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LAND EAST OF MOUSDELL CLOSE ASHINGTON

Phase I
Environmental Assessment

Client
Rocco Homes

Report No. 5993-I

22nd August 2025

CONTENTS

LAND EAST OF MOUSDELL CLOSE ASHINGTON

Phase I Environmental Assessment

Synopsis

A Phase I Environmental Assessment has been carried out into the past and present usage of land east of Mousdell Close, Ashington on the instructions of Rocco Homes.

The purpose of the study was to conduct a visual appraisal of the site and to research available data with reference to chemical constraints that may impinge upon the development proposals.

The study comprised a walkover survey followed by examination of historic map records. In addition, searches were made of various databases held by the Environment Agency and others. The information obtained from these sources is summarised herein.

It is considered that previous activities on or in the immediate vicinity of the site constitute a low risk of significant or widespread contamination. Public Health England do not consider that Radon protection will be required.

1
Walk over survey

The area under investigation is an irregularly shaped, albeit rectilinear plot of land which extends to some 2.2 hectares. The current general arrangement is shown on Figure 1 at Appendix A.

The site is bounded by Rectory Lane to the north with agricultural land beyond, to the east by Chanctonbury House and other residential properties, to the south by woodland with agricultural land beyond and to the west by housing in Penn Gardens and Mousdell Close.

The site is accessed via a gate in the north east corner, off Rectory Lane. The site comprises an open field laid to rough pasture with no permanent structures present (although a horse box was situated on the northern boundary). The site is relatively flat with a gentle fall from the north east to the south west. The majority of the site boundaries are lined with trees and hedgerows.

There was no visual or olfactory evidence of contamination noted during the walk over survey and all trees and shrubs appeared healthy and in good vigour.

2
Historic map records

Extracts from historic Ordnance Survey maps are presented at Figures 2 - 10 of Appendix A and illustrate usage of the site and its surroundings from 1875 to 2024. These also show the approximate boundary of the site and the radius of interest for this assessment.

1875

The earliest available mapping is given at Figure 2 and shows the site to be undeveloped. Indeed, undeveloped land surrounds the subject site to the east, south and west and beyond Rectory Lane which forms the northern boundary. A number of dwellings are noted some 200 m east of the site, some of which have landscaped gardens. No other significant development is noted within the mapped area.

1897

No significant changes to the site or surroundings are evident.

1911

The site and surroundings appear essentially unchanged.

1937 - 1939

The subject site remains undeveloped. Penn Gardens, a residential cul-de-sac, has been constructed immediately to the west and some houses have been constructed to the east, fronting onto Rectory Lane. A Nursery with large greenhouses lies beyond the new housing to the east. A Tank is shown just beyond the south east corner of the site.

1974

Figure 6 at Appendix A shows the site to be unchanged and undeveloped. A couple of new structures, including an electricity substation are shown adjacent to Penn Gardens to the west and the housing to the east has altered somewhat and includes a new dwelling. The Nursery to the east has increased the number of greenhouses along with some ancillary structures and the Tank noted on Figure 5 is now shown as a Reservoir with adjacent Pump House.

1993

The site and surroundings appear essentially unchanged.

2003

The site remains undeveloped although a small structure is depicted on the northern boundary with Rectory Lane. An additional residential dwelling, Chanctonbury House, has been constructed to the east where a Pond is also depicted. No other significant changes are evident within the mapped area.

2010

No large scale maps are available post 2003 and small scale maps have therefore been included. Although little detail can be made out on the site itself, Figure 9 at Appendix A shows the site to remain undeveloped. The town of Ashington lies to the east.

2024

Figure 10 at Appendix A shows the site and surrounds much as they are today.

3
Development proposals

It is intended to erect 74 dwellings with associated landscaping, open space, parking and creation of new vehicular access from Rectory Lane.

The proposed general arrangement is given at Figure 11 of Appendix A.

4

Database searches

The following information has been gleaned from database searches which covers an area within a 250 - 500 m radius of the site unless otherwise stated. All distances are approximate and measured from the nearest part of the site.

4.1

Environmental permits, incidents and registers

4.1.1

Negative search results within 500 m of search centre

The Local Authority have not determined any sites as Contaminated Land under Part IIa of the EPA 1990.

Records of COMAH or NIHHS sites.

Regulated explosive sites.

Hazardous substance storage / usage.

Historical licensed industrial activities (IPC authorisations).

Licensed industrial activities (Part A(1)).

Licensed industrial activities (Part A(2)/B).

Radioactive substance authorisations.

Pollutant release to surface waters (red list).

Pollutant release to the public sewer.

List 1 or List 2 dangerous substances inventory sites.

Pollution inventory (substances).

Pollution inventory (waste transfer).

Pollution inventory (radioactive wastes).

4.1.2

Licensed discharges to controlled waters

One current and one historical license have been found within 500 m of the study site. The current license is shown in Table 1.

Table 1: Licensed discharges to controlled waters

Distance, m	Direction	Address	Effluent type	Receiving water
255	SE	Willards Way, Ashington pumping station	Sewage discharges - water company	Unnamed tributary of Lancing Brook

4.1.3

Pollution incidents

Five records have been identified by the database search within 500 m of the study site, as listed in Table 2.

Table 2: Recorded pollution incidents

Distance, m	Direction	Date	Pollutant	Impact
13	S	23/08/2003	Sewage materials	Water: None Land: None Air: None
70	W	04/03/2002	Sewage materials	Water: Minor Land: None Air: None
312	SE	16/10/2004	Atmospheric pollutants and effects - chemical odour	Water: None Land: Minor Air: Significant
344	E	18/07/2001	Oils and fuel - diesel	Water: Minor Land: None Air: None
348	E	03/09/2002	Inert materials and waste - soils and clay	Water: Minor Land: None Air: None

4.2

Landfill and other waste sites

4.2.1

Landfill sites

No active or recently closed landfill sites under Environment Agency (EA) regulation have been identified within 500 m.

No historical BGS/DoE landfill sites have been identified within 500 m of the search centre.

No landfill sites identified from Local Authority records have been found within 500 m.

No records of known historical (closed) landfill sites have been identified within 500 m. These records relate to sites that existed before the waste licensing regime and sites that have been licensed in the past but where a license has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

No historical waste sites have been identified within 500 m.

No active or recently closed waste sites under EA regulation have been identified within 500 m.

4.2.2

Waste exemptions

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to. Full details are presented in Table 3.

Table 3: Waste exemptions

Distance, m	Direction	Address	Category	Description
13	S	Npa electricity substation 52 m from 21 Penn Gardens	Using waste exemption (not on a farm)	Use of waste in construction

4.3
Current land use

4.3.1
Current industrial data

Two records of current industrial land use have been identified within 250 m, one of which relates to the electricity substation 53 m to the west. Electricity substations are not considered significant. Older substations have the potential to contain polychlorinated biphenyls although they are generally considered to be relatively immobile.

The remaining record relates to the pump house 3 m east of the far south east corner of the site (adjacent to the reservoir).

4.3.2
Petrol and fuel sites

No recorded relating to open, closed, under development or obsolete petrol stations have been identified within 500 m.

4.3.3
High voltage underground electricity cables

None recorded within 500 m.

4.3.4

High pressure underground gas transmission pipelines

None recorded within 500 m.

5

Geology

Published records of the British Geological Survey (BGS) indicate the majority of the site to lie on the Weald Clay Formation. Superficial Head deposits are mapped in the far south and extends to the west, south and south east.

6

Hydrogeology and hydrology

The superficial Head is classed as a Secondary Undifferentiated Aquifer, previously referred to as a minor or non aquifer.

The Weald Clay Formation is classed as Unproductive.

The Head (Secondary Undifferentiated Aquifer) is considered to have a medium vulnerability to a pollutant discharged at ground level. The Weald Clay is unclassified.

No soluble rocks are likely to be present.

The site is not located within 500 m of a groundwater Source Protection Zone.

No groundwater, surface water or potable water abstraction licences are held within 2000 m.

7
Flooding

The EA RoFRaS (risk of flooding from rivers and/or the sea in any given year, based on cells of 50 m) database indicates there to be a negligible risk of flooding on site in any given year.

There are no records of historical flooding within 250 m.

There are no flood defences located within 250 m and no areas benefit from flood defences within 250 m.

There are no flood storage areas within 250 m.

The Environment Agency's (EA) Natural Hazards Map indicates the site is not within 50 m of either a Zone 2 or Zone 3 floodplain.

The highest risk of surface water flooding as a result of extreme rainfall events on site is negligible. The highest risk within 50 m is 1 in 30 year with a flood depth of 0.3 - 1.0 m.

The highest risk of groundwater flooding as a result of water table rise on site is considered to be low (based on a 1 in 100 year return period). The highest risk within 50 m is also low.

8
Environmentally sensitive sites

There are several areas of Designated Ancient Woodland within 2000 m of the site. The closest lies 594 m to the south and the most distant is 1996 m to the east.

9

Natural hazards

9.1

Ground instability

A search of the BGS GeoSure database reveals the following hazard ratings:-

Shrink swell clays:	low
Running sand:	negligible
Compressible ground:	negligible
Collapsible deposits:	very low
Landslide:	very low
Soluble rocks:	negligible

9.2

Mining, ground workings and natural cavities

British Pits (BritPits) is a database maintained by the BGS of currently active and closed surface and underground mineral workings. No records have been identified within 500 m.

One record relating to surface ground workings has bee identified by the database search and relates to the reservoir.

No records of historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings (e.g. mine shafts) have been identified within 1000 m.

No records relating to underground mining extents, including adits and seam workings have been found within 500 m.

No historical mineral planning areas are located within 500 m.

The site is located within an area where underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

The site is not in an area which could be affected by past, current or future coal mining.

No natural cavities or mining cavities are located within 500m.

9.3
Radon

The BGS/Public Health England estimate that less than 1 % of properties exceed the Radon Action Level and no further action is required.

10
Discussion

10.1
Solid and liquid phase contaminants

The development history of the site and its immediate surroundings have been summarised in the foregoing, as far as could be ascertained within the present remit.

The site has not carried any significant development throughout the historical mapping and remains undeveloped to the present day.

The surrounding land has been sparsely developed over the course of the historical mapping. Housing comprises the closest development with a plant Nursery slightly further afield.

The database searches have not revealed any activities within the surrounding area which could potentially give rise to significant contamination migrating to the subject site.

The underlying geology is predominately material of the Weald Clay Formation save for the very southern portion of the site which is mapped as Superficial Head deposits. The Head is classed as a Secondary Undifferentiated Aquifer (previously referred to as a minor or non aquifer) whilst the Weald Clay Formation is classed as Unproductive. Migration of mobile contaminants is therefore unlikely.

Notwithstanding the foregoing, the following potentially contaminative sources have been considered:-:

On site

Current uses/ very recent:	none
Historic uses:	none

Off site

Current uses:	none
Historic uses:	none

It is concluded that historical uses of the site have a low risk as no significant potentially contaminative sources have been identified. Similarly, current / recent uses are also considered to have a low risk for localised contamination for the same reason.

Historical land uses within the immediate environs of the site are considered to represent a low risk of significant contamination migrating to the subject site. Current land uses in the immediate vicinity are also considered to represent a low risk.

10.2
Gas phase

The BGS does not record the site as being either Worked Ground or Made Ground and no infilled land has been identified by the historical mapping on site.

No landfills, waste sites or refuse tips, either active or closed have been identified by the database searches. Therefore, the potential for ground gas, principally methane and carbon dioxide migrating to the subject site or emanating thereon is assessed as low to negligible.

The database searches record the site as being in an area where less than 1 % of homes exceed the Radon Action level. The Health Protection Agency do not consider further action to be necessary and no Radon protection is required.

10.3
Risk assessment

This risk classification is designed to consider environmental risk in the context of alternative use strategies where redevelopment or a change of use may be required. This must be set in the context of the following hierarchy of risks as follows:-

High: Significant risk of contamination without remediation. Precludes all but the least sensitive of development such as car parking. Significant

potential for environmental pollution. Remediation measures expensive. Site investigation required.

Moderate: Risk of isolated areas of contamination but allowing non-sensitive development such as commercial for reasonable costs of remediation. More sensitive development such as housing may require significant remedial measures. Potential for environmental pollution. Site investigation required.

Low: Little risk of contamination where all development options are likely to be possible with little or no remediation measures. Little potential for environmental pollution. Confirmatory site investigation required.

The potential risk of isolated areas of contamination from current and previous uses of the site is considered to be *low*.

The risk of contamination from off site sources is classified as *low.*

It is considered there is a *low* risk of ground gas emissions at the site.

10.4
Preliminary conceptual model

Part IIA of the Environmental Protection Act: 1990 stipulates that a source, pathway and receptor must all be present to form a potential pollution linkage. Based upon the findings of this Assessment, a preliminary conceptual model has been formulated for the source - pathway - receptor interaction in accordance with the risk classification matrix in CIRIA C552 and is presented at Appendix B.

Following is a summary of sources, pathways and receptors identified for the site.

10.5

Possible Sources of Contamination

Table 4: Possible sources of contamination

Source	Description	Comments
None (on site)		
Made Ground (off site)	General background chemical quality of the near surface soils	Possible elevated metals, organic and inorganic contaminants including asbestos

10.6

Summary of Plausible Pathways

In view of the lack of source(s), no pathways have been identified. However, the below is a list of potential pathways, if a source had been identified.

- Human health exposure through; dermal contact, ingestion, inhalation of soil dust (including tracked back dust) and inhalation of soil derived vapour,
- Dissemination and/or diffusion throughout the soil mass;
- Natural higher permeability zones such as sand lenses, bedding planes, granular soils and the like;
- Migration along service trenches;
- Vertical migration associated with in-ground structures, e.g., foundations and drainage.

10.7

Summary of Plausible Receptors

Potential receptors associated with the site and its development, identified or otherwise discounted, are summarised in Table 5:

Table 5: Possible Receptors of Contamination

Receptor	Description	Comments	Plausible
End Users	Users of the proposed development.	Private gardens are included within the proposed development	Yes
Soft landscaping	Areas of planting including lawns, shrubs, trees etc.,	Areas of soft landscaping are proposed	Yes
Adjacent area Users	No sensitive land uses have been identified within the immediate vicinity	Adjacent land use is residential or agricultural	No
Water Supply Pipes	Plastic for potable water supply pipes may be laid in contact with contaminated soils	Made Ground may be present (albeit unlikely) which may not be chemically suitable for the laying of plastic water pipes	Yes
Buildings and Infrastructure	Buried concrete for foundations etc., may be in contact with contaminated/aggressive soils	The soil chemistry of any Made Ground or the natural soils may result in a requirement to produce specific bespoke design of concrete or other building materials	Yes
Groundwater	The very southern part of the site is located on a Secondary Undifferentiated Aquifer	Groundwater is anticipated beneath the far south of the site	Yes
Surface Water	Controlled waters within lakes, rivers and ponds, etc. or coastal waters	No surface water features are present within the site	No

Site workers involved in the preparation and construction of the development have not been considered in this assessment as the principal contractor is duty bound under the current CDM Regulations to undertake their own risk assessments with respect to their employees.

Whilst the above sources and receptors have been identified, Table 6 summarizes the identified plausible pollution linkages and rates the likelihood and risk of the contamination reaching the receptor.

Table 6: Plausible Pollution Linkages

Potential Source/Media	Potential Receptors	Possible Pathways	Probability	Consequence	Risk & Justification
Made Ground and near surface soils	End Users	Direct contact	Unlikely	Minor	Negligible. No significant source has been identified.
	Adjacent Land Users	Direct contact	Unlikely	Minor	Negligible It is considered a negligible probability that adjacent site users come into contact with any affected soils on site.
	Water Supply Pipes	Direct contact	Unlikely	Minor	Low Water supply pipes may come into contact with impacted soil, depending upon depth of installation and extent of soil impact.
	Buildings and Infrastructure	Direct contact	Low Likelihood	Minor	Low Foundations and utilities will be placed within soils. However, the consequence is anticipated to be minor.
	Groundwater	Leachate migration	Low Likelihood	Minor	Low No significant source has been identified.

In summary the potential pollutant linkages on site have been identified as a low risk.

11
Discussion

Information obtained during the course of this assessment has indicated there to be a low risk of significant or widespread contamination from on site uses. Off site sources comprise a low risk whilst the gas risk is also considered to be low.

An intrusive investigation has been commissioned to determine the physical characteristics of the soil with respect to foundation design and related matters. In view of the lack of significant contaminative sources identified by this study, no particular targeting of environmental sampling is expected to be required. However, it is recommended that a watching brief is maintained during the investigation to identify any potentially contaminated soils or groundwater. A general suite of contamination testing is recommended to confirm the site is suitable for use and should include the following :-

Metals & metalloids:	Total arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium and zinc. Water soluble boron.
Organic:	Speciated petroleum hydrocarbons with aliphatic/aromatic split, BTEX & MTBE, speciated polyaromatic hydrocarbons (PAH) and total phenols.
Others:	Asbestos screen and waste acceptance criteria (WAC).

Following the results of the intrusive ground investigation, the need for any remedial measures (e.g., barrier pipes, gas membranes, soft landscaping areas etc.) will be reviewed and recommendations will be made if required.

R G Chapman
AP GEOTECHNICS LTD.
22nd August 2025

PROCEDURAL NOTES
for
ENVIRONMENTAL ASSESSMENTS

This report has been prepared generally in accordance with CLR 11: Model Procedures for the Management of Land Contamination (Defra & Environment Agency 2004).

This report reviewed and evaluated information from the client, property owner, local authority, Environment Agency and others. The opinions, conclusions and recommendations are based on this information and observations made during the site reconnaissance.

The recommendations made in this report represent our professional opinions. These opinions were arrived at in accordance with current accepted industry practises and hydrological and engineering practises at this time. As such they are not a guarantee that the site is free of hazardous or potentially hazardous material or conditions.

APPENDICES

A Figures

B Preliminary Conceptual Model

APPENDIX A

FIGURES

Land East of Mousdell Close,
Ashington, West Sussex,
RH20 3GS

Site Plan

Scale: as shown

N

Scale
1:250 @ A3
metres 2 4 6 8 10

Figure 1

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
County Series: 1875

Scale: approx. 1/2,500 @ A3

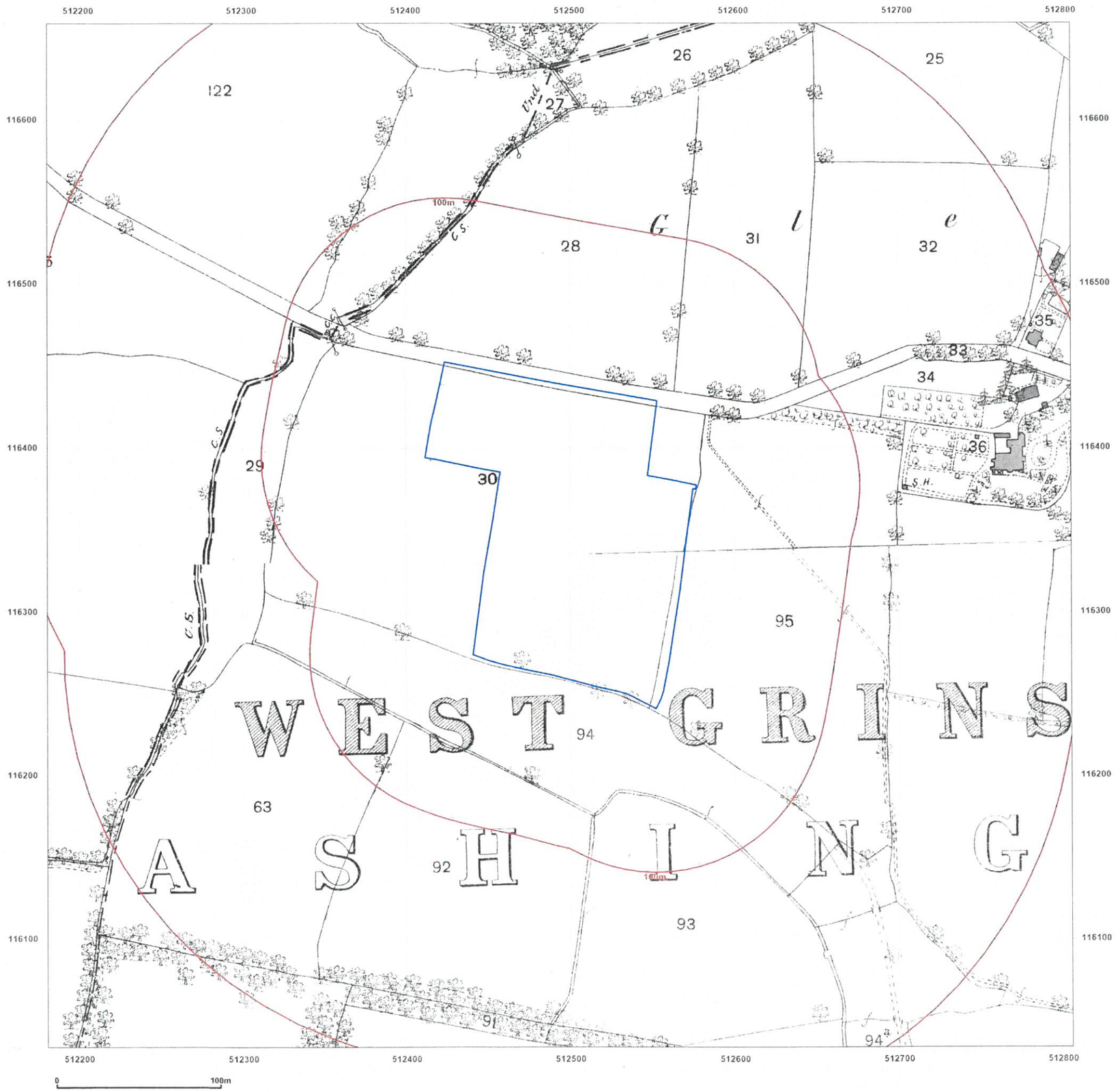

Figure 2

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
County Series: 1897

Scale: approx. 1/2,500 @ A3

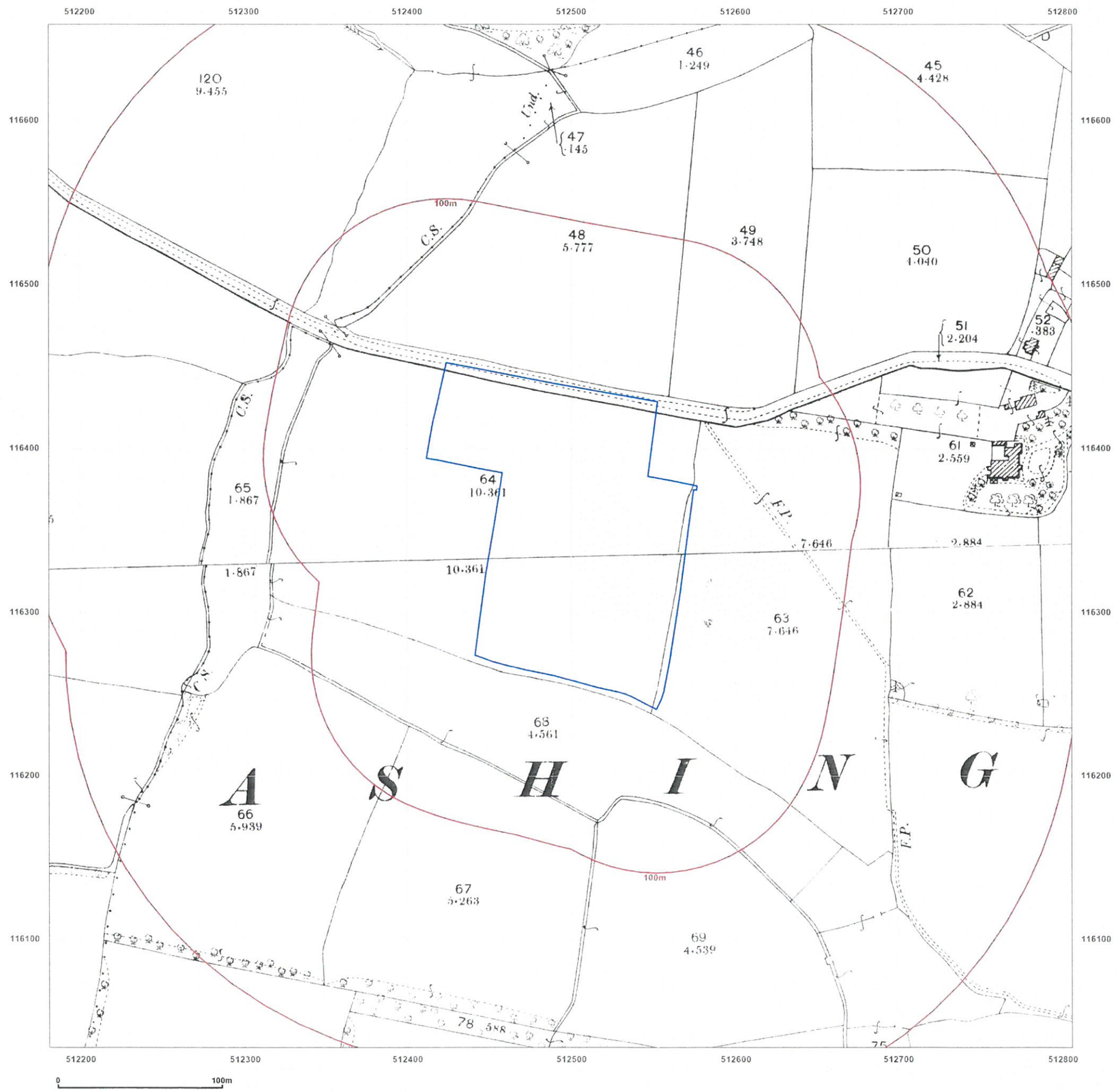

Figure 3

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
County Series: 1911

Scale: approx. 1/2,500 @ A3

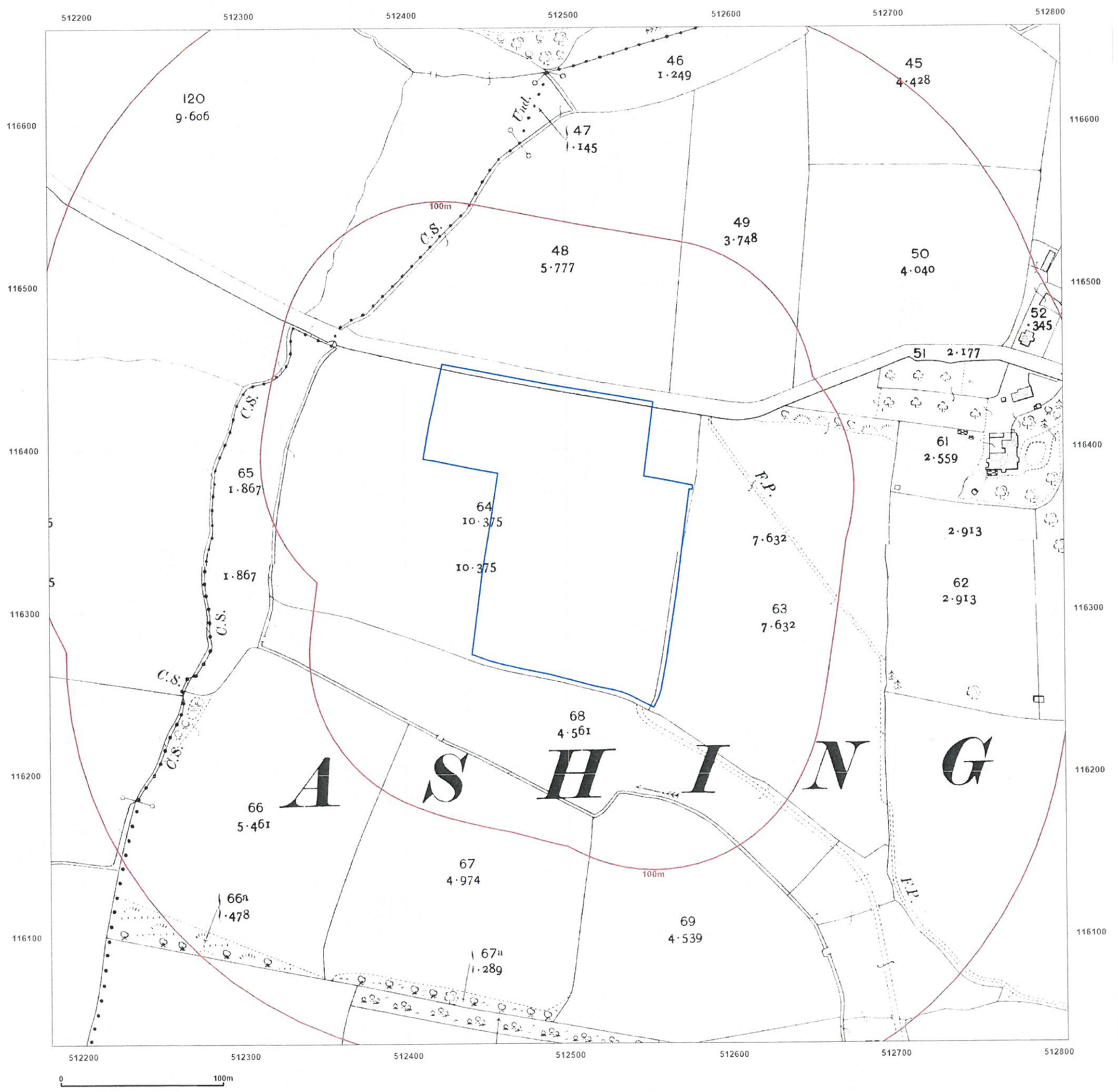

Figure 4

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
County Series: 1937-1939

Scale: approx. 1/2,500 @ A3

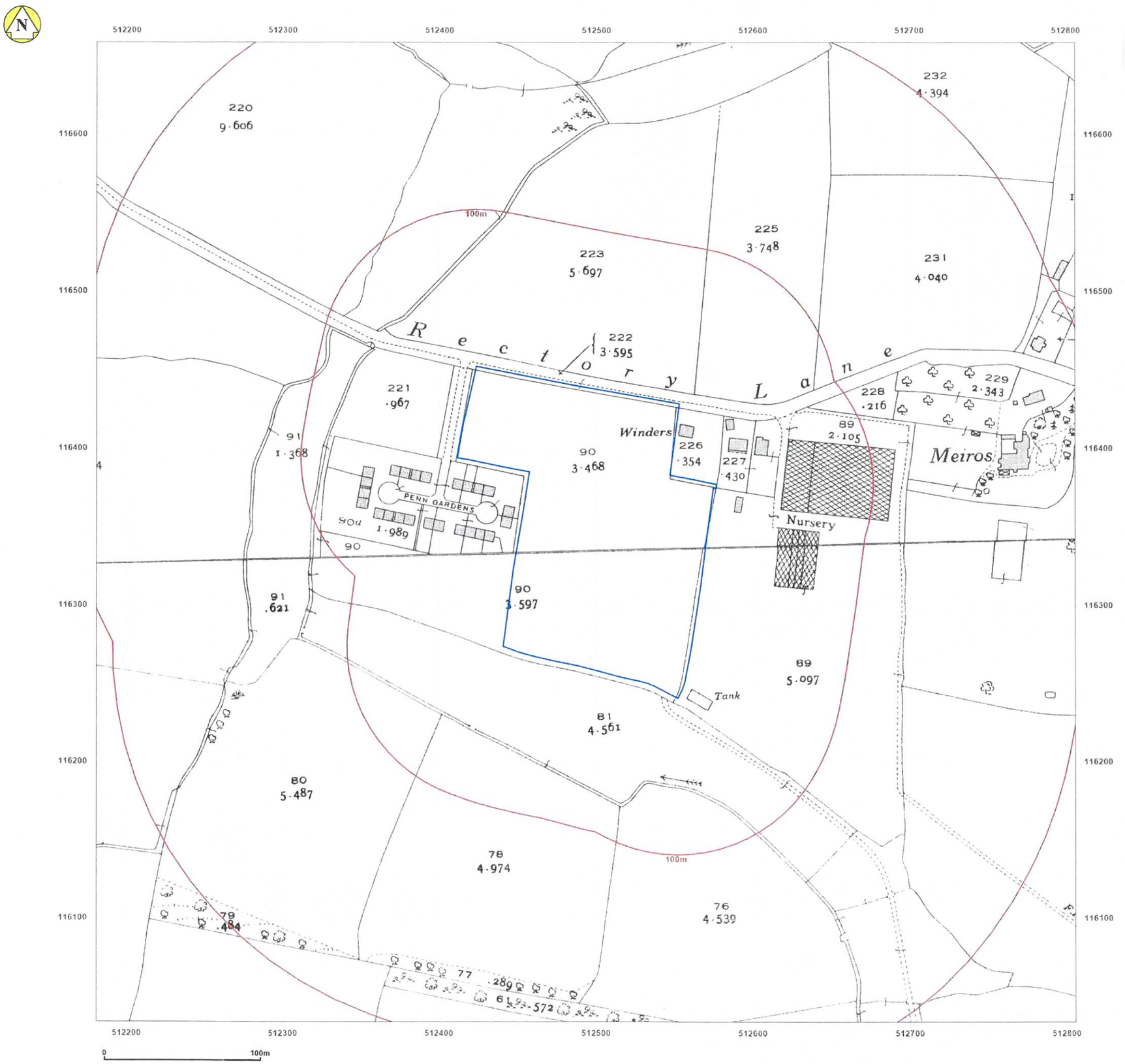

Figure 5

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
National Grid: 1974

Scale: approx. 1/2,500 @ A3

Figure 6

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
National Grid: 1993

Scale: approx. 1/2,500 @ A3

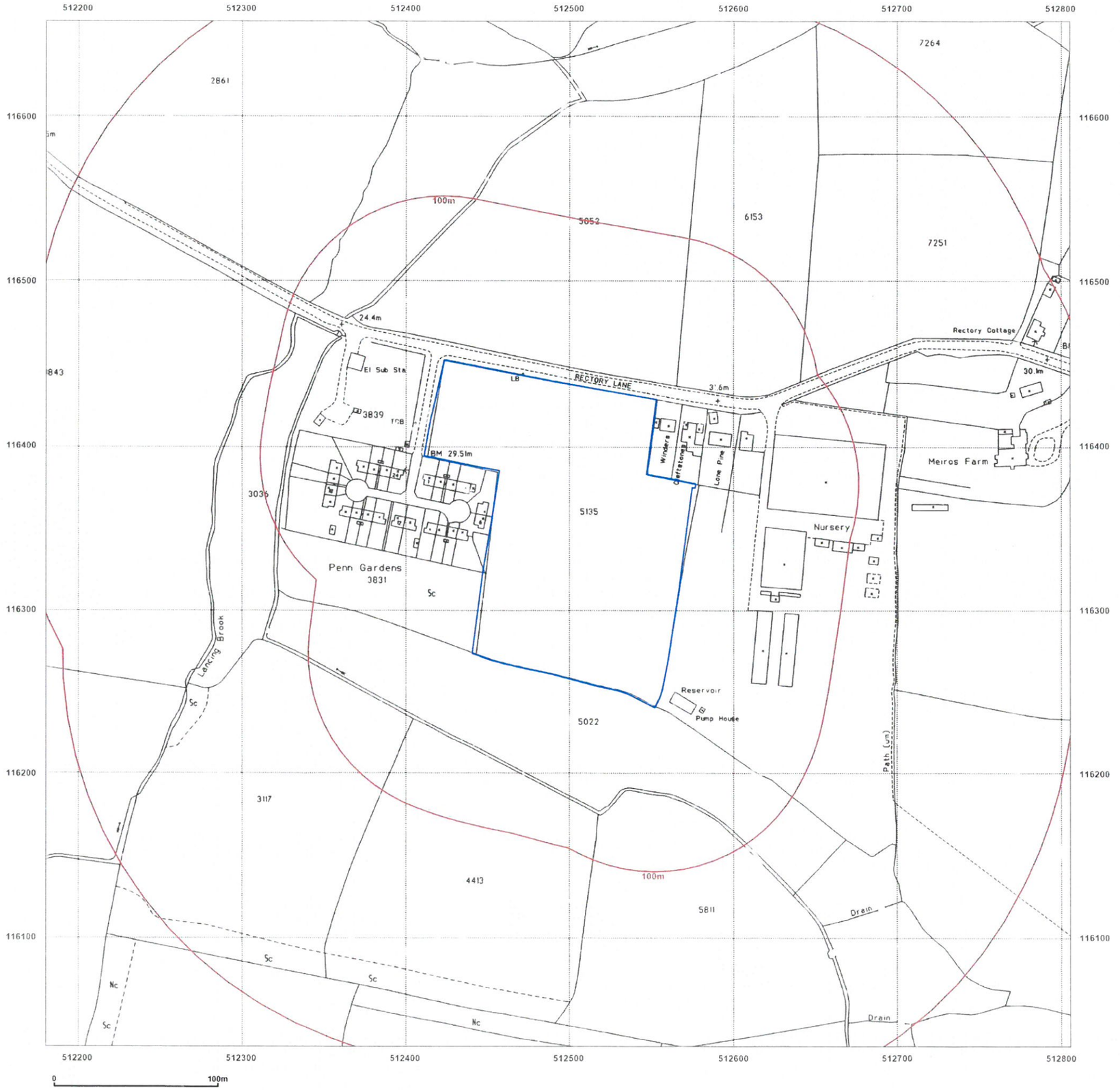

Figure 7

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
LandLine: 2003

Scale: approx. 1/1,250 @ A3

Figure 8

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
National Grid: 2010

Scale: approx. 1/10,000 @ A3

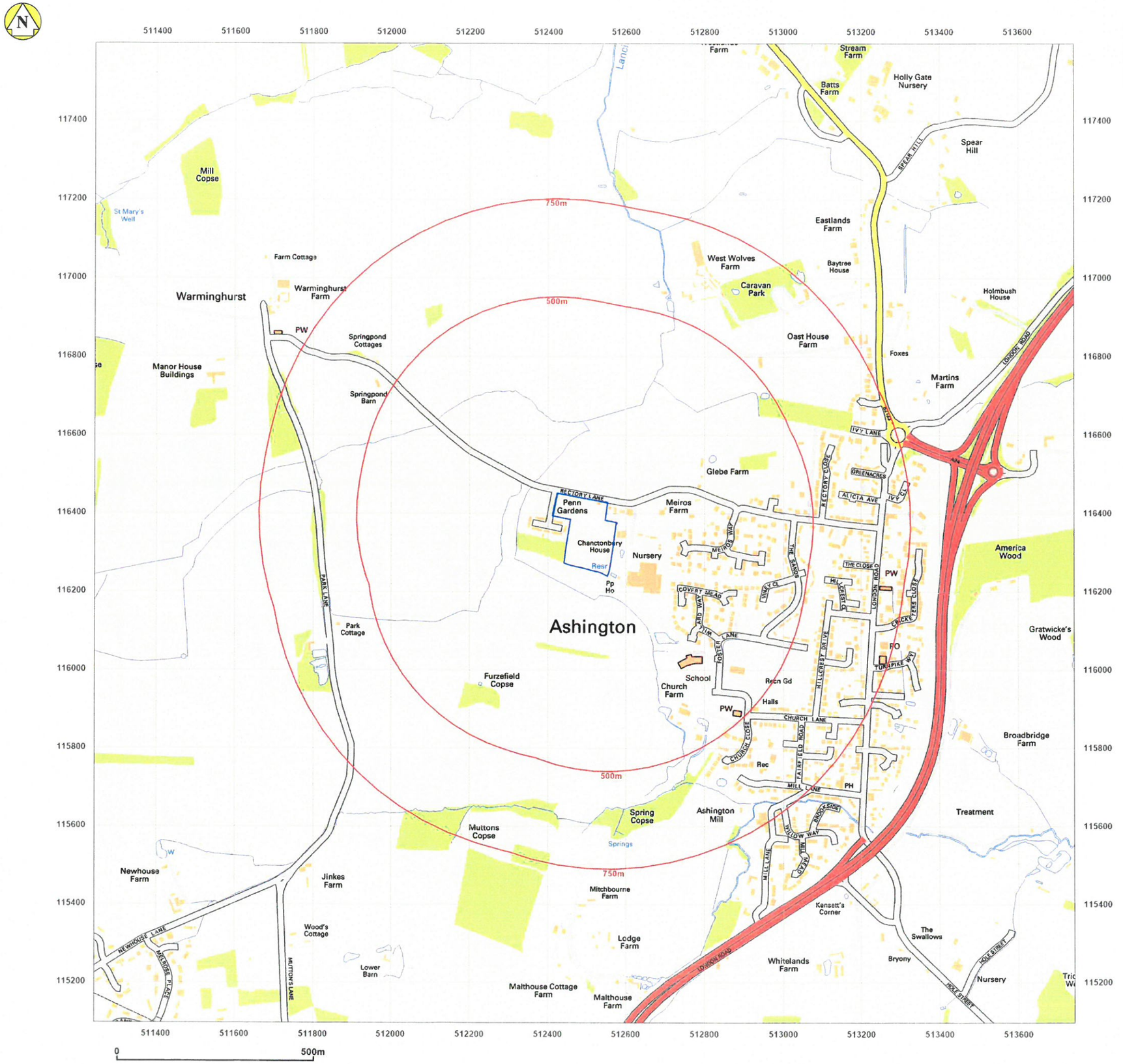

Figure 9

Land East of Mousdell Close,
Ashington, West Sussex, RH20 3GS

Extract from Ordnance Survey Map
National Grid: 2025

Scale: approx. 1/10,000 @ A3

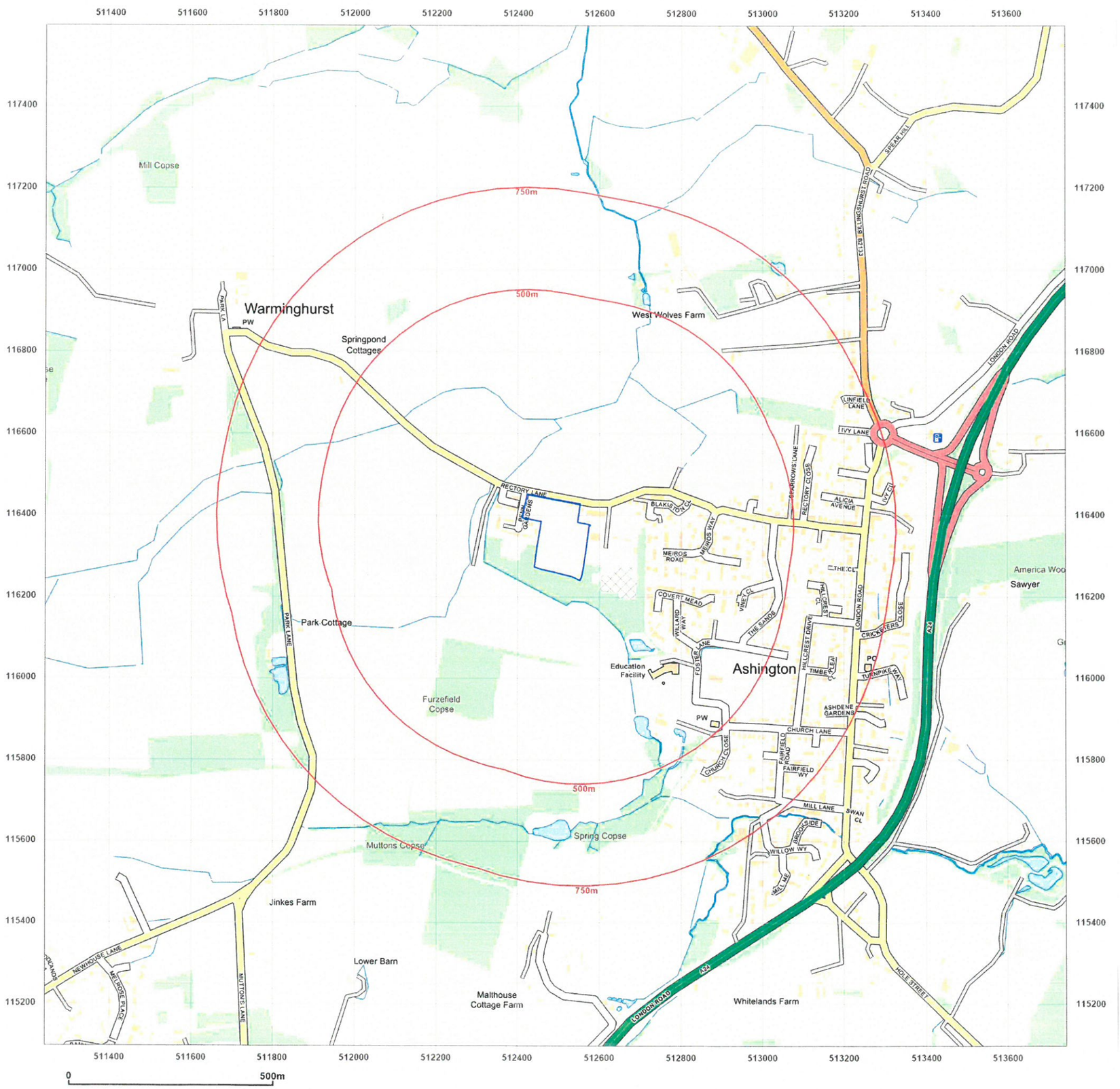

Figure 10

Land East of Mousdell Close,
Ashington, West Sussex,
RH20 3GS

Proposed Development

Scale: as shown

Accommodation Schedule

Affordable Dwellings		**(26no. - 35.1%)**		
Affordable Rent				
4no.	1-Bedroom Flats	Up to 2.5 Storeys	Blocks A and B	540sqft
4no.	1-Bedroom Flats - M4(3)	Up to 2.5 Storeys	Blocks A and B	660sqft
8no.	2-Bedroom Flats	Up to 2.5 Storeys	Blocks A and B	660sqft
1no.	3-Bedroom Townhouses	2.5 Storeys	Semi / Terraced	1145sqft
1no.	3-Bedroom Townhouses	2.5 Storeys	Semi / Terraced	1271sqft
Shared Ownership				
1no.	1-Bedroom Flats	2 Storeys	Block C	540sqft
1no.	1-Bedroom Flats	2 Storeys	Block C	592sqft
2no.	2-Bedroom Houses	2 Storeys	Semi-Detached	855sqft
2no.	3-Bedroom Houses	2 Storeys	Semi-Detached	1003sqft
2no.	3-Bedroom Townhouses	2.5 Storeys	Semi / Terraced	1145sqft
Open Market Dwellings		**(48no. - 64.9%)**		
2no.	1-Bedroom Flats	2 Storeys	Block D/E	540sqft
2no.	1-Bedroom Flats	2 Storeys	Block D/E	592sqft
8no.	2-Bedroom Houses	2 Storeys	Semi-Detached	855sqft
13no.	3-Bedroom Houses	2 Storeys	Semi- Detached	1003sqft
8no.	3-Bedroom Houses	2.5 Storeys	Semi-Detached	1145sqft
5no.	4-Bedroom Houses	2 Storeys	Detached	1240sqft
1no.	4-Bedroom Houses	2 Storeys	Detached	1261sqft
2no.	3-Bedroom Houses	2.5 Storeys	Semi-Detached	1271sqft
1no.	4-Bedroom Houses	2 Storeys	Detached	1285sqft
2no.	4-Bedroom Houses	2.5 Storeys	Semi-Detached	1340sqft
2no.	4-Bedroom Houses	2 Storeys	Detached	1425sqft
2no.	4-Bedroom Houses	2 Storeys	Detached	1933sqft

Total; 74 Dwellings [2.19 Ha approx. to Overall Ownership Line - 33.78 Dw/Ha]

Car Parking Generally;
1 space per 1-Bedroom Flat
1.5 spaces per 2-Bedroom Flat
2-3 spaces per 2 and 3-Bedroom House (incl. open car barns)
3 spaces per 4-Bedroom House (incl. garages)
23 visitor spaces (1 per 3.26 dwellings)

Figure 11

APPENDIX B

PRELIMINARY CONCEPTUAL MODEL

Potentially Contaminating Uses	Potentially Contaminating Sources	Potential Contaminants	Pathway	Receptor(s)	Severity	Probability	Potential risk
On site							
None	None	None					
Off site							
Made Ground	Ash & clinker	Metals / metalloids (arsenic, cadmium, chromium, lead, mercury, nickel, copper, zinc, selenium and water soluble boron)	Inhalation*, dermal contact, soil ingestion, root contact & groundwater	Human, controlled water, flora & fauna	medium	unlikely	low
		USEPA 16 PAHs & petroleum hydrocarbons	Inhalation*, dermal contact, soil ingestion, root contact, permeation of plastic water pipes & groundwater	Human, controlled water, flora & fauna	medium	unlikely	low
	Asbestos cement sheeting	Asbestos fibres	Inhalation*	Human	medium	unlikely	low

* inhalation indicates possible gas risk