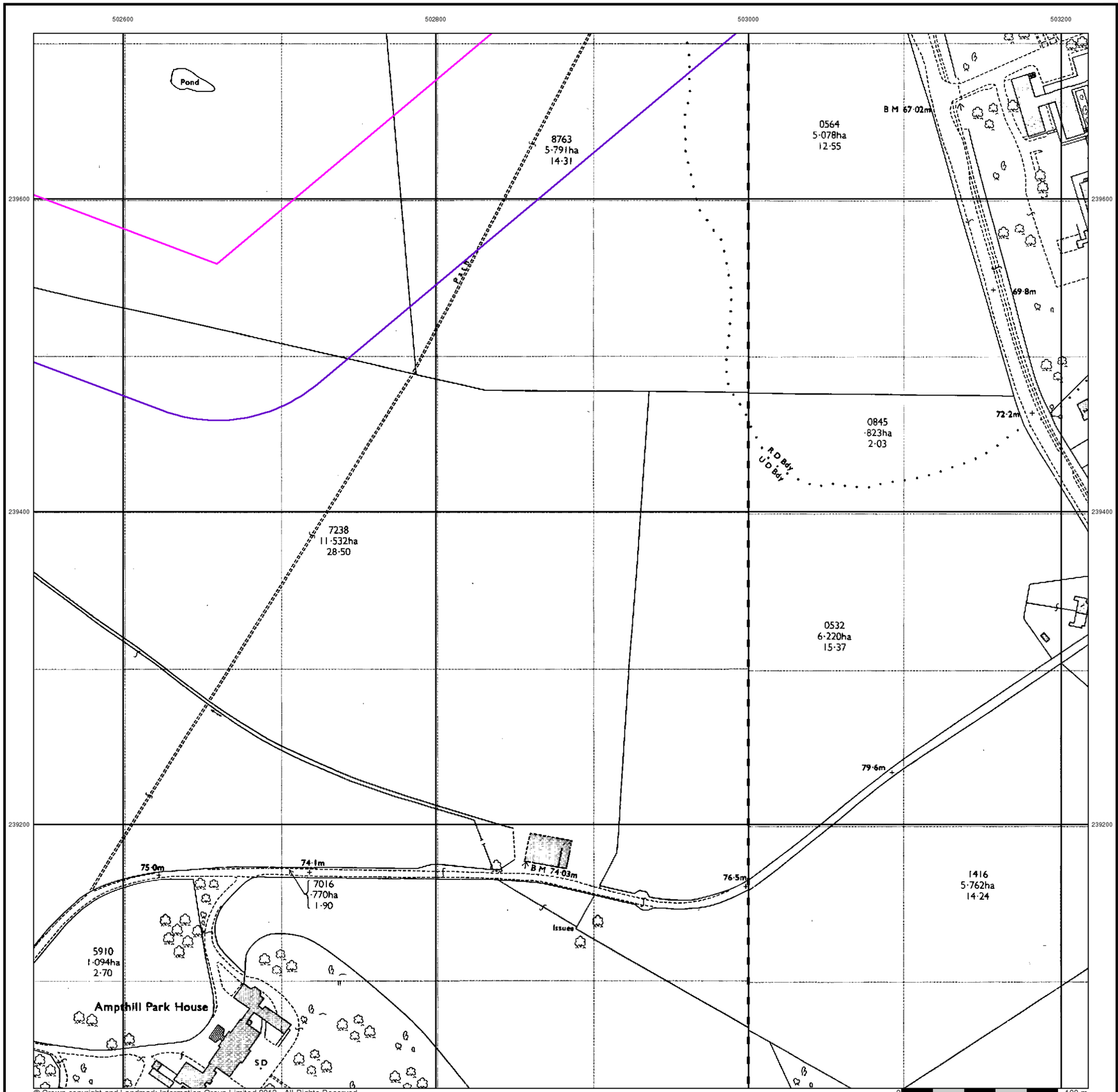
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

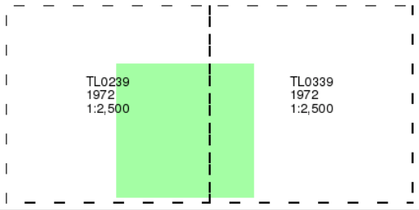
Ordnance Survey Plan

Published 1972

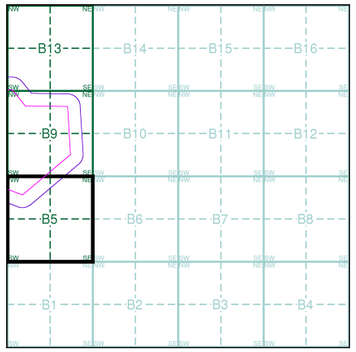
Source map scale - 1:2,500

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 B5



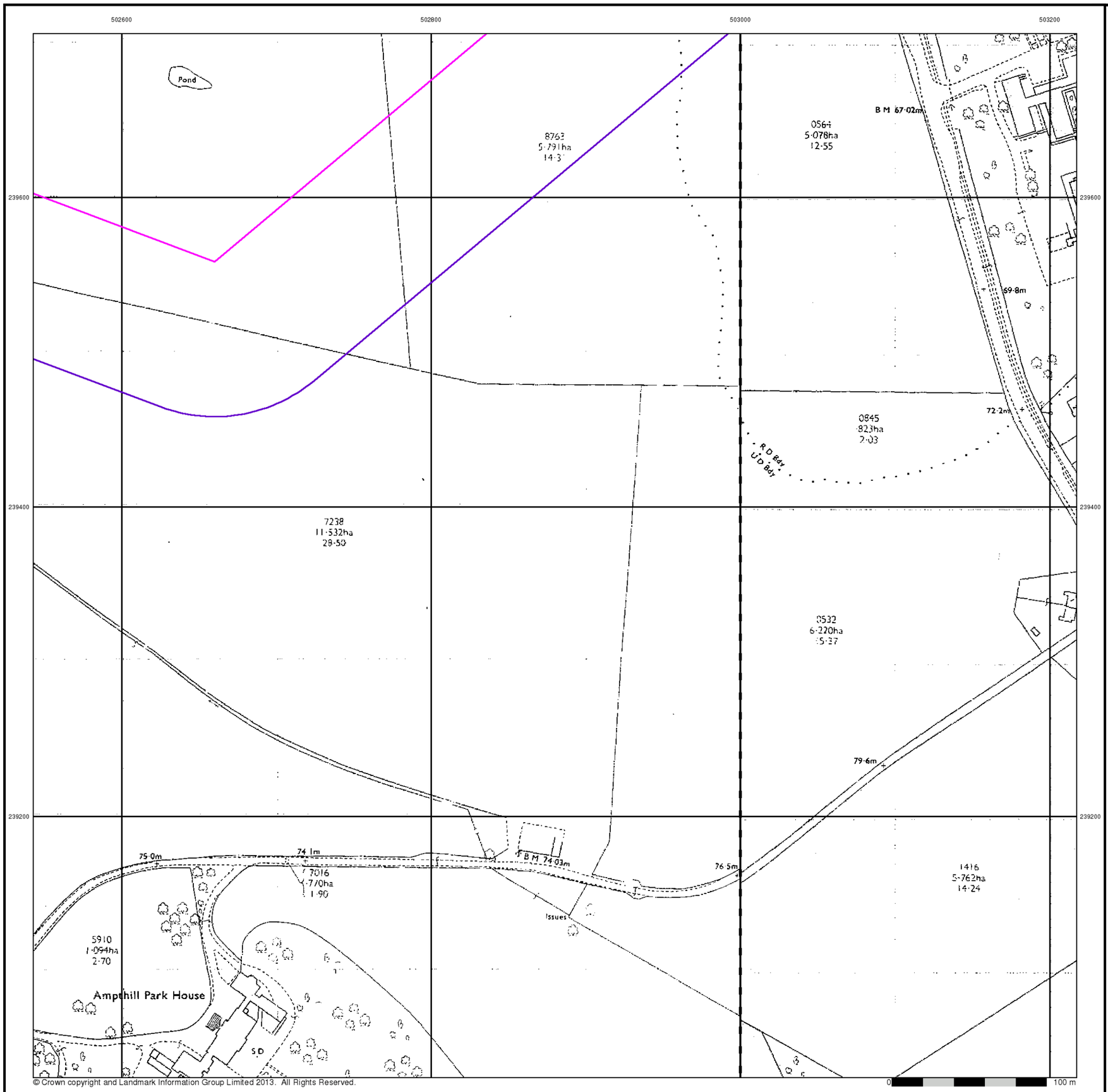
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

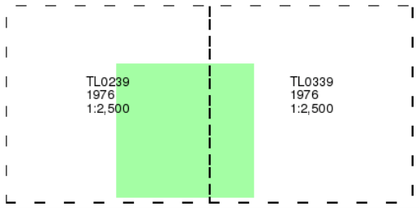
Supply of Unpublished Survey Information

Published 1976

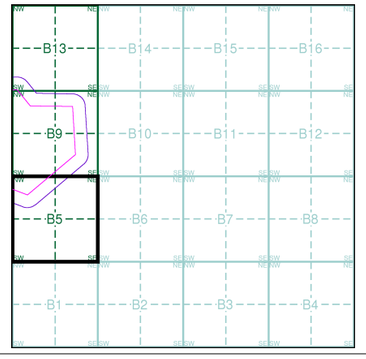
Source map scale - 1:2,500

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 B5



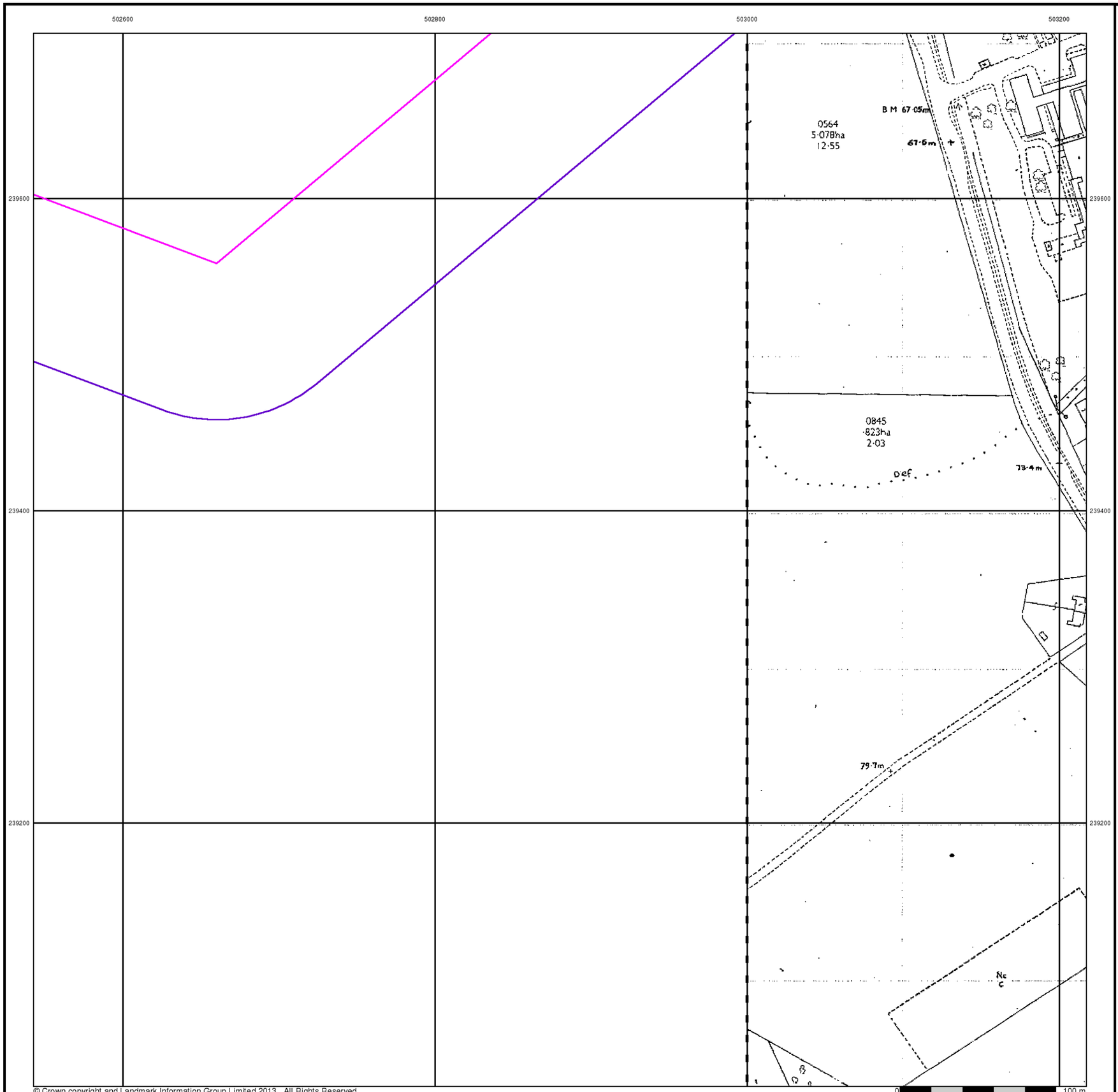
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



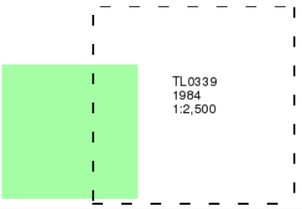
Additional SIMs

Published 1984

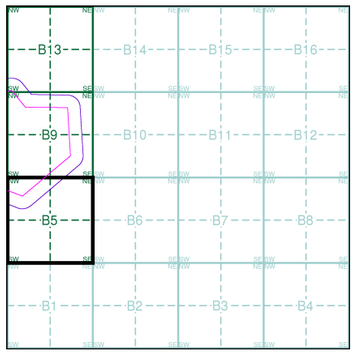
Source map scale - 1:2,500

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 B5



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

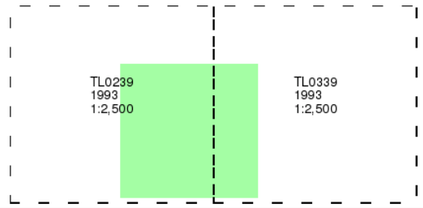
Large-Scale National Grid Data

Published 1993

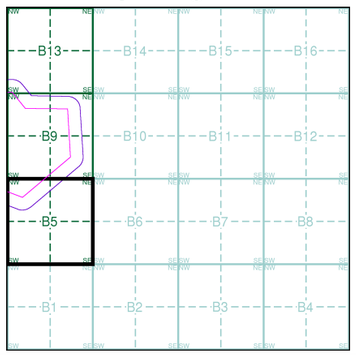
Source map scale - 1:2,500

'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)



Historical Map - Segment B5



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

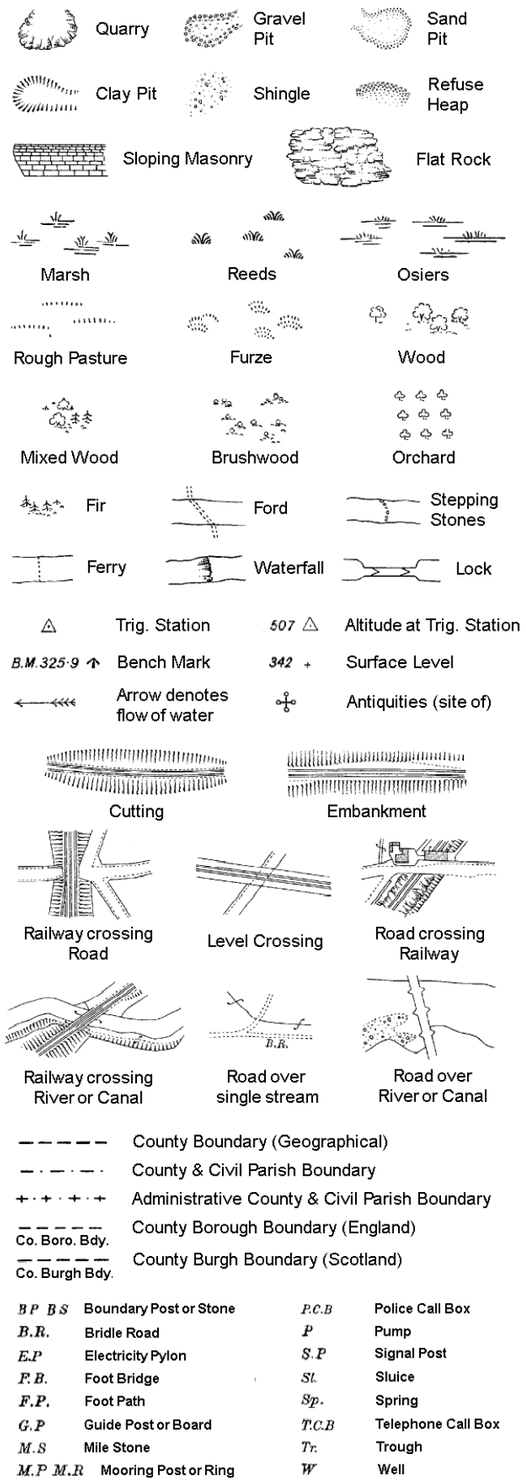
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

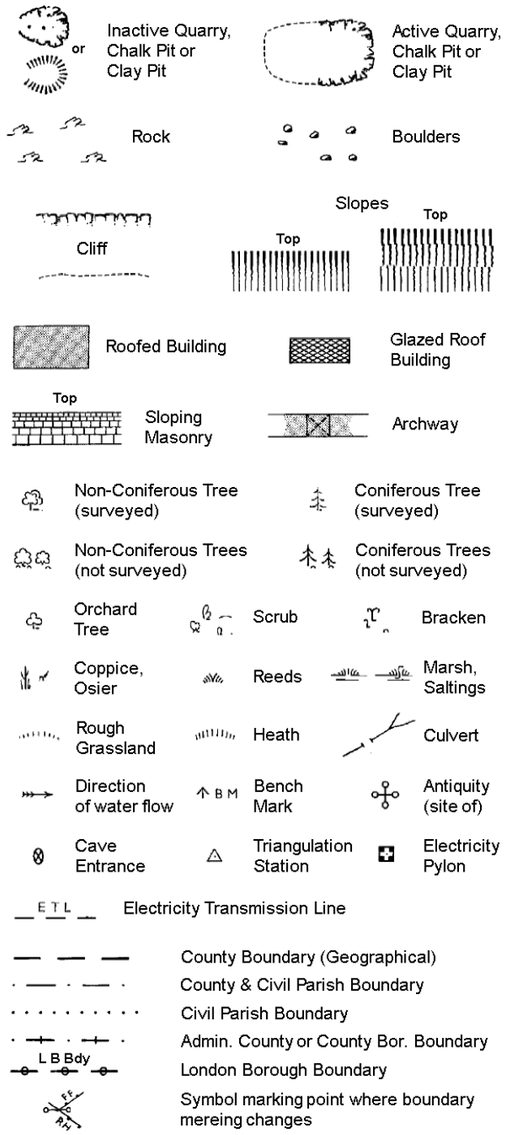
Historical Mapping Legends

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



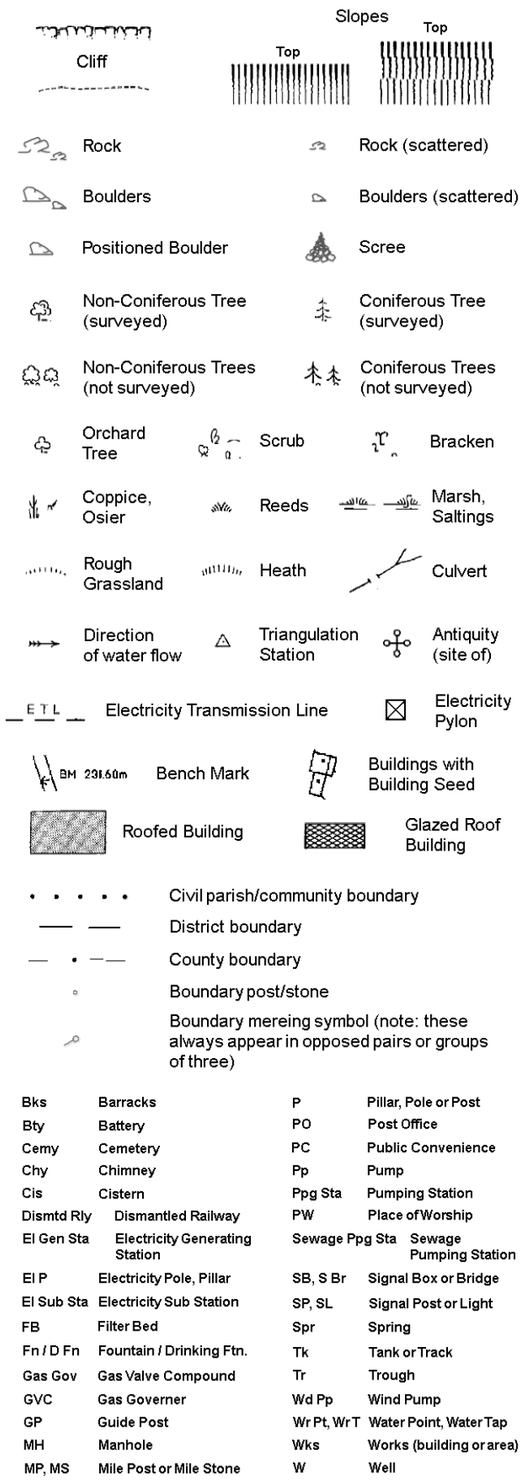
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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

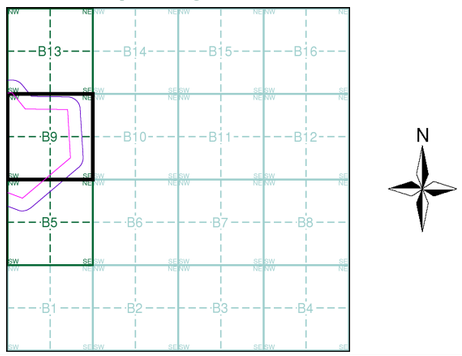


Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Historical Map - Segment B9



Order Details

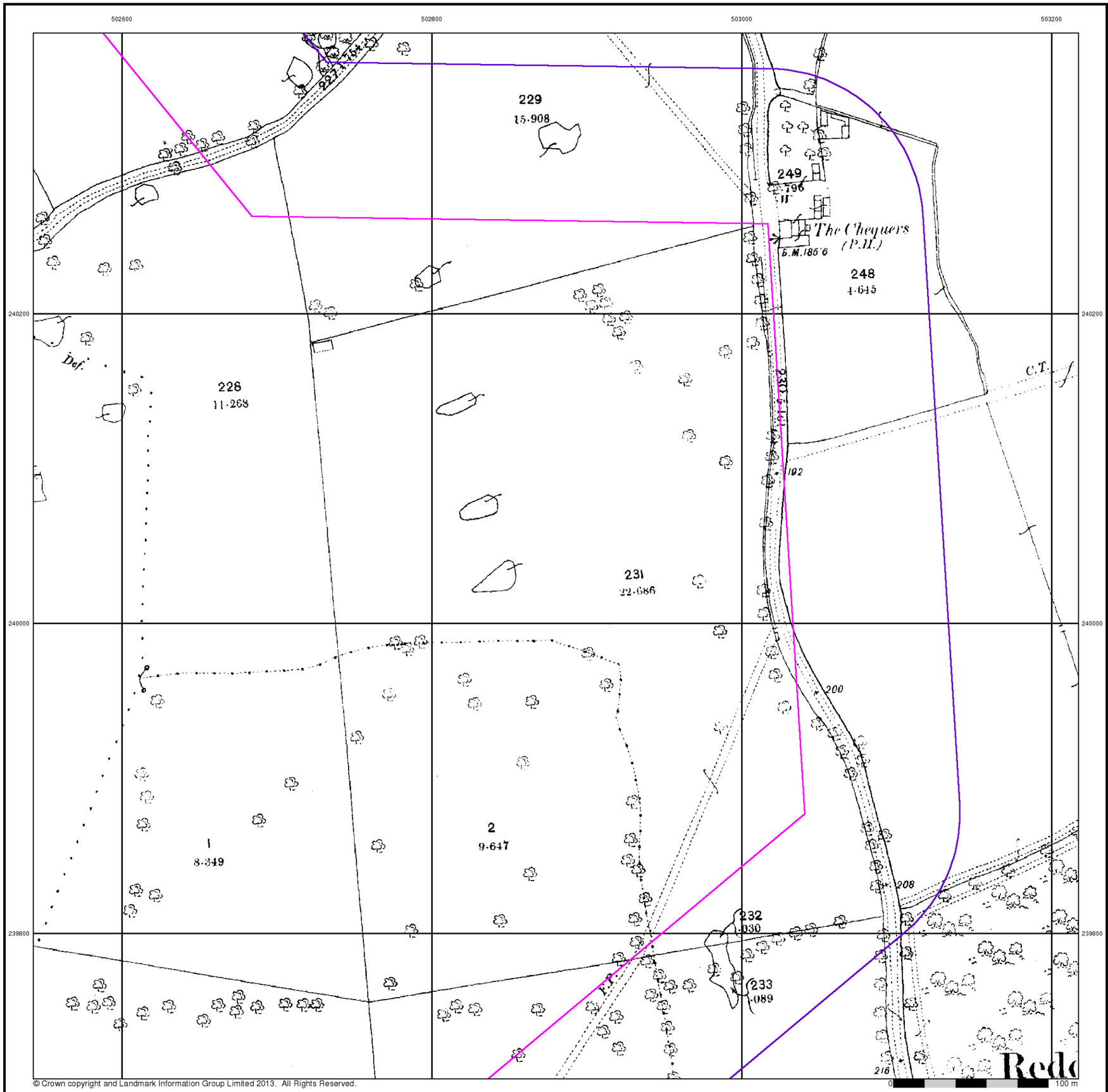
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

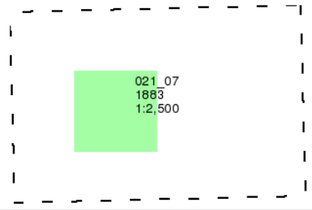
Bedfordshire

Published 1883

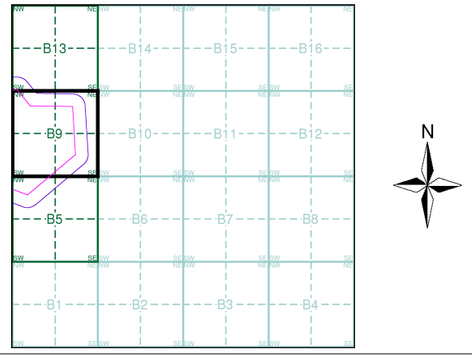
Source map scale - 1:2,500

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 B9



Order Details

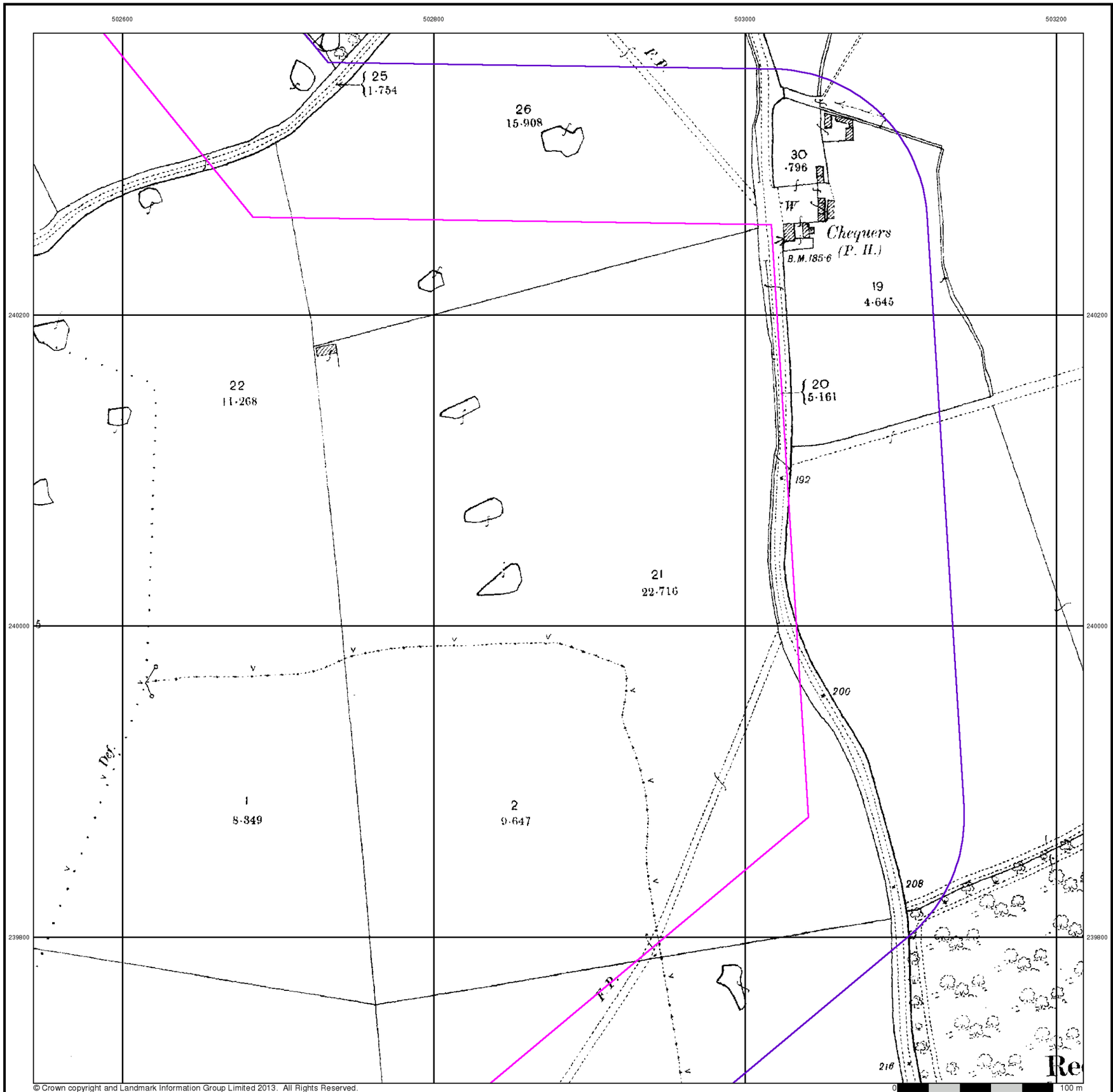
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

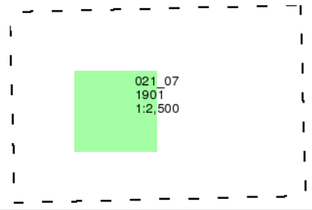
Bedfordshire

Published 1901

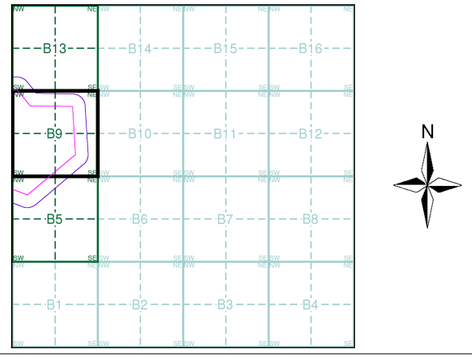
Source map scale - 1:2,500

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 B9



Order Details

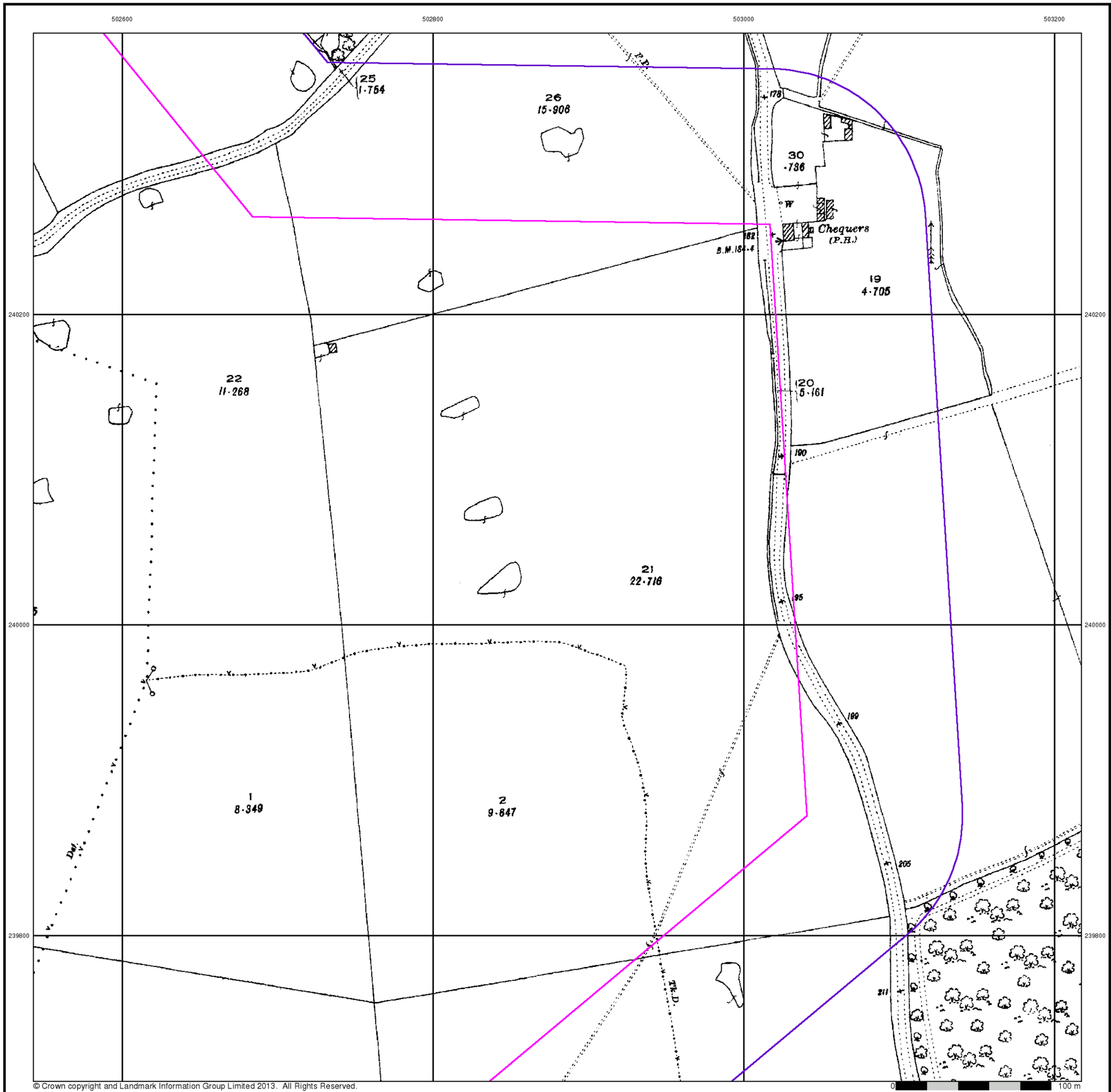
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

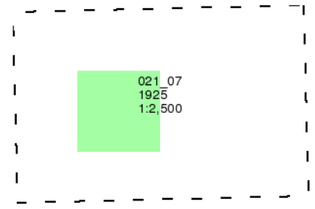
Bedfordshire

Published 1925

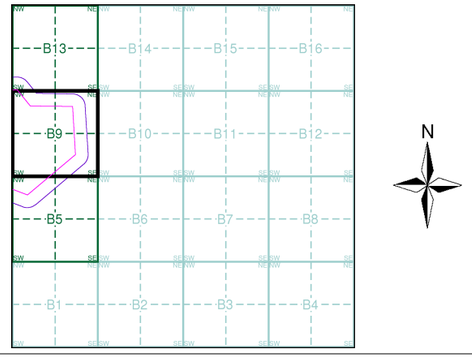
Source map scale - 1:2,500

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 B9



Order Details

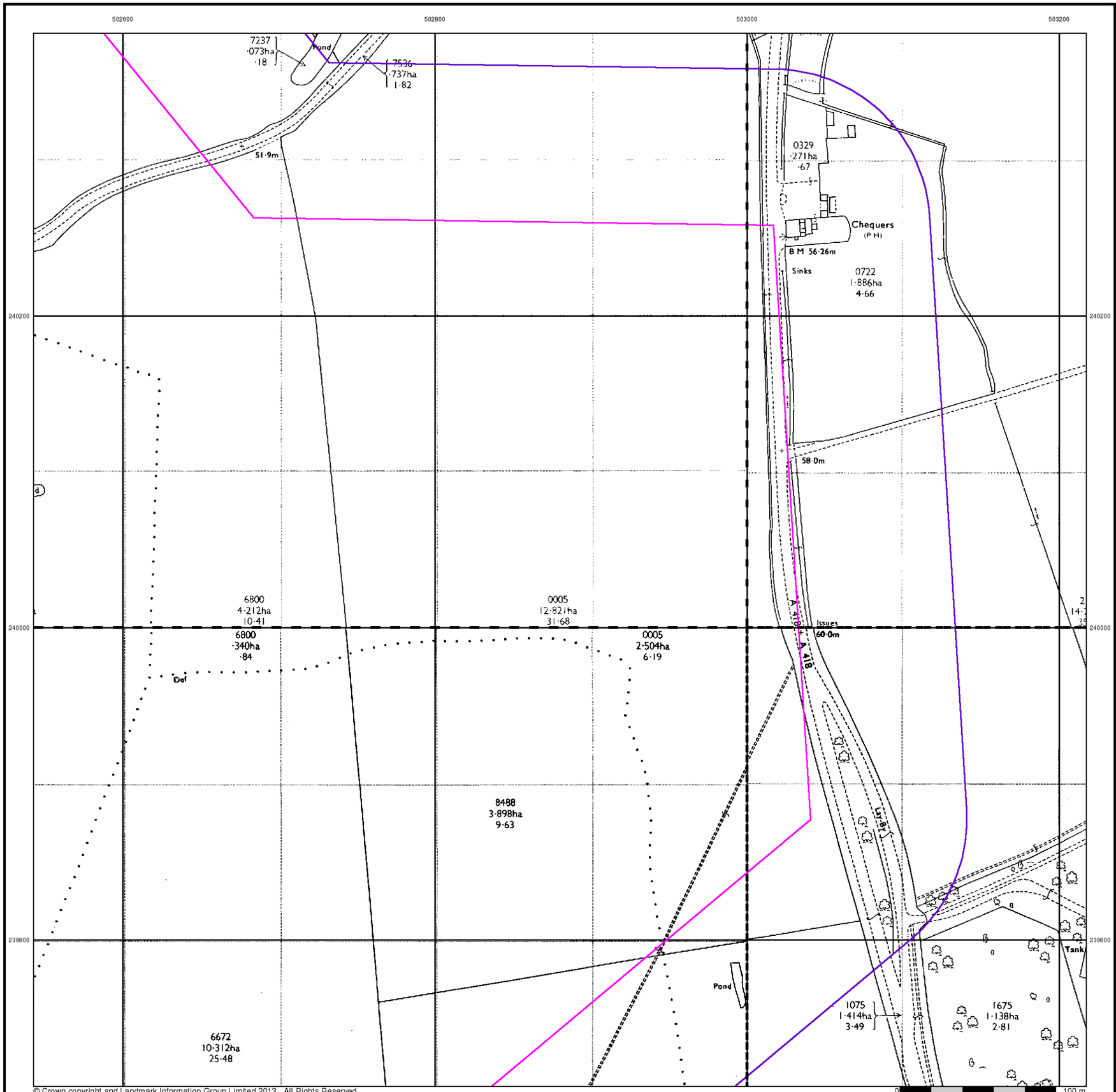
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group

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



pba peterbrett

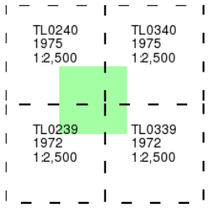
Ordnance Survey Plan

Published 1972 - 1975

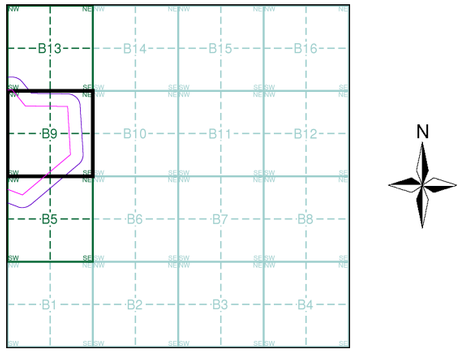
Source map scale - 1:2,500

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 B9



Order Details

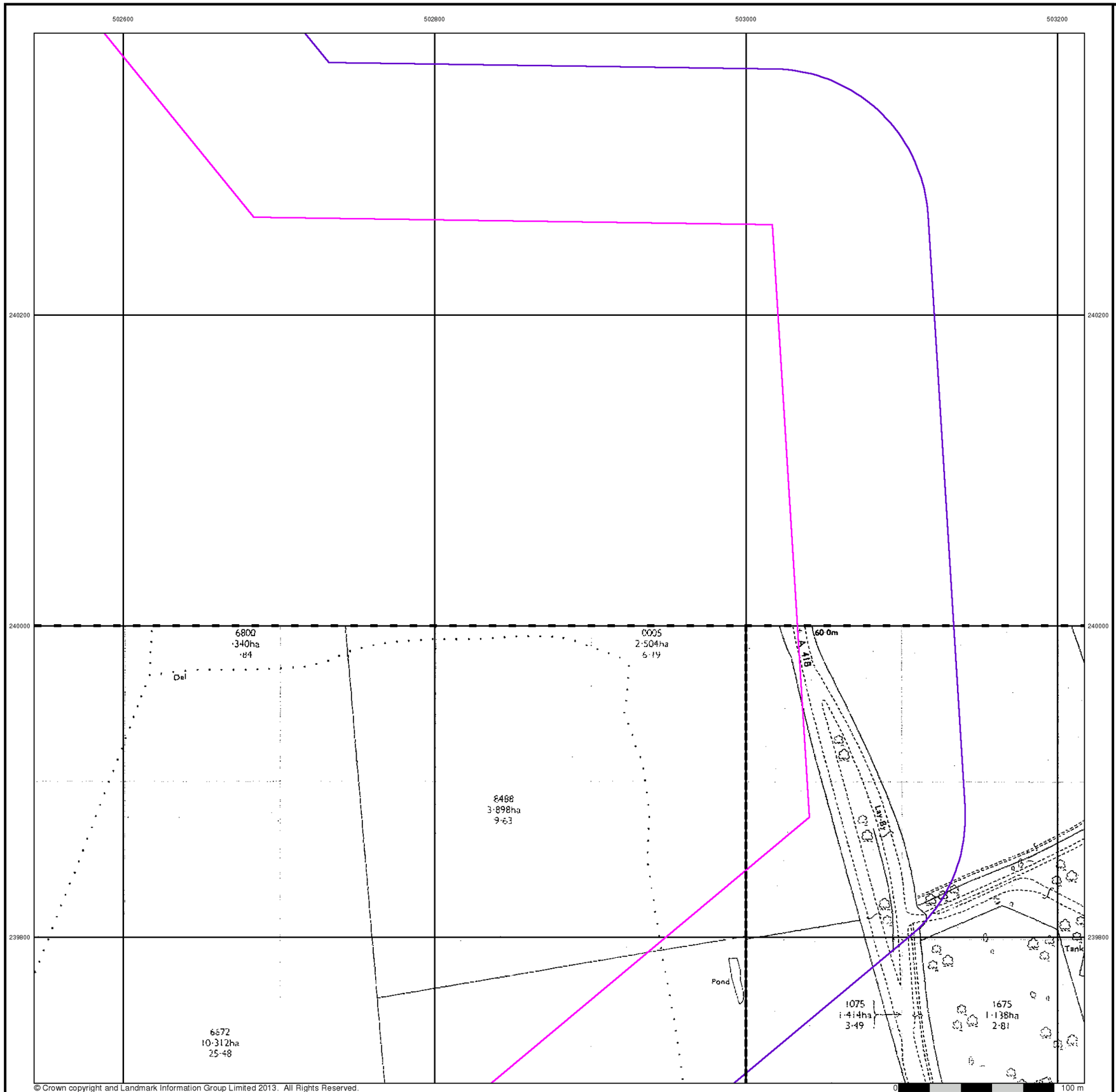
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



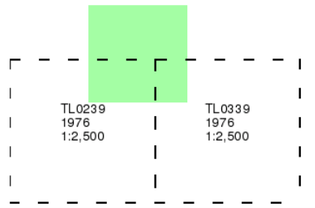
Supply of Unpublished Survey Information

Published 1976

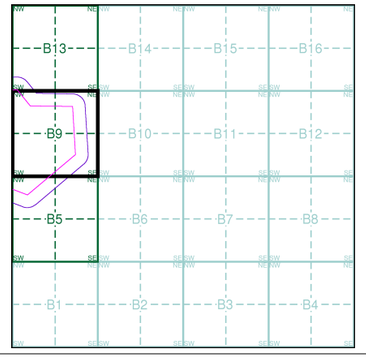
Source map scale - 1:2,500

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 B9



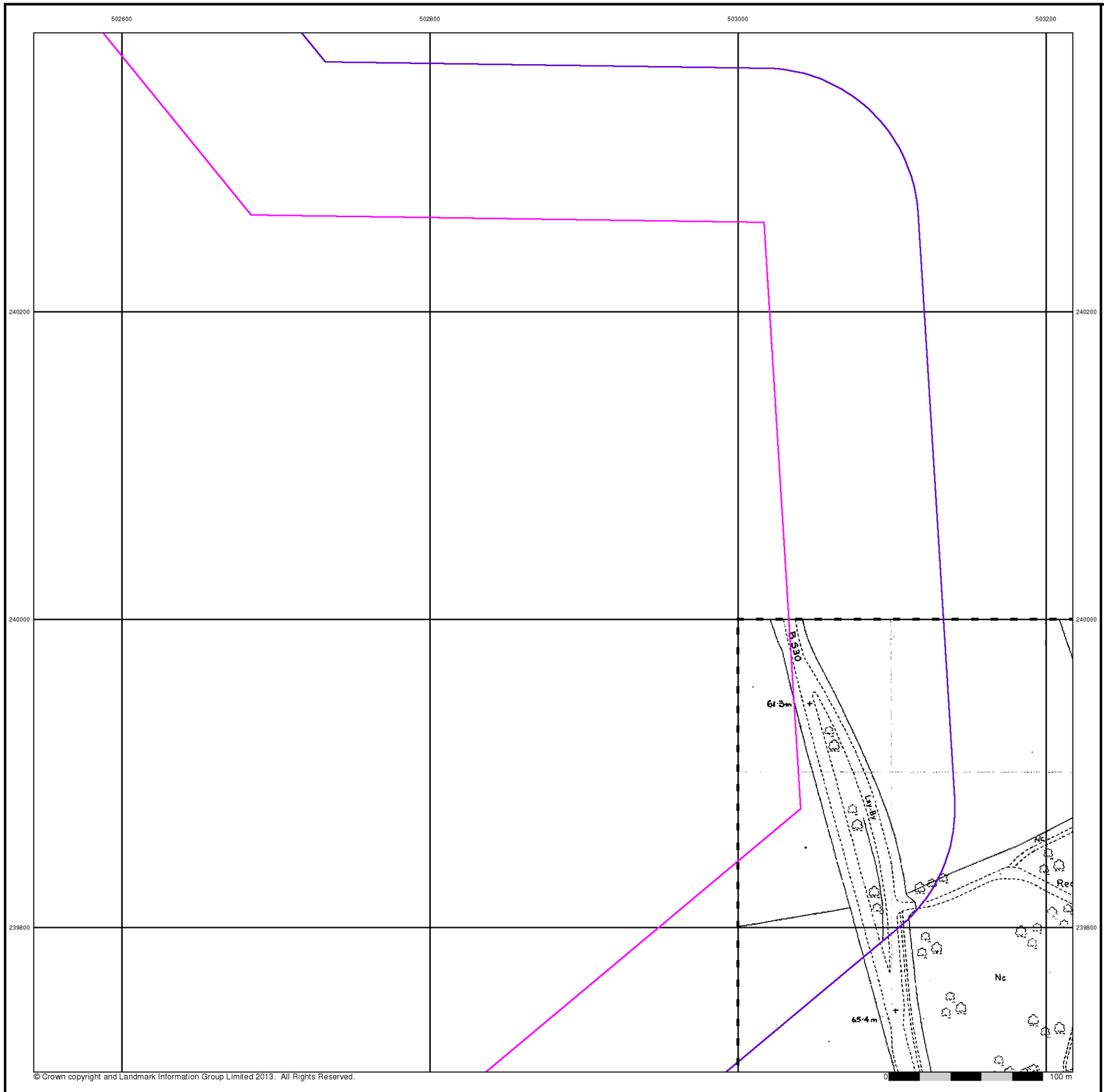
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



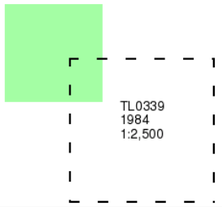
Additional SIMs

Published 1984

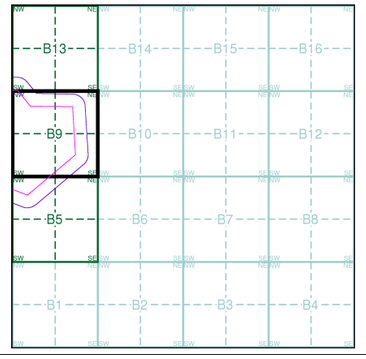
Source map scale - 1:2,500

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 B9



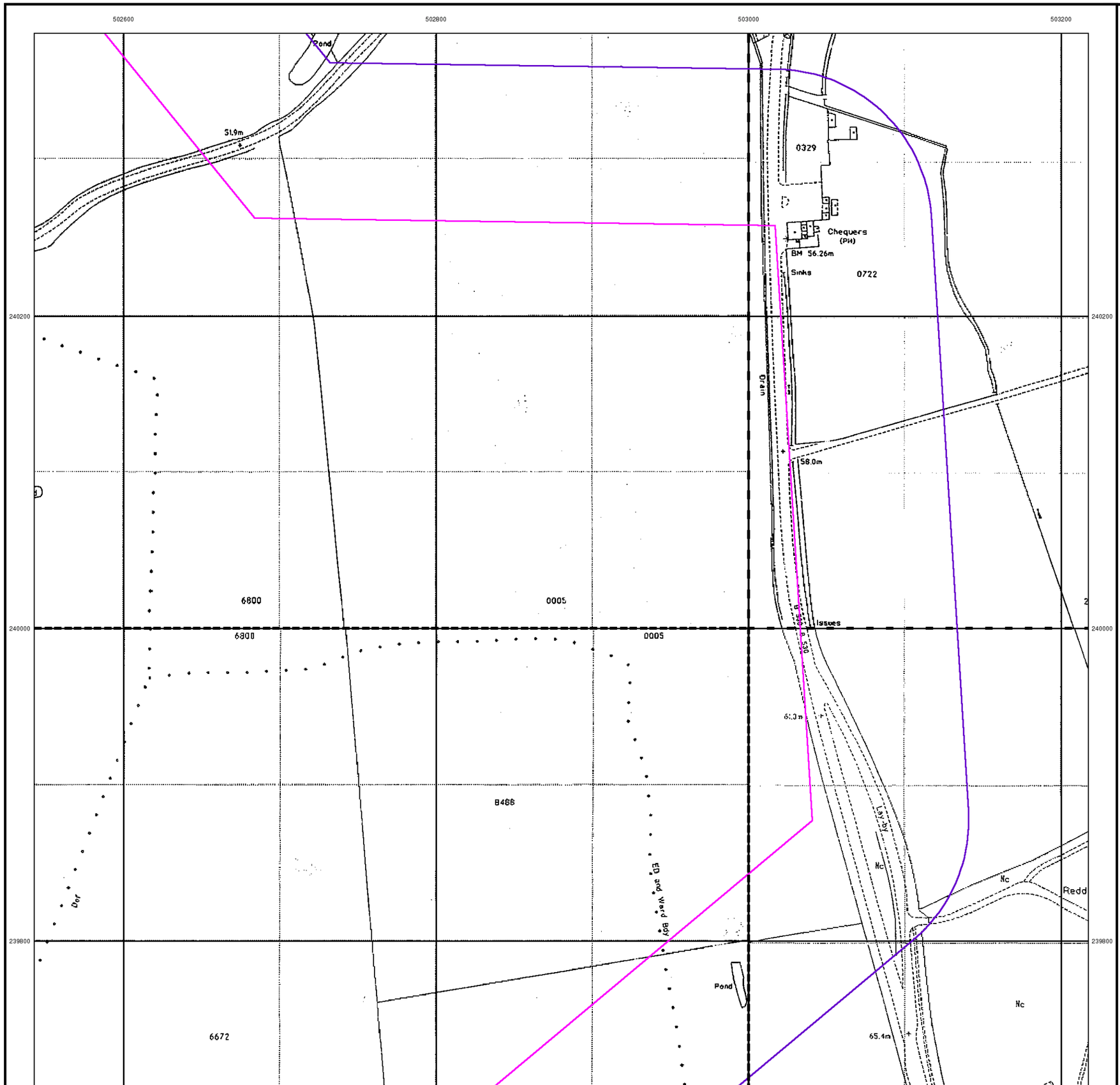
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

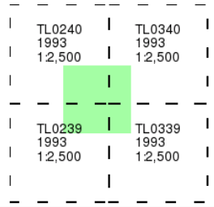
Large-Scale National Grid Data

Published 1993

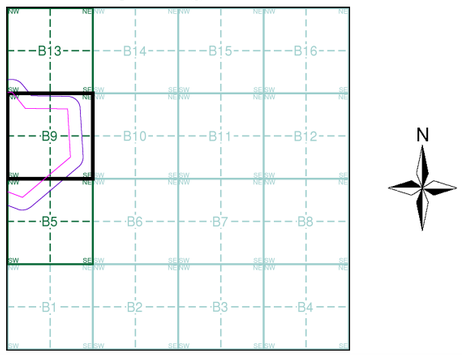
Source map scale - 1:2,500

'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)



Historical Map - Segment B9



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

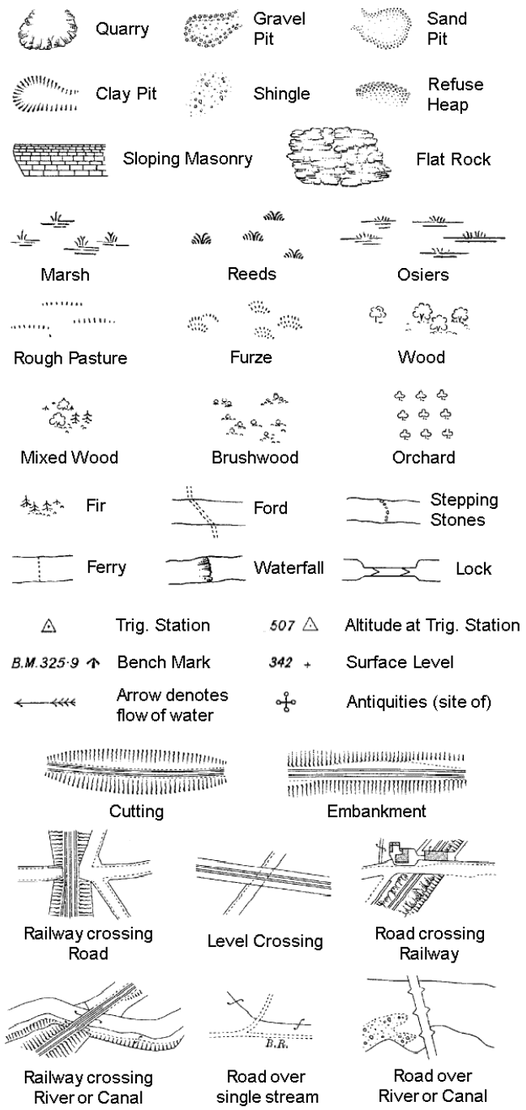
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

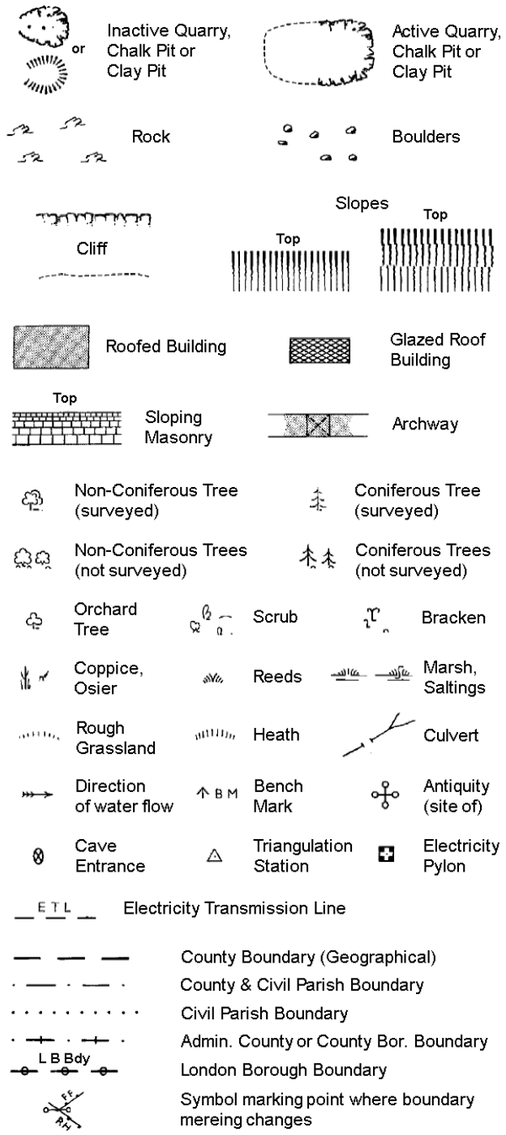
Administrative County & Civil Parish Boundary

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

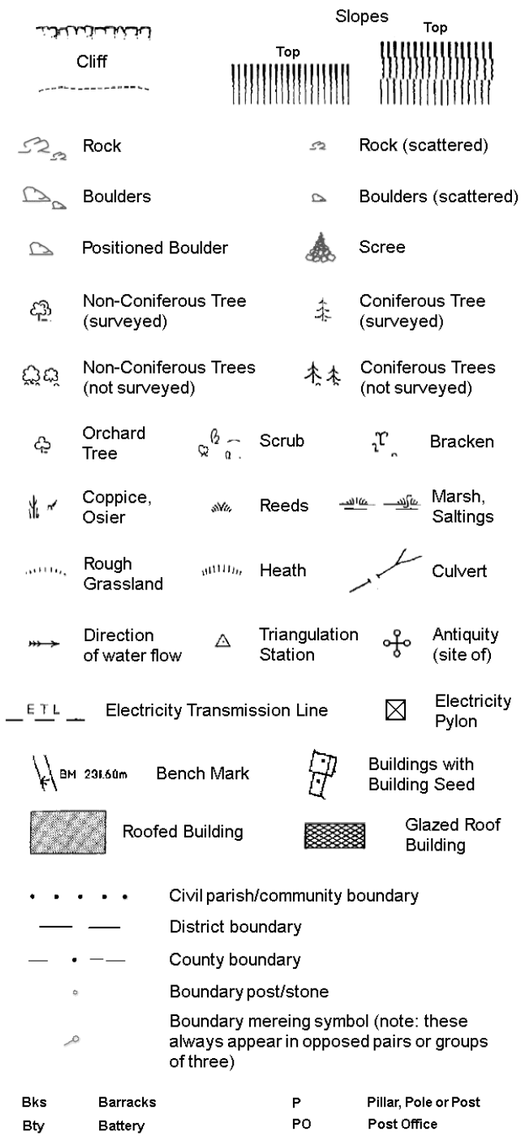
Admin. County or County Bor. Boundary

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)

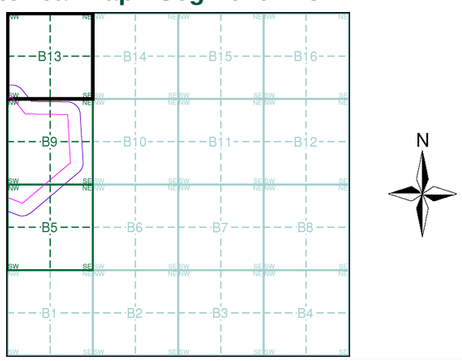
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1975	5
Large-Scale National Grid Data	1:2,500	1993	6

Historical Map - Segment B13



Order Details

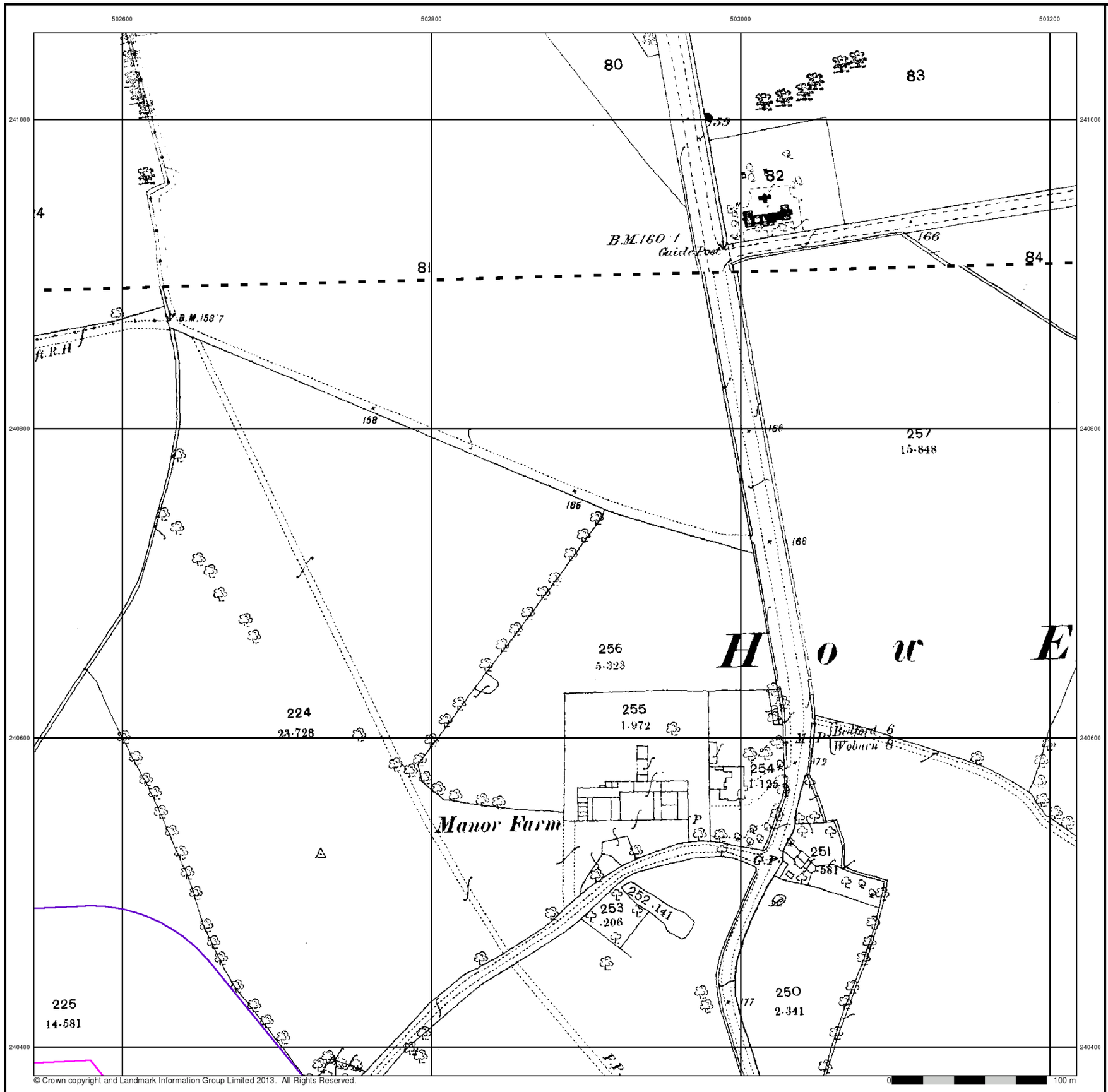
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



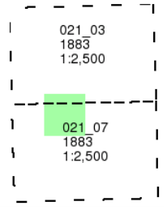
Bedfordshire

Published 1883

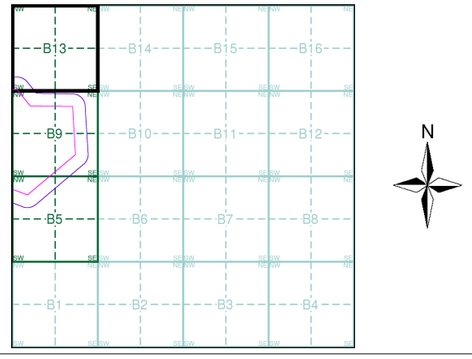
Source map scale - 1:2,500

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 B13



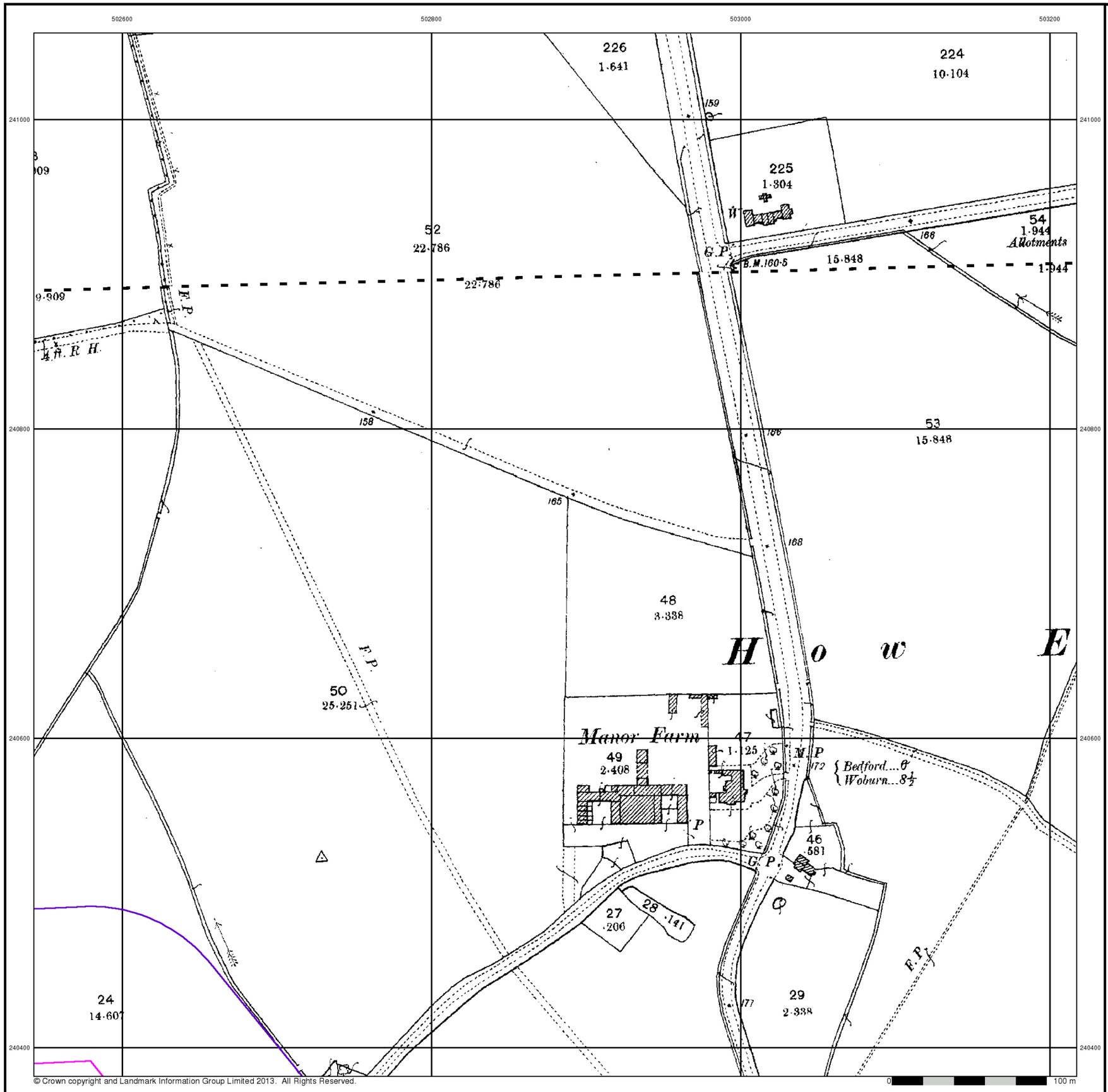
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

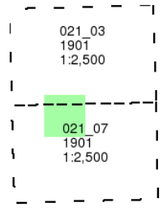
Bedfordshire

Published 1901

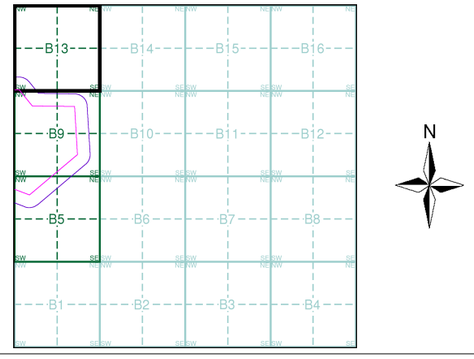
Source map scale - 1:2,500

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 B13



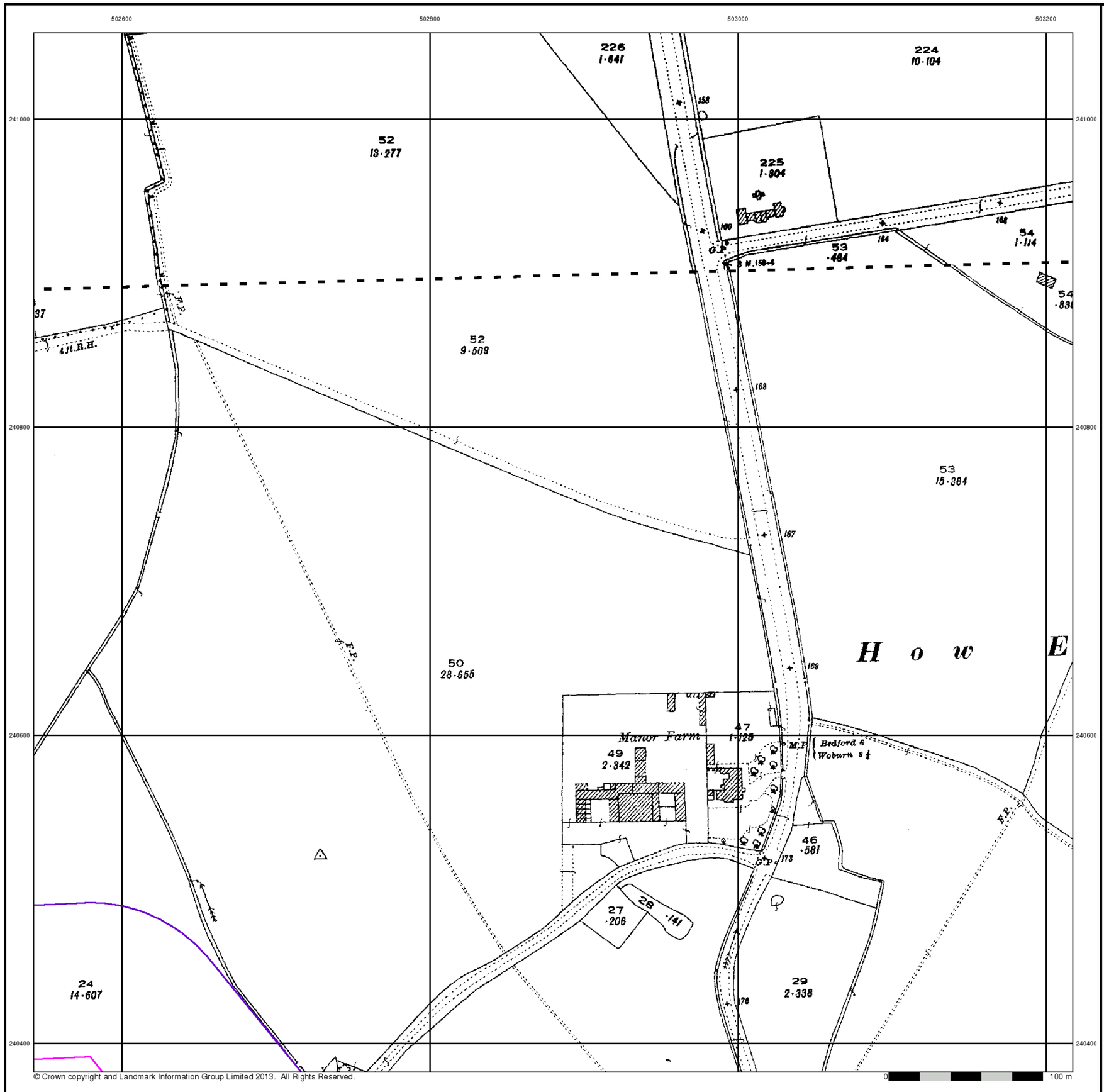
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



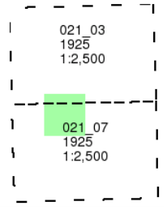
Bedfordshire

Published 1925

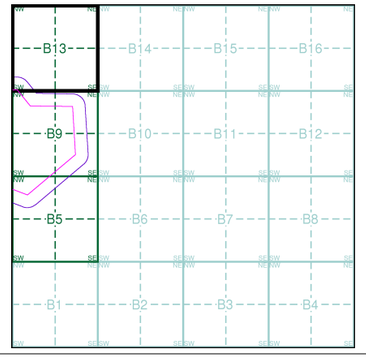
Source map scale - 1:2,500

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 B13



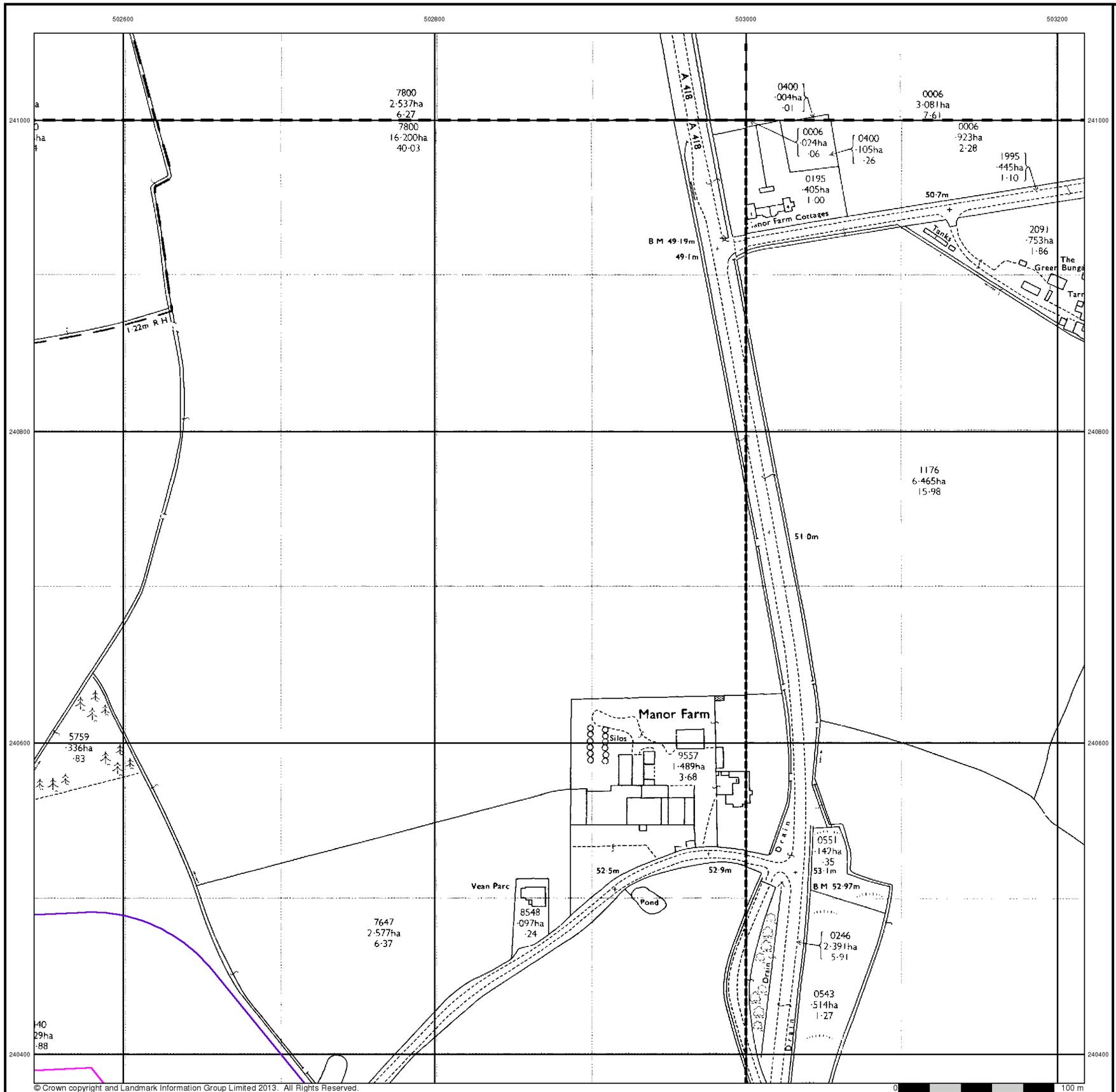
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

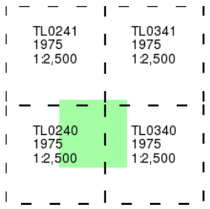
Ordnance Survey Plan

Published 1975

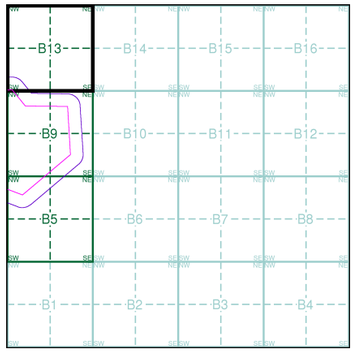
Source map scale - 1:2,500

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 B13



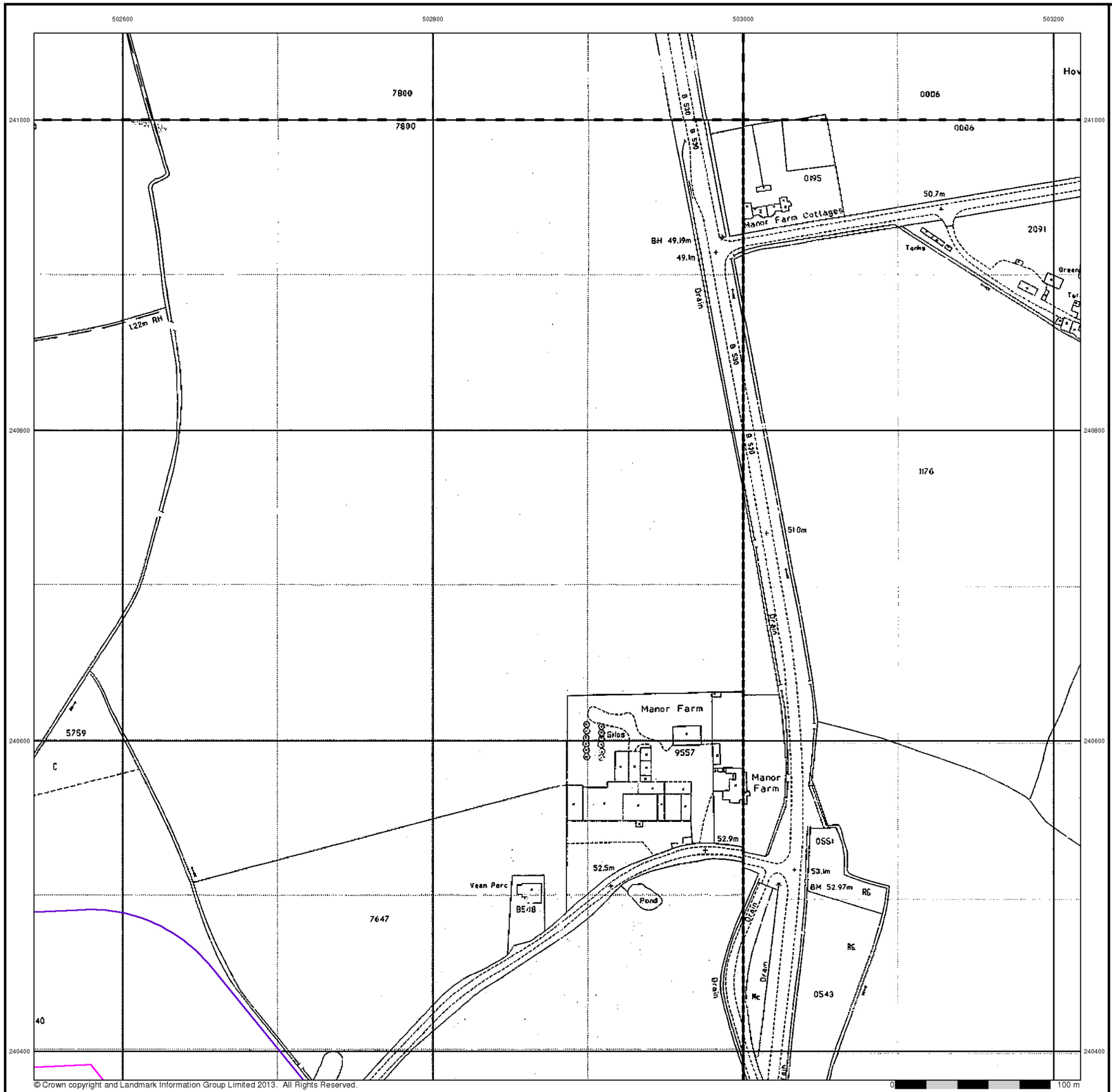
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



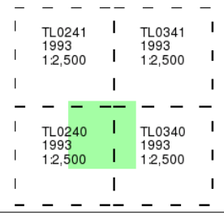
Large-Scale National Grid Data

Published 1993

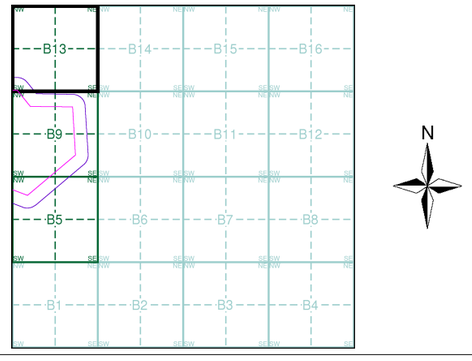
Source map scale - 1:2,500

'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)



Historical Map - Segment B13



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	502970, 239970
Slice:	B
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

Envirocheck® Report:

BGS Boreholes Datasheet

Order Details:

Order Number:
60770728_1_1

Customer Reference:
31116

National Grid Reference:
501420, 241770

Slice:
C

Site Area (Ha):
240.61

Borehole Search Buffer (m):
50

Site Details:

Millbrook Power Project
Green Lane
Stewartby

Client Details:

Ms K Riley
Brett Consulting Ltd
Caversham Bridge House
Waterman Place
Reading
Berkshire
RG1 8DN

BGS Boreholes Summary

Data Type	Page Number	On Site	0 to 50m
BGS Boreholes (50m)	pg 1	9	5

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 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.

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

Report Version v49.0

BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**BGS Boreholes** BGS Reference: Tl04sw29 Drilled Length (m): 13.86 Borehole Name: Lbc Vicarage Farm & L Field 28 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524383/	C7NW (N)	0	4	501500 242110
44	**BGS Boreholes** BGS Reference: Tl04sw78 Drilled Length (m): 16 Borehole Name: Lbc Rookery Field 1/51 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524432/	C3SW (S)	0	4	501250 241190
44	**BGS Boreholes** BGS Reference: Tl04sw162 Drilled Length (m): 15.54 Borehole Name: Lbc Wheeler Mill 9/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524516/	C3SW (S)	0	4	501230 241220
45	**BGS Boreholes** BGS Reference: Tl04sw113 Drilled Length (m): 32.77 Borehole Name: Lbc Rookery Field 11/61 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524467/	C7SW (N)	0	4	501500 242010
46	**BGS Boreholes** BGS Reference: Tl04sw116 Drilled Length (m): 31.19 Borehole Name: Lbc Rookery Field 14/61 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524470/	C7SW (N)	0	4	501430 241860
47	**BGS Boreholes** BGS Reference: Tl04sw161 Drilled Length (m): 15.54 Borehole Name: Lbc Wheeler Mill 8/67 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524515/	C3SW (S)	0	4	501250 241350
48	**BGS Boreholes** BGS Reference: Tl04sw482 Drilled Length (m): 27 Borehole Name: Wheelers Hill Area 17/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524836/	C3SE (S)	0	4	501630 241090
49	**BGS Boreholes** BGS Reference: Tl04sw91 Drilled Length (m): 25.09 Borehole Name: Lbc Rookery Field 1/56 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524445/	C3NW (S)	0	4	501300 241430
50	**BGS Boreholes** BGS Reference: Tl04sw481 Drilled Length (m): 30 Borehole Name: Wheelers Hill Area 16/66 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524835/	C3SW (S)	0	4	501440 241110
51	**BGS Boreholes** BGS Reference: Tl04sw92 Drilled Length (m): 32.46 Borehole Name: Lbc Rookery Field 2/56 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524446/	C3NW (S)	3	4	501320 241470
52	**BGS Boreholes** BGS Reference: Tl04sw604 Drilled Length (m): 27.81 Borehole Name: Stewartby Brickworks Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524958/	C3SE (S)	18	4	501550 241170
53	**BGS Boreholes** BGS Reference: Tl04sw49 Drilled Length (m): 28.57 Borehole Name: Lbc Vicarage Farm & L Field 4/51 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524403/	C7NW (N)	36	4	501430 242160

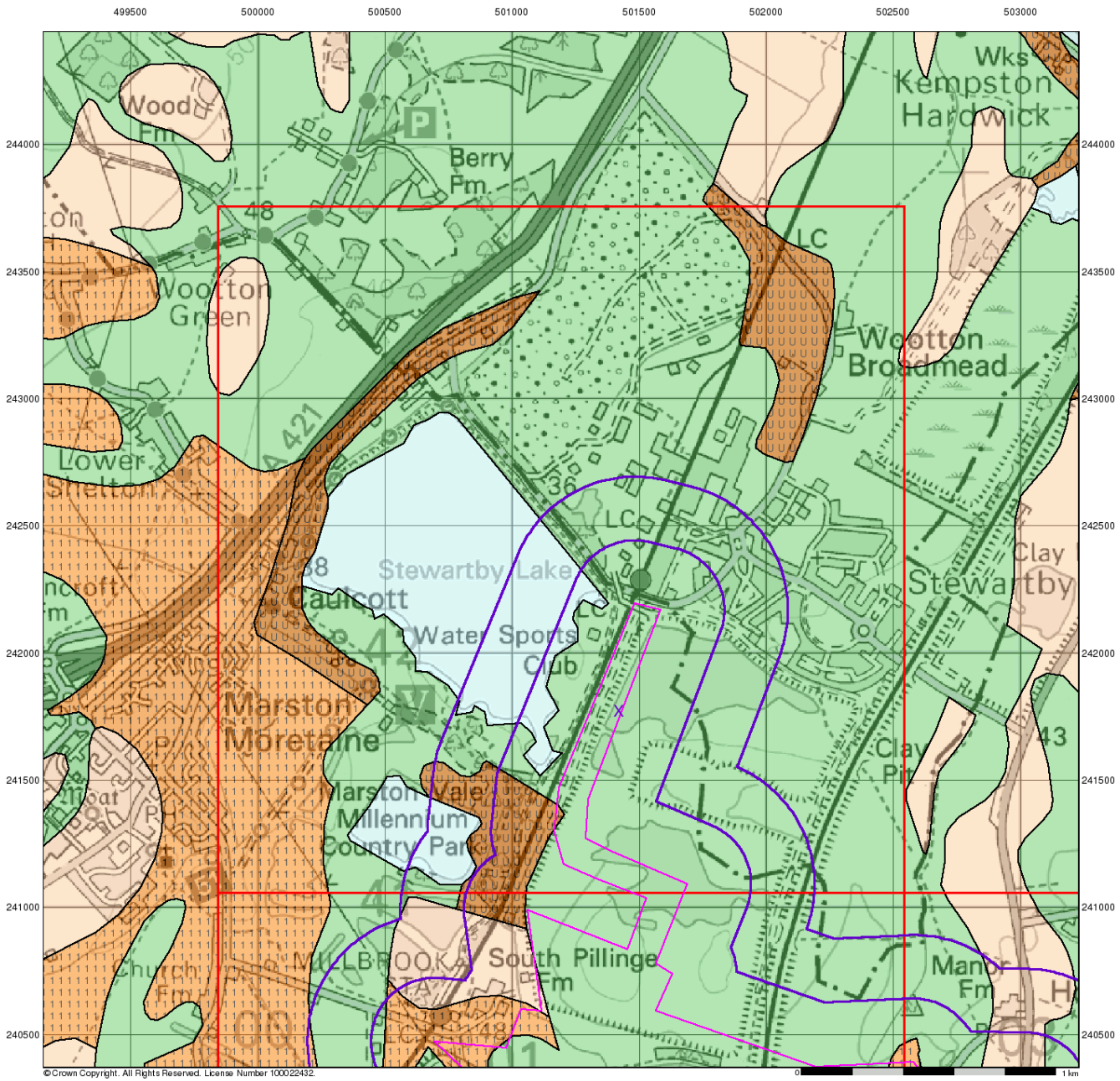
BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	**BGS Boreholes** BGS Reference: TI04sw107 Drilled Length (m): 34.31 Borehole Name: Lbc Rookery Field 4/57 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524461/	C2NE (SW)	47	4	501160 241530
55	**BGS Boreholes** BGS Reference: TI04sw106 Drilled Length (m): 14.48 Borehole Name: Lbc Rookery Field 3/57 Link to Borehole Scan: http://scans.bgs.ac.uk/sobi_scans/boreholes/524460/	C2NE (SW)	49	4	501150 241510

Data Currency and Contact Details

BGS Boreholes	Version	Update Cycle
BGS Boreholes British Geological Survey - National Geoscience Information Service	August 2014	Quarterly

Contact Details	Contact Logo
4 **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	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
- **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	LANDMARK® Information Group



pba peterbrett

Groundwater Vulnerability

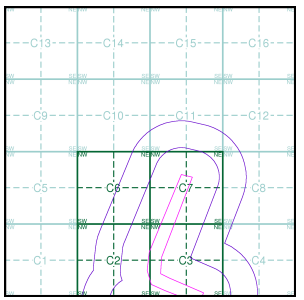
General

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 C



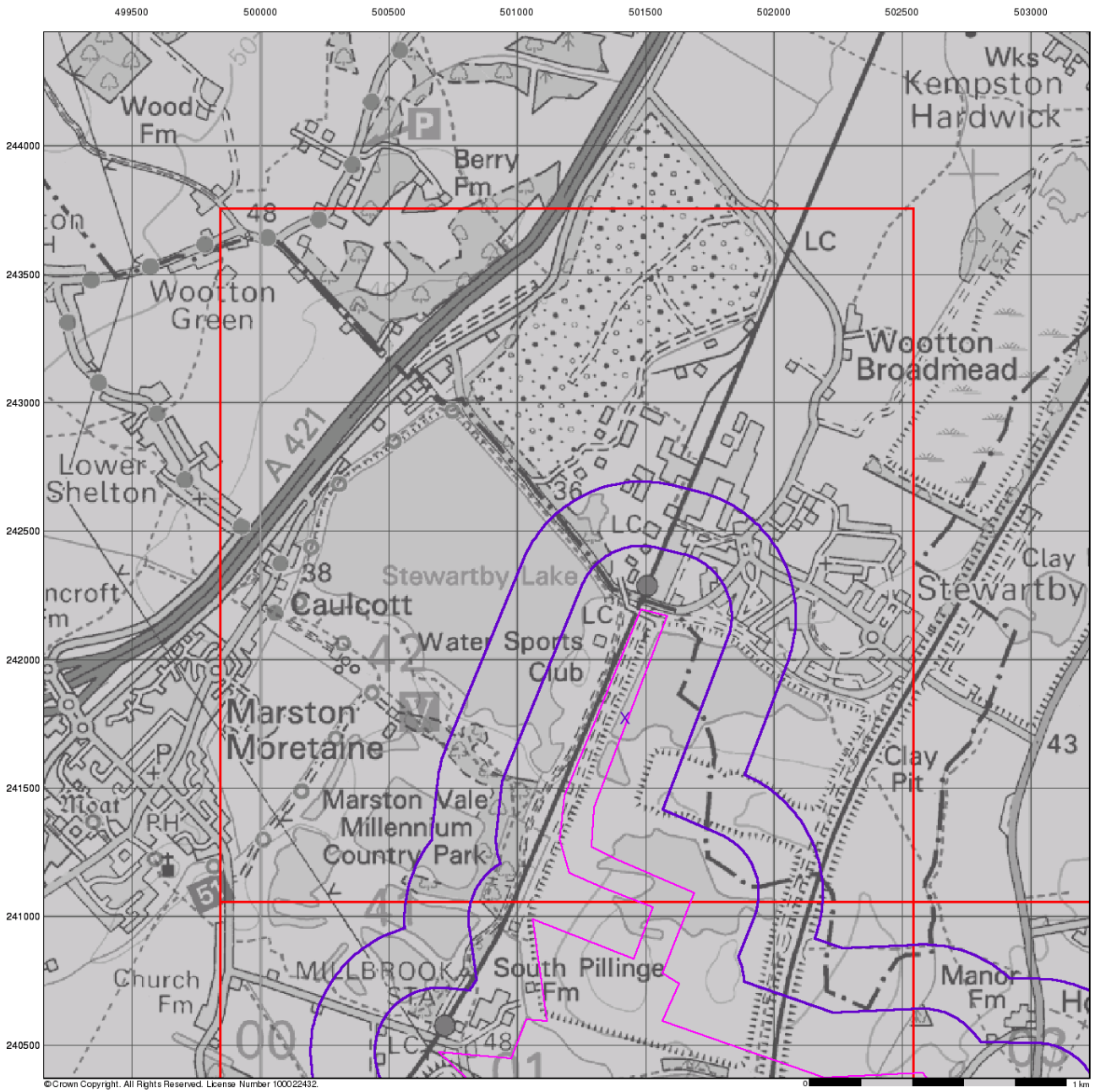
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



Bedrock Aquifer Designation

General

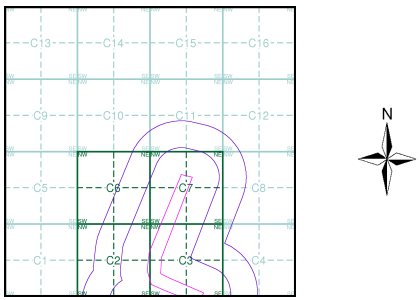
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice C



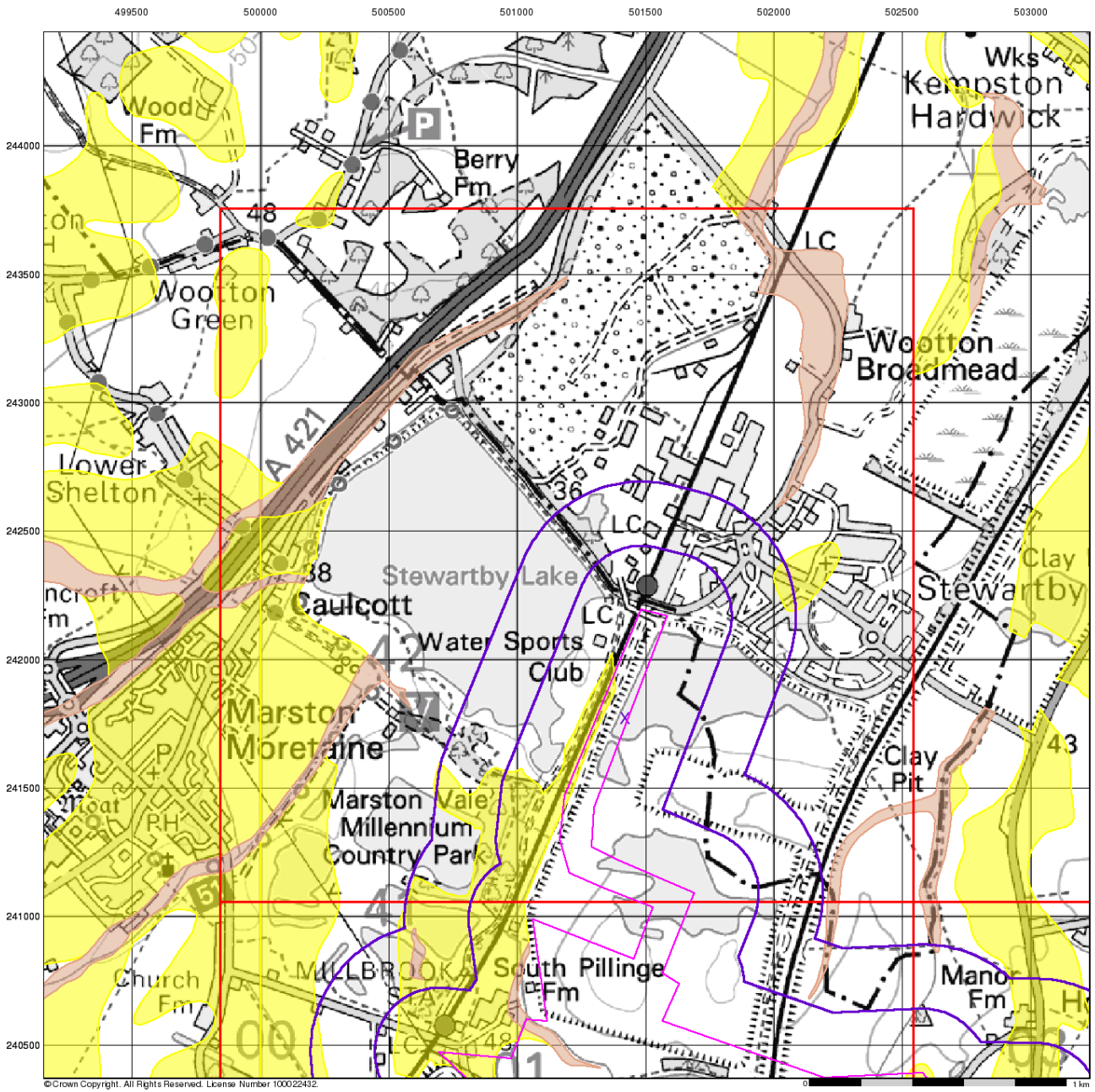
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



Superficial Aquifer Designation

General

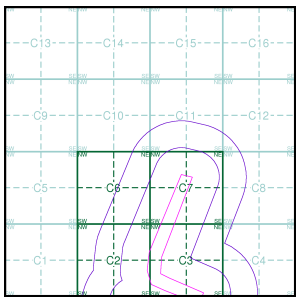
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice C



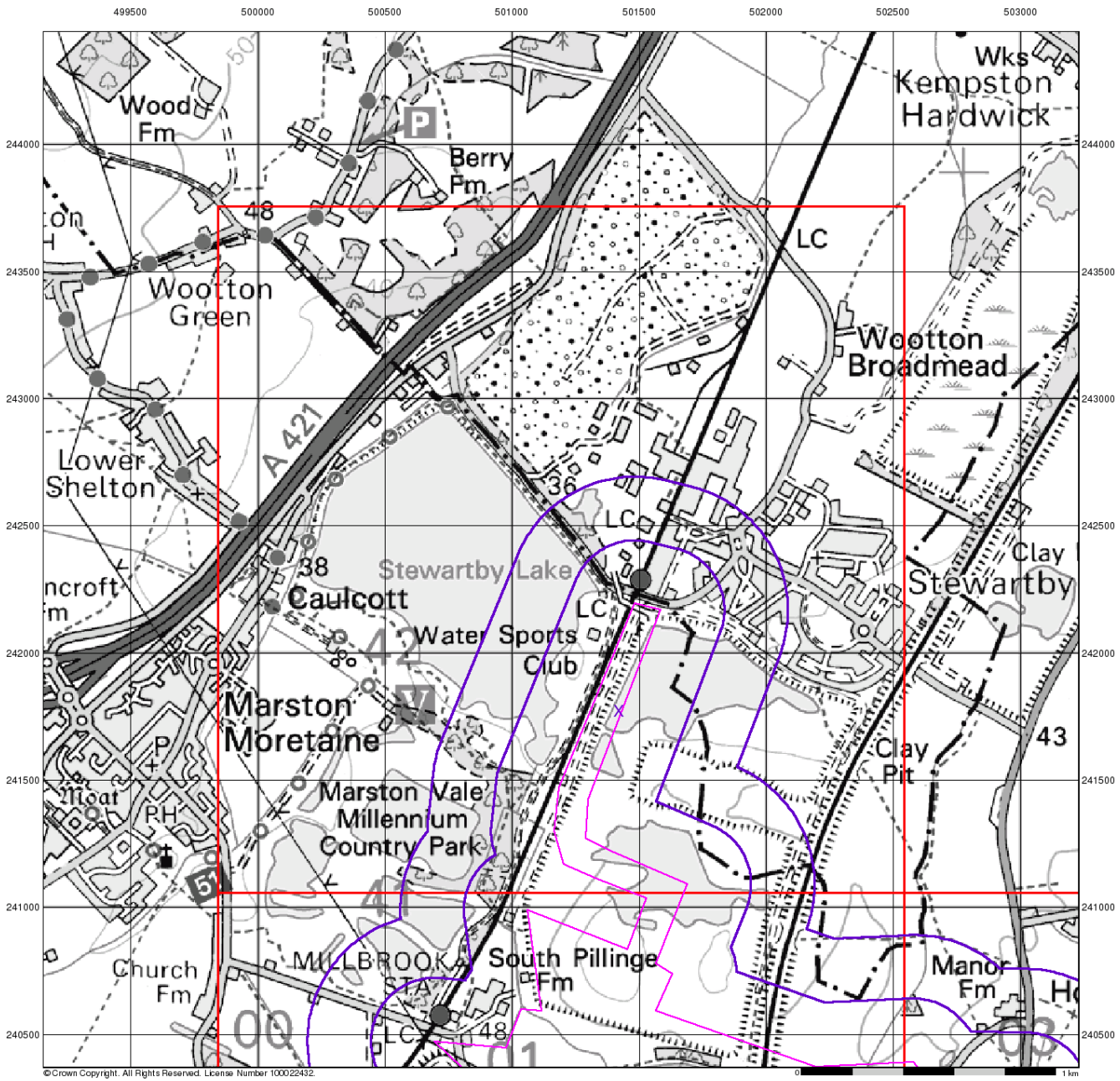
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Source Protection Zones

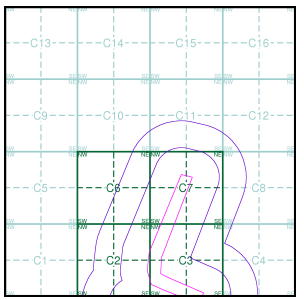
General

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

Agency and Hydrological

Source Protection Zone I
Source Protection Zone II
Source Protection Zone III
Zone of Special Interest
Source Protection Zone Borehole

Site Sensitivity Context Map - Slice C



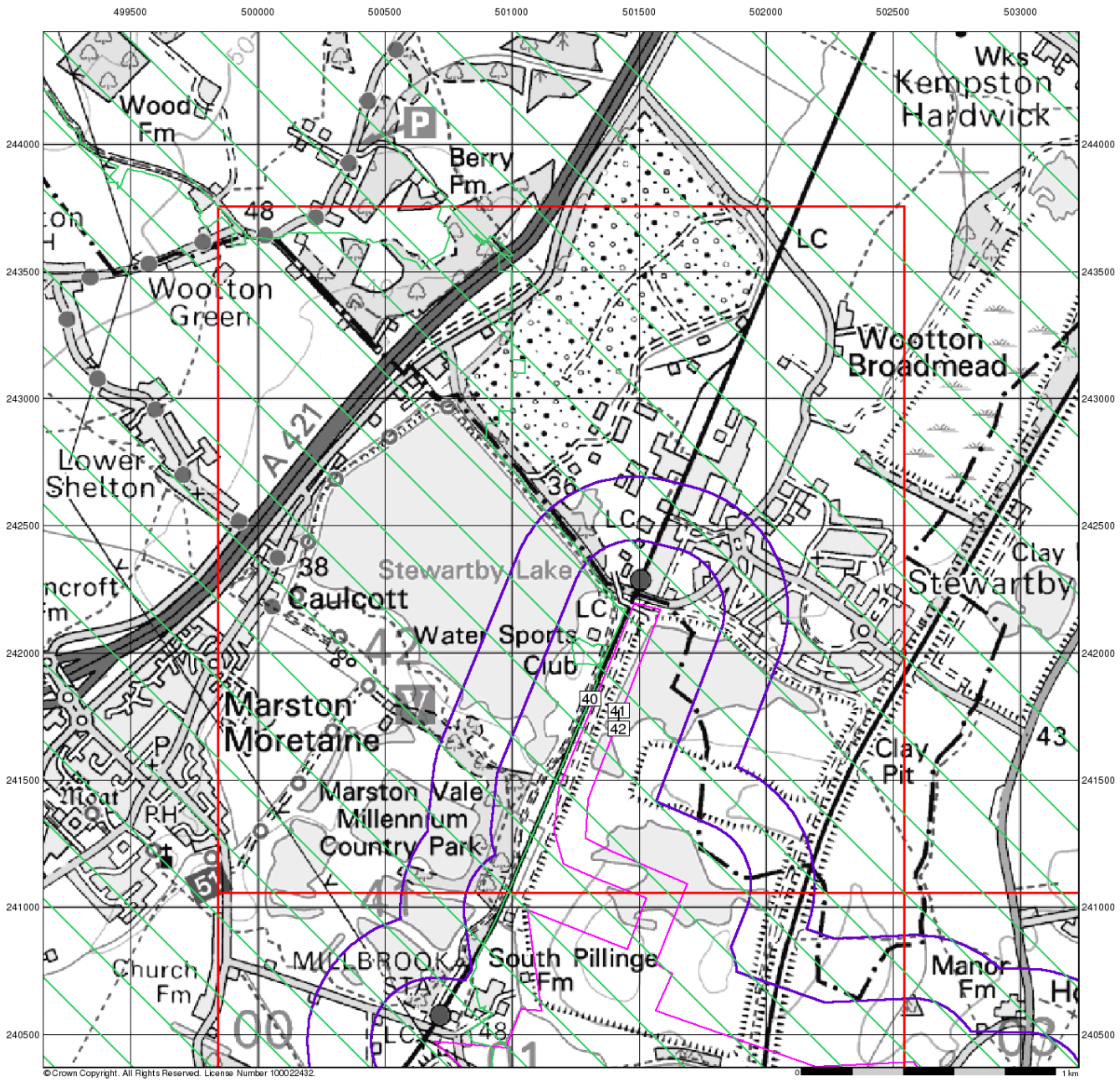
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

Sensitive Land Uses

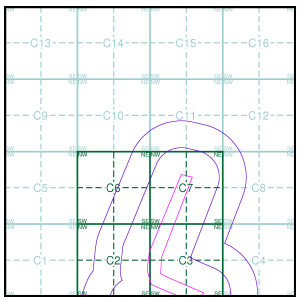
General

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

Sensitive Land Uses

- 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

Site Sensitivity Context Map - Slice C



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
60770728_1_1

Customer Reference:
31116

National Grid Reference:
501420, 241770

Slice:
C

Site Area (Ha):
240.61

Search Buffer (m):
500

Site Details:

Millbrook Power Project
Green Lane
Stewartby

Client Details:

Ms K Riley
Brett Consulting Ltd
Caversham Bridge House
Waterman Place
Reading
Berkshire
RG1 8DN

Contents

Introduction

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

In 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.

Copyright Notice

Natural England Copyright Notice

Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v49.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Agency & Hydrological				
Contaminated Land Register Entries and Notices				
Discharge Consents	pg 1		3	
Enforcement and Prohibition Notices	pg 1			1
Integrated Pollution Controls	pg 1			14
Integrated Pollution Prevention And Control	pg 4		1	3
Local Authority Integrated Pollution Prevention And Control				
Local Authority Pollution Prevention and Controls	pg 4			1
Local Authority Pollution Prevention and Control Enforcements				
Nearest Surface Water Feature	pg 5	Yes		
Pollution Incidents to Controlled Waters				
Prosecutions Relating to Authorised Processes				
Prosecutions Relating to Controlled Waters				
Registered Radioactive Substances				
River Quality				
River Quality Biology Sampling Points				
River Quality Chemistry Sampling Points				
Substantiated Pollution Incident Register				
Water Abstractions	pg 5			(*3)
Water Industry Act Referrals	pg 5		4	1
Groundwater Vulnerability	pg 6	Yes	n/a	n/a
Bedrock Aquifer Designations	pg 7	Yes	n/a	n/a
Superficial Aquifer Designations	pg 7	Yes	n/a	n/a
Source Protection Zones				
Extreme Flooding from Rivers or Sea without Defences	pg 7		Yes	n/a
Flooding from Rivers or Sea without Defences	pg 7		Yes	n/a
Areas Benefiting from Flood Defences				n/a
Flood Water Storage Areas				n/a
Flood Defences				n/a
Detailed River Network Lines	pg 7		Yes	Yes
Detailed River Network Offline Drainage	pg 10			Yes

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Waste				
BGS Recorded Landfill Sites				
Historical Landfill Sites	pg 11	1	1	
Integrated Pollution Control Registered Waste Sites				
Licensed Waste Management Facilities (Landfill Boundaries)				
Licensed Waste Management Facilities (Locations)	pg 11		1	
Local Authority Recorded Landfill Sites				
Registered Landfill Sites	pg 11		1	
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)	pg 12			1
Planning Hazardous Substance Consents	pg 12		1	1
Planning Hazardous Substance Enforcements				
Geological				
BGS 1:625,000 Solid Geology	pg 13	Yes	n/a	n/a
BGS Estimated Soil Chemistry	pg 13	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 17			2
BGS Urban Soil Chemistry				
BGS Urban Soil Chemistry Averages				
Brine Compensation Area			n/a	n/a
Coal Mining Affected Areas			n/a	n/a
Mining Instability			n/a	n/a
Man-Made Mining Cavities				
Natural Cavities				
Non Coal Mining Areas of Great Britain				n/a
Potential for Collapsible Ground Stability Hazards	pg 18	Yes		n/a
Potential for Compressible Ground Stability Hazards	pg 18	Yes	Yes	n/a
Potential for Ground Dissolution Stability Hazards				n/a
Potential for Landslide Ground Stability Hazards	pg 18	Yes	Yes	n/a
Potential for Running Sand Ground Stability Hazards	pg 19	Yes		n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 19	Yes		n/a
Radon Potential - Radon Affected Areas			n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Industrial Land Use				
Contemporary Trade Directory Entries (50m)				n/a
Fuel Station Entries				
Sensitive Land Use				
Areas of Adopted Green Belt				
Areas of Unadopted Green Belt				
Areas of Outstanding Natural Beauty				
Environmentally Sensitive Areas				
Forest Parks				
Local Nature Reserves				
Marine Nature Reserves				
National Nature Reserves				
National Parks				
Nitrate Sensitive Areas				
Nitrate Vulnerable Zones	pg 20	3		
Ramsar Sites				
Sites of Special Scientific Interest				
Special Areas of Conservation				
Special Protection Areas				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Shanks & Mcewan (Southern) Ltd Property Type: Undefined Or Other Location: Rookery North Claypit, Stewartby, Bedford Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Pr1nf1802 Permit Version: 1 Effective Date: 30th January 1985 Issued Date: 30th January 1985 Revocation Date: 19th February 1992 Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Trib Elstow Brook **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	C7NE (NE)	35	2	501600 242200
2	**Discharge Consents** Operator: A & J Bull (Southern) Ltd Property Type: Not Supplied Location: Rookery N&S Brick Pits Green Lane, Stewartby, Mk43 9lz Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Prcnf14024 Permit Version: 1 Effective Date: 22nd May 1998 Issued Date: 22nd May 1998 Revocation Date: Not Supplied Discharge Type: Trade Effluent Discharge Environment: Freshwater Stream/River Receiving Water: Partly Culverted Ditch Stewart **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	C2SE (SW)	48	2	501120 241310
2	**Discharge Consents** Operator: Sita Uk Property Type: Unspecified Tip Location: Rookery N&S Brick Pits Green Lane, Stewartby, Mk43 9lz, Mk43 9lz Authority: Environment Agency, Anglian Region Catchment Area: Mid River Ouse / Elstow Brook Reference: Prcnf14024 Permit Version: 1 Effective Date: 22nd May 1998 Issued Date: 22nd May 1998 Revocation Date: Not Supplied Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Partly Culverted Ditch Stewart **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	C2SE (SW)	48	2	501120 241310
3	**Enforcement and Prohibition Notices** Location: Stewartby Works, Stewartby, BEDFORD, Bedfordshire, MK43 9LE Permit Reference: AL9467 Enforcement Date: Not Supplied Details: Not submitting details of releases in accordance with conditions in authorisation; not submitting information on improvement programme; under EPA90, served 1993/94 Positional Accuracy: Unknown	C11SE (NE)	384	2	501850 242446
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby Works, Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: AH9464 Dated: 30th June 1993 Process Type: IPC application for process that was regulated by HMIP for air releases under previous legislation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	426	2	501874 242481

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby, Bedford, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bx8378 Dated: 28th April 2004 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Revoked - Now IPPC** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bt3722 Dated: 30th September 2002 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bt1452 Dated: 22nd August 2002 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bs8834 Dated: 25th July 2002 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Br9545 Dated: 13th April 2002 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bm1954 Dated: 25th September 2001 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby Works, Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bi5841 Dated: 31st May 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby Works, Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: BH8403 Dated: 15th February 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby Works, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: BC8015 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501879 242481
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby Works, Stewartby, BEDFORD, MK43 9LE Authority: Environment Agency, Anglian Region Permit Reference: AL9467 Dated: 1st February 1994 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Brick Ltd Location: Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bu8444 Dated: Not Supplied Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Application has met the requirements for authorisation (but not yet authorised)Not Yet Authorised** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	430	2	501874 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby Works, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: BC4834 Dated: 26th March 1999 Process Type: IPC major (substantial) variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	433	2	501879 242486
4	**Integrated Pollution Controls** Name: Hanson Building Products Ltd Location: Stewartby Works, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: BF9379 Dated: 21st April 1999 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.6 A (A) Ceramic production within the Mineral Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	437	2	501879 242491

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Integrated Pollution Prevention And Control** Name: Ballast Phoenix Location: Rookery Pit South, Rookery Pit, Rookery South, Stewartby, Bedfordshire Authority: Environment Agency, Anglian Region Permit Reference: LP3236CZ Original Permit Ref: Lp3236cz Effective Date: Not Supplied **Status: Valid** Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 10m Activity Code: 1.1 A(1) (A) Activity Description: Combustion; Any Fuel Greater Or Equal To 50Mw Primary Activity: Y	C3SW (S)	15	2	501310 241370
6	**Integrated Pollution Prevention And Control** Name: Hanson Building Products Limited Location: Stewartby, Bedford, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: SP3534LG Original Permit Ref: Bx1616iu Effective Date: 1st November 2006 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Automatically positioned to the address Activity Code: 3.6 A(1) (A) (I) Activity Description: Manufacturing Ceramic Products: Kiln Production Capacity Greater Than 75 Tonnes Per Day Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N	C12SW (NE)	430	2	501874 242486
6	**Integrated Pollution Prevention And Control** Name: Hanson Building Products Limited Location: Stewartby, Bedford, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bx1616iu Original Permit Ref: Bx1616iu Effective Date: 24th November 2004 **Status: Superseded By Variation** Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N Activity Code: 3.6 A(1) (A) (I) Activity Description: Manufacturing Ceramic Products: Kiln Production Capacity Greater Than 75 Tonnes Per Day Primary Activity: Y	C12SW (NE)	430	2	501874 242486
7	**Integrated Pollution Prevention And Control** Name: Hanson Building Products Limited Location: Stewartby Brickworks, Stewartby Brickworks, Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: RP3134GW Original Permit Ref: Bx1616iu Effective Date: 9th June 2009 **Status: Surrender Effective** Application Type: Surrender App. Sub Type: Whole Positional Accuracy: Manually positioned to the address or location Activity Code: 3.6 A(1) (A) (I) Activity Description: Manufacturing Ceramic Products: Kiln Production Capacity Greater Than 75 Tonnes Per Day Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N	C11SE (N)	482	2	501718 242631
8	**Local Authority Pollution Prevention and Controls** Name: Hanson Brick Location: Broadmead Road, Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Bedford Borough Council, Environmental Health Department Permit Reference: Epa30 Dated: 6th January 1994 Process Type: Local Authority Air Pollution Control Description: PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	C12SW (NE)	430	3	501875 242485

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Nearest Surface Water Feature	C7SW (E)	0	-	501474 241752
	Water Abstractions Operator: Hanson Brick Ltd Licence Number: 6/33/12/*S/0080 Permit Version: 100 Location: Stream At Stewartby Authority: Environment Agency, Anglian Region Abstraction: Other Industrial/Commercial/Public Services: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st October 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	C11SE (N)	544	2	501700 242700
	Water Abstractions Operator: Hanson Brick Ltd Licence Number: 6/33/12/*S/0080 Permit Version: 100 Location: Stream At Stewartby Authority: Environment Agency, Anglian Region Abstraction: Other Industrial/Commercial/Public Services: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st October 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	C11NW (N)	670	2	501200 242800
	Water Abstractions Operator: Marston Vale Services Licence Number: 6/33/12/*S/0142 Permit Version: 1 Location: Stewartby Pit Authority: Environment Agency, Anglian Region Abstraction: Environmental: Non-remedial River/Wetland Support: Make-Up or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 19th November 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	C5NE (W)	966	2	500400 242100
9	**Water Industry Act Referrals** Name: Shanks Waste Services Ltd Location: STEWARTBY, GREEN LANE, BEDFORD, BEDFORDSHIRE, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bv6021 Dated: 18th August 2003 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Authorisation either revoked or cancelledCancelled** Positional Accuracy: Manually positioned within the geographical locality	C7NW (N)	14	2	501502 242202
9	**Water Industry Act Referrals** Name: Shanks And Mcewan Ltd Location: SHANKS AND MCEWAN LTD, MARSTON VALE LEACHATE TREATMENT WORKS, ""L"" FIELD LANDFILL SITE, GREEN LANE, STEWARTBY, BEDFORDSHIRE, MK43 9LY Authority: Environment Agency, Anglian Region Permit Reference: AU2018 Dated: 27th November 1995 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Authorisation either revoked or cancelledCancelled** Positional Accuracy: Manually positioned to the road within the address or location	C7NE (N)	15	2	501543 242193

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	**Water Industry Act Referrals** Name: Shanks And Mcewan Ltd Location: TECHNICAL SERVICES,GREEN LANE, STEWARTBY, BEDFORD, BEDFORDSHIRE, MK43 9LY Authority: Environment Agency, Anglian Region Permit Reference: AE8801 Dated: 24th March 1992 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Application cancelled** Positional Accuracy: Manually positioned to the road within the address or location	C7NE (NE)	125	2	501707 242191
11	**Water Industry Act Referrals** Name: Shanks And Mcewan Ltd Location: SHANKS AND MCEWAN LTD, GREEN LANE, STEWARTBY, BEDFORD, BEDFORDSHIRE, MK43 9LY Authority: Environment Agency, Anglian Region Permit Reference: AB3331 Dated: 8th October 1991 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Application cancelled** Positional Accuracy: Manually positioned to the address or location	C11SW (N)	245	2	501529 242433
12	**Water Industry Act Referrals** Name: Shanks Waste Services Ltd Location: STEWARTBY, GREEN LANE, BEDFORD, BEDFORDSHIRE, MK43 9LZ Authority: Environment Agency, Anglian Region Permit Reference: Bj4841 Dated: 18th September 2000 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Authorisation either revoked or cancelledCancelled** Positional Accuracy: Manually positioned to the address or location	C11SE (NE)	334	2	501772 242444
	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	(SE)	0	2	502524 240452
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	C7SW (NW)	0	2	501421 241772
	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	C5SE (W)	0	2	500431 241795
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	(E)	0	2	502715 241306
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	(SW)	0	2	501058 240915
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	C2NE (SW)	0	2	501183 241400
	Drift Deposits None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	C7SW (NW)	0	4	501421 241772
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(SW)	0	4	501045 240895
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(SE)	0	4	502550 240416
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(E)	0	4	502738 241349
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	C7SW (NW)	0	4	501347 241808
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	C7SW (W)	47	2	501236 241786
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	C7SW (W)	73	2	501234 241781
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	C7SW (W)	49	2	501234 241781
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
13	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2SE (SW)	8	2	501103 241292
14	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C7NE (NE)	13	2	501611 242161

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Secondary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C7SW (NW)	14	2	501302 241823
16	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C7NW (N)	18	2	501467 242209
17	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C7NW (N)	18	2	501475 242209
18	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C7NE (NE)	28	2	501611 242161
19	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C7NW (N)	66	2	501518 242252
20	**Detailed River Network Lines** River Type: Lake/Reservoir River Name: Stewartby Lake Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2NE (W)	83	2	501096 241697

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2SE (SW)	86	2	501081 241305
22	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2NE (SW)	86	2	501119 241534
23	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C7NE (N)	131	2	501541 242313
24	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Secondary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2SE (SW)	132	2	501035 241337
25	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2SE (SW)	199	2	500974 241366
26	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2SE (SW)	199	2	500974 241366

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C11SE (N)	278	2	501600 242451
28	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2NE (SW)	299	2	500879 241461
29	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D005 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	C2NE (SW)	301	2	500876 241406
30	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	C3NE (SE)	296	2	501737 241500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	**Historical Landfill Sites** Licence Holder: London Brick Landfill Limited Location: Stewartby, Bedford, Bedfordshire Name: Rookery Clay Pit Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD01024 First Input Date: 1st January 1971 Last Input Date: 1st April 1987 Specified Waste Type: Deposited Waste included Industrial and Household Waste, and Liquid Sludge EA Waste Ref: 75174 Regis Ref: AX1/L/LON010 WRC Ref: 0200/0045 BGS Ref: Not Supplied Other Ref: 8/1977, PIT 80	C7SW (NW)	0	2	501421 241772
32	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Bedfordshire Name: Stewarby Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD34280 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: PIT 62	C7NW (N)	21	2	501487 242213
33	**Licensed Waste Management Facilities (Locations)** Licence Number: 75174 Location: Property Department, Stewartby, Bedford, Bedfordshire, MK43 9LZ Operator Name: London Brick Land Development Ltd Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Central Area Site Category: Co-disposal Landfill Sites **Licence Status: Surrendered** Issued: 5th December 1977 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 28th April 1987 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	C3NW (S)	160	2	501500 241500
	Local Authority Landfill Coverage Name: Mid Bedfordshire District Council - Has supplied landfill data		0	10	501421 241772
	Local Authority Landfill Coverage Name: Bedfordshire County Council - Has no landfill data to supply		0	9	501421 241772
	Local Authority Landfill Coverage Name: Bedford Borough Council - Has supplied landfill data		11	3	501623 241848
34	**Registered Landfill Sites** Licence Holder: London Brick Co Licence Reference: 8/1977 Site Location: Rockery Clay Pit (North), Stewartby, Bedford, Bedfordshire Licence Easting: 501500 Licence Northing: 241500 Operator Location: Stewartby House, Stewartby, BEDFORD, Bedfordshire, MK43 9LZ Authority: Environment Agency - Anglian Region, Central Area Site Category: Landfill Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Status: Licence known to be surrenderedSurrendered Dated: 5th December 1977 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Approximate location provided by supplier Boundary Accuracy: Not Applicable Authorised Waste Non-Hazardous Waste	C3NW (S)	160	2	501500 241500

Hazardous Substances

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	**Notification of Installations Handling Hazardous Substances (NIHHS)** Name: London Brick Products Limited Location: Stewartby, BEDFORD, Bedfordshire, MK43 9LZ **Status: Record Ceased To Be Supplied Under NIHHS Regulations (1982)** Positional Accuracy: Automatically positioned to the address	C12SW (NE)	434	5	501874 242491
36	**Planning Hazardous Substance Consents** Name: London Brick Company Location: Stewartby Works, STEWARTBY, Bedfordshire, MK43 Authority: Bedford Borough Council Application Ref: TP/92/1165/HS Hazardous Substance: Extremely flammable (extremely flammable gases and liquids with a flash point <21C and boiling point at normal pressure <=35C, and gaseous substances flammable in contact with air at ambient temperature and pressure excluding extremely flammable gases and natural gas, and flammable liquid substances maintained at a temerature above their boiling point) Maximum Quantity: 26 Application date: 25th September 1992 **Decision: Deemed Consent GrantedGranted** Positional Accuracy: Located by supplier to within 10m	C7NW (N)	16	6	501500 242205
37	**Planning Hazardous Substance Consents** Name: London Brick Location: Stewartby Works, Broadmead Road, STEWARTBY, Bedfordshire, MK43 Authority: Bedford Borough Council Application Ref: 92/01165/Haz Hazardous Substance: Extremely flammable (extremely flammable gases and liquids with a flash point <21C and boiling point at normal pressure <=35C, and gaseous substances flammable in contact with air at ambient temperature and pressure excluding extremely flammable gases and natural gas, and flammable liquid substances maintained at a temerature above their boiling point) Maximum Quantity: 52 Application date: Not Supplied **Decision: New application granted conditionallyGranted** Positional Accuracy: Manually positioned to the address or location	C11SE (NE)	373	6	501783 242484

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Oxford Clay and Kellaways Beds	C7SW (NW)	0	4	501421 241772
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (N)	0	7	501421 242000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C3NW (SW)	0	7	501218 241498
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (NW)	0	7	501351 241807
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (NW)	0	7	501421 241772
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (NW)	0	7	501347 241808
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (N)	0	7	501440 242000

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (N)	29	7	501372 242000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (NW)	40	7	501284 241853
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (N)	43	7	501354 242000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7SW (NW)	45	7	501278 241854
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C2NE (SW)	50	7	501185 241612
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C2NE (SW)	59	7	501145 241525

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C2NE (SW)	61	7	501000 241566
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C3NE (SE)	151	7	501544 241630
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C7NW (N)	153	7	501386 242320
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C2NE (SW)	196	7	501017 241573
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C2NE (SW)	209	7	501000 241579
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C6SE (W)	213	7	501000 241772

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C4SW (SE)	311	7	502000 241271
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C8NW (NE)	337	7	501945 242232
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C4NW (SE)	360	7	502000 241462
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C6SE (NW)	373	7	501000 242000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C8SW (NE)	377	7	501923 242000
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C4SW (SE)	408	7	502127 241233

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: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C8NW (NE)	416	7	502000 242175
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C8SW (E)	416	7	502000 242000
	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: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C8NW (NE)	438	7	502042 242202
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C8SW (E)	449	7	502000 241938
	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: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	C8SW (E)	471	7	502000 241772
38	**BGS Recorded Mineral Sites** Site Name: Rookery Location: , Stewartby, Bedford Source: British Geological Survey, National Geoscience Information Service Reference: 233 Type: Opencast **Status: Ceased** Operator: London Brick Co Ltd Operator Location: London Brick Co Ltd, Arden House, West Street, Leighton Buzzard, Bedfordshire, Lu7 7dd Periodic Type: Jurassic Geology: Peterborough Member (Lower Oxford Clay) Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	C7SE (E)	345	4	501795 241755

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	**BGS Recorded Mineral Sites** Site Name: Stewartby Brick Works Location: , Stewartby, Kempston, Bedfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 35259 Type: Opencast **Status: Ceased** Operator: London Brick Co Ltd Operator Location: London Brick Co Ltd, Arden House, West Street, Leighton Buzzard, Bedfordshire, Lu7 7dd Periodic Type: Jurassic Geology: Oxford Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	C11SW (N)	423	4	501500 242615
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	0	4	501421 241772
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	0	4	501421 241772
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	0	4	501347 241806
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C7NE (N)	13	4	501588 242181
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	36	4	501282 241846
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C7NW (N)	144	4	501389 242314
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (SE)	162	4	501551 241622
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	0	4	501421 241772
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C4SW (SE)	0	4	502117 241072
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C3NE (SE)	0	4	501534 241580
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C3NW (SW)	0	4	501243 241585
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C7SW (W)	0	4	501322 241750
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	0	4	501421 241772
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C3NE (SE)	173	4	501561 241622

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C3NE (S)	232	4	501544 241415
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C3SE (SE)	250	4	501652 241378
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C7SW (N)	0	4	501380 241880
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	0	4	501421 241772
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C2NE (SW)	70	4	501108 241452
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C6SE (W)	74	4	501184 241793
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (SE)	162	4	501551 241622
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3SW (S)	0	4	501499 241187
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	0	4	501421 241772
	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	C7SW (NW)	0	4	501421 241772
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	C7SW (NW)	0	4	501421 241772

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Eutrophic Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	C7SW (NW)	0	8	501308 241820
41	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	C7SW (NW)	0	8	501421 241772
42	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Groundwater Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	C7SW (NW)	0	8	501421 241772

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Central Bedfordshire Council - Environmental Health Department	December 2013	Annually
Bedford Borough Council - Environmental Health Department	February 2013	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	July 2008	Not Applicable
Discharge Consents		
Environment Agency - Anglian Region	August 2014	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Anglian Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Anglian Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Anglian Region	August 2014	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	December 2008	Not Applicable
Central Bedfordshire Council - Environmental Health Department	March 2013	Annually
Bedford Borough Council - Environmental Health Department	September 2013	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
Prosecutions Relating to Authorised Processes		
Environment Agency - Anglian Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Anglian Region	March 2013	As notified
Registered Radioactive Substances		
Environment Agency - Anglian Region	August 2014	Quarterly
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Central Area	August 2014	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	July 2014	Quarterly
Water Industry Act Referrals		
Environment Agency - Anglian Region	August 2014	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	January 2011	Not Applicable

Agency & Hydrological	Version	Update Cycle
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	October 2012	Annually
Superficial Aquifer Designations		
British Geological Survey - National Geoscience Information Service	October 2012	Annually
Source Protection Zones		
Environment Agency - Head Office	August 2014	Quarterly
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2014	Quarterly
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2014	Quarterly
Areas Benefiting from Flood Defences		
Environment Agency - Head Office	August 2014	Quarterly
Flood Water Storage Areas		
Environment Agency - Head Office	August 2014	Quarterly
Flood Defences		
Environment Agency - Head Office	August 2014	Quarterly
Detailed River Network Lines		
Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage		
Environment Agency - Head Office	March 2012	Annually
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Anglian Region - Central Area	May 2014	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Anglian Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Anglian Region - Central Area	August 2014	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Central Area	August 2014	Quarterly
Local Authority Landfill Coverage		
Bedford Borough Council - Environmental Health Department	May 2000	Not Applicable
Bedfordshire County Council (now part of Central Bedfordshire Council)	May 2000	Not Applicable
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Bedford Borough Council - Environmental Health Department	April 2003	Not Applicable
Bedfordshire County Council (now part of Central Bedfordshire Council)	May 2000	Not Applicable
Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	May 2000	Not Applicable
Registered Landfill Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	August 2014	Bi-Annually
Explosive Sites		
Health and Safety Executive	November 2013	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Bedford Borough Council	April 2013	Annual Rolling Update
Central Bedfordshire Council - Planning Department	August 2013	Annually
Bedfordshire County Council (now part of Central Bedfordshire Council)	July 2008	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council)	May 2008	Not Applicable
Planning Hazardous Substance Consents		
Bedford Borough Council	April 2013	Annual Rolling Update
Central Bedfordshire Council - Planning Department	August 2013	Annually
Bedfordshire County Council (now part of Central Bedfordshire Council)	July 2008	Annual Rolling Update
Mid Bedfordshire District Council (now part of Central Bedfordshire Council)	May 2008	Not Applicable
Geological	**Version**	**Update Cycle**
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
BGS Estimated Soil Chemistry		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	April 2014	Bi-Annually
Brine Compensation Area		
Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Mining Report Service	December 2013	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	July 2014	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2014	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	August 2014	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2014	Quarterly
Sensitive Land Use	**Version**	**Update Cycle**
Areas of Adopted Green Belt Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	August 2014	As notified
Areas of Unadopted Green Belt Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department	August 2014	As notified
Areas of Outstanding Natural Beauty Natural England	August 2014	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2014	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	October 2014	Bi-Annually
Marine Nature Reserves Natural England	July 2013	Bi-Annually
National Nature Reserves Natural England	September 2014	Bi-Annually
National Parks Natural England	August 2014	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	July 2014	Annually
Ramsar Sites Natural England	March 2014	Bi-Annually
Sites of Special Scientific Interest Natural England	September 2014	Bi-Annually
Special Areas of Conservation Natural England	March 2014	Bi-Annually
Special Protection Areas Natural England	September 2014	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	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Bedford Borough Council - Environmental Health Department** Town Hall, St Pauls Street, Bedford, Bedfordshire, MK40 1SJ	Telephone: 01234 267422 Fax: 01234 325671 Email: enquiries@bedford.gov.uk Website: www.bedford.gov.uk
4	**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
5	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
6	**Bedford Borough Council** Town Hall, St Pauls Square, Bedford, Bedfordshire, MK40 1SJ	Telephone: 01234 267422 Fax: 01234 221606 Website: www.bedford.gov.uk
7	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmark.co.uk Website: www.landmarkinfo.co.uk
8	**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
9	**Bedfordshire County Council (now part of Central Bedfordshire Council)** County Hall, Cauldwell Street, Bedford, Bedfordshire, MK42 9AP	Telephone: 01234 363222 Fax: 01234 228656 Website: www.bedfordshire.gov.uk
10	**Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department** 23 London Road, Biggleswade, Bedford, Bedfordshire, SG18 8ER	Telephone: 01767 313137 Fax: 01767 316717 Website: www.midbeds.gov.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

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
Pylon
Electricity Transmission Line
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

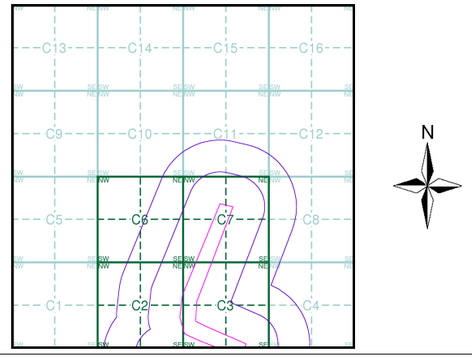
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Mud
Sand
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or 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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:10,560	1883 - 1884	2
Buckinghamshire	1:10,560	1885	3
Bedfordshire	1:10,560	1901 - 1902	4
Bedfordshire	1:10,560	1927	5
Bedfordshire	1:10,560	1938	6
Bedfordshire	1:10,560	1946 - 1948	7
Ordnance Survey Plan	1:10,000	1960	8
Ordnance Survey Plan	1:10,000	1982 - 1983	9
Ordnance Survey Plan	1:10,000	1990	10
10K Raster Mapping	1:10,000	2006	11
VectorMap Local	1:10,000	2014	12

Historical Map - Slice C



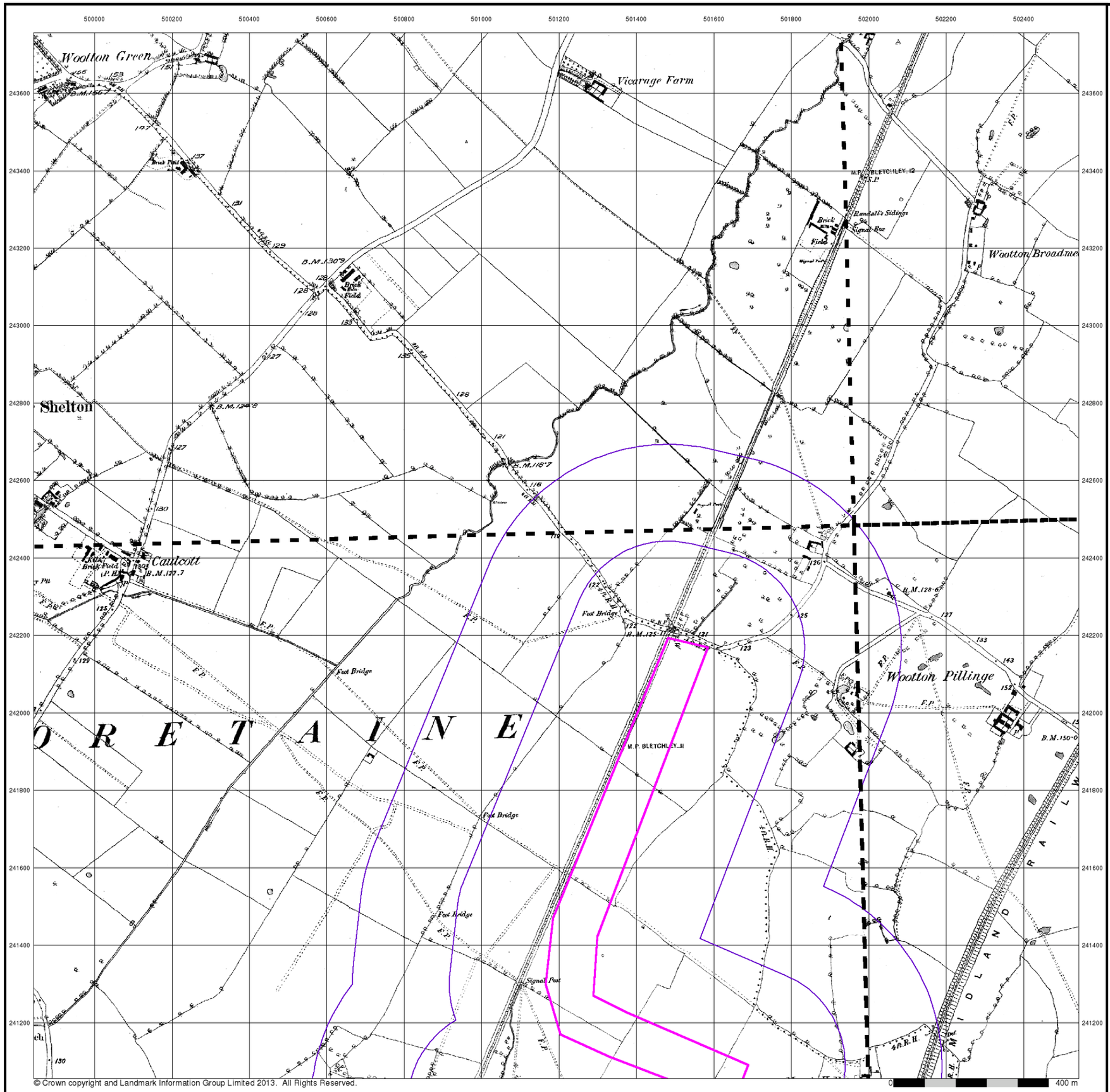
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 501420, 241770
Slice: C
Site Area (Ha): 240.61
Search Buffer (m): 500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

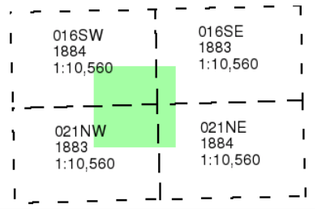
Bedfordshire

Published 1883 - 1884

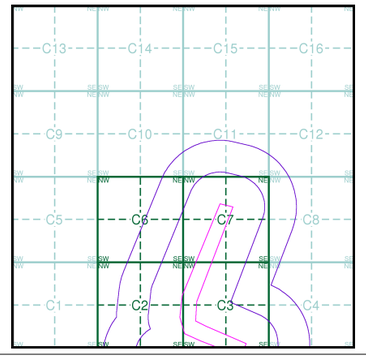
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice C



Order Details

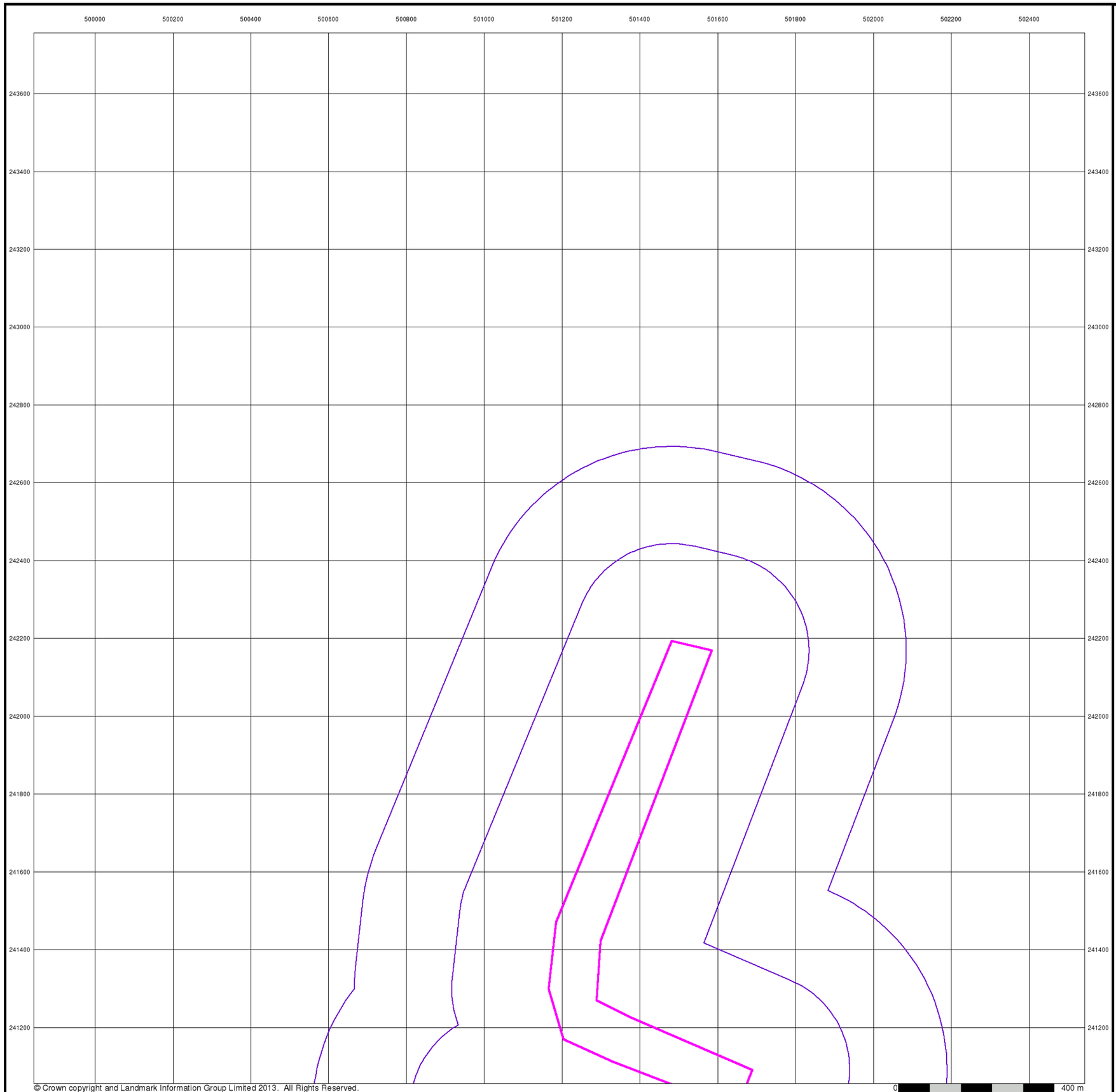
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



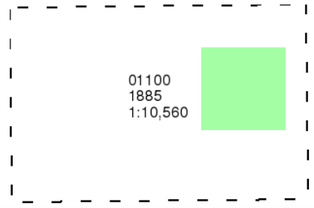
Buckinghamshire

Published 1885

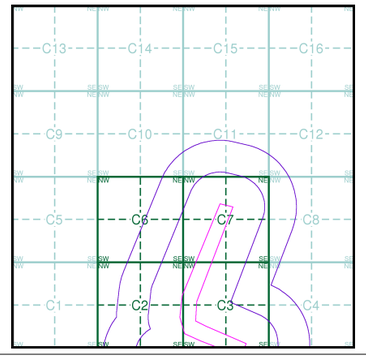
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice C



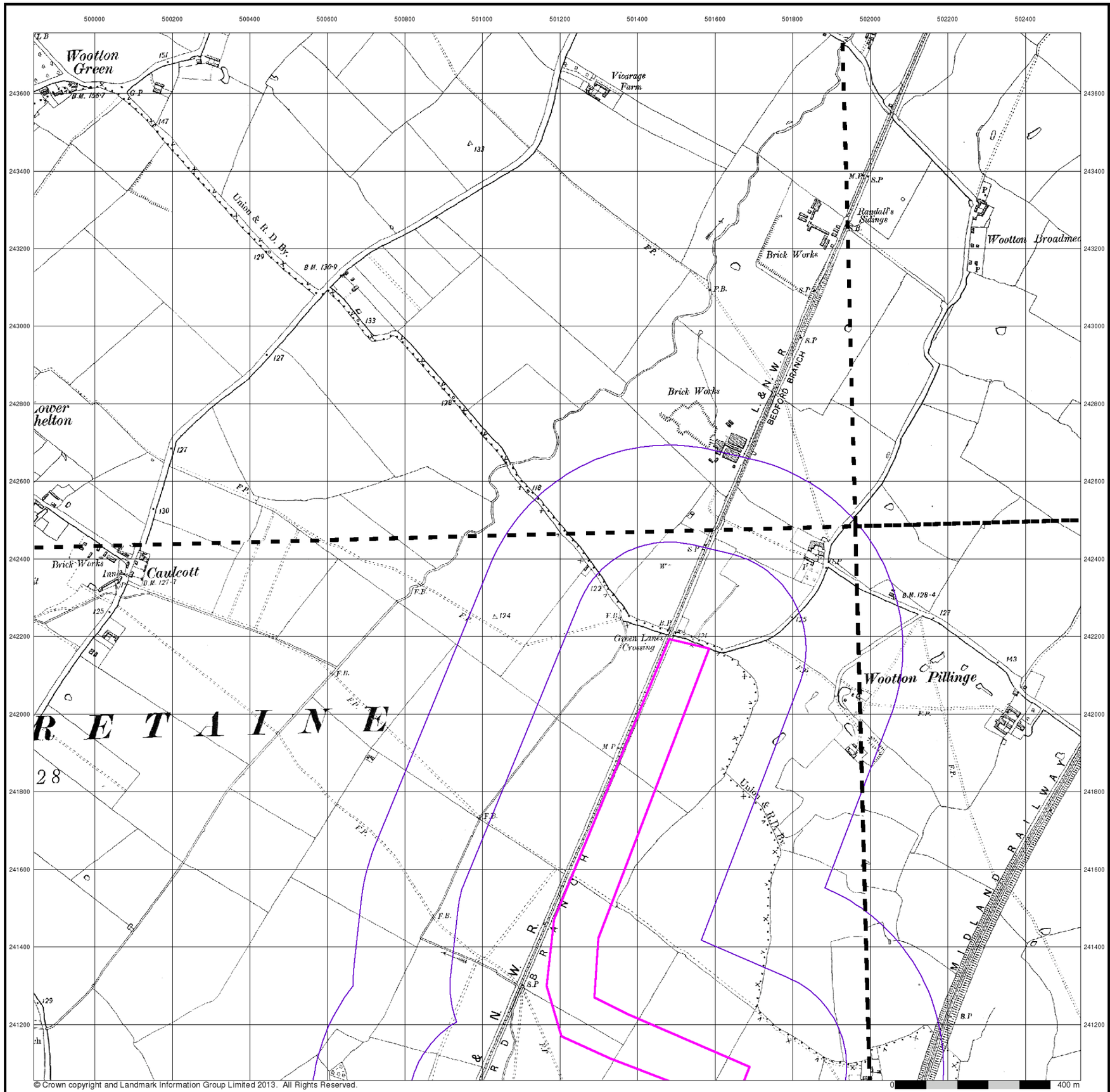
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

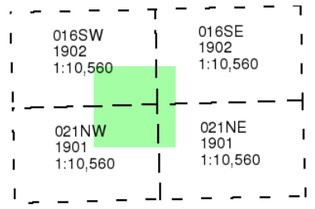
Bedfordshire

Published 1901 - 1902

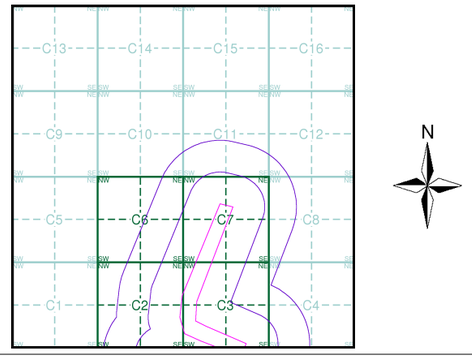
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice C



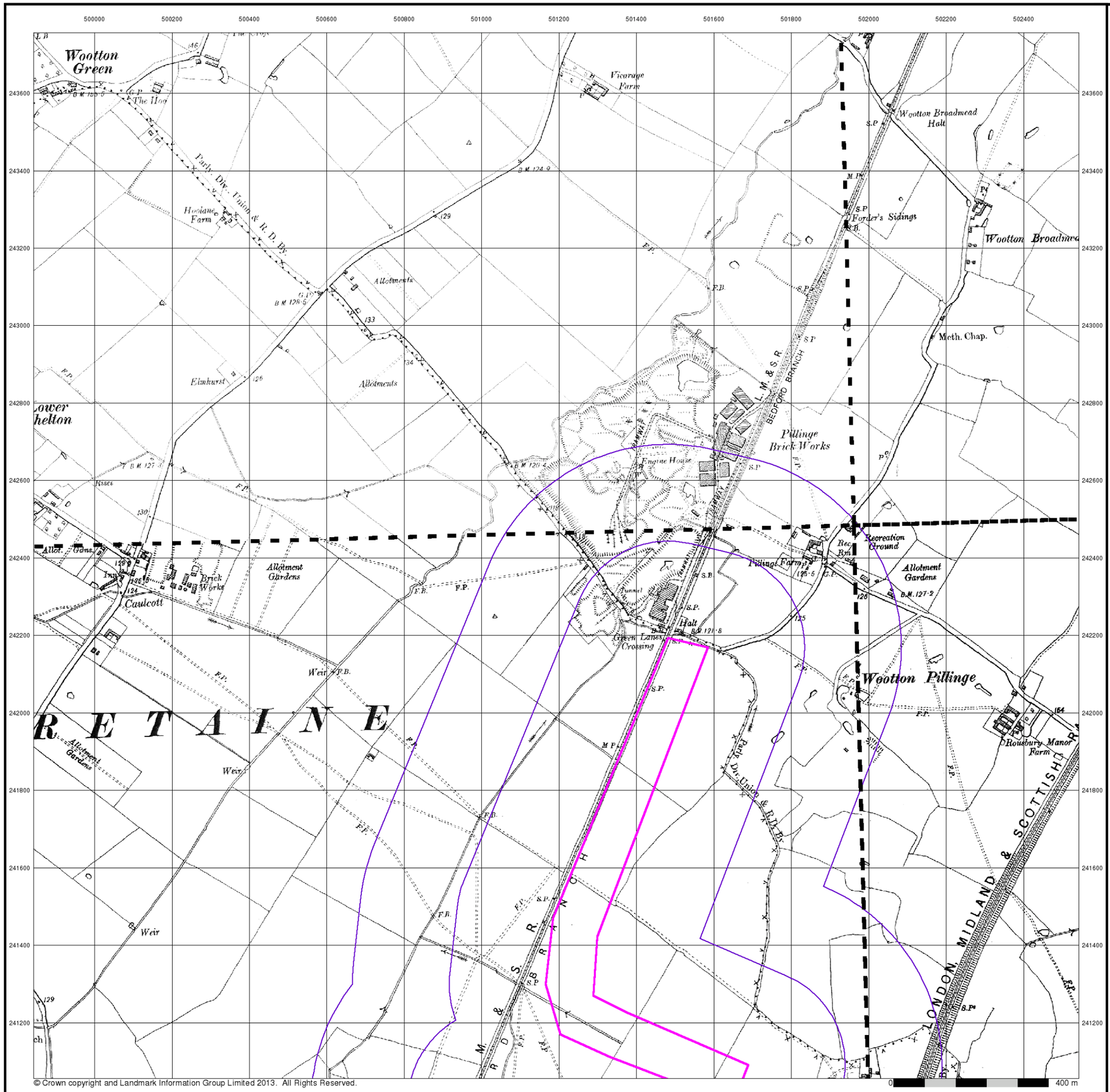
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

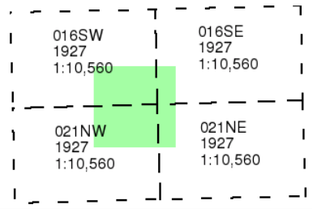
Bedfordshire

Published 1927

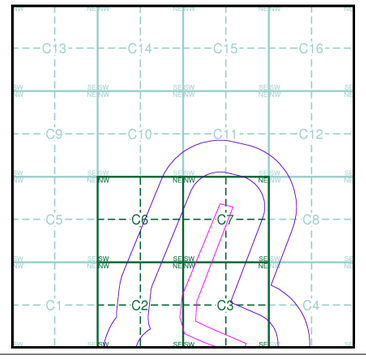
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice C



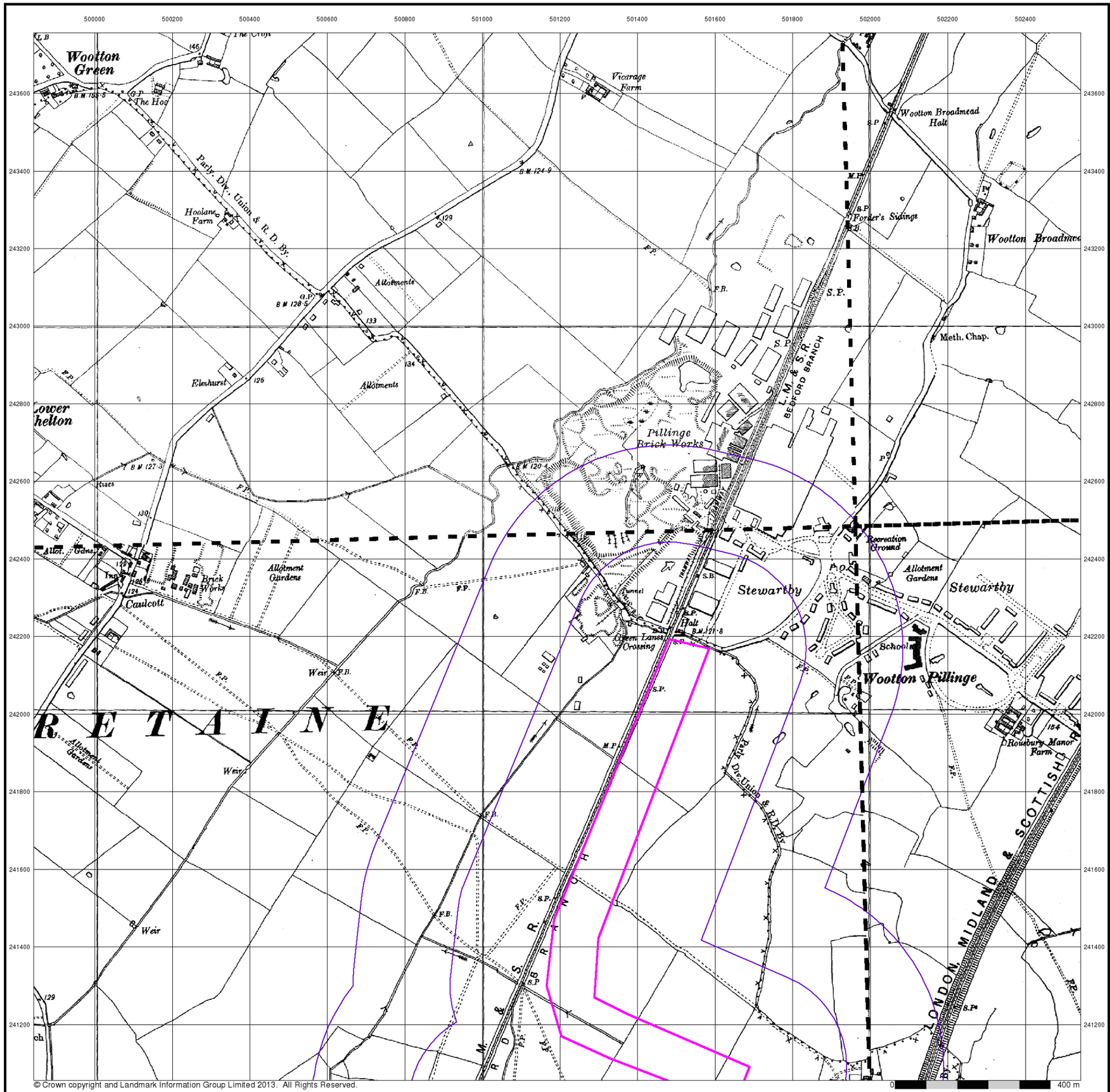
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

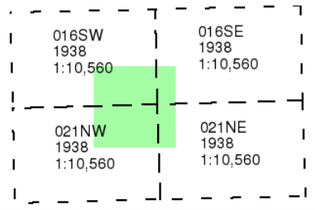
Bedfordshire

Published 1938

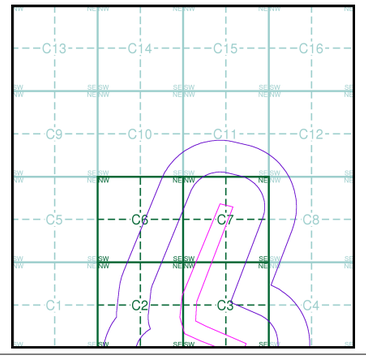
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice C



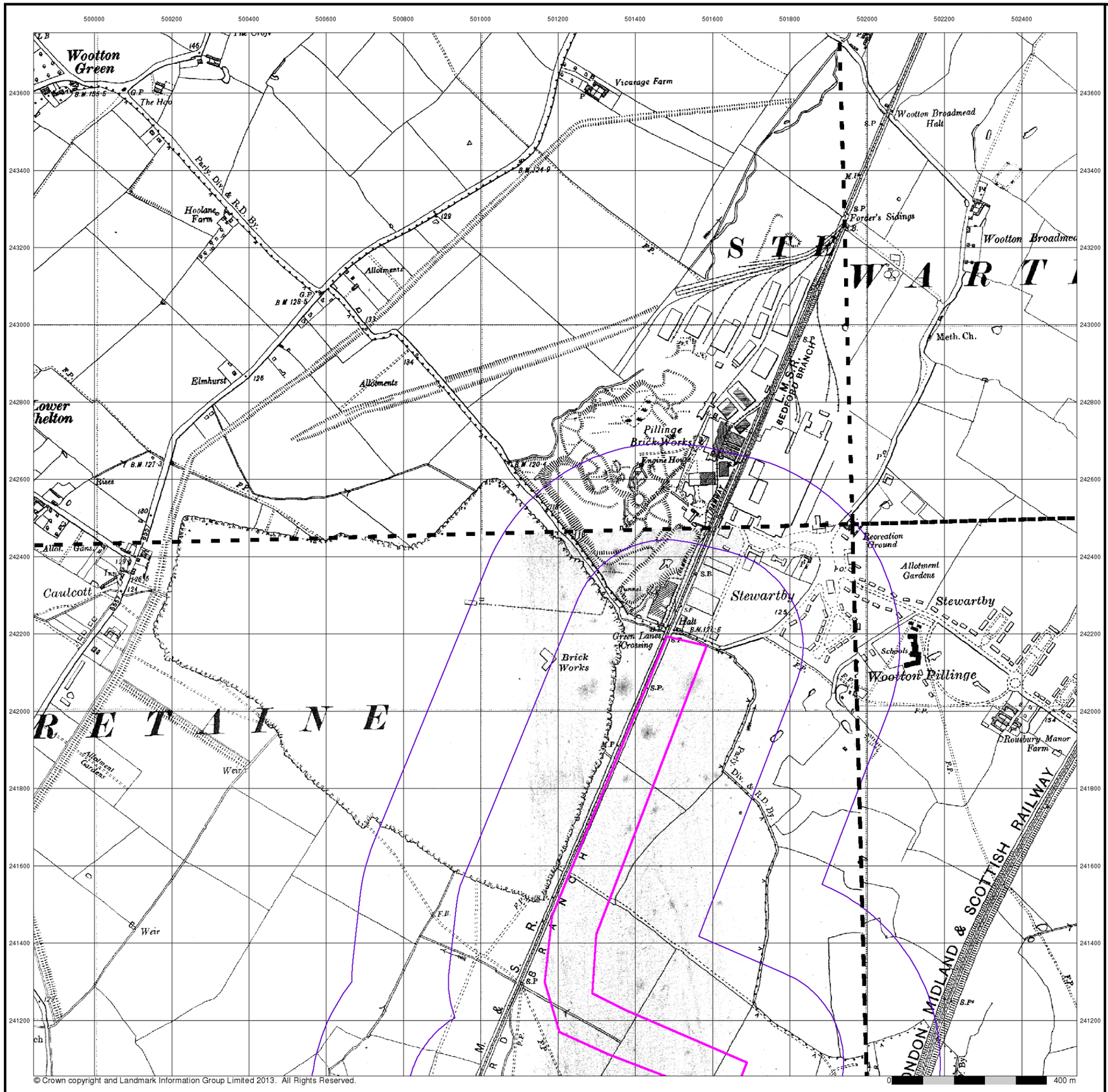
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

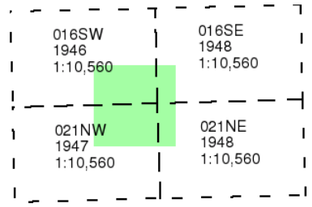
Bedfordshire

Published 1946 - 1948

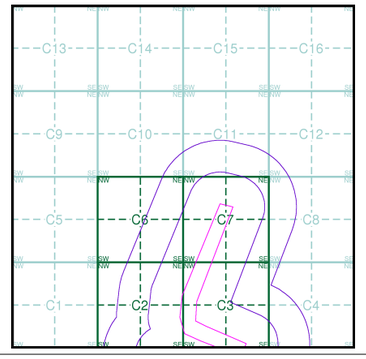
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice C



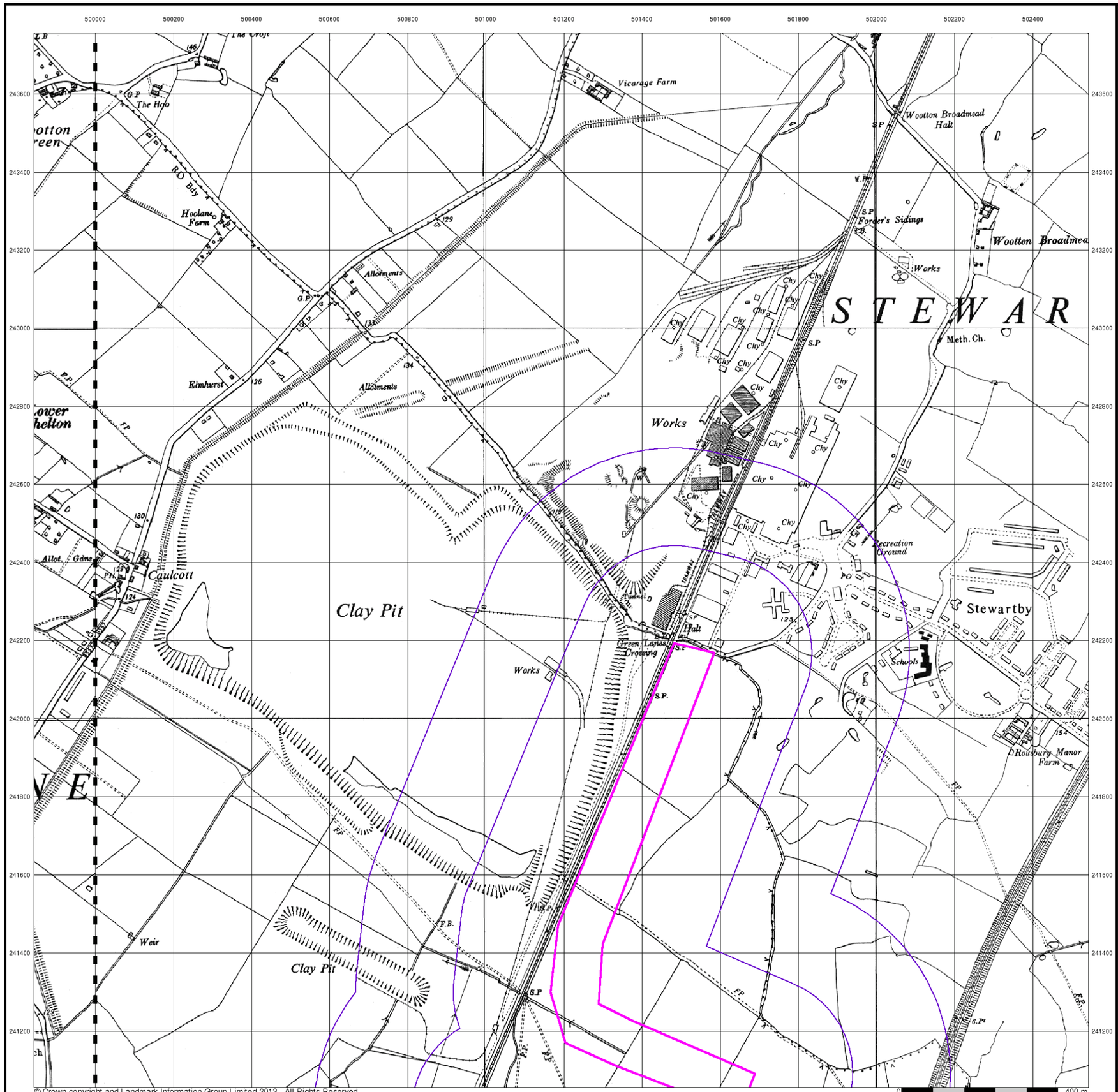
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



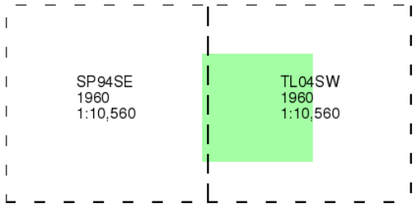
Ordnance Survey Plan

Published 1960

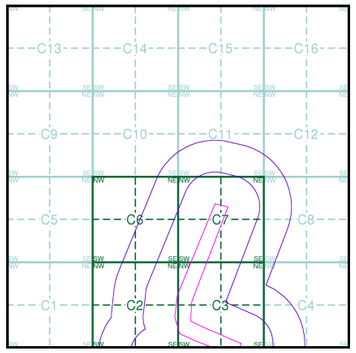
Source map scale - 1:10,000

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 C



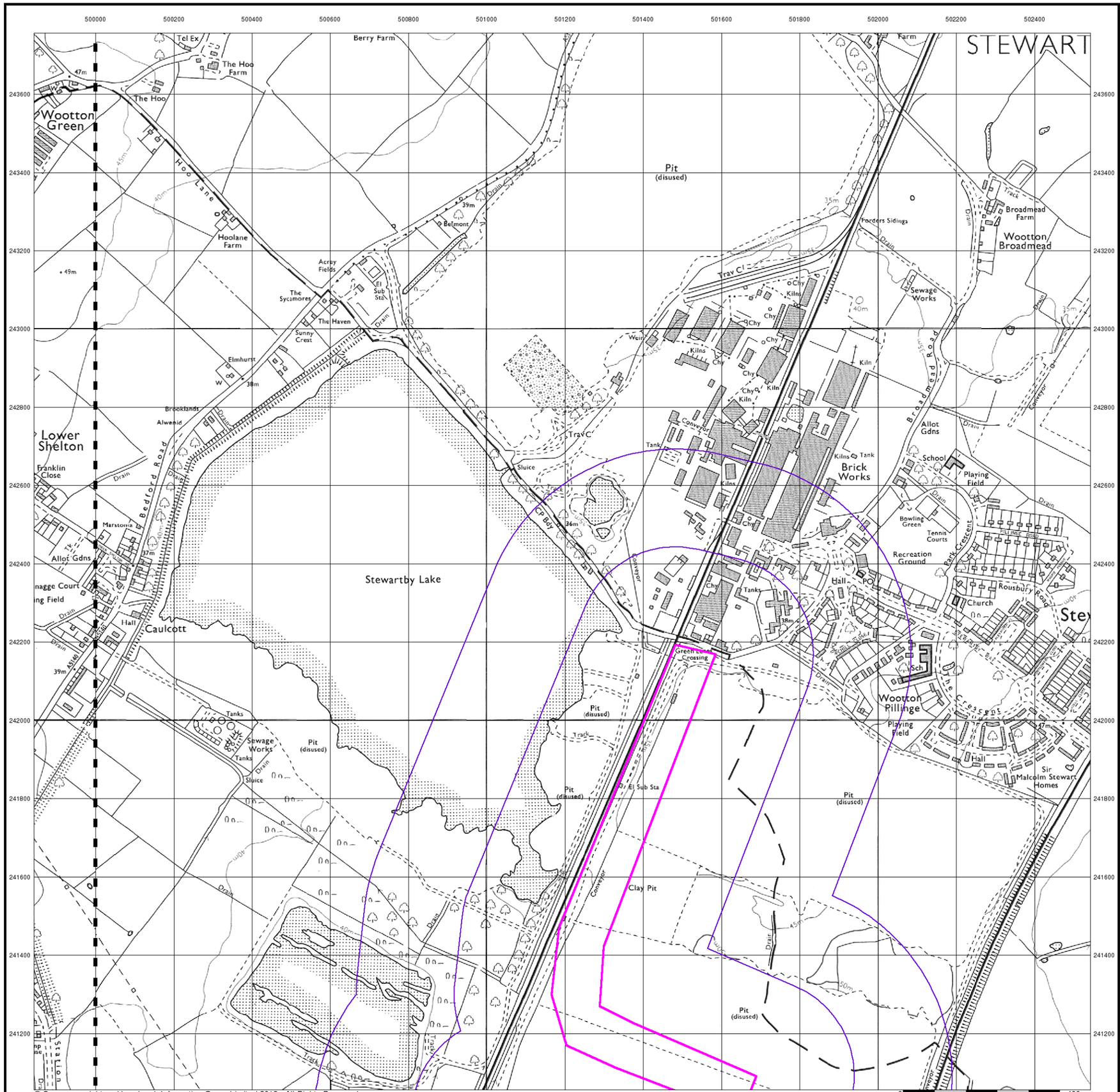
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

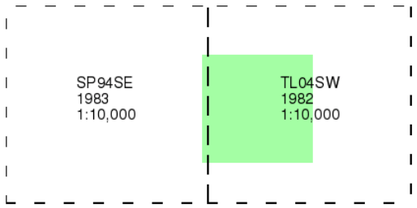
Ordnance Survey Plan

Published 1982 - 1983

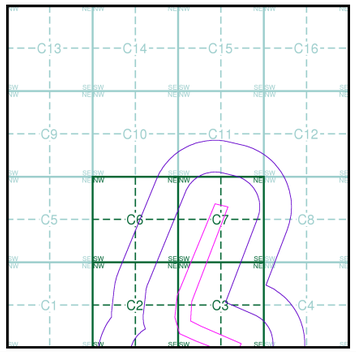
Source map scale - 1:10,000

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 C



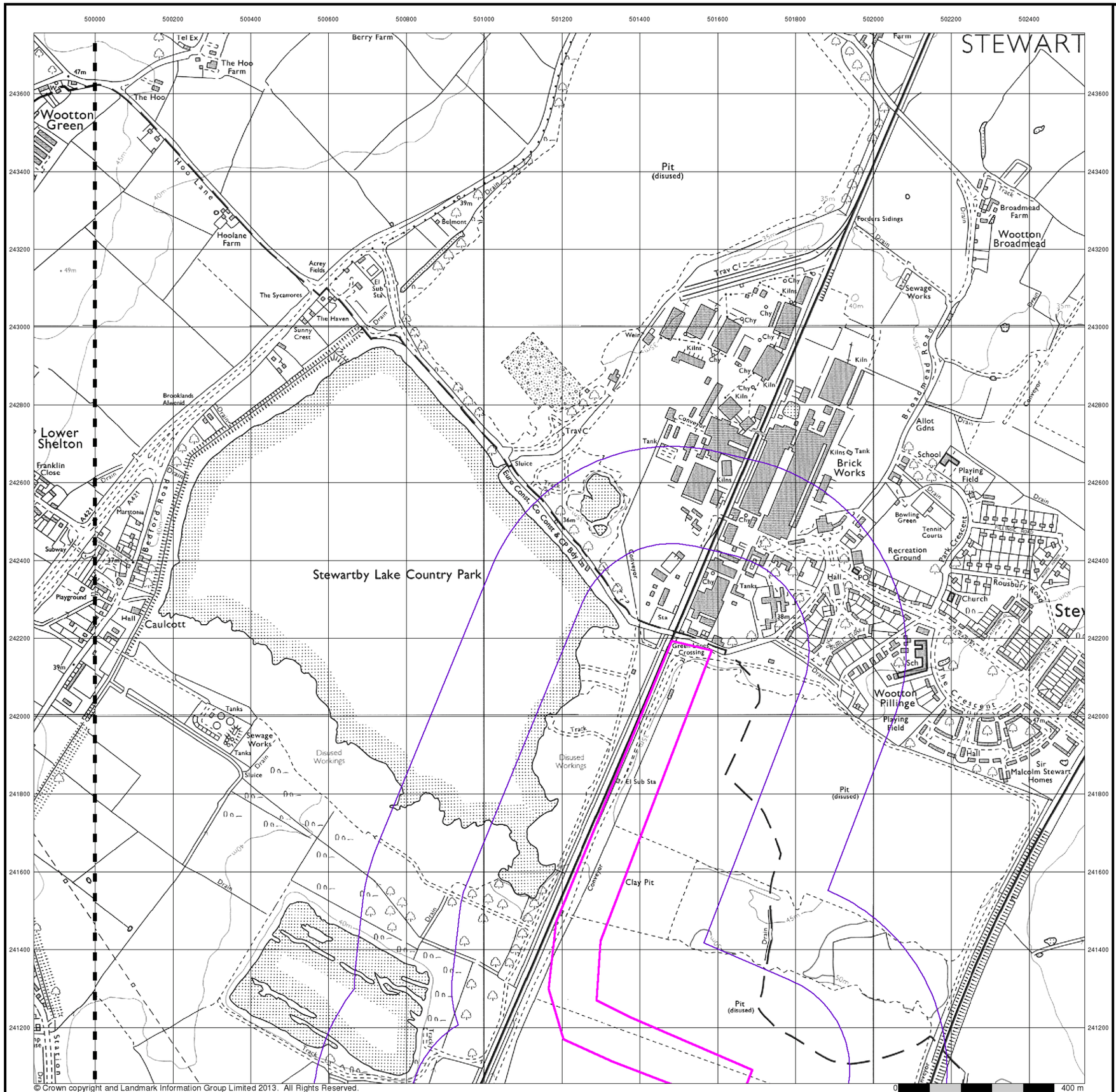
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

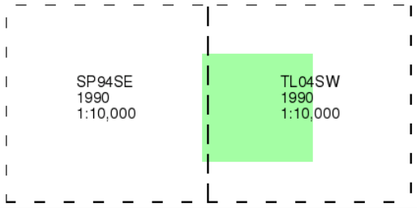
Ordnance Survey Plan

Published 1990

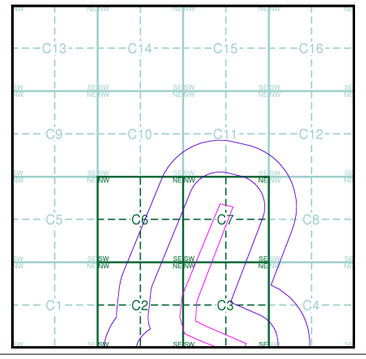
Source map scale - 1:10,000

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 C



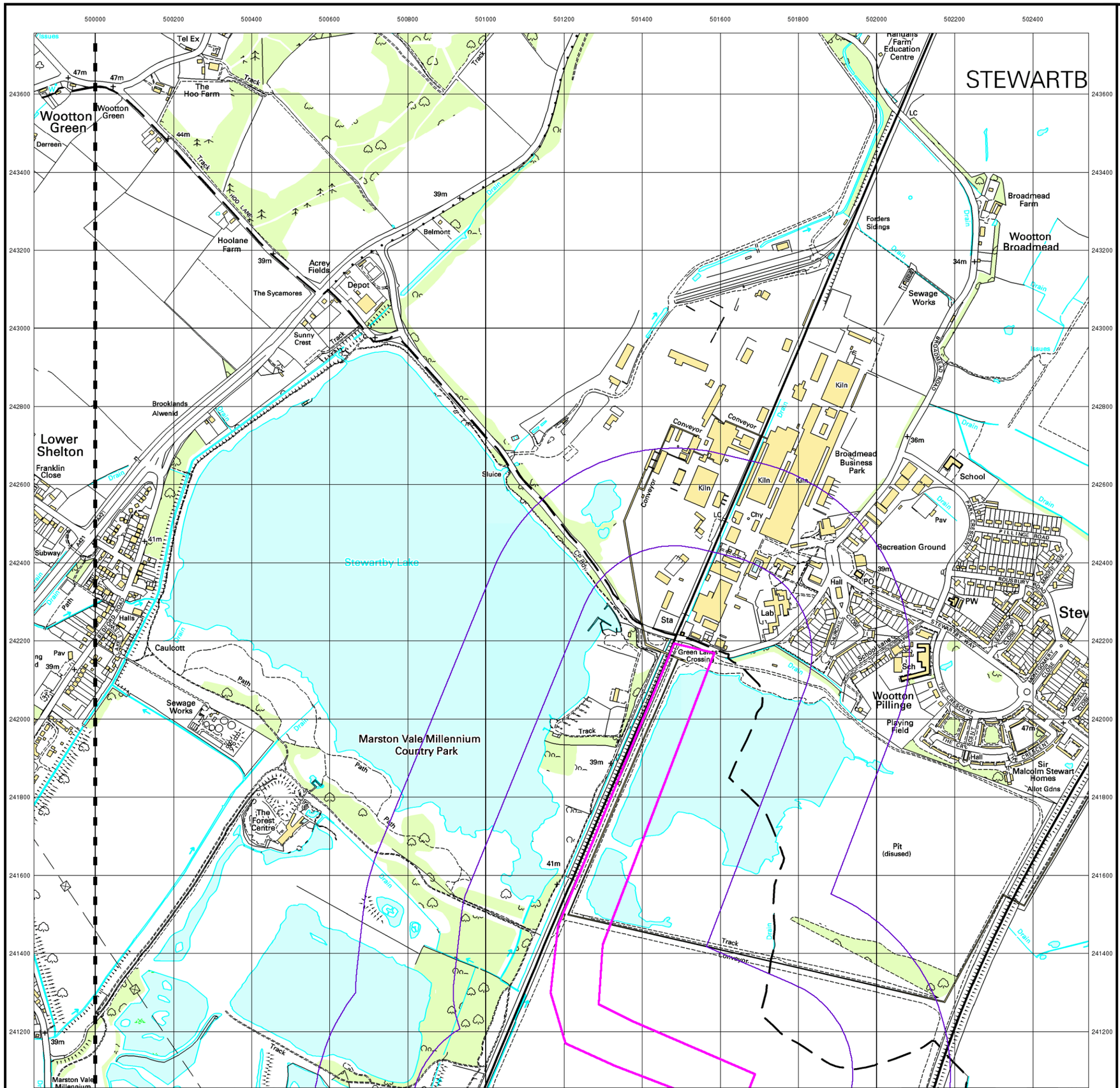
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



© Crown copyright. All Rights Reserved. Licence Number 100022432.

0 400 m

pba peterbrett

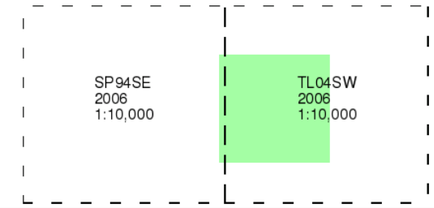
10k Raster Mapping

Published 2006

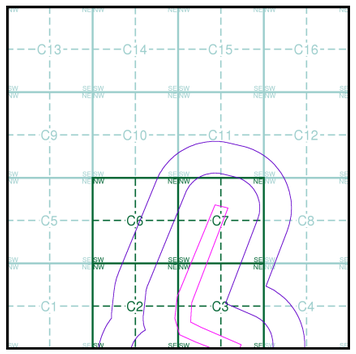
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice C



Order Details

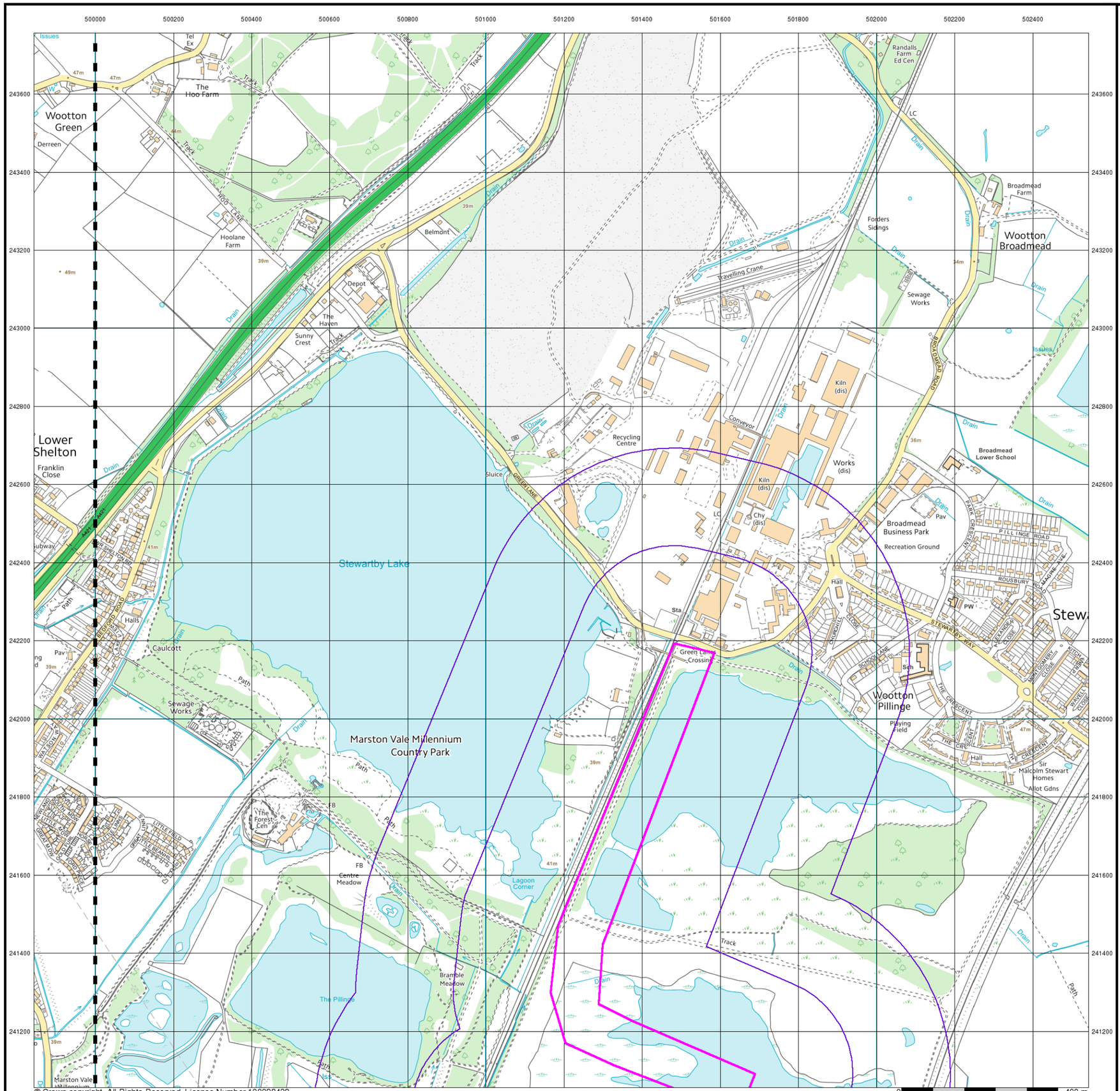
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

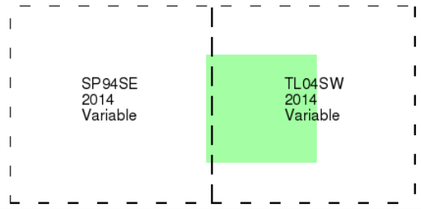
VectorMap Local

Published 2014

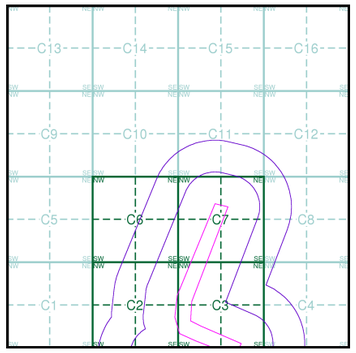
Source map scale - 1:10,000

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 C



Order Details

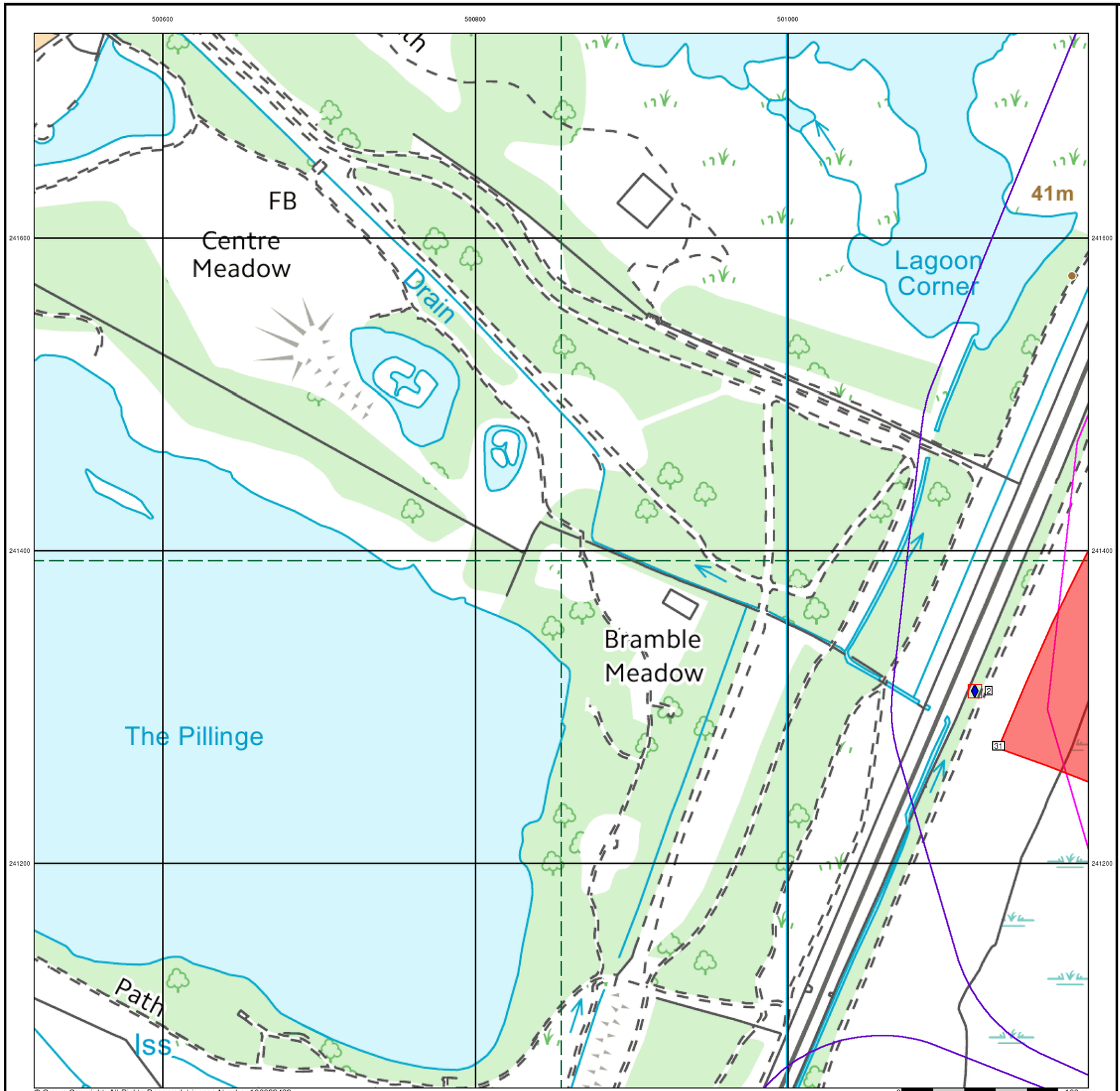
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

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

Geological

BGS Recorded Mineral Site

Industrial Land Use

Contemporary Trade Directory Entry
Fuel Station Entry

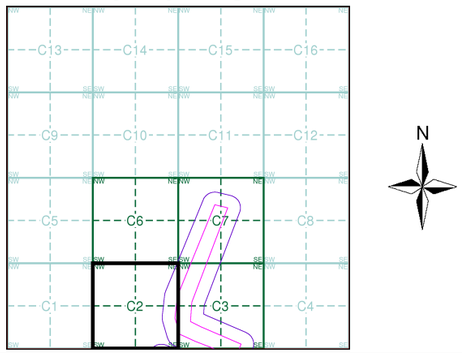
Waste

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
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

Hazardous Substances

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

Site Sensitivity Map - Segment C2



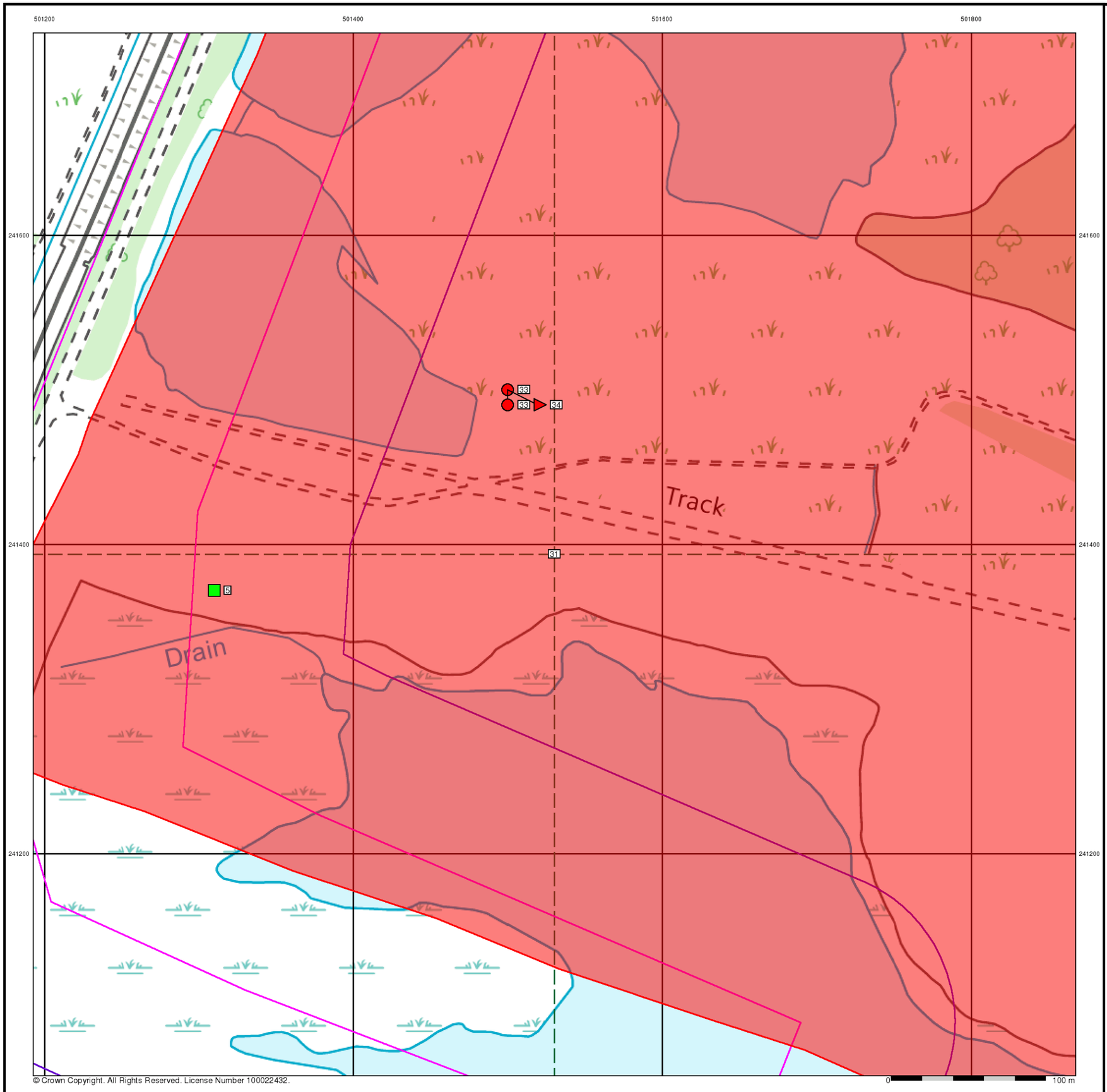
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

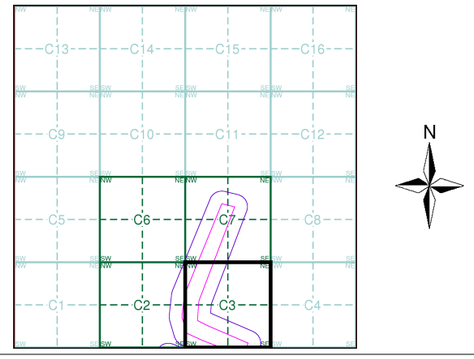
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment C3



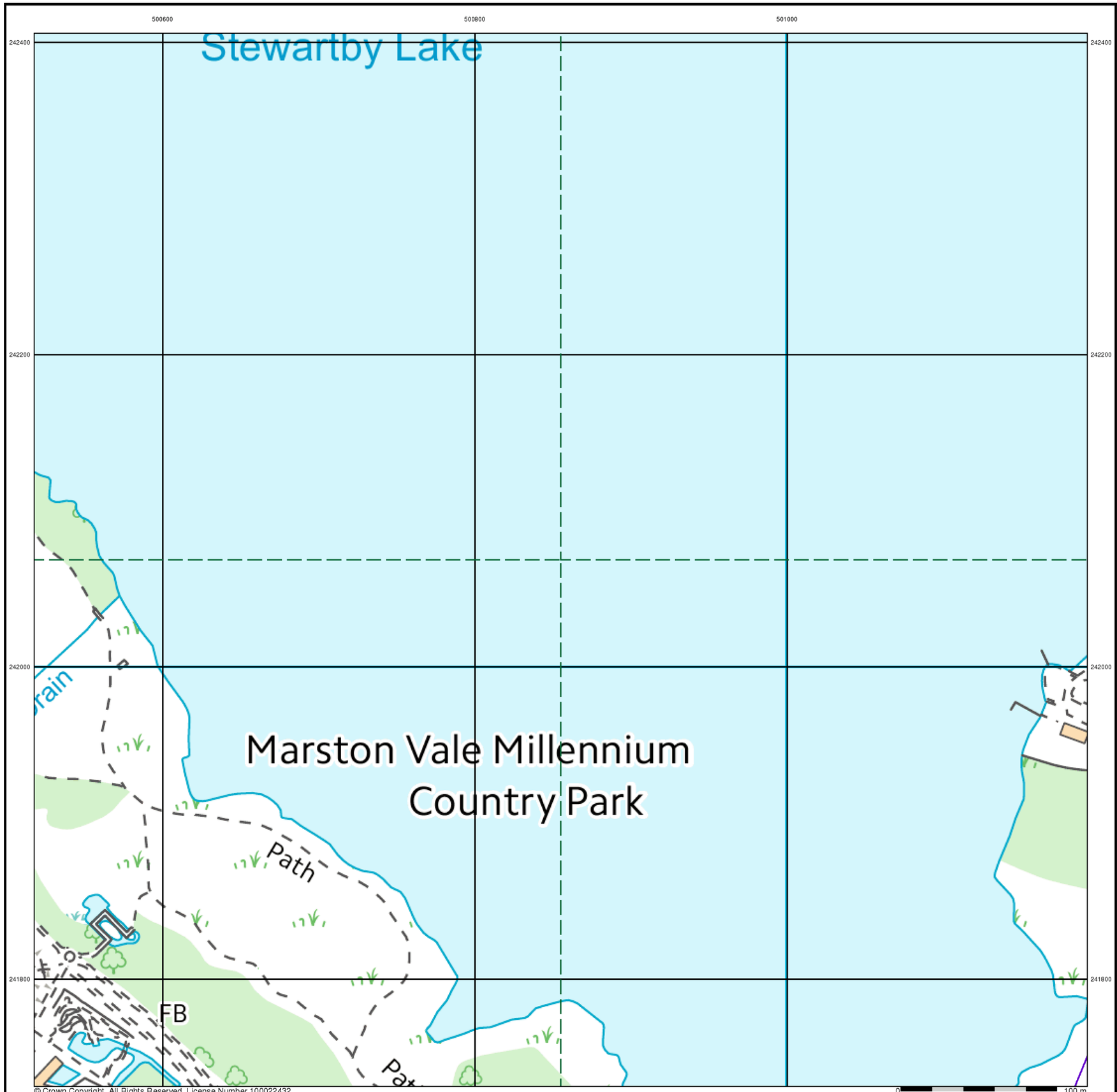
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

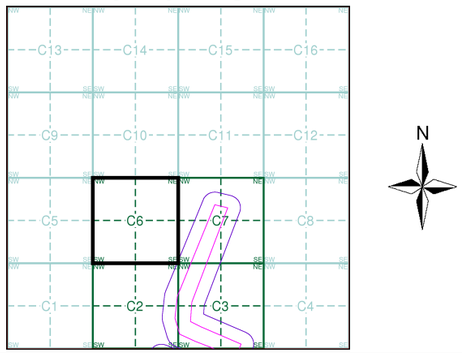
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment C6



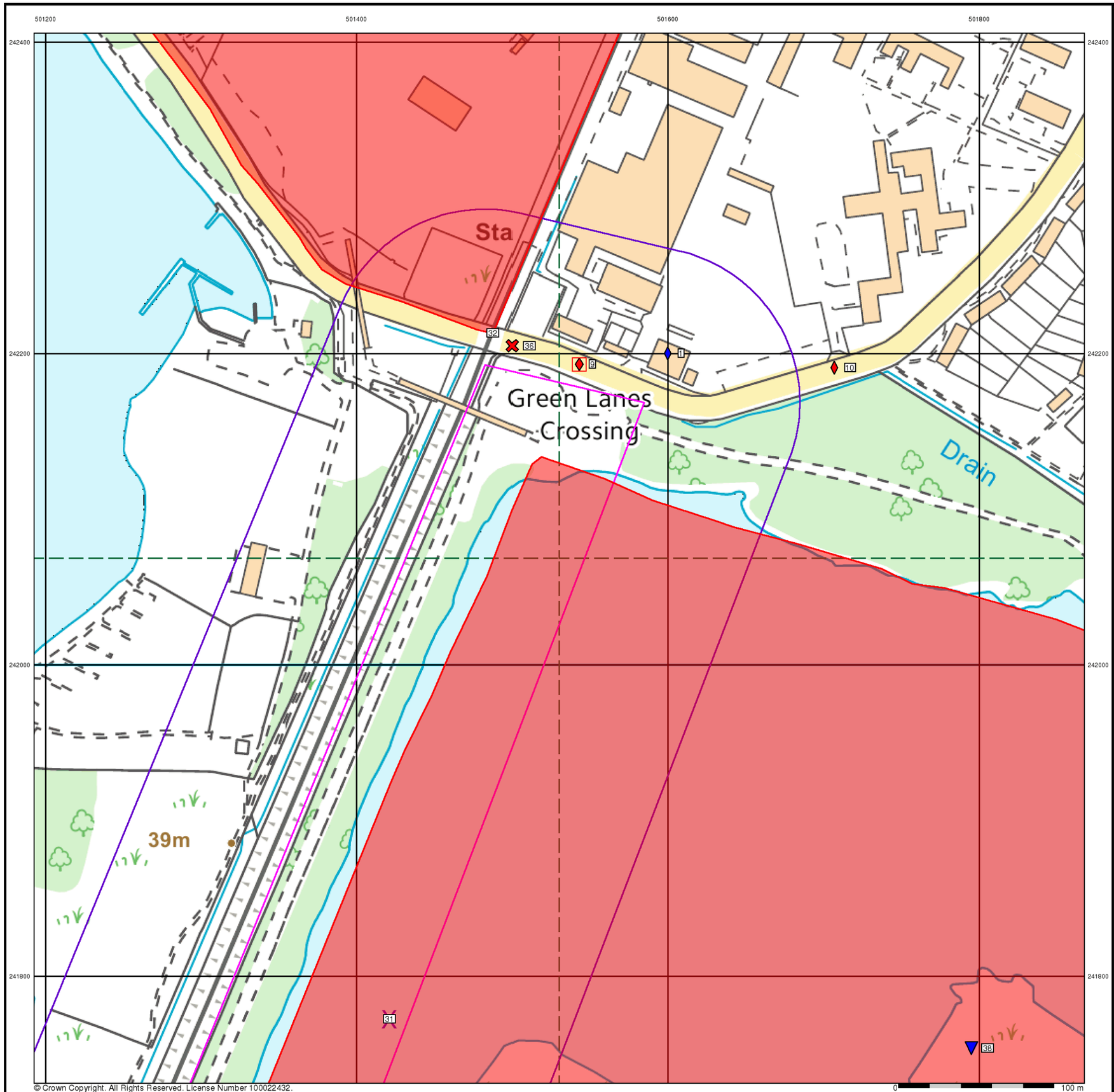
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

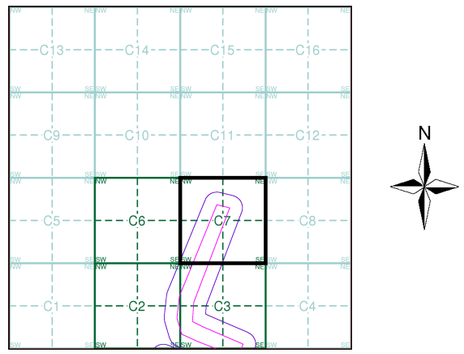
Waste

- 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
- 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

Hazardous Substances

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

Site Sensitivity Map - Segment C7



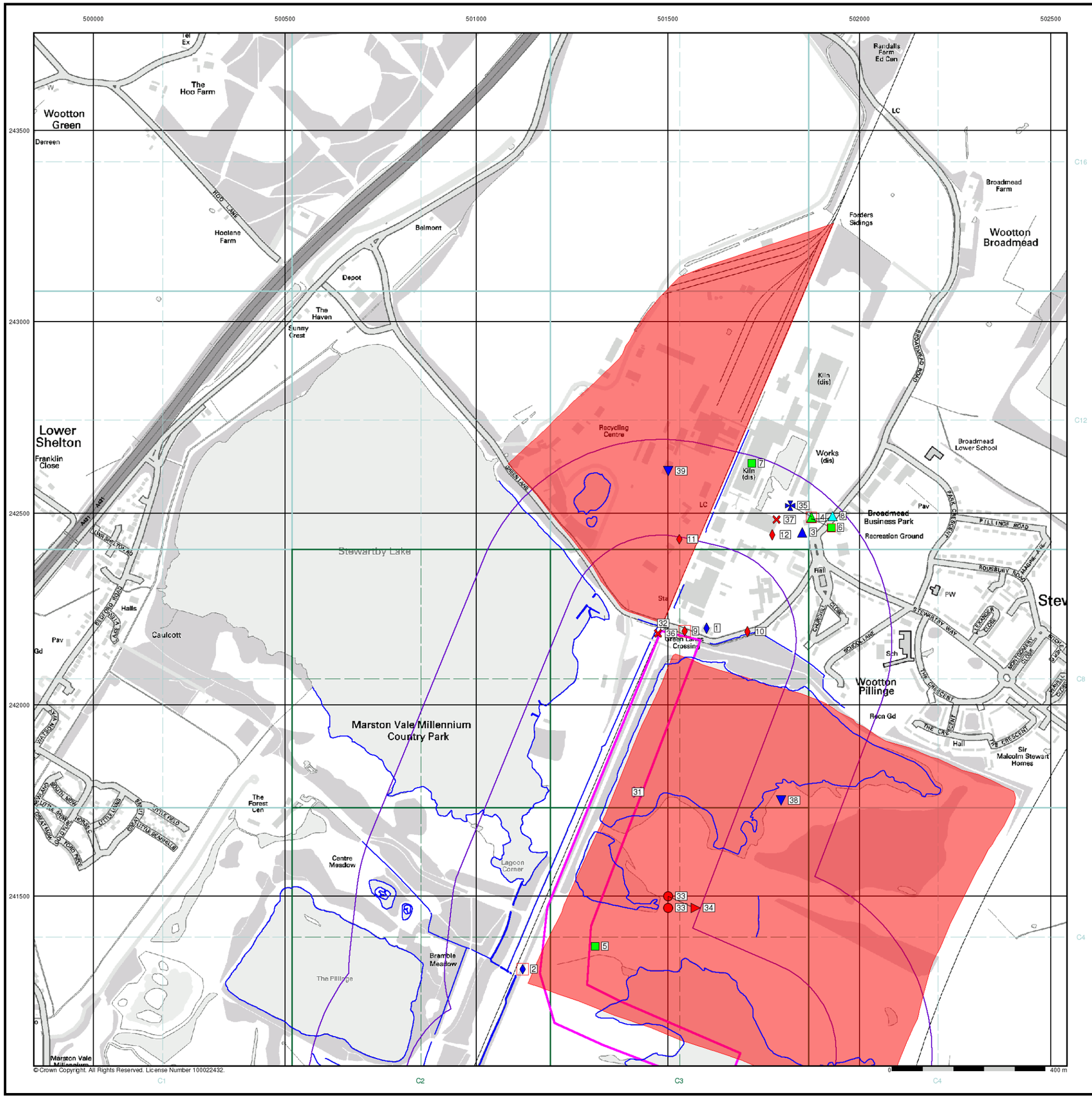
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

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
- 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

Geological

- BGS Recorded Mineral Site

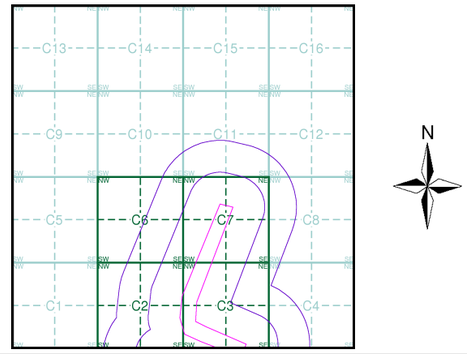
Hazardous Substances

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Slice C



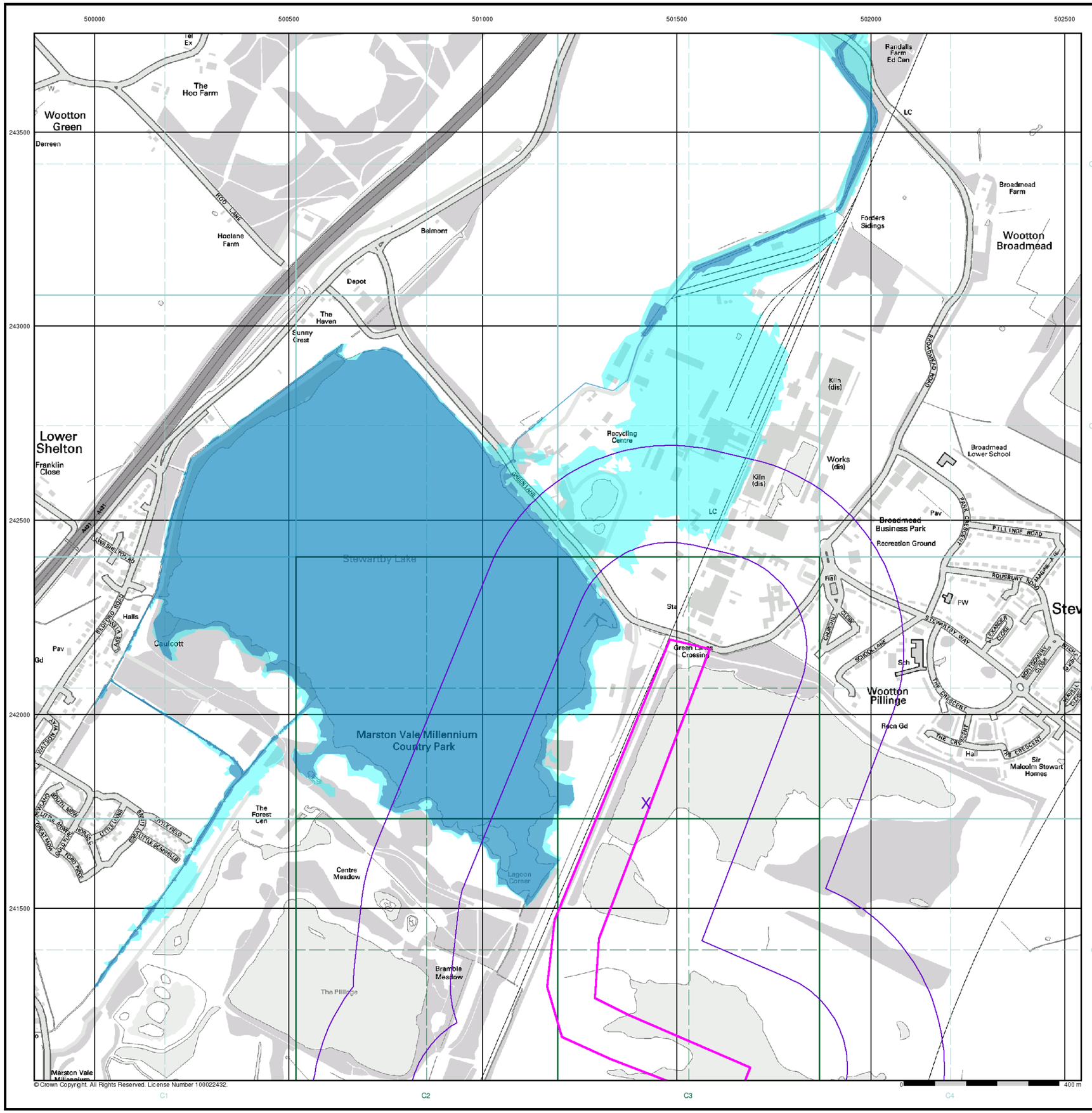
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

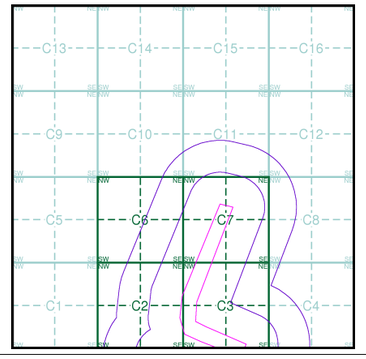
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice C



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

General

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

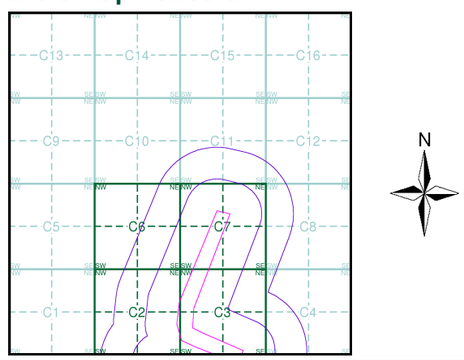
Agency and Hydrological (Boreholes)

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

For Borehole information please refer to the Borehole datasheet 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 C



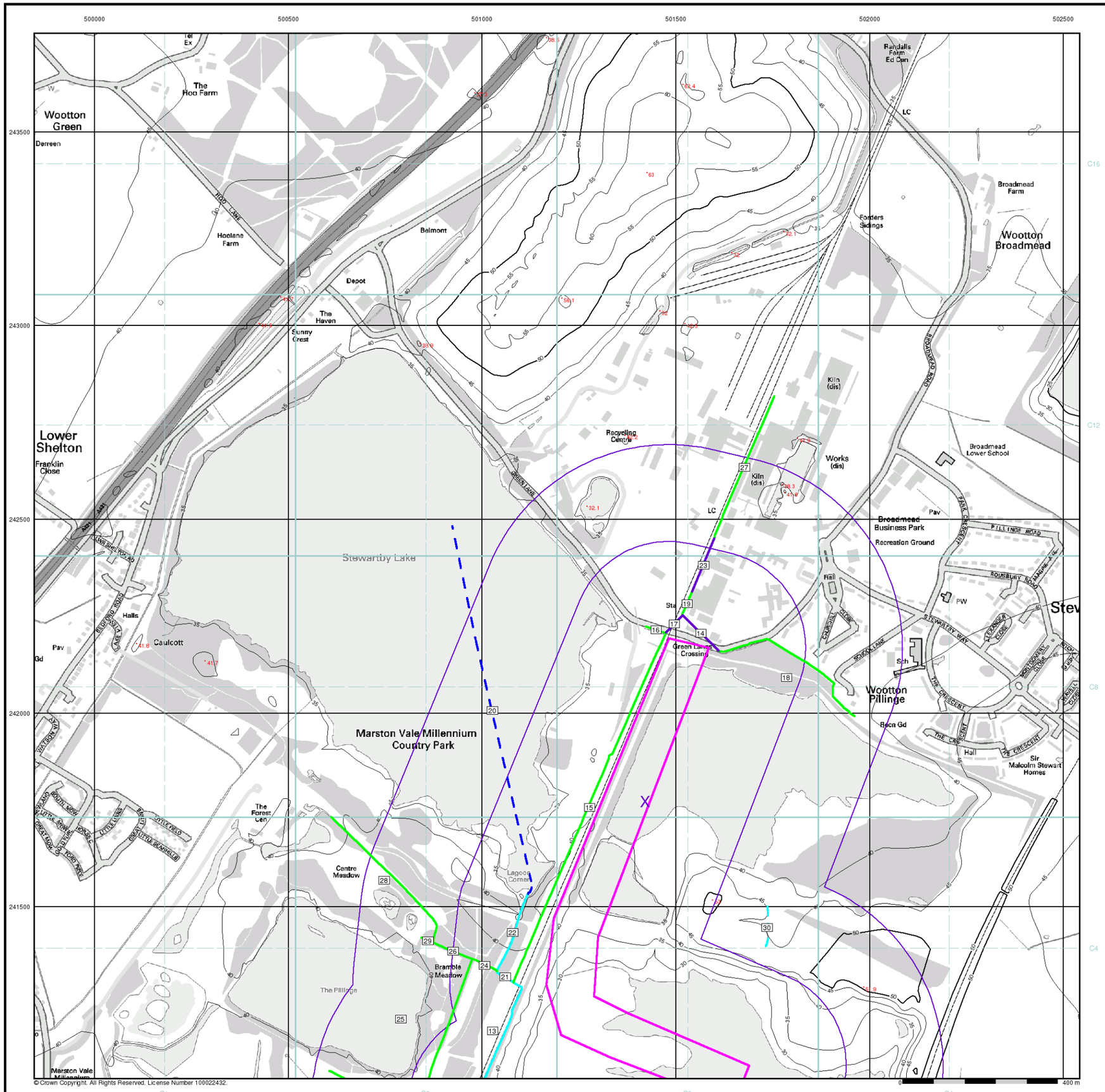
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



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

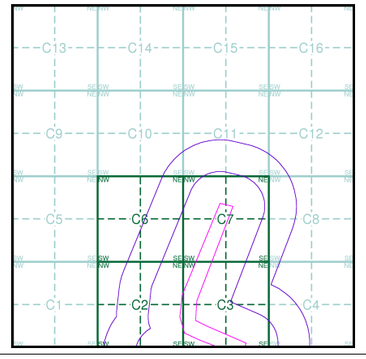
Contours (height in metres)

Standard Contour 105 100 95 — MLW Mean Low Water

Master Contour — MHW Mean High Water

Spot Height *167.3

EA/NRW Detailed River Network Map - Slice C



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

General

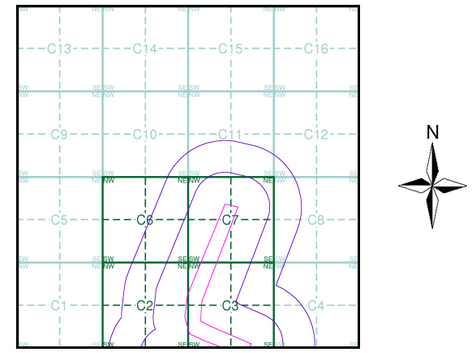
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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 C



Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

General

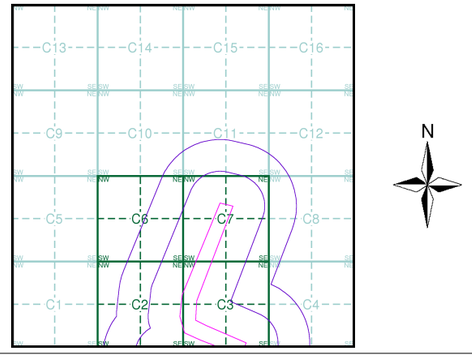
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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 C



Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

General

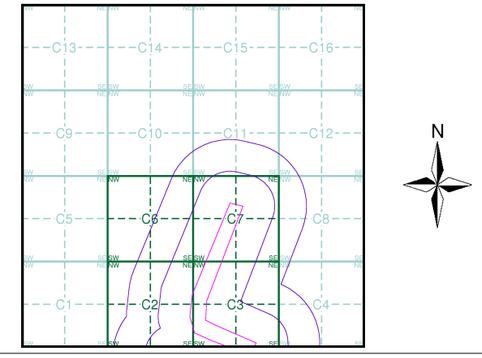
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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 C



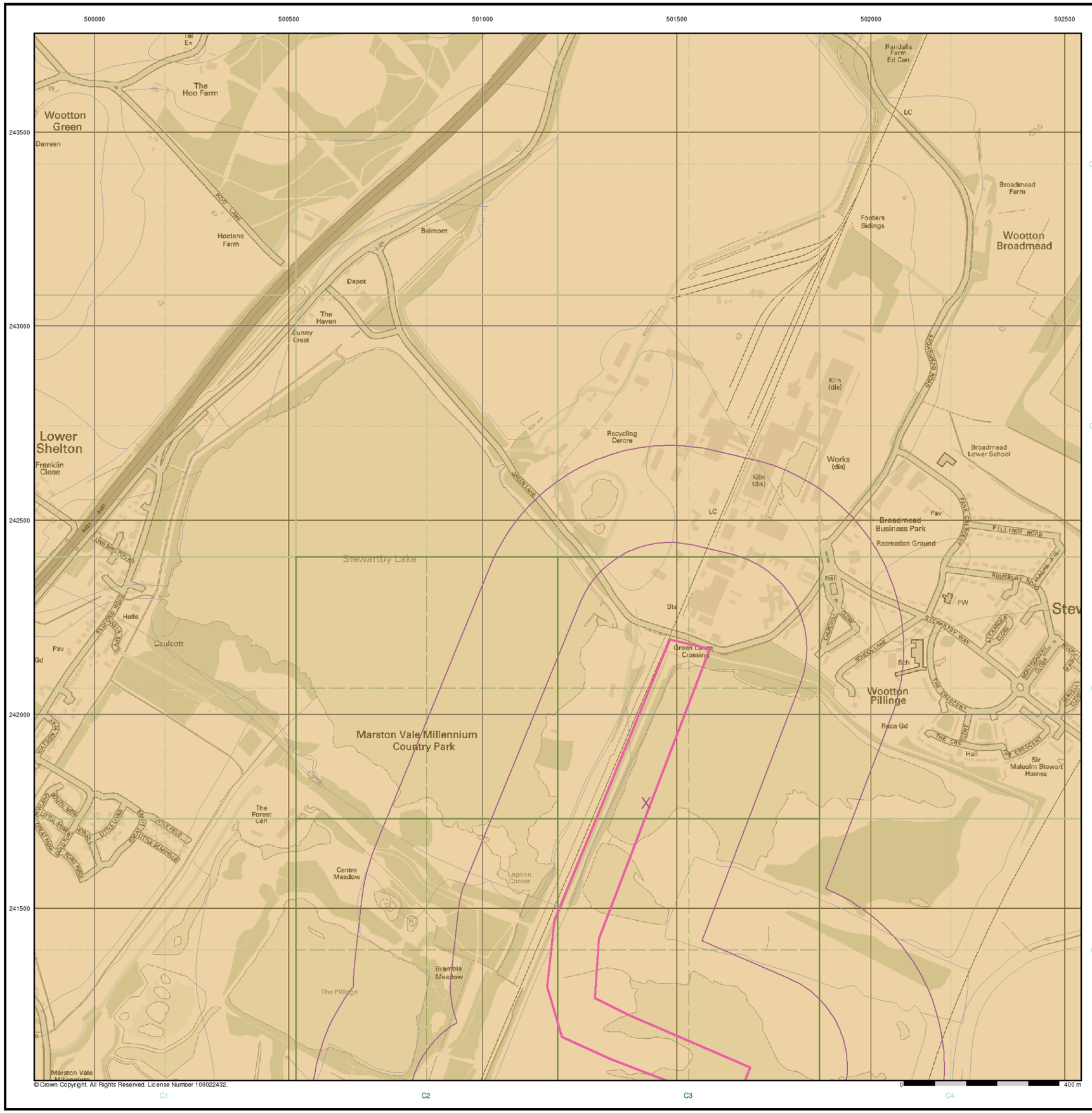
Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



General

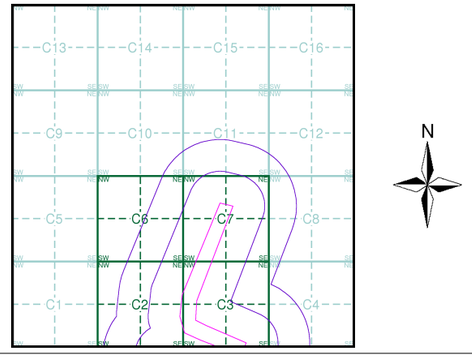
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- < 150
- 150 - 300
- 300 - 600
- 600 - 900
- > 900

Estimated Soil Chemistry Lead - Slice C



Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

General

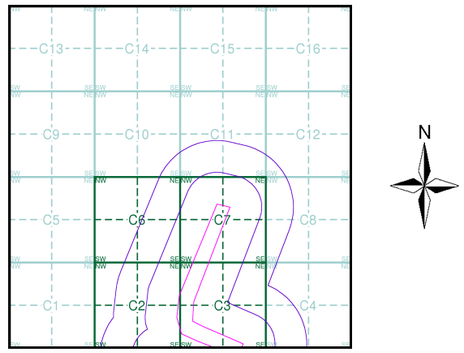
Specified Site | Specified Buffer(s) | X Bearing Reference Point

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 C



Order Details

Order Details:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	500

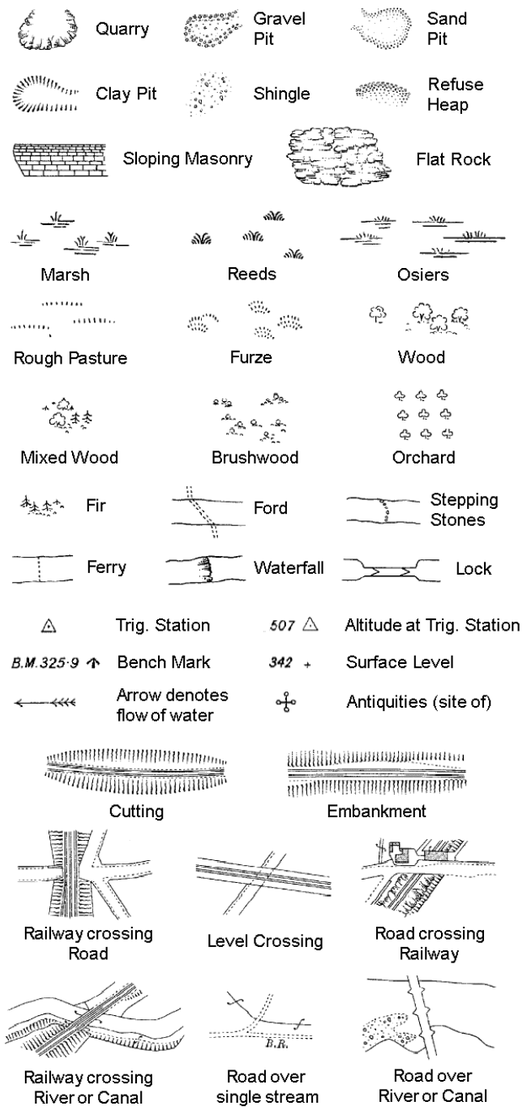
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

Historical Mapping Legends

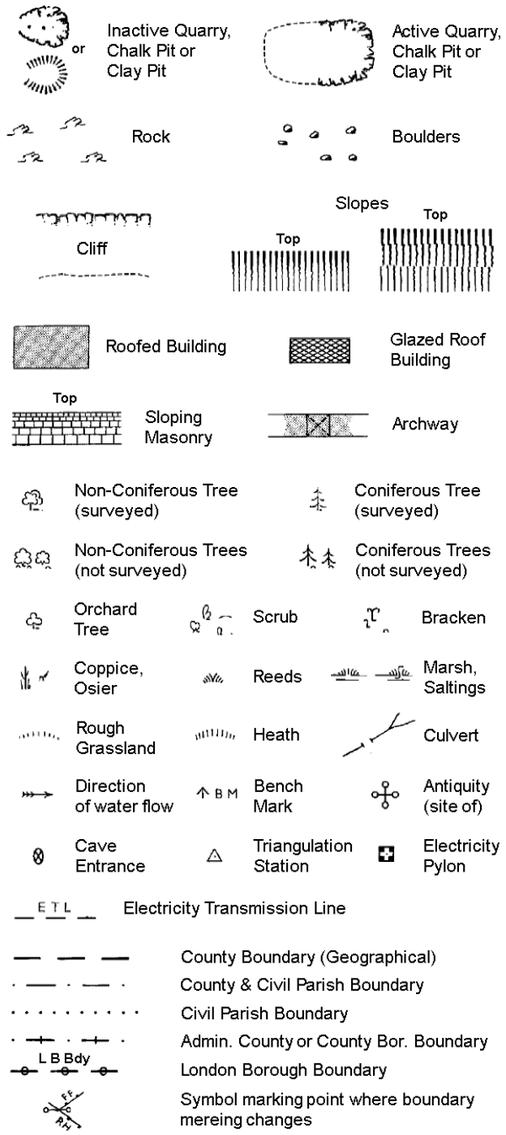
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

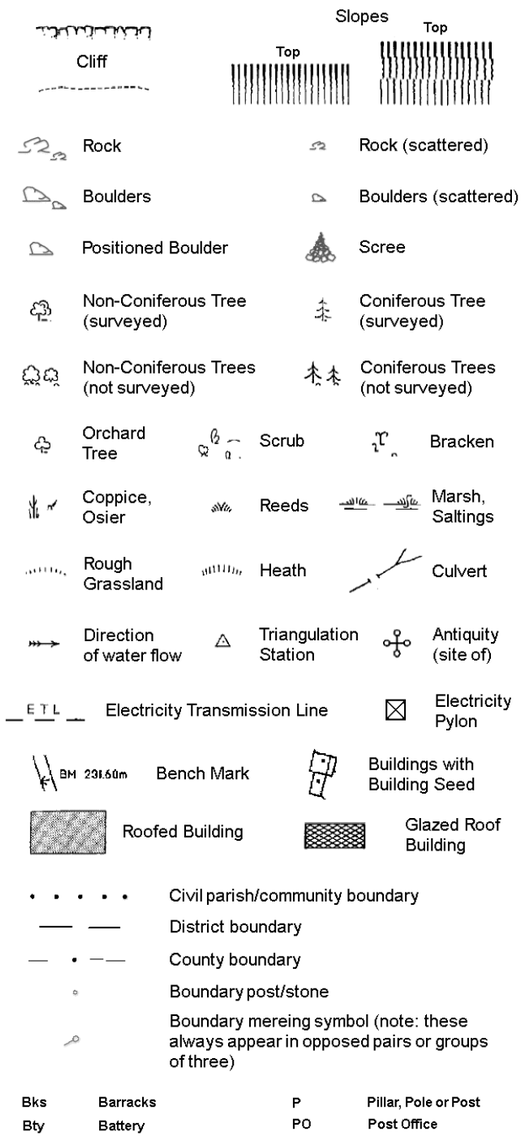
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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



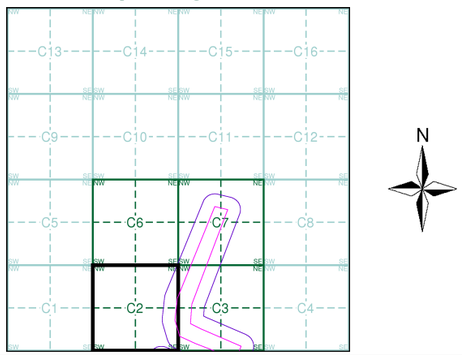
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

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

pba peterbrett

Historical Mapping & Photography included:

Historical Map - Segment C2



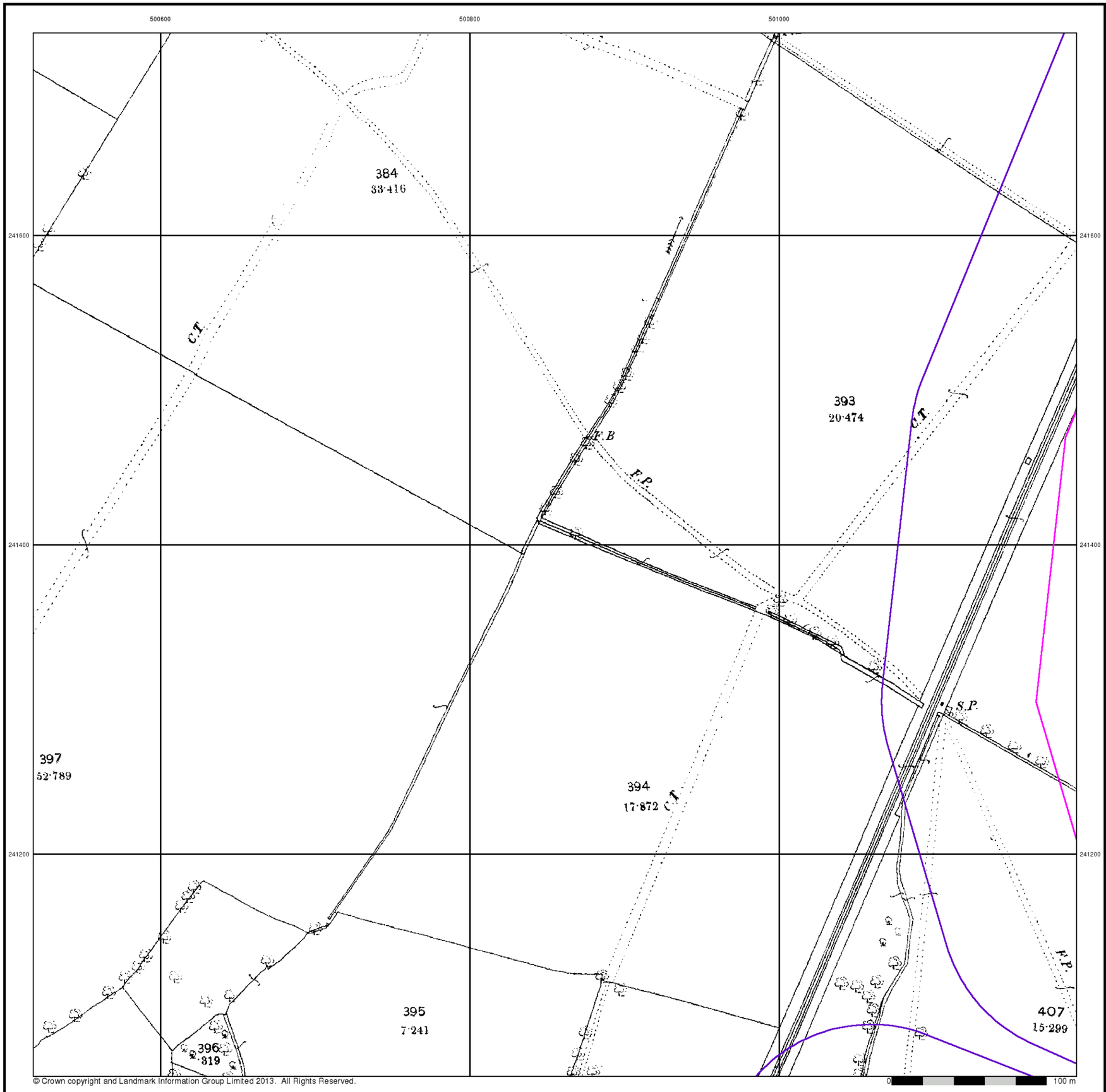
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



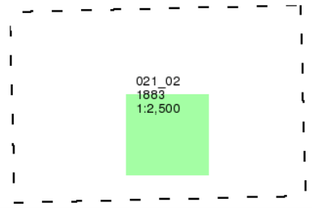
Bedfordshire

Published 1883

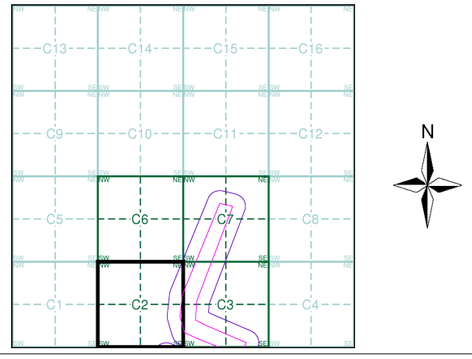
Source map scale - 1:2,500

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 C2



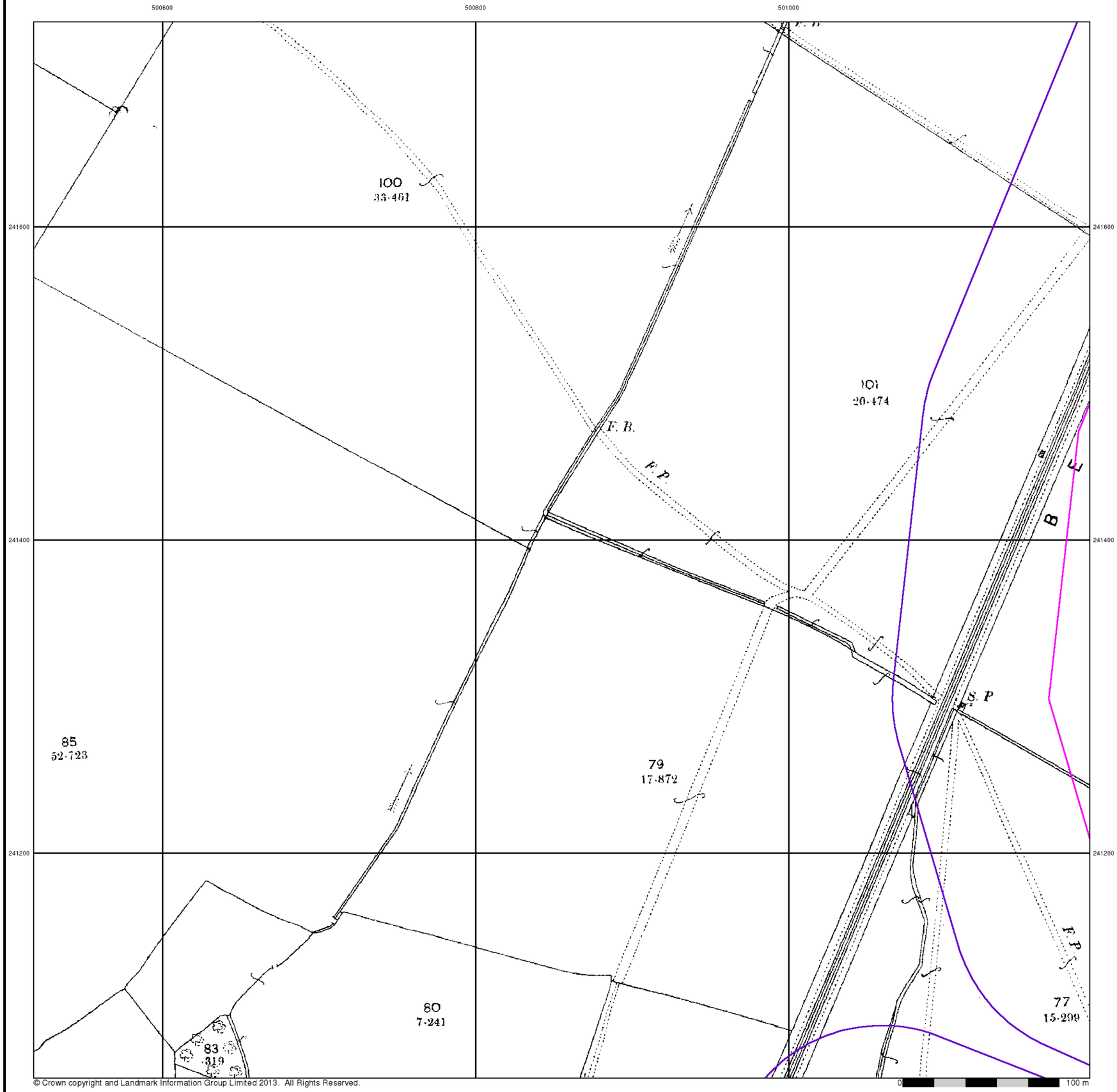
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

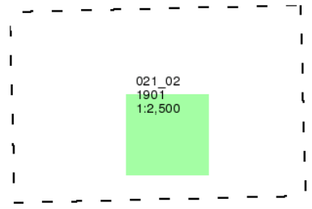
Bedfordshire

Published 1901

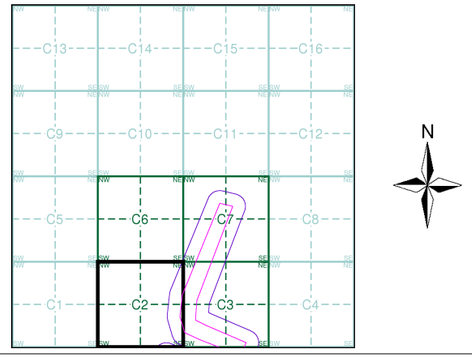
Source map scale - 1:2,500

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 C2



Order Details

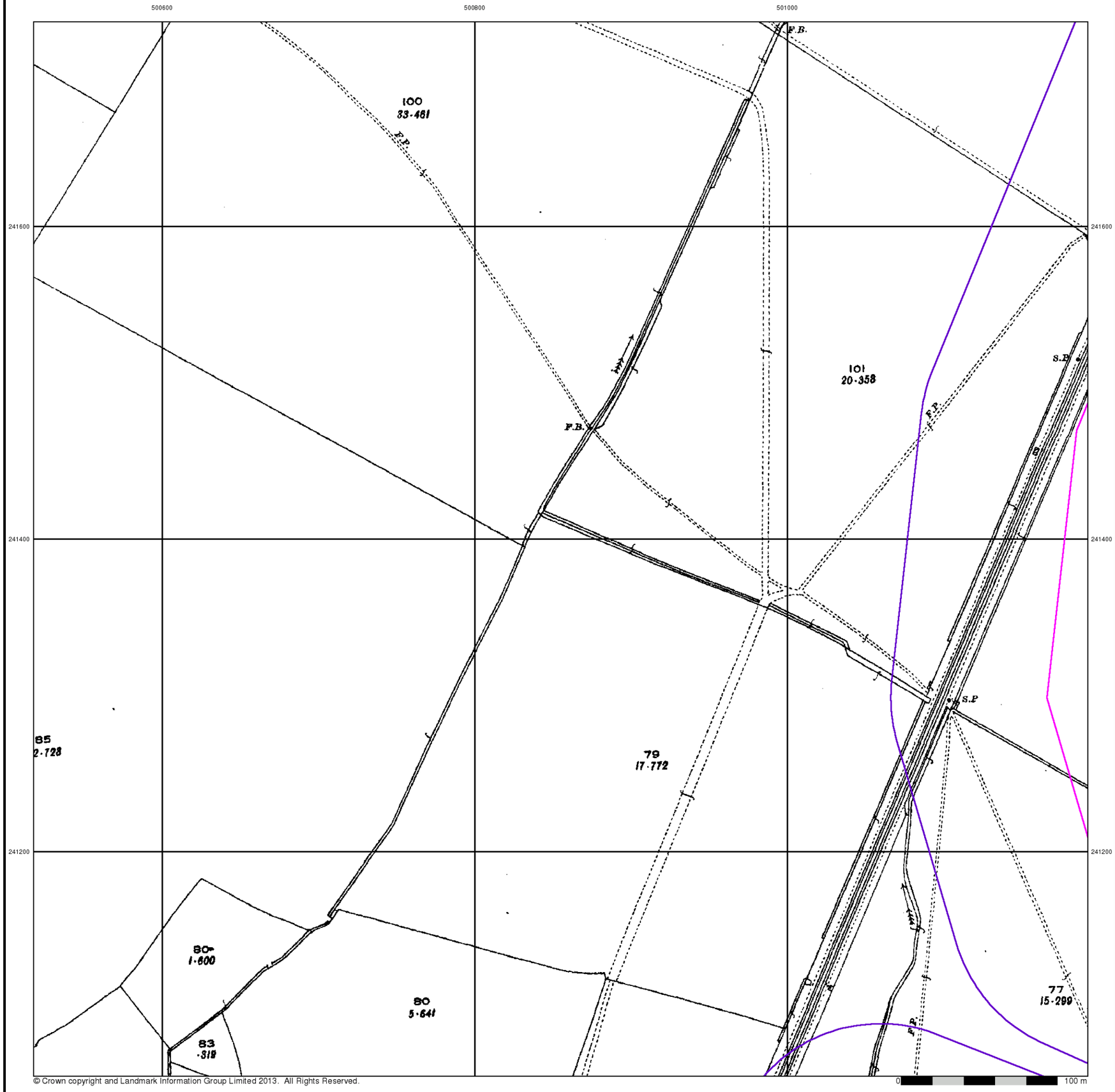
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

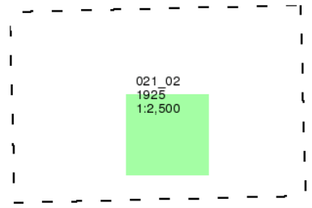
Bedfordshire

Published 1925

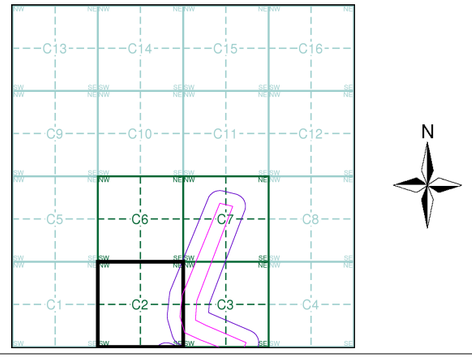
Source map scale - 1:2,500

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 C2



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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

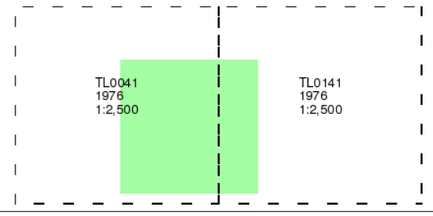
Ordnance Survey Plan

Published 1976

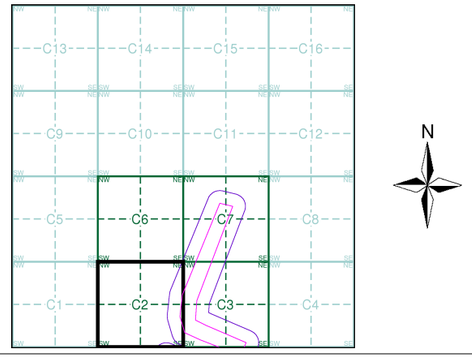
Source map scale - 1:2,500

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 C2



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

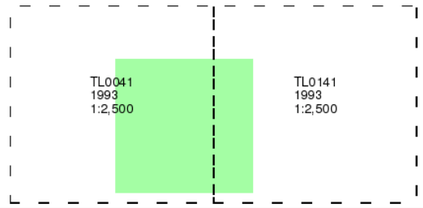
Large-Scale National Grid Data

Published 1993

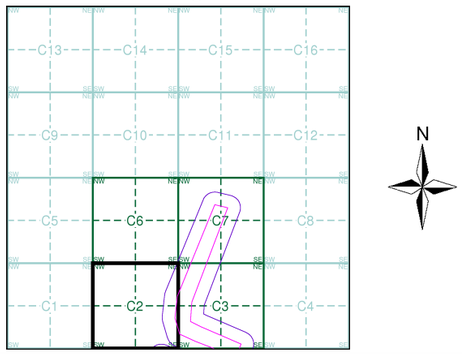
Source map scale - 1:2,500

'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)



Historical Map - Segment C2



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

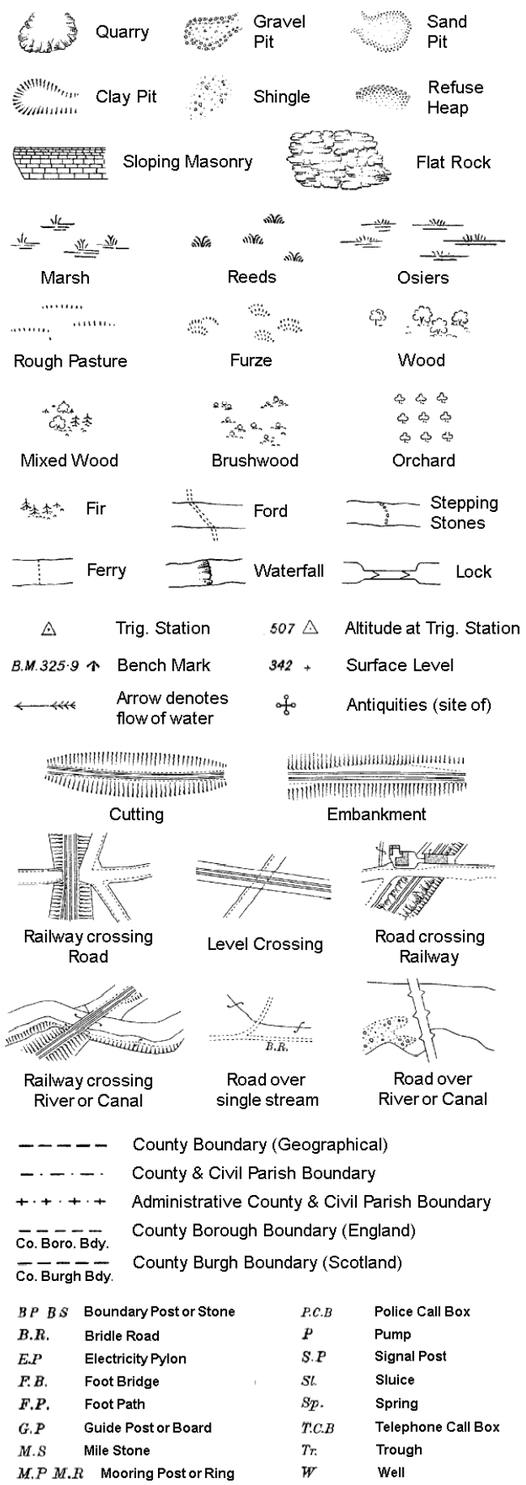
Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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

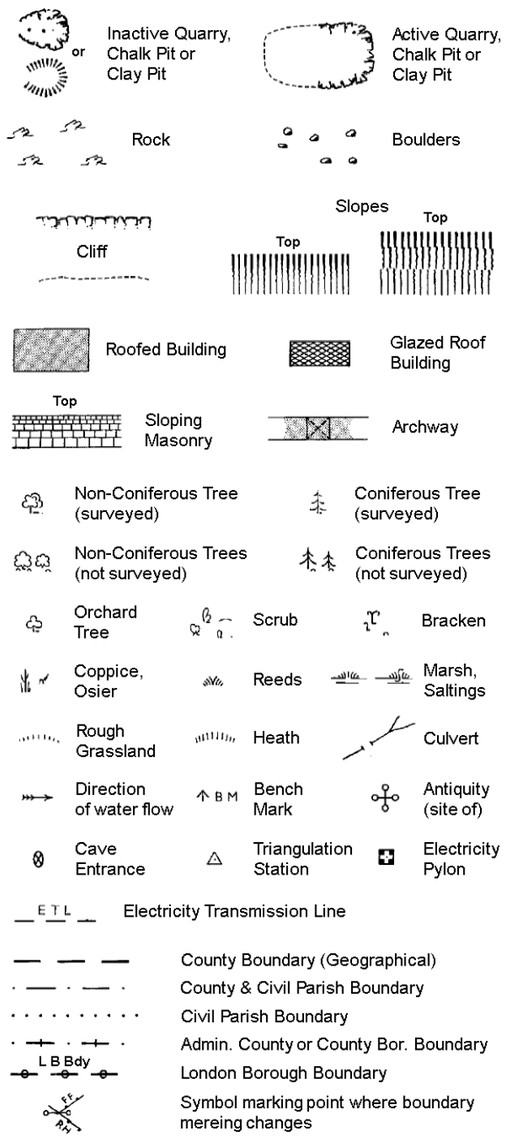
Historical Mapping Legends

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



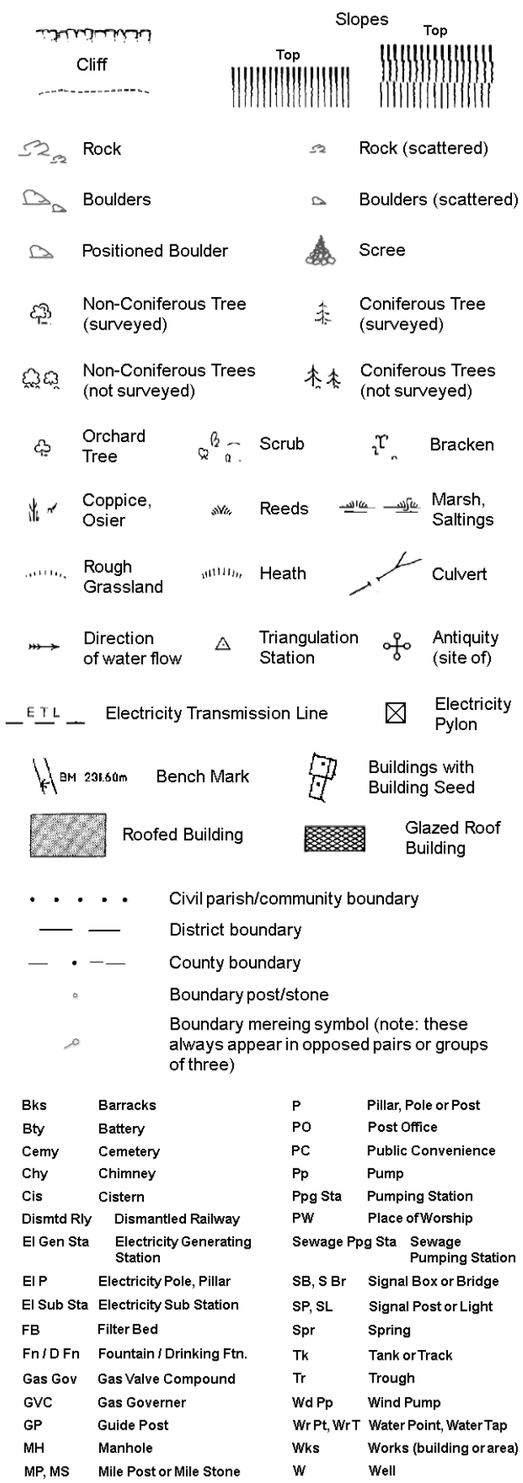
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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

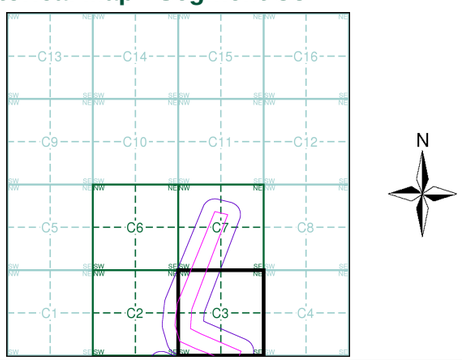


Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Historical Map - Segment C3



Order Details

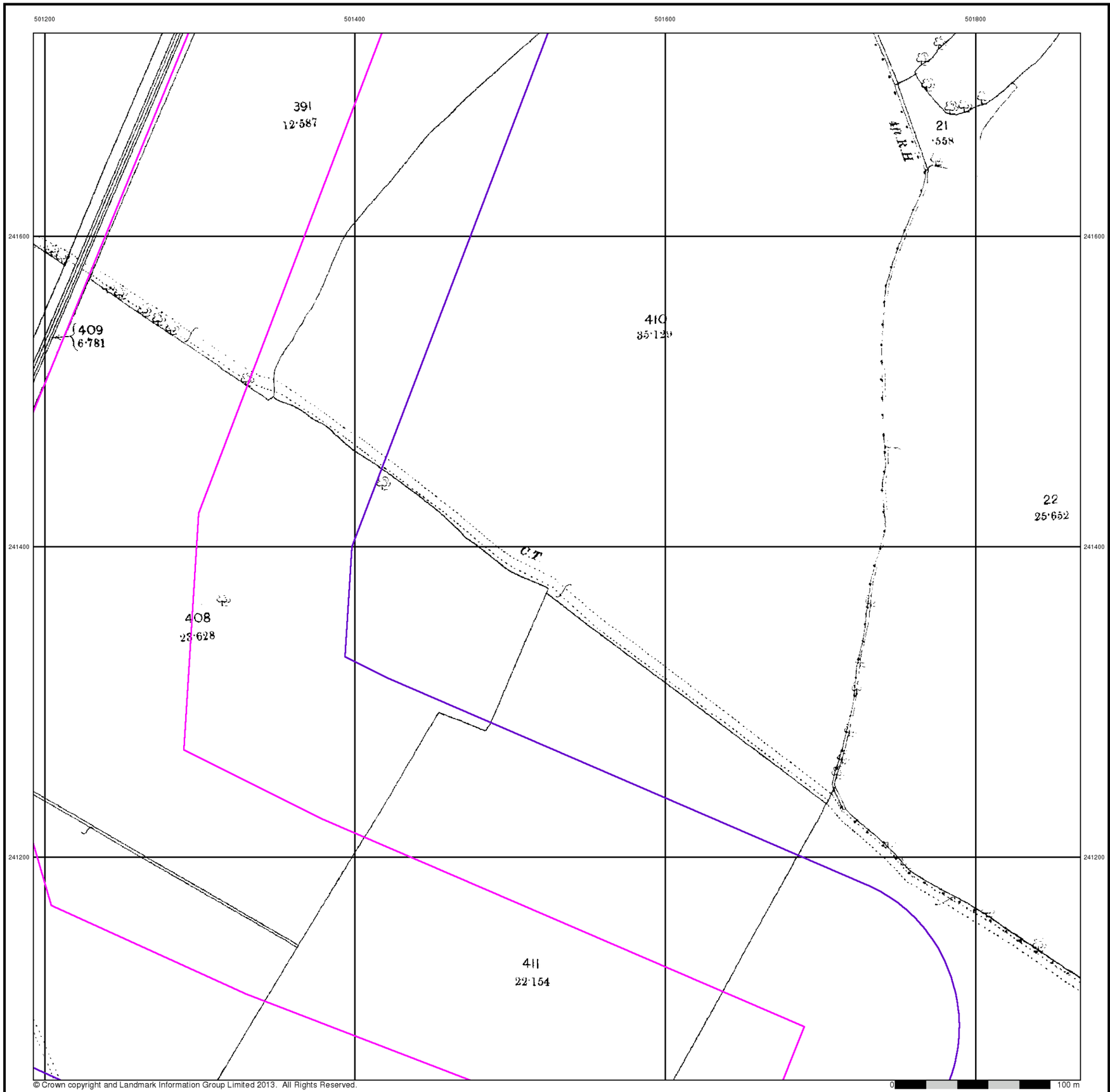
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group

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



pba peterbrett

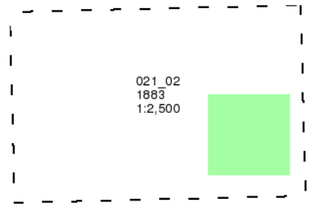
Bedfordshire

Published 1883

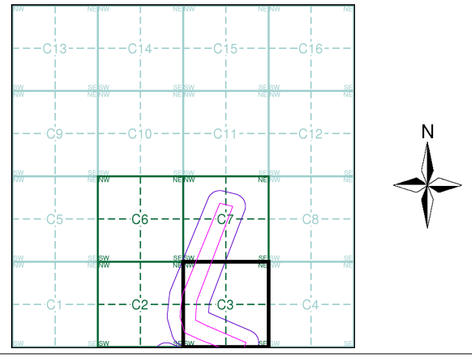
Source map scale - 1:2,500

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 C3



Order Details

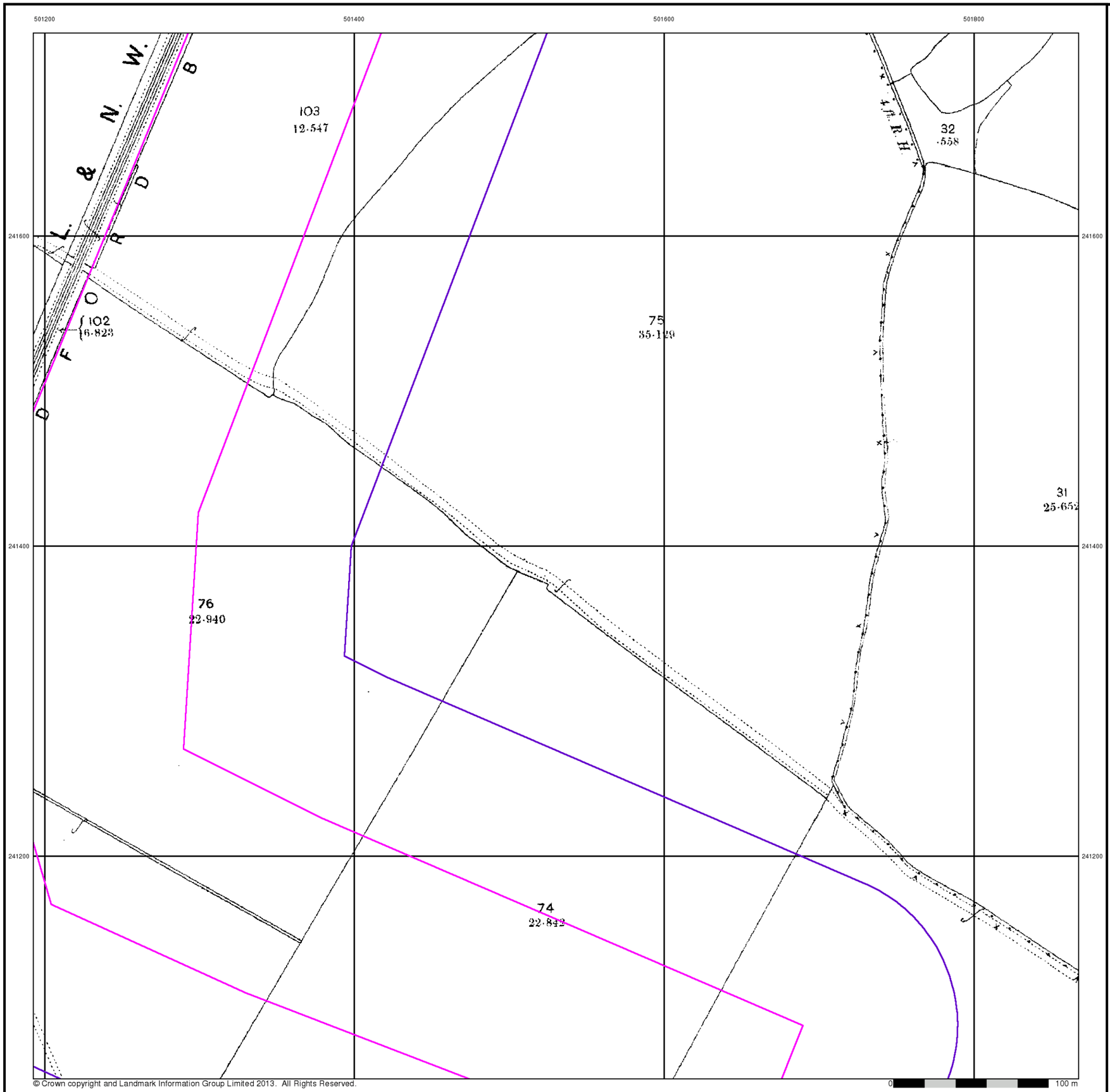
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

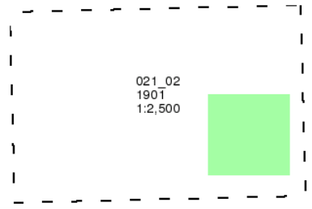
Bedfordshire

Published 1901

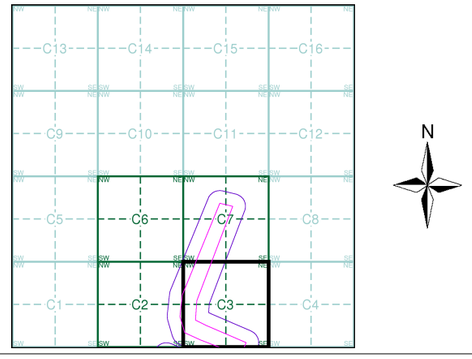
Source map scale - 1:2,500

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 C3



Order Details

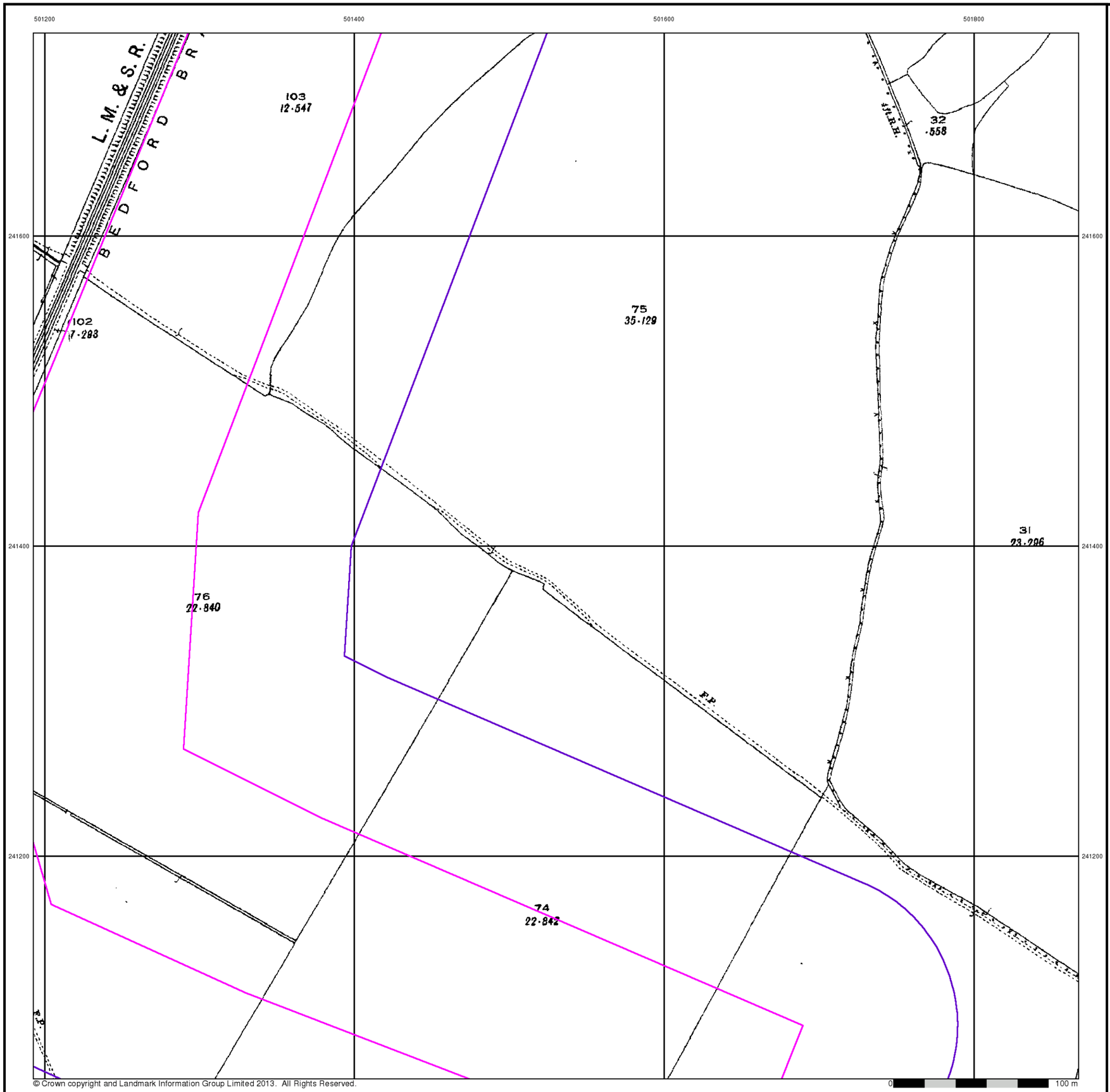
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

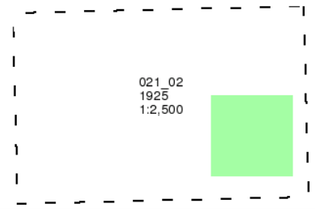
Bedfordshire

Published 1925

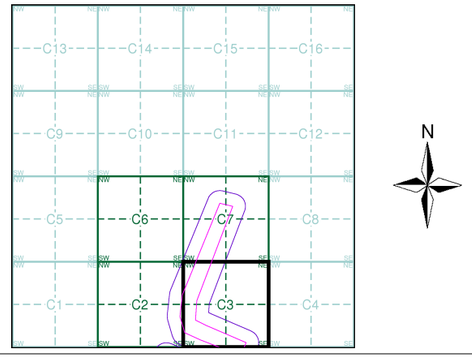
Source map scale - 1:2,500

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 C3



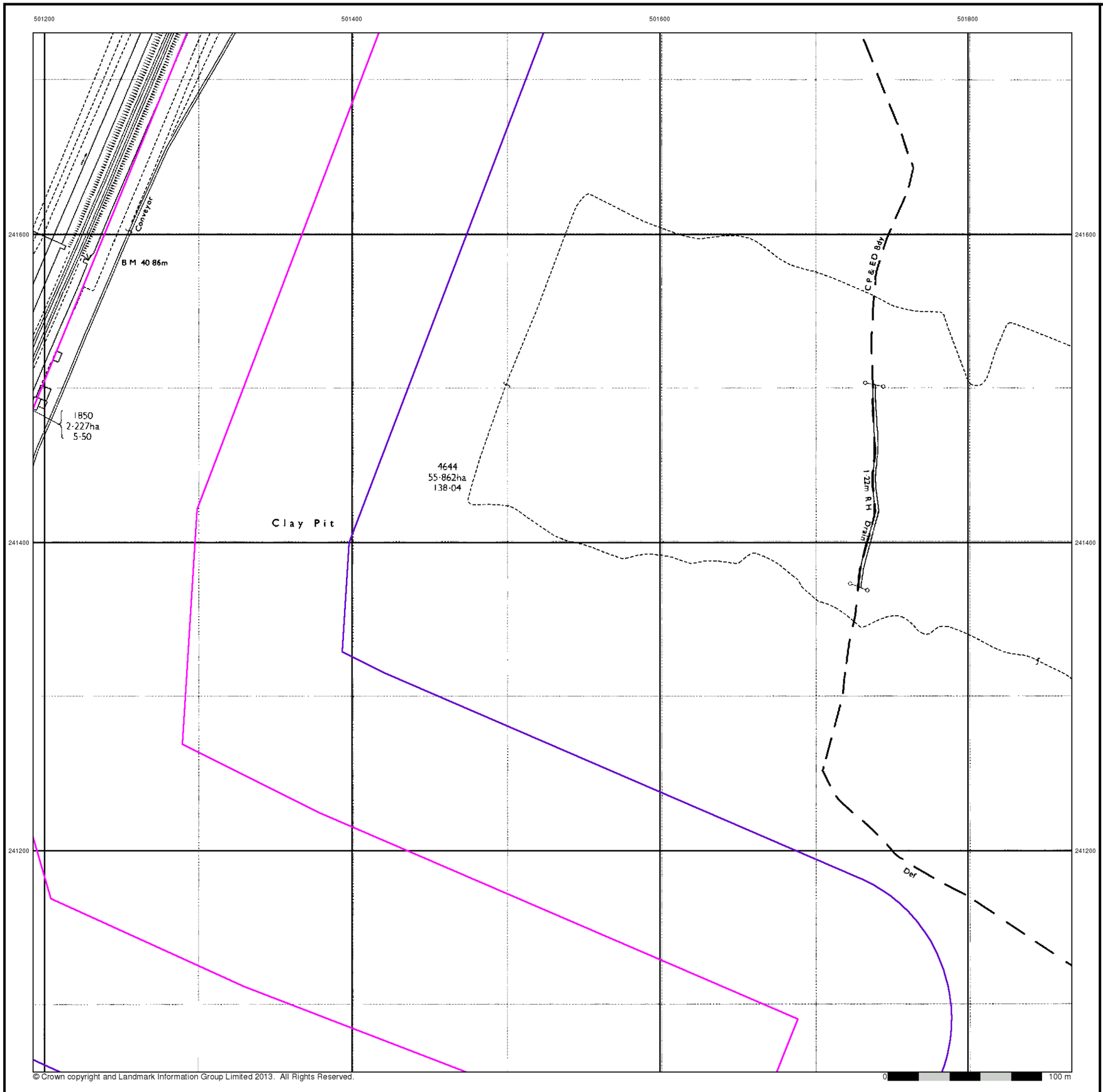
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



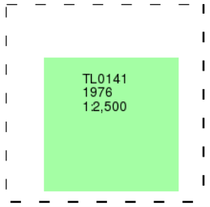
Ordnance Survey Plan

Published 1976

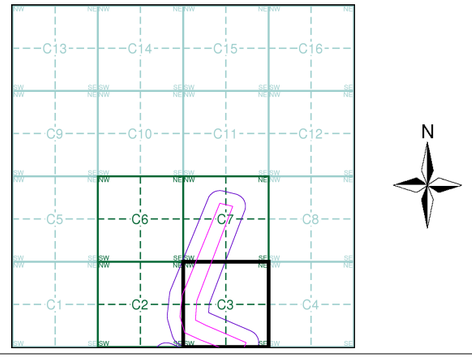
Source map scale - 1:2,500

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 C3



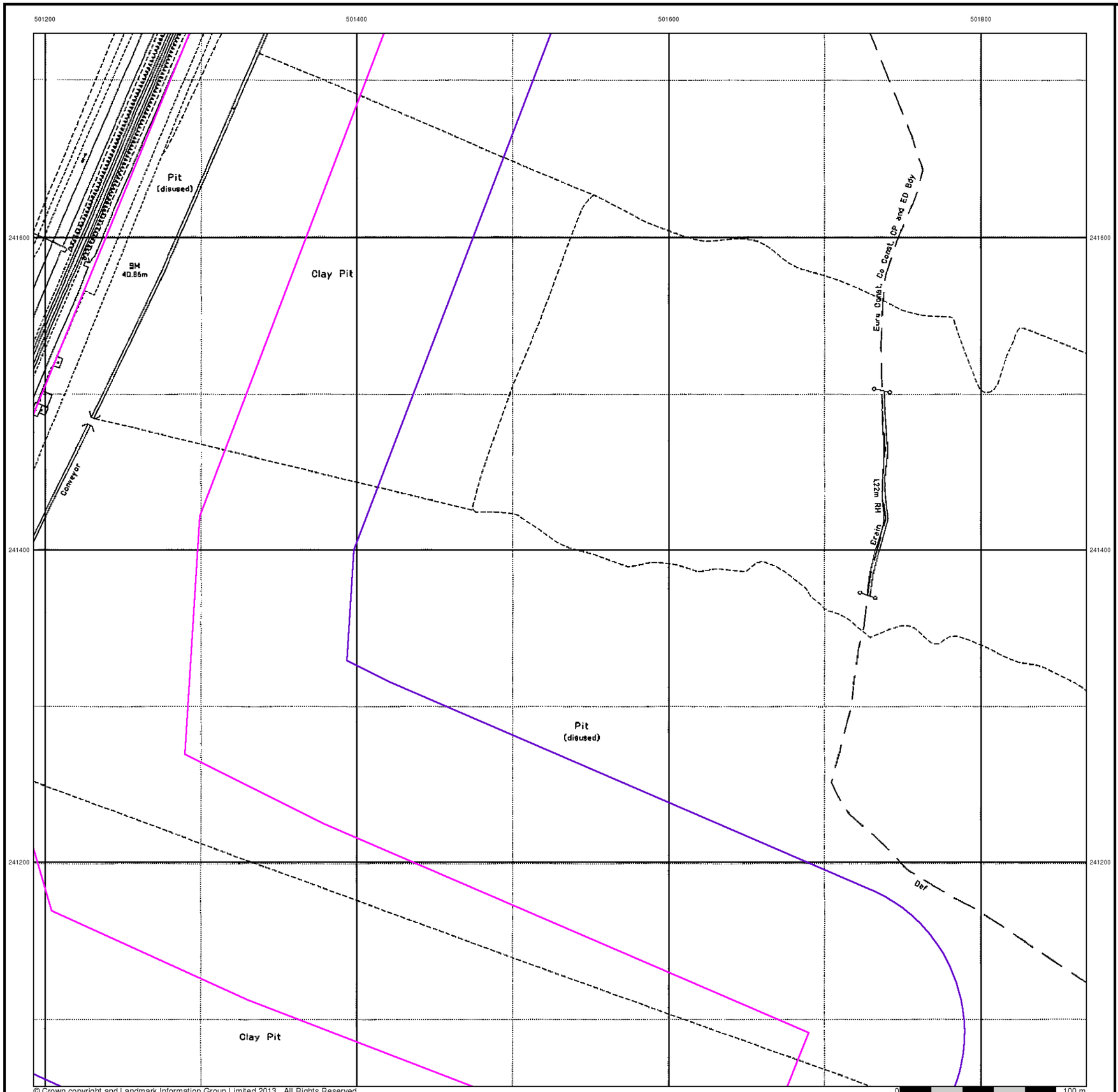
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



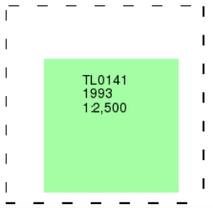
Large-Scale National Grid Data

Published 1993

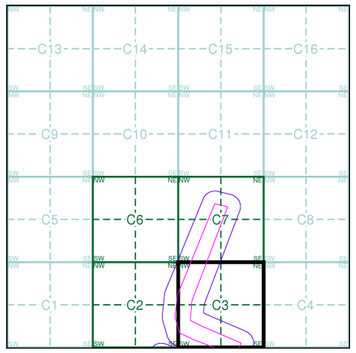
Source map scale - 1:2,500

'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)



Historical Map - Segment C3



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

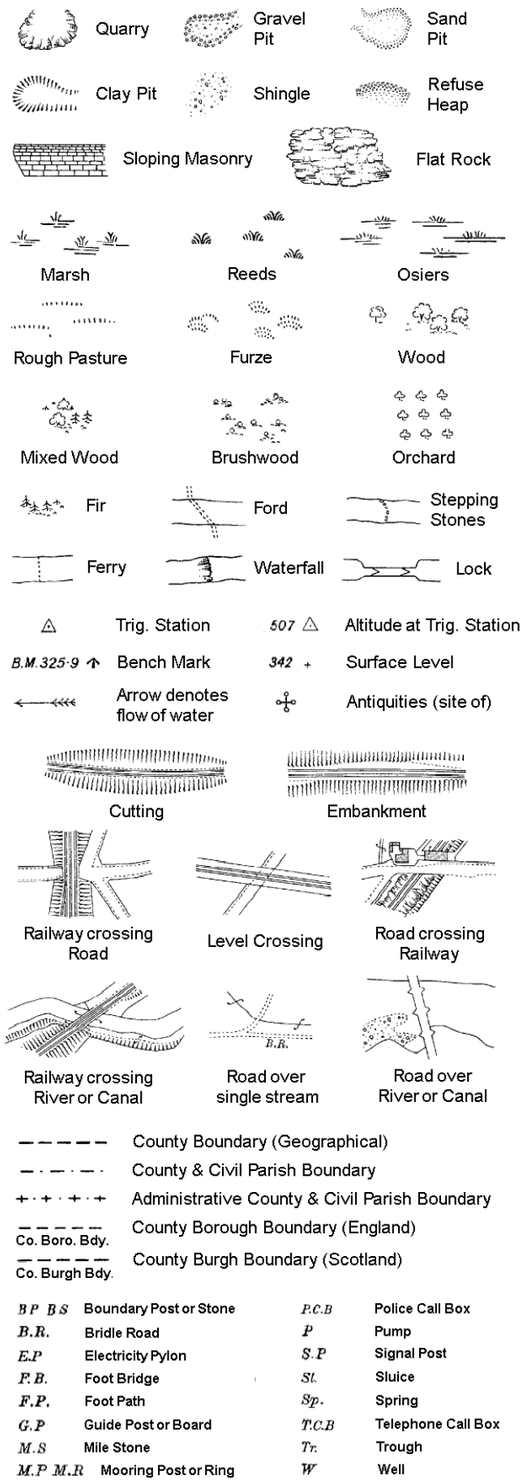
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

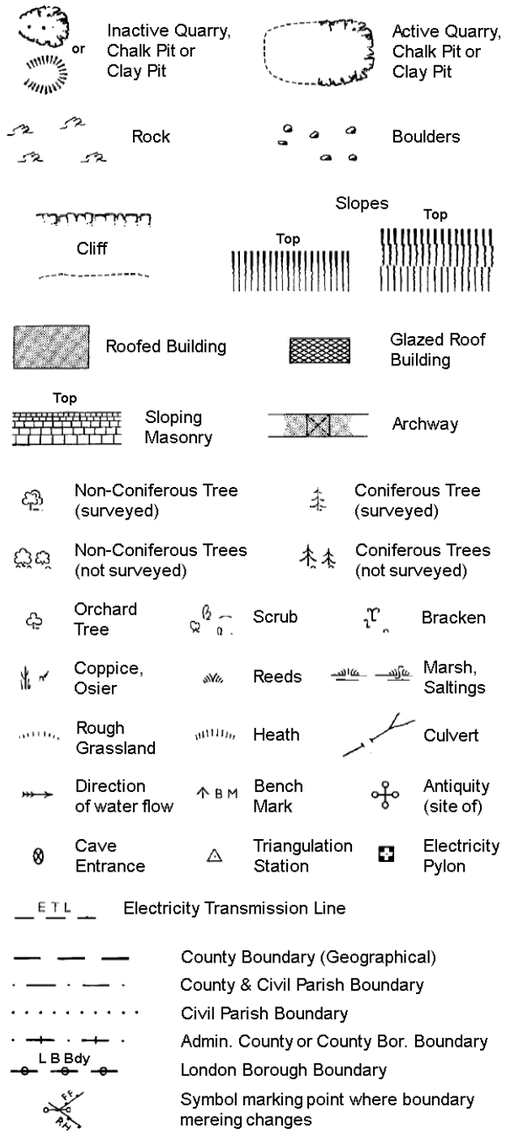
Historical Mapping Legends

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



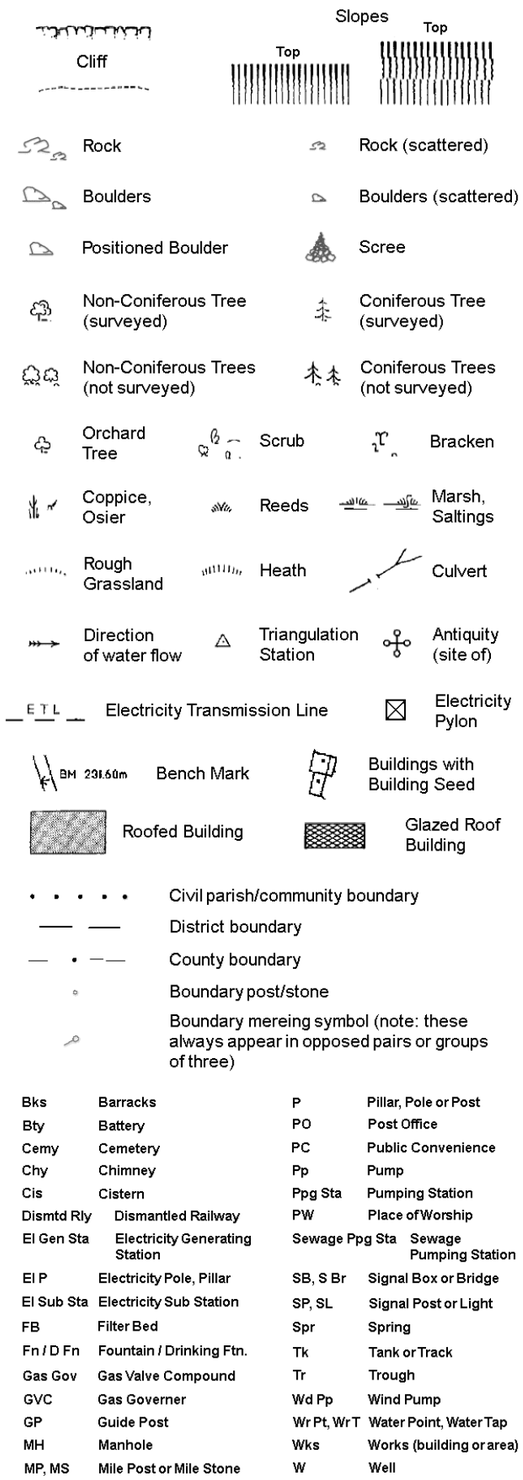
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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



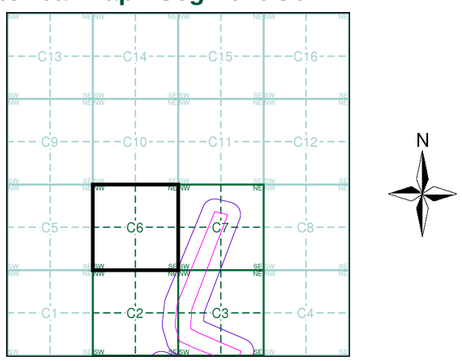
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1976	5
Additional SIMs	1:2,500	1988	6
Large-Scale National Grid Data	1:2,500	1993	7
Large-Scale National Grid Data	1:2,500	1994	8
Large-Scale National Grid Data	1:2,500	1996	9

Historical Map - Segment C6



Order Details

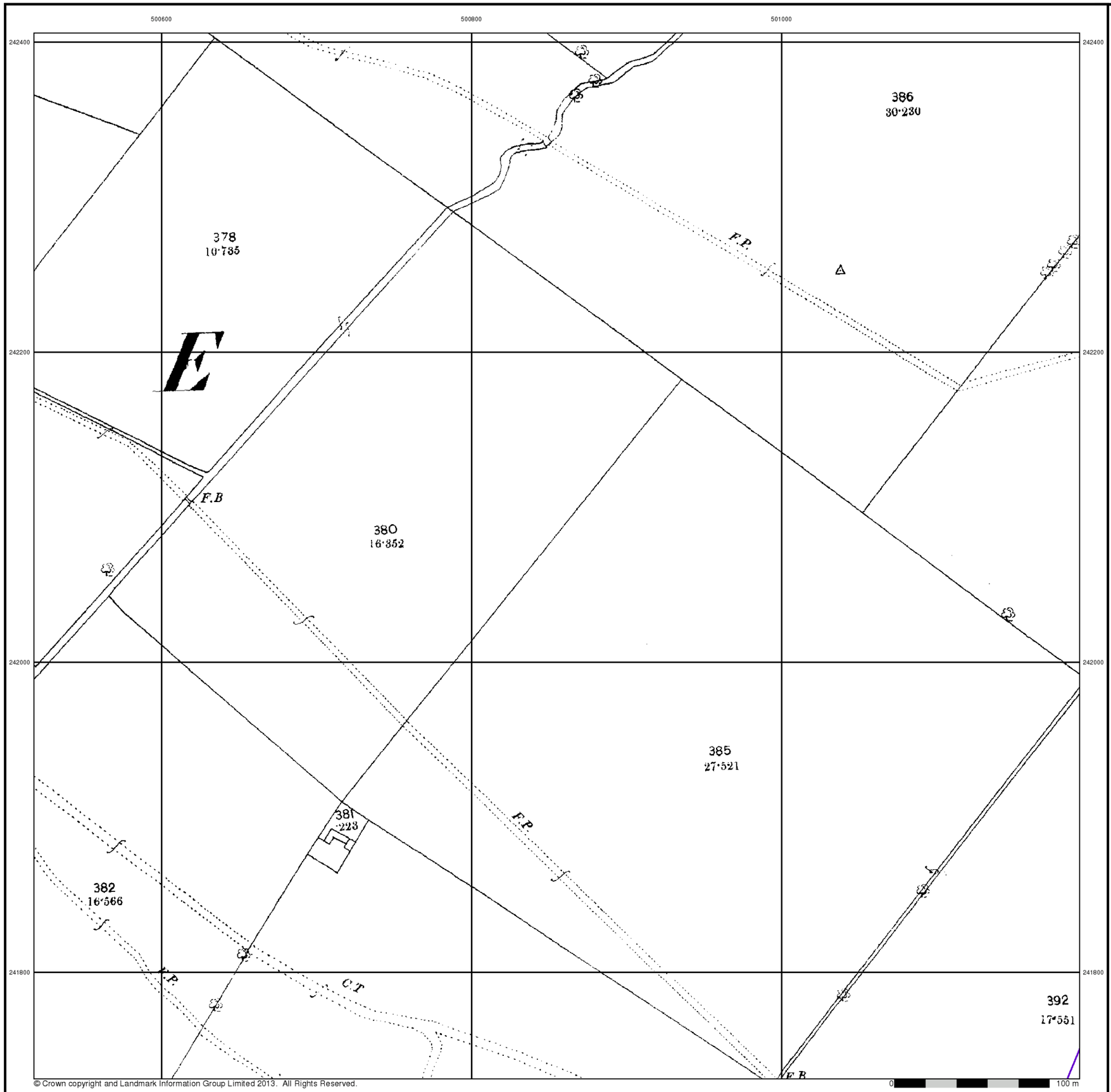
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



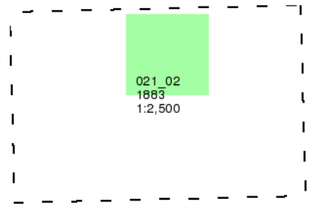
Bedfordshire

Published 1883

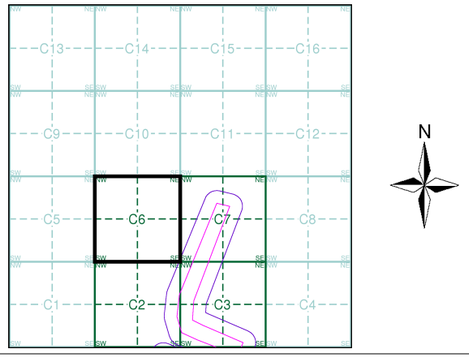
Source map scale - 1:2,500

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 C6



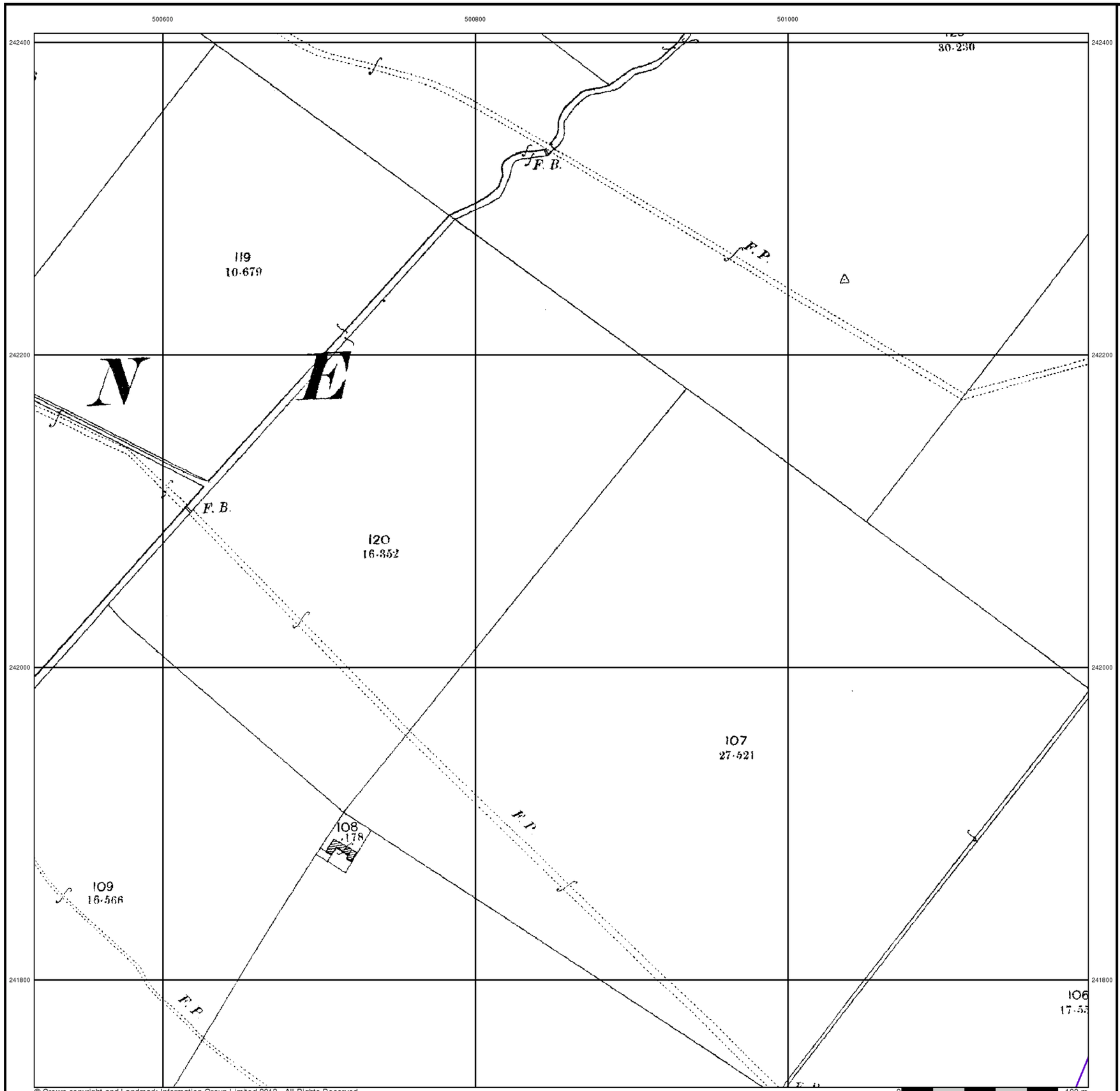
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



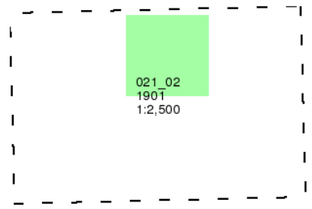
Bedfordshire

Published 1901

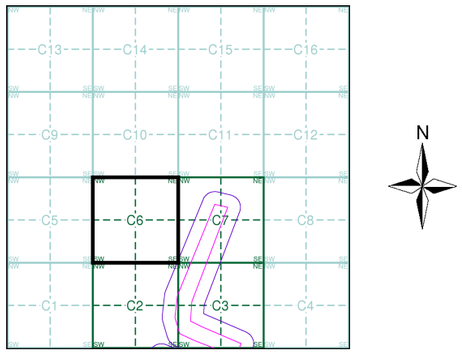
Source map scale - 1:2,500

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 C6



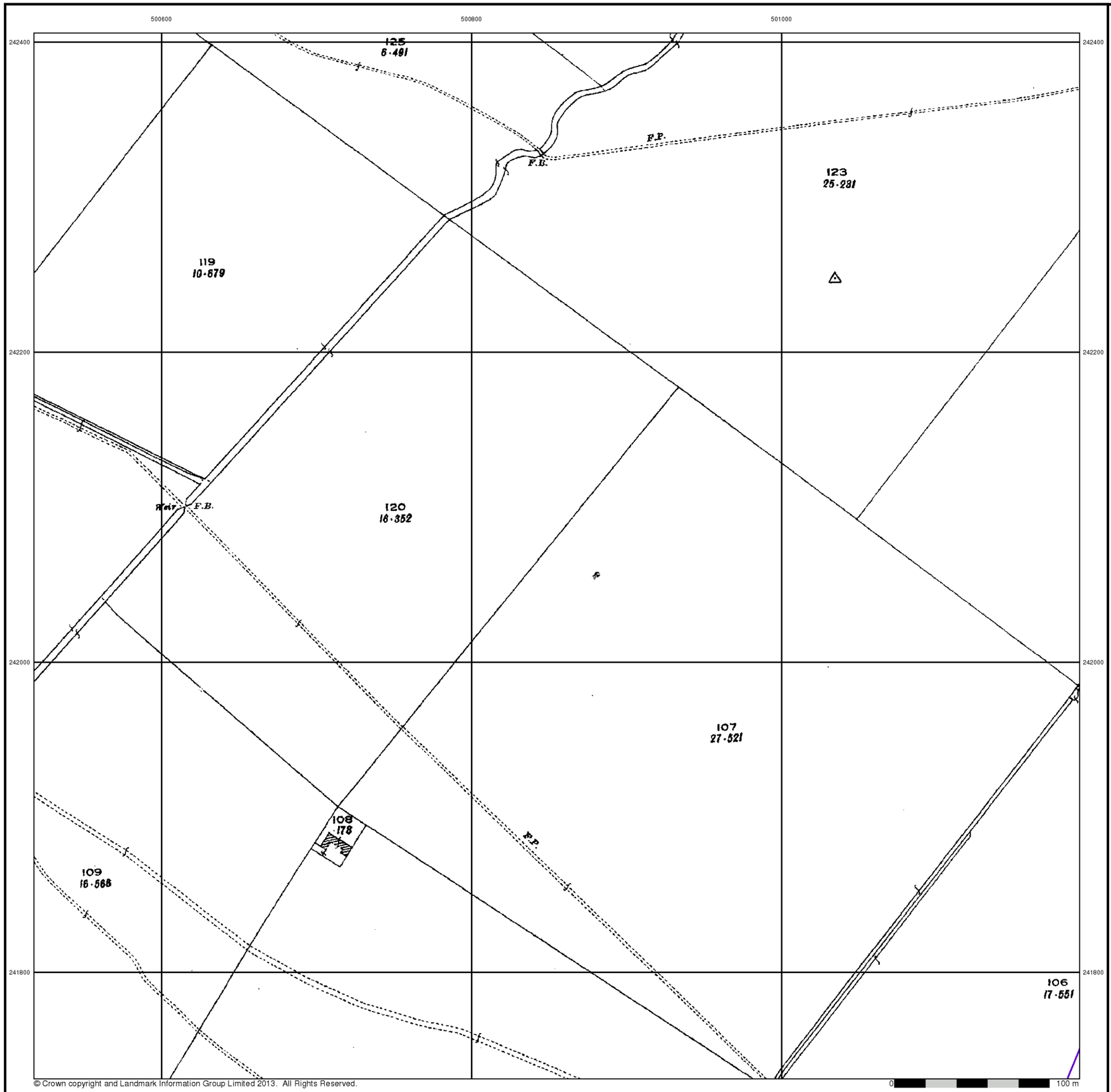
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

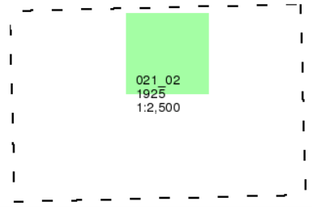
Bedfordshire

Published 1925

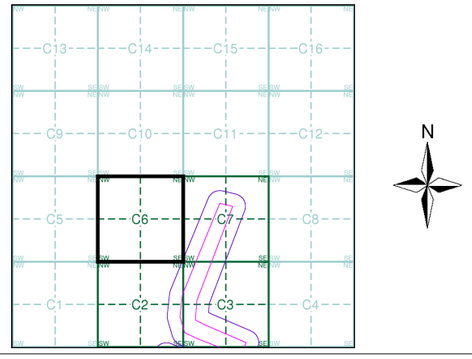
Source map scale - 1:2,500

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 C6



Order Details

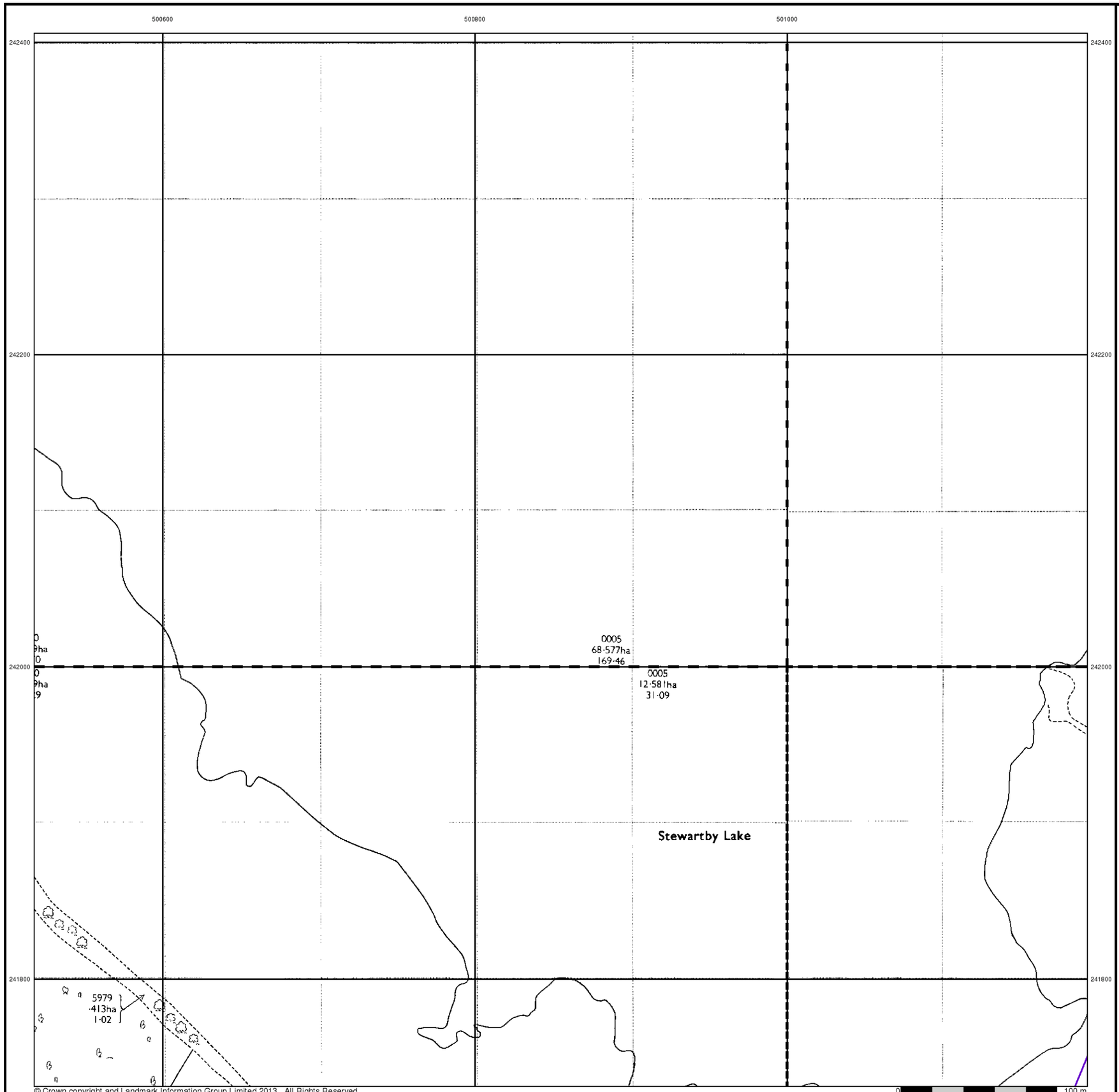
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



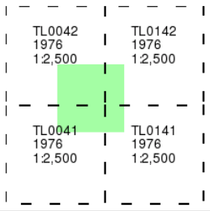
Ordnance Survey Plan

Published 1976

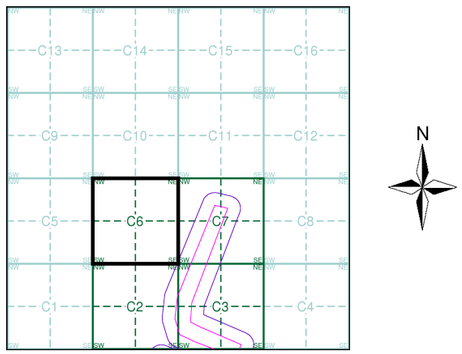
Source map scale - 1:2,500

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 C6



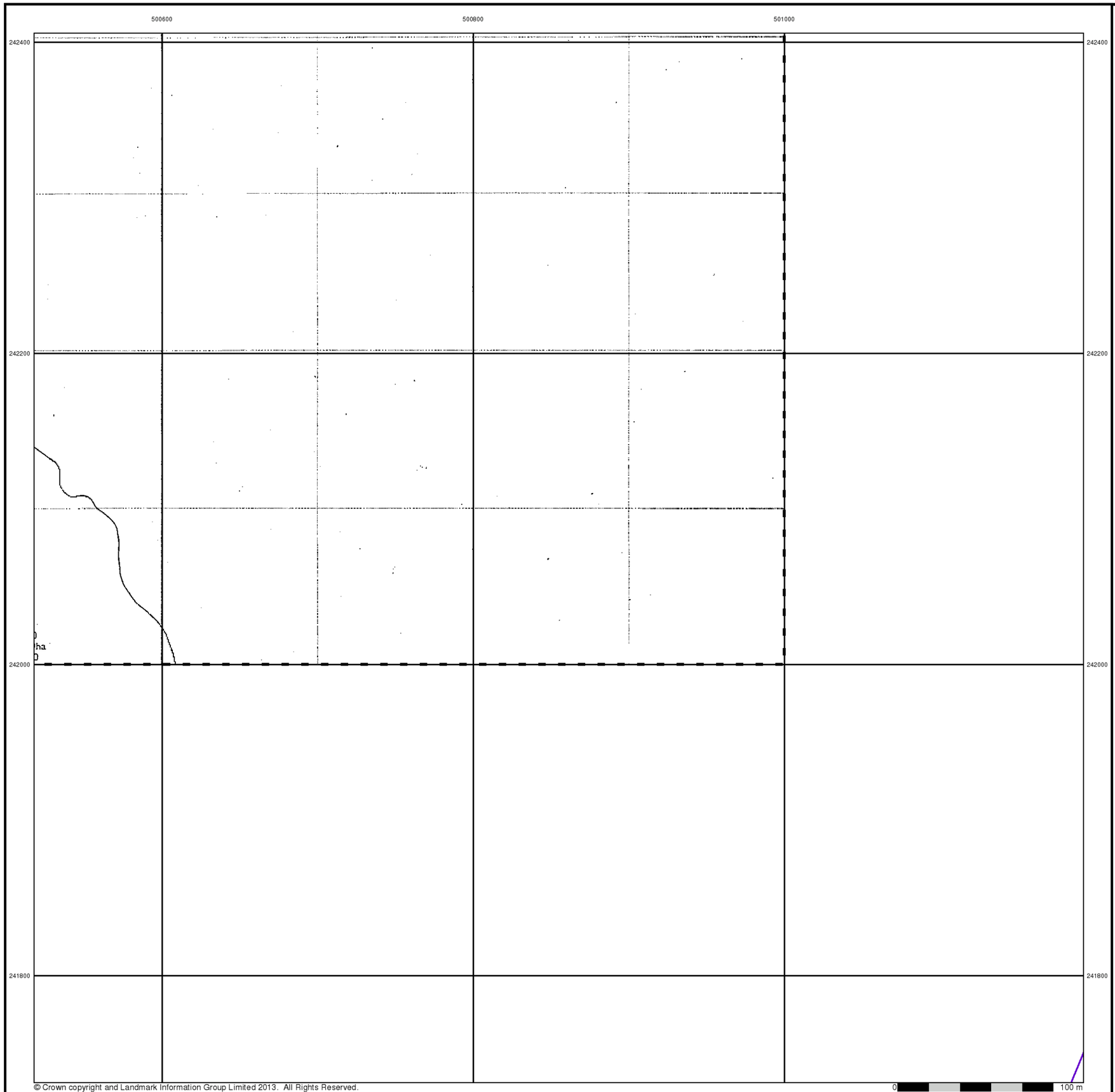
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



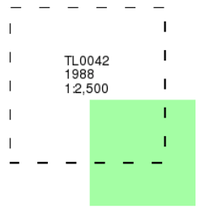
Additional SIMs

Published 1988

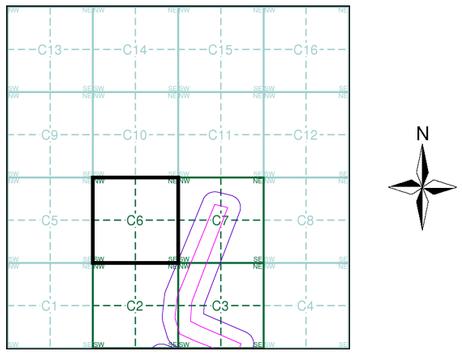
Source map scale - 1:2,500

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 C6



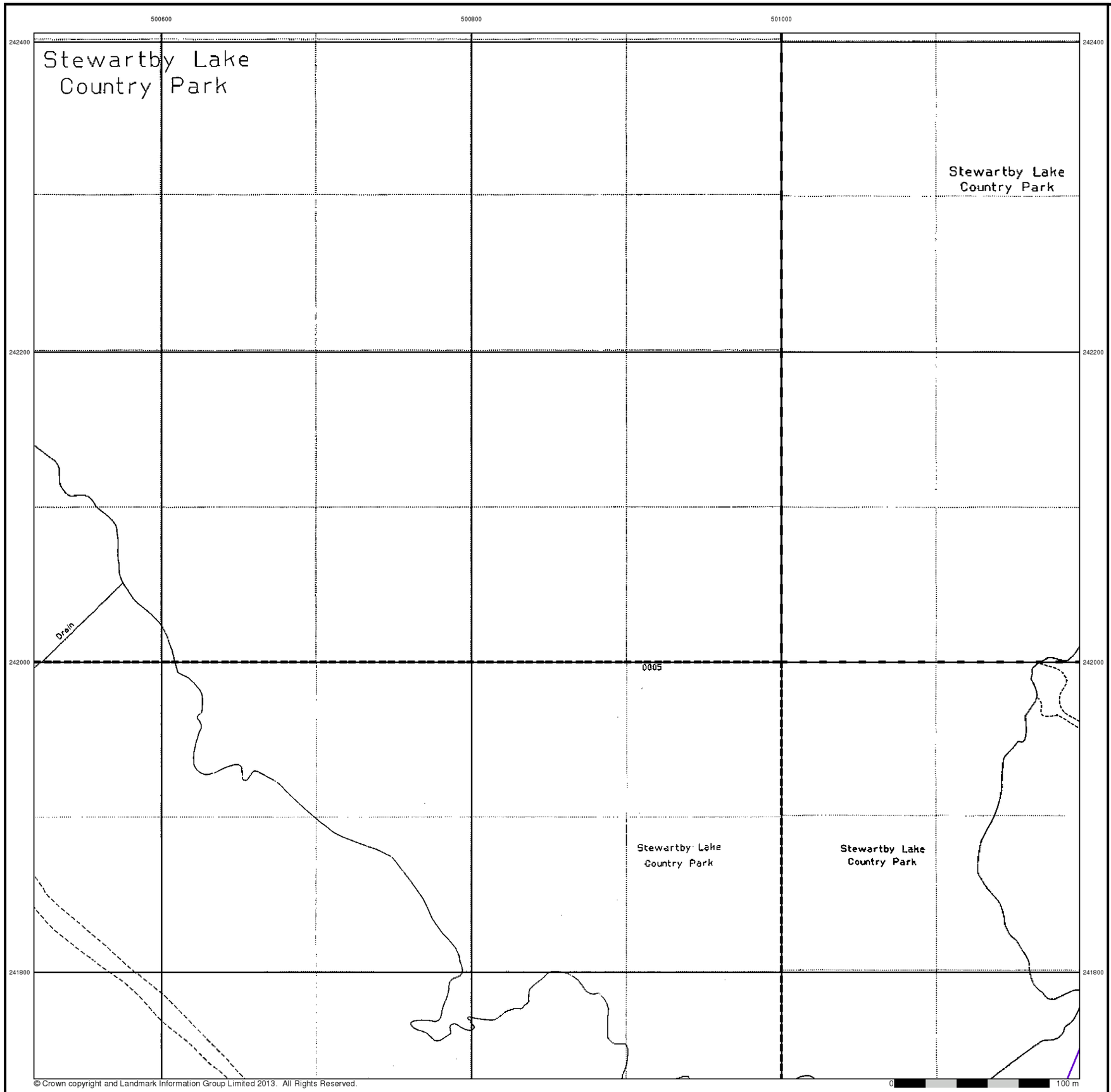
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



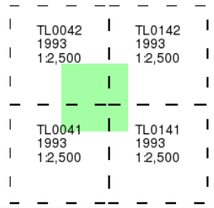
Large-Scale National Grid Data

Published 1993

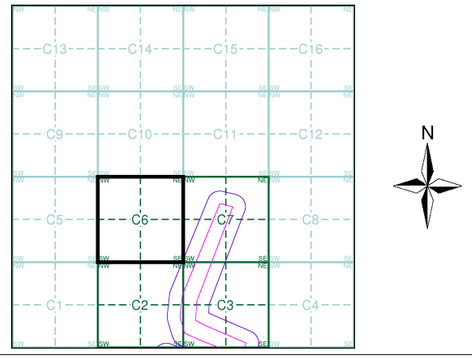
Source map scale - 1:2,500

'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)



Historical Map - Segment C6



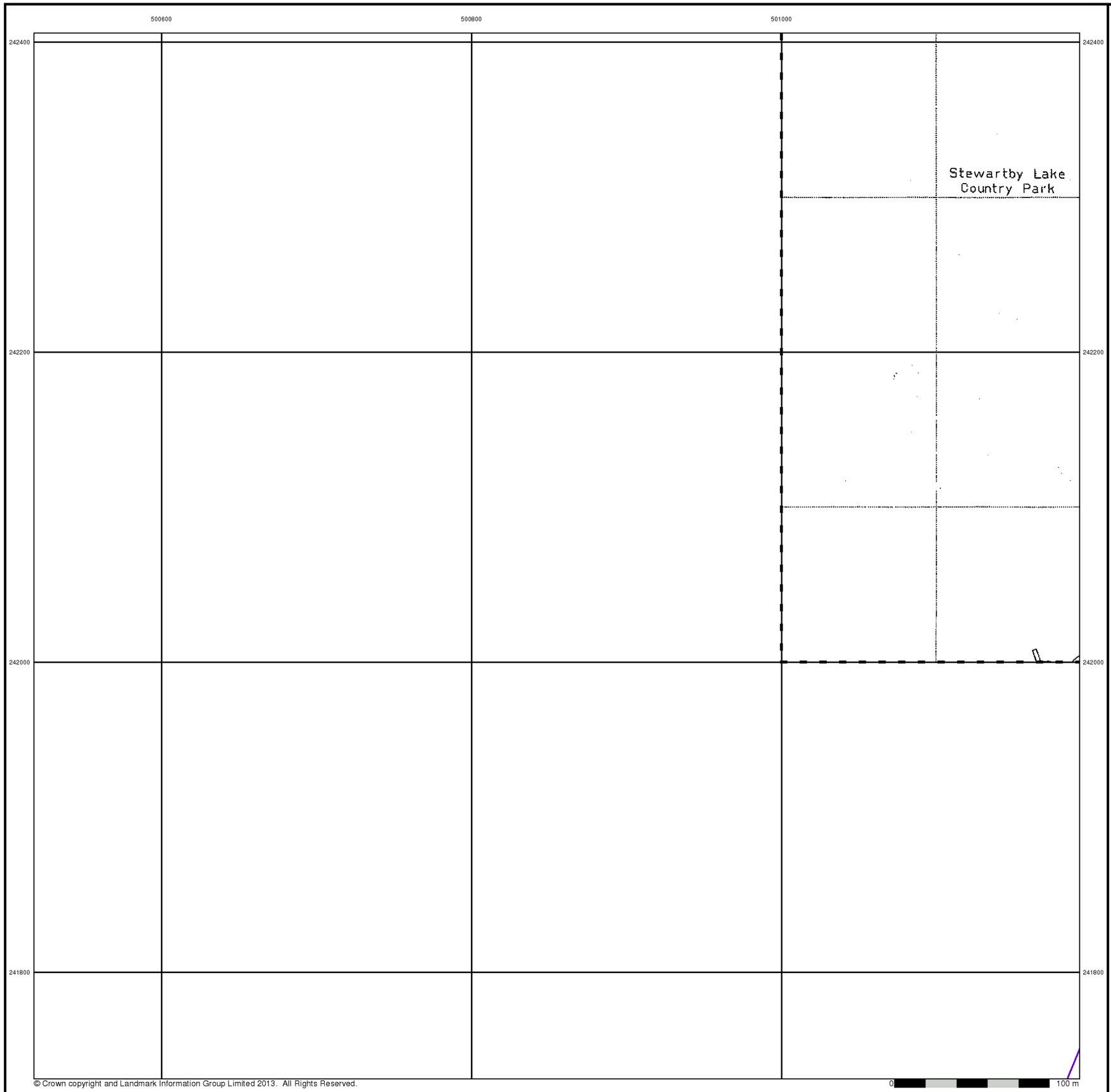
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



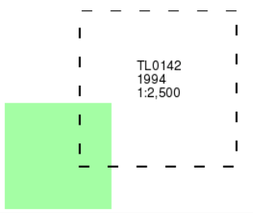
Large-Scale National Grid Data

Published 1994

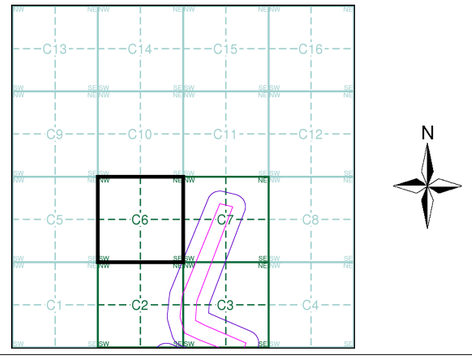
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment C6



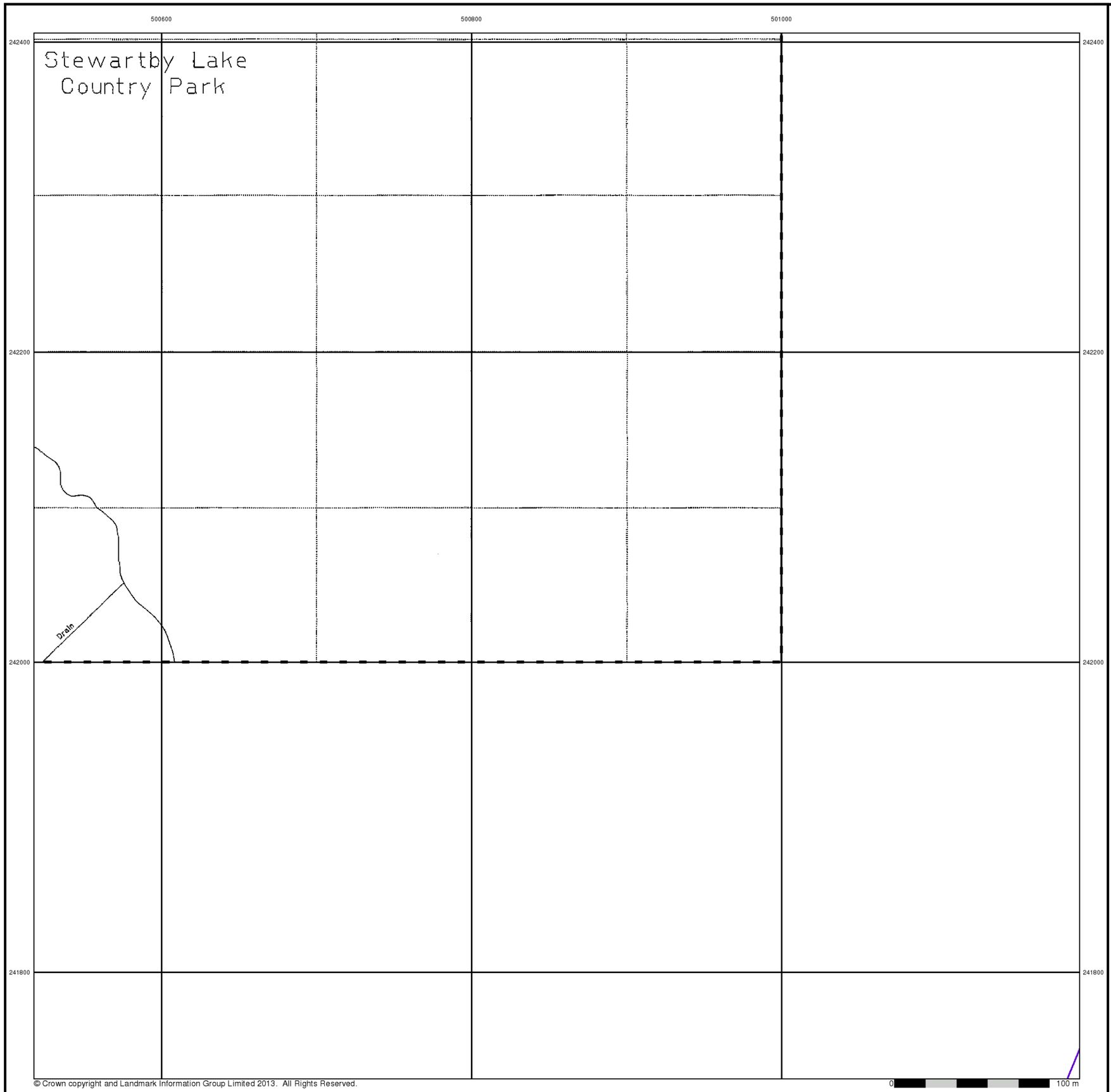
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



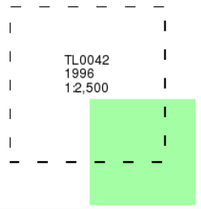
Large-Scale National Grid Data

Published 1996

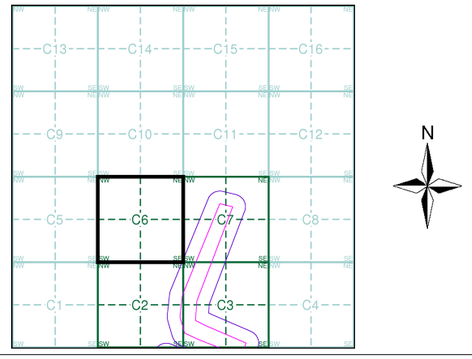
Source map scale - 1:2,500

'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 C6



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

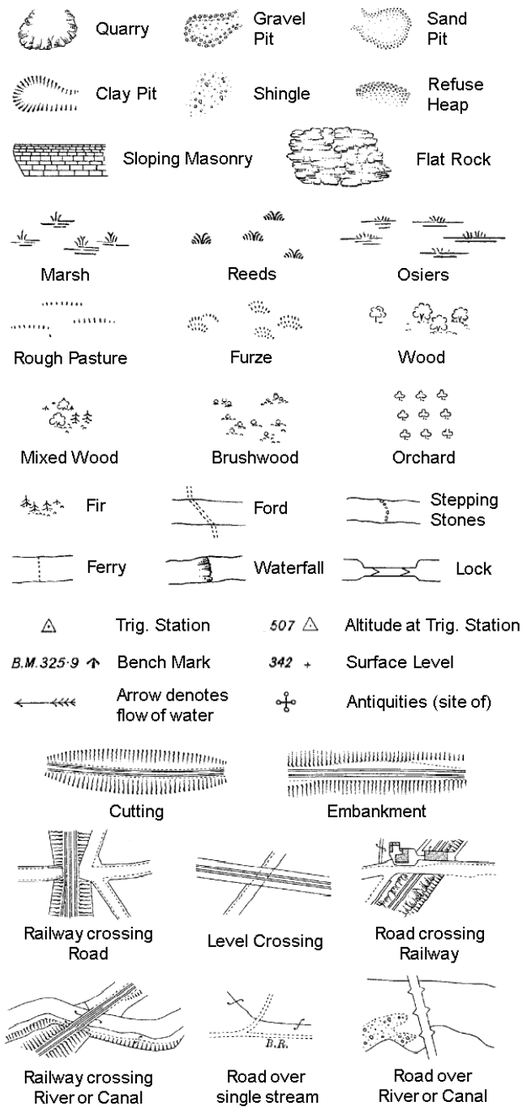
Site Details

Millbrook Power Project, Green Lane, Stewartby

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

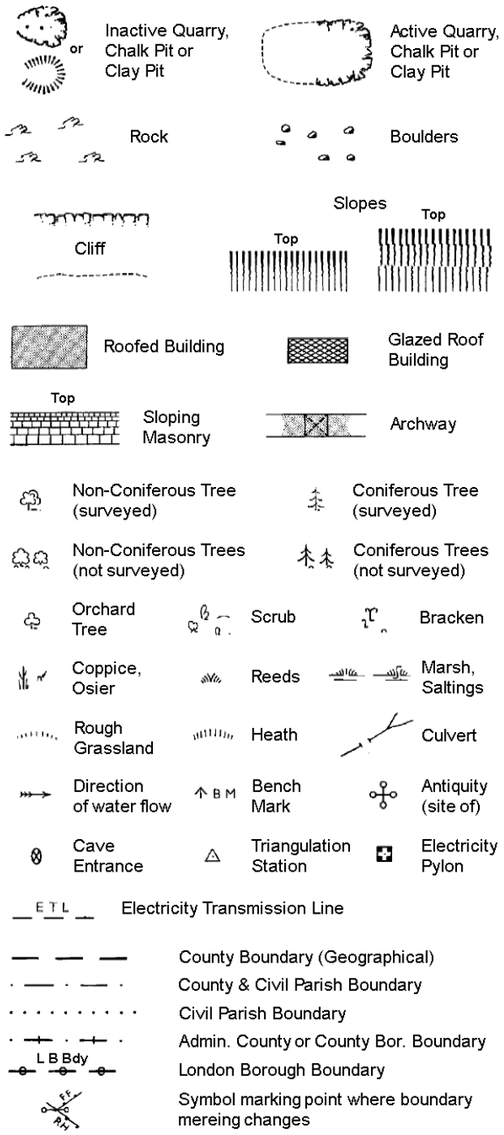
Administrative County & Civil Parish Boundary

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

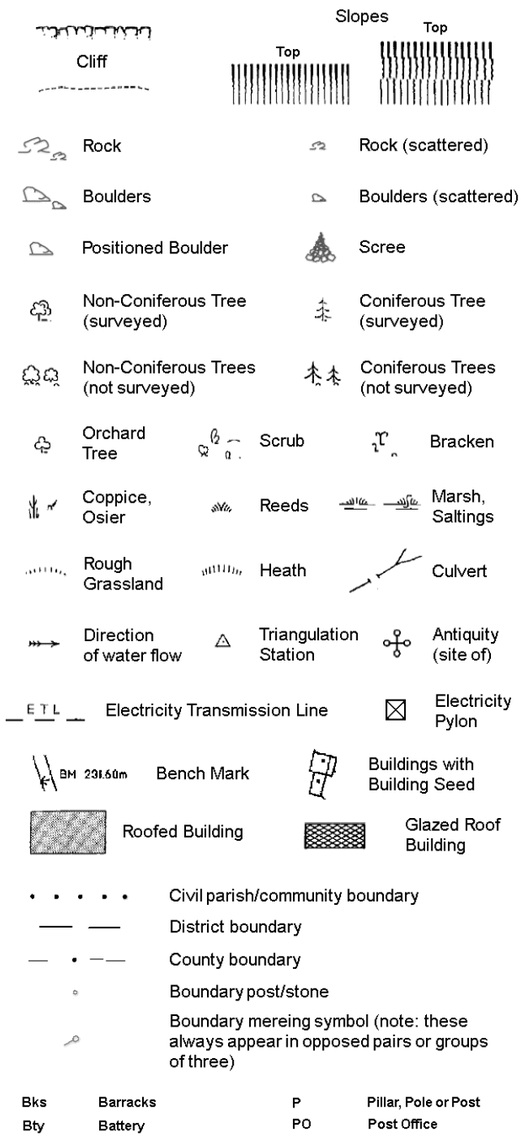
Admin. County or County Bor. Boundary

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)

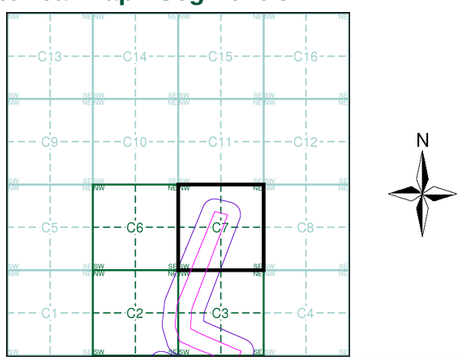
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

pba peterbrett

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Bedfordshire	1:2,500	1883	2
Bedfordshire	1:2,500	1901	3
Bedfordshire	1:2,500	1925	4
Ordnance Survey Plan	1:2,500	1976	5
Large-Scale National Grid Data	1:2,500	1993	6
Large-Scale National Grid Data	1:2,500	1994	7

Historical Map - Segment C7



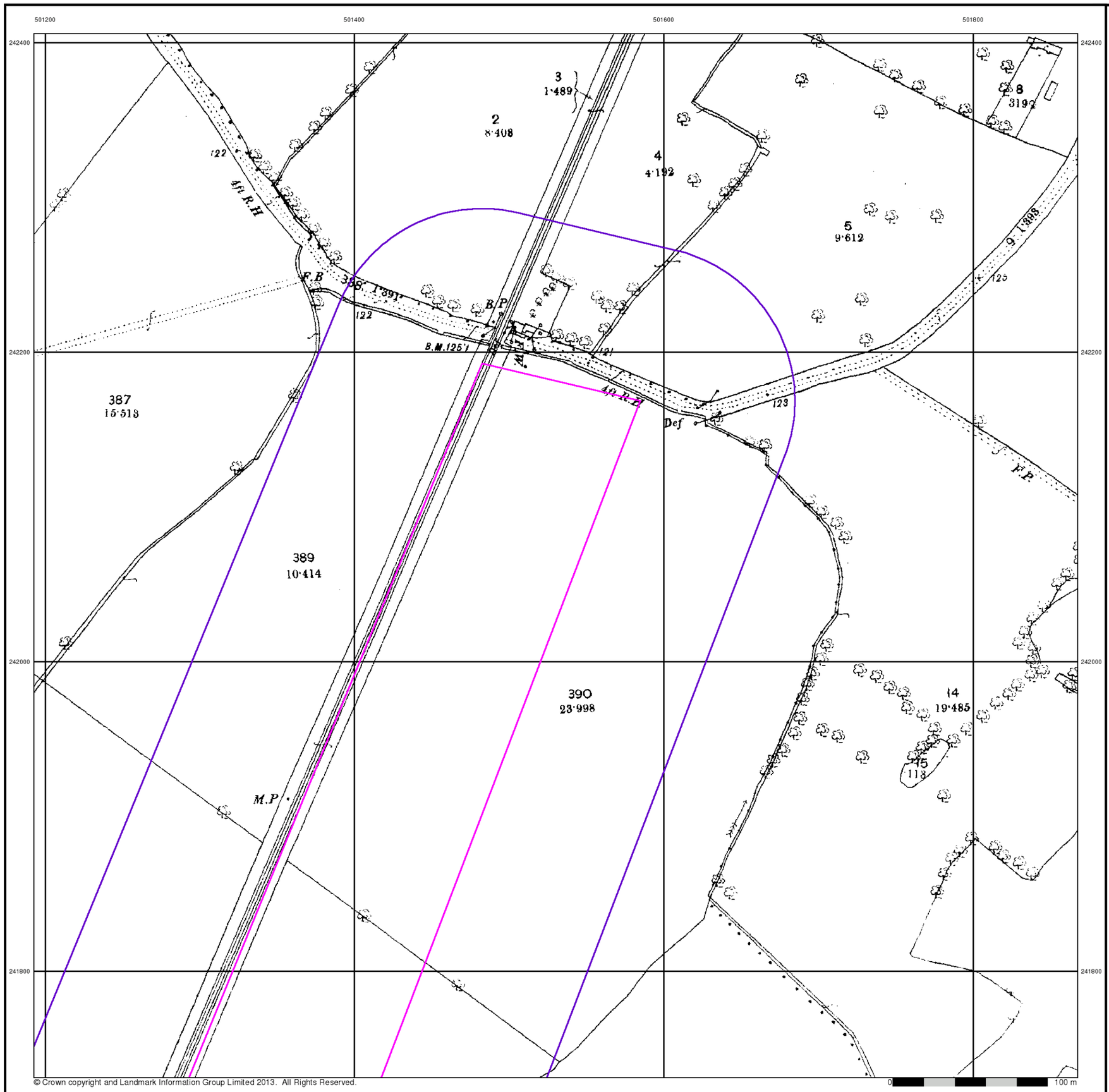
Order Details

Order Number: 60770728_1_1
Customer Ref: 31116
National Grid Reference: 501420, 241770
Slice: C
Site Area (Ha): 240.61
Search Buffer (m): 100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark® Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



pba peterbrett

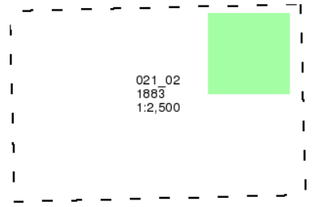
Bedfordshire

Published 1883

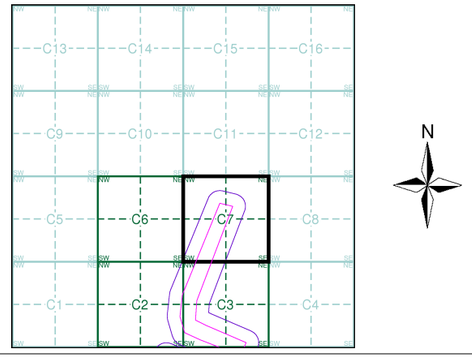
Source map scale - 1:2,500

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 C7



Order Details

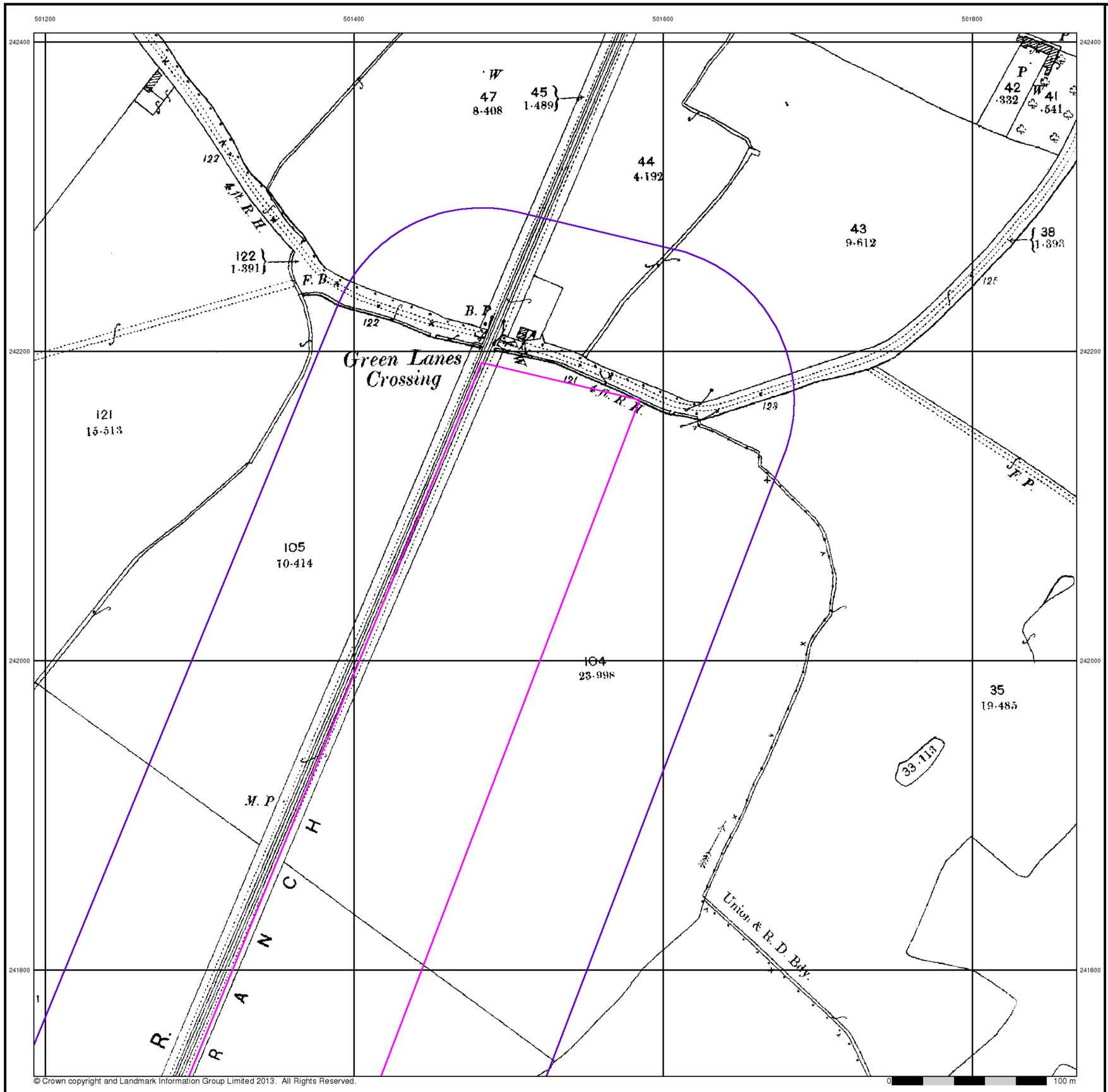
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

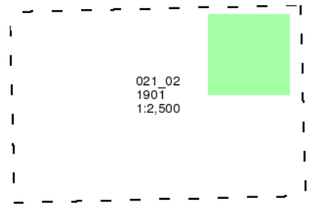
Bedfordshire

Published 1901

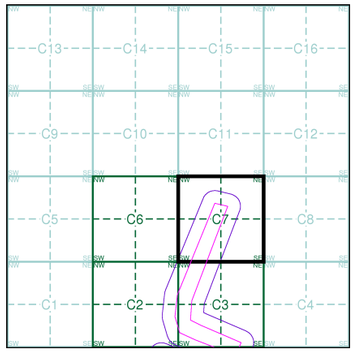
Source map scale - 1:2,500

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 C7



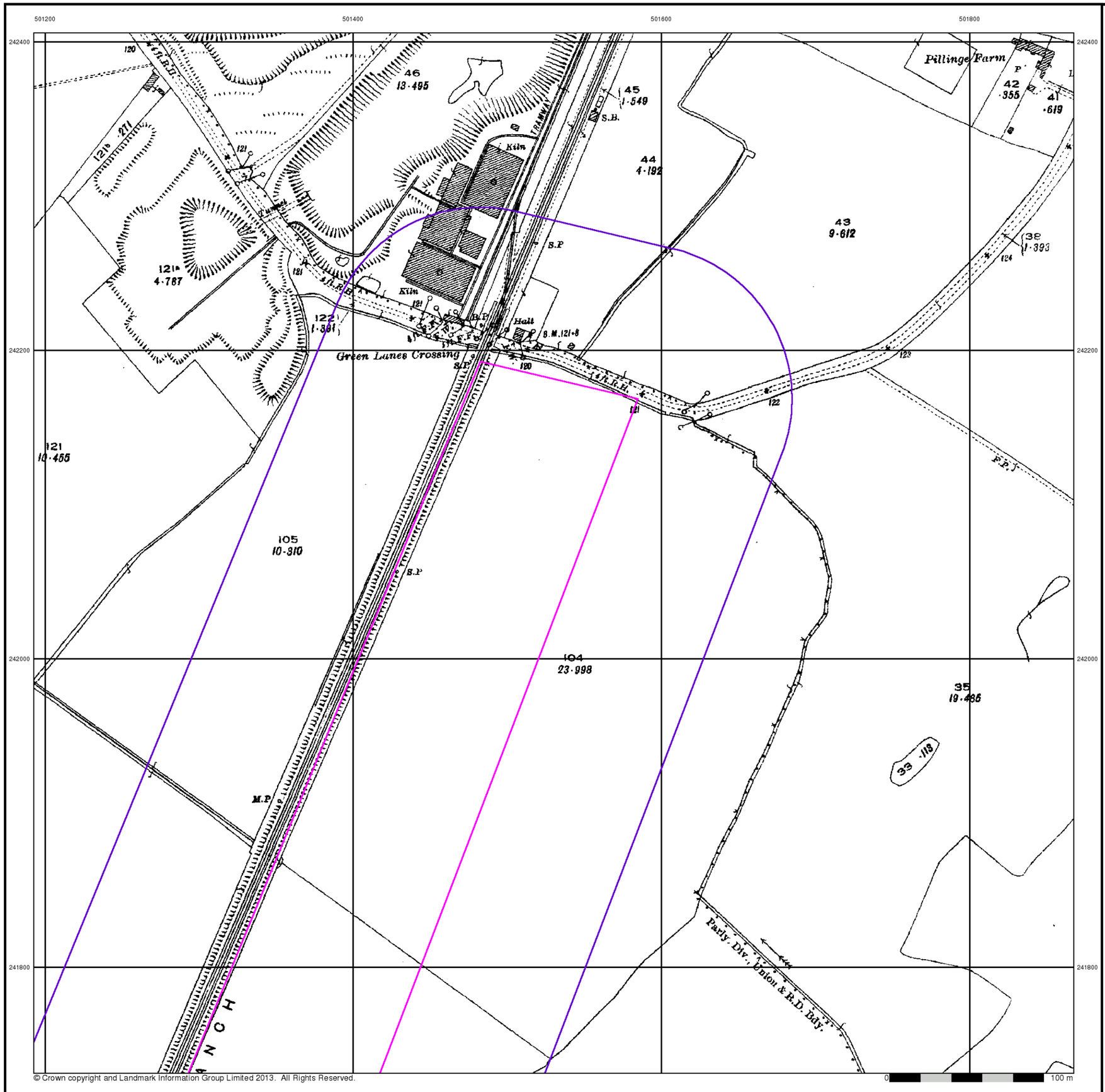
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

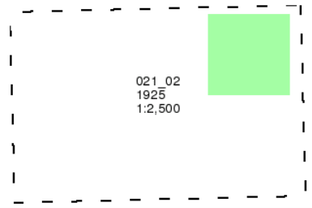
Bedfordshire

Published 1925

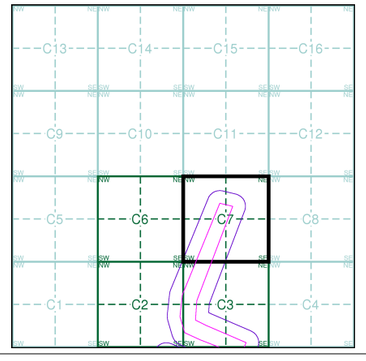
Source map scale - 1:2,500

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 C7



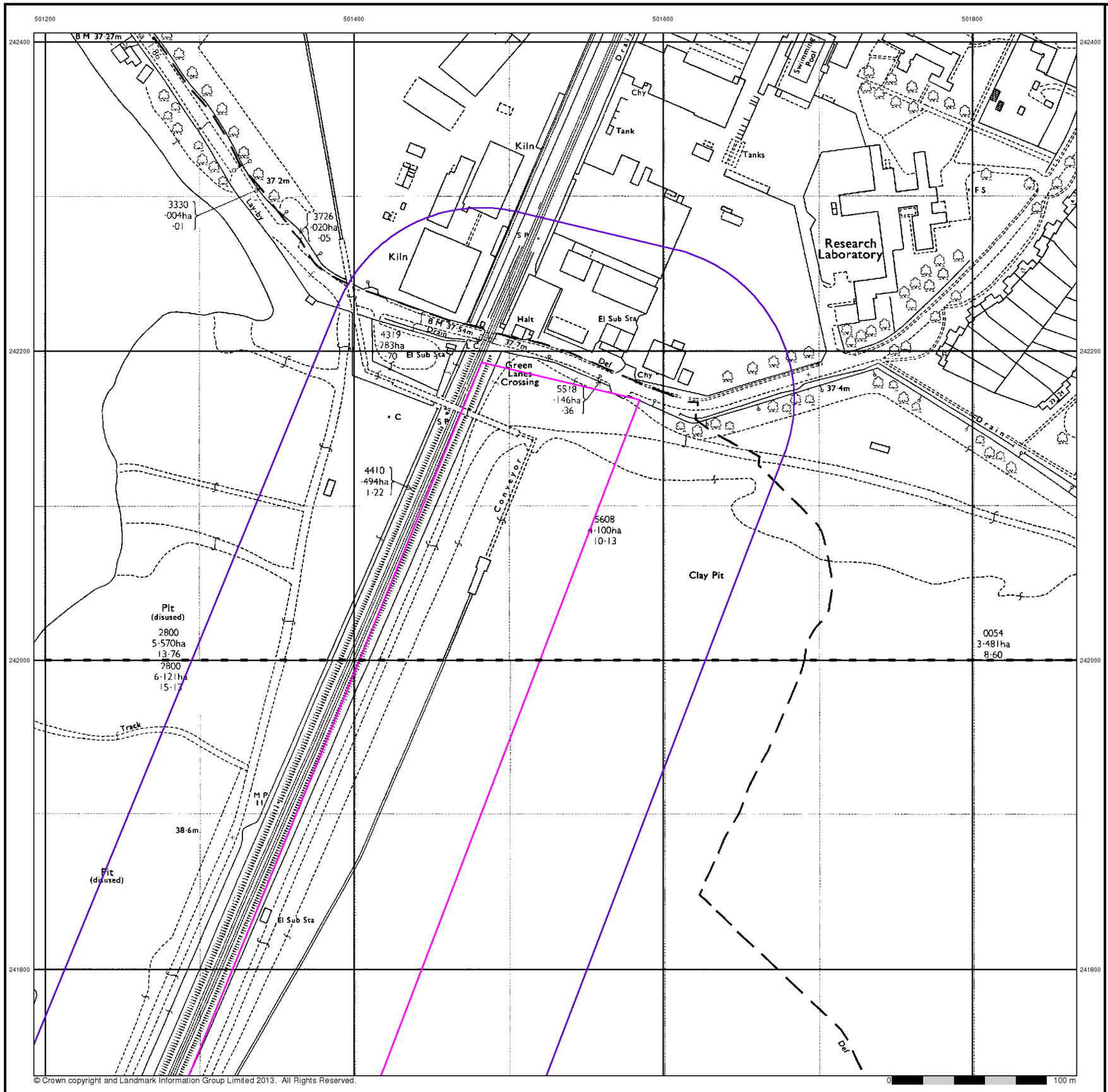
Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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



pba peterbrett

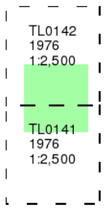
Ordnance Survey Plan

Published 1976

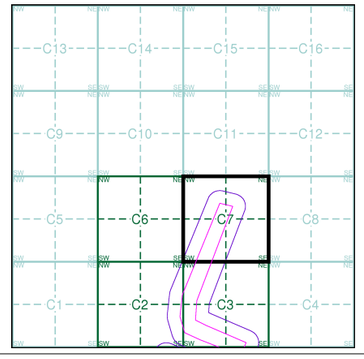
Source map scale - 1:2,500

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 C7



Order Details

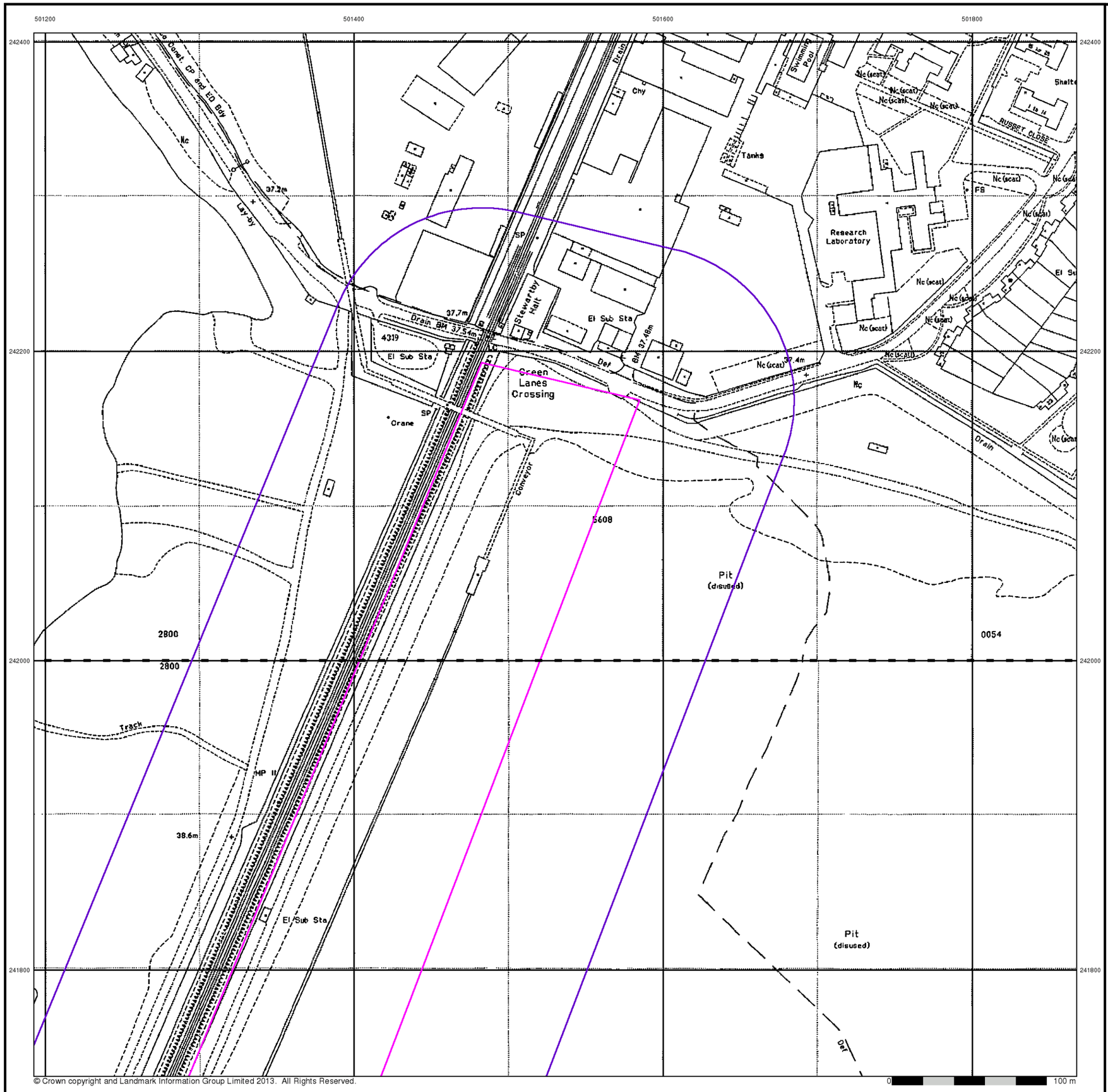
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



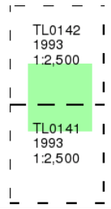
Large-Scale National Grid Data

Published 1993

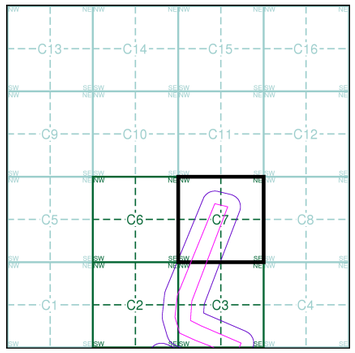
Source map scale - 1:2,500

'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)



Historical Map - Segment C7



Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

pba peterbrett

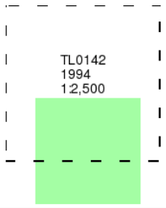
Large-Scale National Grid Data

Published 1994

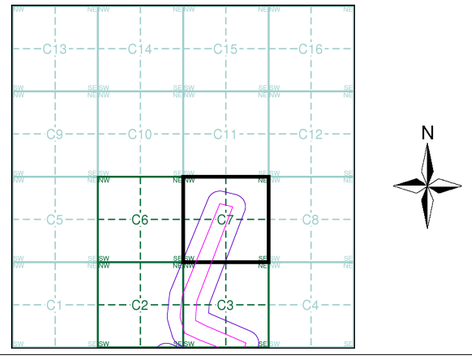
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment C7



Order Details

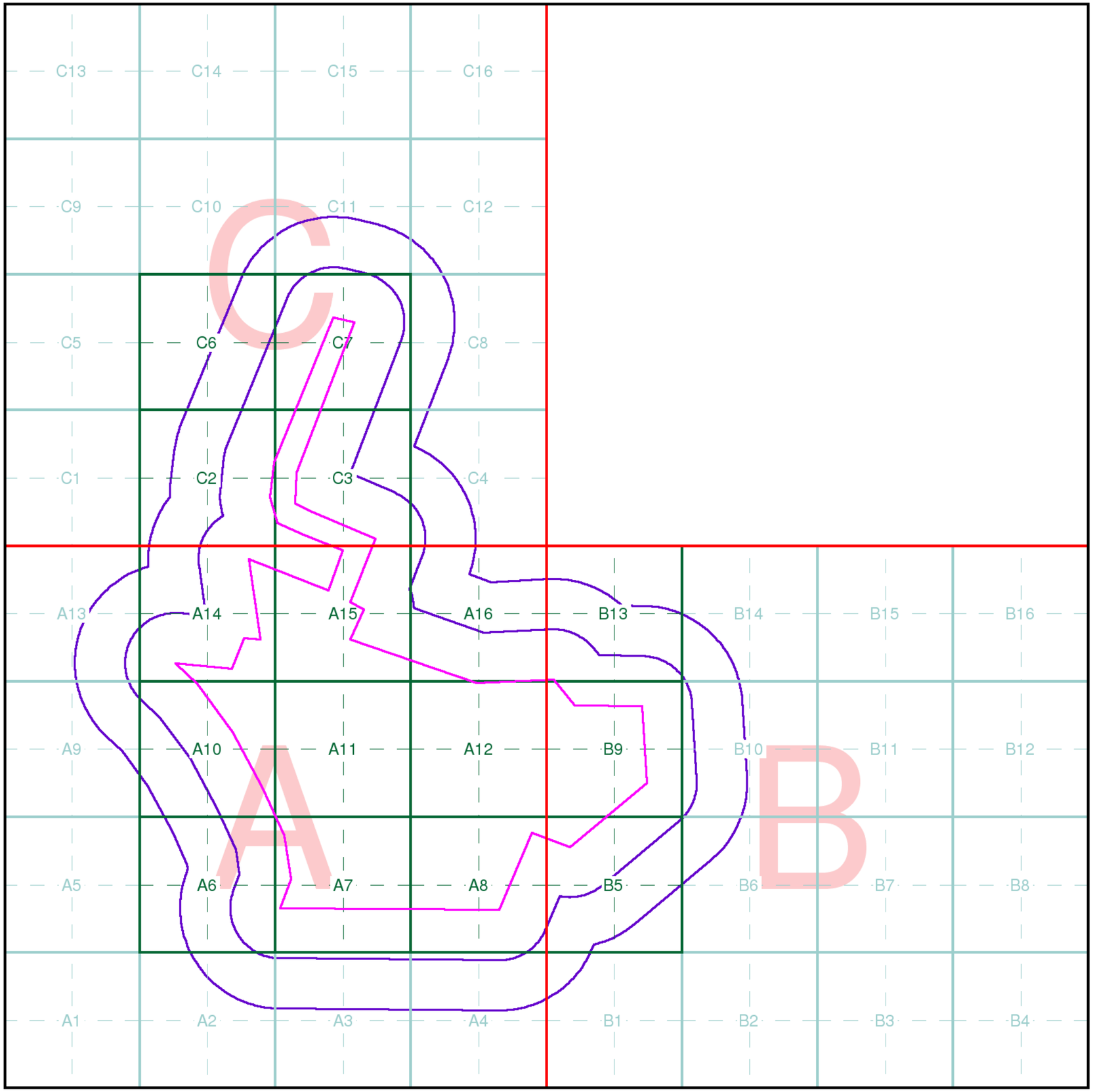
Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501420, 241770
Slice:	C
Site Area (Ha):	240.61
Search Buffer (m):	100

Site Details

Millbrook Power Project, Green Lane, Stewartby

Landmark Information Group

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



pba peterbrett

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:

Ordnance Survey® Licensed Partner

British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Ms K Riley, Brett Consulting Ltd, Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN

Order Details

Order Number:	60770728_1_1
Customer Ref:	31116
National Grid Reference:	501820, 240110
Site Area (Ha):	240.61
Search Buffer (m):	500

Site Details

Millbrook Power Project, Green Lane, Stewartby

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

APPENDIX 4

Geotechnical Engineering Limited

TRIAL PIT LOG

TP102

CLIENT COVANTA ENERGY LTD

SITE ROOKERY SOUTH, STEWARTBY, BEDFORDSHIRE — Sheet 1 of 2

Start Date 25 February 2009 — Easting 501117.9 — Scale 1 : 25

End Date 25 February 2009 — Northing 240982.4 — Ground level 31.55mOD — Depth 4.20 m

water record	sample/test no/type	sample/test result	sample/test depth (m)	description	depth (m)	level (m)	legend
				MADE GROUND: Firm dark greyish blue mottled orangish brown slightly sandy slightly gravelly CLAY with occasional sand to medium gravel sized shell fragments. Gravel is very angular and angular fine to coarse and occasional cobbles of brick and mudstone. (MADE GROUND)			
				0.40m: Becoming dark bluish grey.			
	1D*	H 46	0.50	0.50m: Medium strength.			
	2B	H 43	1.00	1.00m: Medium strength and becoming gravelly. Gravel is subangular fine to coarse and occasional cobbles of mudstone and rare brick.			
	3D*		1.50				
1.70m: Slight seepage from North-East face.				Hard indistinctly thinly laminated dark bluish grey CLAY with occasional sand to medium gravel sized shell fragments. (OXFORD CLAY FORMATION)	1.70	29.85	
	4D		2.00				
	5B		3.00				
				Hard indistinctly thinly laminated dark bluish grey slightly sandy CLAY with	3.90	27.65	

Notes

Trial pit excavated by 8 Tonne rubber tracked mechanical excavator.
Ground water seepage at 1.70m.
Trial pit dimensions 4.00x0.70x4.20m.
Trial pit sides remained stable and vertical.
On completion, the trial pit was backfilled with materials arising.
Hand vane readings presented are an average of three readings.
Stratum names provided by the Engineer.

Sketch of Foundation - Not to scale. All dimensions in metres.

EXPLORATORY HOLE LOGS SHOULD BE READ IN CONJUNCTION WITH KEY SHEETS

AGS

CONTRACT	CHECKED
22607	

Geotechnical Engineering Limited

TRIAL PIT LOG

TP102

CLIENT	COVANTA ENERGY LTD					Sheet	2 of 2
SITE	ROOKERY SOUTH, STEWARTBY, BEDFORDSHIRE					Scale	1 : 25
Start Date	25 February 2009	Easting	501117.9			Depth	4.20 m
End Date	25 February 2009	Northing	240982.4	Ground level	31.55mOD		

water record	sample/test no/type	sample/test result	sample/test depth (m)	description	depth (m)	level (m)	legend
Dry.	6B		4.10	frequent sand to medium gravel sized shell fragments. (OXFORD CLAY FORMATION)	4.20	27.35	
				Trial pit completed at 4.20m.			

Notes

Trial pit excavated by 8 Tonne rubber tracked mechanical excavator.
Ground water seepage at 1.70m.
Trial pit dimensions 4.00x0.70x4.20m.
Trial pit sides remained stable and vertical.
On completion, the trial pit was backfilled with materials arising.
Hand vane readings presented are an average of three readings.
Stratum names provided by the Engineer.

Sketch of Foundation - Not to scale. All dimensions in metres.

EXPLORATORY HOLE LOGS SHOULD BE READ IN CONJUNCTION WITH KEY SHEETS

AGS

CONTRACT	CHECKED
22607	

Geotechnical Engineering Limited

BOREHOLE LOG

WS104

CLIENT COVANTA ENERGY LTD

SITE ROOKERY SOUTH, STEWARTBY, BEDFORDSHIRE — Sheet 1 of 1

Start Date 27 February 2009 — Easting 501218.9 — Scale 1 : 50

End Date 27 February 2009 — Northing 240961.1 — Ground level 28.98mOD — Depth 3.20 m

progress date/time water depth	sample no & type	depth (m) from	depth (m) to	casing depth (m)	test type & value	samp. /core range		instru -ment	description	depth (m)	reduced level (m)	legend
27/02/09 1430hrs	1X	0.00	1.00						MADE GROUND: Reeds over firm medium strength fissured greyish brown mottled orangish brown slightly sandy slightly gravelly CLAY with occasional rootlets and fine and medium gravel sized shell fragments. Gravel is angular and subangular fine and medium brick fragments. (CALLOW CLAY FILL)	0.80	28.18	
		0.40			H 48							
	2D*	0.40	0.60									
	3D	0.60	0.80									
		0.90			H 61							
	4X	1.00	2.00						MADE GROUND: Firm medium strength fissured grey slightly sandy CLAY with occasional fine and medium gravel sized shell fragments and rare fine and medium gravel sized brick fragments. (CALLOW CLAY FILL)			
		1.30			H 89							
	5D*	1.40	1.60									
		1.90			H 44							
	6D	1.85	2.00							2.00	26.98	
	7X	2.00	3.00						MADE GROUND?: Firm to stiff low strength fissured locally indistinctly thinly laminated grey CLAY with occasional sand to medium gravel sized shell fragments. (CALLOW CLAY FILL?)	2.45	26.53	
		2.40			H 36							
27/02/09 1600hrs Dry		2.90			H 122				Very stiff high strength dark grey sandy CLAY with occasional sandy partings and sand to medium gravel sized shell fragments. (OXFORD CLAY FORMATION)	3.20	25.78	
	X	3.00	3.20	Nil								
	8D	3.00	3.20						Borehole completed at 3.20m.			
										(8.00)		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Dynamic sampled (101mm) 0.00-2.00m, (86mm) 2.00-3.00m and (76mm) 3.00-3.20m.

CASING: Not used.

BACKFILL: On completion, hole backfilled with bentonite pellets and the surface reinstated.

REMARKS: Hole refused on hard strata at 3.20m. Stretum names provided by the Engineer.

EXPLORATORY HOLE LOGS SHOULD BE READ IN CONJUNCTION WITH KEY SHEETS

water strike (m)	casing (m)	rose to (m)	time to rise (min)	remarks
				Groundwater not encountered.

AGS

CONTRACT 22607

CHECKED

Geotechnical Engineering Limited

BOREHOLE LOG

WS105

CLIENT COVANTA ENERGY LTD

SITE ROOKERY SOUTH, STEWARTBY, BEDFORDSHIRE

Sheet 1 of 1

Start Date 2 March 2009 Easting 501276.9 Scale 1 : 50

End Date 2 March 2009 Northing 240895.5 Ground level 28.62mOD Depth 3.00 m

progress date/time water depth	sample no & type	depth (m) from	depth (m) to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
02/03/09 0930hrs	1X	0.00	1.00					MADE GROUND: Reeds over soft brownish grey locally stained black slightly sandy slightly gravelly CLAY with frequent rootlets and occasional fine and medium gravel sized shell and pyritised wood fragments. Gravel is angular to subrounded fine and medium brick fragments. (CALLOW CLAY FILL)	0.40	28.22	
	2D*	0.35	0.60		H 45						
	3D	0.90	1.00		H 54						
	4X	1.00	2.00					MADE GROUND: Firm medium strength locally fissured brownish grey locally stained black slightly sandy slightly gravelly CLAY with occasional fine and medium gravel sized shell and pyritised wood fragments and coarse gravel sized pockets of orangish brown mottled off white clay. Gravel is angular to subrounded fine and medium brick fragments. (CALLOW CLAY FILL)			
	5D*	1.40	1.60		H 53						
	6D	1.90	2.00		H 39						
	7X	2.00	3.00						2.30	26.32	
		2.40			H 91			Stiff high strength thinly laminated grey slightly sandy CLAY with occasional fine and medium gravel sized shell and fossil fragments, occasional medium gravel sized lenses of light grey silt and rare sandy partings. (OXFORD CLAY FORMATION)			
02/03/09 1100hrs Dry	8D	2.85	3.00						3.00	25.62	
		2.90		Nil	H 125			Borehole completed at 3.00m.	(8.00)		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Dynamic sampled (101mm) 0.00-2.00m and (86mm) 2.00-3.00m.

CASING: Not used.

BACKFILL: On completion, hole backfilled with bentonite pellets and the surface reinstated.

REMARKS: Hole refused on hard strata at 3.00m. Stratum names provided by the Engineer.

EXPLORATORY HOLE LOGS SHOULD BE READ IN CONJUNCTION WITH KEY SHEETS

water strike (m)	casing (m)	rose to (m)	time to rise (min)	remarks
				Groundwater not encountered.

AGS

CONTRACT 22607

CHECKED

Geotechnical Engineering Limited

BOREHOLE LOG

WS106

CLIENT COVANTA ENERGY LTD

SITE ROOKERY SOUTH, STEWARTBY, BEDFORDSHIRE — Sheet 1 of 1

Start Date 2 March 2009 — Easting 501430.0 — Scale 1 : 50

End Date 2 March 2009 — Northing 240849.2 — Ground level 28.72mOD — Depth 3.55 m

progress date/time water depth	sample no & type	depth (m) from	depth (m) to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
02/03/09 1203hrs	1X	0.00	1.00					MADE GROUND: Reeds over firm medium strength fissured greyish brown mottled orangish brown slightly sandy slightly gravelly CLAY with occasional rootlets and fine and medium gravel sized shell fragments. Gravel is angular and subangular fine and medium brick fragments. (CALLOW CLAY FILL)	0.80	27.92	
		0.40			H 41						
	2D*	0.40	0.80								
		0.90			H 100						
	3D	0.85	1.00								
	4X	1.00	2.00					MADE GROUND: Firm high strength fissured grey slightly sandy CLAY with occasional fine and medium gravel sized shell fragments and rare fine and medium gravel sized brick fragments. (CALLOW CLAY FILL) 1.40m: Medium strength.			
		1.40			H 41						
	5D*	1.40	1.60								
		1.90			H 101						
	6D	1.85	2.00								
	7X	2.00	3.00								
		2.40			H 60			2.40m: Medium strength.			
	8D*	2.50	2.75						2.75	25.97	
	9D	2.85	3.00					Very stiff fissured dark grey slightly sandy CLAY with occasional sand to medium gravel sized shell fragments and rare medium gravel sized lenses of of light grey sand. (OXFORD CLAY FORMATION)	3.10	25.62	
	10X	3.00	3.55								
02/03/09 1400hrs 2.00m	11D	3.40	3.55	Nil				Very stiff dark grey sandy CLAY with occasional sandy partings and sand to medium gravel sized shell fragments. (OXFORD CLAY FORMATION)	3.55	25.17	
								Borehole completed at 3.55m.	(8.00)		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Dynamic sampled (101mm) 0.00-2.00m and (86mm) 2.00-3.55m.

CASING: Not used.

BACKFILL: On completion, hole backfilled with bentonite pellets and the surface reinstated.

REMARKS: Hole refused on hard strata at 3.55m. Stratum names provided by the Engineer.

EXPLORATORY HOLE LOGS SHOULD BE READ IN CONJUNCTION WITH KEY SHEETS

water strike (m)	casing (m)	rose to (m)	time to rise (min)	remarks
2.00	Nil	2.00	20	Seepage

AGS

CONTRACT 22607

CHECKED

C L Associates

Borehole No. BH3

Sheet 1 of 5

Equipment & Methods
Cable tool boring, 200mm dia to 17.00m, then 150mm dia to 24.00m.

Location No. 269077
Location ROOKERY SOUTH

Carried out for
A J Bull Ltd

Ground Level
48.263 mOD

Coordinates
501088.460 mE
240578.073 mN

Date
11/11/99 to 16/11/99

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample Type	Sample No.	Test	Field Records
MADE GROUND: Firm yellow brown sandy clay with some fragments of brick. (Driller's description)	48.263		(0.45)					
	45.81		0.45	0.50 - 1.00	B	1		
				1.50 - 2.00	B	2		
MADE GROUND: Firm, locally soft or stiff, orange brown and light blue grey clay with some fine to coarse gravel size fragments of brick. Occasional shells and shell fragments, root tracks gleyed grey and brown organic matter. (REWORKED CLAY)			(3.65)					
				2.50 - 3.00	B	3		
3.50 - 4.10m Some rootlets and occasional cobble size fragments of brick				3.50 - 4.00	B	4		
				4.00	W	11		
	42.16		4.10					
				4.50 - 5.00	B	5		
				6.00 - 6.50	B	6		
Stiff fissured thinly to thickly laminated grey green very silty CLAY. Frequent shells and shell fragments. (OXFORD CLAY)			(13.40)					
				7.50 - 8.00	B	7		
				9.00 - 9.50	B	8		

Remarks

Logged by: BC
Scale: 1:50
Figure:

Notes:
Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Figure 1.

11/02/00 11:48:16

C L Associates

Borehole No. BH3

Sheet 2 of 5

Equipment & Methods	Location No. 269077
As sheet 1	Location: ROOKERY SOUTH
Carried out for: A J Bull Ltd	Ground Level: As sheet 1 — Coordinates — Date

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample Type	Sample No.	Test	Field Records
				10.50 - 11.00	B	9		
				12.00 - 12.50	B	10		
CLAY (as Sheet 1) (OXFORD CLAY)			(13.40)	13.50 - 14.00	B	12		
				15.00 - 15.50	B	13		
				16.50 - 17.00	B	14		
	28.76		17.50					
				18.00	D	15		
Grey green possibly interbedded SAND and CLAY (recovered as sandy clay) with bands of friable weakly cemented sandstone. Rare shell fragments. (KELLAWAYS FORMATION)			(3.15)					
				19.50 - 20.00	B	16		

Remarks

Logged by: BC

Scale: 1:50

Figure

Materials are ibed in accordance with Appendices. For explanation of symbols abbreviations see Figure 1.

11/02/00 11:48:54

C L Associates

Borehole No. BH3

Sheet 3 of 5

Equipment & Methods: As sheet 1	Location No. 269077
	Location: ROOKERY SOUTH
Carried out for: A J Bull Ltd	Ground Level: As sheet 1 — Coordinates: As sheet 1 — Date:

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample Type	Sample No.	Test	Field Records
Interbedded SAND and CLAY (as Sheet 2)			(3.15)					
(KELLAWAYS FORMATION)	25.61		20.65					
				21.00 - 21.50	B	17		
Stiff thinly to thickly laminated grey green slightly sandy CLAY with rare shell fragments. Sand concentrated along laminae.								
(KELLAWAYS FORMATION)			(3.15)					
				22.50 - 23.00	B	18		
Dark grey fine to medium grained muddy LIMESTONE with occasional shell fragments. Recovered as gravel size fragments.								
(CORNBRASH FORMATION)	22.48		23.80					
	22.28		(0.20p) 24.00	24.00	D	19		
BOREHOLE ENDS AT 24.00 m.								

Remarks

Logged by: BC

Scale: 1:50

Figure

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Figure 1.

11/02/00 11:49:29

C L Associates

Borehole No. BH3

Sheet 4 of 5

Location No. 269077

Location ROOKERY SOUTH

Carried out for A J Bull Ltd

Ground Level | Coordinates | Date

As sheet 1

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
11/11/99	-	7.00	-	-	End of shift
12/11/99	09:00	7.00	-	2.80	Start of shift.
12/11/99	12:00	17.00	-	4.35	End of shift.
15/11/99	11:30	17.00	-	4.00	Start of shift.
15/11/99	18:00	23.00	-	4.80	End of shift.
16/11/99	09:15	23.00	-	3.25	Start of shift.
16/11/99	16:00	24.00	-	4.10	End of boring.

Hole Diameter by Depth Table

Depth of Hole (m)	Diameter of Hole (mm)	Diameter of Casing (mm)	Depth of Casing (m)
17.00	200	-	-
24.00	150	-	-

Water Strike Table

Depth of Strike (m)	Casing Depth (m)	Date	Time	Post Strike Depth (m)	Minutes After Strike	Sealed at (m)	Remarks
6.75	-	11/11/99	:	4.00	30	-	

Depth related Remarks Table

Top Depth (m)	Base Depth (m)	Remarks
17.85	18.10	Hard boring for 45 minutes.
18.90	19.20	Hard boring 45 mountes.
20.20	20.85	Hard boring for 60 minutes.
23.00	24.00	Hard boring for 120 minutes.

Remarks

1. No records of casing depths.

Logged by BC

Scale 1:50

Figure

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Figure 1.

11/02/00 11:50:02

C L Associates

Borehole No. BH3

Sheet 5 of 5

Type of installation Standpipe
Date of installation 16/11/99
Internal diameter of tubing 50 mm
Length of filter 3.55 m
Diameter of filter 150 mm

Location No. 269077

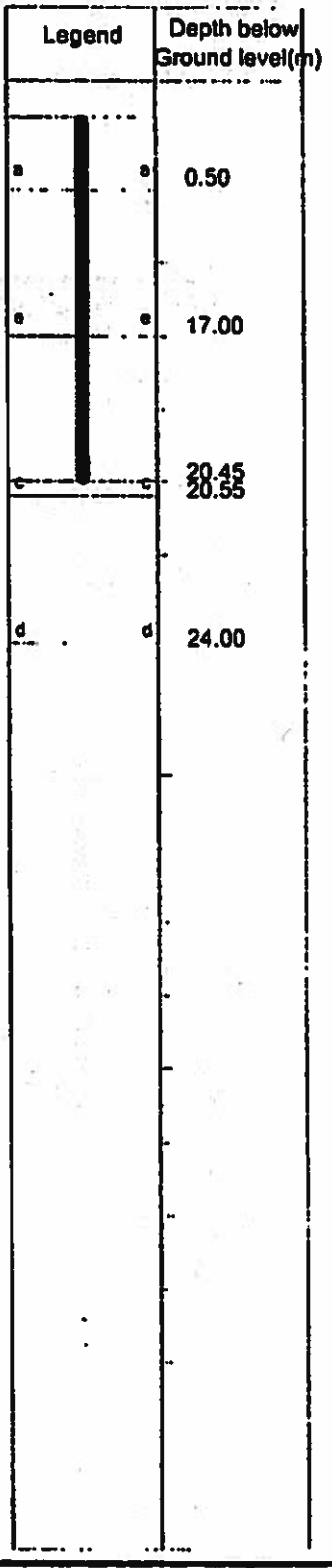
Location ROOKERY SOUTH

Carried out for
A J Bull Ltd

Ground Level | Coordinates | Date

As sheet 1

Depth (m) From	Depth (m) To	SUMMARY OF INSTALLATION
		Surface protection : Gas Barrel
0.00	0.50	Concrete
0.50	17.00	Bentonite grout
17.00	20.45	Length of slotted pipe
17.00	20.55	Gravel filter
20.55	24.00	Bentonite seal



Key

- a Concrete
- b Sand filter
- c Gravel filter
- d Bentonite seal
- e Bentonite/cement grout
- f Backfill

Remarks
1. Ground level and coordinates as sheet 1

DETAILS OF INSTRUMENT

C L Associates

Trial Pit No. TP3

Sheet 1 of 2

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Support used : None.
Backfill : Arisings

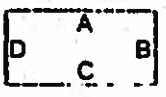
Location No. 269077
Location ROOKERY SOUTH
Carried out for A J Bull Ltd

Ground Level	Coordinates	Date
39.276 mOD	501053.097 mE 240938.675 mN	09/11/99

Description (FACE A)	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample Type	Sample No.	Test	Field Records
	39.276							
MADE GROUND: Brick rubble comprising fine to coarse gravel and small cobble size fragments.			(0.70)					
	38.58		0.70					
				1.50	B	1		
Firm thinly laminated dark green brown very silty CLAY with abundant shells and shell fragments. Recovered as blocky fragments. Becoming more difficult to dig with depth. (OXFORD CLAY)			(3.60 pen)					
TRIAL PIT ENDS AT 4.30 m.	34.98		4.30					

Remarks
Stability : Stable

Sketch



Logged by PAC
Scale 1:25
Figure

11/02/00 12:24:25

C L Associates

Trial Pit No. TP3

Sheet 2 of 2

Location No. 269077
Location ROOKERY SOUTH

Carried out for A J Bull Ltd

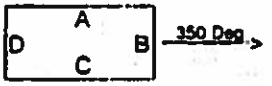
Ground Level	Coordinates	Date
	As sheet 1	

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
09/11/99	14:00	4.30	-	0.70	Slight ingress.

Remarks

Sketch



Logged by PAC

Scale 1:25

Figure

11/02/00 12:24:58

C L Associates

Trial Pit No. TP4

Sheet 1 of 1

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Backfill : Arisings
Support used : none

Location No. 269077
Location ROOKERY SOUTH

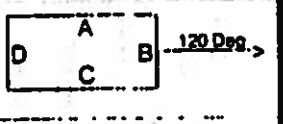
Carried out for A J Bull Ltd

Ground Level: 43.571 mOD
Coordinates: 501002.602 mE, 240868.190 mN
Date: 11/11/99

Description (FACE A)	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample: Type	Sample: No.	Test	Field Records
TOPSOIL	43.571		(1.50)					
	43.47		0.10					
Soft orangish brown slightly sandy CLAY with a little rounded to subrounded fine to coarse gravel and frequent rootlets. (Weathered OXFORD CLAY)			(1.10)					
	42.37		1.20					
				1.50	B	1		
Firm to stiff light grey mottled light brown slightly sandy locally sandy CLAY with occasional subrounded to subangular fine to medium gravel. Frequent rootlets. (Weathered OXFORD CLAY)			(1.80)					
	40.57		3.00					
Firm friable thinly laminated dark green brown very silty CLAY with abundant shells and shell fragments. (OXFORD CLAY)			(1.50 pen)					
	39.07		4.50	4.50	B	2		
TRIAL PIT ENDS AT 4.50 m.								

Remarks
Stability : Stable

Sketch



Logged by: PAC
Scale: 1:25
Figure:

11/02/00 12:33:12

C L Associates

Trial Pit No. TP5

Sheet 1 of 1

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Support used : None.
Backfill : Arisings

Location No. 269077
Location ROOKERY SOUTH

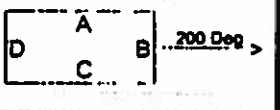
Carried out for A J Bull Ltd

Ground Level	Coordinates	Date
42.035 mOD	501159.337 mE 240589.486 mN	10/11/99

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample Type	Sample No.	Test	Field Records
FACE A								
Frequent bricks and brick fragments	42.035							
				1.50	B	1		
Firm to stiff friable thinly laminated brown becoming greenish brown very silty CLAY with abundant shells and shell fragments. Recovered as blocky fragments. Becoming difficult to dig with depth.			(4.00 pen)					
(OXFORD CLAY)								
TRIAL PIT ENDS AT 4.00 m.	38.04		4.00	4.00	B	2		

Remarks
Stability : Stable.

Sketch



Logged by PAC
Scale 1:25
Figure

11/02/00 12:40:33

C L Associates

Trial Pit No. TP6

Sheet 1 of 1

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Support used : None
Backfill : Arisings

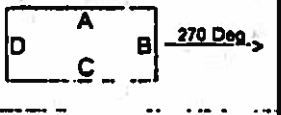
Location No. 269077
Location ROOKERY SOUTH
Carried out for A J Bull Ltd

Ground Level	Coordinates	Date
31.600 mOD	501155.184 mE 240736.874 mN	10/11/99

Description FACE A	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample Type	Sample No.	Test	Field Records
	31.600							
MADE GROUND: Soft to firm grey brown slightly sandy clay with some fine to coarse gravel and cobble size brick fragments. Occasional pockets of black organic matter. (REWORKED CLAY)			(3.10)	2.00	B	1		
Firm thinly to thickly laminated dark grey slightly sandy very silty CLAY thinly interbedded with firm dark grey slightly sandy to sandy CLAY. Silt and fine sand along some partings. Abundant shells and shell fragments. (OXFORD CLAY)	28.50		3.10	3.40	B	2		
			(0.40 pen)					
TRIAL PIT ENDS AT 3.50 m.	28.10		3.50					

Remarks
Stability : Stable.

Sketch



Logged by PAC
Scale 1:25
Figure

11/02/00 12:41:18

C L Associates

Trial Pit No. TP7

Sheet 1 of 1

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Support used : None.
Backfill : Arisings

Location No. 269077
Location ROOKERY SOUTH

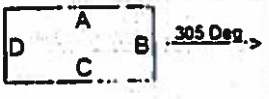
Carried out for A J Bull Ltd

Ground Level	Coordinates	Date
29.911 mOD	501159.390 mE 240964.297 mN	09/11/09

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample: Type	Sample: No.	Test	Field Records
FACE A								
	29.911							
MADE GROUND: Soft to firm grey brown slightly sandy clay with some fine to coarse gravel and cobble size brick fragments intermixed with firm grey very silty clay. Abundant shells and shell fragments. (REWORKED CLAY)			(2.00)	1.00	B	1		
	27.91		2.00					
Firm thinly laminated grey slightly sandy very silty CLAY with abundant shells and shell fragments. (OXFORD CLAY)			(1.00 pen)					
				3.00	B	2		
TRIAL PIT ENDS AT 3.00 m.	26.91		3.00					

Remarks
Stability : Stable

Sketch



Logged by PAC
Scale 1:25
Figure

11/02/00 12:41:58

C L Associates

Trial Pit No. TP12

Sheet 1 of 2

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Support used : None.
Backfill : Arisings

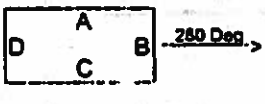
Location No. 269077
Location ROOKERY SOUTH
Carried out for A J Bull Ltd

Ground Level	Coordinates	Date
29.002 mOD	501526.452 mE 240830.456 mN	09/11/99

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample Type	Sample No.	Test	Field Records
FACE A								
	29.002							
MADE GROUND: Soft to firm grey brown slightly sandy clay with some fine to coarse gravel and cobble size brick fragments intermixed with firm grey very silty clay with abundant shells and shell fragments. (REWORKED CLAY)			(1.90)	1.00	B	1		
	27.10		1.90					
Firm thinly laminated grey slightly sandy very silty CLAY with abundant shells and shell fragments. (OXFORD CLAY)			(1.10 pen)					
	26.00		3.00	3.00	B	2		
TRIAL PIT ENDS AT 3.00 m.								

Remarks
Stability : Stable.

Sketch



Logged by PAC
Scale 1:25
Figure

11/02/00 12:08.52

C L Associates

Trial Pit No. TP12

Sheet 2 of 2

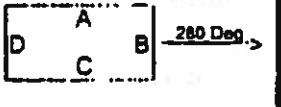
Location No. 269077
Location ROOKERY SOUTH
Carried out for A J Bull Ltd

Ground Level	Coordinates	Date
	As sheet 1	

Water Level Observations During Boring					
Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
09/11/99	11:00	3.00	-	1.90	Slight ingress.

Remarks

Sketch



Logged by PAC

Scale 1:25

Figure

11/02/00 12:09:21

C L Associates

Trial Pit No. TP13

Sheet 1 of 1

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Support used : None.
Backfill : Arisings

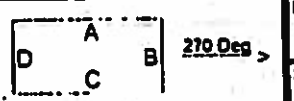
Location No. 269077
Location ROOKERY SOUTH
Carried out for A J Bull Ltd

Ground Level	Coordinates	Date
31.711 mOD	501276.974 mE 240643.869 mN	10/11/99

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample: Type	Sample: No.	Test	Field Records
FACE A								
	31.711							
MADE GROUND: Soft to firm grey brown slightly sandy clay with a little angular to subangular fine to coarse gravel and cobble size brick fragments. Frequent pockets of soft orange brown clay and firm friable greenish brown clay. (REWORKED CLAY)			(3.00)	1.50	B	1		
Firm friable thinly laminated dark greenish brown very silty CLAY with abundant shells and shell fragments. (OXFORD CLAY)	28.71		3.00					
			(0.30 pen)					
	28.41		3.30	3.30	B	2		
TRIAL PIT ENDS AT 3.30 m.								

Remarks
Stability : Stable.

Sketch



Logged by PAC
Scale 1:25
Figure

11/02/00 12:09:58

C L Associates

Trial Pit No. TP14

Sheet 1 of 1

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Support used : None.
Backfill : Arisings

Location No. 269077
Location ROOKERY SOUTH

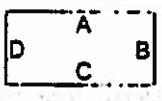
Carried out for A J Bull Ltd

Ground Level: 34.468 mOD
Coordinates: 501485.811 mE, 240866.387 mN
Date: 10/11/99

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample: Type	Sample: No.	Test	Field Records
FACE A								
	34.468							
				1.50	B	1		
MADE GROUND: Firm grey brown clay with a little angular to subangular fine to coarse gravel and cobble size brick fragments intermixed with firm dark greenish brown clay and firm blue grey very silty clay. Occasional pockets of very soft orange brown clay.			(4.70 pen)					
(REWORKED CLAY)								
				4.50	B	2		
TRIAL PIT ENDS AT 4.70 m.	29.77		4.70					

Remarks
Stability : Stable.

Sketch



Logged by: PAC
Scale: 1:25
Figure

11/02/00 12:10:38

C L Associates

Trial Pit No. TP15

Sheet 1 of 2

Equipment & Methods
Machine dug using 360 Excavator
Pit dimensions 1.20m by 4.00m.
Support used : None.
Backfill : Arisings

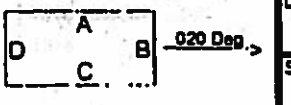
Location No. 269077
Location ROOKERY SOUTH
Carried out for A J Bull Ltd

Ground Level	Coordinates	Date
28.513 mOD	501280.016 mE 240901.698 mN	10/11/99

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests: Depth	Sample: Type	Sample: No.	Test	Field Records
FACE A								
	28.513							
MADE GROUND: Firm grey brown clay with a little angular to subangular fine to coarse gravel and cobble size brick fragments and firm friable greenish brown clay fragments intermixed with firm blue grey very silty clay. Occasional pockets of very soft orange brown clay. (REWORKED CLAY)			(2.80)	2.00	B	1		
	25.71		2.80					
Firm friable thinly laminated dark greenish brown very silty CLAY with abundant shells and shell fragments. (OXFORD CLAY)			(0.50 pen)					
TRIAL PIT ENDS AT 3.30 m.	25.21		3.30	3.30	B	2		

Remarks
Stability : Stable.

Sketch



Logged by PAC
Scale 1:25
Figure

11/02/00 12:11:14

C L Associates

Trial Pit No. TP15

Sheet 2 of 2

Location No. 269077
Location ROOKERY SOUTH
Carried out for A J Bull Ltd

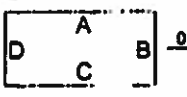
Ground Level	Coordinates	Date
	As sheet 1	

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
10/11/99	-	3.30	-	2.80	Slight Ingress.

Remarks

Sketch



Logged by PAC

Scale 1:25

Figure

11/02/00 12:11:44

APPENDIX 5

Derwentside Environmental Testing Services

Certificate of Analysis

Certificate Number 14-21463

01-Dec-14

Client Peter Brett Associates
Caversham Bridge House
Waterman Place
Reading
Berkshire
RG1 8DN

Our Reference 14-21463

Client Reference 31116

Contract Title Millbrook

Description 11 Water samples.

Date Received 24-Nov-14

Date Started 24-Nov-14

Date Completed 01-Dec-14

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Rob Brown
Business Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Water Samples

Our Ref 14-21463
Client Ref 31116
Contract Title Millbrook

			Lab No	736465	736466	736467	736468	736469	736470
			Sample ID	West Ditch	ROOK N	ROOK S	BH103	BH206	BH5
			Depth						
			Other ID						
			Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
			Sampling Date	19/11/14	18/11/14	18/11/14	18/11/14	18/11/14	19/11/14
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Metals									
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.62	0.33	0.36	1.6	2.4	0.42
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.87	0.77	0.28	1.2	1.5	0.78
Barium, Dissolved	DETSC 2306	0.26	ug/l	18	14	12	120	71	91
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron	DETSC 2123	100	ug/l	310	920	670	2600	2100	960
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	0.05	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.25	< 0.25	< 0.25	< 0.25	0.59	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.2	0.5	1.8	0.6	2.1	1.1
Iron, Dissolved	DETSC 2306	5.5	ug/l	26	70	19	47	290	30
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.14	0.17	< 0.09	0.14	0.65	0.10
Manganese, Dissolved	DETSC 2306	0.22	ug/l	4.4	1.7	10	82	26	440
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Molybdenum, Dissolved	DETSC 2306	1.05	ug/l	< 1.1	< 1.1	1.1	2.2	43	11
Nickel, Dissolved	DETSC 2306	0.5	ug/l	2.4	0.6	4.6	< 0.5	2.7	1.9
Potassium, Dissolved	DETSC 2306	0.08	mg/l	6.5	18	17	20	19	18
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.70	0.71	0.32	< 0.25	1.2	0.42
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	< 0.6	< 0.6	< 0.6	1.7	2.3	< 0.6
Zinc, Dissolved	DETSC 2306	1.25	ug/l	28.4	22.5	11.4	226	68.6	58.5
Inorganics									
Conductivity	DETSC 2009	1	uS/cm	834	2250	1730	4580	3220	2490
Total Biochemical Oxygen Demand	DETSC 2031	1	mg/l	2.2	1.2	< 1.0	3.2	11	8.4
Total Chemical Oxygen Demand	DETSC 2032	10	mg/l	26	12	21	1300	1600	990
Cyanide total	DETSC 2130	40	ug/l	< 40	< 40	< 40	< 40	< 40	< 40
Dissolved Oxygen	DETSC 2048*	0.1	mg/l	11.3	11.5	11.4	6.4	5.1	1.5
Suspended Solids	DETSC 2034	5	mg/l	50	20	18	21000	100000	78000
Total Dissolved Solids	DETSC 2035	5	mg/l	550	1800	1200	3400	1200	1800
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.040	39	0.070	0.91	1.2	0.99
Chloride	DETSC 2055	0.1	mg/l	50	67	31	1200	560	93
Nitrate as NO3	DETSC 2055	0.1	mg/l	74	< 0.10	0.23	0.35	0.21	0.63
Total Phosphate	DETSC 2205*	0.01	mg/l	210	300	300	260	230	200
Sulphate as SO4	DETSC 2055	0.1	mg/l	150	1400	880	510	560	1000
Total Organic Carbon	DETSC 2033	2	mg/l	9.4	6.7	14	150	150	51
Petroleum Hydrocarbons									
EPH (C10-C12)	DETSC 3311	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	ug/l	< 10	< 10	< 10	< 10	59	< 10
EPH (C16-C21)	DETSC 3311	10	ug/l	< 10	36	31	39	520	120
EPH (C21-C28)	DETSC 3311	10	ug/l	< 10	42	33	27	860	580
EPH (C28-C35)	DETSC 3311	10	ug/l	23	52	44	33	1300	840
EPH (C35-C40)	DETSC 3311	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									

Key: * -not accredited. n/s -not supplied. I/S -insufficient sample.

Summary of Chemical Analysis
Water Samples

Our Ref 14-21463
Client Ref 31116
Contract Title Millbrook

			Lab No	736465	736466	736467	736468	736469	736470
			Sample ID	West Ditch	ROOK N	ROOK S	BH103	BH206	BH5
			Depth						
			Other ID						
			Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
			Sampling Date	19/11/14	18/11/14	18/11/14	18/11/14	18/11/14	19/11/14
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Naphthalene	DETSC 3304	0.01	ug/l	0.03	0.02	0.03	< 0.01	0.49	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.39	0.04
Phenanthrene	DETSC 3304	0.01	ug/l	0.024	< 0.010	0.013	0.024	1.3	0.019
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.06	< 0.01	< 0.01	0.01	3.4	0.04
Pyrene	DETSC 3304	0.01	ug/l	0.05	< 0.01	< 0.01	0.03	9.8	0.02
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.04	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.04	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Benzo(g,h,i)perylene	DETSC 3304*	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304*	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01
PAH	DETSC 3304	0.04	ug/l	0.38	< 0.04	0.05	0.07	15	0.12
Phenols									
Phenol	*	0.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	I/S	< 0.50

Key: * -not accredited. n/s -not supplied. I/S -insufficient sample.

Summary of Chemical Analysis
Water Samples

Our Ref 14-21463
Client Ref 31116
Contract Title Millbrook

				Lab No	736471	736472	736473	736474	736475
				Sample ID	BH6	BH105B	BH104	BH12	BH102
				Depth					
				Other ID					
				Sample Type	WATER	WATER	WATER	WATER	WATER
				Sampling Date	19/11/14	18/11/14	18/11/14	18/11/14	18/11/14
				Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Metals									
Antimony, Dissolved	DETSC 2306	0.17	ug/l		0.47	1.5	0.20	0.34	1.0
Arsenic, Dissolved	DETSC 2306	0.16	ug/l		0.44	2.7	0.75	0.38	0.58
Barium, Dissolved	DETSC 2306	0.26	ug/l		99	190	11	25	270
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron	DETSC 2123	100	ug/l		980	1900	2000	1100	200
Cadmium, Dissolved	DETSC 2306	0.03	ug/l		< 0.03	0.06	< 0.03	< 0.03	0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l		0.40	< 0.25	< 0.25	< 0.25	0.33
Copper, Dissolved	DETSC 2306	0.4	ug/l		1.8	1.0	1.5	1.3	2.0
Iron, Dissolved	DETSC 2306	5.5	ug/l		13	110	38	72	37
Lead, Dissolved	DETSC 2306	0.09	ug/l		0.12	0.20	< 0.09	0.12	0.10
Manganese, Dissolved	DETSC 2306	0.22	ug/l		310	580	12	18	410
Mercury, Dissolved	DETSC 2306	0.01	ug/l		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Molybdenum, Dissolved	DETSC 2306	1.05	ug/l		5.5	2.9	< 1.1	20	13
Nickel, Dissolved	DETSC 2306	0.5	ug/l		3.8	12	3.3	9.0	14
Potassium, Dissolved	DETSC 2306	0.08	mg/l		12	33	9.4	15	16
Selenium, Dissolved	DETSC 2306	0.25	ug/l		0.51	0.67	< 0.25	1.4	0.59
Vanadium, Dissolved	DETSC 2306	0.6	ug/l		< 0.6	1.7	< 0.6	< 0.6	< 0.6
Zinc, Dissolved	DETSC 2306	1.25	ug/l		26.9	107	20.0	25.8	105
Inorganics									
Conductivity	DETSC 2009	1	uS/cm		2370	3850	2820	2890	1990
Total Biochemical Oxygen Demand	DETSC 2031	1	mg/l		16	3.2	< 1.0	5.3	15
Total Chemical Oxygen Demand	DETSC 2032	10	mg/l		1000	470	14	410	470
Cyanide total	DETSC 2130	40	ug/l		< 40	< 40	< 40	< 40	< 40
Dissolved Oxygen	DETSC 2048*	0.1	mg/l		9.6	9.9	11.3	10.6	10.7
Suspended Solids	DETSC 2034	5	mg/l		28000	15000	46	11000	27000
Total Dissolved Solids	DETSC 2035	5	mg/l		1900	2900	1900	2000	1900
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l		0.50	0.87	0.73	0.16	0.17
Chloride	DETSC 2055	0.1	mg/l		470	240	360	200	36
Nitrate as NO3	DETSC 2055	0.1	mg/l		81	0.25	0.27	37	4.4
Total Phosphate	DETSC 2205*	0.01	mg/l		230	230	340	170	290
Sulphate as SO4	DETSC 2055	0.1	mg/l		240	1600	560	1000	1000
Total Organic Carbon	DETSC 2033	2	mg/l		310	160	4.9	180	220
Petroleum Hydrocarbons									
EPH (C10-C12)	DETSC 3311	10	ug/l		< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	ug/l		< 10	< 10	< 10	< 10	160
EPH (C16-C21)	DETSC 3311	10	ug/l		25	17	14	18	730
EPH (C21-C28)	DETSC 3311	10	ug/l		< 10	29	19	18	370
EPH (C28-C35)	DETSC 3311	10	ug/l		< 10	42	26	32	110
EPH (C35-C40)	DETSC 3311	10	ug/l		< 10	< 10	< 10	< 10	< 10
PAHs									

Key: * -not accredited. n/s -not supplied. I/S -insufficient sample.

Summary of Chemical Analysis
Water Samples

Our Ref 14-21463
Client Ref 31116
Contract Title Millbrook

			Lab No	736471	736472	736473	736474	736475
			Sample ID	BH6	BH105B	BH104	BH12	BH102
			Depth					
			Other ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sampling Date	19/11/14	18/11/14	18/11/14	18/11/14	18/11/14
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Naphthalene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	0.01	0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.025	< 0.010	0.011	< 0.010	0.018
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.02	0.02	< 0.01	< 0.01	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.03	0.04	0.02	0.01	0.06
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304*	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAH	DETSC 3304	0.04	ug/l	0.15	0.07	< 0.04	< 0.04	0.10
Phenols								
Phenol	*	0.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Key: * -not accredited. n/s -not supplied. I/S -insufficient sample.

Information in Support of the Analytical Results

Our Ref 14-21463
Client Ref 31116
Contract Millbrook

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
736465	West Ditch WATER	19/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736466	ROOK N WATER	18/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736467	ROOK S WATER	18/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736468	BH103 WATER	18/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736469	BH206 WATER	18/11/14	PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	Chromium, Naphthalene, PAH MS, Phenols MS, EPH
736470	BH5 WATER	19/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736471	BH6 WATER	19/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736472	BH105B WATER	18/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736473	BH104 WATER	18/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736474	BH12 WATER	18/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	
736475	BH102 WATER	18/11/14	GB 1L x2, PB 1L	BOD (2 days), Dissolved Oxygen (2 days), Nitrate as NO3 (2 days)	

Key: G-Glass P-Plastic B-Bottle

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

1 Introduction

A Tier 2 Risk Assessment is a quantitative assessment using published (generic) criteria to "screen" the site-specific contamination testing data and identify potential hazards to specific receptors.

The aim of this document is to present an explanation for the selection of the assessment criteria routinely used by PBA when undertaking a Tier 2 risk assessment. This document is divided into general introductory text and sections on soils, waters and soil gases. This document should be read in conjunction with another entitled "PBA Methodology for Assessment of Land Contamination" which summarises the legislative regime and our approach to ground contamination and risk assessment.

2 General Notes

Any deviation from the routine criteria and/or selection of criteria for parameters not covered in this document will be described in the report text. The report will also comment on the appropriateness of the routine criteria for project objectives or ground conditions.

Any PBA interpretation of contamination test results is based on a scientific and engineering appraisal. The perceptions of, for example, banks, insurers, lay people etc are not taken into account.

Any tables included in this document are produced for ease of reference to the criteria, they do not in any way replace the documents of origin (which are fully referenced) and which should be read to ensure appropriate use and interpretation of the data.

SGV/GAC provide an aid to decision-making, but they do not replace the need for sound professional judgement in risk assessment (EA, 2006b).

3 Criteria for Assessing Soil Results

3.1 Potential Harm to Human Health

Defra has yet to produce a comprehensive list of assessment criteria that on its own, would be sufficient to enable the assessment of the potential risks posed by soil contaminants (to human health). A number of industry-driven initiatives have developed to generate contaminated land assessment criteria. This has led to the publication of a series of non-statutory non-Governmental contaminated land assessment criteria. It should be noted that the published DEFRA guidance is also non-statutory.

The criteria routinely used by PBA as Tier 2 soil screening values for the protection of human health are the Governmental Soil Guidance Values (SGVs) and various non-Governmental Generic Assessment Criteria (GAC), these criteria are presented in Table 1.

Both the Governmental and non Governmental sets of criteria have been generated using the Contaminated Land Exposure Assessment model (CLEA) and supporting technical guidance (EA, 2009a, 2009b, 2009c).

PBA has reviewed these publications and consider that the non-Governmental criteria are authoritative and robust, and therefore we will refer to such criteria until such time that DEFRA derive and publish Governmental SGVs to replace the non Governmental GACs.

It is important to note that because the GACs are not published by the UK Government, they may be subject to challenge by a regulatory body or their representative. If the use of the GACs is challenged, it may be necessary to carry out modelling to generate site-specific assessment criteria.

Soil Guideline Values (SGVs) - Governmental

The first series of SGVs were generated using a probabilistic version of the CLEA model. However, on 22 July 2008 DEFRA announced the withdrawal of these SGVs and revised SGVs have been calculated using a fully deterministic version of the CLEA model.

The CLEA model has been developed to calculate a tolerable daily soil intake (TDSI) using a set of ten exposure pathways (Ingestion (outdoor soil, indoor dust, homegrown vegetables and soil attached to homegrown vegetables), Dernmal Contact (outdoor soil and indoor dust) and Inhalation (outdoor dust, indoor dust, outdoor vapours and indoor vapours)). There are exposure pathways not included in the CLEA model such as the permeation of organics into plastic water supply pipes.

The presence and/or significance of each of the potential exposure pathways is dependant on the land use being considered. The model uses standard land use scenarios as follows:-

Residential – habitation of a dwelling up to two storeys high with various default material and design parameters, access to either private or nearby community open space with soil track back to form indoor dust. Assumes ingestion of homegrown produce.

Allotments – the model has default parameters for use and consumption of vegetables but not animals or their products (eggs).

Industrial/commercial – assumes office or light physical work in a permanent three storey structure with breaks taken outside and that the site is NOT covered in hardstanding

Generic Assessment Criteria (GAC) - Non

Governmental

SGVs generated for organic compounds are dependent on the amount of organic matter present in the soil as organic matter acts to immobilise organic contaminants. The SGVs for BTEX compounds and phenol assume that the 'host' soil has 6% organic matter. UK soils often have organic matter concentrations below 6% and that it may therefore not be conservative to use the published SGVs when assessing the potential risks from these chemicals. The on-line Contaminated Land Strategies Digest (CLSD) formed a consortium of ten practitioners (including representatives from local authorities), to prepare generic assessment criteria for a number of contaminants at more conservative organic matter contents of 1% and 3% for the same end uses. The consortium also reproduced the SGVs using the EA's latest CLEA model and latest CLEA guidance and PBA independently verified the results published using CLEA v1.06. These criteria will be used by PBA where appropriate.

In addition the CLSD consortium derived GACs for selected substances for an additional end use, that being residential without plant uptake (CLSD, 2009).

In July 2009, GAC for 82 substances were published by the Chartered Institute of Environmental Health (CIEH) (LQM and CIEH, 2009) using the then current version of the CLEA software v1.04. These GAC replace those generated in 2006 using the original version of the model CLEA UK *beta*.

In January 2010, GAC for 35 substances were published by the Environmental Industries Commission (EIC), Association of Geotechnical and Geoenvironmental Specialists (AGS) and Contaminated Land: Applications in Real Environments (CL:AIRE), (CL:AIRE, 2010) using the then current version of the CLEA software v1.05. These substances are more rarely found to be contaminants of concern during contaminated land investigations and hence are not routinely tested for. The CL:AIRE GAC are not reproduced in Table 1 but may be utilised as required.

Note on Appropriate Use of SGV/GAC The SGVs and GACs generated using the CLEA model are based on numerous and complex assumptions. The appropriateness of these assumptions in a site-specific context requires confirmation on a project by project basis.

In general, SGVs/GACs have been developed using highly conservative assumptions and exceedance does not indicate that a site is statutorily contaminated and/or necessarily unsuitable for use in the planning context. Current guidance (Defra 2012) provides new clarity on the assessment of risk where soil concentrations exceed the SGV. The guidance introduces a four stage classification system where Category 1 sites are obviously contaminated and Category 4 sites uncontaminated as defined by EPA 1990. Outside of these categories further specific risk assessment is required to determine if the site should fall into Category 2 contaminated or category 3 uncontaminated. Category 4 screening values are considered to be more pragmatic than the current published SGV/GAC criteria but still strongly precautionary with the aim of allowing rapid identification of sites where the risk is above minimal but still low/acceptable (within the context of Part 2A).

At the end of 2013 technical guidance in support of Defra's revised Statutory Guidance (SG) was published (CL:AIRE 2013) which provided:

• A methodology for deriving C4SLs for four generic land-uses comprising residential, commercial, allotments and public open space (POS); and

• A demonstration of the methodology, via the derivation of C4SLs for six substances – arsenic, benzene, benzo(a)pyrene, cadmium, chromium (VI) and lead.

The C4SL tables for each of the six substances are reproduced as Tables 6 to 11 in this document. For all tables HCV refers to Health Criteria Value and LLTC Low Level of Toxicological Concern.

A letter from Lord de Mauley dated 3rd September 2014 provides more explicit direction to local authorities on the use of the C4SL in a planning context. The letter identifies four key points:

1) that the screening values were developed expressly with the planning regime in mind

2) their use is recommended in DCLG's planning guidance

3) soil concentrations below a C4SL limit are considered to be 'definitely not contaminated' under Part IIA of the 1990 Environmental Protection Act and pose at most a 'low level of toxicological concern' and

4) exceedance of a C4SL screening value does not mean that land is definitely contaminated, just that further investigation may be warranted.

PBA will use the criteria for lead and may use the other criterion, depending on site specific conditions.

Note on Mercury, Chromium and Arsenic Assessment The analytical testing routinely undertaken by PBA determines total concentration, however, the toxicity depends on the form of the contaminant (species).

If a source of Mercury, Chromium or Arsenic is identified or the total concentration exceeds the relevant worst case speciated criteria it will be

desirable/necessary to undertake additional speciated testing and further assessment.

Note on Lead The published SGV for lead was withdrawn and not replaced. The lowest C4SL for each end use scenario will be used.

Note on Asbestos

Asbestos in soil and made ground is currently under review by a number of bodies. There are no current published guidance values for asbestos in soil other than the waste classification values given in the EA's Technical Guidance WM2, Hazardous Waste – Interpretation of the definition and classification of hazard waste (3d Edition, 2013). This guidance is only appropriate for soils that are being discarded as waste.

Testing for asbestos will be carried out on selected samples of made ground encountered during investigation, initially samples will be subjected to an asbestos screen and, if asbestos is found to be present, subjected to quantification. The reader is directed to the report text for guidance on the approach adopted in respect to any asbestos found to be present. Further guidance is also available in the 2014 CIRIA publication C733, Asbestos in soil and made ground: a guide to understanding and managing risks..

3.2 Potential Harm to the Built Environment

Land contamination can pose risks to buildings, building materials and services (BBM&S) in a number of ways. Volatile contaminants and gases can accumulate and cause explosion or fire. Foundations and buried services can be damaged by corrosive substances and contaminants such as steel slags can create unstable ground conditions through expansion causing structural damage. PBA use the following primary guidance to assess the significance of soil chemistry with respect to its potential to harm the built environment.

i) Approved Document C - Site Preparation and Resistance to Contaminants and Moisture. (DCLG 2010);

ii) Concrete in aggressive ground SD1 (BRE 2005);

iii) Guidance for the selection of water supply pipes to be used in brownfield sites (UKWIR 2011);

iv) Protocols published by agreement between Water UK and the Home Builders Federation providing supplementary guidance which includes the Risk Assessment for Water Pipes (the 'RA') (Water UK 2014).

v) Performance of Building Materials in Contaminated Land report BR255 (BRE 1994).

vi) Risks of Contaminated Land to Buildings, Building Materials and Services. A Literature Review - Technical Report P331 (EA 2000).

vii) Guidance on assessing and managing risks to buildings from land contamination - Technical Report P5 035/TR/01 (EA 2001).

3.3 Potential to Harm Ecosystems, Animals, Crops etc

The criteria routinely used by PBA as Tier 2 screening values to assess the potential of soil chemistry to harm ecosystems are taken from the following guidance and summarised in are given in Table 2.

i) Ecological Risk Assessment (ERA) Science Report Series SC070009, published by the Environment Agency, Bristol (EA, 2008);

ii) The Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing (ICRCL 70/90, 1990); and

iii) Code of Practice for Agricultural Use of Sewage Sludge 2nd Edition (DOE, 2006).

iv) BS 3882:2007 Specification for topsoil and requirements for use. Unless stated in the report the assessment is solely for phytotoxic parameters and additional assessment is required to determine suitability as a growing medium.

4 Criteria for Assessing Liquid Results

4.1 Potential Harm to Human Health

The criteria routinely used by PBA as Tier 2 water screening values (Table 3) are taken from the Water Supply (Water Quality) Regulations (Defra 2010). It should be noted that some of the prescribed concentrations listed in the Water Supply Regulations have been set for reasons other than their potential to cause harm to human health. The concentrations of iron and manganese are controlled because they may taint potable water with an undesirable taste, odour or colour or may potentially deposit precipitates in water supply pipes.

4.2 Potential to Harm Controlled Waters

Controlled Waters are rivers, estuaries, coastal waters, lakes and groundwaters. . Water in the unsaturated zone is not groundwater but does come within the scope of the term "ground waters" as used and defined in the Water Resources Act 1991. It will continue to be a technical decision for the Environment Agency to determine what is groundwater in certain circumstances for the purposes of the Regulations. The approach adopted by PBA considers the objectives of the Water Framework Diredctive (WFD) and the Groundwater Daughter Directive (GWDD) (refer to PBA Methodology).

When assessing ground condition data the aim is to identify whether there could be an environmentally significant input to groundwater. An environmentally insignificant input into groundwater would be one that could not have any effect on (i) any of the receptors noted in the Water Framework/GWDD definition of pollution (ii) the chemical status of a groundwater body; or (iii) could give rise to a significant and sustained rising trend in the concentrations of pollutants in groundwater as noted in those directives. PBA uses the approach presented in Groundwater Protection Policy and Practice (GP3) (EA 2013). The criteria routinely used by PBA as Tier 2 screening values (Tables 3, 4 and 5) are taken from directions to the Environment Agency (EA 2010). Reference is also made to Directive 2013/39/EU (12 August 2013) amending Directives 2000/60/EC and 2008/105/EC as regards priority substances in the field of water policy. While the Directive has yet to be transposed, it is intended that the standards it sets will apply for the purposes of the second cycle of river basin plans.

The 2014 Water Framework Directive implementation in England and Wales: new and updated standards to protect the water environment - Directions to the Environment Agency relating to the Groundwater Directive (Directive 2006/118/EC) informs interested parties of the new and updated environmental standards to be used in the second cycle of Water Framework Directive (2000/60/EC) river basin management planning process in England and Wales. It also presents new and updated assessment criteria for biological elements that must be monitored to assess the ecological status of surface water bodies. This document does not cover any standards and biological assessment criteria that are unchanged for second cycle. The document should be read alongside the draft updated Ministerial Guidance to the Environment Agency and Natural Resources Wales on River Basin Management Planning which refers to the standards in Chapter 9. The relevant Directions to the Environment Agency and Natural Resources Wales (referred to hereafter as the Agencies) will be updated to give legal effect to the standards (currently not updated).

5 Criteria for Assessing Gas Results

PBA use the following primary guidance on gas monitoring methods and strategy, the assessment of risk posed by soil gases (including Volatile Organic Compounds (VOCs)) and mitigation measures/risk reduction during site development.

i) BS 8576:2013 – Guidance on Ground Gas Investigations: Permanent gases and Volatile Organic Compounds (VOCs). (BSI 2013)

ii) A pragmatic approach to Ground Gas Risk Assessment. CL:AIRE Research Bulletin RB17 (Card 2012)

iii) The VOCs Handbook. C682 (CIRIA 2009).

iv) Assessing risks posed by hazardous gases to buildings C665 (CIRIA 2007);

v) Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present. (NHBC 2007); and

vi) Code of practice for the characterization and remediation from ground gas in affected developments BS 8485 (BSI 2007)

Gas and borehole flow data are used to obtain the gas screening value (GSV) for methane and carbon dioxide. The GSV is used to establish the characteristic situation and to make recommendations for gas protection measures for buildings if required.

Radon

PBA use the following primary guidance to assess the significance of the radon content of soil gas.

i) Radon: guidance on protective measures for new dwellings. Report BR211 (BRE, 2007); and

ii) Radon Atlas of England, R290 (NRPB, 1996).

6 References

BRE (2005) Concrete in aggressive ground. Special Digest 1, Building Research Establishment, Garston, Herts.

BRE (2007) Radon: guidance on protective measures for new dwellings. Report BR211, Building Research Establishment, Garston, Herts.

BSI (2007) BS 8485:2007 Code of practice for the characterization and remediation from ground gas in affected developments. British Standards Institute, London.

BSI (2011) BS10175:2011 +A1:2013 Investigation of contaminated sites – code of practice. British Standards Institute, London.

BSI (2013) BS 8576:2013 – Guidance on Ground Gas Investigations : Permanent gases and Volatile Organic Compounds (VOCs). British Standards Institute, London.

Card G, Wilson S, Mortimer S. (2012). A Pragmatic Approach to Ground Gas Risk Assessment. CL:AIRE Research Bulletin RB17. CL:AIRE, London, UK. ISSN 2047-6450 (Online)

CIRIA (2007) Assessing risks posed by hazardous gases to buildings. C665, Construction

Industry Research and Information Association, London.

CL:AIRE (2010) Soil Generic Assessment Criteria for Human Health Risk Assessment. Published in January 2010 by Contaminated Land: Applications in Real Environments, London. ISBN 978-1-905046-20-1.

CL:AIRE (2013) SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report published by Contaminated Land: Applications in Real Environments (CL:AIRE) 20th December 2013

CLAN2-05 Contaminated land advice note 02 from September 2005. Department for the Environment, Food and Rural Affairs, London.

CLSD (2009) Contaminated-Land-Strategies Digest - 30 Apr 2009 to 1 May 2009 - Special issue (#2009-89). Posting titled: "JISCmail GACs for SGV substances: April 2009 and subsequent postings".

DCLG (2013) Approved Document C - Site preparation and resistance to contaminates and moisture (2004 Edition incorporating 2010 and 2013 amendments).

Defra (2010) The Water Supply (Water Quality) Regulations, 2010. Statutory Instrument 2010 No 944, Department of the Environment, Transport and the Regions, London.

Defra (2012) Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance.

Defra (2014) Water Framework Directive implementation in England and Wales: new and updated standards to protect the water environment

DoE (2006) Code of Practice for Agricultural Use of Sewage Sludge. Department of the Environment, London.

EA (2004) Guidance on Assessment of Risks from Landfill Sites. Environment Agency, Bristol.

EA (2006b) CLEA update No. 4. Environment Agency, Bristol.

EA (2008) Ecological Risk Assessment (ERA). Science Report Series SC070009, Environment Agency, Bristol.

EA (2009a) Using Soil Guideline Values. Science Report SC050021/SGV Introduction. Environment Agency, Bristol.

EA (2009b) Updated Technical Background to the CLEA model. Science Report SC050021/SR3 Introduction. Environment Agency, Bristol.

EA (2009c) Human health toxicological assessment of contaminants in soil. Science Report SC050021/SR2. Environment Agency, Bristol.

EA (2009d)Compilation data for priority organic contaminants for derivation of soil guideline values Science Report SC50021/SR7

EA (2009e) CLEA Software (Version 1.05) Handbook Science Report SC050021/SR4

EA (2010) River Basin DistrictsTypology, Standards and Groundwater Threshold Values (Water Framework Directive) England and Wales) Directions 2010.

EA (2013) Groundwater Protection Policy and Practice (GP3) August 2013 Version 1.1

ICRCL (1990) The Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing 70/90. Interdepartmental Committee on the Redevelopment of Contaminated Land, London.

LQM & CIEH (2006) Generic Assessment Criteria for Human Health Risk Assessment. Land Quality Management Limited and the Chartered Institute of Environmental Health, London.

LQM & CIEH (2009) The LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment (2nd Edition). Land Quality Press, Nottingham. ISBN 0-9547474-7-X.

NRPB (1996) Radon Atlas of England. R290, National Radiological Protection Board, Didcot, Oxfordshire.

NHBC (2007) Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present. National House Building Council.

UKWIR (2011) Guidance for the selection of Water Pipes to be used in Brownfield Sites.

Water UK 2014 Contaminated Land Assessment Guidance

Table 1: Tier 2 Criteria for the Assessment of Potential Contaminant Concentrations in Soil – Protection of Human Health

Determinand	Allotments	Residential with plant uptake	Residential without plant uptake	Commercial/ Industrial
Metals/Metalloids				
Arsenic (Inorganic)	43[a]	32[a]	35[f]	640[a]
Beryllium	55[c]	51[c]	-	420[c]
Boron	45[c]	291[c]	-	192,000[c]
Cadmium	1.8[a]	10[a]	117[f]	230[a]
Chromium (trivalent)	34,600[c]	3000[c]	-	30,400[c]
Chromium (hexavalent)	2.1[c]	4.3[c]	-	35[c]
Copper	524[c]	2330[c]	-	71,700[c]
Lead*	30	82	130	1100
Mercury (elemental)	1[a]	26[a]	-	26[a]
Mercury (inorganic)	80[a]	170[a]	235[f]	3600[a]
Methyl Mercury	8[a]	11[a]	-	410[a]
Nickel	230[a]	130[a]	130[f]	1800[a]
Selenium	120[a]	350[a]	595[f]	13000[a]
Vanadium	18[c]	75[c]	-	3160[c]
Zinc	618[c]	3750[c]	-	665,000[c]
BTEX Compounds (1%, 3% and 6% SOM)[d]				
Benzene	0.02[f] / 0.04[f] / 0.07[a]	0.08[f] / 0.18[f] / 0.33[a]	0.27[f] / 0.56[f] / 1.0[f]	28[f] / 57[f] / 95[a]
Toluene	22[f] / 60[f] / 120[a]	120[f] / 320[f] / 610[a]	600[f] / 1500[f] / 2700[f]	870[f]/ 2200[f] / 4400[a]
Ethylbenzene	16[f] / 45[f] / 90[a]	65[f] / 180[f] / 350[a]	165[f] / 450[f] / 840[f]	520[f] / 1400[f] / 2800[a]
Xylenes #	28[f] / 80[f] / 160[a]	42[f] / 120[f] / 230[a]	53[f] / 145[f] / 285[f]	475[f] / 1300[f] / 2600[a]
Polycyclic Aromatic Hydrocarbons (1%, 2.5% and 6% SOM)[d]				
Acenaphthene	34[c] / 85[c] / 200[c]	210[c] / 480[c] / 1000[c]	-	85000[c] / 98000[c] / 100000[c]
Acenaphthylene	28[c] / 69[c] / 160[c]	170[c] / 400[c] / 850[c]	-	84000[c] / 97000[c] / 100000[c]
Anthracene	380[c] / 950[c] / 2200[c]	2300[c] / 4900[c] / 9200[c]	-	530000[c] / 540000[c] / 540000[c]
Benzo(a)anthracene	2.5[c] / 5.5[c] / 10[c]	3.1[c] / 4.7[c] / 5.9[c]	-	90[c] / 95[c] / 97[c]
Benzo(a)pyrene	0.60[c] / 1.2[c] / 2.1[c]	0.83[c] / 0.94[c] / 1.0[c]	-	14[c] / 14[c] / 14[c]
benzo(b)fluoranthene	3.5[c] / 7.4[c] / 13[c]	5.6[c] / 6.5[c] / 7.0[c]	-	100[c] / 100[c] / 100[c]
benzo(g,h,i)perylene	70[c] / 120[c] / 160[c]	44[c] / 46[c] / 47[c]	-	650[c] / 660[c] / 660[c]
benzo(k)fluoranthene	6.8[c] / 14[c] / 23[c]	8.5[c] / 9.6[c] / 10[c]	-	140[c] / 140[c] / 140[c]
Chrysene	2.6[c] / 5.8[c] / 12[c]	6.0[c] / 8.0[c] / 9.3[c]	-	140[c] / 140[c] / 140[c]
Dibenzo(a,h)anthracene	0.76[c] / 1.5[c] / 2.3[c]	0.76[c] / 0.86[c] / 0.90[c]	-	13[c] / 13[c] / 13[c]
Fluoranthene	52[c] / 130[c] / 290[c]	260[c] / 460[c] / 670[c]	-	23000[c] / 23000[c] / 23000[c]
Fluorene	27[c] / 67[c] / 160[c]	160[c] / 380[c] / 780[c]	-	64000[c] / 69000[c] / 71000[c]
Indeno(1,2,3-cd)pyrene	1.8[c] / 3.8[c] / 7.1[c]	3.2[c] / 3.9[c] / 4.2[c]	-	60[c] / 61[c] / 61[c]
Naphthalene	4.1[c] / 9.9[c] / 23[c]	1.5[c] / 3.7[c] / 8.7[c]	-	200[c] / 480[c] / 1100[c]
Phenanthrene	16[c] / 38[c] / 90[c]	92[c] / 200[c] / 380[c]	-	22000[c] / 22000[c] / 23000[c]
Pyrene	110[c] / 270[c] / 620[c]	560[c] / 1000[c] / 1600[c]	-	54000[c] / 54000[c] / 54000[c]
Aliphatic/Aromatic Hydrocarbons (1%, 2.5% and 6% SOM)[d]				
TPH Aliphatic >C5-6	740[c] / 1700[c] / 3900[c]	30[c] / 55[c] / 110[c]	-	3400[c] / 6200[c] / 13000[c]
TPH Aliphatic >C6-8	2300[c] / 5600[c] / 13000[c]	73[c] / 160[c] / 370[c]	-	8300[c] / 18000[c] / 42000[c]
TPH Aliphatic >C8-10	320[c] / 770[c] / 1700[c]	19[c] / 46[c] / 110[c]	-	2100[c] / 5100[c] / 12000[c]
TPH Aliphatic >C10-12	2200[c] / 4400[c] / 7300[c]	93[c] / 230[c] / 540[c]	-	10000[c] / 24000[c] / 49000[c]
TPH Aliphatic >C12-16	11000[c] / 13000[c] / 13000[c]	740[c] / 1700[c] / 3000[c]	-	61000[c] / 83000[c] / 91000[c]

Determinand	Allotments	Residential with plant uptake	Residential without plant uptake	Commercial/ Industrial
TPH Aliphatic >C16-35	260000[c] / 270000[c] / 270000[c]	45000[c] / 64000[c] / 76000[c]	-	1600000[c] / 1800000[c] / 1800000[c]
TPH Aliphatic >C35-44	260000[c] / 270000[c] / 270000[c]	45000[c] / 64000[c] / 76000[c]	-	1600000[c] / 1800000[c] / 1800000[c]
TPH Aromatic >C5-7 (benzene)	13[c] / 27[c] / 57[c]	65[c] / 130[c] / 280[c]	-	28000[c] / 49000[c] / 90000[c]
TPH Aromatic >C7-8 (toluene)	22[c] / 51[c] / 120[c]	120[c] / 270[c] / 611[c]	-	59000[c] / 110000[c] / 190000[c]
TPH Aromatic >C8-10	8.6[c] / 21[c] / 51[c]	27[c] / 65[c] / 151[c]	-	3700[c] / 8600[c] / 18000[c]
TPH Aromatic >C10-12	13[c] / 31[c] / 74[c]	69[c] / 160[c] / 346[c]	-	17000[c] / 29000[c] / 34500[c]
TPH Aromatic >C12-16	23[c] / 57[c] / 130[c]	140[c] / 310[c] / 593[c]	-	36000[c] / 37000 /[c] 37800[c]
TPH Aromatic >C16-21	46[c] / 110[c] / 260[c]	250[c] / 480[c] / 770[c]	-	28000[c] / 28000[c] / 28000[c]
TPH Aromatic >C21-35	370[c] / 820[c] / 1600[c]	890[c] / 1100[c] / 1230[c]	-	28000[c] / 28000[c] / 28000[c]
TPH Aromatic >C35-44	370[c] / 820[c] / 1600[c]	890[c] / 1100[c] / 1230[c]	-	28000[c] / 28000[c] / 28000[c]
TPH Aliphatic + Aromatic >C44-70	1200[c] / 2100[c] / 3000[c]	1200[c] / 1300[c] / 1300[c]	-	28000[c] / 28000[c] / 28000[c]
Chlorinated Hydrocarbons (1%, 2.5% and 6% SOM)[d]				
1,2-dichloroethane	0.0046[c] / 0.0083[c] / 0.016[c]	0.0054[c] / 0.0080[c] / 0.014[c]	-	0.71[c] / 1.0[c] / 1.8[c]
1,1,1 Trichloroethane (TCA)	48[c] / 110[c] / 240[c]	6.2[c] / 13[c] / 28[c]	-	700[c] / 1400[c] / 3100[c]
1,1,1,2 Tetrachloroethane	0.79[c] / 1.9[c] / 4.4[c]	0.90[c] / 2.1[c] / 4.8[c]	-	120[c] / 260[c] / 590[c]
1,1,2,2 Tetrachloroethane	0.41[c] / 0.89[c] / 2.0[c]	1.4[c] / 2.9[c] / 6.3[c]	-	290[c] / 580[c] / 1200[c]
Tetrachloroethene (PCE)	1.6[c] / 3.7[c] / 8.7[c]	0.94[c] / 2.1[c] / 4.8[c]	-	130[c] / 290 / 660[c]
Tetrachloromethane	0.16[c] / 0.37[c] / 0.85[c]	0.018[c] / 0.039[c] / 0.089[c]	-	3.0[c] / 6.6 / 15[c]
Trichloroethene (TCE)	0.43[c] / 0.95[c] / 2.2[c]	0.11[c] / 0.22[c] / 0.49[c]	-	12[c] / 25[c] / 55[c]
Trichloromethane/Chloroform	0.36[c] / 0.70[c] / 1.5[c]	0.75[c] / 1.3[c] / 2.7[c]	-	110[c] / 190[c] / 370[c]
Vinyl Chloride/Chloroethene	0.00055[c] / 0.0010[c] / 0.0018[c]	0.00047[c] / 0.00064[c] / 0.00099[c]	-	0.063[c] / 0.081[c] / 0.12[c]
Pesticides and Other Organic Compounds (1%, 2.5% and 6% SOM)[d]				
Aldrin	1.3[c] / 2.6[c] / 4.0[c]	1.7[c] / 2.0[c] / 2.1[c]	-	54[c] / 54[c] / 54[c]
Atrazine	0.037[c] / 0.085[c] / 0.2[c]	0.24[c] / 0.56[c] / 1.3[c]	-	870[c] / 880[c] / 880[c]
Dichlorvos	0.044[c] / 0.091[c] / 0.20[c]	0.29[c] / 0.6[c] / 1.3[c]	-	842[c] / 872[c] / 893[c]
Dieldrin	0.13[c] / 0.32[c] / 0.73[c]	0.69[c] / 1.4[c] / 2.2[c]	-	90[c] / 91[c] / 92[c]
Endosulfan	0.47[c] / 1.2[c] / 2.7[c]	2.9[c] / 7.0[c] / 16[c]	-	2310[c] / 2990[c] / 3390[c]
Carbon Disulphide	4.8[c] / 10[c] / 23[c]	0.10[c] / 0.20[c] / 0.44[c]	-	12[c] / 23[c] / 50[c]
Chlorobenzene	5.9[c] / 14[c] / 32[c]	0.33[c] / 0.73[c] / 1.7[c]	-	59[c] / 130[c] / 310[c]
Hexachloro-1,3-butadiene	0.25[c] / 0.61[c] / 1.4[c]	0.21[c] / 0.51[c] / 1.2[c]	-	32[c] / 69[c] / 120[c]
Hexachlorobenzene	0.18[c] / 0.42[c] / 0.92[c]	0.59[c] / 1.0[c] / 1.4[c]	-	48[c] / 53[c] / 55[c]
Pentachlorobenzene	1.2[c] / 3.1[c] / 7.1[c]	5.2[c] / 10[c] / 17[c]	-	650[c] / 770[c] / 830[c]
Pentachlorophenol	0.084[c] / 0.21[c] / 0.49[c]	0.55[c] / 1.3[c] / 2.96[c]	-	1200[c] / 1300[c] / 1400[c]
Phenol (1, 3, 6% SOM)	66[f] / 158[f] / 280[a]	184[f] / 316[f] / 420[a]	310[f] / 441[f] / 519[f]	3200[a]
Dioxins, Furans and dioxin-like PCBs[e]	0.008[a]	0.008[a]		0.24[a]

Units mg/kg
* C4SL
\# most conservative of the three isomers selected for each scenario

a Soil Guideline Value (2009) with SOM of 6%
b Soil Guideline Value (2002)
c Generic Assessment Criteria (LQM & CIEH 2009)
d Where three values are presented, SGV/GAC for soils with SOM of 1%, 2.5% and 6% or 1%, 3% and 6% are given as detailed in the table. SOM denotes Soil Organic Matter.
e Refer to Table 2 of the supporting guidance for suite
f Generic Assessment Criteria generated using CLEA v 1.04 by an independent contaminated land working group and independently verified by PBA (CLSD, 2009)

Table 2 Tier 2 Criteria for the Assessment of Potential Contaminant Concentrations in Soil – Protection of Ecological Systems

Parameter	ICRCL 70/90 [a]		Proposed SSVs [b]	Code of Practice for Agricultural Use of Sewage Sludge [c]	BS 3882:2007 Specification for topsoil and requirements for use
	Maximum				Phytotoxic contaminants
	Livestock	Crop Growth			
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kgDS
Benzo(a)pyrene			0.15		
Arsenic	500	1000		50	
Cadmium	30	50	1.15	3	
Chromium			21.1	400	
Copper	500	250	88.4	80/ 100/ 135/ 200 [e]	<100/<135/<200 [f]
Fluoride	1000			500	
Lead	1000		167.9	300	
Mercury			0.06	1	
Molybdenum				4	
Nickel			25.1	50/ 60/ 75/ 110 [e]	<60/<75/<110 [f]
Pentachlorobenzene			0.029		
Pentachlorophenol			0.6		
Selenium				3	
Tetrachloroethene			0.01		
Toluene			0.3		
Zinc	3000	1000	90.1	200/200/200/300 [e]	<200/<200/<300 [f]

Notes

a. Interdepartmental Committee on the Redevelopment of Contaminated Land (ICRCL) 70/90 Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing 1st edition 1990.
b. Proposed Soil Screening Values (SSVs) – Consultation, Environment Agency 2008. Threshold which if exceeded prompts further assessment.
c. Maximum permissible concentration of potentially toxic elements from the Code of Practice for Agricultural Use of Sewage Sludge. Second Edition. DOE 2006.
d. Concentrations are for contamination derived from mine spoil. In other situations the speciation may be more available. Factors include total concentration, speciation, particle size, pH, species of plant, type of animal/grazing habit.
e. Where four values are presented, concentrations are for soils with pH values 5.0-5.5/ 5.5-6.0/ 6.0-7.0/ >7.0
f. Where three values are presented, concentrations are for soils with pH values <6.0/ 6.0-7.0/ >7.0

Table 3: Tier 2 Criteria for Screening Selected Contaminants in Groundwater

Parameter	Protection of Human Health	Protection of Controlled Waters			
	Water Supply (Water Quality) Regulations 2000	Test 2 Minimum	Test 2 Maximum	Test 4	Test 5
Metal/Semi Metal:					
Antimony (µg/l)	5				
Arsenic (µg/l)	10	51.6	199	7.5	
Boron (µg/l)	1000			750	
Cadmium (µg/l)	5	0.2	1.1	3.75	
Chromium (µg/l)	50	5	27.6	37.5	
Copper (µg/l)	2000	10.1	57.8	1500	
Iron (µg/l)	200				
Lead (µg/l)	25 (10 from 25/12/13)	7.3	39.8	18.8	
Manganese (µg/l)	50				
Mercury (µg/l)	1			0.75	
Nickel (µg/l)	20	20.2	116	15	
Selenium (µg/l)	10				
Zinc (µg/l)	-	75.8	414	3750	
Other:					
Ammonium NH4 (mg/l)	0.5				
Ammonia NH3 (mg/l)	-	0.3	1.73	0.29	0.29
Chloride (mg/l)	250			188	187.5
Cyanide (ug/l)	50				
Electrical Conductivity (µS/cm)	2500			1880	
pH (pH units)	6.5 to 10				
Nitrate NO3 (mg/l)	50			42	42
Sulphate (mg/l)	250			188	188
Organics:					
Anthracene		0.1	0.55		
Benzene (µg/l)	1	10.1	55.2	0.75	0.75
Benzo(a)pyrene (µg/l)	0.01			0.075	
Chloroform (µg/l)	100 a	2.53	13.8	75	75
1.2-Dichloroethane (µg/l)	3			2.25	2.25
Fluoranthene		0.1	0.6		
Naphthalene (µg/l)	-	2.4	13.2		
Phenol Total (mg/l)	0.5	15.2	82.8		
PAHs (µg/l)	0.1 b				
Pesticides (ug/l)	0.03c				
Toluene (µg/l)	-	50.5	276		
Trichloroethene TCE (µg/l)	10 d	10.1	55.2	7.5	7.5
Tetrachloroethene PCE (µg/l)	10 d	10.1	57.8	7.5	7.5
Tetrachoromethane (ug/l)	3				
Vinyl Chloride (µg/l)	0.5				
Xylene (µg/l)	-	30.3	166		

Notes

TV Threshold Values for each groundwater body are given in the River Basin Management Plans (RBMP)
Test 2 Groundwater Impacts on Surface Water – Minimum is the lowest TV for any RBMP
Test 4 Groundwater Drinking Water Protected Areas – designed to be equivalent to a 95% standard
Test 5 General Quality of Groundwater Body – designed to be equivalent to a 95% standard

a. Sum for Tri-halomethanes – chloroform, bromoform, dibromochloromethane, bromodichloromethane
b. Concentration for sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene
c. Sum for Aldrin, Dieldrin, Heptachor and Heptachor epoxide
d. Sum of TCE and PCE

Table 4a : Specific Pollutants – Currently Inforce

Pollutant	Rivers and Freshwater Lakes	Transitional and Coastal Waters
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.3 (1.3)*	0.3 (1.3)*
2,4-Dichlorophenol	20	20
Ammonia (Un-ionised) as Nitrogen	Not applicable	21
Arsenic #	50	25
Chlorine (total available)	2 (5)*	(10)*
Chromium VI	3.4	0.6 (32)*
Chromium III	4.7	(32)*
Copper – standard is hardness dependant for freshwater	1/ 6 /10/ 28	5
Cyanide	1 (5)*	1 (5)*
Cypermethrin as ng/l	0.1 (0.4)*	0.1 (0.4)*
Diazinon	0.01 (0.02)*	0.01 (0.1)*
Dimethoate	0.48 (4)*	0.48 (4)*
Iron as mg/l	1	1
Linuron	0.5 (0.9)*	0.5 (0.9)*
Mecoprop	18 (187)*	18 (187)*
Permethrin	(0.01)	(0.01)
Phenol	7.7 (46)*	7.7 (46)*
Toluene	50 (380)*	40 (370)*
Zinc – standard is hardness dependant for freshwater	8/ 50/ 75/ 125	40

i. All units ug/l unless otherwise stated.
ii. The standard is the annual mean standard over a period of 12 consecutive months unless otherwise stated.
iii. Values in brackets ( ) indicates the 95-percentile standard where the standard is exceeded if the measured concentration is above the standard for 5% or more of the time.
iv. Values marked * indicate that the standard is not to be used for the purpose of classifying the ecological status or potential of bodies of surface water.
v. # indicates that the standard is the dissolved fraction obtained by filtration through a 0.45um filter.
vi. Where four values are presented, concentrations are for soils with$CaCO_3$ concentration <50/50-100/100-250/>250 mg/l

Reproduced from Part 4 of The River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Direction 2010.

Table 4b Proposed standards for 29 specific pollutants

Substances	CONCENTRATION ug/l				Standard Status (Existing-E/ Revised-R/ New-N)
	Fresh water		Salt water		
	Long-term (Mean)	Short- term (95 percentile)	Long-term (Mean)	Short- term (95 percentile)	
Unionised ammonia	---	---	21	---	E
Arsenic	50	---	25	---	E
Benzyl butyl phthalate	7.5	51	0.75	10	N
Carbendazim	0.15	0.7	---	---	N
Chlorothalonil	0.035	1.2	---	---	N
Chromium(III)	4.7	32	---	---	E
Chromium(VI)	3.4	---	0.6	32	E
Chlorine	2	5	---	10	E
Copper	1µg/l bioavailable		3.76 µg/l dissolved, where DOC ≤1mg/l 3.76 + (2.677 x ((DOC/2) – 0.5)) µg/l dissolved, where DOC >1mg/l		R
Cyanide	1	5	1	5	E
Cypermethrin[1]	0.1	0.4	0.1	0.4	E
Diazinon	0.01	0.02	0.01	0.26	R/E
2,4- dichlorophenol	4.2	140	0.42	6	R
2,4- dichlorophenoxyacetic acid (2,4-D)	0.3	1.3	0.3	1.3	E
3,4- dichloroaniline	0.2	5.4	0.2	5.4	N
Dimethoate	0.48	4.0	0.48	4.0	E
Glyphosate	196	398	196	398	N
Iron	1	---	1	---	E
Linuron	0.5	0.9	0.5	0.9	E
Manganese	123µg/l bioavailable	---	---	---	N
Mecoprop	18	187	18	187	E
Methiocarb	0.01	0.77	---	---	N
Pendimethalin	0.3	0.58	---	---	N
Permethrin	0.001	0.01	0.0002	0.001	R
Phenol	7.7	46	7.7	46	E
Tetrachloroethane	140	1848	---	---	N
Triclosan	0.1	0.28	0.1	0.28	N
Toluene	74	380	74	370	R/E
Zinc	10.9 bioavailable plus Ambient Background Concentration (µg/l) dissolved		6.8 dissolved plus Ambient Background Concentration (µg/l)		R

[1] Note that cypermethrin becomes a Priority Substance under 2013/39/EU but there will be a transitional period before the PS standards apply.

Table 5: Surface Waters - Priority Substances – Standards for Chemical Status

Pollutant	Annual Average		Maximum Allowable Concentration	
	Inland	Other	Inland	Other
Alachlor	0.3	0.3	0.7	0.7
Anthracene	1.0 (0.1)	1.0 (0.1)	0.1	0.1
Atrazine	0.6	0.6	2.0	2.0
Benzene	10	8	50	50
Brominated diphenylether	0.0005 (NA)	0.0005 (NA)	0.14	0.014
Cadmium (and its compounds) # – hardness dependant	<0.08/ 0.08/ 0.09/ 0.15/ 0.25	0.2	<0.45/ 0.45/ 0.6/ 0.9 / 1.5	<0.45/ 0.45/ 0.6/ 0.9/ 1.5
Carbon tetrachloride	12	12	NA	NA
C10-13 Chloroalkanes	0.4	0.4	1.4	1.4
Chlorfenvinphos	0.1	0.1	0.3	0.3
Chlorpyrifos	0.03	0.03	0.1	0.1
Aldrin, Dieldin, Endrin, Isodrin (Sum)	0.01	0.005	NA	NA
DDT Total	0.025	0.25	NA	NA
Para-para-DDT	0.01	0.01	NA	NA
1,2-Dichloroethane	10	10	NA	NA
Dichloromethane	20	20	NA	NA
Di(2-ethylhexyl)-phthalate (DEHP)	1.3	1.3	NA	NA
Diuron	0.2	0.2	1.8	1.8
Endosulfan	0.005	0.0005	0.01	0.004
Fluoranthene	0.1 (0.0063)	0.1 (0.0063)	0.12	0.12
Hexachlorobenzene	0.01 (NA)	0.01 (NA)	0.05	0.05
Hexachlorobutadiene	0.1 (NA)	0.1 (NA)	0.6	0.6
Hexachlorocyclohexane	0.02	0.002	0.04	0.02
Isoproturon	0.3	0.3	1	1
Lead (and its compounds) #	7.2 (1.2)	7.2 (1.3)	14	14
Mercury (and its compounds) #	0.05 (NA)	0.05 (NA)	0.07	0.07
Naphthalene	2.4 (2.0)	1.2 (2.0)	130	130
Nickel (and its compounds) #	20 (4)	20 (8.6)	34	34
Nonylphenol	0.3	0.3	2	2
Octylphenol	0.1	0.01	NA	NA
Pentachlorobenzene	0.007	0.0007	NA	NA
Pentachlorophenol	0.4	0.4	1	1
Benzo(a)pyrene (v)	0.05 (0.00017)	0.05 (0.00017)	0.27	0.027
Benzo(b)fluoranthene (v)	0.03 (NA)	0.03 (NA)	NA	NA
Benzo(k)fluoranthene (v)	0.03 (NA)	0.03 (NA)	0.017	0.017
Benzo(ghi)perylene (v)	0.002 (NA)	0.002 (NA)	0.017	0.017
Indeno(1,2,3-cd)pyrene (v)	0.002 (NA)	0.002 (NA)	0.017	0.017
Simazine	1	1	4	4
Tetrachloroethylene	10	10	NA	NA
Trichloroethylene	10	10	NA	NA
Tributyl tin compounds	0.0002	0.0002	0.0015	0.0015
Trichlorobenzenes	0.4	0.4	NA	NA
Trichloromethane	2.5	2.5	NA	NA
Tifluralin	0.03	0.03	NA	NA
Dicofol	0.0013	0.000032	NA	NA
PFOS (9.1)	0.00065	0.00013	36	7.2
Quinoxyfen	0.15	0.015	2.7	0.54
Dioxins and like compounds			NA	NA

Pollutant	Annual Average		Maximum Allowable Concentration	
	Inland	Other	Inland	Other
Aclonifen	0.12	0.012	0.12	0.012
Bifenox	0.012	0.0012	0.04	0.004
Cybutryne	0.0025	0.0025	0.016	0.016
Cypermethrin	0.00008	0.000008	0.0006	0.00006
Dichlorvos	0.0006	0.00006	0.0007	0.00007
HBCDD	0.0016	0.0008	0.5	0.05
Heptachlor and heptachlor epoxide	$2x10^{-7}$	$1x10^{-8}$	$3x10^{-4}$	$3x10^{-5}$
Terbutryn	0.065	0.0065	0.34	0.034

i. Units ug/l
ii. The EQS are expressed as total concentrations in the whole water sample except for #.
iii. # indicates that the EQS is dissolved concentration obtained by filtration through 0.45um filter.
iv. Inland = surface waters encompassing rivers and lakes and related artificial or heavily modified water bodies.
v. Hardness Classifications; Where five values are presented, concentrations are for soils with CaCO3 concentration <40/ 40-50/ 50-100/ 100-200/>200 mg/l
vi. For the group of priority substances of polycyclic aromatic hydrocarbons (PAHs) benzo(a)pyrene can be considered a marker for the other PAHs and therefore only this substance need be monitored

New or revised substance in Directive 2013/39/EU BUT currently without revised Direction – the additions and revisions are considered as proposed. The proposed revised concentration is presented in brackets

Reproduced from Part 5 of The River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Direction 2010 and Directive 2013/39/EU

Table 6: pC4SLs for Arsenic

Land-Use	pC4SL (mg/kg)		
	HCVs with suggested changes to exposure parameters	LLTCs with no change to exposure parameters	LLTCs with suggested changes to exposure parameters
Residential (with consumption of home-grown produce)	37	32	37
Residential (without consumption of home-grown produce)	40	35	40
Allotments	49	43	49
Commercial	640	640	640
POS_{resi}	79	NA	79
POS_{park}	168	NA	168

Table 7: pC4SLs for Benzo(a)pyrene

Exposure parameters	pC4SL (mg.kg^{-1})					
	Residential		Allotments	Commercial	POS_{resi}	POS_{park}
	With home grown produce.	Without home grown produce.				
Current GAC [1]	1.0	-	2.1	14	-	-
pC4SL with exposure changes only [2]	2.4	2.5	2.7	36	4.9	10
pC4SL with LLTC but exposure parameters as SR3 [2, 3]	3.2	3.4	5.1	76	-	-
pC4SL with changes in exposure and LLTC	5.0	5.3	5.7	76	10	21

1. GAC assuming 6% SOM from Nathanail *et al*., 2009
2. Parameters as described in Section 3 and include non-integration of assessment criteria
3. Chemical specific parameters as Section 3.1 of Main Report. Non contaminant specific parameters as SR3.

Table 8: Provisional C4SLs for Benzene (in mg kg^{-1})

	pC4SL					
	Residential		Allotments	Commercial	POS_{resi}	POS_{park}
	With home grown prod.	Without home grown prod.				
Current SGV	0.33	N/A	0.07	95	N/A	N/A
pC4SL with exposure changes only [1]	0.42	1.4	0.09	90	72	113
pC4SL with LLTC but exposure parameters as SR3 [2, 3]	0.69	2.3	0.15	100	N/A	N/A
pC4SL with changes in exposure and LLTC - 6% SOM	0.87	3.3	0.18	98	140	230
- 1% SOM [4]	0.20	0.89	0.039	27	140	190

[1] Calculated for 6% SOM
[2] Chemical specific parameters as described above. Non-contaminant specific parameters as SR3. Calculated for 6% SOM.
[3] Note age specific adjustments used for residential and POS land-uses. N/A: Not applicable
[4] Comparative pC4SLs calculated with 1% SOM to demonstrate that lower screening levels are required when less soil organic matter is present (this is particularly evident for land uses where exposure is dominated by inhalation of vapour indoors)

Table 9: pC4SLs for cadmium

Land-Use	pC4SL (mg/kg)		
	HCVs with suggested changes to exposure parameters	LLTCs with no change to exposure parameters	LLTCs with suggested changes to exposure parameters
Residential (with consumption of homegrown produce)	17	17	26
Residential (without consumption of homegrown produce)	87	146	149
Allotments	3.1	3.0	4.9
Commercial	220	417	410
POS_{resi}	120	NA	220
POS_{park}	555	NA	880

Table 10: Provisional C4SLs for Hexavalent Chromium

Exposure parameters	pC4SLs ($mg.kg^{-1}$)					
	Residential		Allotments	Commercial	POS_{resi}	POS_{park}
	With home grown prod.	Without home grown prod.				
Current GAC (LQM; Nathanail *et al.*, 2009))	4.3	N/A	2.1	35	N A	NIA
pC4SL with exposure changes only [1]	6.1	6.1	120	33	7.7	220
pC4SL with LLTC but exposure parameters as SR3[2,3]	14	14	170	52	N/A	N/A
pC4SL with changes in exposure and LLTC	21	21	170	49	23	250

1. Parameters as described in Section 3 of Main report (including assumed absence of plant uptake) and include non integration of assessment criteria
2. Chemical specific parameters as Section 3. Non contaminant specific parameters as SR3
3. Note age specific adjustments used for residential and POS land-uses as shown in Table 3.5

N/A: Not applicable

Table 11: Provisional C4SLs for Lead

Exposure parameters	pC4SLs (mg.kg^{-1})					
	Residential		Allotments	Commercial	POS_{resi}	POS_{park}
	With home grown prod.	Without home grown prod.				
Withdraw SGV	450	450	450	750	-	-
pC4SL with exposure parameters as SR3	82	130	30	-	-	-
	-	-	-	1100	-	-
	-	-	-	2160	-	-
	190	310	70	-	-	-
	-	-	-	2330	-	-
	-	-	-	4800	-	-
	200[6]	300[6]	74[6]	-	-	-
	-	-	-	2690[6]	-	-
	-	-	-	6000[6]	-	-
pC4SL with changes in exposure[2]	86	130	34	-	270	580
	-	-	-	1100	-	-
	-	-	-	2160	-	-
	200	310	80	-	630	1300
	-	-	-	2330	-	-
	-	-	-	4800	-	-
	210[6]	330[6]	84[6]	-	760[6]	1400[6]
	-	-	-	2690[6]	-	-
	-	-	-	6000[6]	-	-

1. Former SGVs for lead were derived using empirically based methods, as opposed to CLEA
2. Exposure parameters as described in Section 3.5.7 of main report.
3. Estimated intake that would lead to geomean blood lead concentration in 0 to 7 year old child using IEUBK.
4. Estimated intake that would lead to geomean blood lead concentration in adult using ALM.
5. Estimated intake that would lead to geomean blood lead concentration in adult using Carlisle & Wade.
6. The LLTC of 5 ug.dL^{-1} is based on CDC's target blood lead concentration in children for all exposure to lead and therefore thus LLTC has been treated as a "threshold". Consequently, mean daily intake from non soil sources has been included in the CLEA model inputs for derivation of this C4SL.

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	18/11/14	
Borehole Ref	BH12	
Depth to Product and Water (m bgl)	DTW: 12.318	DTP:
Depth to Base	18.335	
Weather, Ground and Borehole Conditions	Sunny, cool. Raised cover – good condition	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (^oC)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
20	0945	17.7	6.89	3030	11.9	29.6	

Sample and Purge Method

Purged with hired powerpack and dedicated waterra.

Groundwater Description (odours, color, recharge etc)

Purged dry after 20L, slow recharge – grab sample taken.
Grey brown in colour. Odourless.
No sheen.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	18/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	18/11/14	
Borehole Ref	BH102	
Depth to Product and Water (m bgl)	DTW: 8.465	DTP:
Depth to Base	15.5	
Weather, Ground and Borehole Conditions	Sunny, cool. Raised cover – good condition	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (^oC)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
15			6.67	2050	11.6	52.3	
30			6.64	1987	11.4	44.7	
40	1043		6.59	2070	11.4	46.0	

Sample and Purge Method

Purged using dictated Waterra.

Groundwater Description (odours, color, recharge etc)

Purged dry after 40L, moderate recharge – grab sample taken.
Grey brown in colour. Odourless.
No sheen.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	18/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	18/11/14	
Borehole Ref	BH104	
Depth to Product and Water (m bgl)	DTW: 0.395	DTP:
Depth to Base	2.215	
Weather, Ground and Borehole Conditions	Sunny, cool. Raised cover – good condition	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
7	1130	2.0	6.96	2930	12.4	45.9	

Sample and Purge Method

Purged using dictated Waterra.

Groundwater Description (odours, color, recharge etc)

Purged dry after 7L, moderate recharge – grab sample taken.
Grey brown in colour. Slight sulphurous odour.
No sheen.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	18/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	18/11/14	
Borehole Ref	BH105B	
Depth to Product and Water (m bgl)	DTW: 1.210	DTP:
Depth to Base	6.0	
Weather, Ground and Borehole Conditions	Sunny intervals, cool. Raised cover – good condition	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
15			6.06	3930	12.7	9.6	
30			6.03	3940	12.8	14.5	
45	1200	4.1	6.00	3970	12.8	11.4	

Sample and Purge Method

Purged 3 well volumes using dictated Waterra.

Groundwater Description (odours, color, recharge etc)

Purged dry after 7L, moderate recharge – grab sample taken.
Grey brown in colour. Odourless.
No sheen.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	18/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	19/11/14	
Borehole Ref	BH6	
Depth to Product and Water (m bgl)	DTW: 13.800	DTP:
Depth to Base	22.020	
Weather, Ground and Borehole Conditions	Overcast Raised cover, damaged with no top. Borehole in rough vegetated ground.	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)] \times 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (^oC)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
20	0930	17.2	6.51	2780	10.7	4.7	

Sample and Purge Method

Purged using dictated Waterra.

Groundwater Description (odours, color, recharge etc)

Purged dry after 20L, poor recharge – grab sample taken.
Grey brown in colour. High sediment content with no odour.
No sheen.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	19/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	19/11/14	
Borehole Ref	BH5	
Depth to Product and Water (m bgl)	DTW: 0.395	DTP:
Depth to Base	18.13	
Weather, Ground and Borehole Conditions	Overcast, cool. Raised cover – good condition	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)] \times 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
15	1030	15.9	6.17	2670	10.8	6.2	

Sample and Purge Method

Purged using dictated Waterra.

Groundwater Description (odours, color, recharge etc)

Purged dry after 17L, poor recharge – grab sample taken.
Grey brown in colour, no odour or sheen present

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	19/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	18/11/14	
Borehole Ref	BH206	
Depth to Product and Water (m bgl)	DTW: 5.41	DTP:
Depth to Base	8.87 – sediment	
Weather, Ground and Borehole Conditions	Sunny, cool. Raised cover – good condition	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (^oC)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
8	1220	9.60	6.89	3400	11.8	4.6	

Sample and Purge Method

Purged using dictated Waterra.

Groundwater Description (odours, color, recharge etc)

Purged dry after 8L, Slow recharge – grab sample taken.
Grey brown in colour, moderate sediment content.
No sheen.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	18/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	18/11/14	
Borehole Ref	BH103	
Depth to Product and Water (m bgl)	DTW: 0.315	DTP:
Depth to Base	5.96	
Weather, Ground and Borehole Conditions	Overcast, dry Raised cover – good condition	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (^oC)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
15			6.59	5040	12.8	10.3	
30			6.59	5020	12.9	12.9	
45	1450	3.990	6.54	5010	13.1	14.4	

Sample and Purge Method

Purged using dictated Waterra.

Groundwater Description (odours, color, recharge etc)

Purged 3 well volumes; good recharge
Grey brown in colour. Slight sulphurous odour.
No sheen.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	18/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	18/11/14	
Borehole Ref	ROOKS	
Depth to Product and Water (m bgl)	DTW: 0.395	DTP:
Depth to Base	2.215	
Weather, Ground and Borehole Conditions	Sunny, cool. Surface water grab sample	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (^oC)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
	1510		6.82	1888	9.4	53	

Sample and Purge Method

Surface water grab sample.

Groundwater Description (odours, color, recharge etc)

Clear odourless grab sample.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	18/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	19/11/14	
Borehole Ref	West Ditch	
Depth to Product and Water (m bgl)	DTW:	DTP:
Depth to Base		
Weather, Ground and Borehole Conditions	Surface water sample from SW ditch near BH5.	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (^oC)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
	1045		7.20	950	9.5	73.8	

Sample and Purge Method

Purged using dictated Waterra.

Groundwater Description (odours, color, recharge etc)

Clear, odourless.
Sampled from fast flowing stream

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	19/11/14
Checked by	JG	**Date**	01/12/14

RECORD SHEET - PURGE AND WATER SAMPLE COLLECTION

PBA Project Title and Reference	Millbrook	31116
Date	18/11/14	
Borehole Ref	ROOKN	
Depth to Product and Water (m bgl)	DTW:	DTP:
Depth to Base		
Weather, Ground and Borehole Conditions	Cloudy, mild Surface water sample from lake	

Borehole and Well Information	
Depth to Base of Filter Zone (m bgl) [A]	
Depth to Water Level (m bgl) [B]	
Standpipe Internal Diameter (m) [C]	
Borehole Internal Diameter (m) [D]	
Saturated Well Volume (l) $(A-B)x\ \pi\ [(C/2)^2 + 0.25((D/2)^2 - (C/2)^2)]\ x\ 1000$	

Water Quality Information

Volume Removed (l)	Time (24 hr)	Depth to Water (m bgl)	pH	Conductivity (µS/cm)	Temp (^oC)	Dissolved Oxygen (O_2 %)	ORP/Redox (mV)
7	1130	2.0	6.96	2930	12.4	45.9	

Sample and Purge Method

Surface water grab sample

Groundwater Description (odours, color, recharge etc)

Clear, no odour or sheen.

Sample Containers (numbers taken)

1 L Glass	**2**	**500 ml Plastic**		**Sulphuric**	
1 L Plastic	**1**	**VOC Vial**		**Sodium Hydroxide**	
500 ml Glass		**DO Bottle**		**Nitric**	

Document Verification

Recorded by	CT	**Date**	18/11/14
Checked by	JG	**Date**	01/12/14

APPENDIX 6

Receptor	Present (Y/N) & Sensitivity Value	Pathway	Present (Y/N)	EPH & Solvent	PAH	Metals	Inorganic	Biocides	Radioactivity	Ground Gas	Consequence (Hazard Classification x Sensitivity)	Probability	Estimated Risk
Human Health - On-Site Current Users	N	Ingestion of fruit or vegetable leaf or roots	N	x	x	√	x	√	√	x			
		Ingestion of contaminated drinking water	N	√	√	x	x	√	√	x			
		Ingestion of water / sediments when swimming	N	√	√	√	√	√	√	x			
		Ingestion of soil/dust indoors	N	√	√	√	√	√	√	x			
		Ingestion of soil/dust outdoors	N	√	√	√	√	√	√	x			
		Inhalation of particles (dust / soil) indoor and outdoor	N	√	√	√	√	√	√	x			
		Inhalation of vapours/gases – outdoor	Y	√	x	x	x	x	√	√			
		Inhalation of vapours/gases - indoor	Y	√	x	x	x	x	√	√			
		Dermal absorption via direct contact with soil	N	√	√	√	√	√	√	x			
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health On-Site Future User	Y (4)	Ingestion of fruit or vegetable leaf or roots	N	x	x	√	x	√	√	x			
		Ingestion of contaminated drinking water	N	√	√	x	x	√	√	x			
		Ingestion of water / sediments when swimming	N	√	√	x	x	√	√	x			
		Ingestion of soil/dust indoors	N	√	√	√	√	√	√	x			
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	4 (Minor)	Low	Very Low
		Inhalation of particles (dust / soil) indoor and outdoor	Y	√	√	√	√	√	√	x	4 (Minor)	Low	Very Low
		Inhalation of vapours – outdoor	Y	√	x	x	x	x	√	√	4 (Minor)	Low	Very Low
		Inhalation of vapours - indoor	Y	√	x	x	x	x	√	√	4 (Minor)	Low	Very Low
		Dermal absorption via direct contact with soil	Y	√	√	√	√	√	√	x	4 (Minor)	Low	Very Low
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health - Off-Site	N	Ingestion of fruit or vegetable leaf or roots	N	x	x	√	x	√	√	x			
		Ingestion of contaminated drinking water	N	√	√	x	x	√	√	x			
		Ingestion of water / sediments when swimming	N	√	√	x	x	√	√	x			
		Ingestion of soil/dust indoors	N	√	√	√	√	√	√	x			
		Ingestion of soil/dust outdoors	N	√	√	√	√	√	√	x			
		Inhalation of particles (dust / soil) indoor and outdoor	Y	√	√	√	√	√	√	x			
		Inhalation of vapours – outdoor	Y	√	x	x	x	x	√	√			
		Inhalation of vapours - indoor	Y	√	x	x	x	x	√	√			
		Dermal absorption via direct contact with soil	N	√	√	√	√	√	√	x			
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health - Construction/ Maintenance Workers*	Y (4)	Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	4 (Mild)	Low	Very Low
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	4 (Mild)	Low	Very Low
		Inhalation of particles (dust / soil) outdoor	Y	√	√	√	√	√	√	x	4 (Mild)	Low	Very Low
		Inhalation of vapours – outdoor	Y	√	x	x	x	x	√	√	4 (Mild)	Low	Very Low
		Inhalation of vapours - indoor	N	√	x	x	x	x	√	√			
		Dermal absorption via direct contact with soil	Y	√	√	√	√	√	√	x	4 (Mild)	Low	Very Low
Groundwater	Y (3)	Leaching	N	√	√	√	√	√	√	x			
		Migration via natural or anthropogenic	Y	√	√	√	√	√	√	√	3 (Minor)	Low	Very Low
Surface Water	Y (3)	Direct runoff or discharges from pipes	N	√	√	√	√	√	√	x			
		Indirect via recharge from groundwater (hydraulic flow)	Y	√	√	√	√	√	√	x	3 (Minor)	Low	Very Low
		Deposition of wind blown dust	Y	√	√	√	√	√	√	x	3 (Minor)	Low	Very Low
Buildings	Y (2)	Direct contact	Y	√	√	x	x	x	x	x	2 (Minor)	Low	Very Low
		Explosion due to gas migration via natural / anthropogenic	Y	√	x	x	x	x	x	√	2 (Minor)	Low	Very Low
Ecological Systems	N	Direct deposition of particles / dust - wind blown or flood		√	√	√	√	√	√	x			
		Indirect - through watering		√	√	√	x	x	√	x			
		Inhalation of gases/vapours or particulates/dust by animals		√	√	√	x	x	√	√			
		Ingestion of of vegetation / water / soil by animals		√	√	√	√	√	√	x			
Property	N	Direct deposition via wind or flood		√	√	√	√	√	√	x			
		Indirect through watering		√	√	√	x	x	√	x			
		Inhalation of gas / vapour / particulates / dust by animals		√	x	x	x	x	√	√			
		Ingestion of vegetation / water / soil by animals		√	√	√	√	√	√	x			

Risk estimation establishes the magnitude and probability of the possible consequences (what degree of harm might result and how likely).
The criteria for classifying probability and consequence are set out in Tables 3 and 4 of the PBA methodology.
Green text highlights one or more elements of the Pollutant Linkage are missing and therefore eliminated

pba peterbrett
Caversham Bridge House, Waterman Place, Reading, RG1 8DN
Tel 0118 950 0761 Fax 0118 959 7499

Client

Millbrook Power Ltd

TABLE SUMMARISING POLLUTANT LINKAGES AND RISK ESTIMATION: POTENTIAL HAZARDS ARE METALS, HYDROCARBONS AND ASBESTOS (HAZARD CLASSIFICATION 1)

Millbrook Power Project

Date	30/09/2014
A3 Scale	nts
Drawn	JG
Checked	RHT
Table	1