

APPENDIX C

GROUNDSURE INSIGHT REPORT



Enviro+Geo Insight

CAR PARK AT ST MARGARETS BUSINESS CENTRE, GODSTONE ROAD, ST MARGARETS, TW1 1JS

Order Details

Date: 07/07/2020

Your ref: P20-2043

Our Ref: GS-6850666

Client: Create Consulting Engineers Ltd

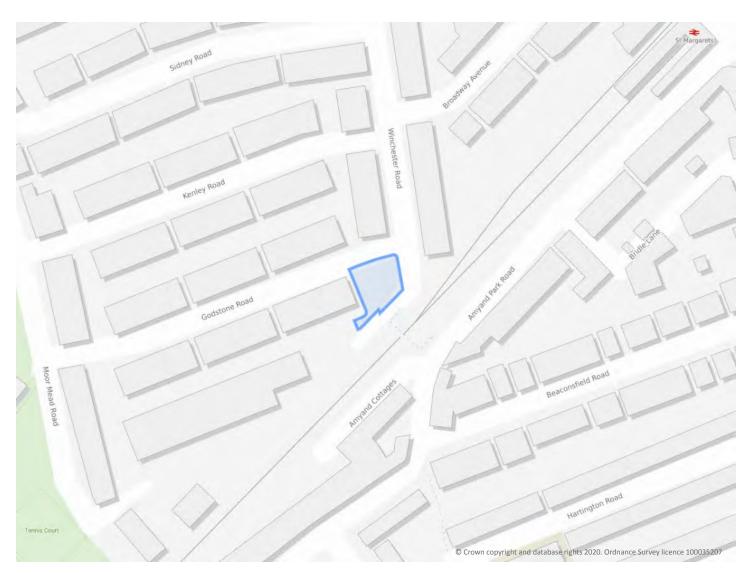
Site Details

Location: 516644 174121

Area: 0.06 ha

Authority: London Borough of Richmond upon

Thames



Summary of findings

p. 2 Aerial image

p. 8

OS MasterMap site plan

p.13 groundsure.com/insightuserguide



Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
<u>14</u>	<u>1.1</u>	Historical industrial land uses	5	2	31	36	-
<u>17</u>	<u>1.2</u>	<u>Historical tanks</u>	2	0	0	3	-
<u>18</u>	<u>1.3</u>	Historical energy features	0	2	3	7	-
19	1.4	Historical petrol stations	0	0	0	0	-
<u>19</u>	<u>1.5</u>	Historical garages	0	0	0	7	-
19	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
<u>20</u>	<u>2.1</u>	Historical industrial land uses	9	2	42	45	-
<u>24</u>	<u>2.2</u>	<u>Historical tanks</u>	3	0	0	4	-
<u>25</u>	<u>2.3</u>	Historical energy features	0	2	3	14	-
26	2.4	Historical petrol stations	0	0	0	0	-
<u>26</u>	<u>2.5</u>	Historical garages	0	0	0	12	-
_	C+:	11 1611			E0.0E0		
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
Page 27	3.1	Active or recent landfill	On site	0-50m 0	0 50-250m	250-500m 0	500-2000m -
							500-2000m - -
27	3.1	Active or recent landfill	0	0	0	0	500-2000m - -
27	3.1	Active or recent landfill Historical landfill (BGS records)	0	0	0	0	500-2000m - - -
27 27 28	3.1 3.2 3.3	Active or recent landfill Historical landfill (BGS records) Historical landfill (LA/mapping records)	0 0	0 0	0 0	0 0	
27 27 28 28	3.1 3.2 3.3 <u>3.4</u>	Active or recent landfill Historical landfill (BGS records) Historical landfill (LA/mapping records) Historical landfill (EA/NRW records)	0 0 0	0 0 0	0 0 0	0 0 0 0	
27 27 28 28 28	3.1 3.2 3.3 <u>3.4</u> 3.5	Active or recent landfill Historical landfill (BGS records) Historical landfill (LA/mapping records) Historical landfill (EA/NRW records) Historical waste sites	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 1	500-2000m
27 27 28 28 28	3.1 3.2 3.3 <u>3.4</u> 3.5	Active or recent landfill Historical landfill (BGS records) Historical landfill (LA/mapping records) Historical landfill (EA/NRW records) Historical waste sites Licensed waste sites	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 1 0	500-2000m 500-2000m
27 27 28 28 28 28 29	3.1 3.2 3.3 3.4 3.5 3.6 3.7	Active or recent landfill Historical landfill (BGS records) Historical landfill (LA/mapping records) Historical landfill (EA/NRW records) Historical waste sites Licensed waste sites Waste exemptions	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 1 0 2	- - - -
27 28 28 28 28 29 Page	3.1 3.2 3.3 3.4 3.5 3.6 3.7 Section	Active or recent landfill Historical landfill (BGS records) Historical landfill (LA/mapping records) Historical landfill (EA/NRW records) Historical waste sites Licensed waste sites Waste exemptions Current industrial land use	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 1 0 2	- - - -
27 28 28 28 28 29 Page	3.1 3.2 3.3 3.4 3.5 3.6 3.7 Section 4.1	Active or recent landfill Historical landfill (BGS records) Historical landfill (LA/mapping records) Historical landfill (EA/NRW records) Historical waste sites Licensed waste sites Waste exemptions Current industrial land use Recent industrial land uses	0 0 0 0 0 0 On site	0 0 0 0 0 0 0 0-50m	0 0 0 0 0 0 50-250m	0 0 0 1 0 2 0 250-500m	- - - -
27 28 28 28 28 29 Page 30 32	3.1 3.2 3.3 3.4 3.5 3.6 3.7 Section 4.1 4.2	Active or recent landfill Historical landfill (BGS records) Historical landfill (LA/mapping records) Historical landfill (EA/NRW records) Historical waste sites Licensed waste sites Waste exemptions Current industrial land use Recent industrial land uses Current or recent petrol stations	0 0 0 0 0 0 On site	0 0 0 0 0 0 0-50m 2	0 0 0 0 0 0 50-250m	0 0 1 0 2 0 250-500m	- - - -





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32	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
33	4.7	Regulated explosive sites	0	0	0	0	-
33	4.8	Hazardous substance storage/usage	0	0	0	0	-
33	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
<u>33</u>	<u>4.10</u>	Licensed industrial activities (Part A(1))	0	0	0	8	-
<u>35</u>	<u>4.11</u>	Licensed pollutant release (Part A(2)/B)	0	0	2	0	-
35	4.12	Radioactive Substance Authorisations	0	0	0	0	-
<u>36</u>	<u>4.13</u>	Licensed Discharges to controlled waters	0	0	2	0	-
36	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
36	4.15	Pollutant release to public sewer	0	0	0	0	-
37	4.16	List 1 Dangerous Substances	0	0	0	0	-
37	4.17	List 2 Dangerous Substances	0	0	0	0	-
<u>37</u>	<u>4.18</u>	Pollution Incidents (EA/NRW)	0	0	1	2	-
<u>38</u>	4.19	Pollution inventory substances	0	0	0	3	-
<u>39</u>	<u>4.20</u>	Pollution inventory waste transfers	0	0	0	1	-
41	4.21	Pollution inventory radioactive waste	0	0	0	0	
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
		Trydrogeology	Offsite	0 30111			
<u>42</u>	<u>5.1</u>	Superficial aquifer		within 500m			
<u>42</u> <u>43</u>	5.1 5.2	, , ,	Identified ()		
		Superficial aquifer	Identified (within 500m)		
<u>43</u>	<u>5.2</u>	Superficial aquifer Bedrock aquifer	Identified (within 500m within 500m within 50m))		
<u>43</u> <u>44</u>	<u>5.2</u> <u>5.3</u>	Superficial aquifer Bedrock aquifer Groundwater vulnerability	Identified (Identified (Identified (None (with	within 500m within 500m within 50m))		
43 44 45	5.2 5.3 5.4	Superficial aquifer Bedrock aquifer Groundwater vulnerability Groundwater vulnerability- soluble rock risk	Identified (Identified (Identified (None (with	within 500m within 500m within 50m) iin 0m))	1	14
43 44 45 45	5.25.35.45.5	Superficial aquifer Bedrock aquifer Groundwater vulnerability Groundwater vulnerability- soluble rock risk Groundwater vulnerability- local information	Identified (Identified (Identified (None (with	within 500m within 500m within 50m) iin 0m) within 0m))	1 0	
43 44 45 45 46	5.25.35.45.55.6	Superficial aquifer Bedrock aquifer Groundwater vulnerability Groundwater vulnerability- soluble rock risk Groundwater vulnerability- local information Groundwater abstractions	Identified (Identified (Identified (None (with Identified (within 500m within 500m within 50m) iin 0m) within 0m)	0		14
43 44 45 45 46 50	5.2 5.3 5.4 5.5 5.6 5.7	Superficial aquifer Bedrock aquifer Groundwater vulnerability Groundwater vulnerability- soluble rock risk Groundwater vulnerability- local information Groundwater abstractions Surface water abstractions	Identified (Identified (Identified (None (with Identified (0	within 500m within 500m within 50m) ain 0m) within 0m) 0	0	0	14 6
43 44 45 45 46 50	5.2 5.3 5.4 5.5 5.6 5.7	Superficial aquifer Bedrock aquifer Groundwater vulnerability Groundwater vulnerability- soluble rock risk Groundwater vulnerability- local information Groundwater abstractions Surface water abstractions Potable abstractions	Identified (Identified (Identified (None (with Identified (0 0 0	within 500m within 500m within 50m) ain 0m) within 0m) 0 0	0 0	0	14 6
43 44 45 45 46 50 52	 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 	Superficial aquifer Bedrock aquifer Groundwater vulnerability Groundwater vulnerability- soluble rock risk Groundwater vulnerability- local information Groundwater abstractions Surface water abstractions Potable abstractions Source Protection Zones	Identified (Identified (Identified (None (with Identified (0 0 0	within 500m within 500m within 50m) ain 0m) within 0m) 0 0 0	0 0 0	0 0	14 6



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54	6.2	Surface water features	0	0	0	-	-
<u>55</u>	<u>6.3</u>	WFD Surface water body catchments	1	-	-	-	-
<u>55</u>	<u>6.4</u>	WFD Surface water bodies	0	0	0	-	-
<u>56</u>	<u>6.5</u>	WFD Groundwater bodies	1	_	-	-	
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
<u>57</u>	<u>7.1</u>	Risk of Flooding from Rivers and Sea (RoFRaS)	Low (within	n 50m)			
58	7.2	Historical Flood Events	0	0	0	-	-
58	7.3	Flood Defences	0	0	0	-	-
58	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
58	7.5	Flood Storage Areas	0	0	0	-	-
<u>59</u>	<u>7.6</u>	Flood Zone 2	Identified (within 50m)			
60	7.7	Flood Zone 3	None (with	in 50m)			
Page	Section	Surface water flooding					
<u>61</u>	<u>8.1</u>	Surface water flooding	1 in 30 yea	r, 0.1m - 0.3r	n (within 50	m)	
Page	Section	Groundwater flooding					
- 0 -							
<u>63</u>	9.1	Groundwater flooding	High (withi	n 50m)			
	9.1 Section	-	High (withi	n 50m) _{0-50m}	50-250m	250-500m	500-2000m
<u>63</u>		Groundwater flooding			50-250m	250-500m	500-2000m
63 Page	Section	Groundwater flooding Environmental designations	On site	0-50m			
63 Page	Section 10.1	Groundwater flooding Environmental designations Sites of Special Scientific Interest (SSSI)	On site	0-50m	0	0	1
63 Page 64 65	Section 10.1 10.2	Groundwater flooding Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites)	On site 0	0-50m 0	0	0	1
63 Page 64 65	Section 10.1 10.2 10.3	Groundwater flooding Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites) Special Areas of Conservation (SAC)	On site 0 0 0	0-50m 0 0	0 0	0 0	1 0 1
63 Page 64 65 65	Section 10.1 10.2 10.3 10.4	Groundwater flooding Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites) Special Areas of Conservation (SAC) Special Protection Areas (SPA)	On site 0 0 0 0	0-50m 0 0 0	0 0 0	0 0 0	1 0 1 0
63 Page 64 65 65 65	Section 10.1 10.2 10.3 10.4 10.5	Groundwater flooding Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites) Special Areas of Conservation (SAC) Special Protection Areas (SPA) National Nature Reserves (NNR)	On site 0 0 0 0 0	0-50m 0 0 0	0 0 0 0	0 0 0 0	1 0 1 0
63 Page 64 65 65 65 66	Section 10.1 10.2 10.3 10.4 10.5 10.6	Groundwater flooding Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites) Special Areas of Conservation (SAC) Special Protection Areas (SPA) National Nature Reserves (NNR) Local Nature Reserves (LNR)	On site 0 0 0 0 0 0	0-50m 0 0 0 0	0 0 0 0 0	0 0 0 0 0	1 0 1 0 1 3
63 Page 64 65 65 66 66	Section 10.1 10.2 10.3 10.4 10.5 10.6 10.7	Groundwater flooding Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites) Special Areas of Conservation (SAC) Special Protection Areas (SPA) National Nature Reserves (NNR) Local Nature Reserves (LNR) Designated Ancient Woodland	On site 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	1 0 1 0 1 3
63 Page 64 65 65 66 66 66	Section 10.1 10.2 10.3 10.4 10.5 10.6 10.7 10.8	Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites) Special Areas of Conservation (SAC) Special Protection Areas (SPA) National Nature Reserves (NNR) Local Nature Reserves (LNR) Designated Ancient Woodland Biosphere Reserves	On site 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	1 0 1 0 1 3 0
63 Page 64 65 65 66 66 67 67	Section 10.1 10.2 10.3 10.4 10.5 10.6 10.7 10.8 10.9	Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites) Special Areas of Conservation (SAC) Special Protection Areas (SPA) National Nature Reserves (NNR) Local Nature Reserves (LNR) Designated Ancient Woodland Biosphere Reserves Forest Parks	On site O O O O O O O O O O O O O O	0-50m 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	1 0 1 0 1 3 0
63 Page 64 65 65 66 66 67 67	Section 10.1 10.2 10.3 10.4 10.5 10.6 10.7 10.8 10.9 10.10	Groundwater flooding Environmental designations Sites of Special Scientific Interest (SSSI) Conserved wetland sites (Ramsar sites) Special Areas of Conservation (SAC) Special Protection Areas (SPA) National Nature Reserves (NNR) Local Nature Reserves (LNR) Designated Ancient Woodland Biosphere Reserves Forest Parks Marine Conservation Zones	On site O O O O O O O O O O O O O O O O O O	0-50m 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 3 0 0





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68	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
68	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
68	10.15	Nitrate Sensitive Areas	0	0	0	0	0
<u>68</u>	<u>10.16</u>	Nitrate Vulnerable Zones	0	0	0	0	1
<u>70</u>	<u>10.17</u>	SSSI Impact Risk Zones	1	-	-	-	-
<u>71</u>	<u>10.18</u>	SSSI Units	0	0	0	0	3
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
74	11.1	World Heritage Sites	0	0	0	-	-
75	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
75	11.3	National Parks	0	0	0	-	-
75	11.4	Listed Buildings	0	0	0	-	-
<u>75</u>	<u>11.5</u>	Conservation Areas	0	1	2	-	-
76	11.6	Scheduled Ancient Monuments	0	0	0	-	-
76	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
rage	Section	Agricultural designations	OII site	0-30111	30 230111	230-300111	300 2000111
77	12.1	Agricultural Land Classification	Urban (with		30 230111	230-300111	300 2000111
					0	-	-
<u>77</u>	<u>12.1</u>	Agricultural Land Classification	Urban (with	nin 250m)		-	-
77 78	12.1 12.2	Agricultural Land Classification Open Access Land	Urban (with	nin 250m) 0	0	-	-
77 78 78	12.1 12.2 12.3	Agricultural Land Classification Open Access Land Tree Felling Licences	Urban (with 0 0	nin 250m) 0 0	0		- - -
77 78 78 78	12.1 12.2 12.3 12.4	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes	Urban (with 0 0 0	nin 250m) 0 0	0 0	- - - - 250-500m	- - - - 500-2000m
77 78 78 78 78	12.1 12.2 12.3 12.4 12.5	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes	Urban (with 0 0 0 0	nin 250m) 0 0 0	0 0 0	- - -	- - - -
77 78 78 78 78 Page	12.1 12.2 12.3 12.4 12.5 Section	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes Habitat designations	Urban (with 0 0 0 0 O On site	0 0 0 0 0	0 0 0 0 50-250m	- - -	- - - -
77 78 78 78 78 Page	12.1 12.2 12.3 12.4 12.5 Section	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes Habitat designations Priority Habitat Inventory	Urban (with 0 0 0 0 On site	o 0 0 0 0 0-50m	0 0 0 0 50-250m	- - -	- - - -
77 78 78 78 78 78 Page 79	12.1 12.2 12.3 12.4 12.5 Section 13.1 13.2	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes Habitat designations Priority Habitat Inventory Habitat Networks	Urban (with 0 0 0 0 On site	0 0 0 0 0-50m	0 0 0 0 50-250m	- - -	- - - -
77 78 78 78 78 78 Page 79 79	12.1 12.2 12.3 12.4 12.5 Section 13.1 13.2 13.3	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes Habitat designations Priority Habitat Inventory Habitat Networks Open Mosaic Habitat	Urban (with 0 0 0 0 On site 0 0	0 0 0 0 0-50m 0	0 0 0 0 50-250m 0	- - -	- - - -
77 78 78 78 78 78 Page 79 79 79	12.1 12.2 12.3 12.4 12.5 Section 13.1 13.2 13.3	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes Habitat designations Priority Habitat Inventory Habitat Networks Open Mosaic Habitat Limestone Pavement Orders	Urban (with 0 0 0 0 On site 0 On site	0 0 0 0 0 0-50m 0	0 0 0 0 50-250m 0 0	- - - 250-500m - - -	- - - 500-2000m - -
77 78 78 78 78 78 Page 79 79 79 Page	12.1 12.2 12.3 12.4 12.5 Section 13.1 13.2 13.3 13.4 Section	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes Habitat designations Priority Habitat Inventory Habitat Networks Open Mosaic Habitat Limestone Pavement Orders Geology 1:10,000 scale	Urban (with 0 0 0 0 On site 0 On site	0 0 0 0 0-50m 0 0	0 0 0 0 50-250m 0 0	- - - 250-500m - - -	- - - 500-2000m - -
77 78 78 78 78 78 Page 79 79 79 Page 80	12.1 12.2 12.3 12.4 12.5 Section 13.1 13.2 13.3 13.4 Section 14.1	Agricultural Land Classification Open Access Land Tree Felling Licences Environmental Stewardship Schemes Countryside Stewardship Schemes Habitat designations Priority Habitat Inventory Habitat Networks Open Mosaic Habitat Limestone Pavement Orders Geology 1:10,000 scale 10k Availability	Urban (with 0 0 0 0 On site 0 On site Identified (0 0 0 0-50m 0 0-50m within 500m	0 0 0 50-250m 0 0 0 50-250m	- - - 250-500m - - - - 250-500m	- - - 500-2000m - -





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84	14.4	Landslip (10k)	0	0	0	0	-
<u>85</u>	<u>14.5</u>	Bedrock geology (10k)	1	0	0	0	-
86	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
87	<u>15.1</u>	50k Availability	Identified (within 500m)		
88	<u>15.2</u>	Artificial and made ground (50k)	0	1	0	3	-
89	15.3	Artificial ground permeability (50k)	0	0	-	-	-
<u>90</u>	<u>15.4</u>	Superficial geology (50k)	1	0	1	0	-
<u>91</u>	<u>15.5</u>	Superficial permeability (50k)	Identified (within 50m)			
91	15.6	Landslip (50k)	0	0	0	0	-
91	15.7	Landslip permeability (50k)	None (with	in 50m)			
<u>92</u>	<u>15.8</u>	Bedrock geology (50k)	1	0	0	0	-
<u>93</u>	<u>15.9</u>	Bedrock permeability (50k)	Identified (within 50m)			
93	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
94	<u>16.1</u>	BGS Boreholes	0	3	0	-	-
Page	Section	Natural ground subsidence					
1 ugc	3000001	3. Carra Car					
96	<u>17.1</u>	Shrink swell clays	Negligible ((within 50m)			
				(within 50m) vithin 50m)			
<u>96</u>	<u>17.1</u>	Shrink swell clays	Very low (v				
96 97	17.1 17.2	Shrink swell clays Running sands	Very low (v	vithin 50m)			
96 97 98	17.1 17.2 17.3	Shrink swell clays Running sands Compressible deposits	Very low (v Negligible (Very low (v	vithin 50m) (within 50m)			
96 97 98 99	17.1 17.2 17.3 17.4	Shrink swell clays Running sands Compressible deposits Collapsible deposits	Very low (v Negligible (Very low (v Very low (v	vithin 50m) (within 50m) vithin 50m)			
96 97 98 99	17.1 17.2 17.3 17.4 17.5	Shrink swell clays Running sands Compressible deposits Collapsible deposits Landslides	Very low (v Negligible (Very low (v Very low (v	vithin 50m) (within 50m) vithin 50m) vithin 50m)	50-250m	250-500m	500-2000m
96 97 98 99 100	17.1 17.2 17.3 17.4 17.5	Shrink swell clays Running sands Compressible deposits Collapsible deposits Landslides Ground dissolution of soluble rocks	Very low (v Negligible (Very low (v Very low (v Negligible (vithin 50m) (within 50m) vithin 50m) vithin 50m) (within 50m)		250-500 m	500-2000m
96 97 98 99 100 101 Page	17.1 17.2 17.3 17.4 17.5 17.6	Shrink swell clays Running sands Compressible deposits Collapsible deposits Landslides Ground dissolution of soluble rocks Mining, ground workings and natural cavities	Very low (v Negligible (Very low (v Very low (v Negligible (On site	vithin 50m) (within 50m) vithin 50m) vithin 50m) (within 50m) 0-50m	50-250m		500-2000m
96 97 98 99 100 101 Page	17.1 17.2 17.3 17.4 17.5 17.6 Section	Shrink swell clays Running sands Compressible deposits Collapsible deposits Landslides Ground dissolution of soluble rocks Mining, ground workings and natural cavities Natural cavities	Very low (v Negligible (Very low (v Very low (v Negligible (On site	vithin 50m) (within 50m) vithin 50m) vithin 50m) (within 50m) 0-50m	50-250m	0	500-2000m - -
96 97 98 99 100 101 Page	17.1 17.2 17.3 17.4 17.5 17.6 Section 18.1	Shrink swell clays Running sands Compressible deposits Collapsible deposits Landslides Ground dissolution of soluble rocks Mining, ground workings and natural cavities Natural cavities BritPits	Very low (v Negligible (Very low (v Very low (v Negligible (On site	vithin 50m) (within 50m) vithin 50m) vithin 50m) (within 50m) 0-50m 0	50-250m 0 0	0	500-2000m - - -

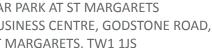




Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

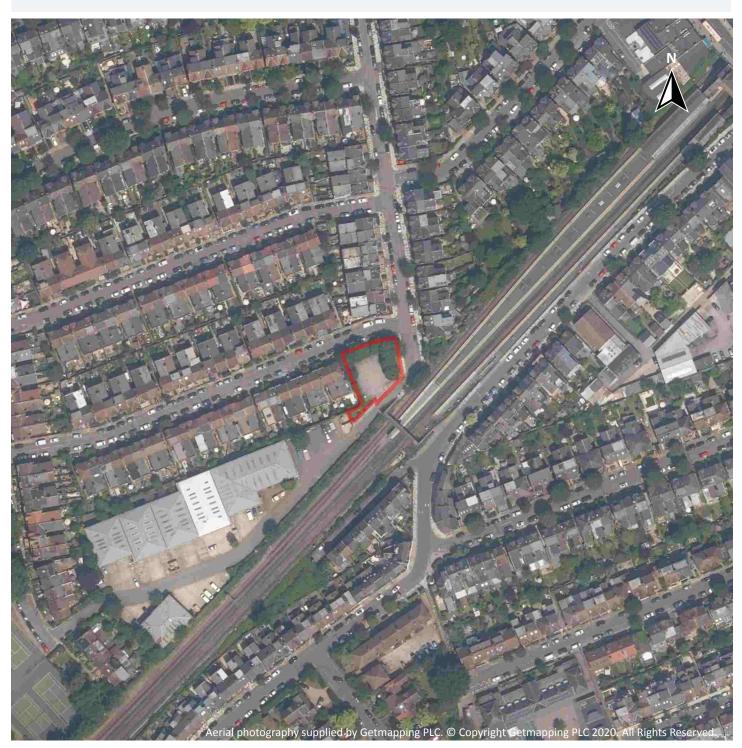
105	18.6	Non-coal mining	0	0	0	0	0
105	18.7	Mining cavities	0	0	0	0	0
105	18.8	JPB mining areas	None (with	in 0m)			
105	18.9	Coal mining	None (with	in 0m)			
106	18.10	Brine areas	None (with	in 0m)			
106	18.11	Gypsum areas	None (with	in 0m)			
106	18.12	Tin mining	None (with	in 0m)			
106	18.13	Clay mining	None (with	in 0m)			
Page	Section	Radon					
<u>107</u>	<u>19.1</u>	Radon	Less than 1	.% (within 0n	n)		
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
108	20.1	BGS Estimated Background Soil Chemistry	1	0	-	-	-
<u>108</u>	20.2	BGS Estimated Urban Soil Chemistry	2	4	-	-	-
109	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
110	21.1	Underground railways (London)	0	0	0	-	-
110	21.2	Underground railways (Non-London)	0	0	0	-	-
111	21.3	Railway tunnels	0	0	0	-	-
<u>111</u>	<u>21.4</u>	Historical railway and tunnel features	5	5	9	-	-
112	21.5	Royal Mail tunnels	0	0	0	-	-
112	21.6	Historical railways	0	0	0	-	-
<u>112</u>	<u>21.7</u>	Railways	0	7	4	-	-
113	21.8	Crossrail 1	0	0	0	0	-
113	21.9	Crossrail 2	0	0	0	0	-
113	21.10	HS2	0	0	0	0	-





Recent aerial photograph

Groundsure



Capture Date: 29/06/2019

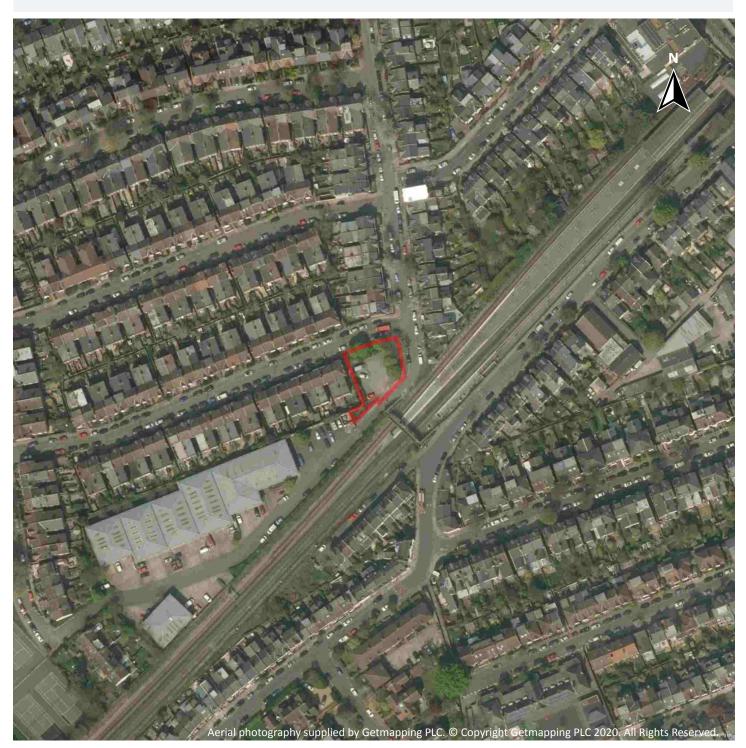
Site Area: 0.06ha





Recent site history - 2015 aerial photograph

Groundsure



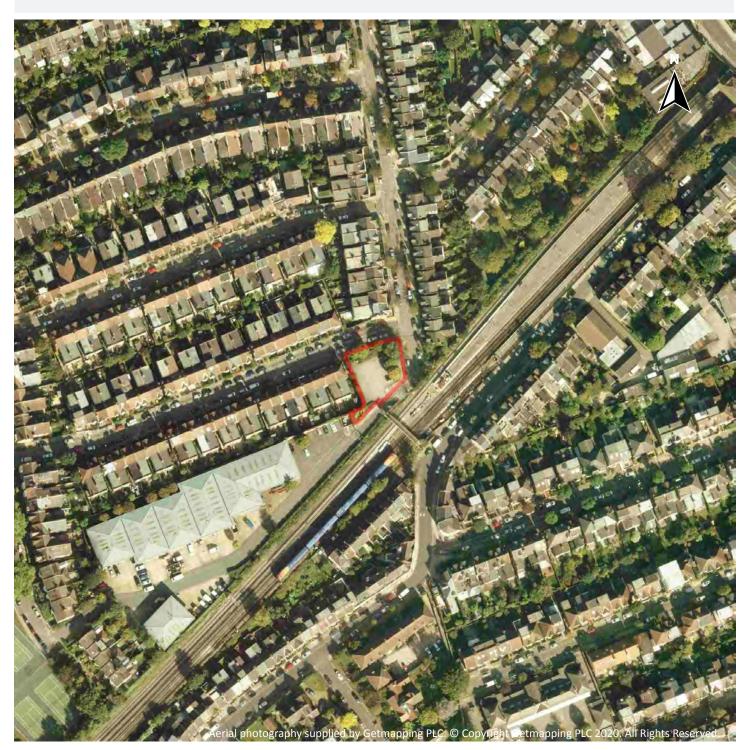
Capture Date: 20/04/2015

Site Area: 0.06ha





Recent site history - 2011 aerial photograph



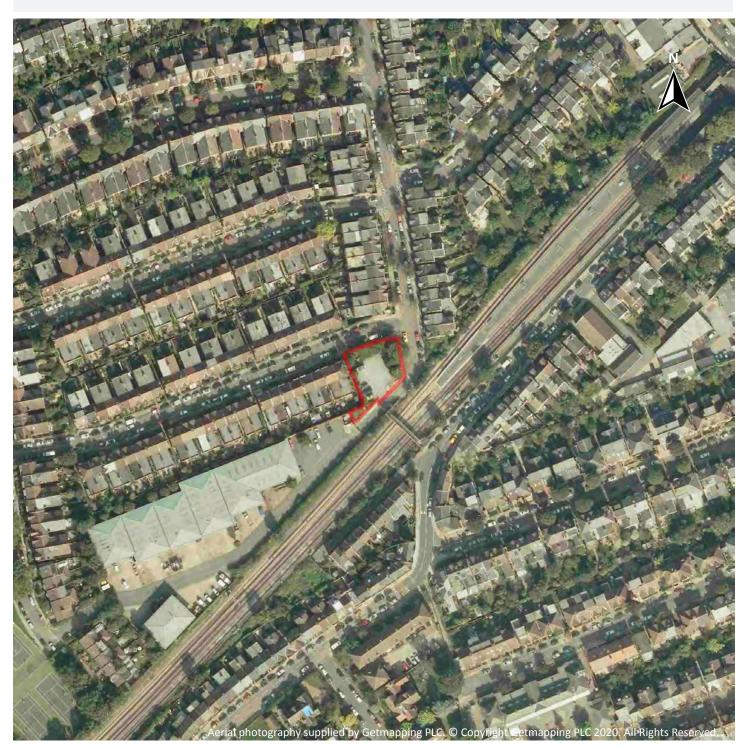
Capture Date: 30/09/2011

Site Area: 0.06ha





Recent site history - 2008 aerial photograph



Capture Date: 21/09/2008

Site Area: 0.06ha





Recent site history - 1999 aerial photograph

Groundsure



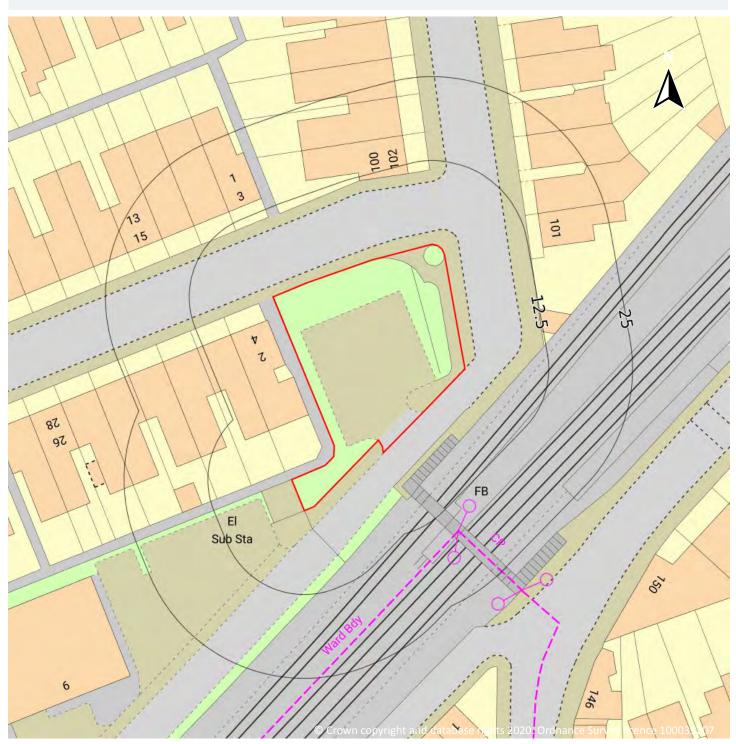
Capture Date: 29/08/1999

Site Area: 0.06ha





OS MasterMap site plan

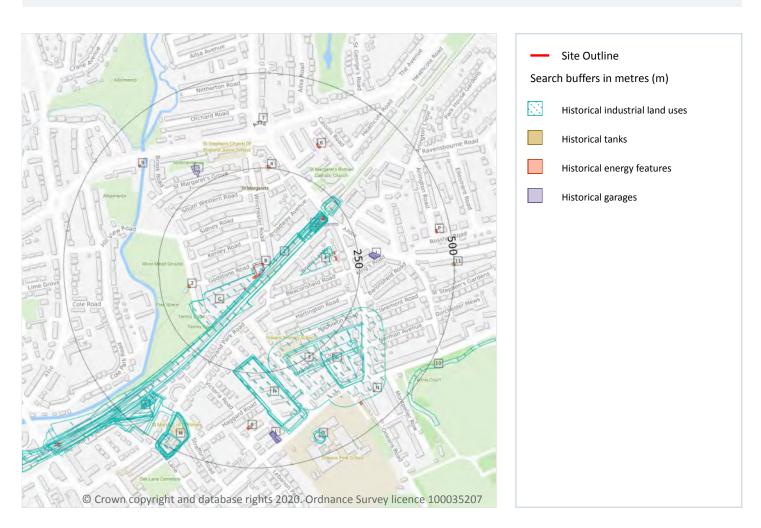


Site Area: 0.06ha





1 Past land use



1.1 Historical industrial land uses

Records within 500m 74

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

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

ID	Location	Land use	Dates present	Group ID
1	On site	Railway Sidings	1933	2280226





Ref: GS-6850666 **Your ref**: P20-2043 **Grid ref**: 516644 174121

ID	Location	Land use	Dates present	Group ID
Α	On site	Railway Sidings	1948 - 1973	2172363
С	On site	Poultry Appliance Works	1912 - 1933	2248007
С	On site	Poultry Appliance Works	1912	2267571
D	On site	Railway Sidings	1938	2193026
Α	6m SE	Railway Sidings	1938	2181622
D	6m SE	Railway Sidings	1935	2246469
Е	95m E	Smithy	1894	2211597
F	115m NE	Railway Station	1912 - 1933	2251883
F	118m NE	Railway Station	1935	2250096
F	119m NE	Railway Station	1938	2210222
F	120m NE	Railway Station	1948 - 1991	2270396
F	121m NE	Railway Station	1938	2214117
F	121m NE	Railway Station	1912	2249295
F	129m NE	Cuttings	1865	2129533
F	152m NE	Railway Station	1898	2283343
F	152m NE	Railway Station	1896	2277702
F	152m NE	Railway Station	1894	2219369
F	157m NE	Railway Station	1894	2278392
Е	159m E	Smithy	1896	2181155
Е	160m E	Smithy	1898	2234481
Е	161m E	Smithy	1894	2237683
G	176m SE	Nursery	1865	2182811
Н	201m S	Nursery	1896 - 1935	2186232
Н	207m S	Nursery	1912	2183536
Н	207m S	Nursery	1938	2259428
Н	207m S	Nursery	1948	2262394
Н	207m S	Nursery	1894	2221930
F	210m NE	Cuttings	1938	2240168



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Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Land use	Dates present	Group ID
F	210m NE	Cuttings	1912	2269606
Н	211m S	Nursery	1894	2186233
Н	211m S	Nursery	1912 - 1938	2238392
G	214m SE	Nursery	1912	2186555
F	215m NE	Cuttings	1912 - 1933	2194851
F	216m NE	Cuttings	1935	2251724
G	219m SE	Nursery	1898 - 1912	2199893
F	219m NE	Cuttings	1948	2177184
3	224m SE	Nursery	1912	2201931
F	260m NE	Railway Building	1948	2148364
G	260m SE	Nursery	1894	2247642
G	268m SE	Nursery	1896	2175910
G	285m SE	Nursery	1933	2181905
J	312m SW	Railway Sidings	1933	2172710
J	381m SW	Railway Sidings	1991	2269743
J	398m SW	Railway Sidings	1894	2233041
K	399m SW	Railway Sidings	1912	2277753
K	401m SW	Railway Sidings	1912	2261690
K	401m SW	Railway Sidings	1912	2221623
M	407m SW	Hospital	1948	2185396
M	407m SW	Hospital	1935	2270098
M	408m SW	Hospital	1966 - 1991	2197377
M	410m SW	Hospital	1938	2292816
M	410m SW	Hospital	1894 - 1896	2193405
K	412m SW	Railway Sidings	1896	2197463
J	414m SW	Railway Sidings	1894	2227216
K	415m SW	Railway Sidings	1898	2204455
M	415m SW	Hospital	1912	2287414



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Land use	Dates present	Group ID
M	417m SW	Hospital	1898	2180958
K	422m SW	Railway Building	1933	2193421
K	424m SW	Railway Building	1948 - 1966	2181810
K	425m SW	Railway Building	1938	2173298
K	425m SW	Railway Building	1912	2287779
K	427m SW	Railway Building	1935	2266340
K	428m SW	Railway Building	1973	2285490
0	432m S	Unspecified Heap	1894 - 1896	2253009
0	436m SE	Unspecified Heap	1894	2257767
0	438m S	Unspecified Heap	1898	2261728
M	466m SW	Hospital	1933	2280668
M	469m SW	Hospital	1938	2175309
M	469m SW	Hospital	1912	2193939
M	477m SW	Hospital	1894	2284044
10	480m SE	Unspecified Ground Workings	1896	2133348
J	492m SW	Railway Sidings	1896	2238847
J	496m SW	Railway Sidings	1898	2169629

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m 5

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

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

ID	Location	Land use	Dates present	Group ID
В	On site	Unspecified Tank	1960 - 1973	400968



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Land use	Dates present	Group ID
В	On site	Unspecified Tank	1959	406199
7	372m N	Unspecified Tank	1915	363145
N	427m SE	Unspecified Tank	1915 - 1935	401925
11	494m E	Unspecified Tank	1865	363162

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m 12

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

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

ID	Location	Land use	Dates present	Group ID
В	1m W	Electricity Substation	1986	242974
В	37m SW	Electricity Substation	1973	242973
2	172m W	Electricity Substation	1973	242972
Е	188m E	Electricity Substation	1986	242975
Е	189m E	Electricity Substation	1973	242977
4	250m N	Electricity Substation	1973 - 1986	267735
6	336m NE	Electricity Substation	1973 - 1986	280497
8	388m S	Electricity Substation	1979 - 1992	284155
9	396m NW	Electricity Substation	1973	242913
Ν	427m SE	Electricity Substation	1979 - 1992	261921
Р	462m E	Electricity Substation	1980 - 1989	289329
Р	463m E	Electricity Substation	1991	291975

This data is sourced from Ordnance Survey / Groundsure.





1.4 Historical petrol stations

Records within 500m 0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m 7

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

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

ID	Location	Land use	Dates present	Group ID
5	276m NW	Garage	1973	73233
I	277m E	Garage	1960 - 1986	81111
I	278m E	Garage	1973	76318
I	278m E	Garage	1959	74423
L	405m S	Garage	1959 - 1979	81606
L	405m S	Garage	1959 - 1967	83300
L	407m S	Garage	1992	75694

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



2.1 Historical industrial land uses

Records within 500m 98

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 ungrouped 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 20

ID	Location	Land Use	Date	Group ID
1	On site	Railway Sidings	1933	2280226
Α	On site	Poultry Appliance Works	1912	2248007
Α	On site	Poultry Appliance Works	1912	2267571





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

A O C O	On site On site On site On site	Poultry Appliance Works Poultry Appliance Works Railway Sidings Railway Sidings	1912 1933 1973	2267571 2248007 2172363
c o	On site On site On site	Railway Sidings Railway Sidings	1973	
СО	on site	Railway Sidings		2172363
	n site		1000	
СО			1966	2172363
		Railway Sidings	1948	2172363
D O	n site	Railway Sidings	1938	2193026
C 6r	m SE	Railway Sidings	1938	2181622
D 6r	m SE	Railway Sidings	1935	2246469
E 95	5m E	Smithy	1894	2211597
F 13	15m NE	Railway Station	1912	2251883
F 11	18m NE	Railway Station	1935	2250096
F 11	18m NE	Railway Station	1912	2251883
F 11	19m NE	Railway Station	1938	2210222
F 12	20m NE	Railway Station	1991	2270396
F 12	20m NE	Railway Station	1973	2270396
F 12	20m NE	Railway Station	1966	2270396
F 12	20m NE	Railway Station	1948	2270396
F 12	21m NE	Railway Station	1938	2214117
F 12	21m NE	Railway Station	1912	2249295
F 12	22m NE	Railway Station	1933	2251883
F 12	29m NE	Cuttings	1865	2129533
F 15	52m NE	Railway Station	1898	2283343
F 15	52m NE	Railway Station	1896	2277702
F 15	52m NE	Railway Station	1894	2219369
F 15	57m NE	Railway Station	1894	2278392
E 15	59m E	Smithy	1896	2181155
E 16	60m E	Smithy	1898	2234481
E 16	61m E	Smithy	1894	2237683



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Ref: GS-6850666 **Your ref**: P20-2043 **Grid ref**: 516644 174121

ID	Location	Land Use	Date	Group ID
G	176m SE	Nursery	1865	2182811
Н	201m S	Nursery	1933	2186232
Н	207m S	Nursery	1938	2259428
Н	207m S	Nursery	1912	2183536
Н	207m S	Nursery	1948	2262394
Н	207m S	Nursery	1896	2186232
Н	207m S	Nursery	1894	2221930
Н	208m S	Nursery	1935	2186232
F	210m NE	Cuttings	1938	2240168
F	210m NE	Cuttings	1912	2269606
Н	211m S	Nursery	1938	2238392
Н	211m S	Nursery	1912	2238392
Н	211m S	Nursery	1894	2186233
Н	213m S	Nursery	1912	2186232
Н	213m S	Nursery	1898	2186232
G	214m SE	Nursery	1912	2186555
F	215m NE	Cuttings	1912	2194851
F	216m NE	Cuttings	1935	2251724
G	219m SE	Nursery	1912	2199893
F	219m NE	Cuttings	1933	2194851
F	219m NE	Cuttings	1948	2177184
G	224m SE	Nursery	1912	2201931
F	260m NE	Railway Building	1948	2148364
G	260m SE	Nursery	1894	2247642
G	263m SE	Nursery	1894	2247642
G	263m SE	Nursery	1898	2199893
G	268m SE	Nursery	1896	2175910
G	285m SE	Nursery	1933	2181905





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Land Use	Date	Group ID
K	312m SW	Railway Sidings	1933	2172710
K	381m SW	Railway Sidings	1991	2269743
K	398m SW	Railway Sidings	1894	2233041
Ν	399m SW	Railway Sidings	1912	2277753
Ν	401m SW	Railway Sidings	1912	2261690
Ν	401m SW	Railway Sidings	1912	2221623
Р	407m SW	Hospital	1948	2185396
Р	407m SW	Hospital	1935	2270098
Р	408m SW	Hospital	1991	2197377
Р	408m SW	Hospital	1973	2197377
Р	410m SW	Hospital	1938	2292816
Р	410m SW	Hospital	1894	2193405
Р	411m SW	Hospital	1966	2197377
Р	411m SW	Hospital	1896	2193405
Ν	412m SW	Railway Sidings	1896	2197463
K	414m SW	Railway Sidings	1894	2227216
N	415m SW	Railway Sidings	1898	2204455
Р	415m SW	Hospital	1912	2287414
Р	417m SW	Hospital	1898	2180958
Ν	422m SW	Railway Building	1933	2193421
N	424m SW	Railway Building	1966	2181810
Ν	424m SW	Railway Building	1948	2181810
Ν	425m SW	Railway Building	1938	2173298
Ν	425m SW	Railway Building	1912	2287779
Ν	427m SW	Railway Building	1935	2266340
Ν	428m SW	Railway Building	1973	2285490
Ν	431m SW	Railway Building	1912	2287779
R	432m S	Unspecified Heap	1894	2253009



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Land Use	Date	Group ID
R	432m SE	Unspecified Heap	1896	2253009
R	436m SE	Unspecified Heap	1894	2257767
R	438m S	Unspecified Heap	1898	2261728
Р	466m SW	Hospital	1933	2280668
Р	469m SW	Hospital	1938	2175309
Р	469m SW	Hospital	1912	2193939
Р	474m SW	Hospital	1912	2193939
Р	477m SW	Hospital	1894	2284044
6	480m SE	Unspecified Ground Workings	1896	2133348
K	492m SW	Railway Sidings	1896	2238847
Κ	496m SW	Railway Sidings	1898	2169629

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m 7

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 20

ID	Location	Land Use	Date	Group ID
В	On site	Unspecified Tank	1959	406199
В	On site	Unspecified Tank	1960	400968
В	On site	Unspecified Tank	1973	400968
4	372m N	Unspecified Tank	1915	363145
Q	427m SE	Unspecified Tank	1915	401925
Q	427m SE	Unspecified Tank	1935	401925
7	494m E	Unspecified Tank	1865	363162

This data is sourced from Ordnance Survey / Groundsure.





2.3 Historical energy features

Records within 500m 19

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 20

ID	Location	Land Use	Date	Group ID
В	1m W	Electricity Substation	1986	242974
В	37m SW	Electricity Substation	1973	242973
2	172m W	Electricity Substation	1973	242972
Е	188m E	Electricity Substation	1986	242975
Е	189m E	Electricity Substation	1973	242977
I	250m N	Electricity Substation	1986	267735
I	250m N	Electricity Substation	1986	267735
I	251m N	Electricity Substation	1973	267735
L	336m NE	Electricity Substation	1986	280497
L	336m NE	Electricity Substation	1986	280497
L	337m NE	Electricity Substation	1973	280497
M	388m S	Electricity Substation	1979	284155
M	389m S	Electricity Substation	1992	284155
5	396m NW	Electricity Substation	1973	242913
Q	427m SE	Electricity Substation	1979	261921
Q	428m SE	Electricity Substation	1992	261921
S	462m E	Electricity Substation	1980	289329
S	462m E	Electricity Substation	1989	289329
S	463m E	Electricity Substation	1991	291975

This data is sourced from Ordnance Survey / Groundsure.





0

2.4 Historical petrol stations

Records within 500m

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 12

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'.

Features are displayed on the Past land use - un-grouped map on page 20

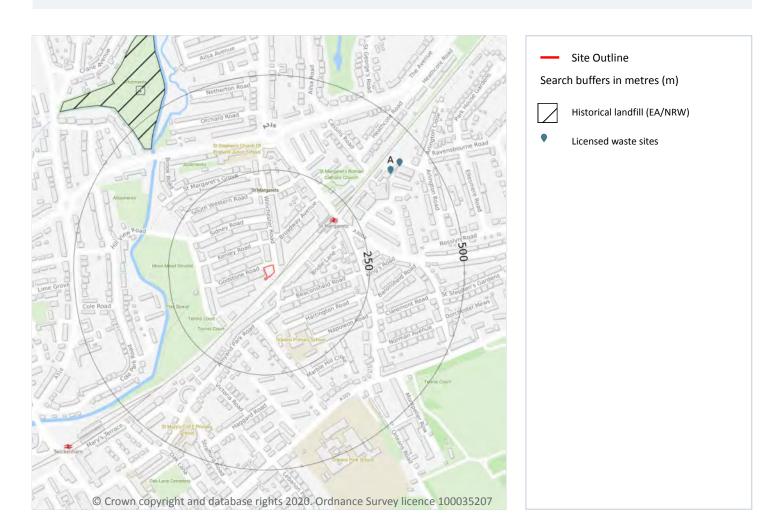
ID	Location	Land Use	Date	Group ID
3	276m NW	Garage	1973	73233
J	277m E	Garage	1986	81111
J	277m E	Garage	1986	81111
J	278m E	Garage	1973	76318
J	278m E	Garage	1959	74423
J	278m E	Garage	1960	81111
0	405m S	Garage	1959	81606
0	405m S	Garage	1959	81606
0	405m S	Garage	1979	81606
0	405m S	Garage	1959	83300
0	405m S	Garage	1967	83300
0	407m S	Garage	1992	75694

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.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

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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

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

Features are displayed on the Waste and landfill map on page 27

ID	Location	Details		
1	430m NW	Site Address: Crane Avenue Allotments, St. Maragrets, Isleworth, Hounslow, London Licence Holder Address: -	Waste Licence: - Site Reference: 8HO085 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded 31/12/1949 Last Recorded: 31/12/1961

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 2

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

Features are displayed on the Waste and landfill map on page 27





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Details		
A	397m NE	Site Name: Arlington Works Site Address: Sharpe Refinery Service (Hydocarbons) Lt, Arlington Works, Arlington Road, Twickenham, Middlesex, TW1 2BB Correspondence Address: -	Type of Site: Special Waste Transfer Station Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA002 EPR reference: EA/EPR/BP3590EU/V003 Operator: Sharpe Refinery Service (Hydro Carbons) Ltd Waste Management licence No: 83207 Annual Tonnage: 60667	Issue Date: 28/02/1995 Effective Date: - Modified:: 04/02/1999 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC
A	428m NE	Site Name: Sharpes, Refinery, Twickenham, Tw1 Site Address: Sharpe Refinery Service (Hydocarbons) Lt, Arlington Works, 21, Arlington Road, Twickenham, Middx, TW1 2BB Correspondence Address: Sharpe Refinery Service (Hydocarbons) Lt, Arlington Works, 21, Arlington Road, Twickenham, Middx, TW1 2BB	Type of Site: Special Waste Transfer Station Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA002 EPR reference: - Operator: Sharpe Refinery Service (Hydocarbons) Ltd Waste Management licence No: 83207 Annual Tonnage: 60667	Issue Date: 28/02/1995 Effective Date: - Modified:: 04/02/1999 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified

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

3.7 Waste exemptions

Records within 500m 0

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.

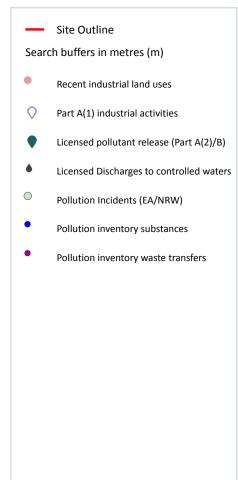
This data is sourced from the Environment Agency and Natural Resources Wales.





4 Current industrial land use





4.1 Recent industrial land uses

Records within 250m 17

Current potentially contaminative industrial sites.

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

ID	Location	Company	Address	Activity	Category
Α	2m W	Electricity Sub Station	Greater London, TW1	Electrical Features	Infrastructure and Facilities
А	44m SW	Powerhouse Design & Engineering	6, Drummond Place, Twickenham, Greater London, TW1 1JN	General Construction Supplies	Industrial Products





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Company	Address	Activity	Category
Α	61m SW	Rheological Ltd	Unit 5 Drummond Place, Twickenham, Greater London, TW1 1JN	Pumps and Compressors	Industrial Products
Α	110m SW	Rowheath	2, Drummond Place, Twickenham, Greater London, TW1 1JN	Textiles, Fabrics, Silk and Machinery	Industrial Products
Α	112m SW	Tacklebag Ltd	2, Drummond Place, Twickenham, Greater London, TW1 1JN	Clothing, Components and Accessories	Consumer Products
A	117m SW	St Margarets Business Centre	Greater London, TW1	Business Parks and Industrial Estates	Industrial Features
Α	126m SW	UK Coffee Ltd	Moor Mead Road, Twickenham, Greater London, TW1 1JS	Food and Beverage Industry Machinery	Industrial Products
2	174m W	Electricity Sub Station	Greater London, TW1	Electrical Features	Infrastructure and Facilities
3	177m S	Victor Kee Piano Tuning & Repairs	126, Amyand Park Road, Twickenham, Greater London, TW1 3HP	Sports and Leisure Equipment Repair	Repair and Servicing
4	191m E	Electricity Sub Station	Greater London, TW1	Electrical Features	Infrastructure and Facilities
В	194m NE	Memories	133, St Margarets Road, Twickenham, Greater London, TW1 1RG	Giftware	Consumer Products
В	198m NE	St Margarets (London) Rail Station	Greater London, TW1	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure
С	199m SE	Mobile Ultrasound Imaging	33, Napoleon Road, Twickenham, Greater London, TW1 3EW	Medical Equipment, Supplies and Pharmaceuticals	Industrial Products
D	209m N	Appleton Company Services Ltd	4 The Mews, Bridge Road, Twickenham, Greater London, TW1 1RF	Business Parks and Industrial Estates	Industrial Features
5	214m E	Nigel Hare Joinery	32a, Crown Road, Twickenham, Greater London, TW1 3EE	Curtains and Blinds	Consumer Products
С	219m SE	Offshore Engineering Ltd	40, Napoleon Road, Twickenham, Greater London, TW1 3EP	Civil Engineers	Engineering Services
С	236m SE	Electricity Sub Station	Greater London, TW1	Electrical Features	Infrastructure and Facilities



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

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

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.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

0

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

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 8

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

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

ID	Location	Details	
F	399m NE	Operator: SHARPE REFINERY SERVICE (HYDRO CARBONS) LIMITED Installation Name: ARLINGTON OIL FACILITY EPR/JP3332ME Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: SP3400BK Original Permit Number: SP3400BK	EPR Reference: - Issue Date: 21/11/2019 Effective Date: 21/11/2019 Last date noted as effective: 15/05/2020 Status: TRANSFER EFFECTIVE





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Details	
F	399m NE	Operator: SHARPE'S RECYCLE OIL LIMITED Installation Name: ARLINGTON OIL FACILITY EPR/JP3332ME Process: TEMPORARY STORAGE OF HAZ WASTE NOT UNDER S 5.2 PENDING ACTIVITIES LISTED IN S 5.1, 5.2, 5.3 AND PARAGRAPH (B) OF THIS SECTION WITH A TOTAL CAPACITY > 50 TONNES, EXCL TEMP STORAGE WHERE GENERATED Permit Number: ZP3535VS Original Permit Number: JP3332ME	EPR Reference: - Issue Date: 13/03/2014 Effective Date: 13/03/2014 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
F	399m NE	Operator: SHARPES RECYCLE OIL LIMITED Installation Name: ARLINGTON OIL FACILITY EPR/JP3332ME Process: OTHER WASTE DISPOSAL; WASTE OILS >10 T/D Permit Number: JP3332ME Original Permit Number: JP3332ME	EPR Reference: - Issue Date: 18/10/2007 Effective Date: 18/10/2007 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
F	399m NE	Operator: SHARPE REFINERY SERVICE (HYDRO CARBONS) LIMITED Installation Name: ARLINGTON OIL FACILITY EPR/JP3332ME Process: ASSOCIATED PROCESS Permit Number: SP3400BK Original Permit Number: SP3400BK	EPR Reference: - Issue Date: 21/11/2019 Effective Date: 21/11/2019 Last date noted as effective: 15/05/2020 Status: TRANSFER EFFECTIVE
F	399m NE	Operator: SHARPE REFINERY SERVICE (HYDRO CARBONS) LIMITED Installation Name: ARLINGTON OIL FACILITY EPR/JP3332ME Process: TEMPORARY STORAGE OF HAZ WASTE NOT UNDER S 5.2 PENDING ACTIVITIES LISTED IN S 5.1, 5.2, 5.3 AND PARAGRAPH (B) OF THIS SECTION WITH A TOTAL CAPACITY > 50 TONNES, EXCL TEMP STORAGE WHERE GENERATED Permit Number: SP3400BK Original Permit Number: SP3400BK	EPR Reference: - Issue Date: 21/11/2019 Effective Date: 21/11/2019 Last date noted as effective: 15/05/2020 Status: TRANSFER EFFECTIVE
F	399m NE	Operator: SHARPE'S RECYCLE OIL LIMITED Installation Name: ARLINGTON OIL FACILITY EPR/JP3332ME Process: ASSOCIATED PROCESS Permit Number: ZP3535VS Original Permit Number: JP3332ME	EPR Reference: - Issue Date: 13/03/2014 Effective Date: 13/03/2014 Last date noted as effective: 15/05/2020 Status: SUPERCEDED



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Details	
F	399m NE	Operator: SHARPE'S RECYCLE OIL LIMITED Installation Name: ARLINGTON OIL FACILITY EPR/JP3332ME Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: ZP3535VS Original Permit Number: JP3332ME	EPR Reference: - Issue Date: 13/03/2014 Effective Date: 13/03/2014 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
F	399m NE	Operator: SHARPES RECYCLE OIL LIMITED Installation Name: ARLINGTON OIL FACILITY EPR/JP3332ME Process: ASSOCIATED PROCESS Permit Number: JP3332ME Original Permit Number: JP3332ME	EPR Reference: - Issue Date: 18/10/2007 Effective Date: 18/10/2007 Last date noted as effective: 15/05/2020 Status: SUPERCEDED

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

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

Records within 500m 2

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

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

ID	Location	Address	Details	
6	236m N	Kingwell Whitby & Mill, 31 Winchester Road, Twickenham, Middlesex, TW1 1LE	Process: Waste Oil Burner 0.4 MW Status: Revoked Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
D	248m N	Tip Top Dry Cleaners, 159 St Margarets Road, Twickenham, TW1 1RD	Process: Dry Cleaning Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

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.



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Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

4.13 Licensed Discharges to controlled waters

Records within 500m 2

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 30

ID	Location	Address	Details	
Е	237m SW	Anyand Park Road, Twickenham, Anyand Park Road, Twickenham	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TEMP.2369 Permit Version: 1 Receiving Water: TIDAL THAMES	Status: TEMPORARY CONSENTS (WATER ACT 1989, SECTION 113) Issue date: 02/11/1989 Effective Date: 02/11/1989 Revocation Date: 02/09/2010
Е	237m SW	Anyand Park Road, Twickenham, Anyand Park Road, Twickenham	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TEMP.2369 Permit Version: 2 Receiving Water: Tidal Thames	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: -

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.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

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 3

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

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

ID	Location	Details	
1	167m SE	Incident Date: 14/01/2003 Incident Identification: 130889 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	370m NE	Incident Date: 06/07/2001 Incident Identification: 16981 Pollutant: Organic Chemicals/Products Pollutant Description: Hydrocarbons	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
7	445m NE	Incident Date: 27/05/2002 Incident Identification: 81738 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

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



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

4.19 Pollution inventory substances

Records within 500m

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.

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

ID: F, Location: 400m NE, Permit: JP3332ME

Operator: Sharpe's Recycle Oil Limited

Activity: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER

DAY INVOLVING PHYSICO-CHEMICAL TREATMENT

Address: Arlington Oil Reclamation Facility Arlington Road Twickenham Middlesex TW1 2BB

Sector Waste Treatment, Sub-sector: Hazardous

Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Carbon monoxide	100000kg	Below Reporting Threshold
Air	Nitrogen oxides (NO and NO2) as NO2	100000kg	Below Reporting Threshold
Wastewater	Arsenic	5kg	Below Reporting Threshold
Wastewater	Cadmium	1kg	Below Reporting Threshold
Wastewater	Chromium	20kg	Below Reporting Threshold
Wastewater	Copper	20kg	Below Reporting Threshold
Wastewater	Lead	20kg	Below Reporting Threshold
Air	Non-methane volatile organic compounds (NMVOCs)	10000kg	Below Reporting Threshold
Air	Particulate matter - PM10	1000kg	Below Reporting Threshold
Wastewater	Naphthalene	1kg	Below Reporting Threshold
Wastewater	Toluene	10kg	Below Reporting Threshold
Wastewater	Xylene - all isomers	10kg	Below Reporting Threshold
Wastewater	Nickel	20kg	Below Reporting Threshold
Wastewater	Zinc	100kg	Below Reporting Threshold
Air	Sulphur oxides (SO2 and SO3) as SO2	100000kg	Below Reporting Threshold
Air	Carbon dioxide	10000000kg	Below Reporting Threshold





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID: F, Location: 400m NE, Permit: JP3332ME

Operator: Sharpe's Recycle Oil Limited

Activity: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER

DAY INVOLVING PHYSICO-CHEMICAL TREATMENT

Address: Arlington Oil Reclamation Facility Arlington Road Twickenham Middlesex TW1 2BB

Sector Waste Treatment, Sub-sector: Hazardous

Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Benzene	1000kg	1524.767kg

ID: F, Location: 400m NE, Permit: JP3332ME

Operator: Sharpe's Recycle Oil Limited

Activity: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER

DAY INVOLVING PHYSICO-CHEMICAL TREATMENT

Address: Arlington Oil Reclamation Facility Arlington Road Twickenham Middlesex TW1 2BB

Sector Waste Treatment, Sub-sector: Hazardous

Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Wastewater	Benzene	10kg	222.9kg

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

4.20 Pollution inventory waste transfers

Records within 500m 1

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.

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

ID: F, Location: 400m NE, Permit: JP3332ME

Operator: Sharpe's Recycle Oil Limited

Activity: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER

DAY INVOLVING PHYSICO-CHEMICAL TREATMENT

Address: Arlington Oil Reclamation Facility Arlington Road Twickenham Middlesex TW1 2BB

Sector Waste Treatment, Sub-sector: Hazardous

Releases:





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	17.2	Absolute Value	16 07 08	wastes containing oil	Yes
R4	Recycling/reclamation of metals and metal compounds	0.38	Absolute Value	15 01 10	packaging containing residues of or contaminated by dangerous substances	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	186.3	Absolute Value	13 08 99	wastes not otherwise specified	Yes
R9	Oil e-refining or other reuses of oil	1382.76	Absolute Value	13 02 05	mineral-based non- chlorinated engine, gear and lubricating oils	Yes
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	24.7	Absolute Value	13 01 10	mineral based non- chlorinated hydraulic oils	Yes
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	456.53	Absolute Value	19 02 07	oil and concentrates from separation	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numberes D1 to D12 (eg evaporation, drying, calcination, etc.)	32.78	Absolute Value	19 02 05	sludges from physico/chemical treatment containing dangerous substances	Yes
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	72.22	Absolute Value	13 02 05	mineral-based non- chlorinated engine, gear and lubricating oils	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	56.26	Absolute Value	19 02 05	sludges from physico/chemical treatment containing dangerous substances	Yes





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	3.34	Absolute Value	13 05 02	sludges from oil/water separators	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	3.47	Absolute Value	15 01 10	packaging containing residues of or contaminated by dangerous substances	Yes

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.

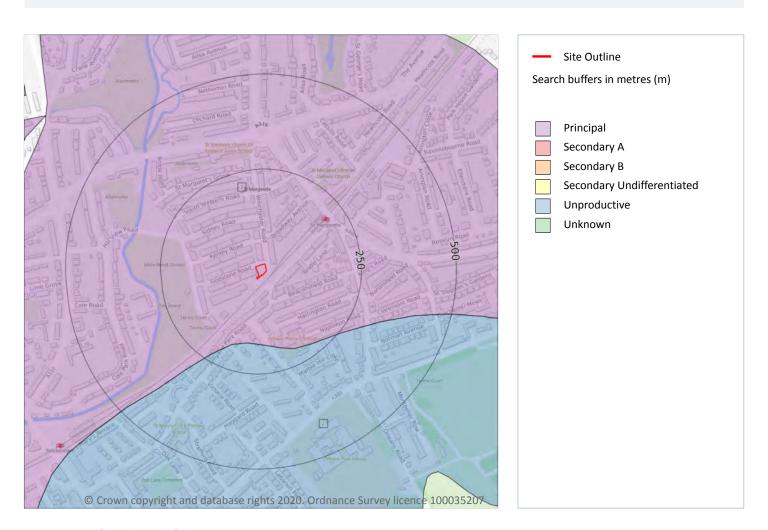
This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



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5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m 2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on page 42

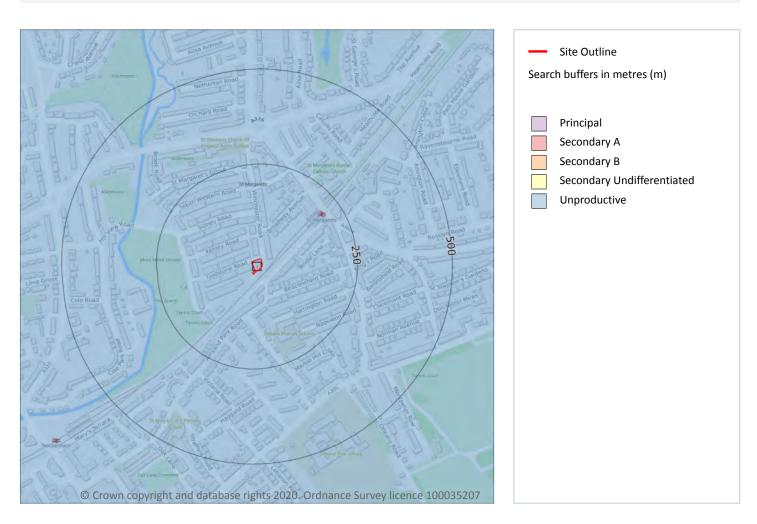
	ID	Location	Designation	Description
1		On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
	2	170m S	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

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on page 43

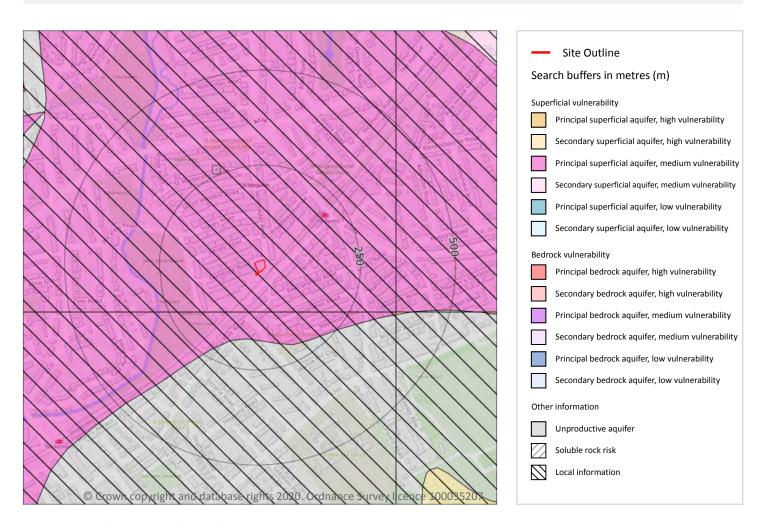
ID	Location	Designation	Description
1	On site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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





Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m 1

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 44



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	On site	Summary Classification: Principal superficial aquifer - Medium Vulnerability Combined classification: Unproductive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: Medium Aquifer type: Principal Thickness: 3-10m Patchiness value: >90% Recharge potential: High	Vulnerability: Unproductive Aquifer type: Unproductive Flow mechanism: Mixed

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 0

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

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

5.5 Groundwater vulnerability- local information

Records on site 1

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.

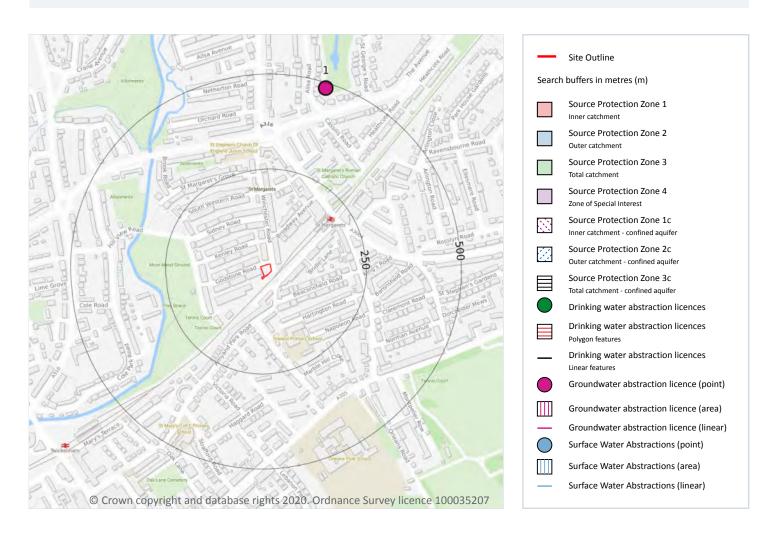
ID	Summary	Additional information
Α	Highly vulnerable Principal superficial aquifer present in river terrace gravels	Principal superficial aquifer in river terrace gravels with only a thin cover of low permeability silts and/or alluvium (shown as unproductive)

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





Abstractions and Source Protection Zones



5.6 Groundwater abstractions

Records within 2000m 15

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

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





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Details	
1	486m N	Status: Historical Licence No: 28/39/34/0006 Details: Lake & Pond Throughflow Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT ST. MARGARET'S LAKE, TWICKENHAM Data Type: Point Name: ST MARGARETS RES GROUNDS Easting: 516800 Northing: 174600	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 08/10/1982 Expiry Date: - Issue No: 100 Version Start Date: 08/10/1982 Version End Date: -
-	822m E	Status: Historical Licence No: TH/039/0034/003 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: RIVER GRAVELS AT TWICKENHAM - POINT A Data Type: Point Name: Kier Construction Limited Easting: 517448 Northing: 174350	Annual Volume (m³): 18144 Max Daily Volume (m³): 432 Original Application No: - Original Start Date: 23/04/2018 Expiry Date: 31/12/2018 Issue No: 1 Version Start Date: 23/04/2018 Version End Date: -
-	844m E	Status: Historical Licence No: TH/039/0034/003 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: RIVER GRAVELS AT TWICKENHAM - POINT D Data Type: Point Name: Kier Construction Limited Easting: 517480 Northing: 174308	Annual Volume (m³): 18144 Max Daily Volume (m³): 432 Original Application No: - Original Start Date: 23/04/2018 Expiry Date: 31/12/2018 Issue No: 1 Version Start Date: 23/04/2018 Version End Date: -
-	872m E	Status: Historical Licence No: TH/039/0034/003 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: RIVER GRAVELS AT TWICKENHAM - POINT B Data Type: Point Name: Kier Construction Limited Easting: 517490 Northing: 174383	Annual Volume (m³): 18144 Max Daily Volume (m³): 432 Original Application No: - Original Start Date: 23/04/2018 Expiry Date: 31/12/2018 Issue No: 1 Version Start Date: 23/04/2018 Version End Date: -





Ref: GS-6850666 **Your ref**: P20-2043 **Grid ref**: 516644 174121

ID	Location	Details	
-	892m E	Status: Historical Licence No: TH/039/0034/003 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: RIVER GRAVELS AT TWICKENHAM - POINT C Data Type: Point Name: Kier Construction Limited Easting: 517521 Northing: 174347	Annual Volume (m³): 18144 Max Daily Volume (m³): 432 Original Application No: - Original Start Date: 23/04/2018 Expiry Date: 31/12/2018 Issue No: 1 Version Start Date: 23/04/2018 Version End Date: -
-	1211m E	Status: Historical Licence No: 28/39/34/0008 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT THE EXILES GROUND, TWICKENHAM Data Type: Point Name: D.G.TILLES & R.H.TILLES Easting: 517840 Northing: 173860	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 15/10/1996 Expiry Date: 31-Dec-06 Issue No: 102 Version Start Date: 14/09/2001 Version End Date: -
-	1211m E	Status: Historical Licence No: 28/39/34/0008 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: THE EXILES GROUND, TWICKENHAM- BOREHOLE A Data Type: Point Name: D G TILLES & R H TILLES Easting: 517840 Northing: 173860	Annual Volume (m³): 5300 Max Daily Volume (m³): 56 Original Application No: - Original Start Date: 15/10/1996 Expiry Date: 31/12/2006 Issue No: 103 Version Start Date: 24/04/2003 Version End Date: -
-	1631m SE	Status: Historical Licence No: 28/39/35/0004 Details: Spray Irrigation - Spray Irrigation Definition Order Direct Source: THAMES GROUNDWATER Point: GRAVELS AT 143 PETERSHAM ROAD, RICHMOND, SURREY Data Type: Point Name: PETERSHAM NURSERIES LIMITED Easting: 518080 Northing: 173320	Annual Volume (m³): 2500 Max Daily Volume (m³): 27.28 Original Application No: - Original Start Date: 09/07/1973 Expiry Date: - Issue No: 101 Version Start Date: 11/11/2001 Version End Date: -





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Details	
-	1631m SE	Status: Active Licence No: 28/39/35/0004 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: GRAVELS AT 143 PETERSHAM ROAD, RICHMOND, SURREY Data Type: Point Name: PETERSHAM NURSERIES LIMITED Easting: 518080 Northing: 173320	Annual Volume (m³): 2,500 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: 09/07/1973 Expiry Date: - Issue No: 102 Version Start Date: 15/05/2008 Version End Date: -
-	1659m SE	Status: Historical Licence No: 28/39/35/0004 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: GRAVELS AT 143 PETERSHAM ROAD, RICHMOND, SURREY Data Type: Point Name: PETERSHAM NURSERIES LIMITED Easting: 518100 Northing: 173300	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/07/1973 Expiry Date: - Issue No: 100 Version Start Date: 09/07/1973 Version End Date: -
-	1659m SE	Status: Historical Licence No: 28/39/35/0004 Details: Spray Irrigation - Spray Irrigation Definition Order Direct Source: THAMES GROUNDWATER Point: GRAVELS AT 143 PETERSHAM ROAD, RICHMOND, SURREY Data Type: Point Name: PETERSHAM NURSERIES LIMITED Easting: 518100 Northing: 173300	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/07/1973 Expiry Date: - Issue No: 100 Version Start Date: 09/07/1973 Version End Date: -
-	1755m NE	Status: Historical Licence No: 28/39/35/0006 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: GRAVEL AT ROYAL MID SURREY GOLF CLUB, RICHMOND Data Type: Line Name: ROYAL MID SURREY GOLF CLUB Easting: 517460 Northing: 175750	Annual Volume (m³): 43000 Max Daily Volume (m³): 480 Original Application No: - Original Start Date: 28/03/1996 Expiry Date: - Issue No: 100 Version Start Date: 28/03/1996 Version End Date: -



08444 159 000



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Details	
-	1755m NE	Status: Active Licence No: 28/39/35/0006 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: BOREHOLE B GRAVEL AT ROYAL MID SURREY GOLF CLUB, RICHMOND Data Type: Point Name: ROYAL MID SURREY GOLF CLUB Easting: 517450 Northing: 175700	Annual Volume (m³): 43,000 Max Daily Volume (m³): 480 Original Application No: - Original Start Date: 28/03/1996 Expiry Date: - Issue No: 100 Version Start Date: 28/03/1996 Version End Date: -
-	1804m NE	Status: Active Licence No: 28/39/35/0006 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: BOREHOLE A GRAVEL AT ROYAL MID SURREY GOLF CLUB, RICHMOND Data Type: Point Name: ROYAL MID SURREY GOLF CLUB Easting: 517460 Northing: 175750	Annual Volume (m³): 43,000 Max Daily Volume (m³): 480 Original Application No: - Original Start Date: 28/03/1996 Expiry Date: - Issue No: 100 Version Start Date: 28/03/1996 Version End Date: -
-	1899m NE	Status: Active Licence No: 28/39/35/0009 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: GRAVEL AT RICHMOND ATHLETICS GROUND, KEW FOOT ROAD, RICHMOND Data Type: Point Name: RICHMOND ATHLETICS ASSOC LTD Easting: 517800 Northing: 175650	Annual Volume (m³): 15,911 Max Daily Volume (m³): 75 Original Application No: - Original Start Date: 25/03/1992 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m 6

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

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

08444 159 000





Ref: GS-6850666 **Your ref**: P20-2043 **Grid ref**: 516644 174121

ID	Location	Details	
-	1420m NW	Status: Historical Licence No: 28/39/37/0007 Details: Non-Evaporative Cooling Direct Source: THAMES SURFACE WATER - NON TIDAL Point: MOGDEN SEWAGE TREATMENT WORKS, ISLEWORTH Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515410 Northing: 174860	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: 31/08/2009 Issue No: 1 Version Start Date: 17/08/1999 Version End Date: -
-	1420m NW	Status: Historical Licence No: 28/39/37/0007 Details: Non-Evaporative Cooling Direct Source: THAMES SURFACE WATER - NON TIDAL Point: D.OF NORTHUMBERLAND- MOGDEN SEWAGE TREATMENT WRKS, ISLEWORTH Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515410 Northing: 174860	Annual Volume (m³): - Max Daily Volume (m³): 7200 Original Application No: - Original Start Date: 17/08/1999 Expiry Date: 31/08/2009 Issue No: 1 Version Start Date: 17/08/1999 Version End Date: -
-	1420m NW	Status: Historical Licence No: 28/39/37/0007 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: D.OF NORTHUMBERLAND- MOGDEN SEWAGE TREATMENT WRKS, ISLEWORTH Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515410 Northing: 174860	Annual Volume (m³): - Max Daily Volume (m³): 7200 Original Application No: - Original Start Date: 17/08/1999 Expiry Date: 31/08/2009 Issue No: 1 Version Start Date: 01/01/2007 Version End Date: -
-	1423m NW	Status: Historical Licence No: TH/039/0037/001 Details: Non-Evaporative Cooling Direct Source: THAMES SURFACE WATER - NON TIDAL Point: DUKE OF NORTHUMBERLAND RIVER - MOGDEN SEWAGE TREATMENT WORKS Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515406 Northing: 174858	Annual Volume (m³): 1,752,000 Max Daily Volume (m³): 7200 Original Application No: - Original Start Date: 12/08/2009 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 12/08/2009 Version End Date: -



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID	Location	Details	
-	1423m NW	Status: Historical Licence No: TH/039/0037/001 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: DUKE OF NORTHUMBERLAND RIVER - MOGDEN SEWAGE TREATMENT WORKS Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515406 Northing: 174858	Annual Volume (m³): 1,752,000 Max Daily Volume (m³): 7200 Original Application No: - Original Start Date: 12/08/2009 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 12/08/2009 Version End Date: -
-	1423m NW	Status: Active Licence No: TH/039/0037/004 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: DUKE OF NORTHUMBERLAND RIVER - MOGDEN SEWAGE TREATMENT WORKS Data Type: Point Name: Thames Water Utilities Ltd Easting: 515406 Northing: 174858	Annual Volume (m³): 1,752,000 Max Daily Volume (m³): 7,200 Original Application No: - 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.

5.8 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 0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

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



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

5.10 Source Protection Zones (confined aquifer)

Records within 500m 0

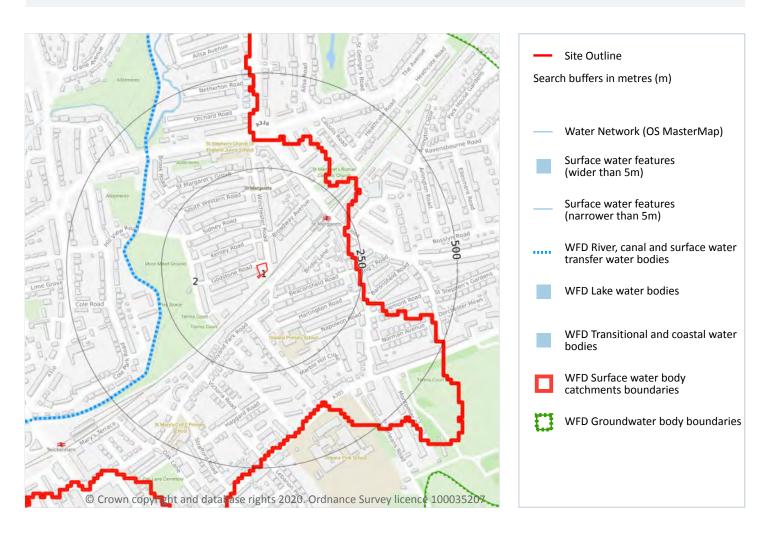
Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

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





6 Hydrology



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

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.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

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 54

ID	Location	Туре	Water body catchment	Water body ID	Operational catchment	Management catchment
2	On site	River WB catchment	Crane	GB106039023030	Crane Rivers and Lakes	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 54

ID	Location	Туре	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
6	267m W	River	Crane	GB106039023030	Poor	Good	Poor	2016

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



Ref: GS-6850666 Your ref: P20-2043 **Grid ref**: 516644 174121

1

6.5 WFD Groundwater bodies

Records on site

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 54

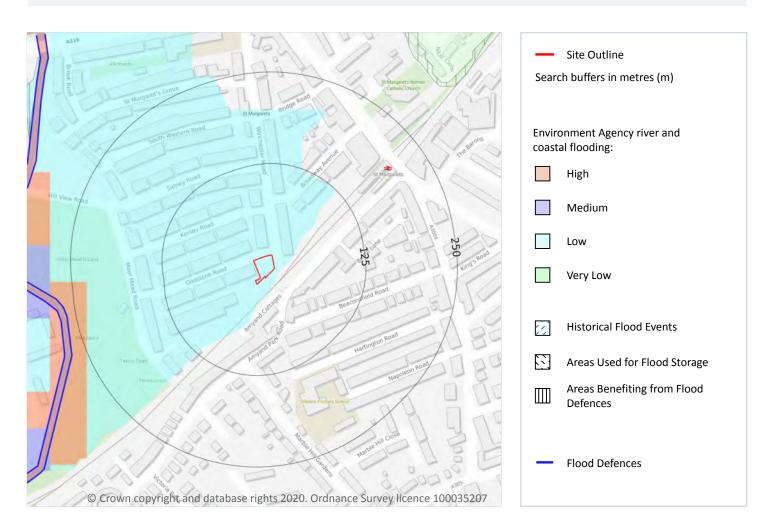
ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Lower Thames Gravels	GB40603G000300	Good	Good	Good	2015

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 Sea (RoFRaS)

Records within 50m

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; 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).

Features are displayed on the River and coastal flooding map on page 57

Distance	RoFRaS flood risk
On site	Low
0 - 50m	Low



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

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

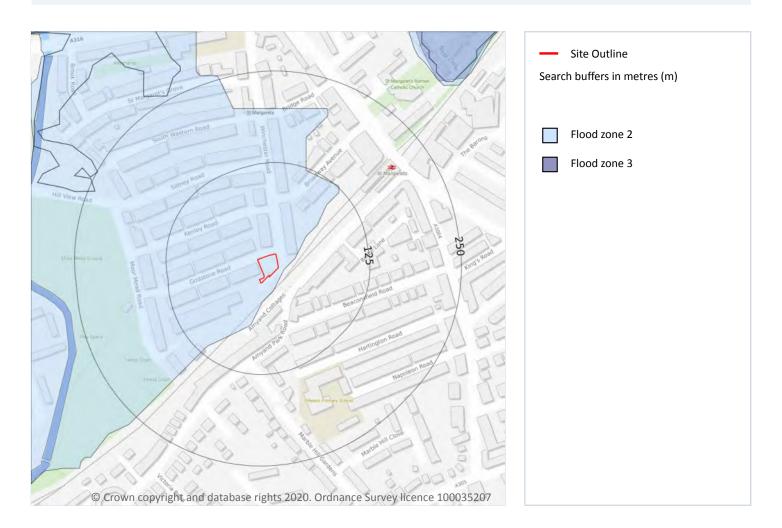
Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

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 1

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.

Features are displayed on the River and coastal flooding map on page 57

Location Type
On site Zone 2 - (Fluvial /Tidal Models)

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





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

7.7 Flood Zone 3

Records within 50m 0

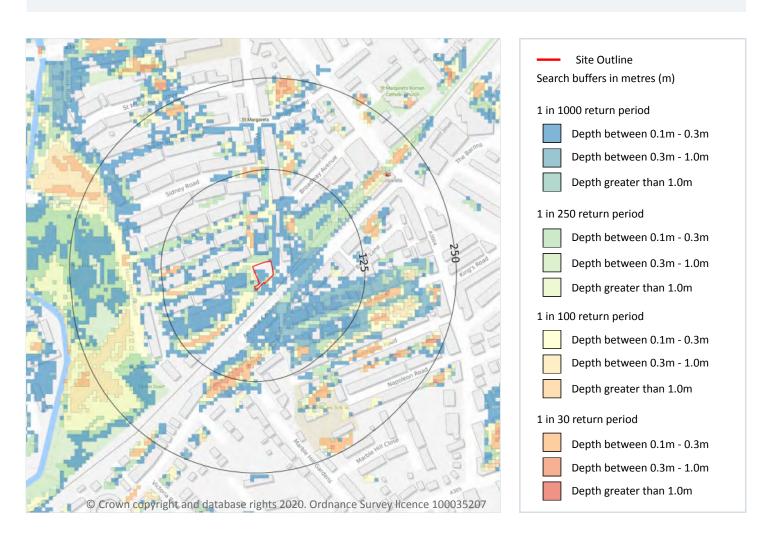
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

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





8 Surface water flooding



8.1 Surface water flooding

Highest risk on site 1 in 100 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.1m - 0.3m

Date: 7 July 2020

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 61

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.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

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

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.





9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Highest risk within 50m

High

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

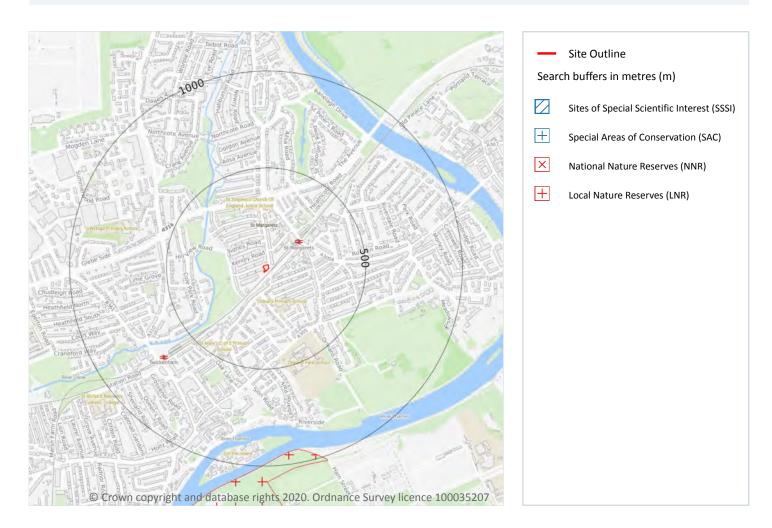
Features are displayed on the Groundwater flooding map on page 63

This data is sourced from Ambiental Risk Analytics.





10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m 1

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

Features are displayed on the Environmental designations map on page 64

ı	D	Location	Name	Data source
-		1776m SE	Richmond Park	Natural England



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m 0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m 1

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

Features are displayed on the Environmental designations map on page 64

ID	Location	Name	Features of interest	Habitat description	Data source
-	1776m SE	Richmond Park	Stag beetle.	Dry grassland, Steppes; Broad-leaved deciduous woodland; Inland water bodies (Standing water, Running water); Bogs, Marshes, Water fringed vegetation, Fens; Humid grassland, Mesophile grassland; Improved grassland; Heath, Scrub, Maquis and Garrigue, Phygrana; Mixed woodland	Natural England

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

10.4 Special Protection Areas (SPA)

Records within 2000m 0

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

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



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Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

10.5 National Nature Reserves (NNR)

Records within 2000m 1

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

Features are displayed on the Environmental designations map on page 64

ID	Location	Name	Data source
-	1776m SE	Richmond Park	Natural England

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

10.6 Local Nature Reserves (LNR)

Records within 2000m 3

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

Features are displayed on the Environmental designations map on page 64

ID	Location	Name	Data source
1	929m S	Ham Lands	Natural England
-	1309m N	Isleworth Ait	Natural England
-	1702m S	Ham Lands	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m 0

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

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



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10.8 Biosphere Reserves

Records within 2000m 0

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

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

10.9 Forest Parks

Records within 2000m 0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m 0

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

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

10.11 Green Belt

Records within 2000m 0

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

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

10.12 Proposed Ramsar sites

Records within 2000m 0

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

This data is sourced from Natural England.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m 0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m 0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m 0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m 1

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

Location	Name	Туре	NVZ ID	Status
1945m SE	Beverley Brook (Motspur Park to Thames) and Pyl Brook at West Barnes NVZ	Surface Water	S455	Existing







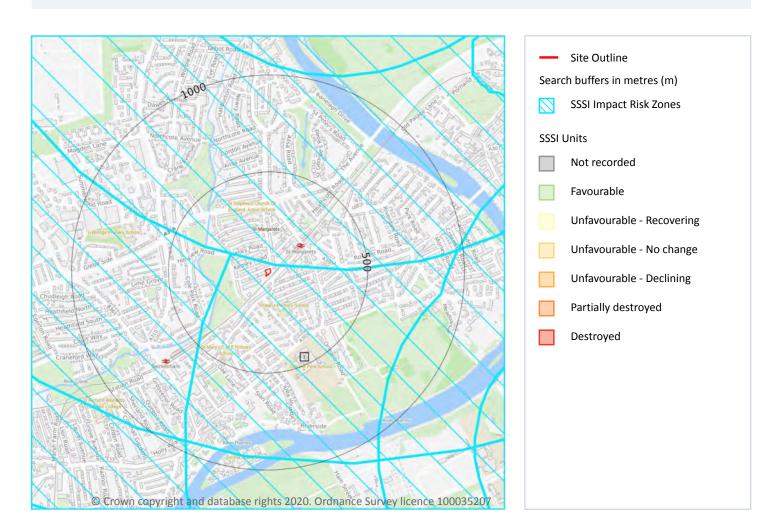
Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

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





SSSI Impact Zones and Units



10.17 SSSI Impact Risk Zones

Records on site 1

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

Features are displayed on the SSSI Impact Zones and Units map on page 70



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

ID Location Type of developments requiring consultation	
Infrastructure - Pipelines, pylons and overhead cables. Any transport proposal including rowater (excluding routine maintenance). Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extract Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (in processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 200m² & mai 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual op throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, ot management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to surface water, such as a beck or stream (NB This does not include discharges to mains sewer unlikely to pose a risk at this location). Water supply - Large infrastructure such as warehousing / industry where total net addition floorspace following development is 1,000m² or more.	iew of Minerals action. (incl: industrial nanure stores > ste incineration, on, sewage operational other waste o seep away) or to wer which are

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m 3

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

Features are displayed on the SSSI Impact Zones and Units map on page 70

ID: -

Location: 1776m SE
SSSI name: Richmond Park
Unit name: Petersham Park

Broad habitat: Acid Grassland - Lowland Condition: Unfavourable - Recovering

Reportable features:

Feature name	Feature condition	Date of assessment
Invert. assemblage A211 heartwood decay	Favourable	27/10/2010
Invert. assemblage A212 bark and sapwood decay	Favourable	27/10/2010
Invert. assemblage A213 fungal fruiting body	Favourable	27/10/2010





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

Feature name	Feature condition	Date of assessment
Lowland dry acid grassland (U1b,c,d,f)	Unfavourable - Recovering	27/10/2010
Lowland dry acid grassland (U4/20)	Unfavourable - Recovering	27/10/2010
S1083 Stag beetle, Lucanus cervus	Favourable	27/10/2010

ID: -

Location: 1878m E

SSSI name: Richmond Park
Unit name: Extensive Grassland
Broad habitat: Acid Grassland - Lowland
Condition: Unfavourable - Recovering

Reportable features:

Feature name	Feature condition	Date of assessment
Invert. assemblage A211 heartwood decay	Favourable	27/10/2010
Invert. assemblage A212 bark and sapwood decay	Favourable	27/10/2010
Invert. assemblage A213 fungal fruiting body	Favourable	27/10/2010
Lowland dry acid grassland (U1b,c,d,f)	Unfavourable - Recovering	27/10/2010
Lowland dry acid grassland (U4/20)	Unfavourable - Recovering	27/10/2010
S1083 Stag beetle, Lucanus cervus	Favourable	27/10/2010

ID:

Location: 1929m E

SSSI name: Richmond Park Unit name: Pond Slade

Broad habitat: Acid Grassland - Lowland Condition: Unfavourable - Recovering

Reportable features:

Feature name	Feature condition	Date of assessment
Invert. assemblage A211 heartwood decay	Favourable	27/10/2010
Invert. assemblage A212 bark and sapwood decay	Favourable	27/10/2010
Invert. assemblage A213 fungal fruiting body	Favourable	27/10/2010
Lowland dry acid grassland (U1b,c,d,f)	Unfavourable - Recovering	27/10/2010
Lowland dry acid grassland (U4/20)	Unfavourable - Recovering	27/10/2010





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

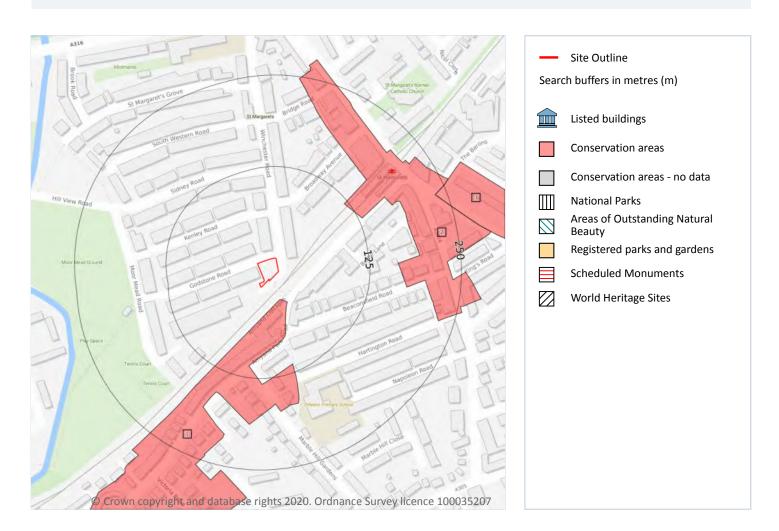
Feature name	Feature condition	Date of assessment
S1083 Stag beetle, Lucanus cervus	Favourable	27/10/2010

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





11 Visual and cultural designations



11.1 World Heritage Sites

Records within 250m 0

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

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



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

11.2 Area of Outstanding Natural Beauty

Records within 250m 0

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

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

11.3 National Parks

Records within 250m 0

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

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

11.4 Listed Buildings

Records within 250m 0

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

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

11.5 Conservation Areas

Records within 250m 3

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



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

Features are displayed on the Visual and cultural designations map on page 74

ID	Location	Name	District	Date of designation
1	29m SE	Amyand Park Road	Richmond upon Thames	14/06/1988
2	120m NE	Crown Road	Richmond upon Thames	14/06/1988
3	234m E	Twickenham Park	Richmond upon Thames	03/06/1976

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

11.6 Scheduled Ancient Monuments

Records within 250m 0

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

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

11.7 Registered Parks and Gardens

Records within 250m 0

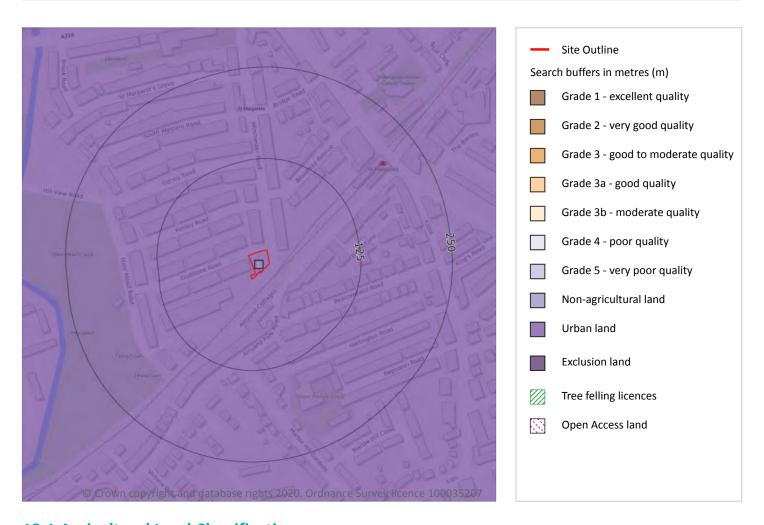
Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the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

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





12 Agricultural designations



12.1 Agricultural Land Classification

Records within 250m 1

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

Features are displayed on the Agricultural designations map on page 77

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

12.2 Open Access Land

Records within 250m 0

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

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

12.3 Tree Felling Licences

Records within 250m 0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m 0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m 0

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

This data is sourced from Natural England.



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13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m 0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m 0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m 0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m 0

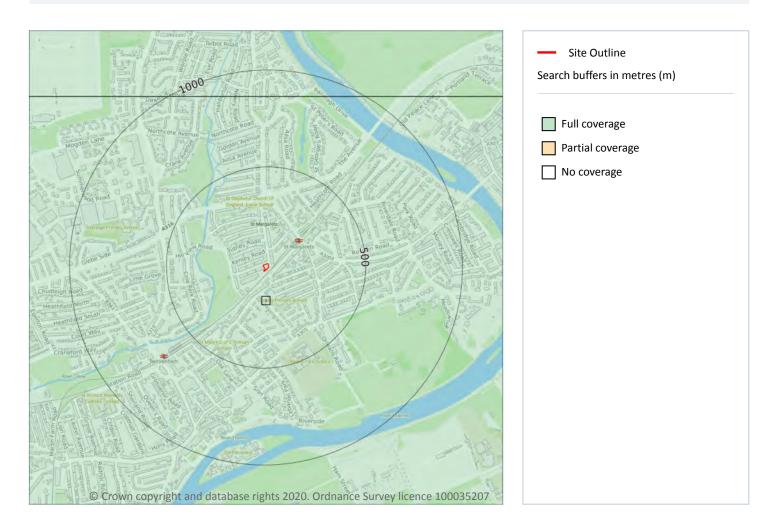
Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened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

This data is sourced from Natural England.





14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m 1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on page 80

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	TQ17SE

This data is sourced from the British Geological Survey.





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



14.2 Artificial and made ground (10k)

Records within 500m 4

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on page 81

ID	Location	LEX Code	Description	Rock description
1	16m E	WGR-UKNOWN	Worked Ground (Undivided)	Unknown/unclassified Entry
2	278m E	WGR-UKNOWN	Worked Ground (Undivided)	Unknown/unclassified Entry
3	431m S	WMGR-UKNOWN	Infilled Ground	Unknown/unclassified Entry
4	441m NW	WMGR-UKNOWN	Infilled Ground	Unknown/unclassified Entry





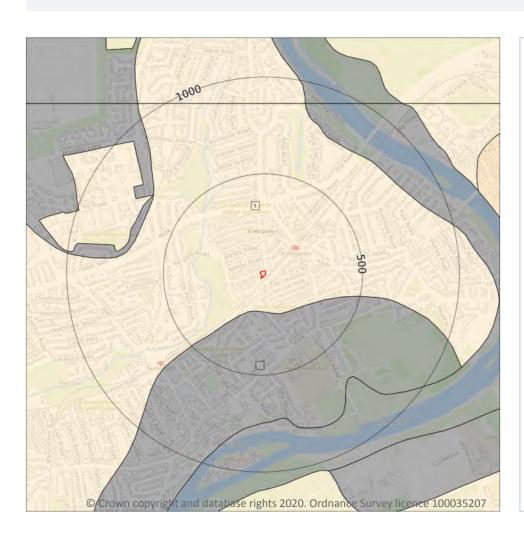
Ref: GS-6850666 **Your ref**: P20-2043 **Grid ref**: 516644 174121

This data is sourced from the British Geological Survey.





Geology 1:10,000 scale - Superficial



Site Outline
Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m 2

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on page 83

ID	Location	LEX Code	Description	Rock description
1	On site KPGR-XSV Kempton Park Gravel Formation - Sand And Gravel		Sand And Gravel	
2	170m S	LASI-Z	Langley Silt Member - Silt (unlithified Deposits Coding Scheme)	Silt

This data is sourced from the British Geological Survey.





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

14.4 Landslip (10k)

Records within 500m 0

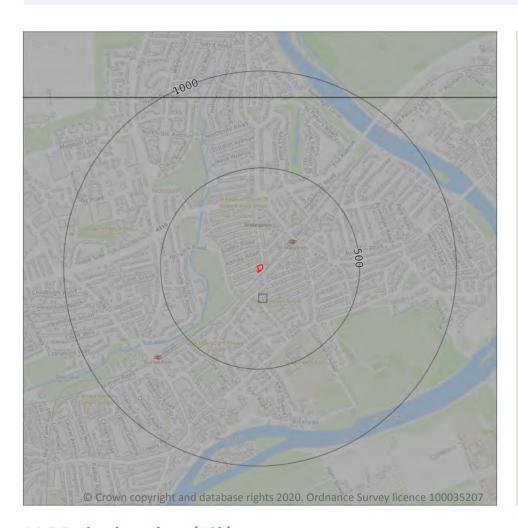
Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.





Geology 1:10,000 scale - Bedrock



Site Outline
Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)

Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

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

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

ID	Location	LEX Code	Description	Rock age
1	On site	LC-CLAY	London Clay Formation - Clay	Eocene Epoch

This data is sourced from the British Geological Survey.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

14.6 Bedrock faults and other linear features (10k)

Records within 500m 0

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

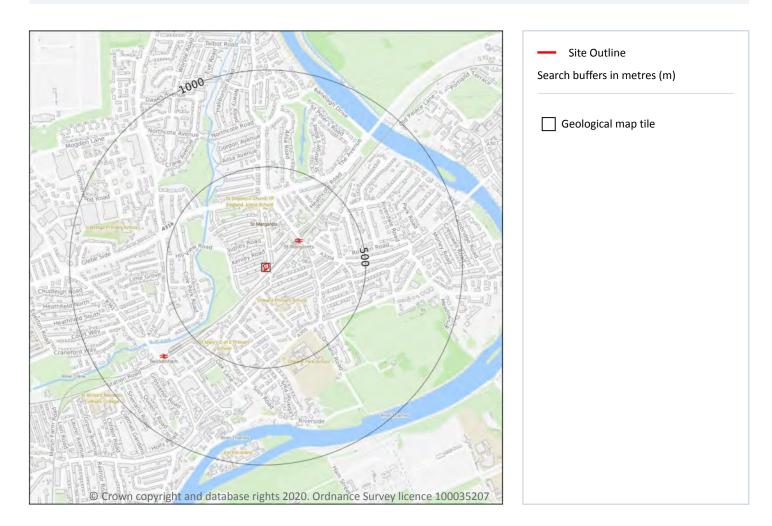
This data is sourced from the British Geological Survey.



08444 159 000



15 Geology 1:50,000 scale - Availability



15.1 50k Availability

Records within 500m 1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on page 87

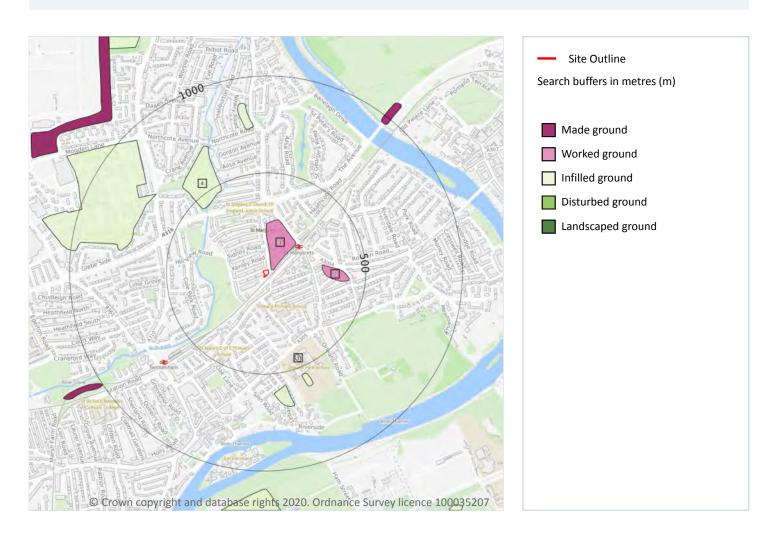
ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW270_south_london_v4

This data is sourced from the British Geological Survey.





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



15.2 Artificial and made ground (50k)

Records within 500m 4

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on page 88

ID	Location	LEX Code	Description	Rock description
1	16m E	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
2	278m E	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
3	432m S	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
4	442m NW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT





Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m 0

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

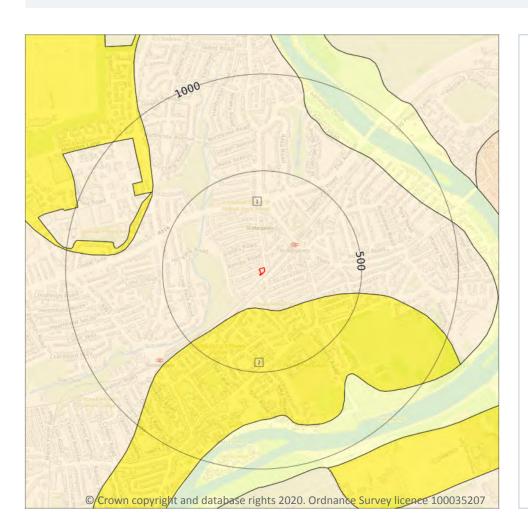
This data is sourced from the British Geological Survey.



08444 159 000



Geology 1:50,000 scale - Superficial



Site Outline
Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m 2

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on page 90

ID	Location	LEX Code	Description	Rock description
1	On site	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL
2	170m S	LASI-XCZ	LANGLEY SILT MEMBER	CLAY AND SILT

This data is sourced from the British Geological Survey.



08444 159 000

Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

1

15.5 Superficial permeability (50k)

Records within 50m

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m 0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m 0

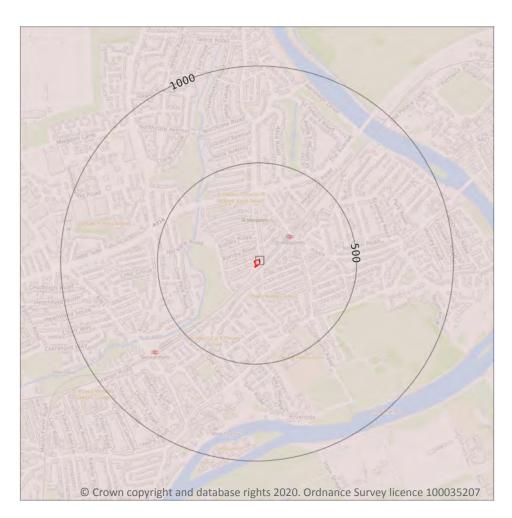
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.





Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)

Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on page 92

ID	Location	LEX Code	Description	Rock age
1	On site	LC-XCZ	LONDON CLAY FORMATION - CLAY AND SILT	YPRESIAN

This data is sourced from the British Geological Survey.



Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

1

15.9 Bedrock permeability (50k)

Records within 50m

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Low	Very Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m 0

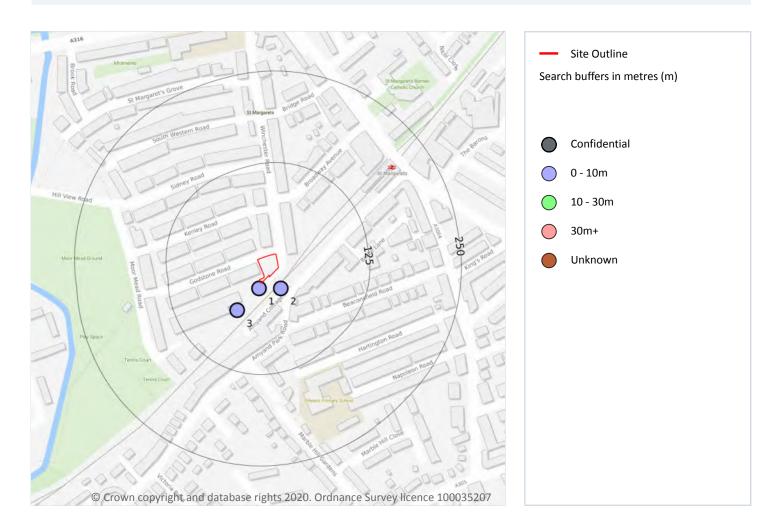
Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.





16 Boreholes



16.1 BGS Boreholes

Records within 250m

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

Features are displayed on the Boreholes map on page 94

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	8m S	516630 174090	ST MARGARETS, TWICKENHAM	7.62	N	<u>581655</u>
2	22m SE	516660 174090	ST MARGARETS, TWICKENHAM	7.62	N	<u>581656</u>
3	49m SW	516600 174060	ST MARGARETS, TWICKENHAM	9.29	N	<u>581657</u>





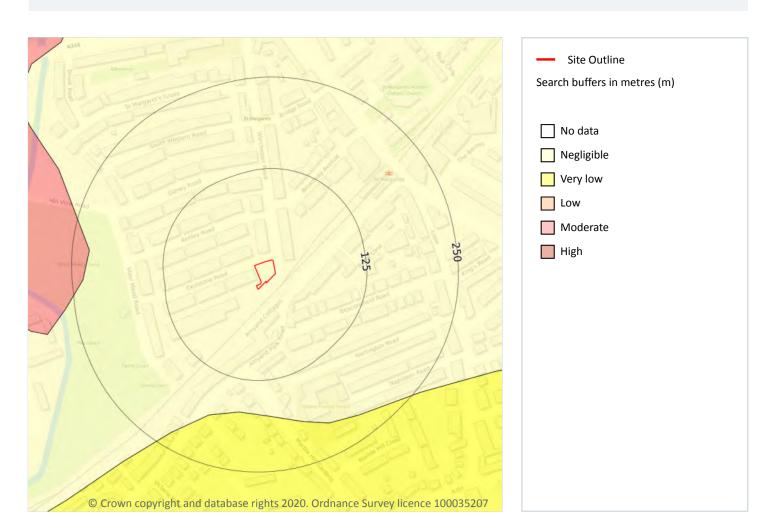
Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

This data is sourced from the British Geological Survey.





17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m 1

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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on page 96

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

This data is sourced from the British Geological Survey.





Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m 1

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

Features are displayed on the Natural ground subsidence - Running sands map on page 97

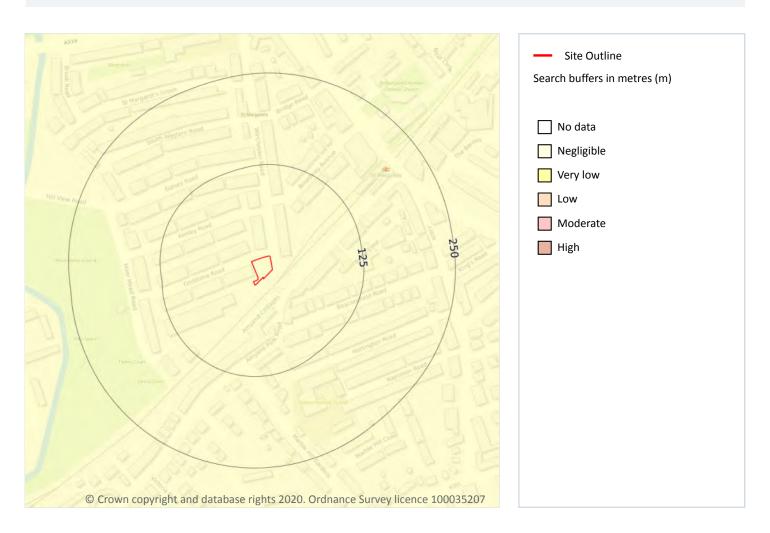
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.





Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

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

Features are displayed on the Natural ground subsidence - Compressible deposits map on page 98

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

This data is sourced from the British Geological Survey.





Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m 1

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

Features are displayed on the Natural ground subsidence - Collapsible deposits map on page 99

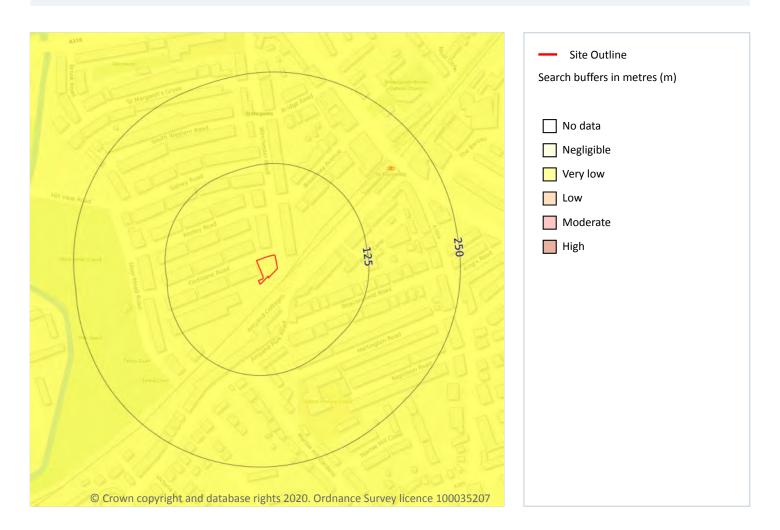
Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.





Natural ground subsidence - Landslides



17.5 Landslides

Records within 50m 1

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

Features are displayed on the Natural ground subsidence - Landslides map on page 100

Locat	on Hazard	Details	
On sit	e Very lo	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.	

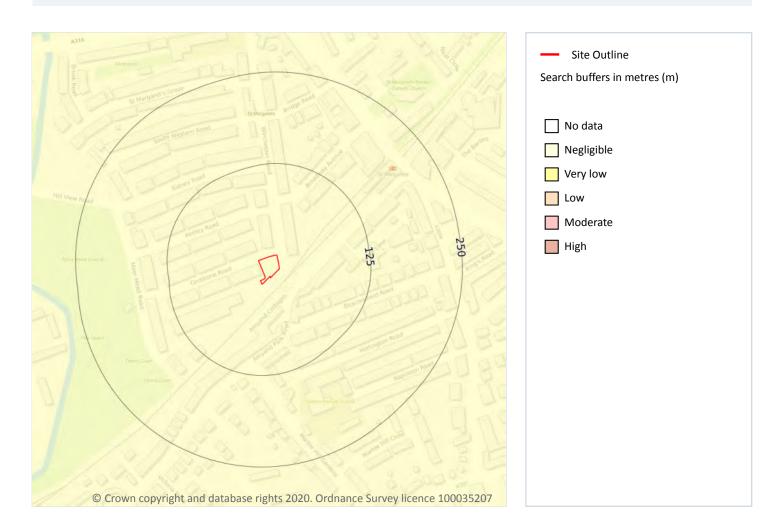
This data is sourced from the British Geological Survey.







Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m 1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 101**

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





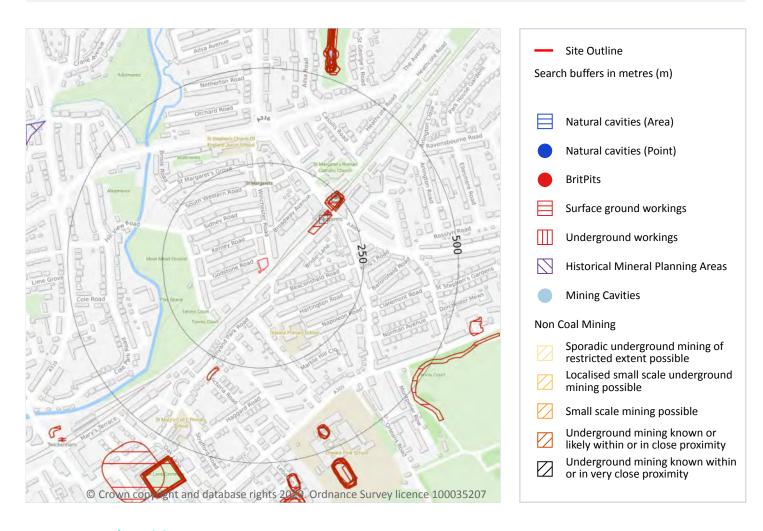
Ref: GS-6850666 **Your ref**: P20-2043 **Grid ref**: 516644 174121

This data is sourced from the British Geological Survey.





18 Mining, ground workings and natural cavities



18.1 Natural cavities

Records within 500m 0

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

This data is sourced from Peter Brett Associates (PBA).



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18.2 BritPits

Records within 500m 0

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

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m 7

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

Features are displayed on the Mining, ground workings and natural cavities map on page 103

ID	Location	Land Use	Year of mapping	Mapping scale
1	129m NE	Cuttings	1865	1:10560
А	210m NE	Cuttings	1938	1:10560
А	210m NE	Cuttings	1912	1:10560
А	215m NE	Cuttings	1912	1:10560
А	216m NE	Cuttings	1935	1:10560
А	219m NE	Cuttings	1933	1:10560
А	219m NE	Cuttings	1948	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m 0

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

This is data is sourced from Ordnance Survey/Groundsure.



104

Ref: GS-6850666 Your ref: P20-2043 Grid ref: 516644 174121

18.5 Historical Mineral Planning Areas

Records within 500m 0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m 0

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

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m 0

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

This data is sourced from Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site 0

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site 0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.



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18.10 Brine areas

Records on site 0

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

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

18.11 Gypsum areas

Records on site 0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site 0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

Records on site 0

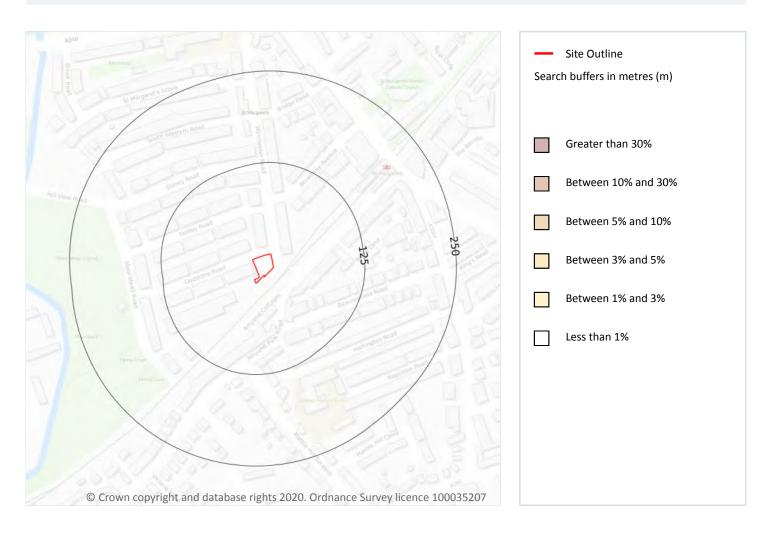
Generalised areas that may be affected by kaolin and ball clay extraction.

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





19 Radon



19.1 Radon

Records on site 1

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

Features are displayed on the Radon map on page 107

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None**

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





1

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	No data	No data	No data	No data	No data	No data	No data

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m 6

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

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromiu m (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/k g)
On site	21	3.7	729	501	0.8	69	76	33	26
On site	21	3.7	621	427	0.8	71	78	32	28
28m W	22	3.8	579	398	0.9	73	94	35	38
31m SW	21	3.7	557	383	0.8	73	86	33	34
43m E	21	3.7	749	515	0.7	67	72	32	24
47m SE	21	3.7	623	428	0.7	68	73	32	25

This data is sourced from the British Geological Survey.





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20.3 BGS Measured Urban Soil Chemistry

Records within 50m 0

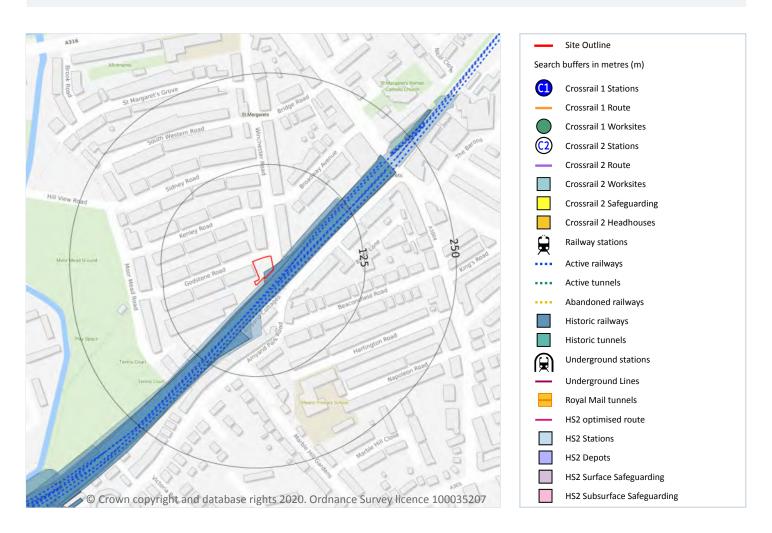
The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.





21 Railway infrastructure and projects



21.1 Underground railways (London)

Records within 250m 0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m

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



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This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m 0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m 19

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

Features are displayed on the Railway infrastructure and projects map on page 110

Location	Land Use	Year of mapping	Mapping scale
On site	Railway Sidings	1938	10560
On site	Railway Sidings	1973	10000
On site	Railway Sidings	1966	10560
On site	Railway Sidings	1948	10560
On site	Railway Sidings	1933	10560
6m SE	Railway Sidings	1938	10560
6m SE	Railway Sidings	1935	10560
6m SE	Railway	1897	-
13m SE	Railway	1932	-
21m SW	Railway	1913	-
65m S	Railway Sidings	1959	2500
69m SW	Railway Sidings	1915	2500
69m SW	Railway Sidings	1935	2500
171m SW	Railway Sidings	1967	1250
171m SW	Railway Sidings	1959	1250
172m SW	Railway Sidings	1959	2500
216m NE	Railway Sidings	1960	1250





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Location	Land Use	Year of mapping	Mapping scale
216m NE	Railway Sidings	1959	2500
244m NE	Railway Sidings	1986	1250

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m 0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m 0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m 11

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on **page 110**

Location	Name	Туре
14m SE	-	rail
16m SE	Not given	Single Track
17m SE	Not given	Multi Track
17m SE	Not given	Multi Track
20m SE	Waterloo to Reading Line	rail
25m SE	Waterloo to Reading Line	rail
38m E	Not given	Multi Track





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Location	Name	Туре
141m NE	Not given	Multi Track
217m NE	Not given	Single Track
217m NE	-	rail
218m NE	Not given	Multi Track

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m 0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m 0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m 0

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

This data is sourced from HS2 ltd.





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Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-jan-2020/.



APPENDIX D

RISK ASSESSMENT CLASSIFICATION

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

Table D1: Classification of Probability

Classification	Definition	Examples
Severe	Short-term (acute) risk to human health likely to	High concentrations of cyanide on the
	result in "significant harm" as defined by the	surface of an informal recreation area.
	Environment Protection Act 1990, Part IIA.	Major spillage of contaminants from Site
	Short-term risk of pollution of sensitive water	into controlled water.
	resource. (Note: Water Resources Act contains	Explosion, causing building collapse (can
	no scope for considering significance of	also equate to a short-term human health
	pollution). Catastrophic damage to	risk if buildings are occupied).
	buildings/property. A short-term risk to a	
	particular ecosystem, or organisation forming	
	part of such ecosystem (note: the definitions of	
	ecological systems within the draft circular on	
	Contaminated Land, DETR, 2000).	
Medium	Chronic damage to human health ("significant	Concentration of a contaminant from Site
	harm" as defined in DETR, 2000). Pollution of	exceed the generic, or Site-specific
	sensitive water resources. (Note: Water	assessment criteria.
	Resources Act contains no scope for considering	Leaching of contaminants from a Site to a
	significance of pollution). A significant change in	major or minor aquifer.
	a particular ecosystem, or organism forming	Death of a species within a designated
	part of such ecosystem, (note: the definitions of	nature reserve.
	ecological systems within draft circular on	
	Contaminated Land, DETR, 2000).	
Mild	Pollution of non-sensitive water resources.	Pollution of non-classified groundwater.
	Significant damage to crops, buildings,	Damage to building rendering it unsafe to
	structures and services ("significant harm" as	occupy (for example foundation damage
	defined in the draft circular on Contaminated	resulting in instability).
	Land, DETR, 2000). Damage to sensitive	
	buildings/structures/services or the	
	environment.	

Classification	Definition	Examples
Minor	Harm, although not necessarily significant	The presence of contaminants at such
	harm, which may result in a financial loss, or	concentrations that protective equipment
	expenditure to resolve.	is required during Site works.
	Non-permanent health effects to human health	The loss of plants in a landscaping scheme.
	(easily prevented by means such as personal	Discolouration of concrete.
	protective clothing etc.), easily repairable	
	effects of damage to buildings, structures and	
	services.	

Table D2: Classification of Consequence

		Consequence			
		Severe	Medium	Mild	Minor
Risk	High Likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low Likelihood	Moderate risk	Moderate/low risk	Low Risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Table D3: Combination of Consequence with Probability