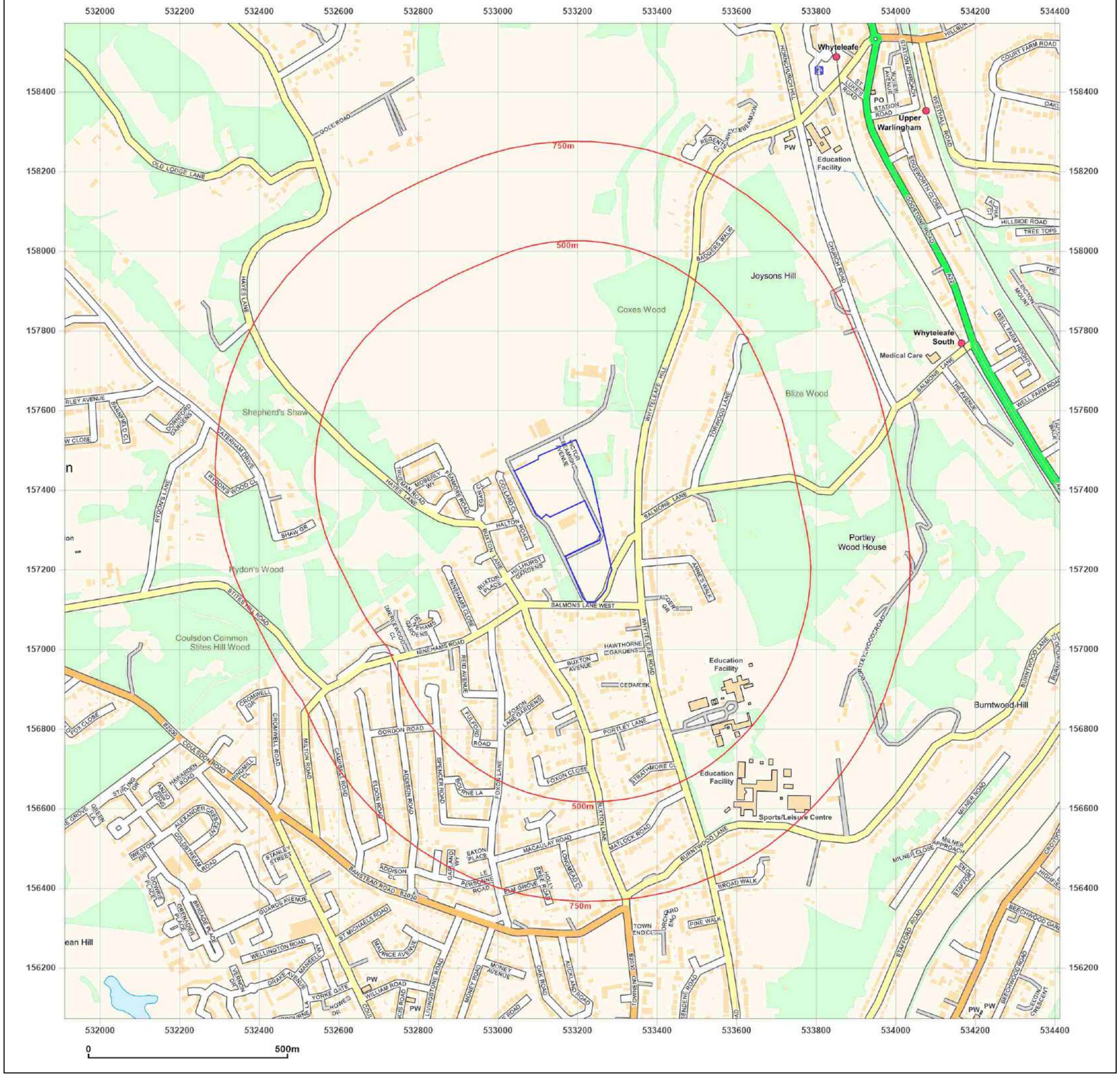

Site Details:

FOCUS SCHOOL, KENLEY CAMPUS, VICTOR BEAMISH AVENUE, CATERHAM, CR3 5FX

Client Ref: POP011895
Report Ref: GS-9214075
Grid Ref: 533162, 157322

Map Name: National Grid

Map date: **2022**

Scale: 1:10,000

Printed at: 1:10,000

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2022

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Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

Production date: 22 November 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

APPENDIX C

Preliminary UXO Risk Assessment

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E-mail: info@1stlinedefence.co.uk
Company No: 7717863
VAT No: 128 8833 79

www.1stlinedefence.co.uk

Preliminary UXO Risk Assessment

Client	Card Geotechnics Limited
Project	Kenley Campus
Site Address	Kenley Campus, Caterham, Surrey
Report Reference	PA16965-00
Date	23/11/2022
Originator	TE

Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the Kenley Campus site. The assessment involves the consideration of the basic factors that affect the potential for UXO to be present at a site as outlined in Stage One of the UXO risk management process.

Background

This assessment uses the sources of information available in-house to 1st Line Defence Ltd to enable the placement of a development site in context with events that may have led to the presence of German air-delivered or Allied military UXO. The report will identify any immediate necessity for risk mitigation or additional research in the form of a Detailed UXO Risk Assessment. It makes use of 1st Line Defence's extensive historical archives, library and unique geo-databases, as well as internet resources, and is researched and compiled by UXO specialists and graduate researchers.

The assessment directly follows CIRIA C681 guidelines "Unexploded Ordnance, a Guide for the Construction Industry". The document will therefore assess the following factors:

- Basic Site Data
- Previous Military Use
- Indicators of potential aerial delivered UXO threat
- Consideration of any Mitigating Factors
- Extent of Proposed Intrusive Works
- Any requirement for Further Work

It should be noted that the vast majority of construction sites in the UK will have a low or negligible risk of encountering UXO and should be able to be screened out at this preliminary stage. The report is meant as a common sense 'first step' in the UXO risk management process. The content of the report and conclusions drawn are based on basic, preliminary research using the information available to 1st Line Defence at the time this report was produced. It should be noted that the only way to entirely negate risk from UXO to a project would be to support the works proposed with appropriate UXO risk mitigation measures. It is rarely possible to state that there is absolutely 'no' risk from UXO to a project.

Risk Assessment Considerations	
Site location and description/current use	 The collective site is located in Caterham, within the county of Surrey. Recent aerial imagery shows the collective site comprises open land, shrubbery, hardstanding ground, and a school. Site A, the bigger of the two parcels of land, is bound by the edge of RAF Kenley to the north, with shrubbery to the east, Salmons Lane to the south, and Victor Beamish Avenue to the west. Site B, the smaller parcel of land, is bound by residential gardens to the north, with Victor Beamish Avenue to the east, Salmons Lane West to the south, and residential gardens and structures to the west. The site is approximately centred on the OS grid reference: **TQ 33177 57333**.
Are there any indicators of current/historical military activity on/close to the site?	In-house geo-data sets indicate that during WWII, the northern portion of the collective site was situated within the technical area of RAF Kenley, within the vicinity of various hangars and gun posts. A spigot mortar emplacement and a pillbox were also located approximately 50m east of Site A. Owing to its location to the south of London, RAF Kenley was heavily involved in both the Battle of Britain and defending against the 'Blitz'. Fighter aircraft from the airfield were later used when escorting Bristol Blenheim bombers to their targets in cross-channel operations throughout the remainder of the war.[1] The closest Heavy Anti-Aircraft (HAA) was situated approximately 2km north-east of the site. The range of a fired projectile can be up to 15km. The risk of Anti-Aircraft projectiles is generally homogenous to the risk from German aerial delivered ordnance.
What was the pre- and post-WWII history of the site?	Pre-war OS mapping, dated 1938, shows the collective site to comprise open land. Open ground is to the north and west of the site, with *Grove House* to the east, and an unnamed road to the south. Post-war OS mapping, dated 1956, shows the collective site to comprise multiple structures, hardstanding ground, and an area labelled *Parade Ground.* Open land and individual structures border the north, east, and west of the site, with *Salmons Lane* and *Salmons Lane West* to the south.
Was the area subject to bombing during WWII?	During WWII, the site was situated within Caterham and Warlingham Urban District. According to official Home Office bombing statistics, the borough was subject to an overall low-moderate density of bombing, with an average of 37.9 items of ordnance recorded per 1,000 acres. This included 272 HE bombs, 13 oil bombs, and seven phosphorus bombs, totalling 312 bombs across 8,233 acres. London bomb census mapping recorded no bombs to have fallen within or in the immediate vicinity of the site. However, online evidence suggests the airfield was heavily bombed during the Battle of Britain, notably on 18th August 1940.[2]

[1] https://www.kenleyrevival.org/content/history/raf-kenley/1917-present/raf-kenley-1939-1945
[2] *Ibid*

Is there any evidence of bomb damage on/close to the site?	The acquisition of high-resolution WWII-era aerial imagery would be required to assess any potential bomb damage within or in the immediate vicinity of the site.
To what degree would the site have been subject to access?	The majority of the collective site is likely to have been infrequently accessed at the onset of the war due to its composition as an area of open land. The northern portion of the site, located within RAF Kenley, may have been afforded certain levels of access.
To what degree has the site been developed post-WWII?	Post-war, none of the collective site is part of RAF Kenley, with the site now comprising open land, shrubbery, hardstanding ground, and a school.
What is the nature and extent of the intrusive works proposed?	The nature and extent of works proposed was not available at the time of writing.

Summary and Conclusions

The site was situated within the technical area of RAF Kenley, within the vicinity of various hangars and gun posts. A spigot mortar emplacement and a pillbox were also located approximately 50m to the east of Site A. Owing to its location to the south of London, RAF Kenley was heavily involved in both the Battle of Britain and defending against the 'Blitz'. Fighter aircraft from the airfield were later used when escorting Bristol Blenheim bombers to their targets in cross-channel operations throughout the remainder of the war.[3] As a result of the heavy military activity across the wider vicinity, the possibility of UXO contamination from an Allied source, cannot be confidently reduced at this preliminary stage.

During WWII, the site was situated within Caterham and Warlingham Urban District, of which sustained an overall low-moderate density of bombing with an average of 37.9 items of ordnance per 1,000 acres. Online evidence suggests the airfield was heavily bombed during the Battle of Britain, notably on 18th August 1940.[4]

Recommendations

Given the findings of this preliminary report, it is recommended that **further research** is undertaken for the site in the form of a **Detailed UXO Risk Assessment**. Further research will consist of the analysis of any available written sources, further anecdotal sources, and post-war aerial photography that will provide a better indication of the risk of encountering UXO on site.

Prior to or in lieu of a Detailed Assessment, it is recommended that appropriate UXO Risk Mitigation Measures are provided for intrusive works proposed.

If the client has any anecdotal or empirical evidence of UXO risk on site, please contact 1st Line Defence.

[3] https://www.kenleyrevival.org/content/history/raf-kenley/1917-present/raf-kenley-1939-1945
[4] *Ibid*

APPENDIX D

Groundsure Geo+Enviro Insight Report

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

FOCUS SCHOOL, KENLEY CAMPUS, VICTOR BEAMISH AVENUE, CATERHAM, CR3 5FX

Order Details

Date: 22/11/2022

Your ref: POP011895

Our Ref: GS-9214076

Site Details

Location: 533188 157366

Area: 3.82 ha

Authority: Tandridge District Council

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
14	1.1	Historical industrial land uses	0	2	2	16	-
15	1.2	Historical tanks	2	0	5	3	-
16	1.3	Historical energy features	3	0	4	6	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
17	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
18	2.1	Historical industrial land uses	0	3	2	23	-
20	2.2	Historical tanks	2	0	6	4	-
20	2.3	Historical energy features	6	0	8	7	-
21	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
24	3.5	Historical waste sites	0	0	0	0	-
24	3.6	Licensed waste sites	0	0	0	0	-
24	3.7	Waste exemptions	0	0	0	20	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
27	4.1	Recent industrial land uses	1	1	4	-	-
28	4.2	Current or recent petrol stations	0	0	0	0	-
28	4.3	Electricity cables	0	0	0	0	-
28	4.4	Gas pipelines	0	0	0	0	-
29	4.5	Sites determined as Contaminated Land	0	0	0	0	-

29	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
29	4.7	Regulated explosive sites	0	0	0	0	-
29	4.8	Hazardous substance storage/usage	0	0	0	0	-
29	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
30	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
30	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
30	4.12	Radioactive Substance Authorisations	0	0	0	0	-
30	**4.13**	**Licensed Discharges to controlled waters**	0	0	0	1	-
31	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
31	4.15	Pollutant release to public sewer	0	0	0	0	-
31	4.16	List 1 Dangerous Substances	0	0	0	0	-
31	4.17	List 2 Dangerous Substances	0	0	0	0	-
31	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
32	4.19	Pollution inventory substances	0	0	0	0	-
32	4.20	Pollution inventory waste transfers	0	0	0	0	-
32	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
33	**5.1**	**Superficial aquifer**	Identified (within 500m)				
34	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
35	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
36	**5.4**	**Groundwater vulnerability- soluble rock risk**	Identified (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37	**5.6**	**Groundwater abstractions**	0	0	0	0	2
38	5.7	Surface water abstractions	0	0	0	0	0
38	5.8	Potable abstractions	0	0	0	0	0
39	**5.9**	**Source Protection Zones**	1	0	0	0	-
39	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
40	6.1	Water Network (OS MasterMap)	0	0	0	-	-

40	6.2	Surface water features	0	0	0	-	-
41	**6.3**	**WFD Surface water body catchments**	1	-	-	-	-
41	**6.4**	**WFD Surface water bodies**	0	0	0	-	-
42	**6.5**	**WFD Groundwater bodies**	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
43	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
43	7.2	Historical Flood Events	0	0	0	-	-
43	7.3	Flood Defences	0	0	0	-	-
44	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
44	7.5	Flood Storage Areas	0	0	0	-	-
45	7.6	Flood Zone 2	None (within 50m)				
45	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
46	**8.1**	**Surface water flooding**	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
48	**9.1**	**Groundwater flooding**	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
49	**10.1**	**Sites of Special Scientific Interest (SSSI)**	0	0	0	0	3
50	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
50	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
50	10.4	Special Protection Areas (SPA)	0	0	0	0	0
50	**10.5**	**National Nature Reserves (NNR)**	0	0	1	0	2
51	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
51	**10.7**	**Designated Ancient Woodland**	0	0	3	3	21
52	10.8	Biosphere Reserves	0	0	0	0	0
53	10.9	Forest Parks	0	0	0	0	0
53	10.10	Marine Conservation Zones	0	0	0	0	0
53	**10.11**	**Green Belt**	1	1	0	1	4
54	10.12	Proposed Ramsar sites	0	0	0	0	0

54	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
54	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
54	10.15	Nitrate Sensitive Areas	0	0	0	0	0
55	**10.16**	**Nitrate Vulnerable Zones**	1	0	0	0	3
56	**10.17**	**SSSI Impact Risk Zones**	2	-	-	-	-
58	**10.18**	**SSSI Units**	0	0	0	0	5
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
60	11.1	World Heritage Sites	0	0	0	-	-
61	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
61	11.3	National Parks	0	0	0	-	-
61	**11.4**	**Listed Buildings**	1	0	1	-	-
62	**11.5**	**Conservation Areas**	1	1	0	-	-
62	11.6	Scheduled Ancient Monuments	0	0	0	-	-
62	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
63	**12.1**	**Agricultural Land Classification**	Urban (within 250m)				
64	**12.2**	**Open Access Land**	0	0	1	-	-
64	12.3	Tree Felling Licences	0	0	0	-	-
64	**12.4**	**Environmental Stewardship Schemes**	0	0	6	-	-
65	**12.5**	**Countryside Stewardship Schemes**	0	0	1	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
66	**13.1**	**Priority Habitat Inventory**	6	6	13	-	-
67	13.2	Habitat Networks	0	0	0	-	-
68	13.3	Open Mosaic Habitat	0	0	0	-	-
68	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
69	**14.1**	**10k Availability**	Identified (within 500m)				
70	**14.2**	**Artificial and made ground (10k)**	0	0	0	1	-
71	**14.3**	**Superficial geology (10k)**	1	0	0	0	-

72	14.4	Landslip (10k)	0	0	0	0	-
73	**14.5**	**Bedrock geology (10k)**	1	0	0	1	-
74	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
75	**15.1**	**50k Availability**	Identified (within 500m)				
76	15.2	Artificial and made ground (50k)	0	0	0	0	-
76	15.3	Artificial ground permeability (50k)	0	0	-	-	-
77	**15.4**	**Superficial geology (50k)**	1	0	0	0	-
78	**15.5**	**Superficial permeability (50k)**	Identified (within 50m)				
78	15.6	Landslip (50k)	0	0	0	0	-
78	15.7	Landslip permeability (50k)	None (within 50m)				
79	**15.8**	**Bedrock geology (50k)**	1	0	0	1	-
80	**15.9**	**Bedrock permeability (50k)**	Identified (within 50m)				
80	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
81	**16.1**	**BGS Boreholes**	0	0	7	-	-
Page	Section	Natural ground subsidence					
83	**17.1**	**Shrink swell clays**	Low (within 50m)				
84	**17.2**	**Running sands**	Negligible (within 50m)				
85	**17.3**	**Compressible deposits**	Negligible (within 50m)				
86	**17.4**	**Collapsible deposits**	Very low (within 50m)				
87	**17.5**	**Landslides**	Very low (within 50m)				
88	**17.6**	**Ground dissolution of soluble rocks**	Moderate (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
90	18.1	Natural cavities	0	0	0	0	-
91	**18.2**	**BritPits**	0	0	0	1	-
91	18.3	Surface ground workings	0	0	0	-	-
91	18.4	Underground workings	0	0	0	0	0
91	18.5	Historical Mineral Planning Areas	0	0	0	0	-

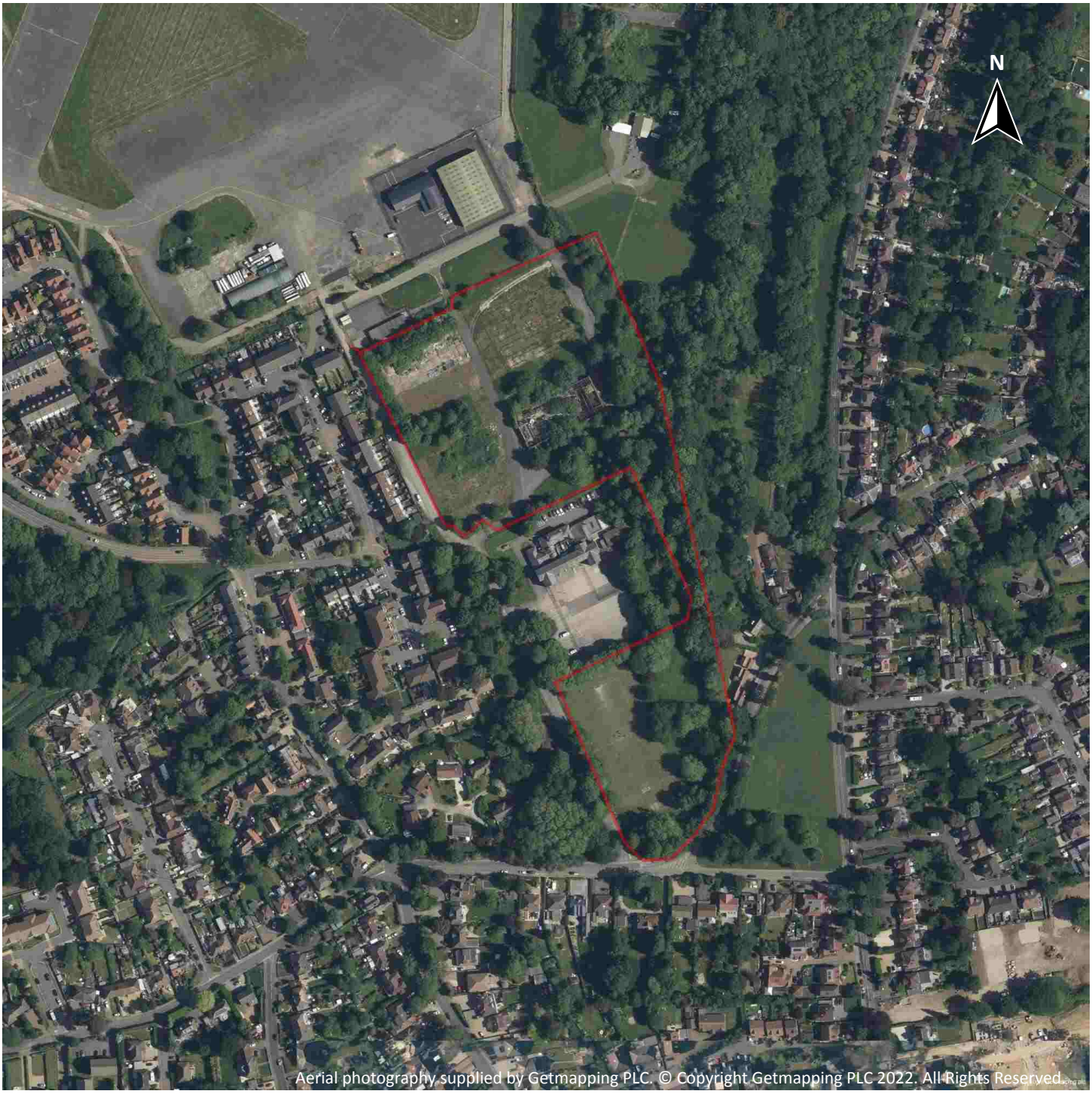
92	**18.6**	**Non-coal mining**	1	0	0	0	0
92	18.7	Mining cavities	0	0	0	0	0
92	18.8	JPB mining areas	None (within 0m)				
92	18.9	Coal mining	None (within 0m)				
93	18.10	Brine areas	None (within 0m)				
93	18.11	Gypsum areas	None (within 0m)				
93	18.12	Tin mining	None (within 0m)				
93	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
94	**19.1**	**Radon**	Between 1% and 3% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
96	**20.1**	**BGS Estimated Background Soil Chemistry**	2	2	-	-	-
96	**20.2**	**BGS Estimated Urban Soil Chemistry**	12	8	-	-	-
97	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
98	21.1	Underground railways (London)	0	0	0	-	-
98	21.2	Underground railways (Non-London)	0	0	0	-	-
98	21.3	Railway tunnels	0	0	0	-	-
98	21.4	Historical railway and tunnel features	0	0	0	-	-
98	21.5	Royal Mail tunnels	0	0	0	-	-
99	21.6	Historical railways	0	0	0	-	-
99	21.7	Railways	0	0	0	-	-
99	21.8	Crossrail 1	0	0	0	0	-
99	21.9	Crossrail 2	0	0	0	0	-
99	21.10	HS2	0	0	0	0	-

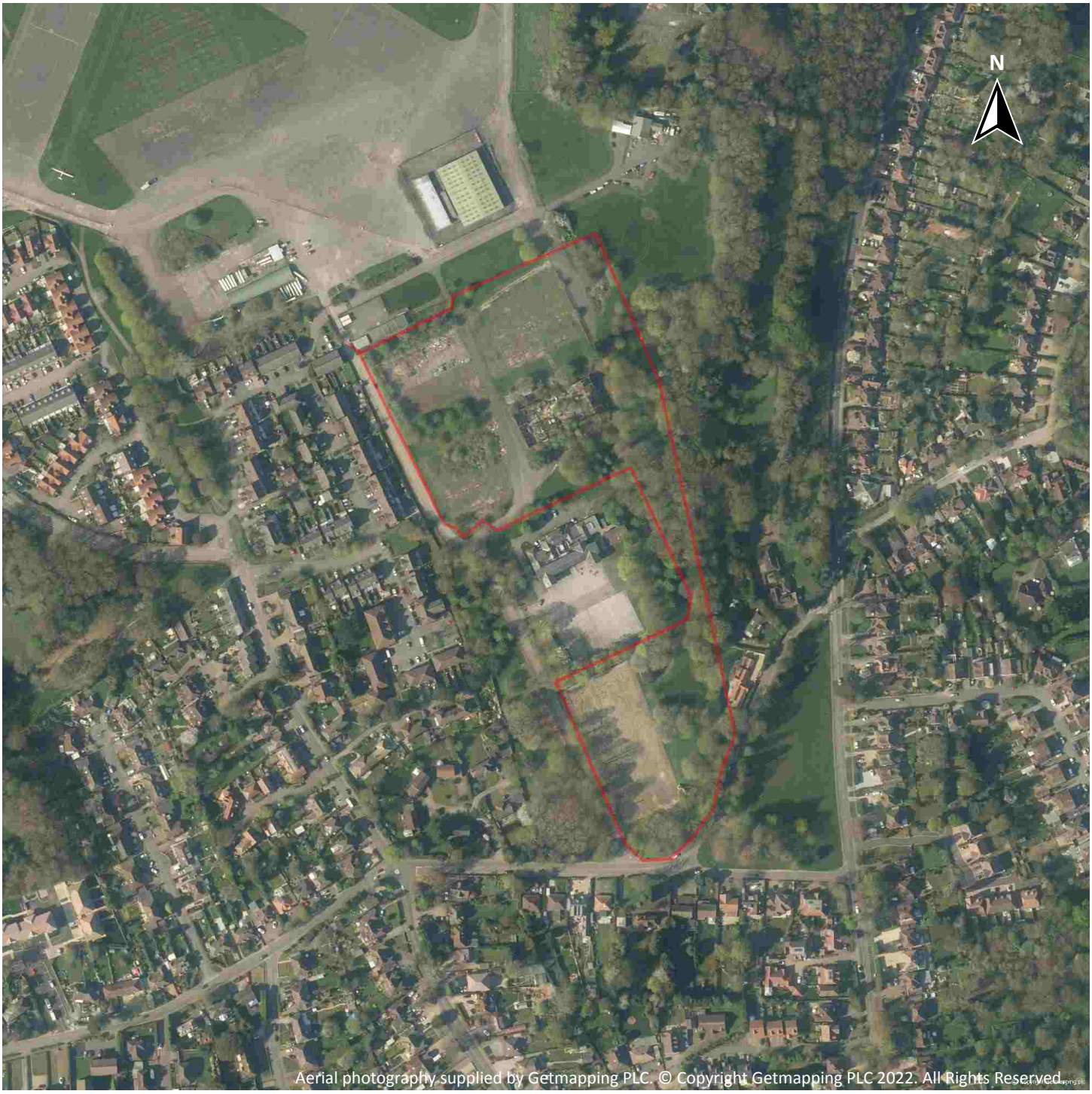
Recent aerial photograph



Capture Date: 14/06/2021

Site Area: 3.82ha

Recent site history - 2018 aerial photograph



Capture Date: 20/04/2018

Site Area: 3.82ha

Recent site history - 2013 aerial photograph

Capture Date: 20/04/2013

Site Area: 3.82ha

Recent site history - 2006 aerial photograph

Capture Date: 11/09/2006

Site Area: 3.82ha

Recent site history - 1999 aerial photograph

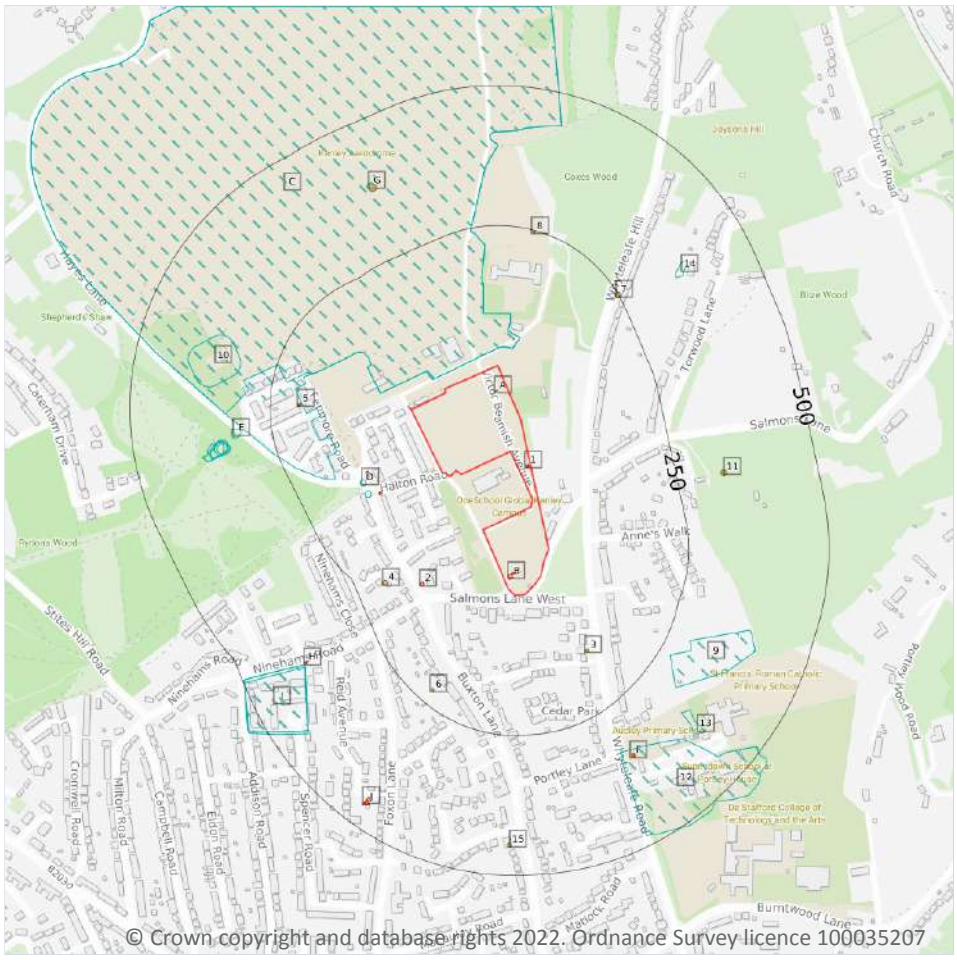
Capture Date: 04/09/1999

Site Area: 3.82ha

OS MasterMap site plan

Site Area: 3.82ha

1 Past land use



1.1 Historical industrial land uses

Records within 500m	20

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
C	24m NW	Aerodrome	1962 - 1967	2194753

ID	Location	Land use	Dates present	Group ID
C	24m NW	Aerodrome	1974	2275462
D	130m W	Unspecified Tank	1967	2153830
D	130m W	Unspecified Tank	1967	2153838
9	271m SE	Nursery	1962 - 1974	2277983
E	305m W	Unspecified Quarry	1867	2144986
10	312m W	Rifle Range	1962 - 1974	2203311
E	328m W	Old Chalk Pit	1895 - 1898	2266018
12	329m SE	Pottery	1867	2147573
E	330m W	Unspecified Pit	1934 - 1938	2250385
E	332m W	Unspecified Quarry	1867	2144985
E	333m W	Unspecified Pit	1938	2247842
E	333m W	Unspecified Pit	1910	2262546
E	339m W	Unspecified Pit	1962 - 1967	2293433
13	347m SE	Unspecified Ground Workings	1867	2133017
14	354m NE	Unspecified Ground Workings	1895	2133018
G	378m NW	Unspecified Tank	1910	2153832
I	387m SW	Nursery	1910	2183171
I	387m SW	Nursery	1895	2245488
I	388m SW	Nursery	1898	2229120

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**10**

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 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
A	**On site**	**Unspecified Tank**	**1970**	**393454**
A	**On site**	**Unspecified Tank**	**1970**	**395972**
3	147m SE	Unspecified Tank	1870	361419
4	193m SW	Unspecified Tank	1870	390512
6	221m S	Unspecified Tank	1934	361414
7	244m NE	Unspecified Tank	1897	361416
8	245m N	Unspecified Tank	1913	361415
11	329m E	Unspecified Tank	1897	361417
G	374m NW	Unspecified Tank	1897	361404
15	443m S	Unspecified Tank	1957	396186

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**13**

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 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**	**Electricity Transformer**	**1970**	**278976**
B	**On site**	**Electricity Substation**	**1970**	**259471**
B	**On site**	**Electricity Transformer**	**1970**	**288262**
D	113m W	Electricity Transformer	1970	287728
D	118m W	Electricity Transformer	1970	286450
2	135m SW	Electricity Transformer	1970	262195
5	194m W	Electricity Transformer	1970	271862
F	343m SE	Electricity Substation	1989 - 1992	277075

ID	Location	Land use	Dates present	Group ID
F	344m SE	Electricity Transformer	1970	250374
H	381m SW	Electricity Transformer	1970	250352
H	383m SW	Electricity Substation	1979	242157
J	443m S	Electricity Substation	1970	254345
J	450m S	Electricity Substation	1979	254956

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 un-grouped 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 un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

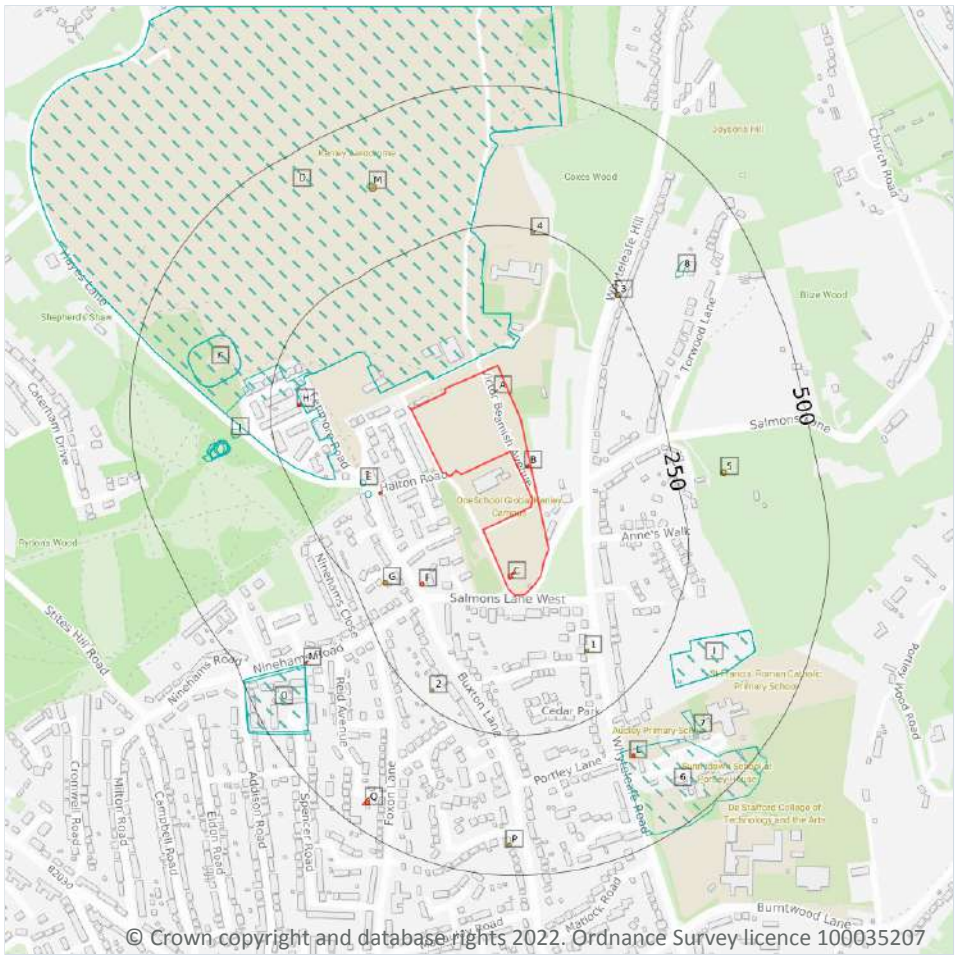
1.6 Historical military land

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	28

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 18**

ID	Location	Land Use	Date	Group ID
D	24m NW	Aerodrome	1974	2275462
D	24m NW	Aerodrome	1962	2194753
D	24m NW	Aerodrome	1967	2194753

ID	Location	Land Use	Date	Group ID
E	130m W	Unspecified Tank	1967	2153830
E	130m W	Unspecified Tank	1967	2153838
I	271m SE	Nursery	1974	2277983
I	271m SE	Nursery	1962	2277983
I	271m SE	Nursery	1967	2277983
J	305m W	Unspecified Quarry	1867	2144986
K	312m W	Rifle Range	1974	2203311
K	312m W	Rifle Range	1962	2203311
K	312m W	Rifle Range	1967	2203311
J	328m W	Old Chalk Pit	1898	2266018
6	329m SE	Pottery	1867	2147573
J	330m W	Unspecified Pit	1938	2250385
J	330m W	Unspecified Pit	1934	2250385
J	331m W	Old Chalk Pit	1895	2266018
J	332m W	Unspecified Quarry	1867	2144985
J	333m W	Unspecified Pit	1938	2247842
J	333m W	Unspecified Pit	1910	2262546
J	339m W	Unspecified Pit	1962	2293433
J	339m W	Unspecified Pit	1967	2293433
7	347m SE	Unspecified Ground Workings	1867	2133017
8	354m NE	Unspecified Ground Workings	1895	2133018
M	378m NW	Unspecified Tank	1910	2153832
O	387m SW	Nursery	1895	2245488
O	387m SW	Nursery	1910	2183171
O	388m SW	Nursery	1898	2229120

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	12

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 18**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Tank**	**1970**	**393454**
A	**On site**	**Unspecified Tank**	**1970**	**395972**
1	147m SE	Unspecified Tank	1870	361419
G	193m SW	Unspecified Tank	1870	390512
G	194m SW	Unspecified Tank	1870	390512
2	221m S	Unspecified Tank	1934	361414
3	244m NE	Unspecified Tank	1897	361416
4	245m N	Unspecified Tank	1913	361415
5	329m E	Unspecified Tank	1897	361417
M	374m NW	Unspecified Tank	1897	361404
P	443m S	Unspecified Tank	1957	396186
P	443m S	Unspecified Tank	1957	396186

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	21

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 18**

ID	Location	Land Use	Date	Group ID
B	**On site**	**Electricity Transformer**	**1970**	**278976**
B	**On site**	**Electricity Transformer**	**1970**	**278976**

ID	Location	Land Use	Date	Group ID
C	**On site**	**Electricity Substation**	**1970**	**259471**
C	**On site**	**Electricity Transformer**	**1970**	**288262**
C	**On site**	**Electricity Substation**	**1970**	**259471**
C	**On site**	**Electricity Transformer**	**1970**	**288262**
E	113m W	Electricity Transformer	1970	287728
E	113m W	Electricity Transformer	1970	287728
E	118m W	Electricity Transformer	1970	286450
E	118m W	Electricity Transformer	1970	286450
F	135m SW	Electricity Transformer	1970	262195
F	135m SW	Electricity Transformer	1970	262195
H	194m W	Electricity Transformer	1970	271862
H	194m W	Electricity Transformer	1970	271862
L	343m SE	Electricity Substation	1992	277075
L	343m SE	Electricity Substation	1989	277075
L	344m SE	Electricity Transformer	1970	250374
N	381m SW	Electricity Transformer	1970	250352
N	383m SW	Electricity Substation	1979	242157
Q	443m S	Electricity Substation	1970	254345
Q	450m S	Electricity Substation	1979	254956

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.

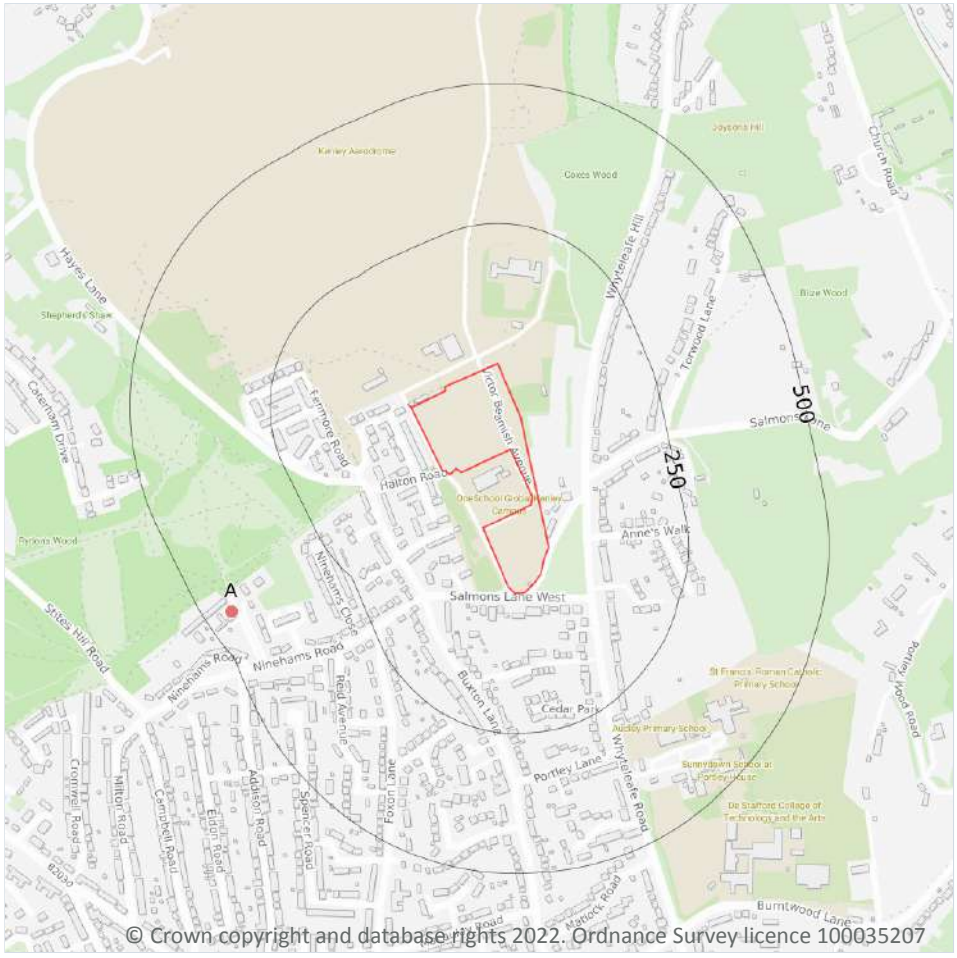
2.5 Historical garages

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



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	0

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.

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	20

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 23**

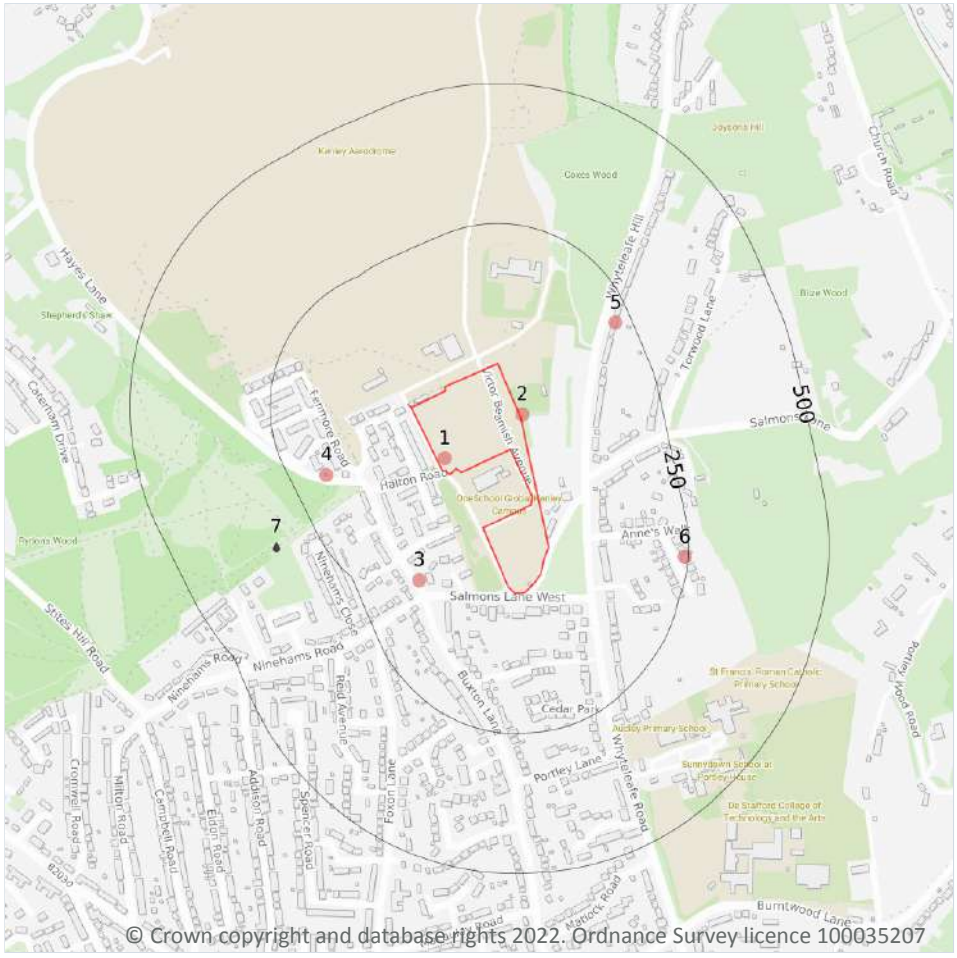
ID	Location	Site	Reference	Category	Sub-Category	Description
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX233751	Using waste exemption	Not on a farm	Use of waste in construction

ID	Location	Site	Reference	Category	Sub-Category	Description
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX233751	Storing waste exemption	Not on a farm	Storage of waste in secure containers
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX233751	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX233751	Disposing of waste exemption	Not on a farm	Deposit of waste from dredging of inland waters
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX233751	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX233751	Using waste exemption	Not on a farm	Use of mulch
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX233751	Using waste exemption	Not on a farm	Spreading waste on agricultural land to confer benefit
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX090446	Disposing of waste exemption	Not on a farm	Deposit of waste from dredging of inland waters
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX090446	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX090446	Storing waste exemption	Not on a farm	Storage of waste in secure containers
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX090446	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX090446	Using waste exemption	Not on a farm	Use of waste in construction
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX090446	Using waste exemption	Not on a farm	Spreading waste on agricultural land to confer benefit
A	453m SW	MERLEWOOD ESTATES OFFICE, NINEHAMS ROAD, CATERHAM, CR3 5LN	WEX090446	Using waste exemption	Not on a farm	Use of mulch

ID	Location	Site	Reference	Category	Sub-Category	Description
A	454m SW	Merlewood Estates Office Ninehams Road CATERHAM Surrey CR3 5LN	EPR/NE5589QS/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
A	454m SW	Merlewood Estates Office Ninehams Road CATERHAM Surrey CR3 5LN	EPR/NE5589QS/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	454m SW	Merlewood Estates Office Ninehams Road CATERHAM Surrey CR3 5LN	EPR/NE5589QS/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	454m SW	Merlewood Estates Office Ninehams Road CATERHAM Surrey CR3 5LN	EPR/NE5589QS/A001	Using waste exemption	Agricultural Waste Only	Use of mulch
A	454m SW	Merlewood Estates Office Ninehams Road CATERHAM Surrey CR3 5LN	EPR/NE5589QS/A001	Storing waste exemption	Both agricultural and non-agricultural waste	Storage of waste in secure containers
A	454m SW	Merlewood Estates Office Ninehams Road CATERHAM Surrey CR3 5LN	EPR/NE5589QS/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction

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

4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m	6

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 27**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Kenley Aerodrome**	**Surrey, CR8**	**Airports and Landing Strips**	**Air**
2	5m NE	Mast (Telecommunication)	Surrey, CR3	Telecommunications Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
3	141m SW	Electricity Sub Station	Surrey, CR3	Electrical Features	Infrastructure and Facilities
4	189m W	Electricity Sub Station	Surrey, CR8	Electrical Features	Infrastructure and Facilities
5	222m NE	Alpha Labels & Signs	140a, Whyteleafe Hill, Whyteleafe, Surrey, CR3 0AE	Office and Shop Equipment	Industrial Products
6	244m SE	Cladding Management Services Ltd	29, Annes Walk, Caterham, Surrey, CR3 5EL	Building and Component Suppliers	Construction Services

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	0

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.

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	1

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

Features are displayed on the Current industrial land use map on **page 27**

ID	Location	Address	Details	
7	326m W	Nine Hams Close, Caterham, Nine Hams Close, Caterham	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1587 Permit Version: 1 Receiving Water: CROYDON BOURNE	Status: REVOKED - UNSPECIFIED Issue date: 02/11/1989 Effective Date: 02/11/1989 Revocation Date: 25/11/1997

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	0

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

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.

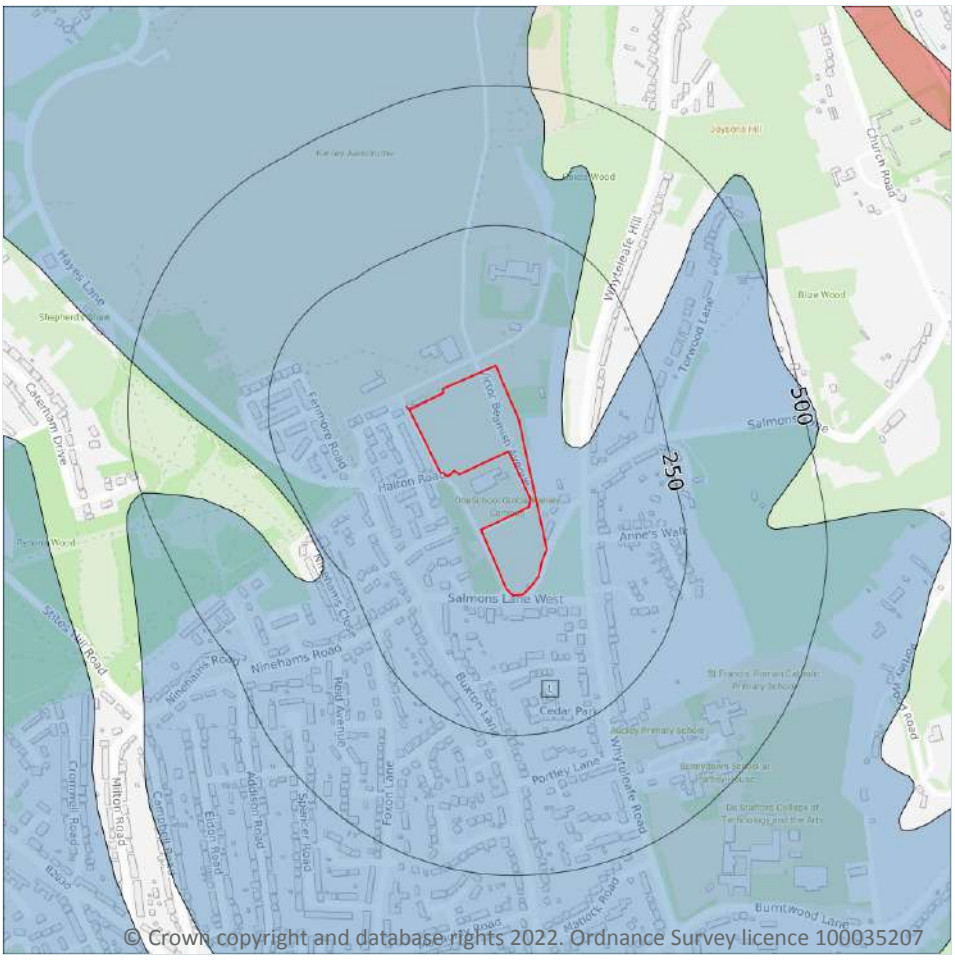
4.21 Pollution inventory radioactive waste

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



5.1 Superficial aquifer

Records within 500m	1

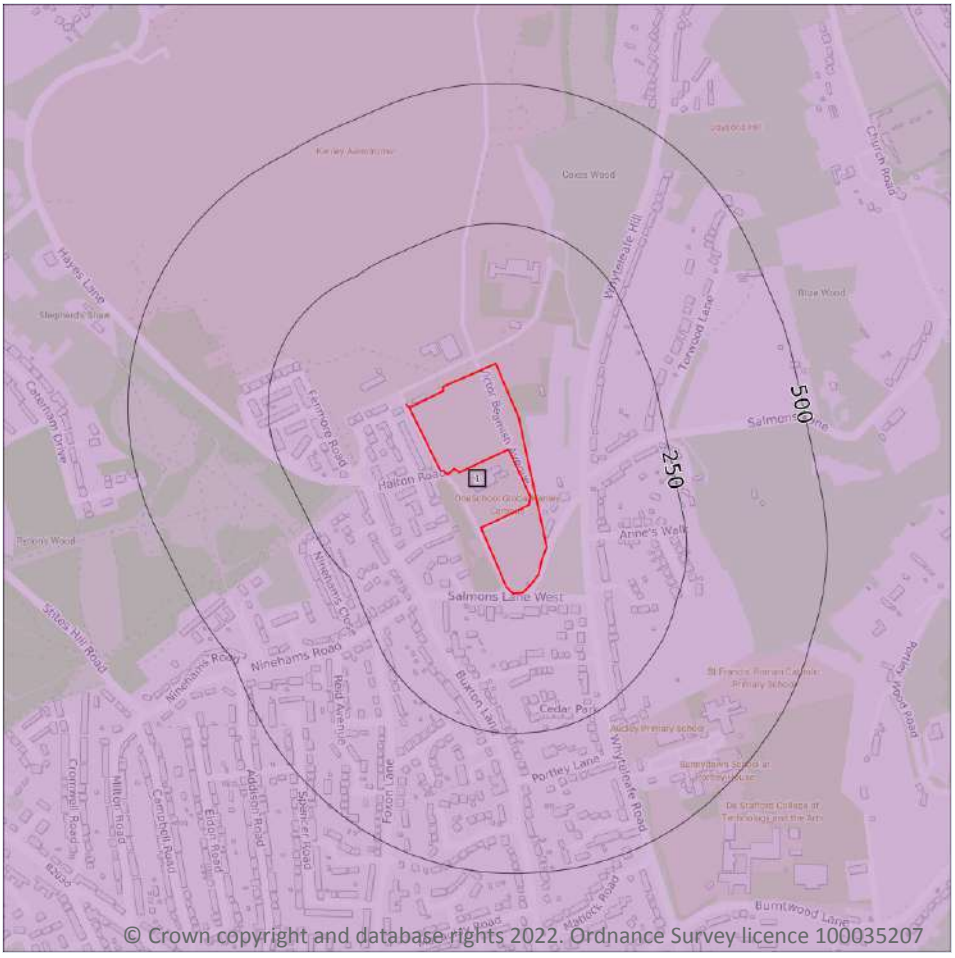
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 33**

ID	Location	Designation	Description
1	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**

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

Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m	1

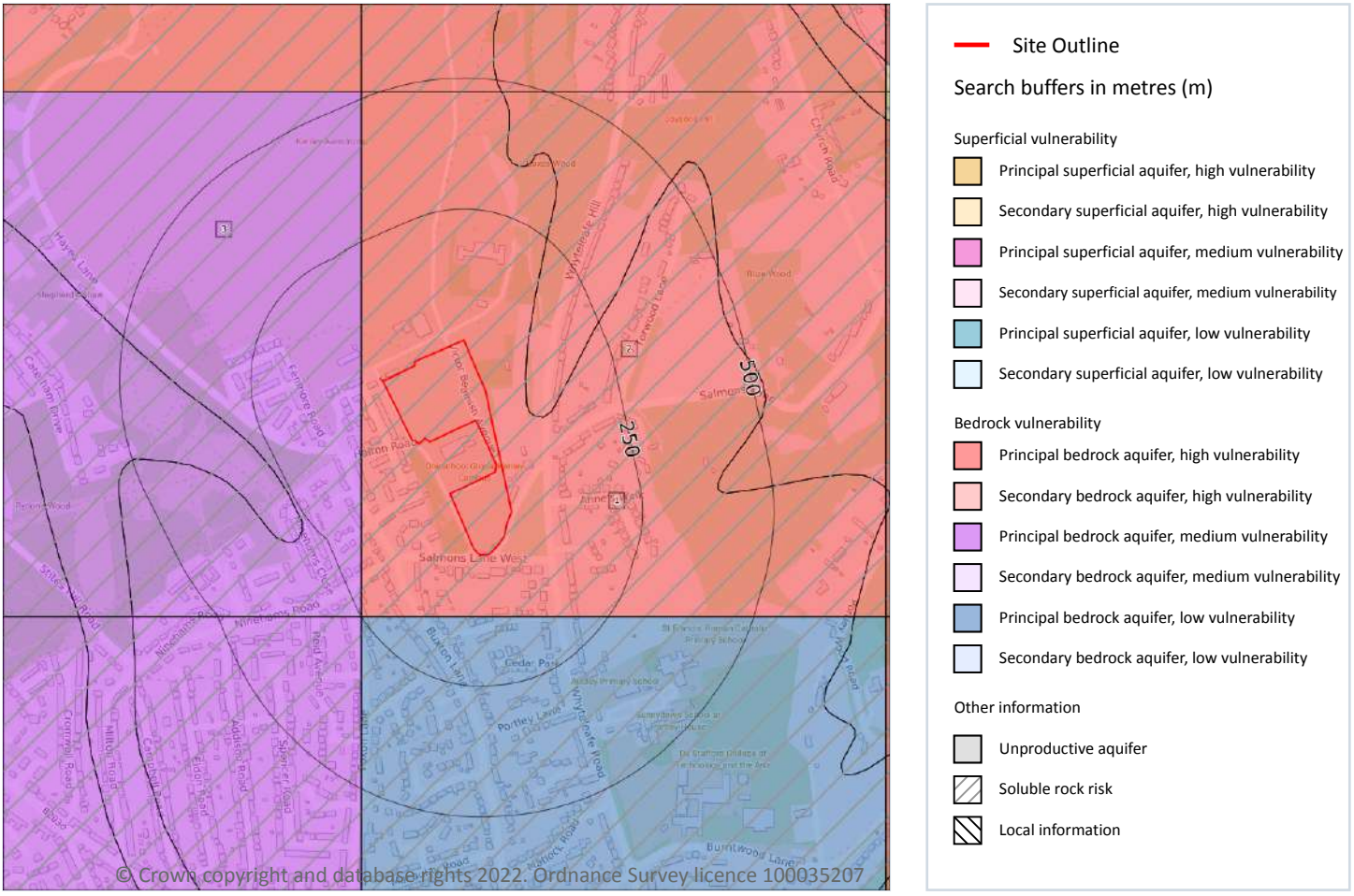
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 34**

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

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

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m	2

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 35**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer**	**Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year**	**Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures**
3	39m NW	Summary Classification: Principal bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium 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	**1**

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
2	**Very significant soluble rocks are likely to be present with a moderate possibility of localised natural subsidence or dissolution-related degradation of bedrock, especially in adverse conditions such as concentrated surface or subsurface water flow.**	**64.0%**

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

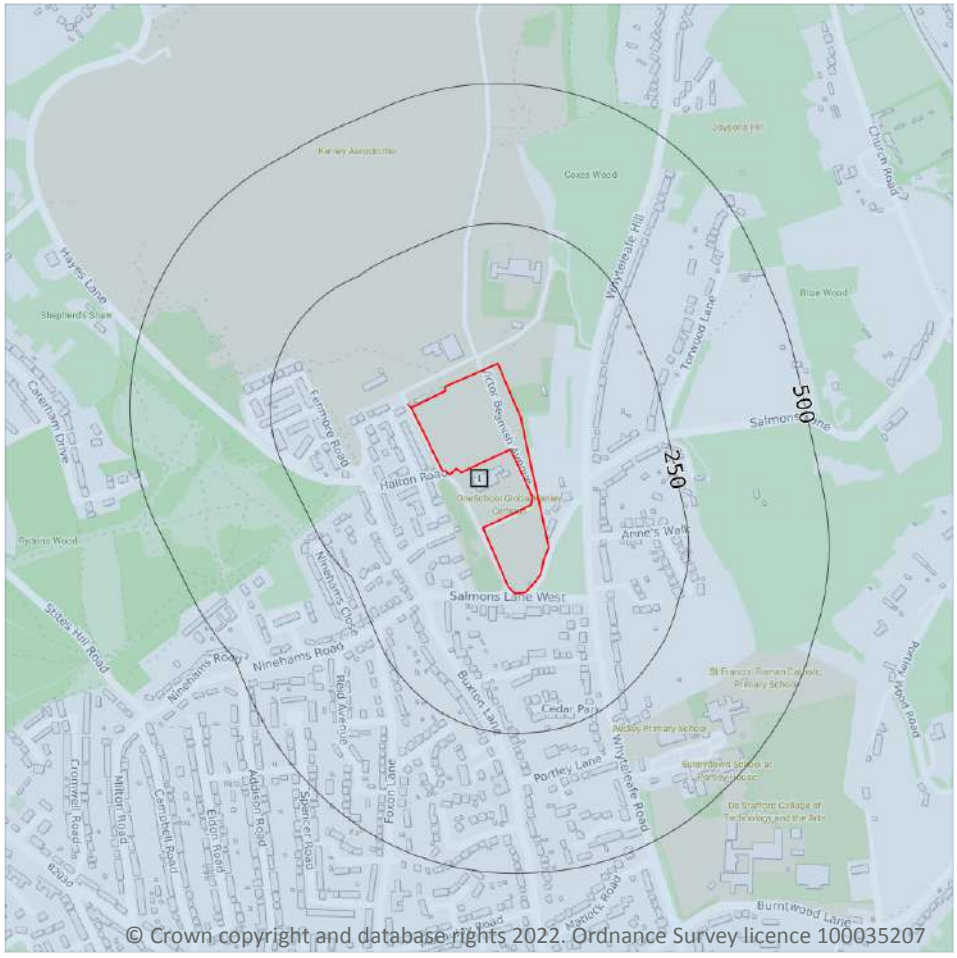
5.5 Groundwater vulnerability- local information

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
- Drinking water abstraction licences — Polygon 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	2

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 37**

ID	Location	Details	
-	1678m SW	Status: Historical Licence No: 28/39/41/0077 Details: Spray Irrigation - Storage Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT HAPPY VALLEY GOLF CLUB, CATERHAM, SURREY Data Type: Point Name: SURREY NATIONAL GOLF CLUB LTD Easting: 532070 Northing: 155900	Annual Volume (m^3): 35000 Max Daily Volume (m^3): 480 Original Application No: - Original Start Date: 11/04/2001 Expiry Date: 31/03/2013 Issue No: 2 Version Start Date: 01/04/2003 Version End Date: -
-	1687m SW	Status: Active Licence No: TH/039/0041/012 Details: Spray Irrigation - Storage Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT HAPPY VALLEY GOLF CLUB, CATERHAM, SURREY Data Type: Point Name: SURREY NATIONAL GOLF CLUB LTD Easting: 532047 Northing: 155910	Annual Volume (m^3): 35,000 Max Daily Volume (m^3): 480 Original Application No: NPS/WR/009238 Original Start Date: 01/04/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 01/04/2013 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**0**

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.

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

5.8 Potable abstractions

Records within 2000m	**0**

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.

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

5.9 Source Protection Zones

Records within 500m	1

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 37**

ID	Location	Type	Description
1	**On site**	**2**	**Outer catchment**

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

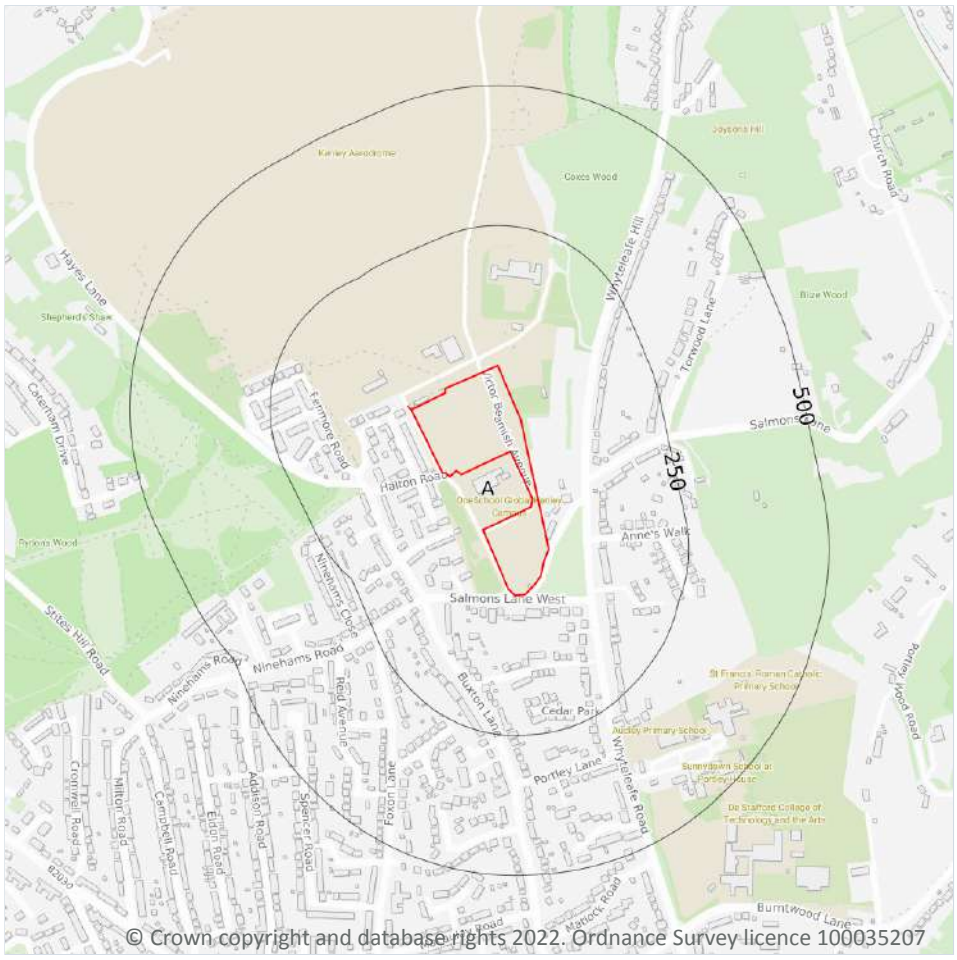
5.10 Source Protection Zones (confined aquifer)

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 40**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Wandle (Croydon to Wandsworth) and the Graveney**	**GB106039023460**	**Wandle**	**London**

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 40**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	8034m N	River	Wandle (Croydon to Wandsworth) and the Graveney	GB106039023460	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 40**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Epsom North Downs Chalk**	**GB40601G602200**	**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.

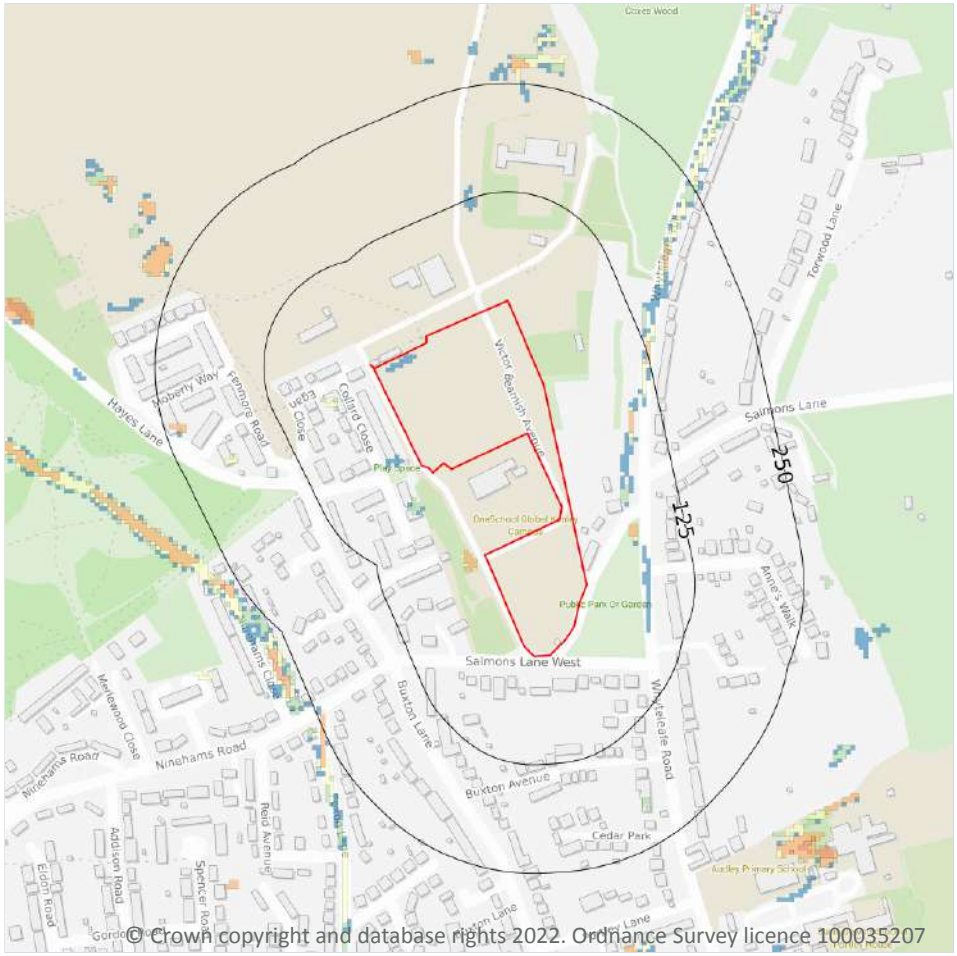
7.7 Flood Zone 3

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 1000 year, 0.1m - 0.3m**
Highest risk within 50m	**1 in 30 year, 0.1m - 0.3m**

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 46**

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.