

**STATION HOUSE**

**9-13 SWISS TERRACE, BELSIZE ROAD, LONDON, NW6 4RR**

**SITE ENVIRONMENTAL RISK ASSESSMENT (SERA)**

**FOR**

***SHAPIRO SHULMAN PROPERTIES***



**PRIVATE & CONFIDENTIAL**

September 2013

**Our Ref:** HLEC27848/001R

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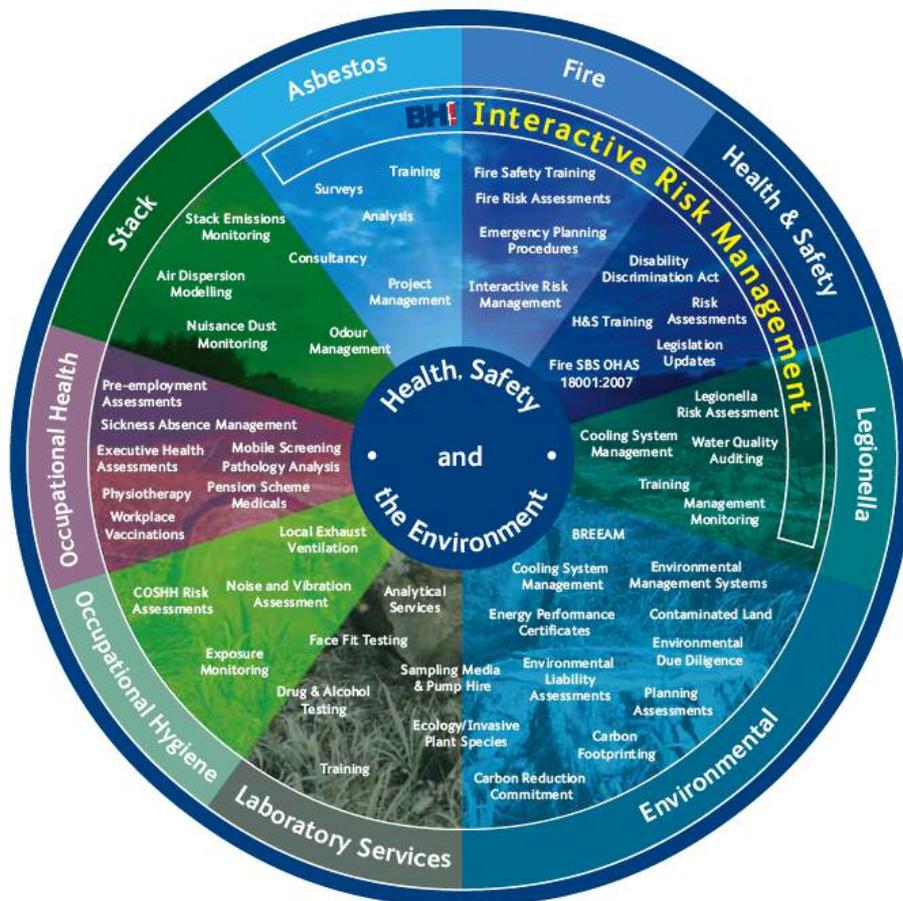
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<b>Date</b>	6th September 2013	

*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.*





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# 1 INTRODUCTION

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This Site Environmental Risk Assessment (SERA) report has been prepared by RPS Health, Safety & Environment (RPS) for the benefit of **Shapiro Shulman Properties** and their professional advisors.

## Aim

The aim of the report is to provide an initial environmental risk assessment of the site. The report structure has been designed to enable RPS to determine whether the site constitutes a low, moderate or high risk from an environmental perspective. If further work is required to determine the level of environmental risk, a recommendation is made detailing the nature of the work.

A statement is also made on the acceptability of the site as bank security from an environmental risk perspective.

## Scope

The scope is composed of the following three parts:

- Part A - a review of the current and historical uses of the site;
- Part B - a review of the environmental setting of the site; and
- Part C - an environmental risk assessment of the information presented in Parts A and B.

The SERA is essentially a desk study, with information obtained from published maps, reports and any previous work undertaken by RPS. No attempt has been made to obtain information from trade directories or the environmental regulators (the Environment Agency and the Local Authority) unless specified. No site visit has been undertaken and no soil sampling or other analyses have been carried out.

## Terms of Reference

The report provides available factual data for the site obtained only from the sources described in the text and related to the information provided by the client. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources. No responsibility can be accepted by RPS for inaccuracies in the data supplied by any other party.

This report is 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.

The report is provided for sole use by the client and is confidential to them and 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. The copyright in the written materials shall remain the property of RPS but with a royalty-free perpetual licence to the client deemed to be granted on payment in full to RPS by the client of the outstanding amounts.

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## Methodology

Environmental regulators use the 'contaminant-pathway-receptor contaminant linkage' concept when assessing the risk posed by a contaminated site, and for a liability to arise each stage of the contaminant linkage must be present.

Part A of the SERA provides information relating to the 'contaminant' through a study of current and historical land use, and the environmental setting information in Part B relates to the 'receptor' and 'pathway' stages. Information is obtained from a number of sources as described below. Details of the site location, the current and proposed site uses and the nature of the transaction have been provided by the client.

*Part A - Land Use:*

This establishes the likelihood for former and current uses of the site, to have caused significant ground contamination. Information about the history of the site has been obtained through an inspection of historical maps at 1:10,000, 1:2,500 and 1:1,250 scales and occasionally Historical Building (Goad) Plans (where available). The accuracy of maps cannot be guaranteed and it should be recognised that different conditions on site may have existed between the various map surveys.

*Part B - Environmental Setting:*

This describes the environmental setting of the site since, irrespective of the level of contamination on the site, if its location is not 'sensitive' to this contamination there is a reduced risk of an environmental liability arising.

The geological sequence underlying the site and the approximate depths of strata are provided by maps published by the British Geological Survey (BGS) 1:50,000 scale. The hydrogeological classification is obtained from Aquifer Designation mapping from the Environment Agency (EA). The vulnerability of groundwater is determined from this mapping and geological information.

The location of surface watercourses is obtained from an inspection of current OS maps. Surface water quality information is taken from the relevant River Basin Management Plan for the district published by the EA. The vulnerability of surface watercourses to any contamination that may be migrating from the site is classed depending on the proximity to the site.

The level of flood risk is obtained from readily available EA records, normally from the EA website.

Radon is a radioactive gas produced naturally from certain types of geology. This report uses the Indicative Atlas of Radon in England and Wales (2007) produced by the Health Protection Agency (HPA) and the BGS to determine whether the site is located in an area at risk from radon gas. Where potential issues are identified, a site-specific radon report is obtained from the HPA and BGS to provide an estimate of the probability of the site being affected by radon gas ingress. Where further recommendations are made, these are in accordance with the Building Research Establishment's guidance (BR211: Protective Measures for New Buildings, 2007) and the Management of Health and Safety Regulations at Work 1999.

Sites located within areas potentially subject to past Coal Mining activities are identified through reference to The Law Society's Guidance Notes and Directory.

Areas of residential housing and schools are considered to be more 'sensitive' to contamination than industrial or business areas. For this reason, the presence of a residential area or school is recorded from OS maps if located within 50m of the site.

*Part C - Risk Ranking:*

The risk ranking uses the information in Parts A and B of the assessment to place the site within one of three broad categories - high, moderate or low environmental risk. The environmental risk classification for the site takes into account the potential for regulatory or third party liability, the potential for impacts on value and saleability and the potential for extra-ordinary environment-related development costs.

## 2 EXECUTIVE SUMMARY & RECOMMENDATIONS

### SITE DETAILS

<b>Site Name &amp; Address</b>	Station House, 9-13 Swiss Terrace, Belsize road, London, NW6 4RR		
<b>Grid Reference</b>	TQ 266 843	<b>Size</b>	Approx. 0.01 Ha
<b>Current Status</b>	DISUSED <input type="checkbox"/> OPERATIONAL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	<b>Proposed Use</b>	UNCHANGED <input type="checkbox"/> REDEVELOP <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
<b>Comments</b>	Office building.	Conversion for mixed commercial and residential use.	
<b>Reason for Report</b>	BUYING <input type="checkbox"/> SELLING <input type="checkbox"/> PLANNING <input checked="" type="checkbox"/> REFINANCE <input type="checkbox"/>	<b>Site Details</b>	FREEHOLD <input checked="" type="checkbox"/> LEASEHOLD <input type="checkbox"/> OWNER/OCCUPIER <input type="checkbox"/> INVESTMENT <input type="checkbox"/>

### EXECUTIVE SUMMARY

<b>Part A: Land Use</b>	<b>Significance:</b>	<b>Low</b>
	<b>Site:</b>	No current or historical potentially contaminative land uses have been identified at the site.
	<b>Surrounds:</b>	No potentially contaminative land uses have been identified in close proximity to the site.
<b>Part B: Environmental Setting</b>	<b>Sensitivity:</b>	<b>Low to Moderate</b>
	<b>Comments:</b>	<p>The site is underlain by low permeability Clay, with no surface water courses located within 100m of the site.</p> <p>Residential properties with private garden areas are located within the immediate vicinity.</p> <p>Rear terraces may be incorporated when the site is converted, but no garden areas will be created.</p> <p>The site is not located within an indicative floodplain.</p>
<b>Part C: Overall Risk</b>	<b>Risk:</b>	<b>Low</b>
	<b>Comments:</b>	No potentially contaminative land uses were recorded at the site or in close proximity. In view of this and absence of any private gardens areas upon site conversion, the site is considered to be suitable for its proposed use from a ground contamination perspective.

**Suitability for proposed use from an Environmental Risk Perspective:**

YES

NO

NOT DETERMINED

**Recommendations**

**No further work is considered necessary in relation to ground contamination.**

*Other General Environmental Considerations:*

*RPS understands that the building may have been constructed at a time when asbestos was commonly used in building materials. Given the proposed conversion of the site, a formal Demolition / Refurbishment Asbestos Survey should be conducted prior to any demolition work commencing. An RPS quote is available on request.*

### 3 SITE ENVIRONMENTAL RISK ASSESSMENT

#### **PART A: LAND USE**

**Current Site Use**

The site is currently occupied by a multi-storey office building.

**Proposed Use**

The site is proposed for conversion to mixed residential and commercial use. Commercial uses will occupy the lower ground and ground floor levels with residential uses on the upper floors.

**Historical Use**

The site has comprised its current form since c.1984.

<b>On-site Land Use Features</b>	<b>Dates</b>
Major outlines of roads are shown.	1850 - c.1871
<i>Then</i> the site comprised land associated with a likely residential property to the west.	1871 – c.1895
<i>Then</i> the site was occupied by parts of a number of likely residential properties.	1895 - c.1954
<i>Then</i> the units in the south west of the site were labelled as 11 and 12 Swiss Terrace.	1954 – c.1967
<i>Then</i> the unit in the north of the site was demolished.	1967 - c.1984
<i>Then</i> the remainder of the units were demolished and a single likely commercial unit had been constructed on the site. This was labelled as Swiss Terrace.	1984 – c.1995
<i>Then</i> the unit on site was labelled as Swiss Cottage House.	1995 – present.

<b>Surrounding Features (250m radius)</b>	<b>Orientation</b>	<b>Distance</b>	<b>Dates</b>
Garage	South East	70m	1954 – c.1967
Garage	North	140m	1962 - present
Fire Station	South East	200m	1895 – c.1935

**PART B: ENVIRONMENTAL SETTING****GEOLOGY AND HYDROGEOLOGY****Geological Sequence:**

British Geological Survey mapping indicates the following stratigraphic sequence in the site vicinity:

- **London Clay Formation** (*Palaeogene*) – Comprising low permeability, firm to stiff, brown and blue / grey clay with variable silty and sandy parts, likely to be between 70m and 110m in thickness beneath the site.

Made Ground is likely to be present across the site as a result of past construction and/or demolition activities. No site investigation reports have been reviewed to verify this.

**Hydrogeological Classification:**

Environment Agency mapping indicates that the site overlies an Unproductive stratum relating to the London Clay Formation. These formations have a low permeability and have negligible significance for water supply or base flow.

The site is not located within a groundwater Source Protection Zone.

**SURFACE WATER****Surface Watercourses:**

One watercourse 1.2 km to the south east of the site has been classified for water quality under the River Basin Management Plans (required under the Water Framework Directive). This relates to Grand Union Canal, which is classified as 'good potential' for current ecological quality (chemical quality does not require assessment).

The nearest surface water feature to the site is a pond located 150m to the south east of the site.

**Fluvial / Tidal Flood Risk:**

According to the Environment Agency (EA) flood map, is not located within an indicative floodplain.

**NATURAL IMPACTS****Radon:**

The site is not located in an area at risk from radon gas.

**Coal Mining:**

The site is not in an area of past coal mining activity.

**RESIDENTIAL AREAS AND SCHOOLS****Residential areas / schools within 50m:**

The site is located in a predominantly residential area. No schools are noted to be located within 50m.

**PART C: ENVIRONMENTAL RISK ASSESSMENT****Land Use  
Significance:****Low****Comments:**

The site has comprised its current form since c.1984. It is proposed to convert the site into a mixed use scheme, with commercial uses occupying the lower floors and residential units on the upper floors.

Historically, the site has been occupied by a number a likely residential or commercial buildings. No potentially contaminative former land uses have been identified on the site.

A number of potentially contaminative former land uses have been identified in the surrounding area. However, none of these are located within close proximity to the site. These include a Garage 70m south east (1954 – c.1967), a Garage 140m north (1962 – present) and a Fire Station 200m to the south east (1895 – c.1935). RPS notes that a London Underground station and associated sidings are located within 15m to the east of the site. However, these land uses are not considered to present a significant contaminative risk to the site.

Overall, given the absence of any potentially contaminative land uses identified on the site or in close proximity, the likelihood of significant contamination existing beneath the site is considered to be low.

**Environmental  
Setting Sensitivity:****Low to moderate****Comments:**

The site is proposed for mixed residential and commercial use. Residential flats will be located on the upper floors. Whilst as part of redevelopment of the site, rear terraces may be created on the lower ground and ground floor areas, RPS considers it is unlikely that these will be for private use and will comprise predominantly hardstanding areas. This reduces the sensitivity of the proposed site use and the risk of exposure / a 'pathway' existing between any contamination (if present) and site users.

The site is located within a predominantly residential setting with some commercial units also present in the area. Residential properties with garden areas are located 20m from the site.

The site is underlain by an Unproductive Stratum relating to the London Clay Formation. There are no surface watercourses within 250m of the site and the site is not located within an indicative floodplain.

Overall, the sensitivity of the environmental setting is considered to be low to moderate given the nearby residential properties with garden areas and proposed part-residential use of the subject site.

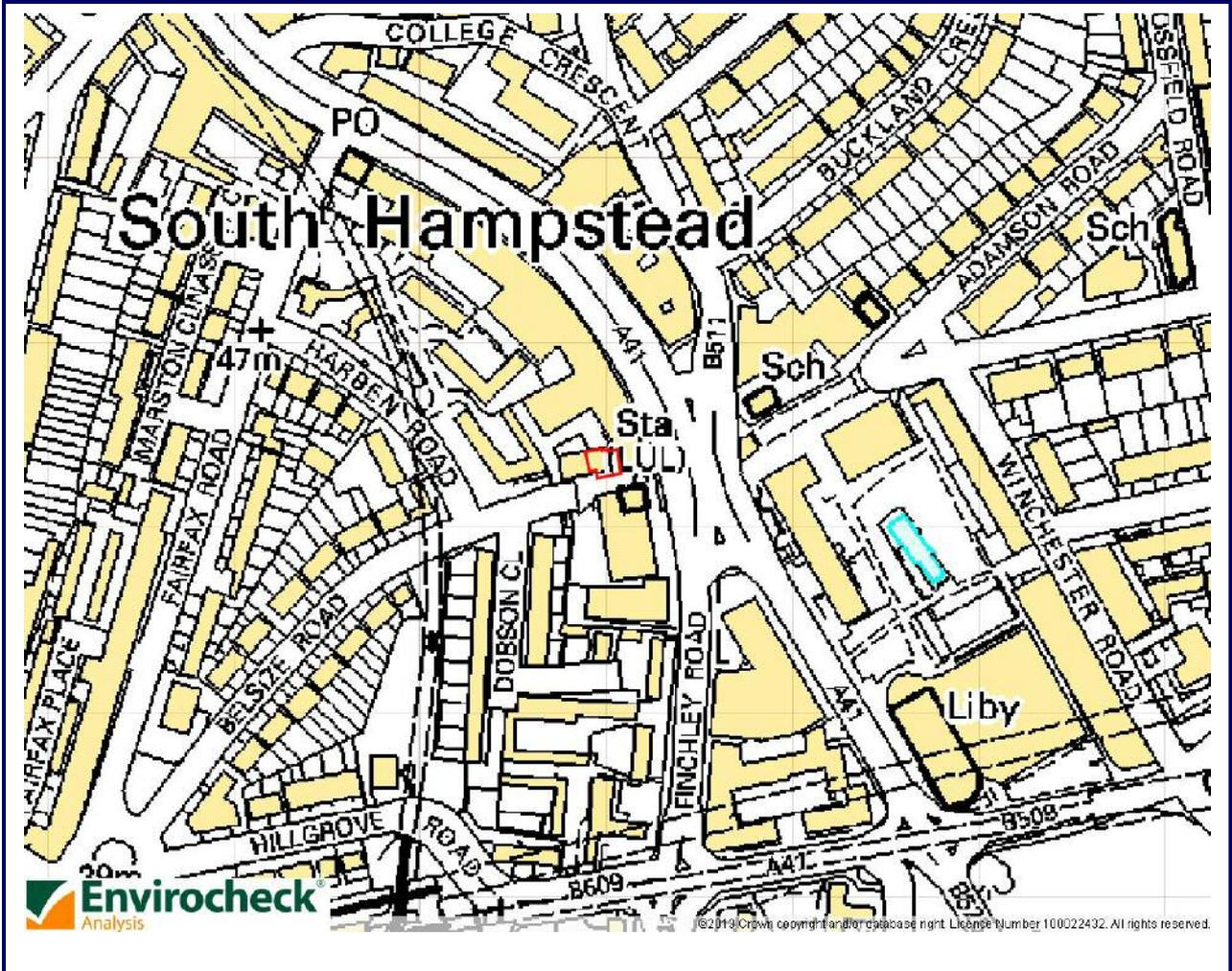
**Overall  
Environmental  
Risk:****Low****Comments:**

No potentially contaminative land uses have been identified on site or in the immediate vicinity of the site. Whilst part of the site will comprise residential flats, in view of the absence of any identified sources of contamination and the absence of any proposed private garden areas, RPS considers that there is no significant 'source' of contamination or 'pathway' between any contamination (if present) and future site users.

Overall, the site is considered to be suitable for its proposed use from a ground contamination perspective.

APPENDIX A: SITE LOCATION AND BOUNDARY PLANS

*Appendix A* - 2 Pages



**Figure 1:** Site Location Plan

**Map Date:** Current

**Scale:** Not to scale

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**Figure 2:** Site Boundary Plan

**Map Date:** Current

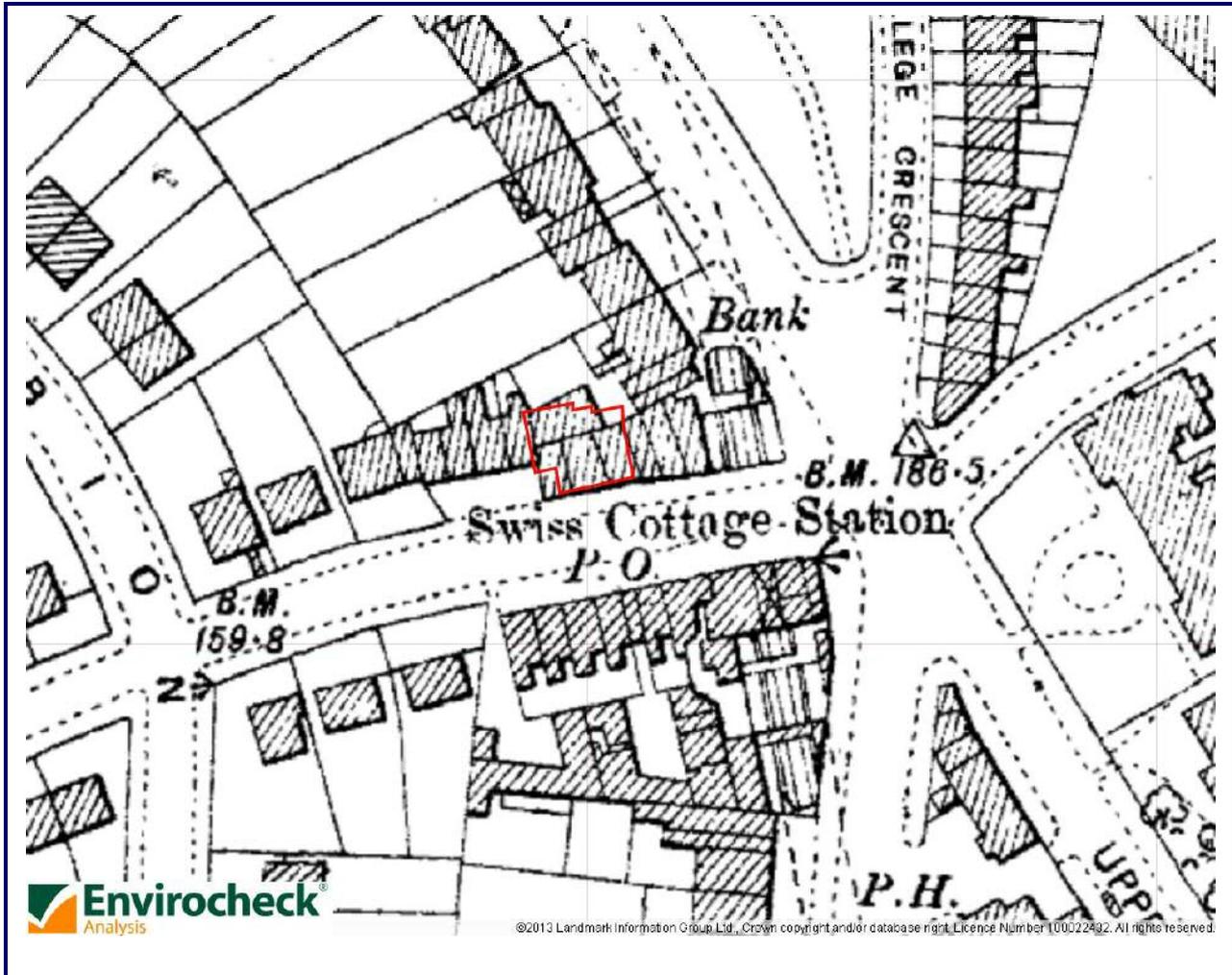
**Scale:** Not to scale

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APPENDIX B: HISTORICAL ORDNANCE SURVEY MAPS

*Appendix B* - 5 Pages



**Figure 3:** Historical Map Extract

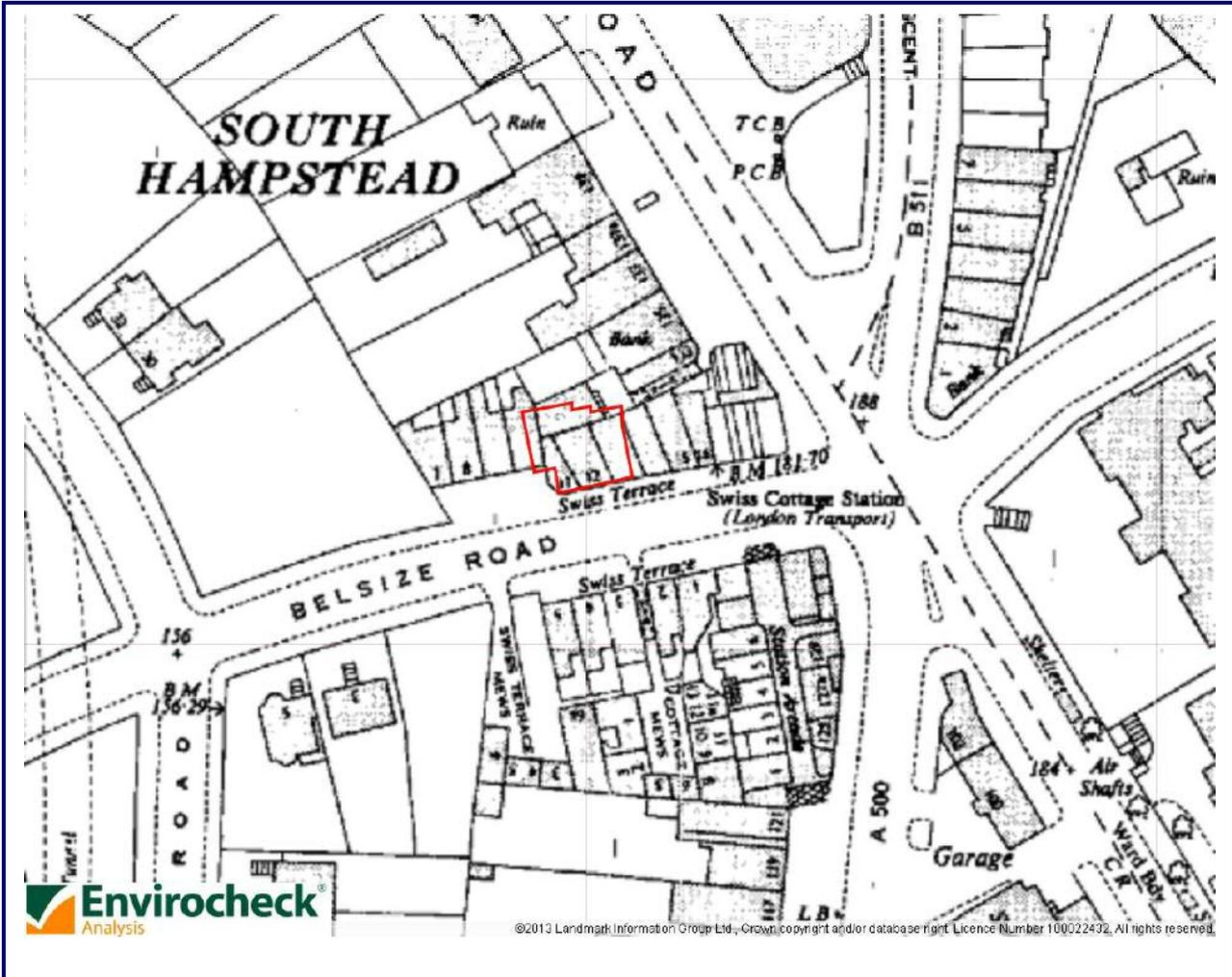
**Map Date:** 1896

**Scale:** Not to scale

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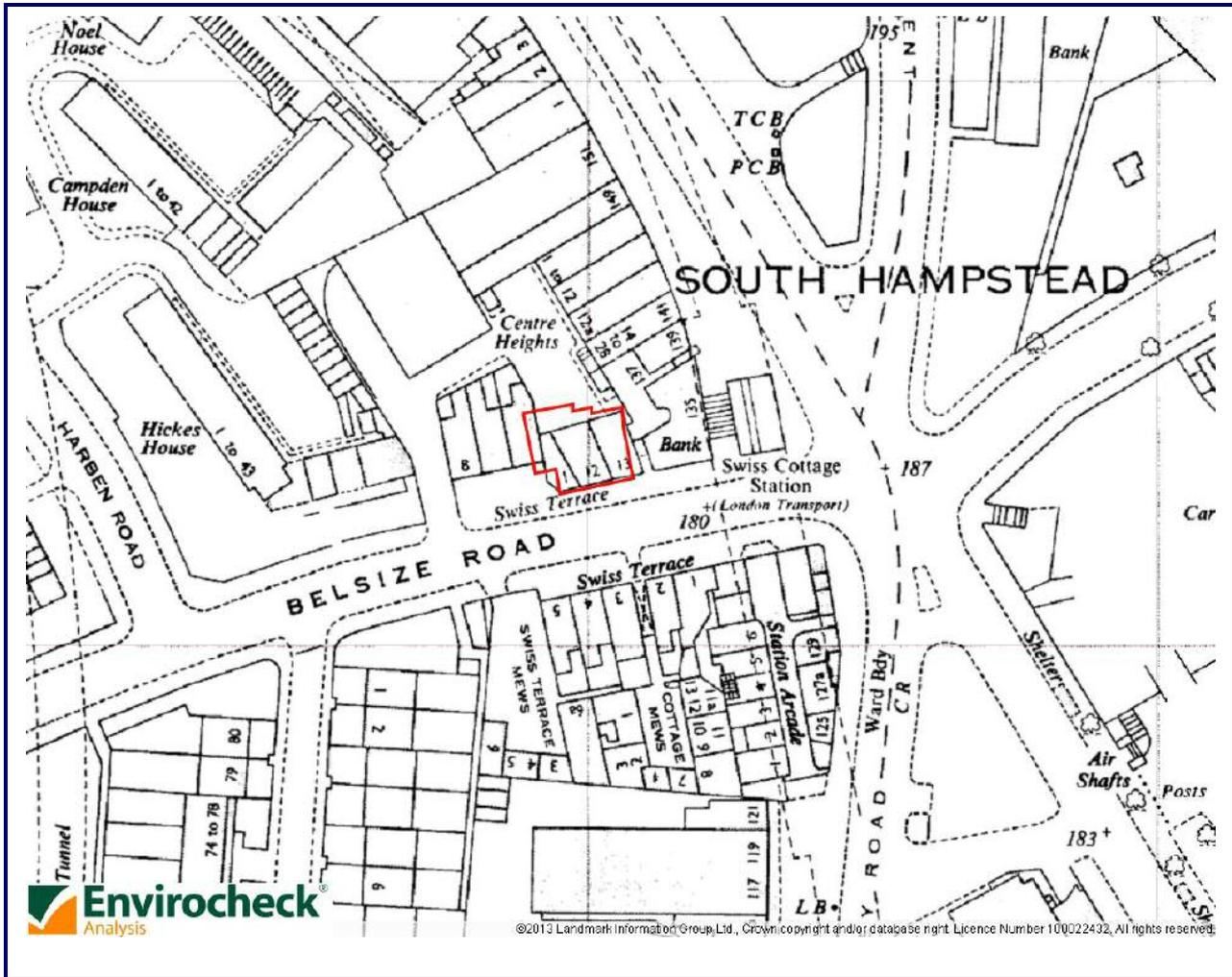
**Figure 4:** Historical Map Extract

**Map Date:** 1955

**Scale:** Not to scale

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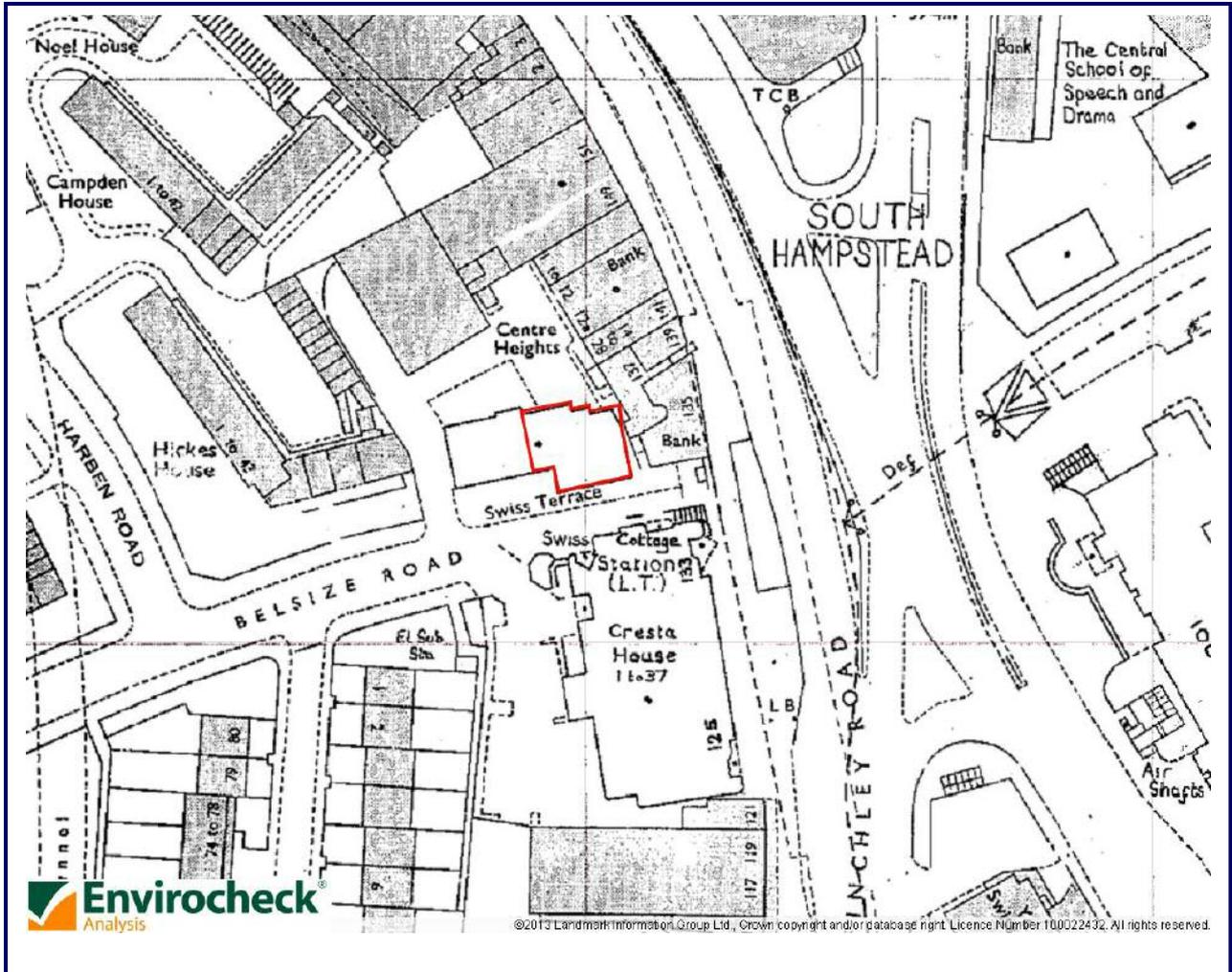
**Figure 5:** Historical Map Extract

**Map Date:** 1967

**Scale:** Not to scale

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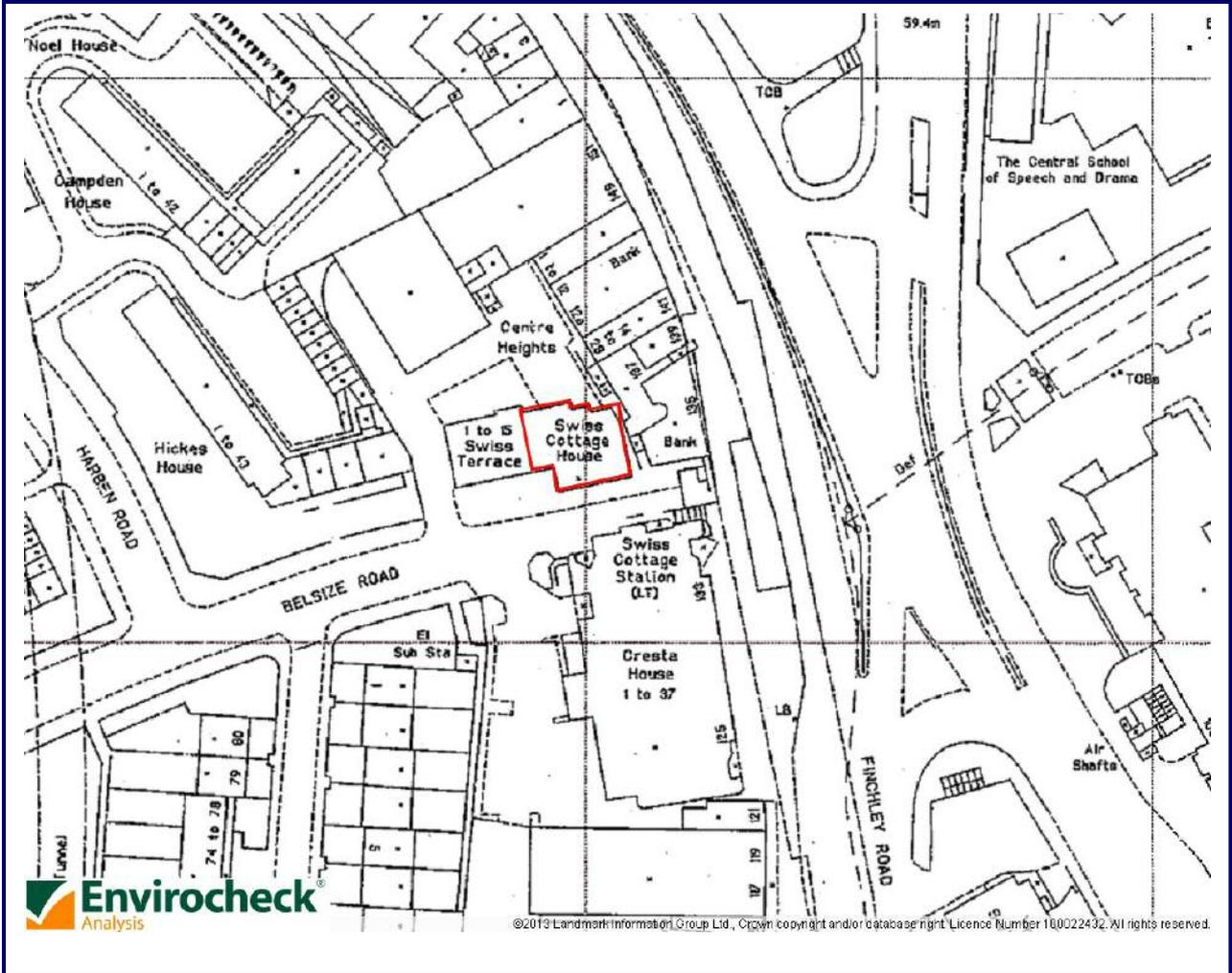
**Figure 6:** Historical Map Extract

**Map Date:** 1984

**Scale:** Not to scale

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**Figure 7:** Historical Map Extract

**Map Date:** 1995

**Scale:** Not to scale

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