



**STANWELL NEW ROAD, STAINES**

**LAND CONTAMINATION PRELIMINARY RISK  
ASSESSMENT**

Carried out for:

**Eton West Construction Ltd**  
191 Stoke Road  
Slough  
SL2 5AX

**September 2021**

**Report No. STH1061/1**

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September 2021

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| September<br>2021 |        |  |  |  |

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## 1 INTRODUCTION

In August 2021, SOCOTEC UK Limited (SOCOTEC) was commissioned by Eton West Construction Ltd (EWC) to carry out a Land Contamination Risk Management (LCRM) Phase 1 Tier 1 Preliminary Risk Assessment (PRA) for a site located on Stanwell New Road, Staines.

It is understood that EWC propose to redevelop the site which is currently occupied by gardens situated to the rear of two residential properties known as Eaglehurst and Ashill. It is proposed that the site is developed with two new residential buildings with associated gardens and car parking areas.

The development is currently in the scoping phase and the desk study is required to determine whether there may be any significant limitations to the development due to potential contamination. This PRA forms the first phase of the contaminated land assessment.

The offer to undertake the work was detailed in SOCOTEC Quote reference QLO/EN-192811/001/SC Rev00 dated 10 August 2021. The instruction to proceed with the work was confirmed through an email dated 18 August 2021.

This desk study has been prepared in accordance with British Standards BS 5930:1999+A2:2010 and BS 10175:2011+A2:2017 (the updated and revised version of BS 10175:2011+A1:2013) and all normative references, including Environment Agency guidance Land Contamination Risk Management (LCRM) (EA, 2020) and AGS Guidelines for Good Practice in Site Investigation.

The desk study presents and discusses the available data obtained for the site and surrounding area's environmental, geological, historical and mining profile, which have been obtained from site specific Groundsure Enviro and Geo Insight Reports. This desk study report identifies the potential environmental issues at the site, and develops an initial conceptual site model (CSM) for geo-environmental considerations. It should be noted that geotechnical considerations are outside the scope of this report.

The principal objectives of the desk study, and the context of the CSM developed within this report, is to provide an assessment of potentially significant risks in order to:

- Give an account of the anticipated ground conditions at the site based upon published historical, geological, hydrogeological and environmental information;
- Develop an initial conceptual site model identifying potential sources of contamination, receptors that may be affected by contamination and pathways linking the two (pollutant linkages);
- Undertake a preliminary risk assessment for each identified potential pollutant linkage with respect to the likelihood and severity of the hazard; and,
- Assess the potential requirements for further investigation and risk assessment to ensure that the site is not causing 'significant harm', 'significant pollution of controlled water receptors' (as defined in the Part IIA legislation), or the significant possibility of either of these two events occurring.

## 2 SOURCES OF INFORMATION

The following sources of information have been used in preparation of this report:

- Extracts of available historical Ordnance Survey (OS) maps covering the period from 1865 to 2021, provided by Groundsure, which are presented in Appendix C;
- The site and surrounding area's environmental, geological, and mining data in site specific Groundsure Enviro and Geo Insight Reports, presented in Appendix D;
- The British Geological Survey (BGS) website; and,
- A site walkover undertaken on 25 August 2021.

## 3 SITE LOCATION AND DESCRIPTION

### 3.1 Site Location

The site is known as Stanwell New Road, Staines. The site is currently occupied by disused gardens, situated to the rear of two residential properties known as Eaglehurst and Ashill. The area directly to the north, south and east of the site mainly consists of residential properties and a school. Commercial buildings are located to the south-east of the site. An electrical substation is located ~75m south-east of the site. The nearest surface water feature is Staines Reservoir Aqueduct ~10m west of the site, and an inland drain runs parallel with the road in the east. The approximate National Grid Reference for the centre of the site is TQ 04483 72243, and the nearest post code area is TW18 4JB. The site location plan is included within Appendix A.

### 3.2 Site Description and Reconnaissance Visit

A SOCOTEC Environmental Scientist attended the site on 25 August 2021 to undertake a walkover survey of the site.

The site was accessed from Stanwell New Road via a driveway which is also used by the residents of 69, 71 and 73 Stanwell New Road. The site was found to comprise, approximately:

- 35%: external hardstanding of concrete
- 65%: open space

Where present the hardstanding surfaces were generally of good condition across the site and no sign of staining was noted. The hardstanding primarily made up the driveway; however, a small area of concrete hardstanding (approximately 7 m x 3 m) was located in the north west corner of the site. The site's terrain was flat.

No buildings were located on site; however, the hardstanding present in the north west corner and broken up concrete suggests a building was once located there. Corrugated cement was found on site which may contain asbestos.

A small oil container was visible located just to the south of the site boundary, located in a shed within an adjacent garden. No olfactory or visual evidence of contamination was noted.

Residential properties are located to the north, south and east of the site. Commercial buildings are located approximately 100 m south east of the site. Approximately 120 m east of the site and 100 m north west of the site are two large reservoirs, named as 'Staines Reservoirs' and 'King George VI Reservoir'. Open space and an A road is situated between the western boundary of site and the reservoir, with a small water course running north east to south west, approximately 15 m west of the site. Staines Bypass (A30) is situated 280 m south west of the site. A large electrical substation building is located on Stanwell New Road, 55 m south of the entrance to site. The substation may present a potential source of oil or PCB contamination from historical leaks. A water pumping station is also located on Stanwell New Road.

No surface water features were noted on site.

A photographic record of the site walkover is presented in Appendix B.

## 4 PROPOSED DEVELOPMENT

The proposed development of the site is two new residential buildings with associated gardens and car parking areas. The new properties will be accessed via the current driveway and there will also be a bin store and cycle store area for each property.

## 5 HISTORICAL SETTING

### 5.1 Historical Land Usage

The development of the site and surrounding area has been reviewed by reference to the available Ordnance Survey historical maps from 1865 to 2021 and is summarised in Table 1 below.

**Table 1** Summary of Site History

| DATE                               | SCALE                           | ON SITE DEVELOPMENT                                         | NEARBY DEVELOPMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------|---------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1865 – 1869<br>1866<br>1866 – 1868 | 1:10,560<br>1:2,500<br>1:2,500  | The site is shown to be undeveloped, located within fields. | <p>The proximal surrounding area within 500 m radius is mainly fields to the north, east and west. A road running south west to north east (named London Road) is located approximately 250 m south of the site and a few buildings and 'Taylor's Manufactory' are situated along this road to the south east of site. Stanwell New Road is built between 1866 and 1868.</p> <p>Within 750 m of the site are several roads and residential properties surrounded by fields. There is also a hotel named 'Railway Hotel', 'Staines Lodge', a police station and a candle manufactory located within 750 m of the site, to the south west. A railway line is located approximately 750 m south of the site. A farm (named Hammonds Farm) is located 750 m west of the site.</p> <p>There is substantial development 1 km to south west of site, consisting of residential properties and manufactory buildings.</p> |
| 1895<br>1895<br>1894 – 1897        | 1:2,500<br>1:10,560<br>1:10,560 | No significant changes on site.                             | A development of residential properties is located 100 m south of the site, on Stanwell New Road. A Mineral Water Works is also located on London Road, approximately 200 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| DATE                                                      | SCALE                                                   | ON SITE DEVELOPMENT                                                                                     | NEARBY DEVELOPMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1895 – 1899<br>1897 – 1899<br>1900                        | 1:10,560<br>1:10,560<br>1:10,560                        |                                                                                                         | <p>south east of the site. A small building is located 250 m north of the site.</p> <p>Residential properties are located approximately 750 m south of the site and a Lineoleum Works is located 750 m south west of site. There is further development of buildings 1 km south west of the site, in the centre of Staines.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1910 – 1913<br>1912 – 1913<br>1914<br>1920                | 1:10,560<br>1:10,560<br>1:2,500<br>1:10,560             | No significant changes on site.                                                                         | <p>A building named 'White Lodge' is located approximately 80 m north of the site, along Stanwell New Road. A property named 'The Bungalow' is located approximately 180 m north west of the site. Staines Reservoirs Aqueduct is located approximately 20 m west of the site and runs generally south west to north. By 1912 – 1913, Staines reservoir is located 100 m east of the site which is surrounded by a large embankment. There is further residential development along London Road. A pumping station is located approximately 270 m south west of the site. An infant school is located approximately 100 m south of the site.</p> <p>There is further residential development within 750 m of the site, in the south west direction. A hospital and school are located approximately 1 km south east of the site.</p> |
| 1934<br>1934<br>1932 – 1935<br>1934 – 1938<br>1938        | 1:10,560<br>1:2,500<br>1:10,560<br>1:10,560<br>1:10,560 | The site is located within the gardens of two residential properties which face onto Stanwell New Road. | <p>Residential properties are located along Stanwell New Road, extending along the road to 100 m north of the site.</p> <p>There is large residential development approximately 1 km south east of the site.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1955 – 1960<br>1961 – 1963<br>1961 – 1963<br>1963<br>1966 | 1:10,560<br>1:1,250<br>1:2,500<br>1:2,500<br>1:10,560   | A residential building is located on the most eastern part of site, which faces onto Stanwell New Road. | <p>Stanwell New Road extends to 100 m north of the site before stopping. A new road, also named Stanwell New Road runs to the west of site and crosses over the Staines Reservoir Aqueduct. Buildings and electricity pylons are located 100 m south east of the site on Stanwell New Road. Further development named as 'Works' is situated approximately 150 m south east of site. A Sports and Social Club is located 250 m south west of site, as well as some more residential properties. A reservoir named 'King George VI Reservoir' is located 100 m north west of the site.</p> <p>The school and hospital located 1 km south east of the site is replaced with 'Her Majesty's Remand Centre'.</p>                                                                                                                         |

| DATE                                                                                           | SCALE                                                                        | ON SITE DEVELOPMENT                                                                                      | NEARBY DEVELOPMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1973 – 1974<br>1974<br>1979 – 1982<br>1984 – 1987<br>1988 – 1992<br>1992 – 1995<br>1994 – 1995 | 1:1,250<br>1:10,000<br>1:1,1250<br>1:10,000<br>1:1,250<br>1:1,250<br>1:1,250 | A builder's yard located south of the site is accessed from Stanwell New Road via a section of the site. | A builder's yard is located directly south of main section of site. The road which runs along the west of the site are renamed Stanwell Moor Road. The building located 100 m south east of the site is named as an 'Electricity Grid Sub Station'.<br><br>A roundabout and new road named 'A30' is built approximately 300 m south of the site. The A30 runs to the west, below the western reservoir. Residential development is located 1 km south of the site. A shopping centre named 'The Elmsleigh Centre' is located approximately 1 km south west of the site. |
| 2001<br>2003                                                                                   | 1:10,000<br>1:1,250                                                          | No significant changes on site.                                                                          | The builder's yard is replaced with three residential properties which are accessed via a section of the site. Two roads named Midway Close are located approximately 20 m east of site and are developed with residential buildings. A drain runs along the most northern section of Stanwell New Road, approximately 50 m north east of the site.                                                                                                                                                                                                                     |
| 2010                                                                                           | 1:10,000                                                                     | No significant changes on site.                                                                          | No significant changes surrounding the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2021                                                                                           | 1:10,000                                                                     | No significant changes on site.                                                                          | No significant changes surrounding the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## 5.2 Published Geology

The Groundsure Geo Enviro and Geo Insight report (ref GS-8144080) and British Geological Survey (BGS) Geology of Britain Viewer (2021) indicate that the bedrock geology comprises the London Clay Formation of the Eocene Epoch and indicated that the superficial geology comprises the Langley Silt Member made up of clay and silt of the Quaternary period. Approximately 25 m north west of the site, the superficial geology comprises the Kempton Park Gravel Member made up of Sand and Gravel of the Quaternary period. The Groundsure report indicated that the permeability of the bedrock on site is very low to moderate with a mixed flow type. The permeability of the superficial deposits on site is very low to low with a mixed flow type.

The Groundsure report indicates that artificial ground or Made Ground is not present on the site. However, it is anticipated that some Made Ground will likely be present on site as a result of the hardstanding surface that is present on the site.

Neither the Groundsure Report nor the British Geological Survey (BGS) Geology of Britain Viewer indicates the presence of faults or coal seams within 1000 m of the site.

### 5.3 Geological Hazards

Information on various geological hazards is contained within the Groundsure Geo Insight report where the risks on site are classified from negligible to very low; these are summarised in Table 2 below.

**Table 2** Summary of On Site Geological Risks

| HAZARD                              | RISK CATEGORY |
|-------------------------------------|---------------|
| Shrink-Swell Clay                   | Very Low      |
| Landslides                          | Very Low      |
| Ground Dissolution of Soluble Rocks | Negligible    |
| Compressible Deposits               | Negligible    |
| Collapsible Deposits                | Very Low      |
| Running Sands                       | Negligible    |

### 5.4 Mining, Extraction & Natural Cavities

According to the Geo Insight report, there are no identified natural cavities within 500 m of the site. There is also no coal mining area within 1000 m of the site; the historical maps also do not record the presence of coal mining activities within 1000 m of the site.

### 5.5 Potentially Infilled Land

The Groundsure Geo Enviro and Geo Insight report (ref GS-8144080) reports there are three identified potentially infilled land within 500 m of the site. They are located 107 m east, 256 m south east and 487 m east of the site. It is unknown whether infilled land is present on-site.

### 5.6 Surface Ground Workings

The Groundsure Geo Enviro and Geo Insight report indicates that there are 12 surface ground working located within 250 m of the site. This is summarised in Table 3 below.

Table 3 Summary of Ground Features

| FEATURE    | DISTANCE FROM SITE | DATE |
|------------|--------------------|------|
| Reservoirs | 88 m north east    | 1938 |
| Reservoir  | 90 m north west    | 1974 |
| Reservoir  | 90 m north west    | 1984 |
| Reservoir  | 90 m north west    | 1955 |
| Reservoirs | 98 m east          | 1920 |
| Reservoirs | 98 m east          | 1938 |
| Reservoirs | 98 m east          | 1913 |
| Reservoirs | 99 m east          | 1974 |
| Reservoirs | 99 m east          | 1984 |
| Reservoirs | 99 m east          | 1955 |
| Reservoirs | 102 m east         | 1934 |
| Reservoirs | 103 m east         | 1934 |

The features are not considered to represent a concern, given their distance from the site.

## 5.7 Hydrogeology and Groundwater and Surface Water Abstraction

The hydrogeological characteristics of the site as indicated by the Groundsure Geo Enviro and Geo Insight report are summarised below in Table 4 below.

Table 4 Summary of Hydrogeological Characteristics

| CHARACTERISTIC                                                                  | OBSERVATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Superficial Aquifer Details (within 500 m of the site)                          | <p>On site, within the superficial geology, is classified as an Unproductive Aquifer comprising rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.</p> <p>Located 24 m north west, 270 m south east and 487 m east of the site are Principal aquifers. These are comprised of geology of high intergranular and / or fracture permeability, usually providing a high level of water storage and may support water supply / river base flow on a strategic scale. Generally principal aquifers were previously major aquifers.</p> <p>Another Unproductive aquifer is also located 485 m east of the site.</p> |
| Bedrock Aquifer Details (within 500 m of the site)                              | The Bedrock geology underlying the site is classified as Unproductive Strata comprising rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Groundwater Abstraction Licences (within 2000 m of the site)                    | There are 10 Groundwater Abstraction Licenses within 2000 m of the site. One is currently active and is located 843 m east of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Surface Water Abstraction Licences (within 2000 m of the site)                  | There are no recorded surface water abstraction licences within 2000 m of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Potable Water Abstraction Licences (within 2000 m of the site)                  | There are no recorded Potable Water Abstraction Licenses within 2000 m of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Nitrate Vulnerable zones (within 2000 m of the site)                            | The site is not located within a Nitrate Vulnerable Zone at risk from agricultural nitrate pollution.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Source Protection Zone (within 500 m of the site)                               | The site is located within a Source Protection Zone (SPZ) in a total catchment of 'Type 3'.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Groundwater Vulnerability and Soil Leaching Potential (within 50 m of the site) | <p>The groundwater vulnerability on site is unproductive within the bedrock geology and superficial geology. The soil leaching potential is high.</p> <p>The groundwater vulnerability 24 m north west of the site is unproductive within the bedroom geology and high within the superficial geology. The soil leaching potential is high.</p>                                                                                                                                                                                                                                                                                                                                       |

## 5.8 Hydrology and Flooding

The Groundsure Geo Enviro and Geo Insight report indicates there are 6 surface water features within 250 m of the site. The closest surface water feature is a manmade water course for surface water transfer, located 14 m north west of the site. There is also an inland river not influence by normal tidal action located 175 m south east of the site. There are two reservoirs 'Staines Reservoir South' and 'King George VI Reservoir' located 92 m east and 138 m north west of site, respectively.

The site is not located within a flood zone 2 or 3 of risk of flooding from rivers and the sea, the risk from surface water (Pluvial) flooding on site from a 1 in 30, 1 in 100 and 1 in 250 year rainfall event is negligible, while the risk from a 1 in 1000 year rainfall event is a maximum flood depth of 0.1 to 0.3 m. There are no identified flood defences located within 250 m of the site. According to Groundsure Geo Enviro and Geo Insight report, groundwater flooding susceptibility is moderate-high on site and high in areas within 50 m of the site.

A search of the Department for Environment, Food and Rural Affairs (DEFRA) website reveals that the site is in an area at risk of flooding from reservoirs. Further assessment of this should be sought through a specialist flood risk report.

It should be noted that a flood risk assessment is out of the scope of this report, although it is considered prudent that one is procured for this site.

## 5.9 Potential Sources of Ground Gas

### 5.9.1 Radon

According to the Groundsure Report, the property is not located within a Radon Affected Area, as less than 1% of properties are above the Action Level. The report states that no radon protective measures are necessary in the area.

### 5.9.2 Ground Gas

The Groundsure report and BGS geology viewer indicate that no artificial, Made Ground, are located on-site or within the site's immediate surrounding area. However, it is anticipated that some Made Ground will likely be present on site as a result of the previous construction of the buildings and hardstanding surfacing.

No landfill or other waste sites have been identified and no records of coal mining have been reported within the site's surrounding area.

## 5.10 Utilities

The site and surrounding area are likely to contain underground services associated with the residential buildings adjacent to the site and potentially the building which was previously located on site. An electricity substation is located 91 m south east of the site, however, according to the Groundsure report, was last active in 1992.

## 5.11 Historical Petrol and Fuel Sites

The Groundsure Enviro Insight does not list any records of historical petrol stations and fuel sites within 500 m of the site boundary. A current Shell petrol station is located 426 m south west of the site on London Road.

# 6 ENVIRONMENTAL SETTING

## 6.1 Topography

During the site walkover, the site was noted to be relatively flat lying across the extent of the site. The surrounding area is relatively flat; with the exception of large embankments associated with the reservoirs are located approximately 70 m west and 90 m east of the site.

## 6.2 Designated Environmentally Sensitive Sites

In the context of this report sensitive land usage covered by the Groundsure report includes the following:

- Sites of Special Scientific Interest (SSSI)
- Local and National Nature Reserves (LNR and NNR)
- Special Protection Areas (SPA) and Special Areas of Conservation (SAC)
- World Heritage Sites and Ancient Woodlands
- Areas of Outstanding Natural Beauty (AONB)
- National Parks
- Ramsar sites
- Green Belt
- Nitrate Sensitive Areas and Nitrate Vulnerable Zones (NSA, NVZ)

The Enviro Groundsure report for the site indicates that Staines Moor, a Site of Specific Scientific Interest (SSSI) is located 47 m north west of the site. A Ramsar site, named South West London Waterbodies, is also located 47 m north west of the site and comprises a series of reservoirs and former gravel pits that support internationally important numbers of wintering *Anas strepera* and *Anas clypeata*. South West London Waterbodies is also listed as a Special Protection Area (SPA) due to the presence of 'Gadwall' and 'Northern shoveler' birds which are species of interest. There are four green belts located within 2000 m of the site; located approximately 30 m north west in Spelthorne, 1551 m south west in Runnymede, 1745 m west in Windsor and Maidenhead and 1795 m east in Spelthorne.

The Enviro Groundsure report indicates that there is a SSSI Impact Risk Zone recorded on site. Therefore; consultation may be required depending on the proposed development.

### 6.3 Current Contaminative Land Uses

The Groundsure Report details other potential contamination sources located close to the site including 'Current Industrial Data'. There are several recent industrial land uses which may be potentially contaminative within 250 m of site which are outlined in Table 5.

**Table 5** Potential Sources of Contamination

| LOCATION         | SOURCE                 | COMMENT                                             |
|------------------|------------------------|-----------------------------------------------------|
| 92 m south west  | Pylon                  |                                                     |
| 120 m south east | Electricity substation | The substation may contain PCBs / transformer oils. |
| 129 m south east | Pylon                  |                                                     |
| 134 m north      | Pylon                  |                                                     |
| 176 m south      | Exotic Car Collection  |                                                     |
| 197 m west       | Electricity substation | The substation may contain PCBs / transformer oils. |
| 198 m south east | Safestore Ltd          |                                                     |
| 201 m south east | Safestore Ltd          |                                                     |
| 237 m south      | Centroller             |                                                     |
| 242 m east       | Pylon                  |                                                     |
| 244 m west       | Electricity substation | The substation may contain PCBs / transformer oils. |

The off-site sources listed above could potentially be sources of contamination, however due to their distance from site; they are unlikely to have caused contamination on site.

## 7 PRELIMINARY CONCEPTUAL SITE MODEL

### 7.1 General

In line with existing legislation and the current good practice guidance for the management of contaminated land, assessments are undertaken using a risk based approach. It is necessary to define a Conceptual Site Model (CSM) for the site which identifies the potential sources of contamination, the receptors and the pathways that can connect them. In order for there to be a risk from contamination, one or more relevant pollutant linkages must exist, connecting a contamination source, a receptor (an entity which might be affected by the contamination) and a pathway (or mechanism) by which the receptor can be exposed to the contaminant.

A discussion of potential sources, pathways and receptors and a tabulated summary of the CSM indicating potential pollutant linkages follow below. The criteria used for assessing the relevance of identified potential pollutant linkages are based on the objectives stated above. It is understood that the purpose of this desk study and walkover is a means to determine and record the current site conditions and to identify and assess the extent of any potential contamination sources within the site prior to its redevelopment for residential use.

## 7.2 Potential Sources of Contamination

Potential sources of contamination are usually associated with current and former industrial activities, where the processing, storage, use, transportation and disposal of raw materials, products and wastes often leads to the contamination of underlying ground and groundwater. In addition, natural processes can also give rise to contamination such as hazardous gases.

Based on the information presented above, potential sources of contamination from current and historical site uses and from potentially significant off site sources have been assessed. Potential sources of contamination and contaminants at and within the site boundary are summarised in the table below. These are based on the desk study data obtained and published guidance. Many of the potential current and historical off sites sources identified in previous sections have been discounted on the basis of their distance and direction (e.g. down inferred topographic and groundwater flow gradient) from the site.

**Table 6** Potential Sources of Contamination

| <b>SITE USE / ACTIVITY AND AREA</b>                   | <b>SOURCES</b>                                                                                                                                                                                                     | <b>CONTAMINANTS</b>                                                                                                                                                                                                                           |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historical and current use of the site as residential | Made Ground associated with the development of the buildings and hardstanding.<br><br>Potential asbestos material identified on site during walkover, possibly from the demolition of a previous building on site. | A range of organic and inorganic contaminants and ground gases, including heavy metals and metalloids, cyanide, fuels, fuel oils, hydrocarbons, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), asbestos, sulphate |

| SITE USE / ACTIVITY AND AREA                               | SOURCES                                                      | CONTAMINANTS                                                                                                                                                                                                                        |
|------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historical and current features (within 250 m of the site) | Electricity substation located 120 m south east of the site. | A range of organic and inorganic contaminants and ground gases, including heavy metals and metalloids, cyanide, fuels, fuel oils, hydrocarbons, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), asbestos |

### 7.3 Potential Migration Pathways

To develop further an understanding of the potential risks posed by the contaminants to human receptors, the pathways through which contaminants may impact receptors need to be identified. The potential migration pathways and / or exposure routes considered to be present at the site are:

- Direct soil, soil dust and / or water ingestion
- Inhalation of soil dust, soil vapour and / or water vapour
- Dermal contact with contaminated soil, soil dust and/or water
- Lateral and vertical migration of gases and / or vapours through permeable strata
- Leaching of contaminants from soils into soil pore water and shallow groundwater
- Downward migration of soil pore water and shallow groundwater (including via preferential pathways created by foundations)
- Lateral groundwater flow towards nearby controlled water receptors
- Preferential pathways including existing services and proposed ground improvements and / or foundations
- Permeation of organic contaminants through water supply pipes and into the water supply for the site

### 7.4 Potential Receptors

Potential receptors have been identified and categorised as follows:

#### 7.4.1 Human Health

- Current and future site users;
- Neighbouring site occupants; and

- Construction workers during any proposed development at the site.

#### 7.4.2 Controlled Waters

- Principal Aquifers located 24 m north west, 270 m south east and 487 m east of site;
- Unproductive Superficial & Bedrock Aquifers located beneath the site; and
- A manmade water course for surface water transfer located approximately 14 m north west of the site.
- Staines Reservoir Aqueduct ~10m west of the site.

#### 7.4.3 Environmental Receptors

- Staines Moor is a Site of Special Scientific Interest (SSSI) located 47 m north west of the site.
- Ramsar site, named South West London Waterbodies, is located 47 m north west of the site and comprises a series of reservoirs and former gravel pits that support internationally important numbers of wintering *Anas strepera* and *Anas clypeata*.
- South West London Waterbodies is a listed Special Protection Area (SPA) due to the presence of 'Gadwall' and 'Northern shoveler' birds which are species of interest.
- Four green belts located within 2000 m of the site; located approximately 30 m north west in Spelthorne, 1551 m south west in Runnymede, 1745 m west in Windsor and Maidenhead and 1795 m east in Spelthorne.
- SSSI Impact Risk Zone recorded on site.

#### 7.4.4 Property, Buildings, Structures and Services

The works on site will include the construction of two residential properties and associated gardens. Any water supply pipes or utilities that will service the buildings are considered to be potential receptors.

### 7.5 Summary

The relevant pollutant linkages based on the potential sources, pathways and receptors outlined above are tabulated below.

Table 7 Preliminary Conceptual Site Model

| SOURCE                                                   | PATHWAY                                                                                                                                                                                                                                                                                                 | RECEPTOR                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sources and contaminants as identified in Table 6 above. | <ul style="list-style-type: none"> <li>Ingestion of soils / soil dust and / or groundwater.</li> <li>Dermal contact with soil, soil / dust and / or groundwater.</li> <li>Inhalation of soil dust and / or soil / groundwater vapours.</li> <li>Permeation / corrosion of water supply pipes</li> </ul> | <ul style="list-style-type: none"> <li>Construction workers</li> <li>Current and future users of the site</li> <li>Neighbouring site occupants</li> </ul>                                                                                                                                                |
|                                                          | <ul style="list-style-type: none"> <li>Leaching and downward migration via permeable soils.</li> <li>Lateral groundwater migration</li> <li>Migration via man made pathways (services, service trench backfill)</li> <li>Surface run off.</li> </ul>                                                    | <ul style="list-style-type: none"> <li>Perched groundwater in shallow superficial deposits</li> <li>Principal aquifer 24m north-west of site.</li> <li>Surface water inland drain and Staines Reservoir Aqueduct ~10m west of the site. Any existing or future water supply pipe or utilities</li> </ul> |
|                                                          | <ul style="list-style-type: none"> <li>Ingress of ground gases and vapour into buildings, accumulation and asphyxiation or explosion.</li> <li>Migration via man made pathways (services, service trench backfill)</li> </ul>                                                                           | <ul style="list-style-type: none"> <li>Proposed new buildings</li> <li>Future site users</li> <li>Neighbouring residential buildings</li> </ul>                                                                                                                                                          |

There are currently a series of uncertainties and assumptions in the CSM presented above as this is based on Desk Study information only:

- Ground conditions have been conceptualised based on BGS geological maps and other primarily desk-based information;
- The thickness and extent of any Made Ground at the site is currently unknown;
- The presence and extent of any suspected contamination is unknown in the absence of ground investigation data;

- 
- The presence and depth of any groundwater bodies at the site is currently unknown; and
  - The ground gas regime at the site has not been characterised.

## 8 PRELIMINARY RISK ASSESSMENT

### 8.1 Assessment of Environmental Risks Methodology

The identification of potential pollutant linkages is a key aspect of the evaluation of potentially contaminated land. An approach based on CIRIA report C552 has been adopted. For each of the pollutant linkages, an estimate is made of the potential 'Severity of Risk' and the 'Probability of Risk Occurring'. These are then used for an overall qualitative evaluation of the level of risk, as defined below in tables taken from CIRIA report C552.

Table 8 presents the classification of the severity of the risk.

**Table 8** Severity of Risk

| RISK FACTOR | TYPICAL EXAMPLES                                                                     |
|-------------|--------------------------------------------------------------------------------------|
| Severe      | Acute risks to human health;<br>Major pollution of controlled water receptors        |
| Medium      | Chronic (long-term) risk to human health;<br>Pollution of controlled water receptors |
| Minor       | Damage to non-sensitive species or ecosystems, buildings or services                 |

The probability of risk occurring is classified according to the criteria provided in Table 9 below:

**Table 9** Probability of Risk Occurring

| PROBABILITY RATING | DESCRIPTION                                                                                                                           |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| High Likelihood    | Pollutant linkage may be present, and risk is almost certain to occur in the long term, or there is evidence of harm to the receptor. |
| Likely             | Pollutant linkage may be present, and it is probable that the risk will occur over the long term.                                     |
| Low Likelihood     | Pollutant linkage may be present and there is a possibility of the risk occurring, although there is no certainty that it will do so. |
| Unlikely           | Pollutant linkage may be present but the circumstances under which harm would occur are improbable.                                   |

An overall qualitative evaluation of the level of risk is gained from a comparison of the severity and probability as represented in Table 10 below:

Table 10 Risk Rating Evaluation

|             |                    | SEVERITY            |                     |                     |
|-------------|--------------------|---------------------|---------------------|---------------------|
|             |                    | SEVERE              | MEDIUM              | MINOR               |
| PROBABILITY | HIGH<br>LIKELIHOOD | Very High Risk      | High Risk           | Moderate / Low Risk |
|             | LIKELY             | High Risk           | Moderate Risk       | Low Risk            |
|             | LOW<br>LIKELIHOOD  | Moderate Risk       | Moderate / Low Risk | Very Low Risk       |
|             | UNLIKELY           | Moderate / Low Risk | Low Risk            | Very Low Risk       |

## 8.2 Preliminary Risk Assessment

The following table details the potential risks associated with the various potential pollutant linkages identified through the assessment of the data collated in this report. The risk category should be reviewed if further information is made available or the environmental setting of the site changes, for example through a proposed change in the development layout or end use.



Table 11      Preliminary Risk Assessment

| SOURCE                                            | PATHWAY                                                                                                                                                                                                        | RECEPTOR                                                                                                                           | SEVERITY | PROBABILITY    | RISK RATING         | COMMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sources and Contaminants as identified in Table 6 | <ul style="list-style-type: none"> <li>Soil / dust / groundwater ingestion</li> <li>Dermal contact</li> <li>Inhalation of soil dust / vapours</li> <li>Permeation / corrosion of water supply pipes</li> </ul> | <ul style="list-style-type: none"> <li>Construction workers</li> <li>Future site users</li> <li>Neighbouring site users</li> </ul> | Medium   | Low Likelihood | Moderate / Low Risk | <p>It is possible that the building previously located on site may have contained asbestos material and asbestos fibres may be present therefore in Made Ground and beneath the remaining hardstanding.</p> <p>The condition of soil and groundwater beneath the site should be investigated further by undertaking a series of boreholes to facilitate the collection of soil and groundwater samples for laboratory analysis. The risks to human health receptors should be reassessed following receipt of laboratory data for the samples collected.</p> <p>Ground workers should be made aware of the potential for exposure to potential contaminants in or on the ground and the need for appropriate levels of PPE. Should contamination be identified within shallow Made Ground and / or superficial materials during the intrusive investigation, it is considered that the risk to water supply pipes and underground utility services will be moderate.</p> |
|                                                   | <ul style="list-style-type: none"> <li>Generation and migration of ground gases</li> <li>Asphyxiation or explosion upon ignition</li> </ul>                                                                    | <ul style="list-style-type: none"> <li>Construction workers</li> <li>Future site users</li> <li>Neighbouring site users</li> </ul> | Medium   | Low Likelihood | Moderate / Low Risk | <p>It is considered that Made Ground may be present on-site as a result of construction of the building which was previously located on site.</p> <p>Given the uncertainties, it is considered that, the ground gas regime at the site should be established as part of any future site investigation by completing an appropriate ground gas monitoring programme.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| SOURCE | PATHWAY                                                                                                                                                                                                                                                                      | RECEPTOR                                                                             | SEVERITY | PROBABILITY | RISK RATING         | COMMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------|-------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | <ul style="list-style-type: none"> <li>Leaching and downward migration of contaminants in into the groundwater</li> <li>Lateral Groundwater Migration</li> <li>Migration via man made pathways (services, service trench backfill)</li> <li>Surface water run off</li> </ul> | <ul style="list-style-type: none"> <li>Surface water</li> <li>Groundwater</li> </ul> | Medium   | Unlikely    | Low Risk            | <p>Given the distance to the nearest surface water receptor, and the lack of potentially contaminative land-uses previously on-site, it is considered that the overall risk of substances derived from the site impacting it will be low.</p> <p>However, groundwater samples should be recovered for laboratory analysis during the phase 2 to confirm levels of potential contaminants within any groundwater underlying the site are sufficiently low.</p> |
|        | Direct contact with contaminated soils                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Buried concrete</li> </ul>                    | Medium   | Low         | Moderate / Low Risk | The presence of sulphate in soils can create a chemically aggressive environment for buried foundations. As assessment in of chemically aggressive ground is considered prudent.                                                                                                                                                                                                                                                                              |

---

## 9 CONCLUSION

Following completion of the desk study and the development of the initial Conceptual Site Model and Preliminary Risk Assessment, the risks posed by land contamination are anticipated to be low to moderate for human health receptors identified and low for controlled water receptors identified.

Broken up concrete and bricks were observed on site, likely to be present following the demolition of a small building on site. Asbestos containing material may be present on site due to this activity and potential asbestos containing materials may have been observed on site during the walkover.

The superficial deposits (Langley Silt Member) beneath the site and surrounding area are classified as an Unproductive Aquifer. A superficial Principal Aquifer is located 2 m north west of the site, relating to gravel deposits. The site and surrounding area is underlain by London Clay (Unproductive Aquifer). The permeability of the superficial and bedrock deposits beneath the site is very low to low so it is unlikely to allow the vertical migration of contamination. The cohesive nature and low permeability of the London Clay below is also considered likely to act as a barrier to any migration of contamination.

Due to the low permeability geology identified beneath the site, previous site use as a garden and lack of olfactory evidence of a significant source of contamination on site to present a significant pollutant linkage it is considered that there is a low risk to controlled water receptors identified.

In addition, there is a risk of flooding from reservoirs noted from the DEFRA mapping service.

## 10 RECOMMENDATIONS

The actual presence of contamination in, on, or under the ground can only be confirmed by an intrusive site investigation. Based on the findings of the above it is recommended that further intrusive investigation work is undertaken in order to assess the condition of soil and groundwater beneath the site and to allow ground gas monitoring to be undertaken. It is envisaged that this would comprise the construction of three window sample boreholes across the site to a depth of 5.0m below ground level targeting potential sources of contamination in order to facilitate the collection of soil samples for analysis. These boreholes should also be installed with gas and groundwater monitoring standpipes to allow the recording of ground gases to characterise the ground gas regime on site and facilitate the collection of shallow groundwater samples, should this be encountered. Five trial pit locations should also be excavated to maximise the coverage across the site.

---

In addition to the above, sampling and associated testing to assess the risks of aggressive compounds to buried concrete is recommended to aid suitable selection of concrete classification during the design process.

Given the risk of flooding from reservoirs, it is recommended that a Flood Risk Assessment is carried out for the site. A fee for this will be provided following submission of this report.

The data obtained from these works will be used to refine the conceptual site model and gather geo-environmental information in order to assess any potential risks with respect to future site users, construction workers and controlled water receptors pertinent to the site.

---

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Groundsure : 2021: Enviro and Geo Insight Report Ref. GS-7889389, 24 May 2021

Groundsure : 2021: Historical Ordnance Survey Maps Report Ref. GS-7889506 and GS-7889607, 24 May 2021

## APPENDIX A

### FIGURES

# Site Location Plan



The Site



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|        |                                           |                                                                     |             |
|--------|-------------------------------------------|---------------------------------------------------------------------|-------------|
| Notes: | Project<br>Project No.<br>Carried out for | Stanwell New Road, Staines<br>STH1061<br>Eton West Construction Ltd | Figure<br>1 |
|--------|-------------------------------------------|---------------------------------------------------------------------|-------------|

**APPENDIX B**  
**SITE RECONNAISSANCE PHOTOS**



Plate 1: Entrance to site from Stanwell New Road.



Plate 2: Stanwell New Road.



Plate 3: Electricity substation located on Stanwell New Road.



Plate 4: The driveway used to access the main section of site.



Plate 5: The southern boundary of the main section of site.



Plate 6: The site, viewing east, taken from the western boundary.



Plate 7: Viewing south from the site – 73 Stanwell New Road.



Plate 8: The site, viewing west, taken from the north eastern corner of site.



Plate 9: Viewing west, showing the watercourse located 14 m from site and the embankment of the reservoir in the background.



Plate 10: Potential asbestos containing material (ACM).



Plate 11: Concrete and bricks on site.



Plate 12: Hardstanding (concrete) on site, approximately 7 m x 3 m in size.



Plate 13: Discarded concrete on site.



Plate 14: Broken and discarded pipe on site.



Plate 15: Litter on site.

**APPENDIX C**  
**HISTORICAL ORDNANCE SURVEY MAP EXTRACTS**

#### Site Details:

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**Client Ref:** CS6219  
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**Grid Ref:** 504485, 172232

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**Map date:** 1866

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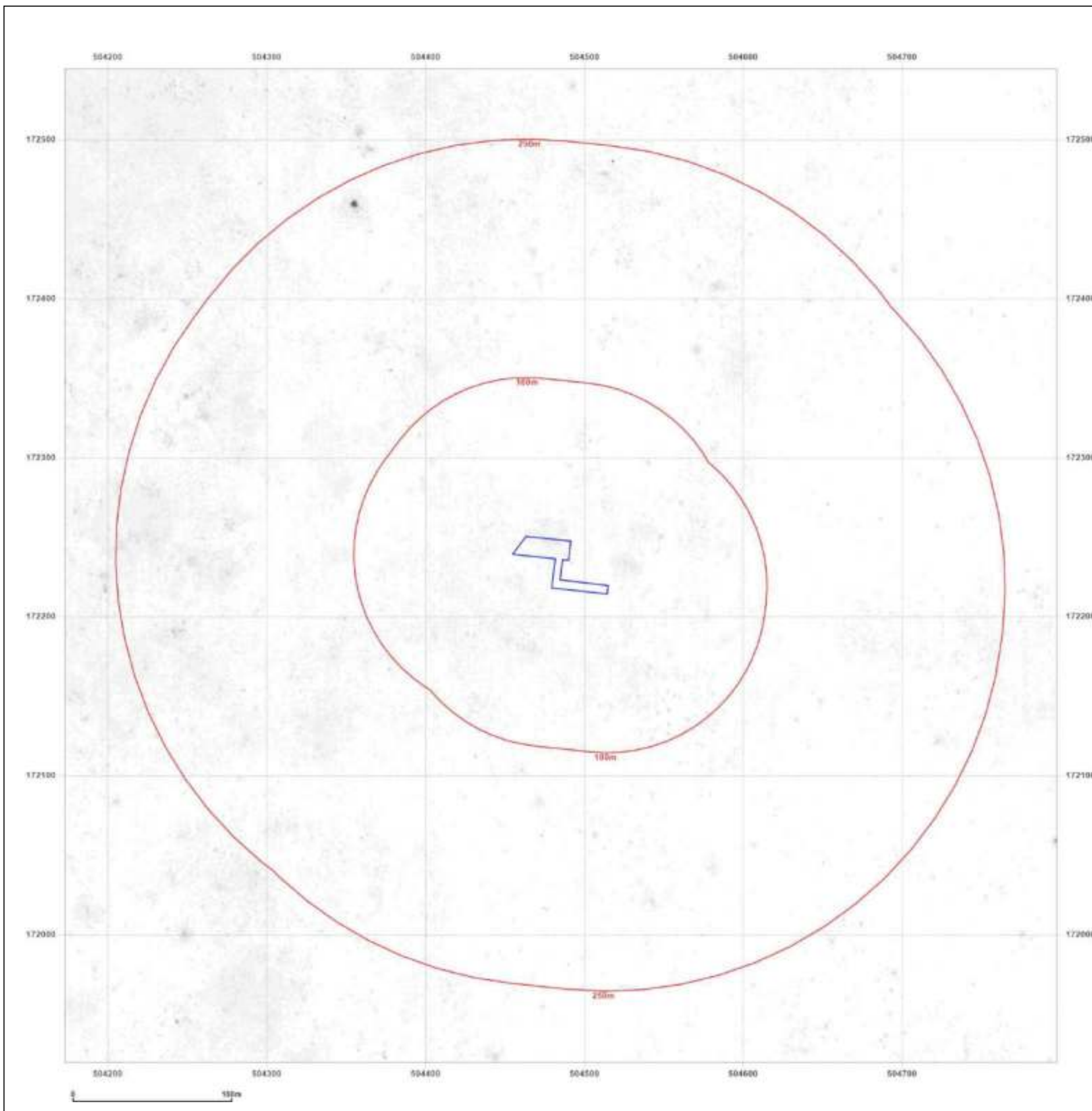


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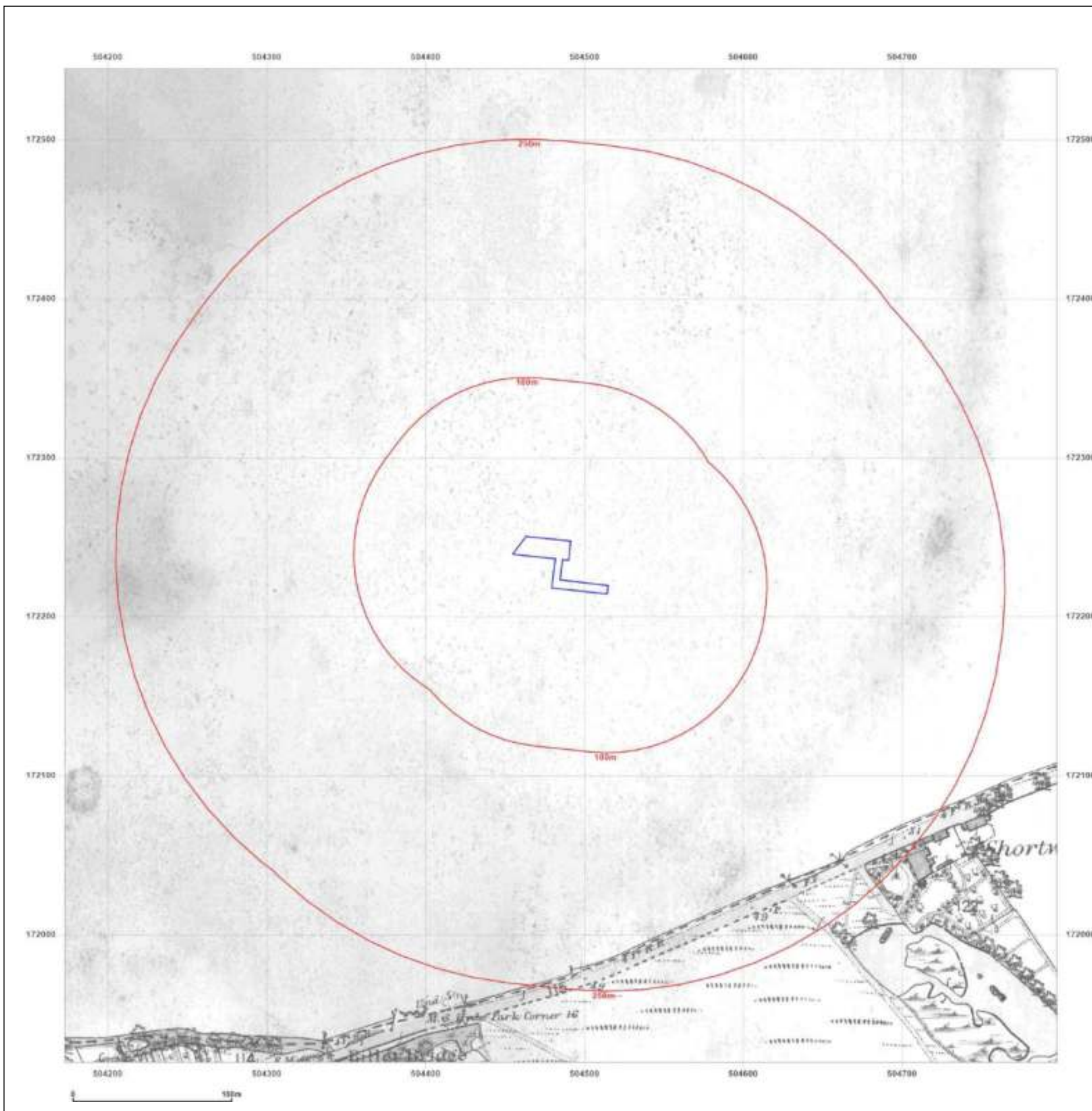


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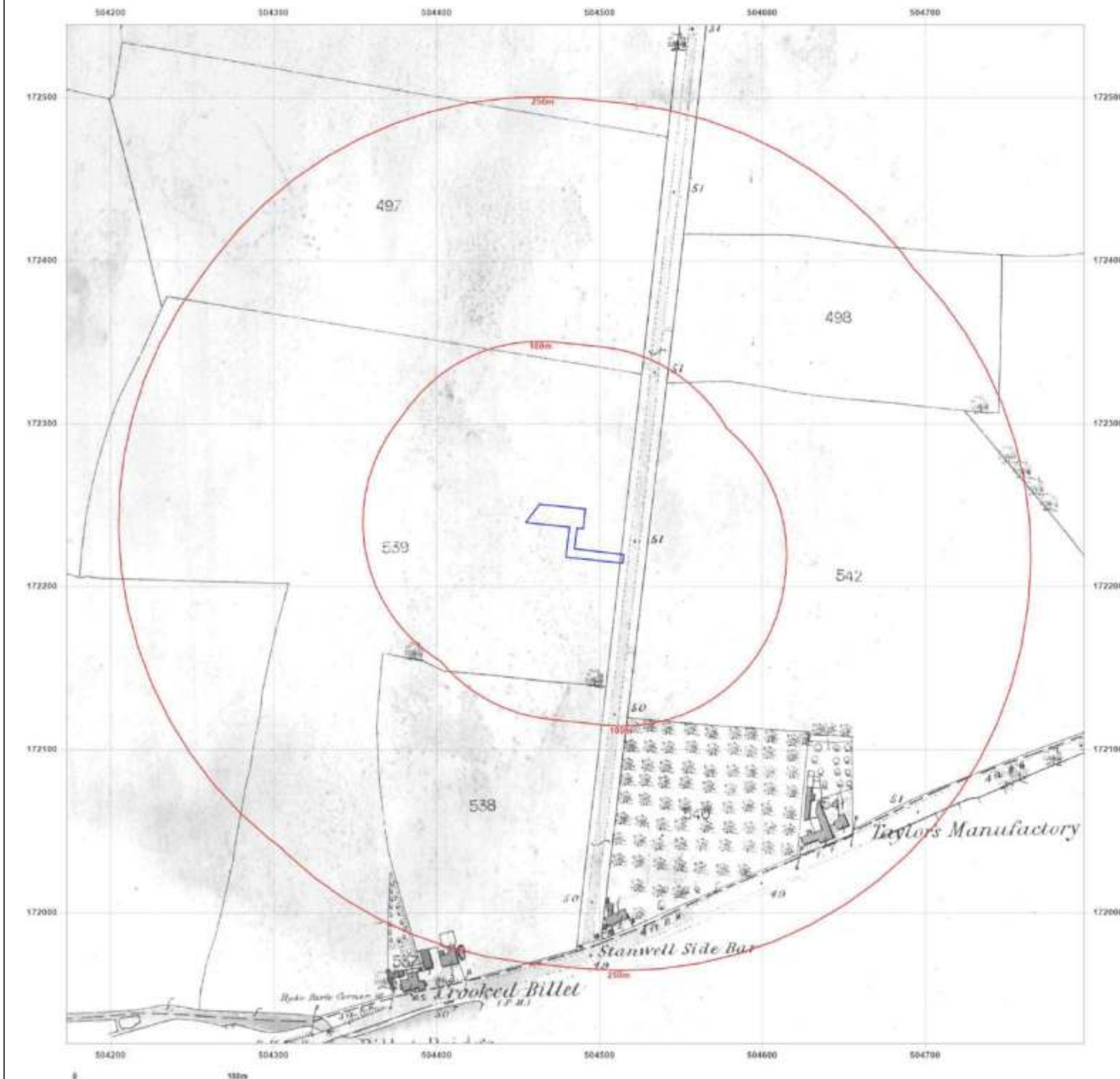


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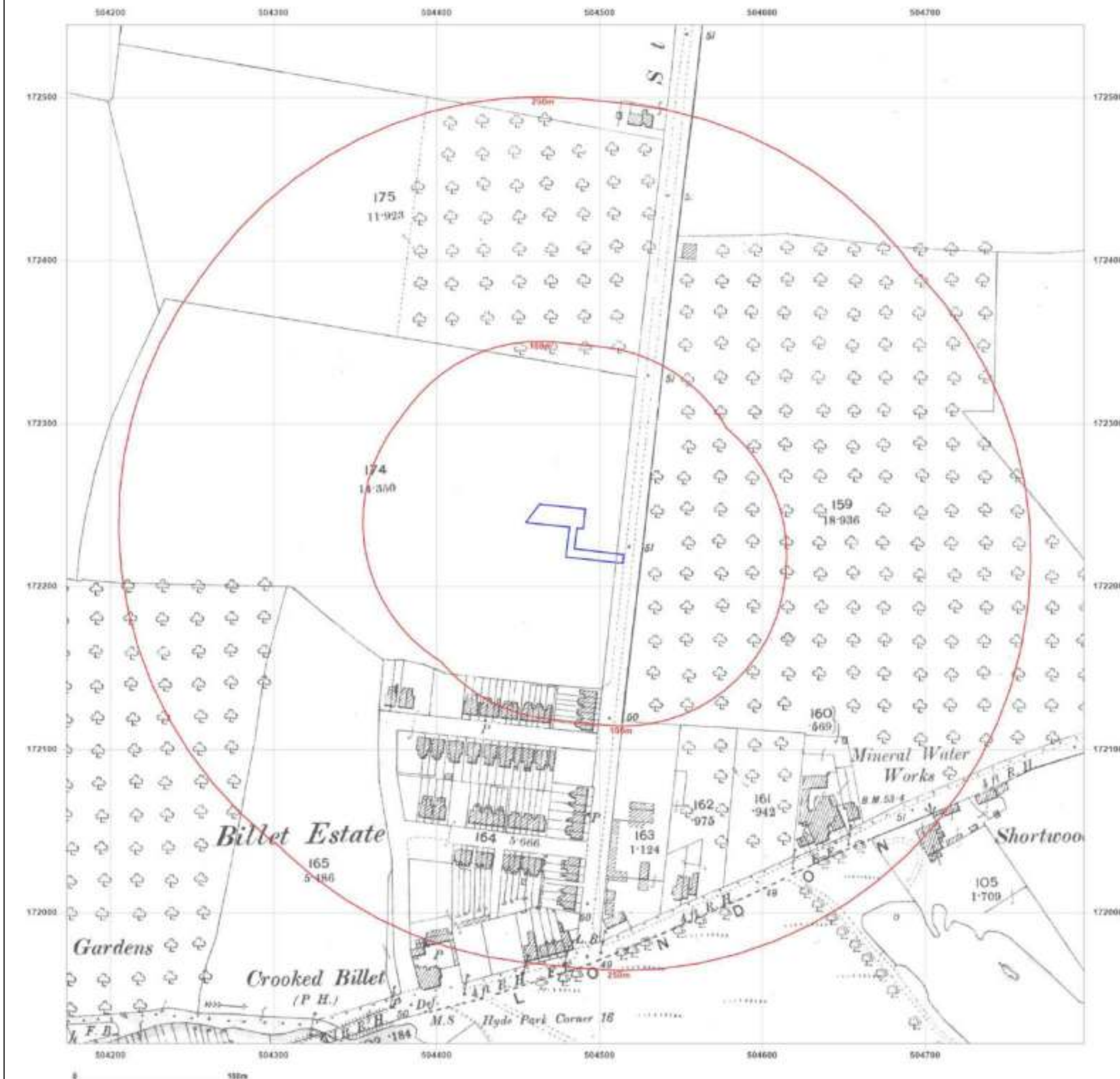


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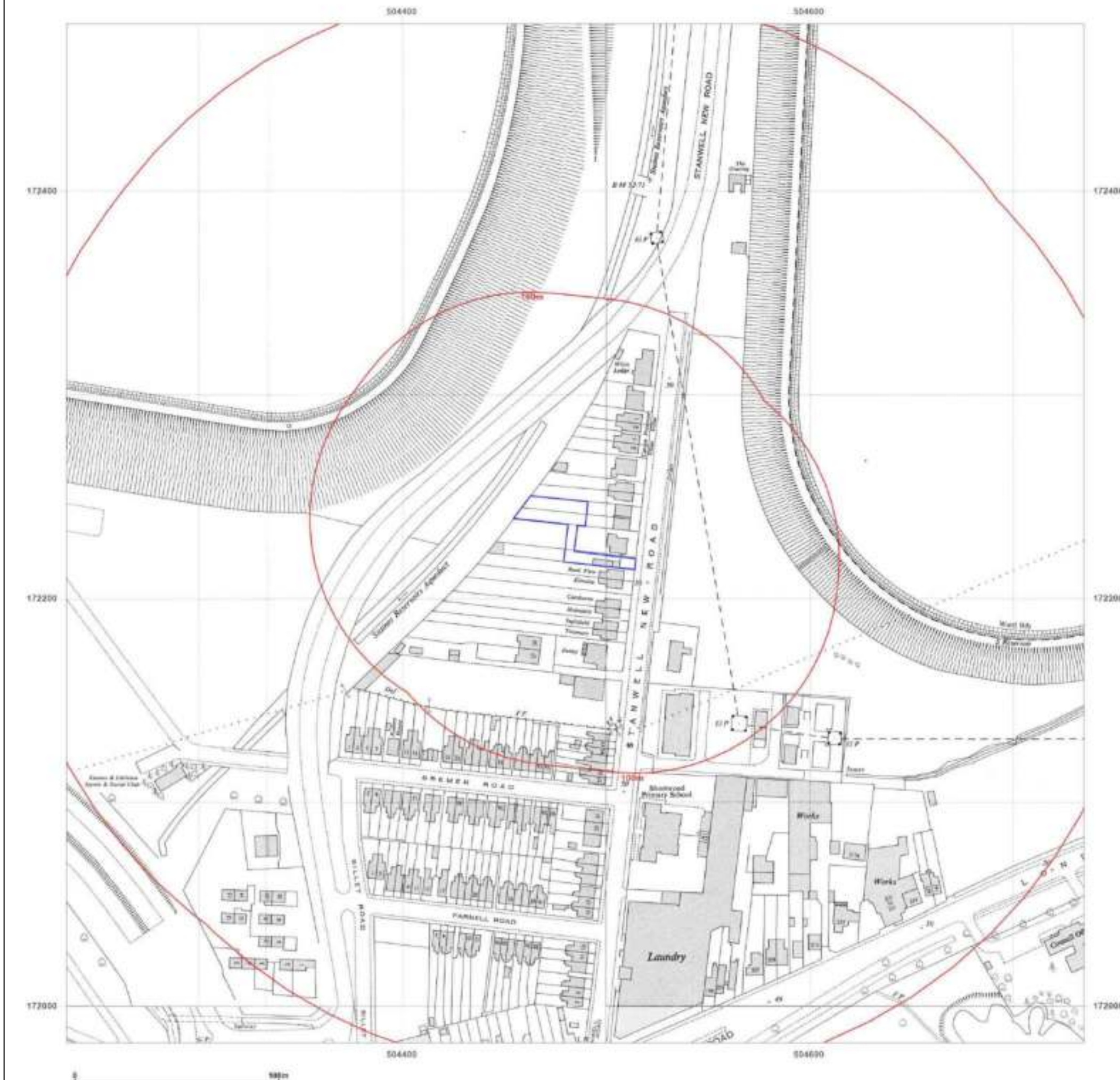


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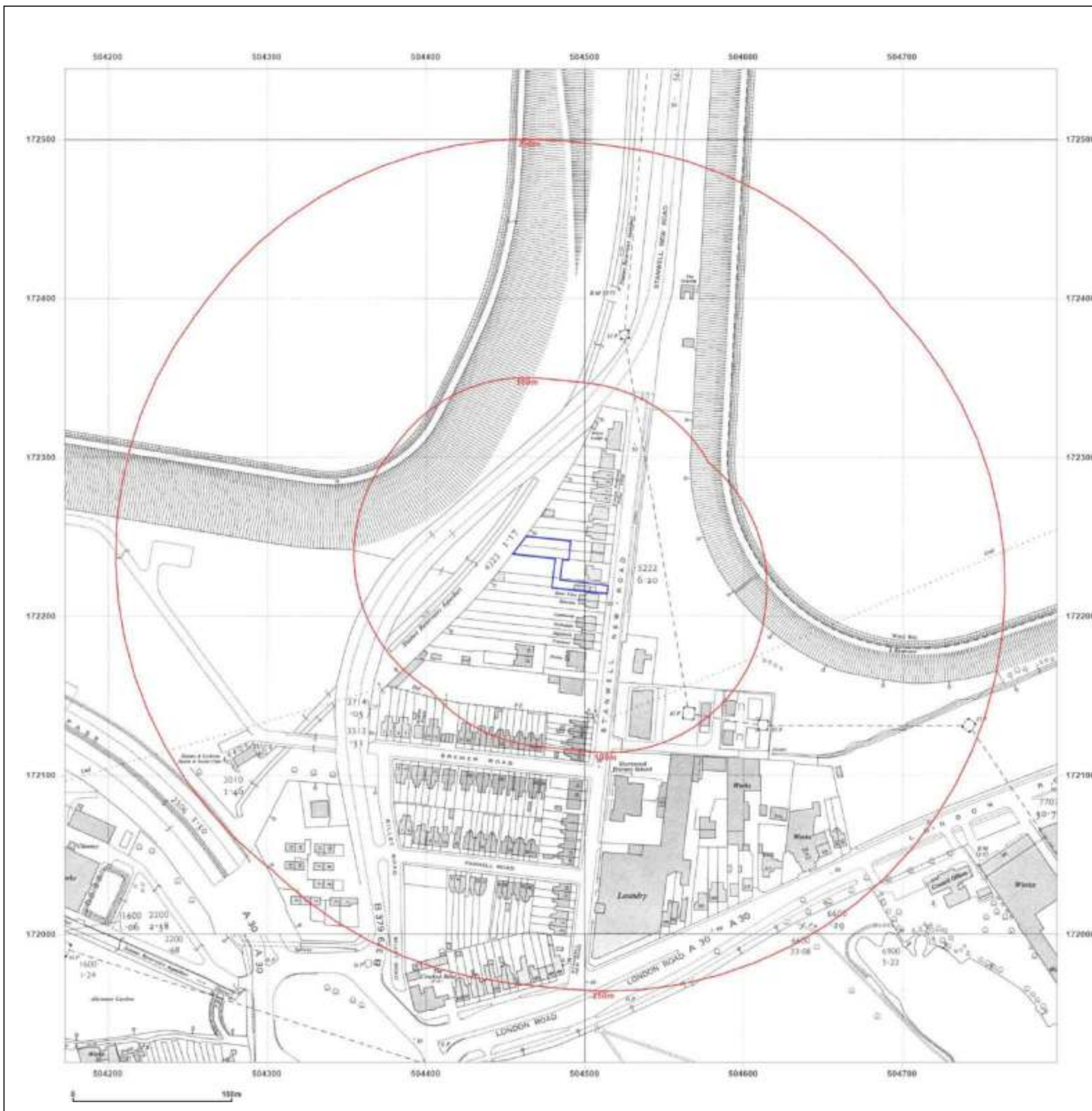


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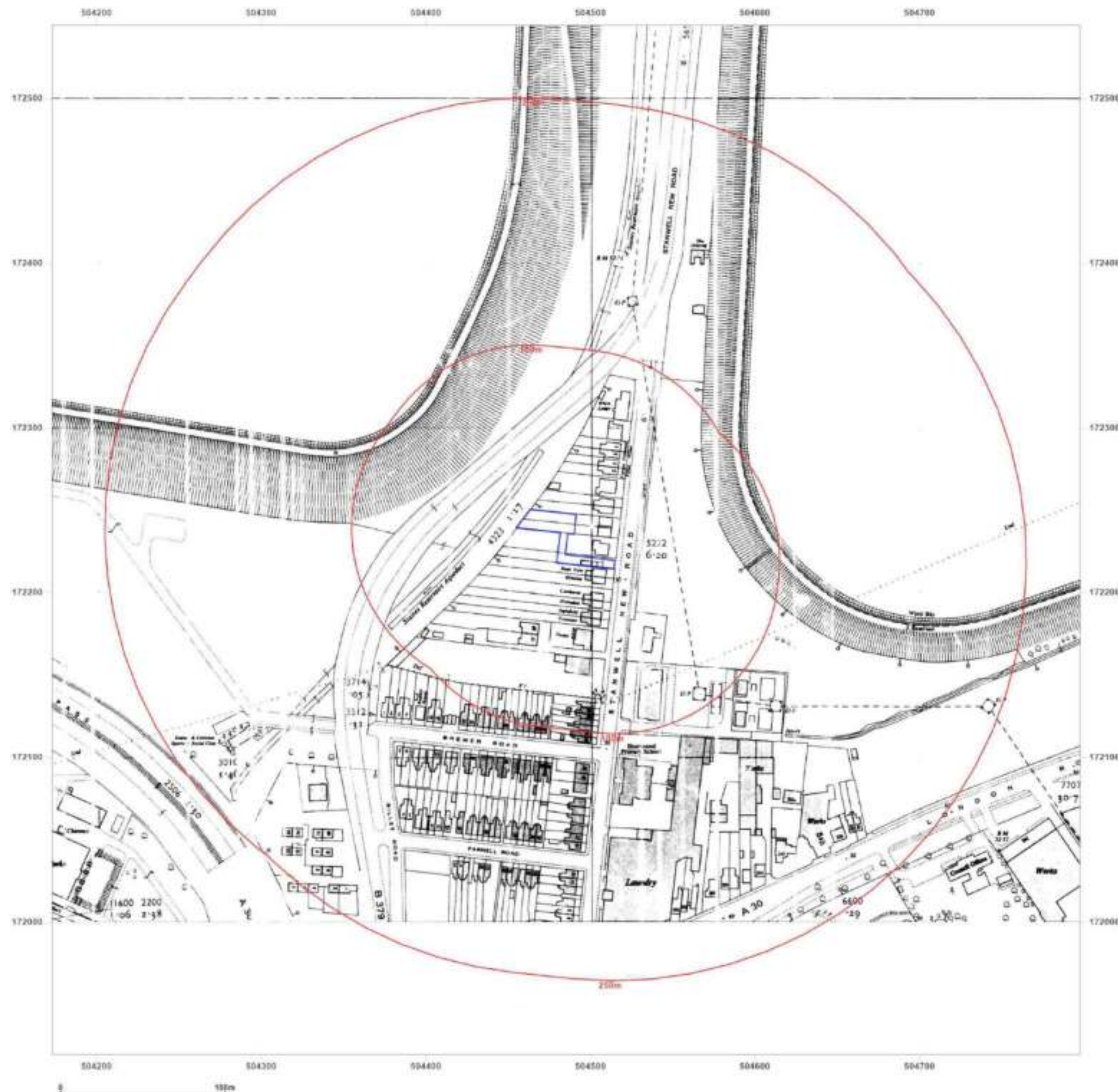


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#### Site Details:

STANWELL NEW ROAD,  
STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** National Grid

**Map date:** 1973-1974

**Scale:** 1:1,250

**Printed at:** 1:2,000



Surveyed 1961  
Revised 1973  
Edition N/A  
Copyright 1974  
Levelled 1957

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

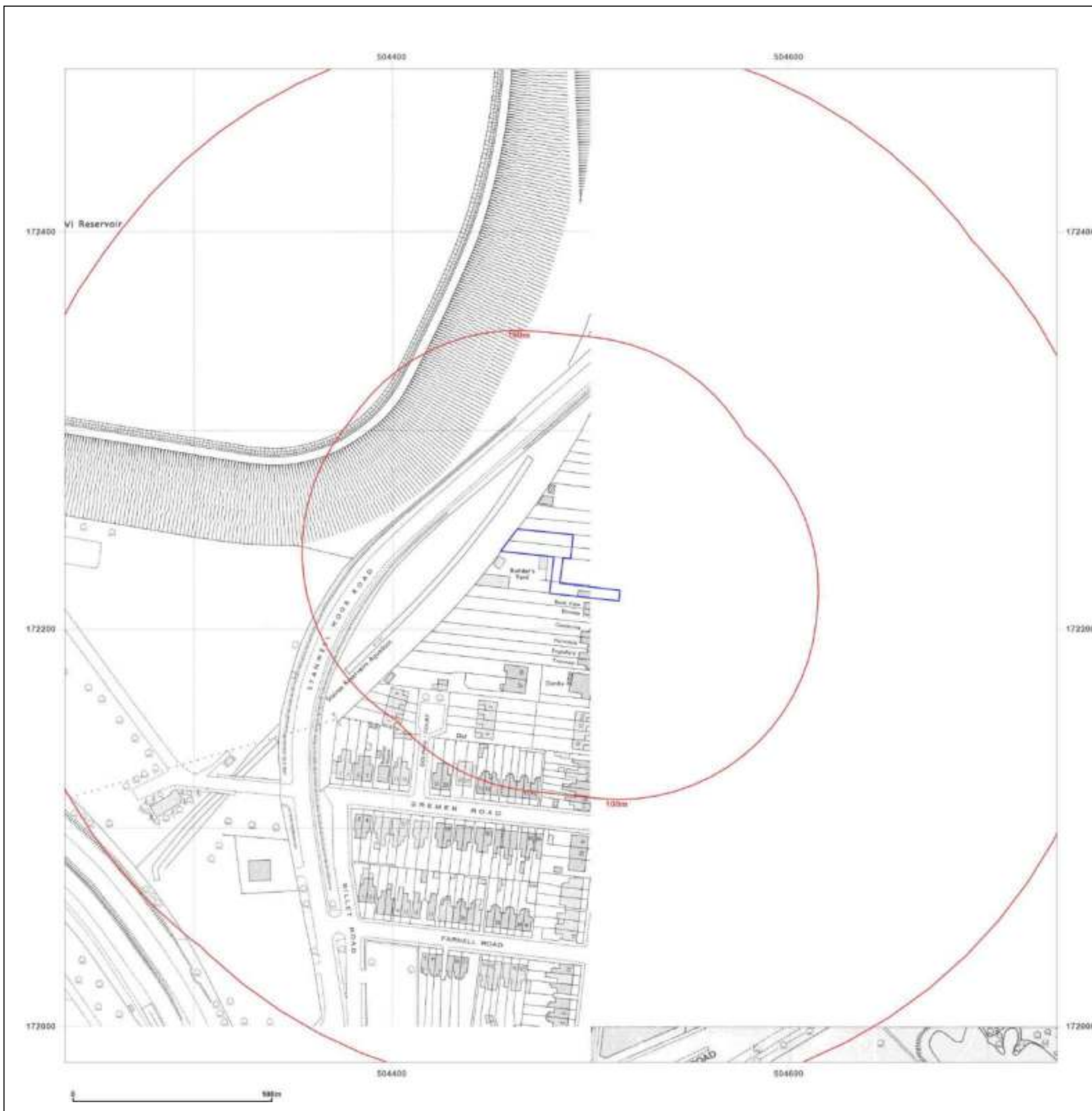


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#### Site Details:

STANWELL NEW ROAD,  
STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
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**Map Name:** National Grid

**Map date:** 1979-1982

**Scale:** 1:1,250

**Printed at:** 1:2,000

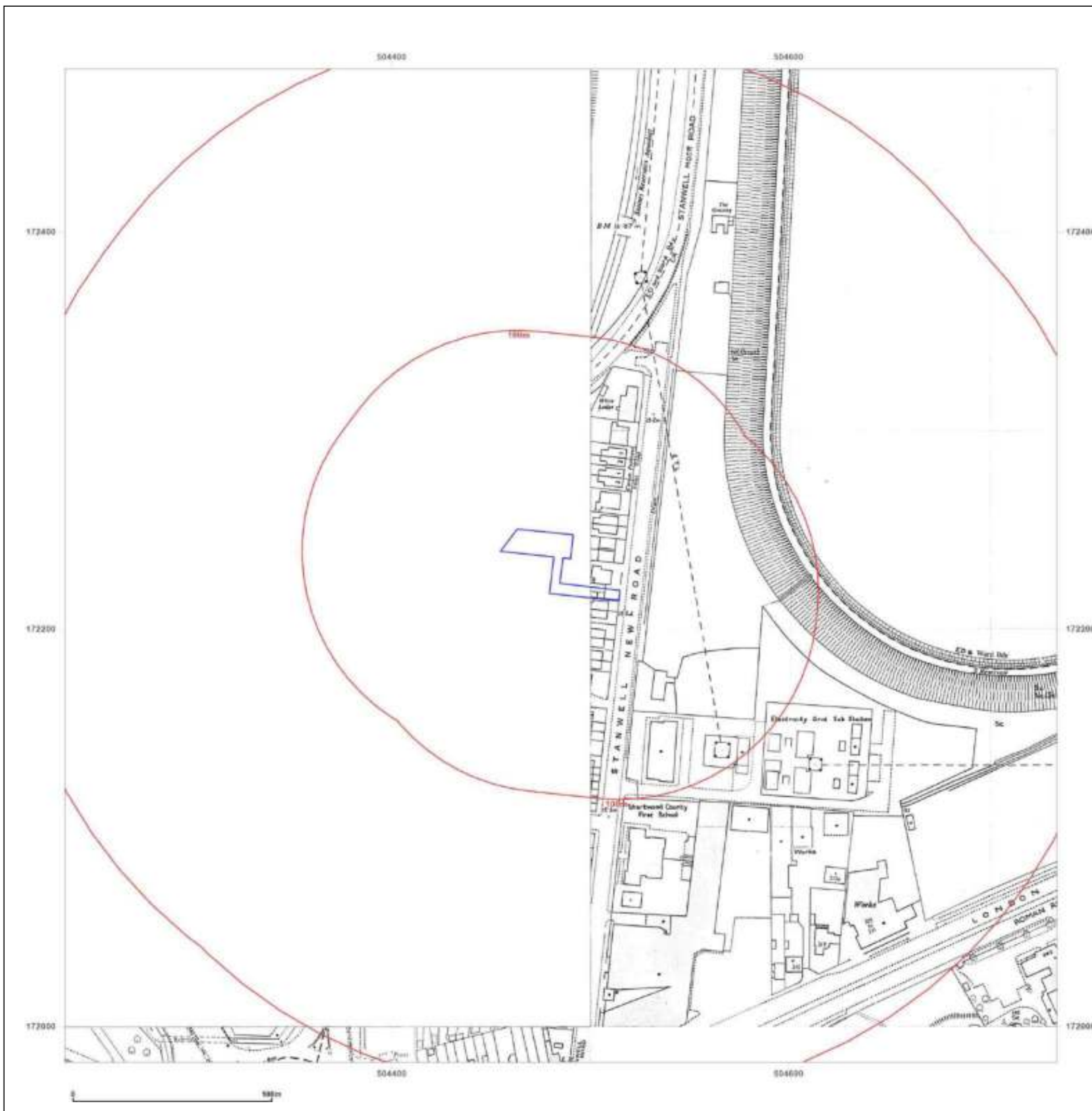


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#### Site Details:

STANWELL NEW ROAD,  
STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** National Grid

**Map date:** 1988-1992

**Scale:** 1:1,250

**Printed at:** 1:2,000



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Revised N/A  
Edition N/A  
Copyright 1992  
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Revised N/A  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1957  
Revised 1988  
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#### Site Details:

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STAINES

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**Grid Ref:** 504485, 172232

**Map Name:** National Grid

**Map date:** 1992-1995

**Scale:** 1:1,250

**Printed at:** 1:2,000



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Revised N/A  
Edition N/A  
Copyright 1995  
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Surveyed N/A  
Revised N/A  
Edition N/A  
Copyright 1992  
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Surveyed N/A  
Revised N/A  
Edition N/A  
Copyright 1994  
Levelled N/A

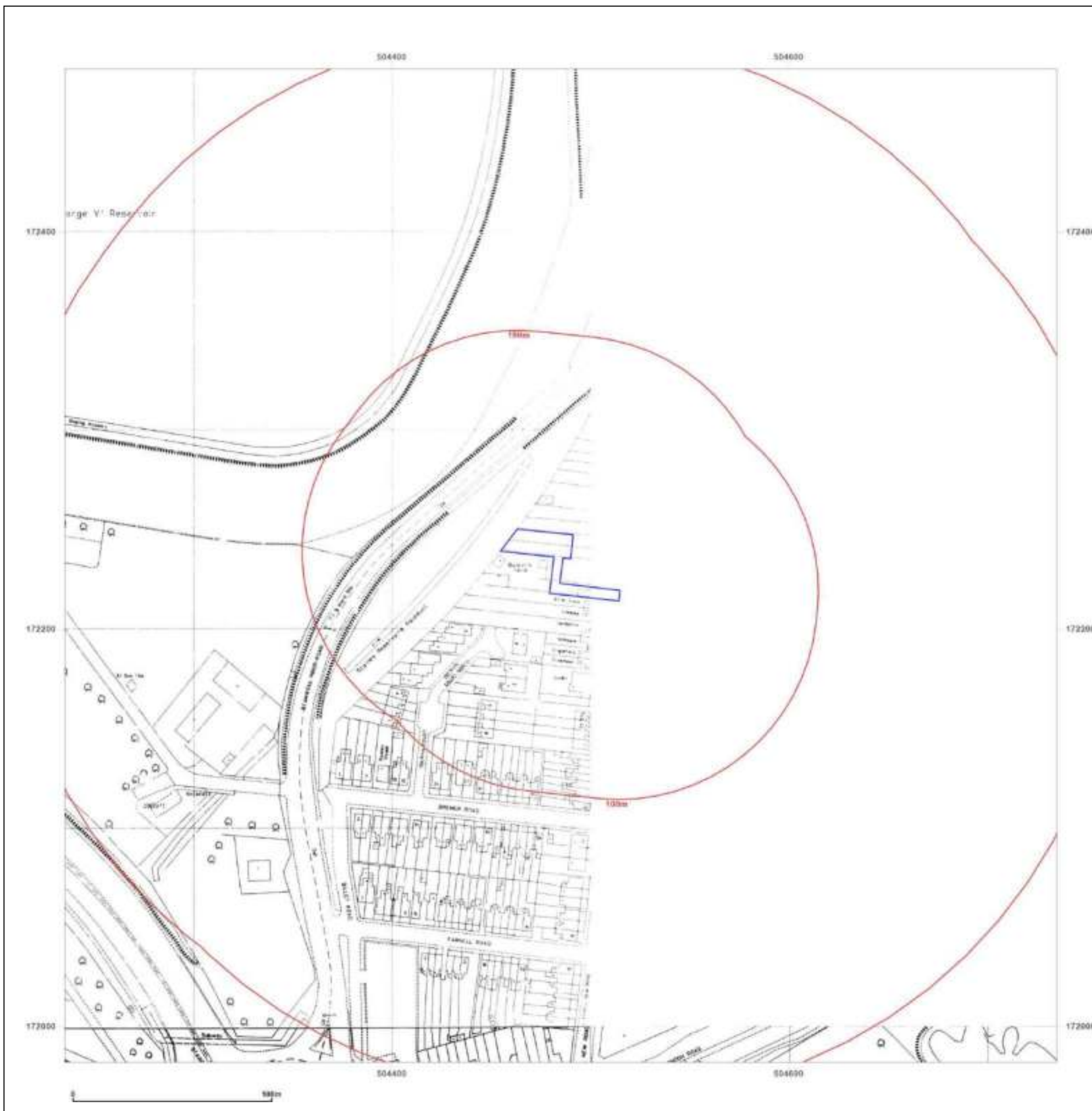


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#### Site Details:

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**Map Name:** National Grid

**Map date:** 1994-1995

**Scale:** 1:1,250

**Printed at:** 1:2,000



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#### Site Details:

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STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** LandLine

**Map date:** 2003

**Scale:** 1:1,250

**Printed at:** 1:1,250



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#### Site Details:

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STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** County Series

**Map date:** 1865-1869

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1865  
Revised 1865  
Edition N/A  
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Surveyed 1869  
Revised 1869  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1865  
Revised 1865  
Edition N/A  
Copyright N/A  
Levelled N/A

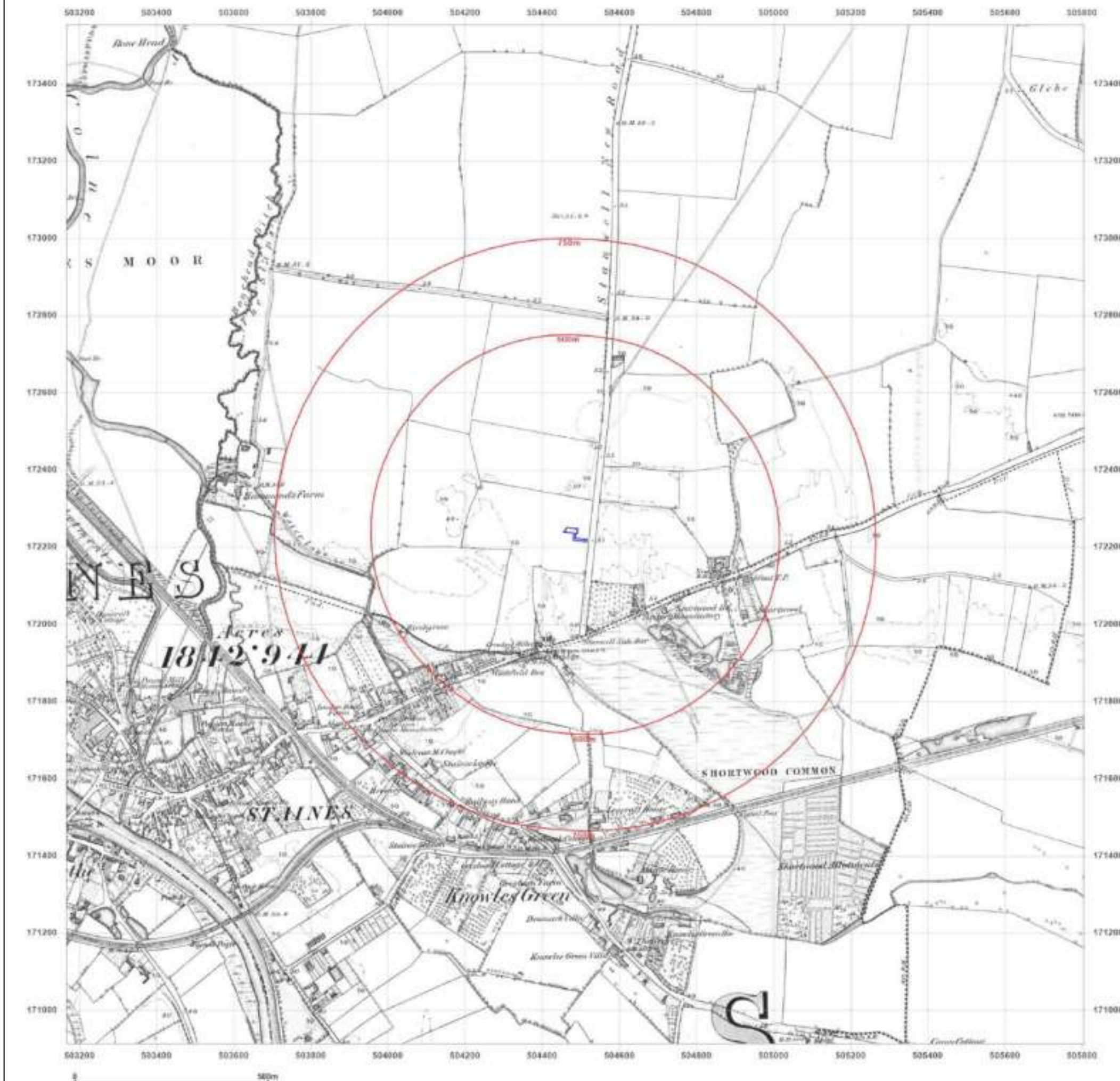


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#### Site Details:

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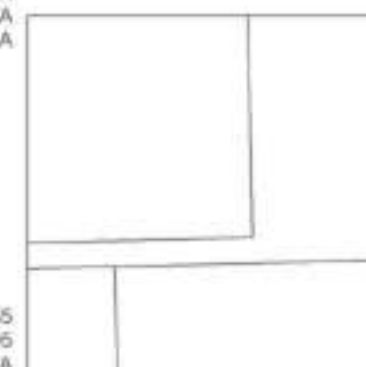
Map date: 1895

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1869  
Revised 1895  
Edition N/A  
Copyright N/A  
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Surveyed 1865  
Revised 1895  
Edition N/A  
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Revised 1895  
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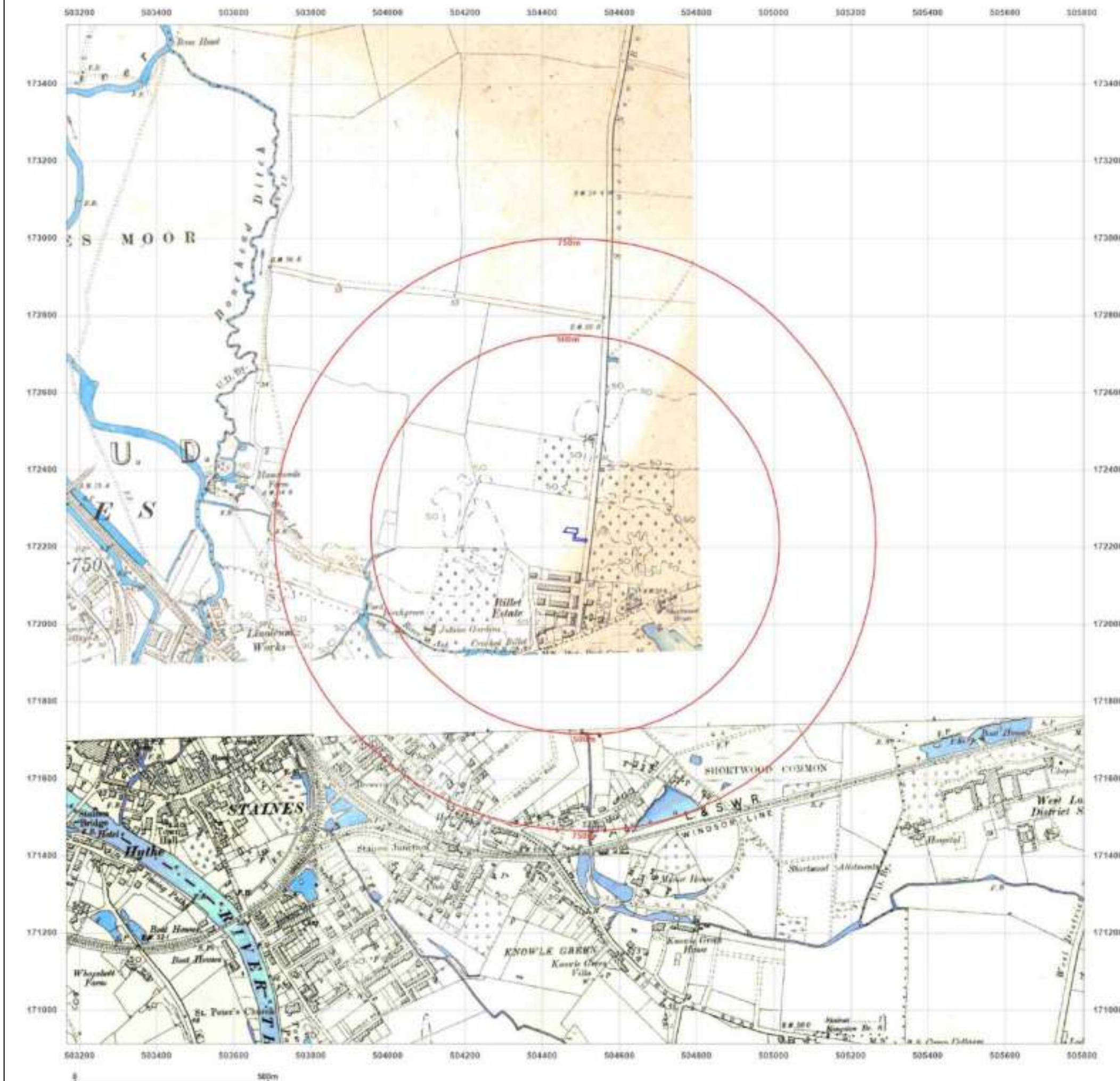


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#### Site Details:

STANWELL NEW ROAD,  
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**Map Name:** County Series

**Map date:** 1894-1897

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1868  
Revised 1894  
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Levelled N/A

Surveyed 1865  
Revised 1895  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1868  
Revised 1895  
Edition N/A  
Copyright N/A  
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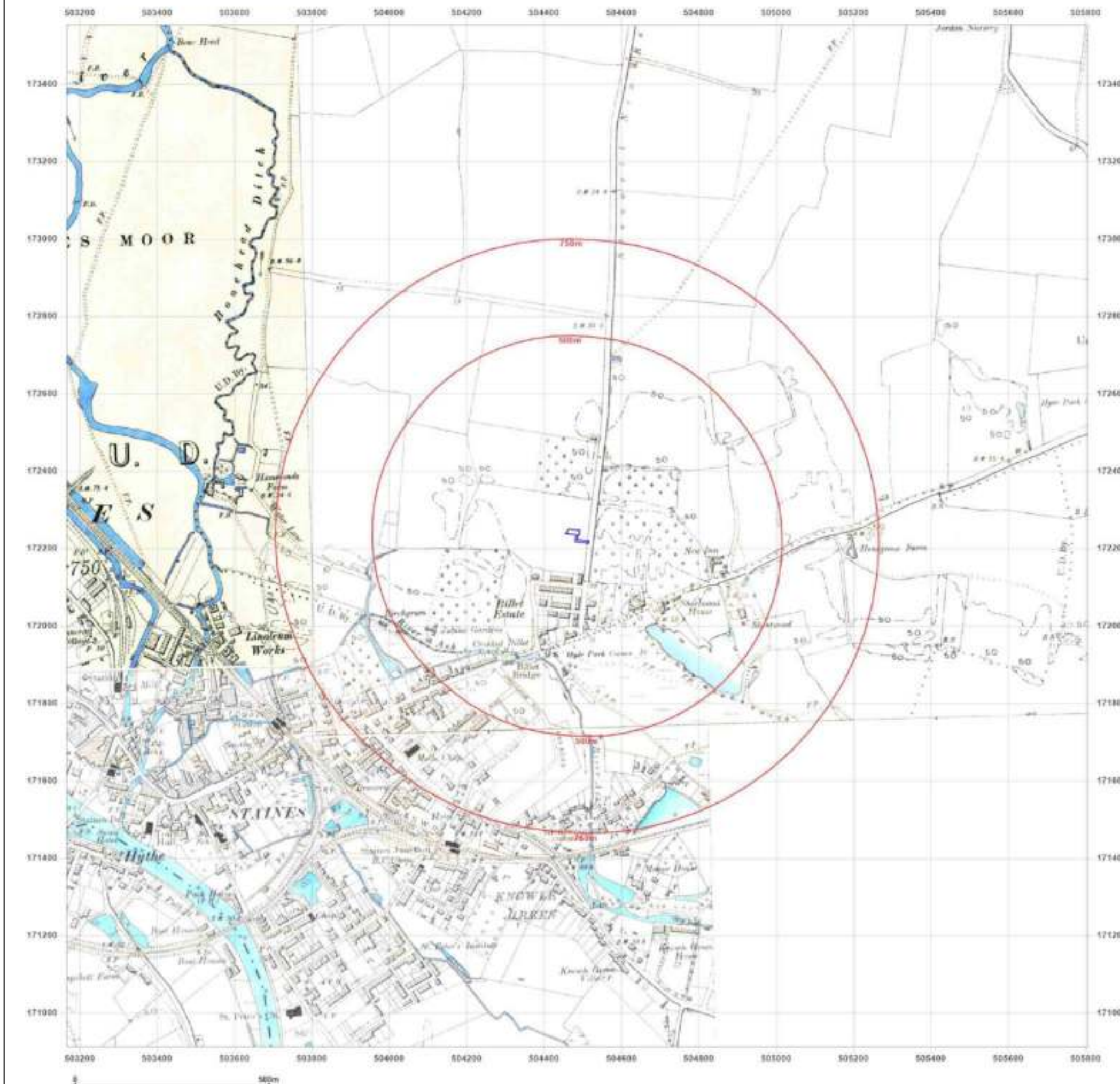


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**Map Name:** County Series

**Map date:** 1895-1899

**Scale:** 1:10,560

**Printed at:** 1:10,560



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Revised 1895  
Edition N/A  
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Levelled N/A

Surveyed 1873  
Revised 1895  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1870  
Revised 1895  
Edition N/A  
Copyright N/A  
Levelled N/A

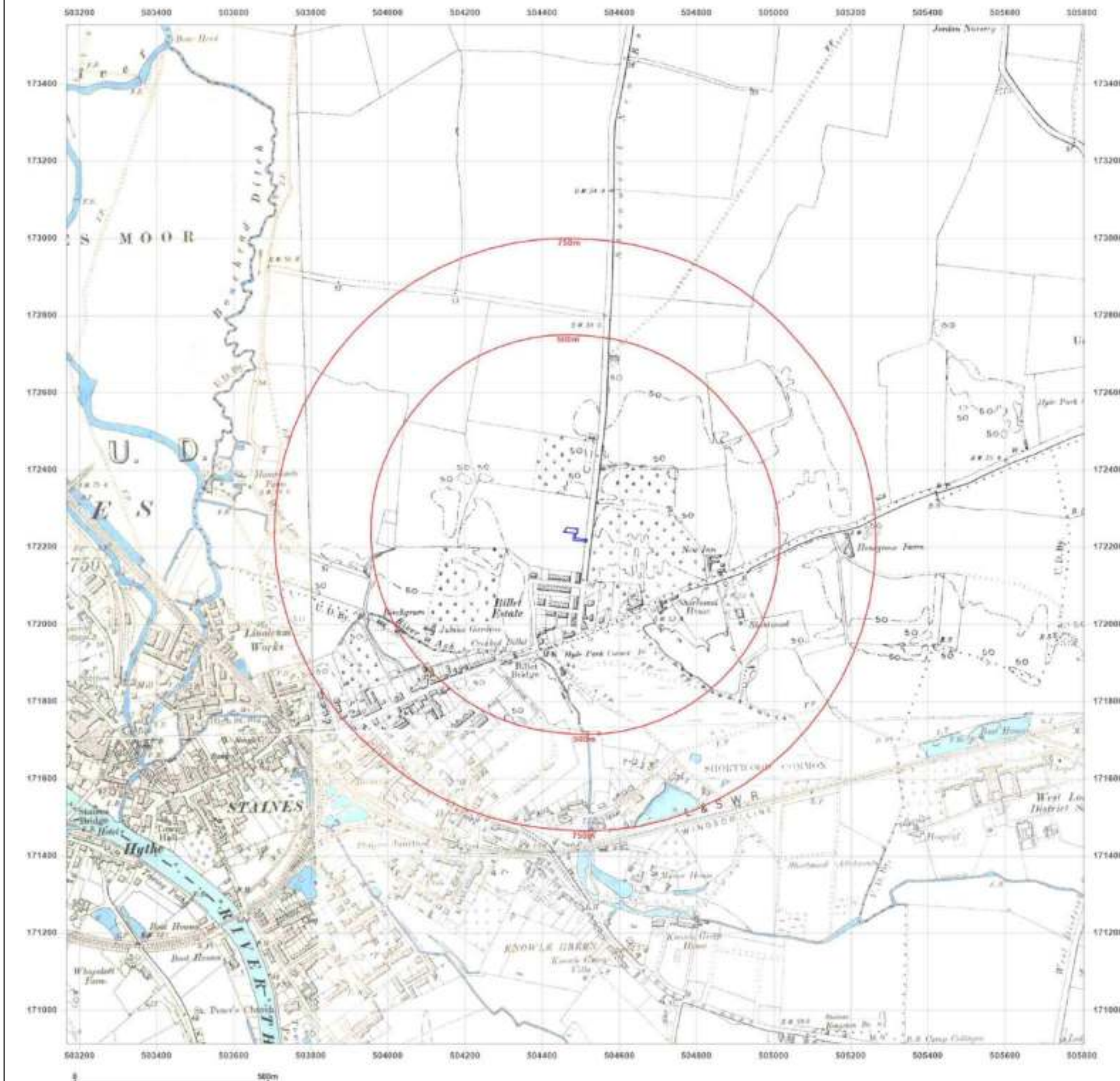


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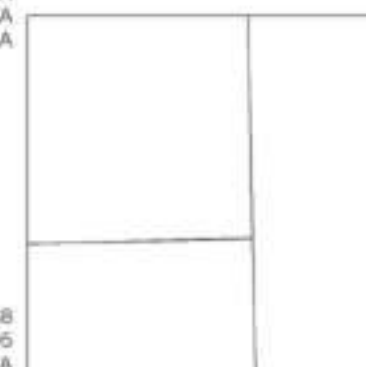
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**Printed at:** 1:10,560



Surveyed 1869  
Revised 1895  
Edition N/A  
Copyright N/A  
Levelled N/A



Surveyed 1868  
Revised 1895  
Edition N/A  
Copyright N/A  
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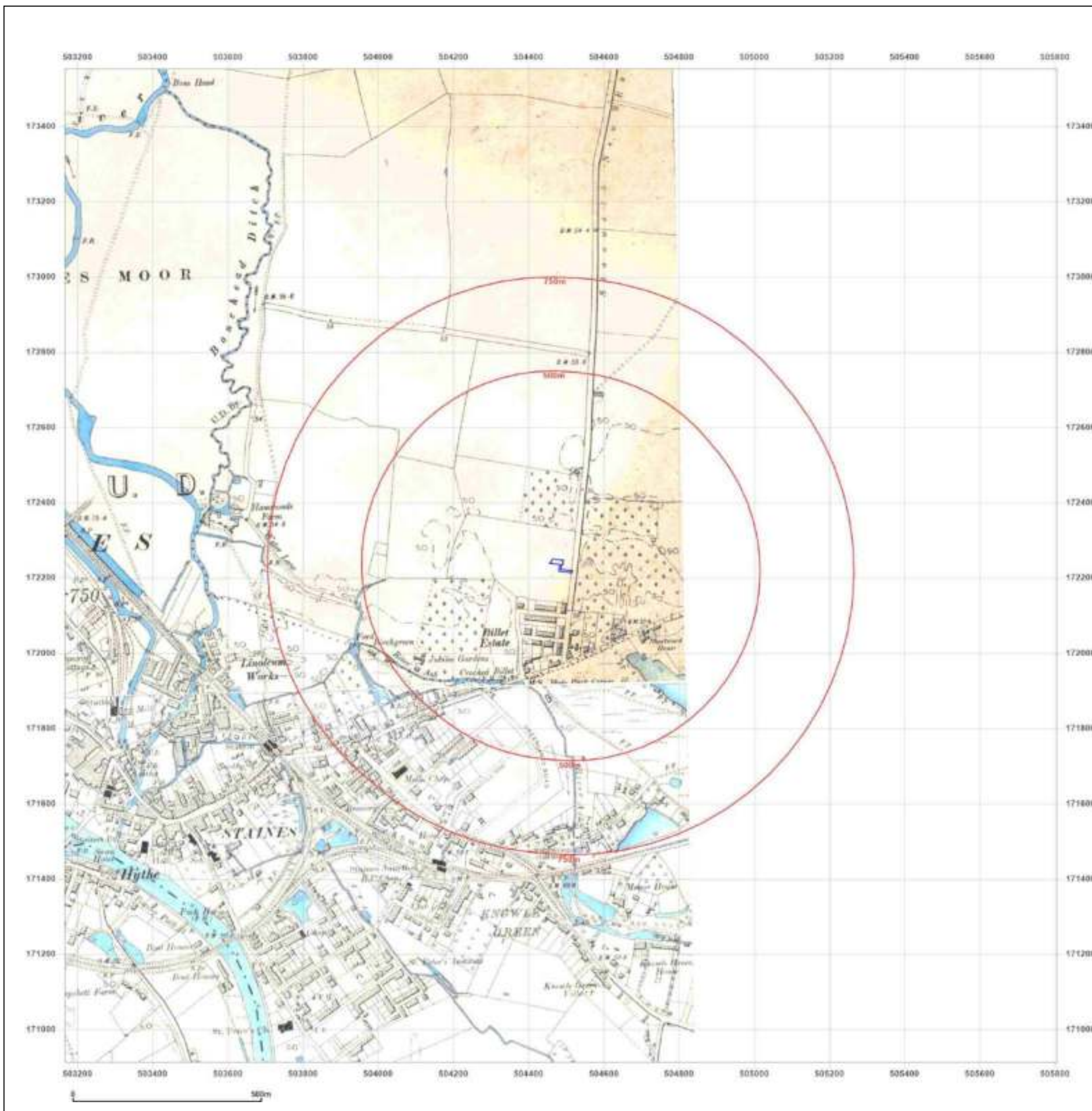


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STAINES

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**Map Name:** County Series

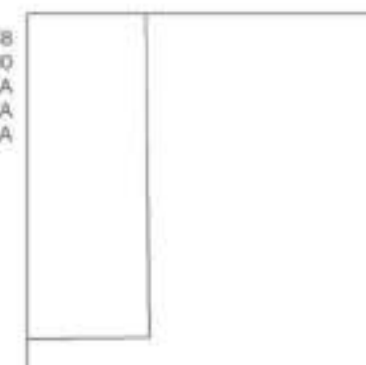
**Map date:** 1900

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**Printed at:** 1:10,560



Surveyed 1868  
Revised 1900  
Edition N/A  
Copyright N/A  
Levelled N/A

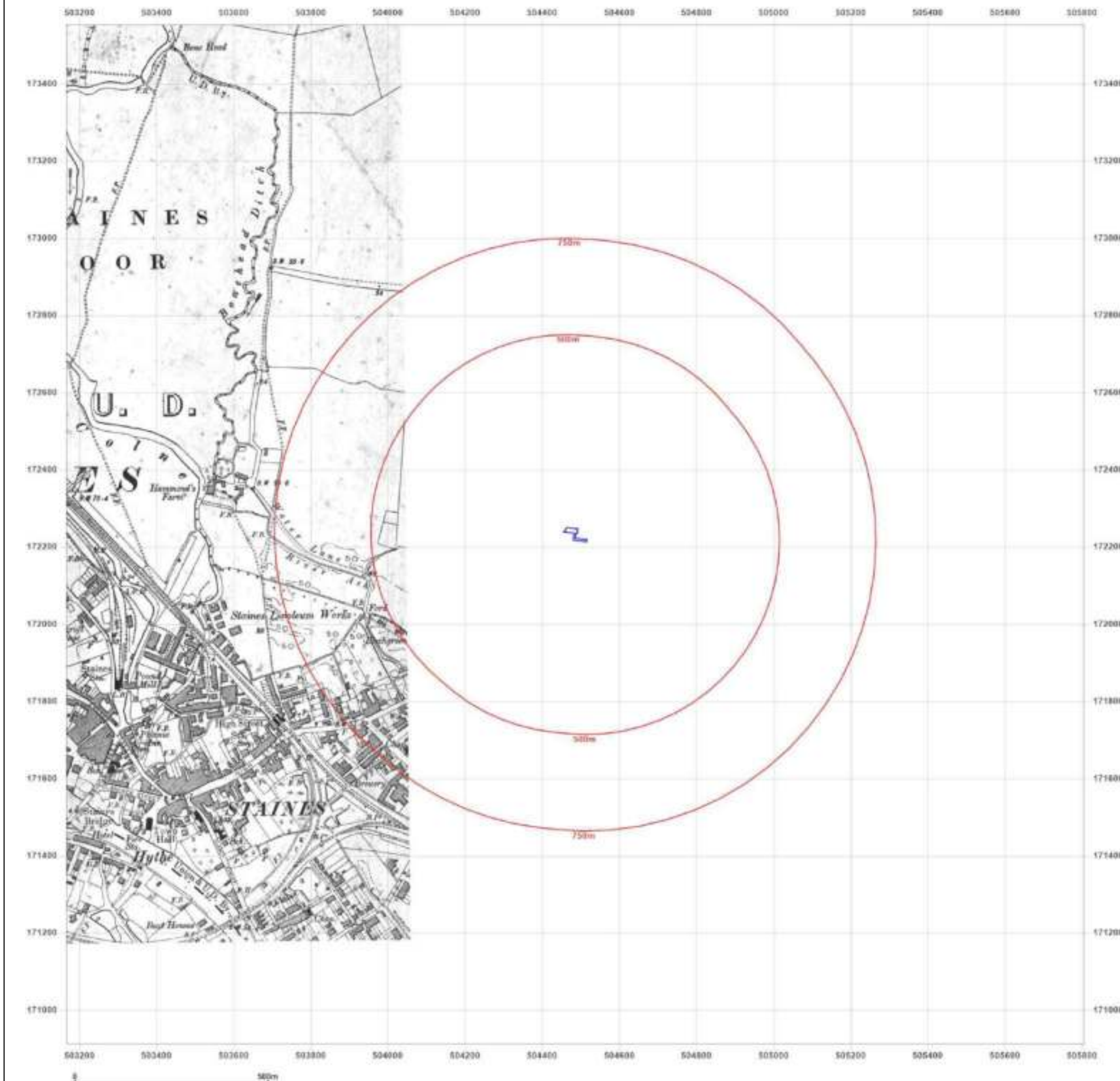


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**Map Name:** County Series

**Map date:** 1910-1913

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1868  
Revised 1910  
Edition N/A  
Copyright N/A  
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Surveyed 1864  
Revised 1913  
Edition N/A  
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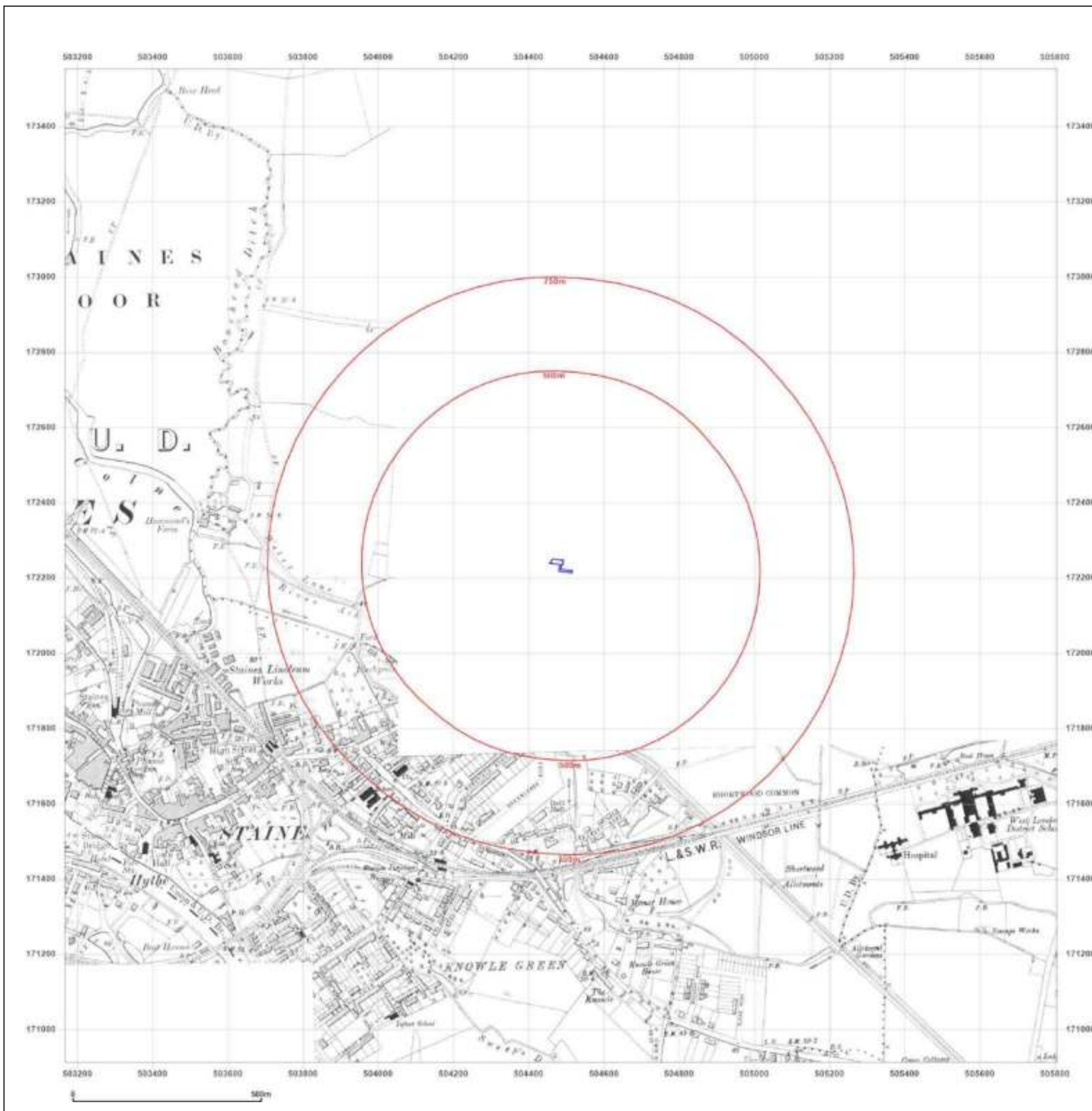


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**Map Name:** County Series

**Map date:** 1912-1913

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1854  
Revised 1913  
Edition N/A  
Copyright N/A  
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Surveyed 1809  
Revised 1912  
Edition N/A  
Copyright N/A  
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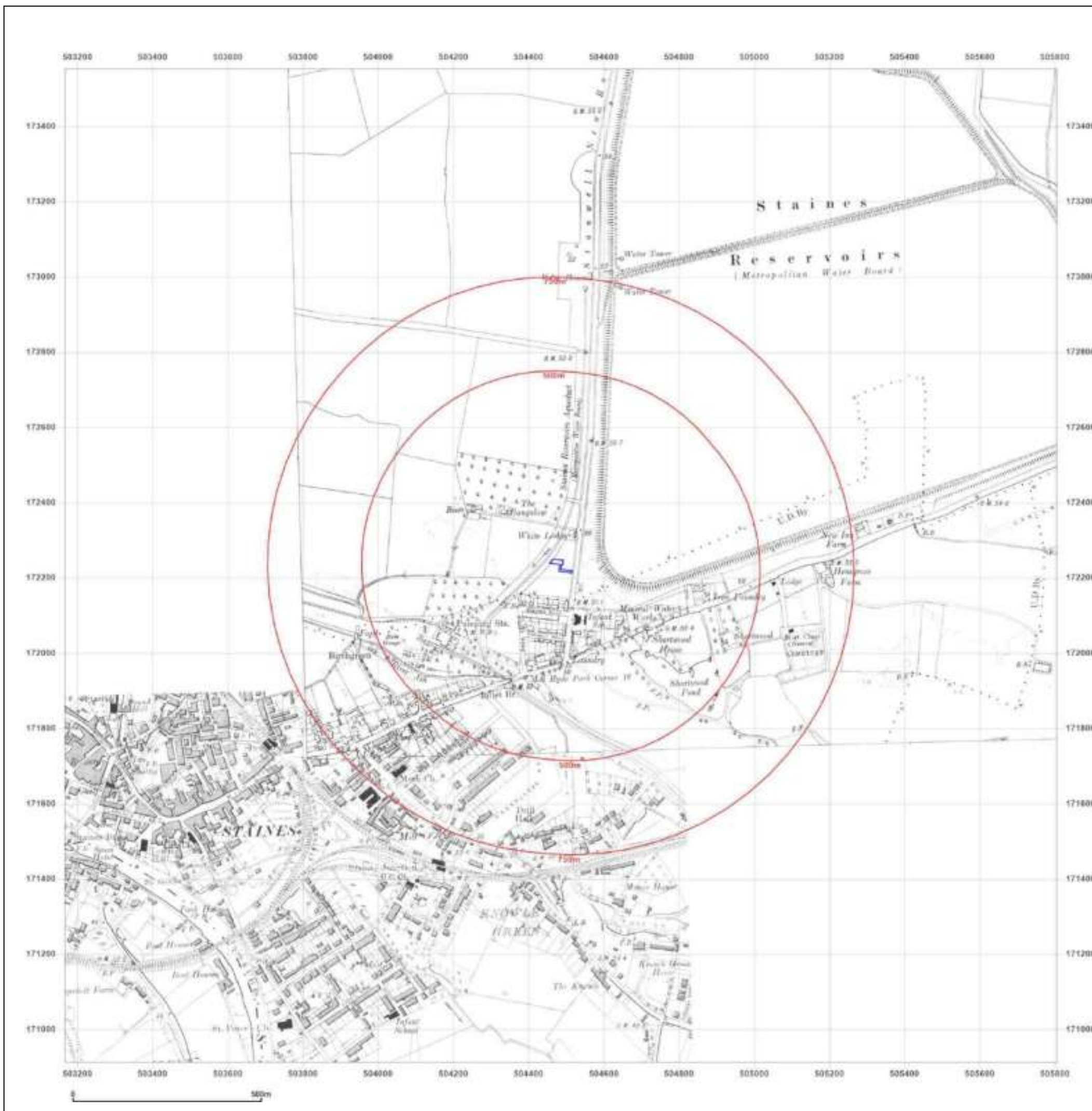


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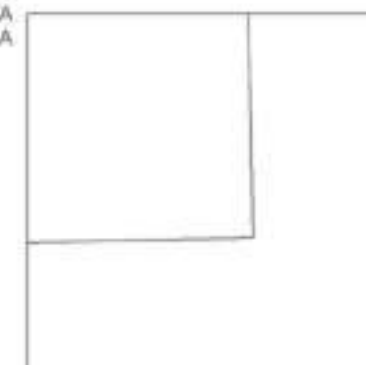
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**Printed at:** 1:10,560



Surveyed 1868  
Revised 1920  
Edtion 1920  
Copyright N/A  
Levelled N/A

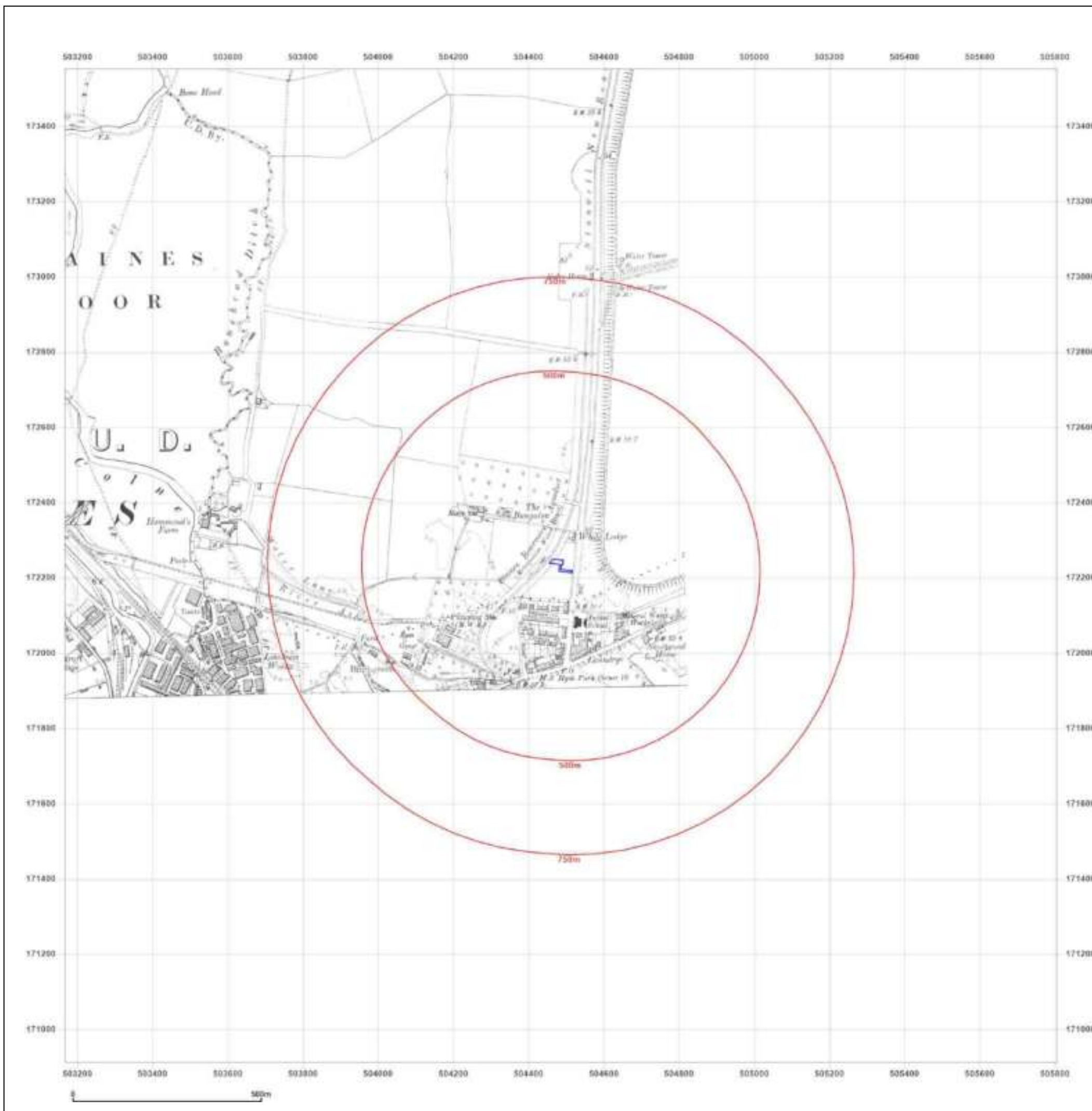


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**Map Name:** County Series

**Map date:** 1934

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1864  
Revised 1934  
Edition N/A  
Copyright N/A  
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Surveyed 1809  
Revised 1934  
Edition N/A  
Copyright N/A  
Levelled N/A

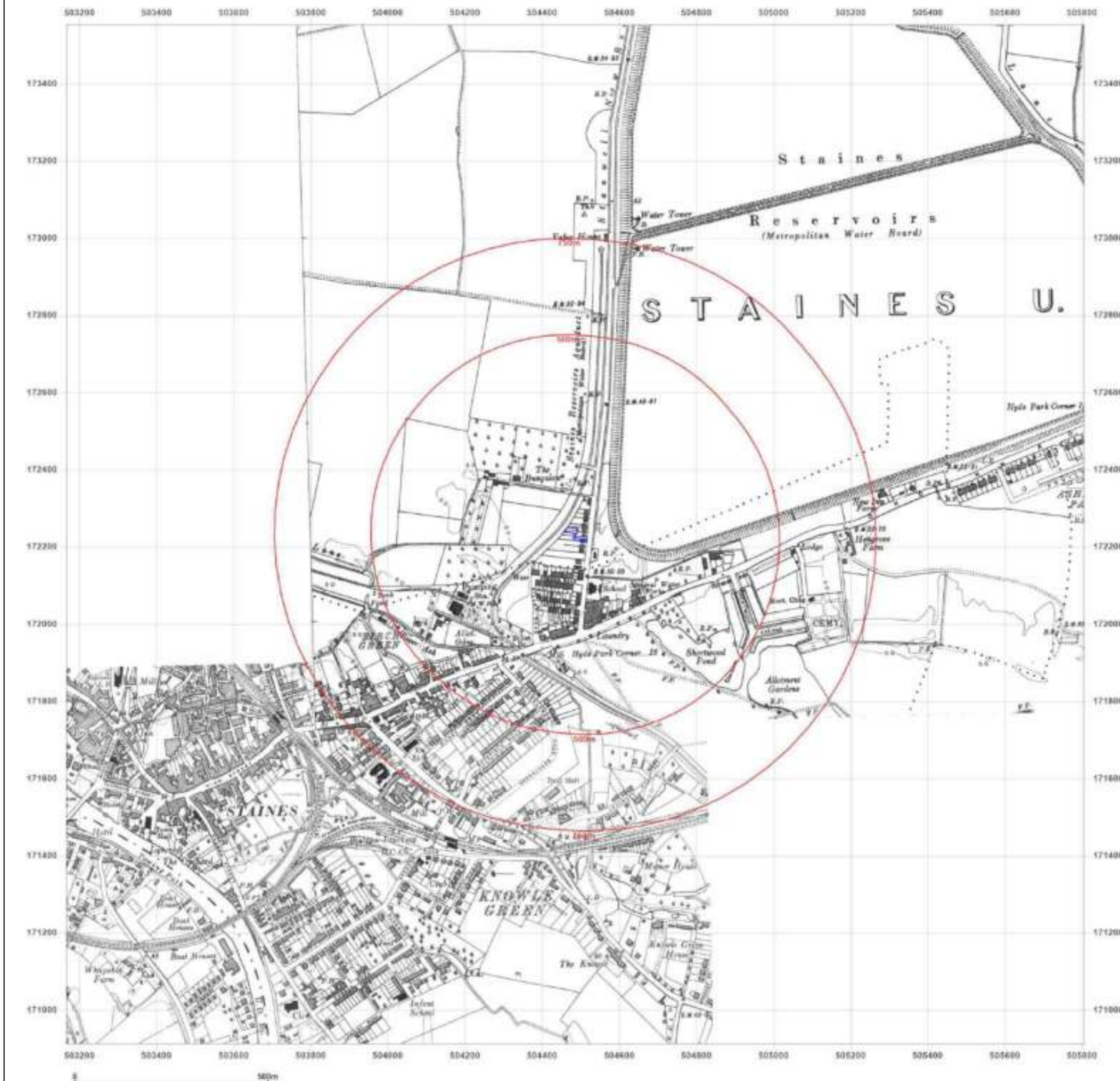


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#### Site Details:

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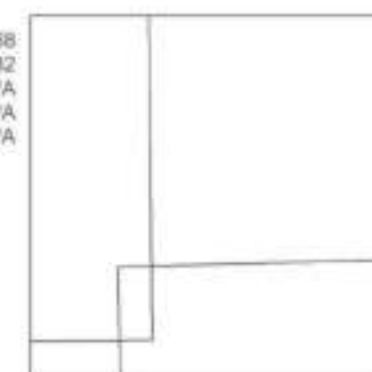
**Map date:** 1932-1935

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1868  
Revised 1932  
Edition N/A  
Copyright N/A  
Levelled N/A



Surveyed 1864  
Revised 1935  
Edition N/A  
Copyright N/A  
Levelled N/A

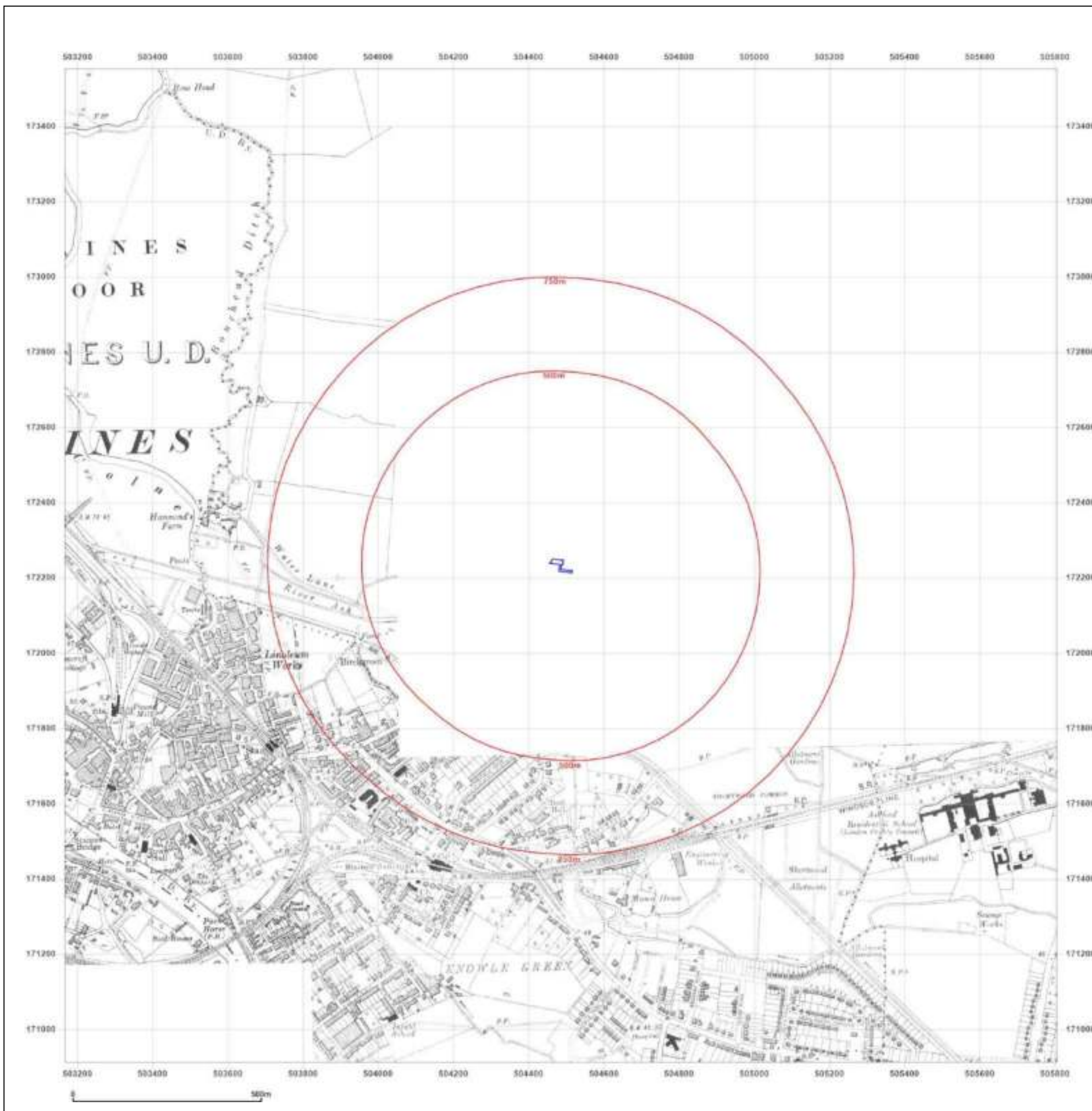


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#### Site Details:

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STAINES

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**Map Name:** County Series

**Map date:** 1934-1938

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed N/A  
Revised N/A  
Edition N/A  
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Surveyed 1864  
Revised 1934  
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Copyright N/A  
Levelled N/A

Surveyed 1864  
Revised 1935  
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Copyright N/A  
Levelled N/A

Surveyed 1864  
Revised 1938  
Edition N/A  
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Levelled N/A

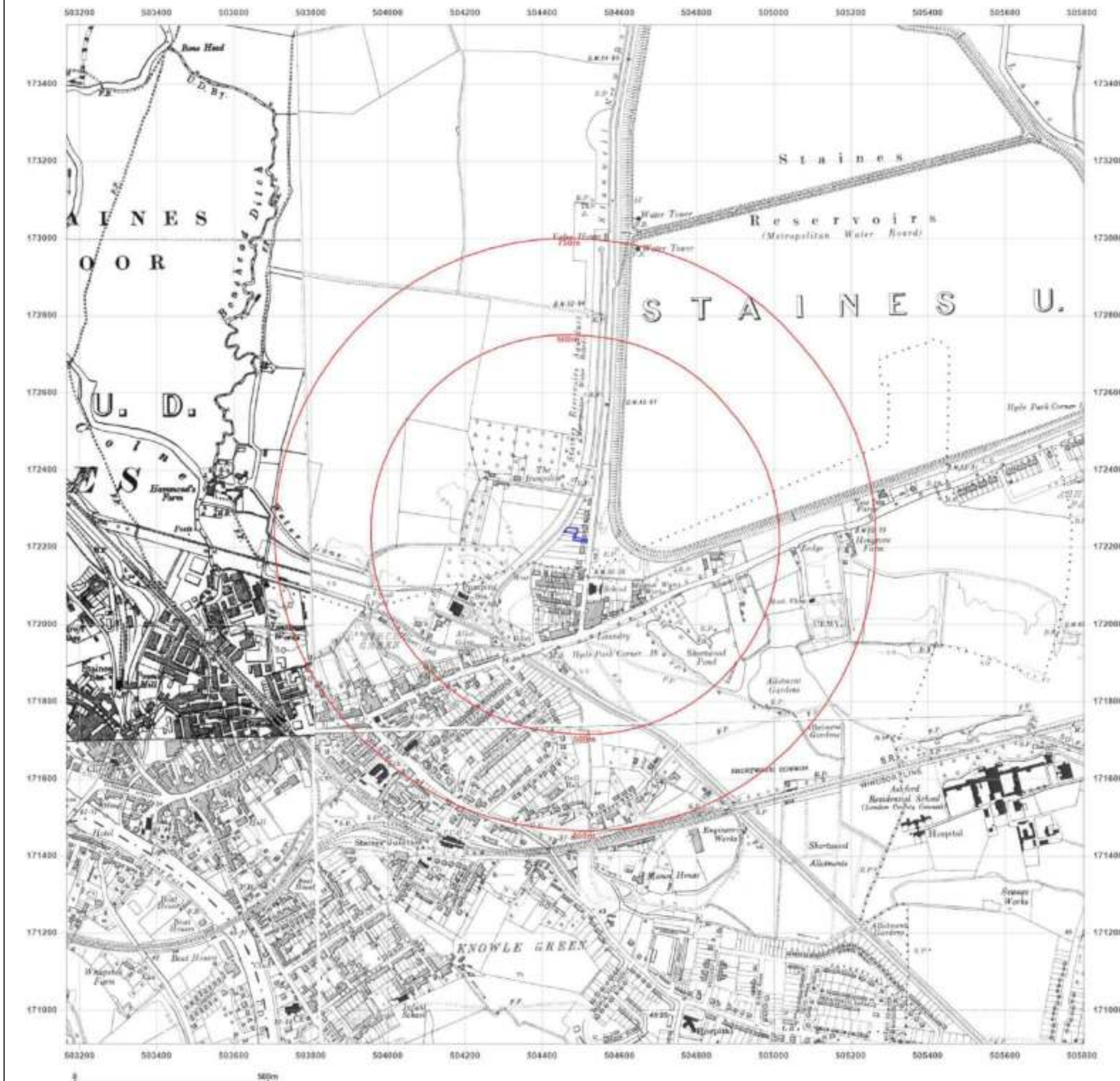


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#### Site Details:

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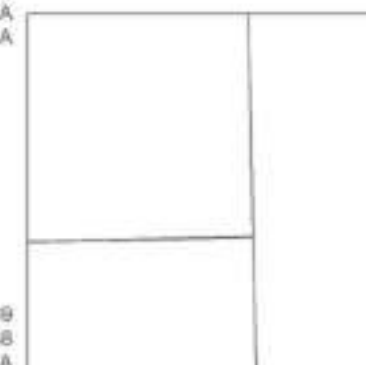
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**Printed at:** 1:10,560



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Revised 1938  
Edition N/A  
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Revised 1938  
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STAINES

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**Printed at:** 1:10,560



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Revised 1938  
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#### Site Details:

STANWELL NEW ROAD,  
STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** Provisional

**Map date:** 1955-1960

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1955  
Revised 1959  
Edition N/A  
Copyright 1960  
Levelled N/A

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

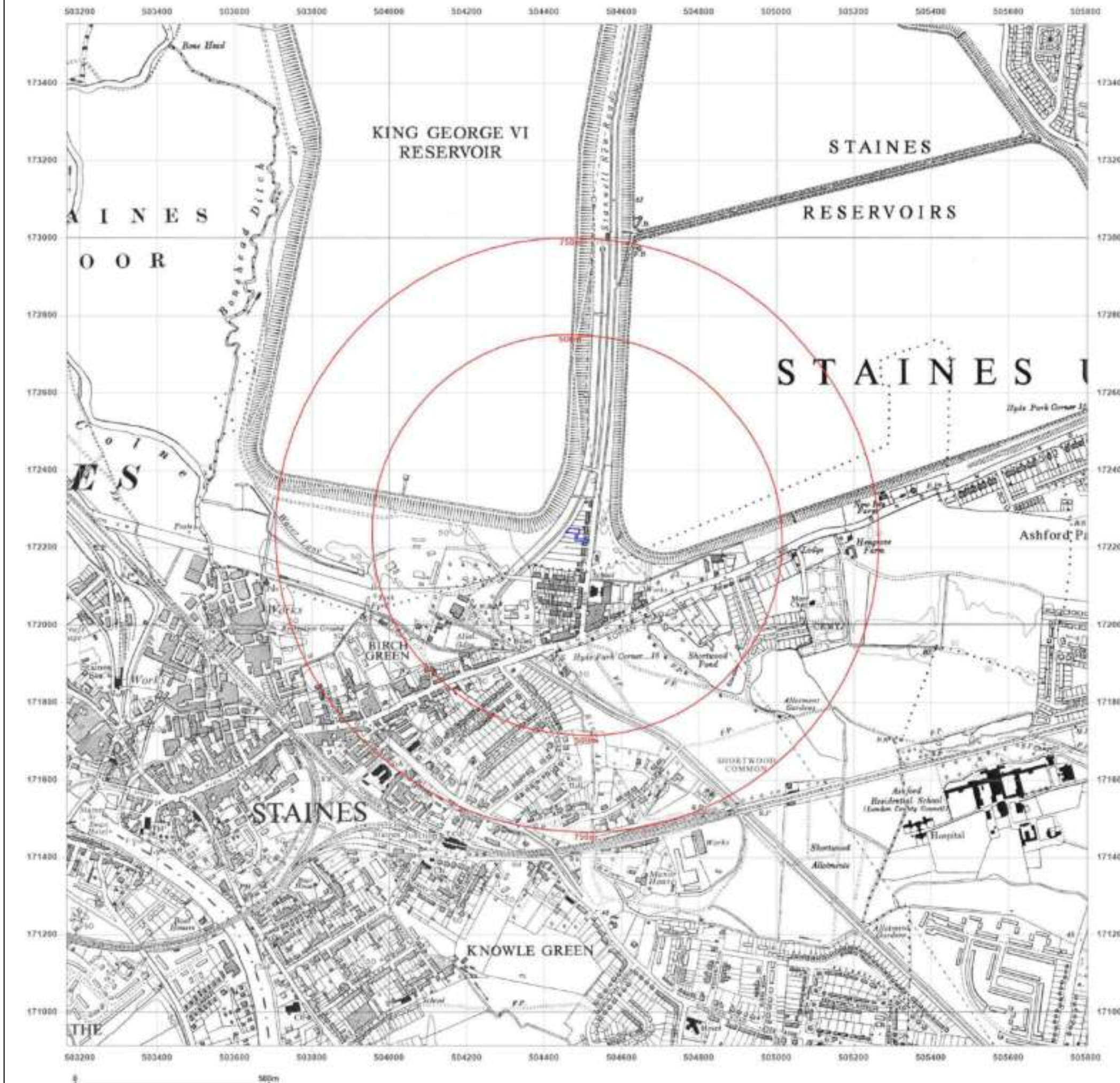


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#### Site Details:

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STAINES

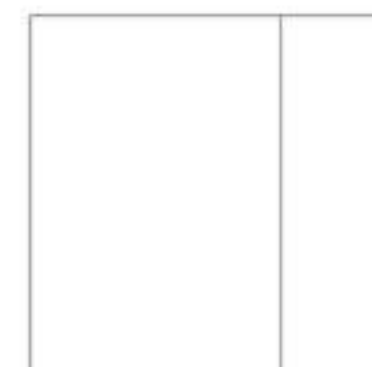
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**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** Provisional

**Map date:** 1966

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1966  
Revised 1966  
Edition N/A  
Copyright N/A  
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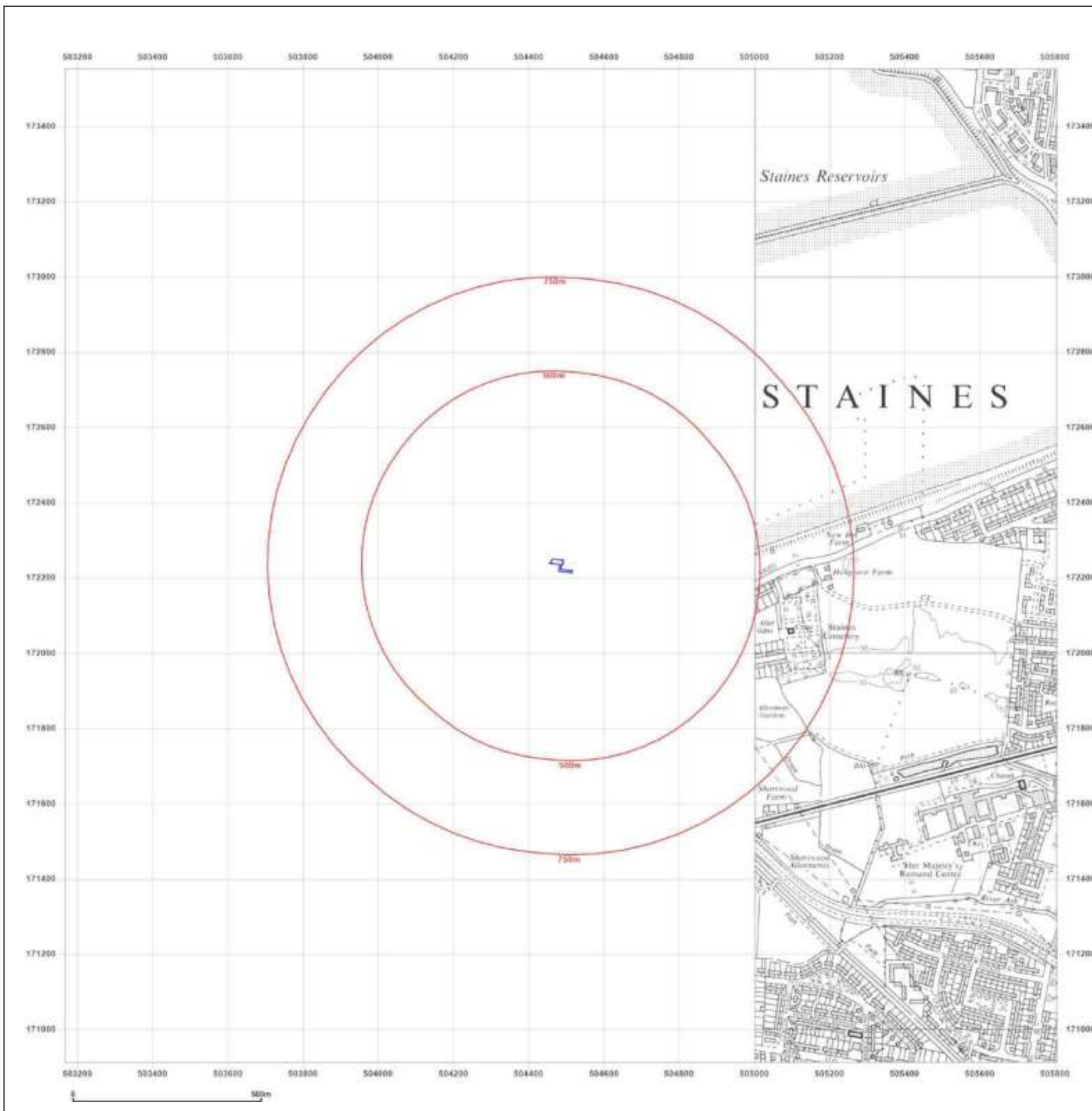


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#### Site Details:

STANWELL NEW ROAD,  
STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** National Grid

**Map date:** 1974

**Scale:** 1:10,000

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Revised 1974  
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Revised 1974  
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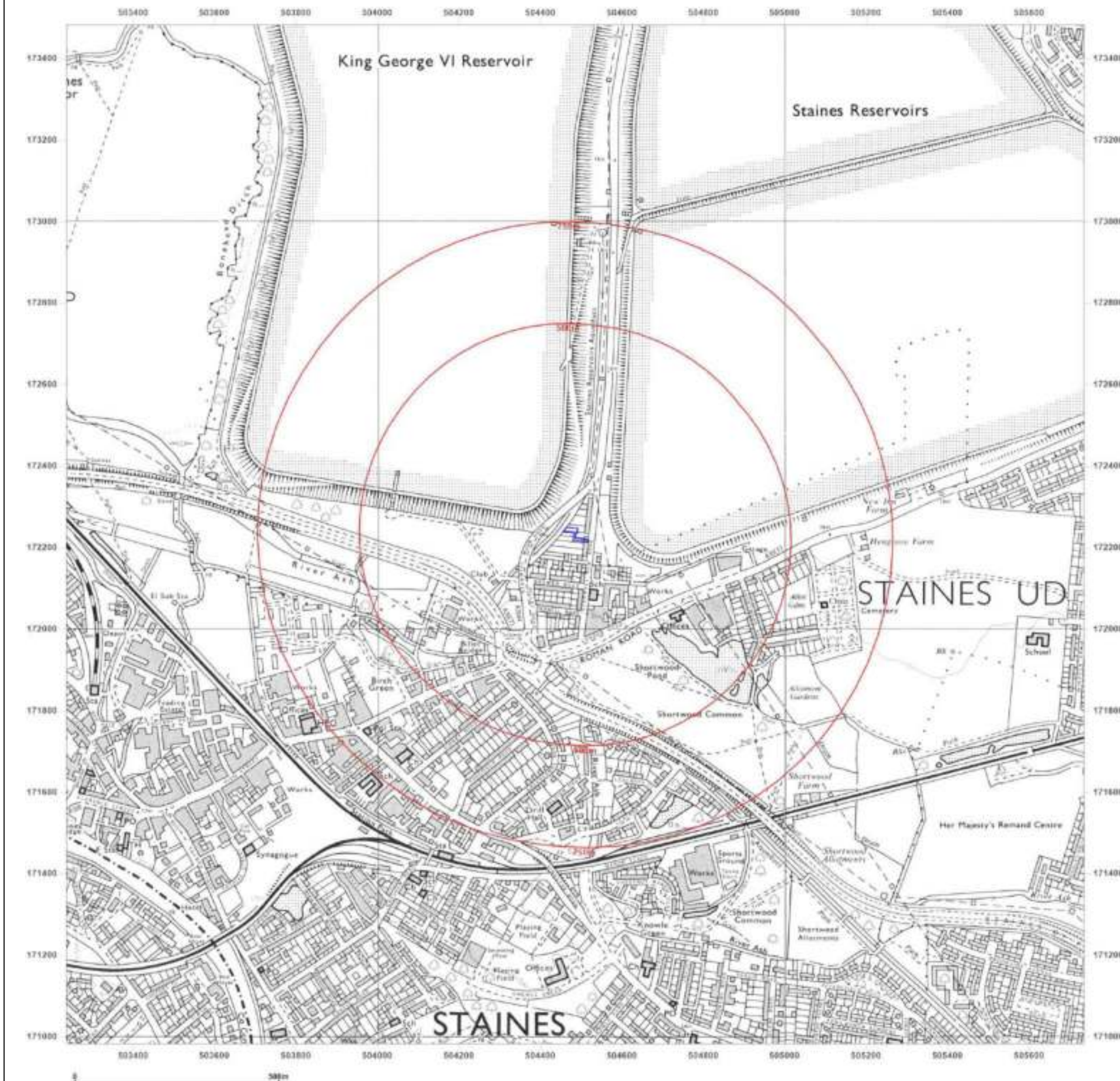


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#### Site Details:

STANWELL NEW ROAD,  
STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** National Grid

**Map date:** 1984-1987

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1983  
Revised 1984  
Edition N/A  
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Surveyed 1980  
Revised 1987  
Edition N/A  
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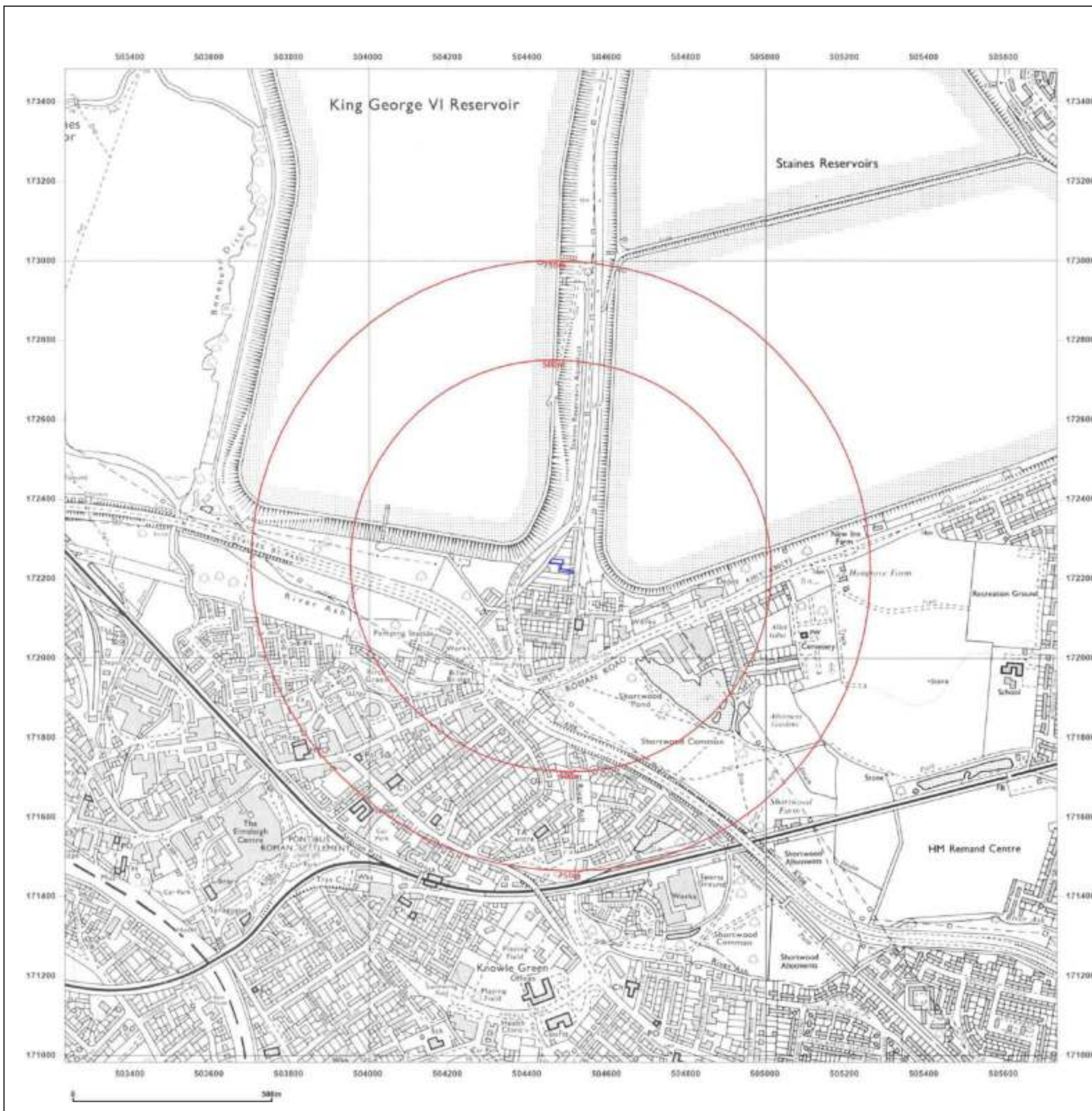


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#### Site Details:

STANWELL NEW ROAD,  
STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** National Grid

**Map date:** 2001

**Scale:** 1:10,000

**Printed at:** 1:10,000

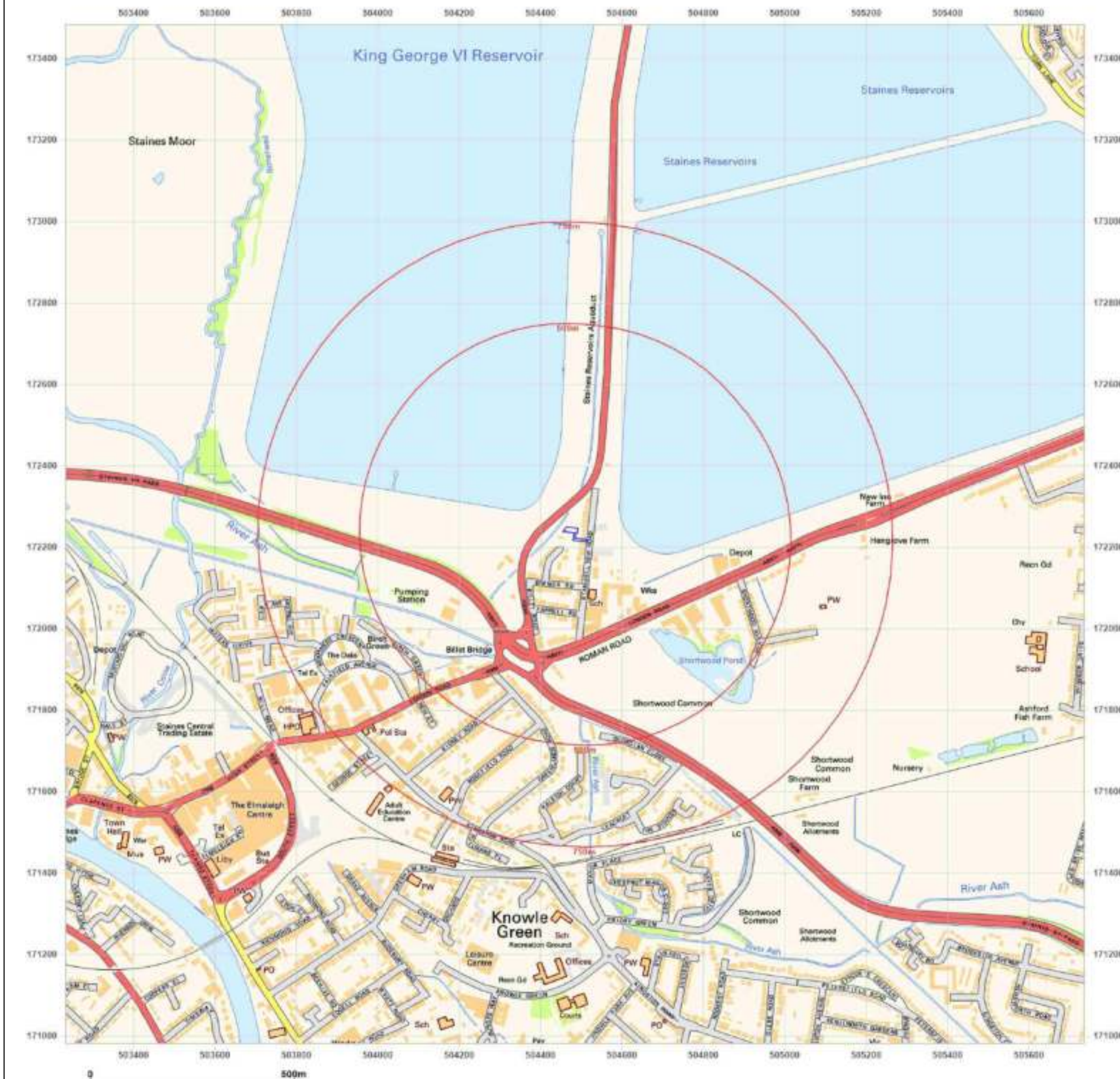


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#### Site Details:

STANWELL NEW ROAD,  
STAINES

**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** National Grid

**Map date:** 2010

**Scale:** 1:10,000

**Printed at:** 1:10,000

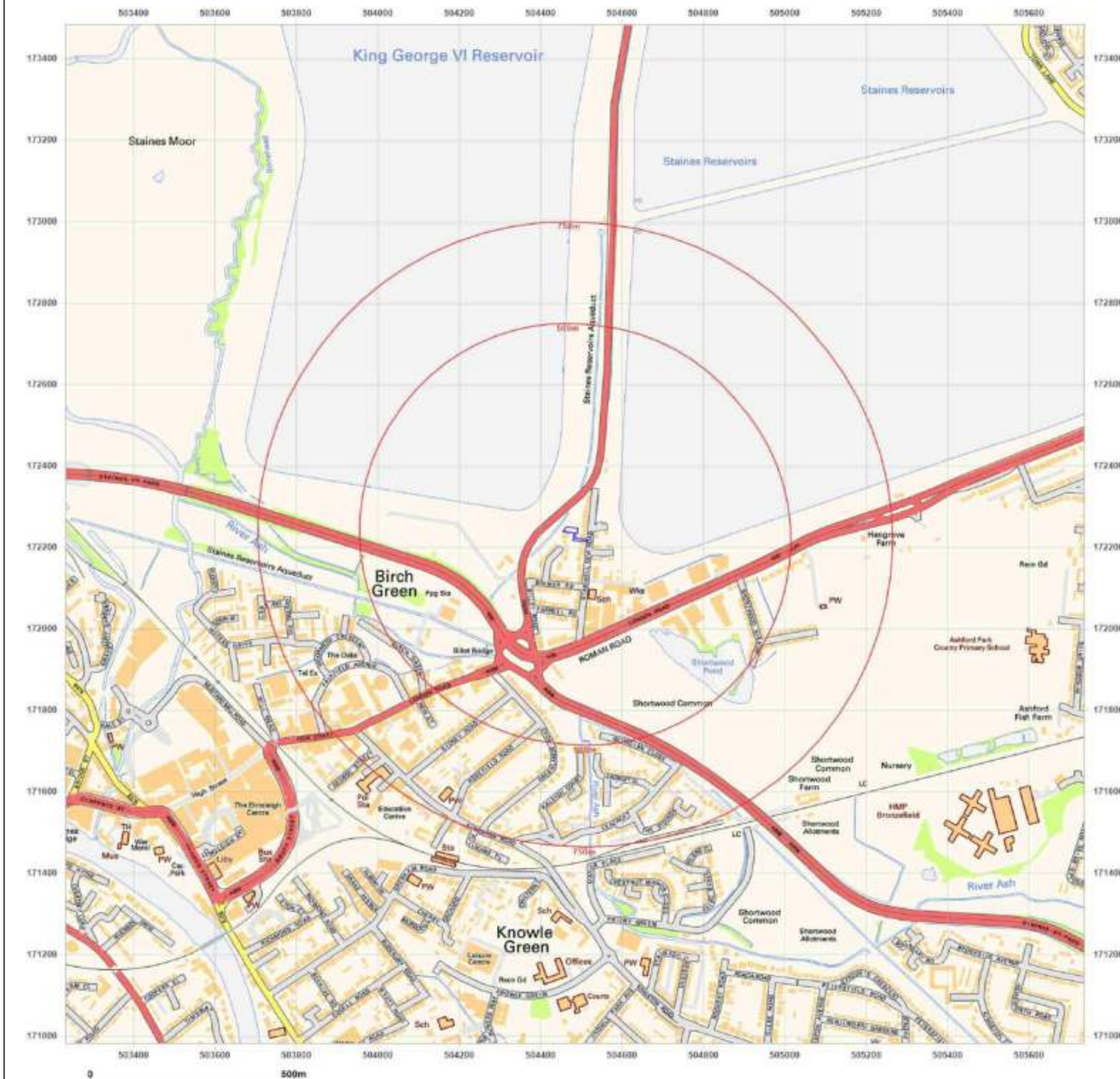


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#### Site Details:

STANWELL NEW ROAD,  
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**Client Ref:** CS6219  
**Report Ref:** GS-8144079  
**Grid Ref:** 504485, 172232

**Map Name:** National Grid

**Map date:** 2021

**Scale:** 1:10,000

**Printed at:** 1:10,000

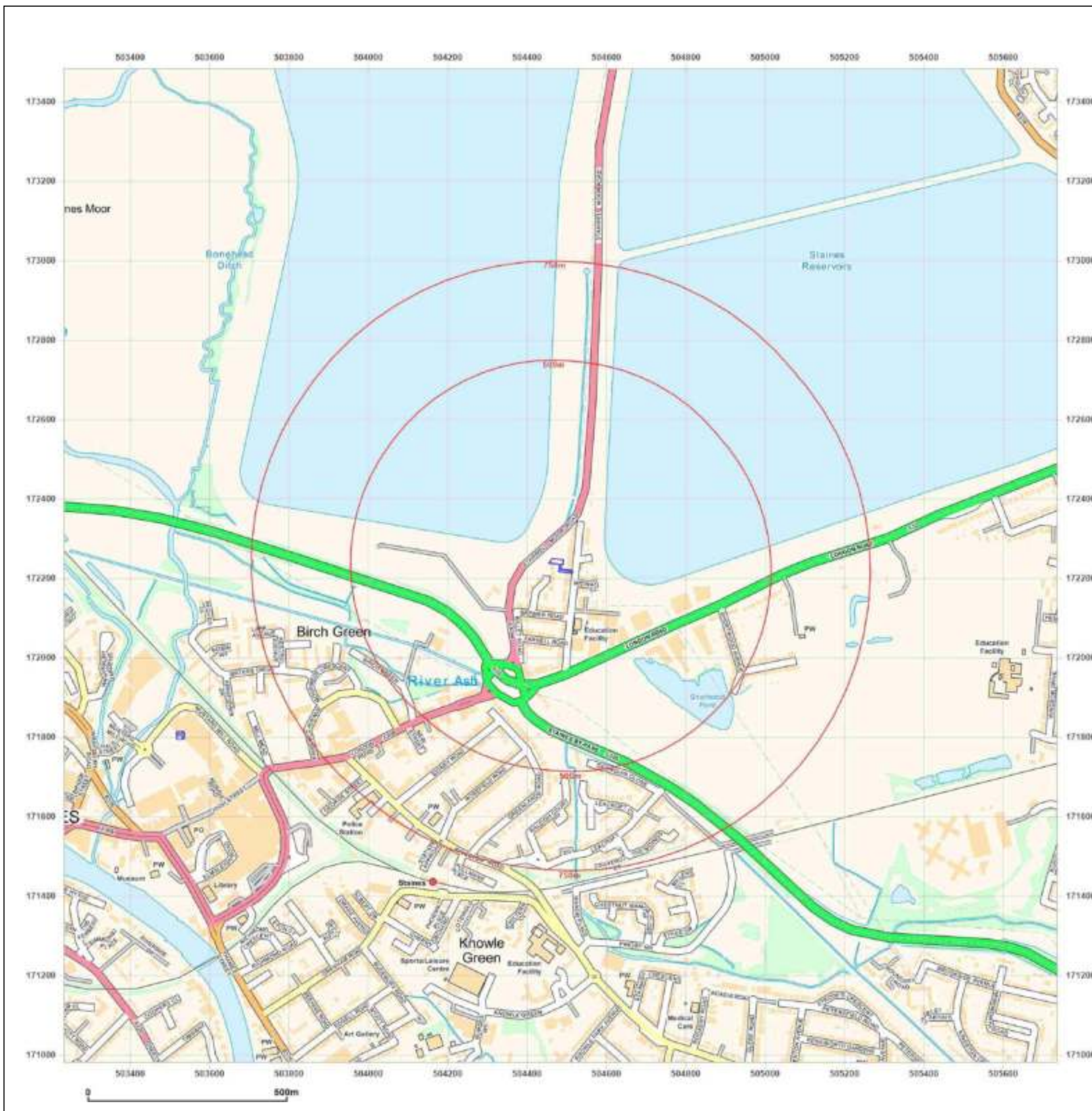


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**APPENDIX D**  
**GROUNDSURE ENVIRO AND GEO INSIGHT REPORT**

## STANWELL NEW ROAD, STAINES

## Order Details

**Date:** 23/08/2021  
**Your ref:** CS6219  
**Our Ref:** GS-8144080  
**Client:** SOCOTEC UK Limited

## Site Details

**Location:** 504477 172242

**Area:** 0.06 ha

**Authority:** [Spelthorne Borough Council](#)



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|                        |      |                                                                                           |      |
|------------------------|------|-------------------------------------------------------------------------------------------|------|
| Summary of findings    | p. 2 | Aerial image                                                                              | p. 8 |
| OS MasterMap site plan | p.13 | <a href="https://www.groundsure.com/insightuserguide">groundsure.com/insightuserguide</a> |      |

## Summary of findings

| Page      | Section    | Past land use                                   | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|-----------|------------|-------------------------------------------------|---------|-------|---------|----------|-----------|
| <b>14</b> | <b>1.1</b> | <b><u>Historical industrial land uses</u></b>   | 0       | 0     | 14      | 20       | -         |
| <b>16</b> | <b>1.2</b> | <b><u>Historical tanks</u></b>                  | 0       | 0     | 0       | 2        | -         |
| <b>16</b> | <b>1.3</b> | <b><u>Historical energy features</u></b>        | 0       | 0     | 4       | 3        | -         |
| 17        | 1.4        | Historical petrol stations                      | 0       | 0     | 0       | 0        | -         |
| <b>17</b> | <b>1.5</b> | <b><u>Historical garages</u></b>                | 0       | 0     | 0       | 6        | -         |
| 18        | 1.6        | Historical military land                        | 0       | 0     | 0       | 0        | -         |
| Page      | Section    | Past land use - un-grouped                      | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>19</b> | <b>2.1</b> | <b><u>Historical industrial land uses</u></b>   | 0       | 0     | 18      | 23       | -         |
| <b>21</b> | <b>2.2</b> | <b><u>Historical tanks</u></b>                  | 0       | 0     | 0       | 3        | -         |
| <b>21</b> | <b>2.3</b> | <b><u>Historical energy features</u></b>        | 0       | 0     | 5       | 6        | -         |
| 22        | 2.4        | Historical petrol stations                      | 0       | 0     | 0       | 0        | -         |
| <b>22</b> | <b>2.5</b> | <b><u>Historical garages</u></b>                | 0       | 0     | 0       | 11       | -         |
| Page      | Section    | Waste and landfill                              | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 24        | 3.1        | Active or recent landfill                       | 0       | 0     | 0       | 0        | -         |
| 24        | 3.2        | Historical landfill (BGS records)               | 0       | 0     | 0       | 0        | -         |
| 24        | 3.3        | Historical landfill (LA/mapping records)        | 0       | 0     | 0       | 0        | -         |
| 24        | 3.4        | Historical landfill (EA/NRW records)            | 0       | 0     | 0       | 0        | -         |
| 24        | 3.5        | Historical waste sites                          | 0       | 0     | 0       | 0        | -         |
| 25        | 3.6        | Licensed waste sites                            | 0       | 0     | 0       | 0        | -         |
| 25        | 3.7        | Waste exemptions                                | 0       | 0     | 0       | 0        | -         |
| Page      | Section    | Current industrial land use                     | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>26</b> | <b>4.1</b> | <b><u>Recent industrial land uses</u></b>       | 0       | 0     | 11      | -        | -         |
| <b>27</b> | <b>4.2</b> | <b><u>Current or recent petrol stations</u></b> | 0       | 0     | 0       | 1        | -         |
| 27        | 4.3        | Electricity cables                              | 0       | 0     | 0       | 0        | -         |
| 28        | 4.4        | Gas pipelines                                   | 0       | 0     | 0       | 0        | -         |
| 28        | 4.5        | Sites determined as Contaminated Land           | 0       | 0     | 0       | 0        | -         |



| 28        | 4.6         | Control of Major Accident Hazards (COMAH)                  | 0                        | 0     | 0       | 0        | -         |
|-----------|-------------|------------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 28        | 4.7         | Regulated explosive sites                                  | 0                        | 0     | 0       | 0        | -         |
| 28        | 4.8         | Hazardous substance storage/usage                          | 0                        | 0     | 0       | 0        | -         |
| 29        | 4.9         | Historical licensed industrial activities (IPC)            | 0                        | 0     | 0       | 0        | -         |
| 29        | 4.10        | Licensed industrial activities (Part A(1))                 | 0                        | 0     | 0       | 0        | -         |
| <b>29</b> | <b>4.11</b> | <b><u>Licensed pollutant release (Part A(2)/B)</u></b>     | 0                        | 0     | 1       | 1        | -         |
| 29        | 4.12        | Radioactive Substance Authorisations                       | 0                        | 0     | 0       | 0        | -         |
| 30        | 4.13        | Licensed Discharges to controlled waters                   | 0                        | 0     | 0       | 0        | -         |
| 30        | 4.14        | Pollutant release to surface waters (Red List)             | 0                        | 0     | 0       | 0        | -         |
| 30        | 4.15        | Pollutant release to public sewer                          | 0                        | 0     | 0       | 0        | -         |
| 30        | 4.16        | List 1 Dangerous Substances                                | 0                        | 0     | 0       | 0        | -         |
| 30        | 4.17        | List 2 Dangerous Substances                                | 0                        | 0     | 0       | 0        | -         |
| <b>31</b> | <b>4.18</b> | <b><u>Pollution Incidents (EA/NRW)</u></b>                 | 0                        | 0     | 0       | 2        | -         |
| 31        | 4.19        | Pollution inventory substances                             | 0                        | 0     | 0       | 0        | -         |
| 31        | 4.20        | Pollution inventory waste transfers                        | 0                        | 0     | 0       | 0        | -         |
| 32        | 4.21        | Pollution inventory radioactive waste                      | 0                        | 0     | 0       | 0        | -         |
| Page      | Section     | Hydrogeology                                               | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>33</b> | <b>5.1</b>  | <b><u>Superficial aquifer</u></b>                          | Identified (within 500m) |       |         |          |           |
| <b>35</b> | <b>5.2</b>  | <b><u>Bedrock aquifer</u></b>                              | Identified (within 500m) |       |         |          |           |
| <b>36</b> | <b>5.3</b>  | <b><u>Groundwater vulnerability</u></b>                    | Identified (within 50m)  |       |         |          |           |
| 37        | 5.4         | Groundwater vulnerability- soluble rock risk               | None (within 0m)         |       |         |          |           |
| <b>37</b> | <b>5.5</b>  | <b><u>Groundwater vulnerability- local information</u></b> | Identified (within 0m)   |       |         |          |           |
| <b>38</b> | <b>5.6</b>  | <b><u>Groundwater abstractions</u></b>                     | 0                        | 0     | 0       | 0        | 10        |
| 41        | 5.7         | Surface water abstractions                                 | 0                        | 0     | 0       | 0        | 0         |
| 41        | 5.8         | Potable abstractions                                       | 0                        | 0     | 0       | 0        | 0         |
| <b>41</b> | <b>5.9</b>  | <b><u>Source Protection Zones</u></b>                      | 1                        | 0     | 0       | 0        | -         |
| 42        | 5.10        | Source Protection Zones (confined aquifer)                 | 0                        | 0     | 0       | 0        | -         |
| Page      | Section     | Hydrology                                                  | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>43</b> | <b>6.1</b>  | <b><u>Water Network (OS MasterMap)</u></b>                 | 0                        | 2     | 11      | -        | -         |



| <b>45</b> | <b>6.2</b>   | <b><u>Surface water features</u></b>                      | 0                                      | 0     | 6       | -        | -         |
|-----------|--------------|-----------------------------------------------------------|----------------------------------------|-------|---------|----------|-----------|
| <b>45</b> | <b>6.3</b>   | <b><u>WFD Surface water body catchments</u></b>           | 1                                      | -     | -       | -        | -         |
| <b>45</b> | <b>6.4</b>   | <b><u>WFD Surface water bodies</u></b>                    | 0                                      | 0     | 2       | -        | -         |
| <b>46</b> | <b>6.5</b>   | <b><u>WFD Groundwater bodies</u></b>                      | 1                                      | -     | -       | -        | -         |
| Page      | Section      | River and coastal flooding                                | On site                                | 0-50m | 50-250m | 250-500m | 500-2000m |
| 47        | 7.1          | Risk of Flooding from Rivers and Sea (RoFRaS)             | None (within 50m)                      |       |         |          |           |
| <b>48</b> | <b>7.2</b>   | <b><u>Historical Flood Events</u></b>                     | 0                                      | 0     | 11      | -        | -         |
| 49        | 7.3          | Flood Defences                                            | 0                                      | 0     | 0       | -        | -         |
| 49        | 7.4          | Areas Benefiting from Flood Defences                      | 0                                      | 0     | 0       | -        | -         |
| 49        | 7.5          | Flood Storage Areas                                       | 0                                      | 0     | 0       | -        | -         |
| 50        | 7.6          | Flood Zone 2                                              | None (within 50m)                      |       |         |          |           |
| 50        | 7.7          | Flood Zone 3                                              | None (within 50m)                      |       |         |          |           |
| Page      | Section      | Surface water flooding                                    |                                        |       |         |          |           |
| <b>51</b> | <b>8.1</b>   | <b><u>Surface water flooding</u></b>                      | 1 in 30 year, 0.3m - 1.0m (within 50m) |       |         |          |           |
| Page      | Section      | Groundwater flooding                                      |                                        |       |         |          |           |
| <b>53</b> | <b>9.1</b>   | <b><u>Groundwater flooding</u></b>                        | High (within 50m)                      |       |         |          |           |
| Page      | Section      | Environmental designations                                | On site                                | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>54</b> | <b>10.1</b>  | <b><u>Sites of Special Scientific Interest (SSSI)</u></b> | 0                                      | 1     | 4       | 0        | 0         |
| <b>55</b> | <b>10.2</b>  | <b><u>Conserved wetland sites (Ramsar sites)</u></b>      | 0                                      | 1     | 1       | 0        | 0         |
| 56        | 10.3         | Special Areas of Conservation (SAC)                       | 0                                      | 0     | 0       | 0        | 0         |
| <b>56</b> | <b>10.4</b>  | <b><u>Special Protection Areas (SPA)</u></b>              | 0                                      | 1     | 1       | 0        | 0         |
| 56        | 10.5         | National Nature Reserves (NNR)                            | 0                                      | 0     | 0       | 0        | 0         |
| 57        | 10.6         | Local Nature Reserves (LNR)                               | 0                                      | 0     | 0       | 0        | 0         |
| 57        | 10.7         | Designated Ancient Woodland                               | 0                                      | 0     | 0       | 0        | 0         |
| 57        | 10.8         | Biosphere Reserves                                        | 0                                      | 0     | 0       | 0        | 0         |
| 57        | 10.9         | Forest Parks                                              | 0                                      | 0     | 0       | 0        | 0         |
| 58        | 10.10        | Marine Conservation Zones                                 | 0                                      | 0     | 0       | 0        | 0         |
| <b>58</b> | <b>10.11</b> | <b><u>Green Belt</u></b>                                  | 0                                      | 1     | 0       | 0        | 3         |
| 58        | 10.12        | Proposed Ramsar sites                                     | 0                                      | 0     | 0       | 0        | 0         |



| 58        | 10.13               | Possible Special Areas of Conservation (pSAC)   | 0                        | 0     | 0       | 0        | 0         |
|-----------|---------------------|-------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 59        | 10.14               | Potential Special Protection Areas (pSPA)       | 0                        | 0     | 0       | 0        | 0         |
| 59        | 10.15               | Nitrate Sensitive Areas                         | 0                        | 0     | 0       | 0        | 0         |
| 59        | 10.16               | Nitrate Vulnerable Zones                        | 0                        | 0     | 0       | 0        | 0         |
| <b>60</b> | <b><u>10.17</u></b> | <b><u>SSSI Impact Risk Zones</u></b>            | 2                        | -     | -       | -        | -         |
| <b>61</b> | <b><u>10.18</u></b> | <b><u>SSSI Units</u></b>                        | 0                        | 1     | 2       | 0        | 2         |
| Page      | Section             | Visual and cultural designations                | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 64        | 11.1                | World Heritage Sites                            | 0                        | 0     | 0       | -        | -         |
| 64        | 11.2                | Area of Outstanding Natural Beauty              | 0                        | 0     | 0       | -        | -         |
| 64        | 11.3                | National Parks                                  | 0                        | 0     | 0       | -        | -         |
| 64        | 11.4                | Listed Buildings                                | 0                        | 0     | 0       | -        | -         |
| 65        | 11.5                | Conservation Areas                              | 0                        | 0     | 0       | -        | -         |
| 65        | 11.6                | Scheduled Ancient Monuments                     | 0                        | 0     | 0       | -        | -         |
| 65        | 11.7                | Registered Parks and Gardens                    | 0                        | 0     | 0       | -        | -         |
| Page      | Section             | Agricultural designations                       | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>66</b> | <b><u>12.1</u></b>  | <b><u>Agricultural Land Classification</u></b>  | Urban (within 250m)      |       |         |          |           |
| <b>67</b> | <b><u>12.2</u></b>  | <b><u>Open Access Land</u></b>                  | 0                        | 0     | 3       | -        | -         |
| 67        | 12.3                | Tree Felling Licences                           | 0                        | 0     | 0       | -        | -         |
| <b>67</b> | <b><u>12.4</u></b>  | <b><u>Environmental Stewardship Schemes</u></b> | 0                        | 0     | 1       | -        | -         |
| 68        | 12.5                | Countryside Stewardship Schemes                 | 0                        | 0     | 0       | -        | -         |
| Page      | Section             | Habitat designations                            | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>69</b> | <b><u>13.1</u></b>  | <b><u>Priority Habitat Inventory</u></b>        | 0                        | 1     | 4       | -        | -         |
| 70        | 13.2                | Habitat Networks                                | 0                        | 0     | 0       | -        | -         |
| 70        | 13.3                | Open Mosaic Habitat                             | 0                        | 0     | 0       | -        | -         |
| 70        | 13.4                | Limestone Pavement Orders                       | 0                        | 0     | 0       | -        | -         |
| Page      | Section             | Geology 1:10,000 scale                          | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>71</b> | <b><u>14.1</u></b>  | <b><u>10k Availability</u></b>                  | Identified (within 500m) |       |         |          |           |
| <b>72</b> | <b><u>14.2</u></b>  | <b><u>Artificial and made ground (10k)</u></b>  | 0                        | 1     | 4       | 7        | -         |
| <b>74</b> | <b><u>14.3</u></b>  | <b><u>Superficial geology (10k)</u></b>         | 1                        | 1     | 1       | 3        | -         |



| 75        | 14.4        | Landslip (10k)                                     | 0                        | 0     | 0       | 0        | -         |
|-----------|-------------|----------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| <b>76</b> | <b>14.5</b> | <b><u>Bedrock geology (10k)</u></b>                | 1                        | 0     | 0       | 1        | -         |
| 77        | 14.6        | Bedrock faults and other linear features (10k)     | 0                        | 0     | 0       | 0        | -         |
| Page      | Section     | Geology 1:50,000 scale                             | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>78</b> | <b>15.1</b> | <b><u>50k Availability</u></b>                     | Identified (within 500m) |       |         |          |           |
| <b>79</b> | <b>15.2</b> | <b><u>Artificial and made ground (50k)</u></b>     | 0                        | 1     | 5       | 1        | -         |
| <b>80</b> | <b>15.3</b> | <b><u>Artificial ground permeability (50k)</u></b> | 0                        | 1     | -       | -        | -         |
| <b>81</b> | <b>15.4</b> | <b><u>Superficial geology (50k)</u></b>            | 1                        | 1     | 3       | 2        | -         |
| <b>82</b> | <b>15.5</b> | <b><u>Superficial permeability (50k)</u></b>       | Identified (within 50m)  |       |         |          |           |
| 82        | 15.6        | Landslip (50k)                                     | 0                        | 0     | 0       | 0        | -         |
| 82        | 15.7        | Landslip permeability (50k)                        | None (within 50m)        |       |         |          |           |
| <b>83</b> | <b>15.8</b> | <b><u>Bedrock geology (50k)</u></b>                | 1                        | 0     | 0       | 0        | -         |
| <b>84</b> | <b>15.9</b> | <b><u>Bedrock permeability (50k)</u></b>           | Identified (within 50m)  |       |         |          |           |
| 84        | 15.10       | Bedrock faults and other linear features (50k)     | 0                        | 0     | 0       | 0        | -         |
| Page      | Section     | Boreholes                                          | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>85</b> | <b>16.1</b> | <b><u>BGS Boreholes</u></b>                        | 0                        | 0     | 7       | -        | -         |
| Page      | Section     | Natural ground subsidence                          |                          |       |         |          |           |
| <b>87</b> | <b>17.1</b> | <b><u>Shrink swell clays</u></b>                   | Very low (within 50m)    |       |         |          |           |
| <b>88</b> | <b>17.2</b> | <b><u>Running sands</u></b>                        | Very low (within 50m)    |       |         |          |           |
| <b>90</b> | <b>17.3</b> | <b><u>Compressible deposits</u></b>                | Very low (within 50m)    |       |         |          |           |
| <b>92</b> | <b>17.4</b> | <b><u>Collapsible deposits</u></b>                 | Very low (within 50m)    |       |         |          |           |
| <b>93</b> | <b>17.5</b> | <b><u>Landslides</u></b>                           | Very low (within 50m)    |       |         |          |           |
| <b>94</b> | <b>17.6</b> | <b><u>Ground dissolution of soluble rocks</u></b>  | Negligible (within 50m)  |       |         |          |           |
| Page      | Section     | Mining, ground workings and natural cavities       | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 95        | 18.1        | Natural cavities                                   | 0                        | 0     | 0       | 0        | -         |
| 96        | 18.2        | BritPits                                           | 0                        | 0     | 0       | 0        | -         |
| <b>96</b> | <b>18.3</b> | <b><u>Surface ground workings</u></b>              | 0                        | 0     | 12      | -        | -         |
| 97        | 18.4        | Underground workings                               | 0                        | 0     | 0       | 0        | 0         |
| 97        | 18.5        | Historical Mineral Planning Areas                  | 0                        | 0     | 0       | 0        | -         |



| 97         | 18.6        | Non-coal mining                                       | 0                        | 0     | 0       | 0        | 0         |
|------------|-------------|-------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 97         | 18.7        | Mining cavities                                       | 0                        | 0     | 0       | 0        | 0         |
| 97         | 18.8        | JPB mining areas                                      | None (within 0m)         |       |         |          |           |
| 98         | 18.9        | Coal mining                                           | None (within 0m)         |       |         |          |           |
| 98         | 18.10       | Brine areas                                           | None (within 0m)         |       |         |          |           |
| 98         | 18.11       | Gypsum areas                                          | None (within 0m)         |       |         |          |           |
| 98         | 18.12       | Tin mining                                            | None (within 0m)         |       |         |          |           |
| 98         | 18.13       | Clay mining                                           | None (within 0m)         |       |         |          |           |
| Page       | Section     | Radon                                                 |                          |       |         |          |           |
| <b>99</b>  | <b>19.1</b> | <b><u>Radon</u></b>                                   | Less than 1% (within 0m) |       |         |          |           |
| Page       | Section     | Soil chemistry                                        | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>100</b> | <b>20.1</b> | <b><u>BGS Estimated Background Soil Chemistry</u></b> | 2                        | 2     | -       | -        | -         |
| 100        | 20.2        | BGS Estimated Urban Soil Chemistry                    | 0                        | 0     | -       | -        | -         |
| 101        | 20.3        | BGS Measured Urban Soil Chemistry                     | 0                        | 0     | -       | -        | -         |
| Page       | Section     | Railway infrastructure and projects                   | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 102        | 21.1        | Underground railways (London)                         | 0                        | 0     | 0       | -        | -         |
| 102        | 21.2        | Underground railways (Non-London)                     | 0                        | 0     | 0       | -        | -         |
| 102        | 21.3        | Railway tunnels                                       | 0                        | 0     | 0       | -        | -         |
| 102        | 21.4        | Historical railway and tunnel features                | 0                        | 0     | 0       | -        | -         |
| 102        | 21.5        | Royal Mail tunnels                                    | 0                        | 0     | 0       | -        | -         |
| 103        | 21.6        | Historical railways                                   | 0                        | 0     | 0       | -        | -         |
| 103        | 21.7        | Railways                                              | 0                        | 0     | 0       | -        | -         |
| 103        | 21.8        | Crossrail 1                                           | 0                        | 0     | 0       | 0        | -         |
| 103        | 21.9        | Crossrail 2                                           | 0                        | 0     | 0       | 0        | -         |
| 103        | 21.10       | HS2                                                   | 0                        | 0     | 0       | 0        | -         |



## Recent aerial photograph



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Capture Date: 29/06/2019

Site Area: 0.06ha



Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com)

08444 159 000

Date: 23 August 2021

## Recent site history - 2017 aerial photograph



Capture Date: 21/06/2017

Site Area: 0.06ha



## Recent site history - 2013 aerial photograph



Capture Date: 20/04/2013

Site Area: 0.06ha



## Recent site history - 2006 aerial photograph



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Capture Date: 29/07/2006

Site Area: 0.06ha



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08444 159 000

Date: 23 August 2021

## Recent site history - 1999 aerial photograph



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Capture Date: 13/10/1999

Site Area: 0.06ha



## OS MasterMap site plan



Site Area: 0.06ha



Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com)

08444 159 000

Date: 23 August 2021

## 1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

### 1.1 Historical industrial land uses

Records within 500m

34

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

| ID | Location | Land use          | Dates present | Group ID |
|----|----------|-------------------|---------------|----------|
| B  | 146m SE  | Unspecified Works | 1974 - 1984   | 2239675  |



| ID | Location | Land use                          | Dates present | Group ID |
|----|----------|-----------------------------------|---------------|----------|
| C  | 150m S   | Laundry                           | 1934          | 2192846  |
| C  | 150m S   | Laundry                           | 1934          | 2241047  |
| C  | 153m S   | Laundry                           | 1913          | 2252058  |
| C  | 153m S   | Laundry                           | 1938          | 2270058  |
| B  | 157m SE  | Mineral Water Works               | 1938          | 2188215  |
| B  | 157m SE  | Mineral Water Works               | 1913 - 1920   | 2268007  |
| B  | 158m SE  | Unspecified Works                 | 1955          | 2229497  |
| C  | 158m S   | Laundry                           | 1938          | 2205649  |
| C  | 158m S   | Laundry                           | 1920          | 2259100  |
| B  | 168m SE  | Unspecified Manufactory           | 1865          | 2138010  |
| B  | 173m SE  | Mineral Water Works               | 1934          | 2230489  |
| D  | 180m SW  | Pumping Station                   | 1938          | 2282049  |
| D  | 190m SW  | Pumping Station                   | 1934          | 2202429  |
| D  | 262m SW  | Pumping Station                   | 1934          | 2288131  |
| D  | 283m SW  | Unspecified Commercial/Industrial | 1920          | 2130794  |
| D  | 283m SW  | Railway Sidings                   | 1920          | 2273647  |
| D  | 285m SW  | Railway Sidings                   | 1934 - 1938   | 2243418  |
| D  | 285m SW  | Railway Sidings                   | 1938          | 2223167  |
| D  | 285m SW  | Railway Sidings                   | 1913          | 2283578  |
| D  | 294m SW  | Pumping Station                   | 1913          | 2215465  |
| 3  | 296m SW  | Unspecified Heap                  | 1974          | 2136210  |
| E  | 297m E   | Garage                            | 1974          | 2168505  |
| D  | 298m SW  | Pumping Station                   | 1938          | 2248693  |
| D  | 298m SW  | Unspecified Works                 | 1974 - 1984   | 2256840  |
| E  | 301m E   | Iron Foundry                      | 1913          | 2164974  |
| D  | 302m SW  | Railway Sidings                   | 1934          | 2190361  |
| D  | 306m SW  | Pumping Station                   | 1920          | 2271819  |
| E  | 310m E   | Unspecified Depot                 | 1984          | 2147043  |



| ID | Location | Land use         | Dates present | Group ID |
|----|----------|------------------|---------------|----------|
| D  | 310m SW  | Unspecified Heap | 1934          | 2171884  |
| D  | 311m SW  | Unspecified Heap | 1934          | 2204383  |
| D  | 315m SW  | Unspecified Heap | 1938          | 2253094  |
| D  | 319m SW  | Unspecified Heap | 1955          | 2174782  |
| D  | 389m SW  | Pumping Station  | 1984          | 2191225  |

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.2 Historical tanks

### Records within 500m

2

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

| ID | Location | Land use         | Dates present | Group ID |
|----|----------|------------------|---------------|----------|
| D  | 298m SW  | Tanks            | 1934          | 375871   |
| D  | 386m SW  | Unspecified Tank | 1974 - 1995   | 393233   |

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.3 Historical energy features

### Records within 500m

7

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| A  | 90m SE   | Electricity Grid Substation | 1982          | 251946   |



| ID | Location | Land use               | Dates present | Group ID |
|----|----------|------------------------|---------------|----------|
| A  | 91m SE   | Electricity Substation | 1992          | 243384   |
| 1  | 196m W   | Electricity Substation | 1995          | 243383   |
| 2  | 242m W   | Electricity Substation | 1974 - 1995   | 291847   |
| 4  | 436m SW  | Electricity Substation | 1979 - 1996   | 271881   |
| H  | 483m SW  | Electricity Substation | 1996          | 243385   |
| H  | 484m SW  | Electricity Substation | 1979 - 1988   | 285517   |

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.4 Historical petrol stations

### Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.5 Historical garages

### Records within 500m

6

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

| ID | Location | Land use | Dates present | Group ID |
|----|----------|----------|---------------|----------|
| E  | 297m E   | Garage   | 1961          | 80815    |
| F  | 313m SE  | Garage   | 1961 - 1992   | 83336    |
| F  | 320m SE  | Garage   | 1982          | 79754    |
| G  | 405m SW  | Garage   | 1969 - 1971   | 80872    |
| G  | 416m SW  | Garage   | 1963 - 1968   | 80894    |



| ID | Location | Land use | Dates present | Group ID |
|----|----------|----------|---------------|----------|
| G  | 417m SW  | Garage   | 1962          | 75212    |

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.6 Historical military land

**Records within 500m**

**0**

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

*This data is sourced from Ordnance Survey / Groundsure / other sources.*

## 2 Past land use - un-grouped



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- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

### 2.1 Historical industrial land uses

Records within 500m

41

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19**

| ID | Location | Land Use          | Date | Group ID |
|----|----------|-------------------|------|----------|
| B  | 146m SE  | Unspecified Works | 1974 | 2239675  |
| B  | 146m SE  | Unspecified Works | 1984 | 2239675  |
| C  | 150m S   | Laundry           | 1934 | 2192846  |



| ID | Location | Land Use                          | Date | Group ID |
|----|----------|-----------------------------------|------|----------|
| C  | 150m S   | Laundry                           | 1934 | 2241047  |
| C  | 153m S   | Laundry                           | 1938 | 2270058  |
| C  | 153m S   | Laundry                           | 1913 | 2252058  |
| B  | 157m SE  | Mineral Water Works               | 1938 | 2188215  |
| B  | 157m SE  | Mineral Water Works               | 1913 | 2268007  |
| B  | 158m SE  | Unspecified Works                 | 1955 | 2229497  |
| C  | 158m S   | Laundry                           | 1938 | 2205649  |
| C  | 158m S   | Laundry                           | 1920 | 2259100  |
| B  | 160m SE  | Mineral Water Works               | 1938 | 2188215  |
| B  | 168m SE  | Unspecified Manufactory           | 1865 | 2138010  |
| B  | 171m SE  | Mineral Water Works               | 1920 | 2268007  |
| B  | 173m SE  | Mineral Water Works               | 1934 | 2230489  |
| B  | 174m SE  | Mineral Water Works               | 1934 | 2230489  |
| D  | 180m SW  | Pumping Station                   | 1938 | 2282049  |
| D  | 190m SW  | Pumping Station                   | 1934 | 2202429  |
| D  | 262m SW  | Pumping Station                   | 1934 | 2288131  |
| D  | 283m SW  | Railway Sidings                   | 1920 | 2273647  |
| D  | 283m SW  | Unspecified Commercial/Industrial | 1920 | 2130794  |
| D  | 285m SW  | Railway Sidings                   | 1934 | 2243418  |
| D  | 285m SW  | Railway Sidings                   | 1938 | 2223167  |
| D  | 285m SW  | Railway Sidings                   | 1913 | 2283578  |
| D  | 286m SW  | Railway Sidings                   | 1938 | 2243418  |
| D  | 294m SW  | Pumping Station                   | 1913 | 2215465  |
| 2  | 296m SW  | Unspecified Heap                  | 1974 | 2136210  |
| F  | 297m E   | Garage                            | 1974 | 2168505  |
| D  | 298m SW  | Pumping Station                   | 1938 | 2248693  |
| D  | 298m SW  | Unspecified Works                 | 1974 | 2256840  |
| D  | 298m SW  | Unspecified Works                 | 1984 | 2256840  |



| ID | Location | Land Use          | Date | Group ID |
|----|----------|-------------------|------|----------|
| F  | 301m E   | Iron Foundry      | 1913 | 2164974  |
| D  | 302m SW  | Railway Sidings   | 1934 | 2190361  |
| D  | 306m SW  | Pumping Station   | 1920 | 2271819  |
| F  | 310m E   | Unspecified Depot | 1984 | 2147043  |
| D  | 310m SW  | Unspecified Heap  | 1934 | 2171884  |
| D  | 311m SW  | Unspecified Heap  | 1934 | 2204383  |
| D  | 311m SW  | Unspecified Heap  | 1934 | 2204383  |
| D  | 315m SW  | Unspecified Heap  | 1938 | 2253094  |
| D  | 319m SW  | Unspecified Heap  | 1955 | 2174782  |
| D  | 389m SW  | Pumping Station   | 1984 | 2191225  |

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.2 Historical tanks

### Records within 500m

3

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19**

| ID | Location | Land Use         | Date | Group ID |
|----|----------|------------------|------|----------|
| D  | 298m SW  | Tanks            | 1934 | 375871   |
| D  | 386m SW  | Unspecified Tank | 1974 | 393233   |
| D  | 387m SW  | Unspecified Tank | 1995 | 393233   |

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.3 Historical energy features

### Records within 500m

11

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.



Features are displayed on the Past land use - un-grouped map on **page 19**

| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| A  | 90m SE   | Electricity Grid Substation | 1982 | 251946   |
| A  | 91m SE   | Electricity Substation      | 1992 | 243384   |
| 1  | 196m W   | Electricity Substation      | 1995 | 243383   |
| E  | 242m W   | Electricity Substation      | 1974 | 291847   |
| E  | 243m W   | Electricity Substation      | 1995 | 291847   |
| I  | 436m SW  | Electricity Substation      | 1996 | 271881   |
| I  | 436m SW  | Electricity Substation      | 1979 | 271881   |
| I  | 436m SW  | Electricity Substation      | 1988 | 271881   |
| J  | 483m SW  | Electricity Substation      | 1996 | 243385   |
| J  | 484m SW  | Electricity Substation      | 1979 | 285517   |
| J  | 484m SW  | Electricity Substation      | 1988 | 285517   |

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.4 Historical petrol stations

**Records within 500m**

**0**

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.5 Historical garages

**Records within 500m**

**11**

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19**

| ID | Location | Land Use | Date | Group ID |
|----|----------|----------|------|----------|
| F  | 297m E   | Garage   | 1961 | 80815    |



| ID | Location | Land Use | Date | Group ID |
|----|----------|----------|------|----------|
| F  | 298m E   | Garage   | 1961 | 80815    |
| G  | 313m SE  | Garage   | 1961 | 83336    |
| G  | 319m SE  | Garage   | 1961 | 83336    |
| G  | 320m SE  | Garage   | 1982 | 79754    |
| G  | 320m SE  | Garage   | 1992 | 83336    |
| H  | 405m SW  | Garage   | 1971 | 80872    |
| H  | 406m SW  | Garage   | 1969 | 80872    |
| H  | 416m SW  | Garage   | 1968 | 80894    |
| H  | 417m SW  | Garage   | 1963 | 80894    |
| H  | 417m SW  | Garage   | 1962 | 75212    |

*This data is sourced from Ordnance Survey / Groundsure.*



## 3 Waste and landfill

### 3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

*This data is sourced from the British Geological Survey.*

### 3.3 Historical landfill (LA/mapping records)

Records within 500m

0

Landfill sites identified from Local Authority records and high detail historical mapping.

*This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.*

### 3.4 Historical landfill (EA/NRW records)

Records within 500m

0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 3.5 Historical waste sites

Records within 500m

0

Waste site records derived from Local Authority planning records and high detail historical mapping.

*This data is sourced from Ordnance Survey/Groundsure and Local Authority records.*



### 3.6 Licensed waste sites

Records within 500m

0

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 3.7 Waste exemptions

Records within 500m

0

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.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- △ Current or recent petrol stations
- Licensed pollutant release (Part A(2)/B)
- Pollution Incidents (EA/NRW)

### 4.1 Recent industrial land uses

Records within 250m

11

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 26**

| ID | Location | Company                 | Address      | Activity            | Category                      |
|----|----------|-------------------------|--------------|---------------------|-------------------------------|
| A  | 92m SE   | Pylon                   | Surrey, TW18 | Electrical Features | Infrastructure and Facilities |
| A  | 120m SE  | Electricity Sub Station | Surrey, TW18 | Electrical Features | Infrastructure and Facilities |
| A  | 129m SE  | Pylon                   | Surrey, TW18 | Electrical Features | Infrastructure and Facilities |



| ID | Location | Company                 | Address                                                     | Activity                | Category                        |
|----|----------|-------------------------|-------------------------------------------------------------|-------------------------|---------------------------------|
| 1  | 134m N   | Pylon                   | Surrey, TW19                                                | Electrical Features     | Infrastructure and Facilities   |
| B  | 176m S   | Exotic Car Collection   | 203, London Road, Staines-upon-Thames, Surrey, TW18 4HR     | Vehicle Hire and Rental | Hire Services                   |
| 2  | 197m W   | Electricity Sub Station | Surrey, TW19                                                | Electrical Features     | Infrastructure and Facilities   |
| B  | 198m SE  | Safestore Ltd           | 217, London Road, Staines-upon-Thames, Surrey, TW18 4HL     | Container and Storage   | Transport, Storage and Delivery |
| B  | 201m SE  | Safestore Ltd           | 215-217, London Road, Staines-upon-Thames, Surrey, TW18 4HL | Container and Storage   | Transport, Storage and Delivery |
| C  | 237m S   | Centroller              | 189, London Road, Staines-upon-Thames, Surrey, TW18 4HR     | Electronic Equipment    | Industrial Products             |
| 3  | 242m E   | Pylon                   | Surrey, TW18                                                | Electrical Features     | Infrastructure and Facilities   |
| 4  | 244m W   | Electricity Sub Station | Surrey, TW19                                                | Electrical Features     | Infrastructure and Facilities   |

*This data is sourced from Ordnance Survey.*

## 4.2 Current or recent petrol stations

**Records within 500m**

**1**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 26**

| ID | Location | Company | Address                                        | LPG | Status |
|----|----------|---------|------------------------------------------------|-----|--------|
| E  | 426m SW  | SHELL   | 93-101, London Road, Staines, Surrey, TW18 4HN | No  | Open   |

*This data is sourced from Experian.*

## 4.3 Electricity cables

**Records within 500m**

**0**

High voltage underground electricity transmission cables.

*This data is sourced from National Grid.*



## 4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

*This data is sourced from National Grid.*

## 4.5 Sites determined as Contaminated Land

Records within 500m

0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

*This data is sourced from Local Authority records.*

## 4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

*This data is sourced from the Health and Safety Executive.*

## 4.7 Regulated explosive sites

Records within 500m

0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

*This data is sourced from the Health and Safety Executive.*

## 4.8 Hazardous substance storage/usage

Records within 500m

0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

*This data is sourced from Local Authority records.*



## 4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

2

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on **page 26**

| ID | Location | Address                                                                    | Details                                                                                                           |                                                                                                                               |
|----|----------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| C  | 206m S   | Windmill Coachworks,<br>London Rd, Staines, TW18<br>4HR                    | Process: Respraying of Road Vehicles<br>Status: Historical Permit<br>Permit Type: Part B                          | Enforcement: No Enforcements Notified<br>Date of enforcement: No Enforcements<br>Notified<br>Comment: No Enforcement Notified |
| E  | 445m SW  | Shell Staines Service<br>Station, 93-101 London<br>Road, Staines, TW18 4HN | Process: Unloading of Petrol into<br>Storage at Service Stations<br>Status: Current Permit<br>Permit Type: Part B | Enforcement: Enforcement Notified<br>Date of enforcement: 31/05/2000<br>Comment: Enforcement Notified                         |

*This data is sourced from Local Authority records.*

## 4.12 Radioactive Substance Authorisations

Records within 500m

0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



#### 4.13 Licensed Discharges to controlled waters

**Records within 500m****0**

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.14 Pollutant release to surface waters (Red List)

**Records within 500m****0**

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.15 Pollutant release to public sewer

**Records within 500m****0**

Discharges of Special Category Effluents to the public sewer.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.16 List 1 Dangerous Substances

**Records within 500m****0**

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.17 List 2 Dangerous Substances

**Records within 500m****0**

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.18 Pollution Incidents (EA/NRW)

Records within 500m

2

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on **page 26**

| ID | Location | Details                                                                                                                    |                                                                                                               |
|----|----------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| D  | 378m SW  | Incident Date: 08/01/2003<br>Incident Identification: 129820<br>Pollutant: Other Pollutant<br>Pollutant Description: Other | Water Impact: Category 3 (Minor)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |
| D  | 378m SW  | Incident Date: 08/01/2003<br>Incident Identification: 129820<br>Pollutant: Other Pollutant<br>Pollutant Description: Other | Water Impact: Category 3 (Minor)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.19 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*

## 4.20 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*



## 4.21 Pollution inventory radioactive waste

Records within 500m

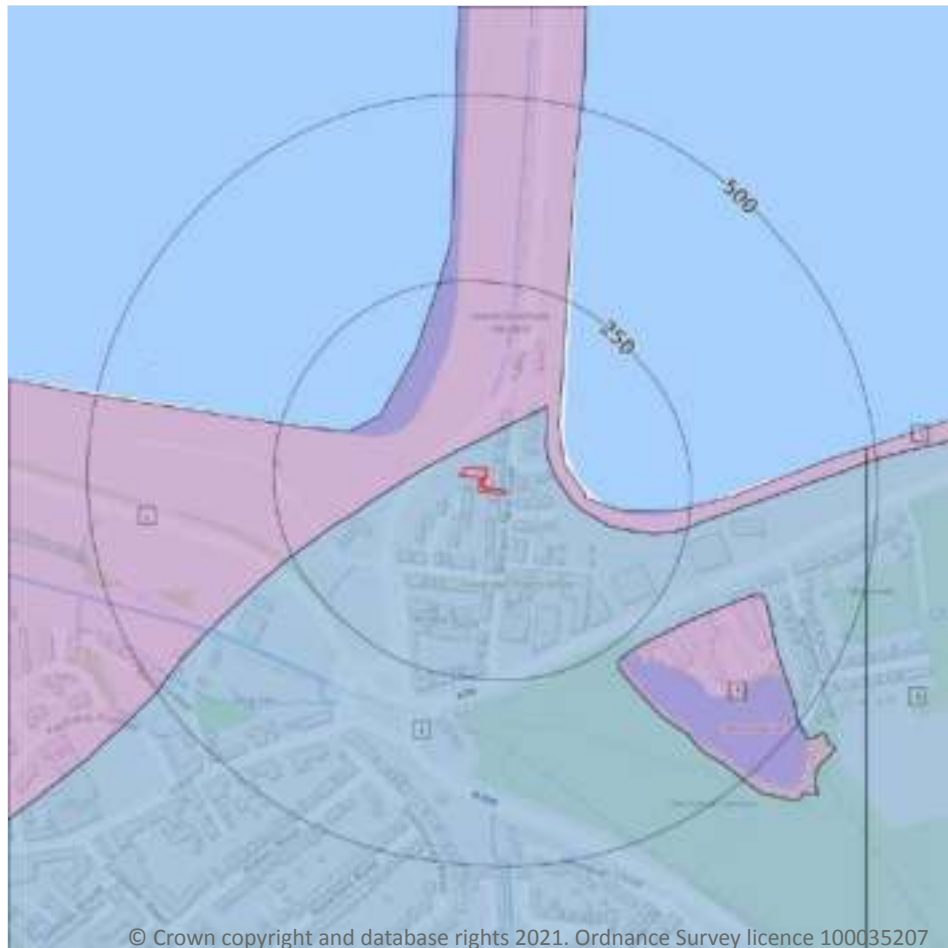
0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*



## 5 Hydrogeology - Superficial aquifer



- Site Outline**
- Search buffers in metres (m)**
- Principal
  - Secondary A
  - Secondary B
  - Secondary Undifferentiated
  - Unproductive
  - Unknown

### 5.1 Superficial aquifer

Records within 500m

5

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 33**

| ID | Location | Designation  | Description                                                                                                                                                                                                                                |
|----|----------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | Unproductive | <b>These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow</b>                                                                                                 |
| 2  | 24m NW   | Principal    | Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers |



| ID | Location | Designation  | Description                                                                                                                                                                                                                                |
|----|----------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | 270m SE  | Principal    | Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers |
| 4  | 485m E   | Unproductive | These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow                                                                                                        |
| 5  | 487m E   | Principal    | Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers |

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*



## Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
  - Secondary A
  - Secondary B
  - Secondary Undifferentiated
  - Unproductive

### 5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

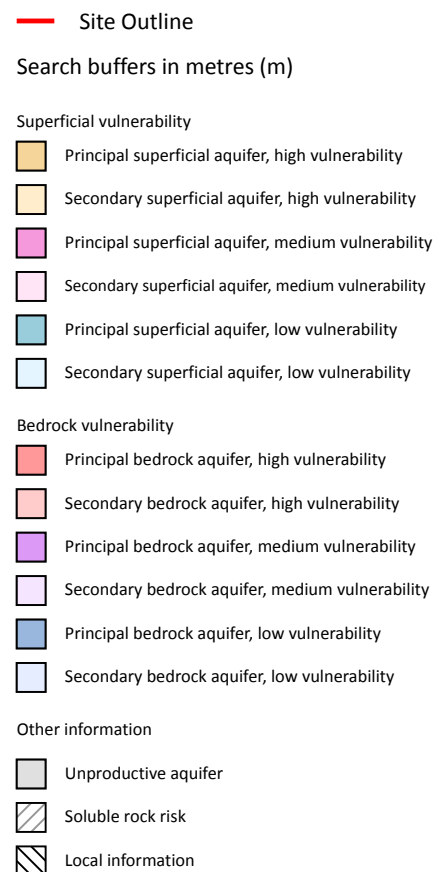
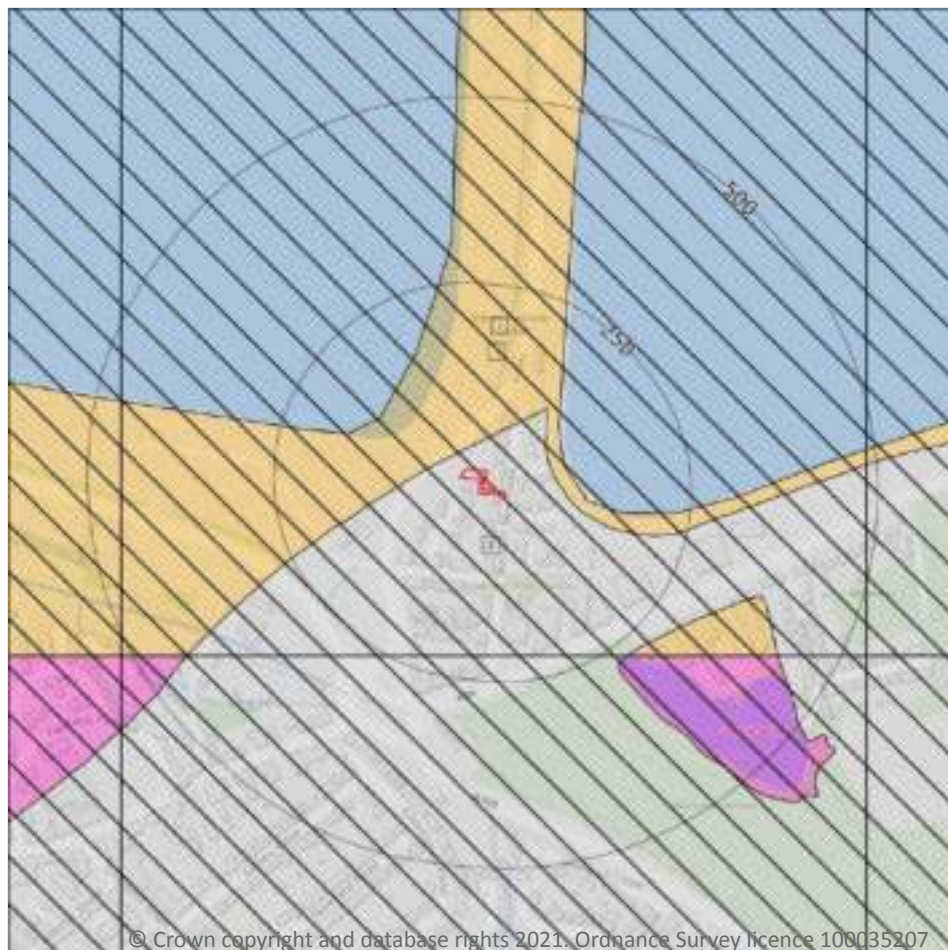
Features are displayed on the Bedrock aquifer map on **page 35**

| ID | Location | Designation  | Description                                                                                                                                |
|----|----------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | Unproductive | <b>These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow</b> |
| 2  | 485m E   | Unproductive | These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow        |

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*



## Groundwater vulnerability



### 5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 36**



| ID | Location | Summary                                                                                                                                                                                           | Soil / surface                                                                                          | Superficial geology                                                                                                                                                   | Bedrock geology                                                                                         |
|----|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 1  | On site  | <b>Summary Classification:</b><br>Unproductive aquifer (may have productive aquifer beneath)<br><b>Combined classification:</b><br>Unproductive Bedrock Aquifer, Unproductive Superficial Aquifer | <b>Leaching class:</b> High<br><b>Infiltration value:</b> >70%<br><b>Dilution value:</b> 300-550mm/year | <b>Vulnerability:</b> Unproductive<br><b>Aquifer type:</b> Unproductive<br><b>Thickness:</b> >10m<br><b>Patchiness value:</b> >90%<br><b>Recharge potential:</b> High | <b>Vulnerability:</b> Unproductive<br><b>Aquifer type:</b> Unproductive<br><b>Flow mechanism:</b> Mixed |
| 3  | 24m NW   | <b>Summary Classification:</b><br>Principal superficial aquifer - High Vulnerability<br><b>Combined classification:</b><br>Unproductive Bedrock Aquifer, Productive Superficial Aquifer           | <b>Leaching class:</b> High<br><b>Infiltration value:</b> >70%<br><b>Dilution value:</b> 300-550mm/year | <b>Vulnerability:</b> High<br><b>Aquifer type:</b> Principal<br><b>Thickness:</b> >10m<br><b>Patchiness value:</b> >90%<br><b>Recharge potential:</b> High            | <b>Vulnerability:</b> Unproductive<br><b>Aquifer type:</b> Unproductive<br><b>Flow mechanism:</b> Mixed |

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*

## 5.4 Groundwater vulnerability- soluble rock risk

### Records on site

0

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

*This data is sourced from the British Geological Survey and the Environment Agency.*

## 5.5 Groundwater vulnerability- local information

### Records on site

1

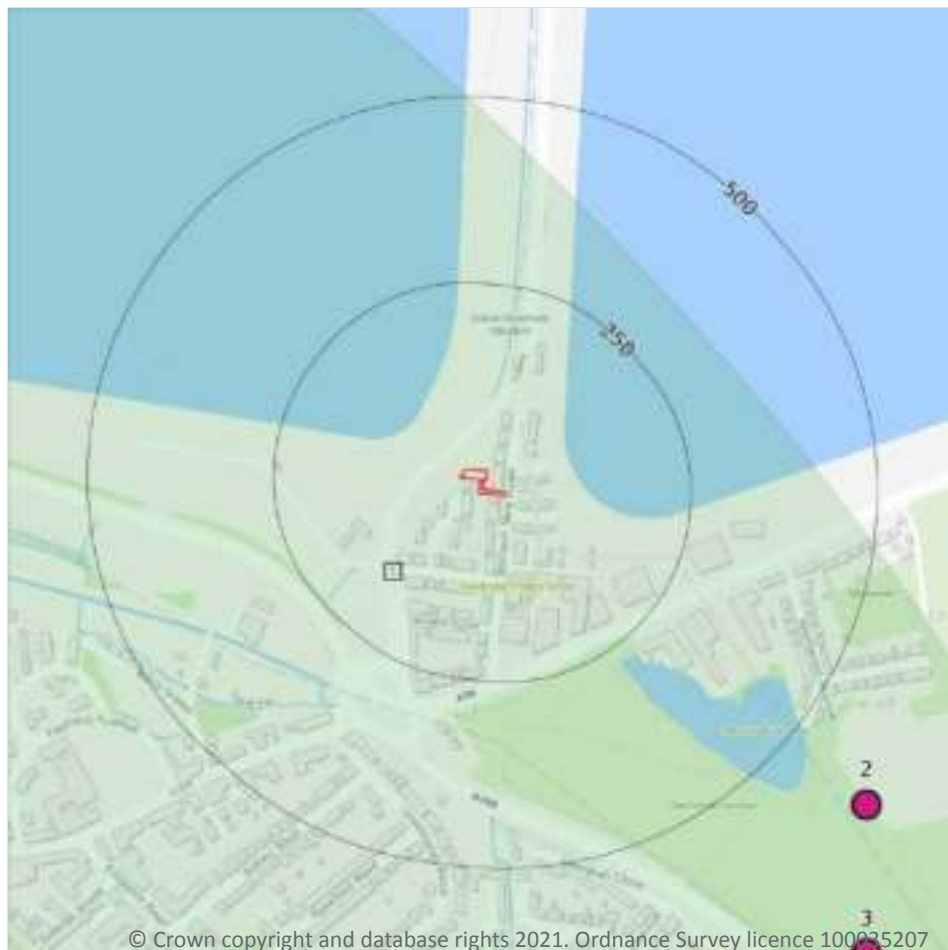
This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk).

| ID | Summary                                                                          | Additional information                                                                                                                          |
|----|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | Highly vulnerable Principal superficial aquifer present in river terrace gravels | Principal superficial aquifer in river terrace gravels with only a thin cover of low permeability silts and/or alluvium (shown as unproductive) |

*This data is sourced from the British Geological Survey and the Environment Agency.*



## Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1  
Inner catchment
- Source Protection Zone 2  
Outer catchment
- Source Protection Zone 3  
Total catchment
- Source Protection Zone 4  
Zone of Special Interest
- Source Protection Zone 1c  
Inner catchment - confined aquifer
- Source Protection Zone 2c  
Outer catchment - confined aquifer
- Source Protection Zone 3c  
Total catchment - confined aquifer
- Drinking water abstraction licences  
Polygon features
- Drinking water abstraction licences  
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

### 5.6 Groundwater abstractions

Records within 2000m

10

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 38**

| ID | Location | Details                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                           |
|----|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | 638m SE  | Status: Historical<br>Licence No: 28/39/31/0141<br>Details: General Farming & Domestic<br>Direct Source: THAMES GROUNDWATER<br>Point: 5 TUBEWELLS AT SHORTWOOD EASTERN ALLOTMENTS<br>Data Type: Point<br>Name: SPELTHORNE BOROUGH COUNCIL<br>Easting: 505000<br>Northing: 171800 | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: 25/10/1978<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 25/10/1978<br>Version End Date: -                  |
| 3  | 783m SE  | Status: Historical<br>Licence No: 28/39/31/0082<br>Details: General Farming & Domestic<br>Direct Source: THAMES GROUNDWATER<br>Point: BOREHOLE 'A' AT SHORTWOOD FARM, SHORTWOOD COMMON<br>Data Type: Point<br>Name: BOVINGDON<br>Easting: 505000<br>Northing: 171600             | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: 13/02/1967<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 13/02/1967<br>Version End Date: -                  |
| -  | 814m S   | Status: Historical<br>Licence No: 28/39/31/0099<br>Details: General Farming & Domestic<br>Direct Source: THAMES GROUNDWATER<br>Point: TUBEWELL 'A' AT CATTLE YARD, KNOWLE GREEN<br>Data Type: Point<br>Name: CUNNINGHAM<br>Easting: 504500<br>Northing: 171400                   | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: 08/05/1967<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 08/05/1967<br>Version End Date: -                  |
| -  | 843m E   | Status: Historical<br>Licence No: 28/39/31/0174<br>Details: Mineral Washing<br>Direct Source: THAMES GROUNDWATER<br>Point: HENGROVE FARM GRAVEL PIT<br>Data Type: Point<br>Name: HENRY STREETER (SAND & BALLAST) LIMITED<br>Easting: 505350<br>Northing: 172100                  | Annual Volume (m <sup>3</sup> ): 750106<br>Max Daily Volume (m <sup>3</sup> ): 2727.6<br>Original Application No: -<br>Original Start Date: 28/03/2000<br>Expiry Date: 31/12/2006<br>Issue No: 1<br>Version Start Date: 28/03/2000<br>Version End Date: - |
| -  | 843m E   | Status: Historical<br>Licence No: 28/39/31/0189<br>Details: Mineral Washing<br>Direct Source: THAMES GROUNDWATER<br>Point: HENGROVE FARM GRAVEL PIT<br>Data Type: Point<br>Name: HENRY STREETER (SAND & BALLAST) LIMITED<br>Easting: 505350<br>Northing: 172100                  | Annual Volume (m <sup>3</sup> ): 625000<br>Max Daily Volume (m <sup>3</sup> ): 2727.6<br>Original Application No: -<br>Original Start Date: 21/05/2007<br>Expiry Date: 31/03/2016<br>Issue No: 2<br>Version Start Date: 21/05/2007<br>Version End Date: - |



| ID | Location | Details                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                              |
|----|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -  | 843m E   | Status: Active<br>Licence No: 28/39/31/0189/R01<br>Details: Mineral Washing<br>Direct Source: THAMES GROUNDWATER<br>Point: HENGROVE FARM GRAVEL PIT<br>Data Type: Point<br>Name: Harleyford Aggregates Limited<br>Easting: 505350<br>Northing: 172100                          | Annual Volume (m <sup>3</sup> ): 625,000<br>Max Daily Volume (m <sup>3</sup> ): 2,727.60<br>Original Application No: -<br>Original Start Date: 01/04/2016<br>Expiry Date: 31/03/2028<br>Issue No: 2<br>Version Start Date: 18/04/2016<br>Version End Date: - |
| -  | 1003m SE | Status: Historical<br>Licence No: 28/39/31/0140<br>Details: General Farming & Domestic<br>Direct Source: THAMES GROUNDWATER<br>Point: 5 TUBEWELLS AT SHORTWOOD NORTH ALLOTMENTS<br>Data Type: Point<br>Name: SPELTHORNE BOROUGH COUNCIL<br>Easting: 505100<br>Northing: 171400 | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: 25/10/1978<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 25/10/1978<br>Version End Date: -                     |
| -  | 1245m W  | Status: Historical<br>Licence No: 28/39/28/0438<br>Details: General Farming & Domestic<br>Direct Source: THAMES GROUNDWATER<br>Point: TUBEWELL B AT ALLOTMENT GARDENS, STAINES<br>Data Type: Point<br>Name: SPELTHORNE BOROUGH COUNCIL<br>Easting: 503210<br>Northing: 172200  | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: 25/10/1978<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 25/10/1978<br>Version End Date: -                     |
| -  | 1294m W  | Status: Historical<br>Licence No: 28/39/28/0438<br>Details: General Farming & Domestic<br>Direct Source: THAMES GROUNDWATER<br>Point: TUBEWELL A AT ALLOTMENT GARDENS, STAINES<br>Data Type: Point<br>Name: SPELTHORNE BOROUGH COUNCIL<br>Easting: 503160<br>Northing: 172260  | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: 25/10/1978<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 25/10/1978<br>Version End Date: -                     |

| ID | Location | Details                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                          |
|----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -  | 1634m E  | Status: Historical<br>Licence No: 28/39/31/0139<br>Details: General Farming & Domestic<br>Direct Source: THAMES GROUNDWATER<br>Point: TUBEWELL 'A' AT ALLOTMENT GARDENS,<br>ASHFORD ROAD<br>Data Type: Point<br>Name: SPELTHORNE BOROUGH COUNCIL<br>Easting: 506090<br>Northing: 171780 | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: 25/10/1978<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 25/10/1978<br>Version End Date: - |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.7 Surface water abstractions

|                             |          |
|-----------------------------|----------|
| <b>Records within 2000m</b> | <b>0</b> |
|-----------------------------|----------|

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.8 Potable abstractions

|                             |          |
|-----------------------------|----------|
| <b>Records within 2000m</b> | <b>0</b> |
|-----------------------------|----------|

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.9 Source Protection Zones

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>1</b> |
|----------------------------|----------|

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

Features are displayed on the Abstractions and Source Protection Zones map on **page 38**

| ID | Location | Type | Description     |
|----|----------|------|-----------------|
| 1  | On site  | 3    | Total catchment |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

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### 6.1 Water Network (OS MasterMap)

Records within 250m

13

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 43**

| ID | Location | Type of water feature                   | Ground level      | Permanence                                                      | Name                        |
|----|----------|-----------------------------------------|-------------------|-----------------------------------------------------------------|-----------------------------|
| A  | 14m NW   | Manmade watercourse for water transfer. | On ground surface | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |

| ID | Location | Type of water feature                               | Ground level      | Permanence                                                      | Name                        |
|----|----------|-----------------------------------------------------|-------------------|-----------------------------------------------------------------|-----------------------------|
| 1  | 36m N    | Manmade watercourse for water transfer.             | Underground       | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| B  | 55m SW   | Manmade watercourse for water transfer.             | Underground       | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| B  | 70m SW   | Manmade watercourse for water transfer.             | On ground surface | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| B  | 98m SW   | Manmade watercourse for water transfer.             | Underground       | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| E  | 99m N    | Manmade watercourse for water transfer.             | On ground surface | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| F  | 147m SW  | Manmade watercourse for water transfer.             | On ground surface | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| E  | 152m N   | Manmade watercourse for water transfer.             | Underground       | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| E  | 161m N   | Manmade watercourse for water transfer.             | On ground surface | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| 2  | 175m SE  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -                           |
| E  | 199m N   | Manmade watercourse for water transfer.             | Underground       | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| G  | 214m N   | Manmade watercourse for water transfer.             | On ground surface | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |
| 3  | 239m SW  | Manmade watercourse for water transfer.             | Underground       | Watercourse contains water year round (in normal circumstances) | Staines Reservoirs Aqueduct |

*This data is sourced from the Ordnance Survey.*



## 6.2 Surface water features

### Records within 250m

6

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 43**

*This data is sourced from the Ordnance Survey.*

## 6.3 WFD Surface water body catchments

### Records on site

1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 43**

| ID | Location | Type               | Water body catchment | Water body ID  | Operational catchment | Management catchment |
|----|----------|--------------------|----------------------|----------------|-----------------------|----------------------|
| A  | On site  | River WB catchment | Surrey Ash           | GB106039023480 | Colne                 | Colne                |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 6.4 WFD Surface water bodies

### Records identified

3

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 43**

| ID | Location | Type | Name                    | Water body ID              | Overall rating | Chemical rating | Ecological rating | Year |
|----|----------|------|-------------------------|----------------------------|----------------|-----------------|-------------------|------|
| C  | 92m E    | Lake | Staines Reservoir South | <a href="#">GB30642525</a> | Moderate       | Good            | Moderate          | 2016 |



| ID | Location | Type  | Name                     | Water body ID                  | Overall rating | Chemical rating | Ecological rating | Year |
|----|----------|-------|--------------------------|--------------------------------|----------------|-----------------|-------------------|------|
| D  | 138m NW  | Lake  | King George VI Reservoir | <a href="#">GB30642488</a>     | Moderate       | Good            | Moderate          | 2016 |
| 6  | 344m SW  | River | Surrey Ash               | <a href="#">GB106039023480</a> | Moderate       | Good            | Moderate          | 2016 |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 6.5 WFD Groundwater bodies

### Records on site

**1**

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 43**

| ID | Location | Name                 | Water body ID                  | Overall rating | Chemical rating | Quantitative | Year |
|----|----------|----------------------|--------------------------------|----------------|-----------------|--------------|------|
| A  | On site  | Lower Thames Gravels | <a href="#">GB40603G000300</a> | Good           | Good            | Good         | 2015 |

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 7 River and coastal flooding



- Site Outline
- Search buffers in metres (m)
- Environment Agency river and coastal flooding:
  - High
  - Medium
  - Low
  - Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

### 7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.2 Historical Flood Events

### Records within 250m

**11**

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

Features are displayed on the River and coastal flooding map on **page 47**

| ID | Location | Event name           | Date of flood            | Flood source | Flood cause                                    | Type of flood |
|----|----------|----------------------|--------------------------|--------------|------------------------------------------------|---------------|
| 1  | 76m NW   | South West England   | 2014-01-30<br>2014-02-10 | Unclassified | Unclassified                                   | No data       |
| A  | 91m NE   | South West England   | 2014-01-30<br>2014-02-10 | Unclassified | Unclassified                                   | No data       |
| 2  | 91m NE   | South West England   | 2014-01-30<br>2014-02-10 | Unclassified | Unclassified                                   | No data       |
| A  | 94m E    | South West England   | 2014-01-30<br>2014-02-10 | Unclassified | Unclassified                                   | No data       |
| A  | 96m E    | South West England   | 2014-01-30<br>2014-02-10 | Unclassified | Unclassified                                   | No data       |
| 3  | 162m N   | Ea06winter13-14      | 2013-11-23<br>2014-02-28 | Main river   | Channel capacity exceeded (no raised defences) | Fluvial       |
| 4  | 165m W   | South West England   | 2014-01-30<br>2014-02-10 | Unclassified | Unclassified                                   | No data       |
| 5  | 225m SE  | 06marchspring1947    | 1947-01-01<br>1947-12-12 | Main river   | Channel capacity exceeded (no raised defences) | Fluvial       |
| B  | 236m S   | Ea06winter13-14      | 2013-11-23<br>2014-02-28 | Unknown      | Local drainage/surface water                   | Fluvial       |
| B  | 239m SE  | 06januarynewyear2003 | 2002-12-23<br>2003-01-12 | Sewer        | Channel capacity exceeded (no raised defences) | Fluvial       |
| B  | 243m S   | South West England   | 2014-01-30<br>2014-02-10 | Unclassified | Unclassified                                   | No data       |

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 7.3 Flood Defences

Records within 250m

0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## River and coastal flooding - Flood Zones

### 7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 7.7 Flood Zone 3

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

### 8.1 Surface water flooding

**Highest risk on site**

**Negligible**

**Highest risk within 50m**

**1 in 30 year, 0.3m - 1.0m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 51**

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

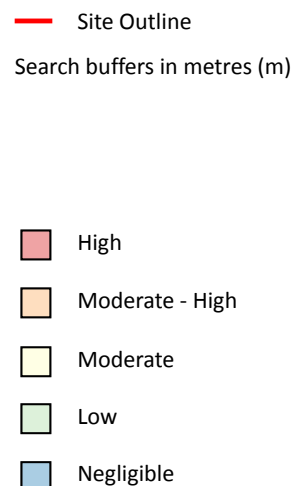
The table below shows the maximum flood depths for a range of return periods for the site.

| Return period  | Maximum modelled depth |
|----------------|------------------------|
| 1 in 1000 year | Negligible             |
| 1 in 250 year  | Negligible             |
| 1 in 100 year  | Negligible             |
| 1 in 30 year   | Negligible             |

*This data is sourced from Ambiantal Risk Analytics.*



## 9 Groundwater flooding



### 9.1 Groundwater flooding

**Highest risk on site**

**Moderate-High**

**Highest risk within 50m**

**High**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 53**

*This data is sourced from Ambiantal Risk Analytics.*

## 10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- X Conserved wetland sites (Ramsar sites)
- Special Protection Areas (SPA)
- Green Belt

### 10.1 Sites of Special Scientific Interest (SSSI)

#### Records within 2000m

5

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 54**

| ID | Location | Name         | Data source     |
|----|----------|--------------|-----------------|
| 2  | 47m NW   | Staines Moor | Natural England |



| ID | Location | Name         | Data source     |
|----|----------|--------------|-----------------|
| 3  | 67m E    | Staines Moor | Natural England |
| 4  | 152m N   | Staines Moor | Natural England |
| B  | 169m N   | Staines Moor | Natural England |
| 5  | 239m SE  | Staines Moor | Natural England |

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.2 Conserved wetland sites (Ramsar sites)

**Records within 2000m**

**2**

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

Features are displayed on the Environmental designations map on **page 54**

| ID | Location | Site                                                                                       | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----|----------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A  | 47m NW   | Name: South West London Waterbodies<br>Site status: Listed<br>Data source: Natural England | Overview: The South West London Waterbodies site comprises a series of reservoirs and former gravel pits that support internationally important numbers of wintering <i>Anas strepera</i> and <i>Anas clypeata</i> .<br>Ramsar criteria: 6. Supports nationally important populations of the following species: Great cormorant <i>Phalacrocorax carbo</i> , great crested grebe <i>Podiceps cristatus</i> , common pochard <i>Aythya ferina</i> , tufted duck <i>Aythya fuligula</i> , common coot <i>Fulica atra</i> . |
| B  | 66m E    | Name: South West London Waterbodies<br>Site status: Listed<br>Data source: Natural England | Overview: The South West London Waterbodies site comprises a series of reservoirs and former gravel pits that support internationally important numbers of wintering <i>Anas strepera</i> and <i>Anas clypeata</i> .<br>Ramsar criteria: 6. Supports nationally important populations of the following species: Great cormorant <i>Phalacrocorax carbo</i> , great crested grebe <i>Podiceps cristatus</i> , common pochard <i>Aythya ferina</i> , tufted duck <i>Aythya fuligula</i> , common coot <i>Fulica atra</i> . |

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*



### 10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

### 10.4 Special Protection Areas (SPA)

Records within 2000m

2

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

Features are displayed on the Environmental designations map on **page 54**

| ID | Location | Name                          | Species of interest        | Habitat description                                                                                                                            | Data source     |
|----|----------|-------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| A  | 47m NW   | South West London Waterbodies | Gadwall; Northern shoveler | Broad-leaved deciduous woodland; Inland water bodies (Standing water, Running water); Improved grassland; Humid grassland, Mesophile grassland | Natural England |
| B  | 67m E    | South West London Waterbodies | Gadwall; Northern shoveler | Broad-leaved deciduous woodland; Inland water bodies (Standing water, Running water); Improved grassland; Humid grassland, Mesophile grassland | Natural England |

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

### 10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.6 Local Nature Reserves (LNR)

Records within 2000m

0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.7 Designated Ancient Woodland

Records within 2000m

0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

*This data is sourced from the Forestry Commission.*

## 10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.11 Green Belt

Records within 2000m

4

Areas designated to prevent urban sprawl by keeping land permanently open.

Features are displayed on the Environmental designations map on **page 54**

| ID | Location | Name   | Local Authority name   |
|----|----------|--------|------------------------|
| 1  | 30m NW   | London | Spelthorne             |
| 6  | 1551m SW | London | Runnymede              |
| -  | 1745m W  | London | Windsor and Maidenhead |
| -  | 1795m E  | London | Spelthorne             |

*This data is sourced from the Ministry of Housing, Communities and Local Government.*

## 10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

*This data is sourced from Natural England.*

## 10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

*This data is sourced from Natural England and Natural Resources Wales.*



## 10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

*This data is sourced from Natural England.*

## 10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

*This data is sourced from Natural England.*

## 10.16 Nitrate Vulnerable Zones

Records within 2000m

0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

*This data is sourced from Natural England and Natural Resources Wales.*

## SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

### 10.17 SSSI Impact Risk Zones

#### Records on site

2

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 60**

| ID | Location | Type of developments requiring consultation                                     |
|----|----------|---------------------------------------------------------------------------------|
| 1  | On site  | All applications - All Planning Applications - Except Householder Applications. |

| ID | Location | Type of developments requiring consultation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | On site  | <p>All applications - All Planning Applications (Except Householder) Outside Or Extending Outside Existing Settlements/urban Areas Affecting Greenspace, Farmland, Semi Natural Habitats Or Landscape Features Such As Trees, Hedges, Streams, Rural Buildings/structures</p> <p>Infrastructure - Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals</p> <p>Wind and Solar - Solar schemes with footprint &gt; 0.5ha, all wind turbines</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil &amp; gas exploration/extraction.</p> <p>Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is &gt; 1,000m<sup>2</sup> or footprint exceeds 0.2ha</p> <p>Residential - Residential development of 10 units or more.</p> <p>Rural residential - Any residential developments outside of existing settlements/urban areas with a total net gain in residential units</p> <p>Air pollution - Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock &amp; poultry units, slurry lagoons/manure stores).</p> <p>Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p> <p>Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management</p> <p>Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream (NB this does not include discharges to mains sewer which are unlikely to pose a risk at this location).</p> <p>Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is &gt; 1,000m<sup>2</sup> or any development needing its own water supply</p> |

*This data is sourced from Natural England.*

## 10.18 SSSI Units

### Records within 2000m

5

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on **page 60**

ID: 4  
 Location: 47m NW  
 SSSI name: Staines Moor  
 Unit name: King George Vi Reservoir  
 Broad habitat: Standing Open Water And Canals  
 Condition: Favourable  
 Reportable features:



| Feature name                                                      | Feature condition | Date of assessment |
|-------------------------------------------------------------------|-------------------|--------------------|
| Aggregations of non-breeding birds - Goosander, Mergus merganser  | Favourable        | 22/11/2016         |
| Aggregations of non-breeding birds - Pochard, Aythya ferina       | Favourable        | 22/11/2016         |
| Aggregations of non-breeding birds - Shoveler, Anas clypeata      | Favourable        | 22/11/2016         |
| Aggregations of non-breeding birds - Tufted duck, Aythya fuligula | Favourable        | 22/11/2016         |

ID: 6  
 Location: 67m E  
 SSSI name: Staines Moor  
 Unit name: Staines Reservoirs  
 Broad habitat: Standing Open Water And Canals  
 Condition: Favourable  
 Reportable features:

| Feature name                                                      | Feature condition | Date of assessment |
|-------------------------------------------------------------------|-------------------|--------------------|
| Aggregations of non-breeding birds - Goosander, Mergus merganser  | Favourable        | 22/11/2016         |
| Aggregations of non-breeding birds - Pochard, Aythya ferina       | Favourable        | 22/11/2016         |
| Aggregations of non-breeding birds - Shoveler, Anas clypeata      | Favourable        | 22/11/2016         |
| Aggregations of non-breeding birds - Tufted duck, Aythya fuligula | Favourable        | 22/11/2016         |

ID: A  
 Location: 239m SE  
 SSSI name: Staines Moor  
 Unit name: Shortwood Pond  
 Broad habitat: Standing Open Water And Canals  
 Condition: Unfavourable - Recovering  
 Reportable features:

| Feature name              | Feature condition         | Date of assessment |
|---------------------------|---------------------------|--------------------|
| Vascular plant assemblage | Unfavourable - Recovering | 01/10/2010         |

ID: 15  
 Location: 782m W  
 SSSI name: Staines Moor  
 Unit name: Staines Moor  
 Broad habitat: Neutral Grassland - Lowland  
 Condition: Favourable



## Reportable features:

| Feature name                               | Feature condition | Date of assessment |
|--------------------------------------------|-------------------|--------------------|
| Lowland neutral grassland (MG5)            | Favourable        | 01/10/2010         |
| Lowland wet neutral grassland (MG11, MG13) | Favourable        | 01/10/2010         |
| Vascular plant assemblage                  | Not Recorded      | 01/01/1900         |

ID: -  
Location: 1722m W  
SSSI name: Staines Moor  
Unit name: Moor Lane  
Broad habitat: Neutral Grassland - Lowland  
Condition: Favourable  
Reportable features:

| Feature name                                                                                                           | Feature condition | Date of assessment |
|------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------|
| Lowland wet neutral grassland (MG11, MG13)                                                                             | Favourable        | 01/10/2010         |
| Lowland wetland including basin fen, valley fen, floodplain fen, waterfringe fen, spring/flush fen and raised bog lagg | Favourable        | 01/10/2010         |

*This data is sourced from Natural England and Natural Resources Wales.*



## 11 Visual and cultural designations

### 11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

### 11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

### 11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

*This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.*

### 11.4 Listed Buildings

Records within 250m

0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.5 Conservation Areas

**Records within 250m**

**0**

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.6 Scheduled Ancient Monuments

**Records within 250m**

**0**

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.7 Registered Parks and Gardens

**Records within 250m**

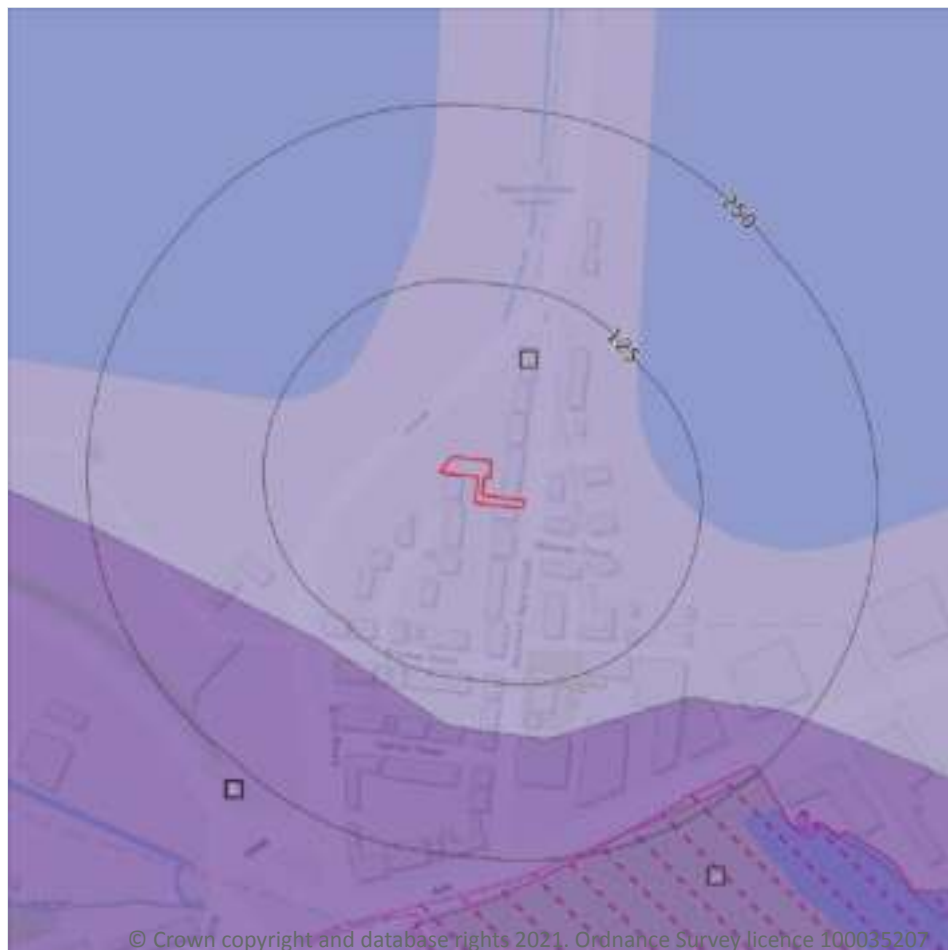
**0**

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*



## 12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

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### 12.1 Agricultural Land Classification

Records within 250m

2

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 66**

| ID | Location | Classification   | Description |
|----|----------|------------------|-------------|
| 1  | On site  | Non Agricultural | -           |
| 2  | 142m SW  | Urban            | -           |

*This data is sourced from Natural England.*



## 12.2 Open Access Land

Records within 250m

3

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

Features are displayed on the Agricultural designations map on **page 66**

| ID | Location | Name                                                                      | Classification                              | Other relevant legislation     |
|----|----------|---------------------------------------------------------------------------|---------------------------------------------|--------------------------------|
| A  | 235m SE  | Staines Lammas or Church Lammas                                           | Section 15 Land                             | S.193 - Urban Borough District |
| A  | 235m SE  | Shortwood Common, Knowle Green, Birch Green, Staines Moor and other lands | Section 4 Conclusive Registered Common Land | -                              |
| A  | 241m S   | Staines Commons                                                           | Section 15 Land                             | Metropolitan                   |

*This data is sourced from Natural England and Natural Resources Wales.*

## 12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

*This data is sourced from the Forestry Commission.*

## 12.4 Environmental Stewardship Schemes

Records within 250m

1

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

| Location | Reference  | Scheme                   | Start Date | End date   |
|----------|------------|--------------------------|------------|------------|
| 239m SE  | AG00393662 | Higher Level Stewardship | 01/03/2012 | 28/02/2022 |

*This data is sourced from Natural England.*



## 12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

*This data is sourced from Natural England.*



## 13 Habitat designations



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

### 13.1 Priority Habitat Inventory

Records within 250m

5

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 69**

| ID | Location | Main Habitat                                    | Other habitats                                     |
|----|----------|-------------------------------------------------|----------------------------------------------------|
| 1  | 45m NW   | No main habitat but additional habitats present | Main habitat: RBEDS (INV > 50%)                    |
| 2  | 61m E    | No main habitat but additional habitats present | Main habitat: RBEDS (INV > 50%)                    |
| 3  | 80m E    | No main habitat but additional habitats present | Main habitat: RBEDS (INV > 50%)                    |
| 4  | 239m SE  | Good quality semi-improved grassland            | Main habitat: RBEDS (INV > 50%); GQSIG (FEP + HLS) |



| ID | Location | Main Habitat                         | Other habitats                                     |
|----|----------|--------------------------------------|----------------------------------------------------|
| 5  | 239m SE  | Good quality semi-improved grassland | Main habitat: RBEDS (INV > 50%); GQSIG (FEP + HLS) |

*This data is sourced from Natural England.*

## 13.2 Habitat Networks

|                            |          |
|----------------------------|----------|
| <b>Records within 250m</b> | <b>0</b> |
|----------------------------|----------|

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

*This data is sourced from Natural England.*

## 13.3 Open Mosaic Habitat

|                            |          |
|----------------------------|----------|
| <b>Records within 250m</b> | <b>0</b> |
|----------------------------|----------|

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

*This data is sourced from Natural England.*

## 13.4 Limestone Pavement Orders

|                            |          |
|----------------------------|----------|
| <b>Records within 250m</b> | <b>0</b> |
|----------------------------|----------|

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

*This data is sourced from Natural England.*

## 14 Geology 1:10,000 scale - Availability



- Site Outline**
- Search buffers in metres (m)
- Full coverage
  - Partial coverage
  - No coverage

### 14.1 10k Availability

#### Records within 500m

2

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

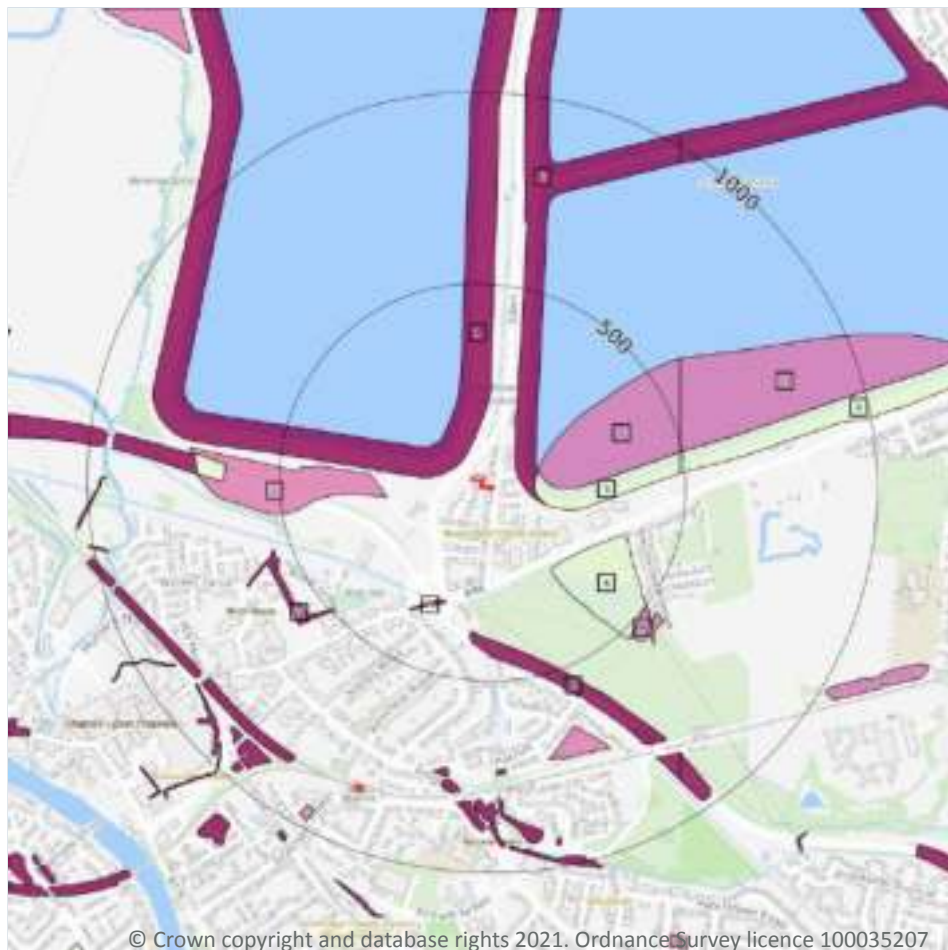
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 71**

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No. |
|----|----------|------------|-------------|---------|---------------|-----------|
| 1  | On site  | Full       | Full        | Full    | No coverage   | TQ07SW    |
| 2  | 485m E   | Full       | Full        | Full    | No coverage   | TQ07SE    |

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Artificial and made ground



- Site Outline**
- Search buffers in metres (m)**
- Reclaimed ground
  - Made ground
  - Worked ground
  - Infilled ground
  - Disturbed ground
  - Landscaped ground

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### 14.2 Artificial and made ground (10k)

**Records within 500m**

**12**

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 72**

| ID | Location | LEX Code     | Description               | Rock description           |
|----|----------|--------------|---------------------------|----------------------------|
| 1  | 49m NW   | MGR-UNKNOWN  | Made Ground (Undivided)   | Unknown/unclassified Entry |
| 2  | 69m NE   | MGR-UNKNOWN  | Made Ground (Undivided)   | Unknown/unclassified Entry |
| 3  | 107m E   | WMGR-UNKNOWN | Infilled Ground           | Unknown/unclassified Entry |
| 4  | 122m E   | WGR-UNKNOWN  | Worked Ground (Undivided) | Unknown/unclassified Entry |

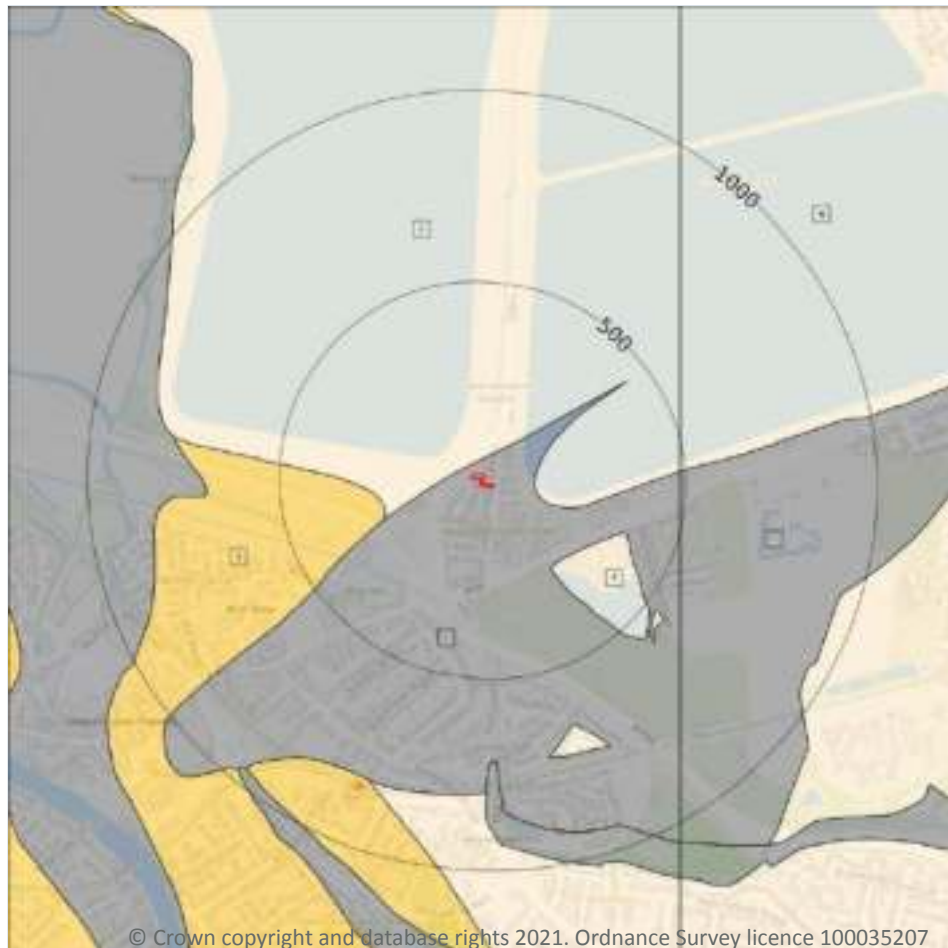


| ID | Location | LEX Code     | Description               | Rock description           |
|----|----------|--------------|---------------------------|----------------------------|
| 5  | 224m W   | WGR-UNKNOWN  | Worked Ground (Undivided) | Unknown/unclassified Entry |
| 6  | 256m SE  | WMGR-UNKNOWN | Infilled Ground           | Unknown/unclassified Entry |
| 7  | 307m S   | MGR-UNKNOWN  | Made Ground (Undivided)   | Unknown/unclassified Entry |
| 8  | 373m S   | MGR-UNKNOWN  | Made Ground (Undivided)   | Unknown/unclassified Entry |
| 9  | 487m E   | WMGR-UNKNOWN | Infilled Ground           | Unknown/unclassified Entry |
| 10 | 489m SW  | MGR-UNKNOWN  | Made Ground (Undivided)   | Unknown/unclassified Entry |
| 11 | 494m E   | WGR-UNKNOWN  | Worked Ground (Undivided) | Unknown/unclassified Entry |
| A  | 497m SE  | WGR-UNKNOWN  | Worked Ground (Undivided) | Unknown/unclassified Entry |

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Superficial



— Site Outline

Search buffers in metres (m)

☒ Landslip (10k)

Superficial geology (10k)  
Please see table for more details.

### 14.3 Superficial geology (10k)

Records within 500m

6

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 74**

| ID | Location | LEX Code | Description                                                     | Rock description |
|----|----------|----------|-----------------------------------------------------------------|------------------|
| 1  | On site  | LASI-Z   | Langley Silt Member - Silt (unlithified Deposits Coding Scheme) | Silt             |
| 2  | 24m NW   | KPGR-XSV | Kempton Park Gravel Formation - Sand And Gravel                 | Sand And Gravel  |
| 3  | 239m W   | SHGR-XSV | Shepperton Gravel Member - Sand And Gravel                      | Sand And Gravel  |



| ID | Location | LEX Code | Description                                                     | Rock description |
|----|----------|----------|-----------------------------------------------------------------|------------------|
| 4  | 256m SE  | KPGR-XSV | Kempton Park Gravel Formation - Sand And Gravel                 | Sand And Gravel  |
| 5  | 485m E   | LASI-Z   | Langley Silt Member - Silt (unlithified Deposits Coding Scheme) | Silt             |
| 6  | 487m E   | KPGR-XSV | Kempton Park Gravel Formation - Sand And Gravel                 | Sand And Gravel  |

*This data is sourced from the British Geological Survey.*

## 14.4 Landslip (10k)

**Records within 500m**

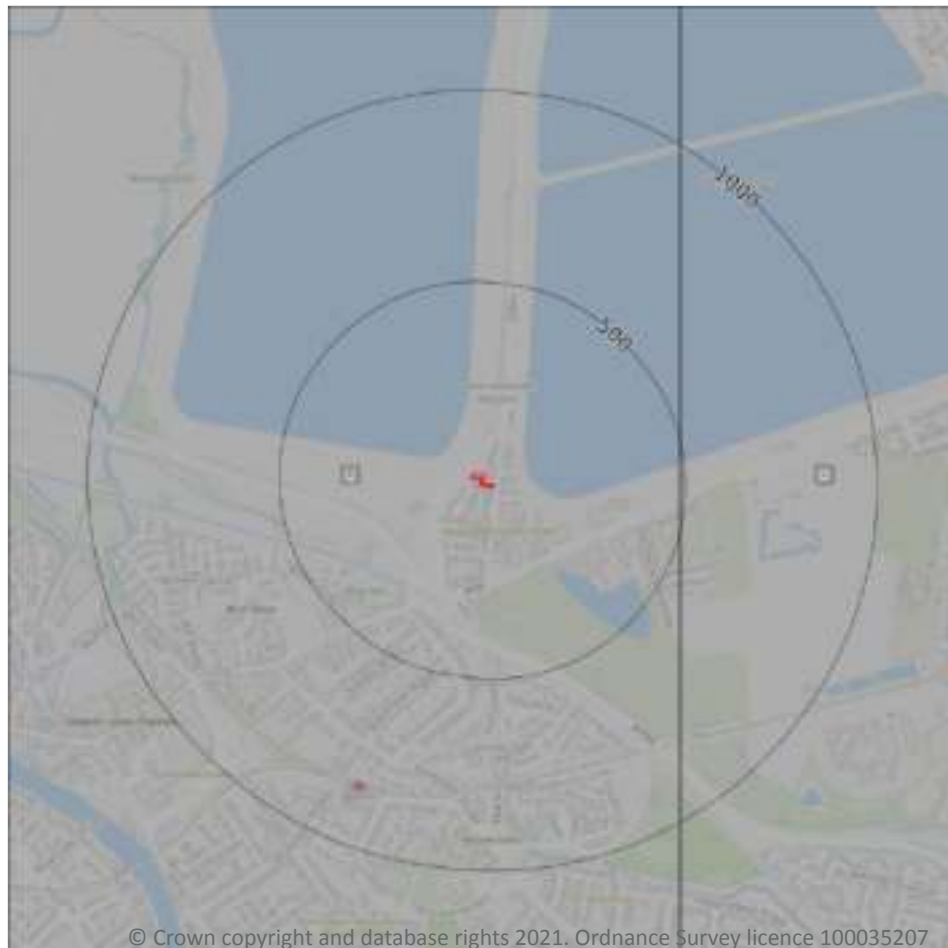
**0**

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (10k)
- Bedrock geology (10k)  
Please see table for more details.

### 14.5 Bedrock geology (10k)

#### Records within 500m

2

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 76**

| ID | Location | LEX Code | Description                  | Rock age     |
|----|----------|----------|------------------------------|--------------|
| 1  | On site  | LC-CLAY  | London Clay Formation - Clay | Eocene Epoch |
| 2  | 485m E   | LC-CLAY  | London Clay Formation - Clay | Eocene Epoch |

*This data is sourced from the British Geological Survey.*



## 14.6 Bedrock faults and other linear features (10k)

Records within 500m

0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

*This data is sourced from the British Geological Survey.*



## 15 Geology 1:50,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- ☐ Geological map tile

### 15.1 50k Availability

#### Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

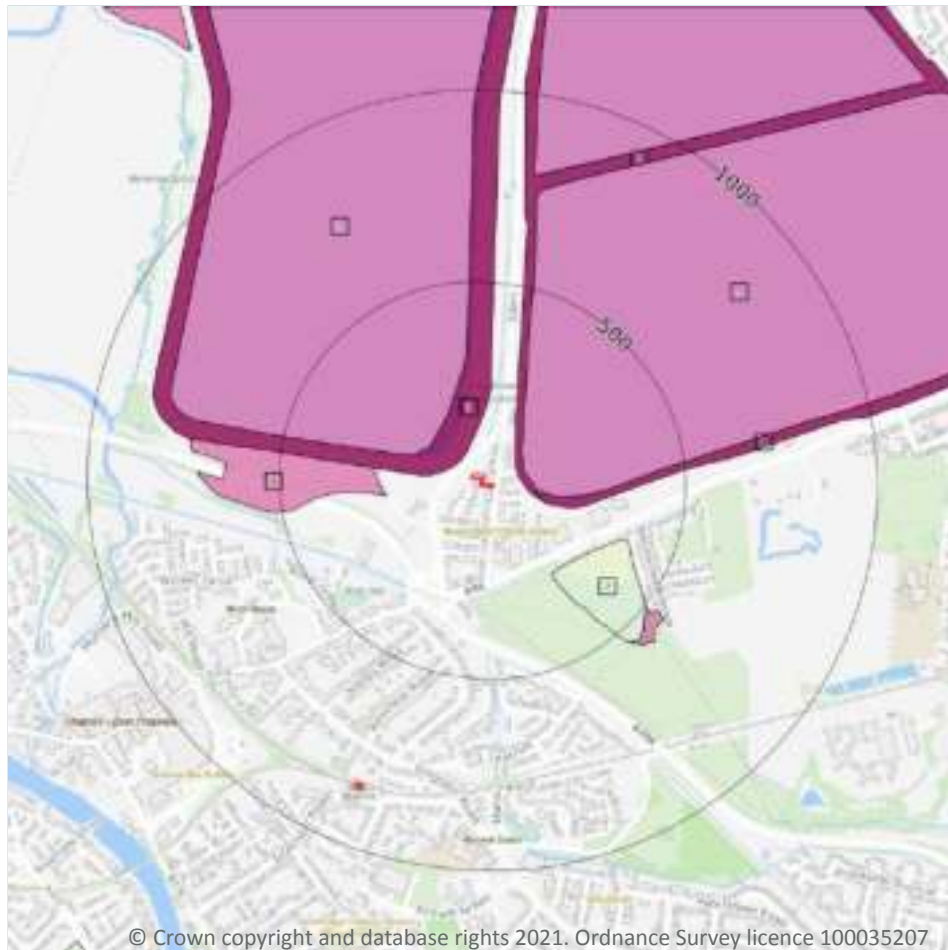
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 78**

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No.        |
|----|----------|------------|-------------|---------|---------------|------------------|
| 1  | On site  | Full       | Full        | Full    | Full          | EW269_windsor_v4 |

*This data is sourced from the British Geological Survey.*



## Geology 1:50,000 scale - Artificial and made ground



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- Site Outline
- Search buffers in metres (m)
- Made ground
  - Worked ground
  - Infilled ground
  - Disturbed ground
  - Landscaped ground

### 15.2 Artificial and made ground (50k)

#### Records within 500m

7

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 79**

| ID | Location | LEX Code  | Description               | Rock description   |
|----|----------|-----------|---------------------------|--------------------|
| 1  | 49m NW   | MGR-ARTDP | MADE GROUND (UNDIVIDED)   | ARTIFICIAL DEPOSIT |
| 2  | 70m NE   | MGR-ARTDP | MADE GROUND (UNDIVIDED)   | ARTIFICIAL DEPOSIT |
| 3  | 87m NE   | WGR-VOID  | WORKED GROUND (UNDIVIDED) | VOID               |
| 4  | 109m E   | MGR-ARTDP | MADE GROUND (UNDIVIDED)   | ARTIFICIAL DEPOSIT |



| ID | Location | LEX Code   | Description               | Rock description   |
|----|----------|------------|---------------------------|--------------------|
| 5  | 134m NW  | WGR-VOID   | WORKED GROUND (UNDIVIDED) | VOID               |
| 6  | 224m W   | WGR-VOID   | WORKED GROUND (UNDIVIDED) | VOID               |
| 7  | 270m SE  | WMGR-ARTDP | INFILLED GROUND           | ARTIFICIAL DEPOSIT |

*This data is sourced from the British Geological Survey.*

### 15.3 Artificial ground permeability (50k)

#### Records within 50m

**1**

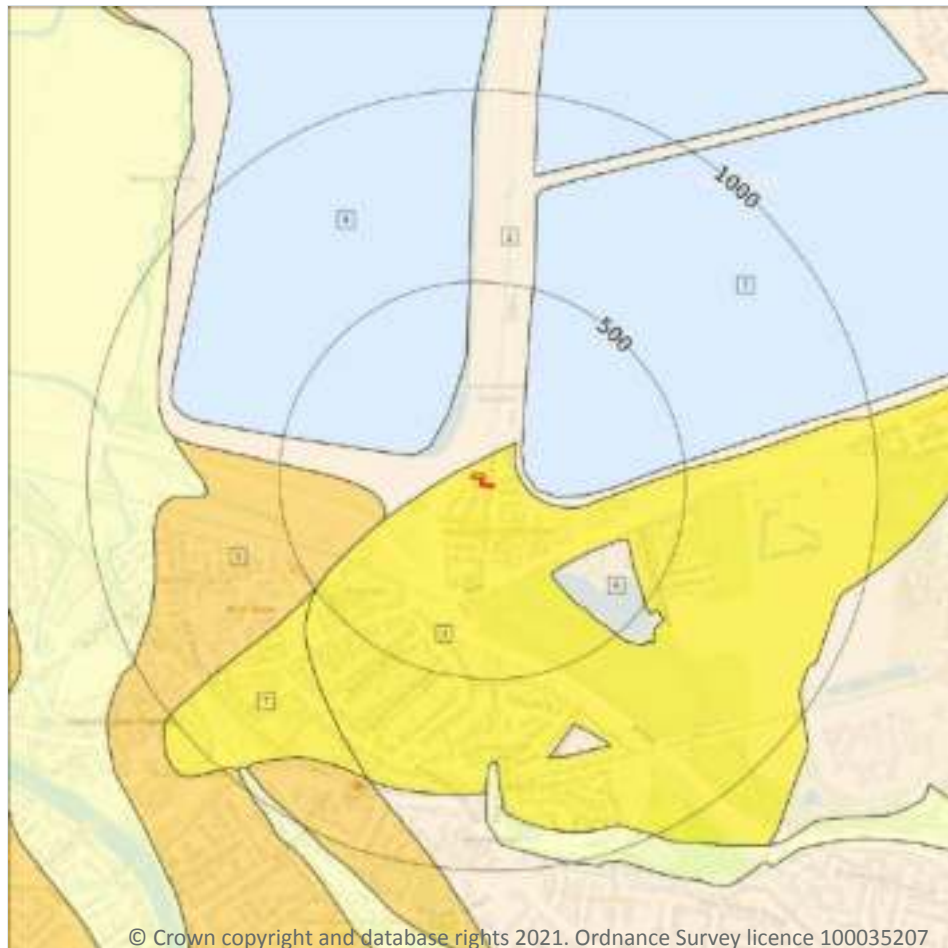
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

| Location | Flow type | Maximum permeability | Minimum permeability |
|----------|-----------|----------------------|----------------------|
| 49m N    | Mixed     | Very High            | Low                  |

*This data is sourced from the British Geological Survey.*



## Geology 1:50,000 scale - Superficial



— Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)  
Please see table for more details.

### 15.4 Superficial geology (50k)

#### Records within 500m

7

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 81**

| ID | Location | LEX Code   | Description                                             | Rock description        |
|----|----------|------------|---------------------------------------------------------|-------------------------|
| 1  | On site  | LASI-XCZ   | LANGLEY SILT MEMBER                                     | CLAY AND SILT           |
| 2  | 24m NW   | KPGR-XSV   | KEMPTON PARK GRAVEL MEMBER                              | SAND AND GRAVEL         |
| 3  | 87m NE   | SUPNM-WATR | SUPERFICIAL THEME NOT MAPPED [FOR DIGITAL MAP USE ONLY] | WATER, TYPE UNSPECIFIED |



| ID | Location | LEX Code   | Description                                             | Rock description        |
|----|----------|------------|---------------------------------------------------------|-------------------------|
| 4  | 134m NW  | SUPNM-WATR | SUPERFICIAL THEME NOT MAPPED [FOR DIGITAL MAP USE ONLY] | WATER, TYPE UNSPECIFIED |
| 5  | 239m W   | SHGR-XSV   | SHEPPERTON GRAVEL MEMBER                                | SAND AND GRAVEL         |
| 6  | 270m SE  | KPGR-XSV   | KEMPTON PARK GRAVEL MEMBER                              | SAND AND GRAVEL         |
| 7  | 498m SW  | LASI-XCZ   | LANGLEY SILT MEMBER                                     | CLAY AND SILT           |

*This data is sourced from the British Geological Survey.*

## 15.5 Superficial permeability (50k)

|                           |          |
|---------------------------|----------|
| <b>Records within 50m</b> | <b>2</b> |
|---------------------------|----------|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

| Location       | Flow type     | Maximum permeability | Minimum permeability |
|----------------|---------------|----------------------|----------------------|
| <b>On site</b> | <b>Mixed</b>  | <b>Low</b>           | <b>Very Low</b>      |
| 24m N          | Intergranular | Very High            | High                 |

*This data is sourced from the British Geological Survey.*

## 15.6 Landslip (50k)

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*

## 15.7 Landslip permeability (50k)

|                           |          |
|---------------------------|----------|
| <b>Records within 50m</b> | <b>0</b> |
|---------------------------|----------|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

*This data is sourced from the British Geological Survey.*



## Geology 1:50,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (50k)
- Bedrock geology (50k)  
Please see table for more details.

### 15.8 Bedrock geology (50k)

#### Records within 500m

1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 83**

| ID | Location | LEX Code | Description                                 | Rock age |
|----|----------|----------|---------------------------------------------|----------|
| 1  | On site  | LC-XCZS  | LONDON CLAY FORMATION - CLAY, SILT AND SAND | YPRESIAN |

*This data is sourced from the British Geological Survey.*



## 15.9 Bedrock permeability (50k)

### Records within 50m

**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

| Location | Flow type | Maximum permeability | Minimum permeability |
|----------|-----------|----------------------|----------------------|
| On site  | Mixed     | Moderate             | Very Low             |

*This data is sourced from the British Geological Survey.*

## 15.10 Bedrock faults and other linear features (50k)

### Records within 500m

**0**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

*This data is sourced from the British Geological Survey.*



## 16 Boreholes



— Site Outline  
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

### 16.1 BGS Boreholes

Records within 250m

7

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 85**

| ID | Location | Grid reference | Name                     | Length | Confidential | Web link               |
|----|----------|----------------|--------------------------|--------|--------------|------------------------|
| 1  | 127m W   | 504328 172238  | STAINES RESERVOIR 4      | -      | Y            | N/A                    |
| A  | 146m SE  | 504570 172080  | STAINES LONDON RD        | 420.62 | N            | <a href="#">574434</a> |
| A  | 150m SE  | 504580 172080  | MIDDX AND SURREY LAUNDRY | 420.62 | N            | <a href="#">574521</a> |

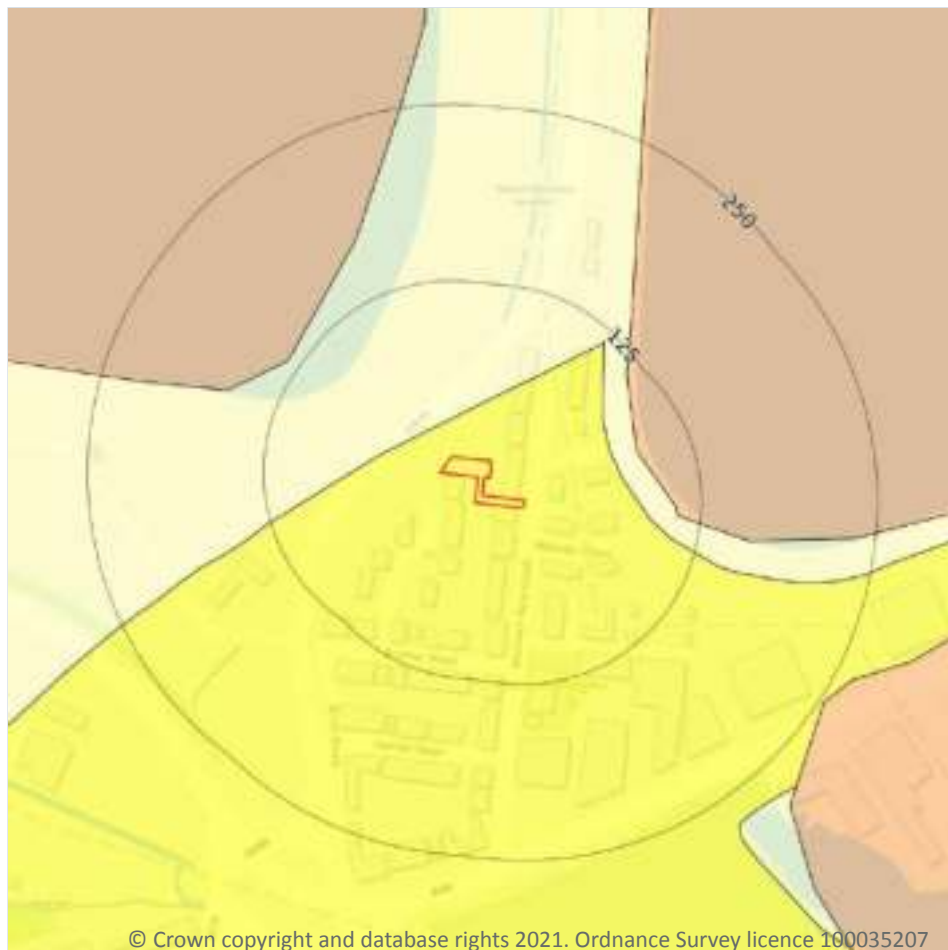


| ID | Location | Grid reference | Name                     | Length | Confidential | Web link               |
|----|----------|----------------|--------------------------|--------|--------------|------------------------|
| 2  | 207m W   | 504250 172210  | WRAYSBURY RESERVOIR 19-1 | 45.99  | N            | <a href="#">574396</a> |
| 3  | 214m E   | 504718 172149  | STAINES RESERVOIR 11     | -      | Y            | N/A                    |
| B  | 215m S   | 504520 172000  | MIDDX AND SURREY LAUNDRY | 129.84 | N            | <a href="#">574522</a> |
| B  | 225m S   | 504510 171990  | MIDDX AND SURREY LAUNDRY | 8.32   | N            | <a href="#">574520</a> |

*This data is sourced from the British Geological Survey.*



## 17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.1 Shrink swell clays

#### Records within 50m

2

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

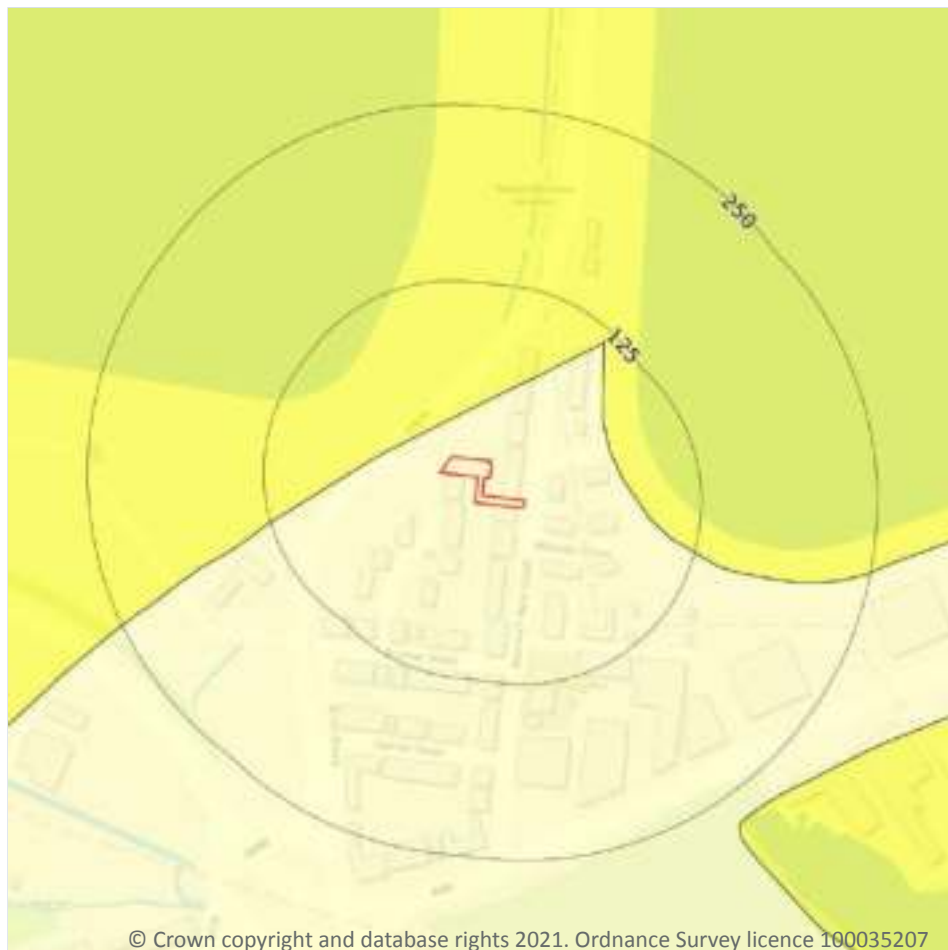
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 87**

| Location | Hazard rating | Details                                         |
|----------|---------------|-------------------------------------------------|
| On site  | Very low      | Ground conditions predominantly low plasticity. |
| 24m NW   | Negligible    | Ground conditions predominantly non-plastic.    |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.2 Running sands

#### Records within 50m

2

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 88**

| Location | Hazard rating | Details                                                                                                                                                      |
|----------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Negligible    | Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions. |

| Location | Hazard rating | Details                                                                                                                                 |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 24m NW   | Very low      | Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Compressible deposits



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— Site Outline  
Search buffers in metres (m)

- ☐ No data
- ☐ Negligible
- ☐ Very low
- ☐ Low
- ☐ Moderate
- ☐ High

### 17.3 Compressible deposits

#### Records within 50m

2

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 90**

| Location       | Hazard rating     | Details                                                                                                         |
|----------------|-------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>On site</b> | <b>Negligible</b> | <b>Compressible strata are not thought to occur.</b>                                                            |
| 49m NW         | Very low          | Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses. |



*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☒ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.4 Collapsible deposits

#### Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 92**

| Location | Hazard rating | Details                                                                                   |
|----------|---------------|-------------------------------------------------------------------------------------------|
| On site  | Very low      | Deposits with potential to collapse when loaded and saturated are unlikely to be present. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

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### 17.5 Landslides

#### Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 93**

| Location | Hazard rating | Details                                                                                                                                                         |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Very low      | Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Ground dissolution of soluble rocks



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.6 Ground dissolution of soluble rocks

#### Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

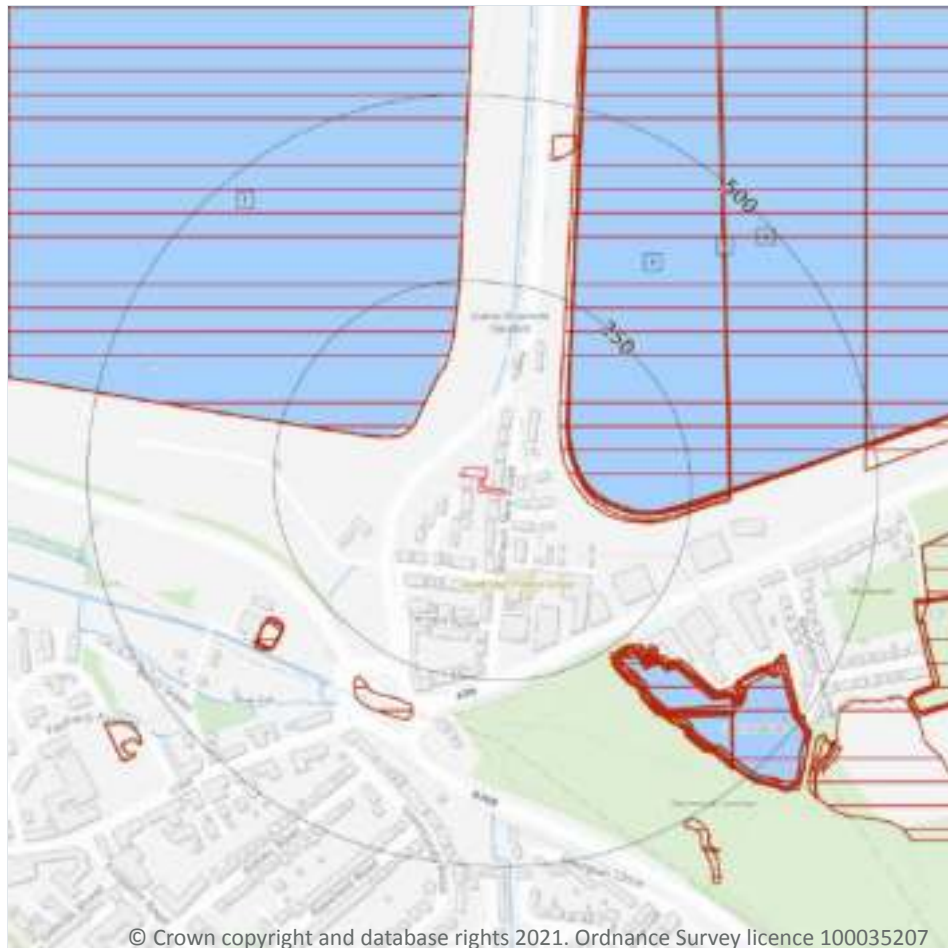
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 94**

| Location | Hazard rating | Details                                                                                                                                             |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Negligible    | Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present. |

*This data is sourced from the British Geological Survey.*



## 18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

### 18.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

*This data is sourced from Stantec UK Ltd.*

## 18.2 BritPits

Records within 500m

0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

*This data is sourced from the British Geological Survey.*

## 18.3 Surface ground workings

Records within 250m

12

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 95**

| ID | Location | Land Use   | Year of mapping | Mapping scale |
|----|----------|------------|-----------------|---------------|
| A  | 88m NE   | Reservoirs | 1938            | 1:10560       |
| B  | 90m NW   | Reservoir  | 1974            | 1:10000       |
| B  | 90m NW   | Reservoir  | 1984            | 1:10000       |
| B  | 90m NW   | Reservoir  | 1955            | 1:10560       |
| A  | 98m E    | Reservoirs | 1920            | 1:10560       |
| C  | 98m E    | Reservoirs | 1938            | 1:10560       |
| C  | 98m E    | Reservoirs | 1913            | 1:10560       |
| D  | 99m E    | Reservoirs | 1974            | 1:10000       |
| D  | 99m E    | Reservoirs | 1984            | 1:10000       |
| D  | 99m E    | Reservoirs | 1955            | 1:10560       |
| C  | 102m E   | Reservoirs | 1934            | 1:10560       |
| C  | 103m E   | Reservoirs | 1934            | 1:10560       |

*This is data is sourced from Ordnance Survey/Groundsure.*



## 18.4 Underground workings

**Records within 1000m****0**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

*This data is sourced from Ordnance Survey/Groundsure.*

## 18.5 Historical Mineral Planning Areas

**Records within 500m****0**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

*This data is sourced from the British Geological Survey.*

## 18.6 Non-coal mining

**Records within 1000m****0**

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

*This data is sourced from the British Geological Survey.*

## 18.7 Mining cavities

**Records within 1000m****0**

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

*This data is sourced from Stantec UK Ltd.*

## 18.8 JPB mining areas

**Records on site****0**

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

*This data is sourced from Johnson Poole and Bloomer.*



## 18.9 Coal mining

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

Areas which could be affected by past, current or future coal mining.

*This data is sourced from the Coal Authority.*

## 18.10 Brine areas

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

*This data is sourced from the Cheshire Brine Subsidence Compensation Board.*

## 18.11 Gypsum areas

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

Generalised areas that may be affected by gypsum extraction.

*This data is sourced from British Gypsum.*

## 18.12 Tin mining

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

Generalised areas that may be affected by historical tin mining.

*This data is sourced from Mining Searches UK.*

## 18.13 Clay mining

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

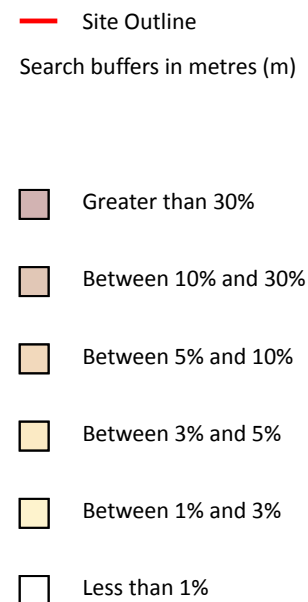
Generalised areas that may be affected by kaolin and ball clay extraction.

*This data is sourced from the Kaolin and Ball Clay Association (UK).*

## 19 Radon



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### 19.1 Radon

#### Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 99**

| Location | Estimated properties affected | Radon Protection Measures required |
|----------|-------------------------------|------------------------------------|
| On site  | Less than 1%                  | None**                             |

*This data is sourced from the British Geological Survey and Public Health England.*



## 20 Soil chemistry

### 20.1 BGS Estimated Background Soil Chemistry

Records within 50m

4

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km<sup>2</sup>. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km<sup>2</sup>; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

| Location | Arsenic  | Bioaccessible Arsenic | Lead            | Bioaccessible Lead | Cadmium   | Chromium      | Nickel        |
|----------|----------|-----------------------|-----------------|--------------------|-----------|---------------|---------------|
| On site  | 15 mg/kg | No data               | 300 - 600 mg/kg | 240 - 360 mg/kg    | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| On site  | 15 mg/kg | No data               | 300 - 600 mg/kg | 240 - 360 mg/kg    | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| 24m W    | 15 mg/kg | No data               | 300 - 600 mg/kg | 240 - 360 mg/kg    | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| 49m NE   | 15 mg/kg | No data               | 300 - 600 mg/kg | 240 - 360 mg/kg    | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |

*This data is sourced from the British Geological Survey.*

### 20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km<sup>2</sup>).

*This data is sourced from the British Geological Survey.*



## 20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km<sup>2</sup>.

*This data is sourced from the British Geological Survey.*



## 21 Railway infrastructure and projects

### 21.1 Underground railways (London)

**Records within 250m****0**

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

*This data is sourced from publicly available information by Groundsure.*

### 21.2 Underground railways (Non-London)

**Records within 250m****0**

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

*This data is sourced from publicly available information by Groundsure.*

### 21.3 Railway tunnels

**Records within 250m****0**

Railway tunnels taken from contemporary Ordnance Survey mapping.

*This data is sourced from the Ordnance Survey.*

### 21.4 Historical railway and tunnel features

**Records within 250m****0**

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

*This data is sourced from Ordnance Survey/Groundsure.*

### 21.5 Royal Mail tunnels

**Records within 250m****0**

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.



*This data is sourced from Groundsure/the Postal Museum.*

## 21.6 Historical railways

**Records within 250m**

**0**

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

*This data is sourced from OpenStreetMap.*

## 21.7 Railways

**Records within 250m**

**0**

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

*This data is sourced from Ordnance Survey and OpenStreetMap.*

## 21.8 Crossrail 1

**Records within 500m**

**0**

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

*This data is sourced from publicly available information by Groundsure.*

## 21.9 Crossrail 2

**Records within 500m**

**0**

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

*This data is sourced from publicly available information by Groundsure.*

## 21.10 HS2

**Records within 500m**

**0**

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

*This data is sourced from HS2 Ltd.*



## Data providers

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