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WELBECK STRATEGIC LAND IV LLP

LAND AT RUDGWICK, HORSHAM

PHASE I GEO-ENVIRONMENTAL DESK STUDY

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PHASE I GEO-ENVIRONMENTAL DESK STUDY

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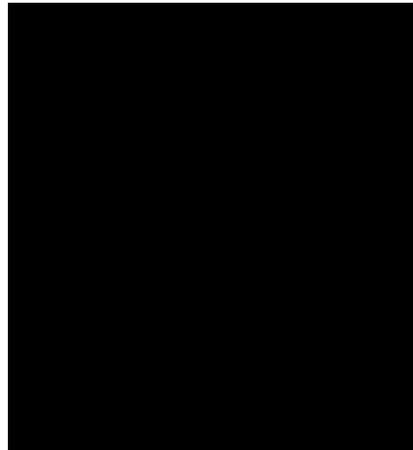
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EXECUTIVE SUMMARY

This Phase 1 Geo-Environmental Desk Study - Land Contamination Assessment report is part of a suite of documents that supports the outline planning application by Welbeck Strategic Land IV LLP (the 'Applicant'), for a residential development of land adjacent to Guildford Road and Lynwick St, Rudgwick, Horsham. This report covers the red line boundary area (the 'Site') shown on the site boundary plan included as Appendix 1. The 4.9-hectare (ha) Site is located to the southwest of the town of Rudgwick within the administrative area of Horsham District Council (HDC).

The outline planning application with all matters reserved (except access) is for up to 120 dwellings, with an improved vehicular and pedestrian access via Guildford Road, the provision of public open space and associated infrastructure and landscaping.

A summary of pertinent information relating to the Site along with a qualitative assessment of the potential risk is provided in the table below.

| Summary of Overall Risk | | | |
|---|---|---------------|--------------------------|
| Issue | Summary | Risk Category | |
| | | Humans | Property/ Environment |
| Present and past Site use | Present: Agricultural Land Past: Agricultural Land and infilled well | Low/Moderate | Low/Moderate |
| Adjacent land uses | Present: Agricultural, residential and a filling station and garage Past: Landfill Site, agricultural, residential and an unspecified 'works' | Moderate | Low/Moderate |
| Environmental setting | One Pollution Incident to Controlled Waters – Cat 3 minor incident recorded as 'no pollutant'. | Low/Moderate | Low/Moderate |
| Asbestos | Potential to be present in made ground material in infilled well. | Moderate | Low |
| Geology, geotechnical and mining | No recorded made ground or superficial deposits overlying Weald Clay Formation. The Weald Clay Formation may have a high-volume change potential. | Low | Low/Moderate |
| Made ground | Potentially infilled well in southwest of site | Low/Moderate | Low/Moderate |

| Summary of Overall Risk | | | |
|--------------------------------------|---|---------------|--------------------------|
| Issue | Summary | Risk Category | |
| | | Humans | Property/ Environment |
| Groundwater and surface water | Site is situated on unproductive strata (Weald Clay Formation). No groundwater abstraction licences within 1km of Site. Nearest graded surface watercourse is an unnamed drain/stream 67m to the southeast of the Site which drains into the River Arun. There are no surface water abstraction licences within 1km of the Site | Low | Low |
| Flooding | For planning purposes, the Site is within flood Zone 1 and has a low probability of flooding. The probability of surface water flooding is low. | Low | Low |
| Unexploded ordnance | Zetica UXO risk maps indicate that the site is in a low-risk area. | Low | Low |
| Recommended further work | Prior to any development a geo-environmental and geotechnical site investigation should be undertaken. | | |
| Overall Risk: | Low to Moderate | | |

The Executive Summary forms part of the overall report and should not be considered in isolation.

1 INTRODUCTION

Instructions

- 1.1 Wardell Armstrong has been instructed by Welbeck Strategic Land IV LLP (the 'Applicant') to undertake a land contamination assessment to support an outline planning application for a residential development of land adjacent to Guildford Road and Lynwick St, Rudgwick, Horsham.

Site Location

- 1.2 The Site is identified as land adjacent to Guildford Road and Lynwick St, Rudgwick, Horsham, shown by the red line boundary (Appendix 1) which is located southwest of Rudgwick and wholly located in the administrative area of Horsham District Council (HDC).
- 1.3 The Site is approximately rectangular in shape and comprises arable/ pastoral land, with a small copse of trees roughly dividing the site into a western and eastern area. The Site slopes gently towards the south and southeast.

Scope and Objectives

- 1.4 The purpose of this report is to identify and examine in broad terms readily available information relating to the:
- past and current uses of the Site and surrounding area;
 - environmental setting including geology, mining, hydrogeology and hydrology;
 - potential contamination sources, pathways and receptors as part of a preliminary conceptual model;
 - potential stability and contamination constraints and liabilities that may arise in connection with the present use or proposed use of the Site; and
 - requirement or otherwise for future studies including potential intrusive site investigation prior to redevelopment.
- 1.5 The standard terms and conditions and limitations to the report are summarised in Appendix 2.
- 1.6 The assessment does not constitute or contain a valuation nor is it a full rigorous environmental audit. In this instance the report is prepared to support an outline planning application for a residential development of the Site. The purpose of this assessment is to determine whether land contamination is likely to be present on the

Site or if any past uses would lead to the potential for contamination. The assessment has been undertaken with reference to the Environment Agency Land Contamination Risk Management (LCRM) documentation presented on the UK government website, <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>. This replaces CLR 11 Model Procedures for the management of contaminated land, which has now been withdrawn.

- 1.7 Further background to government guidance on contamination and the purpose and use of Land Quality Statements in assessing the risk of contamination at a site is described at Appendix 3.

Proposed Site Use

- 1.8 It is proposed that the Site is redeveloped for residential land use, creating up to 120 new dwellings albeit it is understood that the scheme is still evolving.

2 SITE HISTORY AND CURRENT LAND USE

Data Sources

- 2.1 The history of the Site and the surrounding land has been investigated by consultation with a range of archive sources as summarised at Appendix 4. Enquiries have been made to HDC and the Environment Agency regarding any available information in relation to environmental issues at the Site. The topographical and environmental data is based primarily on an Envirocheck report prepared by the Landmark Information Group and dated 2 September 2021 (Appendix 5).

Site History

- 2.2 Historic maps provided in the Envirocheck report have been used to identify previous land uses, including any significant potentially contaminative uses. Where other features that may have an effect on development of the Site have been identified, they are described.
- 2.3 Table 2.1 summarises the history of the Site and its immediate vicinity from about 1876 to the present day.

| Table 2.1: Summary of Land Use | | |
|--------------------------------|--|---|
| Date | Site Land Use | Adjacent Land Use |
| 1870s | The Site is predominantly an area of open fields. There are a number of small buildings, a well and storage units in the southwest corner of the site. | Bucks Green Hamlet is located adjacent to the southeast corner of the Site. Buildings include a public house, post office and a smithy. Two further buildings are present adjacent to the southwest corner of the Site across Guildford Road. Agricultural land is present surrounding the Site in all directions. A railway line and Rudgwick Station is present c. 500m northeast of the Site running northwest to southeast. |
| 1880s | No mapping available. | No mapping available. |
| 1898-1899 | No significant change | Buildings adjacent to southwest corner labelled as a school and a Beer House. An 'Old Clay Pit' is marked adjacent to Rudgwick Station c. 450m to the northwest of the Site. |
| 1912-1914 | Well in southwest corner no longer marked. Possibly infilled. | Residential development adjacent to southern boundary across Guildford Road. Commercial development including a sewage filter and various tanks present close to Rudgwick Station between c. 250-500m northeast of the Site. |
| 1920-1960 | No mapping available | No mapping available |
| 1961 | Small buildings in southwest corner of the Site no longer present | Sewage filter no longer present. Residential development c. 200m to the southwest. |
| 1973-1974 | No significant change | Pavilion constructed adjacent to eastern boundary. Several commercial buildings constructed across Guildford Road along the southern boundary including a garage, a filling station and a 'works'. |
| 1981 | No significant change | Residential development at Rudgwick c. 250-500m to the northeast of the Site. |
| 1994-1999 | No significant change | Works no longer marked as being present to the south of the Site. |
| 2006 | No significant change | No significant change |
| 2016 | No significant change | No significant change |
| 2021 | No significant change | No significant change |

Current Site Use

- 2.4 The Site was visited on 19 August 2021 by a Wardell Armstrong representative. At the time of the visit the Site comprised arable/ pastoral fields and woodland. It is assumed that the site remains unchanged at the time of reporting herein. The following points are of note:

- Ground, undulating in places, gently slopes towards the south and southeast;
- The Site has a boggy section in the south-eastern corner of the site, close to the gardens of the existing properties;
- A small copse of trees define eastern and western parts of the Site;
- The western part of the Site contains a ridgeline roughly central to the site, from which the eastern portion falls to the southeast and the western portion falls to the south;
- On the eastern portion of the site, there is a visible ridge roughly 5 metres back from the hedge line; and
- Several small depressions were noticed – these look to be dug, either by human or animal.

2.5 A site walkover record is attached at Appendix 6.

3 GEOLOGICAL AND HYDROGEOLOGICAL SETTING

Geology

3.1 The assessment of the geology of the Site is based on the published geological mapping sheet (Sheet No 301, Haslemere, Solid and Drift Edition, 1:50,000 scale) supplemented by the geological memoir, topographical plans and site visit. Online data from the British Geological Survey (BGS) has been researched. A summary of relevant geological information is provided below in Table 3.1.

| Strata | Description |
|----------------------|--|
| Made ground | The Envirocheck report shows that there is no record of made ground on the Site. However, review of historical maps shows that there is a potentially infilled well and possible remnants of small buildings close to the southwest corner. |
| Natural superfcials | The site is not recorded to be underlain by superficial deposits however there are recorded deposits of sand and gravel of the Arun Terrace Deposits and Alluvium close to the southern boundary of the site which may be present within the Site. |
| Solid strata | The majority of Site is underlain by the Weald Clay Formation which comprises chiefly mudstones with occasional small amounts of silt, sand and gravel. |
| Geological structure | Shallowly dipping towards the west close to the Alfold Anticline. |
| Natural cavities | None recorded on Site or within 500m of the Site. |

| Table 3.1: Summary of Relevant Geological Data | |
|--|---|
| Strata | Description |
| Ground stability | Although the British Geological Information Services do not indicate a significant potential for ground instability hazards at the Site, it is possible that the Weald Clay may have a high-volume change potential which would need to be considered in terms of foundation design and the presence of vegetation. |

Hydrogeology

3.2 Hydrogeological information has been obtained from a review of:

- an Envirocheck report;
- Groundwater Protection Policy and Groundwater Vulnerability maps published by the Environment Agency; and
- Hydrogeological maps published by the British Geological Survey.

3.3 This information indicates the Site is not underlain by superficial deposits and the underlying solid strata, the Weald Clay Formation is classified as Unproductive strata (mudstone beds).

3.4 Unproductive strata have low permeability and contribute negligible flow for water supply or river base flow.

3.5 The Envirocheck report indicated that there is 1 active groundwater abstraction licence within influencing distance (2km) of the Site located 1259m northeast of the site at the 'Well at Kings, Rudgwick' operated by Mr H E Scotting for General Farming and Domestic. The volume of water abstracted is not supplied.

3.6 The Site does not lie within a source protection zone.

3.7 The BGS has developed a dataset to indicate areas that may be susceptible to groundwater flooding. This can occur when the water table rises causing drainage networks to be ineffective. The data set does not indicate that the Site has the potential for groundwater flooding of property.

Soil Vulnerability Classification – Leaching Potential

3.8 The soil vulnerability classification groups the many different soil types of England and Wales into three soil vulnerability classes and six sub-classes. Each is based on the physical and chemical properties of the soil, which affect the downward passage of

water and contaminants. This classification is not applied to soil above Unproductive strata. Soil information for urban areas is based on fewer observations than elsewhere. A worst-case vulnerability is therefore assumed until proved otherwise.

Hydrology

- 3.9 The nearest surface watercourse is an unnamed drain/stream located 67m southeast of the site which flows south towards the River Arun located c. 260m south of the site. Two further unnamed drains/streams flowing to the River Arun are located c. 85m southwest and c. 140m southeast of the Site.
- 3.10 The EA maintains national flood maps based on ground levels, predicted flood levels, information on flood defences and local knowledge. The flood maps show the predicted likelihood of flooding in an area in the context of current and the proposed land use considered in development planning.
- 3.11 For existing land use purposes, the likelihood of flooding is classed as very low, based on the EA map entitled “Risk of Flooding from Rivers and Sea”. The Site does not fall into an area at risk.
- 3.12 For planning purposes, the likelihood of flooding is classified as low, medium or high based on flood zones identified in National Planning Policy Guidance (2014) attached to the National Planning Policy Framework (2012) and the EA map entitled Flood Map for Planning (Rivers and Sea). The Flood Map for Planning only applies if the Site is intended for redevelopment. The Site is within Zone 1 and has a low probability of flooding. The chance of flooding each year is recorded as having less than a 1 in 1,000 annual probability of river flooding (<0.1%).
- 3.13 By reference to mapping provided within the Envirocheck Report, the Site is within an area of low risk of surface water flooding.
- 3.14 There are no surface water abstraction licence within 1km of the Site.

4 MINING AND QUARRYING

General

- 4.1 Research of the mining setting is based on examination of the published topographical and geological information as described in Section 4 of this report along with other mining archive information.

Surface Workings

- 4.2 Research of topographical, geological and other archive mining records has indicated that there are two BGS recorded mineral sites, extracting Common Clay and Shale are located within 500m of the Site, however they are no longer operational. They are located 435m to the east of the Site and 492m northeast at Gaskyns Clay Pits.

Underground Workings

- 4.3 Published geological information indicates that this Site is not in an area of underground mining. Therefore, the Site is considered unlikely to be subject to any ground instability from this source and no mine entries should be present.

5 ENVIRONMENTAL SETTING

Statutory Sources

- 5.1 Information from various statutory sources has been summarised from the Envirocheck report prepared specifically for this Site (Appendix 5). The results from a site visit have also been considered as part of this assessment.

Contaminated Land Register Entries and Notices

- 5.2 No contaminated land entries or notices are identified within 500m of the Site.

Waste Management

- 5.3 Information supplied indicates that there is one recorded Historical Landfill Site within 1km of the Site located 220m south of the site that accepted inert, commercial and household waste from 1960 – 1962. There are also two recorded Local Authority Landfill Sites located 210m southeast and 907m north of the Site. The date of closure and type of waste has not been supplied.

- 5.4 There are two areas of Potentially Infilled Land (Non-Water) within influencing distance of the site. As identified on the historical mapping, these are pits/quarries

located 445m east and 496m northeast of the Site that have been infilled with unknown material. There are also several areas of Potentially Infilled Land (Water) within 259 – 972m from the site that have been infilled with unknown material.

- 5.5 In addition to the recorded/licensed landfilling activities in the vicinity of the Site, the possibility, although remote of there being unrecorded landfilling activities on Site or within influencing distance of the Site cannot be entirely discounted. If at some time in the future, the presence of such an unrecorded landfill is revealed then its potential influence on the Site may need to be investigated and dealt with as necessary.

Radon

- 5.6 Radon can be a hazard within built developments and especially within enclosed or confined spaces. The Health Protection Agency and British Geological Survey document "Indicative Atlas of Radon in England and Wales" (2007) provides a summary of the number of homes in a given area above the "Action Level" for radon. Although the radon atlas relates directly to measurements taken from homes or dwellings, it is also relevant to employers assessing risks for enclosed underground and ground floor workplaces.
- 5.7 The BRE document "Radon: guidance on protective measures for new buildings" (2015) provides guidance for reducing the concentration of radon in new buildings and a two-stage procedure using accompanying maps needed to determine the level of protection for a given site.
- 5.8 These documents have been consulted and the Site is shown to lie in an area where no protection against radon is needed should development of residential dwellings or new structures of similar form of construction and compartmentation occur.

Environmental Issues

- 5.9 The Environment Agency data via the Envirocheck report records the following environmental issues at or in the vicinity of the Site:
- 30 discharge consents (Table 5.1);
 - 1 Local Authority Pollution Prevention and Controls (Table 5.2); and
 - 3 Pollution Incidents to Controlled Waters (Table 5.3: Pollution Incidents to Controlled Waters).

• Table 5.3: Pollution Incidents to Controlled Waters

5.10 The closest recorded example of each type is shown in the following tables.

| Table 5.1: Discharge Consents | |
|--|--|
| Consent | Details |
| Operator: Horsham District Council Grid Ref: 508330 133080 Distance from Site: 159m East | Location: Residential development, Orchard Hill, Church St, Rudgwick, Horsham, West Sussex Discharge Reference: N01565 Issue Date: 08/05/1979 Type: Discharge of Other Matter – Surface Water Receiving Water: Freshwater Stream/River Status: Lapsed |

| Table 5.2: Local Authority Pollution Prevention and Controls | |
|--|---|
| Consent | Details |
| Authority: Horsham District Council Grid Ref: 507851 132983 Distance from Site: 23m South East | Name: Rudgwick Garage Location: Loxwood Road, Bucksgreen, Horsham, West Sussex, RH12 3JN Permit Reference: Epa/Wob4 Date: 09/11/1992 Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input Status: Authorised |

| Table 5.3: Pollution Incidents to Controlled Waters | |
|--|---|
| Operator and Location | Details |
| Operator: No Premises Identified Grid Ref: 508000 133000 Distance from Site: On site | Authority: Environment Agency, Southern Location: Rudgwick Stw, Horsham Pollutant: Unknown Note: Not Supplied Incident Date: 16/07/1999 Incident Reference: 1793 Incident Severity: Category 3 - Minor Incident |

Unexploded Ordnance

5.11 A Zetica regional unexploded ordnance (UXO) risk map has been reviewed. The map shows the Site to be in a low-risk area.

5.12 Examination of historic plans indicates that the area around the Site has not had previous military use and does not appear to have been subject to aerial bombardment during the Second World War.

5.13 The overall risk of unexploded ordnance (UXO) at the Site can be considered to be low.

Contemporary Trade Directory Entries

5.14 There are 30 contemporary trade directory entries within 500m of the Site. The closest active entry is a garage approximately 22m to the southwest of the site

Fuel Station Entries

5.15 There is 1 fuel station entry within 500m of the site. This is an obsolete station, Rudgwick Garage, located 18m southwest of the site.

6 CONCEPTUAL SITE MODEL

Environmental Issues

6.1 Conclusions are drawn from the preceding information in terms of potential sources of contamination, possible receptors that may be affected by any sources of contamination and the pathways that exist between source and receptor. This basic risk assessment allows identification of the suitability of the Site for its current and future use and evaluation of any potential environmental liability that may attach to the Site. The issues can be broadly addressed as follows: land contamination, groundwater contamination, surface water contamination, ground gases and air pollution.

6.2 The land use history has identified the following potentially significant sources of contamination both on the Site and adjacent to the Site.

Potentially Significant Contamination Source On Site:

1. Localised spills and leaks from farm machinery/equipment/fuel storage including pollution incidents recorded by EA.
2. Agrochemicals – fertilisers, pesticides and herbicides.
3. Organic-rich near surface soils.
4. Infilled well in southwest of Site and other unknown infilling.

Significant Contamination Source Off Site:

1. Potential leaks and spillages related to the filling station, garage and 'works' close to the southern boundary of the site, across Guildford Road, may have infiltrated through shallow soils to the site.

2. Potential contaminants and ground gas sourced from the historical landfill site may have infiltrated through shallow soils to the site.

6.3 As a result of the land use history presented in previous sections of this report the Site may have a number of sources of contamination. For land or groundwater to be designated as polluted a linkage must exist between:

- a source of contamination capable of causing significant harm;
- human or environmental receptors; and
- a pathway by which the contamination can reach the receptor.

6.4 The conceptual site model presented in Table 6.1 details an initial assessment of all potential pollutant linkages.

| Table 6.1: Conceptual Site Model | | |
|---|--|--|
| Source (Contaminant) | Pathway | Receptor |
| No. 1 Localised spills and leaks from farm machinery/ equipment/ fuel storage (hydrocarbons, phenols) | 1. Inhalation 2. Dermal contact 3. Ingestion 4. Surface runoff 5. Groundwater migration 6. Direct contact (aggressive attack) 7. Gas migration | 1. Current occupiers 2. Future occupiers 3. Construction workers 4. Groundwater 5. Surface water 6. Subsurface building materials and plastic service pipes 7. Flora and fauna |
| No. 2 Agrochemicals – fertilisers, pesticides, herbicides | 1. Inhalation 2. Dermal contact 3. Ingestion 4. Surface runoff 5. Groundwater migration | 1. Current occupiers 2. Future occupiers 3. Construction workers 4. Groundwater 5. Surface water 7. Flora and fauna |
| No. 3 Organic-rich near surface soils (ground gas) | 1. Inhalation 2. Gas migration | 1. Current occupiers 2. Future occupiers 3. Construction workers |
| No. 4 Made ground associated with unknown infilling (wide range of contaminants including nitrate, nitrogen, phosphorous, heavy metals, ammonia, dioxins, PCBs, hydrocarbons, asbestos). | 1. Inhalation 2. Dermal contact 3. Ingestion 4. Surface runoff 5. Groundwater migration 6. Direct contact (aggressive attack) 7. Gas migration | 1. Current occupiers 2. Future occupiers 3. Construction workers 4. Groundwater 5. Surface water 6. Subsurface building materials and plastic service pipes 7. Flora and fauna |

| Table 6.1: Conceptual Site Model | | |
|--|--|--|
| Source (Contaminant) | Pathway | Receptor |
| No. 5 Contamination and ground gas from off-site sources close to site – filling station, works, garage and historical landfill (wide range of contaminants including heavy metals, ammonia, dioxins, PCBs, hydrocarbons and VOC). | <ol style="list-style-type: none"> 1. Inhalation 2. Dermal contact 3. Ingestion 4. Surface runoff 5. Groundwater migration 6. Direct contact (aggressive attack) 7. Gas migration | <ol style="list-style-type: none"> 1. Current occupiers 2. Future occupiers 3. Construction workers 4. Groundwater 5. Surface water 6. Subsurface building materials and plastic service pipes 7. Flora and fauna |

7 ENVIRONMENTAL RISK ASSESSMENT

Introduction

7.1 The main issues considered in the risk assessment are:

- The environmental risks identified, if any, that may have implications for the current / the proposed use of the Site;
- How likely it is that the environmental risks identified may affect the Site. This is considered against a background of continuation of the current use and potential for the Site to be redeveloped in accordance with the proposed use;
- Other areas of primary concern from a ground engineering and environmental viewpoint that may have been revealed as a result of the research carried out. These features are limited to the scope of work/research carried out and may not cover such factors as the wider planning constraints, archaeology, ecology etc.

7.2 For ease of reference and understanding the risks are assessed against 3 possible levels/categories:

- **Low risk** - Site considered suitable for use and environmental setting. Contaminants may be present but unlikely to have an unacceptable impact on key targets. Action unlikely to be needed;
- **Moderate risk** - Site may not be suitable for use and environmental setting. Contaminants probably or certainly present and likely to have an unacceptable impact on key targets. Action may be needed in the medium term; and
- **High risk** - Site probably or certainly not suitable for use and environmental setting. Contaminants probably or certainly present and very likely to have an unacceptable impact on key targets. Urgent action needed in short term.

7.3 Under each of the categories the environmental issues which have been identified have been assessed with regard to a wide range of topics including (where appropriate):

- the 'source-pathway-receptor' concept;
- the behaviour of potential contaminants within the environment;
- environmental processes;
- industrial operations and best practice;
- current environmental legislation;
- the views and practices of the environmental regulators;
- the likelihood of environmental notices, orders or other enforcement action;
- any requirements to remove waste, contaminated or hazardous materials;
- the health and safety of occupiers or neighbours;
- any redevelopment plans for the Site;
- effects on the fabric of buildings caused by contamination; and
- financial and cost implications.

Qualitative Risk Assessment

7.4 From the combination of the foregoing information a qualitative assessment of the potential geo-environmental risk is provided in Table 7.1. Where indicated, these risks may need to be considered for any future redevelopment of the land.

7.5 The effect of the present site use on the surrounding area is assessed with regard to the possible contaminant migration from the Site off site and with regard to the general environmental setting and land quality of the surrounding area in order to put the on-site assessment in context.

| Table 7.1: Qualitative Risk Assessment | | | |
|---|--|---------------|--------------------------|
| Issue | Summary | Risk Category | |
| | | Humans | Property/ Environment |
| Contamination Potential: | | | |
| Present site use | Agricultural land | Low | Low |
| Past site use | Agricultural fields, infilled well | Low/Moderate | Low/Moderate |
| Impact to site from past and present adjacent land uses | Past: Historic Landfill, agricultural, residential, unspecified works Present: Agricultural, residential, filling station, garage | Moderate | Low/Moderate |

| Table 7.1: Qualitative Risk Assessment | | | |
|---|---|----------------------|------------------------------|
| Issue | Summary | Risk Category | |
| | | Humans | Property/ Environment |
| Mining history | Historical Clay Pit c. 450m from the Site | Low | Low |
| Emissions, pollution incidents, discharges etc | One Pollution Incident to Controlled Waters – Cat 3 minor incident recorded as ‘no pollutant’. | Low/Moderate | Low/Moderate |
| Asbestos | Potential to be present in made ground material in infilled well. | Moderate | Low |
| Ground gas | Potential presence of made ground on Site may give risk to ground gas. | Low/Moderate | Low/Moderate |
| Waste Management | Potentially infilled land on Site. | Low/Moderate | Low/Moderate |
| Environmental Sensitivity: | | | |
| Geology | No recorded made ground or superficial deposits overlying Weald Clay Formation. | N/A | N/A |
| Groundwater vulnerability | Site is situated on unproductive strata (Weald Clay Formation). No groundwater abstraction licences within 1km of Site. | Low | Low |
| Surface water vulnerability | Nearest graded surface watercourse is an unnamed drain/stream 67m to the southeast of the Site which drains into the River Arun. There are no surface water abstraction licences within 1km of the Site | Low | Low |
| Geological constraints: | | | |
| Made ground / superficals / solid geology | Potentially infilled well on site. No recorded Superficial deposits. No to very low potential for compressible ground. The Weald Clay Formation may have a high-volume change potential. | Low/Moderate | Low/Moderate |
| Radon | Radon protection measures are not required for residential or similar development. | Low | Low |
| Mining setting | Historical clay pit c. 450m north east of Site | Low | Low |
| Risks relating to other constraints (miscellaneous): | | | |
| Services | Sewer runs along the southern and eastern borders of the Site. Overhead High Voltage cables along southern boundary. Overhead BT cables along western boundary and buried cables along southern boundary. Low pressure gas main along southern boundary. All services likely within road. | Low | Low |

| Table 7.1: Qualitative Risk Assessment | | | |
|--|---|---------------|--------------------------|
| Issue | Summary | Risk Category | |
| | | Humans | Property/ Environment |
| Flooding | For planning purposes, the Site is within flood Zone 1 and has a low probability of flooding. The probability of surface water flooding is low. | Low | Low |
| Drainage | An area of boggy ground was noted in the south-eastern corner of the site. | Low | Low/Moderate |
| Ecology | Small copse of trees dividing the western and eastern parts of the site. | Low | Low |
| Unexploded ordnance | Zetica UXO risk maps indicate that the site is in a low risk area. | Low | Low |
| Liability Issues: | | | |
| Risk of liability with past use of Site | Agricultural fields | Low/Moderate | Low/Moderate |
| Risk of liability with current use of Site | Agricultural fields | Low/Moderate | Low/Moderate |
| Risk of liability for proposed use of Site | Residential development | Low | Low |
| Overall Risk for Site: | Low to Moderate | | |

8 CONCLUSIONS AND RECOMMENDATIONS

- 8.1 Based on the available information summarised in this report the Site is considered to present an overall Low risk from past use, adjacent operations, ground instability and environmental setting.
- 8.2 The Site is currently used for agricultural purposes, and it is understood that this use will potentially change to residential. Therefore, it is considered that the Site may present a low to moderate risk of hazard or environmental liability.
- 8.3 If redevelopment is approved, we would anticipate that an investigation of the geological conditions will be required and it may be anticipated that some made ground or other unsuitable materials could be encountered. Further to this, some minor remedial measures may be necessary depending on the nature and extent of the made ground and any future more sensitive land use. Should permission be granted, it is assumed that the necessary works can be secured by means of a Condition and undertaken prior to construction commencing.

8.4 Based on the available information, it is considered likely that the regulator will require a Phase II intrusive investigation of the Site. The Phase II investigation is likely to comprise:

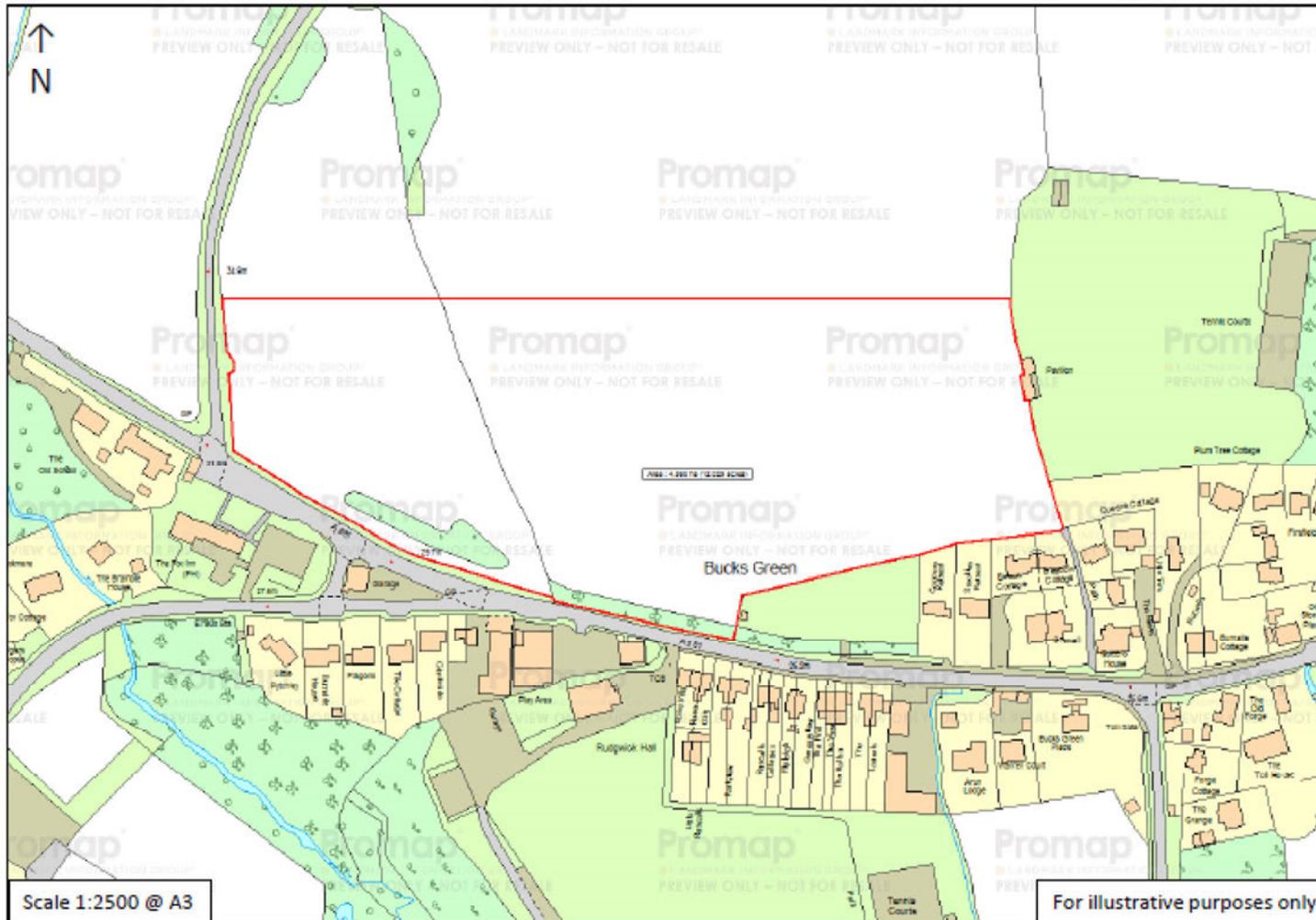
- Drilling and testing of soil, groundwater and ground gas to target potential sources of contamination across the Site;
- A quantitative risk assessment to determine if significant contamination is present; and
- If significant contamination is identified, calculation of site-specific remedial targets, liaison with the regulators and remediation.

8.5 A geotechnical assessment should be undertaken to:

- Determine the type, strength and bearing characteristics of the shallow superficial and underlying solid geology;
- Provide recommendations for a suitable and economic foundation/floor slab solution for the development; and
- Provide recommendations with regard to any other geotechnical aspects pertaining to the development.

Appendix 1
Site Boundary Map

Land Near the Junction of Lynwick Street and Guildford Road, Rudgwick



Appendix 2
Standard Terms and Conditions and Limitations to Report

STANDARD TERMS AND CONDITIONS AND LIMITATIONS TO REPORTS

This Report is provided for the stated purpose and for the sole use of the client in accordance with the Terms and Conditions of Appointment under which the services were performed. The Report is confidential to the client and no other warranty, expressed or implied, is made as to the professional advice included in the Report or any other services provided by Wardell Armstrong LLP. This Report may not be disclosed by the Client nor relied upon by any other party without the prior and express written agreement of Wardell Armstrong LLP.

The conclusions and recommendations contained in this Report are based upon information provided by others including details supplied by the client and/or professional advisors on the assumption that all relevant information from whom it has been requested and/or supplied is accurate. Information so provided and/or supplied has not been verified independently by Wardell Armstrong LLP, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by Wardell Armstrong LLP in providing the services are outlined in this Report. The work described in this Report is based on the conditions and information as stated at the date the Report was completed. The scope of this Report and the services are accordingly limited by these circumstances. The findings outlined in the Report together with any opinions expressed and recommendations made are considered to be valid and appropriate at the time of preparation and for the specific purpose or purposes intended. Whilst a walk over site visit may have been carried out as part of the work this has been limited to observations only and no other physical investigations, sampling and testing work has been carried out as part of this work.

Wardell Armstrong LLP disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to Wardell Armstrong LLP's attention after the date of the Report. Unless otherwise stated in this Report, the assessments made assume that the sites and facilities will continue to be used for their current purpose without significant changes.

Where any site observations have been carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results from any site observations made may vary and further confirmatory work should be made after the issuance of this Report. Wardell Armstrong LLP does not guarantee or warrant any estimates or projections contained in this Report.

Appendix 3
Guidance on Contamination and Land Quality Statements

CONTAMINATION

Environmental Protection Act Part IIA

Contaminated land was defined for the first time under Part IIA of the Environmental Protection Act 1990. Part IIA was inserted into the 1990 Act by section 57 of the *Environment Act 1995*. The regime came into effect in England on 1 April 2000, Scotland on 12 July 2000 and Wales on 15 September 2001.

Contaminated land is defined as “any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

- (a) significant harm is being caused or there is a significant possibility of such harm being caused;
- or
- (b) significant pollution of the water environment is being caused or there is a significant possibility of such pollution being caused.”

Harm is described in the EPA 1990 as being “*harm to the health of living organisms or other interference with ecological systems of which they form part and, in the case of man, includes harm to his property*”.

There are a number of important government policies and priorities underlying the Act. The first priority is to prevent the creation of new contamination by use of this Act and other controls such as Environmental Permitting (formerly regulated by Integrated Pollution Prevention and Control and Waste Management licensing). The second is to identify and remove unacceptable risks to human health and the environment. In addition there is a desire to bring contaminated land back into beneficial use whilst seeking to ensure that the cost burdens faced by individuals, companies and society as a whole are proportionate, manageable and economically sustainable.

Under Part II(a), Local Authorities are responsible for the inspection of contaminated land and for ensuring that remediation is undertaken where necessary. Local Authorities also maintain a Public Register detailing the regulatory actions that they have implemented. The Environment Agency has a complementary role and act as the enforcing Authority for designated special sites.

The policy objectives are underlain by the "suitable for use" approach to the remediation of contaminated land, which the Government considers is the most appropriate approach to achieving sustainable development. This approach recognises that the risks presented by any given level of contamination will vary greatly on a site by site basis.

In general the responsibility for paying for remediation will, where feasible, follow the "polluter pays" principle. In the first instance, any person who caused or knowingly permitted the contaminating substance to be in, or under the land will be the appropriate person(s) to undertake

the remediation and meet its costs. If it is not possible to find such a person, responsibility will pass to the current owner or occupier of the land.

Planning Regime

Land contamination, or the possibility of it, is a material consideration for the purposes of town and country planning. This means that the planning authority has to consider the potential implications of contamination both when it is developing structure or local plans and when it is considering individual applications for planning permission. Under the suitable for use approach, risks should be assessed and remediation requirements set, on the basis of both the current use and its proposed new use.

Land Contamination Risk Management (LCRM)

The assessment has been undertaken with reference to the Environment Agency Land Contamination Risk Management (LCRM) documentation presented on the UK government website, <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>. This replaces CLR 11 Model Procedures for the management of contaminated land, which has now been withdrawn.

RICS Guidance Note: Contamination, the environment and sustainability (GN13/2010)

The document is intended to provide guidance to chartered surveyors (members of RICS). It supersedes an earlier document "Contamination and its implications for Chartered Surveyors" (September 1997) which promoted the concept of a Land Quality Statement (LQS) as the written output of an environmental risk assessment.

In addition to contamination, the document provides a summary and guidance on other factors which might affect land value and environmental duties and/or liabilities. These factors assist with the overall assessment of the site and often provide valuable information to consider within the conceptual model required in LCRM. These factors include, but are not limited to, flooding and flood risk management, invasive species, mineral workings, shallow mining subsidence, natural subsidence risk and radon.

Section 11.8 of the RICS guidance note which sets out what is usually incorporated within a Land Quality Statement as follows:

- *a detailed description of the site and its location, by reference to a plan;*
- *a description of the current uses of the land and of the adjacent land;*
- *a summary of the site history, produced by reference to historical maps, archive records, and statutory, local authority and water authority registers and records;*

- *identification of potential contaminants associated with existing and previous uses, or with geological and hydrogeological features, through site investigation reports and the specialists' own observations;*
- *identification of other relevant issues, including those pertaining to archaeology, ecology, sites of special scientific interest (SSSIs), human population exposure and characteristics of off-site locations that could have an environmental impact or be sensitive to effects from the subject site;*
- *conclusions as to:*
 - *whether remedial treatment is necessary or prudent to enable the continued use of the property for its current use without undue risk to the health of persons using the property;*
 - *whether remedial treatment is necessary or prudent to reduce the risk of damage to a third party's health or property, or damage to the environment, which may give rise to a claim for damages, prosecution or action by the appropriate regulatory authorities;*
 - *if remedial treatment is not warranted, whether a residual risk of future claims from third parties and regulatory authorities remains;*
 - *whether concern regarding the risks associated with the known or suspected presence of contamination restricts the prudent use of the property compared with its likely range of possible uses if the site were uncontaminated;*
 - *if the property is to be redeveloped for a specified purpose, how much additional expense would be incurred in investigating contamination of the property further, and in carrying out any necessary remedial work, as compared with an uncontaminated property. Estimates produced prior to intensive investigations are often extremely broad; and*
 - *whether there is a likely implication from the foregoing for the value and/or the viability of development.*
 - Further information is available from a range of public and professional bodies including central government, local Council and the Environment Agency. Pertinent documents for additional information include Safe Development of Housing on Contaminated Land, 2014; Managing and Reducing Land Contamination: Guiding Principles, 2010 and the Water Framework Directive (2000/60/EC, 23 October 2000).

Appendix 4
Sources of Information

The following principal sources of information have been consulted in the preparation of this report:

- Landmark Envirocheck report dated 2 November 2018 (*a review of information provided by Landmark Information Group Ltd who were commissioned to provide an “Envirocheck” report consisting of published historical plans, environmental data sheets and environmental sensitivity plans;*
- Ordnance Survey County and National Grid Series Plans;
- Other library archive as relevant;
- British Geological Survey published maps and memoirs;
- Environment Agency/NRA Groundwater Vulnerability Map Series;
- British Geological Survey borehole database;
- Environment Agency;
- In house Wardell Armstrong archives; and
- Zetica Regional Unexploded Bomb Risk map (www.zetica.com).

Appendix 5

Landmark Information Group Ltd - Summary of Information

STATUTORY SOURCES OF INFORMATION

Information from the Landmark Information Group Ltd has been summarised in the Table below. The site sensitivity map and full copy of the Envirocheck data is available on request.

| Distance from an Approximate Central Point on Site* | | | |
|---|---------|-----------|----------------------------|
| Agency & Hydrological | On Site | 0 to 250m | 251 to 500m (*up to 1000m) |
| BGS Groundwater Flooding Susceptibility | Yes | Yes | Yes |
| Contaminated Land Register Entries and Notices | | | |
| Discharge Consents | | 6 | 7 (*17) |
| Enforcement and Prohibition Notices | | | |
| Integrated Pollution Controls | | | |
| Integrated Pollution Prevention and Control | | | |
| Local Authority Integrated Pollution Prevention and Control | | | |
| Local Authority Pollution Prevention and Controls | | 1 | |
| Local Authority Pollution Prevention and Control Enforcements | | | |
| Nearest Surface Water Feature | | Yes | |
| Pollution Incidents to Controlled Waters | 1 | | 2 |
| Prosecutions Relating to Authorised Processes | | | |
| Prosecutions Relating to Controlled Waters | | | |
| Registered Radioactive Substances | | | |
| River Quality | | 1 | |
| River Quality Biology Sampling Points | | | |
| River Quality Chemistry Sampling Points | | 1 | |
| Substantiated Pollution Incident Register | | | |
| Water Abstractions | | | (*3) |
| Water Industry Act Referrals | | | |
| Groundwater Vulnerability | Yes | | |
| Source Protection Zones | | | |
| Extreme Flooding from Rivers or Sea without Defences | | Yes | |
| Flooding from Rivers or Sea without Defences | | Yes | |
| Areas Benefiting from Flood Defences | | | |
| Flood Water Storage Areas | | | |
| Flood Defences | | | |
| Waste | On Site | 0 to 250m | 251 to 500m (*up to 1000m) |
| BGS Recorded Landfill Sites | | | |
| Historic Landfill Sites | | 1 | |
| Integrated Pollution Control Registered Waste Sites | | | |
| Licensed Waste Management Facilities (Landfills Boundaries) | | | |
| Licensed Waste Management Facilities (Locations) | | | |
| Local Authority Recorded Landfill Sites | | 2 | |
| Potentially Infilled Land (Non-Water) | | | 2 |
| Potentially Infilled Land (Water) | | | 8 (*8) |
| Registered Landfill Sites | | | |
| Registered Waste Transfer Sites | | | |
| Registered Waste Treatment or Disposal Sites | | | 1 |

| Hazardous Substances | On Site | 0 to 250m | 251 to 500m (*up to 1000m) |
|---|----------------|------------------|-----------------------------------|
| Control of Major Accident Hazards Sites (COMAH) | | | |
| Explosive Sites | | | |
| Notification of Installations Handling Hazardous Substances (NIHHS) | | | |
| Planning Hazardous Substance Consents | | | |
| Planning Hazardous Substance Enforcements | | | |
| Geological | On Site | 0 to 250m | 251 to 500m (*up to 1000m) |
| Brine Compensation Areas | | | |
| Coal Mining Affected Areas | | | |
| Mining Stability | | | |
| Natural and Mining Cavities | | | |
| Potential for Collapsible Ground Stability Hazards | Yes | | |
| Potential for Compressible Ground Stability Hazards | | Yes | |
| Potential for Ground Dissolution Stability Hazards | | | |
| Potential for Landslide Ground Stability Hazards | Yes | | |
| Potential for Running Sand Ground Stability Hazards | | Yes | |
| Potential for Shrinking or Swelling Clay Ground Stability Hazards | Yes | | |
| Radon Affected Areas | | | |
| Radon Protection Measures | | | |
| Industrial Land Use | On Site | 0 to 250m | 251 to 500m (*up to 1000m) |
| Contemporary Trade Directory Entries | | 18 | 9(*3) |
| Fuel Station Entries | | 1 | 0(*1) |
| Sensitive Land Use | On Site | 0 to 250m | 251 to 500m (*up to 1000m) |
| Ancient Woodland | | 2 | 1(*8) |
| Areas of Adopted Green Belt | | | |
| Areas of Unadopted Green Belt | | | |
| Areas of Outstanding Natural Beauty | | | |
| Environmentally Sensitive Areas | | | |
| Forest Parks | | | |
| Local Nature Reserves | | | |
| Marine Nature Reserves | | | |
| National Nature Reserves | | | |
| National Parks | | | |
| National Sensitive Areas | | | |
| Nitrate Vulnerable Zones | 1 | | |
| RAMSAR Sites | | | |
| Sites of Special Scientific Interest | | | |
| Special Areas of Conservation | | | |
| Special Protection Areas | | | |
| World Heritage Sites | | | |

*The distances recorded are approximate and measured from the site boundary.

** Where 'Yes' and 'No' are referred to this indicates the presence or absence of data and does not imply a potential risk or hazard.

Appendix 6
Site Visit Record

| SITE VISIT RECORD | |
|----------------------------------|--|
| Date of visit | 19/08/2021 |
| Weather | Partly Cloudy, Dry |
| Client | Welbeck Strategic Land IV LLP |
| Enquiry/Job No. | LO10907 |
| Site name | Land at Rudgwick, Horsham |
| Drawings / photographs attached? | Yes |
| Visited by | Richard Abbot |
| Site contact details | |
| Access details | Footpath access to site opposite Haven Road. Access from road indicated to be opposite existing junction for village hall, skatepark and recycling centre. |
| Site area (Ha) | 4.72 |

| Observations | Comments | Further action required? |
|---|--|--------------------------|
| General Site Details | | |
| Relevant Identification <i>(names of buildings, roads etc)</i> | | |
| Present Land Use | Agricultural | |
| Adjacent Land Use | Residential to the south, a playing field and pavilion to the east and further agricultural to the west and north. | |
| Adjacent public highways, roads leading to /crossing/servicing the site | A281 adjacent to southern boundary of site | |
| Site Access <i>(main access points, dimensions, by rig/excavator etc, footpaths)</i> | Gate on Lynwick St | |
| Site Boundary <i>(walls, hedges and fences open etc)</i> | Hedges on western southern and eastern boundaries. Open to the north. | |

| Observations | Comments | Further action required? |
|---|--|--------------------------|
| Topography (<i>general site setting, land gradients, slopes etc</i>) | Site as a general falls to the south from the north, small copse of trees define a eastern site and a western site. Western site contains a ridgeline roughly central to the site, from which the eastern portion falls to the southeast and the western portion falls to the south. On the eastern portion of the site, there is a visible ridge roughly 5 meters back from the hedge line. Western portion of the site falls from north to south, with small areas at the north of the site falling west towards Lynwick Street. | |
| Evidence of land use | | |
| Archaeology (<i>old buildings, monuments, mounds, ditches, artefacts in soil, pottery/glass</i>) | N/A | |
| Site Relics (<i>evidence of past land use, building remains, roads, humps, bumps, hollows etc</i>) | Within the site, several small depressions where noticed – these look to be dug, either by human or animal | |
| Buildings (<i>general condition/construction; eg brick/ steel framed, asbestos, pits/basement, use</i>) | N/A | |
| Storage Facilities (eg: <i>tanks/drums/chemicals/capacity /condition/bunding/containment</i>) | N/A | |
| Activities/processes on site (<i>past and present</i>) | N/A | |
| Observable Environment (<i>noise/dust/odours/emissions</i>) | N/A | |
| Waste Management (<i>fly tipping/ waste disposal/fires</i>) | N/A | |
| Underground Services (<i>evidence of manholes, grates, culverts, water supply, telephone</i>) | N/A | |
| Overhead Services (<i>overhead cables/pipes</i>) | N/A | |
| Evidence of ground conditions | | |
| Vegetation (<i>description and condition, tree, frequency and age, bare patches, saplings, new growth</i>) | Small copse of trees | |
| Ecology | Hedgerows along site boundaries | |

| Observations | Comments | Further action required? |
|--|---|---------------------------------|
| <i>(woodland, trees, hedges, ponds, running water, water loving plants, wildflowers, wildlife)</i> | | |
| Soil Cover <i>(vegetated, unvegetated, soil/made ground/hardstanding/condition/cracks/staining)</i> | Vegetated soil (grass) | |
| Evidence of Geological Setting <i>(made ground, natural superfcials and underlying rock)</i> | N/A | |
| Groundwater and Drainage <i>(ponding, streams, springs, wells, marshes, tides, rivers etc)</i> | Site has boggy section in the south-eastern corner of the site, close to the gardens of the existing properties | |
| Subsidence <i>(fissures, abrupt changes in slope, collapse, tilting tree/posts, property damage)</i> | This area of wet ground seemingly has no effect on the existing properties, at least there is no visible mitigation efforts | |
| Evidence of Mining <i>(surface features, shafts, trenches, tunnels, caves, wells, boreholes, gas etc)</i> | N/A | |
| Hazards identified | | |
| <i>(e.g. contamination, mine entries, ground fissures, sharps etc)</i> | N/A | |
| | | |
| Anecdotal information | | |
| Local knowledge | | |
| Interview with residents/staff | | |
| Further observations | | |
| Additional remarks | | |
| | | |
| | | |

Appendix 7

List of Land Uses and Associated Chemicals of Potential Concern

| Industry | Metals and non-metals | | | | | Inorganics | | | | | Organics | | | | | | Other chemicals and compounds |
|---|--|----|----|---|----|------------|---------|----------|----------|----|----------|---------|--------------|------|--------------------------|------------------------|--|
| | Common metal suite (Cd, Cr, Cu, Ni, Pb, Zn) | Hg | As | B | Se | CN | Nitrate | Sulphate | Asbestos | pH | Phenol | Acetone | Hydrocarbons | PAHs | Chlorinated hydrocarbons | PCBs | |
| Airports | ✓ | | | | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | |
| Animal and animal products processing works | ✓ | | ✓ | | | | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | Dieldrin |
| Asbestos manufacturing works | ✓ | | | | | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Ceramics, cement and asphalt manufacturing works | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | |
| Charcoal works | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Chemical works | coatings (paints and printing inks) manufacturing | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Ba, S, organotin compounds |
| | cosmetics and toiletries manufacturing works | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | disinfectants manufacturing works | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Ba, chloro-phenol, dioxins/furans |
| | explosives, propellants and pyrotechnics works | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | Ba |
| | fertiliser manufacturing works | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| | fine chemical manufacturing works | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | V, dioxins/furans |
| | inorganic chemicals manufacturing works | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | Ba |
| | linoleum, vinyl and bitumen-based floor coverings | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | organotin compounds |
| | mastics, sealants, adhesives, roofing felt works. | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Ba |
| | organic chemicals manufacturing works | ✓ | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | V |
| | pesticides manufacturing works | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | chloro-phenol, hexachloro-cyclohexane, Dieldrin, dioxins/furans, organotin |
| | pharmaceuticals manufacturing works | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | |
| | rubber processing works (including tyres) | | | | | | | | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | S, Zn, |
| soap and detergent manufacturing works | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Dockyards and dockland | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | hexachloro-cyclohexane | |
| Dry cleaners | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | |
| Engineering works | aircraft manufacturing works | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | electrical and electronic equipment works | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | mechanical engineering and ordnance works | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | V, Be |
| | railway engineering works | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | S |
| | shipbuilding repair and shipbreaking | ✓ | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | organotin compounds |
| | vehicle manufacturing works | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Fibreglass and fibreglass resin manufacturing works | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Gasworks, coke works and coal carbonisation plants | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | V, S |
| Glass manufacturing works | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Metal works | electroplating and other metal finishing works | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | iron and steelworks | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | V, S |
| | lead works | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | non-ferrous metals (excluding lead works) | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | V |
| | precious metal recovery works | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Oil refineries and bulk storage | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | organolead compounds | |
| Photographic processing industry | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Power stations (excluding nuclear power stations) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | V, Ba, Be |
| Printing and bookbinding works | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Pulp and paper manufacturing works | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | hexachloro-cyclohexane, dioxins/furans |
| Railway land | ✓ | | | | | | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | V |
| Road vehicle: garages and filling stations | ✓ | | | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | organolead compounds |
| Road vehicle: transport and haulage centres | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | V, S, organolead compounds |
| Sewage works and sewage farm | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Textile works and dye works | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Dieldrin |
| Timber products and manufacturing works | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Timber treatment works | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | chloro-phenol, hexachloro-cyclohexane, Dieldrin, organotin |
| Waste management | drum and tank cleaning and recycling plants | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | |
| | hazardous waste treatment plants | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | V, Ba, hexachloro-cyclohexane, Dieldrin |
| | landfills and other waste treatment/disposal sites | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | dioxins/furans |
| | solvent recovery works | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | metal recycling sites | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | Ba |

* The information in this table is indicative only and does not present a comprehensive review. The data is summarised from R&D Publication CLR 8, Potential Contaminants for the Assessment of Land, DEFRA and EA, 2002.

Assessment of individual sites requires knowledge of historic land use and specific site processes. Irrespective of the information present above there are several contaminants of concern such as hydrocarbons and PCBs, that can be found on any industrial site of significant size.

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