



**Castledine
Environmental**

LAND CONTAMINATION SURVEYS

Phase 1 Land Contamination Risk Assessment

for

Proposed Development of Industrial Units

on land at

**Chalcroft Nurseries,
Chalcroft Lane, Bersted,
West Sussex PO21 5TS**

Date: June 2025

Status:

Final Report

Reference:

3583D P1 Cullen – West Bersted

Date:

19/06/2025

EXECUTIVE SUMMARY

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

It is recommended that remediation in-line with section 14.0 is planned and carried out on site, following Local Authority agreement.

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.

CONTENTS

<u>1.0</u>	<u>QUALITY ASSURANCE</u>	<u>1</u>
<u>2.0</u>	<u>LIMITATIONS</u>	<u>1</u>
<u>3.0</u>	<u>INTRODUCTION AND SITE PROPOSALS</u>	<u>2</u>
<u>4.0</u>	<u>SCOPE</u>	<u>2</u>
<u>5.0</u>	<u>SITE DESCRIPTION</u>	<u>3</u>
<u>6.0</u>	<u>REGULATORY AUTHORITY AND OTHER ENVIRONMENTAL DATA</u>	<u>4</u>
6.1	HYDROLOGICAL	4
6.1.1	AQUIFER	4
6.1.2	ABSTRACTIONS AND PRIVATE WATER SUPPLIES	5
6.1.3	SOURCE PROTECTION ZONE	5
6.1.4	GROUNDWATER VULNERABILITY AND SOIL LEACHING POTENTIAL	5
6.1.5	GROUNDWATER VULNERABILITY – SOLUBLE ROCK RISK	6
6.1.6	POTENTIAL SURFACE WATER	6
6.1.7	DISCHARGE CONSENTS	6
6.2	PERMITTED PROCESSES	6
6.3	POLLUTION INCIDENTS	6
6.4	RADIOACTIVE SUBSTANCES REGISTRATIONS	6
6.5	WASTE	7
6.5.1	LICENSED WASTE MANAGEMENT FACILITIES (LOCATIONS)	7
6.5.2	LANDFILL SITES	7
6.6	HAZARDOUS SUBSTANCES	7
6.7	ECOLOGICAL RECEPTORS	7
6.8	SOILS AND GEOLOGY	7
6.8.1	SUPERFICIAL DEPOSITS	7
6.8.2	SUPERFICIAL DEPOSITS PERMEABILITY	7
6.8.3	BEDROCK DEPOSITS	8
6.8.4	BEDROCK PERMEABILITY	8
6.8.5	ARTIFICIAL GROUND	8
6.8.6	COAL MINING	8
6.8.7	NON-COAL MINING	8
6.8.8	SURFACE WORKINGS	8
6.8.9	RADON	9
6.9	AERIAL PHOTOGRAPHY	9
6.9.1	GOOGLE EARTH	9
6.10	GOOGLE STREET VIEW	10
6.11	HISTORIC MAPPING	11
6.12	CURRENT LAND USE DATA	13

6.13	PETROL AND FUEL SITES	14
6.14	HISTORICAL PETROL AND FUEL SITE DATABASE	14
6.15	POTENTIAL CONTAMINATIVE LAND USES IDENTIFIED ON MAPPING	14
6.16	HISTORICAL TANK DATABASE	14
6.17	HISTORICAL ENERGY FACILITIES (<250M)	14
6.18	HISTORICAL GARAGE DATABASE	14
<u>7.0</u>	<u>PRELIMINARY CONCEPTUAL SITE MODEL</u>	<u>15</u>
7.1	SOURCES	16
	7.1.1 ONSITE	16
	7.1.2 OFFSITE	17
7.2	PATHWAYS	17
7.3	RECEPTORS	18
<u>8.0</u>	<u>CONCEPTUAL SITE MODEL</u>	<u>18</u>
8.1	PRELIMINARY CONCEPTUAL SITE MODEL	18
	8.1.1 SOIL CONTAMINATION	18
	8.1.2 HAZARDOUS GROUND GAS AND VAPOURS	19
<u>9.0</u>	<u>ENVIRONMENTAL RISK ASSESSMENT</u>	<u>22</u>
<u>10.0</u>	<u>SUMMARY OF RISKS</u>	<u>23</u>
<u>11.0</u>	<u>HUMAN HEALTH</u>	<u>23</u>
	11.1.1 END-USERS	23
	11.1.2 SITE WORKERS	23
<u>12.0</u>	<u>CONTROLLED WATERS</u>	<u>23</u>
<u>13.0</u>	<u>STRUCTURES</u>	<u>23</u>
	13.1.1 GROUND GASES & VAPOURS	23
<u>14.0</u>	<u>RECOMMENDATIONS</u>	<u>24</u>
<u>15.0</u>	<u>REFERENCES</u>	<u>25</u>
15.1	LEGISLATION AND REGULATIONS	25
	15.1.1 ACTS	25
	15.1.2 PLANNING REGULATIONS	25
	15.1.3 CONTAMINATED LAND REGULATIONS	25
15.2	STATUTORY GUIDANCE	25
15.3	BRITISH STANDARDS	26
15.4	NON STATUTORY TECHNICAL GUIDANCE	26
	15.4.1 ENVIRONMENT AGENCY	26
	15.4.2 CIRIA PUBLICATIONS	26
	15.4.3 CL:AIRE	26
<u>16.0</u>	<u>APPENDICES</u>	<u>27</u>

LIST OF APPENDICES

APPENDIX A	ENVIRONMENTAL SEARCH	27
APPENDIX B	HISTORICAL MAPPING	27
APPENDIX C	PROPOSED AND CURRENT SITE PLANS	28
APPENDIX D	SITE PHOTOS AND LOCATIONS	30
APPENDIX E	WATCHING BRIEF	42
APPENDIX F	DISCOVERY STRATEGY	44

LIST OF TABLES

TABLE 1.	SUMMARY OF SIGNIFICANT POLLUTION LINKAGES	20
TABLE 2.	RISK CLASSIFICATION MATRIX	21
TABLE 3.	CLASSIFICATION OF RISK	22

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.

For and on behalf of Castledine Environmental

Kevin Castledine

(Director)

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. Cullen of Chalcroft Associates LLP to undertake a Phase 1 Desk study on land at Chalcroft Nurseries, Chalcroft Lane, Bersted, West Sussex PO21 5TS.

4.0 SCOPE

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

- Paragraph(s) 174, 179, 183 & 184 of the National Planning Policy Framework 2021
- Part C1 of the building regulations
- Condition No.9 of the Arun District Council planning approval reference BE/13/24/S73

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, hydrological 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;
- To develop a preliminary conceptual site model (CSM).

5.0 SITE DESCRIPTION

The site is located in Bersted, West Sussex at National Grid Reference: 497180,100524 and is approximately 0.8ha in area.

The site is located in an area which is predominantly residential to the east and south east and rural in the remaining directions, with the site itself being bounded by a watercourse with field beyond to the north, residential dwellings and their garden areas east and south east of site, Daffodil Avenue with a church and cemetery to the south and a newly erected residential area west of site, with open field beyond this.

The site interior comprises the grounds, structures, parking and storage areas of Chalcroft Nurseries. Access to site was provided via Ffairfach Close which leads west off Chalcroft Lane before terminating at site. The central area of site then comprises a series of warehouse structures and stock-displays (i.e. potted plants and garden furniture) arrayed to the east of said warehousing and poly-tunnels. Such features extend to the southern extent of site from this central area and to the west of site. This western area comprises a storage area for a number of sheds, a large water tank, palletised stock, containers and items and staff parking areas. Also noted in the central area of site was a small workshop for the repair and replacement of vehicle glass (i.e. windscreens) – no true mechanical repair of the vehicles takes place on site. The remaining areas on site then comprised unoccupied grassed areas forming the north western and south western extents of site.

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 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	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
2	136	N	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 an active groundwater abstraction site located 704m north west of site and relating to general usages sourced via southern region groundwaters (in effect circa.2008 onwards).

No further active abstraction sites are located within 1000m of site.

6.1.3 SOURCE PROTECTION ZONE

Site is not in a source protection zone.

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 - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: High	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures

6.1.5 GROUNDWATER VULNERABILITY – SOLUBLE ROCK RISK

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

“Significant soluble rocks are likely to be present. Problems are unlikely except with considerable surface or subsurface water flow.”

6.1.6 POTENTIAL SURFACE WATER

The Groundsure report records an unnamed, surface level watercourse located 1m north of site and parallel with the northern site boundary and extending out to beyond 250m north west of site, with further records of unnamed, surface level watercourses located 12m south, 13m south west (culverted), 62m west and 120m east at their most proximate point to site.

6.1.7 DISCHARGE CONSENTS

The Groundsure report records an active licenced discharge consent held 212m west of site and relating to unspecified trade discharges direct into a tributary to Aldingbourne Rife (effect circa.2007 onwards).

No further active licenced discharge consents are located within 500m of site.

6.2 PERMITTED PROCESSES

None recorded within 500m of site.

6.3 POLLUTION INCIDENTS

The Groundsure report records an incident located 38m south east of site and dated circa.2002 and relating to atmospheric pollutants or effects (unspecified) with a minor impact to air quality and no impact to land or water qualities.

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

6.4 RADIOACTIVE SUBSTANCES REGISTRATIONS

None recorded within 500m of site.

6.5 WASTE**6.5.1 LICENSED WASTE MANAGEMENT FACILITIES (LOCATIONS)**

None recorded within 500m of site.

6.5.2 LANDFILL SITES

None recorded within 500m of site.

6.6 HAZARDOUS SUBSTANCES

None recorded within 500m of site.

6.7 ECOLOGICAL RECEPTORS

The Groundsure report records the site as being located within the Aldingbourne surface waters Nitrate Vulnerable Zone (NVZ).

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

6.8 SOILS AND GEOLOGY

"Contains British Geological Survey materials © NERC 2025" obtained from <http://www.bgs.ac.uk/data/mapViewers/home.html> under the [Open Government Licence](#)

6.8.1 SUPERFICIAL DEPOSITS

Both BGS geological mapping and the Groundsure report record superficial geological deposits of River Terrace Deposits located on site, comprising sands and gravels with lenses of silt, clay or peat.

6.8.2 SUPERFICIAL DEPOSITS PERMEABILITY

The Groundsure report records the site as being within an area where the maximum permeability of superficial deposits is recorded as 'high' and the minimum permeability as 'low' and facilitated by intragranular 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).

6.8.3 BEDROCK DEPOSITS

Both BGS geological mapping Groundsure report record bedrock geology of the Lambeth Group underlying site, comprising vertically and laterally variable sequences of clay, some being silty or sandy with some sands, gravels and minor limestones, occasional sandstones and conglomerates. Records of the Lewes Nodular Chalk, comprising chalk with flints, are then recorded 128m north of site.

6.8.4 BEDROCK PERMEABILITY

The Groundsure report records the site as being within an area where the maximum permeability of bedrock geology is recorded as 'moderate' and the minimum permeability as 'very low' and facilitated by mixed flow mechanisms.

6.8.5 ARTIFICIAL GROUND

BGS geological mapping records an area of worked ground described as a void located 51m north east of site.

6.8.6 COAL MINING

The site is not located in a coal mining reporting area.

6.8.7 NON-COAL MINING

The Groundsure report records ceased operations clay and shale pits formerly located 185m, 333m and 423m north east of site and 494m south west of site.

6.8.8 SURFACE WORKINGS

ID	Distance [m]	Direction	Land Usage	Year of Mapping
1	0	On site	Pond	1876
2	0	On site	Brick field	1940
3	24	SW	Cemetery	1993
4	42	NE	Ponds	1876
5	54	NE	Unspecified pit	1940
6	170	SE	Pond	1876

6.8.9 RADON

The site is located in a Radon Affected Area where between 3% and 5% of properties are estimated to be affected. Basic Radon Protective Measures are considered necessary, as described in publication BR211:2015 by the Building Research Establishment.

6.9 AERIAL PHOTOGRAPHY

Aerial photography shows the following:

6.9.1 GOOGLE EARTH

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

Date	Description
December 2001	The site is show as remaining occupied by the wider grounds of Chalcroft Nursery, comprising the central poly-tunnels, stock-displays and structures with parking arrayed to the north, NE and east of this. Areas in the south of site show various beds of plants and stock whilst the south west, west and north west of site are occupied by poly-tunnels, further planting beds and a large-scale glasshouse, respectively.
August 2002	No discernible change on site nor site relevant change to the surrounding areas.
December 2005	No discernible change on site. Areas west of site are shown as rough and occupied by numerous indiscernible heaps (possible soils and vegetation cuttings with a single rubble heap).
April 2007	No discernible change on site nor site relevant change to the surrounding areas.
January 2012	The former planting beds and poly-tunnels in the south and SW of site (now wooded) are now shown as largely removed or disused. The large-scale glasshouse / nursery structure in the NW of site is now shown as dilapidated and potentially under demolition. Areas west of site now heavily overgrown.
September 2012	No discernible change on site nor site relevant change to the surrounding areas.
June 2013	No discernible change on site nor site relevant change to the surrounding areas.

Date	Description
April 2015	The south east extent of site is now occupied by a number of caravans. The central and southern extent of site now resembles that seen in the present-day with changes to structure layout and stock-displays.
September 2019	The SW of site (formerly planting beds followed by an overgrown wooded area) has now been returned to field / mowed grass. Structure of the former glasshouse or large poly-tunnel in the north of site remains, however the area appears maintained at this time. The offsite warehousing structures north of site are now present.
June 2020	Site overall now appears more maintained and has been cleared of exterior areas of debris or storage. The areas west of site (formerly occupied by heaps and overgrown areas) are now returned to mowed / maintained field.
August 2021	Site now largely as seen in the present-day on the site walkover following placement of new access route / resurfacing and formation of storage areas west of central area of site.
April 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.
April 2023	No discernible change on site nor site relevant change to the surrounding areas.
March 2024	Structural remnants of the large poly-tunnel / glasshouse in the NW of site now removed, area left to remain as grass.
September 2024	No discernible change on site. Areas south of site now occupied by an access track providing access to a new housing development west of site (beyond the fielded areas).

6.10 GOOGLE STREET VIEW

Google Street View imagery is unavailable for the site due to the site's location in a private compound, with the only imagery available being located outside of site boundaries and circa.2009 (i.e. before the present-day site conditions). From what can be seen from imagery of this date, the site remains occupied by a garden centre.

6.11 HISTORIC MAPPING

The following historic maps have been reviewed as part of this assessment, found in the appendices.

Map	Onsite	Offsite
OS County Series: 1875, 1:2,500	The site is shown as unoccupied field (part of Chalcroft Barn / Farm).	Surrounding areas comprise open field with Chalcroft Barn located directly SE of site (present-day location of associated, large dwelling). A pond may occupy the far eastern extent of site and the access track spur, with a second located approx.55m east and a third approx.90m west of site.
OS County Series: 1875-1876, 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: 1898, 1:2,500	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1909-1910, 1:10,560	No discernible change on site.	A brick field and pit is now marked approx.500m NE of site.
OS County Series: 1912, 1:2,500	No discernible change on site.	Surrounding areas see little site relevant change.
OS County Series: 1932, 1:2,500	The southern half of site is now marked as occupied by an orchard.	Orchard on site extend southwards and westwards from site. New dwellings now located approx.90-200m NE of site.
OS County Series: 1933-1938, 1:10,560	No discernible change on site.	A new brick field is now located approx.227m NE of site. The brick field approx.500m NE of site has been replaced with housing.
OS County Series: 1939, 1:2,500	Large glasshouse now extends partially into the NE extent of site from offsite. Two small outbuildings now located in the east of site.	Unspecified pit now located approx.54m NE of site, to rear of dwellings. A brick field approx.200m NE of site appears reduced in size with the pit possibly infilled. Areas approx.100m east of site now occupied by extensive residential area.

Map	Onsite	Offsite
OS County Series: 1938-1940, 1:10,560	Site is now marked as a nursery.	Brick field formerly located approx.277m NE of site now replaced with housing and gardens.
Provisional: 1957-1961, 1:10,560	No discernible change on site.	Unspecified pit approx.54m NE of site now no longer shown on mapping.
National Grid: 1962-1964, 1:1,250	Additional outbuildings erected in the east of site.	Former pond located west of site now part of a drainage ditch encompassing the orchard. Former brick field approx.200m NE of site now a coal yard.
National Grid: 1967-1970, 1:1,250	Second large glasshouse now partially transgressed onto the NW extent of site.	Surrounding areas see little site relevant change.
National Grid: 1973, 1:2,500	Mapping on site is truncated and missing.	Areas SE of site now show the present-day residential estate. A series of lock-up garages appear to be located approx.65m SE of site.
National Grid: 1975-1979, 1:10,000	No discernible change on site.	Surrounding areas see further residential development to the north and NE of site.
National Grid: 1976, 1:2,500	No discernible change on site.	Surrounding areas see little site relevant change.
National Grid: 1974-1979, 1:1,250	New unit located centrally on site (linear, orientated east to west).	Pond formerly located approx.55m east of site now redeveloped into housing.
National Grid: 1989-1993, 1:10,000	Large-scale glasshouse now marked almost wholly on site in the NW extent of site (seen as remaining with structuring in the area until circa.2023).	Two glasshouses formerly located adjacent to site (and partially on) have now been demolished. Present-day cemetery now located approx.24m south of site, as in the present-day.
National Grid: 1989-1994, 1:1,250	Structure in the NW of site no longer marked as a glasshouse and now simply as a structure – indicating poly-tunnel type structure (evident from satellite imagery). Orchard markings in the south of site are partially no longer shown.	Further housing developed to the east and SE of site (that to the SE of site replacing the former barn / dwelling here).

Map	Onsite	Offsite
National Grid: 2001, 1:10,000	No discernible change on site.	Surrounding areas see little site relevant change.
Landline: 2003, 1:1,250	Orchard marking in the south of site no longer marked.	Surrounding areas see little site relevant change.
National Grid: 2010, 1:10,000	No discernible change on site.	Surrounding areas see little site relevant change.
National Grid: 2025, 1:10,000	Site no longer marked as a nursery. On site structure in the NW of site removed.	Present-day warehousing seen north of site within the grounds of the nursery now present, bringing surrounding areas inline with the present-day.

6.12 CURRENT LAND USE DATA

ID	Distance [m]	Direction	Company	Activity	Category
2	54	SE	Gas governor station	Gas features	Infrastructure and facilities
3	102	NE	DT Autos	Vehicle repair, testing and servicing	Repair and servicing
4	113	S	Grant Transport & Logistics	Distribution and haulage	Transport, storage and delivery
A	149	SE	Electricity substation	Electrical features	Infrastructure and facilities
A	158	SE	Pump House	Water pumping station	Industrial features
6	173	E	Aitken Flooring Specialists	Construction completion services	Construction services
7	224	E	AJM Contractors	Building and component suppliers	Construction services
8	226	N	Mast (telecoms)	Telecoms features	Construction services
9	231	S	Electricity substation	Electrical features	Infrastructure and facilities
10	241	E	Electricity substation	Electrical features	Infrastructure and facilities

6.13 PETROL AND FUEL SITES

None recorded within 500m of site.

6.14 HISTORICAL PETROL AND FUEL SITE DATABASE

None recorded within 500m of site.

6.15 POTENTIAL CONTAMINATIVE LAND USES IDENTIFIED ON MAPPING

ID	Distance [m]	Direction	Use	Date
1	0	On site	Brick field	1940
A	0	On site	Nursery	1993
A	0	On site	Nursery	1961
A	0	On site	Nursery	1940
A	0	On site	Nursery	1979
2	24	SW	Cemetery	1993
3	54	NE	Unspecified pit	1940
C	277	NE	Unspecified pit	1934
C	277	NE	Brick field	1934
D	300	S	Fire station	1979
D	300	S	Fire station	1993
6	363	NE	Brick field	1934
9	464	NE	Smithy	1896
11	490	NE	Brick field	1910

6.16 HISTORICAL TANK DATABASE

None recorded within 500m of site.

6.17 HISTORICAL ENERGY FACILITIES (<250M)

ID	Distance(m)	Direction	Use	Date
4	142	SE	Electricity substation	1970-1990
B	226	S	Electricity substation	1970-1974
B	228	S	Electricity substation	1976-1990
5	237	E	Electricity substation	1970-1991

6.18 HISTORICAL GARAGE DATABASE

None recorded within 500m of site.

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

- Potential for deleterious materials within superficial deposits (i.e. peat – BGS data);
- Initial arable agricultural usage of the site (at least circa.1875 to 1932);
- Orchard usage of the southern extent of site (circa.1932-1989-1994);
- Large glasshouse transgressing onto the NE extent of site (circa.1939 and demolished by circa.1989/93);
- Second large glasshouse transgressing onto the NW extent of site (circa.1967/70 and demolished by circa.1989/93);
- Large-scale glasshouse / subsequent poly-tunnel structure (NW extent of site, almost wholly on site – circa.1989/93 and fully removed by circa.2003);

Potential Sources and Associated Contaminants Identified	
Source	Potential Contaminants
Potential for deleterious materials within superficial deposits (i.e. peat – BGS data);	Hazardous ground gases
Initial arable agricultural usage of the site (at least circa.1875 to 1932);	SVOC (i.e. agrichemicals)
Orchard usage of the southern extent of site (circa.1932-1989-1994);	SVOC (i.e. agrichemicals), heavy metals, PAHs
Large glasshouse transgressing onto the NE extent of site (circa.1939 and demolished by circa.1989/93);	SVOC (i.e. agrichemicals), heavy metals, PAHs, made ground
Second large glasshouse transgressing onto the NW extent of site (circa.1967/70 and demolished by circa.1989/93);	SVOC (i.e. agrichemicals), heavy metals, PAHs, made ground
Large-scale glasshouse / subsequent poly-tunnel structure (NW extent of site, almost wholly on site – circa.1989/93 and fully removed by circa.2003);	SVOC (i.e. agrichemicals), heavy metals, PAHs, made ground

7.1.2 OFFSITE

- Potential for peat deposits associated with nearby watercourse (BGS data);
- Infilled pond (approx.55m east, removed circa.1974/79);
- Infilled unspecified pit (approx.54m NE, removed circa.1957/61);
- Infilled brick-pit (approx.200m NE of site, infilled circa.1939);
- Infilled brick-pit (approx.277m NE, infilled circa.1933/38);
- Series of lock-up garages (approx.65m SE of site, persistent until present-day);
- Adjacent glasshouses (directly NW & NE, demolished by circa.1989/93).

Potential Sources and Associated Contaminants Identified	
Source	Potential Contaminants
Potential for peat deposits associated with nearby watercourse (BGS data);	Hazardous ground gases
Infilled pond (approx.55m east, removed circa.1974/79);	Hazardous ground gases
Infilled unspecified pit (approx.54m NE, removed circa.1957/61);	Hazardous ground gases
Infilled brick-pit (approx.200m NE of site, infilled circa.1939);	Hazardous ground gases
Infilled brick-pit (approx.277m NE, infilled circa.1933/38);	Hazardous ground gases
Series of lock-up garages (approx.65m SE of site, persistent until present-day);	Hydrocarbons TPH CWG / hazardous vapours – considered unlikely
Adjacent glasshouses (directly NW & NE, demolished by circa.1989/93).	SVOC (i.e. agrichemicals), heavy metals, PAHs

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);
- 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;
 - Future users of the site;
 - Users of neighbouring sites;
 - Construction workers; and
 - Services personnel working in trenches.
 - Construction Materials
- Buried concrete, which may be affected by high concentrations of sulphate and/or low pH, in the soils and groundwater underlying the site; and
- Buried water pipes.
- Controlled Waters
- Ecological Receptors
- 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 the grounds, structures, parking and storage areas of Chalcroft Nurseries. Historically, the site initially remained in an arable agricultural usage from the earliest mapping reviewed until circa.1932,

when the south of site was occupied by an orchard (which appeared to remain in such usage until circa.1898/2003). Following this, the north eastern and north western extents of site were partially occupied by large-scale nursery glasshouses from at least circa.1939 and 1967/70, respectively – which remained until circa.1989/93. In between these dates, the central area of site saw the erection of outbuildings, before by circa.1989/93, a new, largely onsite glasshouse / poly-tunnel structure was erected in the north west of site (remaining in use until around circa.2012, when it fell into disrepair before being fully removed by circa.2024). The site has then remained in a nursery / garden centre usage following this date.

Whilst the nursery usage of the site is considered a potential source of soil contamination, site proposals comprise the erection of commercial units and hardstanding and as such, risks from soil contamination will be somewhat reduced by such development.

8.1.2 HAZARDOUS GROUND GAS AND VAPOURS

No significant potential sources of hazardous vapour generation have been identified with small-scale parking areas being located away from proposed development areas and with no significant fuel storage nor tank presence noted on site; and additionally, a series of lock-up garages located approximately 65m south east of site are considered beyond influencing distance to site. Potential sources of ground gas generation have however been identified, in the form of potential peat deposits below and nearby site (associated with both River Terrace Deposits and watercourses) and numerous infilled features in the local area (i.e. infilled ponds, former brick fields and an unspecified pit) and additionally, the site is located in a Radon Affected Area – for which basic radon protective measures will be necessary.

TABLE 1. SUMMARY OF SIGNIFICANT POLLUTION LINKAGES

Contaminant	Pathway	Receptor	Probability of Pollutant Linkage	Conseq.	Risk	Possible Mitigation
Contaminated Soils (<i>initial arable & orchard usage, nursery usage w/ glasshouses - demolished</i>)	Direct Ingestion & Direct Contact	Site Workers (<i>during site works, excavations, eating and drinking</i>)	Lw	Md	M/L	Site workers to wear appropriate PPE for health and safety reasons, considered usage of PPE and adherence to relevant HSE guidance during site works considered sufficient to mitigate hazards to low.
Contaminated Soils (<i>initial arable & orchard usage, nursery usage w/ glasshouses - demolished</i>)	Inhalation of Dust, Dry Arisings	Site Workers (<i>during site works, excavations, eating and drinking</i>)	Lw	Md	M/L	
Contaminated Soils (<i>initial arable & orchard usage, nursery usage w/ glasshouses - demolished</i>)	Crop Uptake & Direct Ingestion, Direct Contact	End Users (<i>site workers & service personnel, visitors, customers</i>)	UI	Md	L	Whilst the nursery usage of the site is considered a limited potential source of soil contamination, site proposals comprise the erection of commercial units and hardstanding and as such, risks from soil contamination will be somewhat reduced by such development and the commercial end-usage of the site (i.e. reduced length of time spent on site, unlikely potential for dermal contact, ingestion, inhalation – soft-landscaping to rear of commercial units). As such, it is recommended that a Watching Brief is applied in regard to soil contamination (inline with Appendix E).
Contaminated Soils (<i>initial arable & orchard usage, nursery usage w/ glasshouses - demolished</i>)	Inhalation of Dust, Dry Arisings	End Users (<i>site workers & service personnel, visitors, customers</i>)	UI	Md	L	
Contaminated Soils (<i>initial arable & orchard usage, nursery usage w/ glasshouses - demolished</i>)	Crop Uptake & Direct Ingestion, Direct Contact	Flora and Fauna (<i>on and offsite</i>)	UI	Md	L	
Contaminated Soils (<i>initial arable & orchard usage, nursery usage w/ glasshouses - demolished</i>)	Vertical and lateral migration (<i>superficial likely permeable, bedrock moderate to low</i>)	Controlled Waters (<i>Secondary A Aquifers – Principal 136m N</i>)	UI	Md	L	
Contaminated Soils (<i>initial arable & orchard usage, nursery usage w/ glasshouses - demolished</i>)	Direct contact (<i>pipe degradation and leaching</i>)	Services (<i>impacted new potable supply piping</i>)	UI	Md	L	
Ground Gases (Methane and CO ₂) (<i>potential for peat presence, infilled pits, ponds & brickfield</i>)	Vertical and lateral migration (<i>superficial likely permeable, bedrock moderate to low</i>)	Site Workers & Excavations, End Users & Building Envelope (<i>ingress and build-up</i>)	UI	Sv	M/L	Potential sources of ground gas generation identified – recommend ground gas monitoring or pragmatic upgrading of required radon protective measures to those ground gas resistant – subject to Local Authority agreement.
Volatile and Semi-volatile Organic Compounds (<i>no significant potential sources identified</i>)	Vertical and lateral migration (<i>superficial likely permeable, bedrock moderate to low</i>)	Site Workers & Excavations, End Users & Building Envelope (<i>ingress and build-up</i>)	UI	Md	L	No significant potential sources of hazardous vapours identified considered capable of impacting the proposed site development, see Section 8.1.2.
Radon	Vertical and lateral migration	End Users & Building Envelope	Li	Md	M	Site is located in a Radon Affected Area – Basic Protection Measures necessary

KEY: Probability of pollutant linkage Hi = Highly likely, Li = Likely, Lw = Low Likelihood, UI = 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 (UI)	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 (VI)	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 to MODERATE** level of risk with respect to the proposed development.

It is recommended that remediation in-line with section 14.0 is planned and carried out on site, following Local Authority agreement.

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.

10.0 SUMMARY OF RISKS**11.0 HUMAN HEALTH****11.1.1 END-USERS**

The risks to end-users of the site are considered to be low when assessed against the commercial end-usage of the site. Risks to end-users of the site are thus reduced as the likelihood for dermal contact, direct or indirect ingestion, inhalation etc. The site is proposed to be almost wholly encapsulated beneath hardstanding or building footprint, beyond an area of soft-landscaping to the rear (west) of the structures, which is likely to be inaccessible to end-users.

11.1.2 SITE WORKERS

The risks to site workers during site works are considered to be low to moderate, due to inherent site worker hazards; however, significant or gross contamination nor a depth or extent of made ground is not expected. As such, with the provision for considered usage of PPE and adherence to relevant HSE guidance, the risks to site workers are considered effectively mitigates to low.

12.0 CONTROLLED WATERS

The risks to controlled waters are considered to be low as significant, gross or mobile contamination is not expected on site, the site is not located in a source protection zone and there are no active abstraction sites located within 700m of site, thus reducing the risks to controlled waters. Additionally, whilst recorded as potentially permeable, River Terrace Deposits are known to largely weather to clays and will act as an aquiclude.

13.0 STRUCTURES**13.1.1 GROUND GASES & VAPOURS**

No significant potential sources of hazardous vapour generation have been identified with small-scale parking areas being located away from proposed development areas and with no significant fuel storage nor tank presence noted on site; and additionally, a series of lock-up garages

located approximately 65m south east of site are considered beyond influencing distance to site. Potential sources of ground gas generation have however been identified, in the form of potential peat deposits below and nearby site (associated with both River Terrace Deposits and watercourses) and numerous infilled features in the local area (i.e. infilled ponds, former brick fields and an unspecified pit) and additionally, the site is located in a Radon Affected Area – for which basic radon protective measures will be necessary.

14.0 RECOMMENDATIONS

The preliminary risk assessment has identified a low risk from soil contamination, a low to moderate risk associated with ground gas hazards and a moderate risk associated with radon hazards. Accordingly, it is recommended that a Watching Brief (inline with the below and Appendix E) is applied during the course development and that the required radon protective measures are upgraded to those ground gas-resistant (subject to local authority agreement).

Following installation of such measures and provision of suitable PPE and adherence to relevant HSE guidance during site development for site workers, overall risks on are site are considered to be effectively mitigated to low.

When this report has been agreed with your Local Planning Authority, a Phase 3 Remediation Strategy and Verification Plan would need to be produced

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

15.1.3 CONTAMINATED LAND REGULATIONS

- [4] The Contaminated Land (England) Regulations 2000. SI2000/No.227
- [5] The Contaminated Land (England) (Amendment) Regulations 2001 SI2001/No.663
- [6] The Contaminated Land (England) Regulations 2006 SI2006/No.1380

15.2 STATUTORY GUIDANCE

- [7] 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
- [8] Communities and local Government, 2018: National Planning Policy Framework.

15.3 BRITISH STANDARDS

- [9] BS 5930:2015 Code of practice for site investigations
- [10] BS 10175:2011+A2:2017 Investigation of potentially contaminated sites - Code of practice
- [11] BS 8485:2015+A1:2019 BS 8485 - 2015 - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings
- [12] BS 8576:2013 Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs)

15.4 NON STATUTORY TECHNICAL GUIDANCE**15.4.1 ENVIRONMENT AGENCY**

- [13] Cassella Stranger, 2002. Model Procedures for the Management of Contaminated Land, Contaminated Land Report (CLR) 11, Department for Environment, Food, and Rural Affairs.

15.4.2 CIRIA PUBLICATIONS

- [14] 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
- [15] 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

- [16] 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

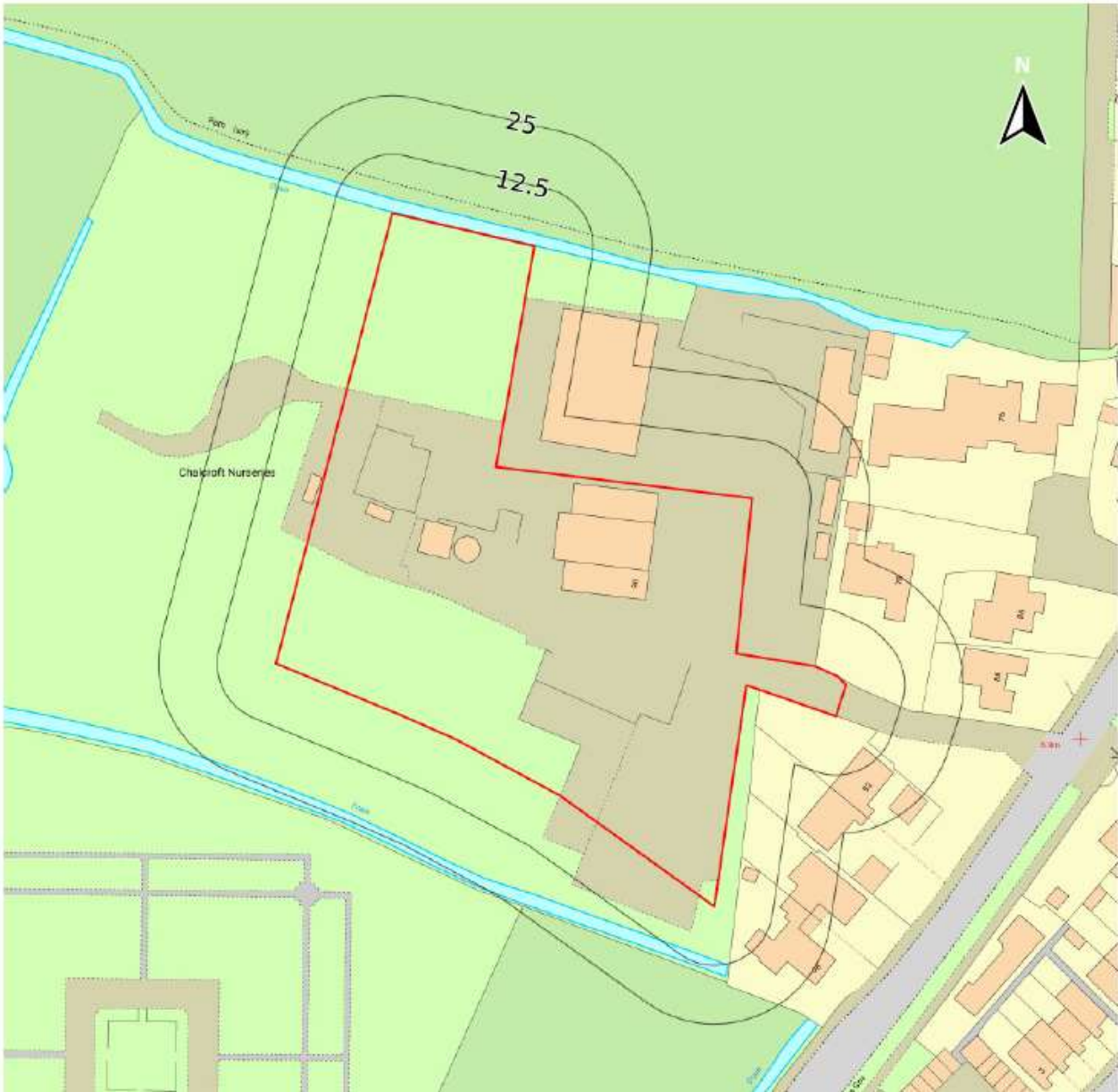
APPENDIX B HISTORICAL MAPPING

Separate Map Packs (2 No. files)

APPENDIX C

PROPOSED AND CURRENT SITE PLANS





APPENDIX D

SITE PHOTOS AND LOCATIONS



Site Walkover Photos

Photo No.1: Facing west from Chalcraft Lane showing the site access (outside redline boundary)



Address: Chalcraft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcraft Associates LLP

Photo No.2: Facing west showing continuation of access route leading west off Chalcraft Lane





Site Walkover Photos

Photo No.3: Facing southwest from the entrance to site showing car-parking and storage area



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.4: Facing northwest from the southeastern corner of site showing further storage areas





Site Walkover Photos

Photo No.5: Facing north from the southern border of site



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.6: Facing north from the southern border of site





Site Walkover Photos

Photo No.7: New site entrance to the right – facing southeast



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.8: Facing north showing the western boundary of site (largely not demarcated beyond ditch)





Site Walkover Photos

Photo No.9: Facing east along the current site track in the central area of site with grassed areas south of this (right)



**Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP**

Photo No.10: Facing southeast showing parking in the NW of site





Site Walkover Photos

Photo No.11: Facing northeast showing vehicle glass (no vehicle repair beyond glass replacement & repair here)



**Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP**

Photo No.12: Facing north showing vehicle graphics and glass repair and replacement unit in the centre of site





Site Walkover Photos

Photo No.13: Facing north – water tank and sheds (storage)



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.14: Facing south showing the central container, storage and parking areas on site





Site Walkover Photos

Photo No.15: Facing east down the current access



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.16: Facing west down the same track





Site Walkover Photos

Photo No.17: Facing northeast showing former train carriage (under renovation)



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.18: Facing slightly southwest showing the western border





Site Walkover Photos

Photo No.19: Facing east from the northwest corner of site



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.20: Facing south showing the western face of the offsite industrial units located north of centre of site





Site Walkover Photos

Photo No.21: Facing east from the northeastern corner of site



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.22: Shows the entrance to the garden centre facing west





Site Walkover Photos

Photo No.23: Facing northeast showing garden centre stock



Address: Chalcroft Nurseries, Bersted, W.Sussex
Client: Mr. P. Cullen of Chalcroft Associates LLP

Photo No.24: Inside the garden centre facing west



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

