



BARWICK ROAD, DOVER
Phase 1 Contaminated Land Assessment – Volume 1 of 2

BARWICK ROAD, DOVER

Phase 1 Contaminated Land Assessment

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Revision	Amendment Details	Revision Prepared By	Revision Approved By

1.0 INTRODUCTION

Brief

- 1.1 Create Consulting Engineers Ltd has been commissioned by Mulberry Tree Holdings (Kent) to provide a Phase 1 Contaminated Land Assessment to support the proposed planning application for the redevelopment of the land south of Barwick Road, Dover (the 'Site').

Development Proposal

- 1.2 The Client intends to submit a planning application for the redevelopment of this Site comprising no. 137 dwellings (comprising no. 73 houses and 64 apartments) with relocation of the existing vehicular access and creation of 1 x additional vehicular access from Barwick Road, alongside associated parking, landscaping and infrastructure.
- 1.3 An extract of the proposed development layout is provided in Figure 1.1 below.

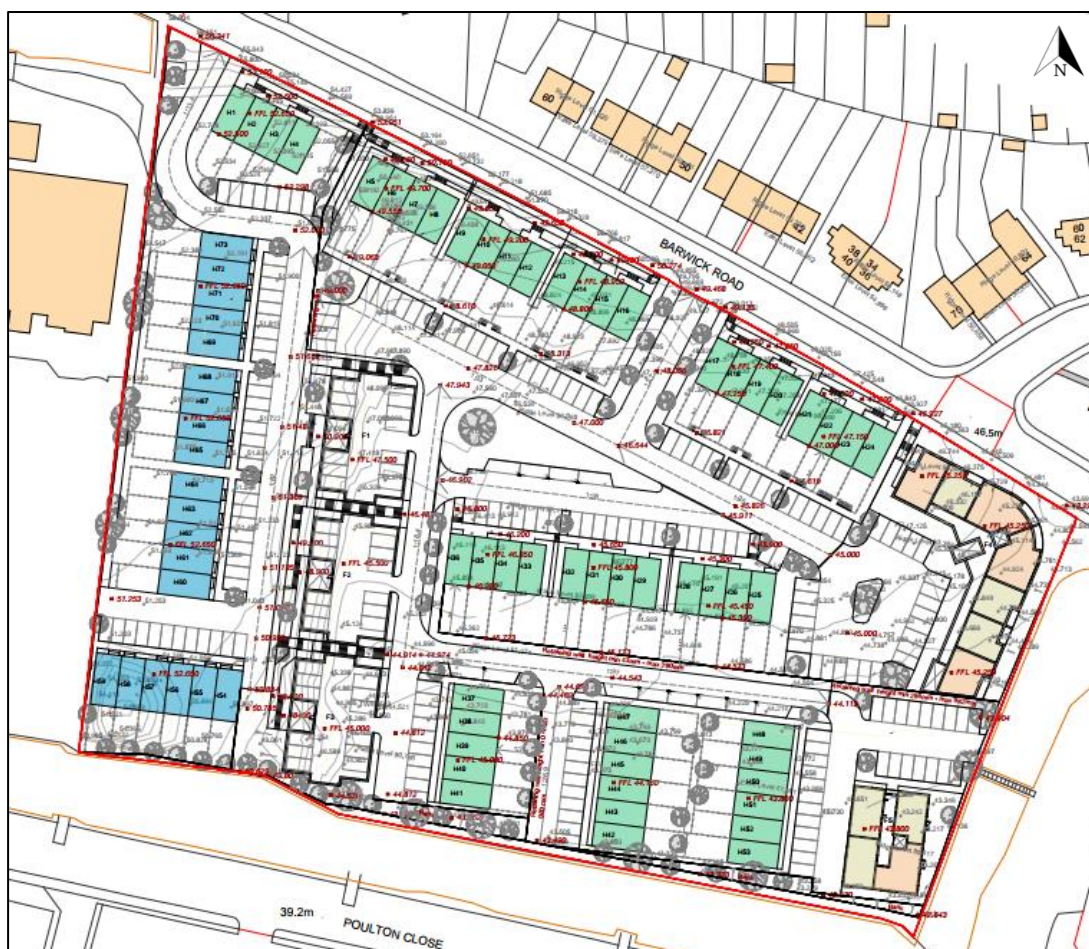


Figure 1.1: Proposed Development Layout

Objective

- 1.4 To undertake a Contaminated Land Preliminary Risk Assessment (PRA) comprising a desk study review of existing information relating to the Site and surrounding area, in accordance with best practice and planning guidance such as that set out in the National Planning Policy Framework, 2020 and the Environment Agency's Land Contamination Risk Management guidance, 2021.

Scope of Works

- 1.5 The scope of works for this study comprises a review of the following information sources:
- British Geological Survey online mapping data;
 - Environment Agency online mapping data;
 - Groundsure Insight report (Appendix B);
 - Available historical Ordnance Survey mapping (Appendix C);
 - Preliminary Unexploded Ordnance (UXO) Risk Assessment (Appendix D);
 - Web searches related to the site and surrounding area; and
 - Google Earth imagery.
- 1.6 A Conceptual Site Model (CSM) will then be developed based on the findings of the screening assessment and potential risks in the context of the proposed development assessed using the source-pathway-receptor approach.
- 1.7 A Site reconnaissance survey was undertaken to assess the Site condition and surrounding land uses and a photographic record is provided in Appendix A.

Constraints and Limitations

- 1.8 The copyright of this report is vested in Create Consulting Engineers Ltd and the Client, Mulberry Tree Holdings (Kent). The Client, or their appointed representatives, may copy the report for purposes in connection with the development described herein. It shall not be copied by any other party or used for any other purposes without the written consent of Create Consulting Engineers Ltd or the Client.
- 1.9 Create Consulting Engineers Ltd accepts no responsibility whatsoever to other parties to whom this report, or any part thereof, is made known. Any such other parties rely upon the report at their own risk.
- 1.10 Create Consulting Engineers Ltd has endeavoured to assess all information provided to them during this appraisal. Should additional information become available which may affect the opinions expressed in this report, Create Consulting reserves the right to review this information and, if warranted, to modify the opinions presented in the report accordingly.

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- 1.11 The report summarises information from a number of external sources and is unable to offer any guarantees or warranties for the completeness or accuracy of information relied upon. Information from third parties has not been verified by Create Consulting Engineers Ltd unless otherwise stated in this report.
- 1.12 It should be noted that the risks which are identified in this report are perceived risks based on the available information at the time of writing and that the actual risks associated can only be assessed following a physical investigation of the Site.
- 1.13 The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the Site.

2.0 SOURCES OF INFORMATION

- 2.1 The information contained in this report is based on a review of readily available information pertaining to the Site.

Records Review

- 2.2 Key reports, drawings and accessed websites pertaining to this assessment are detailed in Table 2.1 below.

Document/Website	Author/Publisher	Date
Flood Maps, Groundwater Mapping, landfill Sites, pollution incidents, reservoir flood map and nitrate vulnerable zones – https://flood-map-for-planning.service.gov.uk/	UK Government	Accessed September 2022
BGS Geology of Britain Viewer - https://mapapps.bgs.ac.uk/geologyofbritain	British Geological Survey	Accessed September 2022
BGS Geoindex – Geology and borehole records - www.bgs.ac.uk/geoindex	British Geological Survey	Accessed September 2022
Public Health England Radon Map of UK (UKRadon.org, 2019)	Public Health England	Accessed September 2022
Pre-Application Document 22.0009_V2	Holloway	June 2022
Proposed Master Plan 22.009	Holloway	No date
Preliminary UXO Risk Assessment Ref PA10421c-00	1 st Line Defence	20 September 2022
Groundsure Insight Report (GS-9055136)	Groundsure Ltd	14 September 2022
Historical Ordnance Survey Maps (GS-9055137)	Groundsure Ltd	14 September 2022
Google Maps & Google Earth	Google	Accessed September 2022

Table 2.1: Key Information Sources

3.0 SITE LOCATION AND DESCRIPTION

Site Location

- 3.1 The Site is located between Barwick Street to the north/north east and Poulton Close to the south with Buckland Hospital 250m to the east and Dover centre approximately 1.5kms to the south east. The Site is centred at National Grid reference 629792, 142027.
- 3.2 The approximate location of the Site is provided as Figure 3.1 below:

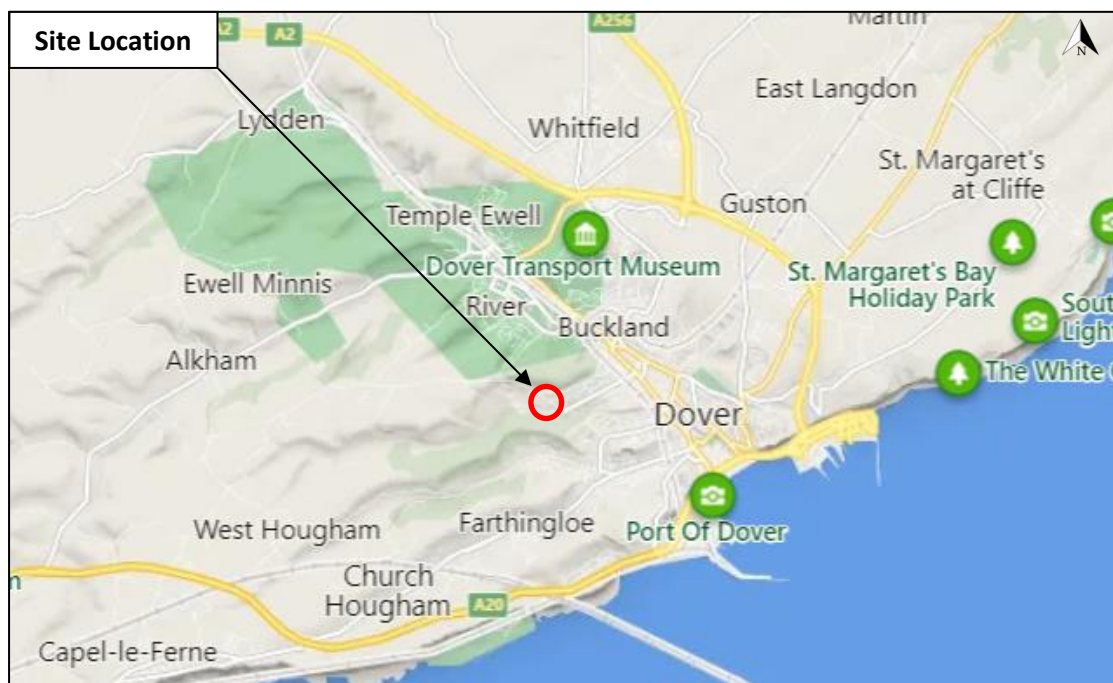


Figure 3.1: Site Location Plan

Site Description

- 3.3 A Site Walkover Survey was undertaken on 22 September 2022 and the findings are detailed in the following paragraphs with photographs taken during the survey presented in Appendix A.
- 3.4 The Site comprised an irregular plot of land to the south of Barwick Road, occupying an approximate area of 2.27 hectares and formed of two areas (Photos 1 to 4, Appendix A): the raised western area with large amounts of dense foliage and no buildings; and the central and eastern area situated at a lower level and occupied by two main buildings and two minor derelict buildings with large amounts of hardstanding in the central area and a large area of dense foliage over open ground in the eastern area.
- 3.5 The existing layout of the Site is illustrated in Figure 3.2 below.

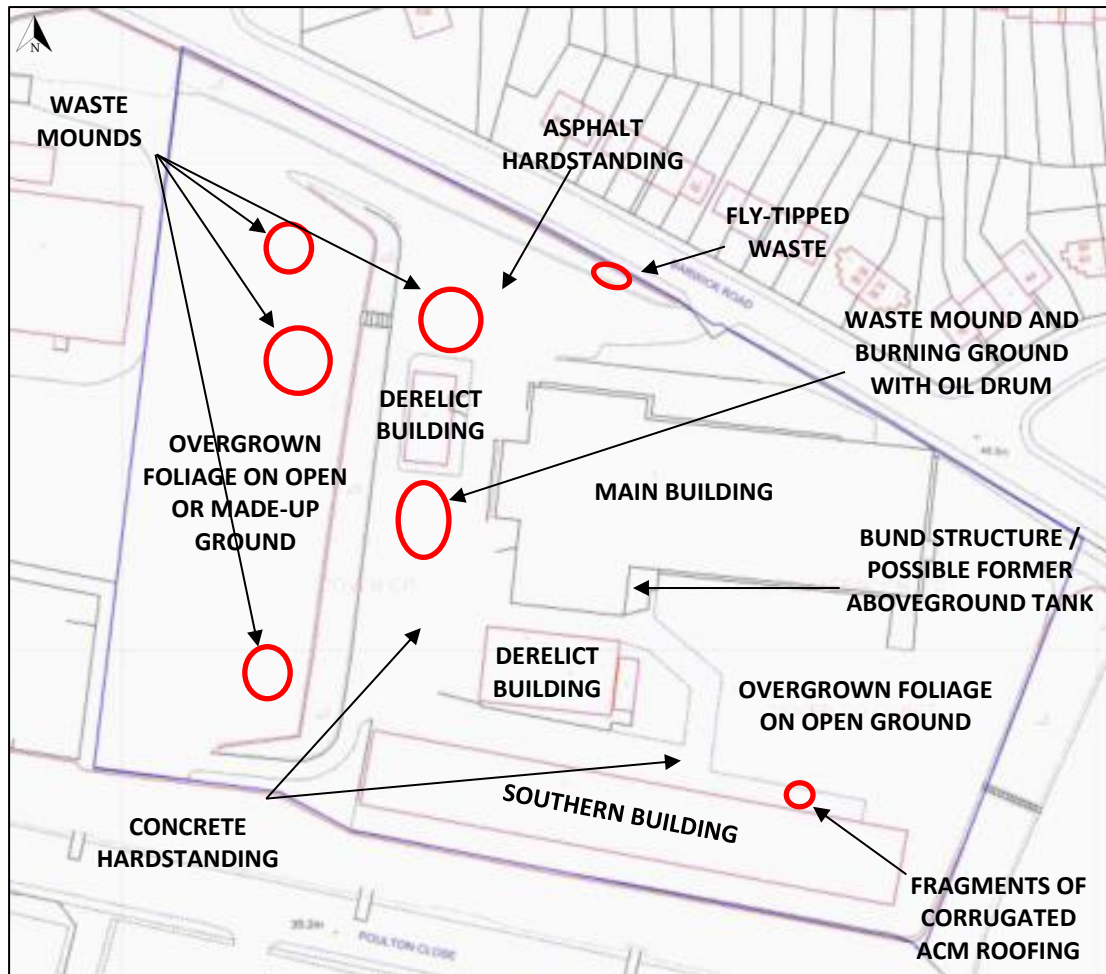


Figure 3.2: Existing Site Layout Plan

- 3.6 The western area of the Site is situated at a higher elevation than the rest of the Site and predominantly covered by dense foliage although with several mounds of waste materials including demolition/construction materials, soils, wood, metal fragments and redundant metal fencing (see Figure 3.2 above and Photos 5 to 7, Appendix A). The ground surface generally appeared to comprise gravelly made-up ground.
- 3.7 In the northwest part of the central and eastern area, there was a brick-built shell building (Photo 11, Appendix A) with a mound of waste materials to the north including concrete blocks, pallets, soil and tarmac on asphalt hardstanding (Photo 8, Appendix A) and a waste mound and burning ground to the south including construction waste, wood, metal fragments and empty oil drum on concrete hardstanding (Photos 9 & 10, Appendix A). Along the northern boundary of the Site, there were further fly-tipped waste materials evident (Photo 12, Appendix A).
- 3.8 Adjacent to the southern Site boundary, there was a long, single storey building with hardstanding to the front (Photos 13 to 15, Appendix A) with dense foliage to the east and south of the building (Photos 16 & 17, Appendix A). The internal roofing in the building comprised corrugated asbestos-cement material and broken fragments of this material was

identified on the hardstanding to the front of the building (Photo 18, Appendix A). The floor of the building comprised concrete hardstanding.

- 3.9 The main building and a small steel frame of a former building occupied the central area (Photos 19 to 21, Appendix A). The floor of the main building mainly comprised macadam surface with concrete in the lean-to extension to the south. A gas canister and evidence of bonfires was observed on the hardstanding within the building. To the south of the main building, there was a concrete breeze block structure completely covered in foliage which may have comprised a bunded area for an aboveground oil tank (Photo 22, Appendix A). The steel frame building was completely covered by dense foliage although leaking oil drums were reported to be present in this area in the 2007 report. There was no evidence of these drums still being present on Site.
- 3.10 The remaining eastern and northern areas of the Site comprised dense foliage with limited access although likely to be on open ground (Photos 16, 23 & 24, Appendix A).

Surrounding Land Use

- 3.11 The Site is located in mixed residential and industrial area on the outskirts of Dover with residential houses to the north and northeast (Photos 23 & 26, Appendix A) beyond Barwick Road and green field/meadow land beyond. To the east was an embankment leading down to a Community Centre with children's playground (Photo 27, Appendix A). To the south was a steep embankment leading to parking and access (Photo 28, Appendix A) for an industrial/business estate with small scale industrial operations and offices further to the south, southeast and southwest.
- 3.12 To the west of the Site was a Printing Works (Photo 25, Appendix A) and former concrete mixing works, although now appears to be used for aggregate storage and distribution with a business centre beyond.
- 3.13 The current surrounding land uses are illustrated in Figure 3.3.

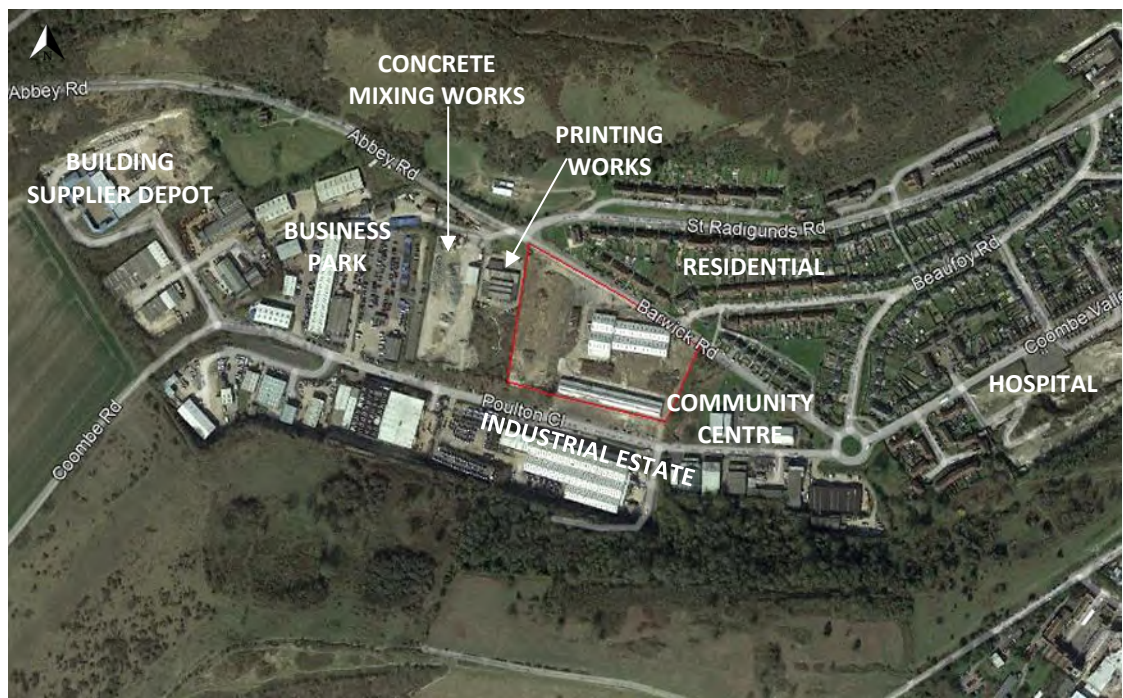


Figure 3.3: Surrounding Land Use Plan (Aerial Image, 2021)

4.0 ENVIRONMENTAL SETTING

Geology

- 4.1 According to the BGS 1:50,000 Digital Map of Great Britain, the southern area of the Site is underlain by superficial Head deposits although the northern area is directly underlain by the Chalk Bedrock. The Chalk bedrock comprises new Pit Chalk Formation under the majority of the Site with the northern boundary underlain by the Lewes Nodular Chalk Formation.
- 4.2 There are no BGS borehole records located on the Site although the nearest record located approximately 250m to the west of the Site (Ref: TR344SW32) recorded Head deposits (clay) beneath topsoil to a depth of 3 metres, underlain by the Chalk bedrock.
- 4.3 The environmental database reports (Appendix B) provide data on coal and non-coal mining areas and potential ground stability hazards for the UK that may affect the Site. The mining and potential ground stability hazards identified are summarised in Table 4.1 below.

Details	On-Site	Risk
Shrink swell	No	Negligible
Landslides	Yes	Low
Potential for Ground Dissolution Stability Hazards	Yes	Very Low
Potential for Collapsible Ground Stability Hazards	Yes	Very Low
Potential for Compressible Ground Stability Hazards	No	Negligible
Potential for Running Sand Ground Stability Hazards	No	Negligible
Coal Mining Affected Area	No	No hazard
Non-Coal Mining Affected Area	Yes	Hazard
Brine affected area	No	No hazard

Table 4.1: Mining and Potential Ground Stability Hazards

- 4.4 Refuse heaps, Brick Works and unspecified ground workings have been identified on the Site between 1906 and 1957.

Radon

- 4.5 Reference has been made to the Public Health England UK maps of radon and the environmental database report, both of which characterise the Site as being within a low to moderate probability area, where between 5% and 10% of homes are estimated to be at or above the action level (see Figure 4.1 overleaf).

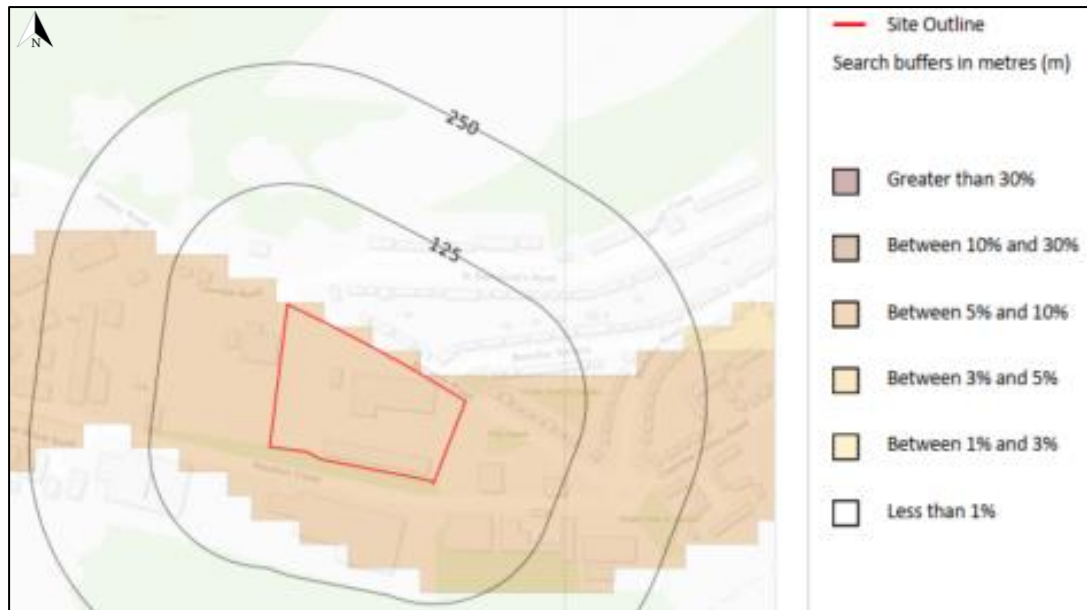


Figure 4.1: Radon Map

- 4.6 Therefore, it can be considered that basic radon protective measures are required in the construction of new dwellings on this Site.

Hydrogeology

- 4.7 The superficial Head deposits beneath the southern area of the Site is classified as Secondary A Aquifer with permeable layers capable of supporting water supplies at a local scale and in some cases form important source of base flow to rivers. The underlying Chalk bedrock is classified as a Principal Aquifer providing a high level of water storage and may support water supply/river base flow on a strategic scale.
- 4.8 The Site falls within a Groundwater Source Protection Zone 2 (Outer) with the nearest potable water supply located 293m to the west of the Site.

Hydrology

- 4.9 There are no surface water features identified on or within 250m of the Site with the nearest receptor being the River Dour 927m to the north.

Ecology

- 4.10 According to data from the environmental database report, there are no Site of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Areas of Natural Outstanding Beauty (AONB) within 500m of the Site.
- 4.11 There are local Nature Reserves located 48m to the south (High Meadow) and 278m to the south (Whinless Down).

-
- 4.12 According to data from the environmental database report, the Site is not classified as being within a *Nitrate Vulnerable Zone*.

Sensitivity

- 4.13 The sensitivity of each of the identified receptors is rated depending upon the environmental setting of the Site, the likelihood for pollutant linkages to be present and potential consequence of those potential pollutant linkages. The assessment approach adopted is based on guidance set out in the *Guidance for the Safe Development of Housing on Land Affected by Contamination* (R&D Publication 66, 2008).
- 4.14 The Site sensitivity with regards to groundwater can be classified as **H2 (Very High)** being underlain by a Principal Aquifer and located within an outer source protection zone.
- 4.15 The Site sensitivity to surface water is designated as **L2 (Very Low)**, with '*no surface water in the general area*'.

5.0 SITE HISTORY

- 5.1 The history of the Site has been assessed by reviewing available Ordnance Survey historical mapping and aerial images. The historical plans which have been reviewed comprised only readily available records and may be limited; however, the information available to date indicates that additional searches are unlikely to add to our understanding of the Site.
- 5.2 The historical development of the Site is summarised in Table 5.1 below and historical ordnance survey mapping is included in Appendix C.

Survey date and source	Detail
1865 (1:2,500) OS Mapping	<p>The Site was surveyed as part of a worked Brick Field across the southern area of the Site only. The northern area of the site is surveyed as undeveloped although a track marks the northern site boundary.</p> <p>The surrounding area to the north, west and south was surveyed as undeveloped land with Coombe Farm surveyed 200m to the west. To the east, the extension of the Brick Field workings and works buildings were surveyed between 120m and 175m to the east.</p>
1871 / 1873 (1:2,500 & 1:10,560) OS Mapping	<p>The Brick Field working areas across the southern area of the Site were no longer surveyed, suggesting these have been infilled.</p> <p>The Brick Field workings and buildings to the east were no longer surveyed. A Cotton Workhouse was surveyed approximately 300m to the east.</p>
1897 / 1898 (1:10,560 & 1:2,500) OS Mapping	No significant changes were surveyed.
1906 / 1907 (1:10,560 & 1:2,500) OS Mapping	<p>A Brick Works was surveyed in the south east corner of the Site with brick field workings surveyed across the southern area.</p> <p>The Brick Works was surveyed to extend to the west of the Site with the working area surveyed further to the west and south of the Site. Allotment gardens were surveyed to the north east of the Site and further development was surveyed to the east with a Gas Works 750m to the east.</p>
1937 / 1939 (1:2,500 & 1:10,560) OS Mapping	<p>The Site was surveyed as undeveloped (Brick Works no longer surveyed). The track along the northern boundary was now surveyed as Abbey Road.</p> <p>Residential development was surveyed 120m to the east of the Site.</p>

Survey date and source	Detail
1956 (1:1,250) OS Mapping	<p>The Site has been redeveloped and the central area surveyed as a <i>Corporation Yard</i> in the central and southern area with parking and a platform, and further buildings in the central northern area surveyed as <i>Ruin</i>. The eastern and western areas were surveyed as undeveloped, with the western area at a higher elevation.</p> <p>Barwick Road was now surveyed with residential housing to the north and east of the Site. Allotment gardens were surveyed to the south beyond a slope along the boundary and a track and the site to the west was surveyed as undeveloped.</p>
1960 Aerial Image	<p>The central and eastern areas of the Site shown to be occupied by buildings and numerous vehicles with hardstanding covering the majority of this area. The western area is shown to comprise undeveloped land.</p> <p>Housing shown to the east and north and allotments shown to the south.</p>
1961 (1:10,560) OS Mapping	No significant changes were surveyed.
1974 / 1976 (1:1,250 & 1:10,000) OS Mapping	<p>The central and eastern area of the Site surveyed as an <i>Automobile Distribution Centre</i> with access from Barwick Road, two principal buildings (still present today), a smaller building in between and two further small rectangular buildings to the west of the northern main building. The western area was surveyed as undeveloped.</p> <p>The site to the west was surveyed as a <i>Printing Works</i> and <i>Concrete Mixing Works</i> and to the south surveyed as an <i>Automobile Distribution Centre</i> with a <i>Fancy Box Factory</i> to the southwest and <i>Warehouses, Factory</i> and <i>Depot</i> to the south east. The Site to the north west was surveyed as a <i>Piggery</i>. A hospital was surveyed 300m to the east.</p>
1987 (1:10,000)	No significant changes were surveyed.
1990 Aerial Image	<p>The western area of the Site shown to be used as a car parking area with a ramp from the industrial site (northern area).</p> <p>Printing Works shown to the west, further distribution centre to the south and factories/warehouses to the south east and south west.</p>
1993 (1:1,250) OS Mapping	<p>One of the small rectangular site buildings no longer surveyed.</p> <p>No significant changes to surrounding area was surveyed.</p>
2001 / 2003 (1:10,000 & 1:1,250) OS Mapping	<p>No significant changes of the Site were surveyed.</p> <p>The cement works to the west no longer surveyed with a Business Park now surveyed to the west beyond the Printing Works.</p>
2002 Aerial Image	The small building between the large buildings shown to be derelict/demolished.
2007 Aerial Image	The Site is shown to be vacant.

Survey date and source	Detail
2010 (1:10,000) OS Mapping	No significant changes were surveyed.
2022 (1:10,000) OS Mapping	No significant changes surveyed. The gas holder to the east no longer surveyed
2021 Aerial Image	The Site is shown to be vacant although cleared of vegetation.
2022 Aerial Imagery	No significant changes were shown.

Table 5.1: Historical Site Uses**Preliminary Unexploded Ordnance Risk Assessment Ref: PA10421c-00, 20 September 2022**

- 5.3 Given the location of the Site and its location close to Dover, it is possible that this area will have been affected by bomb damage during World War II.
- 5.4 A Preliminary Unexploded Ordnance (UXO) Risk Assessment report was prepared by 1st Line Defence on 20 September 2022, in accordance with CIRIA C681: Unexploded Ordnance, a Guide for the Construction Industry.
- 5.5 The assessment comprised a review of historical archives, library and geo-databases to assess the potential for previous military use, indicators for potential aerial delivered UXO threat and the proposed works on the Site.
- 5.6 The key results of the assessment are summarised below:
- There is no indication that the Site footprint had any former military use, including the storage or disposal of ordnance;
 - Post-war OS mapping indicated small structures in the north west of the Site recorded as "ruin", indicating bomb damage during the war; and
 - The borough of Dover is reported to have sustained a high density of bombing during the war, although no incidents are recorded within the Site boundary.
- 5.7 On the basis of the findings above, it is recommended that further research in the form of a Detailed UXO Risk Assessment is completed prior to undertaking any intrusive works on the Site.
- 5.8 A copy of the Preliminary UXO Risk Assessment report is provided in Appendix D.

6.0 ENVIRONMENTAL INFORMATION

Publicly Available Information

- 6.1 Information on potentially significant environmental issues and controls at the Site and surrounding area may be held on public records by regulatory authorities. This information was sourced directly from the regulatory authorities and from the environmental database reports.
- 6.2 The environmental database reports are provided in Appendix B and a summary is provided in Table 6.1 below:

Public Record	On Site / Off Site	Features
Landfill & Waste Sites (Local Authority & British Geological Survey)	On Site	<p>There is 1No. historical landfill identified within the Site boundary; Site Reference DO3 held by Borough Council, licensed to accept inert waste and last recorded in December 1959.</p> <p>There is 1No. historical waste use (ground workings and refuse heap) identified on the Site, dated 1956.</p> <p>No further landfill, waste treatment, transfer or disposal Sites were identified within the Site boundary.</p>
	Off Site	<p>There are no records of current or historical landfills within 250m of the Site boundary.</p> <p>There are a number of waste exemptions registered within 250m of the Site, including:</p> <ul style="list-style-type: none"> • Spreading waste on agricultural land and waste in construction 52m to E; and • Preparatory treatments, recovery of scrap metal, sorting of mixed waste and storage of waste 159m to SE.
Local Authority Searches	On Site	<p>The following historical records of industrial activity taking place on the Site were identified:</p> <ul style="list-style-type: none"> • Refuse heaps (1957); • Brick Works (1906 to 1938); and • Tanks (1973/1974). <p>The following current industrial activities are registered on the Site were:</p> <ul style="list-style-type: none"> • Electricity substation; and • Industrial Estate.

Public Record	On Site / Off Site	Features
	Off Site	<p>Historical industrial sites identified within 250m of the Site included:</p> <ul style="list-style-type: none"> • Works & Pit 2m to W/20m SW with tanks (1907-1974); • Works 31m to S (1974); • Pit 42m to SE (1872); • Factory 55m to W (1974); • Ground workings 111m to SW (1974); • Electrical substation 123 to E (1956-1997); • Tank 172m to W (1974); and • Pit 208m to NE (1872-1938). <p>Current industrial sites identified within 250m of the Site included:</p> <ul style="list-style-type: none"> • Tank 38m to W; • Electrical substation 49m to S and 171m to W; • Distribution & haulage 51m to S and 111m to W; • Industrial Estate 74m to SW; and • Vehicle repair, servicing & testing 114m to E & 188m to W.
Environmental Permits (Environment Agency and Local Authority)	On Site	<p>There is 1No. historical environmental permit registered to the Site; Part B permit for respraying of road vehicles (no enforcements).</p> <p>There are no other records of any environmental permits or licenses within the Site boundary.</p>
	Off Site	<p>The following environmental permits were identified within 250m of the Site:</p> <ul style="list-style-type: none"> • Historical Part B permit for coating processes 72m to S (no enforcements); • Part B permit for coating processes 121m to W (no enforcements); • Part B permit for coating processes 184m to W (no enforcements); • Part B permit for waste oil burner 187m to W (no enforcements); and • Part B permit for waste oil burner 200m to W (no enforcements). <p>No discharge consents or pollution incident were identified within 250m of the Site.</p>

Table 6.1: Publicly Recorded Information

Contamination Statement, September 2007

- 6.3 A Contamination Statement was prepared for the Site in September 2007 which comprised of a view pfa previous desk study and site investigation reports by CC Geotechnical Ltd (2004) and an updated desk study assessment by CC Geotechnical Ltd in October 2006.
- 6.4 The key findings of the desk study are summarised below:
- The walkover survey (September 2006) reported fly tipping of a variety of waste material son the Site including electrical products, including fridges and televisions, gas canisters, leaking oil drums, tyres, paint tins and general domestic refuse (*these wastes were predominantly no longer observed on the Site*);
 - Japanese knotweed was identified to be present in several areas across the Site (*it is understood that this was removed from the Site and was not recorded in any recent ecological surveys*);
 - The Site has been subjected to commercial extraction of clay followed by a period of landfilling to level the Site for subsequent development and industrial/commercial use; and
 - The possibility that the Site was used in a military application during World War 2 and the potential for Unexploded ordnance (UXO) to be present on Site as this area was shelled and bombed during the war.
- 6.5 Potential sources of contamination identified for the Site included poor quality Made Ground, recent industrial land uses, potential military use (explosive residues), UXO and largescale landfilling.
- 6.6 A summary of the findings of the Phase 2 Site Investigation conducted in 2004 is provided below:
- Ground Gas monitoring/Gas Spike Survey identified the presence of ground gases (methane and carbon dioxide) consistent with Characteristic Situation 2 classification (no details provided), although I was reported that the classification is inadequate.
 - Heavy metal contaminants (Arsenic, Chromium, Lead and Nickel) exceeded the screening criteria used at that time (now superseded) and asbestos (chrysotile and amosite) were identified in a few of the samples of Made Ground sampled.
- 6.7 It was reported that further ground gas monitoring was required to characterise ground gas risk, further hydrocarbon testing would be required (including speciated testing and investigation if areas identified in 2006 site walkover), leachate testing should be undertaken to assess risk to the underlying aquifer and explosive residue testing should be completed.

7.0 PRELIMINARY RISK ASSESSMENT

- 7.1 In accordance with guidance outlined by DEFRA and the Environment Agency's Land Contamination Risk Management (LCRM) guidance (2020), a Preliminary Risk Assessment (PRA) has been formulated for the Site. A preliminary Conceptual Site Model (CSM) has been developed using potential source-pathway-receptor linkages using a combination of the likelihood of a pollution event to occur, taking account of the presence of a hazard (or source) and integrity of a pathway, versus the consequence of a pollution occurrence, which is essentially a measure of the severity of a hazard to an identified receptor (such as future sensitive end-users).
- 7.2 The presence of contamination (as a potential hazard) does not necessarily mean that there is a risk. It is the exposure pathway and the quantity of contamination that reaches the receptor which may determine the effect on a receptor.
- 7.3 The risk classification for both likelihood and consequence is based on methodology presented in Contaminated Land Risk Assessment, A Guide to Good Practice (CIRIA C552, 2001) and has been developed from procedures outlined in the EA's LCRM guidance. The DETR, with the EA and Institute of Environment & Health, has also published guidance on risk assessment (Guidelines for Environmental Risk Assessment and Management). The guidance states that the designation of risk is based upon a consideration of both:
- The magnitude of the potential consequence (severity) of risk occurring which takes into account both potential severity of the hazard and sensitivity of the receptor; and
 - The likelihood of an event occurring (probability) which takes into account both the presence of the hazard and receptor and the integrity of the pathway.
- 7.4 The magnitude of consequence (severity) and likelihood (probability) is defined in the CIRIA guidance, together with examples. The two classifications are then compared to obtain an estimation of risk for each pollution linkage, ranging from "very high risk" to "very low risk" (Appendix E). A description of the risks and likely actions are as follows:

Very High Risk: 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.

If this risk is realised, it is likely to result in significant environmental and financial liability to current and/or future Site owners/occupiers. Urgent investigation (if not already undertaken) and remediation is likely to be required.

High Risk: Harm is likely to arise to a designated receptor from an identified hazard. If risk is realised, it is likely to present a sizeable environmental and financial liability to current and/or future Site owners/occupiers. Urgent investigation

is required, and remediation work may be necessary in the short term and likely over the longer term.

Moderate Risk: It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely the harm would be relatively mild.

Investigation is normally required to clarify the risk and determine the potential environmental liability. Some remedial works may be required over the longer term.

Low Risk: It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.

Limited investigation may be recommended to clarify the risk, dependant on the sensitivity of the receptor and view point of those of interest. Any remedial works are likely to be fairly limited.

Very Low Risk: There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is likely to be mild or minor.

- 7.5 The benefit of estimating the risk in this way is that it can be revised after each investigation phase as the CSM and corresponding pollution linkages are refined.
- 7.6 This PRA is based on the proposed commercial end-use with residential units above and no communal gardens or soft landscaped areas and the results of this risk assessment are presented in Table 7.1 overleaf. Should the development proposal change, then the risk assessment should be revised accordingly.

Source	Pollutant	Pathway	Receptor	Likelihood of Occurrence	Consequence (severity)	Potential Risk	Comment	Residual Risk
Current and historical Site use (Brick Works, groundworks, landfilling, refuse heaps, Corporation Yard and automobile distribution with aboveground oil storage and leaking oil drums) and subsequent redevelopments with potential for poor quality Made Ground	Asbestos-containing soils (ACSSs), metals, Total Petroleum Hydrocarbons (TPH), Polyaromatic Hydrocarbons (PAHs) and Volatile Organic Compounds	Possible direct exposure with contaminated soils and accidental ingestion/inhalation of contaminated dust generated during construction or in private gardens/soft landscaped areas.	Future Residents	Likely	Medium	Moderate	Potential exposure pathway between soil contamination and future end users. Site investigation, risk assessment and site remediation may be necessary to mitigate risk.	Low
			Construction and ground workers	Likely	Mild	Moderate/Low	Potential for exposure to soil contamination although use of standard PPE during construction would mitigate any potential exposure risk.	Low
		Vertical migration of contaminants within shallow soils via leaching/lateral migration down hydraulic gradient.	Controlled waters (groundwater)	Likely	Medium	Moderate	Potential exposure pathway between soil contamination and underlying Principal Aquifer (in SPZ 2). Site investigation, risk assessment and site remediation may be necessary to mitigate risk.	Low
		Lateral migration of contaminants down hydraulic gradient (via groundwater)	Controlled waters (surface water)	Unlikely	Minor	Very Low	No potential receptors; no exposure pathway. No action required.	-
		Permeation of water supplies by organic contaminants for new residential units.	Buildings and services (foundations and water supply pipes)	Likely	Medium	Moderate	Potential exposure pathway between soil contamination and buildings/water supply pipes. Site investigation, risk assessment and site remediation may be necessary to mitigate risk.	Low
	Ground gas (methane and carbon dioxide)	Presence of ground gas contaminants on Site and inhalation of harmful (asphyxiant) ground gases or accumulation of explosive gases.	Future Residents	Likely	Medium	Moderate	Potential exposure pathway between ground gas contamination and future end users. Site investigation, ground gas monitoring, risk assessment and installation of protection measures may be necessary to mitigate risk.	Low
			Construction and ground workers	Low Likelihood	Medium	Moderate/Low	Potential for exposure to ground gas contamination although use of Respiratory PE would mitigate any potential exposure risk.	Low
Military use (raised in 2004 report)	Asbestos, metals, hydrocarbons, Volatile Organic Compounds, acids and explosive residues	Possible direct exposure with contaminated soils and accidental ingestion/inhalation of contaminated dust generated during construction or in private gardens/soft landscaped areas.	Future Residents	Unlikely	Medium	Low	Preliminary UXO risk assessment found no evidence of military use of the Site; no action necessary.	Low
			Construction and ground workers	Unlikely	Mild	Very Low		Low
Current and historical adjacent site uses (Brick Works, clay pits, landfilling, Printing Works, Concrete Mixing Works, others works and warehouses)	Hydrocarbons and Volatile Organic Compounds (VOCs)	Possible lateral migration of organic contamination onto Site and inhalation of contamination vapours or accumulation of explosive vapours.	Future Residents	Unlikely	Medium	Low	No significant off-site potential sources in close proximity to site and low permeability superficial deposit will limit migration potential. No action necessary.	-
			Construction and ground workers	Unlikely	Mild	Very Low		-
	Ground gas (methane and carbon dioxide)	Possible lateral migration of ground gas contaminants onto Site and inhalation of harmful (asphyxiant) ground gases or accumulation of explosive gases.	Future Residents	Likely	Medium	Moderate	Potential exposure pathway between off-site ground gas sources (landfilling) and future end users. Site investigation, ground gas monitoring, risk assessment and installation of protection measures may be necessary to mitigate risk.	Low
			Construction and ground workers	Low Likelihood	Medium	Moderate/Low	Potential for exposure to off-site ground gas contamination although use of Respiratory PE would mitigate any potential exposure risk.	Low

Source	Pollutant	Pathway	Receptor	Likelihood of Occurrence	Consequence (severity)	Potential Risk	Comment	Residual Risk
Buildings	Asbestos-Containing Materials (ACMs)	Exposure to asbestos fibres from ACMs present in buildings/outbuilding curtilage	Future Residents	Unlikely	Medium	Low	No exposure risk; any ACMs present will be removed during demolition and construction process.	-
		Inhalation/ingestion of harmful fibres during ground works. Exposure likely to be short term and use of appropriate PPE and an awareness of the hazards would lower the risk.	Demolition workers	Likely	Medium	Moderate	ACMs identified on Site. Pre-demolition survey required and protection measures taken during redevelopment works to mitigate risk.	Low
Invasive Plants	Japanese Knotweed	Spread of an invasive plant	Buildings, adjacent sites	Unlikely	Medium	Low	Japanese Knotweed formerly present reportedly removed a few years ago, and not identified in recent ecological surveys. No action necessary.	-
Radon Gas	Radon	Possible harm from radon gas	Future Site Residents	Low Likelihood	Medium	Moderate/Low	Site is in a Radon affected area; basic gas protection measures will, be required.	-
World War 2 Bombs	Unexploded Ordnance (UXO)	Direct contact and explosion during below ground works, excavation and services/foundation formation	Enabling/Construction Workers	Low Likelihood	Severe	Moderate	Preliminary UXO completed; further detailed UXO risk assessment and/or risk mitigation measures required prior to/during any below ground works.	Low

Table 7.1: Preliminary Risk Assessment

8.0 CONCLUSIONS & RECOMMENDATIONS

Conclusions

- 8.1 The proposed development for the Site will comprise 137 dwellings (comprising no. 73 houses and 64 apartments) with relocation of the existing vehicular access and creation of 1 x additional vehicular access from Barwick Road, alongside associated parking, landscaping and infrastructure.
- 8.2 The environmental sensitivity of the Site has been assessed as **very high** with respect to groundwater and **very low** with respect to surface water surface water.
- 8.3 Based on the findings of the Phase 1 Contaminated Land Assessment, potential pollutant linkages have been identified (see Table 7.1 above) associated with the future development and change of use of the Site and the following potential sources:
- Current and recent site uses (Brick Works, clay pits, landfill, refuse heaps, leaking oil drums, possible aboveground fuel storage, Corporation Yard and Automobile Distribution Centre) as well as the potential presence of poor quality Made Ground underneath the Site arising from prior redevelopment;
 - Local historical and current site uses (Brick Works, clay pits, landfilling, Printing Works, Concrete Mixing Woks and other works/warehouses) to have impacted on the site, including garages, electrical substations, factories, works, railway use and a gas works;
 - Potential military use identified in a 2004 report;
 - Potential presence of Japanese Knotweed;
 - Potential asbestos containing materials (ACM) in the existing buildings;
 - Potential for presence of Radon Gas; and
 - Potential presence of Unexploded Ordnance (UXO).
- 8.4 The potential presence of contamination (soil and ground gas) arising from the historical/current use of the Site is considered to be high and pose a **moderate risk** to future residential end-users and to water supply services for the proposed development.
- 8.5 The potential impact from local off-site sources of organic contamination is considered to be **low** risk to residential end users although the risk posed by off-site ground gas sources (landfill) adjacent to the Site is considered to pose a **moderate** risk to future residential end users.
- 8.6 The potential risk to groundworkers from site (soi/ground gas) contamination and off-site ground gas contamination is considered to pose a **moderate/low** risk to construction/ground workers although can be mitigated through the use of standard or respiratory personal protective equipment.

- 8.7 The potential risk posed to groundwater is considered to be **moderate** due to the presence of the underlying chalk bedrock and location in a source protection zone. The potential risk posed to surface water is considered to be **very low** due to the lack of local surface water receptors.
- 8.8 The potential risk posed by Military Use (explosives residues, etc) has been assessed as **low/very low** as no evidence has been identified that the Site was used for this purpose.
- 8.9 It is understood that the Japanese Knotweed formerly present on the Site was removed a few years ago and no recent ecological surveys have identified the presence of this invasive weed. The risk posed is therefore assessed as **low**.
- 8.10 The potential risk posed by Radon Gas to future residential end users has been assessed as **moderate/low** and basic radon protection measures will be required for this development.
- 8.11 The potential risk posed by Unexploded Ordnance (UXO) at the Site has been assessed as **moderate**.
- 8.12 The potential for asbestos-containing materials within the site buildings is considered to be **likely** and a pre-demolition asbestos survey will be necessary prior to demolition.

Recommendations

- 8.13 The findings of this assessment have identified the potential for soil, ground gas and groundwater contamination to be present on the Site arising from previous historical and recent industrial on-site activities as well as potential off-site historical and recent industrial site uses. This relates to historical site uses (brick Works), subsequent landfilling of worked brick fields and to provide a developable platform and subsequent use of the Site for commercial/industrial purposes including the servicing and respraying of vehicles and the use and storage of oil.
- 8.14 In order to further assess the condition of the Site and determine the nature and extent of any necessary remediation works required to enable residential redevelopment, a detailed Phase 2 Site Investigation will need to be completed. This should comprise the formation of exploratory holes across the Site to enable the inspection, sampling and testing of soils and groundwater (if present), and the monitoring for ground gases. These intrusive works can be undertaken once planning has been granted, under a condition, and completed as part of necessary geotechnical site investigations for foundation design.
- 8.15 Once the condition of the Site has been established through site investigation, a risk assessment will need to be completed to determine the nature and extent of remediation (if any) to mitigate any risk to future site end users and local environmental receptors.
- 8.16 If remediation works are necessary, a Remediation Strategy will need to be developed for the Site and submitted to the Local Planning Authority for approval and then implemented under

the supervision of a suitably qualified, independent environmental engineer who will validate the completion of the works.

- 8.17 Prior to any intrusive works (including site investigation), a detailed UXO Risk Assessment report will be required to further assess the presence of UXO risk at the Site.
- 8.18 Basic radon protection measures will need to be included within the construction of residential houses on the Site.
- 8.19 It is recommended that a pre-demolition asbestos survey is completed on the site buildings prior to demolition and any ACMs identified removed and disposed off-site by a licensed contractor in accordance with prevailing waste management regulations.

9.0 REFERENCES

- I. BRITISH RESEARCH ESTABLISHMENT (BRE). 2015. BR211 Radon: Guidance on protective measures for new buildings. British Research Establishment. Bracknell.
- II. BRITISH STANDARDS INSTITUTION (BSI). 2017. BS 10175:2011+A2. Code of practice for investigation of potentially contaminated Sites. British Standards Institution. London. 2017.
- III. Construction Industry Research and Information Association (CIRIA). Contaminated Land Risk Assessment. A Guide to Good Practice. CIRIA C552 2001.
- IV. DEFRA / Environment Agency, Model Procedures for the Management of Land Contamination, CLR11, September 2004.
- V. DEFRA. 2011. Guidelines for Environmental Risk Assessment and Management – Green Leaves III. November 2011.
- VI. DEFRA, Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance, April 2012.
- VII. ENVIRONMENT AGENCY. Guidance for the Safe Development of Housing on Land Affected by Contamination R&D Publication 66, 2008.
- VIII. ENVIRONMENT AGENCY. Land Contamination Risk Management (LCRM) guidance, 2021.
- IX. FREE MAP TOOLS. 2019. Approximate Elevation Finder available at <https://www.freemaptools.com/elevation-finder.htm>
- X. GOV.UK. 2019. Flood Maps, Groundwater Mapping, landfill Sites, pollution incidents, reservoir flood map and nitrate vulnerable zones available at: <https://flood-map-for-planning.service.gov.uk/>
- XI. INSTITUTE OF GEOLOGICAL SCIENCES. 1984. Hydrogeological map of the area between Cambridge and Maidenhead – NERC, London.
- XII. NATIONAL ENVIRONMENT RESEARCH COUNCIL (NERC). 2019. Geindex onshore – British Geological Survey available at <http://mapapps.bgs.ac.uk/>
- XIII. Ministry FOR HOUSING, COMMUNITIES AND LOCAL GOVERNMENT. 2018. National Planning Policy Framework. 2020.
- XIV. UKRADON.ORG. 2019. UK maps of Radon available at <https://www.ukradon.org/>

APPENDICES

APPENDIX A

SITE PHOTOGRAPHS

Photo 1: Front of Site with entrance via Barwick Road and residential housing to the north (looking south east)



Photo 2: West and central areas of Site with derelict industrial buildings in the central area (looking south east)



Photo 3: Wester area of Site, overgrown with vegetation (looking south)



Photo 4: Eastern area of Site from Barwick Road (looking south)



Photo 5: Waste mound in north west area with demolition rubble, fencing and metal fragments on open ground



Photo 6: Fly tipped material in north west area with wood, cardboard and construction materials on open ground



Photo 7: Waste mound in south west area with demolition rubble and soil on open ground



Photo 8: Waste mound in central north west area with large concrete blocks, pallets, soil and unused tarmac on asphalt hardstanding



Photo 9: Waste mound and burning in central western area with wood, metal fragments and soil on concrete hardstanding



Photo 10: Waste mound in central western area with empty oil drum on concrete hardstanding



Photo 11: Derelict building in central western area of Site with concrete hardstanding surrounds (looking south west)



Photo 12: Fly tipped material on asphalt hardstanding along northern boundary of Site, near access gate (looking north)



Photo 13: Building adjacent to southern boundary with embankment up to western area and hardstanding to the front (looking south)



Photo 14: Southern-most building with hardstanding to front (looking south east)



Photo 15: Inside southern building, with corrugated ACM internal roofing and concrete floor (looking west)



Photo 16: Southeast corner of Site, with southern building and areas of overgrown foliage on open ground (looking south)



Photo 17: Overgrown area along southern boundary, behind southern building (looking west)



Photo 18: Fragments of corrugated ACM roofing on hardstanding outside southern building



Photo 19: Central building with concrete hardstanding to front and sides (looking north east)



Photo 20: Steel frame for central southern building overgrown by foliage (looking north east)



Photo 21: Internal of central main building with asphalt floor (looking north west)



Photo 22: Concrete breeze block structure cover by foliage (possible bund structure for tank?)



Photo 23: North eastern area of Site overgrown by foliage with housing (along Barwick Road) beyond (looking north east)



Photo 24: The area to the north of the main building (adjacent to Barwick Road) overgrown by foliage (looking east)



Photo 25: Printing Works adjacent to the west of the Site, from Barwick Road (looking south)



Photo 26: Barwick Road to the north of the Site with residential houses beyond (looking south east)



Photo 27: Embankment to the east of the Site with Community Centre and children's playground beyond (looking south west)



Photo 28: Embankment to the south of the Site with parking, access road a business estate beyond (looking north west)



APPENDIX B

GROUNDSURE INSIGHT REPORT

BARWICK ROAD, DOVER,

Order Details

Date: 14/09/2022

Your ref: P22-2678

Our Ref: GS-9055136

Site Details

Location: 629792 142027

Area: 2.27 ha

Authority: [Dover District Council](#)



Summary of findings

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Aerial image

p. 8

OS MasterMap site plan

p.13

groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
<u>14</u>	<u>1.1</u>	<u>Historical industrial land uses</u>	6	5	8	19	-
<u>16</u>	<u>1.2</u>	<u>Historical tanks</u>	2	3	1	9	-
<u>17</u>	<u>1.3</u>	<u>Historical energy features</u>	0	0	3	5	-
18	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
<u>19</u>	<u>2.1</u>	<u>Historical industrial land uses</u>	7	7	10	25	-
<u>21</u>	<u>2.2</u>	<u>Historical tanks</u>	2	3	1	13	-
<u>22</u>	<u>2.3</u>	<u>Historical energy features</u>	0	0	4	6	-
23	2.4	Historical petrol stations	0	0	0	0	-
23	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
24	3.1	Active or recent landfill	0	0	0	0	-
24	3.2	Historical landfill (BGS records)	0	0	0	0	-
25	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
<u>25</u>	<u>3.4</u>	<u>Historical landfill (EA/NRW records)</u>	1	0	0	1	-
<u>25</u>	<u>3.5</u>	<u>Historical waste sites</u>	1	0	0	0	-
<u>26</u>	<u>3.6</u>	<u>Licensed waste sites</u>	0	0	0	1	-
<u>26</u>	<u>3.7</u>	<u>Waste exemptions</u>	0	0	22	11	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
<u>30</u>	<u>4.1</u>	<u>Recent industrial land uses</u>	2	3	35	-	-
33	4.2	Current or recent petrol stations	0	0	0	0	-
33	4.3	Electricity cables	0	0	0	0	-
33	4.4	Gas pipelines	0	0	0	0	-
34	4.5	Sites determined as Contaminated Land	0	0	0	0	-



34	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
34	4.7	Regulated explosive sites	0	0	0	0	-
34	4.8	Hazardous substance storage/usage	0	0	0	0	-
34	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
35	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
35	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	1	0	7	0	-
36	4.12	Radioactive Substance Authorisations	0	0	0	0	-
36	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
36	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
37	4.15	Pollutant release to public sewer	0	0	0	0	-
37	4.16	List 1 Dangerous Substances	0	0	0	0	-
37	4.17	List 2 Dangerous Substances	0	0	0	0	-
37	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	1	3	-
38	4.19	Pollution inventory substances	0	0	0	0	-
38	4.20	Pollution inventory waste transfers	0	0	0	0	-
38	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
39	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
41	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
43	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
45	5.4	<u>Groundwater vulnerability- soluble rock risk</u>	Identified (within 0m)				
45	5.5	Groundwater vulnerability- local information	None (within 0m)				
46	5.6	<u>Groundwater abstractions</u>	0	0	0	3	22
52	5.7	<u>Surface water abstractions</u>	0	0	0	0	1
52	5.8	<u>Potable abstractions</u>	0	0	0	2	16
56	5.9	<u>Source Protection Zones</u>	2	0	1	3	-
57	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
58	6.1	Water Network (OS MasterMap)	0	0	0	-	-

58	6.2	Surface water features	0	0	0	-	-
59	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
59	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
60	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
61	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
61	7.2	Historical Flood Events	0	0	0	-	-
61	7.3	Flood Defences	0	0	0	-	-
62	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
62	7.5	Flood Storage Areas	0	0	0	-	-
63	7.6	Flood Zone 2	None (within 50m)				
63	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
64	8.1	<u>Surface water flooding</u>	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding					
66	9.1	<u>Groundwater flooding</u>	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
67	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	0	1
68	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
68	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
68	10.4	Special Protection Areas (SPA)	0	0	0	0	0
68	10.5	National Nature Reserves (NNR)	0	0	0	0	0
69	10.6	<u>Local Nature Reserves (LNR)</u>	0	1	0	2	1
69	10.7	<u>Designated Ancient Woodland</u>	0	0	0	0	7
70	10.8	Biosphere Reserves	0	0	0	0	0
70	10.9	Forest Parks	0	0	0	0	0
70	10.10	Marine Conservation Zones	0	0	0	0	0
70	10.11	Green Belt	0	0	0	0	0
70	10.12	Proposed Ramsar sites	0	0	0	0	0



71	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
71	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
71	10.15	Nitrate Sensitive Areas	0	0	0	0	0
71	10.16	<u>Nitrate Vulnerable Zones</u>	0	0	0	0	1
73	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
74	10.18	<u>SSSI Units</u>	0	0	0	0	2
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
76	11.1	World Heritage Sites	0	0	0	-	-
77	11.2	<u>Area of Outstanding Natural Beauty</u>	1	0	0	-	-
77	11.3	National Parks	0	0	0	-	-
77	11.4	Listed Buildings	0	0	0	-	-
78	11.5	Conservation Areas	0	0	0	-	-
78	11.6	Scheduled Ancient Monuments	0	0	0	-	-
78	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
79	12.1	<u>Agricultural Land Classification</u>	Grade 4 (within 250m)				
80	12.2	<u>Open Access Land</u>	0	0	6	-	-
80	12.3	Tree Felling Licences	0	0	0	-	-
81	12.4	<u>Environmental Stewardship Schemes</u>	0	0	4	-	-
81	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
82	13.1	<u>Priority Habitat Inventory</u>	0	1	12	-	-
83	13.2	<u>Habitat Networks</u>	1	0	8	-	-
84	13.3	<u>Open Mosaic Habitat</u>	1	0	0	-	-
84	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
85	14.1	<u>10k Availability</u>	Identified (within 500m)				
86	14.2	Artificial and made ground (10k)	0	0	0	0	-
87	14.3	<u>Superficial geology (10k)</u>	1	0	2	2	-

88	14.4	Landslip (10k)	0	0	0	0	-
89	14.5	<u>Bedrock geology (10k)</u>	2	0	6	2	-
90	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
91	15.1	<u>50k Availability</u>	Identified (within 500m)				
92	15.2	Artificial and made ground (50k)	0	0	0	0	-
92	15.3	Artificial ground permeability (50k)	0	0	-	-	-
93	15.4	<u>Superficial geology (50k)</u>	1	0	1	1	-
94	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
94	15.6	Landslip (50k)	0	0	0	0	-
94	15.7	Landslip permeability (50k)	None (within 50m)				
95	15.8	<u>Bedrock geology (50k)</u>	2	0	2	0	-
96	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
96	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
97	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
98	17.1	<u>Shrink swell clays</u>	Negligible (within 50m)				
99	17.2	<u>Running sands</u>	Negligible (within 50m)				
100	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
101	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
102	17.5	<u>Landslides</u>	Low (within 50m)				
104	17.6	<u>Ground dissolution of soluble rocks</u>	Very low (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
106	18.1	Natural cavities	0	0	0	0	-
107	18.2	<u>BritPits</u>	1	0	0	1	-
107	18.3	<u>Surface ground workings</u>	7	5	9	-	-
108	18.4	Underground workings	0	0	0	0	0
108	18.5	Historical Mineral Planning Areas	0	0	0	0	-



<u>109</u>	<u>18.6</u>	<u>Non-coal mining</u>	1	0	1	0	1
109	18.7	Mining cavities	0	0	0	0	0
<u>109</u>	<u>18.8</u>	<u>JPB mining areas</u>	Identified (within 0m)				
<u>110</u>	<u>18.9</u>	<u>Coal mining</u>	Identified (within 0m)				
110	18.10	Brine areas	None (within 0m)				
110	18.11	Gypsum areas	None (within 0m)				
111	18.12	Tin mining	None (within 0m)				
111	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
<u>112</u>	<u>19.1</u>	<u>Radon</u>	Between 5% and 10% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
<u>114</u>	<u>20.1</u>	<u>BGS Estimated Background Soil Chemistry</u>	6	1	-	-	-
114	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
115	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
116	21.1	Underground railways (London)	0	0	0	-	-
116	21.2	Underground railways (Non-London)	0	0	0	-	-
116	21.3	Railway tunnels	0	0	0	-	-
116	21.4	Historical railway and tunnel features	0	0	0	-	-
116	21.5	Royal Mail tunnels	0	0	0	-	-
117	21.6	Historical railways	0	0	0	-	-
117	21.7	Railways	0	0	0	-	-
117	21.8	Crossrail 1	0	0	0	0	-
117	21.9	Crossrail 2	0	0	0	0	-
117	21.10	HS2	0	0	0	0	-



Recent aerial photograph



Capture Date: 23/04/2021

Site Area: 2.27ha



Recent site history - 2018 aerial photograph



Capture Date: 06/05/2018

Site Area: 2.27ha



Recent site history - 2012 aerial photograph



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Capture Date: 27/05/2012

Site Area: 2.27ha



Contact us with any questions at:

info@groundsure.com

08444 159 000

Date: 14 September 2022

Recent site history - 2006 aerial photograph



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Capture Date: 30/06/2006

Site Area: 2.27ha



Recent site history - 1999 aerial photograph



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Capture Date: 29/08/1999

Site Area: 2.27ha



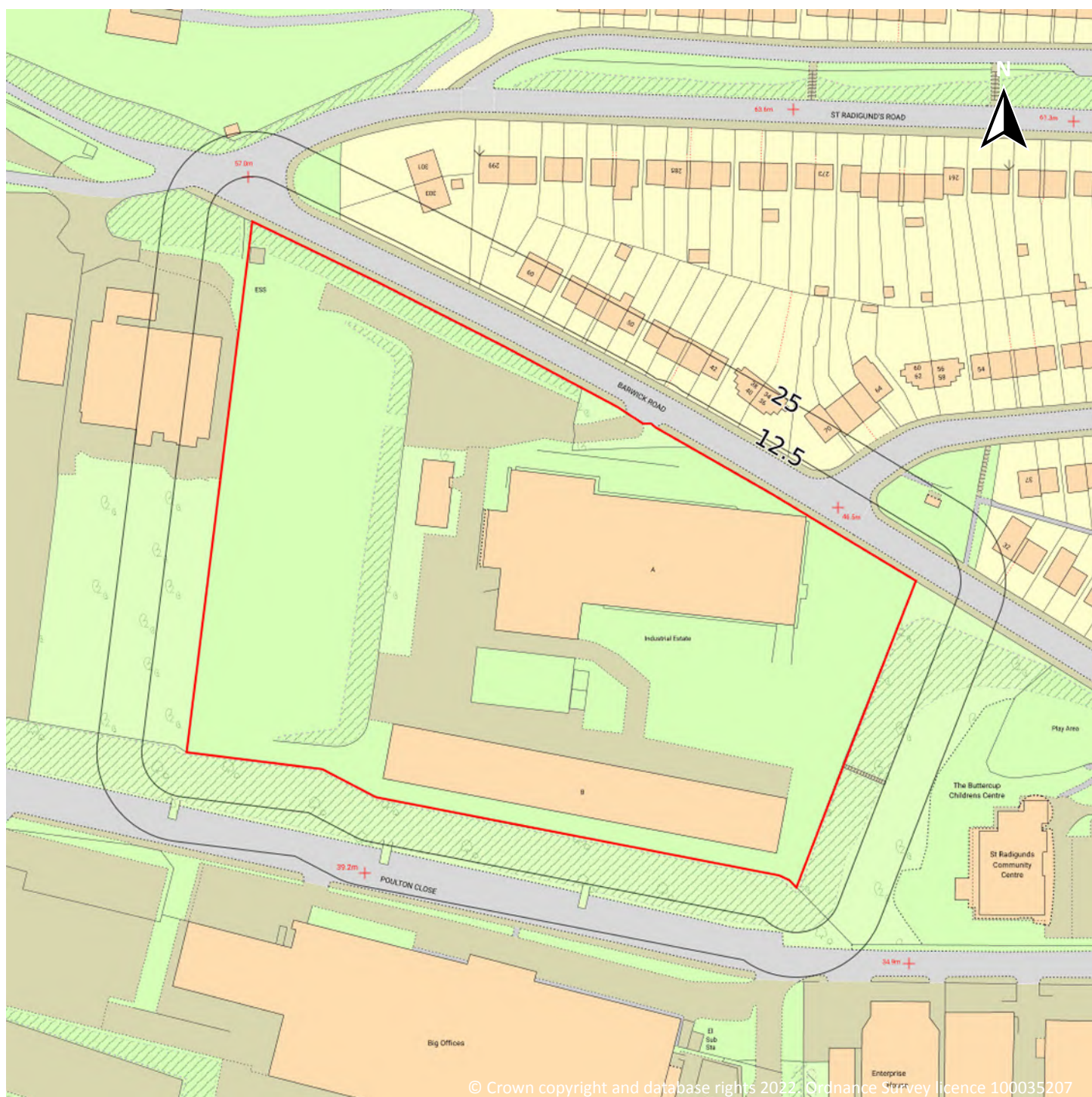
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08444 159 000

Date: 14 September 2022

OS MasterMap site plan



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Site Area: 2.27ha



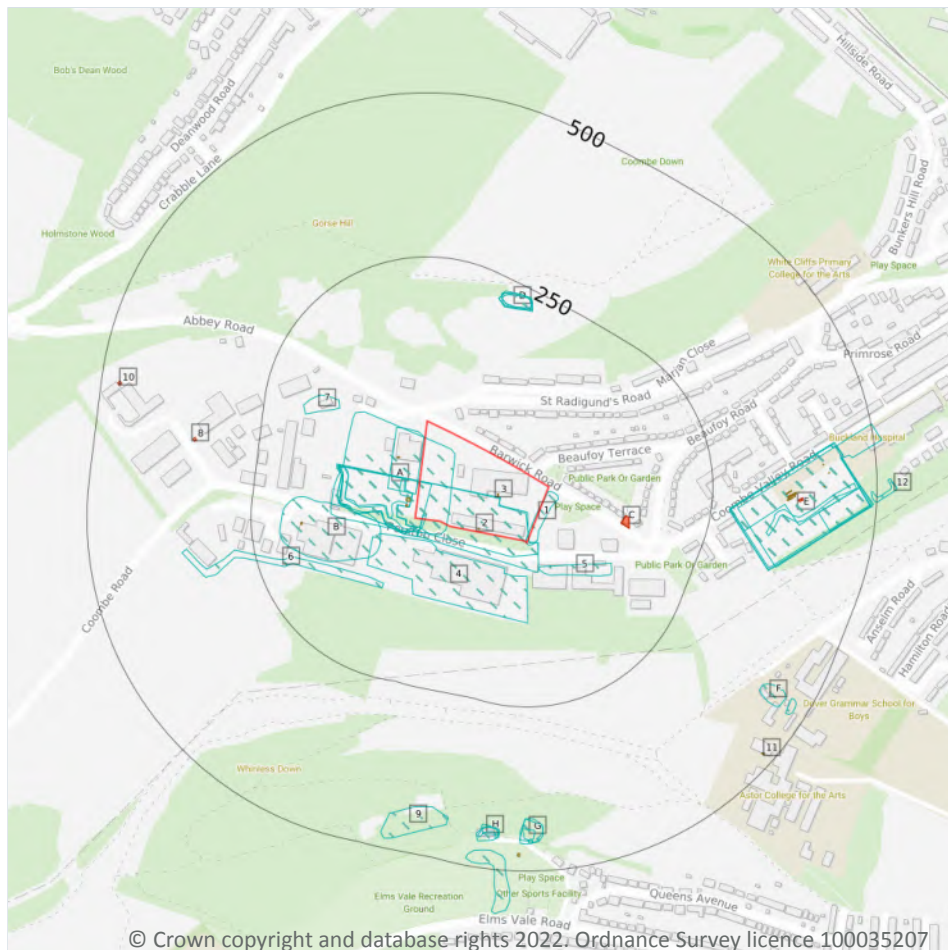
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Date: 14 September 2022

1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

1.1 Historical industrial land uses

Records within 500m

38

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
1	On site	Refuse Heap	1957	2347525



ID	Location	Land use	Dates present	Group ID
A	On site	Refuse Heap	1957	2347524
A	On site	Brick Works	1938	2353713
A	On site	Brick Works	1938	2356568
A	On site	Brick Works	1906	2357899
A	On site	Unspecified Ground Workings	1906	2363553
A	2m W	Unspecified Works	1974	2348402
A	9m W	Unspecified Pit	1938	2352956
A	20m SW	Unspecified Ground Workings	1938	2361758
4	31m S	Unspecified Works	1974	2348400
5	42m SE	Unspecified Pit	1872	2346252
B	55m W	Unspecified Factory	1974	2348950
6	111m SW	Unspecified Ground Workings	1974	2347211
7	135m W	Unspecified Quarry	1938	2346813
D	208m NE	Unspecified Pit	1897	2355532
D	208m NE	Unspecified Pit	1938	2356193
D	210m NE	Unspecified Pit	1872	2359187
D	213m NE	Unspecified Pit	1906	2360889
D	213m NE	Unspecified Pit	1938	2362353
E	277m E	Unspecified Workhouse	1897	2360243
E	277m E	Unspecified Workhouse	1938	2362528
E	278m E	Workhouse	1906	2349318
E	280m E	Unspecified Workhouse	1872	2354853
E	290m E	Hospital	1961 - 1979	2352501
E	339m E	Unspecified Ground Workings	1906	2347209
E	413m E	Hospital	1872	2352751
F	419m SE	Unspecified Heap	1961 - 1973	2360404
G	420m S	Unspecified Quarry	1938	2359807
G	421m S	Chalk Pit	1897	2348874



ID	Location	Land use	Dates present	Group ID
9	424m S	Unspecified Heap	1957	2351451
H	434m S	Unspecified Quarry	1872	2346812
G	436m S	Unspecified Quarry	1872	2357592
H	436m S	Unspecified Pit	1938	2363312
H	437m S	Unspecified Ground Workings	1906	2347210
G	452m S	Lime Kiln	1872	2350893
F	468m SE	Unspecified Heap	1979	2351452
G	471m S	Refuse Heap	1957	2347528
12	491m E	Unspecified Ground Workings	1906	2347208

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

15

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
2	On site	Unspecified Tank	1974	423060
3	On site	Unspecified Tank	1973	423057
A	11m W	Unspecified Tank	1907	423059
A	14m W	Unspecified Tank	1907	423058
A	35m W	Unspecified Tank	1973	423050
B	172m W	Unspecified Tank	1974	423049
E	361m E	Tanks	1955 - 1984	423475
E	364m E	Tanks	1984	424696
E	364m E	Tanks	1955	425818



ID	Location	Land use	Dates present	Group ID
E	365m E	Tanks	1956	423738
E	419m E	Tank or Trough	1871	423290
E	419m E	Tank or Trough	1865 - 1871	424386
E	427m E	Tank or Trough	1865 - 1871	423913
G	473m S	Unspecified Tank	1956	423924
11	480m SE	Unspecified Tank	1974	423045

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

8

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
C	122m E	Electricity Substation	1997	302874
C	123m E	Electricity Substation	1956	302078
C	123m E	Electricity Substation	1956 - 1974	302535
8	345m W	Electricity Substation	1979 - 1990	301331
E	381m E	Electricity Substation	1994	301514
E	381m E	Electricity Substation	1997	301788
E	386m E	Electricity Substation	1984	302612
10	469m W	Electricity Substation	1990	300699

This data is sourced from Ordnance Survey / Groundsure.



1.4 Historical petrol stations

Records within 500m**0**

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m**0**

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

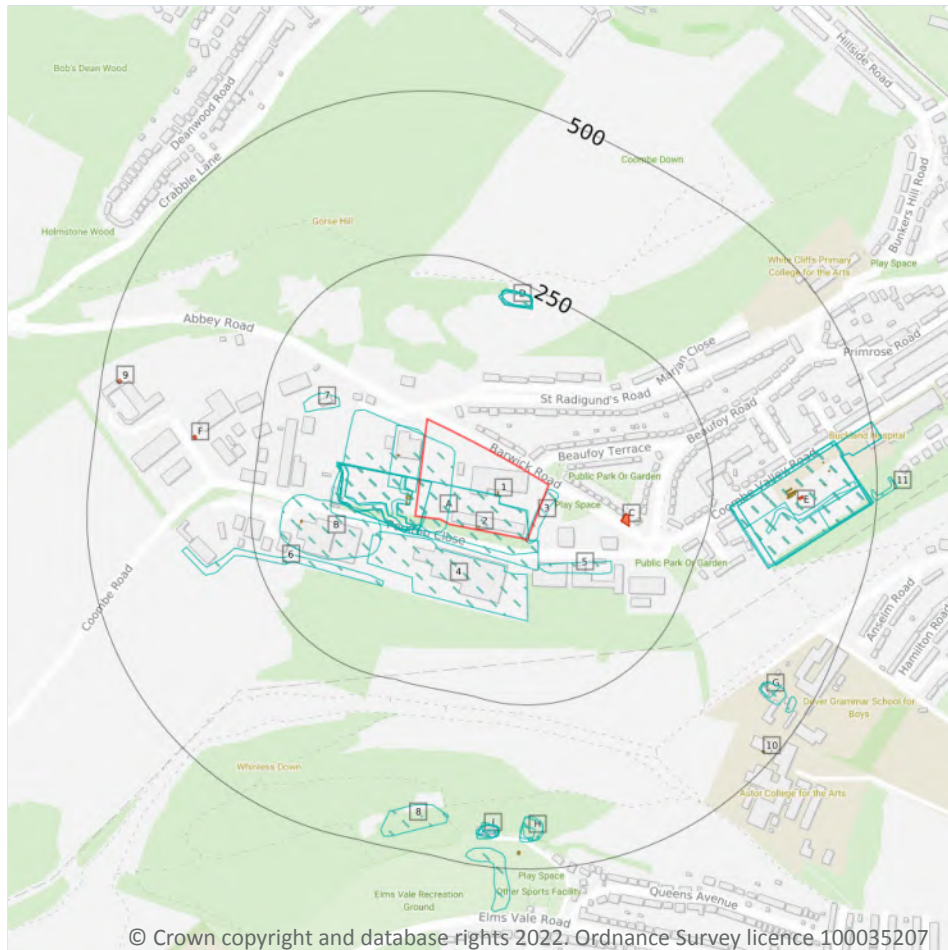
1.6 Historical military land

Records within 500m**0**

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

2.1 Historical industrial land uses

Records within 500m

49

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19**

ID	Location	Land Use	Date	Group ID
3	On site	Refuse Heap	1957	2347525
A	On site	Brick Works	1938	2356568
A	On site	Unspecified Ground Workings	1906	2363553

ID	Location	Land Use	Date	Group ID
A	On site	Brick Works	1906	2357899
A	On site	Brick Works	1938	2353713
A	On site	Refuse Heap	1957	2347524
A	On site	Brick Works	1938	2353713
A	2m W	Unspecified Works	1974	2348402
A	9m W	Unspecified Pit	1938	2352956
A	9m W	Unspecified Pit	1938	2352956
A	20m SW	Unspecified Ground Workings	1938	2361758
A	20m SW	Unspecified Ground Workings	1938	2361758
4	31m S	Unspecified Works	1974	2348400
5	42m SE	Unspecified Pit	1872	2346252
B	55m W	Unspecified Factory	1974	2348950
6	111m SW	Unspecified Ground Workings	1974	2347211
7	135m W	Unspecified Quarry	1938	2346813
D	208m NE	Unspecified Pit	1938	2356193
D	208m NE	Unspecified Pit	1938	2356193
D	208m NE	Unspecified Pit	1897	2355532
D	210m NE	Unspecified Pit	1872	2359187
D	213m NE	Unspecified Pit	1906	2360889
D	213m NE	Unspecified Pit	1938	2362353
D	213m NE	Unspecified Pit	1938	2362353
E	277m E	Unspecified Workhouse	1938	2362528
E	277m E	Unspecified Workhouse	1897	2360243
E	278m E	Workhouse	1906	2349318
E	280m E	Unspecified Workhouse	1872	2354853
E	290m E	Hospital	1973	2352501
E	290m E	Hospital	1961	2352501
E	290m E	Hospital	1979	2352501



ID	Location	Land Use	Date	Group ID
E	339m E	Unspecified Ground Workings	1906	2347209
E	413m E	Hospital	1872	2352751
G	419m SE	Unspecified Heap	1973	2360404
H	420m S	Unspecified Quarry	1938	2359807
G	420m SE	Unspecified Heap	1961	2360404
H	421m S	Chalk Pit	1897	2348874
8	424m S	Unspecified Heap	1957	2351451
I	434m S	Unspecified Quarry	1872	2346812
H	436m S	Unspecified Quarry	1872	2357592
I	436m S	Unspecified Pit	1938	2363312
I	436m S	Unspecified Pit	1938	2363312
I	437m S	Unspecified Pit	1938	2363312
I	437m S	Unspecified Pit	1938	2363312
I	437m S	Unspecified Ground Workings	1906	2347210
H	452m S	Lime Kiln	1872	2350893
G	468m SE	Unspecified Heap	1979	2351452
H	471m S	Refuse Heap	1957	2347528
11	491m E	Unspecified Ground Workings	1906	2347208

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

19

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19**

ID	Location	Land Use	Date	Group ID
1	On site	Unspecified Tank	1973	423057
2	On site	Unspecified Tank	1974	423060



ID	Location	Land Use	Date	Group ID
A	11m W	Unspecified Tank	1907	423059
A	14m W	Unspecified Tank	1907	423058
A	35m W	Unspecified Tank	1973	423050
B	172m W	Unspecified Tank	1974	423049
E	361m E	Tanks	1984	423475
E	361m E	Tanks	1955	423475
E	364m E	Tanks	1984	424696
E	364m E	Tanks	1955	425818
E	365m E	Tanks	1956	423738
E	419m E	Tank or Trough	1871	423290
E	419m E	Tank or Trough	1865	424386
E	419m E	Tank or Trough	1871	424386
E	427m E	Tank or Trough	1865	423913
E	427m E	Tank or Trough	1871	423913
H	473m S	Unspecified Tank	1956	423924
H	473m S	Unspecified Tank	1956	423924
10	480m SE	Unspecified Tank	1974	423045

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

10

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19**

ID	Location	Land Use	Date	Group ID
C	122m E	Electricity Substation	1997	302874
C	123m E	Electricity Substation	1956	302535
C	123m E	Electricity Substation	1974	302535



ID	Location	Land Use	Date	Group ID
C	123m E	Electricity Substation	1956	302078
F	345m W	Electricity Substation	1979	301331
F	345m W	Electricity Substation	1990	301331
E	381m E	Electricity Substation	1997	301788
E	381m E	Electricity Substation	1994	301514
E	386m E	Electricity Substation	1984	302612
9	469m W	Electricity Substation	1990	300699

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

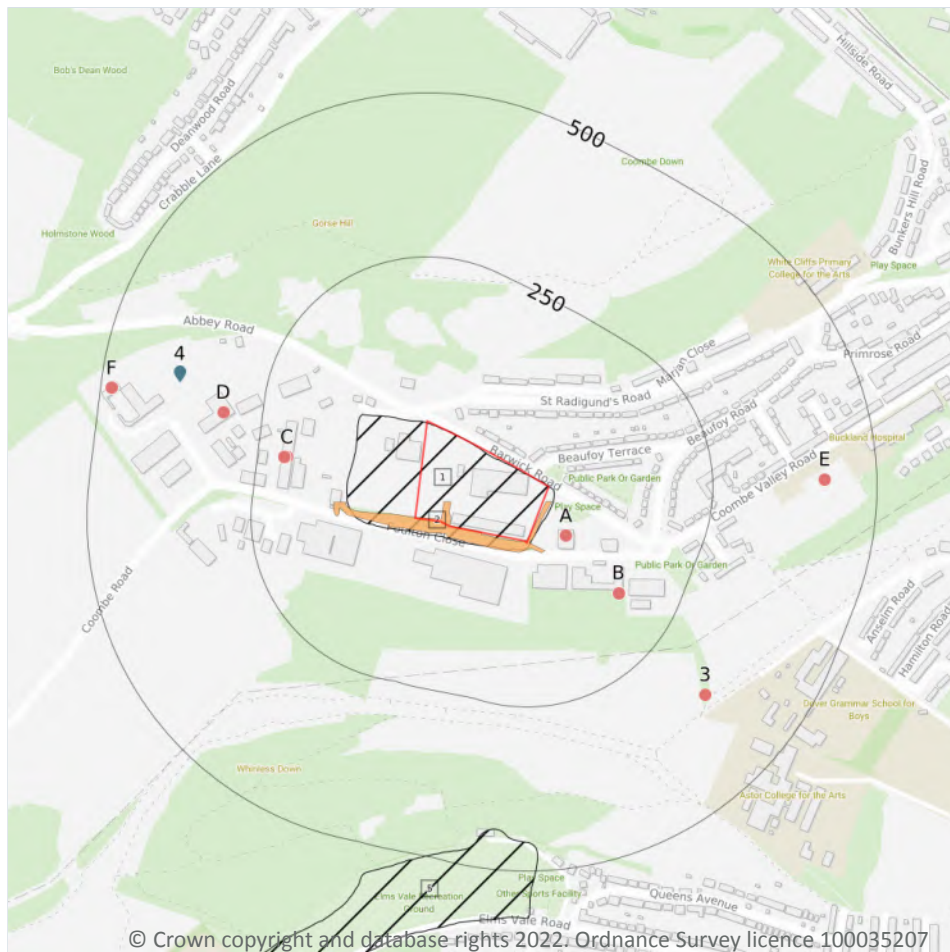
0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical waste sites
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m

2

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on **page 24**

ID	Location	Details		
1	On site	Site Address: Barwick Road, St Radigund's, Dover, Kent Licence Holder Address: -	Waste Licence: - Site Reference: DO3 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: Borough Council First Recorded - Last Recorded: 31/12/1959
5	438m S	Site Address: Elms Vale, Elms Vale Road, Dover, Kent Licence Holder Address: -	Waste Licence: - Site Reference: DO5 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: Borough Council First Recorded - Last Recorded: 31/12/1949

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m

1

Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on **page 24**

ID	Location	Address	Further Details	Date
2	On site	Site Address: N/A	Type of Site: Ground Workings and Refuse Heap Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1956

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m	1
----------------------------	----------

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 24**

ID	Location	Details		
4	383m W	Site Name: Macavis Building Supplies Ltd (Dover Site) Site Address: Castle View Park, Holmestone Road, Dover, Kent, CT17 0UG Correspondence Address: -	Type of Site: Inert & excavation Waste TS + treatment Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAC006 EPR reference: EA/EPR/JB3203KX/A001 Operator: Macavis Building Supplies Ltd Waste Management licence No: 406830 Annual Tonnage: 74999	Issue Date: 11/12/2020 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m	33
----------------------------	-----------

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 24**



ID	Location	Site	Reference	Category	Sub-Category	Description
A	52m E	Dover District Council Offices, Honeywood Parkway, Whitfield, Dover, CT16 3PJ	WEX093199	Using waste exemption	Not on a farm	Spreading waste on non-agricultural land to confer benefit
A	52m E	Dover District Council Offices, Honeywood Parkway, Whitfield, Dover, CT16 3PJ	WEX094998	Using waste exemption	Not on a farm	Use of waste in construction
B	159m SE	Unit 7 Poulton Close Business Centre, Poulton Close, Dover, CT17 0HL	WEX254591	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	159m SE	Unit 7 Poulton Close Business Centre, Poulton Close, Dover, CT17 0HL	WEX254591	Treating waste exemption	Not on a farm	Recovery of scrap metal
B	159m SE	Unit 7 Poulton Close Business Centre, Poulton Close, Dover, CT17 0HL	WEX254591	Treating waste exemption	Not on a farm	Sorting mixed waste
B	159m SE	Unit 7 Poulton Close Business Centre, Poulton Close, Dover, CT17 0HL	WEX254591	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	159m SE	Unit 7 Poulton Close Business Centre, Poulton Close, Dover, CT17 0HL	WEX254591	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	206m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX198058	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	206m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX198058	Storing waste exemption	Not on a farm	Storage of waste in secure containers
C	206m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX198058	Treating waste exemption	Not on a farm	Sorting mixed waste
C	206m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX198058	Treating waste exemption	Not on a farm	Recovery of scrap metal
C	206m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX198058	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
C	210m W	Unit 7 Poulton Business Park Poulton Close DOVER Kent CT17 0HL	EPR/CE5080G B/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in secure containers



ID	Location	Site	Reference	Category	Sub-Category	Description
C	210m W	Unit 7 Poulton Business Park Poulton Close DOVER Kent CT17 0HL	EPR/CE5080G B/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
C	210m W	Unit 7 Poulton Business Park Poulton Close DOVER Kent CT17 0HL	EPR/CE5080G B/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting mixed waste
C	210m W	Unit 7 Poulton Business Park Poulton Close DOVER Kent CT17 0HL	EPR/CE5080G B/A001	Treating waste exemption	Non-Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
C	210m W	Unit 7 Poulton Business Park Poulton Close DOVER Kent CT17 0HL	EPR/CE5080G B/A001	Treating waste exemption	Non-Agricultural Waste Only	Recovery of scrap metal
C	210m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX044478	Storing waste exemption	Not on a farm	Storage of waste in secure containers
C	210m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX044478	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	210m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX044478	Treating waste exemption	Not on a farm	Sorting mixed waste
C	210m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX044478	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
C	210m W	POULTON BUSINESS PARK, UNIT 7, POULTON CLOSE, DOVER, CT17 0HL	WEX044478	Treating waste exemption	Not on a farm	Recovery of scrap metal
D	310m W	HAMMOND HOUSE, HOLMESTONE ROAD, DOVER, CT17 0UF	WEX252487	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
D	310m W	HAMMOND HOUSE, HOLMESTONE ROAD, DOVER, CT17 0UF	WEX111176	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
3	357m SE	1 Whinless Road Dover Kent CT17 0HJ	EPR/QF0806ZL /A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
E	420m E	Buckland Hospital Coombe Valley Road DOVER Kent CT17 0HD	EPR/YH0612AL /A001	Treating waste exemption	Non-Agricultural Waste Only	Crushing waste fluorescent tubes

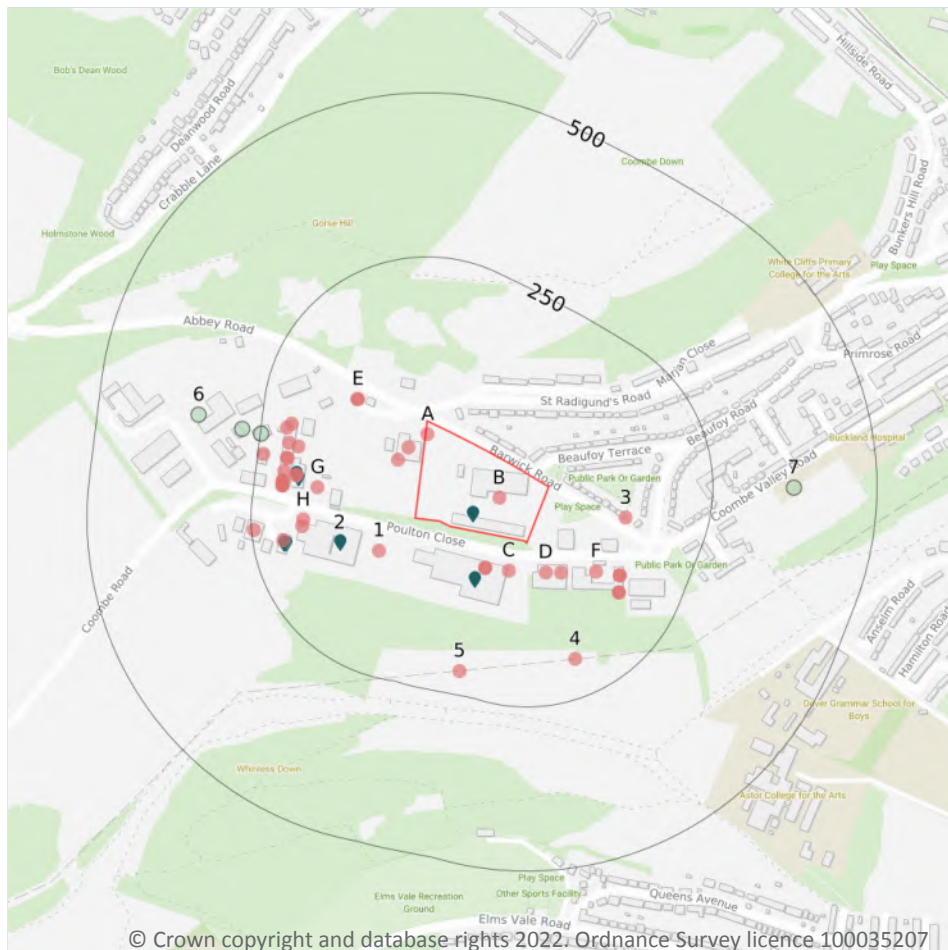


ID	Location	Site	Reference	Category	Sub-Category	Description
E	420m E	Buckland Hospital Coombe Valley Road DOVER Kent CT17 0HD	EPR/TH0010JE /A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
F	484m W	-	WEX292655	Using waste exemption	Not on a farm	Spreading waste on non-agricultural land to confer benefit
F	484m W	-	WEX292655	Using waste exemption	Not on a farm	Spreading waste on agricultural land to confer benefit
F	484m W	-	WEX292655	Using waste exemption	Not on a farm	Use of waste in construction
F	484m W	-	WEX225349	Using waste exemption	Not on a farm	Use of waste in construction
F	484m W	-	WEX225349	Treating waste exemption	Not on a farm	Screening and blending of waste
F	484m W	-	WEX225349	Storing waste exemption	Not on a farm	Storage of waste in a secure place

This data is sourced from the Environment Agency and Natural Resources Wales.



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed pollutant release (Part A(2)/B)
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

40

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 30**

ID	Location	Company	Address	Activity	Category
A	On site	Electricity Sub Station	Kent, CT17	Electrical Features	Infrastructure and Facilities
B	On site	Industrial Estate	Kent, CT17	Business Parks and Industrial Estates	Industrial Features



ID	Location	Company	Address	Activity	Category
A	24m W	Buckland Media Group Ltd	Barwick Road, Dover, Kent, CT17 0LG	Published Goods	Industrial Products
A	38m W	Tank	Kent, CT17	Tanks (Generic)	Industrial Features
C	49m S	Electricity Sub Station	Kent, CT17	Electrical Features	Infrastructure and Facilities
C	51m S	Rosewood Trucking	Big Offices, Poulton Close, Dover, Kent, CT17 0HL	Distribution and Haulage	Transport, Storage and Delivery
C	51m S	Delamode	Office 7 to 8, Big Offices, Poulton Close, Dover, Kent, CT17 0HL	Distribution and Haulage	Transport, Storage and Delivery
D	53m SE	Envirograf	Enterprise House, Poulton Close, Dover, Kent, CT17 0HL	Special Purpose Machinery and Equipment	Industrial Products
D	68m SE	Crown Outdoor	3, Poulton Close, Dover, Kent, CT17 0HL	Curtains and Blinds	Consumer Products
1	74m SW	Industrial Estate	Kent, CT17	Business Parks and Industrial Estates	Industrial Features
E	111m W	N S L Fire & Security Systems	Unit 1, Coombe Works, Coombe Road, Dover, Kent, CT17 0LQ	Electronic Equipment	Industrial Products
E	111m W	Majestic International Freight Forwarding Ltd	Unit 1, Coombe Road, Dover, Kent, CT17 0LQ	Distribution and Haulage	Transport, Storage and Delivery
F	114m E	J.F. Motors	2, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Repair, Testing and Servicing	Repair and Servicing
3	126m E	Electricity Sub Station	Kent, CT17	Electrical Features	Infrastructure and Facilities
F	150m E	East Kent Components Ltd	Ground Floor 1, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Parts and Accessories	Motoring
F	150m E	Dover MOT Centre	2, 1, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Repair, Testing and Servicing	Repair and Servicing
G	153m W	Relyon Van Hire	Relyons Yard, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Hire and Rental	Hire Services
F	160m SE	E K C Ltd	1, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Parts and Accessories	Motoring



ID	Location	Company	Address	Activity	Category
F	160m SE	Dover M O T Centre	1, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Repair, Testing and Servicing	Repair and Servicing
H	171m W	Electricity Sub Station	Kent, CT17	Electrical Features	Infrastructure and Facilities
H	172m W	Tank	Kent, CT17	Tanks (Generic)	Industrial Features
G	188m W	Apollo Motor Group	Apollo Accident Repair Centre, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Repair, Testing and Servicing	Repair and Servicing
G	188m W	Apollo Dover	Apollo Accident Repair Centre, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Repair, Testing and Servicing	Repair and Servicing
G	190m W	Business Park	Kent, CT17	Business Parks and Industrial Estates	Industrial Features
4	192m SE	Pylon	Kent, CT17	Electrical Features	Infrastructure and Facilities
H	204m W	Poulton Service & Exhaust Centre	Hollow Wood Road, Dover, Kent, CT17 0UB	Vehicle Repair, Testing and Servicing	Repair and Servicing
G	204m W	Global Freight Connections	Unit 14 Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Distribution and Haulage	Transport, Storage and Delivery
G	205m W	Direct Service Vehicle Care	Unit 9 and 10, Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Repair, Testing and Servicing	Repair and Servicing
G	205m W	Dover Metals	Unit 7 Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Scrap Metal Merchants	Recycling Services
G	205m W	A E Chilled	Unit 7 Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Distribution and Haulage	Transport, Storage and Delivery
G	206m W	Cloke Scaffolding	Unit 2 Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Construction and Tool Hire	Hire Services
G	207m W	Dover Car Body Repairs	Unit 4 Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Repair, Testing and Servicing	Repair and Servicing
G	207m W	Clan International Transport Services Ltd	Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Distribution and Haulage	Transport, Storage and Delivery
G	207m W	Trans Stor Logistics Ltd	Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Distribution and Haulage	Transport, Storage and Delivery



ID	Location	Company	Address	Activity	Category
G	207m W	Pusterla 1880 UK Ltd	Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Packaging	Industrial Products
G	208m W	J F Motors Dover Ltd	Unit 2 Poulton Business Centre, Poulton Close, Dover, Kent, CT17 0HL	Vehicle Repair, Testing and Servicing	Repair and Servicing
G	211m W	Scribemaster Ltd	Unit 13 Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Tools Including Machine Shops	Industrial Products
5	213m S	Pylon	Kent, CT17	Electrical Features	Infrastructure and Facilities
G	242m W	R & B Engineering Ltd	Unit 15 and 16 Poulton Close Business Park, Poulton Close, Dover, Kent, CT17 0HL	Recycling, Reclamation and Disposal	Recycling Services
H	246m W	Dowle V E S Ltd	Unit 2, Hollow Wood Road, Dover, Kent, CT17 0UB	Vehicle Components	Industrial Products

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.



4.5 Sites determined as Contaminated Land

Records within 500m

0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m

0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

8

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on **page 30**

ID	Location	Address	Details	
B	On site	Seaking Autos, Poulton Cl, Coombe Valley Rd, CT17 0HL	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No enforcements notified Date of enforcement: No enforcements notified Comment: No enforcements notified
C	72m S	Abba Comercials Ltd, Whitecliff House, Poulton Close, Dover, Kent, CT17 0HL	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No enforcements notified Date of enforcement: No enforcements notified Comment: No enforcements notified
2	121m W	Euromotive (Kent) Ltd, White Cliff House, Poulton Close, Dover, CT17 0HL	Process: Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No enforcements notified Date of enforcement: No enforcements notified Comment: No enforcements notified
G	184m W	Apollo Motor Co. Ltd, Transport Workshop, Poulton Close, Coombe Valley Road, Kent, CT17 0HL	Process: Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No enforcements notified Date of enforcement: No enforcements notified Comment: No enforcements notified
G	187m W	R P Greaves Limited, Transport Workshop, Poulton Close, Coombe Valley Road, Dover, Kent, CT17 0HL	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No enforcements notified Date of enforcement: No enforcements notified Comment: No enforcements notified



ID	Location	Address	Details	
G	187m W	R P Greaves Limited, Transport Workshop, Poulton Close, Coombe Valley Road, Dover, Kent, CT17 0HL	Process: Waste Oil Burner 0.4 MW Status: New Legislation Applies Permit Type: Part B	Enforcement: No enforcements notified Date of enforcement: No enforcements notified Comment: No enforcements notified
H	200m W	Poulton Service and Exhaust Centre Ltd, Hollow Wood Road, Poulton Industrial Estate, Dover, Kent, CT17 0HL	Process: Waste Oil Burner 0.4 MW Status: New Legislation Applies Permit Type: Part B	Enforcement: No enforcements notified Date of enforcement: No enforcements notified Comment: No enforcements notified
H	203m W	Da Williams, Hollow Wood Rd, Poulton Cl, CT17 0HL	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No enforcements notified Date of enforcement: No enforcements notified Comment: No enforcements notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m

0

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m

4

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on **page 30**

ID	Location	Details	
G	248m W	Incident Date: 08/02/2003 Incident Identification: 135644 Pollutant: Specific Waste Materials Pollutant Description: Tyres	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
G	278m W	Incident Date: 20/07/2019 Incident Identification: 1720532 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 2 (Significant) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

ID	Location	Details	
6	346m W	Incident Date: 17/01/2006 Incident Identification: 374387 Pollutant: Other Pollutant Pollutant Description: Microbiological	Water Impact: Category 1 (Major) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
7	373m E	Incident Date: 11/04/2003 Incident Identification: 150446 Pollutant: Inorganic Chemicals/Products Pollutant Description: Other Inorganic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m	0
----------------------------	----------

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m	0
----------------------------	----------

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

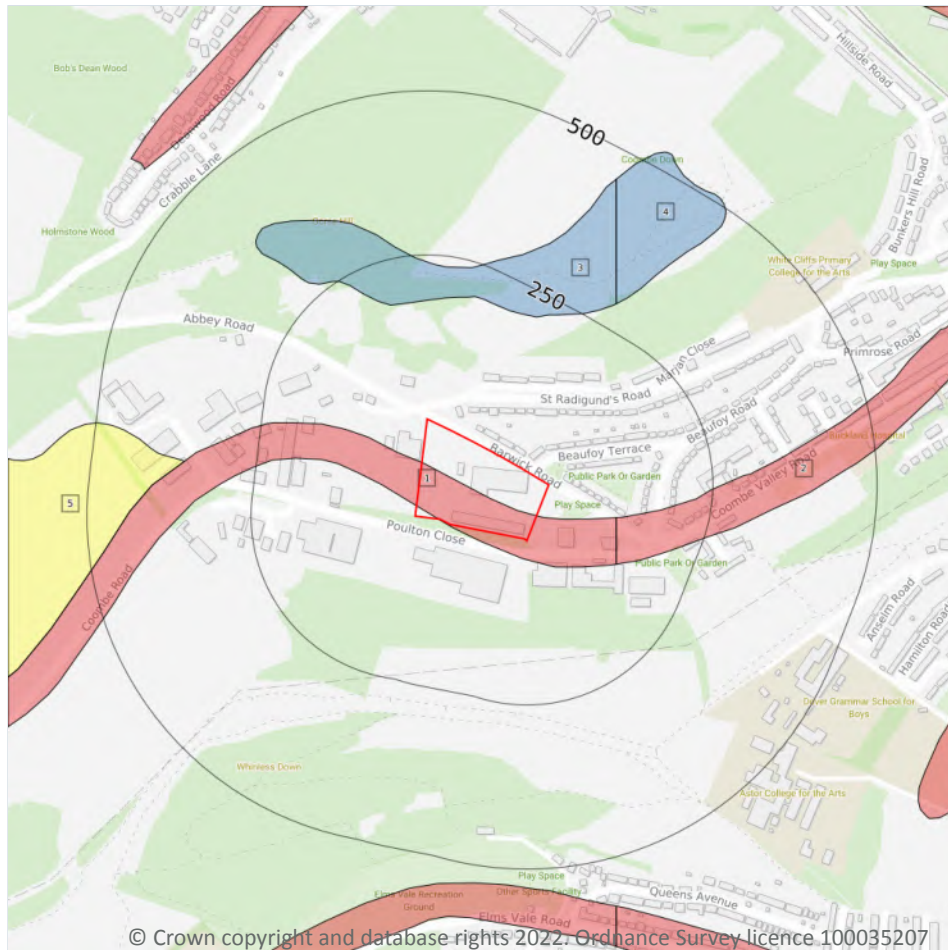
4.21 Pollution inventory radioactive waste

Records within 500m	0
----------------------------	----------

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

5

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 39**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	114m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

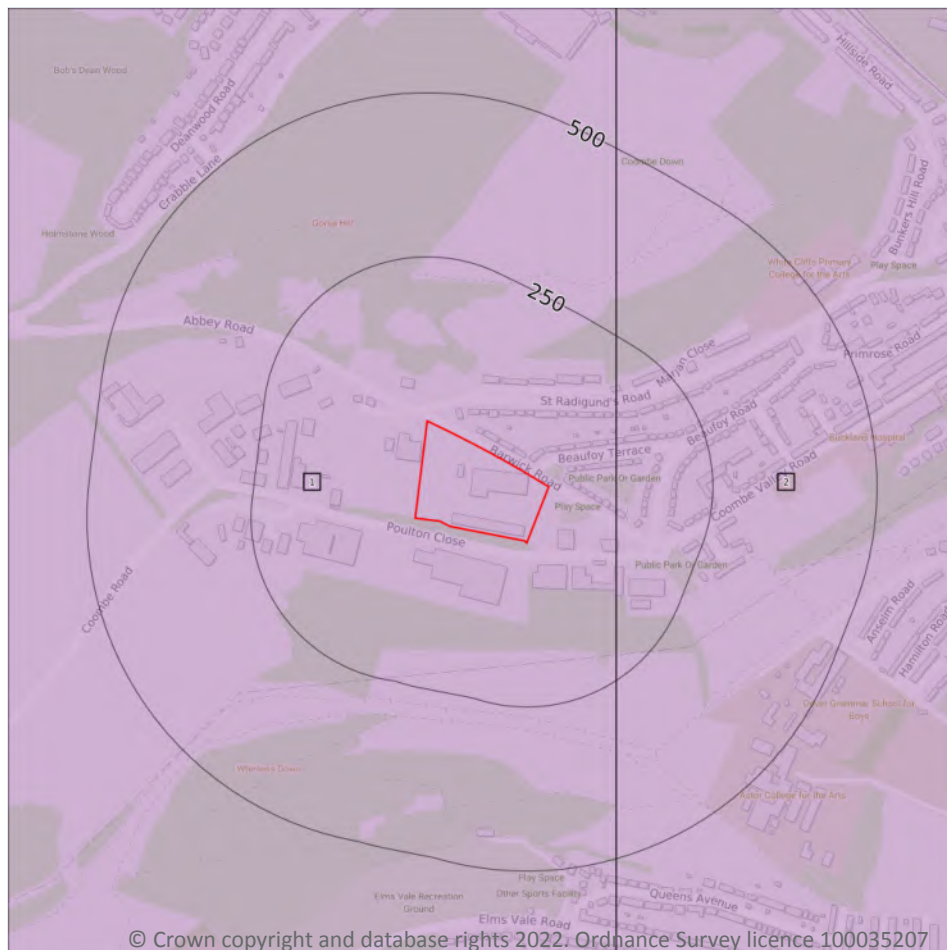


ID	Location	Designation	Description
3	179m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
4	289m NE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
5	359m W	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Bedrock aquifer



- Site Outline**
- Search buffers in metres (m)**
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 41**

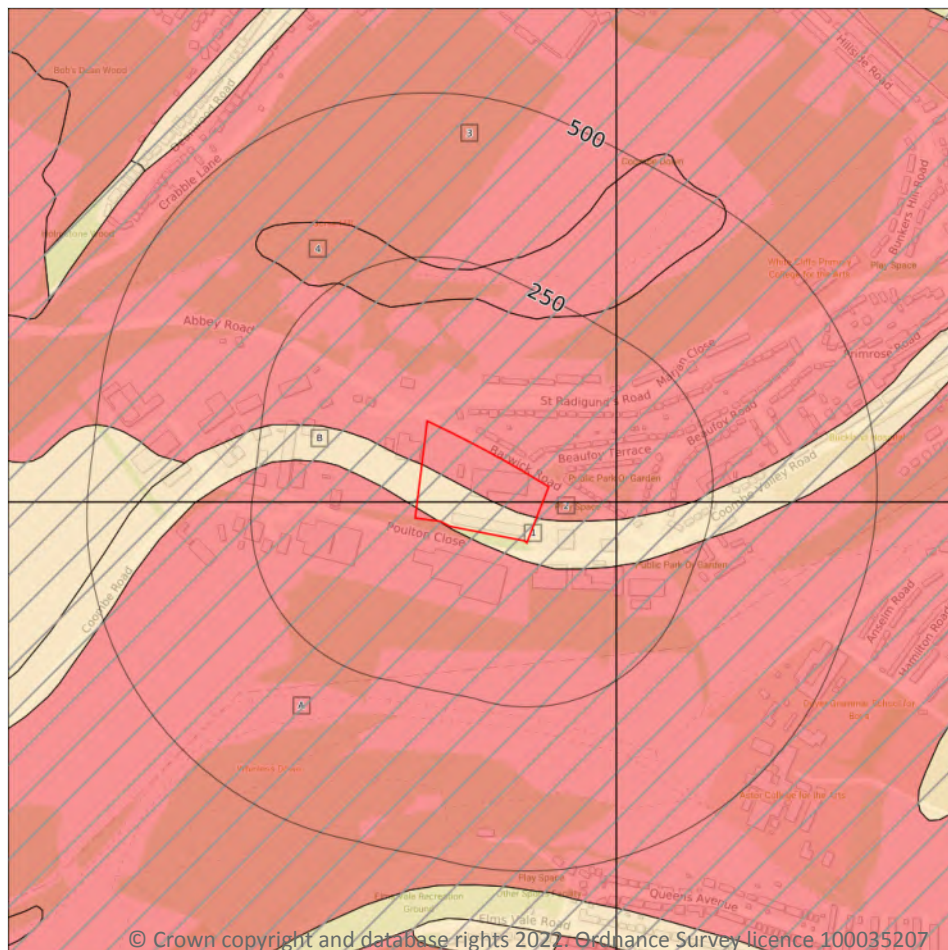
ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	103m E	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers



This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m

6

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

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

Features are displayed on the Groundwater vulnerability map on **page 43**



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
2	On site	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
3	On site	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
A	On site	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
B	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
B	15m W	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



5.4 Groundwater vulnerability- soluble rock risk

Records on site

2

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
4	Very significant soluble rocks are likely to be present with a high possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, especially in adverse conditions such as concentrated surface or subsurface water flow.	6.0%
A	Very significant soluble rocks are likely to be present with a high possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, especially in adverse conditions such as concentrated surface or subsurface water flow.	0.0%

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site

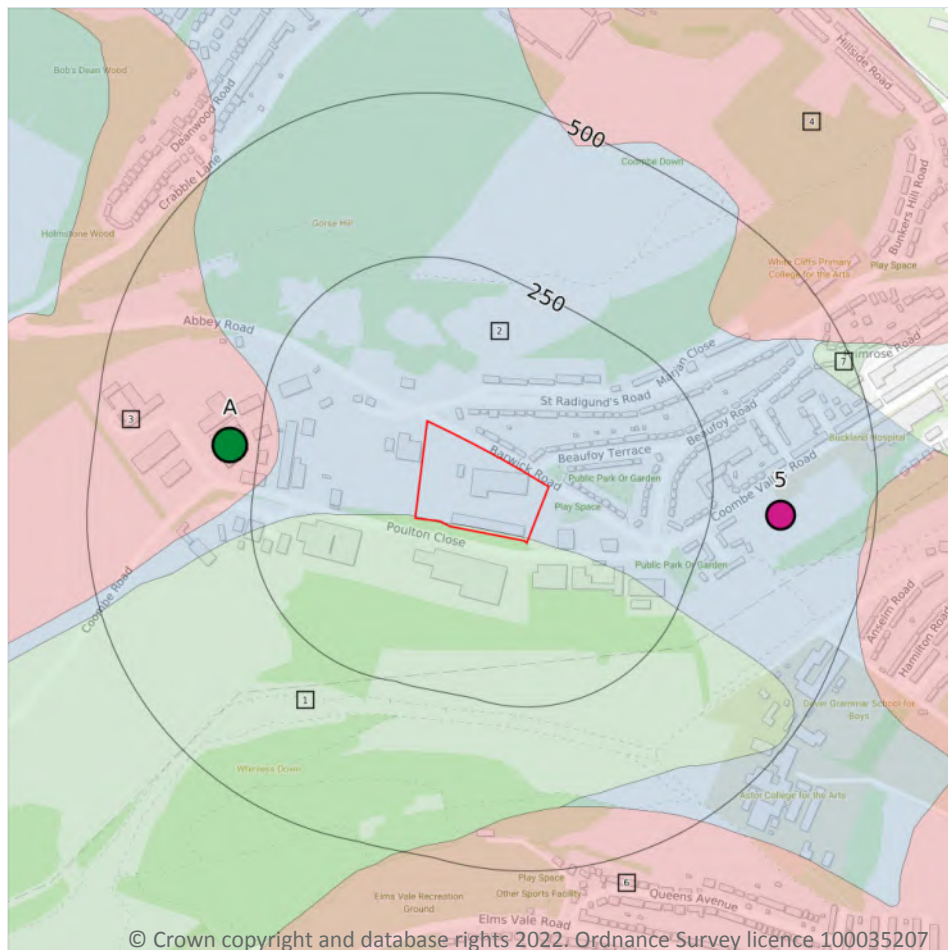
0

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.



Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Point features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

25

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 46**

ID	Location	Details	
A	264m W	Status: Historical Licence No: 9/40/04/0443/G Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: TWO BOREHOLES AT COOMBE FARM, DOVER Data Type: Poly4 Name: Affinity Water Limited Easting: 629380 Northing: 142100	Annual Volume (m ³): 829645 Max Daily Volume (m ³): 3273 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 14/11/2012 Version End Date: -
A	293m W	Status: Active Licence No: 9/40/04/0443/G Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE AT HOLMESTONE Data Type: Point Name: Affinity Water Limited Easting: 629412 Northing: 142087	Annual Volume (m ³): 829,661.40 Max Daily Volume (m ³): 3,273.20 Original Application No: NPS/WR/020586 Original Start Date: 16/03/1981 Expiry Date: - Issue No: 104 Version Start Date: 07/03/2016 Version End Date: -
5	355m E	Status: Historical Licence No: 14/027 Details: Boiler Feed Direct Source: Southern Region Groundwater Point: POINT A, BOREHOLD AT BUCKLAND HOSPITAL Data Type: Point Name: East Kent Hospitals (NHS Trust) Easting: 630250 Northing: 141980	Annual Volume (m ³): 49000 Max Daily Volume (m ³): 140 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 25/10/2006 Version End Date: -
-	727m NE	Status: Active Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 1 (POINT B ON MAP) PRIMROSE PS Data Type: Point Name: Affinity Water Limited Easting: 630560 Northing: 142323	Annual Volume (m ³): 1,098,000 Max Daily Volume (m ³): 4,000 Original Application No: NPS/WR/019495 Original Start Date: 22/03/1966 Expiry Date: - Issue No: 106 Version Start Date: 07/03/2016 Version End Date: -
-	730m NE	Status: Historical Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 1 (POINT B ON MAP) PRIMROSE PS Data Type: Point Name: Affinity Water Limited Easting: 630560 Northing: 142330	Annual Volume (m ³): 1098000 Max Daily Volume (m ³): 4000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 105 Version Start Date: 14/11/2012 Version End Date: -



ID	Location	Details	
-	737m NE	Status: Active Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 2 (POINT B ON MAP) AT PRIMROSE, ST RADIGUNDS, DOVER Data Type: Point Name: Affinity Water Limited Easting: 630566 Northing: 142334	Annual Volume (m ³): 1,098,000 Max Daily Volume (m ³): 4,000 Original Application No: NPS/WR/019495 Original Start Date: 22/03/1966 Expiry Date: - Issue No: 106 Version Start Date: 07/03/2016 Version End Date: -
-	755m E	Status: Historical Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE AT PRIMROSE, ST RADIGUNDS, DOVER Data Type: Point Name: Folkestone & Dover Water Services Ltd Easting: 630600 Northing: 142300	Annual Volume (m ³): 1098000 Max Daily Volume (m ³): 4000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 24/07/2006 Version End Date: -
-	755m E	Status: Historical Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 2 (POINT B ON MAP) AT PRIMROSE, ST RADIGUNDS, DOVER Data Type: Point Name: Affinity Water Limited Easting: 630600 Northing: 142300	Annual Volume (m ³): 1098000 Max Daily Volume (m ³): 4000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 105 Version Start Date: 14/11/2012 Version End Date: -
-	961m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: General use relating to Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: POINT X AT ELMS VALE, DOVER Data Type: Point Name: Folkestone & Dover Water Services Ltd Easting: 630400 Northing: 141140	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 27/03/2003 Version End Date: -

ID	Location	Details	
-	961m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT X AT ELMS VALE, DOVER Data Type: Point Name: Folkestone & Dover Water Services Ltd Easting: 630400 Northing: 141140	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 27/03/2003 Version End Date: -
-	961m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT X AT COWS LANE PS, DOVER Data Type: Point Name: Folkestone & Dover Water Services Ltd Easting: 630400 Northing: 141140	Annual Volume (m ³): 1830000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 24/07/2006 Version End Date: -
-	961m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT B AT COWS LANE PS, DOVER (BH NO.2) Data Type: Point Name: Affinity Water Limited Easting: 630400 Northing: 141140	Annual Volume (m ³): 1830000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 105 Version Start Date: 27/10/2015 Version End Date: -
-	964m NE	Status: Historical Licence No: 9/40/04/0145/GR Details: General use relating to Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: POINT 2 AT BUCKLAND PAPER, DOVER Data Type: Point Name: Arjo Wiggins Fine Papers Ltd Easting: 630520 Northing: 142760	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 29/09/1992 Version End Date: -
-	965m SE	Status: Active Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT B AT COWS LANE PS, DOVER (BH NO.2) Data Type: Point Name: Affinity Water Limited Easting: 630401 Northing: 141136	Annual Volume (m ³): 1,830,000 Max Daily Volume (m ³): 6,000 Original Application No: NPS/WR/035524 Original Start Date: 26/01/1966 Expiry Date: - Issue No: 108 Version Start Date: 01/04/2022 Version End Date: -



ID	Location	Details	
-	968m SE	Status: Active Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: PONT A AT COW LANE B/H NO.1 Data Type: Point Name: Affinity Water Limited Easting: 630403 Northing: 141134	Annual Volume (m ³): 1,830,000 Max Daily Volume (m ³): 6,000 Original Application No: NPS/WR/035524 Original Start Date: 26/01/1966 Expiry Date: - Issue No: 108 Version Start Date: 01/04/2022 Version End Date: -
-	969m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: PONT A AT COW LANE B/H NO.1 Data Type: Point Name: Affinity Water Limited Easting: 630400 Northing: 141130	Annual Volume (m ³): 1830000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 105 Version Start Date: 27/10/2015 Version End Date: -
-	979m NE	Status: Historical Licence No: 9/40/04/0145/GR Details: General use relating to Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: POINT 3 AT BUCKLAND PAPER, DOVER Data Type: Point Name: Arjo Wiggins Fine Papers Ltd Easting: 630480 Northing: 142810	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 29/09/1992 Version End Date: -
-	1005m NE	Status: Historical Licence No: 9/40/04/0145/GR Details: General use relating to Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: POINT 1 AT BUCKLAND PAPER, DOVER Data Type: Point Name: Arjo Wiggins Fine Papers Ltd Easting: 630570 Northing: 142770	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 29/09/1992 Version End Date: -
-	1031m NE	Status: Active Licence No: 14/033/R01 Details: River Recirculation Direct Source: Southern Region Groundwater Point: BUCKLANDS MILL Data Type: Point Name: Affinity Water Limited Easting: 630320 Northing: 142971	Annual Volume (m ³): 2,196,000 Max Daily Volume (m ³): 6,000 Original Application No: NPS/WR/022309 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 2 Version Start Date: 01/04/2016 Version End Date: -



ID	Location	Details	
-	1031m NE	Status: Active Licence No: 14/033/R01 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BUCKLANDS MILL Data Type: Point Name: Affinity Water Limited Easting: 630320 Northing: 142971	Annual Volume (m ³): 2,196,000 Max Daily Volume (m ³): 6,000 Original Application No: NPS/WR/022309 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 2 Version Start Date: 01/04/2016 Version End Date: -
-	1039m NE	Status: Historical Licence No: 14/033 Details: River Recirculation Direct Source: Southern Region Groundwater Point: BUCKLANDS MILL Data Type: Point Name: Affinity Water Limited Easting: 630320 Northing: 142980	Annual Volume (m ³): 1,464,000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: 30/05/2003 Expiry Date: 31/03/2016 Issue No: 4 Version Start Date: 14/11/2012 Version End Date: -
-	1039m NE	Status: Historical Licence No: 14/033 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BUCKLANDS MILL Data Type: Point Name: Affinity Water Limited Easting: 630320 Northing: 142980	Annual Volume (m ³): 1,464,000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: 30/05/2003 Expiry Date: 31/03/2016 Issue No: 4 Version Start Date: 14/11/2012 Version End Date: -
-	1464m E	Status: Active Licence No: 9/40/04/0102/GR/R01 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT A AT DOVER PRIORY, DOVER Data Type: Point Name: Affinity Water Limited Easting: 631289 Northing: 141568	Annual Volume (m ³): 1,051,200 Max Daily Volume (m ³): 2,880 Original Application No: NPS/WR/020587 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2016 Version End Date: -
-	1468m E	Status: Historical Licence No: 9/40/04/0102/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT A AT DOVER PRIORY, DOVER Data Type: Point Name: Affinity Water Limited Easting: 631290 Northing: 141560	Annual Volume (m ³): 1,051,200 Max Daily Volume (m ³): 2880 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 14/11/2012 Version End Date: -



ID	Location	Details	
-	1966m W	Status: Historical Licence No: 9/40/04/0422/G Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT 1, BOREHOLE AT POULTON FARM, HOUGHAM Data Type: Point Name: Veolia Water Southeast Limited Easting: 627810 Northing: 141410	Annual Volume (m ³): 300000 Max Daily Volume (m ³): 2182 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 20/07/2009 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m

1

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 46**

ID	Location	Details	
-	1063m N	Status: Historical Licence No: 14/035 Details: Hydroelectric Power Generation Direct Source: Southern Region Surface Waters Point: POINT A, RIVER DOUR - CRABBLE CORN MILL Data Type: Point Name: Crabble Corn Mill Trust Easting: 629744 Northing: 143187	Annual Volume (m ³): 8,987,760 Max Daily Volume (m ³): 24624 Original Application No: - Original Start Date: 09/10/2006 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 09/10/2006 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m

18

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 46**



ID	Location	Details	
A	264m W	Status: Historical Licence No: 9/40/04/0443/G Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: TWO BOREHOLES AT COOMBE FARM, DOVER Data Type: Poly4 Name: Affinity Water Limited Easting: 629380 Northing: 142100	Annual Volume (m ³): 829645 Max Daily Volume (m ³): 3273 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 14/11/2012 Version End Date: -
A	293m W	Status: Active Licence No: 9/40/04/0443/G Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE AT HOLMESTONE Data Type: Point Name: Affinity Water Limited Easting: 629412 Northing: 142087	Annual Volume (m ³): 829,661.40 Max Daily Volume (m ³): 3,273.20 Original Application No: NPS/WR/020586 Original Start Date: 16/03/1981 Expiry Date: - Issue No: 104 Version Start Date: 07/03/2016 Version End Date: -
-	727m NE	Status: Active Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 1 (POINT B ON MAP) PRIMROSE PS Data Type: Point Name: Affinity Water Limited Easting: 630560 Northing: 142323	Annual Volume (m ³): 1,098,000 Max Daily Volume (m ³): 4,000 Original Application No: NPS/WR/019495 Original Start Date: 22/03/1966 Expiry Date: - Issue No: 106 Version Start Date: 07/03/2016 Version End Date: -
-	730m NE	Status: Historical Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 1 (POINT B ON MAP) PRIMROSE PS Data Type: Point Name: Affinity Water Limited Easting: 630560 Northing: 142330	Annual Volume (m ³): 1098000 Max Daily Volume (m ³): 4000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 105 Version Start Date: 14/11/2012 Version End Date: -
-	737m NE	Status: Active Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 2 (POINT B ON MAP) AT PRIMROSE, ST RADIGUNDS, DOVER Data Type: Point Name: Affinity Water Limited Easting: 630566 Northing: 142334	Annual Volume (m ³): 1,098,000 Max Daily Volume (m ³): 4,000 Original Application No: NPS/WR/019495 Original Start Date: 22/03/1966 Expiry Date: - Issue No: 106 Version Start Date: 07/03/2016 Version End Date: -



ID	Location	Details	
-	755m E	Status: Historical Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE AT PRIMROSE, ST RADIGUNDS, DOVER Data Type: Point Name: Folkestone & Dover Water Services Ltd Easting: 630600 Northing: 142300	Annual Volume (m ³): 1098000 Max Daily Volume (m ³): 4000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 24/07/2006 Version End Date: -
-	755m E	Status: Historical Licence No: 9/40/04/0180/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 2 (POINT B ON MAP) AT PRIMROSE, ST RADIGUNDS, DOVER Data Type: Point Name: Affinity Water Limited Easting: 630600 Northing: 142300	Annual Volume (m ³): 1098000 Max Daily Volume (m ³): 4000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 105 Version Start Date: 14/11/2012 Version End Date: -
-	961m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT X AT ELMS VALE, DOVER Data Type: Point Name: Folkestone & Dover Water Services Ltd Easting: 630400 Northing: 141140	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 27/03/2003 Version End Date: -
-	961m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT X AT COWS LANE PS, DOVER Data Type: Point Name: Folkestone & Dover Water Services Ltd Easting: 630400 Northing: 141140	Annual Volume (m ³): 1830000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 24/07/2006 Version End Date: -
-	961m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT B AT COWS LANE PS, DOVER (BH NO.2) Data Type: Point Name: Affinity Water Limited Easting: 630400 Northing: 141140	Annual Volume (m ³): 1830000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 105 Version Start Date: 27/10/2015 Version End Date: -



ID	Location	Details	
-	965m SE	Status: Active Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT B AT COWS LANE PS, DOVER (BH NO.2) Data Type: Point Name: Affinity Water Limited Easting: 630401 Northing: 141136	Annual Volume (m ³): 1,830,000 Max Daily Volume (m ³): 6,000 Original Application No: NPS/WR/035524 Original Start Date: 26/01/1966 Expiry Date: - Issue No: 108 Version Start Date: 01/04/2022 Version End Date: -
-	968m SE	Status: Active Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: PONT A AT COW LANE B/H NO.1 Data Type: Point Name: Affinity Water Limited Easting: 630403 Northing: 141134	Annual Volume (m ³): 1,830,000 Max Daily Volume (m ³): 6,000 Original Application No: NPS/WR/035524 Original Start Date: 26/01/1966 Expiry Date: - Issue No: 108 Version Start Date: 01/04/2022 Version End Date: -
-	969m SE	Status: Historical Licence No: 9/40/04/0003/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: PONT A AT COW LANE B/H NO.1 Data Type: Point Name: Affinity Water Limited Easting: 630400 Northing: 141130	Annual Volume (m ³): 1830000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 105 Version Start Date: 27/10/2015 Version End Date: -
-	1031m NE	Status: Active Licence No: 14/033/R01 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BUCKLANDS MILL Data Type: Point Name: Affinity Water Limited Easting: 630320 Northing: 142971	Annual Volume (m ³): 2,196,000 Max Daily Volume (m ³): 6,000 Original Application No: NPS/WR/022309 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 2 Version Start Date: 01/04/2016 Version End Date: -
-	1039m NE	Status: Historical Licence No: 14/033 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BUCKLANDS MILL Data Type: Point Name: Affinity Water Limited Easting: 630320 Northing: 142980	Annual Volume (m ³): 1,464,000 Max Daily Volume (m ³): 6000 Original Application No: - Original Start Date: 30/05/2003 Expiry Date: 31/03/2016 Issue No: 4 Version Start Date: 14/11/2012 Version End Date: -

ID	Location	Details	
-	1464m E	Status: Active Licence No: 9/40/04/0102/GR/R01 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT A AT DOVER PRIORY, DOVER Data Type: Point Name: Affinity Water Limited Easting: 631289 Northing: 141568	Annual Volume (m ³): 1,051,200 Max Daily Volume (m ³): 2,880 Original Application No: NPS/WR/020587 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2016 Version End Date: -
-	1468m E	Status: Historical Licence No: 9/40/04/0102/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT A AT DOVER PRIORY, DOVER Data Type: Point Name: Affinity Water Limited Easting: 631290 Northing: 141560	Annual Volume (m ³): 1,051,200 Max Daily Volume (m ³): 2880 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 14/11/2012 Version End Date: -
-	1966m W	Status: Historical Licence No: 9/40/04/0422/G Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT 1, BOREHOLE AT POULTON FARM, HOUGHAM Data Type: Point Name: Veolia Water Southeast Limited Easting: 627810 Northing: 141410	Annual Volume (m ³): 300000 Max Daily Volume (m ³): 2182 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 20/07/2009 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	6
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

Features are displayed on the Abstractions and Source Protection Zones map on **page 46**

ID	Location	Type	Description
1	On site	3	Total catchment
2	On site	2	Outer catchment
3	220m W	1	Inner catchment
4	353m NE	1	Inner catchment



ID	Location	Type	Description
6	406m S	1	Inner catchment
7	448m NE	3	Total catchment

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m

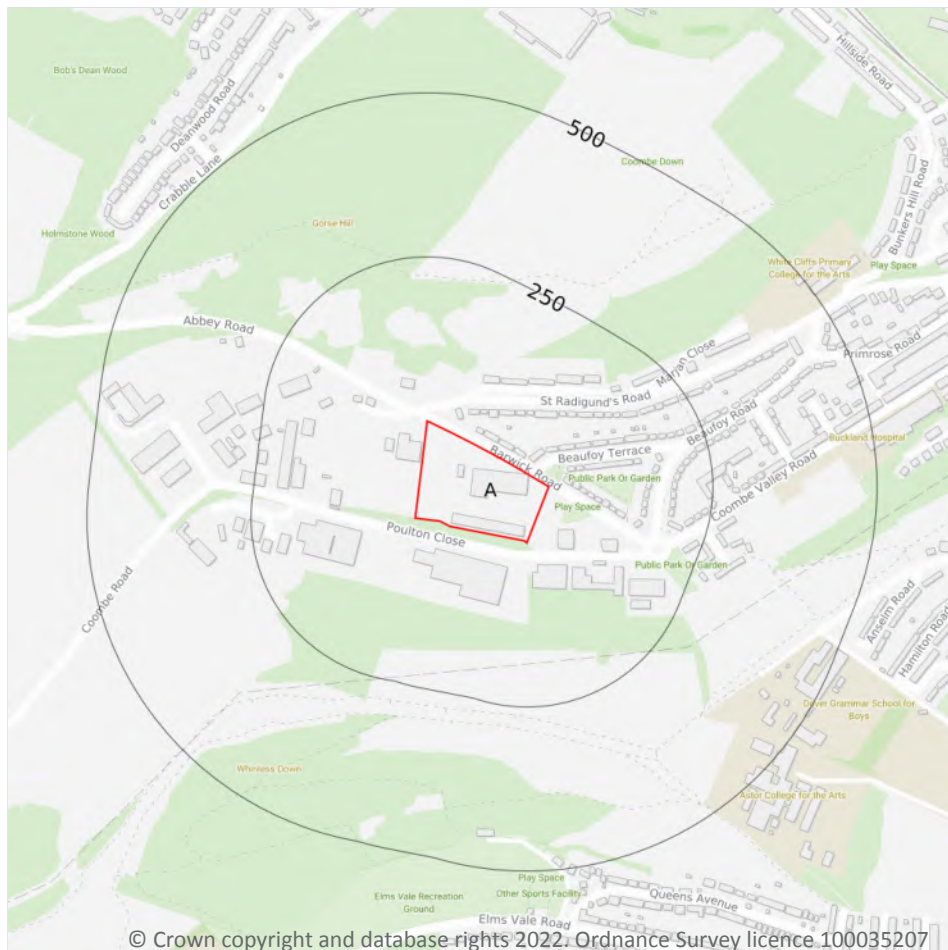
0










Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.



6 Hydrology



-  Site Outline
- Search buffers in metres (m)
-  Water Network (OS MasterMap)
-  Surface water features (wider than 5m)
-  Surface water features (narrower than 5m)
-  WFD River, canal and surface water transfer water bodies
-  WFD Lake water bodies
-  WFD Transitional and coastal water bodies
-  WFD Surface water body catchments boundaries
-  WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

0

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

0

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 58**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Dour from Kearsney to Dover	GB107040073310	Dour	Stour

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified

1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 58**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	927m N	River	Dour from Kearsney to Dover	GB107040073310	Moderate	Fail	Moderate	2019

This data is sourced from the Environment Agency and Natural Resources Wales.



6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 58**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	East Kent Chalk - Stour	<u>GB40701G501500</u>	Poor	Poor	Poor	2019

This data is sourced from the Environment Agency and Natural Resources Wales.



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m**0**

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m**0**

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m**0**

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

1 in 100 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 64**

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.1m and 0.3m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

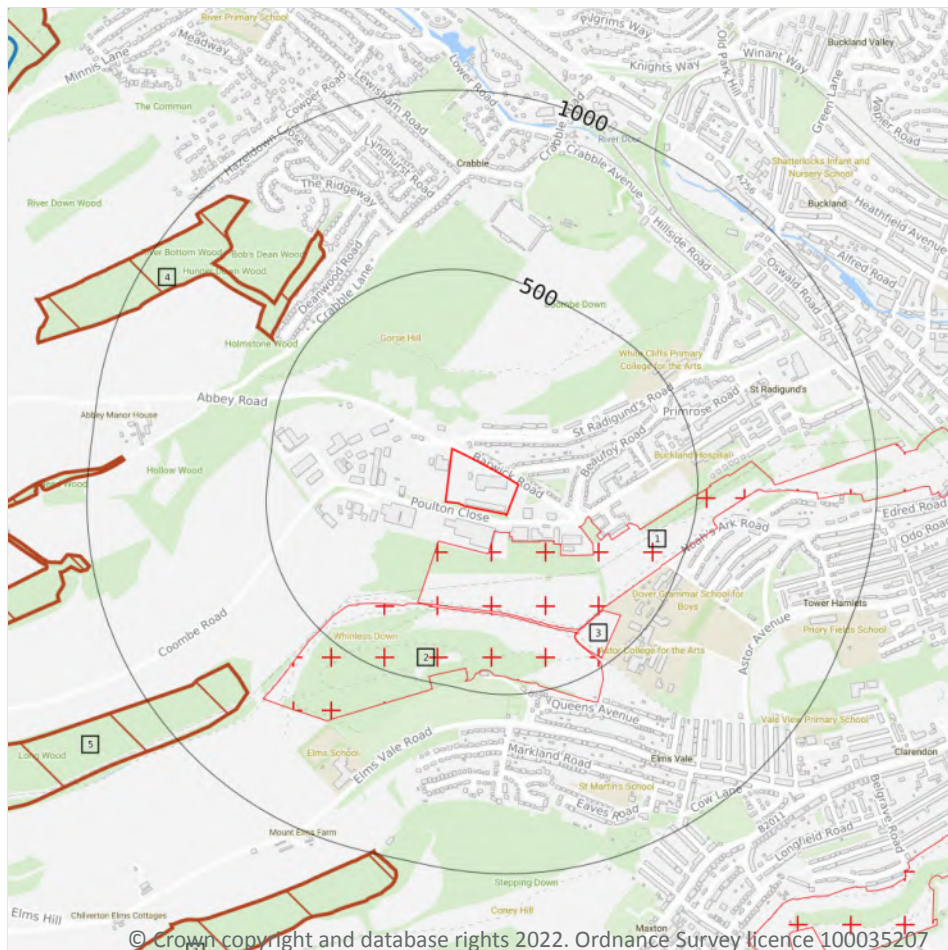
Low

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 66**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Local Nature Reserves (LNR)
- / Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 67**

ID	Location	Name	Data source
9	1576m NW	Alkham, Lydden and Swingfield Woods	Natural England



This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.6 Local Nature Reserves (LNR)

Records within 2000m

4

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on **page 67**

ID	Location	Name	Data source
1	48m S	High Meadow	Natural England
2	278m S	Whinless Down	Natural England
3	376m SE	Whinless Down	Natural England
8	1329m SE	Western Heights	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m

7

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 67**

ID	Location	Name	Woodland Type
4	589m NW	River Bottom Woods	Ancient Replanted Woodland
5	757m SW	Long Wood	Ancient & Semi-Natural Woodland
6	905m W	Limekiln/long/sleed Wood	Ancient & Semi-Natural Woodland
7	995m S	Elms Wood	Ancient & Semi-Natural Woodland
10	1576m NW	Frاندham Wood	Ancient & Semi-Natural Woodland
-	1595m W	Unknown	Ancient & Semi-Natural Woodland
-	1911m W	Frاندham Wood	Ancient & Semi-Natural Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.



10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

1

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

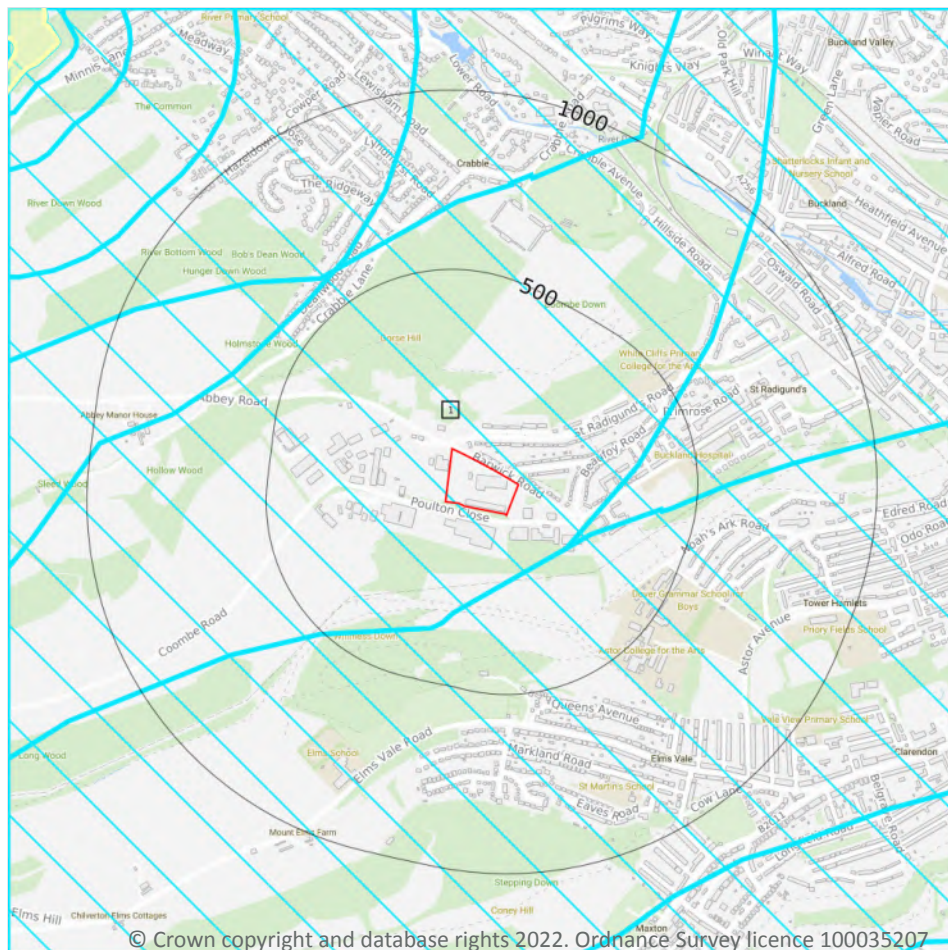
Location	Name	Type	NVZ ID	Status
1354m NE	East Kent	Groundwater	67	Existing



This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 73**

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Airports, helipads and other aviation proposals.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction.</p> <p>Residential - Residential development of 500 units or more.</p> <p>Rural residential - Any residential development of 500 or more houses outside existing settlements/urban areas.</p> <p>Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).</p> <p>Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p> <p>Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill.</p> <p>Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Notes: For new residential development in this area financial contributions are required to mitigate increased recreational disturbance on coastal spas and ramsar sites. check with local planning authority.</p>

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	2
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Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on **page 73**

ID:	11
Location:	1576m NW
SSSI name:	Alkham, Lydden and Swingfield Woods
Unit name:	Frاندham Wood
Broad habitat:	Broadleaved, Mixed And Yew Woodland - Lowland
Condition:	Unfavourable - Recovering
Reportable features:	

Feature name	Feature condition	Date of assessment
Lowland mixed deciduous woodland	Unfavourable - Recovering	13/03/2013



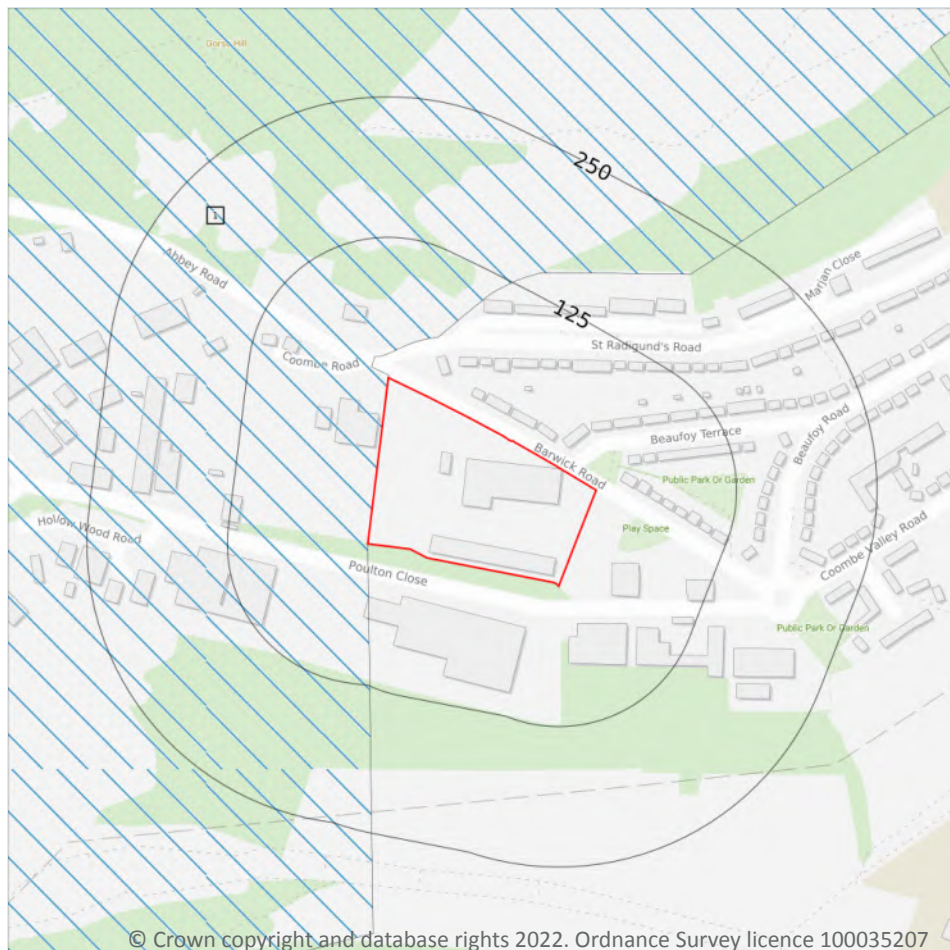
ID: -
Location: 1911m W
SSSI name: Alkham, Lydden and Swingfield Woods
Unit name: Gorsehill Wood (East)
Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Lowland mixed deciduous woodland	Unfavourable - Recovering	26/06/2012

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m**1**

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

Features are displayed on the Visual and cultural designations map on **page 76**

ID	Location	NAME	Data Source
1	On site	Kent Downs	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m**0**

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m**0**

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



11.5 Conservation Areas

Records within 250m**0**

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m**0**

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m**0**

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

2

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 79**

ID	Location	Classification	Description
1	On site	Urban	-

ID	Location	Classification	Description
2	35m SW	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	6
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The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

Features are displayed on the Agricultural designations map on **page 79**

ID	Location	Name	Classification	Other relevant legislation
3	68m N	-	Section 4 Conclusive Open Country	-
4	69m S	-	Section 4 Conclusive Open Country	-
5	116m S	-	Section 4 Conclusive Open Country	-
6	148m NE	-	Section 4 Conclusive Open Country	-
7	218m N	-	Section 4 Conclusive Open Country	-
8	222m N	-	Section 4 Conclusive Open Country	-

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	0
----------------------------	----------

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.



12.4 Environmental Stewardship Schemes

Records within 250m**4**

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

Location	Reference	Scheme	Start Date	End date
69m N	AG00298539	Entry Level plus Higher Level Stewardship	01/11/2009	31/10/2021
116m SW	AG00291388	Entry Level plus Higher Level Stewardship	01/04/2009	31/03/2019
163m E	AG00809932	Higher Level Stewardship	01/12/2013	30/11/2023
204m E	AG00504774	Higher Level Stewardship	01/12/2013	30/11/2023

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

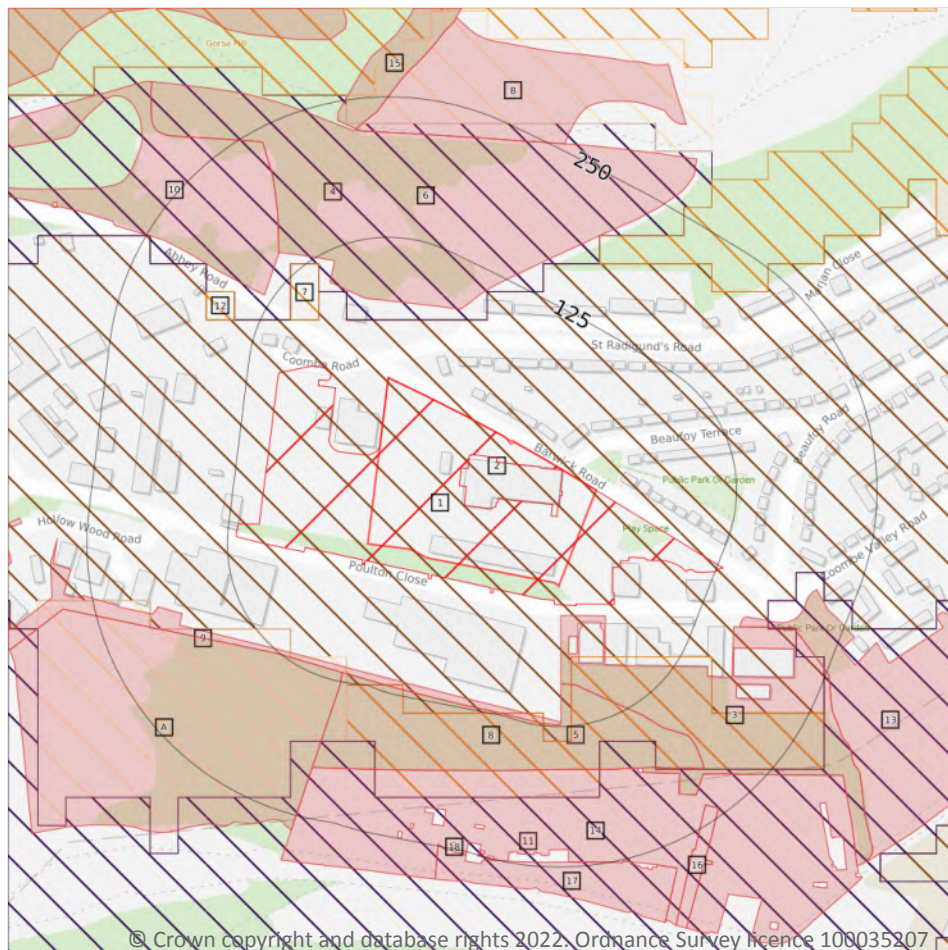
Records within 250m**0**

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

13

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 82**

ID	Location	Main Habitat	Other habitats
3	26m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	68m N	Lowland calcareous grassland	Main habitat: LCGRA (FEP + HLS)
8	87m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	111m S	No main habitat but additional habitats present	Additional: DWOOD (INV 50%)



ID	Location	Main Habitat	Other habitats
A	116m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	133m NW	Lowland calcareous grassland	Main habitat: LCGRA (FEP + HLS)
13	163m E	Lowland calcareous grassland	Main habitat: LCGRA (FEP + HLS)
14	163m S	Lowland calcareous grassland	Main habitat: LCGRA (INV > 50%)
B	218m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%); LCGRA (FEP + HLS)
15	223m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
16	234m SE	Lowland calcareous grassland	Main habitat: LCGRA (INV > 50%)
17	246m S	Lowland calcareous grassland	Main habitat: LCGRA (INV > 50%)
18	247m S	Lowland calcareous grassland	Main habitat: LCGRA (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

9

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

Features are displayed on the Habitat designations map on **page 82**

ID	Location	Type	Habitat
2	On site	Network Enhancement Zone 2	Not specified
4	52m N	Primary Habitat	Lowland calcareous grassland
5	64m S	Network Enhancement Zone 1	Not specified
7	81m NW	Network Enhancement Zone 1	Not specified
A	102m SW	Habitat Restoration-Creation	Not specified
11	143m S	Primary Habitat	Lowland calcareous grassland
12	146m W	Network Enhancement Zone 1	Not specified
B	176m NE	Network Enhancement Zone 1	Not specified
B	227m N	Habitat Restoration-Creation	Not specified

This data is sourced from Natural England.



13.3 Open Mosaic Habitat

Records within 250m

1

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

Features are displayed on the Habitat designations map on **page 82**

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
1	On site	HLD_refs: EAHLD1969 3	Low	Environment Agency Historic Landfill Sites	British Geological Survey BRITPITS database	UK Perspectives Aerial Photography

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

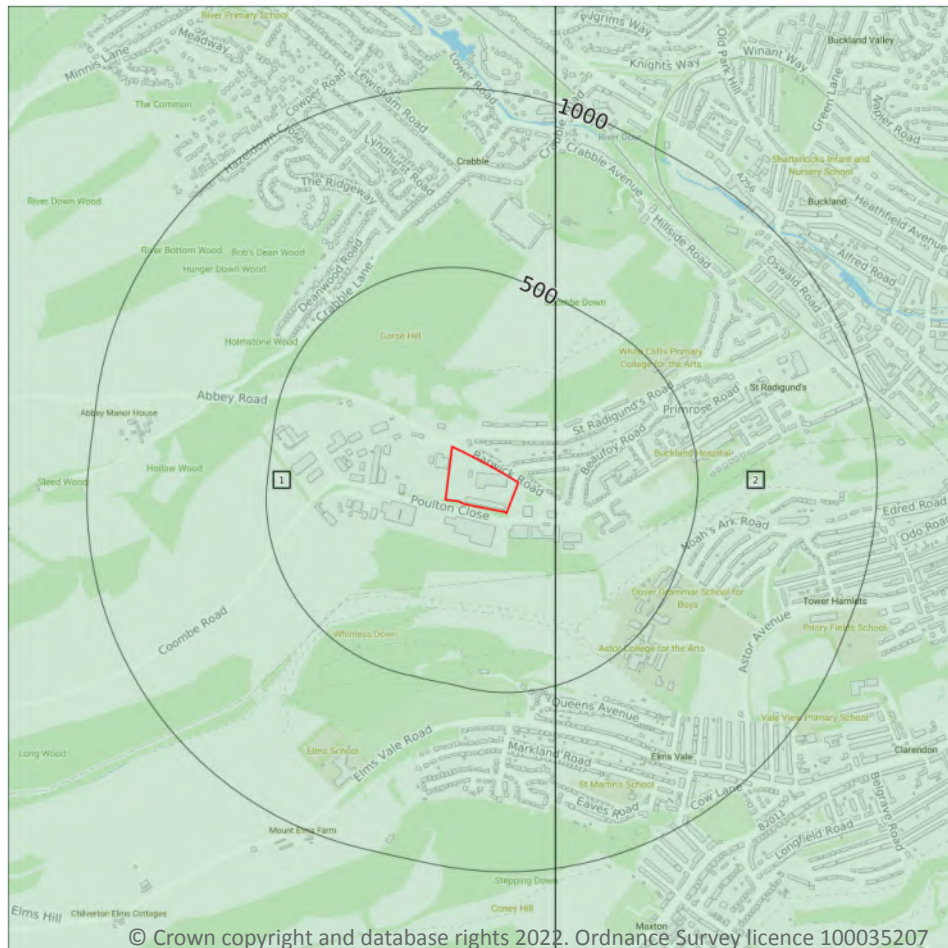
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Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

2

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 85**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	TR24SE
2	103m E	No coverage	Full	Full	No coverage	TR34SW

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground

14.2 Artificial and made ground (10k)

Records within 500m

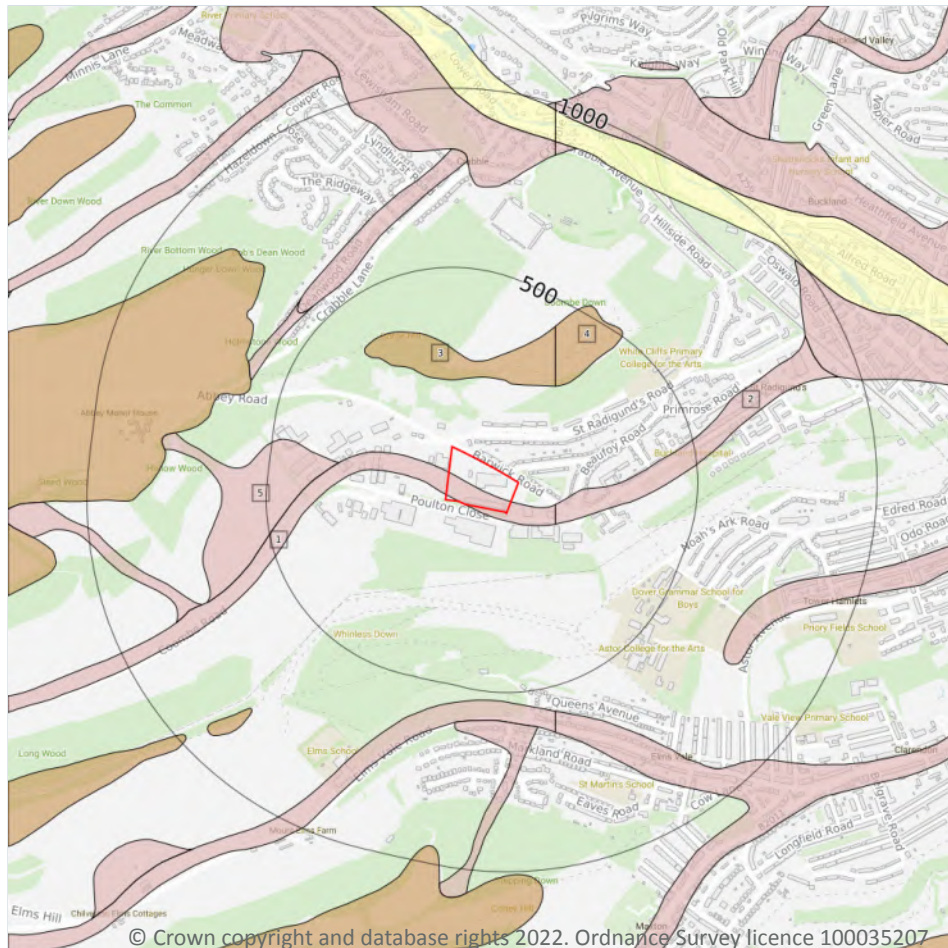
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Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

5

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 87**

ID	Location	LEX Code	Description	Rock description
1	On site	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
2	118m E	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
3	186m N	CWF-XCZSV	Clay-with-flints Formation - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel



ID	Location	LEX Code	Description	Rock description
4	284m NE	CWF-XCZSV	Clay-with-flints Formation - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
5	307m W	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

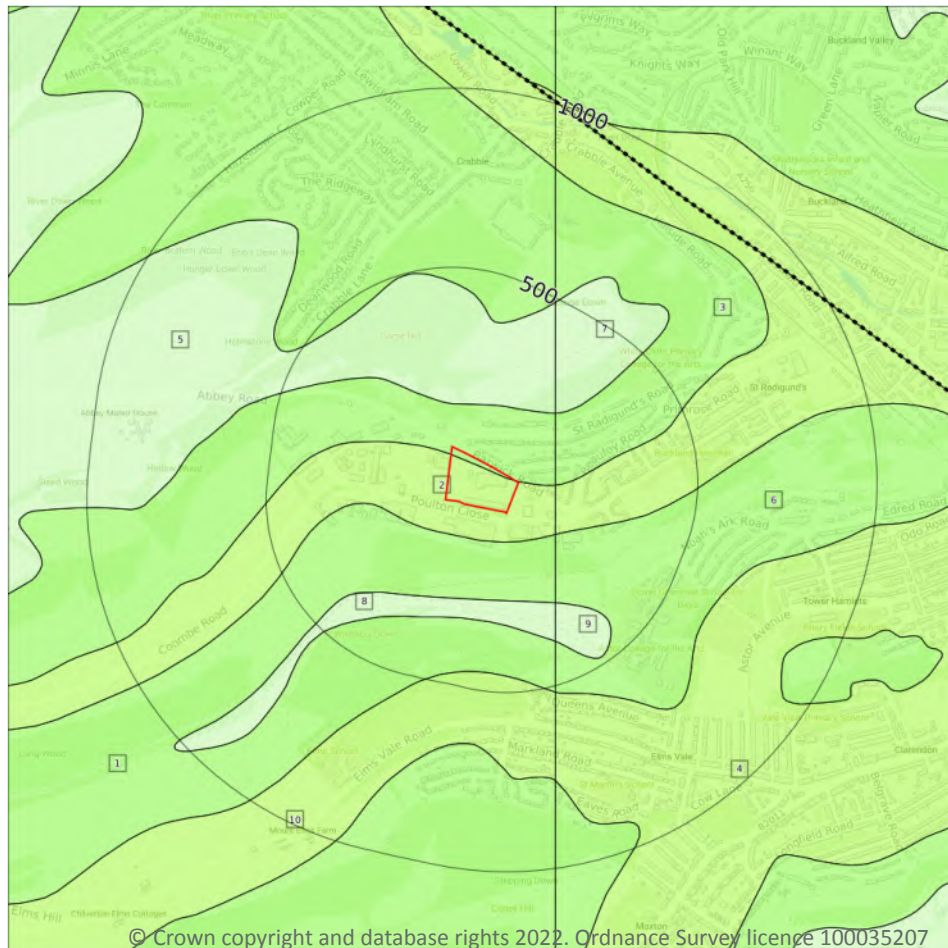
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Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

10

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 89**

ID	Location	LEX Code	Description	Rock age
1	On site	LECH-CHLK	Lewes Nodular Chalk Formation - Chalk	Coniacian Age - Turonian Age
2	On site	NPCH-CHLK	New Pit Chalk Formation - Chalk	Turonian Age
3	103m E	LECH-CHLK	Lewes Nodular Chalk Formation - Chalk	Coniacian Age - Turonian Age
4	103m E	NPCH-CHLK	New Pit Chalk Formation - Chalk	Turonian Age



ID	Location	LEX Code	Description	Rock age
5	120m N	SECK-CHLK	Seafood Chalk Formation - Chalk	Santonian Age - Coniacian Age
6	149m SE	LECH-CHLK	Lewes Nodular Chalk Formation - Chalk	Coniacian Age - Turonian Age
7	219m NE	SECK-CHLK	Seafood Chalk Formation - Chalk	Santonian Age - Coniacian Age
8	244m S	SECK-CHLK	Seafood Chalk Formation - Chalk	Santonian Age - Coniacian Age
9	285m SE	SECK-CHLK	Seafood Chalk Formation - Chalk	Santonian Age - Coniacian Age
10	448m S	NPCH-CHLK	New Pit Chalk Formation - Chalk	Turonian Age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

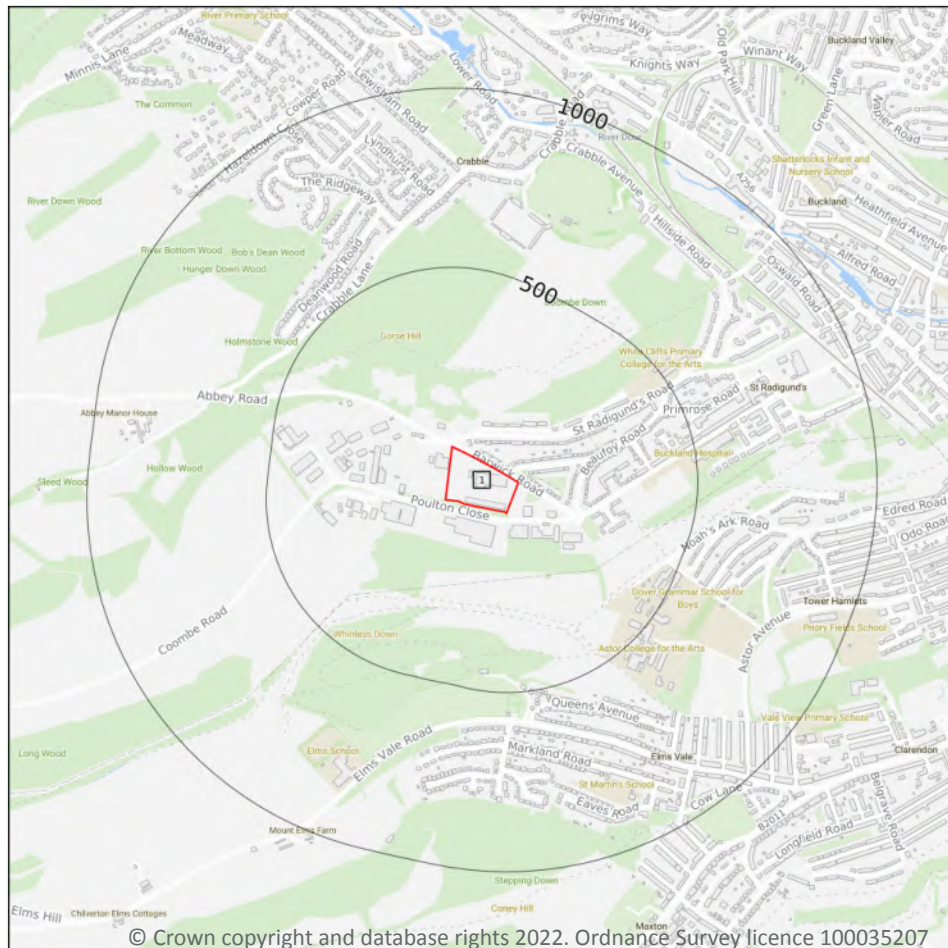
0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 91**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	Full	EW290_dover_v4

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

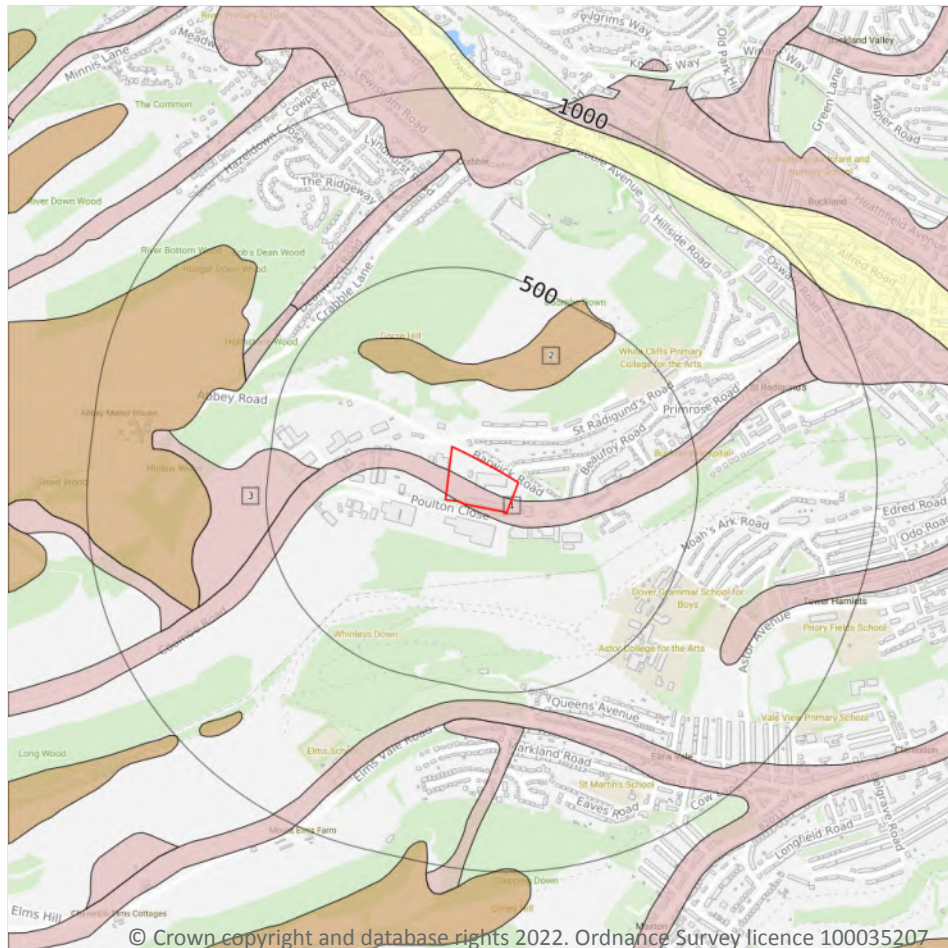
0

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


This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



— Site Outline
Search buffers in metres (m)

 Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

3

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 93**

ID	Location	LEX Code	Description	Rock description
1	On site	HEAD-XZV	HEAD	SILT AND GRAVEL
2	179m N	CWF-XCZSV	CLAY-WITH-FLINTS FORMATION	CLAY, SILT, SAND AND GRAVEL
3	359m W	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL



This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

1

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Moderate

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

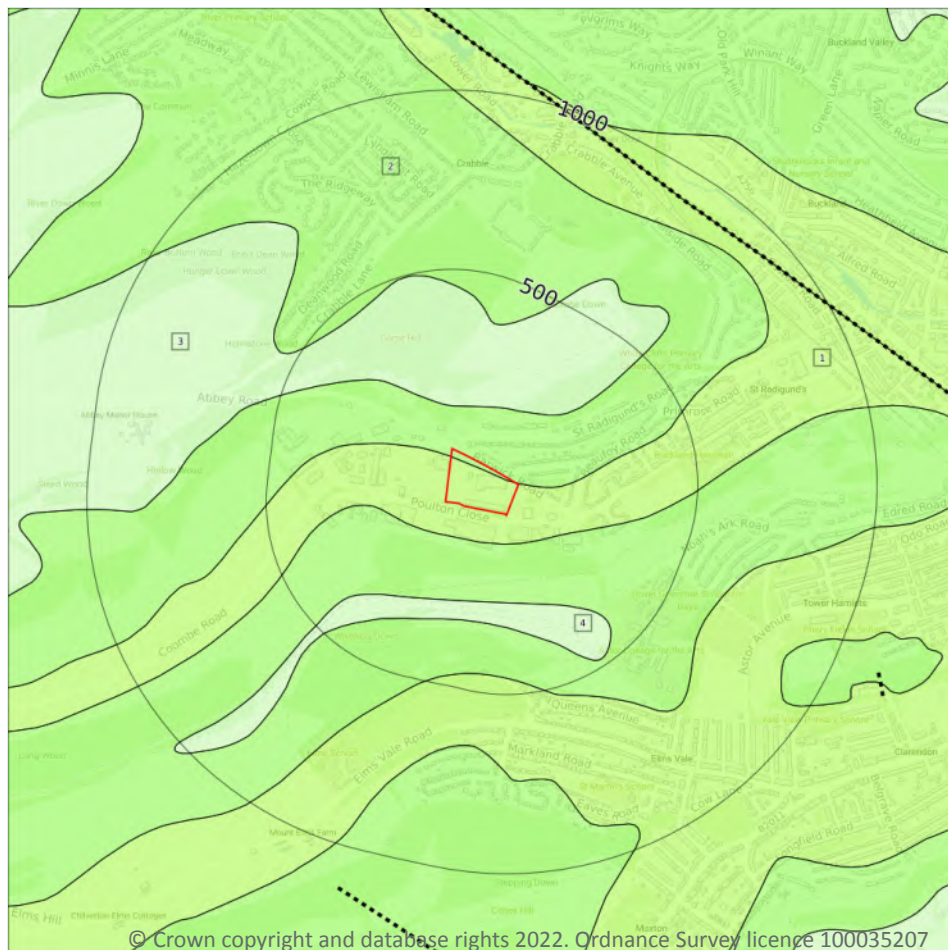
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

4

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 95**

ID	Location	LEX Code	Description	Rock age
1	On site	NPCH-CHLK	NEW PIT CHALK FORMATION - CHALK	TURONIAN
2	On site	LECH-CHLK	LEWES NODULAR CHALK FORMATION - CHALK	TURONIAN
3	120m N	SECK-CHLK	SEAFORD CHALK FORMATION - CHALK	CONIACIAN
4	244m S	SECK-CHLK	SEAFORD CHALK FORMATION - CHALK	CONIACIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

2

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Very High	Very High
On site	Fracture	Very High	Very High

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



16 Boreholes

16.1 BGS Boreholes

Records within 250m

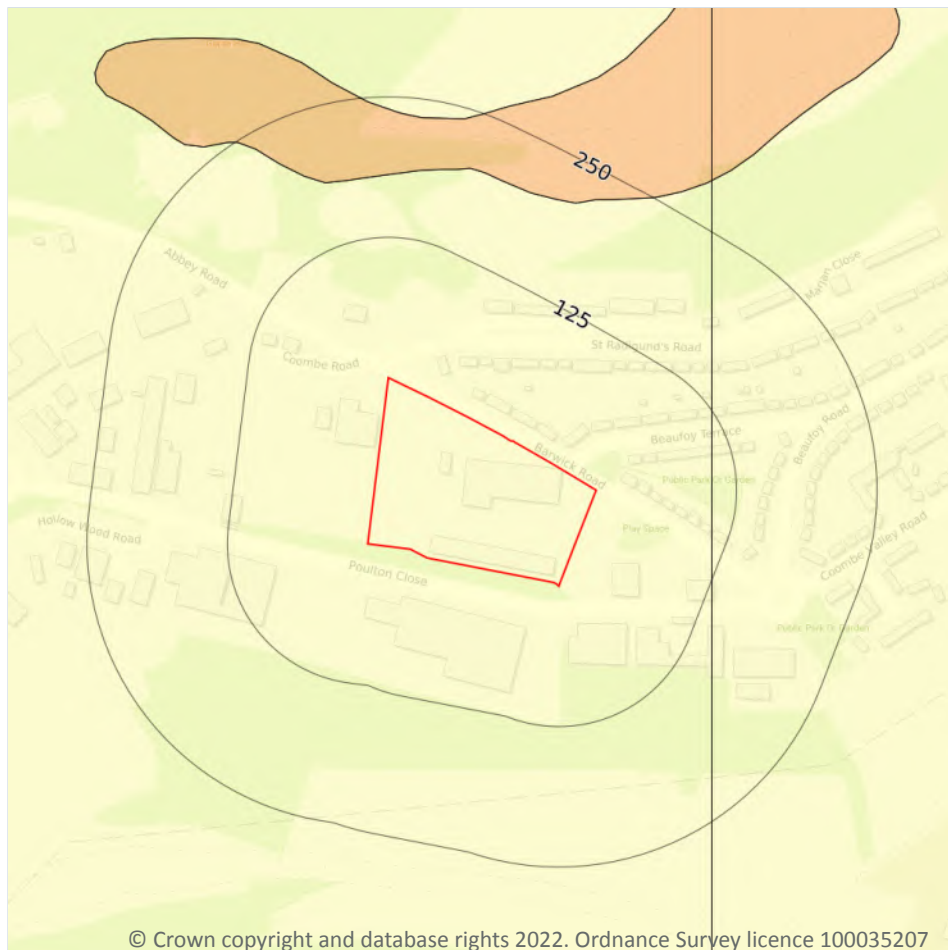
0

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



— Site Outline
Search buffers in metres (m)

- ☐ No data
- ☐ Negligible
- ☐ Very low
- ☐ Low
- ☐ Moderate
- ☐ High

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17.1 Shrink swell clays

Records within 50m

1

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

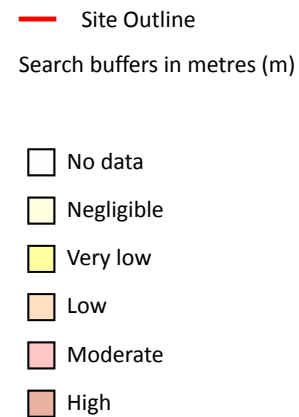
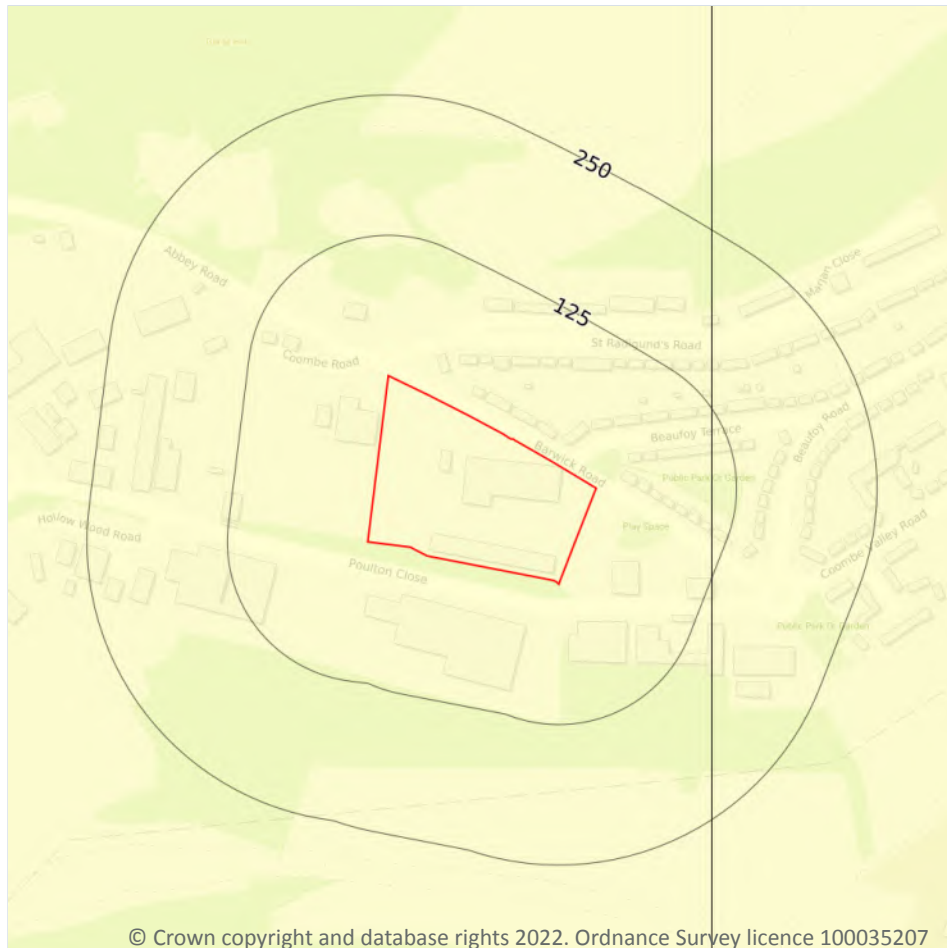
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 98**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

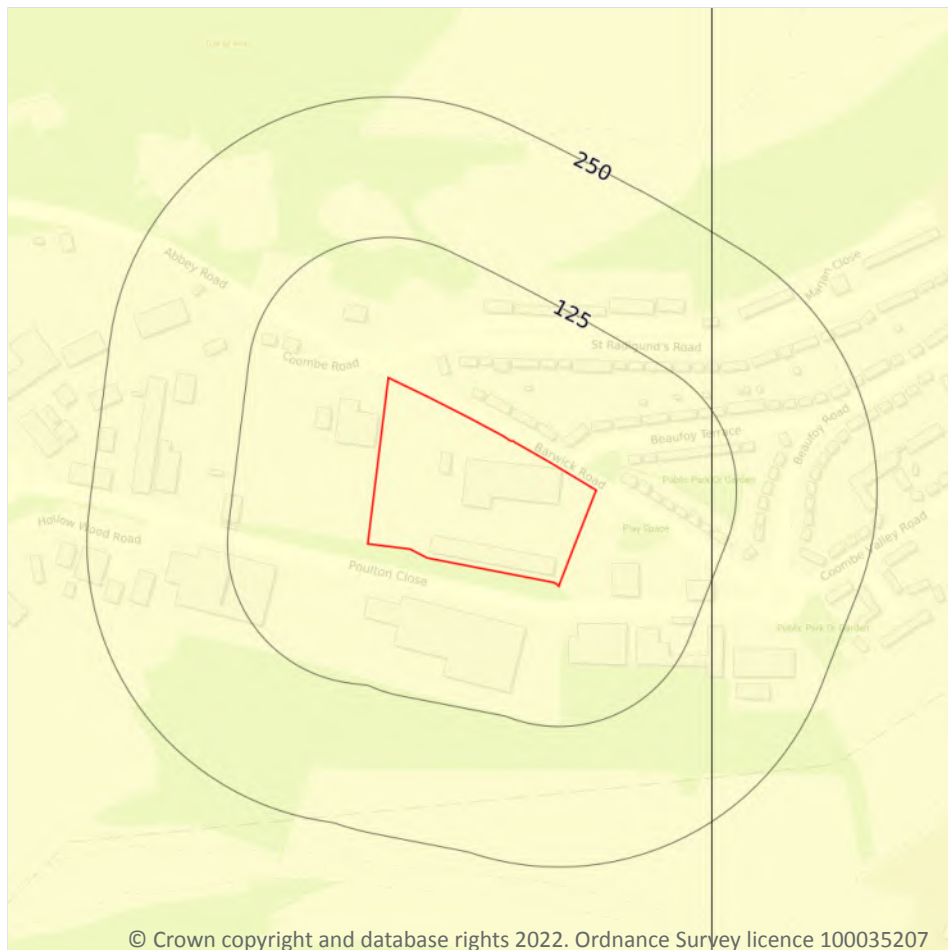
Features are displayed on the Natural ground subsidence - Running sands map on **page 99**

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



— Site Outline
Search buffers in metres (m)

- ☐ No data
- ☐ Negligible
- ☐ Very low
- ☐ Low
- ☐ Moderate
- ☐ High

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17.3 Compressible deposits

Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

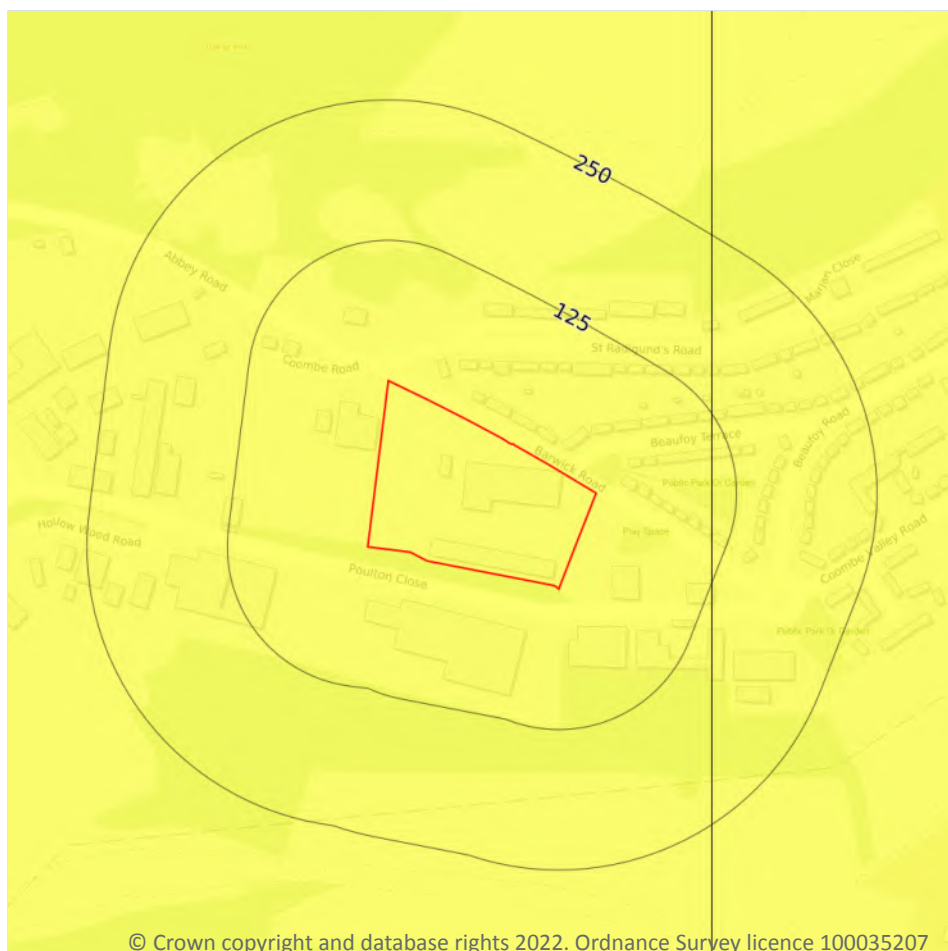
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 100**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

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17.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

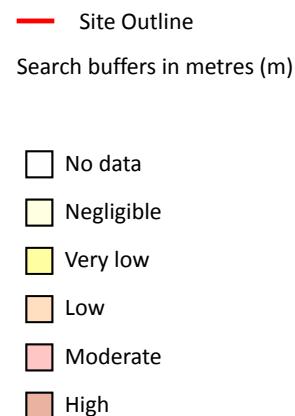
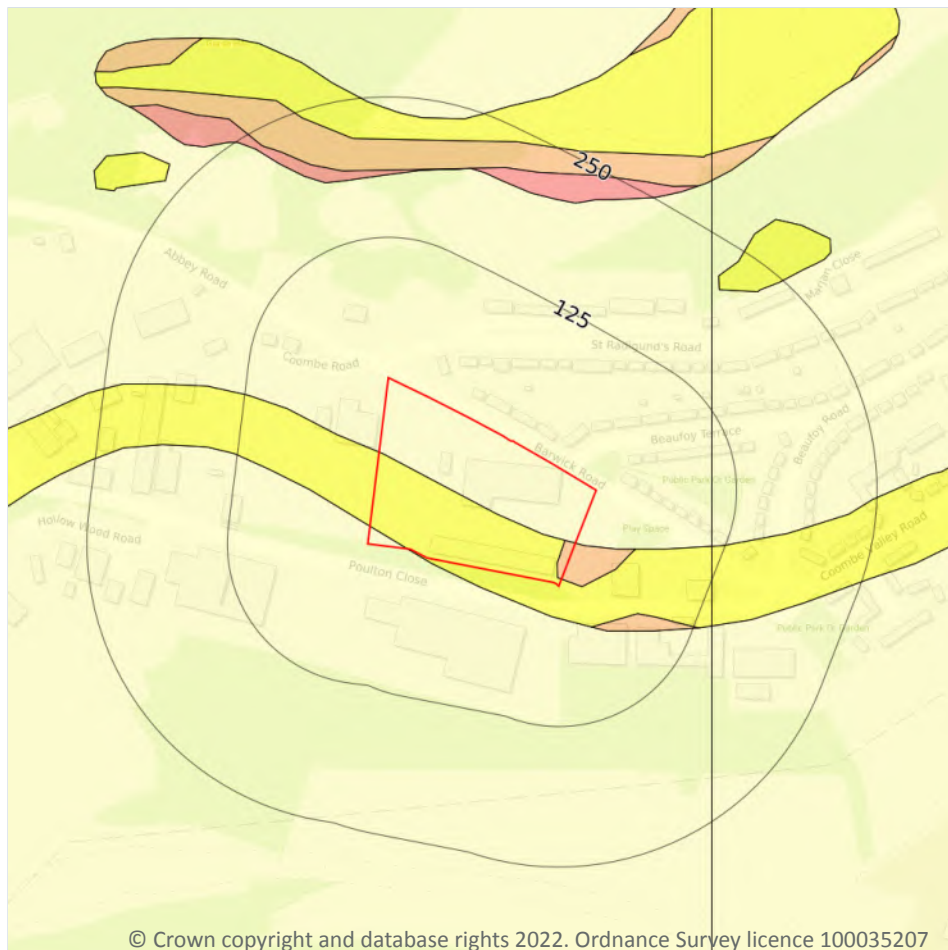
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 101**

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



17.5 Landslides

Records within 50m

4

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 102**

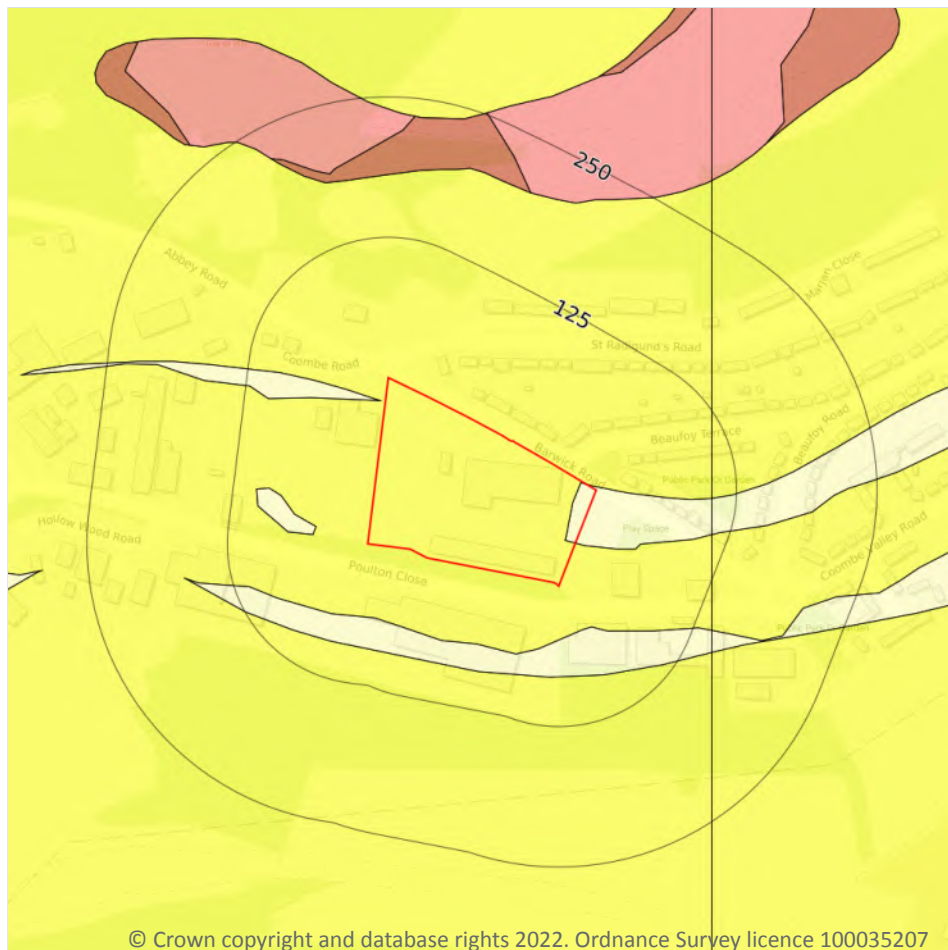
Location	Hazard rating	Details
On site	Negligible	Slope instability problems are not thought to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
47m SE	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.6 Ground dissolution of soluble rocks

Records within 50m

5

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 104**

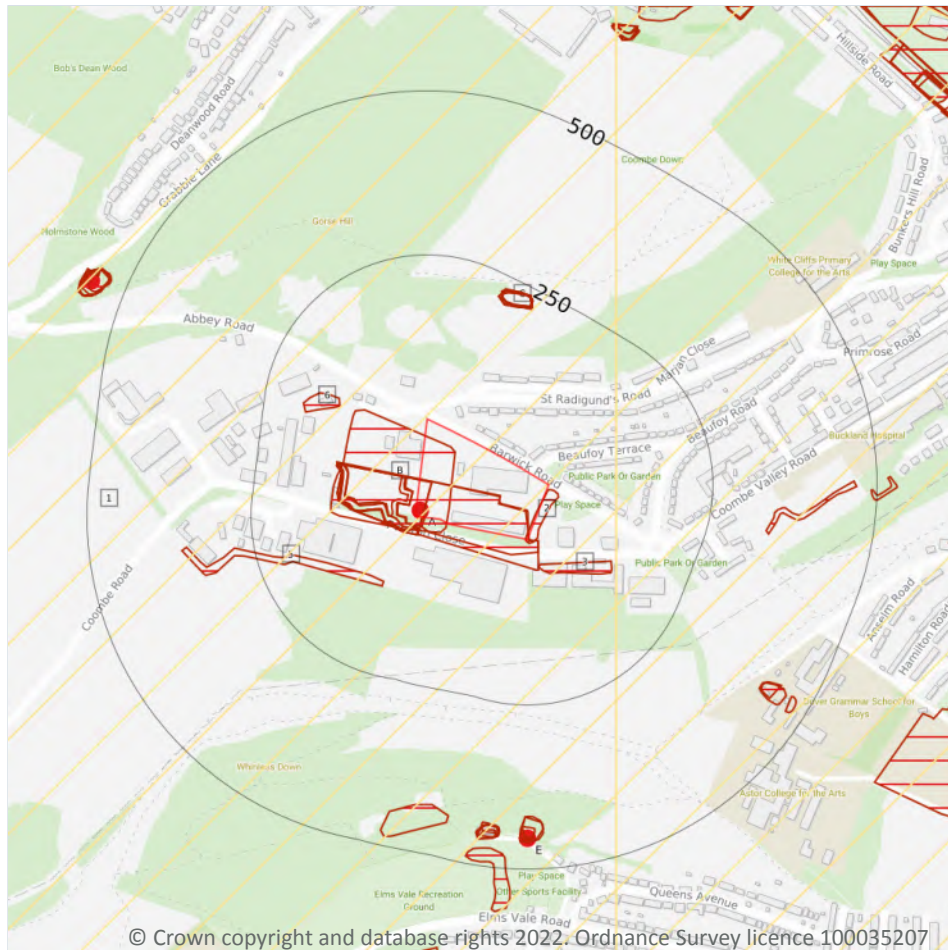
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

Location	Hazard rating	Details
On site	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.
5m W	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.
44m SE	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.
48m W	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m

2

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining, ground workings and natural cavities map on **page 106**

ID	Location	Details	Description
A	On site	Name: St Radigund's Brick Works Address: Dover, DOVER, Kent Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
E	453m S	Name: Elms Vale Limekiln Address: Dover, DOVER, Kent Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m

21

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 106**

ID	Location	Land Use	Year of mapping	Mapping scale
2	On site	Refuse Heap	1957	1:10560
A	On site	Brick Works	1938	1:10560
A	On site	Brick Works	1906	1:10560
B	On site	Refuse Heap	1957	1:10560
B	On site	Brick Works	1938	1:10560
B	On site	Brick Works	1938	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
B	On site	Unspecified Ground Workings	1906	1:10560
B	9m W	Unspecified Pit	1938	1:10560
B	9m W	Unspecified Pit	1938	1:10560
B	20m SW	Unspecified Ground Workings	1938	1:10560
B	20m SW	Unspecified Ground Workings	1938	1:10560
3	42m SE	Unspecified Pit	1872	1:10560
5	111m SW	Unspecified Ground Workings	1974	1:10000
6	135m W	Unspecified Quarry	1938	1:10560
C	208m NE	Unspecified Pit	1938	1:10560
C	208m NE	Unspecified Pit	1938	1:10560
C	208m NE	Unspecified Pit	1897	1:10560
C	210m NE	Unspecified Pit	1872	1:10560
C	213m NE	Unspecified Pit	1906	1:10560
C	213m NE	Unspecified Pit	1938	1:10560
C	213m NE	Unspecified Pit	1938	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

3

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining, ground workings and natural cavities map on **page 106**

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
4	103m E	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
-	971m N	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site

1

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.



Location	Details
On site	In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Please note, the plans held by JPB may also relate to non-mining records. Further details and a quote for services (if appropriate) can be obtained by emailing this report to enquiries.gs@jpb.co.uk .

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1
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Areas which could be affected by past, current or future coal mining.

Location	Details
On site	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0
-----------------	---

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.11 Gypsum areas

Records on site	0
-----------------	---

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

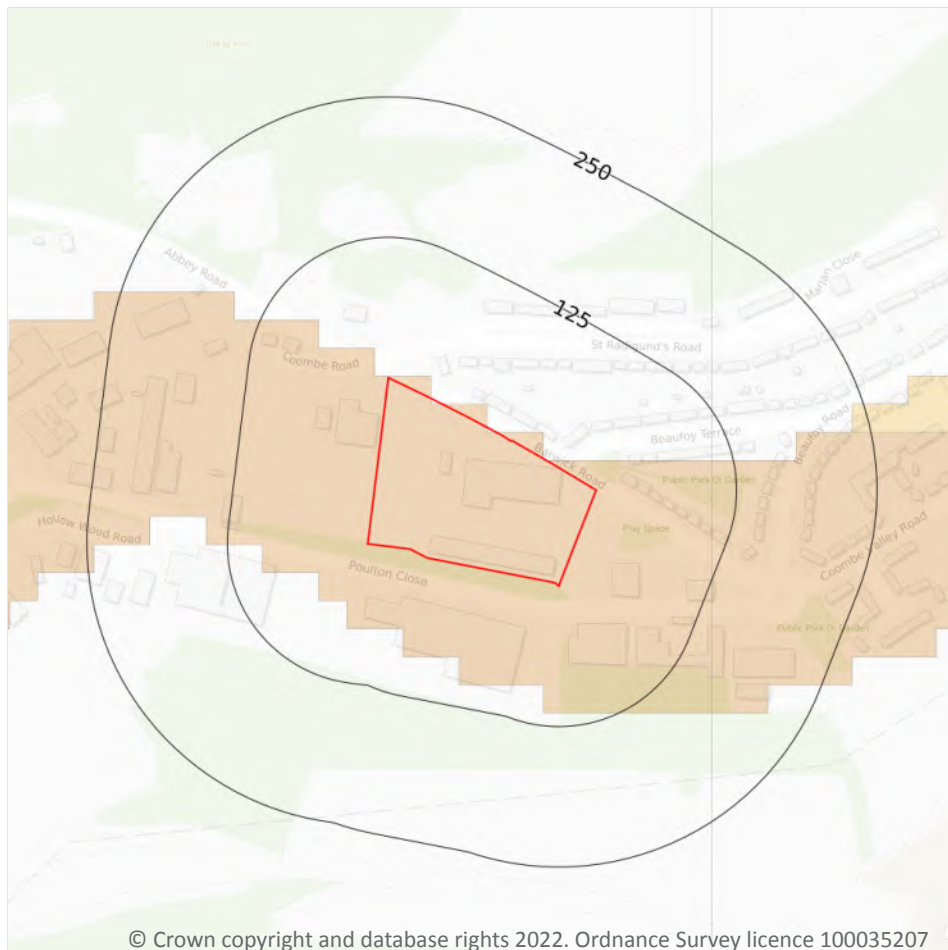
18.13 Clay mining

Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Radon



- Site Outline**
- Search buffers in metres (m)**
- Greater than 30%
 - Between 10% and 30%
 - Between 5% and 10%
 - Between 3% and 5%
 - Between 1% and 3%
 - Less than 1%

19.1 Radon

Records on site

2

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 112**

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 5% and 10%	Basic
On site	Less than 1%	None**



This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

7

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
15m W	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.



20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m**0**

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m**0**

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m**0**

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m**0**

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m**0**

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.



This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m

0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m

0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m

0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference>.

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