APPENDIX A
SERVICE CONSTRAINTS

1. This report and the site investigation carried out in connection with the report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) for Jones Homes (Yorkshire) Limited (the "client") in accordance with the terms of a contract between RSK and the "client", dated 24 June 2015. The Services were performed by RSK with the skill and care ordinarily exercised by a reasonable environmental consultant at the time the Services were performed. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the client.

2. Other than that expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.

3. Unless otherwise agreed in writing the Services were performed by RSK exclusively for the purposes of the client. RSK is not aware of any interest of or reliance by any party other than the client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. **Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.**

4. It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK 's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date of this report, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.

5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.

6. The observations and conclusions described in this report are based solely upon the Services which were provided pursuant to the agreement between the client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off the site of asbestos, electromagnetic fields, lead paint, heavy metals, radon gas or other radioactive or hazardous materials.

7. The Services are based upon RSK's observations of existing physical conditions at the Site gained from a walk-over survey of the site together with RSK's interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The Services are also based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely. The Services clearly are limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the walk-over survey. Further RSK was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services. RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the client and RSK.

8. The intrusive environmental site investigation aspects of the Services is a limited sampling of the site at pre-determined borehole and soil vapour locations based on the operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and RSK] [based on an understanding of the available operational and historical information,] and it should not be inferred that other chemical species are not present.

9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan, but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (boreholes, trial pits etc) annotated on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for setting out and should be considered indicative only.

APPENDIX B
SUMMARY OF LEGISLATION AND POLICY RELATING TO CONTAMINATED LAND

Part IIA of the Environmental Protection Act 1990 (EPA) and its associated Contaminated Land Regulations 2000 (SI 2000/227), which came into force in England on 1 April 2000, formed the basis for the current regulatory framework and the statutory regime for the identification and remediation of contaminated land. Part IIA of the EPA 1990 defines contaminated land as 'any land which appears to the Local Authority in whose area it is situated to be in such a condition by reason of substances in, on or under the land, that significant harm is being caused, or that there is significant possibility of significant harm being caused, or that pollution of controlled waters is being or is likely to be caused'. Controlled waters are considered to include all groundwater, inland waters and estuaries.

In August 2006, the Contaminated Land (England) Regulations 2006 (SI 2006/1380) were implemented, which extended the statutory regime to include Part IIA of the EPA as originally introduced on 1 April 2000, together with changes intended chiefly to address land that is contaminated by virtue of radioactivity. These have been replaced subsequently by the Contaminated Land (England) (Amendment) Regulations 2012, which now exclude land that is contaminated by virtue of radioactivity.

The intention of Part IIA of the EPA is to deal with contaminated land issues that are considered to cause significant harm on land that is not undergoing development (see Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance, April 2012). This document replaces Annex III of Defra Circular 01/2006, published in September 2006 (the remainder of this document is now obsolete).

Water Framework Directive (WFD)

The Water Framework Directive 2000/60/EC is designed to:

- enhance the status and prevent further deterioration of aquatic ecosystems and associated wetlands that depend on the aquatic ecosystems
- promote the sustainable use of water
- reduce pollution of water, especially by 'priority' and 'priority hazardous' substances
- ensure progressive reduction of groundwater pollution.

The WFD requires a management plan for each river basin be developed every six years.

Groundwater Directive (GWD)

The 1980 Groundwater Directive 80/68/EEC and the 2006 Groundwater Daughter Directive 2006/118/EC of the WFD are the main European legislation in place to protect groundwater. The 1980 Directive is due to be repealed in December 2013. The European legislation has been transposed into national legislation by regulations and directions to the Environment Agency.

Environmental Permitting Regulations (EPR)

The Environmental Permitting (England and Wales) Regulations 2010 provide a single regulatory framework that streamlines and integrates waste management licensing, pollution prevention and control, water discharge consenting, groundwater authorisations, and radioactive substances regulation. Schedule 22, paragraph 6 of EPR 2010 states: 'the regulator must, in exercising its relevant functions, take all necessary measures - (a) to prevent the input of any hazardous substance to groundwater; and (b) to limit the input of non-hazardous pollutants to groundwater so as to ensure that such inputs do not cause pollution of groundwater.'

Water Resources Act (WRA)

The Water Resources Act 1991 (Amendment) (England and Wales) Regulations 2009 updated the Water Resources Act 1991, which introduced the offence of causing or knowingly permitting pollution of controlled waters. The Act provides the Environment Agency with powers to implement remediation necessary to protect controlled waters and recover all reasonable costs of doing so.

Priority Substances Directive (PSD)

The Priority Substances Directive 2008/105/EC is a 'Daughter' Directive of the WFD, which sets out a priority list of substances posing a threat to or via the aquatic environment. The PSD establishes environmental quality standards for priority substances, which have been set at concentrations that are safe for the aquatic environment and for human health. In addition, there is a further aim of reducing (or eliminating) pollution of surface water (rivers, lakes, estuaries and coastal waters) by pollutants on the list. The WFD requires that countries establish a list of dangerous substances that are being discharged and EQS for them. In England and Wales, this list is provided in the River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2010. In order to achieve the objectives of the WFD, classification schemes are used to describe where the water environment is of good quality and where it may require improvement.

Planning Policy

Contaminated land is often dealt with through planning because of land redevelopment. This approach was documented in Planning Policy Statement: Planning and Pollution Control PPS23, which states that it remains the responsibility of the landowner and developer to identify land affected by contamination and carry out sufficient remediation to render the land suitable for use.

PPS23 was withdrawn early in 2012 and has been replaced by much reduced guidance within the National Planning Policy Framework (NPPF).

The new framework has only limited guidance on contaminated land, as follows:

- *"planning policies and decisions should also ensure that:*
    - *the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities such as mining, pollution arising from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation;*
    - *after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and*
    - *adequate site investigation information, prepared by a competent person, is presented".*

APPENDIX C
SITE PHOTOGRAPHS AND WALKOVER CHECKLIST

Photo no. **1**	**Date:** **26.01.2016**	
Direction photo taken: **West**		
Description: **View of gap in row of bushes between the two fields in Area 1: Western Area**		

Photo No. **2**	**Date:** **26.01.2016**	
Direction photo taken: **N/A**		
Description: **Waterlogged ground noted in Area 1: Western Area**		

Photo no. 3	Date: 26.01.2016	
Direction photo taken: West		
Description: Northern most field in Area 2: Central Area, showing raised ground		

Photo no. 4	Date: 26.01.2016	
Direction photo taken: North		
Description: Southern area of southern most field in Area 2: Central Area, showing areas of remnant fires and some localised tipping		

Photo no. 5	Date: 26.01.2016	
Direction photo taken: South		
Description: Track and rough vegetation in Area 3: Eastern Area		

Photo no. 6	Date: 26.01.2016	
Direction photo taken: East		
Description: Open access from Howden Close in the east of Area 3: Eastern Area		

Photo no. 7	Date: 26.01.2016	
Direction photo taken: West		
Description: Area of hardstanding in Area 4: Manor House Farm Area		

Photo no. 8	Date: 26.01.2016	
Direction photo taken: South		
Description: Small enclosed field to the southern part of Area 4: Manor House Farm Area		

Photo no. 9	Date: 26.01.2016	
Direction photo taken: South		
Description: Stockpile of made ground associated with demolition of buildings near hardstanding in Area 4: Manor House Farm Area		

Photo no. 10	Date: 26.01.2016	
Direction photo taken: West		
Description: Small retaining wall to north of Bloomhouse Lane in Area 4: Manor House farm Area		

Photo no. 11	Date: 26.01.2016	
Direction photo taken: South		
Description: Hardstanding and gated access point of Area 5: Former School Area		

Photo no. 12	Date: 26.01.2016	
Direction photo taken: East		
Description: Areas of overgrown soft landscaping in Area 5: Former School Area		

WALKOVER SURVEY CHECKLIST: GEOSCIENCES

These inspections can provide useful information on:

- Potential geotechnical hazards
- Suitable and appropriate locations for investigation
- The groundwater and surface water environments
- Potentially sensitive receptors (targets) including issues that require further investigation, e.g. ecology surveys
- Potential sources of contaminants
- Nature of contamination
- Potential migration routes (pathways)

Mark locations of features described on a map and give them a reference number.

Describe features in as much detail as possible. Continue on the back of the checklist if necessary, using the feature letter for reference. Take photos of site and relevant features in immediate surrounding area.

The walkover survey can also provide information for the environmental consultant in planning the site investigation.

Points that should be addressed in a walkover survey are as follows:

Features	Description	Photo no.
a) Describe materials exposed in nearby road or railway cuttings, in pits and quarries and natural exposures of soils and rocks near to the site. *This will give an indication of the geology beneath the site*	None noted	
b) Describe surrounding properties/land use and name occupiers. Type of boundary demarcation (if any) on each side. *This will identify any potential sources of contamination from adjacent sites and any sensitive receptors*	To the east are houses, to the south are houses or the allotment gardens, to the north are open fields and to the west are open fields or playing fields. All boundaries are fenced or tree lined.	
c) Describe present land use. Are there areas of hardstanding (if yes describe location, types and condition)? *Especially crops, for consideration of appropriate timing for further investigation, compensation and reinstatement. Also note hardstanding, obstructions etc. Note any old buildings/ivy covered trees as these may be used by owls or bats*	Majority of the site is open fields used for dog walking. There is restricted access in the south where the former school was, this is covered with patches of hardstanding. The central area has two individual fields used for keeping horses. There is an area of hardstanding close to the Manor House farm building.	All

WALKOVER SURVEY CHECKLIST Continued

Features	Description	Photo no.
d) Describe the site in terms of ground slopes and changes in slope. Is there any evidence of subsidence or landslip/slope erosion? *Old scarps or hummocky ground may be evidence of previous landslips that could be reactivated. A terraced appearance may be indicative of superficial solifluction movement or cambering. Trees that are leaning may indicate instability or general slope movement.*	Site is generally uneven and slopes down towards the south	5
e) Describe the types and condition of surface vegetation. *Nettles may indicate an old cesspit for example or unhealthy vegetation may indicate the presence of phytotoxic fill or landfill gas. Note invasive weeds, e.g. Japanese knotweed.*	Rough grass and vegetation, brambles, small trees and some larger trees. Generally all seemed in good condition. Japanese knotweed is known to exist in the central area of the site, however was not found during walkover.	
f) Note the number, location, height and species of trees and hedges. *This is important in terms of shrinking and swelling ground. Trees and hedgerows may be protected; their condition should be noted along with any restrictions they will impose for site access.* *It is important to note any areas with the potential for nesting birds, roosting bats, water voles and badger setts.*	Tree species were mixed and of mixed ages depending on the location.	
g) Describe any evidence of animal activity. *For example obvious animal paths or areas of excavations and burrows.*	No specific evidence noted, however normal wildlife animal activities is expected	
h) Describe any damage to existing structures on site or adjacent to the site *For example, cracks in buildings both on the site and in the neighbourhood, and other evidence of settlement or differential settlement.* *Note presence of any suspected asbestos-containing materials (ACM)*	None noted	
i) Note the remains of structures that have been demolished. Look for evidence of remnants of any historical structures. *This will provide valuable information on the location of previous foundations, processes etc.* *Note presence of any suspected asbestos-containing materials (ACM)*	Two areas of former structures noted, footings expected as concrete slabs still in place Fly tipping with ACM noted in central area of site	

WALKOVER SURVEY CHECKLIST Continued

Features	Description	Photo no.
j) Note any abrupt changes in ground level. Is there evidence of Made Ground/fill on site *May indicate that minerals have been worked in surface excavations. May indicate cut and fill.*	Area in central north is at a higher level than rest of site, appears filled	
k) Note any surface hollows. *Which may indicate the presence of solution features or swallow holes in rocks such as chalk limestone, gypsum and salt, or collapsed underground workings in these materials. May also indicate badger setts or other wildlife activity.*	None noted	
l) In areas of country underlain by coal or other minerals note any hummocky ground. *Which may be the remnants of spoil tips and surface depressions that may indicate collapsed shallow workings. Areas of general unevenness may be evidence of waste disposal activities.*	Generally uneven ground across site, overgrown vegetation means its not clear if natural or due to some settlement	
m) Note any evidence of gas from nearby landfill sites *Can be indicated for example by poor vegetation or gas bubbles in water-filled trenches.*	None noted	
n) Are there any evidence of gas protection measures (gas membrane, gravel filled trenches, venting pipes, cowls etc)	None noted	
o) Note the location of streams, culverts, ponds, seepages and sinks and signs of previous flooding. Note direction of flow. Note where the stream is accessible for sampling. May need to take dimensions of stream. *If ponds are present on site they may contain great crested newts. Ditches, streams and rivers that border or run through a site may contain water voles, otters or white-clawed crayfish. Presence of water features on site may prompt the need for a survey during a site investigation.*	None noted	
p) All surface waters should be examined for evidence of contamination. *For example, oil sheen, silt, solid matter, discoloured sediment.*	None noted	

Features	Description	Photo no.
q) Note site drainage. Are there any drain covers/soakaways (if yes describe locations). Are there any outfalls to surface watercourses? Are there any interceptors/lagoons/effluent treatment plants?	None noted – only natural drainage	
r) Describe storage of fuels and chemicals. Are there any drums/containers (if yes, describe quantity, full/empty, stored on hardstanding/softstanding, bunded)? *Is there evidence of underground fuel tanks (if yes, describe locations, how many, volumes, bunding, used/disused, condition)?*	None noted	
s) Note any discoloured ground. *This may provide evidence of contamination.*	None noted	
t) Accidents: In the event of a large spillage would runoff affect any vulnerable watercourses/culverts? *Are emergency procedures/equipment in place?*	N/A	
u) Waste: Are there any waste skips on site? Are waste storage facilities adequate? Is there any litter/fly-tipped material?	Localised fly tipping	
v) Are there any electricity substations on or adjacent to site?	None noted	
w) Identify any old structures, pipework etc. wherever possible and, if safe, inspect for evidence of stored waste. *Old tanks may contain oil. Old electricity transformers should be noted. Asbestos risk should be assessed together with the need for a specialist hazardous materials survey.*	None noted	
x) Examine surrounding areas for evidence of contamination which could migrate onto the site. *For example a leaking oil tank on an adjacent site.*	None noted	
y) Note the presence of any underground structures, services, mine workings, tunnels etc *From a safety point of view for development of the site and also as they may provide contaminant migration routes.*	None noted – although mine workings expected	
z) Note any anecdotal information in past uses of the site. *Local street names etc. can provide indicators of past industry or ground problems*	None noted	

WALKOVER SURVEY CHECKLIST Continued

Features	Description	Photo no.
aa) Description of buildings on site. Is there any evidence of asbestos construction materials, e.g. roofing, insulation materials. Do any of the buildings have basements? Do any of the buildings have a boiler room? (if yes describe fuel type and storage arrangements)	N/A	
bb) Identify potential access routes to the site for plant for the site investigation *Excavators and drilling rigs may be required for the next stage of the investigation, or if the access is limited window sampling techniques may need to be specified. Note any specific obstructions such as unsafe/unstable ground, protected trees or hedgerows, or protected buildings.*	Site can be accessed from various points around the site, including the school area in the south.	
cc) Evidence of buried services (water, gas, electricity, telephone, cable, television, pipelines) *Both for safety considerations and in the case of water as supply for further investigation. As well as danger, there is the question of considerable expense, which can arise from an inadequate knowledge of the location of buried services. The locations and heights of overhead cables may be important when considering the movement of site equipment.*	None noted across the site, redundant services expected to be present in areas of former buildings	

Walkover survey completed	Approved: _____	Signature
		Name
		Date

Notes:

APPENDIX D
ENVIRONMENTAL DATABASE, HISTORICAL MAPS AND BGS BOREHOLE RECORDS

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
77520900_1_1

Customer Reference:
301645

National Grid Reference:
431520, 410300

Slice:
A

Site Area (Ha):
11.89

Search Buffer (m):
1000

Site Details:

Bloomhouse Lane
Darton
BARNSLEY
South Yorkshire
S75 5HJ

Client Details:

Mr J Harrison
RSK Environment Ltd
RSK Geoconsult Limited
The Potteries
Pottery Street
Casleford
West Yorkshire
WF10 1NJ

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Agency & Hydrological	1
Waste	25
Hazardous Substances	28
Geological	29
Industrial Land Use	61
Sensitive Land Use	65
Data Currency	66
Data Suppliers	71
Useful Contacts	72

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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Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		5	5	17
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 7			1	4
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control	pg 8				1
Local Authority Pollution Prevention and Controls	pg 8				10
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 10		Yes		
Pollution Incidents to Controlled Waters	pg 10		16	7	22
Prosecutions Relating to Authorised Processes	pg 17				1
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality	pg 17		1		3
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points	pg 19			1	1
Substantiated Pollution Incident Register	pg 20			2	
Water Abstractions	pg 21			1	2 (*1)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 21	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 22	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 22		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 23		Yes	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	pg 23		Yes	Yes	n/a
Detailed River Network Offline Drainage	pg 24		Yes	Yes	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 25			1	2
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites	pg 25			1	2
Registered Landfill Sites	pg 26				3
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 28			1	
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 29	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 29	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 50	1	5	8	27
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 57	Yes	n/a	n/a	n/a
Mining Instability	pg 57	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 57	Yes	Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 57	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 57	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 58	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 58	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 59	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 60	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 60	Yes	n/a	n/a	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 61		3	16	22
Fuel Station Entries	pg 64				1
Sensitive Land Use					
Areas of Adopted Green Belt	pg 65	1		1	
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 65	1			1
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers Location: Church Street, MILL LANE, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/UD/51 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 5th June 1963 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Storm Effluent Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	235	2	431265 410055
1	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Not Given Location: Redbrook Road, Redbrook, DARTON, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/UD/51 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm /emergency overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	240	2	431265 410050
1	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Not Given Location: Church Street/Mill Lane, DARTON, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/UD/51 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm /emergency overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	242	2	431260 410050
1	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Not Given Location: Carr Green Lane, Mapplewell, DARTON, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/UD/51 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm /emergency overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	245	2	431265 410045

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Not Given Location: Dearne Hill Road, Low Barugh, DARTON, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/UD/51 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm /emergency overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	247	2	431260 410045
2	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Darton Church Street Cso Church Street (Adj No 74), Darton Bridge, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wra8610 Permit Version: 1 Effective Date: 31st March 2005 Issued Date: 31st March 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A6NE (SW)	255	2	431310 410020
3	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Woolley Colliery Stw, Woolley, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: E707 Permit Version: 2 Effective Date: 14th February 1986 Issued Date: 14th February 1986 Revocation Date: 18th August 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of The River Dearne **Status: Transferred from COPA 1974** Positional Accuracy: Located by supplier to within 100m	A10NW (NW)	410	2	431100 410900
3	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Woolley Colliery Stw, Woolley, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: E707 Permit Version: 2 Effective Date: 14th February 1986 Issued Date: 14th February 1986 Revocation Date: 18th August 1997 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of The River Dearne **Status: Transferred from COPA 1974** Positional Accuracy: Located by supplier to within 100m	A10NW (NW)	410	2	431100 410900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Woolley Colliery Stw, Woolley, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: E707 Permit Version: 1 Effective Date: 16th November 1981 Issued Date: 16th November 1981 Revocation Date: 13th February 1986 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of The River Dearne **Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961** Positional Accuracy: Located by supplier to within 100m	A10NW (NW)	410	2	431100 410900
3	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Woolley Colliery Stw, Woolley, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: E707 Permit Version: 1 Effective Date: 16th November 1981 Issued Date: 16th November 1981 Revocation Date: 13th February 1986 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of The River Dearne **Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961** Positional Accuracy: Located by supplier to within 100m	A10NW (NW)	410	2	431100 410900
4	**Discharge Consents** Operator: Emerald Sv Limited Property Type: Trade (Unknown/Other) Location: Junction 38 Business Park Darton Works, Huddersfield Road, Darton, Barnsley, S75 5qq Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4011 Permit Version: 2 Effective Date: 22nd July 1993 Issued Date: 22nd July 1993 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Revised Consent, by Notice (Section 37(1))** Positional Accuracy: Located by supplier to within 10m	A9SE (W)	502	2	430710 410300
4	**Discharge Consents** Operator: West Register (Property Investments Limited) Property Type: Trade (Unknown/Other) Location: Parkside Performance Films, Darton, Barnsley Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4011 Permit Version: 2 Effective Date: 22nd July 1993 Issued Date: 22nd July 1993 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Revised Consent, by Notice (Section 37(1))** Positional Accuracy: Located by supplier to within 10m	A9SE (W)	502	2	430710 410300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: Bp, Performance Films Group Property Type: Trade (Unknown/Other) Location: Junction 38 Business Park Darton Works, Huddersfield Road, Darton, Barnsley, S75 5qq Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4011 Permit Version: 1 Effective Date: 25th September 1985 Issued Date: 25th September 1985 Revocation Date: 21st July 1993 Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from COPA 1974** Positional Accuracy: Located by supplier to within 10m	A9SE (W)	502	2	430710 410300
4	**Discharge Consents** Operator: Anglo Clough Management Company Ltd Property Type: Trade (Unknown/Other) Location: Parkside Performance Films, Darton, Barnsley Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4011 Permit Version: 2 Effective Date: 22nd July 1993 Issued Date: 22nd July 1993 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Revised Consent, by Notice (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A9SE (W)	512	2	430700 410300
4	**Discharge Consents** Operator: Emerald Sv Limited Property Type: Trade (Unknown/Other) Location: Junction 38 Business Park Darton Works, Huddersfield Road, Darton, Barnsley, S75 5qq Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4011 Permit Version: 2 Effective Date: 22nd July 1993 Issued Date: 22nd July 1993 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Revised Consent, by Notice (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A9SE (W)	512	2	430700 410300
4	**Discharge Consents** Operator: Bp, Performance Films Group Property Type: Trade (Unknown/Other) Location: Junction 38 Business Park Darton Works, Huddersfield Road, Darton, Barnsley, S75 5qq Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4011 Permit Version: 1 Effective Date: 25th September 1985 Issued Date: 25th September 1985 Revocation Date: 21st July 1993 Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from COPA 1974** Positional Accuracy: Located by supplier to within 100m	A9SE (W)	512	2	430700 410300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Woolley Colliery Stw, Woolley, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: E707 Permit Version: 3 Effective Date: 19th August 1997 Issued Date: 19th August 1997 Revocation Date: 29th September 2009 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Dearne **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A9NE (NW)	542	2	430800 410800
5	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Woolley Colliery Stw, Woolley, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: E707 Permit Version: 3 Effective Date: 19th August 1997 Issued Date: 19th August 1997 Revocation Date: 29th September 2009 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Dearne **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A9NE (NW)	542	2	430800 410800
5	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Undefined Or Other Location: Wooley Colliery Wpc Works Storm Tan, Ks Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: E707(Ss) Permit Version: 1 Effective Date: 1st January 1982 Issued Date: 1st January 1982 Revocation Date: 13th March 1986 Discharge Type: Sewage Discharges - Unspecified - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A9NE (NW)	542	2	430800 410800
5	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Undefined Or Other Location: Wooley Colliery Wpc Works Storm Tan, Ks Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: E707(Ss) Permit Version: 1 Effective Date: 1st January 1982 Issued Date: 1st January 1982 Revocation Date: 13th March 1986 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A9NE (NW)	542	2	430800 410800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: British Coal Property Property Type: Coal Extraction, Surface Location: Woolley Colliery Darton, Barnsley, South Yorkshire, Uk Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4947 Permit Version: 1 Effective Date: 26th January 1988 Issued Date: 26th January 1988 Revocation Date: 16th May 1995 Discharge Type: Trade Effluent Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Consent revoked: Discharge ceased (Water Resources Act 1991, Schedule 10 & 6)** Positional Accuracy: Located by supplier to within 100m	A14SW (NW)	544	2	431000 411000
7	**Discharge Consents** Operator: The Coal Authority Property Type: Coal Extraction, Surface Location: Woolley Colliery Darton, Barnsley, South Yorkshire, Uk Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4758 Permit Version: 1 Effective Date: 2nd September 1987 Issued Date: 2nd September 1987 Revocation Date: 31st October 1994 Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from COPA 1974** Positional Accuracy: Located by supplier to within 10m	A10NW (NW)	567	2	430860 410920
7	**Discharge Consents** Operator: Med Contracting Property Type: Coal Extraction, Surface Location: Woolley Colliery Darton, Barnsley, South Yorkshire, Uk Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 3747 Permit Version: 1 Effective Date: 25th October 1983 Issued Date: 25th October 1983 Revocation Date: 13th February 1986 Discharge Type: Trade Discharge - Mineral Workings Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961** Positional Accuracy: Located by supplier to within 10m	A10NW (NW)	570	2	430830 410892
8	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers Location: Darton Lane Sws, BARNSLEY, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: WA6007 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Surface Water Effluent Discharge Environment: Freshwater Stream/River Receiving Water: Dearne **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A3SE (S)	894	2	431950 409150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers Location: Dearne Hill Road, LOW BARUGH, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/UD/51 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 5th June 1963 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Storm Effluent Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A3SE (S)	959	2	431940 409080
9	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Dearne Hall Road Cso Dearne Hall Road (B6428), Barugh Green, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wra8637 Permit Version: 2 Effective Date: 4th June 2007 Issued Date: 4th June 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A3SE (S)	962	2	431950 409080
9	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Dearne Hall Road Cso Dearne Hall Road (B6428), Barugh Green, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wra8637 Permit Version: 1 Effective Date: 1st April 2005 Issued Date: 11th March 2005 Revocation Date: 3rd June 2007 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A3SE (S)	962	2	431950 409080
10	**Integrated Pollution Controls** Name: Dalkia Utilities Services Plc Location: Dearne Mills, Darton, BARNSLEY, South Yorkshire, S75 5NH Authority: Environment Agency, North East Region Permit Reference: AF6529 Dated: 1st November 1993 Process Type: IPC new application Description: 1.3 A (C) Combustion processes within the Fuel & Power Industry **Status: Authorisation revokedRevoked** Positional Accuracy: Unknown	A6SE (S)	411	2	431382 409717
11	**Integrated Pollution Controls** Name: Regency Doors Plc Location: Spring Ram Business Park, Huddersfield Road, Darton, BARNSLEY, South Yorkshire, S75 5JS Authority: Environment Agency, North East Region Permit Reference: AI7050 Dated: 7th May 1993 Process Type: IPC minor (non-substantial) variation to previous variation Description: 6.7 A (A) Timber processes within Miscellaneous Industries **Status: Authorisation revokedRevoked** Positional Accuracy: Automatically positioned to the address	A9SE (W)	620	2	430597 410476

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Integrated Pollution Controls** Name: Regency Doors Plc Location: Spring Ram Business Park, Huddersfield Road, Darton, BARNSLEY, South Yorkshire, S75 5JS Authority: Environment Agency, North East Region Permit Reference: AI6932 Dated: 4th May 1993 Process Type: IPC minor (non-substantial) variation to previous variation Description: 1.3 A (C) Combustion processes within the Fuel & Power Industry **Status: Authorisation revokedRevoked** Positional Accuracy: Automatically positioned to the address	A9SE (W)	620	2	430597 410476
11	**Integrated Pollution Controls** Name: Regency Doors Plc Location: Spring Ram Business Park, Huddersfield Road, Darton, BARNSLEY, South Yorkshire, S75 5JS Authority: Environment Agency, North East Region Permit Reference: AF9943 Dated: 30th November 1992 Process Type: IPC new application Description: 6.7 A (A) Timber processes within Miscellaneous Industries **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	A9SE (W)	620	2	430597 410476
11	**Integrated Pollution Controls** Name: Regency Doors Plc Location: Spring Ram Business Park, Huddersfield Road, Darton, BARNSLEY, South Yorkshire, S75 5JS Authority: Environment Agency, North East Region Permit Reference: AG0534 Dated: 5th November 1992 Process Type: IPC new application Description: 1.3 A (C) Combustion processes within the Fuel & Power Industry **Status: Authorisation superseded by a substantial or non substantial variationSuperseded** Positional Accuracy: Automatically positioned to the address	A9SE (W)	620	2	430597 410476
12	**Local Authority Integrated Pollution Prevention And Control** Name: Parkside Performance Films Ltd Location: Huddersfield Road, Darton, Barnsley, South Yorkshire, S75 5JS Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: IPPC/A2/02 Dated: Not Supplied Process Type: Production and Processing of Metals Description: Surface treatment of metals and plastics **Status: Application Withdrawn** Positional Accuracy: Automatically positioned to the address	A5NE (W)	588	3	430680 410095
13	**Local Authority Pollution Prevention and Controls** Name: Rightcast Ltd Location: Unit W4 Junction 38 Business Park, Darton, Barnsley, S75 5QQ Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: PPC/B/130 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A9SE (W)	509	3	430707 410272
14	**Local Authority Pollution Prevention and Controls** Name: Robert Thompson Location: Central Garage, Barnsley Road, Darton, BARNSLEY, South Yorkshire, S75 5NN Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: PPC/B/102 Dated: 18th October 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A6SW (SW)	598	3	431115 409725

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Local Authority Pollution Prevention and Controls** Name: Parkside Performance Films Ltd Location: Huddersfield Road, Darton, BARNSLEY, S75 5NA Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Epa50 Dated: 21st October 1993 Process Type: Local Authority Air Pollution Control Description: PG6/17 Printing of flexible packaging **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the road within the address or location	A5NE (W)	626	3	430644 410082
16	**Local Authority Pollution Prevention and Controls** Name: Med Contracting Location: Woolley Colliery Occs Site, Darton, Barnsley Authority: Wakefield City Metropolitan District Council, Environmental Health Permit Reference: A0155 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/5 Coal, coke and coal product processes **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned within the geographical locality	A14SW (NW)	663	4	431104 411168
17	**Local Authority Pollution Prevention and Controls** Name: Premdor Crosby Ltd Location: Huddersfield Road, Darton, Barnsley, S75 5js Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: PPC/B/42 Dated: 26th March 2002 Process Type: Local Authority Pollution Prevention and Control Description: PG6/33 Wood coating **Status: Permitted** Positional Accuracy: Located by supplier to within 10m	A9NE (W)	708	3	430547 410629
17	**Local Authority Pollution Prevention and Controls** Name: Premdor Crosby Limited Location: Spring Ram Business Park, Huddersfield Road, Darton, Barnsley, S75 5js Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Epa84 Dated: 20th March 1996 Process Type: Local Authority Air Pollution Control Description: PG6/33 Wood coating **Status: Authorised** Positional Accuracy: Located by supplier to within 10m	A9NE (W)	708	3	430547 410629
17	**Local Authority Pollution Prevention and Controls** Name: Premdor Crosby Limited Location: Spring Ram Business Park, Darton, Barnsley, S75 5JS Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Ppc/B/31 Dated: 21st September 1992 Process Type: Local Authority Pollution Prevention and Control Description: PG6/2 Manufacture of timber and wood-based products **Status: Permitted** Positional Accuracy: Located by supplier to within 10m	A9NE (W)	708	3	430547 410629
17	**Local Authority Pollution Prevention and Controls** Name: Crosby Limited Location: Spring Ram Business Park, Darton, BARNSLEY, S75 5JS Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Not Supplied Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/2 Manufacture of timber and wood-based products **Status: Authorisation revokedRevoked** Positional Accuracy: Located by supplier to within 10m	A9NE (W)	708	3	430547 410629
18	**Local Authority Pollution Prevention and Controls** Name: Meredew Cabinets Location: Spring Ram Business Park, Darton, BARNSLEY, S75 5JS Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Not Supplied Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/2 Manufacture of timber and wood-based products **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned within the geographical locality	A9SW (W)	774	3	430450 410530

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Local Authority Pollution Prevention and Controls** Name: The Coal Authority Location: Wooley Colliery Site, Darton, Barnsley Authority: Wakefield City Metropolitan District Council, Environmental Health Permit Reference: A0135 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/5 Coal, coke and coal product processes **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	A14NW (NW)	861	4	430901 411305
	Nearest Surface Water Feature	A7NE (E)	177	-	431926 410137
20	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Road Bridge B6428 /, / Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 8th September 1993 Incident Reference: 147764 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	91	2	431300 410200
20	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Church Street, DARTON Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: Pollution Found; No Fish Killed Incident Date: 10th June 1996 Incident Reference: SH960270 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	135	2	431300 410150
21	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Church Street, DARTON Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: No Fish Killed Incident Date: 10th June 1996 Incident Reference: SH960270 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	139	2	431300 410145
21	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Coal Solids Note: Not Supplied Incident Date: 4th September 1989 Incident Reference: 103939 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	181	2	431300 410100
21	**Pollution Incidents to Controlled Waters** Property Type: Other General Premises Location: River Dearne At , Church Street, DARTON Authority: Environment Agency, North East Region Pollutant: Chemicals - Unknown Note: River Dearne; Fish Killed: No Information Incident Date: 26th November 1998 Incident Reference: SH980390 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	184	2	431305 410095

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Miscellaneous - No Visible Pollution/Nothing Found Note: Not Supplied Incident Date: 5th March 1990 Incident Reference: 108349 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	185	2	431300 410095
22	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 22nd October 1993 Incident Reference: 148569 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A10NE (NW)	187	2	431200 410700
23	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Station Road, Darton, BARNSLEY Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: River Dearne; Fish Killed: No Information Incident Date: 3rd July 1998 Incident Reference: SH980430 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	203	2	431250 410100
23	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Tip Leachate Note: Not Supplied Incident Date: 10th November 1989 Incident Reference: 105158 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	216	2	431205 410105
23	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Church Street, DARTON Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: River Dearne; Fish Killed: No Information Incident Date: 11th July 1998 Incident Reference: SH980274 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	218	2	431200 410105
23	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: River Dearne At , DARTON Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: River Dearne; No Fish Killed Incident Date: 5th July 1998 Incident Reference: SH980267 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	220	2	431195 410105

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Coal Solids Note: Not Supplied Incident Date: 7th November 1989 Incident Reference: 105054 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	221	2	431205 410100
23	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Mining Water Note: Not Supplied Incident Date: 30th November 1994 Incident Reference: 154600 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	223	2	431200 410100
23	**Pollution Incidents to Controlled Waters** Property Type: Coal Location: Rear Of Post Office, Church Street, DARTON Authority: Environment Agency, North East Region Pollutant: Unknown Note: No Fish Killed Incident Date: 30th November 1994 Incident Reference: SH950074 Catchment Area: Dearne Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	226	2	431205 410095
23	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 7th February 1990 Incident Reference: 107551 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	228	2	431200 410095
24	**Pollution Incidents to Controlled Waters** Property Type: Other General Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Rubbish Note: Not Supplied Incident Date: 23rd March 1994 Incident Reference: 150728 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A10SW (W)	216	2	431000 410300
25	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Industrial Effluent Note: Not Supplied Incident Date: 6th July 1989 Incident Reference: 101019 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NW (SW)	266	2	431100 410100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**Pollution Incidents to Controlled Waters** Property Type: Farm Location: Road Bridge B6428 /, / Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Agricultural: Carcasses Note: Not Supplied Incident Date: 13th July 1994 Incident Reference: 152592 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	367	2	431300 409900
27	**Pollution Incidents to Controlled Waters** Property Type: Other General Premises Location: Woolley Colliery Stw, WOOLLEY Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: No Fish Killed Incident Date: 20th January 1995 Incident Reference: SH950099 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A10NE (NW)	380	2	431200 410900
28	**Pollution Incidents to Controlled Waters** Property Type: Other General Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Coal Solids Note: Not Supplied Incident Date: 31st May 1991 Incident Reference: 122900 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A10NW (NW)	410	2	431100 410900
29	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 8th October 1993 Incident Reference: 148392 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	414	2	431300 409800
29	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Industrial Effluent Note: Not Supplied Incident Date: 4th November 1992 Incident Reference: 138432 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	417	2	431300 409795
30	**Pollution Incidents to Controlled Waters** Property Type: Other General Premises Location: Dearne At, DARTON Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: No Fish Killed Incident Date: 30th November 1995 Incident Reference: SH950168 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SE (W)	428	2	430800 410500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Tip Leachate Note: Not Supplied Incident Date: 11th December 1991 Incident Reference: 128941 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A10NW (NW)	524	2	430900 410900
32	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Coal Solids Note: Not Supplied Incident Date: 5th September 1989 Incident Reference: 102955 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (NW)	535	2	430805 410795
32	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Industrial Effluent Note: Not Supplied Incident Date: 15th August 1989 Incident Reference: 102421 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	A9NE (NW)	537	2	430805 410800
32	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Surface Water Note: Not Supplied Incident Date: 23rd November 1994 Incident Reference: 153676 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (NW)	539	2	430800 410795
32	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Road Bridge B6428 /, Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Coal Solids Note: Not Supplied Incident Date: 20th April 1989 Incident Reference: 6862 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (NW)	540	2	430805 410805
33	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Sewage - Treated Effluent Note: Not Supplied Incident Date: 28th March 1994 Incident Reference: 150378 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (NW)	540	2	431000 410995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Road Bridge B6428 /, / Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Not Given Note: Not Supplied Incident Date: 4th January 1990 Incident Reference: 106536 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A3NW (S)	541	2	431500 409500
35	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Road Bridge B6428 /, / Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Not Given Note: Not Supplied Incident Date: 28th May 1990 Incident Reference: 111136 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A6SE (S)	553	2	431300 409600
36	**Pollution Incidents to Controlled Waters** Property Type: Petrol/Fuelling Stations Location: Dearne At Darton Authority: Environment Agency, North East Region Pollutant: Unknown Note: No Fish Killed Incident Date: 9th January 1995 Incident Reference: SH950106 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A5NE (W)	568	2	430700 410100
37	**Pollution Incidents to Controlled Waters** Property Type: Surface Water Sewers Location: Footbridge/ Road Bridge B6428 Dearne 19 Authority: Environment Agency, North East Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 16th November 1989 Incident Reference: 105236 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	A12NW (NE)	596	2	432200 410800
38	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Mining Water Note: Not Supplied Incident Date: 2nd February 1991 Incident Reference: 119382 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SE (NW)	666	2	430800 411000
39	**Pollution Incidents to Controlled Waters** Property Type: Other General Premises Location: Road Bridge B6428 /, Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Coal Solids Note: Not Supplied Incident Date: 16th May 1990 Incident Reference: 110515 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (NW)	681	2	430900 411100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Rd Brdg B6131/Colliery Stn Dearne 21 Authority: Environment Agency, North East Region Pollutant: Surface Water Note: Not Supplied Incident Date: 23rd January 1990 Incident Reference: 107101 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SE (NW)	881	2	430700 411200
41	**Pollution Incidents to Controlled Waters** Property Type: Fire Water Location: River Dearne At, DARTON Authority: Environment Agency, North East Region Pollutant: Chemicals - Detergents/Surfactant Note: No Fish Killed Incident Date: 25th July 1997 Incident Reference: SH970370 Catchment Area: Dearne Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3SW (S)	906	2	431700 409100
41	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Low Mill Farm, Silkstone, BARNSLEY Authority: Environment Agency, North East Region Pollutant: Storm Sewage Note: No Fish Killed Incident Date: 9th August 1995 Incident Reference: SH950128 Catchment Area: Dearne Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A3SW (S)	911	2	431700 409095
42	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Road Bridge B6428 /, / Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 10th November 1993 Incident Reference: 148784 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A3SW (S)	913	2	431800 409100
42	**Pollution Incidents to Controlled Waters** Property Type: Rail Location: River Dearne , Between Darton, & Staincross, DARTON Authority: Environment Agency, North East Region Pollutant: Oils - Other Oil Note: Watercourse :River Dearne; From New Lodge To Old Mill; Fish Killed: No Information Incident Date: 22nd February 1998 Incident Reference: SH980060 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3SW (S)	918	2	431800 409095
43	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Road Bridge B6428 /, Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Mining Water Note: Not Supplied Incident Date: 14th April 1991 Incident Reference: 121394 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3SE (S)	930	2	431900 409100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: LOW BARUGH Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: River Dearne; Fish Killed: No Information Incident Date: 16th August 1998 Incident Reference: SH980317 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3SE (S)	935	2	431900 409095
44	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Foul Sewer Location: Footbridge/ Road Bridge B6428 Dearne 19 Authority: Environment Agency, North East Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 17th March 1993 Incident Reference: 145877 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A4SW (SE)	950	2	432200 409200
45	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Dearne Hall Road, BARUGH Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: No Fish Killed Incident Date: 26th September 1997 Incident Reference: SH970516 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3SE (S)	957	2	432000 409100
46	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Colliery Stn, /Haigh Bridge A637 Dearne 22 Authority: Environment Agency, North East Region Pollutant: Mining Water Note: Not Supplied Incident Date: 3rd April 1991 Incident Reference: 121120 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NW)	960	2	430700 411300
47	**Prosecutions Relating to Authorised Processes** Location: Barnsley Road, Darton, Barnsley, Yorkshire, S75 5NT Prosecution Text: EA News Release 04/03/1999, Found guilty of knowingly permitting controlled waste to be deposited without a licence. Prosecution Act: EPA90 Hearing Date: 4th March 1999 Verdict: Guilty Fine: 500 Costs: 1240.1 Positional Accuracy: Manually positioned to the road within the address or location	A2NE (S)	842	2	431286 409268
	River Quality Name: River_Dearne GQA Grade: River Quality C Reach: Wooley_Minewater_Cawthorne_Dyk Estimated Distance (km): 3.3 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A6NE (SW)	199	2	431257 410018

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: River_Dearne GQA Grade: River Quality C Reach: Bretton_Brook_Wooley_Minewate Estimated Distance (km): 1.2 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A13SE (NW)	823	2	430693 411116
	River Quality Name: River_Dearne GQA Grade: River Quality C Reach: Cawthorne_Dyke_New_Lodg Estimated Distance (km): 2 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A3SW (S)	983	2	431626 409025
	River Quality Name: Cawthorne_Dyke GQA Grade: River Quality C Reach: Silkstone_Beck_River_Dearn Estimated Distance (km): 2.1 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A3SW (S)	983	2	431626 409025

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	**River Quality Chemistry Sampling Points** Name: River Dearne Reach: Wooley Minewater Cawthorne Dyke Estimated Distance: 3.30 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied	A6NW (SW)	256	2	431149 410087

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
49	**River Quality Chemistry Sampling Points** Name: River Dearne Reach: Cawthorne Dyke New Lodge Estimated Distance: 2.00 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied	A3SE (SE)	960	2	432021 409104
50	**Substantiated Pollution Incident Register** Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 26th November 2010 Incident Reference: 841110 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Contaminated Water: Suspended Solids	A6NW (SW)	253	2	431155 410087
51	**Substantiated Pollution Incident Register** Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 4th October 2010 Incident Reference: 827897 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A10NW (NW)	424	2	431064 410898

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	**Water Abstractions** Operator: Shaw Carpets Ltd Licence Number: 2/27/08/114 Permit Version: Not Supplied Location: Po Box. 4, Darton, BARNSLEY Authority: Environment Agency, North East Region Abstraction: Commercial Use(pubs etc) Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 312 Yearly Rate (m3): 85072 Details: Licence Status: Active Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6SE (S)	413	2	431400 409700
53	**Water Abstractions** Operator: British Coal Licence Number: 2/27/08/031 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 2728 Yearly Rate (m3): 818000 Details: Licence Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SE (NW)	646	2	430780 410950
54	**Water Abstractions** Operator: The Coal Authority Licence Number: Ne/027/0008/006 Permit Version: 1 Location: Underground Strata At Former Wooley Colliery Authority: Environment Agency, North East Region Abstraction: Environmental: Pump & Treat: Pollution Remediation Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 13th July 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (NW)	710	2	430949 411161
	Water Abstractions Operator: A I Crossley & Son Licence Number: 2/27/08/049 Permit Version: 100 Location: Spring - Coal Measures - Darton Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 5 Yearly Rate (m3): 1659 Details: Birthwaite Hall Farm,Darton,Barnsley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th January 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1816	2	429400 410200
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 11 South Pennines Scale: 1:100,000	A11SW (SW)	0	2	431518 410297
	Drift Deposits None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11SW (SW)	0	5	431518 410297
	Superficial Aquifer Designations No Data Available				
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NE (W)	146	2	431217 410173
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A6NE (SW)	159	2	431212 410162
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models and Fluvial Events Boundary Accuracy: As Supplied	A6NE (SW)	159	2	431305 410062
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A6NE (W)	159	2	431197 410171
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NE (SW)	161	2	431274 410102
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NW (W)	173	2	431090 410224
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A6NW (W)	177	2	431057 410260
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A6NW (W)	177	2	431074 410235
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A6NW (W)	177	2	431068 410244
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NW (W)	177	2	431073 410237
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NW (W)	177	2	431064 410249
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A10SW (W)	189	2	431031 410291
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A6NE (SW)	197	2	431270 410093
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NW (W)	199	2	431044 410240
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NW (W)	203	2	431083 410182

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NE (SW)	211	2	431320 410056
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NE (SW)	223	2	431266 410068
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A6NE (SW)	226	2	431268 410063
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NE (SW)	175	2	431306 410060
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6NW (W)	182	2	431064 410242
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
55	**Detailed River Network Lines** River Type: Primary River River Name: Dearne Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Flood Risk Management Indicative/Statutory Main River Water Course Name: RIVER DEARNE Water Course Reference: 0256	A6NE (SW)	194	2	431302 410055
56	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A11NW (NE)	389	2	431811 410810
57	**Detailed River Network Lines** River Type: Tertiary River River Name: Drain Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A11NW (N)	442	2	431710 410879

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
58	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference:	A9SE (W)	445	2	430801 410556
59	**Detailed River Network Lines** River Type: Primary River River Name: River Dearne Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Flood Risk Management Indicative/Statutory Main River Water Course Name: RIVER DEARNE Water Course Reference: 0256	A9SE (W)	445	2	430801 410556
60	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SE (N)	472	2	431356 411029
61	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A9SE (W)	482	2	430746 410509
62	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A7NE (E)	177	2	431926 410137
63	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A11SE (NE)	235	2	431979 410505
64	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A6SE (S)	269	2	431460 409837
65	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A7SE (SE)	303	2	431914 409793
66	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A7SE (SE)	450	2	432097 409795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
67	**Historical Landfill Sites** Licence Holder: Shaw Carpets Limited Location: Barnsley Road, Darton, Barnsley Name: Shaw Carpets Limited Operator Location: Barnsley Road, Darton, Barnsley Boundary Accuracy: As Supplied Provider Reference: EAHLD04346 First Input Date: 30th April 1980 Last Input Date: 31st December 1993 Specified Waste Type: Deposited Waste included Inert, Industrial and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0478 BGS Ref: Not Supplied Other Ref: WD20 B265, 4400/B265, 20B265(76)	A3NW (S)	499	2	431694 409508
68	**Historical Landfill Sites** Licence Holder: C Birkinshaw and Sons Limited Location: Darton, Barnsley Name: Between Darton Lane and Dearne Hall Road Operator Location: Oaks Farm, Darton Lane, Darton Boundary Accuracy: As Supplied Provider Reference: EAHLD04347 First Input Date: 31st October 1985 Last Input Date: 1st November 1994 Specified Waste Type: Deposited Waste included Inert and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0500 BGS Ref: Not Supplied Other Ref: WD20 B490, 4400/B490, 20B490(98)	A3NW (S)	573	2	431755 409437
69	**Historical Landfill Sites** Licence Holder: National Coal Board Location: Junction of Spark Lane and Swallow Hill Road, Mapplewell, Barnsley Name: Quarry Operator Location: Barnsley Area, Grimethorpe, Barnsley Boundary Accuracy: As Supplied Provider Reference: EAHLD04348 First Input Date: 31st January 1978 Last Input Date: 11th January 1985 Specified Waste Type: Deposited Waste included Inert and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0471 BGS Ref: Not Supplied Other Ref: WD20 B176	A4NW (SE)	951	2	432301 409271
	Local Authority Landfill Coverage Name: Barnsley Metropolitan Borough Council - Has supplied landfill data		0	3	431518 410297
	Local Authority Landfill Coverage Name: Wakefield Metropolitan Borough Council - Has not been able to supply Landfill data		322	4	431154 410827
70	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 76 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A3NW (S)	478	3	431680 409529
71	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 98 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A3NW (S)	590	3	431767 409422

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 69 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A4NW (SE)	952	3	432299 409269
73	**Registered Landfill Sites** Licence Holder: Shaw Carpets Ltd Licence Reference: WD20 B 265 Site Location: Barnsley Road, Darton, Barnsley, South Yorkshire Licence Easting: 431680 Licence Northing: 409450 Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: Only waste produced on site Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st April 1980 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Construction And Demolition Wastes; Ind. Non-Haz. Waste; Soil & Subsoil Prohibited Waste: Asbestos; Liquids In Containers Over 4l Cap.; Slurry In Containers Over 4l Cap.	A3NW (S)	556	2	431680 409450
74	**Registered Landfill Sites** Licence Holder: C Birkinshaw & Sons Ltd Licence Reference: WD20 B 490 Site Location: Between Darton Lane, & Dearne Hall Road, Darton, Barnsley, South Yorkshire Licence Easting: 431850 Licence Northing: 409300 Operator Location: Oaks Farm, Darton Lane, Darton, Barnsley, South Yorkshire Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence revokedRevoked Dated: 21st October 1985 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Construction And Demolition Wastes; Excavated Natural Materials $; Hardcore And Rubble Prohibited Waste: Asbestos; Biodegradable/Putrescible Waste; Combustible/Potentially Combustible; Liquids In Containers Over 4l Cap.; Slurry In Containers Over 4l Cap.	A3NE (S)	724	2	431850 409300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
75	**Registered Landfill Sites** Licence Holder: N.C.B. Licence Reference: WD20 B 176 MOD 1 Site Location: Quarry At Spark Lane, Mapplewell, Darton, Barnsley, South Yorkshire Licence Easting: 432350 Licence Northing: 409250 Operator Location: Barnsley Area Off. Grimethorpe, Barnsley, South Yorkshire Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st July 1983 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste Construction And Demolition Wastes Prohibited Waste Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.	A4SW (SE)	999	2	432350 409250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	**Control of Major Accident Hazards Sites (COMAH)** Name: Stiller Group North Limited Location: Barnsley Depot, Dearne Mills, Barnsley Road, Darton, South Yorkshire, S75 5NN Reference: 4030326 Type: Upper Tier **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A7SW (S)	390	6	431498 409667

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Middle Coal Measures Formation And South Wales Middle Coal Measures Formation (Undifferentiated)	A11SW (SW)	0	5	431518 410297
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (SW)	0	5	431444 410195
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SE (W)	0	5	431298 410279
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (SW)	0	5	431509 410285
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SE (NW)	0	5	431329 410431
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SE (W)	0	5	431269 410347
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (SW)	0	5	431518 410297

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SE (NW)	0	5	431447 410391
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (SE)	6	5	431676 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (S)	12	5	431633 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (SE)	19	5	431719 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (SE)	20	5	431764 410047
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (S)	30	5	431518 410000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (S)	34	5	431442 410070
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SE (W)	35	5	431225 410284
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (SE)	39	5	431776 410060
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (NE)	89	5	431751 410521
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (SE)	108	5	431822 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (NE)	121	5	431660 410576

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (SW)	128	5	431307 410130
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (W)	132	5	431170 410211
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (NE)	136	5	431804 410535
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7SW (SE)	149	5	431818 409916
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (NE)	151	5	431691 410600
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (SW)	165	5	431335 410106

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (SW)	165	5	431323 410109
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (SW)	166	5	431295 410118
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	168	5	431043 410400
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	170	5	431052 410443
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (S)	179	5	431434 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	180	5	431030 410340

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A6NE (S)	205	5	431413 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	208	5	431000 410297
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	209	5	431000 410394
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	210	5	430996 410381
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	210	5	431000 410403
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	210	5	430999 410396

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (E)	214	5	432000 410297
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	214	5	431007 410446
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (E)	215	5	432000 410383
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	223	5	431000 410454
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (E)	225	5	432000 410438
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (E)	228	5	432000 410295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (E)	234	5	432010 410306
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NW (W)	252	5	431000 410210
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NW (W)	257	5	431000 410201
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (SW)	258	5	431367 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10NW (NW)	266	5	431022 410641
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (E)	270	5	432055 410355

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10NW (NW)	273	5	431091 410734
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10NW (NW)	274	5	431010 410624
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NW (NE)	274	5	431826 410688
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10NW (NW)	278	5	431000 410610
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SE)	279	5	432000 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6SE (S)	285	5	431457 409817

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10NW (NW)	286	5	431000 410632
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	309	5	430931 410515
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NW (N)	311	5	431573 410760
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (NE)	326	5	431843 410737
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7SE (SE)	336	5	432000 409854
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (NE)	347	5	431962 410670

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (E)	351	5	432130 410437
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NW (SW)	356	5	431098 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (SW)	356	5	431194 409946
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NW (SW)	360	5	431000 410051
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (NE)	361	5	432000 410661
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NW (W)	362	5	430868 410232

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NW (N)	369	5	431611 410811
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SE)	372	5	432096 409949
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (NE)	385	5	432000 410690
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9SE (W)	391	5	430817 410369
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10NW (NW)	393	5	431000 410815
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SE)	404	5	432127 410000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NW (SW)	404	5	431000 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7SE (SE)	405	5	432000 409736
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (E)	434	5	432179 410086
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A6SE (S)	446	5	431386 409663
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (N)	474	5	431275 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (N)	474	5	431373 411000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (N)	486	5	431417 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NW (N)	487	5	431686 410927
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10NW (NW)	489	5	430847 410776
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SW (N)	493	5	431518 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (SE)	498	5	432222 410000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (NE)	520	5	432240 410623

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A2NE (S)	535	5	431391 409559
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (NW)	544	5	431000 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (N)	555	5	431332 411077
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SW (N)	559	5	431647 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SW (N)	561	5	431695 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (NW)	604	5	430852 410965

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NE (NW)	605	5	430686 410719
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (N)	606	5	431367 411123
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A2NE (S)	607	5	431233 409585
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (NW)	629	5	430853 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (NE)	636	5	432000 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A2NE (S)	642	5	431275 409508

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (NE)	644	5	432016 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (NE)	644	5	432014 411001
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (SE)	648	5	432305 409759
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (NE)	650	5	432000 411015
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (NW)	653	5	430817 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (NE)	721	5	432000 411094

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A3NE (SE)	724	5	432000 409350
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (NE)	737	5	432418 410750
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (N)	756	5	431470 411257
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A3NE (SE)	773	5	432000 409296
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (NW)	788	5	430637 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NE (NW)	796	5	430497 410744

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (NW)	796	5	431000 411276
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A2NE (S)	808	5	431378 409261
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (NE)	808	5	432131 411123
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A2NE (S)	821	5	431363 409254
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A2NW (SW)	824	5	431000 409517
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (SE)	842	5	432488 409693

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A16SW (NE)	855	5	432366 411000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9SW (W)	856	5	430355 410302
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (NE)	862	5	432000 411247
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A2NW (SW)	875	5	431000 409439
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NW (NW)	875	5	431000 411359
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A16SW (NE)	887	5	432412 411000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15NE (N)	921	5	431839 411357
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A3SE (SE)	933	5	432147 409190
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (NW)	963	5	430523 411138
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A16NW (NE)	978	5	432202 411279
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A3SW (S)	983	5	431680 409019
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9SW (W)	996	5	430212 410393

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15NW (N)	996	5	431631 411468
77	**BGS Recorded Mineral Sites** Site Name: Bloomhouse Green Level Location: , Darton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25996 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A11SW (E)	0	5	431682 410327
78	**BGS Recorded Mineral Sites** Site Name: Darton Location: , Darton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 109959 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Haigh Moor Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A10SE (W)	29	5	431188 410330
79	**BGS Recorded Mineral Sites** Site Name: Oates Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217034 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	138	5	431863 410036
80	**BGS Recorded Mineral Sites** Site Name: Pye Wood Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 103076 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A10NE (NW)	163	5	431349 410676
81	**BGS Recorded Mineral Sites** Site Name: Darton Coal Crop Workings Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217031 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A7SW (S)	205	5	431526 409866

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**BGS Recorded Mineral Sites** Site Name: Bloomhouse Lane Phase 2 Occs Location: , Darton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 4504 Type: Opencast **Status: Ceased** Operator: Derbyshire Mining Operator Location: Derbyshire Mining, Spitewinter, Stonedge, Chesterfield, Derbyshire, S45 0lw Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 100m	A11NW (N)	225	5	431500 410700
83	**BGS Recorded Mineral Sites** Site Name: Darton Coal Crop Workings Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217032 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A7SW (S)	255	5	431575 409779
84	**BGS Recorded Mineral Sites** Site Name: Darton Coal Crop Workings Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217030 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A7SW (S)	262	5	431737 409748
85	**BGS Recorded Mineral Sites** Site Name: Bloomhouse Green Location: , Darton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25995 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A7NE (E)	281	5	432029 410209
86	**BGS Recorded Mineral Sites** Site Name: Oates Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217033 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	299	5	432006 409947
87	**BGS Recorded Mineral Sites** Site Name: Darton Coal Crop Workings Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217029 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A7SE (SE)	308	5	431845 409737

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	**BGS Recorded Mineral Sites** Site Name: Sutcliffe & Shipley Colliery Location: , Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217026 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SE (SE)	385	5	432077 409892
89	**BGS Recorded Mineral Sites** Site Name: Pye Wood Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 103077 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A11NW (N)	409	5	431579 410867
90	**BGS Recorded Mineral Sites** Site Name: Oakfield Road Location: , Mapplewell, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25994 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12SW (E)	461	5	432245 410336
91	**BGS Recorded Mineral Sites** Site Name: Darton Main Colliery Location: , Darton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25991 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A5NE (W)	503	5	430733 410192
92	**BGS Recorded Mineral Sites** Site Name: Sutcliffe & Shipley Colliery Location: , Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217027 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8NW (SE)	505	5	432219 409941
93	**BGS Recorded Mineral Sites** Site Name: Woolley Colliery Location: , Woolley, Wakefield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 4499 Type: Underground **Status: Ceased** Operator: British Coal - North Yorkshire Area Operator Location: British Coal - North Yorkshire Area, Allerton Bywater, Castleford, West Yorkshire, Wf10 2al Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Approximate location provided by supplier	A14SW (NW)	544	5	431000 411000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	**BGS Recorded Mineral Sites** Site Name: Sutcliffe & Shipley Colliery Location: , Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217028 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8NW (SE)	554	5	432270 409946
95	**BGS Recorded Mineral Sites** Site Name: Darton Location: , Darton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25989 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	589	5	430936 409822
96	**BGS Recorded Mineral Sites** Site Name: Speedwell Colliery Location: , Darton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25997 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8NW (E)	594	5	432326 410012
97	**BGS Recorded Mineral Sites** Site Name: Darton Colliery Location: , Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217025 Type: Underground **Status: Ceased** Operator: Ncb North Eastern Division, Area No 6 (North Barnsley) Operator Location: Ncb North Eastern Division, Area No 6 (North Barnsley), Woolley Colliery, Darton, Barnsley, Yorkshire Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	665	5	432208 409578
97	**BGS Recorded Mineral Sites** Site Name: Darton Colliery Location: , Darton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25988 Type: Underground **Status: Ceased** Operator: Ncb North Eastern Division, Area No 6 (North Barnsley) Operator Location: Ncb North Eastern Division, Area No 6 (North Barnsley), Woolley Colliery, Darton, Barnsley, Yorkshire Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SW (SE)	675	5	432235 409596

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	**BGS Recorded Mineral Sites** Site Name: Darton Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217037 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	695	5	432221 409548
98	**BGS Recorded Mineral Sites** Site Name: Darton Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217039 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A3NE (SE)	674	5	432101 409466
99	**BGS Recorded Mineral Sites** Site Name: Darton Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217035 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A8SW (SE)	675	5	432286 409671
100	**BGS Recorded Mineral Sites** Site Name: Staincross Hill Location: , Mapplewell, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 26001 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Woolley Edge Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12NW (NE)	705	5	432402 410713
101	**BGS Recorded Mineral Sites** Site Name: Belle Vue Colliery Pit Location: , Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217024 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SW (SE)	713	5	432297 409617
102	**BGS Recorded Mineral Sites** Site Name: Woolley Colliery Occs Location: , Wooley, Wakefield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 5836 Type: Opencast **Status: Ceased** Operator: L Devine & P Mckernan Operator Location: L Devine & P Mckernan, Kingstocks Site, Rotherham Road, Little Houghton, Barnsley, South Yorkshire Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 100m	A14SW (NW)	725	5	431000 411200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	**BGS Recorded Mineral Sites** Site Name: Darton Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217036 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	747	5	432292 409552
104	**BGS Recorded Mineral Sites** Site Name: Belle Vue Colliery Pit Location: , Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217022 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SW (SE)	760	5	432376 409657
104	**BGS Recorded Mineral Sites** Site Name: Mapplewell Brick Works Location: , Mapplewell, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25987 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A8SW (SE)	771	5	432365 409616
104	**BGS Recorded Mineral Sites** Site Name: Belle Vue Colliery Pit Location: , Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217023 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	802	5	432374 409573
105	**BGS Recorded Mineral Sites** Site Name: Belle Vue Colliery Location: , Mapplewell, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25999 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SW (SE)	762	5	432426 409751
106	**BGS Recorded Mineral Sites** Site Name: New Speedwell Colliery Location: , Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217019 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (SE)	845	5	432514 409746

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	**BGS Recorded Mineral Sites** Site Name: New Speedwell Colliery Location: , Mapplewell, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 25998 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (SE)	871	5	432533 409723
107	**BGS Recorded Mineral Sites** Site Name: Darton Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217040 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Rider Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A8SW (SE)	845	5	432476 409662
108	**BGS Recorded Mineral Sites** Site Name: Darton Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217041 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Rider Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	873	5	432318 409391
109	**BGS Recorded Mineral Sites** Site Name: Windhill Shaft, Woolley Colliery Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 102531 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A15NW (N)	890	5	431570 411373
110	**BGS Recorded Mineral Sites** Site Name: Darton Occs Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217038 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Rider Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	903	5	432433 409479
111	**BGS Recorded Mineral Sites** Site Name: Swallow Hill Colliery Location: , Darton, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217043 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Surface Mined Positional Accuracy: Located by supplier to within 10m	A4SW (SE)	941	5	432207 409215

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**BGS Recorded Mineral Sites** Site Name: Spark Lane Mine Location: Spark Lane, Mapplewell, Barnsley, Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 217021 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Barnsley Coal (West And South Yorkshire) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	973	5	432552 409537
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A11SW (SW)	0	7	431518 410297
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A11SW (SW)	0	-	431518 410297
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	6	5	431518 410000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	6	5	431518 410000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	172	5	431299 410070
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	243	5	431364 410000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	0	5	431545 410348
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	5	431231 410328
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	6	5	431518 410000
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	45	5	431586 410487
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	172	5	431299 410070
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A6NW (W)	221	5	431058 410182

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	243	5	431364 410000
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7SW (SE)	246	5	431802 409785
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	6	5	431518 410000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	5	431519 410313
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	6	5	431529 410000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	29	5	431232 410286
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (W)	76	5	431190 410264
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	82	5	431538 410000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	87	5	431538 410010
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10SW (W)	99	5	431113 410333
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	108	5	431529 410005
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	117	5	431518 410000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	176	5	431355 410086
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NE (E)	184	5	431941 410263
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NE)	217	5	431881 410586
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	250	5	431386 410000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	5	431231 410328
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	0	5	431545 410348

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	6	5	431518 410000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	38	5	431732 410463
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	45	5	431586 410487
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (SE)	76	5	431824 410142
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	78	5	431529 410000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	108	5	431529 410005
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	172	5	431299 410070
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A6NW (W)	221	5	431058 410182
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	243	5	431364 410000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7SW (SE)	246	5	431802 409785
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (W)	0	5	431264 410262
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	0	5	431512 410262
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	6	5	431601 410000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	8	5	431518 410000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	38	5	431732 410463
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A6NE (W)	76	5	431190 410264
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (SE)	76	5	431824 410142
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	78	5	431529 410000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	108	5	431529 410005
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	152	5	431252 410157

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	172	5	431299 410070
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	174	5	431820 410568
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (S)	193	5	431433 409972
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	200	5	431313 410075
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	243	5	431364 410000
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	5	431525 410351
	Radon Potential - Radon Affected Areas Affected Area: The property is in an intermediate probability radon area, as between 3 and 5% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	5	431518 410297
	Radon Potential - Radon Affected Areas Affected Area: The property is in an intermediate probability radon area, as between 1 and 3% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	5	431525 410351

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
113	**Contemporary Trade Directory Entries** Name: Carpet Express Ltd Location: Dearne Mills, Darton, Barnsley, South Yorkshire, S75 5NH Classification: Distribution Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NW (SE)	1	-	431727 410177
114	**Contemporary Trade Directory Entries** Name: Bsb Quality Clothing Ltd Location: Station Road, Darton, Barnsley, South Yorkshire, S75 5AF Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (S)	27	-	431625 410014
115	**Contemporary Trade Directory Entries** Name: Microprint Location: 25a, Station Road, Darton, Barnsley, South Yorkshire, S75 5HT Classification: Printers - Glass, Metal, Plastics Etc. **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	93	-	431385 410179
116	**Contemporary Trade Directory Entries** Name: Padgett Bros Ltd Location: Darton Business Park, Barnsley Road, Darton, BARNSLEY, South Yorkshire, S75 5QX Classification: Toys, Games & Sporting Goods - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	275	-	431365 409982
117	**Contemporary Trade Directory Entries** Name: Mallinson International Location: Junction 38 Business Park,Parkside Way, Darton, Barnsley, South Yorkshire, S75 5QQ Classification: Freight Forwarders **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A11SE (NE)	354	-	432082 410564
118	**Contemporary Trade Directory Entries** Name: Ivy Motors Location: 36, Church Street, Darton, Barnsley, South Yorkshire, S75 5HG Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	373	-	431139 409963
118	**Contemporary Trade Directory Entries** Name: Mick'S Tyres Location: Units 3-4 Ivy Works, Church Street, Darton, Barnsley, South Yorkshire, S75 5HG Classification: Tyre Dealers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A6NW (SW)	376	-	431099 409977
118	**Contemporary Trade Directory Entries** Name: M & M Motors Location: Rear of 38, Church Street, Darton, Barnsley, South Yorkshire, S75 5HG Classification: Breakdown and Recovery **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	392	-	431114 409953
119	**Contemporary Trade Directory Entries** Name: Stiller Group Location: Barnsley Road, Darton, Barnsley, South Yorkshire, S75 5NN Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6SE (S)	387	-	431424 409716
119	**Contemporary Trade Directory Entries** Name: Egan Bros Road Haulage Location: Dearne Mills, Barnsley Road, Darton, BARNSLEY, South Yorkshire, S75 5NH Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6SE (S)	411	-	431397 409704
119	**Contemporary Trade Directory Entries** Name: Colour Craft Location: Darton Business Park, Barnsley Road, Darton, Barnsley, South Yorkshire, S75 5QX Classification: Screen Process Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A6SE (S)	412	-	431381 409716

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
120	**Contemporary Trade Directory Entries** Name: Top Gun Cosmetic Car Repairs Location: 16, St. Andrews Drive, Darton, Barnsley, South Yorkshire, S75 5LX Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (E)	389	-	432140 410138
121	**Contemporary Trade Directory Entries** Name: G S S Letterpress Location: 5, Fulford Close, Darton, Barnsley, South Yorkshire, S75 5PY Classification: Printing Engineering Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SE)	390	-	432118 410029
122	**Contemporary Trade Directory Entries** Name: Csk Electrical Services Location: 2, Austwick Close, Mapplewell, Barnsley, South Yorkshire, S75 5QF Classification: Laundry Equipment - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (E)	411	-	432162 410536
123	**Contemporary Trade Directory Entries** Name: Scrap My Car Now For Money Barnsley Kws Location: Dearne Mills, Barnsley Road, Darton, Barnsley, South Yorkshire, S75 5NH Classification: Car Breakers & Dismantlers **Status: Active** Positional Accuracy: Automatically positioned to the address	A3NW (S)	467	-	431598 409549
124	**Contemporary Trade Directory Entries** Name: Hot House Partnerships Ltd Location: Unit 5 Darton Business Park, Barnsley Road, Darton, Barnsley, South Yorkshire, S75 5NQ Classification: Perfume Suppliers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A6SW (SW)	473	-	431114 409865
125	**Contemporary Trade Directory Entries** Name: Constant Power Solutions Ltd Location: 4, Swaithe View, Woolley Grange, Barnsley, South Yorkshire, S75 5RW Classification: Generators - Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (NW)	492	-	431064 410974
126	**Contemporary Trade Directory Entries** Name: 1st Call Pest Solutions Location: 19, Austwick Close, Mapplewell, Barnsley, South Yorkshire, S75 5QF Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (E)	493	-	432250 410536
127	**Contemporary Trade Directory Entries** Name: Barnsley Damp Proof Location: 7, Halstead Grove, Mapplewell, Barnsley, South Yorkshire, S75 5QD Classification: Damp & Dry Rot Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (NE)	500	-	432223 410612
128	**Contemporary Trade Directory Entries** Name: Thyssenkrupp Aerospace Location: Unit 4, Junction 38 Business Park, Parkside Way, Darton, Barnsley, South Yorkshire, S75 5QQ Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (W)	509	-	430707 410273
129	**Contemporary Trade Directory Entries** Name: P B Engineering Services Location: Darton Council Offices, Huddersfield Road, Darton, Barnsley, South Yorkshire, S75 5NB Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6SW (SW)	525	-	430941 409894
129	**Contemporary Trade Directory Entries** Name: Darton Social Services Department Location: The Darton Centre, Huddersfield Road, Darton, Barnsley, South Yorkshire, S75 5ND Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A6SW (SW)	536	-	430942 409880

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
130	**Contemporary Trade Directory Entries** Name: Paul Burgess Location: 16, Sunningdale Avenue, Darton, Barnsley, South Yorkshire, S75 5JB Classification: Washing Machines - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (E)	546	-	432319 410257
131	**Contemporary Trade Directory Entries** Name: Senior Haulage Ltd Location: Unit 3, Junction 38 Business Park, Parkside Way, Darton, Barnsley, South Yorkshire, S75 5QQ Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A5NE (W)	548	-	430689 410182
131	**Contemporary Trade Directory Entries** Name: P B Joinery Ltd Location: Unit 1, Junction 38 Business Park, Parkside Way, Darton, Barnsley, South Yorkshire, S75 5QQ Classification: Mould Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A5NE (W)	548	-	430689 410182
132	**Contemporary Trade Directory Entries** Name: Kuehne + Nagel Ltd Location: Barnsley Road, Darton, Barnsley, South Yorkshire, S75 5NN Classification: Road Haulage Services **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A6SW (SW)	567	-	431101 409766
132	**Contemporary Trade Directory Entries** Name: Robert Thompson Location: Central Garage, Barnsley Road, Darton, Barnsley, South Yorkshire, S75 5NN Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6SW (SW)	595	-	431110 409730
133	**Contemporary Trade Directory Entries** Name: Harratts Mitsubushi Location: Huddersfield Road, Darton, Barnsley, South Yorkshire, S75 5NF Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A5NE (W)	576	-	430725 410038
134	**Contemporary Trade Directory Entries** Name: European Fleet Management Ltd Location: Dearne Mills, Darton, Barnsley, South Yorkshire, S75 5NH Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A5NE (W)	701	-	430532 410174
135	**Contemporary Trade Directory Entries** Name: Diane'S Location: 38, Churchfield Lane, Darton, Barnsley, South Yorkshire, S75 5DJ Classification: Ironing & Home Laundry Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A5SE (SW)	710	-	430773 409788
136	**Contemporary Trade Directory Entries** Name: Luxury Cleaning Services Location: 200, Darton Lane, Mapplewell, Barnsley, South Yorkshire, S75 6AH Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SW (SE)	736	-	432405 409767
137	**Contemporary Trade Directory Entries** Name: M Roberts Location: 253, Darton Lane, Mapplewell, Barnsley, South Yorkshire, S75 6AJ Classification: Electrical goods - servicing & repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (E)	737	-	432450 409913
137	**Contemporary Trade Directory Entries** Name: Motec Mobile Crypton Tuning Location: 2, Ibberson Avenue, Mapplewell, Barnsley, South Yorkshire, S75 6BJ Classification: Car Engine Tuning & Diagnostic Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (E)	782	-	432494 409903

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
138	**Contemporary Trade Directory Entries** Name: Helping Hands Location: Broadway, Mapplewell, Barnsley, South Yorkshire, S75 6HG Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A12SE (E)	746	-	432531 410332
139	**Contemporary Trade Directory Entries** Name: Worth Polythene Ltd Location: 15, Windhill Rise, Woolley Grange, Barnsley, South Yorkshire, S75 5RJ Classification: Paper & Cardboard Products & Packaging - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NW)	832	-	431076 411335
140	**Contemporary Trade Directory Entries** Name: Staincross Coffee Ltd Location: 28, Moorland Avenue, Mapplewell, Barnsley, South Yorkshire, S75 6NJ Classification: Catering Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (E)	861	-	432588 410683
141	**Contemporary Trade Directory Entries** Name: Colouration International Location: A, 48, Roman Road, Darton, Barnsley, South Yorkshire, S75 5DD Classification: Dyers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A5SE (SW)	866	-	430746 409614
142	**Contemporary Trade Directory Entries** Name: Pennine Building Solutions Location: 6, Henry Moore Court, Woolley Grange, Barnsley, South Yorkshire, S75 5QS Classification: Building Block Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NW)	903	-	430875 411339
143	**Contemporary Trade Directory Entries** Name: Cleanworld Laundry Location: 387, Darton Lane, Mapplewell, BARNSLEY, South Yorkshire, S75 6AL Classification: Laundries & Launderettes **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (E)	912	-	432657 410060
144	**Contemporary Trade Directory Entries** Name: Hart Low Loader Transport Hire Location: 27, Windhill Lane, Darton, Barnsley, South Yorkshire, S75 5BJ Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SW (NE)	924	-	432309 411135
145	**Contemporary Trade Directory Entries** Name: P R Scaffolding Ltd Location: 17, Bence Lane, Darton, Barnsley, South Yorkshire, S75 5NX Classification: Scaffolding & Work Platforms **Status: Active** Positional Accuracy: Automatically positioned to the address	A2SE (S)	932	-	431213 409205
146	**Fuel Station Entries** Name: Central Garage Location: Barnsley Road, Darton, Barnsley, South Yorkshire, S73 8DD Brand: MURCO Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A6SW (SW)	597	-	431103 409732

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
147	**Areas of Adopted Green Belt** Authority: Barnsley Metropolitan Borough Council, Planning Department Plan Name: Barnsley Unitary Development Plan **Status:** **Adopted** Plan Date: 31st December 2000	A10SE (NW)	0	8	431415 410370
148	**Areas of Adopted Green Belt** Authority: Wakefield City Metropolitan District Council Plan Name: Proposal Map **Status:** **Adopted** Plan Date: 12th September 2012	A10NW (NW)	438	9	431044 410903
149	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A11SW (SW)	0	10	431518 410297
150	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A12NW (NE)	749	10	432400 410800

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	July 2013	Annual Rolling Update
Wakefield City Metropolitan District Council - Environmental Health	March 2015	Annual Rolling Update
Kirklees Metropolitan Borough Council - Planning Services	November 2013	Annual Rolling Update
Discharge Consents		
Environment Agency - North East Region	November 2015	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - North East Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - North East Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - North East Region	October 2015	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	April 2014	Annual Rolling Update
Kirklees Metropolitan Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Wakefield City Metropolitan District Council - Environmental Health	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	April 2014	Annual Rolling Update
Kirklees Metropolitan Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Wakefield City Metropolitan District Council - Environmental Health	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	April 2014	Annual Rolling Update
Kirklees Metropolitan Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Wakefield City Metropolitan District Council - Environmental Health	June 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - North East Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - North East Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - North East 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 - North East Region - Ridings Area	October 2015	Quarterly
Environment Agency - North East Region - Yorkshire Area	October 2015	Quarterly
Water Abstractions		
Environment Agency - North East Region	July 2015	Quarterly
Water Industry Act Referrals		
Environment Agency - North East Region	October 2015	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	October 2012	As notified

Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	January 2015	As notified
Source Protection Zones Environment Agency - Head Office	October 2015	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2015	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2015	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2015	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2015	Quarterly
Flood Defences Environment Agency - Head Office	November 2015	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

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	November 2015	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - North East Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - North East Region - Ridings Area	August 2014	Quarterly
Environment Agency - North East Region - Yorkshire Area	August 2014	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North East Region - Ridings Area	October 2015	Quarterly
Environment Agency - North East Region - Yorkshire Area	October 2015	Quarterly
Local Authority Landfill Coverage		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	May 2000	Not Applicable
Kirklees Metropolitan Borough Council - Planning Services	May 2000	Not Applicable
Wakefield City Metropolitan District Council - Environmental Health	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	May 2000	Not Applicable
Kirklees Metropolitan Borough Council - Planning Services	May 2000	Not Applicable
Wakefield City Metropolitan District Council - Environmental Health	May 2000	Not Applicable
Registered Landfill Sites		
Environment Agency - North East Region - Ridings Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - North East Region - Ridings Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - North East Region - Ridings Area	March 2003	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	June 2015	Bi-Annually
Explosive Sites		
Health and Safety Executive	June 2015	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Kirklees Metropolitan Borough Council - Planning Services	August 2015	Annual Rolling Update
Barnsley Metropolitan Borough Council - Planning Department	October 2013	Annual Rolling Update
Wakefield City Metropolitan District Council	October 2014	Annual Rolling Update
Planning Hazardous Substance Consents		
Kirklees Metropolitan Borough Council - Planning Services	August 2015	Annual Rolling Update
Barnsley Metropolitan Borough Council - Planning Department	October 2013	Annual Rolling Update
Wakefield City Metropolitan District Council	October 2014	Annual Rolling Update

Data Currency

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	January 2010	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2015	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	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	July 2014	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	November 2015	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2015	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt		
Barnsley Metropolitan Borough Council - Planning Department	November 201	As notified
Kirklees Metropolitan Borough Council	November 201	As notified
Wakefield City Metropolitan District Council	November 201	As notified
Areas of Unadopted Green Belt		
Barnsley Metropolitan Borough Council - Planning Department	November 201	As notified
Kirklees Metropolitan Borough Council	November 201	As notified
Wakefield City Metropolitan District Council	November 201	As notified
Areas of Outstanding Natural Beauty		
Natural England	October 2015	Bi-Annually
Environmentally Sensitive Areas		
Natural England	October 2015	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	October 2015	Bi-Annually
Marine Nature Reserves		
Natural England	October 2015	Bi-Annually
National Nature Reserves		
Natural England	October 2015	Bi-Annually
National Parks		
Natural England	August 2015	Bi-Annually
Nitrate Sensitive Areas		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites		
Natural England	October 2015	Bi-Annually
Sites of Special Scientific Interest		
Natural England	October 2015	Bi-Annually
Special Areas of Conservation		
Natural England	October 2015	Bi-Annually
Special Protection Areas		
Natural England	October 2015	Bi-Annually

Data Suppliers

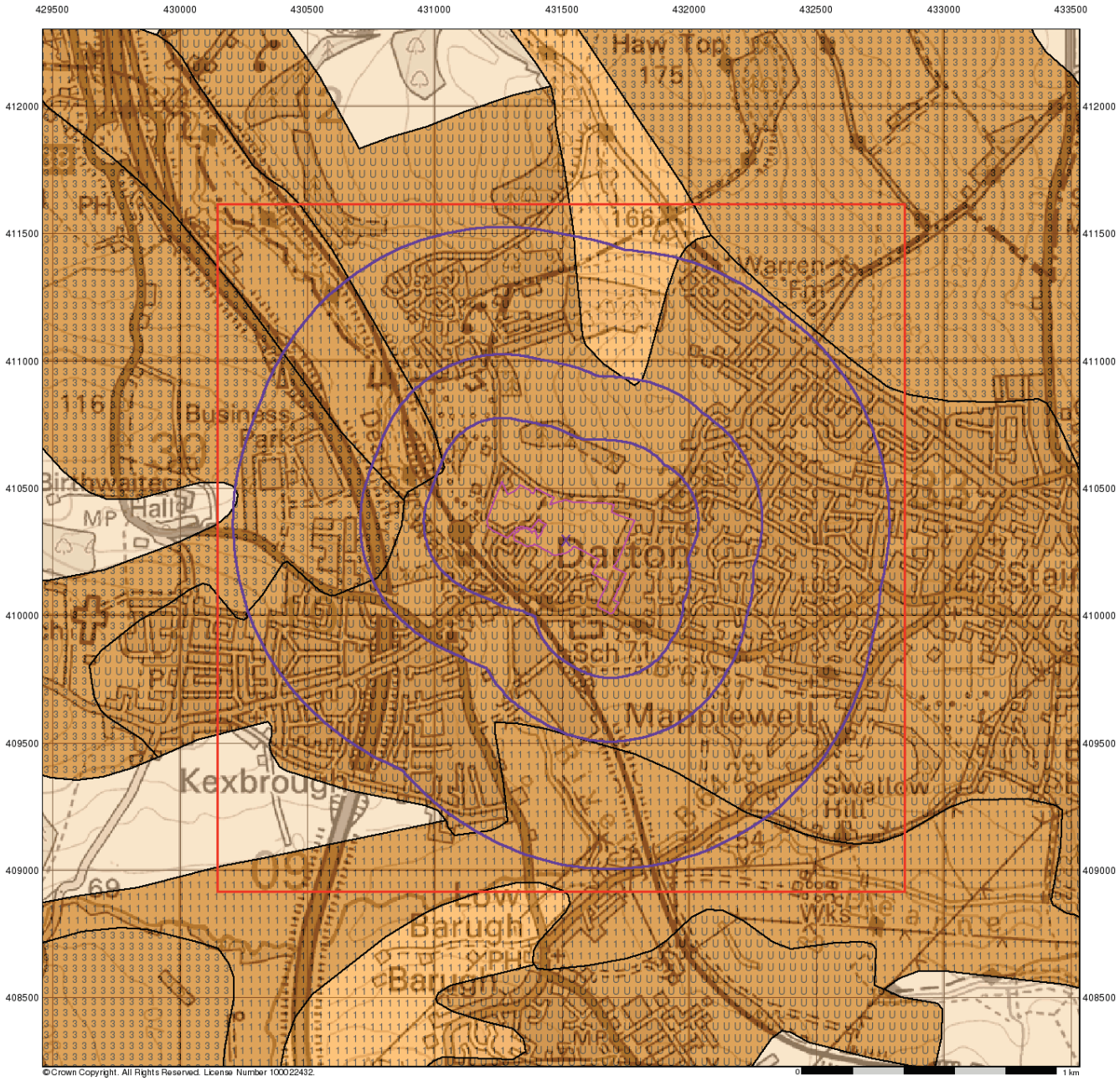
A selection of organisations who provide data within this report

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

Useful Contacts

Contact	Name and Address	Contact Details
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards** Central Offices, Kendray Street, Barnsley, South Yorkshire, S70 2TN	Telephone: 01226 770770 Fax: 01226 772599 Website: www.barnsley.gov.uk
4	**Wakefield City Metropolitan District Council - Environmental Health** Newton Bar, Wakefield, West Yorkshire, WF1 2TX	Telephone: 01924 306090 Website: www.wakefield.gov.uk
5	**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
6	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
7	**The Coal Authority - Mining Report Service** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
8	**Barnsley Metropolitan Borough Council - Planning Department** Central Offices, Kendray Street, Barnsley, South Yorkshire, S70 2TN	Telephone: 01226 770770 Fax: 01226 772599 Website: www.barnsley.gov.uk
9	**Wakefield City Metropolitan District Council** Newton Bar, Wakefield, West Yorkshire, WF1 2TX	Telephone: 01924 306090 Fax: 01924 378532 Website: www.wakefield.gov.uk
10	**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
11	**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
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



Groundwater Vulnerability

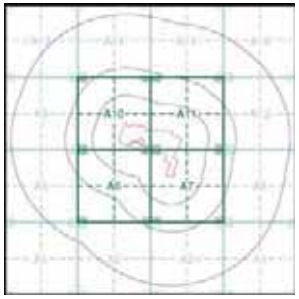
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



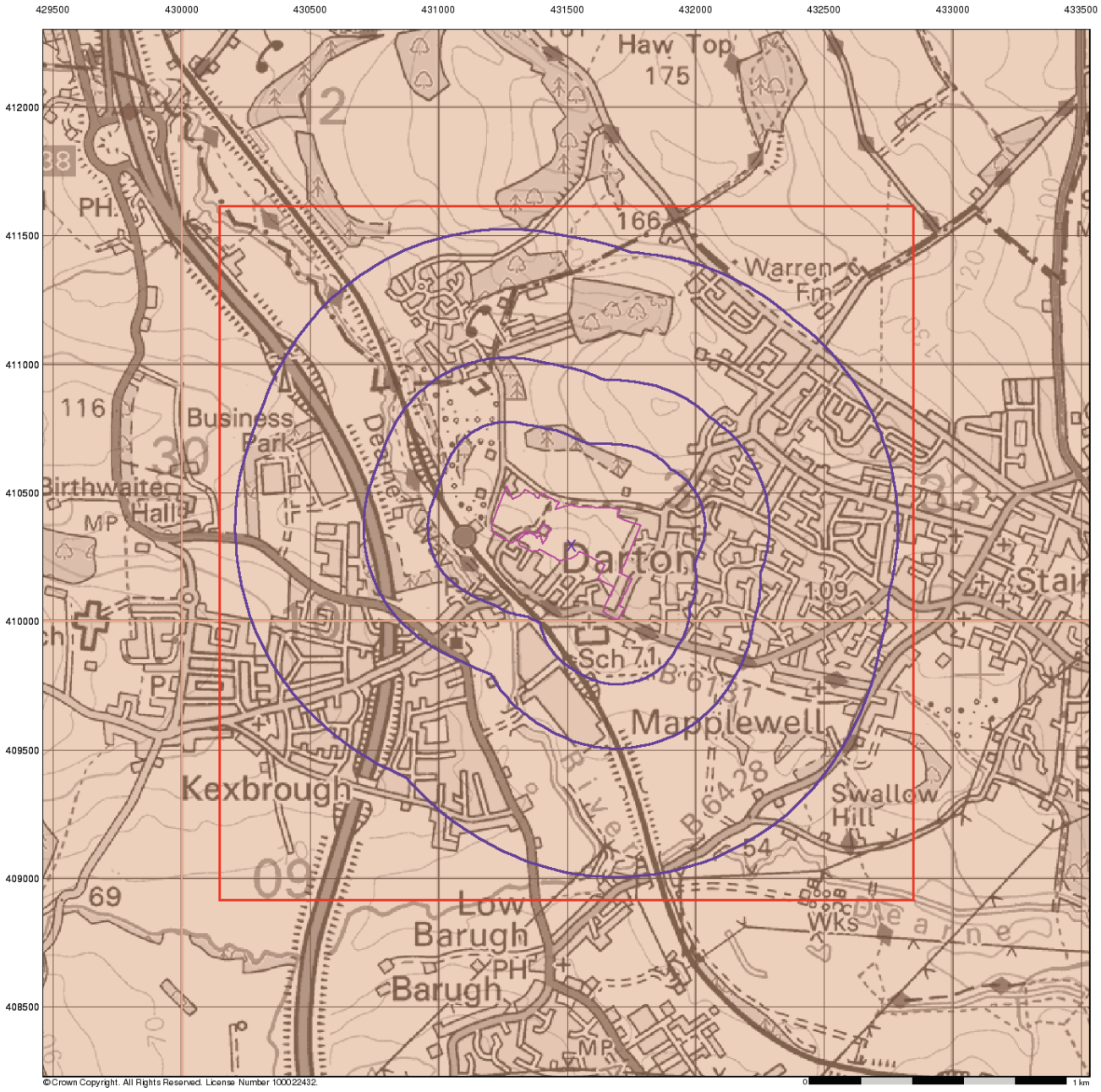
Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

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



Bedrock Aquifer Designation

General

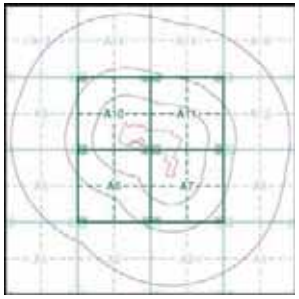
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



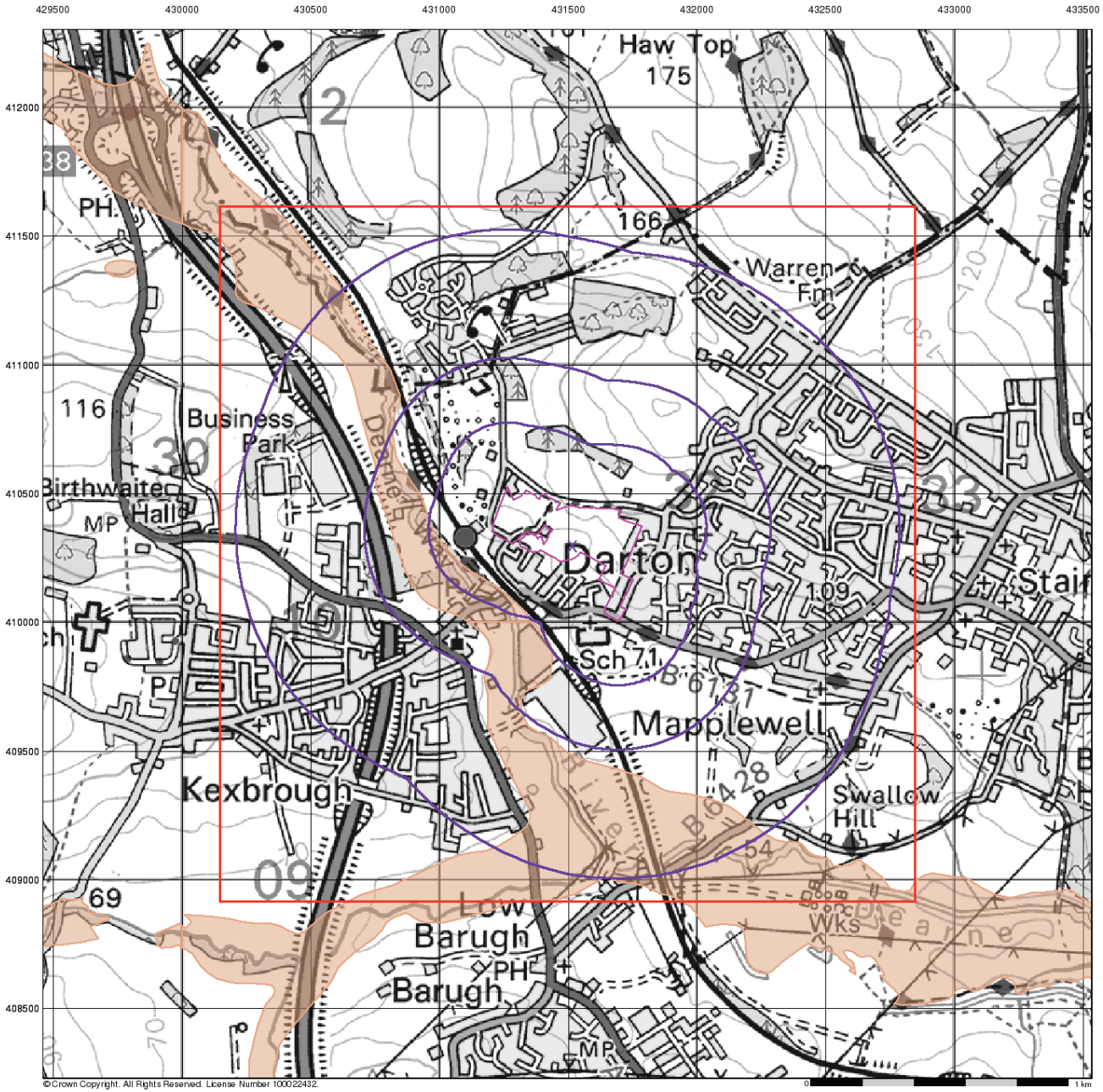
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National Grid Reference:	431520, 410300
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Web: www.envirocheck.co.uk



Superficial Aquifer Designation

General

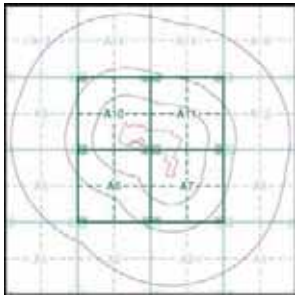
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



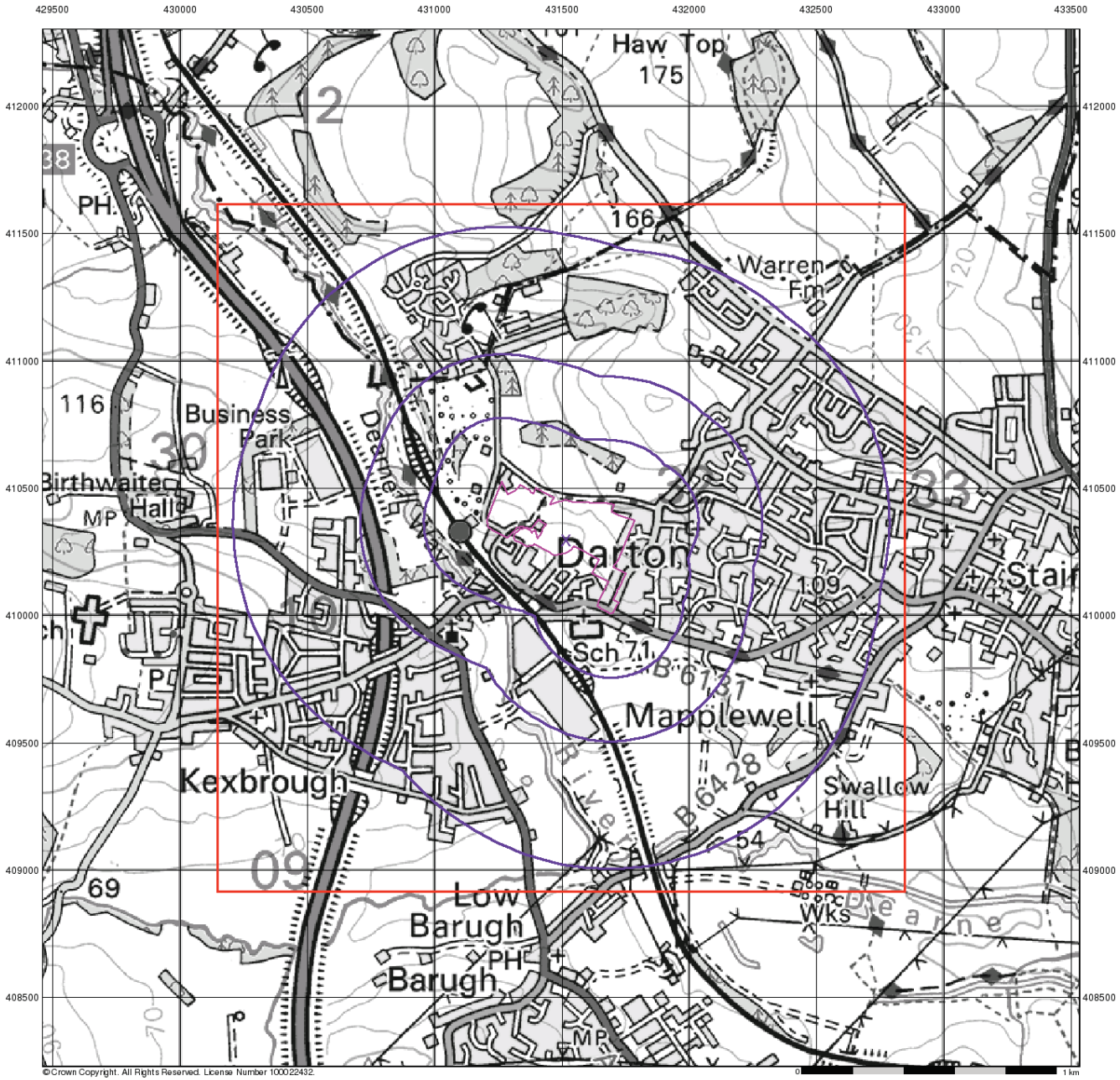
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Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

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Landmark
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RSK

Source Protection Zones

General

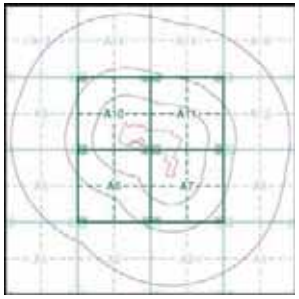
Specified Site | Specified Buffer(s) | Bearing Reference Point

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

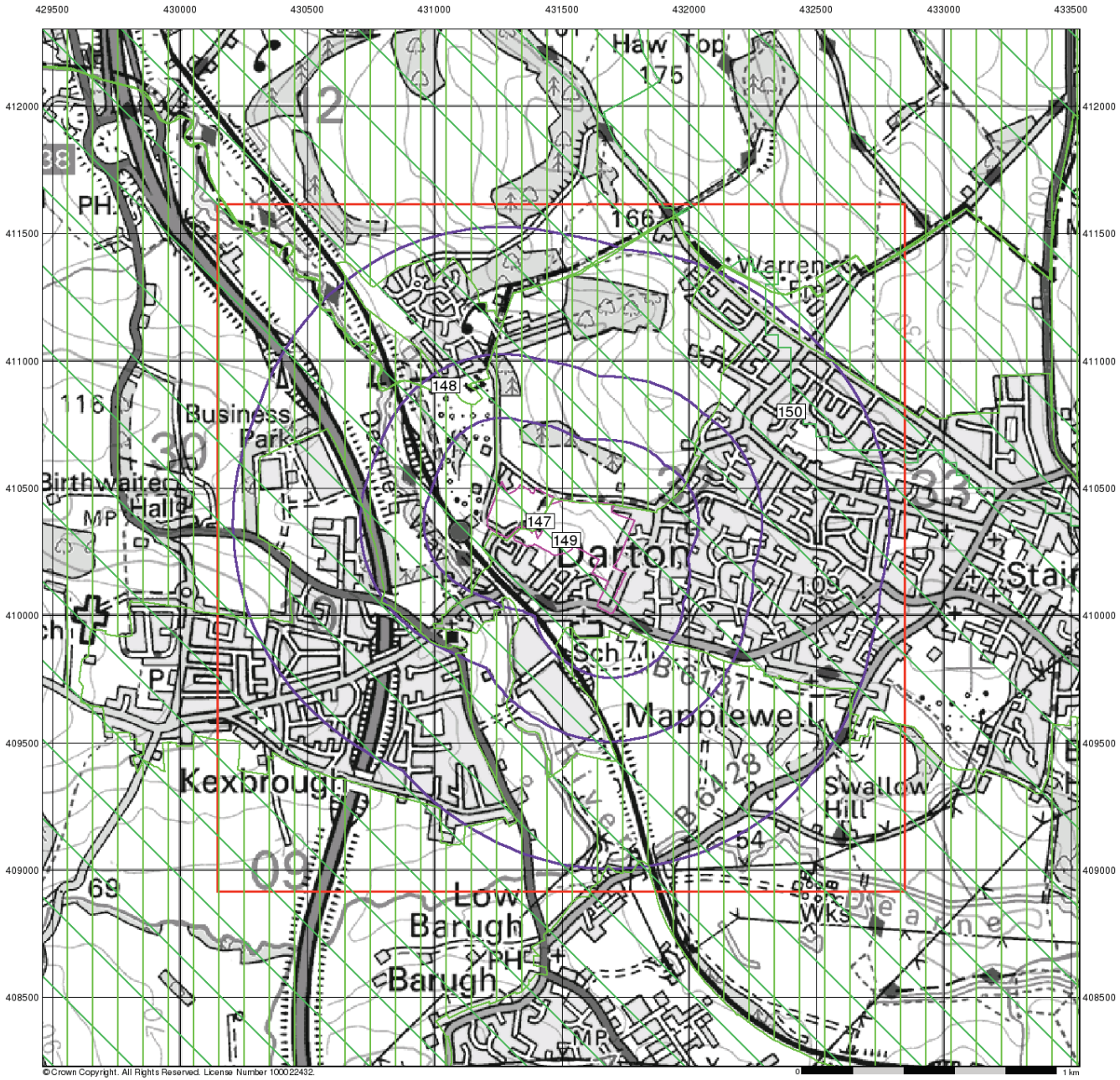
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National Grid Reference:	431520, 410300
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Landmark

Tel: 0844 844 9952
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Sensitive Land Uses

General

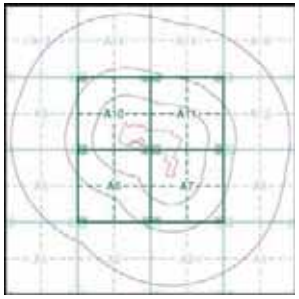
Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

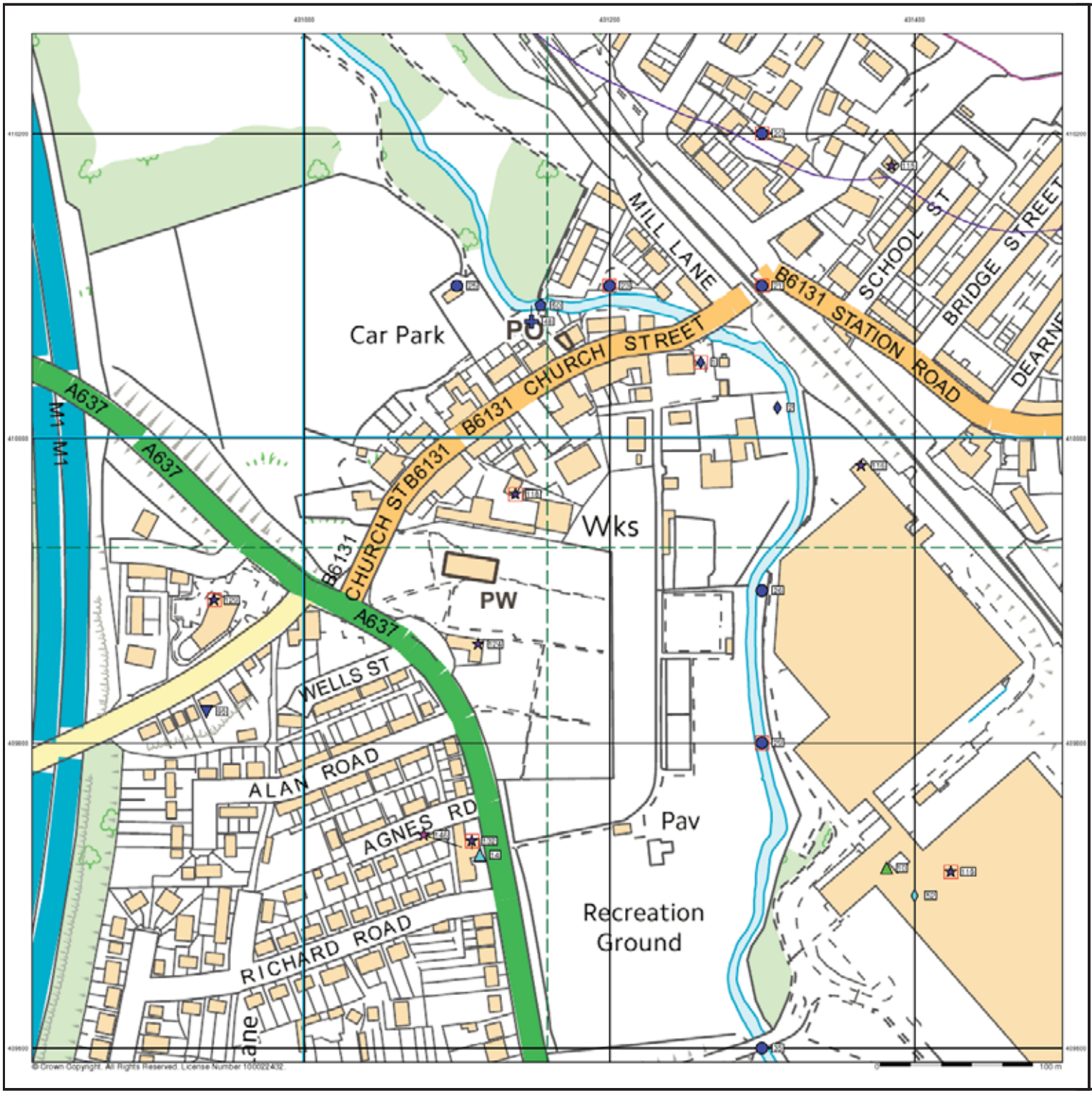
Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
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Site Area (Ha):	11.89
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Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark

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



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General

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

Several of Type at Location

Agency and Hydrological

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

Waste

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

Geological

- BGS Recorded Mineral Site

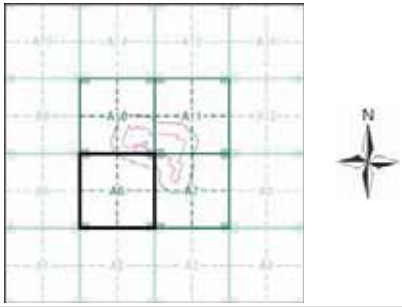
Hazardous Substances

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Segment A6



Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark

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



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General

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

Agency and Hydrological

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

Waste

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

Geological

- BGS Recorded Mineral Site

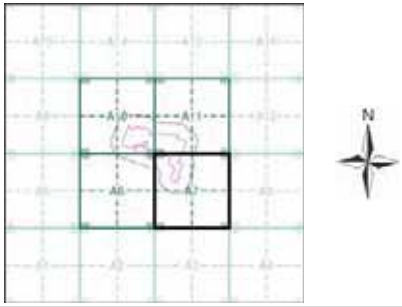
Hazardous Substances

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Segment A7



Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

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



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General

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

Several of Type at Location

Agency and Hydrological

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

Waste

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

Geological

- BGS Recorded Mineral Site

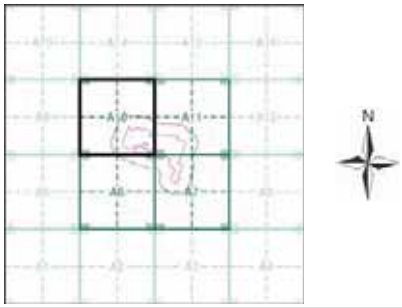
Hazardous Substances

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Segment A10



Order Details

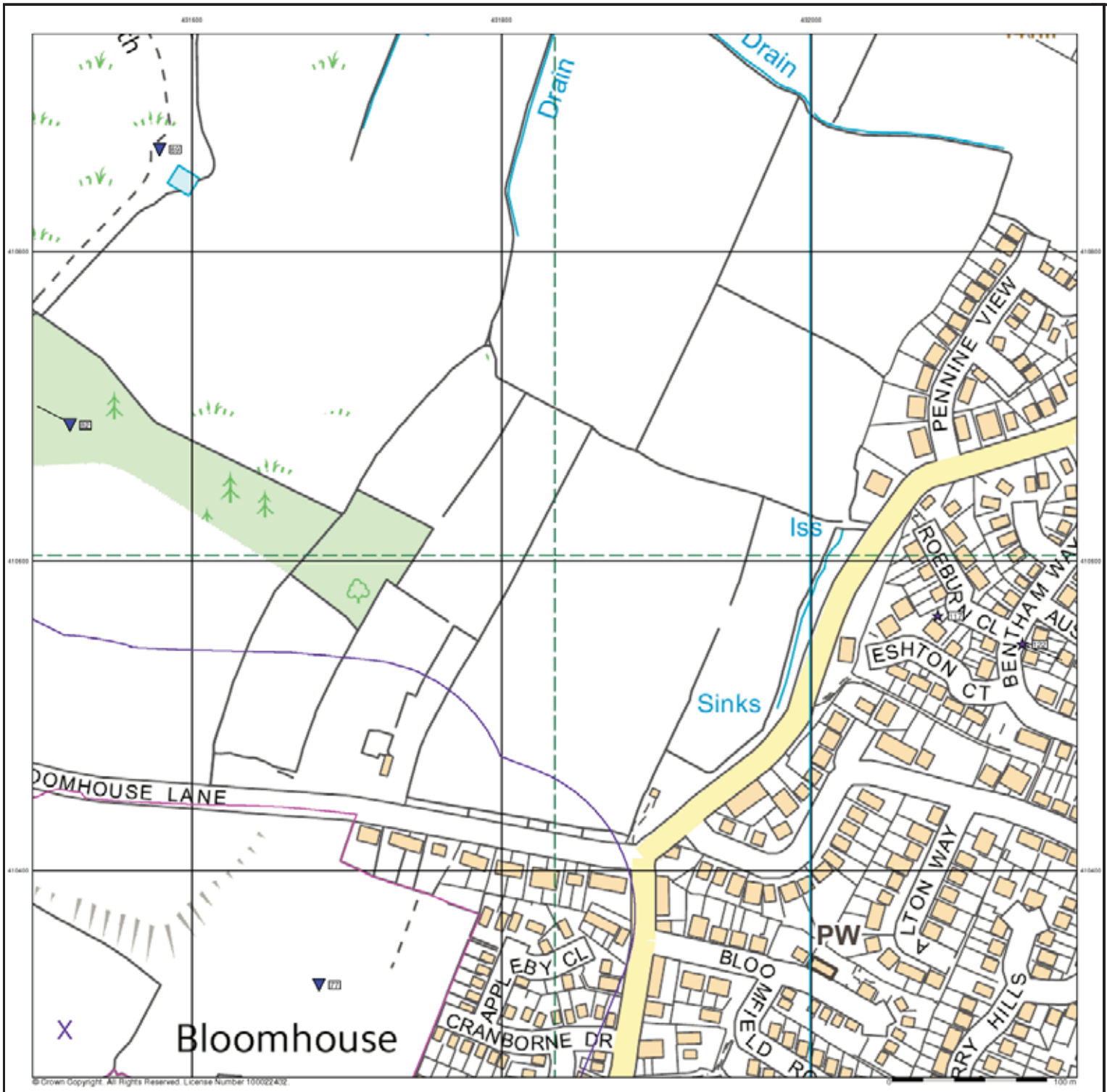
Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark

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



RSK

General

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

Agency and Hydrological

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

Waste

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

Geological

- BGS Recorded Mineral Site

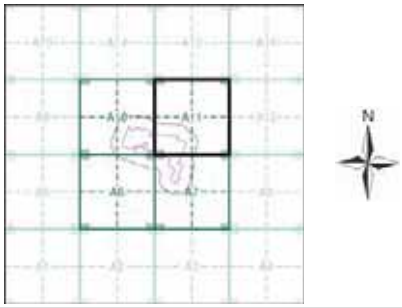
Hazardous Substances

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Segment A11

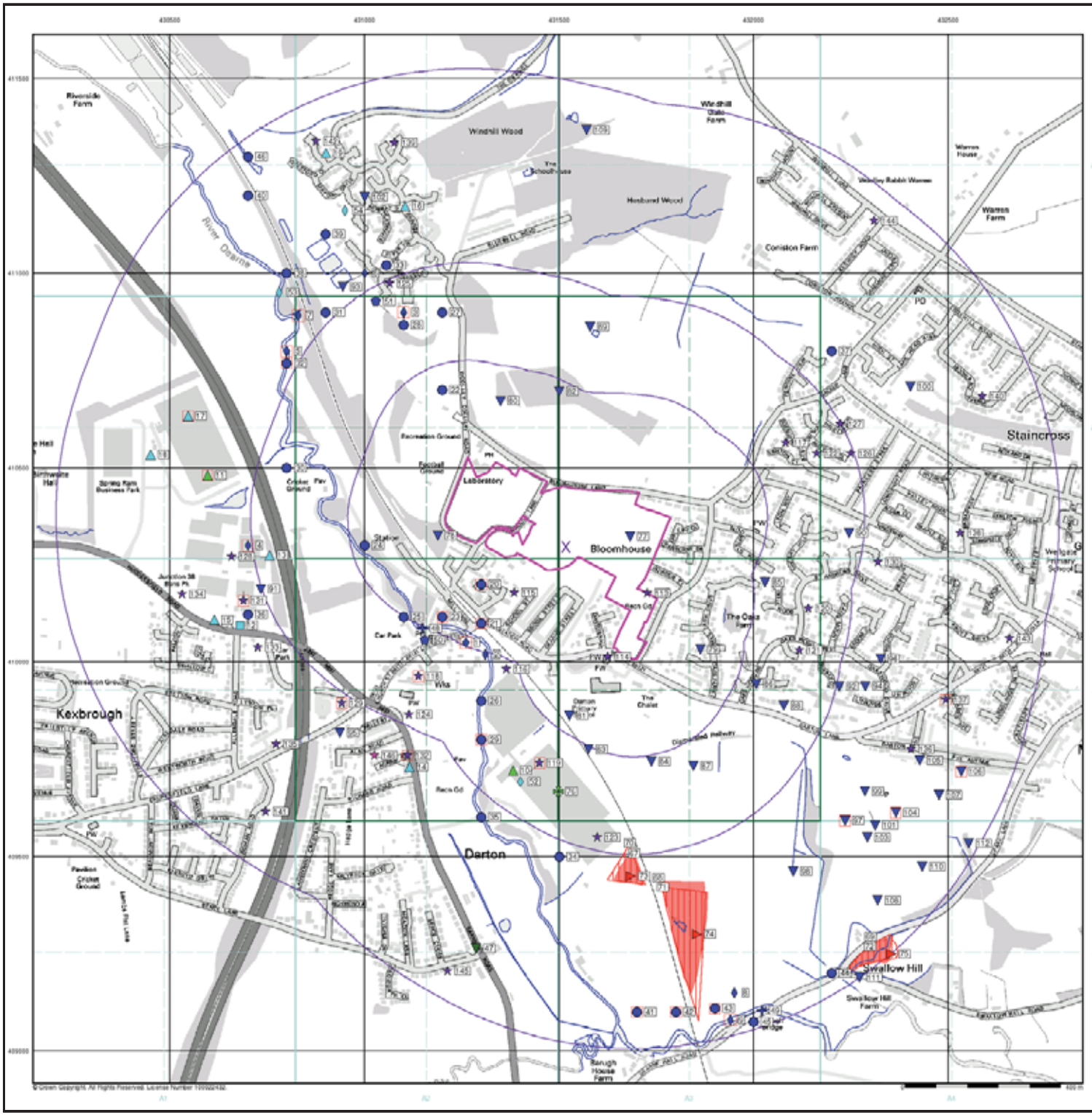


Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ



RSK

General

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

Agency and Hydrological

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

Waste

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

Geological

- BGS Recorded Mineral Site

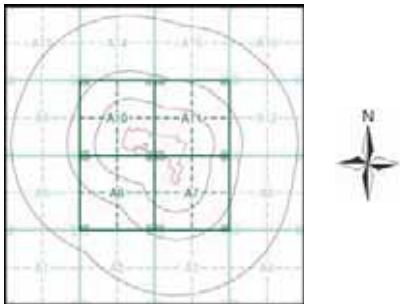
Hazardous Substances

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Slice A



Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

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



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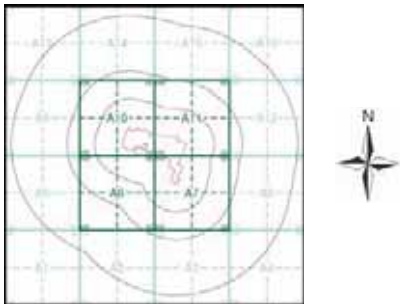
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A



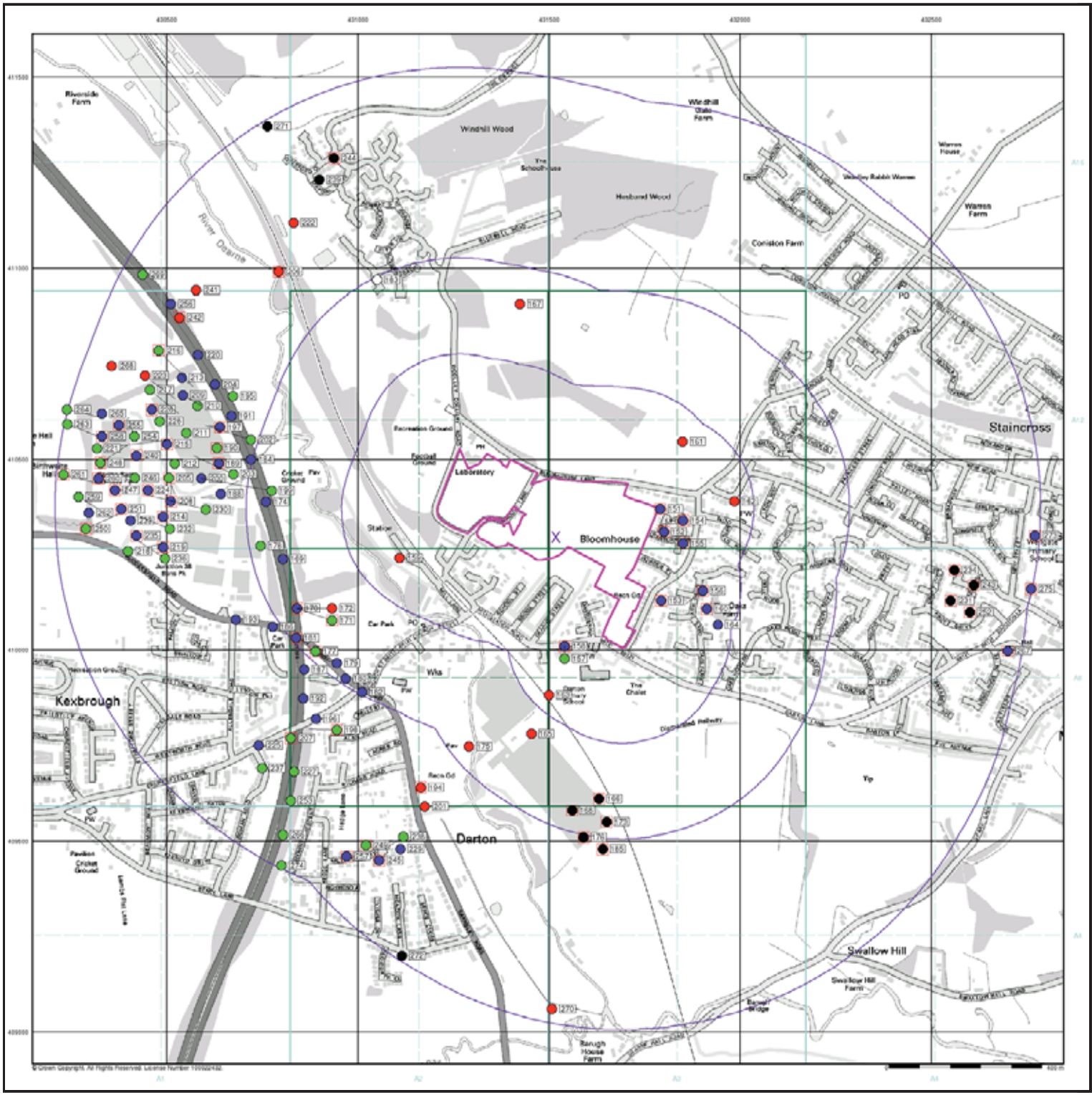
Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

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General

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

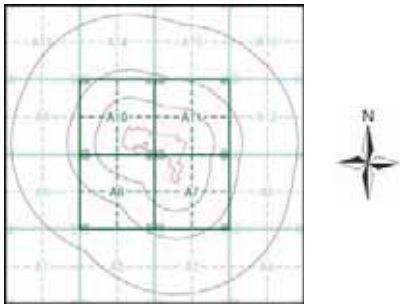
Agency and Hydrological (Boreholes)

- 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:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark
Tel: 0844 844 9952
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Web: www.envirocheck.co.uk



General

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

Detailed River Network Data

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

Contours (height in metres)

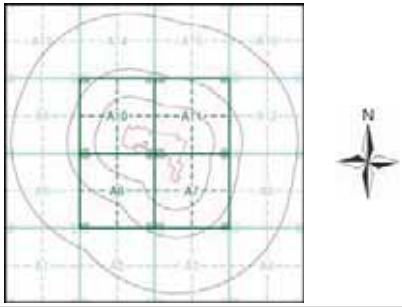
Standard Contour 105

Master Contour 100 95

Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

EA/NRW Detailed River Network Map - Slice A



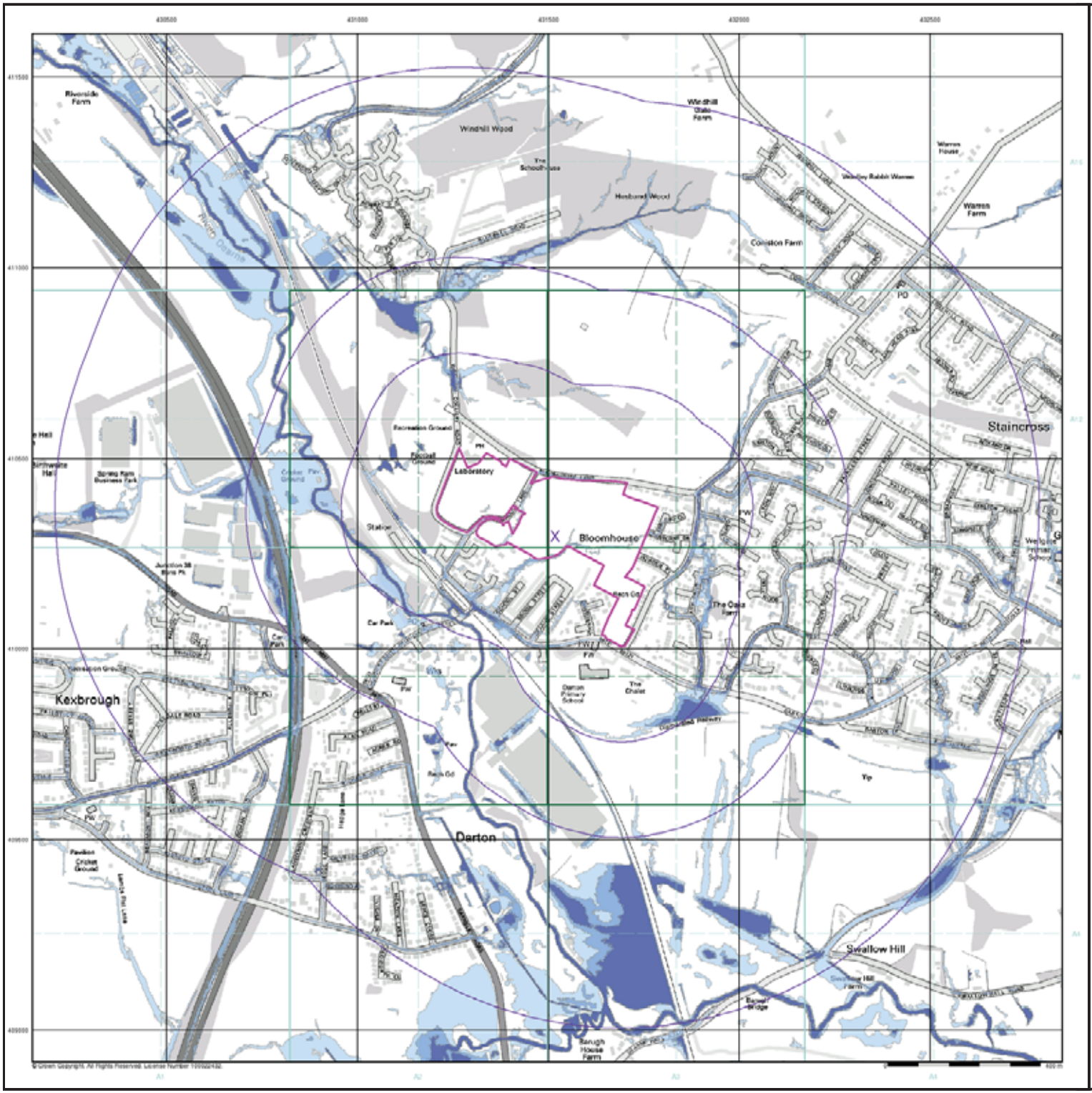
Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark
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Web: www.envirocheck.co.uk



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General

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

Risk of Flooding from Surface Water

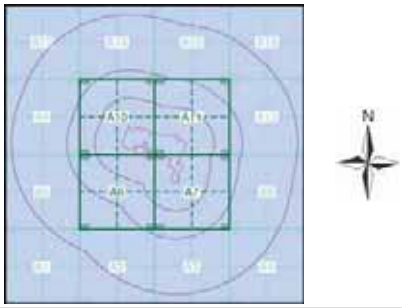
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

Site Details

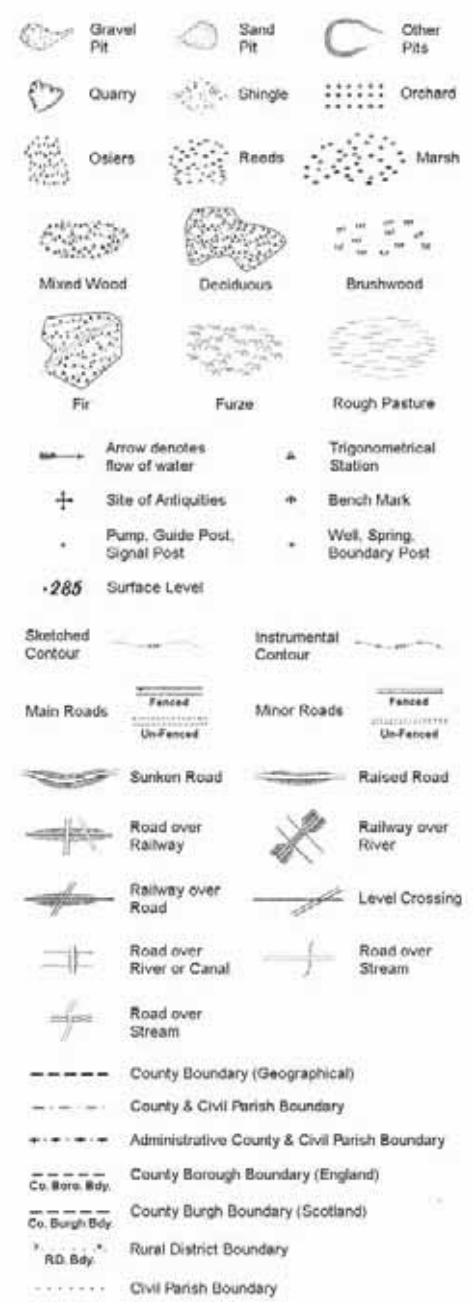
Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark

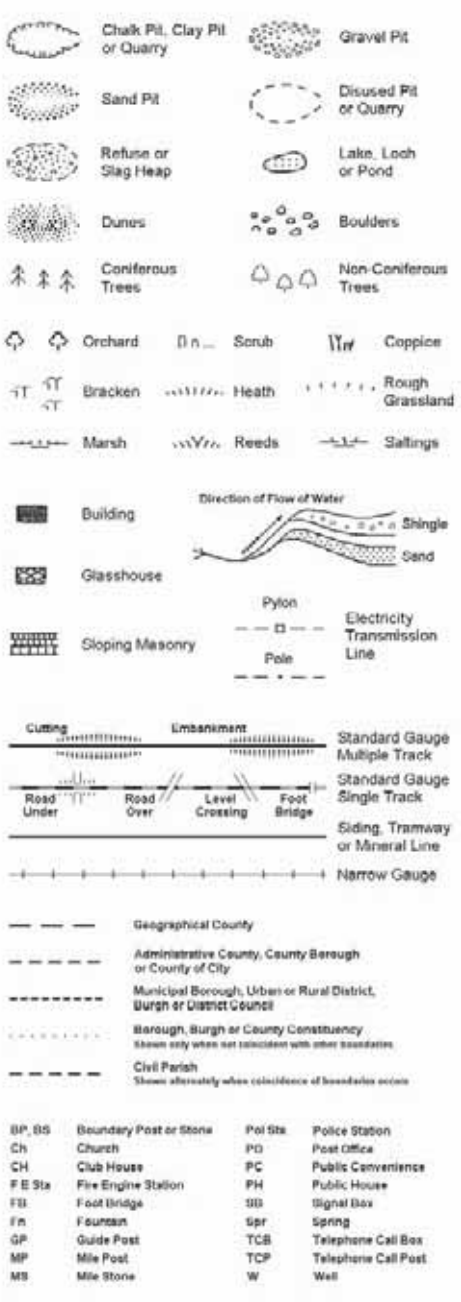
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Historical Mapping Legends

Ordnance Survey County Series 1:10,560



Ordnance Survey Plan 1:10,000



1:10,000 Raster Mapping

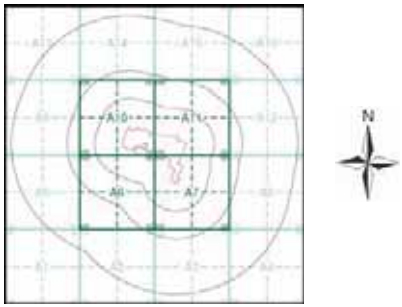


RSK

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1854 - 1855	2
Yorkshire	1:10,560	1894	3
Yorkshire	1:10,560	1907	4
Yorkshire	1:10,560	1930	5
Yorkshire	1:10,560	1932 - 1933	6
Yorkshire	1:10,560	1938	7
Yorkshire	1:10,560	1938 - 1948	8
Yorkshire	1:10,560	1948	9
Ordnance Survey Plan	1:10,000	1956	10
Ordnance Survey Plan	1:10,000	1965 - 1966	11
Ordnance Survey Plan	1:10,000	1973	12
Ordnance Survey Plan	1:10,000	1980 - 1983	13
Ordnance Survey Plan	1:10,000	1991 - 1993	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2015	16

Historical Map - Slice A



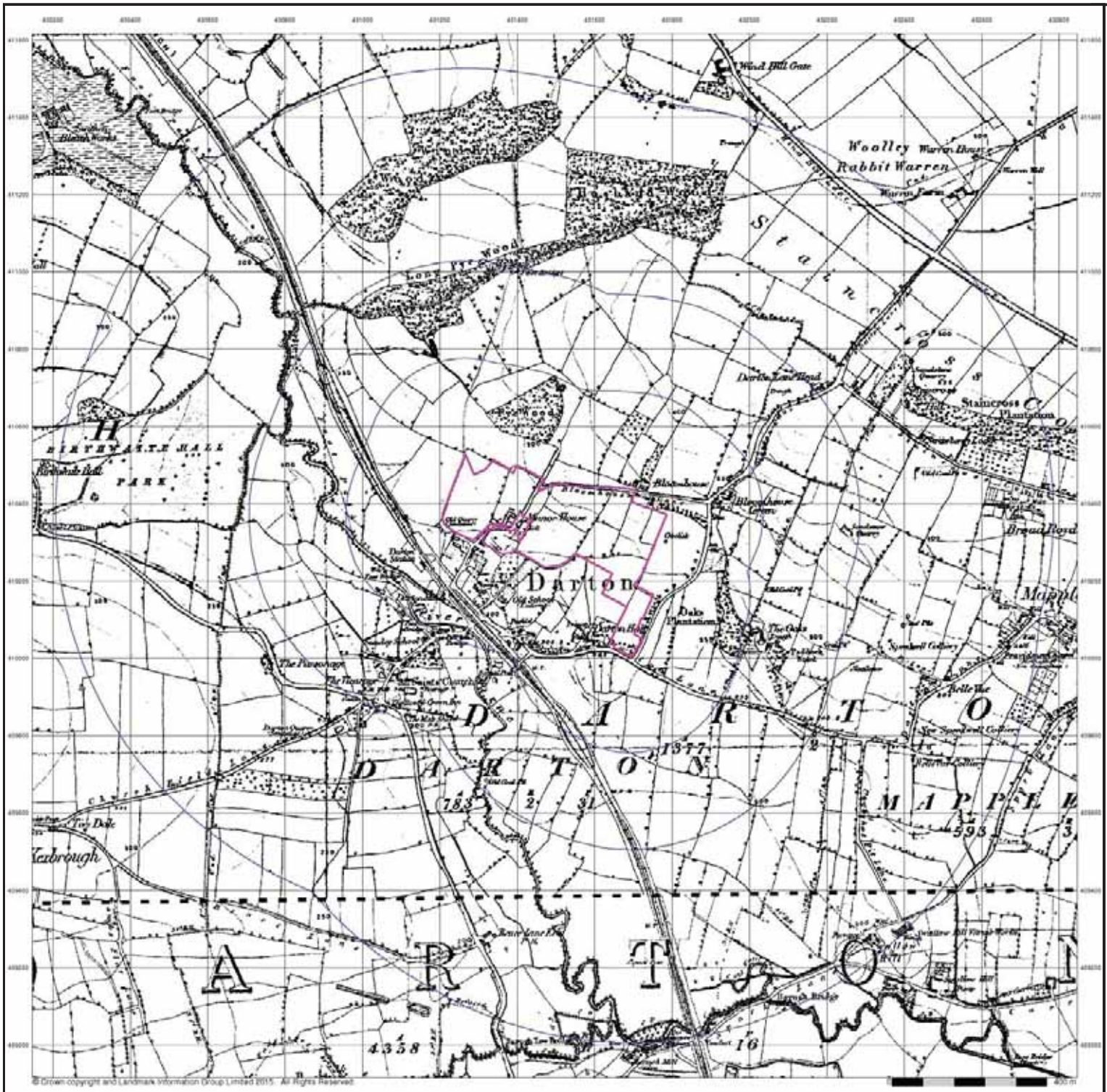
Order Details

Order Number: 77520900_1_1
Customer Ref: 301645
National Grid Reference: 431520, 410300
Slice: A
Site Area (Ha): 11.89
Search Buffer (m): 1000

Site Details

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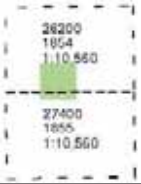
Yorkshire

Published 1854 - 1855

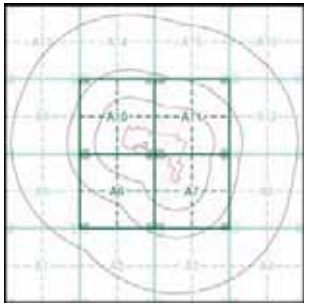
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



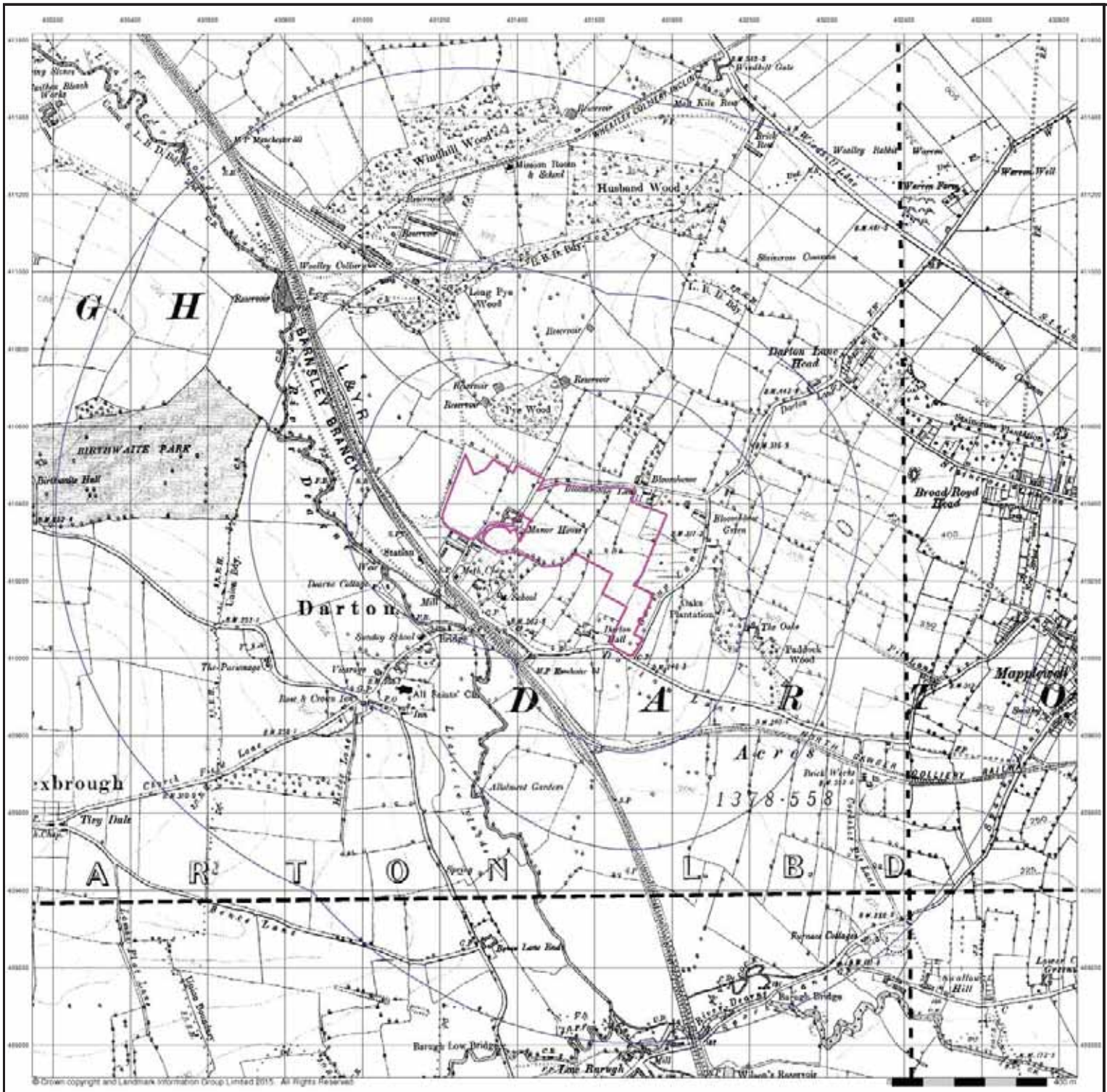
Order Details

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National Grid Reference:	431520, 410300
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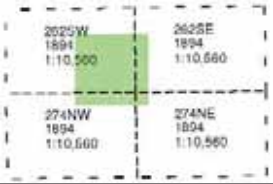
Yorkshire

Published 1894

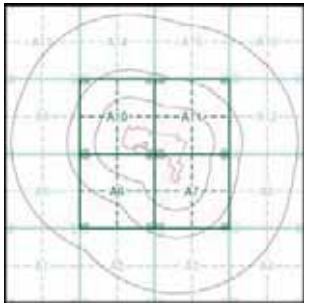
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



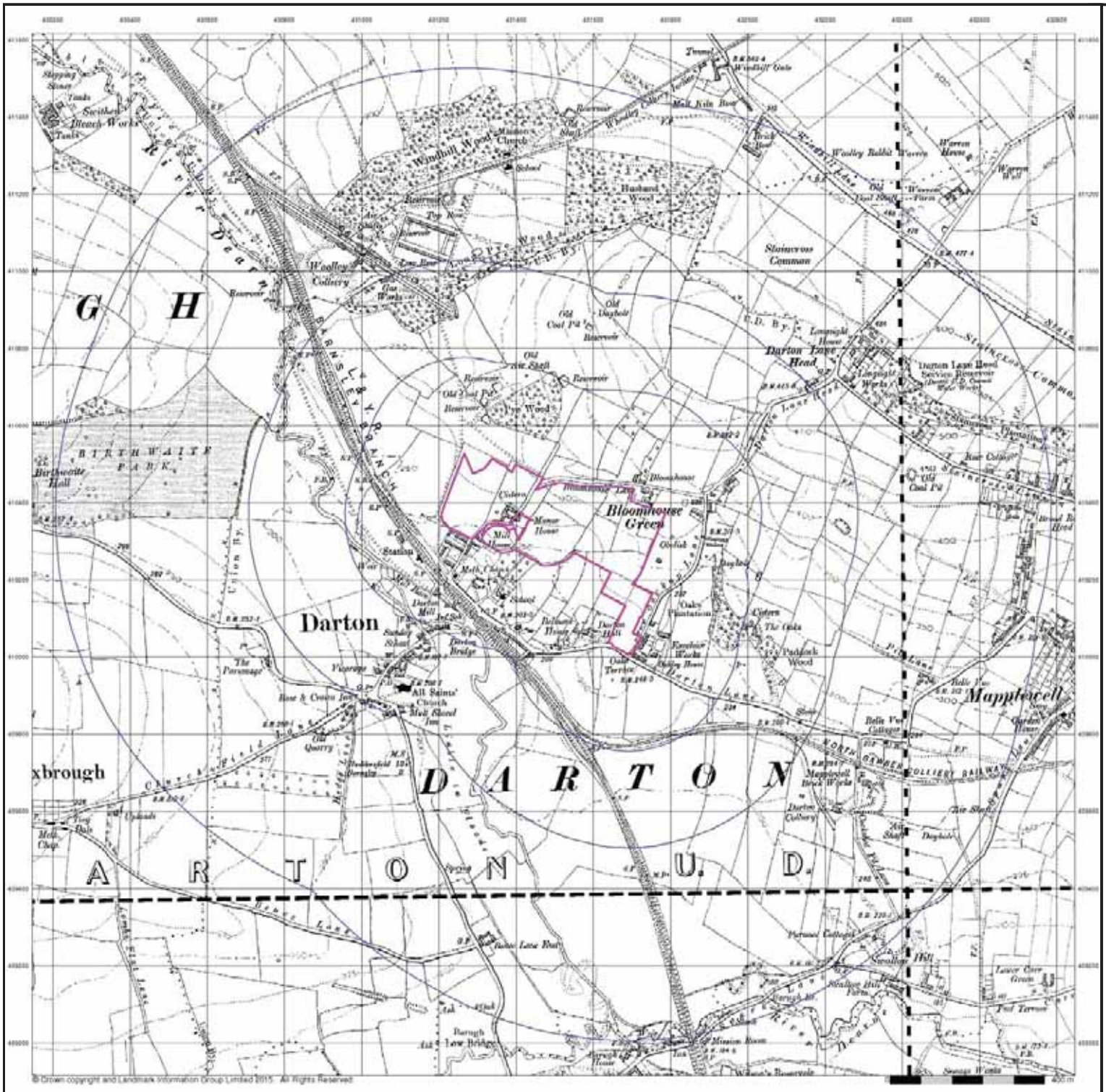
Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

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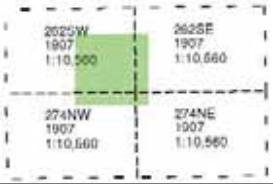
Yorkshire

Published 1907

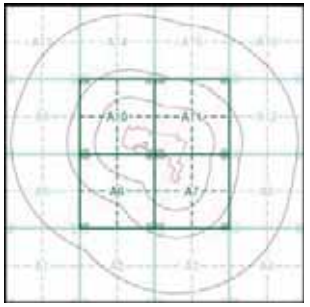
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

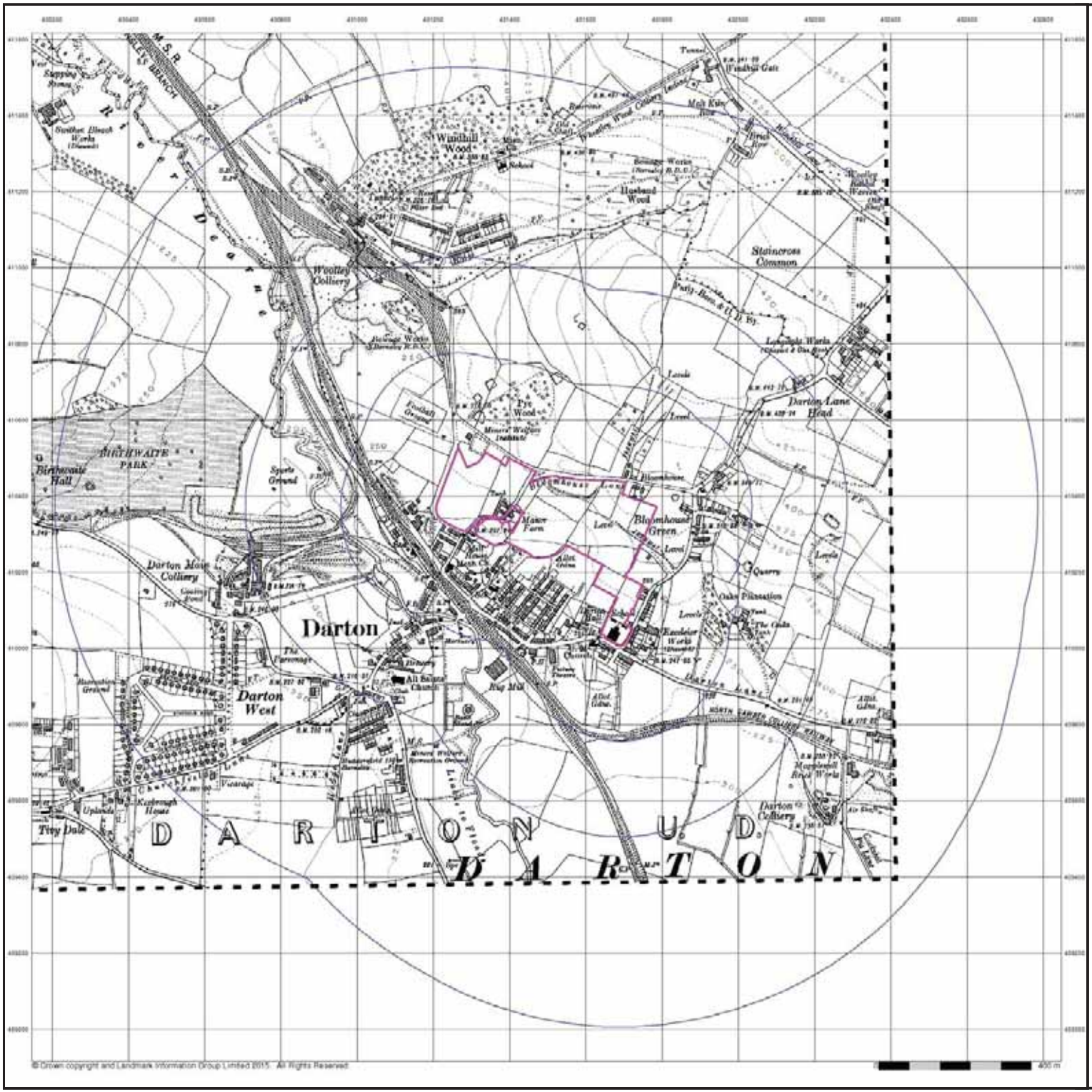
Order Number:	77520900_1_1
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Landmark

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Yorkshire

Published 1930

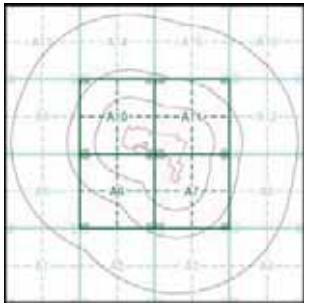
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



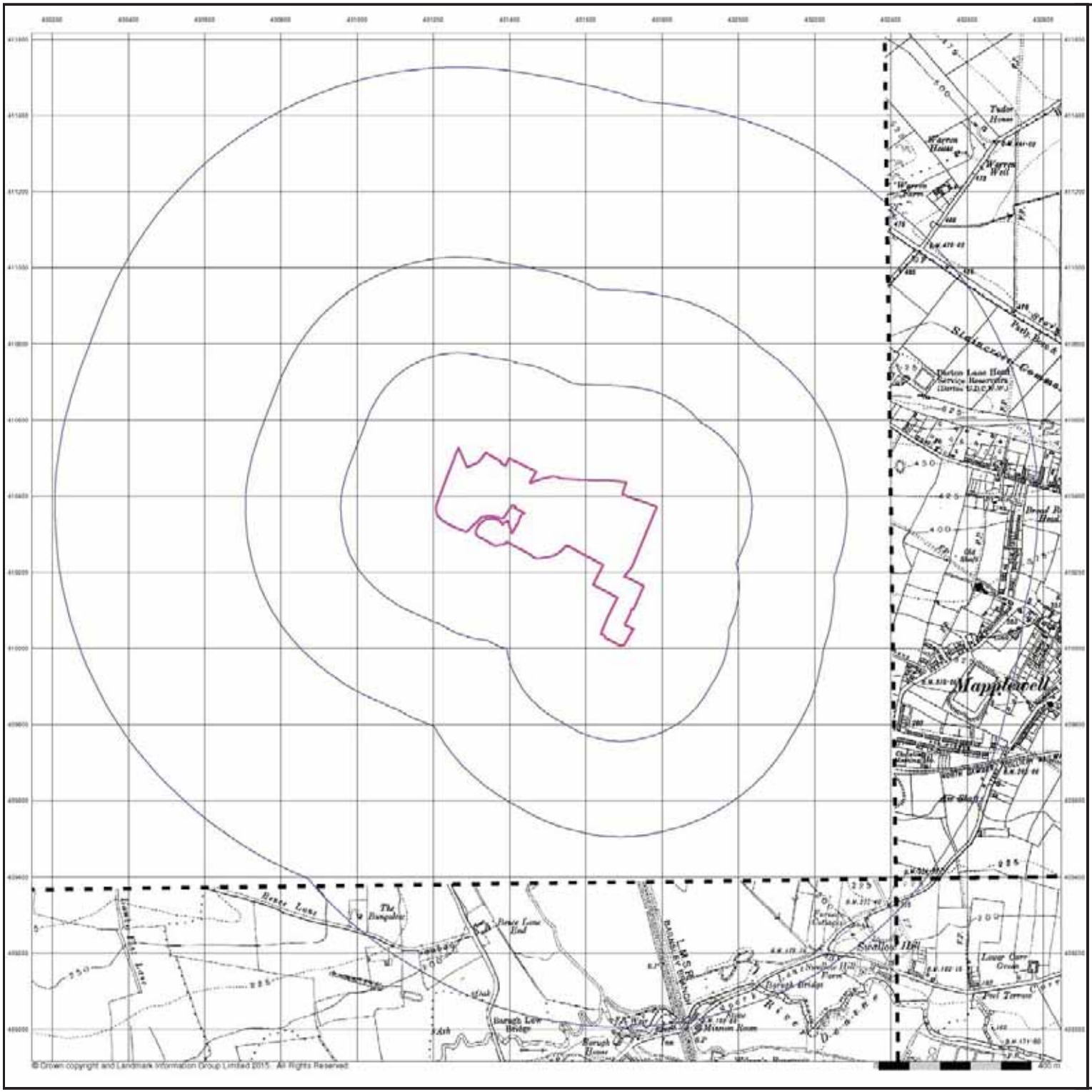
Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
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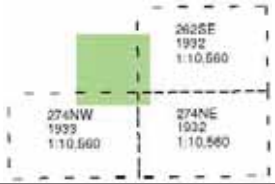
Yorkshire

Published 1932 - 1933

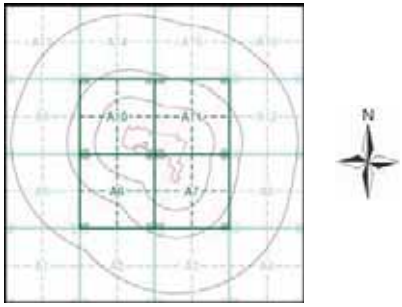
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



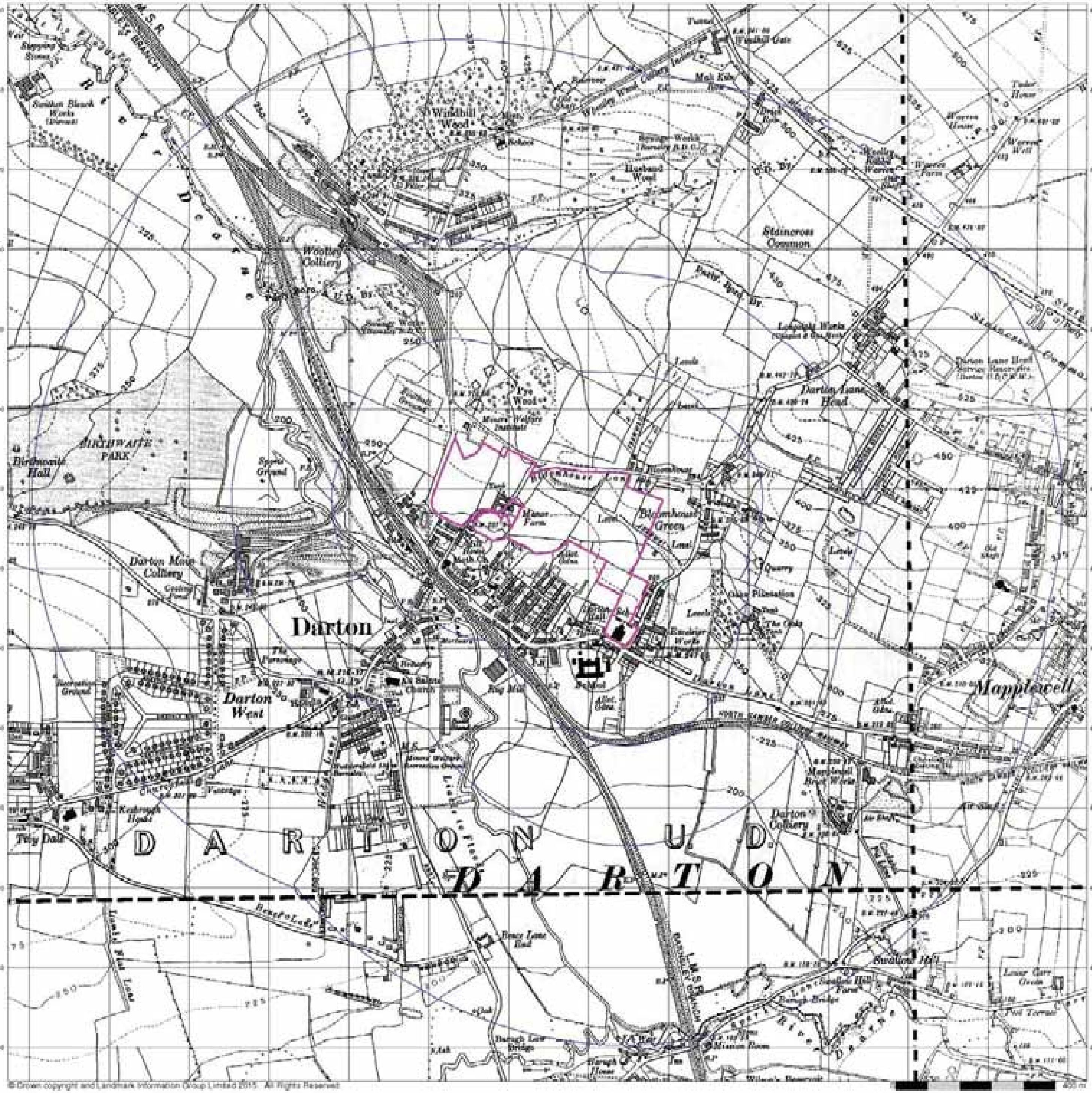
Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
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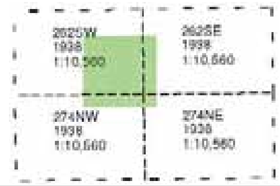
Yorkshire

Published 1938

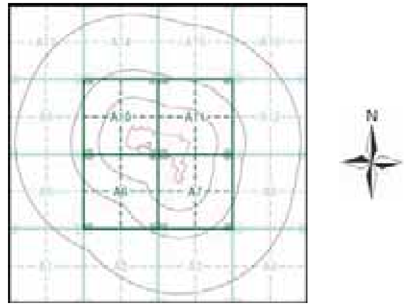
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 77520900_1_1
Customer Ref: 301645
National Grid Reference: 431520, 410300
Slice: A
Site Area (Ha): 11.89
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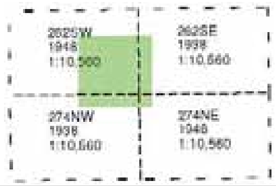
Yorkshire

Published 1938 - 1948

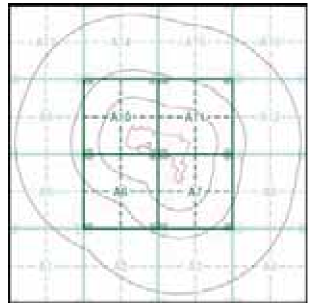
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



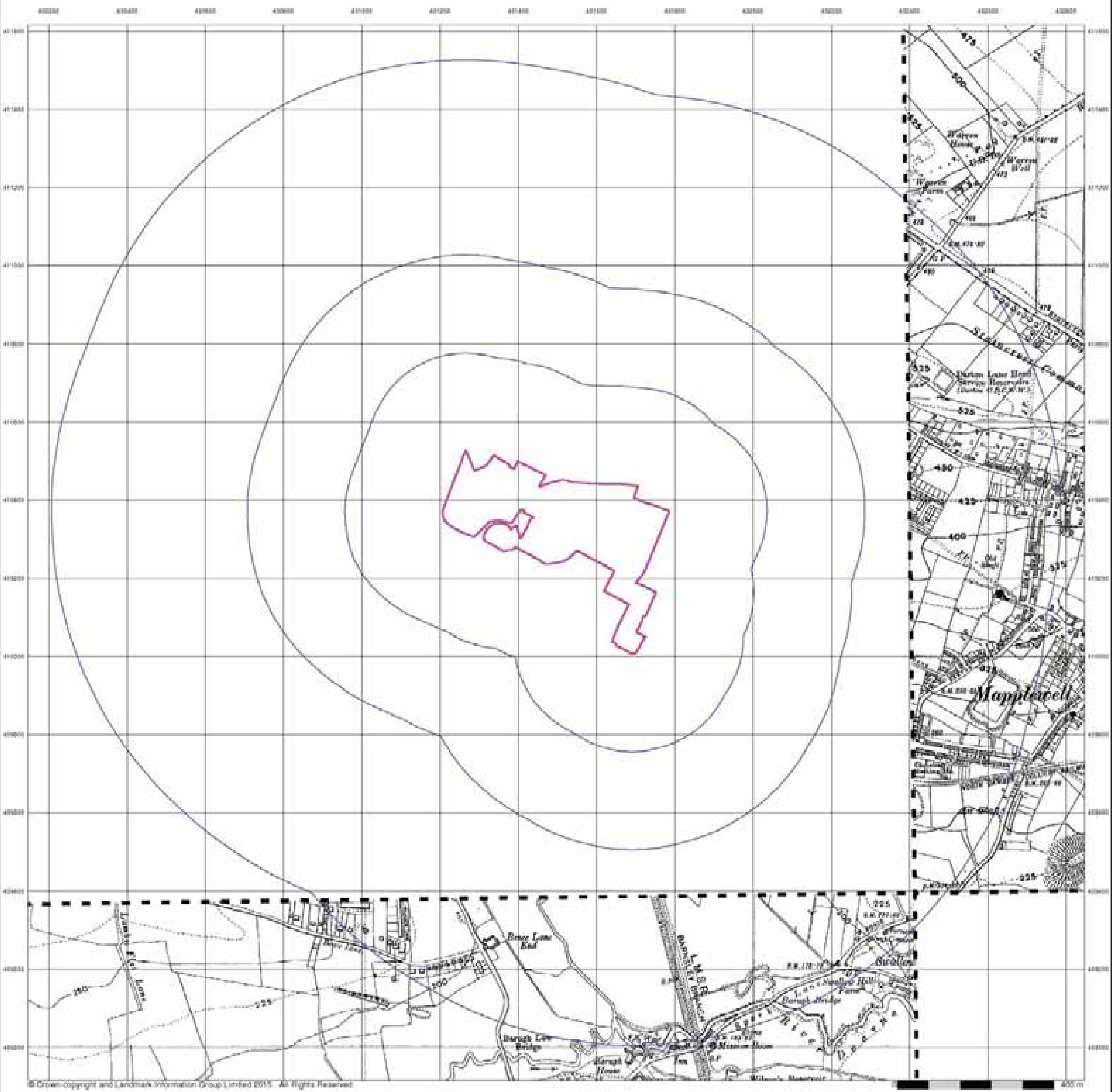
Order Details

Order Number: 77520900_1_1
Customer Ref: 301645
National Grid Reference: 431520, 410300
Slice: A
Site Area (Ha): 11.89
Search Buffer (m): 1000

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

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



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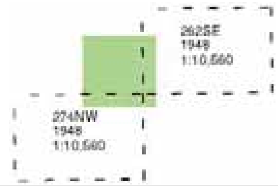
Yorkshire

Published 1948

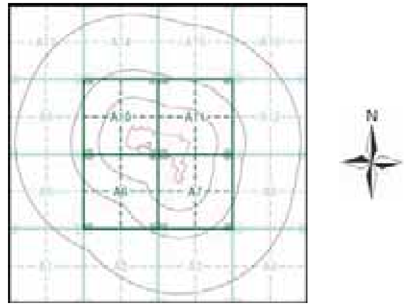
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 77520900_1_1
Customer Ref: 301645
National Grid Reference: 431520, 410300
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Ordnance Survey Plan

Published 1956

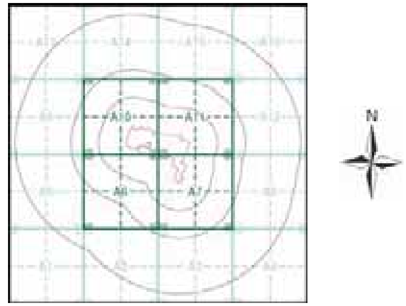
Source map scale - 1:10,000

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



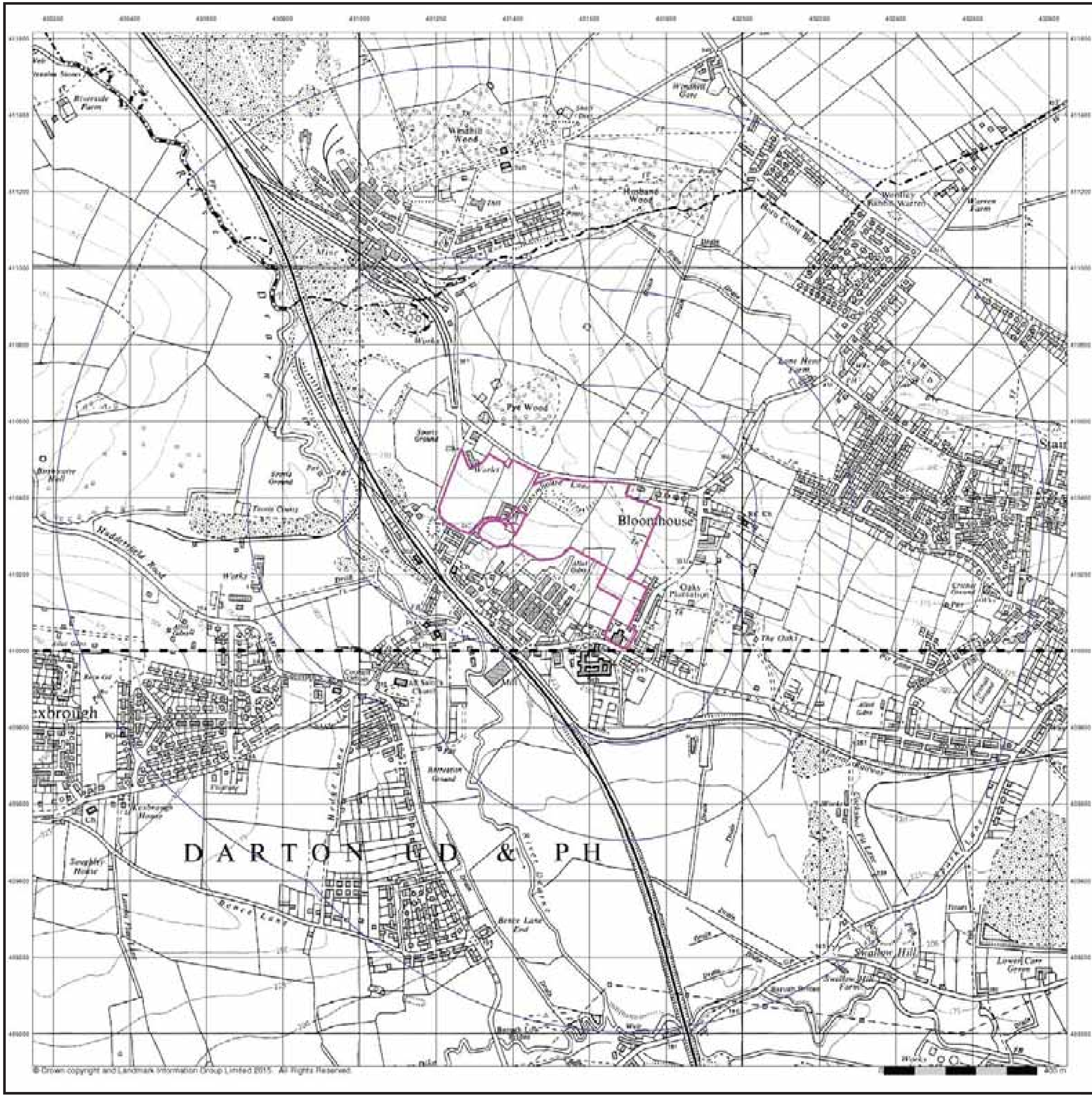
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Ordnance Survey Plan

Published 1965 - 1966

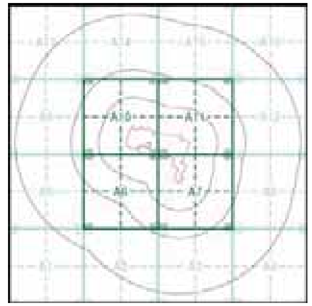
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



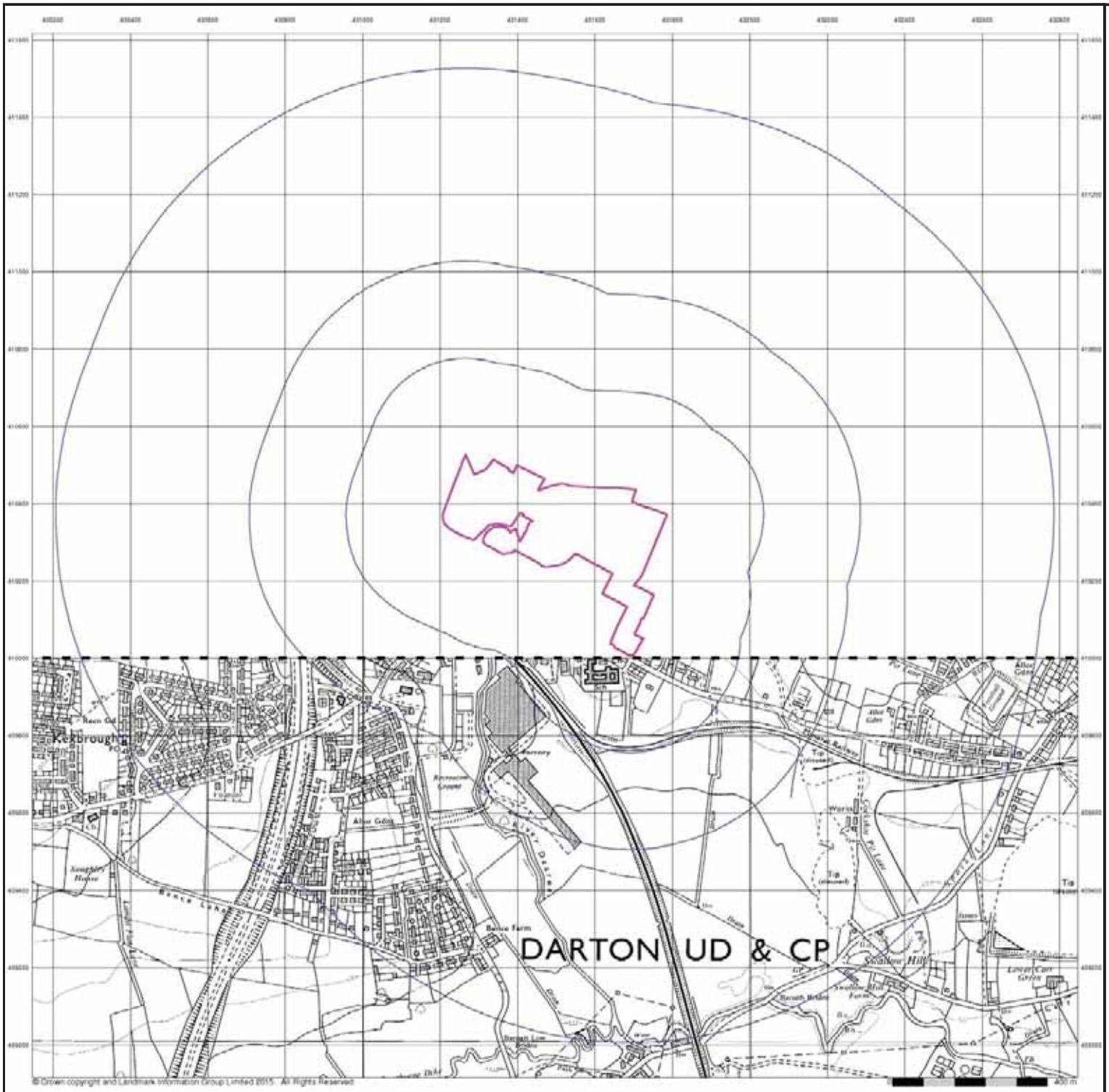
Order Details

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Customer Ref: 301645
National Grid Reference: 431520, 410300
Slice: A
Site Area (Ha): 11.89
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RSK

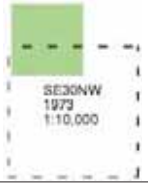
Ordnance Survey Plan

Published 1973

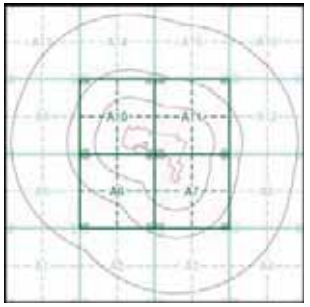
Source map scale - 1:10,000

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

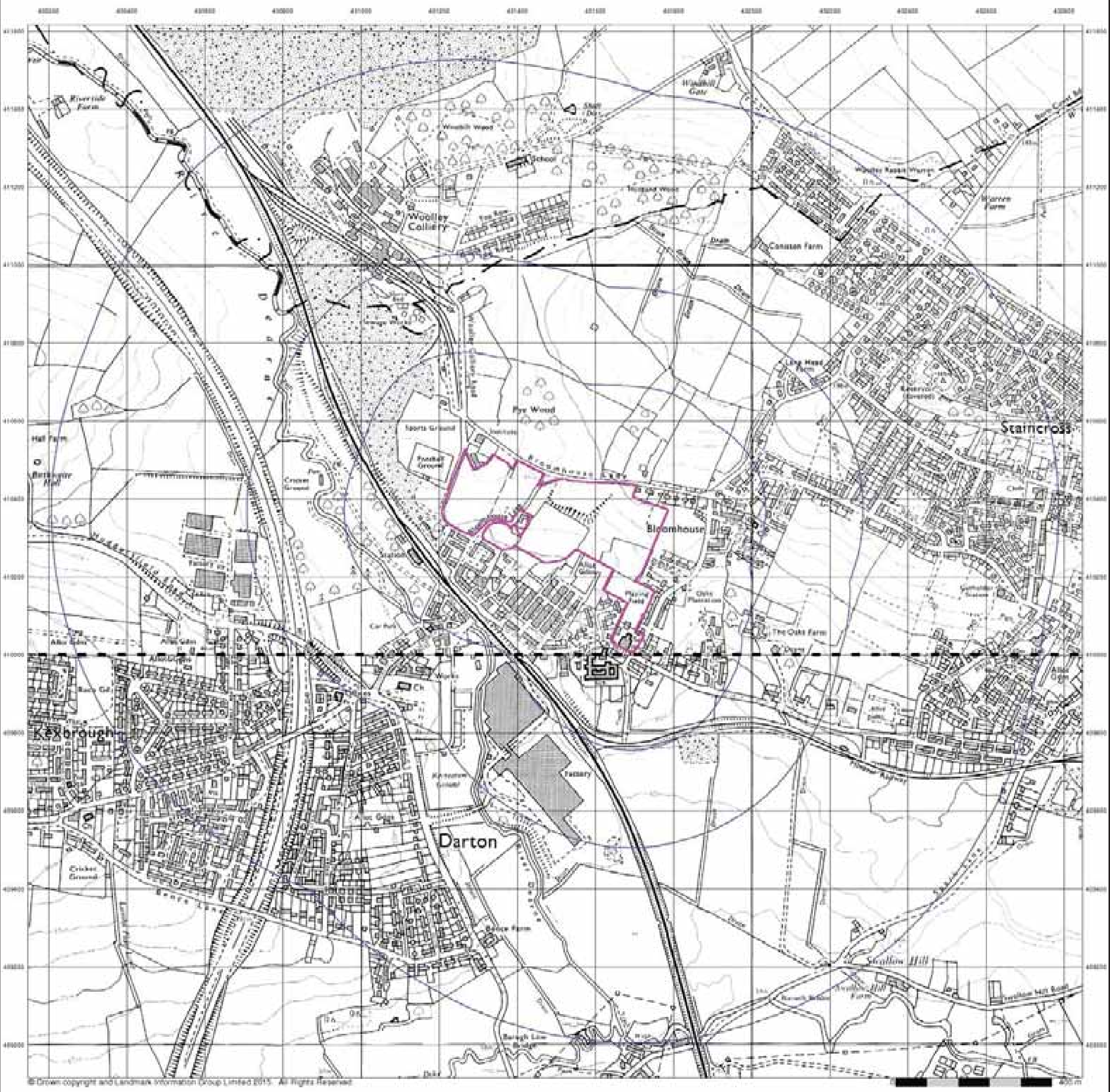
Order Number:	77520900_1_1
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Search Buffer (m):	1000

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Ordnance Survey Plan

Published 1980 - 1983

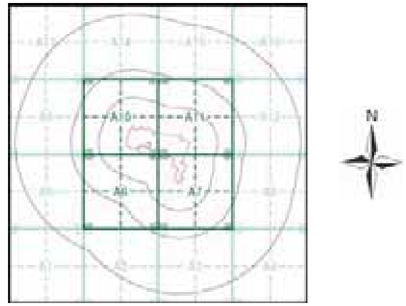
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

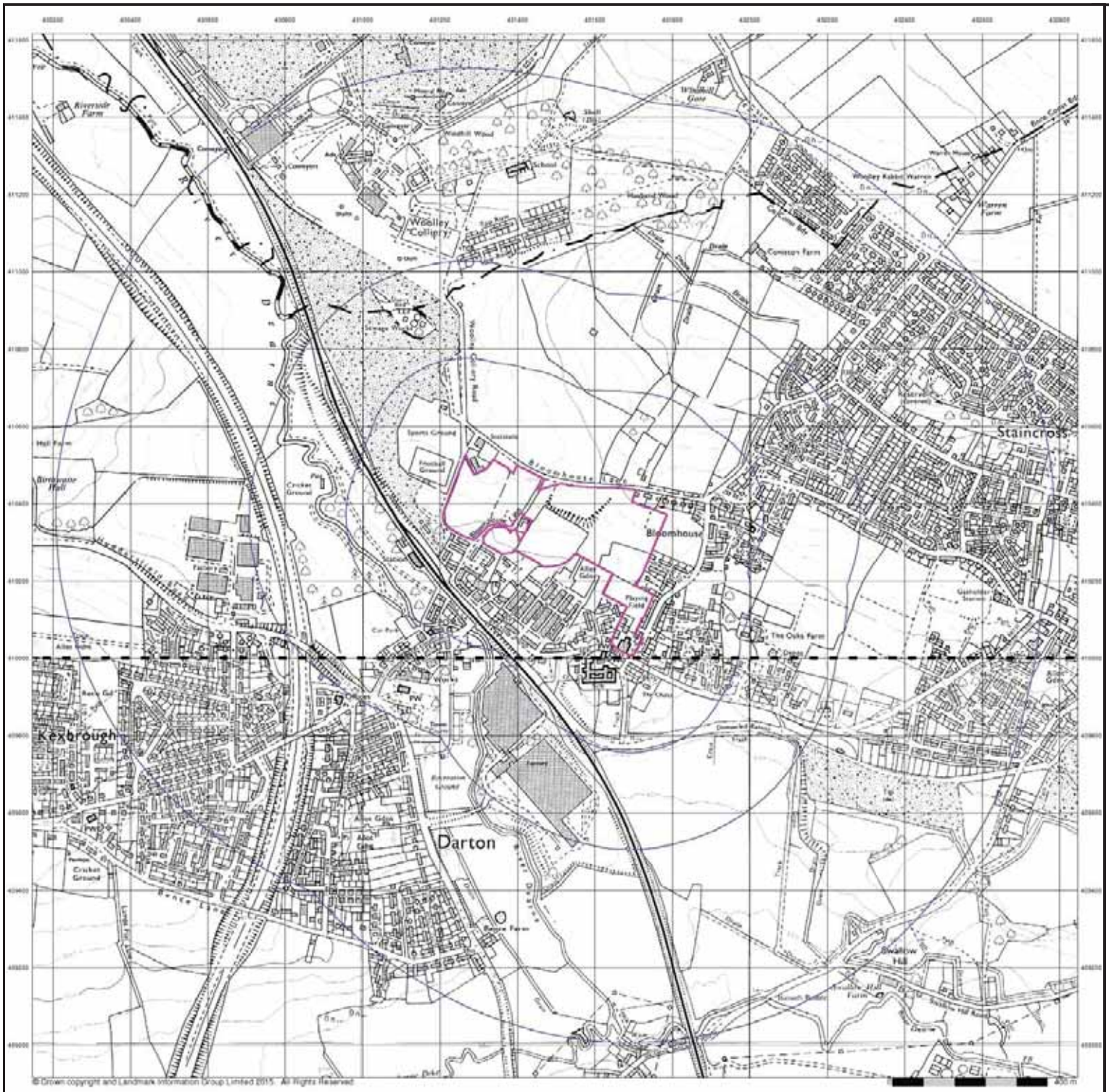
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Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan

Published 1991 - 1993

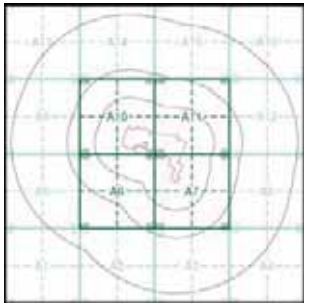
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



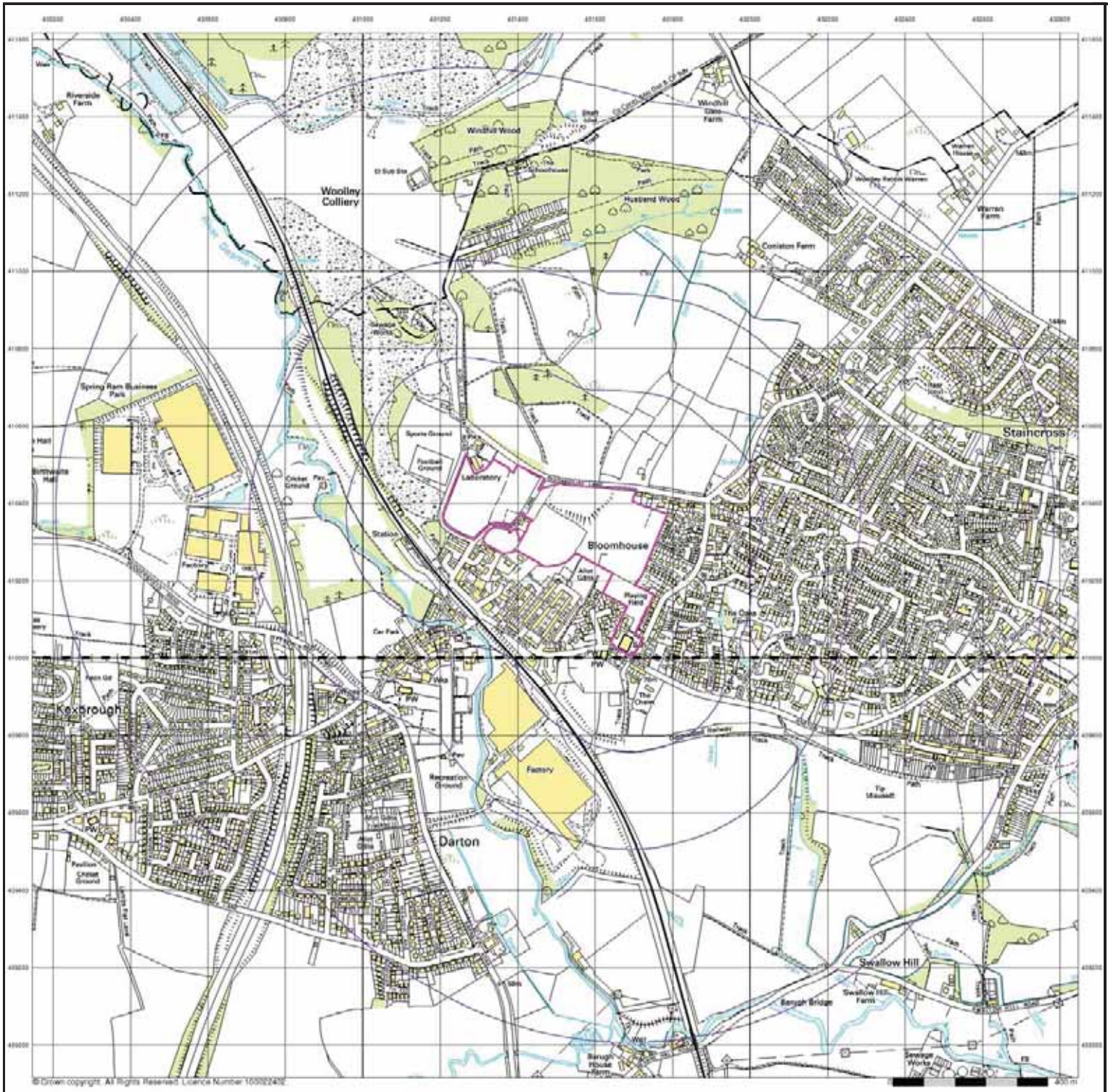
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Order Number:	77520900_1_1
Customer Ref:	301645
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Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	1000

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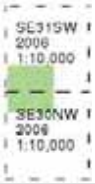
10k Raster Mapping

Published 2006

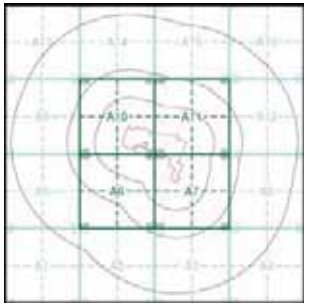
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



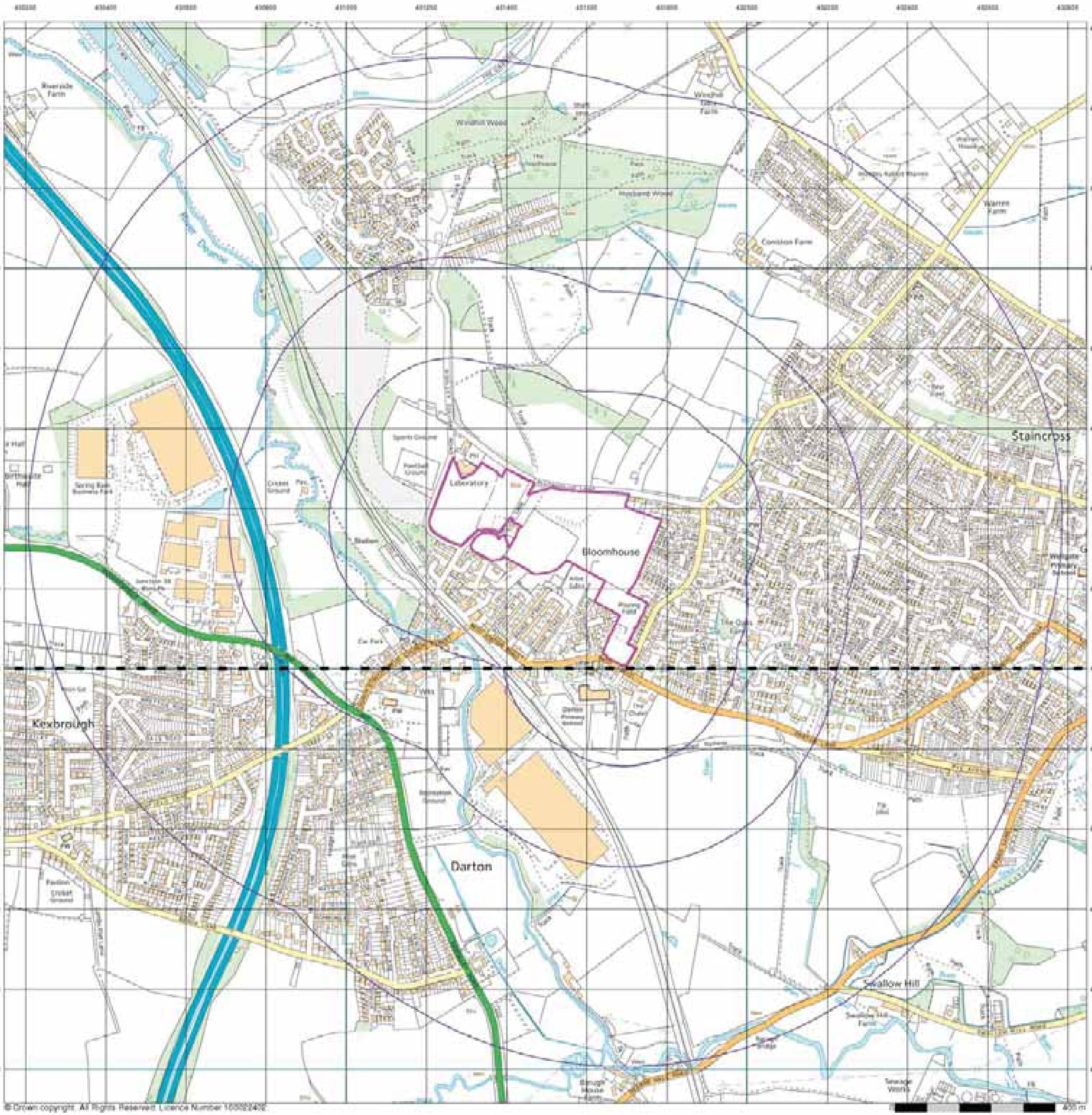
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Customer Ref:	301645
National Grid Reference:	431520, 410300
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Site Area (Ha):	11.89
Search Buffer (m):	1000

Site Details

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VectorMap Local

Published 2015

Source map scale - 1:10,000

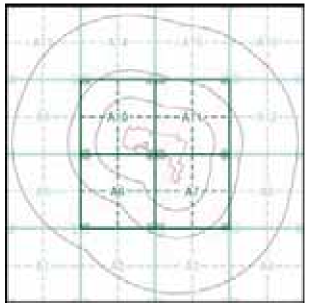
VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap 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)

SE31SW
2015
Variable

SE30NW
2016
Variable

Historical Map - Slice A



N

Order Details

Order Number: 77520900_1_1
Customer Ref: 301645
National Grid Reference: 431520, 410300
Slice: A
Site Area (Ha): 11.89
Search Buffer (m): 1000

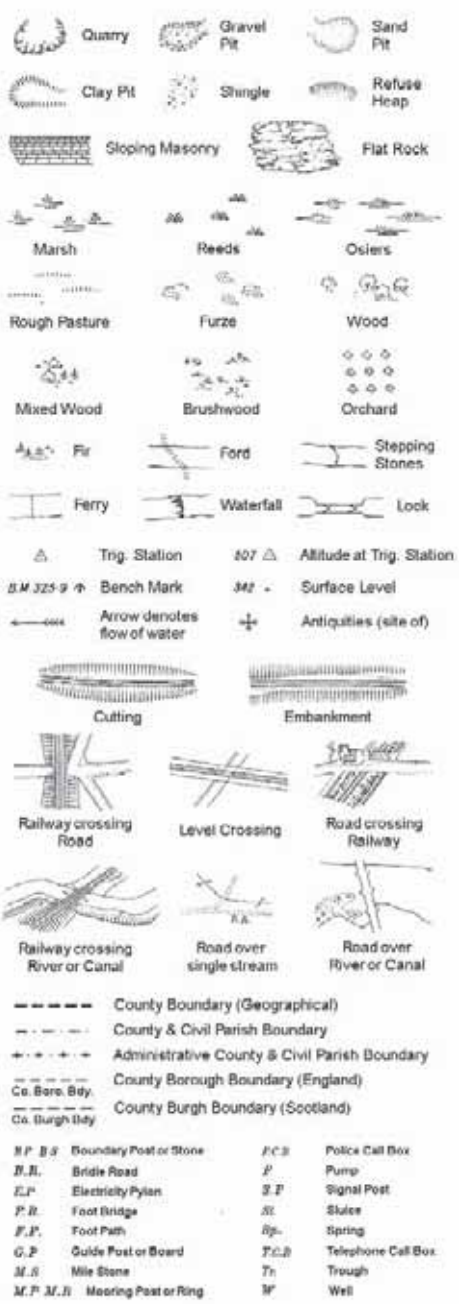
Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

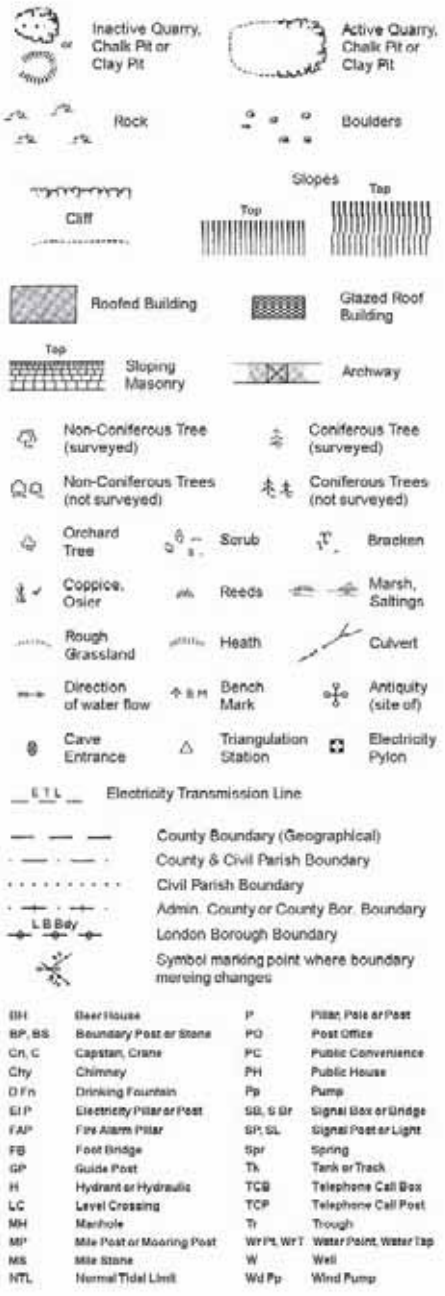
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Historical Mapping Legends

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



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



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

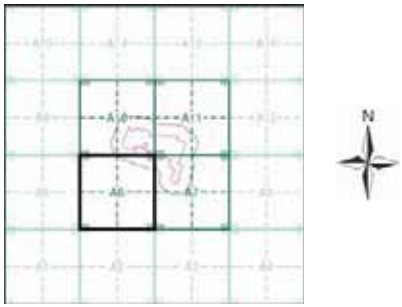


RSK

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1893	2
Yorkshire	1:2,500	1906	3
Yorkshire	1:2,500	1918	4
Ordnance Survey Plan	1:2,500	1961 - 1962	5
Ordnance Survey Plan	1:2,500	1970	6
Ordnance Survey Plan	1:1,250	1978	7
Additional SIMs	1:2,500	1989	8
Additional SIMs	1:1,250	1990 - 1991	9
Additional SIMs	1:1,250	1991	10
Large-Scale National Grid Data	1:1,250	1993	11
Large-Scale National Grid Data	1:1,250	1993 - 1994	12

Historical Map - Segment A6



Order Details

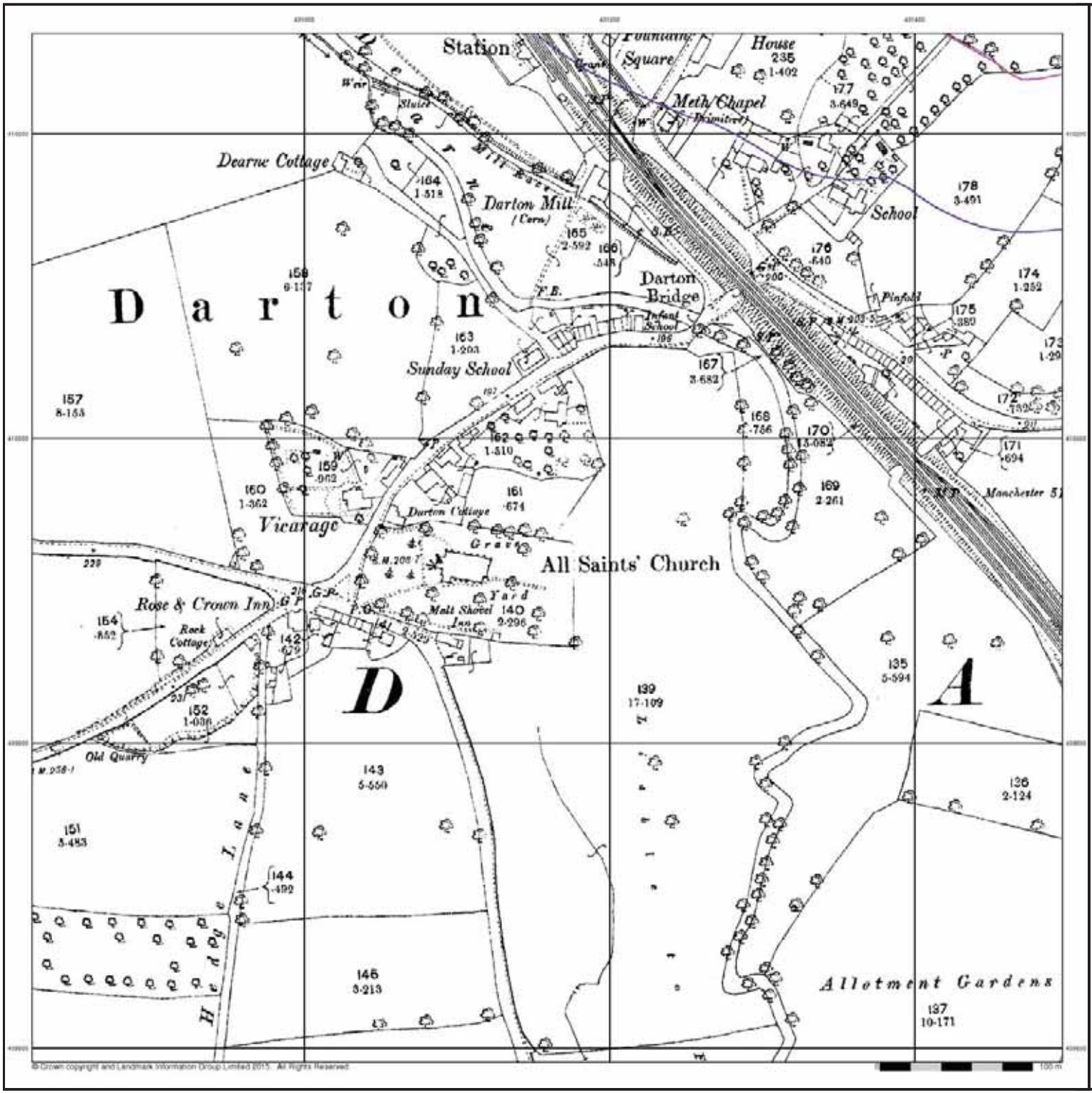
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Slice: A
Site Area (Ha): 11.89
Search Buffer (m): 100

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

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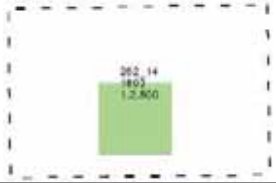
Yorkshire

Published 1893

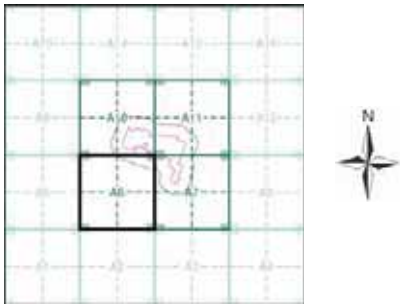
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A6



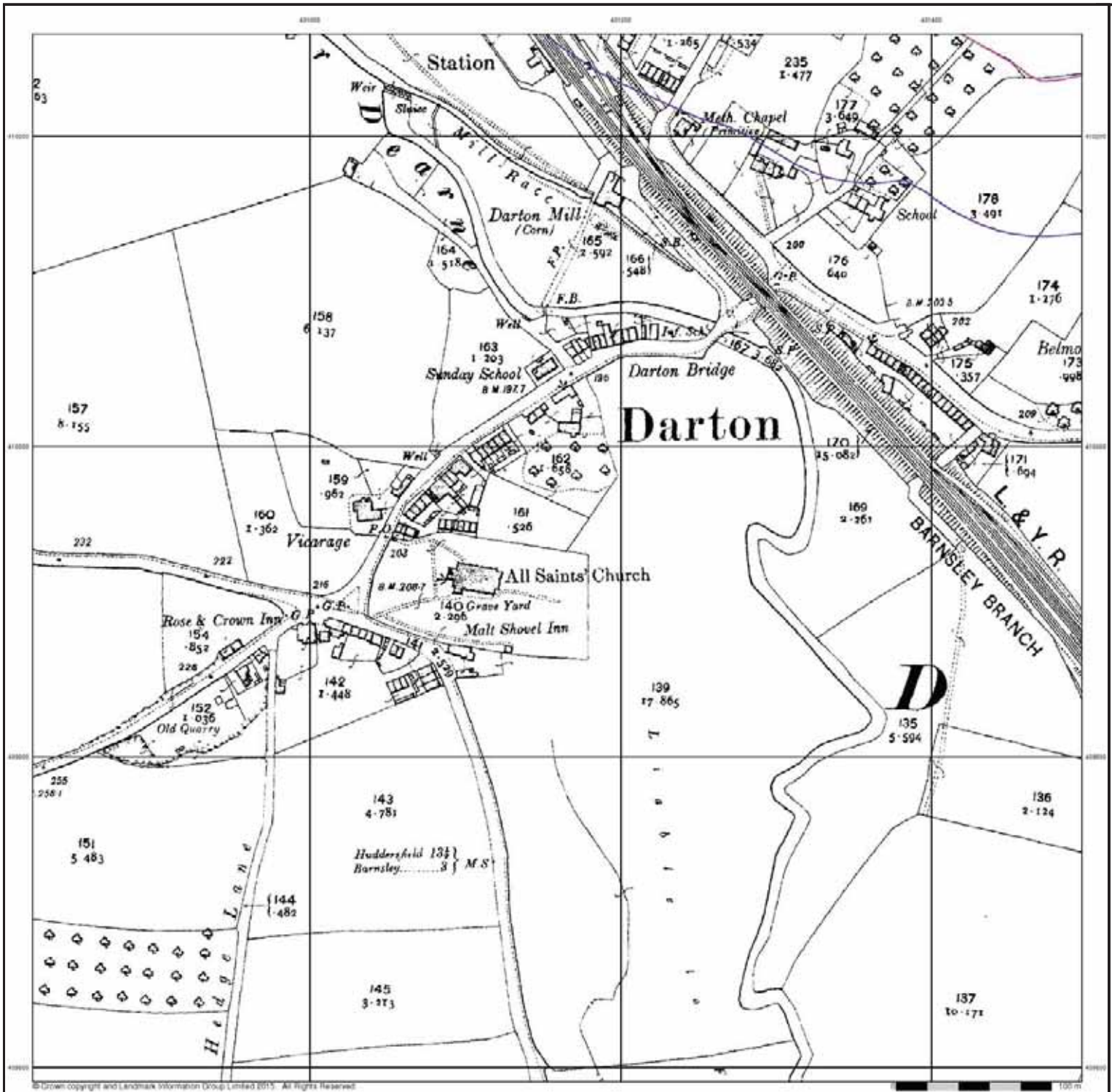
Order Details

Order Number:	77520900_1_1
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Slice:	A
Site Area (Ha):	11.89
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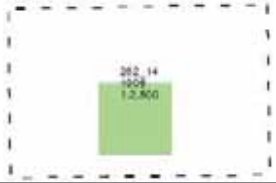
Yorkshire

Published 1906

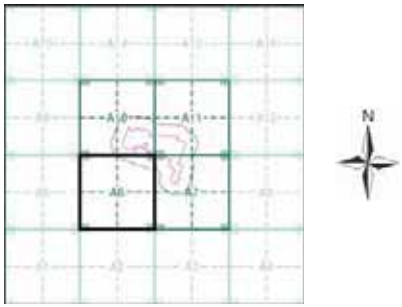
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A6



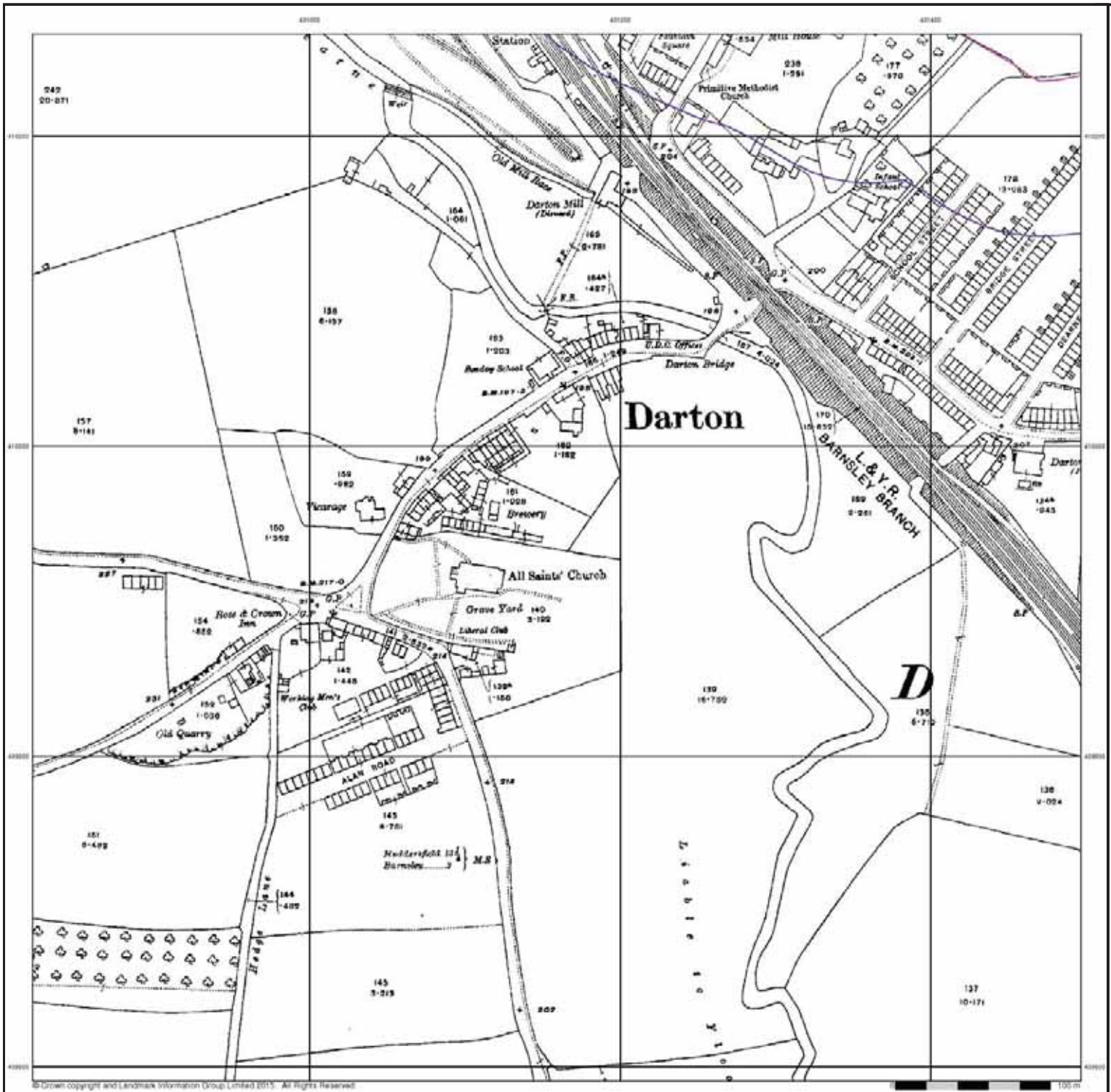
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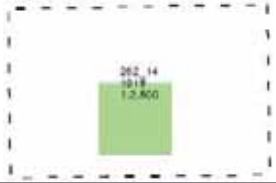
Yorkshire

Published 1918

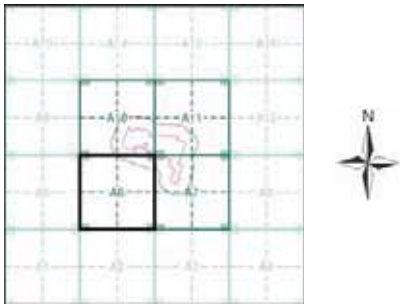
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A6



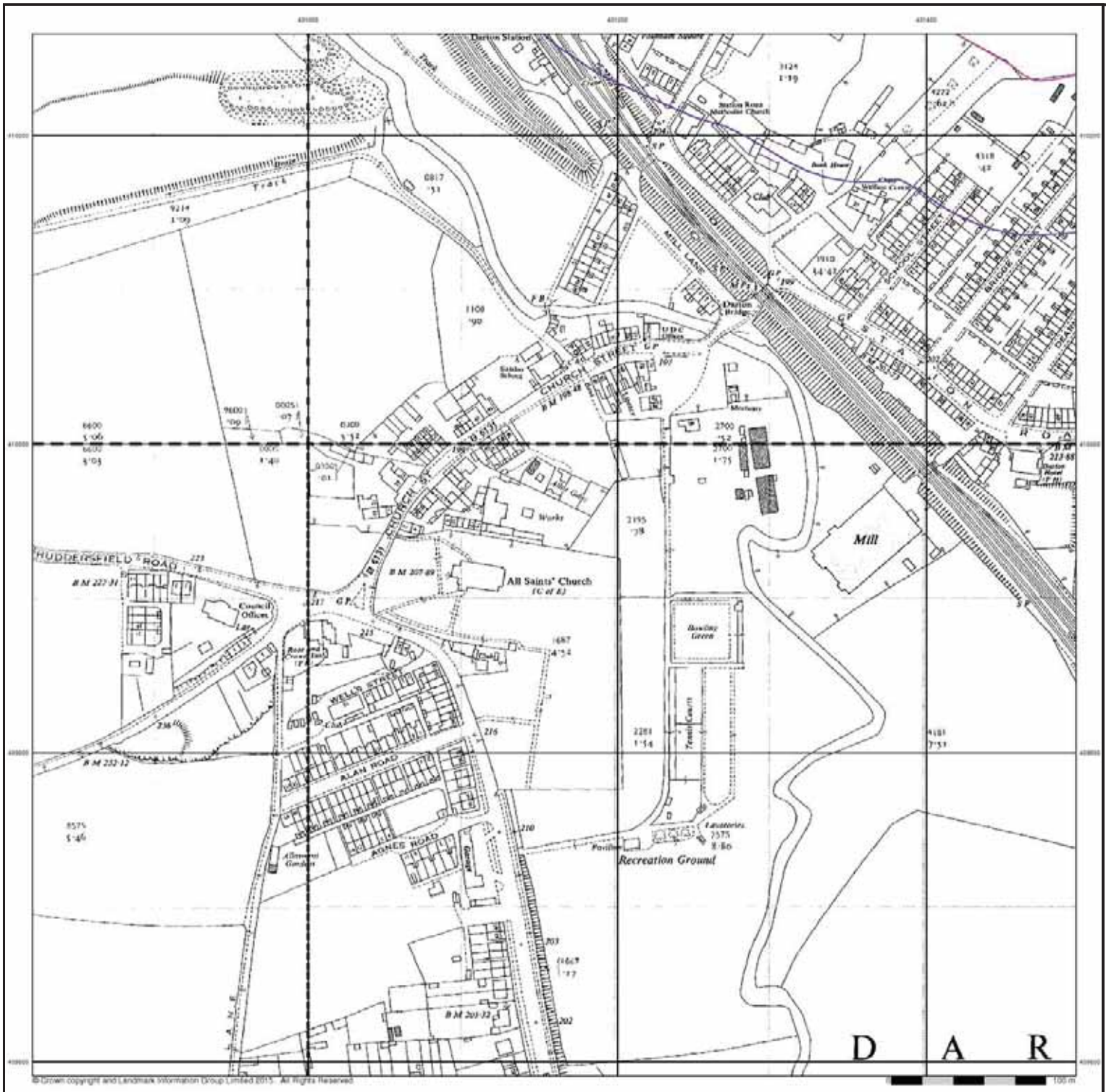
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Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	100

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

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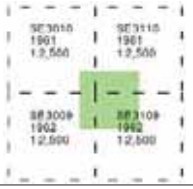
Ordnance Survey Plan

Published 1961 - 1962

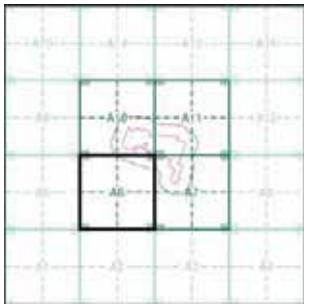
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A6



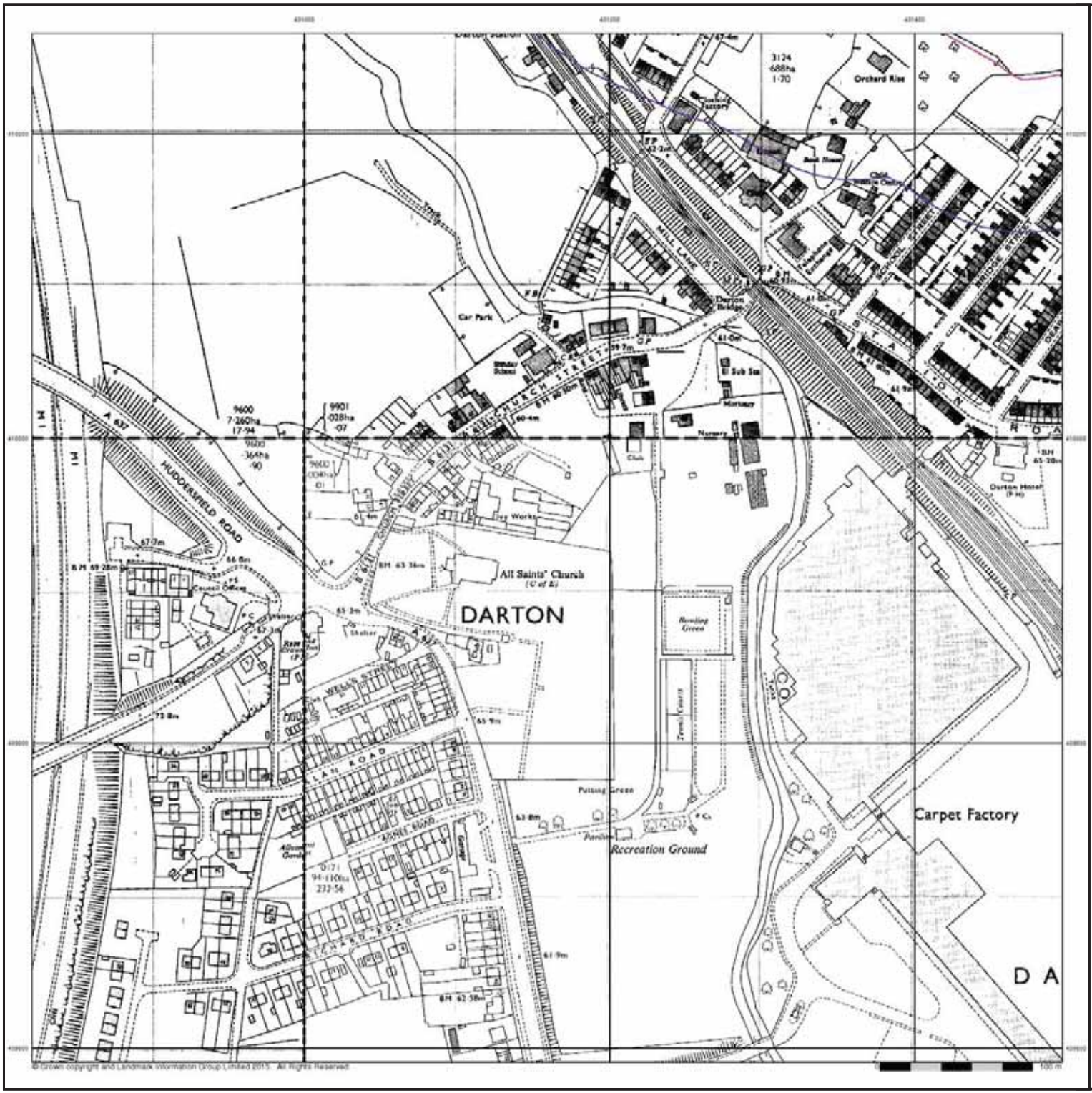
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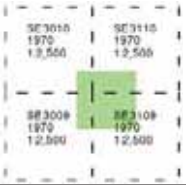
Ordnance Survey Plan

Published 1970

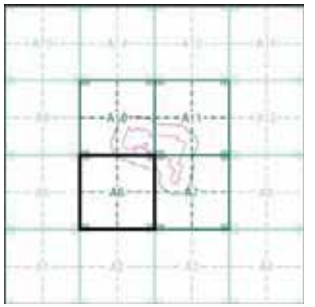
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A6



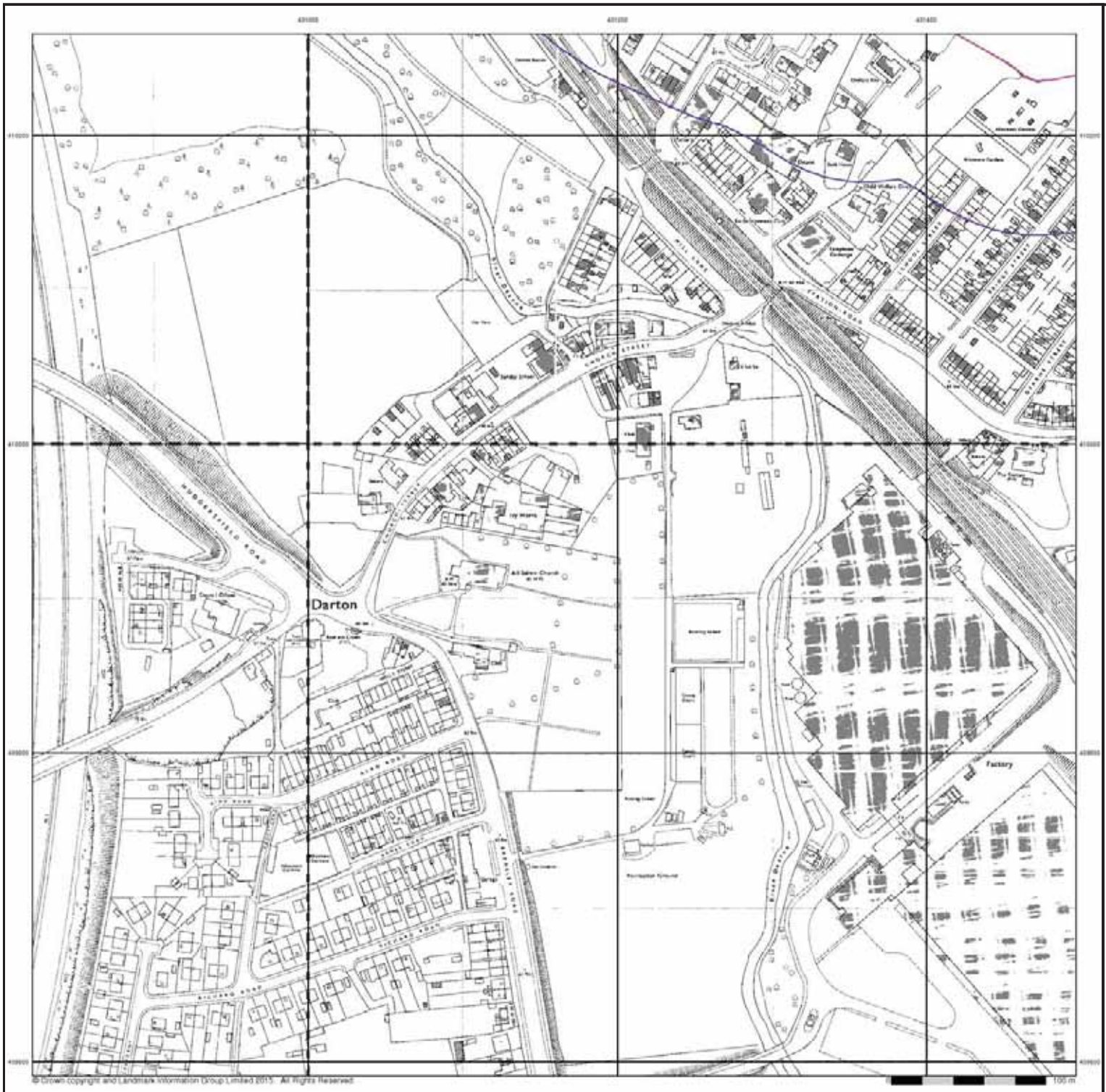
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Ordnance Survey Plan

Published 1978

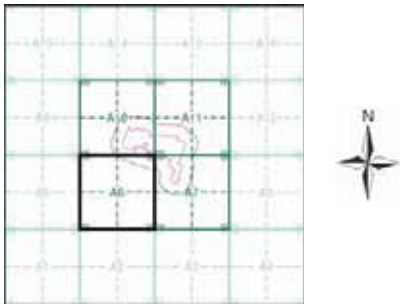
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A6



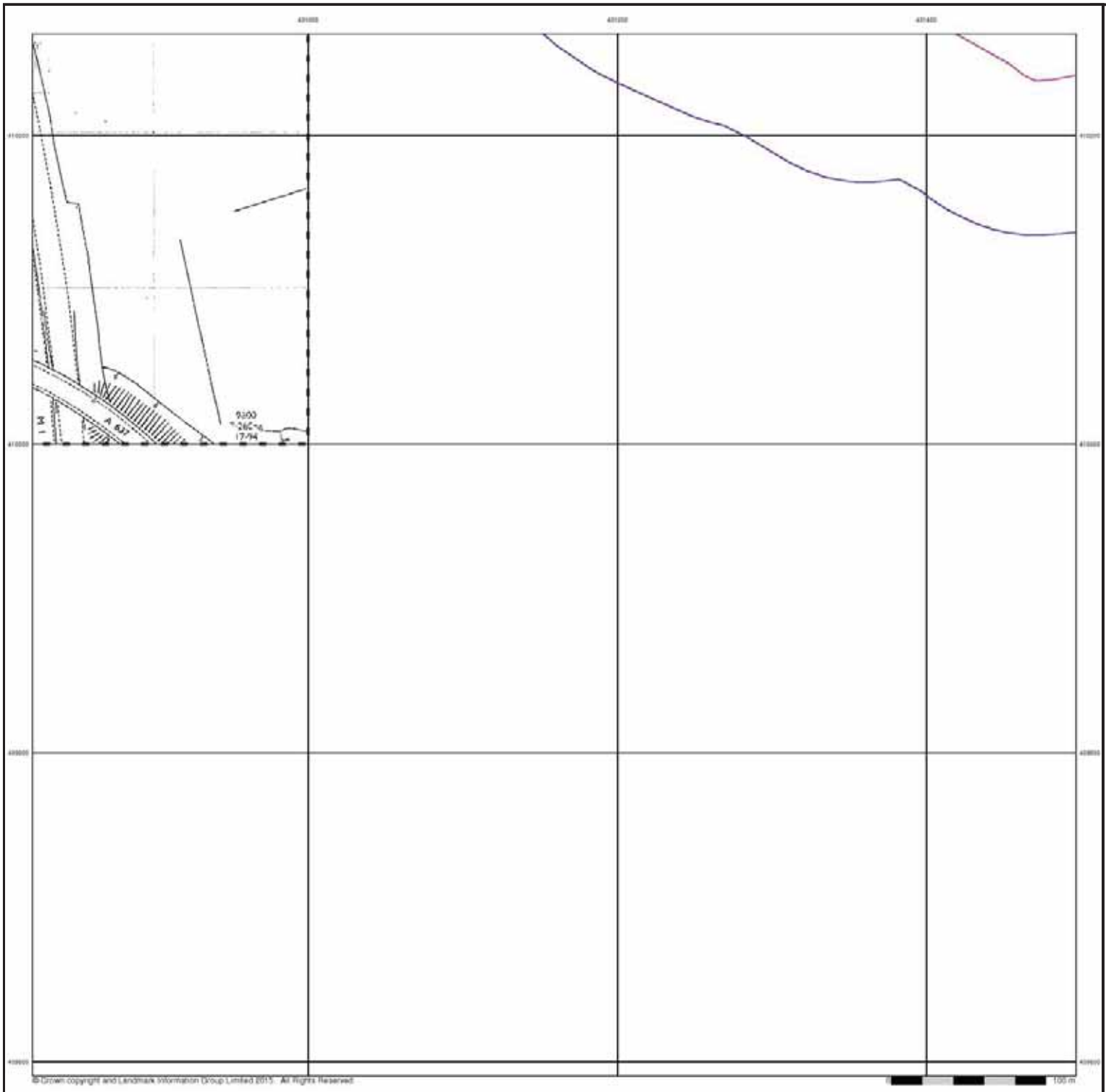
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Additional SIMs

Published 1989

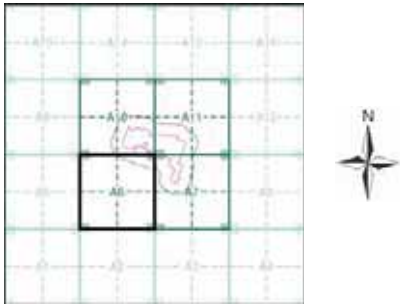
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A6



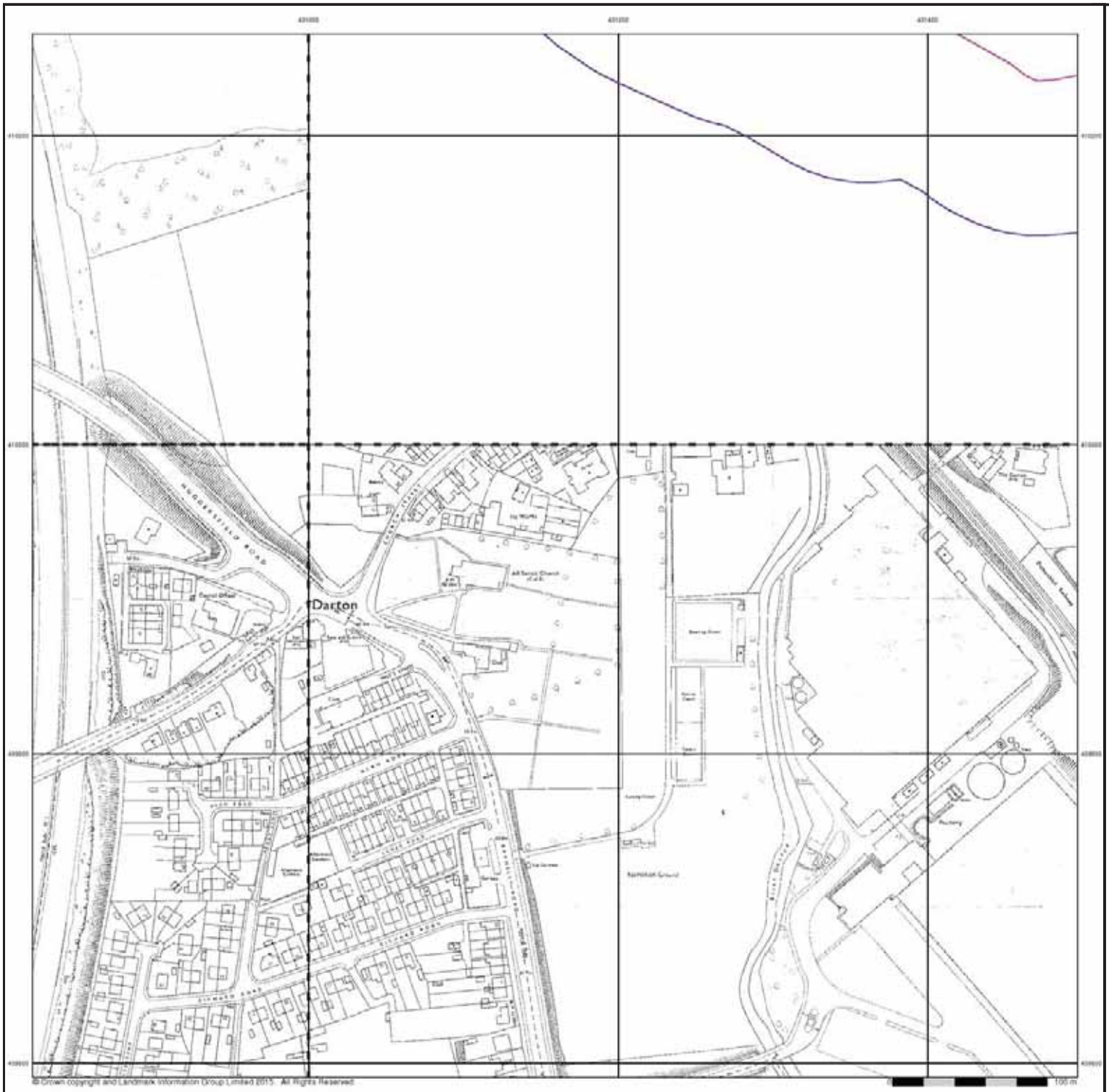
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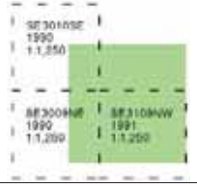
Additional SIMs

Published 1990 - 1991

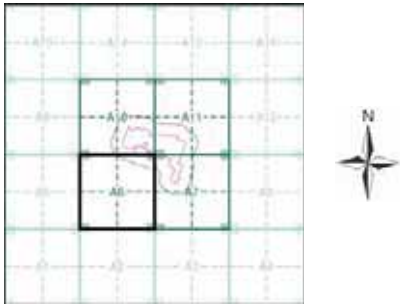
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A6



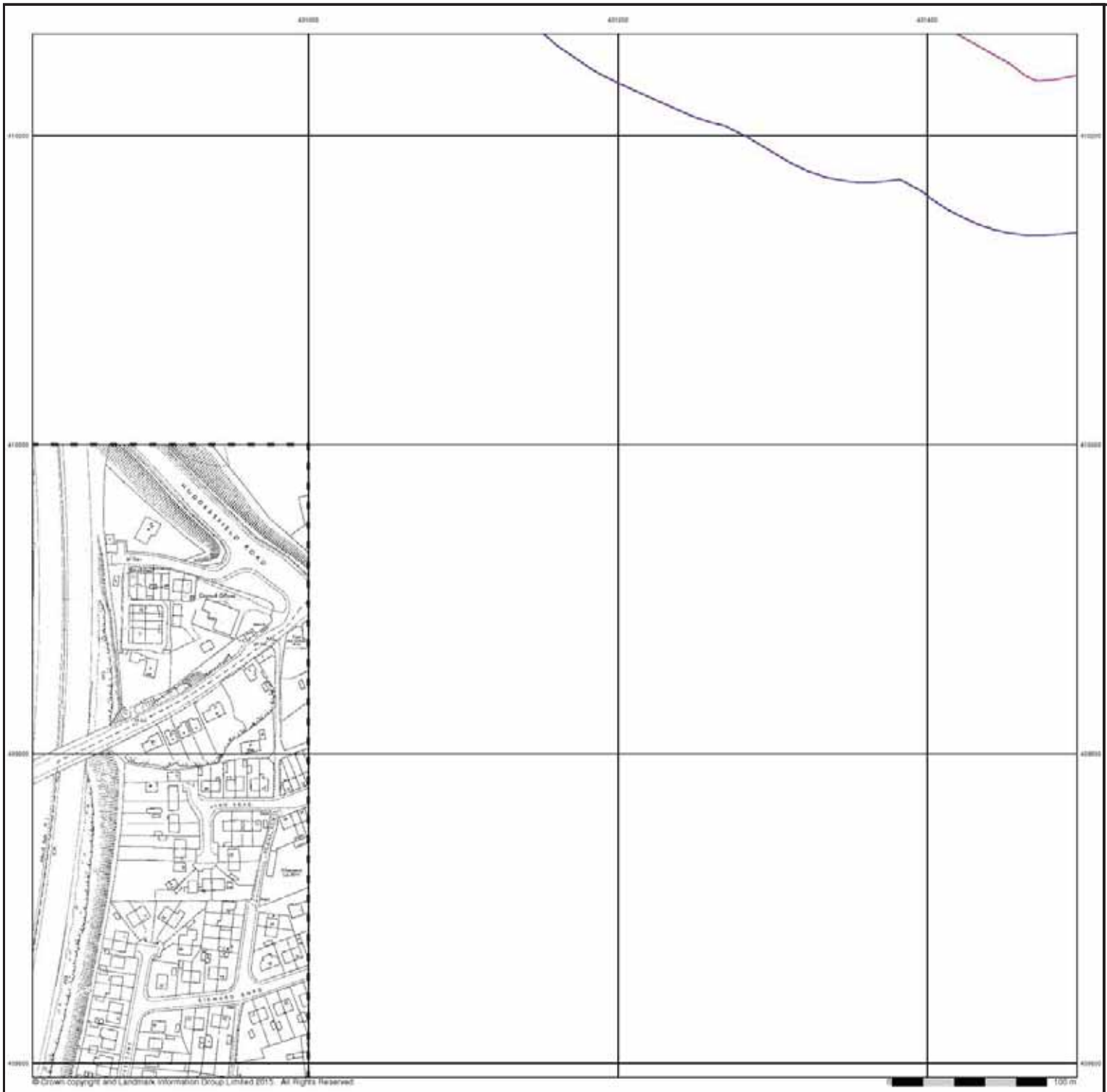
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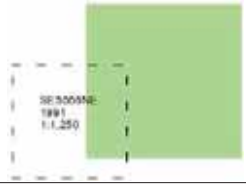
Additional SIMs

Published 1991

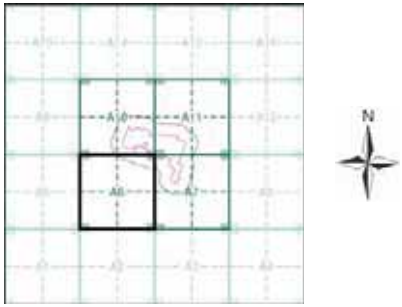
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A6



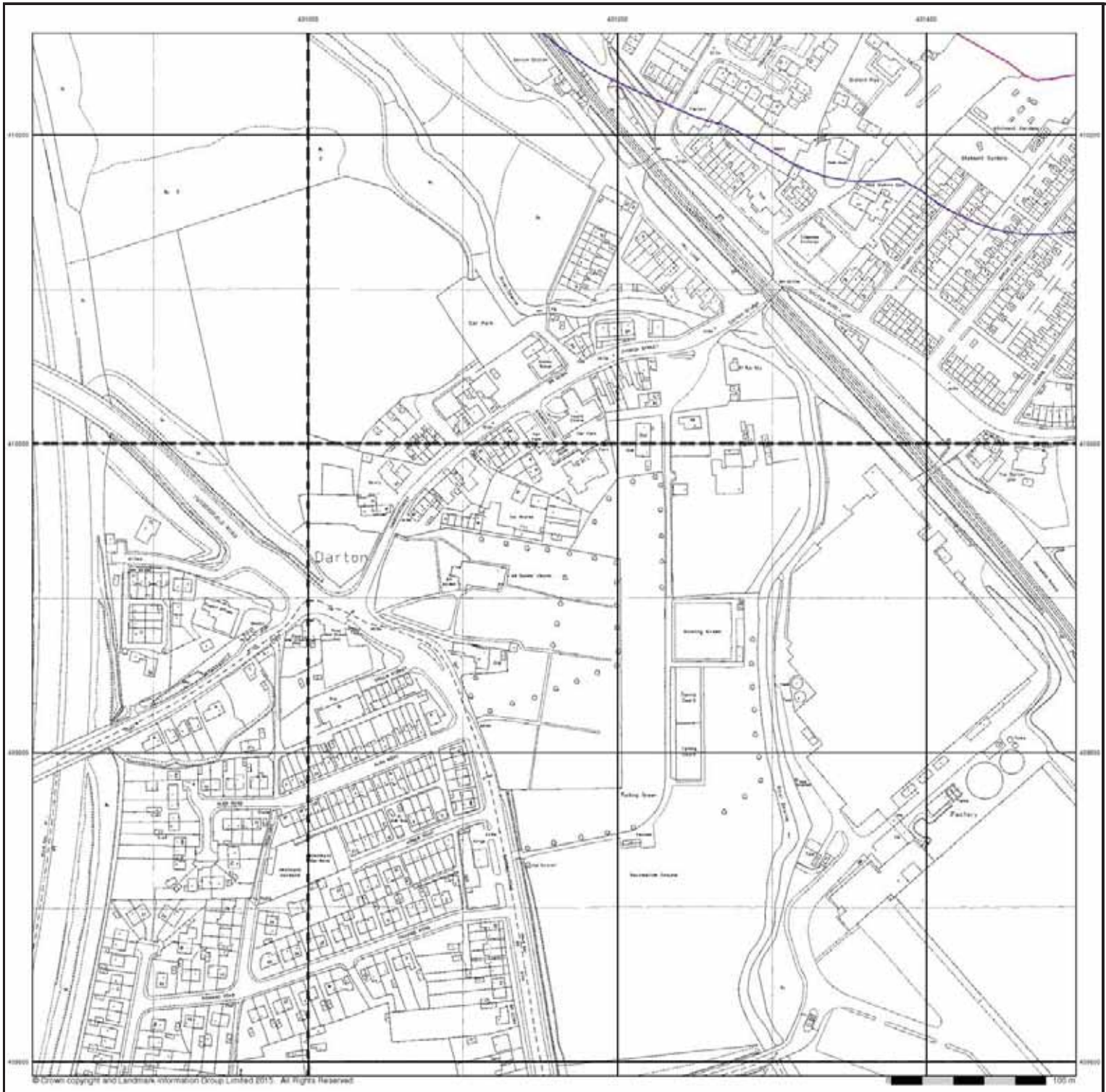
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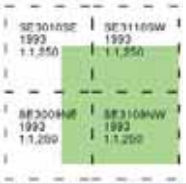
Large-Scale National Grid Data

Published 1993

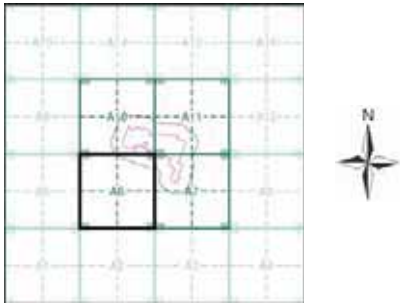
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A6



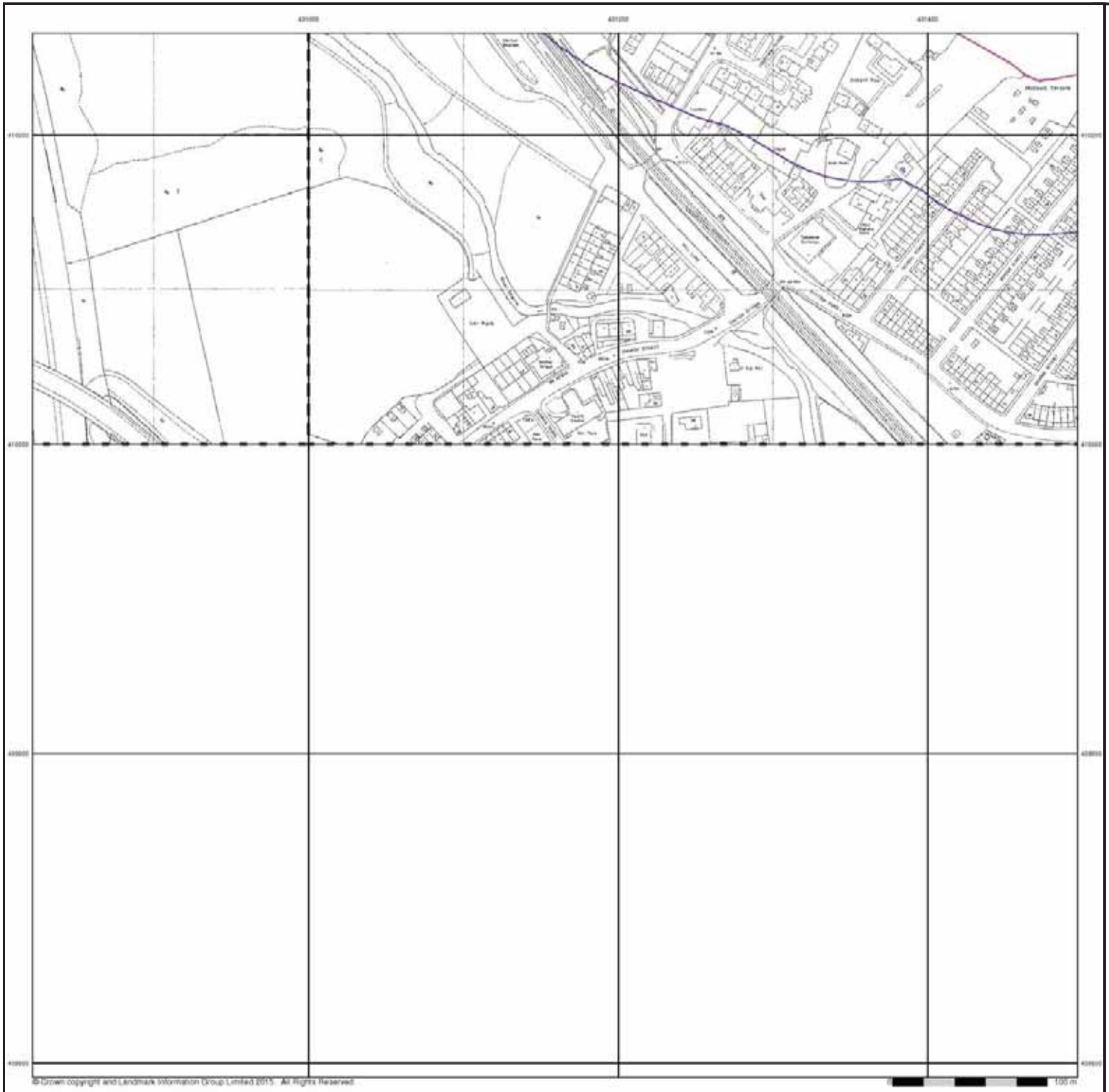
Order Details

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Slice:	A
Site Area (Ha):	11.89
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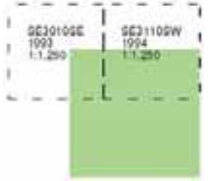
Large-Scale National Grid Data

Published 1993 - 1994

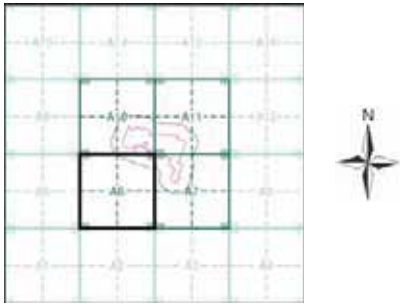
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A6



Order Details

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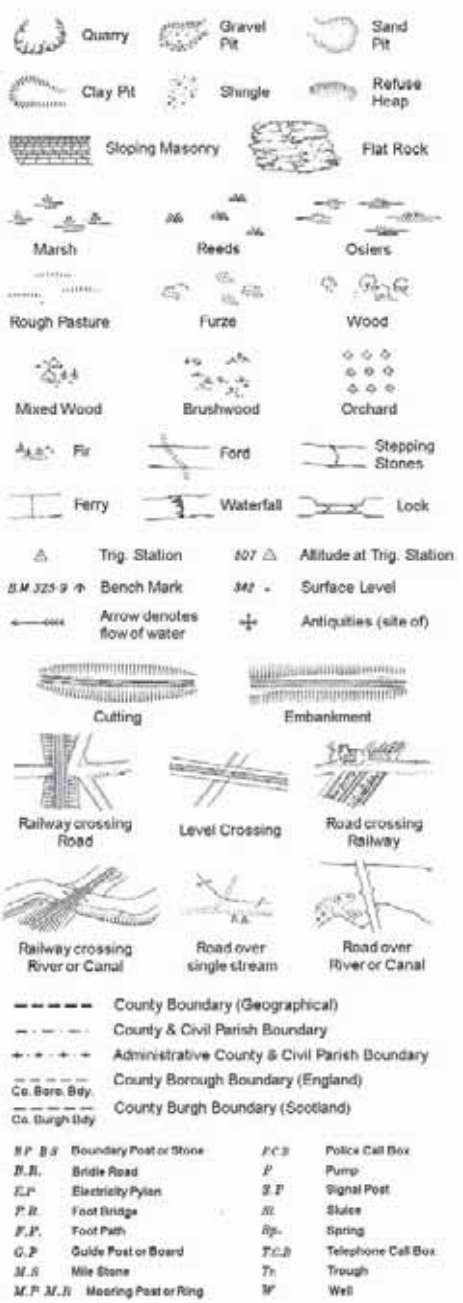
Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

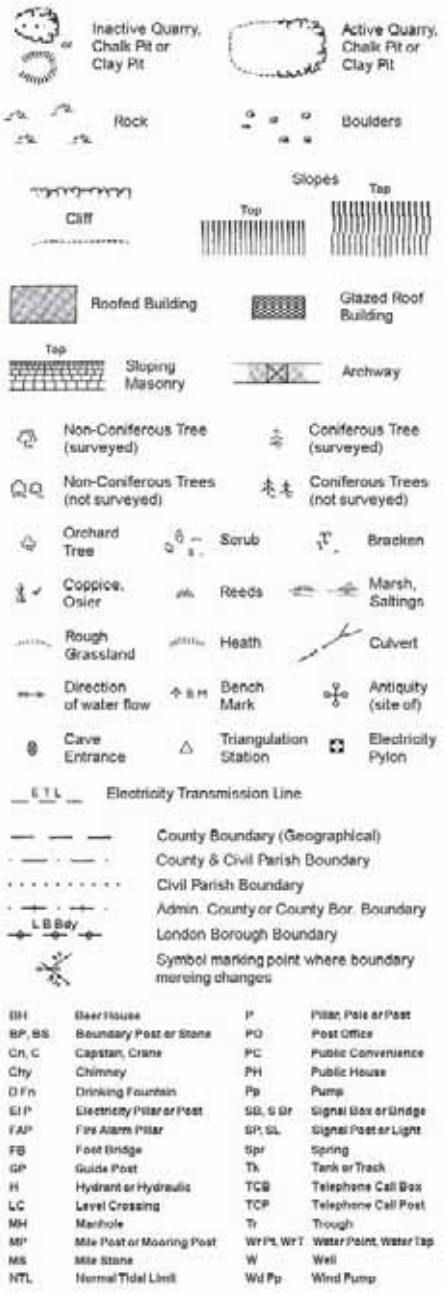
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Historical Mapping Legends

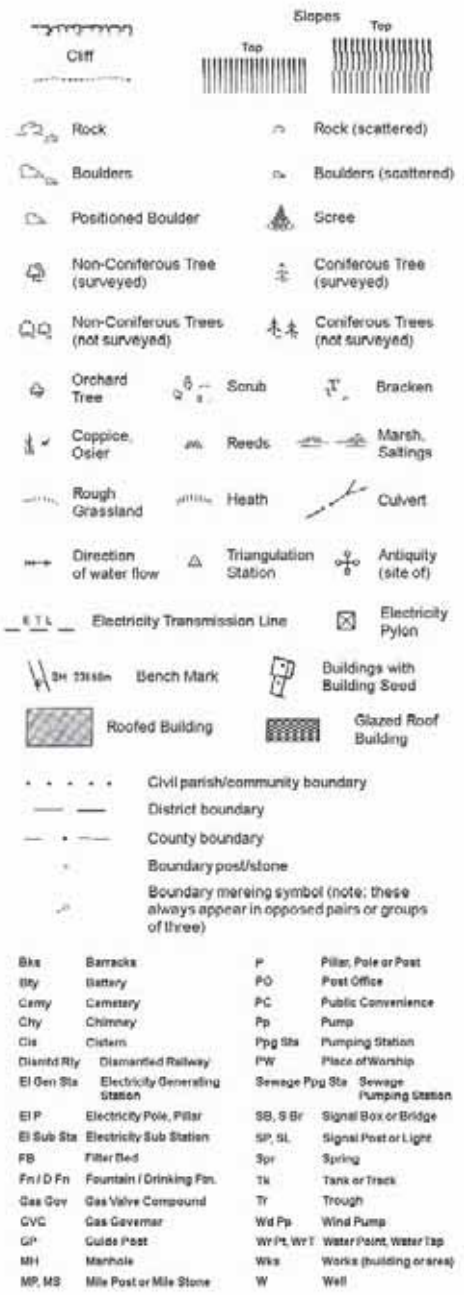
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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



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

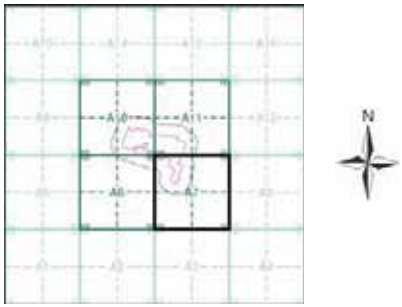


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1893	2
Yorkshire	1:2,500	1906	3
Yorkshire	1:2,500	1918	4
Ordnance Survey Plan	1:2,500	1961 - 1962	5
Ordnance Survey Plan	1:2,500	1967 - 1974	6
Ordnance Survey Plan	1:1,250	1977 - 1978	7
Additional SIMs	1:1,250	1983 - 1991	8
Additional SIMs	1:2,500	1984	9
Additional SIMs	1:1,250	1990 - 1991	10
Large-Scale National Grid Data	1:1,250	1993	11
Large-Scale National Grid Data	1:1,250	1993 - 1994	12
Large-Scale National Grid Data	1:1,250	1994 - 1995	13
Large-Scale National Grid Data	1:1,250	1995	14
Large-Scale National Grid Data	1:1,250	1996	15

Historical Map - Segment A7



Order Details

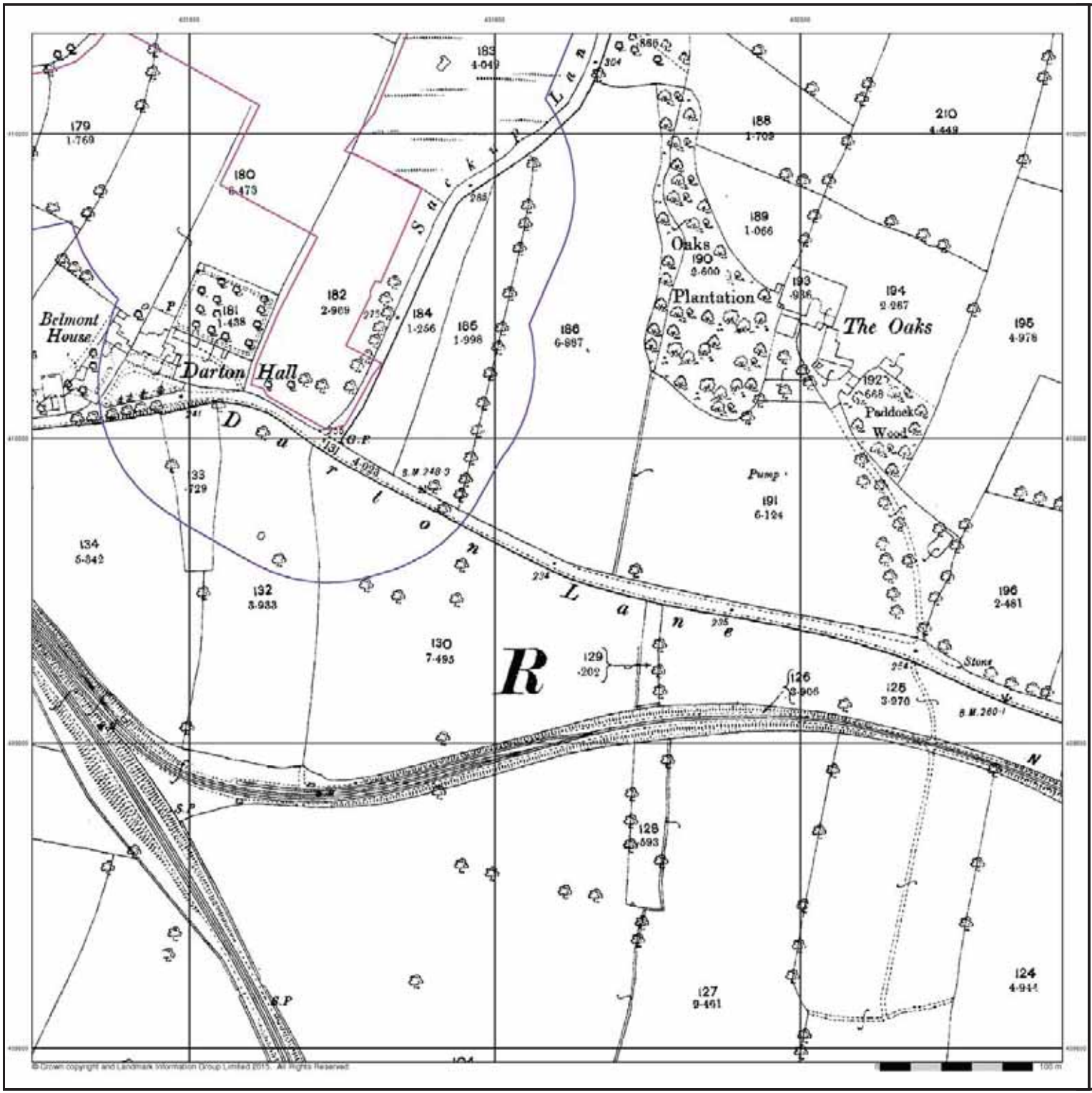
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Slice: A
Site Area (Ha): 11.89
Search Buffer (m): 100

Site Details

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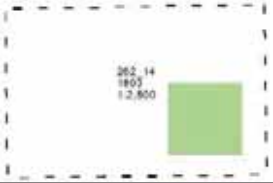
Yorkshire

Published 1893

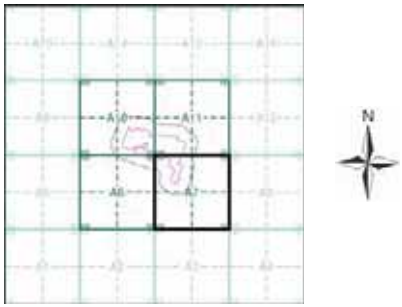
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A7



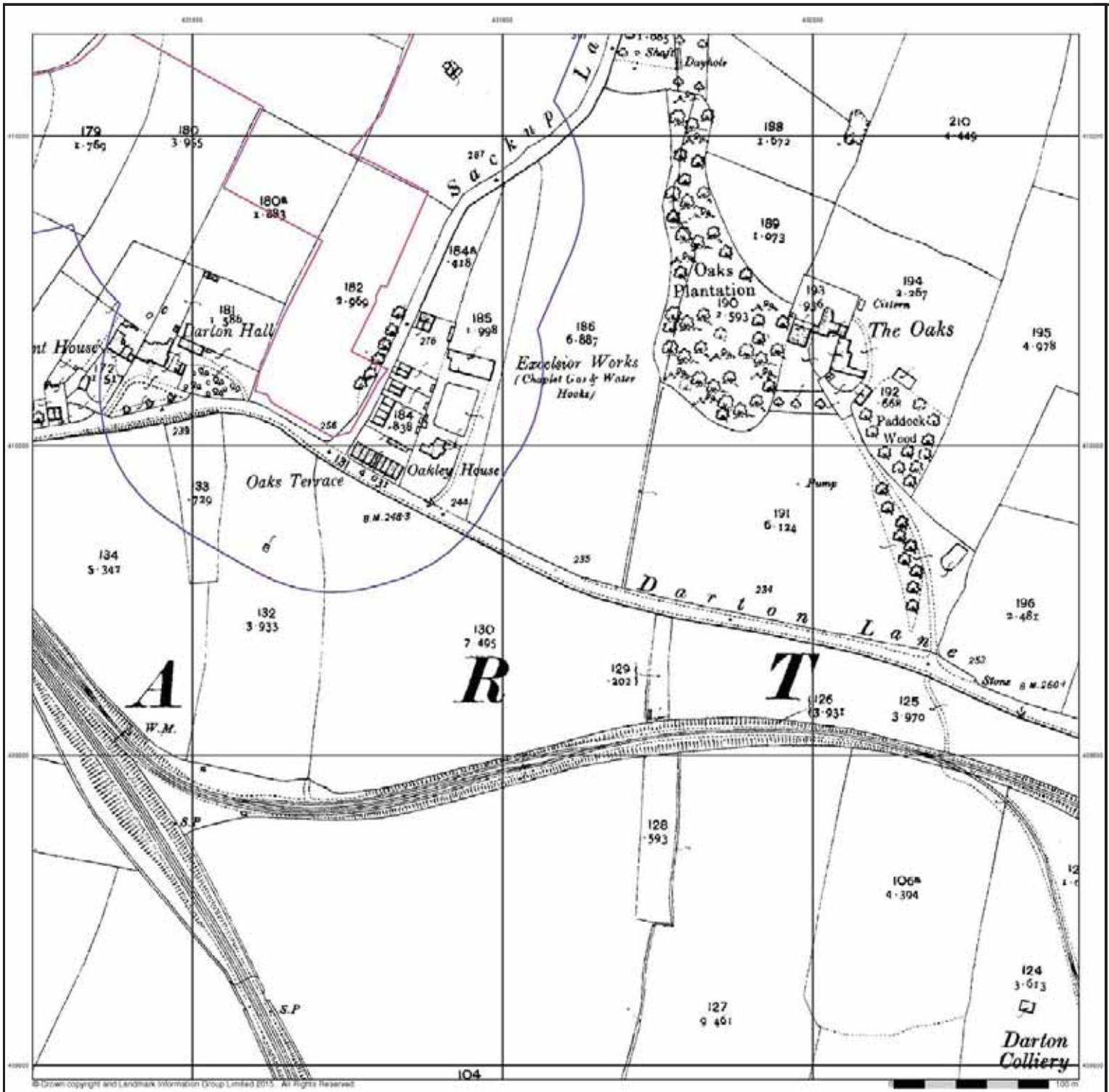
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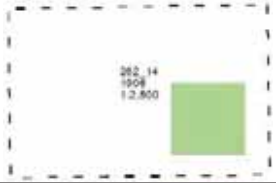
Yorkshire

Published 1906

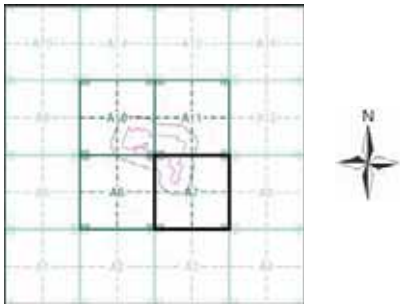
Source map scale - 1:2,500

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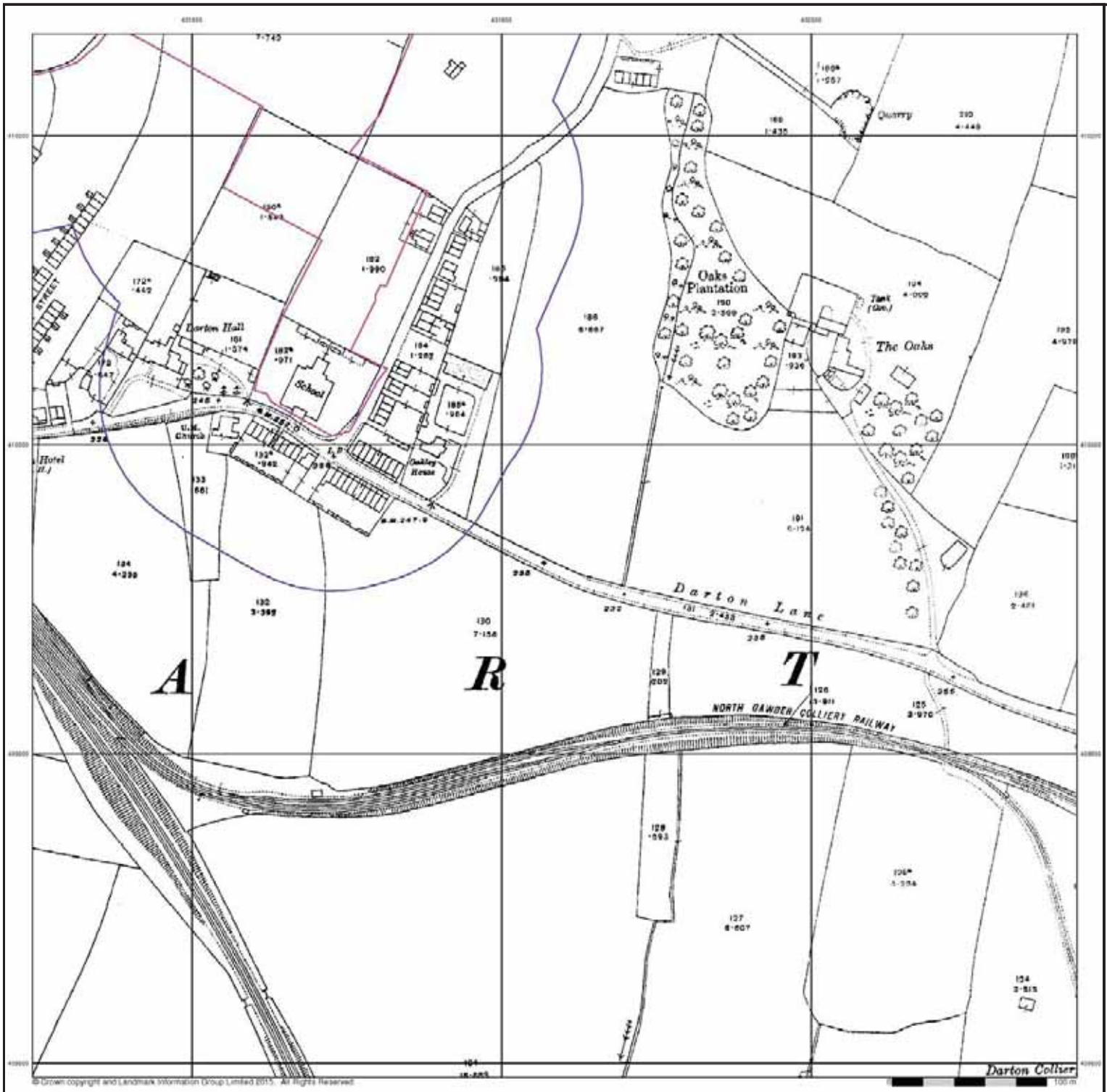
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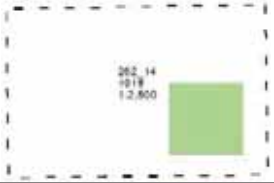
Yorkshire

Published 1918

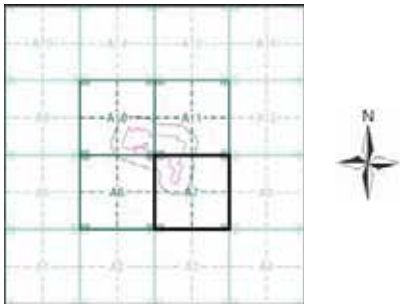
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

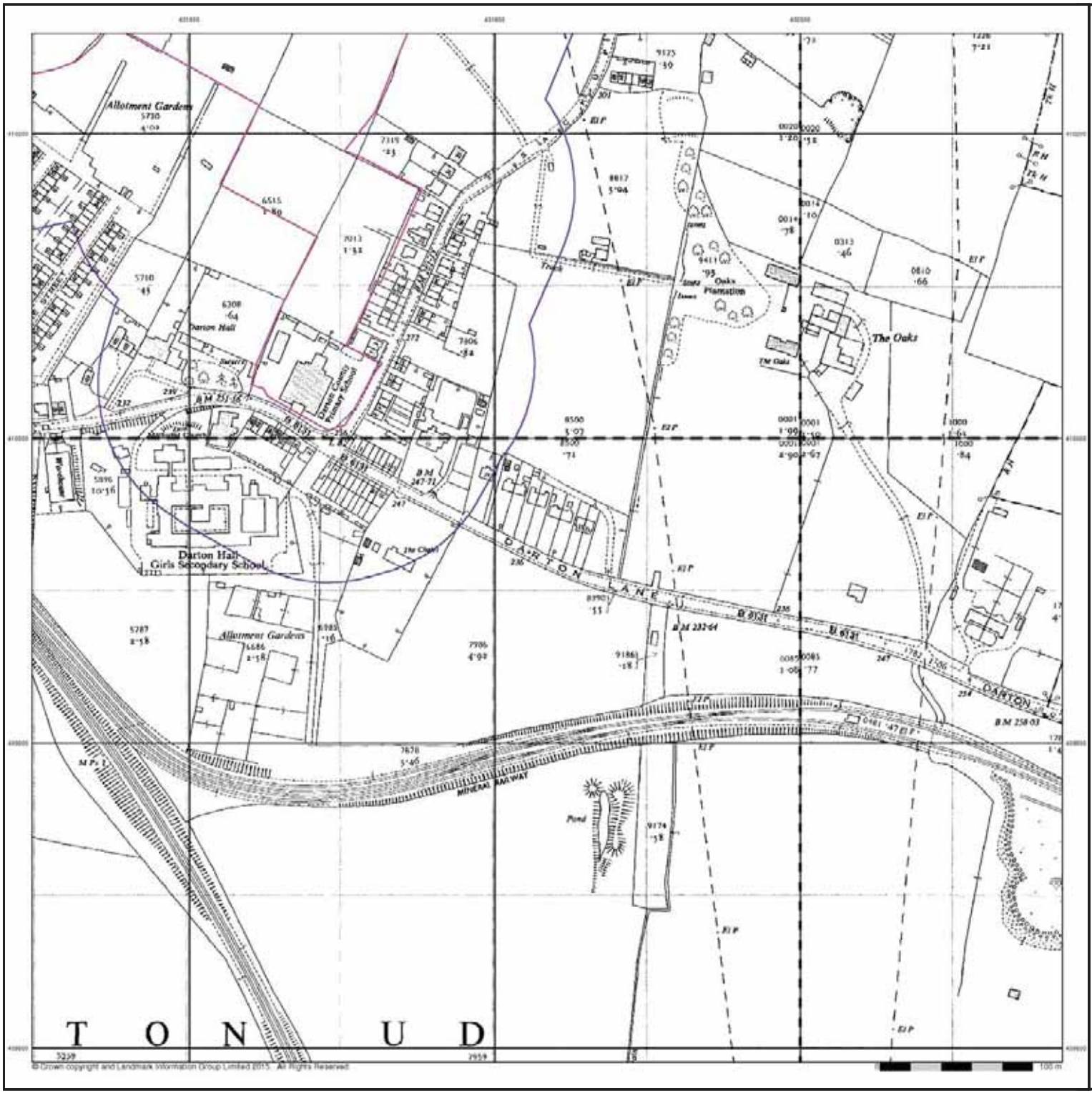
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Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	100

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark

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Fax: 0844 844 9951
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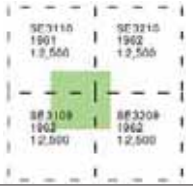
Ordnance Survey Plan

Published 1961 - 1962

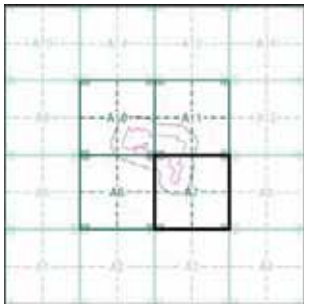
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Map Name(s) and Date(s)



Historical Map - Segment A7



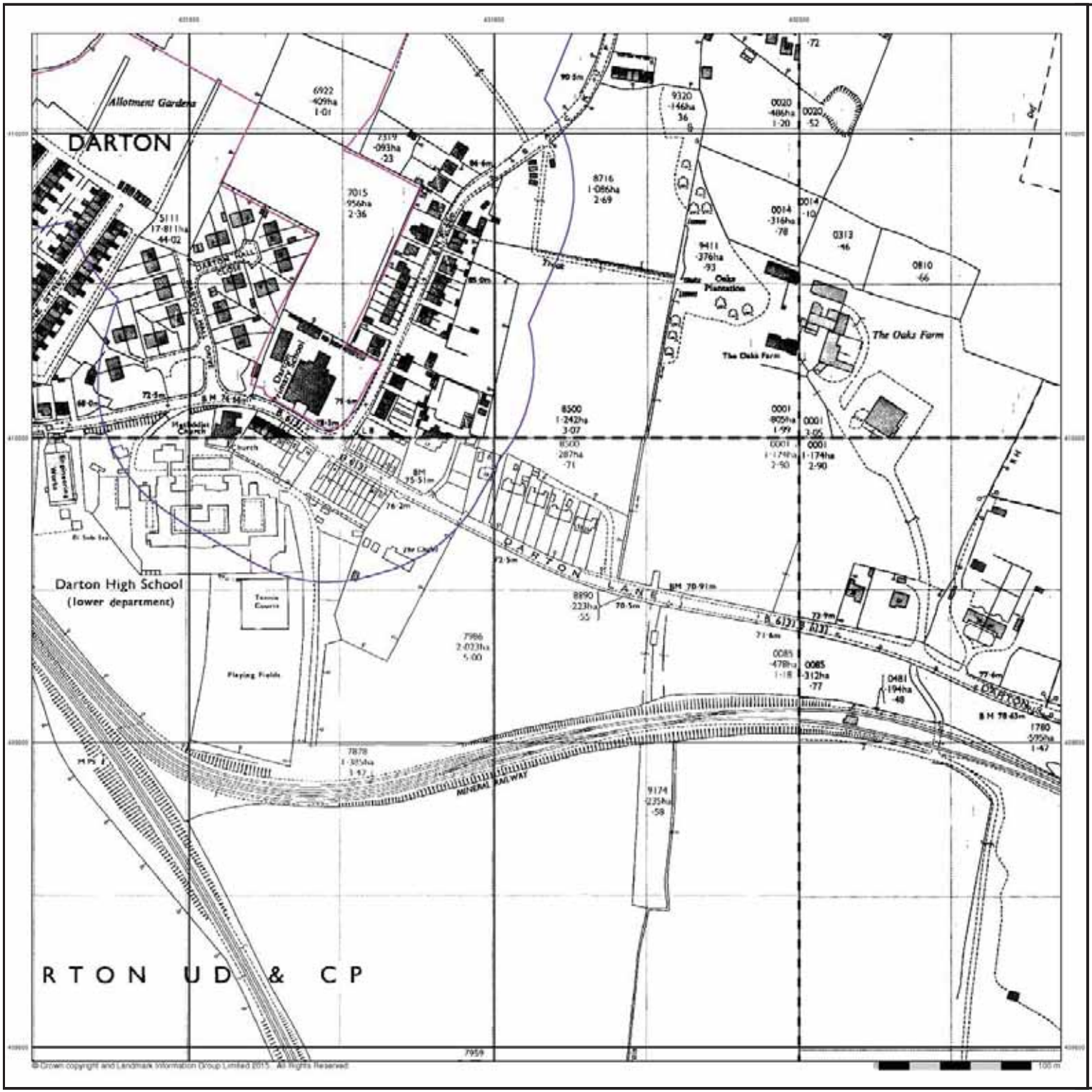
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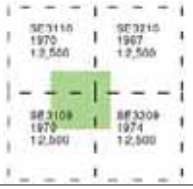
Ordnance Survey Plan

Published 1967 - 1974

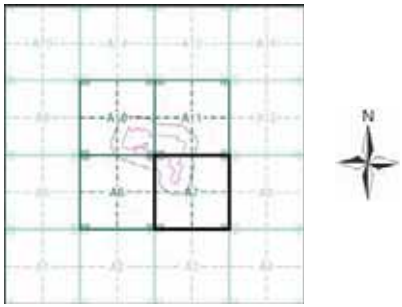
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Map Name(s) and Date(s)



Historical Map - Segment A7



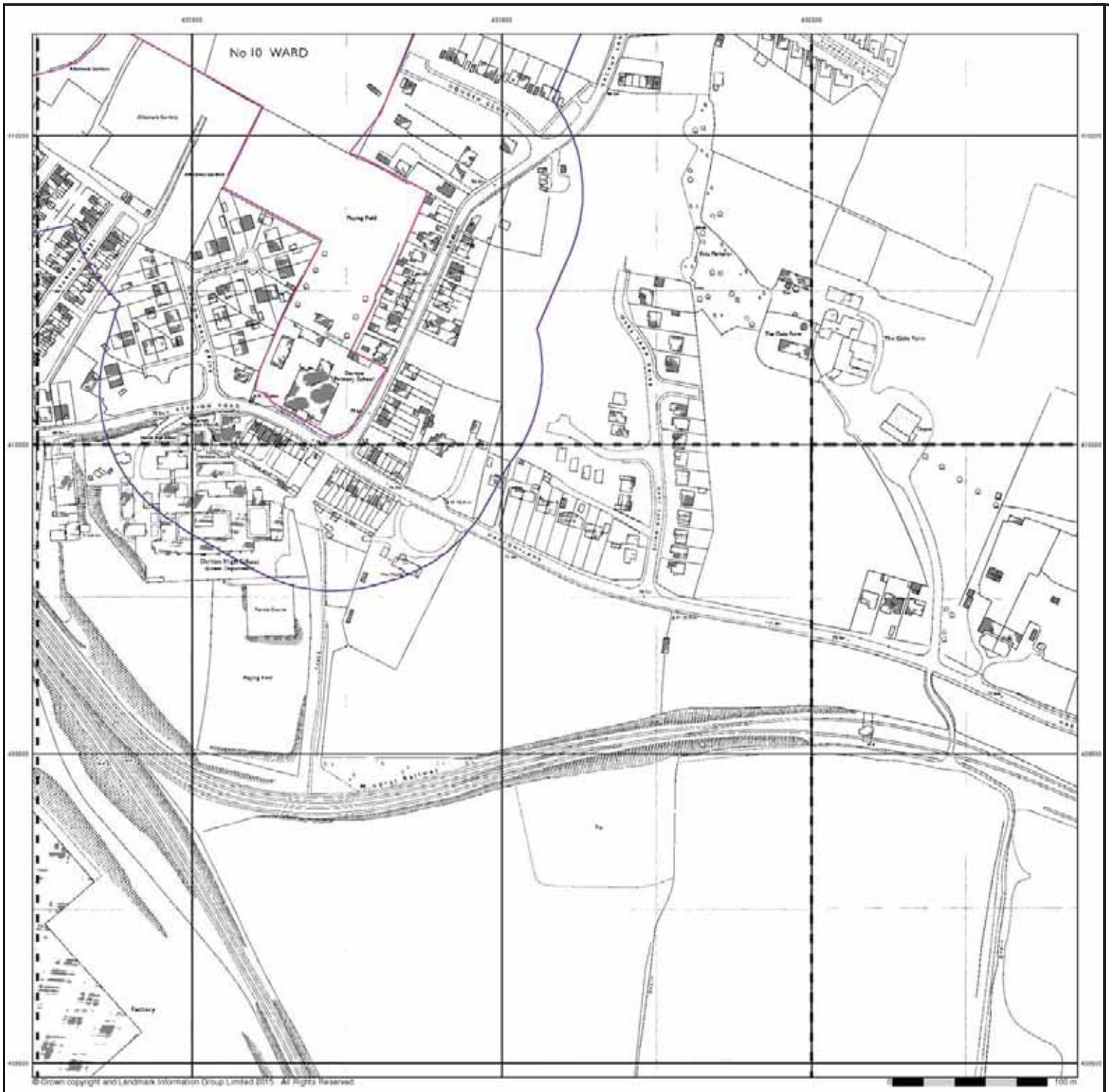
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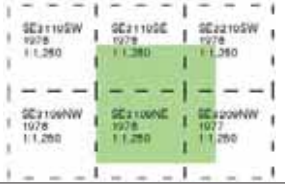
Ordnance Survey Plan

Published 1977 - 1978

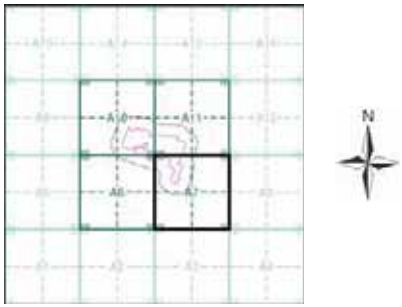
Source map scale - 1:1,250

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Historical Map - Segment A7



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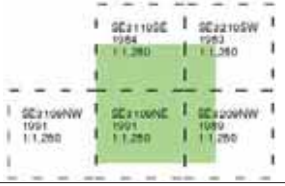
Additional SIMs

Published 1983 - 1991

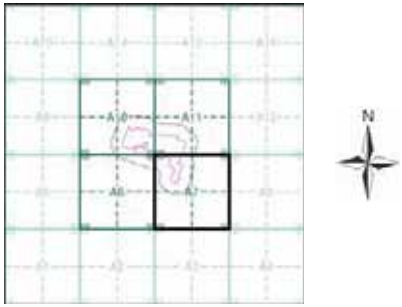
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

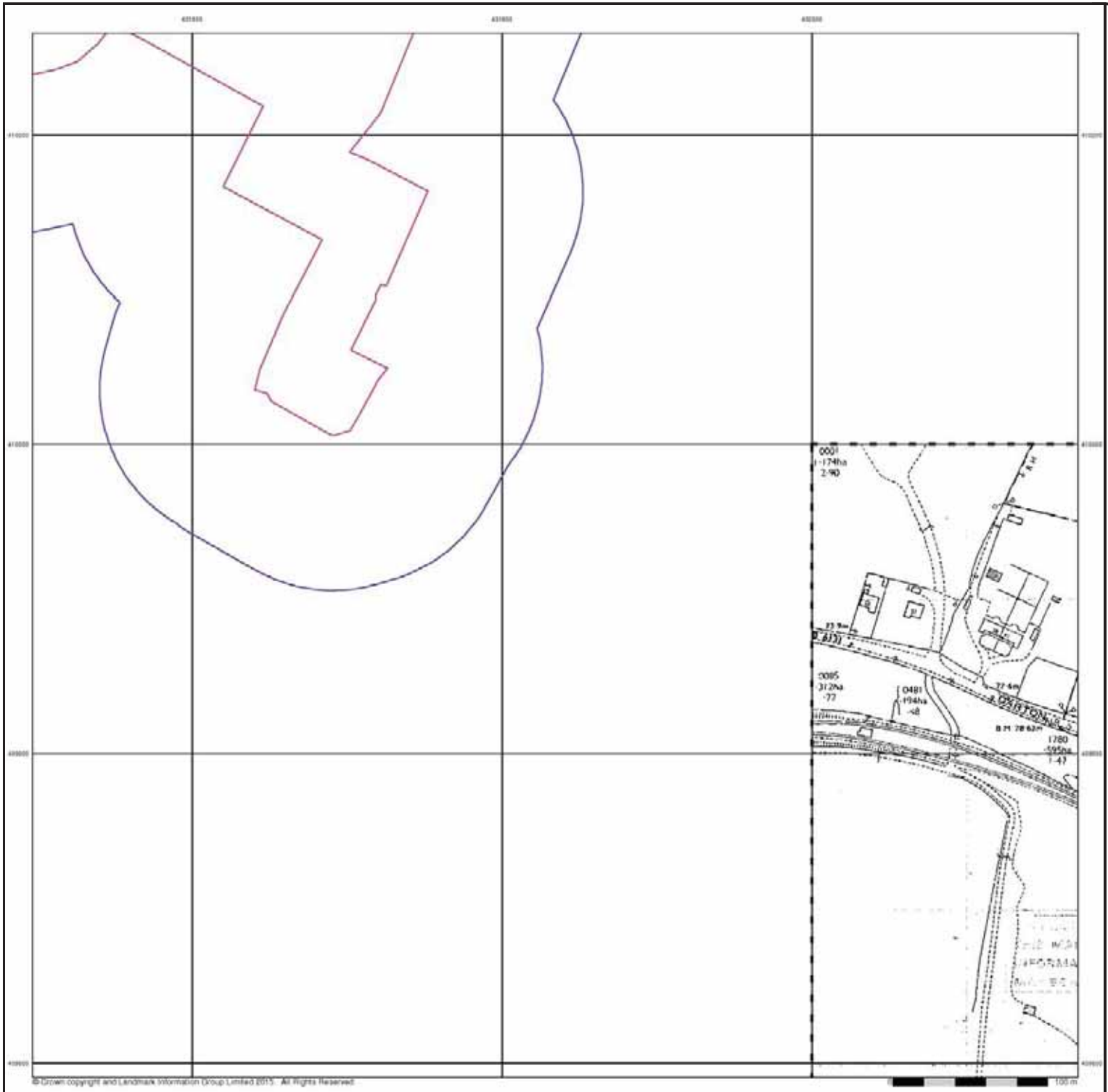
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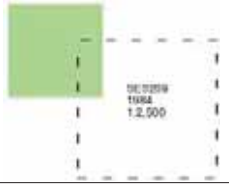
Additional SIMs

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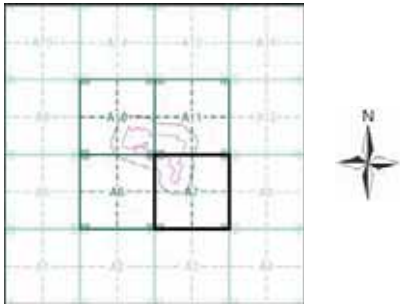
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A7



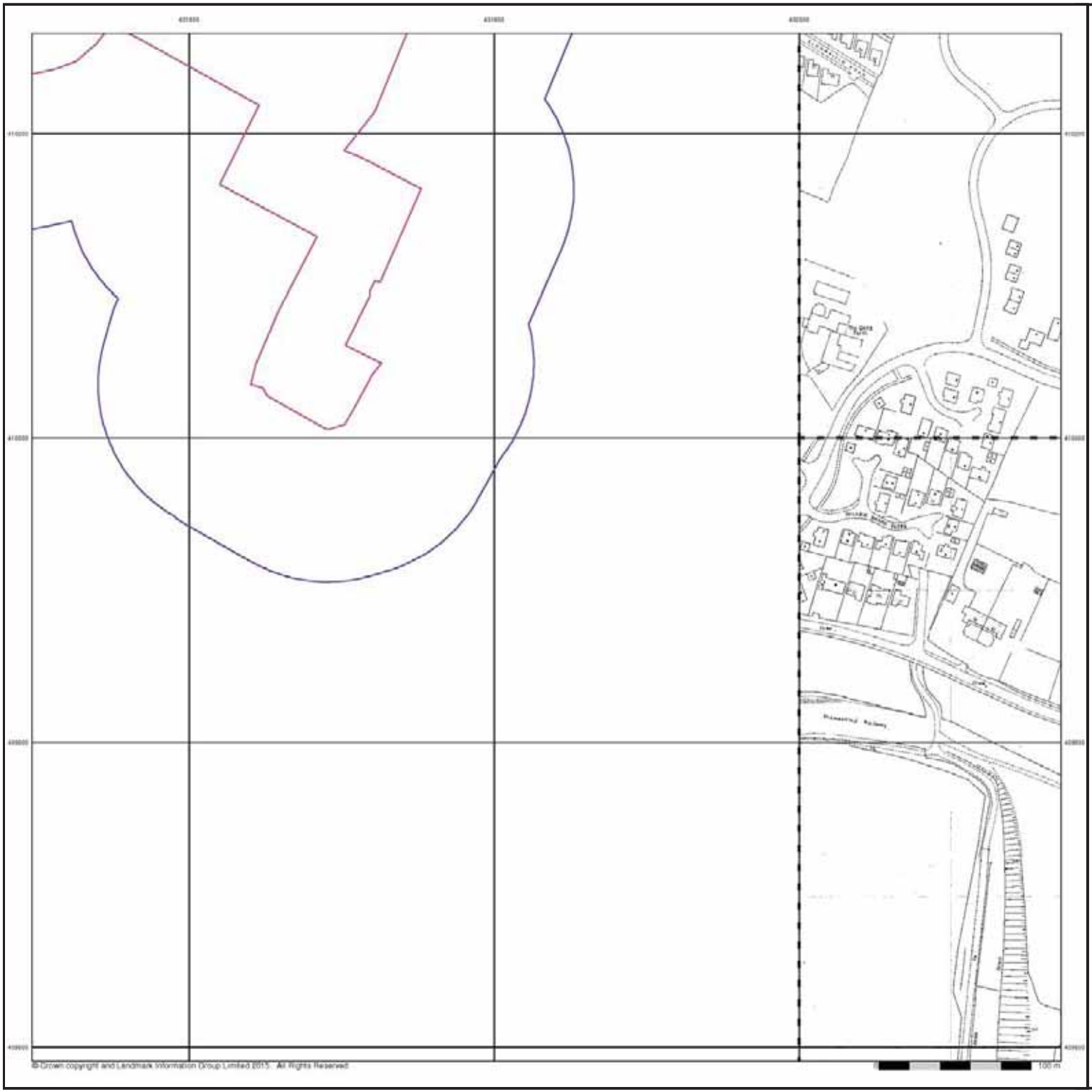
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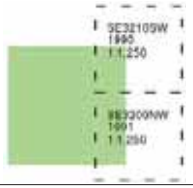
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Published 1990 - 1991

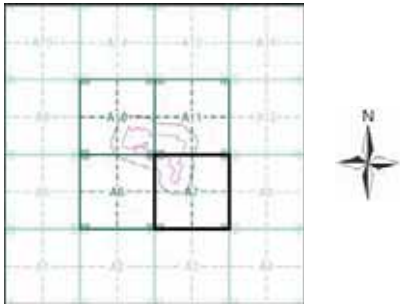
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A7



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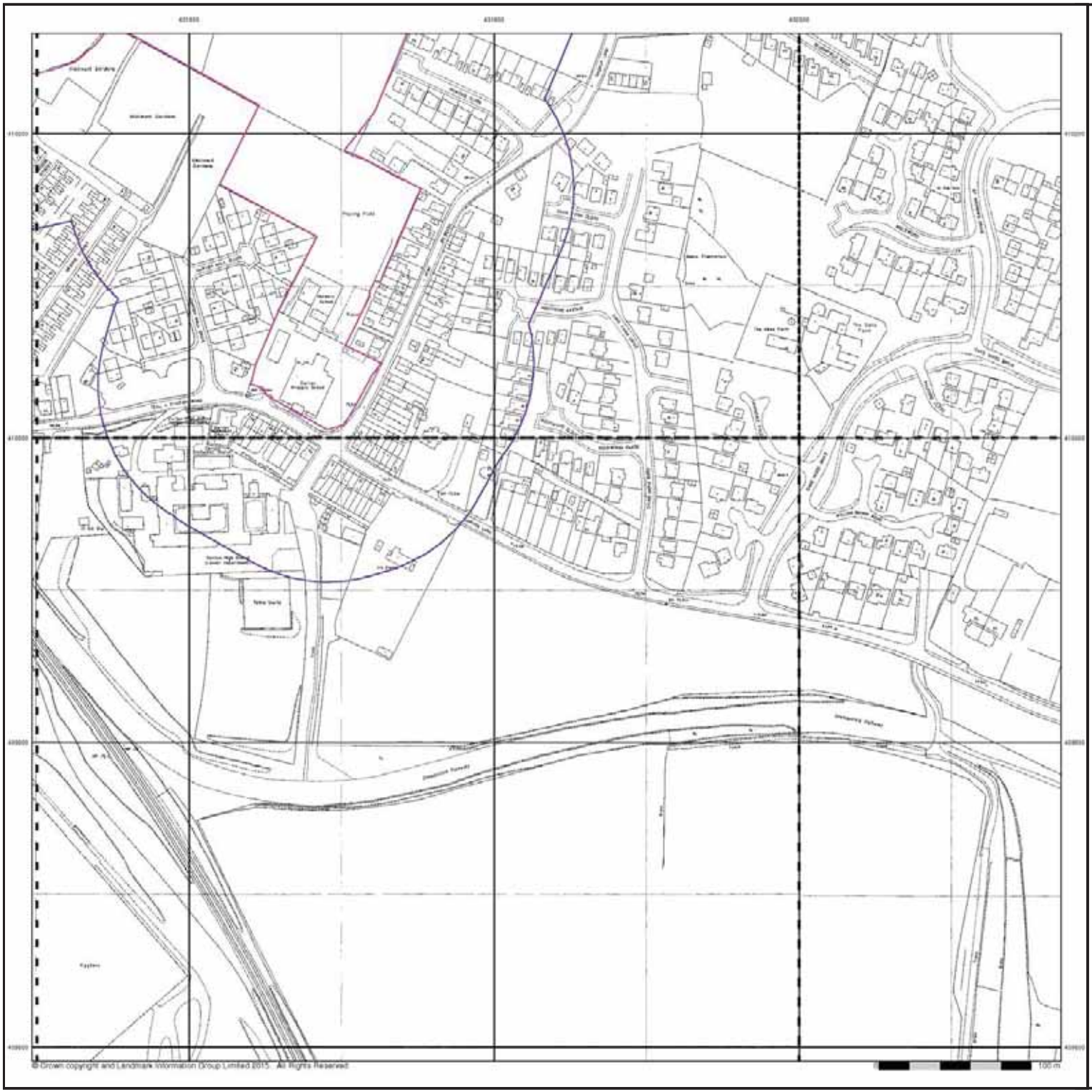
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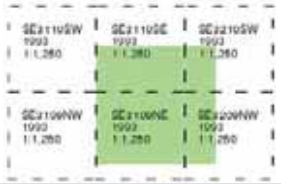
Large-Scale National Grid Data

Published 1993

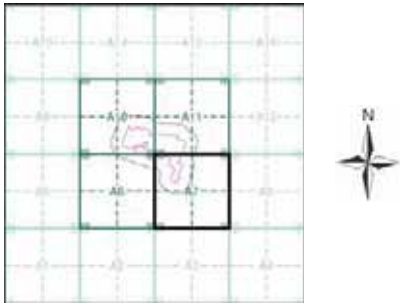
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Map Name(s) and Date(s)



Historical Map - Segment A7



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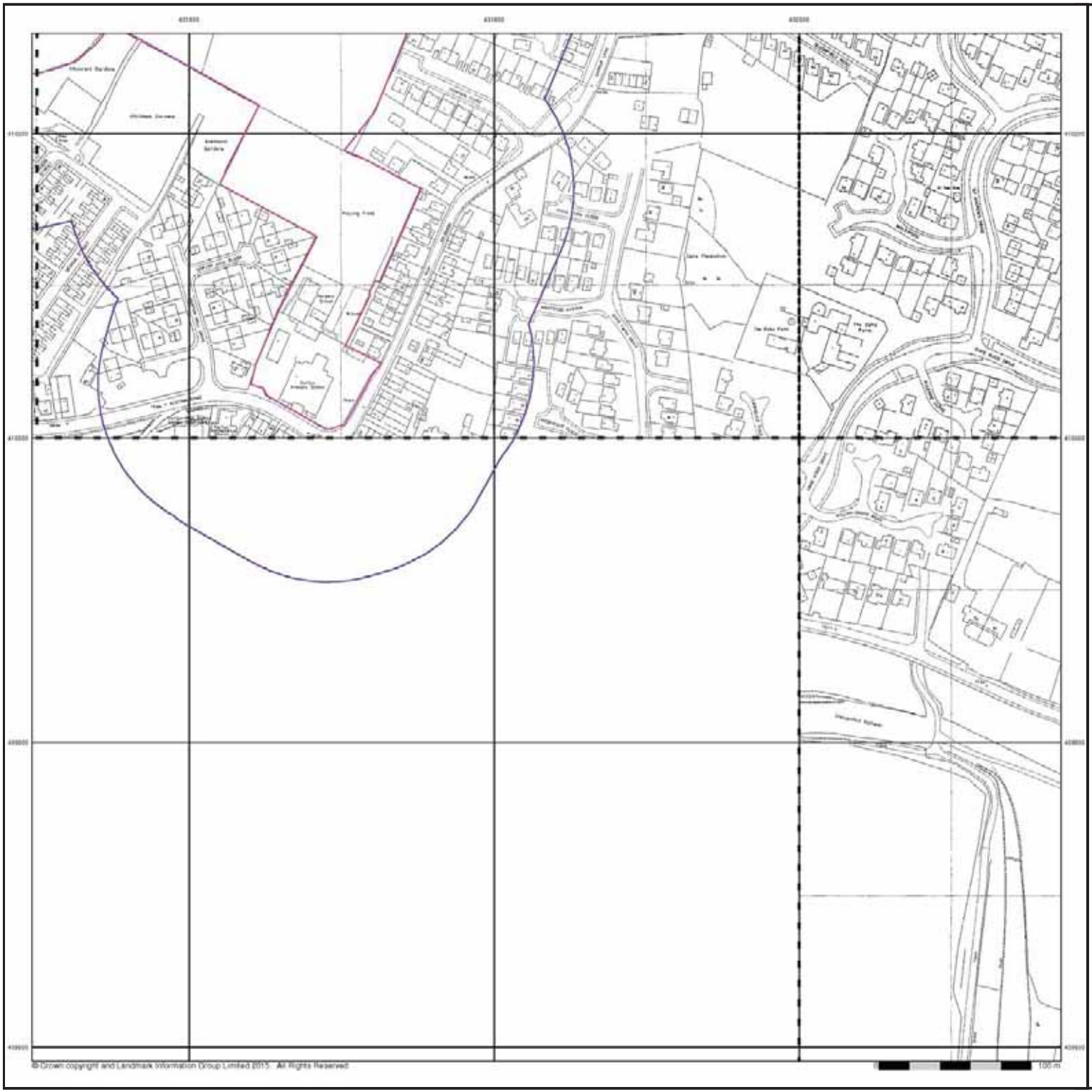
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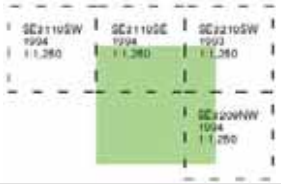
Large-Scale National Grid Data

Published 1993 - 1994

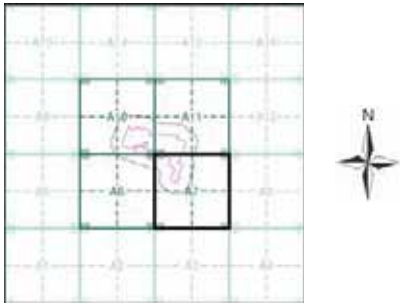
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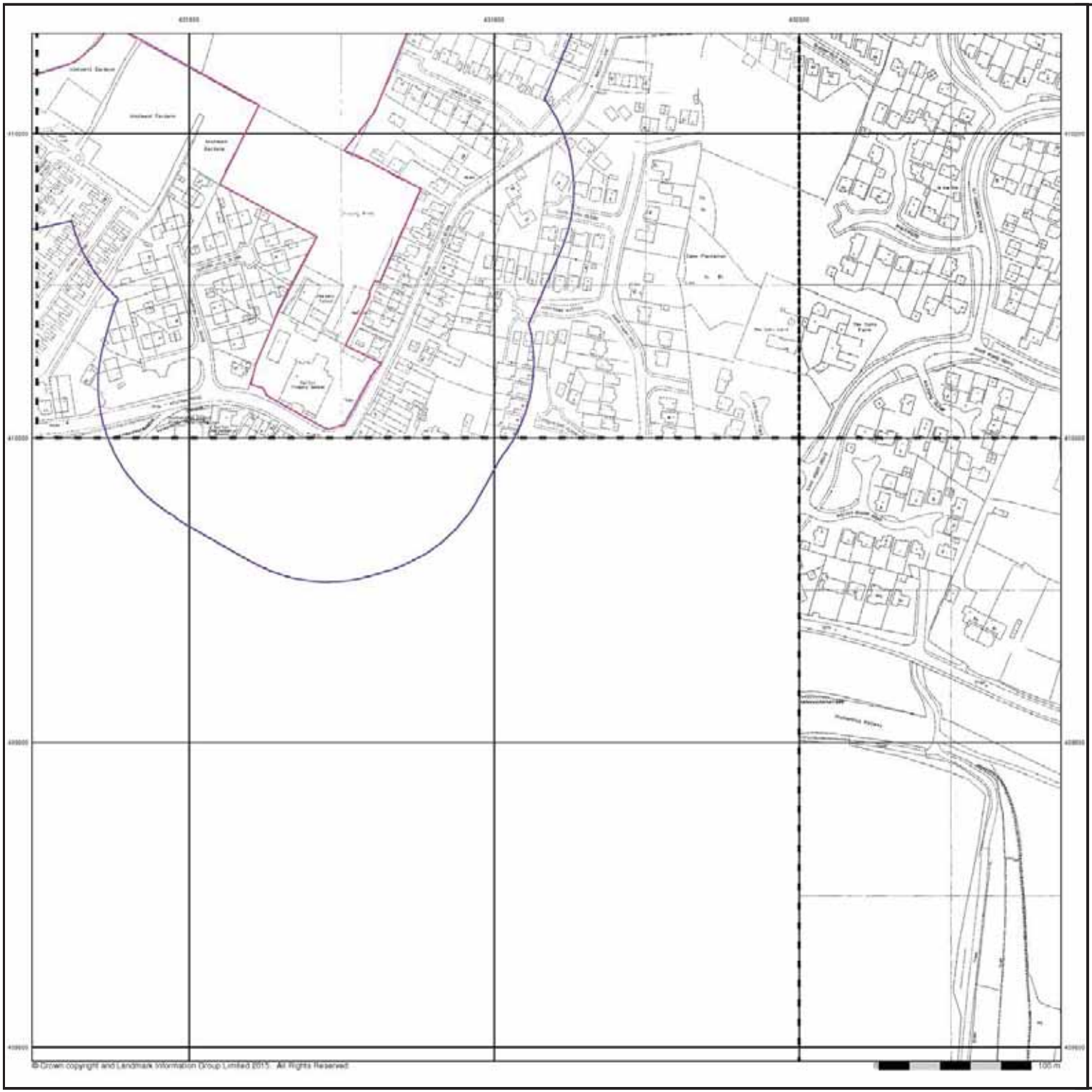
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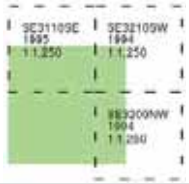
Large-Scale National Grid Data

Published 1994 - 1995

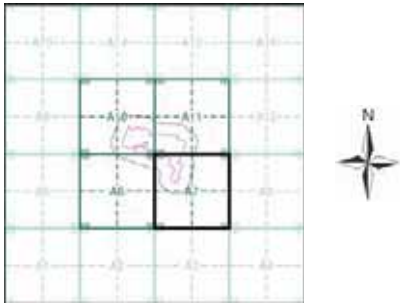
Source map scale - 1:1,250

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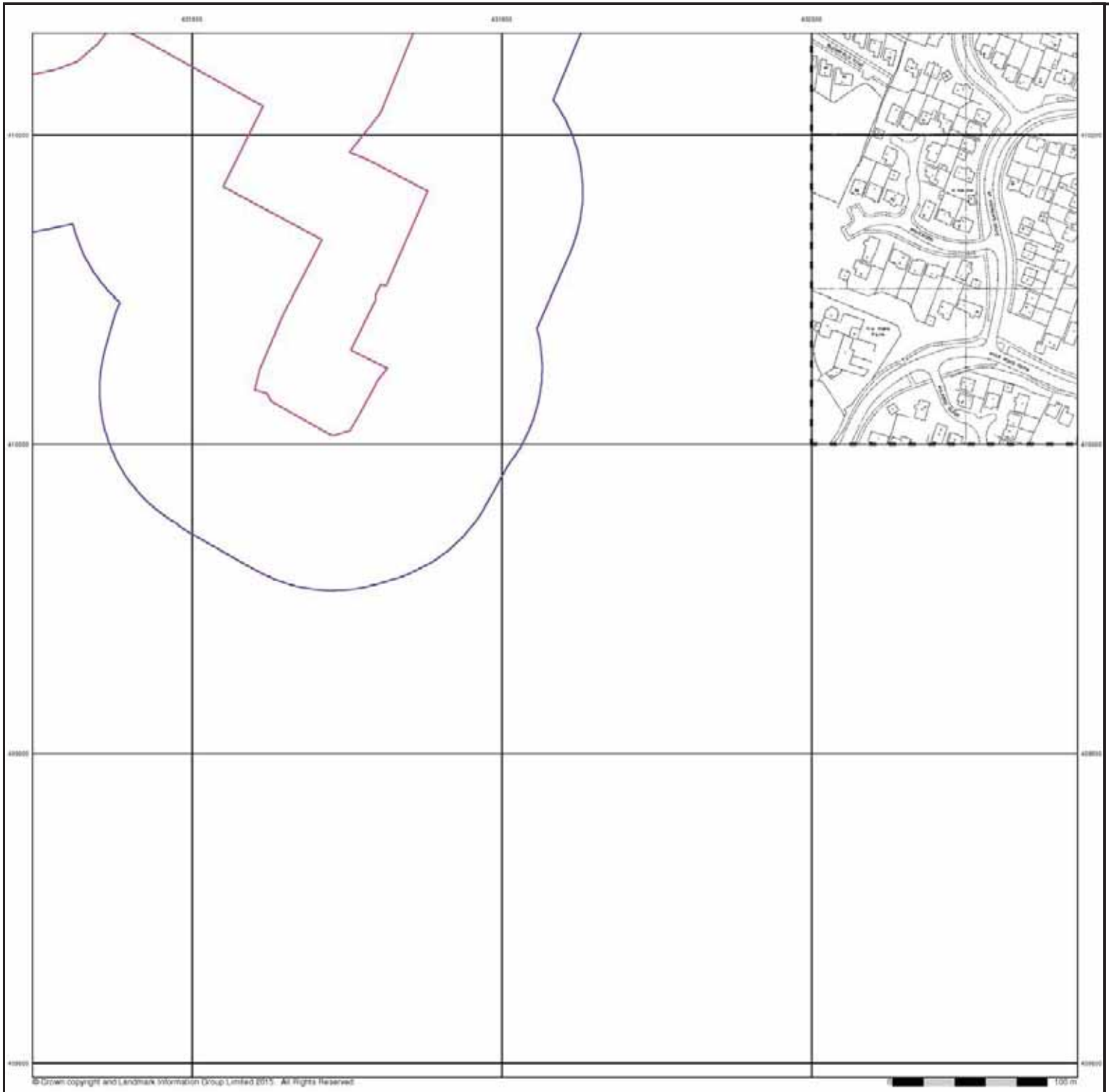
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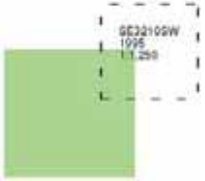
Large-Scale National Grid Data

Published 1995

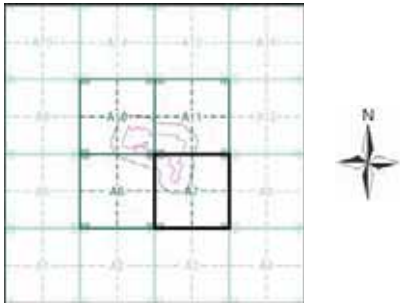
Source map scale - 1:1,250

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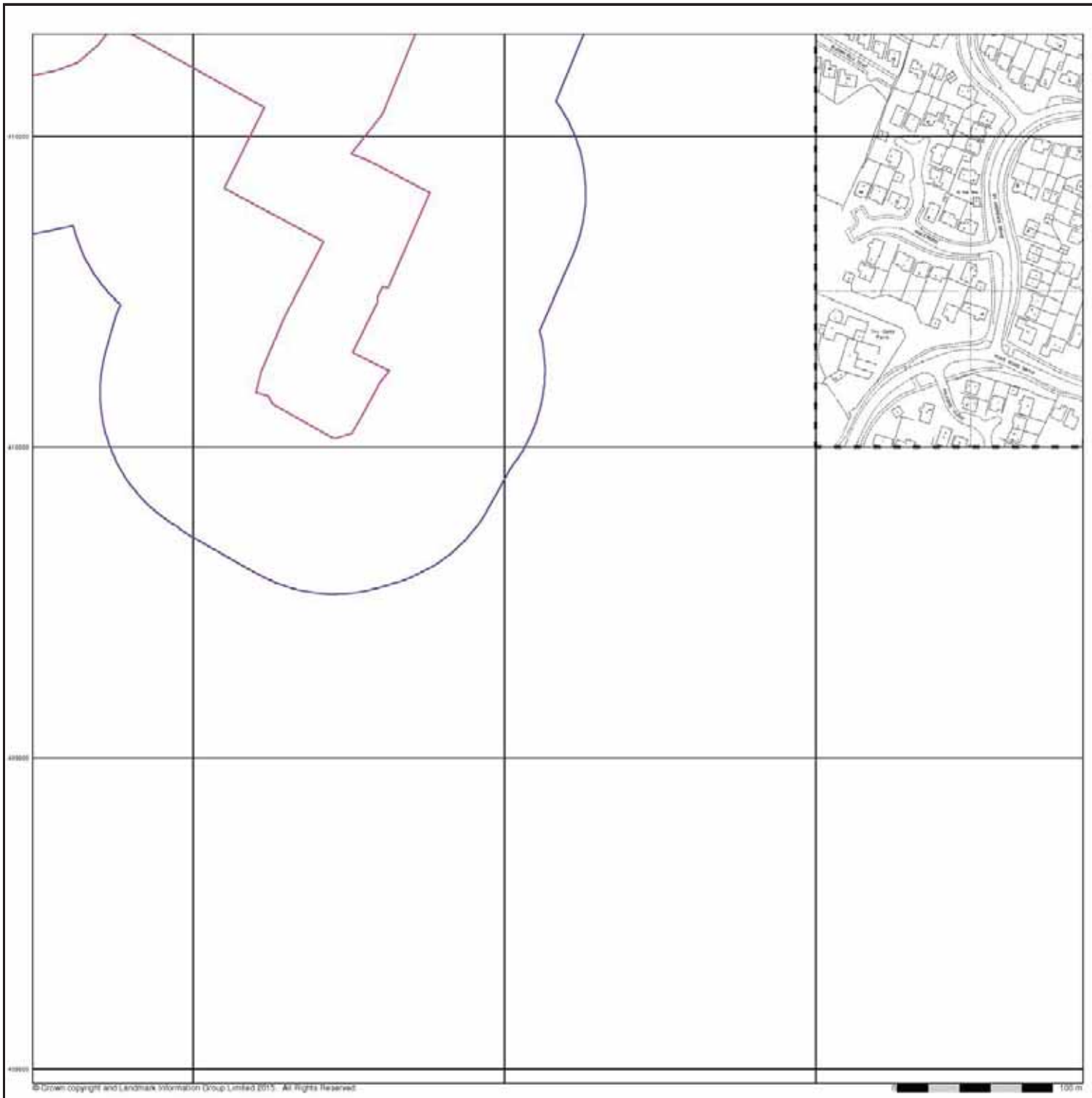
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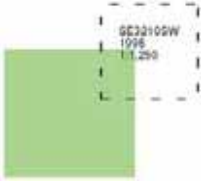
Large-Scale National Grid Data

Published 1996

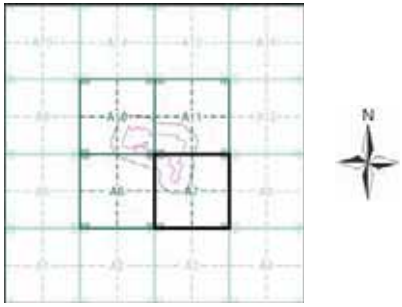
Source map scale - 1:1,250

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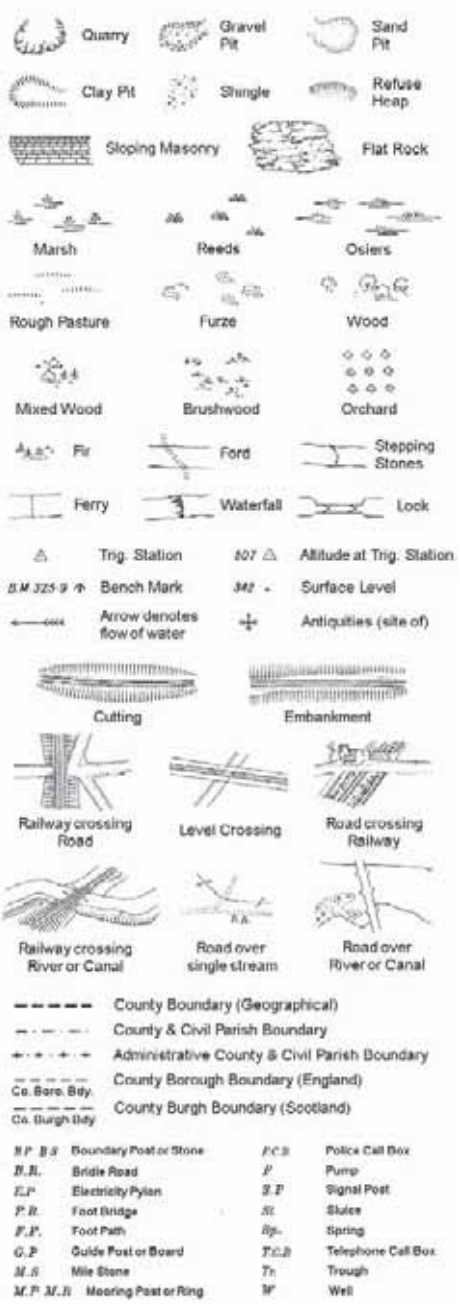
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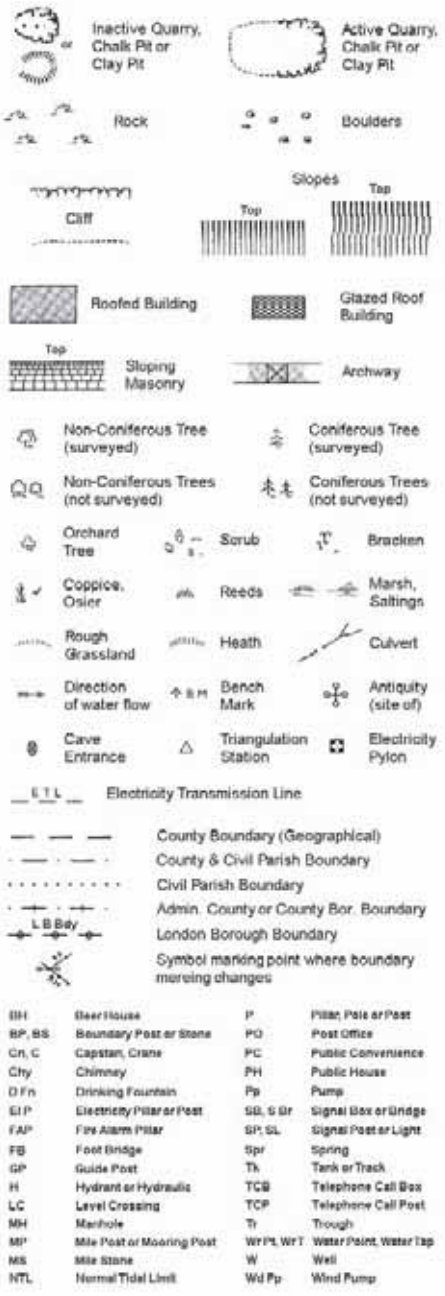
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Historical Mapping Legends

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



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



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

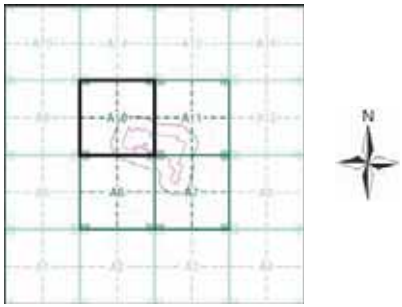


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1893	2
Yorkshire	1:2,500	1906	3
Yorkshire	1:2,500	1918	4
Ordnance Survey Plan	1:2,500	1961	5
Ordnance Survey Plan	1:2,500	1970	6
Ordnance Survey Plan	1:1,250	1978	7
Additional SIMs	1:2,500	1989	8
Additional SIMs	1:1,250	1990	9
Large-Scale National Grid Data	1:1,250	1993	10
Large-Scale National Grid Data	1:1,250	1993 - 1994	11

Historical Map - Segment A10



Order Details

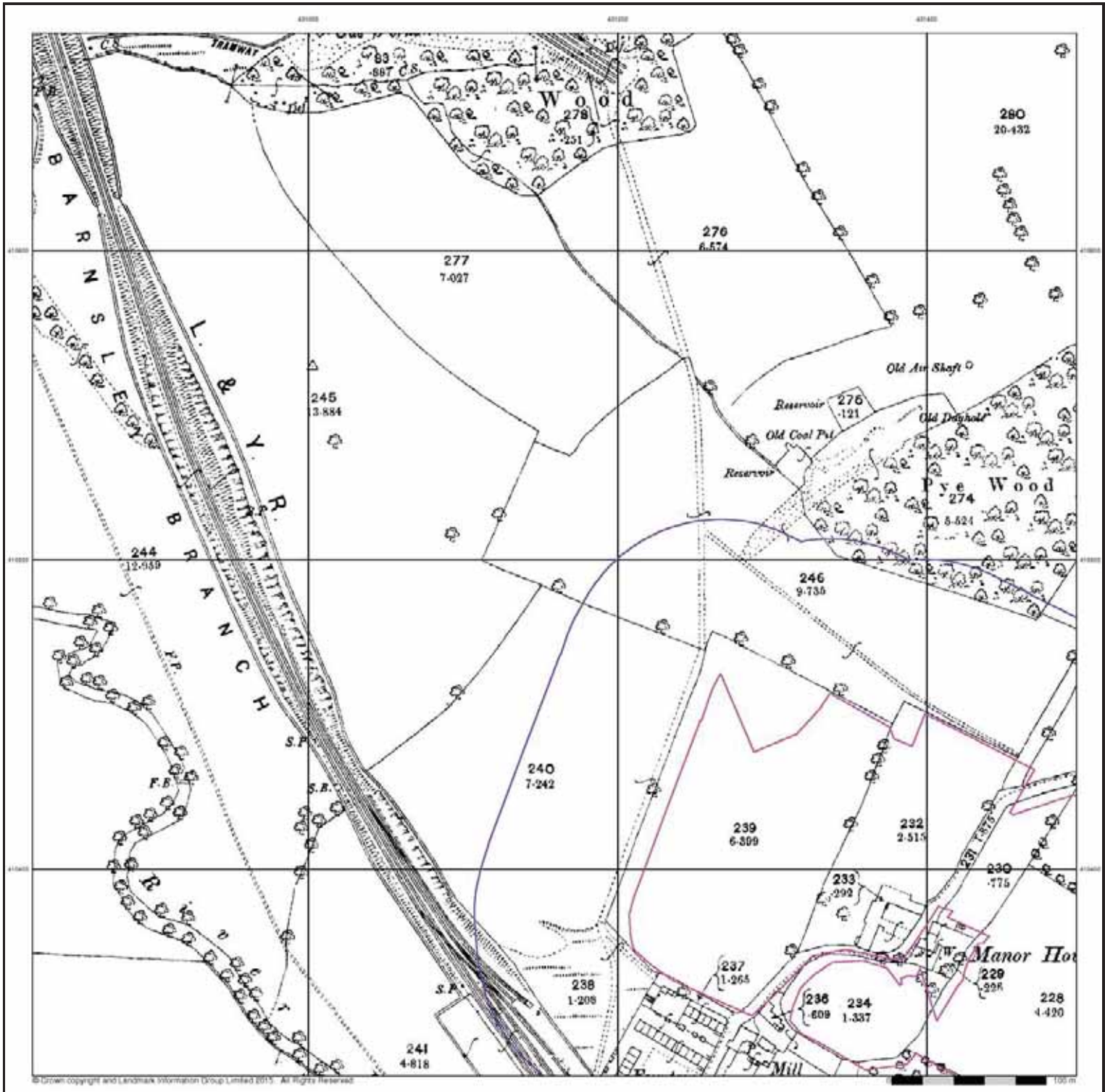
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Customer Ref: 301645
National Grid Reference: 431520, 410300
Slice: A
Site Area (Ha): 11.89
Search Buffer (m): 100

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark

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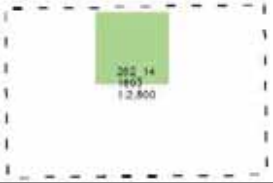
Yorkshire

Published 1893

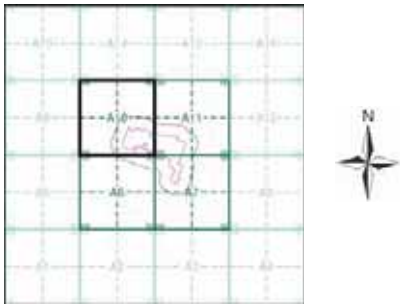
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A10



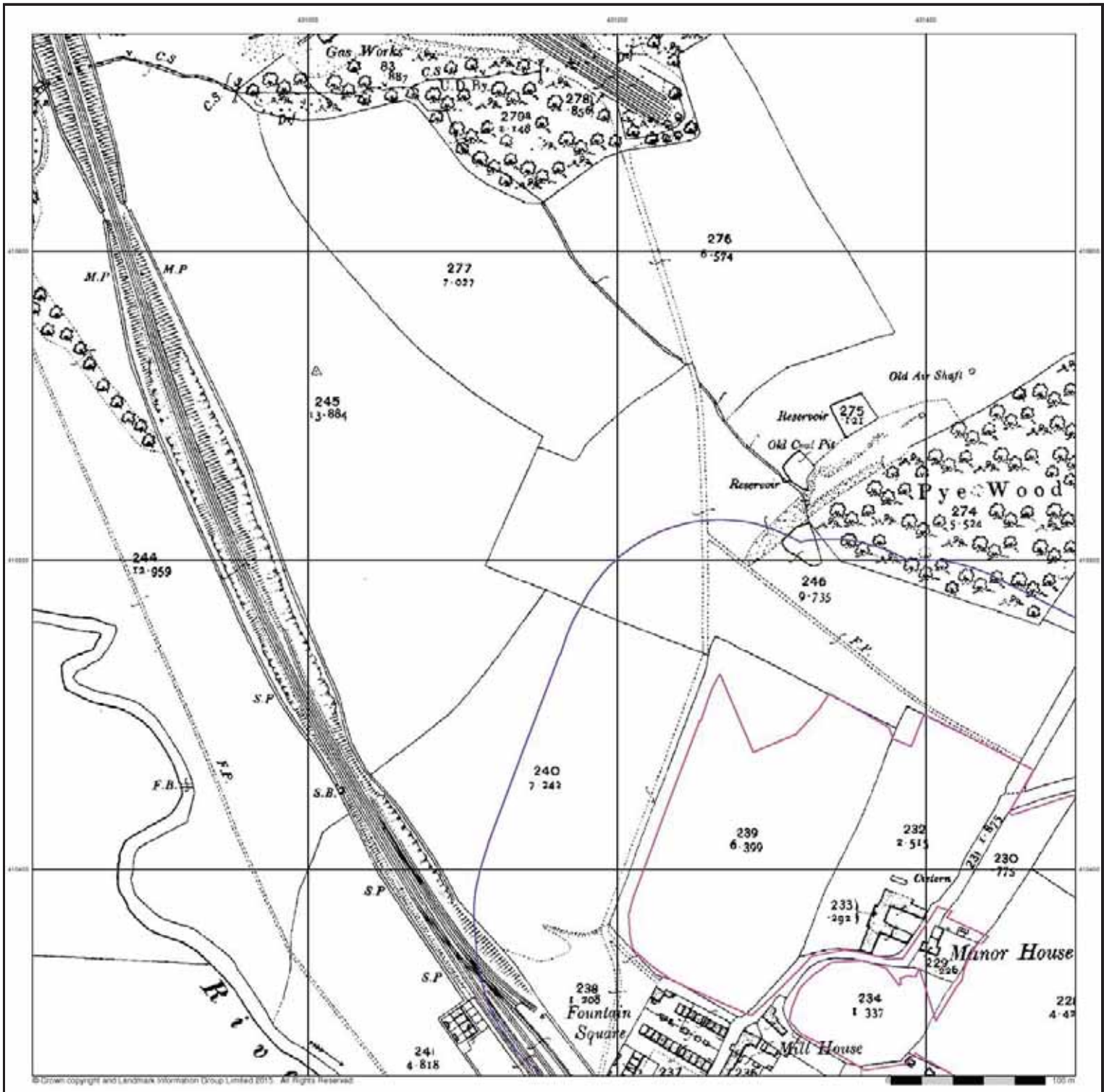
Order Details

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Slice:	A
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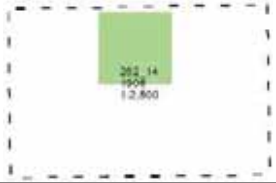
Yorkshire

Published 1906

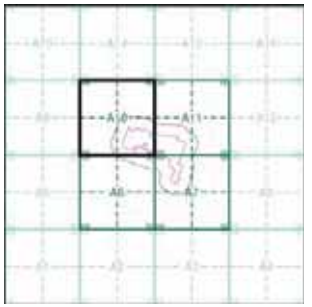
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered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

Map Name(s) and Date(s)



Historical Map - Segment A10



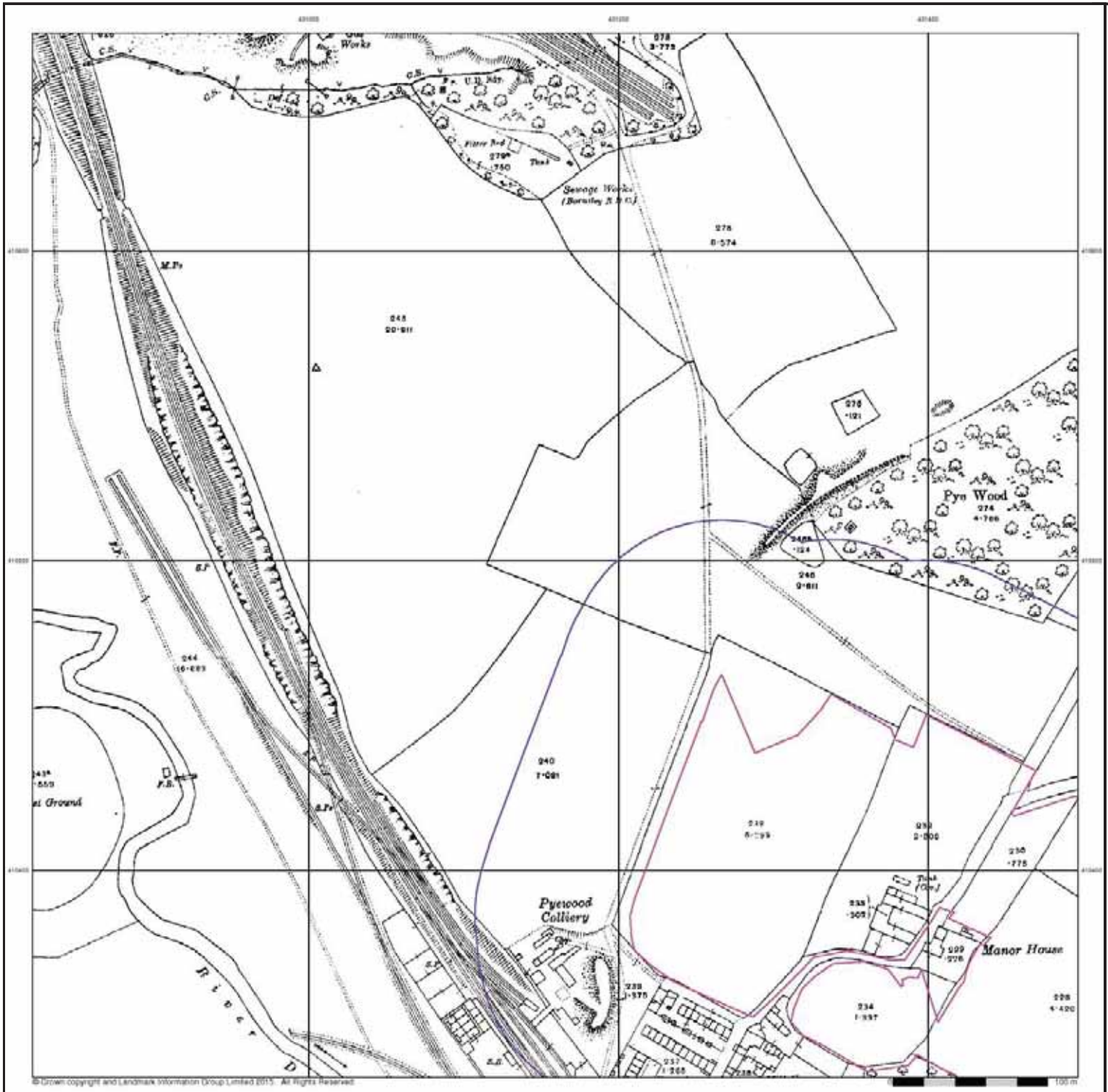
Order Details

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Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
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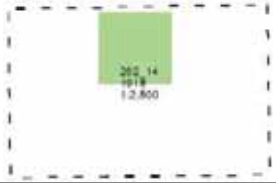
Yorkshire

Published 1918

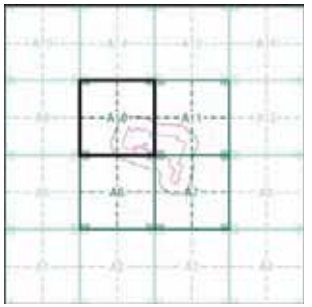
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

Order Number:	77520900_1_1
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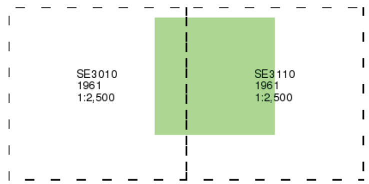
Ordnance Survey Plan

Published 1961

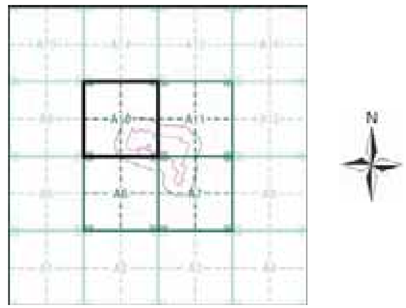
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A10



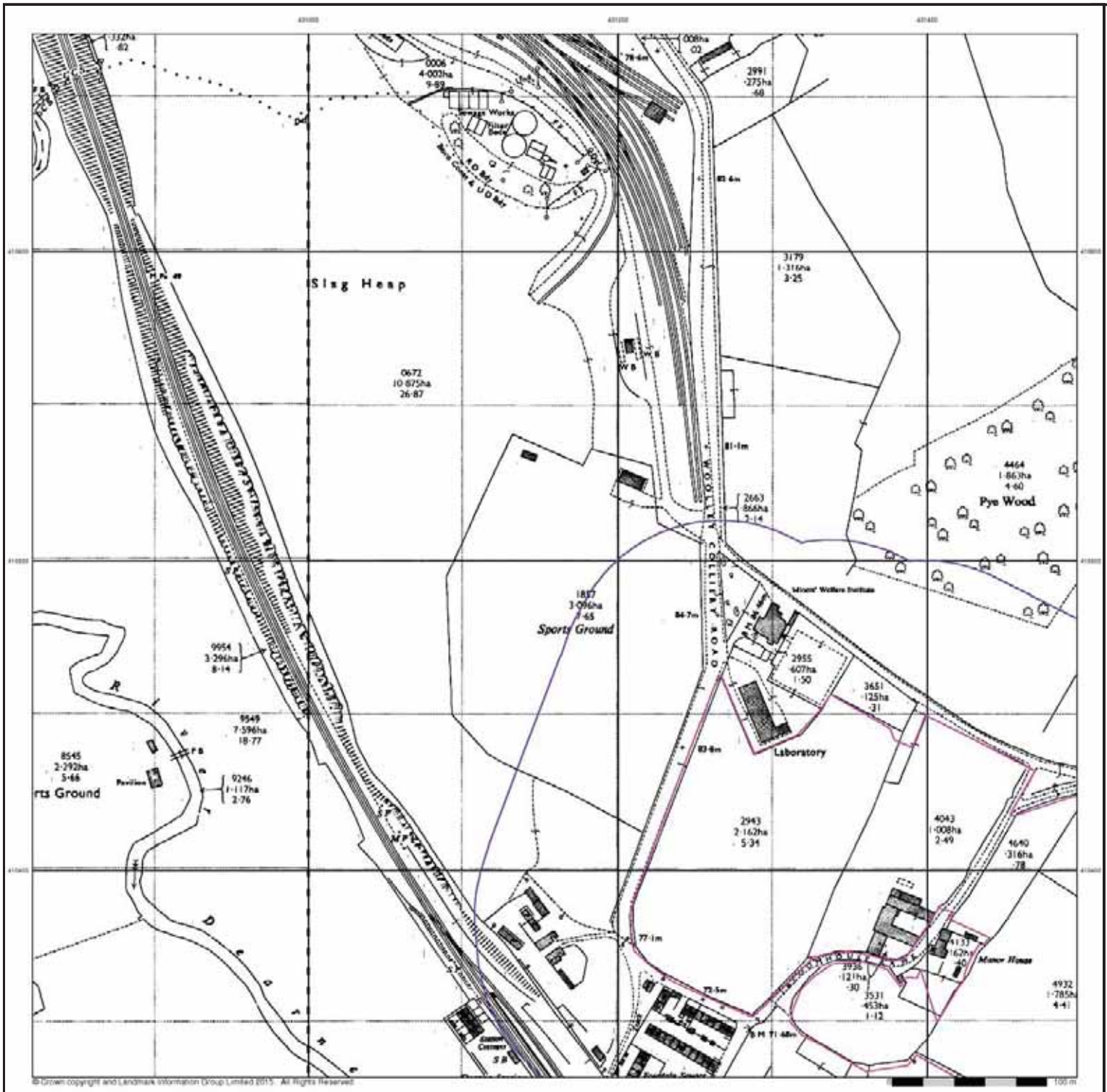
Order Details

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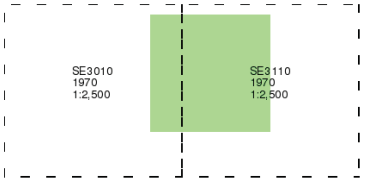
Ordnance Survey Plan

Published 1970

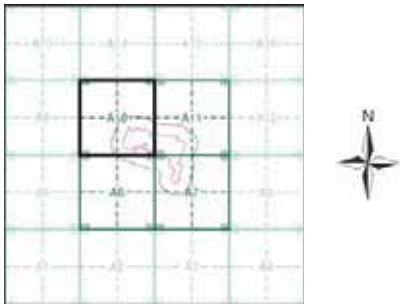
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A10

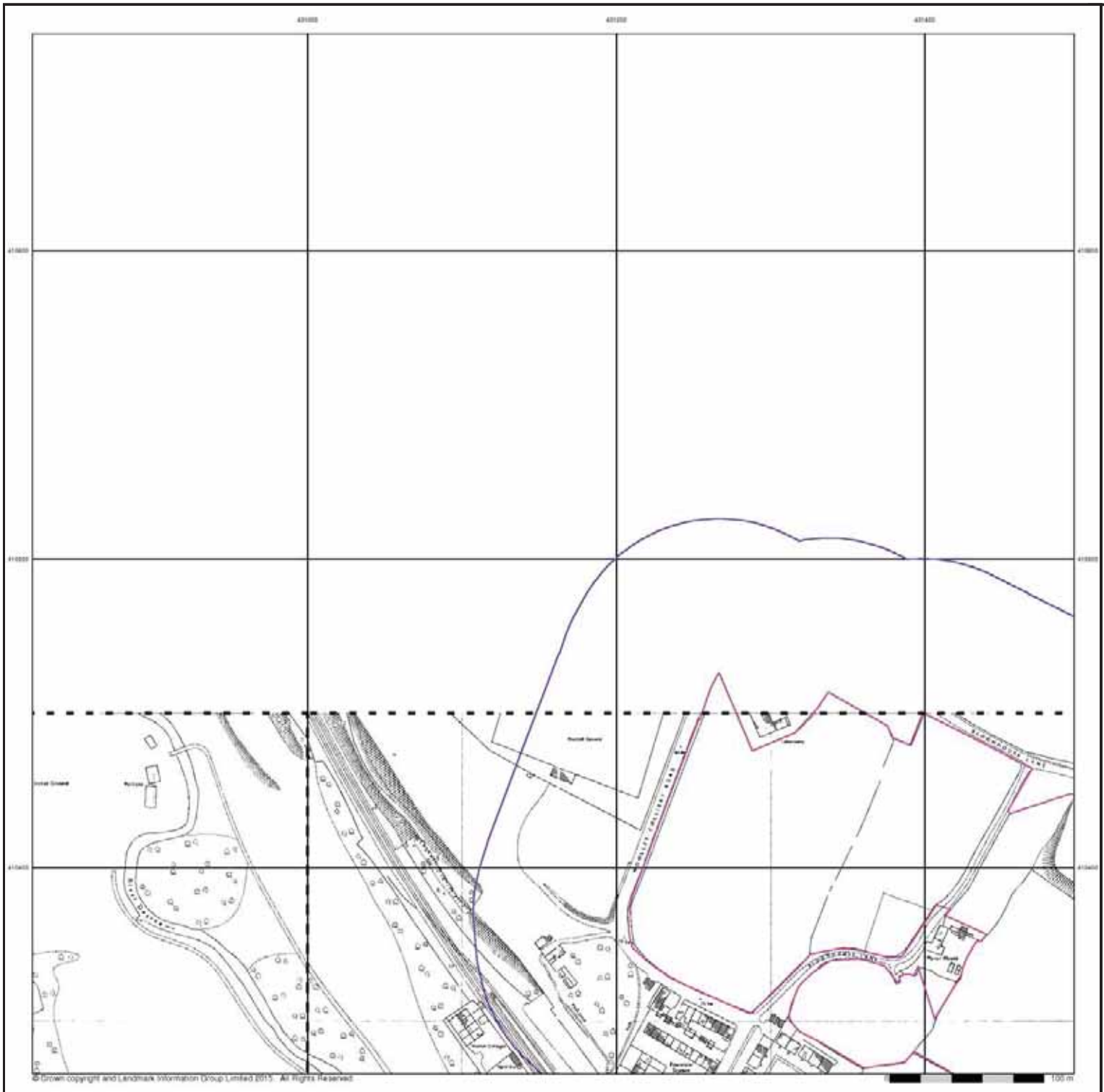


Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
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Site Details

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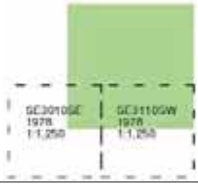
Ordnance Survey Plan

Published 1978

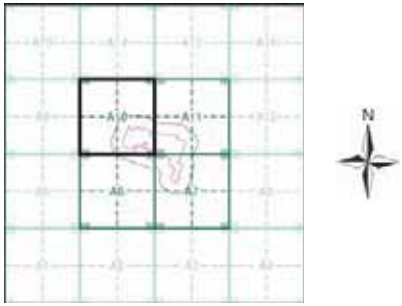
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A10

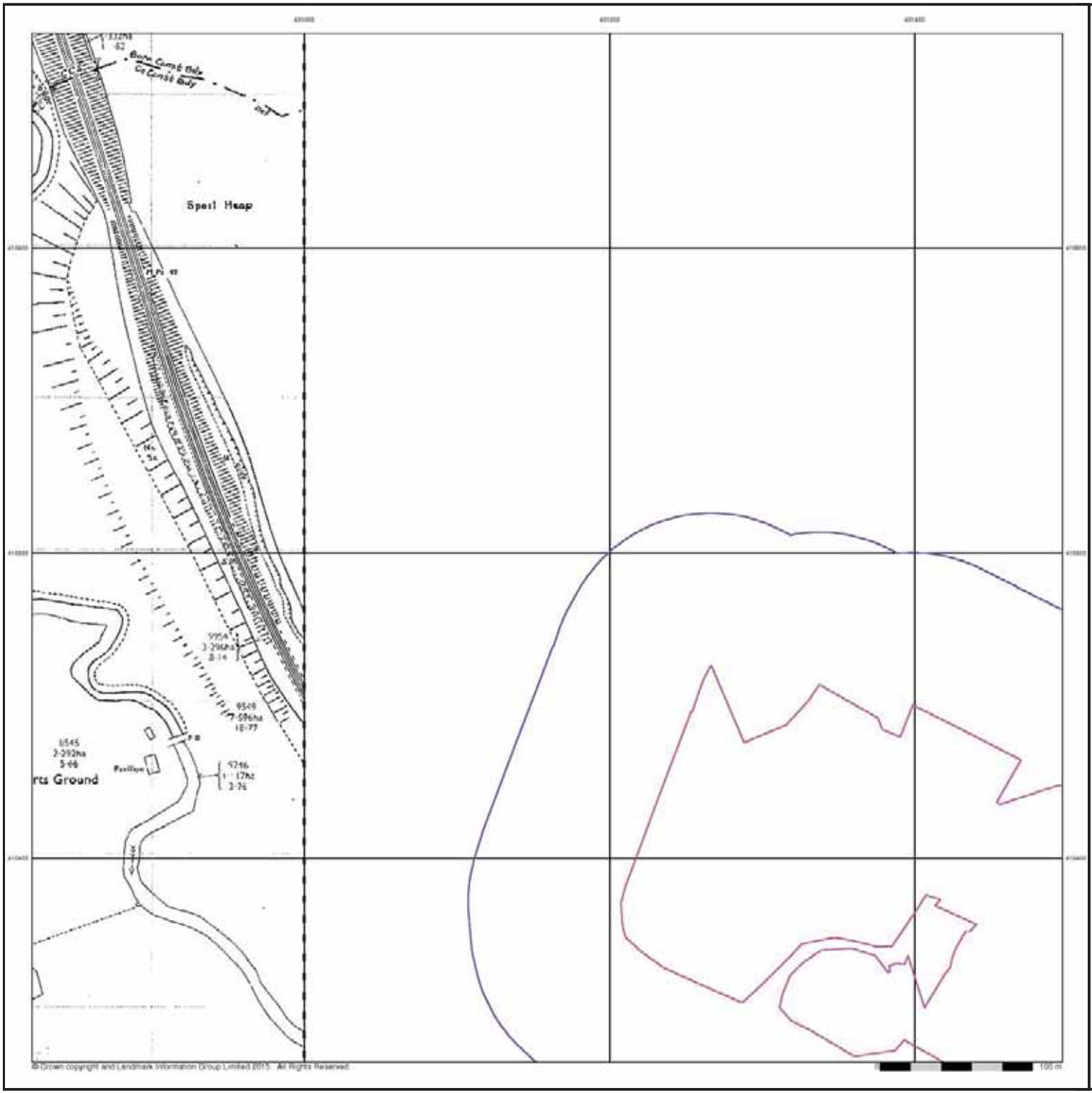


Order Details

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National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
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Site Details

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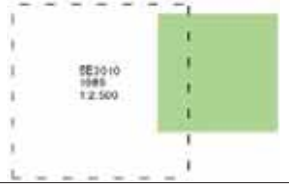
Additional SIMs

Published 1989

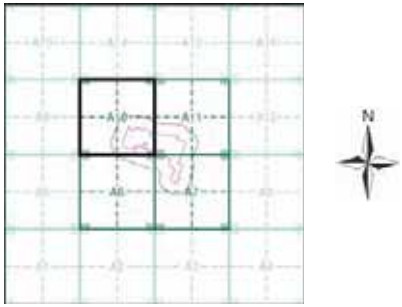
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A10



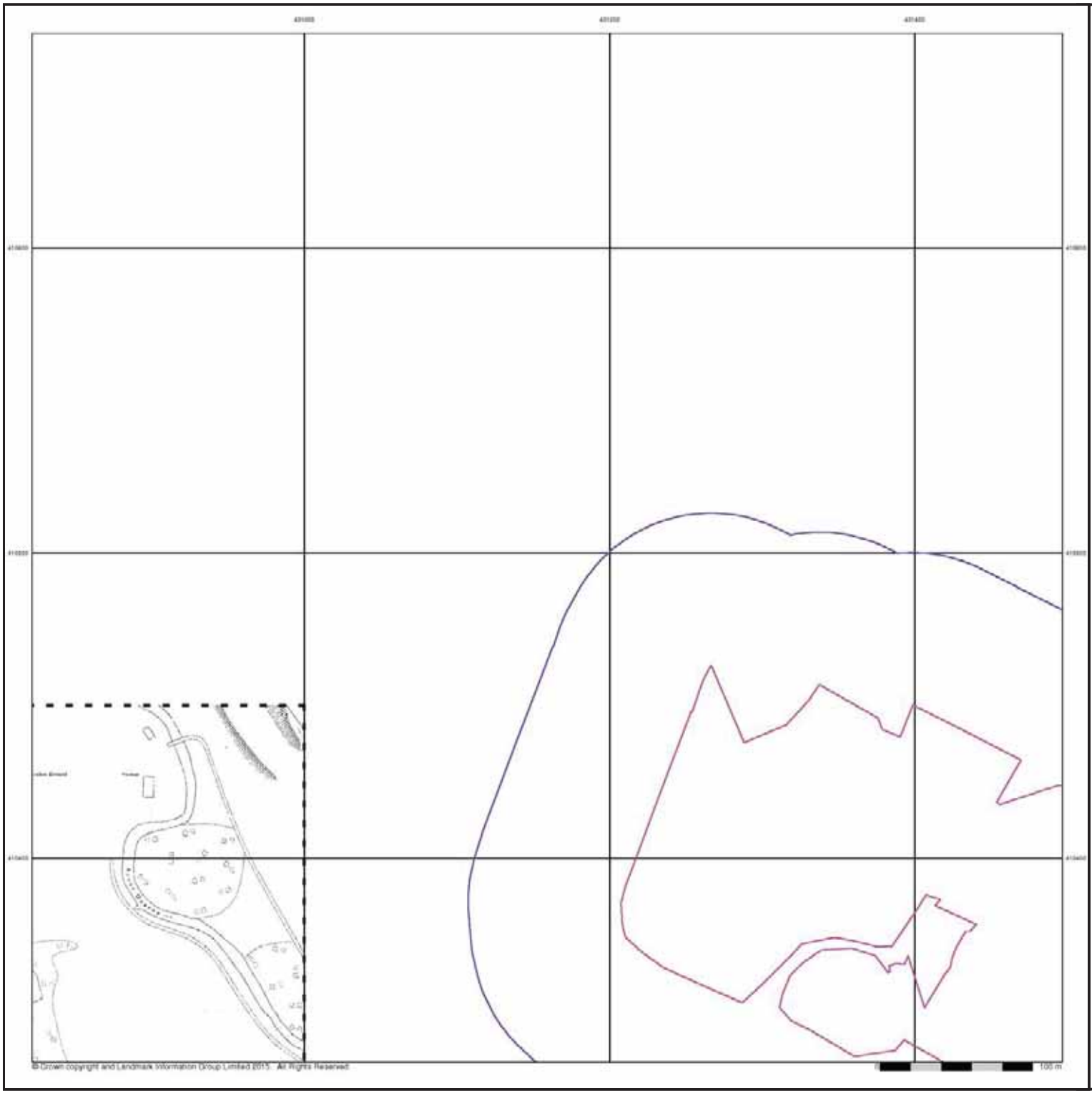
Order Details

Order Number:	77520900_1_1
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Site Area (Ha):	11.89
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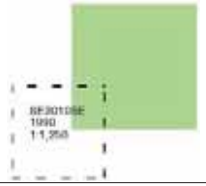
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Published 1990

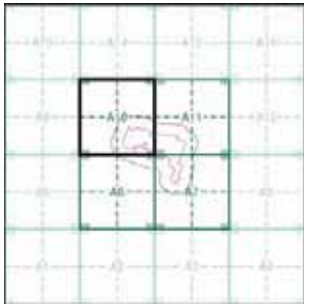
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

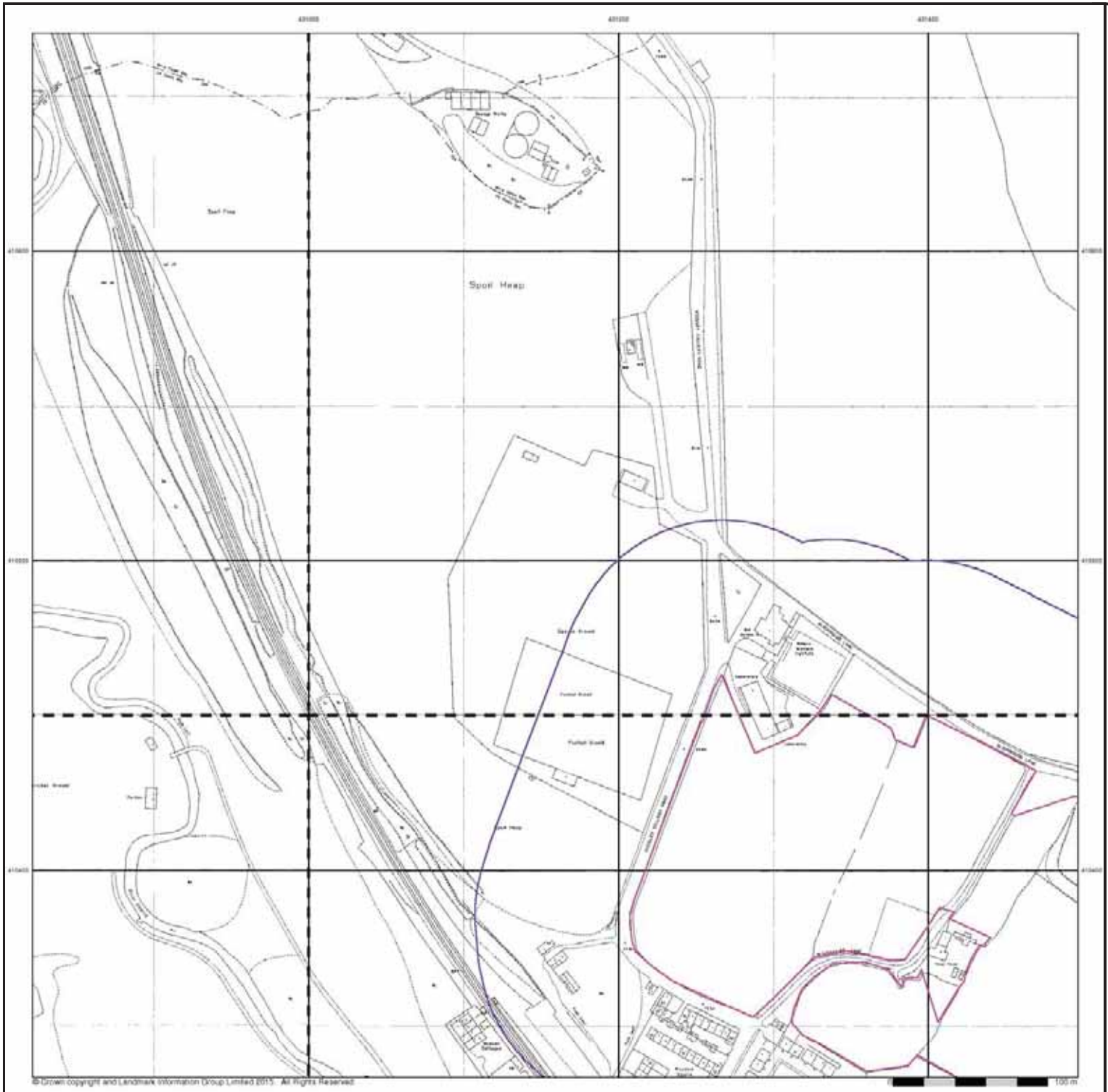
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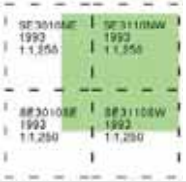
Large-Scale National Grid Data

Published 1993

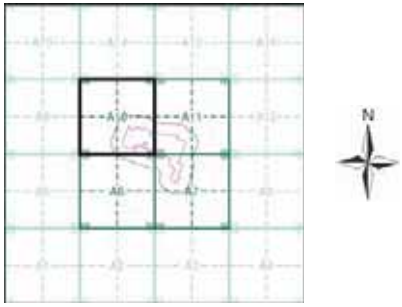
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

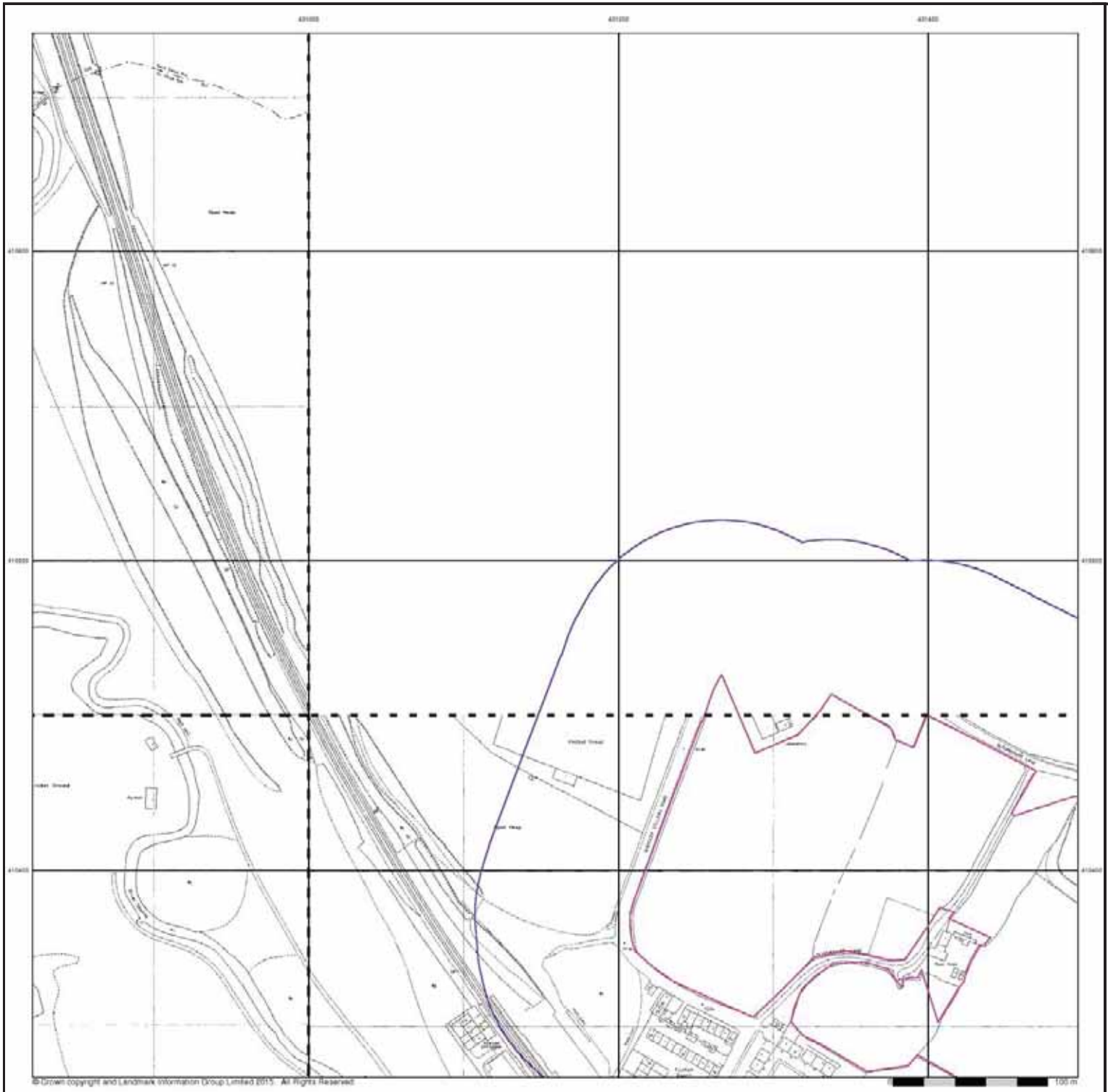
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Site Area (Ha):	11.89
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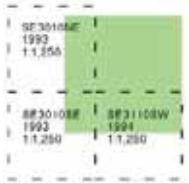
Large-Scale National Grid Data

Published 1993 - 1994

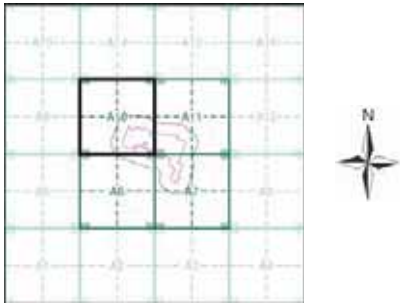
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	100

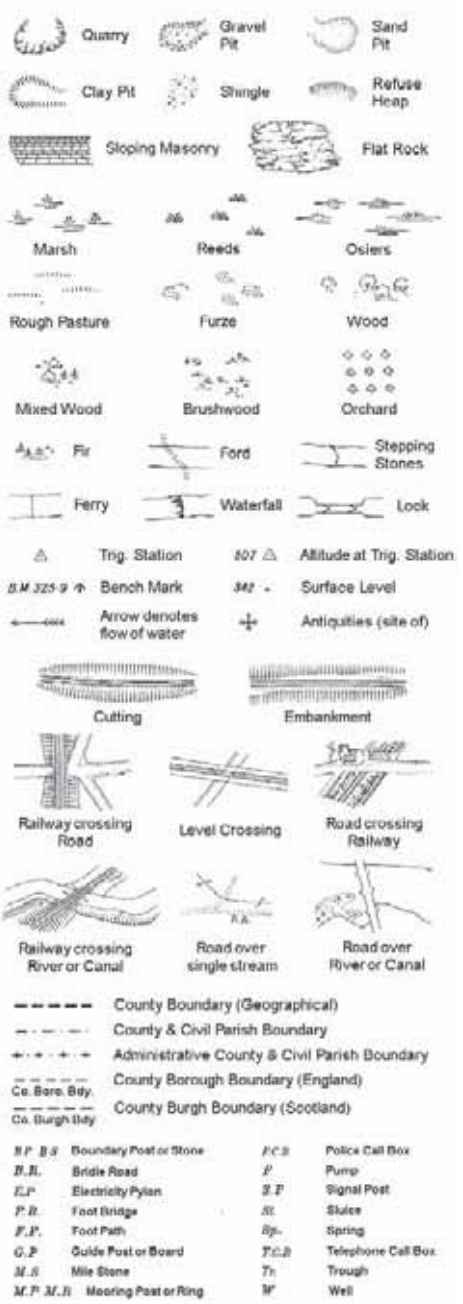
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Historical Mapping Legends

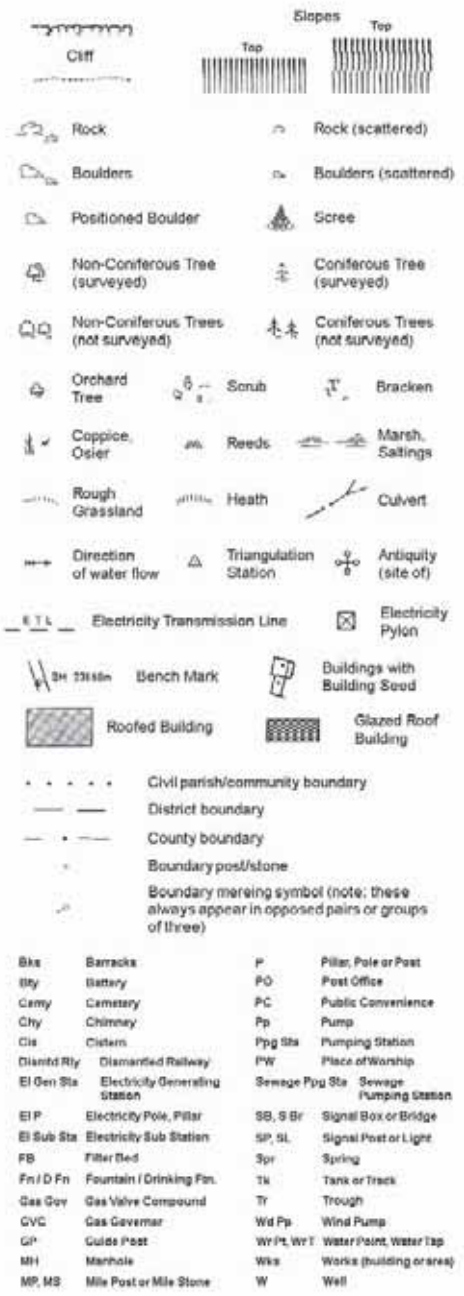
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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



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

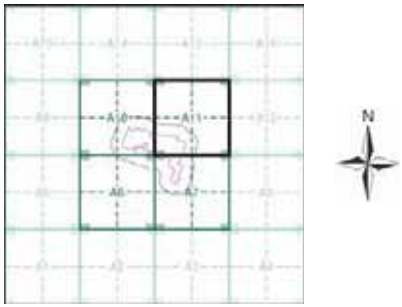


RSK

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1893	2
Yorkshire	1:2,500	1906	3
Yorkshire	1:2,500	1918	4
Ordnance Survey Plan	1:2,500	1961 - 1962	5
Ordnance Survey Plan	1:2,500	1967 - 1970	6
Ordnance Survey Plan	1:1,250	1978	7
Additional SIMs	1:1,250	1982 - 1984	8
Additional SIMs	1:1,250	1984 - 1990	9
Large-Scale National Grid Data	1:1,250	1993	10
Large-Scale National Grid Data	1:1,250	1993 - 1994	11
Large-Scale National Grid Data	1:1,250	1994 - 1995	12
Large-Scale National Grid Data	1:1,250	1995	13
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Historical Map - Segment A11



Order Details

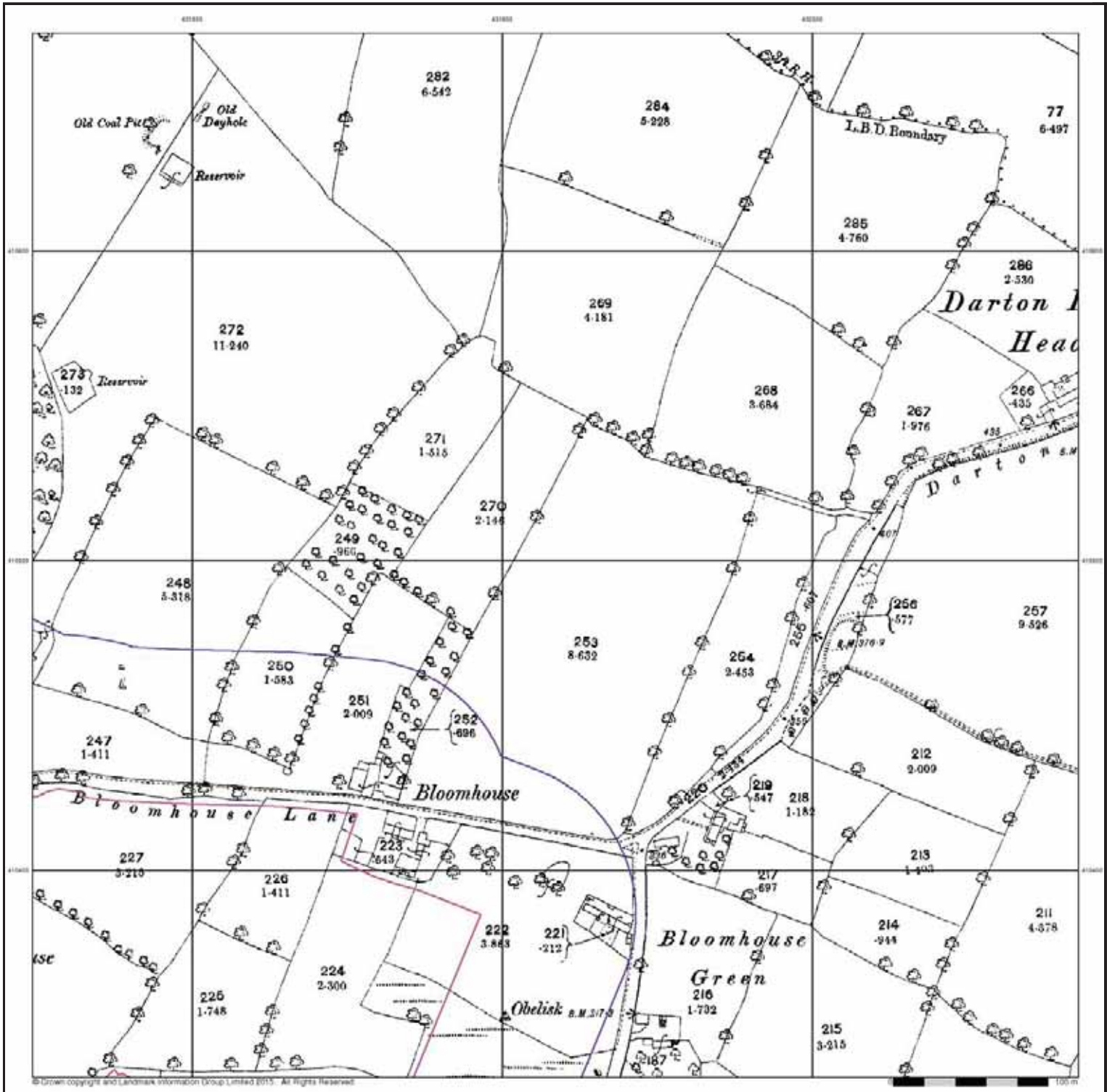
Order Number: 77520900_1_1
Customer Ref: 301645
National Grid Reference: 431520, 410300
Slice: A
Site Area (Ha): 11.89
Search Buffer (m): 100

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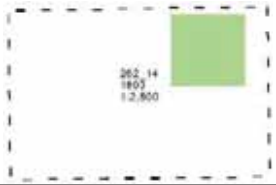
Yorkshire

Published 1893

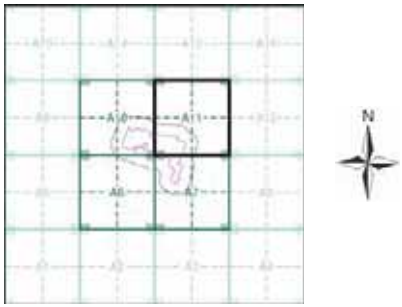
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



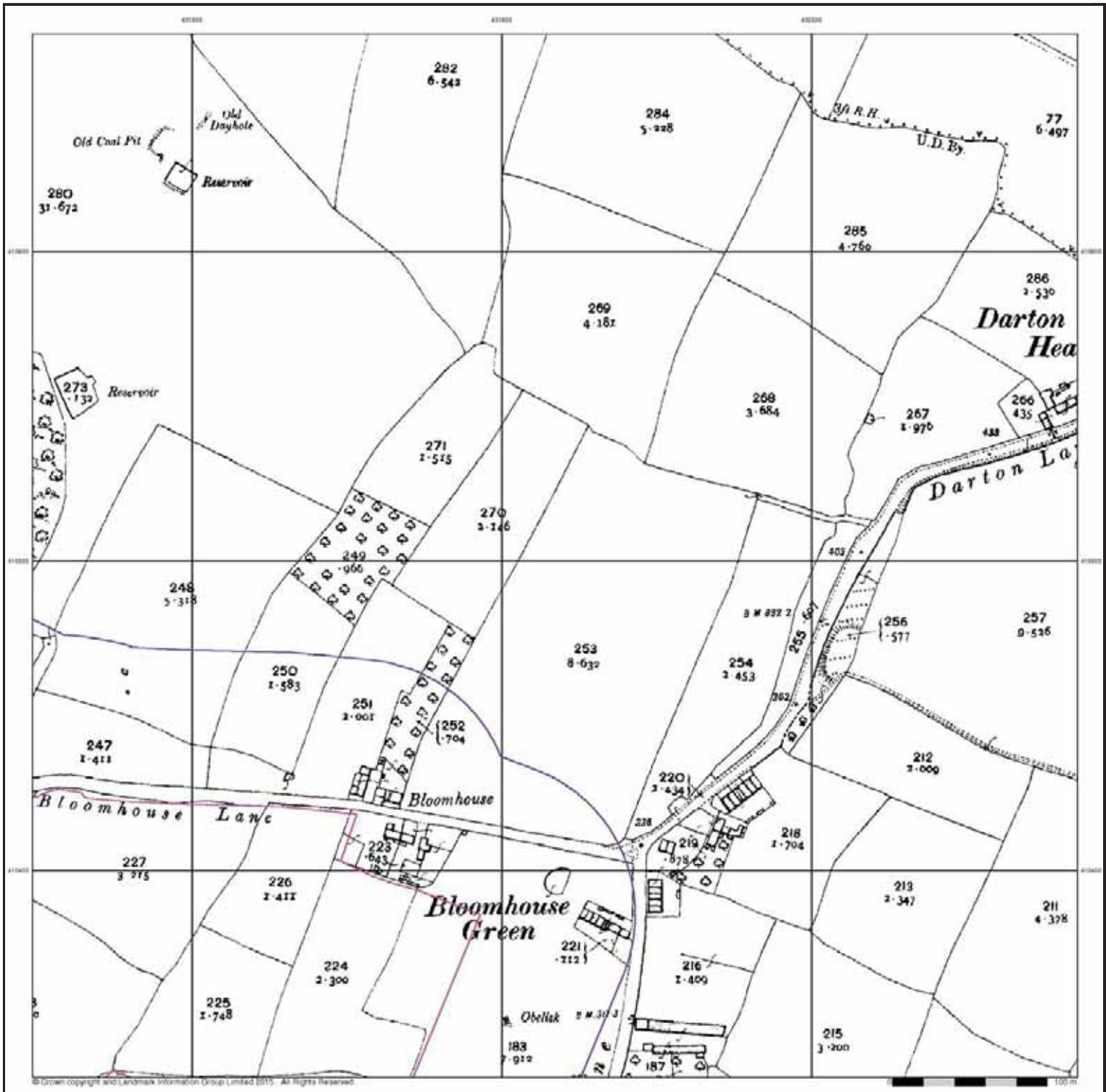
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Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	100

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

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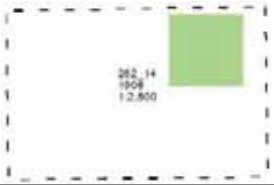
Yorkshire

Published 1906

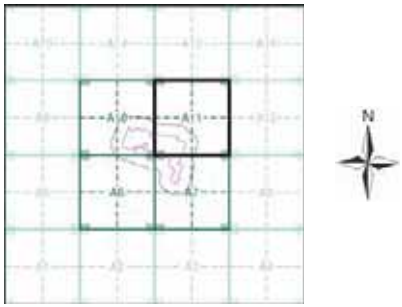
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Map Name(s) and Date(s)



Historical Map - Segment A11



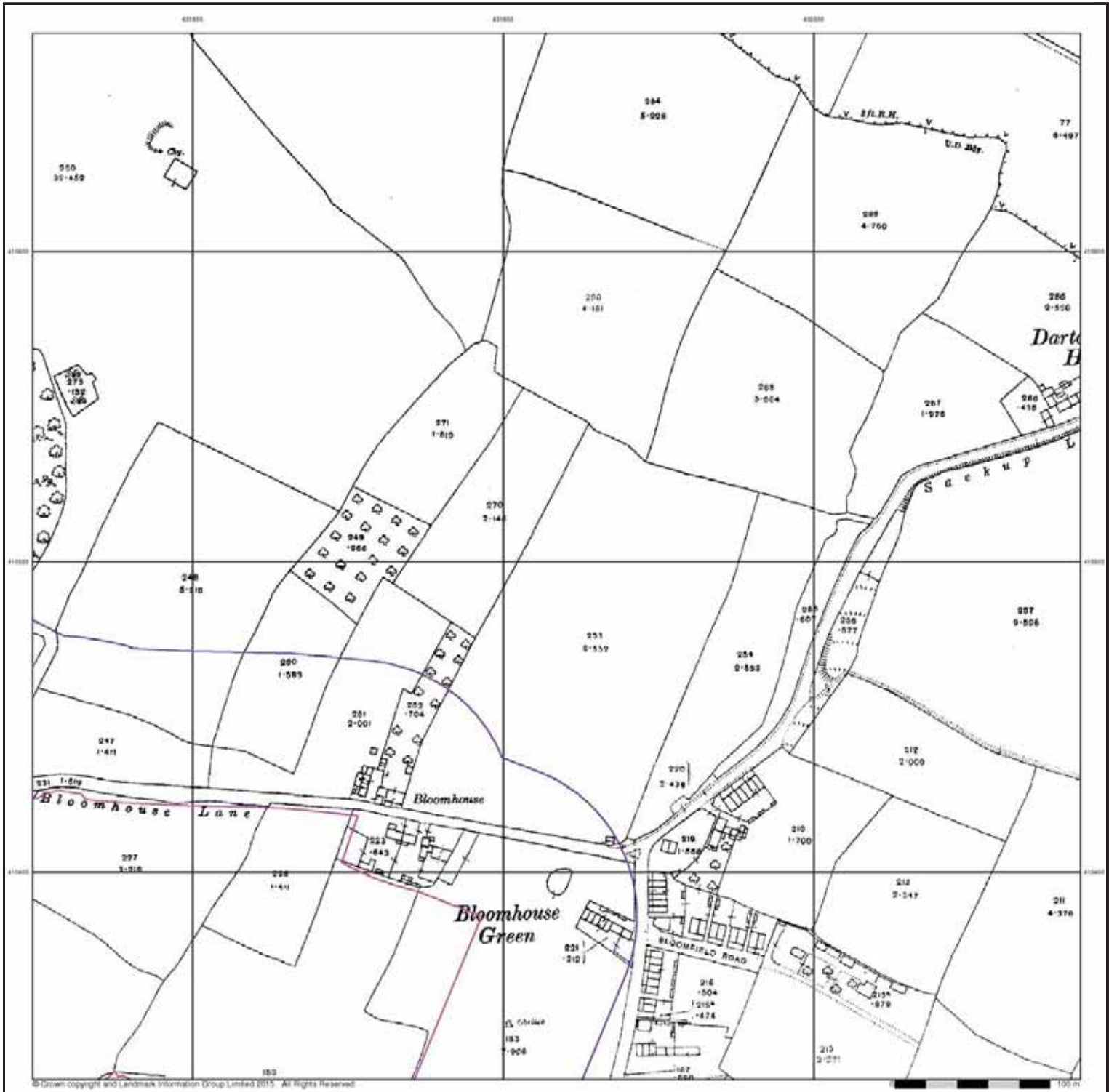
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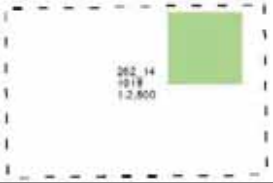
Yorkshire

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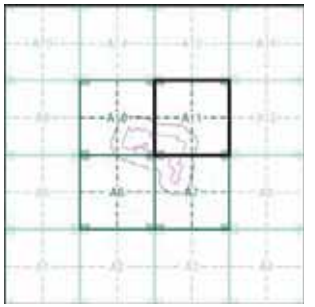
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Map Name(s) and Date(s)



Historical Map - Segment A11



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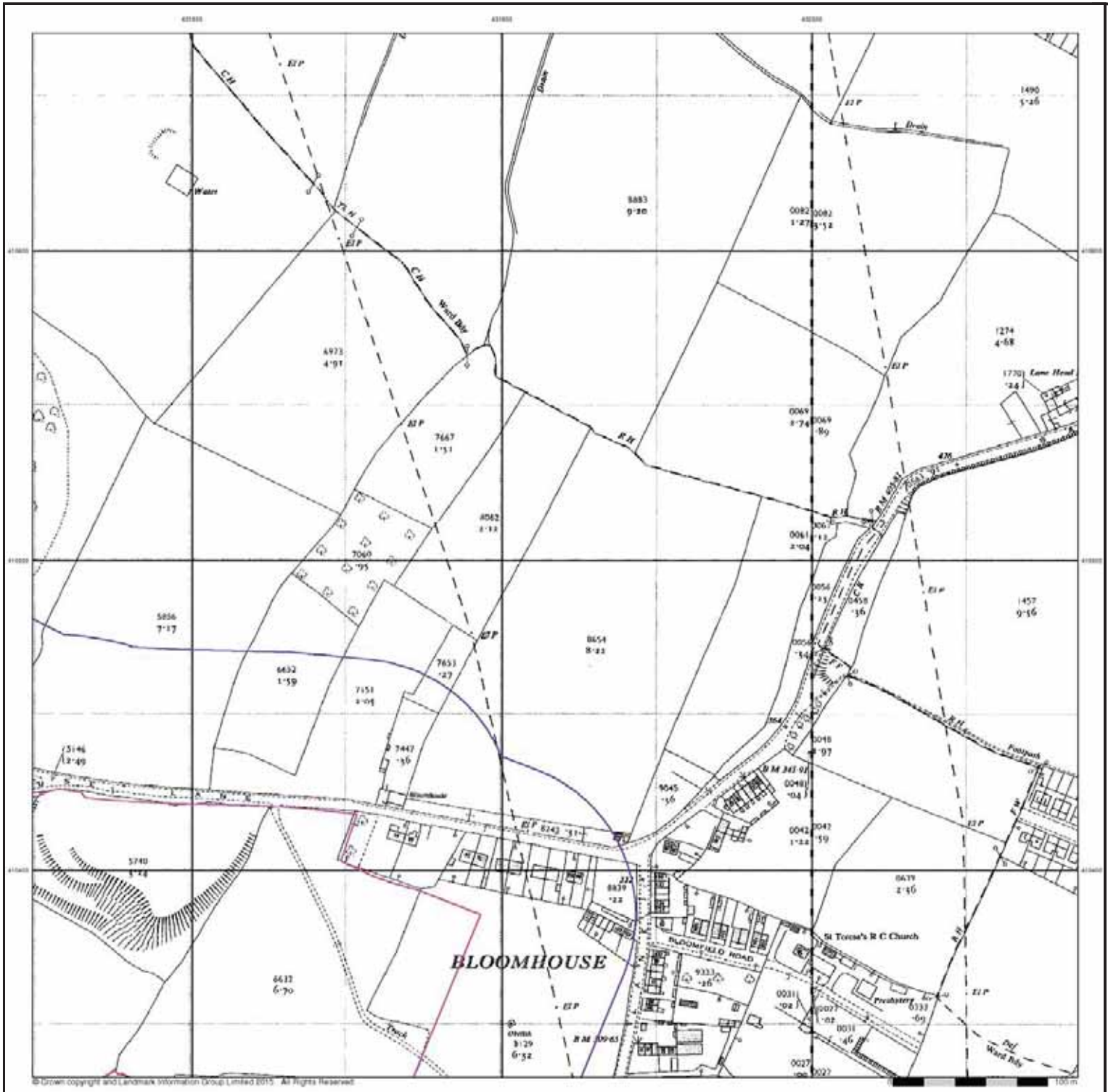
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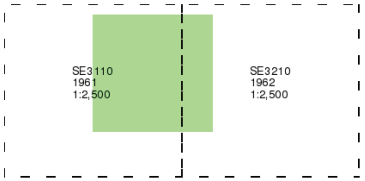
Ordnance Survey Plan

Published 1961 - 1962

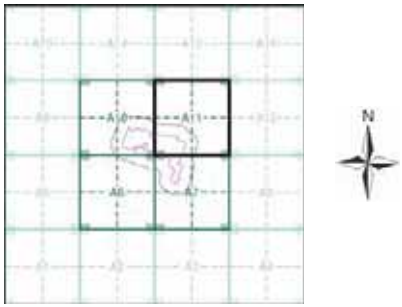
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Map Name(s) and Date(s)



Historical Map - Segment A11



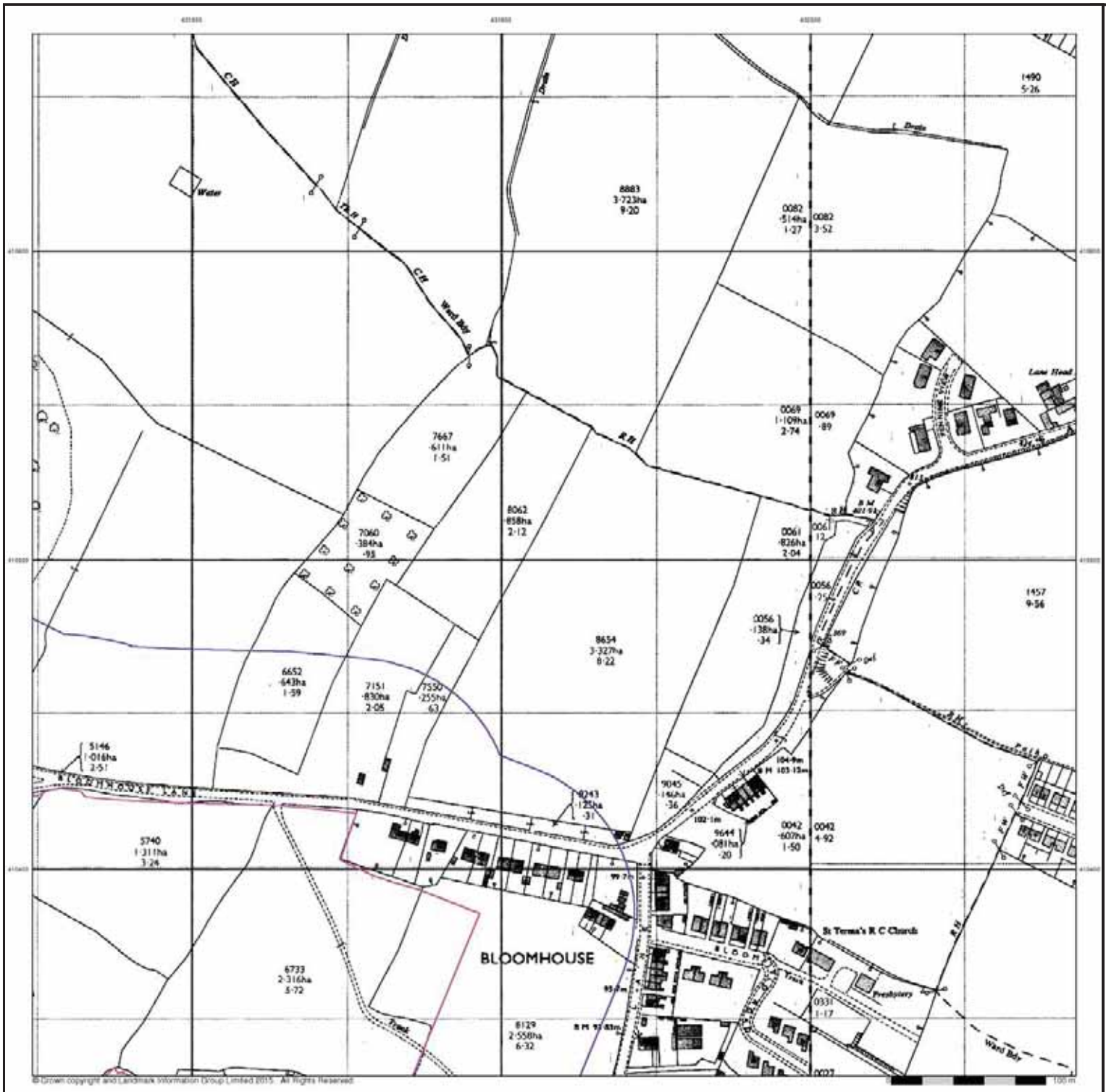
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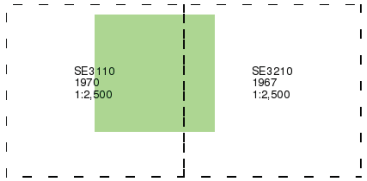
Ordnance Survey Plan

Published 1967 - 1970

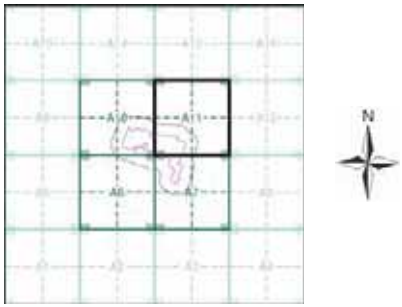
Source map scale - 1:2,500

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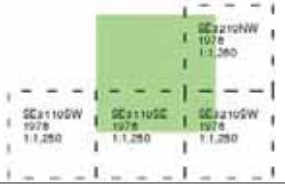
Ordnance Survey Plan

Published 1978

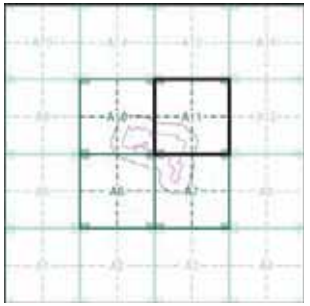
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

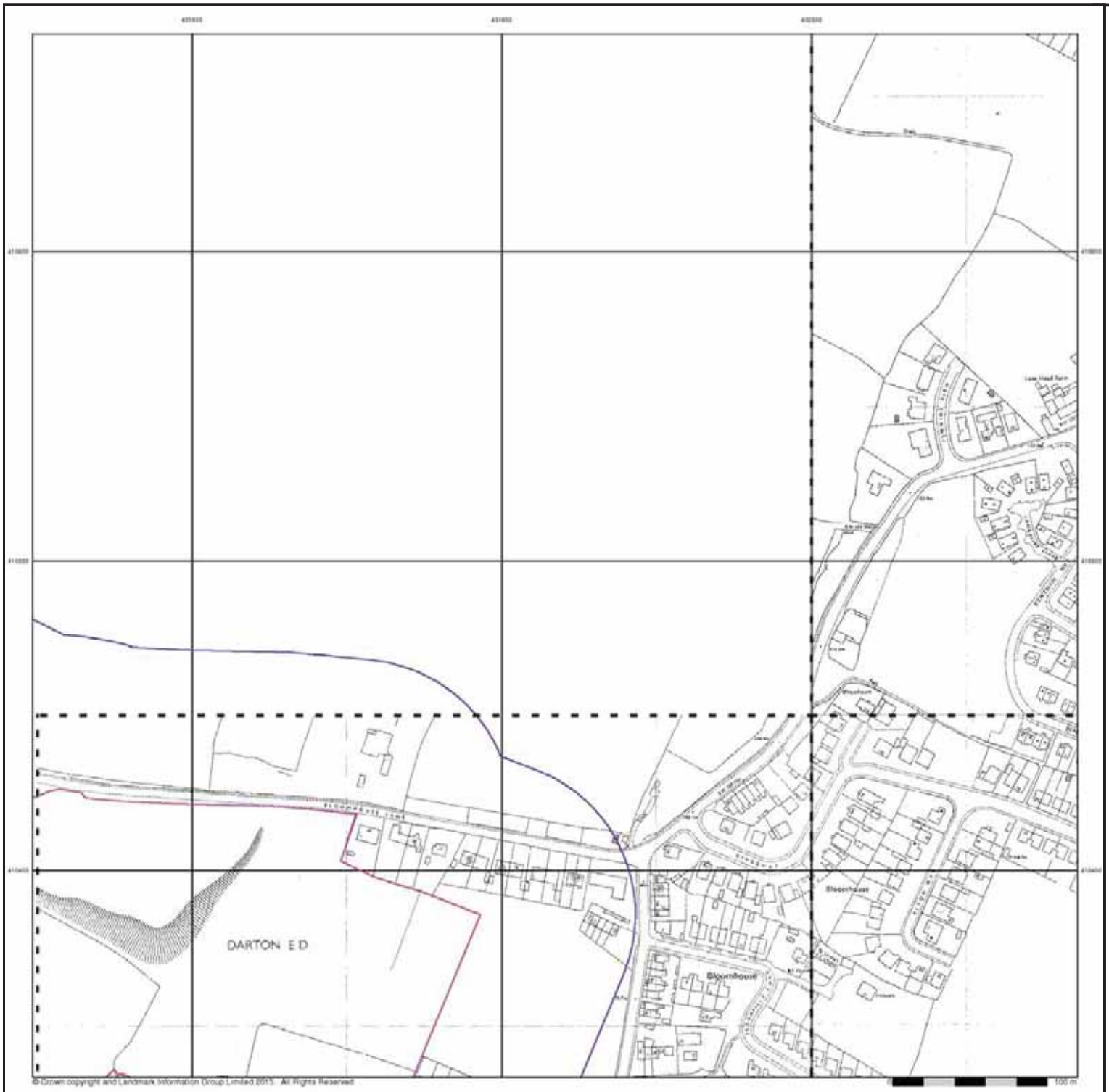
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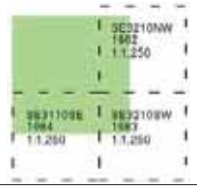
Additional SIMs

Published 1982 - 1984

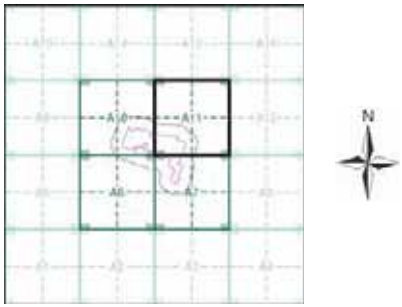
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

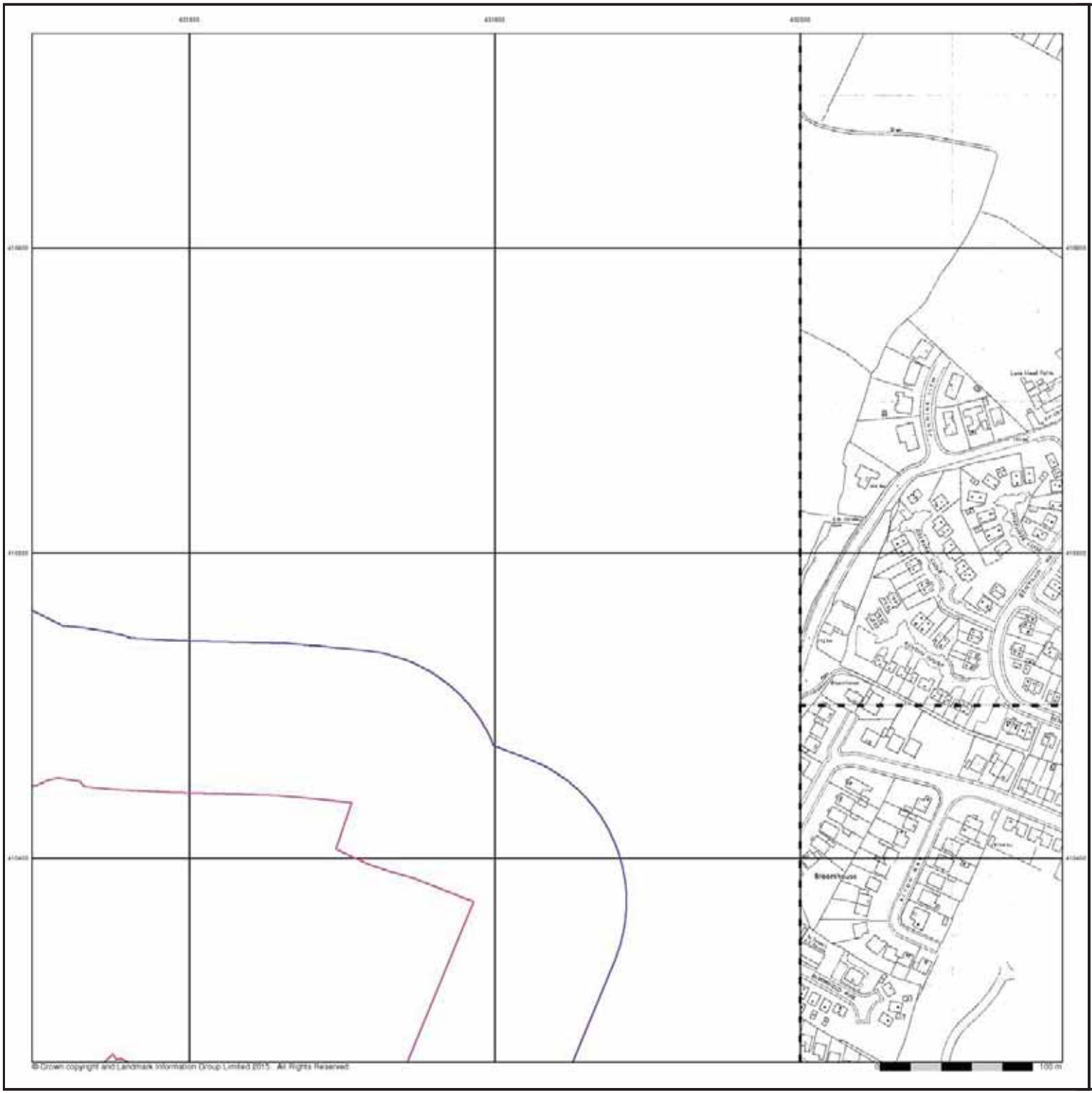
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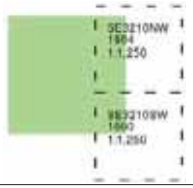
Additional SIMs

Published 1984 - 1990

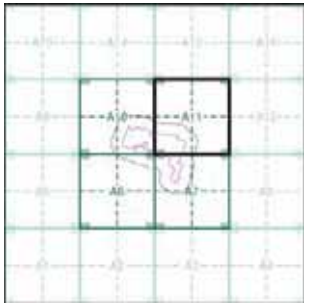
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A11



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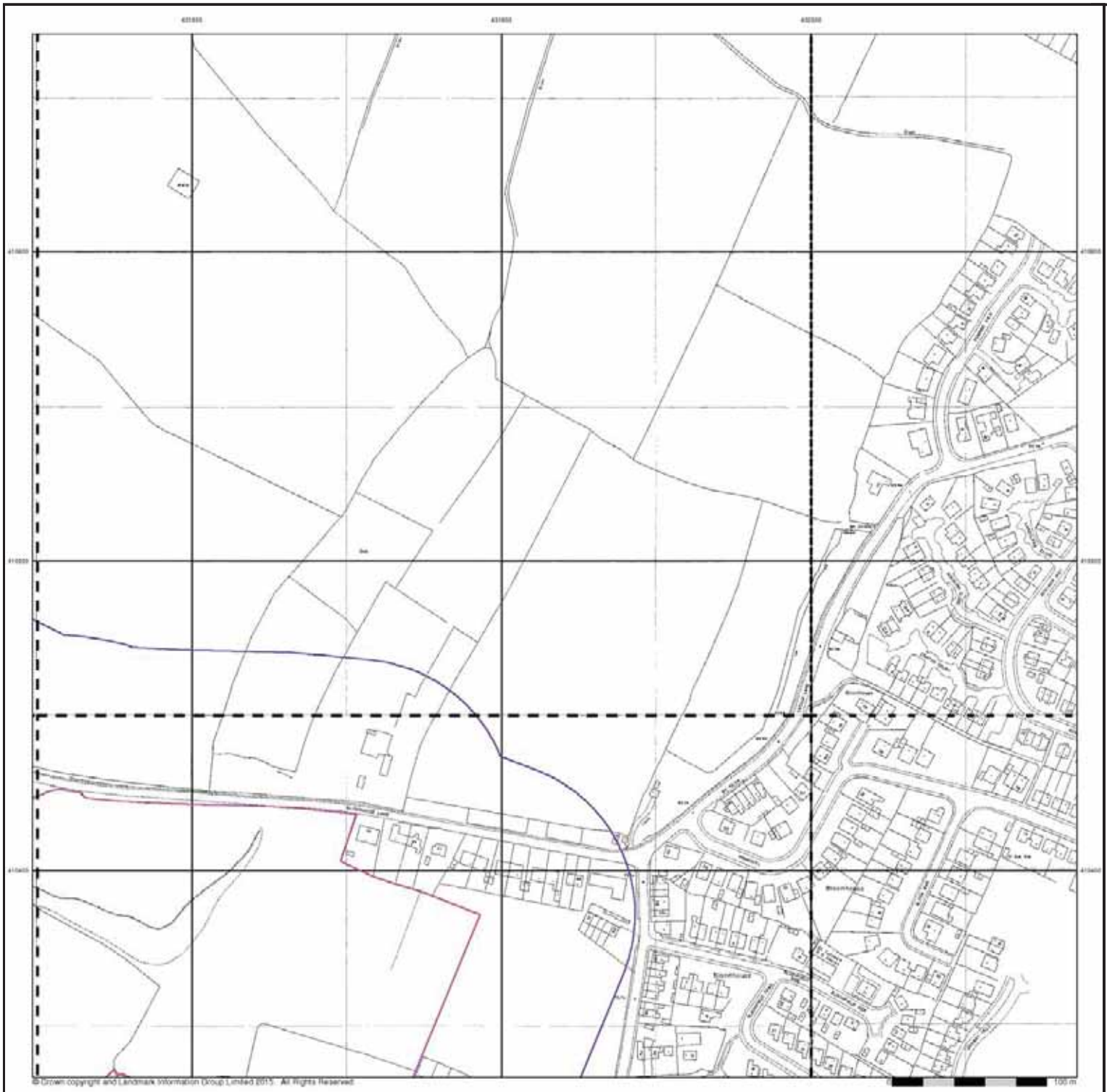
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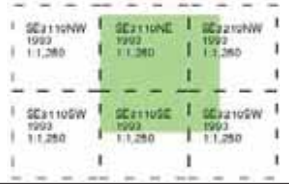
Large-Scale National Grid Data

Published 1993

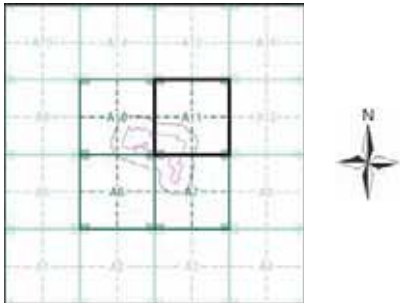
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A11



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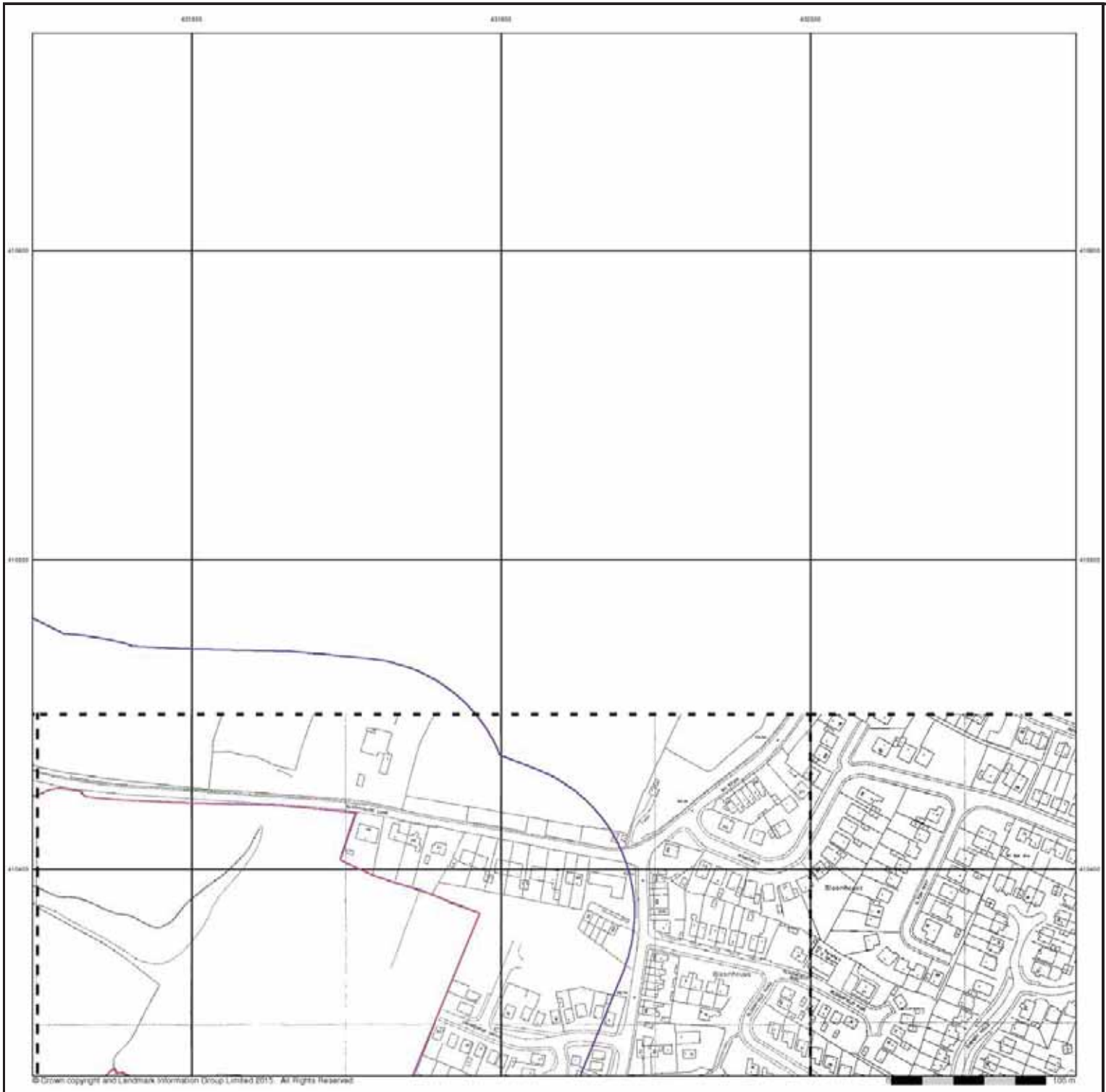
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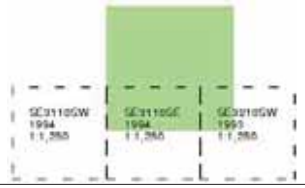
Large-Scale National Grid Data

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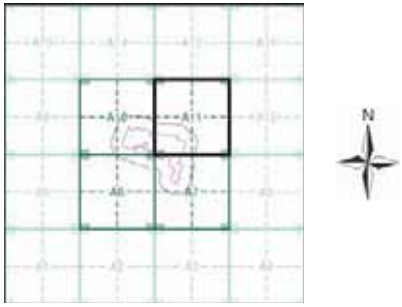
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Map Name(s) and Date(s)



Historical Map - Segment A11



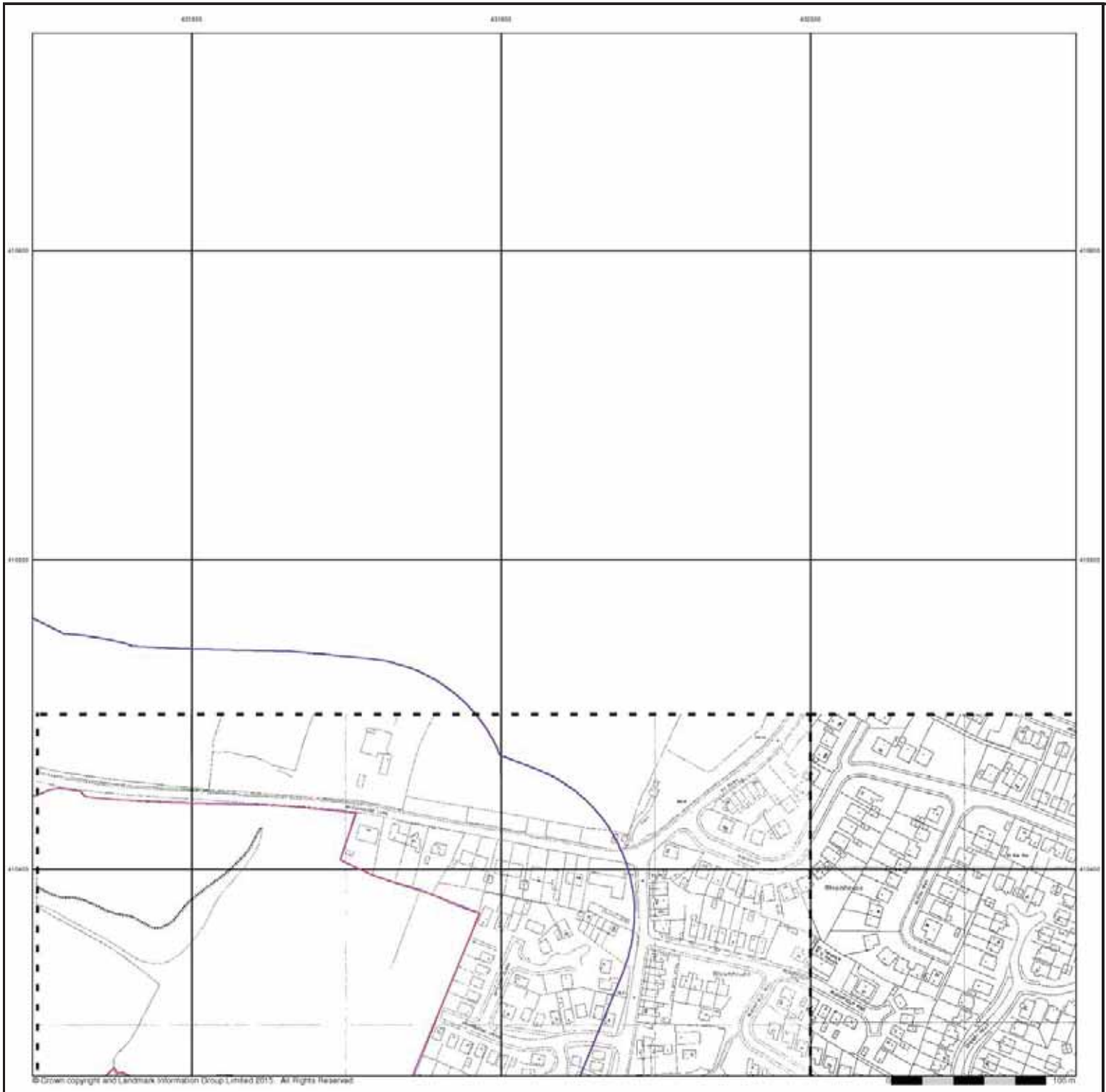
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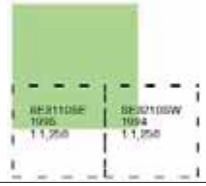
Large-Scale National Grid Data

Published 1994 - 1995

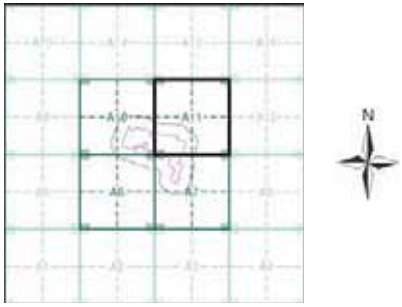
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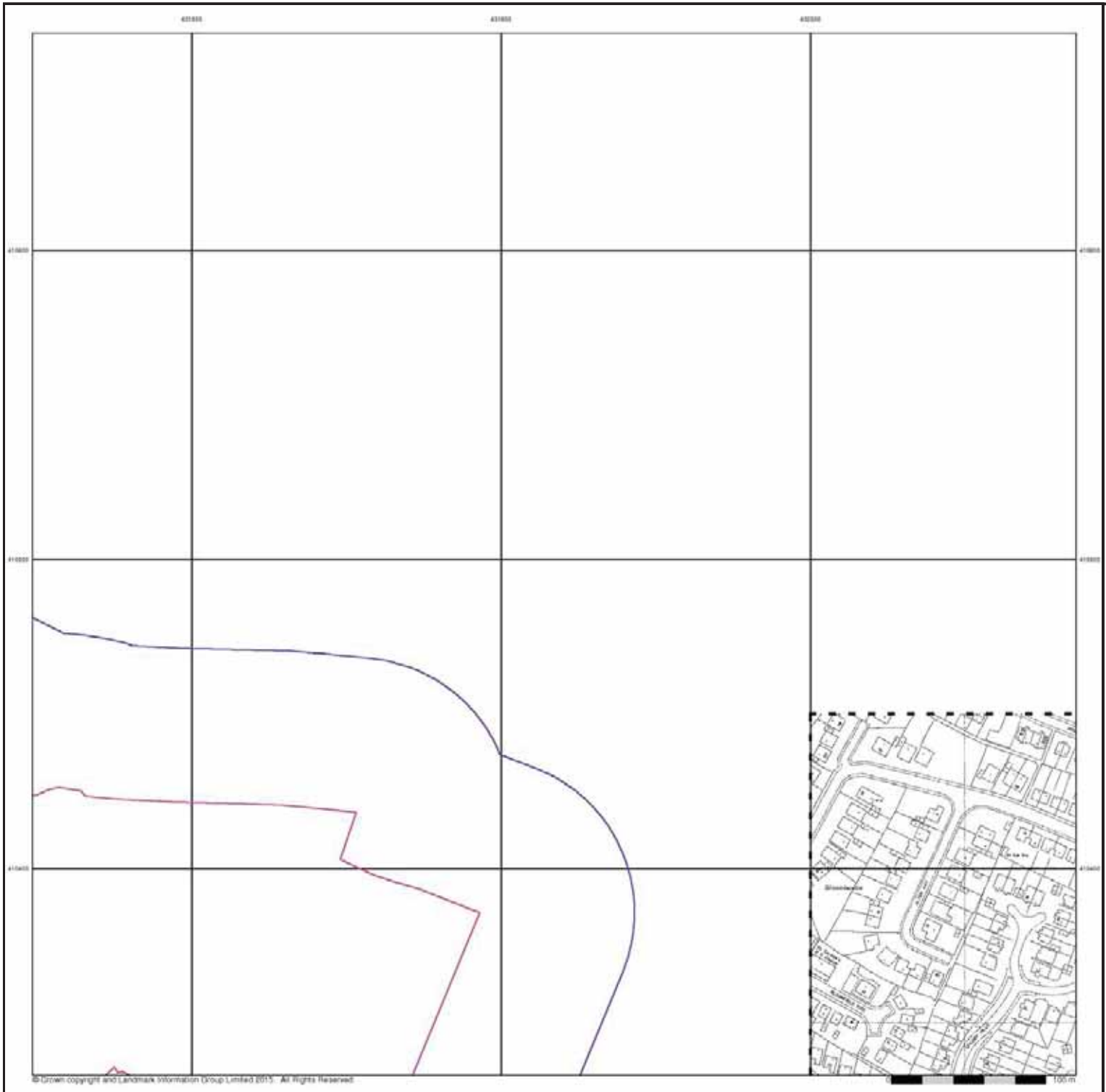
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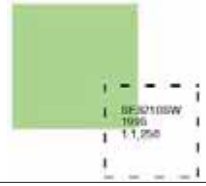
Large-Scale National Grid Data

Published 1995

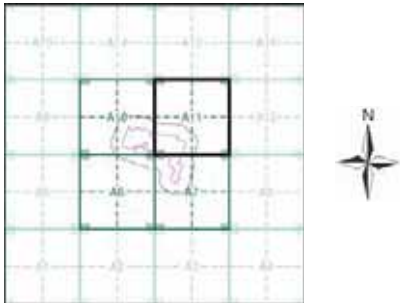
Source map scale - 1:1,250

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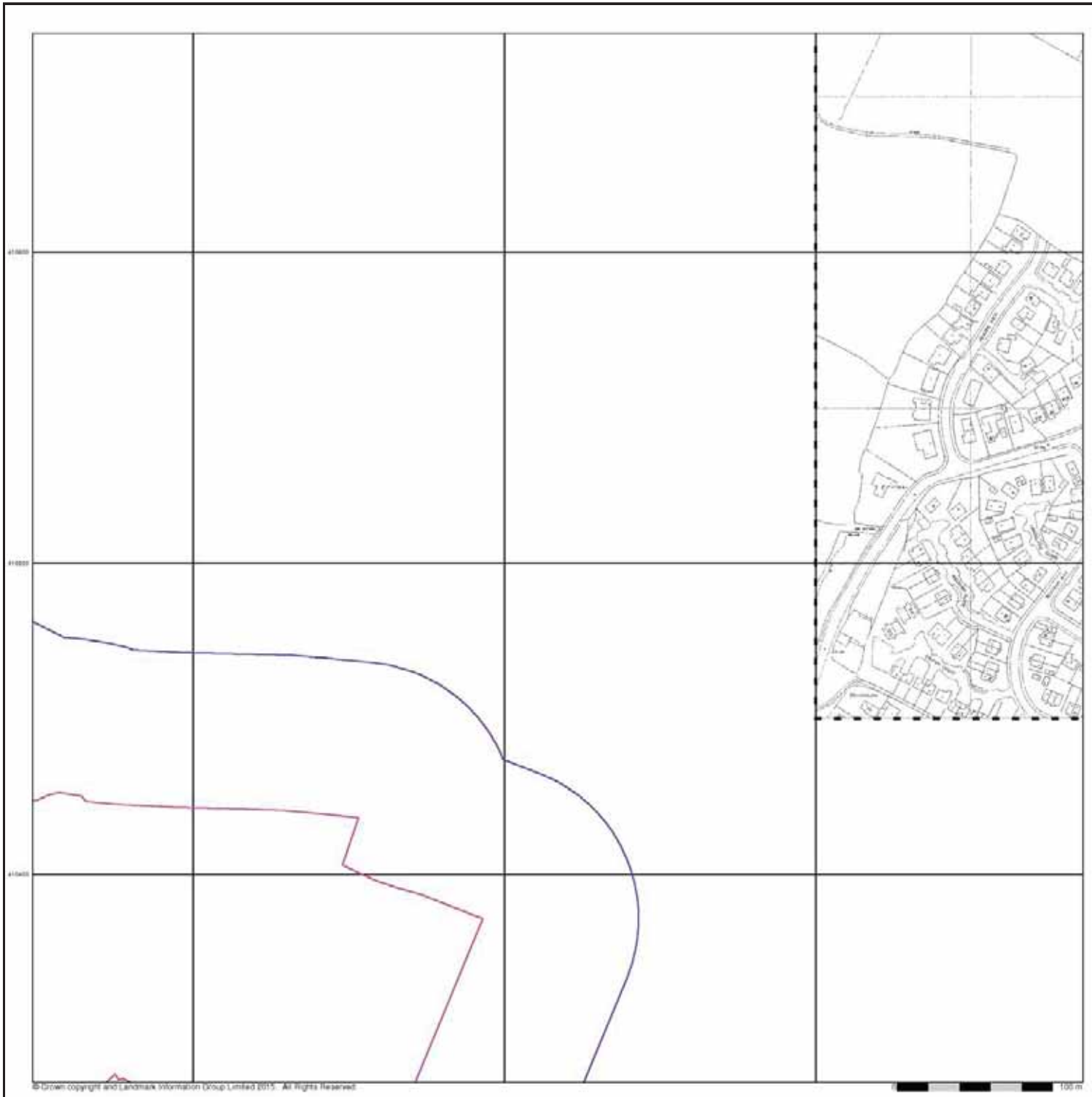
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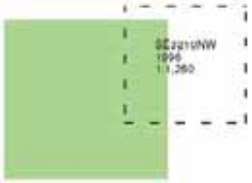
Large-Scale National Grid Data

Published 1996

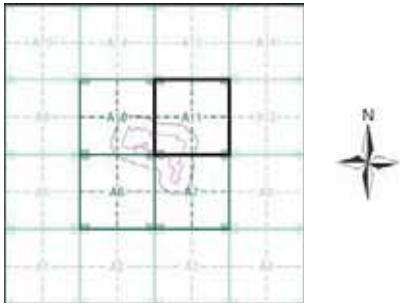
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

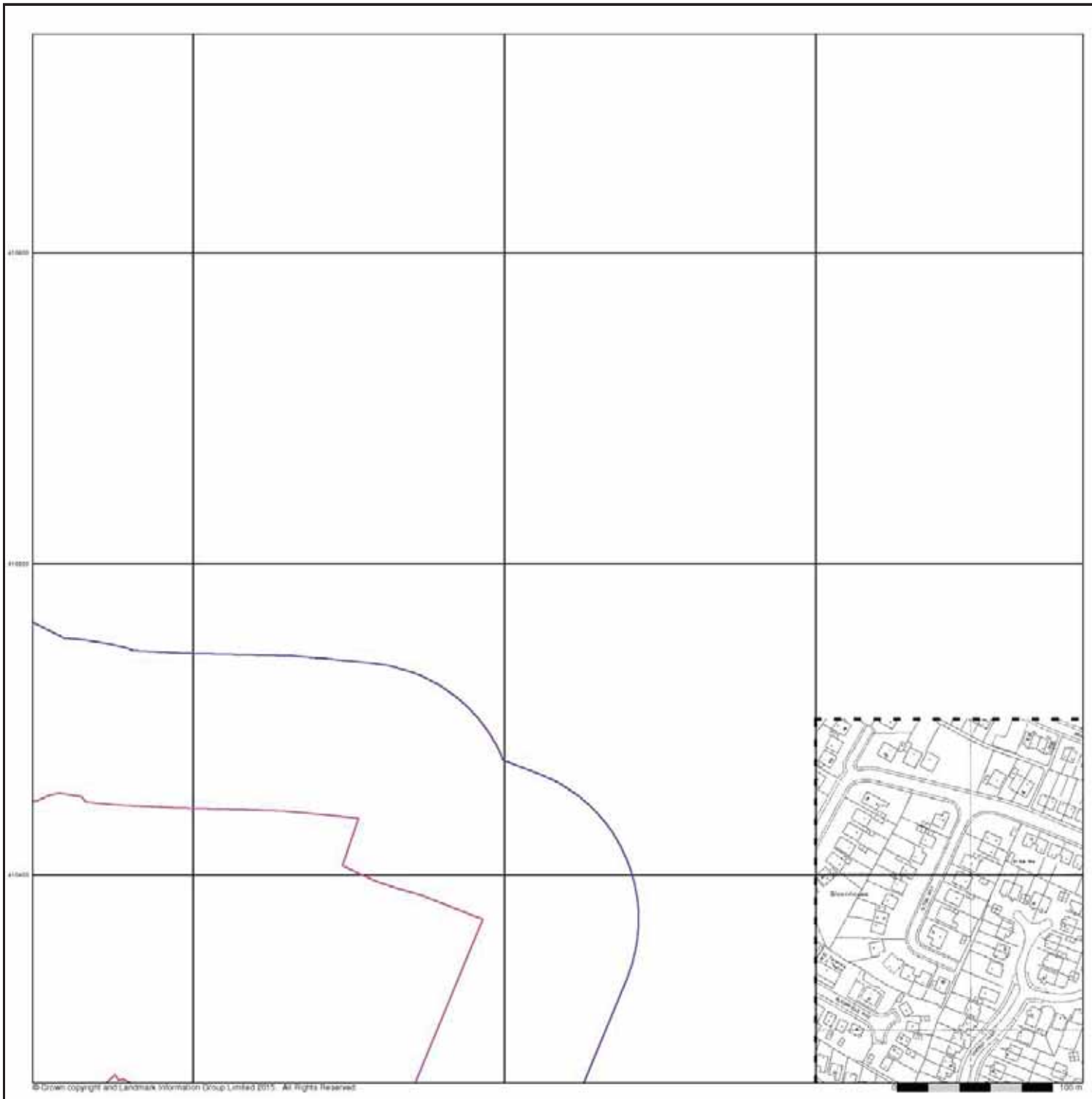
Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	100

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark

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



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RSK

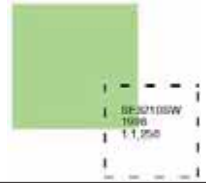
Large-Scale National Grid Data

Published 1996

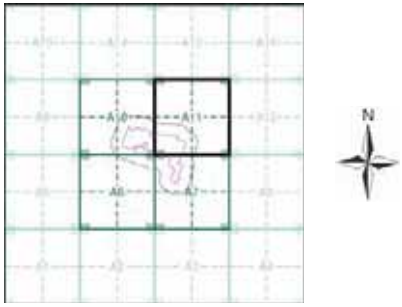
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'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	77520900_1_1
Customer Ref:	301645
National Grid Reference:	431520, 410300
Slice:	A
Site Area (Ha):	11.89
Search Buffer (m):	100

Site Details

Bloomhouse Lane, Darton, BARNSLEY, South Yorkshire, S75 5HJ

Landmark

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

SE31SW 215

Curtins
CONSULTING ENGINEERS

Date : 20/5/88

Job N° DN45

Weather: Today:

Recently:

3179
1037

Level :

Trial Pit N° 1

Depth	Description	Shear Vane Reading Ave of 3
0	Course Grass	
	Dark Brown Topsoil	
	Firm Light Brown Mottled Silty Clay	55, 70 & 55
1000		
	Coal	
2000		
3000		
4000		
5000		

Ground Water: Yes ☐ No ☑ Level: _____ Rate: _____

Soil Sample : Yes ☑ No ☐ Level: 1.0m

Excavation Stable: Yes ☑ No ☐

Comments :

SE31SW 278

Curtins
CONSULTING ENGINEERS

Date :

Job No DN45

3187
1031

Weather: Today:

Recently:

Level :

Trial Pit No 4

Depth	Description	Shear Vane Reading Ave of 3
0	Course Grass	
	Brown Topsoil	
1000	Firm Orangey Brown Mottled Silty Clay With Traces of Coal, & Pockets of Firm Grey Clayey Silt.	
2000	Compact Mottled Brown Clayey Shale	
3000	Rock Could Not Excavate Further.	
4000		
5000		

Ground Water: Yes ☐ No ☑ Level: _____ Rate: _____

Soil Sample: Yes ☑ No ☐ Level: 0.9m

Excavation Stable: Yes ☑ No ☐

Comments: Fragments of Shale Could Be Crushed Into Powder In Hand.

SE31SW 280

Curtins
CONSULTING ENGINEERS

Date :

Job No DN45

Weather: Today:

Recently:

3179
1034

Level :

Trial Pit No 6

Depth	Description	Shear Vane Reading Ave of 3
0		
	Brown Topsoil	
	Firm Orangey Brown Mottled Silty Clay, With Traces of Coal, Becoming Shaley With Depth.	64, 70 & 70
1000		
2000		
	Compact Mottled Brown Clayey Shale	
3000		
4000		
5000		

Ground Water: Yes ☐ Level: _____ Rate: _____
No ☑

Soil Sample : Yes ☐ Level: _____
No ☑

Excavation Stable: Yes ☑ _____
No ☐ _____

Comments :

SE31SW 286

Curtins
CONSULTING ENGINEERS

Date :

Job No DN45

Weather: Today:

Recently:

3178
1027

Level :

Trial Pit No 12

Depth	Description	Shear Vane Reading Ave of 3
0	Course Grass	
	Brown Topsoil With Some Broken Tiles, Pot & Pieces of Glass	
1000	Soft to Firm SIlty Clay Fill With Traces Of Ash & Pieces Of Coal, Rusty Tin Can. Piece of Rotting Cloth In Fill at 2.0m Pieces Of Rotting TImber In Fill at 2.6m Rotting Leather Sole From Shoe at 2.7m Some Pieces of Brick.	
2000		
3000		
4000		
5000		

Ground Water: Yes ☐ Level: _____ Rate: _____
No ☑

Soil Sample: Yes ☐ Level: _____
No ☑

Excavation Stable: Yes ☑ _____
No ☐ _____

Comments: Clay Fill Broke Up Into Fragments Varying In Size & Shape When Excavated.

Norwest Holst Soil Engineering Ltd.

Borehole No. 2

BOREHOLE LOG

Contract No. E8032
Location. Station Road, DARTON
Client. BARNSLEY M.B.C.
Method of Boring. Rotary coring
Diameter of Borehole. 76mm core

Sheet 1 of 1
Chainage. 63.0m; 10.0mS
Ground Level. 104.91 m.A.O.D.
Date. 16 & 17/11/88

Description of Strata	Legend	Depth Below G.L. (m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.Q.D.%	Daily Progress
MADE GROUND: Concrete and sandstone setts		0.20	104.71				
Light grey brown very thinly bedded highly to moderately weathered very silty MUDSTONE very weak to moderately weak ...with very closely spaced iron stained jointing ...bedding dips ≃ 45°					OPEN HOLE TCR (%) SCR (%) 3.00		17/11
		4.50	100.41		75 8	5	
Grey laminated moderately to highly weathered MUDSTONE weak ...bedding dips at 40° reducing to 20° with depth					5.00 38 2	0	
					7.00		
Black laminated moderately weathered carbonaceous MUDSTONE weak ... with very closely spaced discontinuities, some polished		8.50	96.41				
					50 3	0	
Grey laminated moderately weathered MUDSTONE weak ...with closely spaced jointing ...bedding dips at 35°		9.50	95.41				
		10.00	94.91		10.00		

Type of Sample

Is	S.P.T.	■	Undisturbed
Ic.	C.P.T.	×	Vane
O	Jar	Δ	Water
●	Bulk		Piezometer

Remarks (Observations of Ground Water etc.)

Borehole dry during drilling

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Norwest Holst Soil Engineering Ltd.

Borehole No. 1

BOREHOLE LOG

Contract No. E8032
Location Station Road DARTON
Client BARNSLEY M.B.C.
Method of Boring Rotary coring
Diameter of Borehole 76mm core

Sheet 1 of 2
Chainage 133.4m:9.4m S
Ground Level 111.27 m.A.O.D.
Date 16/11/88

Description of Strata	Legend	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	TCR (%)	SCR (%)	"N"/ R.Q.D.%	Daily Progress
MADE GROUND: Tarmacadam and Hardcore		0.30	110.97		Open Hole				
Brown, grey/brown very thinly bedded highly weathered muddy fine grained SANDSTONE weak to moderately weak with very closely spaced iron stained jointing -- bedding dips ≃30°					2.00				
					42	0		0	
		5.00	106.27		5.00				
Grey laminated moderately weathered MUDSTONE very weak to moderately weak with very closely spaced iron stained jointing -- bedding dips vary 30° to 70° (possible fault zone)									
					38	0		0	
					7.00				
					72	20		18	
Black laminated highly weathered highly carbonaceous MUDSTONE, very weak.		8.50	102.77						
		9.00	102.27		9.00				
Light grey thinly bedded highly weathered variably sandy clayey MUDSTONE, very weak (SEAT EARTH)					53	13		7	

Type of Sample

S.P.T. Undisturbed
C.P.T. Vane
Jar Water
Bulk Piezometer

Remarks (Observations of Ground Water etc.)

Water seepage at 9.00m
Strata damp below below 18.00m

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Norwest Holst Soil Engineering Ltd.

Borehole No. 1

BOREHOLE LOG

Contract No. F8032
Location Station Road DARTON
Client BARNSLEY M.B.C.
Method of Boring Rotary coring
Diameter of Borehole 76mm core

Sheet 2 of 2
Chainage 133.4m; 9.4mS
Ground Level 111.27 m.A.O.D.
Date 16/11/88

Description of Strata	Legend	Depth Below G.L. (m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	TCR (%)	SCR (%)	"N"/ R.Q.D.%	Daily Progress
Light grey thinly bedded highly weathered variably sandy, clayey MUDSTONE, very weak (SEAT EARTH)					10.50				
					95	38		30	
					12.50				
		13.00	98.27						
Grey, light grey thinly bedded moderately to highly weathered fine grained SANDSTONE weak to moderately strong ...bedding dips ⏥ 60°					90	28		18	
		15.00	96.27		15.00				
Grey laminated highly to completely weathered clayey MUDSTONE very weak to moderately weak ... bedding dips 0° to 60° (Probable Fault Zone)					75	35		25	
		17.30	93.97		17.00				
Light grey very thinly bedded moderately weathered fine to medium grained SANDSTONE moderately strong with very closely spaced fracturing (shattered)					100	0		0	
					18.20				
					Open Hole				
		20.00	91.27		20.00				

Type of Sample

Is S.P.T. ■ Undisturbed
Ic. C.P.T. × Vane
O Jar △ Water
● Bulk Piezometer

Remarks (Observations of Ground Water etc.)

See sheet 1

Water levels are subject to seasonal or tidal variations and should not be taken as constant

APPENDIX E
NON-RESIDENTIAL COAL AUTHORITY REPORT AND RADON REPORT

The Coal Authority

Issued by:
The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG
Website: www.groundstability.com Phone: 0345 762 6848 DX 716176 MANSFIELD 5

LANDMARK INFORMATION GROUP LIMITED
SOWTON INDUSTRIAL ESTATE
ABBEY COURT
UNIT 5/7 EAGLE WAY
EXETER
DEVON
EX2 7HY

Our reference:	**51001059098001**
Your reference:	**77520900_2|**
Date of your enquiry:	**04 January 2016**
Date we received your enquiry:	**04 January 2016**
Date of issue:	**04 January 2016**

This report is for the property described in the address below and the attached plan.

Non-Residential Coal Authority Mining Report

SITE AT BLOOMHOUSE LANE, DARTON, BARNSLEY, SOUTH YORKSHIRE,

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.

Coal mining	See comments below
Brine Compensation District	No

Information from the Coal Authority

Underground coal mining

Past

The property is in the likely zone of influence from workings in 7 seams of coal at shallow to 290m depth, and last worked in 1979.

Present

The property is not in the likely zone of influence of any present underground coal workings.

Future

The property is not in an area for which the Coal Authority is determining whether to grant a licence to remove coal using underground methods.

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

The property is not in an area that is likely to be affected at the surface from any planned future workings.

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

No notice of the risk of the land being affected by subsidence has been given under section 46 of the Coal Mining Subsidence Act 1991.

Mine entries

Within, or within 20 metres of, the boundary of the property there are 5 mine entries, the approximate positions of which are shown on the attached plan.

Our records disclose the following information:

431410-015. No treatment details.

431410-035. No treatment details.

431410-046. No treatment details.

431410-036. was not encountered during drilling and grouting operations carried out beneath plot 15 Sackup Lane by the developers Marsh Homes 63-73 Commonside Sheffield S10 1GF. We have no record of what steps if any have been taken to treat this mine entry..

431410-047. No treatment details.

Records may be incomplete. Consequently, there may exist in the local area mine entries of which the Coal Authority has no knowledge.

For an additional fee, the Coal Authority will provide a supplementary Mine Entry Interpretive Report. The report will provide a separate assessment for the mine entry (entries) referred to in this report. It will give details based on information in the Coal Authority's possession, together with an opinion on the likelihood of mining subsidence damage arising from ground movement as a consequence of the existence of the mine entry/entries. It will also give details of the remedies available for subsidence damage where the mine entry was sunk in connection with coal mining.

Please note that it may not be possible to produce a report if the main building to the property cannot be identified from Coal Authority plans (ie. for development sites and new build).

For further advice on how to order this additional information visit www.groundstability.com or telephone 0345 7626 848.

Coal mining geology

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

Opencast coal mining

Past

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

Present

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

Future

The property is not within 800 metres of the boundary of an opencast site for which the Coal Authority is determining whether to grant a licence to remove coal by opencast methods.

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.

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 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.

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Mine gas

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

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.

Withdrawal of support

The property is in an area for which notices of entitlement to withdraw support were published in 1947, 1978, 1982.

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

Working facilities orders

The property is not in an area for which 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.

Payments to owners of former copyhold land

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

Comments on Coal Authority information

The attached plan shows the approximate location of the disused mine entry/entries referred to in this report. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence act 1991*). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and the obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by telephoning 0345 762 6848.

If you wish to discuss the relevance of any of the information contained in this report you should seek the advice of a qualified mining engineer or surveyor. If you or your adviser wish to examine the source plans from which the information has been taken these are normally available at our Mansfield office, free of charge, by prior appointment, telephone 01623 637225. Should you or your adviser wish to carry out any physical investigations that may enter, disturb or interfere with any disused mine entry the prior permission of the owner must be sought. For coal mine entries the owner will normally be the Coal Authority.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries). Our emergency telephone number at all times is 01623 646333.

*Note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to

© The Coal Authority

generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

A site investigation was carried out in January 1993 by Amco. Drilling Ltd On behalf of Marsh Homes, 63-73 Commonside, Sheffield. S10 1GF..

Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

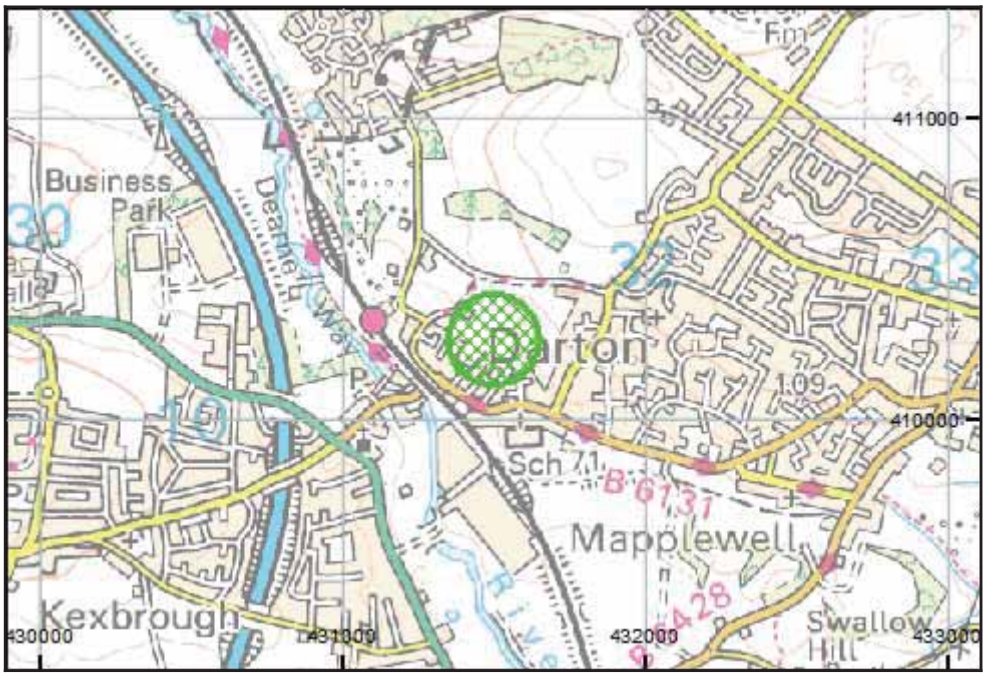
Additional Remarks

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.

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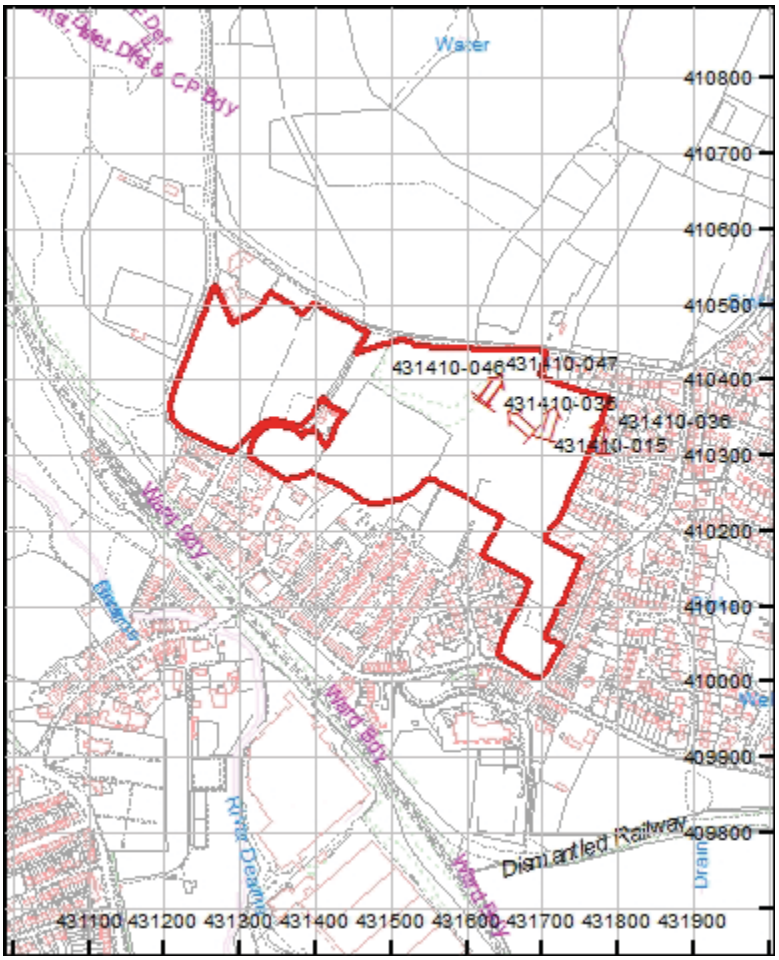
Location map

Approximate position of property



Enquiry boundary

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Key

Approximate position of enquiry boundary shown

Disused Adit or Mineshaft

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Katie Foster
RSK Environment Limited
RSK Environment Limited
Fourways House, 57 Hilton Street
Manchester
Manchester
Lancashire
M1 2EJ

Radon Report: England and Wales

Advisory report on the requirement for radon protective measures in new buildings, conversions and extensions to existing buildings. The report also indicates whether a site is located within a radon Affected Area

Report Id: ***GR_213248/1***

Client reference: Darton - 301645

Search location



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Scale: 1:10 000 (1cm = 100 m)



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OS Street View: Scale: 1:10 000 (1cm = 100 m)

This report describes a site located at National Grid Reference 431477, 410292. Note that for sites of irregular shape, this point may lie outside the site boundary. Where the client has submitted a site plan the assessment will be based on the area given.

Search location indicated in red

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Radon Report: England and Wales

This is an advisory report on the requirement for radon protective measures in new buildings, conversions and extensions. The report also indicates whether a site is located within a radon Affected Area

Requirement for radon protective measures
The determination below follows advice in *BR211 Radon: Guidance on protective measures for new buildings (2007 edition)*, which also provides guidance on what to do if the result indicates that protective measures are required.

BASIC RADON PROTECTIVE MEASURES ARE REQUIRED FOR THE REPORT AREA.

The BGS is not able to provide advice on the technical specifications of 'basic' and 'full' radon protective measures. This information is detailed in **BRE Report BR211 Radon: guidance on protective measures for new buildings** which may be purchased from **brebookshop.com.** This report offers guidance on the technical solutions that are required to satisfy Building Regulations requirements.

Technical solutions to radon protection in new build and existing dwellings in radon affected areas are available on the BRE web site at:
http://www.bre.co.uk/page.jsp?id=1626 and http://www.bre.co.uk/radon/ and in a range of technical reports available from **brebookshop.com;** Tel: 01923 664262, email: bookshop@bre.co.uk.
Summary guidance is available on the web at:
http://www.bre.co.uk/radon/protect.html.

If you require further information or guidance, you should contact your local authority building control officer or approved inspector.

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Radon in existing buildings

Is this property in a radon affected area – YES

The answer to the standard enquiry on house purchase known as **CON29 Standard Enquiry of Local Authority 3.13 Radon Gas: Location of the Property in a radon Affected Area is YES** this property is in a Radon Affected Area as defined by Public Health England (PHE).

The estimated probability of the property being above the Action Level for radon is: 3-5% (INTERMEDIATE PROBABILITY).

The result informs you of the estimated probability that this particular property is above the Action Level for radon. This does not necessarily mean there is a radon problem in the property. The only way to determine whether it is above or below the Action Level is to carry out a radon measurement within the existing property.

Radon Affected Areas are designated by Public Health England. They advise that radon gas should be measured in all properties within Radon Affected Areas.

If you are buying a new build property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

If you are buying a currently occupied property in a Radon Affected Area you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were above the Radon Action Level and if so whether remedial measures were installed, radon levels were retested, and the that the results of re-testing confirmed the effectiveness of the measures.

In radon affected homes, the problem of radon can usually be tackled with simple, effective and relatively inexpensive measures. These measures are comparable in cost to work such as damp-proofing and timber treatment. You can get practical advice about construction work to reduce radon levels from the Building Control Officer at your local council.

For further information, advice about radon, its health risks and details of how to order the radon test, please contact the PHE Radon Helpline on 01235 822622 or go online at www.ukradon.org or write to Radon Survey, Public Health England, Centre for Radiation, Chemical and Environmental Hazards, Chilton, Didcot, Oxon, OX11 0RQ, email: radon@hpa.org.uk. You can obtain an information pack from the PHE free Radon answerphone on 0800 614529

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What is radon?

Radon is a naturally occurring radioactive gas, which is produced by the radioactive decay of radium which, in turn, is derived from the radioactive decay of uranium. Uranium is found in small quantities in all soils and rocks, although the amount varies from place to place. Radon released from rocks and soils is quickly diluted in the atmosphere. Concentrations in the open air are normally very low and do not present a hazard. Radon that enters enclosed spaces such as some buildings (particularly basements), caves, mines, and tunnels may reach high concentrations in some circumstances. The construction method and degree of ventilation will influence radon levels in individual buildings. A person's exposure to radon will also vary according to how particular buildings and spaces are used.

Inhalation of the radioactive decay products of radon gas increases the chance of developing lung cancer. If individuals are exposed to high concentrations for significant periods of time, there may be cause for concern. In order to limit the risk to individuals, the Government has adopted an Action Level for radon in homes of 200 becquerels per cubic metre (Bq m^{-3}). The Government advises householders that, where the radon level exceeds the Action Level, measures should be taken to reduce the concentration.

Radon in workplaces

The Ionising Radiation Regulations, 1999, require employers to take action when radon is present above a defined level in the workplace. Advice may be obtained from your local Health and Safety Executive Area Office or the Environmental Health Department of your local authority. The BRE publishes a guide (BR293)**: Radon in the workplace.** BRE publications may be obtained from the BRE Bookshop, Tel: 01923 664262, email: bookshop@bre.co.ukwebsite: www.brebookshop.com

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Contact Details

Keyworth (KW) Office
British Geological Survey
Environmental Science Centre
Nicker Hill
Keyworth
Nottingham
NG12 5GG
Tel: 0115 9363143
Fax: 0115 9363276
Email: enquiries@bgs.ac.uk

Wallingford (WL) Office
British Geological Survey
Maclean Building
Wallingford
Oxford
OX10 8BB
Tel: 01491 838800
Fax: 01491 692345
Email: hydroenq@bgs.ac.uk

Murchison House (MH) Office
British Geological Survey
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Fax: 0131 650 0252
Email: enquiry@bgs.ac.uk

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BGS Enquiry Service

APPENDIX F
COAL MINING RISK ASSESSMENT SUPPORTING INFORMATION

The Coal Authority

Mining Records Office

Search Results

Search Criteria:

OS Easting: 431517 **OS Northing:** 410330

Radius: 200 metres

Colliery Selection:

All collieries were selected

Seam Selection:

All seams were selected

Working Types Selection:

Underground

Opencast

Dirt Tip

Other Minerals

Total number of entries found: 23

Search Results:

Cat_No	Colliery	Seam	Date Abandoned
12079	OAKS FARM	BARNSLEY	29.04.1937
12647	BLOOMHOUSE	BARNSLEY	18/1/1940

16548	BLOOMHOUSE LANE & EXTENSION LOM OC	BARNSLEY	27/7/1991
16548	BLOOMHOUSE LANE & EXTENSION LOM OC	BARNSLEY RIDER	27/7/1991
17564	DARTON HOTEL OPENCAST	BARNSLEY BED	1963
2281	DARTON HALL	BARNSLEY	31/12/1888
5770	PYE WOOD	BARNSLEY	8/11/1911
7081	OAKS FARM	BARNSLEY	10.02.1920
7368	PYE WOOD	BOTTOM HAIGH MOOR	4/1/1922
7368	PYE WOOD	TOP HAIGH MOOR	4/1/1922
NE1034	WOOLLEY REDBROOK [INCLUDING WOOLLEY, REDBROOK AND DODWORTH]	WHINMOOR	08.08.1988
NE158	WOOLLEY BARNSLEY, NORTH GAWBER AND WHEATLEY WOOD COLLIERIES	BARNSLEY (INCLUDING BARNSLEY SOFTS)	5/4/1955
NE695	NORTH GAWBER	LIDGETT	23.10.1969
NE784	OAKS FARM (OPENCAST)	BARNSLEY	6/1948
NE816	WOOLLEY	SILKSTONE FOUR FOOT	21.09.1974
NE868	NORTH GAWBER [INCLUDING DARTON]	TOP HAIGH MOOR	22.12.1979
NE978	WOOLLEY (FORMERLY NORTH GAWBER)	TOP HAIGH MOOR (NETHERTON THICK)	5/3/1986
NE979	WOOLLEY [FORMER NORTH GAWBER]	LOW HAIGH MOOR [NETHERTON THICK]	05.03.1986
NE996	WOOLLEY	THORNCLIFFE [NEW HARDS]	05.10.1986
PO0	BLOOMHOUSE GREEN	BARNSLEY	1859
PO0	DARTON HALL	BARNSLEY	1886
SCC1	BLOOMHOUSE GREEN	BARNSLEY	1878
SCC12	MAPPLEWELL COLLIERY (1) MAPPLEWELL MINE (2)	BARNSLEY, KENTS THICK OR MAPPLEWELL	1850

The Coal Authority

Mining Records Office

Search Results

Search Criteria:

OS Easting: 431517 **OS Northing:** 410330

Radius: 300 metres

Colliery Selection:

All collieries were selected

Seam Selection:

All seams were selected

Working Types Selection:

Underground

Opencast

Dirt Tip

Other Minerals

Total number of entries found: 31

Search Results:

Cat_No	Colliery	Seam	Date Abandoned
10504	BLOOMHOUSE	MAPPLEWELL OR KENTS THICK	31/3/1931
12079	OAKS FARM	BARNSLEY	29.04.1937

12647	BLOOMHOUSE	BARNSLEY	18/1/1940
16016	DENBY GRANGE, WOOLLEY, REDBROOK, WHEATLEY WOOD, PYE WOOD	SPOIL TIPS (NOS. 270/054, 320/055, 270/058)	1990
16548	BLOOMHOUSE LANE & EXTENSION LOM OC	BARNSLEY	27/7/1991
16548	BLOOMHOUSE LANE & EXTENSION LOM OC	BARNSLEY RIDER	27/7/1991
17564	DARTON HOTEL OPENCAST	BARNSLEY BED	1963
2281	DARTON HALL	BARNSLEY	31/12/1888
5770	PYE WOOD	BARNSLEY	8/11/1911
7081	OAKS FARM	BARNSLEY	10.02.1920
7368	PYE WOOD	BOTTOM HAIGH MOOR	4/1/1922
7368	PYE WOOD	TOP HAIGH MOOR	4/1/1922
FGB795	WOOLLEY COAL CO.	BARNSLEY SEAM	1853
M726	AT NORTH GAWBER, HAIGH, HAIGH, HIGH HOYLAND, SWALLOW HILL, FALCONER	MAPPLEWELL	
NE1034	WOOLLEY REDBROOK [INCLUDING WOOLLEY, REDBROOK AND DODWORTH]	WHINMOOR	08.08.1988
NE158	WOOLLEY BARNSLEY, NORTH GAWBER AND WHEATLEY WOOD COLLIERIES	BARNSLEY (INCLUDING BARNSLEY SOFTS)	5/4/1955
NE378	STAINCROSS COMMON O.C.	KENTS THIN	29/5/1953
NE378	STAINCROSS COMMON O.C.	LOW BEAMSHAW	29/5/1953
NE695	NORTH GAWBER	LIDGETT	23.10.1969
NE784	OAKS FARM (OPENCAST)	BARNSLEY	6/1948
NE816	WOOLLEY	SILKSTONE FOUR FOOT	21.09.1974
NE868	NORTH GAWBER [INCLUDING DARTON]	TOP HAIGH MOOR	22.12.1979
NE978	WOOLLEY (FORMERLY	TOP HAIGH MOOR	5/3/1986

	NORTH GAWBER)	(NETHERTON THICK)	
NE979	WOOLLEY [FORMER NORTH GAWBER]	LOW HAIGH MOOR [NETHERTON THICK]	05.03.1986
NE996	WOOLLEY	THORNCLIFFE [NEW HARDS]	05.10.1986
PO0	BLOOMHOUSE GREEN	BARNSLEY	1859
PO0	DARTON HALL	BARNSLEY	1886
PO0	WHEATLEY WOOD	PROBABLY WINTER	
SCC1	BLOOMHOUSE GREEN	BARNSLEY	1878
SCC1	BLOOMHOUSE GREEN	MAPPLEWELL	1874
SCC12	MAPPLEWELL COLLIERY (1) MAPPLEWELL MINE (2)	BARNSLEY, KENTS THICK OR MAPPLEWELL	1850

The Coal Authority

Issued by:
The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG
Website: www.groundstability.com Phone: 0345 762 6848 DX 716176 MANSFIELD 5

RSK ENVIRONMENT LIMITED
SPRING LODGE
172 CHESTER ROAD
HELSBY
FRODSHAM
WA6 0AR

Our reference:	**51001072291001**
Your reference:	**51001059098001**
Date of your enquiry:	**19 January 2016**
Date we received your enquiry:	**19 January 2016**
Date of issue:	**19 January 2016**

This report is for the property described in the address below and the attached plan.

Shaft Plan and Data Sheets

LAND AT BLOOMHOUSE LANE, DARTON, BARNSLEY, SOUTH YORKSHIRE,

I refer to the enquiry dated 19 January 2016, received 19 January 2016, in connection with the above.

As requested I enclose the mine entry data sheet(s) held for the mine entry/entries referred to.

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Mine Entry Data

Shaft/adit:	Adit
Reference:	431410-015
Source:	OSCS 4th Ed. 1/2500 Yorks 262-14 Ab Plan 12647
Colliery name:	Unknown
Entry name:	Unknown
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	312
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	431686
Northing:	410329
Other information:	None

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Mine Entry Data (continued)

Shaft/adit:	Adit
Reference:	431410-047
Source:	Former British Coal Records (Barnsley SMP)
Colliery name:	Unknown
Entry name:	Bloomhouse Colliery Adit
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	38
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	431621
Northing:	410374
Other information:	None

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Mine Entry Data (continued)

Shaft/adit:	Adit
Reference:	431410-046
Source:	Former British Coal Records (Barnsley SMP)
Colliery name:	Unknown
Entry name:	Bloomhouse Colliery Adit
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	34
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	431626
Northing:	410369
Other information:	None

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Mine Entry Data (continued)

Shaft/adit:	Adit
Reference:	431410-036
Source:	Ab Plan 12647
Colliery name:	Unknown
Entry name:	Bloomhouse Colliery Adit
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	8
Treatment details:	was not encountered during drilling and grouting operations carried out beneath plot 15 Sackup Lane by the developers Marsh Homes 63-73 Commonside Sheffield S10 1GF. We have no record of what steps if any have been taken to treat this mine entry.
Conveyance:	Not Applicable
Easting:	431774
Northing:	410306
Other information:	Yes

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Mine Entry Data (continued)

Shaft/adit:	Adit
Reference:	431410-035
Source:	Ab Plan 12647
Colliery name:	Unknown
Entry name:	Bloomhouse Colliery Adit
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	17
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	431705
Northing:	410325
Other information:	None

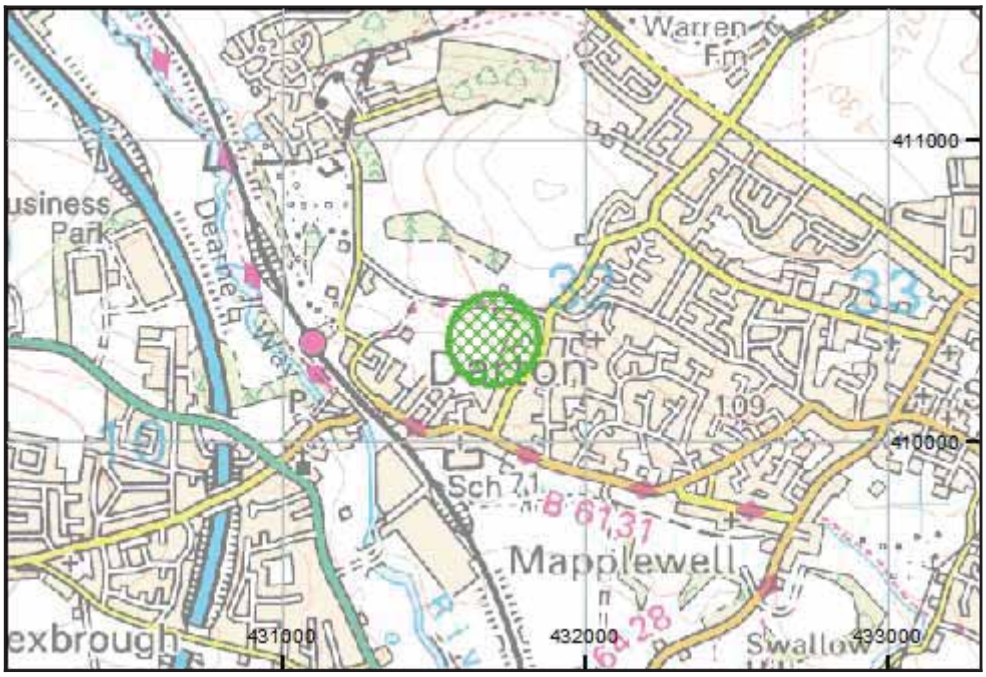
© The Coal Authority

Issued by:	The Coal Authority, 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG
Tax Point Date:	19 January 2016
Issued to:	RSK ENVIRONMENT LIMITED SPRING LODGE 172 CHESTER ROAD HELSBY FRODSHAM WA6 0AR
Property Search for:	LAND AT BLOOMHOUSE LANE, DARTON, BARNSLEY, SOUTH YORKSHIRE,
Reference Number:	51001072291001
Date of Issue:	19 January 2016
Cost:	£63.00
VAT @ 20%:	£12.60
Total Received:	£75.60
VAT Registration	598 5850 68

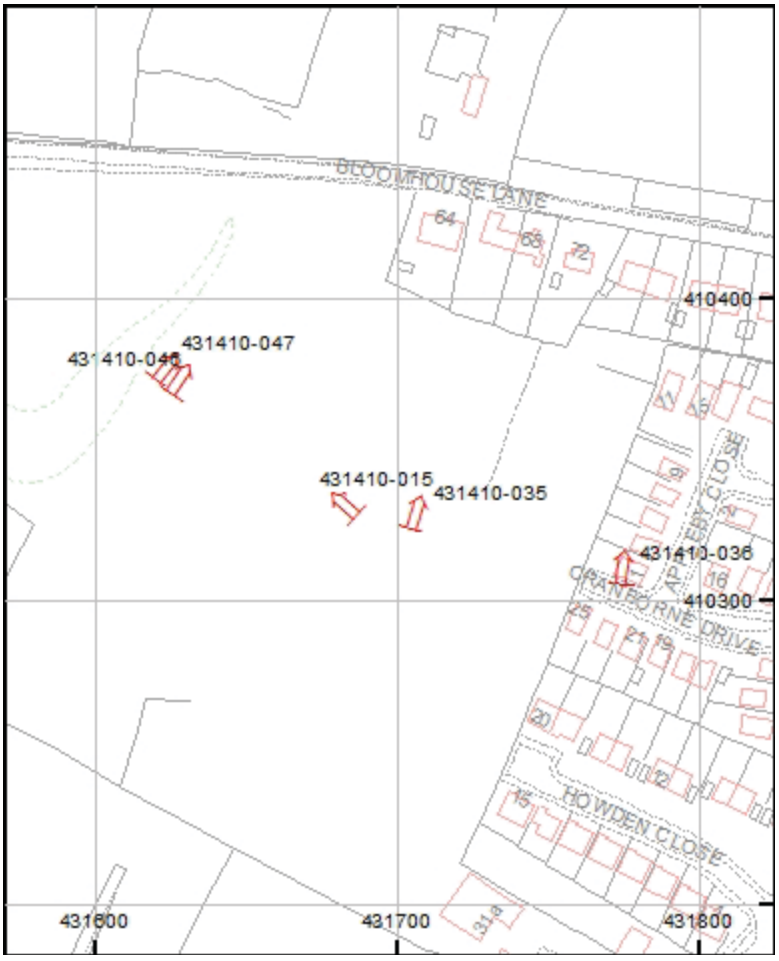
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Location map

Approximate position of enquiry



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This plan shows the approximate location of the disused mine entry / entries referred to in the attached mining report. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by telephoning 0345 762 6848.

If you wish to discuss the relevance of any of the information contained in the attached report you should seek the advice of a qualified mining engineer or surveyor. If you or your advisor wish to examine the source plans from which the information has been taken these are available at our Mansfield office, free of charge by prior appointment, telephone 01623 637225. Should you or your advisor wish to carry out any physical investigations that may enter, disturb or interfere with any disused mine entry the prior permission of the owner must be sought. For coal mine entries the owner will normally be the Coal Authority.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries).

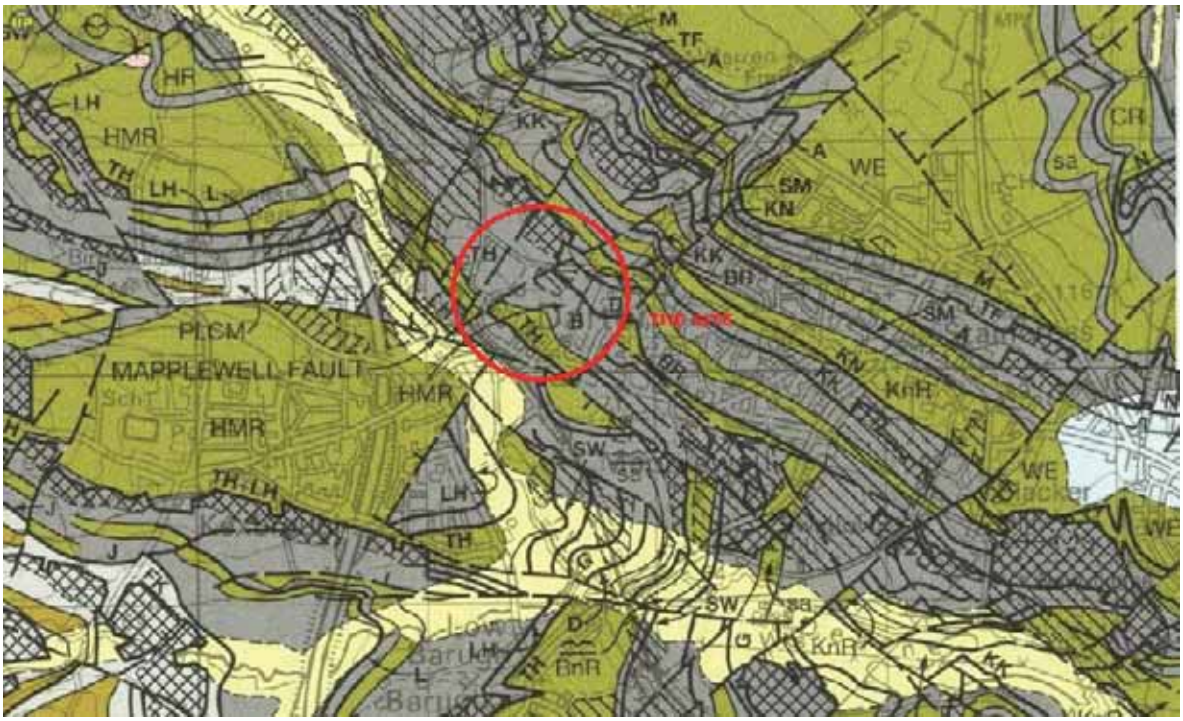
Our emergency telephone number at all times is 01623 646333.

Key

Disused Adit or Mineshaft

Mapping sourced from Ordnance Survey

FIGURE F1: GEOLOGICAL SURVEY OF ENGLAND AND WALES 1:63,360/1:50,000 GEOLOGICAL MAP SERIES SHEET 87 BEDROCK AND SUPERFICIAL 2011



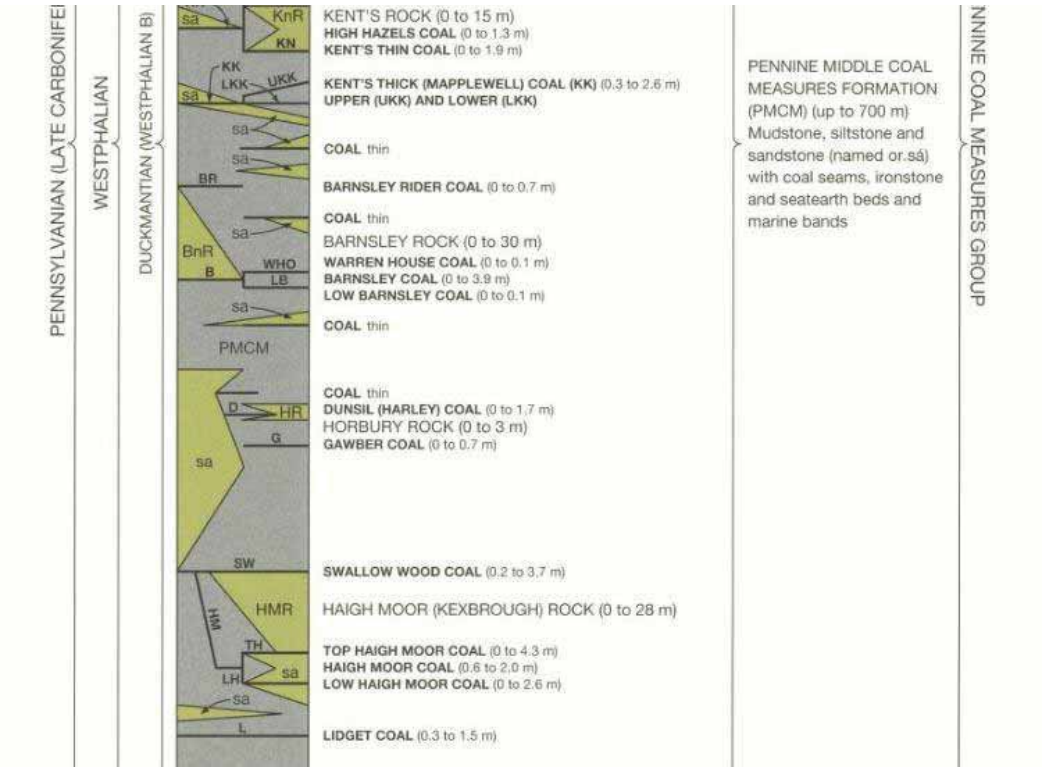
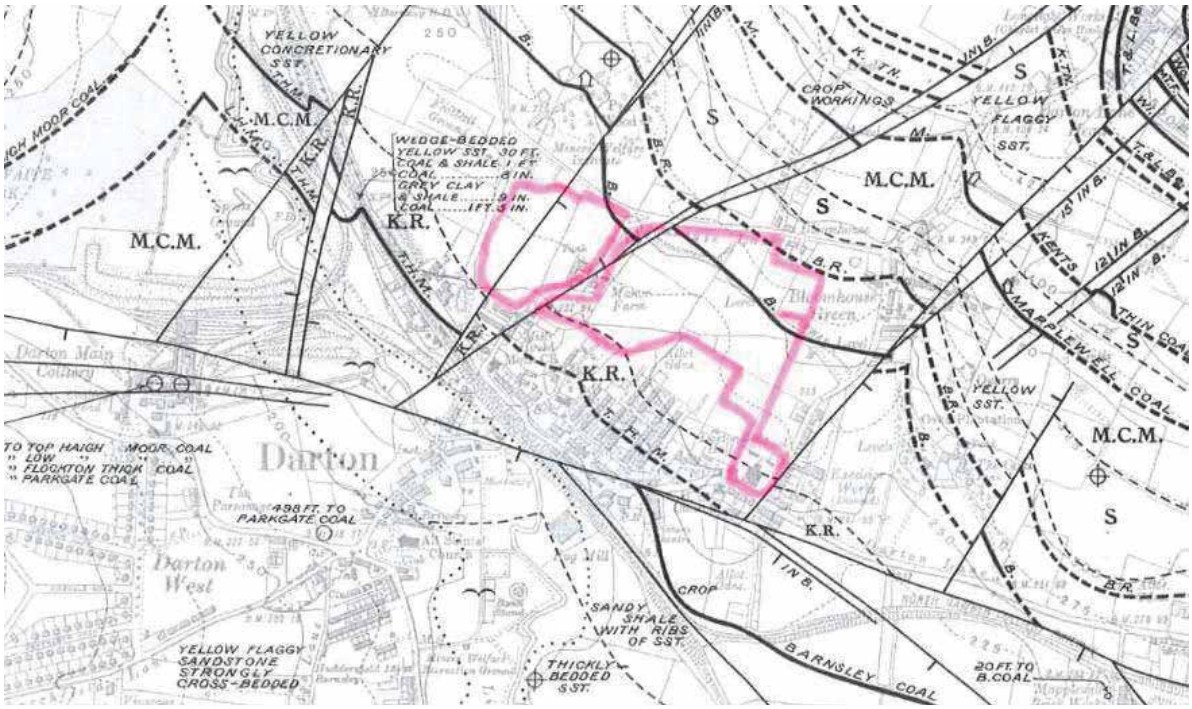


FIGURE F2: GEOLOGICAL SURVEY OF ENGLAND AND WALES SIX INCH TO ONE MILE GEOLOGICAL MAP



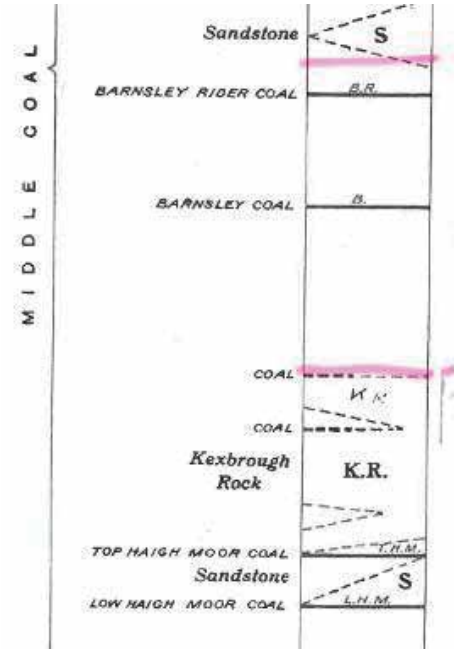


FIGURE F3: MINERAL RESOURCES INFORMATION IN SUPPORT OF NATIONAL, REGIONAL AND LOCAL PLANNING REPORT CR/04/173N SOUTH YORKSHIRE (COMPRISING METROPOLITAN BOROUGHS OF BARNSLEY, DONCASTER AND ROTHERHAM AND CITY OF SHEFFIELD) DATED 2006

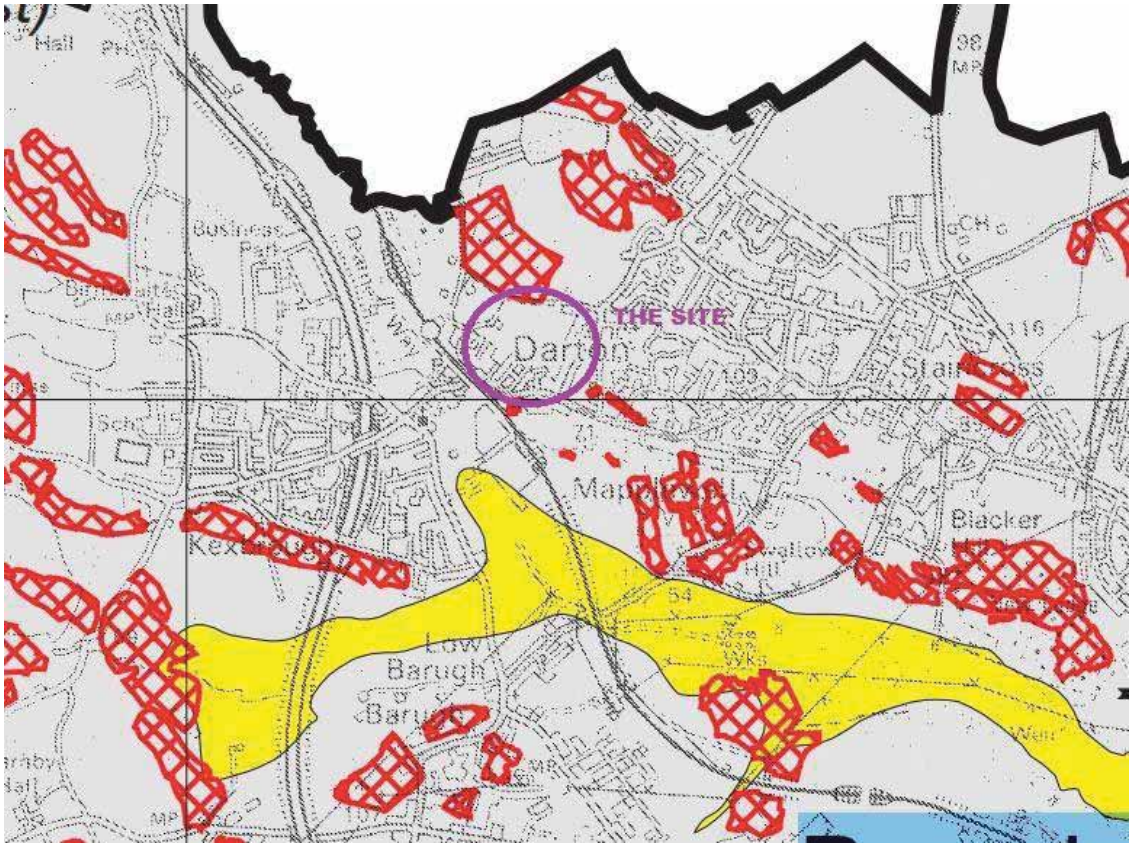
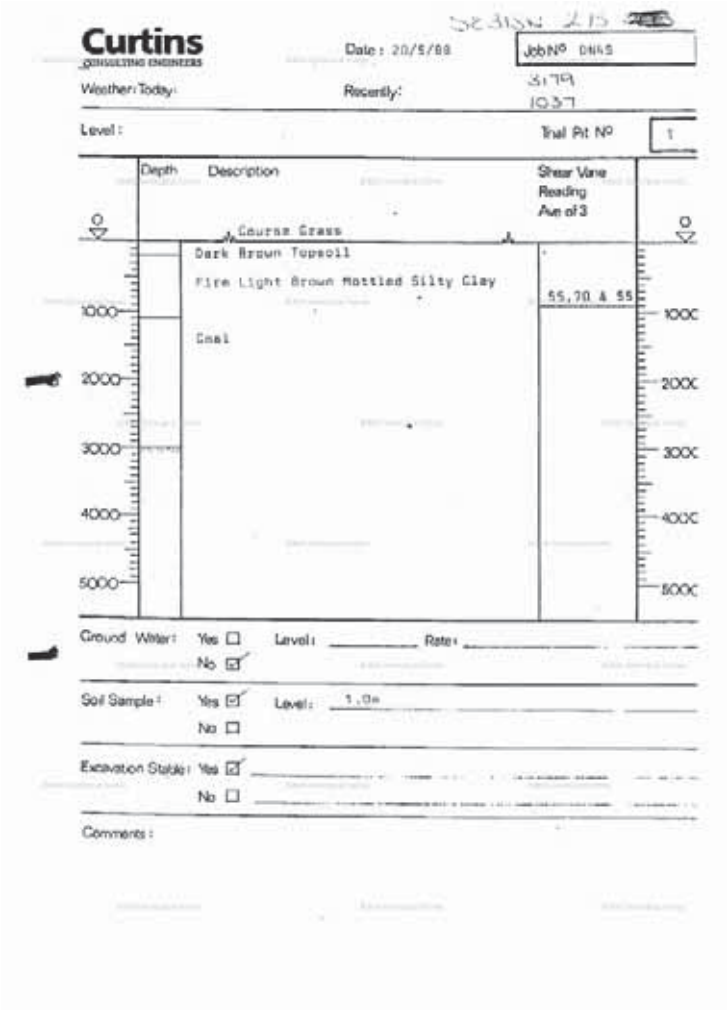


FIGURE F4: BGS ONLINE MAP AND DATA VIEWER: BOREHOLE RECORD SE31SW275



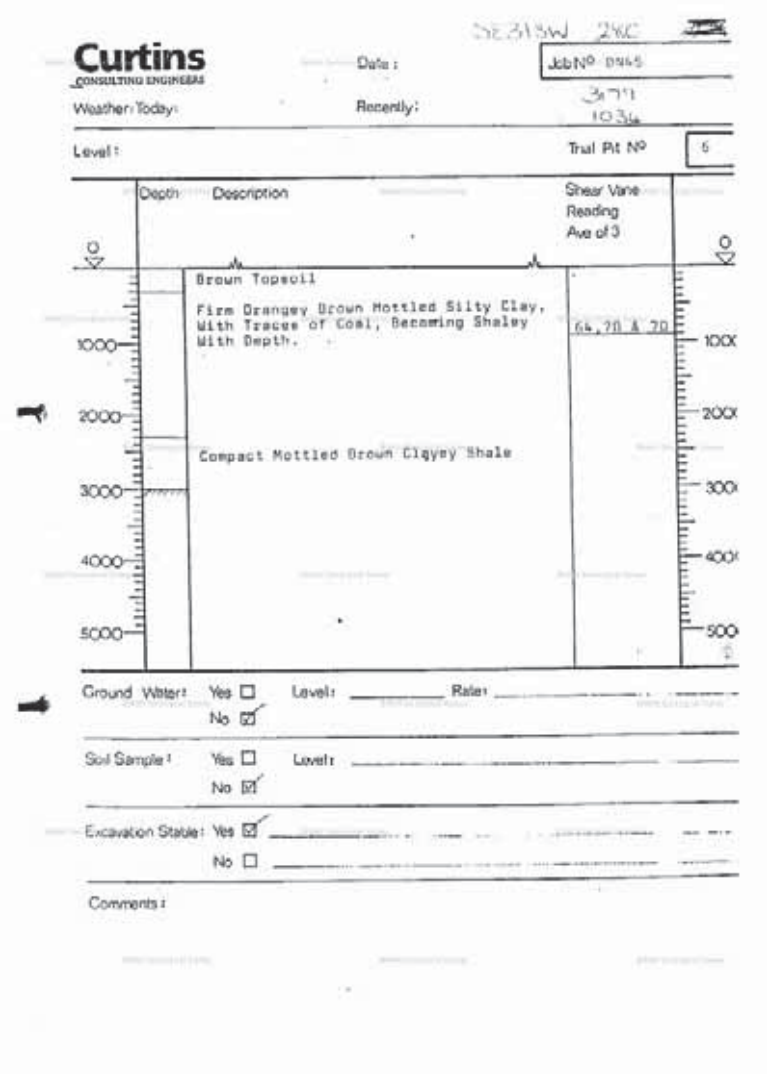
Curtins
CONSULTING ENGINEERS

Date : 20/5/88
Job No 0445
Weather: Today:
Recently:
3179
1037
Level :
Trial Pit No 1

Depth	Description	Shear Vane Reading Ave of 3
0	Course Grass	
	Dark Brown Topsoil	
	Fine Light Brown Mottled Silty Clay	55,70 & 55
1000	Coal	
2000		
3000		
4000		
5000		

Ground Water: Yes ☐ Level: _____ Rate: _____
No ☑
Soil Sample: Yes ☑ Level: 1.0m
No ☐
Excavation Stable: Yes ☑
No ☐
Comments :

FIGURE F5: BGS online map and data viewer: borehole record SE31SW280



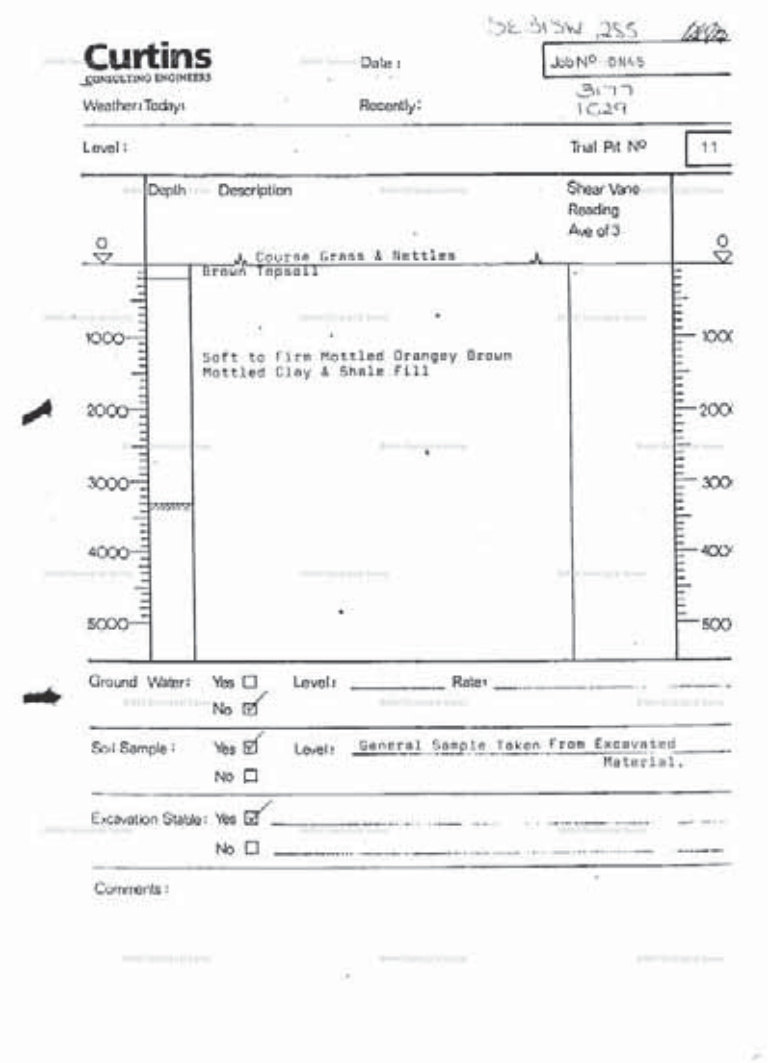
Curtins
CONSULTING ENGINEERS

Date:
Job No 0945
Weather: Today:
Recently:
Level:
Trial Pit No 6

Depth	Description	Shear Vane Reading Ave of 3
	Brown Topsoil	
1000	Firm Orangey Brown Mottled Silty Clay, With Traces of Coal, Becoming Shaley With Depth.	64, 70 & 70
2000	Compact Mottled Brown Clayey Shale	
3000		
4000		
5000		

Ground Water: Yes ☐ No ☑ Level: _____ Rate: _____
Soil Sample: Yes ☐ No ☑ Level: _____
Excavation Stable: Yes ☑ No ☐ _____
Comments:

FIGURE F6: BGS online map and data viewer: borehole record SE31SW285



SE 31 SW 255

Curtins
CONSULTING ENGINEERS

Date :

Job No. 8945

3177
1029

Weather: Today:

Recently:

Level :

Trial Pit No 11

Depth	Description	Shear Vane Reading Ave of 3
0	Course Grass & Nettles	
	Brown Topsoil	
1000	Soft to firm Mottled Orangey Brown Mottled Clay & Shale Fill	
2000		
3000		
4000		
5000		

Ground Water: Yes ☐ No ☑ Level: _____ Rate: _____

Soil Sample : Yes ☑ No ☐ Level: General Sample Taken From Excavated Material.

Excavation Stable: Yes ☑ No ☐

Comments :

Coal Authority archive abandonment records search

FIGURE F7: Extract From Coal Authority Archive Abandonment Catalogue No. 12647: workings in Barnsley Seam

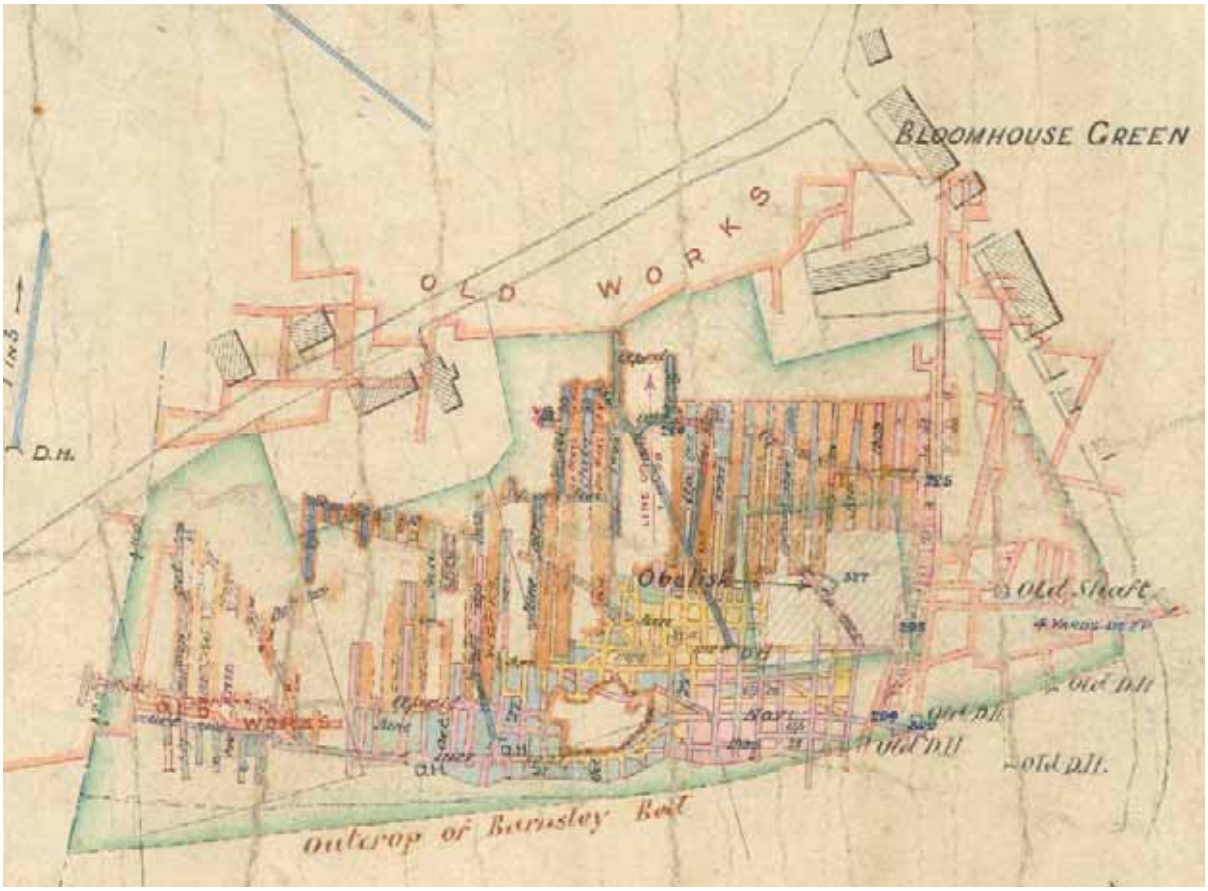
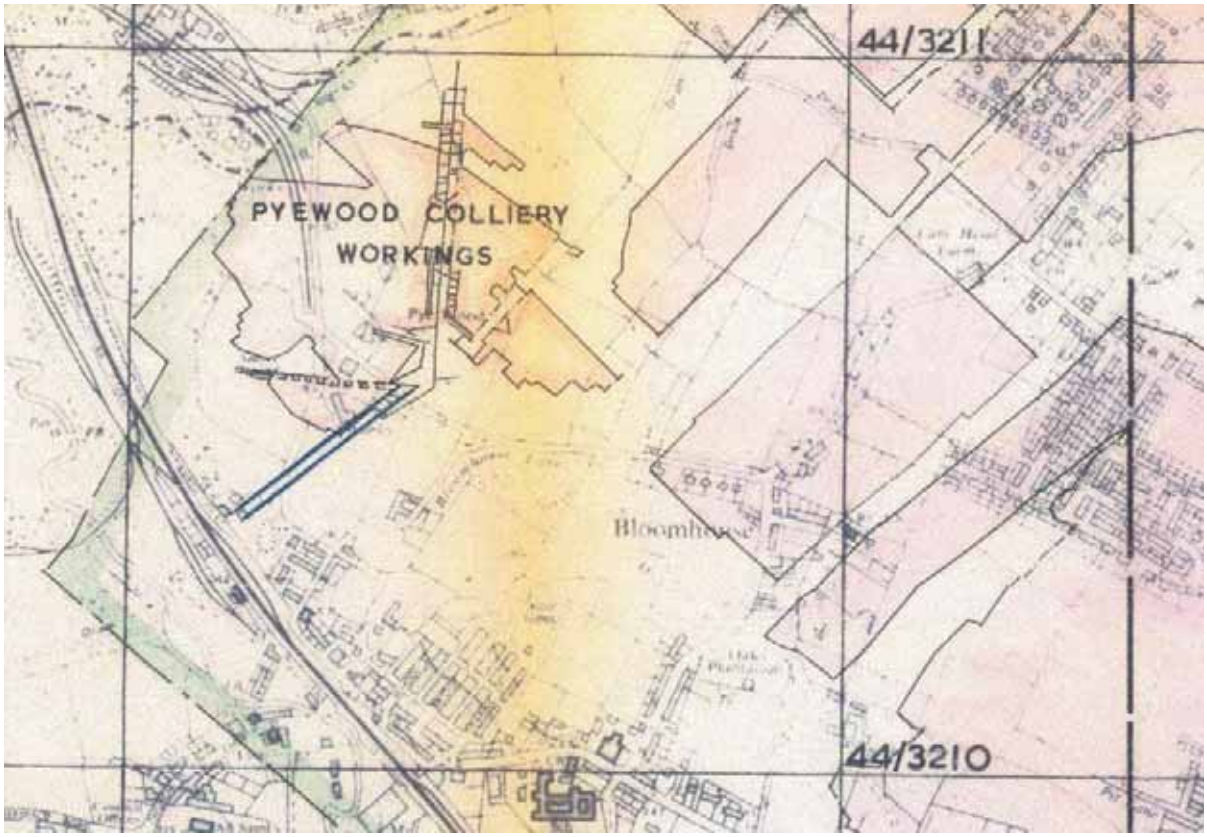


FIGURE F8: Extract From Coal Authority Archive Abandonment Catalogue No. NE979: workings in Low Haigh Moor (Netherton Thick)



APPENDIX G
RISK ASSESSMENT METHODOLOGY

CLR11 outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. Under CLR11, three stages of risk assessment exist: preliminary, generic quantitative and detailed quantitative. An outline conceptual model should be formed at the preliminary risk assessment stage that collates all the existing information pertaining to a site in text, tabular or diagrammatic form. The outline conceptual model identifies potentially complete (termed possible) pollutant linkages (contaminant–pathway–receptor) and is used as the basis for the design of the site investigation. The outline conceptual model is updated as further information becomes available, for example as a result of the site investigation.

Production of a conceptual model requires an assessment of risk to be made. Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the likelihood and the consequences of an event must be taken into account when assessing risk. RSK has adopted guidance provided in CIRIA C552 for use in the production of conceptual models.

The likelihood of an event can be classified on a four-point system using the following terms and definitions based on CIRIA C552:

- highly likely: the event appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution
- likely: it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term
- low likelihood: circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term
- unlikely: circumstances are such that it is improbable the event would occur even in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

- severe: short term (acute) risk to human health likely to result in ‘significant harm’ as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short-term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in ‘Draft Circular on Contaminated Land’, DETR 2000)
- medium: chronic damage to human health (‘significant harm’ as defined in ‘Draft Circular on Contaminated Land’, DETR 2000), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem

- mild: pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures or the environment
- minor: harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

Once the probability of an event occurring and its consequences have been classified, a risk category can be assigned according to the table below.

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

Definitions of these risk categories are as follows together with an assessment of the further work that may be required:

- Very high: there is a high probability that severe harm could occur or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability; urgent investigation and remediation are likely to be required.
- High: harm is likely to occur. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required. Remedial works may be necessary in the short term and are likely over the long term.
- Moderate: it is possible that harm could arise, but it is unlikely that the harm would be severe and it is more likely that the harm would be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term.
- Low: it is possible that harm could occur, but it is likely that if realised this harm would at worst normally be mild.
- Very low: there is a low possibility that harm could occur and if realised the harm is unlikely to be severe.

APPENDIX H
EXPLORATORY HOLE RECORDS

KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF ABBREVIATIONS

SAMPLING

Sample type codes

D = Small disturbed sample.
ES = Soil sample for environmental testing.

IN-SITU TESTING

HP = Hand Penetrometer Test. Value given as shear strength c_u, in kPa.

ADDITIONAL NOTES

1. All soil and rock descriptions and legends in general accordance with BS EN ISO 14688-1, 14688-2, 14689-1, and BS5930:2015.
2. Material types divided by a broken line (- - -) indicates an unclear boundary.
3. The data on any sheet within the report showing the AGS icon is available in the AGS format.

GINT_LIBRARY_V8_06.GLB|GrfcText G - LEGEND - 1 OF 2 | 301645 DARTON.GPJ - v8_06 | 22/3/16 - 16:42 | KF.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk.

Contract Reference: **301645**

KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF GRAPHIC SYMBOLS

WATER COLUMN SYMBOLS



First water strike, second water strike etc.

Standing water level following first strike, standing water level following second strike etc.

Seepage.

Standing water level recorded at documented date.

MATERIAL GRAPHIC LEGENDS


CLAY


Clayey GRAVEL


Coal


Gravelly CLAY


Gravelly CLAY with COBBLES


MADE GROUND


Mudstone


Possible MADE GROUND


Sandstone


Sandy CLAY


Sandy gravelly CLAY


Siltstone


Topsoil



Void


SAND


MUDSTONE

INSTRUMENTATION SYMBOLS


Backfill


Bentonite seal


Concrete


Gravel filter


Plain pipe


Slotted pipe

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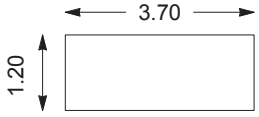
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP01**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**27.1.16**	**84.48**	**E:431268.6 N:410477.1**	**1** of **1**
	End: **27.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.30	1	D				Possible MADE GROUND: Grass over dark brown gravelly CLAY. Gravel is subangular to subrounded fine to coarse weak to strong iron oxide cemented sandstone. (POSSIBLE MADE GROUND)	(0.30)	
							0.30	
						Soft orangish brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is subrounded fine to coarse sandstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	0.50	
						Stiff dark grey and black gravelly CLAY. Gravel is subangular fine to coarse mudstone and coal. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.30)	
0.70	3	D		≈			0.80	
0.70		HP	c_u=156/156/142			Firm to stiff light grey and orange mottled gravelly CLAY. Gravel is subangular to subrounded fine to coarse moderately strong mudstone/siltstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)		
1.00		HP	c_u=151/140/144				(0.70)	
							1.50	
						Stiff light grey, with slight orange mottling, slightly gravelly CLAY. Gravel is subangular fine to coarse mudstone and coal. (Class D PENNINE MIDDLE COAL MEASURES FORMATION)	(0.50)	
							2.00	
						Dark greyish brown gravelly distinctly weathered thinly laminated MUDSTONE. Recovered as grey clayey gravel of mudstone. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40)	
2.20		HP	c_u=170/201/162				2.40	
						Friable black vitreous cubic COAL. Recovered as subangular fine to coarse gravel of coal. (PENNINE MIDDLE COAL MEASURES FORMATION)	(0.30)	
2.50	6	D					2.70	
						Grey and orangish grey distinctly weathered thinly laminated MUDSTONE with laminations of interbedded siltstone. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(0.60)	
							3.30	
						Trial pit terminated at 3.30m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Groundwater seepage encountered at 0.80m.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.
6. Trial pit backfilled with arisings and compacted on completion.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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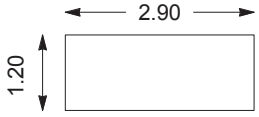
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP02**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**27.1.16**	**85.53**	**E:431316.1 N:410471.9**	**1** of **1**
	End: **27.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.35	1	ES				MADE GROUND: Grass over dark brown slightly gravelly CLAY. Gravel is subrounded fine to medium sandstone. (MADE GROUND)	(0.35)	
							0.35	
0.35-0.45	2	D				Weak black and dark grey laminations of MUDSTONE and COAL. (Class D PENNINE MIDDLE COAL MEASURES FORMATION)	0.45	
0.50		HP	c_u=121/142/148			Stiff to firm light grey and orange mottled slightly gravelly CLAY. Gravel is subangular fine to medium sandstone and mudstone with occasional fine coal fragments. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	0.65	
						Weak black friable cubic COAL. Recovered as fine to medium gravel of coal. (PENNINE MIDDLE COAL MEASURES FORMATION)	0.80	
1.00		HP	c_u=128/130/118			Firm grey and orange gravelly CLAY. Gravel is subangular fine to medium sandstone and mudstone with occasional fine coal fragments. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40)	
							1.20	
						Interbedded weak brown MUDSTONE, grey moderately strong SILTSTONE and orangish brown moderately strong SANDSTONE. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(1.70)	
							2.90	
						Trial pit terminated at 2.90m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:15 | KF |

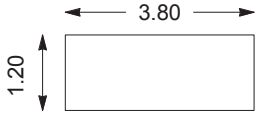
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP03**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**27.1.16**	**78.65**	**E:431233.2 N:410388.5**	**1** of **1**
	End: **27.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Grass/vegetation over soft brown slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse mudstone and sandstone with occasional coal fragments. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.60)	
							0.60	
0.80	2	D				Firm grey, with slight orange mottling, slightly gravelly CLAY. Gravel is subrounded fine to medium mudstone and coal. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)		
0.80		HP	c_u=138/142/142				(0.80)	
							1.40	
1.60	4	D				Stiff light grey mottled orange gravelly CLAY. Frequent interbedded thin laminations of weak grey mudstone and moderately strong sandstone with red iron oxide inclusions. (Class D PENNINE MIDDLE COAL MEASURES FORMATION)		
1.60		HP	c_u=160/166/188				(0.70)	
1.90	5	D						
							2.10	
						Firm orange and grey mottled gravelly CLAY. Gravel of subangular fine to coarse mudstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	2.30	
						Weak greyish brown MUDSTONE interbedded with moderately strong fine grained sandstone. Recovered as gravel and cobbles of mudstone and sandstone. (Class D PENNINE MIDDLE COAL MEASURES FORMATION)	(0.30)	
							2.60	
						Strong thinly bedded fine grained SANDSTONE with iron oxide cementation. Recovered as cobbles of sandstone. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	2.80	
						Trial pit terminated at 2.80m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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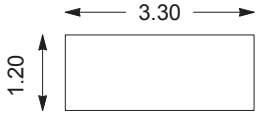
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP04**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**27.1.16**	**80.90**	**E:431317.6 N:410402.1**	**1** of **1**
	End: **27.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.35	1	ES				MADE GROUND: Grass over soft black and brownish grey gravelly CLAY. Gravel is subangular to subrounded fine to coarse sandstone, brick, pottery and coal. With occasional pieces of wood and abundant roots. (MADE GROUND)	(0.35) 0.35	
0.60		HP	c_u=126/102/125			Firm to stiff light grey mottled orange slightly gravelly CLAY. Gravel is subrounded fine to medium sandstone and mudstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.70)	
0.90		HP	c_u=126/104/128				1.05	
1.00	4	D				Very weak black laminated and thinly bedded clayey COAL interbedded with thin bands of dark grey weak mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	1.20	
1.60	6	D				Stiff grey mottled orange slightly gravelly laminated CLAY. Gravel is weak subangular fine to medium mudstone. With occasional pieces of wood and fragments of fine black coal. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)		
1.60		HP	c_u=119/100/102			. . . 1.70m, becoming gravelly fine sandstone gravel/mudstone with orange staining.	(1.25)	
						. . . 2.00m, with cobble sized reddish orange iron-rich sandstone nodules (approx 10cm) with occasional thin (<3mm) bands of weak coal.	2.45	
						Moderately weak black laminated and thinly bedded clayey COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	(0.25) 2.70	
						Weak interbedded greyish brown MUDSTONE with moderately strong siltstone beds <5mm thick and occasional thin <3mm coal beds. Recovered as greyish brown and reddish orange (iron) stained fine to coarse subangular gravel and coal. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(0.50) 3.20	
						Strong orange (iron) stained greyish and orange fine SANDSTONE/SILTSTONE. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	3.25	
						Weak interbedded greyish brown distinctly weathered MUDSTONE with moderately strong siltstone beds <5mm thick and occasional thin <3mm coal beds. Recovered as greyish brown and reddish iron stained subangular fine to coarse gravel of mudstone and coal fragments. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(0.45) 3.70	
						Trial pit terminated at 3.70m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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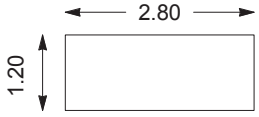
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP05**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**27.1.16**	**85.51**	**E:431398.9 N:410440.2**	**1** of **1**
	End: **27.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Grass over soft black and brownish grey gravelly CLAY. Gravel is subangular to subrounded fine to coarse sandstone, brick, pottery and fragments of coal. With occasional pieces of wood with abundant roots. (MADE GROUND)	(0.60) 0.60	
0.60-1.00	1	ES				Firm orange brown sandy gravelly friable laminated CLAY. Gravel is subrounded to subangular fine to coarse fine laminated weak sandstone and mudstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION) . . . 1.40m, becoming slightly clayey gravel of mudstone/sandstone.	(1.20) 1.80	
						Moderately weak interbedded orangish brown and grey thinly laminated SILTSTONE fine sandstone and mudstone. Recovered as cobbles of siltstone, sandstone and mudstone. (Class D PENNINE MIDDLE COAL MEASURES FORMATION) . . . 2.30m, becoming thickly laminated.	(0.80) 2.60	
						Strong well cemented grey with orange brown thinly bedded coarse grained SANDSTONE. Recovered as cobbles and boulders in sandy matrix. (Class C PENNINE MIDDLE COAL MEASURES FORMATION) Trial pit terminated at 2.80m depth.	2.80	

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.
6. No hand vane tests completed due to friable clay.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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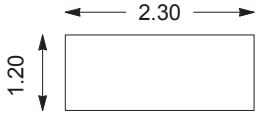
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP06**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**29.1.16**	**81.34**	**E:431390.4 N:410371.8**	**1** of **1**
	End: **29.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Concrete.	0.10	
						(MADE GROUND)	0.15	
0.30-0.50	1	D				MADE GROUND: Soft dark brown slightly sandy gravelly CLAY. Gravel is angular fine to coarse sandstone, brick and concrete. (MADE GROUND)		
						Stiff grey mottled orange slightly sandy gravelly CLAY with low cobble content. Gravel is subangular to subrounded fine to coarse sandstone and mudstone. Cobbles are coarse sandstone and thinly laminated mudstone.	(0.55)	
0.60		HP	c_u=111/136/151			(Class E PENNINE MIDDLE COAL MEASURES FORMATION)	0.70	
						Weak to very weak grey and orangish brown laminated clayey MUDSTONE with occasional interlaminations of siltstone and sandstone. Recovered as gravel and cobbles within clayey matrix. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(1.60)	
						. . . 2.00m, with <7cm thick strong orange brown medium grained sandstone band. With reddish brown iron staining/laminations, occasional coal fragments and very strong iron-rich sandstone nodules.	2.30	
						Trial pit terminated at 2.30m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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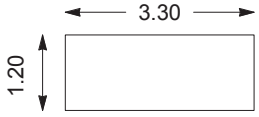
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP07**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**29.1.16**	**80.87**	**E:431365.0 N:410351.8**	**1** of **1**
	End: **29.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Concrete.	0.10	
						(MADE GROUND)		
0.30-0.50	1	ES				MADE GROUND: Dark brown clayey gravelly COBBLES with low boulder content. Gravel is subrounded to angular fine to coarse sandstone and brick. Cobbles and boulders are sandstone, whole bricks, concrete and sandstone flags with some pieces of wood. Assessed as loose as fairly easy to excavate with spade.	(0.50)	
						(MADE GROUND)	0.60	
0.80-1.00	2	ES				Firm to stiff light grey mottled orange gravelly CLAY. Gravel is subangular to subrounded fine to coarse mudstone and occasional sandstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)		
1.20		HP	c_u=111/128/136			. . . 1.20m, becoming grey and thickly laminated, with rare boulder of coarse orange brown sandstone.	(1.20)	
							1.80	
						Very weak medium grey clayey interlaminated MUDSTONE and SILTSTONE. Recovered as clayey subrounded fine to coarse gravel of mudstone and siltstone. (Class D PENNINE MIDDLE COAL MEASURES FORMATION)		
						. . . 3.00m, becoming weak grey thickly laminated mudstone with occasional iron cemented and orange stained sandstone gravel.	(1.50)	
							3.30	
						Trial pit terminated at 3.30m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy becoming difficult below 3.00m.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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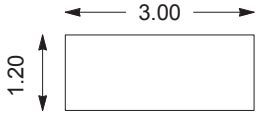
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP08**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**29.1.16**	**80.70**	**E:431384.2 N:410351.8**	**1** of **1**
	End: **29.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Concrete.	0.10	
						(MADE GROUND)		
						MADE GROUND: Dark brown sandy gravelly clay. Gravel is angular fine to coarse sandstone, brick and concrete. Brick footing at northeast edge. Assessed as loose as fairly easy to excavate with spade.	(0.45)	
						(MADE GROUND)	0.55	
						Weak to very weak grey clayey thickly laminated MUDSTONE with occasional orangish brown interbedded siltstone. Recovered as grey thickly laminated subrounded to subangular fine to coarse gravel within clayey matrix and occasional cobbles of reddish brown stained and iron cemented sandstone/siltstone.		
1.00	1	D				(Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(2.35)	
							2.90	
						Trial pit terminated at 2.90m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:15 | KF |

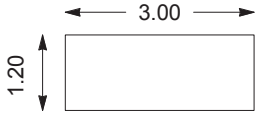
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP09**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**29.1.16**	**87.15**	**E:431462.5 N:410417.3**	**1** of **1**
	End: **29.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20-0.50	1	ES				Possible MADE GROUND: Grass over soft dark brown and brown slightly gravelly slightly organic CLAY. Gravel is subrounded fine to coarse sandstone with abundant rootlets. Occasional dark brown/black clay bands, possible higher organic content. (POSSIBLE MADE GROUND)	(0.50) 0.50	
						Grey mottled orange gravelly CLAY with occasional mudstone laminations. Gravel is subrounded fine to coarse mudstone and siltstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.80) 1.30	
1.60	2	D				Very weak to weak greyish brown clayey thinly laminated MUDSTONE. With occasional orangish brown interbedded siltstone. Recovered as clayey subrounded fine to coarse gravel of mudstone. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(0.90) 2.20	
						Weak to moderately strong MUDSTONE with interbedded siltstone and sandstone. (Class B PENNINE MIDDLE COAL MEASURES FORMATION)	2.30	
						Trial pit terminated at 2.30m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:15 | KF |

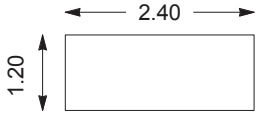
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP10**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**28.1.16**	**80.46**	**E:431438.9 N:410328.0**	**1** of **1**
	End: **28.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Grass over soft dark brown slightly sandy slightly gravelly CLAY. Gravel is subrounded fine to medium sandstone. With abundant rootlets. (TOPSOIL)	(0.30) 0.30	
0.50-0.75	1	ES				Firm orange mottled grey slightly sandy gravelly CLAY. Gravel is subrounded fine to coarse sandstone and very weak mudstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)		
0.90		HP	c_u=93/89/80			. . . 0.90m, With occasional laminations of moderately weak sandstone. . . . 1.00m, Becoming slightly gravelly, with occasional organic matter/wood. . . . 1.20m, Becoming grey.	(1.60) 1.90	
1.50		HP	c_u=96/93/74					
2.00		HP	c_u=151/160/141			Stiff grey mottled orange slightly sandy gravelly CLAY with low cobble content. Gravel is subrounded to subangular fine to coarse sandstone with orange stained (iron) cement and weak mudstone. Cobbles are angular to subrounded of sandstone and mudstone. Grades into interbedded weak mudstone, siltstone and sandstone with iron staining. Recovered as gravel and cobbles within clayey matrix. (Class D PENNINE MIDDLE COAL MEASURES FORMATION)	(0.70) 2.60	
						Trial pit terminated at 2.60m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

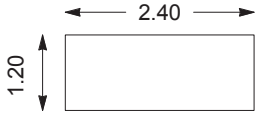
GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:15 | KF |

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Bloomhouse Lane, Darton		**Jones Homes (Yorkshire) Limited**		**TP11**
Contract Ref:	Start: **28.1.16**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	End: **28.1.16**	**80.30**	**E:431486.9 N:410324.0**	**1** of **1**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Grass over soft brown slightly sandy slightly gravelly slightly organic CLAY. Gravel is fine to medium sandstone and mudstone with many rootlets and pieces of wood. (TOPSOIL)	(0.30) 0.30	
0.30-0.60	1	D				Firm orange brown slightly sandy slightly gravelly CLAY. Gravel is subrounded fine to medium mudstone with many rootlets. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.30) 0.60	
						Firm orange and grey slightly sandy slightly gravelly CLAY. Gravel is subrounded fine to coarse sandstone and mudstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40) 1.00	
1.00 1.00	2	D HP	c_u=111/74/100			Stiff grey, occasionally mottled orange, slightly sandy slightly gravelly CLAY. Gravel is subrounded fine to coarse sandstone and mudstone with occasional fine to medium cubic coal fragments and occasional pieces of wood. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.80) 1.80	
1.60		HP	c_u=118/130/109					
						Very weak to weak interbedded grey thickly laminated MUDSTONE and SILTSTONE`. Recovered as gravel and clay. Gravel is subangular to subrounded fine to coarse brown mudstone and siltstone with occasional cobbles of mudstone. (Class C PENNINE MIDDLE COAL MEASURES FORMATION) . . . 2.00m, Becoming weak to moderately weak.	(0.60) 2.40	
						Trial pit terminated at 2.40m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy becoming difficult below 2.00m.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:15 | KF |

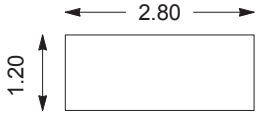
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP12**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**28.1.16**	**74.93**	**E:431482.8 N:410259.6**	**1** of **1**
	End: **28.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.60	1	ES				MADE GROUND: Grass over dark brown slightly sandy gravelly CLAY with low cobble content. Gravel is subangular to subrounded fine to coarse sandstone and brick. Cobbles are angular whole brick. With some pieces of pottery, metal and pipes. (MADE GROUND)	(0.60) 0.60	
						Firm orange mottled grey slightly sandy gravelly CLAY with occasional laminations of mudstone/siltstone. Gravel is subrounded fine to coarse mudstone and occasional sandstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.70) 1.30	
1.60 1.60	3	D HP	c_u=118/136/134			Orange mottled grey gravelly CLAY with occasional laminations of mudstone/siltstone. Gravel is subrounded fine to coarse mudstone. With occasional boulders and cobbles or sandstone. (Class D PENNINE MIDDLE COAL MEASURES FORMATION) . . . 1.70m, Becoming grey and thinly interlaminated with weak siltstone and orange stained iron cemented sandstone. . . . .190m, With fragments of cubic coal.	(0.70) 2.00	
						Weak to moderately strong grey interbedded distinctly weathered MUDSTONE and SILTSTONE with occasional bands of fine sandstone. Recovered as greyish brown gravel within greyish orange clayey matrix. (Class C PENNINE MIDDLE COAL MEASURES FORMATION) Trial pit terminated at 2.20m depth.	2.20	

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy becoming difficult below 2.00m.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:15 | KF |

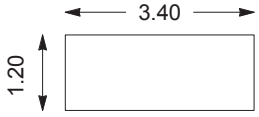
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP13**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**28.1.16**	**94.14**	**E:431539.9 N:410410.9**	**1** of **2**
	End: **28.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.25	1	ES				MADE GROUND: Grass over soft dark brown sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse sandstone and brick. With some pieces of glass, pottery/tiles and plastic and abundant roots.	(0.25)	
							0.25	
0.30-0.50	2	ES				(MADE GROUND)		
						MADE GROUND: Soft reddish brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse brick. With occasional pieces of glass, plastic and tile and occasional whole bricks.	(0.35)	
							0.60	
						(MADE GROUND)		
0.80		HP	c_u=93/93/38			MADE GROUND: Firm reddish orange gravelly CLAY. Gravel is angular to subangular fine to coarse brick. With some pieces of glass and occasional cobble of brick. (MADE GROUND)	(0.50)	
							1.10	
1.50	4	D				MADE GROUND: Firm dark brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse brick and sandstone with occasional cobbles of brick and sandstone with many pieces of twigs, glass, tarmac and fragments of coal with abundant rootlets with strong organic odour). (MADE GROUND)	(1.60)	
							2.70	
2.70		HP	c_u=104/118/70			MADE GROUND: Firm to stiff multicoloured (dark brown, grey, greyish yellow, orange) slightly sandy gravelly organic CLAY. Gravel is subangular to subrounded fine to coarse sandstone, mudstone, occasional brick and fragments of coal. With some pieces of glass, plastic bottles with strong organic odour. (MADE GROUND)		
3.00	6	D					(1.90)	

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered, becoming damp at base of pit.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:15 | KF |

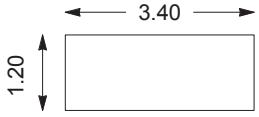
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP13**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**28.1.16**	**94.14**	**E:431539.9 N:410410.9**	**2** of **2**
	End: **28.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Firm to stiff multicoloured (dark brown, grey, greyish yellow, orange) slightly sandy gravelly organic CLAY. Gravel is subangular to subrounded fine to coarse sandstone, mudstone, occasional brick and fragments of coal. With some pieces of glass, plastic bottles with strong organic odour. (MADE GROUND) *(stratum copied from 2.70m from previous sheet)*	4.60	
						Trial pit terminated at 4.60m depth.		

Plan (Not to Scale)



General Remarks

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:15 | KF |

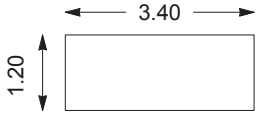
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP14**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**28.1.16**	**92.74**	**E:431583.6 N:410383.2**	**1** of **1**
	End: **28.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Grass over soft dark brown slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse sandstone, mudstone, and brick. With some pieces of glass and tile/pottery. (MADE GROUND)	(0.40) 0.40	
						MADE GROUND: Soft to firm orangish red sandy gravelly CLAY. Gravel is subangular to subrounded fine to coarse brick. With occasional pieces of glass. (MADE GROUND)	(0.30) 0.70	
1.50-1.80	1	ES				MADE GROUND: Firm dark brown, light grey and reddish orange slightly sandy gravelly CLAY with low cobble content. Gravel is subangular fine to coarse mudstone, sandstone, coal and brick. Cobbles are angular brick. With occasional glass bottles. (MADE GROUND)	(2.50) 3.20	
2.50 2.50	3	D HP	c_u=102/84/89					
3.00		HP	c_u=120/96/96					
3.40		HP	c_u=178/174/134			Stiff light grey and orangish brown, locally mottled orange, slightly gravelly s;lightly organic CLAY with thin very weak mudstone laminations. Gravel is subrounded fine to coarse mudstone and siltstone with occasional pieces of organic matter. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(0.60) 3.80	
3.60	6	D						
						Trial pit terminated at 3.80m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:16 | KF |

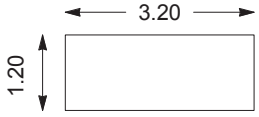
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP15**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**28.1.16**	**89.09**	**E:431624.9 N:410426.2**	**1** of **1**
	End: **28.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Grass over dark brown slightly sandy gravelly CLAY. Gravel is subangular to subrounded fine to coarse sandstone, mudstone and brick. With occasional pieces of pottery and abundant roots. (MADE GROUND)	(1.00) 1.00	
						MADE GROUND: Soft to firm dark brown/black and reddish orange sandy very gravelly CLAY. Gravel is angular to subrounded fine to coarse sandstone, brick, coal and mudstone. With occasional pieces of glass. (MADE GROUND)	(0.80) 1.80	
2.00		HP	c_u=140/118/168			Firm to stiff light grey mottled orange gravelly CLAY. Gravel is subrounded fine to coarse mudstone and siltstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.70)	
2.40		HP	c_u=162/174/201				2.50	
						Firm to stiff light grey mottled orange gravelly CLAY. Gravel is subrounded fine to coarse mudstone and siltstone. Interbedded with thinly laminated mudstone and brown siltstone. Recovered as gravel within clay matrix. (Class D WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40) 2.90	
						Weak to moderately strong interbedded light brown SILTSTONE and MUDSTONE. Recovered as gravel and cobbles. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.30) 3.20	
						Trial pit terminated at 3.20m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:16 | KF |

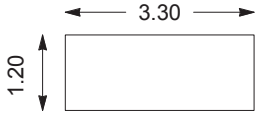
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP16**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**28.1.16**	**85.59**	**E:431566.8 N:410346.6**	**1** of **1**
	End: **28.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Grass over soft dark brown slightly sandy gravelly CLAY. Gravel is subangular to subrounded fine to coarse sandstone, siltstone and brick. With abundant roots. (MADE GROUND)	(0.60) 0.60	
						MADE GROUND: Reddish orange sandy clayey GRAVEL. Gravel is angular to subangular fine to coarse burnt shale and brick. With some pieces of clay pipe and metal. Assessed as medium dense as difficult to excavate with a spade. (MADE GROUND)	(1.10) 1.70	
1.10-1.40	1	ES						
1.80-2.00 1.80	3	ES HP	c_u=125/96/140			Firm brown gravelly CLAY with occasional laminations of friable mudstone. Gravel is subangular fine to coarse sandstone, mudstone and siltstone with occasional coal fragments. (Class D WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.60) 2.30	
2.60		HP	c_u=128/128/130			Firm to stiff brown, becoming light greyish brown, gravelly CLAY. With occasional laminations of friable mudstone. Gravel is subangular fine to coarse sandstone, mudstone and siltstone with occasional coal fragments. (Class D WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.50) 2.80	
						Trial pit terminated at 2.80m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Groundwater seepage encountered at 0.60m to 1.70m.
3. Stability: Trial pit unstable between 0.60m and 1.70m.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.
6. Trial pit backfilled with arisings and compacted on completion.
7. Trial pit excavated on steep slope, thickness of made ground reduces to south end down the slope.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:16 | KF |

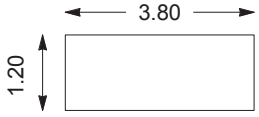
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP17**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**27.1.16**	**78.39**	**E:431580.0 N:410280.9**	**1** of **2**
	End: **27.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.30	1	ES				MADE GROUND: Grass over dark brown and light brown slightly sandy occasionally gravelly CLAY. Gravel is fine subrounded sandstone and mudstone. With many pieces of plastic, tyres and glass. With abundant rootlets.	(0.30)	
						(MADE GROUND)	0.30	
						Firm orange mottled grey slightly gravelly CLAY. Gravel is subrounded fine to medium sandstone and mudstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)		
						. . . 0.60m, Becoming grey.	(1.30)	
1.40	3	D						
1.40		HP	c_u=80/52/74					
							1.60	
						Light grey and grey gravelly CLAY. Gravel is subrounded fine to medium mudstone with some pieces of wood and organic matter. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)		
2.00		HP	c_u=68/58/42				(0.90)	
						. . . 2.30m, Becoming very gravelly, gravel is thinly laminated weak mudstone and moderately strong pale brown siltstone.		
							2.50	
						Weak dark grey/black thinly laminated MUDSTONE. Recovered as clayey subangular medium to coarse gravel. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)		
						. . . 3.00m, Becoming thickly laminated, recovered as gravel and cobbles.	(2.00)	

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Groundwater seepage encountered at 2.55m.
3. Stability: Trial pit moderately unstable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.
6. Trial pit backfilled with arisings and compacted on completion.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:16 | KF |

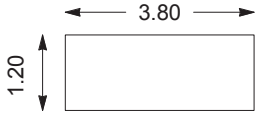
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP17**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**27.1.16**	**78.39**	**E:431580.0 N:410280.9**	**2** of **2**
	End: **27.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Weak dark grey/black thinly laminated MUDSTONE. Recovered as clayey subangular medium to coarse gravel. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION) *(stratum copied from 2.50m from previous sheet)*	4.50	
						Moderately strong medium grey thinly laminated MUDSTONE. Recovered as cobbles of mudstone. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.45) 4.95	
						Trial pit terminated at 4.95m depth.		

Plan (Not to Scale)



General Remarks

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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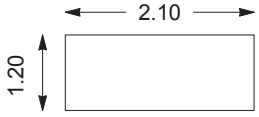
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP18**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**29.1.16**	**98.12**	**E:431767.9 N:410358.7**	**1** of **1**
	End: **29.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.30	1	ES				Vegetation over soft dark brown slightly sandy slightly gravelly CLAY. Gravel is subrounded fine to coarse sandstone. With abundant roots. (TOPSOIL)	(0.30) 0.30	
						Stiff orange mottled grey slightly gravelly CLAY with laminations of weak mudstone. Gravel is subrounded fine to coarse mudstone and occasional siltstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40) 0.70	
						Weak to moderately weak grey interbedded thinly laminated MUDSTONE and moderately strong brownish grey laminated SILTSTONE and strong orange SANDSTONE with orange staining iron cement. With occasional iron sandstone nodules. Recovered as gravel and cobbles of sandstone, mudstone and siltstone with high boulder content of strong sandstone with orangish red iron staining. (Class B WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(1.40) 2.10	
						Trial pit terminated at 2.10m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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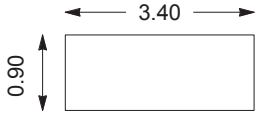
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP19**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**26.1.16**	**87.77**	**E:431681.4 N:410264.5**	**1** of **1**
	End: **26.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.50	1	ES				MADE GROUND: Grass over light brown slightly sandy slightly gravelly CLAY. Gravel is subrounded fine to medium mudstone and sandstone. With abundant rootlets. (MADE GROUND)	(0.50) 0.50	
1.00		HP	c_u=128/142/142			Firm light grey mottled orange slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse sandstone and thinly laminated mudstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION) . . . 1.10m, With occasional thin laminations of moderately strong greyish brown mudstone.	(1.40) 1.90	
						Moderately strong brownish grey thinly laminated MUDSTONE. Recovered as gravel and cobbles within clayey matrix. Weathered grey with occasional dark red iron stained between laminations. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION) . . . 2.40m, Becoming interbedded with thickly laminated siltstone and sandstone, with occasional gravel and cobble sized iron-rich orange stained nodules.	(2.00) 3.90	
						Trial pit terminated at 3.90m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log TRIAL PIT LOG - A4P | 301645 DARTON.GPJ - v8_06.
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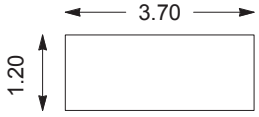
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP20**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**29.1.16**	**78.98**	**E:431688.8 N:410023.5**	**1** of **1**
	End: **29.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.40	1	ES				MADE GROUND: Vegetation and brick rubble over firm orangish brown slightly sandy slightly gravelly CLAY. Gravel is subrounded fine to medium mudstone and sandstone with abundant rootlets. (MADE GROUND)	(0.40)	
						. . . Brick footing noted to 1.20m depth along side of trial pit.	0.40	
0.60		HP	c_u=118/88/114			Firm grey mottled orange gravelly CLAY with siltstone laminations. Gravel is subangular fine to coarse mudstone and siltstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.80)	
1.00	3	D		≈			1.20	
1.30		HP	c_u=148/136/142			Strong grey and brown thickly laminated partially weathered SILTSTONE with orange stained iron cement on laminations. Recovered as cobbles and boulders of siltstone. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40)	
							1.60	
						Interbedded grey weak MUDSTONE and brownish grey moderately strong SILTSTONE. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	1.80	
						Weak grey laminated MUDSTONE with occasional siltstone laminations and cobbles with iron cement. Recovered as grey clayey gravel and cobbles of laminated mudstone. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40)	
							2.20	
						Trial pit terminated at 2.20m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Groundwater seepage encountered at 0.80m.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.
6. Trial pit backfilled with arisings and compacted on completion.
7. Brick footing to approximately 1.20m bgl, water seepage under footing at 1.00m.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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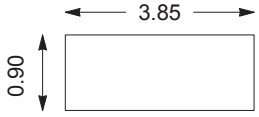
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP21**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**26.1.16**	**79.40**	**E:431666.3 N:410067.4**	**1** of **1**
	End: **26.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.50	1	ES				MADE GROUND: Grass/scrub over black and brown sandy clayey GRAVEL with high cobble content. Gravel is subangular fine to coarse tarmac, brick and sandstone. Cobbles are angular sandstone/paving slabs, tarmac and red burnt shale. (MADE GROUND)	0.20	
0.50	2	D				MADE GROUND: Firm brown slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse tarmac, sandstone and occasional brick. (MADE GROUND)	(0.45) 0.65	
0.80		HP	c_u=128/126/125			MADE GROUND: Brownish grey mottled orange slightly sandy CLAY. (MADE GROUND) . . . brick basement/wall from 0.65m to 3.00m at northern edge of trial pit.	(1.25)	
1.40	5	D						
1.40		HP	c_u=93/140/142					
1.80		HP	c_u=102/180/232				1.90	
2.30		HP	c_u=182/156/199			MADE GROUND: Stiff light grey mottled orange slightly friable CLAY. With occasional thinly laminated black organic matter and occasional fragments of coal. (MADE GROUND)	(1.10) 3.00	
3.60	8	D				Moderately strong brown and light grey thinly laminated SILTSTONE and MUDSTONE. Recovered as gravel and cobbles within a fine sand and clay matrix. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.85) 3.85	
						Trial pit terminated at 3.85m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

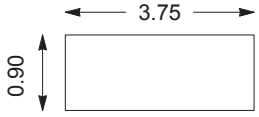
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RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:16 | KF |

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Bloomhouse Lane, Darton		**Jones Homes (Yorkshire) Limited**		**TP22**
Contract Ref:	Start: **26.1.16**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	End: **26.1.16**	**82.06**	**E:431711.5 N:410113.7**	**1** of **1**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.20	1	ES				MADE GROUND: Grass over dark brown slightly organic CLAY. With abundant rootlets. (MADE GROUND)	0.20	
0.40		HP	c_u=111/134/118			Firm orange mottled grey slightly gravelly CLAY. Gravel is subrounded fine to medium sandstone and mudstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40)	
							0.60	
0.70	4	D				Light bluish grey mottled orange slightly gravelly CLAY. Gravel is subangular to subrounded fine mudstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	0.80	
0.70		HP	c_u=128/138/111					
0.80		HP	c_u=151/140/144					
1.10		HP	c_u=180/192/148			Medium grey mottled orange gravelly CLAY. Gravel is subangular to subrounded fine to medium mudstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40)	
						. . . 0.90m, Becoming grey.	1.20	
1.40	7	D				Weak dark grey/black thinly laminated MUDSTONE with orange stained iron-rich cement on lamination surfaces. Recovered as subangular medium gravel. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.60)	
							1.80	
						Moderately weak thinly laminated greyish brown MUDSTONE and SILTSTONE. Recovered as subangular fine to medium gravel with rare cobbles of iron nodules. With orange stained iron-rich cement on lamination surfaces. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)		
						. . . 2.50m, Becoming thickly laminated.	(1.95)	
							3.75	
						Trial pit terminated at 3.75m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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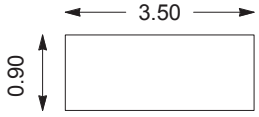
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**26.1.16**	**83.81**	**E:431716.6 N:410151.9**	**1** of **1**
	End: **26.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.30	1	ES				MADE GROUND: Grass over dark brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine brick and occasional pieces of plastic. With abundant rootlets. (MADE GROUND)	(0.30) 0.30	
						Stiff orange mottled light grey CLAY. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	0.45	
0.60		HP	c_u=111/82/91			Firm to stiff orange mottled light grey slightly sandy CLAY. With occasional subrounded fine laminated mudstone gravel, occasional orange iron staining. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.45) 0.90	
0.90-1.25	3	D				Stiff black sandy gravelly CLAY. Gravel is subrounded fine to medium coal and thinly laminated mudstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.35) 1.25	
1.30	5	D				Firm to stiff orange mottled light grey slightly sandy CLAY. Gravel is subangular fine to coarse mudstone. (Class E PENNINE MIDDLE COAL MEASURES FORMATION)	(0.45) 1.70	
1.30		HP	c_u=114/119/96			Light grey and orangish brown clayey GRAVEL. Gravel is subangular to subrounded fine to coarse moderately weak thinly laminated mudstone and siltstone. (Class D PENNINE MIDDLE COAL MEASURES FORMATION)	1.90	
						Weak medium grey with occasional orange iron staining laminated MUDSTONE. Recovered as gravel. (Class C PENNINE MIDDLE COAL MEASURES FORMATION)	(0.40) 2.30	
						Weak interbedded grey, with occasional orange iron staining, thinly laminated MUDSTONE and fine grained orange SANDSTONE/SILTSTONE. Recovered as medium gravel with occasional dark red/black iron bands. (Class E PENNINE MIDDLE COAL MEASURES FORMATION) . . . 2.60m, Becoming moderately strong. . . . 3.00m, With occasional nodules of hematite (deep orange/red strong siltstone).	(1.00) 3.30	
						Trial pit terminated at 3.30m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.
6. Laminations/beds dip approximately 10° north.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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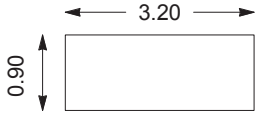
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**TP24**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**26.1.16**	**83.61**	**E:431653.6 N:410184.5**	**1** of **1**
	End: **26.1.16**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						MADE GROUND: Grass over soft dark brown slightly gravelly CLAY. Gravel is subangular fine brick with occasional pieces of plastic. With abundant rootlets (MADE GROUND)	(0.30) 0.30	
0.50	1	ES				Firm light grey mottled orange slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse sandstone and thinly laminated mudstone. (Class E WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.30) 0.60	
						Firm very light grey and orange mottled slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded iron (orange) stained fine to medium sandstone and grey fine to medium subrounded laminated mudstone. (Class D WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION) . . . becoming very light grey mottled orange at 0.60m.	(0.70) 1.30	
1.50		HP	c_u=125/134/125			Stiff grey mottled orange laminated gravelly friable CLAY. Gravel is subangular to subrounded fine to medium sandstone and laminated mudstone. With occasional hematite nodules and iron cemented sandstone cobbles. (Class D WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(0.50) 1.80	
						Interbedded moderately weak greyish brown thinly laminated MUDSTONE, moderately strong thinly laminated orangish brown/grey SILTSTONE and strong dark red/orange stained medium grained SANDSTONE. Recovered as gravel and cobbles. (Class C WEATHERED PENNINE MIDDLE COAL MEASURES FORMATION)	(1.90) 3.70	
						Trial pit terminated at 3.70m depth.		

Plan (Not to Scale)



General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. No groundwater encountered during excavation.
3. Stability: All sides remained stable during excavation.
4. Similarity: All sides were similar during excavation.
5. Ease of excavation: Moderately easy excavation.
6. No hand vane tests completed due to friable clay.

All dimensions in metres | Scale: **1:22**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Komatsu PC200-8 Excavator**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**87.33**	**E:431341.4 N:410494.3**	**1** of **2**

Drilling Progress Log		Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grass over brown sandy CLAY. (TOPSOIL).	(0.80) 0.80	
				Yellowish brown sandy CLAY. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(0.70) 1.50	
				Orangish brown SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(4.30) 5.80	
				Black COAL (flash). (PENNINE MIDDLE COAL MEASURES)	6.00	
				Probably very strong yellowish brown SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(3.00) 9.00	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Slow drilling progress between 6.00m and 9.00m.
3. Standpipe installed to 9.00m: 6.00m plain 3.00m slotted.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**87.33**	**E:431341.4 N:410494.3**	**2** of **2**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Probably very strong SANDSTONE.	9.10	
				Rotary borehole terminated at 9.10m depth due to unable to progress further.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH2**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**76.54**	**E:431227.1 N:410353.3**	**1** of **2**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grass over soft brown slightly sandy CLAY. (TOPSOIL).	(0.70)	
					0.70	
				Soft yellow slightly sandy CLAY. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(1.00)	
					1.70	
				Orangish yellow SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(9.30)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Standpipe installed to 9.00m: 3.00m plain, 6.00m slotted.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH2**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**76.54**	**E:431227.1 N:410353.3**	**2** of **2**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Orangish yellow SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 1.70m from previous sheet)*	11.00	
				Black COAL. (PENNINE MIDDLE COAL MEASURES)	(0.60) 11.60	
				Brownish grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	11.80	
				Black COAL. (PENNINE MIDDLE COAL MEASURES)	(0.50) 12.30	
				Grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(2.70) 15.00	
				Rotary borehole terminated at 15.00m depth.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH3**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**90.06**	**E:431447.8 N:410470.7**	**1** of **3**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grass over brown sandy CLAY. (TOPSOIL).	(0.70)	
					0.70	
				Yellowish brown sandy CLAY. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(0.90)	
					1.60	
				Greyish brown MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(3.40)	
					5.00	
				Black COAL (flash). (PENNINE MIDDLE COAL MEASURES)	5.20	
				Grey and brownish interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES)		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with bentonite on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH3**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**90.06**	**E:431447.8 N:410470.7**	**2** of **3**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grey and brownish interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 5.20m from previous sheet)*	(12.80)	
					18.00	

Rotary borehole terminated at 18.00m depth.

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH3**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16**	**90.06**	**E:431447.8 N:410470.7**	**3** of **3**
	End: **11.2.16**			

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH3A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**90.06**	**E:431453.3 N:410462.1**	**1** of **2**

Drilling Progress Log		Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grass over dark brown gravelly CLAY. (TOPSOIL).	(0.70) 0.70	
				Dark brown/grey black CLAY (possible coal). (WEATHERED PENNINE MIDDLE COAL MEASURES)	(0.90) 1.60	
				Dark grey MUDSTONE. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(1.40) 3.00	
				Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(2.00) 5.00	
				Black COAL (flash). (PENNINE MIDDLE COAL MEASURES)	5.20	
				Grey and orangish yellow interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(6.80)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Standpipe installed to 6.00m: 3.00m plain, 3.00m slotted.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH3A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**90.06**	**E:431453.3 N:410462.1**	**2** of **2**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grey and orangish yellow interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 5.20m from previous sheet)*	12.00	
				Rotary borehole terminated at 12.00m depth.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**100.30**	**E:431682.7 N:410420.5**	**1** of **3**

Drilling Progress Log				Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)	Backfill & Instrumentation	Water			
				Vegetation over soft brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium of various lithologies. (TOPSOIL).	(0.70) 0.70	
				COAL. (PENNINE MIDDLE COAL MEASURES)	1.10	
				Yellowish brown sandy CLAY. (PENNINE MIDDLE COAL MEASURES)	(0.90) 2.00	
				Yellow brown SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(8.80)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Water present in void.
3. Standpipe installed to 2.00m: 1.00m plain, 1.00m slotted.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**100.30**	**E:431682.7 N:410420.5**	**2** of **3**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Yellow brown SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 2.00m from previous sheet)*	10.80	
				Grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(6.20)	
					17.00	
				VOID (loss of flush).	(2.00)	VOID

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**100.30**	**E:431682.7 N:410420.5**	**3** of **3**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				VOID (loss of flush). *(stratum copied from 17.00m from previous sheet)*	19.00	VOID
				Solid (no return).	(2.00) 21.00	
				Rotary borehole terminated at 21.00m depth.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH5**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**79.73**	**E:431573.9 N:410283.4**	**1** of **2**

Drilling Progress Log		Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Possible MADE GROUND: Grass over soft brown CLAY. (POSSIBLE MADE GROUND)	(3.00) 3.00	
				Grey MUDSTONE. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(3.70) 6.70	
				Black COAL. (PENNINE MIDDLE COAL MEASURES)	(0.50) 7.20	
				Light grey and brownish interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(1.80) 9.00	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Slight groundwater seepage noted between 3.00m and 6.00m bgl.
3. Standpipe installed to 9.00m: 6.00m plain, 3.00m slotted.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH5**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**79.73**	**E:431573.9 N:410283.4**	**2** of **2**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Black COAL (flash). (PENNINE MIDDLE COAL MEASURES)	9.10	
				Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(5.90)	
					15.00	
				Rotary borehole terminated at 15.00m depth.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**77.71**	**E:431653.3 N:410034.2**	**1** of **4**

Drilling Progress Log		Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				MADE GROUND: tarmac. (MADE GROUND)	0.10	
				MADE GROUND: soft brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse brick. (MADE GROUND)	(0.90) 1.00	
				Orange brown sandy CLAY. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(1.00) 2.00	
				Light grey sandy interbedded MUDSTONE and SANDSTONE. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(2.70) 4.70	
				Black COAL (flash). (PENNINE MIDDLE COAL MEASURES)	5.00	
				Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(0.50) 5.50	
				Grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(1.00) 6.50	
				Medium to dark grey interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES)		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Slow drilling progress from 30.50m bgl.
3. Standpipe installed to 6.00m: 3.00m plain, 3.00m slotted.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**77.71**	**E:431653.3 N:410034.2**	**2** of **4**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Medium to dark grey interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 6.50m from previous sheet)*	(6.00)	
					12.50	
				Dark grey MUDSTONE with black coal trace. (PENNINE MIDDLE COAL MEASURES)	12.90	
				Light grey interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES)		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**77.71**	**E:431653.3 N:410034.2**	**3** of **4**

Drilling Progress Log		Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Light grey interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 12.90m from previous sheet)*	(17.60)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**BH6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**77.71**	**E:431653.3 N:410034.2**	**4** of **4**

Drilling Progress Log		Backfill & Instru-mentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Light grey interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 12.90m from previous sheet)*		
					30.50	
				Probably very strong grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(0.50)	
					31.00	
				Rotary borehole terminated at 31.00m depth.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**75.05**	**E:431288.7 N:410322.4**	**1** of **2**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grass over brown clay. (TOPSOIL).	(0.70) 0.70	
				Yellowish brown sandy CLAY. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(0.80) 1.50	
				Orange brown SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(11.50)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with arisings and sealed with concrete on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**11.2.16** End: **11.2.16**	**75.05**	**E:431288.7 N:410322.4**	**2** of **2**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Orange brown SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 1.50m from previous sheet)*		
				Probably very strong SANDSTONE.	13.00 13.10	
				Rotary probehole terminated at 13.10m depth due to unable to progress further.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH2**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**97.36**	**E:431667.0 N:410380.8**	**1** of **2**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grass over soft brown sandy clay. (TOPSOIL).	(1.00) 1.00	
				Yellowish brown CLAY. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(0.50) 1.50	
				Weathered yellowish brown SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(1.50) 3.00	
				VOID (loss of flush).	(4.50) 7.50	VOID
				Solid (no return).	(1.50) 9.00	

Rotary probehole terminated at 9.00m depth.

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with arisings and sealed with concrete on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH2**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**97.36**	**E:431667.0 N:410380.8**	**2** of **2**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH3**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16**	**97.36**	**E:431672.7 N:410388.0**	**1** of **3**
	End: **10.2.16**			

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grass over soft brown sandy clay. (TOPSOIL).	(0.50)	
					0.50	
				Yellowish brown CLAY. (COMPLETELY WEATHERED PENNINE MIDDLE COAL MEASURES)	(1.00)	
					1.50	
				Yellowish brown SANDSTONE and MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(8.50)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with arisings and sealed with concrete on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH3**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**97.36**	**E:431672.7 N:410388.0**	**2** of **3**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Yellowish brown SANDSTONE and MUDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 1.50m from previous sheet)*	10.00	
				Soft infilled ground (partial returns).	(4.50) 14.50	
				Solid (no returns).	(3.50) 18.00	

Rotary probehole terminated at 18.00m depth.

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH3**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16**	**97.36**	**E:431672.7 N:410388.0**	**3** of **3**
	End: **10.2.16**			

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**98.26**	**E:431678.6 N:410390.1**	**1** of **3**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grass over soft brown sandy clay. (TOPSOIL).	(0.70) 0.70	
				Yellowish brown CLAY. (COMPLETELY WEATHERED PENNINE MIDDLE COAL MEASURES)	(1.10) 1.80	
				Grey and yellowish brown interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(10.20)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with arisings and sealed with concrete on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**98.26**	**E:431678.6 N:410390.1**	**2** of **3**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Grey and yellowish brown interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 1.80m from previous sheet)*	12.00	
				Black COAL. (PENNINE MIDDLE COAL MEASURES)	(3.80) 15.80	
				Grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(2.20) 18.00	

Rotary probehole terminated at 18.00m depth.

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

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BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16**	**98.26**	**E:431678.6 N:410390.1**	**3** of **3**
	End: **10.2.16**			

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:39 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH5**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**96.69**	**E:431756.0 N:410329.8**	**1** of **3**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Vegetation over brown sandy clay. (TOPSOIL).	(0.70) 0.70	
				Yellowish brown CLAY. (COMPLETELY WEATHERED PENNINE MIDDLE COAL MEASURES)	(0.50) 1.20	
				Orange/brown and grey interbedded SANDSTONE and MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(7.60) 8.80	
				Description on next sheet		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with arisings and sealed with concrete on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:39 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH5**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**96.69**	**E:431756.0 N:410329.8**	**2** of **3**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Soft infilled ground (partial returns). *(stratum copied from 8.80m from previous sheet)*	(6.40) 15.20	
				Solid (no returns).	(2.80) 18.00	

Rotary probehole terminated at 18.00m depth.

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:39 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH5**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16**	**96.69**	**E:431756.0 N:410329.8**	**3** of **3**
	End: **10.2.16**			

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:39 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**93.43**	**E:431738.3 N:410305.2**	**1** of **2**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Vegetation over brown sandy clay. (TOPSOIL).	(0.70) 0.70	
				Yellowish brown CLAY. (COMPLETELY WEATHERED PENNINE MIDDLE COAL MEASURES)	(0.50) 1.20	
				Yellowish brown weathered SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(0.80) 2.00	
				Very soft infilled ground (no returns).	(6.00) 8.00	
				Solid (no return).		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with arisings and sealed with concrete on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:39 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**93.43**	**E:431738.3 N:410305.2**	**2** of **2**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Solid (no return). *(stratum copied from 8.00m from previous sheet)*	(4.00) 12.00	
				Rotary probehole terminated at 12.00m depth.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:40 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**94.39**	**E:431745.1 N:410312.3**	**1** of **2**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Vegetation over brown sandy clay. (TOPSOIL).	(0.80) 0.80	
				Yellowish brown CLAY. (COMPLETELY WEATHERED PENNINE MIDDLE COAL MEASURES)	1.20	
				Grey and yellowish brown interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(3.30) 4.50	
				Soft infilled ground (no returns).	(4.50) 9.00	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with arisings and sealed with concrete on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:40 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**10.2.16** End: **10.2.16**	**94.39**	**E:431745.1 N:410312.3**	**2** of **2**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Solid (no returns).	(3.00) 12.00	
				Rotary probehole terminated at 12.00m depth.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**EUpton**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:40 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH8**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**80.17**	**E:431708.9 N:410054.0**	**1** of **4**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				MADE GROUND: Tarmac. (MADE GROUND)	0.10	
				MADE GROUND: Orange brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse brick. (MADE GROUND)	(0.90) 1.00	
				Light brown sandy CLAY. (WEATHERED PENNINE MIDDLE COAL MEASURES)	(2.00) 3.00	
				Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(7.00)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Position was scanned and cleared with CAT and GPR. No services encountered.
2. Backfilled with arisings and sealed with concrete on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:40 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH8**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**80.17**	**E:431708.9 N:410054.0**	**2** of **4**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 3.00m from previous sheet)*	10.00	
				Dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	10.30	
				Black COAL (flash). (PENNINE MIDDLE COAL MEASURES)	10.50	
				Medium grey/light grey interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES)	(10.30)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:40 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH8**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16** End: **8.2.16**	**80.17**	**E:431708.9 N:410054.0**	**3** of **4**

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Medium grey/light grey interbedded MUDSTONE and SANDSTONE. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 10.50m from previous sheet)*	20.80	
				Black COAL (flash). (PENNINE MIDDLE COAL MEASURES)	21.00	
				Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES)	(5.50)	
					26.50	
				Black COAL (flash). (PENNINE MIDDLE COAL MEASURES)	26.80	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:40 | KF |

BOREHOLE LOG

Contract:	Client:	Borehole:
Bloomhouse Lane, Darton	**Jones Homes (Yorkshire) Limited**	**PH8**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
301645	**8.2.16**	**80.17**	**E:431708.9 N:410054.0**	**4** of **4**
	End: **8.2.16**			

Drilling Progress Log		Backfill	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	Drill Time (hh:mm)					
				Medium grey MUDSTONE with sandstone. (PENNINE MIDDLE COAL MEASURES) *(stratum copied from 26.80m from previous sheet)* *Description on next sheet*	(3.20)	
					30.00	
				Rotary probehole terminated at 30.00m depth.		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary openhole drilling	**Casagrande C6**	**GDC**	**JDuckering**	KF

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_008 PrjVersion: v8_06 - Core+Logs - 001 | Log ROTARY OPENHOLE LOG - A4P | 301645 DARTON.GPJ - v8_06.
RSK Environment Ltd, Fourways House, 57 Hilton Street, Piccadilly, Manchester, M1 2EJ. Tel: 0161 236 2757, Fax: 0161 236 7029, Web: www.rsk.co.uk. | 22/3/16 - 16:40 | KF |

APPENDIX I
TRIAL TRENCH PHOTOGRAPHS

Photo No.	Date:
1	1.02.2016

Description:

Trial trench 1 – coal strata dips steeply to the north – no evidence of mine adit



Photo No.	Date:
2	1.02.2016

Description:

Trial trench 2 - No evidence of mine adit. Coal strata, shallow dip to the south



Photo No.	Date:
3	1.02.2016

Description:

Trial trench 3 - Evidence of Mine Adit. Void extending north through coal measures. Rapidly increases in depth towards the north



Photo No.	Date:
4	1.02.2016

Description:

Trial trench 3 – evidence of mine adit – in filled with mine waste including kettles, pots, pans and glass bottles. Evidence suggested bottles from 1907 indicating age of fill.



Photo No.	Date:
5	1.02.2016

Description:

Trial trench 4 – no evidence of mine adit. Coal strata approximately 2m thick



Photo No.	Date:
6	1.02.2016

Description:

Trial Trench 5 - no evidence of mine adit.

Area of fill identified by irregular contact with coal. Fill is of reddish granular and cohesive material as indicated. Similar waste as evident in trench 3 was noted at the base.



Photo No.	Date:
7	1.02.2016

Description:

Trial trench 6 – no evidence of mine adit. No coal found. Possible made ground to 4m bgl



Photo No.	Date:
8	1.02.2016

Description:

Trial trench 5 and 7 adjoined into large pit up to >4m deep.

Shows same fill material as seen in photo 6, excavated out to prove bottom.

Pit collapsed due to unstable nature of fill material.

No evidence of mine adit. In tact coal directly below fill material to >4m bgl



Photo No.	Date:
9	1.02.2016

Description:

Trial trench 8 – no evidence of mine adit. In tact coal seam



Photo No.	Date:
10	1.02.2016

Description:

Trial trench 9 – no evidence of mine adit. In tact coal seam



Photo No.	Date:
11	2.02.2016

Description:

Trial trench 10 – no evidence of mine adit, however possible railway sleeper identified as indicated in red. Coal in tact.



Photo No.	Date:
12	2.02.2016

Description:

Trial trench 11 – pit collapsed. Coal seam in tact

Top: general photo of pit.

Middle; 1 of 2 railway steels exposed during excavation. Both found lying in E-W orientation.

Bottom; Close up of railway steel once excavated.



Photo No.	Date:
13	2.02.2016

Description:

Extended area of trial trench 12. Timber exposed at approximately 2.2m depth, with E-W orientation. In line with previous timbers and railway steels discovered in trial trenches 11 (Photo 12) and 13 (Photo 14).



Photo No.	Date:
14	2.02.2016

Description:

Trial trench 13

Top: Water seepage at approximately 1.5m below potential made ground

Middle: Timber. Possible railway sleeper lying at approximately 2.2m bgl

Bottom: full depth 3.2m no evidence of adit. No coal seam.







Photo No.	Date:
15	2.02.2016

Description:

Trial trench 14 – no evidence of mine adit



Photo No.	Date:
16	2.02.2016

Description:

Trial trench 15 – no evidence of mine adit



Photo No.	Date:
17	2.02.2016

Description:

Trial trench 16 – no evidence of mine adit



Photo No.	Date:
18	2.02.2016

Description:

Trial trench 18 – no evidence of mine adit



Photo No.	Date:
19	1.02.2016

Description:

Suspected ACM close to Trial trench 4. Corrugate cement sheeting. Partially buried. Mostly on surface, covering approximately 3 x 5m area







APPENDIX J
GROUND GAS MONITORING DATA

IN-SITU GAS MONITORING RESULTS

[Pressures]	Previous	During	Start	End	Equipment Used & Remarks
Round 1	Fluctuating	Rising	997	996	GA2000 + Dipmeter MGS SN-2048 + Weather: Blue skies + Ground: Dry + Wind: Light + Air Temp: 8DegC
Round 2	Fluctuating	Fluctuating	1018	1021	LMSxi + Dipmeter MGS SN-2048 + Weather: Sunny + Ground: Dry + Wind: Light + Air Temp: 10DegC

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH1	1	50	1	9.00	8.95	6.00 to 9.00	22/02/2016 15:30:00	996	996	0.9$_{(I)}$	8.40	0.0$_{(I)}$	0.0$_{(I)}$	20.8$_{(I)}$	0.0$_{(I)}$	-	-
BH1	1	50	1		---	6.00 to 9.00	15 secs	-	-	2.4$_{(SS)}$	-	0.0$_{(SS)}$	0.0$_{(SS)}$	20.9$_{(SS)}$	0.0$_{(SS)}$	-	-
BH1	1	50	1		---	6.00 to 9.00	45 secs	-	-	2.4$_{(SS)}$	-	0.0	0.0	20.9	0.0	-	-
BH1	1	50	1		---	6.00 to 9.00	75 secs	-	-	2.4$_{(SS)}$	-	0.0	0.0	20.9	0.0	-	-
BH1	1	50	1		---	6.00 to 9.00	105 secs	-	-	2.4$_{(SS)}$	-	0.0	0.0	20.9	0.0	-	-
BH1	1	50	2	9.00	8.96	6.00 to 9.00	16/03/2016 16:50:00	1018	1018	0.3$_{(I)}$	8.50	0.0$_{(I)}$	0.0$_{(I)}$	21.1$_{(I)}$	0.0$_{(I)}$	-	-
BH1	1	50	2		---	6.00 to 9.00	15 secs	-	-	0.3$_{(SS)}$	-	0.0$_{(SS)}$	0.0$_{(SS)}$	21.5$_{(SS)}$	0.0$_{(SS)}$	-	-
BH1	1	50	2		---	6.00 to 9.00	30 secs	-	-	0.3$_{(SS)}$	-	0.0	0.0	21.5	0.0	-	-
BH1	1	50	2		---	6.00 to 9.00	60 secs	-	-	0.3$_{(SS)}$	-	0.0	0.0	21.5	0.0	-	-
BH1	1	50	2		---	6.00 to 9.00	90 secs	-	-	0.3$_{(SS)}$	-	0.0	0.0	21.5	0.0	-	-
BH1	1	50	2		---	6.00 to 9.00	120 secs	-	-	0.3$_{(SS)}$	-	0.0	0.0	21.5	0.0	-	-
BH1	1	50	2		---	6.00 to 9.00	180 secs	-	-	0.3$_{(SS)}$	-	0.0	0.0	21.5	0.0	-	-
BH2	1	50	1	9.00	---	3.00 to 9.00	22/02/2016 15:15:00	997	997	0.1$_{(I)}$	-	0.0$_{(I)}$	0.0$_{(I)}$	21.5$_{(I)}$	0.0$_{(I)}$	0.0$_{(I)}$	0.0$_{(I)}$
BH2	1	50	1		---	3.00 to 9.00	15 secs	-	-	0.0$_{(SS)}$	-	0.3	0.0$_{(SS)}$	21.5$_{(SS)}$	0.0$_{(SS)}$	0.0$_{(SS)}$	0.0$_{(SS)}$
BH2	1	50	1		---	3.00 to 9.00	45 secs	-	-	-	-	0.2	0.0	21.5	0.0	0.0	0.0
BH2	1	50	1		---	3.00 to 9.00	105 secs	-	-	-	-	0.1$_{(SS)}$	0.0	21.5	0.0	0.0	0.0
BH2	1	50	1		---	3.00 to 9.00	135 secs	-	-	-	-	0.1	0.0	21.5	0.0	0.0	0.0

Key: I = Initial, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

RSK Environment Ltd
Fourways House
57 Hilton Street
Piccadilly
Manchester M1 2EJ

Compiled By	Date	Checked By	Date	Contract Ref:
K. Foster	22/3/16			301645

Contract: **Bloomhouse Lane, Darton**

GINT_LIBRARY_V8_06.GLB : E - GAS MON - STANDARD - 6A - A4L : 301645 DARTON.GPJ : 22/3/16 09:56 : KF :

IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH2	1	50	1		---	3.00 to 9.00	165 secs	-	-	-	-	0.1	0.0	21.5	0.0	0.0	0.0
BH2	1	50	1		---	3.00 to 9.00	225 secs	-	-	-	-	0.1	0.0	21.5	0.0	0.0	0.0
BH2	1	50	2	9.00	8.85	3.00 to 9.00	16/03/2016 16:30:00	1018	-	0.2(I)	8.05	0.0(I)	0.0(I)	20.7(I)	0.0(I)	-	-
BH2	1	50	2		---	3.00 to 9.00	15 secs	-	-	0.0(SS)	-	1.2	0.0(SS)	18.9	0.0(SS)	-	-
BH2	1	50	2		---	3.00 to 9.00	30 secs	-	-	-	-	1.8	0.0	18.8	0.0	-	-
BH2	1	50	2		---	3.00 to 9.00	60 secs	-	-	-	-	1.9(SS)	0.0	18.8	0.0	-	-
BH2	1	50	2		---	3.00 to 9.00	90 secs	-	-	-	-	1.9	0.0	18.7(SS)	0.0	-	-
BH2	1	50	2		---	3.00 to 9.00	120 secs	-	-	-	-	1.9	0.0	18.7	0.0	-	-
BH2	1	50	2		---	3.00 to 9.00	180 secs	-	-	-	-	1.9	0.0	18.7	0.0	-	-
BH2	1	50	2		---	3.00 to 9.00	240 secs	-	-	-	-	1.9	0.0	18.7	0.0	-	-
BH3A	1	50	1	6.00	5.86	3.00 to 6.00	22/02/2016 15:45:00	996	996	0.0(I)	3.74	0.0(I)	0.0(I)	21.6(I)	0.0(I)	-	-
BH3A	1	50	1		---	3.00 to 6.00	15 secs	-	-	0.0(SS)	-	0.0(SS)	0.0(SS)	21.6	0.0(SS)	-	-
BH3A	1	50	1		---	3.00 to 6.00	45 secs	-	-	0.0(SS)	-	0.0	0.0	21.7	0.0	-	-
BH3A	1	50	1		---	3.00 to 6.00	60 secs	-	-	0.0(SS)	-	0.0	0.0	21.7	0.0	-	-
BH3A	1	50	1		---	3.00 to 6.00	90 secs	-	-	0.0(SS)	-	0.0	0.0	21.8(SS)	0.0	-	-
BH3A	1	50	1		---	3.00 to 6.00	135 secs	-	-	0.0(SS)	-	0.0	0.0	21.8	0.0	-	-
BH3A	1	50	2	6.00	5.86	3.00 to 6.00	16/03/2016 17:05:00	1018	-	0.2(I)	3.60	0.0(I)	0.0(I)	21.1(I)	0.0(I)	-	-
BH3A	1	50	2		---	3.00 to 6.00	15 secs	-	-	0.0(SS)	-	0.0(SS)	0.0(SS)	21.5	0.0(SS)	-	-
BH3A	1	50	2		---	3.00 to 6.00	30 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH3A	1	50	2		---	3.00 to 6.00	60 secs	-	-	0.0(SS)	-	0.0	0.0	21.4(SS)	0.0	-	-
BH3A	1	50	2		---	3.00 to 6.00	90 secs	-	-	0.0(SS)	-	0.0	0.0	21.4	0.0	-	-
BH3A	1	50	2		---	3.00 to 6.00	120 secs	-	-	0.0(SS)	-	0.0	0.0	21.4	0.0	-	-
BH3A	1	50	2		---	3.00 to 6.00	180 secs	-	-	0.0(SS)	-	0.0	0.0	21.4	0.0	-	-

Key: I = Initial, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

RSK Environment Ltd
Fourways House
57 Hilton Street
Piccadilly
Manchester M1 2EJ

Compiled By	Date	Checked By	Date	Contract Ref:
K. Foster	22/3/16			301645

Contract: **Bloomhouse Lane, Darton**

GINT_LIBRARY_V8_06.GLB : E - GAS MON - STANDARD - 6A - A4L : 301645 DARTON.GPJ : 22/3/16 09:56 : KF :

IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH4	1	50	1	2.00	1.96	1.00 to 2.00	22/02/2016 16:00:00	995	995	0.0(I)	1.88	0.0(I)	0.0(I)	21.7(I)	0.0(I)	-	-
BH4	1	50	1		---	1.00 to 2.00	15 secs	-	-	0.0(SS)	-	1.2	0.0(SS)	21.7	0.0(SS)	-	-
BH4	1	50	1		---	1.00 to 2.00	30 secs	-	-	-	-	1.4(SS)	0.0	21.0	0.0	-	-
BH4	1	50	1		---	1.00 to 2.00	60 secs	-	-	-	-	1.4	0.0	20.9(SS)	0.0	-	-
BH4	1	50	1		---	1.00 to 2.00	90 secs	-	-	-	-	1.4	0.0	20.9	0.0	-	-
BH4	1	50	1		---	1.00 to 2.00	120 secs	-	-	-	-	1.4	0.0	20.9	0.0	-	-
BH4	1	50	1		---	1.00 to 2.00	180 secs	-	-	-	-	1.4	0.0	20.9	0.0	-	-
BH4	1	50	2	2.00	1.99	1.00 to 2.00	16/03/2016 17:25:00	1018	1018	0.0(SS)	1.48	0.0(I)	0.0(I)	21.1(I)	0.0(I)	-	-
BH4	1	50	2		---	1.00 to 2.00	15 secs	-	-	0.0(SS)	-	0.8	0.0(SS)	20.5	0.0(SS)	-	-
BH4	1	50	2		---	1.00 to 2.00	30 secs	-	-	-	-	1.2	0.0	20.4	0.0	-	-
BH4	1	50	2		---	1.00 to 2.00	60 secs	-	-	-	-	1.3	0.0	20.4	0.0	-	-
BH4	1	50	2		---	1.00 to 2.00	90 secs	-	-	-	-	1.3	0.0	20.4	0.0	-	-
BH4	1	50	2		---	1.00 to 2.00	120 secs	-	-	-	-	1.3	0.0	20.3(SS)	0.0	-	-
BH4	1	50	2		---	1.00 to 2.00	180 secs	-	-	-	-	1.3	0.0	20.3	0.0	-	-
BH4	1	50	2		---	1.00 to 2.00	240 secs	-	-	-	-	1.2(SS)	0.0	20.3	0.0	-	-
BH5	1	50	1	9.00	---	3.00 to 9.00	22/02/2016 14:40:00	997	997	0.0(I)	-	0.0(I)	0.0(I)	21.5(I)	0.0(I)	0.0(I)	0.0(I)
BH5	1	50	1		---	3.00 to 9.00	15 secs	-	-	0.0(SS)	-	0.3	0.0(SS)	21.5(SS)	0.0(SS)	0.0(SS)	0.0(SS)
BH5	1	50	1		---	3.00 to 9.00	30 secs	-	-	0.0(SS)	-	0.2	0.0	21.5	0.0	0.0	0.0
BH5	1	50	1		---	3.00 to 9.00	75 secs	-	-	0.0(SS)	-	0.1(SS)	0.0	21.5	0.0	0.0	0.0
BH5	1	50	1		---	3.00 to 9.00	105 secs	-	-	0.0(SS)	-	0.1	0.0	21.5	0.0	0.0	0.0
BH5	1	50	1		---	3.00 to 9.00	135 secs	-	-	0.0(SS)	-	0.1	0.0	21.5	0.0	0.0	0.0
BH5	1	50	1		---	3.00 to 9.00	255 secs	-	-	0.0(SS)	-	0.1	0.0	21.5	0.0	0.0	0.0
BH5	1	50	2	9.00	8.68	3.00 to 9.00	16/03/2016 16:08:00	1020	1020	0.2(I)	0.88	0.0(I)	0.0(I)	21.1(I)	0.0(I)	-	-
BH5	1	50	2		---	3.00 to 9.00	15 secs	-	-	0.0(SS)	-	0.0(SS)	0.0(SS)	21.6	0.0(SS)	-	-

Key: I = Initial, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

RSK Environment Ltd
Fourways House
57 Hilton Street
Piccadilly
Manchester M1 2EJ

Compiled By	Date	Checked By	Date	Contract Ref:
K. Foster	22/3/16			301645

Contract: **Bloomhouse Lane, Darton**

GINT_LIBRARY_V8_06.GLB : E - GAS MON - STANDARD - 6A - A4L : 301645 DARTON.GPJ : 22/3/16 09:56 : KF :

IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH5	1	50	2		---	3.00 to 9.00	30 secs	-	-	0.0(SS)	-	0.0	0.0	21.5(SS)	0.0	-	-
BH5	1	50	2		---	3.00 to 9.00	60 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH5	1	50	2		---	3.00 to 9.00	90 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH5	1	50	2		---	3.00 to 9.00	120 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH5	1	50	2		---	3.00 to 9.00	180 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH6	1	50	1	6.00	5.76	3.00 to 6.00	22/02/2016 14:15:00	-	997	0.2(I)	-	0.0(I)	0.0(I)	21.9(I)	0.0(I)	-	-
BH6	1	50	1		---	3.00 to 6.00	15 secs	-	-	0.3(SS)	-	0.1	0.0	21.9	0.0	-	-
BH6	1	50	1		---	3.00 to 6.00	30 secs	-	-	0.3(SS)	-	0.9	0.1	18.6	1.0	-	-
BH6	1	50	1		---	3.00 to 6.00	60 secs	-	-	0.3(SS)	-	0.5	0.0(SS)	20.0	0.0(SS)	-	-
BH6	1	50	1		---	3.00 to 6.00	90 secs	-	-	0.3(SS)	-	0.4	0.0	20.5	0.0	-	-
BH6	1	50	1		---	3.00 to 6.00	120 secs	-	-	0.3(SS)	-	0.3	0.0	20.7	0.0	-	-
BH6	1	50	1		---	3.00 to 6.00	180 secs	-	-	0.3(SS)	-	0.2(SS)	0.0	21.2	0.0	-	-
BH6	1	50	1		---	3.00 to 6.00	240 secs	-	-	0.3(SS)	-	0.2	0.0	21.3(SS)	0.0	-	-
BH6	1	50	1		---	3.00 to 6.00	300 secs	-	-	0.3(SS)	-	0.2	0.0	21.3	0.0	-	-
BH6	1	50	2	6.00	5.76	3.00 to 6.00	16/03/2016 15:45:00	1021	1021	-0.4(I)	DRY	0.1(I)	0.0(I)	20.8(I)	0.0(I)	-	-
BH6	1	50	2		---	3.00 to 6.00	15 secs	-	-	0.0(SS)	-	0.0(SS)	0.0(SS)	21.5(SS)	0.0(SS)	-	-
BH6	1	50	2		---	3.00 to 6.00	30 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH6	1	50	2		---	3.00 to 6.00	60 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH6	1	50	2		---	3.00 to 6.00	90 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH6	1	50	2		---	3.00 to 6.00	120 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-
BH6	1	50	2		---	3.00 to 6.00	180 secs	-	-	0.0(SS)	-	0.0	0.0	21.5	0.0	-	-

Key: I = Initial, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

RSK Environment Ltd
Fourways House
57 Hilton Street
Piccadilly
Manchester M1 2EJ

Compiled By	Date	Checked By	Date	Contract Ref:
K. Foster	22/3/16			301645

Contract: **Bloomhouse Lane, Darton**

GINT_LIBRARY_V8_06.GLB : E - GAS MON - STANDARD - 6A - A4L : 301645 DARTON.GPJ : 22/3/16 09:56 : KF :

APPENDIX K
LABORATORY CERTIFICATES FOR SOIL ANALYSIS

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 16/00914/1

Envirolab Job Number: 16/00914
Issue Number: 2 **Date:** 15 March, 2016

Client:
RSK Environment Ltd Manchester
Fourways House
57 Hilton Street
Manchester
Lancashire
UK
M1 2EJ

Project Manager: Katie Foster
Project Name: Darton
Project Ref: 301645
Order No: N/A
Date Samples Received: 16/02/16
Date Instructions Received: 16/02/16
Date Analysis Completed: 15/03/16

Prepared by:



Kate Ellison
Administrative Assistant

Approved by:



Gill Scott
Laboratory Manager

Envirolab Job Number: 16/00914

Client Project Name: Darton

Client Project Ref: 301645

Lab Sample ID	16/00914/1	16/00914/2	16/00914/3	16/00914/4	16/00914/5	16/00914/6	16/00914/7	16/00914/8	Units	Method ref
Client Sample No	6	1	2	4	1	1	2	1		
Client Sample ID	TP01	TP02	TP03	TP03	TP05	TP07	TP07	TP09		
Depth to Top	2.50	0.00	0.80	1.60	0.60	0.30	0.80	0.20		
Depth To Bottom		0.35			1.00	0.50	1.00	0.50		
Date Sampled	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	29-Jan-16	29-Jan-16	29-Jan-16		
Sample Type	Solid	Soil - ES	Soil - D	Soil - D	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	7	6AE	5E	5	4A	4ABE	5	4E		
% Stones >10mm$_A^{\#}$	<0.1	<0.1	<0.1	<0.1	5.9	34.8	<0.1	<0.1	% w/w	A-T-044
pH$_D^{M\#}$	-	7.19	-	-	-	8.66	-	-	pH	A-T-031s
pH BRE$_D^{M\#}$	4.74	-	5.25	5.01	-	-	-	-	pH	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	-	0.09	-	-	-	0.03	-	-	g/l	A-T-026s
Sulphate BRE (water sol 2:1)$_D^{M\#}$	58	-	33	36	-	-	-	-	mg/l	A-T-026s
Sulphate (acid soluble)$_D^{M\#}$	-	870	-	-	-	710	-	-	mg/kg	A-T-028s
Sulphate BRE (acid sol)$_D^{M\#}$	0.03	-	0.03	<0.02	-	-	-	-	% w/w	A-T-028s
Sulphur BRE (total)$_D$	0.31	-	0.03	<0.01	-	-	-	-	% w/w	A-T-024s
Total Organic Carbon$_D^{M\#}$	-	6.87	-	-	-	2.60	-	-	% w/w	A-T-032s
Arsenic$_D^{M\#}$	-	20	-	-	3	7	3	16	mg/kg	A-T-024s
Cadmium$_D^{M\#}$	-	1.6	-	-	1.9	0.9	1.0	1.5	mg/kg	A-T-024s
Copper$_D^{M\#}$	-	35	-	-	21	20	22	34	mg/kg	A-T-024s
Chromium$_D^{M\#}$	-	23	-	-	18	9	19	19	mg/kg	A-T-024s
Lead$_D^{M\#}$	-	55	-	-	15	74	14	88	mg/kg	A-T-024s
Mercury$_D$	-	0.21	-	-	<0.17	0.35	0.23	<0.17	mg/kg	A-T-024s
Nickel$_D^{M\#}$	-	26	-	-	38	12	25	21	mg/kg	A-T-024s
Selenium$_D$	-	3	-	-	<1	<1	<1	<1	mg/kg	A-T-024s
Zinc$_D^{M\#}$	-	87	-	-	72	80	55	65	mg/kg	A-T-024s

Envirolab Job Number: 16/00914

Client Project Name: Darton

Client Project Ref: 301645

Lab Sample ID	16/00914/1	16/00914/2	16/00914/3	16/00914/4	16/00914/5	16/00914/6	16/00914/7	16/00914/8	Units	Method ref
Client Sample No	6	1	2	4	1	1	2	1		
Client Sample ID	TP01	TP02	TP03	TP03	TP05	TP07	TP07	TP09		
Depth to Top	2.50	0.00	0.80	1.60	0.60	0.30	0.80	0.20		
Depth To Bottom		0.35			1.00	0.50	1.00	0.50		
Date Sampled	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	29-Jan-16	29-Jan-16	29-Jan-16		
Sample Type	Solid	Soil - ES	Soil - D	Soil - D	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	7	6AE	5E	5	4A	4ABE	5	4E		
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_A^{\#}$	-	-	-	-	-	NAD	-	-		A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	-	-	-	-	-	N/A	-	-		Gravimetry

Envirolab Job Number: 16/00914

Client Project Name: Darton

Client Project Ref: 301645

Lab Sample ID	16/00914/1	16/00914/2	16/00914/3	16/00914/4	16/00914/5	16/00914/6	16/00914/7	16/00914/8	Units	Method ref
Client Sample No	6	1	2	4	1	1	2	1		
Client Sample ID	TP01	TP02	TP03	TP03	TP05	TP07	TP07	TP09		
Depth to Top	2.50	0.00	0.80	1.60	0.60	0.30	0.80	0.20		
Depth To Bottom		0.35			1.00	0.50	1.00	0.50		
Date Sampled	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	29-Jan-16	29-Jan-16	29-Jan-16		
Sample Type	Solid	Soil - ES	Soil - D	Soil - D	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	7	6AE	5E	5	4A	4ABE	5	4E		
PAH 16										
Acenaphthene$_A^{M\#}$	-	<0.01	-	-	<0.01	0.02	<0.01	0.04	mg/kg	A-T-019s
Acenaphthylene$_A^{M\#}$	-	0.01	-	-	<0.01	0.02	<0.01	0.07	mg/kg	A-T-019s
Anthracene$_A^{M\#}$	-	0.06	-	-	<0.02	0.11	<0.02	0.58	mg/kg	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	-	0.39	-	-	<0.04	0.61	<0.04	1.91	mg/kg	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	-	0.35	-	-	<0.04	0.67	<0.04	1.50	mg/kg	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	-	0.43	-	-	<0.05	0.75	<0.05	1.82	mg/kg	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	-	0.20	-	-	<0.05	0.39	<0.05	0.71	mg/kg	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	-	0.21	-	-	<0.07	0.32	<0.07	0.79	mg/kg	A-T-019s
Chrysene$_A^{M\#}$	-	0.44	-	-	<0.06	0.67	<0.06	1.97	mg/kg	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	-	0.05	-	-	<0.04	0.09	<0.04	0.21	mg/kg	A-T-019s
Fluoranthene$_A^{M\#}$	-	0.66	-	-	<0.08	0.96	<0.08	4.07	mg/kg	A-T-019s
Fluorene$_A^{M\#}$	-	<0.01	-	-	<0.01	0.02	<0.01	0.10	mg/kg	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	-	0.25	-	-	<0.03	0.46	<0.03	0.95	mg/kg	A-T-019s
Naphthalene$_A^{M\#}$	-	<0.03	-	-	<0.03	0.04	<0.03	0.07	mg/kg	A-T-019s
Phenanthrene$_A^{M\#}$	-	0.26	-	-	<0.03	0.43	<0.03	2.34	mg/kg	A-T-019s
Pyrene$_A^{M\#}$	-	0.56	-	-	<0.07	0.94	<0.07	3.44	mg/kg	A-T-019s
PAH (total 16)$_A^{M\#}$	-	3.89	-	-	<0.08	6.50	<0.08	20.6	mg/kg	A-T-019s

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Lab Sample ID	16/00914/1	16/00914/2	16/00914/3	16/00914/4	16/00914/5	16/00914/6	16/00914/7	16/00914/8	Units	Method ref
Client Sample No	6	1	2	4	1	1	2	1		
Client Sample ID	TP01	TP02	TP03	TP03	TP05	TP07	TP07	TP09		
Depth to Top	2.50	0.00	0.80	1.60	0.60	0.30	0.80	0.20		
Depth To Bottom		0.35			1.00	0.50	1.00	0.50		
Date Sampled	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	29-Jan-16	29-Jan-16	29-Jan-16		
Sample Type	Solid	Soil - ES	Soil - D	Soil - D	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	7	6AE	5E	5	4A	4ABE	5	4E		
TPH CWG										
Ali >C5-C6$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
Ali >C6-C8$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
Ali >C8-C10$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
Ali >C10-C12$_A^{\#}$	-	<0.1	-	-	-	<0.1	-	-	mg/kg	A-T-023s
Ali >C12-C16$_A^{\#}$	-	<0.1	-	-	-	<0.1	-	-	mg/kg	A-T-023s
Ali >C16-C21$_A^{\#}$	-	<0.1	-	-	-	<0.1	-	-	mg/kg	A-T-023s
Ali >C21-C35$_A^{\#}$	-	<0.1	-	-	-	<0.1	-	-	mg/kg	A-T-023s
Total Aliphatics$_A$	-	<0.1	-	-	-	<0.1	-	-	mg/kg	A-T-022+23s
Aro >C5-C7$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
Aro >C7-C8$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
Aro >C8-C9$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
Aro >C9-C10$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
Aro >C10-C12$_A^{\#}$	-	<0.1	-	-	-	<0.1	-	-	mg/kg	A-T-023s
Aro >C12-C16$_A^{\#}$	-	<0.1	-	-	-	<0.1	-	-	mg/kg	A-T-023s
Aro >C16-C21$_A^{\#}$	-	1.1	-	-	-	1.5	-	-	mg/kg	A-T-023s
Aro >C21-C35$_A^{\#}$	-	1.5	-	-	-	1.4	-	-	mg/kg	A-T-023s
Total Aromatics$_A$	-	2.8	-	-	-	2.9	-	-	mg/kg	A-T-022+23s
TPH (Ali & Aro)$_A$	-	2.8	-	-	-	2.9	-	-	mg/kg	A-T-022+23s
BTEX - Benzene$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
BTEX - Toluene$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s
MTBE$_A^{\#}$	-	<0.01	-	-	-	<0.01	-	-	mg/kg	A-T-022s

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Lab Sample ID	16/00914/9	16/00914/10	16/00914/11	16/00914/12	16/00914/13	16/00914/14	16/00914/15	16/00914/16	Units	Method ref
Client Sample No	1	3	1	2	1	3	1	3		
Client Sample ID	TP12	TP12	TP13	TP13	TP14	TP14	TP16	TP16		
Depth to Top	0.00	1.60	0.00	0.30	1.50	2.50	1.10	1.80		
Depth To Bottom	0.60		0.25	0.50	1.80		1.40	2.00		
Date Sampled	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16		
Sample Type	Soil - ES	Soil - D	Soil - ES	Soil - ES	Soil - ES	Soil - D	Soil - ES	Soil - ES		
Sample Matrix Code	6AE	5	4A	4AB	5A	5E	5A	5		
% Stones >10mm$_A^{\#}$	<0.1	<0.1	21.7	5.5	15.9	<0.1	8.5	<0.1	% w/w	A-T-044
pH$_D^{M\#}$	-	-	6.29	6.57	7.55	-	7.33	-	pH	A-T-031s
pH BRE$_D^{M\#}$	7.66	6.47	-	-	7.55	7.39	-	6.22	pH	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	-	-	0.03	0.05	0.53	-	1.43	-	g/l	A-T-026s
Sulphate BRE (water sol 2:1)$_D^{M\#}$	12	98	-	-	528	298	-	1120	mg/l	A-T-026s
Sulphate (acid soluble)$_D^{M\#}$	-	-	2300	6300	2500	-	19000	-	mg/kg	A-T-028s
Sulphate BRE (acid sol)$_D^{M\#}$	0.07	<0.02	-	-	0.25	0.10	-	0.24	% w/w	A-T-028s
Sulphur BRE (total)$_D$	0.04	0.02	-	-	0.08	0.08	-	0.13	% w/w	A-T-024s
Total Organic Carbon$_D^{M\#}$	-	-	9.35	7.96	3.58	-	1.06	-	% w/w	A-T-032s
Arsenic$_D^{M\#}$	13	-	47	45	16	-	34	-	mg/kg	A-T-024s
Cadmium$_D^{M\#}$	2.0	-	1.8	2.1	1.4	-	2.8	-	mg/kg	A-T-024s
Copper$_D^{M\#}$	56	-	104	133	38	-	91	-	mg/kg	A-T-024s
Chromium$_D^{M\#}$	26	-	21	24	17	-	23	-	mg/kg	A-T-024s
Lead$_D^{M\#}$	62	-	111	141	48	-	382	-	mg/kg	A-T-024s
Mercury$_D$	0.42	-	0.38	0.60	<0.17	-	<0.17	-	mg/kg	A-T-024s
Nickel$_D^{M\#}$	26	-	31	32	22	-	50	-	mg/kg	A-T-024s
Selenium$_D$	1	-	2	2	<1	-	<1	-	mg/kg	A-T-024s
Zinc$_D^{M\#}$	647	-	143	124	81	-	606	-	mg/kg	A-T-024s

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Lab Sample ID	16/00914/9	16/00914/10	16/00914/11	16/00914/12	16/00914/13	16/00914/14	16/00914/15	16/00914/16	Units	Method ref
Client Sample No	1	3	1	2	1	3	1	3		
Client Sample ID	TP12	TP12	TP13	TP13	TP14	TP14	TP16	TP16		
Depth to Top	0.00	1.60	0.00	0.30	1.50	2.50	1.10	1.80		
Depth To Bottom	0.60		0.25	0.50	1.80		1.40	2.00		
Date Sampled	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16		
Sample Type	Soil - ES	Soil - D	Soil - ES	Soil - ES	Soil - ES	Soil - D	Soil - ES	Soil - ES		
Sample Matrix Code	6AE	5	4A	4AB	5A	5E	5A	5		
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_A^{\#}$	-	-	NAD	-	NAD	-	NAD	-		A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	-	-	N/A	-	N/A	-	N/A	-		Gravimetry

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Lab Sample ID	16/00914/9	16/00914/10	16/00914/11	16/00914/12	16/00914/13	16/00914/14	16/00914/15	16/00914/16	Units	Method ref
Client Sample No	1	3	1	2	1	3	1	3		
Client Sample ID	TP12	TP12	TP13	TP13	TP14	TP14	TP16	TP16		
Depth to Top	0.00	1.60	0.00	0.30	1.50	2.50	1.10	1.80		
Depth To Bottom	0.60		0.25	0.50	1.80		1.40	2.00		
Date Sampled	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16		
Sample Type	Soil - ES	Soil - D	Soil - ES	Soil - ES	Soil - ES	Soil - D	Soil - ES	Soil - ES		
Sample Matrix Code	6AE	5	4A	4AB	5A	5E	5A	5		
PAH 16										
Acenaphthene$_A^{M\#}$	0.11	-	0.02	0.02	<0.01	-	<0.01	-	mg/kg	A-T-019s
Acenaphthylene$_A^{M\#}$	0.02	-	0.03	0.02	<0.01	-	<0.01	-	mg/kg	A-T-019s
Anthracene$_A^{M\#}$	0.44	-	0.13	0.16	0.03	-	<0.02	-	mg/kg	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	1.48	-	0.67	0.55	0.09	-	<0.04	-	mg/kg	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	1.28	-	0.68	0.47	0.09	-	<0.04	-	mg/kg	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	1.48	-	0.83	0.54	0.11	-	<0.05	-	mg/kg	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.67	-	0.42	0.27	0.06	-	<0.05	-	mg/kg	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.67	-	0.40	0.24	<0.07	-	<0.07	-	mg/kg	A-T-019s
Chrysene$_A^{M\#}$	1.46	-	0.75	0.53	0.10	-	<0.06	-	mg/kg	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.16	-	0.11	0.07	<0.04	-	<0.04	-	mg/kg	A-T-019s
Fluoranthene$_A^{M\#}$	3.23	-	1.18	0.96	0.17	-	<0.08	-	mg/kg	A-T-019s
Fluorene$_A^{M\#}$	0.09	-	0.03	0.03	<0.01	-	<0.01	-	mg/kg	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.86	-	0.54	0.33	0.07	-	<0.03	-	mg/kg	A-T-019s
Naphthalene$_A^{M\#}$	0.07	-	0.06	<0.03	<0.03	-	<0.03	-	mg/kg	A-T-019s
Phenanthrene$_A^{M\#}$	1.37	-	0.41	0.45	0.06	-	<0.03	-	mg/kg	A-T-019s
Pyrene$_A^{M\#}$	2.82	-	1.03	0.82	0.15	-	<0.07	-	mg/kg	A-T-019s
PAH (total 16)$_A^{M\#}$	16.2	-	7.26	5.49	0.93	-	<0.08	-	mg/kg	A-T-019s

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Lab Sample ID	16/00914/9	16/00914/10	16/00914/11	16/00914/12	16/00914/13	16/00914/14	16/00914/15	16/00914/16	Units	Method ref
Client Sample No	1	3	1	2	1	3	1	3		
Client Sample ID	TP12	TP12	TP13	TP13	TP14	TP14	TP16	TP16		
Depth to Top	0.00	1.60	0.00	0.30	1.50	2.50	1.10	1.80		
Depth To Bottom	0.60		0.25	0.50	1.80		1.40	2.00		
Date Sampled	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16	28-Jan-16		
Sample Type	Soil - ES	Soil - D	Soil - ES	Soil - ES	Soil - ES	Soil - D	Soil - ES	Soil - ES		
Sample Matrix Code	6AE	5	4A	4AB	5A	5E	5A	5		
TPH CWG										
Ali >C5-C6$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
Ali >C6-C8$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
Ali >C8-C10$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
Ali >C10-C12$_A^{\#}$	-	-	<0.1	<0.1	<0.1	-	<0.1	-	mg/kg	A-T-023s
Ali >C12-C16$_A^{\#}$	-	-	<0.1	<0.1	<0.1	-	<0.1	-	mg/kg	A-T-023s
Ali >C16-C21$_A^{\#}$	-	-	<0.1	<0.1	<0.1	-	<0.1	-	mg/kg	A-T-023s
Ali >C21-C35$_A^{\#}$	-	-	<0.1	<0.1	<0.1	-	<0.1	-	mg/kg	A-T-023s
Total Aliphatics$_A$	-	-	<0.1	<0.1	<0.1	-	<0.1	-	mg/kg	A-T-022+23s
Aro >C5-C7$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
Aro >C7-C8$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
Aro >C8-C9$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
Aro >C9-C10$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
Aro >C10-C12$_A^{\#}$	-	-	<0.1	<0.1	<0.1	-	<0.1	-	mg/kg	A-T-023s
Aro >C12-C16$_A^{\#}$	-	-	<0.1	<0.1	<0.1	-	<0.1	-	mg/kg	A-T-023s
Aro >C16-C21$_A^{\#}$	-	-	1.1	1.0	<0.1	-	<0.1	-	mg/kg	A-T-023s
Aro >C21-C35$_A^{\#}$	-	-	1.4	0.5	<0.1	-	<0.1	-	mg/kg	A-T-023s
Total Aromatics$_A$	-	-	2.4	1.5	<0.1	-	<0.1	-	mg/kg	A-T-022+23s
TPH (Ali & Aro)$_A$	-	-	2.4	1.5	<0.1	-	<0.1	-	mg/kg	A-T-022+23s
BTEX - Benzene$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
BTEX - Toluene$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s
MTBE$_A^{\#}$	-	-	<0.01	<0.01	<0.01	-	<0.01	-	mg/kg	A-T-022s

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Lab Sample ID	16/00914/17	16/00914/18	16/00914/19	16/00914/20	16/00914/21	16/00914/22	16/00914/23		Units	Method ref
Client Sample No	1	1	1	1	4	7	1			
Client Sample ID	TP17	TP18	TP20	TP21	TP22	TP22	TP23			
Depth to Top	0.00	0.00	0.00	0.00	0.70	1.40	0.00			
Depth To Bottom	0.30	0.30	0.40	0.50			0.30			
Date Sampled	27-Jan-16	29-Jan-16	29-Jan-16	26-Jan-16	26-Jan-16	26-Jan-16	26-Jan-16			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - D	Solid	Soil - ES			
Sample Matrix Code	4AE	4E	5	6AE	5	7	4E			
% Stones >10mm$_A^{\#}$	<0.1	<0.1	<0.1	12.7	<0.1	<0.1	<0.1		% w/w	A-T-044
pH$_D^{M\#}$	5.10	-	6.43	6.65	-	-	6.64		pH	A-T-031s
pH BRE$_D^{M\#}$	-	-	-	-	7.19	6.97	-		pH	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	0.05	-	0.08	0.13	-	-	0.03		g/l	A-T-026s
Sulphate BRE (water sol 2:1)$_D^{M\#}$	-	-	-	-	98	23	-		mg/l	A-T-026s
Sulphate (acid soluble)$_D^{M\#}$	810	-	380	1000	-	-	830		mg/kg	A-T-028s
Sulphate BRE (acid sol)$_D^{M\#}$	-	-	-	-	0.02	<0.02	-		% w/w	A-T-028s
Sulphur BRE (total)$_D$	-	-	-	-	0.01	0.01	-		% w/w	A-T-024s
Total Organic Carbon$_D^{M\#}$	3.49	-	0.31	4.58	-	-	4.27		% w/w	A-T-032s
Arsenic$_D^{M\#}$	13	15	5	12	-	-	11		mg/kg	A-T-024s
Cadmium$_D^{M\#}$	1.6	1.5	1.7	<0.5	-	-	0.6		mg/kg	A-T-024s
Copper$_D^{M\#}$	26	34	13	24	-	-	14		mg/kg	A-T-024s
Chromium$_D^{M\#}$	20	20	22	21	-	-	16		mg/kg	A-T-024s
Lead$_D^{M\#}$	40	77	19	152	-	-	40		mg/kg	A-T-024s
Mercury$_D$	<0.17	0.28	0.22	<0.17	-	-	<0.17		mg/kg	A-T-024s
Nickel$_D^{M\#}$	21	20	18	18	-	-	17		mg/kg	A-T-024s
Selenium$_D$	2	2	3	<1	-	-	2		mg/kg	A-T-024s
Zinc$_D^{M\#}$	98	141	55	57	-	-	73		mg/kg	A-T-024s

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Lab Sample ID	16/00914/17	16/00914/18	16/00914/19	16/00914/20	16/00914/21	16/00914/22	16/00914/23		Units	Method ref
Client Sample No	1	1	1	1	4	7	1			
Client Sample ID	TP17	TP18	TP20	TP21	TP22	TP22	TP23			
Depth to Top	0.00	0.00	0.00	0.00	0.70	1.40	0.00			
Depth To Bottom	0.30	0.30	0.40	0.50			0.30			
Date Sampled	27-Jan-16	29-Jan-16	29-Jan-16	26-Jan-16	26-Jan-16	26-Jan-16	26-Jan-16			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - D	Solid	Soil - ES			
Sample Matrix Code	4AE	4E	5	6AE	5	7	4E			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_A^{\#}$	NAD	-	NAD	NAD	-	-	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	-	N/A	N/A	-	-	N/A			Gravimetry

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Client Project Name: Darton

Client Project Ref: 301645

Lab Sample ID	16/00914/17	16/00914/18	16/00914/19	16/00914/20	16/00914/21	16/00914/22	16/00914/23		Units	Method ref
Client Sample No	1	1	1	1	4	7	1			
Client Sample ID	TP17	TP18	TP20	TP21	TP22	TP22	TP23			
Depth to Top	0.00	0.00	0.00	0.00	0.70	1.40	0.00			
Depth To Bottom	0.30	0.30	0.40	0.50			0.30			
Date Sampled	27-Jan-16	29-Jan-16	29-Jan-16	26-Jan-16	26-Jan-16	26-Jan-16	26-Jan-16			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - D	Solid	Soil - ES			
Sample Matrix Code	4AE	4E	5	6AE	5	7	4E			
PAH 16										
Acenaphthene$_A^{M\#}$	<0.01	0.01	<0.01	3.92	-	-	<0.01		mg/kg	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	2.09	-	-	<0.01		mg/kg	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.07	<0.02	30.2	-	-	0.03		mg/kg	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	0.33	<0.04	42.1	-	-	0.14		mg/kg	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	0.26	<0.04	35.6	-	-	0.12		mg/kg	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	0.31	<0.05	*40.8*	-	-	*0.16*		mg/kg	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	0.16	<0.05	16.6	-	-	<0.05		mg/kg	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	0.16	<0.07	23.1	-	-	<0.07		mg/kg	A-T-019s
Chrysene$_A^{M\#}$	<0.06	0.34	<0.06	50.6	-	-	0.14		mg/kg	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	3.81	-	-	<0.04		mg/kg	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	0.55	<0.08	197	-	-	0.22		mg/kg	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	7.52	-	-	<0.01		mg/kg	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	0.20	<0.03	18.8	-	-	0.04		mg/kg	A-T-019s
Naphthalene$_A^{M\#}$	<0.03	<0.03	<0.03	0.41	-	-	<0.03		mg/kg	A-T-019s
Phenanthrene$_A^{M\#}$	0.04	0.24	<0.03	81.6	-	-	0.11		mg/kg	A-T-019s
Pyrene$_A^{M\#}$	<0.07	0.46	<0.07	137	-	-	0.19		mg/kg	A-T-019s
PAH (total 16)$_A^{M\#}$	<0.08	3.06	<0.08	692	-	-	1.13		mg/kg	A-T-019s

Envirolab Job Number: 16/00914

Client Project Name: Darton

Client Project Ref: 301645

Lab Sample ID	16/00914/17	16/00914/18	16/00914/19	16/00914/20	16/00914/21	16/00914/22	16/00914/23		Units	Method ref
Client Sample No	1	1	1	1	4	7	1			
Client Sample ID	TP17	TP18	TP20	TP21	TP22	TP22	TP23			
Depth to Top	0.00	0.00	0.00	0.00	0.70	1.40	0.00			
Depth To Bottom	0.30	0.30	0.40	0.50			0.30			
Date Sampled	27-Jan-16	29-Jan-16	29-Jan-16	26-Jan-16	26-Jan-16	26-Jan-16	26-Jan-16			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - D	Solid	Soil - ES			
Sample Matrix Code	4AE	4E	5	6AE	5	7	4E			
TPH CWG										
Ali >C5-C6$_A^\#$	<0.01	-	<0.01	<0.05	-	-	0.10		mg/kg	A-T-022s
Ali >C6-C8$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
Ali >C8-C10$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
Ali >C10-C12$_A^\#$	<0.1	-	<0.1	<0.1	-	-	<0.1		mg/kg	A-T-023s
Ali >C12-C16$_A^\#$	<0.1	-	<0.1	<0.1	-	-	<0.1		mg/kg	A-T-023s
Ali >C16-C21$_A^\#$	<0.1	-	<0.1	<0.1	-	-	<0.1		mg/kg	A-T-023s
Ali >C21-C35$_A^\#$	<0.1	-	<0.1	<0.1	-	-	<0.1		mg/kg	A-T-023s
Total Aliphatics$_A$	<0.1	-	<0.1	<0.1	-	-	<0.1		mg/kg	A-T-022+23s
Aro >C5-C7$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
Aro >C7-C8$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
Aro >C8-C9$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
Aro >C9-C10$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
Aro >C10-C12$_A^\#$	<0.1	-	<0.1	<0.1	-	-	<0.1		mg/kg	A-T-023s
Aro >C12-C16$_A^\#$	<0.1	-	<0.1	15.9	-	-	<0.1		mg/kg	A-T-023s
Aro >C16-C21$_A^\#$	<0.1	-	<0.1	222	-	-	<0.1		mg/kg	A-T-023s
Aro >C21-C35$_A^\#$	<0.1	-	<0.1	137	-	-	<0.1		mg/kg	A-T-023s
Total Aromatics$_A$	<0.1	-	<0.1	375	-	-	<0.1		mg/kg	A-T-022+23s
TPH (Ali & Aro)$_A$	<0.1	-	<0.1	375	-	-	<0.1		mg/kg	A-T-022+23s
BTEX - Benzene$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
BTEX - Toluene$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
BTEX - Ethyl Benzene$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
BTEX - m & p Xylene$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
BTEX - o Xylene$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s
MTBE$_A^\#$	<0.01	-	<0.01	<0.01	-	-	<0.01		mg/kg	A-T-022s

REPORT NOTES

Notes - Soil chemical analysis
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones and brick and concrete fragments >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General
This report shall not be reproduced, except in full, without written approval from Envirolab.
Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.
All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supersedes any "A" subscripts.
All analysis is performed on the sample as received for soil samples which are positive for asbestos and/or if they are from outside the European Union and this supercedes any "D" subscripts.
Superscript "M" indicates method accredited to MCERTS.
If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

TPH analysis of water by method A-T-007
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos in soil
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if present as discrete fibres/fragments. Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.
Samples with Matrix Code 7 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations.

Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

APPENDIX L
HUMAN HEALTH GENERIC ASSESSMENT CRITERIA

Generic assessment criteria for human health: residential scenario with home-grown produce

Background

RSK's generic assessment criteria (GAC) were initially prepared following the publication by the Environment Agency (EA) of soil guideline value (SGV) and toxicological (TOX) reports, and associated publications in 2009[1]. RSK GAC were updated following the publication of GAC by LQM/CIEH in 2009[2]. RSK GAC are periodically revised when updated information on toxicological, land use or receptor parameters is published.

Updates to the RSK GAC: 2015

In 2014, the publication of Category 4 Screening Levels (C4SL)[3,4], as part of the Defra-funded research project SP1010, included modifications to certain exposure assumptions documented within EA Science Report SC050221/SR3 (herein after referred to as SR3)[5] used in the generation of SGVs.

C4SL were published for six substances (cadmium, arsenic, benzene, benzo(a)pyrene, chromium VI and lead) for a sandy loam soil type with 6% soil organic matter, based on a low level of toxicological concern (LLTC; see Section 2.3 of research project report SP1010[3]). Where a C4SL has been published, the RSK GAC duplicates the C4SL published values using all input parameters within the SP1010 final project report[3] and associated appendices[6], and adopts them as GAC for these six substances.

For all other substances the C4SL exposure modifications, with the exception of the "top two" produce type approach taken in the C4SL, have been applied to the current RSK GAC. These include alterations to daily inhalation rates for residential and commercial scenarios, reducing soil adherence factors in children (age classes 1 to 12 only) for residential land use, reducing exposure frequency for dermal contact outdoors for residential land use, and updated produce type consumption rates (90th percentile) based on recent data from the National Diet and Nutrition Survey.

The RSK GAC have also been revised with updated toxicology published by LQM/CIEH in 2015[7], where a C4SL has not been published.

RSK GAC derivation for metals and organic compounds

Model selection

Soil assessment criteria (SAC) were calculated using the Contaminated Land Exposure Assessment (CLEA) tool v1.06, supporting EA guidance[5,8,9] and revised exposure scenarios published for the C4SL[3]. Groundwater assessment criteria (GrAC) protective of human health via the inhalation pathway were derived using the RBCA 1.3b model. RSK has updated the inputs within RBCA to reflect EA guidance[1,5,8,9]. The SAC and GrAC collectively are termed GAC.

Conceptual model

In accordance with SR3[5], the residential with home-grown produce scenario considers risks to a female child between the ages of 0 and 6 years old as the highest risk scenario. In accordance

with Box 3.1 of SR3[5], the pathways considered for production of the SAC in the residential with home-grown produce scenario are

- direct soil and dust ingestion
- consumption of home-grown produce
- consumption of soil attached to home-grown produce
- dermal contact with soil and indoor dust
- inhalation of indoor and outdoor dust and vapours.

Figure 1 is a conceptual model illustrating these linkages.

In line with guidance in the EA SGV report for cadmium[1], the RSK GAC for cadmium has been derived based on estimates representative of lifetime exposure. Although young children are generally more likely to have higher exposures to soil contaminants, the renal toxicity of cadmium, and the derivation of the TDI_{oral} and TDI_{inh}, are based on considerations of the kidney burden accumulated over 50 years or so. It is therefore reasonable to consider exposure not just in childhood but averaged over a longer period.

The pathway considered in production of the GrAC is the volatilisation of compounds from groundwater and subsequent vapour inhalation by residents while indoors. Figure 2 illustrates this linkage. Although the outdoor air inhalation pathway is also valid, this contributes little to the overall risks owing to the dilution in outdoor air. Within RBCA, the solubility limit of the chemical restricts the extent of volatilisation, which in turn drives the indoor air inhalation pathway. While the same restriction is not built into the CLEA model, the CLEA model output cells are flagged red where the soil saturation limit has been exceeded.

With respect to volatilisation, the CLEA model assumes a simple linear partitioning of a chemical in the soil between the sorbed, dissolved and vapour phase[9]. The upper boundaries of this partitioning are represented by the maximum aqueous solubility and pure saturated vapour concentration of the chemical. The CLEA model estimates saturated soil concentrations where these limits are reached[9]. The CLEA software uses a traffic light system to identify when individual and/or combined assessment criteria exceed the lower of either the aqueous- or vapour-based soil saturation limits. Model output cells are flagged red where the saturated soil concentration has been exceeded and the contribution of the indoor and outdoor vapour pathway to total exposure is greater than 10%. In this case, further consideration of the following is required[9]:

- Free phase contamination may be present.
- Exposure from the vapour pathways will be over-predicted by the model, as in reality the vapour phase concentration will not increase at concentrations above saturation limits
- Where the vapour pathway contribution is greater than 90%, it is unlikely the relevant health criteria value (HCV) will be exceeded at soil concentrations at least a factor of ten higher than the relevant HCV.

Where the vapour pathway is the predominant pathway (contributes greater than 90% of exposure) or the only exposure route considered and the cell is highlighted red (SAC exceeds saturation limit), the risk based on the assumed conceptual model is likely to be negligible as the vapour risk is assumed to be tolerable at maximum possible soil concentrations. In such circumstances, the vapour pathway exposure should be considered based on the presence of free phase or non-aqueous phase liquid sources and the measured concentrations of volatile organic compounds (VOC) in the vapour phase. Screening could be considered based on setting

the SAC as the modelled soil saturation limits. However, as stated within the CLEA handbook[9], this is likely to not be practical in many cases because of the very low saturation limits and, in any case, is highly conservative.

It should also be noted that for mixtures of compounds, free phase may be present where soil (or groundwater) concentrations are well below saturation limits for individual compounds.

Where the vapour pathway is only one of the exposure pathways considered, an additional approach can then be utilised as detailed within Section 4.12 of the CLEA model handbook[9], which explains how to calculate an effective assessment criterion manually.

SR3[5] states that, as a general rule of thumb, it is recognised that estimating vapour phase concentrations from dissolved and sorbed phase contamination by petroleum hydrocarbons are at least a factor of ten higher than those likely to be measured on-site. RSK has therefore applied an empirical subsurface to indoor air correction factor of 10 into the CLEA model chemical database for all petroleum hydrocarbon fractions (including BTEX, trimethylbenzenes and the polycyclic aromatic hydrocarbons (PAH) naphthalene, acenaphthene and acenaphthylene) to reduce this conservatism.

Input selection

The most up-to-date published chemical and toxicological data was obtained from EA Report SC050021/SR7[10], the EA TOX[1] reports, the C4SL SP1010 project report and associated appendices[3,6] or the 2015 LQM/CIEH report[7]. Where a C4SL has been published, the RSK GAC have duplicated the C4SL published values using all input parameters within the SP1010 final project report[3] and associated appendices[6], and has adopted them as GAC for these six substances. Toxicological and specific chemical parameters for aromatic hydrocarbon C_8–C_9 (styrene), 1,2,4-trimethylbenzene and methyl tertiary-butyl ether (MTBE) were obtained from the CL:AIRE Soil Generic Assessment Criteria report[11].

For TPH, aromatic hydrocarbons C_5–C_8 were not modelled, as this range comprises benzene and toluene, which are modelled separately. The aromatic C_8–C_9 hydrocarbon fraction comprises ethylbenzene, xylene and styrene. As ethylbenzene and xylene are being modelled separately, the physical, chemical and toxicological data for aromatic C_8–C_9 have been taken from styrene.

For the GrAC, owing to the lack of UK-specific data, default information in the RBCA model was used to evaluate MTBE. No published UK data was available for 1,3,5-trimethylbenzene, so information was obtained from the RBCA model. RBCA uses toxicity data for the inhalation pathway in different units to the CLEA model and cannot consider separately the mean daily intake (MDI), occupancy periods or breathing rates. Therefore, the HCV in RBCA was amended to take account of

- amendments to the MDI using Table 3.4 of SR2[8]
- a child weighing 13.3kg (average of 0–6 year old female in accordance with Table 4.6 of SR3[5]) and breathing 11.85m^3 (average daily inhalation rate for a 0–6-year old female in accordance with Table 4.14 of SR3[5]). Inhalation rates used in the derivation of the GrAC have not been updated in line with the 2011 USEPA published values[12]; these will be updated in subsequent revisions of the RSK GAC. The lower inhalation rates presented by the USEPA in 2011 for ages classes 1 to 11 (values are higher for age classes 12 to 18) are not considered to make a significant difference.
- the 50% rule (for petroleum hydrocarbons, trimethylbenzenes and MTBE)[8,9] where MDI data is not available but background exposure is considered important in the overall exposure.

Physical parameters

For the residential with home-grown produce scenario, the CLEA default building is a small, two-storey terrace house with a concrete ground-bearing slab. The house is assumed to have a 100m^2 private garden consisting of lawn and flowerbeds, incorporating a 20m^2 plot for growing fruit and vegetables consumed by the residents. SR3[5] notes this residential building type to be the most conservative in terms of potential for vapour intrusion. The building parameters used in the production of the RSK GACs are the default CLEA v1.06 inputs presented in Table 3.3 of SR3[3], with a dust loading factor detailed in Section 9.3 of SR3[5]. The parameters for a sandy loam soil type were used in line with Table 4.4 of SR3[5]. This includes a value of 6% for the percentage of soil organic matter (SOM) within the soil. In RSK's experience, this is rather high for many sites. To avoid undertaking site-specific risk assessments for SOM, RSK has produced an additional set of GAC for SOM of 1% and 2.5% for all substances using the CLEA tool.

For the GrAC, the depth to groundwater was taken as 2.5m based on RSK's experience of assessing the volatilisation pathway from groundwater. The GrAC were produced using the input parameters in Table 4.

Summary of modifications to the default CLEA 1.06/SR3[5] input parameters for residential with home-grown produce land-use scenario

In summary, the RSK GAC were produced using the default input parameters for soil properties, the air dispersion model, building properties and the vapour model detailed in SR3[5]. Modifications to the default SR3[5] exposure scenarios based on the C4SL exposure scenarios[3] are presented in Tables 2 and 3 below.

The final selected GAC are presented by pathway in Table 5 and the combined GAC in Table 6.

Figure 1: Conceptual model for residential scenario with home-grown produce

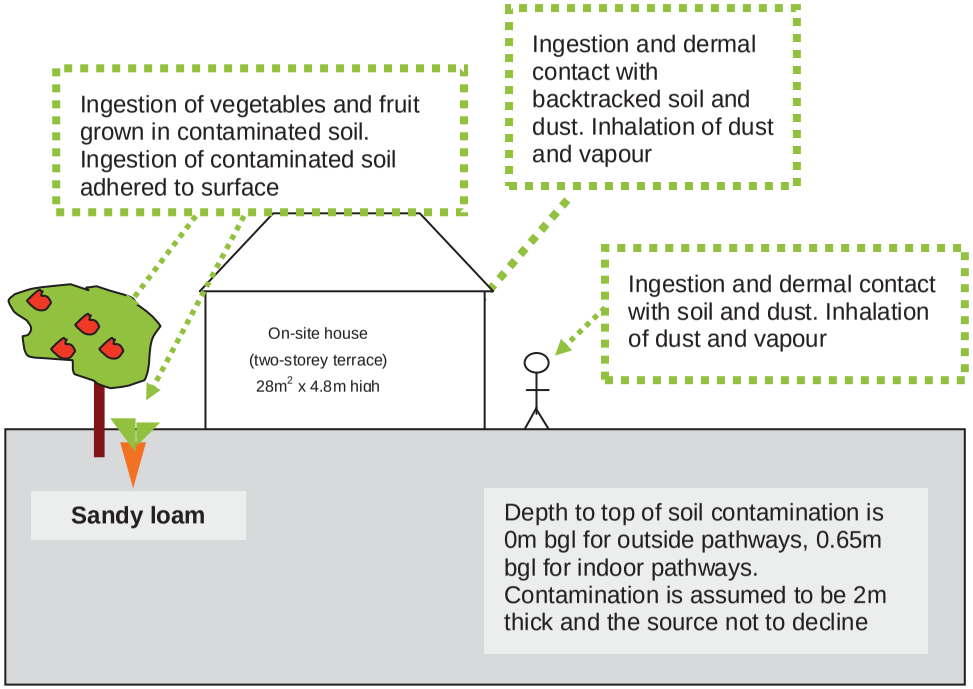


Table 1: Exposure assessment parameters for residential scenario with home-grown produce – inputs for CLEA model

Parameter	Value	Justification
Land use	Residential with homegrown produce	Chosen land use
Receptor	Female child age 1 to 6	Key generic assumption given in Box 3.1, SR3[5]
Building	Small terraced house	Key generic assumption given in Box 3.1, SR3. Small, two-storey terraced house chosen, as it is the most conservative residential building type in terms of protection from vapor intrusion (Section 3.4.6, SR3)[5]
Soil type	Sandy Loam	Most common UK soil type (Section 4.3.1, from Table 3.1, SR3)[5]
Start AC (age class)	1	Range of age classes corresponding to key generic assumption that the critical receptor is a young female child aged 0–6. From Box 3.1, SR3[5]
End AC (age class)	6	
SOM (%)	6	Representative of sandy loamy soil according to EA guidance note dated January 2009 entitled 'Changes We Have Made to the CLEA Framework Documents'[13]
	1	To provide SAC for sites where SOM <6% as often observed by RSK
	2.5	
pH	7	Model default

Table 2: Residential with home-grown produce – modified home-grown produce data

Name	Consumption rate 90th percentile (g FW kg^{-1} BW day^{-1}) by age class						Dry weight conversion factor (g DW g^{-1} FW)	Home-grown fraction (average)	Home-grown fraction (high end)	Soil loading factor (g g^{-1} DW)	Preparation correction factor
	1	2	3	4	5	6					
Green vegetables	7.12	5.87	5.87	5.87	4.53	4.53	0.096	0.05	0.33	1.00E-03	2.00E-01
Root vegetables	10.7	2.83	2.83	2.83	2.14	2.14	0.103	0.06	0.4	1.00E-03	1.00E+00
Tuber vegetables	16	6.6	6.6	6.6	4.95	4.95	0.21	0.02	0.13	1.00E-03	1.00E+00
Herbaceous fruit	1.83	3.39	3.39	3.39	2.24	2.24	0.058	0.06	0.4	1.00E-03	6.00E-01
Shrub fruit	2.23	0.46	0.46	0.46	0.19	0.19	0.166	0.09	0.6	1.00E-03	6.00E-01
Tree fruit	3.82	10.3	10.3	10.3	5.16	5.16	0.157	0.04	0.27	1.00E-03	6.00E-01
Justification	Table 3.4, SP1010 (3)						Table 6.3, SR3(5)	Table 4.19, SR3(5)		Table 6.3, SR3(5)	

Table 3: Residential with home-grown produce – modified and use and receptor data

Parameter	Unit	Age class					
		1	2	3	4	5	6
EF (soil and dust ingestion)	day yr^{-1}	180	365	365	365	365	365
EF (consumption of home-grown produce)	day yr^{-1}	180	365	365	365	365	365
EF (skin contact, indoor)	day yr^{-1}	180	365	365	365	365	365
EF (skin contact, outdoor)	day yr^{-1}	170	170	170	170	170	170
EF (inhalation of dust and vapour, indoor)	day yr^{-1}	365	365	365	365	365	365
EF (inhalation of dust and vapour, outdoor)	day yr^{-1}	365	365	365	365	365	365
Justification		Table 3.5, SP1010(3); Table 3.1, SR3(5)					
Soil to skin adherence factor (outdoor)	mg cm^{-2} day^{-1}	0.1	0.1	0.1	0.1	0.1	0.1
Justification		Table 3.5, SP1010(3)					
Inhalation rate	m^3 day^{-1}	5.4	8.0	8.9	10.1	10.1	10.1
Justification		Mean value USEPA, 2011(12); Table 3.2, SP1010(3)					
Notes: For **cadmium**, the exposure assessment for a residential land use is based on estimates representative of lifetime exposure AC1-18. This is because the TDI_{oral} and TDI_{inh} are based on considerations of the kidney burden accumulated over 50 years. It is therefore reasonable to consider exposure not just in childhood but averaged over a longer period. See the Environment Agency Science Report SC05002/ TOX 3(1), Science Report SC050021/Cadmium SGV(1) and the project report SP1010(3) for more information.							

Figure 2: GrAC conceptual model for RBCA residential with home-grown produce scenario

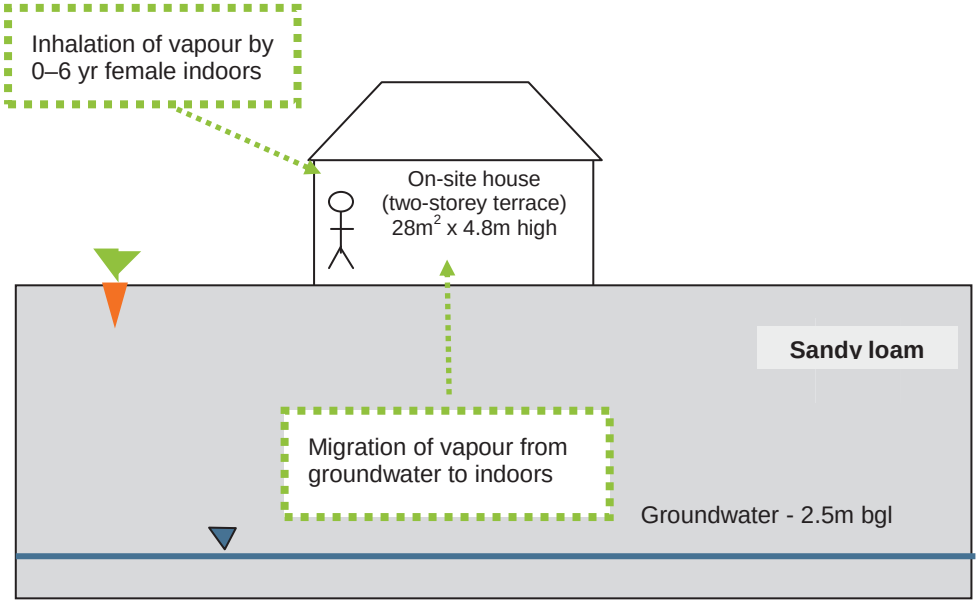


Table 4: Residential with home-grown produce – RBCA inputs

Parameter	Unit	Value	Justification
Receptor			
Averaging time	Years	6	From Box 3.1, SR3[5]
Receptor weight	kg	13.3	Average of CLEA 0–6 year old female data, Table 4.6, SR3[5]
Exposure duration	Years	6	From Box 3.1, report, SR3[5]
Exposure frequency	Days/yr	350	Weighted using occupancy period of 23 hours per day for 365 days of the year
Soil type – sandy loam			
Total porosity	-	0.53	CLEA value for sandy loam. Parameters for sandy loam from Table 4.4, SR3[5]
Volumetric water content	-	0.33	
Volumetric air content	-	0.20	
Dry bulk density	g cm^{-3}	1.21	
Vertical hydraulic conductivity	cm s^{-1}	3.56E-3	CLEA value for saturated conductivity of sandy loam, Table 4.4, SR3[5]
Vapour permeability	m^2	3.05E-12	Calculated for sandy loam using equations in Appendix 1, SR3[5]
Capillary zone thickness	m	0.1	Professional judgement
Fraction organic carbon	%	0.0348	Representative of sandy loam according to EA guidance note dated January 2009 entitled 'Changes We Have Made to the CLEA Framework Documents'[13]
Building			
Building volume/area ratio	m	4.8	Table 3.3, SR3[5]
Foundation area	m^2	28	
Foundation perimeter	m	22	Calculated assuming building measures 7m x 4m to give 28m^2 foundation area
Building air exchange rate	d^{-1}	12	Table 3.3, SR3[5]
Depth to bottom of foundation slab	m	0.15	
Foundation thickness	m	0.15	
Foundation crack fraction	-	0.0151	Calculated from floor crack area of 423 cm^2 and building footprint of 28m^2 in Table 4.21, SR3[5]
Volumetric water content of cracks	-	0.33	Assumed equal to underlying soil type in assumption that cracks become filled with soil over time. Parameters for sandy loam from Table 4.4, SR3[5]
Volumetric air content of cracks	-	0.2	
Indoor/outdoor differential pressure	Pa	3.1	From Table 3.3, SR3[5

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GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE

Table 5

Human Health Generic Assessment Criteria by Pathway for Residential With Home-Grown Produce Scenario

Compound	Notes	GrAC (mg/l)	SAC Appropriate to Pathway SOM 1% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 2.5% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 6% (mg/kg)			Soil Saturation Limit (mg/kg)
			Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Metals														
Arsenic	(a,b)	-	3.71E+01	5.26E+02	NR	NR	3.71E+01	5.26E+02	NR	NR	3.71E+01	5.26E+02	NR	NR
Cadmium	(a)	-	NR	NR	2.60E+01	NR	NR	NR	2.60E+01	NR	NR	NR	2.60E+01	NR
Chromium (III) - trivalent	(c)	-	1.84E+04	9.07E+02	8.85E+02	NR	1.84E+04	9.07E+02	8.85E+02	NR	1.84E+04	9.07E+02	8.85E+02	NR
Chromium (VI) - hexavalent	(a,d)	-	2.92E+01	2.06E+01	NR	NR	2.92E+01	2.06E+01	NR	NR	2.92E+01	2.06E+01	NR	NR
Copper		-	2.72E+03	1.41E+04	2.47E+03	NR	2.72E+03	1.41E+04	2.47E+03	NR	2.72E+03	1.41E+04	2.47E+03	NR
Lead	(a)	-	2.01E+02	NR	NR	NR	2.01E+02	NR	NR	NR	2.01E+02	NR	NR	NR
Elemental Mercury (Hg^0)	(d)	9.40E-03	NR	2.35E-01	NR	4.31E+00	NR	5.60E-01	NR	1.07E+01	NR	1.22E+00	NR	2.58E+01
Inorganic Mercury (Hg^{2+})		-	3.95E+01	3.63E+03	3.91E+01	NR	3.95E+01	3.63E+03	3.91E+01	NR	3.95E+01	3.63E+03	3.91E+01	NR
Methyl Mercury (Hg^{4+})		2.00E+01	1.26E+01	1.87E+01	7.52E+00	7.33E+01	1.26E+01	3.62E+01	9.34E+00	1.42E+02	1.26E+01	7.68E+01	1.08E+01	3.04E+02
Nickel	(d)	-	1.27E+02	1.81E+02	NR	NR	1.27E+02	1.81E+02	NR	NR	1.27E+02	1.81E+02	NR	NR
Selenium	(b)	-	2.58E+02	NR	NR	NR	2.58E+02	NR	NR	NR	2.58E+02	NR	NR	NR
Zinc	(b)	-	3.86E+03	3.63E+07	NR	NR	3.86E+03	3.63E+07	NR	NR	3.86E+03	3.63E+07	NR	NR
Cyanide		-	2.74E+01	4.09E+00	3.78E+00	NR	2.74E+01	4.09E+00	3.78E+00	NR	2.74E+01	4.09E+00	3.78E+00	NR
Volatile Organic Compounds														
Benzene	(a)	7.20E+00	2.62E-01	9.01E-01	2.03E-01	1.22E+03	5.39E-01	1.68E+00	4.08E-01	2.26E+03	1.16E+00	3.48E+00	8.72E-01	4.71E+03
Toluene		5.90E+02	1.53E+02	9.08E+02	1.31E+02	8.69E+02	3.49E+02	2.00E+03	2.97E+02	1.92E+03	7.95E+02	4.55E+03	6.77E+02	4.36E+03
Ethylbenzene		1.80E+02	1.10E+02	8.34E+01	4.74E+01	5.18E+02	2.61E+02	1.96E+02	1.12E+02	1.22E+03	6.00E+02	4.58E+02	2.60E+02	2.84E+03
Xylene - m		8.40E+01	2.10E+02	8.25E+01	5.92E+01	6.25E+02	5.01E+02	1.95E+02	1.40E+02	1.47E+03	1.15E+03	4.56E+02	3.27E+02	3.46E+03
Xylene - o		1.00E+02	1.92E+02	8.87E+01	6.07E+01	4.78E+02	4.56E+02	2.08E+02	1.43E+02	1.12E+03	1.05E+03	4.86E+02	3.32E+02	2.62E+03
Xylene - p		8.70E+01	1.98E+02	7.93E+01	5.66E+01	5.76E+02	4.70E+02	1.86E+02	1.33E+02	1.35E+03	1.08E+03	4.36E+02	3.10E+02	3.17E+03
Total xylene		8.40E+01	1.92E+02	7.93E+01	5.66E+01	6.25E+02	4.56E+02	1.86E+02	1.33E+02	1.47E+03	1.05E+03	4.36E+02	3.10E+02	3.46E+03
Methyl tertiary-Butyl ether (MTBE)		2.20E+03	1.54E+02	1.04E+03	1.34E+02	2.04E+04	2.97E+02	1.69E+03	2.53E+02	3.31E+04	6.03E+02	3.21E+03	5.08E+02	6.27E+04
Trichloroethene		1.80E+00	2.83E-01	1.72E-02	1.62E-02	1.54E+03	6.26E-01	3.59E-02	3.40E-02	3.22E+03	1.41E+00	7.98E-02	7.55E-02	7.14E+03
Tetrachloroethene		3.60E+00	4.49E+00	1.79E-01	1.76E-01	4.24E+02	1.04E+01	4.02E-01	3.94E-01	9.51E+02	2.38E+01	9.21E-01	9.04E-01	2.18E+03
1,1,1-Trichloroethane		2.60E+01	3.33E+02	9.01E+00	8.77E+00	1.43E+03	7.26E+02	1.84E+01	1.80E+01	2.92E+03	1.62E+03	4.04E+01	3.94E+01	6.39E+03
1,1,1,2 Tetrachloroethane		1.40E+01	5.39E+00	1.54E+00	1.20E+00	2.60E+03	1.27E+01	3.56E+00	2.78E+00	6.02E+03	2.92E+01	8.29E+00	6.46E+00	1.40E+04
1,1,2,2-Tetrachloroethane		1.40E+01	2.81E+00	3.92E+00	1.64E+00	2.67E+03	6.09E+00	8.04E+00	3.47E+00	5.46E+03	1.36E+01	1.76E+01	7.67E+00	1.20E+04
Carbon Tetrachloride		5.50E-02	3.10E+00	2.58E-02	2.57E-02	1.52E+03	7.11E+00	5.65E-02	5.62E-02	3.32E+03	1.62E+01	1.28E-01	1.27E-01	7.54E+03
1,2-Dichloroethane		3.00E-01	3.17E-02	9.20E-03	7.13E-03	3.41E+03	5.73E-02	1.33E-02	1.08E-02	4.91E+03	1.09E-01	2.28E-02	1.88E-02	8.43E+03
Vinyl Chloride		1.90E-02	3.82E-03	7.73E-04	6.43E-04	1.36E+03	6.87E-03	1.00E-03	8.73E-04	1.76E+03	1.25E-02	1.53E-03	1.36E-03	2.69E+03
1,2,4-Trimethylbenzene		7.50E-02	NR	1.76E+00	NR	4.74E+02	NR	4.26E+00	NR	1.16E+03	NR	9.72E+00	NR	2.76E+03
1,3,5-Trimethylbenzene	(e)	4.70E-02	NR	NR	NR	2.30E+02	NR	NR	NR	5.52E+02	NR	NR	NR	1.30E+03
Semi-Volatile Organic Compounds														
Acenaphthene		3.20E+00	2.27E+02	4.86E+04	2.26E+02	5.70E+01	5.41E+02	1.18E+05	5.38E+02	1.41E+02	1.18E+03	2.68E+05	1.17E+03	3.36E+02
Acenaphthylene		4.20E+00	1.85E+02	4.59E+04	1.84E+02	8.61E+01	4.42E+02	1.11E+05	4.40E+02	2.12E+02	9.78E+02	2.53E+05	9.74E+02	5.06E+02
Anthracene		2.10E-02	2.43E+03	1.53E+05	2.39E+03	1.17E+00	5.53E+03	3.77E+05	5.45E+03	2.91E+00	1.10E+04	8.76E+05	1.09E+04	6.96E+00
Benzo(a)anthracene		3.80E-03	1.01E+01	2.47E+01	7.18E+00	1.71E+00	1.42E+01	4.37E+01	1.07E+01	4.28E+00	1.69E+01	6.26E+01	1.33E+01	1.03E+01
Benzo(b)fluoranthene		2.00E-03	2.96E+00	1.93E+01	2.56E+00	1.22E+00	3.89E+00	2.13E+01	3.29E+00	3.04E+00	4.43E+00	2.22E+01	3.69E+00	7.29E+00
Benzo(g,h,i)perylene		2.60E-04	3.77E+02	1.87E+03	3.14E+02	1.54E-02	4.09E+02	1.94E+03	3.38E+02	3.85E-02	4.23E+02	1.97E+03	3.48E+02	9.23E-02
Benzo(k)fluoranthene		8.00E-04	8.92E+01	5.41E+02	7.66E+01	6.87E-01	1.10E+02	5.76E+02	9.22E+01	1.72E+00	1.21E+02	5.91E+02	1.00E+02	4.12E+00
Chrysene		2.00E-03	1.66E+01	1.19E+02	1.46E+01	4.40E-01	2.54E+01	1.49E+02	2.17E+01	1.10E+00	3.19E+01	1.66E+02	2.67E+01	2.64E+00
Dibenzo(a,h)anthracene		6.00E-04	2.90E-01	1.45E+00	2.41E-01	3.93E-03	3.43E-01	1.64E+00	2.84E-01	9.82E-03	3.69E-01	1.74E+00	3.04E-01	2.36E-02
Fluoranthene		2.30E-01	2.87E+02	3.83E+04	2.85E+02	1.89E+01	5.63E+02	8.87E+04	5.60E+02	4.73E+01	9.00E+02	1.83E+05	8.96E+02	1.13E+02
Fluorene		1.90E+00	1.77E+02	6.20E+03	1.72E+02	3.09E+01	4.19E+02	1.53E+04	4.07E+02	7.65E+01	8.98E+02	3.62E+04	8.76E+02	1.83E+02
Indeno(1,2,3-cd)pyrene		2.00E-04	3.09E+01	2.12E+02	2.70E+01	6.13E-02	4.22E+01	2.38E+02	3.59E+01	1.53E-01	4.92E+01	2.50E+02	4.11E+01	3.68E-01
Phenanthrene		5.30E-01	9.85E+01	7.17E+03	9.72E+01	3.60E+01	2.24E+02	1.76E+04	2.22E+02	8.96E+01	4.48E+02	4.07E+04	4.43E+02	2.14E+02
Pyrene		1.30E-01	6.25E+02	8.79E+04	6.20E+02	2.20E+00	1.25E+03	2.04E+05	1.24E+03	5.49E+00	2.05E+03	4.23E+05	2.04E+03	1.32E+01
Benzo(a)pyrene	(a)	3.80E-03	4.91E+00	3.51E+01	4.30E+00	9.11E-01	4.91E+00	3.77E+01	4.34E+00	2.28E+00	4.91E+00	3.89E+01	4.36E+00	5.46E+00
Naphthalene		1.90E+01	2.78E+01	2.33E+01	1.27E+01	7.64E+01	6.66E+01	5.58E+01	3.04E+01	1.83E+02	1.53E+02	1.31E+02	7.06E+01	4.32E+02
Phenol		-	1.60E+02	4.58E+02	1.20E+02	2.42E+04	2.96E+02	6.95E+02	2.09E+02	3.81E+04	5.86E+02	1.19E+03	3.93E+02	7.03E+04

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE

Table 5

Human Health Generic Assessment Criteria by Pathway for Residential With Home-Grown Produce Scenario

Compound	Notes	GrAC (mg/l)	SAC Appropriate to Pathway SOM 1% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 2.5% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 6% (mg/kg)			Soil Saturation Limit (mg/kg)
			Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Total Petroleum Hydrocarbons														
Aliphatic hydrocarbons EC_5-EC_6		1.00E+01	4.96E+03	4.24E+01	4.23E+01	3.04E+02	1.12E+04	7.79E+01	7.78E+01	5.58E+02	2.41E+04	1.61E+02	1.60E+02	1.15E+03
Aliphatic hydrocarbons >EC_6-EC_8		5.40E+00	1.46E+04	1.04E+02	1.03E+02	1.44E+02	3.27E+04	2.31E+02	2.31E+02	3.22E+02	6.47E+04	5.29E+02	5.28E+02	7.36E+02
Aliphatic hydrocarbons >EC_8-EC_{10}		2.30E-01	1.45E+03	2.68E+01	2.67E+01	7.77E+01	2.42E+03	6.55E+01	6.50E+01	1.90E+02	3.29E+03	1.56E+02	1.54E+02	4.51E+02
Aliphatic hydrocarbons >EC_{10}-EC_{12}		3.40E-02	3.47E+03	1.33E+02	1.32E+02	4.75E+01	3.98E+03	3.31E+02	3.24E+02	1.18E+02	4.23E+03	7.93E+02	7.52E+02	2.83E+02
Aliphatic hydrocarbons >EC_{12}-EC_{16}		7.60E-04	4.36E+03	1.11E+03	1.03E+03	2.37E+01	4.40E+03	2.78E+03	2.22E+03	5.91E+01	4.41E+03	6.67E+03	3.47E+03	1.42E+02
Aliphatic hydrocarbons >EC_{16}-EC_{35}	(b)	-	5.28E+04	NR	NR	8.48E+00	6.95E+04	NR	NR	2.12E+01	7.94E+04	NR	NR	5.09E+01
Aliphatic hydrocarbons >EC_{35}-EC_{44}	(b)	-	5.28E+04	NR	NR	8.48E+00	6.95E+04	NR	NR	2.12E+01	7.94E+04	NR	NR	5.09E+01
Aromatic hydrocarbons >EC_8-EC_9 (styrene)		7.40E+00	1.07E+01	5.22E+02	1.05E+01	6.26E+02	2.51E+01	1.20E+03	2.46E+01	1.44E+03	5.72E+01	2.79E+03	5.60E+01	3.35E+03
Aromatic hydrocarbons >EC_9-EC_{10}		7.40E+00	5.71E+01	4.74E+01	3.44E+01	6.13E+02	1.35E+02	1.16E+02	8.29E+01	1.50E+03	2.91E+02	2.77E+02	1.89E+02	3.58E+02
Aromatic hydrocarbons >EC_{10}-EC_{12}		2.50E+01	8.17E+01	2.58E+02	7.42E+01	3.64E+02	1.90E+02	6.39E+02	1.74E+02	8.99E+02	3.95E+02	1.52E+03	3.67E+02	2.15E+03
Aromatic hydrocarbons >EC_{12}-EC_{16}		5.80E+00	1.43E+02	2.85E+03	1.41E+02	1.69E+02	3.18E+02	7.07E+03	3.14E+02	4.19E+02	6.09E+02	1.68E+04	6.03E+02	1.00E+03
Aromatic hydrocarbons >EC_{16}-EC_{21}	(b)	-	2.48E+02	NR	NR	5.37E+01	4.84E+02	NR	NR	1.34E+02	7.68E+02	NR	NR	3.21E+02
Aromatic hydrocarbons >EC_{21}-EC_{35}	(b)	-	8.72E+02	NR	NR	4.83E+00	1.10E+03	NR	NR	1.21E+01	1.22E+03	NR	NR	2.90E+01
Aromatic hydrocarbons >EC_{35}-EC_{44}	(b)	-	8.72E+02	NR	NR	4.83E+00	1.10E+03	NR	NR	1.21E+01	1.22E+03	NR	NR	2.90E+01

Notes:

EC - equivalent carbon. GrAC - groundwater assessment criteria. SAC - soil assessment criteria.

The CLEA model output is colour coded depending upon whether the soil saturation limit has been exceeded.

Calculated SAC exceeds soil saturation limit and may significantly effect the interpretation of any exceedances since the contribution of the indoor and outdoor vapour pathway to total exposure is >10%. This shading has also been used for the RBCA output where the theoretical solubility limit has been exceeded.

Calculated SAC exceeds soil saturation limit but will not effect the SSV significantly since the contribution of the indoor and outdoor vapour pathway to total exposure is <10%.

Calculated SAC does not exceed the soil saturation limit.

For consistency where the theoretical solubility limit within RBCA has been exceeded in production of the GrAC, these cells have also been hatched red.

The SAC for organic compounds are dependant upon soil organic matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58. 1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.

SAC for TPH fractions, polycyclic aromatic hydrocarbons, MTBE, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway (Section 10.1.1, SR3)

(a) SAC for arsenic, benzene, benzo(a)pyrene, cadmium, chromium VI and lead are derived using the C4SL toxicology data.

(b) SAC for selenium should not include the inhalation pathway as no expert group HCV has been derived; aliphatic and aromatic hydrocarbons >EC16 should not include inhalation pathway due to their non-volatile nature and inhalation exposure being minimal (oral, dermal and inhalation exposure is compared to the oral HCV); arsenic should only be based on oral contribution (rather than combined) owing to the relative small contribution from inhalation in accordance with the SGV report. The Oral SAC should be adopted for zinc and benzo(a)pyrene.

(c) SAC for CrIII should be based on the lower of the oral and inhalation SAC (see LQM/CIEH 2015 Section 6.8)

(d) SAC for elemental mercury, chromium VI and nickel should be based on the inhalation pathway only.

(e) SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used.

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE

Table 6
Human Health Generic Assessment Criteria for Residential with home-grown produce

Compound	GrAC for Groundwater (mg/l)	SAC for Soil SOM 1% (mg/kg)	SAC for Soil SOM 2.5% (mg/kg)	SAC for Soil SOM 6% (mg/kg)
Metals				
Arsenic	-	37	37	37
Cadmium	-	30	30	30
Chromium (III) - trivalent	-	910	910	910
Chromium (VI) - hexavalent	-	21	21	21
Copper	-	2,500	2,500	2,500
Lead	-	200	200	200
Elemental Mercury (Hg^0)	0.0094	0.2	0.6	1.2
Inorganic Mercury (Hg^{2+})	-	39	39	39
Methyl Mercury (Hg^{4+})	20	10	10	10
Nickel	-	130	130	130
Selenium	-	258	258	258
Zinc	-	3,900	3,900	3,900
Cyanide	-	3.8	3.8	3.8
Volatile Organic Compounds				
Benzene	7.2	0.20	0.41	0.87
Toluene	590	130	300	680
Ethylbenzene	180	50	110	260
Xylene - m	84	59	140	327
Xylene - o	100	61	143	332
Xylene - p	87	57	133	310
Total xylene	84	57	133	310
Methyl tertiary-Butyl ether (MTBE)	2200	130	250	510
Trichloroethene	1.8	0.02	0.03	0.08
Tetrachloroethene	3.6	0.2	0.4	0.9
1,1,1-Trichloroethane	26	9	18	39
1,1,1,2 Tetrachloroethane	14	1.2	2.8	6.5
1,1,2,2-Tetrachloroethane	14	1.6	3.5	7.7
Carbon Tetrachloride	0.055	0.026	0.056	0.127
1,2-Dichloroethane	0.3	0.007	0.011	0.019
Vinyl Chloride	0.019	0.0006	0.0009	0.0014
1,2,4-Trimethylbenzene	0.075	1.8	4.3	9.7
1,3,5-Trimethylbenzene	0.047	NR	NR	NR
Semi-Volatile Organic Compounds				
Acenaphthene	3.2	230	540	1,170
Acenaphthylene	4.2	180	440	970
Anthracene	0.021	2,400	5,500	10,900
Benzo(a)anthracene	0.0038	7	11	13
Benzo(b)fluoranthene	0.002	2.6	3.3	3.7
Benzo(g,h,i)perylene	0.00026	310	340	350
Benzo(k)fluoranthene	0.0008	77	92	100
Chrysene	0.002	15	22	27
Dibenzo(a,h)anthracene	0.0006	0.24	0.28	0.30
Fluoranthene	0.23	280	560	900
Fluorene	1.9	170	410	880
Indeno(1,2,3-cd)pyrene	0.0002	27	36	41
Phenanthrene	0.53	100	220	440
Pyrene	0.13	620	1,240	2,040
Benzo(a)pyrene	0.0038	5	5	5
Naphthalene	19	13	30	71
Phenol	-	120	210	390
Total Petroleum Hydrocarbons				
Aliphatic hydrocarbons EC_5-EC_6	10	42	78	160
Aliphatic hydrocarbons >EC_6-EC_8	5.4	100	230	530
Aliphatic hydrocarbons >EC_8-EC_{10}	0.23	27	65	154
Aliphatic hydrocarbons >EC_{10}-EC_{12}	0.034	130 (48)	320 (118)	750 (283)
Aliphatic hydrocarbons >EC_{12}-EC_{16}	0.00076	1,000 (24)	2,200 (59)	3,500 (142)
Aliphatic hydrocarbons >EC_{16}-EC_{35}	-	53,000 (8)	70,000 (21)	79,000
Aliphatic hydrocarbons >EC_{35}-EC_{44}	-	53,000 (8)	70,000 (21)	79,000
Aromatic hydrocarbons >EC_8-EC_9 (styrene)	7.4	11	25	56
Aromatic hydrocarbons >EC_9-EC_{10}	7.4	34	83	189
Aromatic hydrocarbons >EC_{10}-EC_{12}	25	74	174	367
Aromatic hydrocarbons >EC_{12}-EC_{16}	5.8	100	300	600
Aromatic hydrocarbons >EC_{16}-EC_{21}	-	200	500	800
Aromatic hydrocarbons >EC_{21}-EC_{35}	-	900	1,100	1,200
Aromatic hydrocarbons >EC_{35}-EC_{44}	-	900	1,100	1,200
Minerals				
Asbestos	-	No asbestos detected with ID or <0.001% dry weight[1]		

Notes:

'-' Generic assessment criteria not calculated owing to low volatility of substance and therefore no pathway, or an absence of toxicological data.

NR - SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used

EC - equivalent carbon. GrAC - groundwater assessment criteria. SAC - soil assessment criteria.

[1] LOD for weight of asbestos per unit weight of soil calculated on a dry weight basis using PLM, handpicking and gravimetry.

The SAC for organic compounds are dependent on Soil Organic Matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58. 1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.

SAC for TPH fractions, polycyclic aromatic hydrocarbons, MTBE, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway, section 10.1.1, SR3.

(VALUE IN BRACKETS) The SAC has been set as the model calculated SAC with the saturation limit shown in brackets.
RSK has adopted an approach for petroleum hydrocarbons in accordance with LQM/CIEH whereby the concentration modelled for each petroleum hydrocarbon fraction has been tabulated as the SAC with the corresponding solubility or vapour saturation limits given in brackets.

(VALUE IN BRACKETS) For consistency where the GrAC exceeds the solubility limit, GrAC has been set at the solubility limit. The GrAC is conservative since concentrations of the chemical are very unlikely to be at sufficient concentration to result in an exceedance of the health criteria value at the point of exposure (i.e. indoor air) provided free-phase product is absent.

APPENDIX M
COMPARISON OF SOIL LABORTORY DATA TO HUMAN HEALTH GAC

301645 - Darton - Human Health Risk Assessment Soil Results Summary Table and Direct Comparison to RSK GAC for residential with plant uptake end use scenario

Sample Identity		Residential with Plant Uptake (2.5% SOM)	TP02	TP03	TP03	TP05	TP07	TP07	TP09	TP12	TP12	TP13	TP13	TP14	TP14	TP16	TP16
Depth		SGV/GACs	0.00 - 0.35	0.80	1.60	0.60 - 1.00	0.30 - 0.50	0.80 - 1.00	0.20 - 0.0	0.00 - 0.60	1.60	0.00 - 0.25	0.30 - 0.50	1.50 - 1.80	2.50	1.10 - 1.40	1.80 - 2.00
Strata			MG	PMCM	PMCM	PMCM	MG	PMCM	PossibleMG	MG	PMCM	MG	MG	MG	MG	MG	PMCM
Determinants	**Units**																
Visual Fibre Screen							NAD					NAD		NAD		NAD	
pH	pH		7.19	5.25	5.01		8.66			7.66	6.47	6.29	6.57	7.55	7.39	7.33	6.22
Sulphate BRE (water sol 2:1)	g/l		0.09	0.033	0.036		0.03			0.012	0.098	0.03	0.05	0.53	0.298	1.43	1.12
Cyanide (free)	mg/kg	3.8															
Phenols - Total by HPLC	mg/kg	210															
Loss on ignition (550°C)[1]	% w/w	10%															
Total Organic Carbon	% w/w		6.87				2.6					9.35	7.96	3.58		1.06	
Metals																	
Arsenic	mg/kg	37	20			3	7	3	16	13		47	45	16		34	
Boron (water soluble)	mg/kg																
Cadmium	mg/kg	30	1.6			1.9	0.9	1	1.5	2		1.8	2.1	1.4		2.8	
Copper	mg/kg	2500	35			21	20	22	34	56		104	133	38		91	
Chromium	mg/kg	910	23			18	9	19	19	26		21	24	17		23	
Chromium (hexavalent)	mg/kg	21															
lead (C4SL)	mg/kg	200	55			15	74	14	88	62		111	141	48		382	
Mercury	mg/kg	39	0.21			<0.17	0.35	0.23	<0.17	0.42		0.38	0.6	<0.17		<0.17	
Nickel	mg/kg	180	26			38	12	25	21	26		31	32	22		50	
Selenium	mg/kg	258	3			<1	<1	<1	<1	1		2	2	<1		<1	
Zinc	mg/kg	3900	87			72	80	55	65	647		143	124	81		606	
Total Petroleum Hydrocarbons Criteria Working Group (TPHCWG)																	
Ali >C5-C6	mg/kg	78	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
Ali >C6-C8	mg/kg	230	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
Ali >C8-C10	mg/kg	65	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
Ali >C10-C12	mg/kg	320	<0.1				<0.1					<0.1	<0.1	<0.1		<0.1	
Ali >C12-C16	mg/kg	2200	<0.1				<0.1					<0.1	<0.1	<0.1		<0.1	
Ali >C16-C21	mg/kg	Assess as sum	<0.1				<0.1					<0.1	<0.1	<0.1		<0.1	
Ali >C21-C35	mg/kg	below	<0.1				<0.1					<0.1	<0.1	<0.1		<0.1	
Ali >C16-C35	mg/kg	70,000	<0.1				<0.1					<0.1	<0.1	<0.1		<0.1	
Total Aliphatics	mg/kg		<0.1				<0.1					<0.1	<0.1	<0.1		<0.1	
Aro >C5-C7	mg/kg	0.41	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
Aro >C7-C8	mg/kg	300	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
Aro >C8-C9	mg/kg	25	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
Aro >C9-C10	mg/kg	83	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
Aro >C10-C12	mg/kg	174	<0.1				<0.1					<0.1	<0.1	<0.1		<0.1	
Aro >C12-C16	mg/kg	300	<0.1				<0.1					<0.1	<0.1	<0.1		<0.1	
Aro >C16-C21	mg/kg	500	1.1				1.5					1.1	1	<0.1		<0.1	
Aro >C21-C35	mg/kg	1100	1.5				1.4					1.4	0.5	<0.1		<0.1	
Total Aromatics	mg/kg		2.8				2.9					2.4	1.5	<0.1		<0.1	
TPH (Ali & Aro)	mg/kg		2.8				2.9					2.4	1.5	<0.1		<0.1	
BTEX - Benzene	mg/kg	0.41	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
BTEX - Toluene	mg/kg	300	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
BTEX - Ethyl Benzene	mg/kg	110	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
BTEX - m & p Xylene	mg/kg	133	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
BTEX - o Xylene	mg/kg	143	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
MTBE	mg/kg	250	<0.01				<0.01					<0.01	<0.01	<0.01		<0.01	
PAHs (Polycyclic Aromatic Hydrocarbons)																	
Acenapthene	mg/kg	540	<0.01			<0.01	0.02	<0.01	0.04	0.11		0.02	0.02	<0.01		<0.01	
Acenapthylene	mg/kg	440	0.01			<0.01	0.02	<0.01	0.07	0.02		0.03	0.02	<0.01		<0.01	
Anthracene	mg/kg	5500	0.06			<0.02	0.11	<0.02	0.58	0.44		0.13	0.16	0.03		<0.02	
Benzo(a)anthracene	mg/kg	11	0.39			<0.04	0.61	<0.04	1.91	1.48		0.67	0.55	0.09		<0.04	
Benzo(a)pyrene	mg/kg	5	0.35			<0.04	0.67	<0.04	1.5	1.28		0.68	0.47	0.09		<0.04	
Benzo(b)fluoranthene	mg/kg	3.3	0.43			<0.05	0.75	<0.05	1.82	1.48		0.83	0.54	0.11		<0.05	
Benzo(ghi)perylene	mg/kg	340	0.2			<0.05	0.39	<0.05	0.71	0.67		0.42	0.27	0.06		<0.05	
Benzo(k)fluoranthene	mg/kg	92	0.21			<0.07	0.32	<0.07	0.79	0.67		0.4	0.24	<0.07		<0.07	
Chrysene	mg/kg	22	0.44			<0.06	0.67	<0.06	1.97	1.46		0.75	0.53	0.1		<0.06	
Dibenzo(ah)anthracene	mg/kg	0.28	0.05			<0.04	0.09	<0.04	0.21	0.16		0.11	0.07	<0.04		<0.04	
Fluoranthene	mg/kg	560	0.66			<0.08	0.96	<0.08	4.07	3.23		1.18	0.96	0.17		<0.08	
Fluorene	mg/kg	410	<0.01			<0.01	0.02	<0.01	0.1	0.09		0.03	0.03	<0.01		<0.01	
Indeno(123-cd)pyrene	mg/kg	36	0.25			<0.03	0.46	<0.03	0.95	0.86		0.54	0.33	0.07		<0.03	
Napthalene	mg/kg	30	<0.03			<0.03	0.04	<0.03	0.07	0.07		0.06	<0.03	<0.03		<0.03	
Phenanthrene	mg/kg	220	0.26			<0.03	0.43	<0.03	2.34	1.37		0.41	0.45	0.06		<0.03	
Pyrene	mg/kg	1240	0.56			<0.07	0.94	<0.07	3.44	2.82		1.03	0.82	0.15		<0.07	
Total PAH	mg/kg		3.89			<0.08	6.5	<0.08	20.6	16.2		7.26	5.49	0.93		<0.08	

= Exceedence of GAC for a residential (with plant uptake)

All GACs calculated by RSK or taken from EIC/AGS/CLAIRE Generic Assessment Criteria; and LQM/CIEH Generic Assessment Criteria

301645 - Darton - Human Health Risk Assessment Soil Results Summary Table and Direct Comparison to RSK GAC for residential with plant uptake end use scenario

Sample Identity		Residential with Plant Uptake (2.5% SOM)	TP17	TP18	TP20	TP21	TP22	TP22	TP23
Depth		SGV/GACs	0.00 - 0.30	0.00 - 0.30	0.00 - 0.40	0.00 - 0.50	0.70	1.40	0.00 - 0.30
Strata			MG	Topsoil	MG	MG	PMCM	PMCM	MG
Determinants	**Units**								
Visual Fibre Screen			NAD		NAD	NAD			NAD
pH	pH		5.1		6.43	6.65	7.19	6.97	6.64
Sulphate BRE (water sol 2:1)	g/l		0.05		0.08	0.13	0.98	0.23	0.03
Cyanide (free)	mg/kg	3.8							
Phenols - Total by HPLC	mg/kg	210							
Loss on ignition (550°C)[1]	% w/w	10%							
Total Organic Carbon	% w/w		3.49		0.31	4.58			4.27
Metals									
Arsenic	mg/kg	37	13	15	5	12			11
Boron (water soluble)	mg/kg								
Cadmium	mg/kg	30	1.6	1.5	1.7	<0.5			0.6
Copper	mg/kg	2500	26	34	13	24			14
Chromium	mg/kg	910	20	20	22	21			16
Chromium (hexavalent)	mg/kg	21							
lead (C4SL)	mg/kg	200	40	77	19	152			40
Mercury	mg/kg	39	<0.17	0.28	0.22	<0.17			<0.17
Nickel	mg/kg	180	21	20	18	18			17
Selenium	mg/kg	258	2	2	3	<1			2
Zinc	mg/kg	3900	98	141	55	57			73
Total Petroleum Hydrocarbons Criteria Working Group (TPHCWG)									
Ali >C5-C6	mg/kg	78	<0.01		<0.01	<0.05			0.1
Ali >C6-C8	mg/kg	230	<0.01		<0.01	<0.01			<0.01
Ali >C8-C10	mg/kg	65	<0.01		<0.01	<0.01			<0.01
Ali >C10-C12	mg/kg	320	<0.1		<0.1	<0.1			<0.1
Ali >C12-C16	mg/kg	2200	<0.1		<0.1	<0.1			<0.1
Ali >C16-C21	mg/kg	Assess as sum	<0.1		<0.1	<0.1			<0.1
Ali >C21-C35	mg/kg	below	<0.1		<0.1	<0.1			<0.1
Ali >C16-C35	mg/kg	70,000	<0.1		<0.1	<0.1			<0.1
Total Aliphatics	mg/kg		<0.1		<0.1	<0.1			<0.1
Aro >C5-C7	mg/kg	0.41	<0.01		<0.01	<0.01			<0.01
Aro >C7-C8	mg/kg	300	<0.01		<0.01	<0.01			<0.01
Aro >C8-C9	mg/kg	25	<0.01		<0.01	<0.01			<0.01
Aro >C9-C10	mg/kg	83	<0.01		<0.01	<0.01			<0.01
Aro >C10-C12	mg/kg	174	<0.1		<0.1	<0.1			<0.1
Aro >C12-C16	mg/kg	300	<0.1		<0.1	15.9			<0.1
Aro >C16-C21	mg/kg	500	<0.1		<0.1	222			<0.1
Aro >C21-C35	mg/kg	1100	<0.1		<0.1	137			<0.1
Total Aromatics	mg/kg		<0.1		<0.1	375			<0.1
TPH (Ali & Aro)	mg/kg		<0.1		<0.1	375			<0.1
BTEX - Benzene	mg/kg	0.41	<0.01		<0.01	<0.01			<0.01
BTEX - Toluene	mg/kg	300	<0.01		<0.01	<0.01			<0.01
BTEX - Ethyl Benzene	mg/kg	110	<0.01		<0.01	<0.01			<0.01
BTEX - m & p Xylene	mg/kg	133	<0.01		<0.01	<0.01			<0.01
BTEX - o Xylene	mg/kg	143	<0.01		<0.01	<0.01			<0.01
MTBE	mg/kg	250	<0.01		<0.01	<0.01			<0.01
PAHs (Polycyclic Aromatic Hydrocarbons)									
Acenapthene	mg/kg	540	<0.01	0.01	<0.01	3.92			<0.01
Acenapthylene	mg/kg	440	<0.01	<0.01	<0.01	2.09			<0.01
Anthracene	mg/kg	5500	<0.02	0.07	<0.02	30.2			0.03
Benzo(a)anthracene	mg/kg	11	<0.04	0.33	<0.04	42.1			0.14
Benzo(a)pyrene	mg/kg	5	<0.04	0.26	<0.04	35.6			0.12
Benzo(b)fluoranthene	mg/kg	3.3	<0.05	0.31	<0.05	40.8			0.16
Benzo(ghi)perylene	mg/kg	340	<0.05	0.16	<0.05	16.6			<0.05
Benzo(k)fluoranthene	mg/kg	92	<0.07	0.16	<0.07	23.1			<0.07
Chrysene	mg/kg	22	<0.06	0.34	<0.06	50.6			0.14
Dibenzo(ah)anthracene	mg/kg	0.28	<0.04	<0.04	<0.04	3.81			<0.04
Fluoranthene	mg/kg	560	<0.08	0.55	<0.08	197			0.22
Fluorene	mg/kg	410	<0.01	<0.01	<0.01	7.52			<0.01
Indeno(123-cd)pyrene	mg/kg	36	<0.03	0.2	<0.03	18.8			0.04
Napthalene	mg/kg	30	<0.03	<0.03	<0.03	0.41			<0.03
Phenanthrene	mg/kg	220	0.04	0.24	<0.03	81.6			0.11
Pyrene	mg/kg	1240	<0.07	0.46	<0.07	137			0.19
Total PAH	mg/kg		<0.08	3.06	<0.08	692			1.13

= Exceedence of GAC for a residential (with plant uptake)

All GACs calculated by RSK or taken from EIC/AGS/CLAIRE Generic Assessment Criter

APPENDIX N
GENERIC ASSESSMENT CRITERIA FOR PHYTOTOXIC EFFECTS

Several compounds can inhibit plant growth; hence it is important to have generic assessment criteria (GAC) to promote healthy plant growth. In the absence of other published GAC, the GAC have been obtained from legislation (UK and European) and guidance related to the use of sewage sludge on agricultural fields.

The Council of European Communities Sewage Sludge Directive (86/278/EEC) dated 1986, has been transposed into UK law by Statutory Instrument No. 1263, The Sludge (use in Agriculture) Regulations 1989 (Public Health England, Wales and Scotland), as ammended in 1990 and The Sludge (use in Agriculture) Regulations (Northern Ireland) SR No, 245, 1990. In addition the Department of Environment (DoE) produced a Code of Practice (CoP) (Updated 2nd Edition) in 2006 which provided guidance on the application of sewage sludge on agricultural land (however the status of this document is unclear as it is on the archive section of the Defra website).

The directive seeks to encourage the use of sewage sludge in agriculture and to regulate its use in such a way as to "***prevent harmful effects on soil, vegetation, animals and man".*** To this end, it prohibits the use of untreated sludge on agricultural land unless it is injected or incorporated into the soil. Treated sludge is defined as having undergone "biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its fermentability and the health hazards resulting from its use". To provide protection against potential health risks from residual pathogens, sludge must not be applied to soil in which fruit and vegetable crops are growing, or less than ten months before fruit and vegetable crops are to be harvested. Grazing animals must not be allowed access to grassland or forage land less than three weeks after the application of sludge.

The specified limits of concentrations of selected elements in soil are presented in Table 4 of the updated 2nd Edition of the DoE Code of Practice and are designed to protect plant growth. It is noted that these values are more stringent than the values set in current UK regulations. However since they were ammended following recommendations from the Independent Scientific Committee in 1993. (MAFF/DOE 1993). The GAC are presented in Table 1.

Table 1: Generic assessment criteria

Determinant	Generic assessment criteria (mg/kg)			
	pH 5.0 < 5.5	pH 5.5 < 6.0	pH 6.0 < 7.0	pH >7.0
Zinc	200	200	200	300
Copper	80	100	135	200
Nickel	50	60	75	110
Lead	300	300	300	300
Cadmium	3	3	3	3
Mercury	1	1	1	1
Note: Only compounds with assessment criteria documented within the Directive 86/278/EEC have been included, although criteria for 5 additional compounds have been presented within the 2006 CoP.				

APPENDIX O
GENERIC ASSESSMENT CRITERIA FOR POTABLE WATER SUPPLY PIPES

A range of pipe materials is available and careful selection, design and installation is required to ensure that water supply pipes are satisfactorily installed and meet the requirements of the Water Supply (Water Fittings) Regulations 1999 in England and Wales, the Byelaws 2000 in Scotland and the Northern Ireland Water Regulations. The regulations include a requirement to use only suitable materials when laying water pipes and laying water pipes without protection is not permitted at contaminated sites. The water supply company has a statutory duty to enforce the regulations.

Contaminants in the ground can pose a risk to human health by permeating potable water supply pipes. To fulfil their statutory obligation, UK water supply companies require robust evidence from developers to demonstrate either that the ground in which new plastic supply pipes will be laid is free from specific contaminants, or that the proposed remedial strategy will mitigate any existing risk. If these requirements cannot be demonstrated to the satisfaction of the relevant water company, it becomes necessary to specify an alternative pipe material on the whole development or in specific zones.

In 2010, UK Water Industry Research (UKWIR) published *Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites* (Report Ref. No. 10/WM/03/21). This report reviewed previously published industry guidelines and threshold concentrations adopted by individual water supply companies.

The focus of the UKWIR research project was to develop clear and concise procedures, which provide consistency in the pipe selection decision process. It was intended to provide guidance that can be used to ensure compliance with current regulations and to prevent water supply pipe failing prematurely due to the presence of contamination.

The report concluded that in most circumstances only organic contaminants pose a potential risk to plastic pipe materials and Table 3.1 of the report provides threshold concentrations for polyethylene (PE) and polyvinyl chloride (PVC) pipes for the organic contaminants of concern. The report also makes recommendations for the procedures to be adopted in the design of site investigations and sampling strategies, and the assessment of data, to ensure that the ground through which water supply pipes will be laid is adequately characterised.

Risks to water supply pipes have therefore been assessed against the threshold concentrations for PE and PVC pipe specified in Table 3.1 of Report 10/WM/03/21, which have been adopted as the GAC for this linkage and are reproduced in Table A3 below.

Since water supply pipes are typically laid at a minimum depth of 0.75m below finished ground levels, sample results from depths between 0.5m and 1.5m below finished level are generally considered suitable for assessing risks to water supply. Samples outside these depths can be

used, providing the stratum is the same as that in which water supply pipes are likely to be located. The report specifies that sampling should characterise the ground conditions to a minimum of 0.5m below the proposed depth of the pipe.

It should be noted that the assessment provided in this report is a guide and the method of assessment and recommendations should be checked with the relevant water supply company.

Table A3: Generic assessment criteria for water supply pipes

		Pipe material	
		GAC (mg/kg)	
	Parameter group	**PE**	**PVC**
1	Extended VOC suite by purge and trap or head space and GC-MS with TIC (Not including compounds within group 1a)	0.5	0.125
1a	• BTEX + MTBE	0.1	0.03
2	SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C_5–C_{10}) (Not including compounds within group 2e and 2f)	2	1.4
2e	• Phenols	2	0.4
2f	• Cresols and chlorinated phenols	2	0.04
3	Mineral oil C_{11}–C_{20}	10	Suitable
4	Mineral oil C_{21}–C_{40}	500	Suitable
5	Corrosive (conductivity, redox and pH)	Suitable	Suitable
Specific suite identified as relevant following site investigation			
2a	Ethers	0.5	1
2b	Nitrobenzene	0.5	0.4
2c	Ketones	0.5	0.02
2d	Aldehydes	0.5	0.02
6	Amines	Not suitable	Suitable
Notes: where indicated as ‘suitable’, the material is considered resistant to permeation or degradation and no threshold concentration has been specified by UKWIR.			

APPENDIX P
GROUND GAS RISK ASSESSMENT SHEETS

Generic NHBC Traffic Lights Ground Gas Risk Assessment

Job No.:	301645
Client:	Jones Homes (Yorkshire) Limited
Site:	Land off Bloomhouse Lane, Darton

For low-rise residential developments with a clear ventilated sub-floor void ONLY

Traffic Light	Methane		Carbon Dioxide	
	TMV (%v/v)	GSV (l/hr)	TMV (%v/v)	GSV (l/hr)
Green	1	**0.16**	5	**0.78**
Amber 1	5	**0.63**	10	**1.56**
Amber 2	20	**1.56**	30	**3.13**
Red				

From NHBC (2007, Edition No.: 04) "Guidance On Evaluation Of Development Proposals On Sites Where Methane And Carbon Dioxide Are Present", Boyle & Witherington

KEY:
TMV Typical Maximum Value
GSV Gas Screening Value

GSV can be calculated on a site-specific basis

GSV within Green Traffic Light
GSV within Amber 1 Traffic Light
GSV within Amber 2 Traffic Light
GSV within Red Traffic Light / TMV exceeded

Oxygen concentration ≤10%v/v
Total ground gas concentrations >100%v/v

BH NO.	DATE	Water Level	CH4 I %v/v	CH4 SS %v/v	CO2 I %v/v	CO2 SS %v/v	O2 I %v/v	O2 SS %v/v	Flow l/hr	Baro mbar	BH Press mbar	I SUM %v/v	SS SUM %v/v	GSV CH4	GSV CO2
BH01	22/02/2016	8.400	<0.1	<0.1	<0.1	<0.1	20.8	20.9	**2.4**	996	996	20.8	20.9	**0.00**	**0.00**
	16/03/2016	8.500	<0.1	<0.1	<0.1	<0.1	21.1	21.5	**0.3**	1018	1018	21.1	21.5	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
BH02	22/02/2016	-	<0.1	<0.1	<0.1	0.1	21.5	21.5	**0.1**	997	997	21.5	21.6	**0.00**	**0.00**
	16/03/2016	8.050	<0.1	<0.1	<0.1	1.9	20.7	18.7	**0.2**	1018	1018	20.7	20.6	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
BH03A	22/02/2016	3.740	<0.1	<0.1	<0.1	<0.1	21.6	21.8	**0**	996	996	21.6	21.8	**0.00**	**0.00**
	16/03/2016	3.600	<0.1	<0.1	<0.1	<0.1	21.1	21.4	**0.2**	1018	1018	21.1	21.4	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
BH04	22/02/2016	1.880	<0.1	<0.1	<0.1	1.4	21.7	20.9	**0**	995	995	21.7	22.3	**0.00**	**0.00**
	16/03/2016	1.480	<0.1	<0.1	<0.1	1.2	21.1	20.3	**0**	1018	1018	21.1	21.5	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
BH05	22/02/2016	-	<0.1	<0.1	<0.1	0.1	21.5	21.5	**0**	997	997	21.5	21.6	**0.00**	**0.00**
	16/03/2016	0.880	<0.1	<0.1	<0.1	<0.1	21.1	21.5	**0**	1020	1020	21.1	21.5	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
BH06	22/02/2016	-	<0.1	<0.1	<0.1	0.2	21.9	21.3	**0.3**	997	997	21.9	21.5	**0.00**	**0.00**
	16/03/2016	Dry	<0.1	<0.1	0.1	<0.1	20.8	21.5	**0**	1021	1021	20.9	21.5	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**
												0.0	0.0	**0.00**	**0.00**

WORST-CASE VALUES PER BOREHOLE

			Maximum CH4		Maximum CO2		Minimum O2		Max Flow	Not Applicable		Maximum Total		Maximum GSVs	
BH01			<0.1	<0.1	<0.1	<0.1	20.8	20.9	2.4			20.8	20.9	**0.00**	**0.00**
BH02			<0.1	<0.1	<0.1	1.9	20.7	18.7	0.2			20.7	20.6	**0.00**	**0.00**
BH03A			<0.1	<0.1	<0.1	<0.1	21.1	21.4	0.2			21.1	21.4	**0.00**	**0.00**
BH04			<0.1	<0.1	<0.1	1.4	21.1	20.3	<0.1			21.1	21.7	**0.00**	**0.00**
BH05			<0.1	<0.1	<0.1	0.1	21.1	21.5	<0.1			21.1	21.6	**0.00**	**0.00**
BH06			<0.1	<0.1	0.1	0.2	20.8	21.3	0.3			20.9	21.5	**0.00**	**0.00**
Total across all boreholes			<0.1	<0.1	0.1	1.9	20.7	18.7	2.4			20.8	20.6	**0.00**	**0.05**

Revised Wilson and Card Classification Ground Gas Risk Assessment

Job No.:	301645
Client:	Jones Homes (Yorkshire) Limited
Site:	Land off Bloomhouse Lane, Darton

For low-rise residential developments without a clear ventilated sub-floor void, flats and commercial / industrial sites

Characteristic Situation	Risk	GSV
1	Very Low	0.07
2	Low	0.7
3	Moderate	3.5
4	Moderate to High	15
5	High	70
6	Very High	>70

From CIRIA Report 659 (2006) "Assessing Risks Posed By Hazardous Ground Gases To Buildings", Wilson et al.

KEY:

GSV Gas Screening Value

GSV cannot be calculated on a site-specific basis

GSV indicates very low risk

GSV indicates low to moderate risk

GSV indicates moderate or greater risk; Concentrations of CH4 ≥20%V/V; CO2 ≥30%V/V

Oxygen concentration ≤10%v/v

Total ground gas concentrations >100%v/v

BH NO.	DATE	CH4 I %v/v	CH4 SS %v/v	CO2 I %v/v	CO2 SS %v/v	O2 I %v/v	O2 SS %v/v	Flow l/hr	Baro mbar	BH Press mbar	I SUM %v/v	SS SUM %v/v	GSV CH4	GSV CO2	CS No.
BH1	22/02/2016	<0.1	<0.1	<0.1	<0.1	20.8	20.9	2.4	996	996	20.8	20.9	0.00	0.00	CS1
	16/03/2016	<0.1	<0.1	<0.1	<0.1	21.1	21.5	0.3	1018	1018	21.1	21.5	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
BH2	22/02/2016	<0.1	<0.1	<0.1	0.1	21.5	21.5	0.1	997	997	21.5	21.6	0.00	0.00	CS1
	16/03/2016	<0.1	<0.1	<0.1	1.9	20.7	18.7	0.2	1018	1018	20.7	20.6	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
BH3A	22/02/2016	<0.1	<0.1	<0.1	<0.1	21.6	21.8	0	996	996	21.6	21.8	0.00	0.00	CS1
	16/03/2016	<0.1	<0.1	<0.1	<0.1	21.1	21.4	0.2	1018	1018	21.1	21.4	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
BH4	22/02/2016	<0.1	<0.1	<0.1	1.4	21.7	20.9	0	995	995	21.7	22.3	0.00	0.00	CS1
	16/03/2016	<0.1	<0.1	<0.1	1.2	21.1	20.3	0	1018	1018	21.1	21.5	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
BH5	22/02/2016	<0.1	<0.1	<0.1	0.1	21.5	21.5	0	997	997	21.5	21.6	0.00	0.00	CS1
	16/03/2016	<0.1	<0.1	<0.1	<0.1	21.1	21.5	0	1020	1020	21.1	21.5	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
BH6	22/02/2016	<0.1	<0.1	<0.1	0.2	21.9	21.3	0.3	997	997	21.9	21.5	0.00	0.00	CS1
	16/03/2016	<0.1	<0.1	0.1	<0.1	20.8	21.5	0	1021	1021	20.9	21.5	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1
											0.0	0.0	0.00	0.00	CS1

WORST-CASE VALUES PER BOREHOLE

		Maximum CH4		Maximum CO2		Minimum O2		Max Flow	Not Applicable		Maximum Total		Maximum GSVs		CS No
BH1		<0.1	<0.1	<0.1	<0.1	20.8	20.9	2.4			20.8	20.9	0.00	0.00	CS1
BH2		<0.1	<0.1	<0.1	1.9	20.7	18.7	0.2			20.7	20.6	0.00	0.00	CS1
BH3		<0.1	<0.1	<0.1	<0.1	21.1	21.4	0.2			21.1	21.4	0.00	0.00	CS1
BH4		<0.1	<0.1	<0.1	1.4	21.1	20.3	<0.1			21.1	21.7	0.00	0.00	CS1
BH5		<0.1	<0.1	<0.1	0.1	21.1	21.5	<0.1			21.1	21.6	0.00	0.00	CS1
BH6		<0.1	<0.1	0.1	0.2	20.8	21.3	0.3			20.9	21.5	0.00	0.00	CS1
Total across all boreholes		<0.1	<0.1	0.1	1.9	20.7	18.7	2.4			20.8	20.6	0.00	0.05	CS1

APPENDIX Q
CERTIFICATES OF GEOTECHNICAL ANALYSIS

STRUCTURAL SOILS LTD

TEST REPORT

Report No. 781975 R1

Date 02-March-2016 Contract Darton

Client RSK Environment Ltd
Address Spring Lodge
172 Chester Road
Helsby
Cheshire WA6 0AR

For the Attention of Josh Duckering

Samples submitted by client	15/02/2016	Client Reference	301645
Testing Started	16/02/2016	Client Order No.	
Testing Completed	02/03/2016	Instruction Type	Written

Ukas Accredited Tests Underatken

Moisture Content (oven drying method) BS1377:Part 2:1990,clause 3.2 (superseded)**
Liquid Limit (one point method) BS1377:Part 2:1990,clause 4.4
Plastic Limit BS1377:Part 2:1990,clause 5.3
Plasticity Index Derivation BS1377:Part 2:1990,clause 5.4

* Tests were undertaken on sampes 'as received' unless otherwise stated
** This clause of BS1377 no lnoger most up-to-date due to publication of ISO 17892

Please Note: Remaining samples will be retained for a period of one month from today and will then be disposed of

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with clauses 3.2,4.3,4.4,5.3,5.4,7.2,8.2,8.3 of BS1377:Part 2:1990

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
TP01	2	D	0.70	24	57	26	31	100	Orange grey mottled CLAY
TP04	3	D	1.60	27	61	28	33	99	Grey brown slightly sandy slightly gravelly CLAY
TP08	2	SPTLS	0.80	12	38	21	17	82	Grey bown weathered MUDSTONE
TP09	1	D	1.60	19	36	21	15	79	Orange grey brown CLAY
TP11	1	D	0.30	28	49	27	22	85	Brown slightly sandy slightly gravelly CLAY
TP14	3	D	3.60	24	45	23	22	90	Brown slightly sandy slightly gravelly CLAY
TP17	2	D	1.40	35	51	26	25	94	Orange grey slightly sandy slightly gravelly CLAY
TP20	2	D	1.00	13	33	20	13	91	Orange grey slightly sandy slightly gravelly CLAY

STRUCTURAL SOILS LTD

Contract:

Darton

Contract Ref:

781975

AGS

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with clauses 3.2,4.3,4.4,5.3,5.4,7.2,8.2,8.3 of BS1377:Part 2:1990

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
TP23	2	D	0.90	40	61	36	25	69	Dark brown slightly sandy slightly gravelly CLAY
TP24	1	D	0.50	17	38	21	17	94	Orange grey mottled slightly gravelly CLAY

STRUCTURAL SOILS LTD

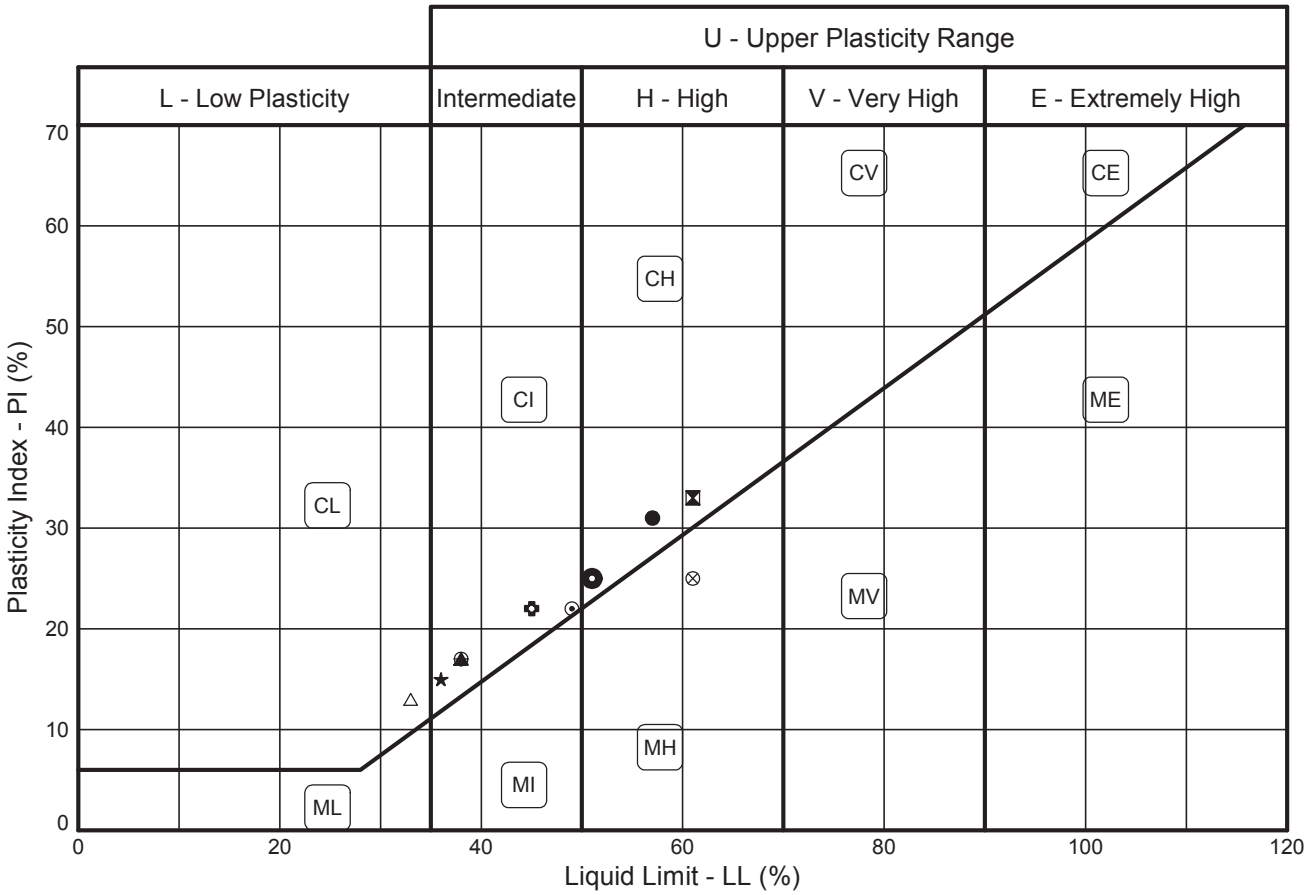
Contract: Darton

Contract Ref: 781975

AGS

PLASTICITY CHART - PI Vs LL

In accordance with clause 42.3 of BS5930:1999
Testing in accordance with BS1377-2:1990



Sample Identification				BS Test Method #	Preparation Method +	MC	LL	PL	PI	<425um	Lab location	
	Exploratory Position ID	Sample	Depth (m)			%	%	%	%	%		
●	TP01	2D	0.70	3.2/4.4/5.3/5.4	4.2.3	24	57	26	31	100	C	
⊠	TP04	3D	1.60	3.2/4.4/5.3/5.4	4.2.4	27	61	28	33	99	C	
▲	TP08	2SPTLS	0.80	3.2/4.4/5.3/5.4	4.2.4	12	38	21	17	82	C	
★	TP09	1D	1.60	3.2/4.4/5.3/5.4	4.2.4	19	36	21	15	79	C	
⊙	TP11	1D	0.30	3.2/4.4/5.3/5.4	4.2.4	28	49	27	22	85	C	
✿	TP14	3D	3.60	3.2/4.4/5.3/5.4	4.2.4	24	45	23	22	90	C	
◉	TP17	2D	1.40	3.2/4.4/5.3/5.4	4.2.4	35	51	26	25	94	C	
△	TP20	2D	1.00	3.2/4.4/5.3/5.4	4.2.4	13	33	20	13	91	C	
⊗	TP23	2D	0.90	3.2/4.4/5.3/5.4	4.2.4	40	61	36	25	69	C	
⊕	TP24	1D	0.50	3.2/4.4/5.3/5.4	4.2.4	17	38	21	17	94	C	

Tested in accordance with the following clauses of BS1377-2:1990.

3.2 - Moisture Content
4.3 - Cone Penetrometer Method
4.4 - One Point Cone Penetrometer Method
4.6 - One Point Casagrande Method
5.3 - Plastic Limit Method
5.4 - Plasticity Index

+ Tested in accordance with the following clauses of BS1377-2:1990.

4.2.3 - Natural State
4.2.4 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT)

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
M. Fisher	MAUREEN FISHER	02/03/16

Contract	Contract Ref:
Darton	781975

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_007 PrjVersion: v8_06 - Core+Geotech Lab-Castleford - Dev 025 | Graph L - ALINE STANDARD - A4P | 781975 - DARTON.GPJ - v8_06.
Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 02/03/16 - 13:38 | MF1 |

TESTING VERIFICATION CERTIFICATE

1774

The test results included in this report are certified as:-

ISSUE STATUS: **FINAL**

In accordance with the Structural Soils Ltd Laboratory Quality Management System, results sheets and summaries of results issued by the laboratory are checked by an approved signatory. The integrity of the test data and results are ensured by control of the computer system employed by the laboratory as part of the Software Verification Program as detailed in the Laboratory Quality Manual.

This testing verification certificate covers all testing compiled on or before the following datetime: **02/03/2016 16:08:19**.

Testing reported after this date is not covered by this Verification Certificate.



Approved Signatory
Mark Athorne (Laboratory Quality Manager)

(Head Office)
Bristol Laboratory
Unit 1A, Princess Street
Bedminster
Bristol
BS3 4AG

Castleford Laboratory
The Potteries, Pottery Street
Castleford
West Yorkshire
WF10 1NJ

Hemel Laboratory
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

STRUCTURAL SOILS LTD	Contract: **Darton**	Job No: **781975**

GINT_LIBRARY_V8_06.GLB LibVersion: v8_06_007 PrjVersion: v8_06 - Core+Geotech Lab-Castleford - Dev 025 | GrfcText L - LAB VERIFICATION REPORT - V01 - A4P | 781975 - DARTON.GPJ - v8_06.
Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 02/03/16 - 16:08 | MAA1 |

APPENDIX R
HASWASTE ASSESSMENT SHEET

envirolab

Haswaste, developed by Dr. Iain Haslock.

301645 Bloomhouse Lane, Darton

TP/WS/BH		TP02	TP05	TP07	TP07	TP09	TP12	TP13	TP13	TP14
Depth (m)		0.00	0.60	0.30	0.80	0.20	0.00	0.00	0.30	1.50
Envirolab reference		16/00914/2	16/00914/5	16/00914/6	16/00914/7	16/00914/8	16/00914/9	16/00914/11	16/00914/12	16/00914/13
% Moisture	%									
pH (soil)		7.19		8.66			7.66	6.29	6.57	7.55
pH (leachate)										
Arsenic	mg/kg	20	3	7	3	16	13	47	45	16
Cadmium	mg/kg	1.6	1.9	0.9	1.0	1.5	2.0	1.8	2.1	1.4
Copper	mg/kg	35	21	20	22	34	56	104	133	38
CrVI or Chromium	mg/kg	23	18	9	19	19	26	21	24	17
Lead	mg/kg	55	15	74	14	88	62	111	141	48
Mercury	mg/kg	0.21	0.17	0.35	0.23	0.17	0.42	0.38	0.60	0.17
Nickel	mg/kg	26	38	12	25	21	26	31	32	22
Selenium	mg/kg	3	1	1	1	1	1	2	2	1
Zinc	mg/kg	87	72	80	55	65	647	143	124	81
Barium	mg/kg									
Beryllium	mg/kg									
Vanadium	mg/kg									
Cobalt	mg/kg									
Manganese	mg/kg									
Molybdenum	mg/kg									
Antimony	NEW v5.4di mg/kg									
Tin	NEW v5.4di mg/kg									
PAH (Input Total PAH **OR** individual PAH results)										
Acenaphthene	mg/kg	0.01	0.01	0.02	0.01	0.04	0.11	0.02	0.02	0.01
Acenaphthylene	mg/kg	0.01	0.01	0.02	0.01	0.07	0.02	0.03	0.02	<0.01
Anthracene	mg/kg	0.06	0.02	0.11	0.02	0.58	0.44	0.13	0.16	0.03
Benzo(a)anthracene	mg/kg	0.39	0.04	0.61	0.04	1.91	1.48	0.67	0.55	0.09
Benzo(a)pyrene	mg/kg	0.35	0.04	0.67	0.04	1.50	1.28	0.68	0.47	0.09
Benzo(b)fluoranthene	mg/kg	0.43	0.05	0.75	0.05	1.82	1.48	0.83	0.54	0.11
Benzo(ghi)perylene	mg/kg	0.20	0.05	0.39	0.05	0.71	0.67	0.42	0.27	0.06
Benzo(k)fluoranthene	mg/kg	0.21	0.07	0.32	0.07	0.79	0.67	0.40	0.24	0.07
Chrysene	mg/kg	0.44	0.06	0.67	0.06	1.97	1.46	0.75	0.53	0.10
Dibenzo(ah)anthracene	mg/kg	0.05	0.04	0.09	0.04	0.21	0.16	0.11	0.07	0.04
Fluoranthene	mg/kg	0.66	0.08	0.96	0.08	4.07	3.23	1.18	0.96	0.17
Fluorene	mg/kg	0.01	0.01	0.02	0.01	0.10	0.09	0.03	0.03	0.01
Indeno(123cd)pyrene	mg/kg	0.25	0.03	0.46	0.03	0.95	0.86	0.54	0.33	0.07
Naphthalene	mg/kg	0.03	0.03	0.04	0.03	0.07	0.07	0.06	0.03	0.03
Phenanthrene	mg/kg	0.26	0.03	0.43	0.03	2.34	1.37	0.41	0.45	0.06
Pyrene	mg/kg	0.56	0.07	0.94	0.07	3.44	2.82	1.03	0.82	0.15
Coronene	mg/kg									
Total PAHs (16 or 17)	mg/kg	3.89	0.08	6.50	0.08	20.60	16.20	7.26	5.49	0.93
TPH										
Petrol	mg/kg									
Diesel	mg/kg									
Lube Oil	mg/kg									
White Spirit / Kerosene	mg/kg									
Creosote	mg/kg									
Unknown TPH with ID	mg/kg									
Unknown TPHCWG	mg/kg	2.8		2.9				2.4	1.5	0.1
Total Sulphide	mg/kg									
Complex Cyanide	mg/kg									
Free (or Total) Cyanide	mg/kg									
Thiocyanate	mg/kg									
Elemental/Free Sulphur	mg/kg									
Phenols Input Total Phenols HPLC **OR** individual Phenol results.										
Phenol	mg/kg									
Cresols	mg/kg									
Xylenols	mg/kg									
Resourcinol	mg/kg									
Phenols Total by HPLC	mg/kg									
BTEX Input Total BTEX **OR** individual BTEX results.										
Benzene	mg/kg	0.01		0.01				0.01	0.01	0.01
Toluene	mg/kg	0.01		0.01				0.01	0.01	0.01
Ethylbenzene	mg/kg	0.01		0.01				0.01	0.01	0.01
Xylenes	mg/kg	0.01		0.01				0.01	0.01	0.01
Total BTEX	mg/kg	0.01		0.01				0.01	0.01	0.01
PCBs (POPs)										
PCBs Total (eg EC7/WHO12)	mg/kg									
PBBs (POPs)										
Hexabromobiphenyl (Total or PBB153; 2,2',4,4',5,5'- if only available)	mg/kg									
POPs Dioxins and Furans Input Total Dioxins and Furans **OR** individual Dioxin and Furan results.										
2,3,7,8-TeCDD	mg/kg									
1,2,3,7,8-PeCDD	mg/kg									
1,2,3,4,7,8-HxCDD	mg/kg									
1,2,3,6,7,8-HxCDD	mg/kg									
1,2,3,7,8,9-HxCDD	mg/kg									
1,2,3,4,6,7,8-HpCDD	mg/kg									
OCDD	mg/kg									
2,3,7,8-TeCDF	mg/kg									
1,2,3,7,8-PeCDF	mg/kg									
2,3,4,7,8-PeCDF	mg/kg									
1,2,3,4,7,8-HxCDF	mg/kg									
1,2,3,6,7,8-HxCDF	mg/kg									
2,3,4,6,7,8-HxCDF	mg/kg									
1,2,3,7,8,9-HxCDF	mg/kg									
1,2,3,4,6,7,8-HpCDF	mg/kg									
1,2,3,4,7,8,9-HpCDF	mg/kg									
OCDF	mg/kg									
Total Dioxins and Furans	mg/kg									

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TP/WS/BH	TP02	TP05	TP07	TP07	TP09	TP12	TP13	TP13	TP14
Depth (m)	0.00	0.60	0.30	0.80	0.20	0.00	0.00	0.30	1.50
Envirolab reference	16/00914/2	16/00914/5	16/00914/6	16/00914/7	16/00914/8	16/00914/9	16/00914/11	16/00914/12	16/00914/13

Some Pesticides (POPs unless otherwise stated)

Aldrin		mg/kg								
α Hexachlorocyclohexane (alpha-HCH) *(leave empty if total HCH results used)*		mg/kg								
β Hexachlorocyclohexane (beta-HCH) *(leave empty if total HCH results used)*		mg/kg								
α Cis-Chlordane (alpha) ***OR*** *Total Chlordane*		mg/kg								
δ Hexachlorocyclohexane (delta-HCH) *(leave empty if total HCH results used)*	New v5.4di	mg/kg								
Dieldrin		mg/kg								
Endrin		mg/kg								
χ Hexachlorocyclohexane (gamma-HCH) (lindane) ***OR*** *Total HCH*		mg/kg								
Heptachlor		mg/kg								
Hexachlorobenzene		mg/kg								
o,p'-DDT *(leave empty if total DDT results used)*		mg/kg								
p,p'-DDT ***OR*** *Total DDT*		mg/kg								
χ Trans-Chlordane (gamma) *(leave empty if total Chlordane results used)*		mg/kg								
Chlordecone (kepone)		mg/kg								
Pentachlorobenzene		mg/kg								
Mirex		mg/kg								
Toxaphene (camphechlor)		mg/kg								
Asbestos in Soil	Thresholds									
Asbestos detected in Soil (enter Y or N)	Y				N				N	

Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7

Asbestos % Composition in Soil (Matrix Loose Fibres or Microscopic Identifiable Pieces only)	see "Carc HP7 % Asbestos in Soil (Fibres)" below	%								
Carcinogenic HP7 % Asbestos in Soil (fibres or micro pieces)	≥0.1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

If Asbestos in Soil above is "Y", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.

Asbestos Identifiable Pieces visible with the naked eye detected in the Soil (enter Y or N)	Y								

If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

Hazardous Property	Thresholds	Cut Off Value								
Corrosive HP8	≥5%	<1%	0.00264	0.00040	0.00092	0.00040	0.00211	0.00172	0.00620	0.00594	0.00211
Irritant HP4	≥10%	<1%	0.00264	0.00040	0.00092	0.00040	0.00211	0.00172	0.00620	0.00594	0.00211
Irritant HP4	≥20%	<1%	0.00969	0.01007	0.00549	0.00756	0.01079	0.01368	0.01891	0.02219	#VALUE!
Specifc Target Organ Toxicity HP5	≥1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Specifc Target Organ Toxicity HP5	≥20%		0.00039	0.00001	0.00065	0.00001	0.00206	0.00162	0.00073	0.00055	0.00009
Specifc Target Organ Toxicity HP5	≥1%		0.00525	0.00768	0.00242	0.00505	0.00424	0.00525	0.00626	0.00646	0.00444
Specifc Target Organ Toxicity HP5	≥10%		0.01088	0.00900	0.01000	0.00688	0.00880	0.08088	0.01788	0.01550	0.01013
Aspiration Toxicity HP5	≥10%		0.00029	0.00000	0.00030	0.00000	0.00000	0.00000	0.00025	0.00016	0.00002
Acute Toxicity HP6	≥0.1%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥0.25%	<0.1%	0.00266	0.00041	0.00096	0.00042	0.00213	0.00176	0.00624	0.00600	0.00213
Acute Toxicity HP6	≥5%	<0.1%	0.00042	0.00014	0.00014	0.00014	0.00014	0.00014	0.00028	0.00028	0.00014
Acute Toxicity HP6	≥25%	<1%	0.02623	0.02076	0.02297	0.01593	0.02787	0.10094	0.04806	0.05200	#VALUE!
Acute Toxicity HP6	≥0.25%	<0.1%	0.00002	0.00002	0.00004	0.00002	0.00002	0.00004	0.00004	0.00006	0.00002
Acute Toxicity HP6	≥2.5%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥15%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥55%	<1%	0.00016	0.00019	0.00009	0.00010	0.00015	0.00020	0.00018	0.00021	0.00014
Acute Toxicity HP6	≥0.1%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥0.5%	<0.1%	0.00018	0.00021	0.00013	0.00012	0.00017	0.00024	0.00022	0.00027	0.00016
Acute Toxicity HP6	≥3.5%	<0.1%	0.00042	0.00014	0.00014	0.00014	0.00014	0.00014	0.00028	0.00028	0.00014
Acute Toxicity HP6	≥22.5%	<1%	0.02163	0.01818	0.01983	0.01333	0.02117	0.09233	0.03524	0.03607	0.01937
Carcinogenic HP7	≥0.1%		0.00679	0.00768	0.00740	0.00561	0.00880	0.00767	0.01110	0.01410	0.00502
Carcinogenic HP7	≥0.1%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Carcinogenic HP7	≥1%		0.00039	0.00001	0.00065	0.00001	0.00206	0.00162	0.00073	0.00055	0.00009
Carcinogenic HP7 Unknown TPH with ID	≥1,000mg/kg		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carcinogenic HP7 b(a)p marker test (Unknown TPH with ID only)	≥0.01%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
pH Corrosive HP8 pH (soil or leachate)	H8 ≥11.5		7.19	0.00	8.66	0.00	0.00	7.66	6.29	6.57	7.55
pH Corrosive HP8 pH (soil or leachate)	H8 ≤2		7.19	0.00	8.66	0.00	0.00	7.66	6.29	6.57	7.55
Toxic for Reproduction HP10	≥0.3%		0.01088	0.00900	0.01000	0.00688	0.00880	0.08088	0.01788	0.01550	0.01013
Toxic for Reproduction HP10	≥3%		0.00028	0.00019	0.00029	0.00010	0.00015	0.00020	0.00024	0.00021	0.00014
Mutagenic HP11	≥0.1%		0.00039	0.00001	0.00065	0.00001	0.00206	0.00162	0.00073	0.00055	0.00009

Table 3.1 of the CLP, CL Inventory, ATPs, IARC, Concawe, MSDSs, REACH + Pesticide Properties databases. Worst case REACH + MSDS's used for "*" STOT + Acute Toxicity.

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TP/WS/BH			TP02	TP05	TP07	TP07	TP09	TP12	TP13	TP13	TP14
Depth (m)			0.00	0.60	0.30	0.80	0.20	0.00	0.00	0.30	1.50
Envirolab reference			16/00914/2	16/00914/5	16/00914/6	16/00914/7	16/00914/8	16/00914/9	16/00914/11	16/00914/12	16/00914/13
Mutagenic HP11 Unknown TPH with ID	≥1,000mg/kg		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mutagenic HP11 b(a)p marker test (Unknown TPH with ID only)	≥0.01%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Mutagenic HP11	≥1%		0.00525	0.00768	0.00242	0.00505	0.00424	0.00525	0.00626	0.00646	0.00444
Produces Toxic Gases HP12 Sulphide	≥1,400mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Produces Toxic Gases HP12 Cyanide	≥1,200mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Produces Toxic Gases HP12 Thiocyanate	≥2,600mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HP13 Sensitising	≥10%		0.00679	0.00768	0.00266	0.00561	0.00561	0.00767	0.00626	0.00708	0.00502
Ecotoxic HP14	≥1.0	<0.1% (except CompCN + Thiocyanate + Xylene + BTEX 1%).	0.14547	0.10667	0.10867	0.08856	0.14726	0.44576	0.24508	0.26279	0.12511
Ecotoxic HP14	≥25%	<0.1%	0.03637	0.02667	0.02718	0.02214	0.03705	0.11158	0.06129	0.06573	0.03128
Ecotoxic HP14	≥25%	<0.1% (except CompCN + Thiocyanate + Xylene + BTEX 1%).	0.03662	0.02667	0.02743	0.02214	0.03682	0.11144	0.06149	0.06584	0.03129
Ecotoxic HP14 individual substance specific thresholds (Benzo(a)anthracene, Dibenz(ah)anthracene (or Total PAH if only used))	≥0.0025%		0.000389	0.000008	0.000650	0.000008	0.002060	0.001620	0.000726	0.000549	0.000093
Ecotoxic HP14 individual substance specific thresholds (Co, γ-HCH)	≥0.025%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistant Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Persistant Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistant Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000

If other contaminants need adding to Haswaste, please contact Envirolab.

envirolab

Haswaste, developed by Dr. Iain Haslock.

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TP/WS/BH		TP16	TP17	TP18	TP20	TP21	TP23			
Depth (m)		1.10	0.00	0.00	0.00	0.00	0.00			
Envirolab reference		16/00914/15	16/00914/17	16/00914/18	16/00914/19	16/00914/20	16/00914/23			
% Moisture	%									
pH (soil)		7.33	5.10		6.43	6.65	6.64			
pH (leachate)										
Arsenic	mg/kg	34	13	15	5	12	11			
Cadmium	mg/kg	2.8	1.6	1.5	1.7	0.5	0.6			
Copper	mg/kg	91	26	34	13	24	14			
CrVI or Chromium	mg/kg	23	20	20	22	21	16			
Lead	mg/kg	382	40	77	19	152	40			
Mercury	mg/kg	0.02	0.02	0.28	0.22	0.17	0.17			
Nickel	mg/kg	50	21	20	18	18	17			
Selenium	mg/kg	1	2	2	3	1	2			
Zinc	mg/kg	606	98	141	55	57	73			
Barium	mg/kg									
Beryllium	mg/kg									
Vanadium	mg/kg									
Cobalt	mg/kg									
Manganese	mg/kg									
Molybdenum	mg/kg									
Antimony	NEW v5.4di mg/kg									
Tin	NEW v5.4di mg/kg									
PAH (Input Total PAH **OR** individual PAH results)										
Acenaphthene	mg/kg	0.01	0.01	0.01	0.01	3.92	0.01			
Acenaphthylene	mg/kg	0.01	0.01	0.01	0.01	2.09	0.01			
Anthracene	mg/kg	0.02	0.02	0.07	0.02	30.20	0.03			
Benzo(a)anthracene	mg/kg	0.04	0.04	0.33	0.04	42.10	0.14			
Benzo(a)pyrene	mg/kg	0.04	0.04	0.26	0.04	35.60	0.12			
Benzo(b)fluoranthene	mg/kg	0.05	0.05	0.31	0.05	40.80	0.16			
Benzo(ghi)perylene	mg/kg	0.05	0.05	0.16	0.05	16.60	0.05			
Benzo(k)fluoranthene	mg/kg	0.07	0.07	0.16	0.07	23.10	0.07			
Chrysene	mg/kg	0.06	0.06	0.34	0.06	50.60	0.14			
Dibenzo(ah)anthracene	mg/kg	0.04	0.04	0.04	0.04	3.81	0.04			
Fluoranthene	mg/kg	0.08	0.08	0.55	0.08	197.00	0.22			
Fluorene	mg/kg	0.01	0.01	0.01	0.01	7.52	0.01			
Indeno(123cd)pyrene	mg/kg	0.03	0.03	0.20	0.03	18.80	0.04			
Naphthalene	mg/kg	0.03	0.03	0.03	0.03	0.41	0.03			
Phenanthrene	mg/kg	0.03	0.03	0.24	0.03	81.60	0.11			
Pyrene	mg/kg	0.07	0.07	0.46	0.07	137.00	0.19			
Coronene	mg/kg									
Total PAHs (16 or 17)	mg/kg	0.08	0.08	3.06	0.08	692.00	1.13			
TPH										
Petrol	mg/kg									
Diesel	mg/kg									
Lube Oil	mg/kg									
White Spirit / Kerosene	mg/kg									
Creosote	mg/kg									
Unknown TPH with ID	mg/kg									
Unknown TPHCWG	mg/kg	0.1	0.1		0.1	375.0	0.1			
Total Sulphide	mg/kg									
Complex Cyanide	mg/kg									
Free (or Total) Cyanide	mg/kg									
Thiocyanate	mg/kg									
Elemental/Free Sulphur	mg/kg									
Phenols Input Total Phenols HPLC **OR** individual Phenol results.										
Phenol	mg/kg									
Cresols	mg/kg									
Xylenols	mg/kg									
Resourcinol	mg/kg									
Phenols Total by HPLC	mg/kg									
BTEX Input Total BTEX **OR** individual BTEX results.										
Benzene	mg/kg	0.01	0.01		0.01	0.01	0.01			
Toluene	mg/kg	0.01	0.01		0.01	0.01	0.01			
Ethylbenzene	mg/kg	0.01	0.01		0.01	0.01	0.01			
Xylenes	mg/kg	0.01	0.01		0.01	0.01	0.01			
Total BTEX	mg/kg	0.01	0.01		0.01	0.01	0.01			
PCBs (POPs)										
PCBs Total (eg EC7/WHO12)	mg/kg									
PBBs (POPs)										
Hexabromobiphenyl (Total or PBB153; 2,2',4,4',5,5'- if only available)	mg/kg									
POPs Dioxins and Furans Input Total Dioxins and Furans **OR** individual Dioxin and Furan results.										
2,3,7,8-TeCDD	mg/kg									
1,2,3,7,8-PeCDD	mg/kg									
1,2,3,4,7,8-HxCDD	mg/kg									
1,2,3,6,7,8-HxCDD	mg/kg									
1,2,3,7,8,9-HxCDD	mg/kg									
1,2,3,4,6,7,8-HpCDD	mg/kg									
OCDD	mg/kg									
2,3,7,8-TeCDF	mg/kg									
1,2,3,7,8-PeCDF	mg/kg									
2,3,4,7,8-PeCDF	mg/kg									
1,2,3,4,7,8-HxCDF	mg/kg									
1,2,3,6,7,8-HxCDF	mg/kg									
2,3,4,6,7,8-HxCDF	mg/kg									
1,2,3,7,8,9-HxCDF	mg/kg									
1,2,3,4,6,7,8-HpCDF	mg/kg									
1,2,3,4,7,8,9-HpCDF	mg/kg									
OCDF	mg/kg									
Total Dioxins and Furans	mg/kg									

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TP/WS/BH	TP16	TP17	TP18	TP20	TP21	TP23			
Depth (m)	1.10	0.00	0.00	0.00	0.00	0.00			
Envirolab reference	16/00914/15	16/00914/17	16/00914/18	16/00914/19	16/00914/20	16/00914/23			

Some Pesticides (POPs unless otherwise stated)

Aldrin		mg/kg								
α Hexachlorocyclohexane (alpha-HCH) *(leave empty if total HCH results used)*		mg/kg								
β Hexachlorocyclohexane (beta-HCH) *(leave empty if total HCH results used)*		mg/kg								
α Cis-Chlordane (alpha) ***OR*** *Total Chlordane*		mg/kg								
δ Hexachlorocyclohexane (delta-HCH) *(leave empty if total HCH results used)*	New v5.4di	mg/kg								
Dieldrin		mg/kg								
Endrin		mg/kg								
χ Hexachlorocyclohexane (gamma-HCH) (lindane) ***OR*** *Total HCH*		mg/kg								
Heptachlor		mg/kg								
Hexachlorobenzene		mg/kg								
o,p'-DDT *(leave empty if total DDT results used)*		mg/kg								
p,p'-DDT ***OR*** *Total DDT*		mg/kg								
χ Trans-Chlordane (gamma) *(leave empty if total Chlordane results used)*		mg/kg								
Chlordecone (kepone)		mg/kg								
Pentachlorobenzene		mg/kg								
Mirex		mg/kg								
Toxaphene (camphechlor)		mg/kg								

Asbestos in Soil	Thresholds									
Asbestos detected in Soil (enter Y or N)	Y		N	N		N	N	N			

Asbestos in Soil above is "**Y**", the soil is Hazardous Waste HP5 and HP7

Asbestos % Composition in Soil (Matrix Loose Fibres or Microscopic Identifiable Pieces only)	see "Carc HP7 % Asbestos in Soil (Fibres)" below	%								
Carcinogenic HP7 % Asbestos in Soil (fibres or micro pieces)	≥0.1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

If Asbestos in Soil above is "**Y**", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.

Asbestos Identifiable Pieces visible with the naked eye detected in the Soil (enter Y or N)	Y									

If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "**Y**", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "**Y**", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

Hazardous Property	Thresholds	Cut Off Value								
Corrosive HP8	≥5%	<1%	0.00449	0.00172	0.00198	0.00066	0.00158	0.00145	0.00000	0.00000	0.00000
Irritant HP4	≥10%	<1%	0.00449	0.00172	0.00198	0.00066	0.00158	0.00145	0.00000	0.00000	0.00000
Irritant HP4	≥20%	<1%	0.02041	0.00721	0.00827	0.00513	0.10103	0.00517	0.00000	0.00000	0.00000
Specifc Target Organ Toxicity HP5	≥1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Specifc Target Organ Toxicity HP5	≥20%		0.00001	0.00001	0.00031	0.00001	0.06920	0.00011	0.00000	0.00000	0.00000
Specifc Target Organ Toxicity HP5	≥1%		0.01010	0.00424	0.00404	0.00364	0.00364	0.00343	0.00000	0.00000	0.00000
Specifc Target Organ Toxicity HP5	≥10%		0.07575	0.01225	0.01763	0.00688	0.03750	0.00913	0.00000	0.00000	0.00000
Aspiration Toxicity HP5	≥10%		0.00002	0.00002	0.00000	0.00002	0.03751	0.00002	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥0.1%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥0.25%	<0.1%	0.00449	0.00172	0.00201	0.00068	0.00160	0.00147	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥5%	<0.1%	0.00014	0.00028	0.00028	0.00042	0.00014	0.00028	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥25%	<1%	0.13464	0.02361	0.03375	0.01407	0.12603	0.01835	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥0.25%	<0.1%	0.00000	0.00000	0.00003	0.00002	0.00002	0.00002	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥2.5%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥15%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥55%	<1%	0.00028	0.00016	0.00015	0.00017	0.00005	0.00006	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥0.1%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥0.5%	<0.1%	0.00028	0.00016	0.00018	0.00019	0.00007	0.00008	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥3.5%	<0.1%	0.00014	0.00028	0.00028	0.00042	0.00014	0.00028	0.00000	0.00000	0.00000
Acute Toxicity HP6	≥22.5%	<1%	0.12405	0.02050	0.02937	0.01241	0.02596	0.01656	0.00000	0.00000	0.00000
Carcinogenic HP7	≥0.1%		0.03820	0.00590	0.00770	0.00649	0.06920	0.00472	0.00000	0.00000	0.00000
Carcinogenic HP7	≥0.1%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Carcinogenic HP7	≥1%		0.00001	0.00001	0.00031	0.00001	0.06920	0.00011	0.00000	0.00000	0.00000
Carcinogenic HP7 Unknown TPH with ID	≥1,000mg/kg		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carcinogenic HP7 b(a)p marker test (Unknown TPH with ID only)	≥0.01%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
pH Corrosive HP8 pH (soil or leachate)	H8 ≥11.5		7.33	5.10	0.00	6.43	6.65	6.64	0.00	0.00	0.00
pH Corrosive HP8 pH (soil or leachate)	H8 ≤2		7.33	5.10	0.00	6.43	6.65	6.64	0.00	0.00	0.00
Toxic for Reproduction HP10	≥0.3%		0.07575	0.01225	0.01763	0.00688	0.06920	0.00913	0.00000	0.00000	0.00000
Toxic for Reproduction HP10	≥3%		0.00028	0.00016	0.00015	0.00017	0.03750	0.00006	0.00000	0.00000	0.00000
Mutagenic HP11	≥0.1%		0.00001	0.00001	0.00031	0.00001	0.06920	0.00011	0.00000	0.00000	0.00000

Table 3.1 of the CLP, CL Inventory, ATPs, IARC, Concawe, MSDSs, REACH + Pesticide Properties databases. Worst case REACH + MSDS's used for "*" STOT + Acute Toxicity.

Haswaste, developed by Dr. Iain Haslock.

301645 Bloomhouse Lane, Darton

TP/WS/BH			TP16	TP17	TP18	TP20	TP21	TP23			
Depth (m)			1.10	0.00	0.00	0.00	0.00	0.00			
Envirolab reference			16/00914/15	16/00914/17	16/00914/18	16/00914/19	16/00914/20	16/00914/23			
Mutagenic HP11 Unknown TPH with ID	≥1,000mg/kg		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mutagenic HP11 b(a)p marker test (Unknown TPH with ID only)	≥0.01%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Mutagenic HP11	≥1%		0.01010	0.00424	0.00404	0.00364	0.06920	0.00343	0.00000	0.00000	0.00000
Produces Toxic Gases HP12 Sulphide	≥1,400mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Produces Toxic Gases HP12 Cyanide	≥1,200mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Produces Toxic Gases HP12 Thiocyanate	≥2,600mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HP13 Sensitising	≥10%		0.01010	0.00590	0.00590	0.00649	0.06920	0.00472	0.00000	0.00000	0.00000
Ecotoxic HP14	≥1.0	<0.1% (except CompCN + Thiocyanate + Xylene + BTEX 1%).	0.58438	0.12622	0.16850	0.08684	0.67390	0.09963	0.00000	0.00000	0.00000
Ecotoxic HP14	≥25%	<0.1%	0.14610	0.03156	0.04215	0.02171	0.17289	0.02492	0.00000	0.00000	0.00000
Ecotoxic HP14	≥25%	<0.1% (except CompCN + Thiocyanate + Xylene + BTEX 1%).	0.14611	0.03157	0.04213	0.02172	0.20223	0.02492	0.00000	0.00000	0.00000
Ecotoxic HP14 individual substance specific thresholds (Benzo(a)anthracene, Dibenz(ah)anthracene (or Total PAH if only used))	≥0.0025%		0.000008	0.000008	0.000306	0.000008	**0.069200**	0.000113	0.000000	0.000000	0.000000
Ecotoxic HP14 individual substance specific thresholds (Co, γ-HCH)	≥0.025%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistant Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Persistant Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistant Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000

If other contaminants need adding to Haswaste, please contact Envirolab.