

**A1839
Phase 1
Contaminated Land Assessment**

**Old Mead House, Old Mead Road, Wick,
Littlehampton, West Sussex, BN17 7PU**



For

Molica Site Maintenance Ltd
Old Mead House, Old Mead Road, Wick, Littlehampton,
West Sussex, BN17 7PU

**December 2018
Report Number: A1839-1**

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CONTENTS

Page

1.	INTRODUCTION	1
2.	SITE LOCATION AND LAYOUT	2
3.	SITE HISTORY	3
4.	ENVIRONMENTAL SETTING	5
	4.1 GEOLOGY	5
	4.2 GROUNDWATER	5
	4.3 SURFACE WATER	5
	4.4 RADON	6
	4.5 OTHER ENVIRONMENTAL INFORMATION	6
	4.5.1 Historical Industrial Land Use	6
	4.5.2 Environment	7
	4.5.3 Waste	7
	4.5.4 Current Industrial Land Use	8
	4.5.5 Water	8
	4.5.6 Flooding	9
	4.5.7 Protected Locations - Environmentally Sensitive Receptors	10
5.	CONCEPTUAL SITE MODEL	11
	5.1 CONTAMINANT SOURCES	11
	5.2 PATHWAYS	12
	5.3 RECEPTORS	12
	5.4 DISCUSSION	12
6.	CONCLUSIONS AND RECOMMENDATIONS	16
	6.1 RECOMMENDATIONS	16

APPENDICES:

1. Site Photographs
2. Historical Maps
3. Environmental Report

1. INTRODUCTION

AGS Ground Solutions Ltd (AGS) were commissioned by Molica Site Maintenance Ltd (The Client) to undertake a Phase 1 contaminated land assessment on a site known as Old Mead House, Wick.

It is understood that it is planned to construct new soakaways on the site. The local authority were concerned at the impact that the soakaways might have upon groundwater resources, given the location of two known landfills close to the site.

In addition, the effects on the proposed development of 24 static caravans will also be considered.

The aim of the investigation was to examine site conditions, and to identify any potential risks of groundwater contamination resulting from historical and contemporary site usage, and to make recommendations in accordance with these findings.

2. SITE LOCATION AND LAYOUT

The site is located off Old Mead House and is centred approximately on Ordnance Survey Grid Reference TQ 023 041.

Access to the site was via Lyminster Road off Old Mead Road.

A walkover survey was undertaken on the 13th November 2018, details of which are presented below.

At the time of the walkover survey the site is split into two main areas named as Site 1 and Site 2.

Site 1 was rectangle in shape, with access to site via a gravel pathway at the northern boundary.

The site comprised of ongoing construction operations, that is split between the eastern half that was laid to grass, with the western half being a gravel driveway. On the eastern half of site, the site comprised of several static caravan homes, building materials, a mini sewage plant, and imported sands and gravel. The entire site appeared tidy, well-tended, and organized.

To the north of the site was residential properties and private lands beyond; to the east was residential properties, green houses and roads beyond; to the south was the owner's properties named Old Mead House, a railway line, and further residential properties beyond; and to the west was fields housing solar panels, a railway line, and further residential properties beyond.

The natural ground profile appeared even and level across the site.

Site 2 rectangle in shape, with access to site via a locked metal gate at the northern boundary.

The site was laid to overgrown vegetation and abandoned man-made materials. The site was boarded by overgrown hedges and metal fencing. An electricity pylon was situated in the middle of the site, with wires running north-east to south-west. Boarding the northern and eastern sides of the site is a ditch partially filled with water.

To the north of the site was residential properties and private lands beyond; to the east was residential properties and roads beyond; to the south was a railway line, and further residential properties beyond; and to the west was Torri House, green houses, Old Mead House, and fields with solar panels beyond.

The natural ground profile appeared even and level across the site.

Photographs taken during the Walkover Survey have been presented in Appendix 1.

3. SITE HISTORY

A map search was carried out for the site and extracts of the following Ordnance Survey maps were obtained covering the period between 1876 and 2014. Maps marked (*) are obtained from Russian Military Mapping, not Ordnance Survey.

These are presented in Appendix 2 and the relevant historic details are summarised as follows:

Period	Scale	Observations
1876	1:2,500	This site is shown as forming part of a field, with several isolated trees running through the site and around the border of the site. A road is shown to run through the eastern side of the site, running approximately east – west, and another road entering the north-eastern boundary of the site running approximately north south. A network of roads to the north, north west, and north east of the site approximately 150 – 200 m away. A railway is shown running broadly east – west approximately 150 m to the south of the site. Additional isolated trees are shown in surrounding fields too.
1876	1:10,560	A river known as Black Ditch is shown approximately 150 m north of the site.
1896	1:10,560	Residential dwellings known as Spring Villas are approximately 250 m to the north-east of the site.
1897	1:2,500	Allotment gardens are shown to the east approximately 250 m from the site.
1910	1:10,560	Additional residential dwellings and roads approximately 250 m to the north-east of the site.
1911 - 1912	1:2,500	No significant changes.
1932	1:2,500	A tank is approximately 175 m to the east of the site.
1932	1:10,560	No significant changes.
1938	1:10,560	A road known as Old Mead Road is running immediately adjacent to the north of the site. Additional residential dwellings are found to east of the site, approximately 225 m away.
1946	1:10,560	No significant changes.
1957	1:2,500	A field of trees is found approximately 100 m south of the site. A drain is found approximately 250 m south of the site.
1957	1:10,560	Old Mead Road is found to further extend west across the northern boundary of the site. Additional residential dwellings and roads are found within 25 m to the north-west and south of the site.

1970 - 1974	1:2,500	Two buildings are now on the western side of the site. Properties are found immediately adjacent to the east of the western properties. The dwellings to the north-west and south of the site is known as Molica Nurseries, and Southdown Nurseries, the Bungalow. A park to the north-west of site approximately 100 m, is known as Thornlea Park. Horsefield Bungalows and a nursery is found approximately 150 m and 200 m, to the east of the site. Drains are found to the west and north of the site, approximately 200 m away from the site. An electrical sub-station is found approximately 250 m to the east of the site.
1972 - 1974	1:2,500	Residential dwellings immediately adjacent to the east is known as Torri House, and Maring House.
1974	1:10,000	The Thornlea Park is known a caravan park, with Arundel Drive, and Penarth Gardens. An additional caravan park is approximately 250 m north of the site.
1974 - 1978	1:2,500	The properties immediately south of the site is known as Old Mead House, Torri Nursery, Old Mead Nursery. Tracks immediately adjacent to the north-west of site is shown. The Thornlea Park is known a caravan park, with Arundel Drive, and Penarth Gardens.
1981	1:10,000	Southdowns Nurseries is now known as Glenvilla. An additional park and road is found approximately 50 m north of the site, known as Kingshead.
1992	1:10,000	No significant changes.
1994	1:10,000	Black Ditch is now known as Ed and Ward Boundary. Sandfield Nursery is found approximately 250 m south-east of the site.
2002	1:10,000	A road known as A214 Lyminster Road is shown approximately 250 m east of the site.
2010	1:10,000	Additional residential dwellings are found immediately north of the site and extends to 200 m of the site.
2014	1:10,000	No significant changes.

4. ENVIRONMENTAL SETTING

4.1 GEOLOGY

Reference to the British Geological Survey 1:50,000 scale geological map of the area shows the site as being underlain Raised Marine Deposits – Clay, Silt, Sand and Gravel (RMB), which is underlain by the Lewes Nodular Chalk Formation (LPCK)

The British Geological survey provides the following geological descriptions. Contains British Geological Survey materials © NERC 2018:

Raised Marine Deposits – Clay, Silt, Sand and Gravel (RMB)

Description: Raised Marine Deposits - Clay, Silt, Sand And Gravel. Superficial Deposits formed up to 3 million years ago in the Quaternary Period. Local environment previously dominated by shallow seas (U).

Setting: shallow seas (U). These sedimentary deposits are shallow-marine in origin. They are detrital, generally coarse-grained forming beaches and bars in a coastal setting.

Lewes Nodular Chalk Formation (LPCK)

Description: Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation And Portsdown Chalk Formation (undifferentiated) - Chalk. Sedimentary Bedrock formed approximately 72 to 94 million years ago in the Cretaceous Period. Local environment previously dominated by warm chalk seas.

Setting: warm chalk seas. These sedimentary rocks are shallow-marine in origin. They are biogenic and detrital, generally comprising carbonate material (coccoliths), forming distinctive beds of chalk.

4.2 GROUNDWATER

Reference to the British Geological Survey's Aquifer within Superficial Geology Map, indicated that the strata underlying the site are classified as a Secondary A. This is described as "Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of based flow to rivers. These are generally aquifers formerly classified as minor aquifers."

The site is not shown as being in a source protection zone.

4.3 SURFACE WATER

The nearest recorded surface water feature is listed as being on site.

There was no monitored surface water source under the Environment Agency's (EA) General Quality Assessment (GQA) scheme within 500 m of the site.

4.4 RADON

Reference to the British Geological Society (BGS) National Geoscience Information Service indicated that between 1 and 3 % of homes within the area, which includes the site, have Radon concentrations above the action level of 200 Bq / m³.

Based upon the advice of the BGS National Geoscience Information Service, no Radon protection measures are required in the construction of new dwellings or extensions.

4.5 OTHER ENVIRONMENTAL INFORMATION

Reference was made to the environmental database Groundsure, extracts from which are provided in Appendix 5. Relevant entries in this database, relating to the sites environmental sensitivity is summarised as follows:

4.5.1 Historical Industrial Land Use

Potentially Contaminative Land Use

There were 3 potentially contaminative land uses shown on site.

- 3 x Nursery

There were 20 potentially contaminative land use within 250m of the site.

- 9 x Nursery
- 6 x Unspecified Heap
- 5 x Cuttings

Historical Tank Database

There were 3 historical tanks identified within 250 m of the site.

- 3 x Unspecified tank

Historical Energy Features

There were no historical energy features identified within 250 m of the site.

Petrol and Fuel

No historical petrol stations or fuel sites were listed within 250 m of the site.

Historical Garage and Motor Vehicle Repair

No historical vehicle or motor repair sites were listed on site.

There were no historical vehicle or motor repair sites within 250 m of the site.

Potentially Infilled Land

There were no potentially infilled features identified on the site

There were 11 potentially infilled features within 250 m of the site.

- 6 x Unspecified Heap
- 5 x Cuttings

4.5.2 Environment

Environmental Permits

There were no known sites holding environmental permits listed within 250 m of the site.

Discharge Consents

There was 2 known discharge consent shown within 250 m of the site.

One of the discharge consents are on domestic property, and one is for commercial use at caravan park.

Dangerous or Hazardous Sites

No recorded COMAH & NIHHS sites were listed within 250 m of the site.

Pollution Incidents

There were 4 known pollution incidents recorded within 250 m of the site.

- 1 x Pollutant 13 m North of the site. Pollutant, Not Identified. Details, Not Identified. Incident, 21/09/2001. Impact, Water Category 3 (Minor), Land Category 4 (No Impact), Air Category 4 (No Impact).
- 1 x Pollutant 76 m East of the site. Pollutant, Specific Waste Materials. Details, Commercial Waste. Incident, 02/09/2003. Impact, Water Category 4 (No Impact), Land Category 3 (Minor), Air Category 4 (No Impact).
- 2 x Pollutant 195 m East of the site. Pollutant, Other Pollutant. Details, Other. Incident, 19/07/2002. Impact, Water Category 4 (No Impact), Land Category 4 (No Impact), Air Category 4 (No Impact).

Contaminated Land

There were no sites listed as contaminated land under part II A of the Environmental Protection Act, 1990.

4.5.3 Waste

Landfill

There were no active landfill sites listed within 250 m of the site.

There were 2 historical landfill sites listed within 250 m of the site.

- 1 x Inert, Industrial, Commercial, Household, Special, Liquid Sludge – Old Mead Road Tip, Littlehampton, Sussex
- 1 x Inert, Industrial – Brook Barn Farm, Littlehampton, Sussex

Waste

There were no licensed waste management facilities listed within 250 m of the site.

There were no waste transfer sites listed within 250 m of the site.

4.5.4 Current Industrial Land Use

Industrial Land Use

There was no potentially contaminative industrial site listed within 250 m of the site:

Petrol and Fuel

No petrol station or fuel site was listed within 250 m of the site.

4.5.5 Water

Abstraction Licenses

There were twelve known water abstraction licenses listed within 1000 m of the site.

- 1 x Well 19 m South of the site. Direct Source, Southern Region Groundwater. Details, Spray Irrigation - Direct. Name, Molica-Franco. Status, 1 x Historical
 - 1 x Well 35 m North-West of the site. Direct Source, Southern Region Groundwater. Details, Horticultural Watering. Name, Perella. Status, 1 x Historical
 - 1 x Well 59 m South of the site. Direct Source, Southern Region Groundwater. Details, Horticultural Watering. Name, Molica Esq. Status, 1 x Active.
 - 1 x Well 99 m South of the site. Direct Source, Southern Region Groundwater. Details, Horticultural Watering. Name, Molica Esq. Status, 1 x Active.
- 1 x Well 153 m North of the site. Direct Source, Southern Region Surface Waters. Details, Spray Irrigation - Direct. Name, Longhurst. Status, 1 x Active.

- 1 x Well 275 m South-East of the site. Direct Source, Southern Region Groundwater. Details, Spray Irrigation - Direct. Name, Farfield Plants Limited. Status, 1 x Historical.

- 1 x Well 281 m South of the site. Direct Source, Southern Region Groundwater. Details, Spray Irrigation - Direct. Name, Sandfield Plant Ltd. Status, 1 x Historical.

1 x Well 317 m North of the site. Direct Source, Southern Region Surface Waters. Details, Spray Irrigation - Direct. Name, Longhurst Esq. Status, 1 x Active.

- 1 x Well 328 m North of the site. Direct Source, Southern Region Groundwater. Details, Spray Irrigation - Direct. Name, Longhurst Esq. Status, 1 x Historical.

- 1 x Well 361 m South-East of the site. Direct Source, Southern Region Groundwater. Details, Spray Irrigation - Direct. Name, Sandfield Plant Ltd. Status, 1 x Historical.

- 1 x Well 450 m South of the site. Direct Source, Southern Region Groundwater. Details, Animal Waterin & General Use in non-Farming situations. Name, Yoder Toddington Ltd. Status, 1 x Historical.

- 1 x Well 601 m South-West of the site. Direct Source, Southern Region Groundwater. Details, Spray Irrigation - Direct. Name, A H Bowerman & Son Ltd. Status, 1 x Historical.

- 1 x Well 753 m East of the site. Direct Source, Southern Region Groundwater. Details, General Farming & Domestic. Name, Kirin Agribo Toddington Ltd. Status, 1 x Historical.

- 1 x Well 849 m South of the site. Direct Source, Southern Region Groundwater. Details, Fish Farm/Cress Pond Throughflow. Name, Biddlecombe. Status, 1 x Historical.

1 x Well 962 m East of the site. Direct Source, Southern Region Surface Waters. Details, Spray Irrigation - Direct. Name, Langmead. Status, 1 x Historical.

4.5.6 Flooding

Flooding from Rivers and the Sea

The risk of flooding from rivers and the sea on the site is considered to be high.

Groundwater Flooding

The site is within 50 m of a British Geological Survey groundwater susceptibility area.

Susceptibility of Clearwater Flooding is potential at surface.

4.5.7 Protected Locations - Environmentally Sensitive Receptors

The site was shown to be situated within a Nitrate Vulnerable Zone (DEFRA).

The site is not situated within 250 m of any other environmentally sensitive receptors, except those referred to in chapters 4.2 and 4.3.

5. CONCEPTUAL SITE MODEL

This conceptual site model has been undertaken with due regard to the advice relating to groundwater as provided in the Environment Agency's "Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources", the advice provided in the Contaminated Land (England) Regulations 2000, and the associated statutory guidance. The guidance defines contaminated land as any land that is in such a condition that by reason of substances in, on or under the land:

- significant harm is being caused or there is a significant possibility of such harm being caused; or
- pollution of controlled water is being, or is likely to be caused.

This definition is based on the principles of risk assessment defined as a combination of the probability (or frequency) of occurrence of a defined hazard and the magnitude (including the seriousness) of the consequences. Central to the risk assessment process is the concept of pollutant linkage that is a linkage between a contaminant and a receptor by means of a pathway.

Statutory definitions relating to pollution linkage.	
Contaminant	"a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of controlled waters."
Receptor	"a living organism, a group of living organisms, and ecological system or a piece of property" which meets given criteria. "controlled waters which are, or could be, polluted by a contaminant".
Pathway	"one or more routes or means by, or through, which a receptor: • is being exposed to, or affected by, a contaminant, or • could be so exposed or affected".

The relationship between these components is discussed below in order to identify the existence of any source-pathway-receptor linkage on the site, and hence the potential risks associated with any contamination.

5.1 CONTAMINANT SOURCES

There were five potential contamination sources identified in chapters 2 – 4.

- Railway to the south of the site

- Electrical substation
- Unspecified historical tank
- Potential contaminated land use
- Potential infilled land
- Landfill sites to the east of the site.

5.2 PATHWAYS

The following potential contaminant pathways may therefore exist on the site:

- Flooding
- Indoor ingestion of soil dust.
- Inhalation of indoor dust and vapour.
- Contact with indoor dust.
- Vapours from the ground.
- Soil tracked indoors by people.
- Dermal contact with contaminated soil.
- Outdoor ingestion of soil.
- Outdoor inhalation of dust and vapour.
- Wind erosion and lifting of soil dust.
- Surface water runoff with suspended soil.
- Wind deposition to surface water.
- Migration through soil.
- Migration into groundwater.
- Migration of surface water.
- Contact of building foundations and buried services with contaminated soil.

5.3 RECEPTORS

Potential receptors/targets at the site and in the area in which the site is located include:

- Future occupants (temporary residents)
- Site workers (servicing staff, gardeners etc)
- Site construction workers
- Groundwater resources
- The River Arun
- Trees / Plants
- Allotment gardens
- Underground services in and around the site
- Buried structures such as building foundations

5.4 DISCUSSION

This discussion is based upon the proposed construction of 28 caravans, with associated soakaways on the site.

Source	Pathway	Receptor	Severity	Likelihood	Risk	Justification
Windblown hydrocarbons from railway	Blown on wind	Plants Groundwater Site Workers Construction Workers	Low	Low	Low	Given the location of the railway 150 m from site, the level of airborne contamination is unlikely to be high. Given also that the railway is currently disused, and it has been more than 50 years since the abolition of external combustion on the railways, the risks are considered to be low.
Electricity Substations / Historical Energy Features - PCBs	Inhalation of vapour, dermal contact, risk of explosion in enclosed space, migration into watercourses	Groundwater Residents Plants Site Workers	Moderate	Low	Low	PCBs were historically used as coolants within electricity substations. Given the size of the stations and distance from site, these are unlikely to have any significant and adverse effect on the proposed development.
Tanks	Leaks / waste water entering the ground	Groundwater	Low	Low	Low	A tank was identified on the northern boundary of the site in 1962 - 1963. It is most likely that the tank contained water for a greenhouse adjacent to the site at the same time. The tank was not shown on subsequent maps, and no evidence for it could be found during the walkover survey. The risk of any residual contamination from the tank is therefore considered to be low
Surface Workings / Potential Contaminated Land Use / Potential Infilled Land (Smithy and Grave Yard)	Inhalation of vapor, dermal contact, migration into water systems, direct ingestion, uptake by plants,	Groundwater Residents Plants Site Workers	Low	Low	Low	Given the size of the stations and distance from site, these are unlikely to have any significant and adverse effect.

	permeation into water pipes, asphyxiation and explosion.					
Landfill Sites	Additional wash out of contaminants due to increased groundwater flow	Groundwater River Arun Abstraction licences.	Moderate	Low	Low	The soakaways planned for the site will intercept rainwater only. The rainwater would have previously run directly into the ground, so the presence of the soakaways will increase overall infiltration into the ground. The concentrating of runoff into a small area (like a soakaway), may lead to increased flow local to the soakaway, however, given that the groundwater table is very shallow on the site, and the underlying geology is granular in nature, it is unlikely that the effect of runoff concentration will extend more than a few metres from the soakaway. With regards to the water abstraction licences, three are owned by the current site owner, and it is likely that they will be surrendered by the change of use. The proposed soakaways will only introduce rainwater runoff into the ground, so the likelihood of ground contamination is low.
	Landfill gases	Residents Site Workers	Moderate	Low	Low	Soil gas is likely to be generated by the adjacent landfill sites, however, the planned development will involve the use of static caravans, with a clear air space between the living area and the ground below. This will effectively break any contaminant

						pathways.
	Leachate	Residents Site Workers Buried Services	Moderate	Low	Low	Groundwater flow beneath the site will be to the west or south west, with groundwater draining into the River Arun or the Sea. This groundwater flow will take the majority of contaminants away from the site, minimising the effects of leachate on the proposed development.

In summary, the proposed development will see a change of use on the site from a nursery (light commercial) to a residential end use.

Whilst there are a number of contaminant pathways present, there are relatively few sources that will affect the site adversely.

The proposed surface water drainage solution involves the construction of soakaways on the site. Whilst this will concentrate the runoff from the caravans into two or three locations on the site, there will be no net increase in groundwater entering the ground, and therefore no net increase in groundwater flow.

There will be some very localised changes to groundwater pathways, however, given the groundwater table and geology of the site, these are unlikely to extend a few tens of metres from each soakaway.

A large landfill (and a smaller landfill) are located to the west of the site. Groundwater flow will be to the west or south west, into the River Arun / the Sea, therefore the effects of the landfills upon the site are likely to be low, with the groundwater slowly taking contaminants away from the site.

Based upon the data made available to us, all contamination risks are low and no further work is recommended with regards to ground contamination, at this stage.

If, during construction, any potentially contaminated ground is encountered, as denoted by discolouration, man-made material, odour, etc, work should stop until the risk posed by the extent of the contamination and the risk posed can be established.

6. CONCLUSIONS AND RECOMMENDATIONS

Based on the data assessment, the following conclusions and recommendations have been drawn up in respect to Old Mead House, Wick.

- Six potential contamination sources were identified on or within 250 m of the site.
- The risks posed by all other ground contamination are considered to be low or low.

6.1 RECOMMENDATIONS

No Radon Protections Measures will be required in the construction of new dwellings / extensions on the site.

If any unexpected ground contamination is encountered (as denoted by colour, odour, texture or any other means), work should stop until the extents and risks posed by the contamination can be identified.

APPENDICES:

1. Site Photographs
2. Historical Maps
3. Environmental Report

Appendix 1

Site Photographs



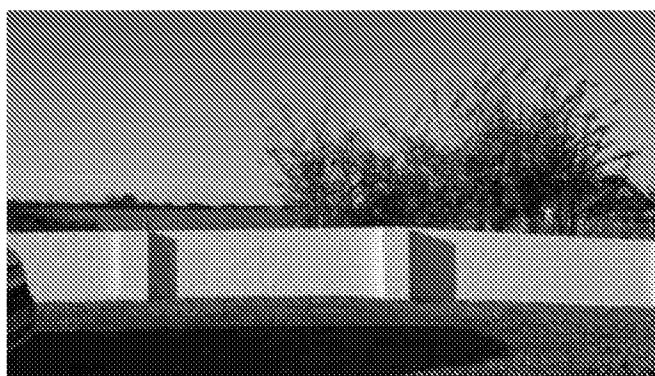
Photograph 1 – Northern boundary of site, showing the gravel driveway.



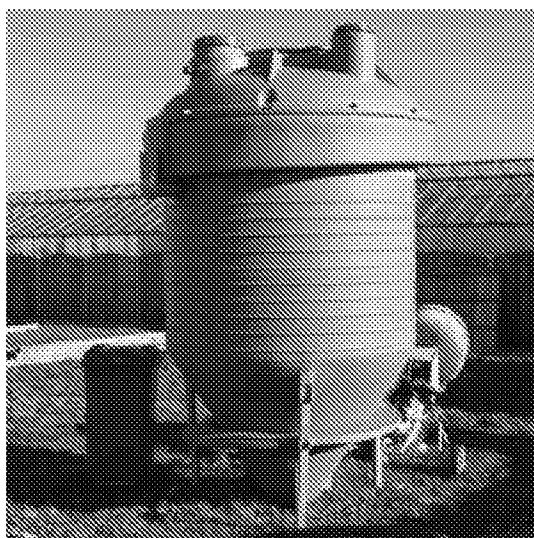
Photograph 2 – Southern boundary of site, showing some of the static caravans.



Photograph 3 – General view of site, facing east.



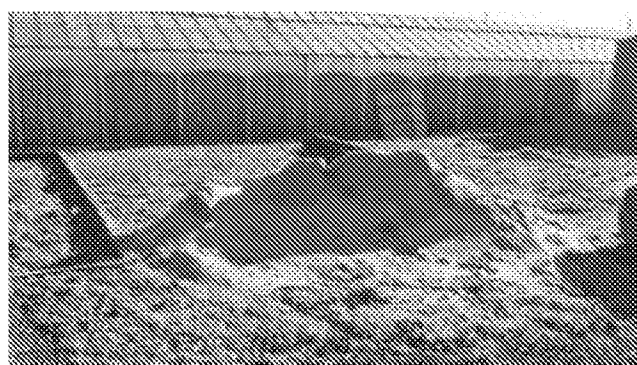
Photograph 4 – General view of the site, facing west.



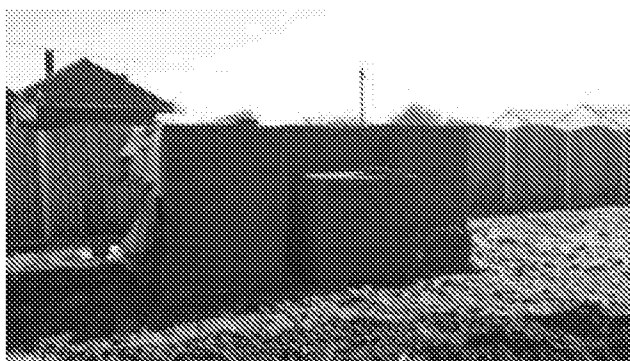
Photograph 5 – Mobile Sewage treatment plant.



Photograph 6 – Building materials found on the south-east corner of the site.



Photograph 7 – Building materials found on the east boundary of the site.



Photograph 8 – Building materials found at the north-east corner of the site.



Photograph 9 – Trial Pit TP1, showing the groundwater level.



Photograph 10 – General view of northern boundary of Site 2.



Photograph 11 – Eastern boundary of site, showing electrical pylon and overgrown vegetation.



Photograph 12 – General view of the western boundary of the site.



Photograph 13 – Western boundary of the site, showing partially filled ditch.



Photograph 14 – Trial Pit TP2, showing the groundwater level.

Appendix 2

Historical Maps

Site Details:

OLD MEAD HOUSE, OLD MEAD ROAD, LITTLEHAMPTON, BN17 7PU

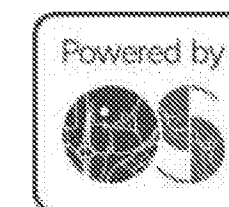
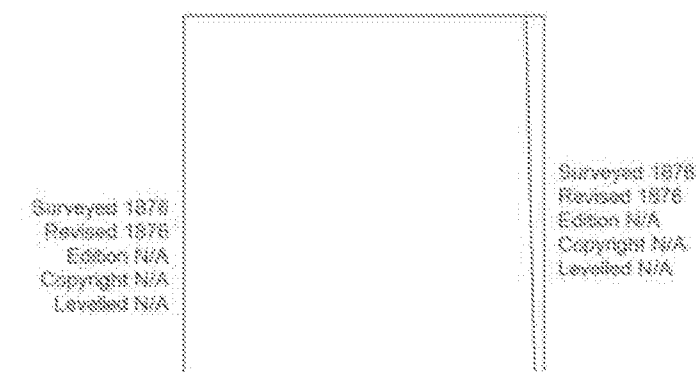
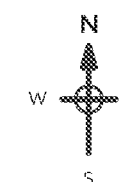
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Grid Ref: 502275, 104145

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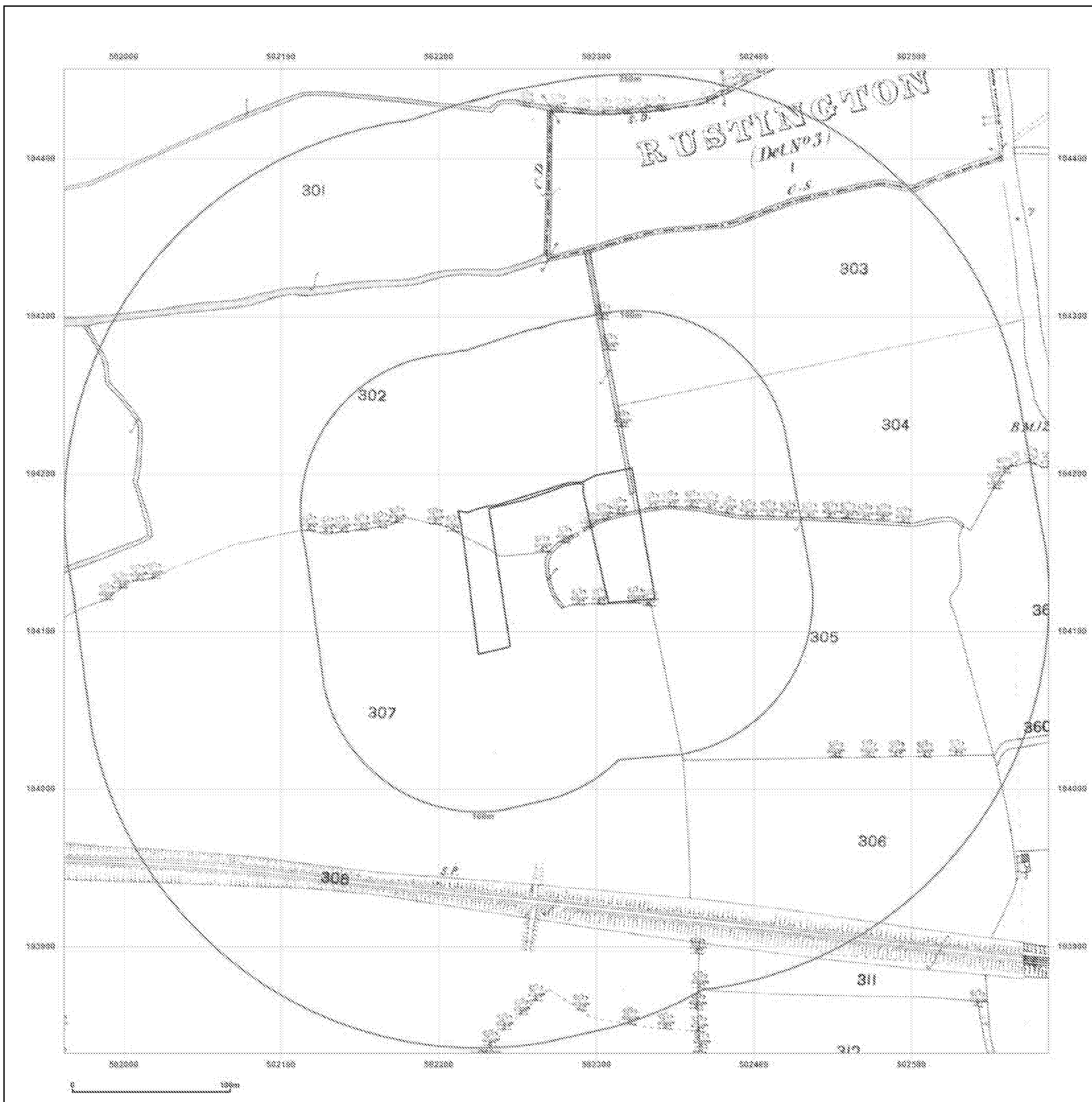


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 Groundsure Insights
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 W: www.groundsure.com

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Production date: 05 December 2018

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



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OLD MEAD HOUSE, OLD MEAD ROAD, LITTLEHAMPTON, BN17 7PU

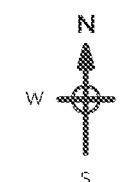
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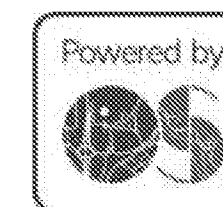
Map date: 1897

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1897
Revised 1897
Edition N/A
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Site Details:

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ROAD, LITTLEHAMPTON,
BN17 7PU

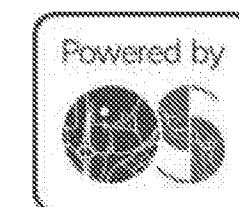
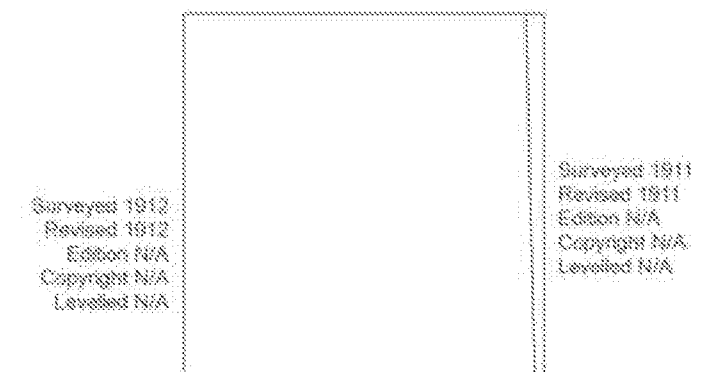
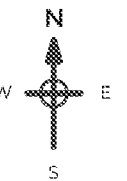
Client Ref: A1839_Old_Mead_House
Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: County Series

Map date: 1911-1912

Scale: 1:2,500

Printed at: 1:2,500



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Site Details:

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BN17 7PU

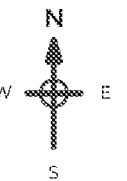
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Map Name: County Series

Map date: 1932

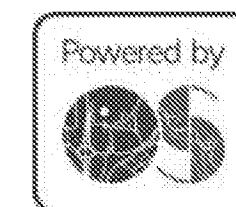
Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

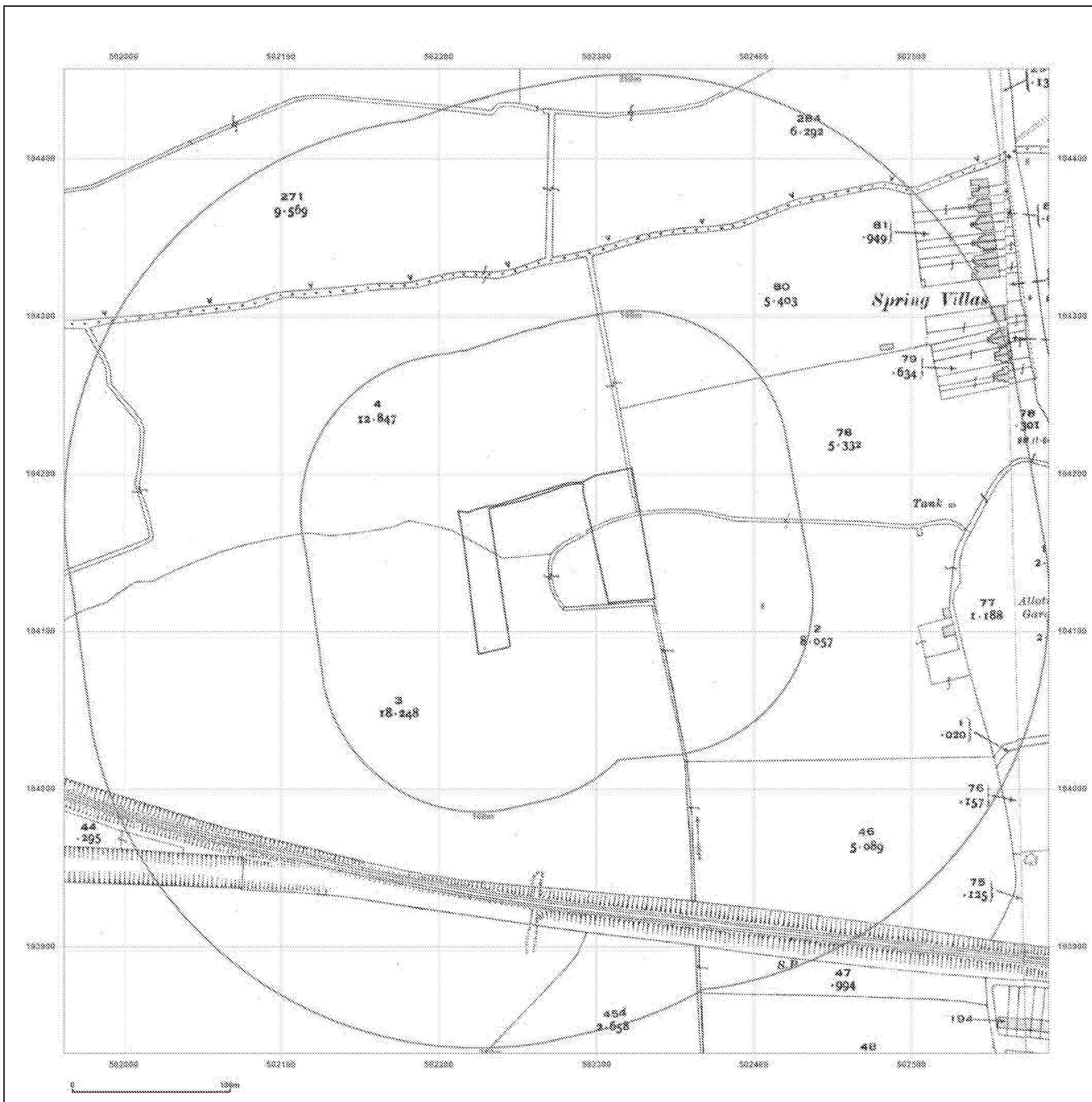


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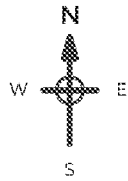
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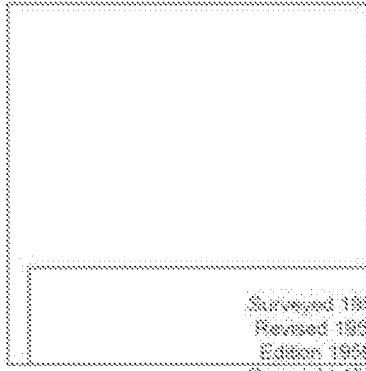
Map Name: National Grid

Map date: 1957

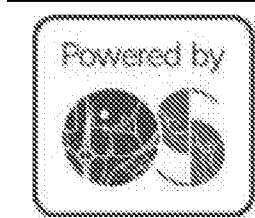
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Printed at: 1:2,500

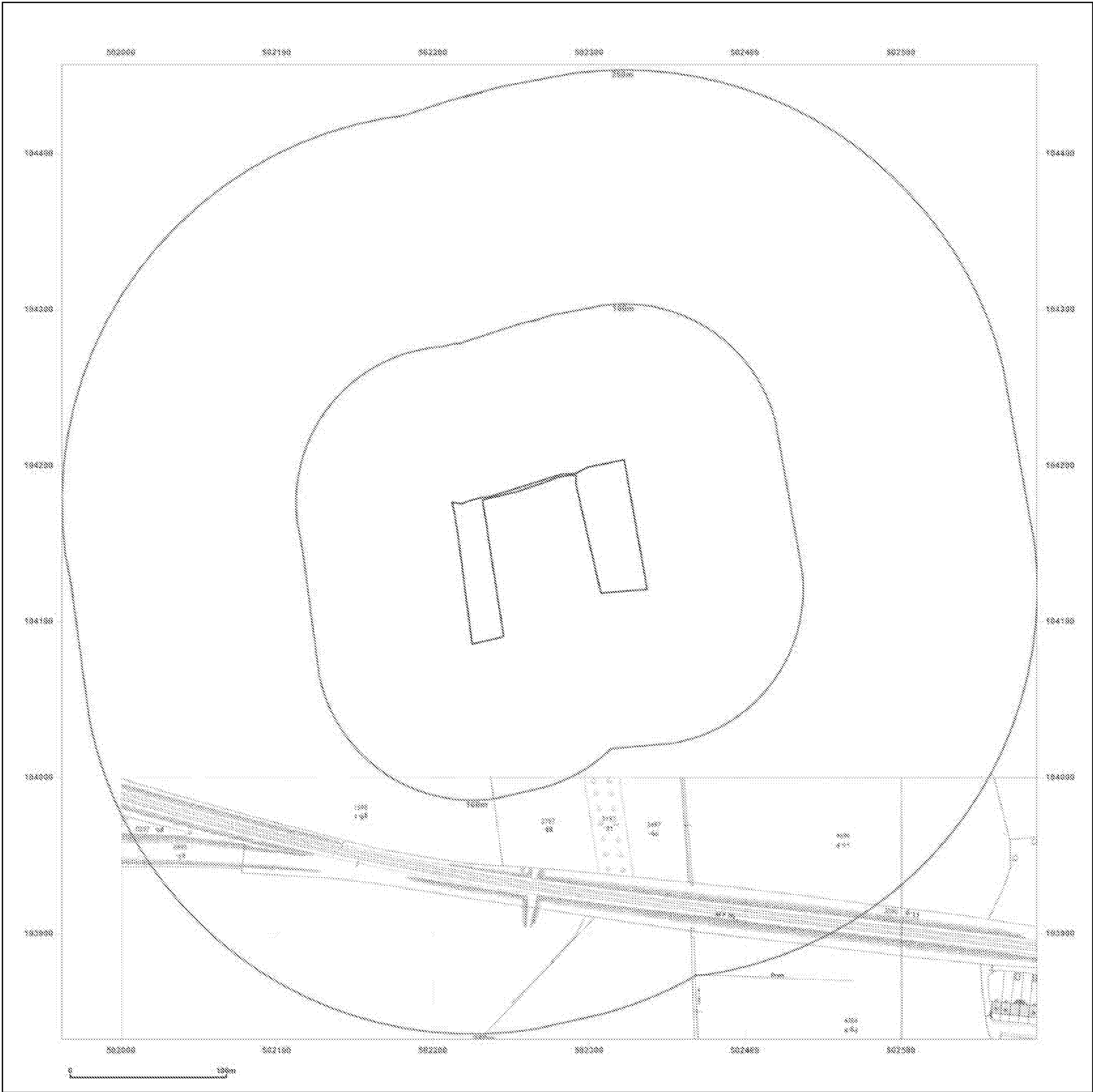




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 Revised 1997
 Edition 1959
 Copyright 1959
 Levelled 1950



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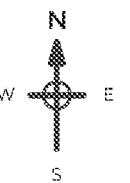
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Grid Ref: 502275, 104145

Map Name: National Grid

Map date: 1970-1974

Scale: 1:2,500

Printed at: 1:2,500

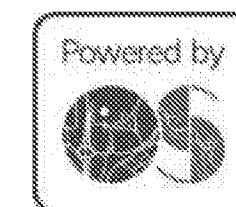


Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1966

Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1966

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Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1966
Revised 1970
Edition N/A
Copyright 1972
Levelled 1966

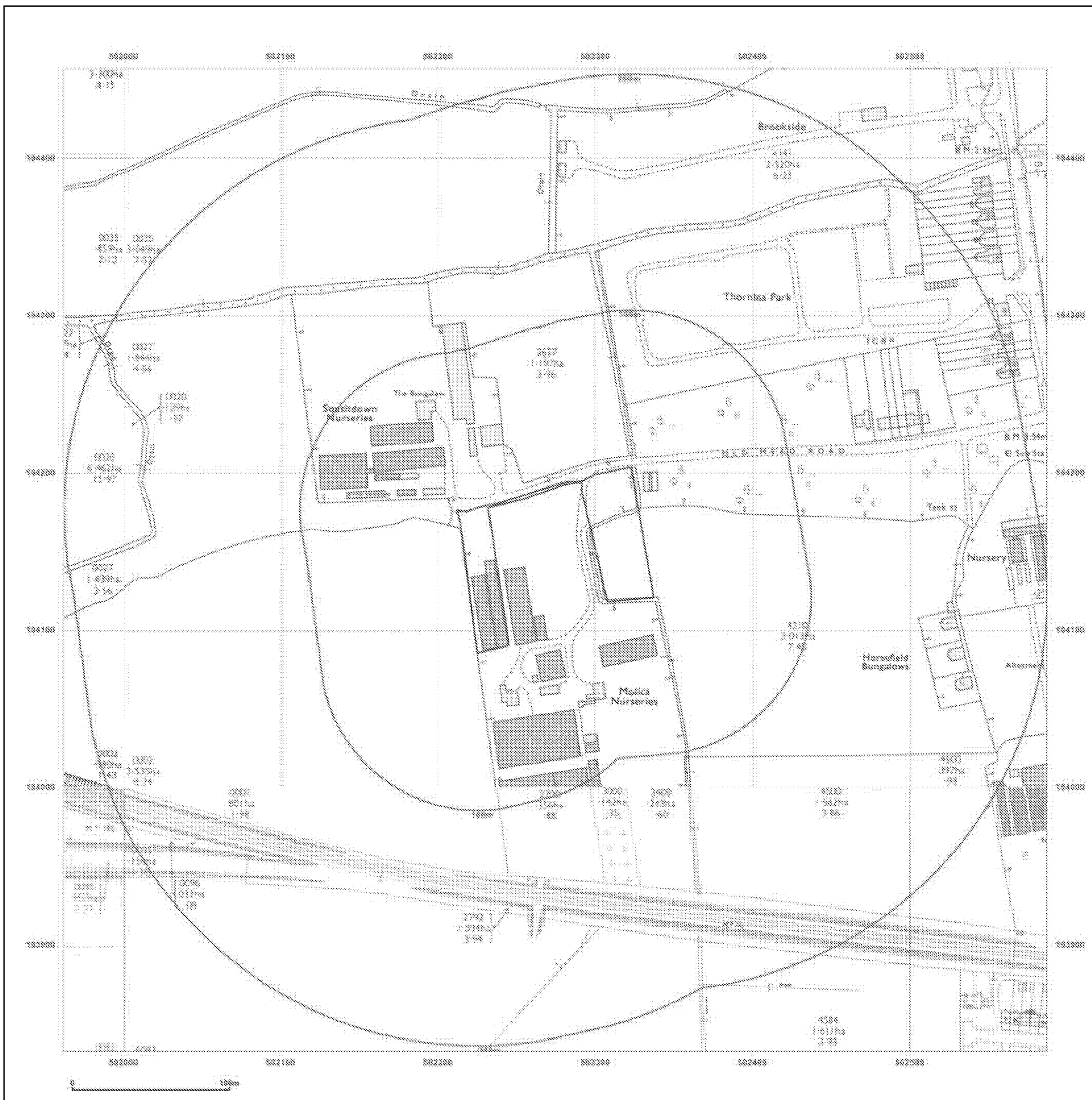


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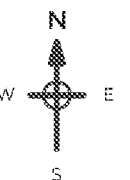
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Grid Ref: 502275, 104145

Map Name: National Grid

Map date: 1972-1974

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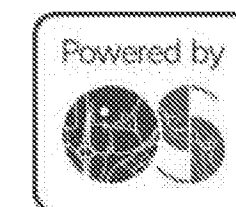
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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Copyright N/A
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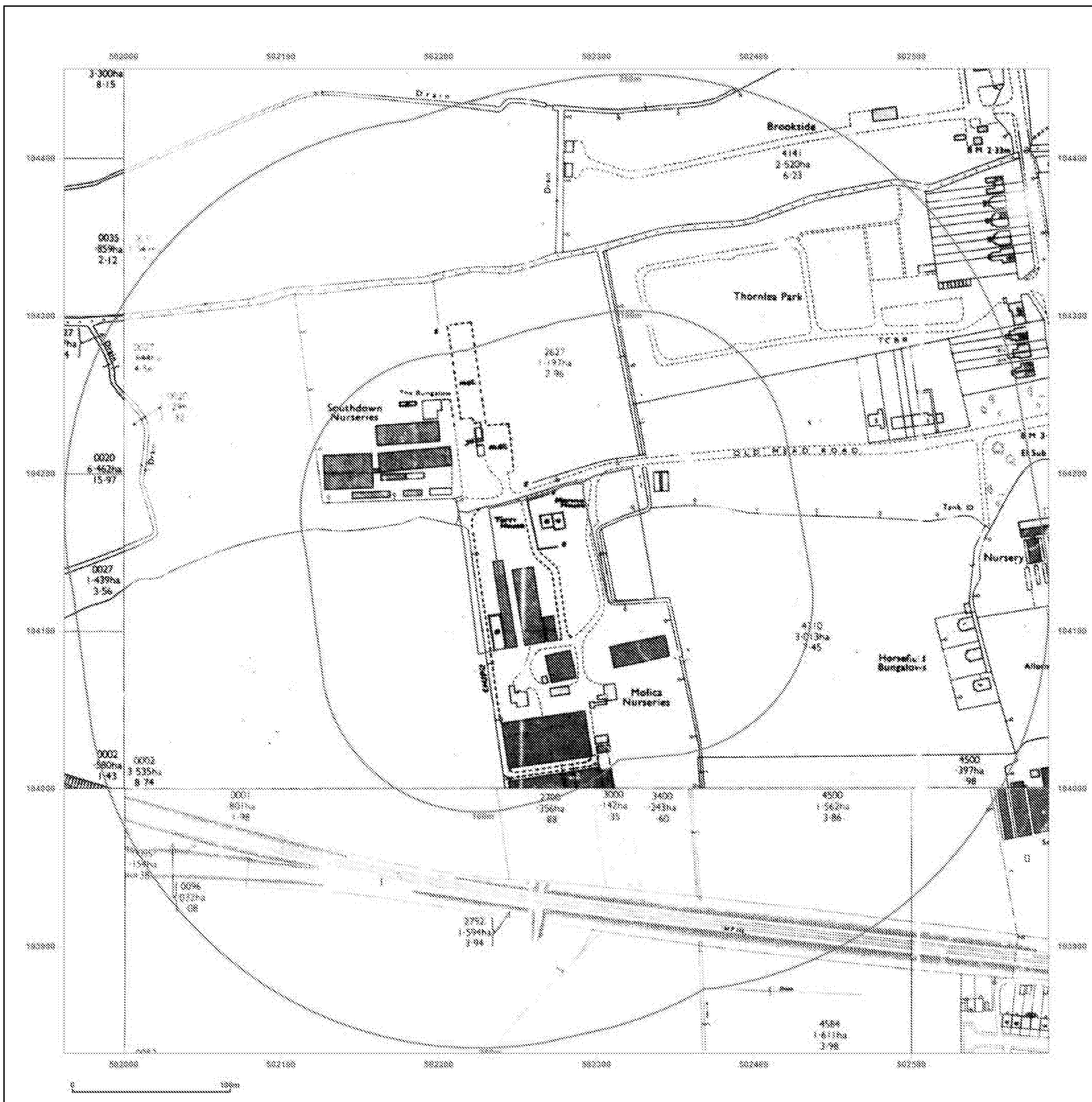


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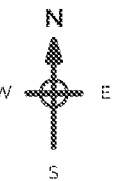
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: National Grid

Map date: 1974-1978

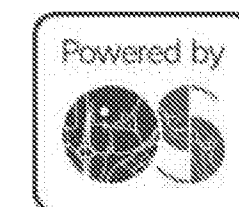
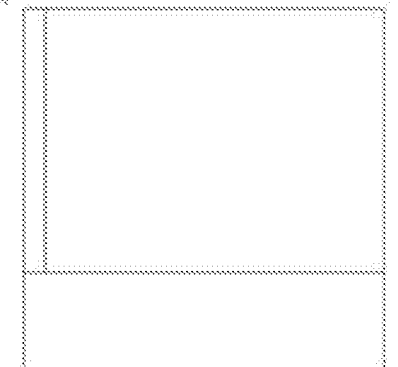
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Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1871
Revised 1978
Edition N/A
Copyright 1980
Levelled 1980



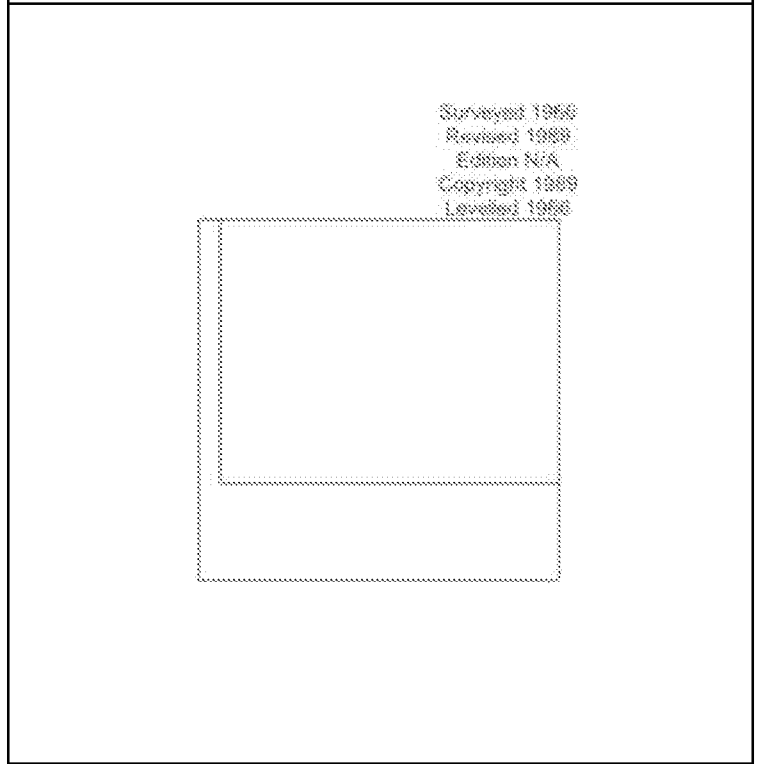
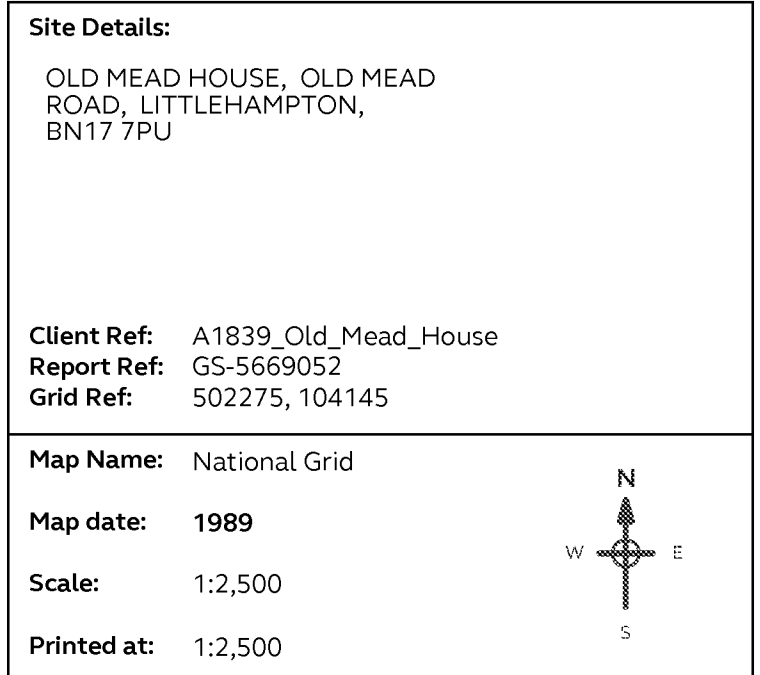
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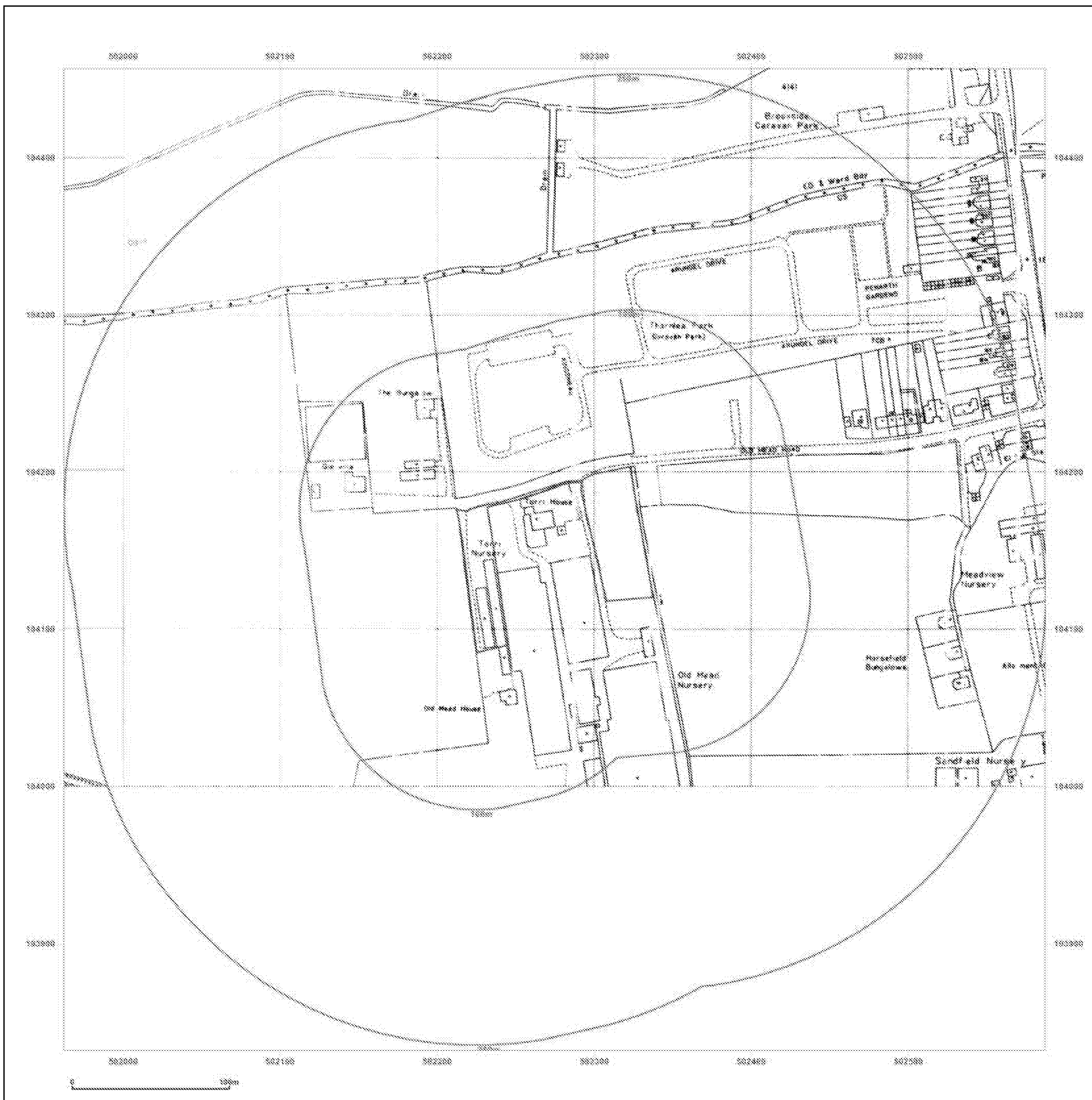
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BN17 7PU

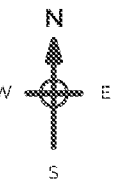
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name:	National Grid
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Map date: 1994

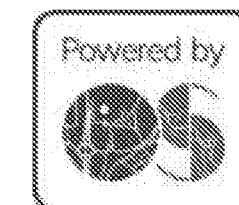
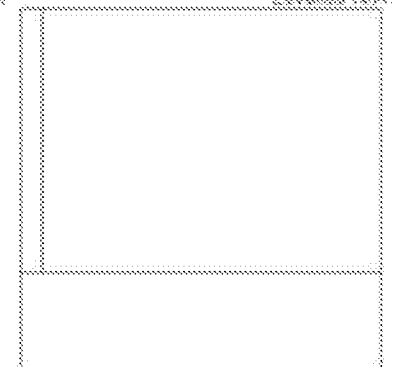
Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Revised N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A



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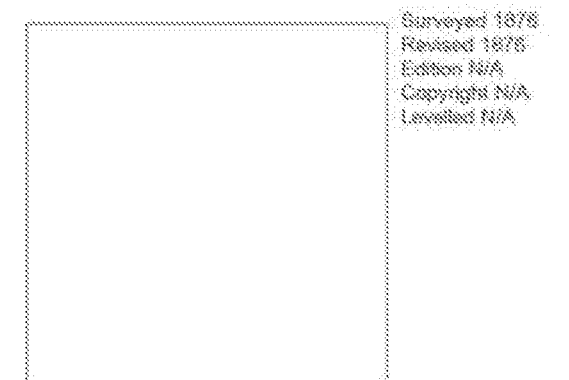
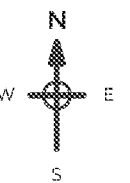
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: County Series

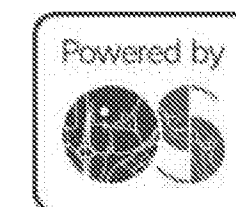
Map date: 1876

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1876
Revised 1876
Edition N/A
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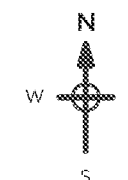
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Grid Ref: 502275, 104145

Map Name: County Series

Map date: 1896

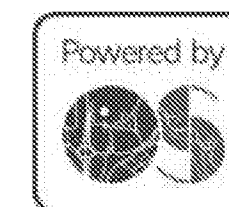
Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1876
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

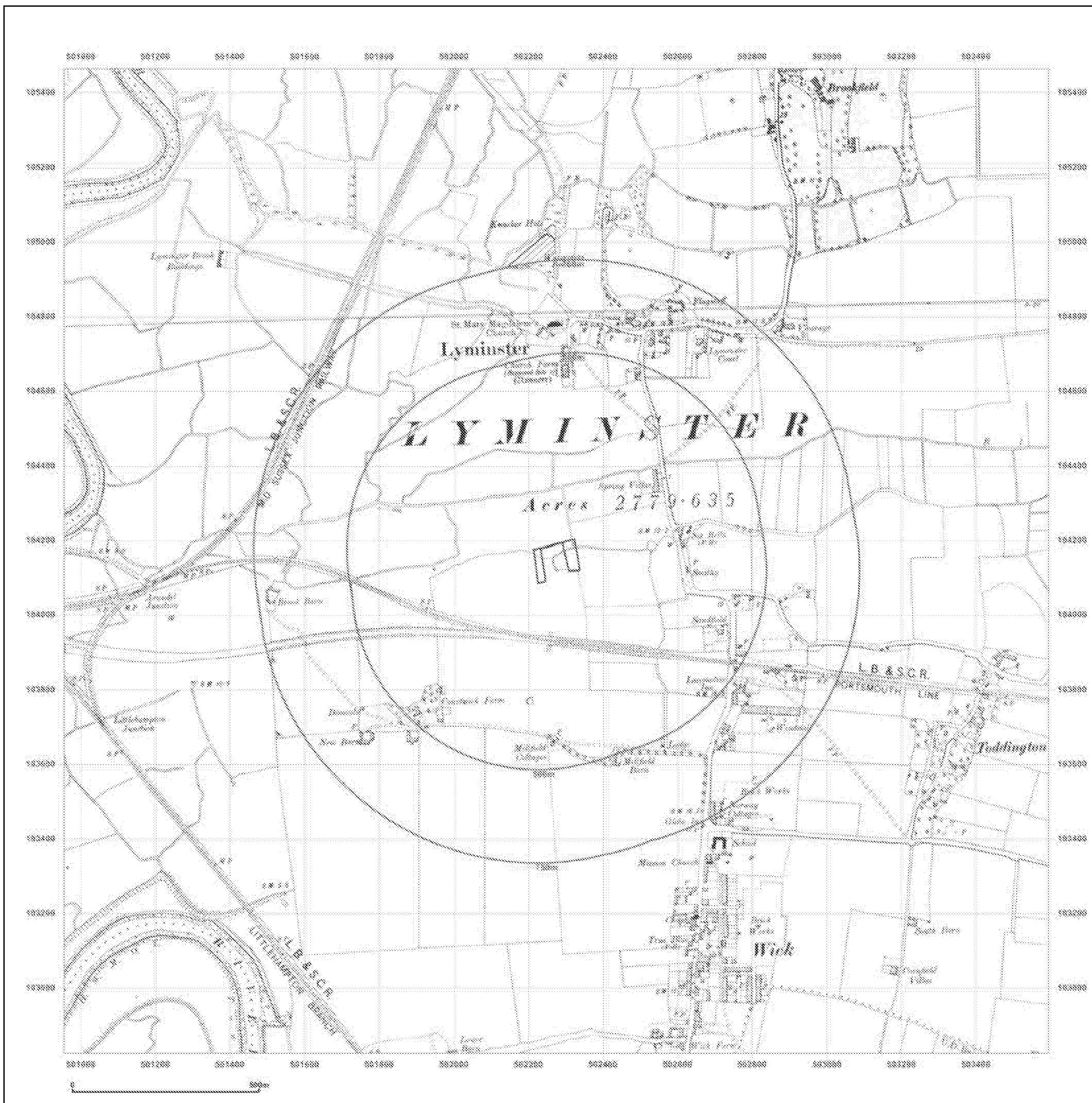


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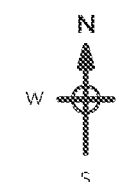
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Map Name: County Series

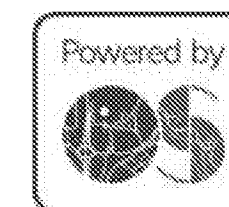
Map date: 1910

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A



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Site Details:

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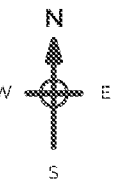
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Map Name: County Series

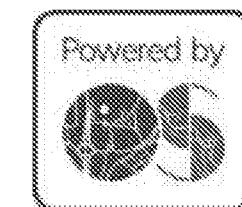
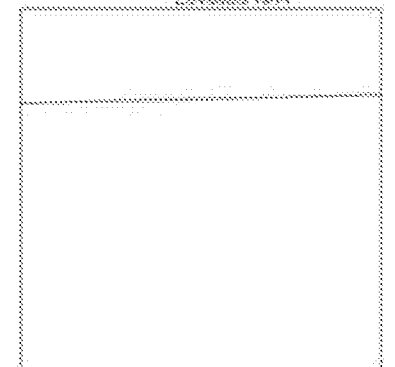
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Printed at: 1:10,560



Surveyed 1875
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

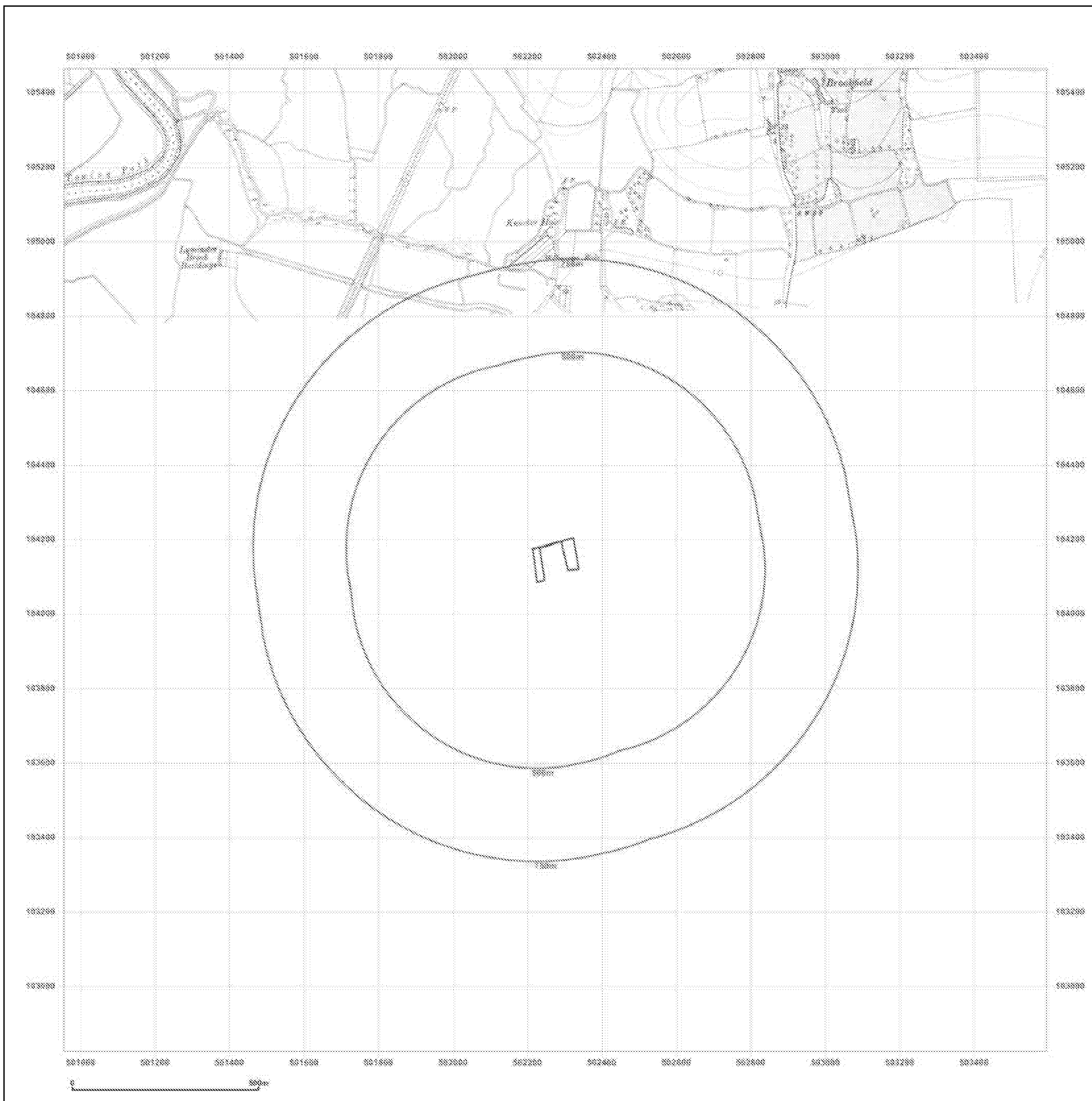


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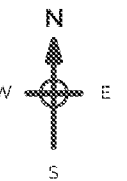
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Map Name: County Series

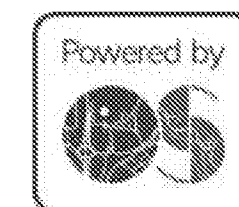
Map date: 1932

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1932
Edition N/A
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Landed N/A



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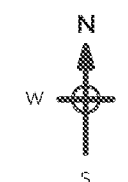
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Grid Ref: 502275, 104145

Map Name: County Series

Map date: 1938

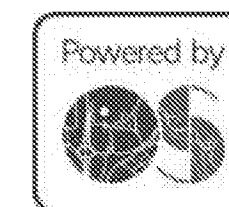
Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

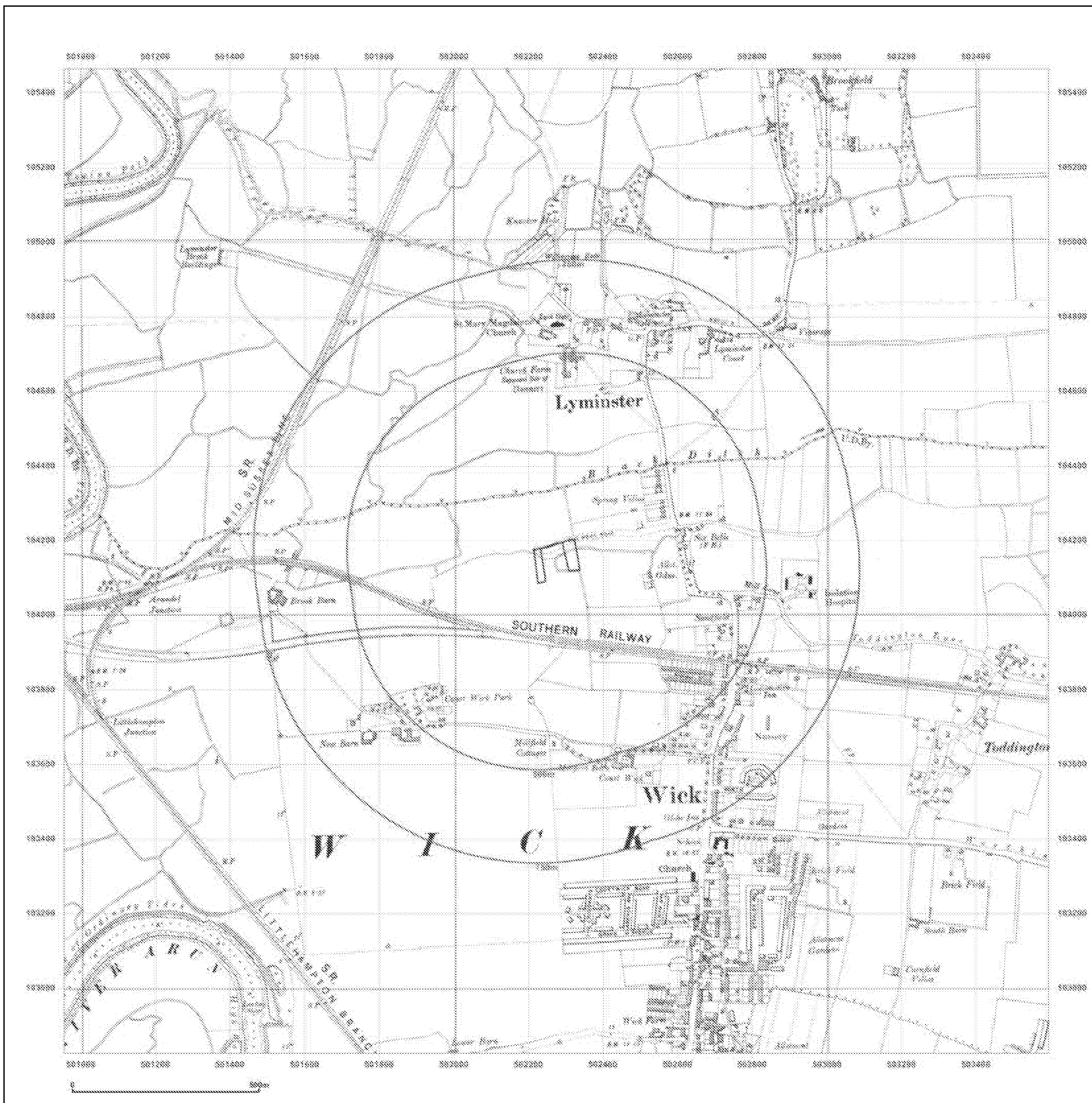


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BN17 7PU

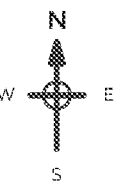
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: County Series

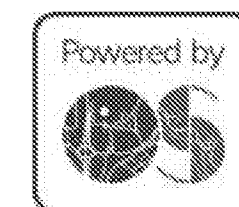
Map date: 1946

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1946
Edition N/A
Copyright N/A
Levelled N/A

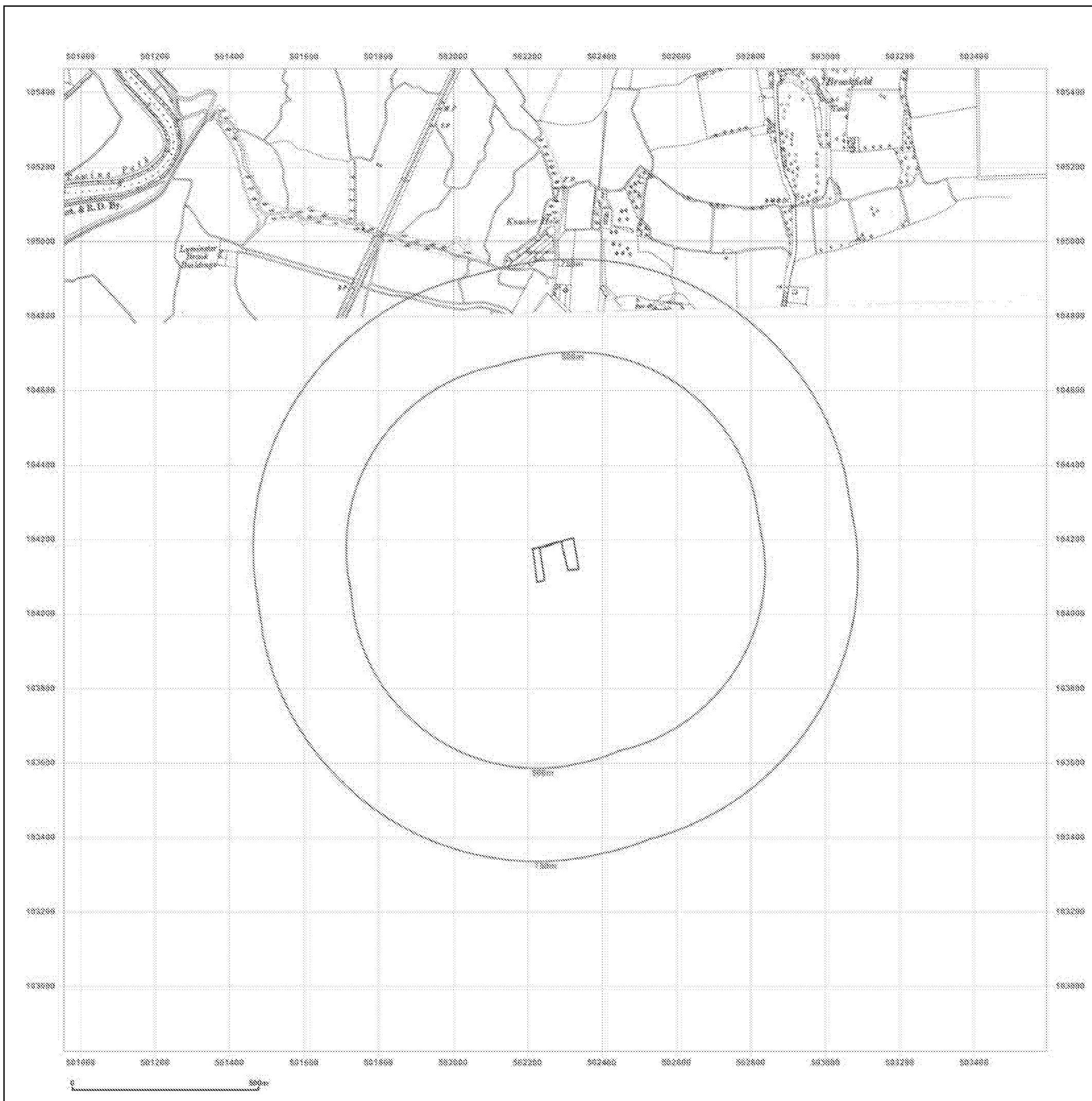


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Site Details:

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ROAD, LITTLEHAMPTON,
BN17 7PU

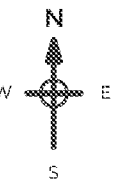
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: Provisional

Map date: 1957

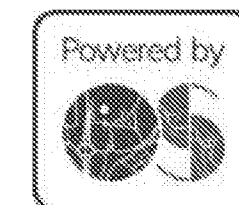
Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1957
Edition N/A
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Site Details:

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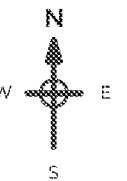
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: Provisional

Map date: 1957

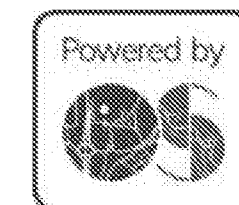
Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1957
 Revised 1957
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1975
 Revised 1957
 Edition N/A
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Site Details:

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ROAD, LITTLEHAMPTON,
BN17 7PU

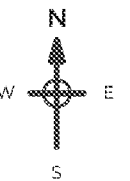
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: National Grid

Map date: 1974

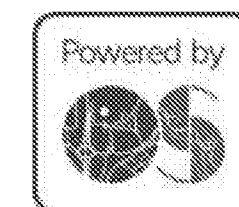
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Edition N/A
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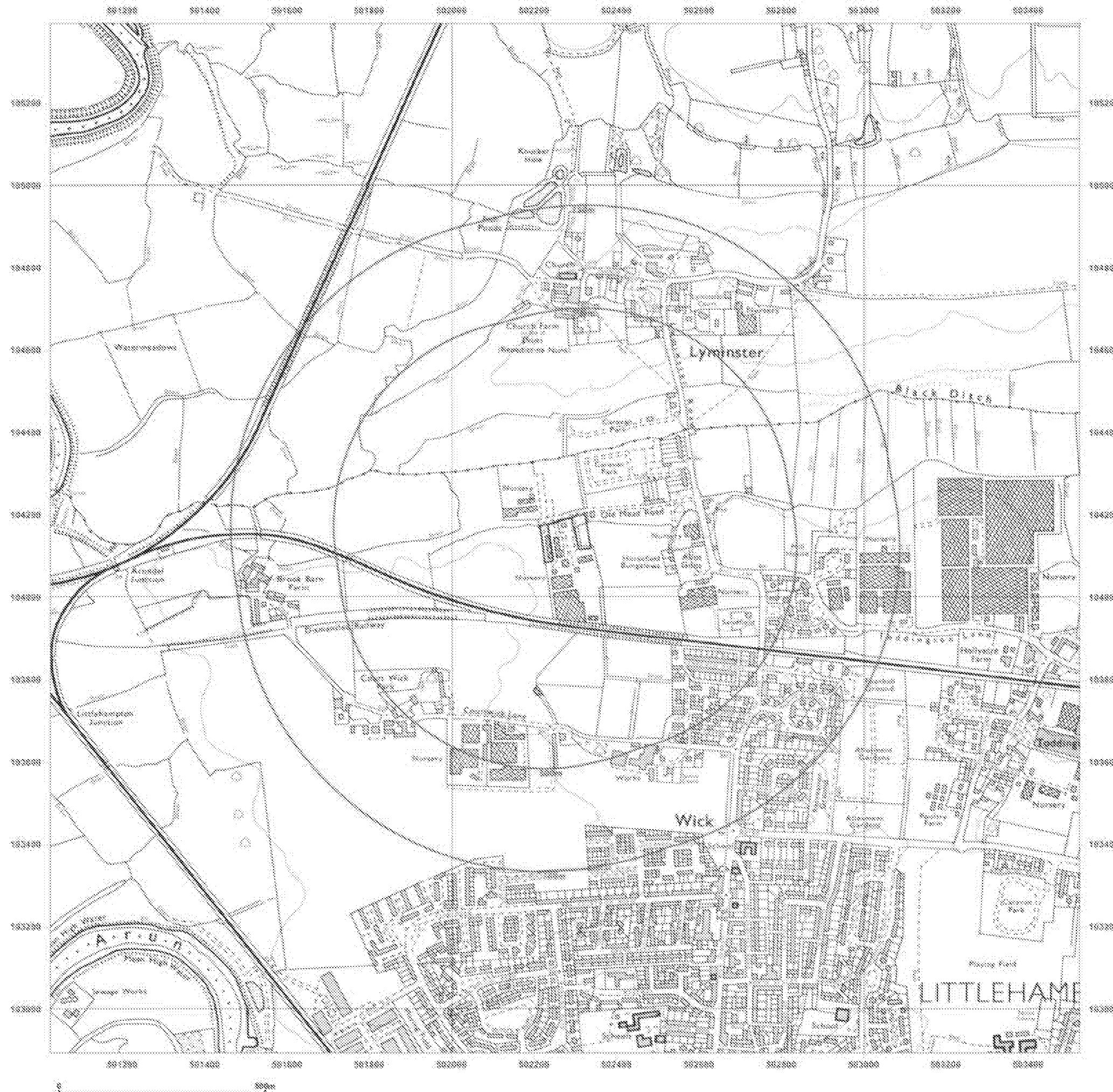


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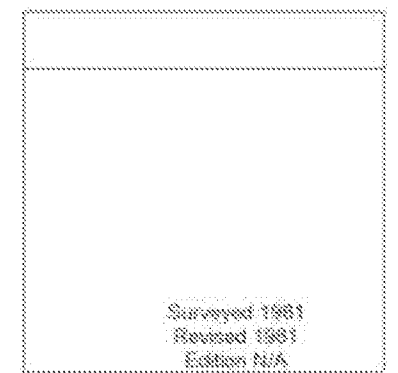
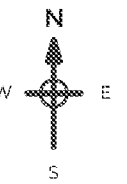
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: National Grid

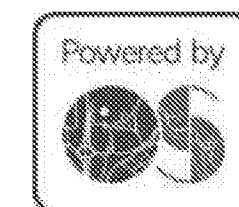
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0 500m

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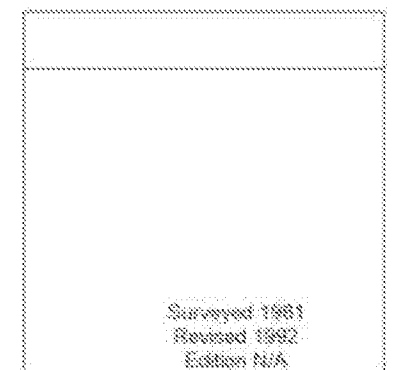
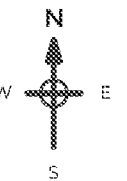
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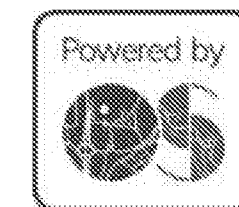
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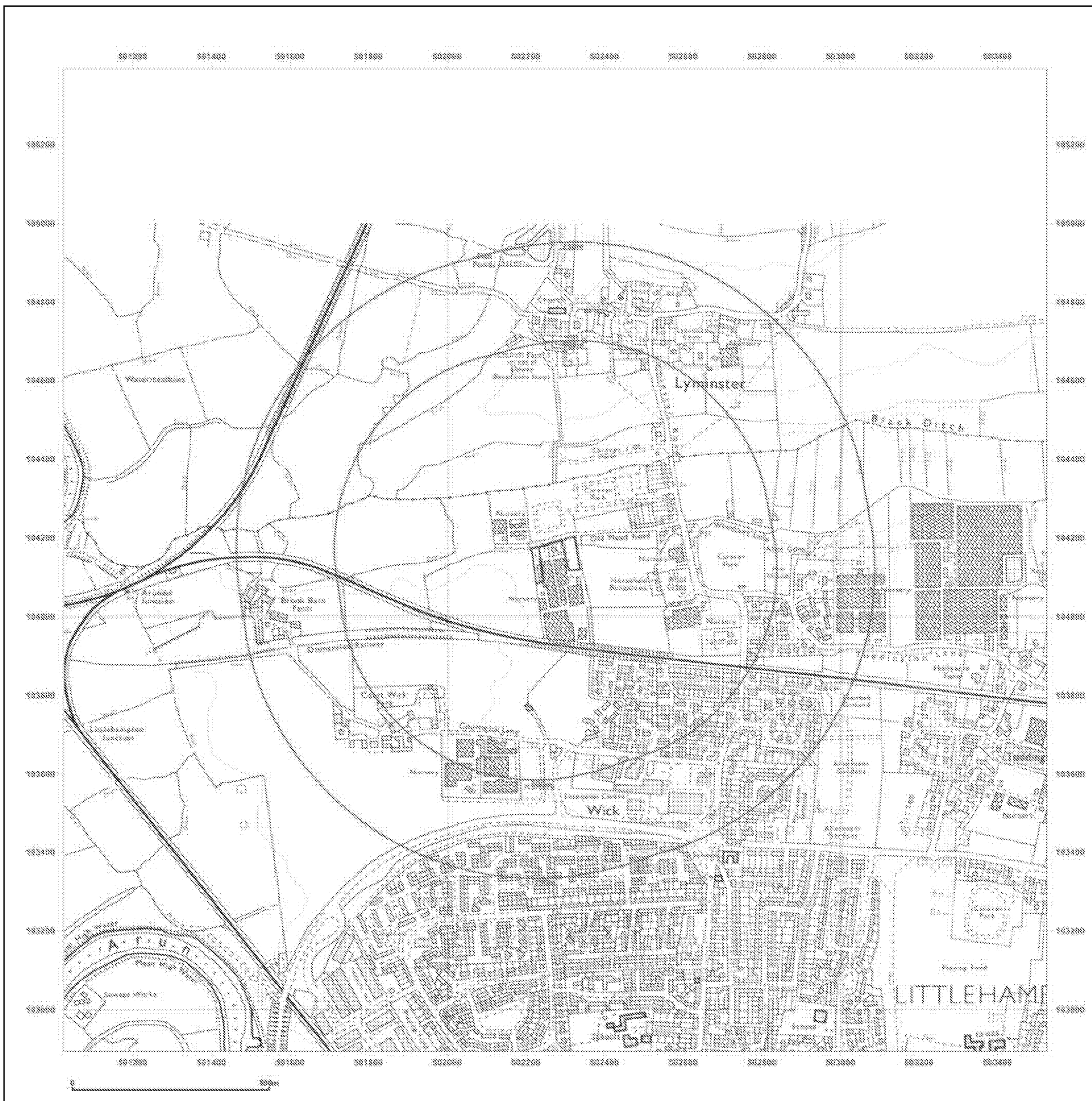


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0 500m

Site Details:

OLD MEAD HOUSE, OLD MEAD
ROAD, LITTLEHAMPTON,
BN17 7PU

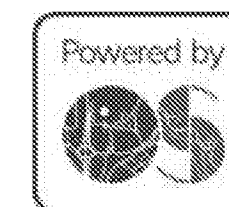
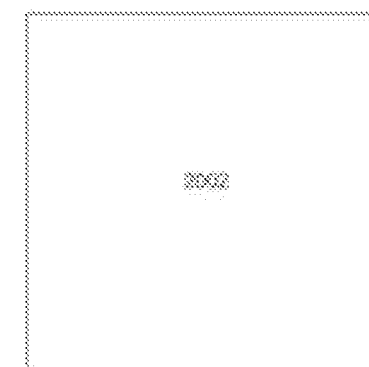
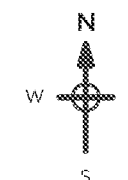
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

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Map date: 2002

Scale: 1:10,000

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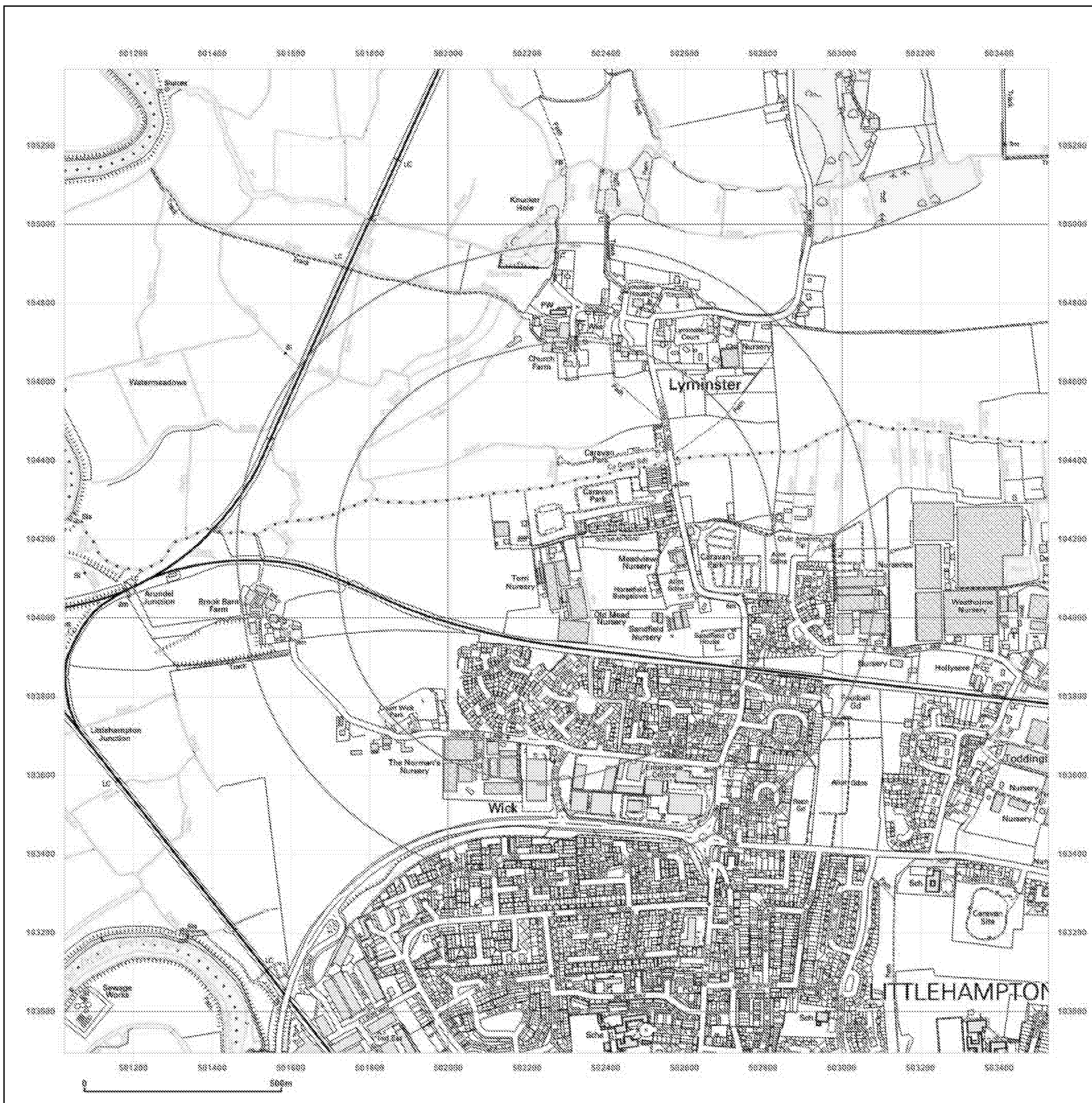


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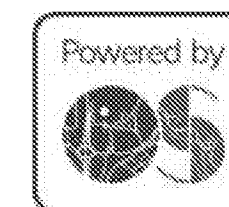
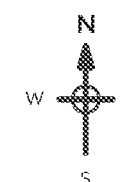
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Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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Site Details:

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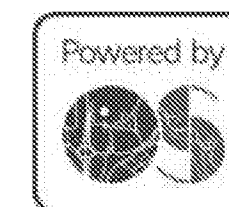
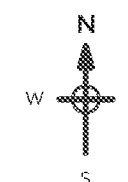
Client Ref: A1839_Old_Mead_House
Report Ref: GS-5669052
Grid Ref: 502275, 104145

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



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Appendix 3

Environmental Report



AGS Ground Solutions Ltd
3, Greenwith Crescent,
Truro, TR3 7LU

Groundsure Reference: GS-5669051
Your Reference: A1839_Old_Mead_House
Report Date: 5 Dec 2018
Report Delivery Method: Email - pdf

Enviro Insight

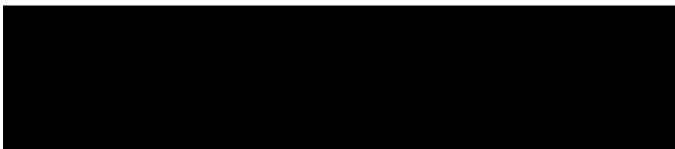
Address: OLD MEAD HOUSE, OLD MEAD ROAD, LITTLEHAMPTON, BN17 7PU

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: OLD MEAD HOUSE, OLD MEAD ROAD, LITTLEHAMPTON, BN17 7PU
Date: 5 Dec 2018
Reference: GS-5669051
Client: AGS Ground Solutions Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 07-Jun-2015
Grid Reference: 502228,104136
Site Size: 0.45ha

Report Reference: GS-5669051
Client Reference: A1839_Old_Mead_House

Contents Page

Contents Page	3
Overview of Findings	6
Using this report	10
1. Historical Land Use	11
1. Historical Industrial Sites	12
1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping	12
1.2 Additional Information – Historical Tank Database	13
1.3 Additional Information – Historical Energy Features Database	13
1.4 Additional Information – Historical Petrol and Fuel Site Database	14
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	14
1.6 Historical military sites	15
1.7 Potentially Infilled Land	15
2. Environmental Permits, Incidents and Registers Map	16
2. Environmental Permits, Incidents and Registers	17
2.1 Industrial Sites Holding Licences and/or Authorisations	17
2.1.1 Records of historic IPC Authorisations within 500m of the study site	17
2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site	17
2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site	17
2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site	17
2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site	17
2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site	18
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	18
2.1.8 Records of Licensed Discharge Consents within 500m of the study site	18
2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site	19
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	19
2.2 Dangerous or Hazardous Sites	19
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents	20
2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site	20
2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site	20
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	20
3. Landfill and Other Waste Sites Map	21
3. Landfill and Other Waste Sites	22
3.1 Landfill Sites	22
3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site	22
3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site	22
3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site	23
3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site	23
3.2 Other Waste Sites	23
3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site	23
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site	24
4. Current Land Use Map	27
4. Current Land Uses	28
4.1 Current Industrial Data	28
4.2 Petrol and Fuel Sites	28
4.3 National Grid High Voltage Underground Electricity Transmission Cables	28
4.4 National Grid High Pressure Gas Transmission Pipelines	29

Report Reference: GS-5669051

Client Reference: A1839_Old_Mead_House

5. Geology	30
5.1 Artificial Ground and Made Ground.....	30
5.2 Superficial Ground and Drift Geology	30
5.3 Bedrock and Solid Geology	30
6 Hydrogeology and Hydrology	31
6a. Aquifer Within Superficial Geology	31
6b. Aquifer Within Bedrock Geology and Abstraction Licences	32
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences	33
6d. Hydrogeology – Source Protection Zones within confined aquifer	34
6e. Hydrology – Watercourse Network and River Quality	35
6.Hydrogeology and Hydrology	36
6.1 Aquifer within Superficial Deposits.....	36
6.2 Aquifer within Bedrock Deposits.....	36
6.3 Groundwater Abstraction Licences.....	37
6.4 Surface Water Abstraction Licences.....	39
6.5 Potable Water Abstraction Licences.....	40
6.6 Source Protection Zones.....	40
6.7 Source Protection Zones within Confined Aquifer.....	41
6.8 Groundwater Vulnerability and Soil Leaching Potential.....	41
6.9 River Quality.....	41
6.9.1 Biological Quality:.....	41
6.9.2 Chemical Quality:.....	42
6.10 Ordnance Survey MasterMap Water Network.....	42
6.11 Surface Water Features.....	47
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)	48
7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS)	49
Map	49
7 Flooding	50
7.1 River and Coastal Zone 2 Flooding.....	50
7.2 River and Coastal Zone 3 Flooding.....	51
7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating.....	52
7.4 Flood Defences.....	52
7.5 Areas benefiting from Flood Defences.....	53
7.6 Areas benefiting from Flood Storage.....	53
7.7 Groundwater Flooding Susceptibility Areas.....	53
7.8 Groundwater Flooding Confidence Areas.....	53
8. Designated Environmentally Sensitive Sites Map	54
8. Designated Environmentally Sensitive Sites	55
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:.....	55
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:.....	55
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:.....	55
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:.....	55
8.5 Records of Ramsar sites within 2000m of the study site:.....	55
8.6 Records of Ancient Woodland within 2000m of the study site:	56
8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:.....	56
8.8 Records of World Heritage Sites within 2000m of the study site:.....	56
8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:	56
8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:	56
8.11 Records of National Parks (NP) within 2000m of the study site:	57
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	57
8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:.....	57

8.14 Records of Green Belt land within 2000m of the study site:.....	57
9. Natural Hazards Findings.....	58
9.1 Detailed BGS GeoSure Data.....	58
9.1.1 Shrink Swell.....	58
9.1.2 Landslides.....	58
9.1.3 Soluble Rocks.....	58
9.1.4 Compressible Ground.....	59
9.1.5 Collapsible Rocks.....	59
9.1.6 Running Sand.....	59
9.2 Radon.....	60
9.2.1 Radon Affected Areas.....	60
9.2.2 Radon Protection.....	60
10. Mining.....	61
10.1 Coal Mining.....	61
10.2 Non-Coal Mining.....	61
10.3 Brine Affected Areas	61
Contact Details.....	62
Standard Terms and Conditions.....	64

Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	3	3	17	19
1.2 Additional Information – Historical Tank Database	0	0	3	18
1.3 Additional Information – Historical Energy Features Database	0	0	0	18
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	0	0	11	6

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	2	5
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	1	3	1
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	2	0	1	4
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	4	9

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	0	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	1
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	None identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology		0-500m				
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site		Identified				
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site		Identified				
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	2	2	5	3	5
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	1	1	1	4
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	1	#250GWV #	#500GWV #	Not searched	Not searched

Report Reference: GS-5669051
Client Reference: A1839_Old_Mead_House

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	No	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	2	20	26	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	High					
7.4 Flood Defences within 250m of the study site	Identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	High					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	3
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	1

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	1
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	Very Low
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Negligible
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Very Low
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Negligible
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Coal mining areas within 75m of the study site	None identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	None identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licences, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon.

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

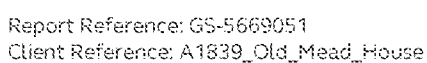
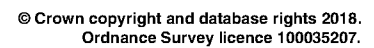
This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.



1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 42

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Nursery	1981
2A	0	On Site	Nursery	1974
3A	0	On Site	Nursery	1992
4B	12	NW	Nursery	1974
5B	12	NW	Nursery	1992
6B	12	NW	Nursery	1981
7C	135	S	Unspecified Heap	1910
8C	135	S	Unspecified Heap	1896
9C	135	S	Unspecified Heap	1938
10E	151	SW	Cuttings	1876
11D	166	S	Unspecified Heap	1910
12D	166	S	Unspecified Heap	1896
13D	166	S	Unspecified Heap	1938
14E	174	SW	Cuttings	1910
15F	174	SW	Cuttings	1938
16E	178	SW	Cuttings	1896
17F	178	SW	Cuttings	1932
18G	194	E	Nursery	1992
19G	194	E	Nursery	1974
20G	194	E	Nursery	1981
21	235	SE	Nursery	1974
22H	236	SE	Nursery	1992
23H	236	SE	Nursery	1981
24I	257	SW	Cuttings	1957
25J	259	SW	Cuttings	1974
26I	259	SW	Cuttings	1957
27J	259	SW	Cuttings	1992
28J	259	SW	Cuttings	1981
29	277	E	Smithy	1896
30K	288	E	Smithy	1876
31K	295	E	Smithy	1910
32T	402	S	Nursery	1974
33L	403	S	Nursery	1992
34L	403	S	Nursery	1981

35L	404	S	Nursery	1957
36L	404	S	Nursery	1957
37M	412	S	Nursery	1957
38M	414	S	Nursery	1992
39M	414	S	Nursery	1981
40M	414	S	Nursery	1957
41N	421	S	Unspecified Works	1981
42N	421	S	Unspecified Works	1974

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

21

ID	Distance (m)	Direction	Use	Date
43	76	SE	Unspecified Tank	1996
44O	194	E	Unspecified Tank	1932
45O	196	E	Unspecified Tank	1971
46P	263	E	Unspecified Tank	1989
47P	265	E	Unspecified Tank	1996
48P	265	E	Unspecified Tank	1978
49	282	SE	Unspecified Tank	1994
50Q	406	S	Tanks	1994
51Q	406	S	Tanks	1994
52Q	407	S	Tanks	1973
53Q	407	S	Tanks	1987
54Q	407	S	Tanks	1991
55Q	407	S	Tanks	1991
56R	421	SW	Unspecified Tank	1973
57R	422	SW	Unspecified Tank	1987
58R	422	SW	Unspecified Tank	1991
59R	422	SW	Unspecified Tank	1991
60S	449	S	Unspecified Tank	1994
61S	449	S	Unspecified Tank	1994
62T	474	S	Unspecified Tank	1994
63T	474	S	Unspecified Tank	1994

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

18

ID	Distance (m)	Direction	Use	Date
64U	261	E	Electricity Substation	1989
65U	262	E	Electricity Substation	1978
66U	262	E	Electricity Substation	1971
67U	264	E	Electricity Substation	1996
68V	305	S	Electricity Substation	1994
69V	305	S	Electricity Substation	1994
70W	445	E	Electricity Substation	1978
71W	445	E	Electricity Substation	1971
72W	445	E	Electricity Substation	1996
73W	447	E	Electricity Substation	1989
74X	452	S	Electricity Substation	1994
75X	452	S	Electricity Substation	1994
76Y	491	S	Electricity Substation	1991
77Y	491	S	Electricity Substation	1991
78Y	491	S	Electricity Substation	1987
79Y	491	S	Electricity Substation	1973
80Y	492	S	Electricity Substation	1994
81Y	492	S	Electricity Substation	1994

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary:

0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary:

0

Database searched and no data found.

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

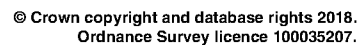
1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 17

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
82C	135	S	Unspecified Heap	1938
83C	135	S	Unspecified Heap	1896
84C	135	S	Unspecified Heap	1910
85E	151	SW	Cuttings	1876
86D	166	S	Unspecified Heap	1896
87D	166	S	Unspecified Heap	1938
88D	166	S	Unspecified Heap	1910
89F	174	SW	Cuttings	1910
90F	174	SW	Cuttings	1938
91E	178	SW	Cuttings	1896
92F	178	SW	Cuttings	1932
93I	257	SW	Cuttings	1957
94I	259	SW	Cuttings	1957
95J	259	SW	Cuttings	1974
96J	259	SW	Cuttings	1981
97J	259	SW	Cuttings	1992
98	442	SW	Pond	1876

2. Environmental Permits, Incidents and Registers Map



- | | | | |
|---|-------------------------------|---|--|
|  | Recorded Pollution Incident |  | RAS 3 & 4 Authorisations |
|  | Dangerous Substances (List 1) |  | Part A(1) Authorised Processes and Historic IPC Authorisations |
|  | Dangerous Substances (List 2) |  | Part A(2) and Part B Authorised Processes |
|  | Site Outline |  | Water Industry Referrals |
|  | Search Buffer (50m) |  | Licensed Discharge Consents |
|  | Search Buffer (200m) |  | Red List Discharge Consents |
| | |  | COMAH / NIHS Sites |
| | |  | Sites Determined as Contaminated Land |
| | |  | Hazardous Substance Consents and Enforcements |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

7

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
6	130	N	502290 104330	Address: EXTENSION TO CARAVAN PARK, EXTENSION TO CARAVAN PARK, THORNLEA PARK, LYMINSTER ROAD, LITTLEHAMPTON WEST SUSSEX Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: N02119 Permit Version: 1 Receiving Water: SALINE ESTUARY Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 21/08/1974 Effective Date: 21-Aug-1974 Revocation Date: 31/03/1997
7	157	NE	502460 104280	Address: BUNGALOW IN OLD MEAD LANE, BUNGALOW IN OLD MEAD LANE, LYMINSTER, LITTLEHAMPTON Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S02833 Permit Version: 1 Receiving Water: FRESHWATER RIVER Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 22/07/1960 Effective Date: 22-Jul-1960 Revocation Date: 01/07/1991
8	387	NW	502000 104500	Address: CHURCH FARM, CHURCH FARM, LYMINSTER, NR LITTLEHAMPTON, WEST SUSSEX Effluent Type: UNSPECIFIED Permit Number: S02103 Permit Version: 1 Receiving Water: SALINE ESTUARY Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 31/07/1972 Effective Date: 31-Jul-1972 Revocation Date: 19/06/1995
9	399	SE	502560 103790	Address: LAND NORTH OF COURT WICK LANE, LAND NORTH OF COURT WICK LANE, LITTLEHAMPTON WEST SUSSEX Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S01569 Permit Version: 1 Receiving Water: CONTROLLED SEA Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 30/03/1967 Effective Date: 30-Mar-1967 Revocation Date: 31/03/1997
10	438	SE	502570 103750	Address: LAND NORTH OF COURT WICK LANE, LAND NORTH OF COURT WICK LANE, LITTLEHAMPTON WEST SUSSEX Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S01569 Permit Version: 1 Receiving Water: CONTROLLED SEA Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 30/03/1967 Effective Date: 30-Mar-1967 Revocation Date: 31/03/1997
11B	471	SW	501850 103800	Address: COURTWICK PARK, LITTLEHAMPTON, COURTWICK PARK, Receiving Water: SOAKAWAY Status: VARIED UNDER EPR 2010

ID	Distance (m)	Direction	NGR	Details
				COURTWICK LANE, LITTLEHAMPTON, WEST SUSSEX, BN17 7PD Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P11165 Permit Version: 2 Issue date: 21/12/2012 Effective Date: 21-Dec-2012 Revocation Date:
12B	471	SW	501850 103800	Address: COURTWICK PARK, LITTLEHAMPTON, COURTWICK PARK, COURTWICK LANE, LITTLEHAMPTON, WEST SUSSEX, BN17 7PD Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P11165 Permit Version: 1 Receiving Water: SOAKAWAY Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 13/06/2003 Effective Date: 13-Jun-2003 Revocation Date: 20/12/2012

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

5

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	13	N	502315 104216	Incident Date: 21-Sep-2001 Incident Identification: 32137 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	76	E	502400 104200	Incident Date: 02-Sep-2003 Incident Identification: 186878 Pollutant: Specific Waste Materials Pollutant Description: Commercial Waste Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3A	195	E	502514 104240	Incident Date: 19-Jul-2002 Incident Identification: 93010 Pollutant: Other Pollutant Pollutant Description: Other Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4A	195	E	502514 104240	Incident Date: 19-Jul-2002 Incident Identification: 93010 Pollutant: Other Pollutant Pollutant Description: Other Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
5	273	NE	502521 104391	Incident Date: 14-Nov-2001 Incident Identification: 42781 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

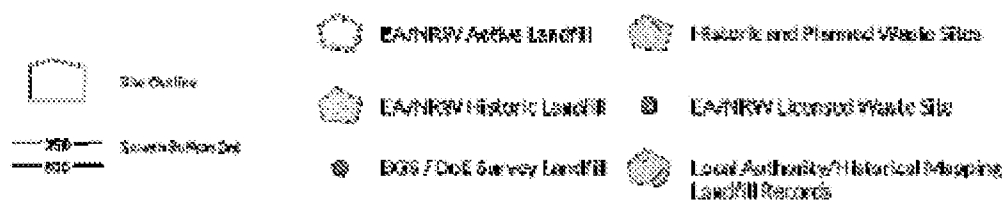
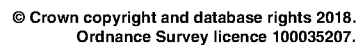
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site

0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

7

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1	89	W		Site Address: Old Mead Road Tip, Littlehampton, Sussex Waste Licence: Yes Site Reference: 27-329, WD27/151, WD13/12, WD13/79 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 13-Jun-1977 Licence Surrendered: 13-Oct-1984 Licence Holder Address: - Operator: - Licence Holder: Sussex Tipping Limited First Recorded: 30-Nov-1975 Last Recorded: 12-Oct-1984
2	195	SW		Site Address: Brook Barn Farm, Littlehampton, Sussex Waste Licence: Yes Site Reference: WD27/248 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01-Jan-1976 Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1970 Last Recorded: 31-Dec-1975
Not shown	933	W		Site Address: Brookbarn Farm, Courtwick Lane, Littlehampton, Wick, West Sussex Waste Licence: Yes Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 24-May-1996 Licence Surrendered: 18-Feb-2016 Licence Holder Address: Rudford Ind Estate, Arundel, Ford, West Sussex Operator: Farndell & Gates Ltd Licence Holder: Farndell & Gates Ltd First Recorded: - Last Recorded: -
Not shown	1227	E		Site Address: Fargo, Toddington Lane, Littlehampton Waste Licence: Yes Site Reference: WD27/255, WD13/5/36 Waste Type: Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 11-Apr-1980 Licence Surrendered: 17-Nov-1980 Licence Holder Address: - Operator: - Licence Holder: Fargo Limited First Recorded: 23-Aug-1979 Last Recorded: 17-Nov-1980

ID	Distance (m)	Direction	NGR	Details
Not shown	1238	SE		Site Address: Cornfield Close Caravan Site, Worthing Road, Littlehampton, Sussex Waste Licence: Yes Site Reference: WD27/153 Waste Type: Inert, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01-Jan-1976 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1960 Last Recorded: 31-Dec-1970
Not shown	1247	SW		Site Address: Wick Farm, Littlehampton, Sussex Waste Licence: - Site Reference: WD27/152 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1383	SW		Site Address: Ferry Road North, Littlehampton, Sussex Waste Licence: Yes Site Reference: WD27/48a, WD27/148a Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01-Jan-1976 Licence Surrendered: Licence Holder Address: - Operator: Littlehampton Urban District Council Licence Holder: - First Recorded: 31-Dec-1946 Last Recorded: 31-Dec-1975

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

0

Database searched and no data found.

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

13

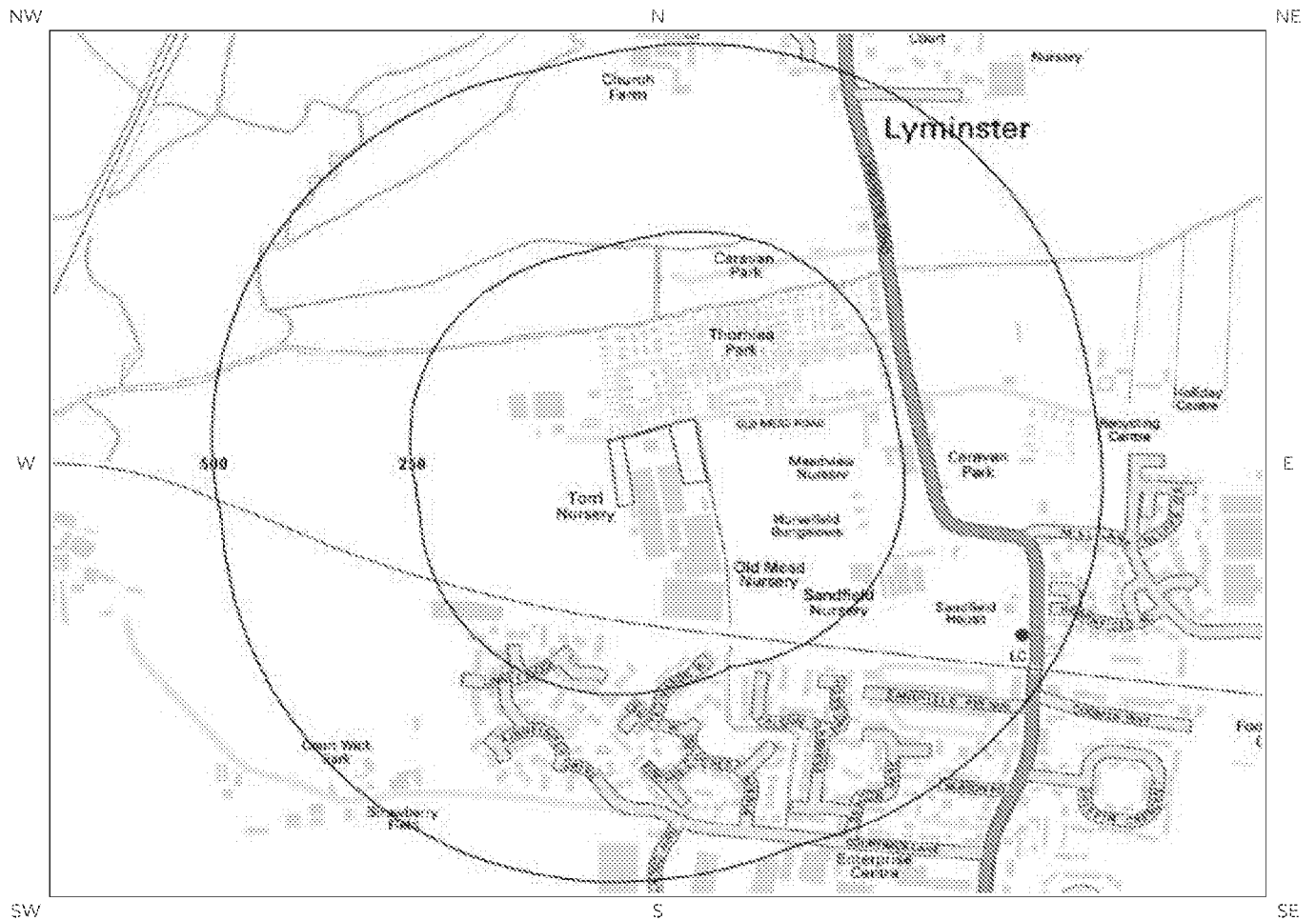
The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
8A	568	E	502900 104200	Site Address: Littlehampton H W R C, Mill Lane, Littlehampton, West Sussex, BN17 7PH Type: Household Waste Amenity Site Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VIR008 EPR reference: EA/EPR/ZP3094HX/V003 Operator: Viridor Waste Management Ltd Waste Management licence No: 19684 Annual Tonnage: 26000.0 Issue Date: 01/09/1995 Effective Date: 28/05/2004 Modified: 11/07/2005 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Littlehampton Civic Amenity Site Correspondence Address: -
9A	568	E	502900 104200	Site Address: Mill Lane, Littlehampton, West Sussex, BN17 7PH Type: Household Waste Amenity Site Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VIR008 EPR reference: EA/EPR/ZP3094HX/V004 Operator: Viridor Waste Management Limited Waste Management licence No: 19684 Annual Tonnage: 25999.0 Issue Date: 01/09/1995 Effective Date: 28/05/2004 Modified: 16/01/2017 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Littlehampton Household Waste Recycling Site Correspondence Address: -
10A	568	E	502900 104200	Site Address: Littlehampton H W R C, Mill Lane, Littlehampton, West Sussex, BN17 7PH Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VIR008 EPR reference: - Operator: Viridor Waste Management Ltd Waste Management licence No: 19684 Annual Tonnage: 26000.0 Issue Date: 01/09/1995 Effective Date: 28/05/2004 Modified: 17/11/1999 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Littlehampton Civic Amenity Site Correspondence Address: Great Western House, Station Approach, Taunton, Somerset, TA1 1QW
11A	568	E	502900 104200	Site Address: Littlehampton H W R C, Mill Lane, Littlehampton, West Sussex, BN17 7PH Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WYV002 EPR reference: - Operator: Wyvern Waste Services Ltd Waste Management licence No: 19684 Annual Tonnage: 26000.0 Issue Date: 01/09/1995 Effective Date: - Modified: 17/11/1999 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Littlehampton Civic Amenity Site Correspondence Address: Contract Office - Burgess Hill Transfer Station, Fairbridge Way, Burgess Hill, West Sussex, RH15 8AR
Not shown	1042	W	501200 103900	Site Address: Brookbarn Farm, Courtwick Lane, Wick, Littlehampton, West Sussex, BN17 7PE Type: Landfill taking Non-Biodegradable Wastes Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FAR001 EPR reference: - Operator: Farndell & Gates Ltd Issue Date: 24/05/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Brookbarn Farm Correspondence Address: Robert House, Rudford Ind Estate, Ford, Arundel, West

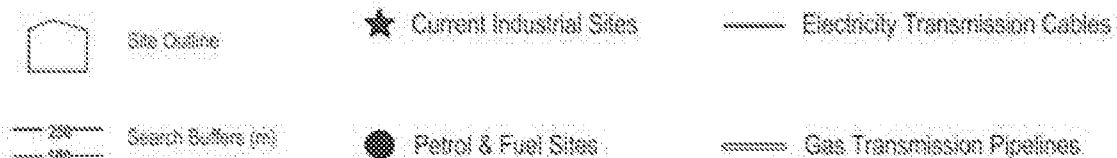
ID	Distance (m)	Direction	NGR	Details
				Waste Management licence No: 19661 Annual Tonnage: 26000.0
				Sussex, BN18 0BD
Not shown	1042	W	501200 103900	Site Address: Brookbarn Farm, Courtwick Lane, Wick, Littlehampton, West Sussex, BN17 7PE Type: Landfill taking Non-Biodegradable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FAR001 EPR reference: EA/EPR/HP3794HS/A001 Operator: Farndell & Gates Ltd Waste Management licence No: 19661 Annual Tonnage: 26000.0
				Issue Date: 24/05/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Brookbarn Farm Correspondence Address: -
Not shown	1110	E	503400 103800	Site Address: Tutley's Nurseries, Toddington Lane, Wick, Littlehampton, West Sussex, BN17 7PW Type: Landfill taking Non-Biodegradable Wastes Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TUL001 EPR reference: - Operator: K C Tutley Nurseries Ltd Waste Management licence No: 19665 Annual Tonnage: 2000.0
				Issue Date: 10/11/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Tutley's Nurseries Correspondence Address: 1, Tutley Cottages, Littlehampton, West Sussex, BN17 7PW
Not shown	1110	E	503400 103800	Site Address: Tutley's Nurseries, Toddington Lane, Wick, Littlehampton, West Sussex, BN17 7PW Type: Landfill taking Non-Biodegradable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TUL001 EPR reference: EA/EPR/FP3594HD/A001 Operator: K C Tutley Nurseries Ltd Waste Management licence No: 19665 Annual Tonnage: 2000.0
				Issue Date: 10/11/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Tutley's Nurseries Correspondence Address: -
Not shown	1336	S	502250 102750	Site Address: Unit A, Fort Road Industrial Estate, Littlehampton, West Sussex, BN17 7QU Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ETH013 EPR reference: FP3895LK/T001 Operator: Ethos Medical & Special Waste Ltd Waste Management licence No: 10147 Annual Tonnage: 5000.0
				Issue Date: 05/07/2006 Effective Date: 05/03/2010 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Fort Road Industrial Estate Clinical Waste Transfer Station Correspondence Address: -
Not shown	1336	S	502250 102750	Site Address: Unit A, Fort Road Industrial Estate, Littlehampton, West Sussex, BN17 7QU Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CLI001 EPR reference: - Operator: Cliniserve Ltd Waste Management licence No: 10147 Annual Tonnage: 0.0
				Issue Date: 05/07/2006 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Fort Road Industrial Estate Clinical Waste Transfer Station Correspondence Address: 35, Bishops Cleeve, Austrey, Atherstone, Warwickshire, CV9 3EU
Not shown	1336	S	502250 102750	Site Address: Unit A, Fort Road Industrial Estate, Littlehampton, West Sussex, BN17 7QU
				Issue Date: 05/07/2006 Effective Date: 06/04/2009 Modified: -

ID	Distance (m)	Direction	NGR	Details
				Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ETH010 EPR reference: CP3196EH/T001 Operator: Ethos Recycling Ltd Waste Management licence No: 10147 Annual Tonnage: 5000.0 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Fort Road Industrial Estate Clinical Waste Transfer Station Correspondence Address: -
Not shown	1446	S	502092 102646	Site Address: Unit A, Fort Road Industrial Estate, Littlehampton, West Sussex, BN17 7QU Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MED040 EPR reference: EA/EPR/QP3536TW/V004 Operator: Medisort Ltd Waste Management licence No: 10147 Annual Tonnage: 20000.0 Issue Date: 05/07/2006 Effective Date: 01/07/2010 Modified: 17/01/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Littlehampton Waste Treatment Plant Correspondence Address: -
Not shown	1475	S	501779 102680	Site Address: Units 15/16, Arndale Road, Lineside Ind Est, Littlehampton, West Sussex, BN17 7HD Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SRC001 EPR reference: EA/EPR/EP3490SD/A001 Operator: S R C L Ltd Waste Management licence No: 101116 Annual Tonnage: 74999.0 Issue Date: 23/12/2009 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Littlehampton Waste Facility Correspondence Address: -

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 0

Database searched and no data found.

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
1	448	SE	502735 103915	OBSOLETE	Lyminster Road, Wick, Littlehampton, West Sussex, BN17 7LF	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
RBD1-XSV	RAISED BEACH DEPOSITS, 1	SAND AND GRAVEL
RMD-XCZSV	RAISED MARINE DEPOSITS	CLAY, SILT, SAND AND GRAVEL

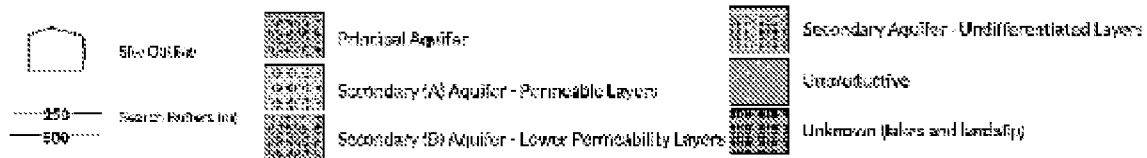
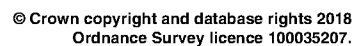
5.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

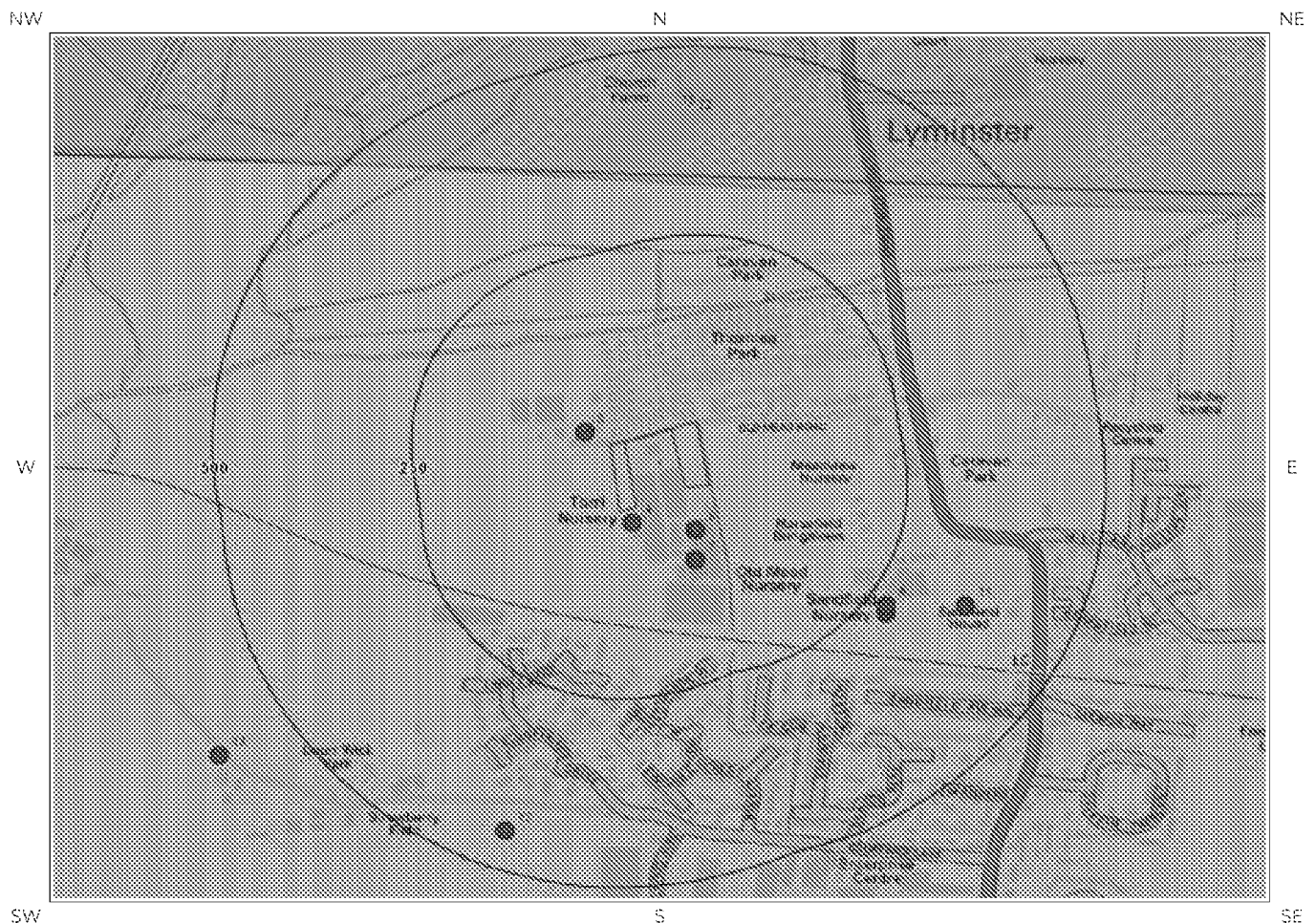
Lex Code	Description	Rock Type
NPCH-CHLK	NEW PIT CHALK FORMATION	CHALK
LPCK-CHLK	LEWES NODULAR CHALK FORMATION, SEAFORD CHALK FORMATION, NEWHAVEN CHALK FORMATION, CULVER CHALK FORMATION AND PORTSDOWN CHALK FORMATION (UNDIFFERENTIATED)	CHALK

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

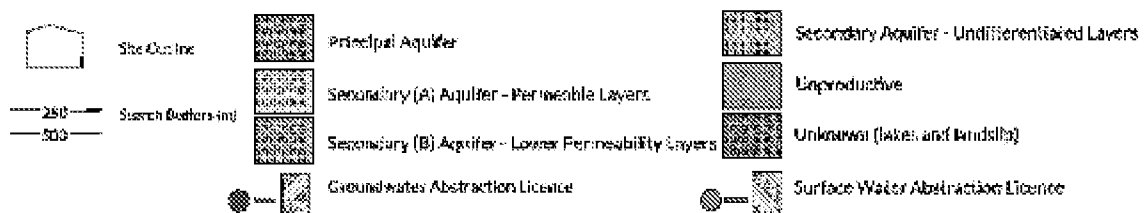
Geology



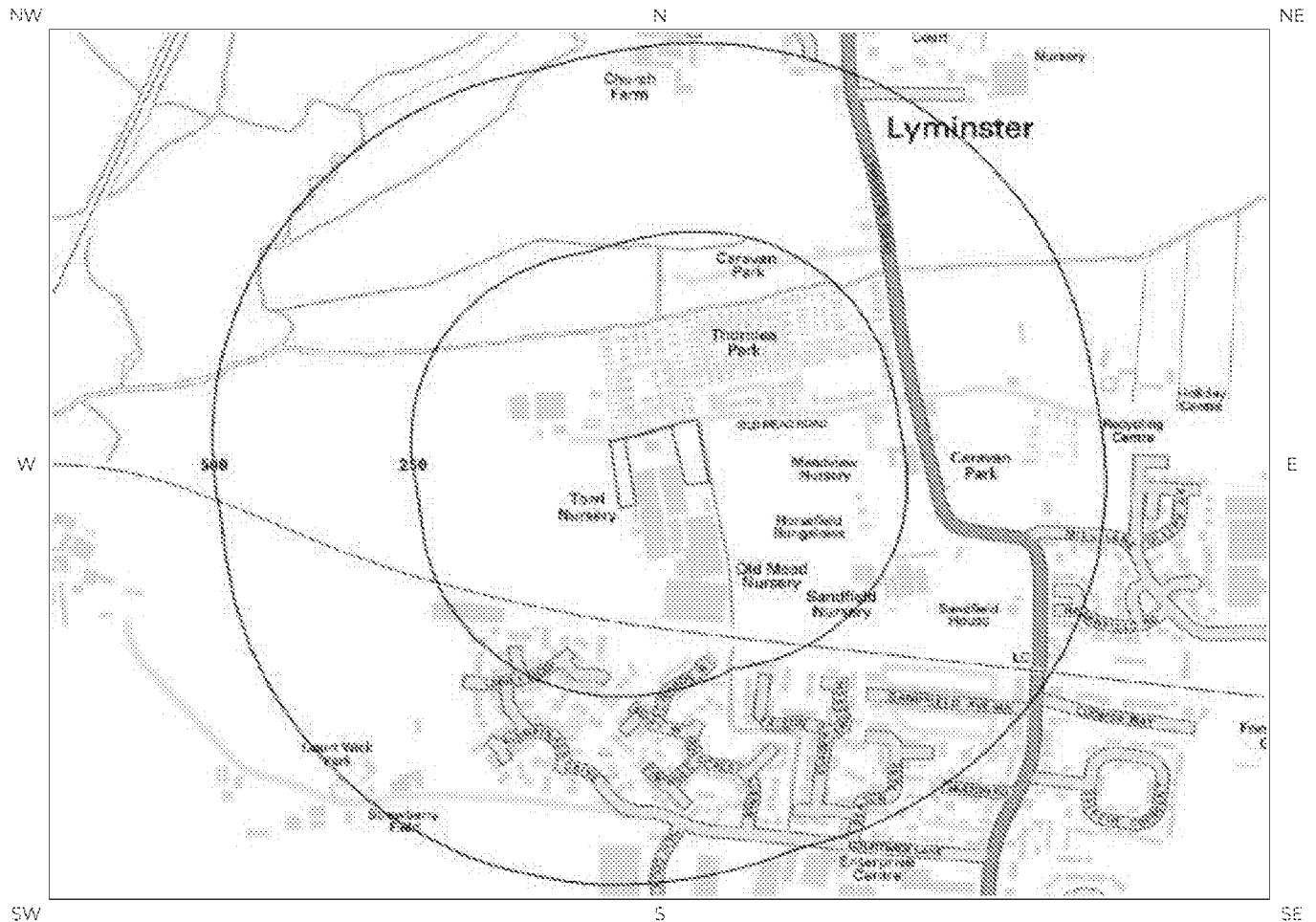
6b. Aquifer Within Bedrock Geology and Abstraction Licences



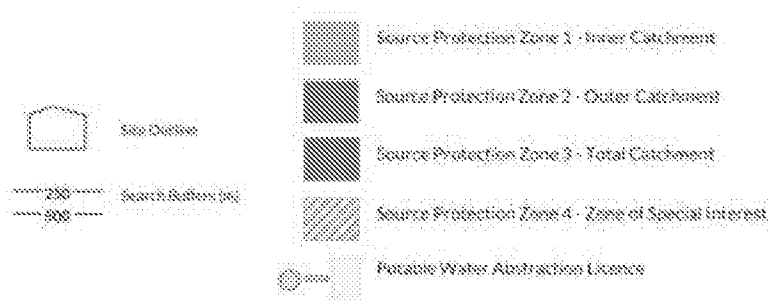
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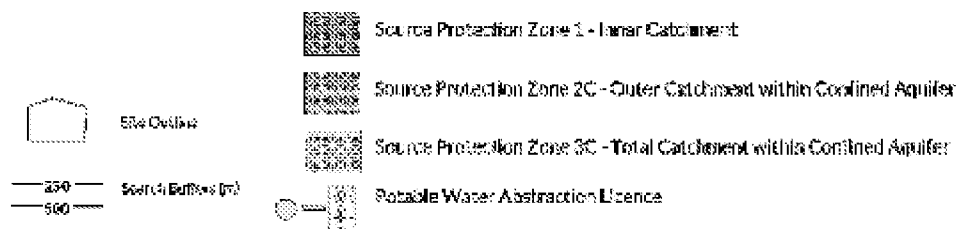
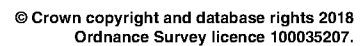


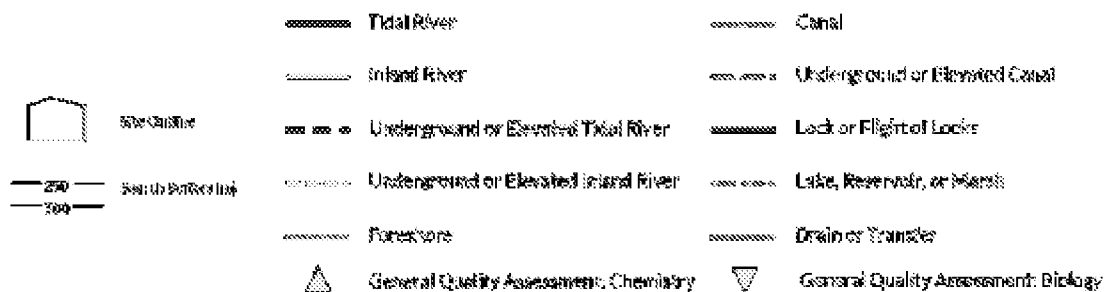
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

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

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
4	19	S	502240 104070	Status: Historical Licence No: 24/062 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: SANDFIELD NURSERY Data Type: Point Name: Molica-Franco	Annual Volume (m³): 4200 Max Daily Volume (m³): 25 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 16/06/2009 Version End Date:
5	35	NW	502180 104190	Status: Historical Licence No: 24/059 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: GLENVILLA LYMINSTER Data Type: Point Name: Perella	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 21/05/1992 Version End Date:
6	59	S	502320 104060	Status: Active Licence No: 24/064 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: MARINA HOUSE Data Type: Point Name: Molica Esq	Annual Volume (m³): 5966 Max Daily Volume (m³): 25 Original Application No: - Original Start Date: 20/07/1995 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date:
7	99	S	502320 104020	Status: Active Licence No: 24/065 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: TORRI HOUSE Data Type: Point Name: Molica Esq	Annual Volume (m³): 5966 Max Daily Volume (m³): 25 Original Application No: - Original Start Date: 20/07/1995 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date:
8A	275	SE	502560 103960	Status: Historical Licence No: 10/41/411012 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE AT SANDFIELD NURSERIES Data Type: Point Name: Farfield Plants Limited	Annual Volume (m³): 16800 Max Daily Volume (m³): 96 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 13/11/2006 Version End Date:
9A	281	SE	502560 103950	Status: Historical Licence No: 10/41/411012 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE AT SANDFIELD NURSERIES Data Type: Point Name: Sandfield Plant Ltd	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/11/1999 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
10	328	N	501260 105330	Status: Historical Licence No: 10/41/411010 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: CHURCH FARM LYMINSTER Data Type: Poly4 Name: Longhurst Esq	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 18/07/1979 Version End Date:
11	361	SE	502660 103960	Status: Historical Licence No: 10/41/411012 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: SANDFIELD NURSERIES Data Type: Point Name: Sandfield Plant Ltd	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/11/1999 Version End Date:
12	450	S	502080 103660	Status: Historical Licence No: 10/41/411004 Details: Animal Watering & General Use in non Farming situations Direct Source: Southern Region Groundwater Point: NORMANS NURSERIES COURTWICK LANE Data Type: Point Name: Yoder Toddington Ltd	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 06/10/2003 Version End Date:
13	601	SW	501720 103760	Status: Historical Licence No: 10/41/411003 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: COURT WICK PARK LITTLEHAMPTON Data Type: Point Name: A H Bowerman & Son Ltd	Annual Volume (m³): 9100 Max Daily Volume (m³): 45 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date:
Not shown	753	E	503090 104110	Status: Historical Licence No: 24/067 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE AT POINT 'A' AT KIRIN AGRIBO TODDINGTON NURSERIES Data Type: Point Name: Kirin Agribo Toddington Ltd	Annual Volume (m³): 24338 Max Daily Volume (m³): 228 Original Application No: - Original Start Date: 15/09/2005 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 16/06/2009 Version End Date:
Not shown	849	N	502250 105050	Status: Active Licence No: 24/060 Details: Fish Farm/Cress Pond Throughflow Direct Source: Southern Region Groundwater Point: KNUCKER HOLE FISH FARM Data Type: Point Name: Biddlecombe	Annual Volume (m³): 332000 Max Daily Volume (m³): 907 Original Application No: - Original Start Date: 30/06/1992 Expiry Date: - Issue No: 101 Version Start Date: 31/03/2016 Version End Date:
Not shown	1255	SE	503460 103560	Status: Historical Licence No: 10/41/414025 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: FIRVIEW NURSERY TODDINGTON LANE Data Type: Point Name: Yoder Toddington Ltd	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 17/10/2003 Version End Date:
Not shown	1255	SE	503460 103560	Status: Historical Licence No: 10/41/414025 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: FIRVIEW NURSERY TODDINGTON LANE Data Type: Point Name: Yoder Toddington Ltd	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 17/10/2003 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1297	E	503580 103750	Status: Historical Licence No: 10/41/414019 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: FOXDALE NURSERY TODDINGTON LANE Data Type: Point Name: Yoder Toddington Ltd Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/11/2004 Version End Date:
Not shown	1478	E	503760 103720	Status: Historical Licence No: 10/41/414031 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: FOXDALE NURSERY TODDINGTON LANE (A) Data Type: Point Name: Yoder Toddington Ltd Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/11/2004 Version End Date:
Not shown	1784	S	501910 102330	Status: Historical Licence No: 10/41/411021 Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: RIVER ARUN ESTUARY Data Type: Point Name: ARC Ltd (Solent Aggregates Ltd) Annual Volume (m³): 39277.4 Max Daily Volume (m³): 163.65 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 29/10/1997 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site Identified

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
21	153	N	501790 104310	Status: Active Licence No: 10/41/414020 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: BLACK DITCH AT CHURCH FARM LYMINSTER Data Type: Line Name: Longhurst Annual Volume (m³): 9092 Max Daily Volume (m³): 654.62 Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2016 Version End Date:
22	317	N	501230 105650	Status: Active Licence No: 10/41/411010 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: CHURCH FARM LYMINSTER Data Type: Poly4 Name: Longhurst Esq Annual Volume (m³): 13638 Max Daily Volume (m³): 654.62 Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2016 Version End Date:
Not shown	962	E	503250 104460	Status: Historical Licence No: 10/41/414014 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: BLACK DITCH AT MANOR FARM Data Type: Line Name: Langmead Annual Volume (m³): 20548 Max Daily Volume (m³): 916.5 Application No: - Original Start Date: - Expiry Date: 31/10/2006 Issue No: 101 Version Start Date: 01/04/2006 Version End Date:
Not shown	1025	NE	501510 105670	Status: Active Licence No: 10/41/411102 Annual Volume (m³): 25003 Max Daily Volume (m³): 458.24

ID	Distance (m)	Direction	NGR	Details	
				Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: BROOMHURST FARM Data Type: Line Name: A M Harriot & Son	Application No: - Original Start Date: 05/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2016 Version End Date:
Not shown	1395	W	500460 104870	Status: Active Licence No: 10/41/411020 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: INTERNAL DITCHES AT TORTINGTON Data Type: Line Name: Luckin & Son	Annual Volume (m³): 2500 Max Daily Volume (m³): 181.8 Application No: - Original Start Date: 06/09/1982 Expiry Date: - Issue No: 100 Version Start Date: 08/06/2009 Version End Date:
Not shown	1945	S	501710 102210	Status: Historical Licence No: 10/41/411016 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: RYEBANK RIFE AND ELMER RIFE Data Type: Line Name: Baird	Annual Volume (m³): 27272 Max Daily Volume (m³): 1091 Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 08/12/2005 Version End Date:
Not shown	1991	S	501720 102160	Status: Active Licence No: 10/41/411016 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: RYEBANK RIFE Data Type: Line Name: James D Baird (Home Farm) Ltd	Annual Volume (m³): 27272 Max Daily Volume (m³): 1091 Application No: - Original Start Date: 13/06/1967 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2016 Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site None identified

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
41	SW	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
257	N	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
270	SE	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site None identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	1 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
2	1 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
3	1 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
64	1 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
65	1 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
66	1 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	2 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
67	2 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				conditions) Average Width in Watercourse Section (m): Not Provided
5	141 N	Black Ditch	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
68	141 N	Black Ditch	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
6	143 N	Black Ditch	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
7	143 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
8	143 N	Black Ditch	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.1
69	143 N	Black Ditch	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
70	143 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
71	143 N	Black Ditch	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.1
9	193 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
72	193 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	220 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.5
73	220 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.5

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
11	228 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
74	228 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
12	234 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
75	234 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
13	237 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
76	237 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
14	239 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
77	239 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
15	400 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	400 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
16	402 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	402 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	402	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	S			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	402 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
18	428 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.1
Not shown	428 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.1
19	429 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
Not shown	429 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
20	430 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	430 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	432 W	Black Ditch	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
Not shown	432 W	Black Ditch	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
22	434 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
Not shown	434 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
23	447 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
Not shown	447 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
24	456 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
Not shown	456 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
25	486 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.1
Not shown	486 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.1
26	496 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
27	496 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
Not shown	496 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
Not shown	496 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Rother and Arun Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3

6.11 Surface Water Features

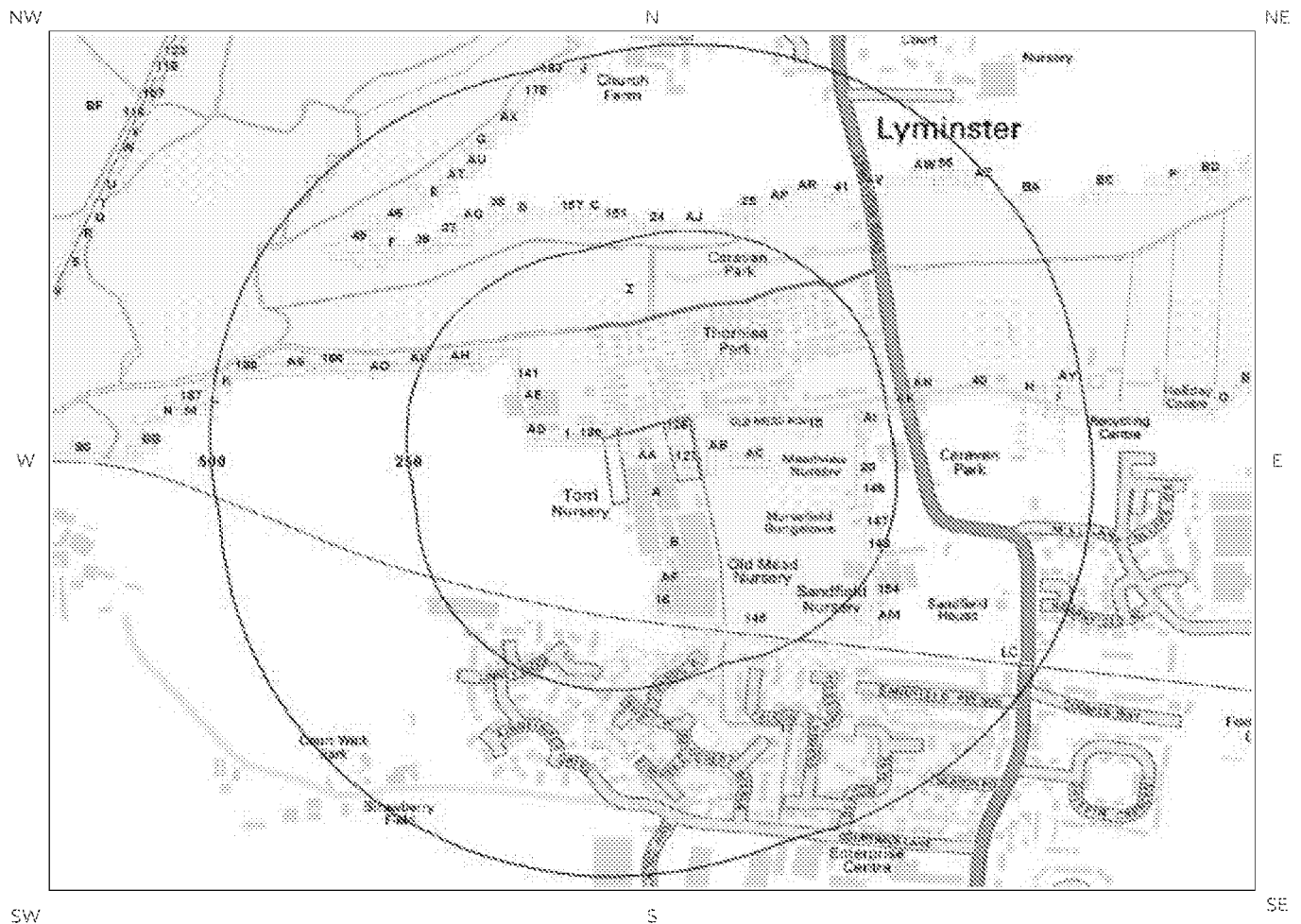
Surface water features within 250m of the study site

Identified

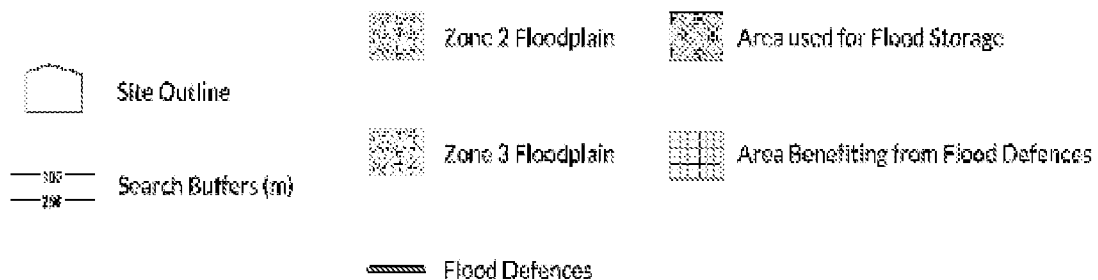
The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
139	N
219	S
238	N

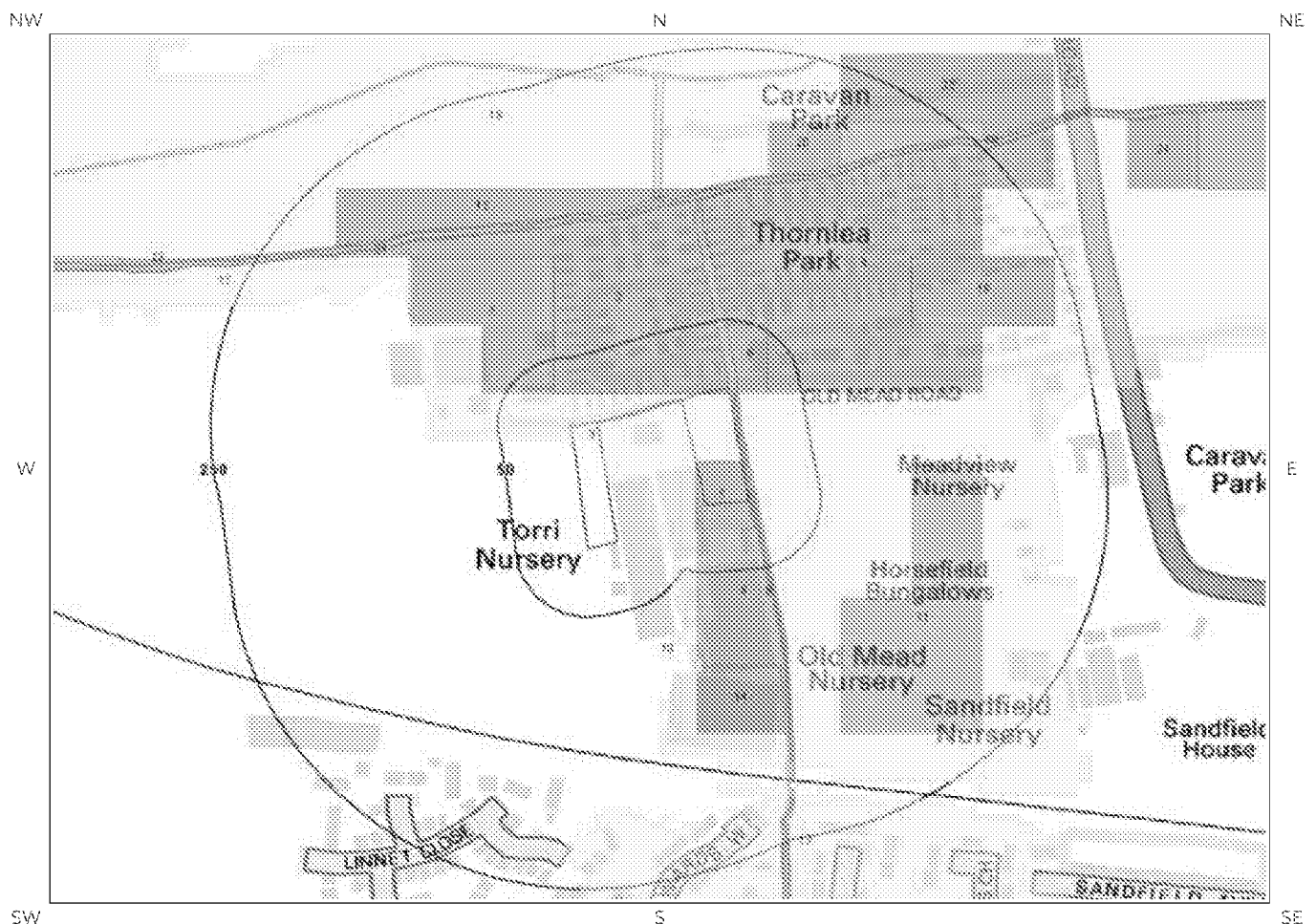
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



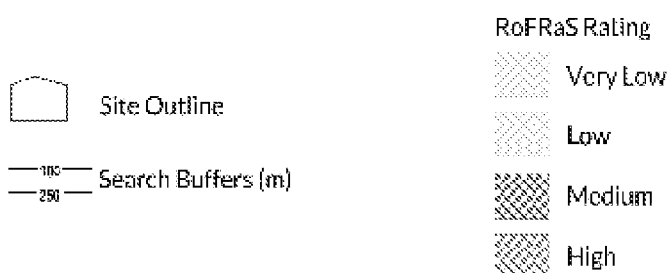
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m Identified

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	0	On Site	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
2Y	0	On Site	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
3Z	0	On Site	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
4AB	8	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
5AA	16	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
6A	20	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
7A	22	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
8AC	40	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
9B	75	SE	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
10B	81	S	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
11AD	87	W	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
12AE	95	NW	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
13AF	103	SE	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
14AG	122	NW	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
15	135	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
16	138	S	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
17	189	S	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
18AH	194	NW	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
19AI	196	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)

20	198	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
21AL	234	W	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
22AK	249	E	15-Oct-2018	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m Identified

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1	0	On Site	15-Oct-2018	Zone 3 - (Fluvial Models)
2Y	0	On Site	15-Oct-2018	Zone 3 - (Fluvial Models)
3Z	0	On Site	15-Oct-2018	Zone 3 - (Fluvial Models)
4AB	0	On Site	15-Oct-2018	Zone 3 - (Fluvial Models)
5AA	0	On Site	15-Oct-2018	Zone 3 - (Fluvial Models)
6A	16	E	15-Oct-2018	Zone 3 - (Fluvial Models)
7A	17	W	15-Oct-2018	Zone 3 - (Fluvial Models)
8AC	20	E	15-Oct-2018	Zone 3 - (Fluvial Models)
9B	25	E	15-Oct-2018	Zone 3 - (Fluvial Models)
10B	51	E	15-Oct-2018	Zone 3 - (Fluvial Models)
11AD	68	SE	15-Oct-2018	Zone 3 - (Fluvial Models)
12AE	73	E	15-Oct-2018	Zone 3 - (Fluvial Models)
13AF	87	W	15-Oct-2018	Zone 3 - (Fluvial Models)
14AG	87	W	15-Oct-2018	Zone 3 - (Fluvial Models)
15	91	SE	15-Oct-2018	Zone 3 - (Fluvial Models)
16	91	W	15-Oct-2018	Zone 3 - (Fluvial Models)
17	103	SE	15-Oct-2018	Zone 3 - (Fluvial Models)
18AH	119	NW	15-Oct-2018	Zone 3 - (Fluvial Models)
19AI	152	NW	15-Oct-2018	Zone 3 - (Fluvial Models)

20	167	NW	15-Oct-2018	Zone 3 - (Fluvial Models)
21AL	196	E	15-Oct-2018	Zone 3 - (Fluvial Models)
22AK	204	S	15-Oct-2018	Zone 3 - (Fluvial Models)
	208	E	15-Oct-2018	Zone 3 - (Fluvial Models)
	218	E	15-Oct-2018	Zone 3 - (Fluvial Models)
	229	SE	15-Oct-2018	Zone 3 - (Fluvial Models)
	231	N	15-Oct-2018	Zone 3 - (Fluvial Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

Highest risk of flooding onsite

High

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a High (1 in 30 or greater) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	0.0	On Site	Medium
2	0.0	On Site	Medium
3	0.0	On Site	Low
4	0.0	On Site	High
5	5.0	E	Low
6	5.0	E	Medium
7	26.0	NW	Medium
8	27.0	E	Medium

7.4 Flood Defences

Flood Defences within 250m of the study site

Identified

The following flood defence records are represented as lines on the Flood Map:

ID	Distance (m)	Direction	Update
201	138	N	08-Oct-2018
202	140	N	08-Oct-2018

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site	None identified
--	-----------------

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site	None identified
--	-----------------

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site	Identified
--	------------

Clearwater Flooding or Superficial Deposits Flooding	Clearwater Flooding
--	---------------------

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result	High
--	------

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site	Identified
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:	0
Database searched and no data found.	
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:	0
Database searched and no data found.	
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:	0
Database searched and no data found.	
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:	0
Database searched and no data found.	
8.5 Records of Ramsar sites within 2000m of the study site:	0
Database searched and no data found.	

8.6 Records of Ancient Woodland within 2000m of the study site:

3

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1888	NE	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1932	NE	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1997	NE	UNKNOWN	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

1

The following Environmentally Sensitive Area records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	ESA Name	Data Source
Not shown	1997	N	South Downs	Natural England

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

1

The following National Park records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NP Name	Data Source
Not shown	1821	N	South Downs	Natural England

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

1

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
2	0	On Site	Modified	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a Groundsure Geo Insight, available from our [website](#). The following information has been found:

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

* This indicates an automatically generated 50m buffer and site.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

None identified

Database searched and no data found.

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

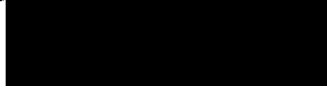
Guidance: No Guidance Required.

Contact Details

Groundsure Helpline



British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG



Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:



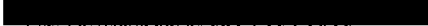
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NG19 1PS



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Adanac Drive, Southampton
SO16 0AS



Local Authority
Authority: Arun District Council
Phone: 01903 737 500
Web: <http://www.arun.gov.uk/>

Address: Maltavers Road, Littlehampton, West Sussex, BN17 5LF

Getmapping PLC
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Hampshire RG27 8NW



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