Report

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Report

Phase 1
Land Contamination Assessment

Capel Street, Capel-le-Ferne,
Folkestone, Kent CT18 7HG

Prepared for: **Quinn Estates Ltd.**

Reference: EES 23.144.1

Date: 16th February 2024

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Title: **Phase 1**
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Client:	Quinn Estates Ltd.	**Client Reference:**	Capel

Management Systems Control

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EXECUTIVE SUMMARY

Site Location	Capel Street, Capel-le-Ferne, Folkestone, Kent CT18 7HG.
Site Description	The Site covers an area of approximately 4.03 hectares (ha) and is situated in the semi-rural village of Capel-le-Ferne. Folkestone town centre is approximately 3.5km to the southwest with the Southern Railway running approximately 600m south of the Site. There are residential properties which directly border the eastern and southern edges of the Site, and partially border the western edge. The northern edge borders agricultural land, which is consistent with the current onsite land use. There is a small industrial / farm estate with several businesses just off Cauldham Lane, which is approximately 15m to the west. The proposed Site access points are currently occupied by a residential property to the east and pastureland to the west.
Objective	This Phase 1 Contaminated Land Assessment is submitted in support of an Outline Planning application for the redevelopment of the Site in accordance with the National Planning Policy Framework. From information provided by the Client, it is understood that the current proposed Site redevelopment comprises the erection of up to 90 dwellings with associated parking and infrastructure following demolition of the existing dwelling; with all matters reserved except access. If this changes, then the conclusions drawn in this report will need to be reconsidered.
Environmental Setting	The geology underlying the Site comprises Clay with Flints Superficial deposits (Secondary A Aquifer, medium vulnerability), with bedrock geology comprising the Lewes Nodular Chalk Formation (Principal Aquifer, medium vulnerability). The Site is located within a groundwater Source Protection Zone (SPZ) 3 – Total Catchment. The Site is not situated in a Drinking Water Protected Area (DrWPA) for groundwater of surface water, with groundwater resting level reported to be at depths of ~75m bgl. No surface water features are present within 250m of the Site boundary. The nearest significant surface water is the Strait of Dover from East Wear Bay, 0.8km to the south. The Site is partially reported to be in a Radon affected area (over 30% of the properties); therefore, full protective measures are necessary for new developments.
Historical Setting	The majority of the Site has remained an undeveloped agricultural field since the late 1800s to current day. The properties which border the Site boundary to the east and south are identified in maps dated from 1931 onwards, with the small industrial estate to the west being mapped from 1972. Over the years, residential properties have primarily been constructed to the southeast of the Site to expand the village of Capel-le-Ferne. The remaining surrounding area consists mainly of agricultural land uses.
Initial Conceptual Site Model	An initial Conceptual Site Model (CSM) has been developed based on the relevant findings in this Phase 1 Assessment. **Onsite Sources:** Future End Users: Moderate Risk associated with dermal contact, inhalation of indoor and outdoor dust and vapours from the agricultural land and existing residential property. Groundwater: Moderate Risk of vertical soil leaching to Secondary A and Principal Aquifer. Surface Water: Very Low Risk of surface water run-off (nearest receptor is the Strait of Dover at East Wear Bay, 0.8km south). Buildings and Structures: High Risk associated with ground gas accumulation within buildings. Moderate / Low Risk associated with hydrocarbons / VOCs permeation of plastic utilities pipes. Moderate Low Risk associated with aggressive ground conditions on concrete. **Off-Site Sources:** Moderate / Low Risk associated with lateral migration of contaminants from surrounding historical and current land uses, historic tanks, electrical substation, road network and residential developments.
Recommendations	Based on the risks assessed by Ecologia, further site investigation works are considered necessary to characterise shallow soil conditions and assess the risks from ground gas generation. Additionally, as a minimum it is recommended that the following is considered during the development construction works: A detailed UXO risk assessment to be conducted prior to any ground penetrative works, given the Site's location in an area at Moderate risk from UXO. A Consultants Coal Mining Report should be obtained to further assess coal mining issues, given the Site's location in a Coal Mining Area as defined by the Coal Authority.

	An assessment of the Site to establish the presence or absence of invasive species would be advisable, to be undertaken by a competent person i.e. trained ecologist, before proceeding with development. A discovery strategy (procedures to be followed should unexpected contamination be identified) during redevelopment works in the event that unforeseen and suspected contamination is encountered, the client should stop works and further assessment undertaken by experienced Environmental Consultant. The discovery strategy may be a requirement / condition of the LPA as the planning application progresses. Appropriate PPE for ground workers, to mitigate potential risks from dermal contact, ingestion and inhalation of contamination materials / soils. Good housekeeping rules should also be observed onsite i.e. washing of hands before eating etc. in accordance with health and safety regulations. **The above recommendations should be presented to the Local Authority for comment and agreement. Typically, we would expect the recommendations to be conditioned as part of a planning application (i.e. Construction Management Plan).**
The initial Conceptual Site Model (CSM), Qualitative Risk Assessment (QRA) and recommendations are made based on the Site being redeveloped for a residential end use with private gardens and soft landscaping. If the proposed end use of the Site is changed, potential risks would need to be reassessed and the GQRA and CSM herein refined accordingly.	

CONTENTS

TABLES

PLANS

APPENDICES

1. INTRODUCTION

1.1 Background

Ecologia has been instructed by Quinn Estates Ltd. (the 'Client'), to complete a Phase 1 Land Contamination Assessment (Desk Study and Site Walkover) for the proposed residential development (the 'Site') located at Capel Street, Capel-le-Ferne, Folkestone, CT18 7HG.

1.2 Objectives

This Phase 1 Contaminated Land Assessment is submitted in support of an Outline Planning application for the redevelopment of the Site in accordance with the National Planning Policy Framework (MHCLG, July 2021).

1.3 Proposed Development

From information provided by the Client, it is understood that the proposed redevelopment will comprise the erection of up to 90 dwellings with associated parking and infrastructure following demolition of the existing dwelling; with all matters reserved except access.

The redevelopment plan is included in Appendix I for reference.

1.4 Report Structure

This Phase 1 Land Contamination Assessment has been undertaken in accordance with the Land Contamination Risk Management guidance (EA, 2023) which has been developed to provide the technical framework for applying a risk management process when dealing with land affected by contamination.

This report includes:

A description of the Site setting and findings of a Site walkover survey.

A review of readily available information and an environmental data search addressing:

the environmental setting of the Site (geology, hydrogeology, hydrology and sensitive environmental land designations); and,

historical mapping and existing and former industrial sites to determine former potentially contaminative land uses.

An initial Conceptual Site Model (CSM) establishing potential contaminant linkages and a qualitative assessment of whether these are likely to form an unacceptable risk.

Recommendations for further works (if required).

1.5 Information Sources

A Groundsure environmental data search has been obtained in the preparation of this report which has been included in Appendix II.

A full set of references is detailed in Section 7.

2. SITE DESCRIPTION

2.1 Site Location

The Site address is: Capel Street
Capel-le-Ferne
Folkestone
Kent
CT18 7HG

The Site covers an area of approximately 4.03 hectares (ha) and is situated in the semi-rural village of Capel-le-Ferne. Folkestone town centre is approximately 3.5km to the southwest with the Southeastern Railway running approximately 600m south of the Site. There are residential properties which directly border the eastern and southern edges of the Site, and partially border the western edge. The northern edge borders agricultural land, which is consistent with the current land use onsite. Little Cauldham Farmhouse and garden border the Site to the west, with a small industrial estate with several businesses just off Cauldham Lane (approximately 75m west). Two Site access points are proposed to the east and west; one to replace a residential property (east; main access) and the other to cross through the neighbouring pastureland (west; emergency access).

The location of the Site and the approximate outline of the Site development area (outlined in red) are shown in Plans 1 and 2 below.

Plan 1. Approximate Site Location (*Source: Google Maps, 2023*).

Plan 2. Approximate Proposed Redevelopment Area (*Source: Google Maps, 2024*).

2.2 Site Walkover Survey

The general Site setting is summarised in Table 2.1 below.

Table 2.1. General Site Setting

National Grid Reference	624686 138669	
Site Area	4.03 hectares	
Approximate Elevation	166.3m AOD (south) to 153.8m AOD (north)	
Site Geometry	Irregular polygon	
Site Boundary	North	Large open agricultural field.
	East	Residential dwellings and Capel Street.
	South	Residential dwellings and Cauldham Lane.
	West	Residential dwelling 'Little Cauldham Farmhouse', Cauldham Lane and small industrial estate / farm estate.

A Site walkover survey was completed by Ecologia on Wednesday, 02 August 2023. The photographic report, included in Appendix III, should be referred to in conjunction with the Site description below.

The Site is situated within a semi-rural, predominantly agricultural area (plates 1,3 & 4). The proposed development area itself encompasses a large grain based arable field, with a topography which slopes down gradient from south to north (plate 2). On both the eastern and southern Site boundaries, there are residential properties with gardens that back onto the agricultural field. The northern Site boundary continues as an arable field, which is consistent with the monoculture crop field found onsite.

The western boundary borders a farmhouse and a field where horses are kept. Cauldham Lane runs parallel to the western and southern Site boundaries, whilst Capel Street runs parallel to the eastern Site boundary. Access to the Site was very limited, which Ecologia gained by walking through the agricultural field via Cauldham Lane, northwest of the Site (plates 5 and 6).

The main development area currently consists of an open agricultural field. Some evidence of dumping was found on the Site boundary, where properties backed onto the field (south and east), including piles of garden waste and wooden pallets (plates 7 and 8). Some general litter was also observed during the Site walkover.

The proposed access points were viewed from the agricultural field (residential back garden and pastureland); no obvious signs of contamination were noted.

No services were identified during the Site walkover, with the exception of one black cable which ran parallel to the southern boundary, its use is currently unknown (plate 9). No soakaways, drainage ditches or septic tanks were identified during the Site walkover.

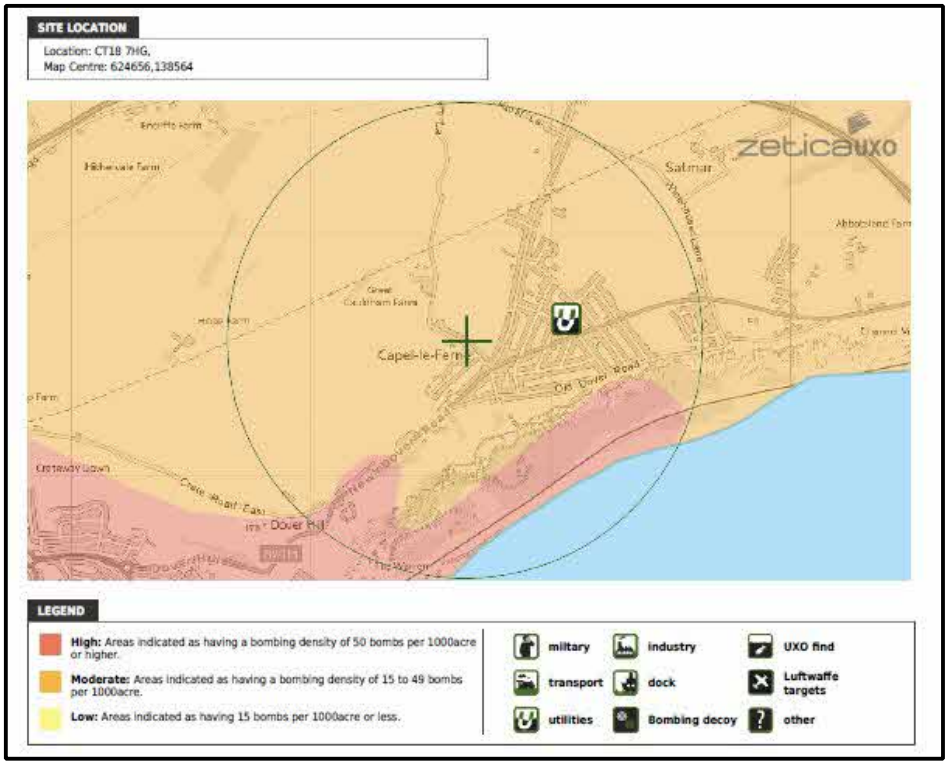
No tanks or storage containers were recorded during the Site walkover. Some brick rubble was identified in soils surrounding the perimeter of the Site (plate 10).

No evidence for invasive species e.g., Japanese Knotweed or Himalayan Balsam etc was observed; however, it must be noted that such identifications are subject to seasonality and can only be reliably made by competent persons (e.g. Ecologists) so the presence of invasive species at the Site cannot be ruled out at this stage.

Overall, no major potential sources of contamination were identified during the Site walkover.

2.3 Unexploded Ordnance

Information obtained from Zetica UXO Risk Map website indicates a 'Moderate Bomb Risk' at the Site. The UXO risk map search results are presented in Plan 3 below.



Plan 3. Zetica UXO Risk Map (*Source: Zetica UXO, 2023*).

3. ENVIRONMENTAL SETTING

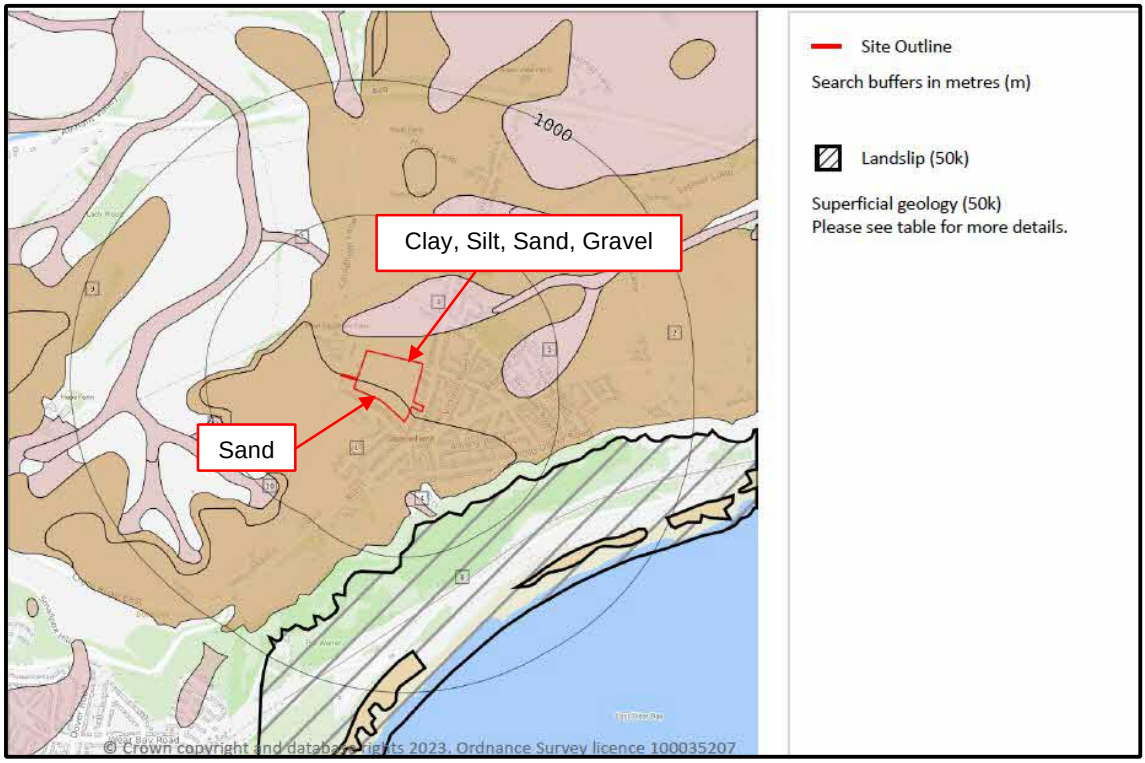
Information with regards to the environmental setting of the Site has been obtained from readily available public sources including the British Geological Survey (BGS); MAGIC (Natural England *et al*); and, GOV.UK websites alongside a report commissioned by Groundsure (Appendix II).

3.1 Geology

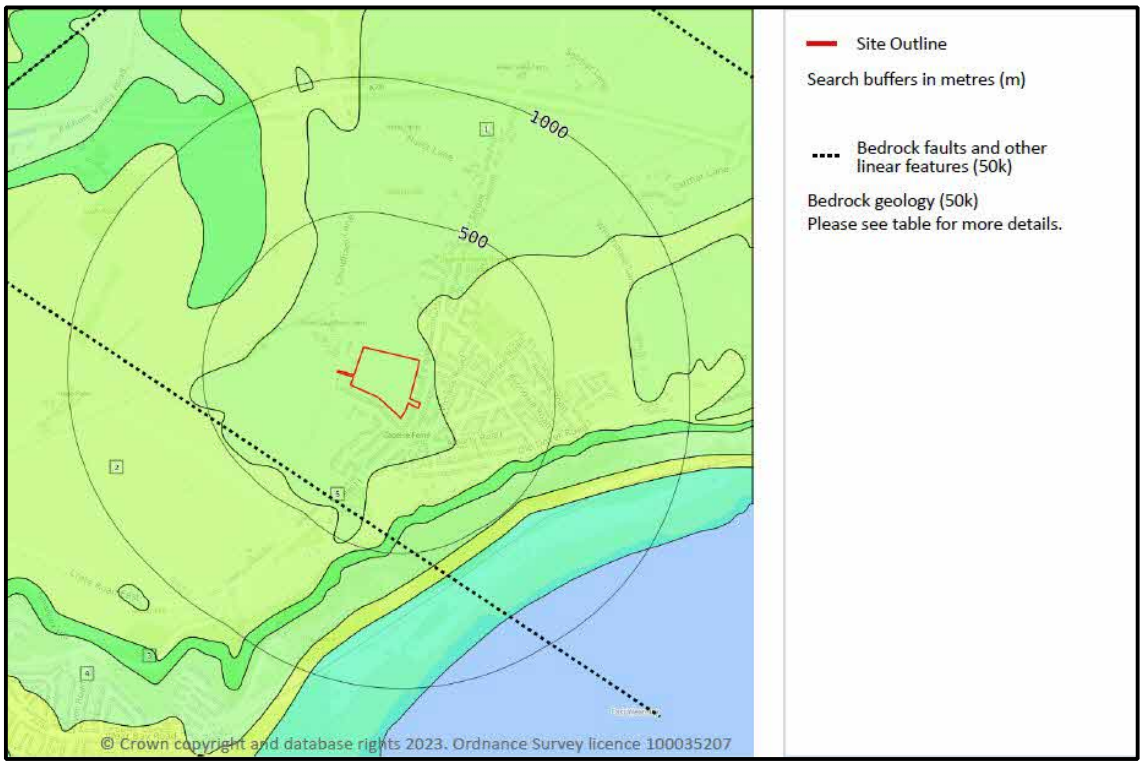
Published geological information (British Geological Survey 1:50 000) and the BGS website (Geology of Britain Viewer) indicates that the Site is directly underlain by the geological sequences as summarised in Table 3.1 below, and shown in Plans 4 and 5.

Table 3.1. Geological Information

Group / Formation		Lithology	Approximate Thickness (m)
Superficial	Clay with Flints Formation *(Sand)*	Dominant lithology is orange-brown and red-brown sandy clay with abundant nodules and rounded pebbles of flint.	Up to 10m
	Clay with Flints Formation *(Clay, Silt, Sand, Gravel)*		
Bedrock	Lewes Nodular Chalk	Composed of hard to very hard chalks and hardgrounds (which resist scratching by fingernail) with interbedded soft to medium chalks (some grainy) and marls.	Up to 60m



Plan 4. Superficial Geology (50k), 1:50,000 scale (*Source: Groundsure, 2023*).



Plan 5. Bedrock Geology (50k), 1:50,000 scale (*Source: Groundsure, 2023*).

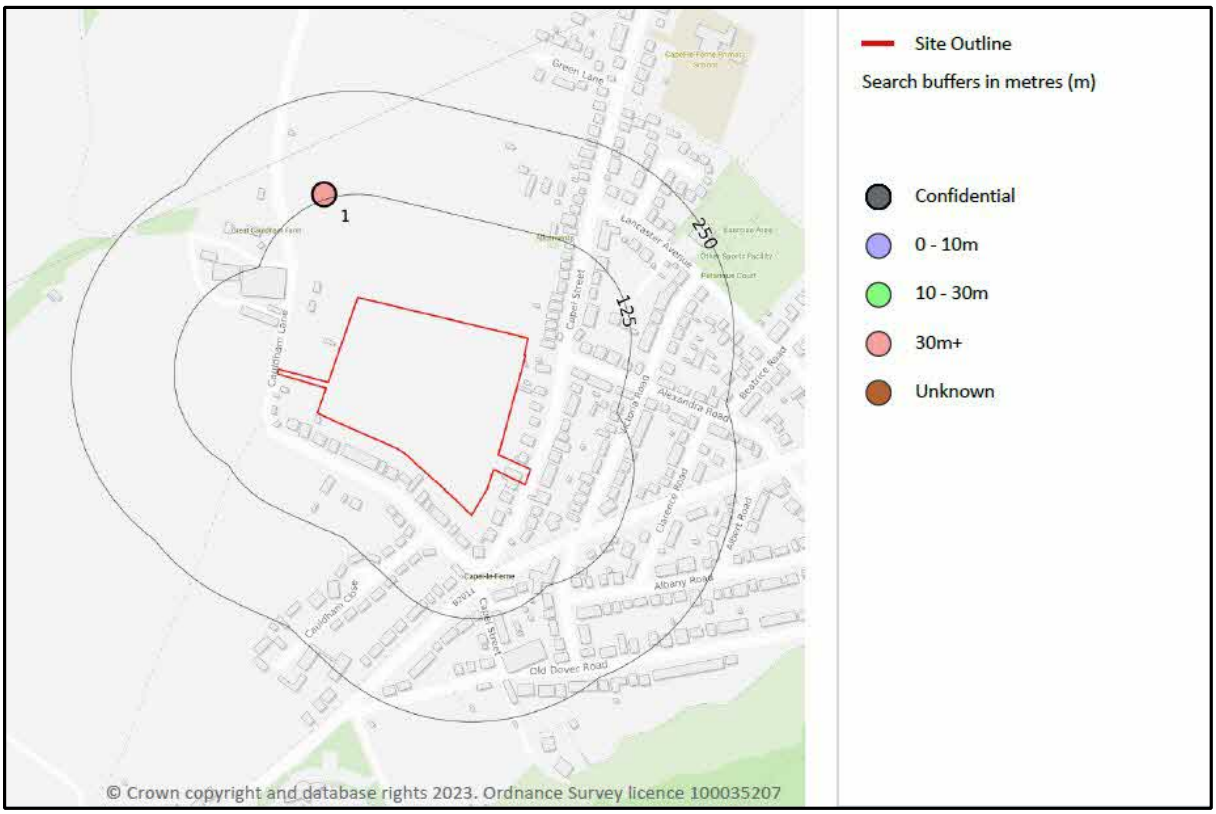
3.1.1. Borehole Records

Information with regards to local borehole records was obtained from the BGS website and the Groundsure report. There is one (1No.) borehole within 250m of the Site, with the geological information summarised in Table 3.2 below.

Table 3.2. Local Borehole Records

ID	Grid Reference	Name	Location	Depth (m)	Description
1	624560 138910	CHANNEL TUNNEL E6 CAPEL LE FERNE	131m NW	0.00 – 0.15	Topsoil
				0.15 – 4.27	Firm brown sandy Clay
				4.27 – 7.01	Stiff brown sandy Clay with flints
				7.01 – 8.84	Brown and grey Clay with bands of weathered Chalk
				8.84 – 47.24	White Chalk without flints
				47.24 – 56.90	Hard, creamy-white “nodular” Chalk with streaks of greyish marly chalk
				56.90 – 59.74	Pale grey-white marly Chalk
				59.74 – 70.03	Massive, uniform, soft pale grey-white Chalk
				70.03 – 71.32	Pale, grey-white Chalk, harder
				71.32 – 91.74	Unrecovered Chalk Groundwater level at 75.70m
				91.74 – 129.39	Grey streaky Chalk, relatively hard

The borehole location is depicted on Plan 6 overleaf.



Plan 6. Borehole Location (*Source: Groundsure, 2023*).

3.1.2. Mineral Safeguarding Areas

The Kent Minerals and Waste Local Plan for the Folkestone and Hythe District has been consulted, which confirms that the Site does not fall within a Mineral Safeguarding Area.

3.1.3. Mining, Extraction and Cavities

There are no records of British Pits (BritPits) within 500m of the Site boundary.

There are fifteen (15No.) records of surface ground workings within 250m of the Site boundary, which are defined as ground excavations at the surface level including:

Pond, 138m NW, mapped in 1897

Pond, 142m NW, mapped in 1938 and 1931

Pond, 144m NW, mapped in 1973

Pond, 146m NW, mapped in 1961

Pond, 149m NW, mapped in 1931 (2No. records)

Pond, 207m S, mapped in 1938 and 1931

Unspecified Pit, 233m S, mapped in 1931 (2No. records)

Unspecified Pit, 235m S, mapped in 1938

Unspecified Pit, 237m S, mapped in 1938 and 1931

Unspecified Pit, 240m S, mapped in 1961

There are two (2No.) records of underground workings within 1,000m of the Site boundary:

Tunnel, 173m NW, mapped in 1993

Tunnel, 466m NE, mapped in 1993

There are no records of underground mining extents within 500m of the Site boundary.

There are no records of historical mineral planning areas within 500m of the Site boundary.

There are two (2No.) records of Non-coal mining within 1000m of the Site boundary, which are listed as the following:

Onsite, Chalk, Class: A, Likelihood: Underground mining workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult conditions are unlikely and are at a level where they need not to be considered.

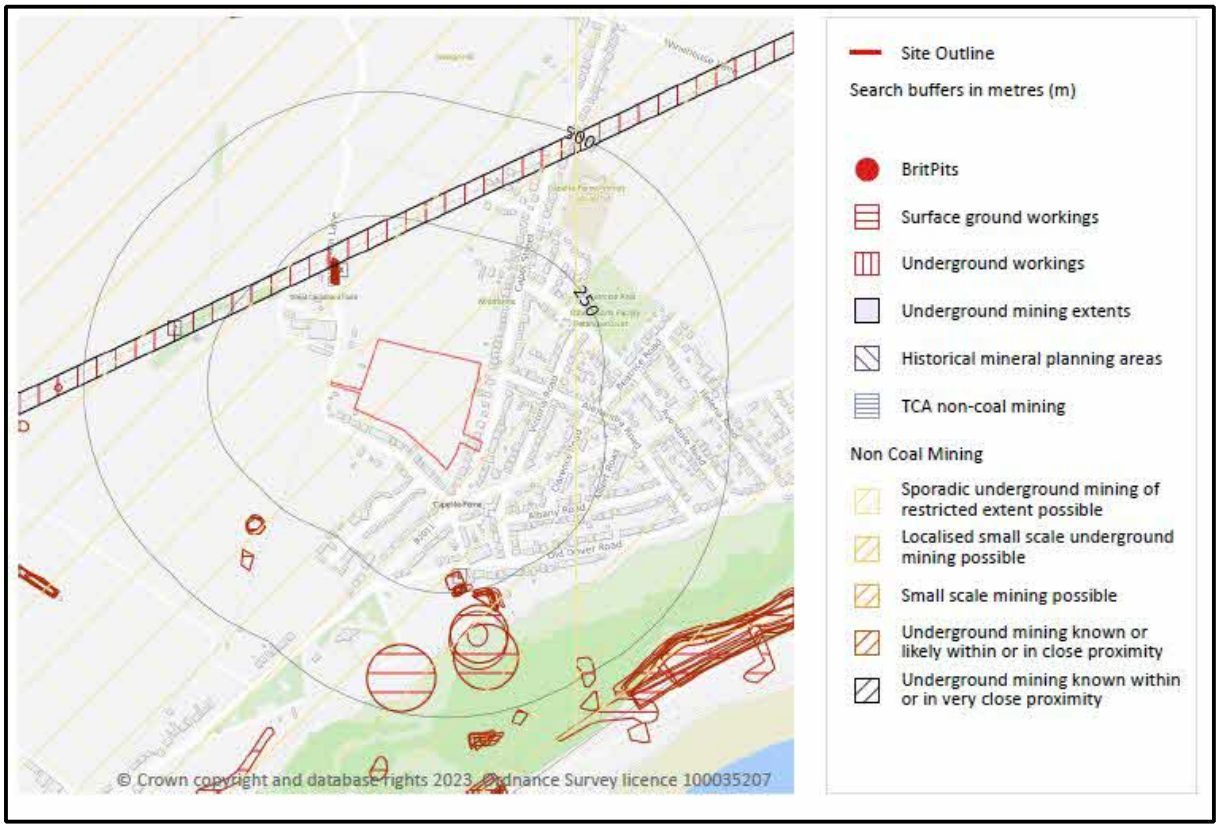
190m E, Chalk, Class: A, Likelihood: Underground mining workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult conditions are unlikely and are at a level where they need not to be considered.

There is one (1No.) record of Researched mining within 500m of the Site boundary, which is described as the following:

199m NE, mineral type: Stone

There is one (1No.) record of Coal mining, which states that the Site is in 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.

Mining and Ground Workings are depicted in Plan 7, below.



Plan 7. Mining and Ground Workings (*Source: Groundsure, 2023*).

There are two (2No.) records of natural cavities within 500m of the Site:

241m W, Type: Solution Pipe x 1

373m S, Type: Solution Pipe x 3

There are no records of mining cavities within 1000m of the Site boundary.

There are fourteen (14No.) records of historical incidents related to ground cavities and sinkholes within 500m of the Site boundary, which are defined as types of holes:

280m S, unspecified hole, mapped in 1938 and 1931

292m S, unspecified hole, mapped in 1872

317m S, unspecified hole, mapped in 1961

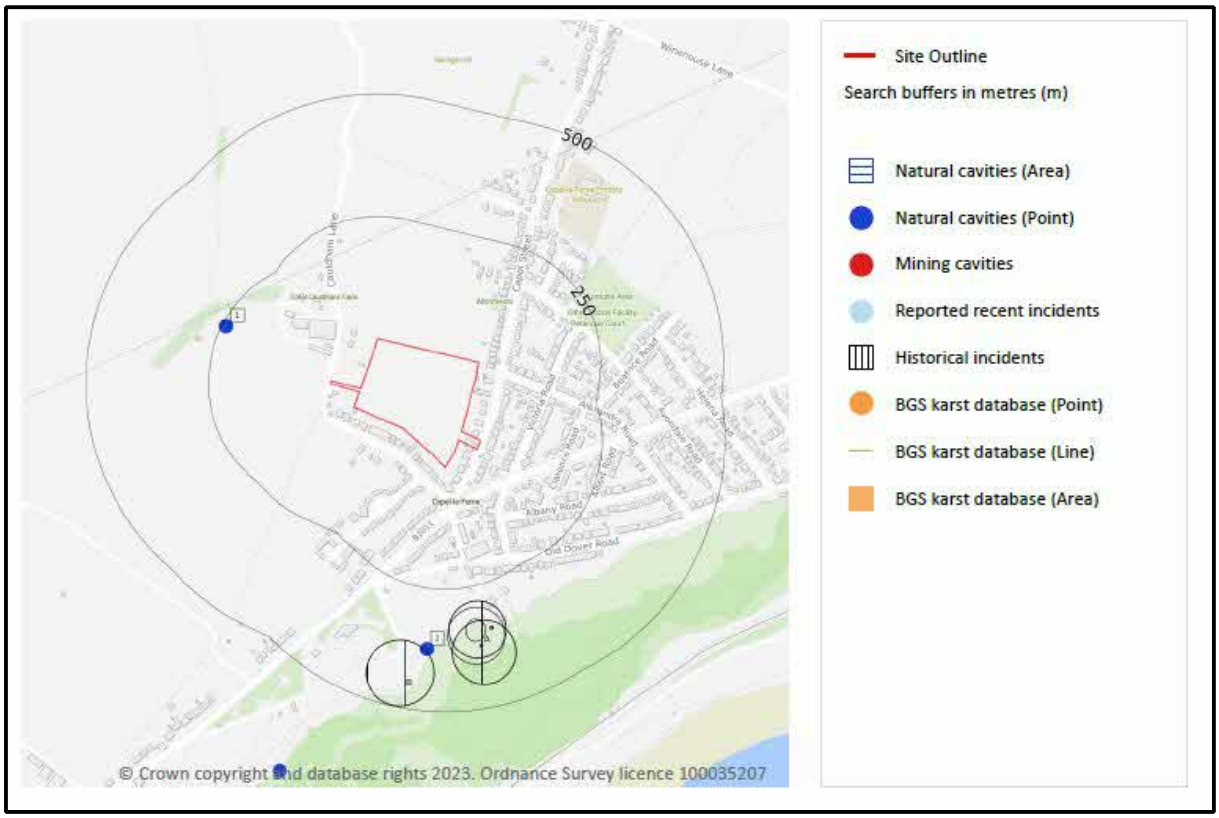
321m S, unspecified hole, mapped in 1906 and 1897

339m S, hole, mapped in 1993, 1992, 1993 and 1982

363m S, unspecified hole, mapped in 1993 and 1973

369m S, hole, mapped in 1898 and 1873

The ground cavities locations are depicted in Plan 8, below.



Plan 8. Ground Cavities (*Source: Groundsure, 2023*).

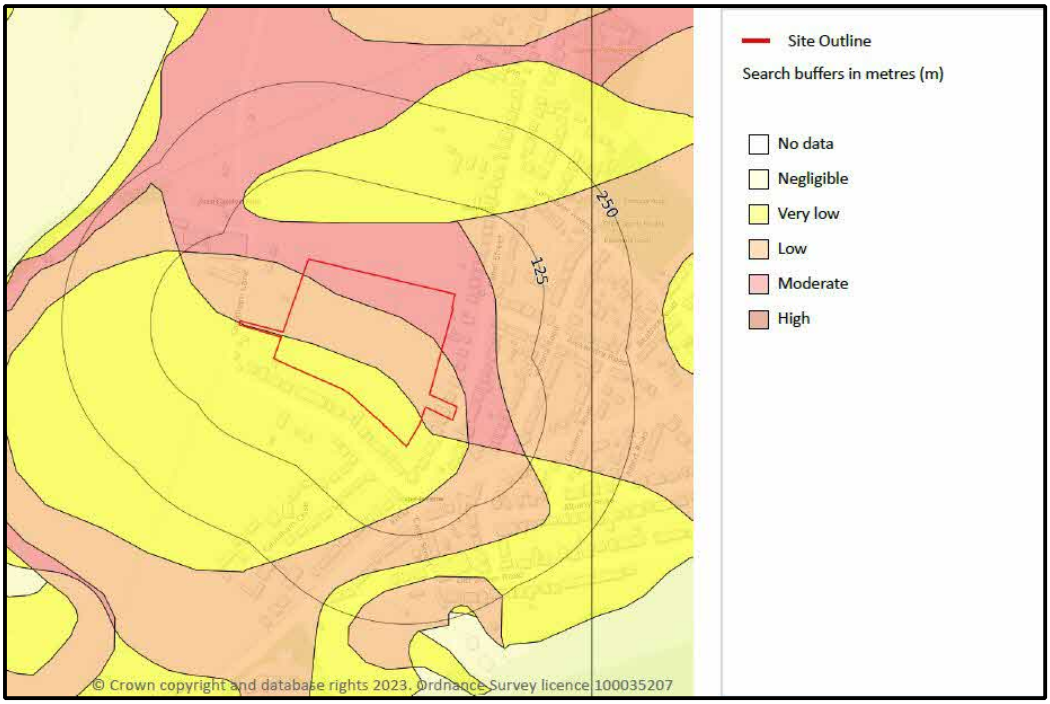
3.1.4. Ground Hazards

The Groundsure report indicates the following ground hazards in Table 3.3 below, within a 50m buffer of the Site.

Table 3.3. Ground Hazards

Hazard	Risk
Shrink Swell Clays	**Negligible (southern edge)** (Ground conditions predominantly non-plastic). **Low (majority of Site)** (Ground conditions predominantly medium plasticity).

Hazard	Risk
Landslides	**Very Low** (Slope instability problems are not likely to occur but consideration to potential of adjacent areas impacting on the Site should always be considered).
Ground Dissolution of Soluble Rocks (see Plan 9)	**Very Low (southern edge)** (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). **Low (central band)** (Soluble rocks are present within the ground. Some dissolution may be present. Potential for difficult ground conditions are at a level where they may be considered, localised subsidence need not be considered except in exceptional circumstances). **Moderate (northern edge)** (Soluble rocks are present within the ground. Many dissolution features may be present. Potential for difficult ground conditions are at a level where they should be considered. Potential for subsidence is at a level where it may be considered).
Compressible Deposits	**Negligible** (Compressible strata are not thought to occur).
Collapsible Deposits	**Very Low** (Deposits with potential to collapse when loaded and saturated are unlikely to be present).
Running Sands	**Negligible (majority of Site)** (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). **Very low (southern edge)** (Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly).

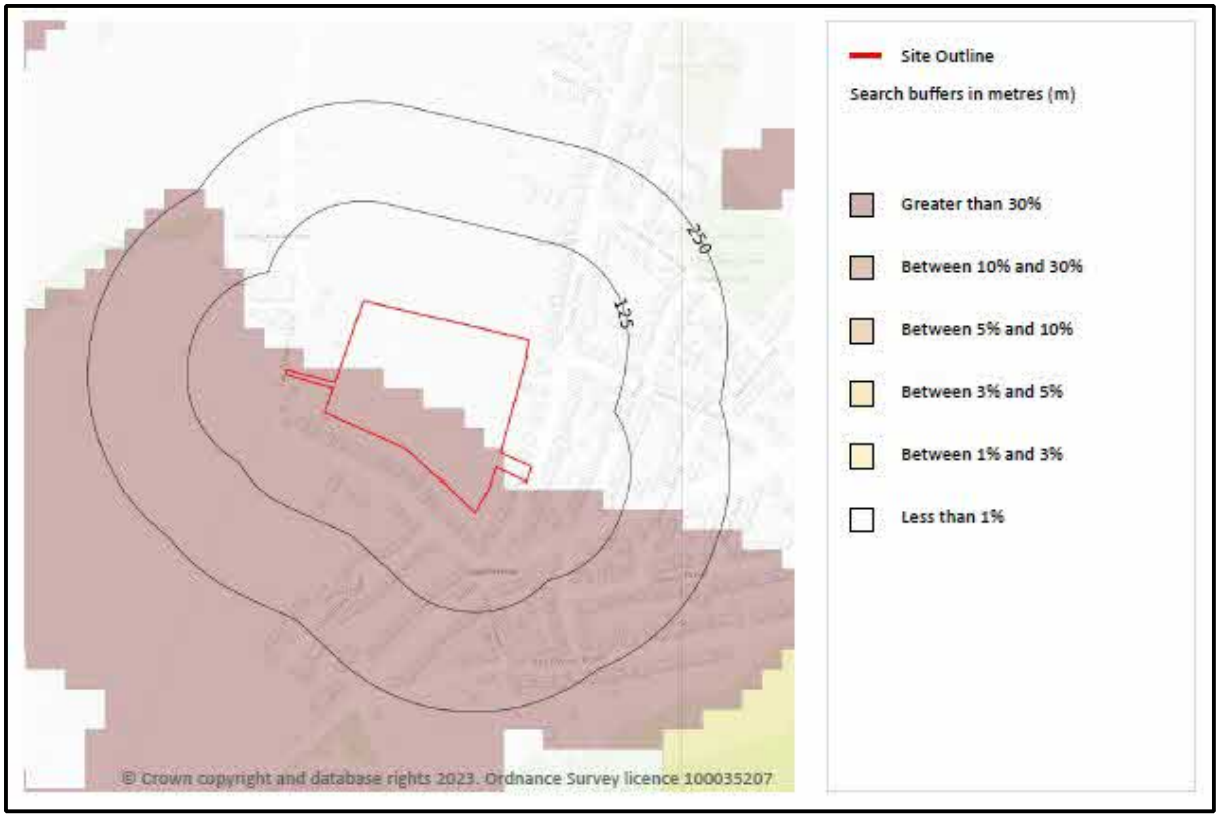


Plan 9. Ground Dissolution of Soluble Rocks (*Source: Groundsure, 2023*).

3.1.5. Radon Affected Areas and Protection Measures

The Groundsure report and reference to the UK radon website (Public Health England, n.d.) indicates that the Site is partially located in an area where greater than 30% of properties are potentially affected, and that consequently **full** radon protection measures are required for buildings developed in these areas. The Site is partially also in an area where less than 1% of the properties are potentially affected by radon, and that consequently no protection measures are required for buildings constructed in these areas.

The radon potential locations are depicted in Plan 10, below.



Plan 10. Ground Dissolution of Soluble Rocks (*Source: Groundsure, 2023*).

3.1.6. Soil Chemistry

The Groundsure report has identified two (2No.) records onsite, which indicate the following estimated background concentrations of potentially harmful elements in the topsoil, however, concentrations below are below current general assessment criteria for Human Health residential end use.

Onsite:

- Arsenic – 15 mg/kg.
- Bio-accessible Arsenic – No Data.
- Lead – 100mg/kg.
- Bio-accessible Lead – 60mg/kg.
- Cadmium – 1.8 mg/kg.
- Chromium – 60-90mg/kg.
- Nickel – 15-30mg/kg.

3.2 Hydrogeology

The Groundsure report and MAGIC website indicate the Site is located over the following:

Principal Aquifer associated with the bedrock geology (Lewes Nodular Chalk).

Secondary A Aquifer associated with the superficial geology (Clay with Flints – Sand).

Unproductive Aquifer associated with superficial geology (Clay with Flints – Clay, Silt, Sand, Gravel).

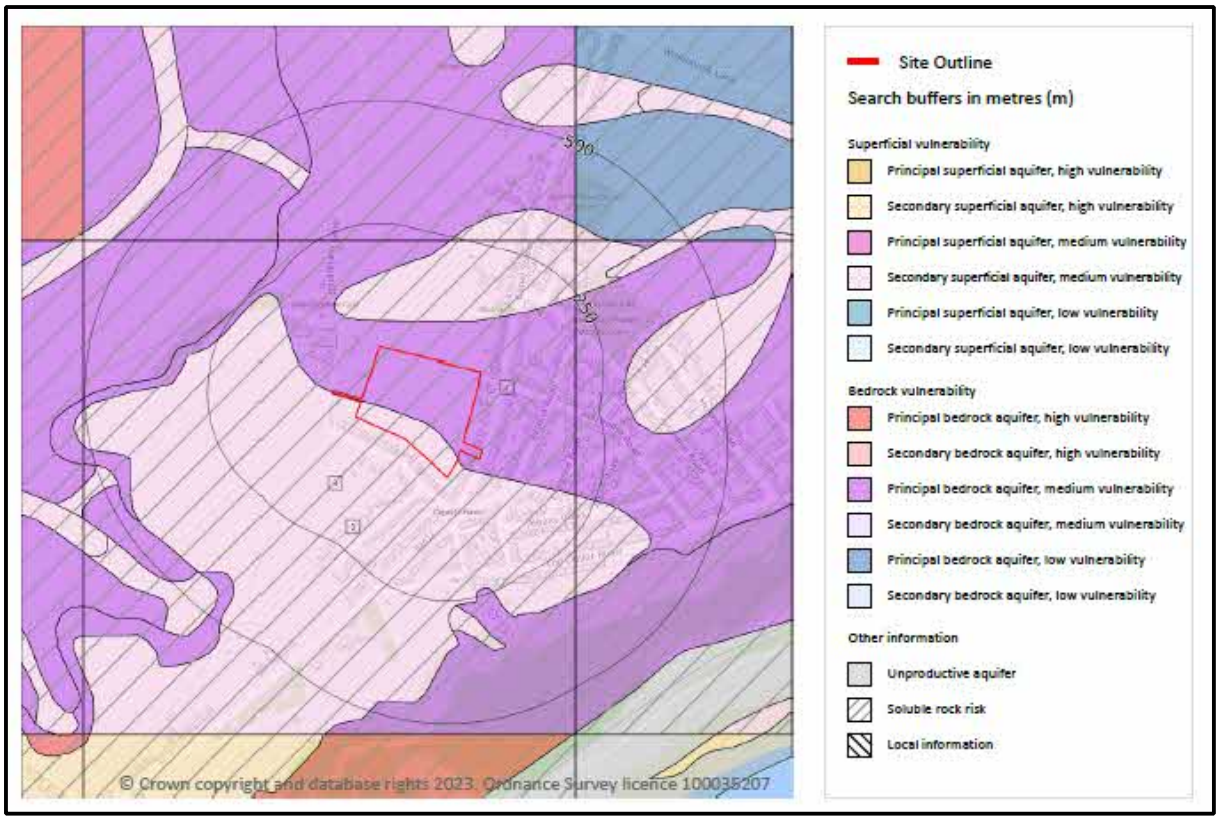
Principal Aquifers are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale.

Secondary A Aquifers are layers of permeable rock, which are capable of supporting water supplies at a local rather than strategic scale, and in some cases form an important source of base flow to rivers.

Unproductive Aquifers are rock layers of drift deposits with low permeability that have negligible significance for water supply or river base flow.

The Site is shown in an area where both the bedrock and superficial (Clay with Flints – Sand) Aquifers are classified as having medium groundwater vulnerability.

The groundwater vulnerability designations are depicted in Plan 11, below.



Plan 11. Groundwater Vulnerability Location Plan *(Source: Groundsure, 2023).*

3.2.1. Groundwater Abstraction

The Groundsure report has identified six (6No.) records of potable groundwater abstractions within 2km of the Site; four (4No.) historical and two (2No.) active, as shown in Table 3.4, overleaf.

Table 3.4. Groundwater Abstractions

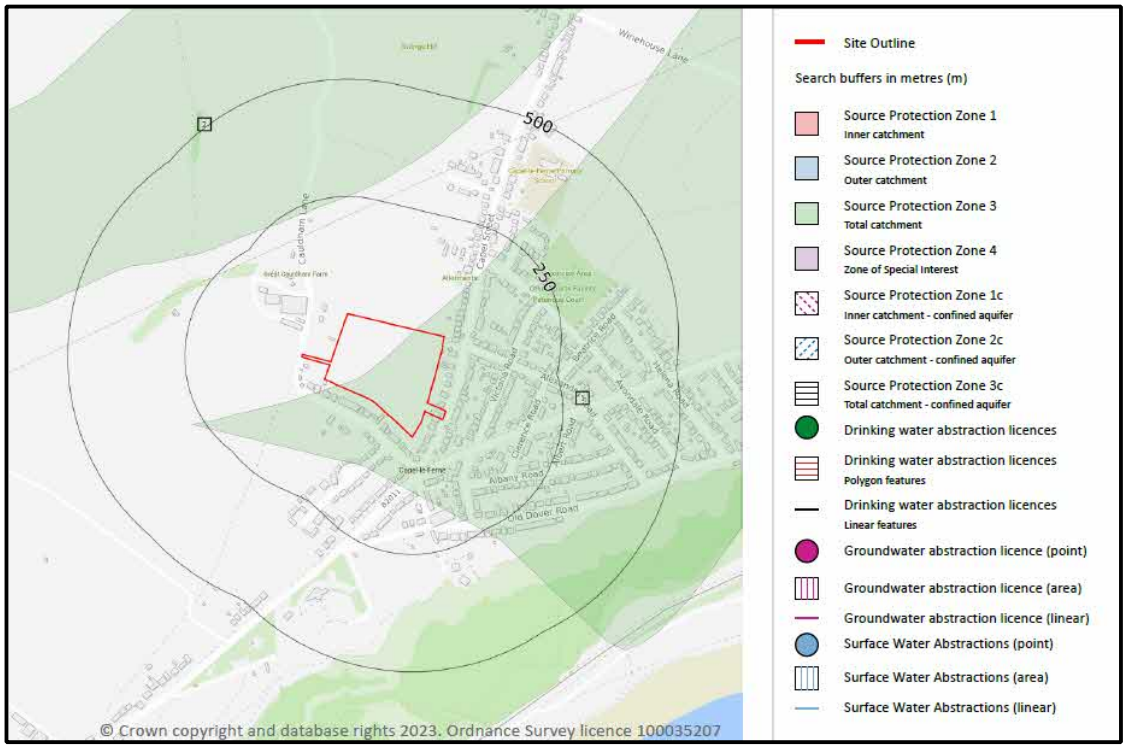
Location	Name	Details
1086m NW	Folkestone & Dover Water Services Ltd	Status: Historical Licence No: 9/40/04/0065/GR Details: Potable Water Supply - Direct
1086m NW	Folkestone & Dover Water Services Ltd	Status: Historical License No: 9/40/04/0065/GR Details: Potable Water Supply - Direct
1086m NW	Affinity Water Limited	Status: Historical Licence No: 9/40/04/0065/GR Details: Potable Water Supply - Direct
1086m NW	Affinity Water Limited	Status: Historical License No: 9/40/04/0065/GR Details: Potable Water Supply – Direct
1728m N	Affinity Water Limited	Status: Active License No: 9/40/04/0065/GR Details: Potable Water Supply – Direct
1730m N	Affinity Water Limited	Status: Active License No: 9/40/04/0065/GR Details: Potable Water Supply – Direct

The Site is not situated in a Drinking Water Safeguard Zone for Groundwater.

The Site is located within one (1No.) groundwater water body:

East Kent Chalk Stour. Overall rating: Poor. (ID: GB40701G501500).

Information obtained from the MAGIC website and Groundsure report indicates that the Site is partially located in a groundwater Source Protection Zone (SPZ) - Zone 3 (Total Catchment).



Plan 12. Groundwater Source Protection Zones *(Source: Groundsure, 2023).*

3.3 Hydrology

There are no notable surface water features within 250m of the Site. A pond is located approximately 20m from the northwest boundary on the industrial estate. The nearest water feature to the Site is the Strait of Dover from East Wear Bay, approximately 0.8km to the south.

Information on the GOV.UK website and Groundsure reports indicates the flood risk onsite as:

Rivers and Sea – Very Low;

Surface Water – Negligible; and,

Groundwater – Low

The Site is not located within a Flood Zone and there are no records of historic flood events within 250m of the Site.

3.3.1. Surface Water Abstraction

The Groundsure report has identified no surface water abstractions within 2km of the Site.

The Site is located within one (1No.) surface water body catchment:

River catchment. Dour from Kearsney to Dover (ID: GB107040073310).

The Site is not situated in a Drinking Water Protected Area for Surface Water.

3.4 Environmentally Sensitive Areas

The Groundsure report and MAGIC website record the following statutory environmental designation areas within 1km of the Site boundary:

Sites of Special Scientific Interest (SSSI):

- 309m S, Folkestone Warren

Local Nature Reserves (LNR)

- 309m S, Folkestone Warren
- 864m S, Folkestone Warren

Designated Ancient Woodland

- 874m W, Unknown – Ancient & Semi-Natural Woodland
- 990m NW, Unknown – Ancient & Semi-Natural Woodland

Marine Conservation Zone

- 698m SE, Dover to Folkestone

3.4.1. Nitrate Vulnerable Zone

The Site is not located within a Nitrate Vulnerable Zone (NVZ).

In accordance with the Natural England guidance on nutrient neutrality published in November 2020, an assessment and evidence may be required as part of the planning process to demonstrate that the proposed development is nutrient neutral (Natural England, 2020).

3.4.2. Habitat Designation

The Groundsure report has identified no open mosaic habitat designations within 250m of the Site.

The Groundsure report has identified no priority habitats within 250m of the Site boundary.

The Groundsure report has identified three (3No.) habitat networks within 250m of the Site boundary:

8m SE, Network Enhancement Zone 2

197m S, Network Enhancement Zone 1

249m S, Restorable Habitat

3.4.3. Tree Felling Licences

The Groundsure report has identified one (1No.) Tree Felling Licence within 250m of the Site boundary:

197m NW, Selective Fell/Thin (Conditional) – Ref: 019/570/11-12

3.4.4. Site of Special Scientific Interest (SSSI) Impact Risk Zone

SSSI Impact Risk Zones (IRZs) allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. Local planning authorities (LPAs) have a duty to consult Natural England before granting planning permission on any development that is in or likely to affect a SSSI. Defined zones around each SSSI indicate the types of development proposals which could potentially have adverse effects. The following types of development would require consultation if proposed onsite.

Infrastructure - Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals.

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.

Rural non-residential - Large non-residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.

Residential - Residential development of 100 units or more.

Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas.

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).

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.

Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.

Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.

Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream.

Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply.

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.

Although the Site is not reported to be in a SSSI, it is within an SSSI IRZ, and elements of the proposed development do fall into the above categories, namely rural residential and discharges.

3.5 Agricultural Designations

The Groundsure report and MAGIC website designates the Site as the following:

Agricultural Grade 3 – Good to moderate quality agricultural land.

Agricultural Grade 3 is defined as good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

3.5.1. Open Access Land

The Groundsure report describes Open Access Land as areas the Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to without having to use paths. There are no areas of Open Access Land within 250m of the Site boundary.

3.6 Visual and Cultural Designations

The Groundsure report indicates that there is an Area of Outstanding Natural Beauty within 250m of the Site boundary:

4m W, Kent Downs

There are no records of listed buildings with 250m of the Site boundary.

2. HISTORICAL AND INDUSTRIAL SITE SETTING

4.1 Site and Surrounding Area Historical Development

Historical Maps (1:1,250, 1:2,500, 1:10,000 & 1:10,560) have been provided by Groundsure dating from 1872 to 2023.

The Site has remained an undeveloped agricultural field throughout the dated maps. The properties, which border the Site boundary to the east and south are identified in maps dated from 1931 onwards, with the small industrial estate to the west being mapped from 1972. Over the years, residential properties have primarily been constructed to the southeast of the Site to expand the village of Capel-le-Ferne. The remaining surrounding area consists mainly of agricultural land uses.

Table 4.1 details the historical activities onsite, significant land use changes within 250m of the Site boundary and historical regional setting (between 250m and 1km from the Site boundary).

Table 4.1. Historical Summary

Dates	Onsite	Locally (<250m)	Regionally (250m – 1km)
1872-1898	The Site is undeveloped agricultural land.	Great Cauldham Farm borders the Site to the west, where some properties and buildings are identified, including Little Cauldham Farmhouse. A farm track which is now Cauldham Lane, runs parallel to the southern and western edges of the Site, likewise another farm track runs parallel to the east, which is now Capel Street. The wider setting comprises of agricultural fields. Some woodland areas lie within the 250m boundary including approximately 50m to the south and within 50m to the west.	A property known as Little Hope lies to the south of the Site. The wider setting comprises of agricultural fields. The Southern Railway is mapped approximately 600m to the south, running east to west through 'The Warren'. Air shafts, chalk pits and earthworks features are annotated throughout 'The Warren'.
1907-1908	No significant changes.	No significant changes.	Properties have been constructed in the wider setting, specifically to the south of the Site.
1933-1934	A residential property has been constructed off Capel Street (location of proposed eastern entrance).	Multiple properties off Capel Street, backing onto the eastern Site boundary have been constructed, including properties to the east and south of the Site.	Properties in all directions have been constructed.
1937-1938	No significant changes.	Further properties off Capel Street have been constructed. A major road system (A20) has been constructed, approximately 100m south of the Site, which runs in a southwest to northeast direction.	Further properties off Capel Street have been constructed in all directions of the Site (predominantly to the east).
1972-1993	No significant changes.	Further properties predominantly to the south and east of the Site have been constructed. The nearby industrial estate, 'Great Cauldham Farm', has been	A tunnel was developed, approximately 350m northwest of the Site. A school is mapped in 1975, northeast of the Site.

Dates	Onsite	Locally (<250m)	Regionally (250m – 1km)
		developed approximately 75m to the west comprising several small business units. Cauldham Close has been developed to the south of the Site, off Cauldham Lane. Three electricity substations have been constructed approximately 105m southeast, 170m northeast and 205m south of the Site.	The majority of properties in this area have been built by 1993.
2023	No significant changes.	No significant changes.	Slight expansion to the school to the northeast.

4.2 Industrial Setting

4.2.1. Trade Directory Entries

The Groundsure report presents the following records of potentially contaminative industrial sites within 250m of the Site boundary, as per Table 4.2 and Table 4.3, below.

Table 4.2. Trade Directory Entries – Current

Location	Company	Details
47m S	House and Garden Clearance	Clearance and Salvage Dealers – Recycling Services
59m NW	Invicta Mould Ltd	Moulds, Dies and Castings – Industrial Products
79-85m NW	Silo	Hoppers and Silos – Farming
105m SE	Electricity Sub Station	Electrical Features – Infrastructure and Facilities
157m NW	Silo	Hoppers and Silos – Farming
158m SE	Gas Governor	Gas Features – Infrastructure and Facilities
170m NE	Electricity Sub Station	Electrical Features – Infrastructure and Facilities
211m S	Capel Garage	Vehicle Repair, Testing and Servicing – Repair and Servicing
212m S	Electricity Sub Station	Electrical Features – Infrastructure and Facilities

Table 4.3. Trade Directory Entries – Historic

Location	Details	Dates
75-102m NW	Tanks	1937 – 1979
173m NW	Tunnel	1993
233-240m S	Unspecified Pit	1931 – 1961
104-107m SE	Electricity Substation	1972 – 1993
163-164m NE	Electricity Substation	1972 – 1979
205-224m S	Electricity Substation	1975 – 1993
199-203m S	Garage	1975 – 1993

4.3 Landfill and Waste Facilities

The Groundsure report details no records of landfill or waste facilities (active or recently closed) within 500m (EA, July 2003) of the Site.

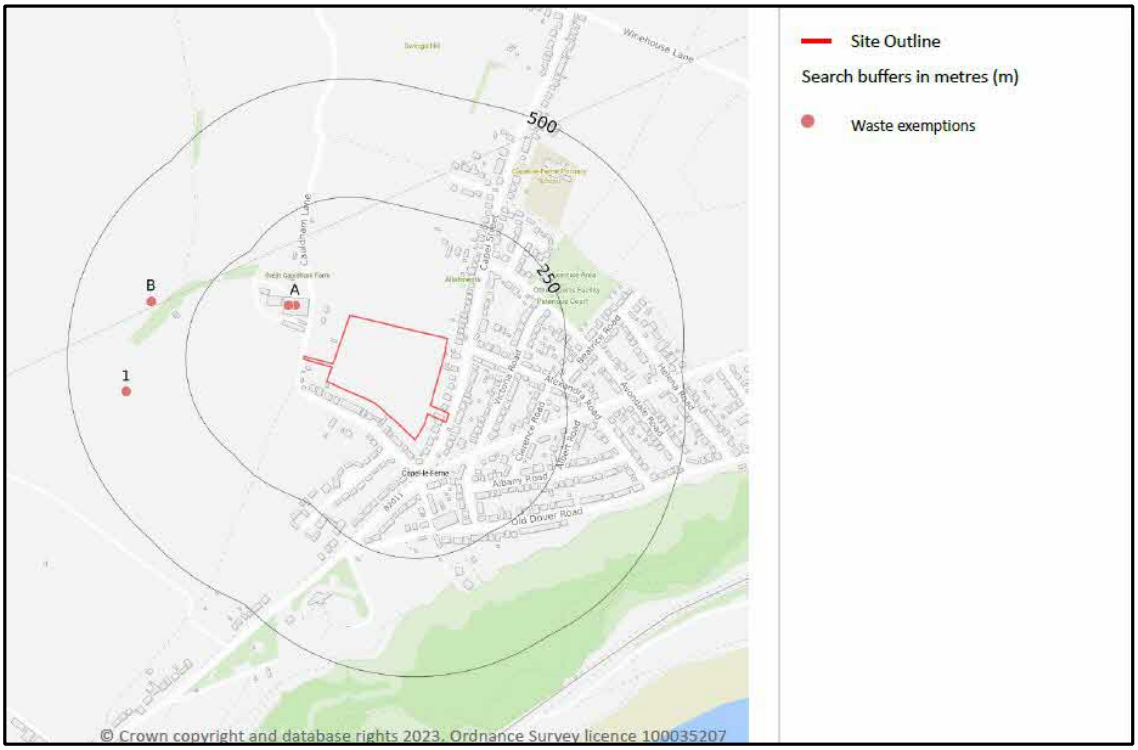
4.4 Waste Exemptions

The Groundsure report presents the following thirty-four (34No.) waste exemptions recorded within 500m of the Site boundary, as detailed in Table 4.4, below and shown in Plan 13 overleaf.

Table 4.4. Waste Exemptions

Location	Site	Reference	Category	Description
109m NW	Great Cauldham Farm, Cauldham Lane, Capel-Le-Ferne, Folkestone, CT18 7HQ	WEX150837	Using waste exemption	Use of waste for a specified purpose
				Use of waste in construction
				Spreading waste on agricultural land to confer benefit
				Burning of waste as a fuel in a small appliance
				Spreading waste on non-agricultural land to confer benefit
				Use of waste in the construction of entertainment or educational installations etc
			Disposing of waste exemption	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
				Burning waste in the open
			Storing waste exemption	Storage of waste in a secure place
			Treating waste exemption	Treatment of waste wood and waste plant matter by chipping, shredding, cutting, or pulverising
				Screening and blending of waste
				Aerobic composting and associated prior treatment
				Burning waste in the open
109m NW	Great Cauldham Farm, Cauldham Lane, Capel-Le-Ferne, Folkestone, CT18 7HQ	WEX288128	Disposing of waste exemption	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
			Treating waste exemption	Aerobic composting and associated prior treatment
				Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
				Screening and blending of waste
			Using waste exemption	Spreading waste on non-agricultural land to confer benefit
				Spreading waste on agricultural land to confer benefit
				Use of waste for a specified purpose
				Burning of waste as a fuel in a small appliance
				Use of waste in construction
112m NW	Great Cauldham Farm, Cauldham Lane, Capel-Le-Ferne, Folkestone, CT18 7HQ	EPR/DF0533 AM/A001	Disposing of waste exemption	Disposal by incineration
				Burning waste in the open
			Treating waste exemption	Screening and blending of waste
				Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
				Use of waste in construction

Location	Site	Reference	Category	Description
			Using waste exemption	Spreading waste on agricultural land to confer benefit
				Use of mulch
				Use of baled end-of-life tyres in construction
				Use of waste for a specified purpose
112m NW	Great Cauldham Farm, Cauldham Lane, Capel-Le-Ferne, Folkestone, CT18 7HQ	WEX175327	Storing waste exemption	Storage of sludge
344m W	-	WEX257487	Storing waste exemption	Storage of sludge
383m W	-	WEX331712	Storing waste exemption	Storage of sludge



Plan 13. Waste Exemptions *(Source: Groundsure, 2023).*

4.5 Licensed Pollutant Release

The Groundsure report details no records of licensed pollutant releases within 500m of the Site.

4.6 Licensed Discharges to Controlled Waters

The Groundsure report details no records of licensed discharge to controlled waters within 500m of the Site.

4.7 Pollution Incidents

The Groundsure report has record of the following pollution incident within 500m of the Site:

Table 4.5. Pollution Incidents

Location	Details	Impact
78m W	Incident Date: 23/06/2002 Incident Identification: 86697 Pollutant: Oils and Fuel Pollutant Description: Insulating and Cable Oils	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
237m SE	Incident Date: 13/11/2003 Incident Identification: 201452 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Vegetable Cuttings and Deposits	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (minor) Air Impact: Category 4 (No Impact)

4.8 Pollution Inventory Substances

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters, and land. The Groundsure report has no records of pollution inventory substances within 500m of the Site.

4.9 Sites Determined as Contaminated Land

The Groundsure report has no records of sites determined as Contaminated Land under Part 2a of the Environmental Protection Act 1990 within 500m of the Site.

4.10 Control of Major Accident Hazard (COMAH) Sites

The Groundsure report has no records of COMAH or Notification of Installations Handling Hazardous Substances (NIHHS) sites within 500m of the Site.

4.11 Hazardous Substance Storage/Usage Sites

The Groundsure report has no records of sites granted consent to hold certain quantities of hazardous substances within 500m of the Site.

5. INITIAL CONCEPTUAL SITE MODEL

5.1 Introduction

The current best practice risk assessment methodology is outlined in the guidance for LCRM, EA, 2020, updated 2023. The risk assessment process is underpinned by the concept of establishing whether a contaminant linkage exists between a source and a sensitive receptor. For a potential risk to be realised all three components must be identified and a contaminant linkage established.

The risk assessment process aims to establish whether unacceptable risks exist and, if so, what further action needs to be taken in relation to the Site. It is an iterative tiered approach which consists of three progressively detailed stages of risk assessment; preliminary risk assessment (PRA), generic quantitative risk assessment (GQRA) and detailed quantitative risk assessment (DQRA). Depending on the nature of the Site and contamination present, not all stages of risk assessment may be required.

5.2 Sources of Contamination

A source is defined as a substance which is located in, on or under the land and has the potential to cause harm to human health, water resources or the wider environment.

5.2.1 Potential Onsite Sources

Reference has been made at this stage to any potential sources identified during the Site walkover, potentially contaminative land uses identified from the historical review and from any previous works undertaken (Table 5.1 below).

Table 5.1. Potential Onsite Sources and Typical Contaminants

Potential Onsite Sources	Typical Contaminants
Farming vehicle use on Site.	Potential for a range of contaminants including asbestos, total petroleum hydrocarbons (TPH), BTEX compounds (benzene, toluene, ethylbenzene, and xylenes), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), general inorganics including heavy metals, herbicides and pesticides.
Farming fertiliser and pesticide use. Waste exemptions permitted to Great Cauldham Farm (such as using waste on agricultural land / burning waste etc.).	
Made Ground and demolition waste from proposed access points.	
Natural ground gases and Radon.	Potential for ground gas (methane and carbon dioxide, carbon monoxide, radon, hydrogen sulphide).

5.2.2 Potential Offsite Sources

Potential sources of contamination identified within 250m of the Site are summarised on Table 5.2, overleaf.

Table 5.2. Potential Offsite Sources and Typical Contaminants

Potential Offsite Sources	Typical Contaminants
Surrounding agricultural land use including potential machinery and use of agricultural chemicals.	Potential for a range of contaminants including asbestos, TPH, BTEX compounds, PAHs, VOCs, general inorganics including heavy metals, herbicides and pesticides.
Surrounding land uses including farming / industrial estate ~50m northwest (inc. historical tanks, silos, waste exemptions), electrical substations (~100m southeast), historical garage (~200m south).	
Run-off from surrounding roads (Cauldham Lane and Capel Street).	
Residential developments on the east and south boundaries.	

The remaining surrounding industry in the wider area is not considered further due to the distance from the Site.

5.3 Receptors

A receptor is something which could come to harm, including human health, water resources, surface water courses or the wider environment. The following potential receptors to any site-based impaction have been identified:

Human Health.

Controlled Waters.

Ecosystems.

Property (buildings).

5.3.1 Human Health

The following potential human health receptors have been identified:

Future Site Users comprising:

Residential Occupants.

Maintenance / Construction Groundworkers.

5.3.2 Controlled Waters

The following Controlled Waters have been identified as potential receptors:

Groundwater.

Principal Aquifer underlying the Site, associated with the Lewes Nodular Chalk Formation bedrock deposits, in a groundwater medium vulnerability area and SPZ 3.

Secondary A Aquifer associated with the superficial geology (Clay with Flints - Sand), southern half of the Site.

5.3.3 Ecosystems

The following Ecosystems have been identified as potential receptors:

Area of Outstanding Natural Beauty – West Downs, 4m west.

Priority Habitat 'Network Enhancement Zone 2', 8m southeast.

SSSI IRZ – proposed development falls within the 'Rural Residential' category, which would trigger the need for further assessment in the context of impact to the SSSI.

5.3.4 Property

The following property has been identified as a potential receptor:

Buildings.

Future proposed residential buildings to be constructed on the Site.

Water supply pipes.

5.4 Pathways

A pathway is the means or route by which a source of contamination can migrate, an identified receptor can be exposed to, or be affected by an identified source.

5.4.1 Human Health Exposure Pathways

Future Site Users

The identification of potential pathways has been undertaken cognisant of the Contaminated Land Exposure Assessment (CLEA) model (EA, January 2009) and CIRIA guidance on ground gas risks (CIRIA, 2007).

Table 5.3. Human Health Exposure Pathways (Future Site Users)

Exposure Pathway			Residential
			With Homegrown Produce
Ingestion	Soil		✓
	Homegrown produce		✓
	Soil attached to homegrown produce		✓
	Consumption of potable water via utilities pipes		✓
Inhalation	Indoor dust	Tracking back from garden	✓
	Outdoor dust	Wind-blown	✓
	Indoor vapour	Soil and groundwater migration via permeable strata and ingress into confined spaces	✓
	Outdoor vapour	Soils and groundwater	✓
Dermal Contact	Outdoor soil		✓
	Indoor dust tracked from garden / wind-blown		✓

Maintenance / Construction Groundworkers

Short term human health risks during ground works as part of any development have been excluded from further consideration on the basis that risks of acute exposure can be addressed through the use of appropriate control measures, including Personal Protective Equipment (PPE) and good standards of health and safety practice.

5.4.2 Controlled Waters

The Environment Agency Groundwater Protection Guides (EA, 2017) and Remedial Targets Methodology 'Hydrogeological Risk Assessment for Land Contamination' (EA, 2006) discusses potential pathways as:

The geological and hydrogeological characteristic of the ground.

The depth and distribution of groundwater and its direction and rates of flow.

The attenuating properties of the soil and aquifer materials:

potential leaching through soils into underlying strata and aquifers from induced infiltration; and,

potential vertical/lateral migration of contaminants through groundwater bodies.

Influences of preferential flow via fissures, drainage systems, soakaways, man-made structures foundations, old mines, boreholes etc

Surface water run-off in areas of low permeability surfacing and / or susceptible to flooding.

5.4.3 Plant Uptake

Phytotoxic contaminants e.g. some heavy metals such as copper and zinc can be taken up by vegetation / planting an cause poor growth or vegetation dieback. Soils used in gardens or landscaping must provide a healthy growth medium.

5.4.4 Ecosystems

Environment Agency guidance (EA, October 2008) defines potential ecological pathways. These are primarily considered to comprise those listed in Section 5.3.3.

5.4.5 Property

Buildings and Structures

The migration via granular and/or fissured strata of ground and/or groundwater gas / vapours and their accumulation of in confined spaces to explosive limits.

Aggressive ground conditions that may influence sub surface concrete foundations.

Utility Infrastructure

Hydrocarbon and VOCs permeation of water supply pipework by direct permeation or ingress through connection points.

Migration via pipes, bedding materials and drainage runs, ducts etc of groundwater and / or gas / vapours and accumulation of in confined spaces to toxic, asphyxiant or explosive limits could occur.

5.5 Conceptual Model Summary

The initial conceptual Model for the Site has been summarised in Table 5.4, overleaf. The qualitative risk assessment methodology has been included within Appendix IV.

Table 5.4. Initial Conceptual Site Model & Preliminary Risk Assessment

Potential Onsite Sources	Potential Receptor	Possible Pathway	Probability		Consequence		Risk
Current use of land: primarily agricultural with a residential property and pastureland on proposed access points *(potential contaminants include asbestos, TPH, BTEX compounds, PAHs, VOCs, general inorganics inc. heavy metals, herbicides and pesticides)*	Future Site Users	Ingestion soil	Likely	Future development to include soft landscaping and private gardens. The Site is currently (and historically) primarily utilised for agricultural purposes and so has the potential for shallow impacted soils. Additionally, creation of the Site access points will involve the demolition of the existing residential property and so potentially impacted shallow soils are anticipated. Construction workers are not considered further due to mitigation through PPE. Should the development proposals change, the CSM will require review.	Medium	Potential for chronic damage to Human Health until proven otherwise.	Moderate
		Ingestion home-grown produce					
		Ingestion soil attached to home-grown produce					
		Inhalation indoor dust					
		Inhalation outdoor dust					
		Dermal soil contact					
		Dermal indoor dust contact					
		Inhalation indoor vapour					
		Inhalation outdoor vapour					
	Groundwater (Secondary A Aquifer and Principal Aquifer)	Vertical soil leaching	Low Likelihood	Site is underlain by a Secondary A Aquifer (Superficial Deposits – Clay with Flints) and a Principal Aquifer (Bedrock – Lewes Nodular Chalk Formation) of medium groundwater vulnerabilities and within a Groundwater SPZ – Zone 3. A nearby borehole log has found groundwater resting level to be ~75m bgl. The Site is at low risk of groundwater flooding.	Severe	Pollution of sensitive water resources (controlled waters).	Moderate

Potential Onsite Sources	Potential Receptor	Possible Pathway	Probability		Consequence		Risk
	Surface Water	Surface water run-off, soil leaching and lateral migration	Unlikely	Site lies in a negligible risk for surface water flooding. No surface water features within 250m of the Site. It is assumed that drainage will be properly managed for the final development.	Mild	Pollution of non-sensitive water resources.	Very Low
	Buildings and structures	Gas accumulation in confined spaces	Likely	Impacted shallow soils from previous and current uses is expected to be limited. The Site lies within a Radon affected area (southern portion) and therefore full protective measures are required.	Severe	Potential for catastrophic damage to proposed buildings. Potential for chronic damage to Human Health	High
		Hydrocarbons / VOCs permeation of plastic utilities pipes	Low Likelihood	Limited hydrocarbon / VOCs contamination anticipated.	Medium	Potential for chronic damage to Human Health	Moderate / Low
		Aggressive ground conditions in relation to subsurface concrete foundations	Low Likelihood	pH and sulphate could be present at levels / concentrations that can impact concrete.	Medium	Potential for significant damage to proposed buildings.	Moderate / Low

Potential Offsite Sources	Potential Receptor	Possible Pathway	Probability		Consequence		Risk
Surrounding land uses including farming, industrial estate ~50m northwest (inc. historical tanks, silos, waste exemptions), electrical substations (~100m southeast), historical garage (~200m south). Run-off from surrounding roads. Residential developments on the east and south boundaries.	Future Site Users Buildings and structures	Lateral migration of contaminants	Low Likelihood	Future development to include areas of soft landscaping. Underlying permeable superficial deposits (Clay with Flints – sand) and bedrock deposits (Lewes Nodular Chalk Formation) lie between the Site and the sources; however, significantly impacted soils are considered unlikely. Should the development proposals change, the CSM will require review.	Medium	Exposure to human health unlikely to lead to "significant harm". Pollution of sensitive water resources (classified aquifers). Minor damage to crops, buildings or property.	Moderate / Low

3. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Ecologia has been instructed by Quinn Estates Ltd (the 'Client'), to complete a Phase 1 Land Contamination Assessment (Desk Study and Site Walkover) for Capel Street, Capel-le-Ferne, Folkestone, Kent, CT18 7HG.

This Phase 1 Contaminated Land Assessment is required in support of a Planning application for the redevelopment of the Site in accordance with the National Planning Policy Framework.

From information provided by the Client, it is understood that the current Site redevelopment plan will comprise the erection of up to 90 dwellings with associated parking and infrastructure following demolition of the existing dwelling; with all matters reserved except access. If this changes, then the conclusions drawn in this report will need to be reconsidered.

The Site covers an area of approximately 4.03 hectares (ha) and is situated in the semi-rural, residential village of Capel-le-Ferne. Residential properties directly border the Site to the south and east, with an industrial / farm estate to west. Folkestone town centre is approximately 3.5km to the southwest with the Southern Railway running approximately 600m south of the Site.

The majority of the Site has remained an undeveloped agricultural field since the late 1800s to current day. The properties, which border the Site boundary to the east and south are identified in maps dated from 1931 onwards, with the small industrial estate to the west being mapped from 1972. Over the years, residential properties have primarily been constructed to the southeast of the Site to expand the village of Capel-le-Ferne. The remaining surrounding area consists mainly of agricultural land uses.

The Site is underlain by Superficial Clay with Flints Deposits (Secondary B Aquifer of medium vulnerability) with bedrock geology comprising the Lewes Nodular Chalk Formation (Principal Aquifer of medium vulnerability). The Site is located within a groundwater SPZ 3 – Total Catchment. The Site is not located in a Drinking Water Protected Area (DrWPA) for groundwater or surface water and groundwater resting levels are anticipated to be at depths of ~75m bgl. No surface water features are present within 250m of the Site.

An initial CSM has been developed based on the relevant findings in this Phase 1 Assessment. Potential sources of contamination have been identified in connection to the Site's historical use and the following preliminary risk assessment of the relevant contaminant linkages has been produced:

Onsite Sources:

Future End Users:

- **Moderate Risk** associated with ingestion, dermal contact, inhalation of indoor and outdoor dust and vapours from agricultural land and the existing residential property.

Groundwater:

- **Moderate Risk** of vertical soil leaching to the Secondary A and Principal Aquifers.

Surface Water:

- **Very Low Risk** of surface run-off to nearby receptors (Strait of Dover at East Wear Bay, 0.8km S).

Buildings and Structures:

- **High Risk** associated with ground gas accumulation within buildings (Radon affected area).
- **Moderate / Low Risk** associated with hydrocarbons / VOCs permeation of plastic utilities pipes.
- **Moderate / Low Risk** associated with aggressive ground conditions (pH and sulphate) on concrete.

Off-Site Sources:

Moderate / Low Risk associated with lateral migration of contaminants from surrounding historical and current land uses, historic tanks, electrical substation, road network and residential developments.

6.2 Recommendations

From a review of the relevant findings, historical land use and anticipated ground conditions, Ecologia does not anticipate significant risks from potential contamination. However, the proposed access point will involve the demolition of an existing residential dwelling which has the potential for shallow impacted ground.

Therefore, an intrusive investigation is recommended as part of development works, which should comprise shallow soils testing and deeper boreholes for ground gas monitoring purposes.

Additionally, as a minimum it is recommended that the following is considered during the development construction works:

A detailed UXO risk assessment to be conducted prior to any ground penetrative works, given the Site's location in a Moderate UXO risk area.

A Consultants Coal Mining Report should be obtained to further assess coal mining issues, given the Site's location in a Coal Mining Area as defined by the Coal Authority.

An assessment of the Site to establish the existence or absence of invasive species would be advisable, to be undertaken by a competent person i.e. trained ecologist before proceeding with development.

A discovery strategy (procedures to be followed should unexpected contamination be identified) during redevelopment works in the event that unforeseen and suspected contamination is encountered, the client should stop works and further assessment undertaken by experienced Environmental Consultant. The discovery strategy may be a requirement / condition of the LPA as the planning application progresses.

Appropriate PPE for ground workers, to mitigate potential risks from dermal contact, ingestion and inhalation of contamination materials / soils.

Good housekeeping rules should also be observed onsite i.e. washing of hands before eating etc. in accordance with health and safety regulations.

The above recommendations should be presented to the Local Authority for comment and agreement. Typically, we would expect the recommendations to be conditioned as part of a planning application (i.e. Construction Management Plan).

If redevelopment plans change, potential risks would need to be reassessed and the GQRA, CSM and recommendations refined accordingly.

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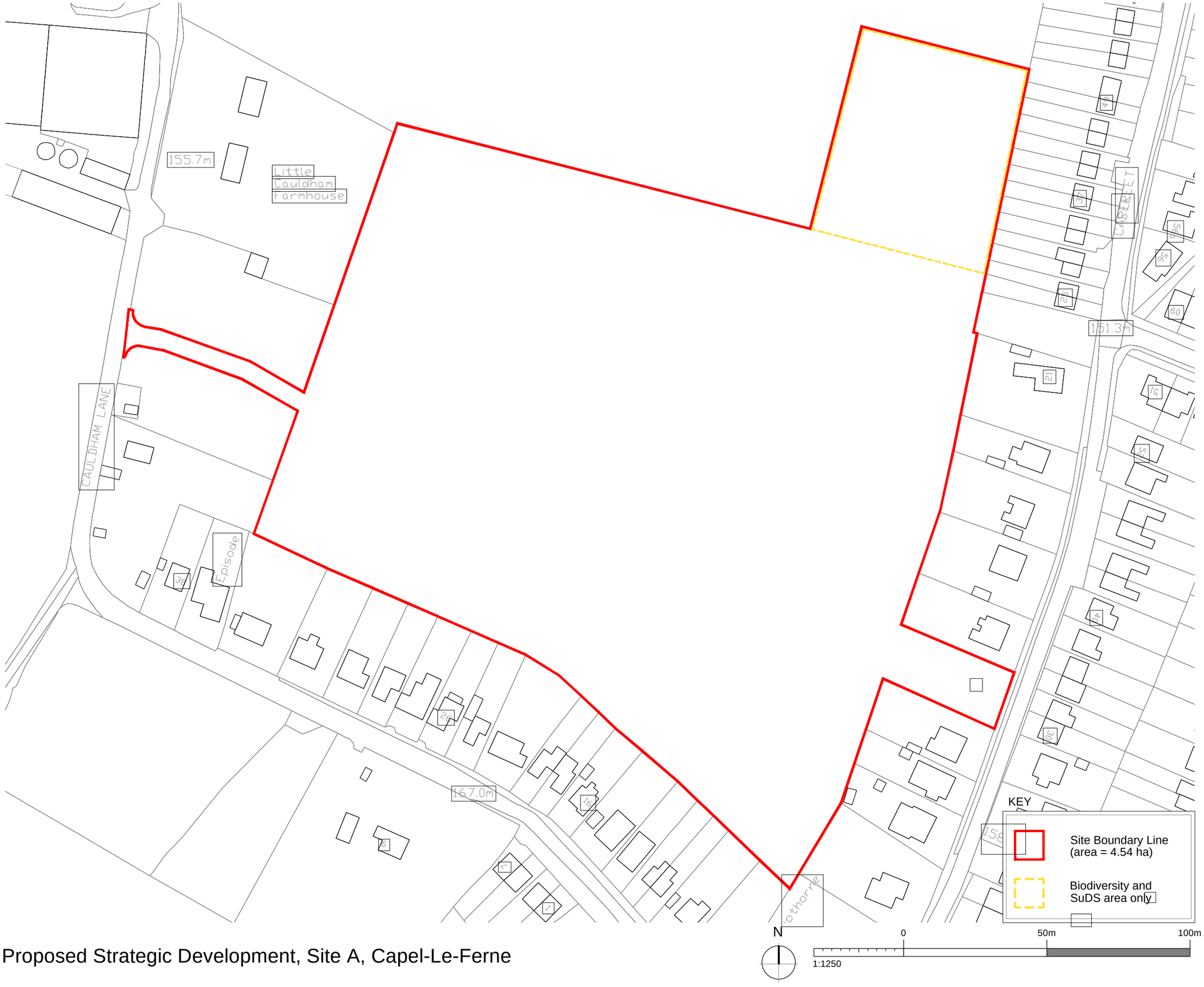
APPENDIX I

FIGURES

Quinn Estates



Proposed Strategic Development, Site A, Capel-Le-Ferne

NOTES:

Do Not Scale.

Report all discrepancies, errors and omissions.

Verify all dimensions on site before commencing any work on site or preparing shop drawings.

All materials, components and workmanship are to comply with the relevant British Standards, Codes of Practice, and appropriate manufacturers recommendations that from time to time shall apply.

For all specialist work, see relevant drawings.

Rev	Date	Description
A	01.02.2021	First Issue
B	01.02.2021	Area amendment
C	02.02.2021	Area amendment
D	09.11.2021	Red Line Amended
E	02.02.2024	Red Line Amended
F	12.02.2024	Hatch colour added
G	14.02.2024	Red Line Amended
H	22.02.2024	Red Line Amended

Project Title

Land off Capel Street,
Capel-Le-Ferne
Kent
CT18 7HF
For Quinn Estates

Drawing Description

Site Location Plan

Scale	Drawn by
1:1250 @ A3	AS
Date	Checked by
February 2024	CSS

CLAGUE ARCHITECTS

62 Burgate, Canterbury
Kent CT1 2BH
01227 762060

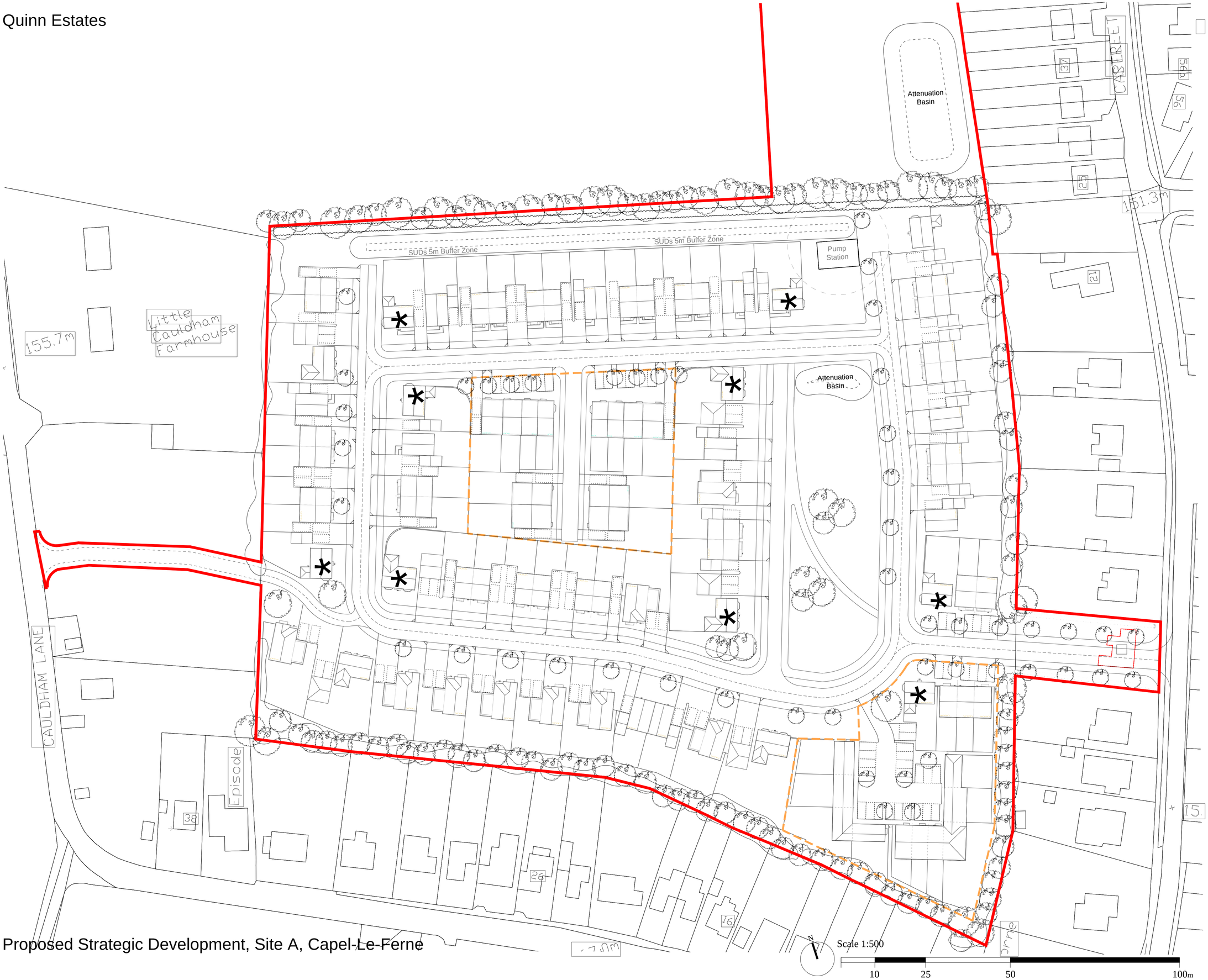
1 Kinsbourne Court, Luton Road,
Harpenden, Hertfordshire Al5 3BL
01582 765102

8, Disney Street
London SE1 1JF
0203 597 6112

CANTERBURY LONDON HARPENDEN

Drawing Number	Revision
23395A_20	H

Quinn Estates



NOTES:

Do Not Scale.

Report all discrepancies, errors and omissions.

Verify all dimensions on site before commencing any work on site or preparing shop drawings.

All materials, components and workmanship are to comply with the relevant British Standards, Codes of Practice, and appropriate manufacturers recommendations that from time to time shall apply.

For all specialist work, see relevant drawings.

Rev	Date	Description
A	18/12/2023	First Issue
B	03/01/2024	Unit Mix Update
C	04/01/2024	Unit numbers increased
D	04/01/2024	Schedule added
E	05/01/2024	Layout amended
F	08/01/2024	Layout amended
G	13/02/2024	Boundary Line Update
H	14/02/2024	Graphical Amendments
I	15/02/2024	Site Boundary Amendment

Schedule of Accommodation

UNIT MIX	
PRIVATE (70%)	63 units
1s = 0 %	0
2s = 29%	18
3s = 47%	30
4s = 24%	15
AFFORDABLE (30%)	27units
1s = 7.5%	2
2s = 44%	12
3s = 30%	8
4s = 18.5%	5
TOTAL	90units

Key

- Site Boundary
- * Corner Plots at an angle or double aspect
- Affordable units

Project Title

Land off Capel Street,
Capel-Le-Ferne
Kent
CT18 7HF
For Quinn Estates

Drawing Description

Proposed Site Layout Plan Option 2

Scale	Drawn by
1:500 @ A1	DJ
Date	Checked by
February 2024	CSS

CLAGUE ARCHITECTS

62 Burgate, Canterbury
Kent CT1 2BH 01227 762060

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Harpenden, Hertfordshire AL5 3BL 01582 765102

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London SE1 1JF 0203 597 6112

CANTERBURY LONDON HARPENDEN

Drawing Number	Revision
23395A_SK107	I

Proposed Strategic Development, Site A, Capel-Le-Ferne