enviro|solution

Phase 1

Environmental Assessment Report

89 High Street,

Billericay,

CM12 9AT

Date: 16th February 2024

ENVIROSOLUTION LTD

Suite 53 3a Bridgewater Street Liverpool L1 OAB

enviro solution

EnviroSolution Ltd

Document Verification

Site Address	89 High Street, Billericay, CM12 9AT		
Report Title	Phase 1 Environmental Site Assessment Report		
Job Number	ES02896	Document Ref.	ES02896
Date Issued	16 th February 2024	Report Version	1
Prepared by	Jacquelyn Hide	Signature	Aride
Checked by	Tom Craig	Signature	TCD

enviro solution

Executive Summary

The preliminary environmental site assessment indicates that the site can be classified as moderate risk in terms of contamination and the risks to the identified receptors (e.g., human health and buildings) following redevelopment is considered to be moderate.

This classification is due to a number of historic off-site land uses in the surrounding area with the potential to contaminate the soils at the site. These include potentially fire engine station, electric sub-station, garage, joinery works and builder's yard. Associated contaminants include Fire-fighting chemicals, hydrocarbons, PFAS, Polychlorinated biphenyls (PCBs), heavy metals, hydrocarbons, polyaromatic hydrocarbons (PAHs), solvents, asbestos, organic solvents, halogenated compounds and mineral oils.

It is recommended a Phase 2 intrusive ground investigation is undertaken prior to site redevelopment to obtain additional information on the ground conditions and the contamination status. The investigation should be carried out by qualified and competent persons. The scope of works for the investigation will need to be submitted and approved by the local authority prior to the commencement of the Phase 2 intrusive works.

Disclaimer

This report has been prepared by EnviroSolution Ltd who has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant experienced in preparing reports of a similar scope.

However, to the extent that the report is based on or relies upon information contained in records, reports or other materials provided to EnviroSolution Ltd, which have not been independently produced or verified, EnviroSolution Ltd, gives no warranty, representation or assurance as to the accuracy or completeness of such information.

The scope of this report is restricted to potential ground contamination and its environmental impact; it does not cover above-ground hazards (e.g., asbestos in buildings), ecological sensitivities (e.g., bats), biological or horticultural hazards (e.g., Japanese Knotweed) or structural hazards (e.g., building stability) unless specifically referred to in the text of this report.

Table of Contents

	1.1	Introduction7
	1.2	Background7
	1.3	Objectives7
	1.4	Scope of Work7
	1.5	Information Sources
2	The	Site9
	2.1	Site Location9
	2.2	Site Description9
	2.3	Development Proposals9
	2.4	Site History
3	Envi	ronmental Setting12
	3.1	Geology
	3.2	Radon12
	3.3	Coal Mining Activity12
	3.4	Hydrogeology12
	3.5	Hydrology13
	3.6	Flood Risk
	3.7	Waste Management Facilities13
	3.8	Environmental Permits, Incidents and Registers13
	3.9	Designated Environmentally Sensitive Sites14
4	Preli	minary Conceptual Site Model16
	4.1	Introduction
	4.2	Potential Contamination Sources16
	4.3	Receptors
	4.4	Pathways18
	4.5	Potential Pollution Linkages
	4.5.1	Human Health 19
	4.5.2	Controlled Waters 19
	4.5.3	Building/Construction Materials/Buried Services
	4.6	Environmental Designations20
	4.7	Preliminary Hazard Assessment20

5	Conclusions and Recommendations	.24	4
---	---------------------------------	-----	---

Appendices

- Appendix A Site Plans
- Appendix B Site Photographs
- Appendix C Historical OS Maps
- Appendix D Geological Maps
- Appendix E BGS Borehole
- Appendix F Hydrogeology Maps
- Appendix G Flood Risk Map
- Appendix H Environmental Designations

1.1 Introduction

1.2 Background

EnviroSolution Ltd was commissioned to undertake a Phase 1 Environmental Site Assessment at a site located at 89 High Street, Billericay, CM12 9AT. This report was commissioned to provide information on the potential contamination status of the site.

1.3 Objectives

The objective of the preliminary environmental site assessment was:

- 1. To provide a summary of the environmental setting and historical land use of the site and immediate surrounding area.
- 2. To obtain information on the ground conditions present beneath the site.
- 3. To develop a conceptual site model and complete a generic quantitative risk assessment to identify any environmental risks and liabilities associated with ground conditions at the site.

1.4 Scope of Work

To achieve the objectives, the following scope of work was completed:

- 1. A desk-based study of the site comprising a review of available environmental information for the site such as geological and hydrogeological data and historical land use information.
- 2. A site walkover.
- 3. Assessment of potential hazards and constraints during construction and longer term.

This work has been devised to generally comply with the relevant principles and requirements of the following legalisation and guidance:

- Part IIA of the Environmental Protection Act, 1990 and Section 57 of the Environmental Act 1995;
- Contaminated Land (England) (Amendment) Regulations 2012 and Contaminated Land Statutory Guidance (DEFRA, April 2012);
- National Planning Policy Framework (Ministry of Housing, Communities and Local Government, July 2021);
- BS10175: 2011 +A2:2017 "Investigation of Potentially Contaminated Sites- Code of Practice"; and
- Environment Agency (2020) Land Contamination Risk Management Report LCRM "How to assess and manage the risks from land contamination".

1.5 Information Sources

Historical Ordnance Survey maps have been obtained from historical records, ranging from 1874 to 2023. These maps provide high quality information on historical site use.

The British Geological Survey Geoindex database has been used to provide information on geo-environmental aspects of the site and the immediate surrounding area such as geological, hydrogeological and hydrological data.

The Environment Agency website (www.gov.uk/government/organisations/environmentagency) and Magic website (www.magic.gov.uk) was also used to obtain environmental information.

Industry Profiles produced by the Department of the Environment were utilised to obtain information on processes, materials and wastes associated with potential contaminative land uses near the site.

Readily available information sources have been used to produce this desk-based study. Additional information may be requested by the Local Planning Authority (e.g., local authority environmental information request).

2 The Site

2.1 Site Location

The site is located at 89 High Street, Billericay, CM12 9AT. The British National Grid Reference for the approximate site centre is GR: 567410, 194615.

The site location is shown on Figure 1 in Appendix A.

2.2 Site Description

The site description has been prepared following a walkover survey conducted by EnviroSolution Ltd on the 20th of December 2023. The site photographs are included in **Appendix B.**

The site is irregular in shape and covers an approximate area of 320 square metres. The wider site (incl. the adjacent existing building at 89 High Street) is slopes slightly east to west with an approximate elevation of 98m to 96m aOD.

The application site is located within the curtilage of 89 High Street and comprises a tarmacked surfaced car park to the rear of 89 High Street which was previously in use as a Lloyd's bank. The application site is accessed via Rose Lane. From the site walkover there is no evidence of visual contamination on site.

The surrounding land use is predominantly residential.

There are no active petrol filling stations identified within a 250m radius of the site.

The existing site plan is shown on Figure 2 which is included in Appendix A.

2.3 Development Proposals

The proposed development comprises the removal of the existing tarmac surface car park to enable the erection of two 3-bed semi-detached houses plus associated soft and hard landscaping.

Adjacent the application site, the applicant is also proposing the partial change of use and upward/rear extension to the Lloyd's Bank building at 89 High Street into seven residential units.

The proposed development plan is shown on Figure 3 which is included in Appendix A.

2.4 Site History

The development site and surrounding area has been reviewed with reference to historical Ordnance Survey (OS) maps. The history of the site and immediate surrounding area is summarised in Table 1. Copies of the historical OS maps are included in **Appendix C**. A search buffer of 250m has been used.

Date	Scale	On Site	Off Site
1874	1:2,500	The southeast area of the site is occupied by a development.	The surrounding area has been developed with residential properties. Pond 50m northwest, 200m northeast and 200m south.
1881	1:10,560	No significant changes.	No significant changes.
1896	1:2,500	Development on site has extended.	Burial Ground150m southeast. Smithy 250m south.
1898	1:10,560	No significant changes.	No significant changes.
1922	1:2,500	No significant changes.	Fire Engine Station 90m northeast.
1923	1:10,560	No significant changes.	No significant changes.
1937	1:2,500	No significant changes.	All ponds have been infilled.
1938	1:10,560	No significant changes.	No significant changes.
1955	1:2,500	The developments were demolished and a new development was built. The site is labelled as a Bank.	The surrounding area has been fully developed with residential properties. Electric sub-station 100m northeast. Garage 150m southwest. Joinery Works 100m southeast.

Date	Scale	On Site	Off Site
1961	1:2,500	No significant changes.	No significant changes.
1960-61	1:10,000	No significant changes.	No significant changes.
1967	1:2,500	No significant changes.	Joinery Works demolished and relabelled as car park.
1968	1:10,000	No significant changes.	No significant changes.
1970-72	1:10,000	No significant changes.	No significant changes.
1974	1:2,500	No significant changes.	No significant changes.
1978	1:2,500	No significant changes.	Builder's Yard 150m southwest. Electrical Sub-Station 150m
			southwest.
1981-83	1:10,000	No significant changes.	No significant changes.
1092 1001	1:1,250	No significant changes.	Garage 50m north and 110m southeast.
1982-1991			Electrical Sub-Station 200m northeast.
1993	1:1,250	No significant changes.	No significant changes.
1994	1:1,250	No significant changes.	No significant changes.
1995	1:1,250	No significant changes.	No significant changes.
1999	1:10,000	No significant changes.	No significant changes.
2023	1:10,000	No significant changes.	No significant changes.

3 Environmental Setting

3.1 Geology

Geological maps of the area indicate that the site is directly underlain by superficial Stanmore Gravel, deposited during the Pleistocene Epoch. Stanmore Gravel generally consists of gravel and sand with layers of silt, clay or peat.

The underlying bedrock is the Bagshot Formation deposited during the Paleogene Period. The Bagshot Formation consists of fine- to coarse-grained sand with layers of clay and gravel.

There are no records of geological faults located within a 1km radius of the site.

A borehole (Ref: TQ69SE173) located 160m northeast of the site was obtained from BGS online records. The borehole penetrated 12m bgl (40 feet) and shows 0.8m of Made Ground, 0.3m of sandy gravel underlain with dense brown silty fine sand.

A copy of the geological maps is included in **Appendix D.** A copy of the BGS borehole log is included in **Appendix E.**

3.2 Radon

The site lies within the lowest band of radon potential where it is estimated that less than 1% of the properties are above the action level (low probability). Radon protective measures are not deemed necessary for the development.

3.3 Coal Mining Activity

The site does not fall within a Coal Mining Reporting Area described as having minable coal deposits and does not lie within a 'Development High Risk Area' for coal mining, as defined by the Coal Authority. As such, it is considered that there are no coal mining related hazards which could affect the site.

3.4 Hydrogeology

Geological maps of the area indicate that the site is directly underlain by superficial Stanmore Gravel, which is designated as a Secondary A Aquifer, defined as; permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

The underlying Bagshot Formation is designated as a Secondary A Aquifer, defined as above.

There are no groundwater abstraction licences located within a 1km radius of the site.

The site is not located within a Source Protection Zone within a 1km radius of the site.

A copy of the hydrogeological maps is included in Appendix F.

3.5 Hydrology

There is a single significant surface water features (rivers, lakes or reservoirs) located within a 1km radius of the site. Lake Meadows is 850m north from the site.

There are no minor surface water features located within a 1km radius of the site.

3.6 Flood Risk

The site lies within a Flood Zone 1 (low probability), land assessed as having less than a 1 in 1,000 annual probability of river flooding (0.01%) in any year (low risk). The completion of a detailed Flood Risk Assessment is not deemed necessary for this site.

A copy of the flood risk map is included in **Appendix G**.

3.7 Waste Management Facilities

There is a single Environment Agency records of historic landfill site located within a 1km radius of the site and is summarised in Table 2.

Table 2 – Historic Landfill Site

Landfill Site	Operation Dates	Waste Type	Distance from Site
Jacksons Lane	1960-69	Inert / Industrial / Household	700m NE

There are no Environment Agency records of currently authorised landfill sites located within a 1km radius of the site.

There are no records of site operating under an environmental permit for waste operations within a 1km radius of the site.

A copy of the historic landfill map is included in **Appendix H**.

3.8 Environmental Permits, Incidents and Registers

There is a single record of a site located within a 1km radius of the development site operating under an environmental permit for discharges to water and groundwater and is summarised in Table 3.

Permit Holder Name	Site Name	Site Type	Start Date	Distance
ANGLIAN WATER SERVICES LIMITED	THE VALE PS	Pumping Station on Sewerage Network (water company)	1970	800m E

Table 3 – Environmental Permit for Discharges to Water and Groundwater

There is a single record of pollution incidents recorded by the Environment Agency having occurred within a 1km radius of the site and is summarised in Table 4.

Table 4 – Pollution Incidents

Poll_Type	Pollutant	Distance from Site
General Biodegradable Materials and Wastes	Algae	975m N

There are no records of sites located within a 1km radius of the development site operating under an environmental installation permit recorded by the Environment Agency.

3.9 Designated Environmentally Sensitive Sites

Records of designated environmentally sensitive sites located within a 1km radius of the site are summarised in Table 5 and shown on plans included in **Appendix I**.

Table 5 – Environmental Designations Summary

Designation	Distance	Details
Green Belt (England)	200m SE	The London Area Green Belt is 200m southeast from the site.
Local Nature Reserves (England)	920m NE 345m SE	The Norsey Wood is 920m northeast from the site and the Mail Meadow is 354m southeast from the site.
Sites of Special Scientific Interest (England)	920m NE 345m SE	The Norsey Wood is 920m northeast from the site and the Mail Meadow is 354m southeast from the site.

Designation	Distance	Details
Nitrate Vulnerable Zone	On Site	The site is located within the nitrate vulnerable zone.

4 Preliminary Conceptual Site Model

4.1 Introduction

In order to assess the environmental risks, present, a preliminary conceptual model has been developed for the site. This model has been developed using best practice guidelines in conjunction with the current assessment framework taking into account the development proposals. This preliminary conceptual model is based on the gathered desk-based information (e.g., historical OS data and data sourced from the EA, Geoindex and Magic databases).

The conceptual site model is a representation of the hypothesised relationships between sources, pathways and receptors which allows the identification of potential pollutant linkages and whether these linkages have the potential to comprise significant harm and/or pollution of controlled waters in relation to the site. This model comprises three elements:

Source – the key pollutant hazards associated with the site.

Receptor – the key targets at risk from the sources.

Pathway – the means by which the contaminant can cause harm to the receptor.

If all three elements are present, then a potential pollutant linkage exists, and this may require further assessment.

4.2 Potential Contamination Sources

The site has been occupied by a development since the 1870s and was extended in the 1890s. In the 1950s the commercial developments were demolished and Lloyd's bank was developed.

The presence of Made Ground is possible as a result of former demolition. Potential contaminants include heavy metals, hydrocarbons, solvents and polyaromatic hydrocarbons.

A number of off-site land uses have been identified in the surrounding area that have the potential to contaminate the shallow soils at the site. The land use and its associated contaminants are summarised in Table 6 below:

Land Use	Potential Contaminants
Pond infilled	Ground gases (carbon dioxide and methane)
Pollution Incidents	See table 4.
Fire Engine Station	Fire-fighting chemicals, hydrocarbons, PFAS
Electric sub-station	Polychlorinated biphenyls (PCBs)
Garage	Heavy metals, hydrocarbons, polyaromatic hydrocarbons (PAHs), solvents.
Joinery Works	Heavy metals, inorganic compounds, acids/alkalis, asbestos, polychlorinated biphenyls (PCBs), organic solvents, halogenated compounds, mineral oils.
Builder's yard	Heavy metals, polyaromatic hydrocarbons (PAHs), solvents

It is considered that the infilled ponds can be discounted due to the and the age of infilling noted as the 1930s. It is therefore unlikely that gas will be generated.

It is considered that the pollution incidents can be discounted as a potential contaminant due to the distance from the site (>975m).

Due to a fire engine station being recorded there are associated contaminants such as perand polyfluoroalkyl substances (PFAS), heavy metals, PAHs and solvents have the potential to be present to be present in the ground beneath the site.

4.3 Receptors

The potential receptors considered to be at risk from soil and groundwater contamination associated with the site are summarised in Table 7 below:

Receptor	Details
Human (On Site)	 Construction workers Future site users Site visitors
Human (Off Site)	- Adjacent site users

Receptor	Details
Controlled Waters	 Secondary A Aquifer Secondary A Aquifer Lake Meadows
Building/ construction materials	FoundationsBuried services
Environmental Receptors	 Green Belt (England) Local Nature Reserves (England) Sites of Special Scientific Interest (England) Nitrate Vulnerable Zone

4.4 Pathways

The potential exposure pathways linking contamination with the receptors identified above are summarised in Table 8 below:

Receptor	Details of Exposure Pathway
Human (on-site)	 Direct ingestion of contaminated soil/groundwater Dermal contact with soil/groundwater Inhalation of gases and vapours
Human (off-site)	 Inhalation of fibres and particulates Inhalation of migrating gases and vapours
Controlled waters	 Vertical and lateral migration of dissolved phase contaminants via preferential pathways to groundwater aquifers Direct surface water run-off to surface water features

Receptor	Details of Exposure Pathway
Building/construction	 Buried materials/services - Contact with contaminated soil and/or groundwater

4.5 Potential Pollution Linkages

4.5.1 Human Health

The proposed development is for the removal of the tarmac surface car park at the rear of 89 High Street to enable the erection of two 3-bed semi-detached houses. The development plans include areas of soft landscaping. This is considered to be a sensitive end-use.

The presence of hardstanding would eliminate the risk of exposure, via the dermal contact and ingestion pathways to future site users to any ground contamination that may remain following development.

There could be a potential risk of exposure to any ground contamination that remains following redevelopment in the proposed areas of soft landscaping (i.e. gardens), to future site users, via all possible exposure pathways.

Any ground gases (i.e., methane and carbon dioxide) and vapours that are present within the soils beneath the site could potentially ingress into the existing buildings through preferential pathways (e.g., service entry points). Therefore, there would be a risk of exposure via inhalation to future site users.

There is the potential for construction workers and adjacent land users to be exposed to soil and groundwater contamination during site redevelopment. However, the use of appropriate PPE and the adoption of suitable Health and Safety methods will help to reduce the risks posed to human health during this work.

4.5.2 Controlled Waters

The site is directly underlain by superficial Stanmore Gravel which is designated as a Secondary A Aquifer. It is considered that if any contamination is present at the surface, it would be in direct contact with the underlying aquifer and could allow the migration of contaminants to the groundwater.

However, there are no groundwater abstraction licences located within a 1km radius of the site and site is not located within a Source Protection Zone within a 1km radius of the site.

There is a single significant surface water features (rivers, lakes or reservoirs) located within a 1km radius of the site. Lake Meadows is 850m north from the site, which is considered to be at sufficient distance from any potential contamination from the site.

There are no minor surface water features located within a 1km radius of the site.

Overall, the risk to controlled waters is deemed to be low.

4.5.3 Building/Construction Materials/Buried Services

The presence of any soil and groundwater contaminants beneath the site could potentially impact on construction materials for future new developments, such as below ground structures and services. Concrete foundations are particularly sensitive to aggressive ground conditions, i.e., sulphate attack. If PCBs are present beneath the site they could affect water supply systems, sewer systems or underground electrical installations.

If ground gases and vapour are present in the soil beneath the site, then there would be the potential risk of ingress into the properties which could present a risk of explosion.

4.6 Environmental Designations

The proposed development is not considered to pose a risk to the identified environmental receptors.

4.7 Preliminary Hazard Assessment

A preliminary hazard assessment is presented in Table 9. The preliminary hazard assessment is a qualitative assessment of the risks posed by each potential pollutant linkage described above and is used to identify the requirement for additional work (e.g., intrusive ground investigation).

Table 9 – Preliminary Hazard Assessment

Source 1	Pathway	Receptor	Likelihood	Effect	Risk	Assessment
Contaminated soil	Ingestion (via soil dust), inhalation (via soil dust and vapours), ingestion through dirty hands, dermal contact with soil/water.	Future site users Adjacent site users Construction workers	2	3	Moderate	On site and off -site contamination source potential identified. Proposed areas of soft landscaping provide exposure pathway. Potential risk of exposure via inhalation of volatile compounds.
Contaminated soil groundwater	Direct contact	Buildings/ services	2	3	Moderate	On site contamination source potential identified. The hydrocarbons can pose a risk to the buried services proposed.
Contaminated groundwater	Downward or lateral migration Surface water run-off	Secondary A Aquifer Secondary A Aquifer Lake Meadows	1	3	Low	No sensitive surface water receptors nearby. The site does not lie within a Source Protection Zone. There are no sensitive groundwater abstraction licences located nearby.
Ground gas / vapours Radon	Inhalation, ingress into buildings	Buildings / services Future site users Adjacent site users	1	3	Low	No significant ground gas source identified. Site lies within a low probability area for radon.

Source 1	Pathway	Receptor	Likelihood	Effect	Risk	Assessment
		Construction				
		workers				

Using Risk Matrix (Table 10) Degree of Risk (R) = Likelihood (L) x Effect (E)

Likelihood	Description	Probability	Effect (E)	Description
5	Almost certain	>70%		
4	Probable	50-70%	4	Severe
3	Likely	30-50%	3	Medium
2	Unlikely	10-30%	2	Mild
1	Negligible	<10%	1	Minor
Risk (R)	Risk Level	Action		
1-5	Low	None required		
6-10	Moderate	Further assessment via Phase 2 intrusive ground investigation.		
>10	High	Further assessment via Phase 2 intrusive ground investigation.		

Table 10 - Risk Matrix, Degree of Risk (R) = Likelihood (L) x Effect (E)

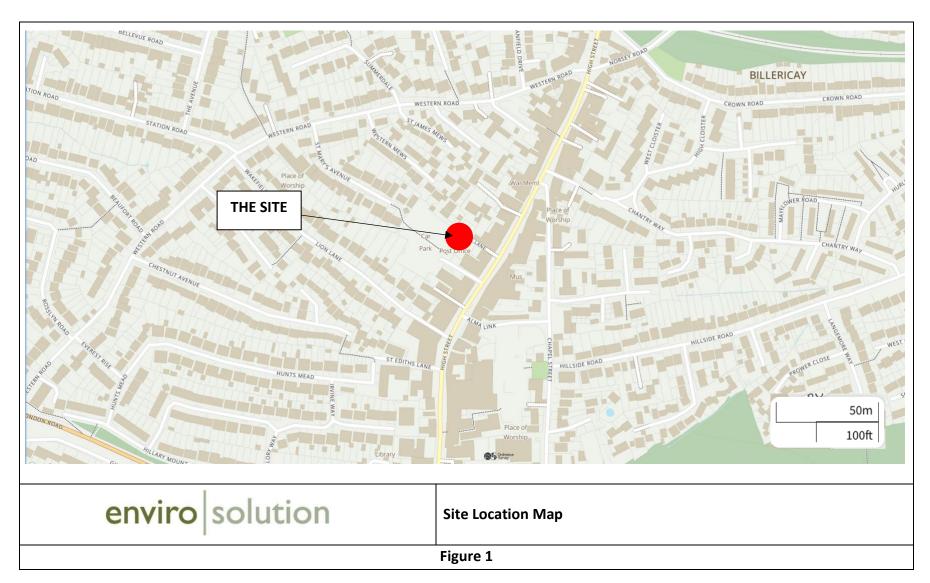
5 Conclusions and Recommendations

The preliminary environmental site assessment indicates that the site can be classified as moderate risk in terms of contamination and the risks to the identified receptors (e.g., human health and buildings) following redevelopment is considered to be moderate.

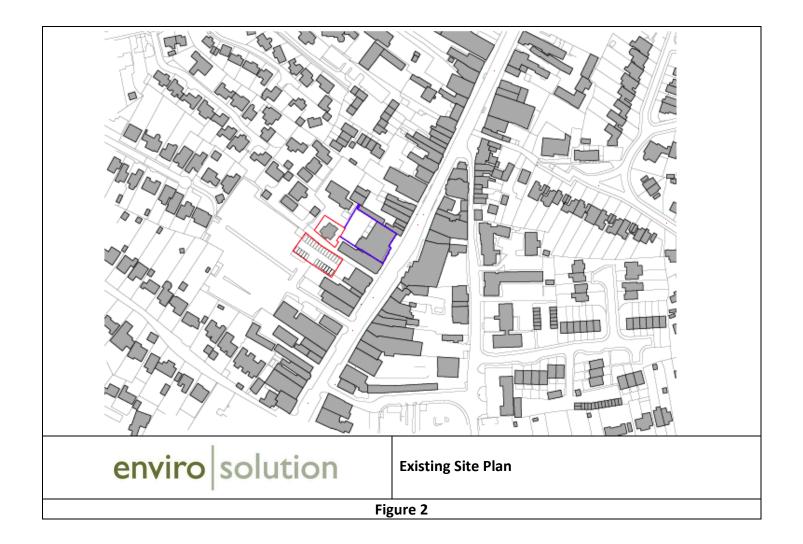
This classification is due to a number of historic off-site land uses in the surrounding area with the potential to contaminate the soils at the site. These include potentially fire engine station, electric sub-station, garage, joinery works and builder's yard. Associated contaminants include Fire-fighting chemicals, hydrocarbons, PFAS, Polychlorinated biphenyls (PCBs), heavy metals, hydrocarbons, polyaromatic hydrocarbons (PAHs), solvents, asbestos, organic solvents, halogenated compounds and mineral oils.

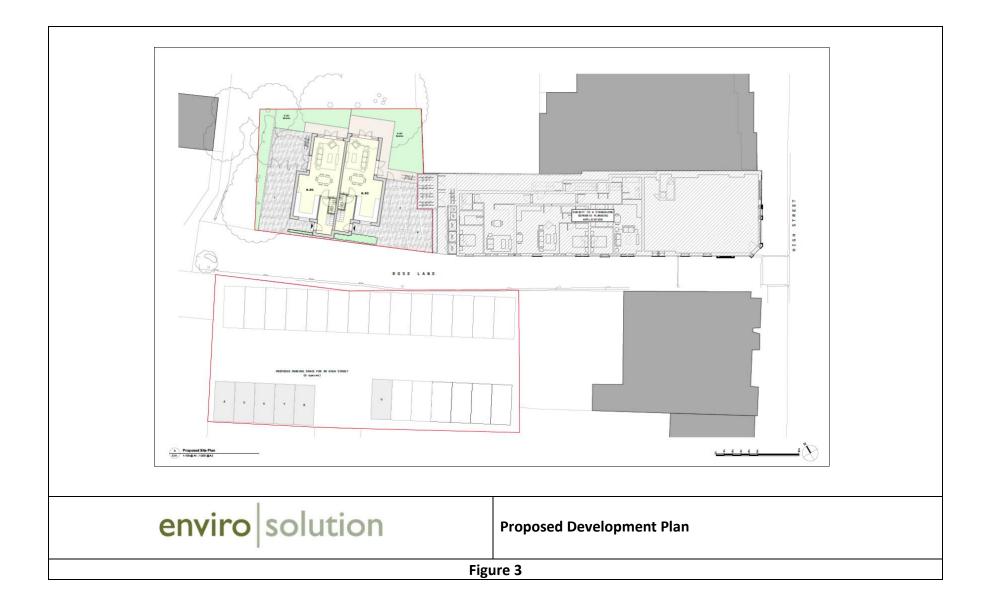
It is recommended a Phase 2 intrusive ground investigation is undertaken prior to site redevelopment to obtain additional information on the ground conditions and the contamination status. The investigation should be carried out by qualified and competent persons. The scope of works for the investigation will need to be submitted and approved by the local authority prior to the commencement of the Phase 2 intrusive works.

APPENDICES

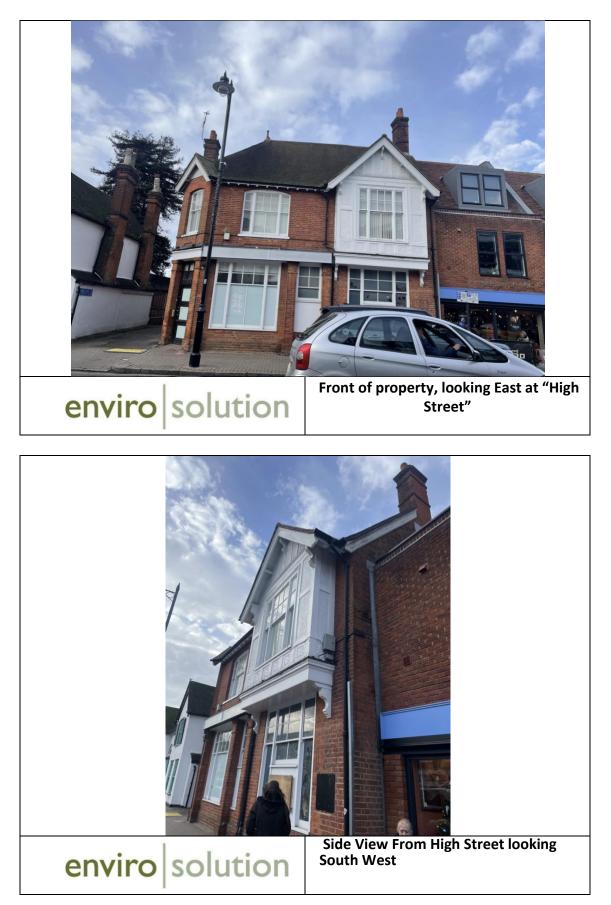


Appendix A – Site Location and Site Plan





Appendix B – Site Photographs











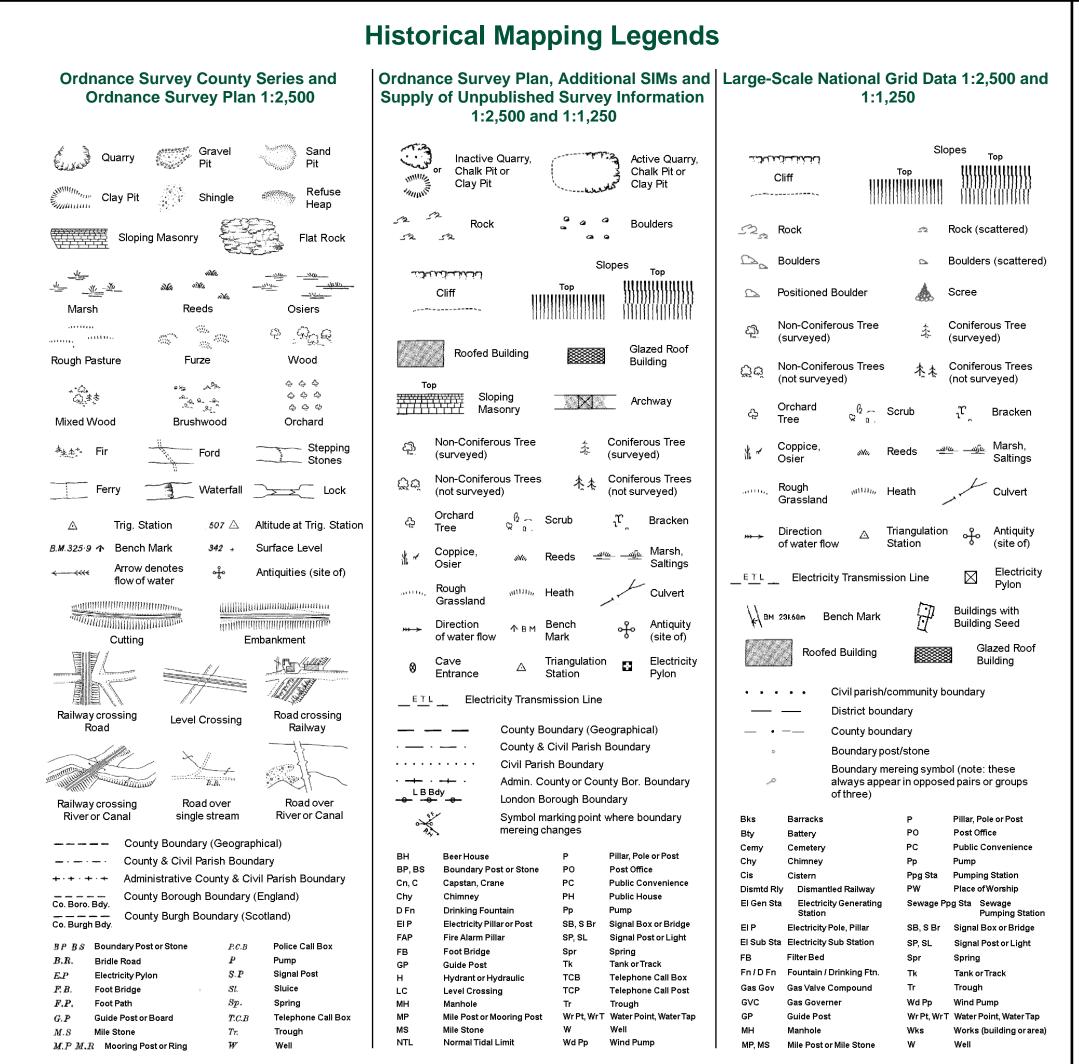




enviro solution

View of the alley way down the side of the site.

Appendix C – Historic Maps

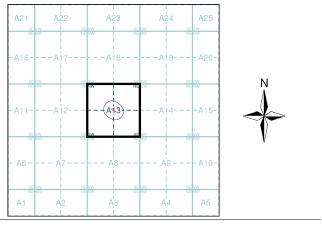


Envirocheck[®] LANDMARK INFORMATION GROUP

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Essex	1:2,500	1874	2
Essex	1:2,500	1896	3
Essex	1:2,500	1922	4
Essex	1:2,500	1937	5
Ordnance Survey Plan	1:2,500	1955	6
Ordnance Survey Plan	1:2,500	1961	7
Ordnance Survey Plan	1:2,500	1967	8
Ordnance Survey Plan	1:2,500	1974	9
Ordnance Survey Plan	1:1,250	1978	10
Additional SIMs	1:1,250	1982 - 1991	11
Additional SIMs	1:1,250	1991	12
Large-Scale National Grid Data	1:1,250	1993	13
Large-Scale National Grid Data	1:1,250	1994	14
Large-Scale National Grid Data	1:1,250	1995	15

Historical Map - Segment A13



Order Details

Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	Α
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

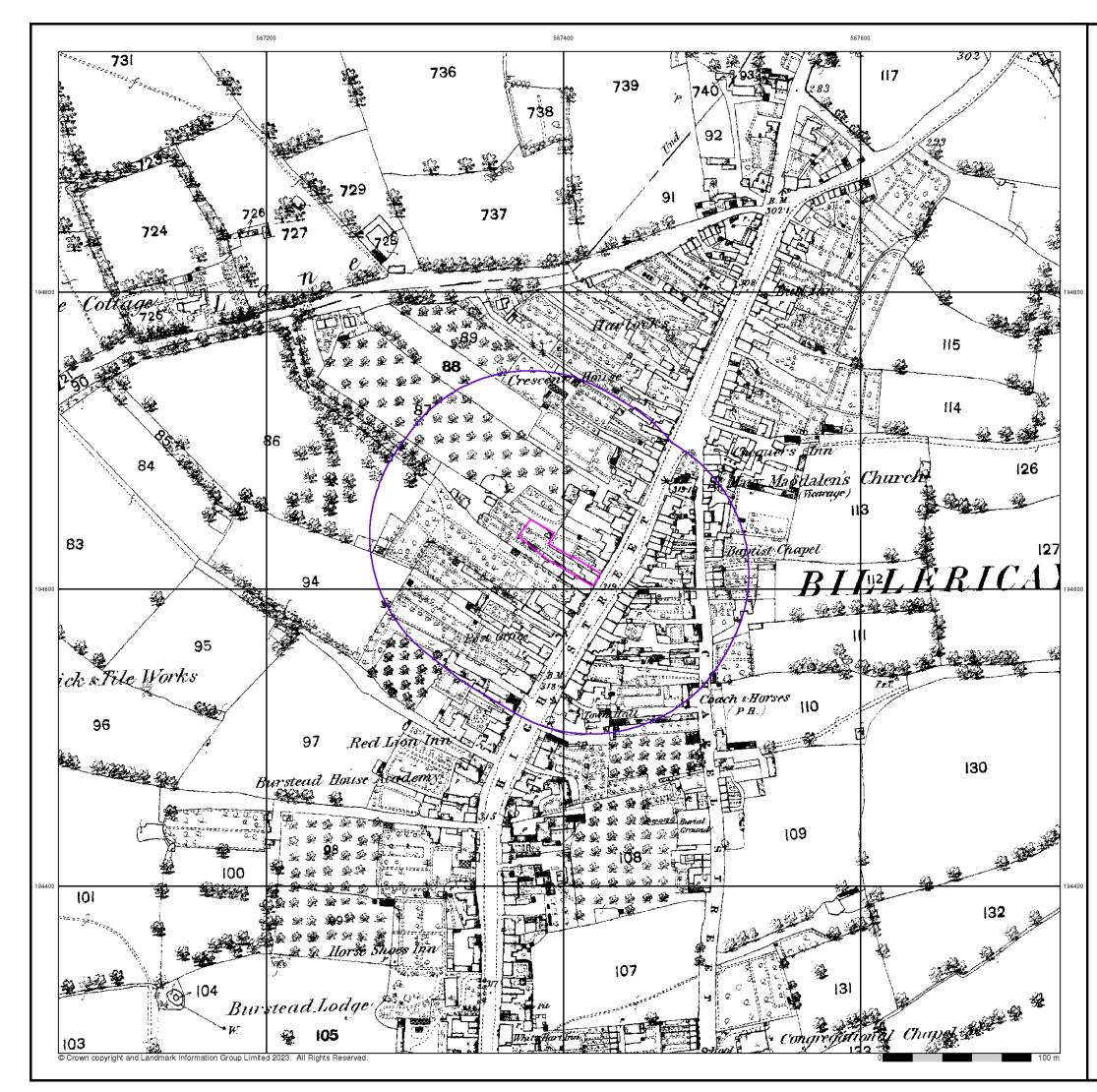
Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT





Tel

Fax: Web



Envirocheck[®] LANDMARK INFORMATION GROUP®

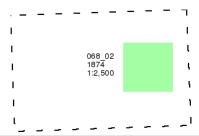
Essex

Published 1874

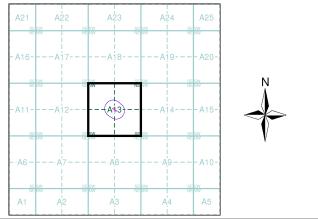
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to mapping urban areas and by rose it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

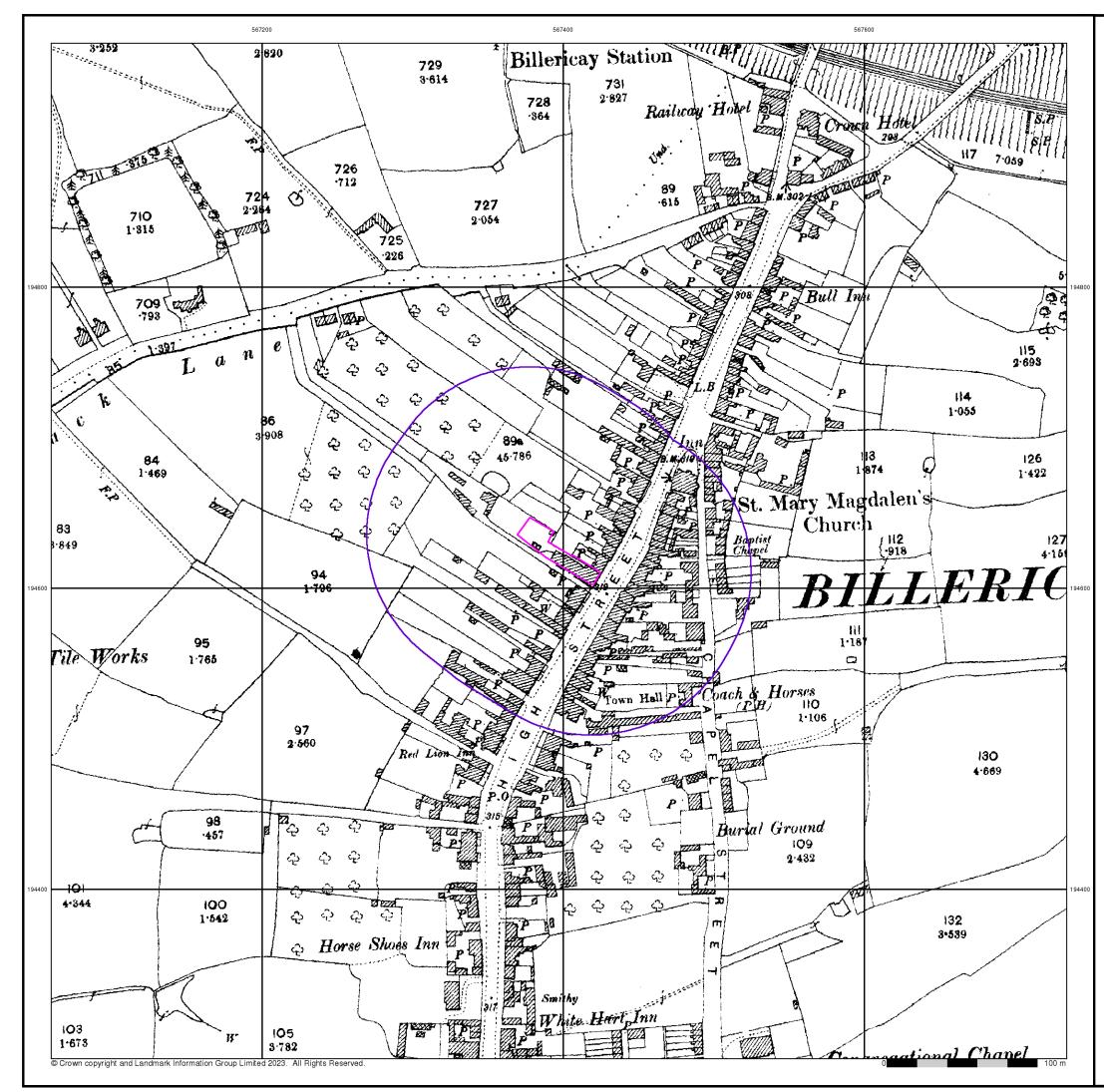
Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT





Tel: Fax: Web

0844 844 9952 0844 844 9951 www.envirocheck.co.uk



Envirocheck[®] LANDMARK INFORMATION GROUP[®]

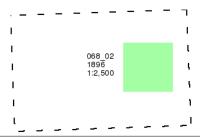
Essex

Published 1896

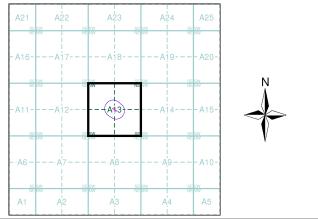
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

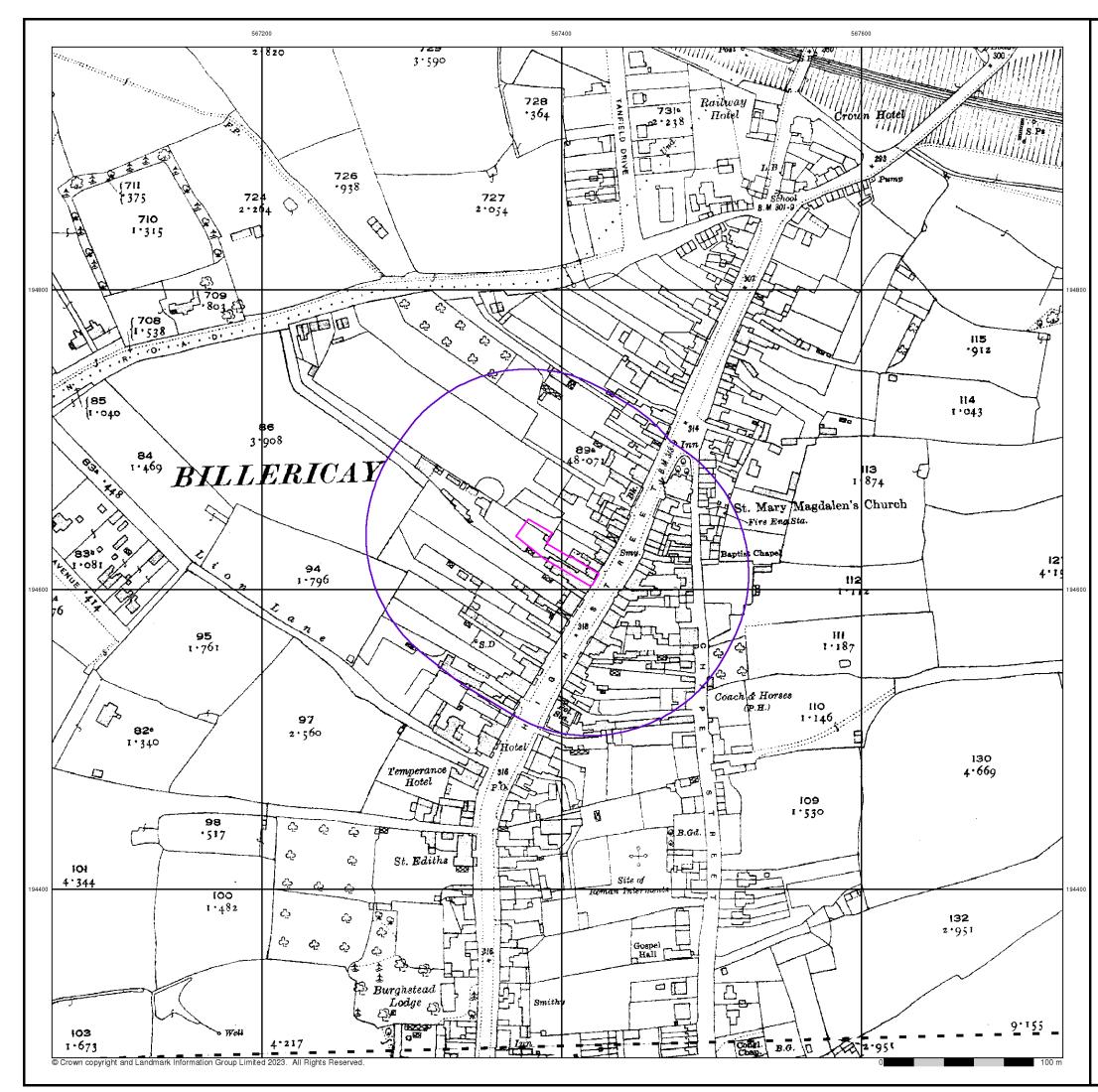
Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT





Tel:

0844 844 9952 0844 844 9951 www.envirocheck.co.uk



Envirocheck[®]

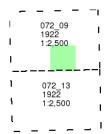
Essex

Published 1922

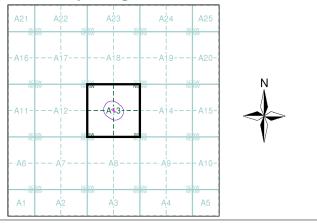
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

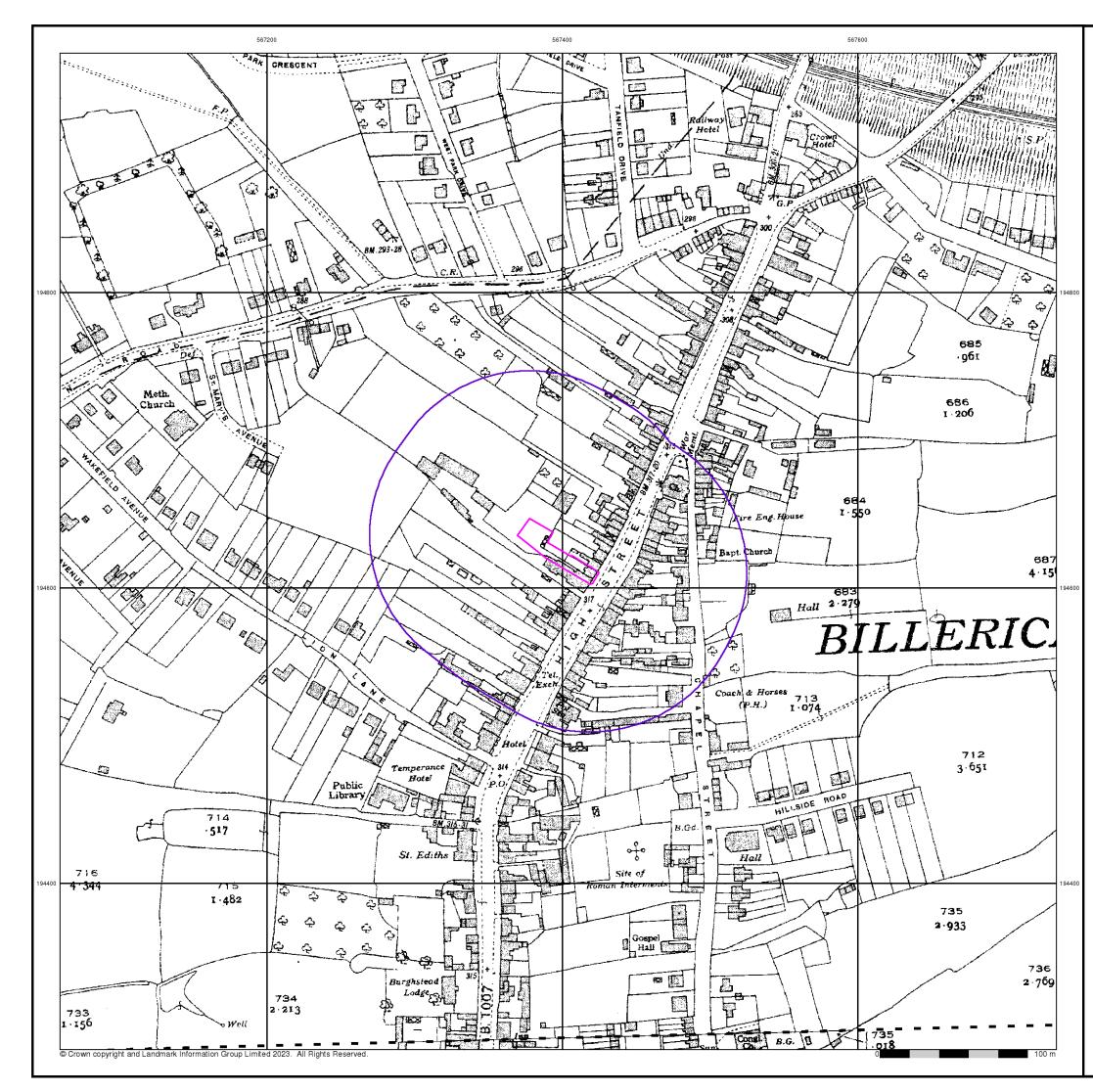
Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT







Envirocheck[®]

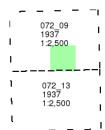
Essex

Published 1937

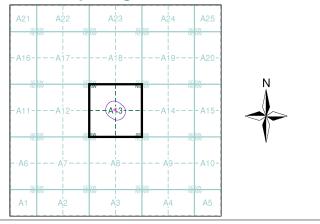
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

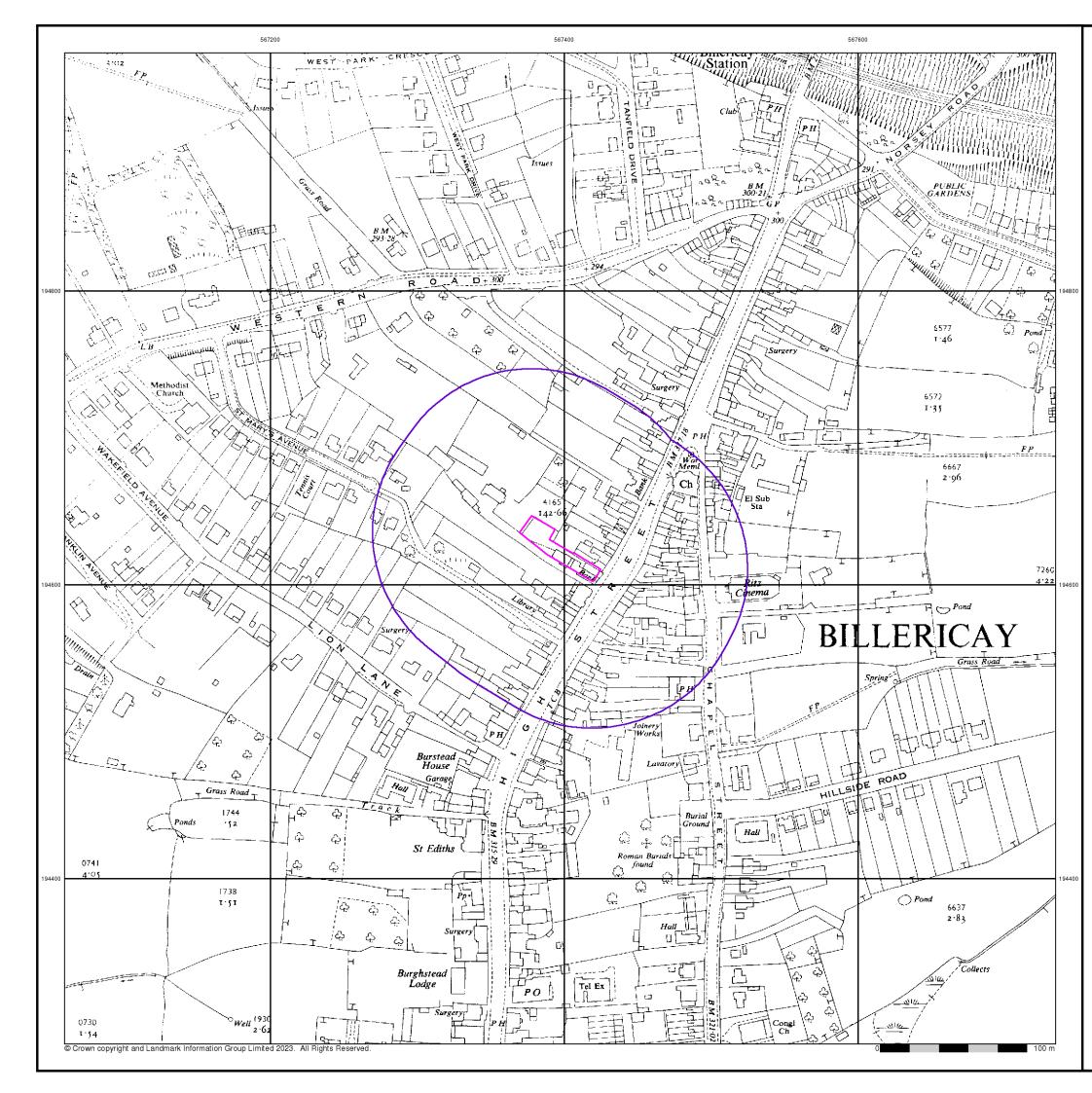
Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	Α
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT







Envirocheck[®] LANDMARK INFORMATION GROUP[®]

Ordnance Survey Plan

Published 1955

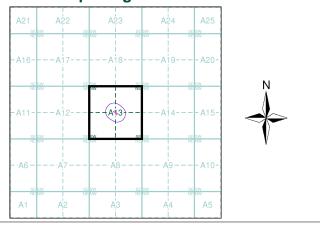
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

Г	-	-	-	-	-	-
Т						
Т		-	FQ67	94		
Т		1	955			
Т						
Т						
1						

Historical Map - Segment A13



Order Details

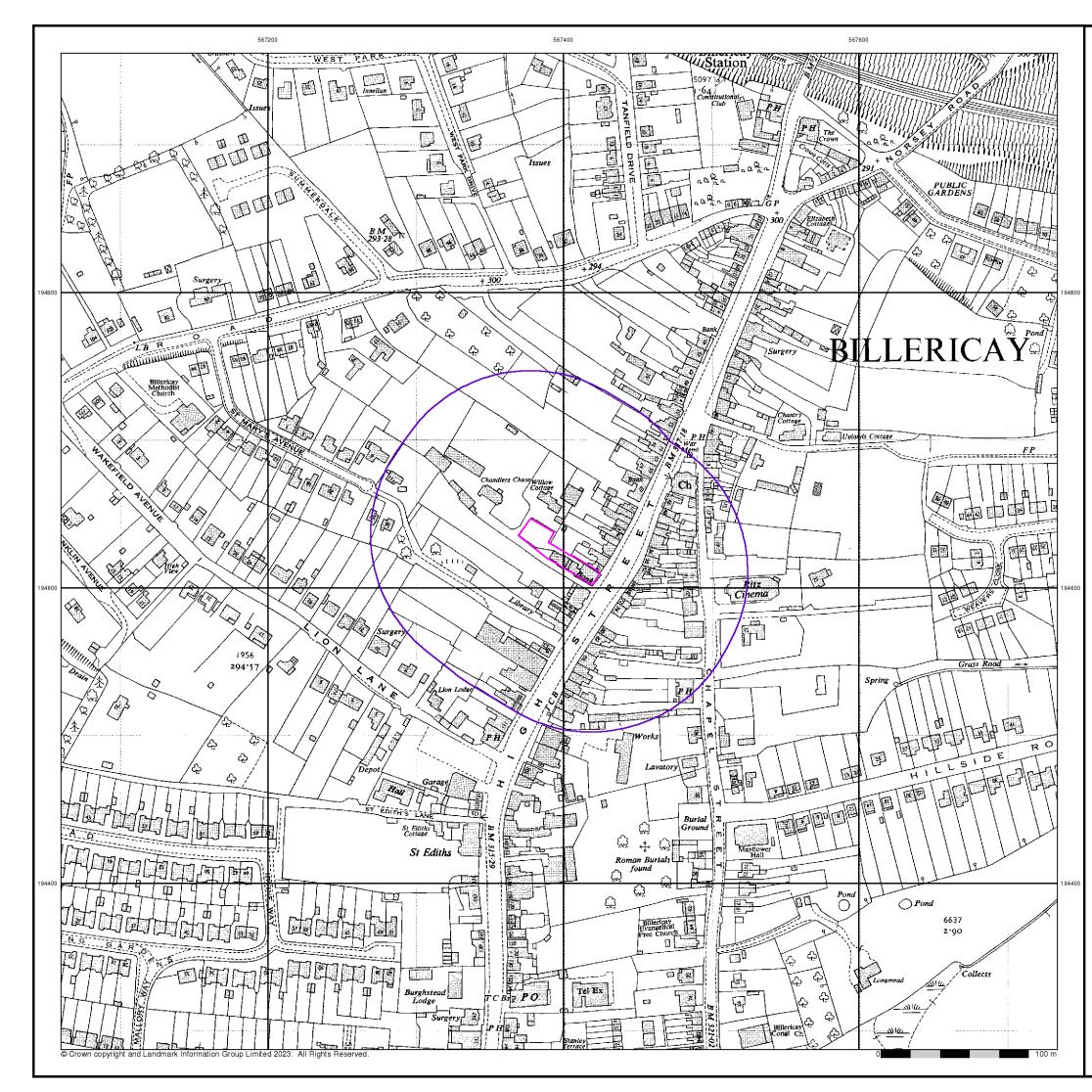
Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT







Envirocheck[®] LANDMARK INFORMATION GROUP[®]

Ordnance Survey Plan

Published 1961

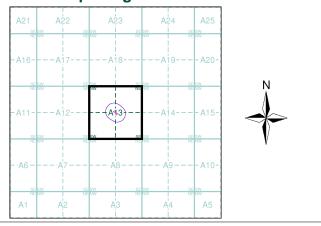
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

Г	-	-	-	-	-	-
Т						
Т		-	FQ67	94		
Т		1	961			
Т						
Т						
1						

Historical Map - Segment A13



Order Details

Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	Α
Site Area (Ha):	0.08
Search Buffer (m):	100

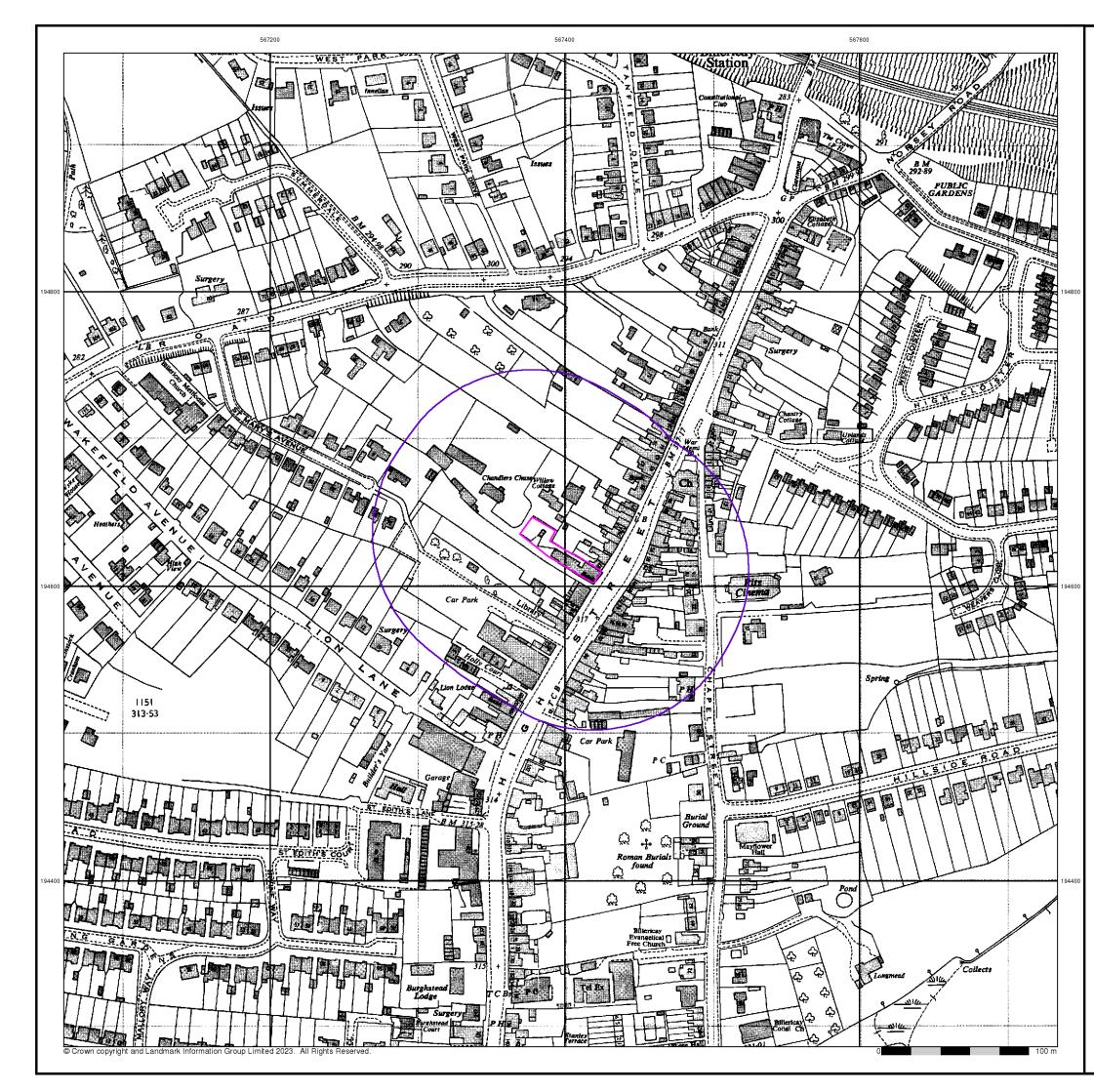
Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT





Tel:



Envirocheck[®] LANDMARK INFORMATION GROUP[®]

Ordnance Survey Plan

Published 1967

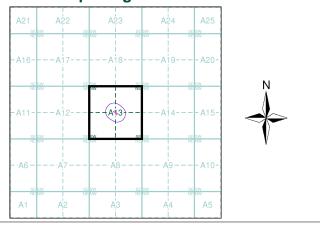
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

Г	-	-	-	-	-	-
Т						
Т		1	rQ67	94		
Т			1967 1:2,5			
Т						
Ι						
1						

Historical Map - Segment A13



Order Details

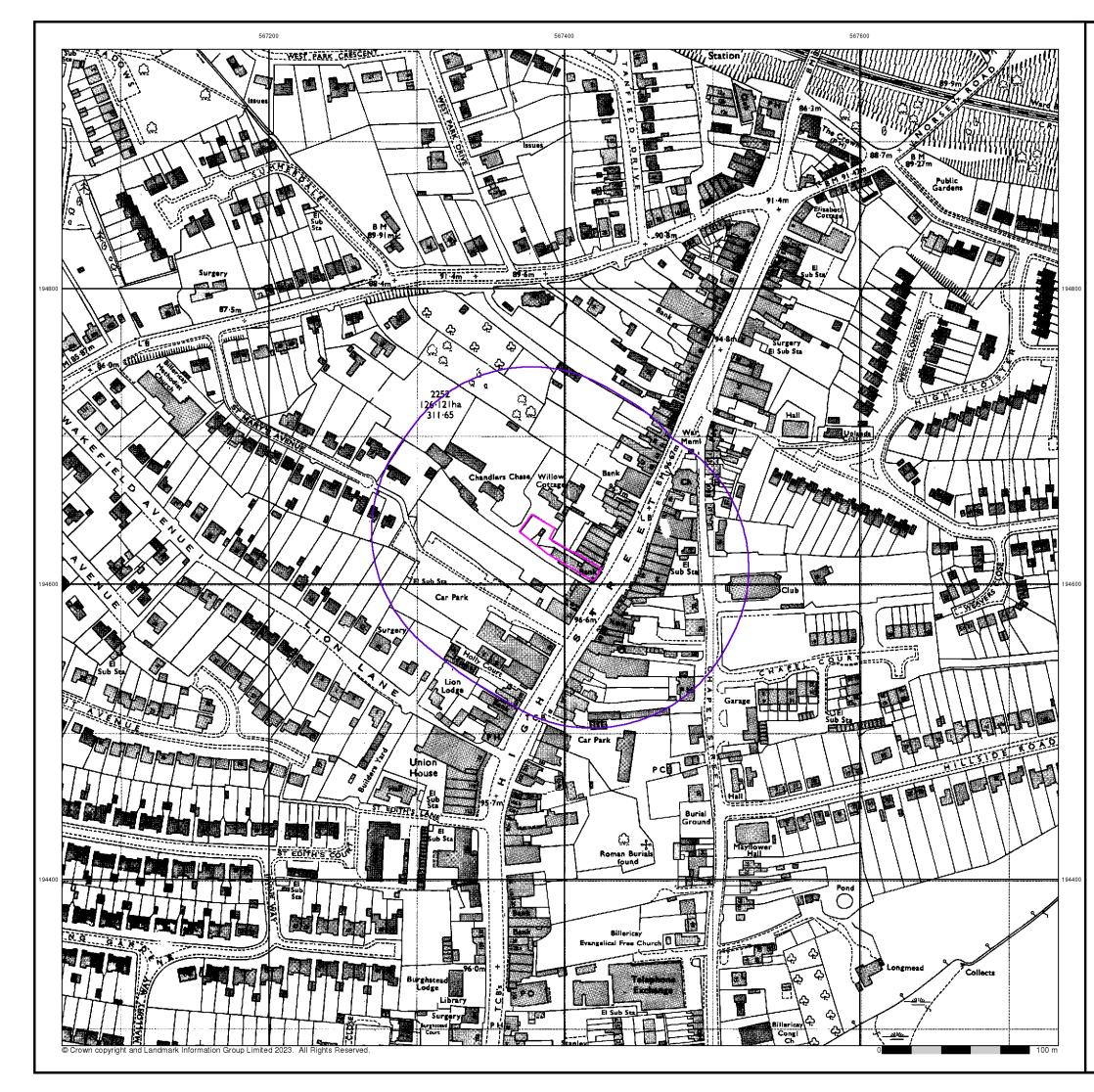
Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	Α
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT







Envirocheck[®] • LANDMARK INFORMATION GROUP[®]

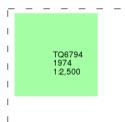
Ordnance Survey Plan

Published 1974

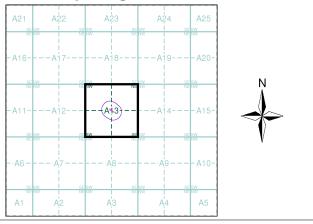
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

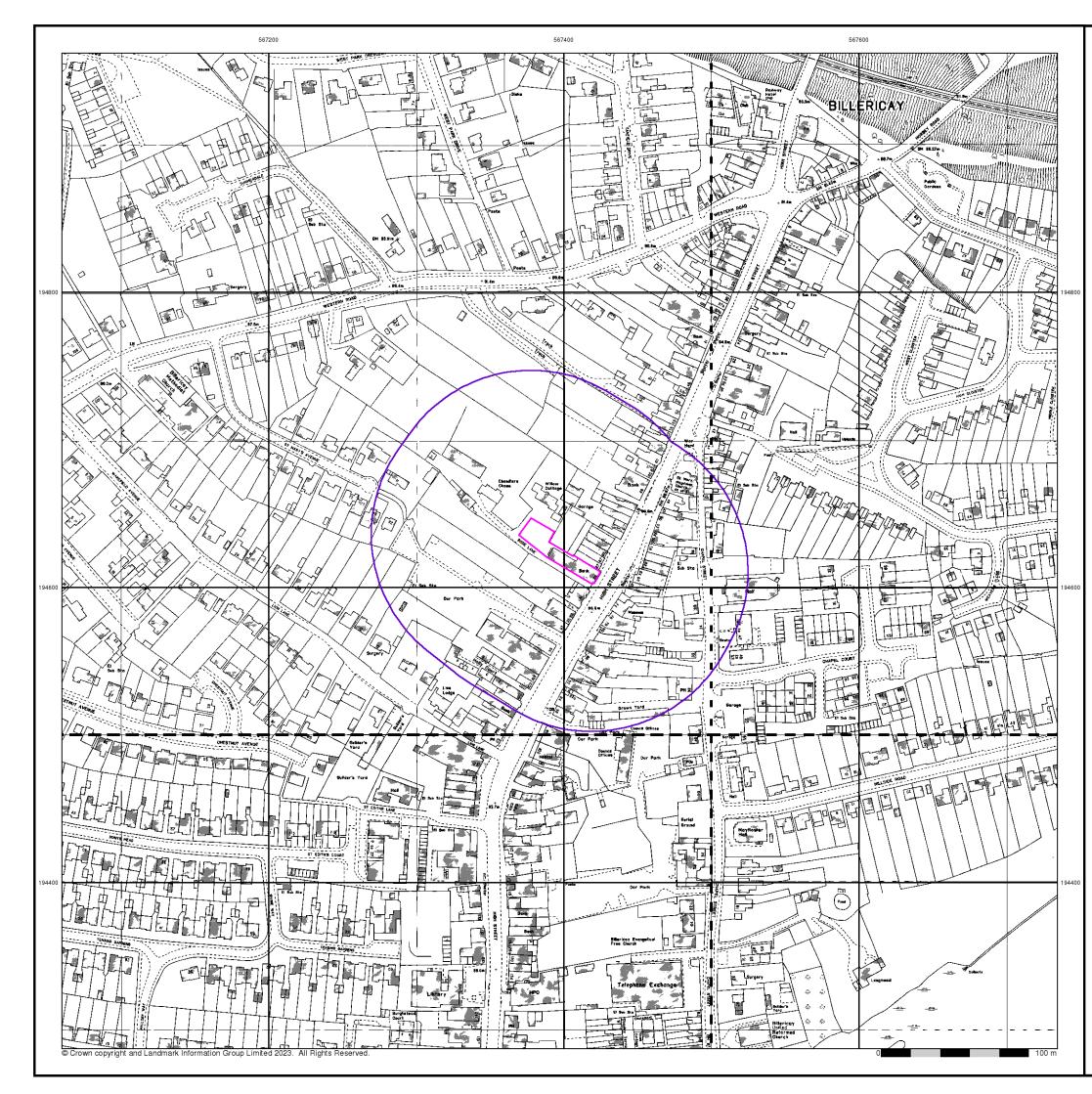
Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT







Envirocheck[®] LANDMARK INFORMATION GROUP[®]

Ordnance Survey Plan

Published 1978

Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

 TQ6794NW
 TQ6794NE

 1978
 1978

 1:1,250
 1:1,250

 ----- -----

 TQ6794SW
 TQ6794SE

 1978
 1978

 1978
 1:1,250

 ----- -----

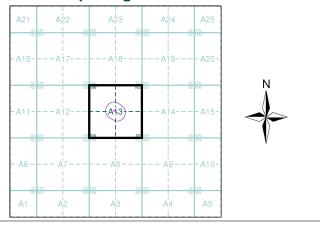
 1978
 1:1,250

 1978
 1978

 1978
 1:1,250

 1:1,250
 1:1,250

Historical Map - Segment A13



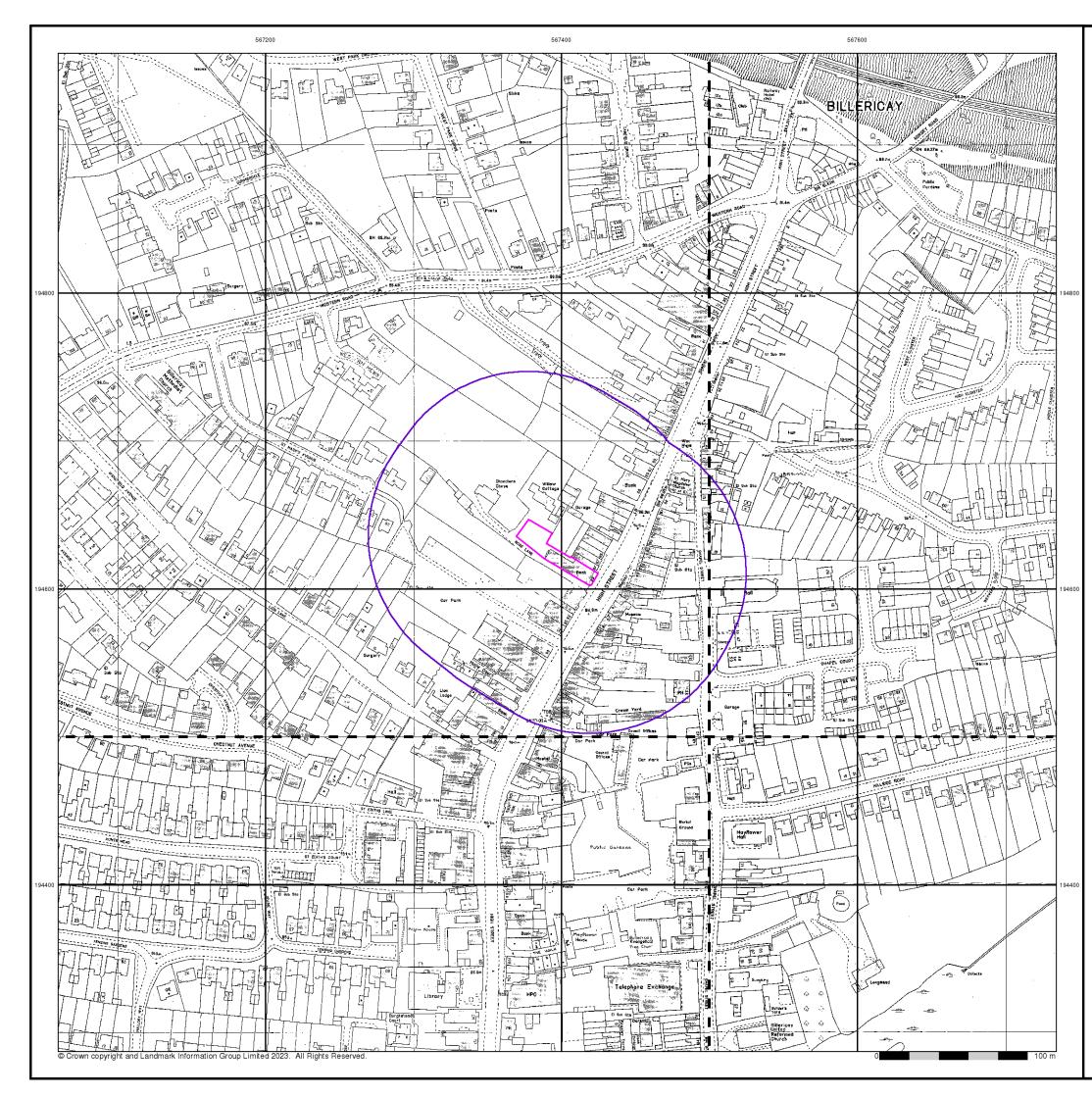
Order Details

Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT





Envirocheck[®] LANDMARK INFORMATION GROUP*

Additional SIMs

Published 1982 - 1991

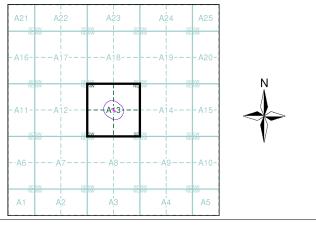
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

-			-		_
T	TQ6794NW	I.		'94NE	I
T	1991 1:1,250	I.	1991 1:1,2	50	I
T		I.			I
		_	_		
ī	TQ6794SW	1		94SE	1
 	TQ6794SW 1991 1:1,250	1	TQ67 1982 1:1,2		- I I
 	1991	 	1982		-

Historical Map - Segment A13



Order Details

0.00.00	
Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

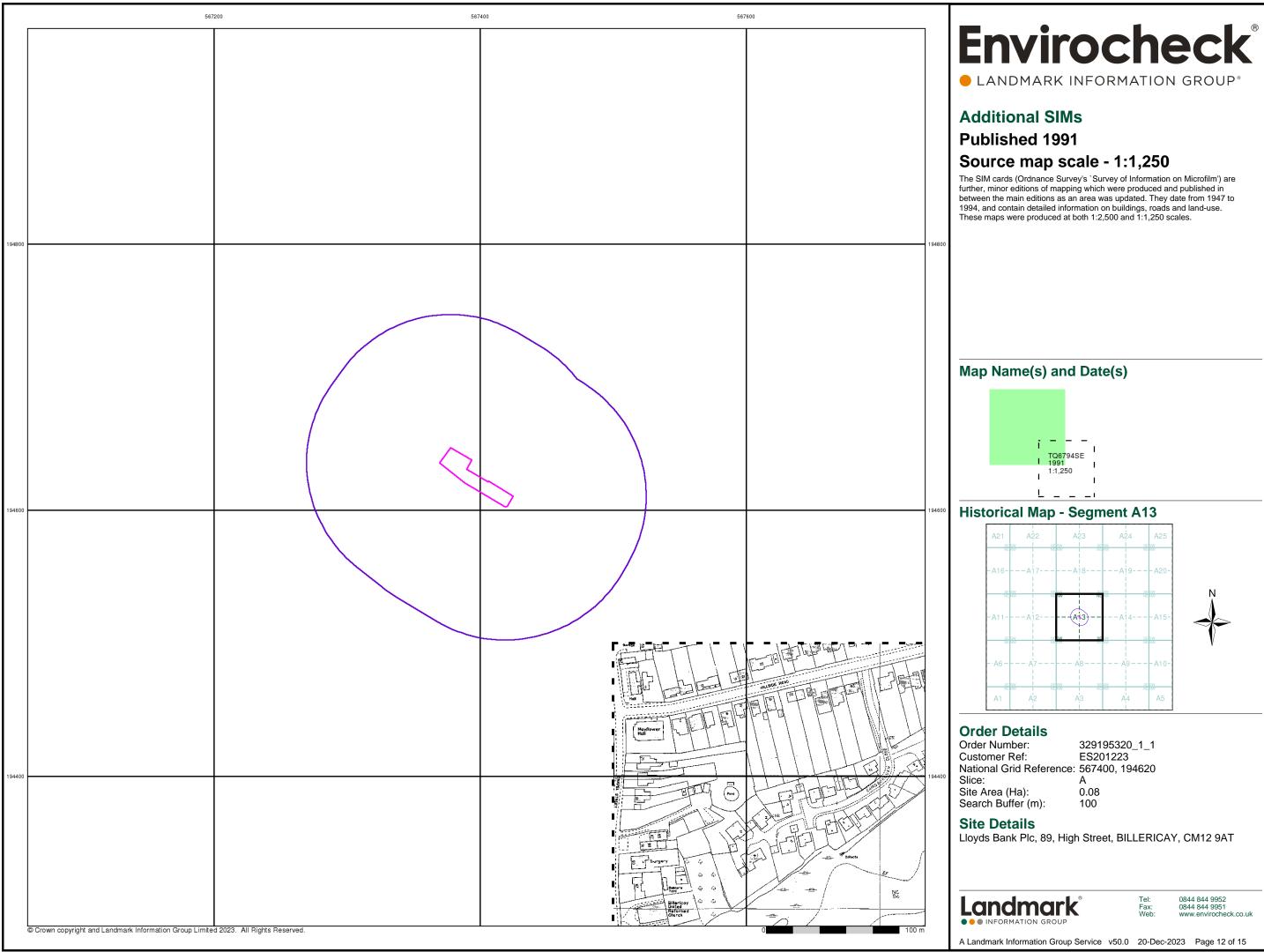
Site Details

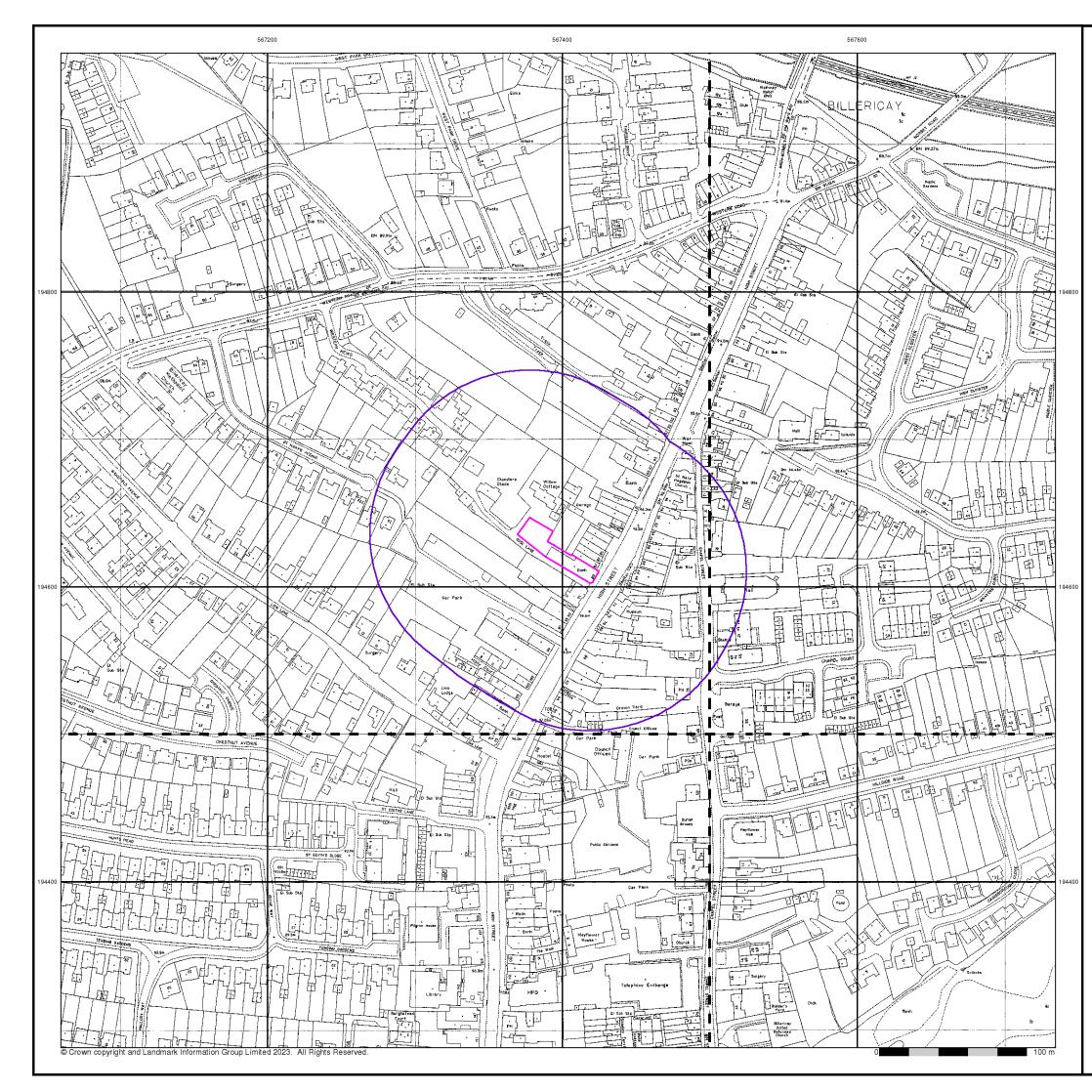
Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT





Tel: Fax: Web:





Envirocheck[®] • LANDMARK INFORMATION GROUP*

Large-Scale National Grid Data Published 1993

Source map scale - 1:1,250

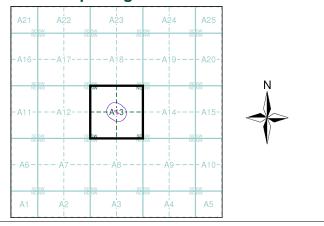
'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

_			_	_	_
I	TQ6794NW	L		'94NE	I
I	1993 1:1,250	L	1993 1:1,2		I
I		I.			I
-		-	-	-	_
	— — — TQ6794SW	 I		_ '94SE	_,
	TQ6794SW 1993 1:1,250	 I	- TQ67 1993 1:1,2		-

- - - -- - -

Historical Map - Segment A13



Order Details

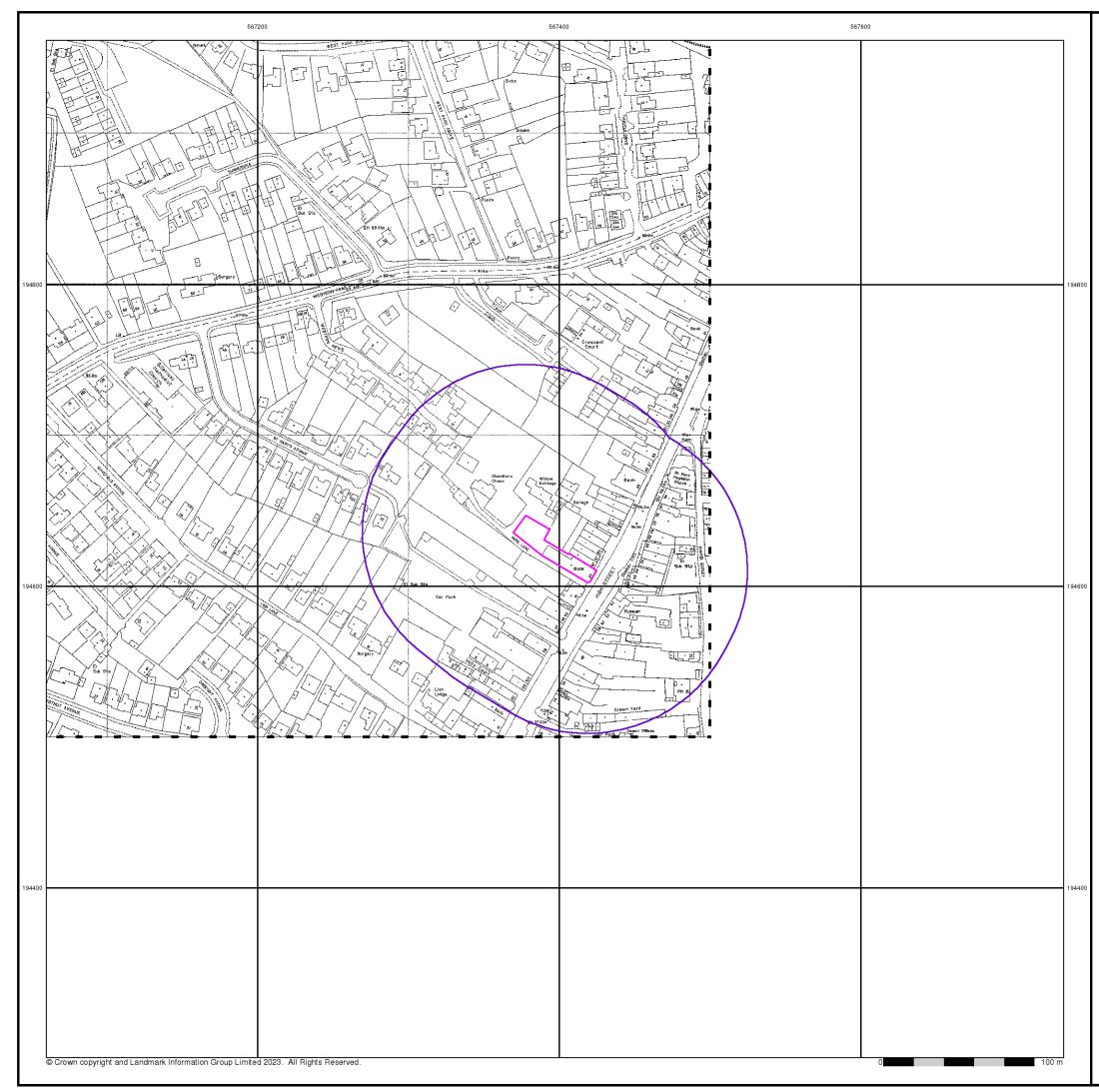
Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT







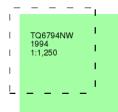
Envirocheck[®] • LANDMARK INFORMATION GROUP*

Large-Scale National Grid Data Published 1994

Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

A21 A	22 A2 I sesw I Nenw I	3 A: sesw Ne NW	24 A25	
-A16A	17A1	8A	19- -A20-	
SE SW NE NW	I SESW	SE SW	SESW NENW	N
-A11A	12A	3)А	14A15-	
SE SW NE NW	I SE SW I NENW	SE SW NENW	SE SW NE NW	\mathbf{V}
- · A6 · A	i \7A8	3A	9A10-	
SE SW NE NW		SE SW NE NW	I SESW	
A1 A	NENW	NENW	4 A5	

Order Details

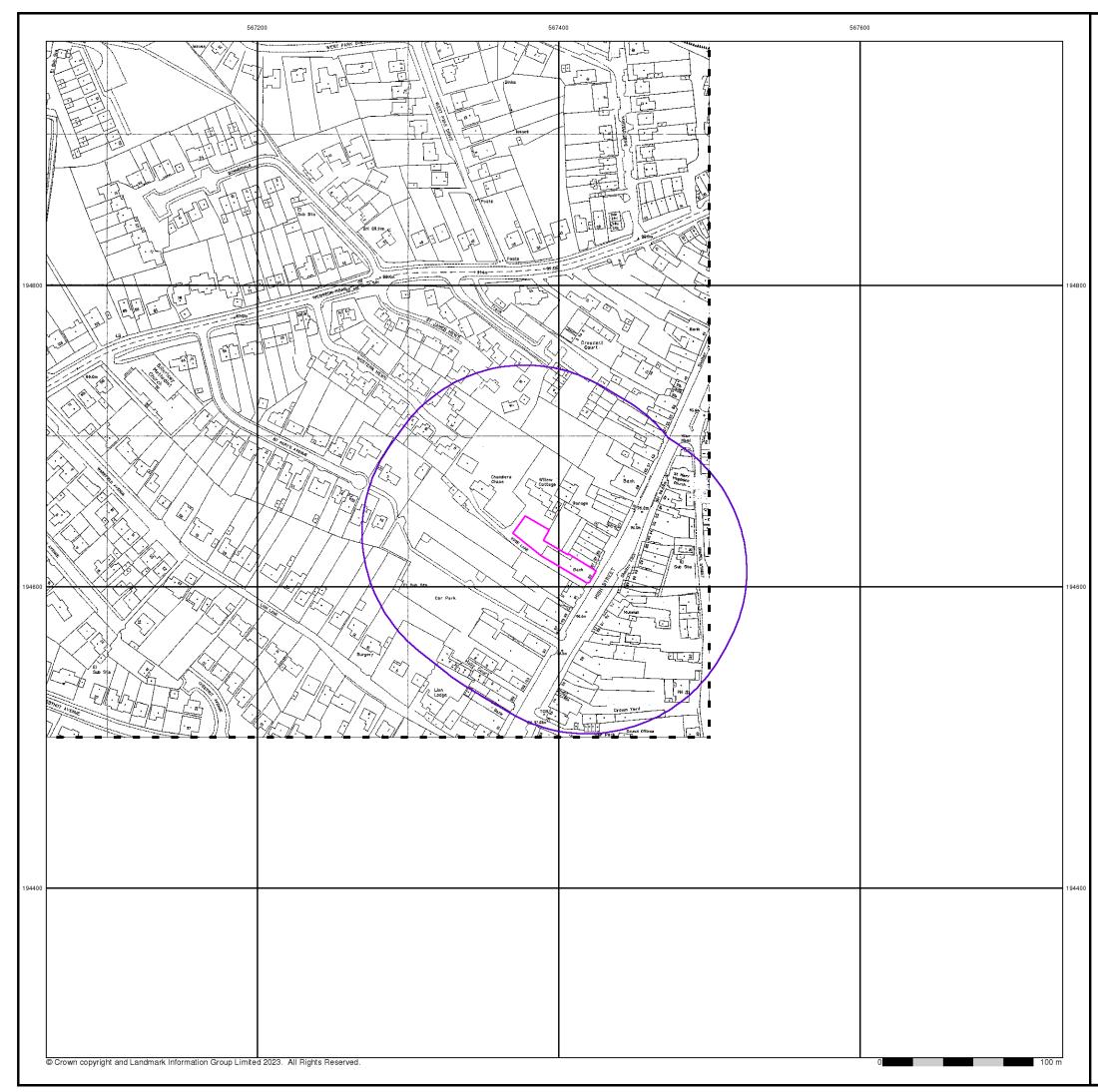
Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	Α
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT







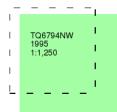
Envirocheck[®] • LANDMARK INFORMATION GROUP*

Large-Scale National Grid Data Published 1995

Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

A21	A22	SE SW NE NW	A23	SE SW NE NW	A24	A25
-A16	-A17-		-A18-		-A19-	A20-
SE SW NE NW		SE SW NE NW		SE SW NE NW		SE SW NE NW
-A11	-A12-		-(A+3)		-A14-	A15-
SE SW NE NW		SE SW NEIWW		SE SW NENW		SE SW NE NW
- · A6	- • A7 -		- • Å8 -		- · Å9 -	A10-
sesw Nenw A1	A2	SE SW NE NW	A3	SE SW NE NW	A4	sesw Nenw A5

Order Details

Order Number:	329195320_1_1
Customer Ref:	ES201223
National Grid Reference:	567400, 194620
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT





Historical Mapping Legends

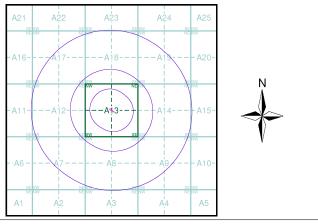
Ordnance	Survey County S	Ordnance Survey Plan 1:10,000				1:10,000 Raster Mapping				
Grav Pit	vel Sand Pit	Other Manual Pits	Contraction of the second	Chalk Pit, Clay Pit or Quarry		🖕 Gravel Pit		Gravel Pit		Refuse tip or slag heap
C Quai	rry Shingle	••••••• ••••••• Orchard		Sand Pit	,, 	 Disused Pit or Quarry 		Rock		Rock (scattered)
^{**} ***** ********* *******************	ers	Marsh		Refuse or Slag Heap		Lake, Loch or Pond		Boulders	000 000	Boulders (scattered)
		1+7 2+5 +4°7 327 1+7 2+5 +4°7 327 1 +4°7 - 100		Dunes	° ° ° ° °	b Boulders	, , , , , , , , , , , , , , , , , , ,	Shingle	Mud	Mud
Mixed Woo	d Deciduous	Brushwood	* * *	Coniferous Trees	A 4 4	Non-Coniferous Trees	Sand	Sand		Sand Pit
			ф	Orchard ∩∩_	Scrub	\Y n ∕ Coppice	*******	Slopes	للللللللل	Top of cliff Underground
Fir	Furze	Rough Pasture	ਜ ਜ ਜ	Bracken SMULL	Heath '	、,,,, Rough Grassland		General detail - Overhead detail		detail Narrow gauge railway
	rrow denotes م w of water	Trigonometrical Station	<u></u>	Marsh 、、、Y///	Reeds	<u>→_չ</u> Saltings		Multi-track railway		Single track railway
	ite of Antiquities 🔹 🛧	Bench Mark		Direct	tion of Flow of V	Water	_•_•	County boundary (England only)	•••••	Ci∨il, parish or community boundary
• Si	ump, Guide Post, ignal Post urface Level	Well, Spring, Boundary Post		Glasshouse		Sand		District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
Sketched	Instrume Contour	200		Sloping Masonry	Pylon — — 🗆 — · Pole	Electricity Transmission Line	۵ ^۵ **	Area of wooded vegetation Non-coniferous	۵۵ ۵۵	Non-coniferous trees Coniferous
Main Roads	Fenced Minor R	Coads Un-Fenced	Cutting				Q ↓	Coniferous trees (scattered)	** **	trees Positioned
	Sunken Road	Raised Road	⊔ Road '''∏ Under	//		⊨ Standard Gauge Single Track	* ج ج ج ج	Orchard	K K	tree Coppice or Osiers
All former and the second seco	Road over Railway	Railway over River				Siding, Tramway or Mineral Line → Narrow Gauge	پ پ ۱۲۰,	Rough Grassland	assilita	Heath
Constanting Constanting	Railway o∨er Road	Level Crossing		— Geographical Co	unty	· · · · · · · · · · · · · · · · · · ·	00_ 00_	Scrub	אַעַיר אווייר	Marsh, Salt Marsh or Reed
	Road over River or Canal	Road over Stream		Administrative Co or County of City Municipal Boroug		_	5	Water feature	← ←	Flow arrows
	Road over Stream			Burgh or District Borough, Burgh o Shown only when no	or County Cons		MHW(S)	Mean high water (springs)	MLW(S)	Mean low water (springs
	County Boundary (Geogra County & Civil Parish Bour	. ,		Civil Parish Shown alternately w	hen coincidence d	of boundaries occurs		Telephone line (where shown)	- • - • -	Electricity transmission li (with poles)
+· +· + ·+	Administrative County & C	-	Ch (Boundary Post or Stone Church	PO	Police Station Post Office	← BM 123.45 m	Bench mark (where shown)	Δ	Triangulation station
Co. Boro. Bdy.	County Borough Boundary County Burgh Boundary (S		F E Sta F	Club House Fire Engine Station Foot Bridge	PH	Public Convenience Public House Signal Box		Point feature (e.g. Guide Post or Mile Stone)	\boxtimes	Pylon, flare sta or lighting tow
Co. Burgh Bdy.		Joonanu)		Fountain Guide Post		Spring Telephone Call Box	•‡•	Site of (antiquity)		Glasshouse
yv. R.D. Bdy.	Rural District Boundary		MP M	/lile Post	TCP	Telephone Call Post				Important

Envirocheck[®] LANDMARK INFORMATION GROUP*

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Essex	1:10,560	1881	2
Essex	1:10,560	1898	3
Essex	1:10,560	1923	4
Essex	1:10,560	1938	5
Ordnance Survey Plan	1:10,000	1960 - 1961	6
Ordnance Survey Plan	1:10,000	1968	7
Ordnance Survey Plan	1:10,000	1970 - 1972	8
Ordnance Survey Plan	1:10,000	1981 - 1983	9
Ordnance Survey Plan	1:10,000	1991	10
10K Raster Mapping	1:10,000	1999	11
Street View	Variable		12

Historical Map - Slice A



Order Details

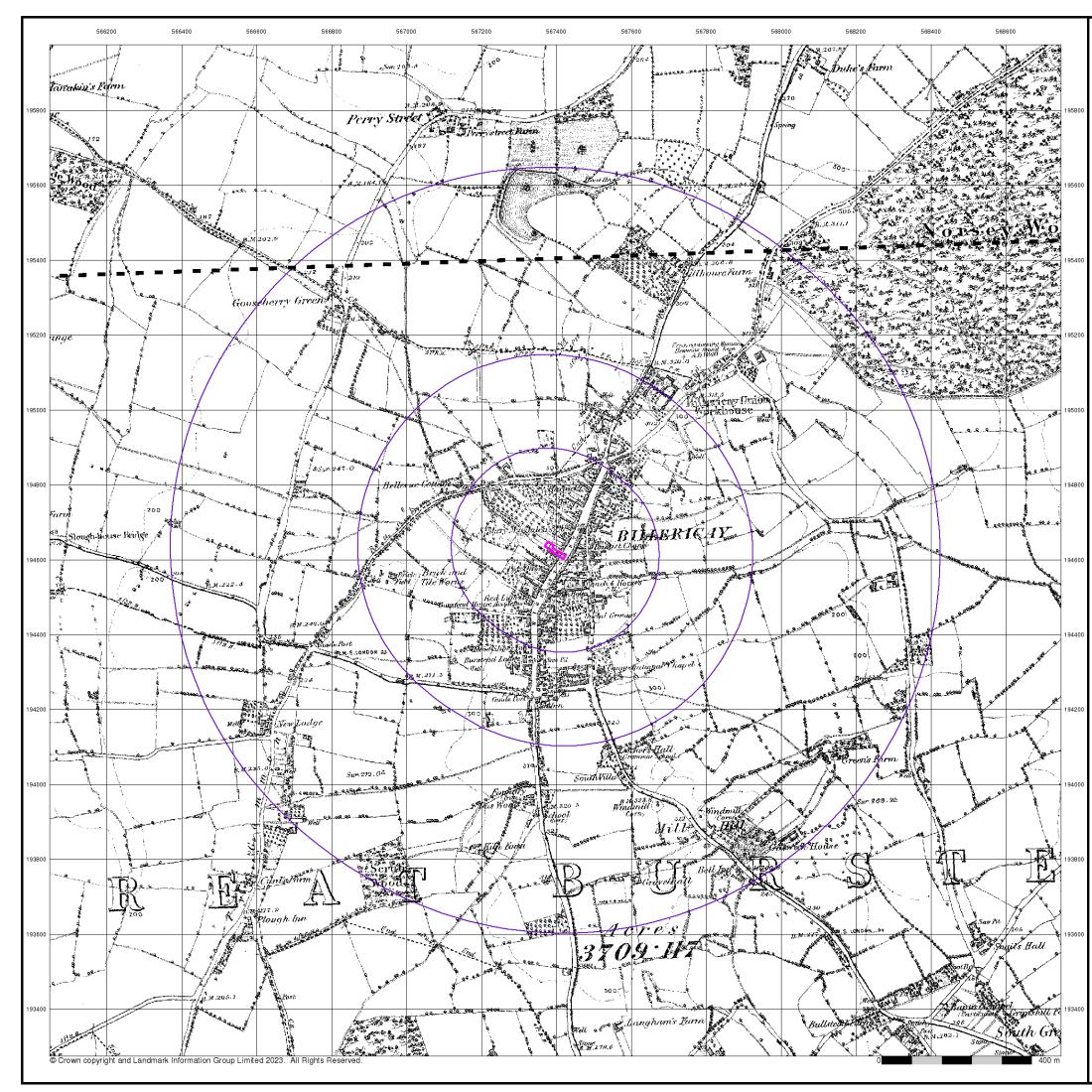
Order Number: Customer Ref: ES201223 National Grid Reference: 567400, 194620 Slice: Site Area (Ha): Search Buffer (m):

329195320_1_1 А 0.08 1000

Site Details

Lloyds Bank Plc, 89, High Street, BILLERICAY, CM12 9AT





Envirocheck[®]

Essex

Published 1881

Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.



