

GEOTECHNICAL
AND
ENVIRONMENTAL
ENGINEERS

Head Office
The Old Dairy
Swanborough Farm
Swanborough
Lewes
East Sussex
BN7 3PF

Telephone
0870 777 1574

Fascimile
0870 777 1577

Website
www.AshdownSI.co.uk

Email
contact@AshdownSI.co.uk

Regional Office
Hertfordshire
(Contact via Head Office)

**THE VINERY
POLING
WEST SUSSEX**

**PHASE 1 CONTAMINATION
ASSESSMENT REPORT**

Report No. LW23270/ds November 2012

Report prepared for the benefit of:

Fargro Ltd
Toddington Lane
Littlehampton
West Sussex
BN17 7PP

Managing Director
J.E.Bewick
BSc MSc CEnv CEng MICE

Company Secretary
V.Bewick
BSc MSc FRSS

Company Registration Number
242 6786



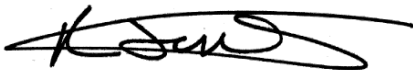
INVESTOR IN PEOPLE

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Report No. LW23270/ds November 2012

Prepared By:



**Rebecca Jones
BSc FGS**

Approved By:



**Steven McSwiney
BA mod Geol MSc FGS**

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1. INTRODUCTION

The development proposals for the site are understood to comprise the construction of a new steel portal-framed warehouse. The construction of this warehouse is likely to involve the use of cut and filling techniques. It is also proposed to construct a planted soil bund along the southern and western boundaries.

Ashdown Site Investigation Limited was commissioned to carry out Phase 1 ground risk contamination assessment of the site by Mr C Self of:

Millwood House Consultants Ltd
The Studio
Millwood House
Littlehampton Road
Ferring
West Sussex
BN12 6PG

The instruction to proceed was received on behalf of the client, Fargro Ltd, in an email dated 23rd October 2012.

The purpose of the phase 1 contamination assessment is to develop an initial conceptual model of the site and establish whether or not there are any potentially unacceptable risks present. The assessment provides information on:

- a) the expected geology and hydrogeology underlying the site;
- b) the development history and most recent site use;
- c) potential sources of on site and off site contamination;
- d) the potential for on site migration of contamination from off site sources; and
- e) sensitive receptors that may be at risk from any contamination migrating from the site.

This assessment has been based on the findings of a walkover survey, reference to historical Ordnance Survey maps and published geological and environmental information from various sources; the latter having been obtained from interrogation of database information compiled by GroundSure Limited.

Copies of the historical maps and geo-environmental data referred to in this report are included in a separate bound volume, entitled Geo-Environmental Data and Historical Maps (Ashdown Site Investigation Limited, Report Number LW23270/map, dated October 2012). **Please note that the site boundary was revised subsequent to the maps being ordered. It is understood that the revised site boundary is that shown in Figure 2 (Site Plan Showing Revised Site Boundary).**

It is noted that the assessment was undertaken and the report prepared specifically for the Client's project and the recommendations given may not be appropriate to alternative schemes. The copyright for the report and licence for its

use shall remain vested in Ashdown Site Investigation Limited (the Company) who disclaim all responsibility or liability (whether at common law or under the express or implied terms of the Contract between the Company and the Client) for any loss or damage of whatever nature in the event that this report is relied on by a third party, or is issued in circumstances or for projects for which it was not originally commissioned.

The risk assessment presented in this report follows 'source-pathway-receptor' techniques for the determination of whether a site is contaminated. This is standard practice in the UK, being intrinsic to the Contaminated Land (England) Regulations 2000 - Part 2A of the Environmental Protection Act 1990.

The report considers end users as the most sensitive human health receptors. If significant risks to construction workers are identified by the preliminary assessment attention is drawn to this. No assessment of risk from acute exposure has been undertaken in this connection.

This report is not intended to be either an ecological or archaeological assessment. An appropriate specialist should be consulted about any concerns that may arise in this regard.

2. SITE LOCATION AND WALKOVER SURVEY

The site comprises an irregular shaped plot of land located at The Vinery, Poling, West Sussex, and is centred on the approximate Ordnance Survey national grid reference TQ 0518 0549. A site location plan is presented as Figure 1. Figure 2 shows the site layout and boundary. As noted in the introduction, the boundary was revised subsequent to the desk study data being ordered. Figure 3 of the report shows the current site layout and highlights the findings of the walkover survey. It is the latter drawing upon which the site description has been prepared. Photographs taken during the walkover survey are presented in Appendix A.

The site lies to the south of an access road named The Vinery and is bound to the north by industrial units, and to the south, west and east by open fields. The industrial units and buildings were used for a variety of business such as a microbrewery and antiques furniture storage. Many of the units were formerly used for mushroom growing and had been converted to business use. An industrial warehouse building located immediately to the north east of the site is understood to have been used to store stage props. Outside of this building were several large empty plastic containers. To the east of The Vinery are several rows of terraced houses with associated gardens.

At the time of the walkover survey the majority of the site comprised a grass field used for horse grazing and divided into paddocks with temporary electric fences. Several sheds and small buildings associated with the paddocks were located in the north eastern corner of the field. A drainage ditch ran along the northern boundary and turned southwards through ninety degrees to cross the eastern side of the site in a north to south direction. The ditch was noted to be overgrown with shrubs and several trees were located along its length. Numerous mature trees and shrubs were also located along the site boundaries. Two poly tunnels were present in the north western corner of the field.

The site to the east of the ditch comprised an area of rough open ground used partly as a paddock and partly as a storage area. In the south eastern corner the site was in use as a plant nursery storing plants in pots, bags of compost, old pots, plastic tubing, timber pallets, stakes and metal posts. Several stockpiles of soil and topsoil were located in this area along with a large telecoms mast.

A sewage filter bed, associated with the residential properties to the east of The Vinery was located on a finger of land penetrating the easternmost side of the site from north to site. The finger was almost wholly enclosed by, but is not considered to be part of, the site.

Beyond the north-western corner of the site was a large metal tank which was rusting and no longer appeared to be in use. From its appearance and very large size and given the context that the site was used as a vinery and a mushroom farm it is considered likely that the tank was used for water storage.

2.1 Potential Contamination Sources Identified by Walkover Survey

A sewage filter bed is used to provide secondary treatment to sewage, which, in this case arises from the residential properties to the east of The Vinery. As operation of the sewage plant is governed by licence from the Environment Agency and given that it services the local domestic properties only it is considered that the filter bed is unlikely to represent a significant risk as a source of contamination to the site.

Similarly the old tank located some distance from the north-western boundary of the site is not considered likely to represent a significant risk to the site.

No significant sources of contamination were identified either on or off site by the walkover survey.

3. GEOLOGICAL DATA REVIEW

3.1 Expected Geology

The stratigraphic succession expected to underlie the site is presented in the following table. In preparing the table reference has been made to the British Geological Survey 1:50,000 series scale map Sheet 317, the British Geological Survey lexicon of named rock units and the maps included within Appendix A (Section 1) of the accompanying Geo-Environmental Data and Historical Maps Volume.

Table 1. Anticipated Geological Strata

Type	Stratum	Age
Superficial Deposits	Head	Quaternary
	River Terrace Deposits	Quaternary
Bedrock Geology	Lambeth Group	Palaeocene

Head

The Head deposits are indicated to be present beneath the south eastern corner of the site only. The Head deposits generally comprise silty clay with variable amounts of gravel and cobbles of flint. The lithology of the Head reflects the nature of the parent bedrock strata and previously existing Quaternary, largely clay, strata.

River Terrace Deposits

The River Terrace Deposits, which are shown to underlie much of the site, generally comprise well graded sandy fine to coarse gravel of flint. Locally sand or gravel strata may predominate. Gravels normally include a high proportion of sub-angular flint and chert and Lower Greensand rock types.

Lambeth Group

The Lambeth Group (formerly named the Woolwich and Reading Beds) comprises a complex and laterally variable sequence of sedimentary deposits including clay, silt, sand and gravel. Inter-laminated clay and sand deposits are common in the lower part of the succession. The component formations are the Upnor Formation, Reading Formation and Woolwich Formation.

3.2 Ground Stability & Geological Features

A review of the data presented within the Geo-Environmental Data and Historical Maps Volume report has been undertaken. The following summarises the data and the assessment of potential risk that the ground hazard/feature may pose to the site. Ashdown Site Investigation Ltd (ASI Ltd) has commented, where appropriate, on the potential risk to the site from the ground hazard/feature reported by the GroundSure data.

The GroundSure data indicates the absence of any significant landslips within 500m of the site. A single geological fault is indicated some 268m to the north but is not considered to pose a significant risk to the site.

The site is in an area where between 1% and 3% of properties are above the action level. However, no radon protective measures are reported by the BGS to be necessary in the construction of new dwellings. It is recommended that discussions with building control are undertaken in connection with any requirements they may have.

No significant risk to the site associated with mining, natural cavities or other extraction activities are reported. It is noted that whilst 'non-coal' mining is recorded within the area of the site, this entry most likely relates to localised historical extraction of chalk from the chalk deposits that underlie the broader area. This risk would be flagged for any site located on the White Chalk Subgroup deposits. With reference to the historical maps discussed later within this report, there are no records of features characteristic of chalk workings (such as lime kilns or brickfields) within the immediate area of the site.

The maximum hazard rating of natural subsidence within the site boundary (including a 50m buffer zone) is moderate. This hazard rating is based on the interrogation of the six British Geological Survey (BGS) natural ground stability datasets (GeoSure). These are reviewed individually in the following table.

Table 2. Natural Ground Subsidence Hazards

Section	Risk Assessment (GroundSure)	Remarks & ASI Ltd Assessment
Soil Volume Change Potential (Shrink-Swell)	Moderate	The moderate risk of soil volume change potential is likely to be associated with the Lambeth Group expected beneath the site but could apply to the Head or River Terrace Deposits, depending upon the clay content of the soils. The risk may be mitigated with appropriate engineering techniques.
Landslides	Very Low	No significant risk has been identified.
Ground Dissolution of Soluble Rocks	Null-Negligible	
Compressible Deposits	Negligible	
Collapsible Deposits	Low	The risks from collapsible deposits are considered to be low under normal groundwater conditions.
Running Sands	Very Low/Low	The actual risk will be dependent upon ground and groundwater conditions but can usually be mitigated by appropriate engineering techniques.

3.3 Background Soil Chemistry

The GroundSure GeolInsight report provides information on background soil chemistry. The following estimated mean concentrations of metals are reported.

Table 3. Background Mean Soil Concentrations of Metals

Metal	Mean Soil Concentration (mg/kg)	Remarks & ASI Ltd Assessment
Arsenic	15-25	The mean soil concentrations indicated are not considered to be significantly elevated for the proposed use.
Cadmium	<1.8	
Chromium	60-90	
Nickel	15-30	
Lead	<150	

3.4 Potential Contamination Sources identified by Geological Data Review

No significant sources of contamination were identified either on or off site by the geological data review.

4. ENVIRONMENTAL DATA REVIEW

Records of potentially contaminative activities, authorisations, pollution incidents and land uses recorded by the regulatory authorities and compiled by GroundSure in their EnviroInsight Report have been reviewed. Data are supplied by the British Geological Survey (BGS), Environment Agency, Health Protection Agency, The Coal Authority and Local Authorities.

Locations of registered potentially hazardous industrial or other land uses, records of pollution incidents affecting controlled water, water abstraction licences and waste water discharge licences are shown on the maps presented in the accompanying Geo-Environmental Data and Historical Maps Volume report.

The information and potential risks to or from the various sources is assessed below.

Table 4. Authorisation, Incidents and Registers

Section	Remarks	ASI Ltd Assessment
Records of Licensed Discharge Consents	One entry located on site refers to a permit for sewerage discharge into the Black Ditch, a tributary of the River Arun. A further entry refers to a sewerage discharge consent located some 417m to the west of the site.	Given that the activity is being undertaken under permit it is unlikely to pose a significant risk to the site.

Table 5. Landfill and Other Waste Sites

Section	Remarks	ASI Ltd Assessment
Environment Agency Licensed Waste Sites	The nearest significant entry refers to a composting facility located 9m to the north of the site.	In view of the nature of the activity and the context of the site being a vinery it is considered not to pose a significant risk.

Table 6. Current Land Uses

Section	Remarks	ASI Ltd Assessment
Current Industrial Data	The nearest entry to the site is a tank indicated to be located some 17m to the west of the site by the dataset, however taking into account the revised site boundary the tank is located at some 80m distance. Another entry refers to a filter bed located adjacent to the revised site boundaries to the east of the site. The remaining entries refer to tanks, a foodstuff company, a cleaning company and a management company located some 47m to 147m from the site.	Given the distance from site and that the tank was identified during the walkover survey as a water/waste treatment tank it is considered that it does not pose a significant risk to the site. As discussed previously in Section 2.1, the filter bed is considered not to pose a significant risk to the site. Given the distance and nature of the remaining entries none are considered to pose a significant risk.

Table 7. Designated Environmentally Sensitive Sites

Section	Remarks	ASI Ltd Assessment
Designated Environmentally Sensitive Sites	The site lies within a Nitrate Vulnerable Zone. The South Downs National Park and Environmentally Sensitive Area is located 193m to the north of the site. Ancient Woodland is also indicated some 189m to the north of the site.	The development proposals are not considered to pose a significant risk to the environmentally sensitive sites.

4.1 Potential Contamination Sources Identified by Environmental Data Review

No significant sources of contamination were identified either on or off site by the environmental data review.

5. HYDROGEOLOGY AND HYDROLOGY

5.1 Groundwater Vulnerability & Soil Classification

The Environment Agency designates aquifers in accordance with the Water Framework Directive. These designations reflect not only the importance of aquifers in terms of groundwater as a resource (drinking water supply) but also their role in supporting surface water flows and wetland ecosystems. The aquifer designation data is based on geological mapping provided by the British Geological Survey.

The River Terrace Deposits and Lambeth Group expected beneath the site are classified as Secondary A Aquifers. Secondary A Aquifers are characterised by 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.

The Head deposits located beneath the south eastern part of the site are classified as a Secondary Undifferentiated Aquifer. Secondary Undifferentiated Aquifer designation is usually given in cases where it has not been possible to attribute either Secondary A or B status to a rock type. In most cases, this means that the layer in question may have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

5.2 Abstraction Licences

There are two groundwater abstraction licences on site with a further seven recorded within 1km of the site. Two surface water abstraction licences are indicated within 1km of the site.

5.3 Potable Water Abstraction Licences and Source Protection Zones (SPZs)

No potable water abstraction licences are indicated within 1.5km of the site, although three licences are located within 2km of the site.

The site does not lie within an Environment Agency Source Protection Zone with regard to the protection of the quality of groundwater that is abstracted for potable supply.

5.4 Surface Water

The data indicates that the nearest significant surface water features are drains located on site.

There is no Environment Agency information on river quality within 250m of the site.

5.5 Flooding

The site does not lie within an Environment Agency Zone 2 or Zone 3 floodplain.

The British Geological Survey reports a very high susceptibility to groundwater flooding within 50m of the site. The BGS consider the confidence rating of their data in this area to be moderate.

A detailed Flood Risk Assessment has been prepared by Millwood House Consultants Ltd (ref 4144C/2.3F, dated October 2012).

6. SITE HISTORY

Historical Ordnance Survey maps covering the area of the site have been reviewed. It is noted that each map presents information applicable at the time of the survey (or revision date) and is subject to surveying and cartographic errors and/or advances. Revisions to maps are made at irregular intervals and it is possible that significant developments may have taken place on or within the vicinity of the site that have not been revealed by the maps.

In the following table 'In Vicinity of Site' generally considers features of relevance within approximately 250m of the site boundary, but may also include more distant features if considered to be pertinent to the assessment of the development history.

Significant details depicted on the maps are identified in the following table.

Table 8. Summary of Significant Features Identified on Historical Maps

Map Details	On-site	In Vicinity of Site	Significant Potential Contamination Sources
1876 1:2,500	The site is shown to comprise open fields.	Several buildings denoted as Yarmer Barn and Yarmer Cottage are shown to the north east of the site.	
1912 1:2,500	No significant changes noted.	A feature is shown to the north of the site close to the Yarmer Barn. Although the mapping data is not clear this feature may represent a small pond. A tank and pump house are shown to the south east of the site.	
1937 1:2,500	A small building together with a further two small structures are shown in the north eastern part of the site. These structures are considered to possibly represent greenhouses /poly tunnels.	Further buildings are shown in the vicinity of Yarmer Barn together with several structures (most likely greenhouses) shown to the north of the site. These structures and buildings are denoted as Worthing Vineries. The possible pond feature is no longer shown.	Given the small size of the possible pond and the age of any backfill material it is considered not to pose a significant risk to the site.

Map Details	On-site	In Vicinity of Site	Significant Potential Contamination Sources
1957 1:10,560	The two small possible greenhouse structures are no longer shown on site.	Further extension of the Worthing Vineries is shown.	Potential for localised made ground and associated metal and PAH contamination from demolished structures located in the north eastern part of the site.
1971 1:2,500	No significant changes.	A row of terraces houses are shown to the east of the Worthing Vineries. A filter bed is shown adjacent to the site and a tank is marked to the north west.	As discussed previously given that the filter bed services domestic properties it is not considered to pose a risk to the site. Also the tank to the north west is most likely to be a water tank and therefore also does not pose a significant risk.
1994 1:2,500	No significant changes.	The greenhouses/poly tunnels of Worthing Vineries appear to have been redeveloped into either the mushroom poly tunnels or the later industrial units. Additional units are also shown to the north west of the site.	
2002 1:10, 000	No significant changes.	A structure most likely to be a poly tunnel is shown to the north west of the site.	

6.1 Potential Contamination Sources identified by Historical Map Review

The following potential source of contamination has been identified from the historical map review:

On Site

- Potential for localised made ground and associated metal and PAH contamination from demolished structures located in the north eastern part of the site.

No significant off site sources of potential contamination have been identified.

7. PRELIMINARY CONTAMINATION RISK ASSESSMENT

7.1 Basis of Preliminary Contamination Risk Assessment

An appropriate contamination risk assessment of a site considers the potential sources of contamination, the potential receptors and how the sources and receptors may be linked (the pathways).

A significant risk is only deemed to exist where a significant pollutant linkage has been identified i.e. where a potentially significant source is linked to the receptor via a significant pollutant pathway. A site is considered suitable for use where no significant pollutant linkages are present.

This preliminary risk assessment takes into account the proposals for the site, key features noted from the walkover survey, information from the database search and any potential risks identified from the review of historical Ordnance Survey maps and other data.

The assessment of risk has been carried out in line with guidance published within "Contaminated Land Risk Assessment: A guide to good practice" published by CIRIA (C552, 2001). The level of risk is determined using the risk matrix presented in the following table. Classifications of likelihood, severity and risk are provided in subsequent tables.

Table 9. Risk Assessment Matrix – Comparison of Consequence and Probability

Severity of potential impact	Likelihood of significant impact				
		Very Low Likelihood	Low Likelihood	Moderate Likelihood	High likelihood
	Very Minor	Negligible	Very Low	Low	Low/Moderate
	Minor	Very Low	Low	Low/Moderate	Moderate
	Moderate	Low	Low/Moderate	Moderate	High
	Severe	Low/Moderate	Moderate	High	Very High

Table 10. Classification of Likelihood

Likelihood Classification	Definition
High	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Moderate	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Very Low	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Table 11. Classification of Severity

Severity Classification	Definition
Severe	Short term (acute) risk to human health likely to result in “significant harm” as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings/property. A short term risk to a particular ecosystem or organisation forming part of such ecosystem (note: the definitions of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).
Moderate	Chronic damage to Human Health (“significant harm” as defined in DETR, 2000). Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution). A significant change in a particular ecosystem or organism forming part of such ecosystem, (note: the definitions of ecological systems within Draft Circular on Contaminated Land, DETR, 2000).
Minor	Pollution of non sensitive water resources. Significant damage to crops, buildings, structures and services (“significant harm” as defined in the Draft Circular on Contaminated Land, DETR, 2000). Damage to sensitive buildings/structures/services or the environment.
Very Minor	Harm, although not necessarily significant harm, which may result in a financial loss or expenditure to resolve. Non permanent health effects to human health (easily prevented by means such as personal protective clothing, etc). Easily repairable effects of damage to buildings, structures and services.

Table 12. Classification of Risk

Risk Classification	Definition
Very High	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	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 long term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is 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	It is possible that harm could arise to a designated receptor from an identified hazard, but there is a low likelihood of this hazard occurring and if realised, harm would at worst normally be mild.
Very Low	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.

The risk assessment has been carried out based on the site being developed for commercial purposes including the provision of areas of soft landscaping. Should the proposed end use be altered, a revised risk assessment may be required.

7.2 Preliminary Risk Assessment for Human Health

The following potential source of contamination that may pose a risk to end users has been identified by the risk assessment:

- 1) Potential for localised made ground and associated metal and PAH contamination from demolished structures located in the north eastern part of the site.

A preliminary human health risk assessment conceptual model is presented in the following table of this report and is presented diagrammatically as Figure 4.

Table 13. Preliminary Human Health (End Users) Conceptual Model – Potential Pollutant Linkages and Initial Assessment of Risk

Contaminant Source	Potential Pathway(s)	Likelihood	Severity	Initial Assessment of Risk to Human Health
Potential for localised made ground and associated metal and PAH contamination from demolished structures located in the north eastern part of the site.	• Dermal contact with soil (Indoor & Outdoor). • Direct soil and dust ingestion. • Inhalation of indoor and outdoor soil dust.	Low	Moderate	Low/Moderate

7.3 Preliminary Risk Assessment for Controlled Water

The following potential source of contamination that could affect controlled waters has been identified by the risk assessment:

- 1) Potential for localised made ground and associated metal and PAH contamination from demolished structures located in the north eastern part of the site.

A preliminary controlled water risk assessment conceptual model is presented in the following table of this report and is presented diagrammatically as Figure 4.

Table 14. Preliminary Controlled Water Conceptual Model – Potential Pollutant Linkages and Initial Assessment of Risk

Contaminant Source	Potential Pathway(s)	Likelihood	Severity	Initial Assessment of Risk to Controlled Water
Potential for localised made ground and associated metal and PAH contamination from demolished structures located in the north eastern part of the site.	Groundwater Flow	Unlikely	Moderate	Low

7.4 Other Potential Receptors

Other potential receptors of contaminants that may be present within the proposed development at the site include construction workers, site services, and planting. These may be sensitive to the potential sources identified by the preliminary risk assessment.

Assessment of acute risks to construction workers, requirements for the protection of services or issues affecting planting is beyond the scope of this preliminary risk assessment.

Although no risk of gross contamination likely to pose an acute risk to construction workers at the site has been identified by the assessment, as with all developments a site specific health and safety assessment should be undertaken prior to construction works commencing. The service provider should be contacted for details of any requirements they may have to protect their equipment. A horticulturalist should be contacted relating to requirements for planting.

7.5 Recommendations

It is recommended that an intrusive ground investigation should be undertaken to assess the risk from the potential contamination source identified by this assessment.

8. CONCLUSIONS

The following conclusions present a summary of the main findings of the assessment. However, no reliance should be placed on any point of the conclusions until the whole of the report has been read as other sections of the report may put into context the information contained herein.

- The site is expected to be underlain by the River Terrace Deposits and Lambeth Group deposits. Beneath the south eastern corner of the site Head deposits may be expected.
- The River Terrace Deposits and Lambeth Group expected beneath the site are classified as Secondary A Aquifers. The Head is classed as a Secondary Undifferentiated Aquifer.
- The site does not lie within an Environment Agency Source Protection Zone with regard to the protection of the quality of groundwater that is abstracted for potable supply.
- The site comprised open fields at the time of the earliest historical map referenced in 1976. The site has remained relatively unchanged with the exception of small structures possibly representing greenhouses/poly tunnels shown on site by 1937 and no longer shown on the 1957 map.
- A potential source of contamination that may pose a low/moderate risk to end users and low risk to groundwater has been identified by the risk assessment. As such it is recommended that an intrusive ground investigation is undertaken to assess risks posed.
- Preliminary conceptual models are presented as Tables 13 and 14 of this report. A diagrammatic representation of the preliminary conceptual models is presented as Figure 4 of this report.

Ashdown Site Investigation Limited
November 2012

APPENDIX A

Site Walkover Photographs



Paddocks and Poly Tunnels in Northern part of Site



Eastern Part of Site used for Storing Plants, Compost, Timber, Pots etc..



Large Metal Tank to North West of Site



Warehouse Building used to Store Stage Props and Empty Plastic Containers



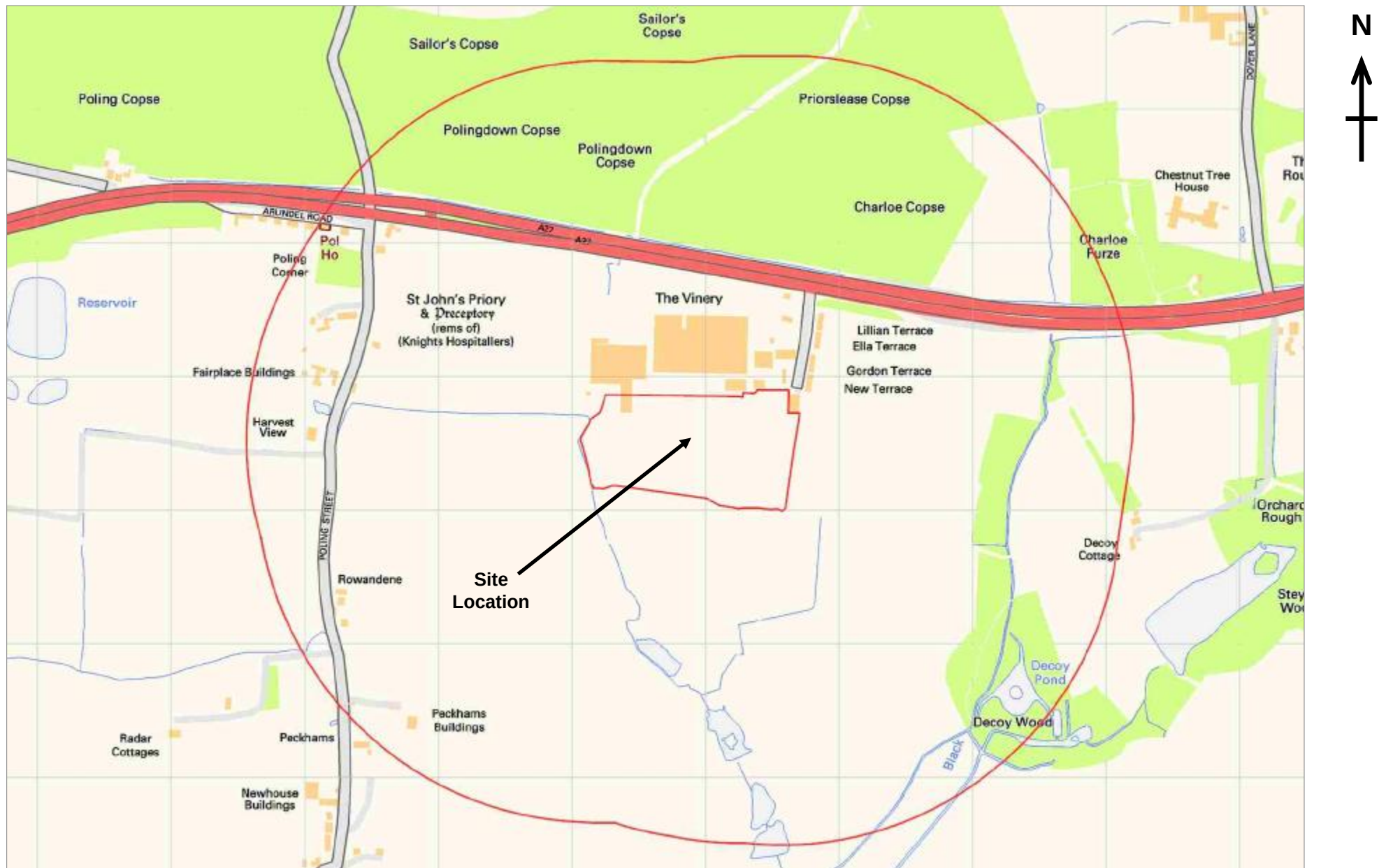
Terrace Houses on the Vinery



Industrial Units To The North Of The Site

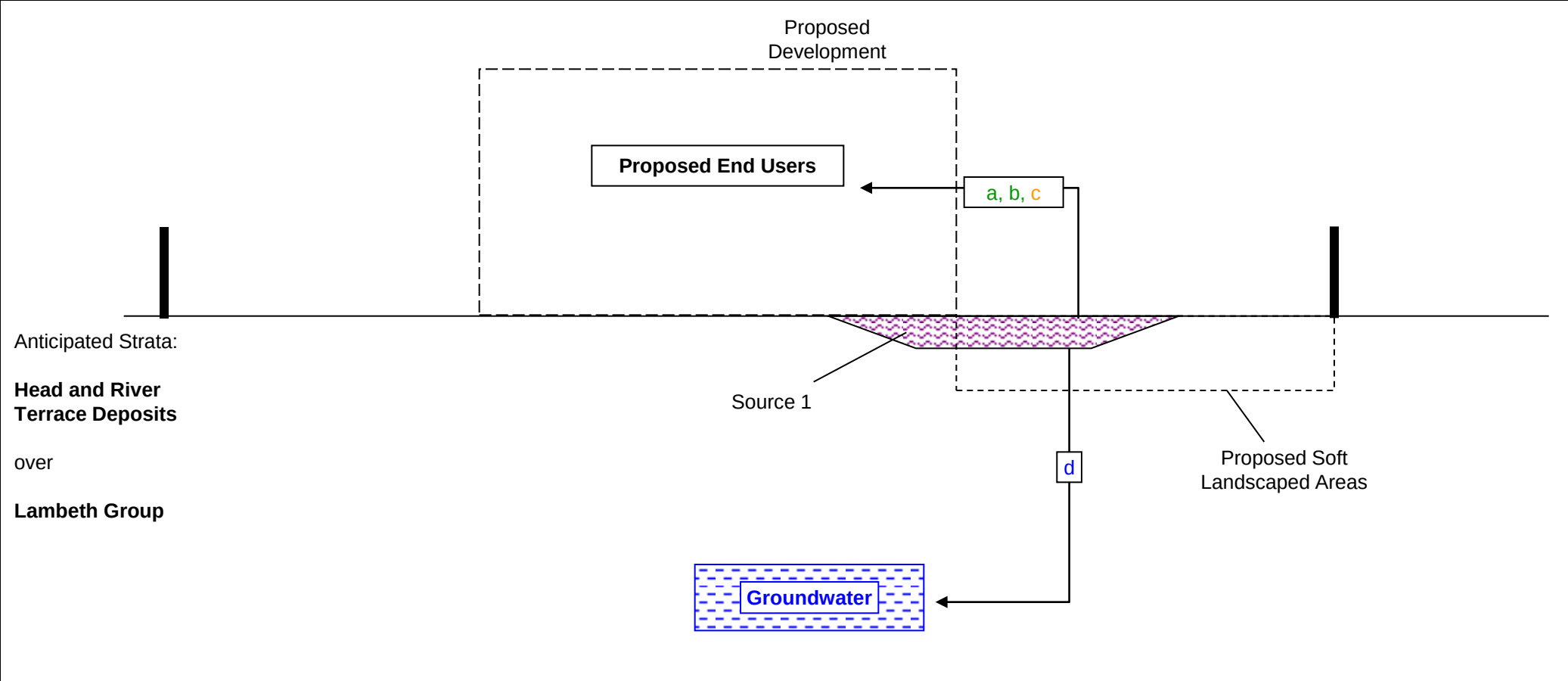
FIGURES

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| Figure 1 | Site Location Plan |
| Figure 2 | Site Plan Showing Revised Site Boundary |
| Figure 3 | Site Plan |
| Figure 4 | Preliminary Conceptual Model |









Key

Sources

1. Potential for localised made ground and associated metal and PAH contamination from demolished structures located in the north eastern part of the site.

Pathways

- a. Dermal contact with soil (Indoor & Outdoor);
- b. Direct soil and dust ingestion;
- c. Inhalation of indoor and outdoor soil dust;
- d. Groundwater flow