

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

2.2.2 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	Low

2.2.3 Landslip

Are there any records of Landslip 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, there 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.

2.2.4 Landslip Permeability

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

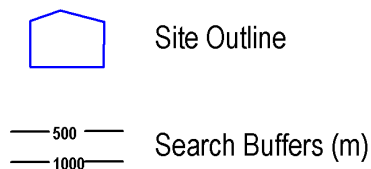
Database searched and no data found.

2.3 Bedrock and Faults Map (1:50,000 scale)



Ground Workings Legend

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2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 068

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	CLHOM-MDST	CLITHEROE LIMESTONE FORMATION AND HODDER MUDSTONE FORMATION (UNDIFFERENTIATED) - MUDSTONE	WISEAN

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low

2.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
3	210.0	W	FAULT	Fault, inferred

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 nation wide coverage.

3 Radon Data

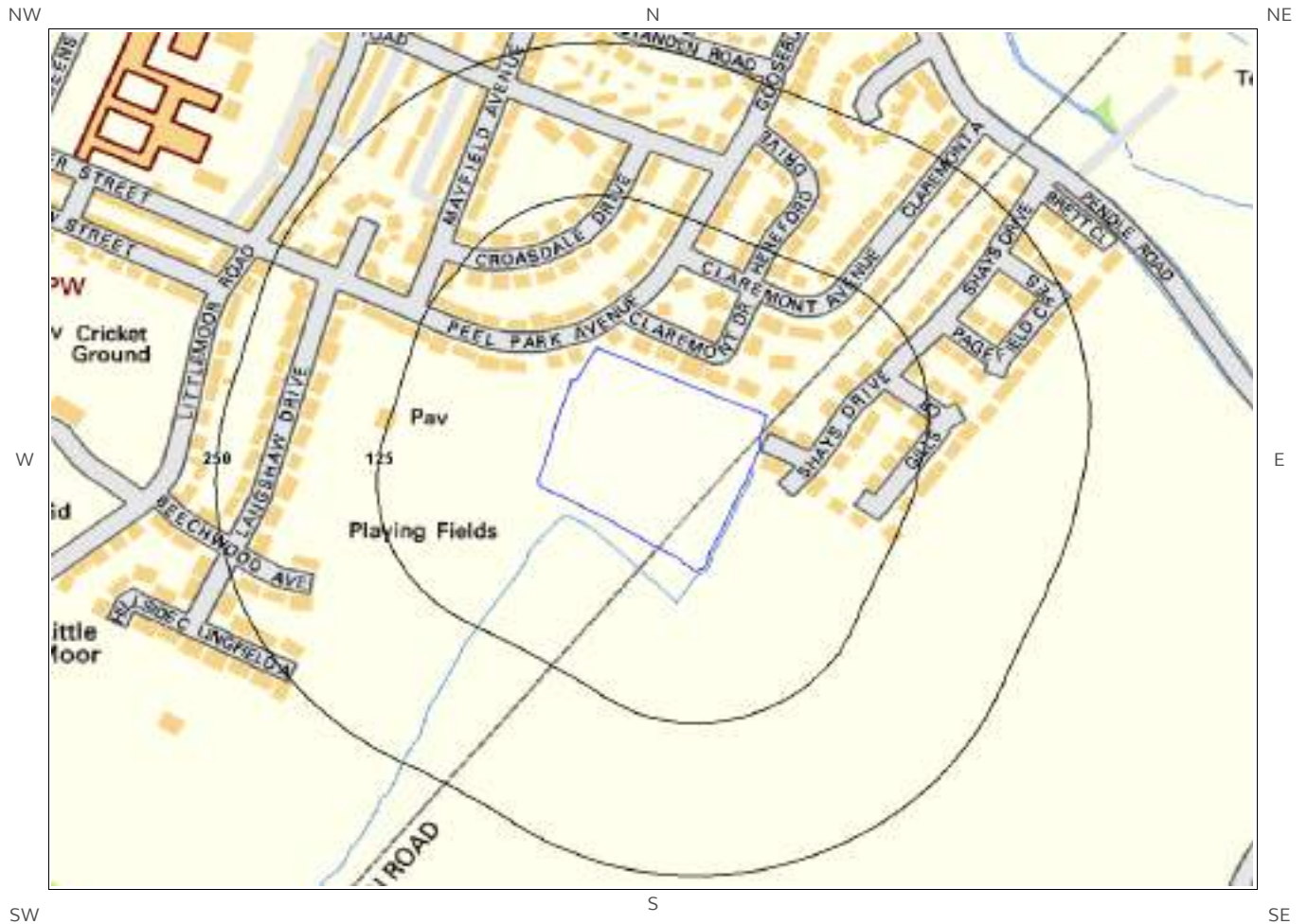
3.1 Radon Affected Areas

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 in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

3.2 Radon Protection

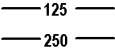
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 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 |

4 Ground Workings

4.1 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? No

Database searched and no data found.

4.2 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.

4.3 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.

5 Mining, Extraction & Natural Cavities Map



**Mining, Extraction and
Natural Cavities Legend**

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
2	101.0	E	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
Not shown	884.0	S	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	898.0	S	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

5.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

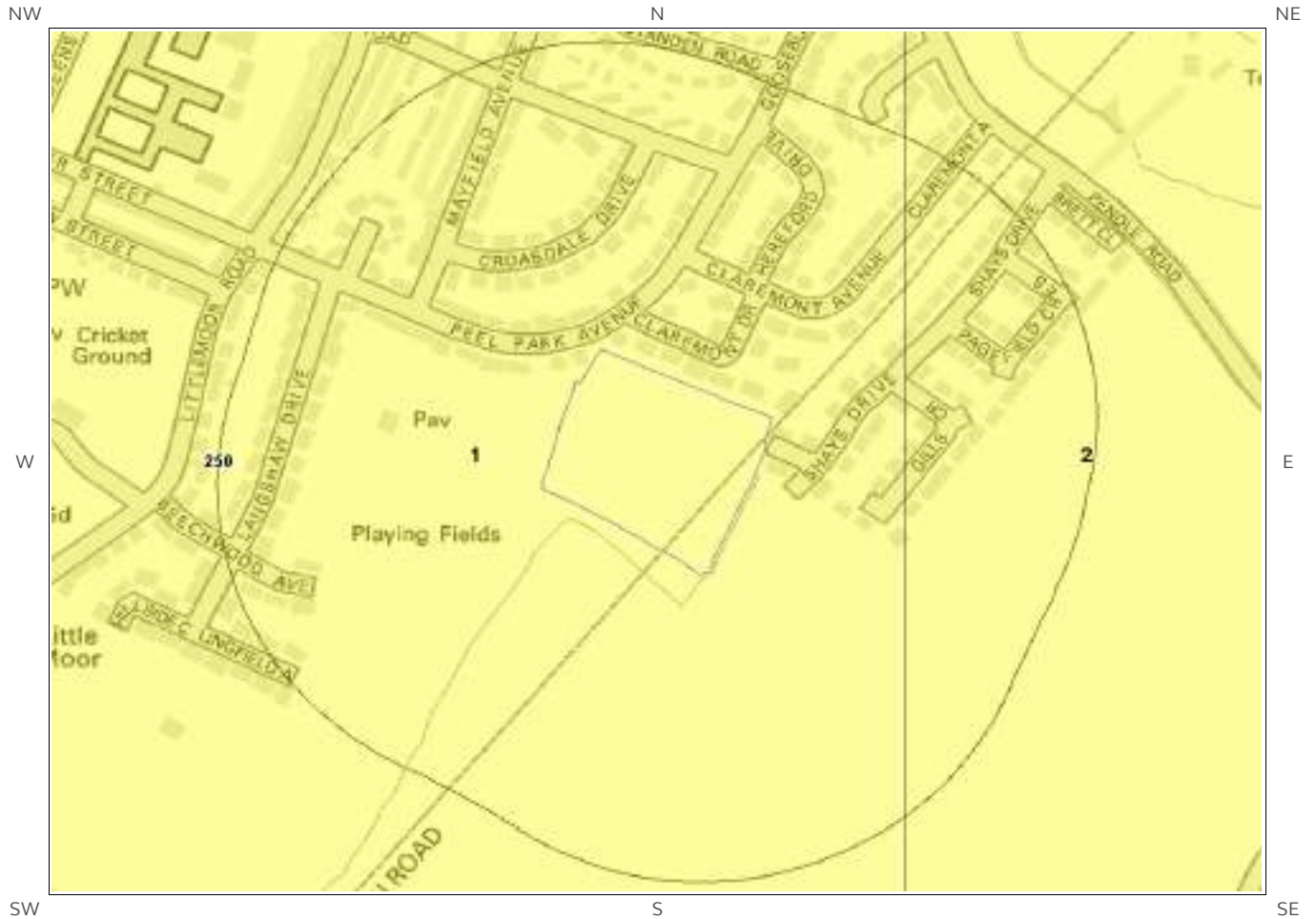
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay Map

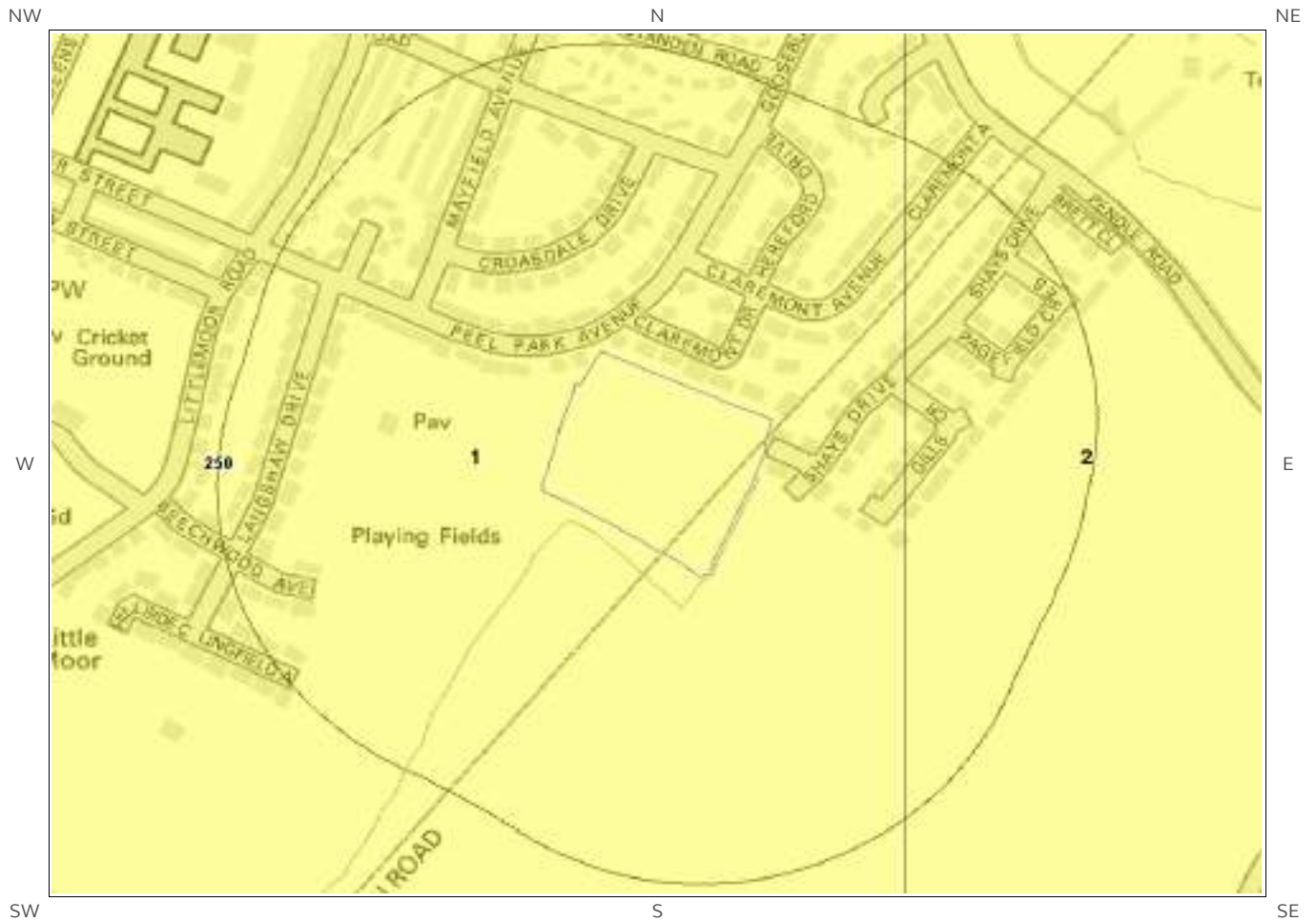


Shrink Swell Clay Legend

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6.2 Landslides Map

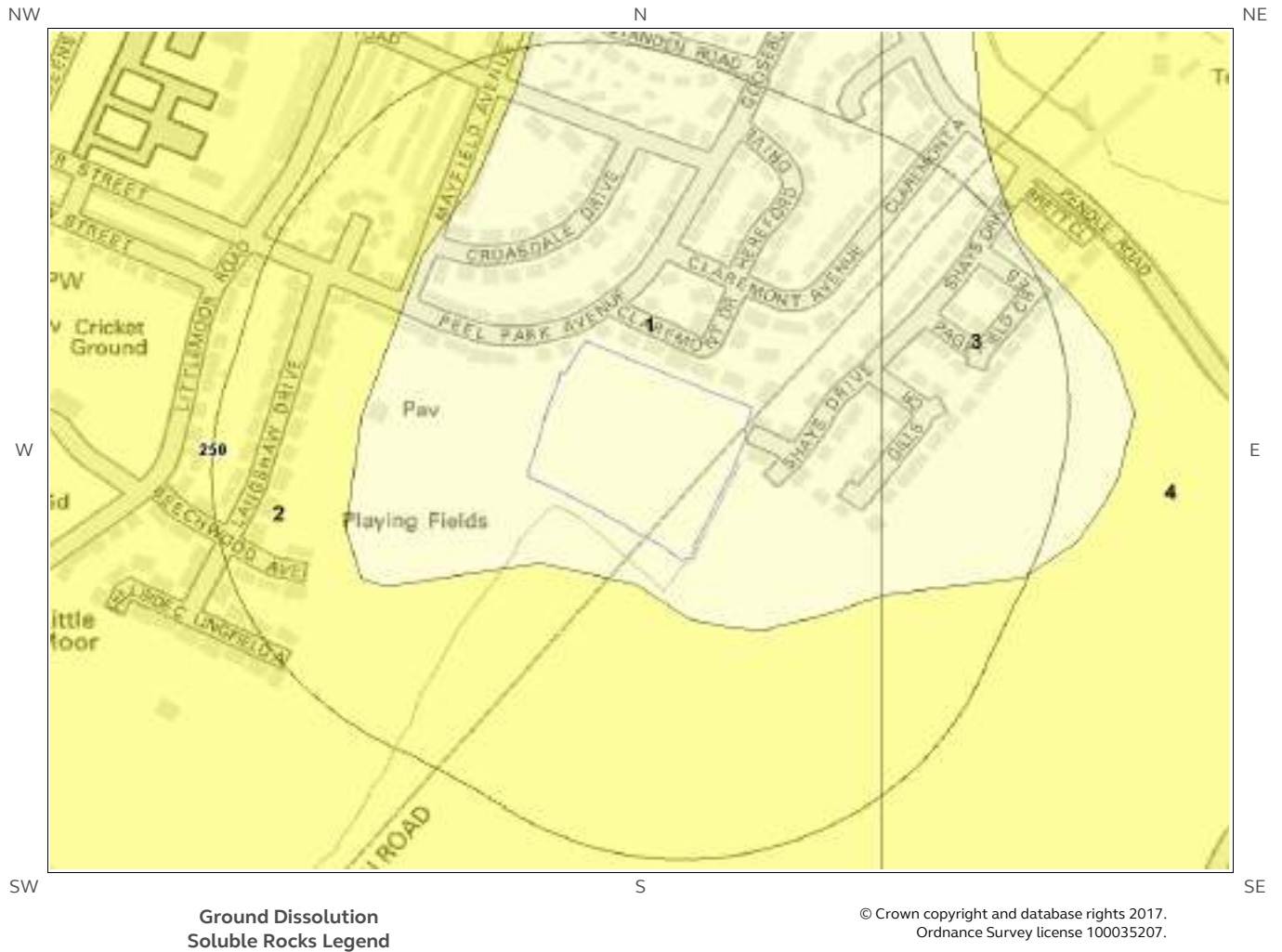


Landslides Legend

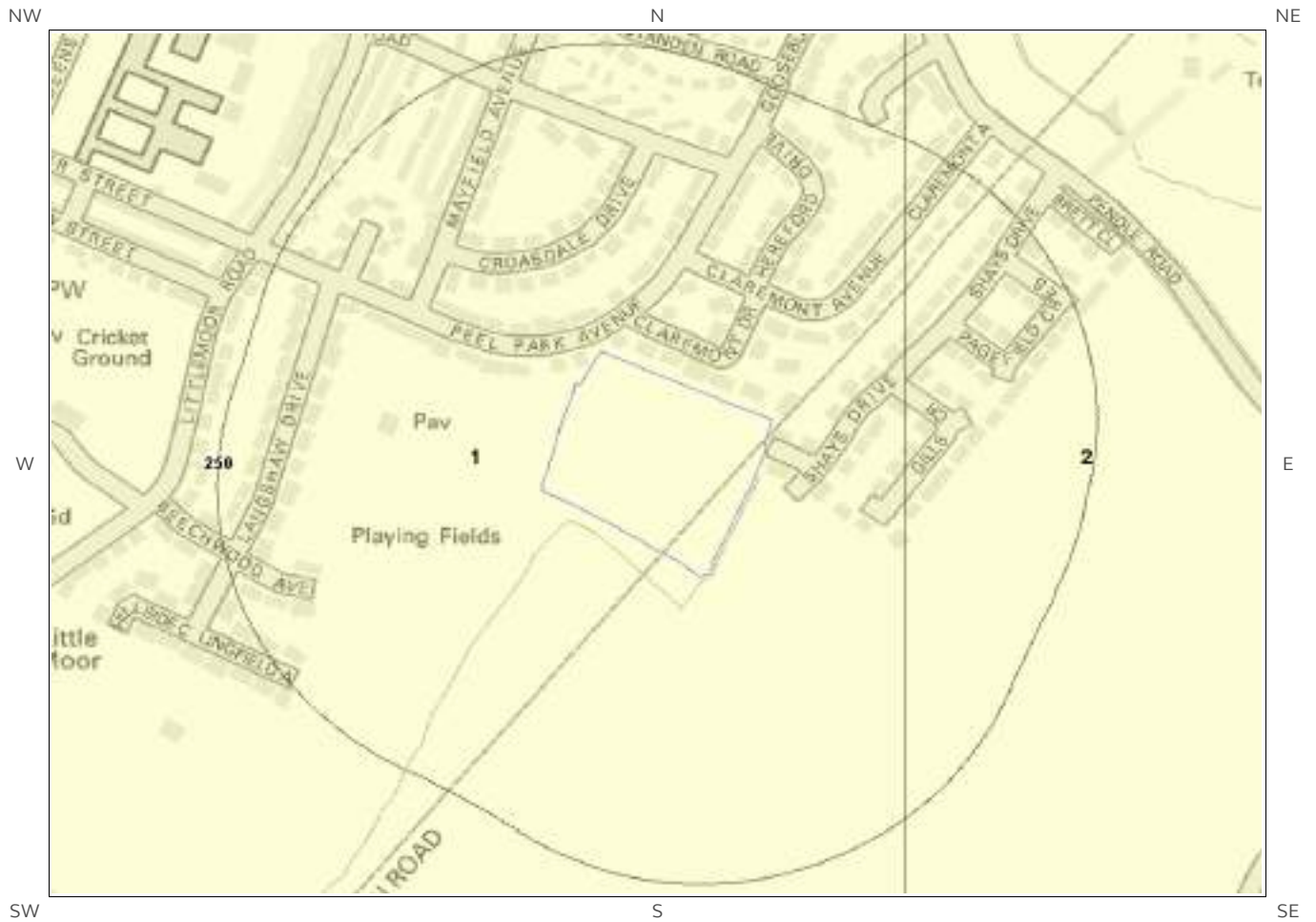
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6.3 Ground Dissolution of Soluble Rocks Map



6.4 Compressible Deposits Map



Compressible Deposits Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary? **Very Low**

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. 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 due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	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.

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

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

ID	Distance (m)	Direction	Hazard Rating	Details
2	37.0	SW	Very Low	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.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	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.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

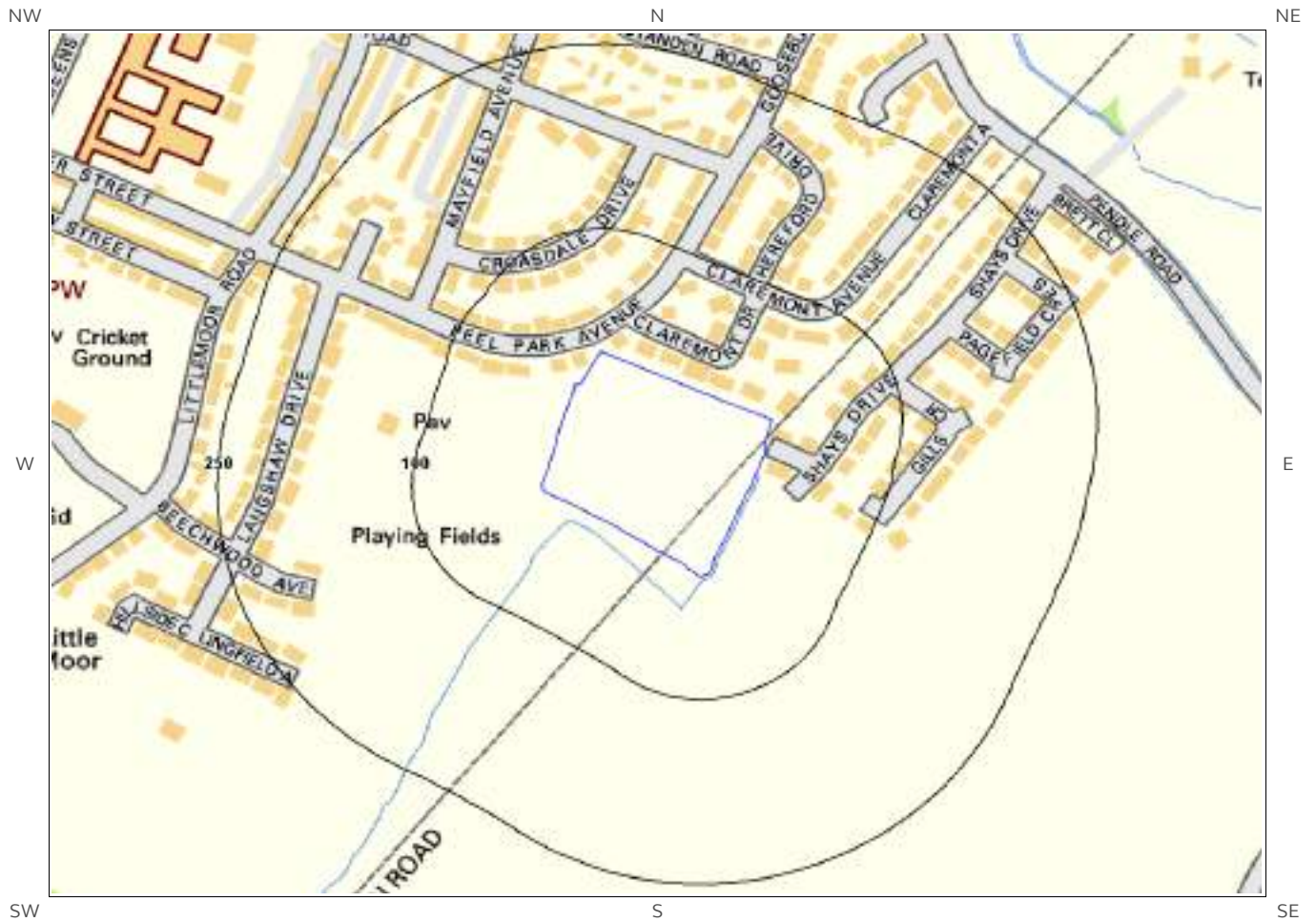
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

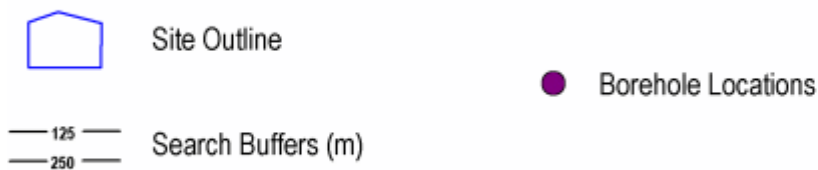
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records Map



Borehole Records Legend

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7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

0

Database searched and no data found.

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

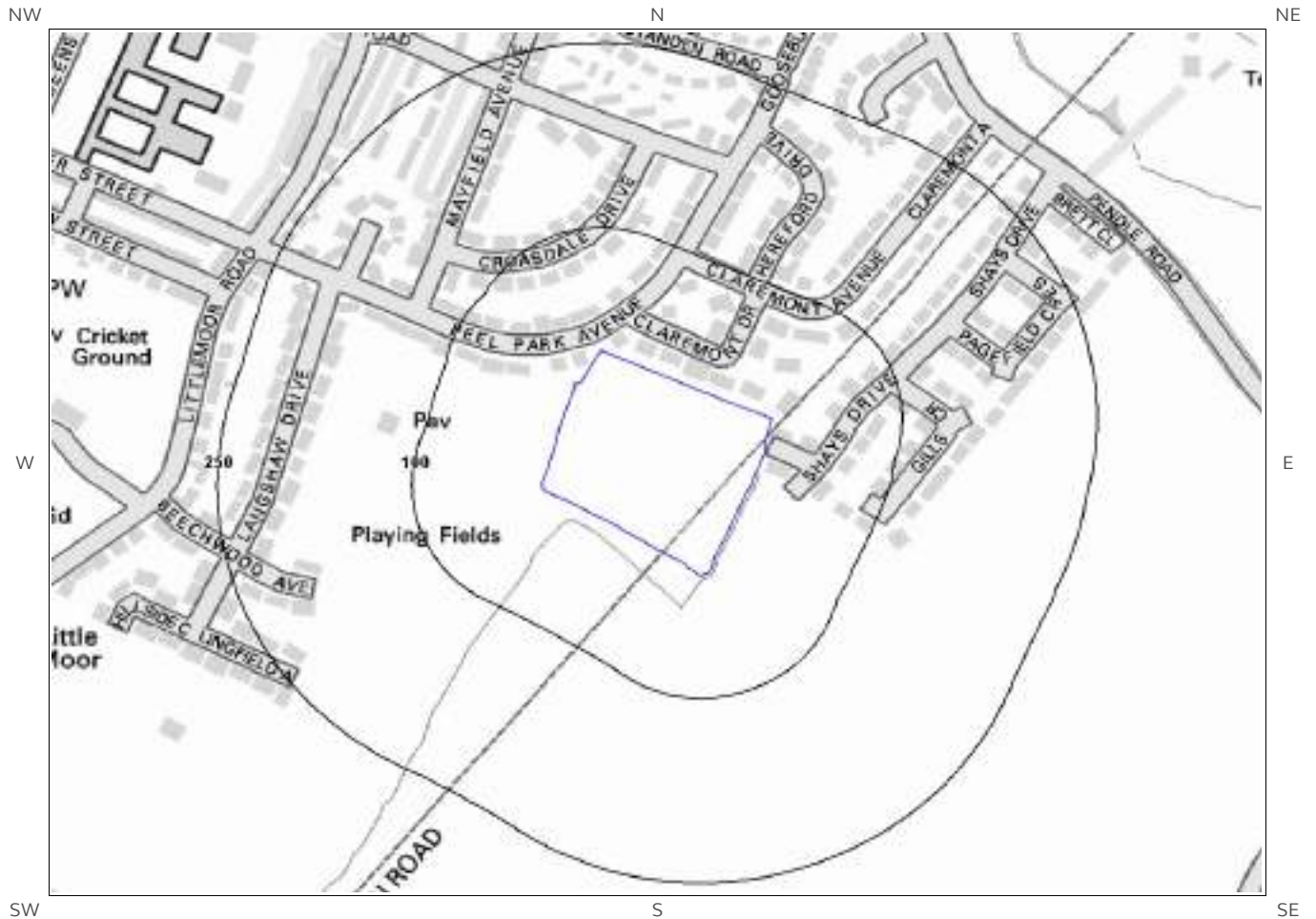
3

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels Map



Railways and Tunnels Legend

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9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

*Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a **Groundsure HS2 and Crossrail 1 Report**.*

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

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Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries



**British
Geological Survey**
NATURAL ENVIRONMENT RESEARCH COUNCIL

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Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



The Coal
Authority

Public Health England

Public information access office
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133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



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<https://www.groundsure.com/terms-and-conditions-sept-2016/>

APPENDIX D

These Ordnance Survey maps are not printed to scale and have been reduced to A4 size

A3 1/10,000 plans are available upon request

Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series

Map date: 1884

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1884
Revised 1884
Edition N/A
Copyright N/A
Levelled N/A



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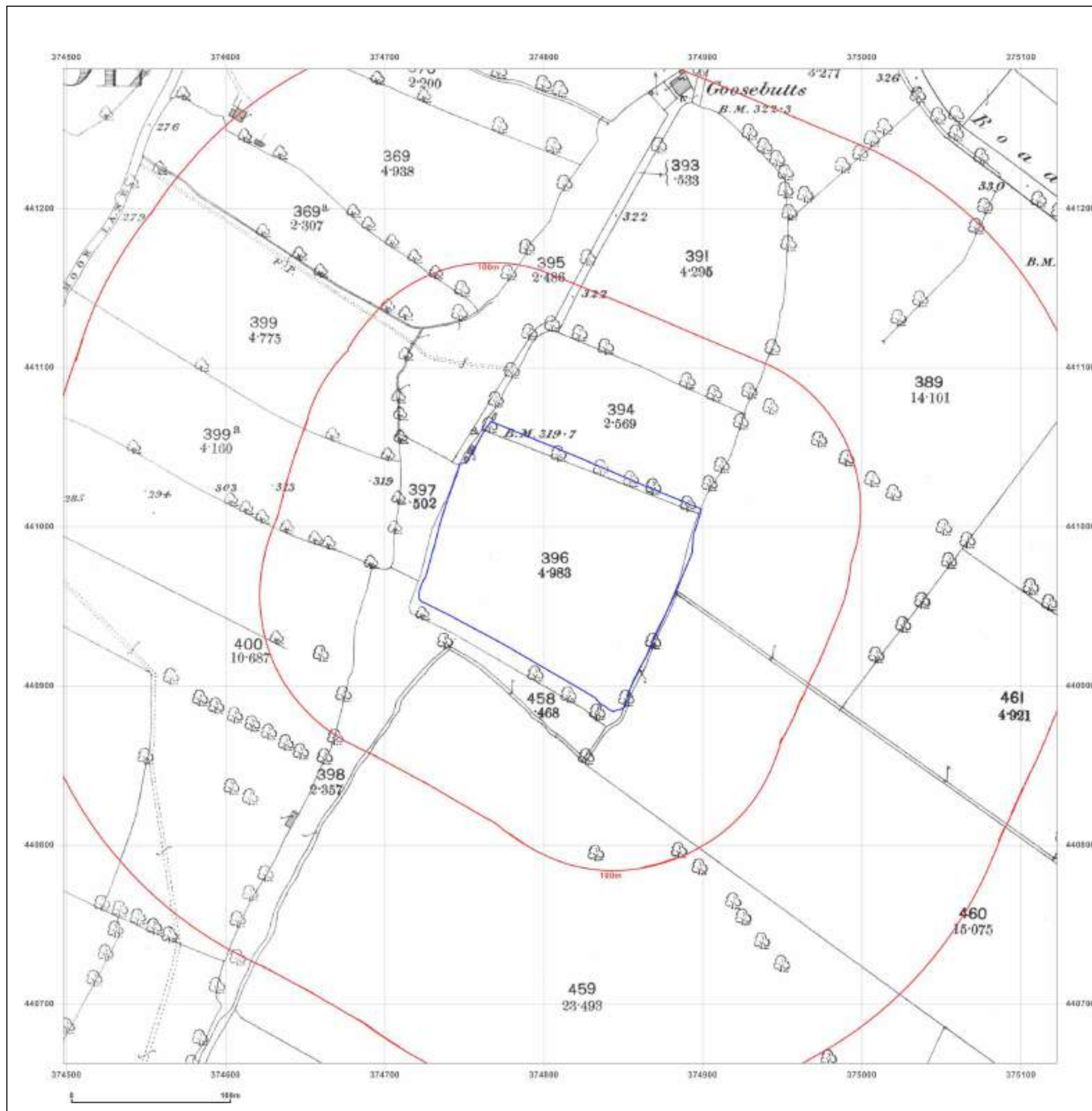


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Production date: 12 July 2017

To view map legend click here [Legend](#)





Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series

Map date: 1912

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1912
Revised 1912
Edition N/A
Copyright N/A
Levelled N/A



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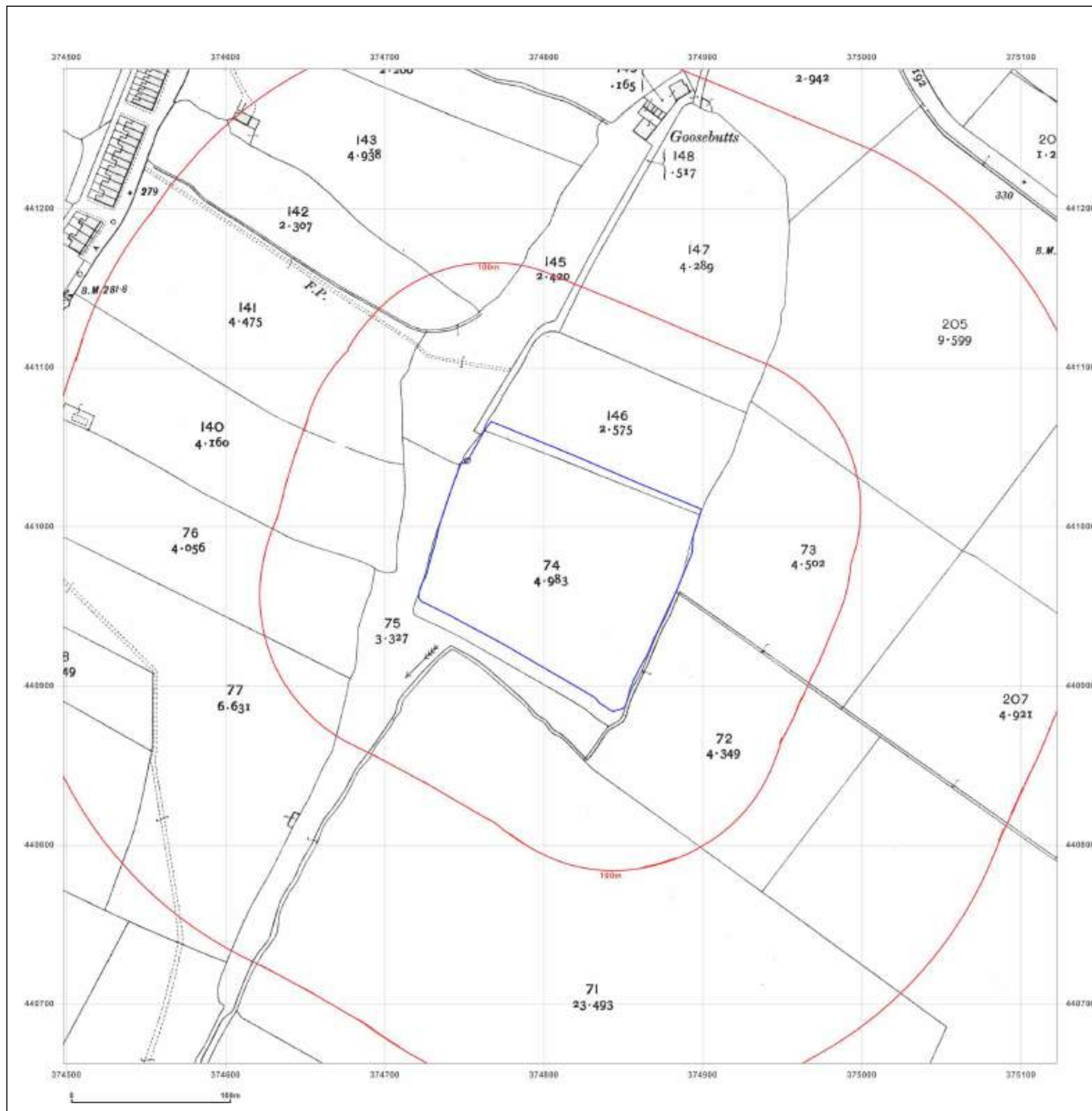


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Site Details:

32 Peel Park Avenue, Clitheroe,
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Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

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



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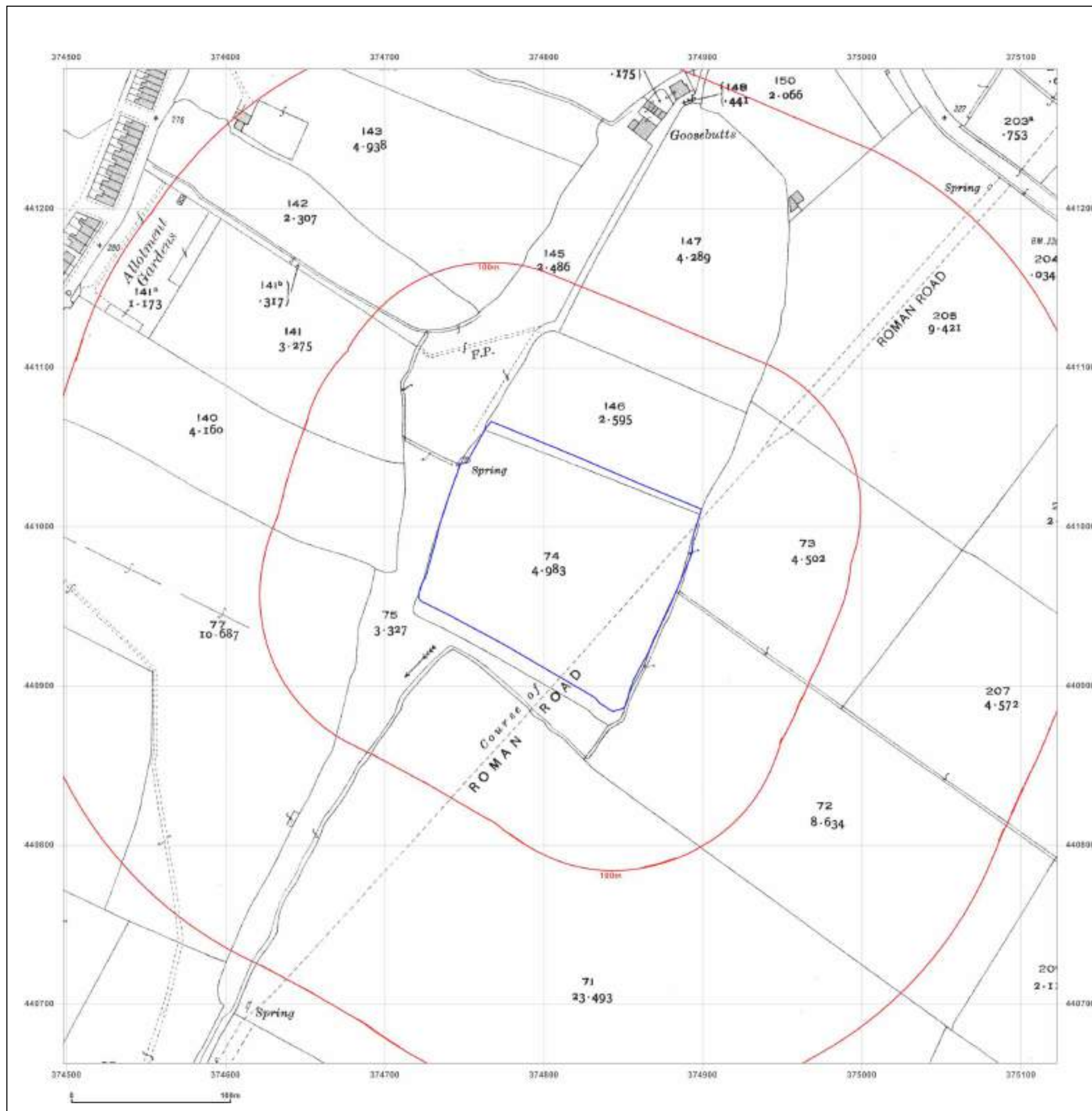


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32 Peel Park Avenue, Clitheroe,
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Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

Map date: 1964

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1984
Revised 1984
Edition N/A
Copyright 1985
Levelled 1962

Surveyed 1984
Revised 1984
Edition N/A
Copyright 1985
Levelled 1962



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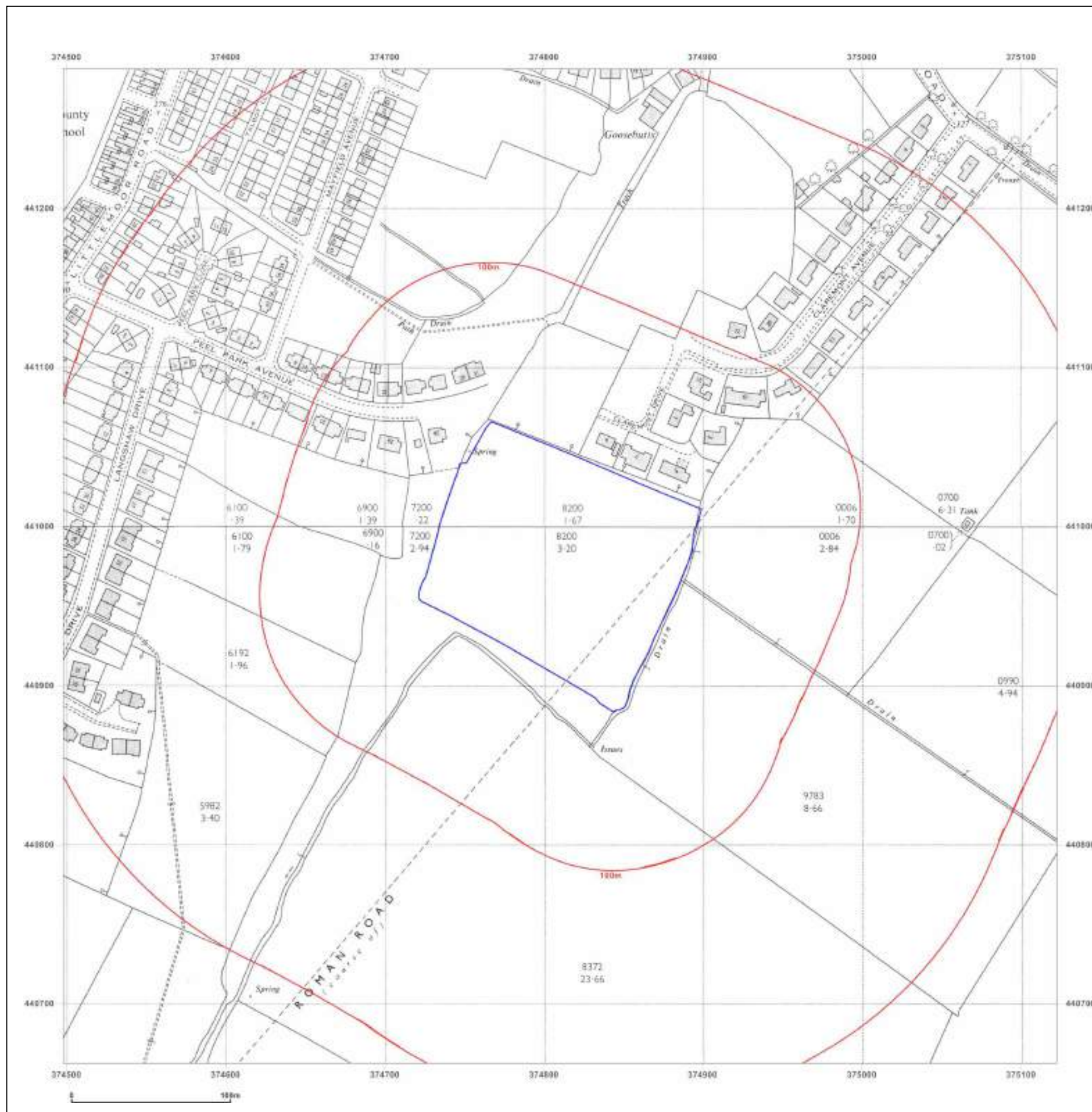


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Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

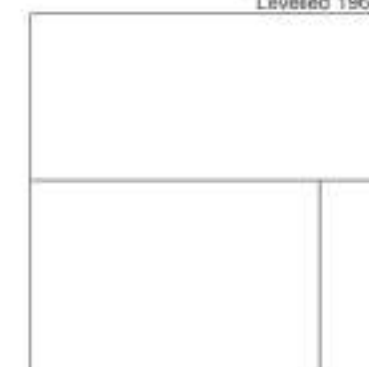
Map date: 1975-1976

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1978
Revised 1976
Edition N/A
Copyright 1977
Levelled 1962



Surveyed 1975
Revised 1975
Edition N/A
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BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

Map date: 1984-1986

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1984
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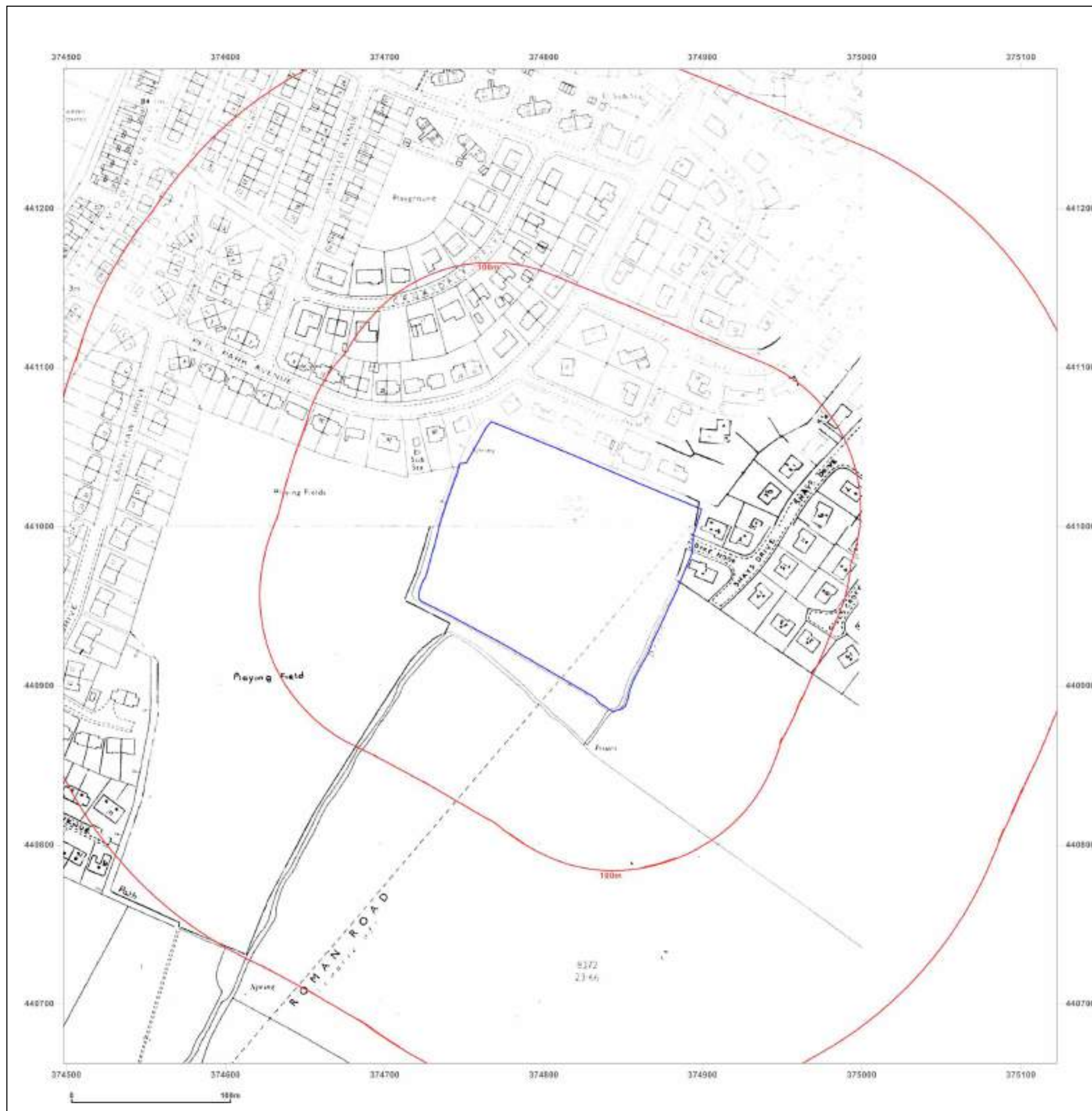


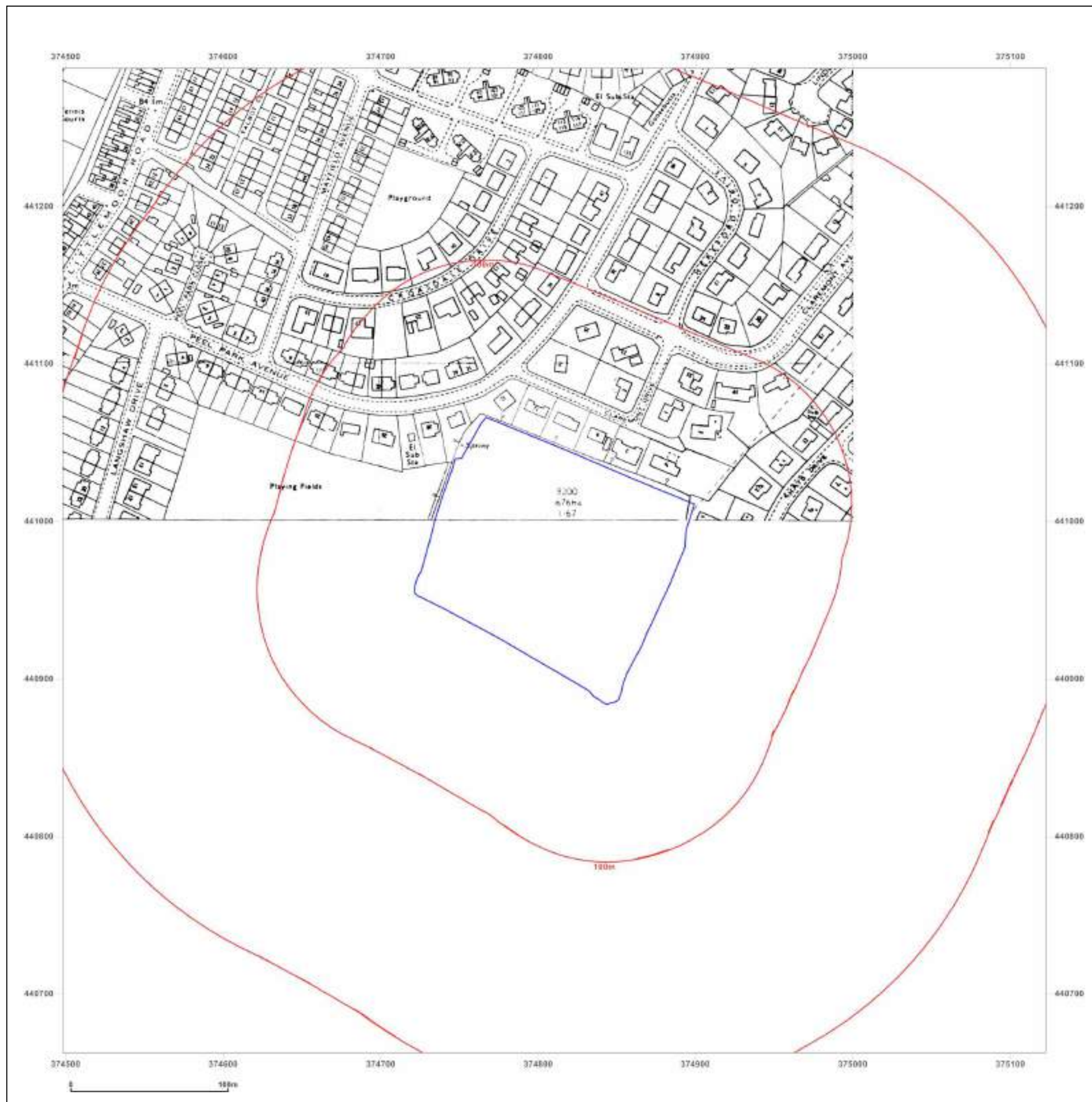
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Production date: 12 July 2017

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Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

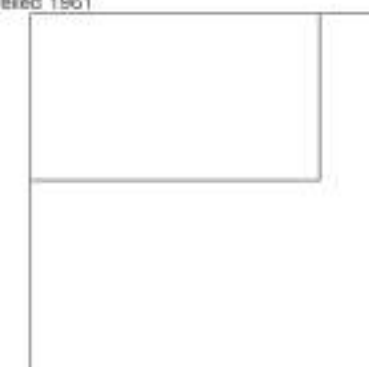
Map date: 1990

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1961
Revised 1990
Edition N/A
Copyright 1990
Levelled 1961



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Production date: 12 July 2017

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Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

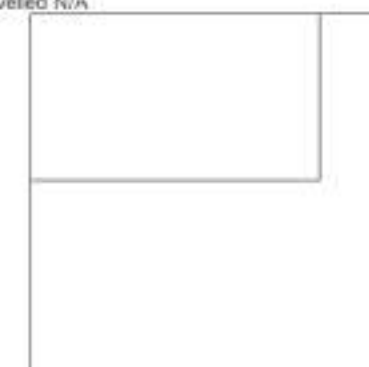
Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A



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Site Details:

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BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

Map date: 1990-1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1990
Levelled 1961

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

Surveyed 1993
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

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



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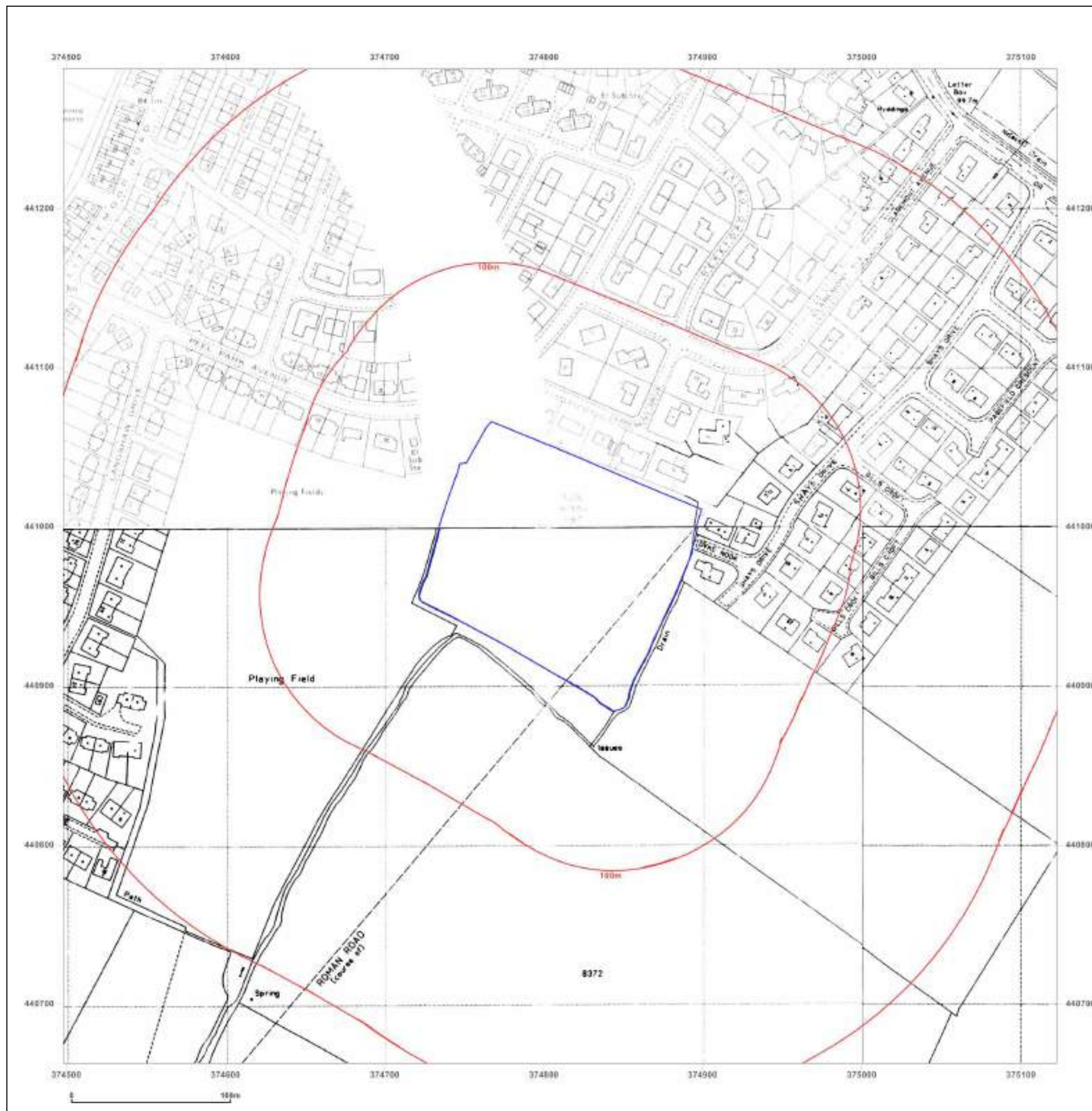


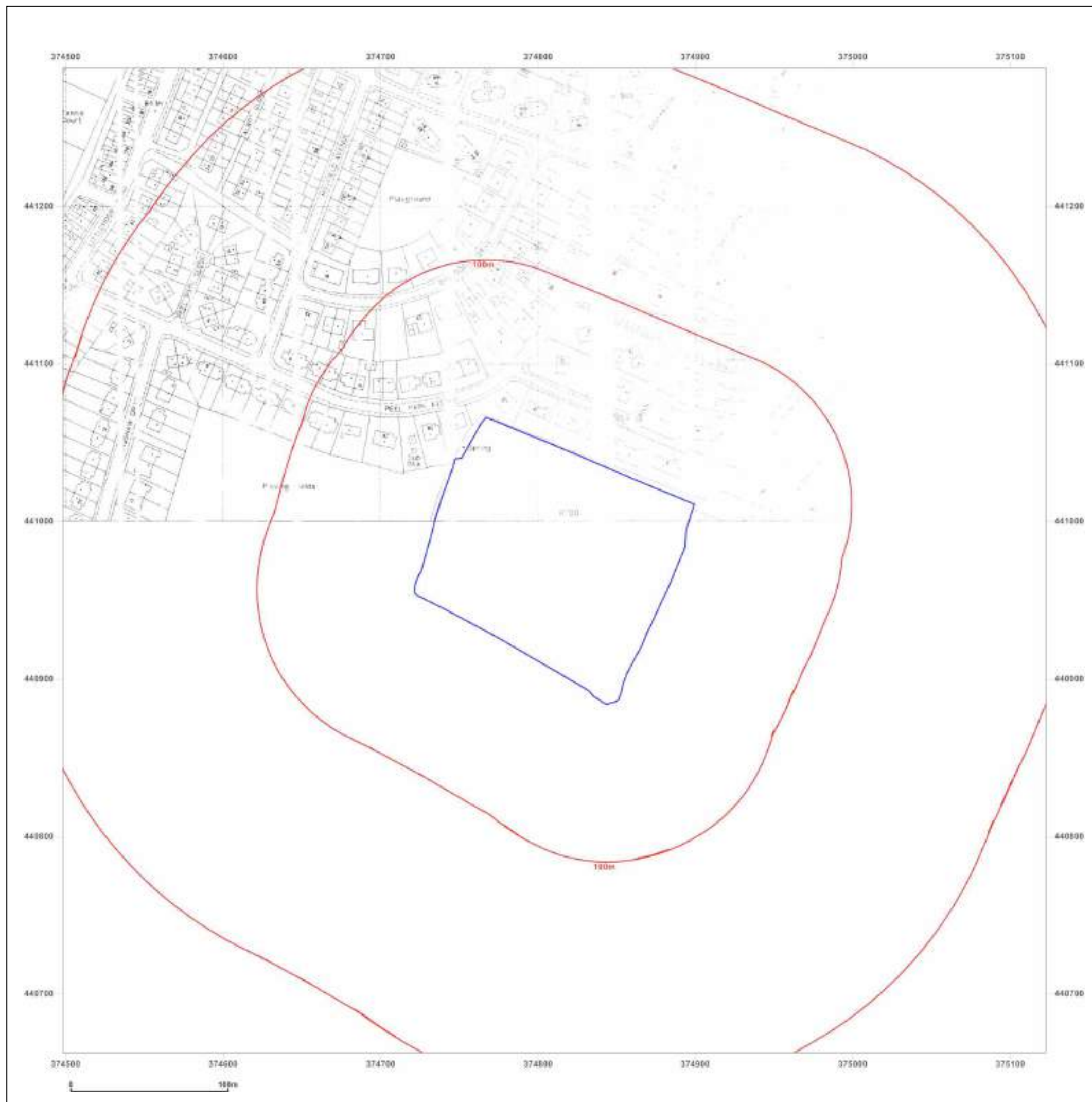
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Site Details:

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BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

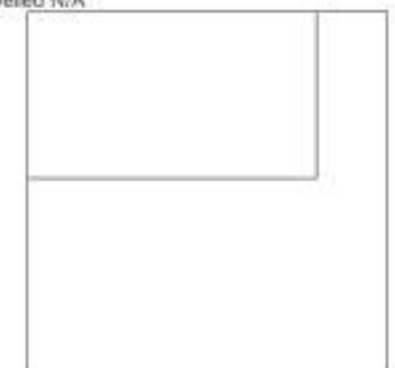
Map date: 1995

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1995
Levelled N/A



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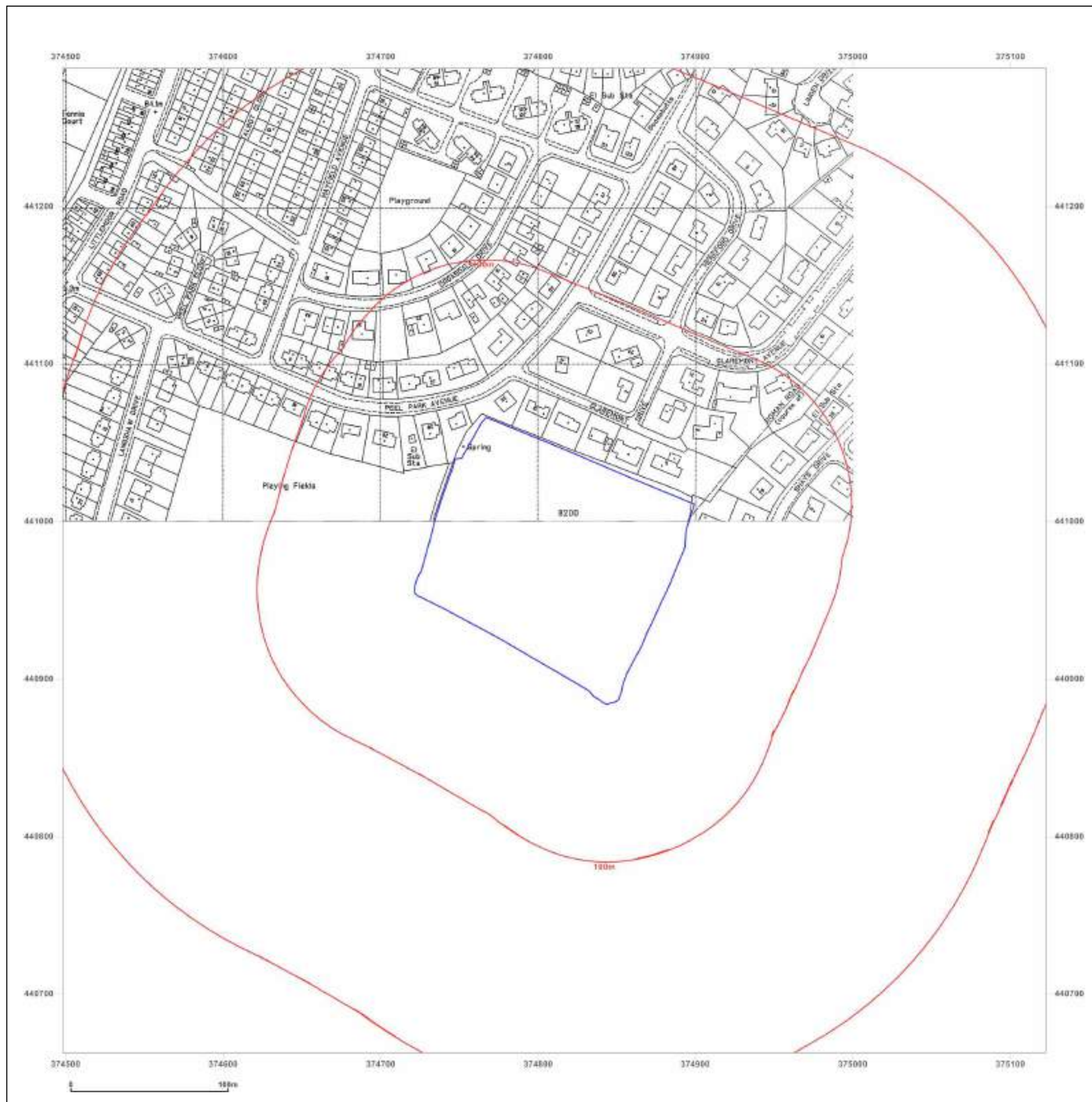


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Site Details:

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BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

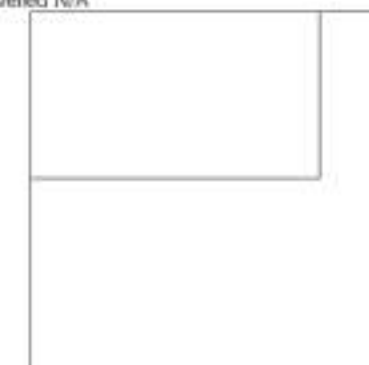
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Surveyed 1995
Revised N/A
Edition N/A
Copyright N/A
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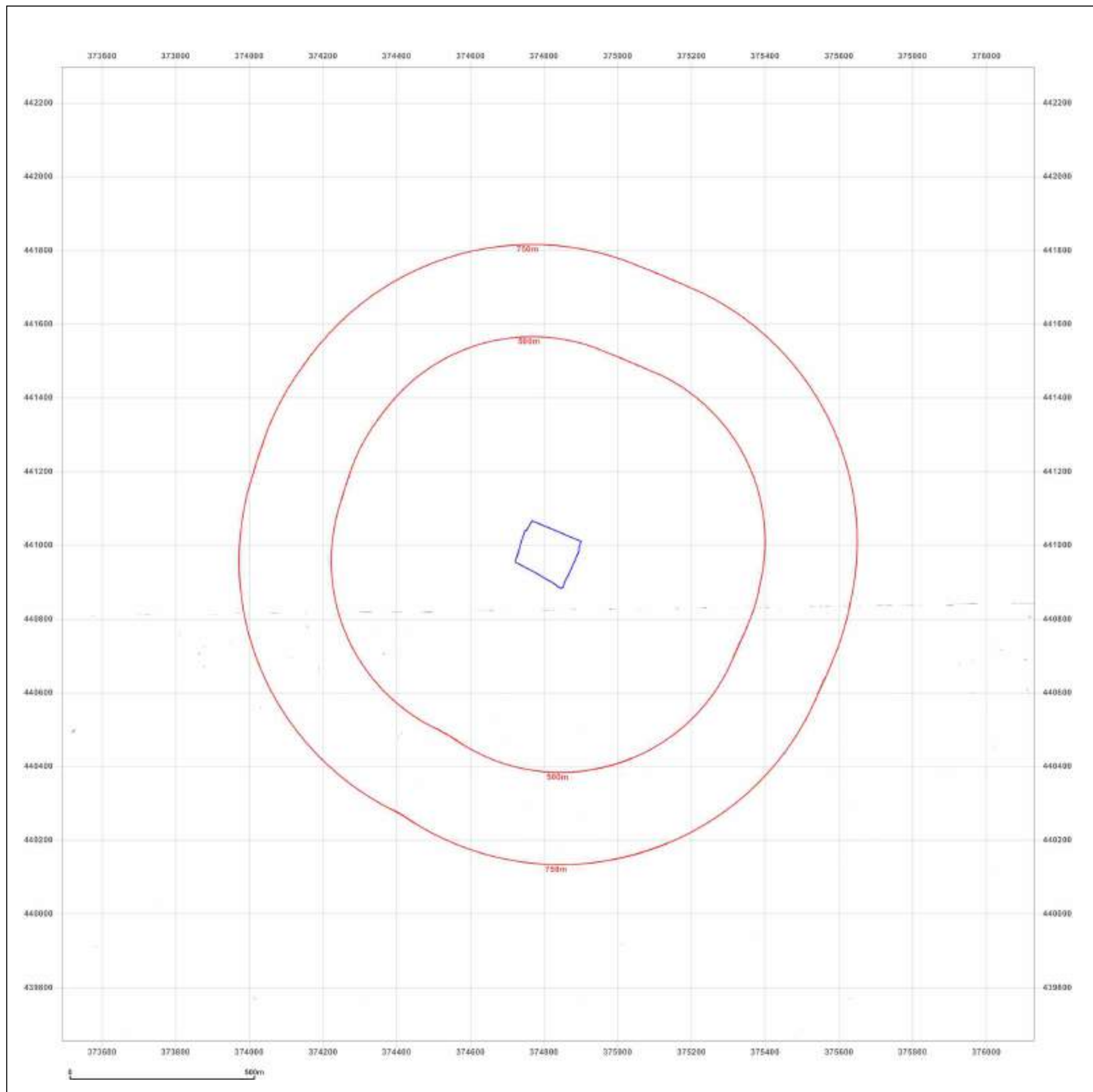


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Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series
Map date: 1847-1848
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A
Surveyed 1847 Revised N/A Edition 1848 Copyright N/A Levelled N/A



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Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series

Map date: 1847-1848

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1847
Edition 1847
Copyright N/A
Levelled N/A

Surveyed 1844
Revised N/A
Edition 1848
Copyright N/A
Levelled N/A



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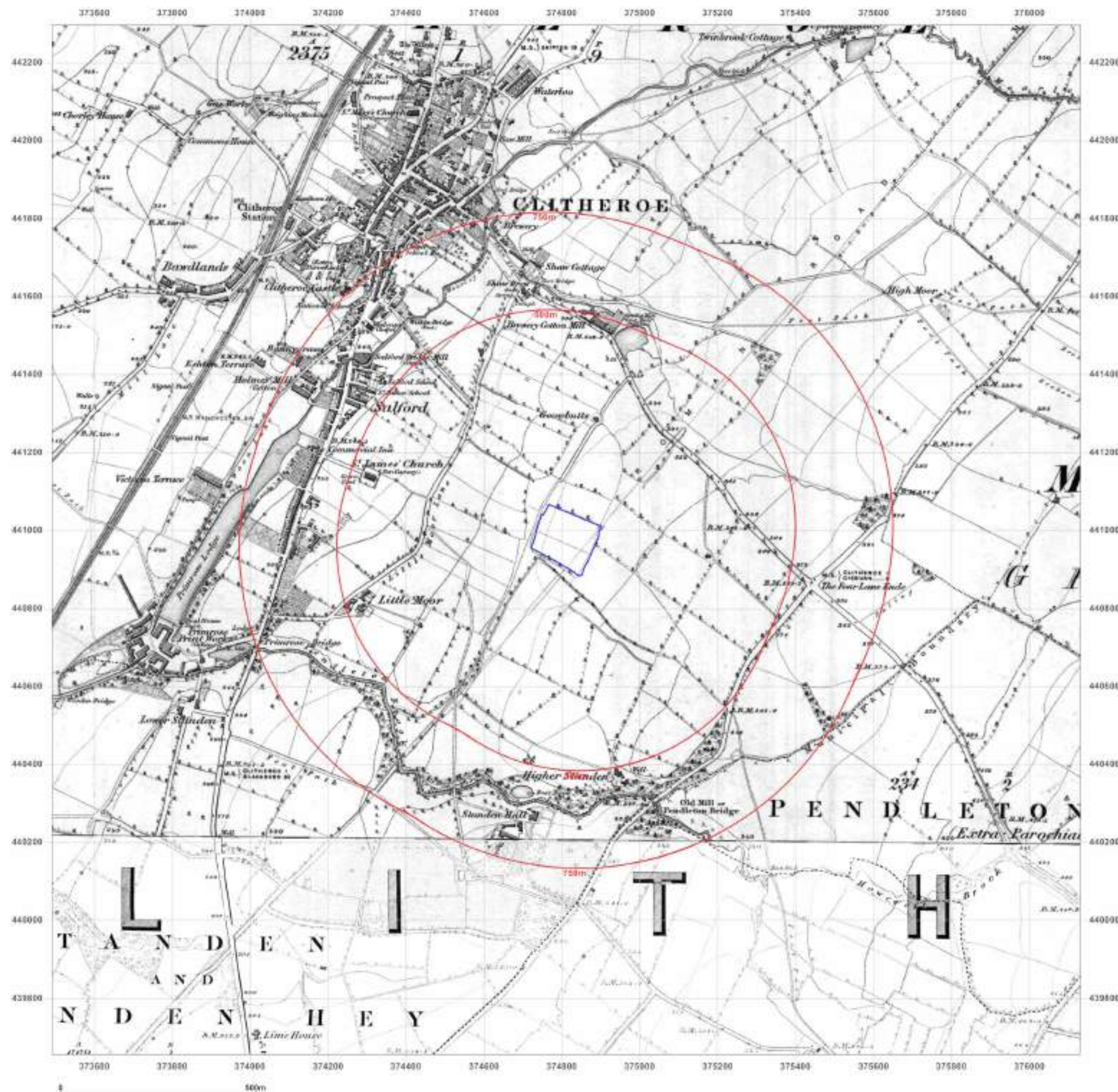


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Site Details:

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BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series

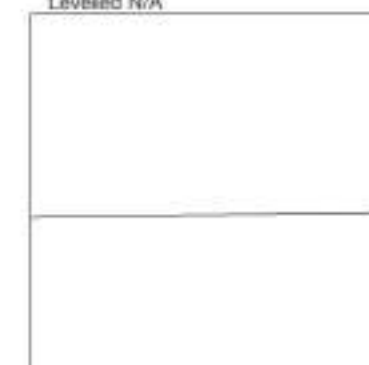
Map date: 1890

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised N/A
Edition 1890
Copyright N/A
Levelled N/A



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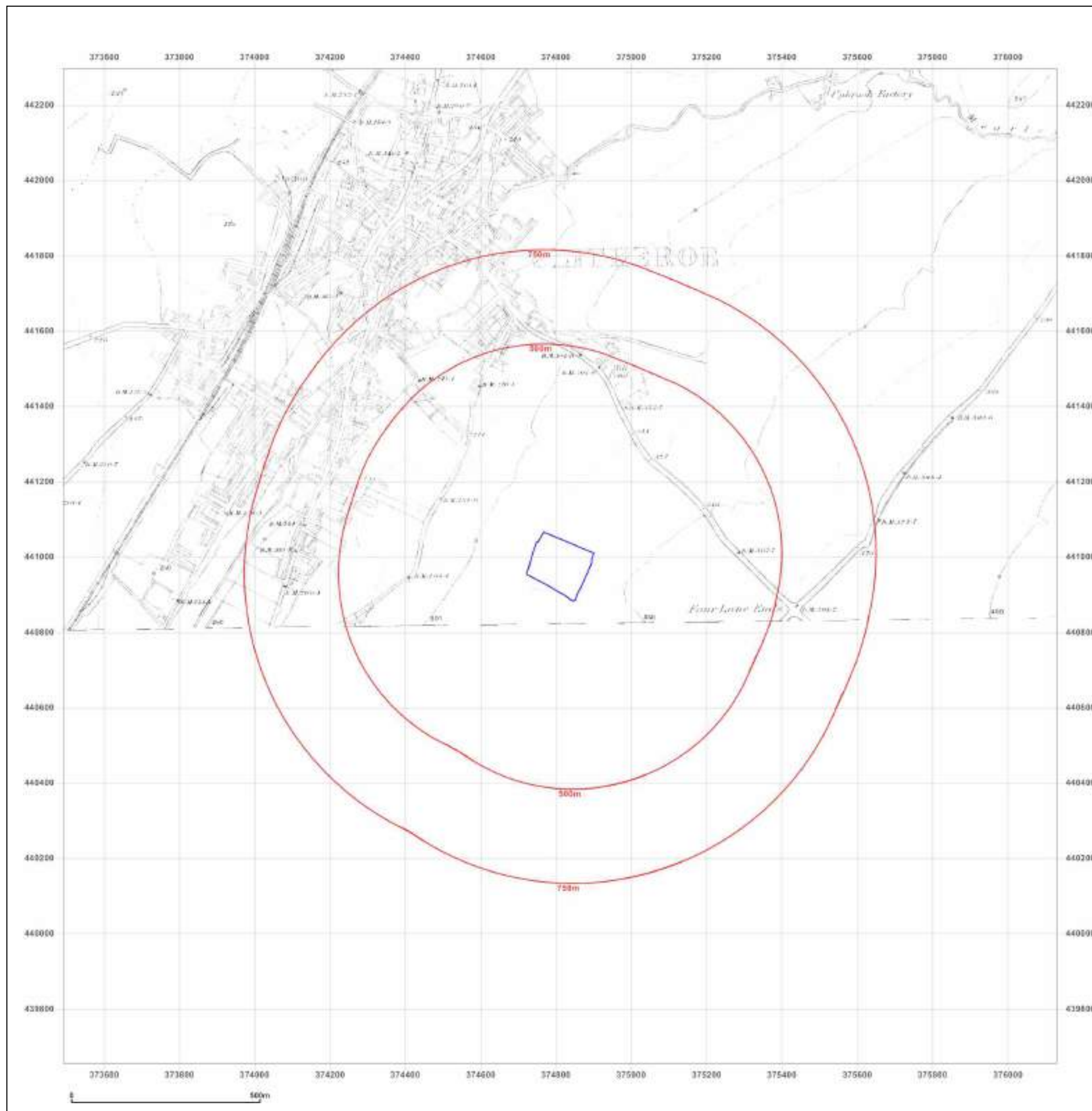


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Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series

Map date: 1896

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised 1892
Edition 1896
Copyright N/A
Levelled N/A



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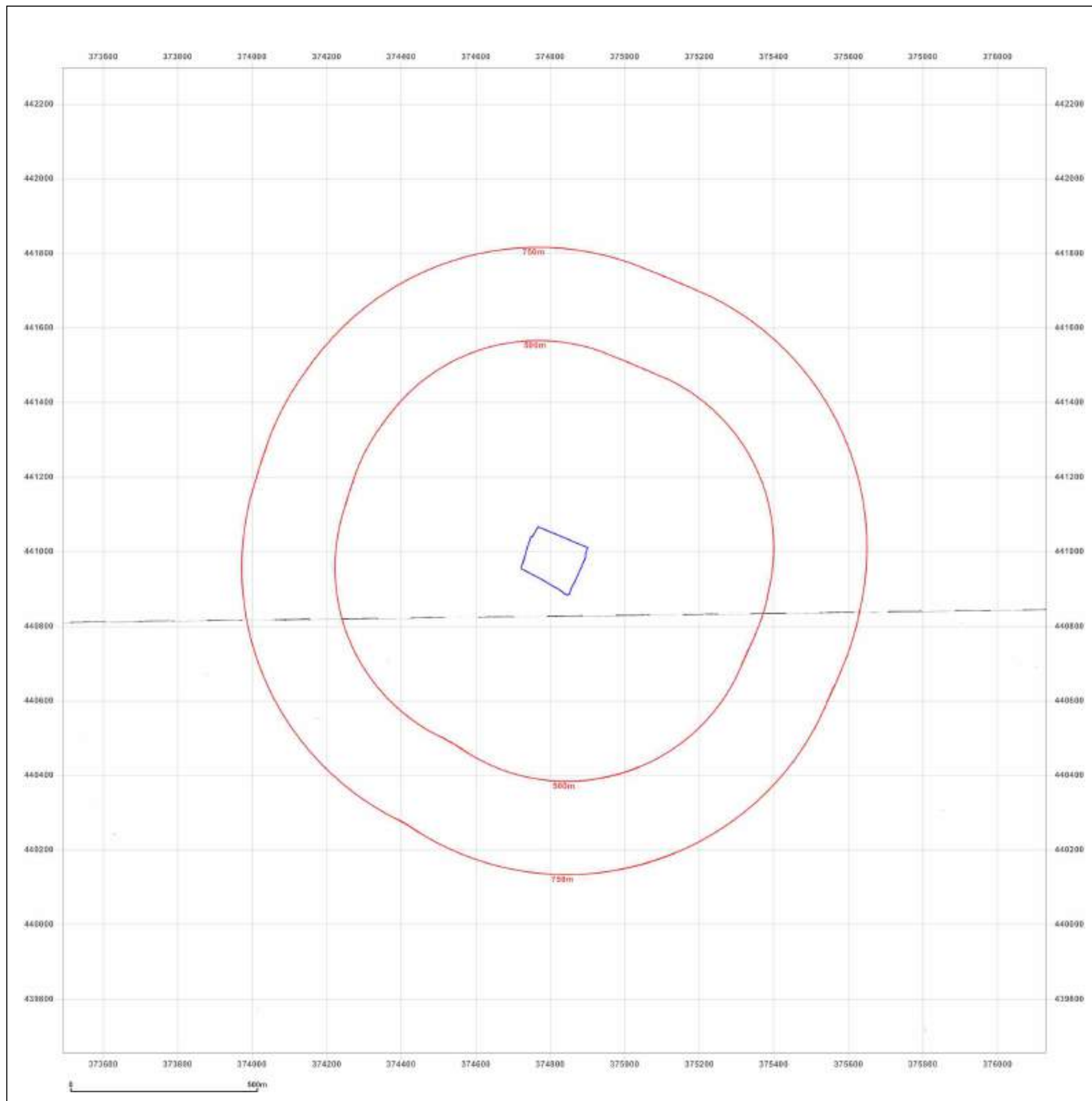


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Site Details:

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BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series

Map date: 1910-1915

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1914
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1847
Revised 1911
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1915
Edition N/A
Copyright N/A
Levelled N/A



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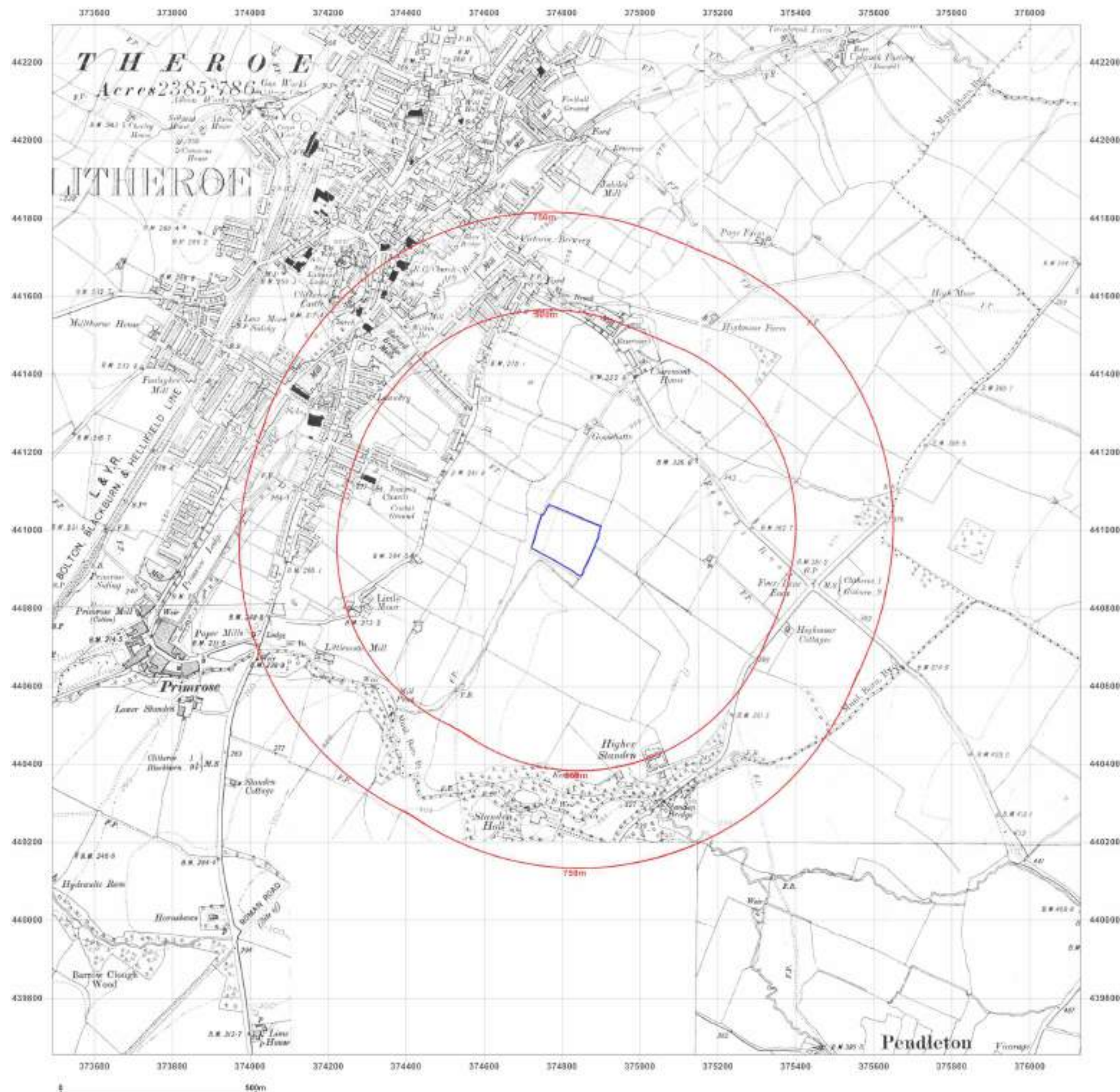


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Site Details:

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Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series

Map date: 1930-1932

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1930
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A



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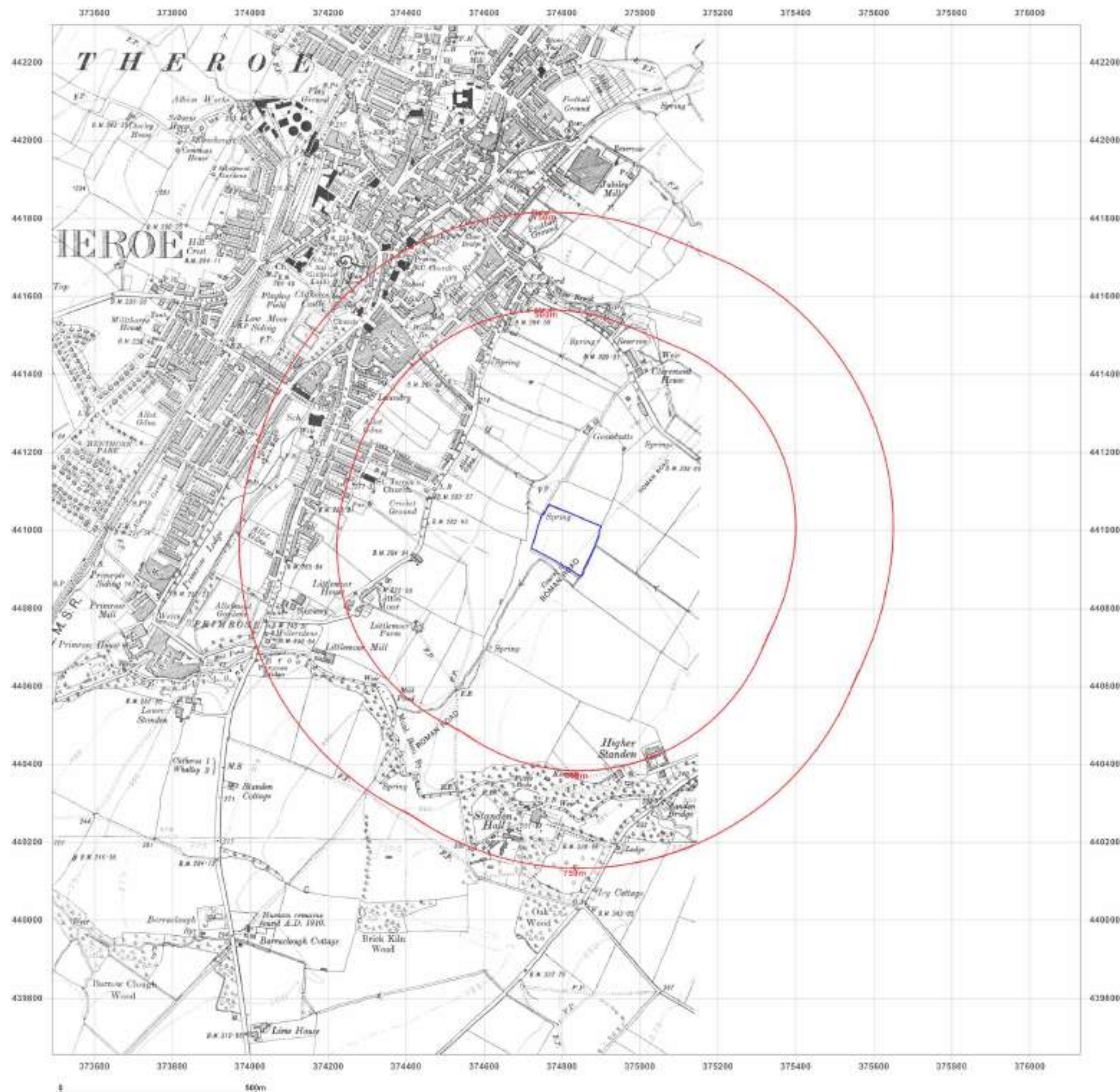


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BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: County Series

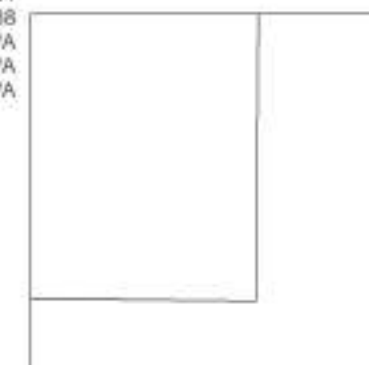
Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A



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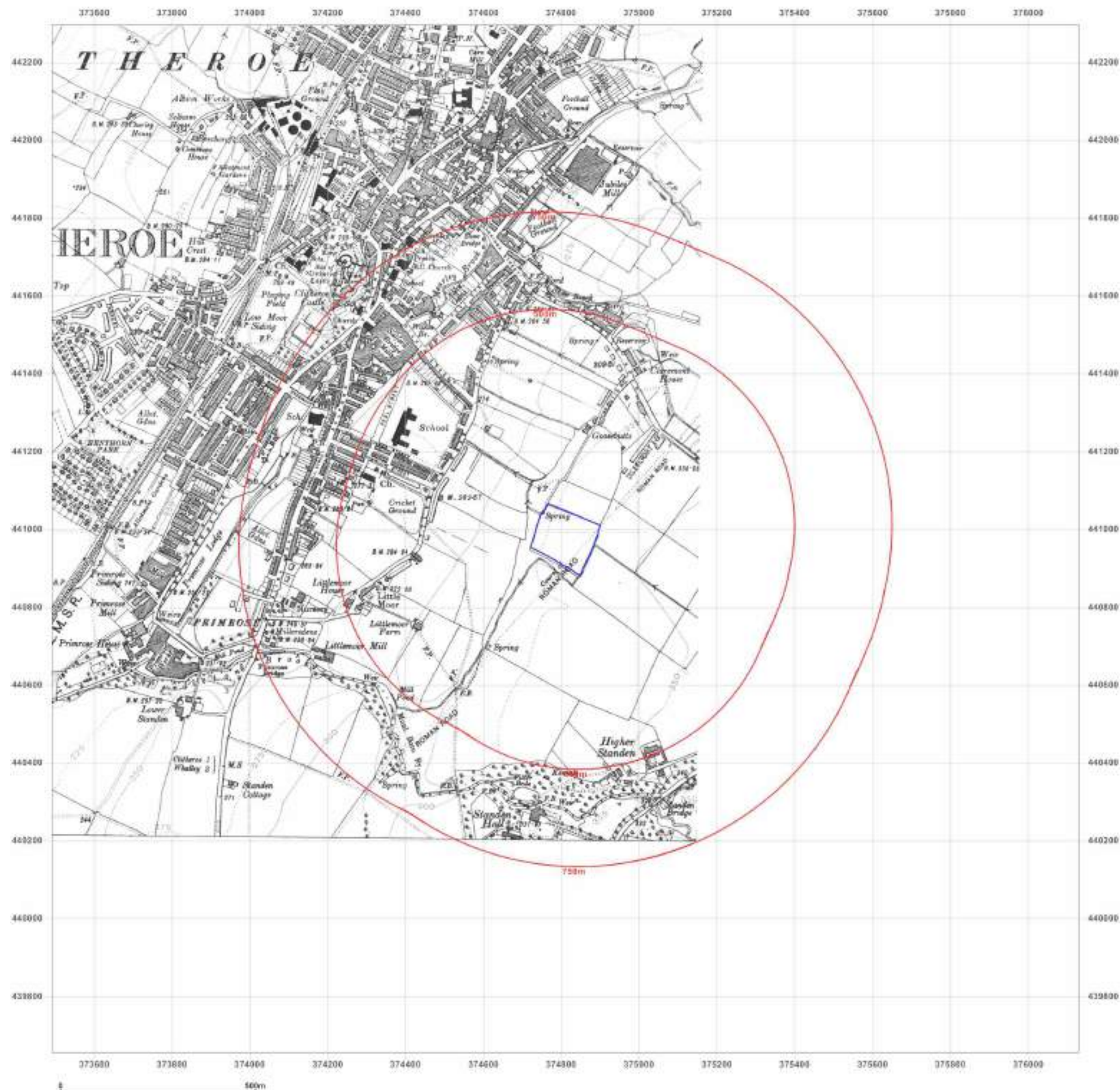


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Site Details:

32 Peel Park Avenue, Clitheroe,
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Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: Provisional

Map date: 1950-1955

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1950
Revised 1950
Edition N/A
Copyright 1955
Levelled N/A

Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1950
Revised 1950
Edition N/A
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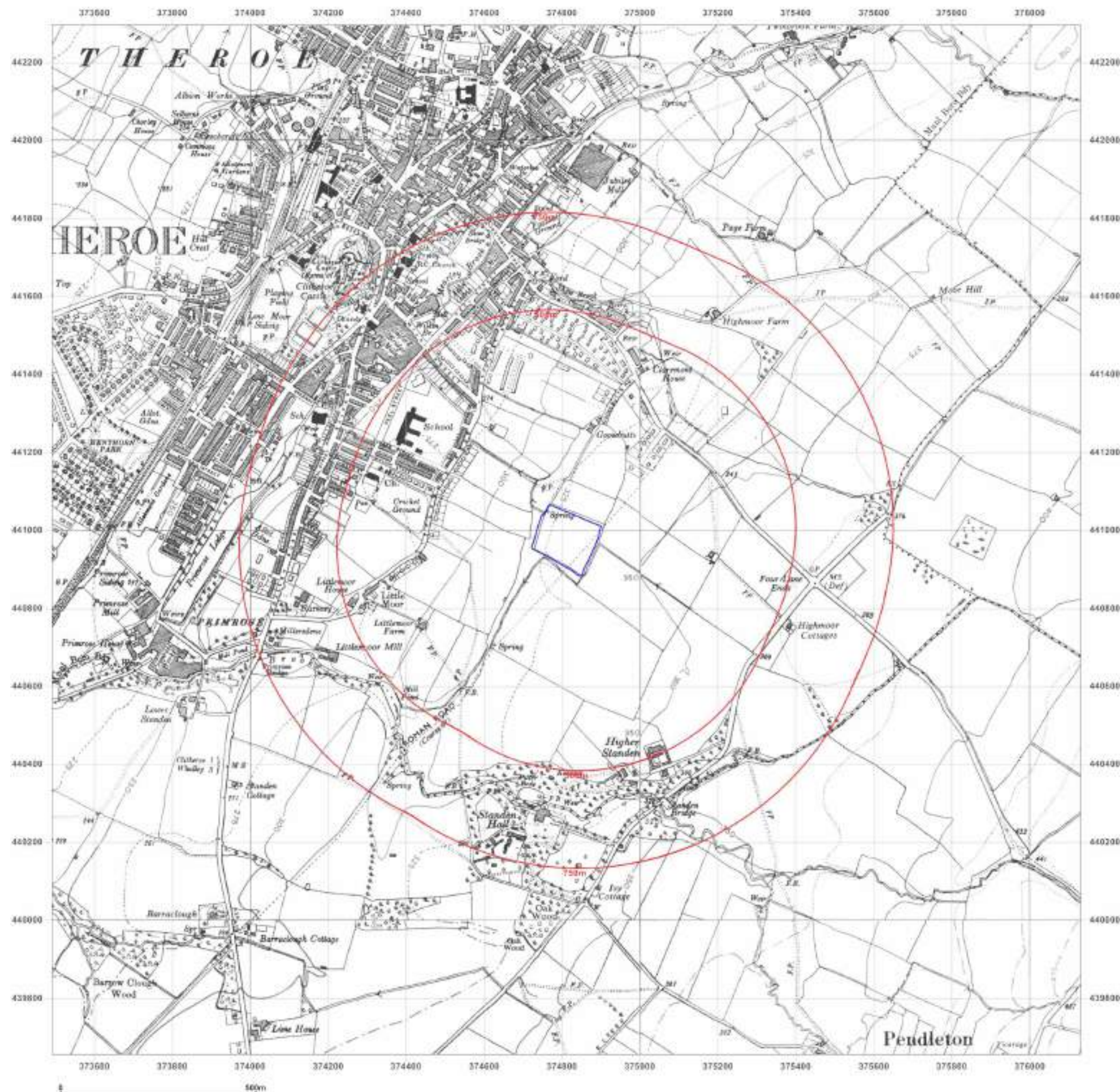


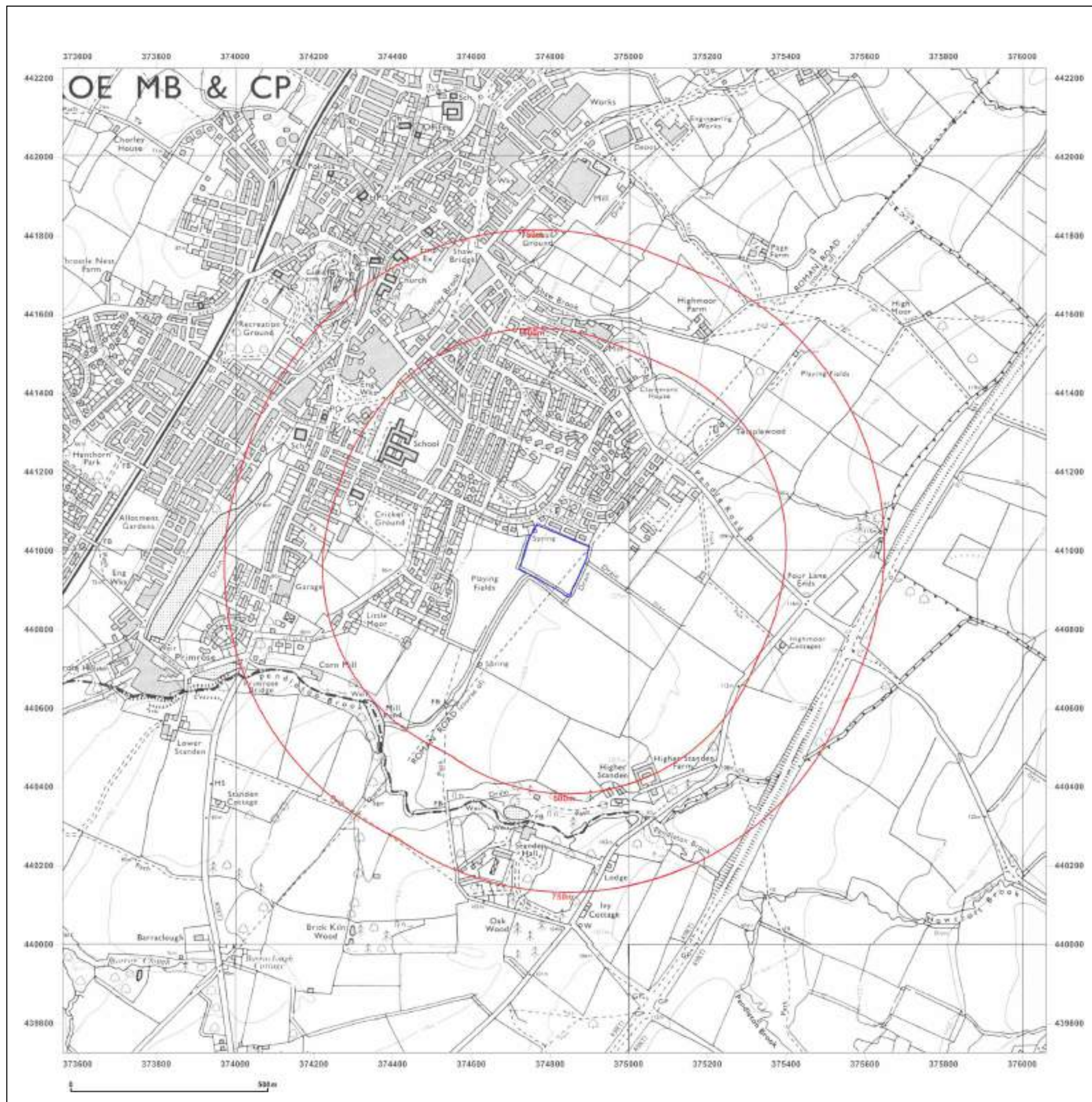
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Production date: 12 July 2017

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Site Details:

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BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

Map date: 1971-1974

Scale: 1:10,000

Printed at: 1:10,000



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

Surveyed 1972
Revised 1974
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1972
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A



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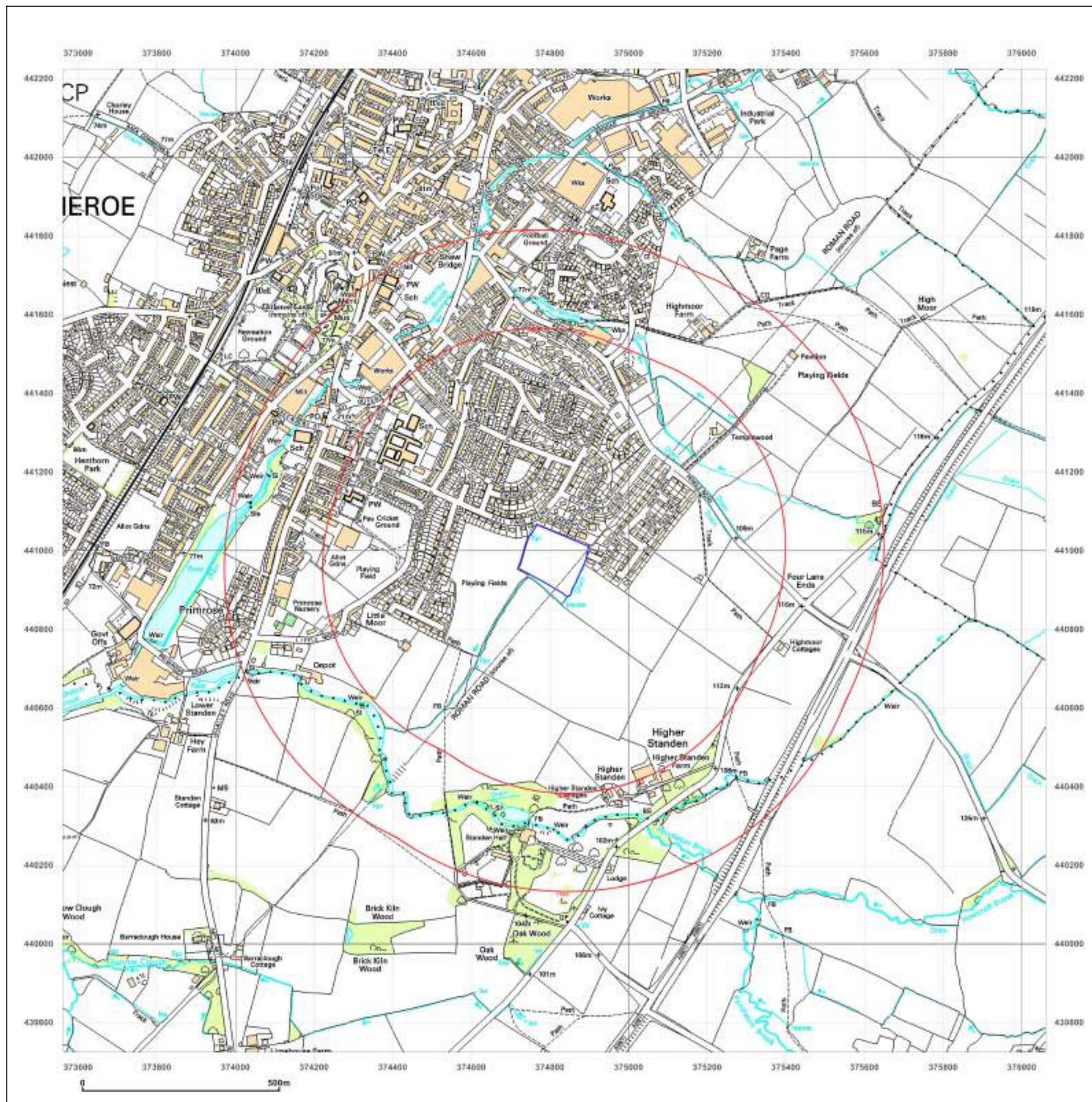


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Production date: 12 July 2017

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Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



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Site Details:

32 Peel Park Avenue, Clitheroe,
BB7 1EU

Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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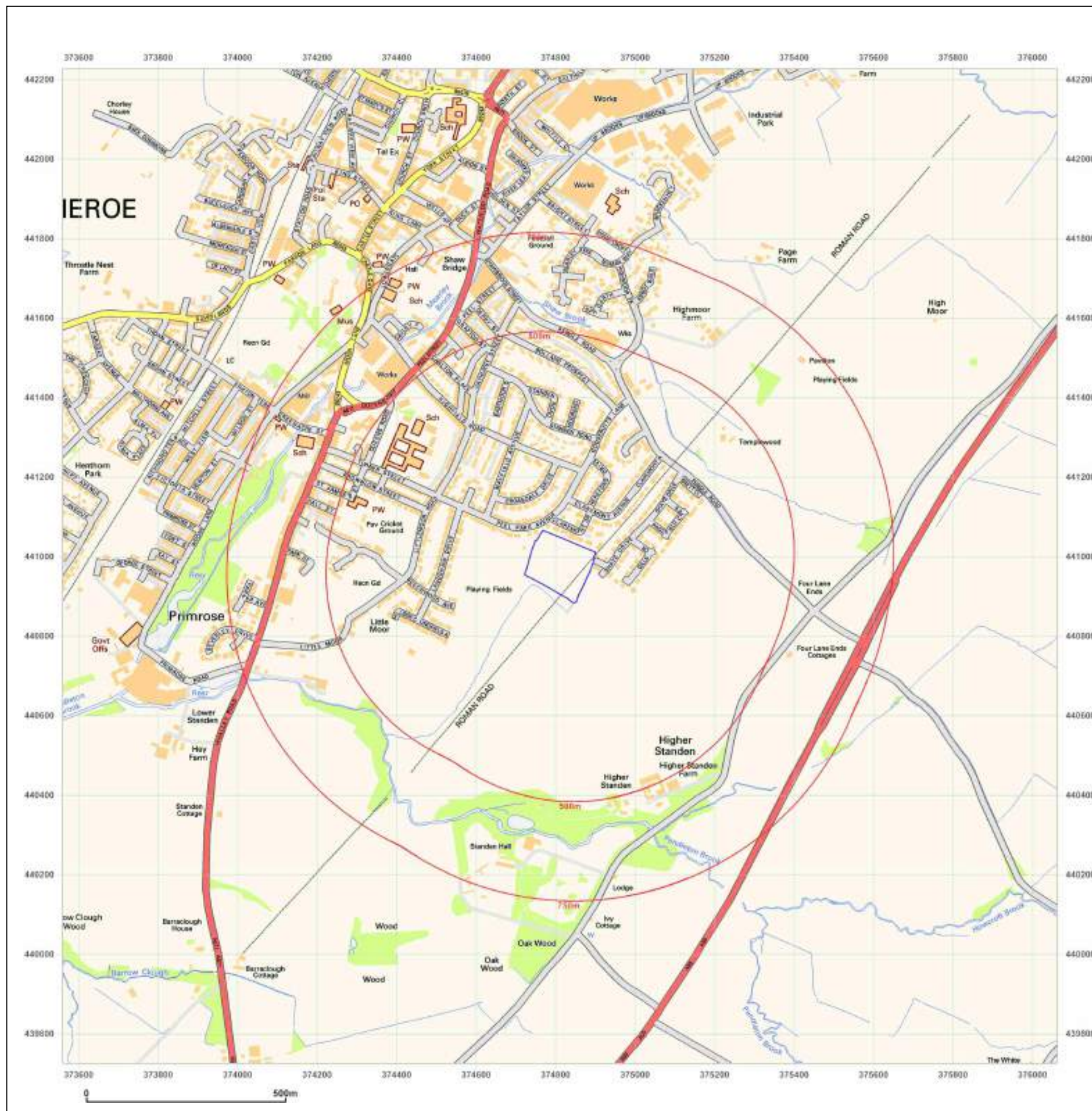


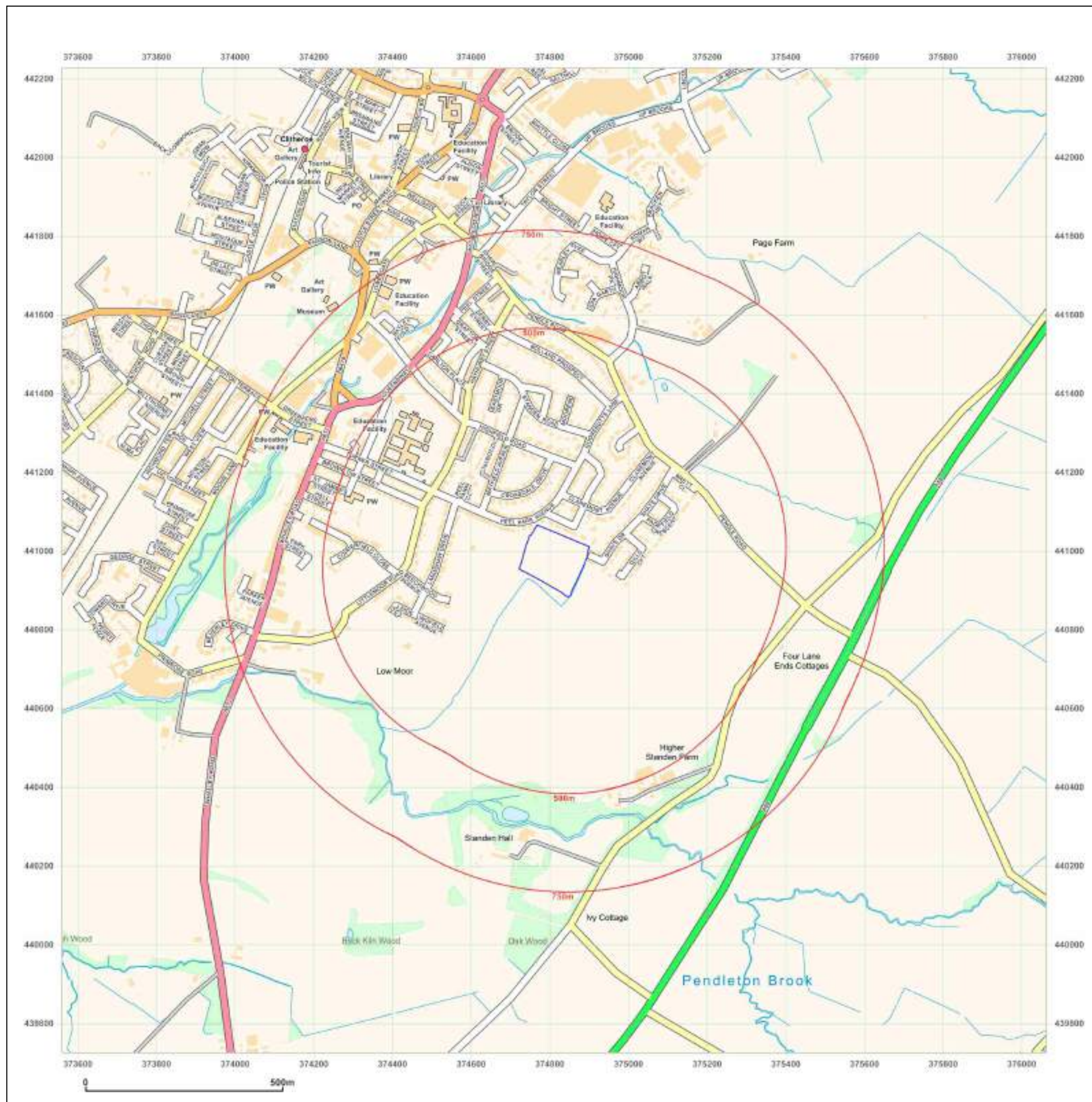
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Site Details:

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Client Ref: 30974
Report Ref: CMAPS-CM-639333-30974-120717HIS
Grid Ref: 374810, 440975

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



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APPENDIX E



Key

- Site Boundary
- Indicates line of Stone Retaining Wall
- Overhead Electricity Cables
Electricity Pylon
- Greenfield Area
- Direction of slope with approximate gradient of 1:10

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45 Bridgeman Terrace
Wigan
Lancashire
WN1 1TT
(01942) 826 020
Email : info@refa.co.uk
Web : www.refa.co.uk

Client:	Applethwaite Ltd	Scale:	1:1	Drawn:	JT
Project:	Peel Park Avenue, Clitheroe	Sheet Size:	A3	Date:	27.07.17
Drawing Title:	Walk Over Survey	Drawing No:	17110/01	Approved:	MD
				Revision Details	Date

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APPENDIX F

Photographs of site during walk over survey**Photo 1 – Site access from Peel Park Avenue****Photo 2 – General view south**



Photo 3 – General view south



Photo 4 – General view east

APPENDIX G



General notes:
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This drawing is subject to the accuracy of detailed supporting reports, surveys, working drawings and
Local Authority Approval. The client and contractor should check the site boundary position is correct
before any works begin on site. Dimensions are approximate only and subject to detailed construction
drawings. Finished floor levels have been provided by others and should be checked by an qualified
engineer prior to commencement of works.

Proposed Site Layout 1:500

Key

- 1.8m high feathered edge fence
- 1.6m high brick wall



Client:
Appletwhaite

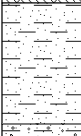
Project:
Peel Park Avenue,
Clitheroe

Title:
Proposed Site Layout

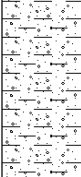
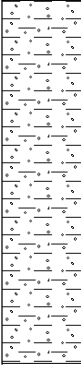
Drawing No.	Revisions	Date:	Scale:	Drawn:	Client Site:
17-18-5301	-	Sep 2017	1:500	WCD	AR

APPENDIX H

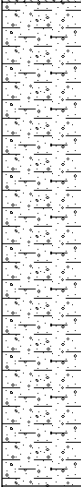
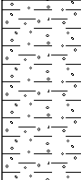
 ROBERT F. EVANS ASSOCIATES LTD. 21, Bridge Street, Weymouth, Dorset DT9 1JY England Tel: 01305 333333 Fax: 01305 333334 Email: info@refa.co.uk				Trial Pit Log				Trialpit No TP01 Sheet 1 of 1	
Project Name: Peel Park Avenue, Clitheroe				Project No. 17110		Co-ords: - Level:		Date 19/07/2017	
Location: Peel Park Avenue, Clitheroe				Dimensions (m):		2.7 0.7		Scale 1:25	
Client: Applethwaite Homes				Depth 1.90		Logged MD			

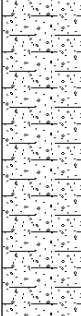
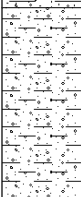
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
▼	0.10	ES		0.20			Grass over TOPSOIL: Dark brown clayey fine to medium sand with rootlets.	1
				0.60			Firm brown sandy CLAY	
			HVP=113					
			HVP=104					
				1.70			Weak dark grey fine grained LIMESTONE(Recovered as clayey angular gravel)	
			1.90			End of pit at 1.90 m		2
								3
								4
								5

Remarks: Damp strata at 1.70m		
Stability: Pit stable		

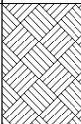
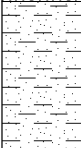
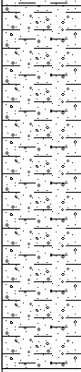
 ROBERT F. EVANS ASSOCIATES LTD. 21, Bridgegate Terrace, Weymouth, Dorset DT9 1TJ England Tel: 01305 333333 Fax: 01305 333334 Email: info@refa.co.uk				Trial Pit Log				Trialpit No TP02 Sheet 1 of 1	
Project Name: Peel Park Avenue, Clitheroe				Project No. 17110		Co-ords: - Level:		Date 19/07/2017	
Location: Peel Park Avenue, Clitheroe				Dimensions (m):		2.6 0.7		Scale 1:25	
Client: Applethwaite Homes				Depth 2.00				Logged MD	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.10	ES		0.20			Grass over TOPSOIL: Dark brown clayey fine to medium sand with rootlets.		
							Firm brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse angular of mudstone.		
	1.00	D		0.80			Firm to stiff brown gravelly CLAY with a high cobble and boulder content of limestone. Gravel is fine to coarse angular to subangular of limestone		
				2.00		End of pit at 2.00 m			
Remarks: Damp strata between 0.8 -2.0m. Minor collapse at 0.8m									
Stability: Pit unstable									



 ROBERT F. EVANS ASSOCIATES LTD. 21, Bridge Street, Weymouth, Dorset DT9 1JY England Tel: 01305 333333 Fax: 01305 333334 Email: info@refa.co.uk				Trial Pit Log				Trialpit No TP04 Sheet 1 of 1	
Project Name: Peel Park Avenue, Clitheroe				Project No. 17110		Co-ords: - Level:		Date 19/07/2017	
Location: Peel Park Avenue, Clitheroe				Dimensions (m):		2.7 		Scale 1:25	
Client: Applethwaite Homes				Depth 2.50		0.7 		Logged MD	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.20	ES		0.30			Grass over TOPSOIL: Dark brown clayey fine to medium sand with rootlets.		
			HVP=80				Firm to stiff brown slightly sandy slightly gravelly CLAY with a medium cobble and boulder content of limestone. Gravel is fine to coarse subangular to subrounded of limestone		
			HVP=92						
	2.00	D		1.90			Stiff dark grey very gravelly CLAY. Gravel is fine to coarse subangular to rounded of limestone (Weathered bedrock)		
				2.50			End of pit at 2.50 m 		
Remarks: Damp strata at 1.3									
Stability: Pit stable									

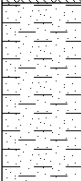
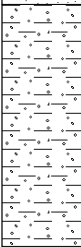
 ROBERT F. EVANS ASSOCIATES LTD. 21, Bridgegate Tower, 100, Westgate Street, Glasgow, G2 7JL Tel: 0141 204 2000 Fax: 0141 204 2001 Email: info@reva.co.uk				Trial Pit Log				Trialpit No TP05 Sheet 1 of 1	
Project Name: Peel Park Avenue, Clitheroe				Project No. 17110		Co-ords: - Level:		Date 19/07/2017	
Location: Peel Park Avenue, Clitheroe				Dimensions (m):		2.6 		Scale 1:25	
Client: Applethwaite Homes				Depth 2.00		0.7 		Logged MD	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.10	ES	HVP=74	0.20			Grass over TOPSOIL: Dark brown clayey fine to medium sand with rootlets.		
							Dark brown gravelly very clayey fine to coarse SAND. Gravel is fine to coarse subangular to rounded of mudstone.		
	1.50	D		1.30			Stiff dark brown slightly sandy gravelly CLAY with high cobble and boulder content of limestone. (Weathered bedrock)		
				2.00			End of pit at 2.00 m		
Remarks: Damp strata between 0.6 - 1.3m									
Stability: Pit stable									



 ROBERT F. EVANS ASSOCIATES LTD. 21, Bridgegate Terrace, Wetherby, West Yorkshire LS23 7BQ Tel: 01937 546100 Fax: 01937 546101 Email: info@refa.co.uk				Trial Pit Log				Trialpit No TP07 Sheet 1 of 1	
Project Name: Peel Park Avenue, Clitheroe				Project No. 17110		Co-ords: - Level:		Date 19/07/2017	
Location: Peel Park Avenue, Clitheroe				Dimensions (m):		2.1 		Scale 1:25	
Client: Applethwaite Homes				Depth 2.10		0.7 		Logged MD	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.30	ES		0.40			Grass over TOPSOIL: Dark brown clayey fine to medium sand with rootlets.		
				0.90			Firm brown sandy CLAY		
	1.50	D		2.10			Firm to stiff dark brown slightly sandy gravelly CLAY with high cobble and boulder content of limestone. (Weathered bedrock)		
							End of pit at 2.10 m		
Remarks: Groundwater ingress at 1.4m with a slow flow									
Stability: Pit stable									



AGS

 ROBERT F. EVANS ASSOCIATES LTD. 41, Bridgegate Tower, 100, West Hill, London, W14 9LH Tel: 020 8996 6000 Fax: 020 8996 6001 Email: info@refa.co.uk				Trial Pit Log				Trialpit No TP11 Sheet 1 of 1	
Project Name: Peel Park Avenue, Clitheroe				Project No. 17110		Co-ords: - Level:		Date 19/07/2017	
Location: Peel Park Avenue, Clitheroe				Dimensions (m):		2.6 		Scale 1:25	
Client: Applethwaite Homes				Depth 1.70		0.7 		Logged MD	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.10	ES		0.20			Grass over TOPSOIL: Dark brown clayey fine to medium sand with rootlets.		
							Firm to stiff brown sandy CLAY		
	1.00	D	HVP=64	0.80			Firm greyish brown gravelly CLAY with a high cobble and boulder content. Gravel is fine to coarse angular to subrounded of limestone.		
			HVP=58	1.60			End of pit at 1.70 m		
Remarks: Groundwater ingress at 0.8m with slow flow. Boulder obstruction at 1.7m and trial pit terminated.									
Stability: Pit stable									



APPENDIX I

Trial Pit Photographs – Peel Park Avenue, Clitheroe 17110

Photo 1 – Trial Pit 01



Photo 2 – Arising's from Trial Pit 01



Photo 3 – Trial Pit 02



Photo 4 – Arising's Trial Pit 02



Photo 5 – Trial Pit 03



Photo 6 – Arising's from Trial Pit 03



Photo 7 – Trial Pit 04



Photo 8 – Arising's from Trial Pit 04



Photo 9 – Trial Pit 05



Photo 10 – Arising's from Trial Pit 05



Photo 11 – Trial Pit 06



Photo 12 – Arising's from Trial Pit 06



Photo 13 – Trial Pit 07



Photo 14 – Arising's from Trial Pit 07



Photo 15 – Trial Pit 08



Photo 16 – Arising's from Trial Pit 08



Photo 17 – Trial Pit 09



Photo 18 – Arising's from Trial Pit 09



Photo 19 – Trial Pit 10



Photo 20 – Arising's from Trial Pit 10



Photo 21 – Trial Pit 11



Photo 22 – Arising's from Trial Pit 11



Photo 23 – Trial Pit 12



Photo 24 – Arising's from Trial Pit 12

APPENDIX J



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Robert E Fry & Associates Ltd
45 Bridgeman Terrace
Wigan
WN1 1TT

Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



Attention :	Mark Davies
Date :	28th July, 2017
Your reference :	
Our reference :	Test Report 17/12434 Batch 1
Location :	Peel Park Avenue, Clitheroe
Date samples received :	21st July, 2017
Status :	Final report
Issue :	1

Nine samples were received for analysis on 21st July, 2017 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Client Name: Robert E Fry & Associates Ltd
Reference:
Location: Peel Park Avenue, Clitheroe
Contact: Mark Davies
JE Job No.: 17/12434

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1	2	3	4	5	6	7	8	9		Please see attached notes for all abbreviations and acronyms		
Sample ID	TP01	TP02	TP03	TP04	TP05	TP06	TP07	TP09	TP12				
Depth	0.10	0.10	0.10	0.20	0.10	0.20	0.30	0.10	0.10				
COC No / misc													
Containers	J	J	J	J	J	J	J	J	J				
Sample Date	19/07/2017	19/07/2017	19/07/2017	19/07/2017	19/07/2017	19/07/2017	19/07/2017	19/07/2017	19/07/2017				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	21/07/2017	21/07/2017	21/07/2017	21/07/2017	21/07/2017	21/07/2017	21/07/2017	21/07/2017	21/07/2017		LOD/LOR	Units	Method No.
Arsenic [#]	12.3	13.9	16.7	19.3	15.7	15.9	13.0	16.9	19.0		<0.5	mg/kg	TM30/PM15
Cadmium [#]	1.1	1.2	1.3	1.0	0.8	0.9	0.9	0.8	0.9		<0.1	mg/kg	TM30/PM15
Chromium [#]	59.1	54.4	50.6	57.5	53.5	57.2	65.9	56.9	53.9		<0.5	mg/kg	TM30/PM15
Copper [#]	27	31	35	52	54	38	31	83	63		<1	mg/kg	TM30/PM15
Lead [#]	60	188	122	164	97	94	108	97	153		<5	mg/kg	TM30/PM15
Mercury [#]	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1		<0.1	mg/kg	TM30/PM15
Nickel [#]	44.1	34.9	37.4	48.0	37.7	50.2	34.2	44.4	50.9		<0.7	mg/kg	TM30/PM15
Selenium [#]	2	<1	2	2	<1	1	1	1	2		<1	mg/kg	TM30/PM15
Zinc [#]	138	157	190	226	185	176	148	159	180		<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene [#]	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	<0.04	0.21		<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	0.06	0.06	<0.03	<0.03	0.07	0.07		<0.03	mg/kg	TM4/PM8
Acenaphthene [#]	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	0.25		<0.05	mg/kg	TM4/PM8
Fluorene [#]	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	0.16		<0.04	mg/kg	TM4/PM8
Phenanthrene [#]	0.09	0.14	0.09	0.34	0.62	0.13	0.08	0.16	1.51		<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	<0.04	<0.04	0.11	0.15	0.05	<0.04	0.14	0.32		<0.04	mg/kg	TM4/PM8
Fluoranthene [#]	0.17	0.22	0.21	0.75	0.91	0.33	0.13	1.04	2.25		<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.15	0.18	0.19	0.59	0.75	0.30	0.12	0.98	1.82		<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.17	0.19	0.19	0.33	0.70	0.33	0.13	1.10	0.85		<0.06	mg/kg	TM4/PM8
Chrysene [#]	0.13	0.15	0.15	0.48	0.52	0.26	0.09	0.79	1.19		<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene [#]	0.16	0.15	0.18	0.54	0.66	0.35	0.12	1.07	1.36		<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.07	0.06	0.08	0.27	0.32	0.16	0.05	0.50	0.66		<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene [#]	0.05	0.06	0.06	0.21	0.23	0.13	<0.04	0.28	0.44		<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	<0.04	0.06	<0.04	<0.04	0.08	0.11		<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.07	0.06	0.06	0.21	0.25	0.13	<0.04	0.28	0.45		<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.1	1.2	1.2	3.9	5.5	2.2	0.7	6.5	11.7		<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.12	0.11	0.13	0.39	0.48	0.25	0.09	0.77	0.98		<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.04	0.04	0.05	0.15	0.18	0.10	0.03	0.30	0.38		<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	103	96	89	95	118	106	103	106	99		<0	%	TM4/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	0.15	<0.15	<0.15	0.23	<0.15		<0.15	mg/kg	TM26/PM21
Natural Moisture Content	31.9	27.0	28.9	41.6	38.1	30.5	16.6	35.6	41.2		<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	24.2	21.3	22.4	29.4	27.6	23.4	14.3	26.3	29.2		<0.1	%	PM4/PM0
Sulphate as SO ₄ (2:1 Ext) [#]	0.0133	<0.0015	0.0164	<0.0015	<0.0015	0.0069	0.0127	0.0121	0.0088		<0.0015	g/l	TM38/PM20
Total Cyanide [#]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	mg/kg	TM89/PM45
Total Organic Carbon [#]	4.25	3.96	4.12	5.72	4.84	4.84	3.03	4.87	7.57		<0.02	%	TM21/PM24
Sulphide	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	mg/kg	TM106/PM119

Please see attached notes for all abbreviations and acronyms

Client Name: Robert E Fry & Associates Ltd

Reference:

Location: Peel Park Avenue, Clitheroe

Contact: Mark Davies

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/12434

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/12434

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes		AR	Yes
TM106	Determination of Sulphide by Skalar Continuous Flow Analyser	PM119	As received solid samples are extracted with 1M NaOH by orbital shaker for Sulphide and Thiocyanate analysis.			AR	Yes

APPENDIX K



LABORATORY REPORT

REPORT



4043

Contract Number: PSL17/3546

Report Date: 10 August 2017
Client's Reference: 17110
Client Name: REFA
45 Brdgeman Terrace
Wigan
WN1 1TT

For the attention of: Mark Davies

Contract Title: Peel Park Avenue, Clitheroe
Date Received: 25/7/2017
Date Commenced: 25/7/2017
Date Completed: 10/8/2017

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson
(Director)

A Watkins
(Director)

R Berriman
(Quality Manager)

L Knight
(Senior Technician)

C Marshall
(Laboratory Manager)

A Fry
(Senior Technician)

5 – 7 Hexthorpe Road, Hexthorpe,
Doncaster DN4 0AR
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fax: +44 (0)844 815 6642
e-mail: rgunson@prosoils.co.uk
awatkins@prosoils.co.uk

Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

[illegible]

PSL
Professional Soils Laboratory

Peel Park Avenue, Clitheroe

Contract No:

PSL17/3546

Client Ref:

17110

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP02			1.00		16			34	19	15	81	Low plasticity CL.
TP03			1.20		14			25	12	13	80	Low plasticity CL.
TP04			2.00		13			29	16	13	81	Low plasticity CL.
TP05			1.50		10			21	11	10	80	Low plasticity CL.
TP06			1.00		18				NP			
TP07			1.50		14			27	16	11	80	Low plasticity CL.
TP08			2.00		13			29	16	13	81	Low plasticity CL.
TP09			1.50		27			32	17	15	87	Low plasticity CL.
TP11			1.00		29			38	20	18	80	Intermediate plasticity CI.
TP12			1.50		27			33	19	14	82	Low plasticity CL.

SYMBOLS : NP : Non Plastic

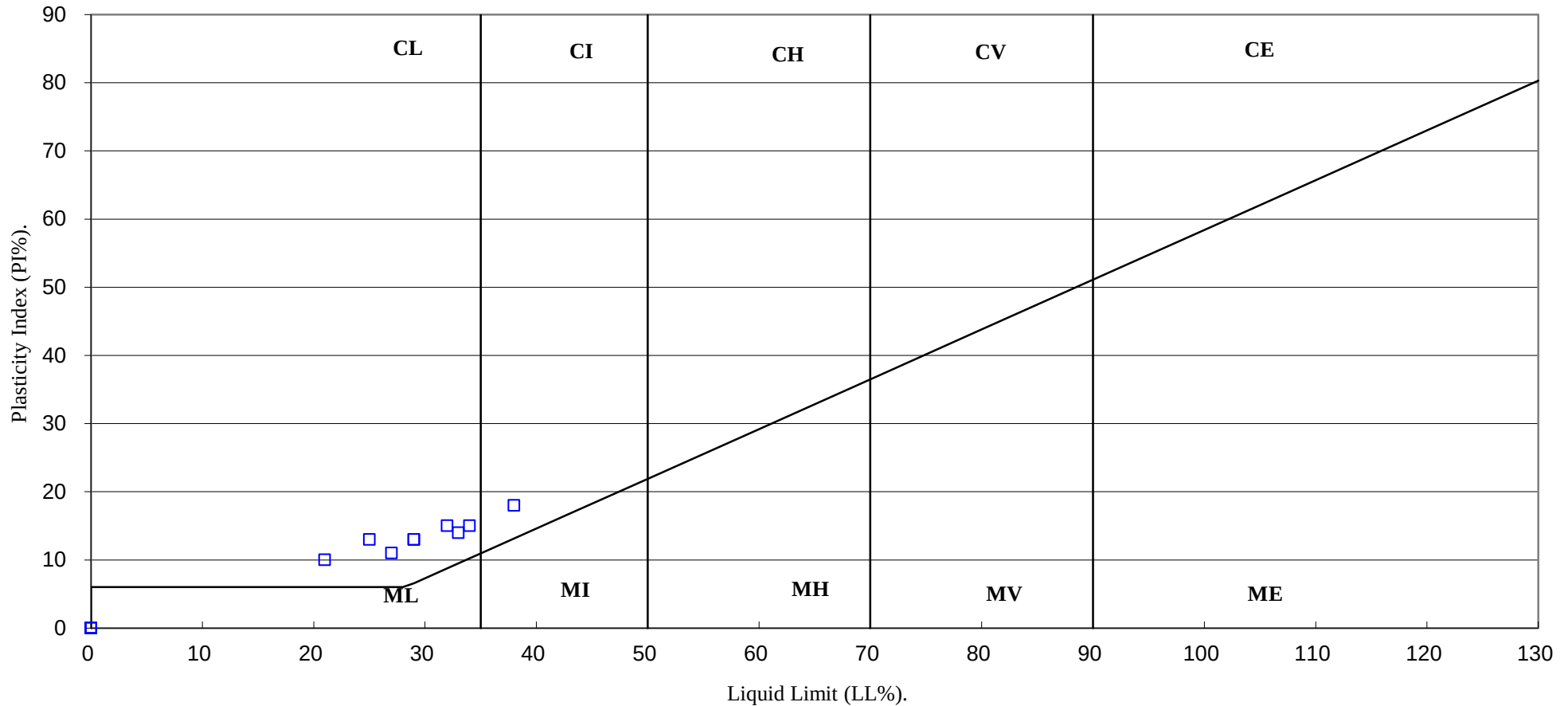
* : Liquid Limit and Plastic Limit Wet Sieved.

		Contract No:	
		PSL17/3546	
		Client Ref:	
		17110	

Peel Park Avenue, Clitheroe

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(BS5930 :2015)



PSL
Professional Soils Laboratory

Peel Park Avenue, Clitheroe

Contract No:

PSL17/3546

Client Ref:

17110