DEVELOPMENT SERVICES
5 MAY 2010
RECEIVED

Report type:	Phase 1 Environmental Assessment
Site:	Linton Farm Merrylees Road, Thornton
Client:	A Pickup and Son Ltd
Ref:	GRM/P5146/F.1
Date:	March 2010

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Phase 1 Environmental Assessment for New Build at Linton Farm, Thornton

SUMMARY OF RECOMMENDATIONS

Where further assessment is required it is indicated with a "Y" in the right hand column		
Proposed Development	One and a half storey farm house	
CONTAMINATION ASSESSMENT - REMEDIATION / WASTE DISPOSAL		
End Users	Low Risk – Greenfield Site	
Site Workers	None	
Construction Materials	Low Risk – Greenfield Site	Y
Groundwater	Non Aquifer – no risk	
Surface Water	None	
Waste Disposal (may include soils, asbestos, oil drums, chemical containers, etc)	Client has a duty of care to ensure that all waste is disposed appropriately to a licensed landfill. The landfill receiving the waste may request additional 'WAC' testing analysis. Waste characterisation can only be confirmed by the landfill site.	
Other Comments	Greenfield site – no contaminant sources on site.	

This summary is based on the full report that provides the detailed assessment of the ground risks affecting the development and how to manage them. It should not be used in isolation.

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1 INTRODUCTION

1.1 PREAMBLE

GRM Development Solutions Limited (GRM) have been appointed by Mr Andrew Pickup to undertake a Phase I environmental assessment for a proposed new farmhouse. The assessment is required by planning conditions attached to the planning permission

The outline development proposals provided by the Client are presented in Appendix A.

The Client has informed GRM of the following potential development hazards:

- Agricultural field (pasture)

GRM Standard Limitations of Reporting are provided on the back cover of this report.

1.2 OBJECTIVES OF THE PHASE 1 ENVIRONMENTAL ASSESSMENT

The principal aims of the Phase 1 Environmental Assessment are as follows:

a) Obtain information, from easily accessible sources, about the soil and groundwater conditions within the area of the site.

b) Determine the possible contamination hazards within the site boundaries that may affect the proposed development.

c) Provide preliminary development recommendations.

d) Provide advice on further works required for the cost-effective reduction of risks to the development and procedures likely to satisfy regulators.

Whilst every effort has been made to pre-empt the likely requirements of the Local Authority and the Environment Agency, they are likely to have specific requirements that will need to be discussed and addressed at a later date.

2 PHASE I DESK STUDY AND SITE OBSERVATIONS

2.1 INFORMATION SOURCES

The following sources have been used for the identification and assessment of potential ground hazards:

- Relevant British Standards
- British Geological Survey (BGS) Geology Map Scale 1:50,000 Sheet 155 'Coalville'
- Environment Agency Groundwater Vulnerability Map Sheet 23 'Leicestershire'
- Historical Ordnance Survey (OS) Maps
- Environmental Data Supplier (report from Emapsite)
- Environment Agency Website: http://www.environment-agency.gov.uk/
- Principal Environmental Health Officer, South Derbyshire District Council (Simon Mortimer)
- DEFRA/Environment Agency Contaminated Land publications and DoE Industry Profiles
- BRE Guide BR211 (2007), 'Radon: Guidance on protective measures for new buildings'
- HPA-RPD-033 (2007), 'Indicative Atlas of Radon in England and Wales'
- NRPB Publication W26 (2002), 'Radon Atlas of England and Wales'
- CIRIA C669 'Assessing risks posed by hazardous ground gases to buildings'
- Client supplied information including: the location of the site, past site usage, utilities plans, proposed development layout

Other technical references used throughout this document are detailed in the text.

2.2 SITE DESCRIPTION

2.2.1 Geographical Setting

The site is located approximately 6km south-east of the town of Coalville and 1km to the south of the village of Thornton, in the county of Leicestershire. The National Grid Reference (NGR) for the approximate centre of the site is SK470066. A location plan is presented in Appendix B.

The site is currently part of an agricultural field (pasture) and covers an approximate area of 0.1Ha. To the north and west of the site is pasture; Merrylees Road forms the eastern boundary with fields beyond and Linton Farm (livestock buildings etc) is to the south.

The topography of the site itself is level, with the local topography sloping to the north and Thornton village.

2.2.2 Site Inspection Observations

Figure 3, Appendix C, illustrates the site layout.

The site area is a small section of a larger pasture field, and is located to the north of modern agricultural buildings (livestock etc). The ground surface of the site is currently grass.

The site owner, Mr Pickup, confirmed that no pesticides or herbicides have been used on the site area.

Significant Features identified during site inspection:	
Pasture field	Adjacent farm buildings

2.3 HISTORICAL DEVELOPMENT OF THE SITE

A review of the available historical Ordnance Survey (OS) maps gives an insight into the development of the site and can highlight potential hazards. Extracts of the maps reviewed are provided in Appendix D. The relevant differences between each edition are highlighted below.

1885-6: The earliest map reviewed shows the site as being located in the southern section of an agricultural field, in a rural area.

The village of Thornton is located approximately 800m to the north of the site, with Thornton Reservoir and associated water works to the east of the village. The Midland railway is located 500m to the west of the site and a north-south flowing stream is identified 200m to the east of the site.

1901: No change to the site. A colliery is located 1.2km to the west of the site.

1919: There is no change to the site. Desford Colliery is expanding to the west, with associated structures and sidings.

1930: No change to the site.

1950: No change to the site. The colliery continues to expand, with spoil heaps increasing in size. A Brick Works is located next to the colliery. A smaller colliery is identified approximately 1km to the south of the site.

1968: No change to the site. A Works is illustrated approximately 500m to the south west of the site. Overhead power lines run north-south approximately 100m west of the site.

1984: No change to the site. The colliery spoil heap continues to expand to the west of the railway line. Barnhills farm is identified 200m to the south of the site.

1994-95: Linton farm is illustrated to the south of the site (livestock buildings and lagoon).

2002: No change to the site. The Desford colliery has now been restored/landscaped, the brick works have expanded and the colliery to the south is illustrated as Merrylees Industrial Estate. A poultry farm is located approximately 1km south of the site.

2009: No change to the site.

The hazards identified are summarised in the table below.

Significant Features identified on OS Maps:
Agricultural land – potential contamination. Overhead power lines nearby.

2.4 ANTICIPATED GEOLOGY

The BGS Geological Sheet for this area shows the site to be underlain by solid geology of the Mercia Mudstone Group. No superficial deposits are indicated within the site area although deposits of Alluvium and River Terrace Deposits are shown close to the site and may impinge on the site.

The geological memoir describes the Mercia Mudstone as being red brown locally green grey silty mudstones with thin bands (skerries) of siltstone and sandstone.

The geological sheet does not indicate the dip direction of the solid geology in the vicinity of the site. The illustrated cross section suggests that the Mercia Mudstone dips down at a shallow angle towards the south west. The site is not shown to be directly affected by faulting although faulting is present in the local area. The nearest is a sub-surface fault approximately 1km to the west of the site.

Significant Features Identified From Geological Data:
Potentially variable strata including shrinkable clays, siltstones and sandstones.

2.5 HYDROGEOLOGICAL INFORMATION

No detailed information regarding the depths to groundwater is available, however, the groundwater level is likely to be subject to seasonal variations.

The underlying strata (Mercia mudstone) have been classified by the Environment Agency report as a non aquifer.

The information contained in Appendix E reports that there are no recorded groundwater abstraction licenses within 500m of the site. The site is not recorded to be located within a groundwater Source Protection Zone.

Significant Features identified from hydrogeological data:
Non-aquifer

2.6 HYDROLOGICAL INFORMATION

Local surface water features include a north-south flowing stream located approximately 200m east of the site.

Although the site is not located within a flood risk zone, there are indicative zone 2 and 3 floodplains within 250 metres.

The information contained in Appendix E reports that there are no surface water abstraction licences within 500m of the site.

Significant Features identified from hydrological data:
Steam located 300m east of site.

2.7 COAL MINERAL RESOURCES

The environmental data provided by Groundsure confirms the site is in an area that is subject to underground coal mining, but the risk of subsidence relating to shallow mining is considered to be negligible.

The geological mapping confirms that the site is located to the east of the Thringstone Fault, therefore the risk to ground stability at the surface by worked underground coal seams is considered to be negligible.

2.8 OTHER MINERAL RESOURCES

There is a brickworks pit located 1km to the west of the site.

Potential Other Mining Hazards:
Brickworks pit within locality

2.9 ENVIRONMENTAL INFORMATION

Environmental information has been acquired from Emapsite. There is a considerable amount of data and not all of it is relevant to this appraisal (e.g. air pollution controls). Therefore, summary sheets are presented in Appendix E, along with copies of data sheets relevant to this report. The full set of data will be held on file by GRM.

A summary of the relevant information not included elsewhere in this report is presented below:

- One historical landfill within 500m of the site.
- No pollution Incidents to Controlled Waters within 500m of the site.
- No contaminated land register entries and notices within 500m of the site.
- Two potentially contaminative industries are registered within 250m of the site related to overhead power lines).
- One Fuel Station entry within 500m of the site.

2.10 ARCHAEOLOGY

Archaeological information has not been sought as part of this desk study and has not been identified as an issue by the Client. Some Local Authorities require at least an initial archaeological appraisal for development sites. GRM can undertake such appraisals if required.

2.11 RADON ASSESSMENT

The site has been assessed following the guidelines in 'Radon: guidance on protective measures for new dwellings' (BR211 2007).

The site is not within an area recorded to require radon protection measures, as shown by map 14, 'Derbyshire, Leicestershire and Nottinghamshire', of the BR211 (2007) guidance.

According to latest available information from the Health Protection Agency (HPA-RPD-033, BGS Radon Atlas), >1% of homes in this area are reported to have radon levels above the 'Action Level' in this area.

Therefore, no radon protection measures are required for the proposed development.

Radon Hazard:
None

2.12 CONTAMINANTS OF CONCERN

For land uses such as this site's, where no published industrial profile is available, likely contaminants of concern are selected by GRM based on past experience of similar sites, a general screening suite of contaminants covered by CLEA and common contaminants from the Industry Profiles.

Asbestos and PCBs are listed in the vast majority of profiles. PCBs are listed as the profiles expect electricity substations and switch boxes on all industrial sites (none have been recorded on this site).

There are contaminants that are generally tested for as a matter of course as their prevalence on brownfield sites is renowned. These include:

- Arsenic
- Cadmium
- Chromium
- Lead
- Mercury
- Selenium
- Copper
- Nickel
- Zinc
- Phenols
- cyanide (total)
- pH
- Water soluble sulphate
- PAH (polycyclic aromatic hydrocarbons)

The site owner has confirmed that as the site is pasture land, no such chemicals or pesticides or herbicides have been used, therefore analysis for such chemicals will not be required for this site.

No potential source of landfill gas (>250m to site) has been identified in the review of the phase 1 information.

3 PHASE I CONCEPTUAL MODEL

3.1 POTENTIAL SOURCE – PATHWAY – RECEPTOR

The consideration of contamination is based upon the principles of risk assessment, using the 'source-pathway-receptor' model in order to establish the presence, or potential presence, of a pollutant linkage.

To create a risk, contamination must have the potential to cause harm to susceptible targets or receptors such as humans, the water environment or the built environment. The potential for harm to occur requires three conditions to be satisfied:

- The presence of substances that may cause harm (SOURCE).
- The presence of a target which may be harmed (RECEPTOR).
- The existence of a plausible pollutant linkage between the source and the receptor (PATHWAY).

In the absence of a plausible pollutant linkage there is no risk. Where a potential linkage is identified in order for it not to pose a risk to the identified receptor(s) it must be broken.

The site comprises a section of a pasture field which is to be developed with a new farm house. The site location is classed as greenfield land and it has been confirmed by the landowner that no pesticides or herbicides have been used on site.

Made ground is not is not considered to be present on site therefore there is no potential source of ground gas within 250m of the site.

Potential contaminants of concern for the whole site include those listed in Section 2.12.

The primary human health receptors are residents of the completed development and construction workers. The primary pathways of concern include dermal contact with contaminated soil and soil dust, the ingestion of contaminated soil and soil dust, ingestion of vegetables that have taken up the contamination, indoor and outdoor inhalation of ground gas and soil vapours, and migration of contamination into water supply pipes.

The site is underlain by a non-aquifer and there is no proximal surface water course, therefore controlled waters are not considered as a potential receptor.

For construction materials, the primary receptors are water pipes and buried concrete. The primary pathways of concern are the migration of contamination leading to degradation of pipe materials and sulphate and/or acid attack on buried concrete.

The pollutant linkage model is illustrated in detail on the following page.

3.2 POLLUTANT LINKAGE MODEL

HUMAN HEALTH			
Source	**Pathway**	**Receptor**	**Solution**
Greenfield site – pasture. No historical use of pesticides/herbicides. No ground gas source within 250m.	Indoor and outdoor inhalation of ground gas and soil vapours, the ingestion of contaminated soil, vegetables and soil dust; dermal contact with contaminated soil and soil dust.	End users of the completed development and construction workers.	No risk.
CONTROLLED WATERS			
Greenfield site – pasture. No historical use of pesticides/herbicides.	Vertical migration to the saturated zone.	Non aquifer	No risk.
CONSTRUCTION MATERIALS			
Greenfield site – pasture.	Migration of contamination through leaks and joints, degradation of pipe materials and sulphate attack on buried concrete.	Water pipes and buried concrete.	No contaminant source on site. Appropriate concrete specification.

4 FURTHER INVESTIGATION

No intrusive investigation, to determine more accurately the effect of some of the identified hazards on the development, is recommended.

A copy of this report should be submitted to the Planning Department of the Local Authority/Local Authority EHO for review.

GRM can provide additional services to assist with the progress of this development. Budget costs for these services can be itemised under separate cover if required.

5 CONCLUSIONS

This Site Appraisal has shown the site is suitable for the proposed development, assuming compliance with all the recommendations contained within this report.

See 'Summary of Recommendations' table at the beginning of the report.

Document prepared by	**Richard Sutton MRICS** **(Principal Environmental Consultant)**
Reviewed by	**Chris Storey FGS** **(Principal Engineer)**
Approved by	**Chris Jerram FGS CGeol** **(Director)**
When required in-house geological, geotechnical, environmental, structural and civil staff helped to produce this document.	

APPENDIX A

GRM
Development Solutions
geoenvironmental - civil - structural

NOTES:

DO NOT SCALE

GRM Development Solutions Ltd
Development · Risk · Structure
100 Hutton Farm, Chestnut Avenue, Hutton, Brentwood, Essex CM13 2PA
Tel: 01277 262 888 Fax: 01277 262 889
www.grmdevelopment.co.uk

CLIENT:

A Pickup & Son Ltd

PROJECT:

Hutton Farm, Hutton, Brentwood, Essex.

TITLE:

Development Proposal

SCALE@SIZE:	ISSUE:
NTS	1
DESIGNDRAWN:	DATE:
RAS	12/03/10
PROJECT No:	DRAWING No:
8548	Figure 1

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APPENDIX B

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N
NOTES:
DO NOT SCALE
Approximate Site Location
GRM
GRM Development Solutions Ltd
Saxon House, First Avenue, Centrum 100
Burton-upon-Trent, Staffs, DE14 2WH
Tel: 01283 537529 Fax: 01283 211988
CLIENT:
A Pickup & son Ltd
PROJECT:
Linton Farm, Thornton,
Leics.
TITLE:
Site Location
SCALE@A1: NTS
DESIGNDRAWN: RPS
PROJECT No: 8515
DRAWING No: Figure 2
ISSUE: 1
DATE: 10/2015
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Crown Copyright: AL 100017001

APPENDIX C

GRM Development Solutions
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NOTES: DO NOT SCALE

N

Approximate Site Layout

GRM Developments Solutions Ltd
Laurus House, First Avenue, Centrum 100
Burton-upon-Trent, Staffs, DE14 2WH
Tel: 01283 537249 Fax: 01283 211888

CLIENT:

A Pickup & Son Ltd

PROJECT:

Linton Farm, Thornton, Leics.

TITLE:

Site Layout

PSH	Figure 3
PROJECT No:	DRAWING No:
PS	15/10/10
DESIGNED/DRAWN:	DATE:
NTS	1
SCALE@SIZE:	ISSUE:

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APPENDIX D

GRM
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emapsite™

Site Details:

Linton Farm,Merrylees Road,Thornton,LE67 1AN

Client Ref: EMS_101253_128484
Report Ref: S EMS-101253_128484
Grid Ref: 447053, 309767

Map Name: County Series

Map date: 1885

Scale: 1:10,560

Printed at: 1:10,560

Surveyed 1885
Revised 1885
Edition NA
Copyright NA
Levelled NA

Surveyed 1885
Revised 1885
Edition NA
Copyright NA
Levelled NA


THORNTON
Thornton Reservoir
(Junction Compensation Water Works)
Water Works
MIDLAND RAILWAY
Old Gravel Pit
Gravel Pit
Gravel Pit Covert
Meadow
Pond
Pond
Pond

emapsite™

Site Details:

Linton Farm,Merrylees Road,Thornton,LE67 1AN

Client Ref: EMS_101253_128484
Report Ref: S EMS-101253_128484
Grid Ref: 447053, 309767

Map Name: County Series

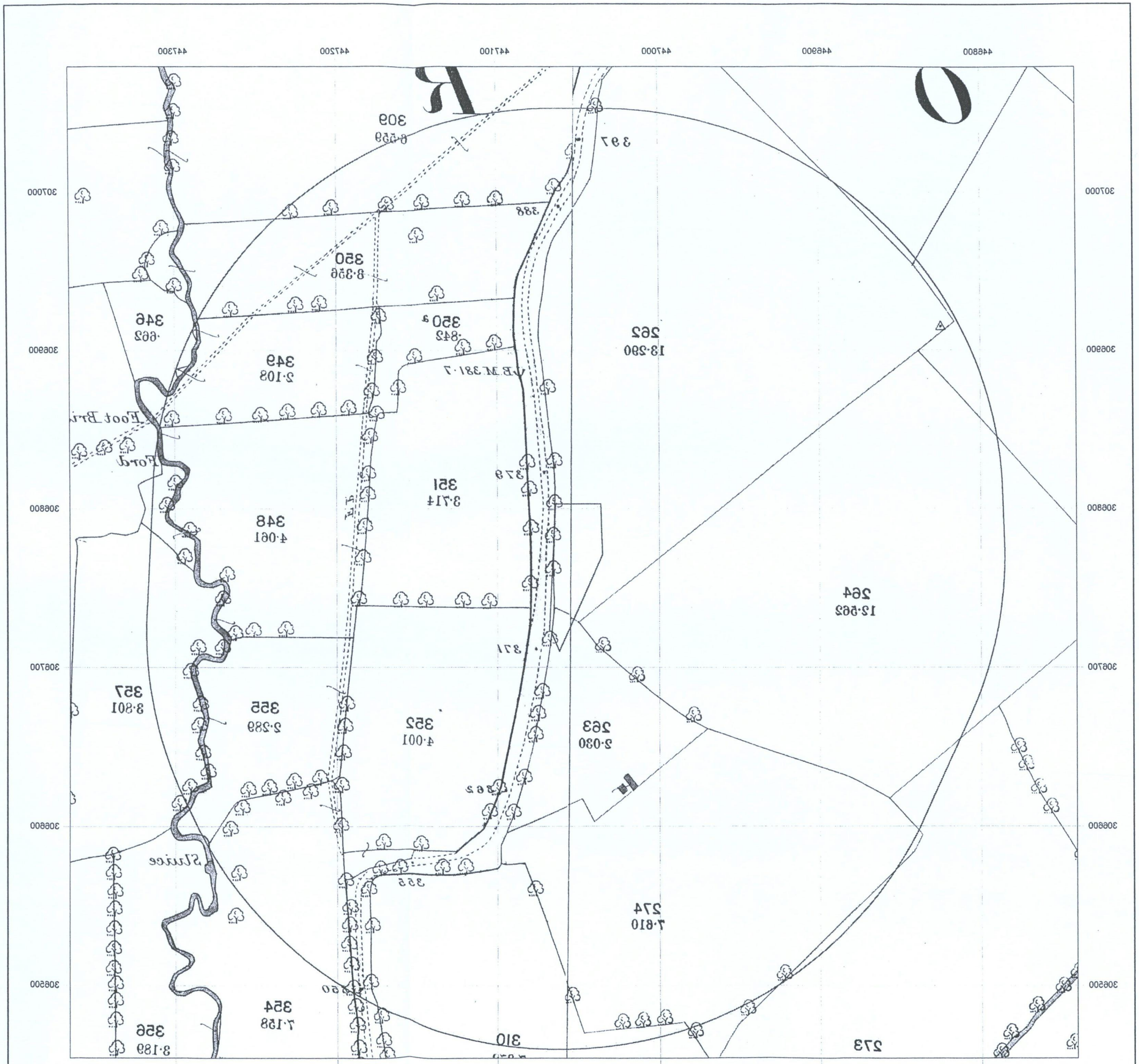
Map date: 1886

Scale: 1:2,500

Printed at: 1:2,500

Surveyed 1886
Revised 1886
Edition NA
Copyright NA
Levelled NA

Surveyed 1886
Revised 1886
Edition NA
Copyright NA
Levelled NA



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Site Details:

Linton Farm,Merrylees
Road,Thornton,LE67 1AN

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Report Ref: S EMS-101253_128484
Grid Ref: 447053, 308767

Map Name: County Series

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Printed at: 1:10,560

Surveyed 1885
Revised 1901
Edition NA
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Surveyed 1885
Revised 1901
Edition NA
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Site Details:

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Client Ref: EMS_101253_128484
Report Ref: S EMS-101253_128484
Grid Ref: 447053, 308767

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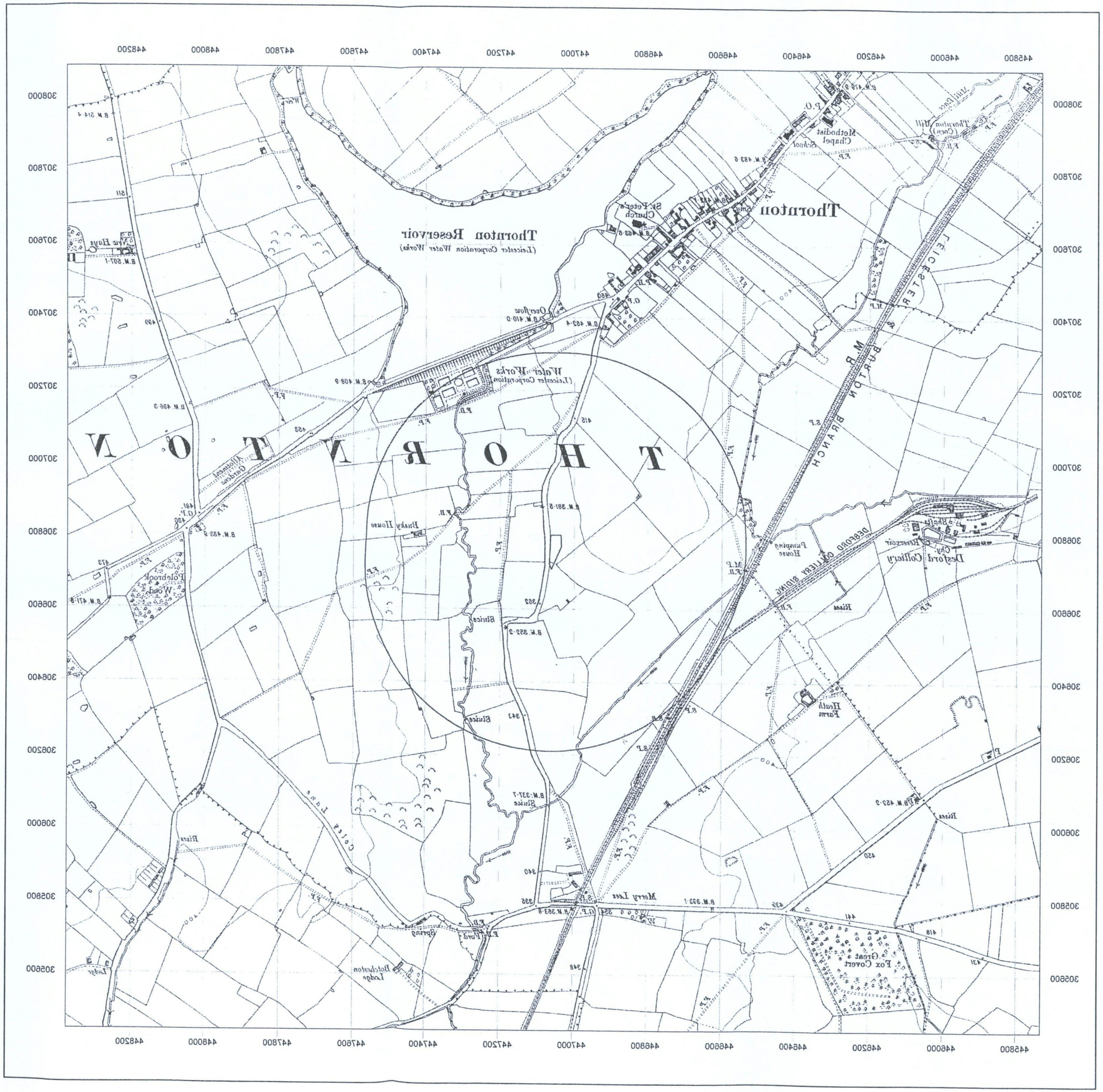
Printed at: 1:10,560

Surveyed 1884
Revised 1919
Edition NA
Copyright NA
Levelled NA


Thornton Reservoir
(Leicester Corporation Water Works)
Thornton
T H O R N T O N
Methodist Chapel
Destord Colliery
Pumping House
Old Reservoir
Fox Covert
Great
Holly Farm
Turnpike (Toll)
Sch. Peter's Church
Water Works
(Leicester Corporation)
Merry Lees
Holly Tower
Tolethorpe Wood
Dolphinston Lodge
Gorse Lodge
Old Quarry
Sluice
Rising
Hedge
Fence
Trees
Path
Road
Footpath
Boundary
Telegraph
Pylon
Well
Spring
Tank
Sand Pit
Gravel Pit
Chalk Pit
Quarry
Level
Bridge
Ford
Cutting
Embankment
Tunnel
Mile Post
Milestone
Boundary Stone
Direction Post
Cattle Grid
Gate
Stile
Pond
Reservoir
Sewage Works
Pumping Station
Electricity Sub-Station
Gas Governor
Post Office
Public Telephone
Public Convenience
Public House
Church
Chapel
School
Institute
Village Hall
Town Hall
Market Cross
Drinking Fountain
Coastguard Station
Lighthouse
Lighthouse (Occulting)
Beacon
Boundary Post
Boundary Beacon
Boundary Pillar
Boundary Mark
Boundary Cairn
Boundary Obelisk
Boundary Monument
Boundary Marker
Boundary Post
Boundary Stone

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Site Details:
Linton Farm,Merrylees Road,Thornton,LE67 1AN

Client Ref: EMS_101253_128484
Report Ref: S EMS-101253_128484
Grid Ref: 447053, 306767

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Scale: 1:2,500
Printed at: 1:2,500

Surveyed 1930
Revised 1930
Edition NA
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Edition NA
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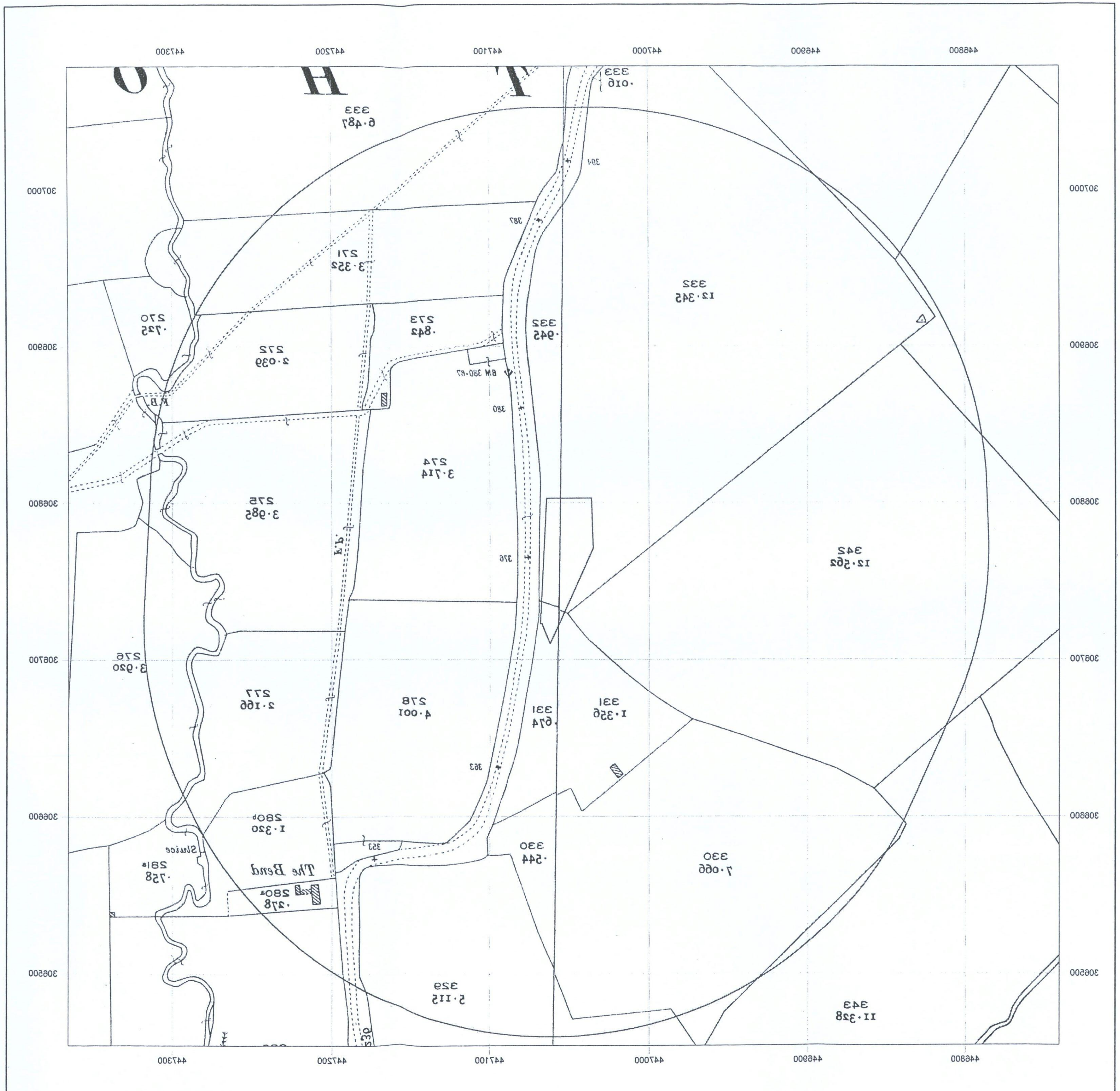

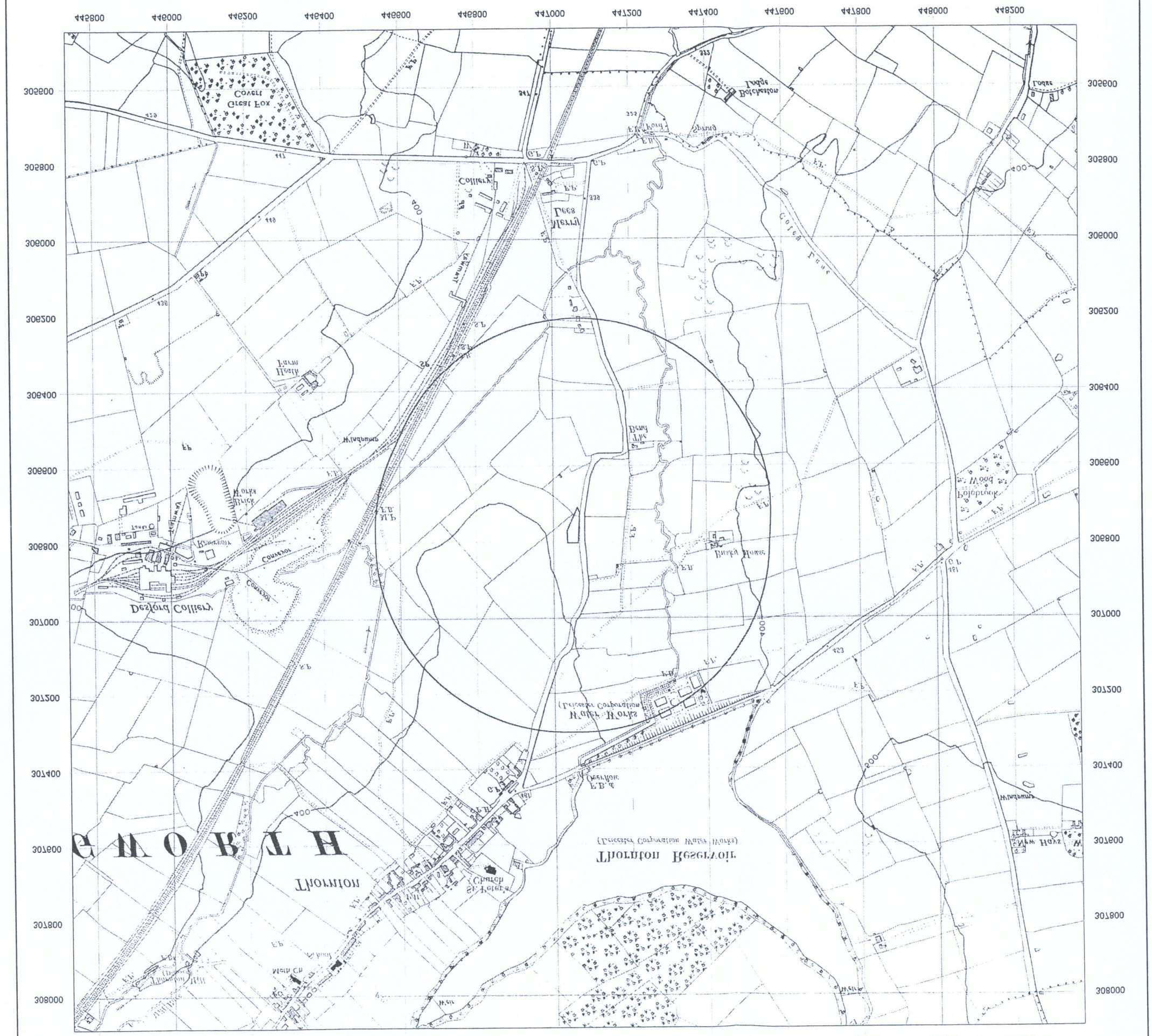
Thornton Reservoir
Thornton
Thornton Hall
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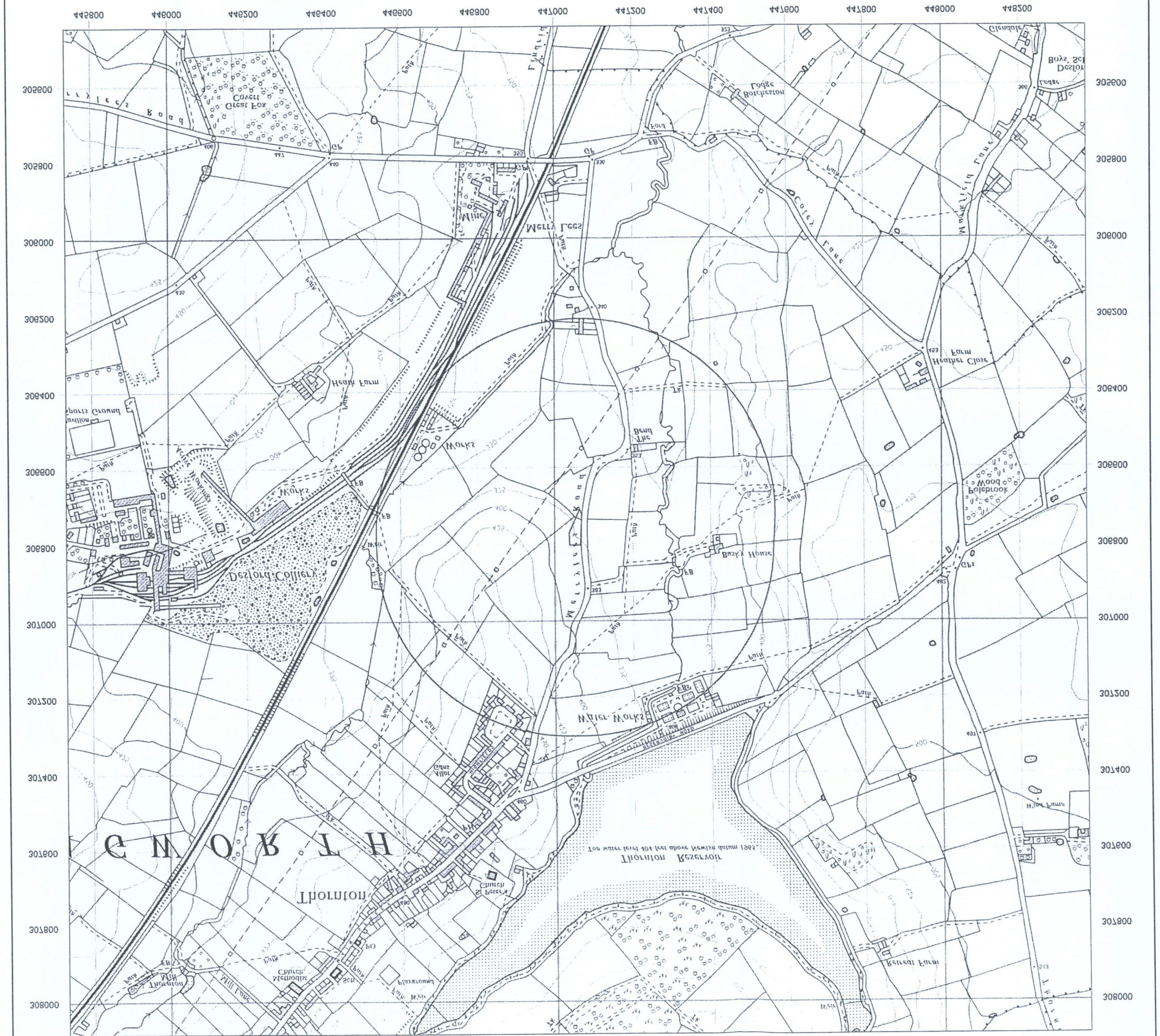
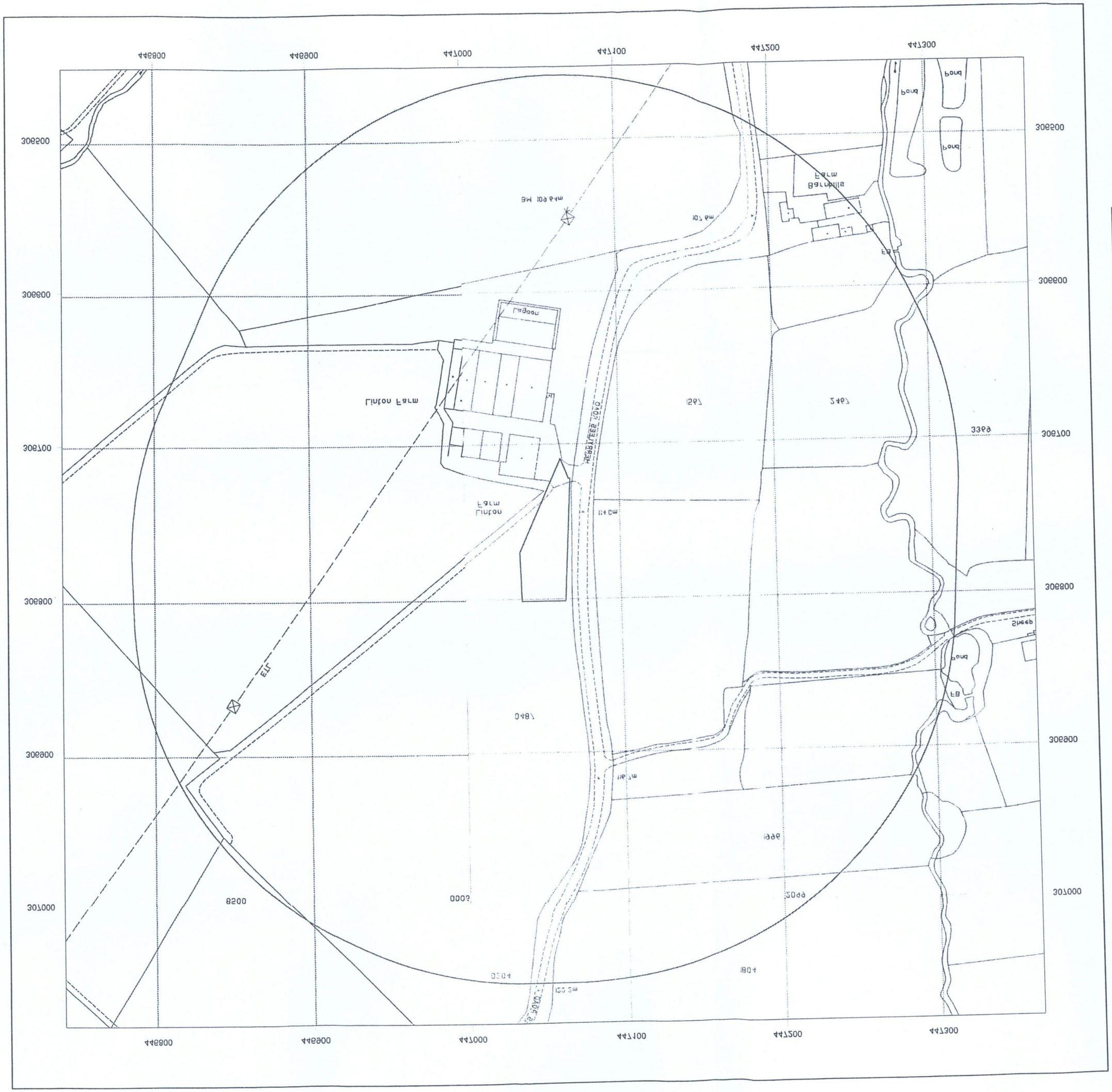
Thornton Hall Cottages
Thornton Hall Lodge
Thornton Hall Gate
Thornton Hall Gate Lodge
Thornton Hall Gate Lodge
Thornton Hall Gate Lodge


Road
Thornton Quarry
Thornton Reservoir
Thornton Golf Course
Thornton Manor
Thornton Hall Farm
Thornton Hall Lodge
Thornton Hall Cottages
Thornton Hall Gate


BACWORTH CP
Tarmac
Tarmac
Tarmac


Linton Farm
Farm
Bridge
Pond
Pond
Pond
Pond
Farm
Bridge
Footpath
Footpath
Footpath

emapsite™

Site Details:

Linton Farm,Merrylees Road,Thornton,LE67 1AN

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Report Ref: S EMS-101253_128484
Grid Ref: 447053, 306767

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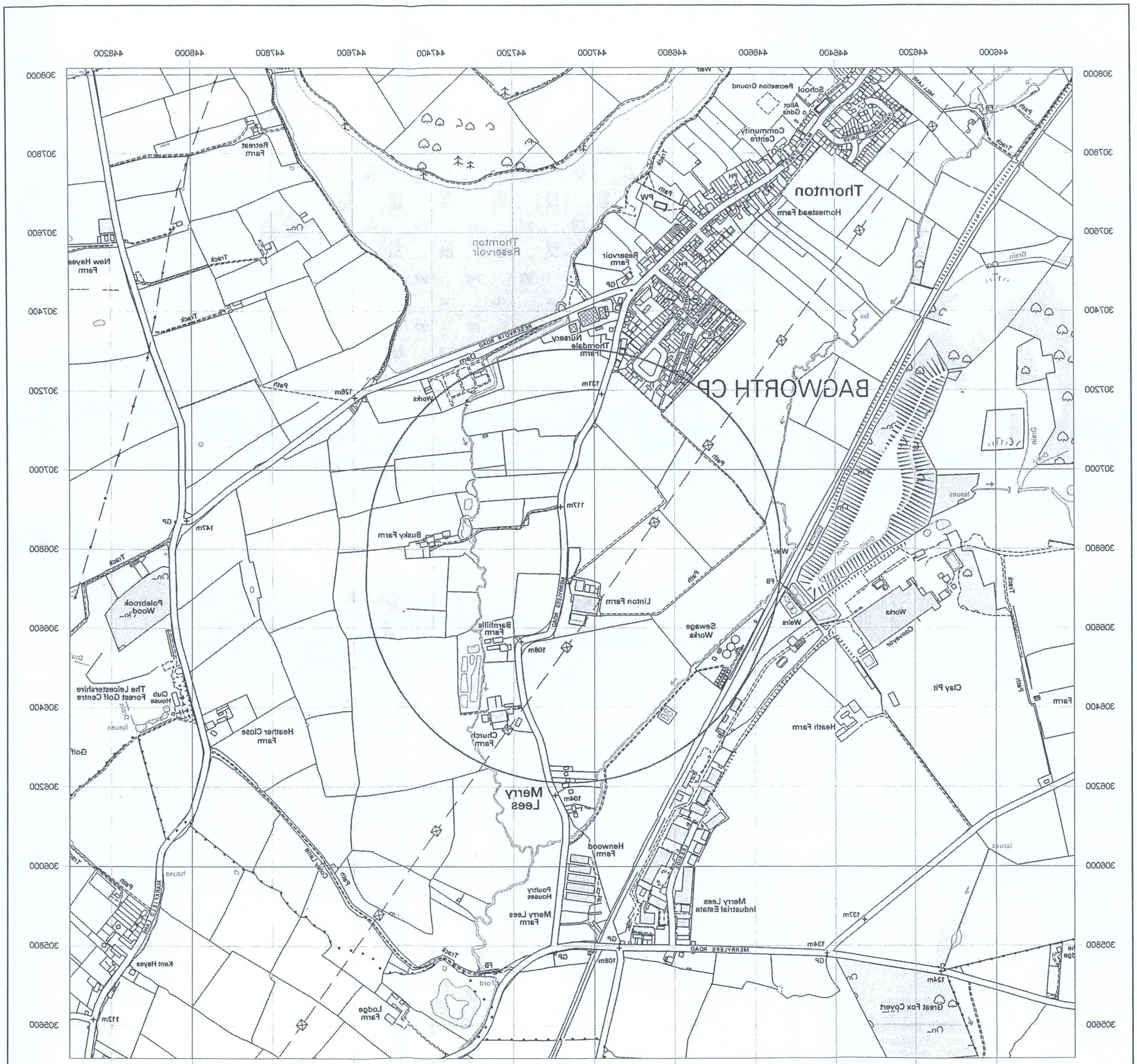
Scale: 1:10,000

Printed at: 1:10,000

2002



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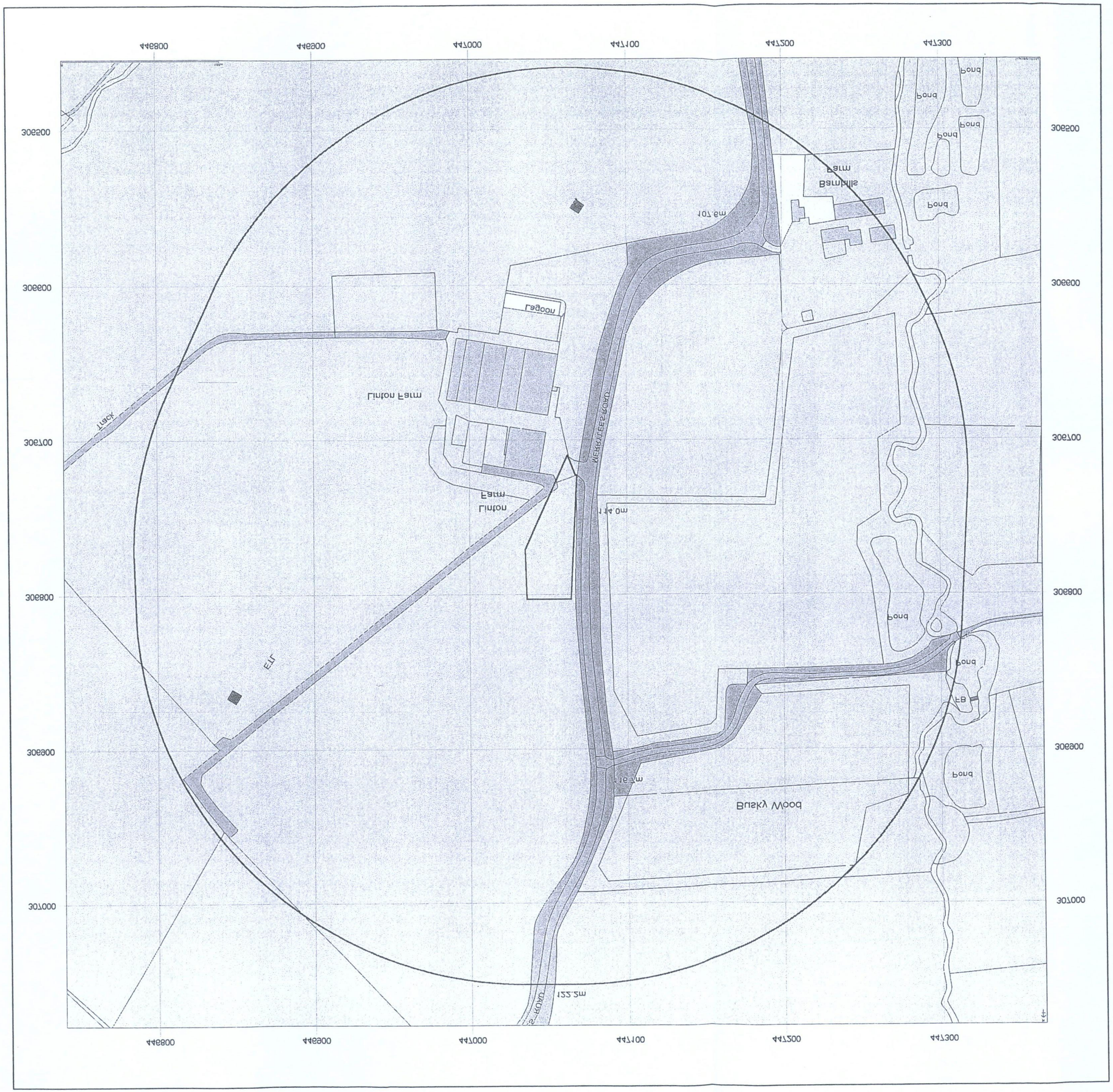
Pond
Pond
Pond

APPENDIX E

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GroundSure EnviroInsight

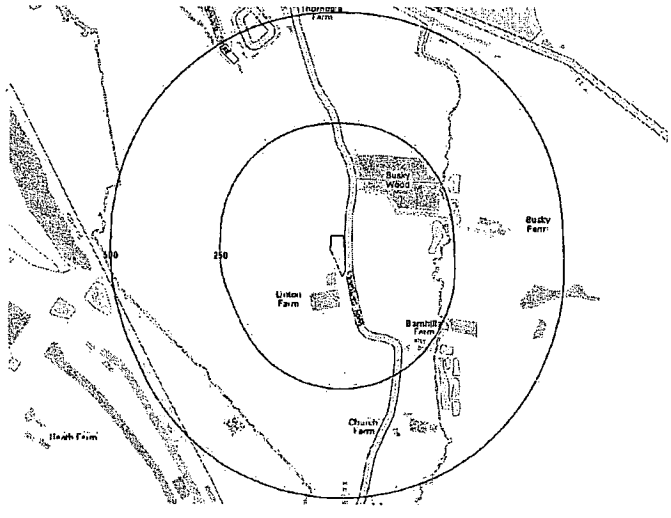
Address: Linton Farm,Merrylees Road,Thornton,LE67 1AN

Date: Mar 8, 2010

GroundSure Reference: S EMS-101253_128485

Your Reference: EMS_101253_128485

Client: EmapSite



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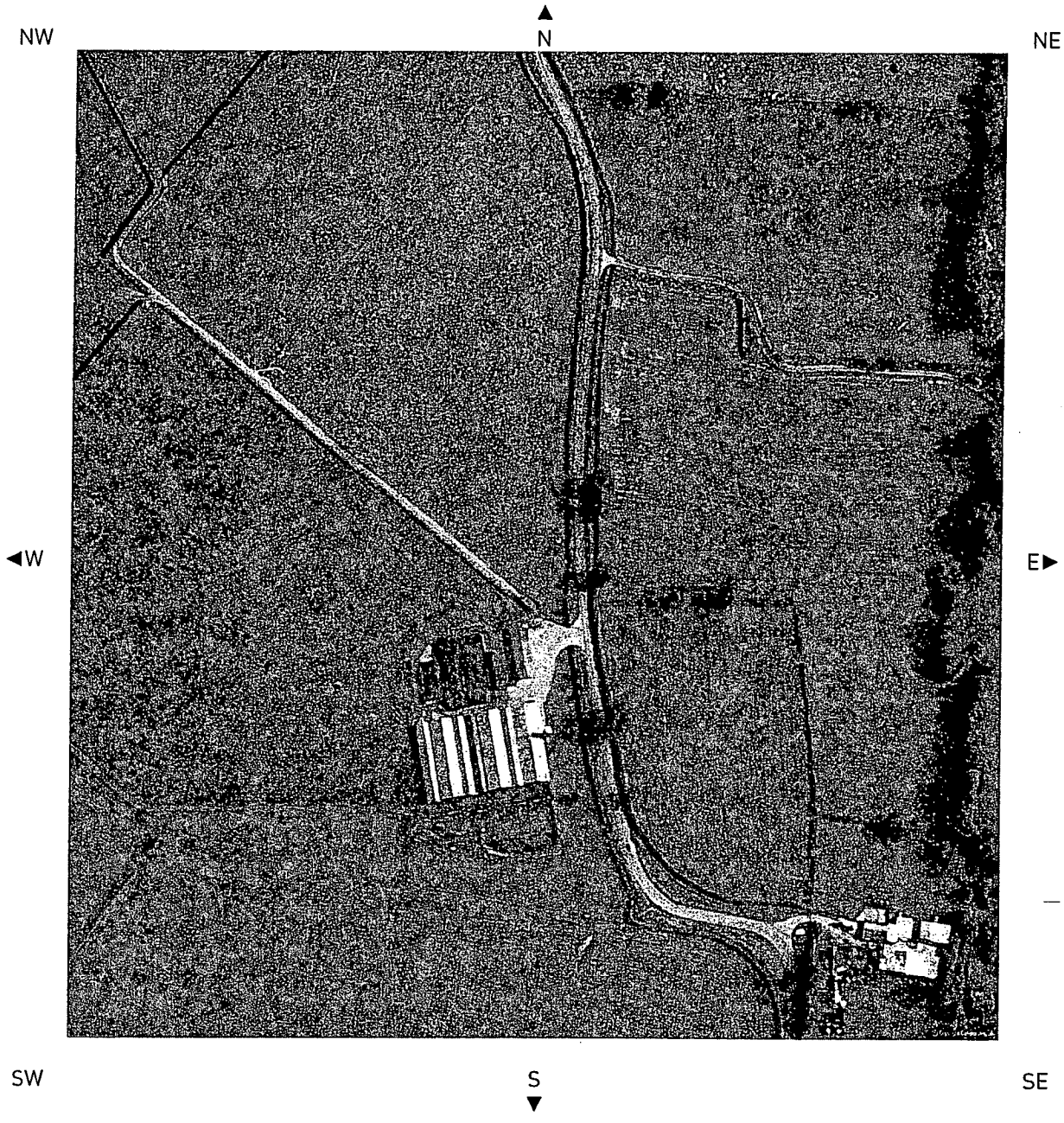
Aerial Photograph of Study Site



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Site Name: Linton Farm,Merrylees Road,Thornton,LE67 1AN
Grid Reference: 447053,306767

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.

Report Section	Number of records found within (X) m of the study site boundary					
1. Authorisations, Incidents and Registers	on-site	0-50	51-250	251-500	501-1000	1000-1500
1.1 Industrial Sites Holding Licences and/or Authorisations						
Records of IPC Authorisations	0	0	0	0	-	-
Records of IPPC Authorisations	0	0	0	0	-	-
Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0	-	-
Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0	-	-
Records of List 1 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of List 2 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of LAPPC Authorisations	0	0	0	0	-	-
Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0	-	-
Records of Licensed Discharge Consents	0	0	0	7	-	-
Records of Planning Hazardous Substance Consents	0	0	0	0		
1.2 Records of COMAH and NIHHS sites	0	0	0	0	-	-
1.3 Environment Agency Recorded Pollution Incidents						
National Incidents Recording System, List 2	0	0	0	-	-	-
National Incidents Recording System, List 1	0	0	0	-	-	-
1.4 Sites Determined as Contaminated Land under Part IIA EPA 1990	0	0	0	0	-	-
1.5 Planning Hazardous Substance Enforcements	0	0	0	0	-	-
2. Landfill and Other Waste Sites	on-site	0-50	51-250	251-500	501-1000	1000-1500
2.1 Landfill Sites						
Environment Agency Registered landfill Sites	0	0	0	0	1	-
Landfill Data - Operational Landfill Sites	0	0	0	0	1	-
Environment Agency Historic Landfill Sites	0	0	0	1	0	1
Landfill Data - Non-Operational Landfill Sites	0	0	0	0	0	-
BGS/DoE Landfill Site Survey	0	0	0	0	0	0
GroundSure Local Authority Landfill Sites Data	0	0	0	0	0	0
2.2 Landfill and Other Waste Sites Findings						
Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Environment Agency (REGIS) Waste Sites	0	0	0	0	1	0
3. Current Land Uses	on-site	0-50	51-250	251-500	501-1000	1000-1500
3.1 Current Industrial Sites Data	0	0	2	-	-	-
3.2 Records of Petrol and Fuel Sites	0	0	0	1	-	-

3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0	-	-

4. Geology

	Description
4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site? *	No
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site? *	No
4.3 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	

Source: Scale: 1:50,000 BGS Sheet 155

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

5. Hydrogeology and Hydrology

	on-site	0-50	51-250	251-500	501-1000	1001-2000
5.1 Environment Agency Groundwater Vulnerability and Soil Classification						
Is a Minor Aquifer present on site?	No	-	-	-	-	-
Is a Major Aquifer present on site?	No	-	-	-	-	-
Are there any Soil Classification records present on site?	No	-	-	-	-	-
5.2 Groundwater Abstraction Licences (within 1000m of the study site).	0	0	0	1	0	-
5.3 Surface Water Abstraction Licences (within 1000m of the study site).	0	0	0	0	0	-
5.4 Potable Water Abstraction Licences (within 2000m of the study site).	0	0	0	0	0	0
5.5 Are there any Source Protection Zones within 500m of the study site?			No			
5.6 River Quality						
Is there any Environment Agency information on river quality within 500m of the study site?	No	No	Yes	No	-	-
5.7 Main Rivers within 500m of the study site.	0	0	1	0	-	-
5.8 Surface water features within 250m of the study site	No	No	Yes	-	-	-

6. Flooding

6.1 Are there any Environment Agency indicative Zone 2 floodplains within 250m of the study site?	Yes
6.2 Are there any Environment Agency indicative Zone 3 floodplains within 250m of the study site?	Yes
6.3 Are there any Flood Defences within 250m of the study site?	No
6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
6.5 Are there any areas used for Flood Storage within 250m of the study site?	No
6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Negligible
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Moderately High

7. Designated Environmentally Sensitive Sites

	on-site	0-50	51-250	251-500	501-1000	1001-1500
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	-	-
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	-	-
7.3 Records of Local Nature Reserves (LNR)	0	0	0	0	-	-
7.4 Records of Special Areas of Conservation (SAC)	0	0	0	0	-	-
7.5 Records of Special Protection Areas (SPA)	0	0	0	0	-	-
7.6 Records of Ramsar sites	0	0	0	0	-	-
7.7 Records of World Heritage Sites	0	0	0	0	-	-
7.8 Records of Environmentally Sensitive Areas	0	0	0	0	-	-
7.9 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	-	-
7.10 Records of National Parks	0	0	0	0	-	-

7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	-	-
7.11 Records of Nitrate Sensitive Areas	0	0	0	0	-	-
7.12 Records of Nitrate Vulnerable Zones	1	0	0	0	-	-

8. Natural Hazards

8.1 What is the maximum risk of natural ground subsidence?	Very Low

9. Mining

9.1 Are there any coal mining areas within 75m of the study site?	Yes
9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site?	Negligible
9.3 Are there any brine affected areas within 75m of the study site?	No