

Meece Landfill Site

Green Waste Composting Facility

Site Condition Report

Biffa Waste Services Ltd

Project number: 60586541

13th November 2019

Quality information

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1. Report Context

1.1 Introduction

AECOM has been commissioned by Biffa Waste Services Limited (“the Operator” or Biffa) to prepare an application for an environmental permit for a new green waste composting (GWC) facility located at Meece Landfill Site, Yarnfield Road, Swynnerton, Cold Meece near Stone in Staffordshire.

This report has been prepared to support the permit application and details the condition of the site at the time of the permit application. The report should be read in conjunction with other supporting application information.

1.2 Proposed Facility

The proposed facility will comprise new plant to facilitate the receipt, shredding and subsequent composting of green waste. Waste types accepted at the facility will be defined according to their European Catalogue Waste Code, attached in Section 3.3, Management Plan (see Application Part 3) and will generally consist of:

- green waste;
- leaves;
- grass clippings; and
- horticulture type waste.

The new plant is designed to effectively shred the constituent parts of the incoming waste, which is then transferred to open air windrows which facilitates maturation and conversion to a soil improver. Typically, the compost will be used in the restoration at Meece and Poplars landfill sites (LFS) or will be sold to third parties. The operation of the facility will be linked to the life of Meece LFS.

Composting is a sustainable practice and helps to move the management of waste up the waste hierarchy.

The facility will not receive or accept any waste covered by the Animal By-Product (Enforcement) (England) Regulations 2013 (ABPR).

2. Site Details

2.1 Applicant

Biffa Waste Services Limited
Coronation Road
Cressex
High Wycombe
Bucks
HP12 3TZ

Registered company number: 946107

2.2 The Site

Site details are included in Table 1 below :

Table 1 Site Details

	Site Details			
Activity Address	Meece Landfill Site, Swynnerton, Staffordshire			
National Grid Reference	SJ85282 33953			
	Easting	385282	Northing	333953

2.3 Application Document References

Document Reference and Dates for SCR at Permit Application	<ul style="list-style-type: none"> ▪ Envirocheck Report (Appendix A) ▪ MAGIC Search Results (Appendix B). ▪ EA Nature and Heritage Screen (Appendix C).
Document References for Site Plans	<p>Drawings in Application Section 10 Drawings and Plans</p> <ul style="list-style-type: none"> ▪ GW-001 Site Location ▪ GW-002 Existing Situation ▪ GW-003 Installation Boundary ▪ GW-004 Proposed Site Layout

2.4 Site Description and Layout

2.4.1 GWC Location

The proposed facility will comprise new plant to facilitate the receipt, shredding and subsequent composting of green waste.

The GWC facility will be located within the LFS permitted boundary to the south east of the main Meece I landfill site. The facility will be developed in a rectangular area as shown GW-EP003 (refer to Application Part 10, Drawings and Plans) and occupies an area of approximately 2.17ha.

The GWC facility will be situated on an area of hardcore over GCL, with a 200mm sand protection layer also placed above and below the GCL and will be used to treat up to 25,000 tonnes of green waste per annum. The GWC facility would share use of the existing weighbridge, wheel wash, office accommodation and parking facilities with the landfill operation.

The location and layout of the proposed facility is shown on drawing GW-EP004 (reference Application Part 10, Drawings and Plans).

2.4.2 Site Location

The landfill site (LFS) is located approximately 1km to the south of Swynnerton as shown on Figure GW-EP001 (Application part 10, Drawings and Plans) and the new GWC facility will be operated within the

identified area within the landfill boundary as shown in GW-EP003. The village of Cold Meece is located 0.8km south and Yarnfield is 1.5km south east.

The landfill site comprises:

- the operational areas which are available to be landfilled in the future.
- areas in which landfilling has been completed and where restoration work is underway;
- a waste reception area which includes a weighbridge, site offices, wheel wash, related buildings and facilities;
- a soil treatment facility (STF) operated by Biogenie; and
- an aggregate treatment and recycling facility (ATRF).

2.4.3 Surrounding Area

The southern boundary of Meece landfill is formed by a former ordnance depot perimeter track (known as Horsley Road). To the south of this there is the extensive Ministry of Defence (MoD) Swynnerton Training Area and remainder of the former ordnance depot. This area contains a number of disused buildings and structures and is now largely overgrown.

The north eastern boundary is defined by another former ordnance depot perimeter track (known as Blackflats Road), beyond which there is woodland and the Yarnfield Road (C2).

The western, northern and eastern boundaries of the landfill site meanwhile are also defined by Blackflats Road, beyond which there is agricultural land to the west and north. Beyond this road is the landfill site's gas management compound and a road maintenance waste recycling compound operated by JDM Accord Limited. Beyond intervening woodland and the STF operated by Biogenie to the east there is Yarnfield Road (C2) and Pilstones Wood beyond.

The nearest residential properties are;

- various properties at New Birch House around 800 metres to the west;
- various houses at Cotes around 850 metres to the north west; and
- Pilstones Cottage some 475 metres to the north.

3. Condition of Land at Permit Issue

The following sections detail the sources of desk study information searched in order to describe the condition of the site and, in particular, to determine the potential for substances to be present in, on or under the land associated with present and past uses of the site and its surrounding areas.

3.1 Environmental Consents, Permits and Designations

An Envirocheck Report for the site is reproduced in Appendix A. The report provides extensive information and details on:

- waste management licences;
- environmental permits;
- discharge consents;
- groundwater vulnerability;
- trade effluent consents;
- records of any land pollution incidents associated with the site; and
- sensitive land uses

The Multi-Agency Geographic Information for the Countryside (MAGIC) website was searched to provide details of any:

- European Nature Conservation Sites;
- Special Protection Areas (SPAs);
- Special Areas of Conservation (SACs);
- RAMSAR sites; and
- Sites of Special Scientific Interest (SSSIs).

Information regarding designated sites was obtained from the Multi-Agency Geographic Information for the Countryside (MAGIC) website and Stafford Borough Council website (Appendix B). A search was completed for sites within at least 5km radius of the site. This information was confirmed by a Nature and Heritage screen completed by the EA during the pre-application process which is attached in Appendix C.

A phase 1 habitat survey was also completed as part of the planning application for the facility (See Appendix D).

Other than Local Nature Reserves (LNRs), there are no statutory designated sites within at least 5km of the GWC site. The nearest such site is King's and Hargreaves Woods Site of Special Scientific Interest (SSSI) located approximately 5.4km to the north. The nearest LNR is Stone Meadows LNR approximately 3.9km to the east in Stone. The nearest internationally designated site is Midland Meres and Mosses Phase 2 Ramsar approximately 6.2km to the south west. The GWC area is not within an impact zone defined by Natural England for a Site of Special Scientific Interest (SSSI) on the MAGIC website.

A summary of designations within 5km are shown in Table 2 below.

Table 2 Statutory Sites

Status	Site Ref	Location Name	Description	Distance from Proposed Development
Within 2km				

Status	Site Ref	Location Name	Description	Distance from Proposed Development
Ancient Woodland	1411607	Un-named	Ancient Replanted Woodland	430m
Ancient Woodland	1411608	Un-named	Ancient and Semi-Natural Woodland	680m
Within 5 km				
Scheduled Monument	1009314	Bowl Barrow	A slightly oval earth and stone mound up to 2.5m high marking the burial site of Neolithic-bronze age	1km
Local Nature Reserve	-	Stone Meadows	Three separate grassland meadows including Crown Meadow, Goodall Meadow and Southern Meadow which are located next to the River Trent as it flows past Stone.	3.9km
Greater than 5 km				
SSSI	1002252	Kings and Hargreaves Woods	Broadleaved, mixed and yew woodland	>5km

There are a number of non-statutory ecology sites within 1km. Table 3 below lists the ones that are considered to be most relevant.

Table 3 Non-Statutory Sites

Status	Site Ref	Location Name	Description	Distance from Proposed Development
Retained Grade 1 Site of Biological Importance (SBI)	83/42/05	Meece Brook/ Swynnerton / MOD/ Railway	An extensive area of willow scrub and alder carr around Meece Brook and its associated channels.	0.5km
Local Wildlife Site (LWS)	83/53/99	Pilstones Wood	Part ancient semi-natural woodland, part ancient replanted woodland. The strip adjacent to the road is relatively undisturbed semi-natural woodland	0.1km
Retained Grade 1 SBI	83/63/33	Yarnfield Meadows	A series of semi-improved hay meadows.	0.9km
Retained Grade 2 SBI	83/64/33	Highlow bank (west of)	An unimproved damp corner of a field with a generally good mixture of species in the turf, including lady's-mantle.	1km

In addition to the above surveys and reviews, based on site knowledge and prior ecological surveys the Operator believes the facility actually satisfies the criteria for a Standard Rules Permit and should therefore be considered as a lower risk activity. The assessment and justification for classification as a lower risk activity is presented in Appendix A of the Non-Technical Summary (see 60586541-ACM-00-XX-RP-EN-NTE-S-R02, Application Part 2). This assessment confirms:

- The facility does not lie within 250m of greater crested newts (GCN). Based on surveys completed since 2015, it was concluded that:
 - a. GCN are no longer present at the site or are in such low numbers that they cannot be detected by standard or eDNA survey techniques and that a translocation exercise using fencing and pitfalls is unnecessary.

- b. The risk of injury of death of GCN that may occur during the site works for the Green Waste Composting facility was assessed as minimal and the proposed work could be undertaken under a Reasonable Avoidance Measures Scheme (RAMS).
- c. Therefore based on this survey work, there is no GCN within 250m of the proposed GWC area and the SR2012 No 8 criteria has been met
- The protected habitat area shown in the nature and heritage screening report is identified on the National Forestry Inventory as broadleaved woodland. However, the actual conditions on site show that the portion of the potential protected habitat area which encroaches into the proposed GWC development does not actually contain any woodland and as such cannot be classed as protected habitat.
 - In respect of the remaining protected habitat area, this is listed on MAGIC as protected habitat based on the National Forestry Inventory entry classification as broadleaved woodland. However, the MAGIC entry also identifies that the area is NOT classified as Wood pasture and Parkland BAP Priority Habitat and that the confidence in the main classification as broadleaved woodland is low.
 - Surveys of the landfill site in 2015, identified a range of habitats across the wider landfill area which included broadleaved woodland including the area which has been identified as protected. The survey however, found limited features of significant nature conservation value across the site and that none of the habitats within the site qualified for Section 41 or Local Biodiversity Action Plans.
 - The habitat is developed on land which has previously been used by the Ministry of Defence munitions training area and ground conditions within the woodland are reflective of this.
 - There are 2 other waste treatment activities already authorised and operating in close proximity to the woodland. Applications for these both for planning and bespoke permits did not highlight the area as sensitive or as having any designation.
 - The woodland is located in an area which will be subject to future development as a landfill – both planning permission and an environmental permit are in place for this. Part of this area will actually be used for the deposit of hazardous waste.

3.2 Environmental Setting

3.2.1 Geology

The published stratigraphic sequence beneath and adjacent to the landfill site is detailed in Table 4 below:

Table 4 Stratigraphic Sequence

Age	Formation	Lithology
Recent/Pleistocene	Glacial Sand and Gravel	Sand and Gravel
Triassic	Mercia Mudstone 'Keuper Marl'	Red marl with thin sandstones, rock salt and gypsum
Triassic	Sherwood Sandstone 'Waterstones'	Buff and red sandstones with marl bands
Triassic	Sherwood Sandstone 'Upper Mottled Sandstone'	Soft red sandstone
Triassic	Sherwood Sandstone 'Bunter Pebble Beds'	Pebbly red-brown sandstone and conglomerate
Triassic	Sherwood Sandstone 'Bunter Lower Mottled Sandstone'	Soft red sandstone

The British Geological Survey (BGS) maps state that the Cold Meece area is underlain by the Mercia Mudstone. The geological cross section shows the Mercia Mudstone forming a basin with a general dip and thickening towards the east until the Whitgreave area where the dip reverses.

The Swynnerton Fault cuts across the north-western corner of the site bringing the Sherwood Sandstone Pebble Beds to the surface. The thickness of the Mercia Mudstone is unknown at the site due to the absence of deep boreholes. It is possible that the Swynnerton Fault may affect the dip and thickness of the Mercia Mudstone.

To the immediate west and east of the site small localised areas of glacial sands and gravels overlie above the bedrock units. A dolerite intrusion lies just across the site's eastern boundary and strikes almost north-south.

3.2.2 Hydrogeology

The groundwater regime at Meece landfill site is discussed with reference to:

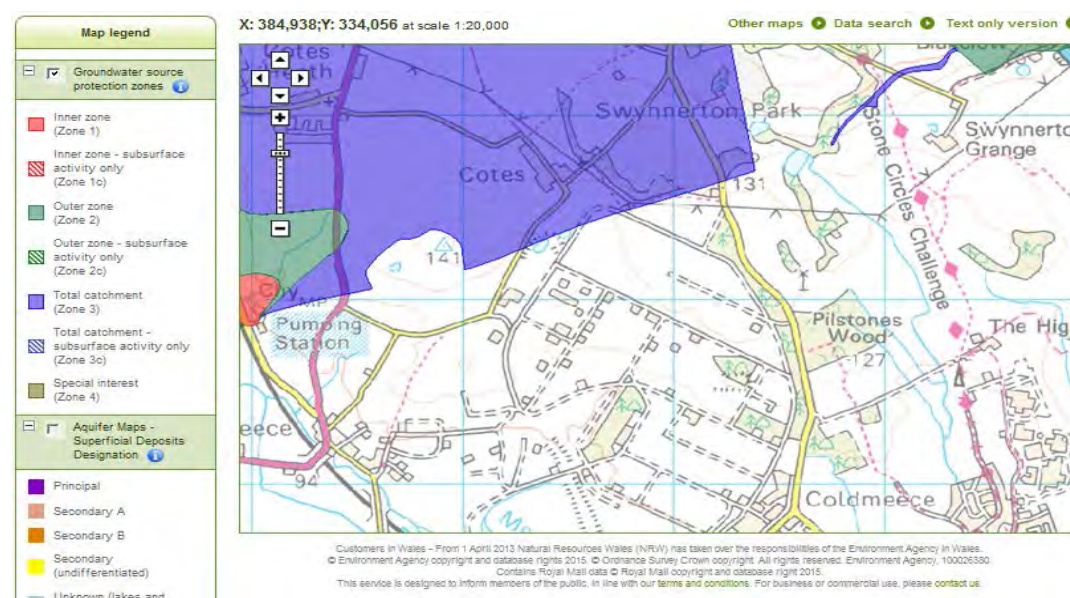
- The characteristics of the unsaturated zone; and
- The characteristics of the aquifers.

The unsaturated zone beneath Meece landfill site comprises silty clays of the Mercia Mudstone group. The zone varies in thickness from absent in the hydraulically contained phases to approximately 5km in some areas.

In terms of aquifer characteristics, the Environment Agency has produced a series of maps covering England and Wales to identify the vulnerability of groundwater to contamination. It uses geological information to define major, minor and non-aquifers, and information on soils to determine the protection afforded to the underlying geology and therefore its overall vulnerability. After reviewing the EA maps, it has been confirmed that:

- The majority of the site is underlain by the Mercia Mudstone Group and has been identified on the EA groundwater vulnerability map as a non-aquifer.
- The Sherwood Sandstone Pebble Beds are classified as a major aquifer under the EA's Policy and Practise for the Protection of Groundwater, are located in the far north western corner of the landfill site. There is no evidence that this unit lies within the footprint of Meece GWC installation boundary. The major aquifer category is described as 'highly permeable formations usually with a known or probable presence of significant fracturing'. The soils above the Pebble Beds are classified as H2, which are defined as 'deep permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential'. The GWC facility will not impact on these strata based on their location.

Figure 1 Groundwater



3.2.3 Surface Waters

The Meece Landfill Site lies approximately 120m AOD. The land slopes steadily to the south towards the Meece Brook which lies approximately 1.5km from the site boundary. Meece Brook flows in a south westerly direction. Several tributaries of the Meece Brook drain the area to the west, south and east of Meece Landfill. In addition several surface water ponds/lakes are present. The nearest watercourse to the site is a tributary of the Meece Brook which rises in Pilstones Wood approximately 350m east of the site. This tributary is separated from Meece landfill site by intervening land in the form of a low ridge. The proposed GWC operations are not expected to impact on any of these watercourses.

Meece Landfill Site is not sited on the floodplain of any rivers according to the Environment Agency, and it is not located within a flood warning area. The majority of the landfill site does not lie within any source protection zone (SPZ). The far north western corner is located within Zone 3 Groundwater Source Protection Zone which is defined as 'the area around a source within which all groundwater recharge is presumed to be discharged at the source'. The proposed GWC operations will not lie within the Zone 3 area.

There has been no history of flooding at the site.

In relation to water abstraction the nearest spring is located 350m north east of the GWC area.

The nearest groundwater abstraction zone is a large abstraction zone located 1.2km north east of the landfill site.

The closest surface water abstraction site is a medium abstraction size and located over 2km south of the landfill site.

3.2.4 Water Abstractions

Referring to Envirocheck there are three groundwater abstractions at:

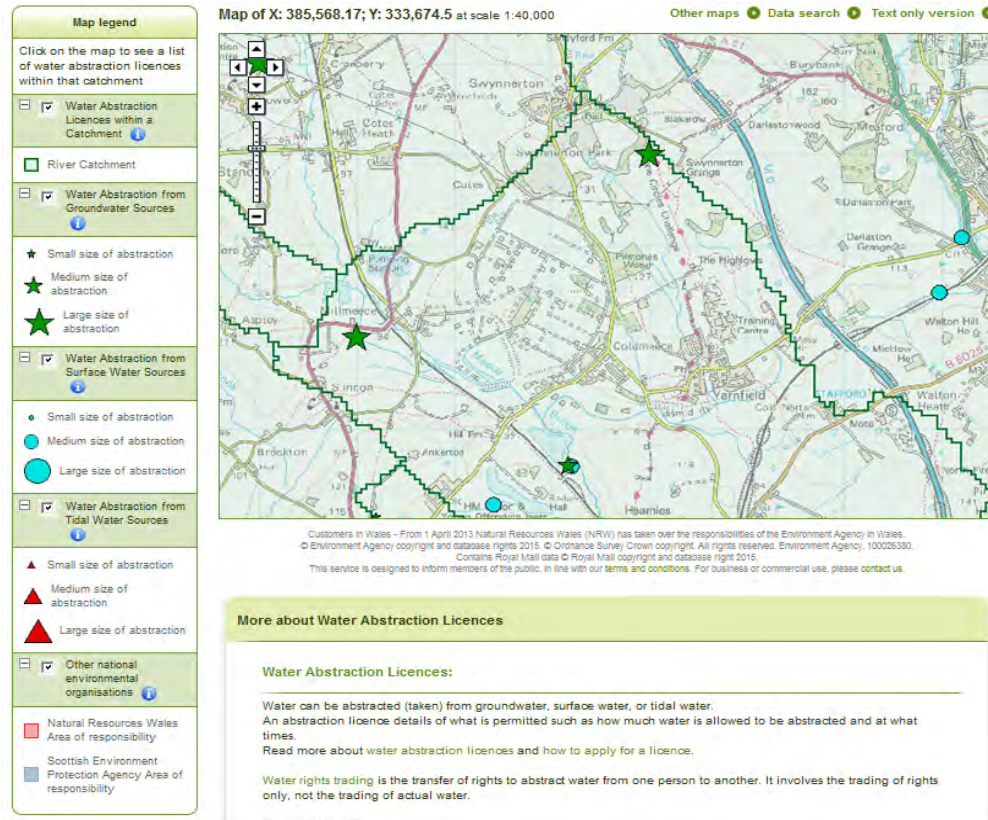
- Moss House Farm – 494m east of the site;
- Woodmill – 1,648m west of the site; and
- Mill Meece Farm – 1,912m south west of the site.

Referring to the Environment Agency there is:

- a large groundwater abstraction zone located 1.2km north east of the landfill site which is used for both potable supplies (Severn Trent) and for agricultural spray irrigation purposes
- a medium surface water abstraction zone located over 2km south of the landfill site which is primarily used for spray irrigation purposes.

This is shown on Figure 2 on the next page.

Figure 2 Abstraction Map



Referring to Staffordshire County Council Interactive Mapping service, the nearest spring is located 350m north east of the GWC

Figure 3 Staffordshire County Council Interactive Mapping – Springs and Boreholes



3.3 Pollution History

The Environment Agency record and classify any reported pollution incidents as major or significant. Based on the results of the Environment Agency's website search no reported pollution incidents have occurred within the proposed GWC installation boundary.

On-site details are shown below, taken from the Environment Agency's website.

3.3.1 Pollution incidents which may have affected the land

Information for Industrial Pollution was obtained from the EA website and is shown in Table 5 below.

Table 5 Industrial Pollution Incidents

Licence Number	Year	Type of Release
BV4967IW (Meece I landfill)	2012	<ul style="list-style-type: none"> • air • water
	2011	<ul style="list-style-type: none"> • air • water
	2010	<ul style="list-style-type: none"> • air • water
	2009	<ul style="list-style-type: none"> • air • water
	2008	<ul style="list-style-type: none"> • air • water
BW1157IQ (Infinis permit for Meece 3 Gas Compound)	2012	<ul style="list-style-type: none"> • air
	2011	<ul style="list-style-type: none"> • air • land
	2010	<ul style="list-style-type: none"> • air • land
	2009	<ul style="list-style-type: none"> • air • land
	2008	<ul style="list-style-type: none"> • air • land
POP002/42353	2004	<ul style="list-style-type: none"> • air • land
	2002	<ul style="list-style-type: none"> • air • land

3.3.2 Historical land uses and possible associated contamination

Prior to use as a landfill, the site at Meece was owned and operated by the MOD as a munitions depot. The existing MOD training ground is located adjacent to the southern site boundary of the site. The land to the north, east and west of the site is mainly agricultural.

Meece was licensed as a landfill in 1986 under the management of Staffordshire County Council (SCC). The site was taken over by Poplars Resources Management in 1994 under Waste Management License 4/F/93/0516 (EAWML42353). This was superseded by two Pollution Prevention and Control (PPC) permits, under the landfill re-permitting exercise, permit BV4967IW being issued on 29th April 2005 for the Meece I (non-hazardous waste) landfill area, and permit BW0096IJ being issued on 22nd December 2004 for the Meece II (hazardous waste) landfill area. Both permits have been varied since issue. The Meece I landfill itself has been mothballed, and the Meece II landfill area has never been engineered or received waste and is pre-operational. A separate operator undertakes combustion of landfill gas from the Meece I landfill under a separate permit (Meece 3) and exports electricity to the national grid.

More recently a Soil Treatment Facility has been developed onsite with a separate planning permission and is covered by a variation to the Meece I environmental permit.

3.3.3 Other Potentially Contaminative Industries in surrounding area

A review using the Envirocheck information for the site indicates no contemporary trade licences within 900m of the site.

3.3.4 Evidence of damage to pollution prevention measures

There is no evidence of damage to current pollution prevention measures.

3.3.5 Existing monitoring

Groundwater and surface water monitoring will continue to be undertaken at the wider landfill site in accordance with the landfill permit.

3.4 Existing Contamination

There is no existing contamination recorded for the site according to the EA website.

4. Permitted Activities

4.1 Permitted activities

The non-hazardous landfill site (Meece 1) is currently operated under permit reference EPR/BV49671W dated 29th April 2005 for landfill operations. However, although landfill operations have been suspended at the site for around 5 years due to changes in the market and a consequent fall in the amount of waste brought to the site for disposal, the operator will continue to maintain the available capacity for the foreseeable future.

The Site also includes:

- the Soil Treatment Facility (STF) which is also operated under permit reference EPR/BV49671W as a consequence of variation V003, issued on 26th June 2012. The STF treats soils that are classified as hazardous wastes and once treated the soils are utilised within Biffa's landfill operations at Meece and Poplars LFS.
- The aggregate treatment and recycling facility (ATRF) which is operated under permit reference EPR/EB3603FM which was issued on 13/01/2017. The ATRF treats non-hazardous street cleansing and similar residues to produce a range of recycled aggregate materials.

The Meece I permit has been varied a number of times since issue, the most recent variation being V010, issued on 7th September 2015, which increased the annual throughput of the soils treatment facility.

The hazardous waste landfill (Meece II) is authorised under permit reference EPR/BW00961J, dated 22nd December 2004. To date, the Meece II landfill has not been constructed and landfill operations have never commenced in this area, which is to be regarded as pre-operational. The Meece II permit has also been varied, the most recent variation being V004, issued on 13th March 2014 as a result of an Agency led review of permits.

The proposed GWC facility has been proposed within the footprint of the Meece I landfill area.

Existing permitted activities are shown on Figure GW-EP002 and will continue to take place at the site. No changes to their operation have been made as a result of the proposed development.

4.2 Non-permitted Activities

Non-permitted activities at the site include use of the existing office buildings for site management and admin purposes. No other activities are carried out at the site.

4.3 GWC Site Layout

The GWC facility will be operated in a rectangular area as shown in Figure GW-EP003 (see Application Part 10, Drawings and Plans). The area will extend to 2.17ha.

The GWC area will be constructed by levelling the existing clay layer to form a regulation layer and then installing an impermeable GCL liner overlain by a 200mm protective sand layer and hardcore. The liner will be laid to falls to enable incident rainfall to drain to a new lined perimeter ditch system – which in turn will drain to a lined lagoon as shown in Figure GW-EP004 (see Application Part 10, Drawings and Plans).

4.4 Environmental Risk Assessment

A generic risk assessment has been completed as part of this application and involves the following:

- Data information, to identify potential receptors and sources of hazards associated with the operation of the GWC facility;
- Judgement, to review the probability of exposure and the magnitude of risk to identified receptors; and
- Actions that can manage the risk to reduce the magnitude of impact.

4.4.1 Methodology

The methodology adopted is described in detail in Environment Agency Report CLR11: Model Procedures for the Management of Land Contamination and relies on the development of a site specific conceptual site model (CSM) consisting of three components:

- A source of contamination, for example due to historical site operations;
- A pathway, a route by which receptors can become exposed to contaminants. Examples include vapour inhalation, soil ingestion and groundwater migration;
- A receptor, a target that may be exposed to contaminants via the identified pathways. Examples include human occupiers/users of the site, controlled water receptors, property or ecosystems.

For a potential risk to either environmental and/or human receptors to exist, a plausible pollutant linkage involving each of these components must exist. If one of the components is absent then a pollutant linkage, and thereby potentially unacceptable risk, is also unlikely to exist. Where all three components are or may be present, a potentially complete pollutant linkage can be considered to exist. This does not automatically imply the presence of unacceptable risk but further investigation of the potential pollutant linkages is required.

The potential sources of contamination on or in the vicinity of the site, receptors on or near site, and pathways on or near the site are discussed within this section. Below is a summary of the CSM:

4.4.2 Potential Sources of Contamination

Potential sources of contamination have been identified from historic and current uses of the site. These are as follows:

Table 6 Potential Sources of Contamination

Potential Onsite Source	Potential Contaminants
<i>On-site Sources</i>	
Areas of made and unmade ground associated with former MoD training area.	Metals associated with spent munitions
Former and current site roads	Heavy metals, TPH and PAH.
Landfill operations to the north and northeast of the site.	Source of landfill gas and potentially contaminated leachate.
<i>Off-site Sources</i>	
Adjacent MOD Training Area	Metals associated with spent munitions
Agricultural land	Pesticides, Insecticides metals, TPH and PAH

4.4.3 Potential Receptors

The closest human receptor to the proposed development of the GWC is Pilstones Cottage located 475m north of the site. There are various properties located at new Birch House around 800m to the west, the hamlet of Cotes is 800m north west of the site and the village of Cold Meece is 1km south of the site.

Table 7 Potential Receptors

Potential Receptor	Description
Human Health	<ul style="list-style-type: none"> • Construction workers, • Future site users; and • Operational staff.
Controlled Waters	<ul style="list-style-type: none"> • Groundwater within the underlying made ground deposits; • Groundwater within the underlying bedrock; • Site lagoons and drainage systems; and • Meece Brook.
Construction Materials/Buildings	Risk to concrete foundations and services; and Risk to buildings from ground gas.
Vegetation	Vegetation and landscaping along all site boundaries.

4.4.4 Potential Pathways

Potential pathways have been identified, which could link the potential sources with the potential receptors. These pathways are discussed by receptor type below in consideration of the redevelopment of the site:

Table 8 Potential Pathways

Potential Pathway	Description
Controlled Waters	<ul style="list-style-type: none"> • Migration of contaminants with sub-surface infiltration; • Shallow ground water flow
Ground Gas	<ul style="list-style-type: none"> • Has potential to migrate via permeable strata within the made ground or through service trench backfill; • Emission to air from landfill gas engines; and • Potential for landfill gas at ground level from the landfill activities.
Soil	<ul style="list-style-type: none"> • Risk from organic vapours and migrated landfill gas during construction and maintenance activities and for future site users; • Potential for direct contact and potentially contaminated soils during future construction activities; and • Potential for direct contact by future users from any landscaped area will be low as no landscaping proposed for the new GWC.

4.4.5 Qualitative Risk Assessment

A Qualitative Risk Assessment has been undertaken for these potential source-pathway-receptor linkages based on current DEFRA (Guidelines for Environmental Risk Assessment and Management) and CIRIA (C552) guidance. This assessment is based on consideration of both:

- The likelihood of an event (probability – takes into account both the presence of the hazard and receptor and the integrity of the pathway);
- The severity of the potential consequence (takes into account both the potential severity of the hazard and the sensitivity of the receptor).

The method of dealing with identified risks and the level of significance of those risks will be a function of site use. The risks associated with each potential pollutant linkage take into account the findings of the site investigation work undertaken at the site and are considered in Table 9 on the next page:

Table 9 Qualitative Risk Assessment

Source	Pollutants	Pathway	Receptor	Associated Hazard (Severity)	Likelihood of Occurrence	Potential Impact
Potential contaminants within soils	Fuel spillages Made Ground Natural contaminants in unmade ground/ underlying strata	Direct contact, ingestion and inhalation.	Site users	Effect on human health (medium)	Unlikely: Hardstanding will prevent contact with underlying materials.	Low risk.
			Future construction / maintenance	Effect on human health (medium)	Unlikely: Site workers or potential future construction / landscaping workers could be exposed to localised sub-surface contaminants during works. The use of appropriate PPE should mitigate this risk.	Very low risk.
		Surface run-off.	Aquatic resources, ecology and subsequent users including humans	Lateral movement to surface watercourses (medium)	Unlikely: Soils are generally very low permeability with high attenuation.	Moderate/low risk
		Direct contact with foundations, services and migration in groundwater	Construction/maintenance workers and site users	Effect on human health (medium)	Moderate: Ground is impermeable.	Moderate
		Direct Contact.	Building structures and services	Aggressive chemical attack	Low likelihood: Low levels of contamination. Mitigation measures can be taken during future construction phases in order to reduce the likelihood of occurrence.	Very Low Risk
		Uptake via root.	Flora and fauna.	Effect on flora / fauna [Minor]	Unlikely: Site vegetation showed no signs of stress or die-back during site visits. No protected species are present.	Very Low risk
Landfill operations	Leachate	Migration of contaminants with sub-surface infiltration and shallow groundwater flow	Aquatic resources, ecology and subsequent users including humans	Lateral movement to surface watercourses (medium)	Low: Landfill is engineered to control leachate. Ground is generally impermeable and will prevent flow and attenuate contamination.	Moderate/low risk
	Landfill Gas	Airborne	Human health		Moderate: Significant gas will be produced. Site controls include gas capture/management using gas engines and flare.	Moderate/low risk

Source	Pollutants	Pathway	Receptor	Associated Hazard (Severity)	Likelihood of Occurrence	Potential Impact
Ground gas associated with the landfill operations, made ground / fill material present on-site.	Ground gases (including methane and carbon dioxide).	Gas migration and diffusion via permeable strata into enclosed spaces in/under buildings and structures	Construction workers and future maintenance works and site users.	Explosive risks and impact on human health (severe)	Low: Soils are generally impermeable so risk will reduce with distance from landfill	Moderate to Low Risk
			Building structures and services			
Offsite source – MoD land and agricultural land	Heavy metals, sulphate, organic compounds	Direct contact, ingestion and inhalation	Construction workers and future operators/users	Health risks including skin irritation (medium)	Low likelihood Hardstanding will prevent contact with underlying materials. Construction workers to wear full and correct PPE.	Low risk
		Surface run off.	Aquatic resources, ecology and subsequent users including humans	Lateral movement to surface watercourses	Low Likelihood Hardstanding will prevent contact with underlying materials.	Low risk
		Leaching / dispersion	Aquatic resource – groundwater abstraction wells/surface water	Downward migration into groundwater	Low/moderate likelihood Site drainage to control surface water.	Low/moderate risk
		Direct contact	Building structures and services	Aggressive chemical attack	Low Likelihood Hardstanding will prevent contact with underlying materials.	Low risk

4.5 Operational Environmental Risk Assessment

Environmental risk assessments have been completed for the proposed GWC operations and are included in the Odour Management Plan (60586541-ACM-00-XX-RP-EN-OMP-R02, Application, Part 5), the Impact Assessment Report (IAR) document (A60586541-ACM-00-XX-RP-EN-IAR-R01, Application, Part 8) and Bioaerosol Risk Assessment (60586541-ACM-00-XX-RP-EN-BRA-R01, Application Part 9).

Appendix A Envirocheck Report

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

91709528_1_1

Customer Reference:

60471494

National Grid Reference:

385110, 333960

Slice:

A

Site Area (Ha):

0.01

Search Buffer (m):

1000

Site Details:

Site at 385340, 334000

Client Details:

Dr I Campbell

Aecom Infrastructure & Environment UK Ltd

Royal Court

Basil Close

Chesterfield

Derbyshire

S41 7SL

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	6
Hazardous Substances	11
Geological	12
Industrial Land Use	16
Sensitive Land Use	17
Data Currency	18
Data Suppliers	23
Useful Contacts	24

Introduction

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

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Radon Potential dataset Copyright Notice

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Report Version v50.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1			Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents					
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices	pg 1				1
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 1		8	3	4
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 4		Yes		
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes	pg 4				1
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 4			1	(*2)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 5	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 5	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones	pg 5				1
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Detailed River Network Lines					n/a
Detailed River Network Offline Drainage	pg 5			Yes	n/a

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 6				3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 6	1	1		
Licensed Waste Management Facilities (Locations)	pg 7			1	1
Local Authority Landfill Coverage	pg 7	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 7				1
Potentially Infilled Land (Non-Water)	pg 7			2	9
Potentially Infilled Land (Water)					
Registered Landfill Sites	pg 8		3		1
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites	pg 11				1
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 12	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 12	Yes			Yes
BGS Recorded Mineral Sites	pg 13			3	7
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards				n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 16				3
Fuel Station Entries					
Points of Interest - Commercial Services					
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 16			1	
Points of Interest - Public Infrastructure	pg 16		1		2
Points of Interest - Recreational and Environmental					
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 17			1	1
Areas of Adopted Green Belt	pg 17			1	
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 17	1			1
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	350	2	385400 334150
1	Enforcement and Prohibition Notices Location: Swynnerton, Cold Meece Permit Reference: Not Supplied Enforcement Date: Not Supplied Details: Notice Served Requesting Toxic Fireworks Are Destroyed - Destroyed N July 2010 Positional Accuracy: Manually positioned within the geographical locality	A8NW (SW)	517	3	384827 333525
2	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece Landfill 1, Swinnerton, Cold Meece, Stone, Staffordshire, ST15 0QF Authority: Environment Agency, Midlands Region Permit Reference: Bv4967iw Original Permit Ref: Bv4967iw Effective Date: 29th April 2005 Status: Superseded By Variation Application Type: Application App. Sub Type: New Positional Accuracy: Manually positioned to the address or location Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A13NE (NE)	91	3	385181 334012
3	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece Landfill 1, Swinnerton, Cold Meece., STONE, Staffordshire, ST15 0QF Authority: Environment Agency, Midlands Region Permit Reference: QP3331LR Original Permit Ref: Bv4967iw Effective Date: 26th April 2010 Status: Superseded By Variation Application Type: Variation App. Sub Type: Minor Positional Accuracy: Manually positioned within the geographical locality Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A13NW (NW)	161	3	385024 334095
4	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece 1 Landfill Site, Meece Landfill Site, Swynnerton, Cold Meece., Stone, Staffordshire, ST15 0QN Authority: Environment Agency, Midlands Region Permit Reference: YP3539RU Original Permit Ref: Bv4967iw Effective Date: 16th March 2016 Status: Effective Application Type: Variation App. Sub Type: Simple Standard Variation Positional Accuracy: Located by supplier to within 100m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A13NW (NW)	206	3	384960 334100
4	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece 1 Landfill Site, Meece Landfill Site, Swynnerton, Cold Meece., Stone, Staffordshire, ST15 0QN Authority: Environment Agency, Midlands Region Permit Reference: DP3231AW Original Permit Ref: Bv4967iw Effective Date: 7th September 2015 Status: Superseded By Variation Application Type: Variation App. Sub Type: Simple Standard Variation Positional Accuracy: Located by supplier to within 100m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A13NW (NW)	206	3	384960 334100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece Landfill 1, Swinnerton, Cold Meece., STONE, Staffordshire, ST15 0QF Authority: Environment Agency, Midlands Region Permit Reference: MP3332AX Original Permit Ref: Bv4967iw Effective Date: 4th June 2015 Status: Superseded By Variation Application Type: Variation App. Sub Type: Minor Positional Accuracy: Located by supplier to within 100m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A13NW (NW)	206	3	384960 334100
4	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece Landfill 1, Swinnerton, Cold Meece., STONE, Staffordshire, ST15 0QF Authority: Environment Agency, Midlands Region Permit Reference: BP3733AU Original Permit Ref: Bv4967iw Effective Date: 6th March 2015 Status: Superseded By Variation Application Type: Variation App. Sub Type: Minor Positional Accuracy: Located by supplier to within 100m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A13NW (NW)	206	3	384960 334100
4	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece Landfill 1, Swinnerton, Cold Meece., STONE, Staffordshire, ST15 0QF Authority: Environment Agency, Midlands Region Permit Reference: EP3839ES Original Permit Ref: Bv4967iw Effective Date: 28th November 2013 Status: Superseded By Variation Application Type: Variation App. Sub Type: Minor Positional Accuracy: Located by supplier to within 100m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A13NW (NW)	206	3	384960 334100
4	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece Landfill 1, Swinnerton, Cold Meece., STONE, Staffordshire, ST15 0QF Authority: Environment Agency, Midlands Region Permit Reference: RP3736FK Original Permit Ref: Bv4967iw Effective Date: 26th June 2012 Status: Superseded By Variation Application Type: Variation App. Sub Type: Substantial Positional Accuracy: Located by supplier to within 100m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A13NW (NW)	206	3	384960 334100
5	Integrated Pollution Prevention And Control Name: Infinis (Re-Gen) Ltd Location: Meece 3, Westgate, Swynnerton, Cold Meece., STONE, Staffordshire, ST15 0QN Authority: Environment Agency, Midlands Region Permit Reference: VP3735ZX Original Permit Ref: Bw1157iq Effective Date: 5th April 2013 Status: Effective Application Type: Variation App. Sub Type: Minor Positional Accuracy: Located by supplier to within 100m Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: Y	A13SE (E)	298	3	385400 333900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Integrated Pollution Prevention And Control</p> <p>Name: Infinis (Re-Gen) Ltd Location: Meece 3, Westgate, Swynnerton, Cold Meece,, STONE, Staffordshire, ST15 0QN Authority: Environment Agency, Midlands Region Permit Reference: HP3136TP Original Permit Ref: Bw1157iq Effective Date: 23rd December 2010 Status: Superseded By Variation Application Type: Variation App. Sub Type: Standard Positional Accuracy: Located by supplier to within 100m Activity Code: 1.1 A(1) (B) (III) Activity Description: Combustion; Waste Derived Fuel Greater Or Equal To 3Mw But Less Than 50Mw Primary Activity: Y Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: N Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N</p>	A13SE (E)	298	3	385400 333900
6	<p>Integrated Pollution Prevention And Control</p> <p>Name: Biffa Waste Services Ltd Location: Meece li Landfill Site Epr/Bw0096ij, Westgate, Swynnerton, Cold Meece,, STONE, Staffordshire, ST15 0QN Authority: Environment Agency, Midlands Region Permit Reference: Bw0096ij Original Permit Ref: Bw0096ij Effective Date: 22nd December 2004 Status: Superseded By Variation Application Type: Application App. Sub Type: New Positional Accuracy: Manually positioned to the address or location Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y</p>	A13NW (NW)	320	3	384900 334200
7	<p>Integrated Pollution Prevention And Control</p> <p>Name: Biffa Waste Services Ltd Location: Meece li Landfill Site Epr/Bw0096ij, Westgate, Swynnerton, Cold Meece,, STONE, Staffordshire, ST15 0QN Authority: Environment Agency, Midlands Region Permit Reference: SP3736EK Original Permit Ref: Bw0096ij Effective Date: 21st March 2014 Status: Effective Application Type: Variation App. Sub Type: Simple Standard Variation Positional Accuracy: Located by supplier to within 10m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y</p>	A9NW (SE)	574	3	385530 333570
7	<p>Integrated Pollution Prevention And Control</p> <p>Name: Biffa Waste Services Ltd Location: Meece li Landfill Site Epr/Bw0096ij, Westgate, Swynnerton, Cold Meece,, STONE, Staffordshire, ST15 0QN Authority: Environment Agency, Midlands Region Permit Reference: ZP3133EY Original Permit Ref: Bw0096ij Effective Date: 25th September 2013 Status: Superseded By Variation Application Type: Variation App. Sub Type: Simple Standard Variation Positional Accuracy: Located by supplier to within 10m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y</p>	A9NW (SE)	574	3	385530 333570

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece li Landfill Site Epr/Bw0096ij, Westgate, Swynnerton, Cold Meece,, STONE, Staffordshire, ST15 0QN Authority: Environment Agency, Midlands Region Permit Reference: ZP3237KZ Original Permit Ref: Bw0096ij Effective Date: 30th March 2010 Status: Superseded By Variation Application Type: Variation App. Sub Type: Minor Positional Accuracy: Located by supplier to within 100m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A9NW (SE)	574	3	385530 333570
8	Integrated Pollution Prevention And Control Name: Biffa Waste Services Ltd Location: Meece Landfill 1, Swinnerton, Cold Meece,, STONE, Staffordshire, ST15 0QF Authority: Environment Agency, Midlands Region Permit Reference: QP3632XE Original Permit Ref: Bv4967iw Effective Date: Not Supplied Status: Valid Application Type: Variation App. Sub Type: Minor Positional Accuracy: Manually positioned within the geographical locality Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A9SW (SE)	889	3	385510 333166
	Nearest Surface Water Feature	A13NE (N)	12	-	385112 333969
9	Prosecutions Relating to Authorised Processes Location: Swynnerton, Cold Meece, Staffordshire Prosecution Text: Importing toxic fireworks Prosecution Act: Popr07 Hearing Date: 9th February 2011 Verdict: Guilty Fine: 2600 Costs: 4583 Positional Accuracy: Manually positioned within the geographical locality	A8NW (SW)	517	3	384827 333525
10	Water Abstractions Operator: Mr T E Bennison Licence Number: 03/28/02/0028 Permit Version: 100 Location: Moss House Farm- Well 3 Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Moss House Farm Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 5th October 1965 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14NW (E)	494	3	385600 334000
	Water Abstractions Operator: Miss M P Key Licence Number: 03/28/02/0037 Permit Version: 100 Location: Woodhill Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Woodhill Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 4th October 1972 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1648	3	383500 333600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: J Bennison & Partners Licence Number: 03/28/02/0027 Permit Version: 100 Location: Mill Meece Farm Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Mill Meece Farm Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 22nd July 1993 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(SW)	1912	3	383400 333100
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 22 South Staffordshire & East Shropshire Scale: 1:100,000	A13NE (NE)	0	3	385108 333958
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A13NE (NE)	0	2	385108 333958
	Superficial Aquifer Designations No Data Available				
11	Source Protection Zones Name: Various Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A18SW (N)	596	3	384925 334524
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
	Detailed River Network Lines None				
12	Detailed River Network Offline Drainage River Type: Tertiary River Hydrographic Area: D004	A8NE (S)	489	3	385189 333476

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	Historical Landfill Sites Licence Holder: Staffordshire County Council Location: Coates Avenue, Swynnerton, Staffordshire Name: New Birch House Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD29114 First Input Date: 1st April 1977 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 4/F/77/0050, Z03, 9999/9779	A12NE (NW)	723	3	384448 334250
14	Historical Landfill Sites Licence Holder: Not Supplied Location: Meece, Swynnerton Name: Meece Refuse Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD29115 First Input Date: 1st January 1970 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Household Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: STAFFORD BOROUGH 18, 9999/9168	A12NE (NW)	729	3	384439 334244
15	Historical Landfill Sites Licence Holder: D O Wood (Plant Contractors) Location: Cold Meece, Swynnerton, Staffordshire Name: Highlows Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD29117 First Input Date: 31st December 1991 Last Input Date: 31st December 1993 Specified Waste: Deposited Waste included Inert and Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: W32, 4/D/91/0352, 9999/9791	A9NE (SE)	976	3	385873 333352
16	Licensed Waste Management Facilities (Landfill Boundaries) Name: Meece 1 - Inert & Non Hazardous Landfill Site Licence Number: 42353 Location: Meece 1 Landfill Site, Swynnerton, Cold Meece, Stone, Staffordshire, ST15 0QN Licence Holder: Poplars Resource Management Company Ltd Authority: Environment Agency - Midlands Region, Central Area Site Category: Household, Commercial And Industrial Waste Landfills Max Input Rate: Not Supplied Licence Status: PPC Issued: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A13NE (NE)	0	3	385108 333958
17	Licensed Waste Management Facilities (Landfill Boundaries) Name: Meece li Landfill Site Epr/Bw0096ij Licence Number: 42902 Location: WESTGATE, SWYNNERTON, COLD MEECE, STONE, STAFFORDSHIRE, ST15 0QN Licence Holder: Biffa Waste Services Ltd Authority: Environment Agency - Midlands Region, Central Area Site Category: Waste Landfilling; >10 T/D with Capacity >25,000T Excluding Inert Waste Max Input Rate: Not Supplied Licence Status: Effective Issued: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A13SE (SE)	121	3	385213 333899

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	Licensed Waste Management Facilities (Locations) Licence Number: 42353 Location: Meece 1 Landfill Site, Swynnerton, Cold Meece, Stone, Staffordshire, ST15 0QN Operator Name: Poplars Resource Management Company Ltd Operator Location: Not Supplied Authority: Environment Agency - Midlands Region, Central Area Site Category: Household, Commercial And Industrial Waste Landfills Licence Status: To PPC Issued: 26th March 1993 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: BV4967IW Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	419	3	385493 333793
19	Licensed Waste Management Facilities (Locations) Licence Number: 42902 Location: Meece 2 Landfill Site, Swynnerton, Cold Meece, Stone, Staffordshire, ST15 0QN Operator Name: Biffa Waste Services Ltd Operator Location: Not Supplied Authority: Environment Agency - Midlands Region, Central Area Site Category: Other Landfill Sites Taking Special Waste Licence Status: To PPC Issued: 22nd December 2004 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: BW00961J Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	576	3	385539 333577
	Local Authority Landfill Coverage Name: Staffordshire County Council - Has supplied landfill data		0	4	385108 333958
	Local Authority Landfill Coverage Name: Stafford Borough Council - Has no landfill data to supply		0	5	385108 333958
20	Local Authority Recorded Landfill Sites Location: Meece/ Swynnerton Reference: 18 Authority: Staffordshire County Council, Waste Management Last Reported Status: Unknown Types of Waste: Household Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 10m Boundary Quality: Not Applicable	A12NW (W)	813	4	384350 334250
21	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A13SE (SE)	253	-	385207 333725
22	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A8NE (S)	488	-	385212 333481
23	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A17SE (NW)	587	-	384733 334409
24	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A7NE (SW)	638	-	384614 333557
25	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A7NE (SW)	662	-	384551 333601
26	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A14SW (E)	678	-	385758 333769

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A12SE (SW)	731	-	384451 333640
28	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A7NE (SW)	747	-	384680 333346
29	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A18NE (N)	789	-	385298 334723
30	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A7SE (SW)	999	-	384435 333220
31	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A9NE (SE)	1000	-	385930 333389
32	Registered Landfill Sites Licence Holder: Staffordshire C.C. Licence Reference: 4/F/85/0264 Site Location: Meece Landfill Site, Swynnerton, Stone, Staffordshire Licence Easting: 385000 Licence Northing: 334100 Operator Location: 4 Chapel Street, STAFFORD, Staffordshire, ST14 2BX Authority: Environment Agency - Midlands Region, Upper Trent Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Record supersededSuperseded Dated: 1st March 1996 Preceded By: 4/F/85/0264 (Z28) Licence: Superseded By: 4/F/93/0516 (TZ28) Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste Animal Carcasses Not Used For Research Carcasses And Flesh Clinical Grp E Only- As In Hsc '92 Construction And Demolition Wastes Contaminated Soil House, Com & Ind.Waste Incinerator Residues From Campbell Rd Industrial Effluent Treatment Sludge Rubber Sewage Sludge Shredded Tyres Soap Prohibited Waste Drums/Cont'Rs > 25 L Cap'Y Liquid Wastes Notifiable Wastes N.O.S. Special Wastes Waste N.O.S. Waste With Flash Pt < 40 C	A13NW (NW)	179	3	385000 334100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	<p>Registered Landfill Sites</p> <p>Licence Holder: Poplars Resource Management Co Ltd Licence Reference: 4/F/93/0516 (TZ28) Site Location: Meece Landfill Site, Swynnerton, Stone, Staffordshire Licence Easting: 385000 Licence Northing: 334100 Operator Location: The Priory, Lichfield Street, STONE, Staffordshire, ST15 8NB Authority: Environment Agency - Midlands Region, Upper Trent Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Operational as far as is knownOperational Dated: 1st March 1993 Preceded By: 4/F/85/0264 Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Animal Carcasses Animal Carcasses Not Used For Research Clinical Wastes (Hsc Group E) Construction And Demolition Wastes Contaminated Rubbish/Bags/Sacks Contaminated Soil Excavation Waste House, Com & Ind.Waste Incinerator Residues From Campbell Rd. Ind. Effluent Treatment Sludge/Cake Scrap Rubber Sewage Sludge Shredded Tyres Soap Prohibited Waste: Liquid Wastes Notifiable Wastes N.O.S. Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste Containing Free Solvents Waste N.O.S. Waste With Flash Pt < 40 C</p>	A13NW (NW)	179	3	385000 334100
32	<p>Registered Landfill Sites</p> <p>Licence Holder: Staffordshire C.C. Licence Reference: 4/F/85/0264 (Z28) Site Location: Meece Landfill Site, Swynnerton, Stone, Staffordshire Licence Easting: 385000 Licence Northing: 334100 Operator Location: 4 Chapel Street, STAFFORD, Staffordshire, ST14 2BX Authority: Environment Agency - Midlands Region, Upper Trent Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Record supersededSuperseded Dated: 1st June 1985 Preceded By: Not Given Licence: Superseded By: 4/F/85/0264 Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Clinical Wastes Gulley Cleansing Vehicle Contents House, Com + Ind.Waste Incinerator Residues Prohibited Waste: Full Or Empty Drums Or Containers Liquid Wastes Notifiable Wastes Sludges (Except Gulley Emptyings) Special Wastes Toxic/Poisonous Wastes</p>	A13NW (NW)	179	3	385000 334100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	<p>Registered Landfill Sites</p> <p>Licence Holder: Staffordshire C.C. Licence Reference: 4/F/77/0050 (Z 3) Site Location: New Birch House, Cotes Avenue, Swynnerton, Stone, Staffordshire Licence Easting: 384350 Licence Northing: 334250 Operator Location: 4 Chapel Street, STAFFORD, Staffordshire, ST14 2BX Authority: Environment Agency - Midlands Region, Upper Trent Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: Not Supplied Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Com. + Ind. Waste Gulley Detritus House. + Com. Baled Waste House. + Com. Untreated Waste Incinerator Residues Street Sweepings Prohibited Waste: Notifiable Wastes</p>	A12NW (W)	813	3	384350 334250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	Explosive Sites Name: Swynnerton Training Area/Echo 2 Ltd Location: Cold Meece, Stone, Staffs, St15 0qn Status: Active Positional Accuracy: Manually positioned within the geographical locality	A8NW (S)	541	6	385045 333421

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A13NE (NE)	0	2	385108 333958
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	0	2	385108 333958
	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: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (E)	549	2	385657 333942
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A18SW (N)	595	2	384926 334524
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18SW (N)	603	2	385000 334550
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17SE (NW)	712	2	384582 334437
	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: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NE (N)	736	2	385315 334664

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium 1.8 - 2.2 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	958	2	385108 333000
35	BGS Recorded Mineral Sites Site Name: Horsley Pits Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 63996 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13SE (S)	283	2	385194 333689
36	BGS Recorded Mineral Sites Site Name: Horsley Pits Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 63997 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A8NE (S)	375	2	385248 333610
37	BGS Recorded Mineral Sites Site Name: Birch House Farm Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 64022 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A8NE (S)	496	2	385205 333472
38	BGS Recorded Mineral Sites Site Name: Birch House Farm Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 64015 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	664	2	384549 333600
39	BGS Recorded Mineral Sites Site Name: Birch House Farm Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 64017 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	674	2	384602 333513

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Birch House Farm Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 64016 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	724	2	384585 333459
41	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Birch House Farm Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 64014 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A12SE (SW)	734	2	384449 333636
42	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Birch House Farm Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 64018 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	752	2	384674 333344
43	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Swynnerton Park Brick Works Location: , Swynnerton, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 63805 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Palaeogene Geology: Butterton - Swynnerton Dykes Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A18NE (N)	835	2	385274 334776
44	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Pilson'S Wood Location: , Yarnfield, Stone, Staffordshire Source: British Geological Survey, National Geoscience Information Service Reference: 64026 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A9NE (SE)	996	2	385877 333326
	<p>BGS Measured Urban Soil Chemistry</p> <p>No data available</p>				
	<p>BGS Urban Soil Chemistry Averages</p> <p>No data available</p>				
	<p>Coal Mining Affected Areas</p> <p>In an area that might not be affected by coal mining</p>				
	<p>Non Coal Mining Areas of Great Britain</p> <p>No Hazard</p>				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	2	385108 333958
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	109	2	385000 333958
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	2	385108 333958
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	109	2	385000 333958
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	2	385108 333958
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	109	2	385000 333958
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	2	385108 333958
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	109	2	385000 333958
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	2	385108 333958
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	109	2	385000 333958
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	2	385108 333958
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	109	2	385000 333958
	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	A13NE (NE)	0	2	385108 333958
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	2	385108 333958

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	Contemporary Trade Directory Entries Name: Daystate Ltd Location: Cotes, Swynnerton, Stone, Staffordshire, ST15 0QQ Classification: Gunsmiths Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (W)	972	-	384149 333803
45	Contemporary Trade Directory Entries Name: Rowe Precision & General Engineers Ltd Location: Swynnerton Workshops, Cotes, Swynnerton, Stone, Staffordshire, ST15 0QQ Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A12SW (W)	972	-	384149 333803
45	Contemporary Trade Directory Entries Name: Topmarc Ltd Location: Cotes, Swynnerton, Stone, Staffordshire, ST15 0QQ Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (W)	972	-	384149 333803
46	Points of Interest - Manufacturing and Production Name: Meece Landfill - Landfill Gas (DECC) Location: Westgate, Swynnerton, Stone, ST15 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location	A13SE (E)	298	8	385400 333900
47	Points of Interest - Public Infrastructure Name: Landfill Site Location: ST15 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	182	8	385091 334139
48	Points of Interest - Public Infrastructure Name: Landfill Site Location: ST15 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	537	8	384727 334336
49	Points of Interest - Public Infrastructure Name: Sluice Location: ST15 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	899	8	385607 334705

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
50	Ancient Woodland Name: Not Supplied Reference: 1411607 Area(m ²): 12811.32 Type: Plantation on Ancient Woodland	A14SW (E)	430	9	385537 333954
51	Ancient Woodland Name: Not Supplied Reference: 1411608 Area(m ²): 21298.11 Type: Ancient and Semi-Natural Woodland	A14NE (E)	680	9	385786 334004
52	Areas of Adopted Green Belt Authority: Stafford Borough Council Plan Name: Proposal Map Status: Adopted Plan Date: 19th June 2014	A13NE (NE)	325	10	385358 334166
53	Nitrate Vulnerable Zones Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A13NE (NE)	0	11	385108 333958
54	Nitrate Vulnerable Zones Name: Not Supplied Description: Groundwater Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A18SE (N)	579	11	385159 334534

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Stafford Borough Council - Environmental Health Department Newcastle-under-Lyme Borough Council - Environmental Health Department	March 2015 September 2013	Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Midlands Region	April 2016	Quarterly
Enforcement and Prohibition Notices Environment Agency - Midlands Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - Midlands Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - Midlands Region	April 2016	Quarterly
Local Authority Integrated Pollution Prevention And Control Newcastle-under-Lyme Borough Council - Environmental Health Department Stafford Borough Council - Environmental Health Department	November 2015 October 2011	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Controls Newcastle-under-Lyme Borough Council - Environmental Health Department Stafford Borough Council - Environmental Health Department	November 2015 October 2011	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Newcastle-under-Lyme Borough Council - Environmental Health Department Stafford Borough Council - Environmental Health Department	November 2015 October 2011	Annual Rolling Update Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - Midlands Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Midlands Region	July 2015	As notified
Prosecutions Relating to Controlled Waters Environment Agency - Midlands Region	March 2013	As notified
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - Upper Trent Area	April 2016 April 2016	Quarterly Quarterly
Water Abstractions Environment Agency - Midlands Region	April 2016	Quarterly
Water Industry Act Referrals Environment Agency - Midlands Region	April 2016	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	April 2016	Quarterly

Agency & Hydrological	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2016	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2016	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2016	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	February 2016	Quarterly
Flood Defences Environment Agency - Head Office	February 2016	Quarterly
Detailed River Network Lines Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	May 2016	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Midlands Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - Upper Trent Area	May 2016 May 2016	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - Upper Trent Area	April 2016 April 2016	Quarterly Quarterly
Local Authority Landfill Coverage Newcastle-under-Lyme Borough Council - Environmental Health Department Stafford Borough Council - Environmental Health Department Staffordshire County Council - Waste Management	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Newcastle-under-Lyme Borough Council - Environmental Health Department Stafford Borough Council - Environmental Health Department Staffordshire County Council - Waste Management	August 2003 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - Midlands Region - Upper Trent Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - Midlands Region - Upper Trent Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Midlands Region - Upper Trent Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	February 2016	Bi-Annually
Explosive Sites Health and Safety Executive	February 2016	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Newcastle-under-Lyme Borough Council Stafford Borough Council Staffordshire County Council	February 2016 February 2016 February 2016	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Newcastle-under-Lyme Borough Council Stafford Borough Council Staffordshire County Council	February 2016 February 2016 February 2016	Annual Rolling Update Annual Rolling Update Annual Rolling Update

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2016	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	June 2016	Quarterly
Fuel Station Entries Catalist Ltd - Experian	July 2016	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	June 2016	Quarterly
Points of Interest - Education and Health PointX	June 2016	Quarterly
Points of Interest - Manufacturing and Production PointX	June 2016	Quarterly
Points of Interest - Public Infrastructure PointX	June 2016	Quarterly
Points of Interest - Recreational and Environmental PointX	June 2016	Quarterly
Underground Electrical Cables National Grid	January 2016	Bi-Annually

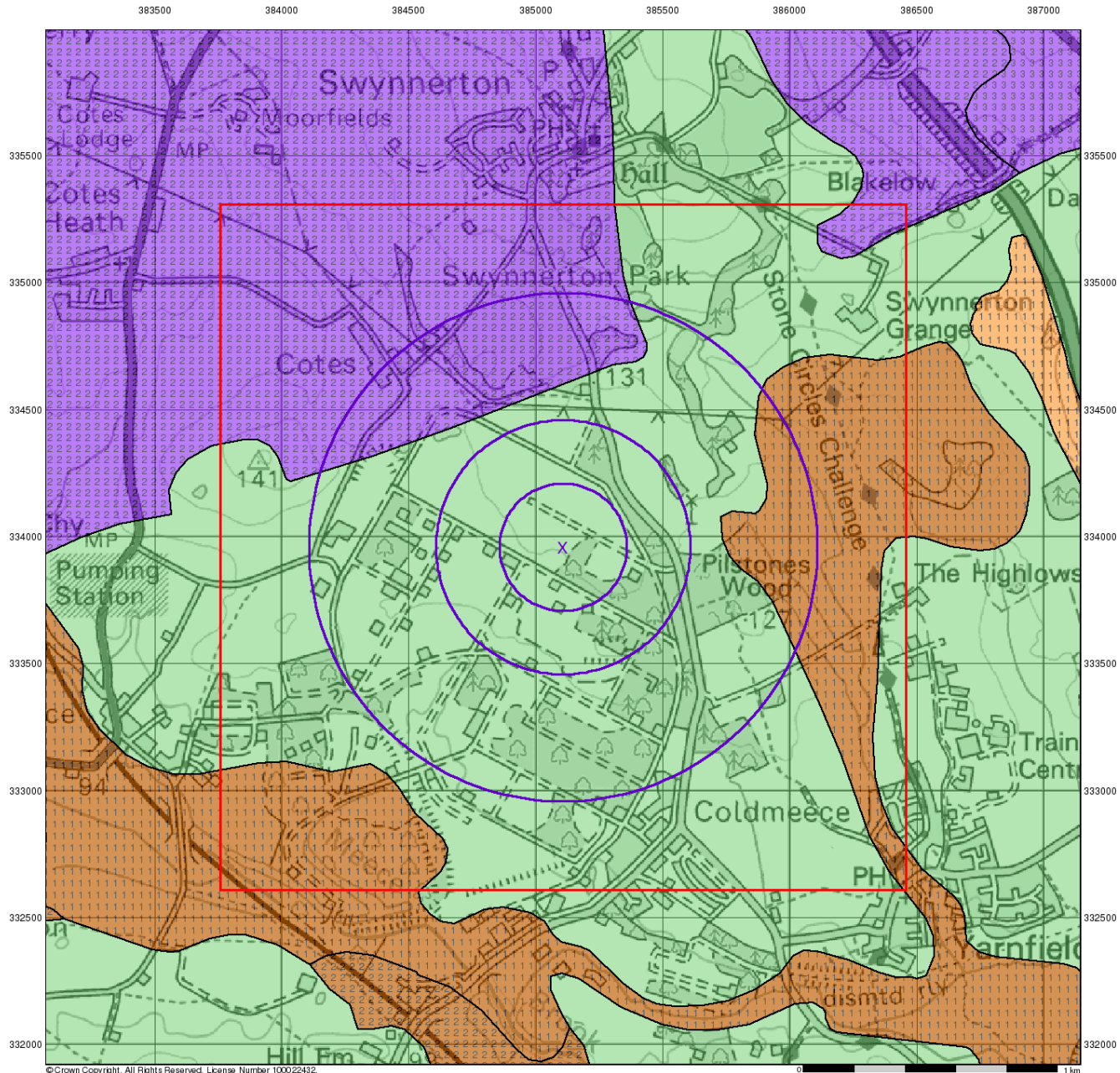
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	June 2015	Bi-Annually
Areas of Adopted Green Belt Newcastle-under-Lyme Borough Council Stafford Borough Council	May 2016 May 2016	As notified As notified
Areas of Unadopted Green Belt Newcastle-under-Lyme Borough Council Stafford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

A selection of organisations who provide data within this report

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

Contact	Name and Address	Contact Details
2	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	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
5	Stafford Borough Council - Environmental Health Department Civic Offices, Riverside, Stafford, Staffordshire, ST16 3AQ	Telephone: 01785 619000 Fax: 01785 223156 Website: www.staffordbc.gov.uk
6	Health and Safety Executive 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
7	The Coal Authority - Property Searches 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk
8	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
9	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
10	Stafford Borough Council Civic Offices, Riverside, Stafford, Staffordshire, ST16 3AQ	Telephone: 01785 223181 Fax: 01785 223156 Website: www.staffordbc.gov.uk
11	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
12	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
-	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

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



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Groundwater Vulnerability

General

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

Agency and Hydrological

Geological Classes

- Major Aquifer (Highly Permeable)**
 - High (H) 1, 2, 3, U
 - Intermediate (I) 1, 2
 - Low

- Minor Aquifer (Variably Permeable)**
 - High (H) 1, 2, 3, U
 - Intermediate (I) 1, 2
 - Low

- Non Aquifer (Negligibly Permeable)**

-

- Water or Sea**

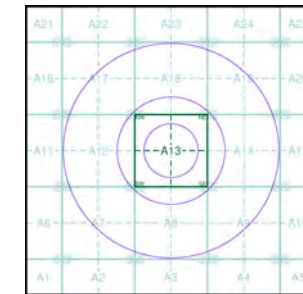
-

- Drift Deposit**

-

Soil Classes

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

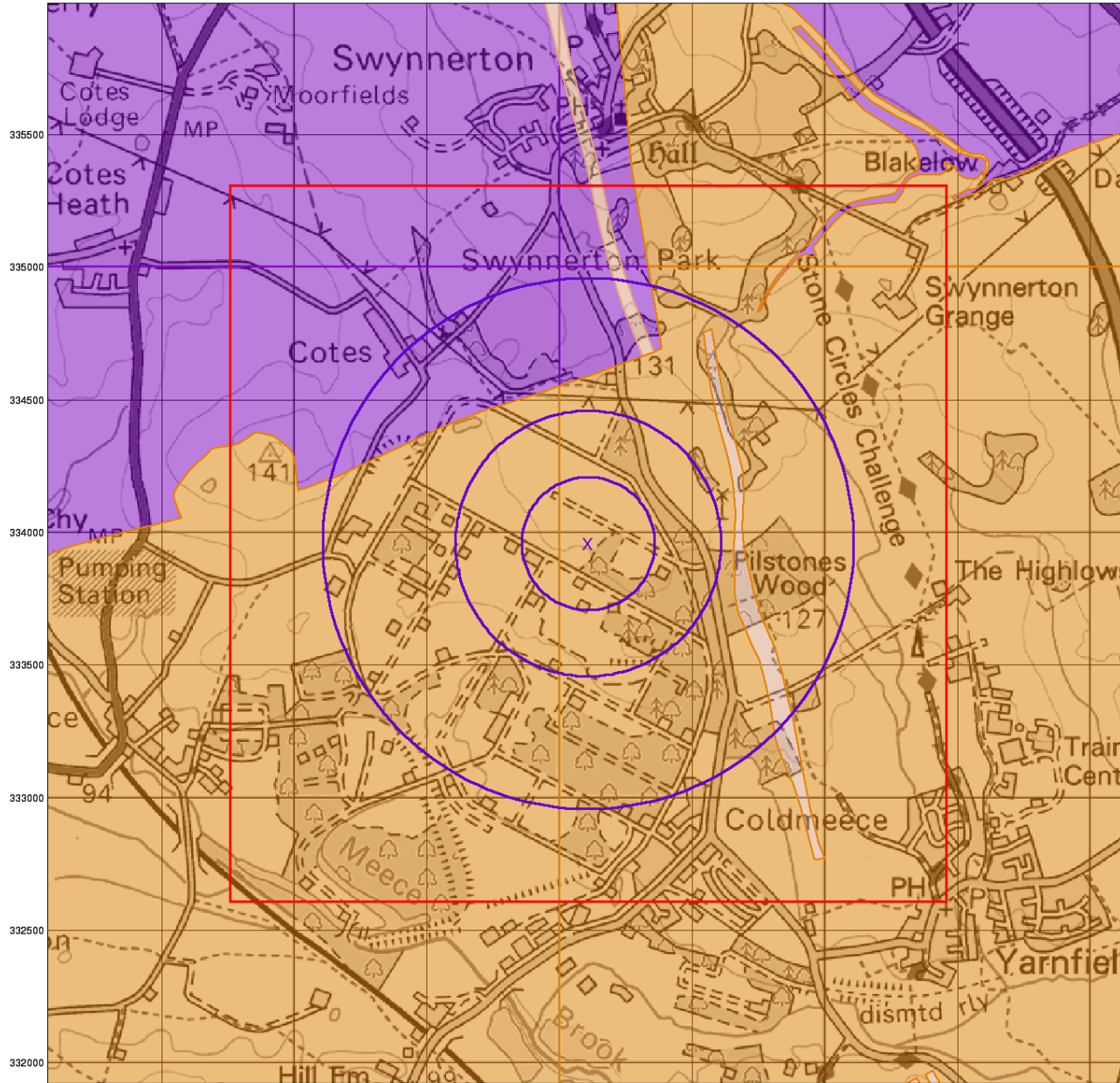
Site Details

Site at 385340, 334000



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 Fax: 0844 844 9951
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383500 384000 384500 385000 385500 386000 386500 387000



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0 1 km



Bedrock Aquifer Designation

General

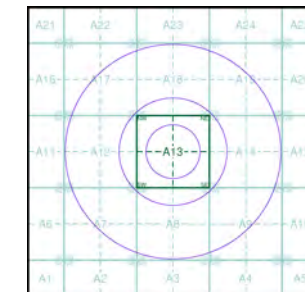
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

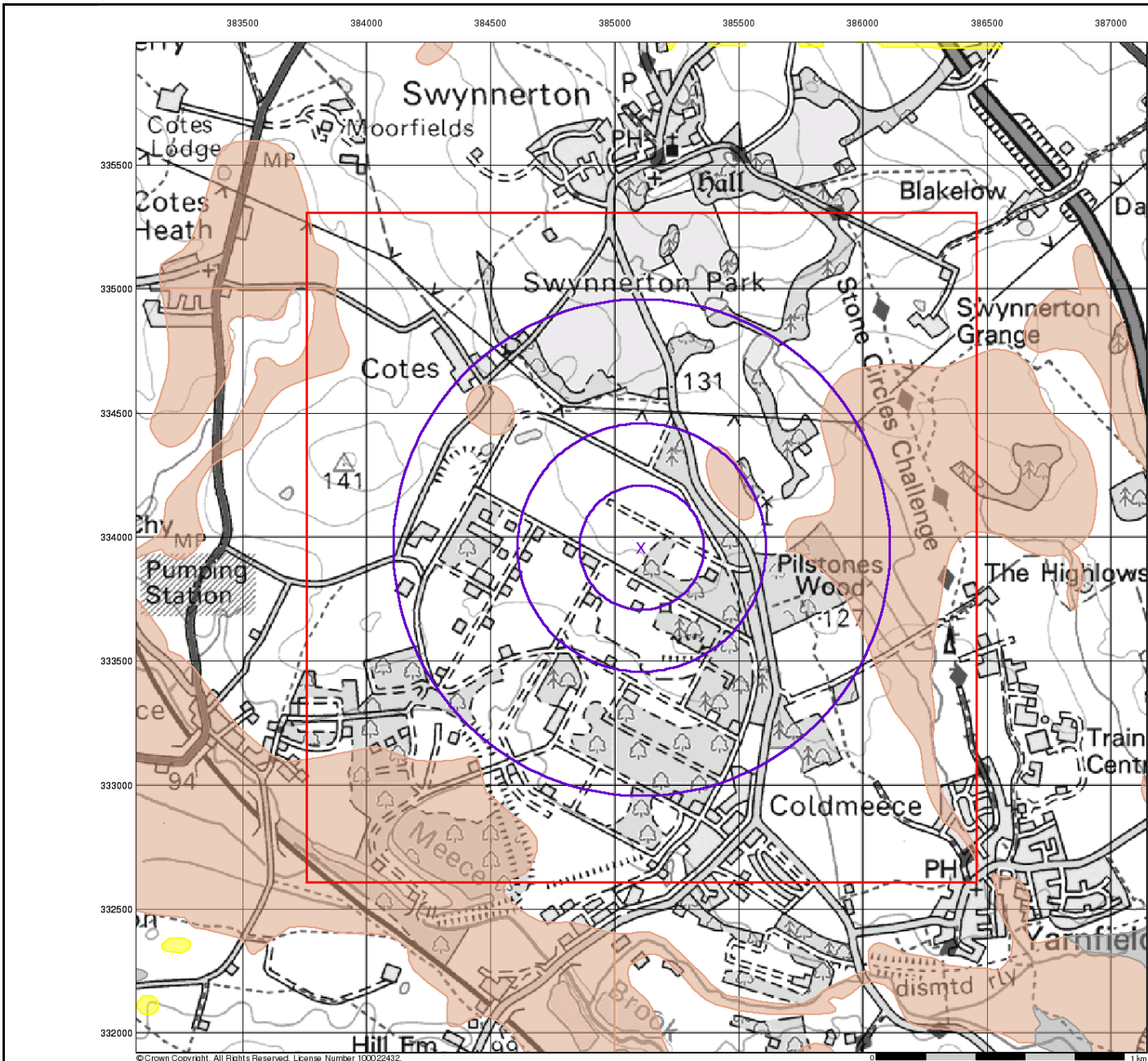
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 Site Area (Ha): 0.01
 Search Buffer (m): 1000

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Superficial Aquifer Designation

General

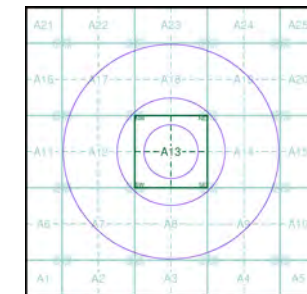
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

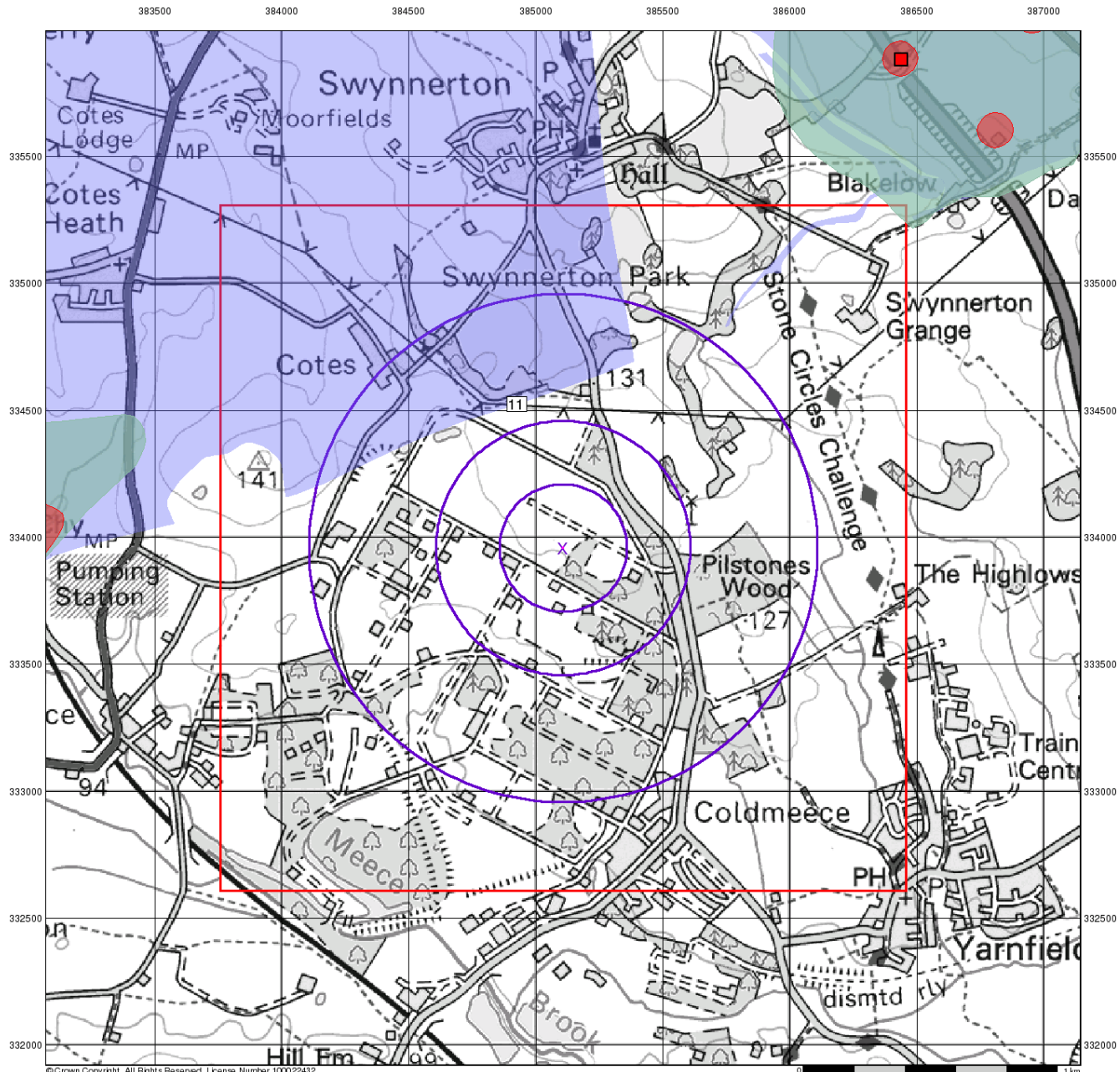
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 Customer Ref: 60471494
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 Site Area (Ha): 0.01
 Search Buffer (m): 1000

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Source Protection Zones

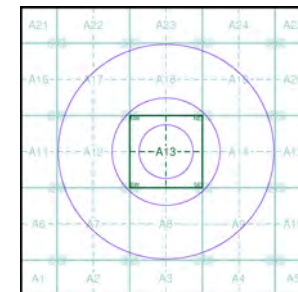
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

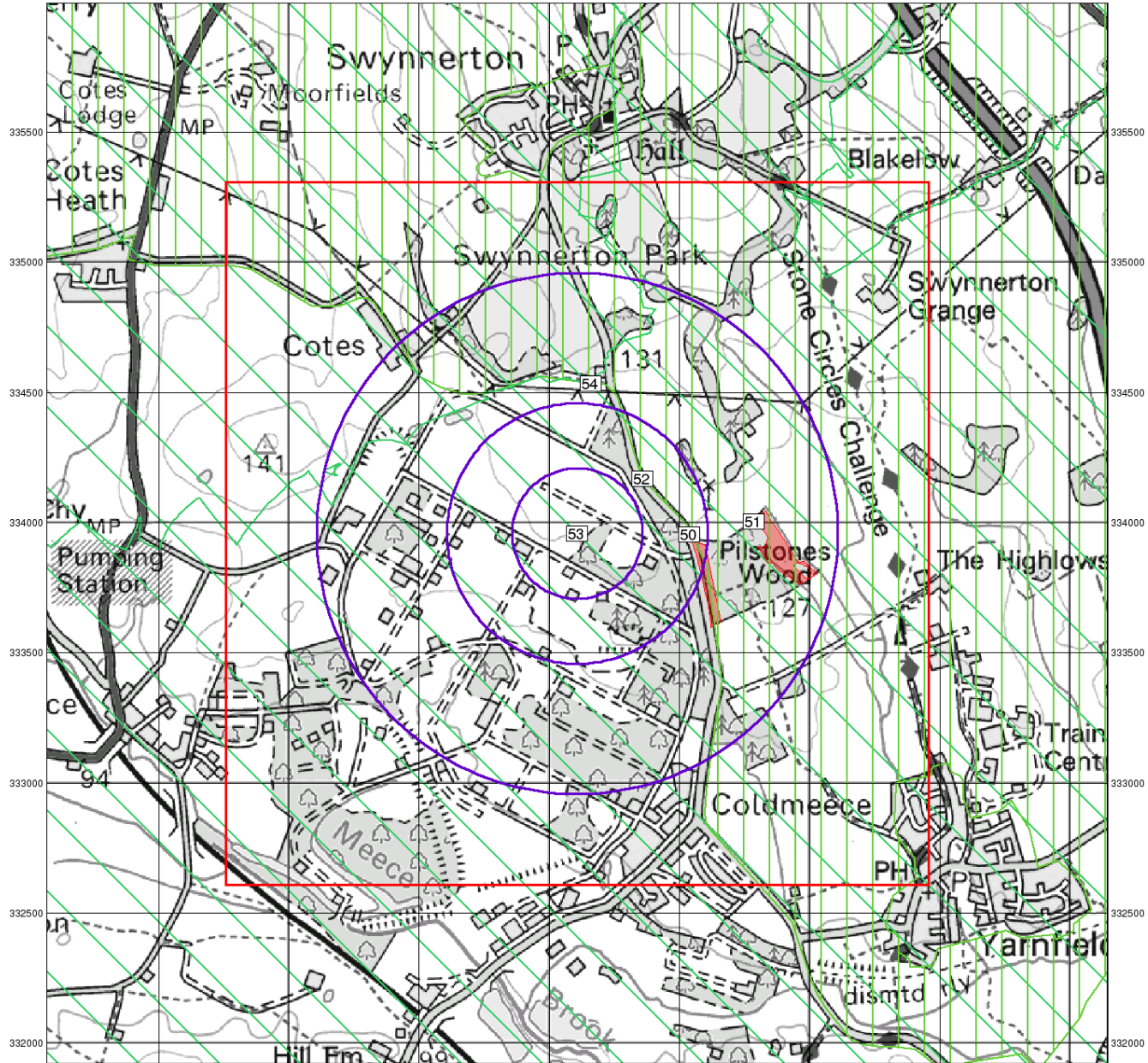
Site Details

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Sensitive Land Uses

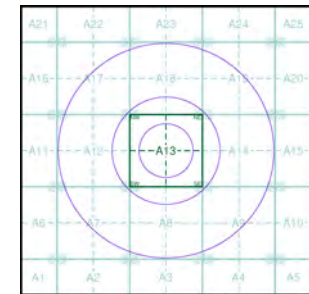
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

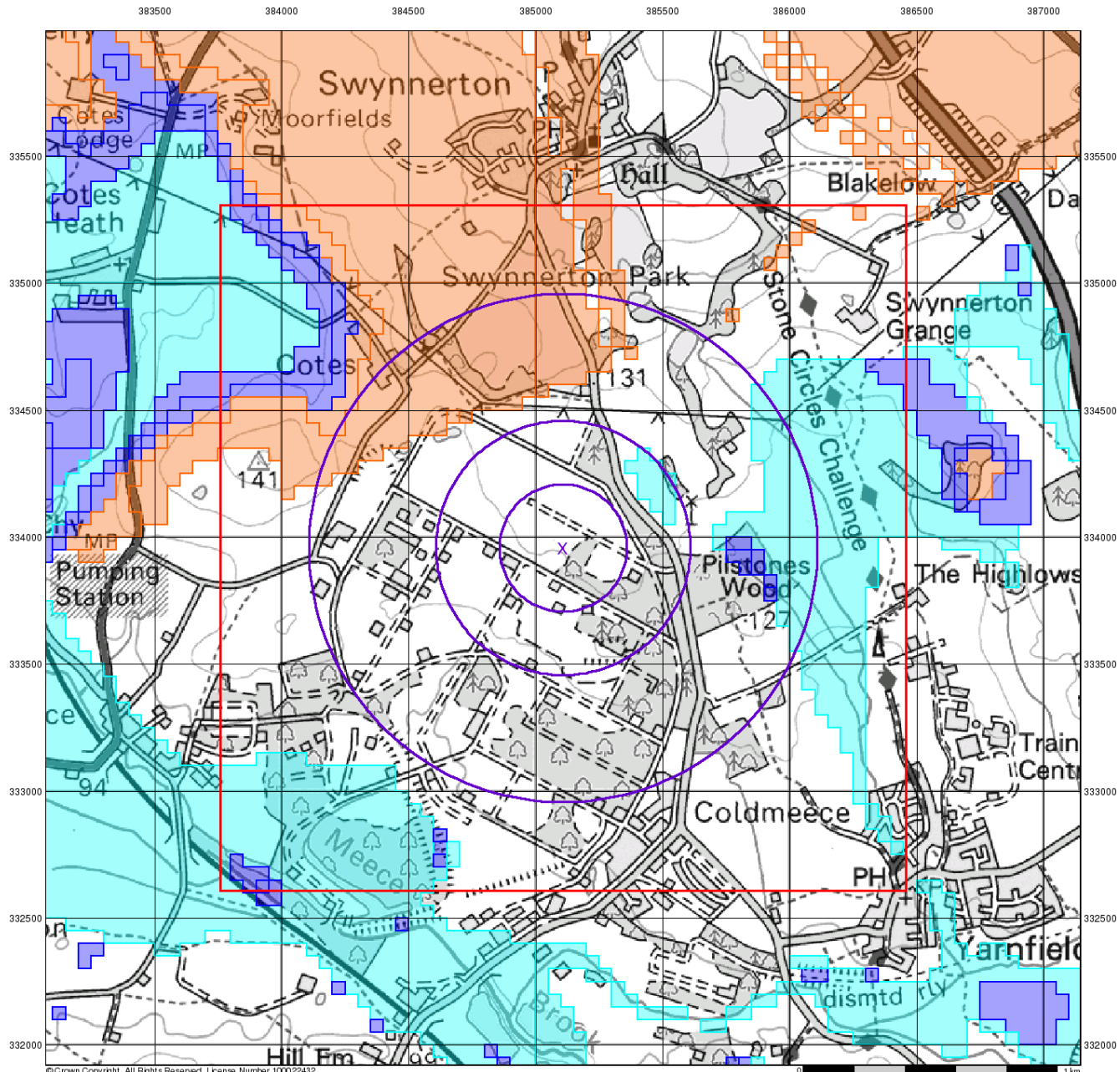
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 Site Area (Ha): 0.01
 Search Buffer (m): 1000

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BGS Flood GFS Data

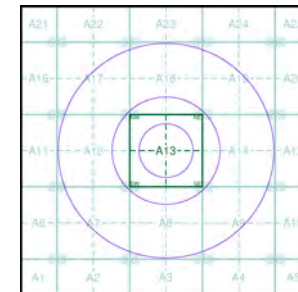
General

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

Agency and Hydrological (Flood)

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

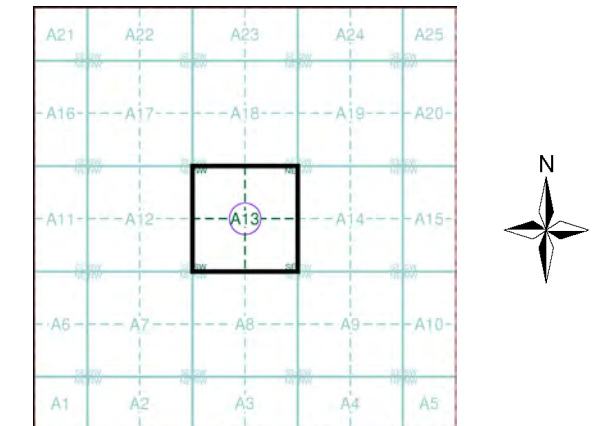
Site at 385340, 334000



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 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
 - Pylon
 - Overhead Transmission Line
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control 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
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site

Site Sensitivity Map - Segment A13

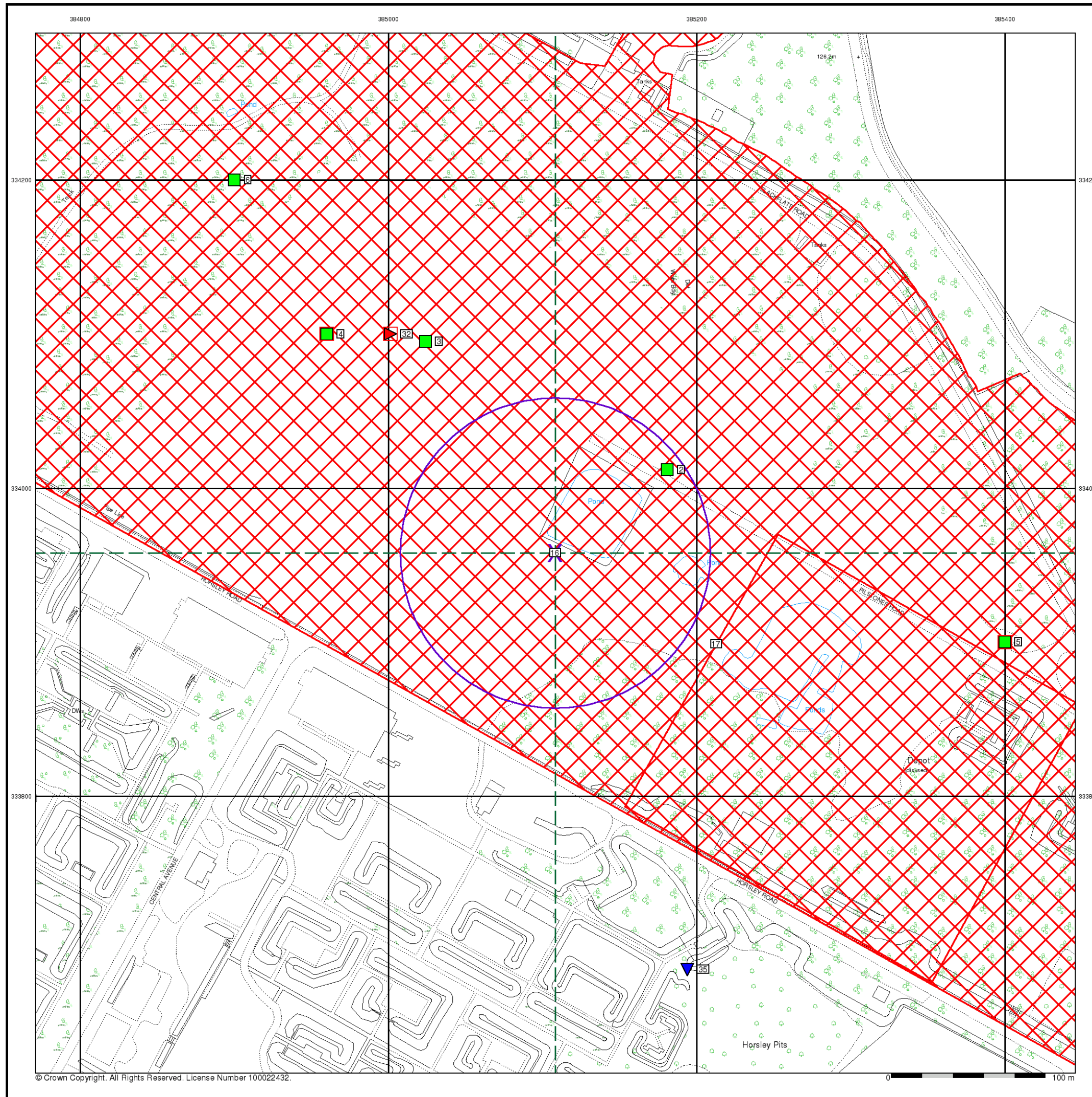


Order Details

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 Plot Buffer (m): 100

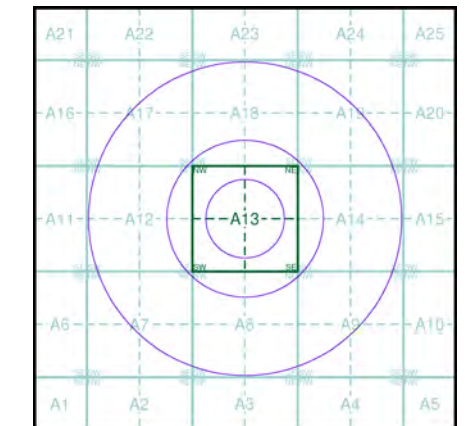
Site Details

Site at 385340, 334000



- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
- 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
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - 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
 - NIHNS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - BGS Recorded Mineral Site
- Geological**
- BGS Recorded Mineral Site

Site Sensitivity Map - Slice A

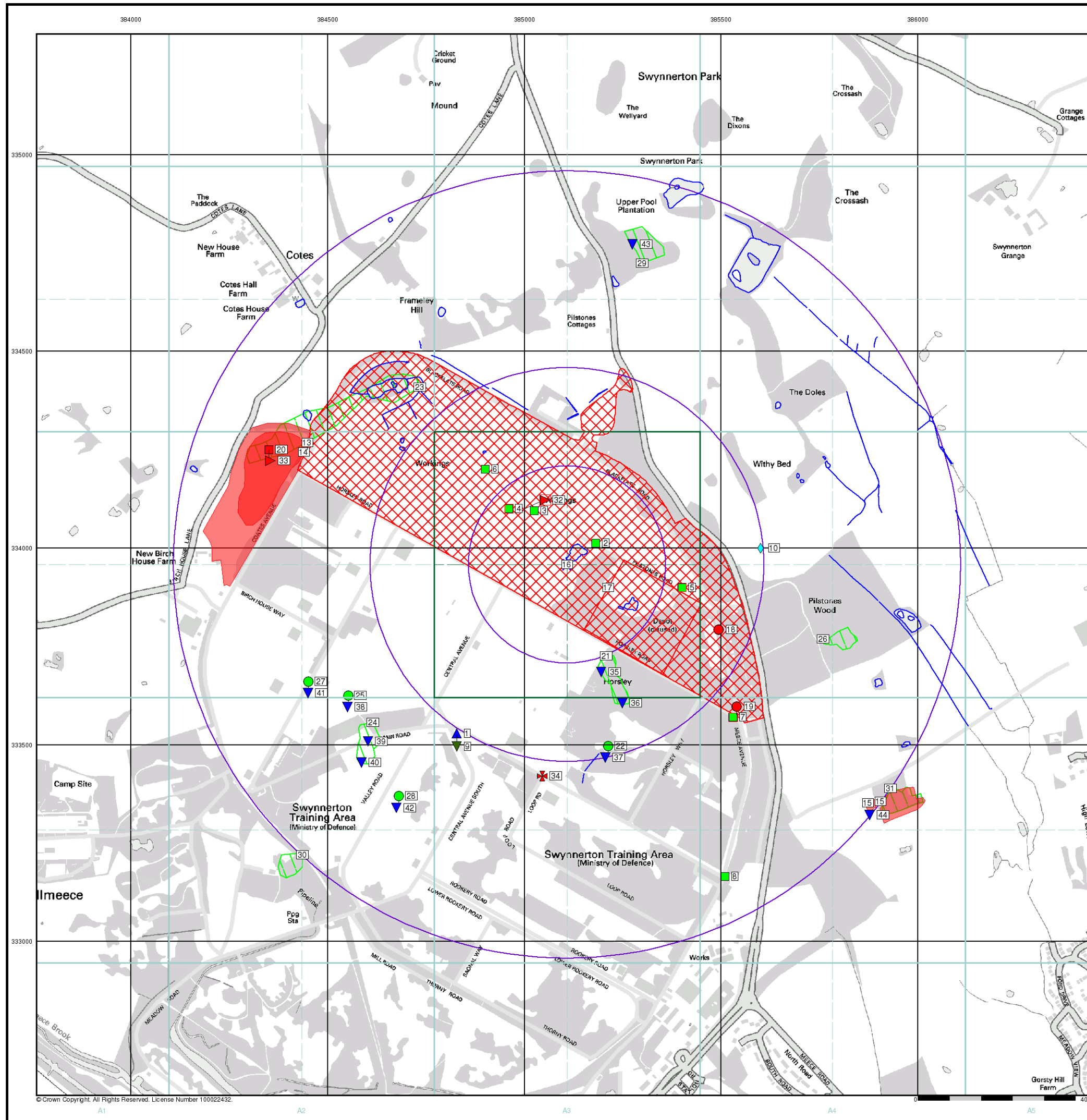


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Industrial Land Use Map

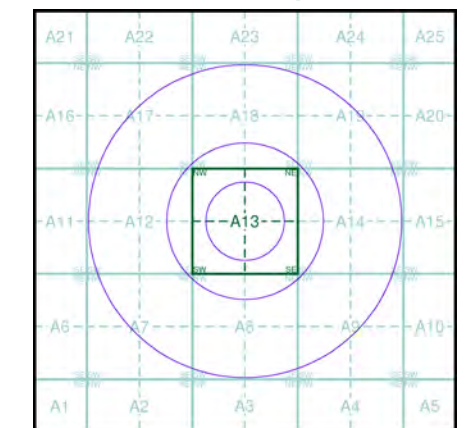
General

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

Industrial Land Use

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

Industrial Land Use Map - Slice A

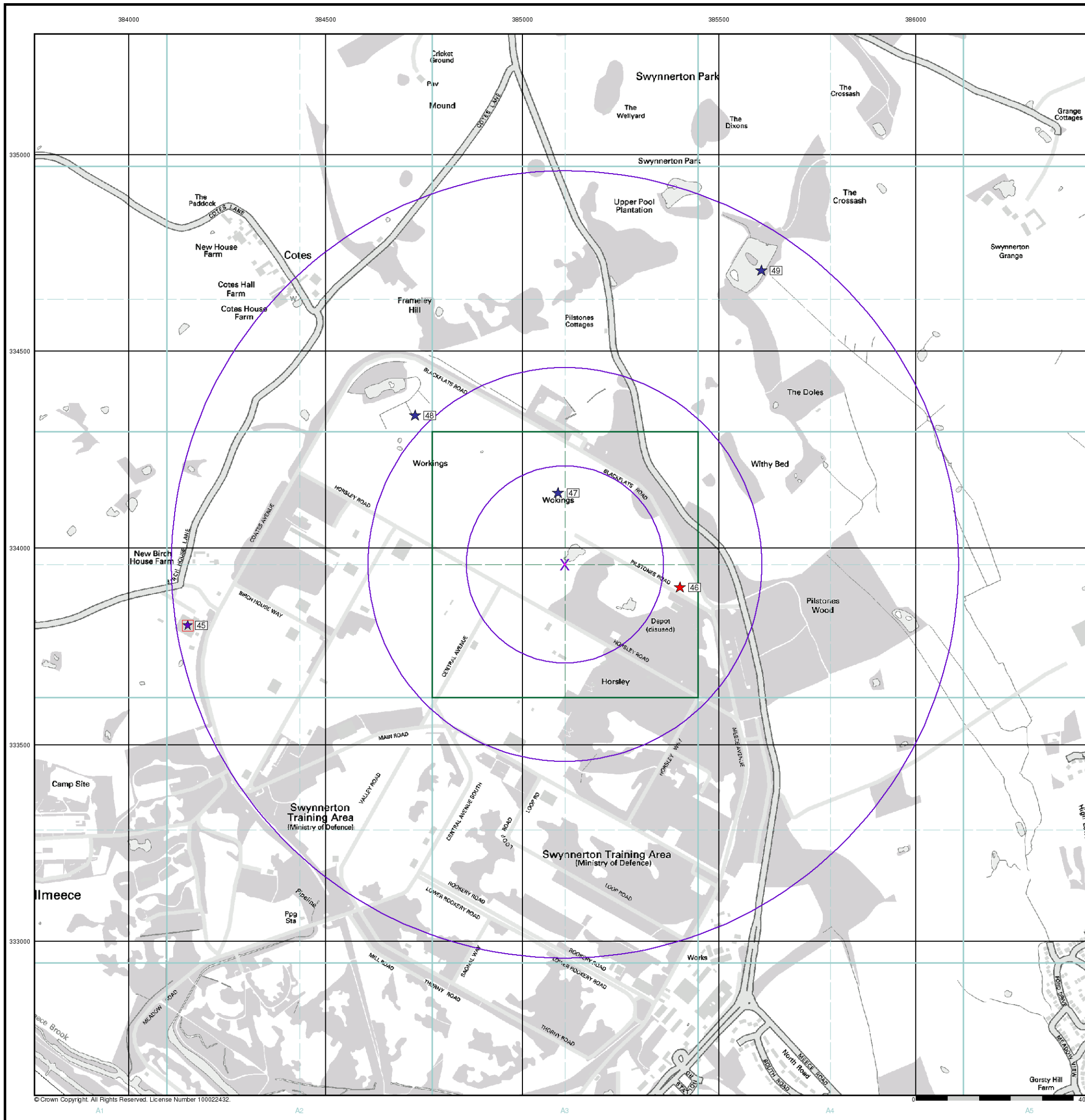


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
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Site Details

Site at 385340, 334000



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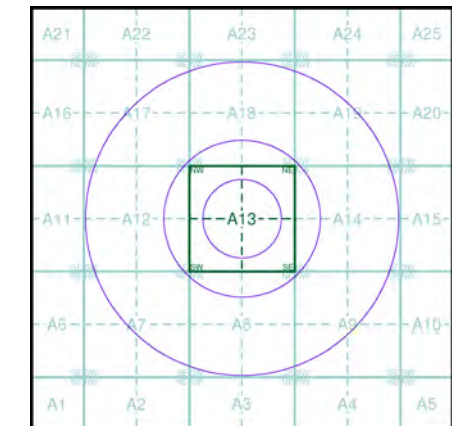
General

- 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

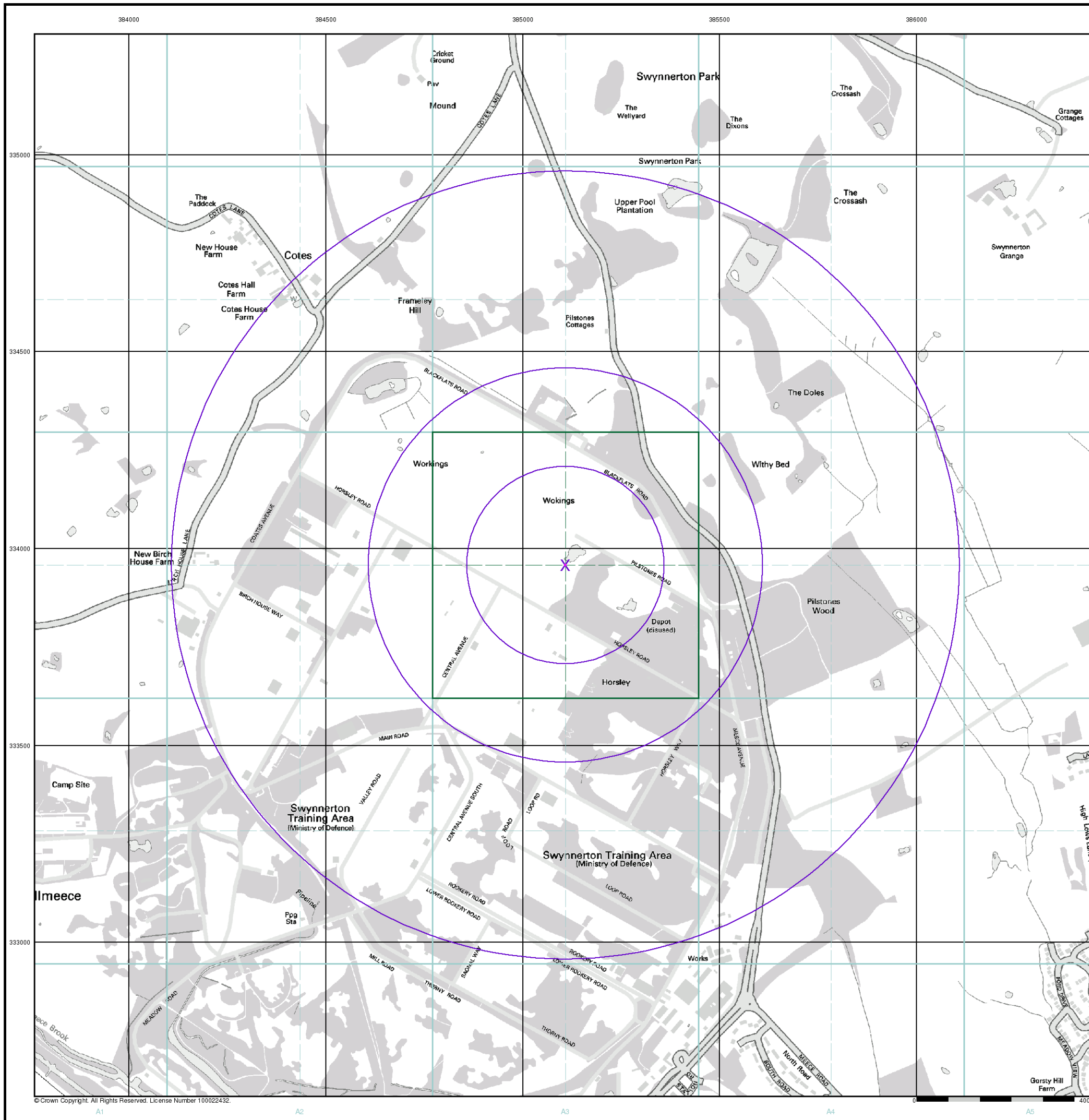


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



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General

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

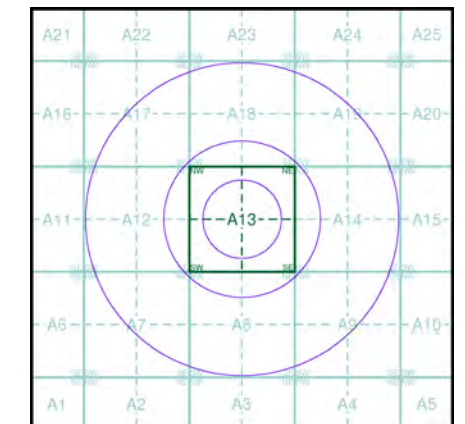
Agency and Hydrological (Boreholes)

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

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

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

Borehole Map - Slice A

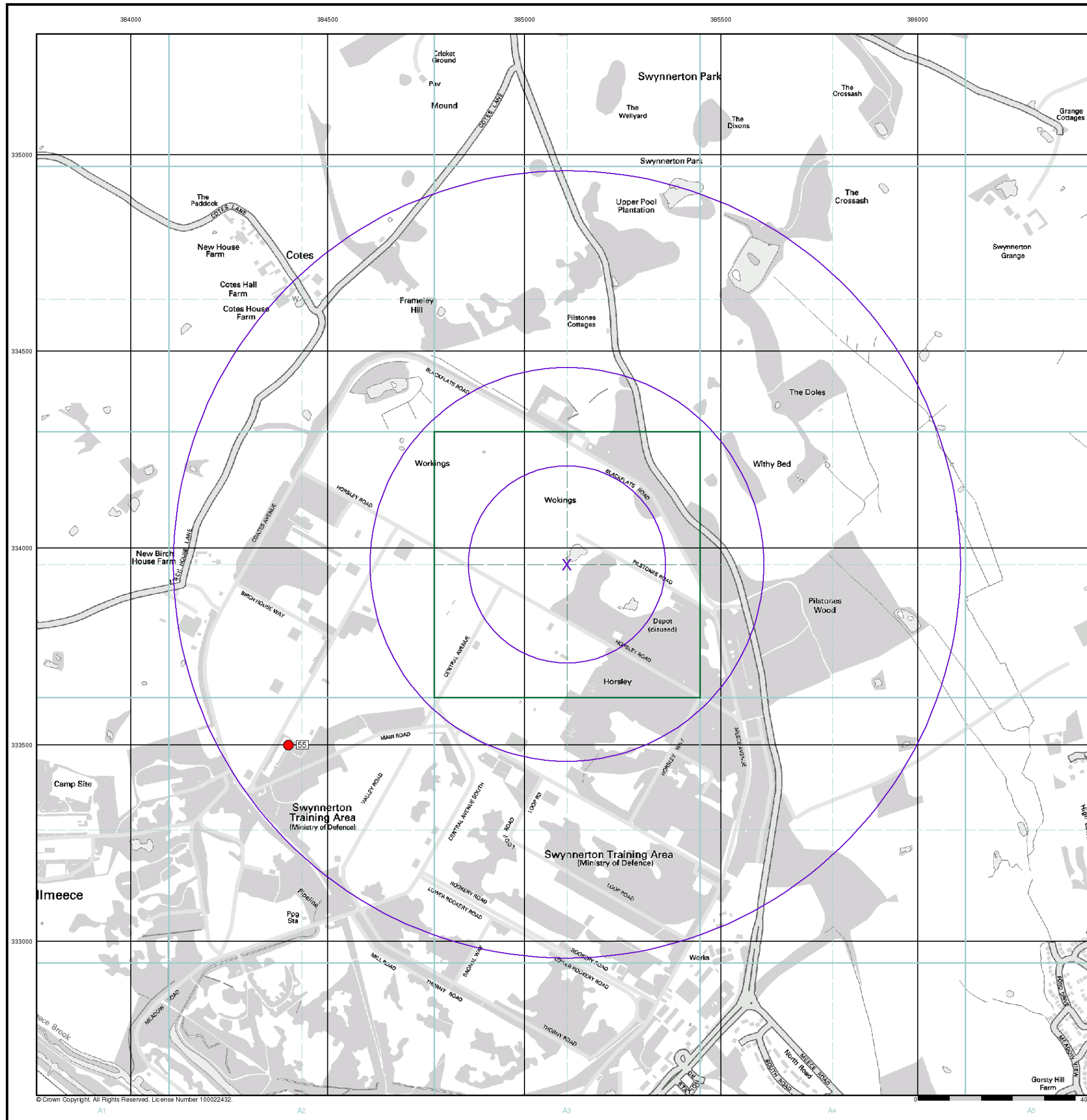


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



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General

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

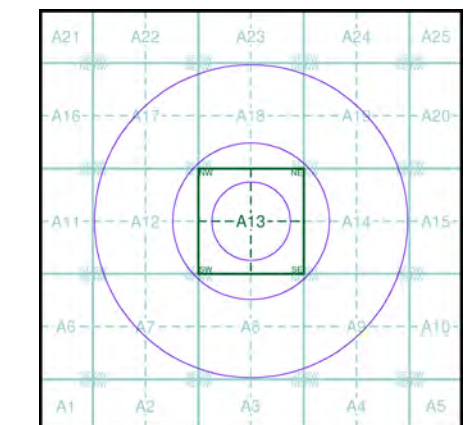
Detailed River Network Data

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

Contours (height in metres)

- Standard Contour 105 100 95
- Master Contour
- Spot Height *167.3
- MLW Mean Low Water
- MHW Mean High Water

E/ANRW Detailed River Network Map - Slice A

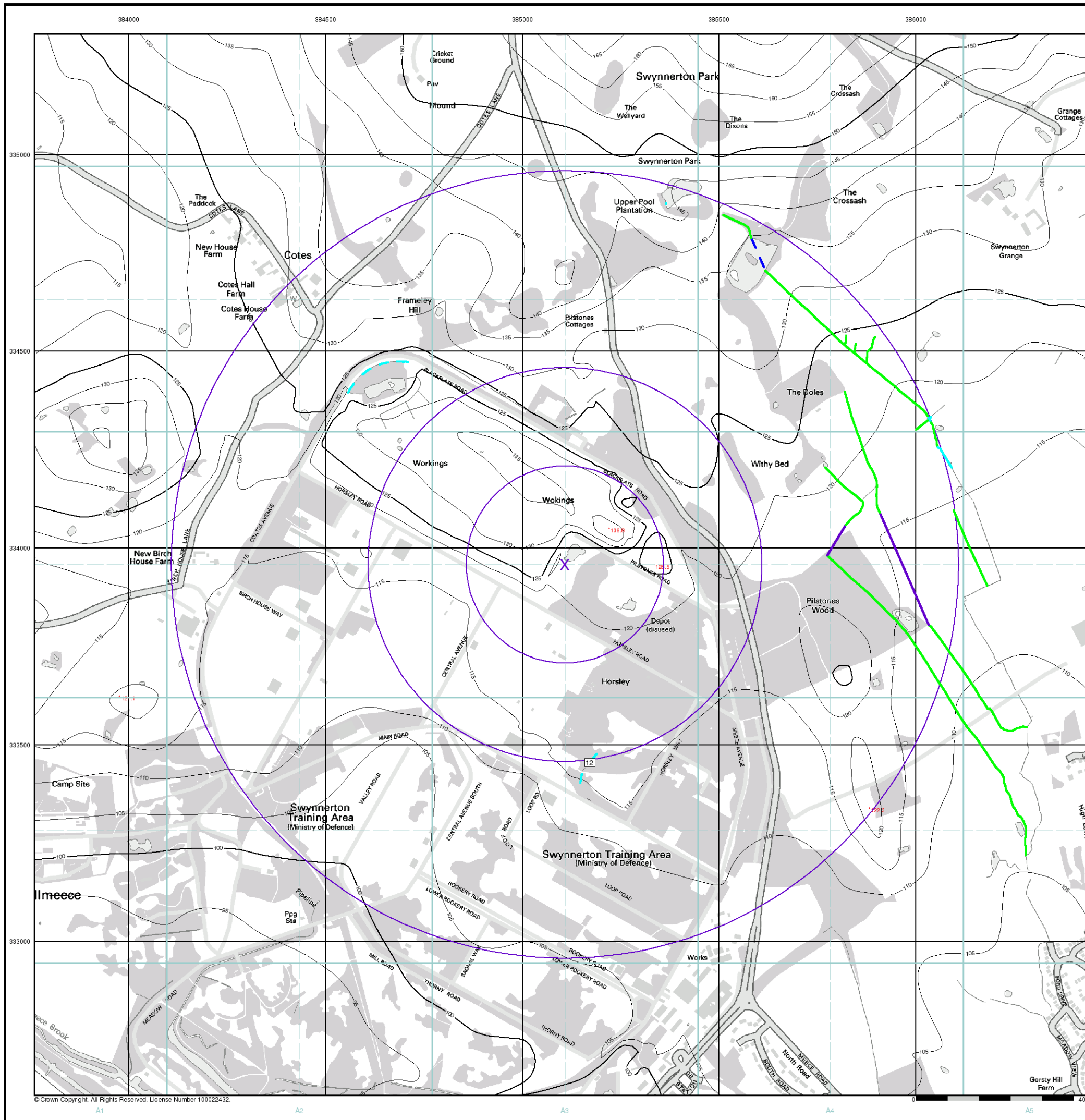


Order Details




Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



General

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

Risk of Flooding from Surface Water

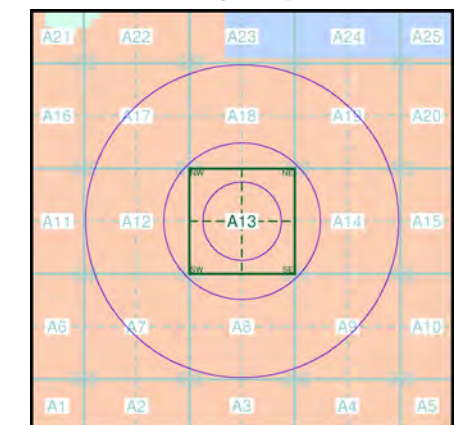
-  High - 30 Year Return
-  Medium - 100 Year Return
-  Low - 1000 Year Return

Suitability

See the suitability map below

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

EANRW Suitability Map - Slice A

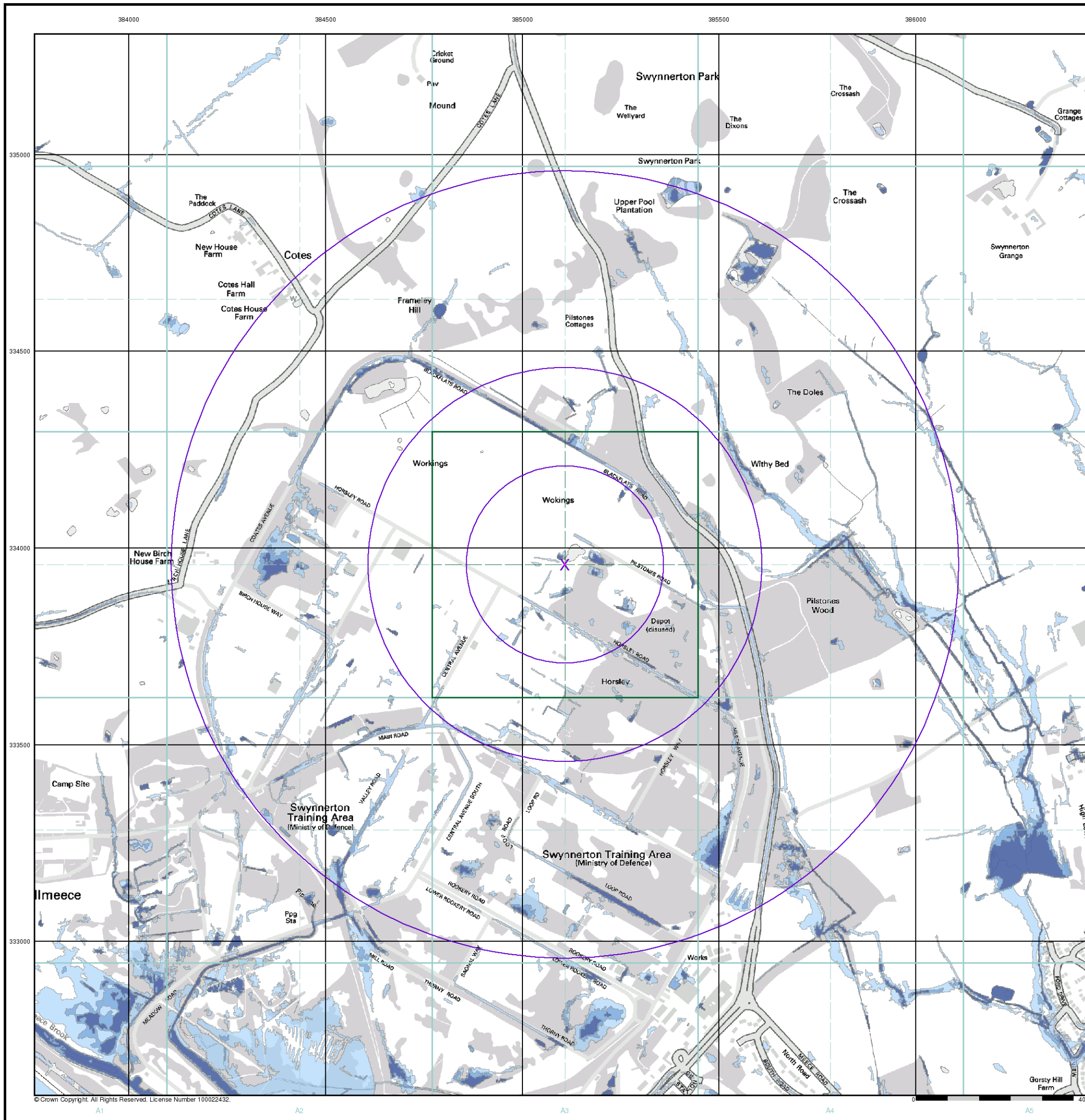


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



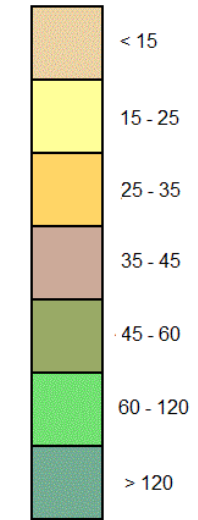
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General

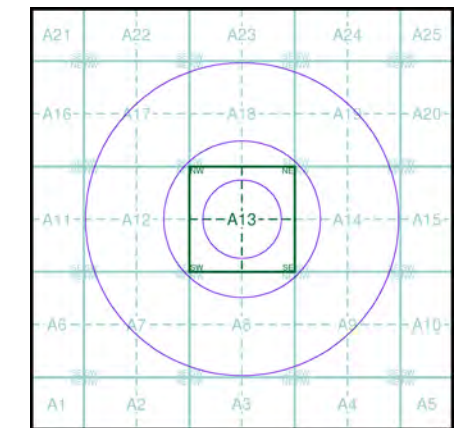
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A

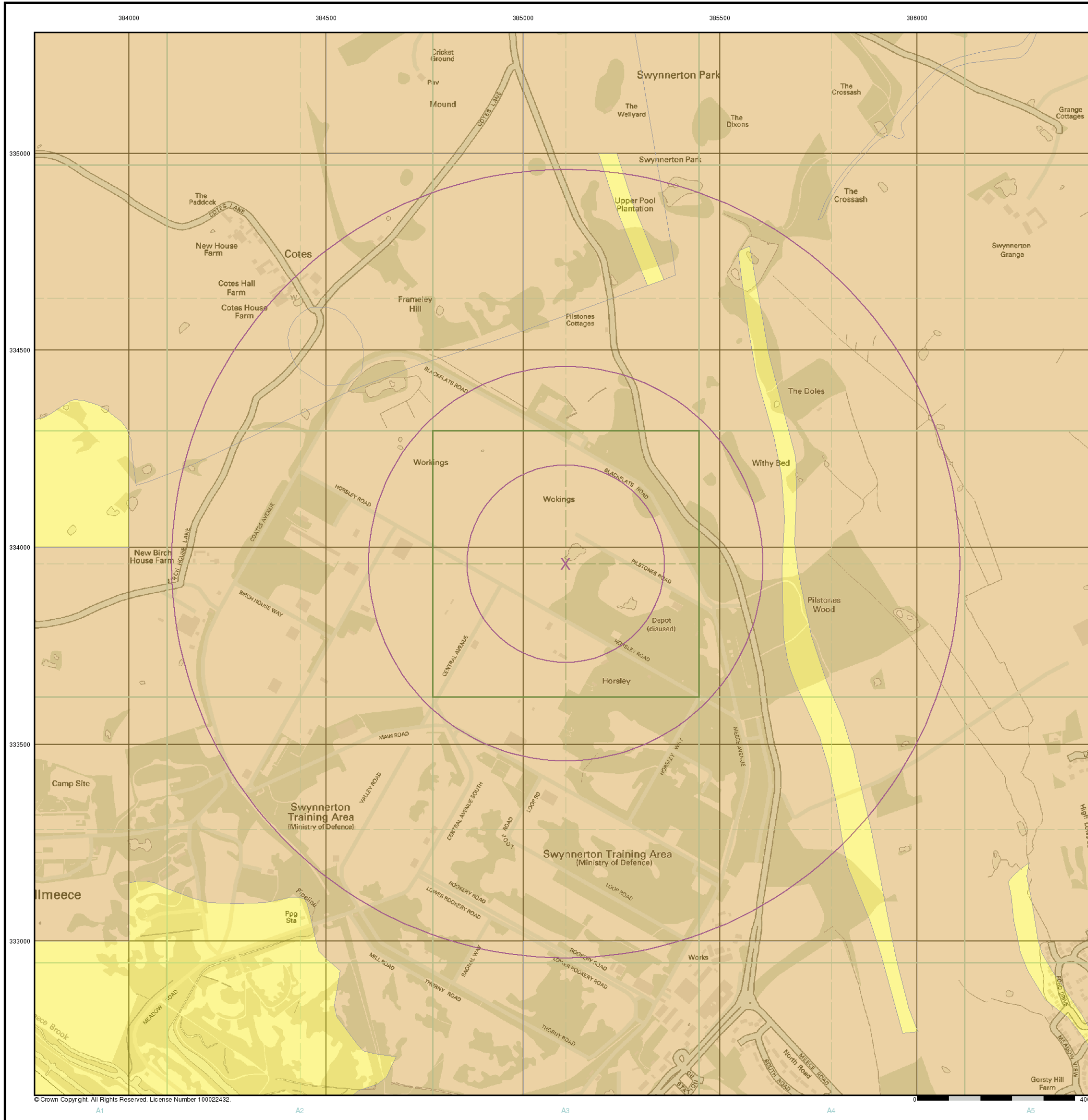


Order Details

Order Details: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000

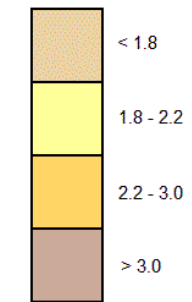


General

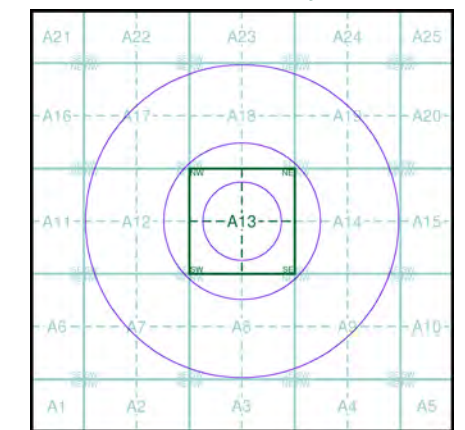
- ✱ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A

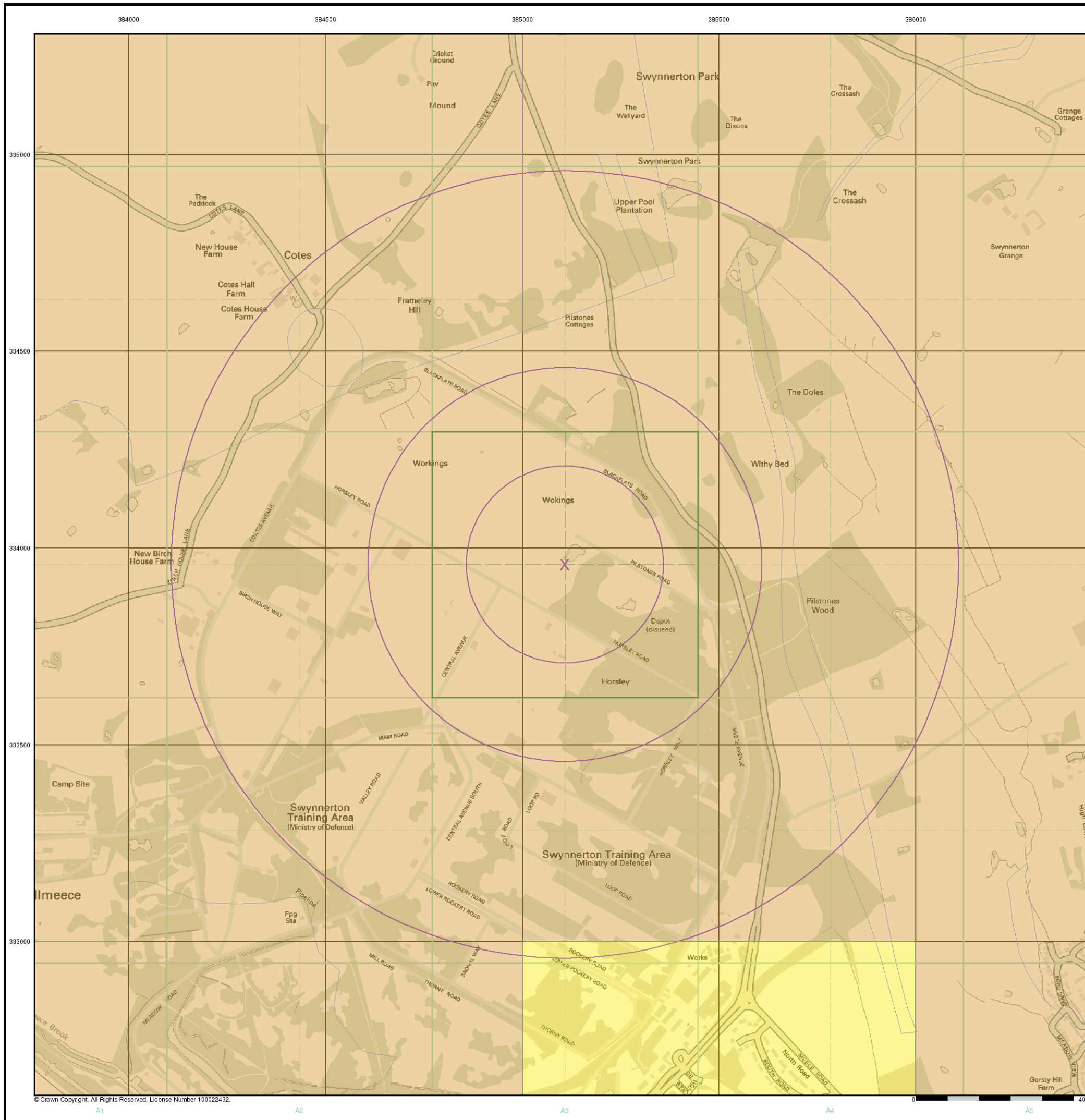


Order Details

Order Details: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



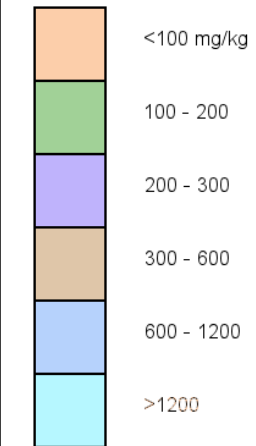
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General

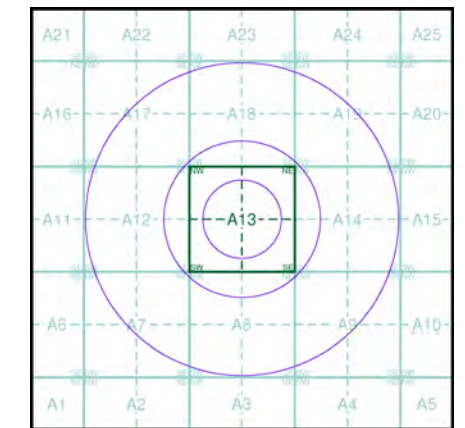
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A

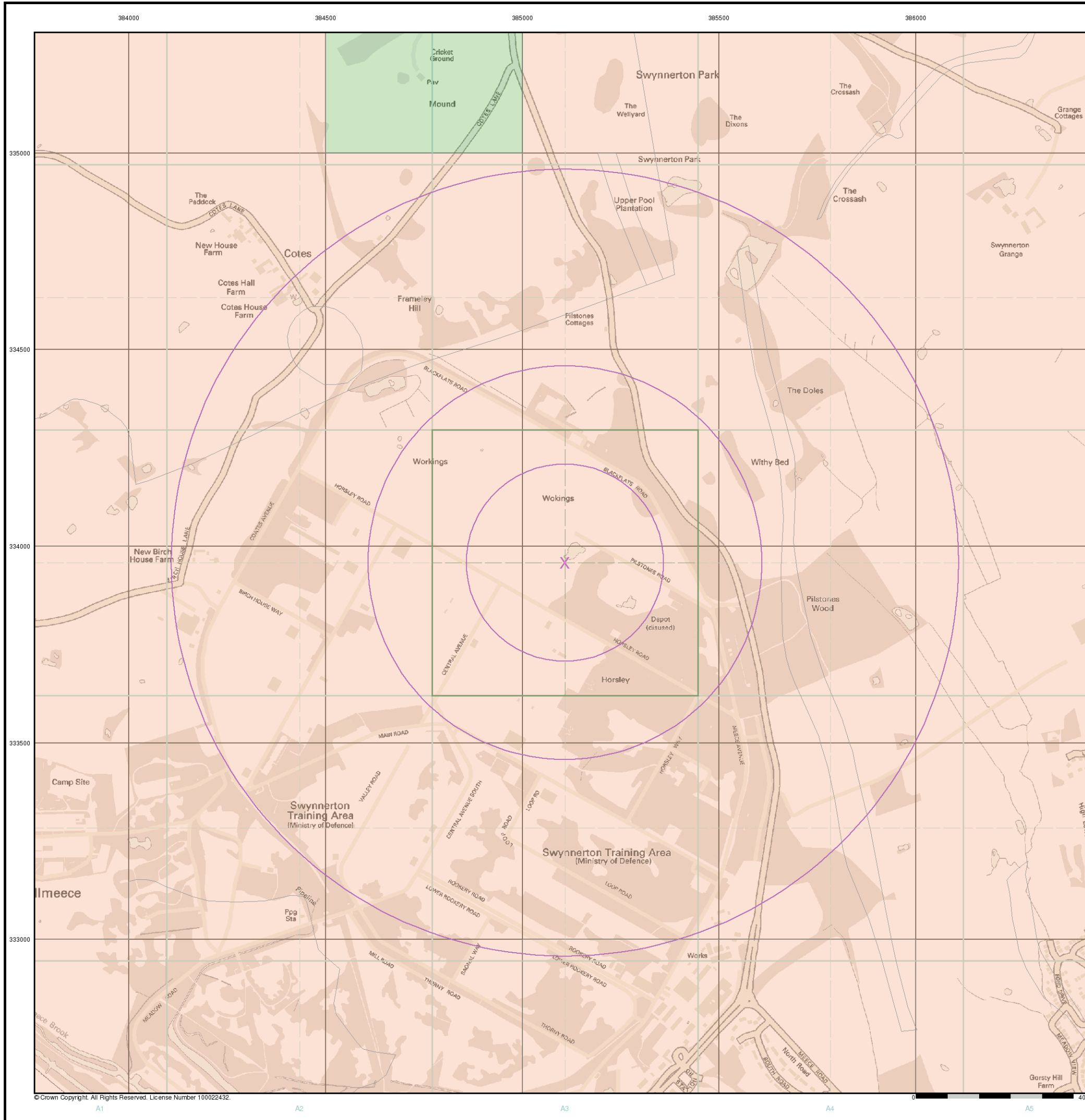


Order Details

Order Details: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



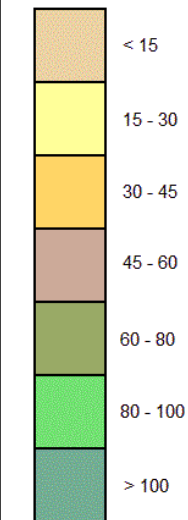
© Crown Copyright. All Rights Reserved. License Number 100022432.

General

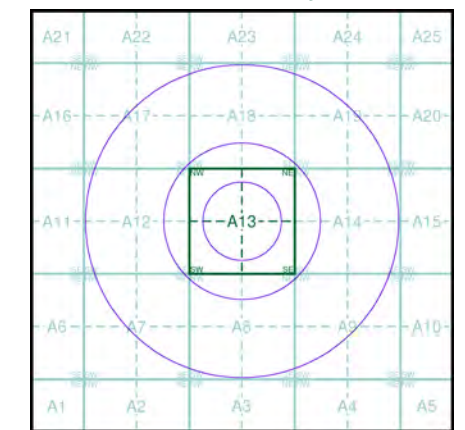
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A

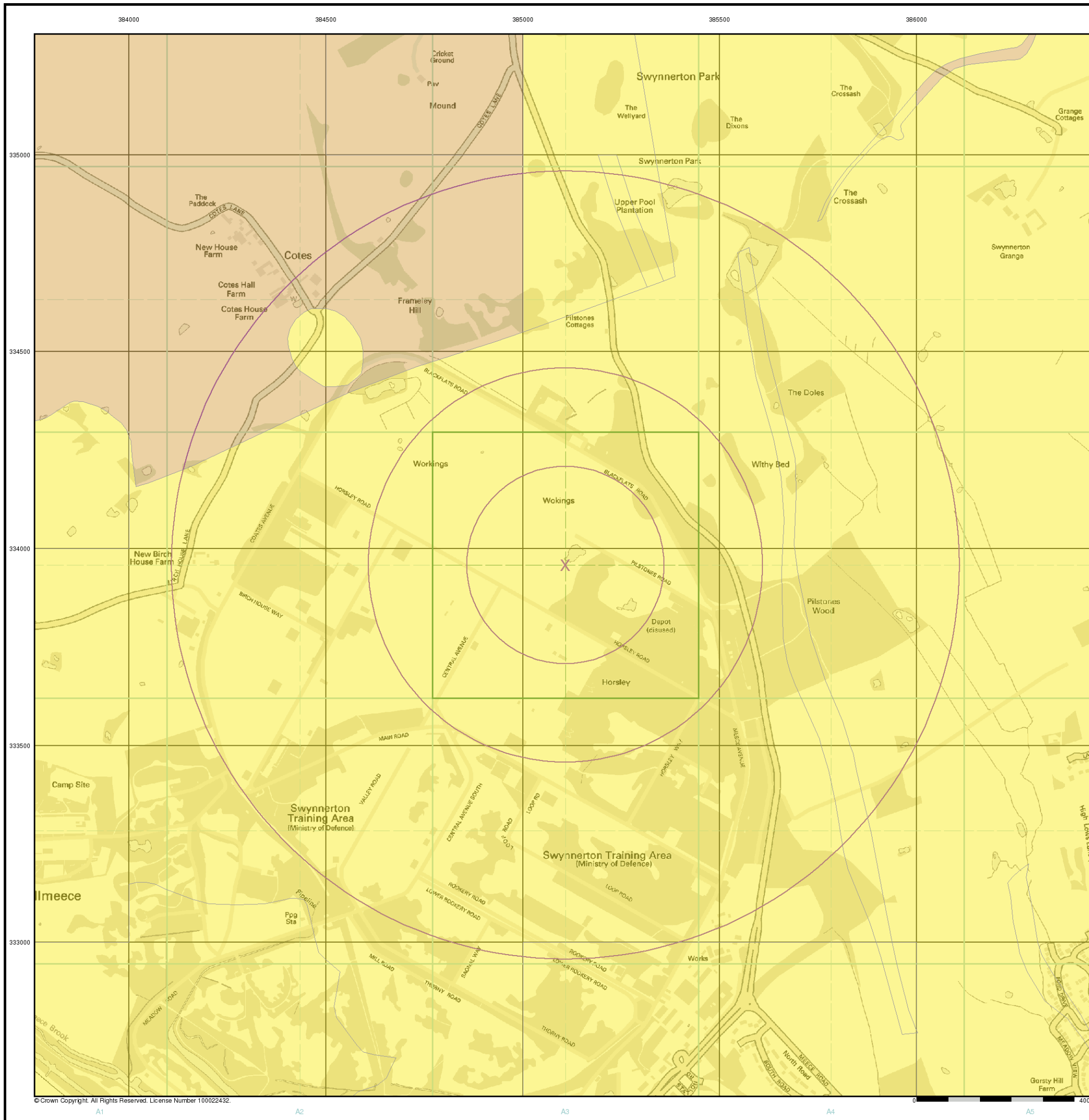


Order Details

Order Details: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



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:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Dr I Campbell, Aecom Infrastructure & Environment UK Ltd, Royal Court, Basil Close, Chesterfield, Derbyshire, S41 7SL

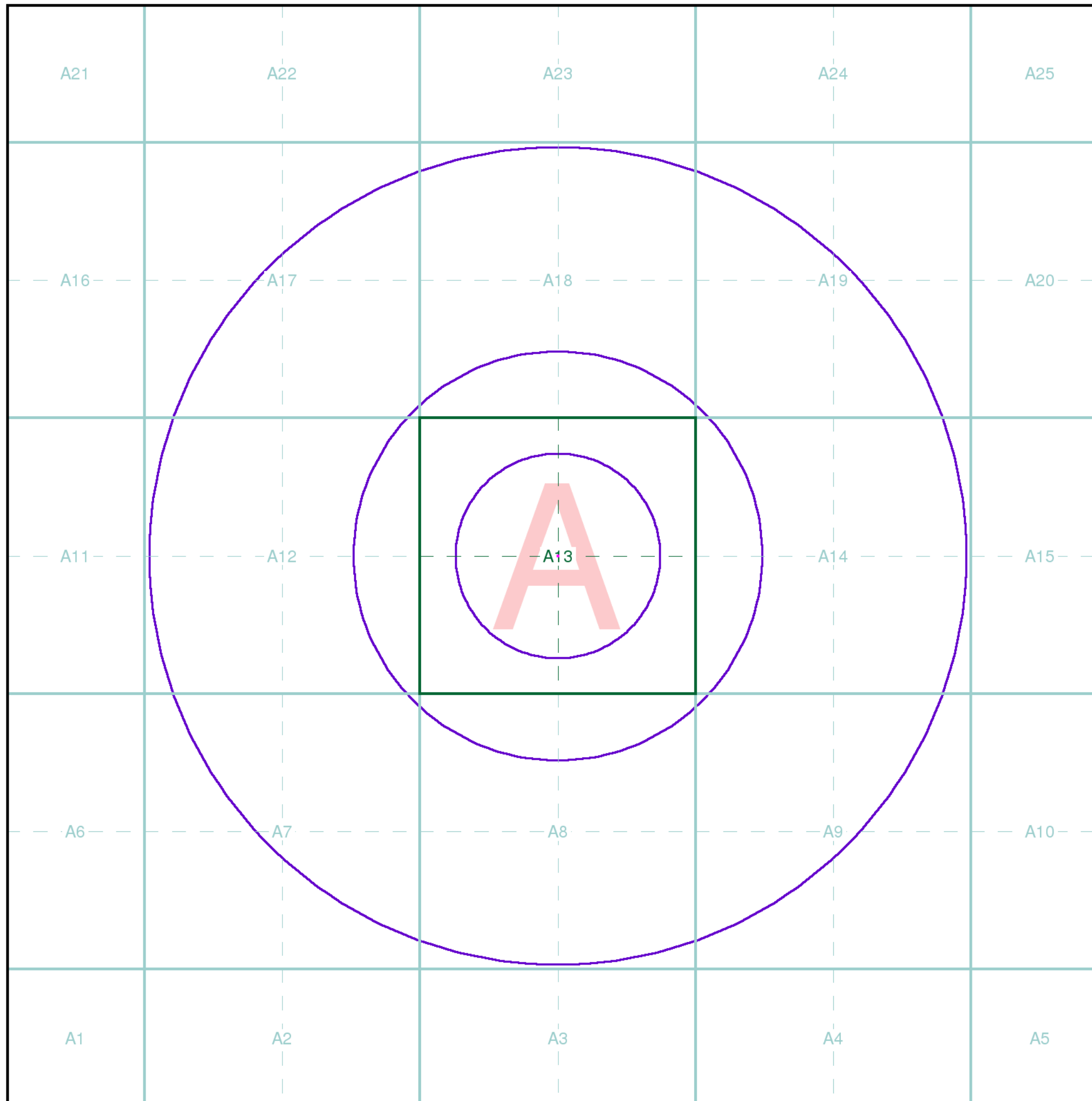
Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000

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



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		Minor Roads		
	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				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	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		Glasshouse
	Sloping Masonry		Pylon
	Electricity Transmission Line		Pole
	Cutting		Embankment
	Standard Gauge Multiple Track		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

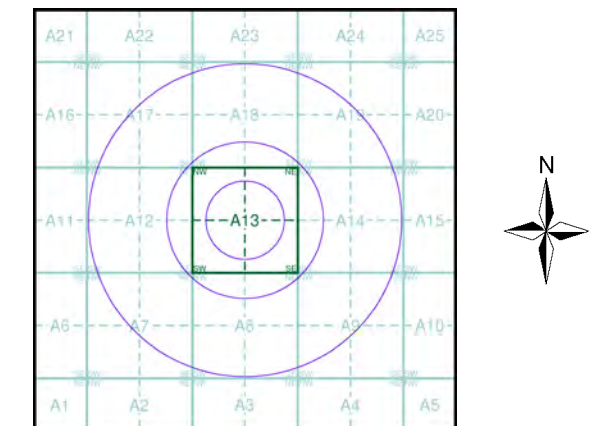
1:10,000 Raster Mapping

	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)
	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

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Staffordshire	1:10,560	1887 - 1889	3
Staffordshire	1:10,560	1901	4
Staffordshire	1:10,560	1925	5
Staffordshire	1:10,560	1938	6
Ordnance Survey Plan	1:10,000	1954 - 1955	7
Ordnance Survey Plan	1:10,000	1963 - 1968	8
Ordnance Survey Plan	1:10,000	1968	9
Ordnance Survey Plan	1:10,000	1981	10
Stoke-on-Trent	1:25,000	1981	11
10K Raster Mapping	1:10,000	2000	12
Historical Aerial Photography	1:10,000	2000	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2016	15

Historical Map - Slice A



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Fireproof Building		Prominent Fireproof Building
	Non-fireproof Building		Non-fireproof Building (non-dwelling)
	Factory, mill, and flour mill, with chimneys		Factory, mill, and flour mill, without chimneys
	Power Station, drawn to scale		Hydroelectric Power Station
	Radio Station, drawn to scale		Telephone Station, drawn to scale
	Abandoned Open-pit Mine or Quarry		Open-pit Salt Mine
	Pit		Oil Deposit or Well
	Oil Seepage		Natural Gas Tank
	Tailings Pile		Fuel Storage Tanks
	Bench Mark		Drill Hole
	Burial Mound		Triangulation Point on Burial Mound
	Single-track Railroad		Double-track Railroad
	Railroad and Station Building		Small Bridge
	Pipe (Culvert)		Tunnel
	Coniferous Forest		Deciduous Forest
	Mixed Forest		Lawns
	Citrus Orchard		Wet Ground
	Scattered Vegetation		

243,8 Values for prominent elevations
186.0 Numbers for spot elevations, depth soundings, contour lines, etc.
0,2 Velocity of the current, width of river bed, depth of river
180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	Ъ (-)
Д д (D)	Л л (L)	У у (U)	Ы (Y)
Е е (E)	М м (M)	Ф ф (F)	Ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Partly Demolished Buildings		Demolished Buildings
	Built-Up Area with Fireproof Buildings Predominant		Built-Up Area with Non-Fireproof Buildings Predominant
	Individual Fireproof Building		Prominent Industrial Building
	Individual Dwelling, Fireproof		Ruins of an Individual Dwelling
	Factory or Mill Chimney		Factory or Mill with Chimney
	Factory or Mill without Chimney		Salt Mine
	Operating Shaft or Mine		Non-Operating Shaft or Mine
	Tailings Pile		Gas Pump or Service Station
	Fuel Storage or Natural Gas Tank		Oil or Natural Gas Derrick
	Small Hydroelectric Power Station		Power Station
	Transformer Station		Cemetery
	Burial Mound (height in metres)		Triangulation Point on Burial Mound
	Triangulation Point		Bench Mark
	Bench Mark (monumented)		Telegraph Office
	Telephone Station		Radio Station
	Radio Tower		Airfield or Seaplane Base
	Landing Strip		Cut
	Fill		Km Post
	Plantings		Width of Road
	Steep Grade		Highway under Construction
	Improved Dirt Road (former truck road)		Small Bridge
	Pipe (Culvert)		Tunnel
	Dismantled Railroad		Double-track Railroad with First Class Station
	Railroad Under Construction		Shore Embankment
	River or Ditch with Embankment		Water Gauge
	Direction and velocity of current		Water Level Mark
	Well		Spring
	Water Reservoir or Rain Water Pit		Isobath with value
	Heavy (Index) Contour Line		Half Contour Line
	Contour Line and Value		Spot Elevation Value
	Coniferous		Deciduous
	Mixed		Scrub

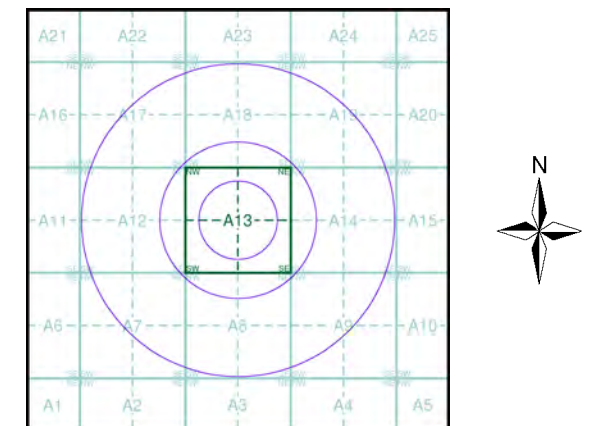
Key to Numbers on Mapping



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Staffordshire	1:10,560	1887 - 1889	3
Staffordshire	1:10,560	1901	4
Staffordshire	1:10,560	1925	5
Staffordshire	1:10,560	1938	6
Ordnance Survey Plan	1:10,000	1954 - 1955	7
Ordnance Survey Plan	1:10,000	1963 - 1968	8
Ordnance Survey Plan	1:10,000	1968	9
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Stoke-on-Trent	1:25,000	1981	11
10K Raster Mapping	1:10,000	2000	12
Historical Aerial Photography	1:10,000	2000	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2016	15

Russian Map - Slice A



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



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

Staffordshire

Published 1887 - 1889

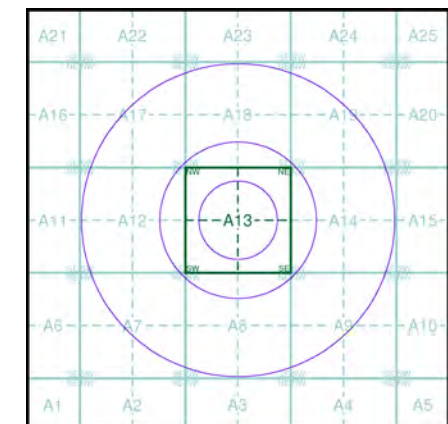
Source map scale - 1:10,560

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)

023SE 1889 1:10,560	024SW 1889 1:10,560
029NE 1889 1:10,560	030NW 1887 1:10,560

Historical Map - Slice A

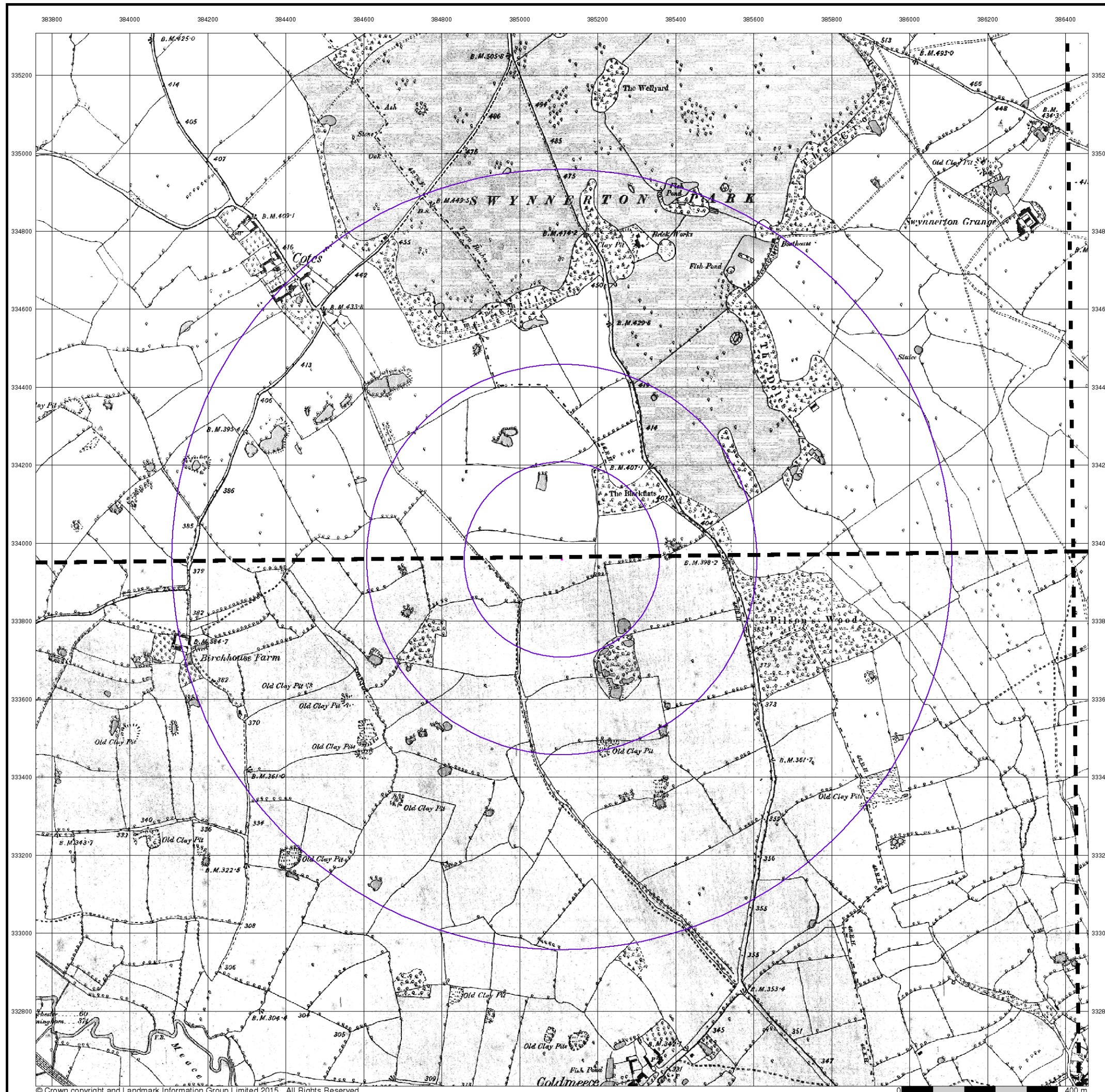


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Staffordshire

Published 1901

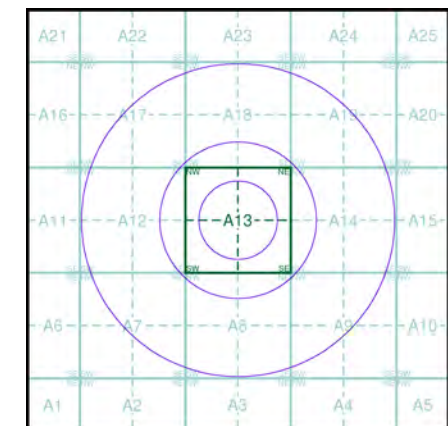
Source map scale - 1:10,560

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)

023SE 1901 1:10,560	024SW 1901 1:10,560
029NE 1901 1:10,560	030NW 1901 1:10,560

Historical Map - Slice A

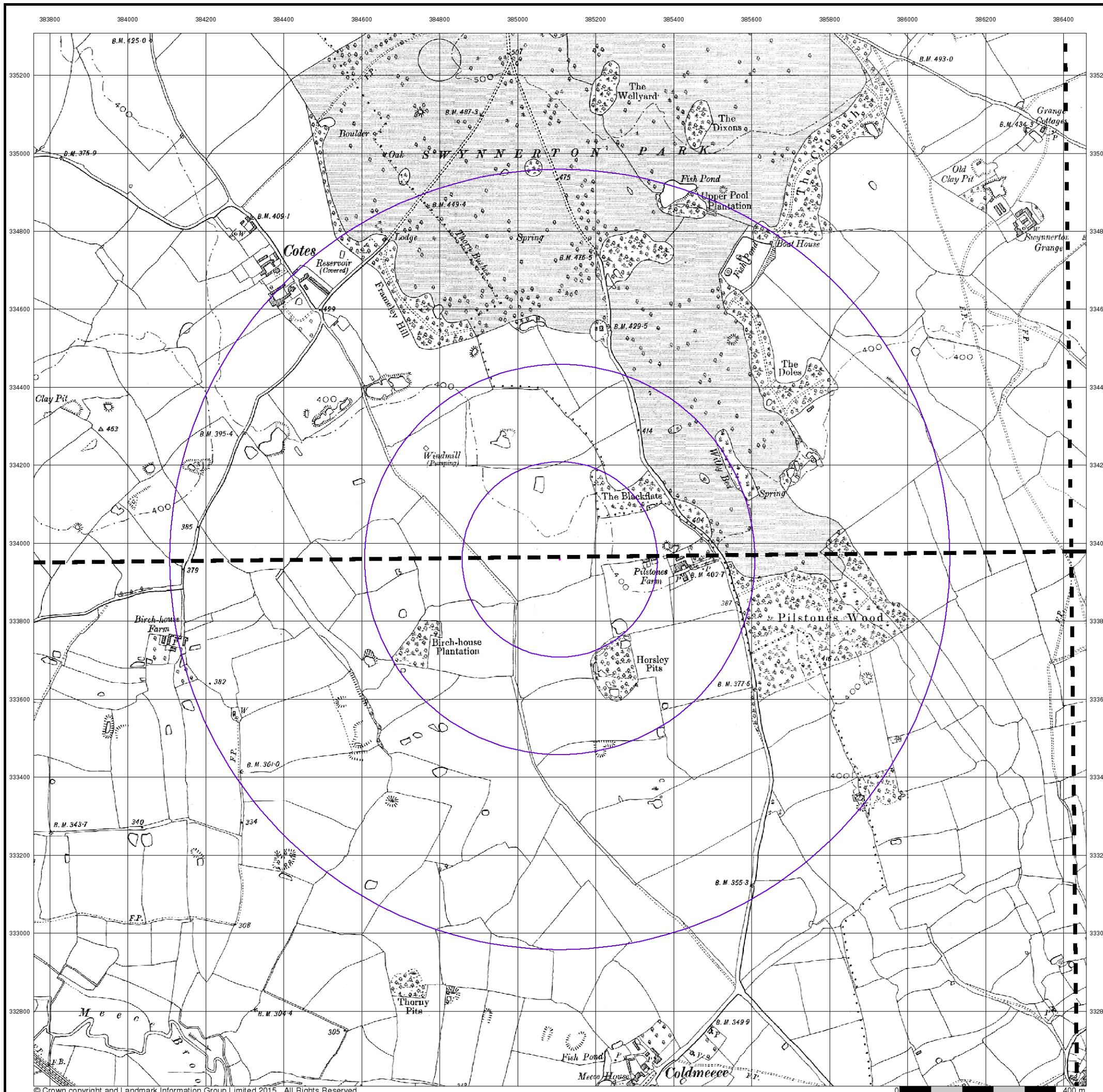


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Staffordshire

Published 1925

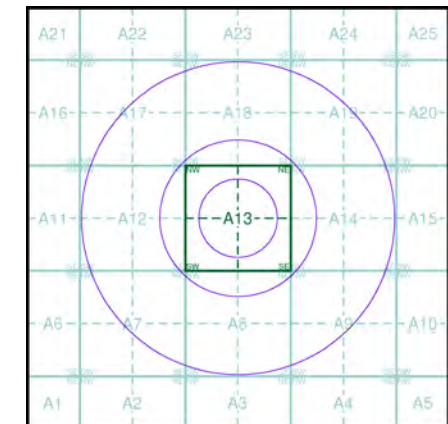
Source map scale - 1:10,560

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)

023SE	024SW
1925	1925
1:10,560	1:10,560
02900	030NW
1925	1925
1:10,560	1:10,560

Historical Map - Slice A

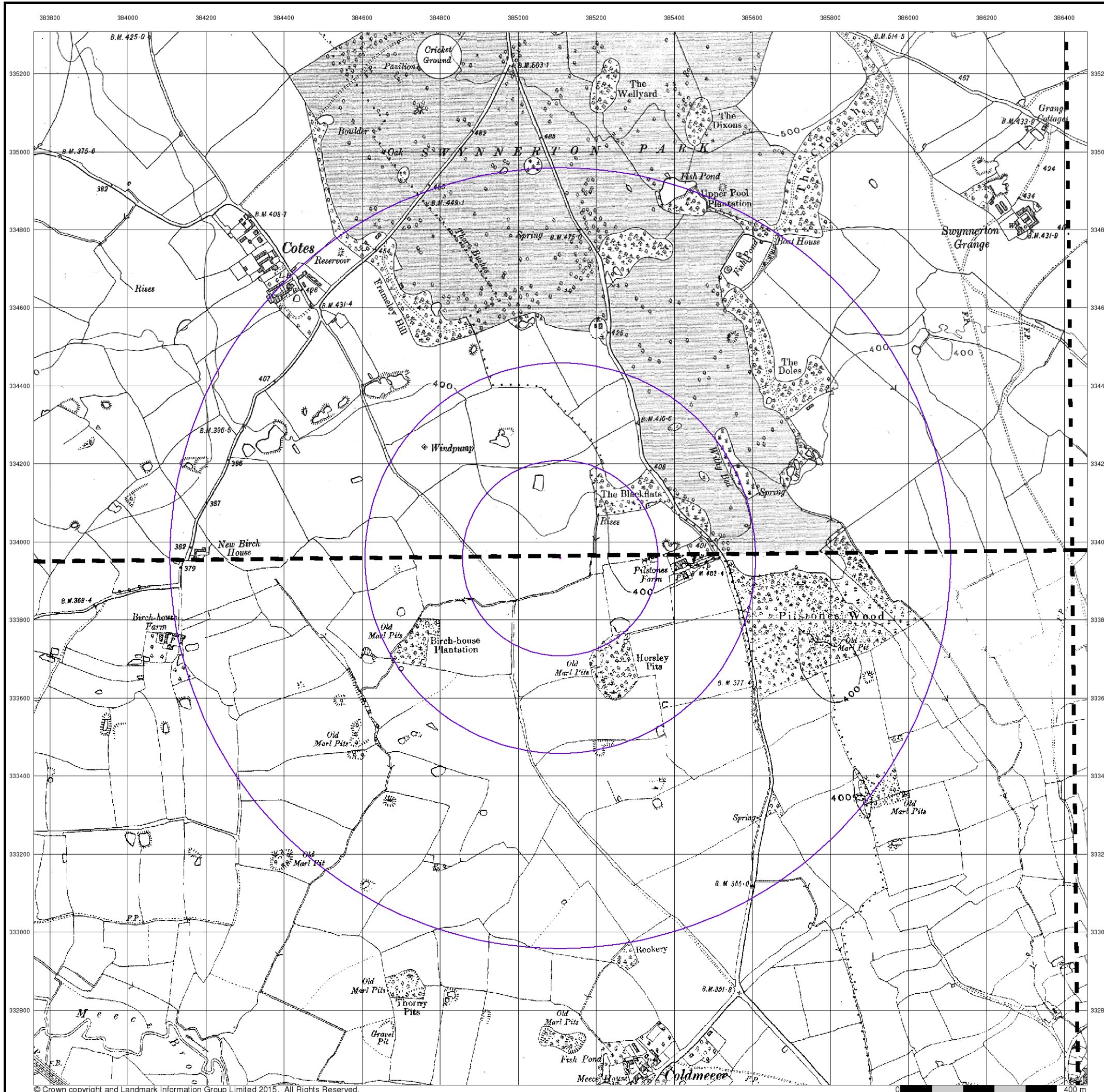


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Staffordshire

Published 1938

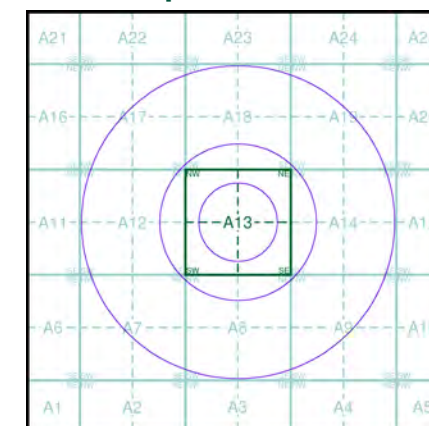
Source map scale - 1:10,560

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)

024SW	1938	1:10,560
030NW	1938	1:10,560

Historical Map - Slice A

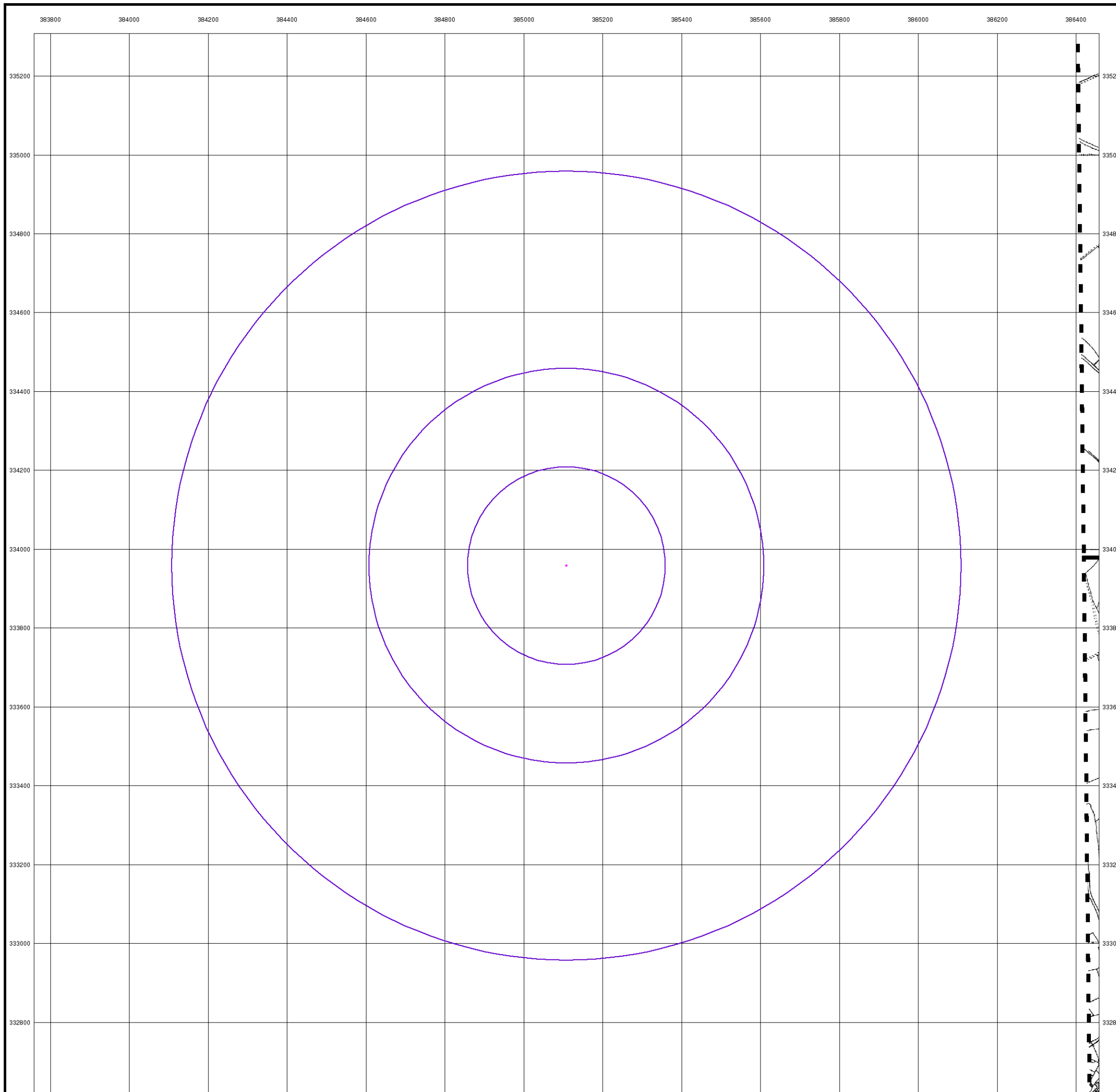


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Ordnance Survey Plan

Published 1954 - 1955

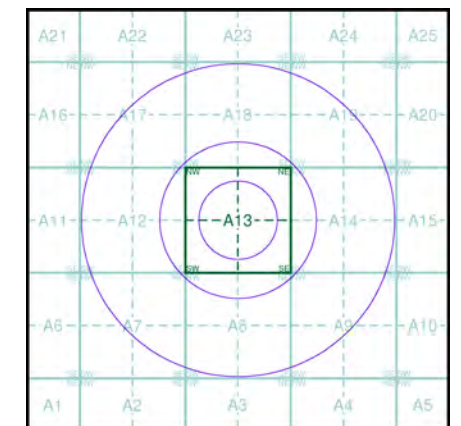
Source map scale - 1:10,000

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)

SJ83NW	SJ83NE
1954	1954
1:10,560	1:10,560
SJ83SW	SJ83SE
1954	1955
1:10,560	1:10,560

Historical Map - Slice A

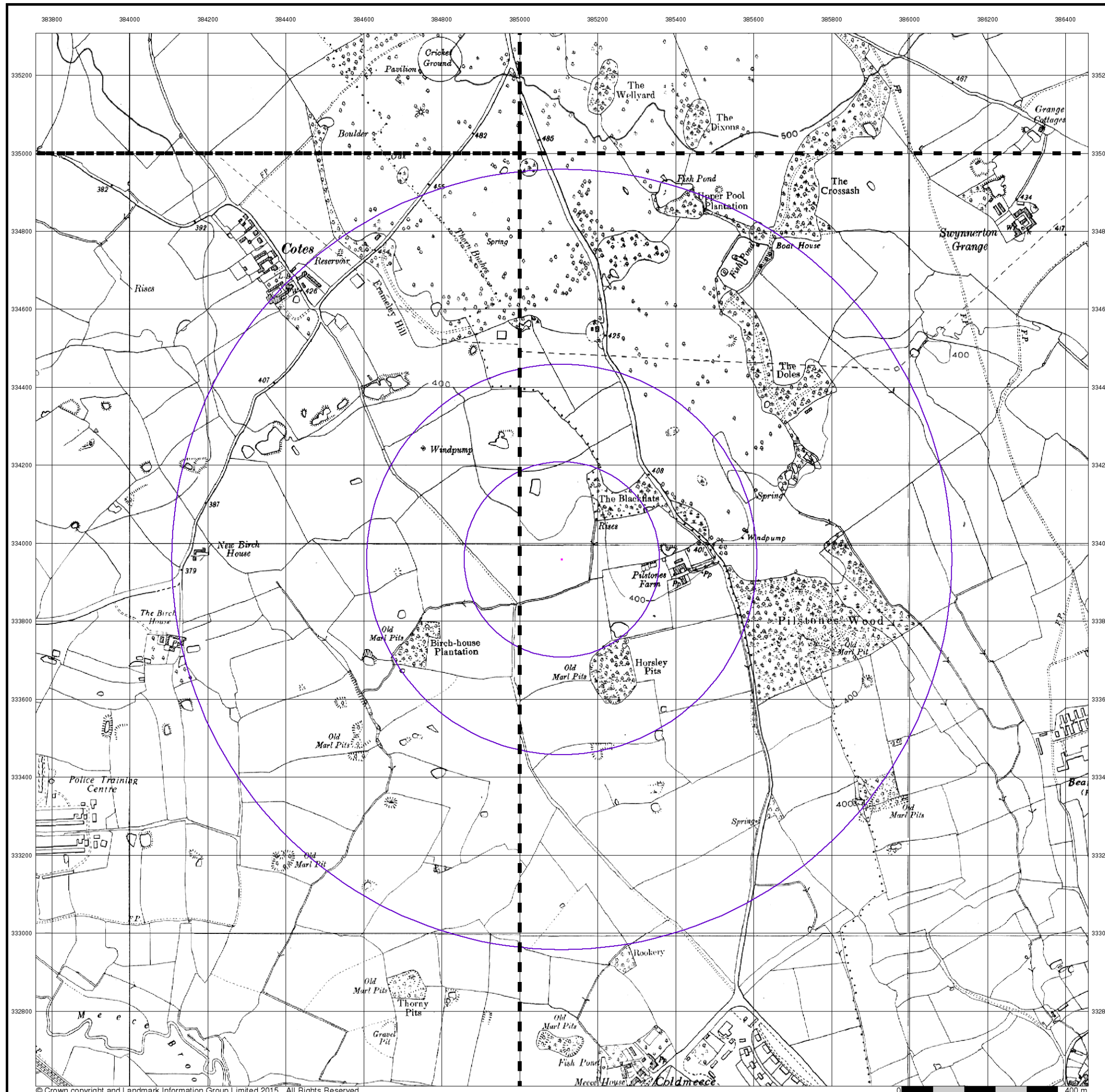


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Ordnance Survey Plan

Published 1963 - 1968

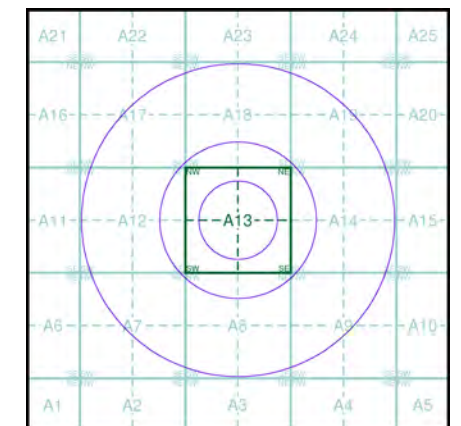
Source map scale - 1:10,000

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)

SJ83NW	SJ83NE
1967	1963
1:10,560	1:10,560
SJ83SW	SJ83SE
1968	1968
1:10,560	1:10,560

Historical Map - Slice A

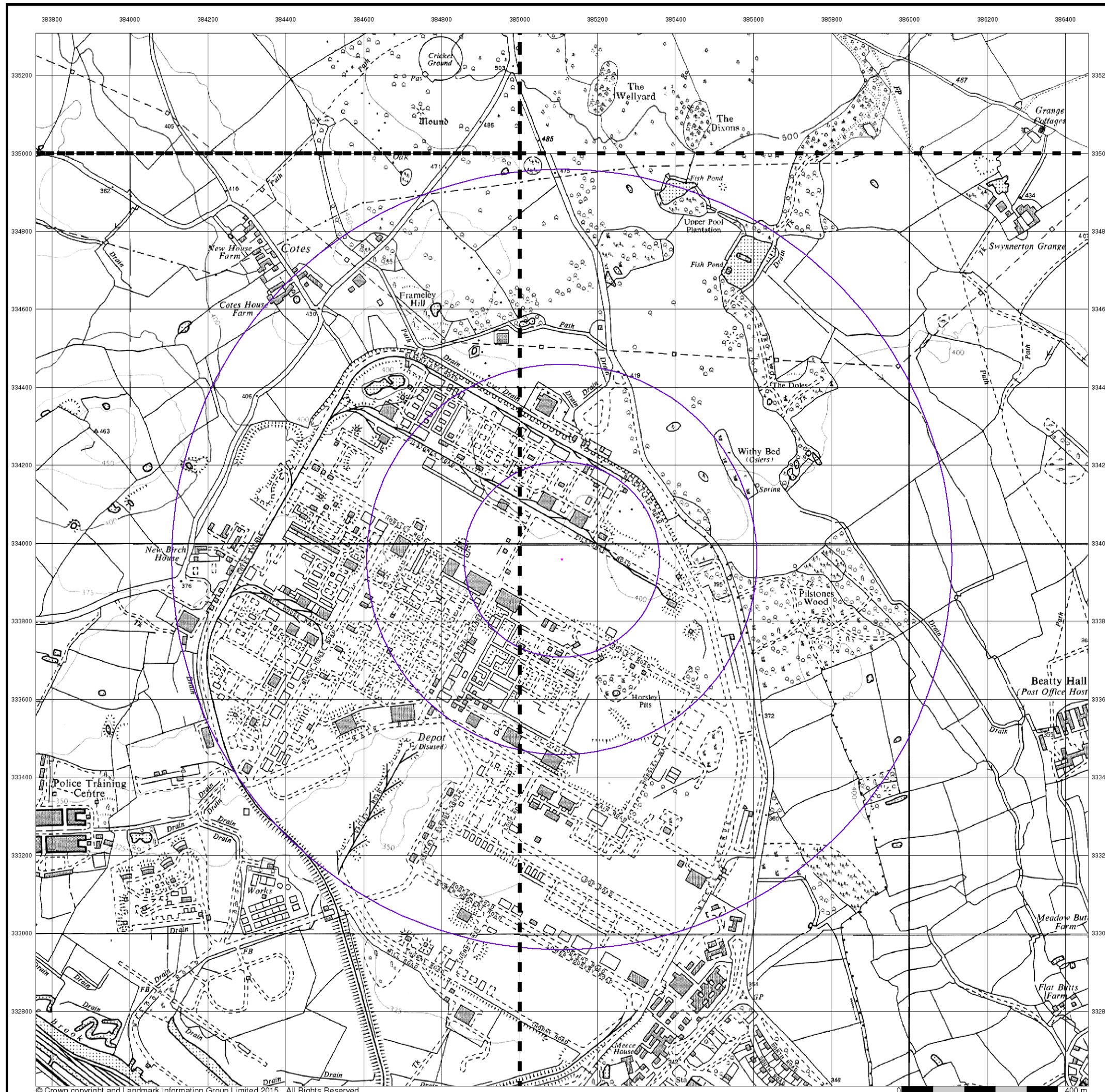


Order Details

Order Number: 91709528_1_1
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 National Grid Reference: 385110, 333960
 Slice: A
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 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



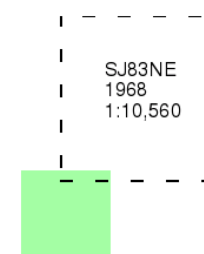
Ordnance Survey Plan

Published 1968

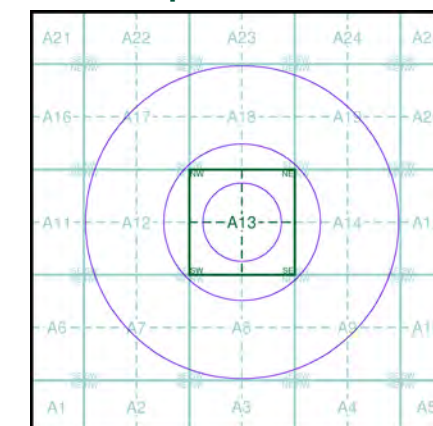
Source map scale - 1:10,000

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

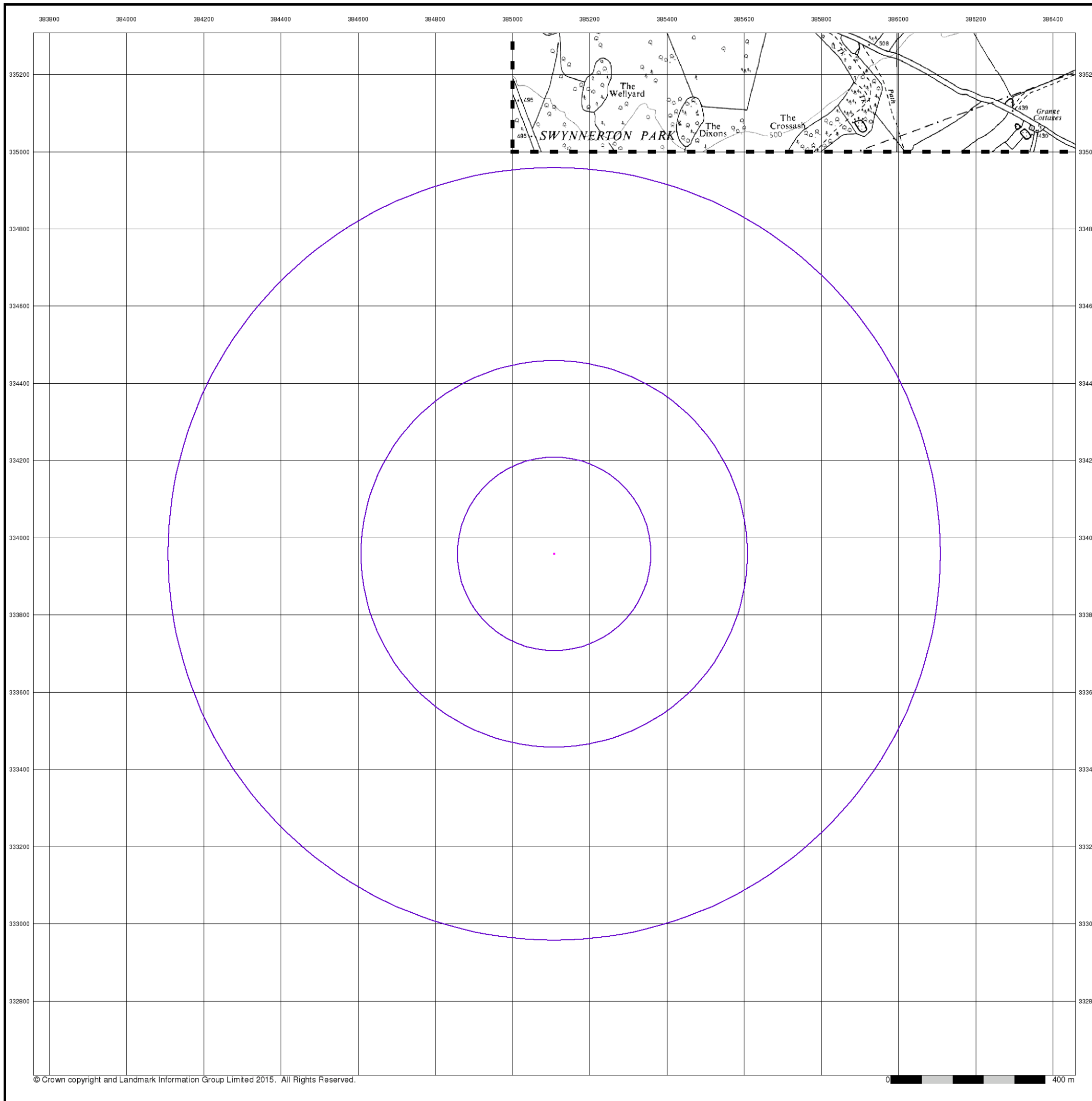


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Ordnance Survey Plan

Published 1981

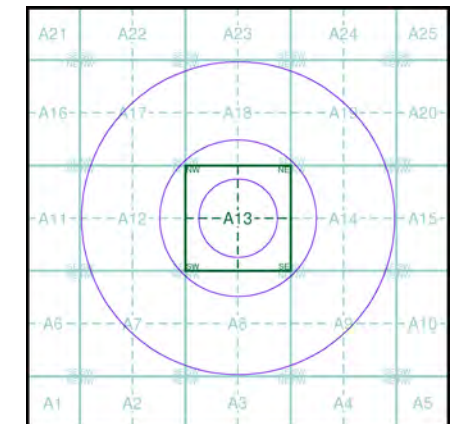
Source map scale - 1:10,000

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)

SJ83NW	SJ83NE
1981	1981
1:10,000	1:10,000
SJ83SW	SJ83SE
1981	1981
1:10,000	1:10,000

Historical Map - Slice A



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Stoke-on-Trent

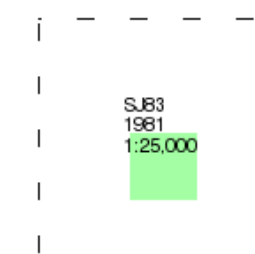
Published 1981

Source map scale - 1:25,000

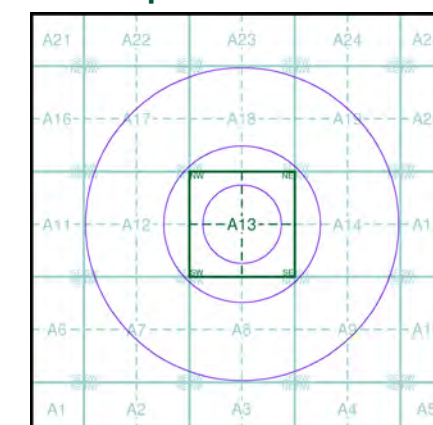
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A

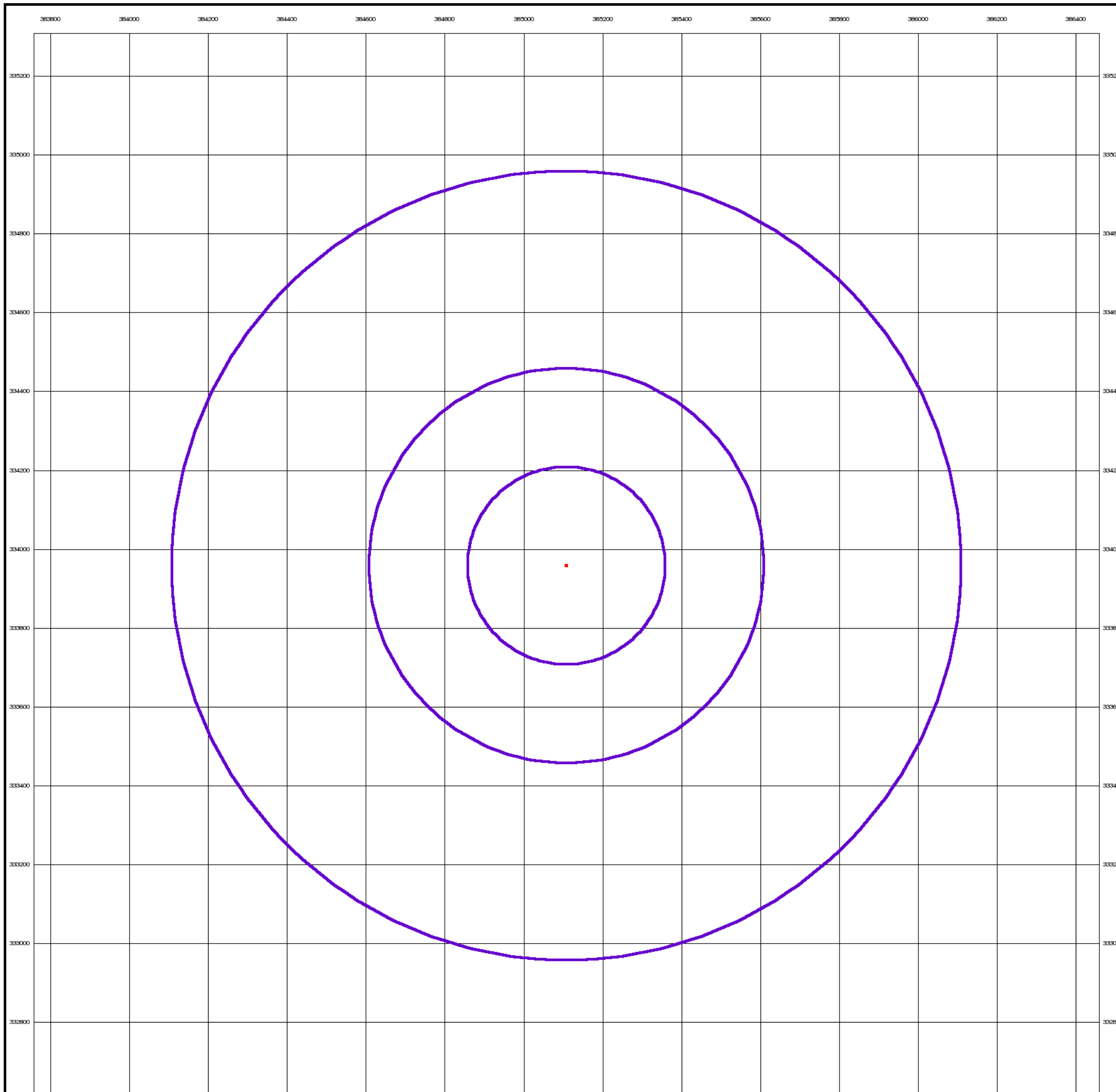


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



10k Raster Mapping

Published 2000

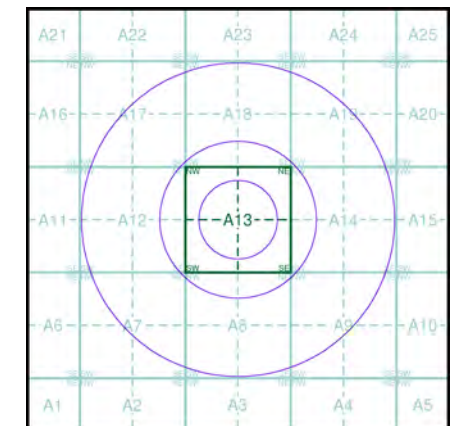
Source map scale - 1:10,000

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)

SJ83NW	SJ83NE
2000	2000
1:10,000	1:10,000
SJ83SW	SJ83SE
2000	2000
1:10,000	1:10,000

Historical Map - Slice A

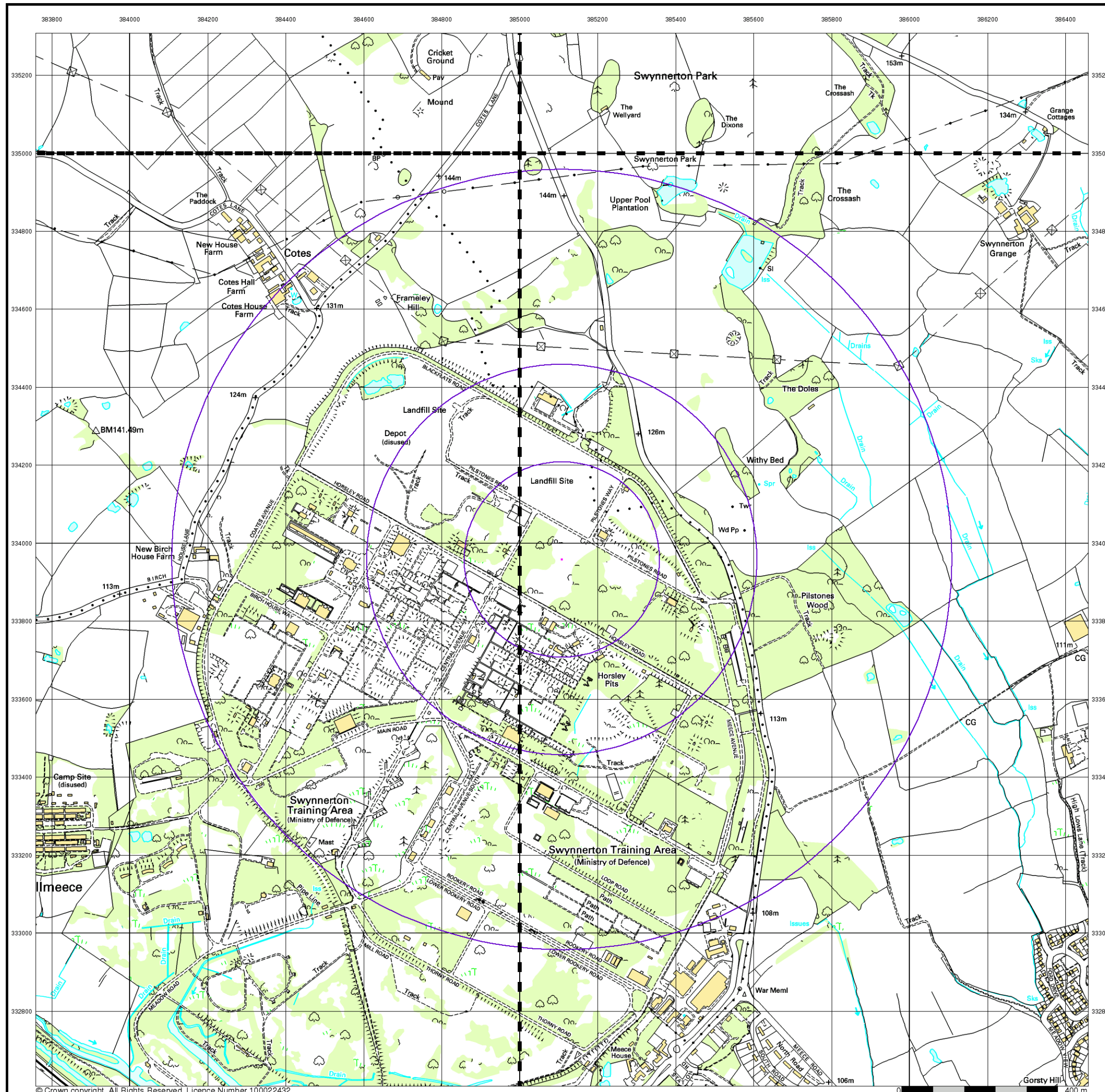


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000

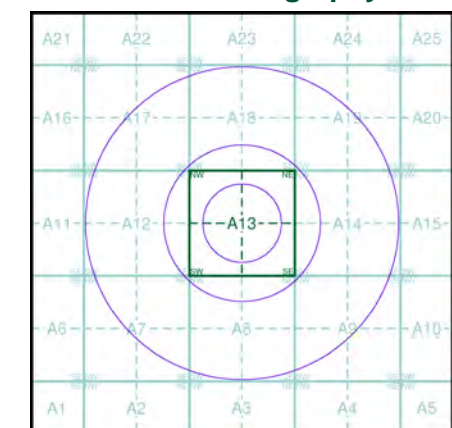


Historical Aerial Photography

Published 2000

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Slice A



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



10k Raster Mapping

Published 2006

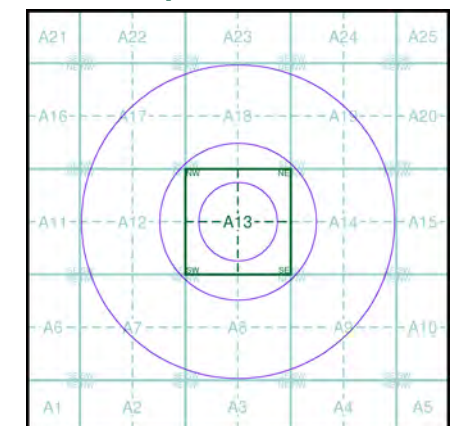
Source map scale - 1:10,000

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)

SJ83NW	SJ83NE
2006	2006
1:10,000	1:10,000
SJ83SW	SJ83SE
2006	2006
1:10,000	1:10,000

Historical Map - Slice A



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



VectorMap Local

Published 2016

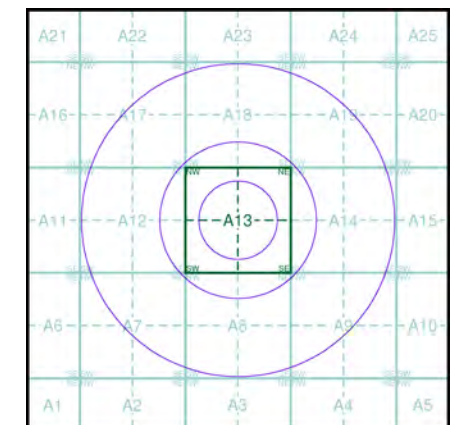
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

SJ83NW	SJ83NE
2016	2016
Variable	Variable
SJ83SW	SJ83SE
2016	2016
Variable	Variable

Historical Map - Slice A

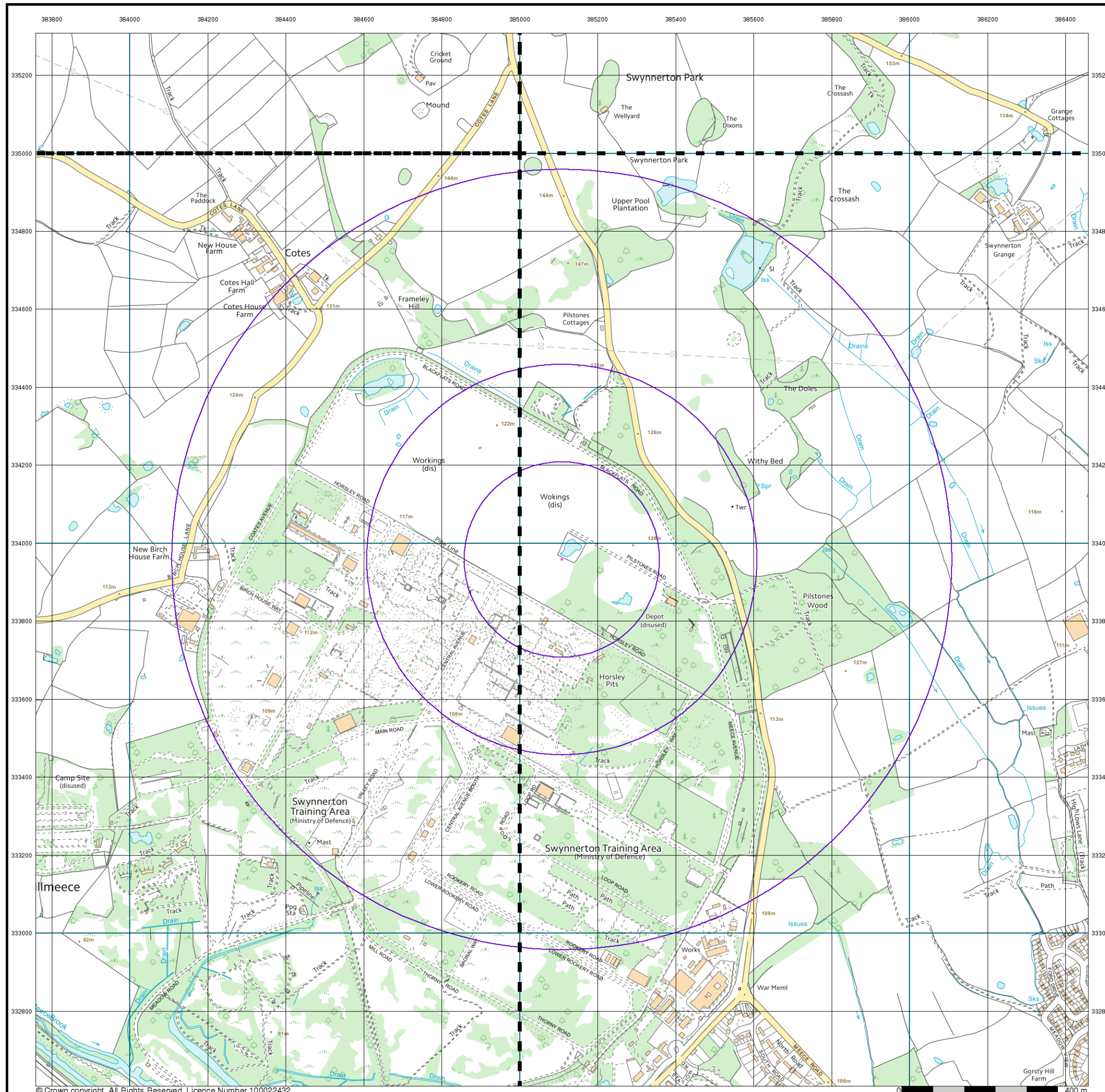


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 385340, 334000



Historical Mapping Legends

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

Quarry **Gravel Pit** **Sand Pit**
Clay Pit **Shingle** **Refuse Heap**
Sloping Masonry **Flat Rock**
Marsh **Reeds** **Osiers**
Rough Pasture **Furze** **Wood**
Mixed Wood **Brushwood** **Orchard**
Fir **Ford** **Stepping Stones**
Ferry **Waterfall** **Lock**
Trig. Station **Altitude at Trig. Station**
B.M. 325.9 **Bench Mark** **Surface Level**
Arrow denotes flow of water **Antiquities (site of)**
Cutting **Embankment**
Railway crossing Road **Level Crossing** **Road crossing Railway**
Railway crossing River or Canal **Road over single stream** **Road over River or Canal**
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
County Burgh Boundary (Scotland)
Co. Boro. Bdy.
Co. Burgh Bdy.
BP BS 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

Inactive Quarry, Chalk Pit or Clay Pit **Active Quarry, Chalk Pit or Clay Pit**
Rock **Boulders**
Cliff **Slopes** **Top**
Roofed Building **Glazed Roof Building**
Sloping Masonry **Archway**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Bench Mark** **Antiquity (site of)**
Cave Entrance **Triangulation Station** **Electricity Pylon**
Electricity Transmission Line
County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
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
EI 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

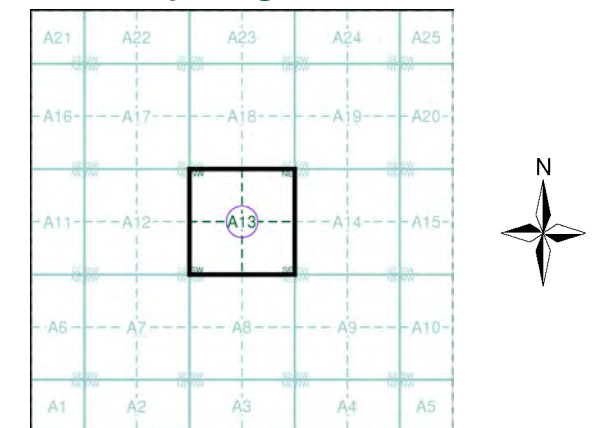
Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Triangulation Station** **Antiquity (site of)**
Electricity Transmission Line **Electricity Pylon**
B.M. 231.60m **Bench Mark** **Buildings with Building Seed**
Roofed Building **Glazed Roof Building**
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
EI Gen Sta Electricity Generating Station **Sewage Ppg Sta** Sewage Pumping Station
EI P Electricity Pole, Pillar **SB, S Br** Signal Box or Bridge
EI 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 Governor **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



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Staffordshire	1:2,500	1880	2
Staffordshire	1:2,500	1901	3
Staffordshire	1:2,500	1924	4
Ordnance Survey Plan	1:2,500	1959	5
Ordnance Survey Plan	1:2,500	1963 - 1977	6
Ordnance Survey Plan	1:2,500	1977	7
Large-Scale National Grid Data	1:2,500	1994	8
Large-Scale National Grid Data	1:2,500	1996	9
Large-Scale National Grid Data	1:2,500	1996	10

Historical Map - Segment A13



Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



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

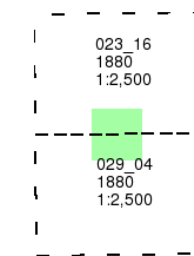
Staffordshire

Published 1880

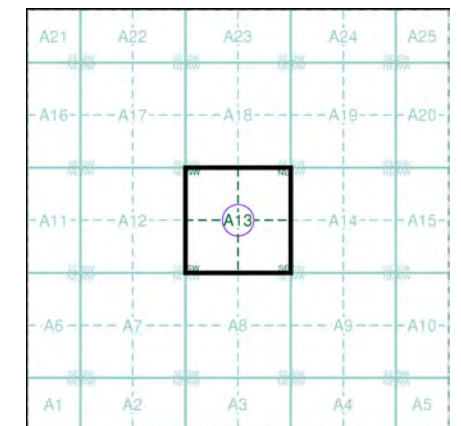
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

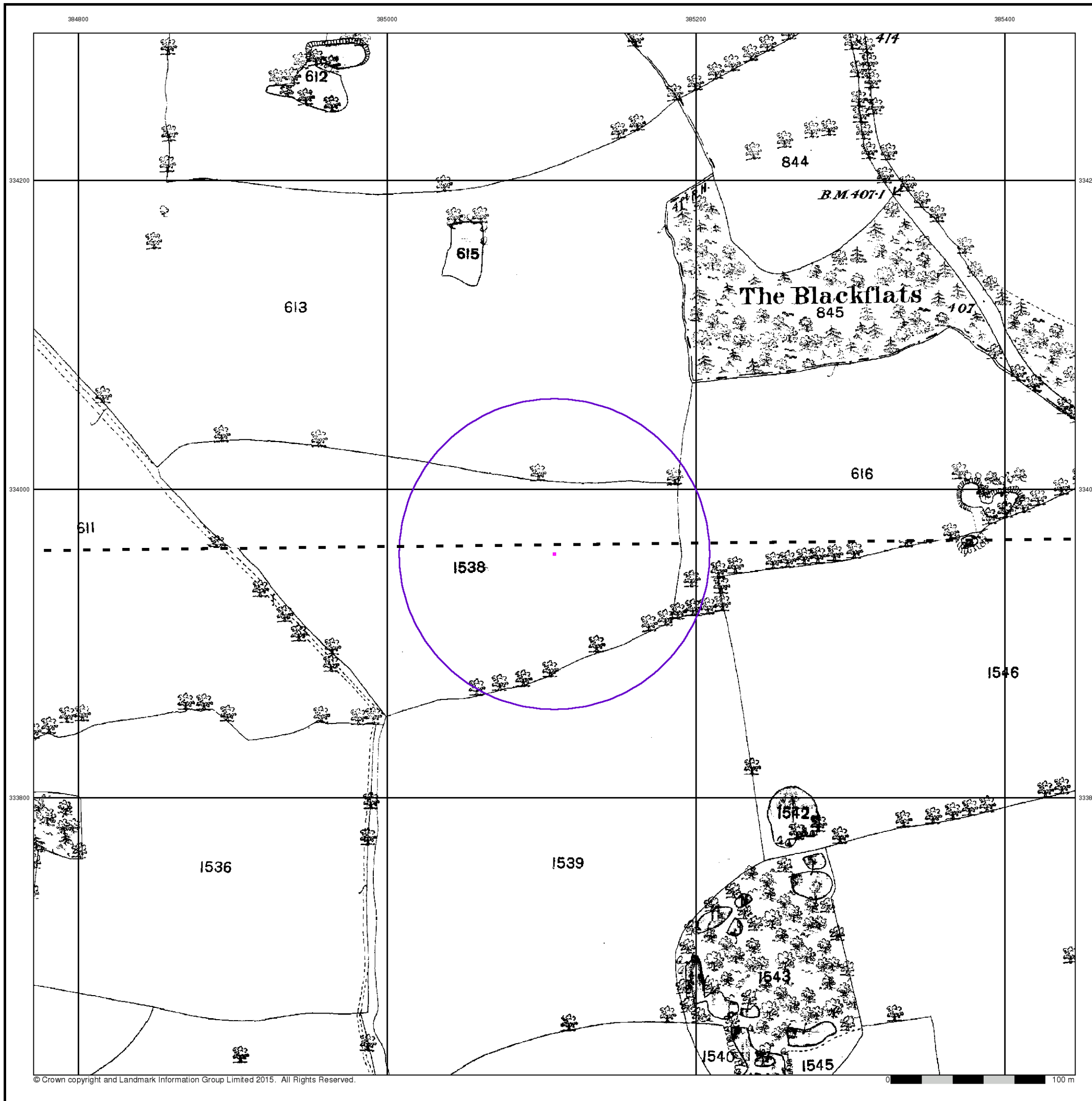


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



Staffordshire

Published 1901

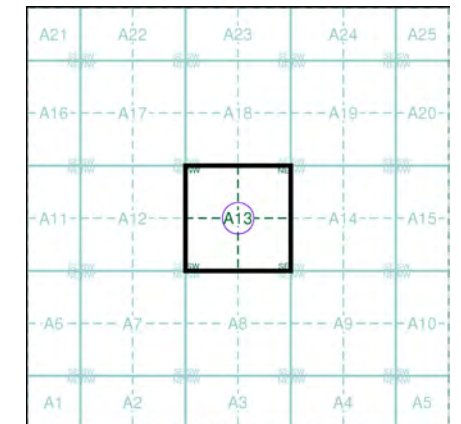
Source map scale - 1:2,500

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)

023_16	1901	1:2,500
029_04	1901	1:2,500

Historical Map - Segment A13

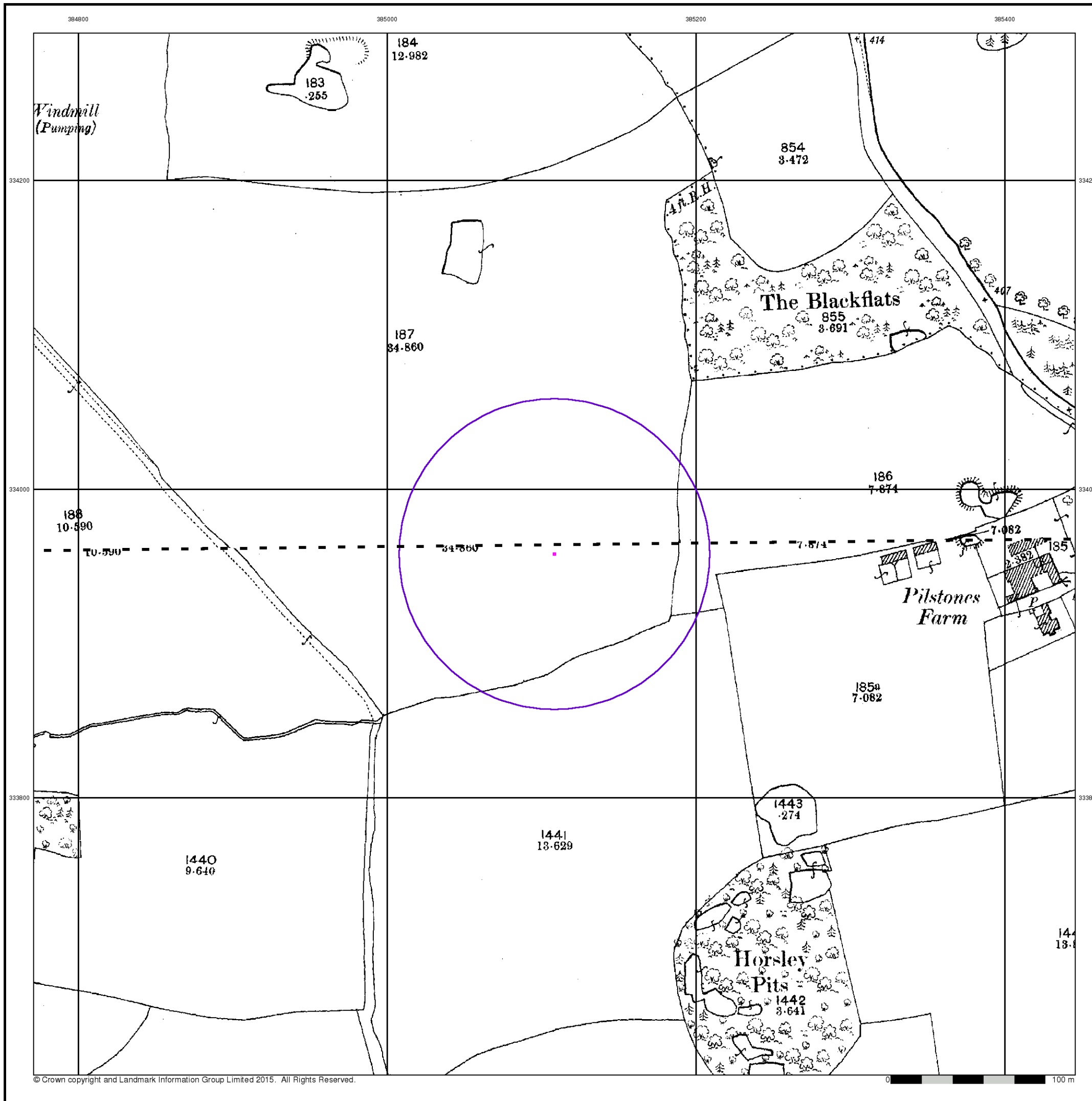


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



Staffordshire

Published 1924

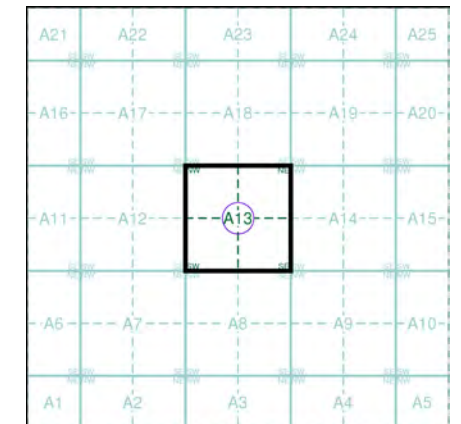
Source map scale - 1:2,500

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)

023_16	1924	1:2,500
029_04	1924	1:2,500

Historical Map - Segment A13

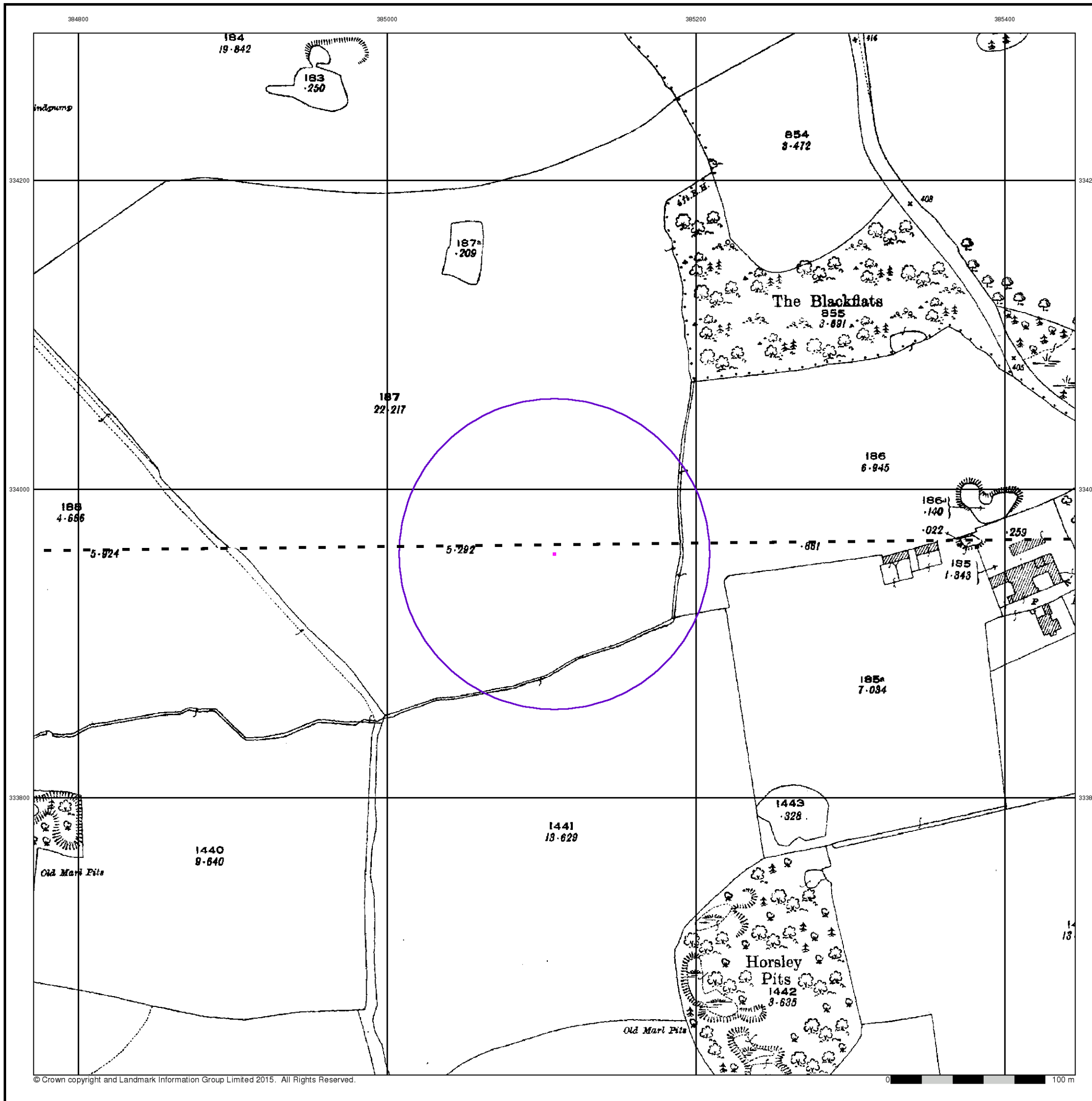


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



Ordnance Survey Plan

Published 1959

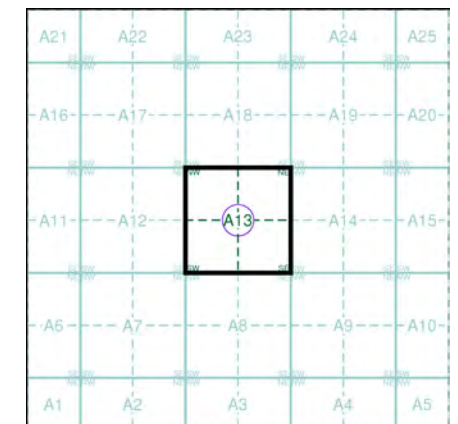
Source map scale - 1:2,500

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)

SJ8434 1959 12,500	SJ8534 1959 12,500
SJ8433 1959 12,500	SJ8533 1959 12,500

Historical Map - Segment A13

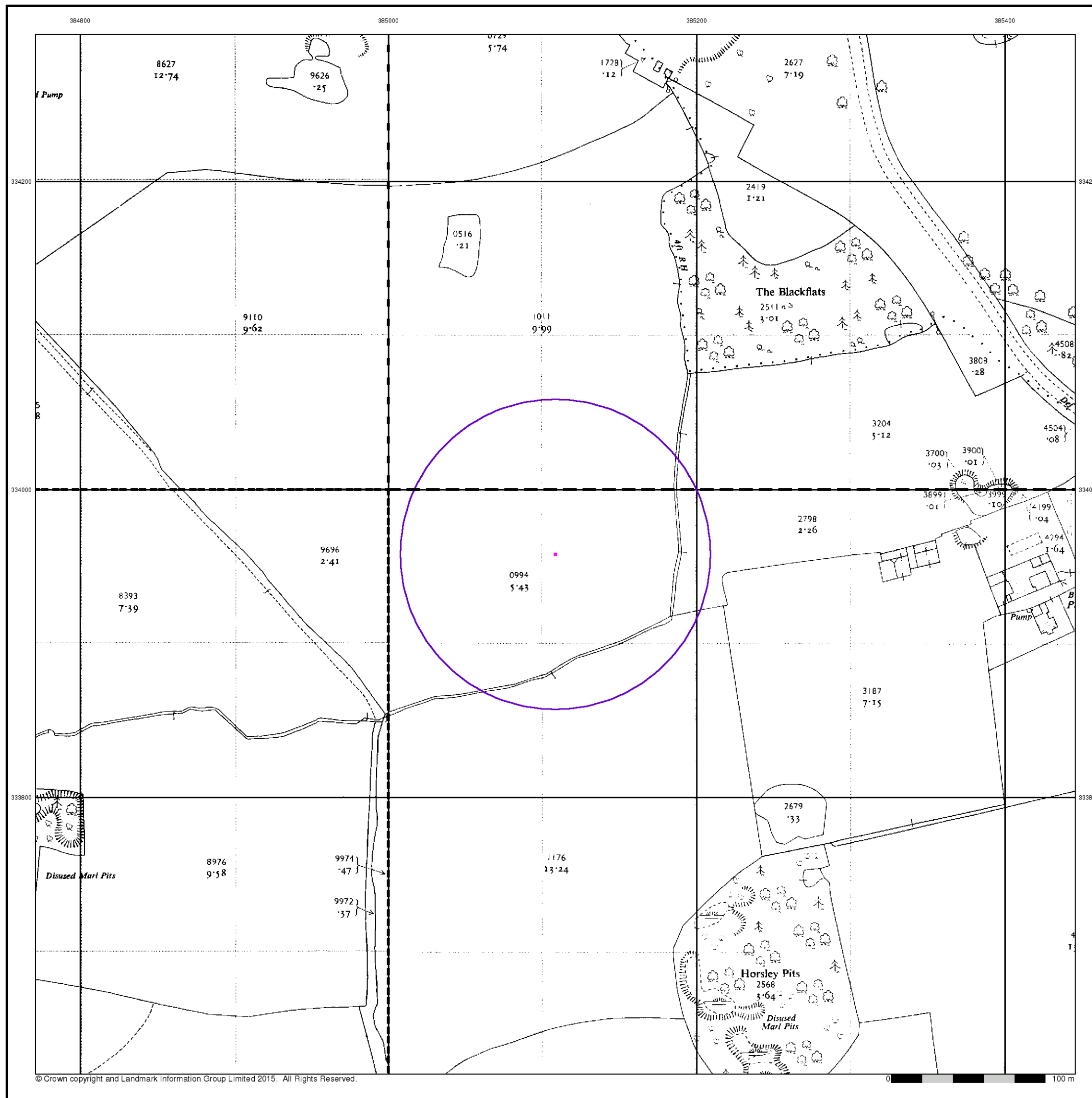


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



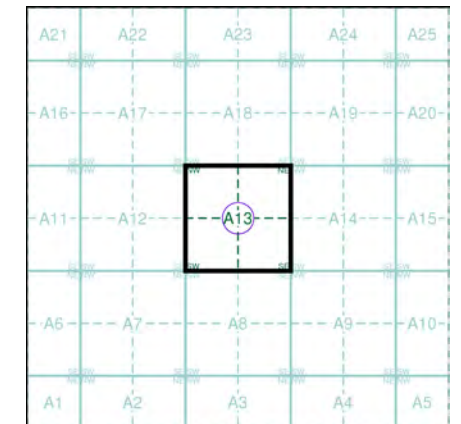
Ordnance Survey Plan
Published 1963 - 1977
Source map scale - 1:2,500

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)

SJ8434	SJ8534
1977	1977
12,500	12,500
■	
SJ8433	SJ8533
1963	1963
12,500	12,500

Historical Map - Segment A13

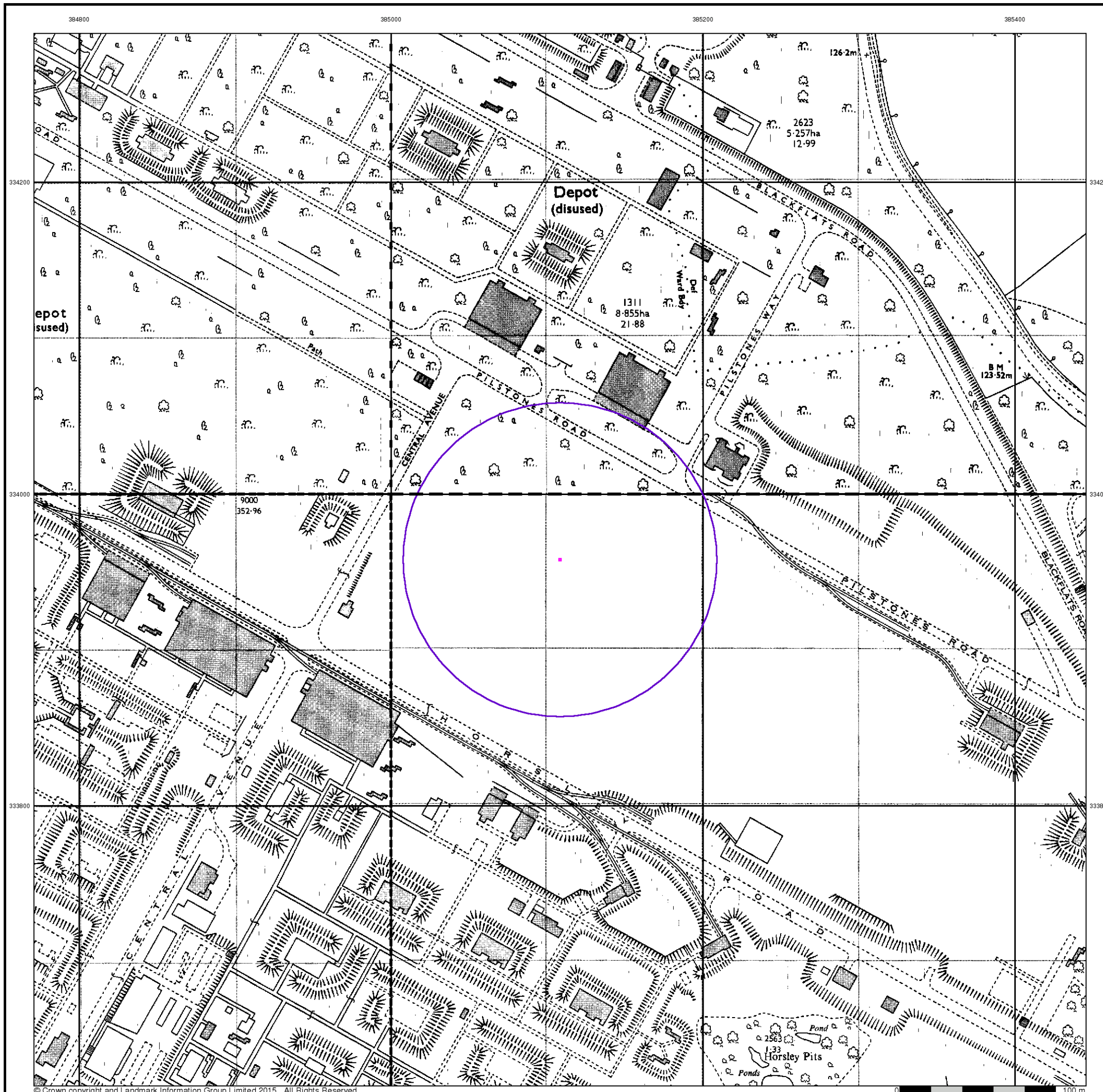


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



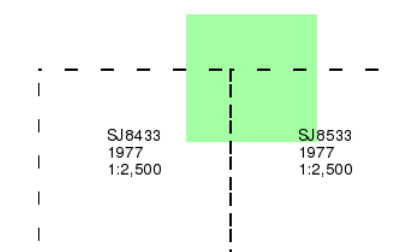
Ordnance Survey Plan

Published 1977

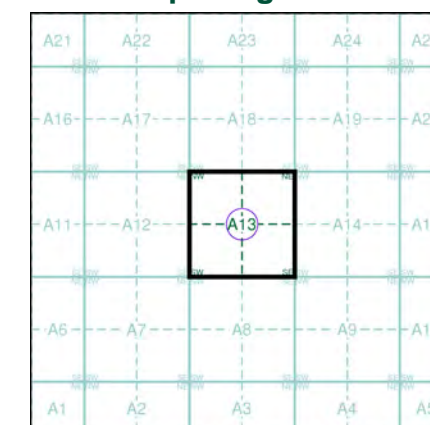
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

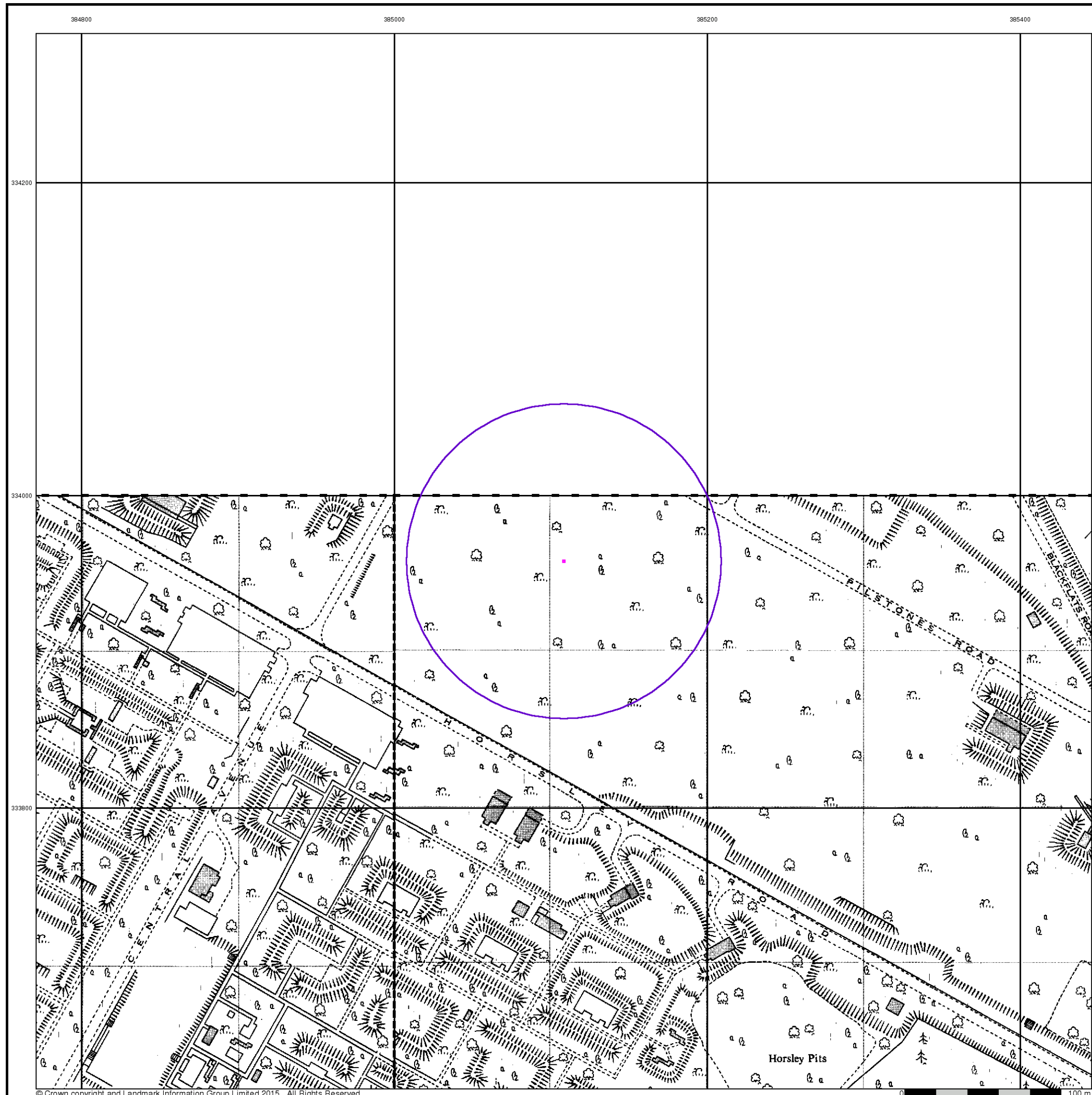


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



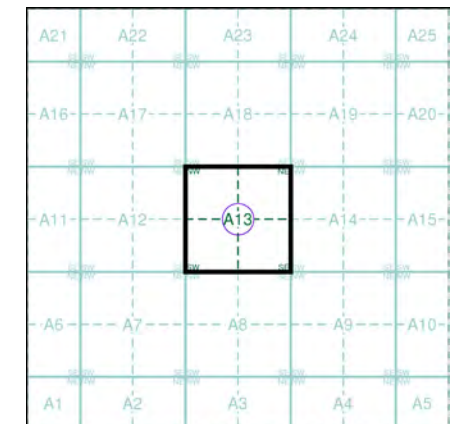
Large-Scale National Grid Data
Published 1994
Source map scale - 1:2,500

'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)

SJ8434	1994	12,500	SJ8534	1994	12,500
SJ8433	1994	12,500	SJ8533	1994	12,500

Historical Map - Segment A13

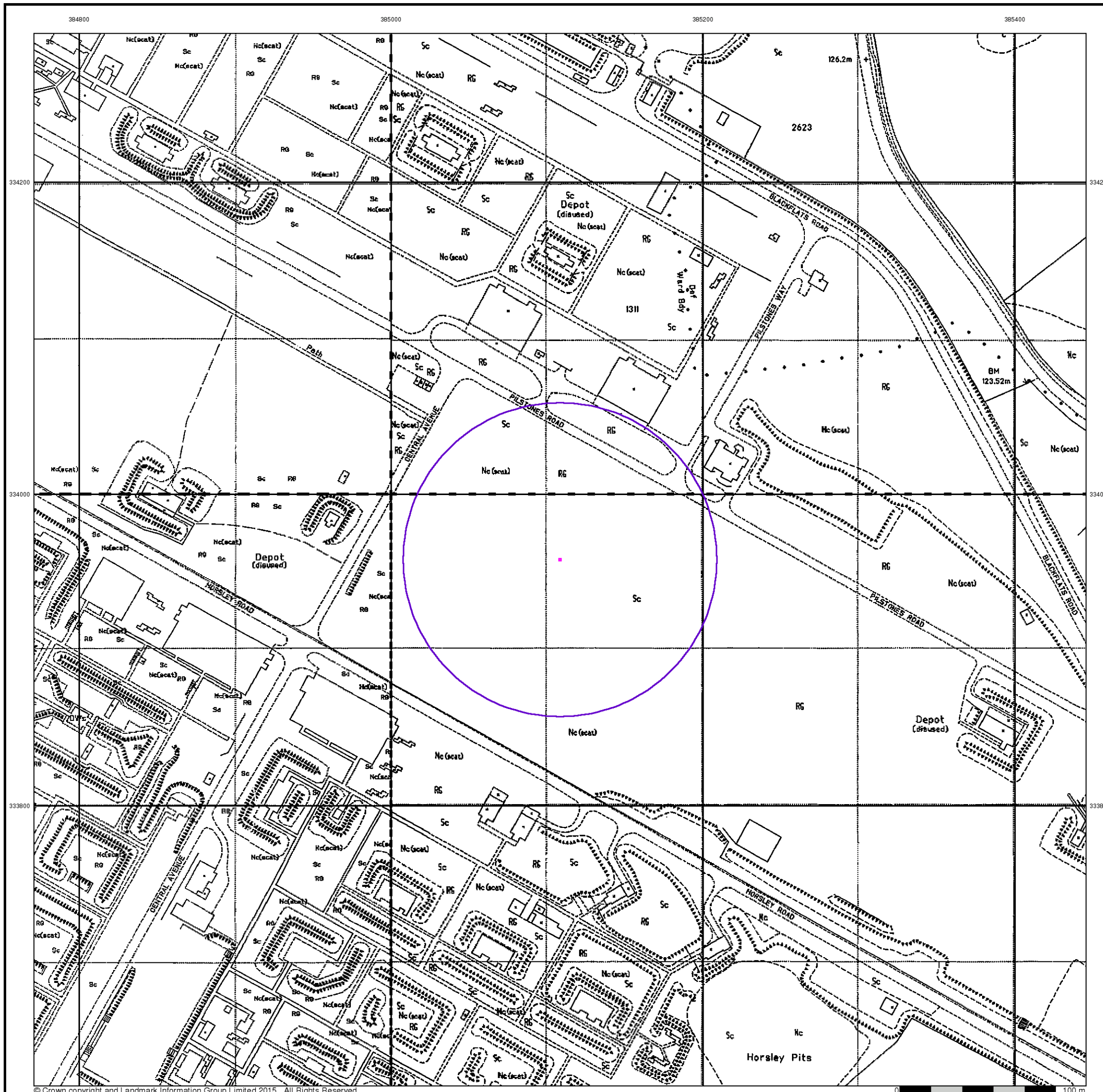


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



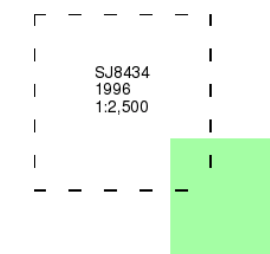
Large-Scale National Grid Data

Published 1996

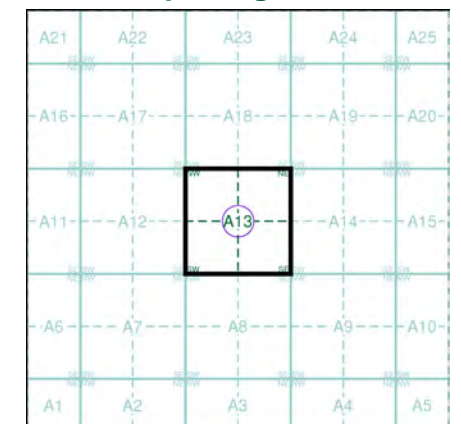
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

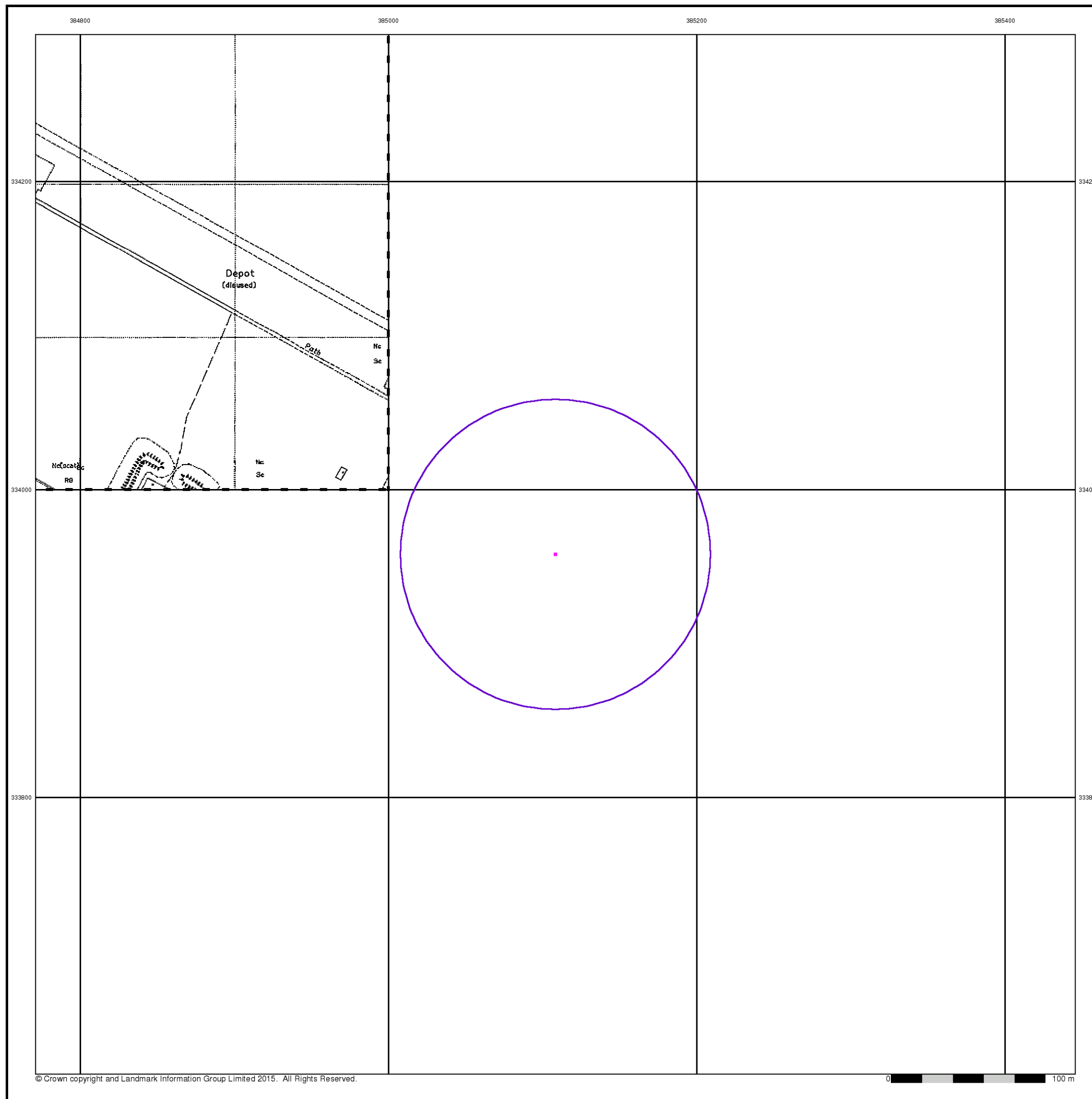


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000



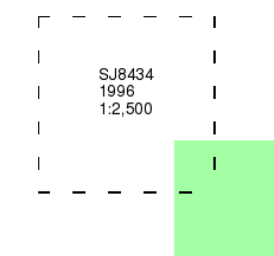
Large-Scale National Grid Data

Published 1996

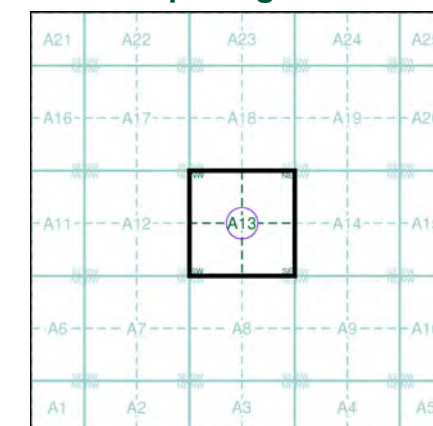
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

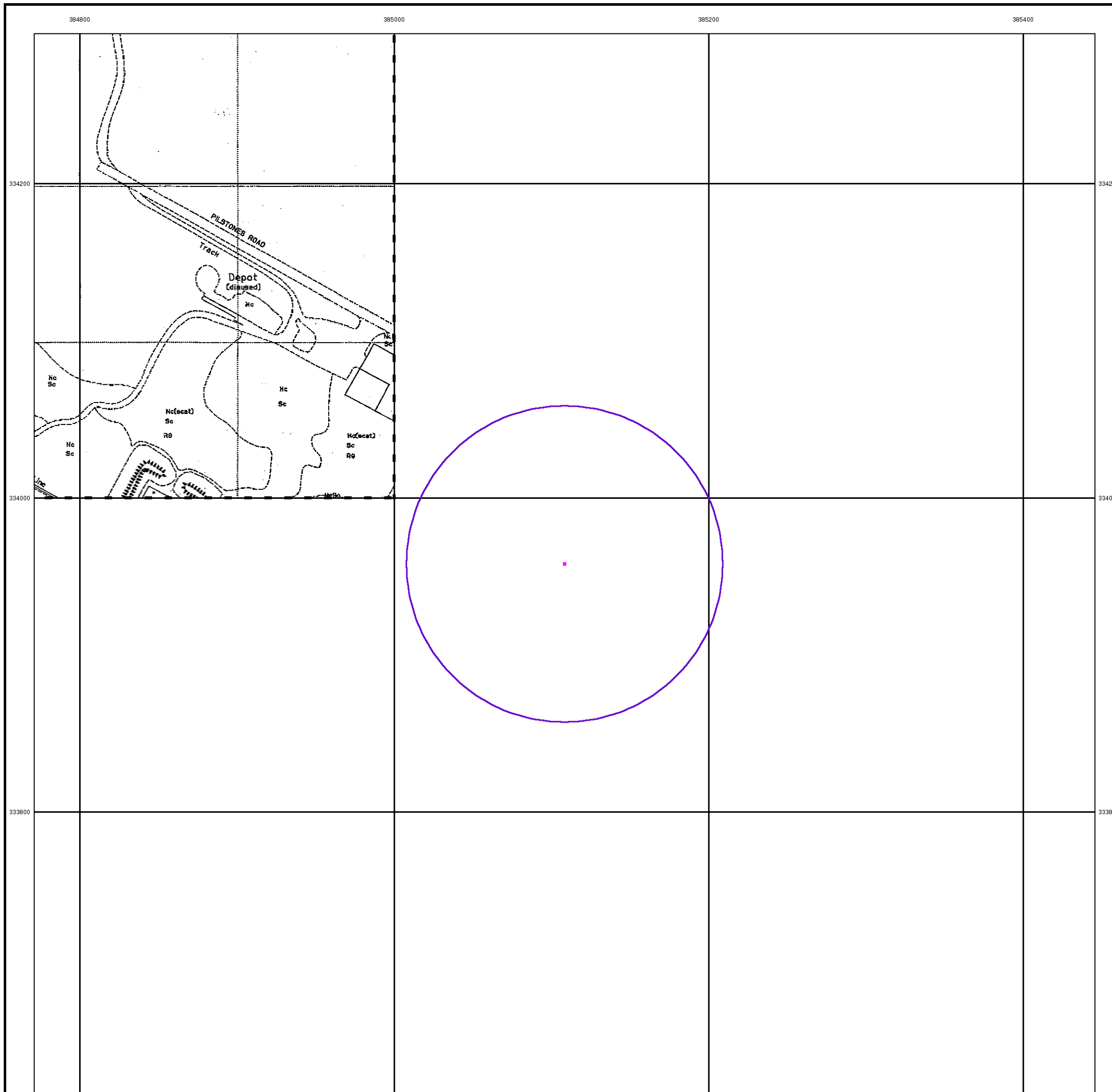


Order Details

Order Number: 91709528_1_1
 Customer Ref: 60471494
 National Grid Reference: 385110, 333960
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 100

Site Details

Site at 385340, 334000





The Coal
Authority

Resolving the **impacts** of mining

CON29M Non-Residential Mining Report

SITE AT 385340, 334000
SHROPSHIRE

Date of enquiry: 26 July 2016
Date enquiry received: 26 July 2016
Issue date: 26 July 2016

Our reference: 51001219117001
Your reference: 91709528_2 |



CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Client name

LANDMARK INFORMATION GROUP LIMITED

Enquiry address

SITE AT 385340, 334000, SHROPSHIRE


How to contact us


0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

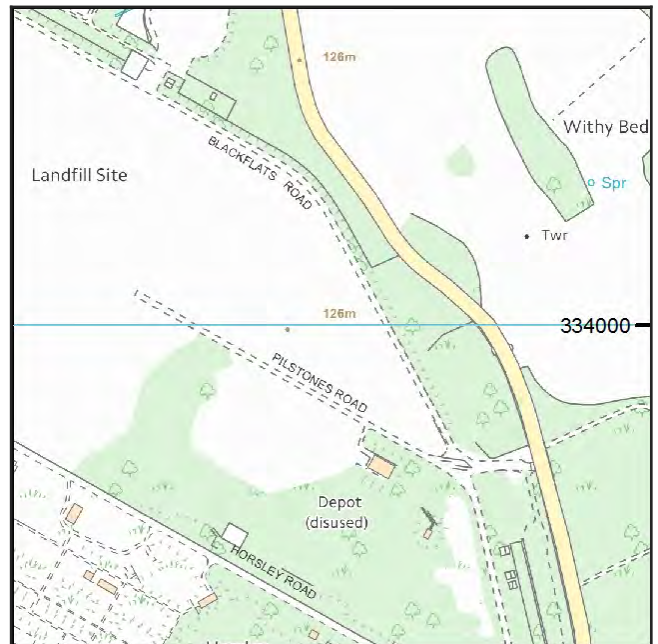
200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.gov.uk/coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /coalauthority



Approximate position of property



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Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	No
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	No
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No
15	Information from the Cheshire Brine Subsidence Compensation Board	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is not within a surface area that could be affected by past underground mining.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has plans to grant a licence to remove coal using underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4. Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres, since 31st October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10. Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13. Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

15. Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

Disclaimer

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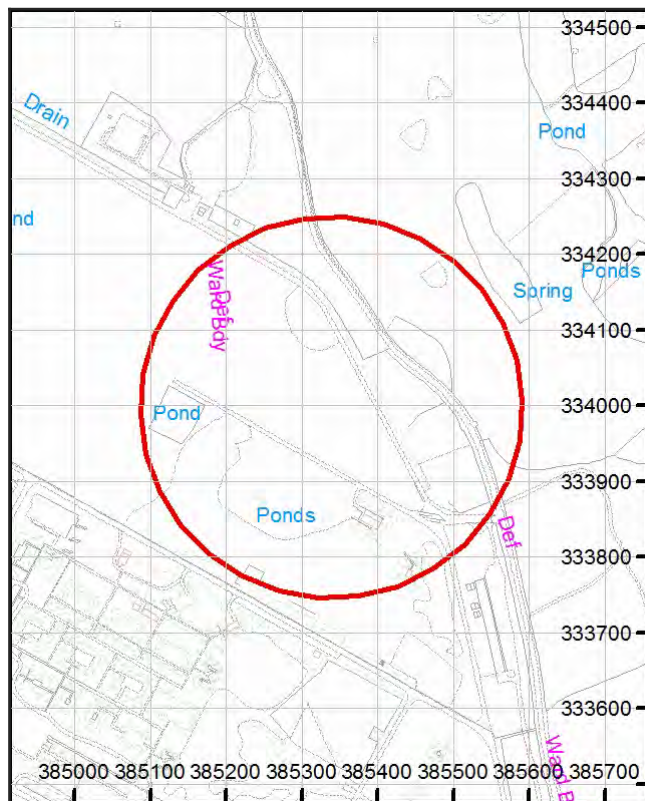
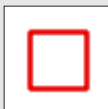
Alternative formats

If you would like this report in an alternative format, please contact our communications team.

Enquiry boundary

Key

Approximate position of enquiry boundary shown




How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.gov.uk/coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /coalauthority



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Appendix B MAGIC Report



Legend

- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Nature Reserves (Scotland)
- National Nature Reserves (Wales)
- National Parks (England)
- Ramsar Sites (England)
- Proposed Ramsar Sites (England)
- Ramsar Sites (Scotland)
- Ramsar Sites (Wales)
- Sites of Special Scientific Interest Units (England)**
- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- Destroyed
- Not Assessed
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Sites of Special Scientific Interest (Scotland)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (England)
- Possible Special Areas of Conservation (England)

Projection = OSGB36
 xmin = 380700
 ymin = 332000
 xmax = 388800
 ymax = 336500

Map produced by MAGIC on 2 July, 2019.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

Site Check Report Report generated on Tue Jul 02 2019

You selected the location: Centroid Grid Ref: SJ85283395

The following features have been found in your search area:

Ancient Woodland (England)

Wood Name	
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1411608
Area (Ha)	2.129811

Wood Name	
Theme Name	Ancient Replanted Woodland
Theme ID	1411607
Area (Ha)	1.281132

Wood Name	BIRCHWOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1505415
Area (Ha)	0.538069

SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?

All Planning Applications

Infrastructure

Wind & Solar Energy

Minerals, Oil & Gas

Rural Non Residential

Residential

Rural Residential

Air Pollution

Combustion

Waste

Composting

Discharges

Water Supply

Notes

GUIDANCE - How to use the Impact Risk Zones

2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m².

General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.

[/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf](#)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?

All Planning Applications

Infrastructure

Wind & Solar Energy

Minerals, Oil & Gas

Rural Non Residential

Residential

Rural Residential

Air Pollution

Combustion

Waste

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Notes

GUIDANCE - How to use the Impact Risk Zones

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All Planning Applications

Infrastructure

Wind & Solar Energy

Minerals, Oil & Gas

Rural Non Residential

Residential

Rural Residential

Air Pollution

Combustion

Waste

Composting

Discharges

Water Supply

Notes

GUIDANCE - How to use the Impact Risk Zones

2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

Airports, helipads and other aviation proposals.

Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t).

General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.

Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location).

[/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf](#)

2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

Airports, helipads and other aviation proposals.

Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t).

General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.

[/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf](#)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?

All Planning Applications

Infrastructure

Wind & Solar Energy

Minerals, Oil & Gas

Rural Non Residential

Residential

Rural Residential

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Rural Residential

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[/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf](#)

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Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.

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Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location).

[/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf](#)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?**All Planning Applications****Infrastructure****Wind & Solar Energy****Minerals, Oil & Gas****Rural Non Residential****Residential****Rural Residential****Air Pollution****Combustion****Waste****Composting****Discharges****Water Supply****Notes****GUIDANCE - How to use the Impact Risk Zones****Scheduled Monuments (England) - points****Name****Scale of Capture****Old Reference****Reference****Easting****Northing****Date****Area (Ha)****Hyperlink**

2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

Airports, helipads and other aviation proposals.

Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.

General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.

[/Metadata for magic/SSSI IRZ User Guidance MAGIC.pdf](#)

Bowl barrow in Swynnerton Park

1:10000

22425

1009314

384745.677999

335108.911548

20/01/1993

0.11349

[/Metadata for magic/rsm/22425.pdf](#)

Scheduled Monuments (England)**Name****Scale of Capture****Old Reference****Reference****Easting****Northing****Date**

Bowl barrow in Swynnerton Park

1:10000

22425

1009314

384745.677999

335108.911548

20/01/1993

7/2/2019

Area (Ha)

0.11349

Hyperlink

/Metadata_for_magic/rsm/22425.pdf

Woodpasture and Parkland BAP Priority Habitat (England)

No Features found

Areas of Outstanding Natural Beauty (England)

No Features found

Limestone Pavement Orders (England)

No Features found

Local Nature Reserves (England) - points

No Features found

Local Nature Reserves (England)

No Features found

Moorland Line (England)

No Features found

National Nature Reserves (England) - points

No Features found

National Nature Reserves (England)

No Features found

National Nature Reserves (Scotland) - points

No Features found

National Nature Reserves (Scotland)

No Features found

National Nature Reserves (Wales) - points

No Features found

National Nature Reserves (Wales)

No Features found

National Parks (England)

No Features found

Ramsar Sites (England) - points

7/2/2019

No Features found

Ramsar Sites (England)

No Features found

Proposed Ramsar Sites (England) - points

No Features found

Proposed Ramsar Sites (England)

No Features found

Ramsar Sites (Scotland) - points

No Features found

Ramsar Sites (Scotland)

No Features found

Ramsar Sites (Wales) - points

No Features found

Ramsar Sites (Wales)

No Features found

Sites of Special Scientific Interest Units (England) - points

No Features found

Sites of Special Scientific Interest Units (England)

No Features found

Sites of Special Scientific Interest (England) - points

No Features found

Sites of Special Scientific Interest (England)

No Features found

Sites of Special Scientific Interest (Scotland) - points

No Features found

Sites of Special Scientific Interest (Scotland)

No Features found

Sites of Special Scientific Interest (Wales) - points

No Features found

7/2/2019

Sites of Special Scientific Interest (Wales)

No Features found

Special Areas of Conservation (England) - points

No Features found

Special Areas of Conservation (England)

No Features found

Possible Special Areas of Conservation (England) - points

No Features found

Possible Special Areas of Conservation (England)

No Features found

Special Protection Areas (England) - points

No Features found

Special Protection Areas (England)

No Features found

Potential Special Protection Areas (England) - points

No Features found

Potential Special Protection Areas (England)

No Features found

Appendix C Nature and Heritage Screen

Nature and Heritage Conservation

Screening Report: Bespoke installations - Discharges to Air

Reference	EPR/AP3906PS/A001
NGR	SJ 85122 33909
Buffer (m)	90
Date report produced	18/07/2019
Number of maps enclosed	3

The nature conservation sites identified in the table below must be considered in your application.

Nature and heritage conservation sites	Screening distance (km)	Further information
Ramsar	10	Joint Nature Conservation Committee
Midland Meres & Mosses		
Local Wildlife Sites (LWS)	2	Appropriate Local Record Centre (LRC)
Pilstones Wood		
Lodge Covert, Swynnerton		Appropriate Wildlife Trust
Highlowbank (west of)		
Beatty Hall		
Highlow Meadows		
Millmeece (south of) (hedges and nearby marl pits)		
Meece Brook/Swynnerton/MOD/Railway		
Yarnfield Meadows		



Ancient Woodland

2

[Woodland Trust](#)

Unknown

[Forestry Commission](#)

Birchwood

[Natural England](#)

Where protected species are present, a licence may be required from Natural England or the Welsh Government to handle the species or undertake the proposed works.

The relevant Local Records Centre must be contacted for information on the features within local wildlife sites. A small administration charge may also be incurred for this service.

Please note we have screened this application for protected and priority sites, habitats and species for which we have information. It is however your responsibility to comply with all environmental and planning legislation, this information does not imply that no other checks or permissions will be required.

Please note, the enclosed pre-application map(s) is valid for a period of **6 months**. If you plan to submit your application more than 6 months after the map(s) was generated, you must request that the screen is re-run. This will ensure that you have used the most current information on heritage and nature conservation interests in your application.

customer service line
03708 506 506



incident hotline
0800 80 70 60

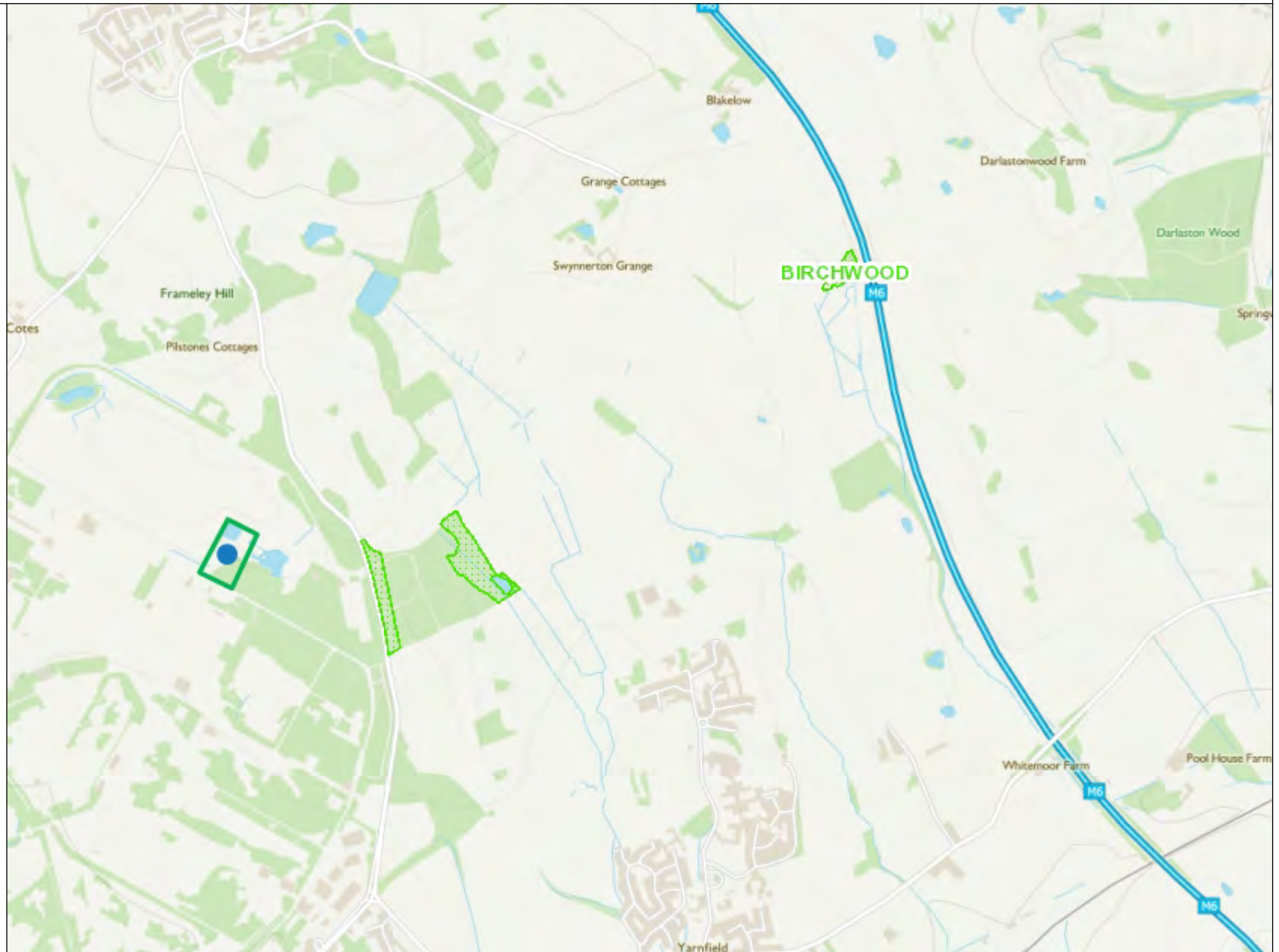
floodline
0845 988 1188

www.environment-agency.gov.uk

Ancient Woodland Area 1

Legend

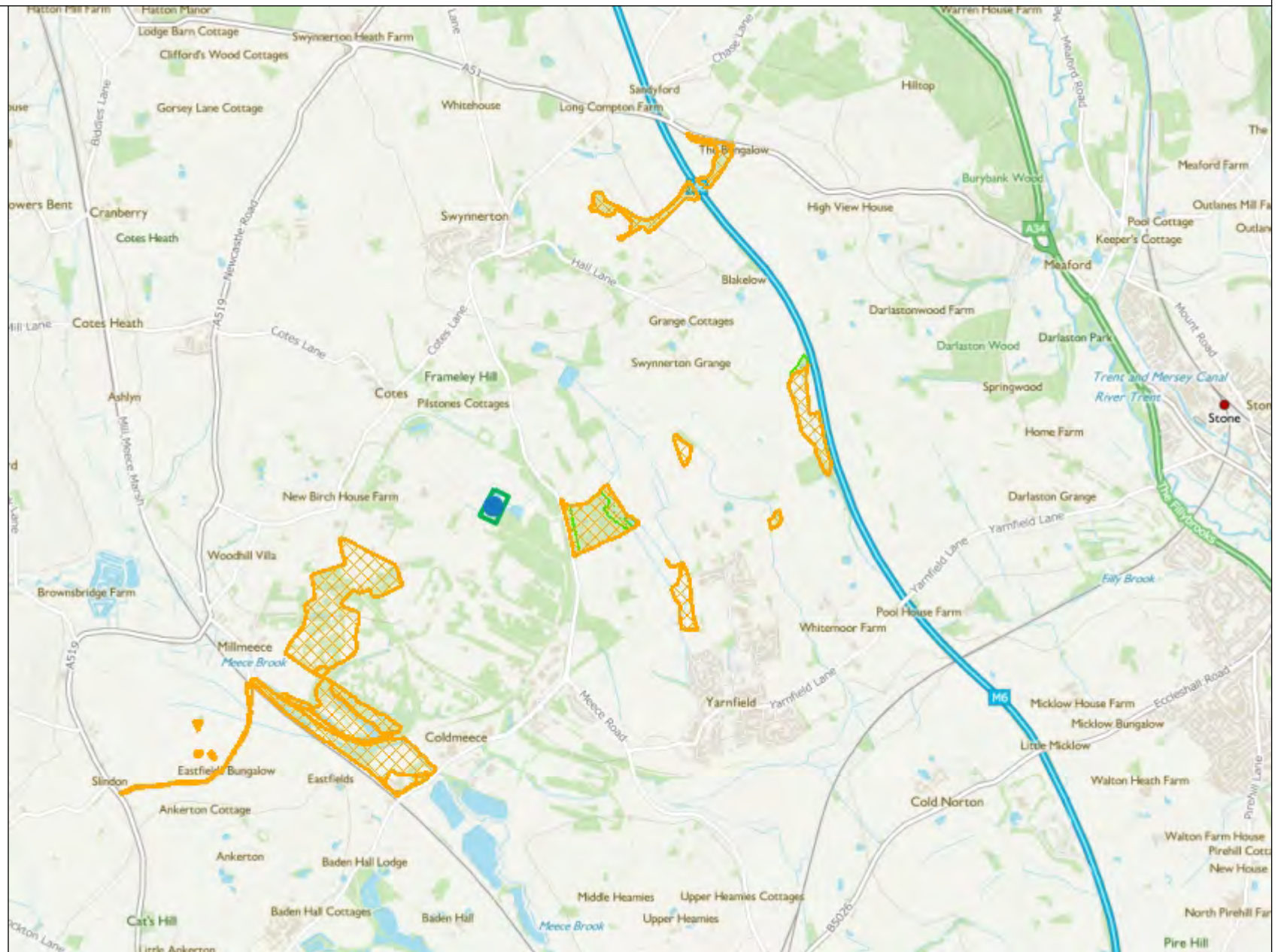
-  Ancient Woodland (England)
-  Ancient Woodland (Wales)



Local Wildlife site Area 1



Legend

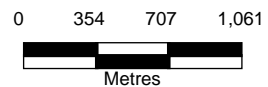
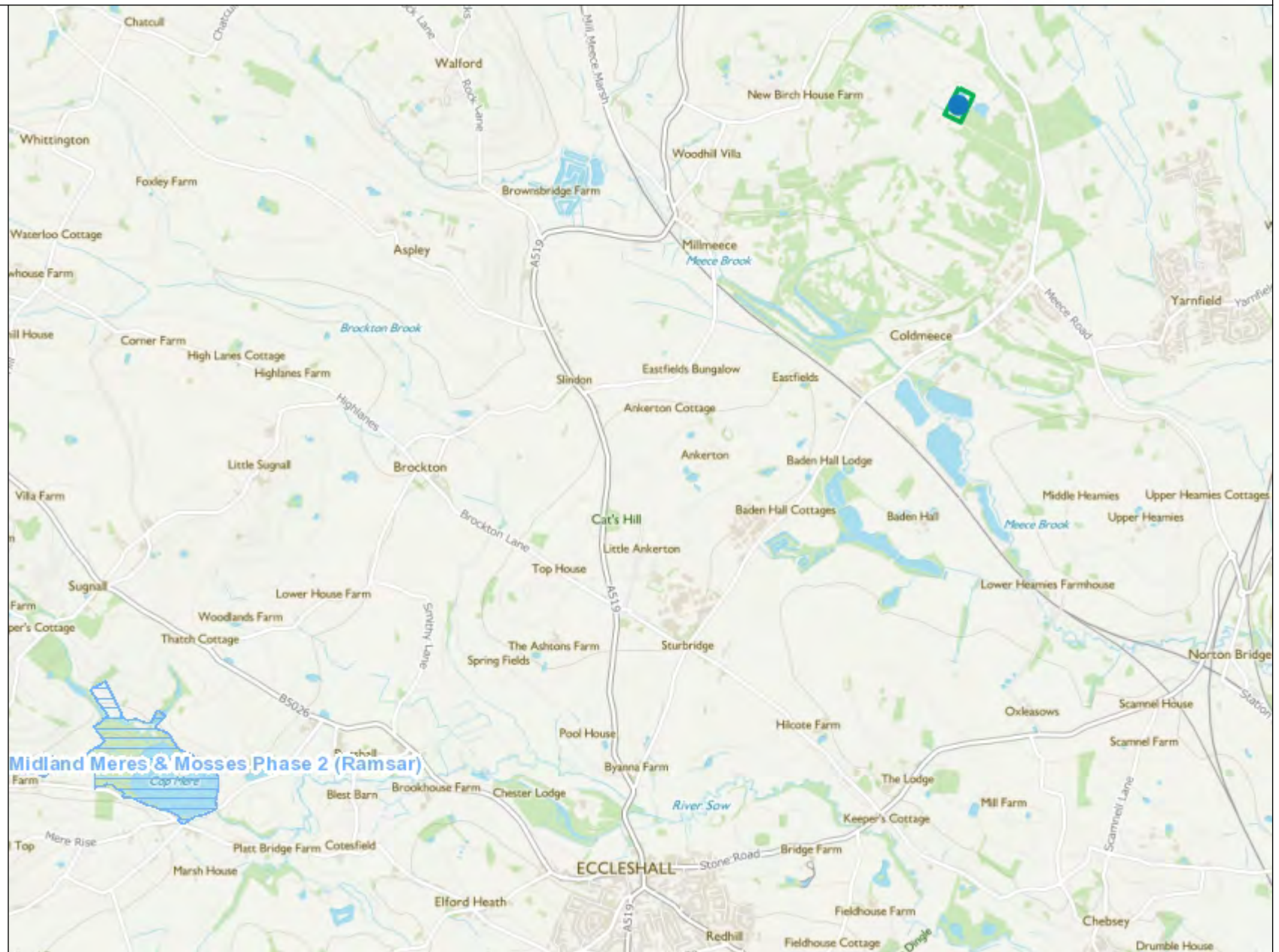
-  Local Wildlife Sites
-  Ancient Woodland (England)
-  Ancient Woodland (Wales)
-  Ramsar (England)
-  Ramsar (Wales)



RAMSAR

Legend

-  Ramsar (England)
-  Ramsar (Wales)
-  Marine Nature Reserves
-  Marine Conservation Zones



Appendix D Ecology Report

1 Introduction

1.1 Context

This Appendix comprises an assessment of the ecological effects likely to arise from the proposals for a temporary facility to compost green waste within parts of the landfill site until such time as these areas are required to be landfilled.

Please note this Appendix must be read in conjunction with the Supporting Statement which contains:

- a detailed description of the proposed development (see section 4 of the Supporting Statement);
- figures; and
- a summary of other assessments undertaken which may be relevant.

1.2 Scoping

Although it was agreed with the SCC case officer that the application does not need to be accompanied by an ES, there remains a requirement to ensure that sufficient information is provided to enable SCC, its consultees and interested parties to properly assess the main likely effects - in land use planning terms. At a pre-application meeting held on 25th August 2015 the SCC case officer agreed that one of the main likely effects of the proposals is considered to be on ecology. Accordingly potential effects in relation to ecological effects have been assessed in detail.

This ecological impact assessment is based on the results of the Phase 1 vegetation and habitat survey and desk study which were undertaken in December 2014 and the further survey work that was undertaken following the Phase 1 survey. Further ecological survey work undertaken at the landfill site in 2015 includes:

- surveys of a number of ponds for great crested newts;
- foraging and commuting bat surveys; and
- reptile surveys

Additionally, as a local butterfly surveyor indicated that both grizzled and dingy skipper were known in the MoD training area to the south of the landfill site and had been recorded previously within the landfill site, a survey for butterflies was also undertaken.

1.3 Structure

This Appendix presents the results of the ecological impact assessment and includes the following documents as annexes:

Annex C1 – Wildlife Legislation

Annex C2 – Assessment Methodology

Annex C3 – Desk Study

Annex C4 – Baseline Surveys (including Appendix C4.1 and C4.2)

1.4 Figures

The following Figures are appended to this assessment:

Figure C1 – Survey Areas

Figure C2 – Phase 1 Habitat Survey Map

Figure C3 – Bat Transect Survey – May 2015

Figure C4 – Bat Transect Survey – July 2015

Figure C5 - Bat Transect Survey - August 2015

Figure C6 – Reptile Mat Locations

Figure C7 – Butterfly Survey – Visit 1

Figure C8 – Butterfly Survey – Visit 2

Figure C9 – Butterfly Survey – Visit 3

Figure C10 – Butterfly Survey – Visit 4

Figure C11 – Butterfly Survey – Visit 5

Figure C12 – Butterfly Survey – Visit 6

2 Planning Policy Context

This section summarises the findings of a review of legislation and planning policy relevant to the protection and enhancement of plants, animals and habitats.

The framework for the assessment of the potential ecological effects of the proposed development is based on current legislation and UK government and local authority policies that relate to nature conservation.

2.1.1 National Legislation

The main relevant legislation for the protection of wildlife and ecology in the UK comprises;

- The Wildlife and Countryside Act (WCA), 1981 (as amended);
- The Countryside and Rights of Way (CroW) Act, 2000;
- The Natural Environment and rural Communities (NERC) Act 2006;
- The Conservation of Habitats & Species Regulations 2010 (as amended); and
- The Protection of Badgers Act 1992.

Further details are provided in Annex C1.

2.1.2 National Planning Policy Framework and Local Planning Policies

This assessment has taken into account the relevant parts of the NPPF and local planning policies. A full discussion of how the proposed development complies with the relevant policies is contained in the Supporting Statement for this application.

2.1.3 Biodiversity Strategies

National Strategy

In July 2012 the UK Post -2010 Biodiversity Framework was published. This covers the period 2011 - 2020 and forms the UK Government's response to the UN convention on Biological Diversity held in Nagoya in 2010. This contained 5 strategic goals ("Aichi" Goals). The Framework recognised that the Biodiversity Action Plan should now be delivered through strategies for each of the 4 countries comprising United Kingdom and Northern Ireland. In England this is embodied in Biodiversity 2020: A strategy for England's wildlife and ecosystem services. These country strategies replace the UK Biodiversity Action Plan (BAP). In England, the priority species and habitats for action are those listed on Section 41 of the NERC Act (2006), however the strategies and targets set out for the habitats and species in the BAP are still largely applicable.

Local Biodiversity Action Plans

The local biodiversity action plan for Staffordshire was initially produced in 2009 and has been updated regularly. The third edition is now based around ecosystem action plans, rather than plans for specific species and habitats. There are 14 Ecosystem Action Plans (EAP). The EAP that the Site falls within is the 'Wooded Quarter'. This is described as a *"highly diverse area of land that ranges from marshy clay farmland and vales, wet heath moor & boglands, stream valleys and washlands, free draining upland estates and large areas of dry heathland and woodland."* Within this EAP, habitats relevant to the application include Native Woodland and Ponds. Species to consider include pipistrelle bats, noctule bats, barn owl, skylark and great crested newt.

3 Assessment Methodology and Significance Criteria

The methodology used to assess the significance of impacts on ecological receptors is based on the Guidelines for Ecological Impact Assessment (EclA) published by the Institute of Ecology and Environmental Management (IEEM) in 2006 (now Chartered Institute of Ecology and Environmental Management CIEEM). Details of the approach are provided in Annex C2 but in summary, areas and/or species of ecological value within the site are identified and the main factors contributing to their value are described and assigned a value ranging from: international down to within immediate zone of influence only.

The impact on a feature has a number of characteristics that need to be fully described before significance can be assessed and a number of factors need to be considered when describing and assessing impacts.

IEEM guidance states that impacts should be determined as being significant when they have an adverse or positive effect “*on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area*”. Such impacts may be significant at the level of importance defined in the Evaluation section or, for habitats and species, at a lesser geographical scale. For example, limited impacts on woodland of County importance might be assessed as being significant at a District level of importance.

Using this information and judgement, it is determined whether the effects will be significant or not on the integrity (of site/ecosystems) or conservation status (of habitats/species) of each ecological feature and the impact significance is determined at the appropriate geographical scale.

Where possible, levels of certainty are given to indicate the likelihood that both the predicted activity/impact and the associated ecological effect will occur.

To provide a consistency of impact assessment terminology throughout this assessment, each impact (referred to as effects throughout this assessment) is assigned using the IEEM criteria but has been translated to a significance level on the scale of negligible, minor, moderate & major, as outlined in Table 3.1 below.

Table 3.1: Effect Significance Criteria

Effect Significance		Equivalent IEEM Assessment
Significant	Major Beneficial	Significant Positive Impact on ecological integrity or conservation status at Regional, National or International level
	Moderate Beneficial	Significant Positive Impact on ecological integrity or conservation status at District - County level
Non-significant	Minor Beneficial	Significant Positive Impact on ecological integrity or conservation status a Site - Local level
Neutral	Negligible	No significant effect
Non-significant	Minor Adverse	Significant Negative Impact on ecological integrity or conservation status a Site - Local level
Significant	Moderate Adverse	Significant Negative Impact on ecological integrity or conservation status at District - County level
	Major Adverse	Significant Negative Impact on ecological integrity or conservation status at Regional, National or International level

4 Baseline Conditions

Details of both the desk study and fieldwork undertaken can be found in Annex C3 and C4 respectively. A summary of the results obtained is presented below.

4.1 Desk Study

A desk study was undertaken to identify any existing records of statutory and non-statutory nature conservation sites, and protected or otherwise notable species. The following organisations and websites were contacted/ searched:

- Staffordshire Biological Records Centre (SBRC); and
- Multi-Agency Geographic Information for the Countryside (MAGIC)

The area covered by the desk study extends beyond the boundary of Area 1 and Area 2 and identified any internationally, nationally and locally designated statutory sites within and up to at least 5km beyond the landfill site boundary; and, locally designated non-statutory sites, NERC Act Section 41 habitats and notable species within and up to 1km beyond the landfill site boundary.

4.2 Statutory Designated Sites

Other than Local Nature Reserves (LNRs), there are no statutory designated sites within at least 5km of Area 1 or Area 2. The nearest such site is King's and Hargreaves Woods Site of Special Scientific Interest (SSSI) located approximately 5.4km to the north. The nearest LNR is Stone Meadows LNR approximately 3.9km to the east in Stone. The nearest internationally designated site is Midland Meres and Mosses Phase 2 Ramsar approximately 6.2km to the south west. Areas 1 and 2 are not within an impact zone defined by Natural England for a Site of Special Scientific Interest (SSSI) on the MAGIC website.

4.3 Non-Statutory Designated Sites

There are a number of non-statutory designated sites within 1km. Table 4.1 below lists the ones that are considered relevant to this assessment.

Table 4.1: Non-Statutory Sites

Status	Site Ref	Location Name	Description	Distance from proposed development
Retained Grade 1 Site of Biological Importance (SBI)	83/42/05	Meece Brook/ Swynnerton/ MOD/ Railway	An extensive area of sallow scrub and willow and alder carr around Meece Brook and its associated channels.	0.5km
Local Wildlife Site (LWS)	83/53/99	Pilstones Wood	Part ancient semi-natural woodland, part ancient replanted woodland. The strip adjacent to the road is relatively undisturbed semi-natural woodland	<0.1km
Retained Grade 1 SBI	83/63/33	Yarnfield Meadows	A series of semi-improved hay meadows.	0.9km
Retained Grade 2 SBI	83/64/33	Highlowbank (west of)	An unimproved damp corner of a field with a generally good mixture of species in the turf, including lady's-mantle.	1km

4.4 Protected and Notable Species

A number of records of protected/notable species were provided by SBRC. Table 4.2 below lists the ones considered relevant to this assessment.

Table 4.2: Records of Species within 1km

Species	Approximate Location	Most recent date recorded
Protected Species		
Brown long eared (bat)	Recorded 868m to south of the landfill site on	2004
Natterer's (bat)	Recorded 868m to south of the landfill site on	2004
Otter	Recorded from 414m from the landfill site	2005
Eurasian Hobby	Recorded 474m north of the landfill site	2000
Brambling	Recorded 686m from the landfill site	2011
Barn Owl	Recorded 467m north east of Blackflats Road	2009
Badger	Recorded adjacent to the landfill site	2007
Bluebell	Recorded 954m west of the landfill site in Pilstones wood	1997
Notable Species		
Dingy Skipper	Recorded 484m south of the landfill site on MOD	2011
Small Heath	Recorded 484m south of the landfill site on MOD	2011
Wall	Recorded 680m to north of the landfill site	2005
Grizzled Skipper	Recorded 484m south of the landfill site on MOD	2011
European Golden Plover	Recorded 680m from the landfill site	2008
Skylark	Recorded 680m west of the landfill site	2008
Linnet	Recorded 726m to southwest of the landfill site.	2014
Northern Wheatear	680m from the landfill site	2005
Brown Hare	Recorded 912m north east of the landfill site	2006

4.5 Previous Surveys

In 2011, SKM EnviroS undertook a number of surveys at the eastern end of the landfill site to support planning application number S.11/23/403W - which sought consent for the development of the Soil Treatment Facility (STF) to the south east of Area 2. An extended Phase 1 vegetation and habitat survey was undertaken, as was a specific survey for bats in connection with two derelict buildings. At that time, it was noted that there were no waterbodies within 500m of the proposed STF. This indicates that the lagoon at TN18 and the water bodies at TN28 and TN29 are relatively recent in origin.

The bat surveys undertaken in connection with the two buildings and a tree area recorded low numbers of four species foraging and commuting; common pipistrelle, soprano pipistrelle, noctule / Leisler's and Myotis sp.

4.6 Field Surveys

4.6.1 Habitats

Habitats recorded across the wider landfill site included bare ground, sparsely vegetated ground, un-managed secondary grassland, secondary wet grassland, bare ground, dense scrub, scattered scrub, broadleaved woodland, tall herb, sparsely vegetated ground, ephemeral short perennial and open water.

These habitats are described in greater detail in Annex C4. A map showing the distribution of these habitats is provided as Figure C2 and a brief summary is provided below.

Bare Ground

Areas of bare ground were present in both Area 1 and 2, with a much larger area of bare ground in Area 1 to the south and east of TN29. There are further large areas of bare ground in the wider landfill site, forming the capped landfill areas which are undergoing restoration.

Sparsely Vegetated Ground

A large area of Area 2 was identified as an area of spoil and was sparsely vegetated (area surrounding TN3) and an area within Area 1 was identified as a refuse tip (area surrounding TN19). Large parts of the wider landfill site comprised either bare or sparsely vegetated ground, with the latter covering large areas including capped landfill areas which are undergoing restoration and many large bunds and access tracks.

Unmanaged Secondary Grassland

Peripheral to Area 1 and Area 2 is unmanaged grassland. Large sections of the northern and western parts of the wider landfill site are dominated by unmanaged grassland, along with patches of bramble scrub and tall herbs.

Secondary Wet Grassland

There is no wet grassland within Area 1 or Area 2 but several areas were recorded within the boundary of the wider landfill site including a linear short section located at the north-eastern end of Blackflats Road.

A large area dominated by reed canary grass (*Phalaris arundinacea*) was recorded in a central elevated position to the north-west. The ground was found to be wet, but contained no open water.

Dense Scrub/Scattered Scrub

Area 2 features dense/continuous scrub along the north east boundary to Blackflats Road. In the wider landfill site, stands of dense scrub were recorded along several linear bund slopes, the woodland edges, and along the fence-lines that form the boundaries of the landfill site. Several small stands to large pockets of bramble scrub were also recorded within central areas of the landfill site, and along with patches of tall herbs and grasses formed extensive areas of secondary grassland mosaic.

Broad-leaved Woodland

There are several large areas of woodland within the large landfill site; the largest of these is in the south east corner and which just extends into the south eastern part of Area 1. There are also further stands located to the north of the access road, the eastern landfill site boundary and surrounding a large pond at the west end of the landfill site.

Tall Ruderal/Herb

Extensive areas of this habitat type were recorded across central and the north-western parts of the wider landfill site but not within Areas 1 and 2. These areas, together with patches of bramble scrub and un-managed secondary grassland, formed large mosaics of habitat across the landfill site.

Ephemeral Short Perennial

Small areas were recorded within the central south of the landfill site. No areas were recorded within Areas 1 or 2.

Hard Standing/Buildings

Two buildings with the potential to support bats were identified; one in the woodland towards the east end of the landfill site near the offices and STF and the second, a series of shallow brick archways with a reinforced concrete roof, close to the southern boundary fence towards the south east end of the landfill site and Area 1.

Open Water

Twenty waterbodies (19 ponds and 1 wet ditch) were identified within the boundary of the landfill site; five of these were identified in Area 1 and four in Area 2.

Invasive Species

No invasive species were recorded in Areas 1 or 2 but Japanese knotweed was recorded at two locations in the wider site; both in the central south west part of the Site.

4.6.2 Species

An assessment was undertaken for protected/notable species based on the habitats present and previous surveys undertaken. Further details can be found in Annex C4.

Surveys have been undertaken in 2015 for great crested newts, reptiles, bats and butterflies. Details of methods and results can be found in Annex C4 but a summary of the findings is provided below.

Bats

A small number of trees in the woodland in the south west of the landfill site appear to have potential for roosting bats. The two built structures, also in the south east were appraised.

- Old brick built building (Annex C4; TN27 on Figure C2) with a reinforced concrete flat roof; open at both ends; several internal stud-wall cavity bricks, in a damaged internal wall, covered in cobwebs. It is possible that bats could use these bricks as a temporary summer roost, but at the time of survey no indication of bat activity was recorded.
- A series of shallow brick archways (Annex C4; TN22 on Figure C2) with a reinforced concrete roof, close to the southern boundary fence; series of archways approximately 1.5m high providing low potential for roosting bats.

Most of the foraging and commuting habitat is around the periphery of the landfill site - along the perimeter tracks and woodland edges. A small number of what is thought to be Daubenton's bats were however noted during the great crested newt surveys feeding over the large shallow water body (Annex C4; TN28 on Figure C2) towards the south east of the landfill site. The majority of the landfill site is either undergoing restoration to grassland or will be disturbed by future filling and other earthworks and will therefore provide foraging habitat - but of less value.

A transect was walked through the landfill site to record bat activity in late May 2015 (Annex C4 and Figure C3). This is considered to be within the peak season for bat activity. Two surveyors walked the whole landfill site from approximately 15 minutes before dusk for around 2 hours after sunset. The first bat recorded was a Leisler's bat at 22:03, 44 minutes after sunset; between then and the end of the survey at 23:15 small numbers of common pipistrelle (45KHz), soprano pipistrelle (55KHz) and a Myotis species (thought to be Daubenton's over the water) were recorded and this activity was all towards the south east.

A recording bat detector (SM2; Wildlife Acoustics) was placed along the woodland edge east of the large waterbody (TN28) and left to record for five consecutive nights. The results can be found in Annex C4 but in summary four species were recorded with most passes recorded within the first two hours following sunset; few passes recorded through the night and then a cluster often just before sunrise. There is an indication from these results that there is a roost nearby, although the first recording each night is more than 30 minutes after sunset. There are historic records of bat roosts from the MoD training area immediately south of the landfill site.

A second visit was undertaken on the 28th July (Annex C3 and Figure C4). The transect was recorded in the opposite direction so that locations visited early during the first visit were visited later during the second visit. On the second occasion, 20th July 2015 the weather was 17°C with little cloud cover and no rain. It was breezy at the commencement of the survey but this quickly dropped away soon after sunset. The transect commenced at 21:15 (sunset 21:20) and continued until 23:15. The transect was walked in the opposite direction so that areas covered early after dusk on the first occasion were visited later on the second occasion (Figure C4). The first call was at 22:13 and was a common pipistrelle right in the south west corner at Stop Point 5; it appeared to be commuting along the track north to south. Further calls were then recorded along the track

between Stop Points 5 and 6; two common pipistrelles, three Myotis species and a noctule at Stop Point 7. Two further Myotis were recorded between Stop Points 7 and 8. Finally as in May, bat activity was recorded over the water at TN28 including noctule/Leisler's, common pipistrelle and Daubenton's.

An SM2 detector was placed out at the location shown on Figure C4 and left for five nights. Over the five nights only a low level of activity was recorded with most records pipistrelle bats and particularly soprano pipistrelles.

A third visit was undertaken on the 18th August (Annex C4 and Figure C5). The transect was recorded in the same direction as the first in May. The weather was 15°C with little cloud cover, no rain and little or no wind. The transect commenced at 20:15 (sunset 20:30) and continued until 22:30. The first call was at 21:05, a Myotis species in the north west corner of the site at Stop Point D; it was a single pass. Single passes of common pipistrelle were recorded at Stop Point E and F; a common pipistrelle and a soprano pipistrelle at Point G; a single pass of a Myotis species at Point H; an unknown species at Point I; a Myotis species and a common pipistrelle at Stop Point J and finally Daubenton bats at Stop Point K, nearby the remaining standing water, the level of which had fallen considerably from that in July.

A recording bat detector (SM2; Wildlife Acoustics) was placed along the woodland edge south east of the large waterbody (TN28) and left to record for five consecutive nights (figure C5). The results can be found in Annex C4 but in summary four species were recorded but as in July, there was little activity over the five nights with most calls pipistrelles.

Great Crested Newt

From the initial appraisal undertaken in November 2014, five water bodies within the landfill site were assessed to be suitable for great crested newt breeding. They all had Habitat Suitability Indices of >0.5, with three of the five classed as having 'Excellent' suitability. These ponds were at TN4, TN7, TN18, TN19 and TN28 (Annex C4 and Figure C2). Over winter 2014/15 TN4, TN7, TN19 and a number of other waterbodies were lost to works undertaken during that time. Thus in spring 2015 surveys were undertaken of the waterbodies remaining; TN18, TN28 and TN29. TN13, TN14 & TN26 also remained but none of these had been assessed to be suitable for great crested newt breeding in October 2014; TN13 and TN14 are located more than 400 metres from the nearest edge of the landfill, the land between having been restored and TN26 is a small surface water lagoon within the STF with shallow water, heavily eutrophic from run-off from the STF and which during dry periods dries out.

TN18 and TN29 are both located within Area 1. Landfill environmental control works have recently been undertaken in part of this area. The three water bodies; TN18, TN28 and TN29 along with smaller areas associated with TN28 and TN29 were surveyed up to six occasions between April - mid June 2015. Details of the methods, dates and results can be found in Annex C4.

In summary, a small population of great crested newts was found in TN28, at its eastern end, which by the end of the surveys had reduced in water level to form four discrete open water areas. The eastern end has large blocks of concrete in and above the water, which is at its deepest here and where the great crested newts were seen. A single juvenile great crested newt was also seen in TN18, which also indicates either a small population is present or it is an animal that has wandered from TN28. Juvenile great crested newts do wander further than adults and the two waterbodies are less than 100 metres apart. Smooth newts were recorded in all the water bodies surveyed, with frog and toad tadpoles.

Badgers

A badger sett is located on the far west side of the landfill site. No other setts or signs of badger were found elsewhere.

Reptiles

Habitat suitable for reptiles occurred at a number of locations around the landfill site including an area towards the south, within Area 1 associated with TN19 and TN20 that was lost over winter 2014/15. In areas that are still to be lost to the landfill, mats (0.5m x 1m sheets of roofing felt) were placed out in suitable habitat and checked on seven occasions May - June 2015 (Annex C4 and Figure C6). No reptiles were recorded. The only amphibian recorded under any of the mats was a single toad.

Butterflies

Anecdotal evidence was obtained from a local butterfly recorder that both dingy skipper and grizzled skipper had been recorded on the landfill site in the past. Areas particularly towards the west that have been restored have habitat suitable for these two and other species that have adapted to brownfield sites that provide similar dry, sparsely vegetated areas with sunny aspects and abundant larval foodplants such as bird's foot trefoil (*Lotus corniculatus*) and grasses such as red fescue (*Festuca rubra*) and abundant nectar plants.

A transect was walked on six occasions and the butterflies encountered noted; species and, where possible, numbers. Details can be found in Annex A4.

In summary, eight species were recorded including dingy and grizzled skippers and two other species often associated with the same habitats; small heath and common blue. Most records were from the western side of the landfill site, which has been restored and where bird's foot trefoil is locally abundant (Annex C4 and Figures C7 - C12). Areas 1 and 2 have only small areas of habitat suitable for these species and are not the locus of the records of the foodplants of these species.

Miscellaneous Species

No signs of other protected/notable species were found; in terms of birds, a number of small passerines were noted during the other surveys, the woodland habitats fringing the landfill site and in the south east providing suitable habitat; the area undergoing restoration has expanses of largely unmanaged grassland suitable for species such as skylark; during one of the great crested newt surveys, a barn owl was seen over the grassland; Canada geese bred on the lagoon TN18 and a pair of little ringed plover bred around TN28 within Area 1 which, as the water levels fell, had good areas of bare/sparsely vegetated sandy ground.

5 Assessment of Nature Conservation Value

5.1 Statutory and Non-Statutory Sites of Nature Conservation Value

5.1.1 Statutory Sites

Other than Local Nature Reserves, there are no statutory designated sites within at least 5km of Area 1 or Area 2. The nearest is King's and Hargreaves Woods SSSI located approximately 5.4km to the north. This site is of National value, as it meets one or more of the criteria for designation as an SSSI. The nearest internationally designated site is Midland Meres and Mosses Phase 2 Ramsar approximately 6.2km to the south west. This site is of International value, as it meets one or more of the criteria for designation as a Ramsar site. The nearest LNR is Stone Meadows LNR approximately 3.9km to the east in Stone and is considered to be of Local value as it was declared as an LNR by Stafford Borough Council.

5.1.2 Non-Statutory Sites

There are four designated sites present within 1km of the landfill site, three SBIs and one LWS, and as such have met criteria for selection and are of **County** value.

5.2 Protected / Notable Species

5.2.1 Bats

There is limited opportunity for roosting bats, there are a small number of trees with suitable features for roosting in the south east of the landfill site but outside of Area 1 and should any of these hold roosting bats, based on the species recorded foraging are considered to be of **Local** value for roosting bats.

There are limited opportunities for foraging bats within the landfill site. Woodland edges and waterbodies are the most significant but the largely unmanaged grassland will also provide some foraging habitat. Woodland edge and water are present in Area 1; Area 2 is largely open and disturbed. These areas are assessed to be of **Local** value for any bats that may be roosting in the wider area.

There are known records of roosts of common pipistrelle, brown long eared, Natterer's and whiskered/ Brandt's bats within the MoD training area immediately to the south and are likely to be the source of the bats recorded.

5.2.2 Great Crested Newts

A small population of great crested newts has been found in the water body at TN28, parts of which located within Area 1. This water body varies in size depending on pumping and weather conditions, is of relatively recent origin and has little in the way of aquatic, emergent and marginal vegetation. A single juvenile great crested newt was recorded in TN18, also within Area 1 and the result indicates a small population is present here also or an animal has wandered from TN28. There are few other water bodies within the wider landfill site and of these TN29 did not have great crested newts present. Two other water bodies; TN13 and TN14 are located over 400 metres to the west and were not surveyed. There are water bodies within the wider area outside the landfill site but there do not appear to be any records from the data search undertaken within 1km. Based on this it would appear that the population present is possibly remnant from before the landfill commenced and has survived in small numbers in water bodies created around the Site since. Based on this, it is assessed that the population is of **Local** value.

5.2.3 Reptiles

There is limited suitable habitat for reptiles within the landfill site and this is even more limited within Areas 1 and 2. A survey did not record the presence of any of the four common species. There is suitable habitat immediately to the south within the MoD training area but there appear not to be any records from within 1km. Small numbers cannot be discounted but this means that the landfill site as a whole is assessed to be of **Local** value should they be present but the habitat within Areas 1 and 2 is very limited.

5.2.4 Birds

A specific survey has not been undertaken but the woodlands and coarse grassland will attract a range of common passerine species. Based on the wider landscape and the habitats present, the value of the landfill site as a whole for the breeding bird assemblage is considered to be of **Local** importance.

Two species noted during other surveys; little ringed plover and barn owl are both listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended) and as such both receive protection from disturbance whilst nesting or attempting to nest. The pair of little ringed plover appears to have been attracted to the bare sandy areas around the waterbody at TN28 (to the immediate east of Area 1) and is a species that has been increasing in this country since first being recorded breeding in the 1930s. It has found gravel pits and similar areas with bare/sparsely vegetated ground suitable. Such areas are often transient, as here, and the Site is assessed to be of **Local** value for this species.

A single barn owl was seen flying over the grassland during one of the surveys for great crested newts. The habitat is not optimal foraging habitat for barn owl, although the grassland is likely to be home to increasing numbers of small mammals as it develops since restoration. The Site is set within a pastoral and arable landscape and to the north is extensive Parkland and so the Site forms but a small part of suitable foraging habitat for barn owl and as such is assessed to be of **Local** value.

5.2.5 Butterflies

The butterfly survey recorded 13 species of butterfly, the most notable being grizzled and dingy skipper and small heath. All three species are listed on Section 41 of the NERC Act 2006 as species of principal importance for conservation in England. All three are species that have adapted to brownfield sites, as these often develop habitat suitable for these species; dry and sunny with short perennial vegetation that has a high proportion of suitable nectar and larval food plants such as common grasses; red fescue and forbs; bird's foot trefoil and barren and wild strawberry in particular. Anecdotal information provided to one of the AECOM ecologists from the local butterfly group indicated that large numbers of these species were recorded in 2015 to the south within the MoD training area, of which the Site was once a part. It would appear that the habitat present particularly on the western side of the Site that is undergoing restoration is part of a wider area suitable for these species. The habitats within areas 1 and 2 however are quite limited. Based on this, it is assessed that the landfill site as a whole as part of a wider mosaic of suitable habitat including the training area to the south, is of **County** value for dingy and grizzled skipper and the small heath butterfly

5.2.6 Section 41 & Local Biodiversity Action Plans (Habitats)

None of the habitats present within the Site would appear to qualify.

5.2.7 Miscellaneous Habitats

The habitats present within the landfill site are typical of those within the wider landscape and as such are assessed to be of Site value. Table 5.1 below provides a summary of the features recorded and their assigned value within Areas 1 and 2 and the wider landfill site.

Table 5.1: Assignment of Ecological Value

Ecological Receptor	Description	Assessed Value Landfill Site	Assessed Value Areas 1 and 2
Non-statutory LWS	Four sites within 1km of the landfill site.	County	County
Bats (Roosting)	Limited potential.	Local	None
Foraging & commuting	Woodland edge and ponds.	Local	Local
Great crested newt	Small population found in waterbody at TN28.	Local	Local
Nesting bird assemblage	Habitat suitable for ground nesting birds such as skylark and range of common passerine species.	Local	Local
Little ringed plover	A pair breeding on the shore of the large waterbody at TN28.	Local	Local
Barn owl	A single barn owl seen flying around the landfill site.	Local	None
Butterflies	Grizzled and dingy skippers and small heath butterflies recorded; seem to be part of populations present to the south within the MoD training area.	County	Site

Ecological Receptor	Description	Assessed Value Landfill Site	Assessed Value Areas 1 and 2
Reptiles	None recorded; some albeit limited suitable habitat, could be present in small numbers.	Local	Site
Habitats	Generally low nature conservation value; local value habitats.	Site/Local	Site

6 Embedded Mitigation

6.1 Introduction

The potential for many effects of development are mitigated through adoption of best working practice. These are embedded into the working practices at the Site and therefore, along with the restoration and landscaping proposals, form part of the proposed development and as such are considered to be effects in their own right when assessing impacts upon identified sensitive receptors.

Embedded measures include standard industry best practice for dust suppression, lighting, noise, soil handling, surface water management, all of which significantly reduce the potential for significant adverse impacts on sensitive receptors.

6.2 Noise

The noise sources during the construction and operational phases will comprise mainly the use of mobile plant and vehicle movements. To minimise the potential, published Best Practice guidance, will be employed.

6.3 Air Quality/Dust

During operation of the Site, standard dust suppression measures (spray tanker) and other best practice measures will be followed.

6.4 Surface and Ground Water

Surface water run-off from the green waste composting facility will be contained in a closed system. Area 1 will be prepared by installing an impermeable liner (made of high density polyethylene) overlain by hardcore. The liner will be laid to enable incident rainfall to drain to a new lined perimeter ditch system - which in turn will drain to the existing surface water lagoon P18. From there the accumulated water will be recirculated in the composting process and any excess will be removed by suction tanker for onward treatment and disposal at a suitably permitted facility elsewhere.

If Area 2 is developed it will be constructed and drained in the same way as Area 1 – with the exception that a new lined lagoon will be provided. Further details can be found in the Supporting Statement.

6.5 Restoration and Landscaping

A restoration scheme was submitted in 2002 with most of the completed landform of the landfill site restored to agricultural grassland with small scale woodland planting around the pond at the western end of the Site and on two of the three high spots on the restored landform; two hedgerows north east/south west across the Site would divided the area into three enclosures. The eastern end of the Site towards the toe of the slope has retained woodland to the public road and this will be extended by the proposals for the restoration of the STF. Around the pond in the west, some areas were to be retained for nature conservation and the proposals now include the establishment of an area for butterfly conservation and two ponds for great crested newts in the south west corner.

As Areas 1 and 2 will be used until such time as they are required for landfilling, the restoration scheme submitted with the application for an extension of time applies to this application as well.

7 Assessment of Effects

7.1 Introduction

The details of the proposed development are provided in section 4 of the Supporting Statement.

In outline, the proposals are to develop a green waste composting facility at Meece landfill site in order that it can bid competitively for contracts to manage such waste collected by local authorities. If the company is not successful in securing one or more suitable contracts of this nature, the facility will not be developed.

Initially Biffa would carry out composting operations in Area 1 until such time as that part of the landfill site is required to be engineered in preparation for landfilling in accordance with the revised programme and phasing submitted separately for approval by SCC.

Area 2 will only be developed as a replacement for Area 1 in the event that the duration of the green waste composting contract awarded to Biffa exceeds the date when Area 1 is no longer available for green waste composting. If developed, Area 2 will be constructed and operated in the same manner as Area 1.

7.2 Effects on Statutory Sites of Nature Conservation Importance

There are no anticipated direct or indirect on such sites from the proposed development. Other than Local Nature Reserves, the nearest site is King's and Hargreaves Woods Site of Special Scientific Interest (SSSI) located approximately 5.4km to the north. The nearest internationally designated site is Midland Meres and Mosses Phase 2 Ramsar approximately 6.2km to the south west. The nearest LNR is Stone Meadows LNR approximately 3.9km to the east in Stone. All three sites are too distant from Areas 1 and 2 to be affected by the proposed composting activities; there is no hydrological connectivity to either, which would be the most likely pathway to affect the sites.

7.3 Effects on Non-Statutory Sites of Nature Conservation Importance

There is one non-statutory site considered to be close enough to Areas 1 and 2 to have the potential to be affected. This is Pilstones Wood LWS, which is located on the opposite side of Meece Road. All HGV traffic is routed to and from the south to a roundabout with the B5026 and eventually the A34. This means that HGV traffic passes the LWS (the northern end of which is almost opposite the Site entrance). There is no potential for direct effects but there could be indirect effects due to emissions from the regular passing of HGV vehicles. There is a fence and verge along this section and the trees appear to be sycamore in the main with an occasional larger, mature oak tree. Taking into account the fact that the proposed composting activity will be tied to the life of the landfill and that the resumed landfill operation will last no longer than 15 years and given the expected level of HGV traffic generation, it is considered that any such effects would be expected to be very localised. Accordingly, no significant long-term adverse effects on the LWS are predicted.

7.4 Protected and Notable Species

7.4.1 Bats

There are a small number of trees in the south east of the landfill site that would be lost when landfilling progresses to current Phases 10 and 11. However, it is not proposed that Areas 1 and 2 encroach on the established woodland. Even if landfill operations resumed immediately, the engineering / preparation works in these two phases would not take place for some time – meaning that the trees present will continue to be available for use by bats for a further period, even if they are not being used now. The loss of this small number of trees is expected to be a non-significant **Negligible** effect on the local bat population.

It is however recognised that checks would need to be made for any roosting bats in these trees before they are felled.

The loss of the habitats used by bats for foraging and commuting is the woodland edges and for the most part these are to be retained as even though woodland is felled for Phases 10 and 11, edge habitat is retained and so there would not be an effect on the ability of bats to forage and commute in the area. The open water at TN28 and being used by bats would be lost; however, this feature is relatively new and is transient. Bats will have used this opportunistically when it was created and will move on when it is lost. Two new ponds are to be created as part of the great crested newt mitigation scheme and these would provide suitable foraging habitat for bats once created. Overall this will have a non-significant **Negligible** effect on the local bat population.

7.4.2 Great Crested Newts

A small population of great crested newts has been found in the water body at TN28 and a single juvenile great crested newt was seen in the lagoon at T18. None of the other water bodies surveyed were found to hold great crested newts. None of these water bodies have been present historically, all have been created as part of the land fill operation and a number of other small water bodies have been lost recently. It is quite likely that a population has been around the area historically and that they have moved around as water bodies have been created and lost to the landfill operation. The water bodies remaining on the Site in the south east will eventually be lost to the scheme and this would be a non-significant **Minor** adverse effect on the local great crested newt population and also without mitigation, an offence.

7.4.3 Badger

Badgers are present around the wider Site but no signs were found in the area still to be landfilled. At the moment badgers are not a constraint, however they are highly mobile and the situation can change quite quickly. This means that once the landfill is again operational a walkover should be undertaken twice a year to check that the situation has not changed. Should setts be found at this time, appropriate mitigation will have to be put into place and if necessary a licence applied for.

7.4.4 Nesting Birds

A very small amount of woodland is lost to Area 1 and only small areas of scrubby habitat should Area 2 be developed. These will be used by a small range of nesting and foraging birds and the loss is assessed to be a non-significant **Minor** adverse effect. Development of Area 1 will result in some loss of little ringed plover habitat but habitat will be retained east of Area 1. The rest of this habitat would eventually be lost to the development of the landfill site but this has been created as part of the working of the landfill site and was only ever temporary and so is considered to have a non-significant **Negligible** effect on the species. The ability of barn owl to forage over the landfill site will not be affected significantly either by development of Areas 1 and 2 or by completion of the proposed development and once the Site is restored there will be more grassland habitat present than there is currently and it is therefore assessed a non-significant **Minor** beneficial effect.

In addition to the above, all birds receive protection from harm whilst nesting or attempting to nest and there is the potential for an offence should any nesting birds be harmed. Thus standard measures to clear and fell vegetation between September - end March will be employed. Where this cannot be practised, prior to undertaking any work, a check would be made for nesting birds and if any are found, a stand-off established and the area left undisturbed until the chicks have fledged.

7.4.5 Reptiles

There is limited suitable habitat for reptiles within the areas yet to be landfilled and this includes Areas 1 and 2 and a survey did not record any reptiles. The areas already restored provide suitable habitat and as the Site is progressively restored further habitat will be created. Should small populations of one or more of the common reptile species be present, then this habitat will provide for them in the long term. It is assessed that there will not be a non-significant **Negligible** effect on reptiles from the scheme.

7.4.6 Butterflies

The grassland, particularly the areas restored to the west of the Site provide suitable habitat for a number of butterfly species that are on Section 41 of the NERC Act 2006. Small numbers were also recorded in the areas yet to be landfilled including Areas 1 and 2, however these areas are disturbed and a lot of the area, if not bare, is covered in tall ruderal species, which are not optimal for butterflies. It is assessed that whilst there will be some loss of suitable habitat from development of Areas 1 and 2, this will have a non-significant **Negligible** effect on the maintenance of populations of these species. Furthermore the new restoration scheme for the landfill site as a whole now provides for the conservation of the suitable habitat that occurs currently on the west side of the Site. In the long term there is the potential for an overall non-significant **Minor** beneficial effect on these species from the restoration of the landfill site.

7.5 Habitats

The development of Areas 1 and 2 will result in the loss of bare and sparsely vegetated ground, tall ruderal vegetation and standing water. All these habitats have been created in the recent past as part of the operation of the landfill site and based on their low nature conservation status, great crested newts apart; their loss is assessed to not be significant. Habitats to be created on restoration of the landfill site including grassland with some small areas of tree planting and an area for the conservation of butterfly habitat has the potential in the long term for an overall non-significant **Minor beneficial** effect.

Table 7.1 below provides a summary of impacts without mitigation on the identified receptors.

Table 7.1: Summary of Potential Effects on Sensitive Ecological Receptors before Mitigation

Receptor		Nature of Impact	Significance of Impact
Non-Statutory Sites	Pilstones Wood LWS	Assessed to be insignificant change based on emissions from HGVs	Negligible
Bats	Roosting	Small number of trees present in the south east with roosting potential	Negligible as no tree lost to the development of Areas 1 and 2
	Foraging and commuting	No significant loss of habitat; very small area of woodland and scrub; transient waterbodies lost	Negligible
Great Crested Newts		Loss of aquatic habitat and temporary loss of terrestrial habitat	Minor non-significant adverse impact but potential for an offence without mitigation
Badger		No setts or signs recorded within areas yet to be worked	No impact
Nesting Birds		Loss of very small areas of woodland and scrub	Minor non-significant adverse effect
		Creation of grassland on restoration and some woodland planting	Minor non-significant beneficial effect
Little ringed plover		Loss of transient nesting habitat	Negligible
Barn owl		Overall increase in grassland habitat	Minor non-significant beneficial effect
Reptiles		New habitat created on restoration but no reptiles recorded in areas yet to be worked including Areas 1 and 2	Negligible
Butterflies		Negligible loss of suitable habitat; overall on restoration a gain in suitable habitat	Potential for an overall Minor non-significant beneficial effect
Habitats		Loss of bare ground, tall ruderal, woodland; new habitats as part of restoration	Minor non-significant beneficial impact

8 Proposed Mitigation

8.1 Protected and Notable Species

8.1.1 Bats

No significant effect is predicted on the maintenance of the local bat population; no features suitable for roosting bats are lost to the development of Area 1 and 2.

8.1.2 Great Crested Newts

A small population of great crested newts is present in the waterbody at TN28. This is a large waterbody that when at its maximum extent lies partly within Area 1 but based on the results, it is possible that the great crested newt population identified is using the east of the waterbody only, which lies outside of Area 1. There is suitable terrestrial habitat within 250 metres radius of the waterbody and this is likely to be used by the animals from TN28.

The woodland habitat to the east and south remains undisturbed until required to be felled for the future development of the landfill. At least part of the waterbody at TN28 will be lost to Area 1 and once operating as a green waste site, any great crested newts present in TN28 and TN18 could wander into the operation area and come to harm, as the green waste process will produce large areas of habitat suitable for great crested newts to use.

For the extension of time application for the landfill site, two long term options were put forward to maintain the population of great crested newts – the creation of new ponds or the carrying out of tree and fish clearance necessary to make the existing pond in the northern corner of the Site (TN14) suitable. The application to develop Areas 1 and 2 makes it essential that the population of great crested newts is translocated away from the area.

Therefore it is proposed that two ponds be created at the west of the landfill site (see Figure GW6) where the land has already been restored and a licenced capture be undertaken to translocate the great crested newts to the new ponds. There is abundant terrestrial habitat on the west side of the landfill site and the location will be more than 400m from the current working area of the landfill, which would move eastwards and further away as phasing progresses. It is even further away from Areas 1 and 2. The two ponds would be dug six months prior to the translocation, which would be programmed to be undertaken in the spring of 2016, as animals head to the pond to breed. The populations of smooth newts, frog and toads would also be captured and moved to the new pond locations or in the case of toads, to TN14. The capture and translocation would involve erection of temporary fencing and use of pitfall traps to catch animals as they migrate to the water bodies in the spring.

It is the aquatic habitat that is the limiting factor for the population based in TN28 and the provision of the new ponds would allow the population to be at least maintained and more likely increase, as the habitat to be provided will be of a higher quality than that of the current waterbodies. The new ponds would be designed for great crested newts with shallow margins and pockets of deeper water as per the guidelines provided in English Nature (2001). They would be planted with a range of aquatic and emergent species to provide egg laying substrate for the great crested newts.

8.1.3 Butterflies

The species of note at the landfill site prefer short vegetation and open sunny aspects and these tend to occur along the west side of the landfill site, which is restored for the most part. The proposed restoration scheme submitted as part of the application form an extension of time provides for this area to be conserved for butterfly conservation. This measure is assessed as being particularly effective along the southern slope where the conditions could be ideal for these species and would form continuity with the habitats present on the MoD training area to the south.

9 Assessment of Residual Effects

Provided the measures detailed above in section 8 are undertaken, it is assessed that there would be no significant residual adverse effects as a result of the proposed development.

10 Summary and Conclusions

The ecological impact assessment set out in this Appendix has dealt with the potential impacts on ecology arising from the proposed development at two locations; Areas 1 and 2 for processing of green waste. A number of potential sensitive receptors including non-statutory sites of nature conservation importance, great crested newts, bats, butterflies and nesting birds have been identified for a separate application for an extension of time for the landfill site within which both areas are located and which, once landfilling recommences, would be subject to landfilling.

Surveys have found limited features of significant nature conservation value but have confirmed that great crested newts are present as a small population in two water bodies in the south east within and adjacent to Area 1 and a small number of trees have potential for roosting bats, also in the south east but these are unaffected by the proposed development of Areas 1 and 2. Three species of notable butterfly have been recorded and these are present mainly in the area which is proposed for conservation as butterfly habitat in the restoration scheme now submitted as part of the separate application for an extension of time for the wider landfill site.

There would be mitigation to avoid harm to great crested newts. The great crested newts would be translocated to a new location in the southwest. This measure means that the residual adverse effects arising from the proposed development of Areas 1 and 2 would not be significant and that there are no reasons to withhold planning permission on nature conservation grounds.

References

English Nature (2001)

Great Crested Newt Mitigation Guidelines. English Nature, Peterborough

SKM Enviros (2011)

Extended Phase 1 Habitat Survey Report. Unpublished report by SKM Enviros, Manchester for Biffa Waste Services Ltd

Figures

Figure C1 – Survey Areas

Figure C2 – Phase 1 Habitat Survey Map

Figure C3 – Bat Transect Survey – May 2015

Figure C4 – Bat Transect Survey – July 2015

Figure C5 - Bat Transect Survey - August 2015

Figure C6 – Reptile Mat Locations

Figure C7 – Butterfly Survey – Visit 1

Figure C8 – Butterfly Survey – Visit 2

Figure C9 – Butterfly Survey – Visit 3

Figure C10 – Butterfly Survey – Visit 4

Figure C11 – Butterfly Survey – Visit 5

Figure C12 – Butterfly Survey – Visit 6

Annex C1 – Wildlife Legislation

Annex C1 - Wildlife Legislation

The Wildlife and Countryside Act 1981 (as amended)

The WCA 1981 is the major domestic legal instrument for wildlife protection in the UK, and is the primary means by which the following are implemented:

- The Convention on the Conservation of European Wildlife and Natural Habitats ('the Bern Convention'); and
- The Council Directive 79/409/EEC on the Conservation of Wild birds (the 'Bird Directive')

The main relevant provisions of the Act are: allowance for the protection of the most important habitats by designating SSSI's, a level of protection to all nesting wild birds and specific species under Schedule 1, and protection to various other species under the Act, including other animals (Schedule 5) and plants (Schedule 8).

The Countryside and Rights of Way (CroW) Act, 2000

Part III of this Act deals specifically with wildlife protection and nature conservation in England and Wales. The CroW Act strengthens the safeguards afforded to SSSI's and adds to the protection of wild animals designated under the WCA 1981 by making it an offence to "recklessly disturb" the sheltering places of wild animals designated under Schedule 5 of the WCA.

Habitats & Species Regulations, 2010 (as amended)

The original Regulations transposed the EU Directive on Natural Habitats, and Wild Fauna and Flora 9/43/EEC) into domestic legislation. Amendments in 2007 and 2009 addressed a number of gaps and inconsistencies in the original legislation and provided a greater legal certainty and clarity in a number of areas and in April 2010 the Regulations were brought up to date to consolidate changes made since 1994. The Regulations afford a high level of protection to a variety of species that are considered important at a European scale. The Regulations identify European Protected Species and various habitats of importance within the European Union, with important sites for these habitats/species or both being designated as special Areas of Conservation (SAC). Any development that may have a significant effect on a SAC or Special Protection Area (SPA) should be assessed in relation to the site's 'conservation objectives', i.e. the reasons for which the site is designated.

The new Regulations simplify the species protection regime to better reflect the Habitats Directive, provide a clear legal basis for surveillance and monitoring of European Protected Species (EPS). The Regulations also amend the WCA, updating Schedules 5 and 8 to consider provisions made by the Habitat Regulations 1994 in relation to the protection of EPS. They also offer further clarification to Part 4 of Section 9 considering "reckless" offences on wild animals, which was previously amended by the CROW Act 2000.

Natural Environment and Rural Communities (NERC) Act, 2006

Section 41 of the NERC Act requires the listing of habitats and species that are considered to be of principle importance for the conservation of biodiversity in England, including habitats and species in England that have been identified as priorities within the UK Biodiversity Action Plan (UKBAP).

The NERC Act requires that the section 41 list be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 was put in place to protect the welfare of badgers in the UK and protect them from persecution. The Act makes it an offence to:

- wilfully kill, take, possess or cruelly ill-treat a badger, or attempt to do so;
- interfere with a sett by damaging or destroying it;
- obstruct access to, or any entrance of, a badger sett; or
- disturb a badger when it is occupying a set.

Annex C2 – Assessment Methodology

Annex C2 - Assessment Methodology

The methodology used to assess the significance of impacts on ecological receptors is based on the Guidelines for Ecological Impact Assessment (EclA) published by the Institute of Ecology and Environmental Management (IEEM) (Institute of Ecology and Environmental Management, 2006).

Areas and/or species of ecological value within the site area identified and the main factors contributing to their value are described. An ecological resource or feature is considered to be valuable (or have potential value) at the following scales:

- International;
- UK;
- National (i.e., England/Northern Ireland/Scotland/Wales);
- Regional;
- County;
- District (or Unitary Authority, City or Borough);
- Local (or Parish); or
- within immediate zone of influence* only.

The zone of influence for a development is difficult to define, but for the purposes of this study, the zone of influence within which potential direct effects on flora and fauna may be reasonably anticipated is the planning application boundary and a radius not exceeding 2km around the Site. This is because whilst the impacts expected are all largely confined within the footprint of the working quarry, a buffer is included to provide confidence in any assessment of impacts in the wider area and in particular any hydrology related impacts on a number of wetland sites.

The impact on a feature has a number of characteristics that need to be fully described before significance can be assessed. A number of factors need to be considered when describing and assessing impacts, which include:

- Direction (positive, negative or neutral impact);
- Magnitude (the amount or level of impact);
- Extent (area in hectares, linear metres, etc);
- Duration (in time or related to species life-cycles);
- Reversibility (i.e. is the impact permanent or temporary);
- Timing and frequency (e.g. related to breeding seasons); and
- Cumulative effects (between impacts from a number of sources).

IEEM guidance states that impacts should be determined as being significant when they have an adverse or positive effect *“on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area”*. Such impacts may be significant at the level of importance defined in the Evaluation section or, for habitats and species, at a lesser geographical scale. For example, limited impacts on woodland of County importance might be assessed as being significant at a District level of importance. This methodology supersedes previous matrix-based assessment methodologies.

Using this information and judgement, it is determined whether the effects will be significant or not on the integrity (of site/ecosystems) or conservation status (of habitats/species) of each ecological feature and the impact significance is determined at the appropriate geographical scale.

Where possible, levels of certainty are given to indicate the likelihood that both the predicted activity/impact and the associated ecological effect will occur. The IEEM guidance suggests using the following four-point scale to identify the levels of confidence arrived at by professional judgement:

- Certain/High
- Probable/Moderate

- Unlikely/Low
- Extremely unlikely/Negligible

Annex C3 – Desk Study

Annex C4 - Baseline Site Surveys

Annex C4 – Baseline Site Surveys

Methodology

Desk Study

A desk study was undertaken to identify any existing records of statutory and non-statutory nature conservation sites, and protected or otherwise notable species. The following organisations and websites were contacted/ searched:

- Staffordshire Ecological Records
- Multi-Agency Geographic Information for the Countryside (MAGIC)

The area covered by the desk study depends upon the likely zone of influence of the proposed development on the resource under consideration (e.g. internationally designated sites, nationally designated sites and species). The precise study area applied reflects standard best practice and the maximum distances within which statutory consultees would typically be expected to comment (e.g. 2km for statutory sites). Accordingly, the desk study identified any internationally, nationally and locally designated statutory sites within 5km of the boundary of the development; and, locally designated non-statutory sites, NERC Act Section 41 habitats and notable species within 1km of the development and is considered to be sufficient for the proposed development.

Information obtained during the course of a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular protected species does not automatically mean that such species do not occur in the study area. Likewise, the presence of records for protected species does not automatically mean that these species still occur within the area of interest or are relevant in the context of the site. However, a desk study does help characterise the site, provides context, and can provide valuable background information that would not be gathered on a site visit alone.

The location of the landfill site and boundaries of Areas 1 and 2 are shown on Figure GW2.

Phase 1 Habitat Survey

Habitats

A Phase 1 Habitat survey was undertaken on the 17th and 18th November 2014, in accordance with the standard Joint Nature Conservation Committee (JNCC) (2010) methodology, recording and mapping habitat types and other ecological features.

The survey covered all of the land within the landfill site and several small areas outside the boundary (Areas A - H, Figure C1). Survey results were recorded on a field map and are illustrated in the form of a Phase 1 Habitat map (Figure C2).

It should be noted that the survey was not intended to provide a comprehensive list of fauna and flora, rather to characterise the habitats present and determine any potential risks or constraints that might be associated with the proposed Scheme. Incidental observations of flora and fauna observed, in particular birds and mammals were recorded as they were made.

An appraisal was made of the potential suitability of the habitats to support protected or notable species of plants or animals. Field signs, features with potential to support protected species and evidence of their presence were recorded when encountered, but no detailed surveys were carried out for species.

Species

The extended Phase 1 included an appraisal of habitats within the landfill site and adjacent to the proposed development areas for suitability for protected or notable species including:

- European Protected Species/Habitats;
- Priority species/habitats in England under Section 41 of the NERC Act 2006; and
- species listed in red data books.

Based on aerial photographs, plans provided and the survey work undertaken, it was considered that the following protected species have the potential to be present within/adjacent the landfill site.

Bats

An initial high level appraisal was made of trees from the ground for signs of features suitable for roosting bats (cracks and crevices, woodpecker holes, splits, flaking bark and thick-stemmed ivy) following guidance presented in Bat Surveys: good practice guidelines (Hundt, 2012) and Bat Workers Manual (Mitchell-Jones & McLeish, 2004). Trees would be assigned a category corresponding to the likelihood that bats could be present. This would identify whether further survey work is required to confirm use by bats.

Great Crested Newt

Waterbodies within and, subject to access, outside the landfill site were assessed generally for their potential to support great crested newts (*Triturus cristatus*).

Badger

A survey for evidence of badger was undertaken in accordance with published methods (Harris, Creswell & Jefferies, 1989).

Water voles

A walkover assessment of aquatic habitats was also undertaken for their potential to support water voles.

Reptiles

Habitats were assessed for their suitability for reptiles (Gent and Gibson, 1998), particularly the more common British species, grass snake (*Natrix natrix*) and common lizard (*Zootoca vivipara*), which are more likely to be present in this locality.

Miscellaneous Species

The walkover also searched for signs and appraised the habitats for potential of other protected/notable species. This included invasive species and particularly Japanese knotweed (*Fallopia japonica*).

Limitations

The survey was undertaken outside of the recognised period for Phase 1 survey (April - end September) but based on the habitats present and the experience of the surveyor, this is not considered to be a significant constraint.

Preliminary Baseline Conditions

Protected Sites

Statutory Designated Sites

Other than Local Nature Reserves (LNRs), there are no statutory designated sites within at least 5km of Area 1 or Area 2. The nearest such site is King's and Hargreaves Woods Site of Special Scientific Interest (SSSI) located approximately 5.4km to the north. The nearest LNR is Stone Meadows LNR approximately 3.9km to the east in Stone. The nearest internationally designated site is Midland Meres and Mosses Phase 2 Ramsar approximately 6.2km to the south west. Areas 1 and 2 are not within an impact zone defined by Natural England for a Site of Special Scientific Interest (SSSI) on the MAGIC website.

Non-Statutory Designated Sites

There are a number of non-statutory designated sites within 1km of the landfill site. Table C4.1 below lists the ones that are considered relevant to this study, whilst the remainder are listed and shown in Annex C3.

Table C4.1: Non-Statutory Sites

Status	Site Ref	Location Name	Description	Distance from the proposed development
Retained Grade 1 Site of Biological Importance (SBI)	83/42/05	Meece Brook/ Swynnerton/ MOD/ Railway	An extensive area of willow scrub and alder carr around Meece Brook and its associated channels.	0.5km
Local Wildlife Site (LWS)	83/53/99	Pilstones Wood	Part ancient semi-natural woodland, part ancient replanted woodland. The strip adjacent to the road is relatively undisturbed semi-natural woodland	<0.1km
Retained Grade 1 SBI	83/63/33	Yarnfield Meadows	A series of semi-improved hay meadows.	0.9km
Retained Grade 2 SBI	83/64/33	Highlowbank (west of)	An unimproved damp corner of a field with a generally good mixture of species in the turf, including lady's-mantle.	1km

Habitats

Habitats within the landfill site were systematically recorded according to their habitat type, ecological interest and their location within the landfill site. Each habitat identified was recorded along with the area it was recorded in (Areas A-H). Habitats recorded included; bare ground, sparsely vegetated ground, un-managed secondary grassland, secondary wet grassland, bare ground, dense scrub, scattered scrub, broadleaved woodland, tall herb, sparsely vegetated ground, ephemeral short perennial and open water.

Where a particular habitat or ecological receptor is considered important, this have been target noted, and referenced within this report (Target Notes are included at Appendix C4.1 and locations are shown on Figure C2).

These habitats are described in greater detail below. A map showing the distribution of these habitats is provided as Figure C2. Representative site photographs are provided at Appendix C4.1.

Bare ground

Extensive areas of bare ground were recorded within the landfill site, especially within Areas D and C (Figures C1 and C2). Bare ground areas included several earth/rubble bunds and expansive areas of disturbed ground, especially around TN3, TN4, TN8, TN9, TN18, TN28 and TN29 (see Figure C2). A large area of recently disturbed bare ground was also recorded in Area D, which forms the restored tip capping for the most recent landfill cell.

Sparsely Vegetated Ground

Large parts of the landfill site consist of either bare or sparsely vegetated ground, with the latter covering large areas including restored tip cappings, and many large bunds and access tracks that frequent Areas B, C and D.

Species recorded included; willowherb (*Epilobium* sp.), goat willow (*Salix caprea*) seedlings, pineapple mayweed (*Matricaria discoidea*), red fescue (*Festuca rubra*), cock's foot (*Dactylis glomerata*), creeping buttercup (*Ranunculus repens*), oxeye daisy (*Leucanthemum vulgare*) and creeping thistle (*Cirsium arvense*).

Unmanaged Secondary Grassland

Large sections of the north and western parts of the landfill site are covered in this habitat type, which along with patches of bramble scrub and tall herbs forms a restored ground grassland mosaic. Species recorded include; false oat-grass (*Arrhenatherum elatius*), Yorkshire fog, (*Holcus lanatus*), red fescue and common bent (*Agrostis capillaris*), cock's foot, common ragwort (*Senecio jacobaea*), creeping buttercup, creeping thistle, oxeye daisy, red campion (*Silene dioica*), birds-foot trefoil (*Lotus corniculatus*), stinging nettle (*Urtica dioica*), meadow vetchling (*Lathyrus pratensis*), ribwort plantain (*Plantago lanceolata*) hogweed (*Heracleum sphondylium*) and common teasel (*Dipsacus fullonum*). Goat willow saplings frequent the landfill site especially along the northern facing bunds that border Blackflats Road (Areas A & B) along with immature stands of hawthorn (*Crataegus monogyna*), ash (*Fraxinus excelsior*) and willow to the south western reaches of Areas D and E. Several small stands of broom (*Cytisus scoparius*) and common gorse (*Ulex europaeus*) were also recorded within the landfill site.

Secondary Wet Grassland

Several areas of this habitat type were recorded within the landfill site including a linear short section (TN12, Figure C2) located the north-eastern end of Blackflats Road, this constituted an area of short rabbit grazed wet grassland interspersed with stands of hard rush (*Juncus inflexus*), creeping buttercup, ribwort plantain and the moss, *Calliergonella cuspidatum*.

A large area of dry reedbed (reed canary grass - *Phalaris arundinacea*) was recorded in a central elevated position bordering Area A to the north-west and Area B to the east. The ground was found to be wet, but contained no open water.

Two small areas of sedge (*Carex* sp.) dominated wet grassland were identified in this study; Area 1 (TN21, Figure C2) constitutes an area (12m x 8m) of dense sedge situated to the north west of Area F, approximately 5m south of TN20 (Figure C2). The second area was recorded centrally within Area B, and consisted of several small pockets of an unidentified sedge species.

Dense Scrub/Scattered Scrub

Stands of dense scrub were recorded along several linear bund slopes, the woodland edges within Area F, and along the fence-lines that form the outer boundaries of the landfill site. Several small stands to large pockets of bramble scrub were also recorded within central areas, and along with patches of tall herbs and grasses formed extensive areas of secondary grassland mosaic. Bramble was the dominant species recorded across the landfill site with stands of gorse, broom, hawthorn and willow with ash and dog rose (*Rosa canina* agg.) also recorded.

Broad-leaved Woodland

Several large areas of note were recorded, the largest of these are Area F, to the south east corner of the landfill site, Area H - located to the north of the access road from Meece Road (TN1), the woodland belt that forms the eastern boundary of Area G and the woodland that surrounds TN14 an old lake (see Photograph TN14 at Appendix C4.1) at the north-western corner of Area A.

TN1 (Area H) contains a mixture of mature and semi-mature trees including large stands of poplar (*Populus* sp) and sycamore (*Acer pseudoplatanus*), interspersed with mature stands of pedunculate oak (*Quercus robur*), silver birch (*Betula pendula*), ash and Scots pine (*Pinus sylvestris*). Also recorded within this woodland were stands of beech (*Fagus sylvatica*), hawthorn, and hazel (*Corylus avellana*), with an understory of mainly bramble, bracken (*Pteridium aquilinum*) and stinging nettle, interspersed with occasional stands of dog rose, raspberry (*Rubus idaeus*), red campion and ash regeneration.

Species recorded include silver birch, pedunculate oak, hazel, field maple (*Acer campestre*) and mountain ash (*Sorbus aucuparia*) and non-native species such as sycamore, poplars, ornamental cherries (*Prunus* spp.) and narrow leaved ash (*Fraxinus angustifolia*).

Area F, the largest of the aforementioned areas was found to be dominated by large stands of mature poplar and silver birch, especially the south-eastern regions with some very large trees recorded. Two particular trees with the potential to support bats were recorded (TN23 and TN24, Figure C2). The woodland was found to contain a diverse mix of other species, including stands of semi mature oaks, sycamore, ash, willow, hazel and hawthorn. The understory was found to be dominated by stands of bramble and stinging nettle, with sporadic stands of bracken and red campion.

The woodland that surrounds TN14 in Area A was found to contain a diverse mix of deciduous species, including mature stands of oak, ash, silver birch and willow, with occasional stands of hazel, beech, hawthorn, and elder (*Sambucus nigra*). An area of immature stands of goat willow were recorded fringing the main wooded area to the south-east of the old lake, most of which were inside the post and wire fence that surrounds the area.

Tall Ruderal/Herb

Extensive areas of this habitat type were recorded across central and the north-western parts of the landfill site. These areas, together with patches of bramble scrub and un-managed secondary grassland, formed large mosaics of habitat across the Site. Species recorded include; hairy willowherb (*Epilobium hirsutum*), goosefoot (*Chenopodium* sp), yellow melilot (*Melilotus officinalis*), bristly ox-tongue (*Picris echioides*) and mugwort (*Artemisia vulgaris*), stinging nettle and rosebay willowherb (*Chamerion angustifolium*).

Ephemeral Short Perennial

Small areas of this habitat type were recorded within the area that contained TN19 in Area C. Species recorded included; ribwort plantain, creeping cinquefoil (*Potentilla reptans*), white clover (*Trifolium repens*), bristly ox tongue, creeping bent (*Agrostis stolonifera*) and unidentified short grasses and mosses.

Hard Standing/Buildings

Two buildings with the potential to support bats were identified. TN27 –the larger of the two brick structures (an old depot building) occupies a position to the north of Area F and the second structure is a series of shallow brick archways with a reinforced concrete roof was recorded close to the southern boundary fence, approximately 15m north of Horsley Way (MoD road) within the woodland area to the north.

Open Water

Twenty waterbodies (19 ponds and 1 wet ditch) were identified within the landfill site boundary, with a further 16 waterbodies identified from OS mapping within 500m of the landfill site boundary. Of the twenty identified within the landfill site boundary five; TN4, TN7, TN18, TN19 and TN28 have the capacity to sustain breeding for great crested newts and other amphibians. Of the remaining fifteen, all have the potential to provide foraging opportunities for amphibians.

The five with potential for breeding great crested newts are describe below. A summary of the remaining 11 waterbodies are listed in Appendix C4.2.

(TN4) – a triangular waterbody located at the base of a steep sided bund located centrally within Area C, the pond is situated to the north of Pilstones Road, and runs parallel with the access track that connects Blackflats road to the north. The pond was found to be well vegetated with dense stands of reedmace (*Typha latifolia*) dominating open water areas (see Photograph TN4 at Appendix C4.1). This water body and its surrounding terrestrial habitat provide excellent potential for amphibians.

(TN7) – a rectangular waterbody (30mx10m) occupying a position approximately 35m west of Blackflats Road, to the rear of the hard standing/ gas container holding area (see Photograph TN7 at Appendix C4.1). The pond had an open aspect and was approximately 0.5-0.7m in depth. The pond was fringed to both north and western banks by patchy stands of hairy willowherb, the south eastern banks were more open and contained areas of short rabbit grazed grassland. Stands of reedmace, flag iris (*Iris pseudacorus*) and soft rush (*Juncus effusus*) dominated marginal flora, along with sporadic patches of celery-leaved buttercup (*Ranunculus scleratus*). The pond like most water bodies within the landfill site is very close to good terrestrial habitat.

(TN18) – this is the main settling lagoon on the landfill site it is fenced and occupies a position beneath an L-shaped sparsely vegetated bund to the western end of Pilstones Road. The lagoon is square and surrounded by a shallow 0.5m sparsely vegetated bund. The pond and accompanying bund is itself surrounded by a 2m high meshed-metal fence, preventing access to the water's edge (see Photograph TN18 at Appendix C4.1). No true aquatic/marginal vegetation was recorded within the pond, but the survey was undertaken outside the optimal survey season for plants, it's possible that several species were over looked.

Bund vegetation recorded included patchy stands of hairy willowherb and broadleaved dock (*Rumex obtusifolius*), along with creeping buttercup and colt's foot (*Tussilago farfara*). Water clarity was good at the time of survey, however depth was unknown.

(TN19) – a cluster of three ponds located approximately 50m south of TN18, within an extensive array of large-scale building/concrete waste. All three ponds are well vegetated with stands of reedmace interspersed with the occasional stand of soft and hard rush (see Photograph TN19 at Appendix C4.1). The terrestrial area provides an exceptional habitat for grass snake and amphibians, and is extremely well vegetated with a mosaic of tall herbs, ephemeral short perennial patches interspersed with vegetated spoil heaps.

(TN28) - the largest ephemeral expanse of water on the landfill site, measuring approximately 150m x 150m (at the time of survey). No marginal/aquatic vegetation was recorded within the pond but terrestrial species such as common dock and hairy willowherb are starting to develop on marginal interfaces. Habitat surrounding the waterbody is mainly bare ground on three sides with a few pioneer species becoming established the exception being on the southern side where shading from the adjacent woodland is reducing the light to the margins.

Sixteen waterbodies were identified within 500m of the landfill site boundary. It is considered that several of these could support great crested newts and if so, if they have not already done so, it is considered that they could colonise the ponds that are suitable for great crested newts at the landfill site in the future.

Invasive Species

Japanese knotweed was recorded at two locations. One, TN16 is located in the south west part of Area D and the second, TN17 at the east end of Area E. TN16 (see Photograph TN19 at Appendix C4.1) comprises 4 small stands, each <1m² and TN 17, one small stand.

Species

Desk Study

A number of records of protected/notable species were provided by SER. The number of bird records from the wider area was substantial and so these are not provided in Annex C3. The list of non-statutory sites and a plan showing these and protected species records are however provided. Table C4.2 below lists the ones considered relevant to this study.

There are no records of protected species from within the landfill site. The desk-study did however reveal several protected/notable species records within 1km of the landfill site boundary; see Tables C4.2 and C4.3 below:

Table C4.2: Records of Protected Species within 1km of the landfill site boundary

Species	Approximate Location	Most recent recorded date
Brambling	Recorded 686m from landfill site	2011
Barn Owl	Recorded 467m north east of Blackflats Road	2009
Eurasian Hobby	Recorded 474m north of landfill site	2000
Brown long ear (bat)	Recorded 868m to south of landfill site on MoD land	2004
Otter	Recorded from 414m from landfill site	2005
Natterer's (bat)	Recorded 868m to south of landfill site on MoD land	2004
Badger	Recorded adjacent to landfill site	2007

Table C4.3: Records of Notable Species within 1km of the landfill site boundary

Species	Approximate Location	Most recent recorded date
Dingy Skipper	Recorded 484m south of landfill site on MoD land	2011
Small Heath	Recorded 484m south of landfill site on MoD land	2011
Wall	Recorded 680m to north of landfill site	2005
Grizzled Skipper	Recorded 484m south of landfill site on MoD land	2011
European Golden Plover	Recorded 680m from the landfill site	2008
Skylark	Recorded 680m west of landfill site	2008
Linnet	Recorded 726m to southwest of landfill site.	2014
Northern Wheatear	680m from landfill site	2005
Brown Hare	Recorded 912m north east of the landfill site	2006
Bluebell	Recorded 954m west of the landfill site in Pilstones Wood	1997

Field Surveys

Bats

Several trees with the potential to support bats were recorded within the landfill site, including target notes; TN23, TN24 and TN14 (Appendix C4.1 and Figure C2). The latter includes several trees that surround the lake in the north - west corner of the landfill site. A photograph of the oak tree at TN23 can be found in Appendix C4.1.

Two buildings with the potential to support bats were identified.

A series of shallow brick archways with a reinforced concrete roof was recorded close to the southern landfill boundary fence, approximately 15m north of Horsley Way (MoD road) within the woodland area to the north (TN 22, Figure C2 and Photograph TN22 at Appendix C4.1). The archways were approximately 1.5m high and provided low potential for roosting bats.

TN27 - the larger of the two brick structures (an old depot building) occupies a position to the north of Area F, and consists of an open brick walled structure (no glazing) with a reinforced concrete roof. Several internal stud-wall cavity bricks, in a damaged internal wall were recorded, albeit covered in cobwebs. It is possible that bats could use these bricks as a temporary summer roost, but at the time of survey no indication of bat activity was recorded.

Great Crested Newt

Twenty waterbodies were identified within the landfill site boundary, five of which TN4, TN7, TN18, TN19 and TN28 (Appendix C4.1 and Figure C2) are considered to provide moderate to good potential breeding habitat for great crested newts. The other fifteen contained foraging potential for the species but not breeding.

A Habitat Suitability Index (HSI) was calculated for all the waterbodies (Oldham et al., 2000). The HSI is a mathematical model that incorporates ten suitability indices, all of which are thought to influence the likelihood of the presence of great crested newts in a waterbody. The result of an HSI is a score between 0 (unsuitable) and 1 (optimal). The HSI is a tool for assessing the suitability of water bodies for great crested newts; however, it is not a substitute for surveys. It does however provide useful baseline data for the creation of new or the restoration of existing ponds.

Table C4.4 below provides the results of the HSI calculation for the ponds considered to be suitable for breeding. The HSI values for the other waterbodies can be found in Appendix C4.2.

Table C4.4: Habitat Suitability Score

Pond No.	HSI Score	Pond Suitability
TN4	0.82	Excellent
TN7	0.84	Excellent
TN18	0.79	Excellent
TN19	0.76	Good
TN28	0.54	Below Average

Badgers

No signs of badgers were found on the day of the walkover but there are records from close to the landfill site, mostly from within the MoD training area to the south.

Reptiles

No signs of reptiles were recorded from this survey; however the study was undertaken outside of the active season for reptiles (March-May and August –October). The landfill site does however have areas of suitable habitat for the common species; grass snake, slow worm and common lizard.

Water Voles

No signs of water vole activity or suitable habitat areas were noted during the survey.

Miscellaneous

No signs of other protected/notable species were found. A number of birds were recorded during the walkover; green woodpecker, snipe, and a single jay as well as a number of small passerines. There is abundant suitable habitat for a range of nesting and foraging bird species.

Further Survey Work

Following the initial survey work, further specific surveys were recommended for bats, great crested newts, butterflies and reptiles. The results of these surveys are provided below.

Great Crested Newt

Introduction

Following the initial walkover survey it was recommended that surveys for great crested newts be undertaken in five of the waterbodies described. In spring 2015, a survey was undertaken of three waterbodies at TN18, TN28 and TN29 (Figure C2).

The waterbodies at TN4, TN7 and TN19 had been lost to site operations over the winter 2014/15. The waterbody at TN29 was included as it was full of water and close to the others that had been lost. A ditch running along part of the southern boundary was visited on two three occasions when it was holding water, as water is pumped into and from this ditch as part of the water management system.

Methodology

Six great crested newt surveys were undertaken during May to mid-June. The dates were 5th/6th May, 12th/13th May, 21st/22nd May, 3rd/4th June, 11th/12th June and the 15th/16th June. Three of the six surveys were undertaken during the peak period mid-April and mid-May. The survey on the 21st May was just beyond the calendar mid-May, however, the cold nights in April had delayed the great crested newt season and so this is not considered to be significant variation to the published guidelines.

The survey methods that employed were based on best practice guidelines as identified in the English Nature Guidelines (2001). Three of the following four survey techniques; torchlight survey, bottle trapping, netting and egg searching, were used on each survey occasion at each waterbody.

Results

Over the six visits smooth newts were recorded in all three waterbodies and when water was present, the ditch also. Great crested newts were not caught in bottle traps but one male and a female were seen on separate survey occasions at the east end of TN28. On the sixth survey occasion a single juvenile great crested newt was seen in TN18.

The water level in TN28 fell considerably during the time of the surveys and by the sixth visit had reduced to four separate pools. However, the area where the great crested newts had been seen still had deep water areas along the edge of the tipped blocks of concrete. No great crested newts were caught or seen elsewhere in this waterbody and so it is concluded that there is a small populations present. There is very little in the way of aquatic, emergent or marginal vegetation save for a species of stonewort and blanket weed and so eggs were not found to prove breeding. It is very likely that the newts seen represent a small and possible declining population, particularly as large numbers of smooth newts were recorded.

Similarly in TN18, this is a lagoon that receives run-off from the landfill and has blooms of blanket weed and surface algae. Seen both by torchlight and caught in the bottle traps were large numbers of dragonfly larvae that predate heavily things like newt larvae. Only small numbers of smooth newts were caught or seen and the only sighting of a great crested newt was a single juvenile. No eggs were found but as with TN28, vegetation suitable for this is limited in extent.

Table C4.5 below provides the results from each survey occasion.

Table C4.5: Results of Great Crested Newt Surveys

Pond No TN18												
Survey Method												
Torchlight						Bottle trap					Egg Search	
Date of Survey	GCN		Smooth		Other	Traps	GCN		Smooth			Other
	Male	Female	Male	Female			Male	Female	Male	Female		
5th May	nothing recorded					20	nothing recorded					-
12th May	-	-	2	1	-	20	nothing recorded					-
21st May	nothing recorded					20	nothing recorded					-
3rd June	-	-	5	3	-	20	-	-	-	1	-	-
11th June	-	-	13	10	-	17	nothing recorded					-
15th June	1 juv		15		-	20	-	-	2	-	-	-
Pond No TN28												
Survey Method												
Torchlight						Bottle trap					Egg Search	
Date of Survey	GCN		Smooth		Other	Traps	GCN		Smooth			Other
	Male	Female	Male	Female			Male	Female	Male	Female		
5th May	-	-	10	4	tadpoles	30	-	-	1	1	tadpoles	-
12th May	-	-	30	12	tadpoles	30	-	-	6	1	tadpoles	-
21st May	-	1	22	25	tadpoles	30	-	-	2	1	tadpoles	-
3rd June	1	-	11	16	tadpoles	40	-	-	9	7	-	-
11th June	-	-	4	1	tadpoles	30	-	-	-	-	-	-
15th June	-	-	62		tadpoles	30						-
Pond No TN29												
Survey Method												
Torchlight						Bottle trap					Egg Search	
Date of Survey	GCN		Smooth		Other	Traps	GCN		Smooth			Other
	Male	Female	Male	Female			Male	Female	Male	Female		
5th May	-	-	2	4	tadpoles	30	-	-	1	1	tadpoles	-
12th May	-	-	8		tadpoles	20	-	-	11	3	tadpoles	-

Pond No TN29												
Survey Method												
Torchlight												
Bottle trap												
Date of Survey	GCN		Smooth		Other	Traps	GCN		Smooth		Other	Egg Search
	Male	Female	Male	Female			Male	Female	Male	Female		
21st May	-	-	5	5	tadpoles	20	-	-	13	7	tadpoles	-
3rd June	-	-	1	1	tadpoles	20	-	-	-	-	tadpoles	-
11th June	-	-	35		-	20	-	-	3	3	tadpoles	-
15th June	-	-	4	5	-	20	-	-	6	8	tadpoles	-

Table C4.6: Weather Conditions

Date of Survey	Temperature		Weather
	Torch	Overnight	
5th May	12°C	7°C	Showers; windy
12th May	11°C	6°C	Dry; breezy
21st May	11°C	9°C	Dry; warm; still
3rd June	12°C	10°C	Dry; warm; still
11th June	15°C	11°C	Dry; warm; still
15th June	16°C	10°C	Dry; warm; still

Bat Surveys

Introduction

A habitat appraisal of the landfill site assessed that foraging and commuting activity was likely to be around the fringes of the landfill site along woodland edges and over waterbodies. Also based on the status of the landfill site and the nature of the habitats, there is little impact on these habitats save in the south east but even here whilst woodland would be felled, the edge habitat would remain. The value based on this was assessed to be medium and thus it was appropriate to undertake a transect survey for foraging bats seasonally; spring, summer and autumn.

Methods

A walked activity transect has been conducted at dusk on two occasions; 28th May, and 20th July and the third is proposed for August, each survey lasting over two hours (Hundt, 2012). Each survey involved surveyors walking between predetermined stopping points using a frequency division recorder (Batbox duet) and recording equipment (SM2 or Ediol) to determine bat species and activity. In addition to this, at each survey, a static detector (SM2) was deployed at one location for a period of five nights. All surveys were completed during suitable environmental conditions within the bats active season (April-October). All recordings were analysed using Analook 3.9c sonogram analysis software.

Bat activity levels, during both walked and static surveys were assessed using the following bespoke categories:

- Low activity: 0-10 calls per species per hour;
- Moderate activity: 11-50 calls per species per hour; and
- High activity: 50+ calls per species per hour.

The location of the static detector as well as the direction of the walked transect was varied on each survey to gain as much information as possible how bats utilise the landfill site.

Results

The route of the transect walk and the location of the SM2 on each occasion is shown on Figures C3, C4 & C5. Tables C4.7 - C4.9 below provides the results of the analysis of the SM2 recordings on each occasion.

On the first occasion on the 28th May 2015 the weather was 14°C with no cloud or rain and a light wind. The transect commenced at 21:10 (sunset 21:19) and continued until 23:35. Few bats were recorded during the transect walk; a noctule/Leisler's call was recorded at 22:03 at Stop 1 and no other activity was recorded until Stop 9 near the large waterbody at TN28 (Figure C3). Here Daubentons were recorded foraging over the water along with a number of common pipistrelles.

The SM2 placed midway along the woodland edge east of TN28 recorded four bats species over the five nights (Figure C3). Of these the most common were passes of pipistrelle bats both common (45KHz) and soprano (KHz). Most passes were within 1 hour of sunset or sunrise with few calls during the rest of the night; usually single figures of passes in any one hour. There were few *Myotis* species passes recorded and these are likely to be the Daubenton bats that were seen foraging over TN28 during newt surveys. Most interesting was the cluster of passes of noctule/Leisler's bat just before dawn on two mornings with the last calls 18 minutes and 10 minutes before sunrise respectively. No bats were recorded during the period from around 22:15 on the evening of the 31st May until 03:51 of the morning of the 2nd June and this coincided with a period of very high winds.

On the second occasion, 20th July 2015 the weather was 17°C with little cloud cover and no rain. It was breezy at the commencement of the survey but this quickly dropped away soon after sunset. The transect commenced at 21:15 (sunset 21:20) and continued until 23:15. The transect was walked in the opposite direction so that areas covered early after dusk on the first occasion were visited later on the second occasion (Figure C4). The first call was at 22:13 and was a common pipistrelle right in the south west corner at Stop Point 5; it appeared to be commuting along the track north to south. Further calls were then recorded along the track between Stop Points 5 and 6; two common pipistrelles, three *Myotis* species and a noctule at Stop Point 7. Two further *Myotis* were recorded between Stop Points 7 and 8. Finally as in May, bat activity was recorded over the water at TN28 including noctule/Leisler's, common pipistrelle and Daubenton's.

An SM2 detector was placed out at the location shown on Figure C4 and left for five nights. Over the five nights only a low level of activity was recorded with most records pipistrelle bats and particularly soprano pipistrelles.

On the third occasion, 18th August 2015 the weather was 15°C with little cloud cover and no rain. There was little or no wind. The transect commenced at 20:15 (sunset 20:30) and continued until 22:30. The first call was at 21:05, a *Myotis* species in the north west corner of the landfill site at Stop Point D; it was a single pass. Single passes of common pipistrelle were recorded at Stop Point E and F; a common pipistrelle and a soprano pipistrelle at Point G; a single pass of a *Myotis* species at Point H; an unknown species at Point I; a *Myotis* species and a common pipistrelle at Stop Point J and finally Daubenton bats at Stop Point K, nearby the remaining standing water, the level of which had fallen considerably from that in July.

An SM2 detector was placed out at the location shown on Figure C5 and left for five nights. As in July, there was little activity over the five nights with most calls pipistrelles.

Table C4.7: Bat Activity Recorded on SM2, 28th May - 4th June

Date	Species	21:00	22:00	23:00	00:00	01:00	02:00	03:00	04:00	Total	Passes/hr
		- 22:00	- 23:00	- 00:00	- 01:00	- 02:00	- 03:00	- 04:00	- 05:00		
28th/29th May 2015											
Sunset: 21:19	<i>Pip 45</i>		16	4	2	2	4	2		30	3.75
1st bat: 22:03	<i>Pip 55</i>		9							9	1.125
last bat: 04:34	<i>Pip.sp.</i>			2			2	3	1	8	1.00
Sunrise: 04:52	<i>My.sp.</i>		6	1					1	7	0.875
	<i>Noctule</i>								40	40	5.00
29th/30th May 2015											
Sunset: 21:20	<i>Pip 45</i>	2	3							5	0.625
1st bat: 21:38	<i>Pip 55</i>	1	16							17	2.125
last bat: 04:26	<i>My.sp.</i>		12							12	1.5
Sunrise: 04:51	<i>Noctule</i>	33	1						16	50	6.25
30th/31st May 2015											
Sunset: 21:22	<i>Pip 45</i>	3	56	11	1	2		1		74	9.25
1st bat: 21:20	<i>Pip 55</i>	7	10						5	22	2.75
last bat: 04:29	<i>Pip.sp.</i>	1	5	2	1					9	1.125
Sunrise: 04:50	<i>My.sp.</i>					3		1	1	5	0.625
	<i>Noctule</i>	2								2	0.25
31st May/1st June 2015											
Sunset: 21:23	<i>Pip 45</i>		2							2	0.25
1st bat: 21:58	<i>Pip 55</i>	1								2	0.25
last bat: 22:11	<i>Pip.sp.</i>		1							1	0.125
Sunrise: 04:49	<i>My.sp.</i>							3	8	11	1.375
	<i>Leisler's</i>									0	0

Date	Species	21:00	22:00	23:00	00:00	01:00	02:00	03:00	04:00	Total	Passes/hr
1st/2nd June 2015											
Sunset: 21:24	<i>Pip 45</i>									1	0.125
1st bat: 03:51	<i>Pip 55</i>							3	8	13	1.625
last bat: 04:13	<i>My.sp.</i>									0	0
Sunrise: 04:49	<i>Noctule</i>									0	0
2nd/3rd June 2015											
Sunset: 21:25	<i>Pip 45</i>		8	3	7	2	3	1		24	3
1st bat: 21:46	<i>Pip 55</i>		15	4			5	2	1	30	3.75
	<i>Pip.sp.</i>	2		1					1	4	0.5
last bat: 04:38	<i>My.sp.</i>								1	1	10.125
Sunrise: 04:48	<i>Noctule</i>								15	15	2.625
3rd/4th June 2015											
Sunset: 21:26	<i>Pip 45</i>		44	3	2	3		3		8	1
1st bat: 21:33	<i>Pip 55</i>	5	27	2	1	1		2		41	5.125
	<i>Pip.sp.</i>		5	5	6	2		3			
last bat: 03:55	<i>My.sp.</i>									4	0.5
Sunrise: 04:47	<i>Noctule</i>	1	1	1	1					5	1.875

Table C4.8: Bat Activity Recorded on SM2, 20th July - 28th July

Date	Species	21:00 - 22:00	22:00 – 23:00	23:00 – 00:00	00:00 – 01:00	01:00 – 02:00	02:00 – 03:00	03:00 – 04:00	04:00 – 05:00	Total	Passes/hr
20th/21st July 2015											
Sunset: 21:21	<i>Pip 45</i>		4							4	0.5
1st bat: 22:13	<i>Pip 55</i>		5		1			1	1	8	1.00
last bat: 04:22	<i>Pip sp.</i>		1						1	2	0.25
Sunrise: 05:10	<i>My.sp.</i>		1	1	1					3	0.375
	<i>Noctule /Leisler's</i>									0	0
21st/22nd July 2015											
Sunset: 21:20	<i>Pip 45</i>		3	1					2	6	0.75
1st bat: 22:16	<i>Pip 55</i>		2	1			1		19	23	2.875
last bat: 04:42	<i>Pip sp.</i>		4							4	0.5
Sunrise: 05:11	<i>My.sp.</i>					1	2			3	0.375
	<i>Noctule/ Leisler's</i>		1				1			2	0.25
22nd /23rd July 2015											
Sunset: 21:19	<i>Pip 45</i>		5	1						6	0.75
1st bat: 21:58	<i>Pip 55</i>	5	5	2		2		1	4	19	2.375
last bat: 04:42	<i>Pip.sp.</i>	1	1							2	0.25
Sunrise: 05:12	<i>My.sp</i>		2		2					4	0.5
	<i>My.daub</i>		1		1					2	0.25
	<i>Noctule /Leisler's</i>									0	0

Date	Species	21:00 - 22:00	22:00 – 23:00	23:00 – 00:00	00:00 – 01:00	01:00 – 02:00	02:00 – 03:00	03:00 – 04:00	04:00 – 05:00	Total	Passes/hr
23rd/24th July											
Sunset: 21:17	<i>Pip 45</i>		10							10	1.25
1st bat: 21:47	<i>Pip 55</i>	4	1					1	9	15	1.875
last bat: 04:44	<i>Pip sp</i>								1	1	0.125
Sunrise: 05:14	<i>My.sp.</i>									0	0
	<i>Noctule /Leisler's</i>								1	1	0.125
24th/25th July 2015											
Sunset: 21:16	<i>Pip 45</i>	2								2	0.25
1st bat: 21:43	<i>Pip 55</i>	2	2						2	6	0.75
last bat: 04:23	<i>My.sp.</i>									0	0
Sunrise: 05:15	<i>Noctule /Leisler's</i>									0	0
25th/26th July 2015											
Sunset: 21:14	<i>Pip 45</i>	3	2	1					2	8	1.00
1st bat: 21:43	<i>Pip 55</i>	16	5		4	1		1	13	40	5.00
last bat: 04:49	<i>Pip sp.</i>									0	0
Sunrise: 05:17	<i>My sp.</i>			1				1		2	0.25
	<i>My.daub</i>			1						1	0.125
	<i>Noctule/ Leisler's</i>								1	1	0.125

TABLE C4.9: Bat Activity Recorded on SM2, 18th August – 25th August

Date	Species	20:00 – 21:00	21:00 – 22:00	22:00 – 23:00	23:00 – 00:00	00:00 – 01:00	01:00 – 02:00	02:00 – 03:00	03:00 – 04:00	04:00 – 05:00	05:00 – 06:00	Total	Passes/hr
18th/19th August 2015													
Sunset: 20:30	<i>Pip 45</i>					1						1	0.1
1st bat: 22:50	<i>Pip 55</i>				1		1				1	3	00.3
last bat: 05:30	<i>Pip. sp.</i>										3	3	0.3
Sunrise: 05:56	<i>My.sp.</i>											0	0
	<i>Noctule/ Leisler's</i>			2					1		1	4	0.4
19th/20th August 2015													
Sunset: 20:28	<i>Pip 45</i>	1		1	1							3	0.3
1st bat: 20:54	<i>Pip 55</i>											0	0
last bat: 23:12	<i>My.sp.</i>											0	0
Sunrise: 05:58	<i>Nyctalus/ Eptesicus</i>			1								1	0.1
20th/21st August 2015													
Sunset: 20:26	<i>Pip 45</i>		7								1	8	10.8
1st bat: 20:38	<i>Pip 55</i>	4	2			2		1	1		2	12	1.2
last bat: 05:37	<i>Pip.sp.</i>	7	2		1	1	2		1	1	1	16	1.6
Sunrise: 06:00	<i>My.sp.</i>											0	0.4
	<i>Nyctalus/ Eptesicus</i>					2	2					4	0.4
21st/22nd August 2015													
Sunset: 20:23	<i>Pip 45</i>		2		2		1	1				6	0.6
1st bat: 20:50	<i>Pip 55</i>	1								1	1	3	0.3
last bat: 05:30	<i>Pip.sp.</i>	1	3	2				1			1	8	0.8
Sunrise: 06:01	<i>My.sp.</i>											0	0
	<i>Noctule/ Leisler's</i>		1			1				1		3	0.3
22nd/23rd August 2015													

No bats recorded

Date	Species	20:00 – 21:00	21:00 – 22:00	22:00 – 23:00	23:00 – 00:00	00:00 – 01:00	01:00 – 02:00	02:00 – 03:00	03:00 – 04:00	04:00 – 05:00	05:00 – 06:00	Total	Passes/hr
23rd/24th August 2015													
Sunset: 20:21	<i>Pip 45</i>											0	0
1st bat: 11:58	<i>Pip 55</i>											0	0
last bat: 05:40	<i>Pip.sp.</i>											0	0
Sunrise: 06:03	<i>My.sp.</i>											0	0
	<i>Noctule/ Leisler's</i>				1	2					3	6	0.6
24th/25th August 2015													
Sunset: 20:17	<i>Pip 45</i>	22	22									44	4.4
1st bat: 20:44	<i>Pip 55</i>	49	31								1	81	8.1
last bat: 05:32	<i>Pip sp</i>	22	32					1				55	5.5
Sunrise: 06:06	<i>My.sp.</i>											0	0
Sunrise: 06:03	<i>Nyctalus /Eptesicus</i>	16	20	1	2		5					44	4.4

Reptile Surveys

Introduction

Suitable habitat for the common reptile species occurs across the landfill site but there were few records from the desk study (see Annex C3). Most of the west part of the landfill site is complete and so effort was concentrated at the eastern side of the landfill site, where work is still yet to take place and where the green waste composting activities are proposed. Grass snake was possible and so mats were placed out around the waterbody at T28 and also on the south facing slope above TN18.

Methods

The survey method was based on Froglife (1999) Reptile Survey, An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation Froglife Advice Sheet 10. Froglife, Halesworth and The Reptile Mitigation Guidelines; Natural England Technical Information Note TIN102 (subsequently withdrawn).

Mats (0.5m x 1m roofing felt) were placed out in suitable areas for reptiles and left for two weeks to "bed" in before checking on seven occasions to determine presence/likely absence of reptiles. Locations of the clusters of mats are shown on Figure C6.

Results

Table C4.10 below provides the results of each survey occasion. No reptiles were recorded and if any are present, they are in small numbers that were not detected by the survey.

Table C4.10: Results of Reptile Survey 2015

	14-May	27-May	05-Jun	08-Jun	10-Jun	18-Jun	23-Jun
Location / number of refugia	15°C; 40% cloud; still	12°C; 20% cloud; F1	17°C; 80% cloud; F1 & gusty	14°C; 20% cloud; F1	14°C; 50% cloud; F1 - F2	15°C; 50% cloud; F3	13°C; 50% cloud; F1
A/6	0	0	0	0	0	0	0
B/5	0	0	0	0	0	0	0
C/4	0	0	0	0	0	0	0
D/5	0	0	0	0	0	0	0
E/20	0	0	0	0	0	0	0

Butterfly Surveys

Introduction

Records and anecdotal evidence provided by a local butterfly recorder indicated that grizzled and dingy skippers had been recorded on the landfill site. There are also recent records (Staffordshire Invertebrate Group 2105) of dingy & grizzled skippers and brown argus from the area including the MoD training area to the south of the landfill site. Suitable habitat occurs around the landfill site for these species, particularly to the west.

Methods

The survey method was based on the volunteer transect monitoring scheme run by Butterfly Conservation. This involves a weekly transect walk along a predefined route for 26 weeks to record throughout the flight period of most species. At the landfill site, based on records and habitat types, it has been determined that the species to be most likely recorded are those that have become adapted to brownfield habitats that most closely resemble the natural habitats they are found in. These species that includes dingy and grizzled skipper are on the wing generally from early/mid May until early/mid July and so the surveys were designed to pick up the peak activity period for these and other species expected based on the habitats present.

Six survey visits were undertaken between the 14th May and 19th June, during the period when the target species would be on the wing.

Results

Table C4.11 below provides the results of each survey occasion. The location of the records on each occasion is provided on Figures C7 - C12. The landfill site supports good populations of dingy and grizzled skippers along with high populations of common blue butterfly and small heath butterfly. Other species are present, including Brown argus, small white, large white, peacock, painted lady, orange-tip, small skipper and holly blue, though due to the low numbers of other species it is likely that these are visitors to the landfill site from within the local vicinity.

Table C4.11: Results of Butterfly Transect Walks 2015

Date	14th May	27th May	5th June	8 th June	10 th June	19 th June
Weather	Warm and sunny	Sunny periods	Sunny periods, warm	Warm, wind increasing later	Warm, clear	Warm, overcast clearing.
Cloud Cover (%)	40%	20%	40%	20%	<5%	80% and clearing
Temperature (°C)	15 ⁰ C	14 ⁰ C	17 ⁰ C	14 ⁰ C	14°C	15°C
Wind (Beaufort Scale)	None	F1	F2	F1	F2	F3-4
Species	Location (map reference number)					
	1	2	3	4	5	6
Common blue (<i>Polyommatus icarus</i>)	1		3, 12, 17, 18, 19, 20, 22, 23 & 24	18, 20, 22, 25, 29(2), 30, 31(2), 32, 34, 35, 36, 38(2), 40, 43(2), 46, 47, 49(2)	1, 4, 5, 9, 10(2), 13, 14, 18, 20, 21, 23, 24, 27, 29(2), 32, 33(4), 39, 40, 43(3), 44(2), 46, 50, 51, 52(2), 55, 60, 61, 62	4, 7, 18, 19, 20, 21, 23, 25, 27, 28
Holly blue (<i>Celastrina argiolus</i>)						24 (unconfirmed)
Peacock (<i>Aglais io</i>)	3 & 8	5		38	36, 49	
Grizzled skipper (<i>Pyrgus malvae</i>)	4			2, 5	3	
Dingy skipper (<i>Erynnis tages</i>)	5 & 9	3 & 6	7	13, 15(2), 19, 26(2), 48		
Small white (<i>Pieris rapae</i>)	6	1	1 & 2	4	1, 34	
Small skipper (<i>Thymelicus sylvestris</i>)						3
Small heath (<i>Coenonympha pamphilus</i>)	7		4, 6, 9, 10, 11(4), 16(20+) & 21	6, 7(2), 8, 9, 10(2), 11(3), 12(3), 14, 16, 17, 21, 22, 24, 27, 39(4), 42, 45, 46	7, 8(2), 10(5), 11(2), 12, 13(2), 16, 17(5), 18(3), 19(3), 21, 25, 26(2), 28, 30, 32(3), 33(6), 41(2), 42(5), 44(3), 45(3), 48(2), 56, 57,	5, 7, 8(2), 10, 11, 12, 14, 15, 16(3), 17, 22, 26
Orange tip (<i>Anthocharis cardamines</i>)		2 & 4				
Meadow brown (<i>Maniola jurtina</i>)						
Brown argus (<i>Aricia agestis</i>)			8 & 13	33, 28, 44, 49	22, 47(2),	6
Large white (<i>Pieris brassicae</i>)			14	52	1, 2(2), 5, 35, 59	1
Painted lady (<i>Vanessa cardui</i>)				1		

Date	14th May	27th May	5th June	8 th June	10 th June	19 th June	
Weather	Warm and sunny	Sunny periods	Sunny periods, warm	Warm, wind increasing later	Warm, clear	Warm, overcast clearing.	
Cloud Cover (%)	40%	20%	40%	20%	<5%	80% and clearing	
Temperature (°C)	15 ⁰ C	14 ⁰ C	17 ⁰ C	14 ⁰ C	14°C	15°C	
Wind (Beaufort Scale)	None	F1	F2	F1	F2	F3-4	
Species	Location (map reference number)		2	3	4	5	6
Other Records							
Cinnabar moth (<i>Tyria jacobaeae</i>)	2		15			2	
Six-spot burnet (<i>Zygaena filipendulae</i>)				17	15, 17, 18(2), 19, 31, 44(2), 53,		
Broad bodied chaser (<i>Libuella depressa</i>)				3, 50(3), 6	38,		
Black tailed skimmer (<i>Orthetrum cancellatum</i>)						13	
Emperor dragonfly (<i>Anax imperator</i>)						9	
Common blue damsel (<i>Enallagma cyathigerum</i>)				37, 41, 51, 53	37(2), 54, 58		

References

English Nature (2001)

Great Crested Newt Mitigation Guidelines. English Nature, Peter

Froglife (1999)

Reptile Survey, An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation
Froglife Advice Sheet 10. Froglife, Halesworth

Gent, T and Gibson, S. (1998)

Herpetofauna Workers' Manual. Joint Nature Conservation Committee, Peterborough

Harris, S., Creswell, P., and Jefferies, D.J., (1989)

Surveying badgers. Mammal Society, London.

Hundt, L (2012)

Bat Surveys: Good Practice Guidelines, 2nd Edition. Bat Conservation Trust

Joint Nature Conservation Committee (2010)

Handbook for Phase I Habitat Survey: A technique for environmental audit. JNCC, Peterborough.

Mitchell-Jones, A.J. & McLeish, A.P. (Eds.). (1999)

The Bat Workers Manual, 2nd Edition. Joint Nature Conservation Committee, Peterborough.

Oldham, R.S., Keeble, J. Swan, M.J.S. & Jeffcote, M. (2001)

Evaluating the Suitability of Habitat for Great Crested Newt (*Triturus cristatus*). The Herpetological Journal 10 (4), 143 – 155

Appendix C4.1 - Target Notes and Photographs

Appendix C4.1 - Target Notes and Photographs

Table C4.1.1: Target Notes

TN Number	Grid Ref	Notes
TN1	Not taken (general)	Area of broadleaved woodland dominated by mature stands of sycamore and oak.
TN2	Not taken (general)	Linear area of bramble scrub running around the inside of the perimeter fencing, several areas containing standard trees, including a linear line of semi mature oaks (TN11).
TN3	SJ 85388 33969	Two ephemeral water bodies recorded central between a series of large rubble/earth bunds/piles containing brick and concrete waste.
TN4	SJ 85297 33991	A triangular pond/impoundment located to the south-western corner of TN3, the pond provides good potential for great crested newts.
TN5	SJ 85350 34091	A 5x3m ephemeral pool located to the extreme eastern corner of Area B.
TN6	SJ 85276 34128	A small impoundment located within a gap between two bunded areas.
TN7	SJ 85258 34149	A triangular pond with an open aspect, located to the rear/south of the two gas containers next to Blackflats road, good potential for great crested newts.
TN8	SJ 85169 34111	A small 8x4m impoundment located to the north west of Area C, the pond is in two sections, one being a dry reedbed with reed canary grass.
TN9	SJ 85115 34144	A rectangular waterbody located at the north-west corner of the large earth bund that forms the north-western boundary of Pilstones Road (see Photograph below).
TN10	SJ 85008 34330	A linear section (flooded) of the former blackflats road that runs along the northern boundary of the Site, the section is over 300m in length (see Photograph below).
TN11	SJ 84806 34441	A linear section of TN2 that contains a linear belt of semi-mature oak trees.
TN12	SJ 84552 34412	A linear area of very short vegetation interspersed with many stands of hard rush and bright green mosses.
TN13	SJ 84552 34412	A small ephemeral shaded pond located on the bend where Coate Avenue meets Blackflats Road, located to the west of TN14 (large lake).

TN Number	Grid Ref	Notes
TN14	SJ 84719 34406	One of a small number of mature/dead trees that surround the old lake to the north-west of Area A.
TN15	SJ 84748 34125	A 30mx20m patch of broom.
TN16	SJ 84754 34096	Four small stands of Japanese Knotweed each measuring <math><1\text{m}^2</math>
TN17	SJ 84737 34053	A single stand of Japanese Knotweed, measuring <math><1\text{m}^2</math>
TN18	SJ 85106 33970	Main official lagoon, square water body approximately 50x50m in size bunded to three sides and completely fenced off by metal fencing (2m high).
TN19	SJ 85091 33924	Moderate sized area of old building bricks and concrete interspersed with a series of small ponds offering excellent potential for grass snake common lizard amphibians.
TN20	SJ 85091 33924	The eastern end of the open field drain (pond) that flows eastwards along the southern boundary of the Site.
TN21	SJ 85063 33853	A 12m x 8m patch of unknown sedge species that is located to the south of TN20
TN22	SJ 85209 33775	A series of brick archways with a concrete roof located approximately 10m from the southern boundary of the Site, and located within the large expanse of Broadleaved woodland.
TN23	SJ 85268 33758	Mature oak with three small holes, each hole has staining below the entrance, note squirrel dray in upper reaches of the tree, (moderate - high pot).
TN24	SJ 85462 33679	Dead tree stump with several cracks holes (moderate bat potential).
TN25	SJ 85508 33698	A 56m x 5m patch of horsetail.
TN26	SJ 85507 33827	Balancing pond situated within Area G, in the north eastern corner.
TN27	SJ 85385 33867	Large brick building/structure with concrete roof, low bat potential.
TN28	SJ 85312 33861	Expansive settlement lagoon, with unknown depth, located to the south east of Area C.
TN29	SJ 85211 33960	A small ephemeral pond fringed with scattered stands of epilobium and common dock, approximately 0.5m deep.
TN30	SJ 85612 33724	A small woodland pond (3m diameter) located outside the boundary, to the east of Meece Road.

TN4



TN7



TN9



TN10



TN14



TN14



TN16



TN18



TN19



TN19



TN22



T23



T26



Appendix C4.2 - Description of Ponds and HSI Calculations

Appendix C4.2 - Description of Ponds and HSI Calculations

Table C4.2.1: Description of Ponds

Target Note/Ref	Grid reference	Description
TN3	SJ 85388 33969	Two shallow ephemeral pools located between a series of large earth/rubble bunds within Area C. No recognised aquatic flora. Marginal species mainly pioneer terrestrial plants, with the occasional stand of immature reedmace.
TN5	SJ 85350 34091	A small ephemeral pool located to the south-east corner of Area B, approximately 1.5m south of Blackflats Road, the pond is dominated by central stands of reedmace, surrounded by tall herbs with occasional patch of hard rush and hairy willowherb.
TN6	SJ 85276 34128	A small ephemeral pool located between two large earth bunds to the west of the bend on Blackflats Road.
TN8	SJ 85169 04111	A small linear figure of eight pool, located to the north of Area C, approximately 5m south-west of the northern access track.
TN9	SJ 85115 34144	A 25mx4m rectangular waterbody (depth unknown) located on the north-western corner of Area C, to the north of the large L-shaped bund.
TN10	SJ 85008 34330	a linear section (flooded) of the former Blackflats Road that runs along the northern boundary of the site, the section is over 300m in length, boarded by stands of hairy willowherb, soft rush and hard rush, water depth 10-20cm.
TN13	SJ 84552 34412	a small ephemeral shaded pond located on the bend where Coates Avenue meets Blackflats Road, located to the west of TN14 (large lake). No marginal/aquatic vegetation recorded.
TN14	SJ 84719 34406	Large mature lake that occupies a position to the north west corner of the site (area A). The water depth was unknown (likely very deep) surrounded by mature trees, no marginal/aquatic flora was recorded.
TN20	SJ 85091 33924	The eastern end of the open field drain (pond) that flows eastwards along the southern boundary of the Site.
TN26	SJ 85507 33827	Recently created balancing pond situated within Area G, in the north eastern corner. Several small stands of reedmace and hairy willowherb were recorded along southern margins. Pond surrounded by sparsely vegetated ground.
TN29	SJ 85211 33960	A small ephemeral pond fringed with sporadic stands of hairy willowherb and common dock, approximately 0.5m deep.
TN30	SJ 85612 33724	A small woodland pond (3m diameter) located outside the landfill site boundary, to the east of Meece Road.
TN31	SJ 84841 33972	Linear/open wet ditch/channel (1.5m wide), that culminates at TN20.

Table C3.2.2: HSI for Pond TN3

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	300m ²	0.60
SI ₃	Pond drying	Annually	0.10
SI ₄	Water quality	Poor	0.33
SI ₅	Shoreline shade	0%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	1%	0.31
HSI			0.60
Pond suitability			Average

Table C4.2.4: HSI for Pond TN4

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	240m ²	0.48
SI ₃	Pond drying	Sometimes	0.50
SI ₄	Water quality	Moderate	0.67
SI ₅	Shoreline shade	2%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	90%	0.90
HSI			0.82
Pond suitability			Excellent

Table C4.2.5: HSI for Pond TN5

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	40m ²	0.08
SI ₃	Pond drying	Annually	0.10
SI ₄	Water quality	Poor	0.33
SI ₅	Shoreline shade	30%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	90%	0.90
HSI			0.55
Pond suitability			Below average

Table C4.2.6: HSI for Pond TN6

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	20m ²	0.04
SI ₃	Pond drying	Annually	0.10
SI ₄	Water quality	Moderate	0.67
SI ₅	Shoreline shade	10%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	90%	0.90
HSI			0.55
Pond suitability			Below average

Table C4.2.7: HSI for Pond TN7

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	600m ²	1.00
SI ₃	Pond drying	Sometimes	0.50
SI ₄	Water quality	Moderate	0.67
SI ₅	Shoreline shade	5%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	20%	0.50
HSI			0.84
Pond suitability			Excellent

Table C4.2.8: HSI for Pond TN8

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	50m ²	0.10
SI ₃	Pond drying	Annually	0.10
SI ₄	Water quality	Poor	0.33
SI ₅	Shoreline shade	10%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	90%	0.90
HSI			0.56
Pond suitability			Below average

Table C4.2.9: HSI for Pond TN9

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	120m ²	0.24
SI ₃	Pond drying	Sometimes	0.50
SI ₄	Water quality	Poor	0.33
SI ₅	Shoreline shade	10%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Moderate	0.67
SI ₁₀	Macrophytes	90%	0.90
HSI			0.69
Pond suitability			Average

Table C4.2.10: HSI for Pond TN10

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	1000m ²	0.95
SI ₃	Pond drying	Annually	0.10
SI ₄	Water quality	Poor	0.33
SI ₅	Shoreline shade	10%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Moderate	0.67
SI ₁₀	Macrophytes	0%	0.30
HSI			0.60
Pond suitability			Average

Table C4.2.11: HSI for Pond TN13

		Results	Scores
SI₁	Location	A	1.00
SI₂	Pond area	12m ²	0.02
SI₃	Pond drying	Annually	0.10
SI₄	Water quality	Poor	0.33
SI₅	Shoreline shade	80%	0.60
SI₆	Fowl	Absent	1.00
SI₇	Fish	Absent	1.00
SI₈	Pound count	>12	1.00
SI₉	Terrestrial habitat	Moderate	0.67
SI₁₀	Macrophytes	0%	0.30
HSI			0.40
Pond suitability			Poor

Table C4.2.12: HSI for Pond TN14

		Results	Scores
SI₁	Location	A	1.00
SI₂	Pond area	>7000m ²	0.03
SI₃	Pond drying	Never	0.90
SI₄	Water quality	Moderate	0.67
SI₅	Shoreline shade	100%	0.20
SI₆	Fowl	Minor	0.67
SI₇	Fish	Possible	0.67
SI₈	Pound count	>12	1.00
SI₉	Terrestrial habitat	Moderate	0.67
SI₁₀	Macrophytes	0%	0.30
HSI			0.54
Pond suitability			Below average

Table C4.2.13: HSI for Pond TN18

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	2500m ²	0.72
SI ₃	Pond drying	Rarely	1.00
SI ₄	Water quality	Moderate	0.67
SI ₅	Shoreline shade	2%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Moderate	0.67
SI ₁₀	Macrophytes	0%	0.30
HSI			0.79
Pond suitability			Excellent

Table C4.2.14: HSI for Pond TN19

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	100m ²	0.20
SI ₃	Pond drying	Sometimes	0.50
SI ₄	Water quality	Moderate	0.67
SI ₅	Shoreline shade	10%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	80%	1.00
HSI			0.76
Pond suitability			Good

Table C4.2.15: HSI for Pond TN20

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	30m ²	0.06
SI ₃	Pond drying	Sometimes	0.50
SI ₄	Water quality	Poor	0.33
SI ₅	Shoreline shade	10%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	90%	0.90
HSI			0.62
Pond suitability			Average

Table C4.2.16: HSI for Pond TN26

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	160m ²	0.32
SI ₃	Pond drying	Annually	0.10
SI ₄	Water quality	Poor	0.33
SI ₅	Shoreline shade	0%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Moderate	0.67
SI ₁₀	Macrophytes	20%	0.50
HSI			0.57
Pond suitability			Below average

Table C4.2.17: HSI for Pond TN28

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	>7000m ²	0.03
SI ₃	Pond drying	Sometimes	0.50
SI ₄	Water quality	Moderate	0.67
SI ₅	Shoreline shade	10%	1.00
SI ₆	Fowl	Minor	0.67
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	2%	0.32
HSI			0.54
Pond suitability			Below average

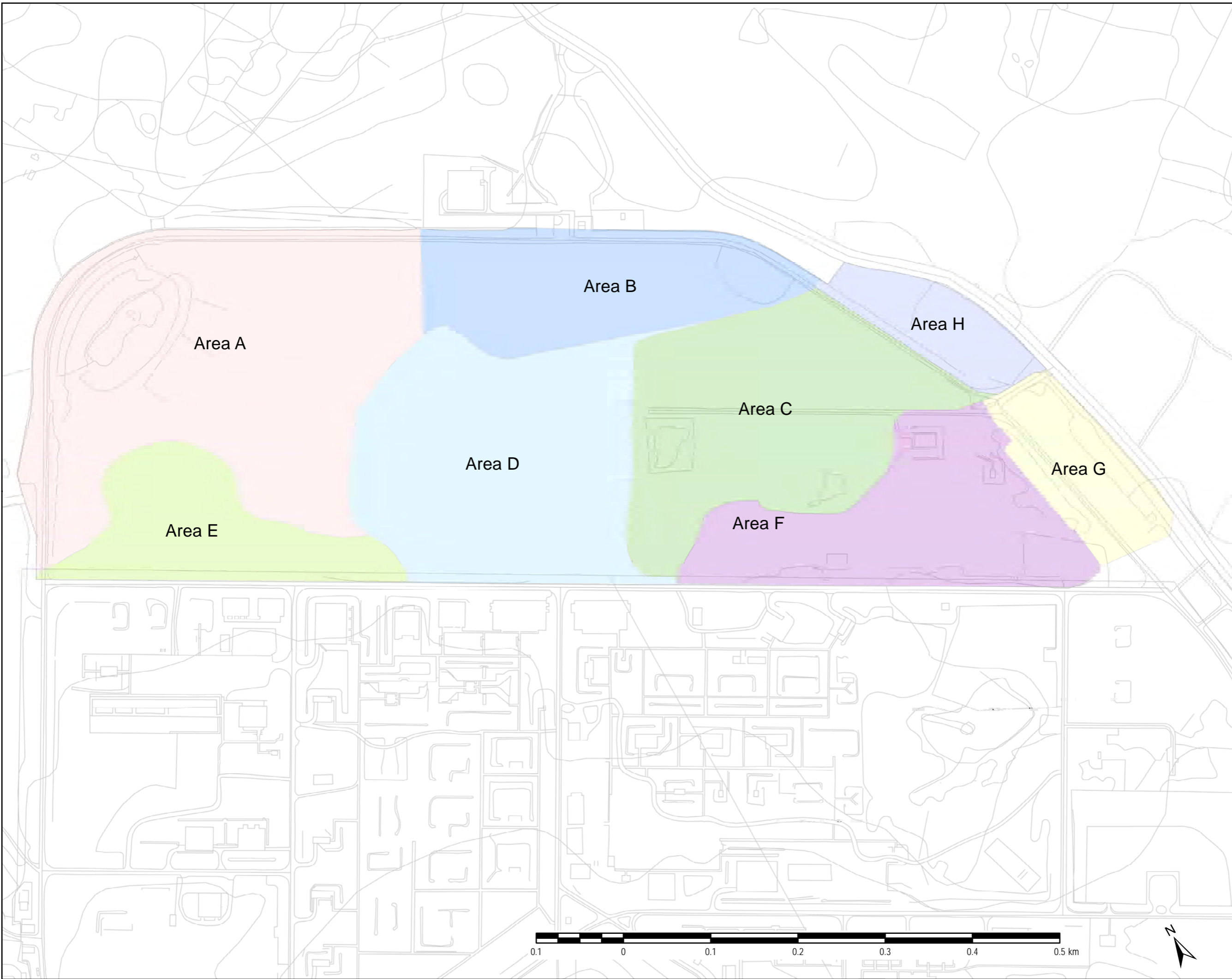
Table C4.2.18: HSI for Pond TN29

		Results	Scores
SI ₁	Location	A	1.00
SI ₂	Pond area	300m ²	0.60
SI ₃	Pond drying	Annually	0.10
SI ₄	Water quality	Poor	0.33
SI ₅	Shoreline shade	0%	1.00
SI ₆	Fowl	Absent	1.00
SI ₇	Fish	Absent	1.00
SI ₈	Pound count	>12	1.00
SI ₉	Terrestrial habitat	Good	1.00
SI ₁₀	Macrophytes	2%	0.32
HSI			0.60
Pond suitability			Average

Table C4.2.19: HSI for Pond TN30

		Results	Scores
SI₁	Location	A	1.00
SI₂	Pond area	1060m ²	0.94
SI₃	Pond drying	Annually	0.10
SI₄	Water quality	Poor	0.33
SI₅	Shoreline shade	60%	1.00
SI₆	Fowl	Absent	1.00
SI₇	Fish	Absent	1.00
SI₈	Pound count	>12	1.00
SI₉	Terrestrial habitat	Moderate	0.67
SI₁₀	Macrophytes	0%	0.30
HSI			0.60
Pond suitability			Average

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Drawing Title
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AREAS

Drawn GB	Checked DS	Approved PB	Date 23/09/2015
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Legend

- Target note
- Planning Application Boundaries
- * Location of SM2 Transect 3
- Tree
- Dry ditch
- Fence
- Broad-leaved semi-natural woodland
- Dense/continuous scrub
- Unimproved neutral grassland
- Semi-improved neutral grassland
- Improved grassland
- Tall herb and fern
- Swamp
- Standing water
- Spoil
- Refuse tip
- Ephemeral/short perennial
- Bare ground
- Other habitat

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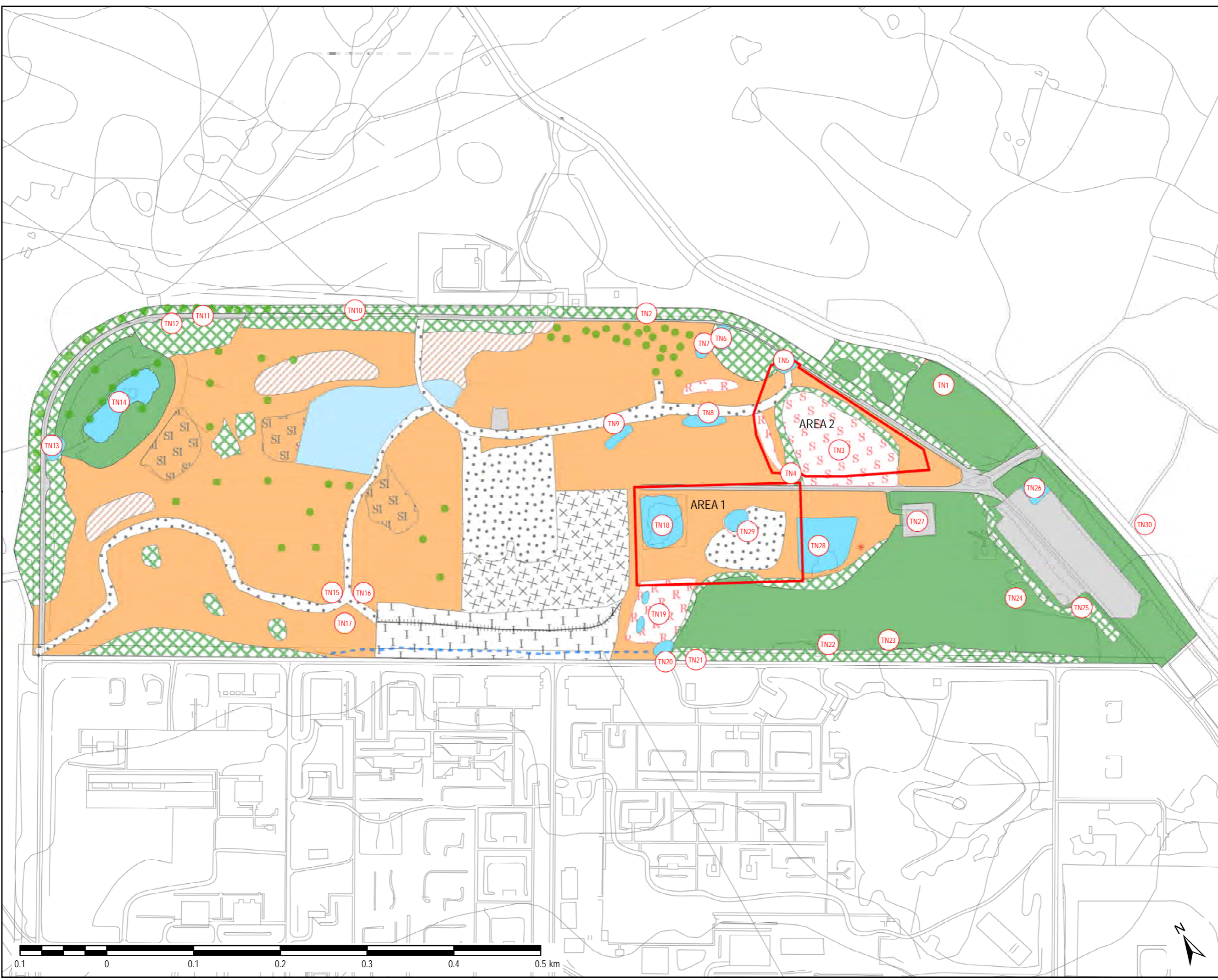
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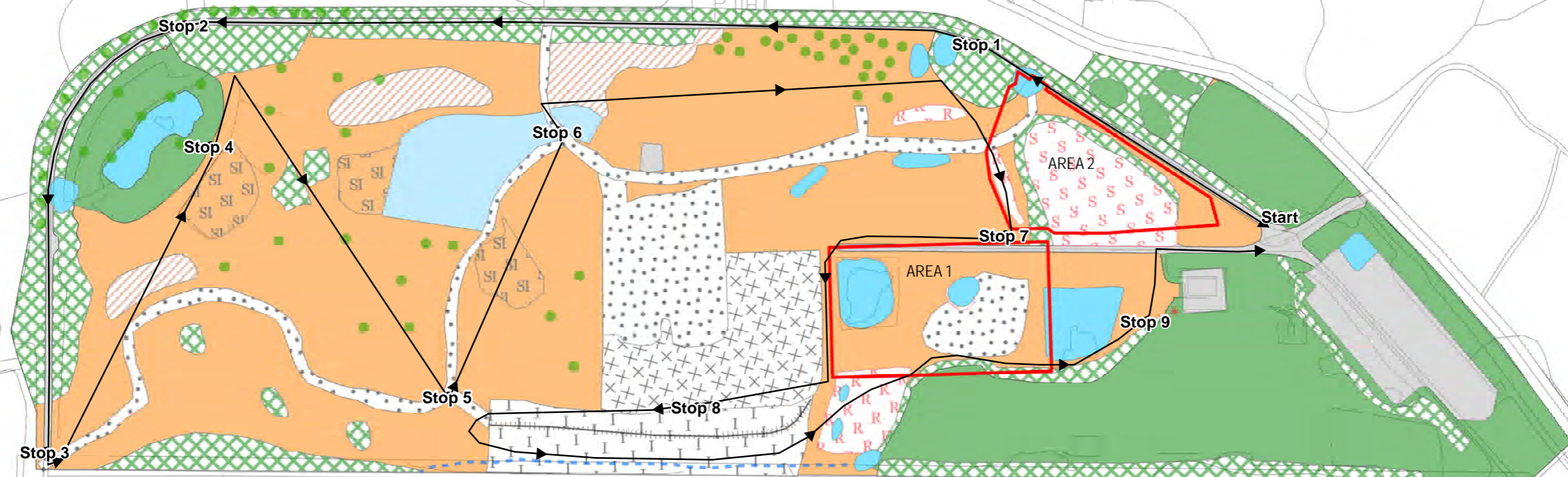
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FIGURE C2



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- LEGEND
- Bat transect
 - Planning Application Boundaries
 - * Location of SMP2



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 BAT TRANSECT SURVEY

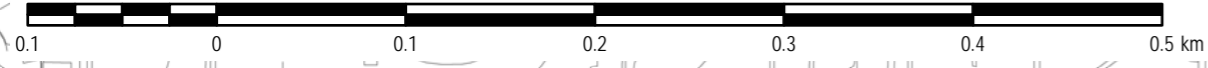
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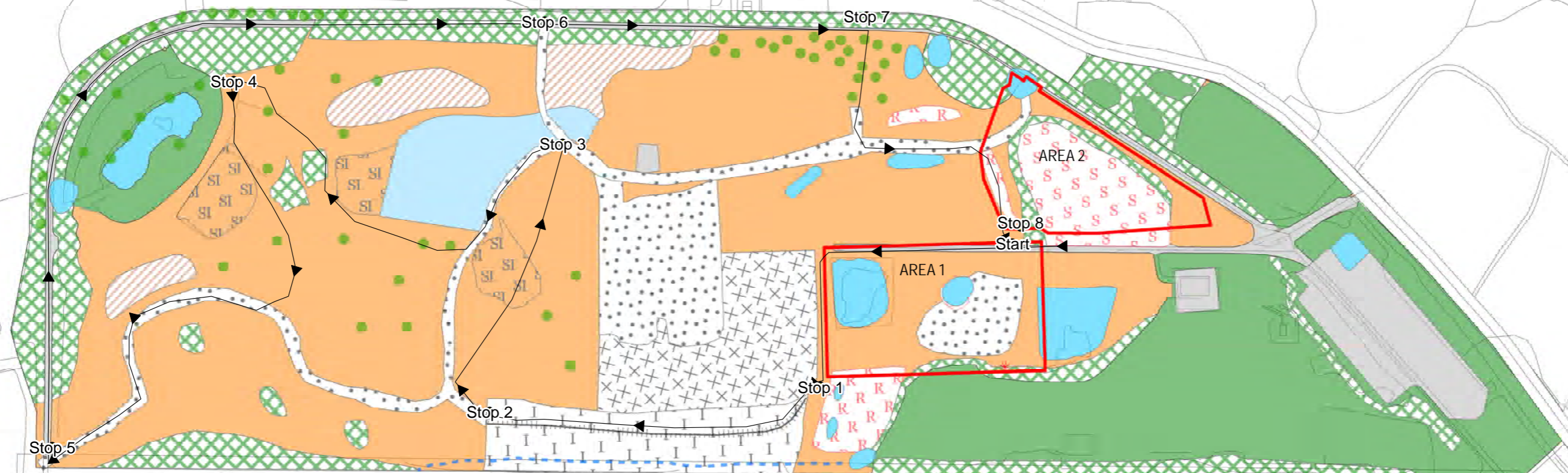


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- LEGEND**
- Bat transect
 - * Location of SM2
 - Planning Application Boundaries



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Drawing Title
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- LEGEND
- Bat transect
 - * Location of SM2
 - Planning Application Boundaries

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

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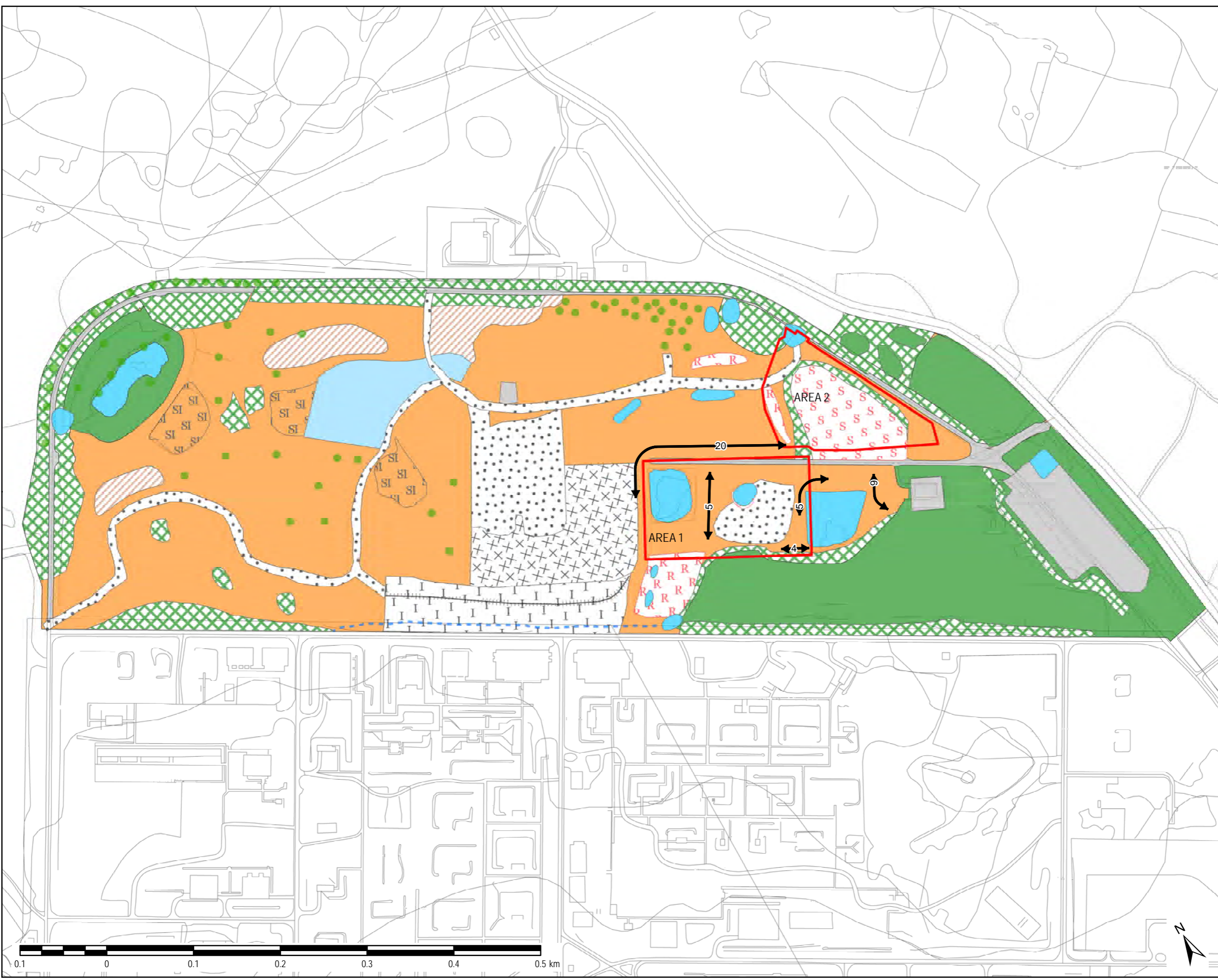
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- LEGEND**
-  Reptile mats locations and number
 -  Planning Application Boundaries



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REPTILE MATS LOCATIONS

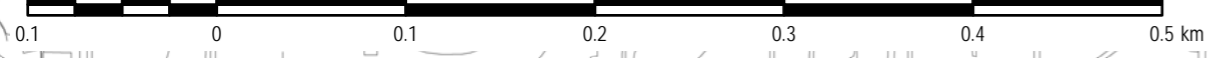
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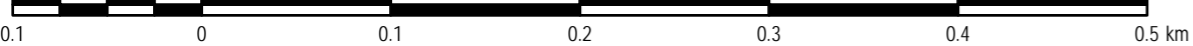
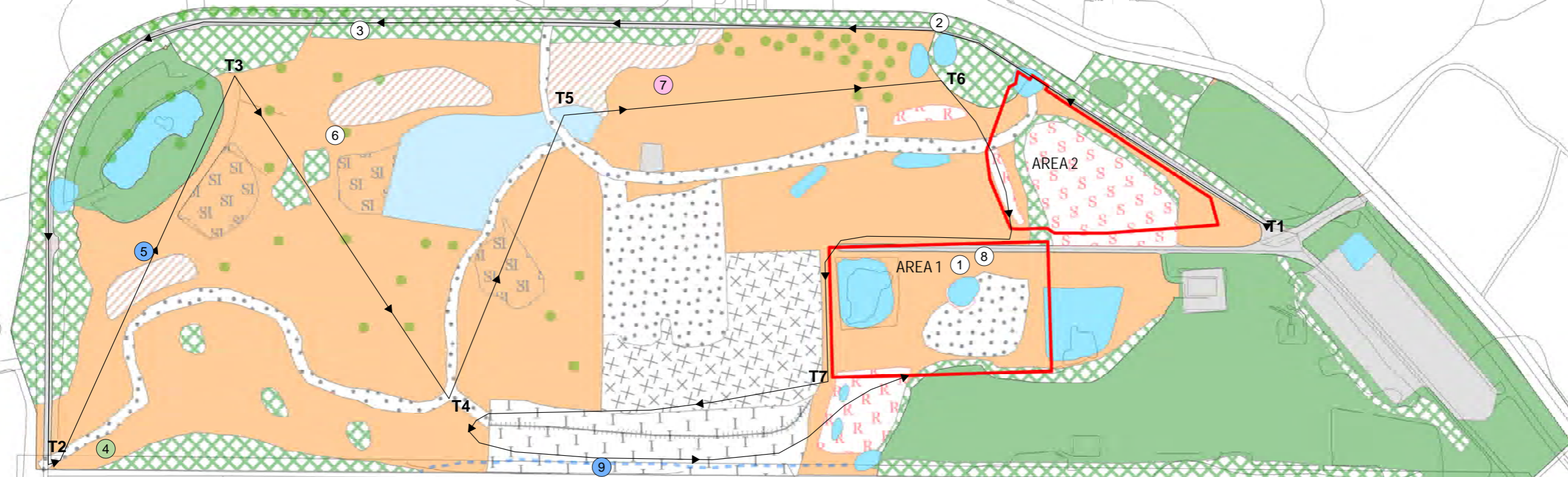
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- LEGEND**
- Dingy skipper
 - Grizzled skipper
 - ⊕ Small heath
 - Other species
 - Transect sections
 - Transect
 - ▬ Planning Application Boundaries



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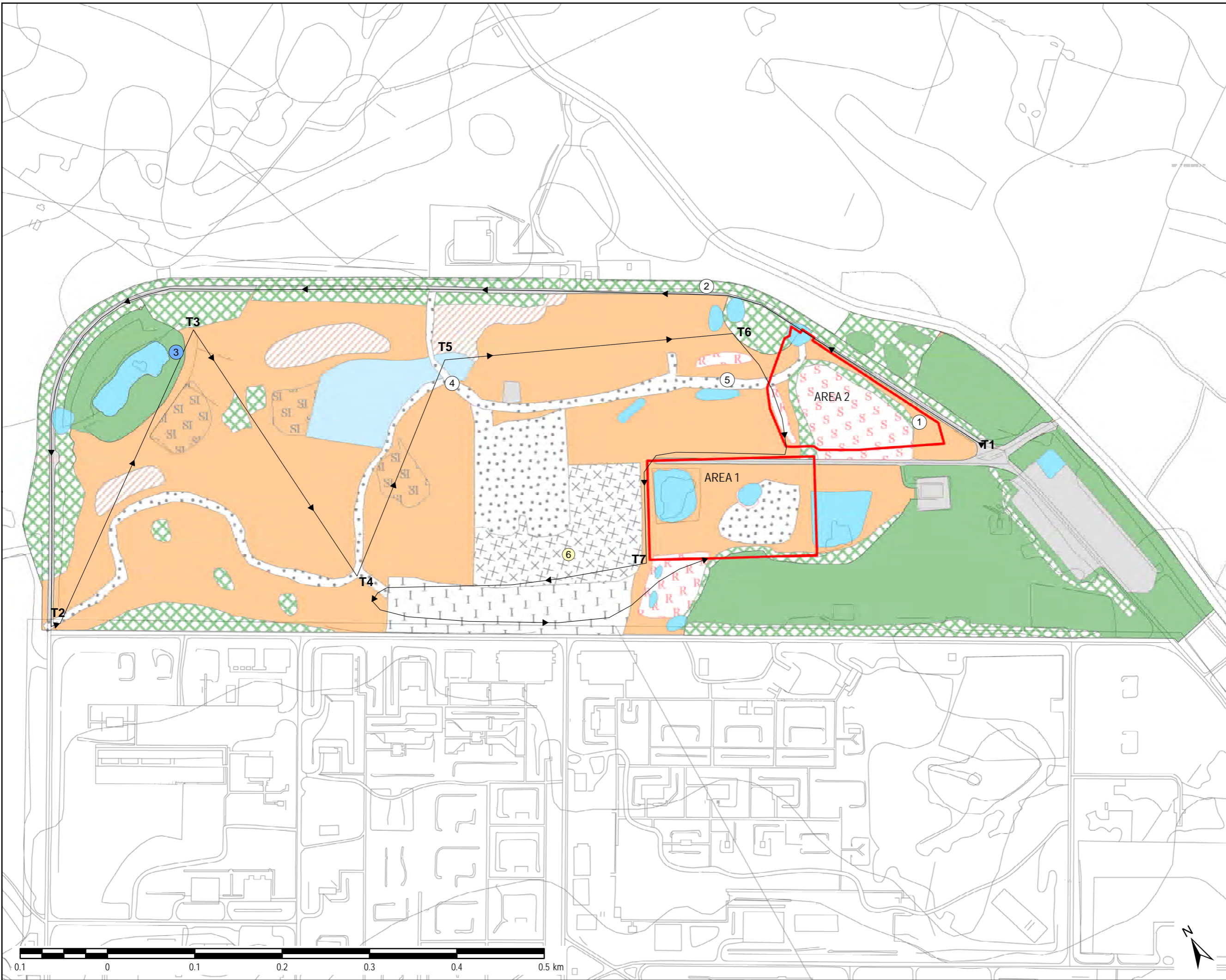
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 FIGURE C7



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BUTTERFLY SURVEY VISIT 2

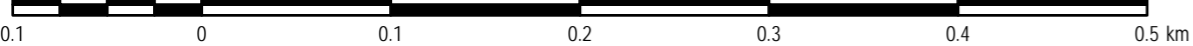
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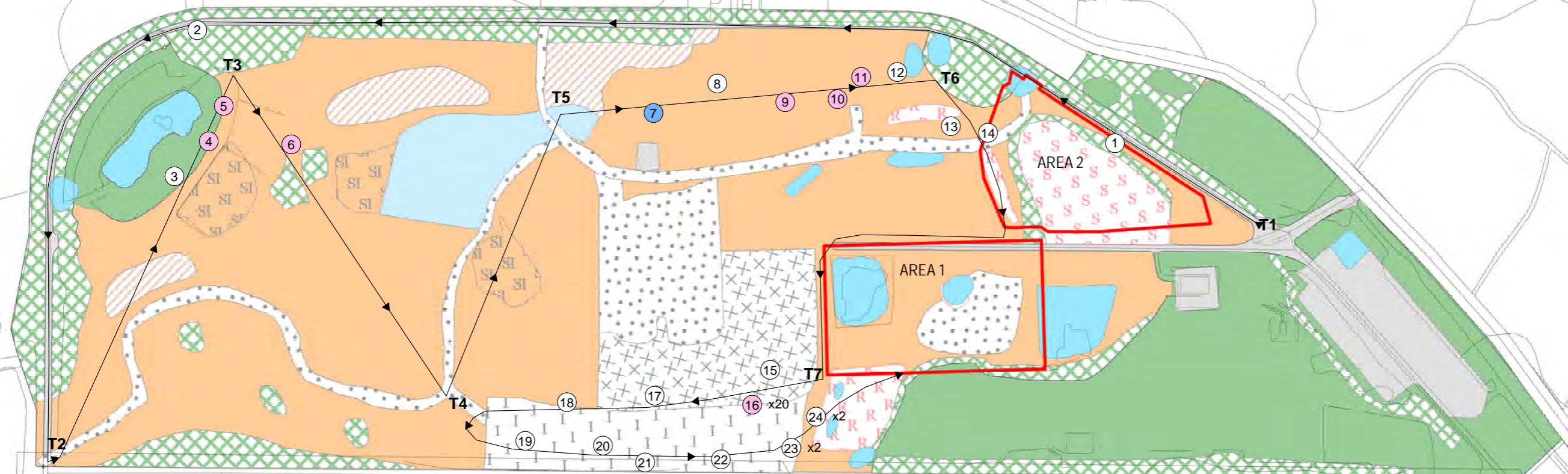


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 - Transect sections
 - Transect
 - Planning Application Boundaries



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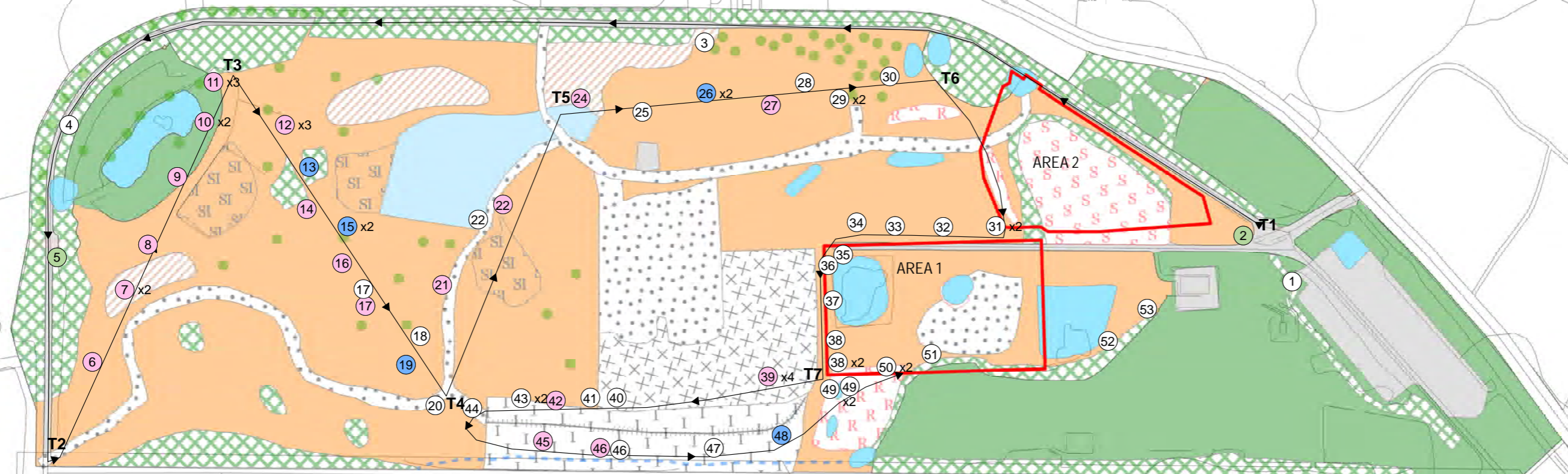
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- Other species
- Transect sections
- Transect
- Planning Application Boundaries



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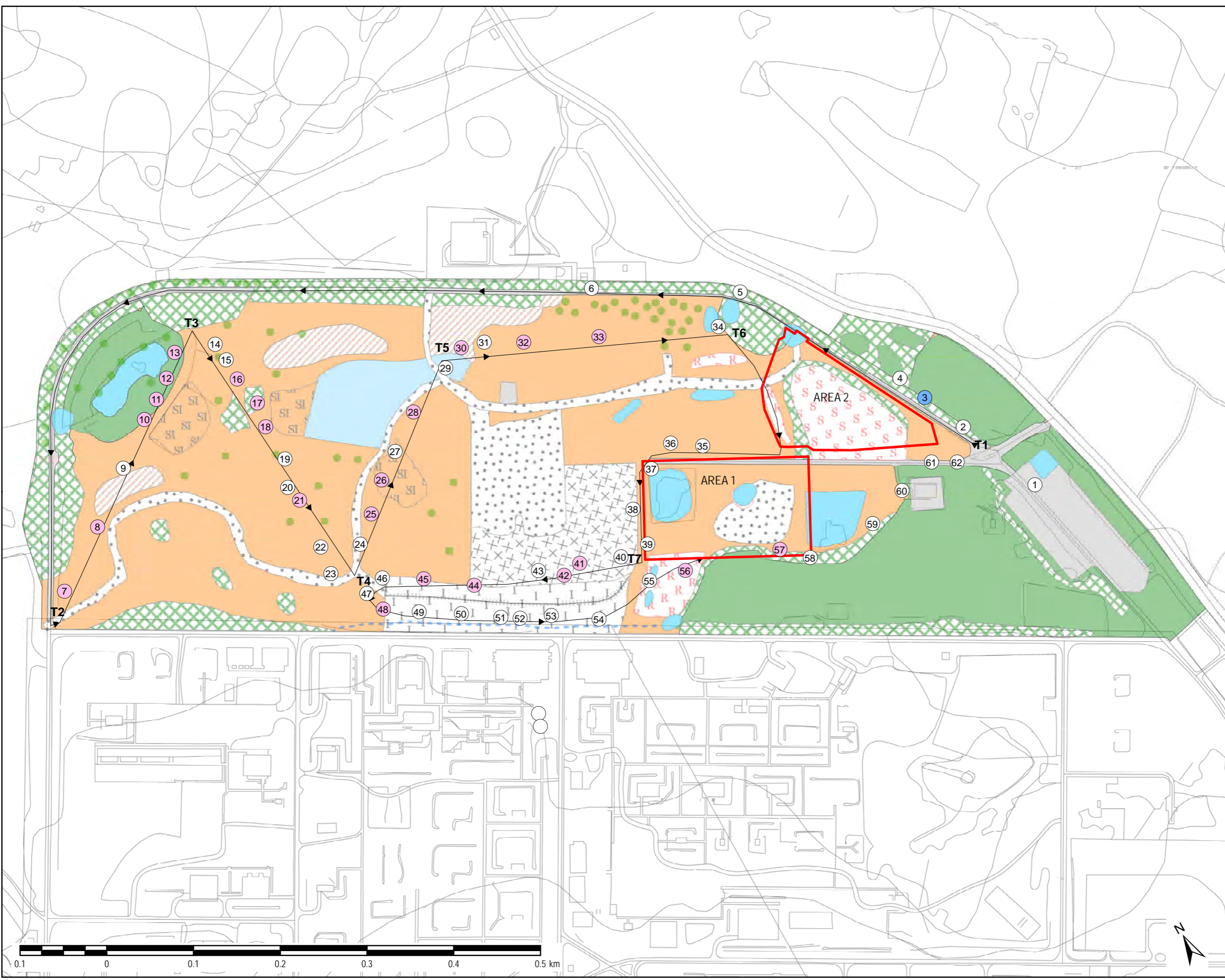
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 FIGURE C10

File Name: L:\CH_Waste_Management\7072250 Biffa Meece - LFS\Technical\Green Waste Composting - Planning\Supporting Statement\Appendices\Appendix C - Ecology\GIS\Plans 2015.09.23\Meece - Figure C11 - Butterfly surveys 2015.09.23.mxd



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

- Dingy skipper
- Grizzled skipper
- Small heath
- Other species
- Transect sections
- Planning Application Boundaries

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 Ordnance Survey 0100031673

Purpose of Issue
 FINAL

Client
 BIFFA WASTE SERVICE LTD

Project Title
 MEECE
 GREEN WASTE COMPOSTING

Drawing Title
 BUTTERFLY SURVEY
 VISIT 5

Drawn GSB	Checked SR	Approved PB	Date 23/09/2015
URS Internal Project No. 47072250.0003		Scale @ A3 1:4,000	

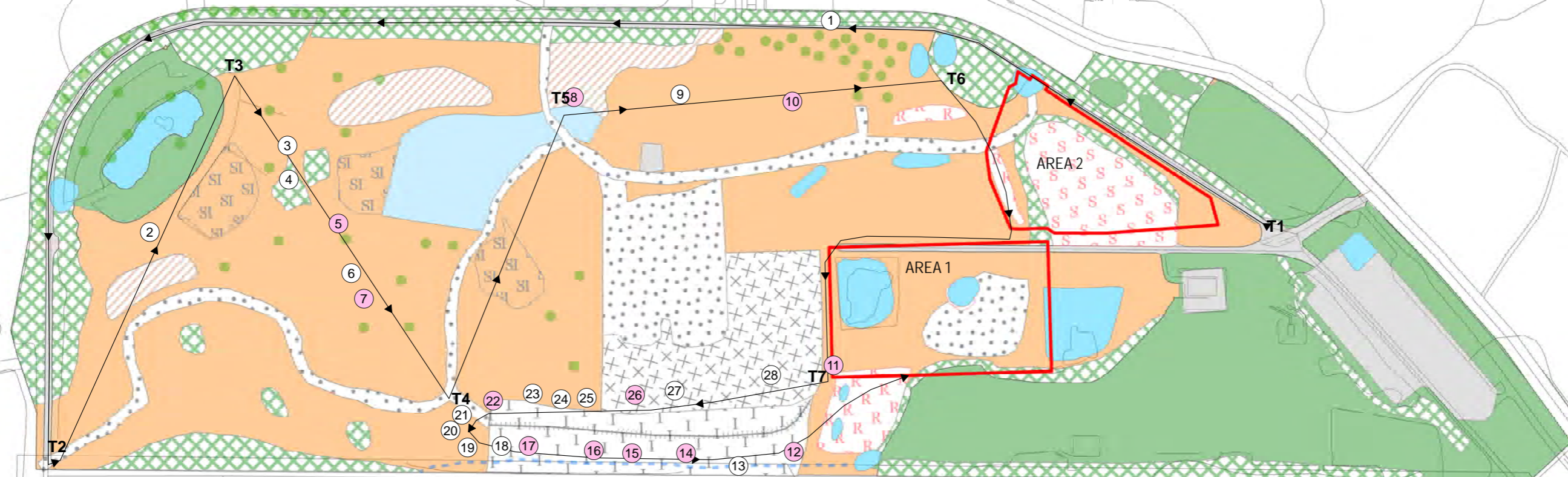
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Drawing Number
 FIGURE C11

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

- LEGEND**
- Dingy skipper
 - T Grizzled skipper
 - Small heath
 - Other species
 - Transect sections
 - Planning Application Boundaries



File Name: L:\CH_Waste_Management\7072250 Biffa Meece - LFS\Technical\Green Waste Composting - Planning\Supporting Statement\Appendices\Appendix C - Ecology\GIS\Plans 2015.09.23\Meece Figure C12 - Butterfly survey6.mxd

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Purpose of Issue
 FINAL

Client
 BIFFA WASTE SERVICE LTD

Project Title
 MEECE
 GREEN WASTE COMPOSTING

Drawing Title
 BUTTERFLY SURVEY
 VISIT 6

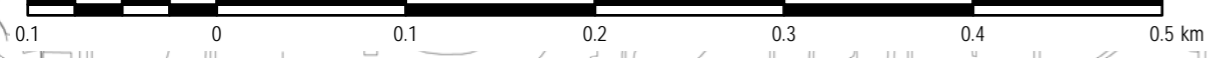
Drawn GSB	Checked SR	Approved PB	Date 23/09/2015
URS Internal Project No. 47072250.0003		Scale @ A3 1:4,000	

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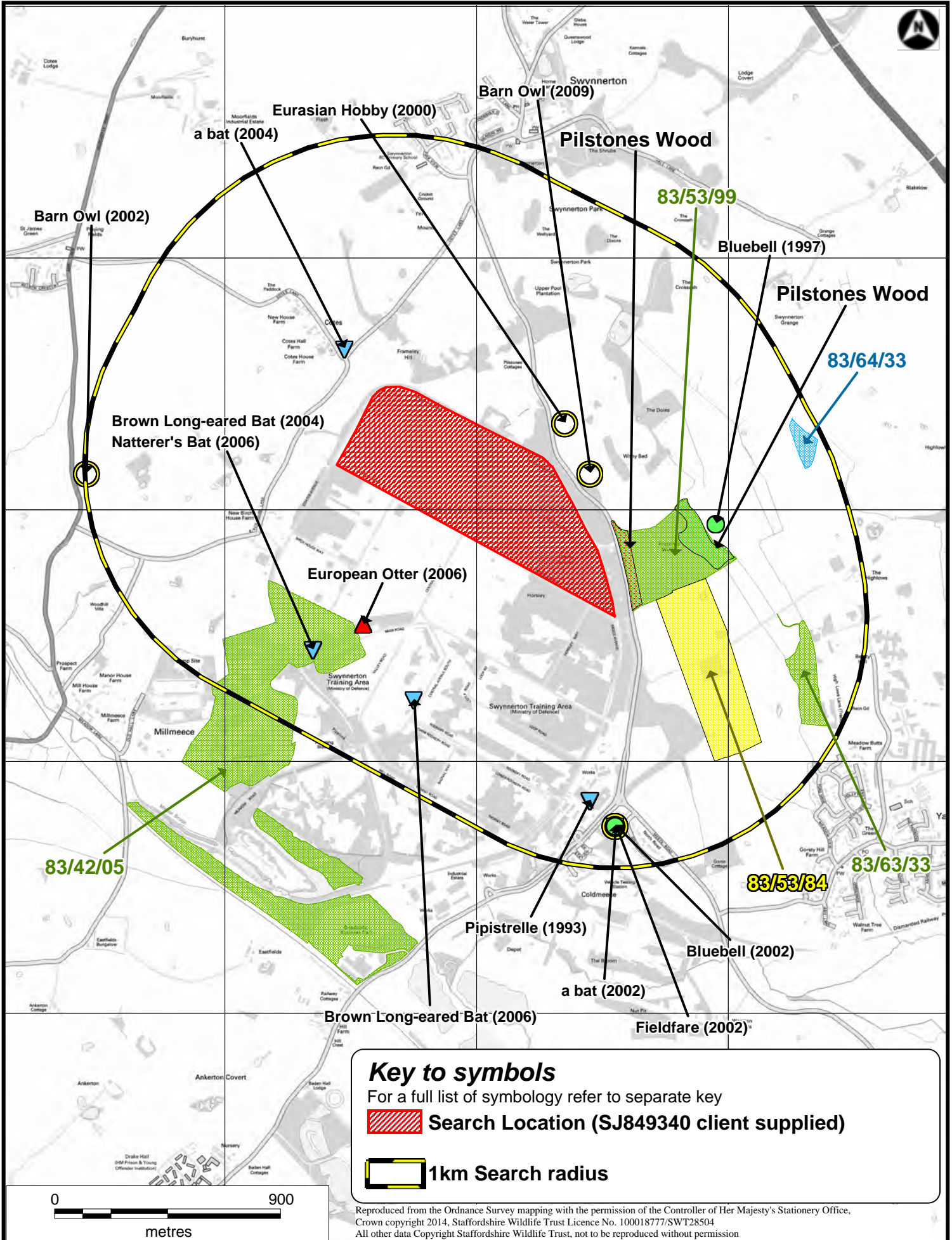


Drawing Number
 FIGURE C12



Nature Conservation Sites and Species within 1km of land south of Swynnerton (SJ849340)

Note: Badger records are excluded, and only 100m precision sightings are plotted









A legend to the map showing Nature Conservation Sites and Species




Introduction

These colours are used on the site alert mapping within the SWT GIS, but SER cannot guarantee the same colours are used in any other mapping system, particularly those based on ArcView.

Statutory Designations from Natural England's web-site

- | | | | |
|--|--------------------------------------|---|--|
|  | National Nature Reserves |  | NNR (boundary not available owing to OS restrictions) |
|  | Sites of Special Scientific Interest |  | SSSI (boundary not available owing to OS restrictions) |
|  | Local Nature Reserves |  | LNR (boundary not available owing to OS restrictions) |

Non-statutory Designations from the Staffordshire Grading System (1995 onwards)

- | | |
|--|--|
|  | Site of Biological Importance (ex Grade 1 SBI) equivalent to "Local Wildlife Site" |
|  | Biodiversity Alert Site (ex Grade 2 SBI) |
|  | Proposed/potential Site of Biological Importance |

Geological Sites

- | | |
|--|---|
|  | Regionally Important Geological/geomorphological Site (= Local Geological Site) |
|--|---|



Staffordshire Wildlife Trust Sites

- | | |
|--|---------------------|
|  | SWT Nature Reserves |
|--|---------------------|

















Other Nature Reserves

- | | |
|--|---|
|  | Royal Society for the Protection of Birds |
|--|---|

Ancient Woodland Inventory

- | | |
|---|---------------------------------|
|  | Ancient & Semi-natural Woodland |
|  | Ancient Replanted Woodland |

Species Information

- | | | | |
|---|---|---|--|
|  | Mammals excluding those listed below |  | Amphibians and reptiles excluding those below |
|  | Otter (<i>Lutra lutra</i>) |  | Great Crested Newt (<i>Triturus cristatus</i>) |
|  | Badger (<i>Meles meles</i>) - not normally supplied |  | Native Crayfish (<i>Austropotamobius pallipes</i>) |
|  | Water Vole (<i>Arvicola terrestris</i>) |  | Flowering plants except those below |
|  | All bat species |  | Bluebell (<i>Hyacinthoides non-scripta</i>) |
|  | All bird species |  | Butterflies and Moths |
|  | Any other protected species (precise to 100m) |  | BAP Species Records (precise to 100m) |
|  | All Protected Species Records (precise to 1km) |  | BAP Species Records (precise to 1km) |

Notes:

The Local Nature Reserve and other nature reserve boundaries can overlay the current grading when both layers are actively visible

Where there are multiple species records for the same grid reference the dot for one species may obscure the dots for other species - all species records will be displayed in the accompanying spreadsheet

Not all the above categories may be present on the accompanying map

Version 2.0 July 2011

SiteID	Grid Ref.	Site Name	Status	Year	Abstract
83/42/05	SJ840325	Meece Brook/Swynnerton/MOD/Railway	Retained Grade 1 SBI	1979	An extensive area of sallow scrub and willow and alder carr around Meece Brook and it's associated channels.
83/53/99	SJ859339	Pilstones Wood	Local Wildlife Site	1997	Part ancient semi-natural woodland, part ancient replanted woodland. The strip adjacent to the road is relatively undisturbed semi-natural woodland
83/63/33	SJ863333	Yarnfield Meadows	Retained Grade 1 SBI	1982	A series of semi-improved hay meadows.
83/64/33	SJ863343	Highlowbank (west of)	Retained Grade 2 SBI	1982	An unimproved damp corner of a field with a generally good mixture of species in the turf, including lady's-mantle.
	SJ855337	Pilstones Wood	Ancient Replanted Woodland		
	SJ859339	Pilstones Wood	Ancient & Semi-Natural Woodland		

Scientific Name	Common Name	Location Detail	Grid Ref.	Date
Accipiter gentilis	Northern Goshawk	Coldmeece Pools	SJ8532	08/02/2004
Alcedo atthis	Common Kingfisher	Meece Brook	SJ8432	05/09/2005
Alcedo atthis	Common Kingfisher	Coldmeece Pools	SJ8532	31/03/2006
Anas acuta	Northern Pintail	Coldmeece Pools	SJ8532	12/09/2004
Anas querquedula	Garganey	Coldmeece Pools	SJ8532	16/08/2004
Anser anser	Greylag Goose	Millmeece	SJ8333	14/10/2007
Anser anser	Greylag Goose	Coldmeece Pools	SJ8532	05/03/2006
Anser anser	Greylag Goose	Coldmeece	SJ8532	27/08/2006
Anser anser	Greylag Goose	Swynnerton	SJ8535	23/10/2011
Asio flammeus	Short-eared Owl	Cotes Heath	SJ8335	04/04/2005
Aythya marila	Greater Scaup	Coldmeece Pools	SJ8532	02/02/2008
Botaurus stellaris	Great Bittern	Yarnfield	SJ8632	19/12/1989
Branta leucopsis	Barnacle Goose	Coldmeece Pools	SJ8532	19/11/2008
Bucephala clangula	Common Goldeneye	Coldmeece Pools	SJ8532	30/10/2005
Calidris pugnax	Ruff	Coldmeece Pools	SJ8532	28/08/2003
Charadrius dubius	Little Plover	Meece Brook	SJ8432	July 2000
Charadrius dubius	Little Plover	Coldmeece Pools	SJ8532	15/03/2008
Chlidonias niger	Black Tern	Coldmeece Pools	SJ8532	06/06/2009
Ciconia ciconia	White Stork	Cotes Heath	SJ8335	25/03/2012
Egretta garzetta	Little Egret	Coldmeece Pools	SJ8532	23/07/2004
Falco peregrinus	Peregrine Falcon	Coldmeece Pools	SJ8532	24/02/2007
Falco subbuteo	Eurasian Hobby	Coldmeece Pools	SJ8532	09/06/2006
Falco subbuteo	Eurasian Hobby	Swynnerton Training Area	SJ853343	21/08/2000
Falco subbuteo	Eurasian Hobby	Yarnfield	SJ8632	13/09/2008
Fringilla montifringilla	Brambling	Meece Brook	SJ8432	03/02/2000
Fringilla montifringilla	Brambling	Coldmeece Pools	SJ8532	07/03/2004
Fringilla montifringilla	Brambling	Meece Landfill	SJ8534	01/03/2006
Fringilla montifringilla	Brambling	Swynnerton	SJ8535	16/10/2011
Fringilla montifringilla	Brambling	Yarnfield	SJ8632	16/02/2007
Larus melanocephalus	Mediterranean Gull	Swynnerton Landfill	SJ8434	23/12/2008
Limosa lapponica	Bar-tailed Godwit	Coldmeece Pools	SJ8532	09/05/2006
Milvus milvus	Red Kite	Coldmeece Pools	SJ8532	03/02/2009
Milvus milvus	Red Kite	Yarnfield	SJ8632	25/05/2008
Numenius phaeopus	Whimbrel	Coldmeece Pools	SJ8532	08/05/2005
Numenius phaeopus	Whimbrel	Yarnfield	SJ8632	21/04/2008
Pandion haliaetus	Osprey	Coldmeece Pools	SJ8532	10/04/2001
Pandion haliaetus	Osprey	Yarnfield	SJ8632	08/04/2013
Phoenicurus ochruros	Black Redstart	Yarnfield	SJ8632	05/05/1988
Pluvialis apricaria	European Golden Plover	Cotes Heath	SJ8335	19/01/2008
Pluvialis apricaria	European Golden Plover	Swynnerton Landfill	SJ8434	27/01/2008
Pluvialis apricaria	European Golden Plover	Coldmeece Pools	SJ8532	16/11/2008
Pluvialis apricaria	European Golden Plover	Swynnerton	SJ8535	16/10/2011
Pluvialis apricaria	European Golden Plover	Yarnfield	SJ8632	23/03/2007
Sterna hirundo	Common Tern	Coldmeece Pools	SJ8532	28/07/2010
Tringa glareola	Wood Sandpiper	Meece Brook	SJ8432	29/07/2000
Tringa glareola	Wood Sandpiper	Coldmeece Pools	SJ8532	10/09/2005
Tringa nebularia	Common Greenshank	Meece Brook	SJ8432	12/08/2000
Tringa nebularia	Common Greenshank	Coldmeece Pools	SJ8532	23/06/2005
Tringa ochropus	Green Sandpiper	Meece Brook	SJ8432	September 2000
Tringa ochropus	Green Sandpiper	Coldmeece Pools	SJ8532	31/03/2007
Turdus iliacus	Redwing	Cotes Heath	SJ8335	30/12/2007
Turdus iliacus	Redwing	Meece Brook	SJ8432	25/11/2000
Turdus iliacus	Redwing	Coldmeece Pools	SJ8532	03/04/2005
Turdus iliacus	Redwing	Coldmeece	SJ8532	04/02/2007
Turdus iliacus	Redwing	Swynnerton	SJ8535	23/10/2011
Turdus pilaris	Fieldfare	Cotes Heath	SJ8335	30/12/2007
Turdus pilaris	Fieldfare	Meece Brook	SJ8432	13/03/2000
Turdus pilaris	Fieldfare	Coldmeece	SJ8532	04/02/2007
Turdus pilaris	Fieldfare	Coldmeece Pools	SJ8532	26/02/2005
Turdus pilaris	Fieldfare	Swynnerton	SJ8535	23/10/2011
Turdus pilaris	Fieldfare	corner of Swynnerton Road/Yarnfield Road	SJ855327	2002
Turdus pilaris	Fieldfare	Yarnfield	SJ8632	14/03/1990
Tyto alba	Barn Owl	crossing A519	SJ8334	12/01/2009
Tyto alba	Barn Owl	A519 between Cotesheath & Mill Meece	SJ834341	February 2002
Tyto alba	Barn Owl	Swynnerton	SJ8434	29/05/2008
Tyto alba	Barn Owl	Coldmeece	SJ854341	09/11/2009
Tyto alba	Barn Owl	Yarnfield	SJ8632	05/01/2009
Tyto alba	Barn Owl	west of Highlows Lane (track)	SJ8633	January 2012
Hyacinthoides non-scripta	Bluebell	corner of Swynnerton Road/Yarnfield Road	SJ855327	2002
Hyacinthoides non-scripta	Bluebell	The Woodland	SJ859339	25/07/1997
Arvicola amphibius	European Water Vole		SJ8532	1969
Lutra lutra	European Otter	Swynnerton Training Camp	SJ845335	20/08/2006
Meles meles	Eurasian Badger		SJ8333	2007
Meles meles	Eurasian Badger		SJ8432	2010
Meles meles	Eurasian Badger		SJ8433	2008
Meles meles	Eurasian Badger		SJ8534	2007
Mustela putorius	Polecat		SJ8435	15/12/1994
Chiroptera	a bat		SJ844346	04/03/2004
Chiroptera	a bat	corner of Swynnerton Road/Yarnfield Road	SJ855327	2002
Chiroptera	a bat	Yarnfield	SJ8632	07/04/1995
Myotis daubentonii	Daubenton's Bat	Swynnerton Army Camp	SJ8432	07/07/2010
Myotis nattereri	Natterer's Bat	Swynnerton Army Camp	SJ8432	07/07/2010
Nyctalus noctula	Noctule Bat	Yarnfield	SJ8633	06/07/1994
Pipistrellus pipistrellus	Common Pipistrelle	Swynnerton Army Camp	SJ8432	07/07/2010
Pipistrellus pipistrellus s.l.	Pipistrelle	Coldmeece	SJ8432	24/07/2006
Pipistrellus pipistrellus s.l.	Pipistrelle		SJ854328	21/04/1993
Pipistrellus pipistrellus s.l.	Pipistrelle	Swynnerton M.O.D. Site	SJ854328	27/06/1989
Pipistrellus pipistrellus s.l.	Pipistrelle	Yarnfield	SJ8632	03/08/1993
Pipistrellus pipistrellus s.l.	Pipistrelle	Yarnfield	SJ8633	04/07/1994
Pipistrellus pygmaeus	Soprano Pipistrelle	Swynnerton Army Camp	SJ8432	07/07/2010
Plecotus auritus	Brown Long-eared Bat	Swynnerton Army Training Grounds	SJ847332	20/08/2006
Plecotus auritus	Brown Long-eared Bat		SJ8532	17/02/1992



Magic Map



Legend

- Areas of Outstanding Natural Beauty (England)
- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Nature Reserves (Scotland)
- National Nature Reserves (Wales)
- National Parks (England)
- National Parks: Lake District and Yorkshire Dales Variation Orders (England)
- 2012 - subject to confirmation (England)
- Ramsar Sites (England)
- Ramsar Sites (Scotland)
- Ramsar Sites (Wales)
- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- Destroyed
- Not Assessed
- Sites of Special Scientific Interest (England)
- Sites of Special Scientific Interest (Scotland)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (England)
- Special Areas of Conservation (Scotland)
- Special Areas of Conservation (Wales)
- Special Protection Areas (England)
- Special Protection Areas (Scotland)
- Special Protection Areas (Wales)
- Biosphere Reserves (England)
- Biosphere Reserves (Scotland)
- Biosphere Reserves (Wales)

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 ymin = 323800
 xmax = 409900
 ymax = 346000
 Map produced by MAGIC on 24 July, 2015.
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Site Check Report Report generated on Fri Jul 24 2015
 You selected the location: Centroid Grid Ref: SJ849341
 The following features have been found in your search area:

Local Nature Reserves (England) - points

Reference	1009409
Name	BARLASTON AND ROUGH CLOSE COMMON
Hectares	21.06
Hyperlink	http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1009409
Reference	1421544
Name	BRIGETT'S POOL
Hectares	2.06
Hyperlink	http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1421544
Reference	1122966
Name	CROWN MEADOW
Hectares	3.1
Hyperlink	http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1122966
Reference	1460416
Name	FERNDOWN
Hectares	6.79
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Reference	1009736
Name	STONE MEADOWS
Hectares	14.36
Hyperlink	http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1009736

Local Nature Reserves (England)

Reference	1009409
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Hectares	3.1
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Name	FERNDOWN
Hectares	6.79
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Reference	1009736
Name	STONE MEADOWS
Hectares	14.36
Hyperlink	http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1009736

Ramsar Sites (England)

Name	MIDLAND MERES & MOSSES PHASE 2
Reference	UK11080
Hectares	1593.12

Sites of Special Scientific Interest Units (England) - points

Name	COP MERE
Reference	1054286
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014816
Hectares	2.04
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014816
Name	MAER POOL
Reference	1054312
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014623

Hectares	9.08
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014623
Name	COP MERE
Reference	1054287
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014815
Hectares	15.69
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014815
Name	KING'S AND HARGREAVES WOODS
Reference	1054322
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014667
Hectares	36.78
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014667
Name	COP MERE
Reference	1054288
Site Unit Condition	FAVOURABLE
Citation	1022802
Hectares	0.75
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1022802
Name	KING'S AND HARGREAVES WOODS
Reference	1054323
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1023050
Hectares	11.86
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1023050
Name	COP MERE
Reference	1054289
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014814
Hectares	18.94
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014814
Name	KING'S AND HARGREAVES WOODS
Reference	1054324
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1027100
Hectares	9
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1027100
Sites of Special Scientific Interest Units (England)	
Name	COP MERE
Reference	1054286
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014816
Hectares	2.04
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014816
Name	MAER POOL
Reference	1054312
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014623
Hectares	9.08
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014623
Name	COP MERE
Reference	1054287
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014815
Hectares	15.69
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014815
Name	KING'S AND HARGREAVES WOODS
Reference	1054322
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1014667
Hectares	36.78
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1014667
Name	COP MERE
Reference	1054288
Site Unit Condition	FAVOURABLE

Citation	1022802
Hectares	0.75
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1022802
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Reference	1054323
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Citation	1023050
Hectares	11.86
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Name	COP MERE
Reference	1054289
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Citation	1014814
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Name	KING'S AND HARGREAVES WOODS
Reference	1054324
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1027100
Hectares	9
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1027100

Sites of Special Scientific Interest (England) - points

Name	COP MERE
Reference	1002233
Natural England Contact	PAUL CANDLIN
Natural England Phone Number	0845 600 3078
Hectares	37.43
Citation	1000057
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000057
Name	MAER POOL
Reference	1002240
Natural England Contact	REBECCA BUTTERS
Natural England Phone Number	0845 600 3078
Hectares	9.08
Citation	1000283
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000283
Name	KING'S AND HARGREAVES WOODS
Reference	1002252
Natural England Contact	KATIE.R LLOYD
Natural England Phone Number	0845 600 3078
Hectares	57.64
Citation	1000991
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000991

Sites of Special Scientific Interest (England)

Name	COP MERE
Reference	1002233
Natural England Contact	PAUL CANDLIN
Natural England Phone Number	0845 600 3078
Hectares	37.43
Citation	1000057
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000057
Name	MAER POOL
Reference	1002240
Natural England Contact	REBECCA BUTTERS
Natural England Phone Number	0845 600 3078
Hectares	9.08
Citation	1000283
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000283
Name	KING'S AND HARGREAVES WOODS
Reference	1002252
Natural England Contact	KATIE.R LLOYD
Natural England Phone Number	0845 600 3078
Hectares	57.64
Citation	1000991
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000991

SSSI Impact Risk Zones – to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

