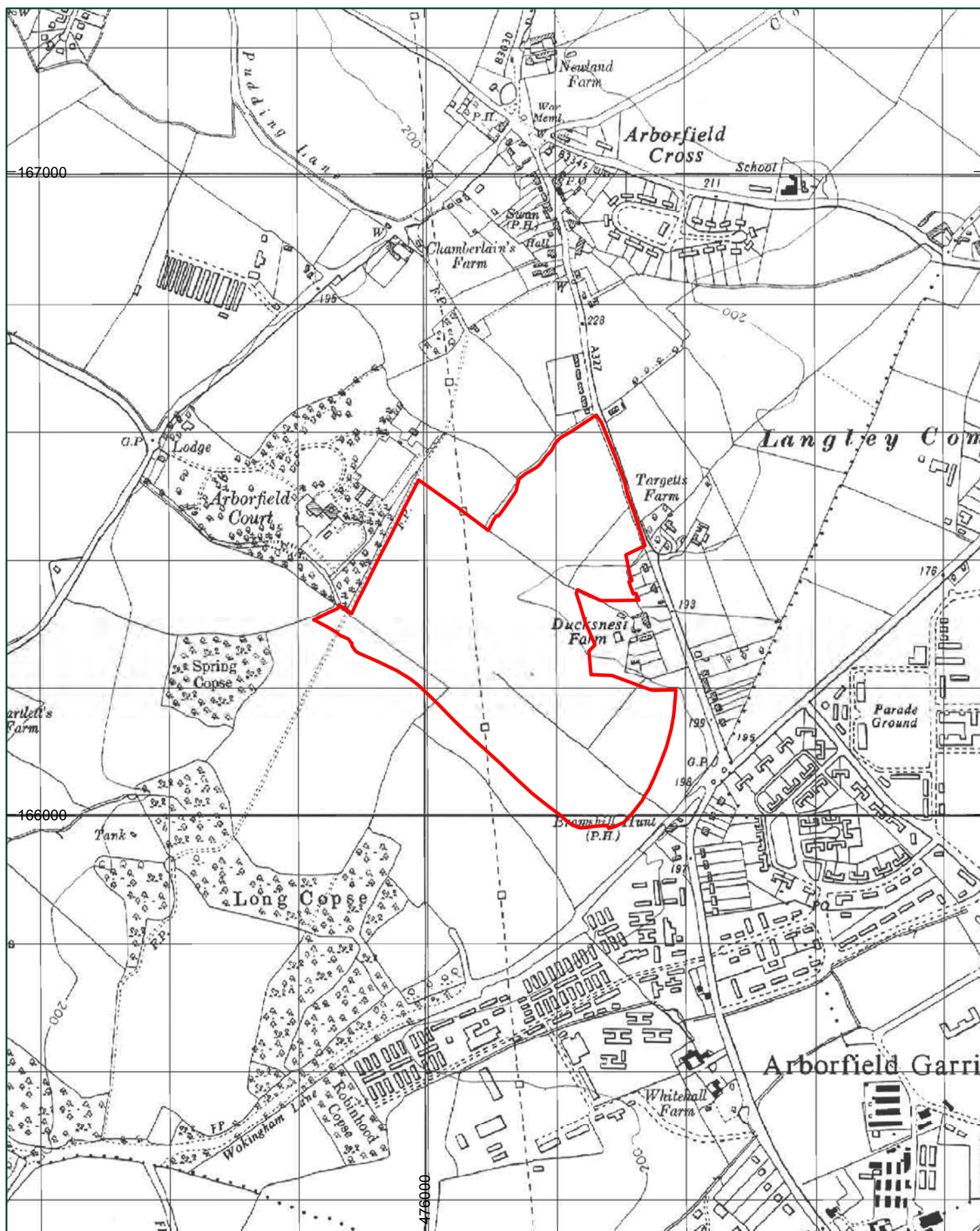




#### Legend



Site Boundary

1:8,000 at A4



#### Title:

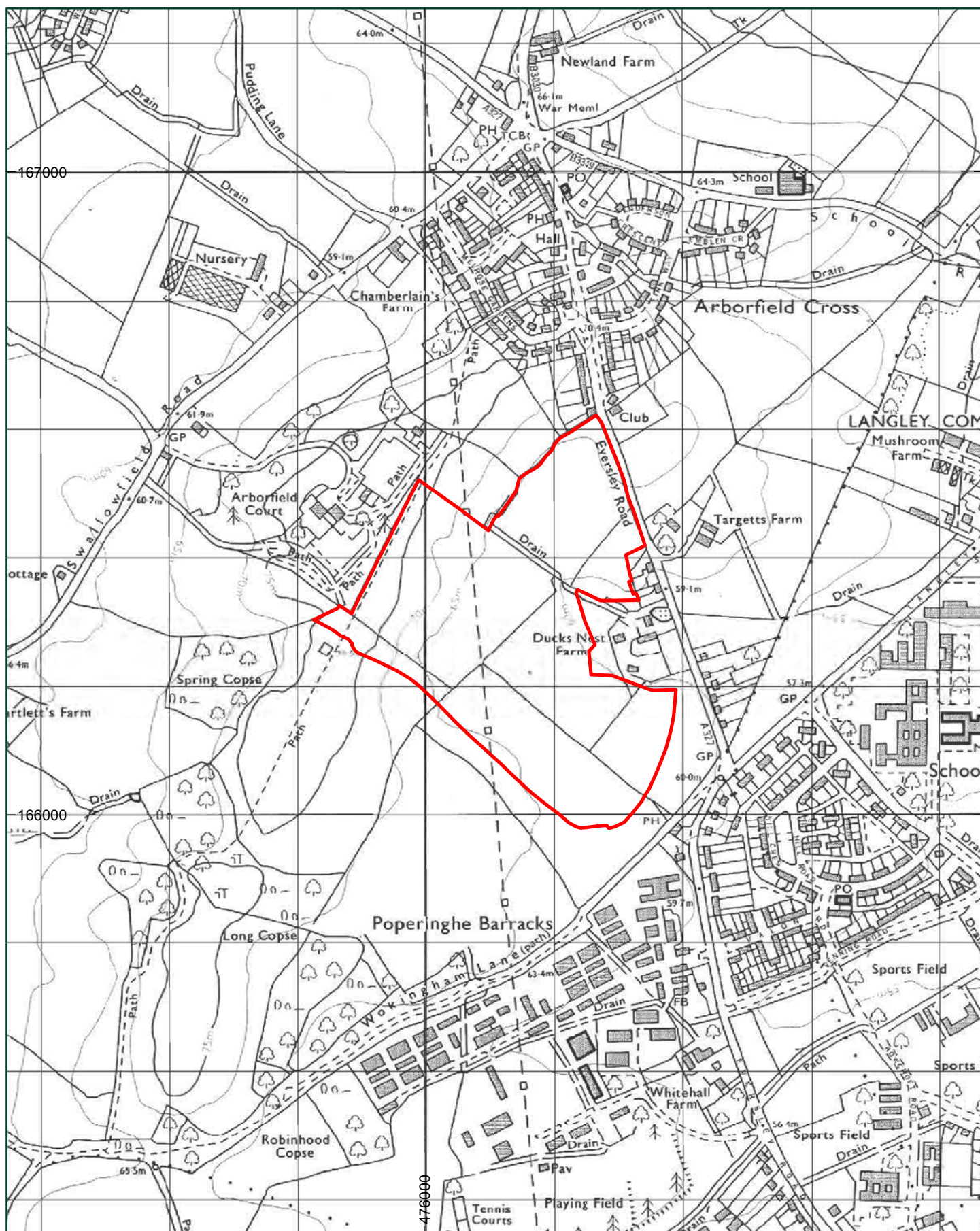
Figure 9: 1961 Ordnance Survey 1:10,000 Map

#### Address:

Arborfield Cross



**orion.**



#### Legend



Site Boundary

1:8,000 at A4

0 250m

#### Title:

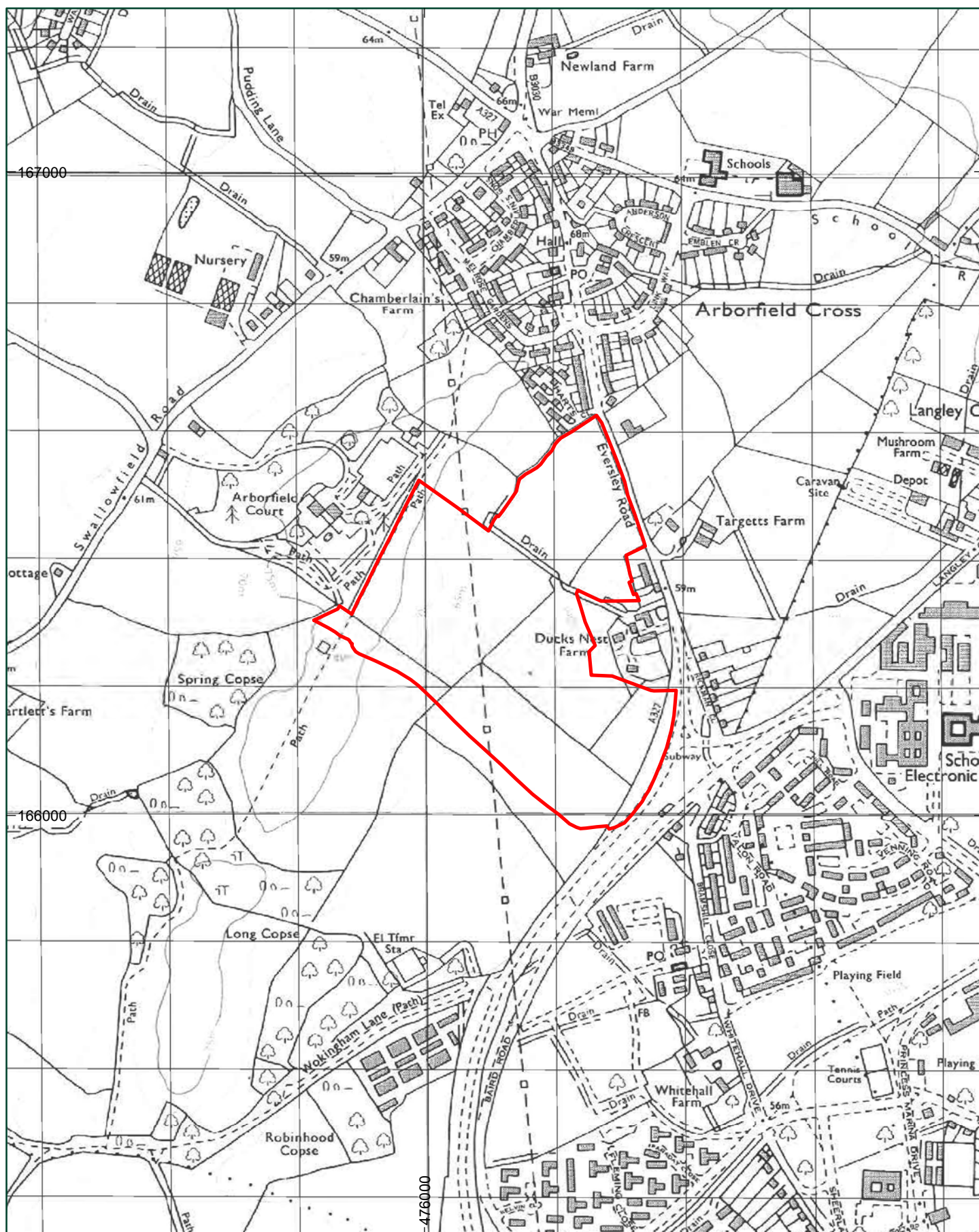
Figure 10: 1971/6 Ordnance Survey 1:10,000 Map

#### Address:

Arborfield Cross



**orion.**



#### Legend



Site Boundary

1:8,000 at A4

0 250m

#### Title:

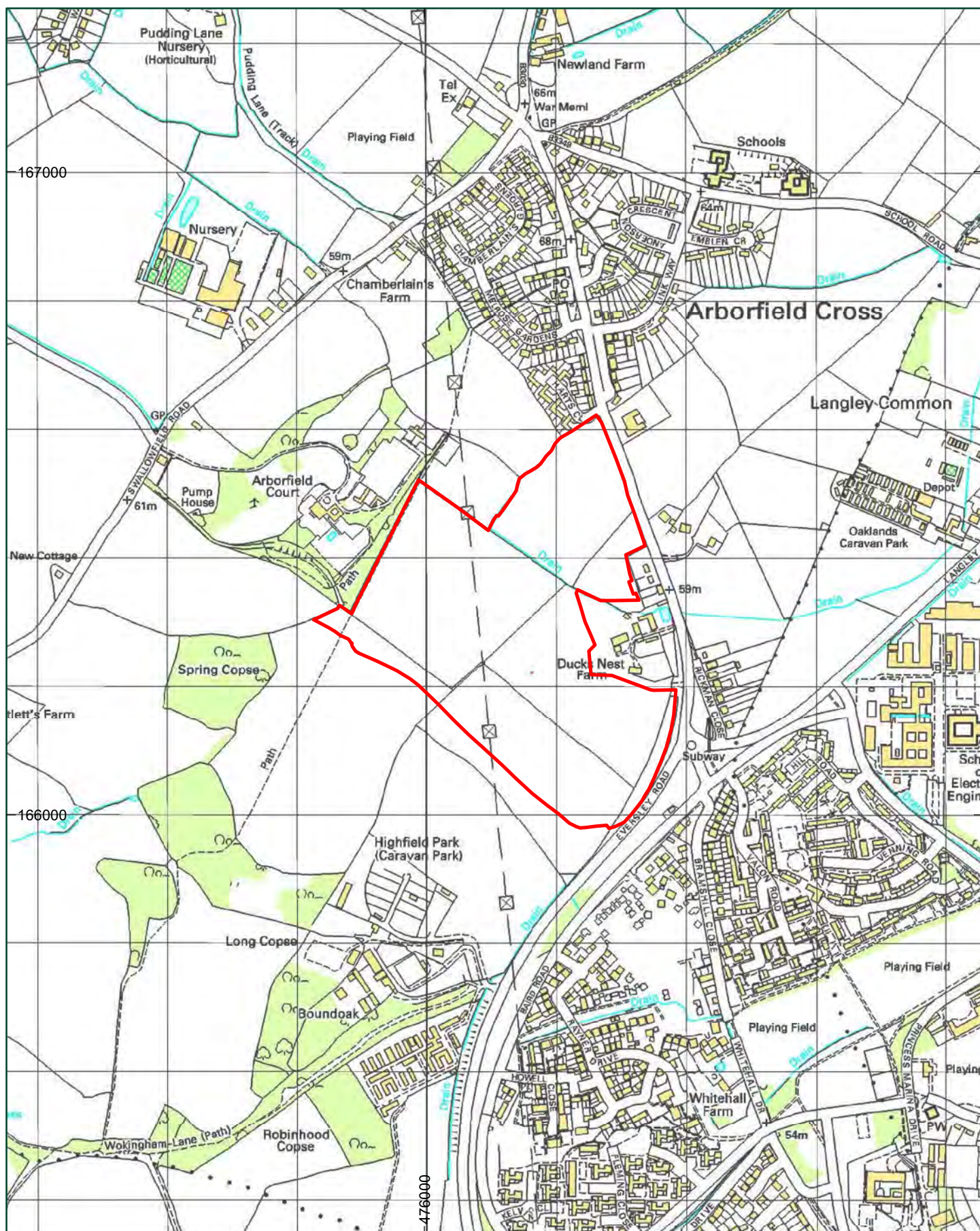
Figure 11: 1990 Ordnance Survey 1:10,000 Map

#### Address:

Arborfield Cross



**orion.**



#### Legend



Site Boundary

1:8,000 at A4

0 250m

#### Title:

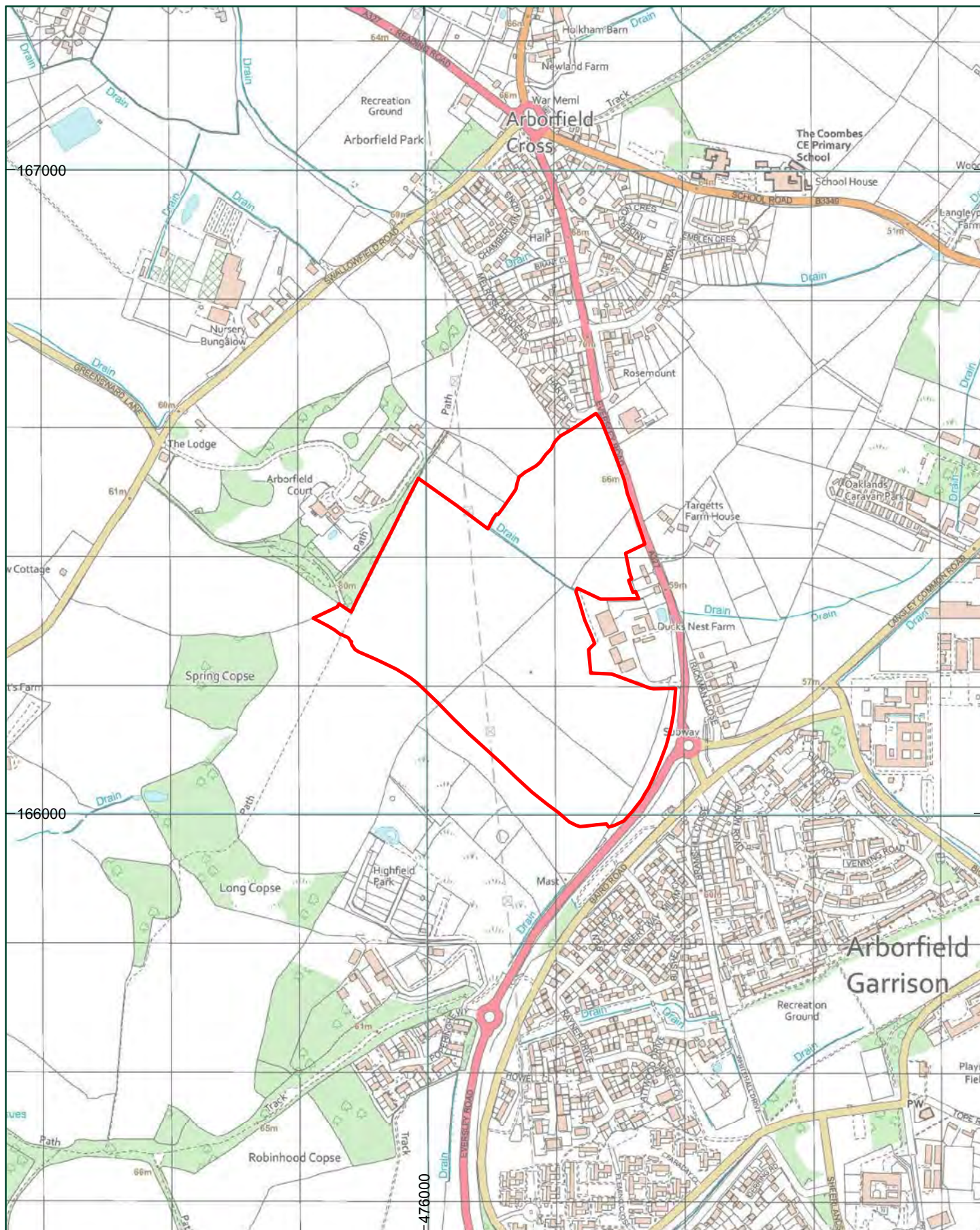
Figure 12: 2006 Ordnance Survey 1:10,000 Map

#### Address:

Arborfield Cross



**orion.**



Legend



Site Boundary

1:8,000 at A4



Title:

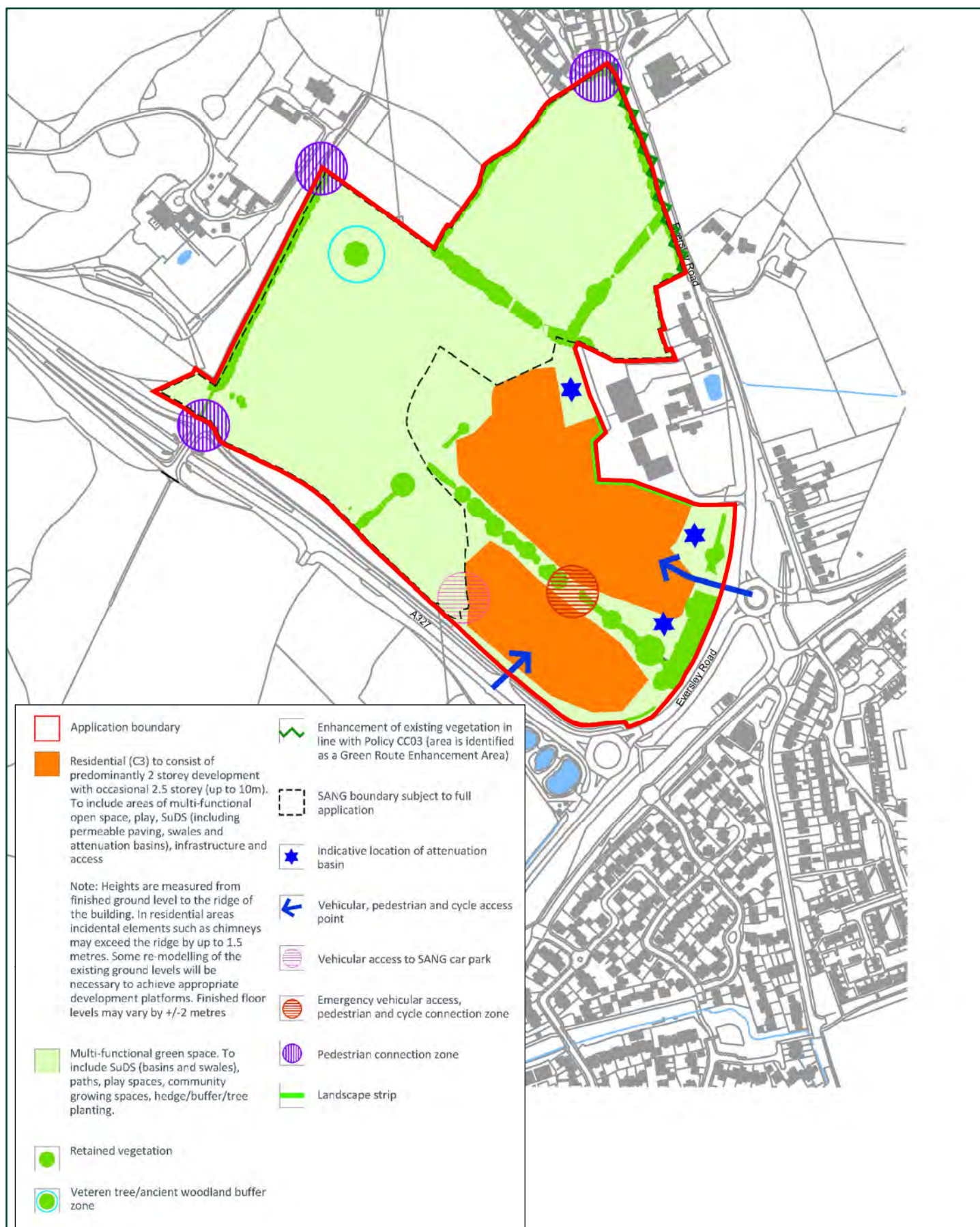
Figure 13: 2018 Ordnance Survey 1:10,000 Map

Address:

Arborfield Cross



**orion.**



#### Legend

 Site Boundary

1:8,000 at A4

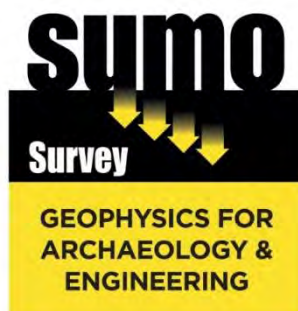
0 150m

Title:  
Figure 14: Proposed Development Parameters Plan

Address:  
Arborfield Cross



**orion.**



## **GEOPHYSICAL SURVEY REPORT**

**Duck's Nest Farm, Arborfield, Berkshire**

Client

**Orion Heritage Ltd**

For

**David Wilson Homes (Southern) Ltd**

Survey Report

**07670**

OASIS Ref. No.

**sumogeop1-506685**

Date

**12 May 2022**



## **Survey Report 07670: Duck's Nest Farm, Arborfield, Berkshire**

|                           |                                               |
|---------------------------|-----------------------------------------------|
| <b>Survey dates</b>       | 11 - 14 April 2022                            |
| <b>Field co-ordinator</b> | Robert Knight BA MA                           |
| <b>Field Team</b>         | Robert Ottolangui MSc                         |
| <b>Report Date</b>        | 12 May 2022                                   |
| <b>CAD Illustrations</b>  | Thomas Cockcroft MSc<br>Liam Brice-Bateman BA |
| <b>Report Author</b>      | Thomas Cockcroft MSc                          |
| <b>Project Manager</b>    | Simon Haddrell BEng AMBCS PCIfA               |
| <b>Report approved</b>    | Dr John Gater BSc DSc(Hon) MCIfA FSA          |

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| Appendix A | Technical Information: Magnetometer Survey Methods, Processing and Presentation |
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## 3 SURVEY TECHNIQUE

- 3.1 Detailed magnetic survey (magnetometry) was chosen as the most efficient and effective method of locating the type of archaeological anomalies which might be expected at this site. All survey techniques will follow the guidance set out by CIFA (2014, updated 2020), Historic England (2008), and the European Archaeology Council (EAC) (2016).

Bartington Cart System      Traverse Interval 1.0m      Sample Interval 0.125m

The only processes performed on data are the following unless specifically stated otherwise:

|                    |                                                                                                                                                                                             |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Zero Mean Traverse | This process sets the background mean of each traverse within each grid to zero. The operation removes instrument striping effects and edge discontinuities over the whole of the data set. |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 4 SUMMARY OF RESULTS

- 4.1 A magnetometer survey of 18 ha of land at Duck's Nest Farm, Arborfield has not recorded any magnetic responses that could be interpreted as being of definite archaeological interest. Uncertain trends have been plotted and while the majority of them are likely to be due to agricultural processes, a circular response in Area 4 could be a ring ditch. A bike track is visible in Area 3 along with land drains. The route of a service pipe has been marked. Three zones of magnetic disturbance have been detected in the survey which are due to made ground and/or the spreading of green waste.

## 5 INTRODUCTION

- 5.1 **SUMO Geophysics Ltd** were commissioned to undertake a geophysical survey of an area outlined for residential development. This survey forms part of an archaeological investigation being undertaken by **Orion Heritage Ltd** on behalf of **David Wilson Homes (Southern) Ltd**.

### 5.2 Site Details

|                    |                                                                                                                                                                                |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGR / Postcode     | SU 76206 66361 / RG2 9PW                                                                                                                                                       |
| Location           | The site is located 5km south-west of Wokingham and 5km south of Earley. The survey area is bounded to the east by Eversley Road and to the south-west by Observer Way (A327). |
| HER                | Berkshire HER                                                                                                                                                                  |
| OASIS Ref. No.     | sumogeop1-506685                                                                                                                                                               |
| District           | Wokingham                                                                                                                                                                      |
| Parish             | Arborfield and Newland Civil Parish                                                                                                                                            |
| Topography         | Undulating                                                                                                                                                                     |
| Land Use           | Pasture                                                                                                                                                                        |
| Geology (BGS 2022) | Bedrock: London Clay Formation - Clay, Silt and Sand<br>Bagshot Formation - Sand                                                                                               |
|                    | Superficial: Head - Gravel, Sand, Silt and Clay                                                                                                                                |
| Soils (CU 2022)    | Soilscape 8: Slightly acid loamy and clayey soils with impeded drainage<br>Soilscape 18: Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils    |
| Survey Methods     | Magnetometer survey (fluxgate gradiometer)                                                                                                                                     |
| Study Area         | 18 ha                                                                                                                                                                          |

### 5.3 **Archaeological Background** (OH 2019)

- 5.3.1 A heritage desk-based assessment has been carried out by Orion Heritage.
- 5.3.2 The DBA states that there is a low potential for prehistoric remains across the site. The HER does not record any finds/features of archaeological origin within the site. The evidence found through the field walking of Loddon (within the study area) indicates there is some potential for prehistoric material to exist within the site.
- 5.3.3 The irregular and enclosed field systems and narrow tracks and lanes within the site and study area are interspersed with potential earlier settlement activity, including Iron Age settlement and industrial activity to the south, and Bronze Age potential occupation (cemetery) activity to the east. Evidence for Iron Age settlement within the site may yield information associated with its construction and occupation. Therefore, a high potential for archaeological remains of

Bronze Age and Iron Age is considered in the east of the site; the remainder of the site is moderate/low.

- 5.3.4 The archaeological interest of the study area surrounding Arborfield Cross focuses on the evidence of the Medieval and Post-Medieval landscapes and the development of the local agricultural settlements into larger villages and towns. The evidence of late Medieval and Post-Medieval occupation is shown within the surrounding historic landscape character, indicative of numerous moated sites, 'close' farmsteads and the ruined Medieval and Post-Medieval church of St Bartholomew. However, the study site is in the agricultural hinterland of the known historic settlement. As such, the positional for significant Medical or Post-Medieval finds/features within the site is low.

#### 5.4 ***Aims and Objectives***

- 5.4.1 To locate and characterise any anomalies of possible archaeological interest within the study area.

## 6 **RESULTS**

- 6.1 *The survey has been divided into five survey areas (Areas 1-5).*

#### 6.2 ***Probable / Possible Archaeology***

- 6.2.1 No magnetic responses have been recorded that could be interpreted as being of definite archaeological interest.

#### 6.3 ***Uncertain***

- 6.3.1 A couple of linear trends and a circular response have been detected in the survey. They generally lack the defined morphology of anomalies that would usually be interpreted as being of archaeological interest; consequently, they have been assigned to the category of *Uncertain*. They are likely to be due to modern agricultural processes. However, the weak circular response in Area 4 which measures 11m in diameter could be of interest; it could be a ring ditch. An archaeological origin for this response cannot be dismissed given the high potential for Bronze Age and Iron Age assets recorded in the DBA.

#### 6.4 ***Modern Bike Track***

- 6.4.1 A number of discrete curvilinear responses are visible in Area 3. These anomalies correspond with the location of a bike track which is visible on aerial imagery and in LiDAR data (see Figure 06). The survey team also noted the presence of the track when they collected the data.

#### 6.5 ***Agricultural –Land Drains***

- 6.5.1 Four negative linear responses have been detected in Area 3 which are likely to be due to land drains.

#### 6.6 ***Service***

- 6.6.1 A chain of strong dipolar ferrous anomalies have been recorded in Area 2 which mark the route of a service pipe.

## 6.7 **Ferrous / Magnetic Disturbance**

- 6.7.1 Several zones of magnetic disturbance are visible in the data across the site. The disturbance in Area 1 has been caused by made ground, during the construction of adjacent road (Observer Way A327), this field was used as a compound for the works. This is visible on aerial imagery (see Figure 05). A small band of magnetic disturbance in Area 2 corresponds with the route of a farm track.
- 6.7.2 The disturbance in Areas 3 and 4 could have been caused by the spreading of green waste, or other modern processes. Green waste can have a marked effect on the results from magnetic surveys and has been recognised as an issue for some time (Gerrard et al 2015). However, not all green waste is the same, so it is impossible to predict in advance any potentially detrimental effects; it depends on the quantity of inorganic contaminants, including batteries, pieces of metal cans and other ferrous items which result in spurious anomalies or 'noise'.
- 6.7.3 Ferrous responses close to boundaries are due to adjacent fences and gates. Smaller scale ferrous anomalies ("iron spikes") are present throughout the data and are characteristic of small pieces of ferrous debris (or brick / tile) in the topsoil; they are commonly assigned a modern origin. Only the most prominent of these are highlighted on the interpretation diagram.

## 7 **DATA APPRAISAL & CONFIDENCE ASSESSMENT**

- 7.1 Historic England guidelines (EH 2008) Table 4 states that the typical magnetic response on the local soils / geology is variable. The results from this survey indicate the presence of a possible ring feature, linear trends and land drains; as a consequence, there is no *a priori* reason why archaeological features would not have been detected. However, any anomalies will have been masked by the zones of magnetic disturbance, if present.

## 8 **CONCLUSION**

- 8.1 The magnetometer survey has not recorded any magnetic responses that could be interpreted as being of definite archaeological interest. A number of weak linear anomalies have been assigned to the category of uncertain. While they are likely to be due to modern agricultural processes, a circular response in Area 4 could be a ring ditch. A bike track is visible in the magnetic data in Area 3. The routes of four land drains have been plotted along with the route of one service pipe. Three zones of magnetic disturbance have been detected in the survey which are due to made ground and/or the spreading of green waste.

---

## 9 REFERENCES

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- OH 2019      *Duck's Nest Farm and Chamberlain's Farm, Arborfield, Berkshire, Heritage Desk Based Assessment*. Orion Heritage, Manchester

## 10 ARCHIVE

- 10.1      The minimally processed data, data images, XY traces and a copy of this report are stored in **SUMO Geophysics Ltd.'s** digital archive, on an internal RAID configured NAS drive in the Midlands Office. These data are also backed up to the Cloud for off-site storage.
- 10.2      The Grey Literature will be archived with OASIS and the relevant HER within a period of 12 months.