Castledine Environmental

LAND CONTAMINATION SURVEYS

Phase 1 Land Contamination Risk Assessment

for

The Extension and Change of use of Former Working Men's Club to Mixed Residential (9 No. Flats) and Commercial Usage

on the site of

The Vixen, Millfields Way, Haverhill, Suffolk CB9 0JB

Date: April 2025

Status:	Final Report
Reference:	3926D P1 Patel Construction - Haverhill
Date:	11/04/2025

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EXECUTIVE SUMMARY

The site is currently occupied by a dilapidated working men's club formerly named 'The Vixen' and a very limited extent of exterior space, presently occupied by heaped debris and refuse in exterior areas (i.e. plastics, timbers, plaster, paint cans, domestic wastes). Historically, the site remained unoccupied open field from at least circa.1884 through until circa.1973/78, when the present-day working men's club was erected on site, following which the site has remained in such usage until around circa.2023, when the site fell into disrepair and was partially demolished.

Whilst the former arable agricultural usage of the site is considered a potential source of contamination (agrichemicals), it is not considered likely that prior potentially impacted soils have remained on site, as they were likely removed as part of the site development (i.e. site partially terraced and therefore land formed) and additionally, visible ground conditions noted on the day of the site walkover evidenced no significant made ground deposits nor relict topsoil / ratable soils. The remaining contaminants of concern comprise the potential for asbestos within the structure itself (within the age of usage) and potential for impact from the heaped debris in exterior areas of site; however, these areas are to be cleared and covered in hardstanding, thus reducing the risk. No soft-landscaping is evident on the proposed plans, which further reduces the risk; however, should any soft-landscaping be formed, then it is likely that raised beds and/or imported clean soils will be required, as no present site soils are extant that would be suitable (site largely covered in hardstanding). As such, beyond site worker hazards, the risks from soil contamination are considered to be low.

Based on the information contained in this report, it is the opinion of Castledine Environmental that the site represents a **LOW** level of risk with respect to the proposed development.

It is not envisaged that any further works or investigation are required, beyond the provision for an asbestos survey (and subsequent professional removal, if required) on the existing structure and the removal of heaped wastes and debris in exterior areas on site for site worker safety.

This report should be submitted to your Local Planning Authority for agreement and to avoid abortive costs.

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

1.0 QUALITY ASSURANCE

Castledine Environmental confirm that all reasonable efforts have been made to ensure that the information outlined within this report is accurate.

Castledine Environmental would further confirm that due care, attention and technical skill were used in the creation of this report.

2.0 LIMITATIONS

The conclusions and recommendations made in this report are limited to those based on the findings of the investigation. Where comments are made based on information obtained from third parties, Castledine Environmental assumes that all third-party information is true and correct. No independent action has been undertaken to validate the findings of third parties. The assessments and interpretation have been made in line with legislation and guidelines in force at the time of writing, representing best practice at the time.

This survey has not included asbestos within existing structures, invasive plant species, geotechnical considerations or any elements unconnected with potential ground contamination at the site. If required, such surveys should be undertaken by suitably accredited organisations.

There may be other conditions prevailing at the site which have not been disclosed by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for conditions not revealed by the investigation.

3.0 INTRODUCTION AND SITE PROPOSALS

Castledine Environmental have been appointed by Mr. P. Vadsola to undertake a Phase 1 Desk study on a site at The Vixen (former Working Men's Club), Millfields Way, Haverhill, Suffolk CB9 0JB.

4.0 SCOPE

Castledine Environmental have prepared this report for the sole use and reliance of Mr. P. Vadsola and associated appointees for the purpose of ensuring compliance with:

- National Planning Policy Framework (NPPF) December 2024;
- Part C1 of the building regulations;
- Support of a Planning Application.

This report may not be used or relied upon by any unauthorised third party, or for any other proposed use than that specified above, without the explicit written agreement of Castledine Environmental.

This report is to be regarded as a Preliminary Risk Assessment in accordance with the Environment Agency's Land Contamination Risk Management (LCRM – 2021), which replaces CLR11 *"Model Procedures for the Management of Land Contamination",* carried out in accordance with BS 10175:2011+A2:2017, *"Investigation of Potentially Contaminated Land - Code of Practice"* and relevant sections of BS5930:2015+A1:2020*, "Code of Practice for Ground Investigations".*

The objectives of the report are:-

- To assess historical activities at the site with respect to their potential impact on the site environment;
- To assess historical and current surrounding land use in relation to known or potential off-site contamination issues that may impact on the subject site;
- Review of geological, hydrogeological and hydrological conditions at the site, pertaining to land contamination issues;

- To characterise the environmental setting of the site, identify migration pathways and vulnerable receptors for contamination originating at the site, focusing on potential soil and groundwater liabilities; and
- To develop a preliminary conceptual site model (CSM).

This report has been produced in order to discharge any relevant planning conditions outlined by the Local Authority and Environment Agency; however, further requirements may be imposed after the findings of this report that may need to be addressed at a later date.

5.0 SITE DESCRIPTION

The site is located in Haverhill, Suffolk at National Grid Reference: 567555,245760 and is approximately 0.07ha in area.

The site is an irregular rectangle in shape and is orientated north east to south west. The site is located in a predominantly residential area and is directly bounded by Millfields Way with a residential estate beyond to the north east, a car park with Ingham Road and further dwellings beyond to the south east, a combined series of shops and residential flats above to the south west and a public underpass (below Millfields Way) and footpath to the north west, with a care home beyond this.

The site interior comprises a dilapidated working men's club formerly named 'The Vixen' and a very limited extent of exterior space. Access to site was provided via an entrance through the hoarding, enclosing the north eastern exterior area of site, before accessing the building itself via an entrance on the north eastern face.

The exterior area to site was seen to be heavily overgrown and occupied by numerous heaps of debris (appearing to be a mixture of fly-tipped debris and construction wastes from within the building – i.e. plastics, timbers, plaster, paint cans, domestic wastes). The building on site was then seen to be largely constructed of concrete and brick, with a brick façade and flat felt roofing. The interior of the building was seen to have

been largely stripped of former fittings, furnishings and occupations (i.e. pub fittings, seating, kitchen areas) with bare concrete, timber structing and walling noted. Of note in the interior areas were at least 4 No. inspection pits, formed through the concrete flooring into the underlying ground conditions. These pits were likely associated with a prior structural survey and, whilst they had been partially infilled with wastes, the ground conditions displayed little to no made ground deposits of concern (i.e. ashes, wastes, debris – gravelled subbases to the concrete) with the ground conditions appearing to be light brown sandy gravels or gravelly sands.

The heaped debris and refuse in exterior areas are considered a potential source of contamination noted on the site walkover. Topographically, the site is level however the areas around site slope from the north east to the south west, with steps providing access around the southern extent of the site, and embankments forming the north western extent, dropping off to the adjacent and sunken alleyway.

Photos of the site are present in Appendix D.

6.0 REGULATORY AUTHORITY AND OTHER ENVIRONMENTAL DATA

An environmental search listing historical and environmental factors likely to affect the property has been reviewed.

The most pertinent information is summarised in the following sections.

A copy is presented in Appendix A.

Additional geological and hydrological data was obtained from the British Geological Survey.

6.1 HYDROLOGICAL

6.1.1 AQUIFER

6.1.1.1 SUPERFICIAL GEOLOGY

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary (Undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general, these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	250	SW	Secondary A	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. These are generally aquifers formerly classified as minor aquifers

6.1.1.2 BEDROCK GEOLOGY

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	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. Generally principal aquifers were previously major aquifers

6.1.2 ABSTRACTIONS AND PRIVATE WATER SUPPLIES

The Groundsure report records no active abstraction sites located within 1000m of site.

6.1.3 SOURCE PROTECTION ZONE

The site is located in a Type 3 Total Catchment Source Protection Zone (SPZ) with a second and third record of the SPZ then located 130m west and 488m south of site. Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

6.1.4 GROUNDWATER VULNERABILITY AND SOIL LEACHING POTENTIAL

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one-kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

ID	Location	Summary	Soil / Surface	Superficial Geology	Bedrock Geology
1	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / Surface	Superficial Geology	Bedrock Geology
2	On site	Summary Classification: Principal bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures

6.1.5 GROUNDWATER VULNERABILITY – SOLUBLE ROCK RISK

The Groundsure report records the site as being located in an area where:

"Significant soluble rocks are likely to be present. Low possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow."

6.1.6 POTENTIAL SURFACE WATER

The Groundsure report records no hydrological features located within 250m of site

6.1.7 DISCHARGE CONSENTS

The Groundsure report records no active discharge consents held within 500m of site (most recent revoked circa.1993).

6.2 PERMITTED PROCESSES

The Groundsure report records an active Part B Permit relating to dry cleaning processes located 475m south of site.

6.3 LIST 2 DANGEROUS SUBSTANCE SITES

The Groundsure report records a launderette located 464m west of site as a site handling dangerous substances, namely 'pH'.

6.4 POLLUTANT RELEASE TO PUBLIC SEWER

The Groundsure report records a Special Category Effluent site located 188m south west of site at Page Fixing and Supply. The special effluent is not recorded however the permit is presently effective.

6.5 POLLUTION INCIDENTS

No further pollution incidents are located within 250m of site and no incidents with a significant or major impact are recorded within 500m of site.

6.6 RADIOACTIVE SUBSTANCES REGISTRATIONS

None recorded within 500m of site.

6.7 WASTE

6.7.1 LICENSED WASTE MANAGEMENT FACILITIES (LOCATIONS)

None recorded within 500m of site.

6.7.2 LANDFILL SITES

None recorded within 500m of site.

6.8 HAZARDOUS SUBSTANCES

None recorded within 500m of site.

6.9 ECOLOGICAL RECEPTORS

The Groundsure report records the site as being located within both the Lower Stour surface waters Nitrate Vulnerable Zone (NVZ) and the Sandlings and Chelmsford groundwaters NVZ, with further records of both then located 206m north of site. The Groundsure report also records 4 No. records of a Local Nature Reserve (LNR) named Haverhill Railway Walks located 138m, 150m south west, 397m west and 614m south east of site.

No further sensitive land usages are recorded within 1000m of site.

6.10 SOILS AND GEOLOGY

6.10.1 SUPERFICIAL DEPOSITS

Both BGS geological mapping and the Groundsure report record superficial geological deposits of the Lowestoft Formation on site, comprising an extensive sheet of chalky till, together with outwash sands and gravels, silts and clays and characterised by its chalk and flint content.

6.10.2 SUPERFICIAL DEPOSITS PERMEABILTY

The Groundsure report records the site as being within an area where the maximum permeability of superficial deposits is recorded as ‘moderate’ and the minimum permeability as ‘low’ and facilitated by mixed flow mechanisms.

This is a qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

6.10.3 BEDROCK DEPOSITS

Both BGS geological mapping and the Groundsure report records bedrock geology of the Lewes Nodular Chalk Formation And Seaford Chalk Formation (Undifferentiated), comprising chalk with flints.

6.10.4 BEDROCK PERMEABILITY

The Groundsure report records the site as being within an area where the maximum permeability of bedrock geology is recorded as ‘very high’ and the minimum permeability as ‘very high’ and facilitated by fracture flow mechanisms.

6.10.5 ARTIFICIAL GROUND

BGS geological mapping records an area of landscaped ground located 44m west and an area of made ground (undivided) located 232m south of site.

6.10.6 COAL MINING

The site is not located in a coal mining reporting area and the local geology is not considered appropriate for such extraction. As such the risk from coal mining activities is considered to be negligible.

6.10.7 NON-COAL MINING

The Groundsure report records the site as being located within an area where the limited extraction of chalk may have taken place, the report states:

"Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered."

Additionally, the Groundsure report records no non-coal mining operations, features or activities located within 250m of site with the nearest record beyond this being a ceased operations clay and shale pit formerly located 300m south of site.

6.10.8 SURFACE WORKINGS

None recorded within 250m of site.

6.10.9 RADON

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level. No radon protective measures are necessary as described in publication BR211:2015 by the Building Research Establishment.

6.11 AERIAL PHOTOGRAPHY

Aerial photography shows the following:

6.11.1 GOOGLE EARTH

14 No. images are held in the historic imagery dataset, as follows:

Date	Description
December 1945	Imagery is indistinct; however, the site appears to be open, unoccupied field.
December 2000	Site now shown as occupied by the present-day working men's club, however the site appears in use at this time and maintained. The surrounding areas remain consistent with the residential area seen in the present-day.
January 2003	No discernible change on site nor site relevant change to the surrounding areas.
August 2007	A canopy or covered area is now located in the exterior area forming the NE extent of site (likely a beer garden).
December 2007	No discernible change on site nor site relevant change to the surrounding areas.
December 2009	Canopy removed from exterior area on site. No site relevant change to the surrounding areas.
March 2011	No discernible change on site nor site relevant change to the surrounding areas.
March 2012	No discernible change on site nor site relevant change to the surrounding areas.
July 2015	No discernible change on site. A large structure – considered to formerly be a school (evidenced by playgrounds etc) approx.50m NW of site has been demolished and the area left unoccupied.
July 2018	No discernible change on site nor site relevant change to the surrounding areas.
April 2021	Site now appears disused with debris in exterior areas. Area NW of site where previously a school was located has now returned to grassed land.
March 2022	No discernible change on site nor site relevant change to the surrounding areas.
June 2022	No discernible change on site nor site relevant change to the surrounding areas.
June 2023	No discernible change on site nor site relevant change to the surrounding areas.

6.11.2 GOOGLE STREET VIEW

Google Street View imagery is dated circa.2009, 2010, 2011, 2018 and 2023 with the site viewed from Millfields Way and facing south west and west. Imagery dated circa.2009 shows the site as occupied by the Vixen working men's club (in use at this time) with the present-day exterior area seen to be enclosed by walling, forming a pub beer garden, with what appears to be a domestic garage unit in the far northern corner of site. Imagery then dated between circa.2009 to 2018 shows little to no change on site, before imagery dated circa.2048 shows a degree of disuse and overgrowth on site. Imagery then dated circa.2023 shows the site as seen in the present-day and on the site walkover, being dilapidated and disused. The former walling surrounding the beer garden has been demolished in place of the hoarding seen on the site walkover and the garage unit has also been demolished at this time.

6.12 HISTORIC MAPPING

The following historic maps have been reviewed as part of this assessment:

Map	Onsite	Offsite
OS County Series: 1884, 1:2,500	Site is shown as unoccupied, open field.	Immediate surroundings for at least 100m in all compass directions occupied by open field, beyond a track approx.80m south. Notable features include a mainline railway approx.150m SW, sidings approx.250m west, a windmill approx.260m NW of site, adj. to a corn mill.
OS County Series: 1885, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1896, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1902, 1:2,500	No discernible change on site.	Additional sidings added to the railway approx.250m west / SW of site.

Map	Onsite	Offsite
OS County Series: 1902-1905, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1905, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1924, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1926, 1:2,500	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1924-1927, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1938, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1946-1949, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1951, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.
National Grid: 1956-1961, 1:2,500	No discernible change on site.	Further depots, sidings and railway features added to mainline railway aprox.150m SW and 250m west of site.
Provisional: 1960, 1:10,560	No discernible change on site.	Windmill NW of site no longer marked on mapping. Corn mill now marked ‘mill’.
National Grid: 1968-1969, 1:2,500	No discernible change on site.	Housing erected within 50m north, NE and east of site and extending further in these respective directions. Open-sided barn located approx.15m NW of site. Sidings, rail line and rail features SW and west of site removed (sidings formerly located approx.250m west now replaced with coal yard).
Provisional: 1967-1970, 1:10,560	No discernible change on site.	Surrounding areas see little site relevant change.

Map	Onsite	Offsite
National Grid: 1972, 1:10,560	No discernible change on site.	Present-day mixed shops and flats seen south / SW of site in present-day now developed. School structure NW of site (demolished by circa.2015) now located NW of site. Housing now located within 100m east and SE of site. The mainline railway has been dismantled SW of site.
National Grid: 1969-1973, 1:2,500	No discernible change on site.	Surrounding areas see little site relevant change.
National Grid: 1973-1974, 1:2,500	No discernible change on site.	Pedestrian subway directly NW of and below site now present, surrounding areas now almost wholly residential, as in the present-day.
National Grid: 1973-1978, 1:2,500	Site now developed with the present-day working men's structure.	Further housing infill in the surrounding areas. Former rail features beyond the dismantled railway line west and SW of site now redeveloped into allotments (former coal yard), council yard (former railway buildings) and sports centre (with adj. tank); however, due to their downslope location from site, potential impact from these features has been discounted.
National Grid: 1981, 1:10,000	No discernible change on site.	Surrounding areas see little site relevant change.
National Grid: 1989-1994, 1:1,250	Site now marked as public house.	Surrounding areas see little site relevant change.
National Grid: 1981, 1:10,000	Surrounding areas see little site relevant change	Surrounding areas see little site relevant change
National Grid: 1991, 1:10,000	Surrounding areas see little site relevant change	Surrounding areas see little site relevant change
National Grid: 2001, 1:10,000	Surrounding areas see little site relevant change	Surrounding areas see little site relevant change
Landline: 2003, 1:1,250	Surrounding areas see little site relevant change	Surrounding areas see little site relevant change

Map	Onsite	Offsite
National Grid: 2010, 1:10,000	Surrounding areas see little site relevant change	Surrounding areas see little site relevant change
National Grid: 2025, 1:10,000	Surrounding areas see little site relevant change	The school structure NW of site has been demolished, bringing the surrounding areas inline with that seen in the present-day.

6.13 CURRENT LAND USE DATA

ID	Distance (m)	Direction	Company	Activity	Category
1	64	SE	Electricity substation	Electrical features	Infrastructure and facilities
2	75	NW	Gas governor	Gas features	Infrastructure and facilities
3	154	E	Electricity substation	Electrical features	Infrastructure and facilities
A	166	NE	Grey Trucks International	Distribution and haulage	Transport, storage and delivery
4	179	N	Electricity substation	Electrical features	Infrastructure and facilities
A	182	NE	Electricity substation	Electrical features	Infrastructure and facilities
B	190	SW	Premier Tyres	Vehicle parts and accessories	Motoring
5	204	S	Gas Distribution Centre	Gas features	Infrastructure and facilities
6	208	W	Waves Hand Car Wash Haverhill	Vehicle cleaning services	Personal, consumer and other services
7	242	NW	Electricity substation	Electrical features	Infrastructure and facilities

6.14 PETROL AND FUEL SITES

None recorded within 500m of site.

6.15 HISTORICAL PETROL AND FUEL SITE DATABASE

None recorded within 500m of site.

6.16 POTENTIAL CONTAMINATIVE USES IDENTIFIED ON MAPPING (<250M)

ID	Distance (m)	Direction	Use	Date
A	145	SW	Railway building	1938
A	145	SW	Railway sidings	1938
A	146	SW	Railway sidings	1949
B	149	SW	Railway sidings	1905
A	151	SW	Railway sidings	1869
A	151	SW	Railway sidings	1885
A	156	SW	Railway sidings	1967-1972
A	161	SW	Railway sidings	1924
A	164	SW	Railway sidings	1960
A	166	SW	Railway sidings	1869
A	168	SW	Railway building	1938
A	169	SW	Railway sidings	1951
A	171	SW	Railway building	1967-1972
A	173	SW	Railway building	1949
A	173	SW	Railway building	1869-1905
A	174	SW	Railway building	1885
A	176	SW	Railway building	1896
A	186	SW	Railway building	1951-1960
A	186	SW	Railway building	1924
2	190	SW	Unspecified depot	1967-197
A	200	SW	Railway building	1938
A	202	W	Railway sidings	1905
F	239	SW	Fire station	1991
F	243	SW	Fire station	1972

6.17 HISTORICAL TANK DATABASE

ID	Distance (m)	Direction	Use	Date
B	235	S	Unspecified tank	1974
B	235	S	Unspecified tank	1989
B	236	S	Unspecified tank	1978
B	261	S	Unspecified tank	1988
J	367	W	Unspecified tank	1969-1978
J	384	W	Unspecified tank	1961
10	384	SW	Unspecified tank	1988
J	395	W	Tanks	1961
N	399	S	Unspecified tank	1926

ID	Distance (m)	Direction	Use	Date
N	399	S	Unspecified tank	1902
N	406	S	Unspecified tank	1884
N	418	S	Unspecified tank	1902
N	418	S	Unspecified tank	1926

6.18 HISTORICAL ENERGY FACILITIES (<100M)

The Groundsure report records an historical electricity substation located 61m south east of site and identified from historical mapping dated circa.1989. No further historical energy features are located within 100m of site (scale assessed reduced to 100m in light of low-mobility of associated contaminants i.e. PCBs); however, the nearest gas feature is a distribution centre formerly located 196m south of site and identified from historical mapping dated circa.1989.

6.19 HISTORICAL GARAGE DATABASE

ID	Distance (m)	Direction	Use	Date
M	360	SW	Garage	1961
Q	434	SW	Garage	1969-1974
Q	434	SW	Garage	1961
Q	436	SW	Garage	1987
J	446	W	Garage	1961
T	448	SW	Garage	1961-1969

7.0 PRELIMINARY CONCEPTUAL SITE MODEL

The risk posed by any contaminants in soil or groundwater will depend on the nature of the hazard, the probability of exposure, the pathway by which exposure occurs, and the likely effects on the receptors. A contaminant is defined as a substance in, on or under land (or within groundwaters) that has the potential to cause harm, while a risk is considered to exist if such a substance is present in sufficient concentration to cause harm and a pathway exists for a receptor to be exposed to the substance. The following sections discuss all the identified potential on and off-site sources, pathways and receptors in the context of the proposed development and plausible pollutant linkages which may represent a risk to identified receptors from the data gained from the desk study. At this stage the assessment is qualitative and aimed to determine all pollutant linkages, irrespective of significance or allowing for uncertainty.

Source	A contaminant or pollutant that is in, on or under land that has the potential for cause harm or pollution to a receptor.
Pathway	The physical route by which a receptor is or could be affected by a contaminant or pollutant.
Receptor	Something or someone that could be adversely affected by a contaminant, i.e. people, controlled waters, ecological systems, buildings, crops, livestock.

By considering each of the three elements above, an assessment of actual and potential hazards to receptors can be carried out, taking into account the significance and degree of risk of each. The three elements above can exist separately; however, they only create a risk where they are linked together, thus creating a contaminant linkage. During the Preliminary Risk Assessment Stage, the linkages are referred to as ‘Potential Contaminant Linkages’, until they are confirmed via intrusive sampling, thus becoming ‘Relevant Contaminant Linkages’.

A tabled, diagrammatic or matrix of pollutant linkages is considered to be a Conceptual Site Model (CSM), the source-pathway-receptor linkages are reviewed and displayed, apportioning a risk-rating and mitigation suggestion after each summary.

Three impact potentials exist for any given site, these are:

- The site impacting upon itself;
- The site impacting on its surroundings; and
- The surroundings impacting on the site.

All three impacts need to be considered in a risk assessment.

7.1 SOURCES

The following potential sources of contamination have been identified:

7.1.1 ONSITE

- Initial arable agricultural usage of the site (at least circa.1884 to circa.1973/78 when the site was developed)
- Development of the present-day working men's club with garage unit (circa.1973/78 and remains present today, garage demolished by circa.2023)
- Debris and refuse in exterior areas (noted on site walkover)

Potential Sources and Associated Contaminants Identified	
Source	**Potential Contaminants of Concern**
Initial arable agricultural usage of the site (at least circa.1884 to circa.1973/78 when the site was developed)	Agrichemicals (SVOC); however, considered unlikely as prior site soils likely removed as part of site development & evidence noted via inspection pits showed no relict topsoils beneath site
Development of the present-day working men's club with garage unit (circa.1973/78 and remains present today, garage demolished by circa.2023)	Asbestos (within age of usage – peak between circa.1930-1970s), hydrocarbons (garage unit, however demolished circa.2023 – two years of former ground conditions being exposed)
Debris and refuse in exterior areas (noted on site walkover)	Heavy metals, metals, asbestos, PAHs

7.1.2 OFFSITE

No significant potential sources of offsite contamination have been identified that are considered capable of impacting the sites proposed development.

7.2 PATHWAYS

A pathway is defined as a mechanism or route by which a contaminant comes into contact with, or otherwise affects a receptor. Pathways by which the identified receptors may be impacted upon in the context of the proposed development are identified as follows:

- Ingestion (direct and indirect via crop uptake);
- Dermal contact;
- Inhalation;
- Plant uptake;
- Direct contact by buried structures (i.e. pipe degradation and leaching, pH & Sulphate attack on concrete); and
- Leaching of soluble contamination into groundwater.

7.3 RECEPTORS

Receptors are defined as people, living organisms, ecological systems, controlled waters, atmosphere, structures and utilities that could be adversely affected by contaminant(s).

- Human Health;
  - Current users of the site (none beyond trespassers);
  - Future users of the site (mixed residential and commercial usage);
  - Users of neighbouring sites;
  - Construction workers;
  - Services personnel working in trenches;
- Buried concrete, which may be affected by high concentrations of sulphate and/or low pH, in the soils and groundwater underlying the site;
- Construction Materials;
- Buried water pipes;
- Controlled Waters;
- Ecological Receptors; and
- Flora and fauna using the proposed development.

8.0 CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) is a hypothesis of the nature and sources of contamination, potential receptors that may be the recipient of contamination arising from those sources and any pathways that may exist. It creates a plausible source-pathway-receptor pollutant linkage (hazard), set within the context of the ground and proposed end use of the site.

8.1 PRELIMINARY CONCEPTUAL SITE MODEL

8.1.1 SOIL CONTAMINATION

The site is currently occupied by a dilapidated working men's club formerly named 'The Vixen' and a very limited extent of exterior space, presently occupied by heaped debris and refuse in exterior areas (i.e. plastics, timbers, plaster, paint cans, domestic wastes). Historically, the site remained unoccupied open field from at least circa.1884 through until circa.1973/78, when the present-day working men's club was erected on site, following which the site has remained in such usage until around circa.2023, when the site fell into disrepair and was partially demolished.

Whilst the former arable agricultural usage of the site is considered a potential source of contamination (agrichemicals), it is not considered likely that prior potentially impacted soils have remained on site, as they were likely removed as part of the site development (i.e. site partially terraced and therefore land formed) and additionally, visible ground conditions noted on the day of the site walkover evidenced no significant made ground deposits nor relict topsoil / ratable soils. The remaining contaminants of concern comprise the potential for asbestos within the structure itself (within the age of usage) and potential for impact from the heaped debris in exterior areas of site; however, these areas are to be cleared and covered in hardstanding, thus reducing the risk. No soft-landscaping is evident on the proposed plans, which further reduces the risk; however, should any soft-landscaping be formed, then it is likely that raised beds and/or imported clean soils will be required, as no present site soils are extant that would be suitable (site largely covered in hardstanding). As such, beyond site worker hazards, the risks from soil contamination are considered to be low.

8.1.2 GROUND GAS AND HAZARDOUS VAPOURS

No significant potential sources of hazardous ground gas generation have been identified with no significant infilled pits, ponds or landfill records identified within influencing distance to site. The general public house usage of the site is not considered a significant vapour hazard beyond the associated domestic garage; however, this was small-scale (i.e. unlikely to be occupied by heavy machinery, tanks or significant fuel storage) and was demolished by circa.2023 (thus leaving the ground conditions exposed for at least two years, thus allowing any limited hydrocarbon impact to have volatilized).

TABLE 1. SUMMARY OF SIGNIFICANT POLLUTION LINKAGES

Source	Pathway	Receptor	Probability of Pollutant Linkage	Conseq.	Risk	Possible Mitigation
Contaminated Soils *(no significant potential sources identified beyond potential for asbestos within building, exterior areas to be cleared and encapsulated)*	Direct Ingestion & Direct Contact	Site Workers *(during site works, excavations, eating and drinking)*	Lw	Md	M/L	Site workers to wear appropriate PPE for health and safety reasons, provision for an asbestos survey within the building, removal of heaps in exterior areas and the suitable usage of PPE and adherence to relevant HSE guidance during site works considered sufficient to mitigate inherent site worker hazards to low.
Contaminated Soils *(no significant potential sources identified beyond potential for asbestos within building, exterior areas to be cleared and encapsulated)*	Inhalation of Dust, Dry Arisings	Site Workers *(during site works, excavations, eating and drinking)*	Lw	Md	M/L	
Contaminated Soils *(no significant potential sources identified beyond potential for asbestos within building, exterior areas to be cleared and encapsulated)*	Crop Uptake & Direct Ingestion, Direct Contact	End Users *(site workers & service personnel, visitors, customers)* mixed usage *(residents / tenants, children, visitors, service personnel)*	Ul	Md	L	Whilst very limited potential sources of contamination have been identified, they have been discounted (when taking into account the site's historical legacy, usage and the site development proposals), see Section 8.1.1. As such, it is recommended that an asbestos survey is carried out on the existing structure and that all areas of exterior heaped debris are suitably and safely removed offsite, for site worker safety. With the provision of the above and a Watching Brief (inline with Appendix F and below), coupled with hardstanding of building footprint encapsulating the site (no soft-landscaping proposed, should any be proposed, raised beds or imported soils will be required as no existing soils are present on site), the overall risks on site are considered to be low. (i.e. no significant risk to aquifer, potable piping, end-users nor site-workers, following provision of the above).
Contaminated Soils *(no significant potential sources identified beyond potential for asbestos within building, exterior areas to be cleared and encapsulated)*	Inhalation of Dust, Dry Arisings	End Users *(site workers & service personnel, visitors, customers)* mixed usage *(residents / tenants, children, visitors, service personnel)*	Ul	Md	L	
Contaminated Soils *(no significant potential sources identified beyond potential for asbestos within building, exterior areas to be cleared and encapsulated)*	Crop Uptake & Direct Ingestion, Direct Contact	Flora and Fauna *(on and offsite)*	Ul	Md	L	
Contaminated Soils *(no significant potential sources identified beyond potential for asbestos within building, exterior areas to be cleared and encapsulated)*	Vertical and lateral migration *(superficial predominantly low in permeability, bedrock very high)*	Controlled Waters *(Secondary Undifferentiated & A Aquifers, Principal Bedrock Aquifer)*	Ul	Md	L	
Contaminated Soils *(no significant potential sources identified beyond potential for asbestos within building, exterior areas to be cleared and encapsulated)*	Direct contact *(pipe degradation and leaching)*	Services *(impacted new potable supply piping)*	Ul	Md	L	
Ground Gases (Methane and CO_2) *(no significant potential sources identified)*	Vertical and lateral migration *(superficial predominantly low in permeability, bedrock very high)*	Site Workers & Excavations, End Users & Building Envelope *(ingress and build-up)*	Ul	Md	L	No significant potential sources of hazardous ground gas generation identified, see Section 8.1.2.
Volatile and Semi-volatile Organic Compounds *(no significant potential sources identified – small-scale domestic garage discounted as significant hazard)*	Vertical and lateral migration *(superficial predominantly low in permeability, bedrock very high)*	Site Workers & Excavations, End Users & Building Envelope *(ingress and build-up)*	Ul	Md	L	No significant potential sources of hazardous vapours identified, see Section 8.1.2.
Radon	Vertical and lateral migration	End Users & Building Envelope	Ul	Md	L	Site is not located in a Radon Affected Area.

KEY: Probability of pollutant linkage Hi = Highly likely, Li = Likely, Lw = Low Likelihood, Ul = Unlikely
Consequence Sv = Severe, Md = Medium, Mi = Mild, Mr = Minor,
Overall Risk VH = Very High, H = High, M = Moderate, M/L = Moderate/Low, L = Low, VL = Very Low

Based on the preliminary CSM for the site, an environmental risk assessment has been undertaken. A simple matrix can provide a consistent basis for decision making. It should be used with caution, recognising the over-simplification that it will normally represent. The probability and consequences are defined according to parameters relevant to the situation; the boundaries of risk acceptability (and tolerability, where relevant) indicated on the matrix provided in Table 2, can be tailored to the factors influencing the significance of the risk. Individual situations are mapped onto the matrix to provide a ready and consistent indication of their acceptability or tolerability.

TABLE 2. RISK CLASSIFICATION MATRIX

		Consequence			
		Severe (Sv)	**Medium (Md)**	**Mild (Mi)**	**Minor (Mr)**
Probability	**High (Hi)**	Very high risk	High risk	Moderate Risk	Moderate/ Low Risk
	Likely (Li)	High risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low Likelihood (Lw)	Moderate Risk	Moderate/ Low Risk	Low Risk	Very Low Risk
	Unlikely (Ul)	Moderate/ Low Risk	Low Risk	Very Low Risk	Very Low Risk

Source: CIRIA Report C552, Contaminated Land Risk Assessment. A Guide to Good Practice, 2001

These attributes are evaluated qualitatively against individual hazard assessments to determine the likelihood of a given hazard occurring. The risk evaluations for each plausible pollutant linkage are given in the last three columns of Table 1.

TABLE 3. CLASSIFICATION OF RISK

Very high risk (Vh)	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High risk (Hi)	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short-term and are likely over the longer term.
Moderate risk (Md)	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term.
Low risk (Lw)	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk (Vl)	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Source: CIRIA Report C552, Contaminated Land Risk Assessment. A Guide to Good Practice, 2001

9.0 ENVIRONMENTAL RISK ASSESSMENT

Based on the information contained in this report, it is the opinion of Castledine Environmental that the site represents a **LOW** level of risk with respect to the proposed development.

It is not envisaged that any further works or investigation are required, beyond the provision for an asbestos survey (and subsequent professional removal, if required) on the existing structure and the removal of heaped wastes and debris in exterior areas on site for site worker safety.

This report should be submitted to your Local Planning Authority for agreement and to avoid abortive costs.

10.0 SUMMARY OF RISKS

11.0 HUMAN HEALTH

11.1.1 RESIDENTS / END-USERS

The risks to end-users of the site are considered to be low when assessed against the lack of development history or potentially contaminative usage history on and nearby to site and the site development proposals (mixed residential and commercial usage, no soft-landscaping with site almost entirely occupied by hardstanding and building footprint). Whilst the hazards from soil contamination to end-users in the main site area (i.e. beneath building footprint and hardstanding) are considered to be low, no existing soils nor suitable soils are present on site and as such, should the site development plans change and areas of soft-landscaping are proposed, these areas should be formed by raised beds or imported fresh soils.

11.1.2 SITE WORKERS

The risks to site workers during site works are considered to be low to moderate, due to the potential for asbestos within the structure and as such, provision should be made for an asbestos survey (and subsequent professional removal, if required) prior to any site works or redevelopment. Additionally, the heaped debris and refuse in exterior areas should also be cleared and removed from site by a professional contractor to a suitability accredited waste site. With the further provision for the considered usage of PPE and adherence to relevant HSE guidance during site works, the inherent site work risks to site workers are considered to be ameliorated to low.

12.0 CONTROLLED WATERS

No significant or significantly mobile contamination considered capable of impacting controlled waters is expected on site and superficial deposits on site (Lowestoft Formation) are known to be predominantly cohesive and low in permeability, thus acting to protect the underlying Principal Bedrock Aquifer and inherent Source Protection Zone (SPZ). Additionally, no active abstraction sites are recorded within 1000m of site, which further reduces the risk.

13.0 STRUCTURES

13.1.1 GROUND GASES & VAPOURS

No significant potential sources of hazardous ground gas generation have been identified with no significant infilled pits, ponds or landfill records identified within influencing distance to site. The general public house usage of the site is not considered a significant vapour hazard beyond the associated domestic garage; however, this was small-scale (i.e. unlikely to be occupied by heavy machinery, tanks or significant fuel storage) and was demolished by circa.2023 (thus leaving the ground conditions exposed for at least two years, allowing any limited hydrocarbon impact to have volatilized).

13.1.2 POTABLE WATER SUPPLY PIPING

The risks to potable piping on site are considered to be low, due to the lack of significant hydrocarbon contamination expected on site. The only area where this is a remote potential includes the northern extent of site, where a former small-scale domestic garage was sited; however, significant hydrocarbon impact from this feature is considered unlikely (demolished by circa.2023, thus leaving the ground conditions exposed for at least two years, allowing any limited hydrocarbon impact to have volatilized). As a matter of pragmatism, should any new potable piping be laid in this area (considered unlikely), it is considered prudent to lay the new potable piping in a clean, fresh excavation and being suspended in an inert pea-gravel matrix, to prevent contact with residual site soils.

14.0 RECOMMENDATIONS

Whilst very limited potential sources of contamination have been identified, they have been discounted (when taking into account the site's historical legacy, usage and the site development proposals), see Section 8.1.1. As such, it is recommended that an asbestos survey is carried out on the existing structure and that all areas of exterior heaped debris are suitably and safely removed offsite, for site worker safety. With the provision of the above and a Watching Brief (inline with Appendix F and below), coupled with hardstanding and building footprint encapsulating the site (no soft-

landscaping proposed) the overall risks on site are considered to be low. (i.e. no significant risk to aquifer, potable piping, end-users nor site-workers, following provision of the above).

Should any soft-landscaping be proposed in the future, then raised beds or imported soils will be required as no existing nor suitable soils are present on site (gravelled hardstanding).

A watching brief (as outlined in Appendix E) should be carried out by the site supervisor during the course of demolition, site clearance and construction works for any obvious contamination (e.g. oil spillage in ground, buried waste, possible asbestos containing material). Should previously unreported or undiscovered contamination be identified, then development should stop and Castledine Environmental should be contacted to determine if further assessment or changes to the remediation scheme are required.

15.0 REFERENCES

15.1 LEGISLATION AND REGULATIONS

15.1.1 ACTS

[1] Environmental Protection Act 1990, Part IIA: inserted by Environment Act 1995, Section 57. See Environment Act 1995 for text of Part IIA.

15.1.2 PLANNING REGULATIONS

[2] The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 SI1999/No.293

[3] The Town and Country Planning (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2000 SI2000/No.2867

[4] The Town and Country Planning (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2017 SI2017/No.571

15.1.3 CONTAMINATED LAND REGULATIONS

[5] The Contaminated Land (England) Regulations 2000. SI2000/No.227

[6] The Contaminated Land (England) (Amendment) Regulations 2001 SI2001/No.663

[7] The Contaminated Land (England) Regulations 2006 SI2006/No.1380

15.2 STATUTORY GUIDANCE

[8] Department of Environment, Food and Rural Affairs. 2012. *Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance.* Department of Environment, Food and Rural Affairs

[9] Communities and local Government, 2024: National Planning Policy Framework.

15.3 BRITISH STANDARDS

[10] BS 5930:2015+A1:2020 Code of practice for site investigations

[11] BS 10175:2011+A2:2017 Investigation of potentially contaminated sites - Code of practice

[12] BS 8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings

[13] BS 8576:2013 Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs)

[14] Bs 10176:2020 Taking Soil Sample for Determination of Volatile Organic Compounds (VOCs)

15.4 NON-STATUTORY TECHNICAL GUIDANCE

15.4.1 ENVIRONMENT AGENCY

[15] Land Contamination Risk Management (LCRM) 2020, updated 2023

15.4.2 CIRIA PUBLICATIONS

[16] Wilson, S., Oliver, S., Mallett, H., Hutchings, H., and Card, G.. 2007, *C 665 Assessing risks posed by hazardous ground gases to buildings* London: Construction Industry Research and Information Association

[17] Mallett, H., Cox, L., Wilson, S. and Corban, M... 2014, *C 735 Good practice on the testing and verification of protection systems for buildings against hazardous ground gases* London: Construction Industry Research and Information Association

15.4.3 CL:AIRE

[18] Card G, Wilson S, Mortimer S. 2012. *A Pragmatic Approach to Ground Gas Risk Assessment. CL:AIRE Research Bulletin RB17*. CL:AIRE, London, UK. ISSN 2047- 6450 (Online)

16.0 APPENDICES

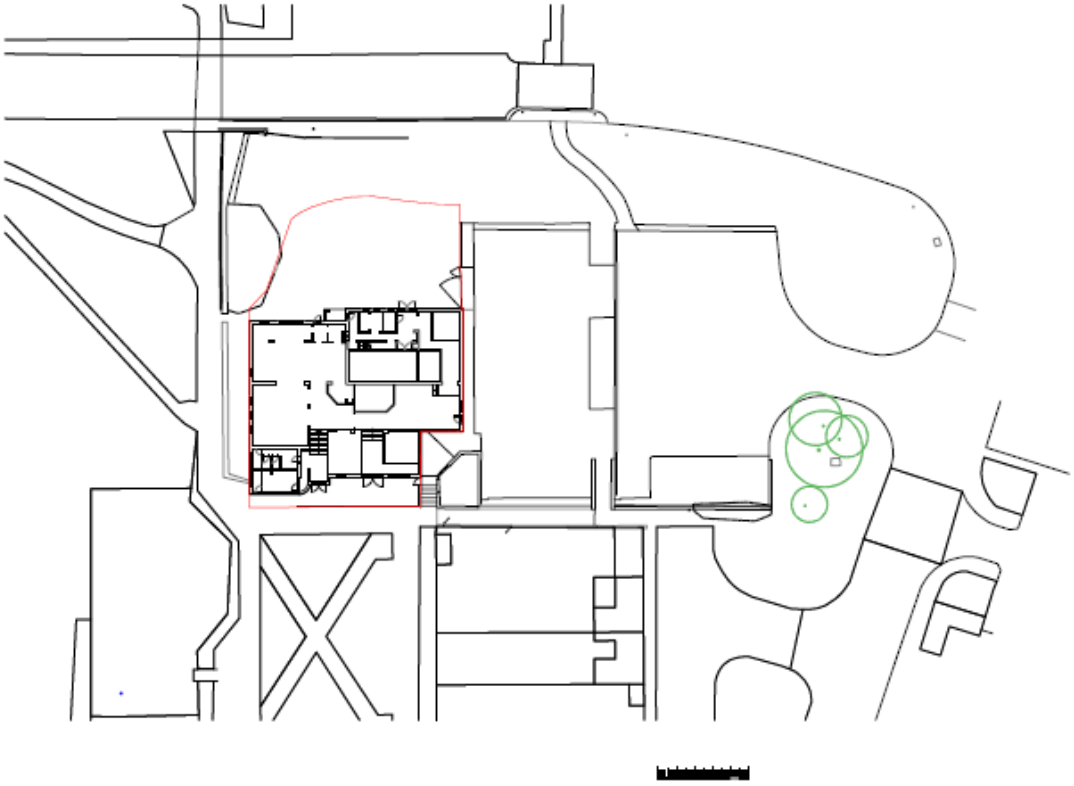
APPENDIX A **ENVIRONMENTAL SEARCH**

Separate Groundsure Report

APPENDIX B **HISTORICAL MAPPING**

Separate Map Packs (2 No. files)

APPENDIX C **EXISTING AND PROPOSED SITE PLANS**



LONDON
CONSULTANTS LTD

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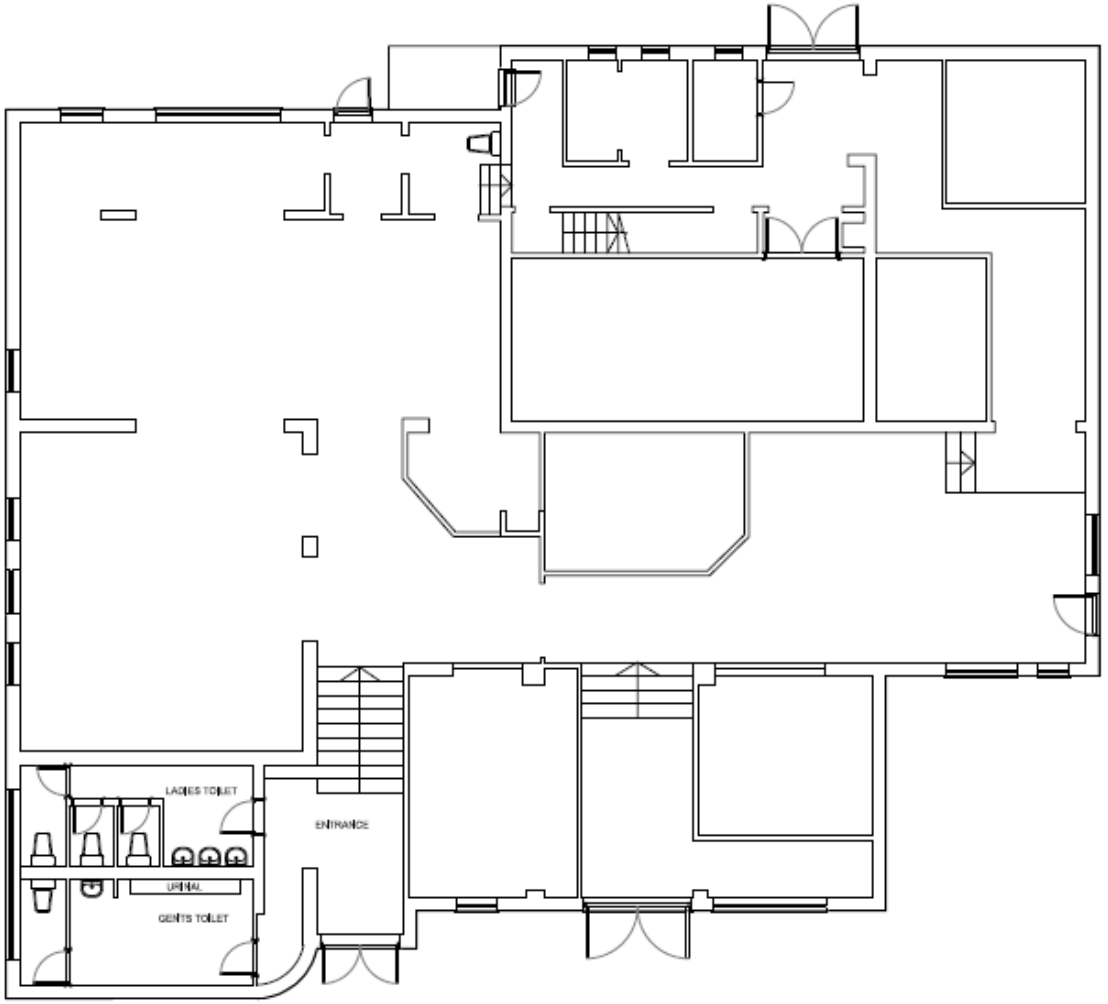

EXISTING GROUND FLOOR PLAN
SCALE 1:100

LONDON CONSULTANTS LTD

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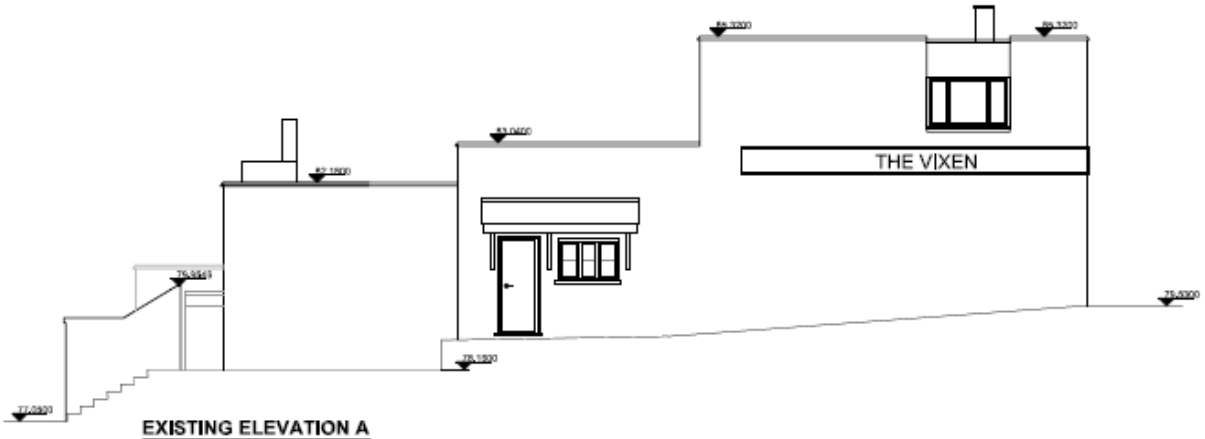

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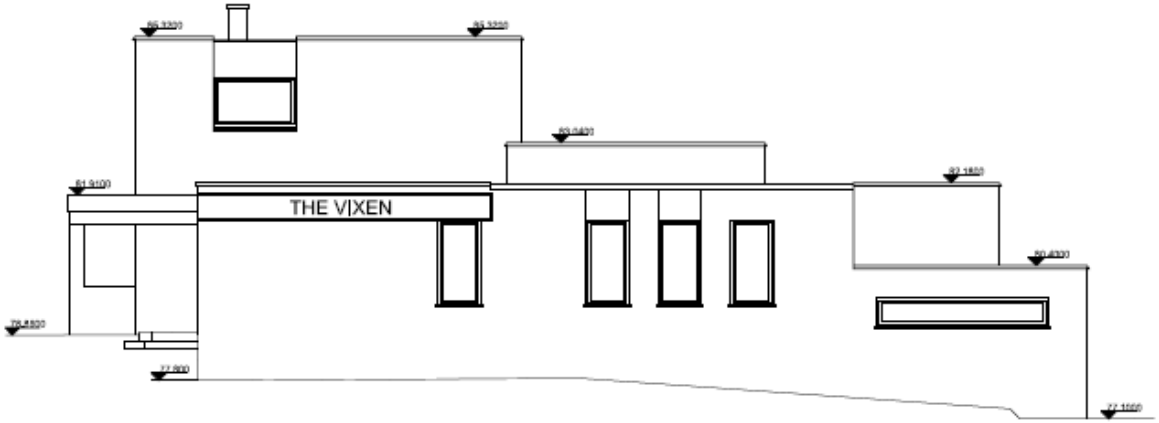

EXISTING ELEVATION C
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LONDON CONSULTANTS LTD

PROPOSAL:
EXTENSION AND CHANGE OF USE TO 9 FLATS AND 3 COMMERCIAL UNITS

SITE ADDRESS:
THE VIXENS, MILLFIELDS WAY, HAVERHILL, CB9 0JB

DATE: 04.12.2024
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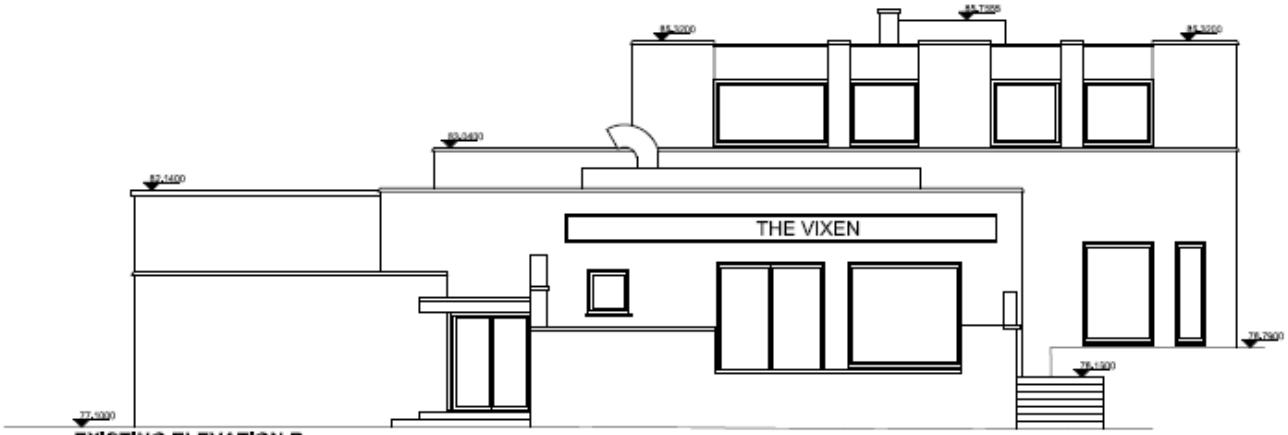

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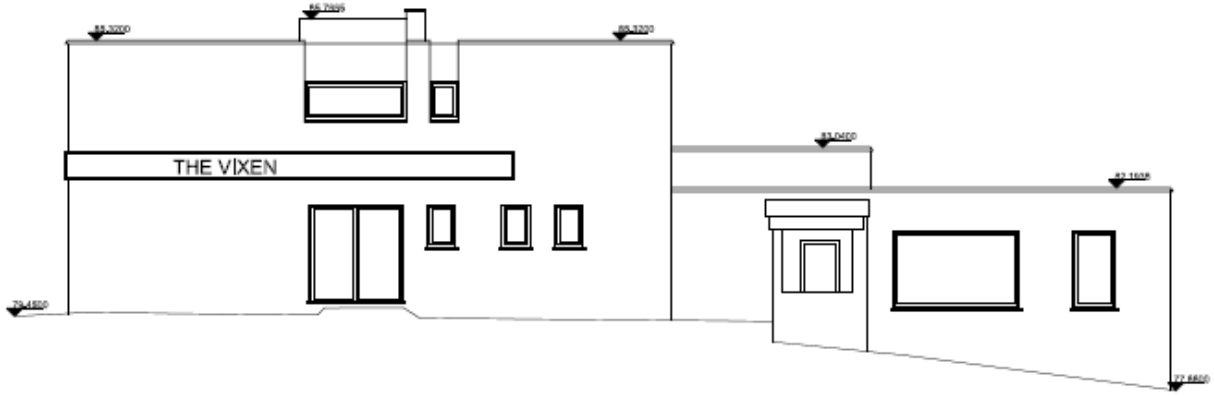

EXISTING ELEVATION D
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LONDON CONSULTANTS LTD

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EXTENSION AND CHANGE OF USE TO 9 FLATS AND 3 COMMERCIAL UNITS

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THE VIXENS, MILIFIELDS WAY, HAVERHILL, CB9 0JB

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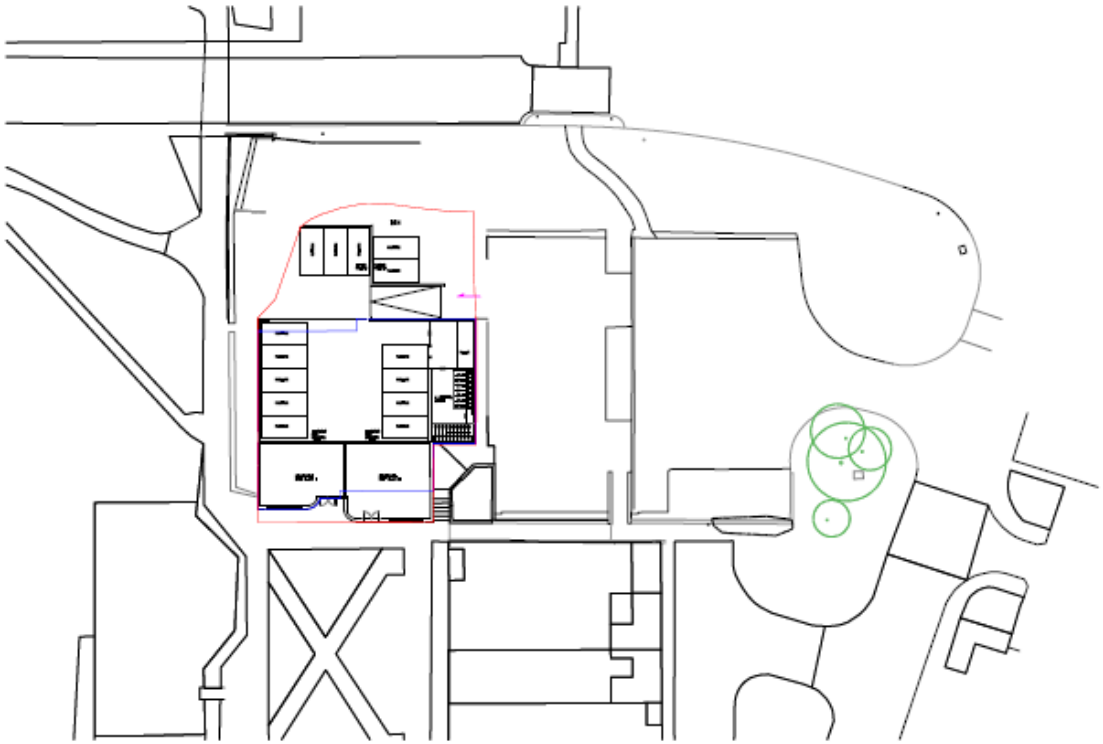

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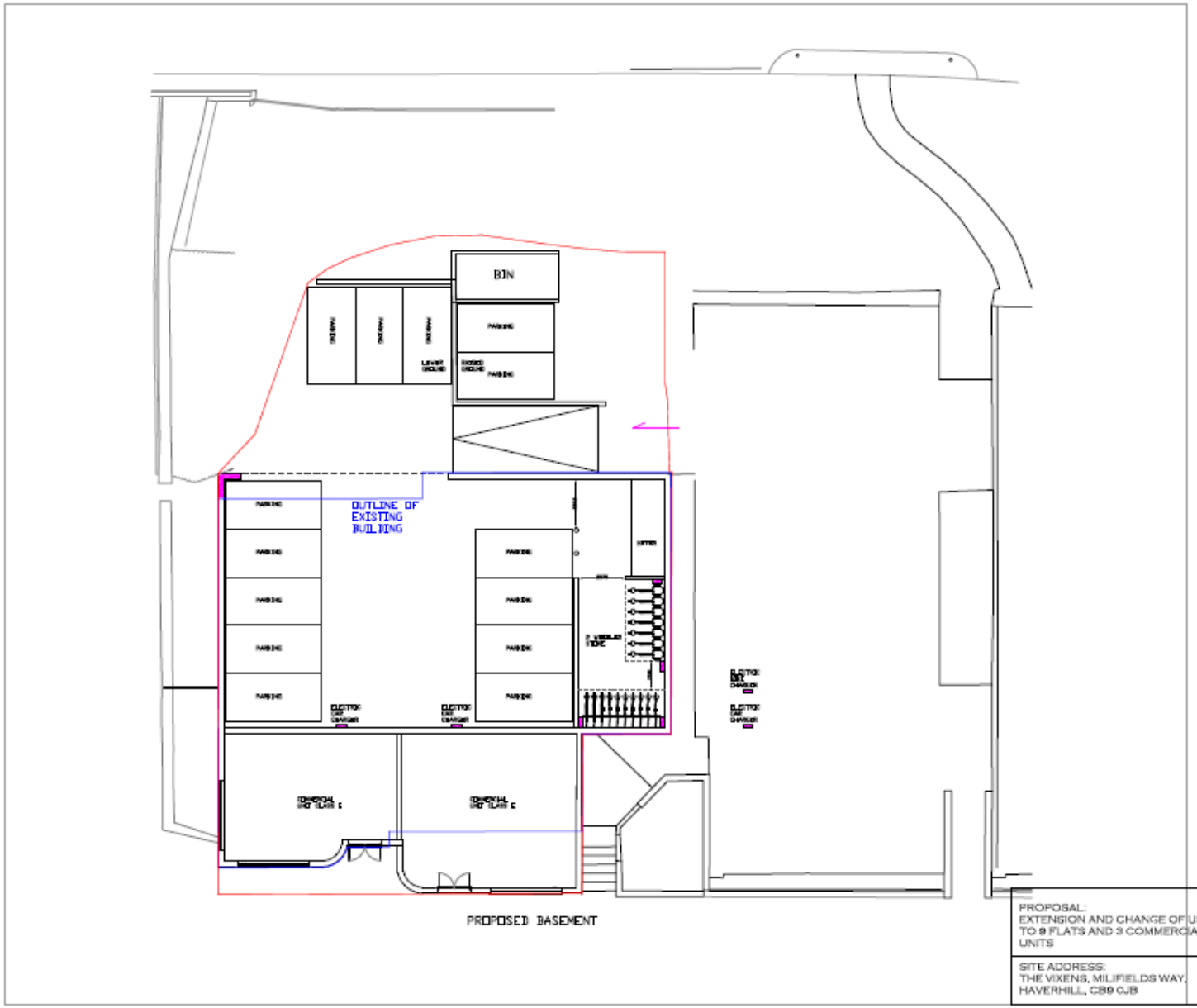

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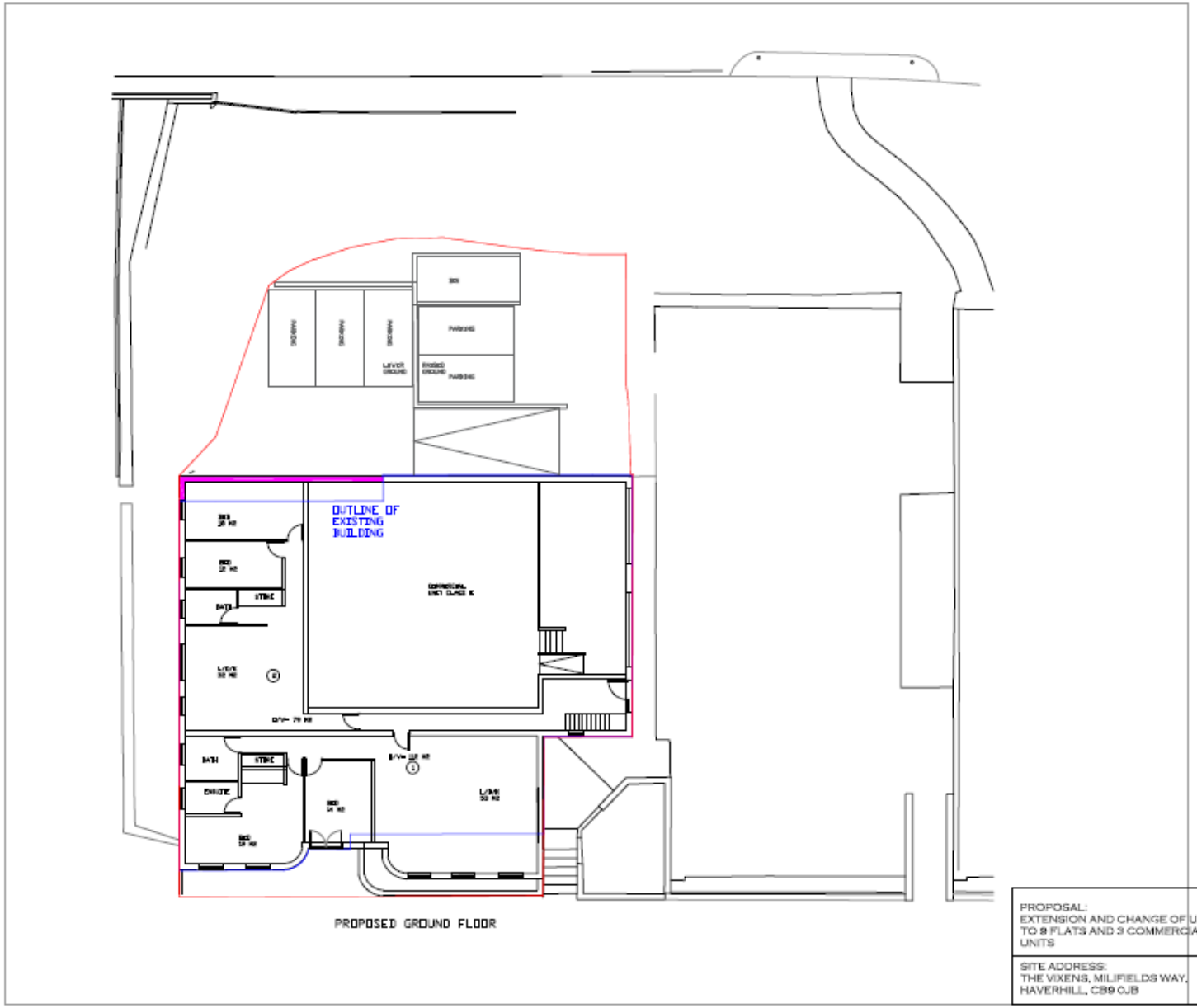

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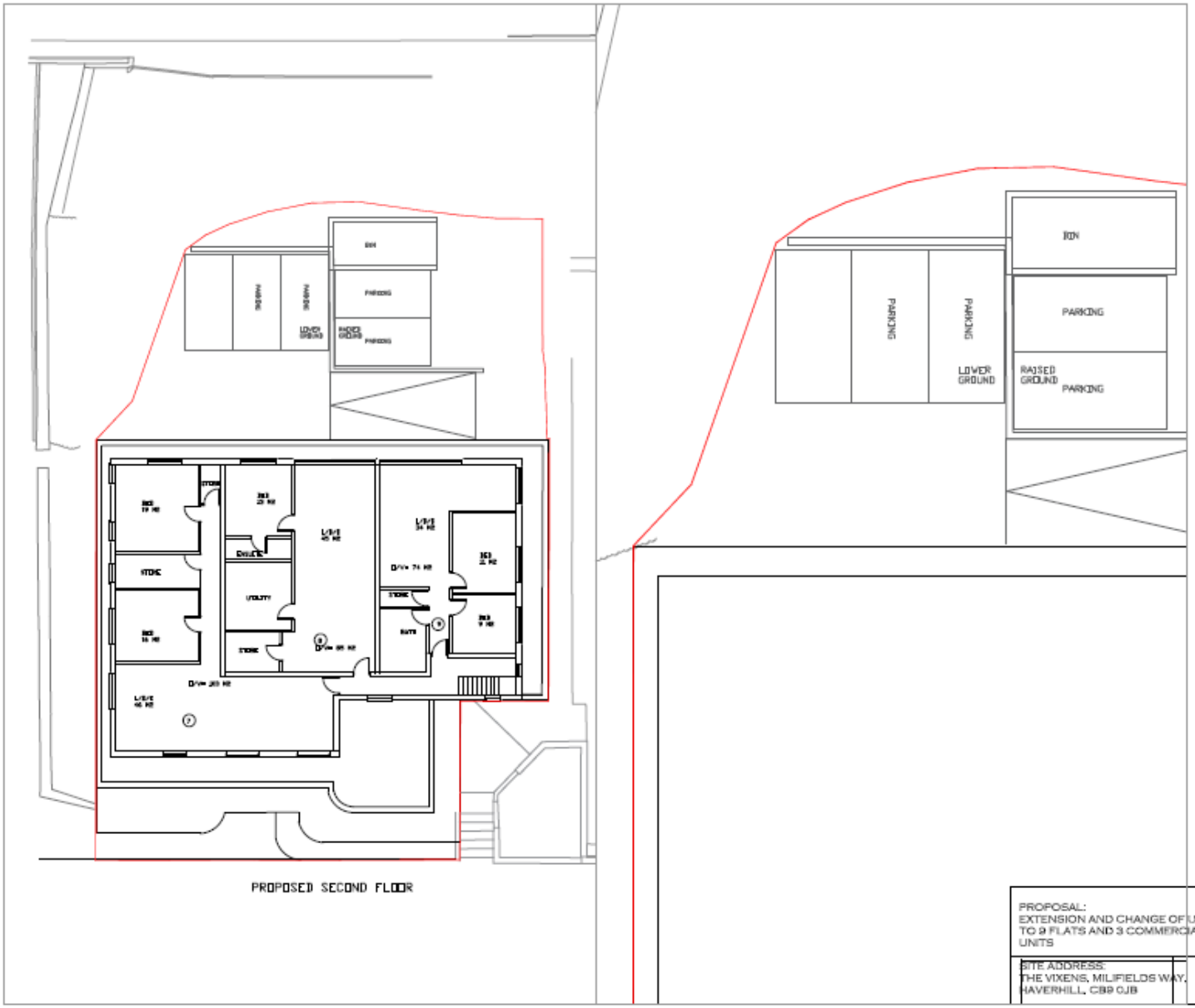

LONDON CONSULTANTS LTD

PROPOSAL:
EXTENSION AND CHANGE OF USE TO 9 FLATS AND 3 COMMERCIAL UNITS

SITE ADDRESS:
THE VIXENS, MILLFIELDS WAY, HAVERHILL, CB9 0JB

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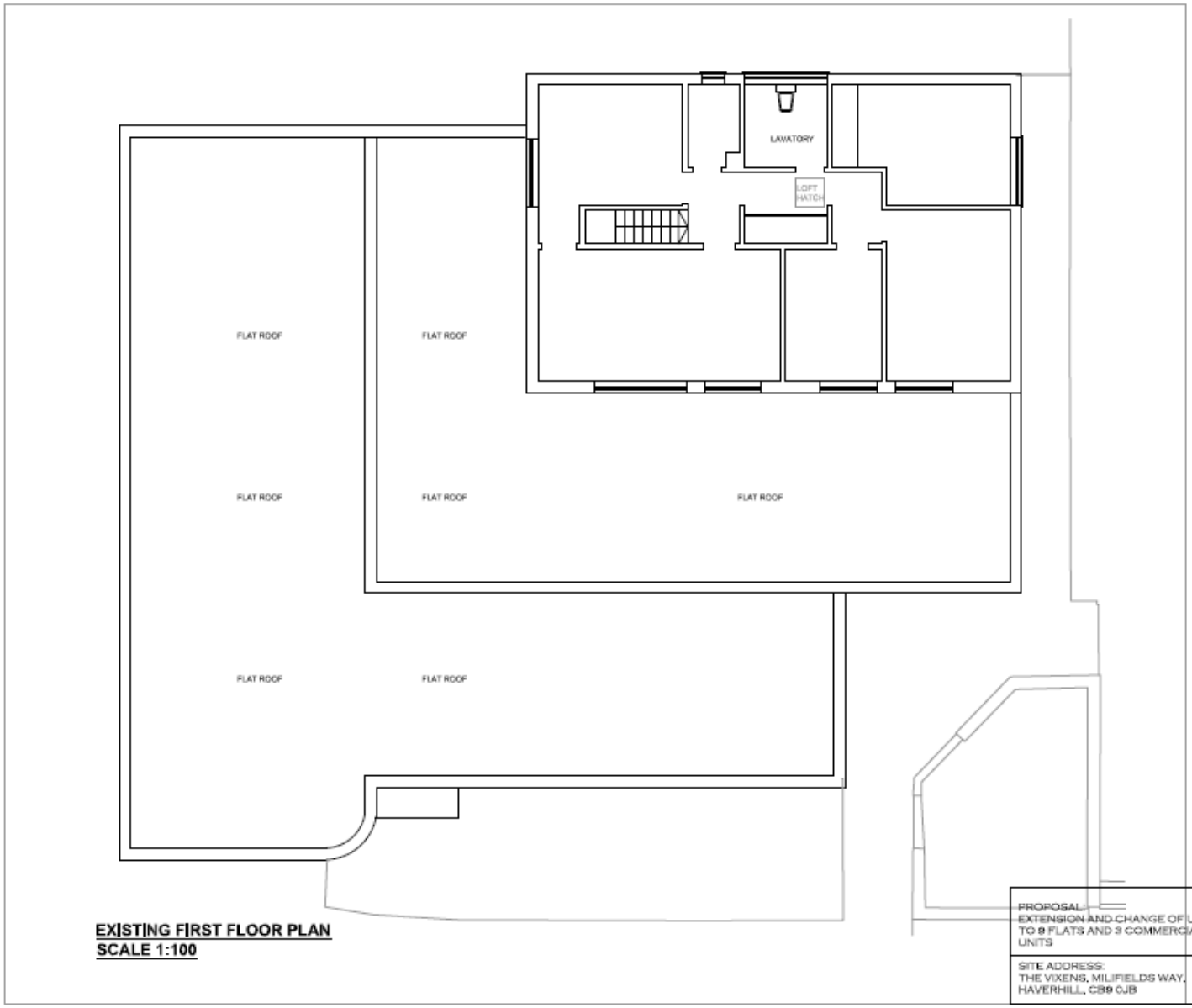

EXISTING FIRST FLOOR PLAN
SCALE 1:100

LONDON CONSULTANTS LTD

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PROPOSAL:
EXTENSION AND CHANGE OF USE TO 9 FLATS AND 3 COMMERCIAL UNITS
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THE VIXENS, MILIFIELDS WAY, HAVERHILL, CB9 0JB
DATE: 04.12.2024
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DRAWN: J.V
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LONDON CONSULTANTS LTD
OUTLINE OF EXISTING BUILDING
OUTLINE OF EXISTING BUILDING
OUTLINE OF EXISTING BUILDING
RAISED GROUND
LOWER GROUND
PROPOSED ELEVATION D
SCALE 1:100
OUTLINE OF EXISTING BUILDING
OUTLINE OF EXISTING BUILDING
PROPOSED ELEVATION B
SCALE 1:100

PROPOSAL: EXTENSION AND CHANGE OF USE TO 9 FLATS AND 3 COMMERCIAL UNITS	DATE: 04.12.2024
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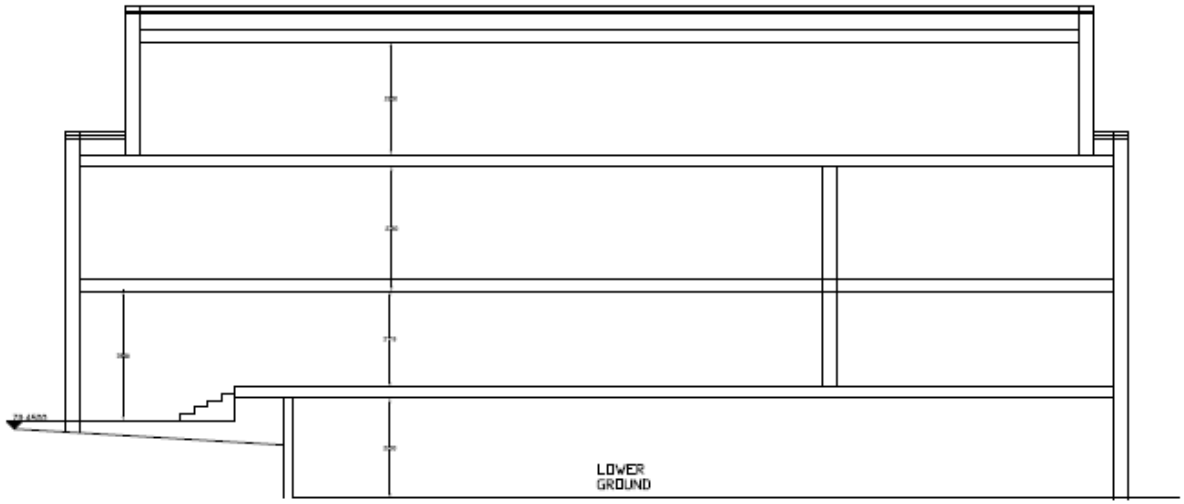

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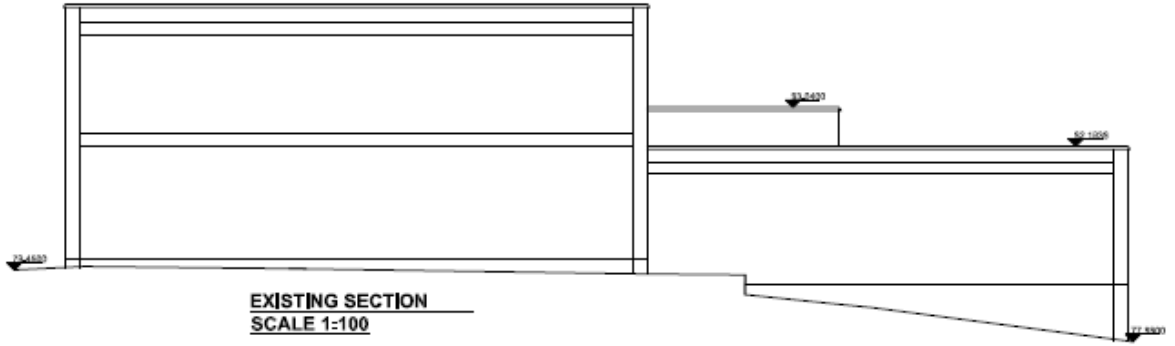

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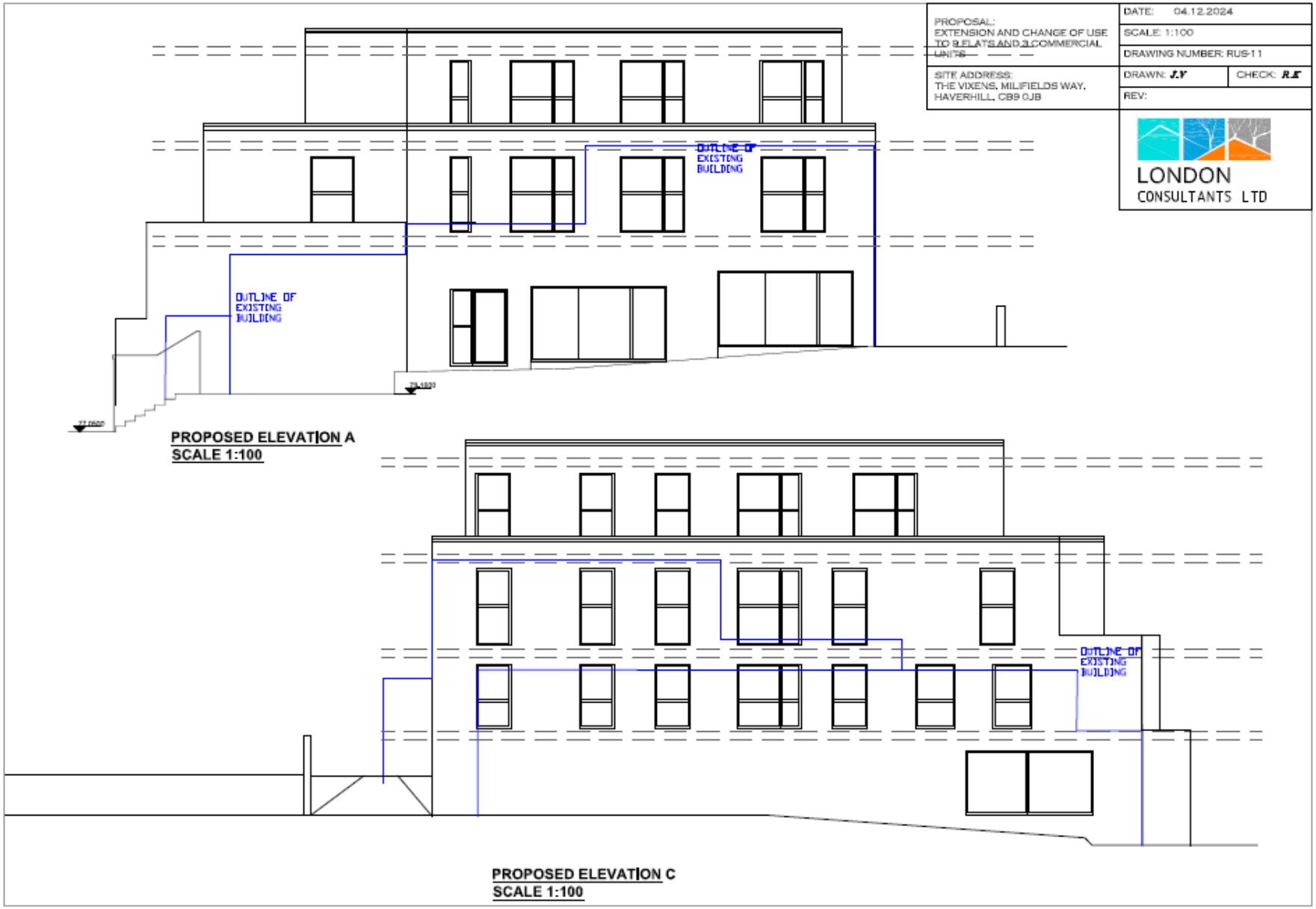
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LONDON CONSULTANTS LTD
OUTLINE OF EXISTING BUILDING
OUTLINE OF EXISTING BUILDING
PROPOSED ELEVATION A
SCALE 1:100
OUTLINE OF EXISTING BUILDING
PROPOSED ELEVATION C
SCALE 1:100

APPENDIX D SITE PHOTOS AND LOCATIONS

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.1: Facing NW from Ingham Road showing the site access to the car park, which forms the area SE of site

Photo No.2: Facing west from Millfields Way

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.3: Facing south from Millfields Way (NE of site)

Photo No.4: Facing SW from the same location showing the heavily overgrown NE extent of site, enclosed by hoarding

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.5: Facing SE outside the NW face of site showing topographical difference between site and pedestrian alleyway

Photo No.6: Facing east / SE outside the western corner of site (adj. to commercial shops and residential flats, SW / south of site)

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.7: Facing east / SE outside the southern corner of site (left of photo) showing stairway to car-parking area

Photo No.8: Facing NW outside the SE face of site and the car-parking area (access to site on right of photo)

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.9: Facing NW from car-parking area showing gated site access (via hoarding) to the site interior

Photo No.10: Facing NW inside the hoarding and within the site boundary showing debris occupying NE extent of site

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.11: Further photograph showing the heaped debris and refuse noted in the exterior, NE extent of site

Photo No.12: Facing NW showing the far northern corner of site and the heavily overgrown debris & refuse here

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.13: Further shot of the debris and refuse noted in the northern and NE exterior extents of site

Photo No.14: Facing SW outside the NE face of the building showing access to interior

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.15: General shot of the interior of the NE extent of the building showing fittings and furnishings removed

Photo No.16: Further shot of the interior showing the dilapidated, stripped nature of the interior of the onsite structure

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.17: Inspection pit noted within the structure (likely from structural survey) showing limited made ground deposits

Photo No.18: Second inspection pit noted within the structure showing limited made ground deposits atop gravelly sands

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.19: Further shot evidencing the state of the interior

Photo No.20: Third inspection pit noted within the structure showing limited made ground deposits atop gravelly sands

Castledine Environmental
LAND CONTAMINATION SURVEYS

Site Walkover Photos

Address: The Vixen, Millfields Way, Haverhill
Client: Mr. P. Vadsola

Photo No.21: Fourth inspection pit noted within the structure showing limited made ground deposits atop gravelly sands

Photo No.22: Further shot evidencing the state of the interior

APPENDIX E WATCHING BRIEF

It remains possible that previously unexpected soil conditions may be encountered during the construction process. Examples may include oily pockets within the soil, potential for asbestos containing materials, black ashy materials, soils exhibiting strong odours, brightly coloured materials, and former demolition materials.

Should previously undiscovered contamination be encountered during the demolition/construction of the new buildings the following course of action should be adhered to:

1. The ground workers should report any suspected contamination immediately to the Client's site supervisor. The supervisor should contact the Client or their appointed agent who will in turn contact Castledine Environmental to request an engineer to visit the site to assess the extent of the 'contamination'.
2. Castledine Environmental shall make records of their inspection, and pass details of these to the Local Authority.
3. Where the conditions revealed differ from those previously anticipated, the Castledine Environmental shall take samples as deemed appropriate to be dispatched for appropriate chemical testing.
4. Depending on the results of the testing either:
    a. no further work will be required;
    b. a further detailed risk assessment will be required; and/or
    c. Localised specific remedial measures will be necessary. Appraisal criteria will vary depending on the nature of the assessment.
5. The results of any such testing will be sent to the Local Authority Pollution Control Section, Local Authority development control section, and the appointed building inspector. If remediation is required, the LA/Building inspector will be informed of the date and time of the proposed works.

6. Remediation will be undertaken in accordance with a method statement submitted for approval. The works shall be supervised where necessary by Castledine Environmental who shall provide a Verification Report for the Local Authorities.
7. A copy of the discovery strategy should be lodged on site and provisions made to ensure that all workers are made aware of their responsibility to observe, report and act on any potentially suspicious or contaminated materials they may encounter.

APPENDIX F DISCOVERY STRATEGY