

Phase 1 Preliminary Risk Assessment

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Rampard Ltd

74 Turnpike Lane, Wood Green, London, N8 0PR

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1. Introduction

The following document is a Phase 1 Preliminary Risk Assessment carried out by Oakshire Environmental, and includes details of the site, environmental setting, contaminant linkages and an evaluation of risk.

1.1 Project Overview

The client's proposed project involves the construction of 2 storey rear extension to facilitate change of use from vacant HMO units at the upper floors into a 2bed-3p flat at the first floor, a 1bed-2p flat at the second floor and a studio flat on the third floor at 74 Turnpike Lane, Wood Green, London, N8 0PR. Oakshire Environmental have carried out a Phase 1 Preliminary Risk Assessment, as described below.

1.2 Purpose of Investigation

The objectives of the Phase 1 Preliminary Risk Assessment were to:

- Develop a detailed assessment of the site.
- Identify potential contamination sources, receptors and pathways at the site.
- Assess the level of potential contamination risk.
- Determine the requirement or scope of further investigations.

1.3 Scope of Work

- Brief introductory information has been noted to provide context to the report and include an Introduction, Project Overview, Scope of Work and Limitations.
- To develop a detailed assessment of the site, desk studies have been carried out to collate information obtained from sources including the British Geological Society, Environment Agency and Ordnance Survey on planning and site history, ground conditions and environmental setting.
- This information has been used to identify potential contamination sources, receptors and pathways at the site, as part of an initial Conceptual Site Model.
- To assess the level of potential contamination risk, a Conceptual Site Model has been produced to categorise the potential severity of the impact of the contaminant linkage on the receptor and the probability of the contaminant linkage being present.
- Following the assessment of contaminant linkages, an evaluation of contamination risk has been conducted to determine the requirement and scope of further investigations.
- Supporting appendix include photographs, maps, and plans of the site.

1.4 Limitations

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This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

2. Site

The following section provides a description of the site, location and proposed development, in addition to, planning and site history, utilising information obtained from the client and publicly available sources.

2.1 Site Description and Location

The site is located on Turnpike Lane in Hornsey and is approximately 0.02ha. The site is comprised of a three-storey terraced building with a restaurant at the ground floor and a vacant house of multiple occupancy at the upper floors. There is no visible evidence of contamination at the site.

The site is bordered by retail units with flats above to the east and west, residential gardens to the north and Turnpike Lane to the south with additional retail units with flats above beyond. The surrounding area is a mixture of residential dwellings and commercial premises.

National Grid Reference: TQ 31198 89561

2.2 Proposed Development

The proposed development involves the demolition of part of the existing ground floor extension and the construction of a new three-storey extension with a restaurant kitchen at the ground floor and flats across the upper floors.

An external area of hardstanding will be developed at the north of the site to include refuse and cycle storage areas.

2.3 Relevant Planning History

A search of Haringey London Borough Council's planning website identified the following relevant applications at and near the site.

Table 1: Planning applications at or near the site

Application No.	Year	Address	Proposal	Decision	Details
OLD/1957/0666	1957	74 Turnpike Lane (on-site)	Continuation of use for manufacture of ladies dresses	Approve with Conditions	No documents available
OLD/1962/0951	1962		Change of use of betting office	Approve with Conditions	No documents available
OLD/1971/1197	1971		Continued use of premises as retail furniture shop & estate agent office	Approve with Conditions	No documents available
HGY/2002/0198	2002		Change of Use of ground floor from office to (A3) restaurant and the erection of an extract flue to the rear elevation	Approve with Conditions	No contaminated land conditions Not carried out
HGY/2012/2455	2013		Change of use from A1 (retail) to A3 (restaurant) and installation of flue to rear elevation	Approve with Conditions	No contaminated land conditions Resubmission of HGY/2002/0198
HGY/2015/1229	2015		Construction of rear extension including internal alterations and new external flue	Approve with Conditions	No contaminated land conditions
HGY/2017/3117	2018	Land at Haringey Heartlands (300m west of the site)	Hybrid planning permission (part Outline, part Detailed) for the demolition of Olympia Trading Estate and Western Road buildings and structures, and a phased, residential led mixed use development...	Approve with Conditions	Contamination identified within made ground above London Clay Ground gas regime at the site was classified as Characteristic Situation 2 (CS2), requiring mitigation within the proposed development to address potential risks associated with the ingress of ground gas from made ground

2.4 Site History

A detailed assessment of historical Ordnance Survey maps and associated data has highlighted the below on-site and off-site, current and historical land uses.

Table 2: Description of the site and surrounding area over time, according to historical maps

Year	Site Description	Surrounding Area
1863	Site forms part of an open field No development on the site	Surrounding land is predominantly open fields Tottenham Lane and an adjacent land drain bordering the site to the south Railway line and associated embankment 350m south west Gas Works 430m west
1896	End terrace building at the south with external garden/yard at the north	Significant residential development in the surrounding area including mostly terraced and semi-detached dwellings Tottenham Lane renamed to Turnpike Lane Smithy 260m west Tramway along road 280m north east Brewery 340m west Additional lines at railway to the south west Gas Works to the west redeveloped to railway sidings and new Gas Works developed 370m north west including three gasholders New railway line with associated embankment 460m north east
1914	Small outbuilding at the north boundary	Further residential development with additional terraced and semi-detached dwelling Tramway along Turnpike Lane Engine Shed 320m south west Additional lines at railway to the south west
1935	Outbuilding at the north boundary no longer shown	Smithy to the west no longer labelled Additional gasholder and new buildings 450m north west
1955 - 1956		Tramways on Turnpike Lane and along road to the east no longer shown
1975		Railway lines at Engine Shed to the south west removed Some buildings and tanks at Gas Works to the north west removed
1990 - 1992		Engine Shed to the south west now labelled as a Depot Gas Works to the north west now labelled as a Depot and a Gasholder Station
1999	Aerial photo shows a three-storey building with single storey extensions to the front and rear and a rear grass garden	Site is bordered by three-storey buildings with extensions to the front and rear and rear grass or paved gardens to the east and west and residential gardens to the north
2010	Mature trees in the rear garden	No significant change
2016	Rear garden cleared of vegetation and single-storey extension built up to the north boundary	No significant change
2018		Rear extension to building bordering the site to the east

3. Environmental Setting

The following section provides information on the environmental setting of the site, utilising data from the British Geological Survey (BGS), the Department for Environment, Food and Rural Affairs (DEFRA), the Coal Authority and Public Health England (PHE).

Table 3: Summary of the site's environmental setting

Environmental Factor		Details	
Hydrogeology	Aquifer Designation	Superficial	No superficial aquifer within 500m of the site
		Bedrock	Unproductive
	Groundwater Vulnerability	Superficial	N/A
		Bedrock	Negligible
	Source Protection Zones and Abstractions		Site is situated within a Source Protection Zone (Inner) Potable groundwater abstractions for 'Public Water Supply' 440m and 490m west from chalk stratum beneath London Clay Site is not in a Drinking Water Protected Area or Drinking Water Safeguard Zone
Hydrology	Water Network		New River 280m south west
Geology	Artificial Ground		None within 500m of the site
	Superficial Deposits		None within 500m of the site
	Bedrock Geology		London Clay Formation - Stiff brown clay becoming mottled with blue/green streaks becoming stiff, dark grey/blue with depth
	Superficial Permeability		N/A
	Bedrock Permeability		Very Low
	Borehole Records		Borehole completed 280m west of the site in 1898 identified London Clay comprising yellow clay and blue clay to 36.3m, Reading Beds to 44.5m and Thanet Sands to 51.2m above Chalk and flints (water level identified at 3.4mbgl)
Workings	Mining and Ground Workings		No coal mining activity within 500m of the site Embankments along railway lines 350m south west and 460m north east
Radon	PHE UKradon		<1% probability of being above action level
Waste and Landfill	Historical Landfill		None within 1km of the site
	Permitted Waste Sites		None within 1km of the site

4. Initial Conceptual Site Model

The following section outlines potential contamination sources, pathways and receptors, utilising information gathered in the previous sections, to develop an initial conceptual site model.

4.1 Potential Contamination Sources

Information collated through detailed desk studies has identified the following potential sources of contamination.

Infilled Watercourse

Historical maps show a land drain bordering the site to the south in 1863 which is no longer shown when the site and surrounding area is developed by 1896. It is possible that this land drain has been infilled to allow the development of the site.

Where contaminated material has been used as infill, this may impact the site if volatile contaminants are present and where putrescible material has been used as infill, ground gases may be produced when these materials degrade. Given the size of this watercourse and the time elapsed since this infilling occurred (>127 years), the risk of vapour ingress and ground gas production is considered to be negligible.

Several potentially contaminative land uses have been identified in the wider area including railways and associated infrastructure, gas works and associated gasholders and a smithy, however, these are not considered to pose a risk given their distance from the site.

4.2 Potential Contamination Receptors

Given the proposed use of the site, the following receptors are considered:

- Residential end users
- Site users

Given the absence of on-site sources of contamination, off-site receptors are not considered relevant.

4.3 Potential Contamination Pathways

Based on the expected on-site receptors, relevant pathways for the above receptors include:

- Ingestion/inhalation of contaminated soil dust
- Dermal contact with contaminated soil
- Inhalation of soil vapours
- Ingestion of homegrown produce
- Permeation into drinking water pipes
- Ground gas permeation into the building

Pathways between off-site sources and off-site receptors is beyond the scope of this assessment.

4.4 Risk Assessment Methodology

The potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on the receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

Severities are categorised from Minor to Severe and probabilities are categorised from Unlikely to High Likelihood to give a potential level of risk output.

Table 4: Risk Matrix

Probability	Severity of Consequence			
	Severe	Medium	Mild	Minor
High Likelihood	Very High Risk	High Risk	Moderate Risk	Low / Moderate Risk
Likely	High Risk	Moderate Risk	Low / Moderate Risk	Low Risk
Low Likelihood	Moderate Risk	Low / Moderate Risk	Low Risk	Very Low Risk
Unlikely	Low / Moderate Risk	Low Risk	Very Low Risk	Very Low Risk

Very High Risk

There is a high probability that severe harm could arise to a designated receptor from an identified source; or there is evidence that severe harm to a designated receptor is currently happening.

High Risk

Harm is likely to arise to a designated receptor from an identified source.

Moderate Risk

It is possible that harm could arise to a designated receptor from an identified source. It is relatively unlikely that any such harm would be severe or if any harm were to occur it is more likely that the harm would be relatively mild.

Low Risk

It is possible that harm could arise to a designated receptor from an identified source, however, it is likely that this harm, if realised, would normally be mild.

Very Low Risk

There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

4.5 Conceptual Site Model

The information in this section has been compiled to produce an initial conceptual site model outlining the potential sources, pathways and receptors to consider at the site. The level of risk was categorised by considering the severity and probability, as outlined in the previous section.

Table 5: Conceptual site model

Sources	Pathways	Receptors	Severity	Probability	Potential Level of Risk	
Infilled Watercourse	Ingestion/inhalation of contaminated soil dust	Residential end users Site users	Medium	Unlikely	Low	Where contaminated material has been used to infill the historic watercourse bordering the site to the south, this may impact the site if volatile contaminants are present and where putrescible material has been used as infill, ground gases may be produced when these materials degrade. Given the size of this watercourse and the time elapsed since this infilling occurred (>127 years), the risk of vapour ingress and ground gas production is considered to be negligible.
	Dermal contact with contaminated soil					
	Inhalation of soil vapours					
	Ingestion of homegrown produce					
	Permeation into drinking water pipes					
	Ground gas permeation into the building					

5. Conclusions

5.1 Risk Evaluation

The initial conceptual site model identified the following potential contaminant linkages present at the site and the following conclusions have been drawn:

- There is a **low risk** to residential end users and site users from the ingestion/inhalation of contaminated soil dust, dermal contact with contaminated soil, inhalation of soil vapours, ingestion of homegrown produce, permeation into drinking water pipes and ground gas permeation into the building from the potential infilling of the historical watercourse to the south of the site.

Based on the findings of this Phase 1 Preliminary Risk Assessment, the risk to residential end users and site users is considered to be low.

5.2 Further Investigation

Based on the above conclusions, further investigation or remediation is not considered necessary. It is important to note that this conclusion is based on the proposed development plan.

If visible or olfactory evidence of contamination is identified during excavations at the site, work should cease in order to allow further investigation to be carried out. In addition, to ensure regulatory compliance, Waste Classification & Waste Acceptance Criteria (WAC) testing of excavated material from the site may be required prior to off-site disposal.

6. References

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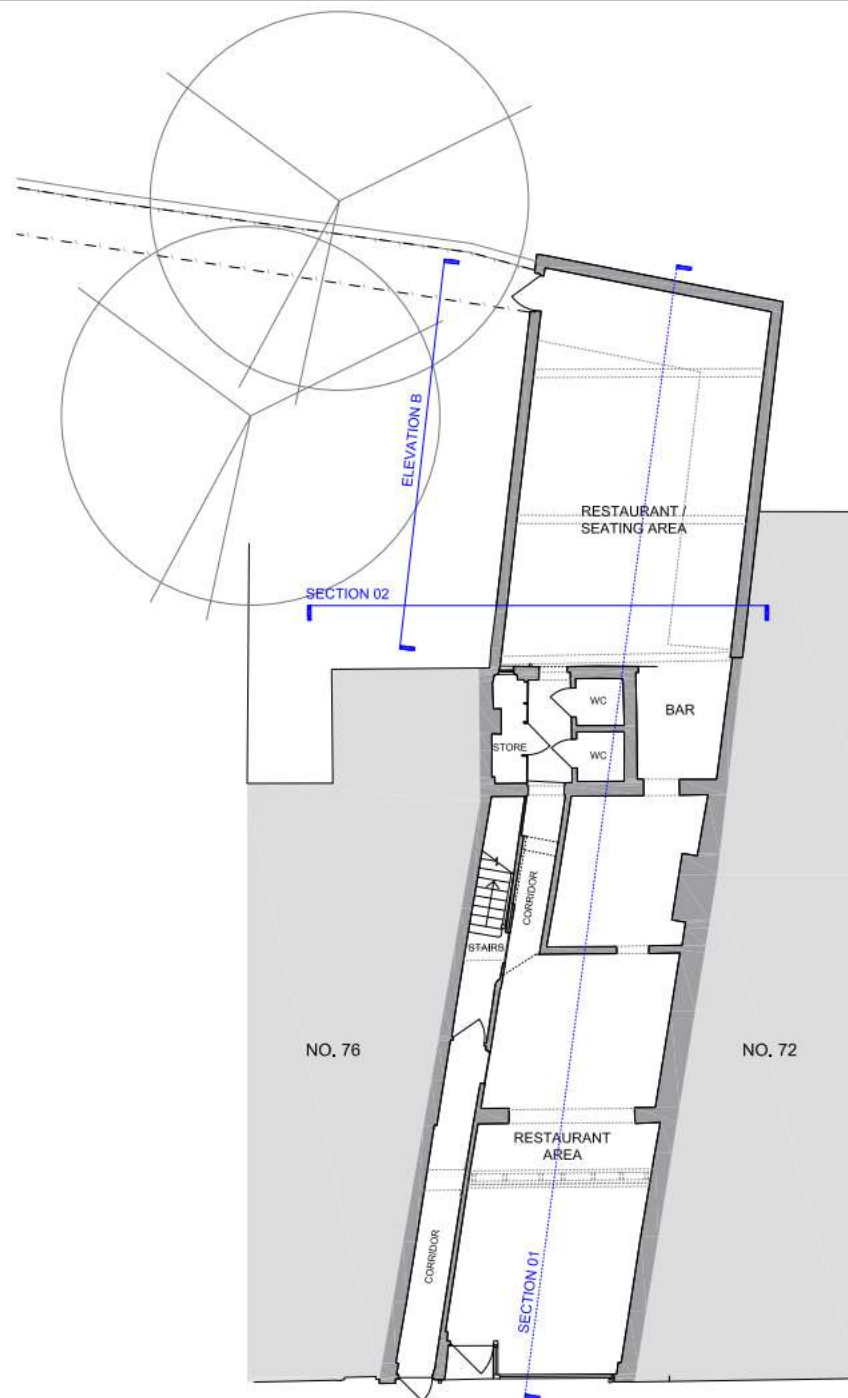
Oakshire Environmental. Available at: <oakshireenvironmental.co.uk>.



Appendix - Site Maps & Plans	
Description	
Site location plan	
Sources	
Contains OS data © Crown copyright and database rights	
Key	
	Site boundary
	North



Appendix - Site Maps & Plans	
Description	
Existing block plan	
Sources	
Marrons	
Key	
	Site boundary
	North



Appendix - Site Maps & Plans

Description

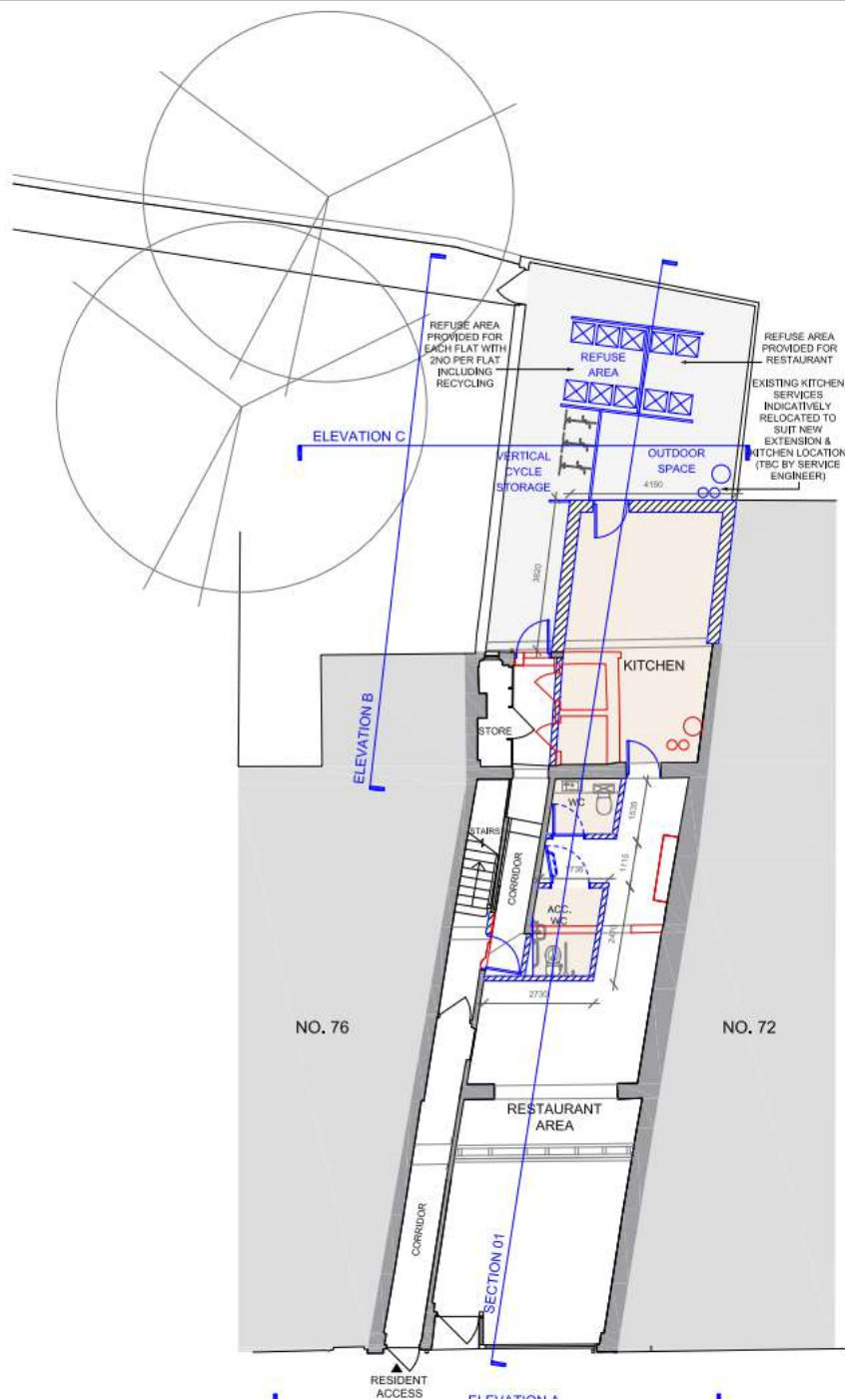
Existing ground floor plan

Sources

Marrons



Appendix - Site Maps & Plans	
Description	
Proposed block plan	
Sources	
Marrons	
Key	
	Site boundary
	North



Appendix - Site Maps & Plans

Description

Proposed ground floor plan

Sources

Marrons



Appendix - Site Photos

Description

Photo of existing building and single-storey front extension at the south of the site, facing north

Sources

Marrons



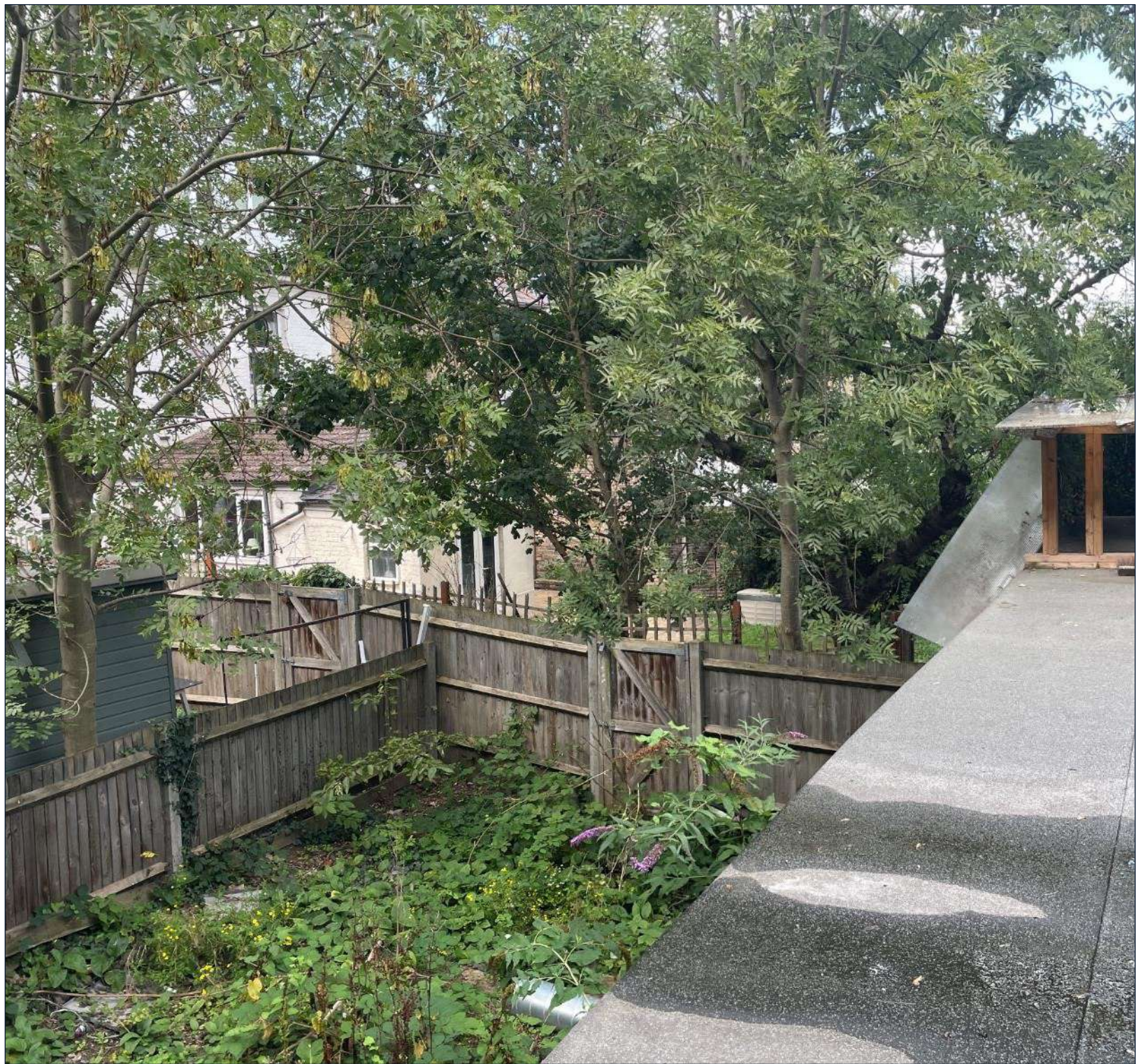
Appendix - Site Photos

Description

Photo of existing single-storey rear extension at the north of the site, facing south east

Sources

Marrons



Appendix - Site Photos

Description

Photo of garden bordering the site to the west, facing north west

Sources

Marrons



Appendix - Site Photos

Description

Photo of overgrown area bordering the site to the north, facing north east

Sources

Marrons



Appendix - Site Photos

Description

Photo of Turnpike Lane bordering the site to the south, facing north east

Sources

Marrons



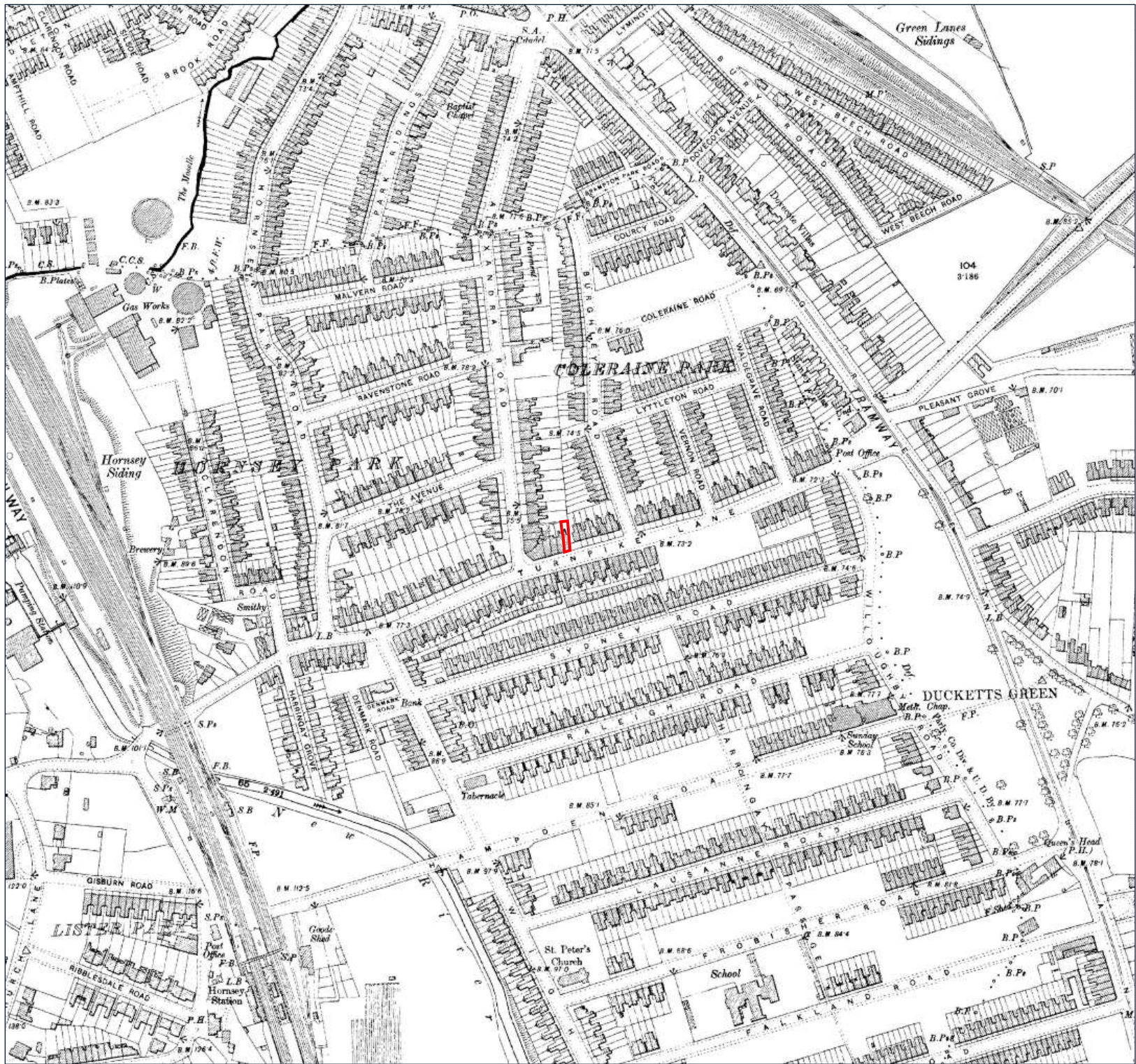
Appendix - Site Photos

Description

Photo of Turnpike Lane bordering the site to the south, facing north west

Sources

Marrons



Appendix – Historical Maps

Description

Historical map dated 1896

Scale: 1:2,500

Sources

Landmark Information Group

Key

- Site boundary
- North



Appendix – Historical Maps

Description

Historical map dated 1914

Scale: 1:2,500

Sources

Landmark Information Group

Key

Site boundary

North



Appendix – Historical Maps

Description

Historical map dated 1935

Scale: 1:2,500

Sources

Landmark Information Group

Key

Site boundary

North



Appendix – Historical Maps	
Description	
Historical map dated 1955 - 1956	
Scale: 1:2,500	
Sources	
Landmark Information Group	
Key	
	Site boundary
	North



Appendix – Historical Maps	
Description	
Historical map dated 1975	
Scale: 1:10,000	
Sources	
Landmark Information Group	
Key	
	Site boundary
	North



Appendix – Historical Maps

Description

Historical map dated 1990 - 1992

Scale: 1:10,000

Sources

Landmark Information Group

Key

Site boundary

North



Appendix – Historical Maps

Description

Aerial photograph dated 1999

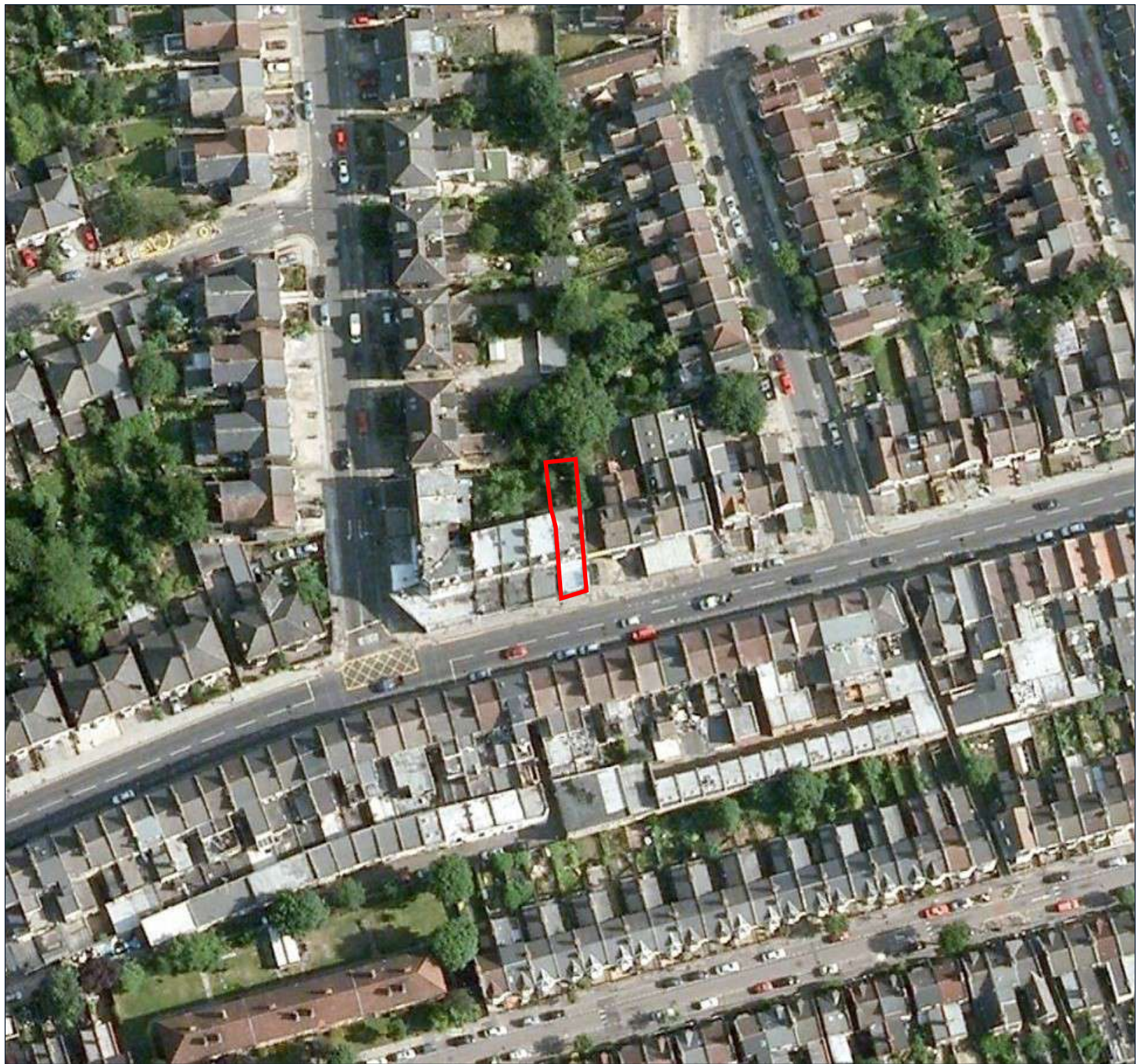
Sources

Infoterra Ltd & Bluesky

Key

Site boundary

North



Appendix – Historical Maps

Description

Aerial photograph dated 2010

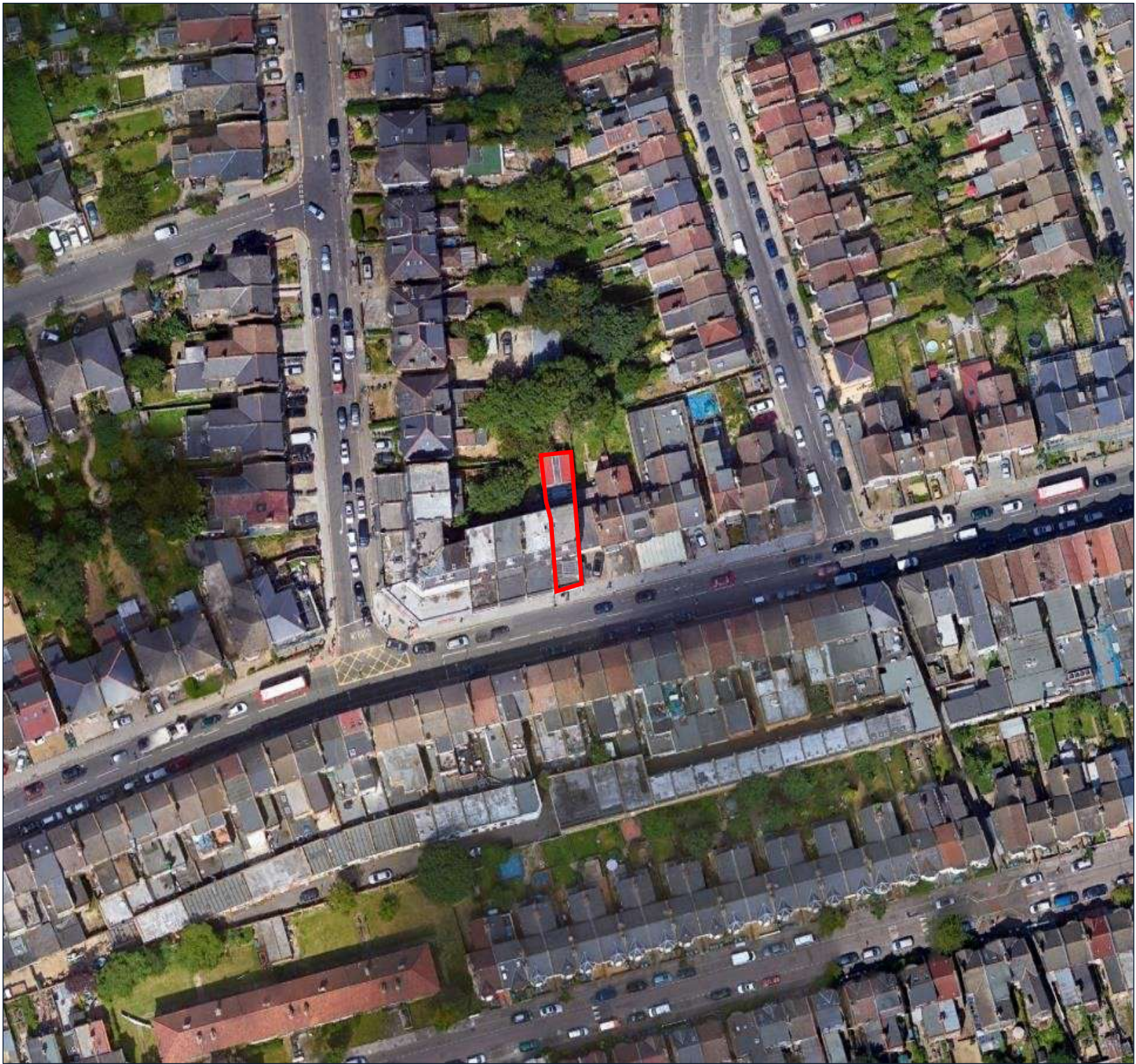
Sources

Bluesky

Key

■ Site boundary

▲ North



Appendix – Historical Maps

Description

Aerial photograph dated 2016

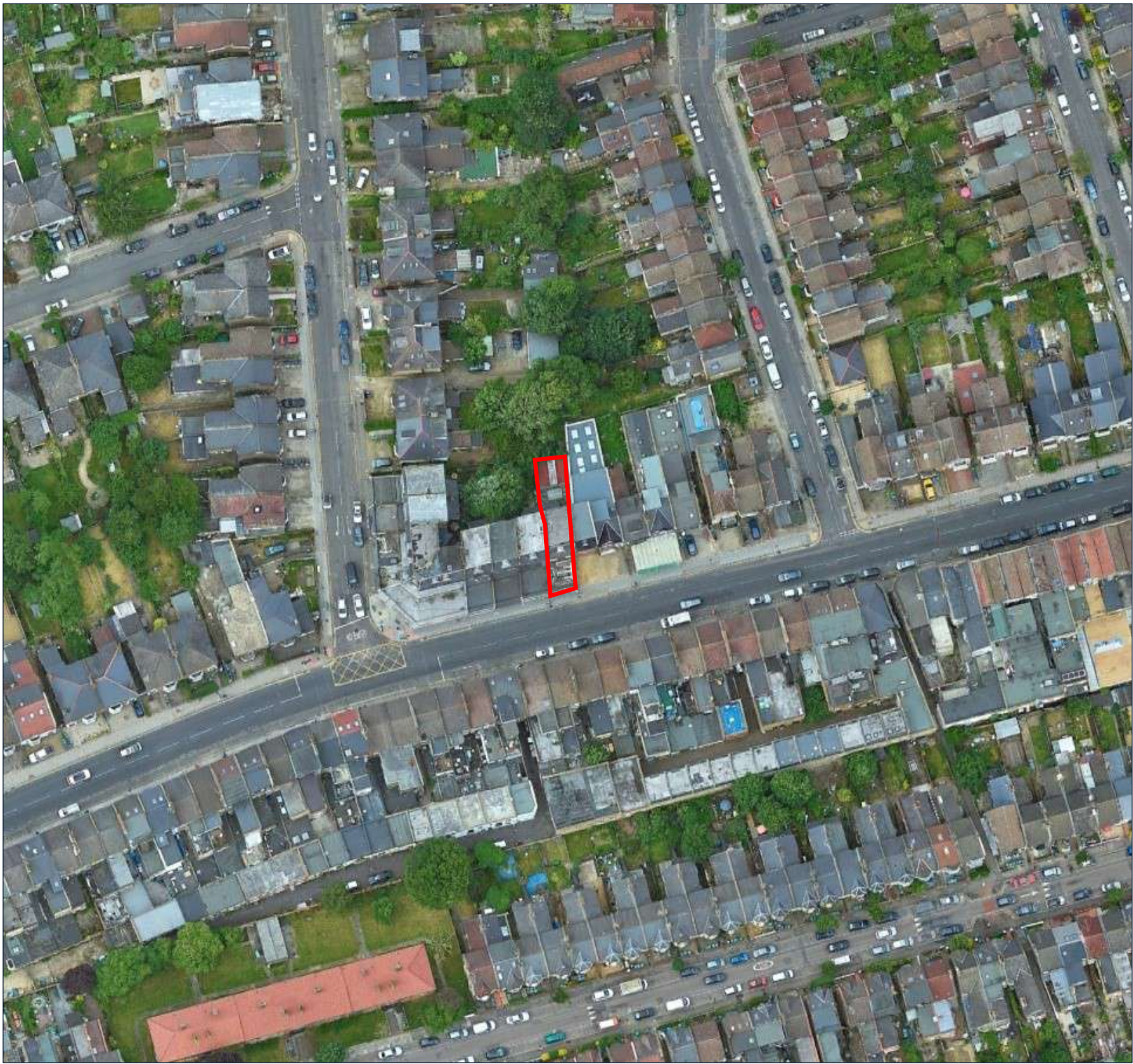
Sources

Google Earth

Key

Site boundary

North



Appendix – Historical Maps

Description

Aerial photograph dated 2018

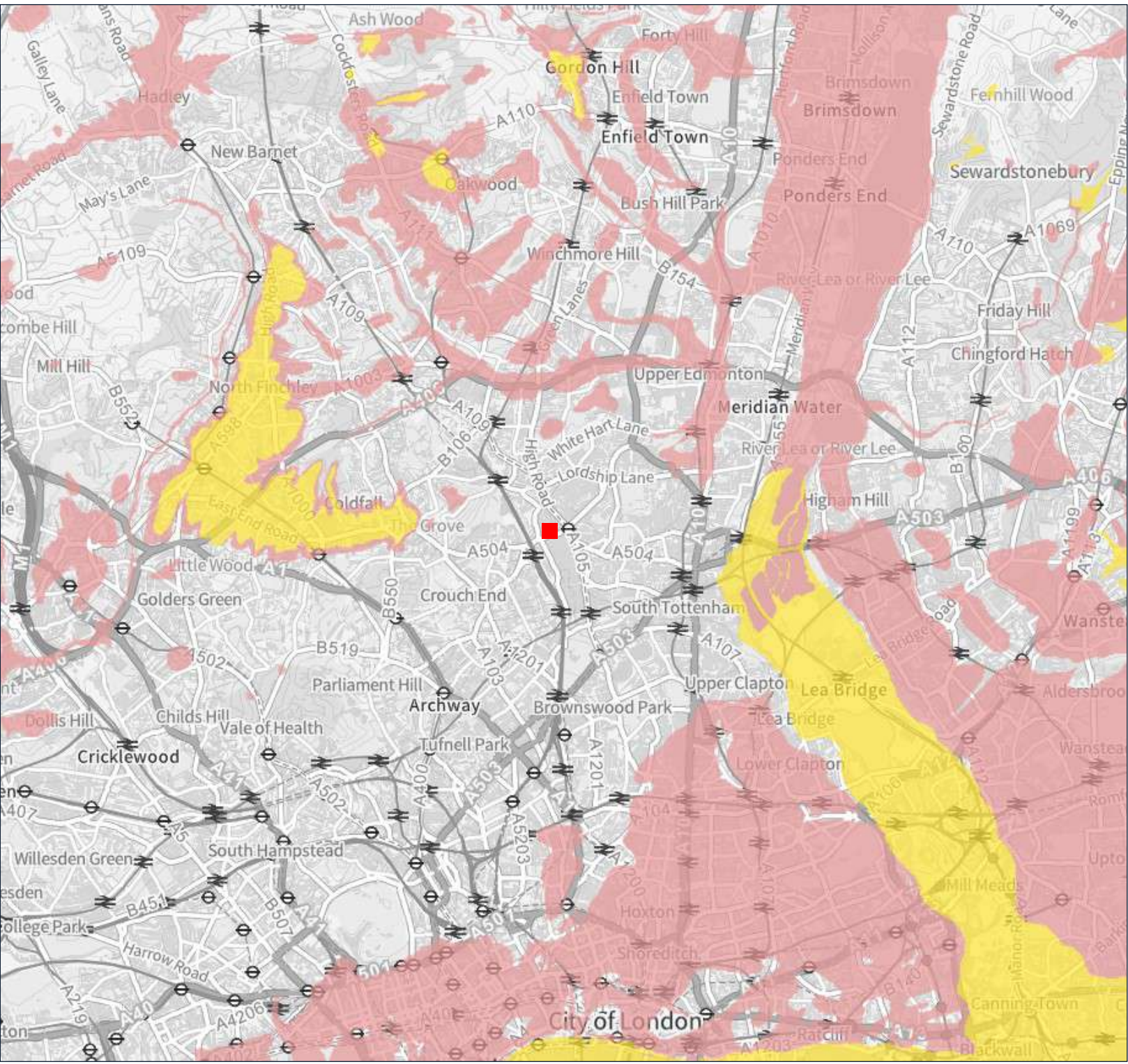
Sources

Google Earth

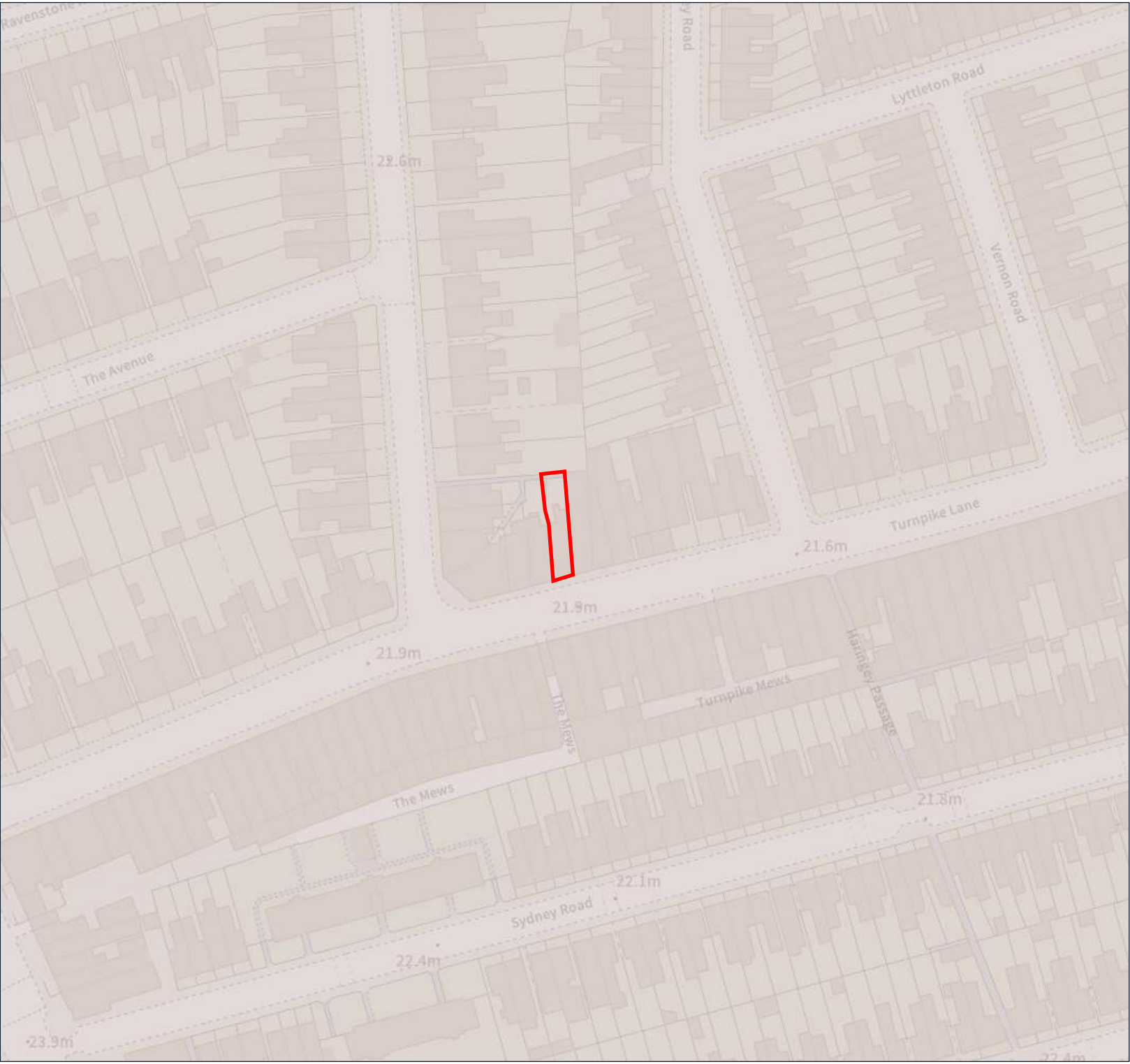
Key

■ Site boundary

▲ North



Appendix - Geological Maps	
Description	
BGS map showing superficial hydrogeology on site	
Sources	
DEFRA Magic Map British Geological Survey	
Key	
	Site location
	Principal
	Secondary A
	Secondary B
	Secondary Undifferentiated
	Unproductive
	North



Appendix - Geological Maps	
Description	
BGS map showing bedrock geology on site	
Sources	
British Geological Survey	
Key	
	Site boundary
	London Clay Formation
	North