



Preliminary Investigation Report

at

**Samsons Gym, 237 Chamberlayne Road,
Eastleigh, Hampshire SO50 5JB**

for

Eastleigh Borough Council

**Reference: I9I92/PIR RevI.I
May 202I**

Control Document

Project

Samsons Gym, 237 Chamberlayne Road, Eastleigh, Hampshire SO50 5JB

Document Type

Preliminary Investigation Report

Document Reference

19192/PIR Rev 1.1

Document Status

Final

Date

May 2021

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This is not a valid document for use in the design of the project unless it is titled Final in the document status box.

Current regulations and good practice were used in the preparation of this report. The recommendations given in this report must be reviewed by an appropriately qualified person at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.



Commission

This document comprises the Preliminary Investigation Report (PIR) and incorporates the results, discussion, and conclusions to this desk study. General site data is recorded below:

Commission Record	
Client	Eastleigh Borough Council
Site Name	Samsons Gym, 237 Chamberlayne Road, Eastleigh, Hampshire SO50 5JB
Grid Reference	SU 451 184
Soils Limited Quotation Ref	Q30459 dated 15 th September 2025
Clients Purchase Order	PO-000310410 dated 16 th September 2025

The record of revision is presented below:

Record Of Revisions		
Revision	Date	Reason
1.0	May 2021	Original to the Client
1.1	October 2025	Updated to reflect new proposal and change in end-use.

Note: The latest revised document supersedes all previous revisions of the PIR produced by Soils Limited.

Documents associated with this development that must be referred to are given below.

Record Of Associated Documents			
Reference	Type	Date	Creator
7694-08-600-P03	Proposed Site Plan	26 th June 2023	FDG
7694-08-200-P03	Existing Site Plan	26 th June 2023	FDG
ENC/231121/U3D6	Utility	November 2021	Encompass Surveys

Caveats

Whilst reasonable skill and care has been taken to determine the site history and the environmental setting within the time constraints applied by the project, it should be appreciated that uncertainties may occur owing to the natural variability of soil material within a defined area or as a result of unknowns that are associated with contaminated land assessment in general. The site conditions may be different from that indicated by this Preliminary Investigation, particularly on a site with a history of past development. No responsibility can be accepted should such conditions alter the recommendations made in this report.

Without a drainage survey it is not possible to establish if the surface water drainage is to the main drainage system or soakaways. If there are soakaways on-site, they could act as a potential source. The geology on-site to an extent may determine if soakaways were likely to have been adopted.

Ordinary watercourses (OWs) are defined as rivers (which are not designated as main rivers), streams, ditches, drains, culverts, cuts and sewers (other than public sewers). This includes all OWs that are not mapped. Ordinary watercourse consent (OWC) is required from the Lead Local Flood Authority (LLFA) when changing/adapting/adding to the cross sections of OWs. Installations of any structure or obstruction into an OW that

impedes the flow without consent is prohibited by the Land Drainage Act 1991 Section 23.

Failure to remove obstructions may result in legal action by the LLFA with powers under Section 25 of the Land Drainage Act 1991.

Soils Limited suggest surveying the site for OW usually seen in rural areas as boundary ditches in order to avoid potential impacts to residents downstream and prosecution. OWC can be applied for from your LLFA.

This Preliminary Investigation does not include a detailed UXO risk assessment, it does however contain a basic assessment in accordance with CIRIA C681 and C785. In preparing a Preliminary Investigation reference is made to historical maps and web based sources to assess the risk of the site potentially having been impacted by bombing during the World Wars. The data readily available is not necessarily definitive. Certain areas were bombed heavily such as centres of industrial manufacture, airfields, shipyards, docklands, railways sidings and junctions. The assessment is based on the likely area risk, bomb patterns (i.e. lines of recorded bomb impacts with gaps where an impact would be anticipated) and the age of structures on and in close proximity to the site.

Explanations

The Preliminary Investigation Report was undertaken to advise the client on the risk pertaining to the site, with special reference to historic and current potential contaminative activities and processes. This also included the assessment of their impact on current and future sensitive receptors such as human health, controlled waters, ecological features, building structures and services.

During the site walkover observations were made in relation to current activities, evidence of historical activities, sources of potential contamination such as fuel storage tanks, oil drums and chemical storage and evidence of contamination. The walkover also looked for evidence of soil contamination in the form of staining odours and stressed or discoloured vegetation.

To assess the vulnerability of groundwater to contamination, consideration must be given to the leaching characteristics of the overlying soils and the characteristics of the strata in the unsaturated zone. Information on the geological strata such as lithological type and permeability characteristics has been combined with the physical properties of the soil to produce varying degrees of vulnerability.

The object of the historic map study was to report on the evidence of site history and redevelopment of the site and its environs from available County Series and Ordnance Survey Maps dating from the mid to late 19th Century to the present day as downloaded from Landmark Environmental.

The published maps only represent a “snap shot” of the site and its environs at the date of the survey. The detail of the information recorded can vary between epochs, map scale and county areas. It should be noted that changes in land uses, processes or

activities may have occurred outside of published epochs and these may not have been recorded on subsequent epochs. Also note that as methods of projection, production and recording have changed over time, this can result in geo-reference errors that may indicate the established site boundary is off-centre from its true location on older historical maps. Where this is potentially significant it will be noted.

Any distances quoted for features remote from the site have been scaled from the maps and are only approximate. Where dates have been noted in brackets, these are the actual dates applicable to the map editions and may not reflect the date of the original survey it is based on. The information reported might not represent all pertinent information that could be obtained. The interpretation of the maps and/or other data commented on in this report is subjective.

As part of the review of the historical plans, only features considered to have or to have had a potential contaminative impact on the site and usually within a notional 250m radius are discussed. The north point and approximate extent of the site are indicated on each figure.

Dataset survey is undertaken, and the extent of the search has initially been limited to a radius of 250m as it is considered that sources of contamination beyond 250m are unlikely to impact on the site.

The BGS soil chemistry for environmental assessments dataset coverage, was developed from BGS G-BASE and Imperial College Wolfson Atlas data. It contains estimated ambient As, Cd, Cr, Ni and Pb background concentrations for rural topsoils across Great Britain. It also contains the locations and measured concentrations (mg kg⁻¹) of As, Cd, Cr, Cu, Ni, Pb, Sn and Zn in urban topsoil samples, collected from geochemical surveys in 23 major urban centres.

In accordance with CIRIA C681 and C785 a review has been undertaken of the historic maps and the Zetica UXO risk website.

Legislation and Liability

The primary legislative mechanism for contaminated land management in the UK is Part 2A of the Environmental Protection Act, 2021 (EPA). Part 2A was introduced into the EPA under Section 57 of the Environment Act 1995 to help deal with the substantial legacy of land contamination. The legislation provides powers in relation to the identification, remediation and apportionment of liability for contaminated land. Part 2A applies where there is unacceptable risk, assessed on the basis of the current use and the relevant circumstances of the land. It is not directed to assessing risks in relation to a future use of the land that would require a specific grant of planning permission.

Under Part IIA of the Environment Act 2021, Local Authorities are required to identify contaminated land and serve on every person who is an appropriate person a remediation notice setting out what is to be done by way of remediation and the period within which it must be done.

If the person who caused, or knowingly permitted, the contaminating substance cannot

be found, the owner and/or, occupier for the time being, of the property can be the appropriate person.

Under the legislation, Contaminated Land is defined as: -

“Land which is in such a condition by reason of substances in, on or under the land that significant harm is being caused or that there is a significant possibility of such harm being caused or that pollution of controlled waters is being, or is likely to be caused.”

Where the Act defines harm as:

“harm to the health of living organisms or other interference with the ecological systems of which they form a part and, in the case of man, includes harm to his property.”

and pollution of controlled waters is defined as: -

“the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter.”

In addition, The Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 introduced the supplementary definition of harm to include: lasting exposure to any person resulting from the after-effects of a radiological emergency, past practice or past work activity.

With regard to contaminated waters, the Environment Act 1995 amends the Water Resources Act 1991 and provides the Environment Agency with the power to force clean-up of historical contamination by issuing a Works Notice, with remediation paid for by the responsible parties.

The Groundwater Regulations (1998) stated that entry of List 1 substances into groundwater must be prevented, and List II substances must be controlled.

This PIR was made to comply with planning requirements and only covers contaminative land issues unless otherwise specifically noted.

Limitations and Disclaimers

This Preliminary Investigation Report relates to the site located at Samsons Gym, 237 Chamberlayne Road, Eastleigh, Hampshire SO50 5JB and was prepared for the sole benefit of the Client for the brief described in the Commission of this report.

The contents, recommendations and advice given in the report are subject to the Terms and Conditions given in the Soils Limited Quotation and the subsequent Clients Purchase Order.

Soils Limited disclaims any responsibility to the Client and others in respect of any matters outside the scope of the above.

This report has been prepared by Soils Limited, with all reasonable skill, care and diligence within the terms of the contract with the Client, incorporation of our General Conditions of Contract of Business and taking into account the resources devoted to us by agreement with the Client.

The report is personal and confidential to the Client and Soils Limited accept no responsibility of whatever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report wholly at its own risk.

The Client may not assign the benefit of the report or any part to any third party without the written consent of Soils Limited.

The ground is a product of continuing natural and artificial processes. As a result, the ground will exhibit a variety of characteristics that vary from place to place across a site, and also with time. Whilst a ground investigation will mitigate to a greater or lesser degree against the resulting risk from variation, the risks cannot be eliminated.

The investigation, interpretations, and recommendations given in this report were prepared for the sole benefit of the client in accordance with their brief. As such these do not necessarily address all aspects of ground behaviour at the site.

Current regulations and good practice were used in the preparation of this report. An appropriately qualified person must review the recommendations given in this report at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

There may be other sources of information not included in those listed that hold data relevant to the Preliminary Investigation Report undertaken at the site that could materially affect the conclusions made in this report.

It should be noted that a detailed survey of the possible presence or absence of invasive species, such as Japanese Knotweed, is outside of the scope of investigation.

Ownership of land brings with it onerous legal liabilities in respect of harm to the environment. "Contaminated Land" is defined in Section 57 of the Environment Act 2021.

Where a contaminative use is identified in the Preliminary Investigation Report this does not determine whether contamination has actually occurred, or if it has the degree to which it may have taken place. An intrusive investigation(s) and analysis is required to establish the nature and degree of any contamination present.

All works are undertaken in the context of, and in compliance with, BS10175+A2 2017 and LCRM (EA 2021) and all other pertinent planning, standards, documentation and guidance appropriate to the site at the time of production which may include, but are not necessarily limited to, documents provided by BS/CEN/ISO, NHBC, AGS, CIEH, CIRIA, SoBRA and CLAIRE.

Ownership of copyright of all printed material including reports, survey data, drawings, laboratory test results, trial pit and borehole log sheets, including drillers log sheets remains with Soils Limited. License is for the sole use of the client and may not be assigned, transferred or given to a third party. This license is only valid once we have been paid in full for this engagement. In the event of non-payment for our services, we reserve the right to retract the license for all project data, preventing their use and any reliance upon such data by the client or any other third party. We may also contact parties other than the client to notify them of this retraction.

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Appendix E Zetica UXO Map

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Appendix G Risk Assessment Criteria

Section I Site Conditions and Proposed Development

I.1 Site Walkover

A site walkover was undertaken in September 2025 by Soils Limited. The notes of the site walkover are presented in Table 1.1 and Table 1.2.

Table 1.1 Site Walkover Record (On-site)

Use of Site	No structure onsite at the time of the site walkover. However from previous site walkover in 2021, a large single storey building covered the majority of the north of the site with a courtyard separating the gym from the food bank and parking space situated to the south of the side accessed from the east and the west of the site. Car park was located to the southwest corner of the site.
Structures	
Site Topography	Generally flat (<3°)
Site Covering	Hard landscaped, comprising block paving and tarmacadam with cracks
Vegetation	Weeds noted along cracks in the hardstanding
Potential Contamination Sources	Small pile of domestic rubbish including plastics containers, metal frames and wood planks, noted at the Derby Road gate entrance. Car park may potentially leak engine oil, fuel oil, PAHs, asbestos and lubricant.
Odour	None noted
Drainage	Drainage noted onsite

Table 1.2 Site Walkover Record (Off-site)

Use of Land	Predominantly residential on all four sides.
Area Topography	Generally flat.
Vegetation	Occasional mature trees lining nearby roads.
Potential Contamination Sources	None observed.

I.2 Site Drainage

Via surface drains, which are anticipated to be connected to the mains system. The details will need to be confirmed by a drainage survey conducted by a drainage surveyor.

I.3 Site Photographs

The site photographs have been included within Appendix F.

I.4 Proposed Development

The proposal comprises the construction of three 2.5-storey terraced houses, alongside a three-storey apartment building comprising nine residential units. The development includes public open space or domestic gardens and provision for car parking spaces adjacent to the terraced row.

In compiling this report reliance was placed on drawings listed in the Commission

Section and recommendations apply only to this scheme. Any changes require consultation with Soils Limited.

The proposed development plans have been provided in Appendix A.

Section 2 Geology, Hydrogeology, Hydrology and Radon

2.1 Anticipated Geology

The 1:50,000 BGS Geology map showed the site to be situated on the London Clay Formation bedrock, with overlying superficial River Terrace Deposits.

2.1.1 Superficial – River Terrace Deposits

The rivers Test and Itchen have deposited extensive spreads of River Terrace Deposits in the Southampton area, representative of ancient floodplains. In total, eleven terraces have been recorded. The River Terrace Deposits consist predominantly of gravels made up of subangular to subrounded flints with a significant sand component locally with lenses of silt, clay or peat.

The five highest terraces have appreciable clay content. Poorly sorted, clayey and sandy silts and silty clays overlie the 1st, 3rd, 5th and 6th terraces and locally at above terrace gravels.

2.1.2 Bedrock – London Clay Formation

The London Clay Formation in the Hampshire region comprises silty and sandy clay, clayey and sandy silt, silty sand; sporadic claystones and thin beds of flint pebbles. The formation includes the Bognor Sand, Whitecliff Sand, Durley Sand, Portsmouth Sand and Nursling Sand Members. Crystals of gypsum (Selenite) are often found within the weathered part of the London Clay, and precautions against sulphate attack to concrete are sometimes required.

The lowest part of the London Clay Formation rests on the Lambeth Group.

2.2 Hydrogeology

Table 2.1 presents the hydrological data that is relevant to the site.

Table 2.1 Hydrogeological Assessment

Hydrogeological Data		Comment
On-site	Superficial	Secondary A Aquifer ¹
Aquifers	Bedrock	Unproductive Strata ²
Groundwater Vulnerability		Medium Vulnerability
Source Protection Zones (SPZ)		None onsite or within 1000m
Abstraction	Potable	None within 500m
	Non-potable	None within 500m
Sensitive Land Uses		Nitrate Vulnerable Zone
Surface Water Features		753m SW
Flood Risk from Rivers or Seas		None within 500m
Flood Risk from Surface Water		None onsite, low risk of surface water flooding on adjacent roads.
Flood Risk from Groundwater		None within 250m

Note(s): 1 Secondary A are 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. 2 Unproductive strata are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

Any works or development which has the potential to have an impact on surface water, aquifer or groundwater quality must be approved by the Environment Agency prior to implementation.

2.3 Hydrology

The elevation of the site was circa 14.95m Above Ordnance Datum (AOD). The anticipated surface water and groundwater flow direction is given in Table 2.2.

Table 2.2 Hydrological Assessment

Type	Direction	Notes
Surface water	South	Anticipated flow towards the south in line with the dominant surrounding topography
Groundwater	South	Anticipated towards the south in line with the dominant surrounding topography. Flow through the London Clay Formation at a very slow rate

2.4 Radon Gas

The site is in an area where 3-5% of homes are estimated to be at or above the Action Level. Therefore, basic radon protective measures are necessary in the construction of new dwellings or extensions.

Section 3 Site History

3.1 Historic Map Study

The historic maps referred to are appended to this report (Appendix B).

Table 3.1 Historic Development of the Site

Site History	Date Range	
	From	To
Open farmland	1886 ¹	1931
A large single storey building covered the majority of the north of the site with a courtyard separating the gym from the food bank and parking space situated to the south of the site accessed from the east and the west of the site.	1931	2022
Car park was noted to the southwestern corner of the site from Google Earth Image.	2000	2022
No structure noted onsite	2022	2025 ¹
Note(s): ¹ Earliest readily available map. ² Time of writing: October 2025		

Table 3.2 Historic Off-site Development

Off-site Development	Date Range	
	From	To
Site surrounded by farmland.	1886 ¹	1896
Residential terraces, school and church constructed >100m northeast of the site. Derby Road was extended past the north of the site by 1909.	1896	1931
Residential terraces are now present north and south of the site with additional residential buildings to the west of the site. Allotments are present 75m east of the site with a school 100-150m east of the site. A recreation ground is present 50-200m northwest of the site.	1931	1938
Allotment gardens 75m east of the site now a residential terrace.	1938	1983-1989
Allotment gardens were noted circa 75m northwest to the site	1946	1954-1968
Playing field located 100m south of the site is replaced with a series of school and college buildings. No further significant changes.	1983-1989	2025 ²
Note(s): ¹ Earliest readily available map. ² Time of writing: October 2025		

Table 3.3 Potential Sources of Pollution Indicated from Historic Maps

Source	Direction	Distance (m)	Date Range	
			From	To
Agriculture use (if arable)	Onsite		1886	1931
Car park	Onsite		2000	2022
Agriculture use (if arable)	N/E/S/W	<250	1886	1896
Electricity sub-station	SE	125	1951	2021
Electricity sub-station	S	130	1958	2021
Allotment gardens	E	75	1931	1969
Allotment gardens	NW	75	1946	1954-1968

3.2 Bomb damage and the potential for Unexploded Ordnance

No evidence of onsite bomb damage was identified and nor was any offsite bomb damage identified near the site. However, the wider area of Southampton and Eastleigh

were subjected to heavy bombing during World War II. The area around Eastleigh included spitfire factories as well as significant rail links between Southampton docks and London and therefore was heavily targeted.

A review of the Zetica bomb risk mapping service identified a moderate risk of UXO being present onsite. In addition, the site was approximately 200m east of an industrial target with a further two Luftwaffe targets and one UXO find within 1000m of the site.

Therefore, it is recommended that a preliminary UXO desk study is carried out by an appropriately qualified specialist.

Section 4 Environmental Records and Consultation

4.1 Dataset Information

A copy of the report is appended to this report in Appendix C and summarised in Table 4.1, Table 4.2 and Table 4.3.

Table 4.1 Environmental Significance of Data

Source	Direction	Distance (m)
Contaminated Land Register Entries and Notices	None	None
Discharge Consents	None	None
Integrated Pollution Prevention and Control	None	None
Local Authority Pollution Prevention and Controls	None	None
Local Authority Pollution Prevention and Control Enforcements	None	None
Nearest Surface Water Feature	S	753
Pollution Incidents to Controlled Waters (Significant Incidents only)	None	None
Prosecutions Relating to Authorized Processes	None	None
Registered Radioactive Substances	None	None
Substantiated Pollution Incident Register	None	None
Nearest Potable Abstraction Point	None	None
Nearest Non-Potable Abstraction Point	None	None
Water Industry Act Referrals	None	None
Source Protection Zones	None	None
Extreme Flooding from Rivers or Sea Without Defences	None	None
Flooding from Rivers or Sea Without Defences	None	None
Areas Benefiting from Flood Defences	None	None
Flood Water Storage Areas	None	None
Flood Defences	None	None
BGS Recorded Landfill Sites	None	None
Historical Landfill Sites	None	None
Licensed Waste Management Facilities	None	None
Local Authority Recorded Landfill Sites	None	None
Potentially Infilled Land (Non-Water)	None	None
Potentially Infilled Land (Water)	None	None
Registered Landfill Sites	None	None
Registered Waste Transfer Sites	None	None
Registered Waste Treatment or Disposal Sites	None	None
Control of Major Accident Hazards Sites (COMAH)	None	None
Notification of Installations Handling Hazardous Substances	None	None
Planning Hazardous Substance Consents	None	None

The contemporary trades listed in Table 4.2 are only those considered to be viable potential sources of contamination that could impact the site.

Table 4.2 Contemporary Trade Directory

Contemporary Trade Directory within 250m	Direction	Distance (m)	Status
Cleaning services – unlicensed	S	60	Inactive
Cleaning services – unlicensed	E	232	Active

Table 4.3 Geological Hazards

Source	Nearest Distance from Site/Type
Coal Mining Affected Areas	No hazard
Mining Instability	No hazard
Natural and Mining Cavities	No hazard
Potential for Collapsible Ground Stability Hazards	Low
Potential for Compressible Ground Stability Hazards	No hazard
Potential for Ground Dissolution Stability Hazards	No hazard
Potential for Landslide Ground Stability Hazards	Very low
Potential for Running Sand Ground Stability Hazards	No hazard
Potential for Shrinking or Swelling Ground Stability Hazards	Low

4.2 Site Sensitivity Maps

No other significant potential sources of contamination were shown on the Landmark Envirocheck Site Sensitivity Maps, which have not been listed in Table 4.1, Table 4.2 and Table 4.3, and copies of which are appended to this report (Appendix D).

4.3 Regulatory Enquires

This was requested at the time of the original report, but no information was provided.

4.4 Soil Geochemistry

The results of this survey are contoured on the Landmark Envirocheck report (Appendix C). The results of the local soil chemistry are presented in Table 4.4.

Table 4.4 Soil Geochemistry

Determinant	Indicated Soil Geochemistry (mg kg⁻¹)
Arsenic	<15
Cadmium	<1.8
Chromium	60-90
Lead	<100
Nickel	15-30

Indicated values were not noted above the '*Residential with Homegrown Produce*' Generic Assessment Criteria.

Section 5 Data Collection Summary

5.1 General

Table 5.1 summarises the site Environs, which include geology, hydrogeology, the risk from radon and potential risk from flooding.

Table 5.1 Site Environs

Environs	Summary
Geology	Superficial River Terrace Deposits and bedrock of the London Clay Formation
Hydrogeology	River Terrace Deposits classified as Secondary A Aquifer which support shallow groundwater flow. London Clay Formation classified as Unproductive strata with low permeability and negligible significance for water supply or river base flow
Source Protection Zone (SPZ)	None onsite or within 1000m
Surface Water Flow	Anticipated flow towards the south in line with topography
Groundwater Flow	Anticipated towards the south in line with topography. Flow through the London Clay Formation at a very slow rate
Radon	Basic protection measures required
Flooding	There was no risk of flooding onsite from rivers, sea, groundwater or surface water. There was a low risk of surface water flooding on the roads surrounding the site.
Geological Hazard	No to low hazard recorded
Local Authority Enquiry	Response awaited
Soil Chemistry	No exceedances noted

Table 5.2 provides a summary of potential on-site and off-site contamination sources identified during the study of the historic maps, the Landmark Envirocheck Dataset Report and the site walkover.

Table 5.2 Summary of Potential Contamination Sources

Contaminative Source	Direction	Distance (m)	Date Range		Data Source
			From	To	
On-Site					
Agriculture use (if arable)	Onsite		1886	1931	HM
Car park	Onsite		2000	2022	GE
Domestic rubbish	Onsite		Unknown	2025	SW
Off-Site					
Agriculture use (if arable)	N/E/S/W	<250	1886	1896	HM
Cleaning services	S	60	-	-	DS
Electricity sub-station	SE	125	1951	2021	HM
Electricity sub-station	S	130	1958	2021	HM
Cleaning services	E	232	-	2021	DS
Allotment gardens	E	75	1931	1969	HM
Allotment gardens	NW	75	1946	1954-1968	HM

Note(s): SW – Site walkover, HM – Historic Maps, DS – Datasheet