



**44 WATERLOO ROAD
UXBRIDGE UB8 2QX**

**PHASE 1 PRELIMINARY RISK ASSESSMENT
FOR
*UXBRIDGE PROPERTY LIMITED***

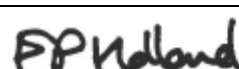


June 2017

Our Ref: HLEI52937/001R

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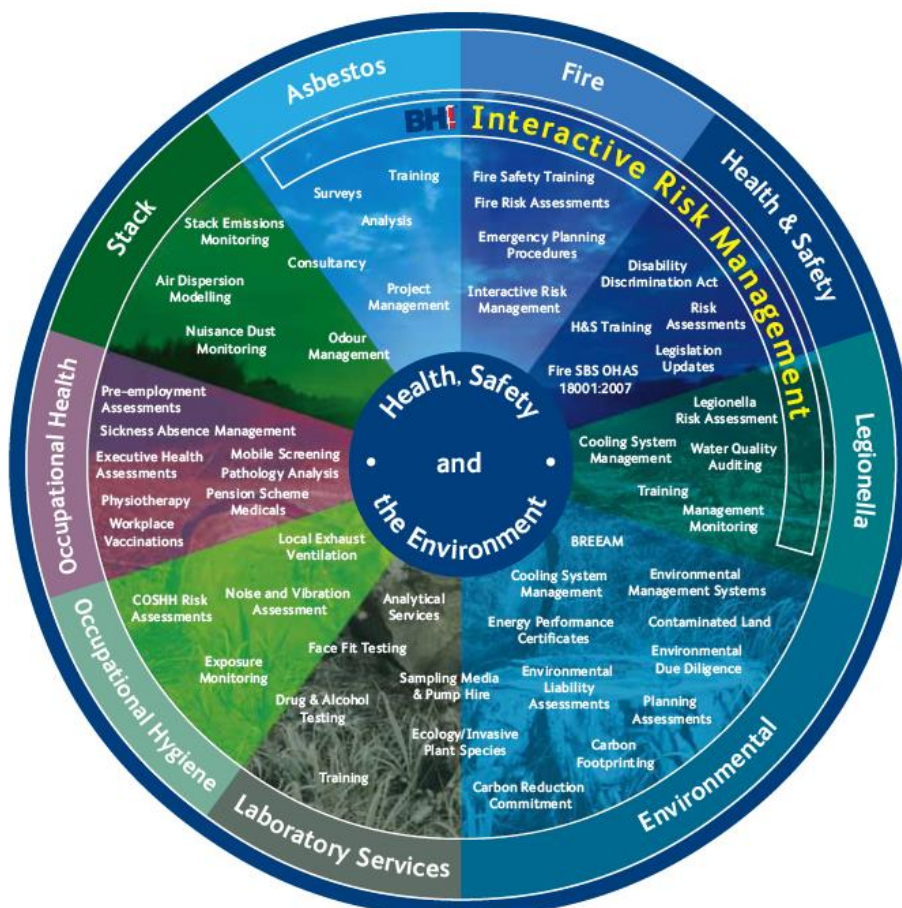
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This report has been prepared in the RPS Group Quality Management System to British Standard EN ISO 9001:2008

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RPS Health, Safety & Environment (London office) is certified to Environmental Management Standard ISO 14001.





CONTENTS

	PAGE
EXECUTIVE SUMMARY	
1 INTRODUCTION	1
2 SITE RECONNAISSANCE AND DESK STUDY	3
3 OUTLINE CONCEPTUAL SITE MODEL	10
4 CONCLUSIONS AND RECOMMENDATIONS.....	13

FIGURES

APPENDIX A

General Notes

APPENDIX B

Photographs

APPENDIX C

Part 2A (The Contaminated Land Regime)

EXECUTIVE SUMMARY

RPS Health, Safety & Environment (RPS) was commissioned by Uxbridge Property Limited to undertake a Phase 1 Preliminary Risk Assessment for 44 Waterloo Road, Uxbridge UB8 2QX. The report has been commissioned in relation to the proposed conversion of the site to comprise a residential use.

Site History

A building, labelled as an infant school, was present on site from 1896 until c.1914. From c.1935 to c.1963, the building was labelled as a hall. From 1963, a building labelled as a factory was indicated to have been present at the site.

A number of historical potentially contaminative land uses have been identified in the vicinity of the site. An electricity works was located approximately 20m to the south of the site (1975 to c.1978), this was latterly labelled as a works (1978 to c.1986) and then a depot with associated tanks (1986 to at least 1995). An electricity works was located approximately 65m to the south, from 1914 to c.1935. From information provided by the London Borough of Hillingdon, it is understood that the electricity works site was remediated in 2001.

On Site and Surrounding Land Use

The site was vacant at the time of the walkover. RPS understands that that the site had previously been used as a church hall and, more recently, to store vehicle parts.

There is the potential for Made Ground to be present beneath the site as a result of past construction and demolition activities.

Current potentially contaminative land uses in the vicinity of the site include Black Horse Yard, located adjacent to the west and south of the site; a number of works located between approximately 5m and 40m from the site; Uxbridge Boat Centre located approximately 40m to the north; and Uxbridge Wharf, located approximately 50m to the north.

Environmental Setting

The site is located within a mixed light industrial and residential area.

The site is indicated to be underlain by a Secondary A Aquifer relating to Alluvium and the Taplow Gravel Formation Principal Aquifer. The site is not located in a groundwater Source Protection Zone (SPZ).

The River Colne is located approximately 140m to the west of the site, at its closest point.

Outline Conceptual Site Model

An outline conceptual site model (CSM) has been derived on the basis of the desktop study and site reconnaissance. Current and historical potentially contaminative land uses have been identified both on site and in the surrounding area. Based on current redevelopment plans, proposed surface cover at the site will comprise building cover and hardstanding, thereby mitigating the risks to future on site human health receptors via the pathways of dermal contact and ingestion. This would also mitigate the potential for the airborne off-site migration of soil/dust from these areas.

However, there is the potential for ground gas and volatile contaminants of concern in soil and/or groundwater (if present) beneath the site to impact future site users via the inhalation pathway in indoor areas.

Groundwater within granular horizons of the Made Ground (if present) and underlying Alluvium and Taplow Gravel Formation could constitute a potential pathway for the on or off-site migration of contaminants of concern.

Recommendations

The outline CSM produced upon completion of the desk study assessment has identified a number of potential pollutant linkages that may become active upon the redevelopment of the site. It is therefore recommended that the potential for these linkages to become active is assessed through a Phase 2 Environmental Site Investigation of the site.

Other Issues

Given the age of the building on site, it is possible that asbestos containing materials (ACMs) could be present within the building fabric. Given the proposed conversion of the building, it is recommended that an asbestos refurbishment survey should be undertaken prior to any works being carried out.

1 INTRODUCTION

1.1 Preamble

RPS Health, Safety & Environment (RPS) was commissioned by *Uxbridge Property Ltd* to undertake a Phase 1 Preliminary Risk Assessment for 44 Waterloo Road, Uxbridge UB8 2QX. A site location plan is provided as Figure 1.

The report has been commissioned in order to accompany a planning application for the proposed conversion of the site to comprise residential end use.

1.2 Scope of Work

The scope of works for this assessment was as follows:

- To undertake a site inspection;
- To review the historical land uses to assess the potential for ground contamination;
- To review the environmental setting to assess the sensitivity of the surrounding area to contamination/pollution;
- To undertake a qualitative environmental risk assessment of the site's current and proposed use; and
- Produce an outline Conceptual Site Model (CSM) detailing potential pollutant linkages associated with the redevelopment of the site.

1.3 Legislation and Guidance

This report has been produced in general accordance with:

- *Contaminated Land (England) Regulations 2006 (as amended)*;
- *DEFRA Environmental Protection Act 1990: Part 2A – Contaminated Land Statutory Guidance (2012)*;
- DEFRA and Environment Agency (2004) Contaminated Land Report 11 (CLR 11): *Model Procedures for the Management of Land Contamination*;
- *National Planning Policy Framework (2012)*; and
- British Standard requirements for the '*Investigation of potentially contaminated sites - Code of practice*' (ref. BS10175:2011+A1:2013).

Where appropriate, consideration has also been given to the following:

- The potential for environmental liabilities to occur under other associated regimes, for example the *Water Resources Act (1991)* and the *Environmental Damage Regulations (2009)*; and
- Key constraints on site redevelopment.

Details of the limitations of this type of assessment are described in Appendix A.

2 SITE RECONNAISSANCE AND DESK STUDY

2.1 Site Reconnaissance

This section of the report is based upon observations made during a site visit carried out on 15th June 2017. A site boundary plan is shown as Figure 2. Selected photos are shown in Appendix B.



General view of the site. For further photos see Appendix B.

2.1.1 The Site

Table 1 – Summary of Site Reconnaissance

Section	Description
<i>Background:</i>	The site is located approximately 700m to the southwest of Uxbridge town centre at National Grid Coordinates 505011, 183645. It is rectangular in shape and occupies an area of approximately 0.03ha.
<i>Site Layout:</i>	At the time of the walkover, the site comprised a building which occupied the majority of the site. The building included a mezzanine level which was accessed via a staircase in the northeast of the building. A small external yard area was present in the west of the site. A large metal roller shutter door was present at the back of the building, providing access to the yard area. A further metal roller shutter door was present at the western boundary wall, providing access to Black Horse Yard beyond.
<i>Activity Operations:</i>	The site was vacant at the time of the walkover (see Appendix B, Photo 1). The site representative advised RPS that the site had previously been used as a church hall and, more recently, to store vehicle parts.
<i>Building Structure:</i>	The building was of brick construction with a pitched roof constructed of corrugated metal.

Section	Description
<i>Topography and Surface Cover:</i>	The site was generally flat. Surface cover across external areas comprised concrete hardstanding, which was observed to be generally in a moderate condition, with some cracks evident. Internally, the floor surface comprised concrete, this was observed to be in a generally reasonable condition.
<i>Surface Water Drainage:</i>	A number of surface water drains and manhole covers were observed on the site, both within the building and the surrounding periphery. No oil/water interceptors were observed during the site walkover. No site drainage plans have been provided to RPS for review as part of this assessment.
<i>Bulk Storage / Tanks:</i>	No above or below ground storage tanks were observed to be present on site during the walkover.
<i>Waste:</i>	The building was vacant at the time of the walkover and no waste streams associated with the site were observed to be present. A one ton bag containing sand was present in the south of the yard area (see Appendix B, Photo 2).
<i>Electrical Substations / Transformers:</i>	No electrical substations or transformers were observed on site during the walkover.
<i>Visual Evidence of Contamination:</i>	No visual evidence of contamination was observed during the walkover.
<i>Other Issues:</i>	No <i>Japanese Knotweed</i> or <i>Giant Hogweed</i> (invasive plant species) were readily identified on the site at the time of the survey. <i>(It should be noted that the identification can be limited by the seasons and in areas of dense vegetation growth).</i> Given its age, it is considered that there is potential for asbestos containing materials (ACMs) to be present within the building on site.

2.1.2 The Surrounding Area

The site is located in an area of mixed residential and light industrial use. At the time of the site inspection, neighbouring land consisted of the following:

Table 2 – Neighbouring Land Uses

Direction	Description
<i>North</i>	Residential dwellings with Uxbridge Boat Centre approximately 40m to the north.
<i>East</i>	Waterloo Road with residential dwellings beyond.
<i>South and West</i>	Access road to the south with Black Horse Yard to the south and west. This comprised a vehicle repair works including a number of lockup garages, a yard used to store vehicles, as well as workshop buildings.

2.2 Proposed Development

The existing building is proposed to be converted into six residential dwellings. Small areas of decking are proposed on the ground floor of each of the properties with pocket gardens on the roof level.

It is understood that the existing rear yard area will remain as an area of hardstanding.

A proposed redevelopment plan is provided as Figure 3.

2.3 Site History

2.3.1 Historical Map Review

The following review is based on past editions of readily available Ordnance Survey (OS) maps. These include scales of 1:1,250, 1:2,500 and 1:10,000 dated 1866 to 2014. Extracts from selected and historical maps are given as Figures 4 to 7.

Table 3 – Historical Site Uses

On-site Land Use and Features	Dates
The site comprised open land with a track/footpath running through the centre of the site.	1866 to c.1896
A building was present on site, labelled as an infant school. <i>Then</i> the building was unlabelled. <i>Then</i> the building was labelled as a hall.	1896 to c.1914 1914 to c.1935 1935 to c.1963
A building labelled as a factory was present on site. The building was labelled as a factory until at least 1992.	1963 to Present

RPS has been advised that the site had previously been used as a church hall and, more recently, for the storage of vehicle parts.

Table 4 – Historical Neighbouring Site Uses

Surrounding Land Uses (100m radius)	Orientation	Distance	Dates
Black Horse Yard	West	Adjacent	1986 to Present
Works	Northwest	5m	1986 to Present
Works	Southwest	5m	1986 to Present
Electricity Works <i>Then</i> works <i>Then</i> depot with associated tanks	South	20m	1975 to c.1978 1978 to c.1986 1986 to at least 1995
Barge works <i>Then</i> works	Northwest	20m	1935 to c.1963 1963 to Present
Works	Northwest	20m	1886 to Present
Works	West	40m	1963 to Present
Uxbridge Wharf	North	50m	1986 to Present
Boat yard	North	60m	1986 to Present
Electricity works	South	65m	1914 to c.1935
Tanks	Southwest	80m	1935 to c.1963
Warehouse	North	85m	1986 to Present
Waterloo Wharf	North	90m	1963 to Present
Tramway	South	100m	1935 to c.1963

2.3.2 Site Planning History

A review of the London Borough of Hillingdon's planning website identified one readily available and relevant planning record for the site. This related to a retrospective application for a change of use

from a church hall to Class B8 (storage and distribution of used car spares). The planning application reference is 1654/D/93/046, the application was approved on 2nd July 1993.

2.4 Environmental Setting

2.4.1 Geology

Based on British Geological Survey (BGS) mapping (1:50,000-scale) and the Environment Agency (EA) Groundwater Vulnerability mapping (1:100,000-scale), the stratigraphic sequence and aquifer classifications beneath the site are indicated to be as follows:

Table 5 – Descriptions of Geological Strata

Strata	Description & approximate thickness	Aquifer Classification
Alluvium	This stratum is indicated to comprise clay, silt, sand and gravel and is likely to be several metres in thickness in the vicinity of the site.	Secondary A Aquifer
Taplow Gravel Formation	This stratum comprises sand and gravel and is likely to be approximately 5m in thickness in the vicinity of the site.	Principal Aquifer
London Clay Formation	This stratum comprises clay, silt and sand and is likely to be to up approximately 10m in thickness in the vicinity of the site.	Unproductive Stratum
Lambeth Group	This stratum comprises clay, silt and sand and is likely to be approximately 10m in thickness in the vicinity of the site.	Secondary A Aquifer

In addition to the strata detailed above, Made Ground is likely to be present beneath the site as a result of previous construction and demolition activities.

2.4.2 Hydrogeology

The site is located above a Secondary A Aquifer relating to the Alluvium. These formations are formed of permeable layers capable of supporting water supplies at a local scale, in some cases forming an important source of base flow to rivers. The Taplow Gravel Formation is classified as a Principal Aquifer. These formations provide a high level of water storage and may support water supply and / or river base flow on a strategic scale.

The London Clay Formation is classified as an Unproductive Stratum. These formations have a low permeability and have negligible significance for water supply or base flow. The underlying Lambeth Group is classified as a Secondary A Aquifer.

According to EA data, the site is not located in a groundwater Source Protection Zone (SPZ).

Groundwater chemical quality beneath the site within the underlying Taplow Gravel Formation has been classified as good under the EA's local River Basin Management Plan.

Information provided by the EA indicates that there are no records of any active licensed groundwater abstractions present within 1km of the site.

2.4.3 Surface Water

Under the Water Framework Directive, the EA identifies four waterbodies within 1km of the site which are classified within the local River Basin Management Plan. A list of nearby watercourses and water bodies is as follows:

Table 6 – Nearby Surface Watercourses

Watercourse / body	Quality Classification	Approx. Distance and Direction from Site
Grand Union Canal	Chemical Quality: Good Ecological Quality: Moderate	40m West
River Colne	Chemical Quality: Good Ecological Quality: Moderate	140m West and 290m East
Colne Brook	Chemical Quality: Good Ecological Quality: Moderate	435m Southwest
Alderbourn	Chemical Quality: Good Ecological Quality: Moderate	625m West

Information provided by the EA indicates that there are two records of active licensed surface water abstractions present within 1km of the site. The details of these are provided in the table below.

Table 7 – Surface Water Abstractions within 1km of the Site

Licence Holder	Use	Approx. Distance and Direction from Site
Jones	Spray irrigation - direct Source: Thames surface water	905m West
Jones	Spray irrigation - direct Source: Thames surface water	915m Northwest

2.4.4 Fluvial / Tidal Flood Risk

According to the EA flood map, the site is located within Flood Zone 1, whereby there is less than a 0.1% (1 in 1000) chance of flooding from rivers or the sea occurring each year.

2.4.5 Ecologically Sensitive Sites

Natural England data indicates that there are no ecologically sensitive sites that constitute environmental receptors as defined within Table 1 of the DEFRA Environmental Protection Act 1990: Part 2A - Contaminated Land Statutory Guidance (2012), located within a 1km radius of the site.

2.4.6 Radon

According to the Indicative Atlas of Radon in England and Wales published by the Health Protection Agency and the British Geological Survey, the site is located within a lower probability radon area (less than 1% of properties are estimated to be at or above the Action Level). No radon protective measures are necessary in the construction of new dwellings or extensions.

2.4.7 Coal Authority

According to Coal Authority data, the site is not located in an area potentially affected by coal mining activities.

2.5 Authorised Processes and Pollution Incidents

2.5.1 Landfills and Waste Sites

Information provided by the EA, Local Authority and BGS shows that there is a record of one historical landfill within 500m of the site. This is located approximately 480m to the west of the site on Slough Road. No further information has been provided regarding this site. There are no licensed waste management/transfer facilities indicated to be present within 500m of the site.

2.5.2 Environmental Permits

EA and Local Authority data indicates that there are no active processes regulated by an Environmental Permit (under the Environmental Permitting Regulations 2010) registered within 500m of the subject site.

2.5.3 COMAH Sites

There are no records of facilities being registered under the Control of Major Accident Hazards (COMAH) Regulations 1999 within 500m of the site.

2.5.4 Pollution Incidents

EA data indicates that there are records of two significant pollution incidents within 500m of the site. These are outlined in the table below.

Table 8 – Significant Pollution Incidents within 500m

Location/Address	Receiving Medium and Date	Severity of Incident and Type	Approx. Distance and Direction from Site
Not supplied	3 rd May 2000 Groundwater within the Colne catchment	Pollutant: Not available Water impact: Significant	315m Northwest
Not supplied	15 th August 2003 Receiving medium not provided	Pollutant: Crude sewage Water impact: Significant	490m Southwest

2.6 Regulatory Consultations

The Environmental Protection Unit at London Borough of Hillingdon was contacted regarding any known contamination issues at the site. The Council advised that they were aware of two phases of site investigation having been undertaken at the electricity works site (located approximately 20m to the south of the subject site) in 1998 and 1999. They were aware that a number of transformers were present on the site. Remediation works were subsequently undertaken in 2001, these included the remediation of hotspots of diesel contamination.

3 OUTLINE CONCEPTUAL SITE MODEL

3.1 Background

An outline conceptual site model (CSM) consists of an appraisal of the *source-pathway-receptor* 'contaminant linkages' which is central to the approach used to determine the existence of 'contaminated land' according to the definition set out under Part 2A of the Environmental Protection Act 1990. For a risk to exist (under Part 2A), all three of the following components must be present to facilitate a potential 'pollutant linkage'.

- **Source** referring to the source of contamination.
- **Pathway** for the contaminant to move/migrate to receptor(s).
- **Receptor** that could be affected by the contaminant(s).

Receptors include human beings, other living organisms, crops, controlled waters and buildings / structures. The National Planning Policy Framework, used to address contaminated land through the planning process, follows the same principles as those set out under Part 2A. Further details on the Part 2A regime are presented within Appendix C.

3.2 Potential Pollutant Linkages

Each stage of the potential pollutant linkages have been assessed individually on the basis of information obtained during the site reconnaissance and desk study exercise and is discussed in the following section.

3.2.1 Potential Contaminant Sources

On Site

A building, labelled as an infant school, was present on site from 1896 until c.1914. From c.1935 to c.1963, the building was labelled as a hall. From 1963, a building labelled as a factory was indicated to have been present at the site.

The site was vacant at the time of the walkover. It is understood that the site had previously been used as a church hall and, more recently, to store vehicle parts.

Made Ground is likely to be present beneath the site, resulting from previous construction and demolition activities, which may represent a source of contaminants of concern, as well as ground gas.

Off-Site

A number of historical potentially contaminative land uses have been identified in the vicinity of the site. An electricity works was located approximately 20m to the south of the site (1975 to c.1978), this was latterly labelled as a works (1978 to c.1986) and then a depot with associated tanks (1986 to at least 1995). An electricity works was located approximately 65m to the south, from 1914 to c.1935.

Current potentially contaminative land uses in the vicinity of the site include Black Horse Yard, located adjacent to the west of the site; a number of works located between approximately 5m and 40m from the site; Uxbridge Boat Centre located approximately 40m to the north; and Uxbridge Wharf, located approximately 50m to the north.

3.2.2 Potential Pathways

Following redevelopment, it is understood that the ground floor level will comprise complete building cover and hardstanding, thereby mitigating the potential risks to future site users *via* the dermal contact and ingestion pathways. The presence of complete building cover and hardstanding would also restrict the potential for the airborne off-site migration of soil/dust.

There is the potential for ground gas and volatile contaminants of concern in soil and/or groundwater (if present) beneath the site to impact future site users via the inhalation pathway in indoor areas.

Groundwater within granular horizons of the Made Ground (if present) and underlying Alluvium and Taplow Gravel Formation may constitute a potential pathway for the on or off-site migration of contaminants of concern.

3.2.3 Potential Receptors

Potential human health receptors include future site users and neighbouring human health receptors.

Providing construction workers adopt appropriate levels of hygiene and personal protective equipment, they are not considered to be at significant risk from potential contaminants of concern and have not been considered further as part of this assessment.

The site is indicated to be underlain by a Secondary A Aquifer, relating to the Alluvium and the Taplow Gravel Formation Principal Aquifer. The underlying London Clay Formation is likely to provide a significant degree of protection to the deeper Lambeth Group Secondary A Aquifer.

The site is not located within a groundwater SPZ.

The nearest surface water feature is the Grand Union Canal, located approximately 40m to the west of the site. It is considered that this feature is likely to be lined and therefore not in hydraulic continuity with any groundwater beneath the site. The River Colne is located approximately 140m to the west of the site, at its closest point.

3.3 Outline Conceptual Site Model

An outline CSM has been developed on the basis of the site reconnaissance and desk study. The CSM is used to identify potential sources, pathways and receptors (i.e. potential pollutant linkages) on site and is summarised in the table below:

Table 9 – Outline Conceptual Site Model

Potential Source	Contaminants of Concern	Via	Potential Pathways	Linkage Potentially Active?	Receptors
On site – historical: Factory and storage of vehicle parts On site – current: Made Ground	Metals, hydrocarbons, solvents and asbestos	Soil	Direct contact/ingestion	✗	Future site users
			Inhalation of volatiles	✓	
			Airborne migration of soil or dust	✗	Off-site users
			Leaching of mobile contaminants	✓ ✓	Alluvium Secondary A Aquifer Taplow Gravel Formation Principal Aquifer
		Groundwater	Direct contact/ingestion	✓ ✓	Future site users Off-site users
			Inhalation of volatiles	✓ ✓	Future site users Off-site users
			Vertical and lateral migration in permeable strata	✓ ✓ ✓	Alluvium Secondary A Aquifer Taplow Gravel Formation Principal Aquifer River Colne
Off site – historical: Electricity works, latterly a works and then a depot Off-site – current: Black Horse Yard, a number of works, Uxbridge Boat Centre and Uxbridge Wharf	Metals, hydrocarbons and solvents	Groundwater	Direct contact/ingestion	✓	Future site users
			Inhalation of volatiles	✓	Future site users
On and off-site: Made Ground / natural strata or bio-degradation of contamination	Carbon dioxide and methane	Ground Gas	Inhalation of ground gas	✓ ✓	Future site users Off-site users
			Explosive risks	✓ ✓	Future site users Off-site users

4 CONCLUSIONS AND RECOMMENDATIONS

Complete building cover and hardstanding will be present across the ground floor level following redevelopment, thereby mitigating the potential risks to future site users via the dermal contact and ingestion pathways.

However, there is the potential for ground gas and volatile contaminants of concern in soil and/or groundwater (if present) beneath the site to impact future site users via the inhalation pathway in indoor areas. There is also the potential for any contaminants of concern, resulting from historical on site activities, to migrate off-site via groundwater and potentially impact off-receptors.

It is therefore recommended that the potential for these linkages to be active is assessed through a Phase 2 Environmental Site Investigation of the site. The scope of this investigation should include the following:

- Drilling of a number of boreholes across the site targeting identified potential sources and pollutant linkages;
- Installation of groundwater and gas monitoring wells in selected boreholes;
- Collection of samples of soil and groundwater (if present) from beneath the site with chemical analysis of these samples for contaminants of concern;
- Ground gas monitoring from wells installed at the site;
- Assessment of ground conditions and generic quantitative risk assessment of soil and groundwater chemical analysis results to determine the potential for the identified potential pollutant linkages to remain active upon redevelopment of the site; and
- Provision of recommendations (where necessary) for remediation/mitigation measures to ensure that any identified potential pollutant linkages are not active upon redevelopment of the site.

Given the age of the building on site, it is possible that ACMs could be present within the building fabric. Given the proposed conversion of the building, it is recommended that an asbestos refurbishment survey should be undertaken prior to any works being carried out.

FIGURES

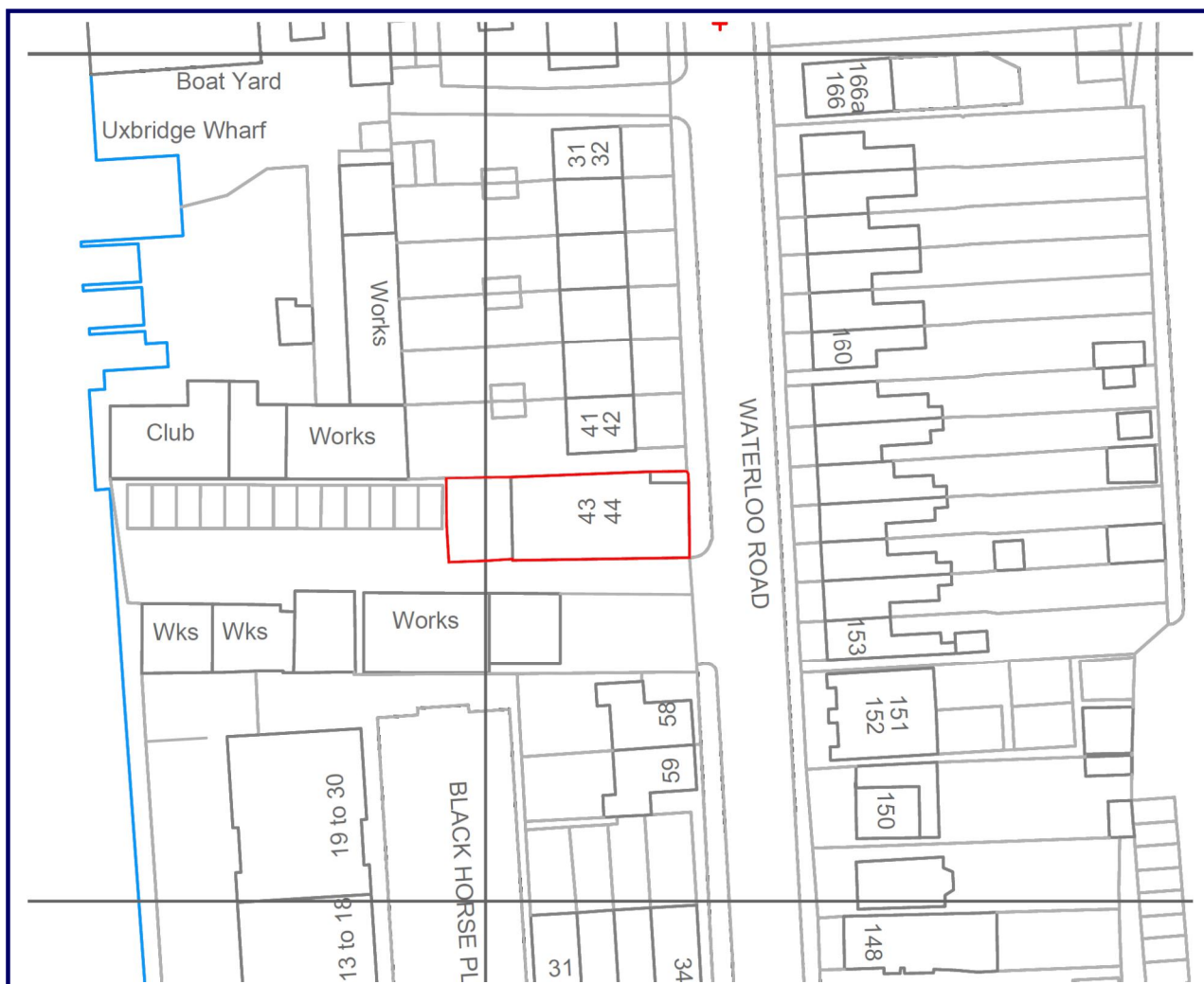


Figure 1: Site Location Plan

Map Date: Current

Scale: Not to scale

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Figure 2: Site Boundary Plan

Map Date: Current

Scale: Not to scale

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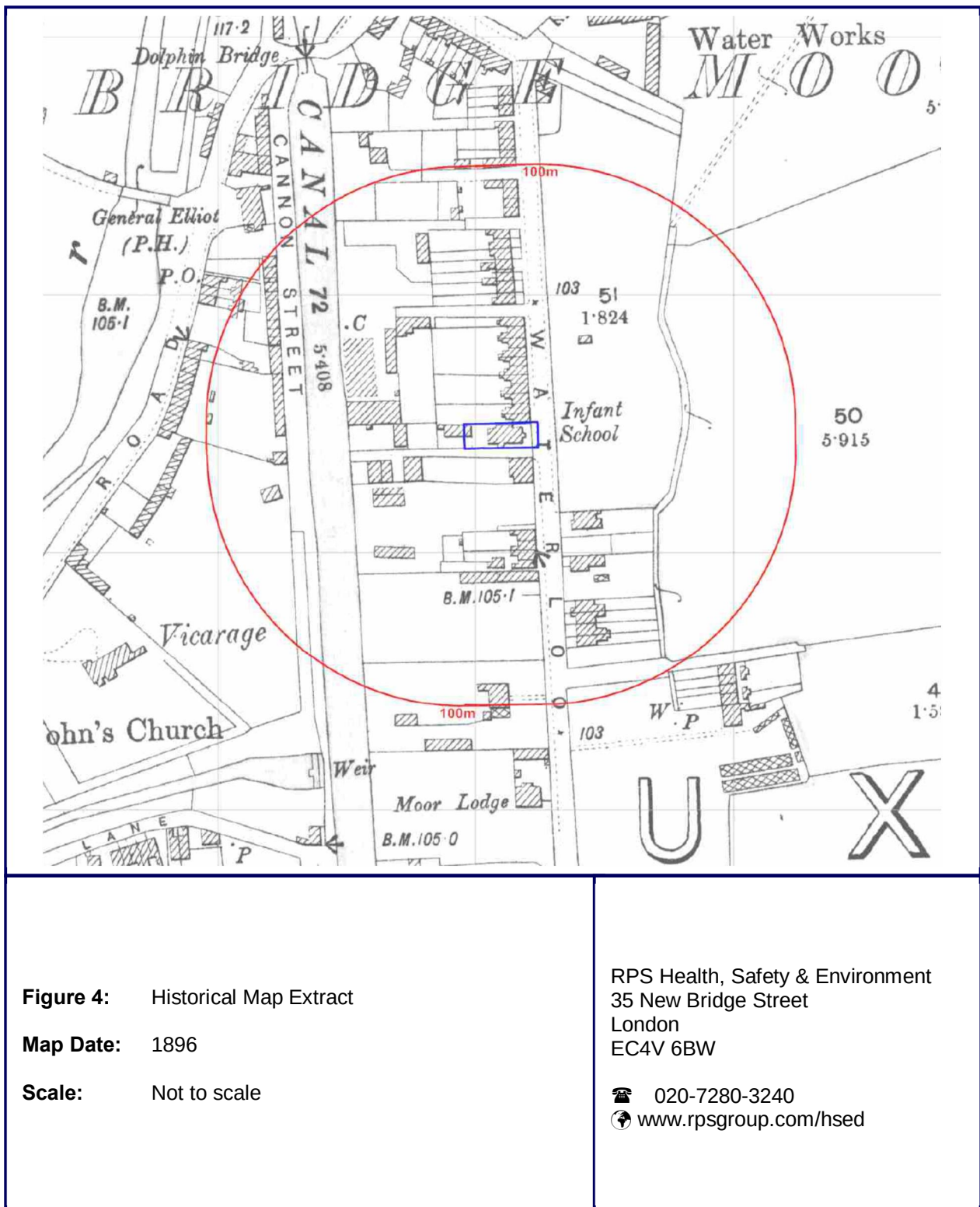


Figure 3: Proposed Development Plan

Scale: Not to scale

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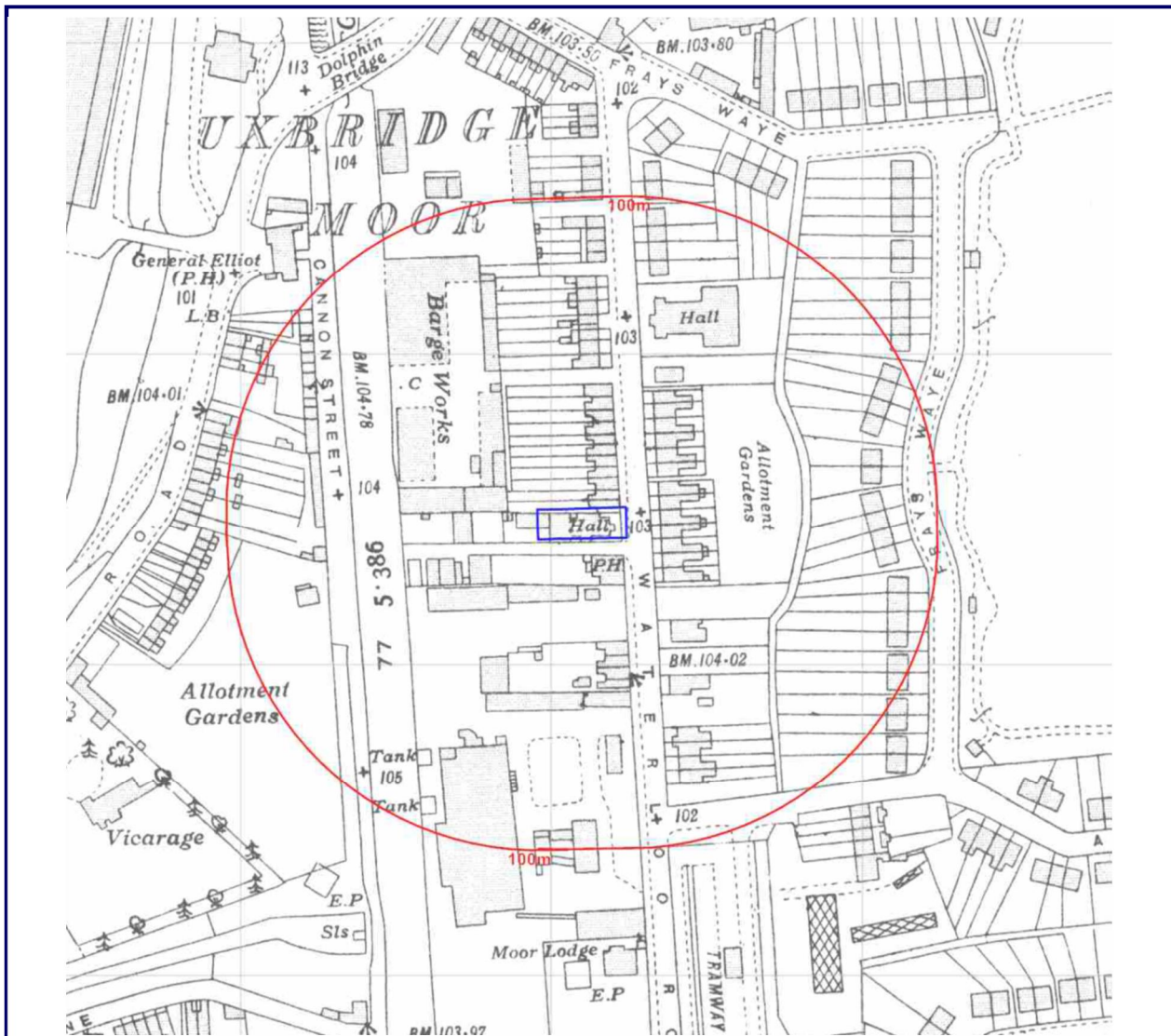


Figure 5: Historical Map Extract

Map Date: 1935

Scale: Not to scale

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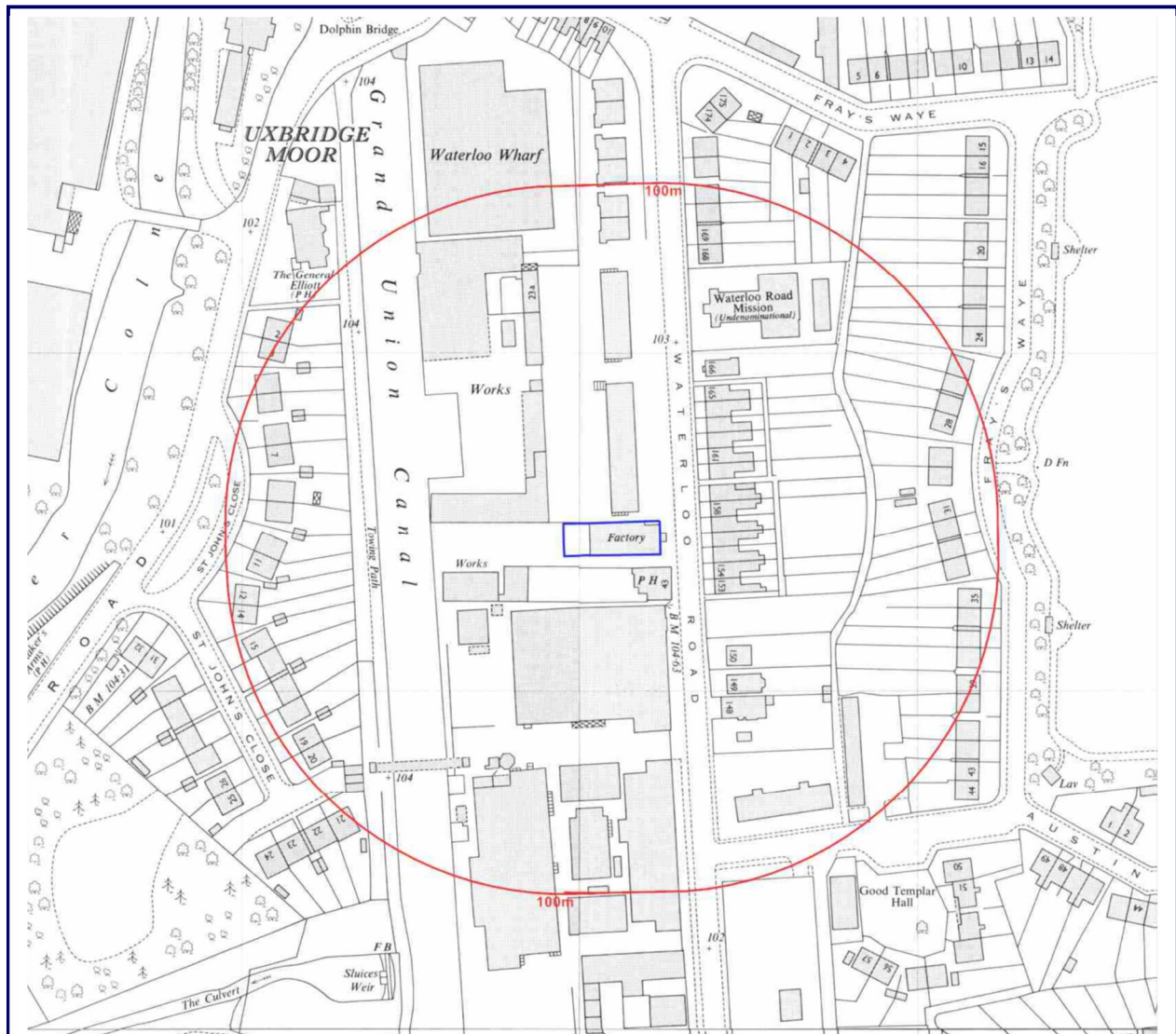


Figure 6: Historical Map Extract

Map Date: 1963

Scale: Not to scale

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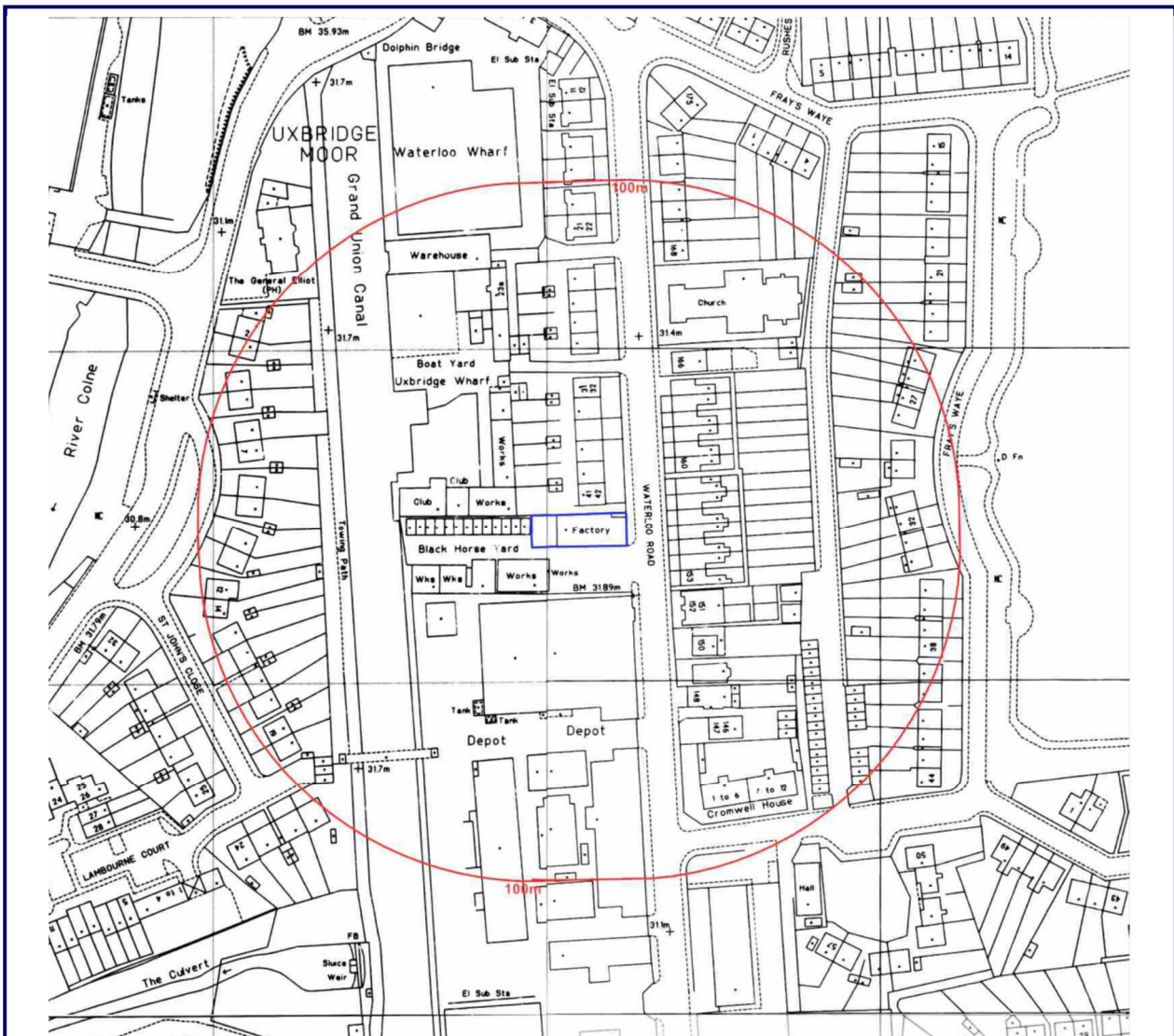


Figure 7: Historical Map Extract

Map Date: 1992

Scale: Not to scale

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APPENDIX A

General Notes

RPS HEALTH, SAFETY & ENVIRONMENT

Phase 1 - Environmental Risk Assessment / Desk Study Environmental Review

General Notes

1. A "desk study" means that no site visits have been carried out as any part thereof, unless otherwise specified.
2. This report provides available factual data for the site obtained only from the sources described in the text and related to the site on the basis of the location information provided by the Client.
3. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources.
4. The accuracy of maps cannot be guaranteed and it should be recognised that different conditions on site may have existed between and subsequent to the various map surveys.
5. No sampling or analysis has been undertaken in relation to this desk study.
6. Any borehole data from British Geological Survey sources is included on the basis that: "The British Geological Survey accept no responsibility for omissions or misinterpretation of the data from their Data Bank as this may be old or obtained from non-BGS sources and may not represent current interpretation".
7. Where any data supplied by the Client or from other sources, including that from previous site investigations, have been used it has been assumed that the information is correct. No responsibility can be accepted by RPS for inaccuracies in the data supplied by any other party.
8. This report is prepared and written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information, improved practices and changes in legislation may necessitate a re-interpretation of the report in whole or in part after its original submission.
9. The copyright in the written materials shall remain the property of the RPS Company but with a royalty-free perpetual licence to the Client deemed to be granted on payment in full to the RPS Company by the Client of the outstanding amounts.
10. The report is provided for sole use by the Client and is confidential to them, their professional advisors, no responsibility whatsoever for the contents of the report will be accepted to any person other than the Client. [Unless otherwise agreed]
11. These terms apply in addition to the RPS HSED "Standard Terms & Conditions" (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing. (In the event of a conflict between these terms and the said Standard Terms & Conditions the said Standard Terms & Conditions shall prevail.) In the absence of such a written contract the Standard Terms & Conditions will apply.

APPENDIX B

Photographs

Photo 1: Internal area of building.



Photo 2: Yard area to the west of the building.



APPENDIX C

Part 2A (The Contaminated Land Regime)

Contaminated Land Definition

Under Section 57 of the Environmental Act 1995, Part 2A was inserted into the Environmental Protection Act 1990 to include provisions for the management of contaminated land.

Subsequent regulations were first implemented in England in April 2000, Scotland in July 2000 and Wales in July 2001¹, providing a definition of ‘contaminated land’ and setting out the nature of liabilities that can be incurred by owners of contaminated land and groundwater.

According to the Act, contaminated land is defined as ‘any land which appears to the local authority in whose area the land is situated to be in such a condition, by reason of substances in, on or under the land that:

- a) *significant harm* is being caused or there is a *significant possibility* of such harm being caused; or
- b) *significant pollution* of controlled waters² is being caused or there is a significant possibility of such pollution being caused³

The guidance on determining whether a particular possibility is significant is based on the principles of risk assessment and in particular on considerations of the magnitude or consequences of the different types of significant harm caused. The term ‘possibility of significant harm being caused’ should be taken, as referring to a measure of the probability, or frequency, of the occurrence of circumstances that could lead to significant harm being caused.

The following situations are defined where harm is to be regarded as significant:

- i. Chronic or acute toxic effect, serious injury or death to humans
- ii. Irreversible or other adverse harm to the ecological system
- iii. Substantial damage to, or failure of, buildings
- iv. Disease, other physical damage or death of livestock or crops
- v. The pollution of controlled waters⁴.

¹ In England by The Contaminated Land (England) Regulations 2000, updated by The Contaminated Land (England) (Amendment) Regulations 2012; in Scotland by The Contaminated Land (Scotland) Regulations 2000, updated by the Contaminated Land (Scotland) Regulations 2005; and in Wales by The Contaminated Land (Wales) Regulations 2001, updated by the Contaminated Land (Wales) Regulations 2006.

² In Scotland the term ‘controlled water’ has been updated to ‘water environment’ under the Contaminated Land (Scotland) Regulations 2005 in line with the Water Environment and Water Services (Scotland) Act 2003.

³ The definition was amended in 2012 by implementation of the Water Act 2003.

⁴ Groundwater in this context does not include waters within underground strata but above the saturated zone.

With regard to radioactivity, contaminated land is defined as any land which appears to be in such a condition, by reason of substances in, on or under the land that harm is being caused, or there is a *significant possibility of such harm being caused*⁵

The Risk Assessment Methodology

Risk assessment is the process of collating known information on a hazard or set of hazards in order to estimate actual or potential risks to receptors. The receptor may be humans, a water resource, a sensitive local ecosystem or future construction materials. Receptors can be connected with the hazard via one or several exposure pathways (e.g. the pathway of direct contact). Risks are generally managed by isolating or removing the hazard, isolating the receptor, or by intercepting the exposure pathway. Without the three essential components of a source (hazard), pathway and receptor, there can be no risk. Thus, the mere presence of a hazard at a site does not mean that there will necessarily be attendant risks.

The Risk Assessment

By considering where a viable pathway exists which connects a source with a receptor, this assessment will identify where pollutant linkages may exist. A pollutant linkage is the term used by the DEFRA in their standard procedure on risk assessment. If there is no pollutant linkage, then there is no risk. Therefore, only where a viable pollutant linkage is established does this assessment go on to consider the level of risk. Risk should be based on a consideration of both:

- The likelihood of an event (probability) - takes into account both the presence of the hazard and receptor and the integrity of the pathway.
- The severity of the potential consequence - takes into account both the potential severity of the hazard and the sensitivity of the receptor.

For further information please see the Contaminated Land section on the DEFRA website (www.defra.gov.uk)

⁵ The Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 and Contaminated Land (Wales) Regulations 2006.