

LAND CONTAMINATION SURVEYS

# **Preliminary Land Contamination**

# **Risk Assessment**

## on Land at

# Syston Mill, Mill Lane, Syston,

# Leicestershire LE7 1NS

### Date: December 2024

Status:

Reference:

Final Report

3860D P1 Marrons - Syston

11/12/2024

Tel: 01509 880399 Email: info@castledineenvironmental.co.uk 4 Wymeswold Road, Hoton, Loughborough, Leicestershire, LE12 5SN

Date:

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#### **EXECUTIVE SUMMARY**

The site presently comprises two large fields (designated 'Field A' and 'Field B'), a car-parking / car dealership area (within which lots No.101 to 106 are located) and the former Syston Mill area (within which further plots and units are located) – please see Appendix C for a zoned site plan (both the larger areas, alongside the plot and unit designations within each zone). Historically, the site has been occupied by Syston Mill since at least circa.1883 through until the present-day, having seen various usages (initial usage unknown, subsequently followed by leather, fibre board and unspecified 'factory' usages, followed by the present-day, varied vehicle workshop and unspecified commercial usages). Whilst the former and varying mill usages within the north of site are considered potential sources of contamination (i.e. industrial usages, tanks, various erections, demolitions, usage of hydrocarbons, PACM cladding and roofing), the present-day state of the site, varying commercial usages and extensive areas of made ground and debris, refuse and burning events are considered the most pertinent sources of contamination identified.

Based on the information contained in this report, it is the opinion of Castledine Environmental that the site represents a **MODERATE** to **HIGH** level risk with respect to the present usage and risks to controlled waters, respectively.

It is recommended that a phased intrusive site investigation is planned and carried out on site.

This report should be submitted to your Local Planning Authority for agreement to allow the Phase 2 intrusive testing to be undertaken.

#### TABLE OF CONTENTS

EXECUT	IVE SUM	MARY		<u> </u>			
TABLE C	F CONT	ENTS		<u> </u>			
LIST OF	APPEND	ICES					
LIST OF	TABLES						
<u>1.0</u>		QUALITY ASSURANCE					
<u>2.0</u>	<u>LIMITAT</u>	MITATIONS					
<u>3.0</u>	INTROD		AND SITE PROPOSALS	2			
<u>4.0</u>	SCOPE			2			
<u>5.0</u>	<u>SITE DE</u>	SCRIPTIC	N	3			
<u>6.0</u>	REGULA		JTHORITY AND OTHER ENVIRONMENTAL DATA	7			
	6.1	HYDROL	LOGICAL	8			
		6.1.1 6.1.2 6.1.3 6.1.4	AQUIFER ABSTRACTIONS AND PRIVATE WATER SUPPLIES SOURCE PROTECTION ZONE GROUNDWATER VULNERABILITY AND SOIL LEACHING POTENTIAL	8 9 9			
		6.1.5 6.1.6 6.1.7	POTENTIAL POTENTIAL SURFACE WATER FLOOD RISK DISCHARGE CONSENTS	9 10 10 11			
	6.2	PERMIT	TED PROCESSES	11			
	6.3		ION INCIDENTS	11			
	6.4	RADIOACTIVE SUBSTANCES REGISTRATIONS					
	6.5	WASTE		11			
		6.5.1 6.5.2	LICENSED WASTE MANAGEMENT FACILITIES (LOCATIONS) LANDFILL SITES	11 12			
	6.6	HAZARD	DOUS SUBSTANCES	12			
	6.7	ECOLO	GICAL RECEPTORS	12			
	6.8	SOILS A	ND GEOLOGY	12			
		6.8.1 6.8.2 6.8.3 6.8.4 6.8.5 6.8.6 6.8.7 6.8.8 6.8.9	SUPERFICIAL DEPOSITS SUPERFICIAL DEPOSITS PERMEABILTY BEDROCK DEPOSITS BEDROCK PERMEABILITY ARTIFICIAL GROUND COAL MINING NON-COAL MINING SURFACE WORKINGS RADON	12 13 13 13 13 14 14 14 15			
	6.9	AERIAL	PHOTOGRAPHY	15			
		6.9.1 6.9.2	GOOGLE EARTH GOOGLE STREET VIEW	15 17			
	6.10	HISTOR	IC MAPPING	18			
	6.11	CURRENT LAND USE DATA					
	6.12	PETROL	AND FUEL SITES	21			
	6.13	HISTOR	ICAL PETROL AND FUEL SITE DATABASE	21			
	6.14	POTENT	TIAL CONTAMINATIVE LAND USES IDENTIFIED ON MAPPING	21			
	6.15		ICAL TANK DATABASE	22			
	6.16	HISTOR	ICAL ENERGY FACILITIES (<150M)	22			

	6.17	HISTO	RICAL GARAGE DATABASE	
7.0	PRELI		CONCEPTUAL SITE MODEL	
	7.1	SOUR		
		7.1.1	ONSITE	
		7.1.2	OFFSITE	:
	7.2	PATHV	VAYS	
	7.3	RECEF		
<u>.0</u>	CONC	EPTUAL S		
	8.1	PRELIN	MINARY CONCEPTUAL SITE MODEL	
		8.1.1 8.1.2	SOIL CONTAMINATION GROUND GAS AND HAZARDOUS V	APOURS
.0	ENVIR	ONMENT	AL RISK ASSESSMENT	
0.0	<u>SUMM</u>	<u>ARY OF F</u>	RISKS	
1.0	<u>HUMA</u>	N HEALTH	1	
		11.1.1	PRESENT USERS OF THE SITE / SI	TE WORKERS
2.0	CONT		VATERS	
<u>3.0</u>	<u>STRUC</u>	TURES		
		13.1.1		
		13.1.2 13.1.3	HAZARDOUS VAPOURS POTABLE WATER SUPPLY PIPING	
4.0	OFFSI	TE RECEI		
5.0			FICATION	
6.0		MMENDA <sup>®</sup>		
7.0		RENCES		
	17.1		ATION AND REGULATIONS	
		17.1.1	ACTS	
		17.1.2 17.1.3		
	47.0			
	17.2 17.3		TORY GUIDANCE H STANDARDS	
	17.3		TATUTORY TECHNICAL GUIDANCE	
	17.4	17.4.1	ENVIRONMENT AGENCY	
		17.4.2	CIRIA PUBLICATIONS	
		17.4.3	CL:AIRE	
<u>8.0</u>	<u>APPEN</u>	DICES		

APPENDIX A	ENVIRONMENTAL SEARCH	38
APPENDIX B	HISTORICAL MAPPING	38
APPENDIX C	CURRENT SITE PLANS (ZONED)	39
APPENDIX D	SITE PHOTOS AND LOCATIONS	42
APPENDIX E	WATCHING BRIEF	79
APPENDIX F	DISCOVERY STRATEGY	81

# 3860D P1 Marrons - SystonCastledine EnvironmentalLIST OF TABLESTABLE 1.SUMMARY OF SIGNIFICANT POLLUTION LINKAGES29TABLE 2.RISK CLASSIFICATION MATRIX30

TABLE 3.CLASSIFICATION OF RISK31

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#### 1.0 QUALITY ASSURANCE

Castledine Environmental confirm that all reasonable efforts have been made to ensure that the information outlined within this report is accurate.

Castledine Environmental would further confirm that due care, attention and technical skill were used in the creation of this report.

#### 2.0 LIMITATIONS

The conclusions and recommendations made in this report are limited to those based on the findings of the investigation. Where comments are made based on information obtained from third parties, Castledine Environmental assumes that all third-party information is true and correct. No independent action has been undertaken to validate the findings of third parties. The assessments and interpretation have been made in line with legislation and guidelines in force at the time of writing, representing best practice at the time.

This survey has not included asbestos within existing structures, invasive plant species, geotechnical considerations or any elements unconnected with potential ground contamination at the site. If required, such surveys should be undertaken by suitably accredited organisations.

There may be other conditions prevailing at the site which have not been disclosed by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for conditions not revealed by the investigation.

#### 3.0 INTRODUCTION AND SITE PROPOSALS

Castledine Environmental have been appointed by Mr. M. Nagpal to undertake a Phase 1 Desk study on a site at Syston Mill Industrial Estate, Mill Lane, Syston, Leicestershire LE7 1NS.

#### 4.0 SCOPE

Castledine Environmental have prepared this report for the sole use and reliance of Mr. M. Nagpal and associated appointees for the purpose of ensuring compliance with:

- National Planning Policy Framework (NPPF) December 2023.
- Part C1 of the building regulations.

This report may not be used or relied upon by any unauthorised third party, or for any other proposed use than that specified above, without the explicit written agreement of Castledine Environmental.

This report is to be regarded as a Preliminary Risk Assessment in accordance with the Environment Agency's Land Contamination Risk Management (LCRM – 2021), which replaces CLR11 *"Model Procedures for the Management of Land Contamination",* carried out in accordance with BS 10175:2011+A2:2017, *"Investigation of Potentially Contaminated Land - Code of Practice"* and relevant sections of BS5930:2015+A1:2020, *"Code of Practice for Ground Investigations".* 

The objectives of the report are:-

- To assess historical activities at the site with respect to their potential impact on the site environment;
- To assess historical and current surrounding land use in relation to known or potential off-site contamination issues that may impact on the subject site;
- Review of geological, hydrological and hydrological conditions at the site, pertaining to land contamination issues;

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- To characterise the environmental setting of the site, identify migration pathways and vulnerable receptors for contamination originating at the site, focusing on potential soil and groundwater liabilities; and
- To develop a preliminary conceptual site model (CSM).

This report has been produced in order to discharge any relevant planning conditions outlined by the Local Authority and Environment Agency; however, further requirements may be imposed after the findings of this report that may need to be addressed at a later date.

#### 5.0 SITE DESCRIPTION

The site is located in Syston, Leicestershire at National Grid Reference: 461492,312286 and is approximately 7.55ha in area.

The site is irregular in shape – comprising various parcels of land – and is located in a predominantly rural area, being directly bounded by the River Wreake to the north, north west and west with open field and marshland to the south west, south, south east, an offsite, associated dwelling and scaffolding compound east and a wooded area north east of site with a mainline railway located beyond this.

The site interior can be roughly divided into two large fields, designated 'Field A' and 'Field B', a car-parking area (within which lots No.101 to 106 are located) and the former Syston Mill area (within which further plots and units are located) – please see Appendix C for a zoned site plan (both the larger areas, alongside the plot and unit designations within each zone).

Access to site was provided via an access track leading north west from Fosse Way, before terminating within the site boundary. The site access route bypasses Field A, located directly south west and west of the access route and car-parking area, respectively. On the day of the site walkover, the field was seen to unoccupied, beyond two former gas monitoring wells (local information indicated these were associated with a former sand pit / sludge bed usage and it's subsequent environmental monitoring).

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The extensive car-parking area, located in the southern extent of the main site area and north of Field A, was then seen to extend from the access track approximately 130m to the south west. The main access route leading by this area was seen to be tarmacked, however the areas extending south west from here (forming lots No.101 to 106) were seen to be gravelled (of various compositions, including road planings to rolled stone). When splitting this area into its lots, Lot No.101 comprised a smaller car-parking area with numerous vehicles stored here, and Lot No.102 directly south west again of this comprised an enclosed car storage compound (access was unavailable on the day of the walkover). Lot No.104 (comprising the central and longest extent of the car-parking area) again comprised a car dealership / storage compound, however in this area a further gas monitoring well was noted, alongside various areas of burnt debris and refuse.

Lot Nos.103, 105 and 106 then form the remainder of this southern / south western extent of site and were seen to be gravelled with road planings, laid atop a woven geotextile membrane. The far south western extent of site was seen to have been stripped of vegetation and trees, with areas of debris, refuse and a stagnant lagoon / pond noted here. Further debris and refuse were noted in and around the depression. The former boundary between Lot Nos.104 and 105 / 106 was seen to be a former wall, which had been partially demolished as part of the site extension. The ground conditions here were poor, comprising road planings, tarmacs and further plastic, metal and refuse held in an ashy matrix, alongside numerous areas of fragmented, corrugated PACM (see Photos No.22, 23 & 24 in Appendix D).

Moving northward, to the main site area and the former Syston Mill area, the access route is bridged across a branch of the River Wreake, thus providing access from the car-parking area to the northern extent of site. When facing north east and south west from atop the bridge, both banks of the river were seen to be heavily vegetated, however some debris and refuse (including domestic items) were noted scatted within the vegetation.

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When assessing the main, former mill area on site, the walkover progressed in a counter-clockwise fashion (i.e. leading to the north eastern, northern, north western and south western extents of this area, before returning to the bridge).

Units No.18, 17 A/B/C were the first areas assessed and comprised brickbuilt former mill units (atop which PACM corrugated roofing was noted), within which evidence of former vehicle maintenance / repair was noted, however the units were seen to be empty on the day of the walkover. Significant, visual and olfactory evidence of hydrocarbon staining was noted throughout the units (see Photos No.31 & 32), alongside significant hydrocarbon storage (and evidence of release) directly outside the unit (see Photos No.29 & 30).

Moving north-eastwards, Lot No.107 was the next area assessed and was seen to comprise an extent of gravelled, open ground within which the storage of numerous commercial vehicles / vans was noted. Beyond the made ground gravelled ground conditions and vehicle and trailer storage, this area was largely free of significant occupation; however, when moving to the north and north western extents of the mill area, the exterior areas here were seen to be heavily occupied by wastes, debris, refuse, vehicles (in various states of repair) alongside poor ground-conditions (i.e. iridescence displayed atop pooled water, ashy / road planing gravels). Of particular note were various oil-stained ground conditions, rags, barrels and further refuse stored outside the rear (northern) faces of Units No.16, D and E1/E2 (see Photos No.36 to 39 in Appendix D).

In the far north western extent of the mill area, adjacent to the river Wreake, numerous waste heaps of various compositions were noted along the entire extent of the riverbank. The wastes comprised tyres, vehicle parts (oil filters, brake pads, engine parts, chassis), electrical components (printed circuit boards, a dialysis machine and associated computer terminal), IBCs (empty or with indiscernible contents), plastic wastes such vehicle bodywork and undercarriages, domestic plastics (containers, furniture) and domestic refuse (furniture, bin bags, foodstuffs and wrapping). Also noted in this area were numerous heaps of ashy debris, evidence of previous burning events and at

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least one burning barrel, around which further debris and refuse (both burnt and unburnt) were noted. Additionally, a small unit here – inaccessible on the day – displayed signages stating "petroleum mixture – highly flammable" was located within the waste heap area. Arrayed outside the north western faces of Units No.E1/Es2, A, C & 'Lean' (within which vehicle maintenance was seen to be ongoing), further broken, under repair or dilapidated vehicles were noted, alongside further evidence of poor hydrocarbon storage and release, debris and refuse heaps were seen.

The far western extent of the mill area, forming Unit No.20 and 7/7A, was seen to be largely clear of significant debris and refuse in exterior areas; however, the interior of these structures were inaccessible on the day of the walkover – signage indicated the units remained in vehicle repair / storage usage. The exterior areas were concreted, as was the access route leading back towards the car-parking and bridge area; however, adjacent to the river bank, ground conditions gave way to overgrowth – within which further scattered refuse and debris was noted, alongside a possible former road painting oven. The roofing atop the majority of industrial units in this area were seen to be of potentially asbestos containing corrugated materials.

The southernmost extent of the mill area was then seen to comprise a hardstanding car-park, within which numerous vehicles in various states of repair were noted. Of particular note in this area was both a former sump – which local information indicated was previously associated with the historical shoe-making usage of the mill (see Photos No.56 & 57) – and an area of hydrocarbon and chemical storage (containers, barrels, open to the air with oil within) and release – see Photos No.64 & 65). The units arrayed around the car-park (7/7A and B1/B2) were seen to be vacant and in use for vehicle repair, respectively. As with the north western extent of the former mill area, the southernmost bank of the car-parking area was seen to be heavily occupied by debris, refuse and scattered containers and PACM fragments.

When assessing some of the units in the mill area (i.e. Unit No.16, however was noted within and outside other units), former ironwork grating was noted within the flooring, around which further refuse (including stacked PACM),

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debris and poor hydrocarbon storage was noted (see Photos No.69, 70 & 71) – this would indicate that the former occupiers of the unit potentially utilised this grating for hydrocarbon / chemical disposal. It should be noted that exterior areas around such units also displayed oily ground conditions, hydrocarbon release / iridescence or stagnant, brown chemical staining (see Photos No.72, 75 & 76).

Potential sources of contamination noted on the site walkover include extensive areas of car-parking / storage atop significant made ground deposits in the southern and south western extents of site; the former and present usages of the units in the north of site (i.e. vehicle storage, maintenance, dismantling, PACM cladding and roofing) alongside clear evidence of hydrocarbon spillages and release; the heaped, buried or scattered refuse, debris and wastes noted site wide, particularly in the north western extent of site (river bank – electrical wastes) and centrally on site (river channel); and evidence areas of burning events, burnt debris / refuse, ash deposits site-wide. Topographically, the site and surrounding areas are level, with the adjacent river Wreake and the central channel being the lowest points of relief on site.

Photos of the site are present in Appendix D.

#### 6.0 REGULATORY AUTHORITY AND OTHER ENVIRONMENTAL DATA

An environmental search listing historical and environmental factors likely to affect the property has been reviewed. The most pertinent information is summarised in the following sections. A copy is presented in Appendix A.

Additional geological and hydrological data was obtained from the British Geological Survey.

- 6.1 HYDROLOGICAL
- 6.1.1 AQUIFER

#### 6.1.1.1 SUPERFICIAL GEOLOGY

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	152	Ν	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	155	Ν	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	201	NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

#### 6.1.1.2 BEDROCK GEOLOGY

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water- bearing parts of the former non-aquifers

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#### 6.1.2 ABSTRACTIONS AND PRIVATE WATER SUPPLIES

The Groundsure report records an active surface water abstraction site located 29m west of site – the record relates to spray irrigation usages sourced direction from the River Wreake, with the permit in effect from circa.2024; a second, active record for the same usages is then located 415m west of site, also in effect from circa.2024.

#### 6.1.3 SOURCE PROTECTION ZONE

Site is not recorded to lie in a Source Protection Zone (SPZ).

#### 6.1.4 GROUNDWATER VULNERABILITY AND SOIL LEACHING POTENTIAL

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one-kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High Areas able to easily transmit pollution to groundwater. They
  are likely to be characterised by high leaching soils and the
  absence of low permeability superficial deposits.
- Medium Intermediate between high and low vulnerability.
- Low Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Ð	Location	Summary	Soil / Surface	Superficial Geology	Bedrock Geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

3860D P1 Marrons - Systo	n
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D	Location	Summary	Soil / Surface	Superficial Geology	Bedrock Geology
2	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Aquifer type: - Thickness: <3m Patchiness value: <90%	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

#### 6.1.5 POTENTIAL SURFACE WATER

The Groundsure report records an unnamed, surface level watercourse located on site, which was noted on the site walkover orientated south west to north east and separating the northern and southern extents of site; alongside the river Wreake directly north, north west and west of site, with the Barkby Brook then located 126m south of site.

The report also records a monitoring point for the river Eye / Wreake from Langham Brook to the river Soar located on site: for which the overall rating, chemical rating and ecological rating are recorded as poor, fail and poor, respectively (last monitored circa.2019); however, onsite groundwater monitoring has been rated as good overall.

#### 6.1.6 FLOOD RISK

According to both the Groundsure report and Environment Agency interactive online maps, the site is recorded to be at a high risk of flooding from the River and Seas (RoFRaS), a 1 in 30-year (0.30-1.0m) risk from surface water flooding on site, a low risk from groundwater flooding on site and is located within both a Zone 2 and Zone 3 Flood Zone.

Additionally, the Groundsure report records a total of 5 No. historical flooding events on site, described as 'channel capacity exceeded – no raised defences', dated circa.1977, 1998 (3 No. records) and 2000.

#### 6.1.7 DISCHARGE CONSENTS

The Groundsure report records no active discharge consents held within 250m of site; however, revoked consents relating to trade discharges / mineral discharges into the River Wreake (on behalf of Lafarge Aggregates Ltd) are located 160m north east (2 No. records here), 230m south and 232m south west of site (revoked circa.2023, 2004, 2000 & 2005, respectively).

#### 6.2 PERMITTED PROCESSES

The Groundsure report records historical Part B Permits relating to coating processes and di-isocyanate processes located 24m north west and 390m south east of site, respectively.

#### 6.3 POLLUTION INCIDENTS

The Groundsure report records a total of 6 No. pollution incidents located within 500m of site; however, none of the incidents are considered pertinent to site (i.e. being some distance from site or relating to inert wastes such as biodegradable wastes / natural organic materials, fly-tipped tyres or vegetation cuttings).

#### 6.4 RADIOACTIVE SUBSTANCES REGISTRATIONS

None recorded within 500m of site.

#### 6.5 WASTE

#### 6.5.1 LICENSED WASTE MANAGEMENT FACILITIES (LOCATIONS)

The Groundsure report records a total of 7 No. licenced waste facilities located 171m (5 No. records) and 172m south of site. The site was named Meadow Lane Quarry and comprised a landfill taking non-biodegradable wastes and appeared to be in effect between circa.2000 and was expired / surrendered by circa.2019.

#### 6.5.2 LANDFILL SITES

The Groundsure report records an onsite, historical landfill and a further 4 No. offsite historical landfills, in proximity order from onsite these are:

- On site historical landfill (Field A, car-parking area) handling inert wastes on behalf of Lafarge Aggregates no first or last date held;
- 154m south Meadow Lane Quarry as in Section 6.5.1;
- 327m south west, licenced, handling inert wastes (Pontylue Sand and Ballast operator) and in effect from circa.1977-1990;
- 376m east of site, licenced, handling inert and industrial waste types (Acresford Sand and Gravel Limited), in effect from circa.1981-1993;
- 464m south west, licenced, handling inert, commercial and household wastes, in effect from circa.1967-1993.

#### 6.6 HAZARDOUS SUBSTANCES

None recorded within 250m of site.

#### 6.7 ECOLOGICAL RECEPTORS

The Groundsure report records the site as being located within the River Soar surface waters Nitrate Vulnerable Zone (NVZ). No further sensitive land usages are recorded within 1000m of site.

#### 6.8 SOILS AND GEOLOGY

"Contains British Geological Survey materials © NERC 2024" obtained from <u>http://www.bgs.ac.uk/data/mapViewers/home.html</u> under the <u>Open</u> <u>Government Licence</u>

#### 6.8.1 SUPERFICIAL DEPOSITS

Both BGS geological mapping and the Groundsure report record superficial geological deposits of Alluvium on site, comprising a silty clay, but can contain layers of silt, sand, peat and basal gravels, extending from the central river channel to the far north of site and the river Wreake and extending further beyond this.

#### 6.8.2 SUPERFICIAL DEPOSITS PERMEABILTY

The Groundsure report records the site as being within an area where the maximum permeability of superficial deposits is recorded as 'high' and the minimum permeability as 'very low' and facilitated by intragranular flow mechanisms.

This is a qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

#### 6.8.3 BEDROCK DEPOSITS

Both BGS geological mapping and the Groundsure report records bedrock geology of Branscome Mudstone Formation, comprising a red-brown mudstone and siltstone underlying the south eastern half of site; and the Edwalton Member, comprising a red-brown and greenish-grey mudstone and siltstone underlying the north western extent of site – the underlying geology is traversed by an inferred fault, orientated north east to south west and directly below the centre of site, separating the formations.

#### 6.8.4 BEDROCK PERMEABILITY

The Groundsure report records the site as being within an area where the maximum permeability of bedrock geology is recorded as 'low' and the minimum permeability as 'low' and facilitated by fracture flow mechanisms.

#### 6.8.5 ARTIFICIAL GROUND

BGS geological mapping records the site as being occupied by made ground deposits and locate in a wider, extensive area of further artificial / worked or infilled deposits. Specifically, the Groundsure report records the southern extent of site (Field A, part of the present car-parking area) as occupied by infilled ground (extending south west and south east).

Further, offsite records of artificial deposits are then located:

- Made ground (undivided) records located 2m north east, 127m and 139m west and 208m south west of site;
- Infilled ground 9m south west and 62m south of site;
- Worked ground described as 'void' located 38m north, 173m south east, 174m south, 246m south of site; and
- Landscaped ground (undivided) 120m south.

#### 6.8.6 COAL MINING

The site is not located in a coal mining reporting area and the local geology is not considered appropriate for such extraction. As such the risk from coal mining activities is considered to be negligible.

#### 6.8.7 NON-COAL MINING

The Groundsure report records the site as being located in an area where a surface mineral working application – sand and gravel – was refused in circa.1979. Additionally, a ceased operations sand and gravel pit was formerly located 54m south of site and client / local information indicates part of the southern extent of site may have been within a former sand and gravel extraction pit / pond or sludge bed in the past.

#### 6.8.8 SURFACE WORKINGS

ID	Distance (m)	Direction	Land Usage	Year of Mapping
А	0	On site	Pond	1987
А	0	On site	Pond	1976
А	0	On site	Sludge beds	1976
В	47	Ν	Cuttings	1987
В	47	Ν	Cuttings	1976
С	47	Ν	Cuttings	1883
D	52	SE	Sewage works	1938
D	52	SE	Sewage works	1938
С	54	Ν	Cuttings	1927

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ID	Distance (m)	Direction	Land Usage	Year of Mapping
С	54	Ν	Cuttings	1950
С	55	Ν	Cuttings	1957
С	55	Ν	Cuttings	1902
D	104	SE	Sewage works	1950
D	104	SE	Sewage works	1928
D	104	SE	Sewage works	1902
С	217	Ν	Cuttings	1987
С	217	Ν	Cuttings	1976

#### 6.8.9 RADON

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level. No radon protective measures are necessary as described in publication BR211:2015 by the Building Research Establishment.

#### 6.9 AERIAL PHOTOGRAPHY

Aerial photography shows the following:

#### 6.9.1 GOOGLE EARTH

13 No. images are held in the historic imagery dataset, as follows:

Date	Description
December 1999	The northern extent of site is shown as remaining occupied by the mill structures and exterior areas, as seen in the present-day, with the southern extent of site occupied by a much smaller, gravelled car-park than that seen during the site walkover. The site remains bounded by the river to the north, NW and west with wooded and fielded areas to the north east, east, south west, south and south west. An area approx.100m SW of site is shown as an open excavation / gravel pit.
December 2000	No discernible change on site nor site relevant change to the surrounding areas.

Date	Description
July 2006	Gravelled hardstanding in the NE extent of site has partially transgressed into the grassed areas NE again of site. Minor vehicle movements across site. The ongoing excavation approx.100m SW of site has finished and the area returned to pasture land.
December 2010	Gravelled hardstanding in the NE extent of site has been extended north eastwards once again, the area is now occupied by at least 20 No. vehicles.
September 2011	No discernible change on site nor site relevant change to the surrounding areas.
April 2015	Once again, the car-parking area in the NE of site has been extended once again and the area wholly occupied by numerous vehicles (present-day commercial van area, however at this time the vehicles appear to cars). Lot No.103 in the southern extent of site has now been formed and extends to the south west. At the far end of Lot No.13 there is an extensive heap of fly-tipped debris and refuse.
April 2016	Water or fluid is seen in and around the far northern extent of Syston Mill (appearing to originate from Unit 22 GF). Heaps of debris and the removal of vegetation are now present along the river bank in the NW of site. Further heaps, debris and refuse are now located SW again of Lot No.103.
April 2018	The area SW of Lot No.103 is now shown as occupied by either the present-day road planings and/or debris, having been spread and levelled – it is unclear from this scale of mapping.
March 2019	No discernible change on site nor site relevant change to the surrounding areas.
April 2020	The area SW of Lot No.103 is now shown as vegetated, indicating the prior spreading of waste has now been overgrown. Further heaps of refuse, debris and fly-tipped wastes are now located atop the area once again.
April 2021	The entirety of Lots No.101 to 106 forming the far SW extent of site have now been developed with hardstanding, as seen in the present-day – it is likely this new layer of hardstanding has been emplaced atop the prior wastes and hardstanding (and vegetation). Further wastes and debris located along the NW extent of site.
June 2021	No discernible change on site nor site relevant change to the surrounding areas.

Date	Description
March 2022	The SW extent of site is now largely occupied by vehicles, as seen in the present-day on the site walkover. The northern extent of site now appears as occupied by the present-day features.

#### 6.9.2 GOOGLE STREET VIEW

Google Street View imagery extends from the main site access route, via the car-parking areas to the area of Syston Mill itself, before circumnavigating the mill area itself.

Imagery from the car-parking area, in the south and south western extents of site, is dated circa.2011, 2019, 2022 and 2023. Imagery dated circa.2011 shows the southern extent of site as remaining with original, small car-parking areas, however the remaining areas extending south west from here are not present and the area is occupied by field, tree and vegetation. Imagery then dated circa.2019 shows the area of Lot No.103 now having been formed, extending south westwards into the fielded areas. A number of heaps are located within the area of No.101 (forming hardstanding for a small car-parking extension). By imagery dated circa.0222, all lots forming the south western extent of site are present, forming the car-parking area and car dealerships seen in the present-day, with imagery dated circa.2023 showing little to no change in this extent.

Imagery around the Syston Mill itself is then dated circa.2023. Working in a counter-clockwise orientation, the same as the walkover, the site comprises the same exterior areas as that seen on the walkover. The exterior areas comprise the access route leading via the south easternmost mill units (however, the heaped hydrocarbon containers are not present at this time), which then leads into the commercial vehicle / van storage area (with an increased number of vehicles than that seen on the site walkover). Moving to the north and north west of the mill area, the rear of the units can be seen, by bypassing the vehicle repair garages. The area in the north western extent remains occupied by vehicles, made ground deposits, open-air hydrocarbon storage and scattered refuse and

#### Castledine Environmental

debris. Along the river bank in the north west of site, significant and extensive areas of made ground, burnt debris, burning barrels, rubbles and debris can be seen along the banking. At least 3 No. areas of burnt debris and burning barrels are located along this extent of site. An IBC within a rough-shod bund is located outside the western face of the mill units here (with significant hydrocarbon staining in and around the feature). In the south western extent of this area (compound No.20 – inaccessible on the day of the walkover), a series of potentially asbestos piping can be seen, alongside a skip and further waste storage. The remaining area in this northern extent of site comprises the car-parking and forecourt area directly across the bridge, which remains in such usage at this time (however, the number of vehicles is significantly more than that seen on the site walkover).

#### 6.10 HISTORIC MAPPING

The following historic maps have been reviewed as part of this assessment:

Мар	Onsite	Offsite
OS County Series: 1883, 1:10,560	Imagery is small-scale; however, the site appears occupied by Syston Mill (disused), with the central river channel appearing larger than the present-day and two large ponds or lakes located in the NW and south of the main site area (northern extent). The remainder of site remains unoccupied, open field.	The surrounding areas comprise the river to the NW, west and SW, field to the south and south east and the mainline railway to the east, as in the present- day.
OS County Series: 1885, 1:2,500	Higher resolution mapping confirms the far NW and southern areas of the northern extent of site as occupied by large mill ponds	Surrounding areas see little site relevant change.
OS County Series: 1902, 1:10,560	Additional structures have been erected in the north of site (mill area – appears to be Unit No.20 7/7A)	A sewage works is now located approx.104m SE of site with at least 2 No. settling beds.

#### Castledine Environmental

Мар	Onsite	Offsite
OS County Series: 1903, 1:2,500	Additional structures erected around the main site area and mill itself. The mill is now marked as 'leather'	Surrounding areas see little site relevant change.
OS County Series: 1927-1928, 1:10,560 OS County Series: 1929-1930, 1:2,500 OS County Series:	No discernible change on site. The mill structures have been extended slightly and now resemble the layout seen in the present-day (northern extent of site). No discernible change on	Surrounding areas see little site relevant change. Surrounding areas see little site relevant change. Additional tanks developed
1950, 1:10,560 National Grid: 1955 1955 – 1956, 1:2,500	site. The site is now marked as a 'fibre board' mill. There have been some changes to the site structure outlines and layout, and tanks are marked in the northern and central extents of the mill aera itself. The pond / inlet forming the far northern extent of site (present-day commercial van storage area) has seen a change in outline.	within the sewage works to the SE of site. Additional tanks and settling tanks developed in sewage works area SE of site.
Provisional: 1958, 1:10,560 National Grid: 1971, 1:2,500	No discernible change on site. The former river channel skirting the northern, NE and southern extents of the mill area (including weir, likely waterwheel and associated infrastructure) have been removed and infilled. A new structure is located on the northern extent of the mill area and the adjacent tank here is no longer marked (central tank now marked as two linear tanks).	Surrounding areas see little site relevant change. River Wreake now remaining in its original channel and path, skirting the NW, western and SW extents of site. A new weir is located directly NW of the far northern tip of site at this time.

#### **Castledine Environmental**

Мар	Onsite	Offsite
National Grid: 1971- 1976, 1:2,500	Four large settling beds are now located in the southern extent of site (fielded area) adj. to a linear, long pond.	The sewage works, tanks, settling ponds and associated infrastructure SE of site have been demolished, removed and infilled.
National Grid: 1976, 1:10,000	The southern extent of site is now marked with sludge beds (marking the above features from circa.1971/76).	The A46 is now located approx.151m NW of site, as in the present-day.
National Grid: 1977, 1:2,500	No discernible change on site.	Surrounding areas see little site relevant change.
National Grid: 1986, 1:2,500	Site now marked as a 'factory'. The central area of site (formerly appearing covered) now appears to be open-aired once again.	The two linear tanks located in the central extent of the mill area are no longer marked and the area replaced with a new unit.
National Grid: 1987, 1:10,000	No discernible change on site.	Large-scale waterbody now located approx.300m east of site (remains persistent until the present-day).
National Grid: 1993, 1:2,500	The pump house seen in the north of site (small breezeblock structure) is now marked on site.	Surrounding areas see little site relevant change.
National Grid: 2001, 1:10,000	The sludge beds in the south of site have been removed and infilled. The linear ponds remain persistent on historical mapping until the present- day.	Surrounding areas see little site relevant change.
National Grid: 2010, 1:10,000	No discernible change on site.	Surrounding areas see little site relevant change.
National Grid: 2024, 1:10,000	No discernible change on site.	Surrounding areas see little site relevant change.

#### 6.11 CURRENT LAND USE DATA

ID	Distance (m)	Direction	Company	Activity	Category
1	0	On site	Pump house	Water pumping stations	Industrial features

#### **Castledine Environmental**

ID	Distance (m)	Direction	Company	Activity	Category
А	0	On site	Cars Care Garage	Vehicle repair, testing and servicing	Repair and servicing
А	0	On site	Heritage Bodyworks Ltd	Vehicle repair, testing and servicing	Repair and servicing
A	0	On site	Just Airports	Airlines and airline services	Transport, storage and delivery
А	0	On site	Works	Unspecified works or factories	Industrial features
С	226	SW	D Calver Commercial Ltd	Vehicle repair, testing and servicing	Repair and servicing

#### 6.12 PETROL AND FUEL SITES

None recorded within 500m of site.

#### 6.13 HISTORICAL PETROL AND FUEL SITE DATABASE

None recorded within 500m of site.

#### 6.14 POTENTIAL CONTAMINATIVE LAND USES IDENTIFIED ON MAPPING

ID	Distance (m)	Direction	Use	Date
1	0	On site	Sludge beds	1976
А	0	On site	Unspecified disused mill	1883
А	0	On site	Factory mills	1987
А	0	On site	Unspecified mills	1902
А	0	On site	Unspecified mills	1927
А	0	On site	Unspecified mills	1950
А	0	On site	Unspecified mills	1958-1976
В	47	Ν	Cuttings	1987
В	47	Ν	Cuttings	1976
С	47	Ν	Cuttings	1883
D	52	SE	Sewage works	1938
С	54	Ν	Cuttings	1927-1950
С	55	Ν	Cuttings	1958
С	55	Ν	Cuttings	1902
Е	79	Е	Rifle range	1883

**Castledine Environmental** 

ID	Distance (m)	Direction	Use	Date
2	82	Е	Rifle range	1883
D	101	SE	Unspecified works	1958
D	104	SE	Sewage works	1950
D	104	SE	Sewage works	1902-1928
3	107	E	Rifle range	1902
4	114	E	Disused rifle range	1927
D	117	SE	Unspecified tanks	1950-1958
Е	128	E	Disused rifle range	1928-1938
F	195	NE	Butts	1958
F	195	NE	Butts	1927-1950
С	217	Ν	Cuttings	1976
С	217	Ν	Cuttings	1987
G	323	SE	Timber yard	1987
6	360	W	Small pox hospital	1928-1938
7	395	W	Boat yard	1976
G	405	SE	Unspecified heap	1958
G	410	SE	Unspecified heap	1902
G	410	SE	Unspecified heap	1928

#### 6.15 HISTORICAL TANK DATABASE

ID	Distance (m)	Direction	Use	Date
А	0	On site	Tanks	1955
А	0	On site	Tanks	1955
А	0	On site	Unspecified tanks	1955
А	0	On site	Tanks	1955-1971
D	79	SE	Settling tanks	1955
D	106	SE	Tanks	1955
D	111	SE	Unspecified tank	1955
D	127	SE	Settling tanks	1955
D	132	SE	Tanks	1955

#### 6.16 HISTORICAL ENERGY FACILITIES (<150M)

The Groundsure report records no historical energy features located within 150m of site.

#### 6.17 HISTORICAL GARAGE DATABASE

ID	Distance (m)	Direction	Use	Date
Н	497	Ν	Garage	1994
Н	497	Ν	Garage	1990

#### 7.0 PRELIMINARY CONCEPTUAL SITE MODEL

The risk posed by any contaminants in soil or groundwater will depend on the nature of the hazard, the probability of exposure, the pathway by which exposure occurs, and the likely effects on the receptors. A contaminant is defined as a substance in, on or under land (or within groundwaters) that has the potential to cause harm, while a risk is considered to exist if such a substance is present in sufficient concentration to cause harm and a pathway exists for a receptor to be exposed to the substance. The following sections discuss all the identified potential on and off-site sources, pathways and receptors in the context of the proposed development and plausible pollutant linkages which may represent a risk to identified receptors from the data gained from the desk study. At this stage the assessment is qualitative and aimed to determine all pollutant linkages, irrespective of significance or allowing for uncertainty.

Source	A contaminant or pollutant that is in, on or under land that has the	
	potential for cause harm or pollution to a receptor.	
Pathway	The physical route by which a receptor is or could be affected by a	
	contaminant or pollutant.	
Receptor	Something or someone that could be adversely affected by a	
	contaminant, i.e. people, controlled waters, ecological systems,	
	buildings, crops, livestock.	

By considering each of the three elements above, an assessment of actual and potential hazards to receptors can be carried out, taking into account the significance and degree of risk of each. The three elements above can exist separately; however, they only create a risk where they are linked together, thus creating a contaminant linkage. During the Preliminary Risk Assessment Stage, the linkages are referred to as 'Potential Contaminant Linkages', until they are confirmed via intrusive sampling, thus becoming 'Relevant Contaminant Linkages'.

A tabled, diagrammatic or matrix of pollutant linkages is considered to be a Conceptual Site Model (CSM), the source-pathway-receptor linkages are reviewed and displayed, apportioning a risk-rating and mitigation

suggestion after each summary. Three impact potentials exist for any given site, these are:

- The site impacting upon itself;
- The site impacting on its surroundings; and
- The surroundings impacting on the site.

All three impacts need to be considered in a risk assessment.

#### 7.1 SOURCES

The following potential sources of contamination have been identified:

#### 7.1.1 ONSITE

- Initial development and construction of the mill (prior to circa.1883)
- Subsequent leather, fibre board and 'factory' usage of the mill (circa.1903, 1955/56 and 1986)
- Various erections and demolitions of structures on site (northern extent, between the dates of circa.1902-1986)
- Removal and infilling of the former mill ponds, watercourse and weir (circa.1971)
- Development of a number of tanks on site (circa.1955/56-1986 located in the northern and central extents of the mill area)
- Removal and infilling of sludge beds (southern extent of site, circa.2001)
- Extensive made ground deposits (forming the southern, SW and NE extents of site, various depths, compositions, dates of laying – tarmacs, ashes, rubbles, debris – noted on walkover)
- Recent usage of various units for vehicle maintenance / breaking (noted on site walkover, poor working practises noted)
- Various areas of heaped or fly-tipped debris (noted on walkover, in car-parking areas, SW extent of site, NW extent of site, in and around the former mill area, adjacent to and within various units)
- Medical and electrical equipment noted in fly-tipped debris (NW extent of site)
- Noted exterior areas of hydrocarbon and chemical storage (NW extent, within and without various units, central area of mill area release noted)
- Potentially asbestos corrugated roofing on various structures, also noted fragmented in SW extent of site, central mill area, within units)
- Likely release of hydrocarbons and chemicals into pre-existing drainage gullies, channels and sumps (noted on walkover, associated with present-usage and prior mill usage / infrastructure)
- Various contemporary and historical burning events with associated melted, burnt debris and refuse (noted on satellite imagery, street view imagery and on the site walkover, NW extent of mill area, car-parking area, centrally on site)

#### Castledine Environmental

Potential Sources and Associated	Contaminants Identified
Source	Potential Contaminants of Concern
Initial development and construction of the mill (prior to circa.1883)	Various contaminants – most likely comprising heavy metals (arsenic for treating purposes), PAHs, TPH CWG, VOCs, phenol
Subsequent leather, fibre board and 'factory' usage of the mill (circa.1903, 1955/56 and 1986)	Various contaminants – most likely comprising heavy metals, PAHs, TPH CWG, VOCs, phenol
Various erections and demolitions of structures on site (northern extent, between the dates of circa.1902-1986)	Various contaminants – most likely comprising heavy metals, PAHs, TPH CWG, VOCs
Removal and infilling of the former mill ponds, watercourse and weir (circa.1971)	Ground gases (CO2, CH4, CO) dependant on depth and organic content
Development of a number of tanks on site (circa.1955/56-1986 – located in the northern and central extents of the mill area)	Hydrocarbons TPH CWG / BTEX MTBE, heavy metals, VOCs – dependant on usage of tanks
Removal and infilling of sludge beds (southern extent of site, circa.2001)	Ground gases (CO2, CH4, CO), SVOC (dependant on fill)
Extensive made ground deposits (forming the southern, SW and NE extents of site, various depths, compositions, dates of laying – tarmacs, ashes, rubbles, debris – noted on walkover)	Ground gases (CO2, CH4, CO) dependant on depth and organic content – physical contaminants such as PAHs, sharps, asbestos, TPH CWG, VOCs
Recent usage of various units for vehicle maintenance / breaking (noted on site walkover, poor working practises noted)	Hydrocarbons TPH CWG / BTEX MTBE, heavy metals, VOCs
Various areas of heaped or fly-tipped debris (noted on walkover, in car-parking areas, SW extent of site, NW extent of site, in and around the former mill area, adjacent to and within various units)	Various contaminants – most likely comprising heavy metals, PAHs, TPH CWG, PCBs
Noted exterior areas of hydrocarbon and chemical storage (NW extent, within and without various units, central area of mill area – release noted)	Hydrocarbons TPH CWG / BTEX MTBE, heavy metals, VOCs
Potentially asbestos corrugated roofing on various structures, also noted fragmented in SW extent of site, central mill area, within units)	Asbestos (fragmented, intact, free fibre)
Likely release of hydrocarbons and chemicals into pre-existing drainage gullies, channels and sumps (noted on walkover, associated with present-usage and prior mill usage / infrastructure)	Hydrocarbons TPH CWG / BTEX MTBE, heavy metals
Various contemporary and historical burning events with associated melted, burnt debris and refuse (noted on satellite imagery, street view imagery and on the site walkover, NW extent of mill area, car-parking area, centrally on site)	PAHs, heavy metal presence

#### 7.1.2 OFFSITE

• Sewage works (present approx.52m SE from at least circa.1902, extended by circa,1950 & 1955/86 and full removed and infilled by circa.1971/76)

Potential Sources and Associated Contaminants Identified						
Source	Potential Contaminants of Concern					
Sewage works (present approx.52m SE from at least circa.1902, extended by circa,1950 & 1955/86 and full removed and infilled by circa.1971/76)	Ground gases (CO2, CH4, CO) dependant on depth and organic content					

#### 7.2 PATHWAYS

A pathway is defined as a mechanism or route by which a contaminant comes into contact with, or otherwise affects a receptor. Pathways by which the identified receptors may be impacted upon in the context of the proposed development are identified as follows:

- Ingestion (direct and indirect via crop uptake);
- Dermal contact;
- Inhalation;
- Plant uptake;
- Direct contact by buried structures (i.e. pipe degradation and leaching, pH & Sulphate attack on concrete); and
- Leaching of soluble contamination into groundwater.

#### 7.3 RECEPTORS

Receptors are defined as people, living organisms, ecological systems, controlled waters, atmosphere, structures and utilities that could be adversely affected by contaminant(s).

- Human Health;
  - o Current users of the site;
  - Future users of the site;
  - Users of neighbouring sites;
  - o Construction workers;
  - o Services personnel working in trenches;
  - o Construction Materials;
- Buried concrete, which may be affected by high concentrations of sulphate and/or low pH, in the soils and groundwater underlying the site;

- Buried water pipes;
- Controlled Waters;
- Ecological Receptors; and
- Flora and fauna using the proposed development.

The site's present usage and likely future proposals are understood to be **commercial**, as such the likely receptors are site workers during site development, end-users of the site following redevelopment (i.e. site workers & service personnel, visitors, customers), controlled waters (i.e. aquifers, watercourses), adjacent receptors (neighbours, flora and fauna, ecological receptors) and building fabric and buried utilities.

#### 8.0 CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) is a hypothesis of the nature and sources of contamination, potential receptors that may be the recipient of contamination arising from those sources and any pathways that may exist. It creates a plausible source-pathway-receptor pollutant linkage (hazard), set within the context of the ground and proposed end use of the site.

#### 8.1 PRELIMINARY CONCEPTUAL SITE MODEL

#### 8.1.1 SOIL CONTAMINATION

The site presently comprises into two large fields, designated 'Field A' and 'Field B', a car-parking / car dealership area (within which lots No.101 to 106 are located) and the former Syston Mill area (within which further plots and units are located) – please see Appendix C for a zoned site plan (both the larger areas, alongside the plot and unit designations within each zone). Historically, the site has been occupied by Syston Mill since at least circa.1883 through until the present-day, having seen various usages (initial usage unknown, subsequently followed by leather, fibre board and unspecified 'factory' usage, followed by the present-day, various vehicle workshop and unspecified commercial usages). Whilst the former, varying mill usages within the north of site are considered potential sources of contamination (i.e. industrial usages, tanks, various erections, demolitions,

#### Castledine Environmental

usage of hydrocarbons, PACM cladding and roofing), the present-day state of the site, varying usages and extensive areas of made ground and debris, refuse and burning events are considered the most pertinent sources of contamination identified.

#### 8.1.2 GROUND GAS AND HAZARDOUS VAPOURS

A number of potentially significant ground gas and hazardous vapour sources have been identified both historically and contemporaneously on site.

Historical sources of possible ground gas generation include the removal and infilled of former mill ponds, channels, underlying infrastructure (likely waterwheel) and weir in the northern, north eastern and eastern extents of site; the removal and infilling of at least 4 No. large sludge beds in the southern extent of site; and the removal and infilling of a similar, sewage works feature approximately 52m south east of site. Contemporary potential sources of ground gas generation include extensive, potentially deep made ground on and around site (with potentially high levels of organic content) and nearby alluvial deposits; alongside the potential for the break-down of hydrocarbons below site, following significant evidence of hydrocarbon / chemical release and spillages being noted on site.

In regard to hazardous vapours, whilst historical potential sources have been noted on site (various known and unknown industrial processes and usages on site, various tanks of varying shapes and sizes), it is the contemporary vehicle maintenance, storage, breaking and disposal of associated chemicals, lubricants, oils and fuels in the present-day that are considered the most significant and pertinent sources of potential hazardous vapours on site.

#### TABLE 1. SUMMARY OF SIGNIFICANT POLLUTION LINKAGES

Contaminant	Contaminant Pathway Receptor		Probability of Pollutant Linkage	Conseq.	Risk		
Contaminated Soils (historical industrial usages and developments, contemporary industrial / commercial usages, vehicle maintenance, extensive made ground, various areas of fly-tipped debris, refuse, various burning events and associated melted debris, ash deposits)	Direct Ingestion & Direct Contact	Site Workers (during site works, excavations, eating and drinking)	Li	Md	М	Site w safety releva	
		Site Workers (during site works, excavations, eating and drinking)	Li	Md	М	survey to miti followi	
Contaminated Soils (historical industrial usages and developments, contemporary industrial / commercial usages, vehicle maintenance, extensive made ground, various areas of fly-tipped debris, refuse, various burning events and associated melted debris, ash deposits)	Crop Uptake & Direct Ingestion, Direct Contact	End Users (site workers & service personnel, visitors, customers)	Li	Md	м	Signifi contar entiret potent	
Contaminated Soils (historical industrial usages and developments, contemporary industrial / commercial usages, vehicle maintenance, extensive made ground, various areas of fly-tipped debris, refuse, various burning events and associated melted debris, ash deposits)	Inhalation of Dust, Dry Arisings	End Users (site workers & service personnel, visitors, customers)	Li	Md	м	includi tanks mainte variou debris stainin	
Contaminated Soils (historical industrial usages and developments, contemporary industrial / commercial usages, vehicle maintenance, extensive made ground, various areas of fly-tipped debris, refuse, various burning events and associated melted debris, ash deposits)	Crop Uptake & Direct Ingestion, Direct Contact	Flora and Fauna (on and offsite)	Li	Md	м	tipped mill ar extent (exten subse	
usages, vehicle maintenance, extensive made ground, various areas of fly-tipped debris, refuse, various burning events and associated melted debris, ash deposits)       (superficial highly permeable, bedrock predominantly low)       Secondary A & Secondary B Aq         Contaminated Soils (historical industrial usages and developments, contemporary industrial (commercial)       A       Secondary B Aq		Controlled Waters (River Wreak, Secondary A & Secondary B Aquifers)	Li	Sv	н	vehicle debris recomi and ca areas o arounc any fui formati sufficie on site	
		Services (impacted new potable supply piping)	Li	Md			
(superficial highly permeable, bedrock)		Site Workers & Excavations, End Users & Building Envelope (ingress and build-up)	Li	Md	М	Variou identif	
Volatile and Semi-volatile Organic Compounds (numerous historical and contemporary sources of hazardous vapours identified)			Li	Md	М	Variou identif	
Radon	Vertical and lateral migration	End Users & Building Envelope	UI	Md	L	Site is	

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#### **Possible Mitigation**

workers to wear appropriate PPE for health and ty reasons, suitable usage and adherence to vant HSE – alongside provision of an asbestos rey on existing structures – considered sufficient itigate hazards to site workers to LOW – wing confirmation via intrusive Phase II SI.

ificant and extensive potential sources of soil amination have been identified across the site ety (including both historical and contemporary ential sources – historical industrial usages Iding various erections, demolitions and usages, s and infilled ground / contemporary vehicle ntenance usages - poor working practises, ous events of burning with associated melted ris and ash deposits, hydrocarbon storage, ning and spillages, various areas of heaped, flyed debris). Pertinent areas include the northern area (including NW, central and southern nts) and the south western extent of site ensive infilling of former features here, sequent extensive made ground deposits, cle storage and areas of burnt debris, fly-tipped ris and iridescence atop standing waters). It is mmended that a phased intrusive is planned carried out on site, targeting the most likely as of contamination on site (i.e. works in and ind the mill area, leading into the SW extent and further areas requiring investigation). Trial pit ation and environmental sampling will be cient to outline likely remedial actions required ite.

ous potential sources of ground gas generation tified – see Section 8.1.2.

ous potential sources of hazardous vapours tified – see Section 8.1.2.

is not located in a Radon Affected Area.

#### Castledine Environmental

Based on the preliminary CSM for the site, an environmental risk assessment has been undertaken. A simple matrix can provide a consistent basis for decision making. It should be used with caution, recognising the over-simplification that it will normally represent. The probability and consequences are defined according to parameters relevant to the situation; the boundaries of risk acceptability (and tolerability, where relevant) indicated on the matrix provided in Table 2, can be tailored to the factors influencing the significance of the risk. Individual situations are mapped onto the matrix to provide a ready and consistent indication of their acceptability or tolerability.

		Consequence					
		Severe (Sv)	Medium (Md)	Mild (Mi)	Minor (Mr)		
Probability	High (Hi)	Very high risk	High risk	Moderate Risk	Moderate/ Low Risk		
	Likely (Li)	High risk	Moderate Risk	Moderate/Lo w Risk	Low Risk		
	Low Likelihood (Lw)	Moderate Risk	Moderate/ Low Risk	Low Risk	Very Low Risk		
	Unlikely (UI)	Moderate/ Low Risk	Low Risk	Very Low Risk	Very Low Risk		

#### TABLE 2. RISK CLASSIFICATION MATRIX

Source: CIRIA Report C552, Contaminated Land Risk Assessment. A Guide to Good Practice, 2001

These attributes are evaluated qualitatively against individual hazard assessments to determine the likelihood of a given hazard occurring. The risk evaluations for each plausible pollutant linkage are given in the last three columns of Table 1.

## **Castledine Environmental**

### TABLE 3. CLASSIFICATION OF RISK

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

Source: CIRIA Report C552, Contaminated Land Risk Assessment. A Guide to Good Practice, 2001

### 9.0 ENVIRONMENTAL RISK ASSESSMENT

Based on the information contained in this report, it is the opinion of Castledine Environmental that the site represents a **MODERATE** to **HIGH** level risk with respect to the present usage and risks to controlled waters, respectively.

It is recommended that a phased intrusive site investigation is planned and carried out on site.

This report should be submitted to your Local Planning Authority for agreement to allow the Phase 2 intrusive testing to be undertaken.

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#### 10.0 SUMMARY OF RISKS

#### 11.0 HUMAN HEALTH

### 11.1.1 PRESENT USERS OF THE SITE / SITE WORKERS

The risks to present-users of the site are considered to be moderate, due to the extensive, surface level potential contamination noted across the site (i.e. extensive made ground deposits, waste heaps, refuse tips, surface-level spillages and storages of wastes, hydrocarbons, chemicals), with hazards including the inhalation of dusts / vapours / gases, direct contact with soils and/or wastes, direct and indirect ingestion, surface water run-off and impact to potable supplies on site (if newer piping present). As such, it is recommended further investigation is planned and carried out on site.

### 12.0 CONTROLLED WATERS

The risks to controlled waters are considered to be high, due to the directly adjacent river Wreak and its associated channel, the level of extensive debris, refuse and made ground located directly atop the river banking, the presence of vulnerable Secondary A & B Aquifers below site and the presence of a surface water abstraction site directly south west of and downstream from site (providing irrigation to the adjacent agricultural fields). The extent and likely mobility of the contaminants noted on site (i.e. hydrocarbons, chemical storage, extensive made ground and ashy debris heaps adjacent to river channel) further increase the risks to controlled waters. Furthermore, it was evident on the day of the walkover that the former mill usage infrastructure (itself and likely and potential source of historical contamination) had been priorly used to dispose of hydrocarbon and chemical wastes, which should be investigated further (i.e. are these features draining to groundwaters, surface waters or direct to land via soakaways). As such, it is recommended further investigation is planned and carried out on site and that the subsequent remediation of the areas adjacent to watercourses is planned and carried out, once the extent of contamination and actual risks to controlled waters are known.

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### 13.0 STRUCTURES

### 13.1.1 GROUND GASES

Historical sources of possible ground gas generation include the removal and infilled of former mill ponds, channels, underlying infrastructure (likely waterwheel) and weir in the northern, north eastern and eastern extents of site; the removal and infilling of at least 4 No. large sludge beds in the southern extent of site; and the removal and infilling of a similar, sewage works feature approximately 52m south east of site. Contemporary potential sources of ground gas generation include extensive, potentially deep made ground on and around site (with potentially high levels of organic content) and nearby alluvial deposits; alongside the potential for the break-down of hydrocarbons below site, following significant evidence of hydrocarbon / chemical release and spillages being noted on site.

### 13.1.2 HAZARDOUS VAPOURS

In regard to hazardous vapours, whilst historical potential sources have been noted on site (various known and unknown industrial processes and usages on site, various tanks of varying shapes and sizes), it is the contemporary vehicle maintenance, storage, breaking and disposal of associated chemicals, lubricants, oils and fuels in the present-day that are considered the most significant and pertinent sources of potential hazardous vapours on site.

#### 13.1.3 POTABLE WATER SUPPLY PIPING

Hydrocarbon degradation and leaching can impact potable supply piping and thus impact potable supplies themselves, offering a potential risk to end-users via impacted water supplies. Given the usages and hydrocarbon presence observed onsite, it is recommended that the risk to potable water piping is investigated further.

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### 14.0 OFFSITE RECEPTORS

The site is located in a predominantly rural area, adjacent to a known, sensitive and impacted watercourse with areas of the site having been extended into former woodland / fielded areas. Additionally, standing water in the form of small ponds, a lagoon and an inner river channel have been identified, which may further increase the risk for offsite impact, alongside the presence of a surface water abstraction site directly south west of and downstream from site (providing irrigation to the adjacent agricultural fields). As such, the extent, nature and likely mobility of contamination on site should be investigated, as hazard are presently considered to exist to offsite receptors (including controlled waters, offsite ecological receptors and human receptors – via spray irrigation).

### 15.0 WASTE CLASSIFICATION

Due to the extent and varied nature of the likely contamination on site, it is recommended that all arisings produced during the site investigation be WAC (waste acceptance classification) tested, to ascertain the suitability of the material for disposal at an accredited waste facility.

- Any waste generated during site works will need to be disposed of at a suitable and accredited landfill and in accordance with current waste regulations.
- Results of any WAC testing should be given to relevant waste/landfill site so they can be reviewed by a qualified waste assessor.
- Separate waste steams should be formed (i.e. rubbles and soils, WEEE wastes, vehicle and mechanical wastes, hydrocarbon and chemical containers and likely hydrocarbon impacted wastes) and all ticketing, invoicing and evidence of their removal and acceptance at suitably accredited landfills should be retained.

### **Castledine Environmental**

#### 16.0 **RECOMMENDATIONS**

At this stage, it is recommended that a phased intrusive site investigation is planned and carried out. The site works could be phased so as to assess particular and pertinent areas of site initially, thus being expanded into areas considered less pertinent. Areas of most concern include the existing mill area (including within and without units, the central, northern, north western and southern extents - areas adjacent to existing watercourses); followed by the car-dealership and storage areas (extending in the south western and north eastern extents of site formerly occupied by ecological receptors); with the remaining works comprising a ground gas / VOC monitoring regime (if required) alongside a survey of the existing, below ground infrastructure (associated with the prior industrial usage an the contemporary, poor working practises commercial usages) and its impact on controlled waters. Generic environmental sampling should be carried out site-wide, with targeted SVOC, TPH CWG / BTEX, MTBE, PID usage and asbestos screening be carried out.

It is likely that separate site investigation proposals will be required for each extent and pertinent area of the site. This can be done on an asrequired basis and/or ground gas monitoring can be carried out in the future, should site development proposals require such.

A Watching Brief (as outlined in Appendix E) should be carried out by the site supervisor during the course of demolition, site clearance and construction works for any obvious contamination (e.g. oil spillage in ground, buried waste, possible asbestos containing material). Should previously unreported or undiscovered contamination be identified, then development should stop and Castledine Environmental should be contacted to determine if further assessment or changes to the remediation scheme are required.

## **Castledine Environmental**

### 17.0 REFERENCES

### 17.1 LEGISLATION AND REGULATIONS

### 17.1.1 ACTS

[1] Environmental Protection Act 1990, Part IIA: inserted by Environment Act 1995, Section 57. See Environment Act 1995 for text of Part IIA.

### 17.1.2 PLANNING REGULATIONS

- [2] The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 SI1999/No.293
- [3] The Town and Country Planning (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2000
   SI2000/No.2867
- [4] The Town and Country Planning (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2017 SI2017/No.571

### 17.1.3 CONTAMINATED LAND REGULATIONS

- [5] The Contaminated Land (England) Regulations 2000. SI2000/No.227
- [6] The Contaminated Land (England) (Amendment) Regulations 2001SI2001/No.663
- [7] The Contaminated Land (England) Regulations 2006SI2006/No.1380

### 17.2 STATUTORY GUIDANCE

- [8] Department of Environment, Food and Rural Affairs. 2012.
   Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance. Department of Environment, Food and Rural Affairs
- [9] Communities and local Government, 2023: National Planning Policy Framework.

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### 17.3 BRITISH STANDARDS

- [10] BS 5930:2015+A1:2020 Code of practice for site investigations
- [11] BS 10175:2011+A2:2017 Investigation of potentially contaminated sites Code of practice
- [12] BS 8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings
- [13] BS 8576:2013 Guidance on investigations for ground gas.Permanent gases and Volatile Organic Compounds (VOCs)
- [14] Bs 10176:2020 Taking Soil Sample for Determination of VolatileOrganic Compounds (VOCs)

### 17.4 NON-STATUTORY TECHNICAL GUIDANCE

### 17.4.1 ENVIRONMENT AGENCY

[15] Land Contamination Risk Management (LCRM) 2020, updated 2023

### 17.4.2 CIRIA PUBLICATIONS

- [16] Wilson, S., Oliver, S., Mallett, H., Hutchings, H., and Card, G. 2007, C 665 Assessing risks posed by hazardous ground gases to buildings London: Construction Industry Research and Information Association
- [17] Mallett, H., Cox, L., Wilson, S. and Corban, M... 2014, C 735 Good practice on the testing and verification of protection systems for buildings against hazardous ground gases London: Construction Industry Research and Information Association

### 17.4.3 CL:AIRE

 [18] Card G, Wilson S, Mortimer S. 2012. A Pragmatic Approach to Ground Gas Risk Assessment. CL:AIRE Research Bulletin RB17.
 CL:AIRE, London, UK. ISSN 2047- 6450 (Online)

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18.0 APPENDICES

## APPENDIX A ENVIRONMENTAL SEARCH

Separate Groundsure Report

## APPENDIX B HISTORICAL MAPPING

Separate Map Packs (2 No. files)





## **Order Details**

Date:	03/12/2024
Your ref:	3860D Syston
Our Ref:	GS-LYR-XRP-NIK-6ZH

## **Site Details**

Location:	461492 312286
Area:	7.55 ha
Authority:	Charnwood Borough Council 7







## **Summary of findings**

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
<u>15</u> >	<u>1.1</u> >	Historical industrial land uses >	7	3	17	6	-
<u>17</u> >	<u>1.2</u> >	Historical tanks >	4	0	5	0	_
<u>18</u> >	<u>1.3</u> >	Historical energy features >	0	0	0	2	_
18	1.4	Historical petrol stations	0	0	0	0	-
<u>18</u> >	<u>1.5</u> >	Historical garages >	0	0	0	2	-
19	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
<u>20</u> >	<u>2.1</u> >	Historical industrial land uses >	8	3	24	8	-
<u>22</u> >	<u>2.2</u> >	Historical tanks >	5	0	5	0	_
<u>23</u> >	<u>2.3</u> >	Historical energy features >	0	0	0	7	_
23	2.4	Historical petrol stations	0	0	0	0	-
<u>24</u> >	<u>2.5</u> >	Historical garages >	0	0	0	2	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
25	3.1	Active or recent landfill	0	0	0	0	-
25	3.2	Historical landfill (BGS records)	0	0	0	0	-
26	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
<u>26</u> >	<u>3.4</u> >	Historical landfill (EA/NRW records) >	1	0	1	3	-
27	3.5	Historical waste sites	0	0	0	0	-
<u>27</u> >	<u>3.6</u> >	Licensed waste sites >	0	0	7	0	-
<u>29</u> >	<u>3.7</u> >	Waste exemptions >	0	0	0	12	-
Page	Section	<u>Current industrial land use</u> >	On site	0-50m	50-250m	250-500m	500-2000m
<u>31</u> >	<u>4.1</u> >	<u>Recent industrial land uses</u> >	5	0	1	-	-
32	4.2	Current or recent petrol stations	0	0	0	0	-
32	4.3	Electricity cables	0	0	0	0	-
32	4.4	Gas pipelines	0	0	0	0	-
32	4.5	Sites determined as Contaminated Land	0	0	0	0	-





Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

33	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
33	4.7	Regulated explosive sites	0	0	0	0	-
33	4.8	Hazardous substance storage/usage	0	0	0	0	-
33	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
33	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
<u>34</u> >	<u>4.11</u> >	Licensed pollutant release (Part A(2)/B) >	0	1	0	1	-
34	4.12	Radioactive Substance Authorisations	0	0	0	0	-
<u>34</u> >	<u>4.13</u> >	Licensed Discharges to controlled waters >	0	0	4	0	-
35	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
35	4.15	Pollutant release to public sewer	0	0	0	0	-
35	4.16	List 1 Dangerous Substances	0	0	0	0	-
36	4.17	List 2 Dangerous Substances	0	0	0	0	-
<u>36</u> >	<u>4.18</u> >	Pollution Incidents (EA/NRW) >	0	0	2	4	-
37	4.19	Pollution inventory substances	0	0	0	0	-
37	4.20	Pollution inventory waste transfers	0	0	0	0	-
37	4.21	Pollution inventory radioactive waste	0	0	0	0	-
37 Page	4.21 Section	Pollution inventory radioactive waste <u>Hydrogeology</u> >	0 On site	0 0-50m	0 50-250m	0 250-500m	- 500-2000m
			On site		50-250m		- 500-2000m
Page	Section	Hydrogeology >	On site Identified (	0-50m	50-250m		- 500-2000m
Page <u>38</u> >	Section <u>5.1</u> >	Hydrogeology > Superficial aquifer >	On site Identified ( Identified (	0-50m within 500m	50-250m 1)		- 500-2000m
Page <u>38</u> > <u>40</u> >	Section <u>5.1</u> > <u>5.2</u> >	Hydrogeology       >         Superficial aquifer       >         Bedrock aquifer       >	On site Identified ( Identified (	0-50m within 500m within 500m within 50m)	50-250m 1)		- 500-2000m
Page <u>38</u> > <u>40</u> > <u>42</u> >	Section <u>5.1</u> > <u>5.2</u> > <u>5.3</u> >	Hydrogeology >         Superficial aquifer >         Bedrock aquifer >         Groundwater vulnerability >	On site Identified ( Identified ( Identified (	0-50m within 500m within 500m within 50m) iin 0m)	50-250m 1)		- 500-2000m
Page <u>38</u> > <u>40</u> > <u>42</u> > 43	Section 5.1 > 5.2 > 5.3 > 5.4	Hydrogeology >         Superficial aquifer >         Bedrock aquifer >         Groundwater vulnerability >         Groundwater vulnerability - soluble rock risk	On site Identified ( Identified ( Identified ( None (with	0-50m within 500m within 500m within 50m) iin 0m)	50-250m 1)		- 500-2000m
Page         38         40         42         43	Section 5.1 > 5.2 > 5.3 > 5.4 5.5	Hydrogeology >         Superficial aquifer >         Bedrock aquifer >         Groundwater vulnerability >         Groundwater vulnerability- soluble rock risk         Groundwater vulnerability- local information	On site Identified ( Identified ( Identified ( None (with None (with	0-50m within 500m within 500m within 50m) ain 0m)	50-250m 1)	250-500m	
Page         38         40         42         43         43         44	Section         5.1 >         5.2 >         5.3 >         5.4         5.5         5.6 >	Hydrogeology >         Superficial aquifer >         Bedrock aquifer >         Groundwater vulnerability >         Groundwater vulnerability- soluble rock risk         Groundwater vulnerability- local information         Groundwater abstractions >	On site Identified ( Identified ( Identified ( None (with None (with 0	0-50m within 500m within 500m within 50m) iin 0m) iin 0m) 0	50-250m 1) 0	250-500m	9
38       >         40       >         42       >         43       >         44       >         46       >	Section 5.1 > 5.2 > 5.3 > 5.4 5.5 5.6 > 5.6 > 5.7 >	Hydrogeology >         Superficial aquifer >         Bedrock aquifer >         Groundwater vulnerability >         Groundwater vulnerability- soluble rock risk         Groundwater vulnerability- local information         Groundwater abstractions >         Surface water abstractions >	On site Identified ( Identified ( Identified ( None (with None (with 0 0	0-50m within 500m within 500m within 50m) in 0m) in 0m) 0 1	50-250m ) ) 0 0 0	250-500m 0 1	9 4
38         40         42         43         43         43         43         43         43         43         43         43         43         43         43         43         43         43         43         43         43         44         >         46         48	Section 5.1 > 5.2 > 5.3 > 5.4 5.5 5.6 > 5.6 5.7 > 5.8	Hydrogeology >   Superficial aquifer >   Bedrock aquifer >   Groundwater vulnerability >   Groundwater vulnerability- soluble rock risk   Groundwater vulnerability- local information   Groundwater abstractions >   Surface water abstractions >   Potable abstractions	On site Identified ( Identified ( Identified ( None (with None (with 0 0 0 0	0-50m within 500m within 500m within 50m) in 0m) in 0m) 0 1 0 1 0	50-250m	250-500m 0 1 0	9 4
38         40         42         43         43         44         48         48	Section 5.1 > 5.2 > 5.3 > 5.4 5.5 5.6 > 5.6 5.8 5.8 5.9	Hydrogeology >Superficial aquifer >Bedrock aquifer >Groundwater vulnerability >Groundwater vulnerability- soluble rock riskGroundwater vulnerability- local informationGroundwater abstractions >Surface water abstractions >Potable abstractionsSource Protection Zones	On site Identified ( Identified ( Identified ( None (with None (with 0 0 0 0 0	0-50m within 500m within 500m within 50m) ain 0m) ain 0m) 0 1 0 1 0 0	50-250m	250-500m 0 1 0 0	9 4



Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

<u>51</u> >	<u>6.2</u> >	Surface water features >	1	3	10	-	-
<u>52</u> >	<u>6.3</u> >	WFD Surface water body catchments >	2	-	-	-	-
<u>52</u> >	<u>6.4</u> >	WFD Surface water bodies >	1	0	1	-	-
<u>53</u> >	<u>6.5</u> >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
<u>54</u> >	<u>7.1</u> >	<u>Risk of flooding from rivers and the sea</u> >	High (withi	n 50m)			
<u>55</u> >	<u>7.2</u> >	Historical Flood Events >	5	2	8	-	-
56	7.3	Flood Defences	0	0	0	-	-
56	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
56	7.5	Flood Storage Areas	0	0	0	-	-
<u>57</u> >	<u>7.6</u> >	Flood Zone 2 >	Identified (	within 50m)			
<u>58</u> >	<u>7.7</u> >	<u>Flood Zone 3</u> >	Identified (	within 50m)			
Page	Section	Surface water flooding >					
<u>59</u> >	<u>8.1</u> >	Surface water flooding >	1 in 30 yea	r, 0.3m - 1.0r	m (within 50	m)	
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Page	Section	Groundwater flooding >					
Page <u>61</u> >	<u>9.1</u> >	Groundwater flooding > Groundwater flooding >	Low (withir	ո 50m)			
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<u>61</u> >	<u>9.1</u> >	<u>Groundwater flooding</u> >			50-250m O	250-500m 0	500-2000m 0
<u>61</u> > Page	<u>9.1</u> > Section	Groundwater flooding > Environmental designations >	On site	0-50m			
<u>61</u> > Page 62	9.1 > Section 10.1	Groundwater flooding > Environmental designations > Sites of Special Scientific Interest (SSSI)	On site	0-50m	0	0	0
61 > Page 62 63	9.1       >         Section       10.1         10.2       10.2	Groundwater flooding       >         Environmental designations       >         Sites of Special Scientific Interest (SSSI)         Conserved wetland sites (Ramsar sites)	On site O O	0-50m 0 0	0	0	0
61 > Page 62 63 63	9.1 >         Section         10.1         10.2         10.3	Groundwater flooding       >         Environmental designations       >         Sites of Special Scientific Interest (SSSI)         Conserved wetland sites (Ramsar sites)         Special Areas of Conservation (SAC)	On site O O O	0-50m 0 0	0 0 0	0 0 0	0 0 0
<ul> <li>61 &gt;</li> <li>Page</li> <li>62</li> <li>63</li> <li>63</li> <li>63</li> </ul>	<pre>9.1 &gt; Section 10.1 10.2 10.3 10.4</pre>	Groundwater flooding >         Environmental designations >         Sites of Special Scientific Interest (SSSI)         Conserved wetland sites (Ramsar sites)         Special Areas of Conservation (SAC)         Special Protection Areas (SPA)	On site 0 0 0 0 0 0	0-50m 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0 0
<ul> <li>61 &gt;</li> <li>Page</li> <li>62</li> <li>63</li> <li>63</li> <li>63</li> <li>63</li> <li>63</li> </ul>	<pre>9.1 &gt; Section 10.1 10.2 10.3 10.4 10.5</pre>	Groundwater flooding >         Environmental designations >         Sites of Special Scientific Interest (SSSI)         Conserved wetland sites (Ramsar sites)         Special Areas of Conservation (SAC)         Special Protection Areas (SPA)         National Nature Reserves (NNR)	On site 0 0 0 0 0 0 0	0-50m 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
61 > Page 62 63 63 63 63 63 63 64 >	<pre>9.1 &gt; Section 10.1 10.2 10.3 10.4 10.5 10.6 &gt;</pre>	Groundwater flooding >         Environmental designations >         Sites of Special Scientific Interest (SSSI)         Conserved wetland sites (Ramsar sites)         Special Areas of Conservation (SAC)         Special Protection Areas (SPA)         National Nature Reserves (NNR)         Local Nature Reserves (LNR) >	On site 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0		0 0 0 0 0	0 0 0 0 0 1
61       >         Page          62          63          63          63          64       >	<pre>9.1 &gt; Section 10.1 10.2 10.3 10.4 10.5 10.6 &gt; 10.7</pre>	Groundwater flooding >         Environmental designations >         Sites of Special Scientific Interest (SSSI)         Conserved wetland sites (Ramsar sites)         Special Areas of Conservation (SAC)         Special Protection Areas (SPA)         National Nature Reserves (NNR)         Local Nature Reserves (LNR) >         Designated Ancient Woodland	On site 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0			0 0 0 0 0 1 0
61       >         Page       62         63       63         63       63         64       >	<pre>9.1 &gt; Section 10.1 10.2 10.3 10.4 10.5 10.6 &gt; 10.7 10.8</pre>	Groundwater flooding >         Environmental designations >         Sites of Special Scientific Interest (SSSI)         Conserved wetland sites (Ramsar sites)         Special Areas of Conservation (SAC)         Special Protection Areas (SPA)         National Nature Reserves (NNR)         Local Nature Reserves (LNR) >         Designated Ancient Woodland         Biosphere Reserves	On site 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0 0			0 0 0 0 1 0 0
61       >         Page          62          63          63          63          64          64          64	<pre>9.1 &gt; Section 10.1 10.2 10.3 10.4 10.5 10.6 &gt; 10.7 10.8 10.9</pre>	Groundwater flooding >Environmental designations >Sites of Special Scientific Interest (SSSI)Conserved wetland sites (Ramsar sites)Special Areas of Conservation (SAC)Special Protection Areas (SPA)National Nature Reserves (NNR)Local Nature Reserves (LNR) >Designated Ancient WoodlandBiosphere ReservesForest Parks	On site 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0 0 0 0 0 0 0			
61       >         Page       62         63       63         63       63         64       >         64       64         65       5	<pre>9.1 &gt; Section 10.1 10.2 10.3 10.4 10.5 10.6 &gt; 10.7 10.8 10.9 10.10</pre>	Groundwater flooding >Environmental designations >Sites of Special Scientific Interest (SSSI)Conserved wetland sites (Ramsar sites)Special Areas of Conservation (SAC)Special Protection Areas (SPA)National Nature Reserves (NNR)Local Nature Reserves (LNR) >Designated Ancient WoodlandBiosphere ReservesForest ParksMarine Conservation Zones	On site 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0 0 0 0 0 0 0			





Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

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§6 >10.16 >Nitrate Vulnerable Zones >10000§7 >10.17 >SSSI Impact Risk Zones >20000810.18 SSU Jults0000000PageSectionVisual and cultural designations >00000000011.1Vorid Heritage Sites00	65	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
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70 >11.4 >Listed Buildings >001711.5Conservation Areas000000711.6Scheduled Ancient Monuments000000711.7Registered Parks and Gardens000000721.17Agricultural designations >00.000007312.2Open Access Land00000007412.4Environmental Stewardship Schemes0000007412.4Environmental Stewardship Schemes0000007513.4Pointy Habitat Inventory >00000007613.4Identore Parement Orders00000007613.4Identore Parement Orders00000007613.4Identore Parement Orders000000007714.1Identore Parement Orders0000000007714.1Identore Parement Orders0000000000000000000000000<	70	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
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74 >12.5 >Countryside Stewardship Schemes >002PageSectionHabitat designations >On site00275 >13.1 >Priority Habitat Inventory >00176 13.2 Habitat Networks000176 13.3 Open Mosaic Habitat000076 13.4 Imestone Pavement Orders000076 13.4 Ide Store Pavement Orders000077 >14.1 >10k Availability >Called Store Pavement1387-77 >14.2 >Artificial and made ground (10k) >1387-						0	-	-
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TogeSectionInterfer designations75 >13.1 >Priority Habitat Inventory >001-7613.2Habitat Networks0007613.3Open Mosaic Habitat0007613.4Limestone Pavement Orders00076SectionGeology 1:10,000 scale >00077 >14.1 >10k Availability >Identified (within 500m)50-250m500-200m78 >14.2 >Artificial and made ground (10k) >1387-	73 73	12.2 12.3	Open Access Land Tree Felling Licences	0	0	0	-	- -
7613.2Habitat Networks0007613.3Open Mosaic Habitat00007613.4Limestone Pavement Orders000078SectionGeology 1:10,000 scale >On site0-50m50-250m250-50m50-200m77 >14.1 >Iok Availability >Iok Availability >1387-	73 73 74	12.2 12.3 12.4	Open Access Land Tree Felling Licences Environmental Stewardship Schemes	0 0	0 0 0	0 0	-	- - -
7613.3Open Mosaic Habitat000-7613.4Limestone Pavement Orders000PageSectionGeology 1:10,000 scale >On site0-50m50-250m50-200m77 >14.1 >Iok Availability >Iok Availability >Iok -1387-	73 73 74 <u>74</u> >	12.2 12.3 12.4 <u>12.5</u> >	Open Access Land Tree Felling Licences Environmental Stewardship Schemes <u>Countryside Stewardship Schemes</u> >	0 0 0	0 0 0	0 0 2	- - - 250-500m	- - - 500-2000m
7613.4Limestone Pavement Orders000-PageSectionGeology 1:10,000 scale >On site0-50m50-250m250-50m50-200m77 >14.1 >10k Availability >Identified Utility >1387-78 >14.2 >Artificial and made ground (10k) >1387-	73 73 74 <b>74 &gt;</b> Page	12.2 12.3 12.4 <b>12.5</b> > Section	Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes > Habitat designations >	0 0 0 0 On site	0 0 0 0 0-50m	0 0 2 50-250m	- - - 250-500m	- - - 500-2000m
Page         Section         Geology 1:10,000 scale >         On site         0-50m         50-250m         500-200m           77 >         14.1 >         10k Availability >         Identified UNITIANS         UNITIAN	73 73 74 <b>74 &gt;</b> Page <b>75 &gt;</b>	12.2 12.3 12.4 <b>12.5</b> > Section <b>13.1</b> >	Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes > Habitat designations > Priority Habitat Inventory >	0 0 0 0 0 0 0 0	0 0 0 0 0-50m	0 0 2 50-250m 1	- - - 250-500m -	- - - 500-2000m -
77 >14.1 >10k Availability >Identified (within 500m)78 >14.2 >Artificial and made ground (10k) >1387	73 73 74 <b>74</b> > Page <b>75</b> > 76	12.2 12.3 12.4 <b>12.5 &gt;</b> Section <b>13.1 &gt;</b> 13.2	Open Access LandTree Felling LicencesEnvironmental Stewardship SchemesCountryside Stewardship Schemes >Habitat designations >Priority Habitat Inventory >Habitat Networks	0 0 0 0 0 0 0 0	0 0 0 0 0-50m 0 0	0 0 2 50-250m 1 0	- - - 250-500m - -	- - - 500-2000m - -
78 >         14.2 >         Artificial and made ground (10k) >         1         3         8         7         -	73 73 74 <b>74 &gt;</b> Page <b>75 &gt;</b> 76 76	12.2 12.3 12.4 <b>12.5 &gt;</b> Section <b>13.1 &gt;</b> 13.2 13.3	Open Access LandTree Felling LicencesEnvironmental Stewardship SchemesCountryside Stewardship Schemes >Habitat designations >Priority Habitat Inventory >Habitat NetworksOpen Mosaic Habitat	0 0 0 0 0 0 0 0 0	0 0 0 0 0-50m 0 0	0 0 2 50-250m 1 0	- - - 250-500m - -	- - 500-2000m - - -
	<ul> <li>73</li> <li>73</li> <li>74</li> <li>74 &gt;</li> <li>Page</li> <li>75 &gt;</li> <li>76</li> <li>76</li> <li>76</li> <li>76</li> <li>76</li> </ul>	12.2 12.3 12.4 <b>12.5 &gt;</b> Section <b>13.1 &gt;</b> 13.2 13.3 13.4	Open Access LandTree Felling LicencesEnvironmental Stewardship SchemesCountryside Stewardship Schemes >Habitat designations >Priority Habitat Inventory >Habitat NetworksOpen Mosaic HabitatLimestone Pavement Orders	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0-50m 0 0 0 0	0 0 2 50-250m 1 0 0		
<b><u>80</u> &gt; <u>14.3</u> &gt; <u>Superficial geology (10k)</u> &gt; 1 0 3 5 -</b>	<ul> <li>73</li> <li>74</li> <li>74 &gt;</li> <li>74 &gt;</li> <li>74 &gt;</li> <li>76 </li> <li>71 </li> <li>71 </li> <li>71 </li> <li>72 </li> <li>74 </li></ul>	12.2 12.3 12.4 <b>12.5 &gt;</b> Section 13.2 13.3 13.4 Section	Open Access LandTree Felling LicencesEnvironmental Stewardship SchemesCountryside Stewardship Schemes >Habitat designations >Priority Habitat Inventory >Habitat NetworksOpen Mosaic HabitatLimestone Pavement OrdersGeology 1:10,000 scale >	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 2 50-250m 1 0 0 0 0 50-250m		
	<ul> <li>73</li> <li>73</li> <li>74</li> <li>74 &gt;</li> <li>Page</li> <li>75 &gt;</li> <li>76</li> <li>76</li> <li>76</li> <li>76</li> <li>76</li> <li>76</li> <li>78</li> <li>98</li> <li>78</li> <li>79</li> <li>79</li> <li>79</li> <li>79</li> <li>79</li> <li>70</li> <li>70&lt;</li></ul>	<pre>12.2 12.3 12.4 12.5 &gt; Section 13.2 13.3 13.4 Section</pre>	Open Access LandTree Felling LicencesEnvironmental Stewardship SchemesCountryside Stewardship Schemes >Habitat designations >Priority Habitat Inventory >Habitat NetworksOpen Mosaic HabitatLimestone Pavement OrdersGeology 1:10,000 scale >10k Availability >	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0-50m 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 2 50-250m 1 0 0 0 50-250m	- - - 250-500m	

5



Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

81	14.4	Landslip (10k)	0	0	0	0	-
<u>82</u> >	<u>14.5</u> >	Bedrock geology (10k) >	2	0	0	1	-
<u>83</u> >	<u>14.6</u> >	Bedrock faults and other linear features (10k) >	1	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
<u>84</u> >	<u>15.1</u> >	50k Availability >	Identified (	within 500m	)		
<u>85</u> >	<u>15.2</u> >	Artificial and made ground (50k) >	1	0	2	7	-
<u>86</u> >	<u>15.3</u> >	Artificial ground permeability (50k) >	1	0	-	-	-
<u>87</u> >	<u>15.4</u> >	Superficial geology (50k) >	1	0	3	4	-
<u>88</u> >	<u>15.5</u> >	Superficial permeability (50k) >	Identified (	within 50m)			
88	15.6	Landslip (50k)	0	0	0	0	-
88	15.7	Landslip permeability (50k)	None (with	in 50m)			
<u>89</u> >	<u>15.8</u> >	Bedrock geology (50k) >	2	0	0	1	-
<u>90</u> >	<u>15.9</u> >	Bedrock permeability (50k) >	Identified (	within 50m)			
<u>90</u> >	<u>15.10</u> >	Bedrock faults and other linear features (50k) >	1	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
<u>91</u> >	<u>16.1</u> >	BGS Boreholes >	0	0	2	-	-
Page	Section	Natural ground subsidence >					
<u>92</u> >	<u>17.1</u> >	Shrink swell clays >	Very low (w	vithin 50m)			
<u>93</u> >	<u>17.2</u> >	<u>Running sands</u> >	Low (withir	າ 50m)			
<u>95</u> >	<u>17.3</u> >	<u>Compressible deposits</u> >	Moderate (	within 50m)			
<u>97</u> >	<u>17.4</u> >	<u>Collapsible deposits</u> >	Very low (w	vithin 50m)			
<u>99</u> >	<u>17.5</u> >	<u>Landslides</u> >	Very low (w	vithin 50m)			
<u>100</u> >	<u>17.6</u> >	Ground dissolution of soluble rocks >	Negligible (	within 50m)			
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
<u>102</u> >	<u>18.1</u> >	<u>BritPits</u> >	0	0	1	1	-
<u>103</u> >	<u>18.2</u> >	Surface ground workings >	3	3	11	-	-
104	18.3	Underground workings	0	0	0	0	0
104	18.4	Underground mining extents	0	0	0	0	-

6



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105	18.6	Non-coal mining	0	0	0	0	0
105	18.7	JPB mining areas	None (within 0m)				
105	18.8	The Coal Authority non-coal mining	0	0	0	0	-
<u>105</u> >	<u>18.9</u> >	<u>Researched mining</u> >	0	0	0	2	-
106	18.10	Mining record office plans	0	0	0	0	-
106	18.11	BGS mine plans	0	0	0	0	-
106	18.12	Coal mining	None (with	in Om)			
106	18.13	Brine areas	None (with	in Om)			
107	18.14	Gypsum areas	None (with	in Om)			
107	18.15	Tin mining	None (with	in Om)			
107	18.16	Clay mining	None (with	in Om)			
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
108	19.1	Natural cavities	0	0	0	0	-
108	19.2	Mining cavities	0	0	0	0	0
108	19.3	Reported recent incidents	0	0	0	0	-
108	19.4	Historical incidents	0	0	0	0	-
109	19.5	National karst database	0	0	0	0	-
Page	Section	<u>Radon</u> >					
<u>110</u> >	<u>20.1</u> >	Radon >	Less than 1	% (within Or	n)		
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
<u>112</u> >	<u>21.1</u> >	BGS Estimated Background Soil Chemistry >	3	1	-	-	-
<u>112</u> >	<u>21.2</u> >	BGS Estimated Urban Soil Chemistry >	7	4	-	-	-
113	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	<b><u>Railway infrastructure and projects</u> &gt;</b>	On site	0-50m	50-250m	250-500m	500-2000m
114	22.1	Underground railways (London)	0	0	0	-	-
114	22.2	Underground railways (Non-London)	0	0	0	-	-
115	22.3	Railway tunnels	0	0	0	-	-
115	22.4	Historical railway and tunnel features	0	0	0	-	-
115	22.5	Royal Mail tunnels	0	0	0	-	-





Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

115	22.6	Historical railways	0	0	0	-	-
<u>115</u> >	<u>22.7</u> >	<u>Railways</u> >	0	12	7	-	-
116	22.8	Crossrail 2	0	0	0	0	-
117	22.9	HS2	0	0	0	0	_







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## **Recent aerial photograph**



Capture Date: 10/07/2022 Site Area: 7.55ha







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## **Recent site history - 2019 aerial photograph**



Capture Date: 29/03/2019 Site Area: 7.55ha







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## Recent site history - 2013 aerial photograph



Capture Date: 18/07/2013 Site Area: 7.55ha







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## Recent site history - 2010 aerial photograph



Capture Date: 25/10/2010 Site Area: 7.55ha







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## **Recent site history - 1999 aerial photograph**



Capture Date: 18/06/1999 Site Area: 7.55ha







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## OS MasterMap site plan



Site Area: 7.55ha

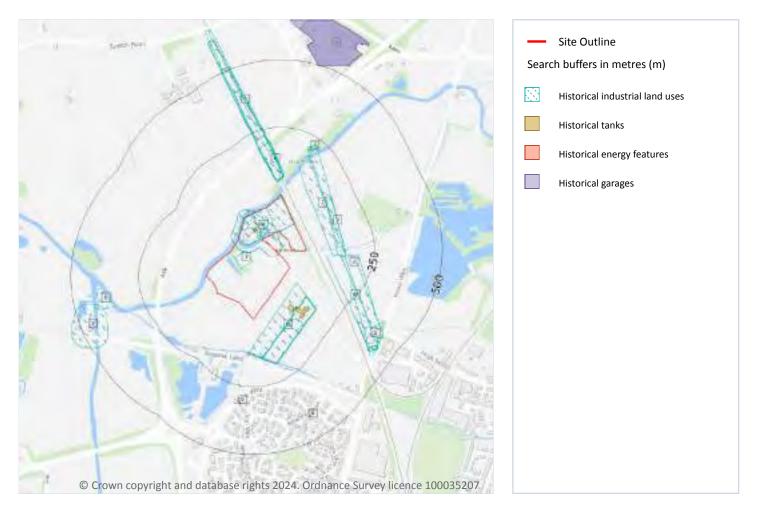






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## 1 Past land use



## **1.1 Historical industrial land uses**

#### Records within 500m

33

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on page 15 >

ID	Location	Land use	Dates present	Group ID
1	On site	Sludge Beds	1976	1596541







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	Land use	Dates present	Group ID
Α	On site	Unspecified Disused Mill	1883	1589360
Α	On site	Factory Mills	1987	1630912
Α	On site	Unspecified Mills	1902	1701464
Α	On site	Unspecified Mills	1927	1703794
Α	On site	Unspecified Mills	1950	1756017
Α	On site	Unspecified Mills	1958 - 1976	1760332
В	47m N	Cuttings	1987	1706036
В	47m N	Cuttings	1976	1734874
С	47m N	Cuttings	1883	1728411
D	52m SE	Sewage Works	1938	1772549
С	54m N	Cuttings	1927 - 1950	1769365
С	55m N	Cuttings	1958	1728255
С	55m N	Cuttings	1902	1777395
E	79m E	Rifle Range	1883	1689586
2	82m E	Rifle Range	1883	1727076
D	101m SE	Unspecified Works	1958	1612528
D	104m SE	Sewage Works	1950	1678151
D	104m SE	Sewage Works	1902 - 1928	1727204
3	107m E	Rifle Range	1902	1749473
4	114m E	Disused Rifle Range	1927	1596494
D	117m SE	Unspecified Tanks	1950 - 1958	1712109
Е	128m E	Disused Rifle Range	1928 - 1938	1676832
F	195m NE	Butts	1958	1765752
F	195m NE	Butts	1927 - 1950	1752995
С	217m N	Cuttings	1976	1676393
С	217m N	Cuttings	1987	1707131
G	323m SE	Timber Yard	1987	1636306
6	360m W	Small Pox Hospital	1928 - 1938	1646767







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

ID	Location	Land use	Dates present	Group ID
7	395m W	Boat Yard	1976	1763338
G	405m SE	Unspecified Heap	1958	1769288
G	410m SE	Unspecified Heap	1902 - 1928	1682013
G	410m SE	Unspecified Heap	1950	1719400

This data is sourced from Ordnance Survey / Groundsure.

## **1.2 Historical tanks**

#### **Records within 500m**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on page 15 >

ID	Location	Land use	Dates present	Group ID
Α	On site	Tanks	1955	264033
А	On site	Tanks	1955	264034
Α	On site	Unspecified Tank	1955	270999
Α	On site	Tanks	1955 - 1971	286341
D	79m SE	Settling Tanks	1955	275265
D	106m SE	Tanks	1955	264032
D	111m SE	Unspecified Tank	1955	270998
D	127m SE	Settling Tanks	1955	275266
D	132m SE	Tanks	1955	264031

This data is sourced from Ordnance Survey / Groundsure.





9



## **1.3 Historical energy features**

#### Records within 500m

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on page 15 >

ID	Location	Land use	Dates present	Group ID
5	309m S	Electricity Substation	1993 - 1997	170048
8	414m S	Electricity Substation	1991 - 1995	176509

This data is sourced from Ordnance Survey / Groundsure.

## **1.4 Historical petrol stations**

#### **Records within 500m**

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

## **1.5 Historical garages**

Records within 500m

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on page 15 >

ID	Location	Land use	Dates present	Group ID
Н	497m N	Garage	1994	58848
Н	497m N	Garage	1990	54117





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This data is sourced from Ordnance Survey / Groundsure.

## **1.6 Historical military land**

#### Records within 500m

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## 2 Past land use - un-grouped



## 2.1 Historical industrial land uses

### Records within 500m

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on page 20 >

ID	Location	Land Use	Date	Group ID
1	On site	Sludge Beds	1976	1596541
А	On site	Unspecified Mills	1902	1701464
А	On site	Unspecified Mills	1950	1756017





43



Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	Land Use	Date	Group ID
А	On site	Factory Mills	1987	1630912
А	On site	Unspecified Mills	1958	1760332
А	On site	Unspecified Mills	1976	1760332
А	On site	Unspecified Disused Mill	1883	1589360
А	On site	Unspecified Mills	1927	1703794
В	47m N	Cuttings	1987	1706036
В	47m N	Cuttings	1976	1734874
С	47m N	Cuttings	1883	1728411
D	52m SE	Sewage Works	1938	1772549
D	52m SE	Sewage Works	1938	1772549
С	54m N	Cuttings	1927	1769365
С	54m N	Cuttings	1950	1769365
С	55m N	Cuttings	1958	1728255
С	55m N	Cuttings	1902	1777395
Е	79m E	Rifle Range	1883	1689586
F	82m E	Rifle Range	1883	1727076
D	101m SE	Unspecified Works	1958	1612528
D	104m SE	Sewage Works	1950	1678151
D	104m SE	Sewage Works	1928	1727204
D	104m SE	Sewage Works	1902	1727204
F	107m E	Rifle Range	1902	1749473
2	114m E	Disused Rifle Range	1927	1596494
D	117m SE	Unspecified Tanks	1958	1712109
D	121m SE	Unspecified Tanks	1950	1712109
Е	128m E	Disused Rifle Range	1928	1676832
Е	128m E	Rifle Range	1902	1749473
E	139m E	Disused Rifle Range	1938	1676832
G	195m NE	Butts	1958	1765752







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

ID	Location	Land Use	Date	Group ID
G	195m NE	Butts	1927	1752995
G	195m NE	Butts	1950	1752995
С	217m N	Cuttings	1987	1707131
С	217m N	Cuttings	1976	1676393
	323m SE	Timber Yard	1987	1636306
J	360m W	Small Pox Hospital	1928	1646767
J	362m W	Small Pox Hospital	1938	1646767
3	395m W	Boat Yard	1976	1763338
	405m SE	Unspecified Heap	1958	1769288
	410m SE	Unspecified Heap	1950	1719400
	410m SE	Unspecified Heap	1928	1682013
	410m SE	Unspecified Heap	1902	1682013

This data is sourced from Ordnance Survey / Groundsure.

### **2.2 Historical tanks**

Records within 500m	10
Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500	scale. Any
records shown are available intelligently grouped in section 1. Grouped and the original un-grouped	fasturas

records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on page 20 >

ID	Location	Land Use	Date	Group ID
А	On site	Tanks	1955	286341
А	On site	Tanks	1955	264034
А	On site	Unspecified Tank	1955	270999
А	On site	Tanks	1955	264033
А	On site	Tanks	1971	286341
D	79m SE	Settling Tanks	1955	275265
D	106m SE	Tanks	1955	264032
D	111m SE	Unspecified Tank	1955	270998







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

7

ID	Location	Land Use	Date	Group ID
D	127m SE	Settling Tanks	1955	275266
D	132m SE	Tanks	1955	264031

This data is sourced from Ordnance Survey / Groundsure.

## 2.3 Historical energy features

#### **Records within 500m**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on page 20 >

ID	Location	Land Use	Date	Group ID
Н	309m S	Electricity Substation	1997	170048
Н	309m S	Electricity Substation	1994	170048
Н	309m S	Electricity Substation	1996	170048
Н	311m S	Electricity Substation	1993	170048
К	414m S	Electricity Substation	1995	176509
К	414m S	Electricity Substation	1991	176509
К	414m S	Electricity Substation	1991	176509

This data is sourced from Ordnance Survey / Groundsure.

## 2.4 Historical petrol stations

# Records within 500m 0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.







## **2.5 Historical garages**

**Records within 500m** 

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Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on page 20 >

ID	Location	Land Use	Date	Group ID
L	497m N	Garage	1994	58848
L	497m N	Garage	1990	54117

This data is sourced from Ordnance Survey / Groundsure.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## **3** Waste and landfill



## 3.1 Active or recent landfill

#### **Records within 500m**

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

## 3.2 Historical landfill (BGS records)

#### Records within 500m

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.





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## 3.3 Historical landfill (LA/mapping records)

#### **Records within 500m**

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

## 3.4 Historical landfill (EA/NRW records)

#### Records within 500m

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on page 25 >

ID	Location	Details		
1	On site	Site Address: Syston Quarry, Meadow Lane, Syston Licence Holder Address: -	Waste Licence: - Site Reference: - Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: Lafarge Aggregates Limited Licence Holder: - First Recorded - Last Recorded: -
2	154m S	Site Address: Meadow Lane Quarry/Syston, Meadow Lane, Syston, Leicestershire Licence Holder Address: -	Waste Licence: - Site Reference: 175, 246 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded - Last Recorded: -
3	327m SW	Site Address: Wanlip Road, Syston, Charnwood, Pontylue Sand And Ballast, Wanlip Road, Syston, Charnwood, Leicestershire Licence Holder Address: -	Waste Licence: Yes Site Reference: 0012, GDO 156, 175 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 08/08/1977 Licence Surrender: 08/11/1990	Operator: - Licence Holder: Pontylue Sand and Ballast First Recorded 31/12/1977 Last Recorded: 08/11/1990







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

ID	Location	Details		
4	376m E	Site Address: Land off Fosse Way, Syston, Charnwood, Fosse Way, Syston, Charnwood, Leicestershire Licence Holder Address: -	Waste Licence: Yes Site Reference: GDO 103, 0137 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 17/06/1991 Licence Surrender: 01/10/1992	Operator: - Licence Holder: Acresford Sand and Gravel Limited First Recorded 31/01/1981 Last Recorded: 31/12/1993
5	464m SW	Site Address: Leicester Corporation Site (2), Fillingate, Wanlip, Leicester, Leicestershire Licence Holder Address: -	Waste Licence: Yes Site Reference: 0068, GDO 63 Waste Type: Inert, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 14/12/1977 Licence Surrender: 05/04/1993	Operator: Leicester Corporation Licence Holder: Mr P Winterton First Recorded 31/12/1967 Last Recorded: 05/04/1993

This data is sourced from the Environment Agency and Natural Resources Wales.

### **3.5 Historical waste sites**



Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

## **3.6 Licensed waste sites**

### Records within 500m

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on page 25 >

ID	Location	Details		
А	171m S	Site Name: Meadow Lane Quarry Site Address: Meadow Lane Quarry, Meadow Lane, Syston, Leicester, Leicestershire, LE7 1NR Correspondence Address: P O Box 7388, Syston, Leicester, Leicestershire, LE7 1WA	Type of Site: Landfill taking Non- Biodegradeable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAF001 EPR reference: - Operator: Lafarge Aggregates Limited Waste Management licence No: 43482 Annual Tonnage: 100000	Issue Date: 11/22/2000 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



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Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	Details		
A	171m S	Site Name: Meadow Lane Quarry Site Address: Meadow Lane Quarry, Meadow Lane, Syston, Leicester, Leicestershire, LE7 1NR Correspondence Address: P O Box 7388, Syston, Leicester, Leicestershire, LE7 1WA	Type of Site: Landfill taking Non- Biodegradeable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAF001 EPR reference: - Operator: Lafarge Aggregates Ltd Waste Management licence No: 43482 Annual Tonnage: 100000	Issue Date: 22/11/2000 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
A	171m S	Site Name: Meadow Lane Quarry Site Address: Meadow Lane Quarry, Meadow Lane, Syston, Leicester, Leicestershire, LE7 1NR Correspondence Address: -	Type of Site: Landfill taking Non- Biodegradeable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAF001 EPR reference: EA/EPR/MP3590CN/V003 Operator: Lafarge Aggregates Limited Waste Management licence No: 43482 Annual Tonnage: 100000	Issue Date: 22/11/2000 Effective Date: - Modified: 26/11/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure
A	171m S	Site Name: Meadow Lane Quarry Site Address: Meadow Lane Quarry, Meadow Lane, Syston, Leicester, Leicestershire, LE7 1NR Correspondence Address: -	Type of Site: Landfill taking Non- Biodegradeable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAF001 EPR reference: EA/EPR/MP3590CN/A001 Operator: Lafarge Aggregates Ltd Waste Management licence No: 43482 Annual Tonnage: 100000	Issue Date: 22/11/2000 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
A	171m S	Site Name: Meadow Lane Quarry Site Address: Meadow Lane Quarry, Meadow Lane, Syston, Leicester, Leicestershire, LE7 1NR Correspondence Address: -	Type of Site: Landfill taking Non- Biodegradeable Wastes Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: LAF001 EPR reference: EA/EPR/MP3590CN/S005 Operator: Tarmac Aggregates Limited Waste Management licence No: 43482 Annual Tonnage: 1700000	Issue Date: 22/11/2000 Effective Date: - Modified: 08/01/2016 Surrendered Date: Feb 28 2019 12:00AM Expiry Date: - Cancelled Date: - Status: Closure







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

ID	Location	Details		
A	171m S	Site Name: Meadow Lane Quarry Site Address: Meadow Lane Quarry, Meadow Lane, Syston, Leicester, Leicestershire, LE7 1NR Correspondence Address: -	Type of Site: Landfill taking Non- Biodegradeable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 635599 EPR reference: EA/EPR/MP3590CN Operator: Tarmac Aggregates Limited Waste Management licence No: 43482 Annual Tonnage: 1700000	Issue Date: 22/11/2000 Effective Date: 22/11/2000 Modified: - Surrendered Date: 22/11/2000 Expiry Date: - Cancelled Date: - Status: Expired
A	172m S	Site Name: Meadow Lane Quarry Site Address: Meadow Lane, Syston, Leicester, Leicestershire Correspondence Address: Bradgate House, Groby, Leicester, Leicestershire, LE6 OFA	Type of Site: Landfill taking Non- Biodegradeable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAF001 EPR reference: - Operator: Lafarge Redland Aggregates Ltd Waste Management licence No: 43482 Annual Tonnage: 100000	Issue Date: 22/11/2000 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

This data is sourced from the Environment Agency and Natural Resources Wales.

# 3.7 Waste exemptions

Re	cords within 500m		12
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Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on page 25 >

ID	Location	Site	Reference	Category	Sub-Category	Description
В	450m SE	201 Fosse Way Leicester Leicestershire Le7 1nh	EPR/CE5741UL /A001	Treating waste exemption	Non-agricultural waste only	Recovery of scrap metal
В	450m SE	201 Fosse Way Leicester Leicestershire Le7 1nh	EPR/CE5741UL /A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
С	463m W	Danaher & Walsh, Meadow Lane, Syston, Le7 1nr	WEX367232	Storing waste exemption	Not on a farm	Storage of waste in secure containers







ID	Location	Site	Reference	Category	Sub-Category	Description
С	463m W	Danaher & Walsh, Meadow Lane, Syston, Le7 1nr	WEX367232	Storing waste exemption	Not on a farm	Storage of waste in a secure place
С	463m W	Danaher & Walsh, Meadow Lane, Syston, Le7 1nr	WEX240618	Storing waste exemption	Not on a farm	Storage of waste in a secure place
С	463m W	Danaher & Walsh, Meadow Lane, Syston, Le7 1nr	WEX240618	Storing waste exemption	Not on a farm	Storage of waste in secure containers
В	465m SE	201, Fosse Way, Syston, Leicester, Le7 1nh	WEX104503	Treating waste exemption	Not on a farm	Recovery of scrap metal
В	465m SE	201, Fosse Way, Syston, Leicester, Le7 1nh	WEX246583	Treating waste exemption	Not on a farm	Recovery of scrap metal
С	469m W	Danaher & Walsh (Civil Engineering) Limited, Meadow Lane, Syston, Le7 1nr	WEX107399	Storing waste exemption	Not on a farm	Storage of waste in secure containers
С	469m W	Danaher & Walsh, Meadow Lane, Syston, Le7 1nr	WEX107401	Storing waste exemption	Not on a farm	Storage of waste in secure containers
С	469m W	Danaher & Walsh (Civil Engineering) Limited, Meadow Lane, Syston, Le7 1nr	WEX107399	Storing waste exemption	Not on a farm	Storage of waste in a secure place
С	469m W	Danaher & Walsh, Meadow Lane, Syston, Le7 1nr	WEX107401	Storing waste exemption	Not on a farm	Storage of waste in a secure place

This data is sourced from the Environment Agency and Natural Resources Wales.







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

# 4 Current industrial land use



# Site Outline Search buffers in metres (m) Recent industrial land uses Licensed pollutant release (Part A(2)/B) Licensed Discharges to controlled waters Pollution Incidents (EA/NRW)

## 4.1 Recent industrial land uses

#### **Records within 250m**

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on page 31 >

ID	Location	Company	Address	Activity	Category
1	On site	Pump House	Leicestershire, LE7	Water Pumping Stations	Industrial Features
A	On site	Cars Care Garage	Syston Mill, Mill Lane, Syston, Leicestershire, LE7 1NS	Vehicle Repair, Testing and Servicing	Repair and Servicing







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

ID	Location	Company	Address	Activity	Category
А	On site	Heritage Bodyworks Ltd	Unit B2 Syston Mills, Mill Lane, Syston, Leicester, Leicestershire, LE7 1NS	Vehicle Repair, Testing and Servicing	Repair and Servicing
A	On site	Just Airports	Building 10 Syston Mill, Mill Lane, Syston, Leicestershire, LE7 1NS	Airlines and Airline Services	Transport, Storage and Delivery
Α					
~	On site	Works	Leicestershire, LE7	Unspecified Works Or Factories	Industrial Features

This data is sourced from Ordnance Survey.

# 4.2 Current or recent petrol stations

Records within 500m	0			
Open, closed, under development and obsolete petrol stations.				
This data is sourced from Experian.				
4.3 Electricity cables				
Records within 500m	0			
High voltage underground electricity transmission cables.				
This data is sourced from National Grid.				
4.4 Gas pipelines				

**Records within 500m** 

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

# 4.5 Sites determined as Contaminated Land

# Records within 500m

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.





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# 4.6 Control of Major Accident Hazards (COMAH)

#### **Records within 500m**

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

## 4.7 Regulated explosive sites

#### **Records within 500m**

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

## 4.8 Hazardous substance storage/usage

## Records within 500m

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

## 4.9 Historical licensed industrial activities (IPC)

#### **Records within 500m**

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

## 4.10 Licensed industrial activities (Part A(1))

#### Records within 500m

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.





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# 4.11 Licensed pollutant release (Part A(2)/B)

## Records within 500m

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on page 31 >

ID	Location	Address	Details	
A	24m NW	Stamina Components Syston Mills, Fosse Way, Leicester, LE7 1NS	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements notified Date of enforcement: No Enforcements notified Comment: No Enforcements notified
5	390m SE	George Walker Ltd, Fosse Way, Syston, Leicester, LE7 1NH	Process: Di-isocyanate Processes Status: Historical Permit Permit Type: Part B	Enforcement: Enforcement Notified Date of enforcement: 28/03/2001 Comment: No details.

This data is sourced from Local Authority records.

# 4.12 Radioactive Substance Authorisations

## Records within 500m

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

# 4.13 Licensed Discharges to controlled waters

Records within 500m

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

## Features are displayed on the Current industrial land use map on page 31 >

ID	Location	Address	Details	
В	160m NE	LAFARGEAGGREGATESL TD,BRADGATEHOUSE,G ROBY,LEICESTER	Effluent Type: TRADE DISCHARGES - MINERAL WORKINGS Permit Number: T/55/45572/T Permit Version: 2 Receiving Water: RIVER WREAKE	Status: SURRENDERED UNDER EPR 2010 Issue date: 13/02/2002 Effective Date: 11/08/2004 Revocation Date: 13/07/2023





Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	Address	Details	
В	160m NE	LAFARGEAGGREGATESL TD,BRADGATEHOUSE,G ROBY,LEICESTER	Effluent Type: TRADE DISCHARGES - MINERAL WORKINGS Permit Number: T/55/45572/T Permit Version: 1 Receiving Water: RIVER WREAKE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 13/02/2002 Effective Date: 01/10/2002 Revocation Date: 10/08/2004
3	230m S	MEADOWLANEQUARRY, MEADOWLANE,SYSTON, LEICESTERSHIRE	Effluent Type: TRADE DISCHARGES - MINERAL WORKINGS Permit Number: T/55/45296/T Permit Version: 1 Receiving Water: SYSTON BROOK	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 19/04/1999 Effective Date: 19/04/1999 Revocation Date: 18/02/2000
D	232m SW	MEADOWLANEQUARRY, MEADOWLANE,SYSTON, LEICESTERSHIRE	Effluent Type: TRADE DISCHARGES - MINERAL WORKINGS Permit Number: T/55/45302/T Permit Version: 1 Receiving Water: SYSTON BROOK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 13/05/1999 Effective Date: 13/05/1999 Revocation Date: 31/12/2005

This data is sourced from the Environment Agency and Natural Resources Wales.

# 4.14 Pollutant release to surface waters (Red List)

# Records within 500m 0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

# 4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

# 4.16 List 1 Dangerous Substances

**Records within 500m** 

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.





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## 4.17 List 2 Dangerous Substances

#### Records within 500m

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

# 4.18 Pollution Incidents (EA/NRW)

#### **Records within 500m**

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on page 31 >

ID	Location	Details	
2	192m S	Incident Date: 21/05/2003 Incident Identification: 159740 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Natural Organic Material	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
С	231m SW	Incident Date: 29/05/2003 Incident Identification: 161650 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
D	254m SW	Incident Date: 17/08/2001 Incident Identification: 24870 Pollutant: Specific Waste Materials Pollutant Description: Tyres	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
D	254m SW	Incident Date: 17/08/2001 Incident Identification: 24870 Pollutant: Specific Waste Materials Pollutant Description: Tyres	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4	266m S	Incident Date: 08/08/2003 Incident Identification: 180209 Pollutant: General Biodegradable Materials and Wastes:Specific Waste Materials Pollutant Description: Vegetable Cuttings and Deposits:Household Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
6	498m SE	Incident Date: 07/08/2003 Incident Identification: 179983 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

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This data is sourced from the Environment Agency and Natural Resources Wales.

## 4.19 Pollution inventory substances

#### Records within 500m

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

## 4.20 Pollution inventory waste transfers

#### Records within 500m

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

## 4.21 Pollution inventory radioactive waste

## Records within 500m

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

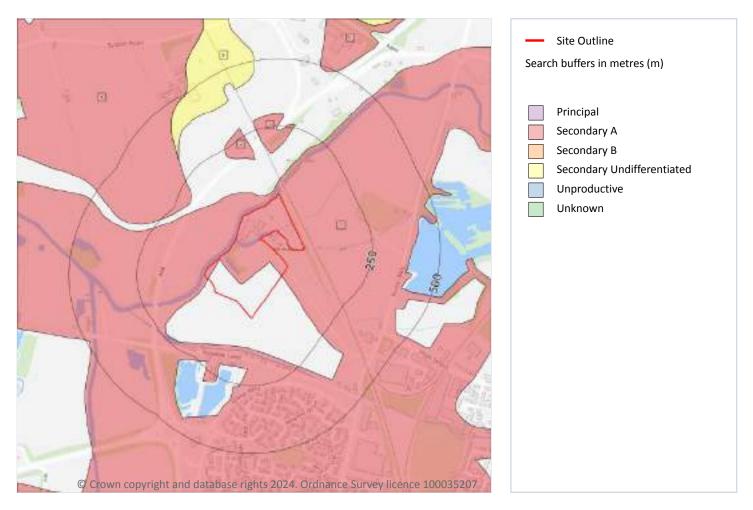






**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

# 5 Hydrogeology - Superficial aquifer



# 5.1 Superficial aquifer

Records within 500m	6
Aquifer status of groundwater held within superficial geology.	
Features are displayed on the Hydrogeology map on page 38 >	

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	152m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers







ID	Location	Designation	Description
3	155m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	201m NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	319m NW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
6	486m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

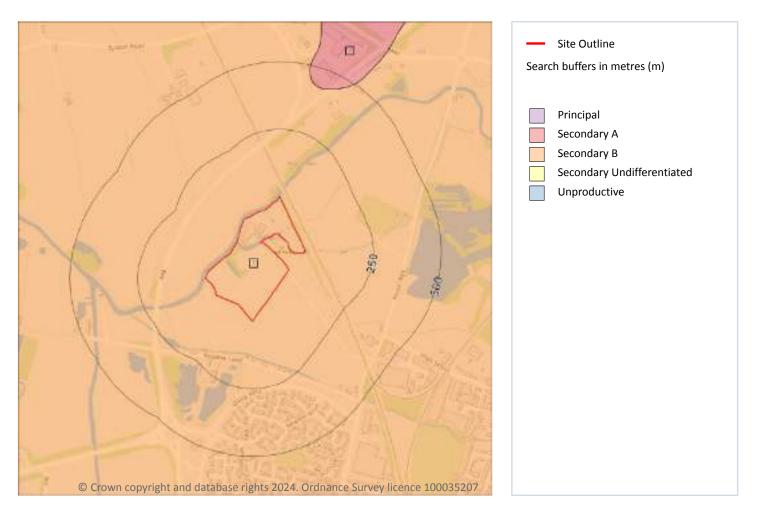






**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

# **Bedrock aquifer**



# 5.2 Bedrock aquifer

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on page 40 >

ID	Location	Designation	Description
1	On site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers
2	429m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers







This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

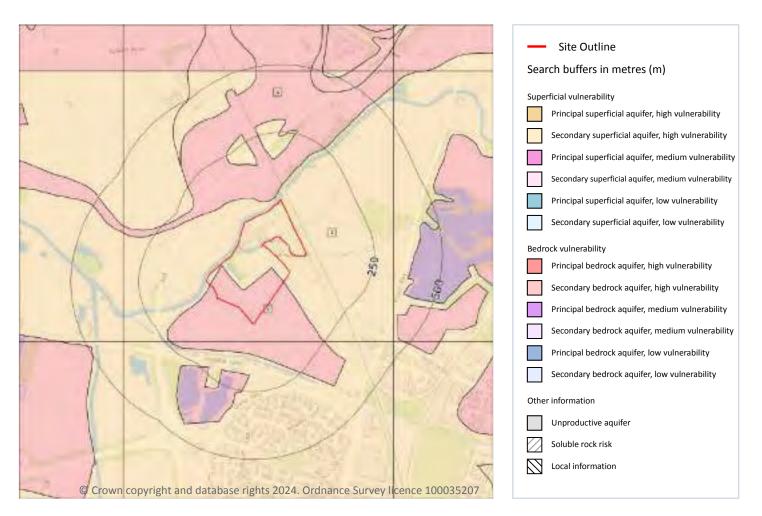






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# **Groundwater vulnerability**



# 5.3 Groundwater vulnerability

## Records within 50m

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium Intermediate between high and low vulnerability.
- Low Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on page 42 >





**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
A	21m N	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

# 5.4 Groundwater vulnerability- soluble rock risk

Records	on	site	
ILCCOLOG	0.11	JILL	

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

# 5.5 Groundwater vulnerability- local information

## **Records on site**

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on <u>enquiries@environment-agency.gov.uk</u> 7.

This data is sourced from the British Geological Survey and the Environment Agency.

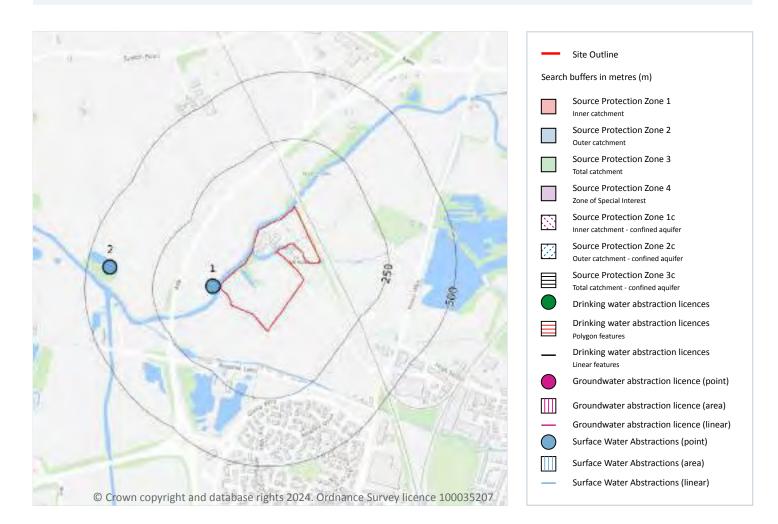




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# **Abstractions and Source Protection Zones**



# 5.6 Groundwater abstractions

## **Records within 2000m**

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on page 44 >







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	Details	
-	1051m S	Status: Historical Licence No: 03/28/55/0073 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: 28 WANLIP ROAD - BOREHOLE Data Type: Point Name: TIVEY Easting: 461900 Northing: 311100	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 29/01/1972 Expiry Date: - Issue No: 100 Version Start Date: 29/01/1972 Version End Date: -
-	1051m S	Status: Historical Licence No: 03/28/55/0073 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: 28 WANLIP ROAD - BOREHOLE Data Type: Point Name: TIVEY Easting: 461900 Northing: 311100	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 29/01/1972 Expiry Date: - Issue No: 100 Version Start Date: 29/01/1972 Version End Date: -
-	1073m SW	Status: Active Licence No: 03/28/53/0013 Details: Mineral Washing Direct Source: Groundwater Midlands Region Point: FOREST FIELD - GRAVEL WORKINGS Data Type: Point Name: P WINTERTON LIMITED Easting: 460500 Northing: 311500	Annual Volume (m <sup>3</sup> ): 954660 Max Daily Volume (m <sup>3</sup> ): 3182.2 Original Application No: - Original Start Date: 07/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 11/03/2003 Version End Date: -
-	1458m N	Status: Historical Licence No: 03/28/57/0054 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: 68,MAIN STREET - WELL Data Type: Point Name: ASTILL Easting: 461100 Northing: 313900	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 13/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
	1795m NE	Status: Historical Licence No: 03/28/55/0078 Details: Process water Direct Source: Groundwater Midlands Region Point: RATCLIFFE-ON-THE-WREAKE - OLD GRAVEL PIT Data Type: Point Name: PEDIGREE PETFOODS A DIVISION OF MARS(UK) Easting: 463200 Northing: 313300	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 23/06/1977 Expiry Date: - Issue No: 100 Version Start Date: 31/01/1996 Version End Date: -







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

ID	Location	Details	
-	1834m E	Status: Active Licence No: 03/28/55/0080 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: PREMISES AT MELTON ROAD, SYSTON - BOREHOLE Data Type: Point Name: JAMES COLES & SONS (NURSERIES) LTD Easting: 463510 Northing: 312430	Annual Volume (m <sup>3</sup> ): 11364 Max Daily Volume (m <sup>3</sup> ): 32.7 Original Application No: - Original Start Date: 15/08/1978 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1853m NE	Status: Historical Licence No: 03/28/55/0041 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: BEEDLES LAKE GOLF CLUB - GRAVEL PIT Data Type: Point Name: ACRESFORD SAND & GRAVEL LTD Easting: 463150 Northing: 313510	Annual Volume (m <sup>3</sup> ): 9000 Max Daily Volume (m <sup>3</sup> ): 49 Original Application No: - Original Start Date: 13/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/03/2005 Version End Date: -
-	1855m NE	Status: Active Licence No: 03/28/55/0041 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: BEEDLES LAKE GOLF CLUB - GRAVEL PIT 'A' Data Type: Point Name: ACRESFORD SAND & GRAVEL LTD Easting: 463151 Northing: 313514	Annual Volume (m <sup>3</sup> ): 9000 Max Daily Volume (m <sup>3</sup> ): 49 Original Application No: NPS/WR/010994 Original Start Date: 13/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 03/12/2018 Version End Date: -
-	1894m NE	Status: Active Licence No: 03/28/55/0041 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: BEEDLES LAKE GOLF CLUB - GRAVEL PIT 'B' Data Type: Point Name: ACRESFORD SAND & GRAVEL LTD Easting: 463263 Northing: 313397	Annual Volume (m <sup>3</sup> ): 9000 Max Daily Volume (m <sup>3</sup> ): 49 Original Application No: NPS/WR/010994 Original Start Date: 13/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 03/12/2018 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

## 5.7 Surface water abstractions

## **Records within 2000m**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.







## Features are displayed on the Abstractions and Source Protection Zones map on page 44 >

ID	Location	Details	
1	29m W	Status: Active Licence No: 03/28/55/0097 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SYSTON MILLS - RIVER WREAKE Data Type: Point Name: The Barber Farming Partnership Easting: 461280 Northing: 312230	Annual Volume (m <sup>3</sup> ): 25000 Max Daily Volume (m <sup>3</sup> ): 1500 Original Application No: - Original Start Date: 30/12/1996 Expiry Date: - Issue No: 102 Version Start Date: 06/03/2024 Version End Date: -
2	415m W	Status: Active Licence No: 03/28/55/0094 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT COSSINGTON - TURNSTILE POND Data Type: Point Name: The Barber Farming Partnership Easting: 460900 Northing: 312300	Annual Volume (m <sup>3</sup> ): 25000 Max Daily Volume (m <sup>3</sup> ): 1500 Original Application No: - Original Start Date: 13/11/1992 Expiry Date: - Issue No: 102 Version Start Date: 06/03/2024 Version End Date: -
3	782m NE	Status: Historical Licence No: 03/28/55/0084 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WREAKE HOUSE FARM - RIVER WREAKE Data Type: Line Name: SHERWOOD FARMS Easting: 462680 Northing: 312990	Annual Volume (m <sup>3</sup> ): 10000 Max Daily Volume (m <sup>3</sup> ): 196 Original Application No: - Original Start Date: 03/08/1979 Expiry Date: - Issue No: 100 Version Start Date: 03/08/1979 Version End Date: -
-	1453m W	Status: Historical Licence No: 03/28/55/0103 Details: Hydraulic Testing Direct Source: Surface Water Midlands Region Point: ASHBY FOLVILLE TO THURCASTON PIPELINE- RIVER WREAKE Data Type: Point Name: MURPHY PIPELINES LTD Easting: 459920 Northing: 312650	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/08/2005 Expiry Date: 31/12/2005 Issue No: 1 Version Start Date: 20/08/2005 Version End Date: -
-	1727m W	Status: Historical Licence No: 03/28/53/0043 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WANLIP HILL NURSERY - RIVER SOAR Data Type: Point Name: W BENTLEY & SONS LTD Easting: 459600 Northing: 311960	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 30/09/1985 Expiry Date: - Issue No: 100 Version Start Date: 30/09/1985 Version End Date: -







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	Details	
-	1795m W	Status: Active Licence No: 03/28/53/0048 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: ROTHLEY,LEICS - RIVER SOAR Data Type: Point Name: The Barber Farming Partnership Easting: 459520 Northing: 312380	Annual Volume (m <sup>3</sup> ): 25000 Max Daily Volume (m <sup>3</sup> ): 1500 Original Application No: - Original Start Date: 30/12/1996 Expiry Date: - Issue No: 103 Version Start Date: 06/03/2024 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

# **5.8 Potable abstractions**

Records within 2000m	0
Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day ar active and historical records. The data may be for a single abstraction point, a stretch of watercourse larger area.	
This data is sourced from the Environment Agency and Natural Resources Wales.	
5.9 Source Protection Zones	

## Records within 500m

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

# 5.10 Source Protection Zones (confined aquifer)

#### **Records within 500m**

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.



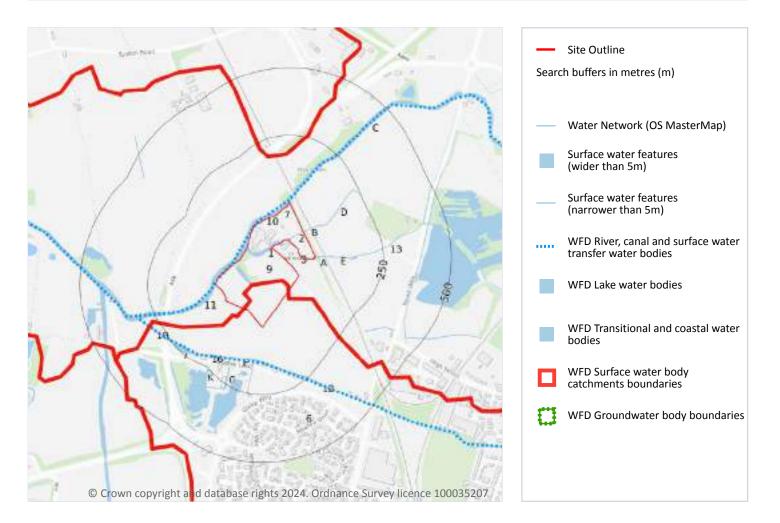


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Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# 6 Hydrology



# 6.1 Water Network (OS MasterMap)

## **Records within 250m**

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on page 49 >

ID	Location	Type of water feature	Ground level	Permanence	Name
1	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	Type of water feature	Ground level	Permanence	Name
2	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
10	4m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Wreake
11	4m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Wreake
A	10m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	10m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
В	13m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
A	13m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
С	44m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Wreake
D	47m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	51m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	124m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
12	126m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Barkby Brook







ID	Location	Type of water feature	Ground level	Permanence	Name
F	126m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Barkby Brook
F	126m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
13	129m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
16	167m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Barkby Brook
G	167m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	227m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Barkby Brook
J	228m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Barkby Brook
19	245m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Barkby Brook
К	250m SW	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

# **6.2 Surface water features**

Records within 250m	14
Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previo	us section

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on page 49 >

This data is sourced from the Ordnance Survey.







# 6.3 WFD Surface water body catchments

#### **Records on site**

2

2

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on page 49 >

ID	Location	Туре	Water body catchment	Water body ID	Operational catchment	Management catchment
6	On site	River	Syston Brook Catchment (trib of Wreake)	GB104028047440	Wreake River	Soar
7	On site	River	Eye / Wreake from Langham Brook to Soar	GB104028047550	Wreake River	Soar

This data is sourced from the Environment Agency and Natural Resources Wales.

# 6.4 WFD Surface water bodies

## **Records identified**

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on page 49 >

ID	Location	Туре	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
8	On site	River	Eye / Wreake from Langham Brook to Soar	<u>GB104028047550</u> オ	Poor	Fail	Poor	2019
15	131m S	River	Syston Brook Catchment (trib of Wreake)	<u>GB104028047440</u> 7	Moderate	Fail	Moderate	2019

This data is sourced from the Environment Agency and Natural Resources Wales.







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## 6.5 WFD Groundwater bodies

# Records on site

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on page 49 >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
9	On site	Soar - Secondary Combined	<u>GB40402G990600</u> 7	Good	Good	Good	2019

This data is sourced from the Environment Agency and Natural Resources Wales.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# 7 River and coastal flooding



# 7.1 Risk of flooding from rivers and the sea

## **Records within 50m**

6

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance). Medium (less than 1 in 30 but greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 0 requal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance), Medium (less than 1 in 200 but greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance), Medium (less than 1 in 200 but greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance), Medium (less than 1 in 200 but greater than or equal to 1 in 30 chance). Or High (greater than or equal to 1 in 30 chance) or High (greater than or equal to 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on page 54 >







15

Distance	Flood risk category
On site	High
0 - 50m	High

This data is sourced from the Environment Agency and Natural Resources Wales.

# 7.2 Historical Flood Events

## Records within 250m

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

Features are displayed on the River and coastal flooding map on page 54 >

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
3	On site	Wreake April 1998	1998-04-10 1998-04-10	Main river	Channel capacity exceeded (no raised defences)	Fluvial
4	On site	Wreake April 1998	1998-04-10 1998-04-10	Main river	Channel capacity exceeded (no raised defences)	Fluvial
5	On site	Wreake April 1998	1998-04-10 1998-04-10	Main river	Channel capacity exceeded (no raised defences)	Fluvial
6	On site	Wreake 1977	1977-02-23 1977-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
7	On site	Wreake October 2000	2000-10-31 2000-10-31	Main river	Channel capacity exceeded (no raised defences)	Fluvial
11	14m N	Wreake April 1998	1998-04-10 1998-04-10	Main river	Channel capacity exceeded (no raised defences)	Fluvial
12	35m N	Wreake April 1998	1998-04-10 1998-04-10	Main river	Channel capacity exceeded (no raised defences)	Fluvial
А	111m S	Barkby Brook 1992	1992-09-01 1992-09-30	Main river	Channel capacity exceeded (no raised defences)	Fluvial
В	176m W	Soar 1977	1977-02-23 1977-02-28	main river	channel capacity exceeded (no raised defences)	Fluvial
В	177m W	Wreake April 1998	1998-04-10 1998-04-10	Main river	Channel capacity exceeded (no raised defences)	Fluvial







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
С	178m W	Soar 31st Oct 2000	2000-10-31 2000-10-31	Main river	Channel capacity exceeded (no raised defences)	Fluvial
С	178m W	Soar 31st Oct 2000	2000-10-31 2000-10-31	Main river	Channel capacity exceeded (no raised defences)	Fluvial
21	186m S	Wreake April 1998	1998-04-10 1998-04-10	Main river	Channel capacity exceeded (no raised defences)	Fluvial
В	220m SW	Soar 31st Oct 2000	2000-10-31 2000-10-31	Main river	Channel capacity exceeded (no raised defences)	Fluvial
В	220m SW	Soar 31st Oct 2000	2000-10-31 2000-10-31	Main river	Channel capacity exceeded (no raised defences)	Fluvial

This data is sourced from the Environment Agency and Natural Resources Wales.

# 7.3 Flood Defences

#### Records within 250m

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

## **7.4 Areas Benefiting from Flood Defences**

#### **Records within 250m**

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

# 7.5 Flood Storage Areas

**Records within 250m** 

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.





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**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

# **River and coastal flooding - Flood Zones**



# 7.6 Flood Zone 2

## **Records within 50m**

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

Features are displayed on the River and coastal flooding map on page 54 >

Location	Туре
On site	Zone 2 - (Fluvial /Tidal Models)

This data is sourced from the Environment Agency and Natural Resources Wales.







# 7.7 Flood Zone 3

**Records within 50m** 

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Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on page 54 >

Location	Туре
On site	Zone 3 - (Fluvial Models)

This data is sourced from the Environment Agency and Natural Resources Wales.

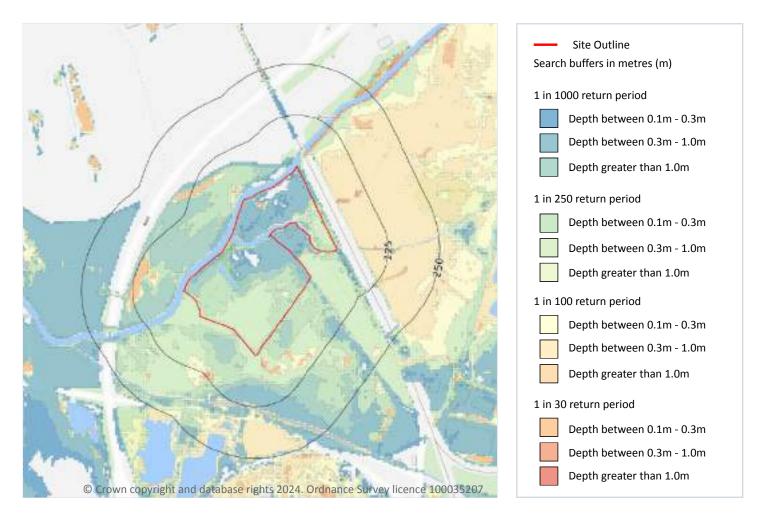






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# 8 Surface water flooding



# 8.1 Surface water flooding

## Highest risk on site

1 in 30 year, 0.1m - 0.3m

## Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on page 59 >

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.







## The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.1m and 0.3m

This data is sourced from Ambiental Risk Analytics.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# 9 Groundwater flooding



# 9.1 Groundwater flooding

Highest risk on site	Low
Highest risk within 50m	Low

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

## Features are displayed on the Groundwater flooding map on page 61 >

This data is sourced from Ambiental Risk Analytics.

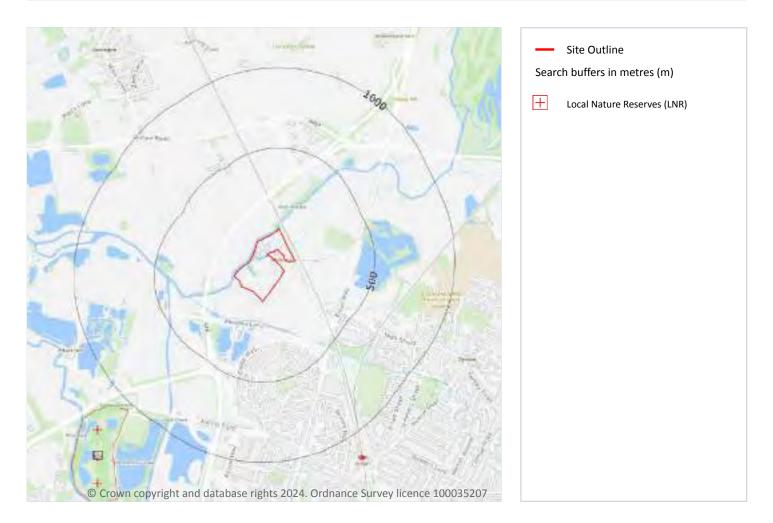






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# **10** Environmental designations



# **10.1 Sites of Special Scientific Interest (SSSI)**

## **Records within 2000m**

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were renotified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.







## 10.2 Conserved wetland sites (Ramsar sites)

## **Records within 2000m**

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

# **10.3 Special Areas of Conservation (SAC)**

## Records within 2000m

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

## **10.4 Special Protection Areas (SPA)**

#### **Records within 2000m**

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

# **10.5 National Nature Reserves (NNR)**

#### **Records within 2000m**

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.





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# **10.6 Local Nature Reserves (LNR)**

# Records within 2000m 1

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on page 62 >

ID	Location	Name	Data source
1	1041m SW	Reedbed	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

# **10.7 Designated Ancient Woodland**

Records within 2000m	0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

# **10.8 Biosphere Reserves**

**Records within 2000m** 

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

# **10.9 Forest Parks**

## **Records within 2000m**

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.





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### **10.10 Marine Conservation Zones**

#### Records within 2000m

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

### 10.11 Green Belt

#### **Records within 2000m**

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

### **10.12 Proposed Ramsar sites**

#### **Records within 2000m**

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

## 10.13 Possible Special Areas of Conservation (pSAC)

#### **Records within 2000m**

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

## **10.14 Potential Special Protection Areas (pSPA)**

#### Records within 2000m

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.





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### **10.15 Nitrate Sensitive Areas**

#### Records within 2000m

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Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

### **10.16 Nitrate Vulnerable Zones**

Records within	2000m		1

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Туре	NVZ ID	Status
On site	SOAR R NVZ	Surface Water	309	Existing

This data is sourced from Natural England and Natural Resources Wales.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## **SSSI Impact Zones and Units**



### **10.17 SSSI Impact Risk Zones**

#### **Records on site**

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on page 67 >

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 750m <sup>2</sup> , manure stores > 3500t. Discharges - Any discharge of water or liquid waste of more than 20m <sup>3</sup> /day to ground (ie to seep away) or to surface water, such as a beck or stream.







ID	Location	Type of developments requiring consultation
2	On site	Infrastructure - Airports, helipads and other aviation proposals. Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.

This data is sourced from Natural England.

## 10.18 SSSI Units

Records within 2000m	0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## **11 Visual and cultural designations**



## **11.1 World Heritage Sites**

#### **Records within 250m**

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.







### **11.2 Area of Outstanding Natural Beauty**

#### Records within 250m

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

### **11.3 National Parks**

#### Records within 250m

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic wellbeing of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

## **11.4 Listed Buildings**

#### Records within 250m

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on page 69 >

ID	Location	Name	Grade	Reference Number	Listed date
1	181m SW	Bridge Over River Wreake	II	1177732	09/10/1984

This data is sourced from Historic England, Cadw and Historic Environment Scotland.





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### **11.5 Conservation Areas**

#### **Records within 250m**

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

### **11.6 Scheduled Ancient Monuments**

#### Records within 250m

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

## **11.7 Registered Parks and Gardens**

#### **Records within 250m**

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



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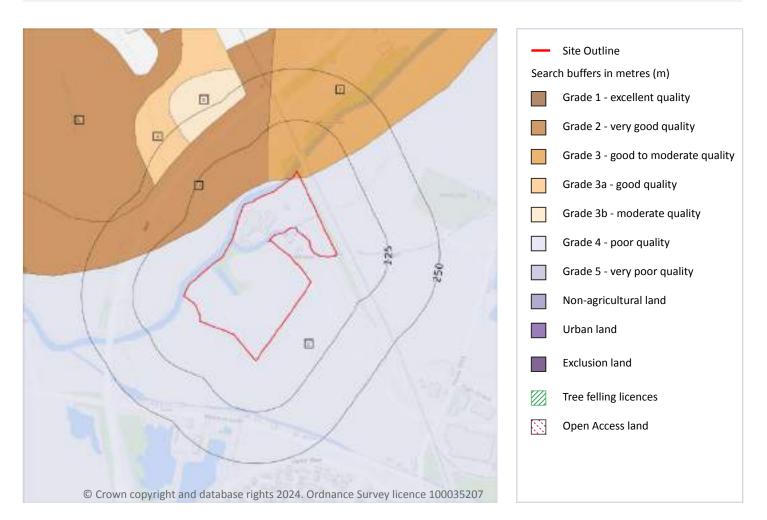






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## **12** Agricultural designations



## **12.1 Agricultural Land Classification**

#### Records within 250m

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on page 72 >

ID	Location	Classification	Description
1	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.





ID	Location	Classification	Description
2	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
3	24m N	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.
4	197m NW	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
5	198m NW	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
6	218m NW	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

This data is sourced from Natural England.

## 12.2 Open Access Land

#### Records within 250m

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

### **12.3 Tree Felling Licences**

#### **Records within 250m**

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.





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This data is sourced from the Forestry Commission.

## **12.4 Environmental Stewardship Schemes**

#### **Records within 250m**

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

## 12.5 Countryside Stewardship Schemes

# Records within 250m 2

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
53m NE	1461789	Countryside Stewardship (Middle Tier)	01/01/2023	31/12/2027
176m W	1272642	Countryside Stewardship (Middle Tier)	01/01/2022	31/12/2026

This data is sourced from Natural England.







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## **13 Habitat designations**



## **13.1 Priority Habitat Inventory**

#### Records within 250m

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on page 75 >

ID	Location	Main Habitat	Other habitats
1	51m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.







### **13.2 Habitat Networks**

#### **Records within 250m**

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

## **13.3 Open Mosaic Habitat**

#### **Records within 250m**

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

### **13.4 Limestone Pavement Orders**

#### Records within 250m

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.





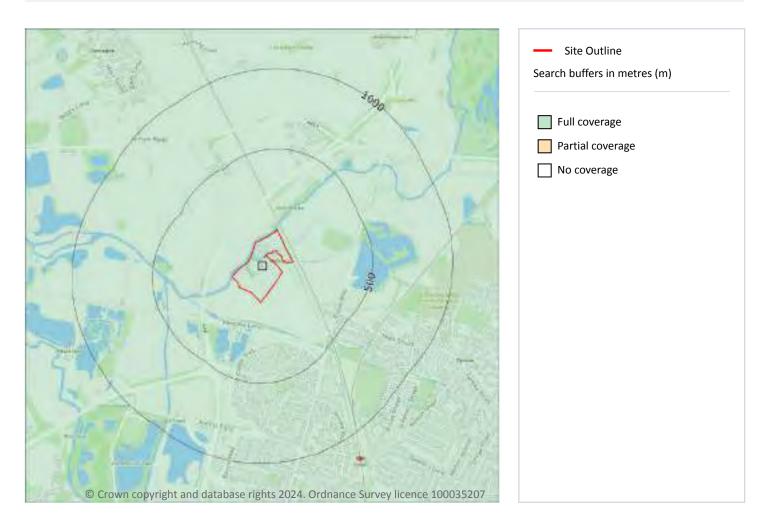
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**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## 14 Geology 1:10,000 scale - Availability



## 14.1 10k Availability

#### **Records within 500m**

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on page 77 >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SK61SW

This data is sourced from the British Geological Survey.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## Geology 1:10,000 scale - Artificial and made ground



## 14.2 Artificial and made ground (10k)

#### Records within 500m

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on page 78 >

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	2m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	9m SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	38m N	WGR-VOID	Worked Ground (Undivided)	Void



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Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

ID	Location	LEX Code	Description	Rock description
5	62m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	120m S	LSGR-UKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
7	127m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	139m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
9	173m SE	WGR-VOID	Worked Ground (Undivided)	Void
10	174m S	WGR-VOID	Worked Ground (Undivided)	Void
А	208m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
А	246m SW	WGR-VOID	Worked Ground (Undivided)	Void
11	328m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
12	331m SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
13	386m W	WGR-VOID	Worked Ground (Undivided)	Void
14	387m E	WGR-VOID	Worked Ground (Undivided)	Void
15	388m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
16	404m E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
17	489m SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit

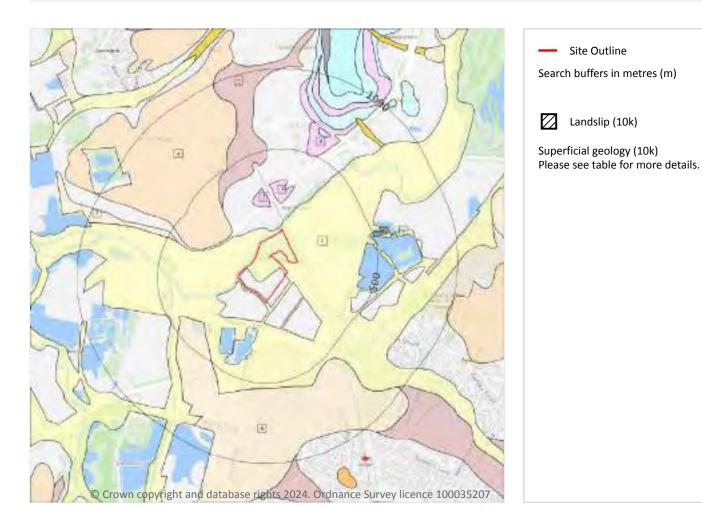






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## Geology 1:10,000 scale - Superficial



## 14.3 Superficial geology (10k)

#### Records within 500m

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on page 80 >

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
2	154m N	GFDUA-XSV	Glaciofluvial Deposits, Anglian - Sand And Gravel	Sand And Gravel
3	159m N	GFDUA-XSV	Glaciofluvial Deposits, Anglian - Sand And Gravel	Sand And Gravel
4	190m NW	WASG-XSV	Wanlip Member - Sand And Gravel	Sand And Gravel



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ID	Location	LEX Code	Description	Rock description
5	319m NW	HEAD- XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
6	331m SW	SYSG-XSV	Syston Member - Sand And Gravel	Sand And Gravel
7	431m W	SYSG-XSV	Syston Member - Sand And Gravel	Sand And Gravel
8	487m N	GFDUA-XSV	Glaciofluvial Deposits, Anglian - Sand And Gravel	Sand And Gravel
9	496m E	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

This data is sourced from the British Geological Survey.

## 14.4 Landslip (10k)

artificial ground.

Records within 500m	0
Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily supe	erficial deposits that have
moved down slope under gravity to form landslips. These affect bedrock, other su	perficial deposits and







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## Geology 1:10,000 scale - Bedrock



## 14.5 Bedrock geology (10k)

#### Records within 500m

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on page 82 >

ID	Location	LEX Code	Description	Rock age
1	On site	EDW-MDST	Edwalton Member - Mudstone	Carnian Age
2	On site	BCMU- MDST	Branscombe Mudstone Formation - Mudstone	Rhaetian Age - Norian Age







This data is sourced from the British Geological Survey.

## 14.6 Bedrock faults and other linear features (10k)

Records within 500m	1

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on page 82 >

ID	Location	Category	Description
3	On site	FAULT	Normal fault, inferred

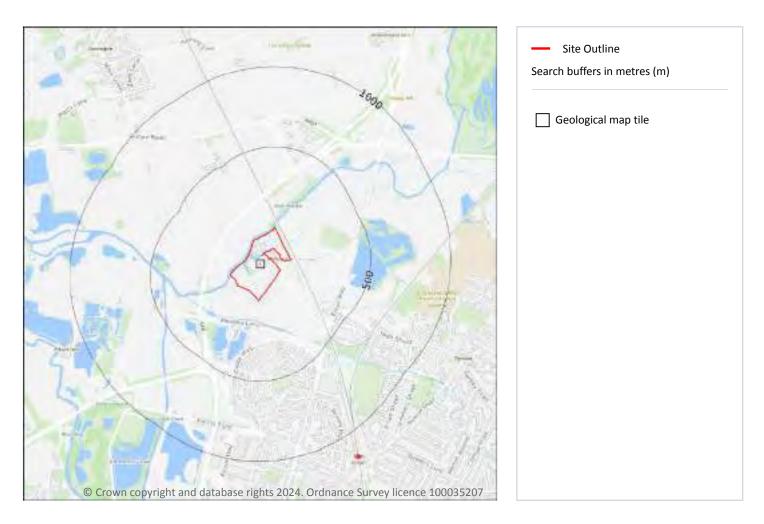






**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## 15 Geology 1:50,000 scale - Availability



### 15.1 50k Availability

#### Records within 500m

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on page 84 >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	EW156_leicester_v4

This data is sourced from the British Geological Survey.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## Geology 1:50,000 scale - Artificial and made ground



## 15.2 Artificial and made ground (50k)

#### **Records within 500m**

10

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability. Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on page 85 >

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	173m SE	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
3	188m S	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
4	331m SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

ID	Location	LEX Code	Description	Rock description
5	368m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
6	385m E	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
7	404m E	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
8	434m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
9	489m SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
10	497m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

## 15.3 Artificial ground permeability (50k)

Records within 50m	1
A qualitative classification of estimated rates of vertical movement of water from the ground surface	through
the unsaturated zone of any artificial deposits (the zone between the land surface and the water tab	le).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Very High	Low

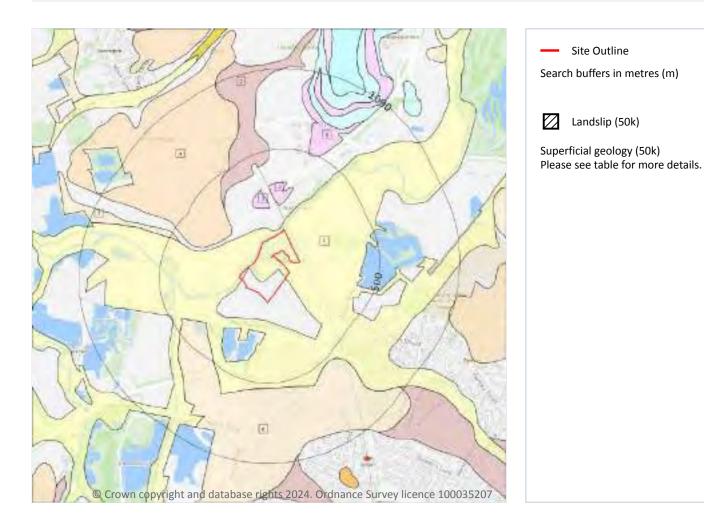






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## Geology 1:50,000 scale - Superficial



## 15.4 Superficial geology (50k)

#### Records within 500m

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on page 87 >

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	152m N	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL
3	155m N	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL
4	201m NW	WASG-XSV	WANLIP MEMBER	SAND AND GRAVEL







ID	Location	LEX Code	Description	Rock description
5	319m NW	HEAD- XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
6	331m SW	SYSG-XSV	SYSTON MEMBER	SAND AND GRAVEL
7	431m W	SYSG-XSV	SYSTON MEMBER	SAND AND GRAVEL
8	486m N	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

## 15.5 Superficial permeability (50k)

|--|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Very Low

This data is sourced from the British Geological Survey.

## 15.6 Landslip (50k)

Records w	vithin 500m				0
· · ·		 	 	 	

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

## 15.7 Landslip permeability (50k)

Records within 50m		0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

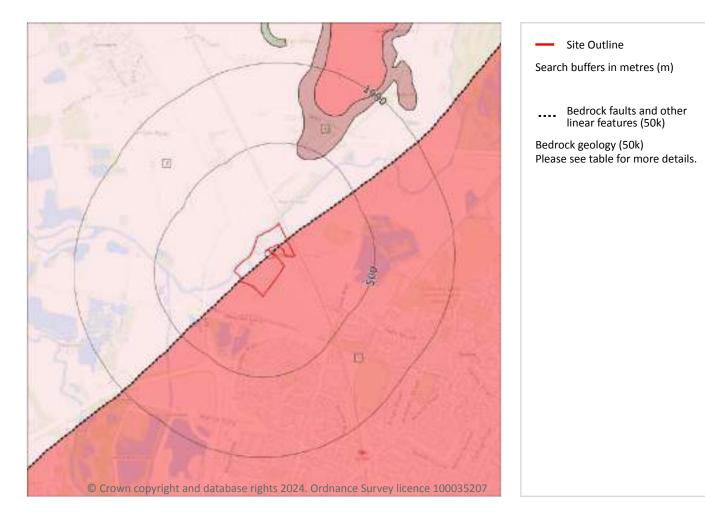






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## Geology 1:50,000 scale - Bedrock



## 15.8 Bedrock geology (50k)

#### Records within 500m

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on page 89 >

ID	Location	LEX Code	Description	Rock age
1	On site	BCMU- MDST	BRANSCOMBE MUDSTONE FORMATION - MUDSTONE	NORIAN
2	On site	EDW-MDST	EDWALTON MEMBER - MUDSTONE	CARNIAN







This data is sourced from the British Geological Survey.

## 15.9 Bedrock permeability (50k)

Records within 50m 2	
----------------------	--

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Low	Low
On site	Fracture	Low	Low

This data is sourced from the British Geological Survey.

## 15.10 Bedrock faults and other linear features (50k)

Records within 500m	1

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on page 89 >

ID	Location	Category	Description
3	On site	FAULT	Fault, inferred

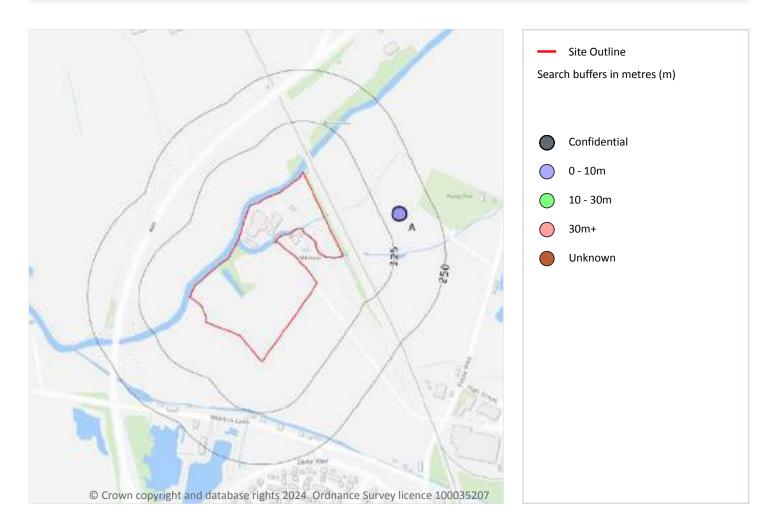






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## **16 Boreholes**



## 16.1 BGS Boreholes

#### Records within 250m

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on page 91 >

ID	Location	Grid reference	Name	Length	Confidential	Web link
А	167m NE	461816 312422	SOAR VALLEY SAND AND GRAVEL	6.0	Ν	232635 7
А	167m NE	461816 312422	SOAR VALLEY SAND AND GRAVEL	5.3	Ν	232614 7

This data is sourced from the British Geological Survey.







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## 17 Natural ground subsidence - Shrink swell clays



### **17.1 Shrink swell clays**

Records within 50m	1
The potential hazard presented by soils that absorb water when wet (making them swell), and los	se water as
they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of	of clay in the

soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage). Features are displayed on the Natural ground subsidence - Shrink swell clays map on page 92 >

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## Natural ground subsidence - Running sands



### 17.2 Running sands

#### Records within 50m

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on page 93 >

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.







Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.
21m N	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## Natural ground subsidence - Compressible deposits



## **17.3 Compressible deposits**

#### **Records within 50m**

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on page 95 >

Location	Hazard rating	Details
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.
21m N	Negligible	Compressible strata are not thought to occur.







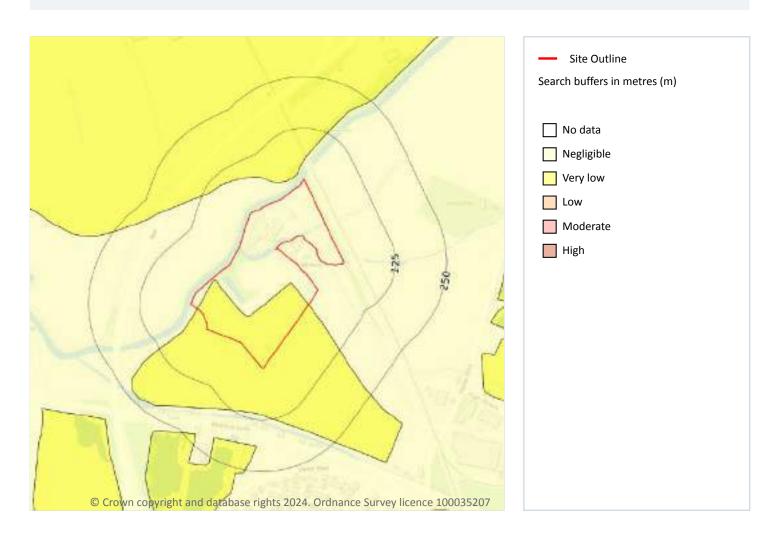






**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

## Natural ground subsidence - Collapsible deposits



### **17.4 Collapsible deposits**

#### **Records within 50m**

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on page 97 >

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
21m N	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.













Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

## Natural ground subsidence - Landslides



## **17.5 Landslides**

#### **Records within 50m**

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on page 99 >

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.







## Natural ground subsidence - Ground dissolution of soluble rocks



## **17.6 Ground dissolution of soluble rocks**

#### Records within 50m

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 100** >

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.







This data is sourced from the British Geological Survey.

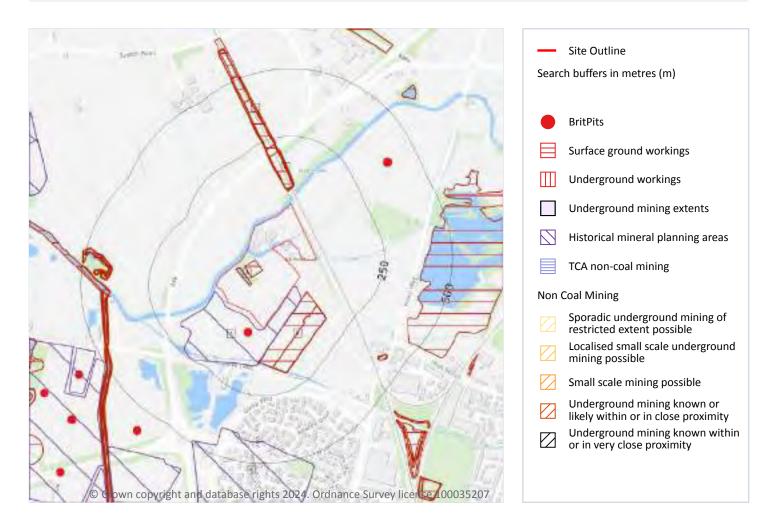






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# **18 Mining and ground workings**



## 18.1 BritPits

### **Records within 500m**

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on page 102 >







ID	Location	Details	Description		
2	54m S	Name: Meadow Lane Gravel Pit Address: Syston, LEICESTER, Leicestershire Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority		
3	389m NE	Name: Syston Address: Syston, LEICESTER, Leicestershire Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority		

This data is sourced from the British Geological Survey.

## 18.2 Surface ground workings

Records within 250m	17
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Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on page 102 >

ID			Year of mapping	Mapping scale
Α			1987	1:10000
Α	On site	Pond	1976	1:10000
Α	On site	Sludge Beds	1976	1:10000
В	47m N	Cuttings	1987	1:10000
В	47m N	Cuttings	1976	1:10000
С	47m N	Cuttings	1883	1:10560
D	52m SE	Sewage Works	1938	1:10560
D	52m SE	Sewage Works	1938	1:10560
С	54m N	Cuttings	1927	1:10560
С	54m N	Cuttings	1950	1:10560
С	55m N	Cuttings	1958	1:10560
С	55m N	Cuttings	1902	1:10560







ID	Location	Land Use	Year of mapping	Mapping scale
D	104m SE	Sewage Works	1950	1:10560
D	104m SE	Sewage Works	1928	1:10560
D	104m SE	Sewage Works	1902	1:10560
С	217m N	Cuttings	1987	1:10000
С	217m N	Cuttings	1976	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

## **18.3 Underground workings**

#### Records within 1000m

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

# **18.4 Underground mining extents**

### Records within 500m

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

## **18.5 Historical Mineral Planning Areas**

**Records within 500m** 

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

### Features are displayed on the Mining and ground workings map on page 102 >

ID	Location	Site Name	Mineral	Туре	Planning Status	Planning Status Date
1	On site	Meadow Lane	Sand and gravel	Surface mineral working	Refused	20/7/79



0

0



ID	Location	Site Name	Mineral	Туре	Planning Status	Planning Status Date
6	397m S	Pontylue Farm	Sand and gravel	Surface mineral working	Refused	21/5/81

This data is sourced from the British Geological Survey.

# **18.6 Non-coal mining**

#### **Records within 1000m**

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

# 18.7 JPB mining areas

#### Records on site

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

# 18.8 The Coal Authority non-coal mining

#### Records within 500m

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

## **18.9 Researched mining**

### **Records within 500m**

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is





0

0

2



approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

Location	Mineral type
410m E	Stone
428m E	Stone

This data is sourced from Groundsure.

# 18.10 Mining record office plans

Records within 500m	0
This detect is representative of Mining Record Office and /or plan outputs hold by Croundours and s	hould bo

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

# 18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

# 18.12 Coal mining



This data is sourced from the Coal Authority.

# 18.13 Brine areas

Records on site			0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

### 18.14 Gypsum areas

### **Records on site**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

# 18.15 Tin mining

#### **Records on site**

### Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

# 18.16 Clay mining

### **Records on site**

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).





0

0



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0

0

# **19 Ground cavities and sinkholes**

## **19.1 Natural cavities**

### **Records within 500m**

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

## **19.2 Mining cavities**

### Records within 1000m

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

## **19.3 Reported recent incidents**

### Records within 500m

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

# **19.4 Historical incidents**

### **Records within 500m**

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.







0

This data is sourced from Groundsure.

# **19.5 National karst database**

### Records within 500m

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

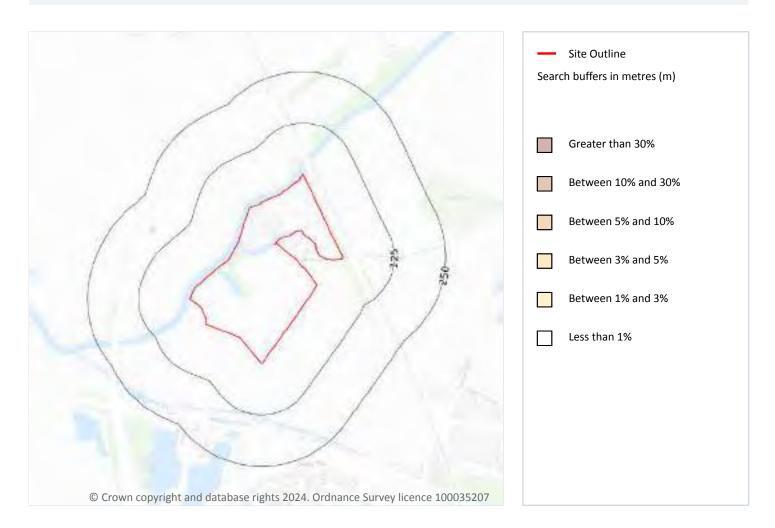






Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# 20 Radon



# **20.1** Radon

### **Records on site**

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on page 110 >

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

This data is sourced from the British Geological Survey and UK Health Security Agency.







# 21 Soil chemistry

# 21.1 BGS Estimated Background Soil Chemistry

### **Records within 50m**

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km<sup>2</sup>. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km<sup>2</sup>; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
33m N	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

# 21.2 BGS Estimated Urban Soil Chemistry

### **Records within 50m**

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Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km<sup>2</sup>).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg )	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromiu m (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/k g)
On site	19	3.3	67	46	0.5	106	22	42	5
On site	20	3.5	67	46	0.3	109	21	43	6







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg )	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromiu m (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/k g)
On site	20	3.5	36	25	0.1	110	17	43	3
On site	20	3.5	37	25	0.1	110	17	43	4
On site	21	3.7	81	56	0.5	109	24	42	6
On site	21	3.7	74	51	0.5	109	23	41	5
On site	21	3.7	134	92	0.3	108	37	41	9
17m SE	21	3.7	135	93	0.3	102	37	41	9
21m SW	19	3.3	313	215	0.4	108	169	43	49
30m E	21	3.7	49	34	0.4	100	23	41	5
36m SW	20	3.5	72	49	0.3	109	24	43	6

This data is sourced from the British Geological Survey.

# 21.3 BGS Measured Urban Soil Chemistry

### **Records within 50m**

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km<sup>2</sup>.

This data is sourced from the British Geological Survey.







Ref: GS-LYR-XRP-NIK-6ZH Your ref: 3860D Syston Grid ref: 461492 312286

# 22 Railway infrastructure and projects



# 22.1 Underground railways (London)

### **Records within 250m**

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

# 22.2 Underground railways (Non-London)

### **Records within 250m**

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.





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This data is sourced from publicly available information by Groundsure.

## 22.3 Railway tunnels

#### **Records within 250m**

### Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

# 22.4 Historical railway and tunnel features

#### **Records within 250m**

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

# 22.5 Royal Mail tunnels

#### Records within 250m

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

## **22.6 Historical railways**

#### **Records within 250m**

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

### 22.7 Railways

#### Records within 250m

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on **page 114** >





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Location	Name	Туре
20m NE	Midland Main Line	rail
20m NE	Midland Main Line	rail
24m NE	Midland Main Line	rail
24m NE	Midland Main Line	rail
28m NE	Midland Main Line	rail
28m NE	Midland Main Line	rail
29m NE	Not given	Multi Track
29m NE	Not given	Multi Track
31m NE	Not given	Multi Track
33m NE	Midland Main Line	rail
33m NE	Midland Main Line	rail
38m E	Not given	Multi Track
51m N	Midland Main Line	rail
53m N	Midland Main Line	rail
55m N	Midland Main Line	rail
57m N	Not given	Multi Track
57m N	Midland Main Line	rail
192m E	Not given	Multi Track
221m N	Not given	Multi Track

*This data is sourced from Ordnance Survey and OpenStreetMap.* 

# 22.8 Crossrail 2

**Records within 500m** 

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an
underground tunnel through London.

This data is sourced from publicly available information by Groundsure.







## 22.9 HS2

### **Records within 500m**

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.







**Ref**: GS-LYR-XRP-NIK-6ZH **Your ref**: 3860D Syston **Grid ref**: 461492 312286

# Data providers

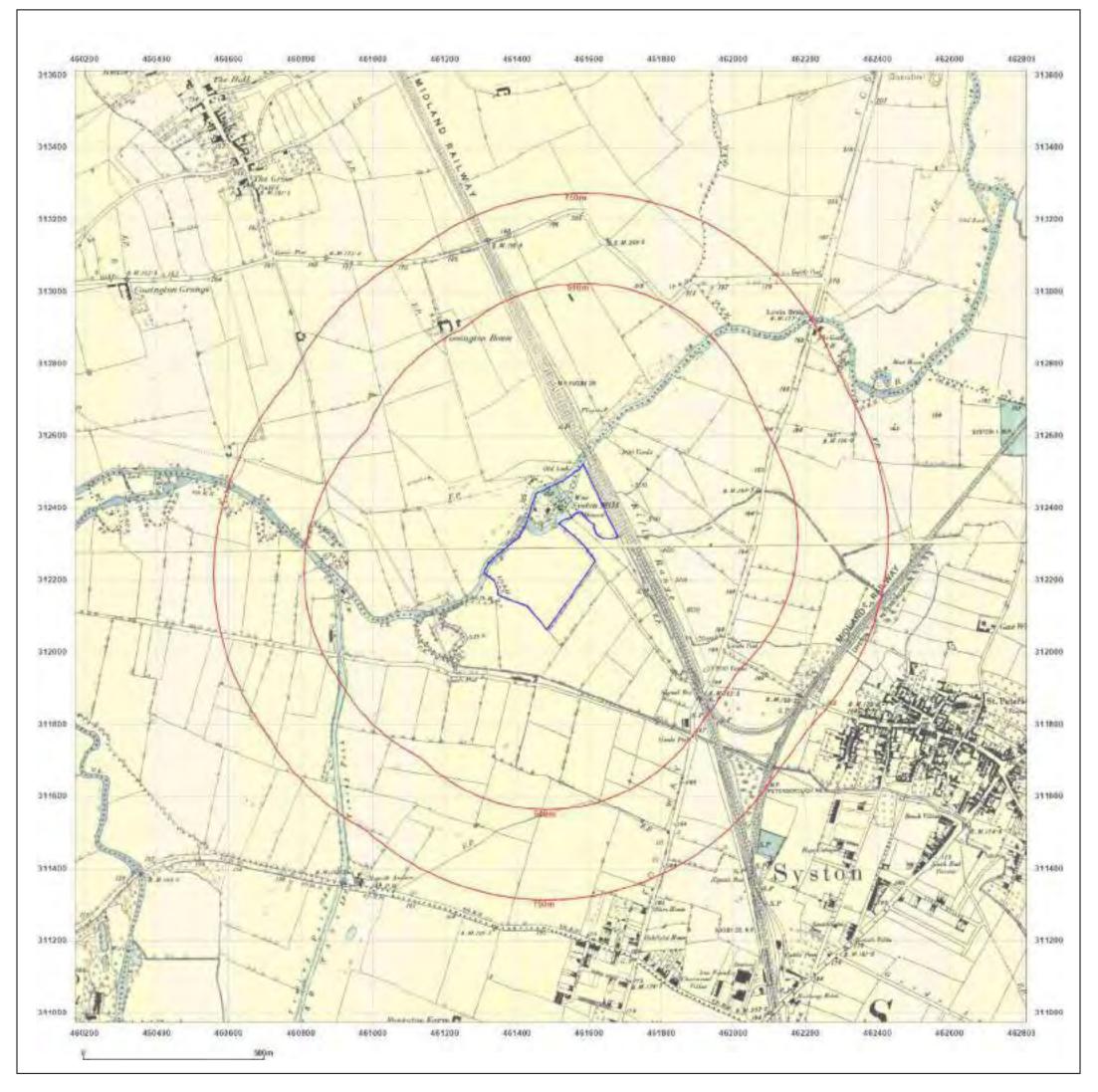
Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <u>https://www.groundsure.com/sources-reference</u>  $\nearrow$ .

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 3860D Syston

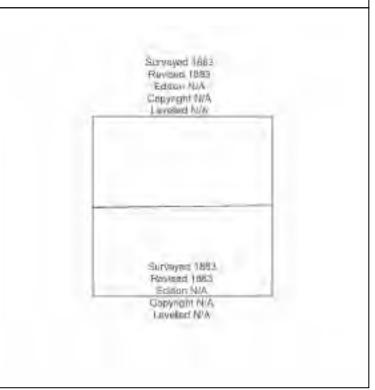
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 Grid Ref:
 461493, 312293

Map Name:	County Series
Map date:	1883

**Scale:** 1:10,560

**Printed at:** 1:10,560



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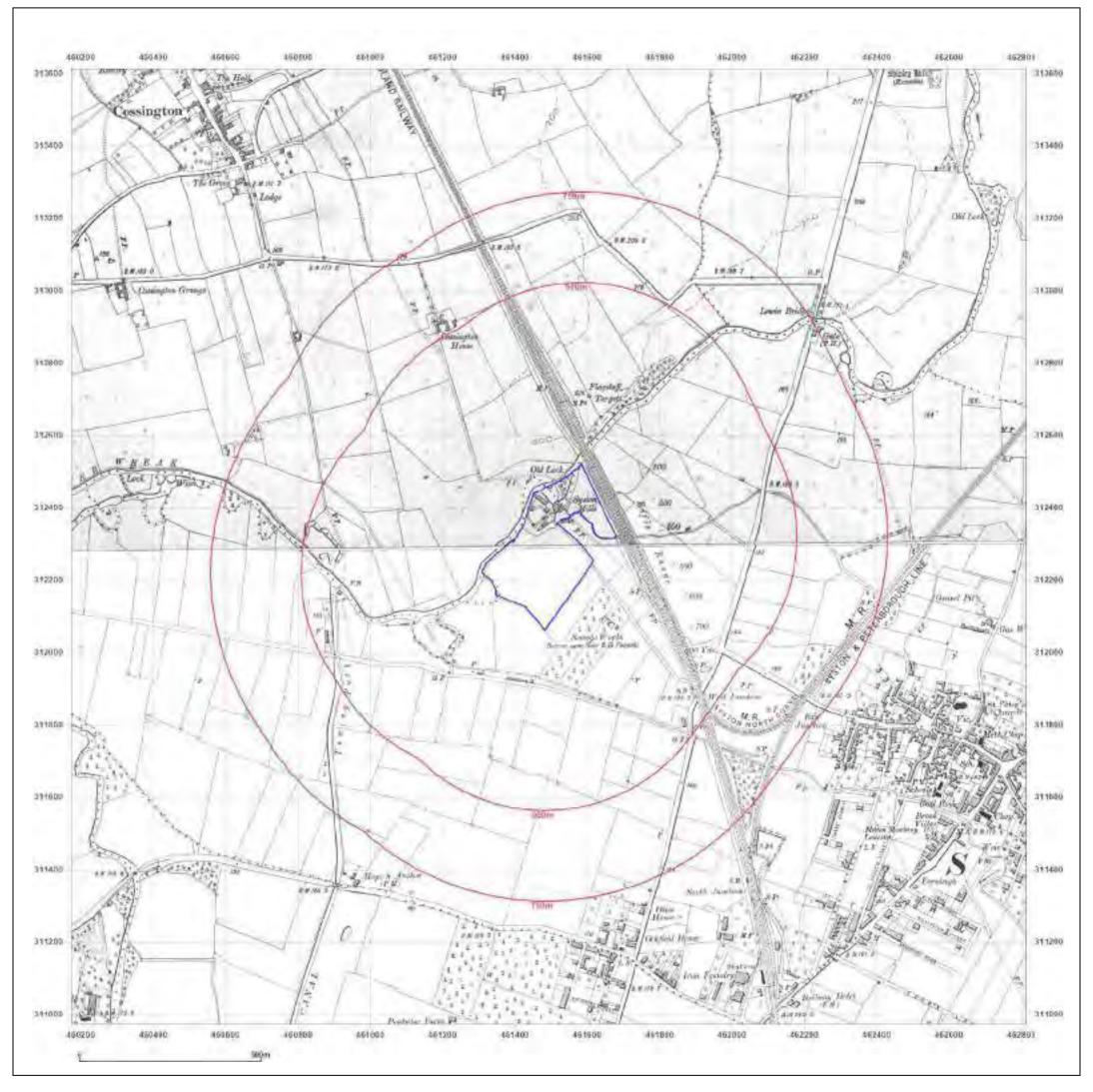


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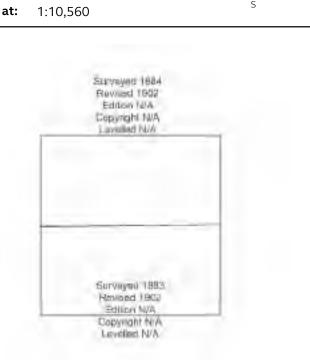


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Map Name:	County Series

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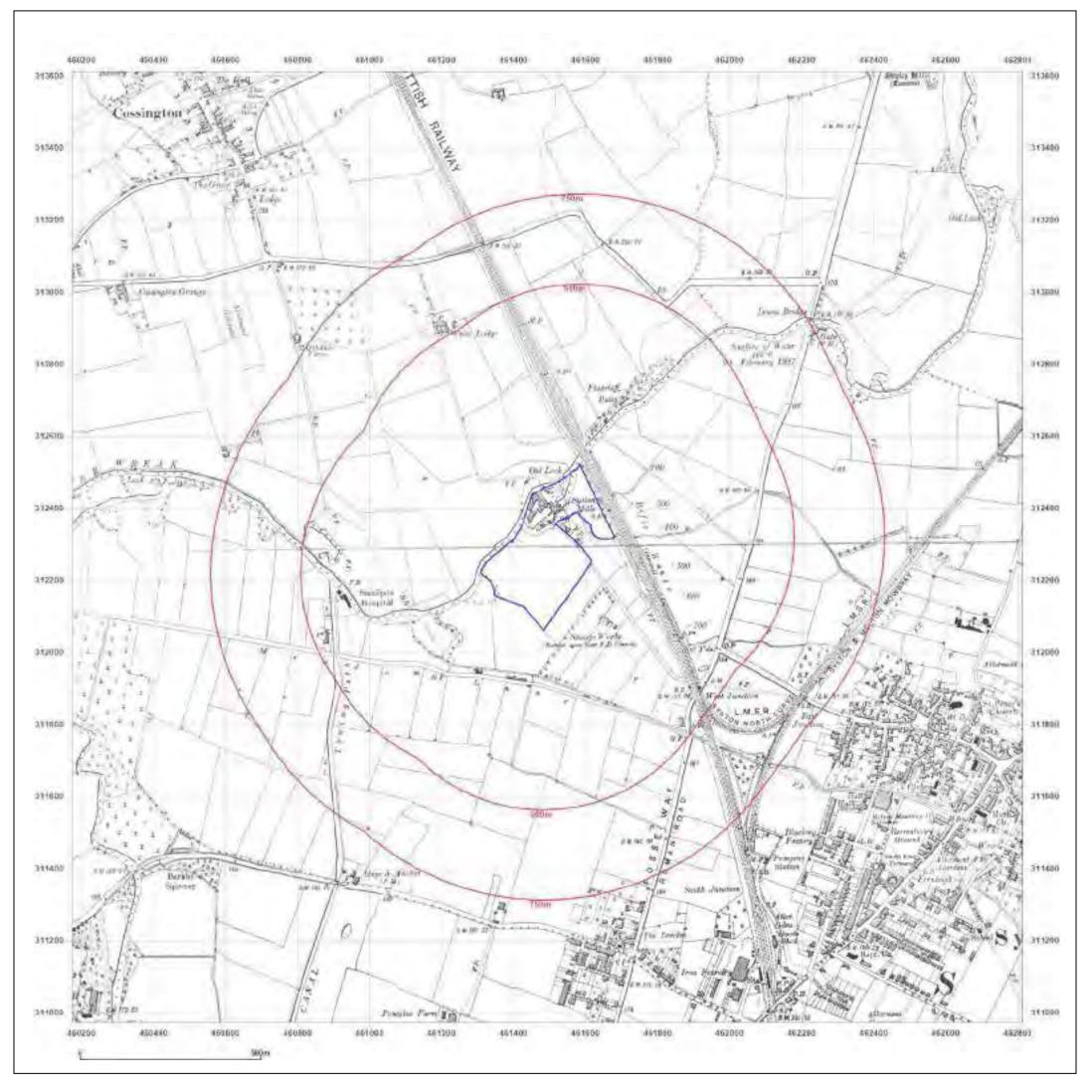


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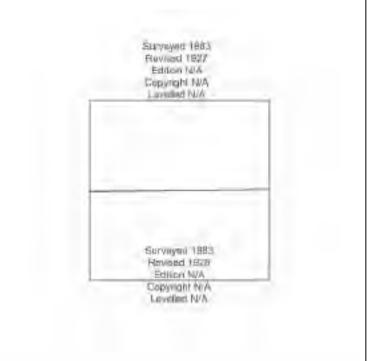
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1927-1928 Map date:

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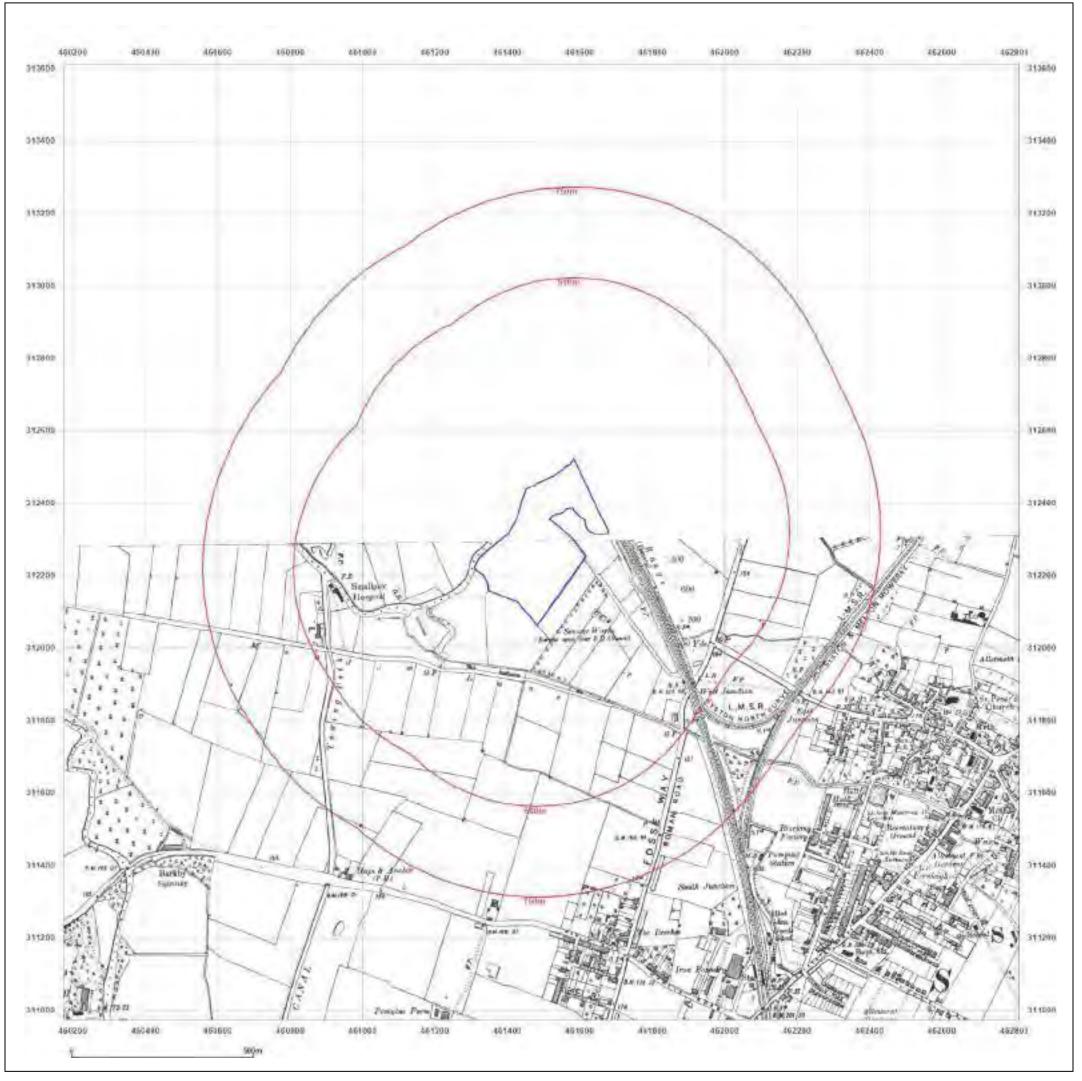




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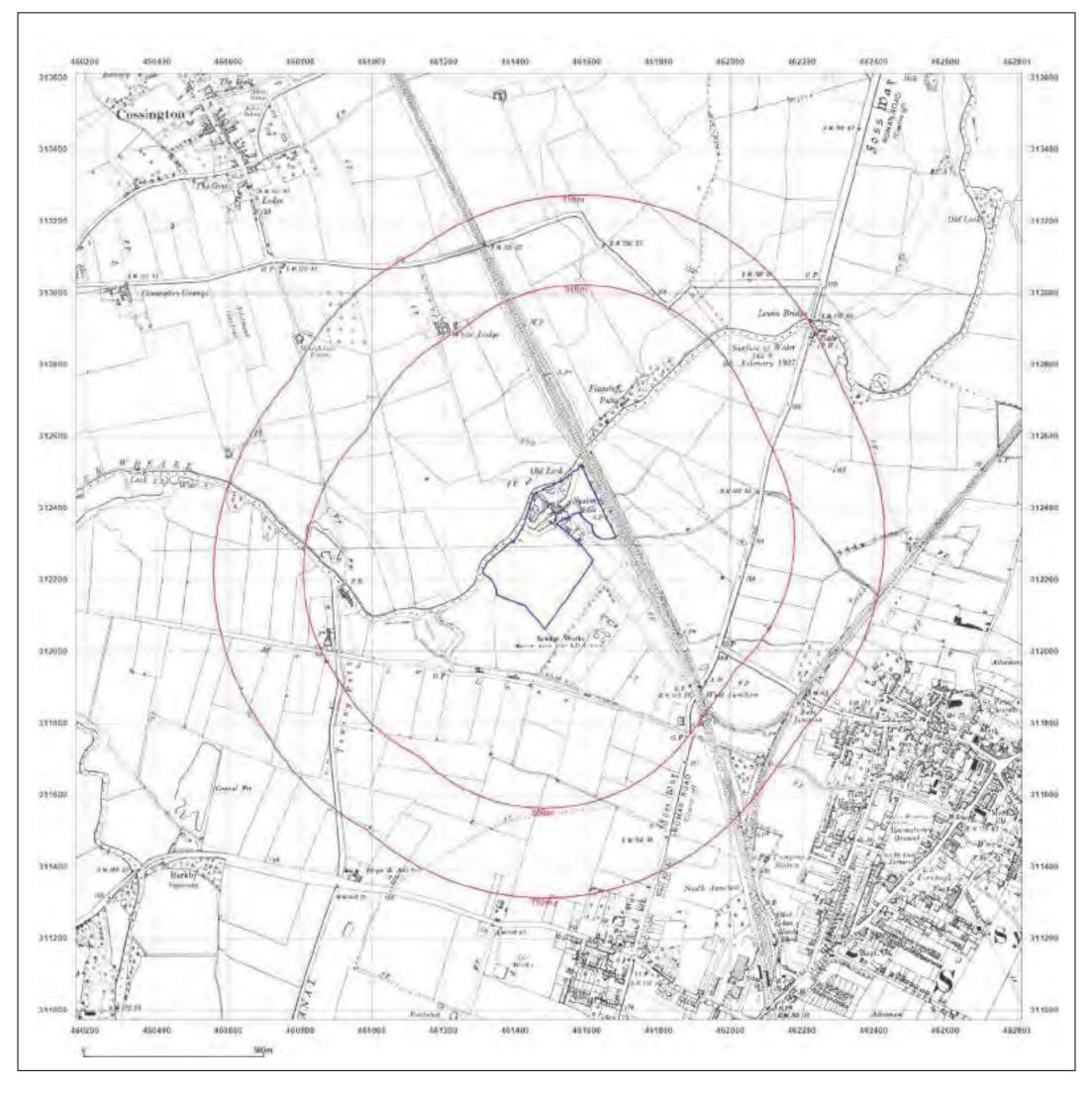
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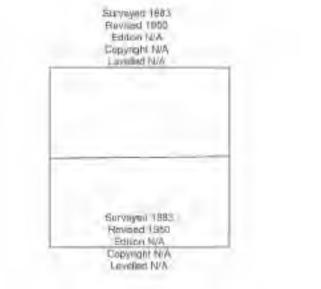


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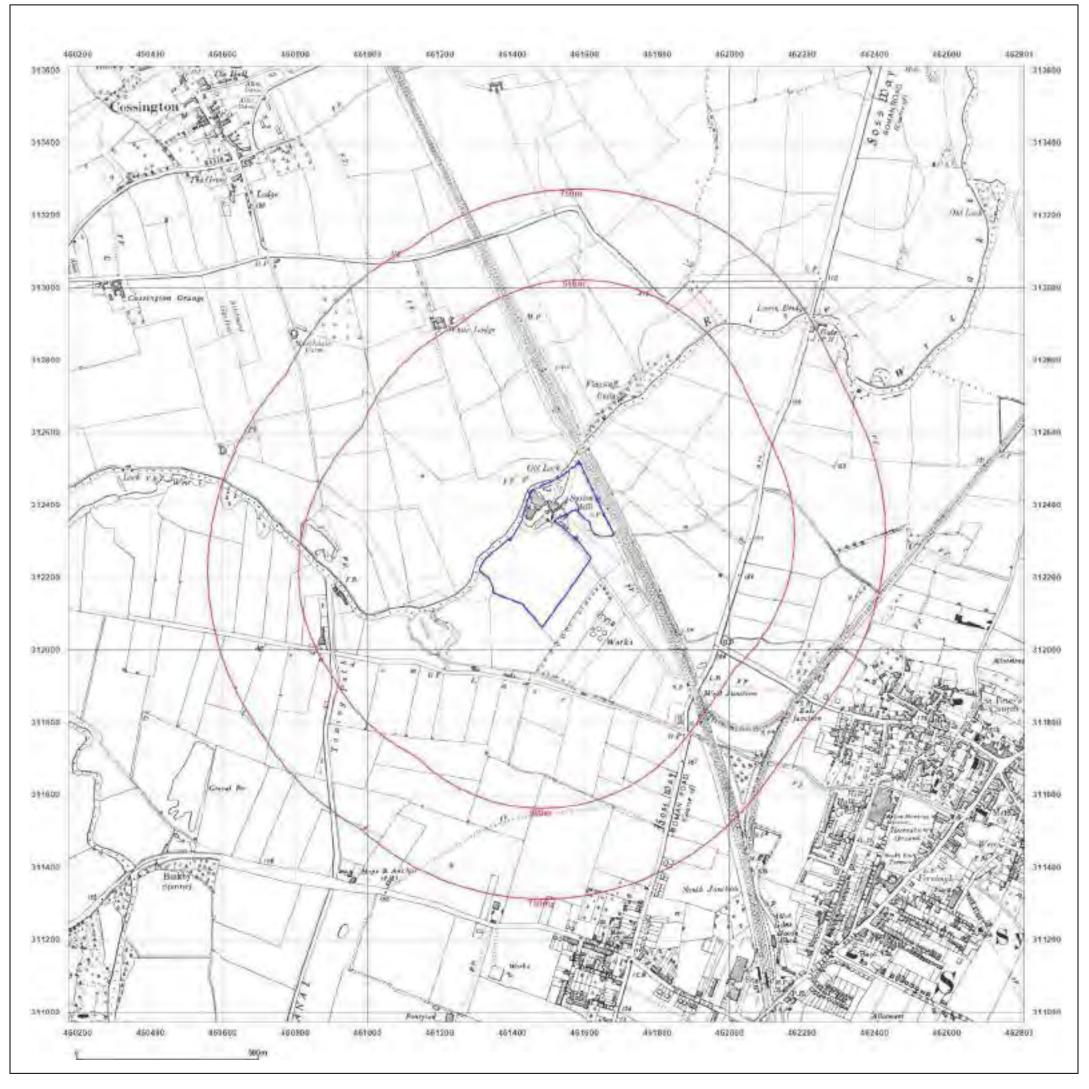




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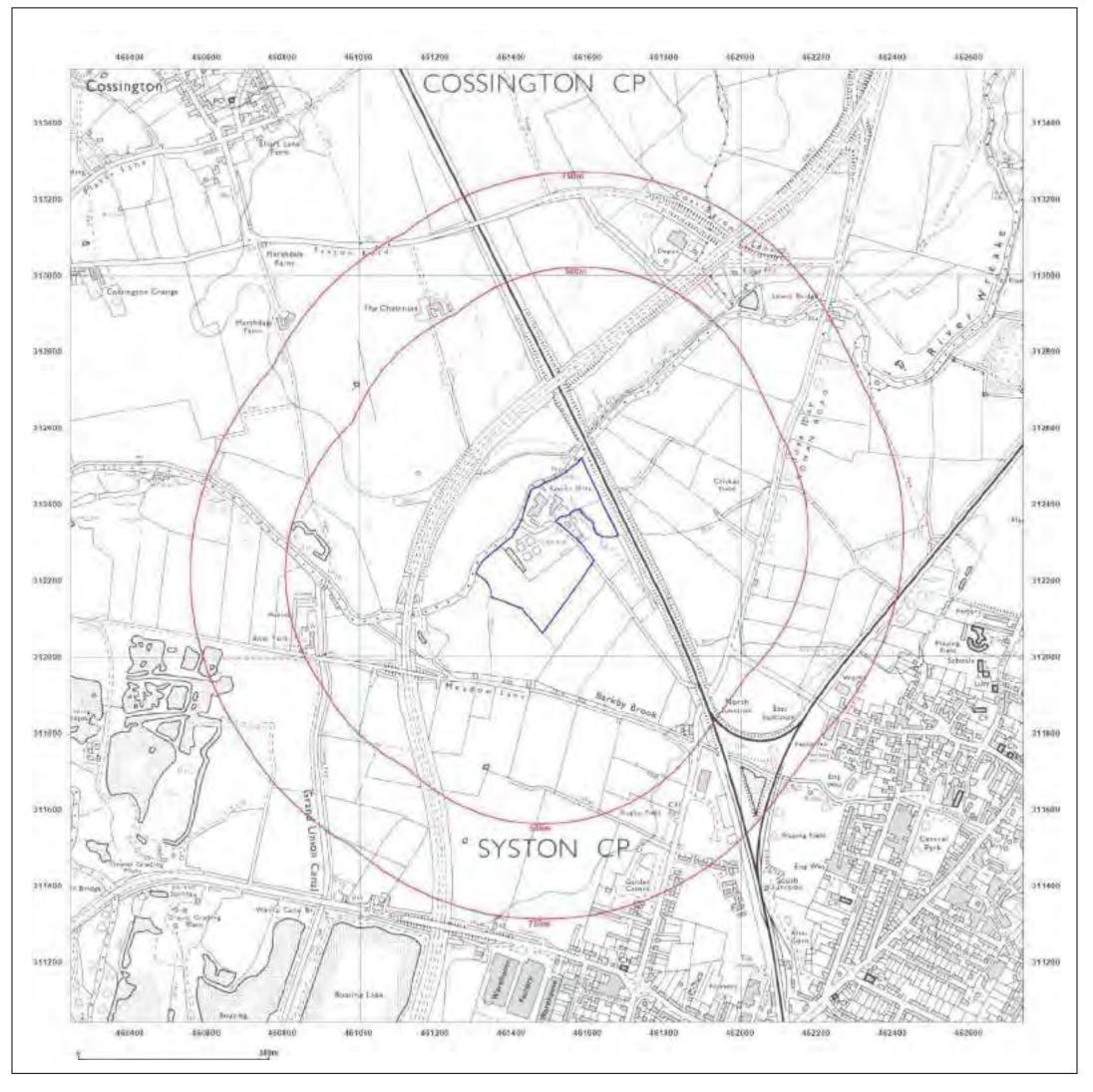
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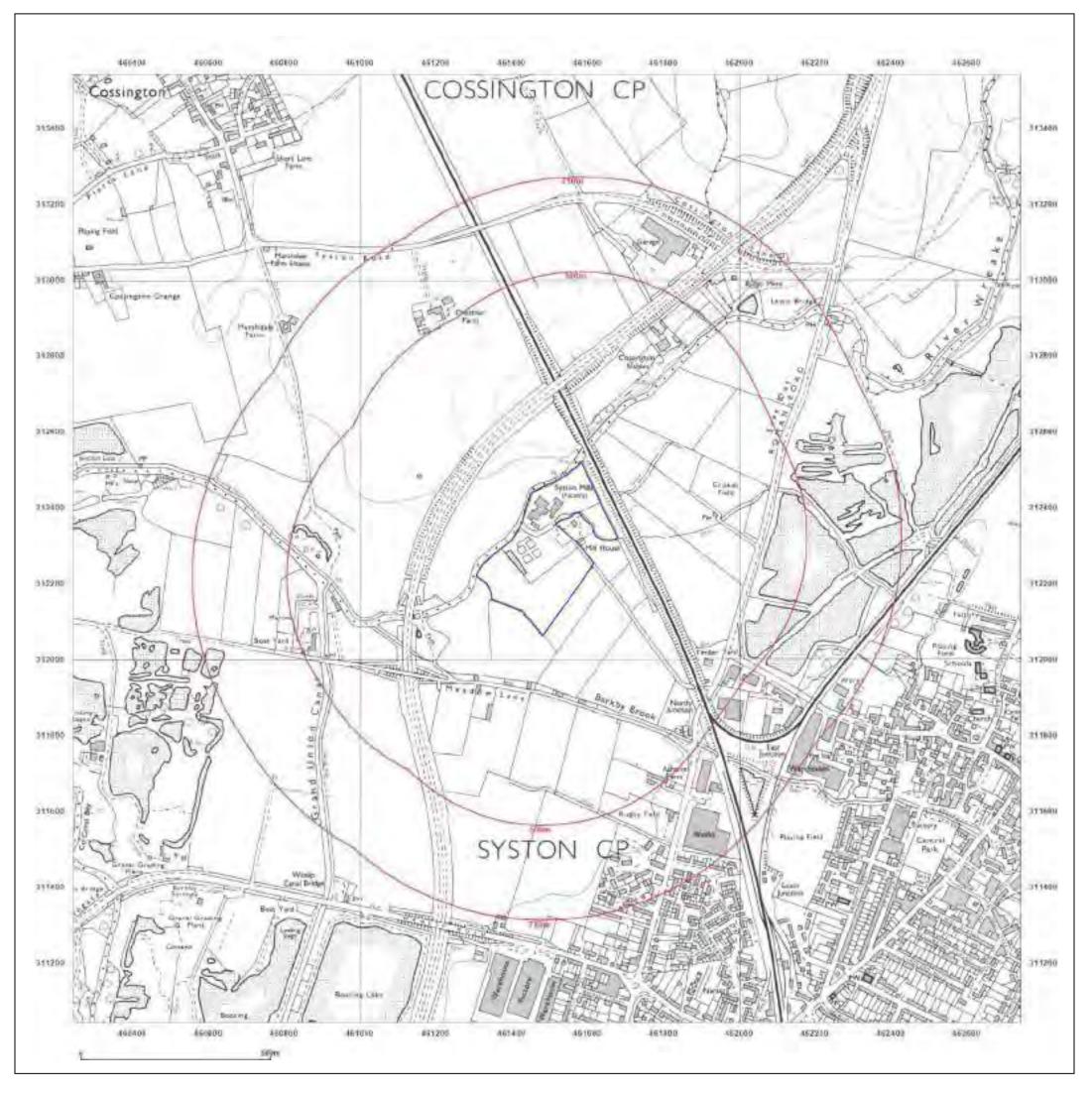


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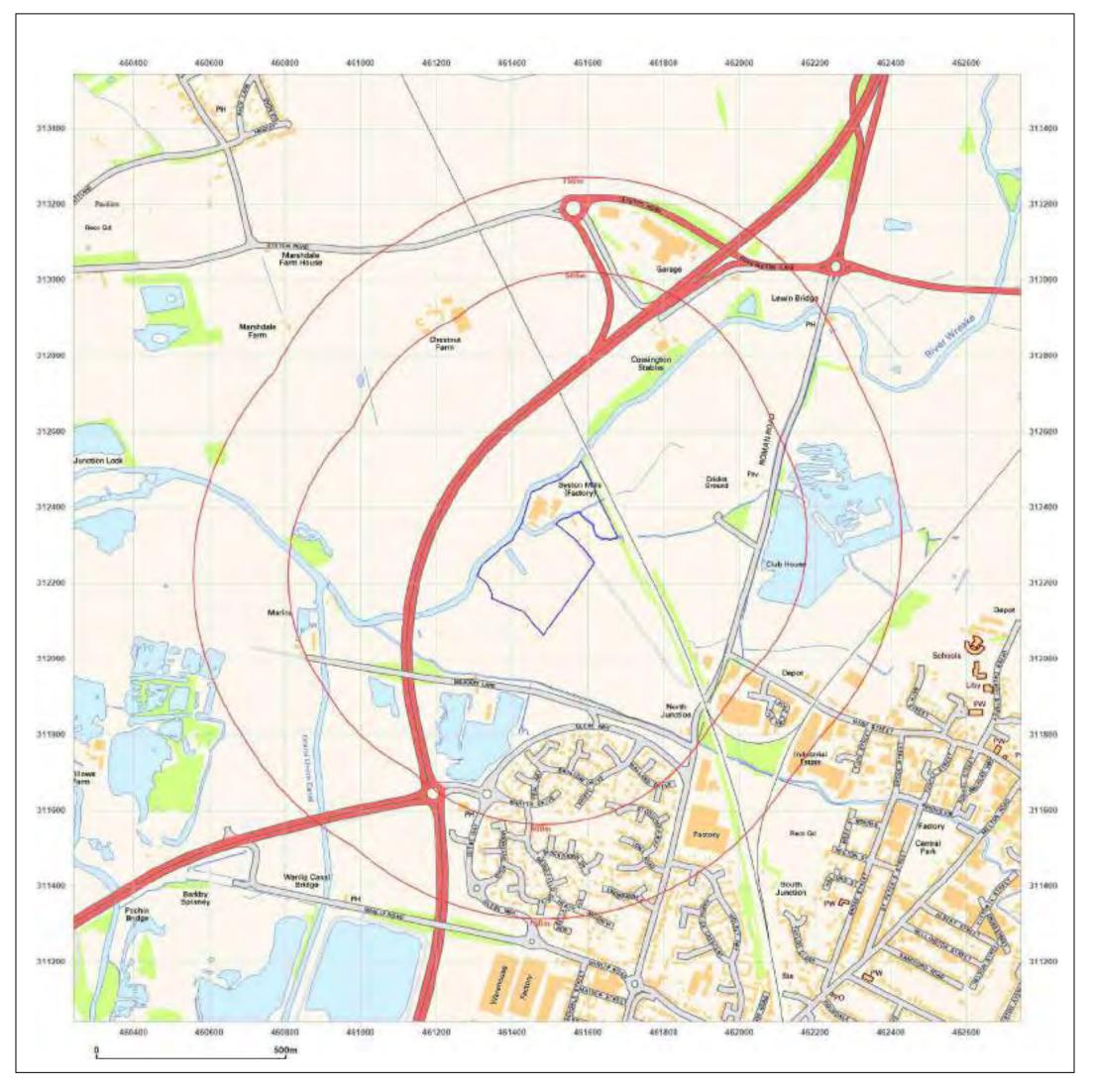


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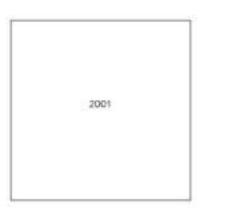
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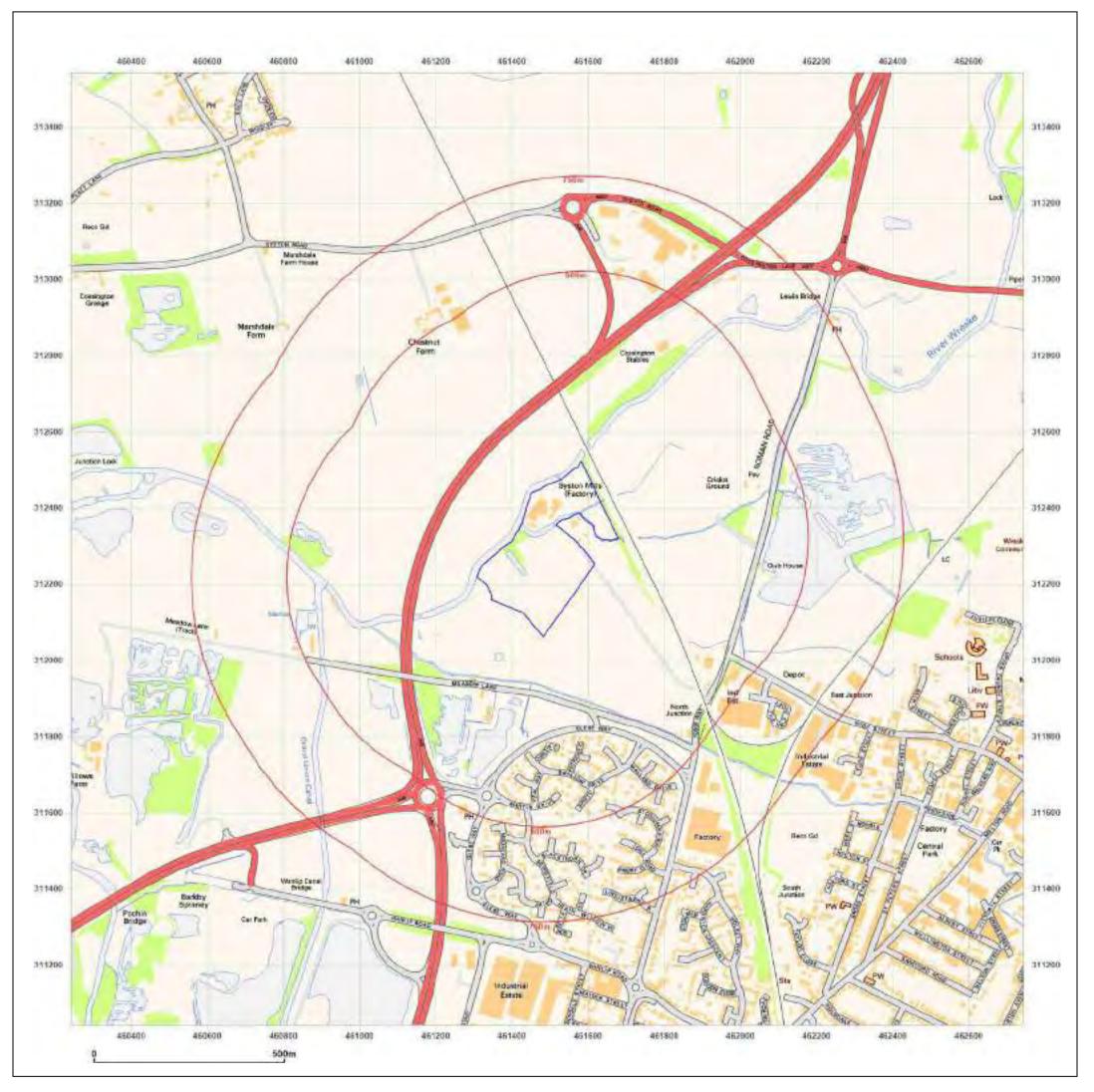


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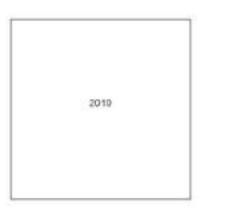


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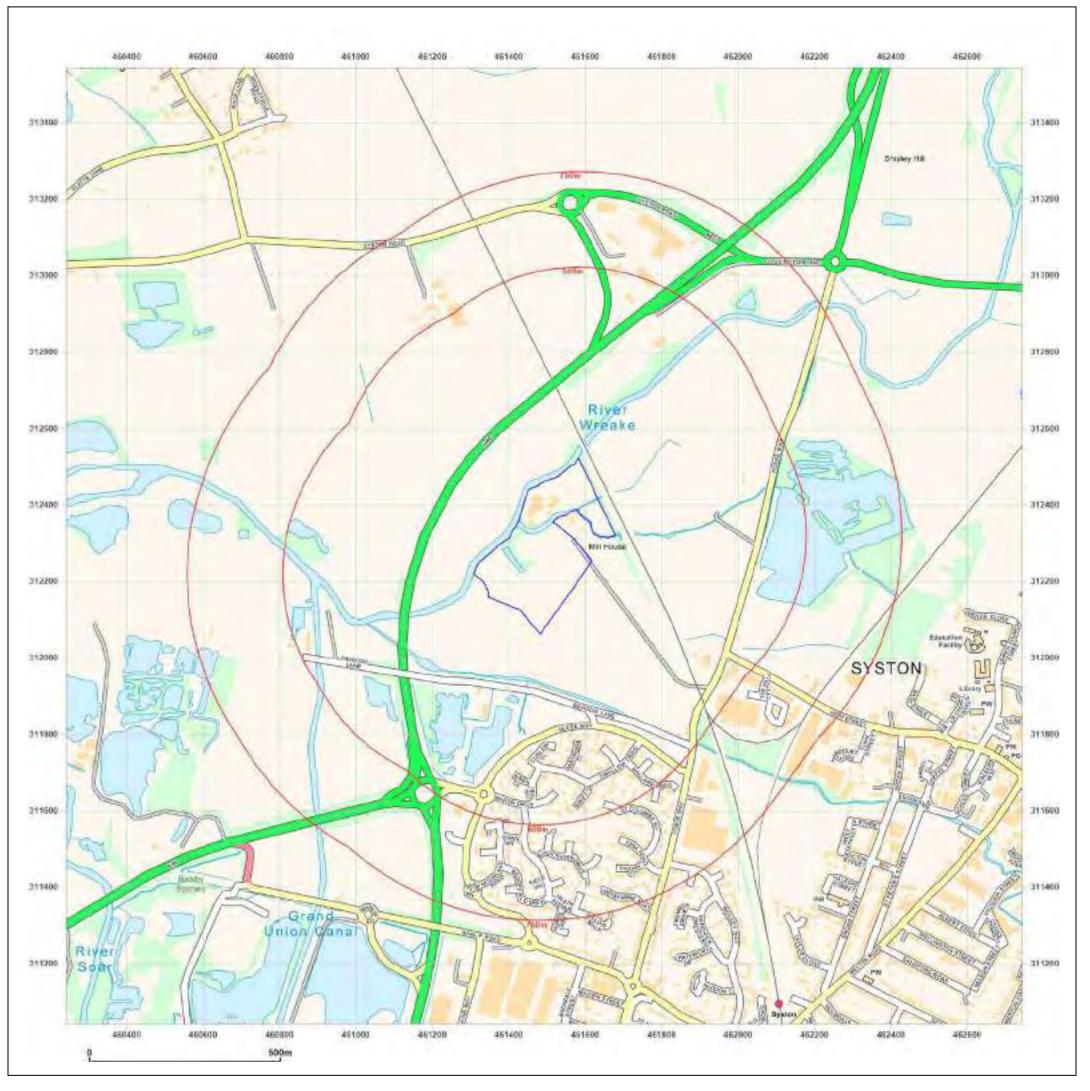


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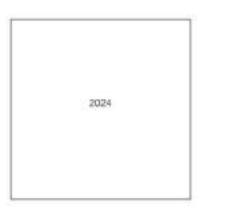


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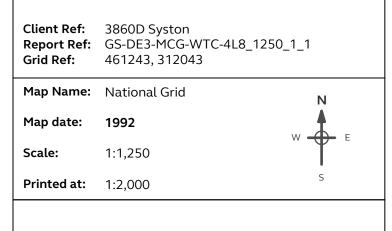
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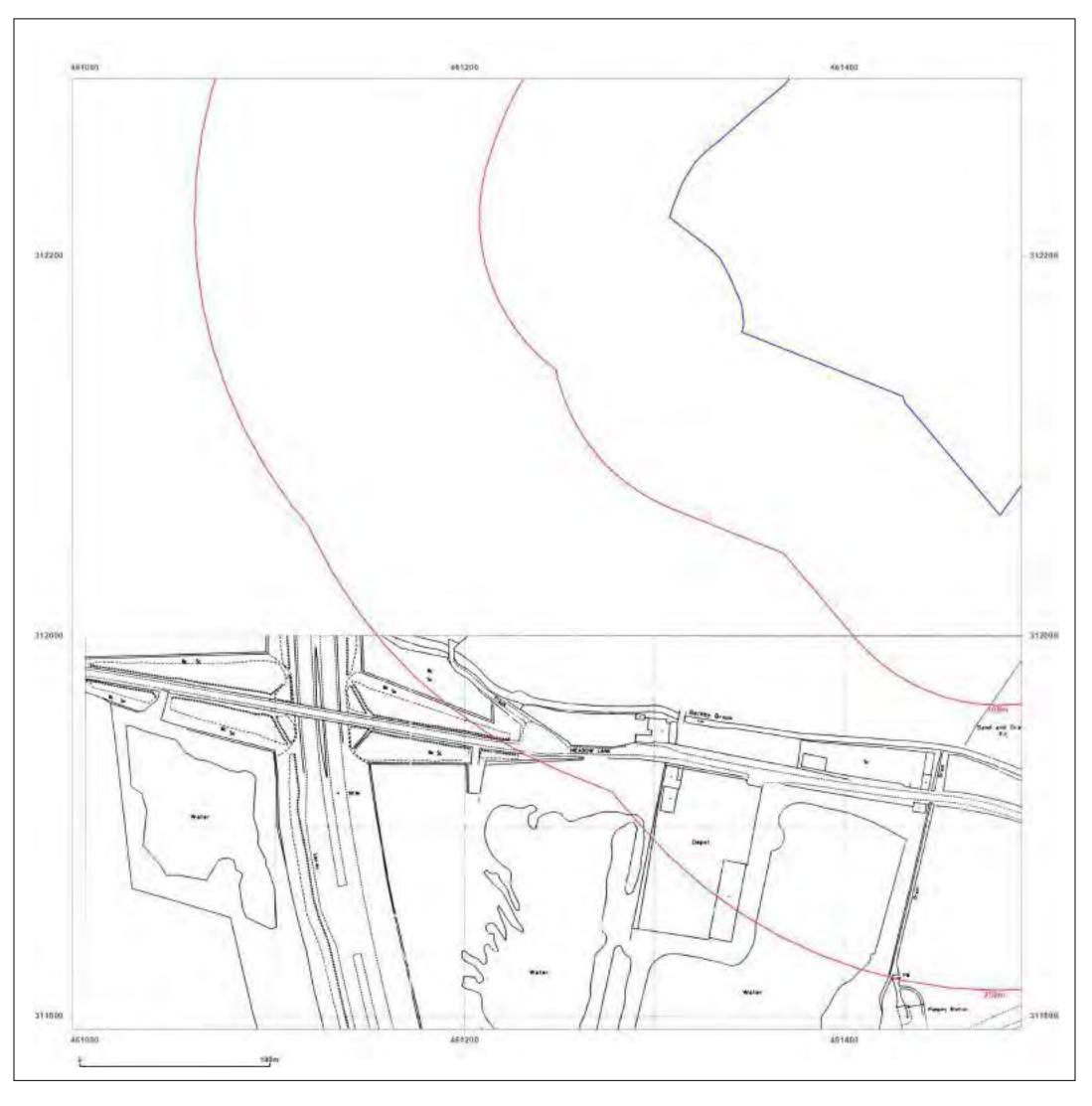




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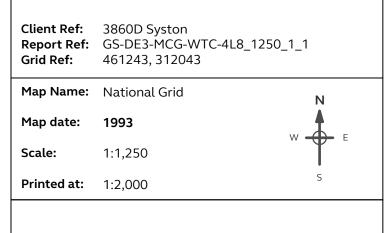
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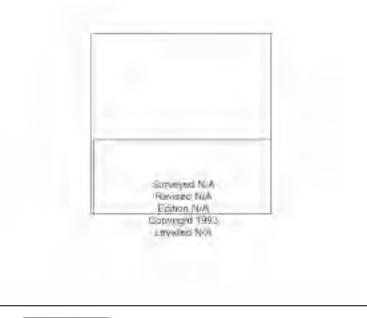




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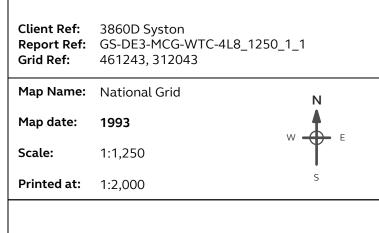
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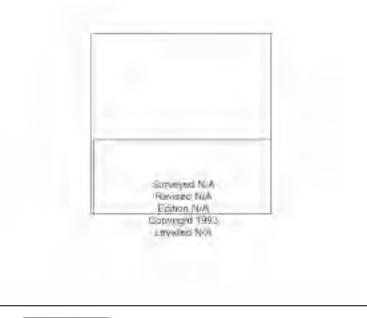
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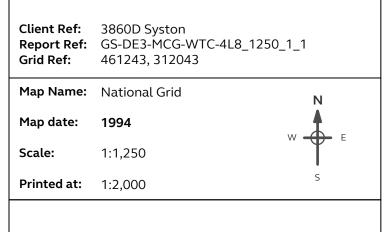
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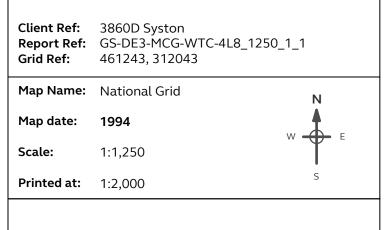
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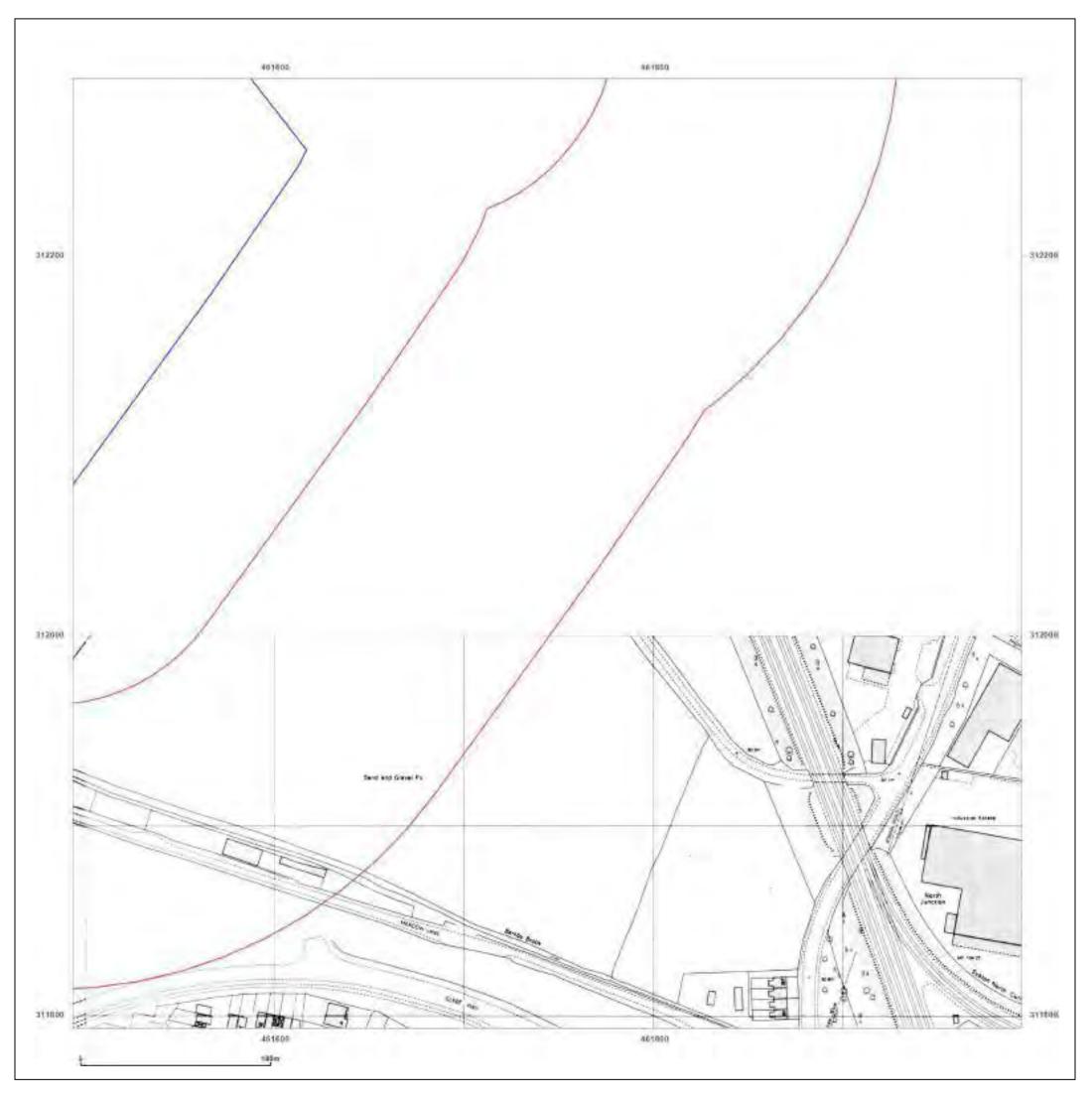




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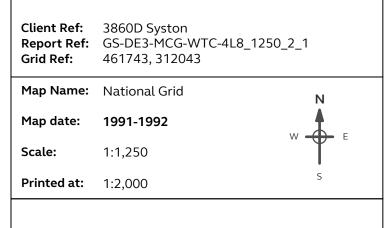
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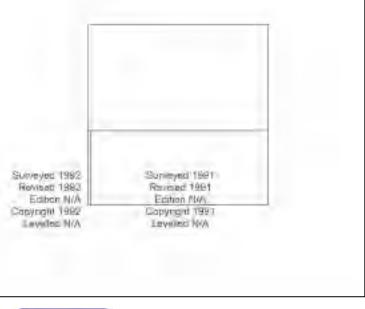




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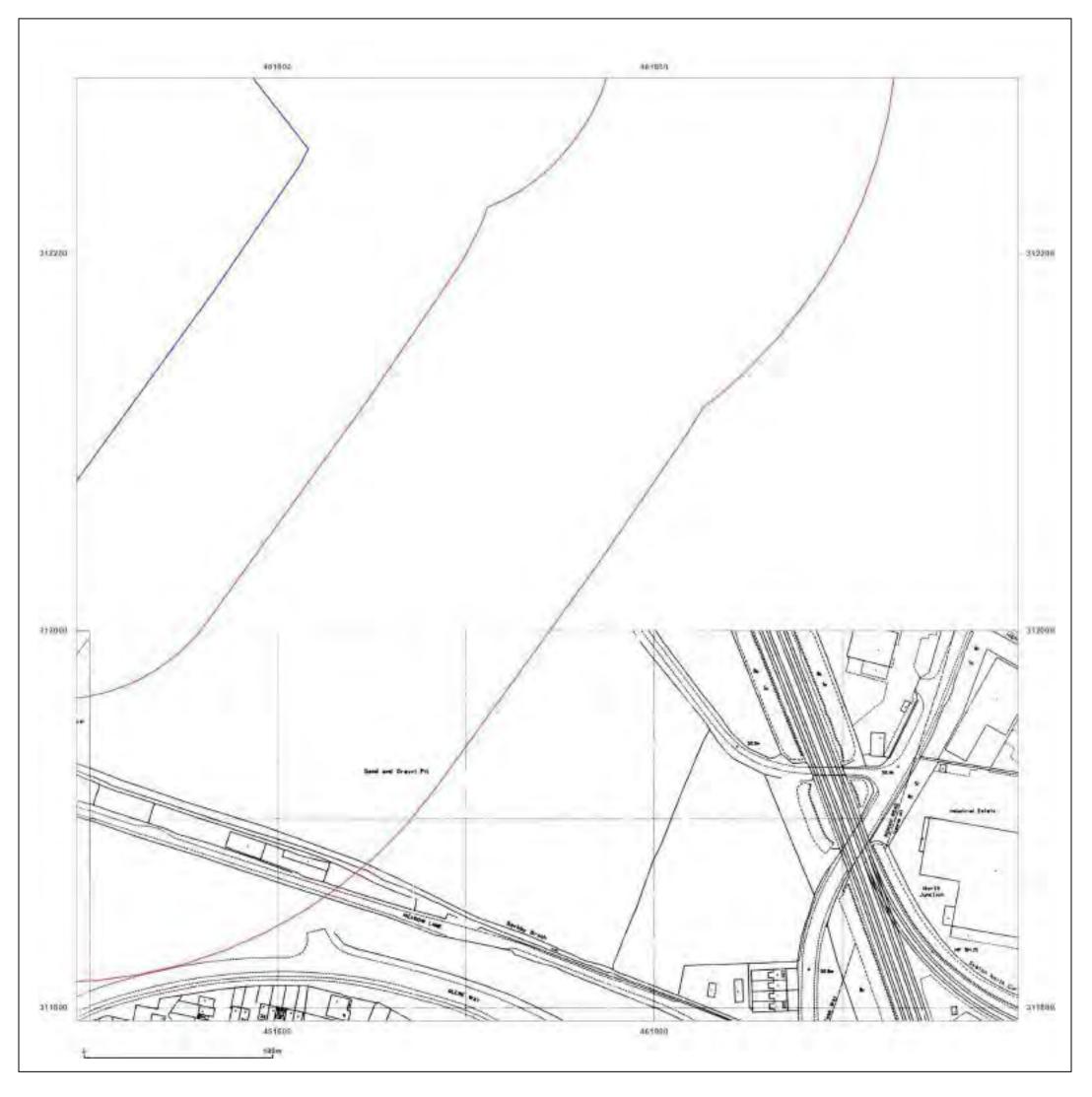




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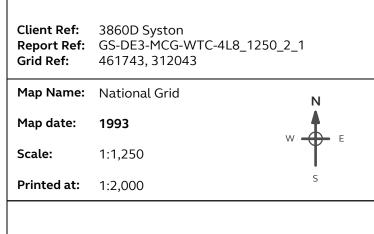
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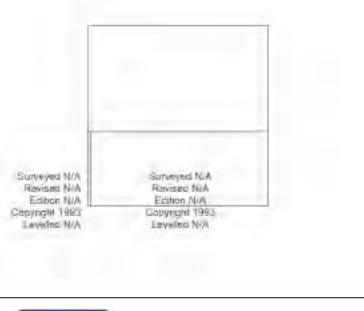




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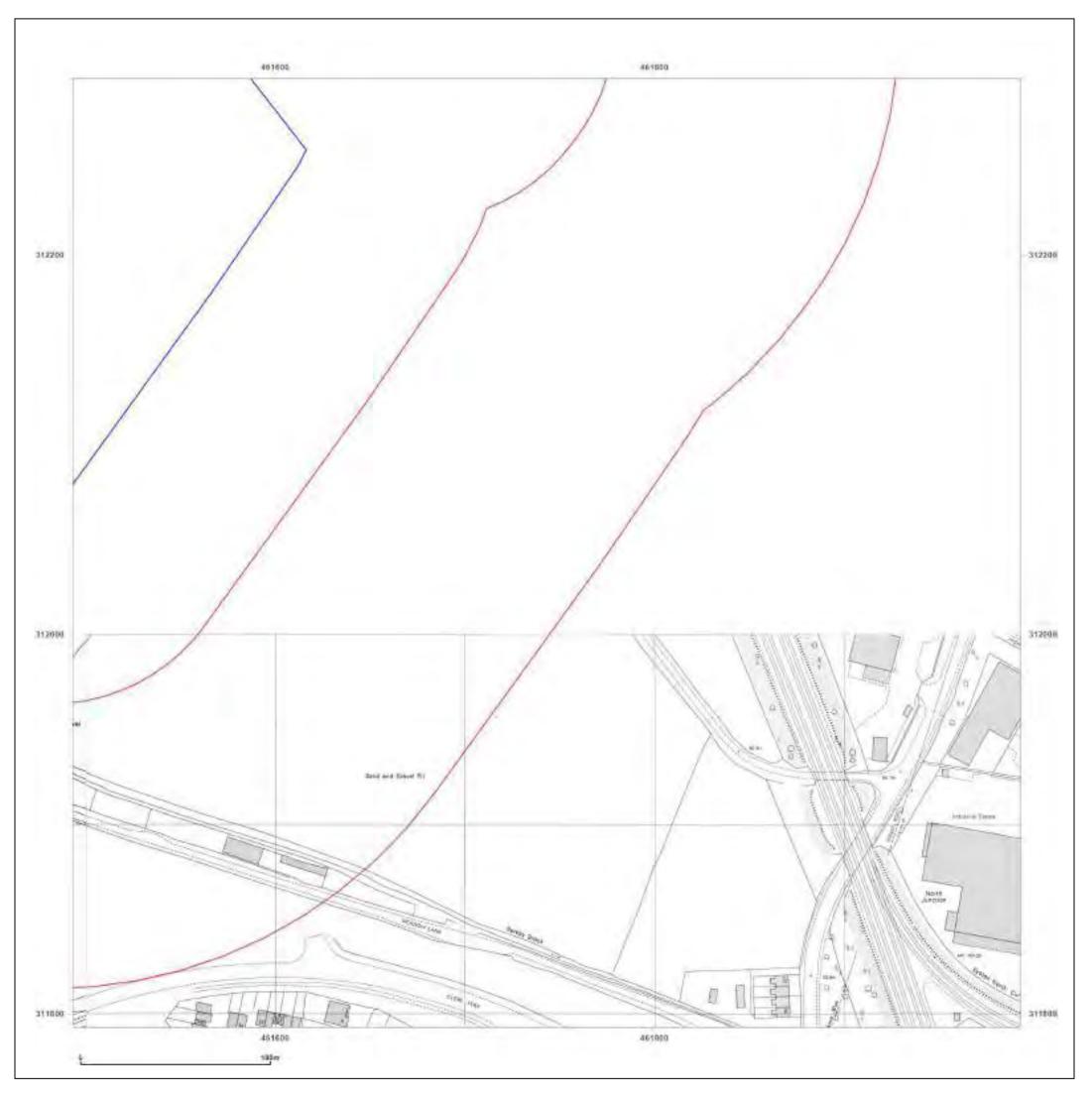






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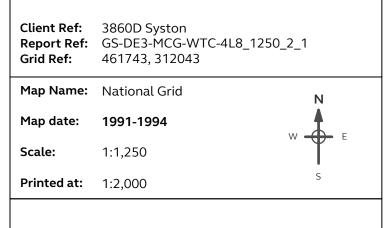
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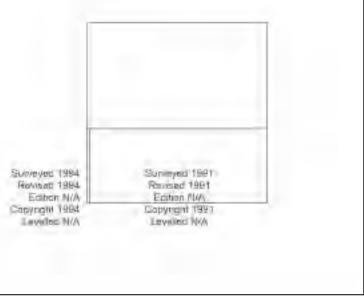




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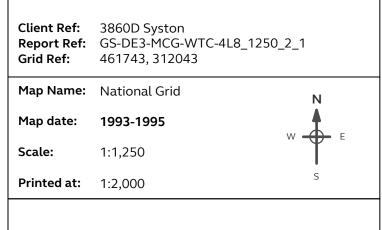
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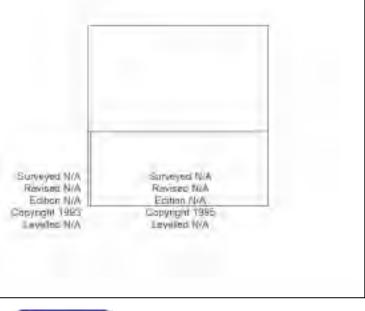




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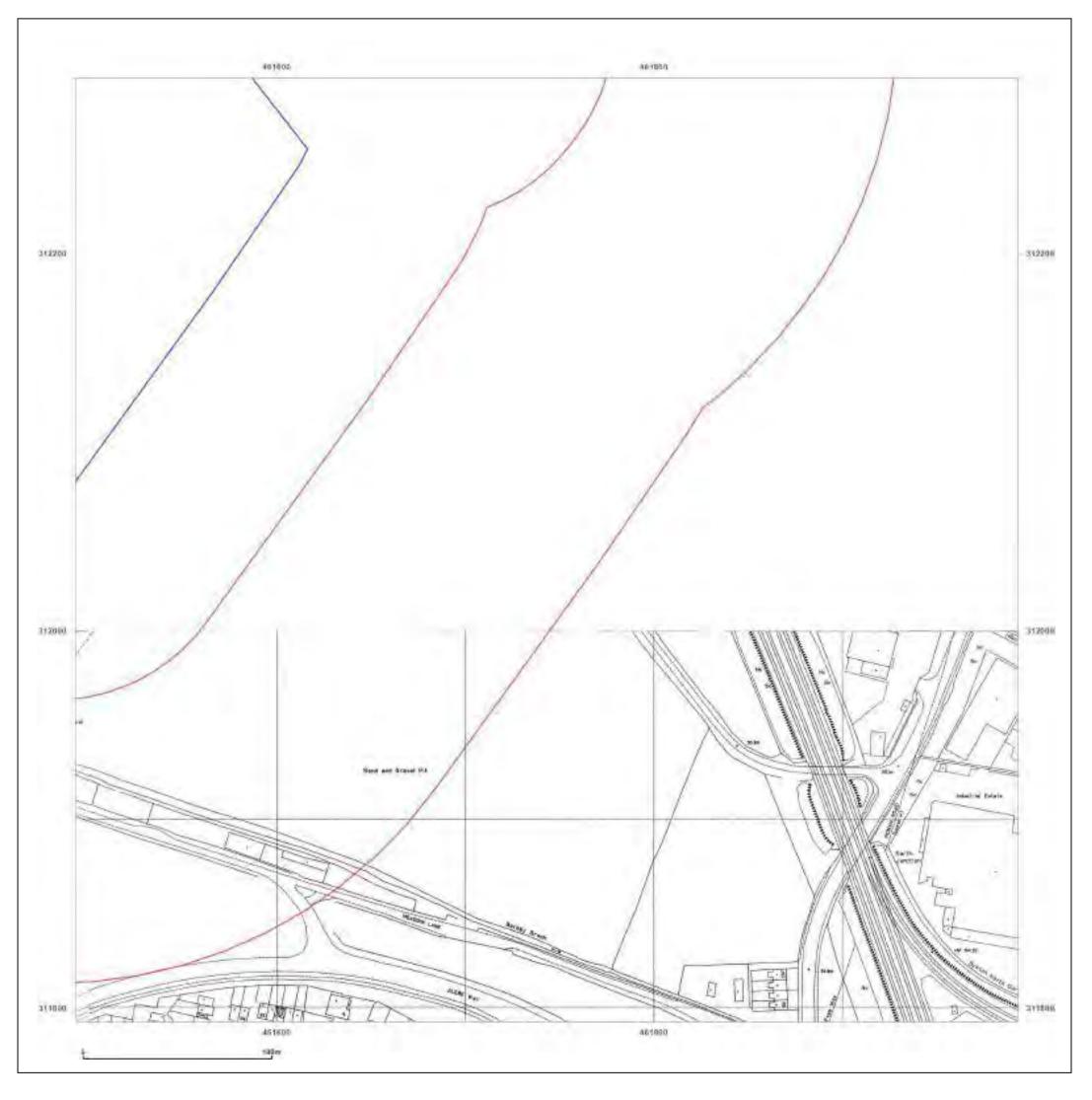






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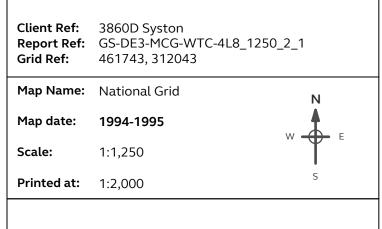


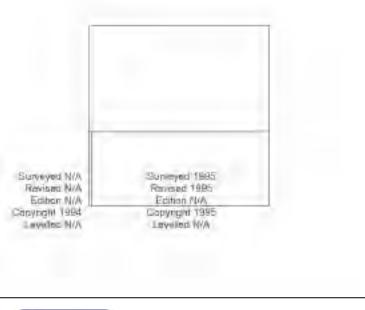
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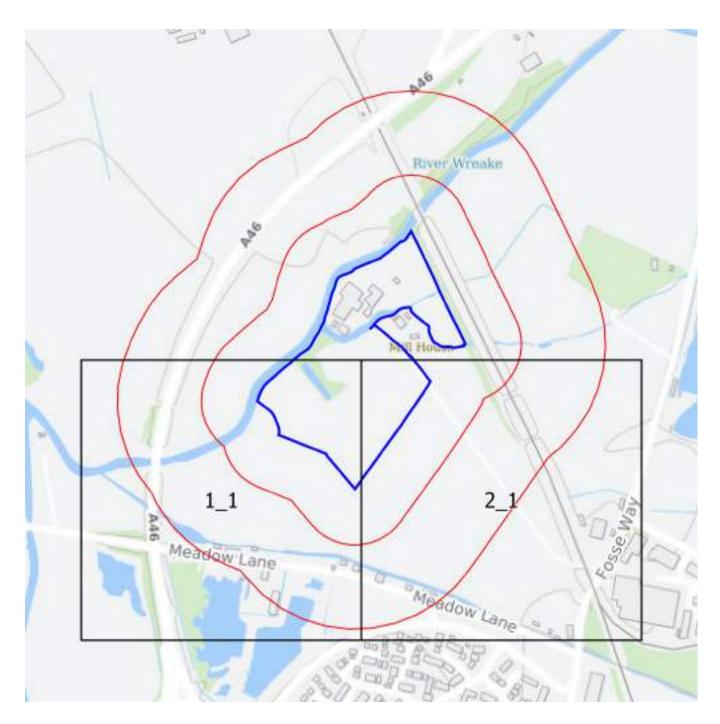
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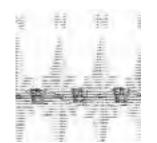


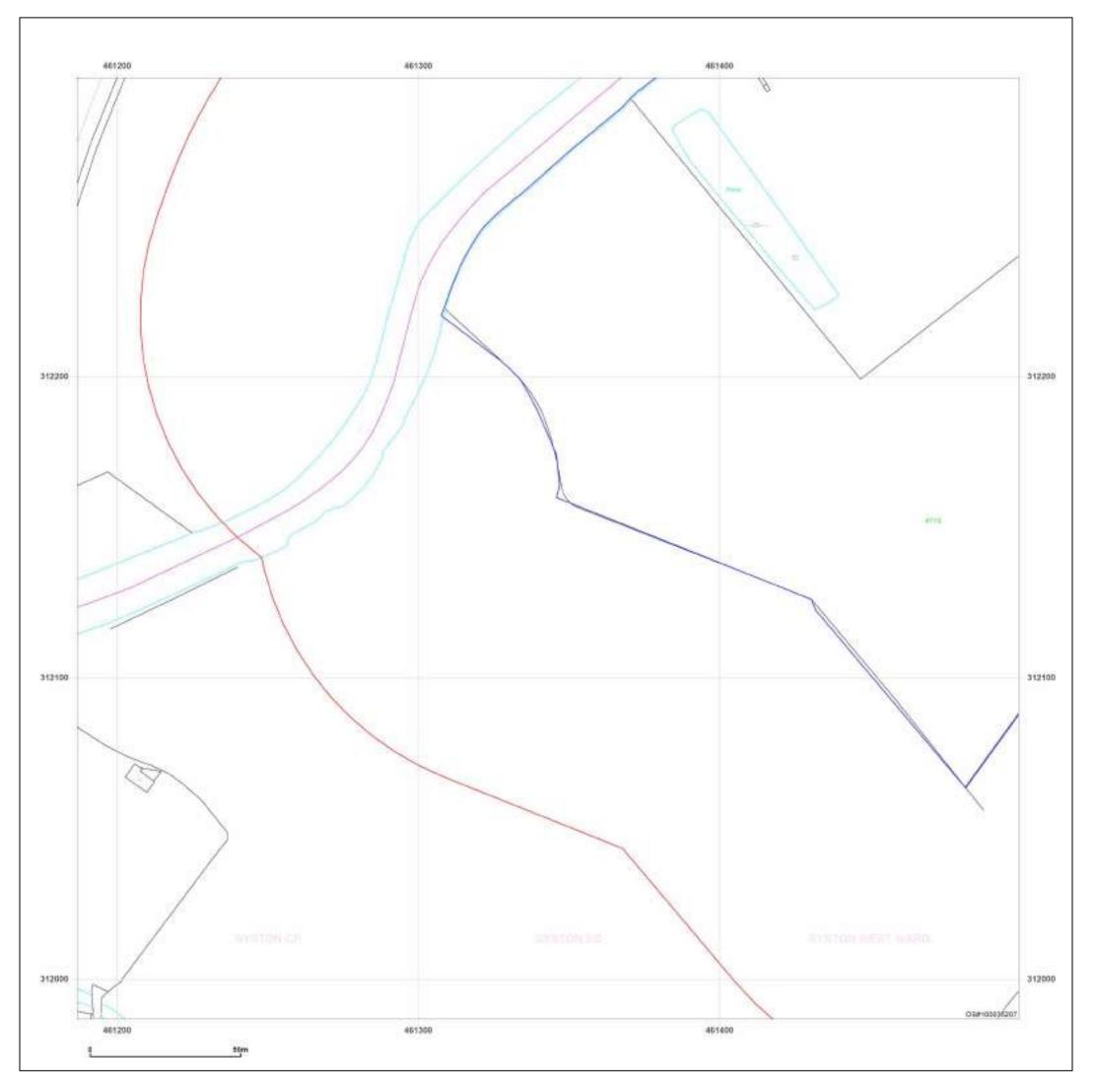






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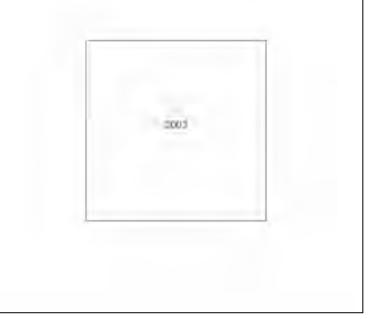






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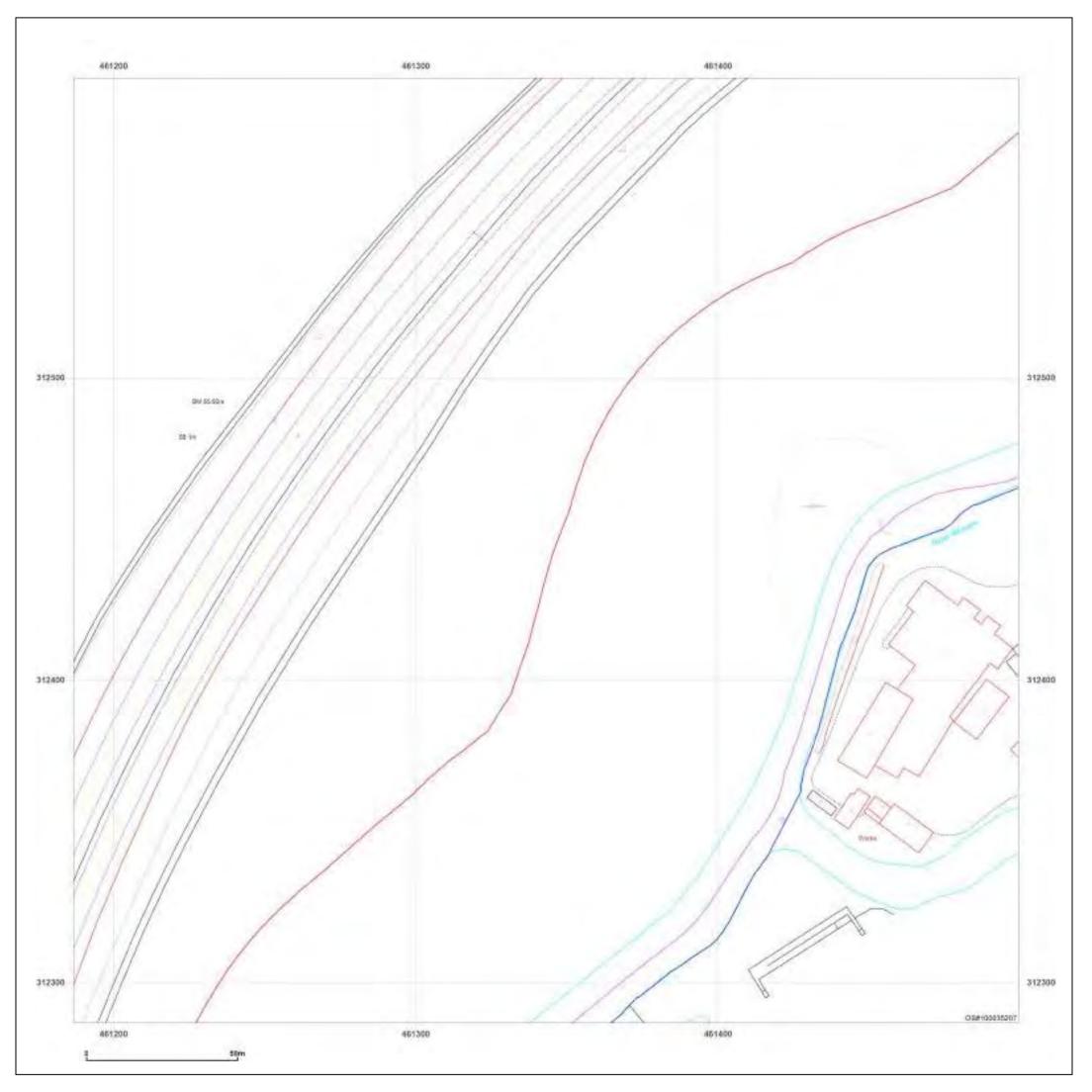




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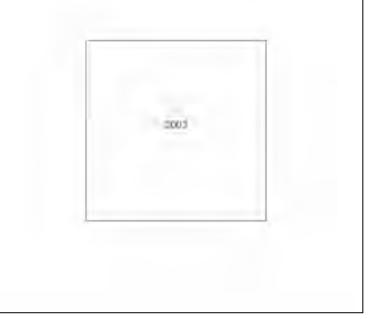




# Site Details:

SYSTON MILL, MILL LANE, SYSTON, LEICESTERSHIRE, LE7 1NS

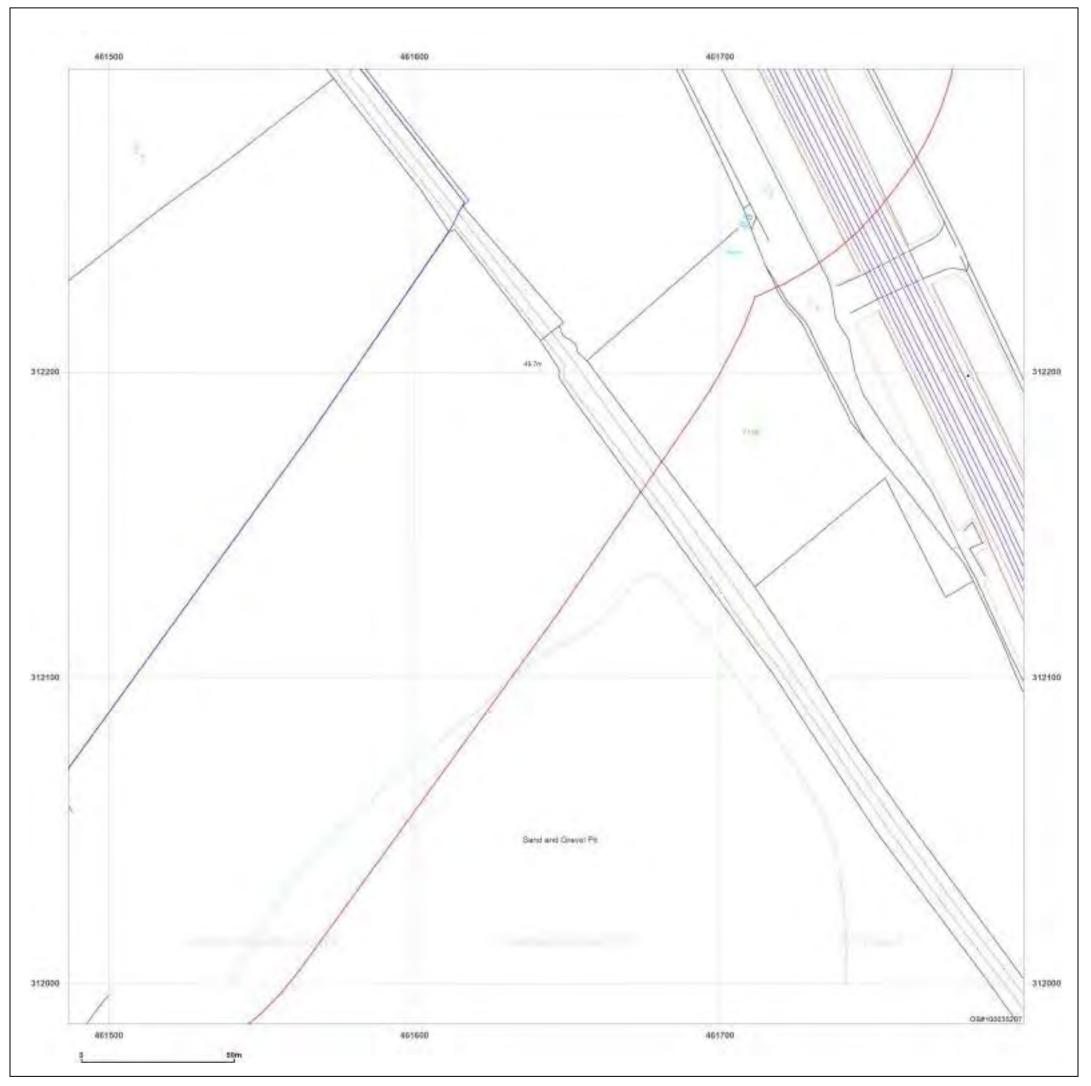
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Map Name:	LandLine	Ν
Map date:	2003	
Scale:	1:1,250	T -
Printed at:	1:1,250	S





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Production date: 03 December 2024 Map legend available at: www.groundsure.com/sites/default/files/groundsure\_legend.pdf



# Site Details:

SYSTON MILL, MILL LANE, SYSTON, LEICESTERSHIRE, LE7 1NS

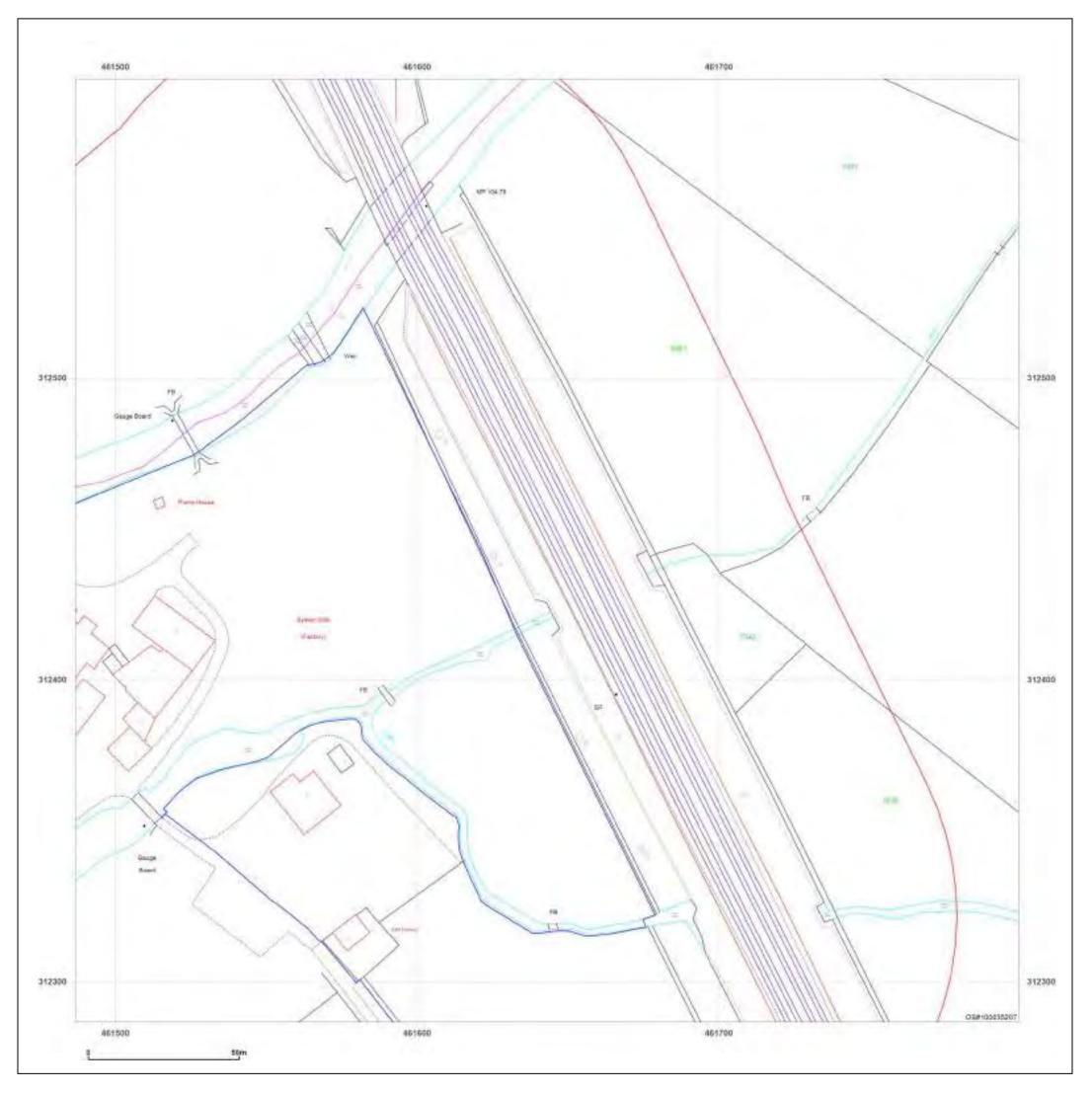
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Printed at:	1:1,250	S





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# Site Details:

SYSTON MILL, MILL LANE, SYSTON, LEICESTERSHIRE, LE7 1NS

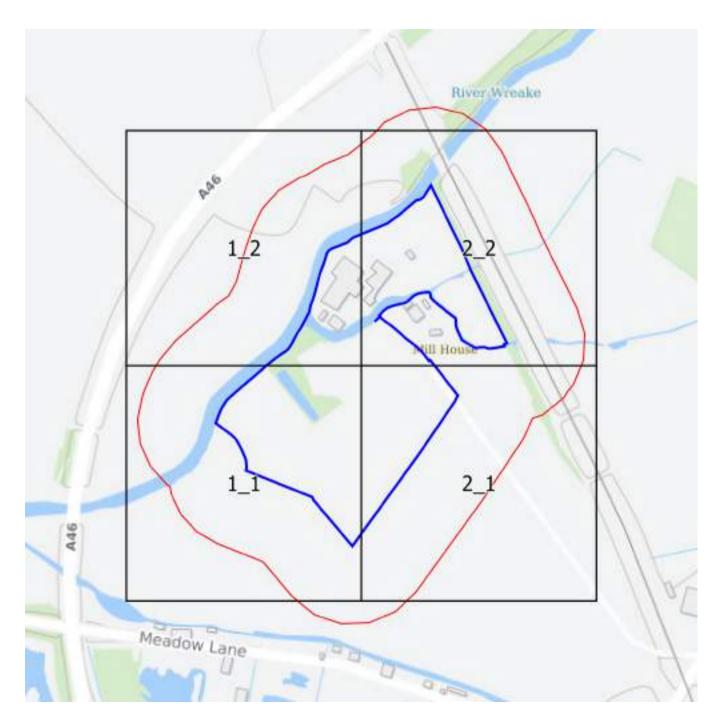
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Map date:	2003	
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Printed at:	1:1,250	S





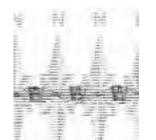
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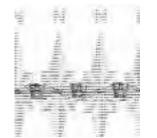
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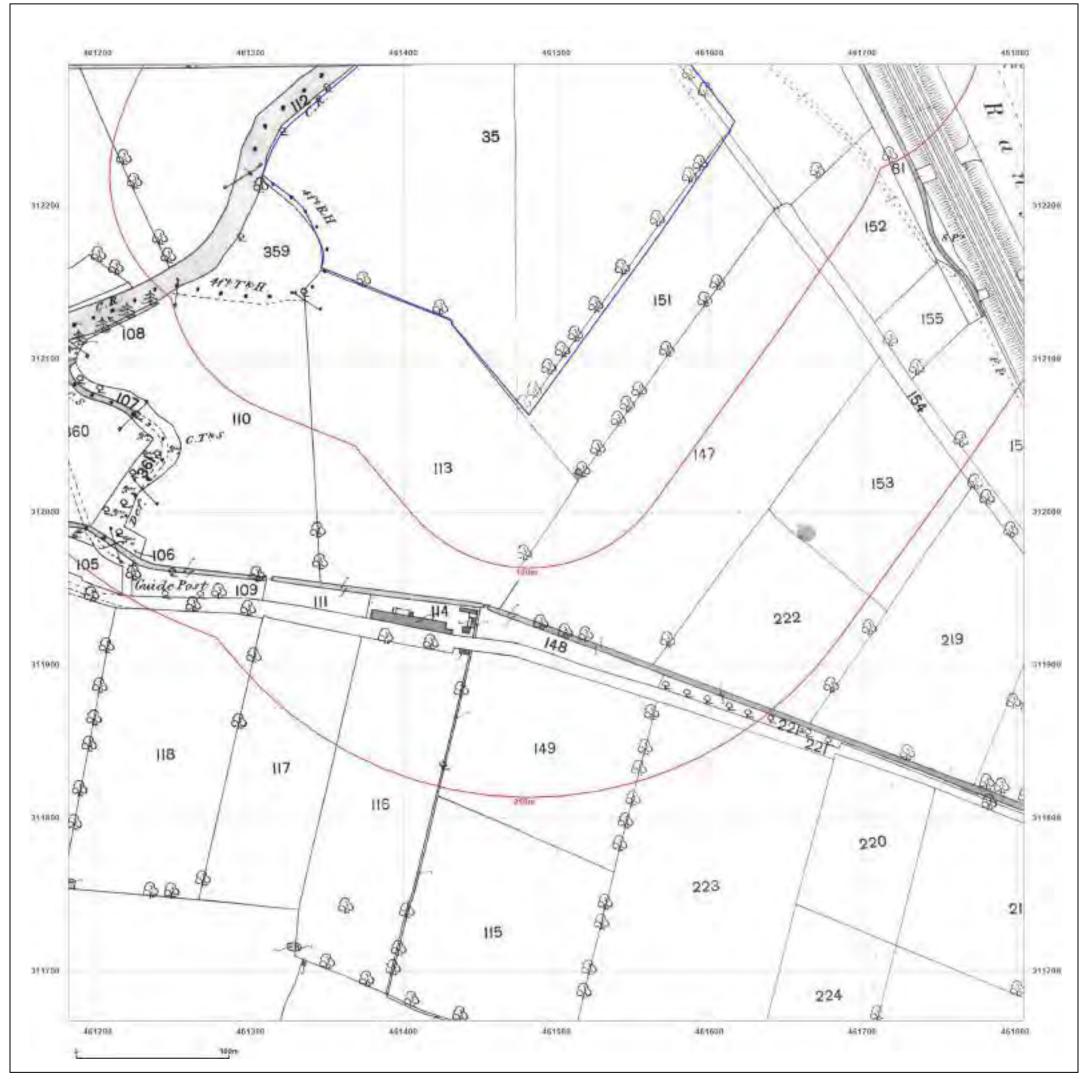






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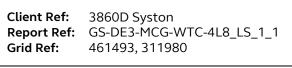


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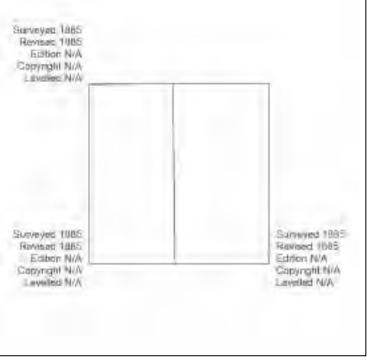
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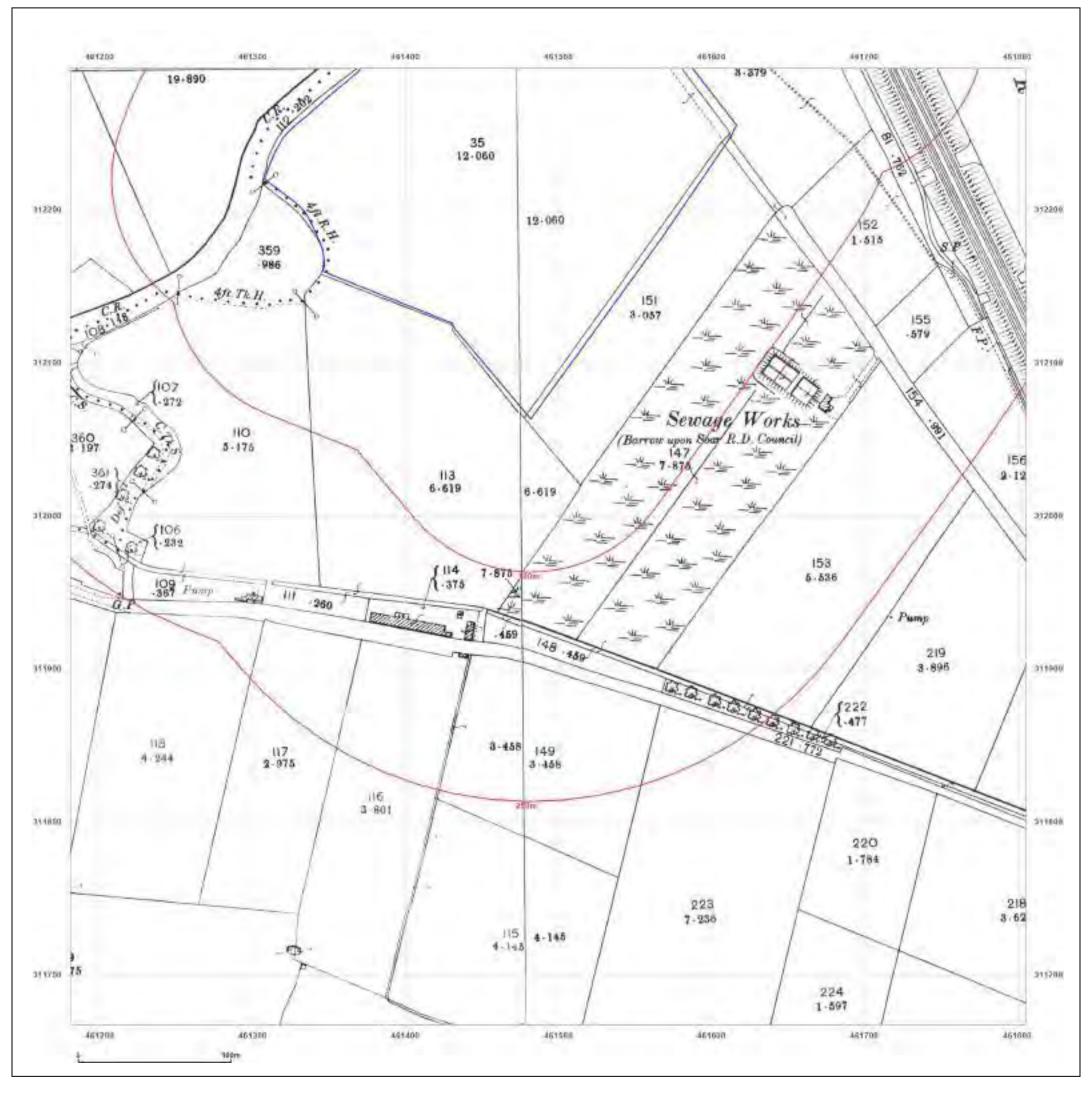




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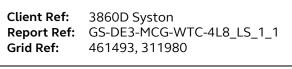


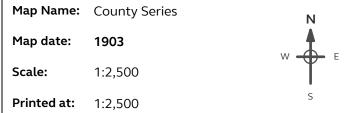
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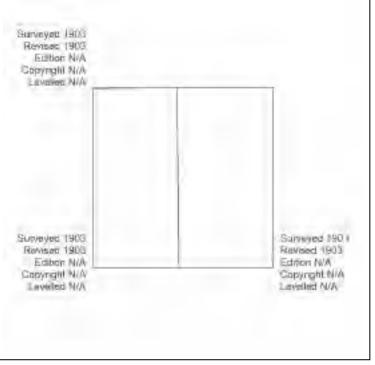


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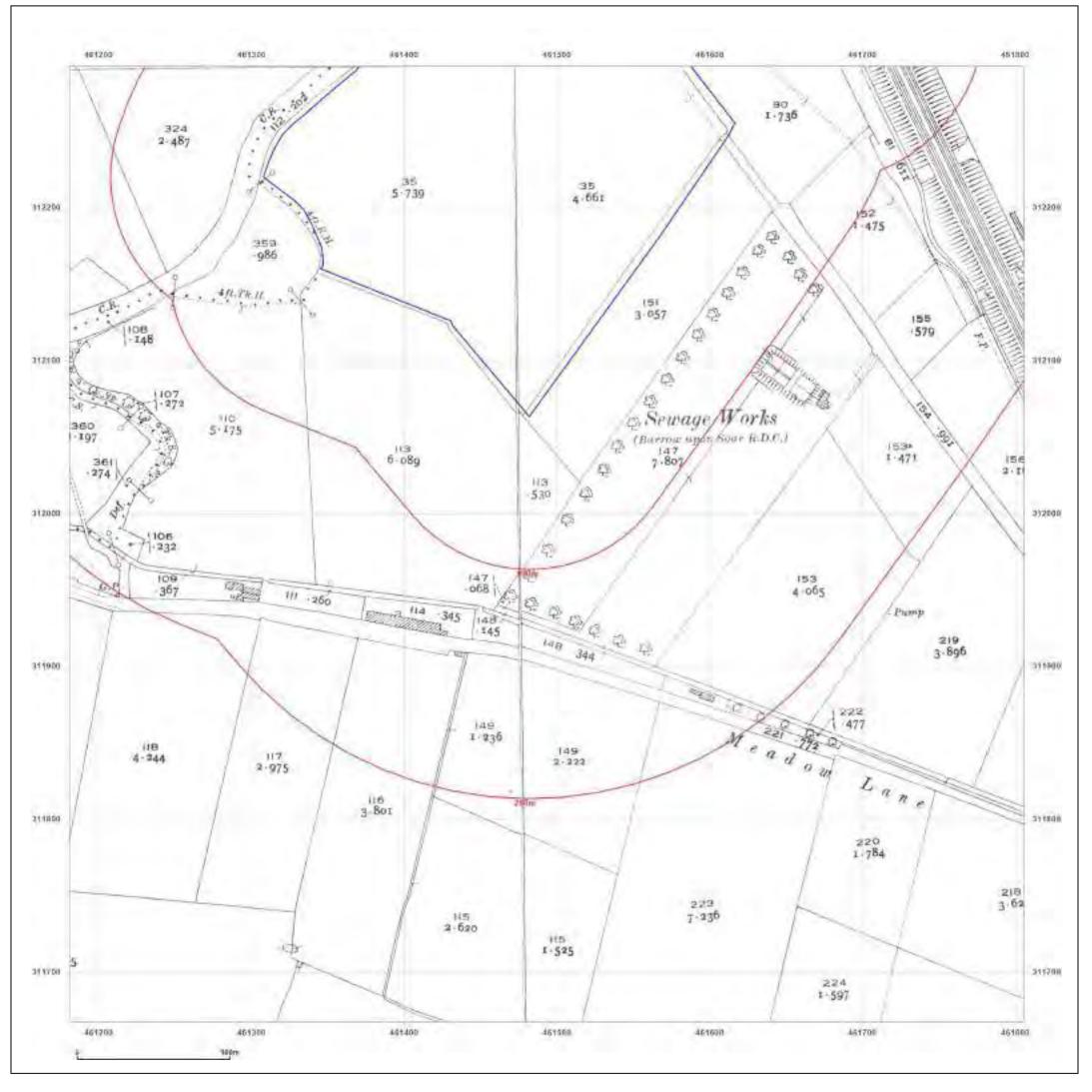










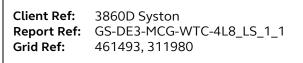


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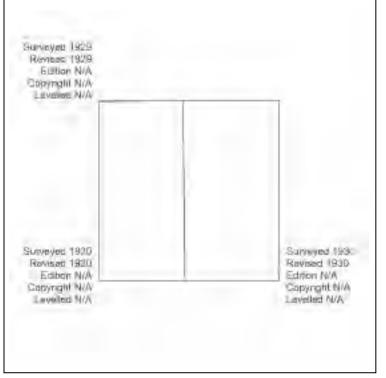
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Map Name: C	ounty Series
Map Name: C	ounty Series

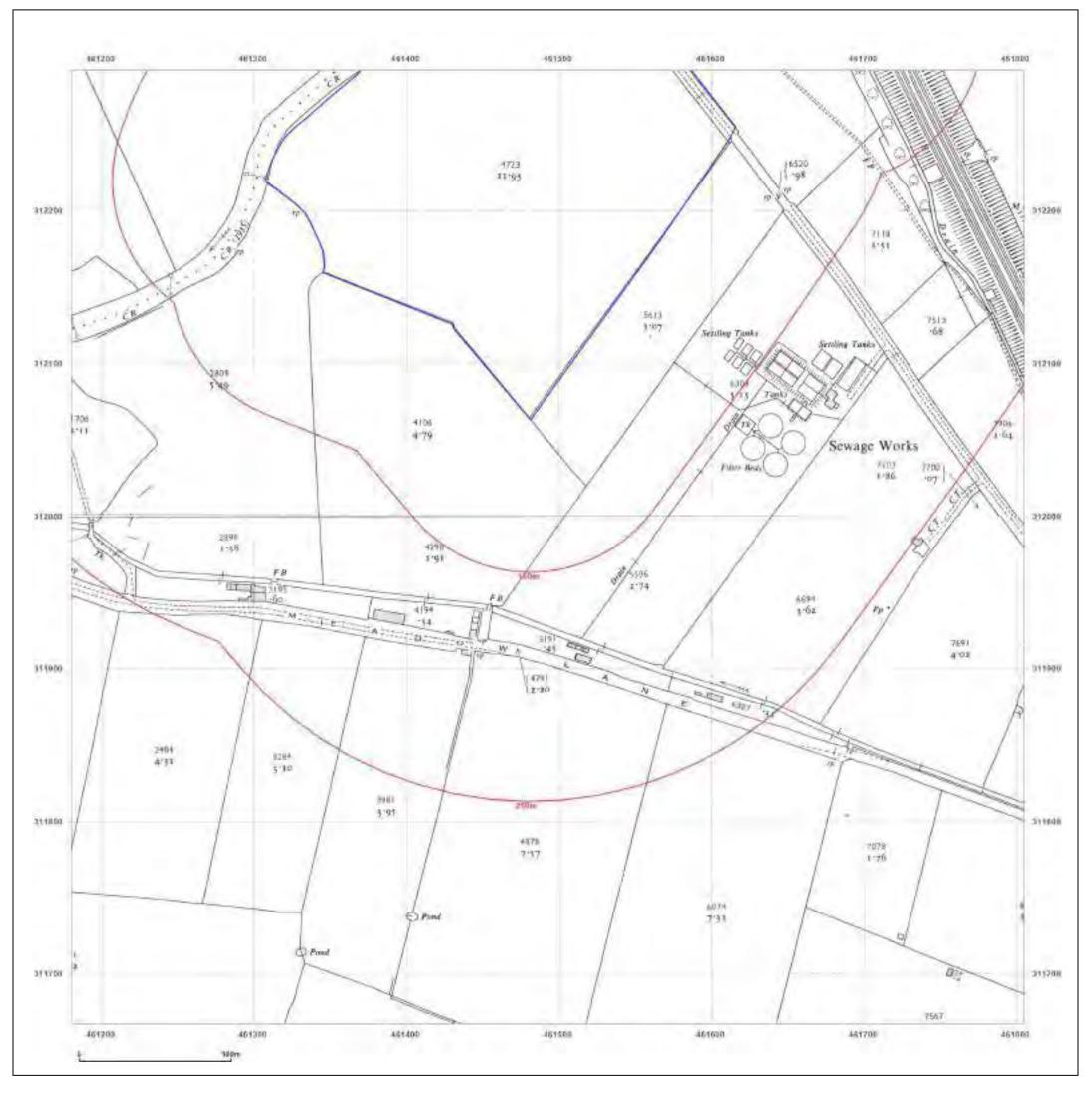
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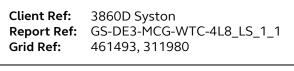






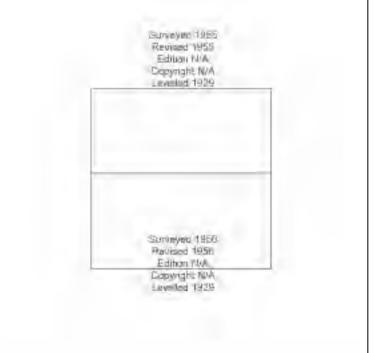
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- Map Name: National Grid
- 1955-1956 Map date:
- 1:2,500 Scale:
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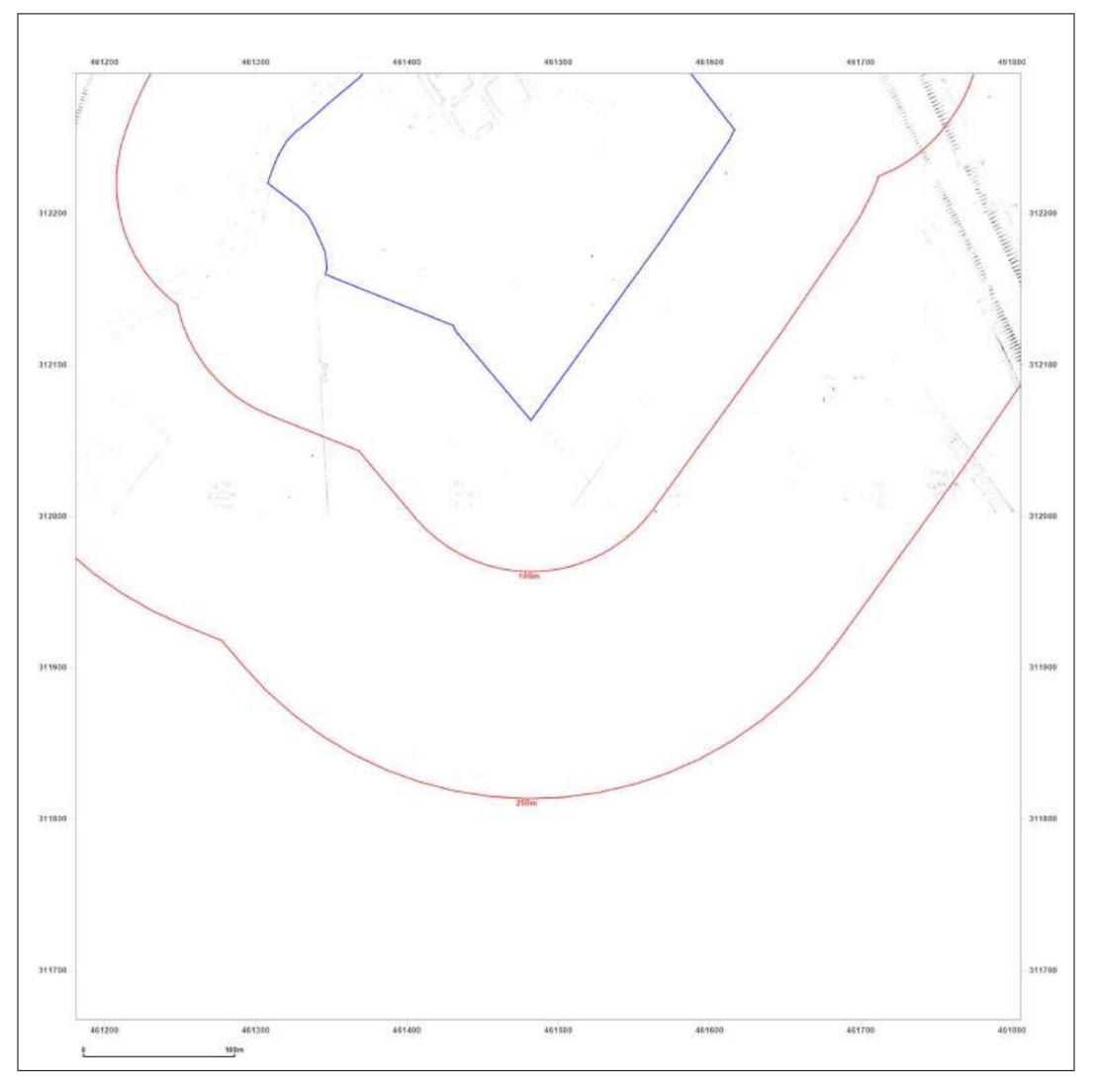






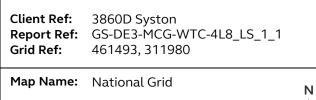
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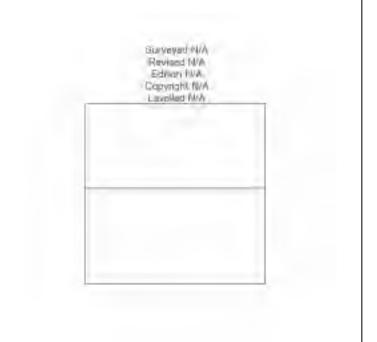




Map date:	1974

Scale: 1:2,500

**Printed at:** 1:2,500



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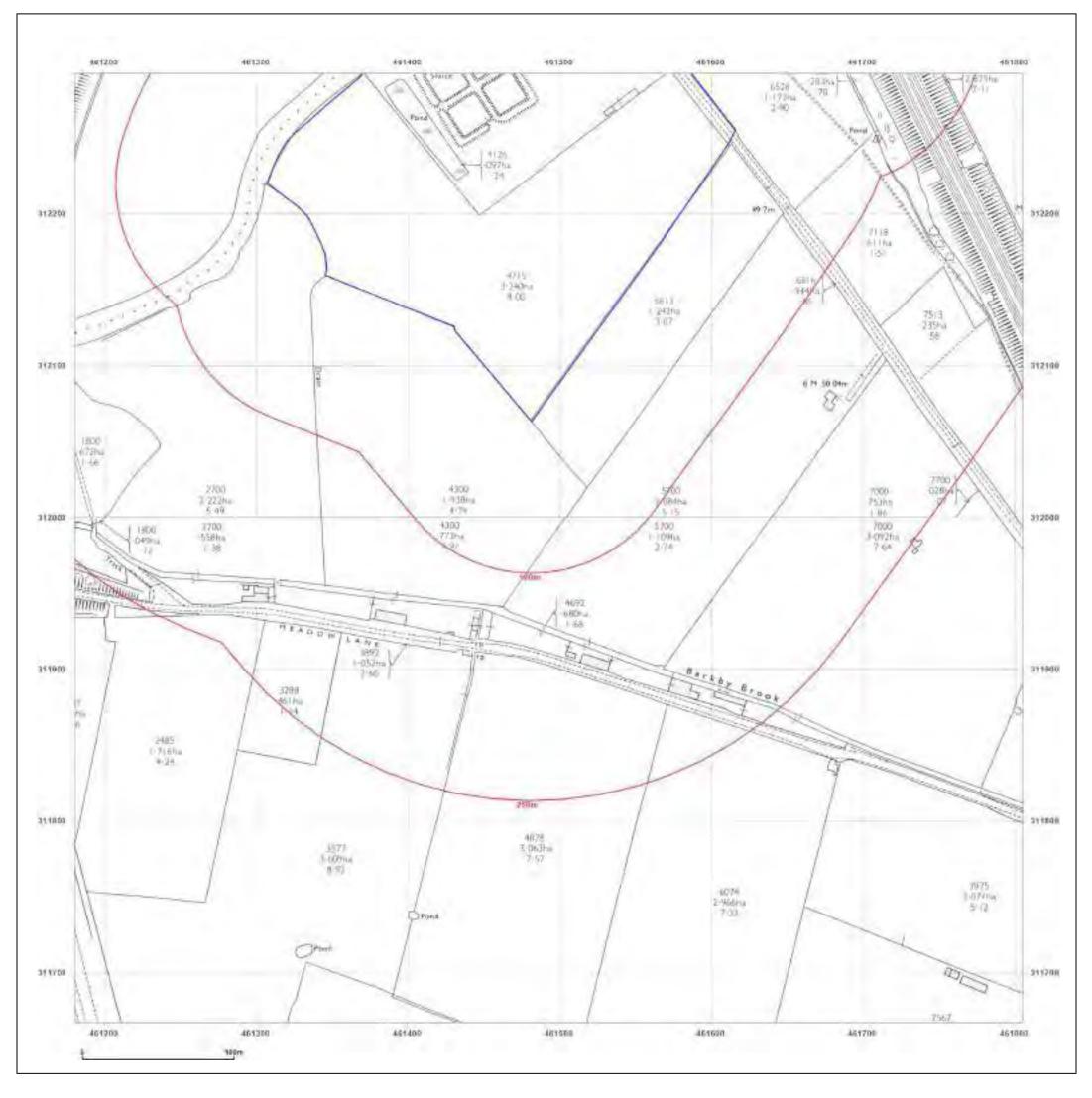
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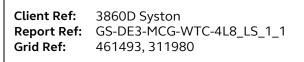
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Production date: 03 December 2024









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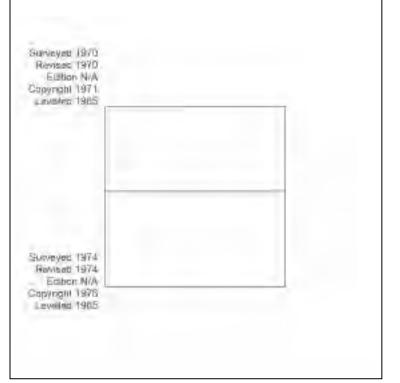
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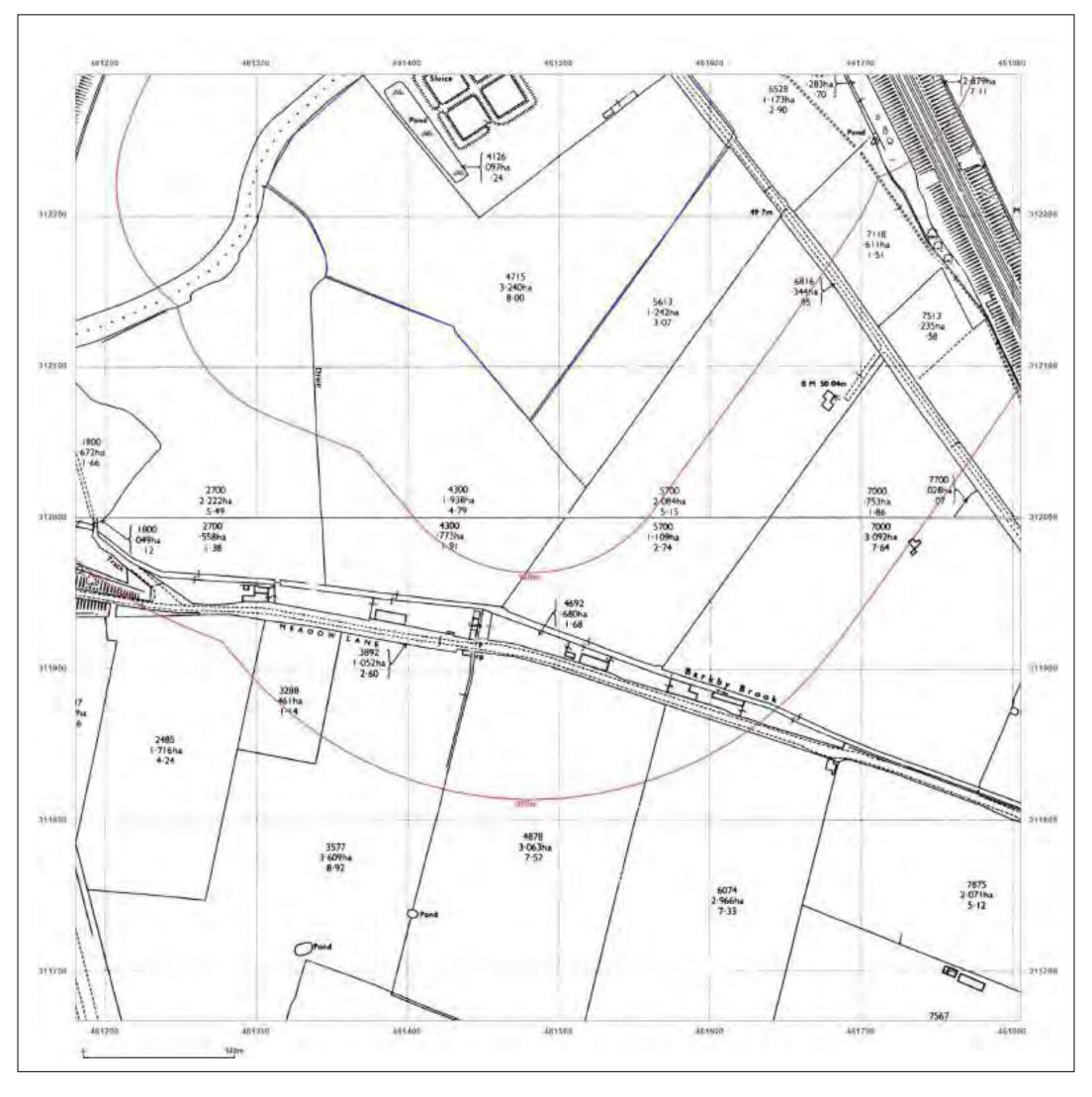




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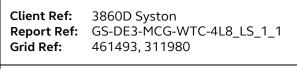
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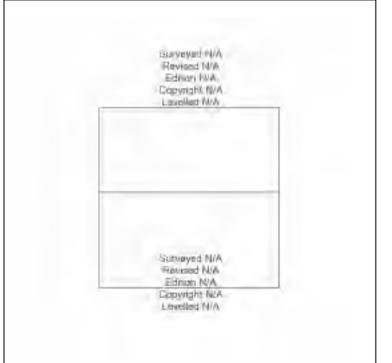
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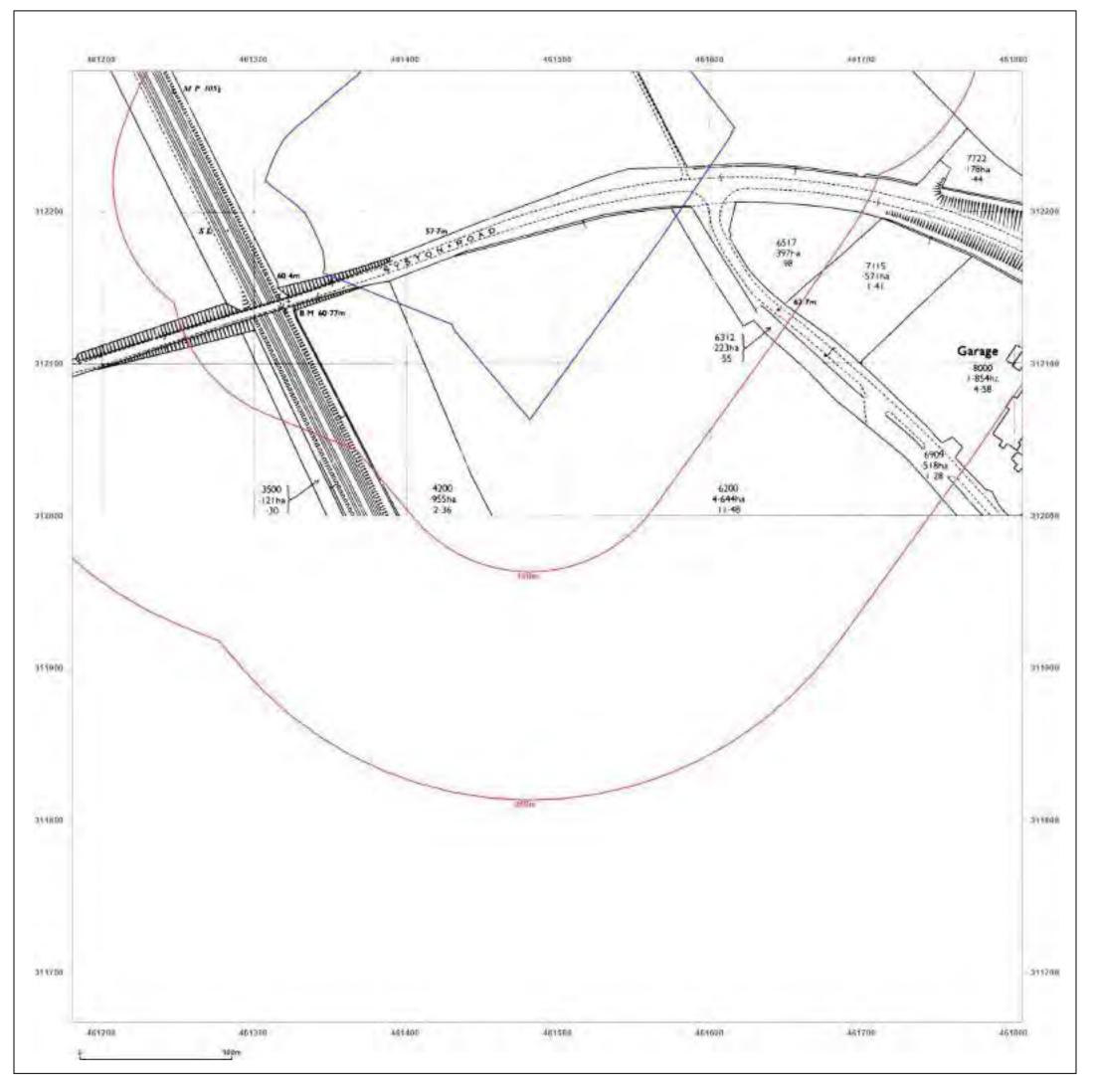
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- **Scale:** 1:2,500
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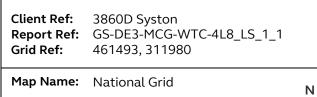
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Map date:	1977

1:2,500 Scale:

**Printed at:** 1:2,500



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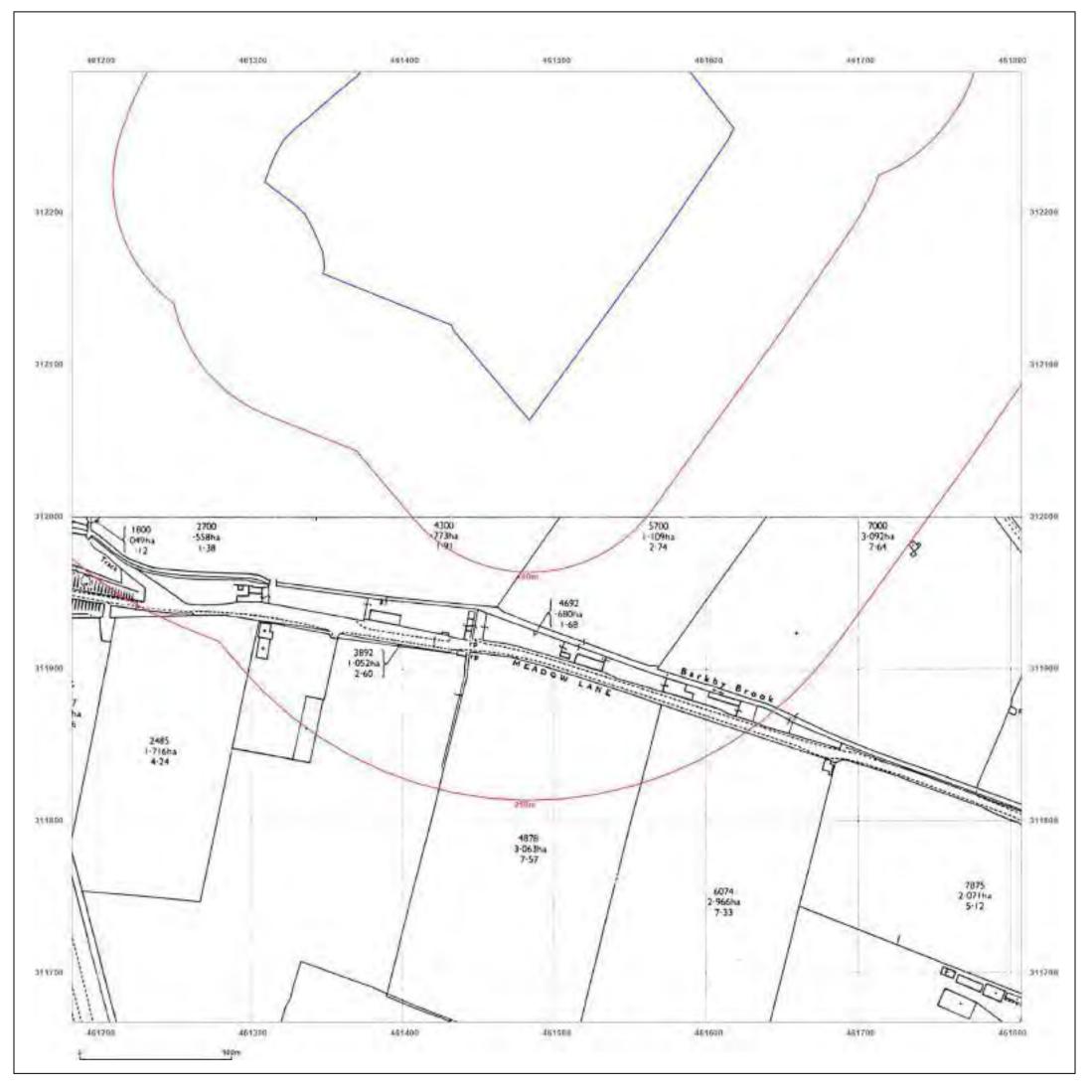
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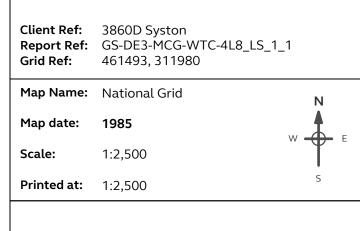
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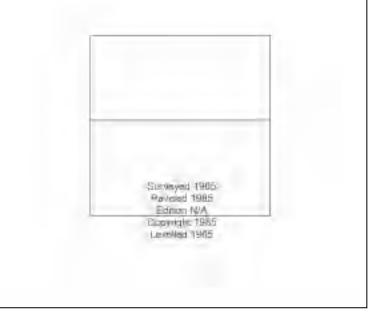
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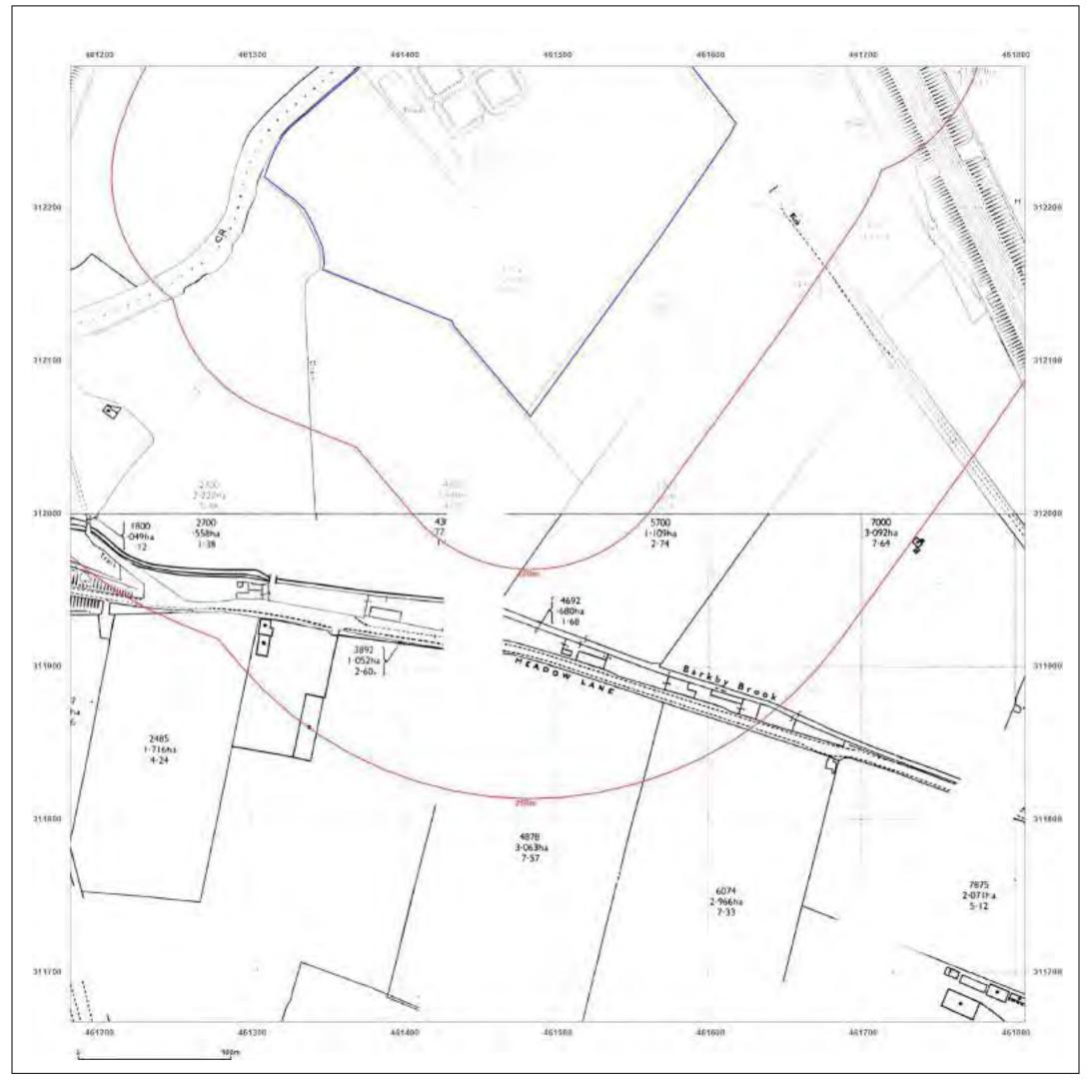




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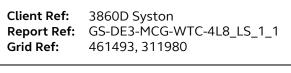
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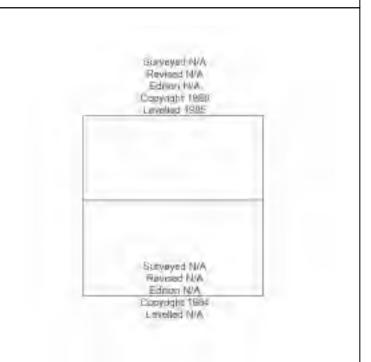


## Site Details:





- Map Name: National Grid
- Map date: 1984-1986
- 1:2,500 Scale:
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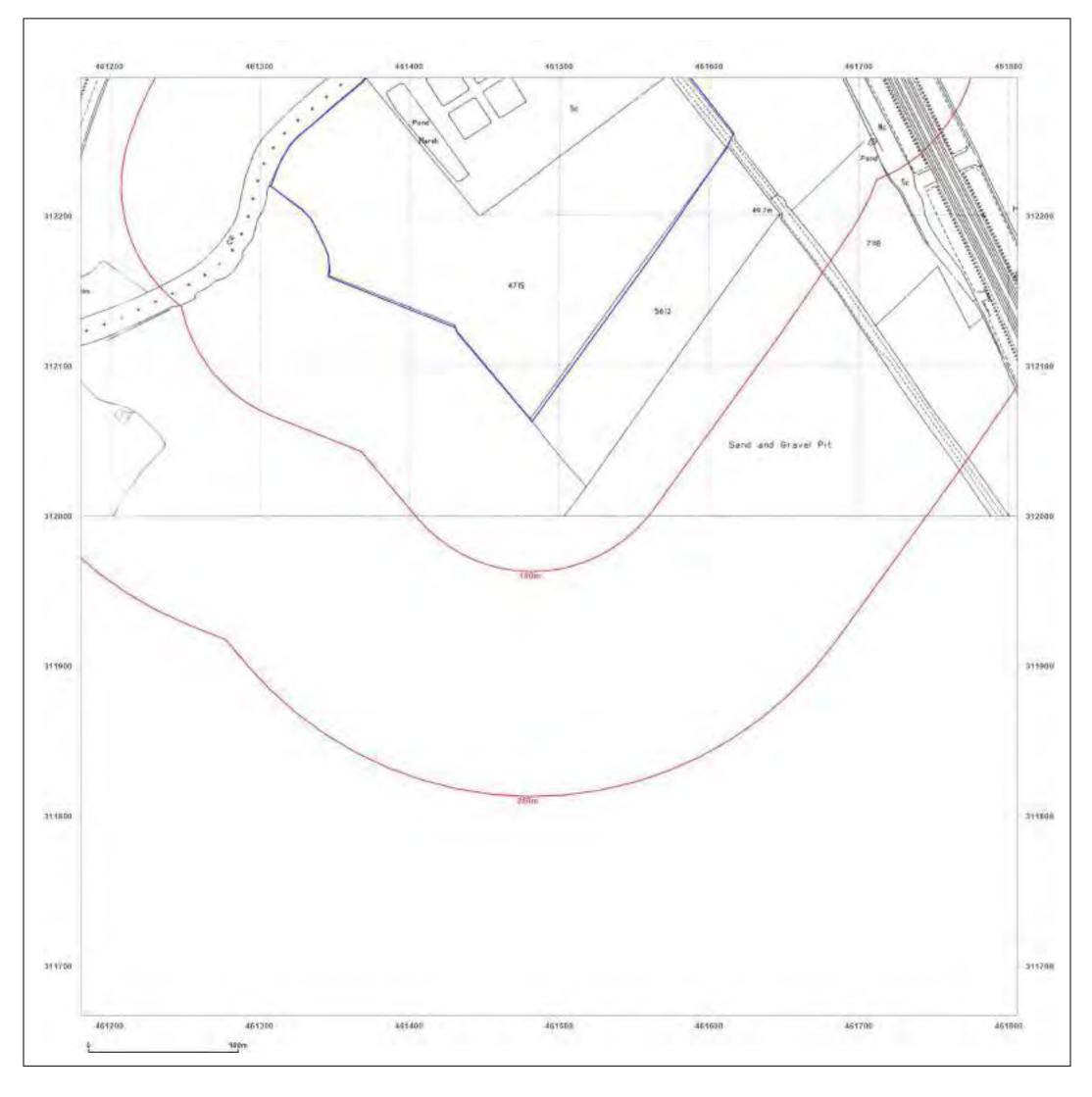
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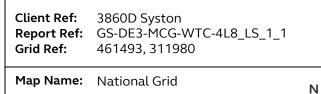
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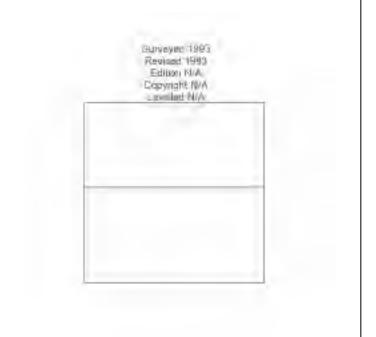




Map date:	1993
Map date:	1993

Scale: 1:2,500

**Printed at:** 1:2,500



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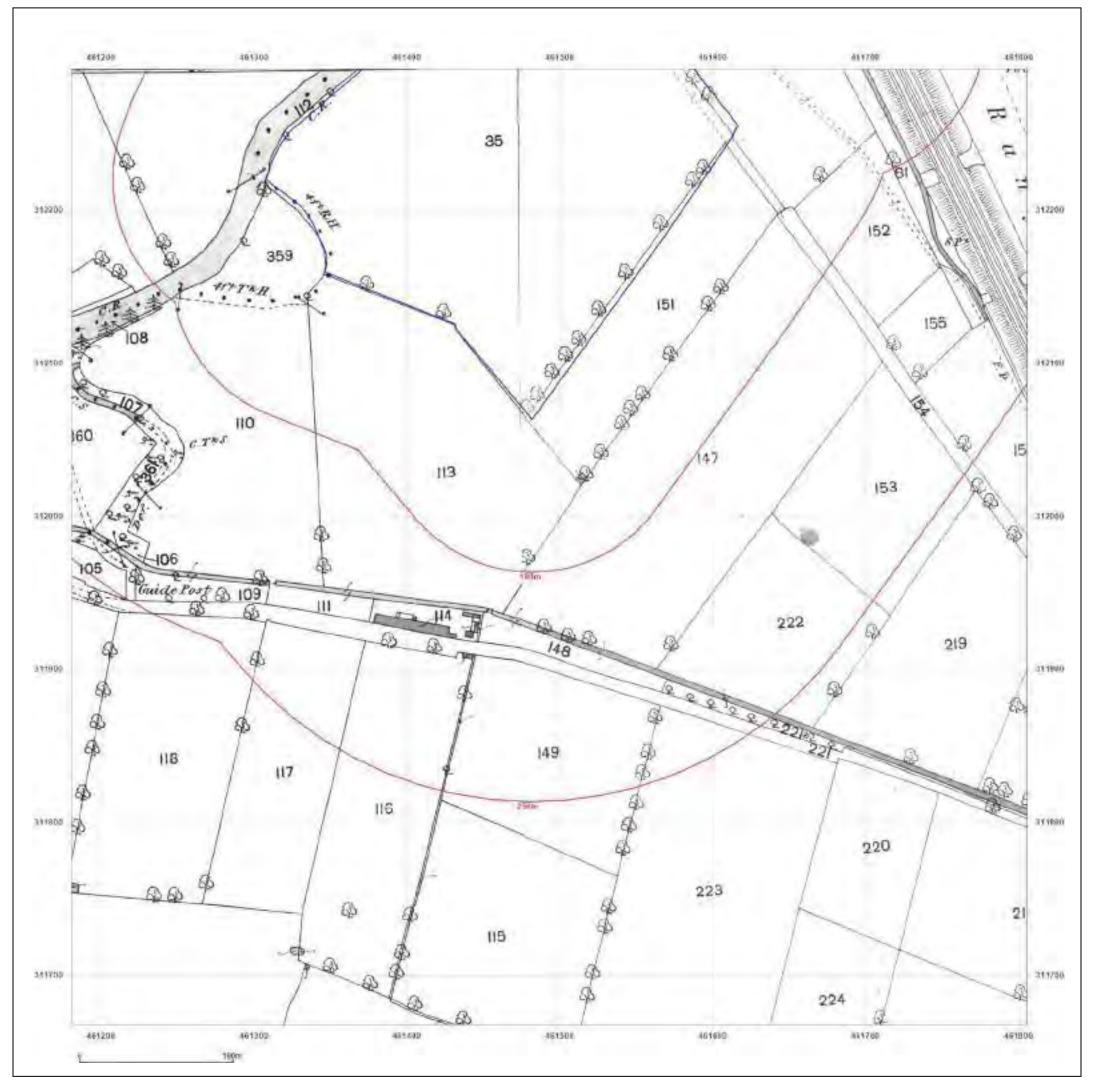
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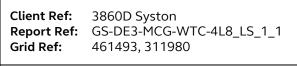


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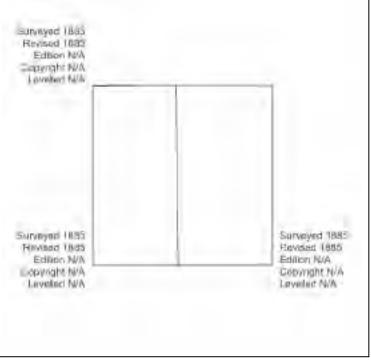
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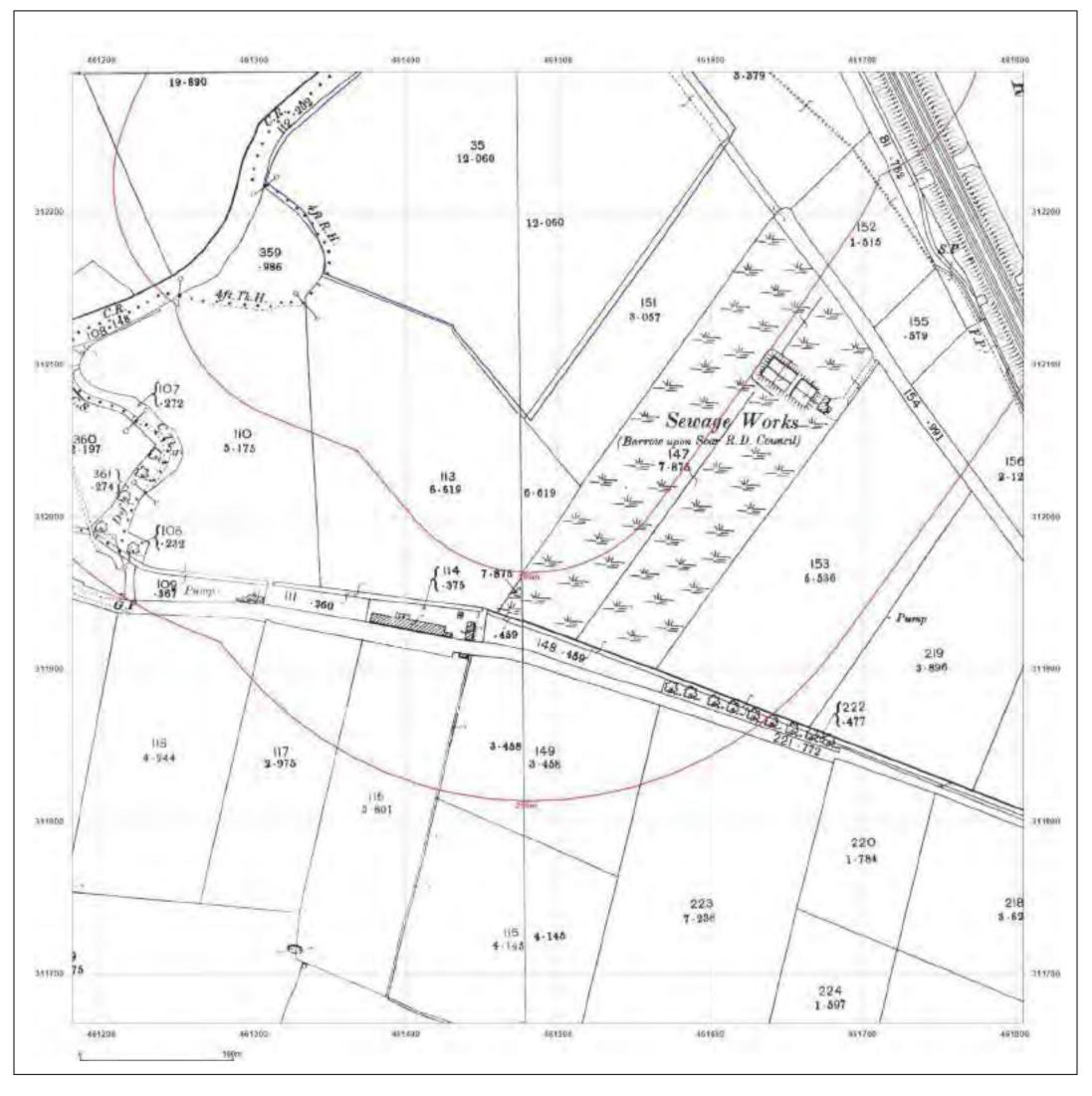




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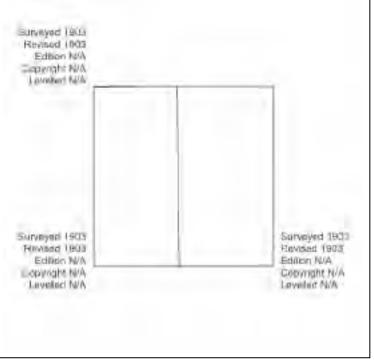








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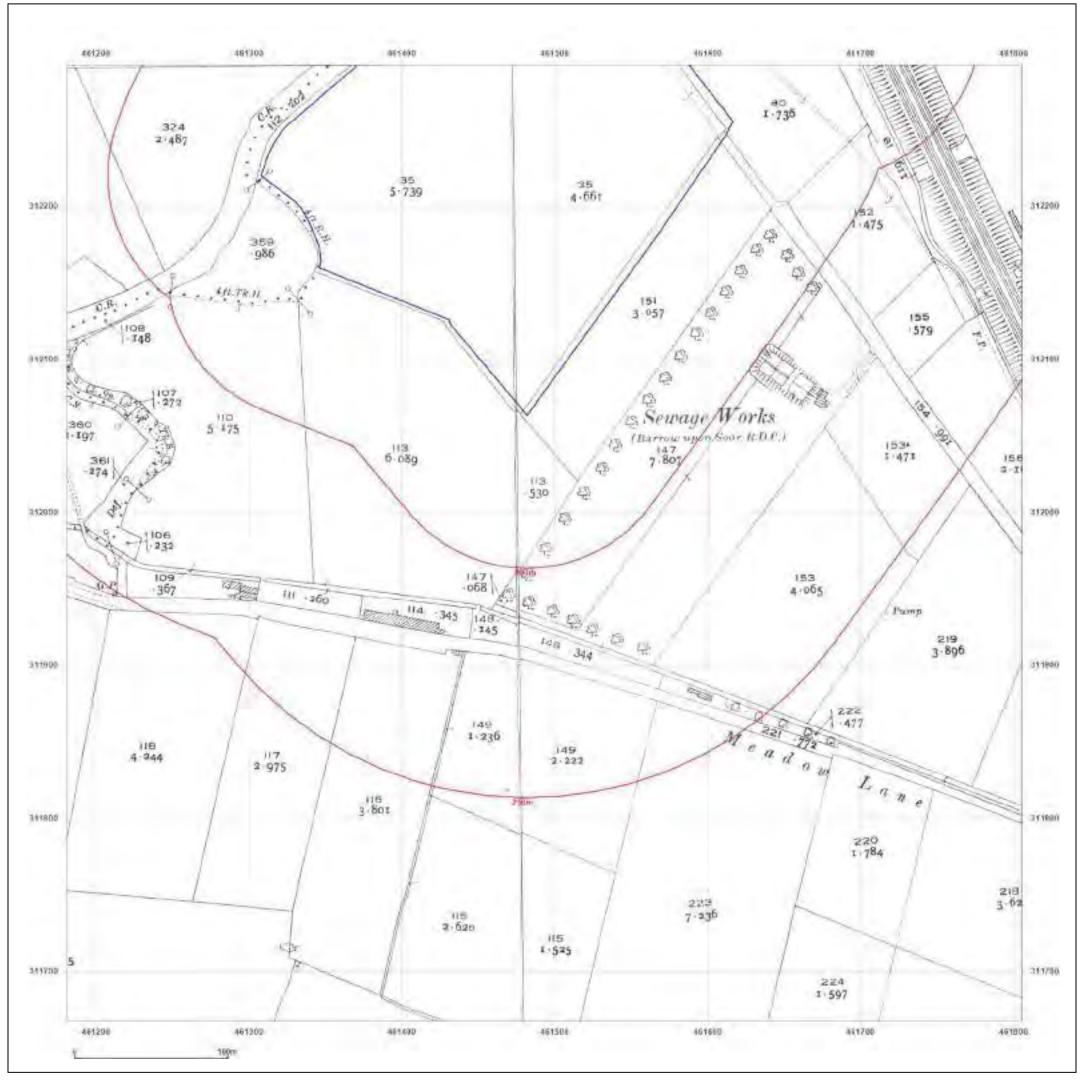




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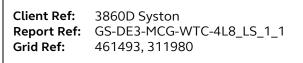


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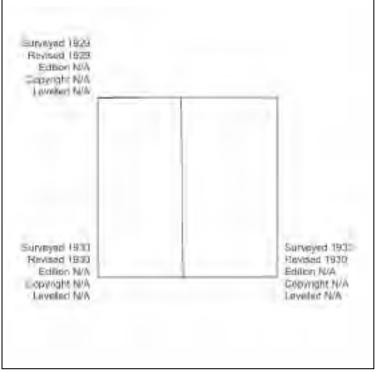
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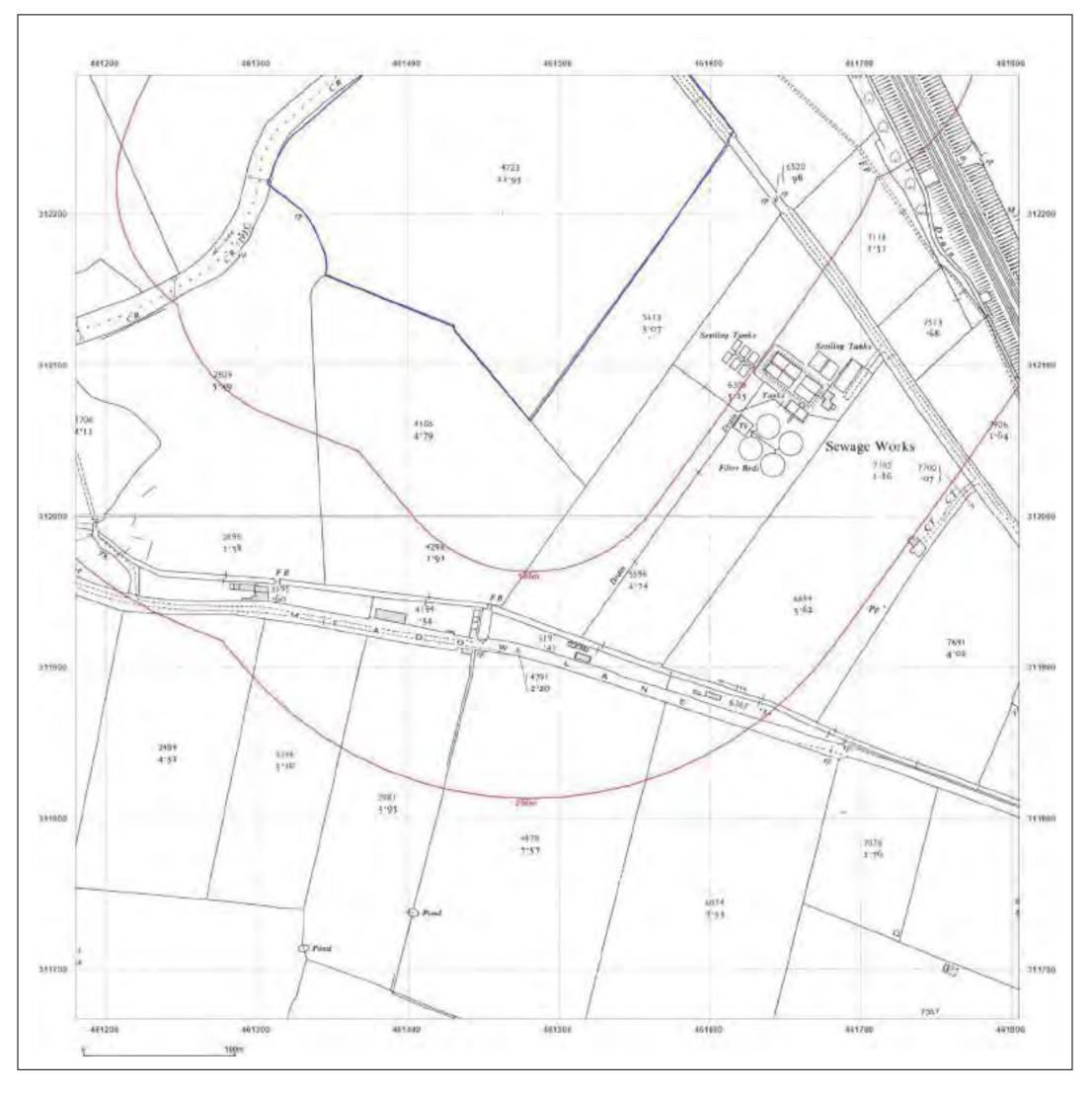
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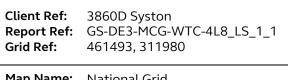












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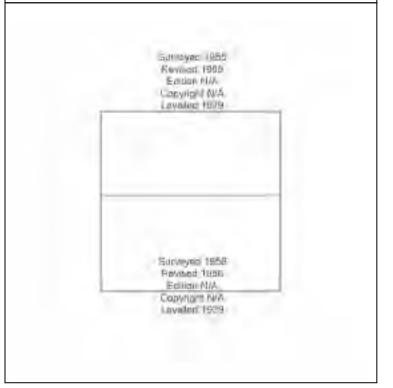
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Map Name:	National	Grid

Map date: 1955-1956

1:2,500 Scale:

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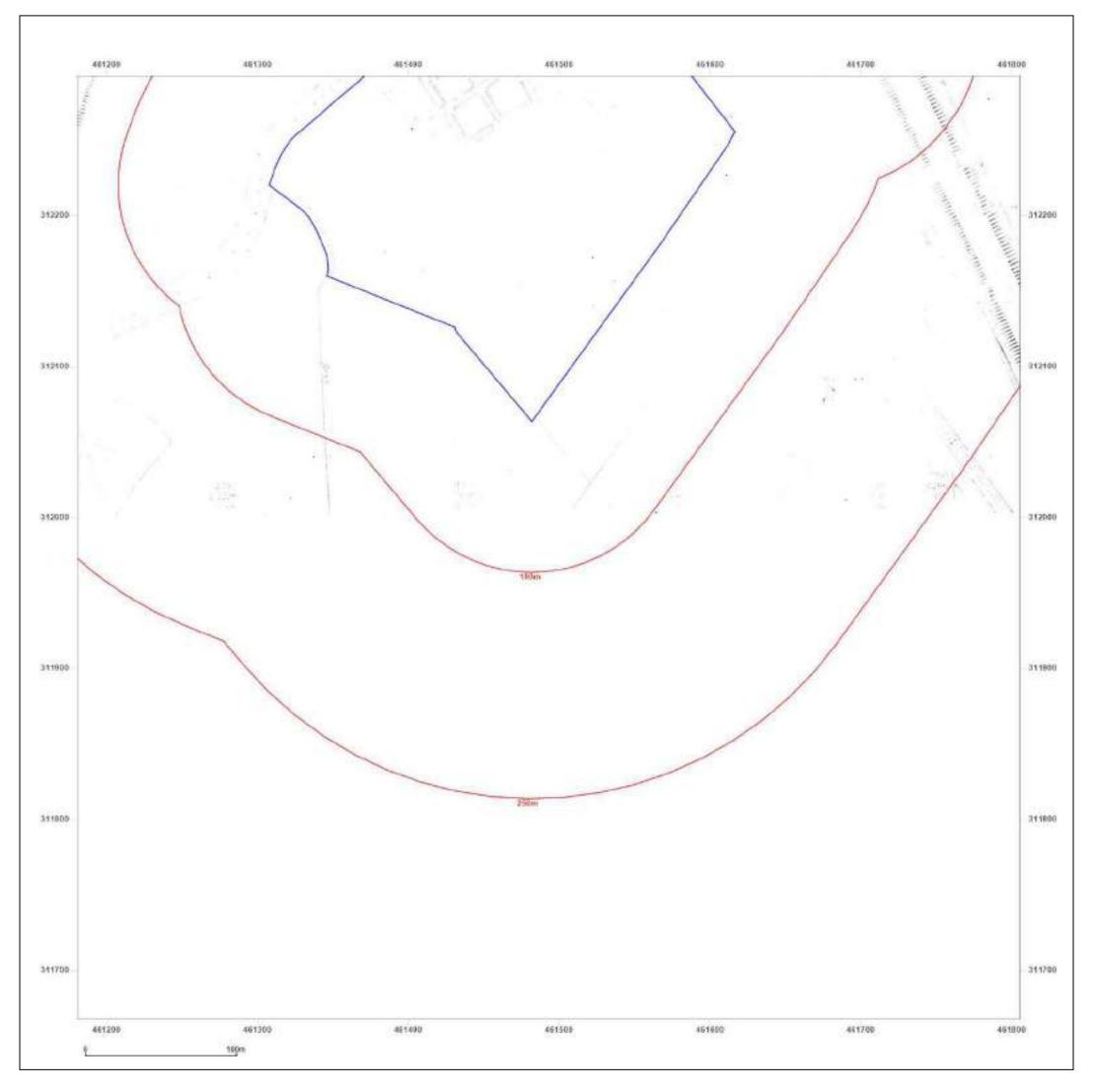




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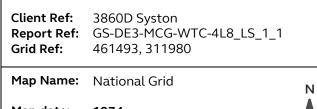
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Production date: 03 December 2024









Map date:	1974

1:2,500 Scale:

**Printed at:** 1:2,500



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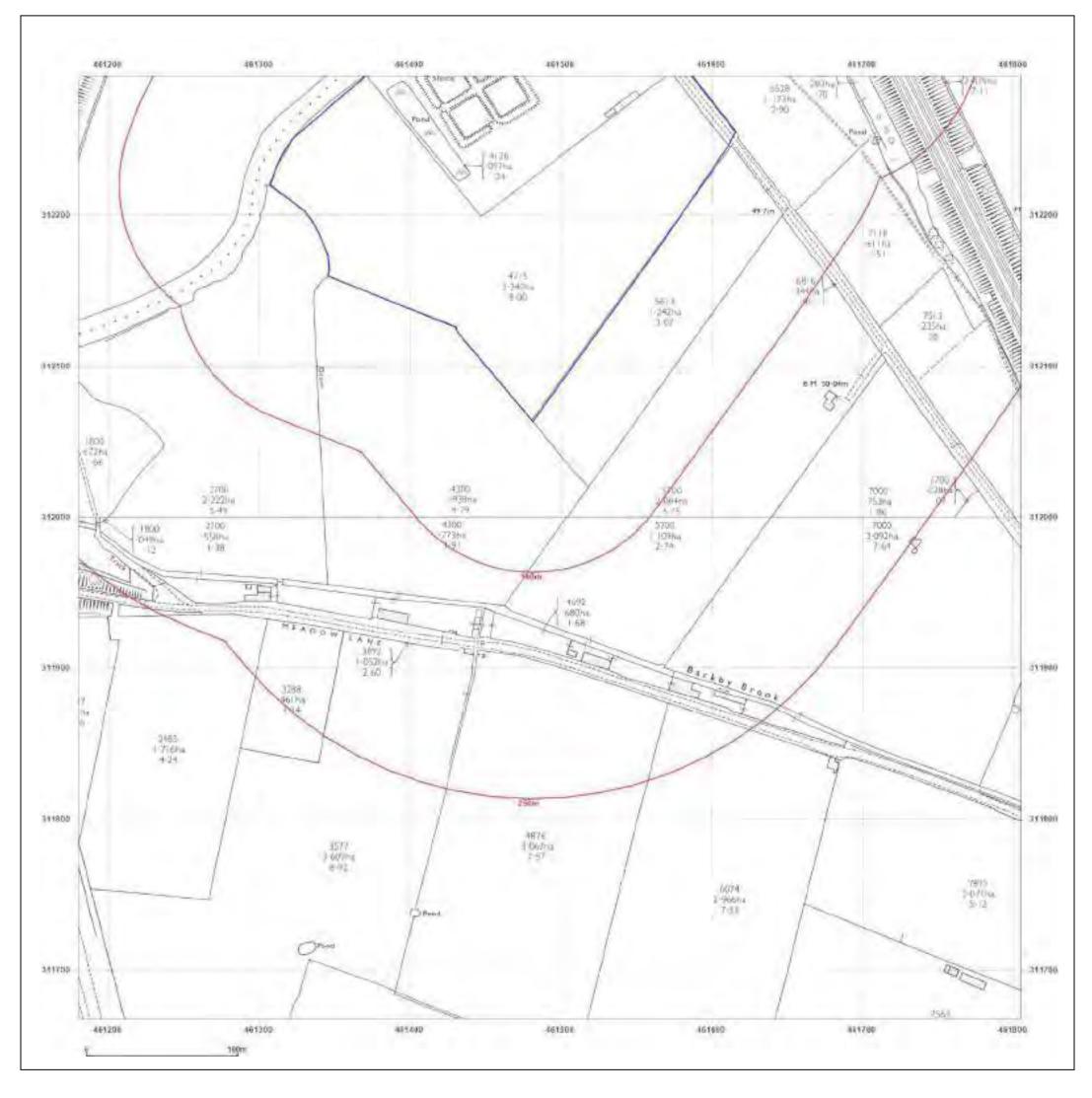
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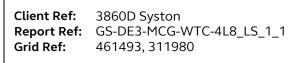
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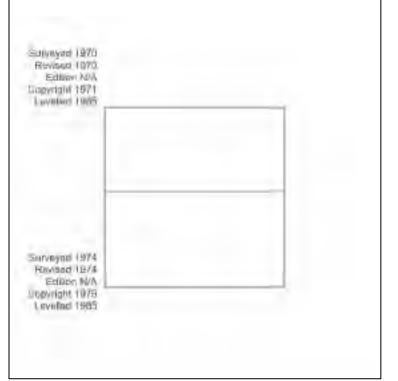
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Map Name: National Grid

Map date: 1971-1976

**Scale:** 1:2,500

**Printed at:** 1:2,500

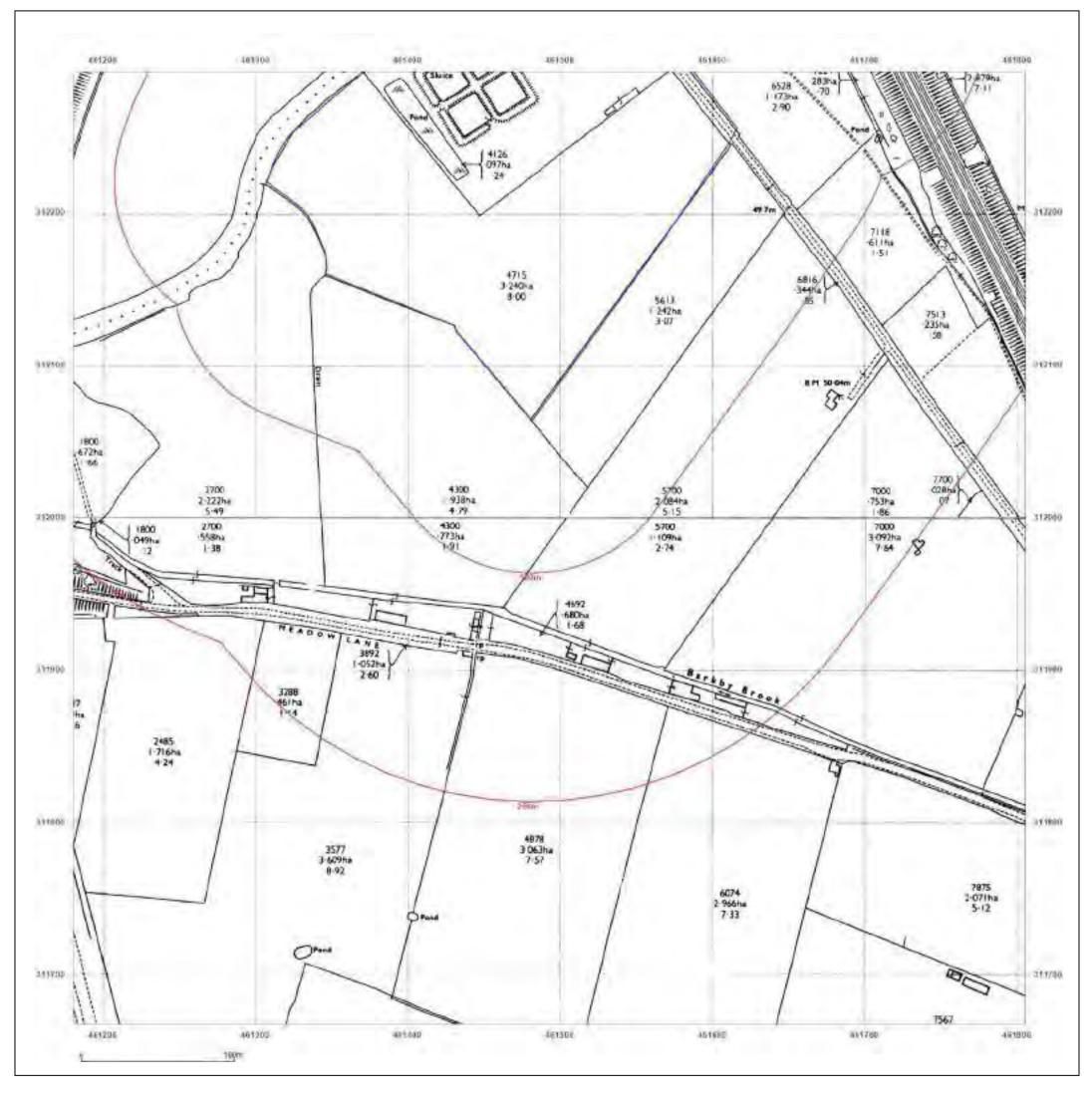




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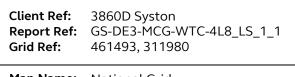
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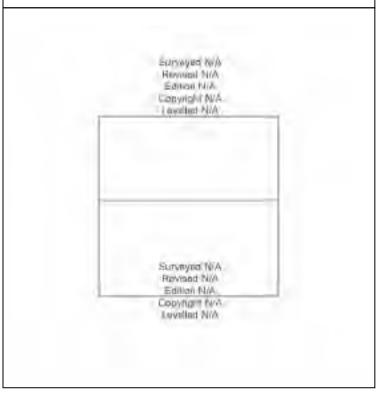
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Map Name:	National Grid
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Map date: 1971-1976

**Scale:** 1:2,500

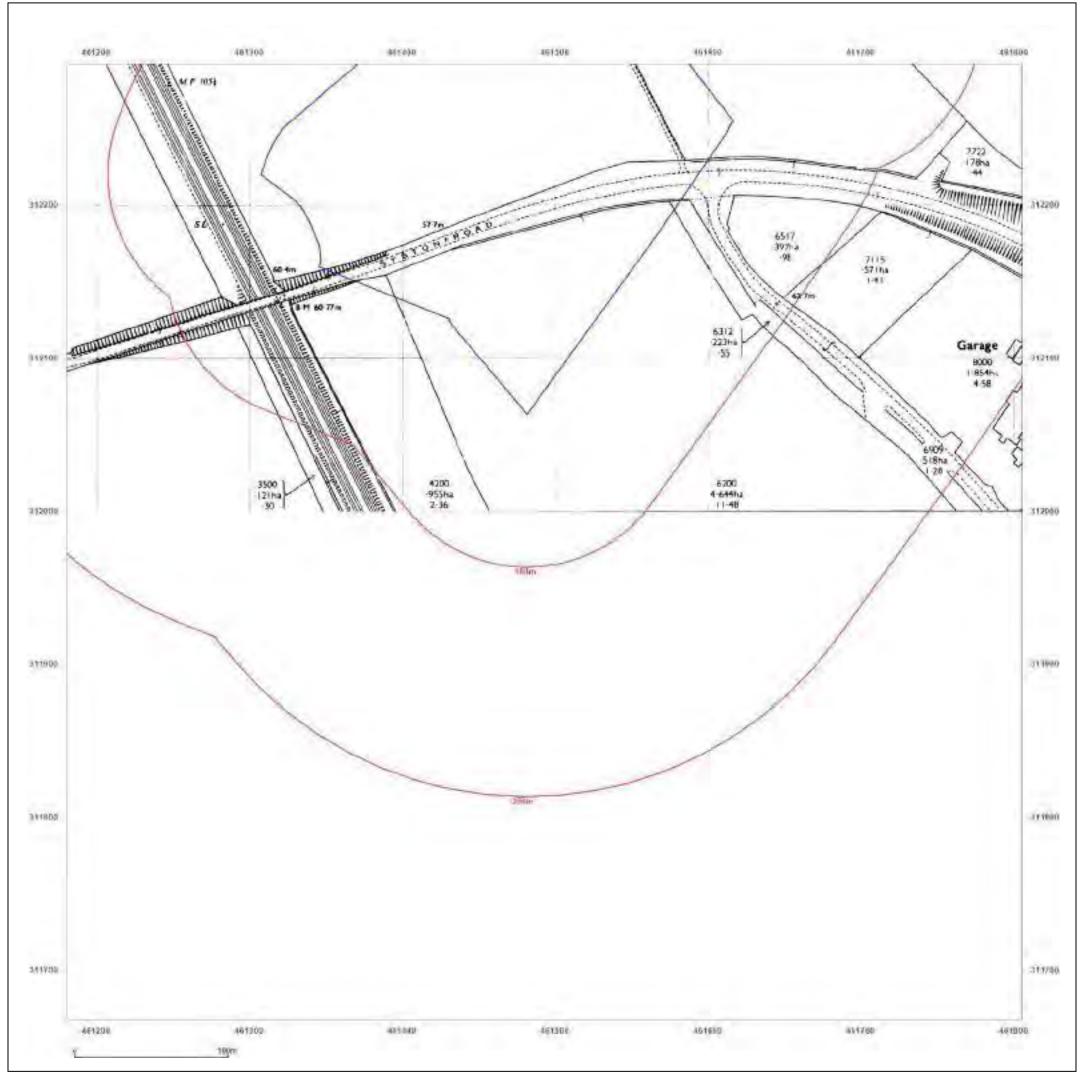
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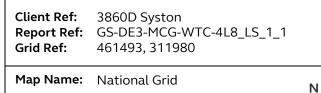
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## Site Details:





Map date:	1977

**Scale:** 1:2,500

**Printed at:** 1:2,500



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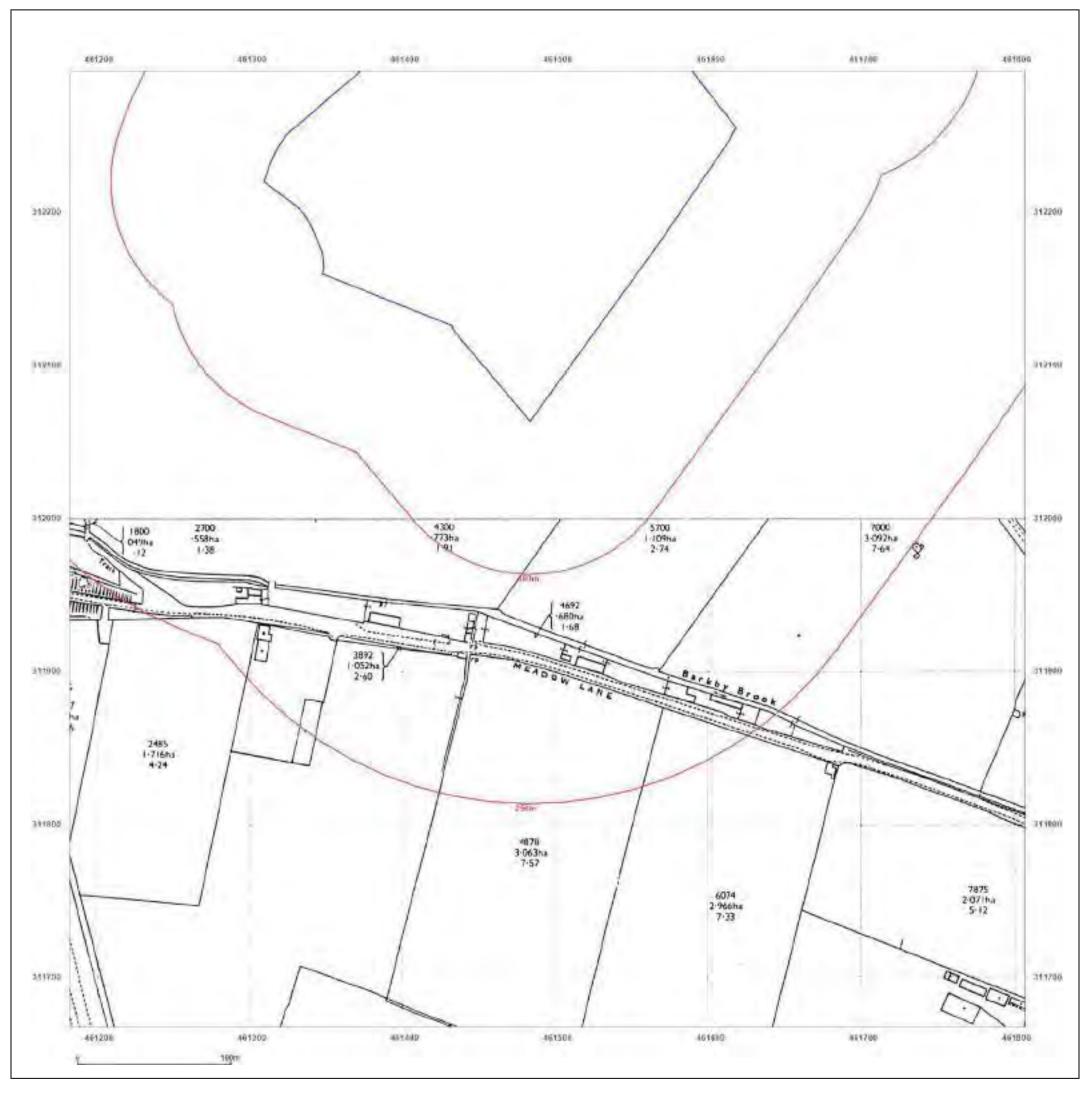
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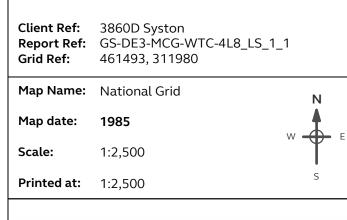
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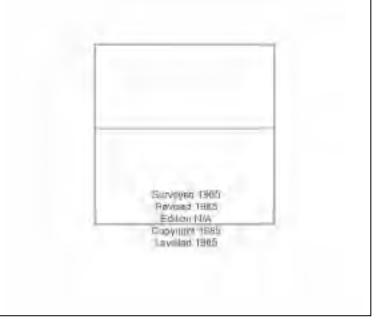




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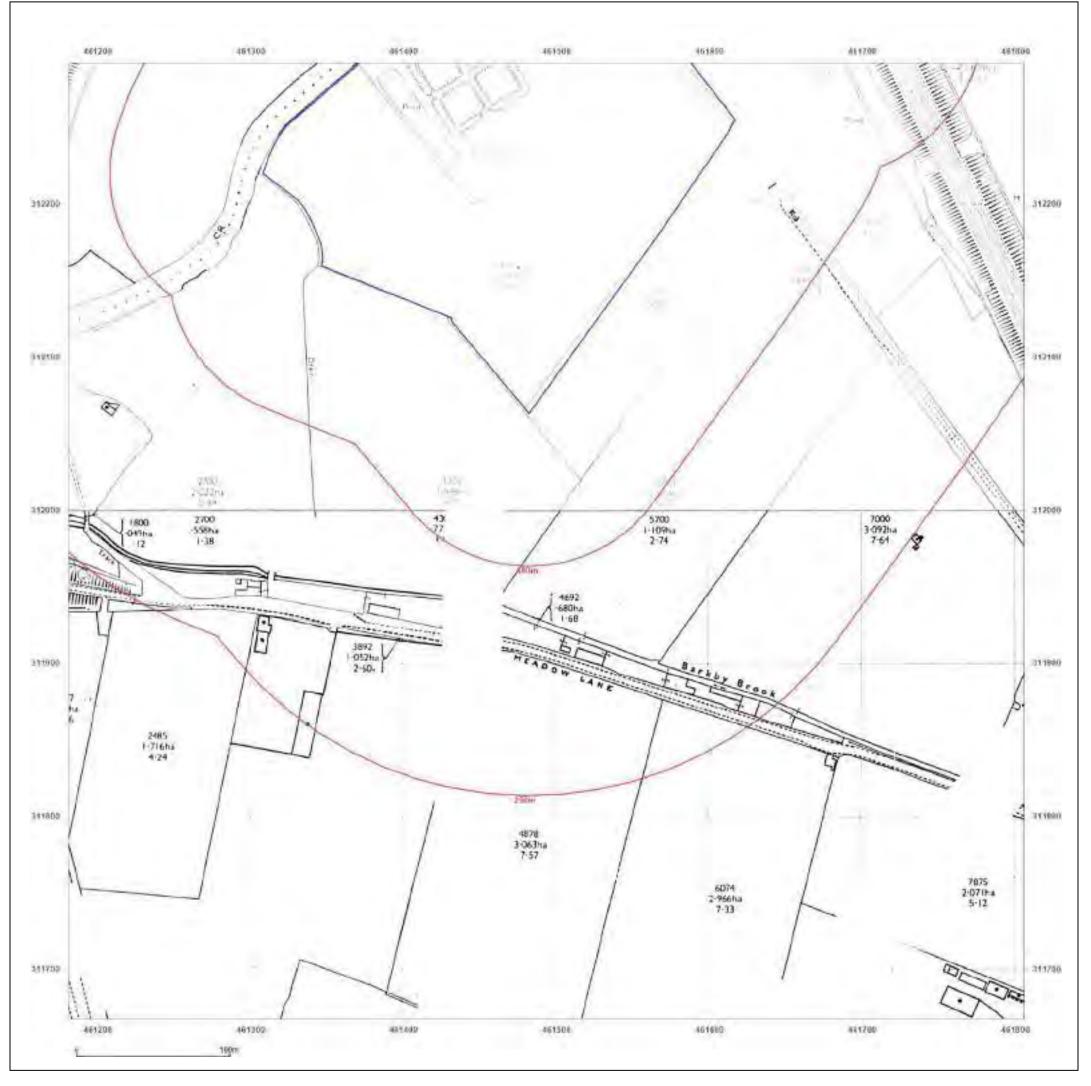






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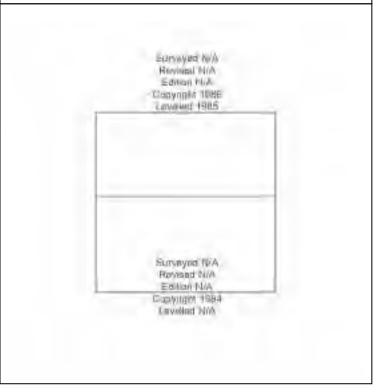
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- Map Name: National Grid
- Map date: 1984-1986
- **Scale:** 1:2,500
- **Printed at:** 1:2,500



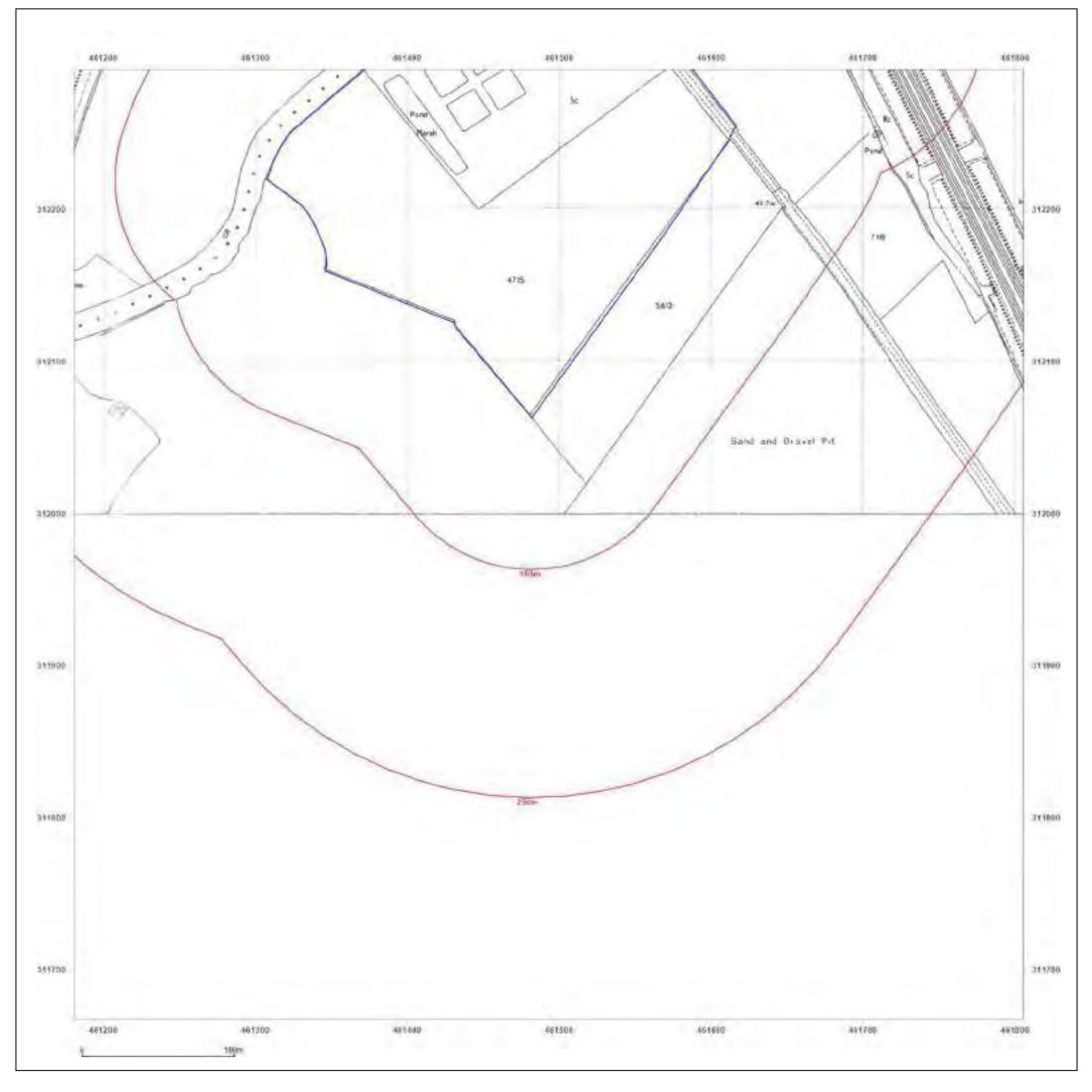


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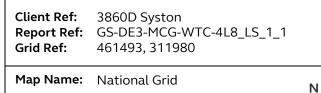
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Map legend available at: <a href="http://www.groundsure.com/sites/default/files/groundsure\_legend.pdf">www.groundsure\_legend.pdf</a>









Map date:	1993

Scale: 1:2,500

**Printed at:** 1:2,500



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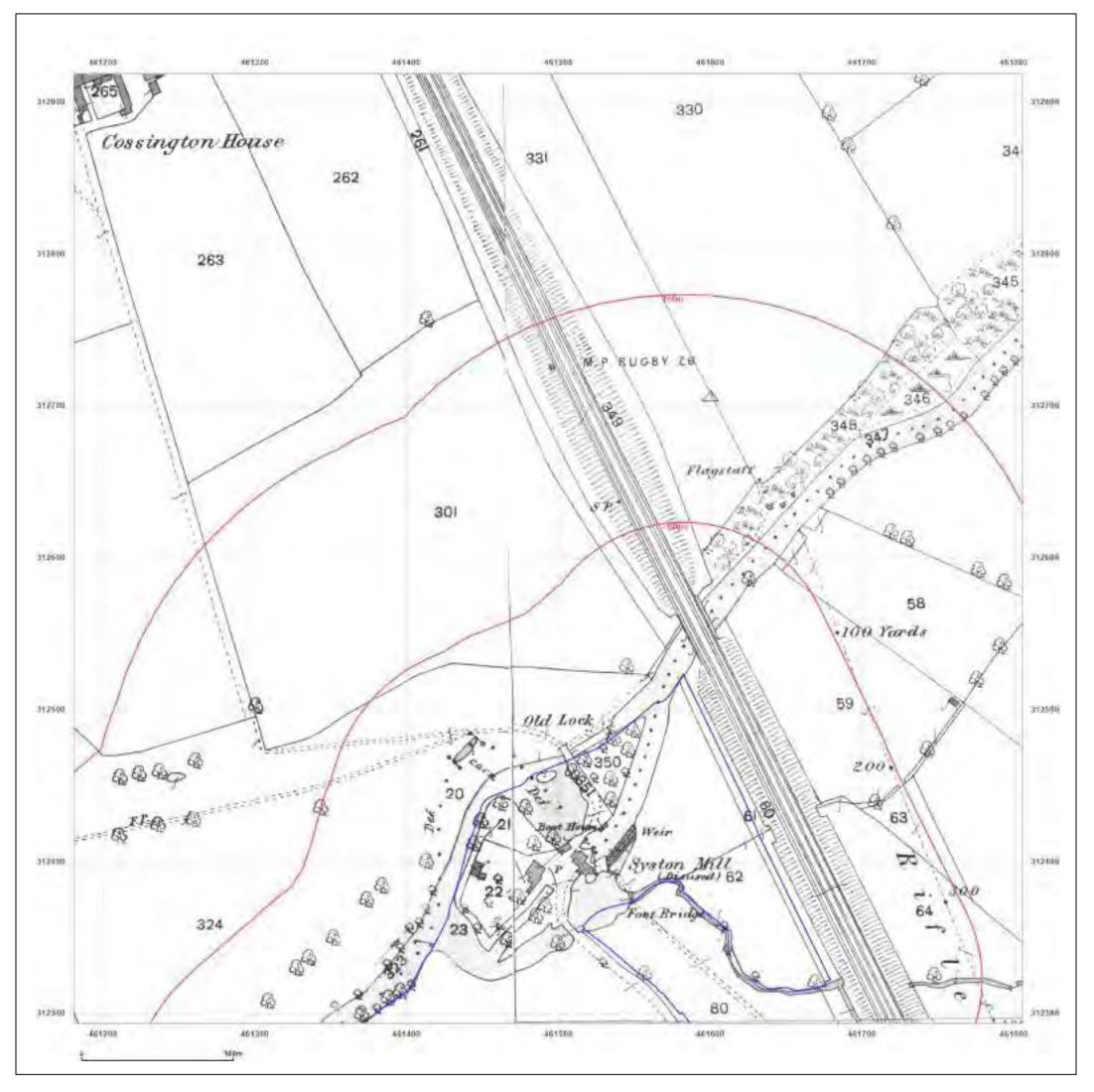
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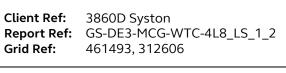
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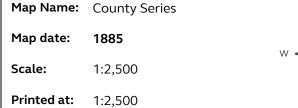
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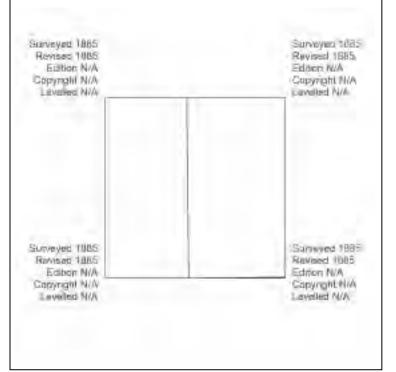








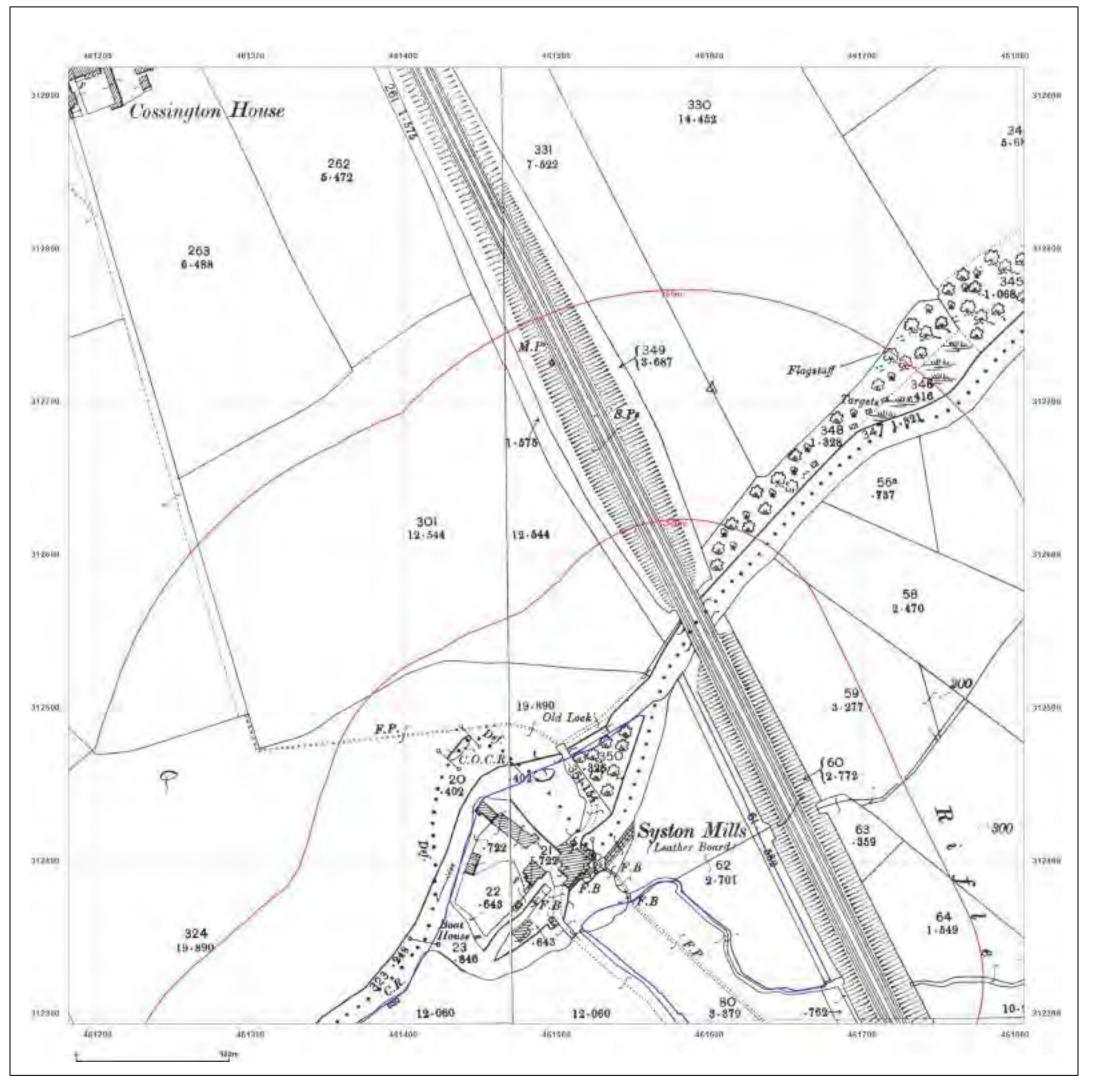
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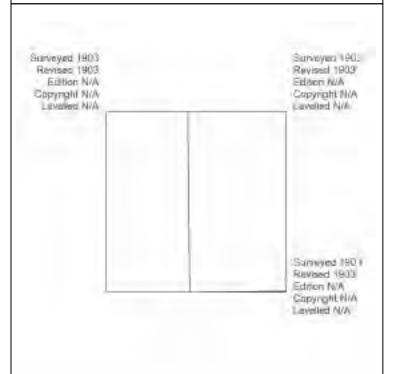
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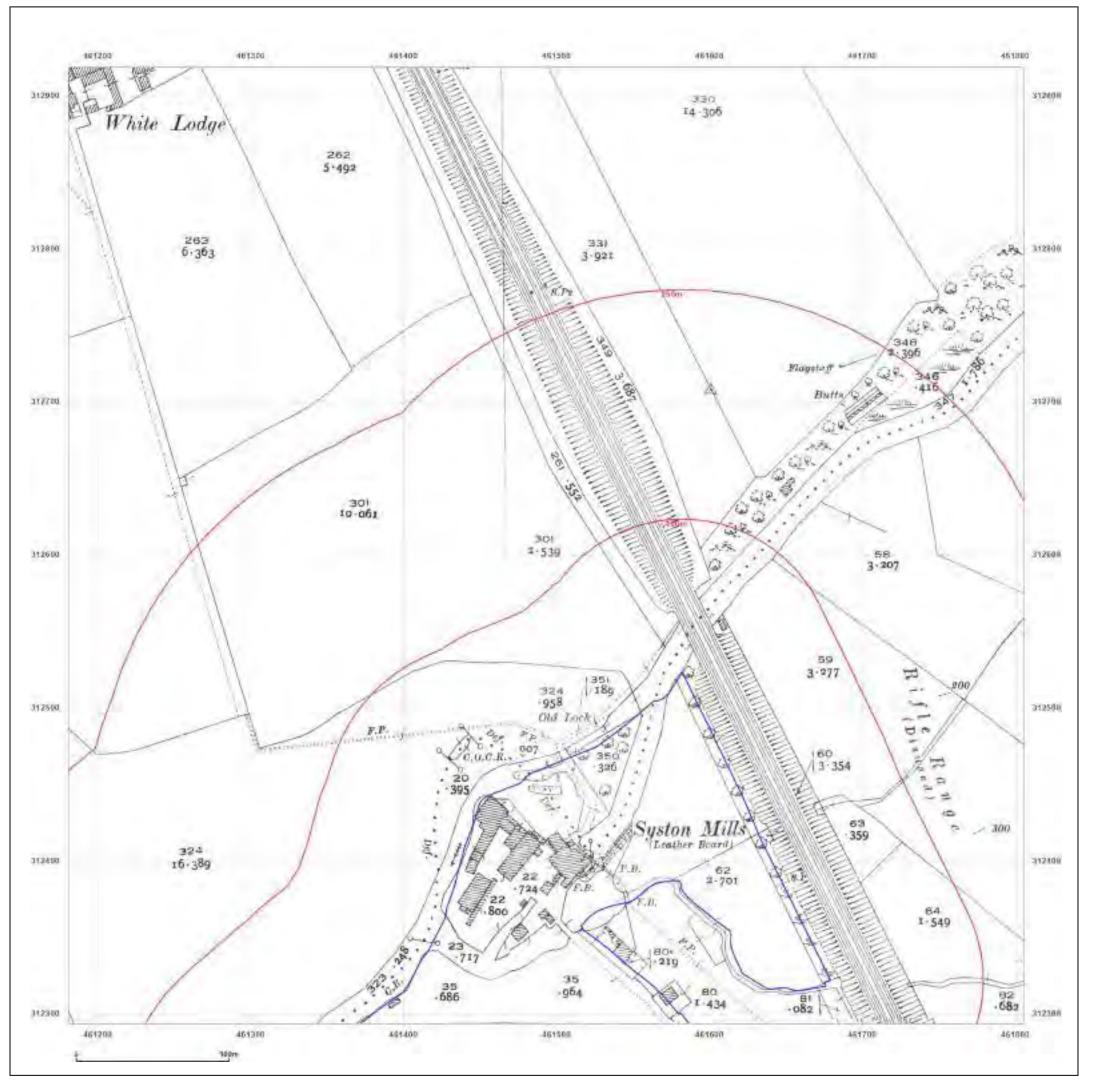


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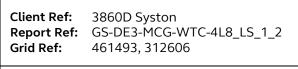
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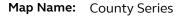




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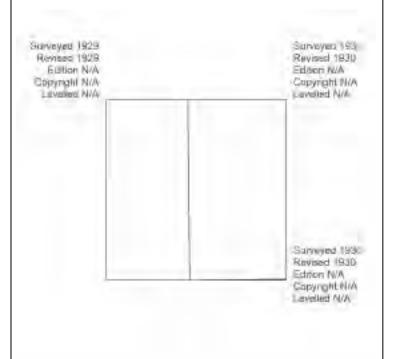
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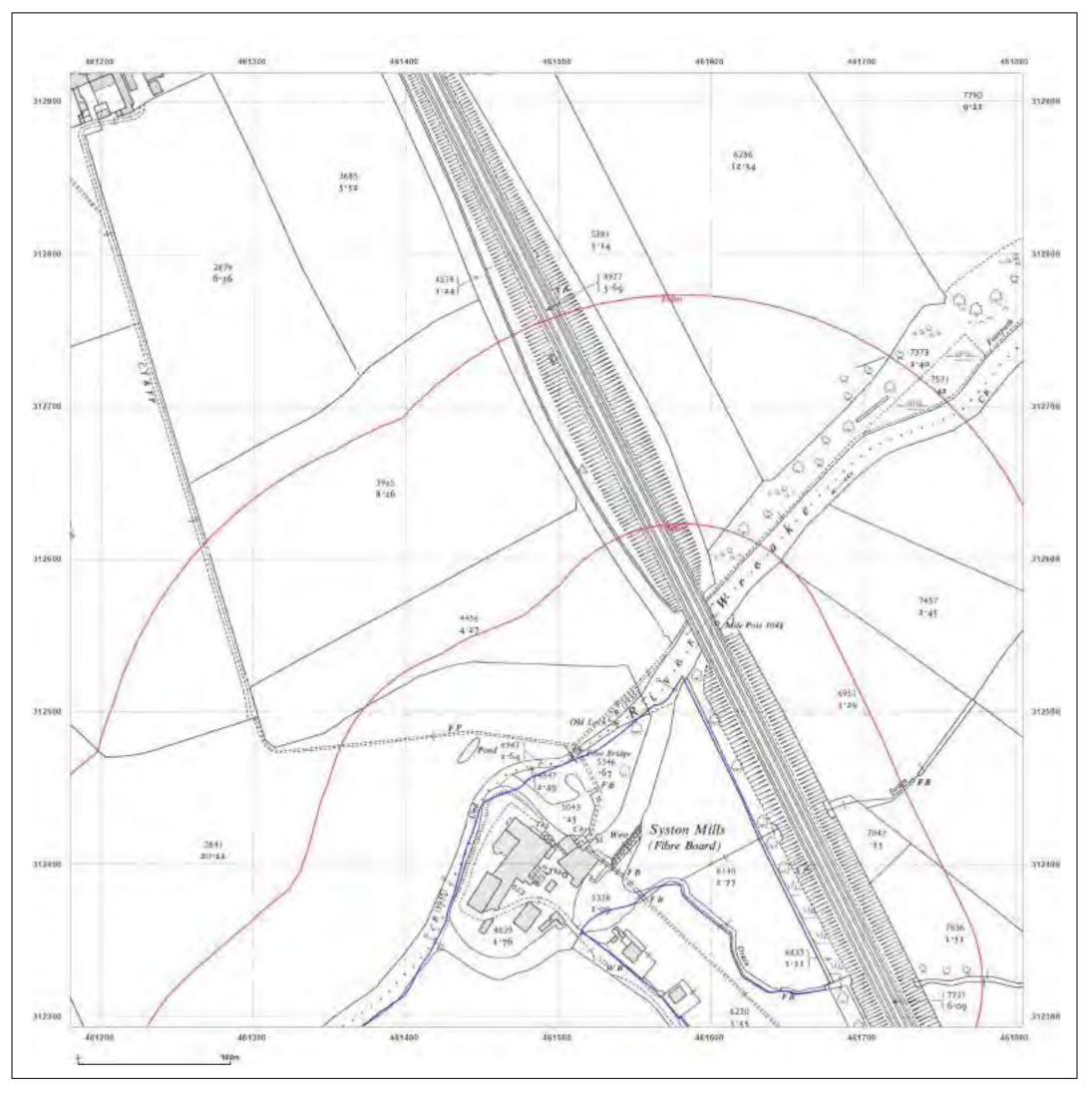
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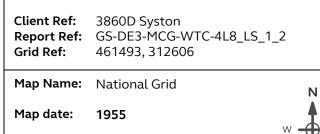
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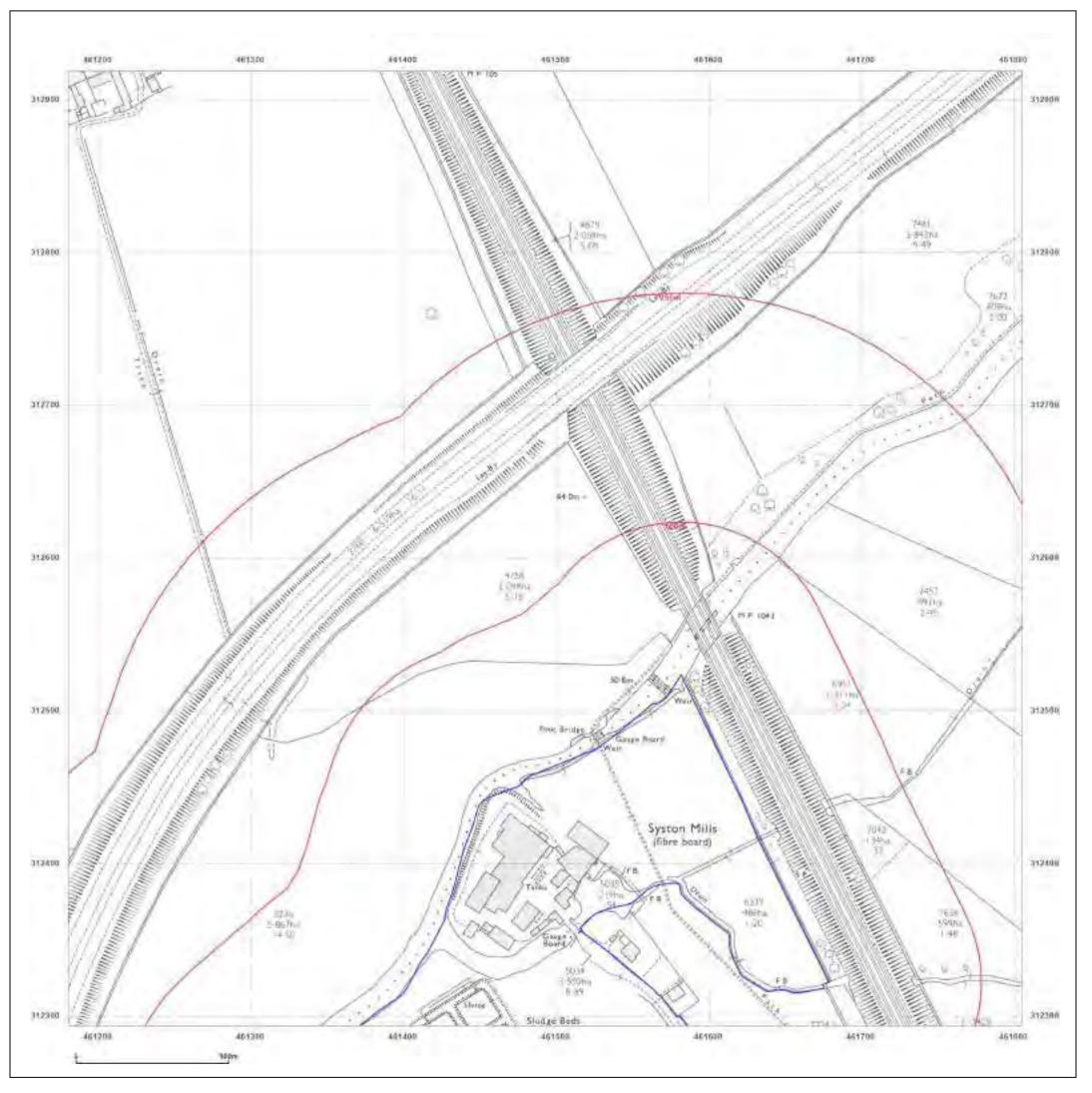
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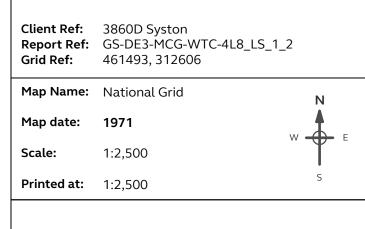


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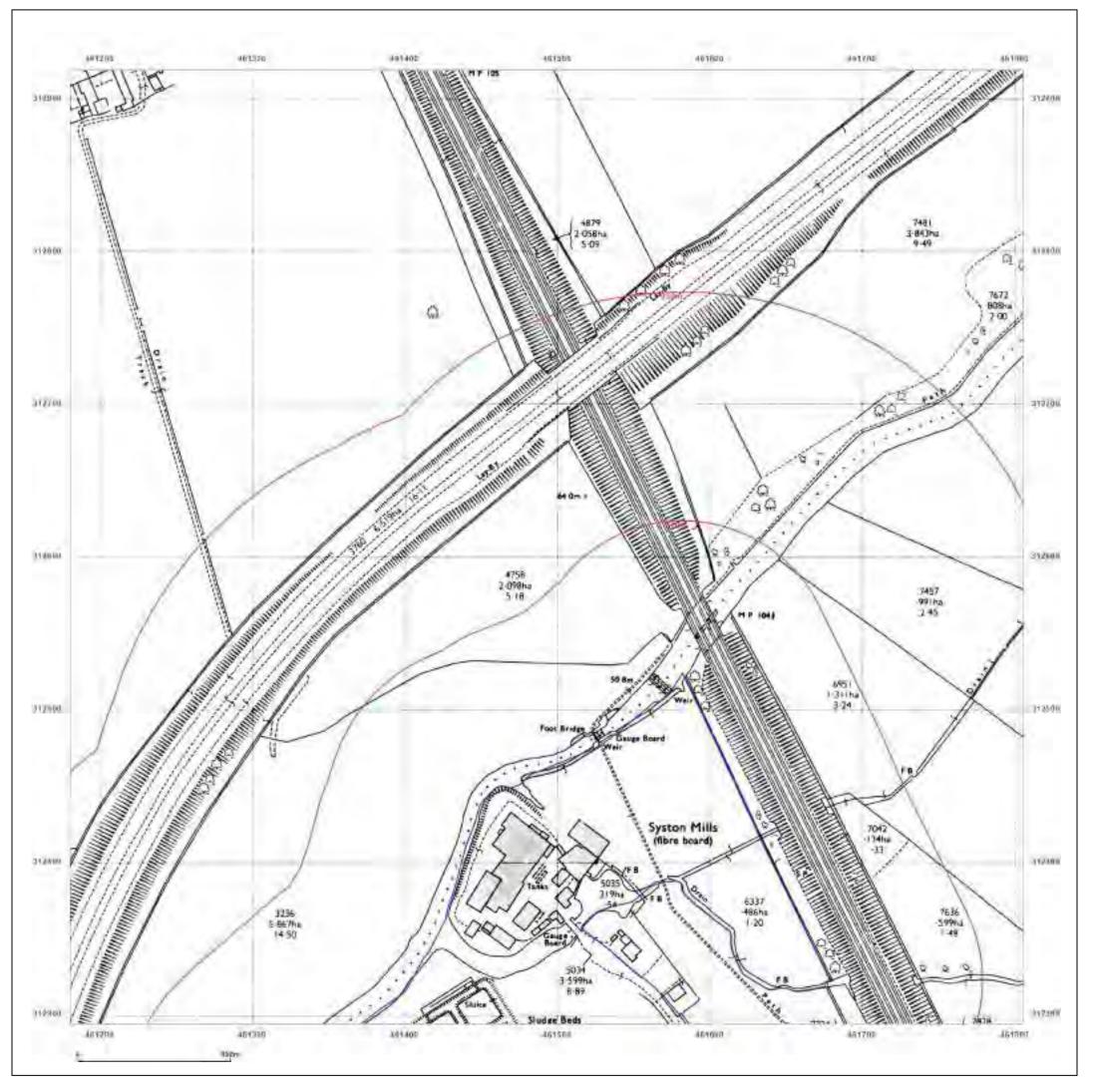




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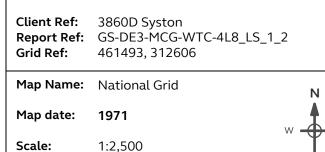


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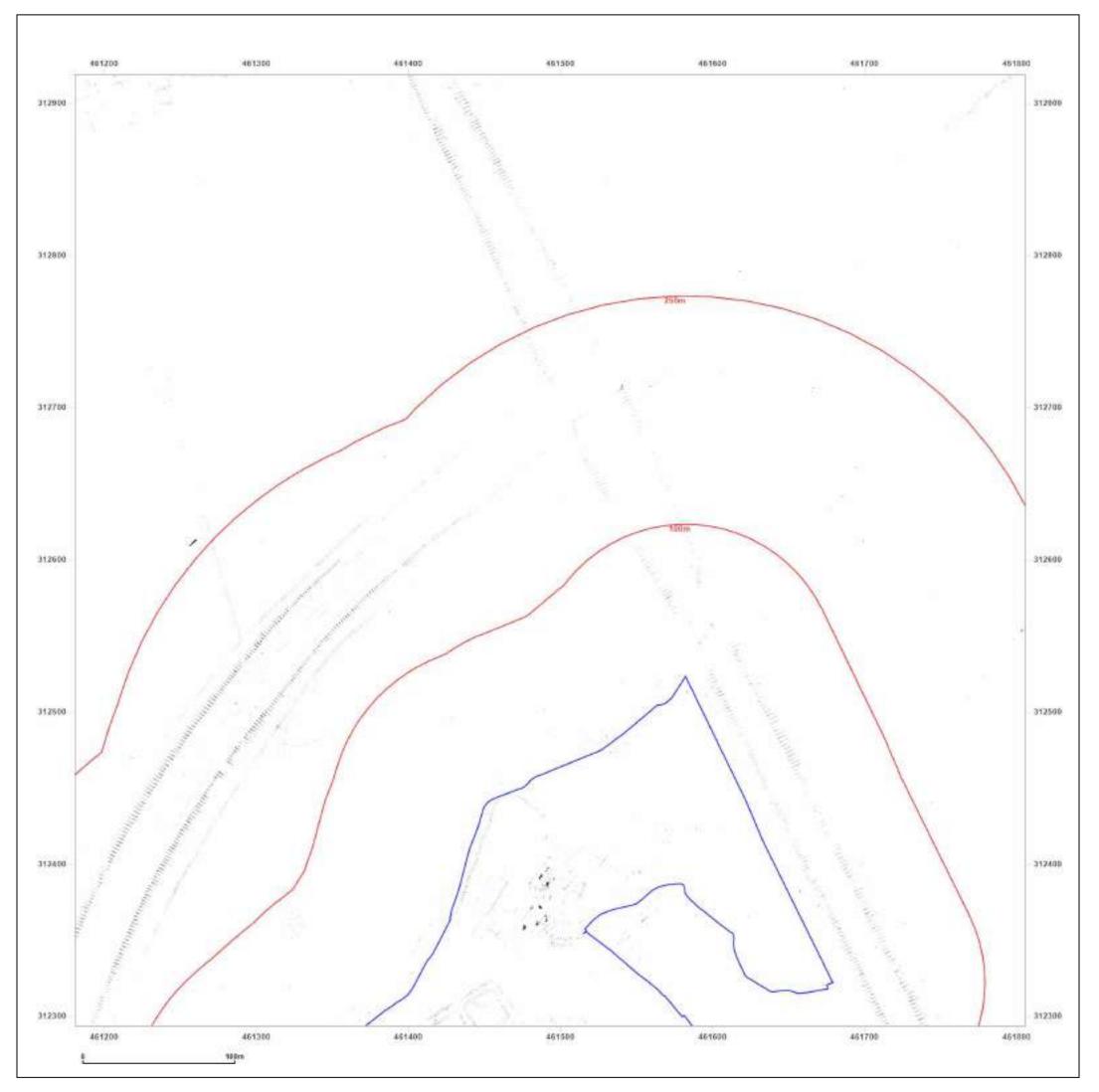




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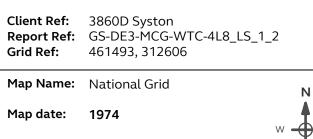
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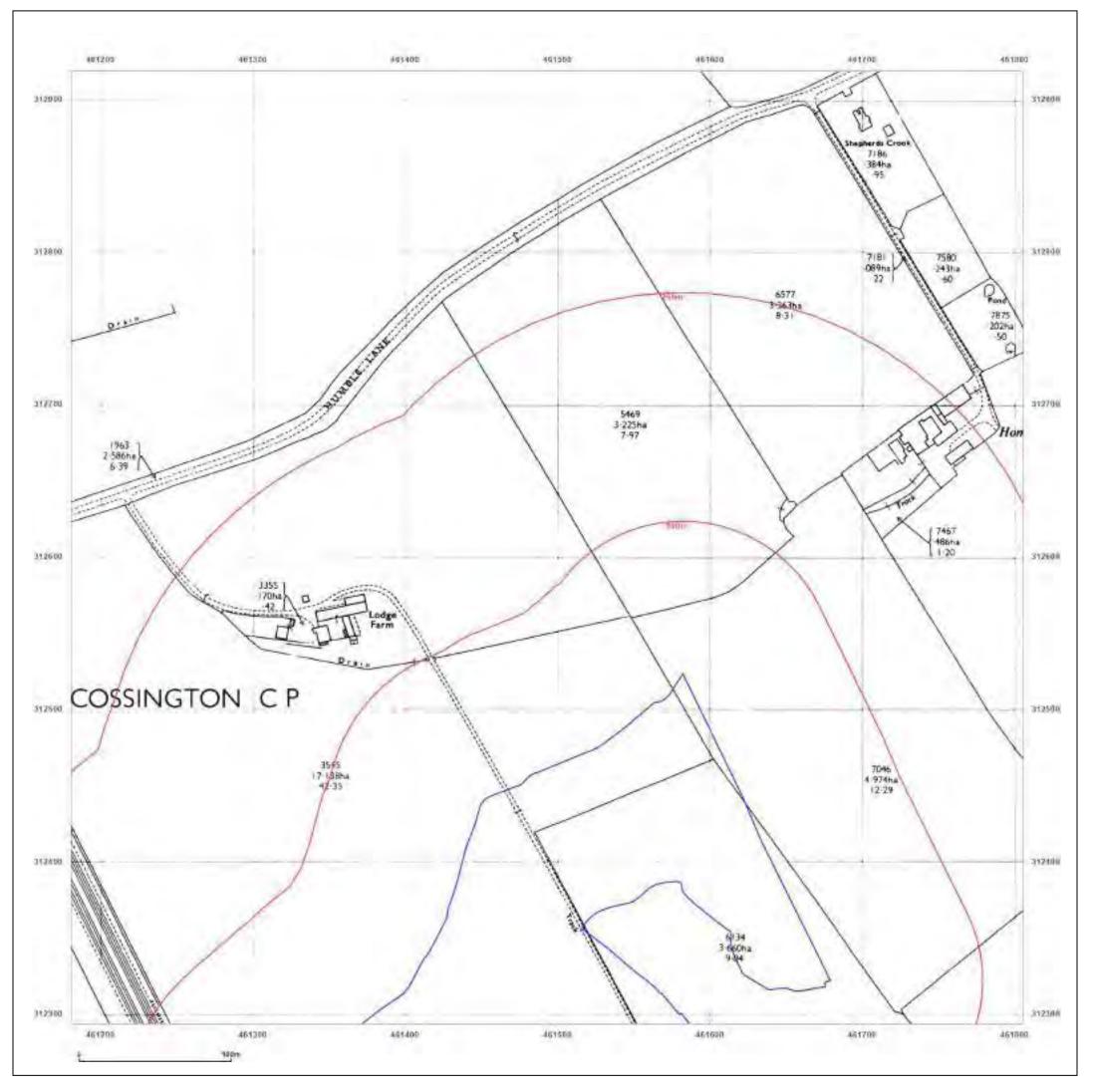


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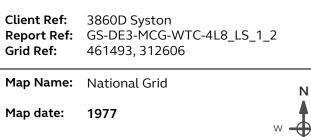
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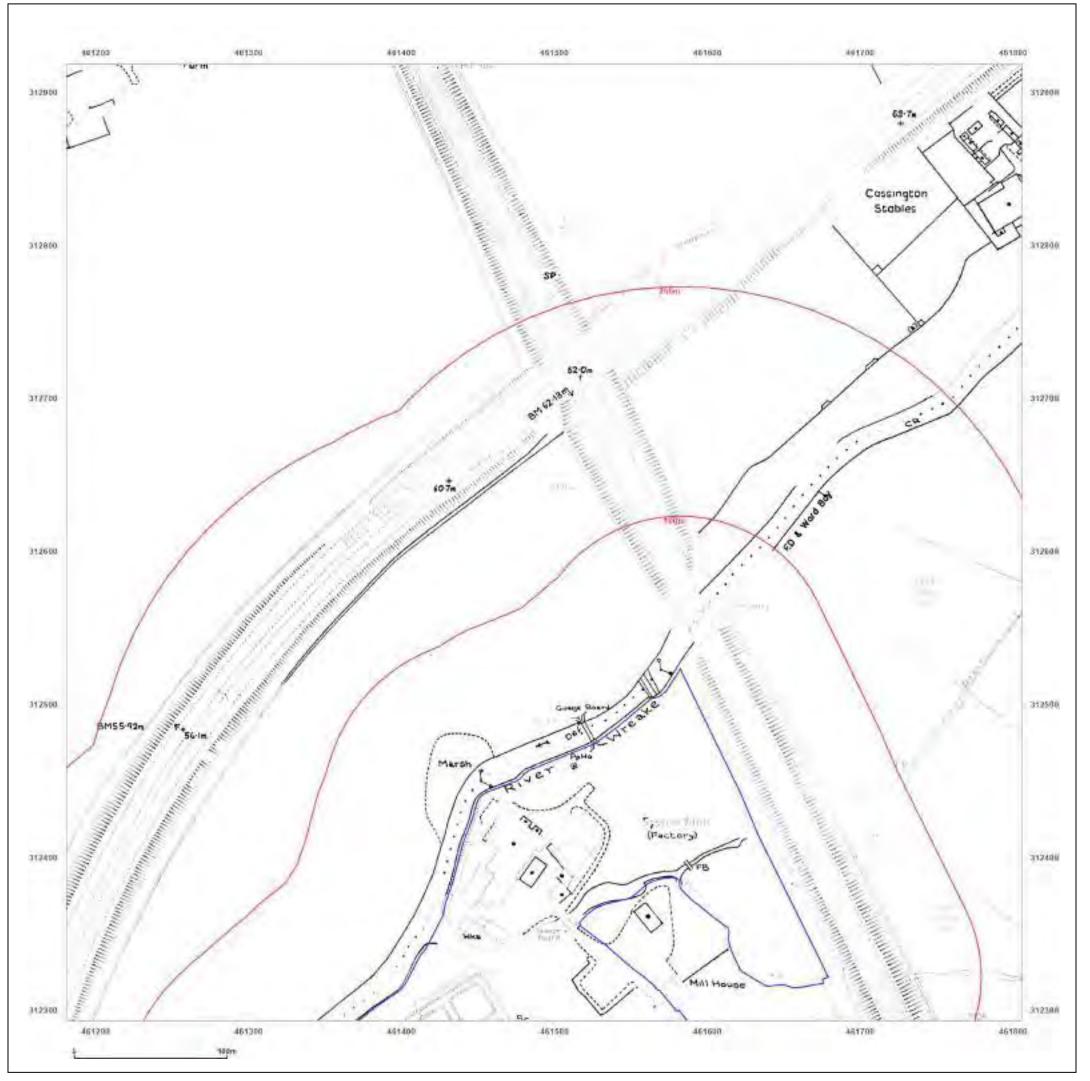


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SYSTON MILL, MILL LANE, SYSTON, LEICESTERSHIRE, LE7 1NS

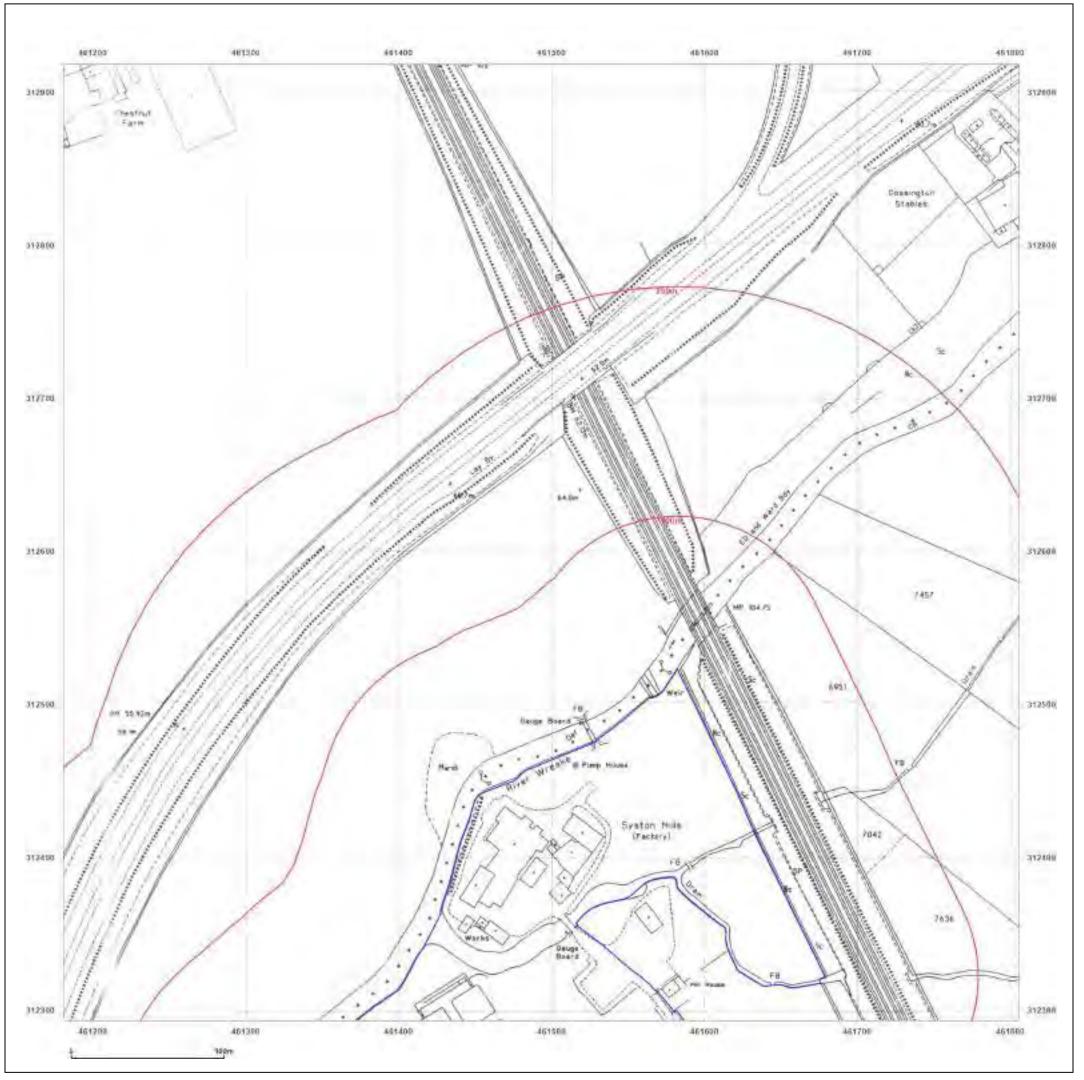
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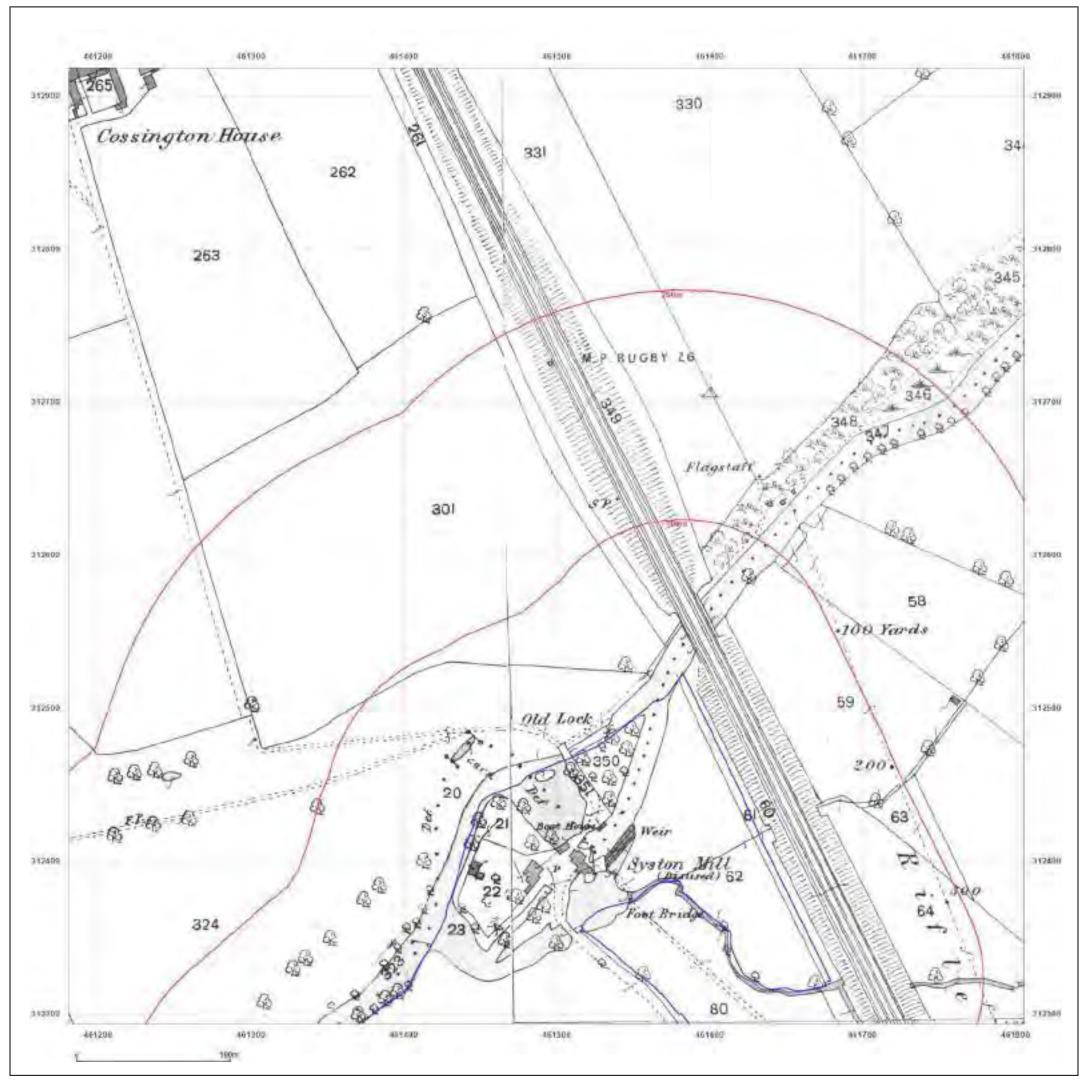
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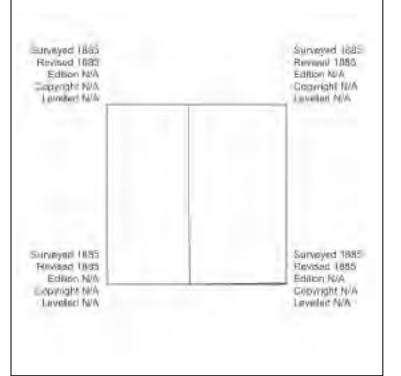
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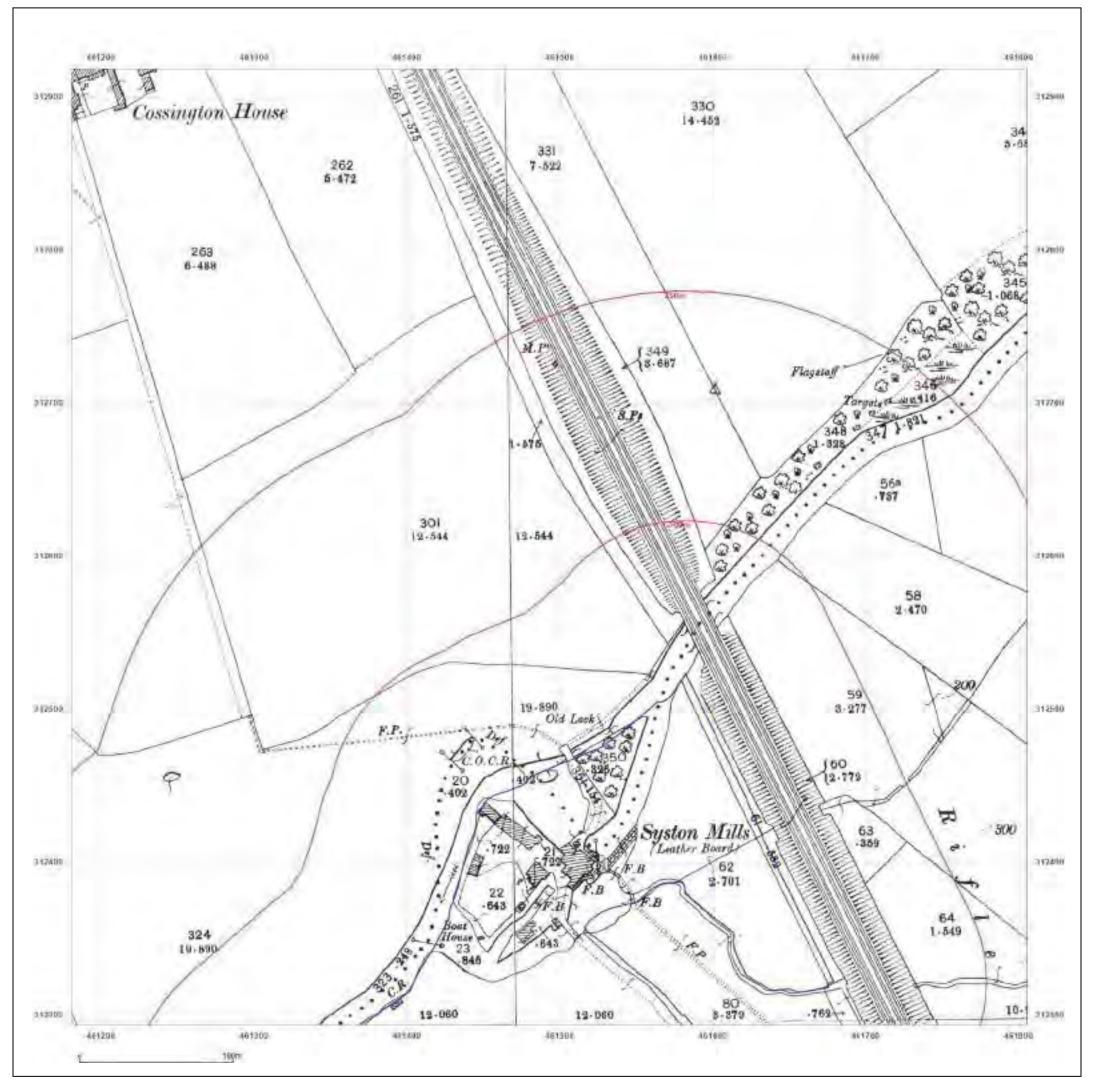


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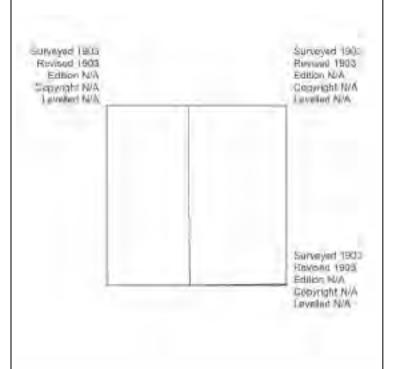




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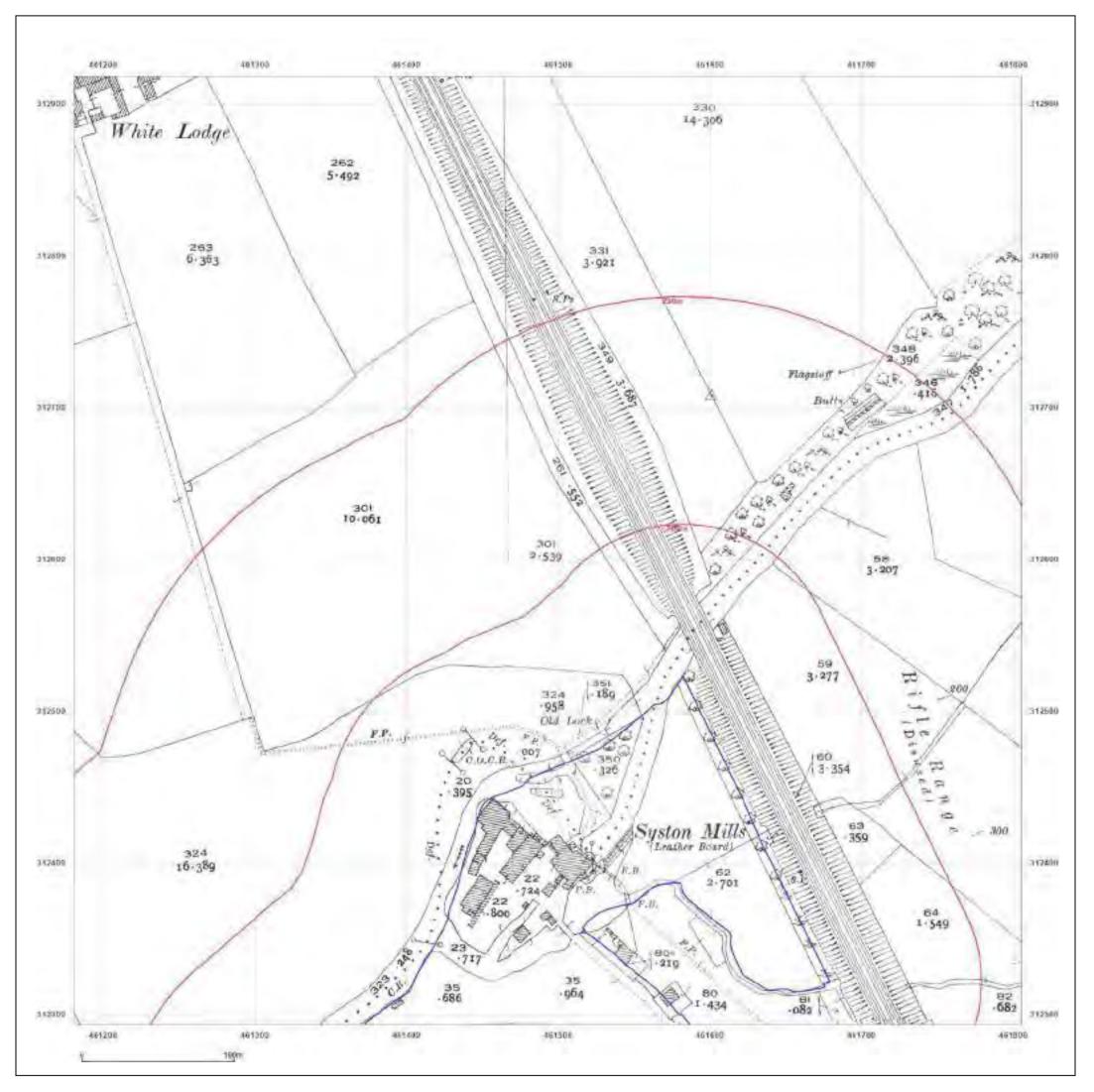
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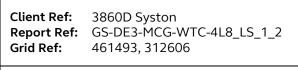
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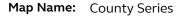




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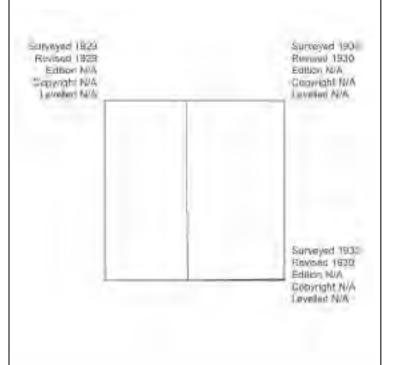
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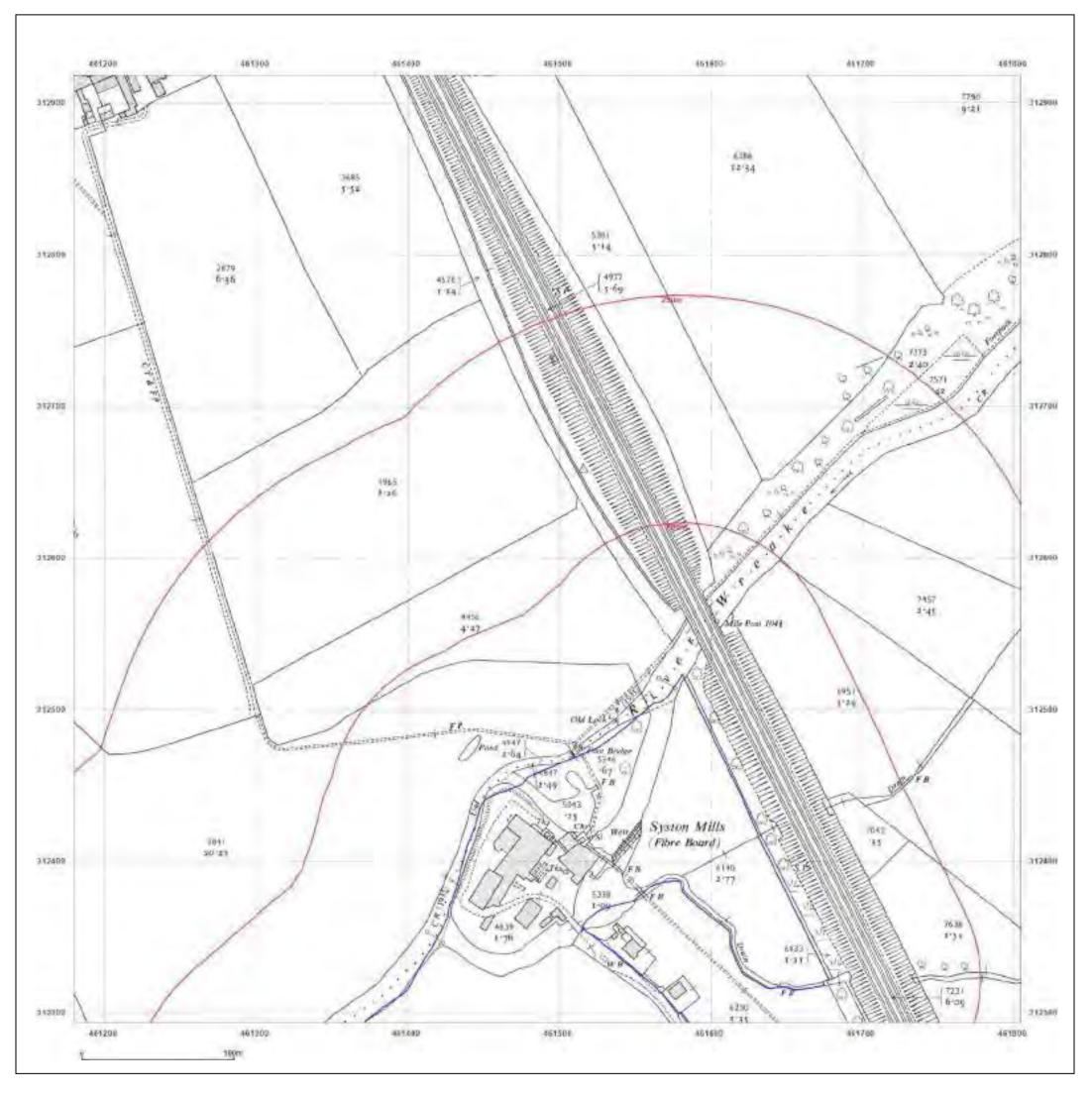
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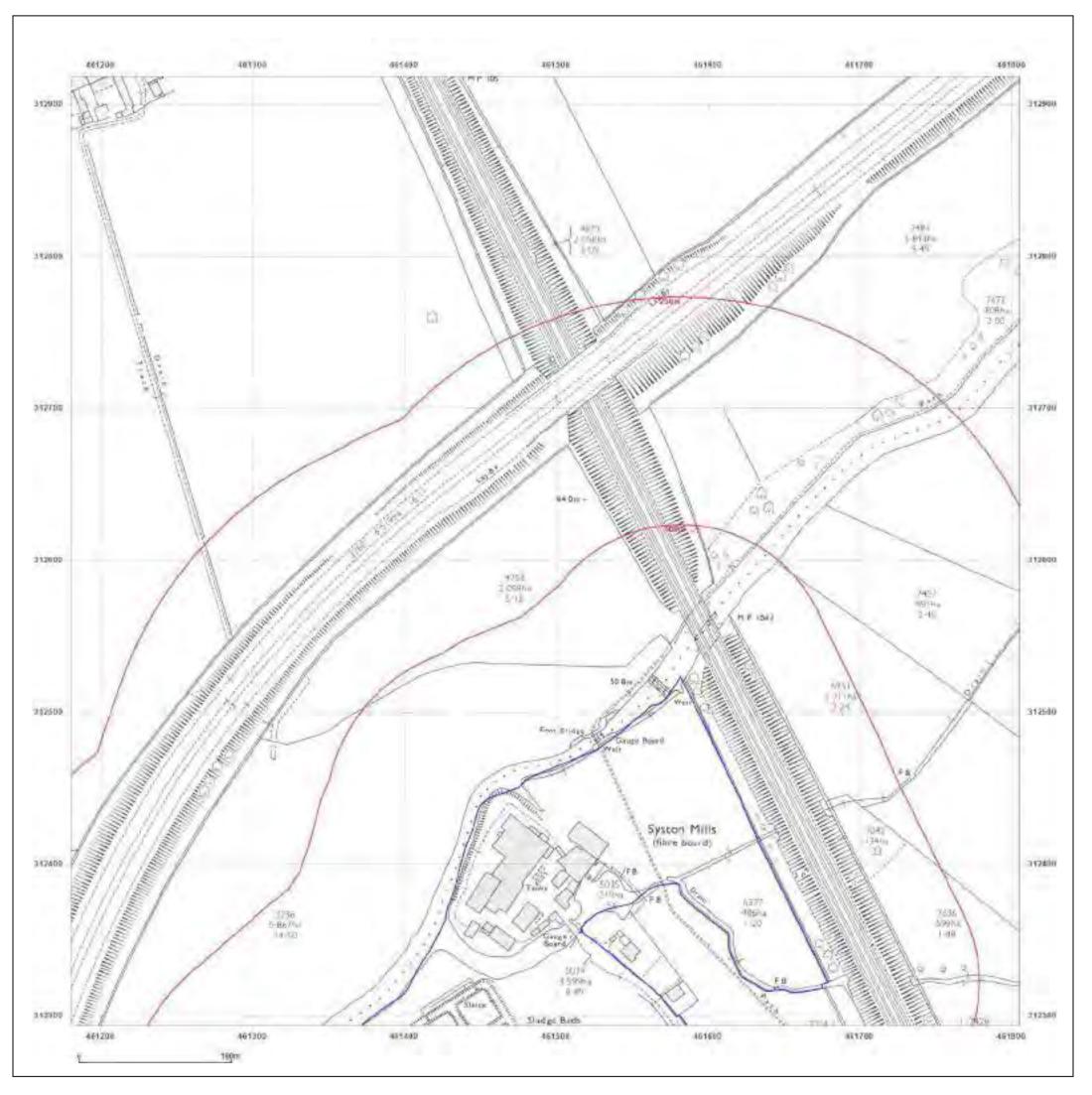
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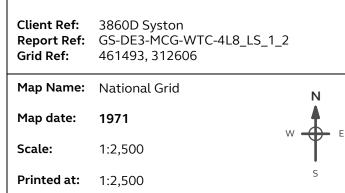
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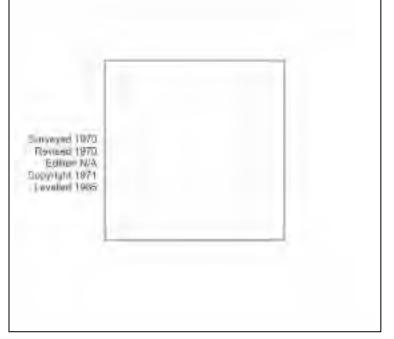




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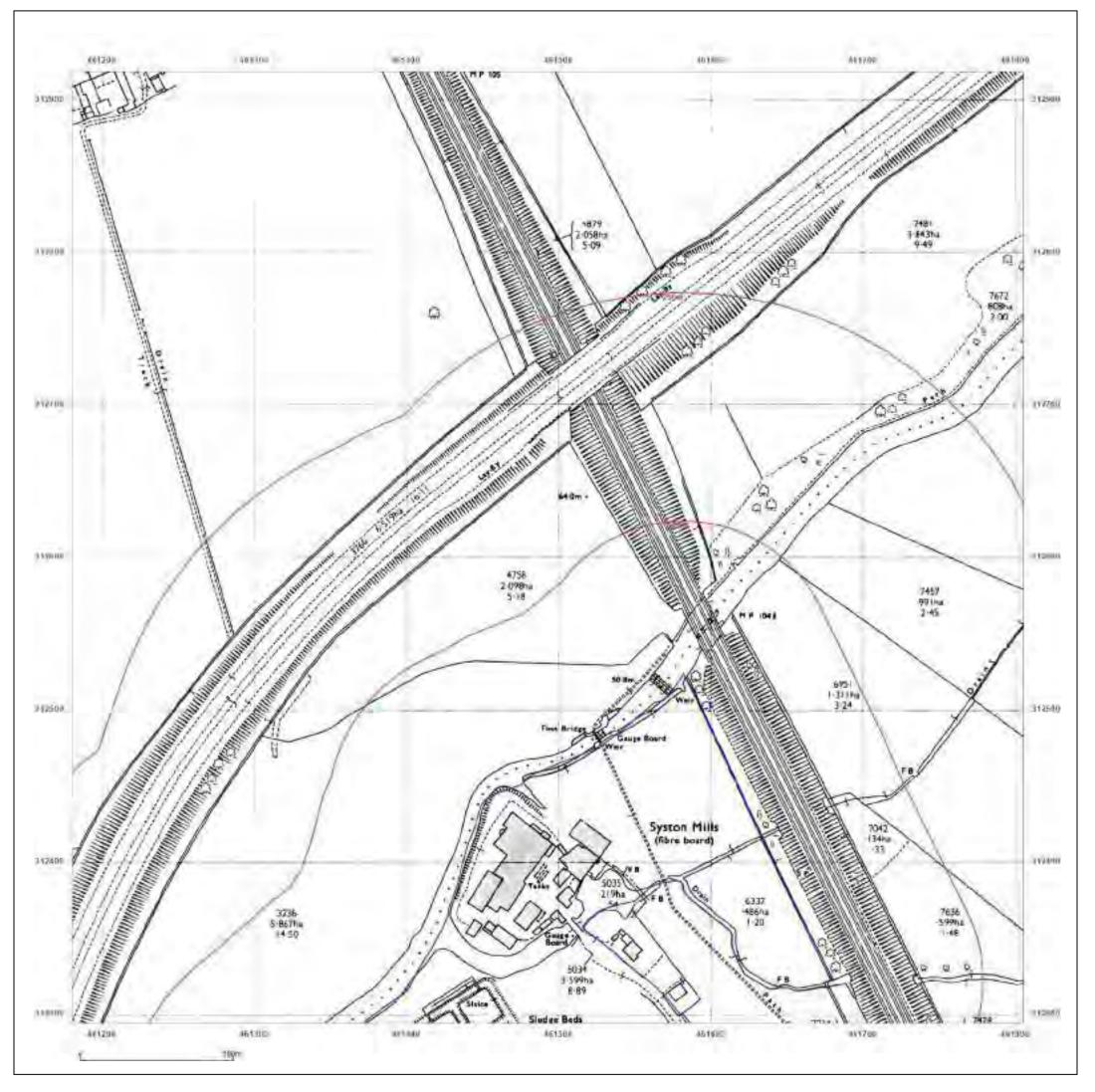






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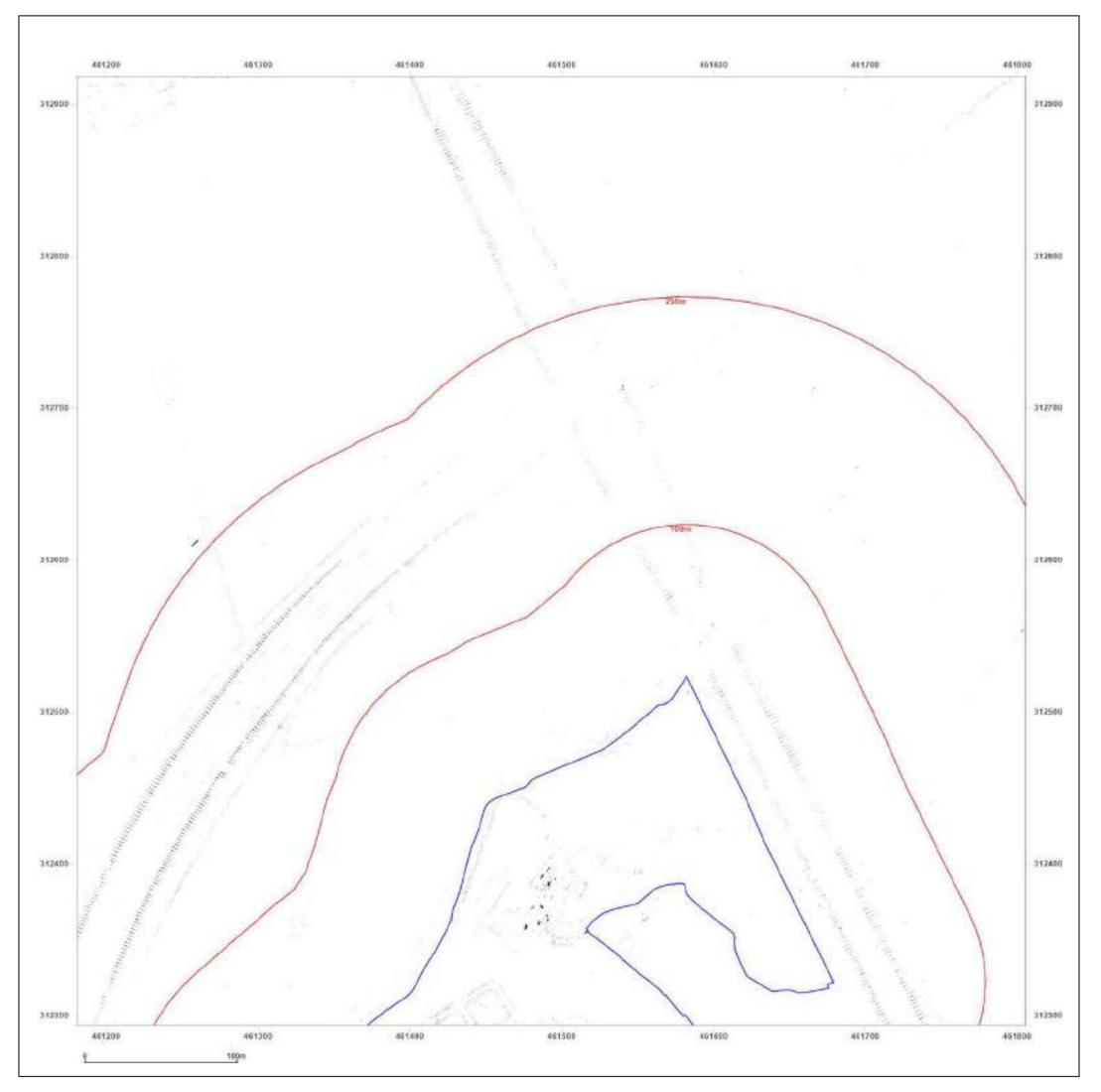




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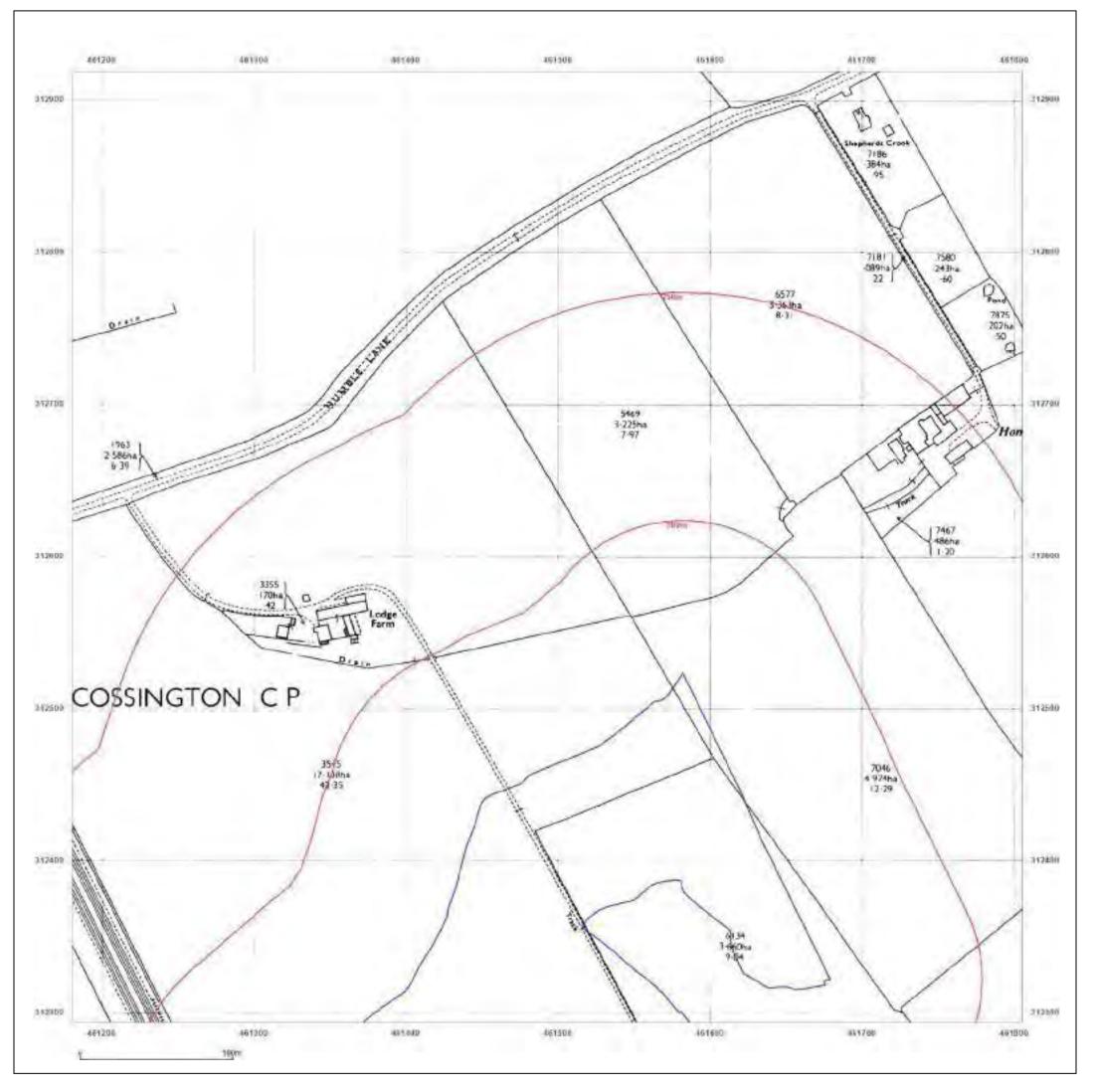
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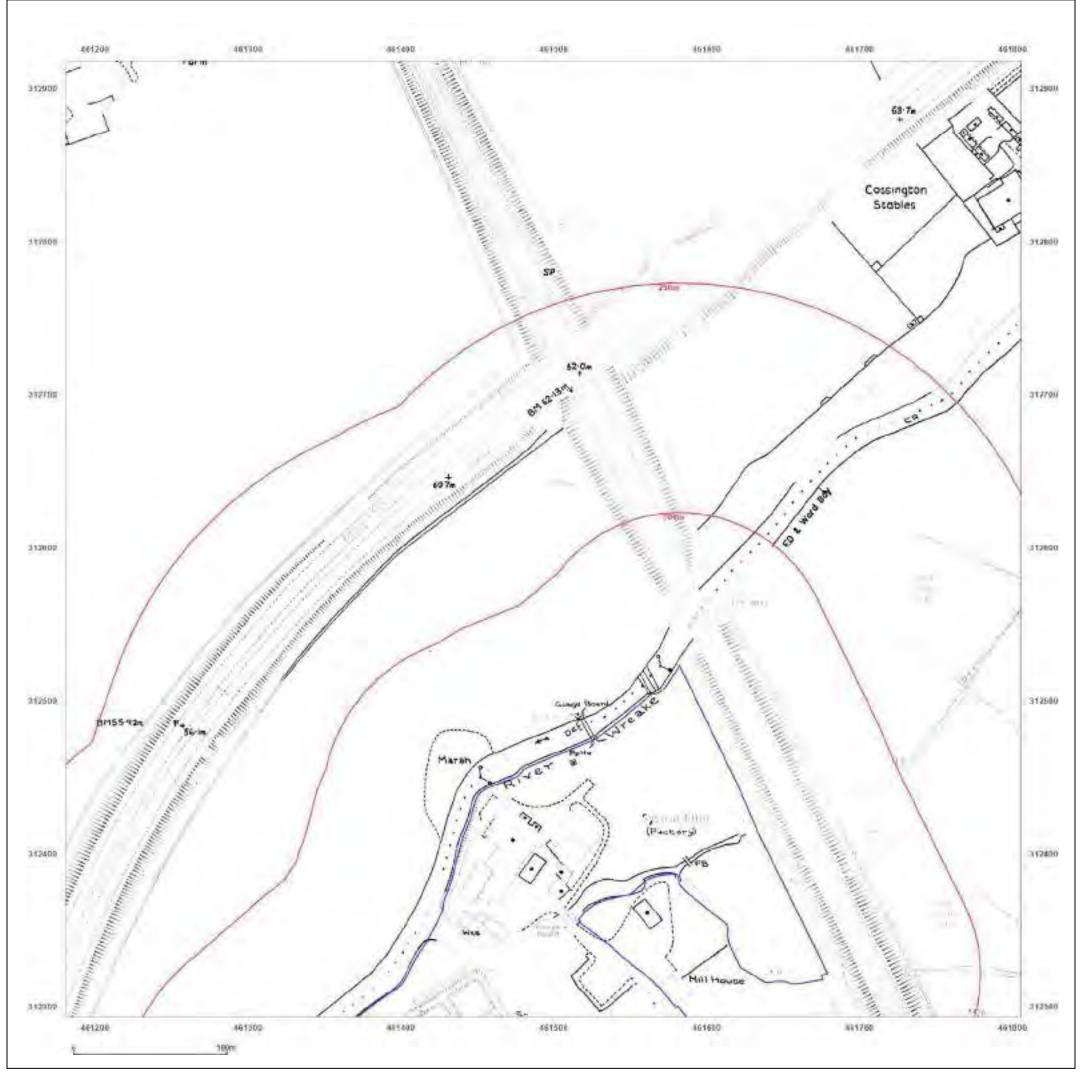




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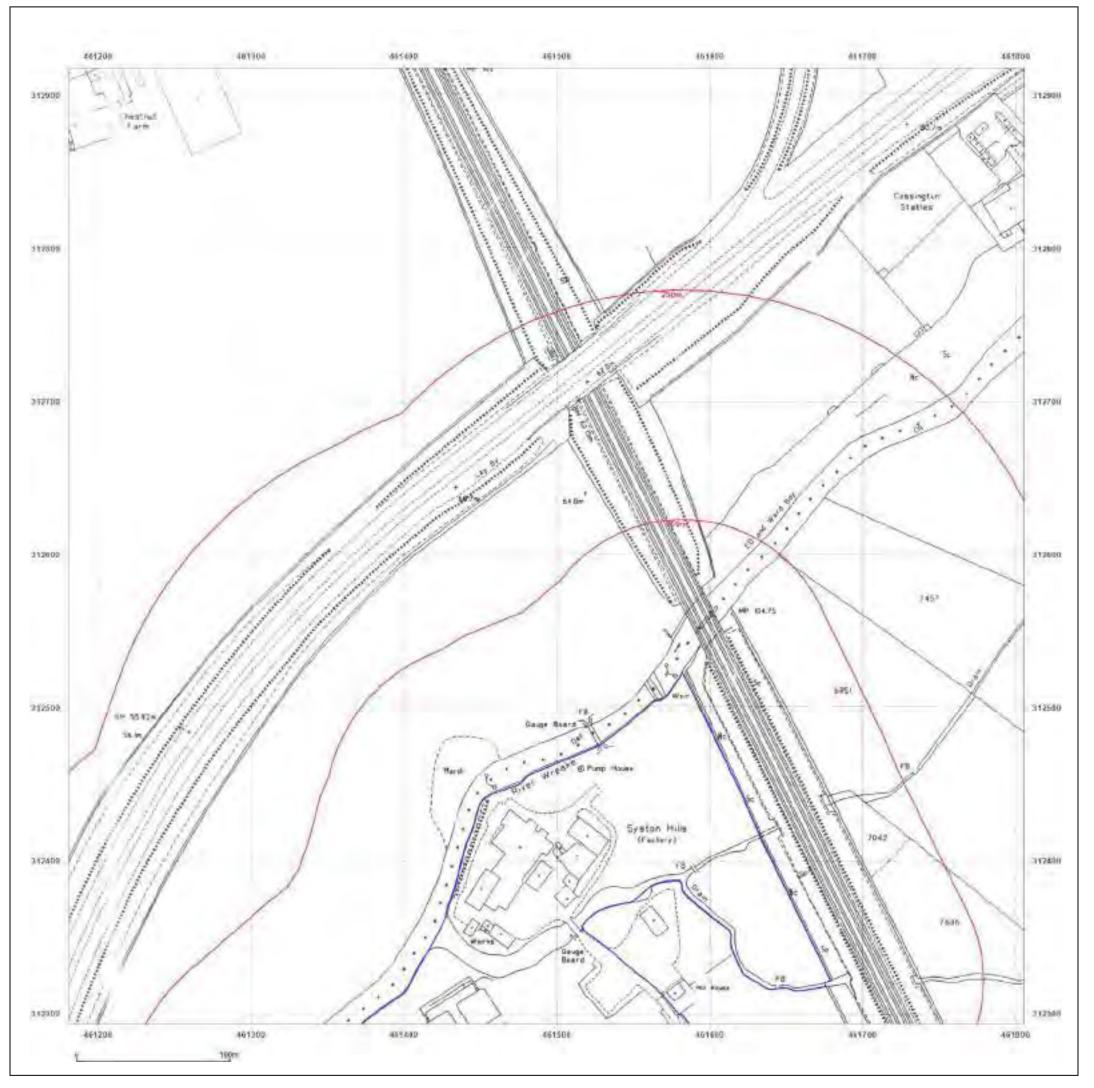




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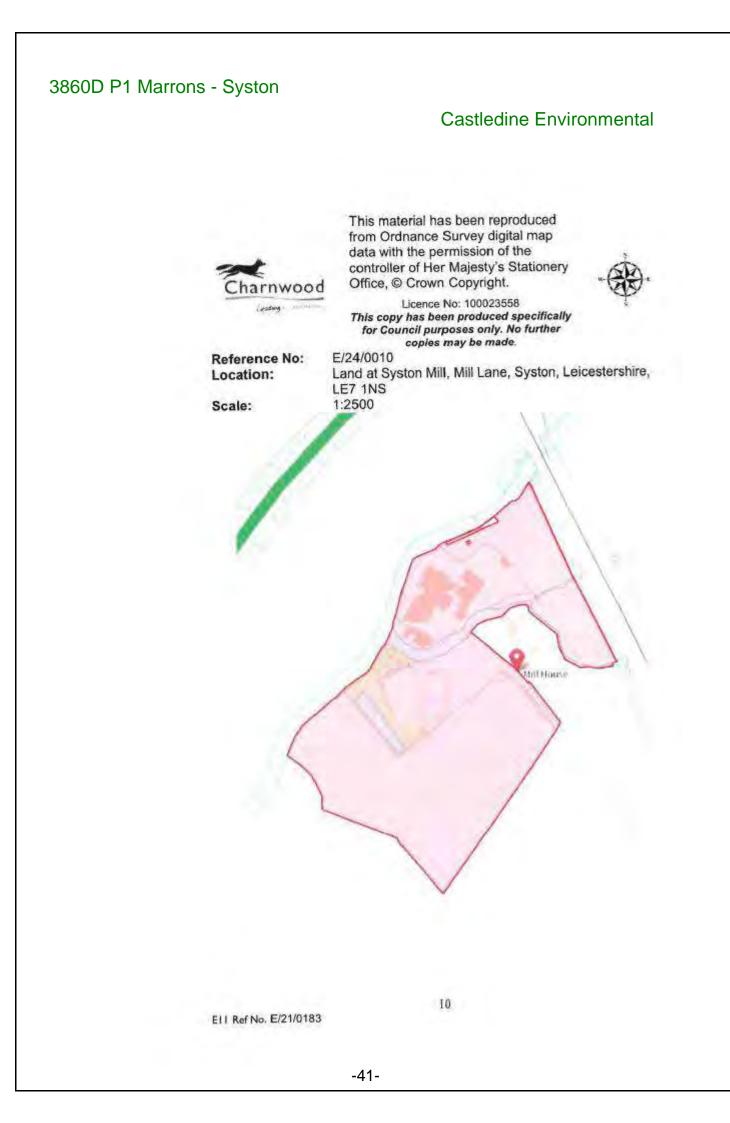
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### APPENDIX C CURRENT SITE PLANS (ZONED AND UNIT DESIGNATION)



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APPENDIX D

SITE PHOTOS AND LOCATIONS



Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.1: Facing SE along Mill Lane (site access track) showing recently removed trees and vegetation



### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.2: Facing south showing debris, refuse and evidence of vegetation removal / vehicle movements adj. to access route



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# Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.4: Facing SE from the entrance to the main site area showing the continuation of Mill Lane / site access route



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### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

### Photo No.6: Facing NW showing the main car-parking area



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### Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.7: Facing SW showing the area of Plot No.101 with Plot No.102 to the rear (car dealership / car-parking area)



## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.8: Facing slightly NW in the area between Plot Nos.101 & 102 (left) showing scattered debris and refuse



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### Site Walkover Photos

LAND CONTAMINATION SURVEYS.

Photo No.9: Facing SW from the security fencing of Plot No.102 (no access available on the day of the walkover)



### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.10: Area of burnt and melted debris adj. to Plot No.102, within Plot No.101 (plastics, metals, indiscernible debris)



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### Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.11: Facing NE from Plot No.101 showing the offsite scaffolding unit (far background of photograph)

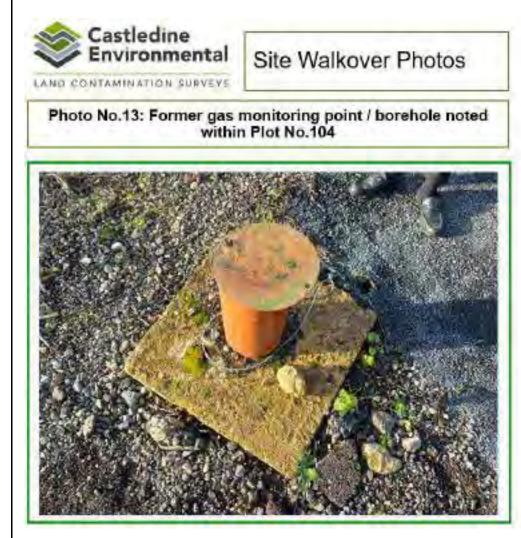


# Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.12: Facing SW within plot No.104 (further carparking and vehicle storage areas)



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## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.14: Former gas monitoring point / borehole noted within Plot No.104 with bung and tap remaining insitu



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## Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.15: Facing NE from the central area of Plot No.104 showing the location of the former gas monitoring well



### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.16: Further debris, refuse and burnt material noted on the boundary between Plot Nos.103 & 104



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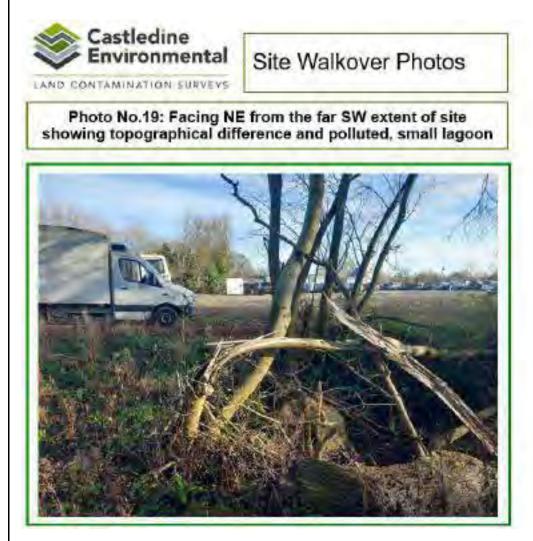


### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.18: Facing west / NW showing continuation of Plot No.104 into Plot No.105 (No.106 in far background)



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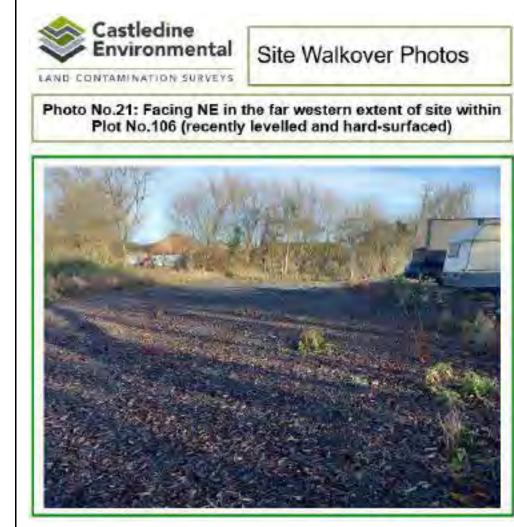


# Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.20: Polluted, small lagoon noted in the far SW extent of site, adj. to an overflow area for the River Wreake



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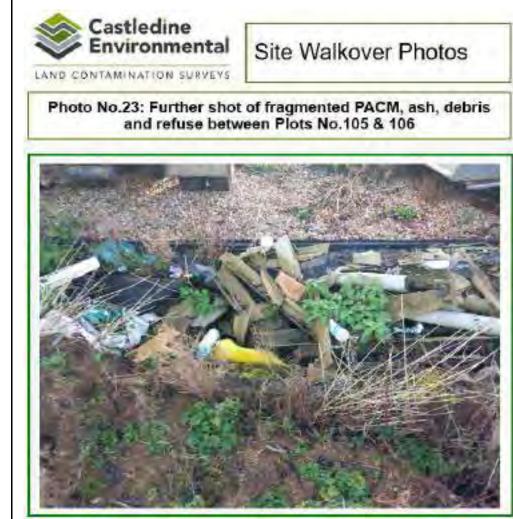


### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.22: Former wall located between Plots No.105& 106 showing significant PACM and made ground presence



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Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.24: Showing make-up of ground and topographical difference between Plot Nos.105 & 106



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Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.25: Facing SW showing Plot No.103 (further car dealership and car-parking area)

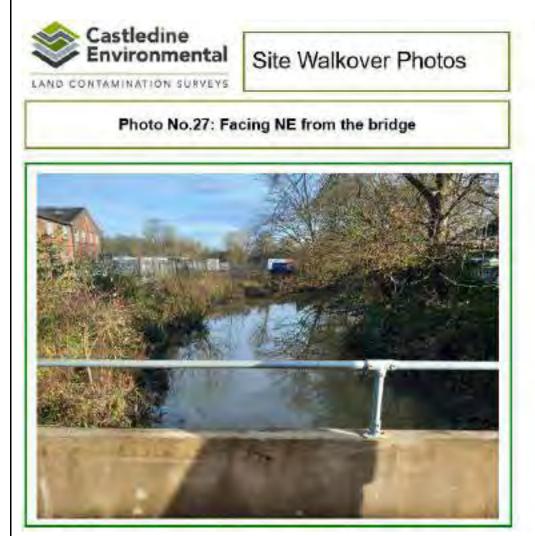


### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.26: Facing SE from the far side of the bridge providing access to the northern extent of site



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Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.28: Facing SW from the bridge



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### Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.29: Facing slightly NE in the NE extent of site showing further debris, refuse and hydrocarbon containers



### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.30: Chemical / hydrocarbon containers and open-air storage of oil noted adj. to Unit No.17 A/B/C



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### Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.31: Interior of Unit No. 17 A/B/C showing oil staining throughout (olfactory evidence of hydrocarbon presence noted)



### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.32: Interior of Unit No. 17 A/B/C showing oil staining throughout and former vehicle lift location (bolts)



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## Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.33: Facing north showing Plot No.107 forming the far NE extent of site (commercial vehicle storage)



### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.34: Facing NE showing Plot No.107 forming the far NE extent of site (commercial vehicle storage)



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## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.36: Facing SW from the same location as Photo No.35 showing courtyard area and Units D & E1 / E2 (left to right)



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## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.38: Showing area between Units No.10 (O) and 16 with further oil / barrel and fragmented PACM storage noted



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## Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.39: Facing NW in the far north of site showing the embankment to the River Wreake and further debris & refuse



### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.40: Electrical equipment including medical equipment noted adj. to riverbank – dialysis machine



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### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.42: Further debris & refuse atop the riverbank in the far NW of site (vehicle parts, plastics, oil filters, domestic debris)



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## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.44: Further debris including chemical containers, burning barrels and wastes adj. to the riverbank (NW of site)



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### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.46: Facing NE in the far west of site showing the rear of Units A, C and B1/B2 (river to left of photograph)



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## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.48: Vehicle and mechanical engineering equipment / wastes noted outside Unit E1 / E2



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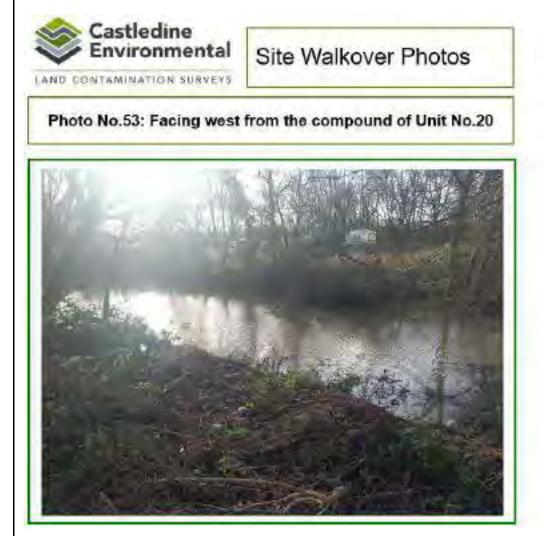


### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.52: Facing SE showing the frontage (northern) face of Unit No.20, located in a small-compound (PACM roofing)



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## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.54: Unknown object – possibly associated with heating of road paint – noted within Unit No.20 compound



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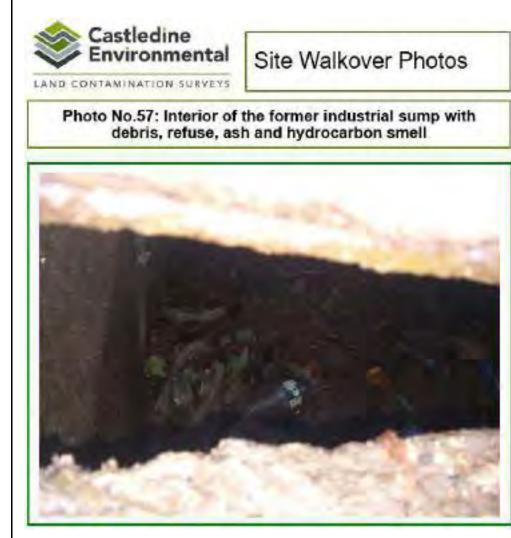


## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.56: Sump or below-ground drain (local information indicated it was associated with former shoe-making industry)



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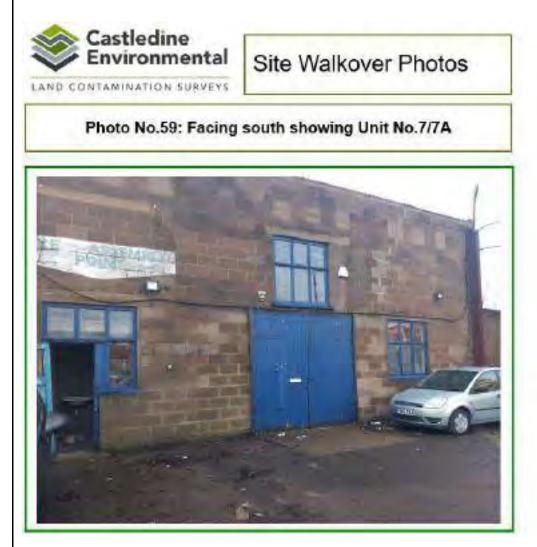


## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

### Photo No.58: Facing north showing Units No.B1/B2



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# Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

### Photo No.60: Showing interior of Unit No.7/7A



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Photo No.61: Showing interior of Unit No.7/7A (roofing)



## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

### Photo No.62: Showing interior of Unit No.7/7A (rear room)



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## Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.63: Facing NW from the SE extent of the courtyard in the north of site, showing Unit No.10(O)



## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.64: Further open-air, uncovered barrel / oil & hydrocarbon storage with evident release noted



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### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.66: Facing east / NE from the car-parking area in the north of site towards Units No.18 and rear of Unit No.17 A/B/C



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### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.68: Interior of Unit No.16 showing scattered debris and significant hydrocarbon staining on flooring



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### Site Walkover Photos

LAND CONTAMINATION SURVEYS

Photo No.69: Interior of Unit No.16 showing scattered debris and significant hydrocarbon staining on flooring



### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.70: Open drains – likely associated with former mill usages – noted within Unit No.16 (at least 2 No. noted here)



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### Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.72: Hydrocarbon staining and chemical presence noted in interceptor of Unit No.16 (hydrocarbon smell noted)



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Site Walkover Photos

Photo No.73: Facing SW showing further mechanical engineering debris and wastes outside Unit No.16



## Address: Syston Mill Industrial Estate Client: Mr. M. S. Nagpal

Photo No.74: Facing east / SE on the north bank of the river channel on site (bridge off to left of photograph) debris noted



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Photo No.76: Iridescence noted atop concrete adj. to trailer containing chemicals / fuels etc in car-parking area in north of site



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### APPENDIX E WATCHING BRIEF

It remains possible that previously unexpected soil conditions may be encountered during the construction process. Examples may include oily pockets within the soil, potential for asbestos containing materials, black ashy materials, soils exhibiting strong odours, brightly coloured materials, and former demolition materials.

Should previously undiscovered contamination be encountered during the demolition/construction of the new buildings the following course of action should be adhered to:

- The ground workers should report any suspected contamination immediately to the Client's site supervisor. The supervisor should contact the Client or their appointed agent who will in turn contact Castledine Environmental to request an engineer to visit the site to assess the extent of the 'contamination'.
- Castledine Environmental shall make records of their inspection, and pass details of these to the Local Authority.
- Where the conditions revealed differ from those previously anticipated, the Castledine Environmental shall take samples as deemed appropriate to be dispatched for appropriate chemical testing.
- 4. Depending on the results of the testing either:
  - a. no further work will be required;
  - b. a further detailed risk assessment will be required; and/or
  - Localised specific remedial measures will be necessary.
     Appraisal criteria will vary depending on the nature of the assessment.
- 5. The results of any such testing will be sent to the Local Authority Pollution Control Section, Local Authority development control section, and the appointed building inspector. If remediation is required, the LA/Building inspector will be informed of the date and time of the proposed works.

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- Remediation will be undertaken in accordance with a method statement submitted for approval. The works shall be supervised where necessary by Castledine Environmental who shall provide a Verification Report for the Local Authorities.
- 7. A copy of the discovery strategy should be lodged on site and provisions made to ensure that all workers are made aware of their responsibility to observe, report and act on any potentially suspicious or contaminated materials they may encounter.

