

10 SOUTHERN COURT, SOUTH STREET, READING

Phase One Environmental Assessment

Prepared for Wallmer Asset Management

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October 2018



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1.0 Introduction

1.1 Background

In May 2018, SLR Consulting Limited (SLR) was commissioned by Wallmer Asset Management (Wallmer) to undertake an environmental assessment of 10 Southern Court, South Street, Reading RG1 4QS (the Site). The Site comprises a three storey office building on the south side of South Street; the study boundary and current site layout are shown on Drawing 1.

This assessment has been requested in order to confirm that the Site does not meet the definition of “contaminated land” as defined in part 2A of the Environmental Protection Act 1990 and therefore facilitate conversion of the building to residential use under permitted development rights. SLR understands that no material external alterations to the building or the remainder of the Site are proposed as part of the conversion although a proposed site layout drawing was not available at the time of writing.

This report has been prepared by the SLR Land Quality Group based at 65 Woodbridge Road, Guildford, Surrey GU1 4RD; Tel: 44 (0)1483 889800.

1.2 Scope of Work

The scope of work comprised:

- a brief site visit to identify existing contaminant sources such as tanks, chemical stores etc. and also identify any remaining evidence of historic contaminative activities, both on and adjacent to the Site;
- review of previous studies / investigations carried out at the Site or adjacent sites;
- review of the current and historical uses of the Site and surrounding area, including any current or past industrial and waste management activities, to identify any contaminative linkages;
- review of the underlying soils and the geological, hydrological and hydrogeological features, including any abstraction or discharge consents within the vicinity;
- obtaining information from British Geological Survey (BGS) to enable a preliminary assessment of land stability;
- review of any accessible information from regulatory authorities and other sources such as Environment Agency, the Local Authority, GroundSure, the BGS and the Ordnance Survey;
- review of contaminant sources, pathways and receptors applicable to the Site;
- collation of information about the Site’s setting and conditions to form a Conceptual Site Model and environmental risk assessment of the actual and potential pollution linkages identified; and
- preparation of this report, detailing the collated information and recommendations for further investigation works, if deemed necessary.

Historical maps are included at Appendix 1 and the GroundSure Report is included at Appendix 2.

It should be noted that the Site inspection did not extend to any underground features, any enclosed spaces where special entry precautions would have been required, the structural condition of buildings, the geotechnical stability of walls or the potential environmental impact on any media other than that of the land. An asbestos survey was not carried out.

A preliminary risk assessment can only indicate the potential for contamination to be present on site and refers to conditions present at the Site at the time of the study.

2.0 Phase One Desk Study

2.1 Introduction

The purpose of a Phase One environmental assessment is to introduce the Site and present a preliminary environmental risk assessment, which will collate information concerning potential contaminants, pathways and receptors and other relevant characteristics of the Site and its surrounds. This involves a study of the Site's current and historical land use and is best achieved via a combination of desk-based research, site reconnaissance and regulatory consultation.

2.2 Previous Reports

SLR previously undertook a Phase One Environmental Assessment for the adjacent property, 9 Southern Court, in 2016¹. The study found no significant risks to human health or controlled waters and was suitable for change of use under Permitted Development rights without further investigation.

2.3 Current and Historical Land Use

2.3.1 Site Location

The site comprises a rectangular plot wholly occupied by the building that is No. 10, covering 0.01ha, located south of South Street, RG1 4QS (National Grid Reference 471950, 173081). The Site is set in an urban area within Reading town centre.

The study boundary is shown on Drawing 1.

2.3.2 Current Land Use

SLR Site Walkover

A formal site inspection was carried out on 12th October 2018. The site inspection enabled SLR to compile information with respect to:

- land use;
- past and present site operations;
- site access; and
- land quality and potential contaminants.

The Site comprises one half of a three storey office building with an open air car park to the rear. The other half of the building (9 Southern Court) lies outside the site boundary. Raised planting beds were observed at the front of the property, planted with trees and shrubs. Albeit these are outside the defined site boundary.

The ground floor comprises an entrance lobby, meeting rooms, kitchenette and toilet facilities. The first floor comprised meeting rooms, office space with a kitchen and toilet facilities on the landing. Access was not available to the third floor on the day of the inspection.

¹ 9 Southern Court, Phase One Geo-Environmental Assessment, SLR Reference 427.05052.00002, October 2016.

No boiler room or plant rooms were observed and there were no chemical stores or other potential contaminant sources noted during the site inspection.

Potential asbestos containing materials were not observed, although an asbestos survey was not part of this study.

The current site layout is shown on Drawing 1 and photographs of the Site are presented at Drawing 2.

Surrounding Land Use

The Site is bound:

- to the north by South Street with an arts centre and chapel beyond and residential properties to the north east;
- to the east by no. 9 Southern Court, which was previously converted to residential use, with offices beyond;
- to the south by the car park serving the buildings on South Street with a school beyond; and
- to the west by an access road and 8 Southern Court beyond, which comprises offices.

2.3.3 Historical Land Use

Historical mapping has been reviewed with the aim of identifying historical land uses and the location of previous potentially contaminative land uses on and around the Site. Hence, the map-audit searches for areas of waste deposition, historic fuel tanks and potentially contaminative processes e.g. gasworks, mine workings, etc.

The historical maps were obtained from Groundsure and are contained in Appendix 1 of this report. Table 2-1 summarises this information.

Table 2-1
Historical Land Use

Date (scale)	Land Use
1879 (1:500) 1879 (1:2,500)	South Street is present on its present day alignment and the Site comprises part of what appears to be an allotment on the south side of South Street with a single building measuring 9m x 4m on the northern side. The surrounding area is of mixed use with residential properties and a church on the north side of South Street. Other small buildings are present on land to the south of the Site including a glass house.
1900 (1:2,500) 1897– 1898 (1:10,560)	The Site has been developed and now comprises the external areas of a Biscuit Factory. The factory building is adjacent to the east, extending off-site to the east for approximately 250m along the south side of South Street. Land to the north, south and west of the Site is largely unchanged.
1912 (1:2,500) 1910-1914 (1:10,560)	The Biscuit Factory building has extended to within the site boundary. The surrounding area is largely unchanged.
1956-1957 (1:1,250) 1931, 1956-1957 (1:1,250 & 1:2,500), 1959-1961 (1:2,500), 1962, 1968-1971, 1979 (1:1,250) 1933-1938, 1962 (1:10,560), 1973, 1979 (1:10,000)	No changes to the site area although the previously labelled Biscuit Factory has undergone further expansion and is now simply labelled as a Factory. Land to the north of South Street, immediately west of the church, has been redeveloped as an Employment Exchange, the configuration of which matches that of the present day arts centre. Adjacent to the east, a glass house is shown. Land to the south of the Site has been developed and is now occupied by a school. A

Date (scale)	Land Use
	Slaughter House and Canteen are shown approximately 50m south west.
1988-1989, 1988-1991, 1988-1993 (1:1,250) 1989, 1994, 2002, 2010 (1:10,000)	The Site and land to the east and west have been redeveloped with demolition of the factory and construction of the ten commercial properties of the present day Southern Court and its associated car park. The configuration of the Site matches that of the present day. The surrounding area is largely unchanged.

In summary, the Site was first developed in the late 19th Century when it comprised part of a biscuit factory on the south side of South Street. The biscuit factory was extended in the early 20th century, occupying the whole site and extending off-site to both the east and west. After the 1950s the Site was labelled only as a factory.

The factory was demolished by 1988 and replaced by a row of ten commercial properties and an associated car park to the south. The Site comprises one of these properties and the present day configuration matches that of 1988.

2.4 Site Conditions

2.4.1 Topography

The Site lies on generally flat topography. The surrounding area slopes gently down to the north. The elevation is approximately 45m AOD.

2.4.2 Ecology

The Groundsure report records no designated environmentally sensitive sites within 1km of the Site.

2.4.3 Geology

The 1:50,000 geological map Reading Sheet 268 (BGS, 2000) indicates that the Site is underlain by superficial deposits of the Taplow Gravel Member overlying the undifferentiated Seaford Chalk Formation and Newhaven Chalk Formation.

The GroundSure report records three historical surface ground working features within 250m of the Site. The nearest of these is described as an Unspecified Wharf 190m north and dates from 1938.

There are numerous recorded historical or current underground working features within a 1km radius of the Site and several records may relate to one feature. SLR has identified a total of six features, all relate to clay and chalk mining with the nearest located 600m south of the Site. All are recorded as ceased.

Information from the GroundSure report indicates that the maximum risk from shrink-swell clays and compressible deposits on-site is negligible and risks from landslides, collapsible rocks and running sands are recorded as very low. A high risk is recorded from soluble rocks. However, this high risk is considered to relate to the chalk bedrock rather than the overlying superficial gravel deposits.

2.4.4 Soil Borne Gas Risk

The site is not located within an area identified as being at risk from radon and no radon protection measures are required in the construction of new dwellings or extensions.

The Groundsure report records no historical or current landfill sites within 1km of the Site.

2.4.5 Hydrogeology

The underlying superficial geology (Taplow Gravel) has been classified by the Environment Agency (EA) as a Secondary A aquifer. Secondary A aquifers are designated to comprise layers of geology capable of supporting water supplies at local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

The underlying solid geology (Chalk) is classified as a Principal aquifer. Principal aquifers are designated to comprise geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale.

Hydrogeological mapping² indicates that groundwater lies at approximately 10m depth with a flow direction towards the south east.

The GroundSure report records the permeability of the Taplow Gravel Formation to be very high (intergranular flow) and the permeability of the Seaford Chalk Formation to also be very high (fracture flow).

The Site does not lie within a Source Protection Zone (SPZ). However the boundary of a SPZ3 (Total Catchment) lies approximately 350m to the north east.

2.4.6 Licensed Groundwater Abstractions and Discharges

The GroundSure report records fourteen licensed groundwater abstractions within 2km of the Site, the nearest is located approximately 520m to the south east at the Royal Berkshire Hospital. This is a potable supply for drinking, cooking, sanitary and washing use.

The GroundSure report does not identify any discharge consents to groundwater within 500m.

2.4.7 Hydrology

The Groundsure report records the nearest surface water feature as Gunter's Brook approximately 190m to the north.

The site's Risk of Flooding from Rivers and the Sea (RoFRaS) risk rating is Very Low. However the Groundsure report records that the Site is within 100m of a British Geological Survey groundwater flooding susceptibility area.

2.4.8 Licensed Surface Water Abstractions and Discharges

The Groundsure report records no surface water abstractions within 2km of the Site.

The GroundSure report records sixteen licensed discharge consents within 500m. The nearest of these is located approximately 260m north west of the Site and discharges to the River Kennet.

2.4.9 Licensed Waste Management Facilities / Landfills

The Groundsure report records no historical or current landfill sites within 1km of the Site.

² Hydrogeological map of the South West Chilterns and the Berkshire and Marlborough Down, 1:100,000, 1978, BGS.

The closest waste management facility is a waste and recycling yard, recorded within 530m north east.

2.4.10 Industrial Land Use

The Groundsure report records no Integrated Pollution Prevention and Control (IPPC) Authorised Activities within 500m of the Site.

26 historical potentially contaminative industrial sites are recorded within 250m of the study site. The nearest of these is located on-site and relates to the former biscuit factory and after that the closest is a tin works 150m south west.

A total of 19 current potentially historical contaminative industrial sites are recorded within 250m, the nearest of which is on-site and is recorded as a metal working company.

One historical petrol and fuel site is recorded within 500m for a petrol filling station 390m east.

The GroundSure report records no COMAH (Control of Major Accident Hazards) or NIHHS (Notification of Installations Handling Hazardous Substances) sites within 500m of the Site.

2.4.11 Pollution Incidents

The GroundSure report records eleven EA recorded pollution incidents within 500m of the Site. The nearest occurred in 2003 and was located approximately 240m north west of the Site. The pollutant is recorded as crude sewage leading to Category 3 (Minor) impact to land and water. The most recent recorded incident occurred in 2005, 350m north west of the Site. The pollutant is recorded as diesel leading to Category 2 (Significant) impact to water.

4.0 Preliminary Conceptual Site Model

This report section uses the information gathered in previous sections and aims to identify all the potential Contaminants, Pathways and Receptors present with respect to the Site and assess their significance and acceptability.

When considering the contaminants, receptors and pathways relevant to this site, SLR has been mindful that the report is for the Permitted Development of an existing building.

The statutory guidance for Part IIA, DEFRA Circular 04/12³, defines a Contaminant as:

“a substance which is in, on or under the land and which has the potential to cause significant harm to a relevant receptor, or to cause significant pollution of Controlled Waters”.

Based on available information which includes a visual inspection of the Site, the GroundSure Report and historic mapping, it appears the Site was first developed in the late 1800s when it comprised the external area of a biscuit factory on the south side of South Street. The biscuit factory was extended in the first half of the 20th century, occupying the whole site and extending off-site to both the east and west. After 1956 the Site was labelled only as a factory.

The factory was demolished by 1988 and replaced by a row of ten commercial properties and an associated car park. The site comprises one of these properties and the present day configuration matches that of 1988.

The Site is entirely occupied by the building footprint.

The statutory guidance for Part IIA, DEFRA Circular 04/12, defines a Pathway as:

“a route by which a receptor is or might be affected by a contaminant”.

Following an assessment of the environmental and geological setting of the Site and considering the land use, it is considered that a number of potential pathways for contaminant impact could exist. The validity of each of these pathways is assessed in Table 4-1 below.

The statutory guidance for Part 2A, DEFRA Circular 04/12, defines a Receptor as:

“something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property, or Controlled Waters.”

As the Site is being assessed in line with Permitted Development guidance, it is considered that the receptors are defined as future site users as well as controlled waters. As the Site is underlain by Principal and Secondary A aquifers, a controlled waters receptor is considered to be present.

The potential pollutant linkages are detailed in Table 4-1 below.

³ DEFRA; 2012; EPA 1990: Part2A, Contaminated Land Statutory Guidance, PB13735; April 2012

Table 4-1
Preliminary Conceptual Site Model

Source	Pathway	Receptor	Significant?	Comments
Biscuit factory / unspecified factory, redevelopment into commercial (office) premises.	Inhalation of indoor or outdoor air	On-Site Health	No	Although the Site and adjacent land have commercial and industrial past uses, there are no storage tanks recorded on the historical maps or evidence of large scale use of volatile substances that may give rise to hazardous vapours. There are no current or historic landfill sites recorded within 500m of the Site, consequently there are no sources of landfill gas. With particular regard to outdoor air, it is considered that the hardstanding cover and dilution with ambient air mean that this pathway is not complete.
		Off-Site Health	No	Groundwater lies at approximately 10m depth reducing the likelihood of groundwater forming a pathway. The site lies within an area that is predominately hard paved thus breaking potential exposure pathways.
	Direct ingestion or dermal contact	On-Site Health	No	The site is entirely hard surfaced and no material external alterations are planned under the change of use. The raised beds present at the front of the Site are not considered to present a viable human health risk pathway.
	Vertical migration of contaminants	Groundwater	No	The site is almost entirely hard surfaced meaning that there is no mechanism for infiltration and subsequent leaching. Therefore the potential for infiltration of rainwater and vertical migration of contaminants to the underlying aquifers is negligible.
	Lateral migration of separate and dissolved phase contaminants	Surface Water	No	The nearest identified surface water feature is Gunter's Brook approximately 190m to the north which is unlikely to be affected by potential contaminants at the Site by virtue of distance.
		Groundwater Abstraction Boreholes	No	The nearest groundwater abstraction borehole is 490m from the Site and not considered further by virtue of distance.

4.1 Interpretation

Table 4-1 indicates that there are no potentially significant pollutant linkages with respect to human health or controlled waters associated with the Site.

SLR has been requested to determine whether the Site will constitute Contaminated Land as described in part 2A of the Environmental Protection Act 1990. The definition of Contaminated Land therein is:

“any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, 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 waters is being caused or there is a significant possibility of such pollution being caused.”

Given the interpretation of site conditions outlined above, SLR does not consider the Site to constitute Contaminated Land.

SLR has been further requested to determine whether, in relation to the contamination risk on the Site, and as a result of the proposed change of use, taking into account any proposed mitigation, the Site will be defined as contaminated land as described in part 2A of the Environmental Protection Act 1990, and in doing so have regard to the contamination land statutory guidance issued by the Secretary of State for the Environment, Food and Rural Affairs in April 2012.

Given the interpretation of site conditions outlined above, SLR does not consider the Site to constitute Contaminated Land and the proposed change of use will not alter this.

5.0 Summary

A Phase One Environmental Assessment has been undertaken by SLR for the Site at 10 Southern Court, South Street, Reading RG1 4QS on behalf of Wallmer Asset Management. The primary purpose of this report is to satisfy the local authority that the Site would not constitute Contaminated Land under Permitted Development rights following the proposed change from commercial to residential use.

The Site was first developed in the late 19th century when it comprised the external area of a biscuit factory on the south side of South Street. The biscuit factory was extended in the first half of the 20th century, occupying the whole site and extending off-site to both the east and west. After 1956 the Site was labelled only as a factory. The factory was demolished by 1988 and replaced by a row of ten commercial properties and an associated car park. The site comprises one of these properties and the present day configuration matches that of 1988.

The current configuration of the Site includes an entrance lobby, offices and conference rooms over three floors. The building footprint occupies the whole site.

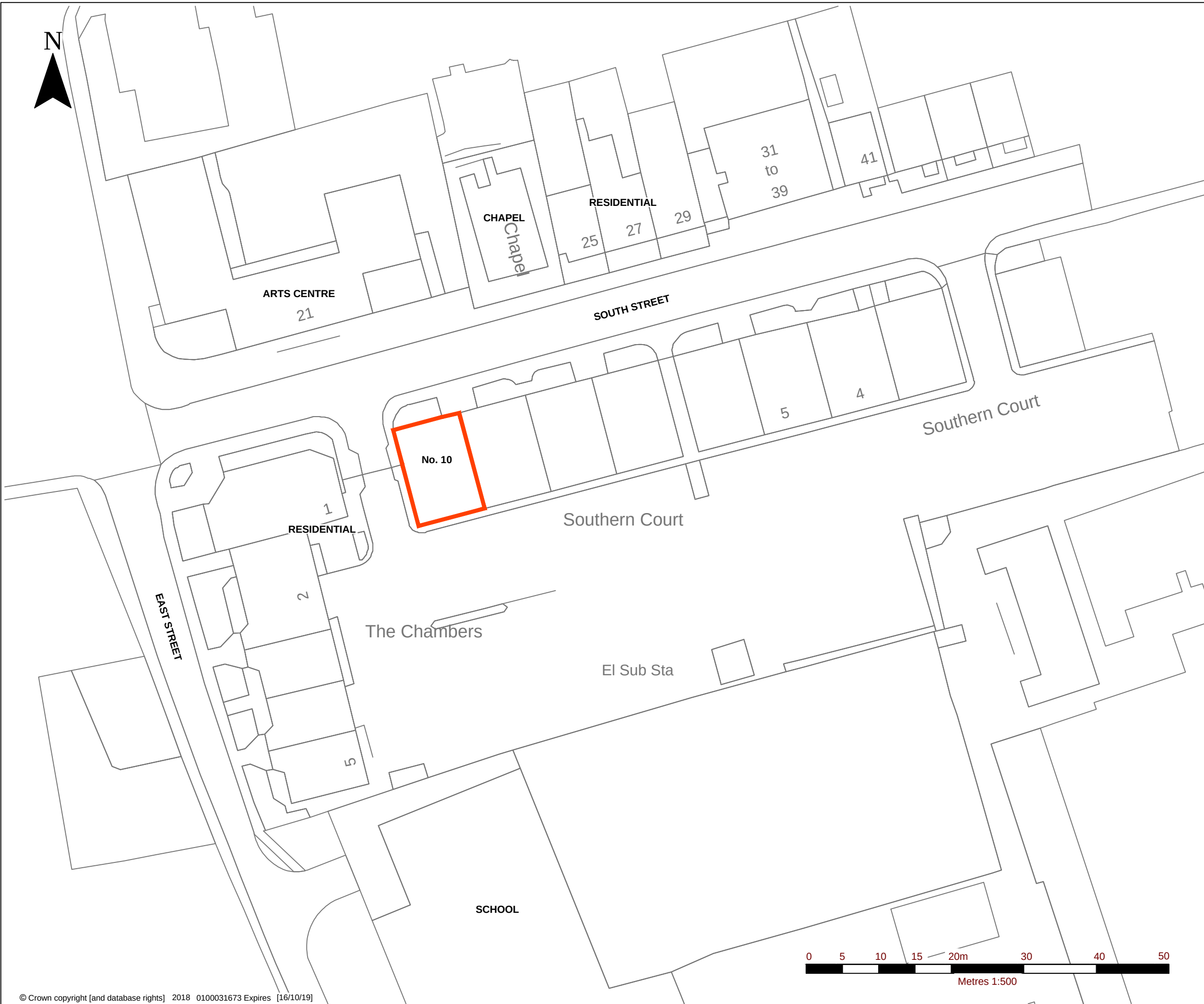
There are considered to be no complete pollution pathways to human health or controlled waters receptors at the Site, either currently or subsequent to the proposed change of use.

Factual information has been used to produce a Preliminary Conceptual Model of the Site. This confirms there are no significant risks to human health or controlled waters.

SLR considers that the Site is not Contaminated Land as described in part 2A of the Environmental Protection Act 1990 and is thus suitable for change of use under the Permitted Development regime without further investigation.

DRAWINGS

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NOTES



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10 SOUTHERN COURT
**PHASE ONE GEO-ENVIRONMENTAL
ASSESSMENT**
SITE LAYOUT PLAN

DWG No. 1

Scale
1:500 @ A3

Date
OCTOBER 2018



Front elevation of 10 Southern Court
(on right)

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SITE PHOTOGRAPHS

DWG No. 2

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Southern aspect of the building (centre) and car park



Rear elevation and car park

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Access road to west of building



Adjacent land use to north

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Building interior



Building interior

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Building interior

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