

Site Details:
Land at Oldlands Farm, Bognor
Regis, PO22 9ST

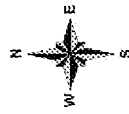
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Report Ref: HYD-1466353_LS_A2
Grid Ref: 494239, 101321

Map Name: County Series

Map date: 1876

Scale: 1:2,500

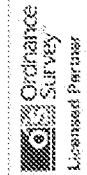
Printed at: 1:2,500



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Revised 1876
Editor: P.H.
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Revised 1876
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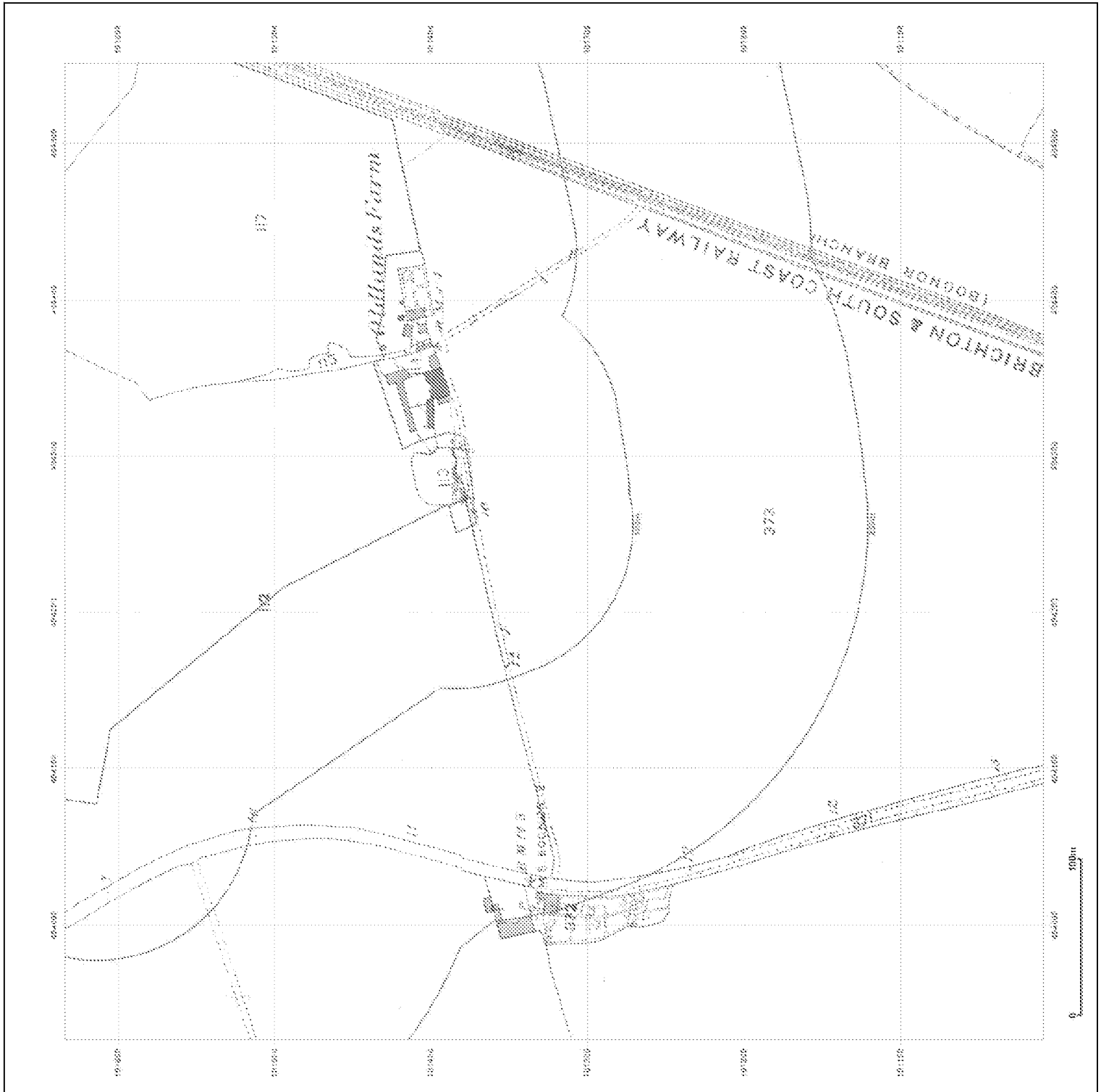
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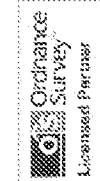
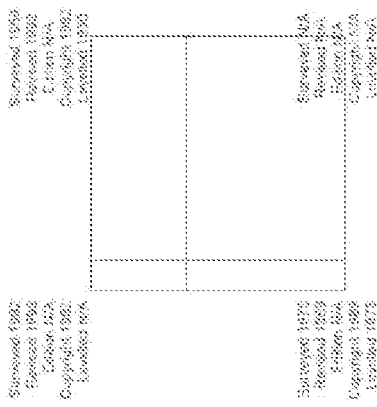
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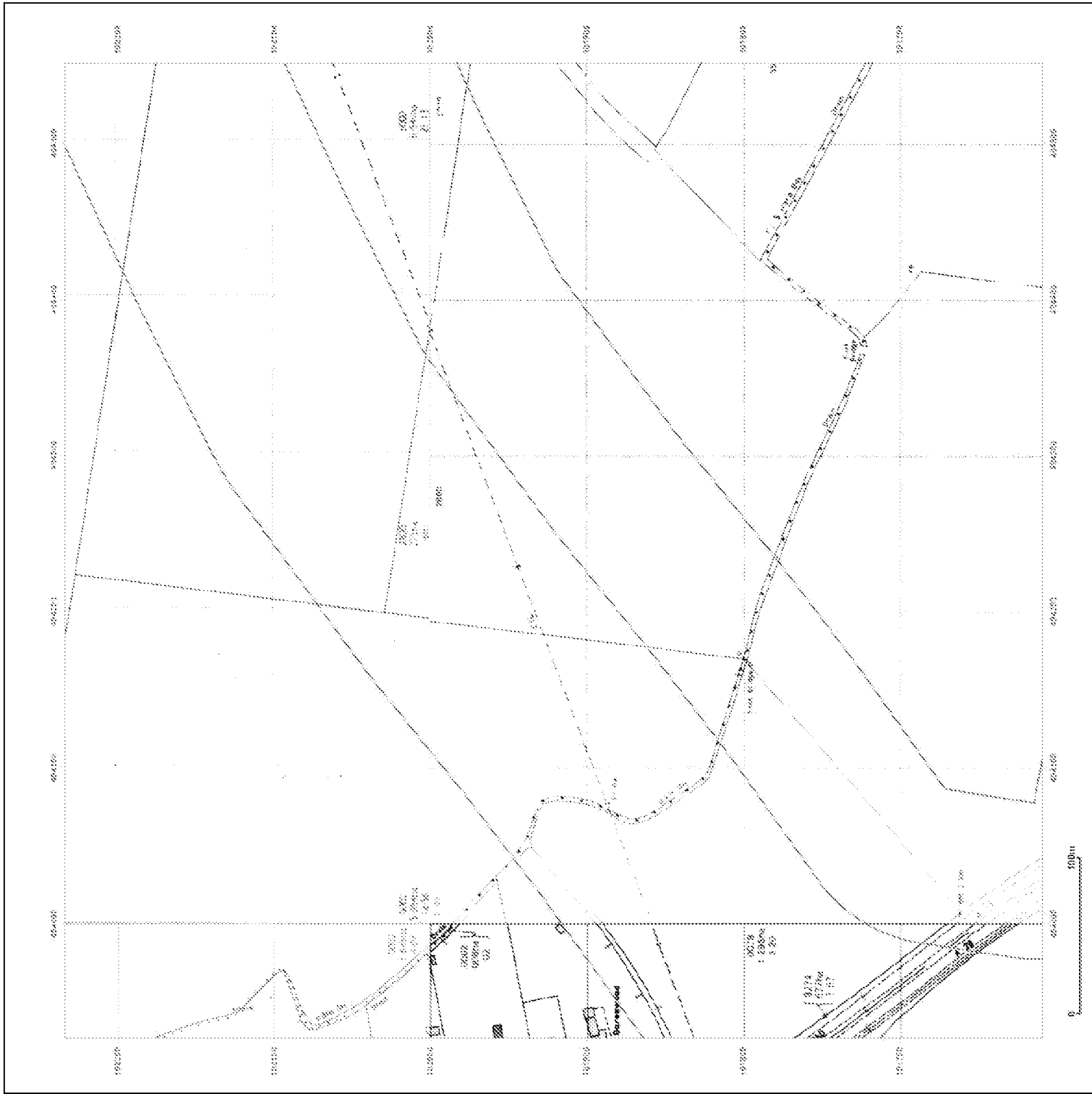


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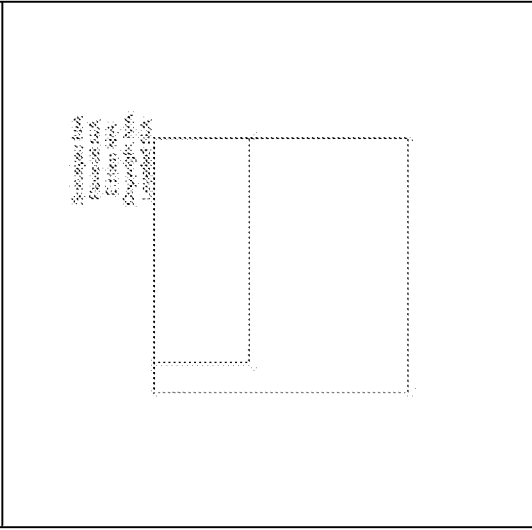
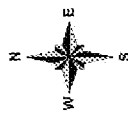
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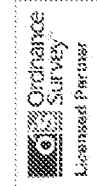
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Land at Oldlands Farm, Bognor
Regis, PO22 9ST

Client Ref: N5752 / C14459
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Grid Ref: 494239, 101921

Map Name: National Grid
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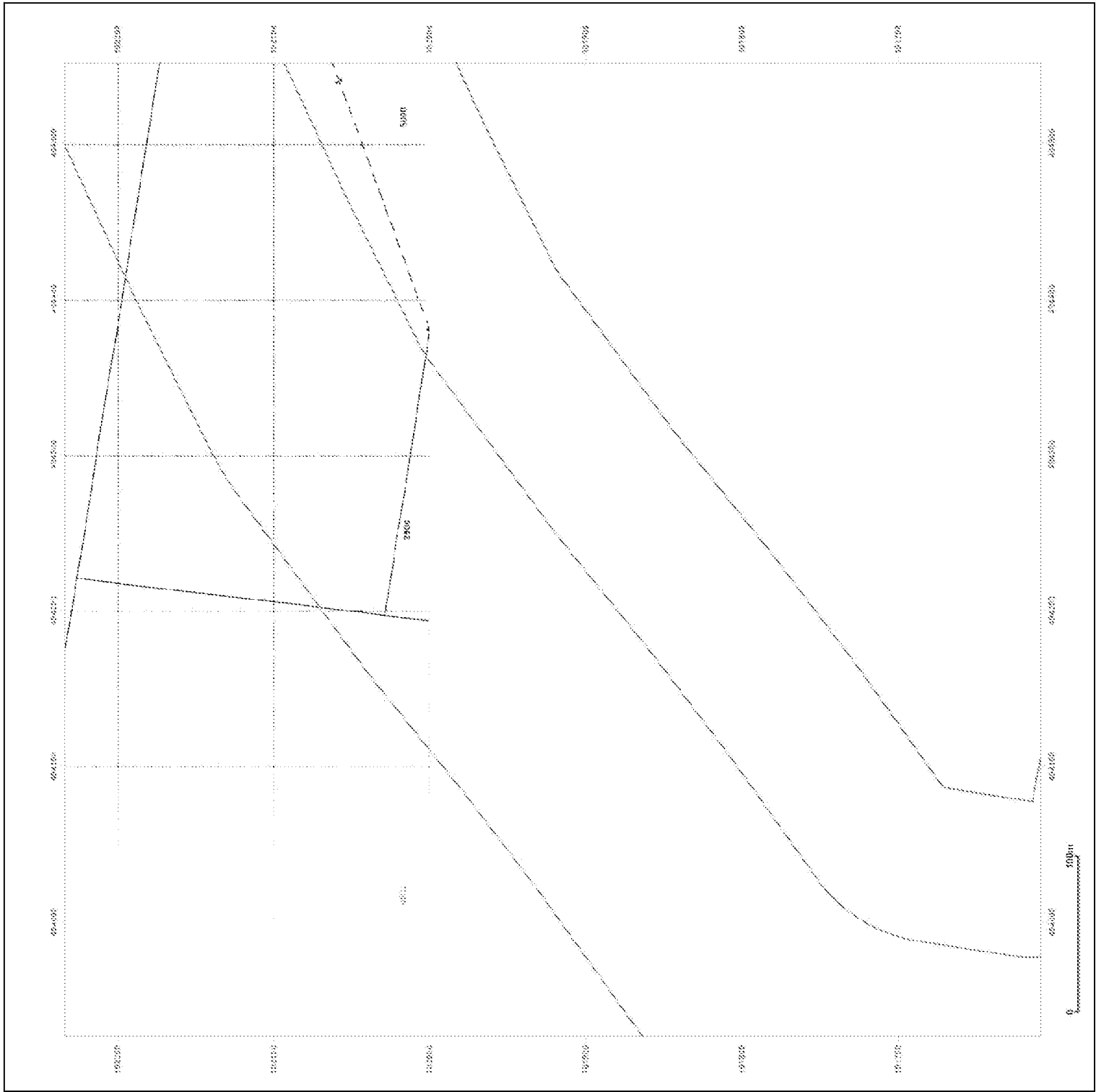
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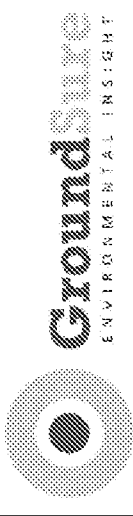


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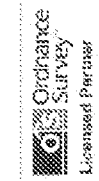
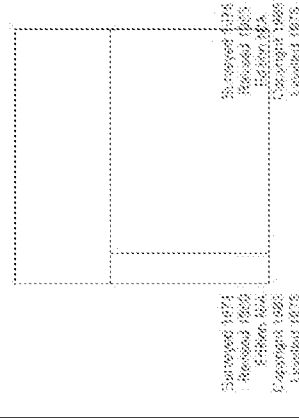
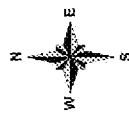
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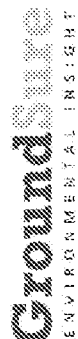
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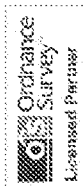
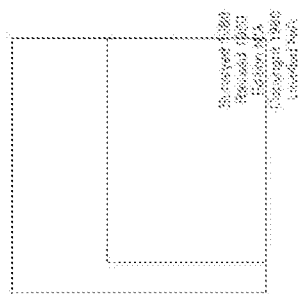
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Gnd Ref: 494239, 101921

Map Name: National Grid

Map date: 1980

Scale: 1:2,500

Printed at: 1:2,500

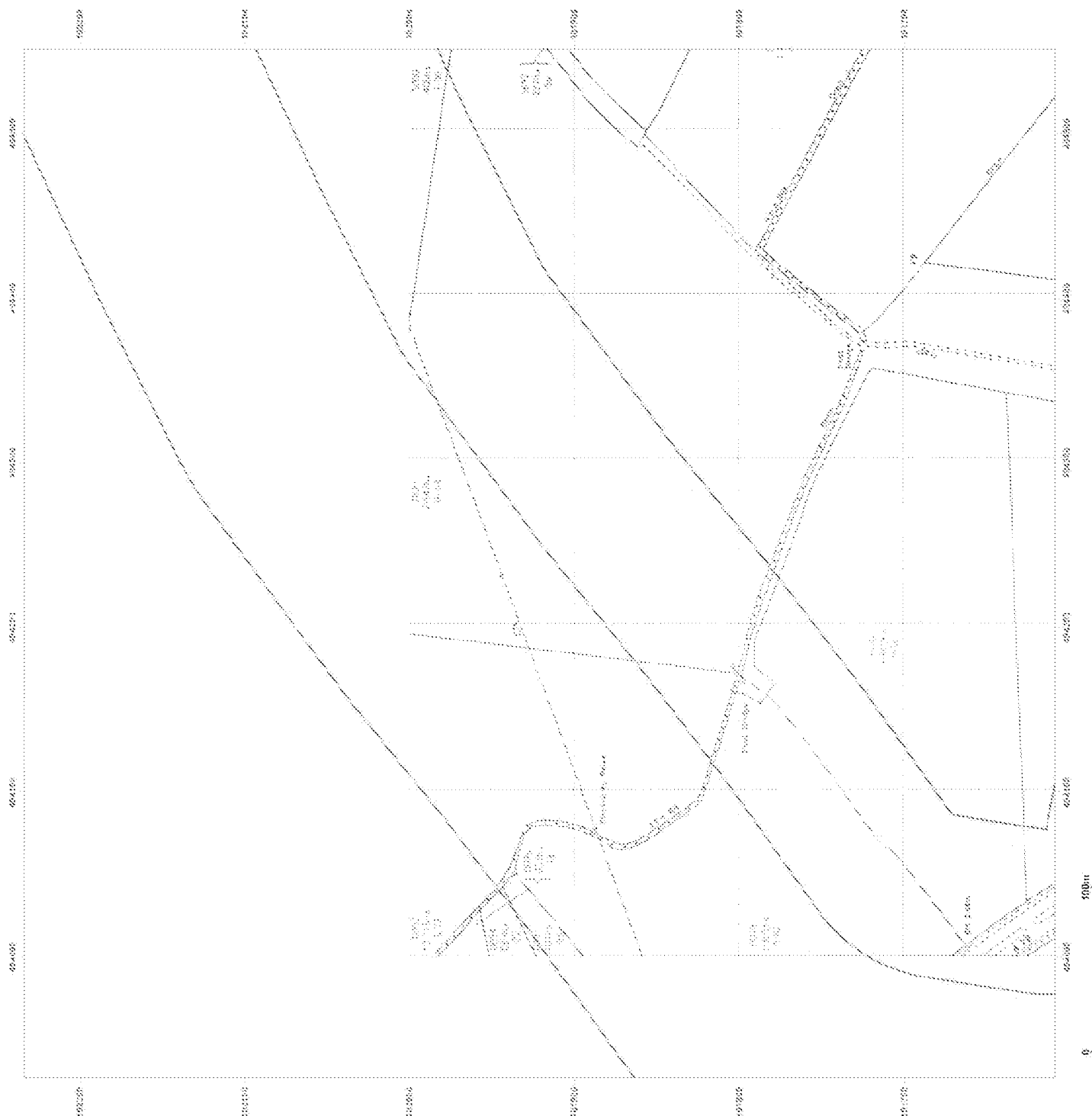


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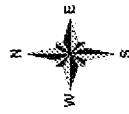
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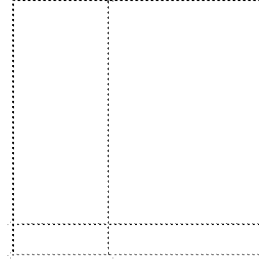
Site Details:
Land at Oldlands Farm, Bognor
Regis, PO22 9ST

Client Ref: N5752 / C14459
Report Ref: HYD-1466353_LS_A1
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Printed at: 1:2,500

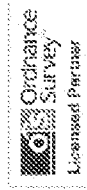


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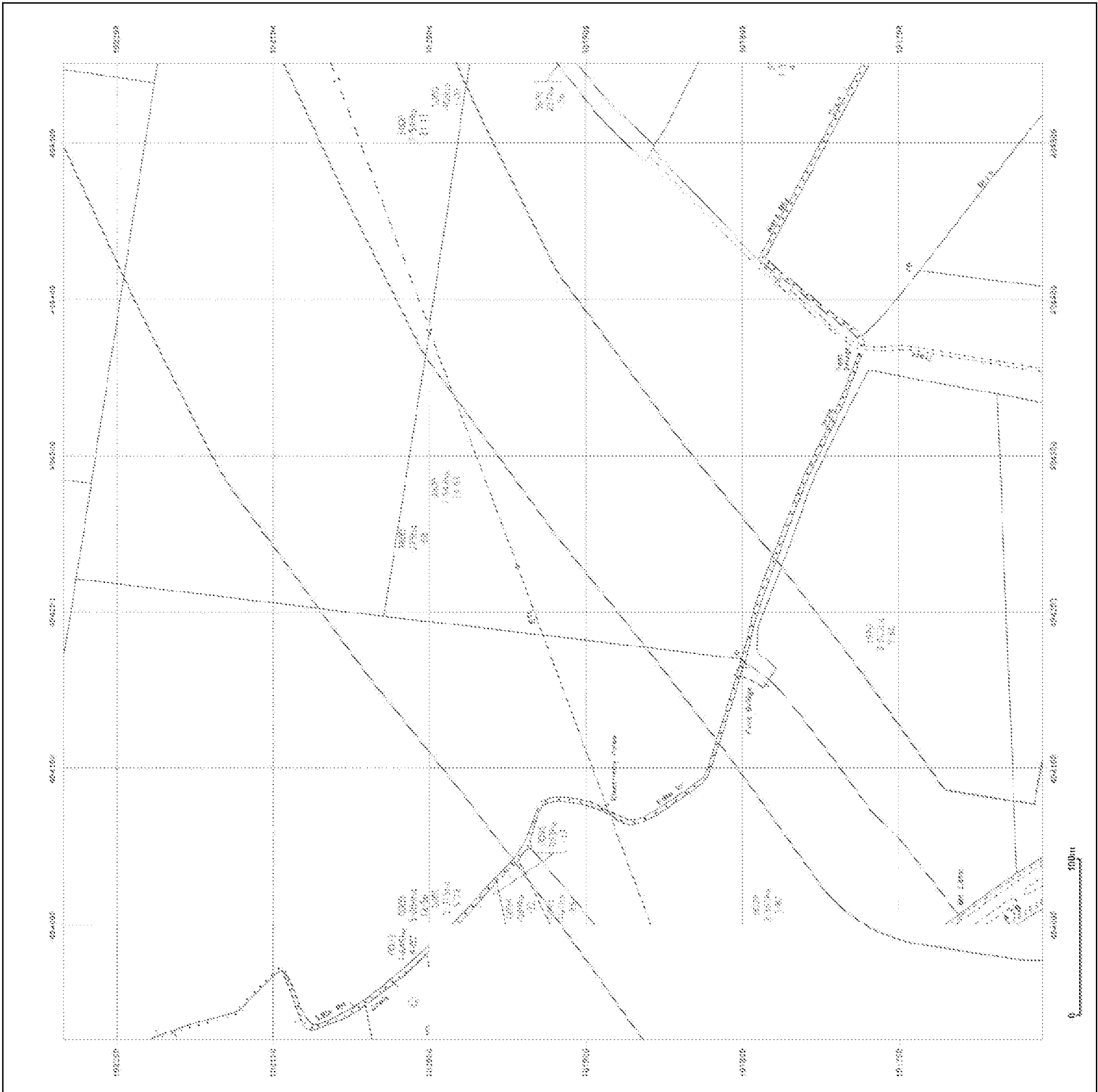
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Client Ref: N5752 / C14459
Report Ref: HYD-1466353_LS_A1
Grid Ref: 494239, 101921

Map Name: County Series

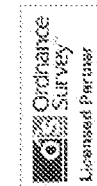
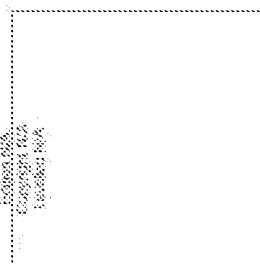
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Printed at: 1:2,500



Sheet ref: 1939
Revised: 1939
1:250000
Copyright: 1939
1:250000

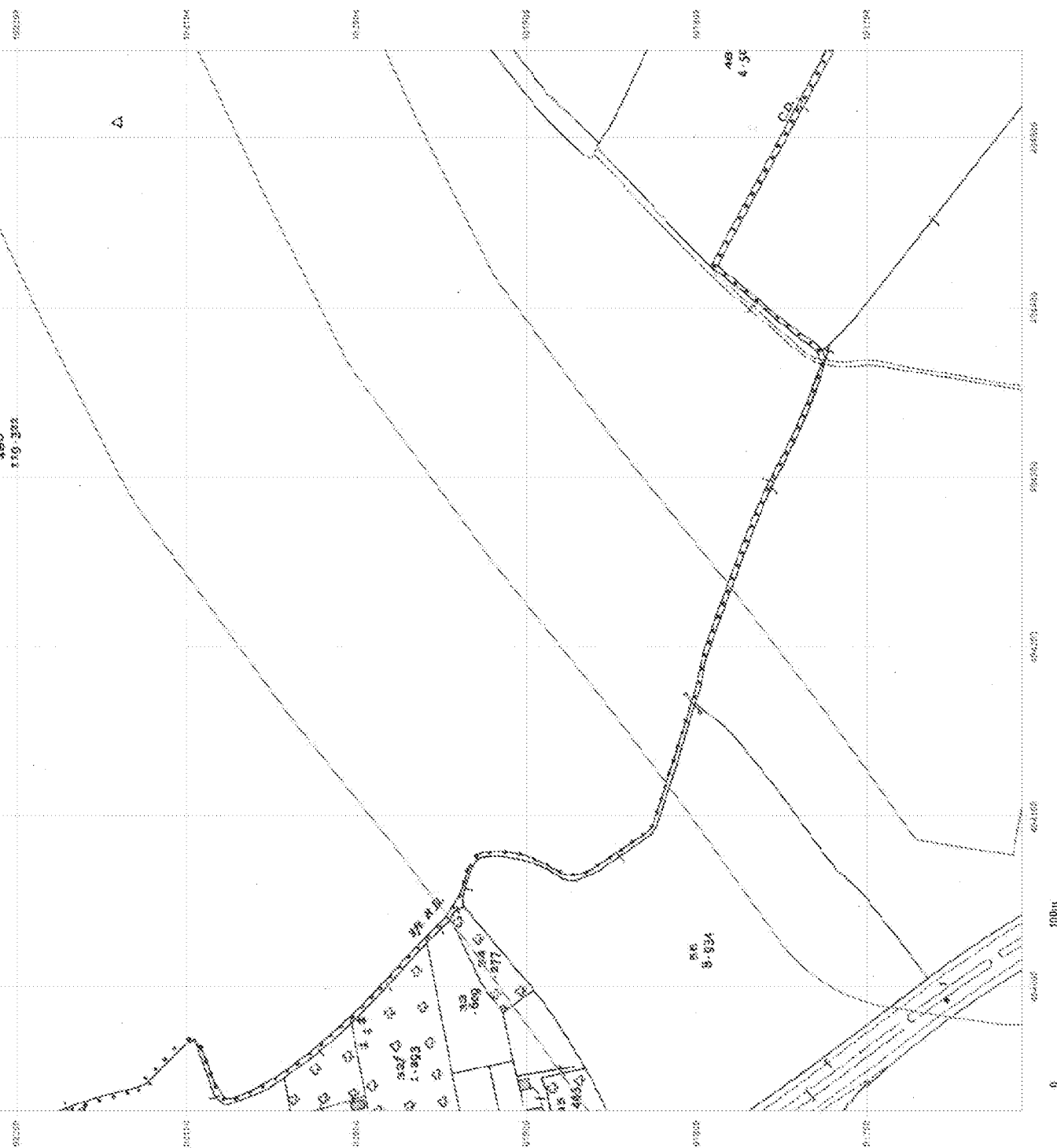


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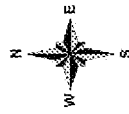


0 100m

Site Details:
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Regis, PO22 9ST

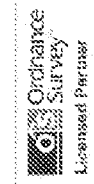
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Report Ref: HYD-1466353_LS_A1
Grid Ref: 494239, 101921

Map Name: County Series
Map date: 1912
Scale: 1:2,500
Printed at: 1:2,500



Statement: 1312
Revised: 1912
Author: J. B. B. B.
Checked: J. B. B. B.
Date: 13/03/2014
Version: 1.0

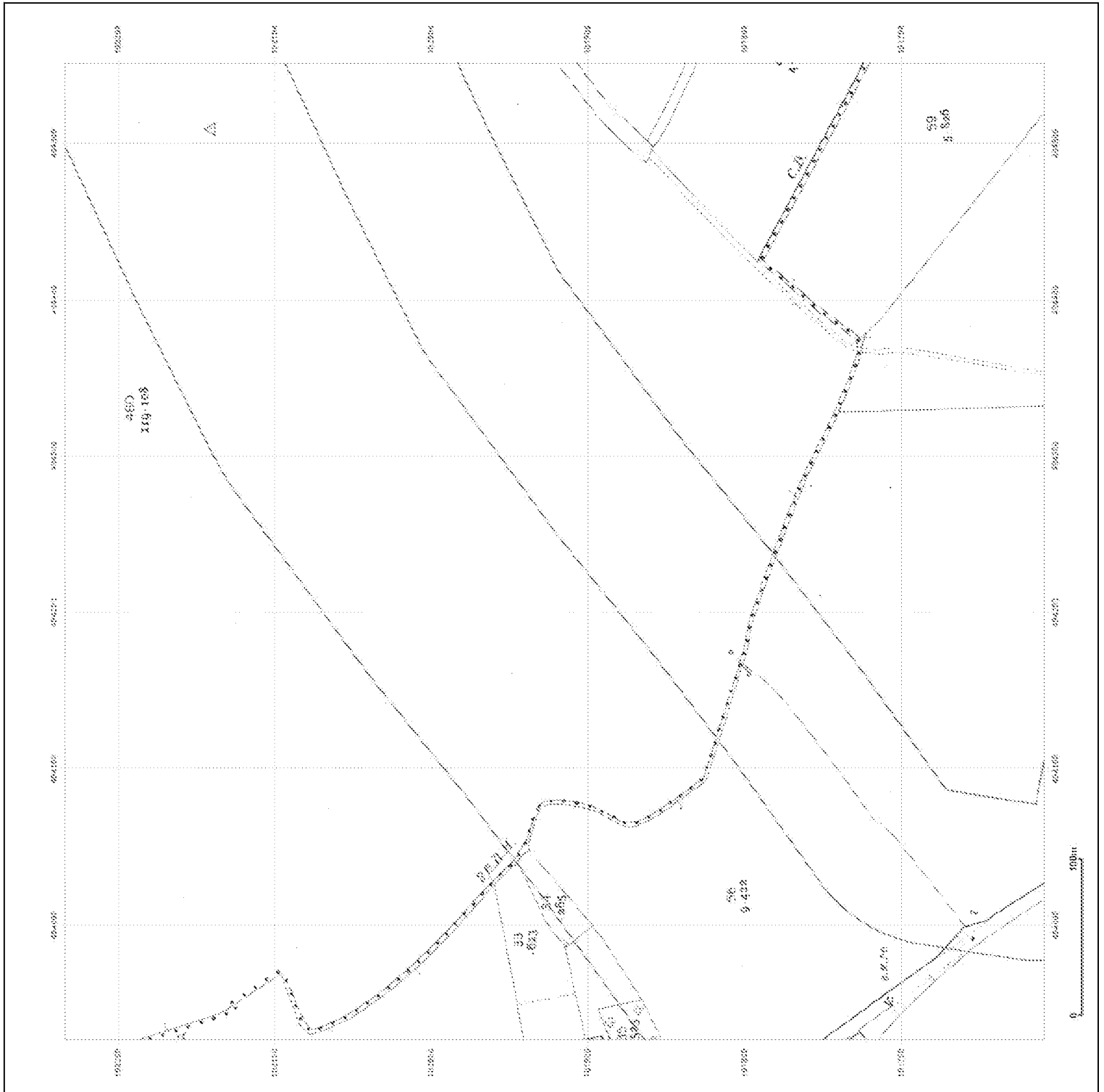
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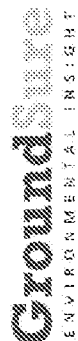


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Production date: 23 May 2014

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Land at Oldlands Farm, Bognor
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Client Ref: N5752 / C14459
Report Ref: HYD-1466353_LS_A1
Gnd Ref: 494239, 101921

Map Name: County Series

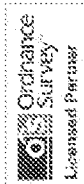
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Scale: 1:2,500

Printed at: 1:2,500



RESEARCH

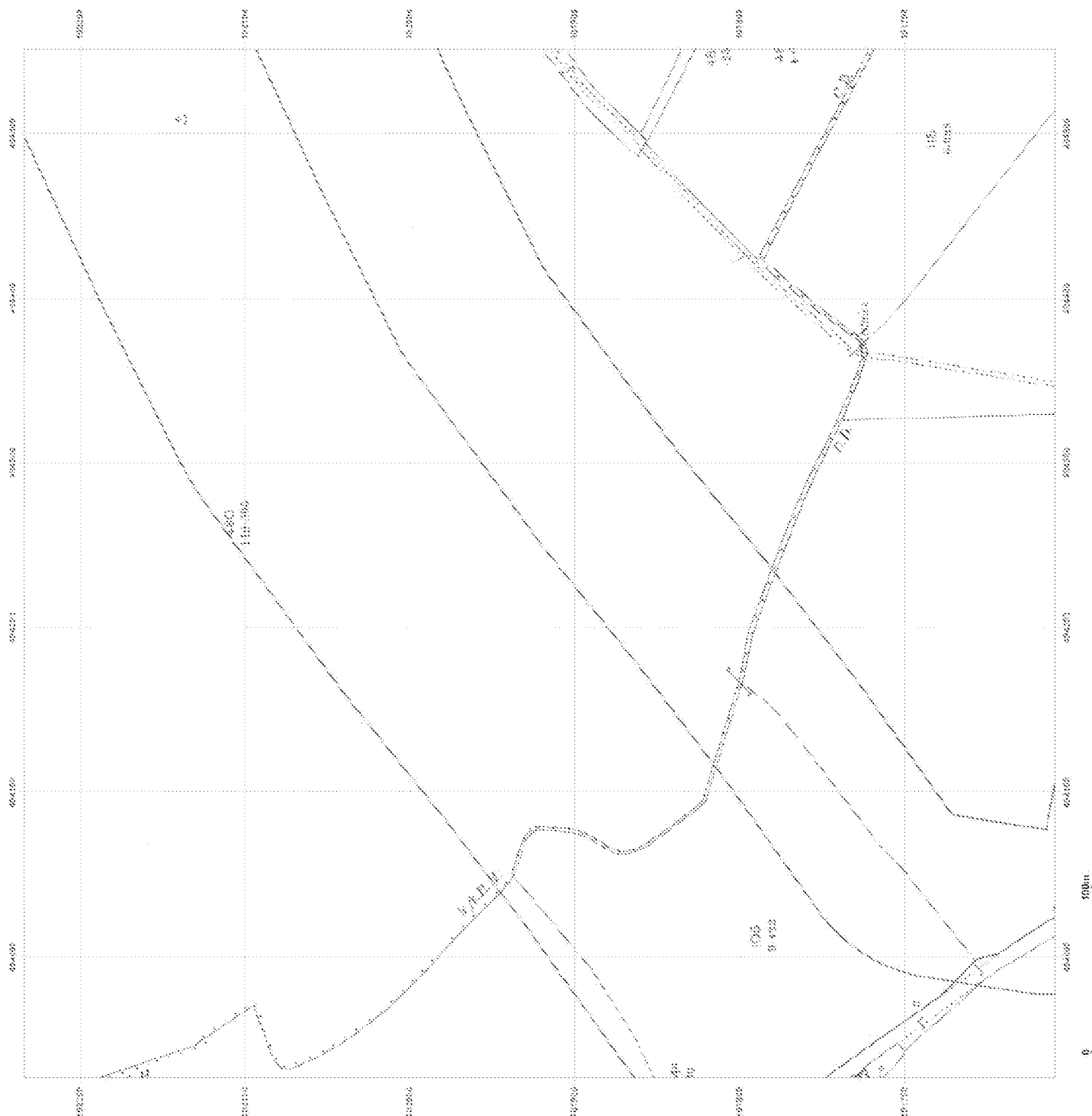


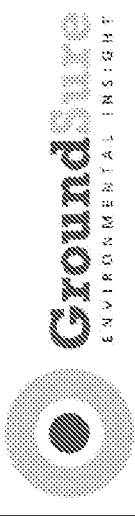
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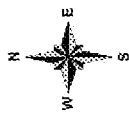




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Land at Oldlands Farm, Bognor
Regis, PO22 9ST

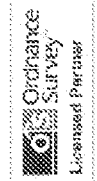
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Report Ref: HYD-146353_LS_A1
Grid Ref: 494239, 101921

Map Name: County Series
Map date: 1876
Scale: 1:2,500
Printed at: 1:2,500



Surveyed: 1876
Revised: 1876
Drawn: 1876
Checked: 1876
Grid Ref: 494239, 101921
Scale: 1:2,500
Printed: 1876

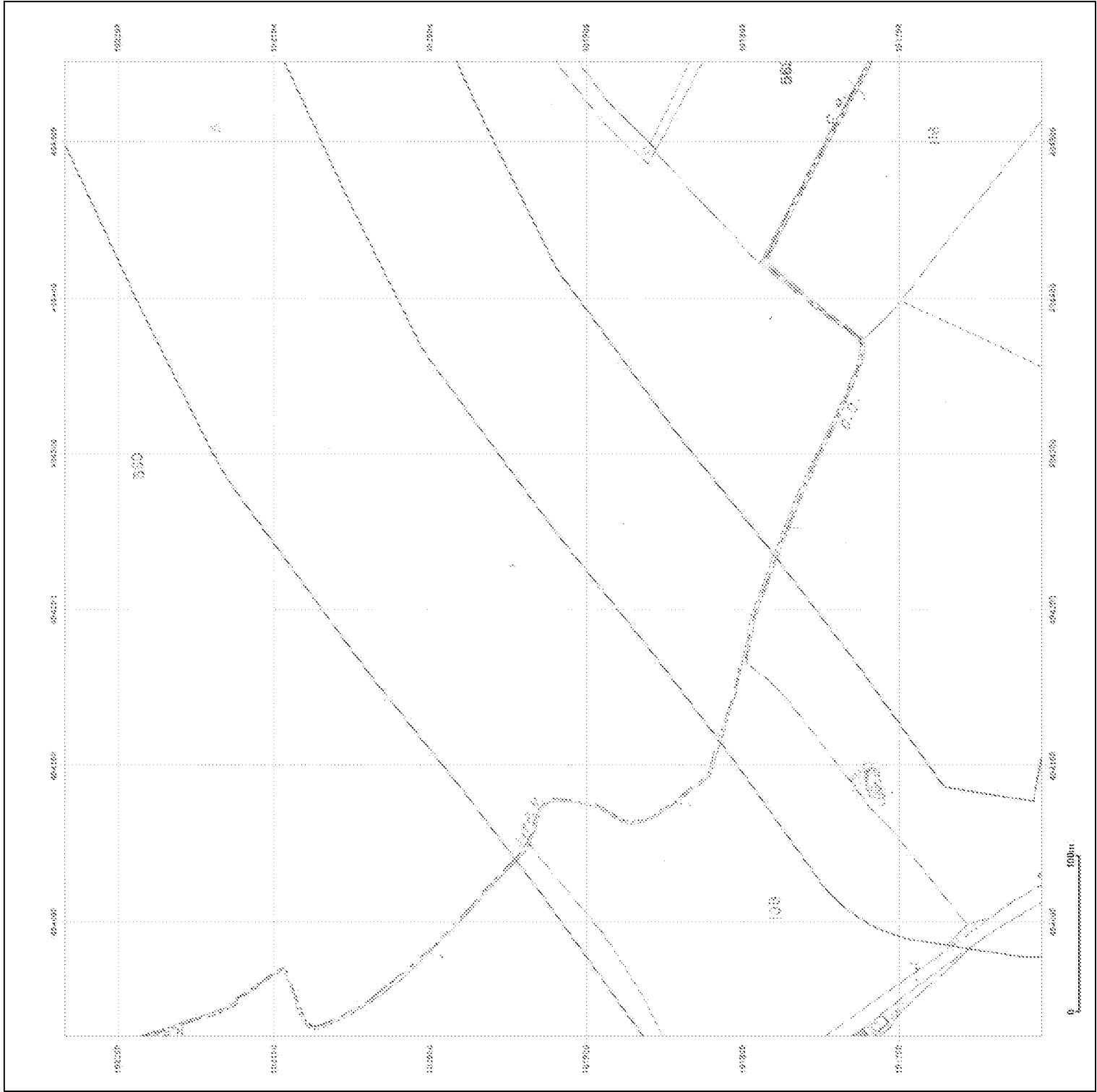
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Appendix D

Desk Study Research Information



Hydrock Consultants Ltd

2-4 Hawthorn Park, Holdenby Road,
Northampton, NN6 8LD

Report Reference: HYD-1466355

Your Reference: N5752 / C14459

Report Date 23 May 2014

Report Delivery Email - pdf
Method:

GroundSure Geolnsight

Address: Land at Oldlands Farm, Bognor Regis, PO22 9ST

Dear Sir/Madam,

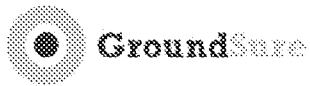
Thank you for placing your order with GroundSure. Please find enclosed the GroundSure Geolnsight as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 01752 347 515 quoting the above report reference number.

Yours faithfully,

Hydrock

Enc.
GroundSure Geolnsight



GroundSure GeolInsight

Address: Land at Oldlands Farm, Bognor Regis, PO22 9ST
Date: 23 May 2014
Reference: HYD-1466355
Client: Hydrock Consultants Ltd



Aerial Photograph Capture date: 13-Sep-2012
Grid Reference: 494377,101684
Site Size: 22.03ha

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Overview of Findings

The GroundSure GeoInsight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and GroundSure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the 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 Geology

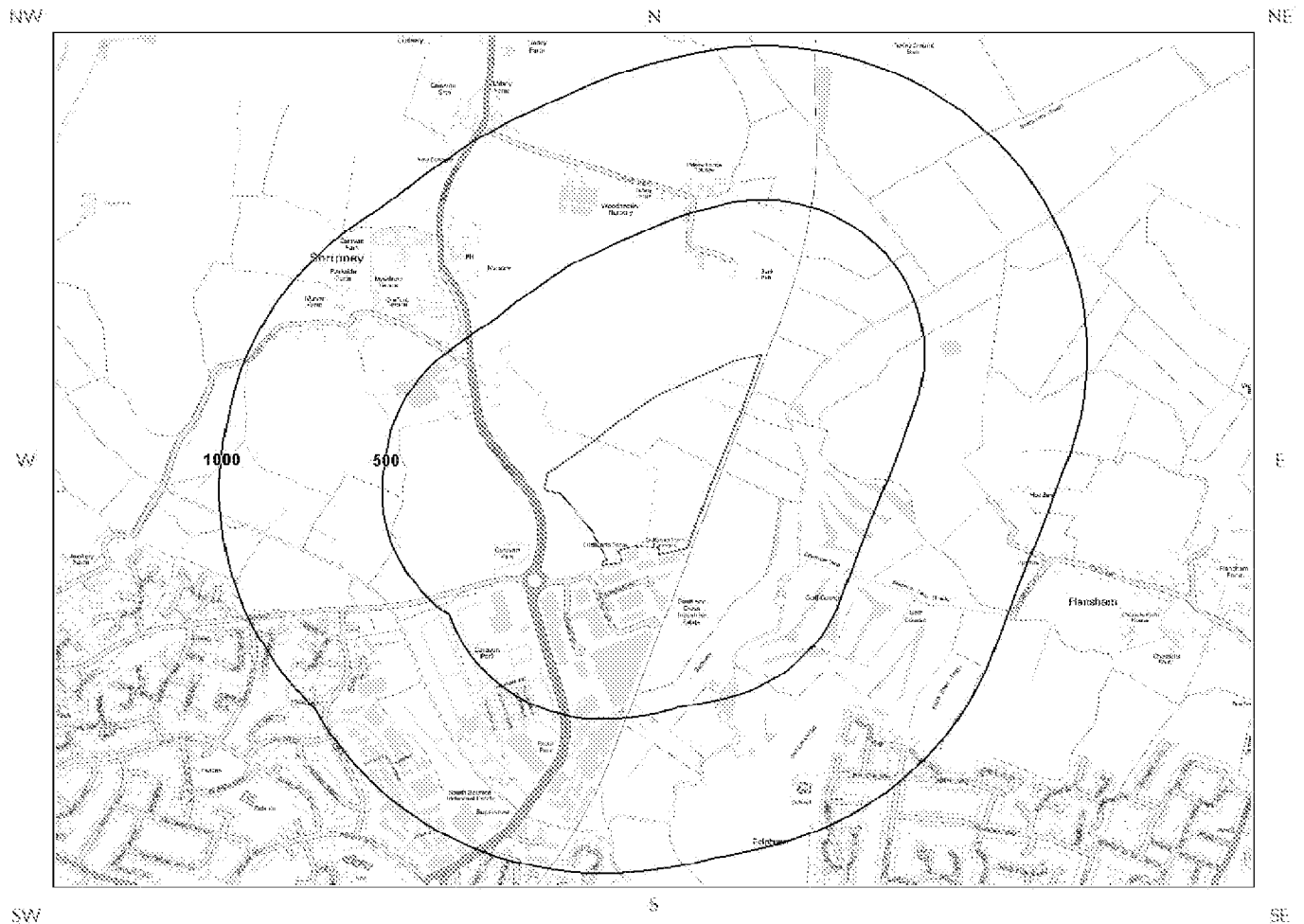
1.1 Artificial Ground	1.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?	Yes
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	Yes
	1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	1.2.4 Are there any records relating to permeability of landslips within the study site boundary?	No
1.3 Bedrock, Solid Geology & Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records relating to permeability of bedrock within the study site boundary?	Yes
	1.3.3 Are there any records of faults within 500m of the study site boundary?	No
1.4 Radon data	1.4.1 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 property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level
	1.4.2 Is the property in an area where Radon Protection Measures 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 2 Ground Workings	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	9	0	0	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	0	0	0	0

Section 3: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining	1	0	0	1	0
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0
Section 4: Natural Ground Subsidence	On-site				
4.1 Shrink Swell Clay	Low				
4.2 Landslides	Very Low				
4.3 Ground Dissolution of Soluble Rocks	Very Low				
4.4 Compressible Deposits	Negligible				
4.5 Collapsible Deposits	Low				
4.6 Running Sand	Low				
Section 5: Borehole Records	On-site	0-50m	51-250		
5 BGS Recorded Boreholes	1	0	0		
Section 6: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
6 Records of Background Soil Chemistry	4	0	2		

1 Geology

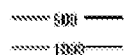
1.1 Artificial Ground Map



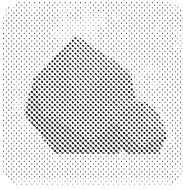
Artificial Ground Legend



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	Site Outline		Made Ground (undivided)		Disturbed Ground (undivided)
	Search Buffers (m)		Worked Ground (undivided)		Landscaped Ground (undivided)
			Infilled Ground		Reclaimed Ground

Report Reference: HYD-1466355
Client Reference: N5752 / C14459



1 Geology

1.1 Artificial Ground

1.1.1 Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:332

Are there any records of Artificial/Made Ground within 500m of the study site boundary? No

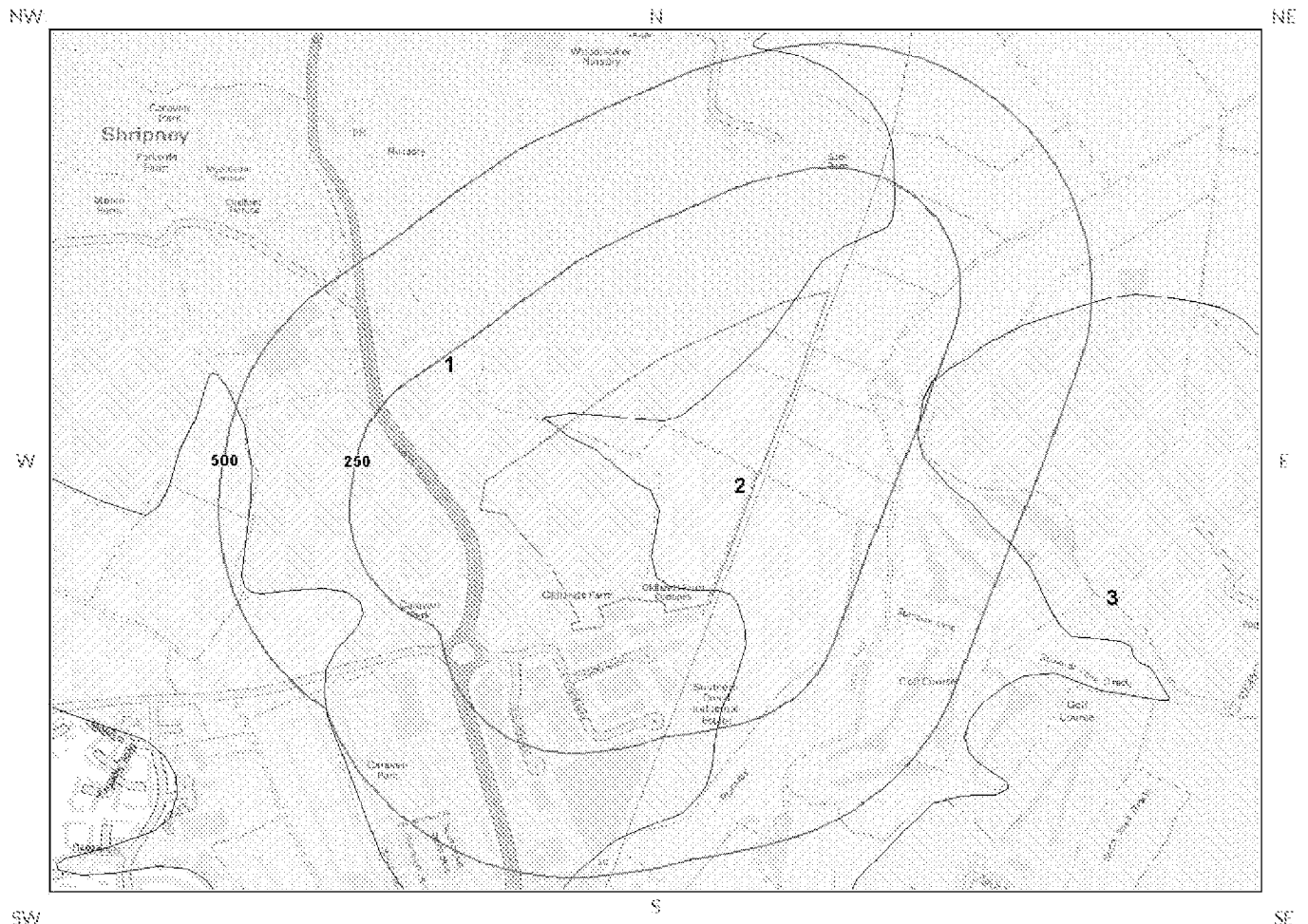
Database searched and no data found.

1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

1.2 Superficial Deposits and Landslips Map



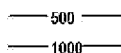
Superficial Deposits and Landslips
Legend



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Site Outline



Search Buffers (m)

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	RTDU-SSCL	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND, SILT AND CLAY
2	0.0	On Site	RMD-CSSG	RAISED MARINE DEPOSITS	CLAY, SILT, SAND AND GRAVEL
3	240.0	E	RTDU-SSCL	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND, SILT AND CLAY

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Very Low
0.0	On Site	Intergranular	High	Low

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

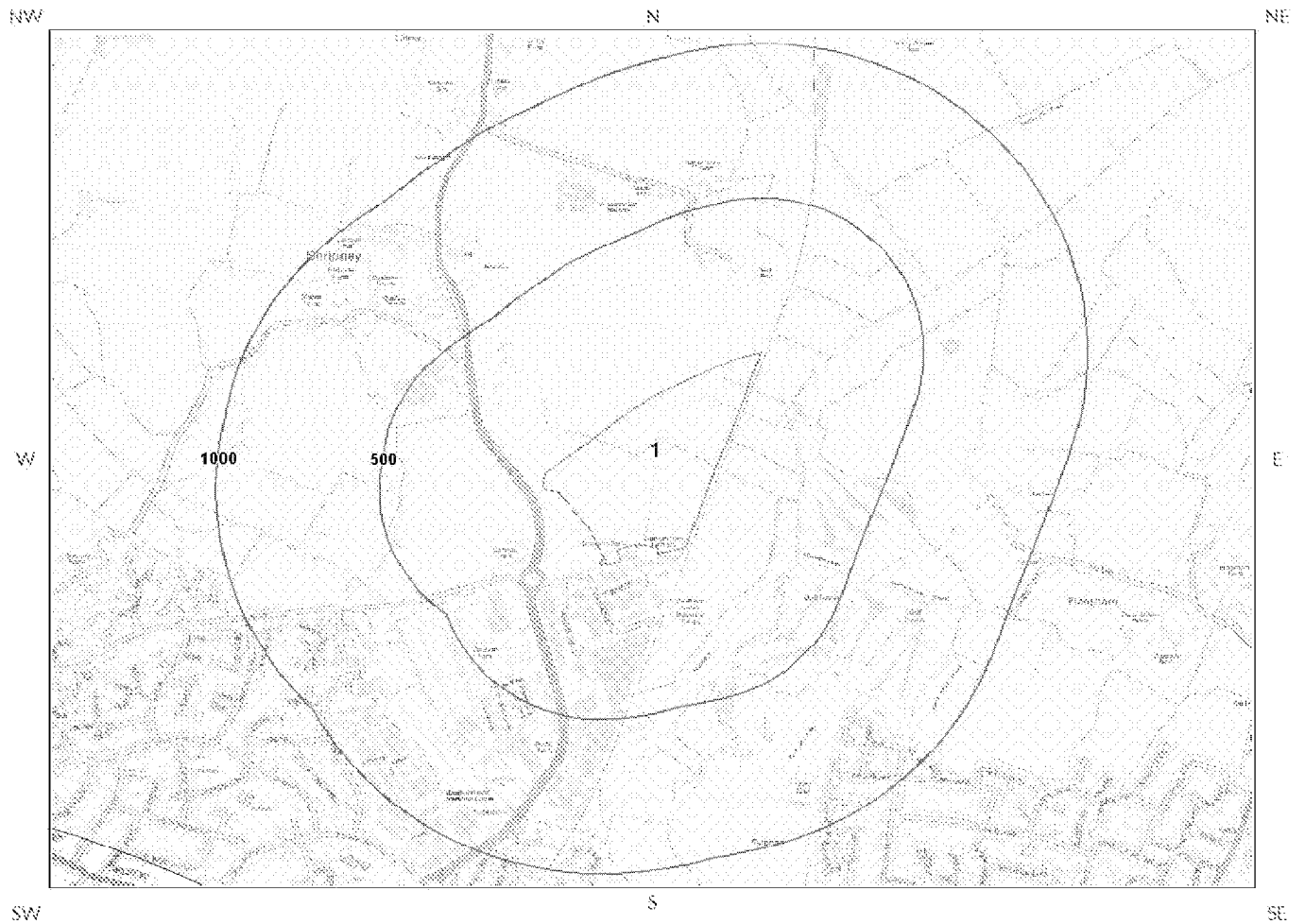
1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site** boundary? No

Database searched and no data found.

* This includes an automatically generated 50m buffer zone around the site

1.3 Bedrock and Faults Map



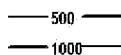
Bedrock and Faults Legend



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Site Outline



Search Buffers (m)

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:332

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/ Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEXCode	Description	Rock Age
1	0.0	On Site	LPCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation And Portdown C	Campanian / Turonian

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Very High	Very High

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

* This includes an automatically generated 50m buffer zone around the site

1.4 Radon Data

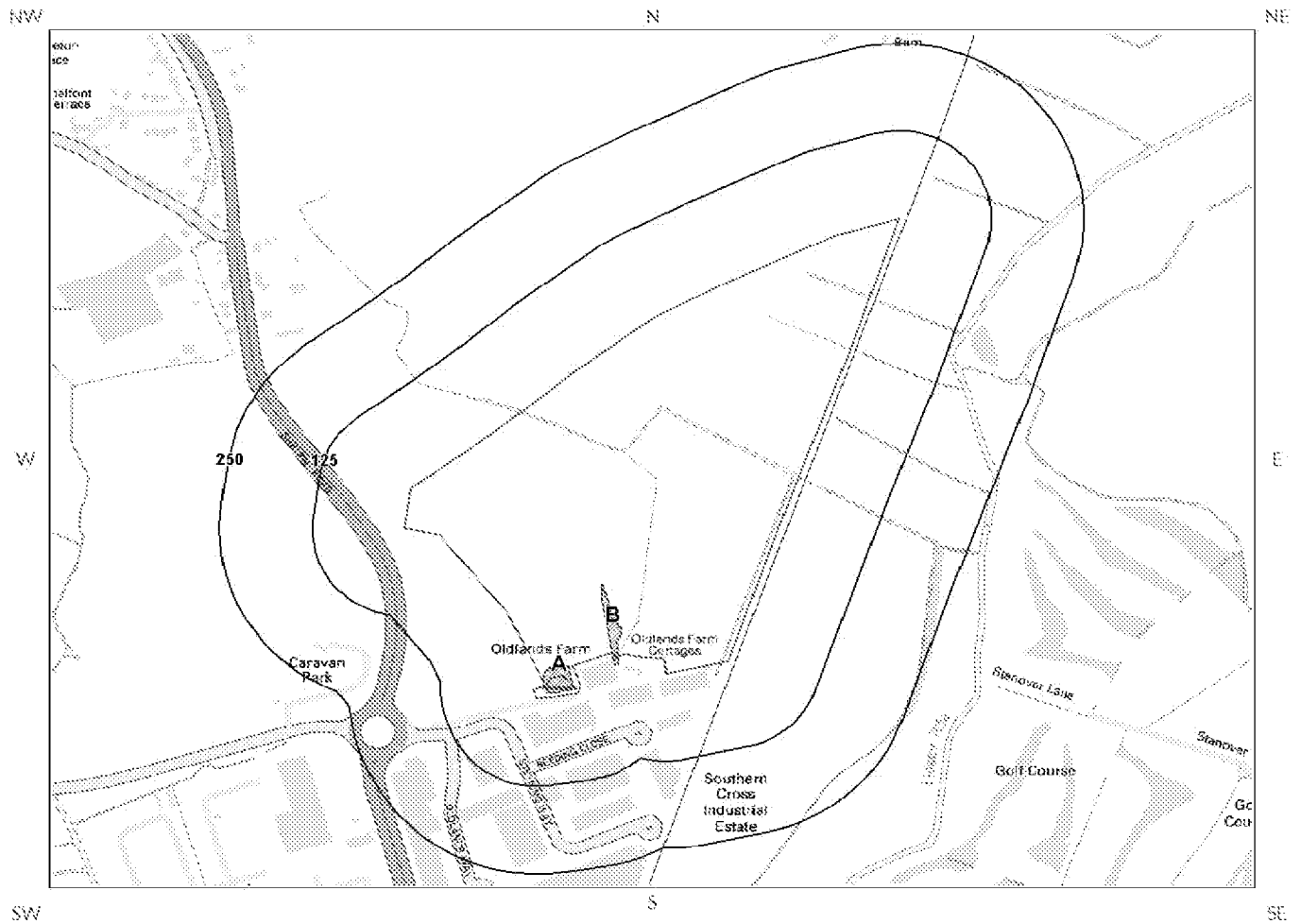
1.4.1 Radon Affected Areas

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 property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level

1.4.2 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

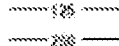
2 Ground Workings Map

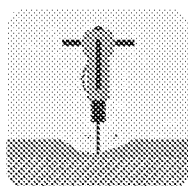


Ground Workings Legend



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- | | | | |
|---|--------------------|---|----------------------------------|
|  | Site Outline |  | Historic Surface Ground Workings |
|  | Search Buffers (m) |  | Historic Underground Workings |
| | |  | Current Ground Workings |



2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on GroundSure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
1A	0.0	On Site	494285 101403	Pond	1876
2B	0.0	On Site	494358 101477	Pond	1876
3A	0.0	On Site	494285 101394	Pond	1896
4A	0.0	On Site	494285 101394	Pond	1950
5A	0.0	On Site	494285 101394	Pond	1910
6A	0.0	On Site	494289 101383	Pond	1876
7A	0.0	On Site	494285 101403	Pond	1876
8B	0.0	On Site	494358 101477	Pond	1876
9A	0.0	On Site	494289 101383	Pond	1876

2.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the GroundSure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

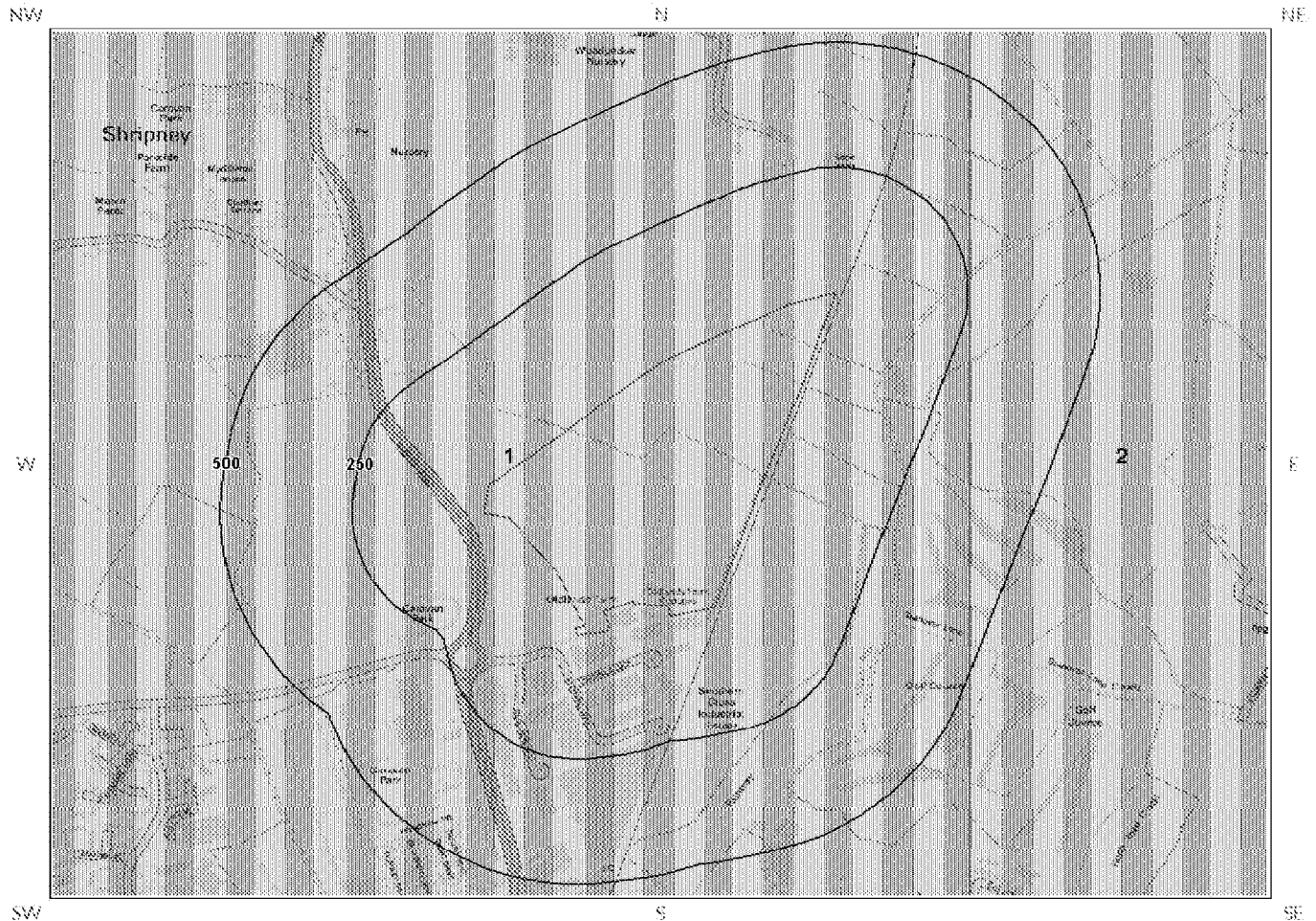
2.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? No

Database searched and no data found.

3 Mining, Extraction & Natural Cavities Map



Mining, Extraction and
Natural Cavities Legend



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