

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
156	<b>Contemporary Trade Directory Entries</b> Name: A & M Services Location: 63, Pentley Park, Welwyn Garden City, Hertfordshire, AL8 7SF Classification: Domestic Appliances - Servicing, Repairs & Parts <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A17NE (N)	844	-	523545 214135
157	<b>Contemporary Trade Directory Entries</b> Name: Fairtop Filling Station Location: Bessemer Road, Welwyn Garden City, Hertfordshire, AL7 1HJ Classification: Petrol Filling Stations <b>Status:</b> Inactive Positional Accuracy: Manually positioned to the address or location	A19NE (NE)	847	-	524742 213946
157	<b>Contemporary Trade Directory Entries</b> Name: Palfinger Location: Bessemer Road, Welwyn Garden City, Hertfordshire, AL7 1ET Classification: Lifting Equipment <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A19NE (NE)	869	-	524782 213931
157	<b>Contemporary Trade Directory Entries</b> Name: Palfinger Tail Lifts Ltd Location: Bessemer Road, Welwyn Garden City, Hertfordshire, AL7 1ET Classification: Lifting Equipment <b>Status:</b> Active Positional Accuracy: Manually positioned within the geographical locality	A19NE (NE)	898	-	524816 213932
158	<b>Contemporary Trade Directory Entries</b> Name: Quadrant Location: 83 Bridge Rd East, Welwyn Garden City, Hertfordshire, AL7 1LA Classification: Plastic Products - Manufacturers <b>Status:</b> Inactive Positional Accuracy: Manually positioned to the address or location	A9NE (SE)	851	-	524802 212780
158	<b>Contemporary Trade Directory Entries</b> Name: Mr Bagels Factory Location: Berland House, 83, Bridge Road East, Welwyn Garden City, AL7 1LA Classification: Manufacturers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A9NE (SE)	858	-	524806 212770
158	<b>Contemporary Trade Directory Entries</b> Name: Mr Bagels Location: Berland House, 83, Bridge Road East, Welwyn Garden City, AL7 1LA Classification: Food Products - Manufacturers <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	858	-	524806 212770
159	<b>Contemporary Trade Directory Entries</b> Name: Welwyn Tyre & M O T Centre Location: Unit 8, Quadrant Park, Mundells, Welwyn Garden City, Hertfordshire, AL7 1FS Classification: Mot Testing Centres <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A19SE (E)	851	-	524914 213601
160	<b>Contemporary Trade Directory Entries</b> Name: Chemecol Uk Ltd Location: 3, Swallow End, Welwyn Garden City, Hertfordshire, AL7 1JA Classification: Fuel Dealers <b>Status:</b> Inactive Positional Accuracy: Manually positioned to the address or location	A14SE (E)	862	-	524860 212930
160	<b>Contemporary Trade Directory Entries</b> Name: Electronics Distribution Location: Coronet House, 5a, Swallow End, Welwyn Garden City, Hertfordshire, AL7 1JA Classification: Distribution Services <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	876	-	524880 212953
160	<b>Contemporary Trade Directory Entries</b> Name: Ecl Contracts Ltd Location: 5, Swallow End, Welwyn Garden City, Hertfordshire, AL7 1JA Classification: Cladding Suppliers & Installers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	876	-	524880 212953

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160	<b>Contemporary Trade Directory Entries</b> Name: Electronics Distribution Ltd Location: 5, Swallow End, Welwyn Garden City, Hertfordshire, AL7 1JA Classification: Electronic Component Manufacturers & Distributors <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	876	-	524880 212953
160	<b>Contemporary Trade Directory Entries</b> Name: J N Tyres Autocare Location: 7, Swallow End, Welwyn Garden City, AL7 1JA Classification: Garage Services <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	900	-	524910 212982
161	<b>Contemporary Trade Directory Entries</b> Name: Smart Print Location: Unit 2, The Polaris Centre, 41, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Printing Equipment Manufacturers <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	866	-	524917 213172
161	<b>Contemporary Trade Directory Entries</b> Name: Ds Ducts Location: Unit 5, The Polaris Centre, 41, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Air Conditioning & Refrigeration Contractors <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15SW (E)	890	-	524949 213205
162	<b>Contemporary Trade Directory Entries</b> Name: Megaman Location: Unit 2, Quadrant Park, Mundells, Welwyn Garden City, Hertfordshire, AL7 1FS Classification: Electrical Goods Sales, Manufacturers & Wholesalers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	868	-	524943 213529
163	<b>Contemporary Trade Directory Entries</b> Name: L S Fabrications Location: Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1JD Classification: Sheet Metal Work <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A9NE (E)	870	-	524846 212856
163	<b>Contemporary Trade Directory Entries</b> Name: Bracken Creative Print Solutions Location: The Print House, Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1JD Classification: Printers <b>Status:</b> Inactive Positional Accuracy: Manually positioned to the road within the address or location	A14SE (E)	885	-	524872 212888
163	<b>Contemporary Trade Directory Entries</b> Name: Marshall Vauxhall Location: Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1JD Classification: Car Dealers <b>Status:</b> Inactive Positional Accuracy: Manually positioned to the road within the address or location	A14SE (E)	890	-	524876 212885
163	<b>Contemporary Trade Directory Entries</b> Name: Natalie Chocolates Location: 4 Swallow Ct, Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1SB Classification: Confectionery Manufacturers <b>Status:</b> Inactive Positional Accuracy: Manually positioned to the address or location	A9NE (E)	915	-	524886 212832
164	<b>Contemporary Trade Directory Entries</b> Name: Vestcom Location: Unit 5, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Ventilators & Ventilation Systems <b>Status:</b> Inactive Positional Accuracy: Manually positioned within the geographical locality	A15NW (E)	888	-	524958 213260
164	<b>Contemporary Trade Directory Entries</b> Name: Taylor & Indge Mouldings Ltd Location: Vector House, 27, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Rubber & Plastic Products - Manufacturers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	888	-	524958 213260

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164	<b>Contemporary Trade Directory Entries</b> Name: I T Mouldings Location: Vector House, 27, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Tool Design, Manufacturers & Makers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	888	-	524958 213260
164	<b>Contemporary Trade Directory Entries</b> Name: Promotional Print Services Location: Vector House, 27, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Printers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	888	-	524958 213260
164	<b>Contemporary Trade Directory Entries</b> Name: Absolute Blinds Ltd Location: 25, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Blinds, Awnings & Canopies <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	897	-	524968 213267
164	<b>Contemporary Trade Directory Entries</b> Name: Goode Sport Location: 25, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Leisure & Sportswear Manufacturers & Wholesalers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	897	-	524968 213267
165	<b>Contemporary Trade Directory Entries</b> Name: Masons Location: 14, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Brush Manufacturers <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A15NW (E)	892	-	524972 213343
165	<b>Contemporary Trade Directory Entries</b> Name: Adcock Refrigeration & Air Conditioning Ltd Location: 10, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Air Conditioning & Refrigeration Contractors <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	900	-	524981 213350
165	<b>Contemporary Trade Directory Entries</b> Name: Garden City Orthodontic Laboratory Location: 8, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Medical & Dental Laboratories <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	904	-	524985 213354
166	<b>Contemporary Trade Directory Entries</b> Name: Targeted Youth Support Services Location: Mundells, Welwyn Garden City, Hertfordshire, AL7 1FT Classification: Damp & Dry Rot Control <b>Status:</b> Inactive Positional Accuracy: Manually positioned within the geographical locality	A20SW (NE)	894	-	524937 213680
167	<b>Contemporary Trade Directory Entries</b> Name: Computa Tune Location: 13, Haymeads, Welwyn Garden City, Hertfordshire, AL8 7AD Classification: Car Engine Tuning & Diagnostic Services <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A23SE (N)	894	-	524111 214307
168	<b>Contemporary Trade Directory Entries</b> Name: Auto Gallery Location: 1, Greenfield, Welwyn Garden City, Hertfordshire, AL8 7HW Classification: Car Dealers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A23SE (N)	899	-	523945 214313
169	<b>Contemporary Trade Directory Entries</b> Name: Print Resources Location: 58, Brockswold Lane, WELWYN GARDEN CITY, Hertfordshire, AL8 7BG Classification: Printers <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A11NE (W)	900	-	522878 213338
170	<b>Contemporary Trade Directory Entries</b> Name: Proven Location: 13 Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Bakery Equipment Manufacturers & Suppliers <b>Status:</b> Active Positional Accuracy: Manually positioned to the address or location	A15NW (E)	921	-	524998 213308

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170	<b>Contemporary Trade Directory Entries</b> Name: Portogram Location: Unit 4 Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Electrical goods - servicing & repairs <b>Status:</b> Inactive Positional Accuracy: Manually positioned to the road within the address or location	A15NW (E)	929	-	525009 213340
170	<b>Contemporary Trade Directory Entries</b> Name: Atlas Fuses Ltd Location: 4, Brownfields Court, Welwyn Garden City, Hertfordshire, AL7 1AJ Classification: Electronic Component Manufacturers & Distributors <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	935	-	525011 213299
170	<b>Contemporary Trade Directory Entries</b> Name: Willy A Bachofen Uk Ltd Location: 4, Brownfields Court, WELWYN GARDEN CITY, Hertfordshire, AL7 1AJ Classification: Machinery - Industrial & Commercial <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	935	-	525011 213299
170	<b>Contemporary Trade Directory Entries</b> Name: Welwyn Auto Centre Location: 9 Blenheim Court, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Garage Services <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A15NW (E)	936	-	525013 213310
170	<b>Contemporary Trade Directory Entries</b> Name: Prime Impressions Location: 5, Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Printers <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A15NW (E)	946	-	525024 213315
170	<b>Contemporary Trade Directory Entries</b> Name: Broadbans Engineering Co Ltd Location: Brownfields, Welwyn Garden City, Hertfordshire, AL7 1AN Classification: Precision Engineers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15NW (E)	950	-	525029 213323
170	<b>Contemporary Trade Directory Entries</b> Name: Rotech Machines Ltd Location: 1, Brownfields Court, WELWYN GARDEN CITY, Hertfordshire, AL7 1AJ Classification: Printing Equipment Manufacturers <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A15NW (E)	950	-	525029 213323
171	<b>Contemporary Trade Directory Entries</b> Name: Premier Electrical Services Location: 3, Applecroft Road, WELWYN GARDEN CITY, Hertfordshire, AL8 6JZ Classification: Washing Machines - Servicing & Repairs <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A7SW (SW)	924	-	523035 212455
172	<b>Contemporary Trade Directory Entries</b> Name: P W Gates Distribution Ltd Location: 2, Swallow End, Welwyn Garden City, Hertfordshire, AL7 1JA Classification: Road Haulage Services <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A15SW (E)	929	-	524927 212919
172	<b>Contemporary Trade Directory Entries</b> Name: Elevator Supply Services Ltd Location: 2, Swallow End, Welwyn Garden City, Hertfordshire, AL7 1JA Classification: Lift Manufacturers <b>Status:</b> Inactive Positional Accuracy: Automatically positioned to the address	A15SW (E)	929	-	524927 212919
173	<b>Contemporary Trade Directory Entries</b> Name: Wiltshire Farm Foods Location: Unit 3, Swallow Court, Swallowfields, Welwyn Garden City, AL7 1SB Classification: Frozen Food Processors & Distributors <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A9NE (E)	931	-	524901 212827
174	<b>Contemporary Trade Directory Entries</b> Name: Axalta Coating Systems Uk Ltd Location: Unit 1, Quadrant Park, Mundells, Welwyn Garden City, Hertfordshire, AL7 1FS Classification: Car Manufacturers <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A15NW (E)	939	-	525014 213538

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175	<b>Contemporary Trade Directory Entries</b> Name: Duncan Print Group Location: Mundells, Welwyn Garden City, Hertfordshire, AL7 1EU Classification: Printers <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	A20SW (NE)	955	-	524924 213866
176	<b>Contemporary Trade Directory Entries</b> Name: Univolt Uk Ltd Location: Unit 4, Quadrant Park, Mundells, Welwyn Garden City, Hertfordshire, AL7 1FS Classification: Electrical Goods Sales, Manufacturers & Wholesalers <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	A20SW (E)	957	-	525021 213605
177	<b>Contemporary Trade Directory Entries</b> Name: Catomance Technology Ltd Location: 96, Bridge Road East, Welwyn Garden City, Hertfordshire, AL7 1JW Classification: Chemicals & Allied Products <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A9NE (SE)	961	-	524868 212646
178	<b>Contemporary Trade Directory Entries</b> Name: Henderson Thomas Associates Location: Unit 2 Mundells Court, Welwyn Garden City, Hertfordshire, AL7 1EN Classification: Engineering Services <b>Status: Active</b> Positional Accuracy: Manually positioned to the address or location	A20SW (NE)	973	-	524978 213795
178	<b>Contemporary Trade Directory Entries</b> Name: Workplace Drinks Location: Unit 8 Mundells Court, Welwyn Garden City, Hertfordshire, AL7 1EN Classification: Water Coolers <b>Status: Inactive</b> Positional Accuracy: Manually positioned within the geographical locality	A20SW (NE)	992	-	524984 213829
178	<b>Contemporary Trade Directory Entries</b> Name: G & D Auto Services Ltd Location: 7, Mundells Court, WELWYN GARDEN CITY, Hertfordshire, AL7 1EN Classification: Car Customisation & Conversion Specialists <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	A20SW (NE)	995	-	524985 213834
179	<b>Contemporary Trade Directory Entries</b> Name: Amelie Chocolat Location: Unit 4, Swallow Court, Swallowfields, Welwyn Garden City, AL7 1SB Classification: Confectionery Manufacturers <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A10NW (E)	975	-	524938 212798
179	<b>Contemporary Trade Directory Entries</b> Name: Welwyn Handles Ltd Location: 3, Woodfield Road, Welwyn Garden City, Hertfordshire, AL7 1JQ Classification: Leather Garments & Products <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A10NW (SE)	982	-	524937 212772
180	<b>Contemporary Trade Directory Entries</b> Name: Bioshine Cleaning Services Location: 5, The Links, Welwyn Garden City, Hertfordshire, AL8 7DS Classification: Cleaning Services - Domestic <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	A6NE (SW)	981	-	522834 212675
181	<b>Contemporary Trade Directory Entries</b> Name: Consort Abrasives Products Ltd Location: Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1JD Classification: Abrasive Products - Manufacturers & Distributors <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A10NW (E)	981	-	524969 212876
181	<b>Contemporary Trade Directory Entries</b> Name: Thermopac Plastics Ltd Location: Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1JD Classification: Plastics - Extrusion <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A10NW (E)	982	-	524969 212876
181	<b>Contemporary Trade Directory Entries</b> Name: Marshall Location: Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1JD Classification: Car Customisation & Conversion Specialists <b>Status: Active</b> Positional Accuracy: Manually positioned within the geographical locality	A10NW (E)	986	-	524966 212849

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
181	<b>Contemporary Trade Directory Entries</b> Name: T Nevill & Co Location: Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1JD Classification: Machine Shops <b>Status: Active</b> Positional Accuracy: Manually positioned within the geographical locality	A10NW (E)	986	-	524966 212849
181	<b>Contemporary Trade Directory Entries</b> Name: Old Ford Ltd Location: Unit 4b Swallowfields, Welwyn Garden City, Hertfordshire, AL7 1JD Classification: Catering Equipment <b>Status: Inactive</b> Positional Accuracy: Manually positioned within the geographical locality	A10NW (E)	986	-	524966 212849
182	<b>Contemporary Trade Directory Entries</b> Name: Avdel (Uk) Ltd Location: Pacific House, City Park, Swiftfields, Welwyn Garden City, Hertfordshire, AL7 1LY Classification: Engineering Services <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A15SW (E)	995	-	525058 213214
183	<b>Fuel Station Entries</b> Name: Central Garage Location: Church Road , , Welwyn Garden City, Hertfordshire, AL8 6PW Brand: OBSOLETE Premises Type: Not Applicable <b>Status: Obsolete</b> Positional Accuracy: Automatically positioned to the address	A8NW (SW)	191	-	523659 212883
184	<b>Fuel Station Entries</b> Name: Mfg Eastbridge Location: Bridge Road East , , Welwyn Garden City, Hertfordshire, AL7 1LE Brand: ESSO Premises Type: Petrol Station <b>Status: Open</b> Positional Accuracy: Manually positioned to the address or location	A14SW (SE)	525	-	524514 212951
185	<b>Fuel Station Entries</b> Name: Tesco Head Office Welwyn Automat Location: Kestrel Way (Tesco Ho) , Shire Park , Welwyn Garden City, Hertfordshire, AL7 1GA Brand: Tesco Premises Type: Hypermarket <b>Status: Non-Retail</b> Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	560	-	524479 213810
186	<b>Fuel Station Entries</b> Name: Fairtop Service Station Location: Bessemer Road , , Welwyn Garden City, Hertfordshire, AL7 1HJ Brand: Bp Premises Type: Not Applicable <b>Status: Obsolete</b> Positional Accuracy: Manually positioned to the address or location	A19NE (NE)	847	-	524742 213946

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187	<b>Ancient Woodland</b> Name: Sherrardspark Woods Reference: 1116056 Area(m <sup>2</sup> ): 566977.51 Type: Ancient and Semi-Natural Woodland	A12NW (W)	591	10	523195 213340
188	<b>Ancient Woodland</b> Name: Sherrardspark Woods Reference: 1116056 Area(m <sup>2</sup> ): 95111.25 Type: Plantation on Ancient Woodland	A12NW (W)	683	10	523096 213326
189	<b>Areas of Adopted Green Belt</b> Authority: Welwyn Hatfield District Council Plan Name: Welwyn Hatfield Local Plan <b>Status: Adopted</b> Plan Date: 15th April 2005	A12NW (W)	589	8	523193 213329
190	<b>Local Nature Reserves</b> Name: Sherrardspark Wood Multiple Area: Y Area (m2): 731961.94 Source: Natural England Designation Date: 1st January 1998	A12NW (W)	573	10	523211 213333
191	<b>Nitrate Vulnerable Zones</b> Name: Lee Nvz Description: Surface Water Source: Environment Agency, Head Office	A13SE (NW)	0	4	523923 213214
192	<b>Sites of Special Scientific Interest</b> Name: Sherrardspark Wood Multiple Areas: N Total Area (m2): 743104.83 Source: Natural England Reference: 1000271 Designation Details: Local Nature Reserve Designation Date: 1st February 1986 Date Type: Notified Designation Details: Site Of Special Scientific Interest Designation Date: 1st February 1986 Date Type: Notified	A12NW (W)	573	10	523211 213333

Agency & Hydrological	Version	Update Cycle
<b>Contaminated Land Register Entries and Notices</b> Welwyn Hatfield District Council - Environmental Health Department St Albans City & District Council - Environmental Health Department East Hertfordshire District Council - Environmental Health Department North Hertfordshire District Council - Environmental Health Department	August 2013 February 2015 January 2013 October 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
<b>Discharge Consents</b> Environment Agency - Thames Region	July 2019	Quarterly
<b>Enforcement and Prohibition Notices</b> Environment Agency - Thames Region	March 2013	Annual Rolling Update
<b>Integrated Pollution Controls</b> Environment Agency - Thames Region	October 2008	Variable
<b>Integrated Pollution Prevention And Control</b> Environment Agency - South East Region - North East Thames Area Environment Agency - Thames Region	July 2019 July 2019	Quarterly Quarterly
<b>Local Authority Integrated Pollution Prevention And Control</b> East Hertfordshire District Council - Environmental Health Department Welwyn Hatfield District Council - Environmental Health Department St Albans City & District Council - Environmental Health Department North Hertfordshire District Council - Environmental Health Department	January 2014 May 2012 May 2014 September 2014	Variable Variable Variable Variable
<b>Local Authority Pollution Prevention and Controls</b> East Hertfordshire District Council - Environmental Health Department Welwyn Hatfield District Council - Environmental Health Department St Albans City & District Council - Environmental Health Department North Hertfordshire District Council - Environmental Health Department	January 2014 May 2012 May 2014 September 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
<b>Local Authority Pollution Prevention and Control Enforcements</b> East Hertfordshire District Council - Environmental Health Department Welwyn Hatfield District Council - Environmental Health Department St Albans City & District Council - Environmental Health Department North Hertfordshire District Council - Environmental Health Department	January 2014 May 2012 May 2014 September 2014	Variable Variable Variable Variable
<b>Nearest Surface Water Feature</b> Ordnance Survey	January 2019	
<b>Pollution Incidents to Controlled Waters</b> Environment Agency - Thames Region	September 1999	Not Applicable
<b>Prosecutions Relating to Authorised Processes</b> Environment Agency - Thames Region	March 2013	Annual Rolling Update
<b>Prosecutions Relating to Controlled Waters</b> Environment Agency - Thames Region	March 2013	Annual Rolling Update
<b>Registered Radioactive Substances</b> Environment Agency - Thames Region	June 2016	
<b>River Quality</b> Environment Agency - Head Office	November 2001	Not Applicable
<b>River Quality Biology Sampling Points</b> Environment Agency - Head Office	July 2012	Annually
<b>River Quality Chemistry Sampling Points</b> Environment Agency - Head Office	July 2012	Annually
<b>Substantiated Pollution Incident Register</b> Environment Agency - South East Region - North East Thames Area Environment Agency - Thames Region - North East Area	July 2019 July 2019	Quarterly Quarterly
<b>Water Abstractions</b> Environment Agency - Thames Region	July 2019	Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - Thames Region	October 2017	Quarterly

Agency & Hydrological	Version	Update Cycle
<b>Groundwater Vulnerability Map</b> Environment Agency - Head Office	June 2018	Annually
<b>Groundwater Vulnerability - Soluble Rock Risk</b> Environment Agency - Head Office	June 2018	Annually
<b>Bedrock Aquifer Designations</b> Environment Agency - Head Office	January 2018	Annually
<b>Superficial Aquifer Designations</b> Environment Agency - Head Office	January 2018	Annually
<b>Source Protection Zones</b> Environment Agency - Head Office	July 2019	Quarterly
<b>Extreme Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	August 2019	Quarterly
<b>Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	August 2019	Quarterly
<b>Areas Benefiting from Flood Defences</b> Environment Agency - Head Office	August 2019	Quarterly
<b>Flood Water Storage Areas</b> Environment Agency - Head Office	August 2019	Quarterly
<b>Flood Defences</b> Environment Agency - Head Office	August 2019	Quarterly
<b>OS Water Network Lines</b> Ordnance Survey	April 2019	Quarterly
<b>BGS Groundwater Flooding Susceptibility</b> British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
<b>BGS Recorded Landfill Sites</b> British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
<b>Historical Landfill Sites</b> Environment Agency - Head Office	July 2019	Quarterly
<b>Integrated Pollution Control Registered Waste Sites</b> Environment Agency - Thames Region	October 2008	Not Applicable
<b>Licensed Waste Management Facilities (Landfill Boundaries)</b> Environment Agency - South East Region - North East Thames Area Environment Agency - Thames Region - North East Area	July 2018 July 2018	Quarterly Quarterly
<b>Licensed Waste Management Facilities (Locations)</b> Environment Agency - South East Region - North East Thames Area Environment Agency - Thames Region - North East Area	July 2019 July 2019	Quarterly Quarterly
<b>Local Authority Landfill Coverage</b> East Hertfordshire District Council - Environmental Health Department Hertfordshire County Council - Spatial Planning and Economy Unit North Hertfordshire District Council - Environmental Health Department St Albans City & District Council - Environmental Health Department Welwyn Hatfield District Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
<b>Local Authority Recorded Landfill Sites</b> East Hertfordshire District Council - Environmental Health Department Hertfordshire County Council - Spatial Planning and Economy Unit North Hertfordshire District Council - Environmental Health Department St Albans City & District Council - Environmental Health Department Welwyn Hatfield District Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
<b>Registered Landfill Sites</b> Environment Agency - Thames Region - North East Area	March 2003	Not Applicable
<b>Registered Waste Transfer Sites</b> Environment Agency - Thames Region - North East Area	March 2003	Not Applicable
<b>Registered Waste Treatment or Disposal Sites</b> Environment Agency - Thames Region - North East Area	June 2015	Not Applicable
Hazardous Substances	Version	Update Cycle
<b>Control of Major Accident Hazards Sites (COMAH)</b> Health and Safety Executive	April 2018	Bi-Annually
<b>Explosive Sites</b> Health and Safety Executive	March 2017	Annually
<b>Notification of Installations Handling Hazardous Substances (NIHHS)</b> Health and Safety Executive	November 2000	Not Applicable
<b>Planning Hazardous Substance Enforcements</b> East Hertfordshire District Council Hertfordshire County Council - Spatial Planning and Economy Unit North Hertfordshire District Council St Albans City & District Council Welwyn Hatfield District Council	April 2015 February 2016 February 2016 February 2016 February 2016	Variable Variable Variable Variable Variable
<b>Planning Hazardous Substance Consents</b> East Hertfordshire District Council Hertfordshire County Council - Spatial Planning and Economy Unit North Hertfordshire District Council St Albans City & District Council Welwyn Hatfield District Council	April 2015 February 2016 February 2016 February 2016 February 2016	Variable Variable Variable Variable Variable

Geological	Version	Update Cycle
<b>BGS 1:625,000 Solid Geology</b> British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	April 2019	Bi-Annually
<b>CBSCB Compensation District</b> Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
<b>Coal Mining Affected Areas</b> The Coal Authority - Property Searches	March 2014	Annual Rolling Update
<b>Mining Instability</b> Ove Arup & Partners	October 2000	Not Applicable
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Radon Potential - Radon Affected Areas</b> British Geological Survey - National Geoscience Information Service	July 2011	Annually
<b>Radon Potential - Radon Protection Measures</b> British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	Version	Update Cycle
<b>Contemporary Trade Directory Entries</b> Thomson Directories	July 2019	Quarterly
<b>Fuel Station Entries</b> Catalist Ltd - Experian	September 2019	Quarterly
<b>Gas Pipelines</b> National Grid	July 2014	
<b>Underground Electrical Cables</b> National Grid	December 2015	

Sensitive Land Use	Version	Update Cycle
<b>Ancient Woodland</b> Natural England	August 2018	Bi-Annually
<b>Areas of Adopted Green Belt</b> East Hertfordshire District Council North Hertfordshire District Council St Albans City & District Council Welwyn Hatfield District Council	March 2019 March 2019 March 2019 March 2019	As notified As notified As notified As notified
<b>Areas of Unadopted Green Belt</b> East Hertfordshire District Council North Hertfordshire District Council St Albans City & District Council Welwyn Hatfield District Council	March 2019 March 2019 March 2019 March 2019	As notified As notified As notified As notified
<b>Areas of Outstanding Natural Beauty</b> Natural England	June 2019	Bi-Annually
<b>Environmentally Sensitive Areas</b> Natural England	January 2017	
<b>Forest Parks</b> Forestry Commission	April 1997	Not Applicable
<b>Local Nature Reserves</b> Natural England	March 2019	Bi-Annually
<b>Marine Nature Reserves</b> Natural England	July 2019	Bi-Annually
<b>National Nature Reserves</b> Natural England	July 2019	Bi-Annually
<b>National Parks</b> Natural England	April 2017	Bi-Annually
<b>Nitrate Vulnerable Zones</b> Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
<b>Ramsar Sites</b> Natural England	April 2019	Bi-Annually
<b>Sites of Special Scientific Interest</b> Natural England	March 2019	Bi-Annually
<b>Special Areas of Conservation</b> Natural England	June 2019	Bi-Annually
<b>Special Protection Areas</b> Natural England	April 2019	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 <b>Centre for Ecology &amp; Hydrology</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	<b>British Geological Survey - Enquiry Service</b> British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: <a href="mailto:enquiries@bgs.ac.uk">enquiries@bgs.ac.uk</a> Website: <a href="http://www.bgs.ac.uk">www.bgs.ac.uk</a>
2	<b>Environment Agency - National Customer Contact Centre (NCCC)</b> PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: <a href="mailto:enquiries@environment-agency.gov.uk">enquiries@environment-agency.gov.uk</a>
3	<b>Welwyn Hatfield District Council - Environmental Health Department</b> Council Offices, Campus East, Welwyn Garden City, Hertfordshire, AL8 6AE	Telephone: 01707 357000 Fax: 01707 375490 Website: <a href="http://www.welhat.gov.uk">www.welhat.gov.uk</a>
4	<b>Environment Agency - Head Office</b> Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	<b>Ordnance Survey</b> Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: <a href="mailto:customerservices@ordnancesurvey.co.uk">customerservices@ordnancesurvey.co.uk</a> Website: <a href="http://www.ordnancesurvey.gov.uk">www.ordnancesurvey.gov.uk</a>
6	<b>Hertfordshire County Council - Spatial Planning and Economy Unit</b> County Hall, Hertford, Hertfordshire, SG13 8DN	Telephone: 01992 556266 Fax: 01992 556015 Email: <a href="mailto:spatialplanning@hertfordshire.gov.uk">spatialplanning@hertfordshire.gov.uk</a> Website: <a href="http://www.hertsdirect.org">www.hertsdirect.org</a>
7	<b>Health and Safety Executive</b> 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: <a href="http://www.hse.gov.uk">www.hse.gov.uk</a>
8	<b>Welwyn Hatfield District Council</b> Council Offices, Campus East, Welwyn Garden City, Hertfordshire, AL8 6AE	Telephone: 01707 357000 Fax: 01707 375490 Website: <a href="http://www.welhat.gov.uk">www.welhat.gov.uk</a>
9	<b>Peter Brett Associates</b> Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN	Telephone: 0118 950 0761 Fax: 0118 959 7498 Email: <a href="mailto:reading@pba.co.uk">reading@pba.co.uk</a> Website: <a href="http://www.pba.co.uk">www.pba.co.uk</a>
10	<b>Natural England</b> County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: <a href="mailto:enquiries@naturalengland.org.uk">enquiries@naturalengland.org.uk</a> Website: <a href="http://www.naturalengland.org.uk">www.naturalengland.org.uk</a>
11	<b>East Hertfordshire District Council</b> Wallfields, Pegs Lane, Hertford, Hertfordshire, SG13 8EQ	Telephone: 01279 655261 Fax: 01992 552280 Website: <a href="http://www.eastherts.gov.uk">www.eastherts.gov.uk</a>
-	<b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b> Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: <a href="mailto:radon@phe.gov.uk">radon@phe.gov.uk</a> Website: <a href="http://www.ukradon.org">www.ukradon.org</a>
-	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: <a href="mailto:customerservices@landmarkinfo.co.uk">customerservices@landmarkinfo.co.uk</a> Website: <a href="http://www.landmarkinfo.co.uk">www.landmarkinfo.co.uk</a>

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

# Historical Mapping Legends

## Ordnance Survey County Series 1:10,560

	Gravel Pit		Sand Pit		Other Pits
	Quarry		Shingle		Orchard
	Osiers		Reeds		Marsh
	Mixed Wood		Deciduous		Brushwood
	Fir		Furze		Rough Pasture
	Arrow denotes flow of water		Trigonometrical Station		
	Site of Antiquities		Bench Mark		
	Pump, Guide Post, Signal Post		Well, Spring, Boundary Post		
	285 Surface Level				
	Sketched Contour		Instrumental Contour		
	Main Roads		Minor Roads		
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

## Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	Standard Gauge Multiple Track		Standard Gauge Single Track
	Siding, Tramway or Mineral Line		Narrow Gauge
	Geographical County		Administrative County, County Borough or County of City
	Municipal Borough, Urban or Rural District, Burgh or District Council		Borough, Burgh or County Constituency
	Civil Parish		
	Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

## 1:10,000 Raster Mapping

	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil, parish or community boundary
	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
	Area of wooded vegetation		Non-coniferous trees
	Non-coniferous trees (scattered)		Coniferous trees
	Coniferous trees (scattered)		Positioned tree
	Orchard		Coppice or Osiers
	Rough Grassland		Heath
	Scrub		Marsh, Salt Marsh or Reeds
	Water feature		Flow arrows
	Mean high water (springs)		Mean low water (springs)
	Telephone line (where shown)		Electricity transmission line (with poles)
	Bench mark (where shown)		Triangulation station
	Point feature (e.g. Guide Post or Mile Stone)		Pylon, flare stack or lighting tower
	Site of (antiquity)		Glasshouse
	General Building		Important Building

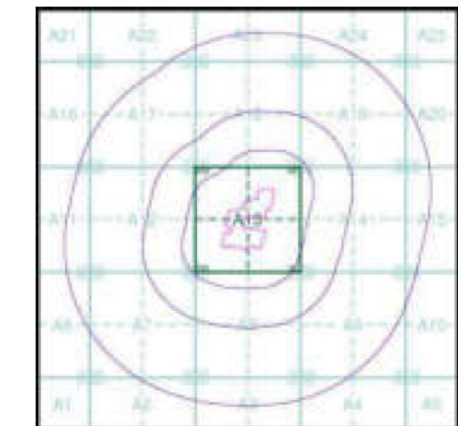
# Envirocheck

LANDMARK INFORMATION GROUP

## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Hertfordshire	1:10,560	1884	2
Hertfordshire	1:10,560	1899	3
Hertfordshire	1:10,560	1925	4
Hertfordshire	1:10,560	1939	5
Hertfordshire	1:10,560	1950	6
Ordnance Survey Plan	1:10,000	1960	7
Ordnance Survey Plan	1:10,000	1965 - 1966	8
Ordnance Survey Plan	1:10,000	1976	9
Ordnance Survey Plan	1:10,000	1981 - 1989	10
Ordnance Survey Plan	1:10,000	1991	11
10K Raster Mapping	1:10,000	1999	12
Street View	Variable		13

## Historical Map - Slice A



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire

Landmark  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk

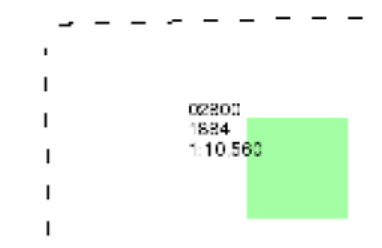
## Hertfordshire

Published 1884

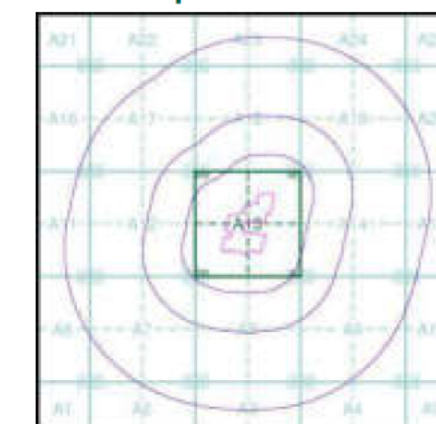
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A

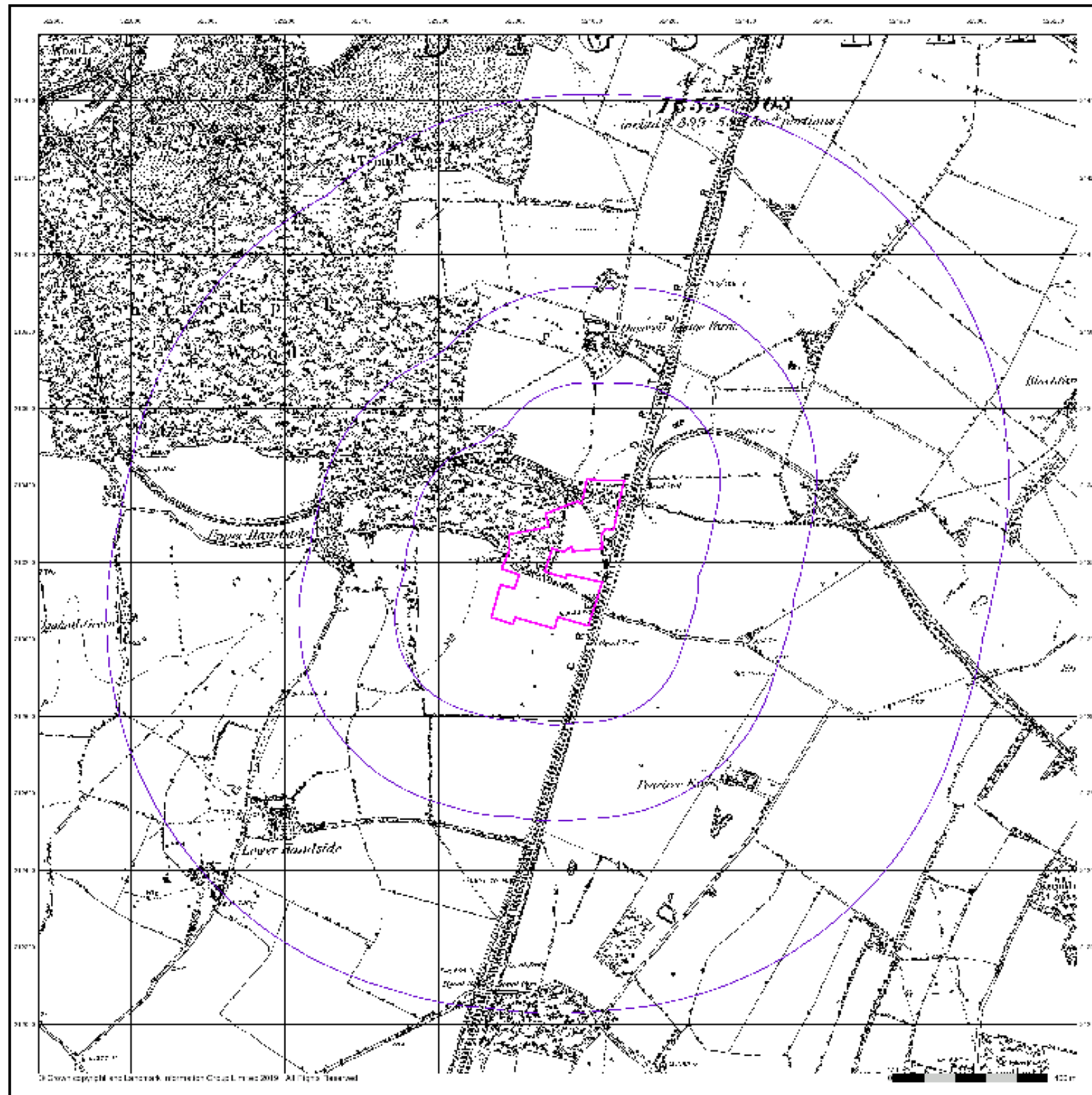


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National Grid Reference: 523920, 213210  
Slice: A  
Site Area (Ha): 6.66  
Search Buffer (m): 1000

### Site Details

Site at, Welwyn Garden City, Hertfordshire



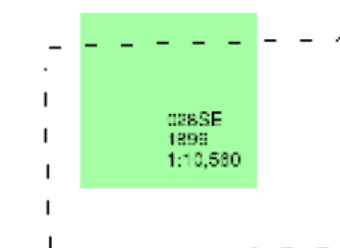
## Hertfordshire

Published 1899

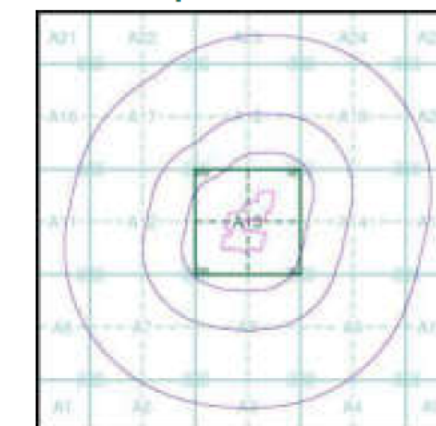
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A

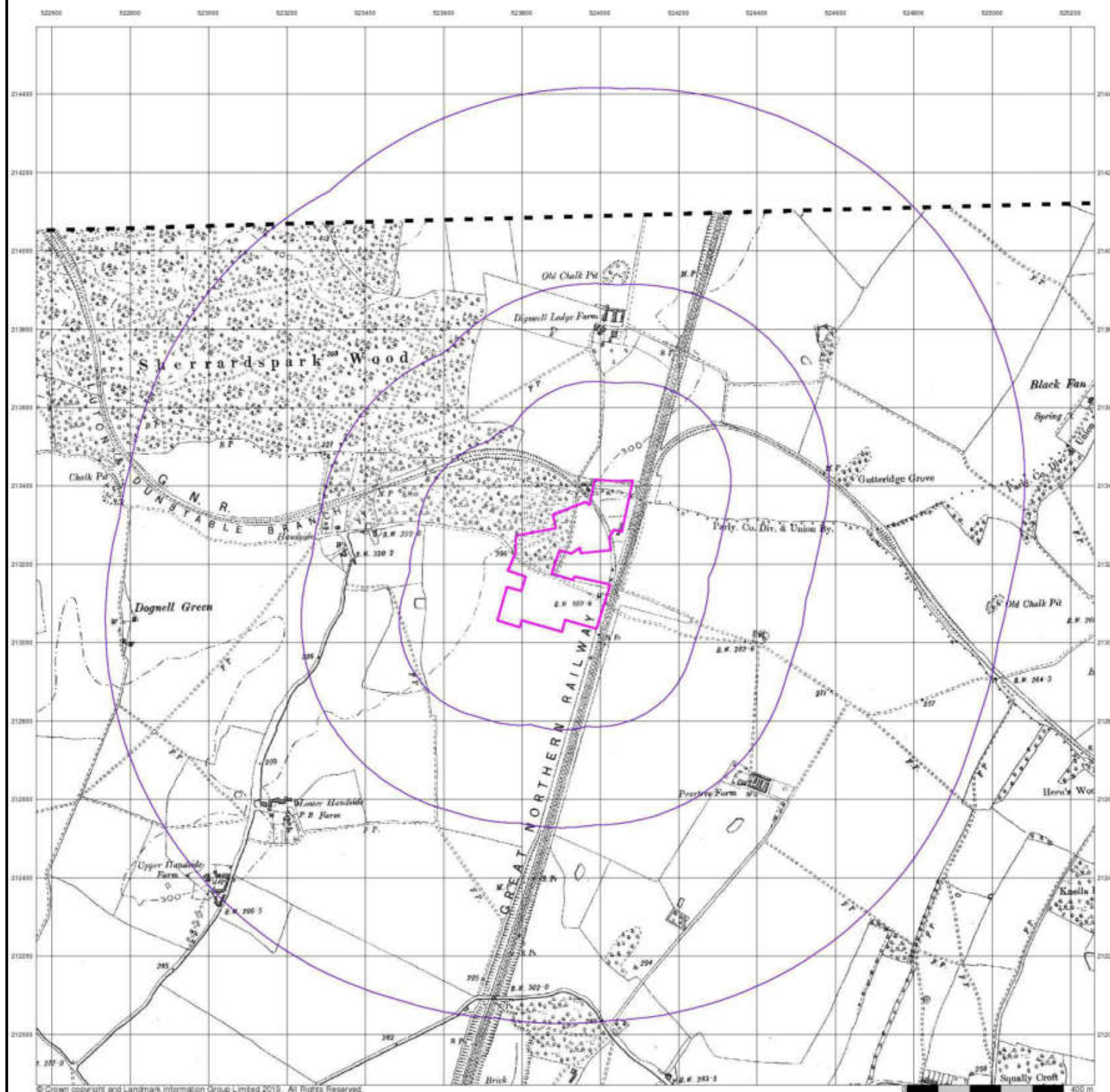


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 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

### Site Details

Site at, Welwyn Garden City, Hertfordshire



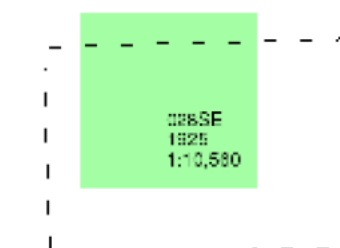
## Hertfordshire

Published 1925

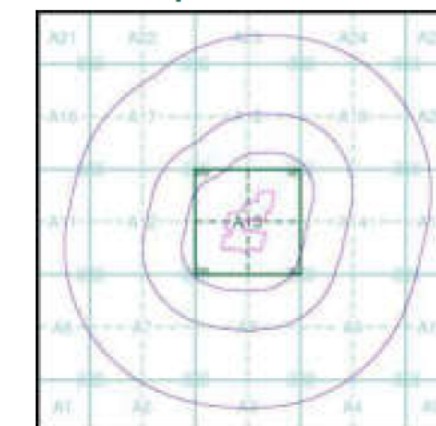
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A

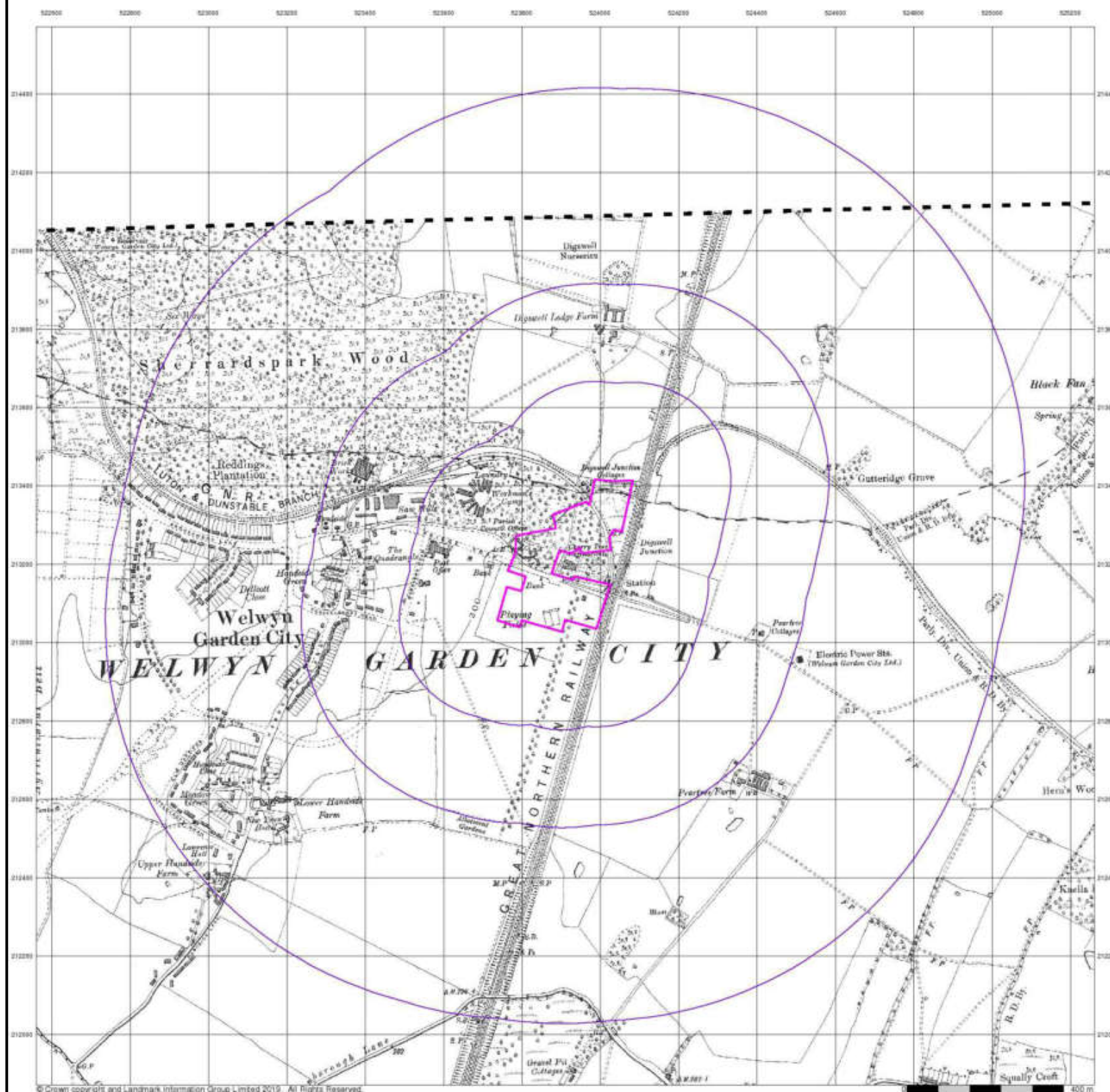


### Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

### Site Details

Site at, Welwyn Garden City, Hertfordshire





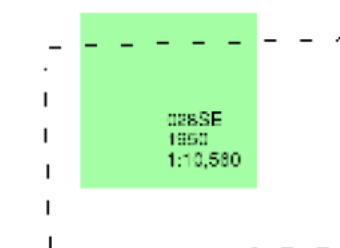
## Hertfordshire

Published 1950

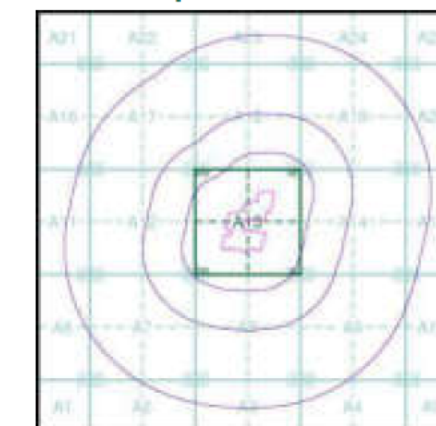
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A

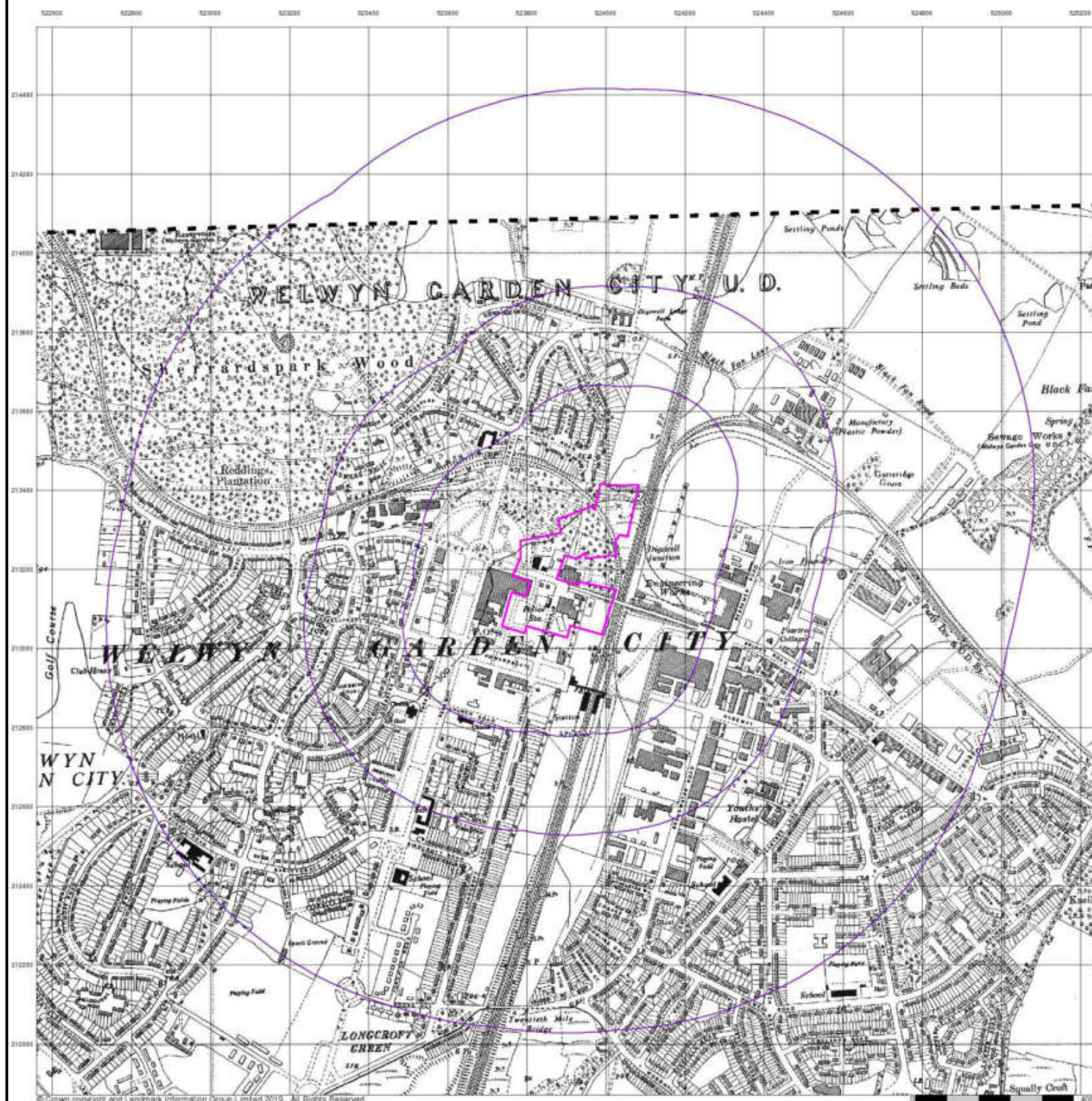


### Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

### Site Details

Site at, Welwyn Garden City, Hertfordshire



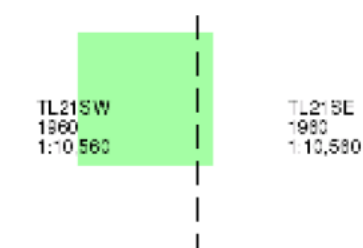
## Ordnance Survey Plan

Published 1960

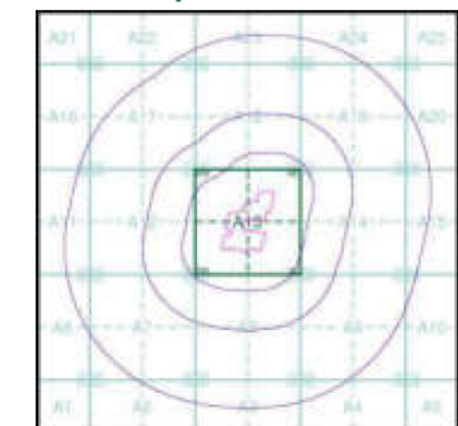
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)



## Historical Map - Slice A



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire



## Ordnance Survey Plan

Published 1965 - 1966

Source map scale - 1:10,000

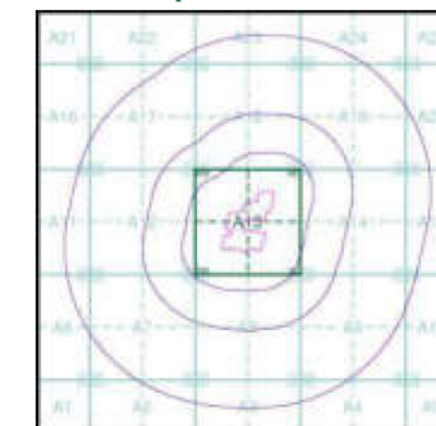
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

TL21SW  
1966  
1:10,560

TL21SE  
1965  
1:10,560

## Historical Map - Slice A



## Order Details

Order Number: 219952457\_1\_1  
Customer Ref: A115249 WGC Town Centre  
National Grid Reference: 523920, 213210  
Slice: A  
Site Area (Ha): 6.66  
Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire



## Ordnance Survey Plan

Published 1976

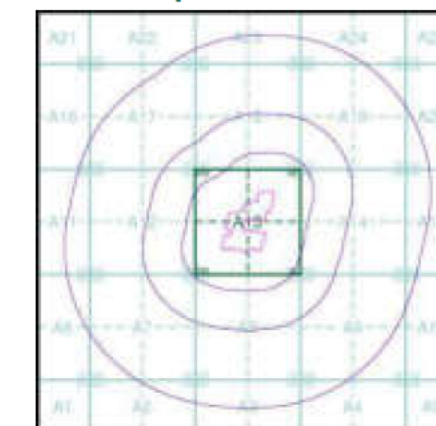
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

TL21 SW  
1976  
1:10,000

## Historical Map - Slice A

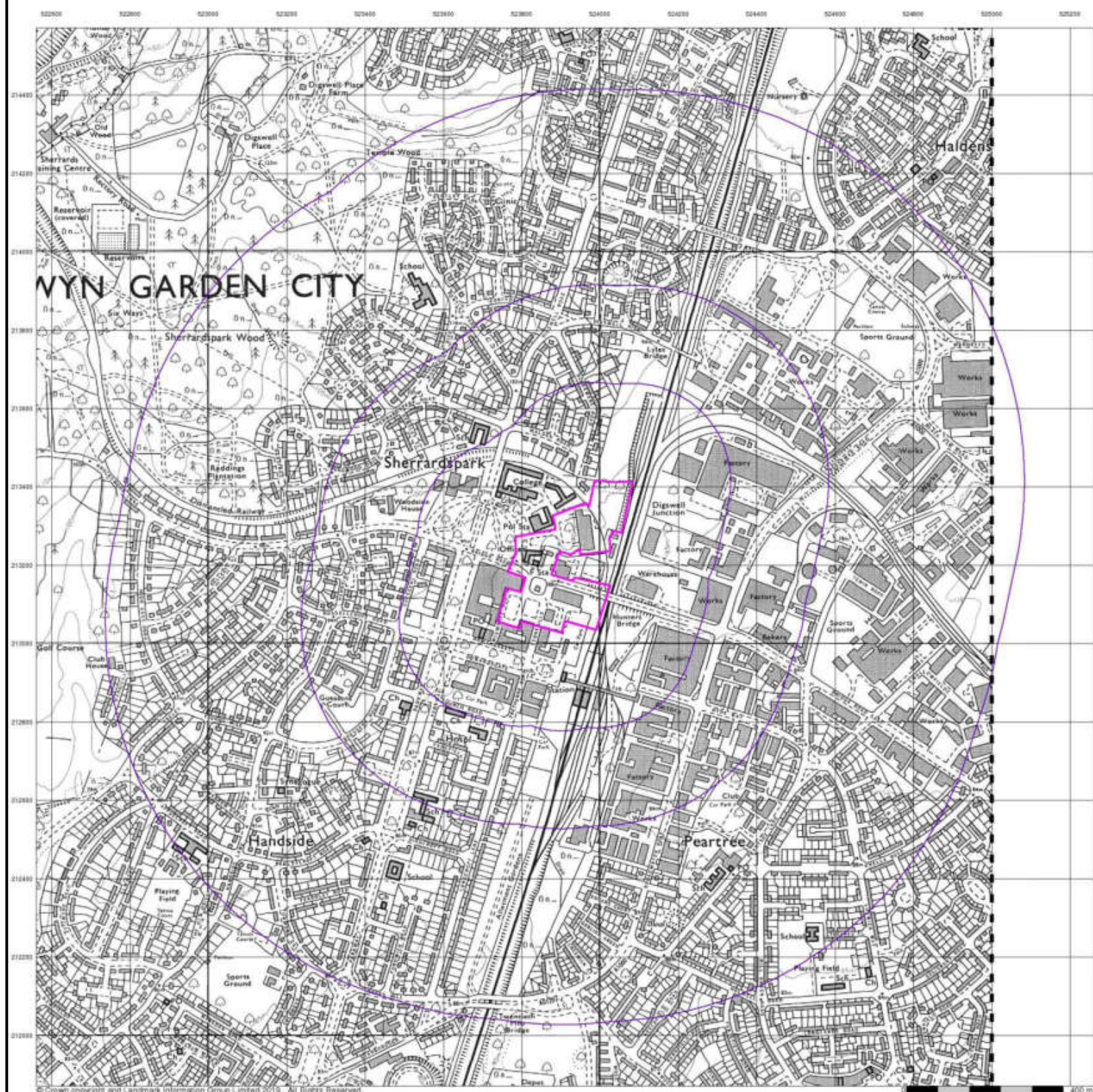


## Order Details

Order Number: 219952457\_1\_1  
Customer Ref: A115249 WGC Town Centre  
National Grid Reference: 523920, 213210  
Slice: A  
Site Area (Ha): 6.66  
Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire



## Ordnance Survey Plan

Published 1981 - 1989

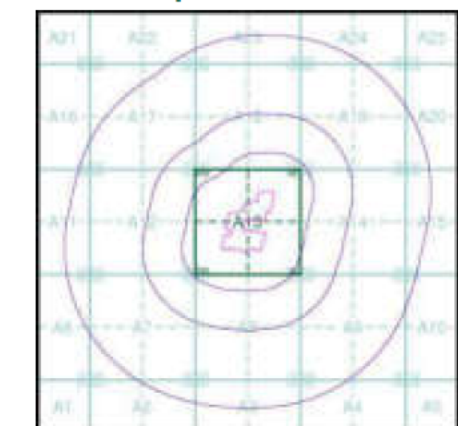
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

TL21SW 1969 1:10,000	TL21SE 1981 1:10,000
----------------------------	----------------------------

## Historical Map - Slice A

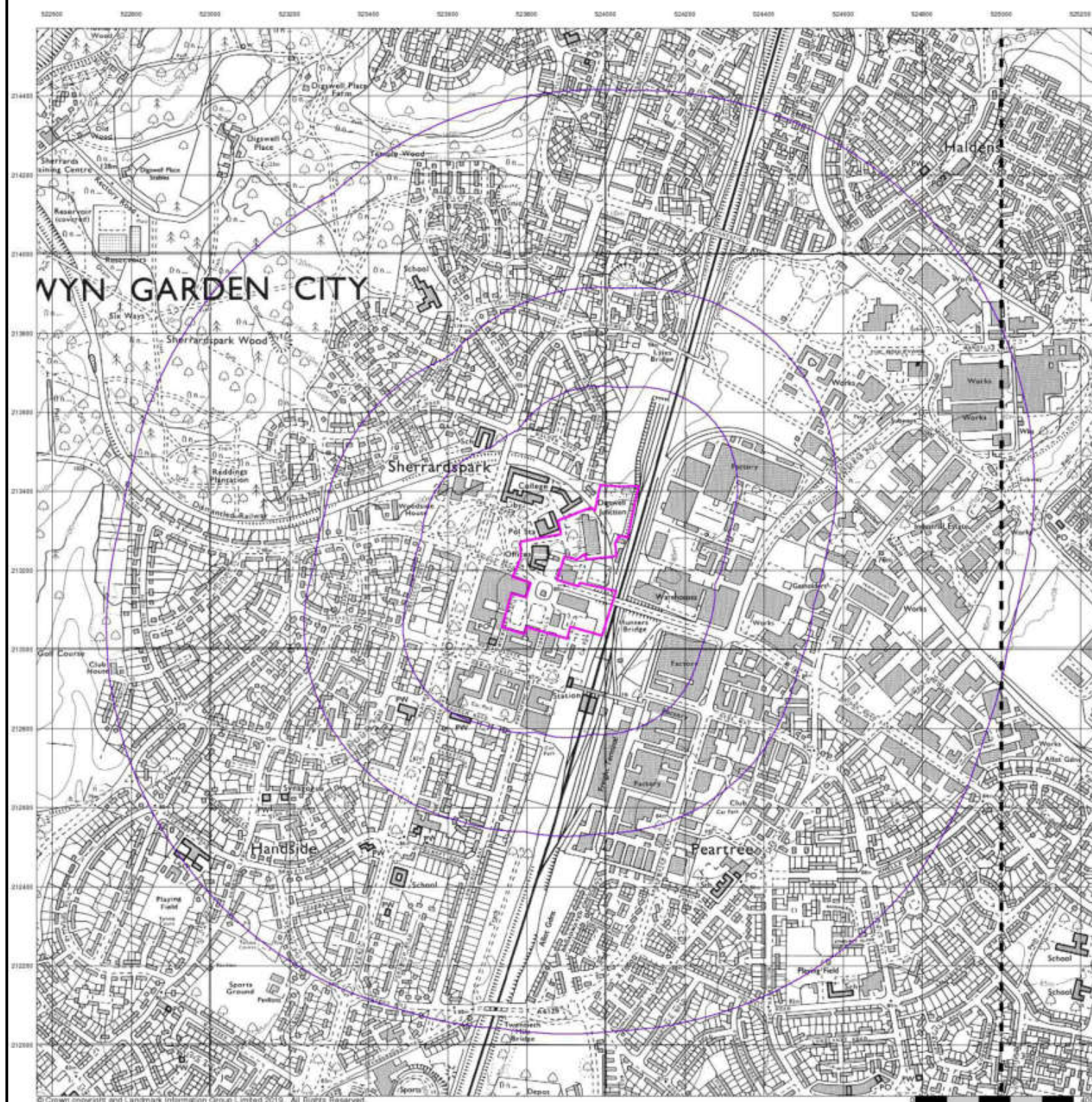


## Order Details

Order Number: 219952457\_1\_1  
Customer Ref: A115249 WGC Town Centre  
National Grid Reference: 523920, 213210  
Slice: A  
Site Area (Ha): 6.66  
Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire



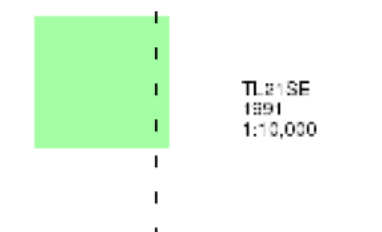
## Ordnance Survey Plan

Published 1991

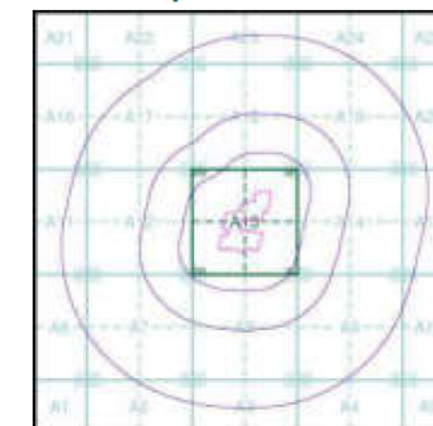
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A

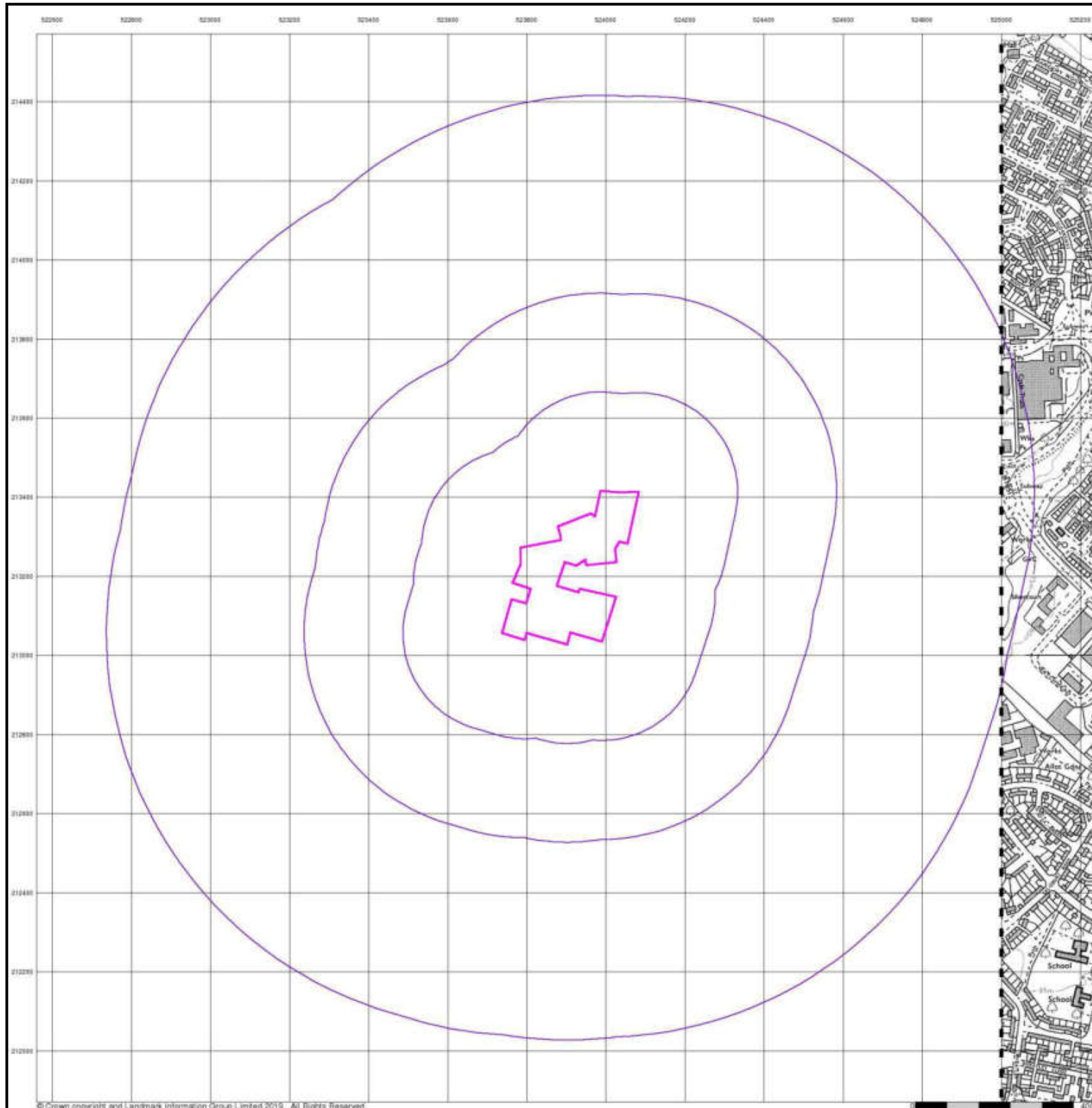


### Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

### Site Details

Site at, Welwyn Garden City, Hertfordshire



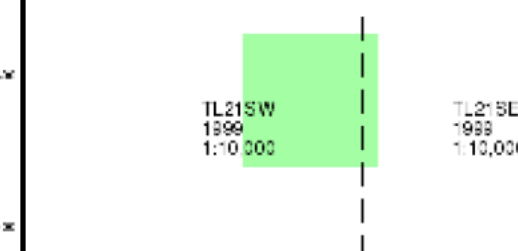
## 10k Raster Mapping

Published 1999

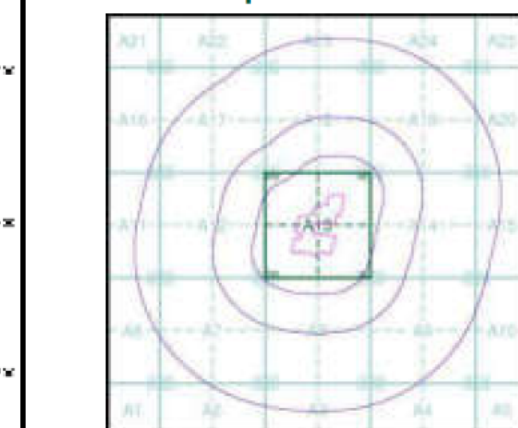
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

## Map Name(s) and Date(s)



## Historical Map - Slice A



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire

## Street View

Published 2019

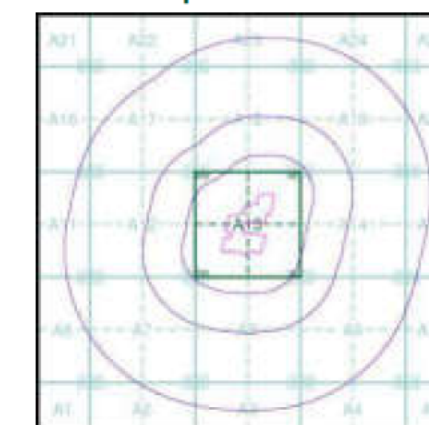
Source map scale - 1:10,000

Street View is a street-level map for the whole of Great Britain produced by the Ordnance Survey. These maps are provided at a nominal scale of 1:10,000

## Map Name(s) and Date(s)



## Street View Map - Slice A

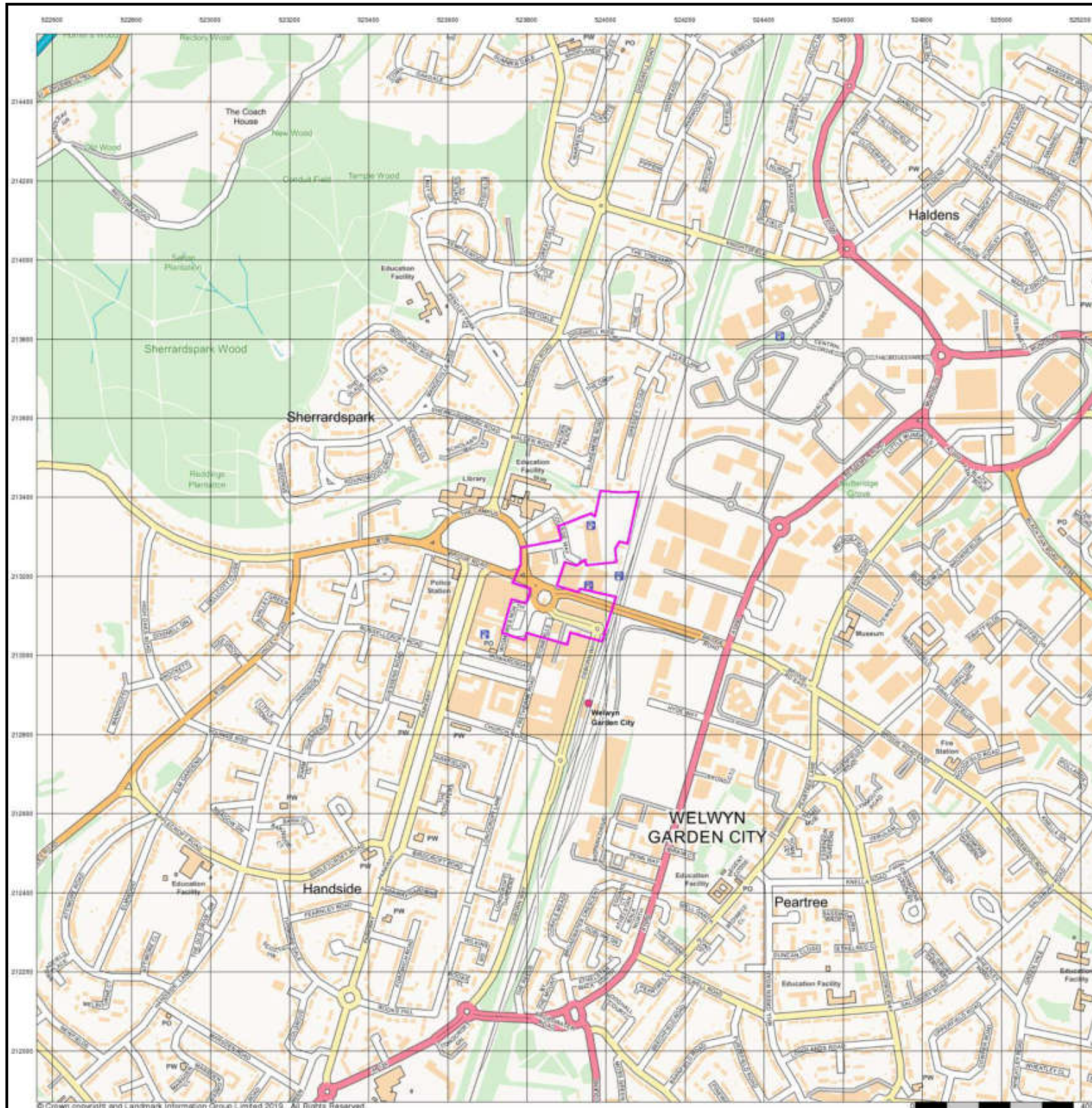


## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

## Site Details






Site at, Welwyn Garden City, Hertfordshire









## Industrial Land Use Map

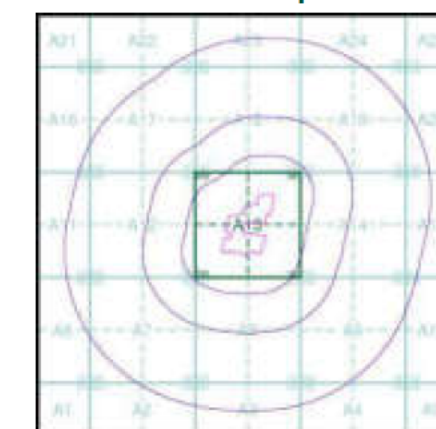
### General

-  Acquisition
-  Specified Boundary
-  Bearing Reference Point
-  Site
-  Map ID

### Industrial Land Use

-  Coal mine - Trade Wreck - Fuel
-  Fuel - Fuel - Fuel
-  Gas Pipeline
-  Underground Pipeline Corridor

## Industrial Land Use Map - Slice A



### Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

### Site Details

Site at, Welwyn Garden City, Hertfordshire

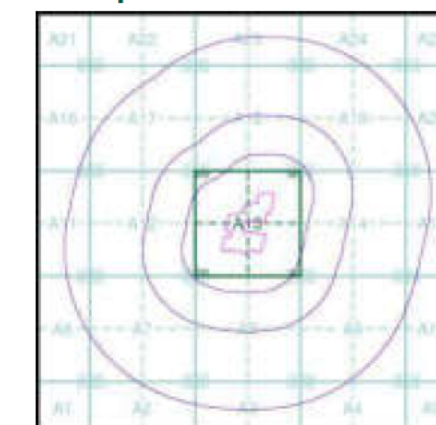
## General

- Study Area
- Search Buffer
- Flood Defence Point

## Agency and Hydrological (Flood)

- Flooded Flooding from River or Flow within Catchment (Zone 1)
- Flooded from River or Flow within Catchment (Zone 2)
- Area Benefiting from Flood Defence
- Floodable along Roads
- Flood Defence

## Flood Map - Slice A



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire

## General

- Study Area
- Search Buffer
- Borehole Location
- Map
- Boundary of Local Authority

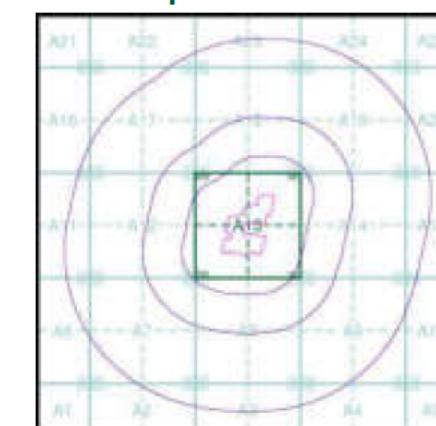
## Agency and Hydrological (Boreholes)

- Borehole (Agency)
- Borehole (Hydrological)
- Borehole (Agency)
- Contaminated
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [www.envirocheck.co.uk](http://www.envirocheck.co.uk).

## Borehole Map - Slice A



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire

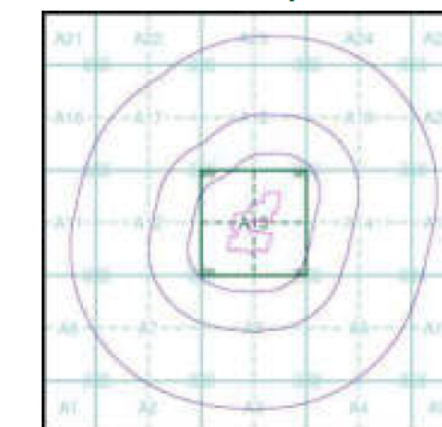
## General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

## OS Water Network Data

- |                |                           |
|----------------|---------------------------|
| — Canal        | — Drain                   |
| — Reservoir    | — Other                   |
| — Foreshore    | — Lake                    |
| — Marsh        | — Transfer                |
| — Tidal River  | — Lock Or Flight Of Locks |
| — Inland River | — Sea                     |

## OS Water Network Map - Slice A

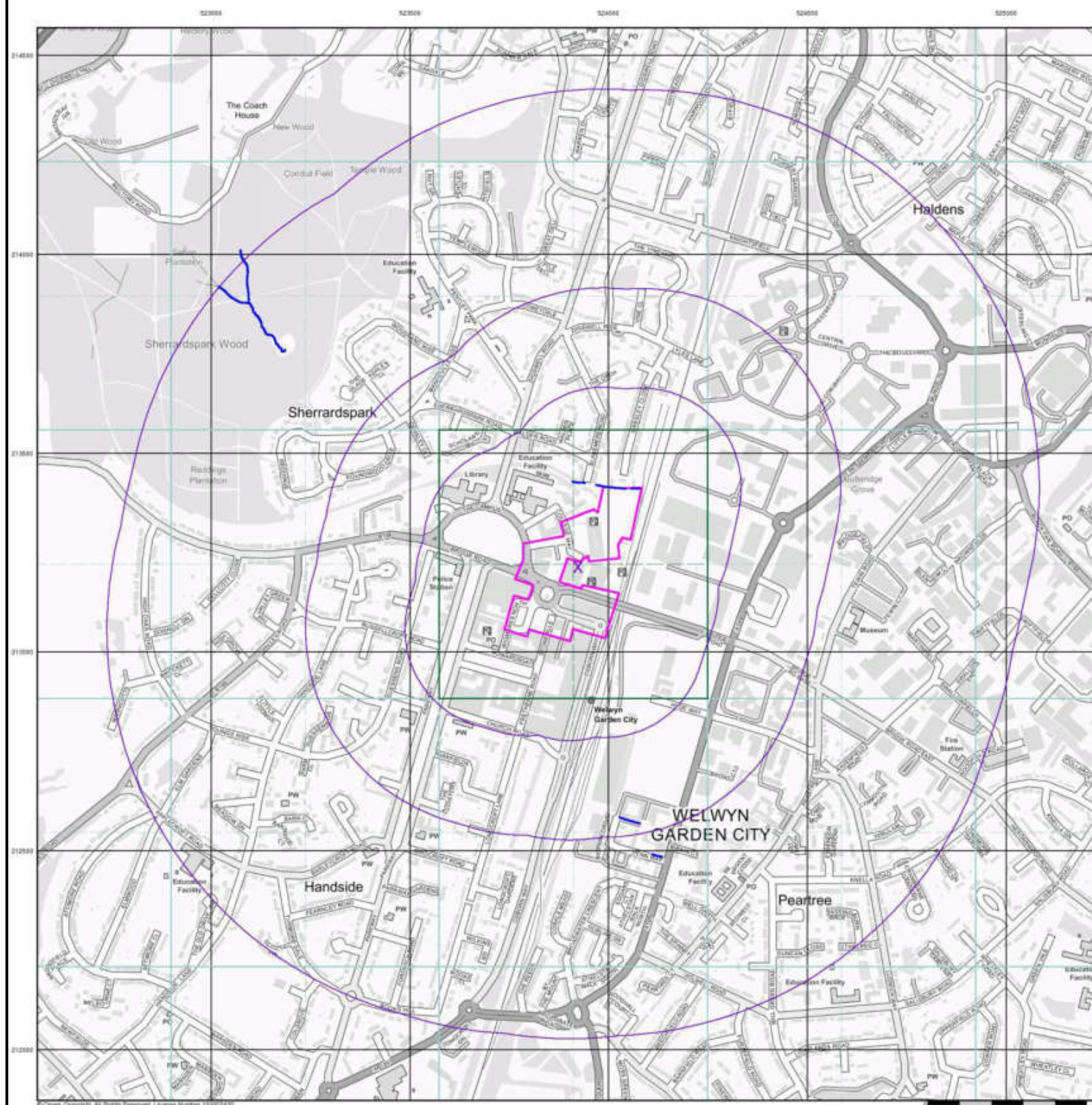


## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 1000

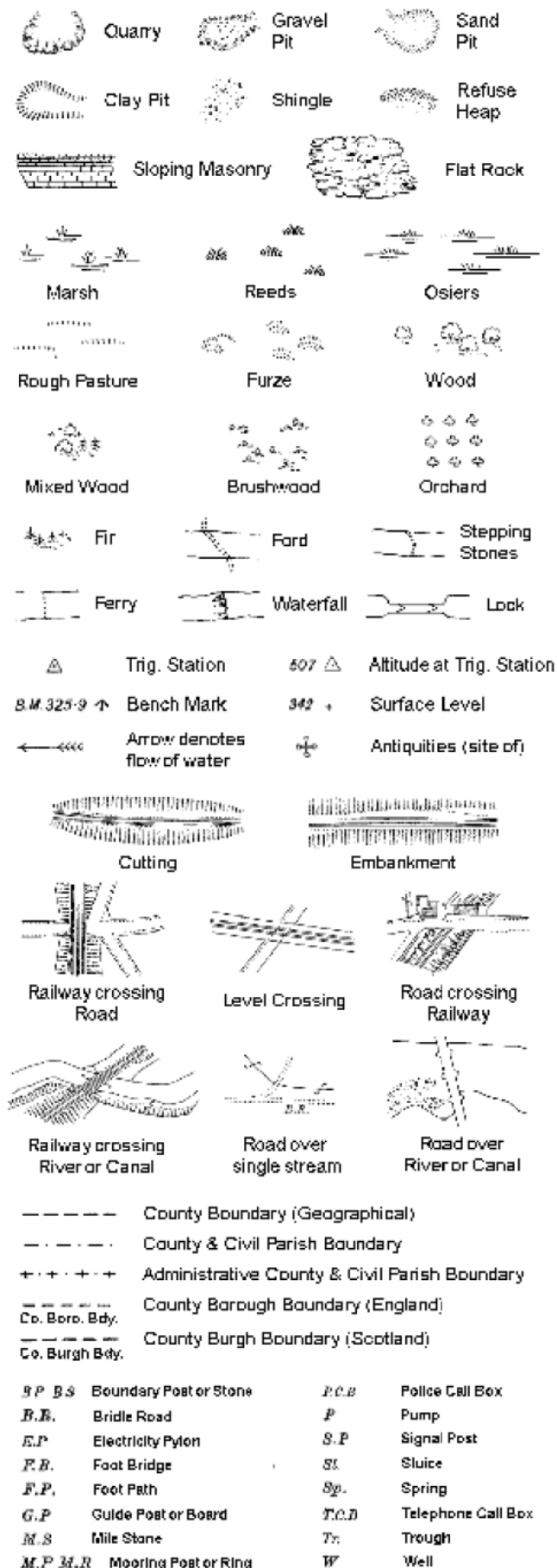
## Site Details

Site at, Welwyn Garden City, Hertfordshire

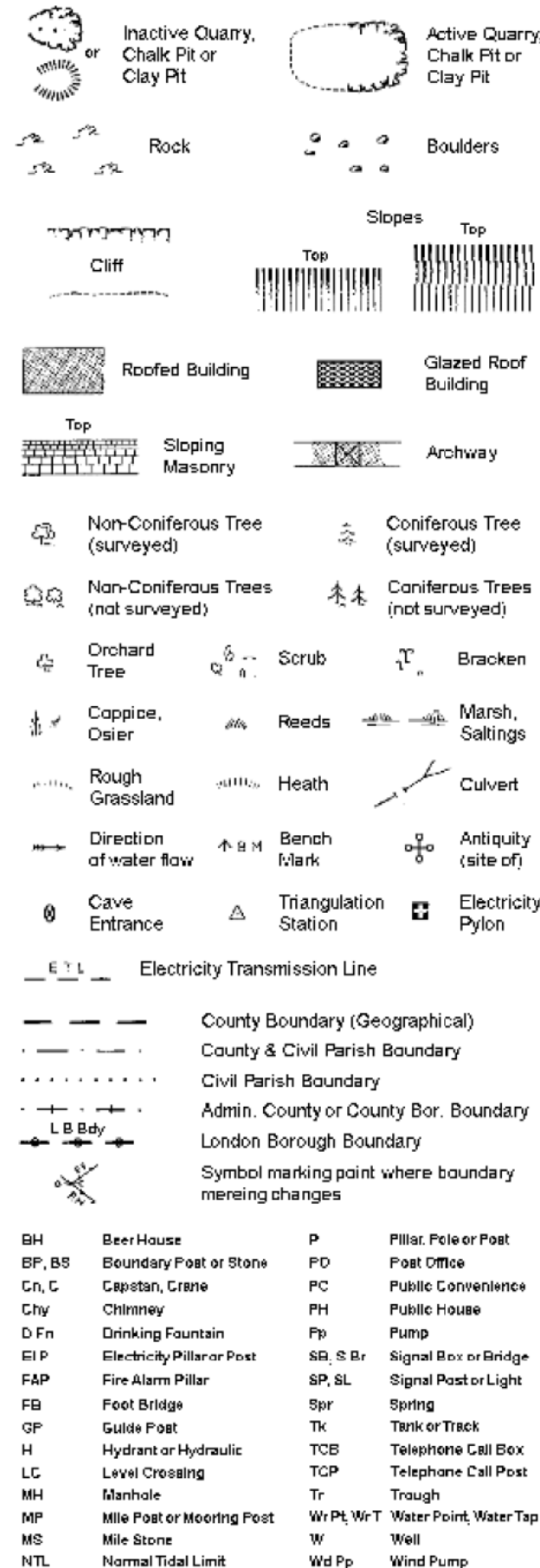


# Historical Mapping Legends

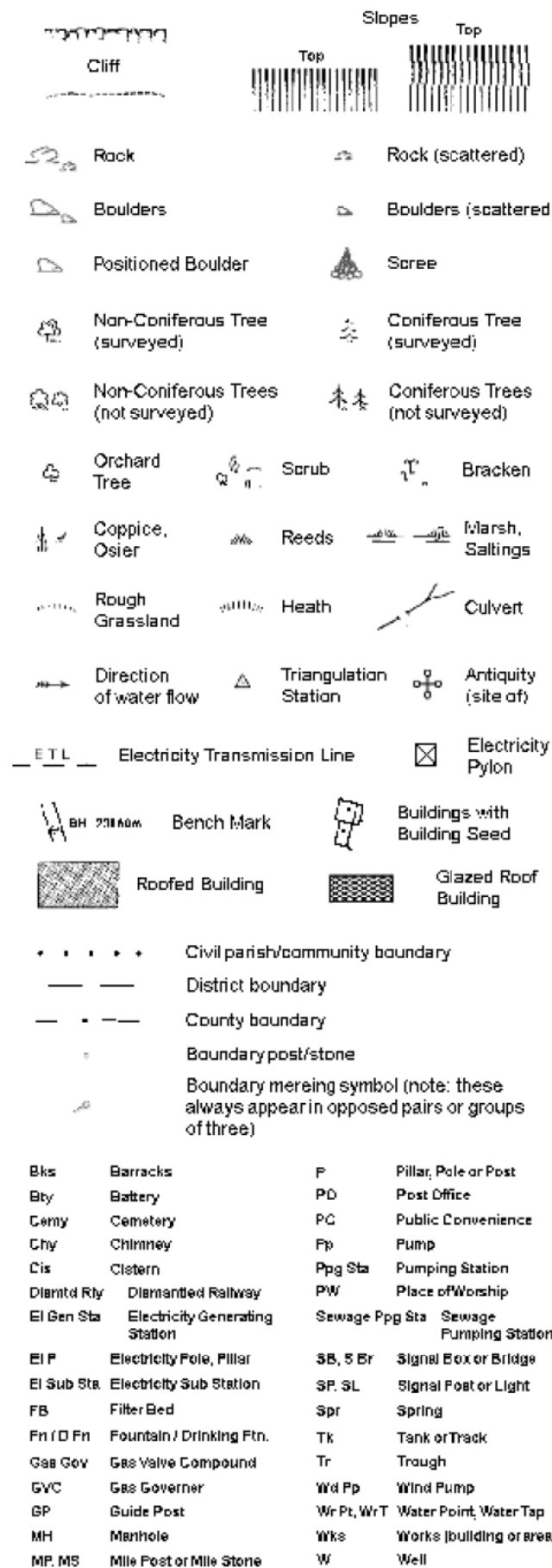
## Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



## Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



## Large-Scale National Grid Data 1:2,500 and 1:1,250



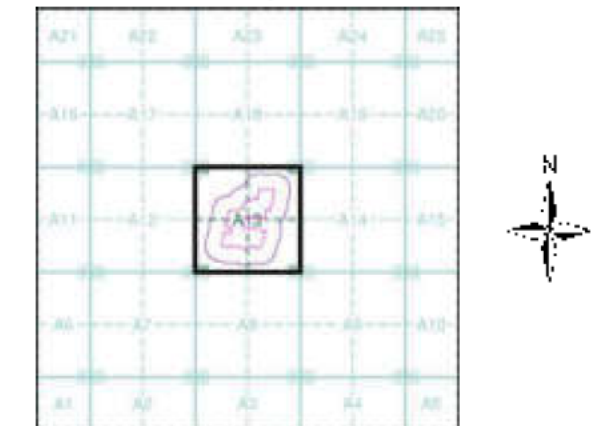
# Envirocheck

LANDMARK INFORMATION GROUP

## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Hertfordshire	1:2,500	1878	2
Hertfordshire	1:2,500	1898	3
Hertfordshire	1:2,500	1923	4
Hertfordshire	1:2,500	1938	5
Ordnance Survey Plan	1:1,250	1960 - 1961	6
Additional SIMs	1:1,250	1961 - 1986	7
Ordnance Survey Plan	1:1,250	1965 - 1971	8
Ordnance Survey Plan	1:2,500	1972	9
Ordnance Survey Plan	1:1,250	1980 - 1986	10
Additional SIMs	1:1,250	1991 - 1992	11
Large-Scale National Grid Data	1:1,250	1993	12
Large-Scale National Grid Data	1:1,250	1993 - 1994	13

## Historical Map - Segment A13



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

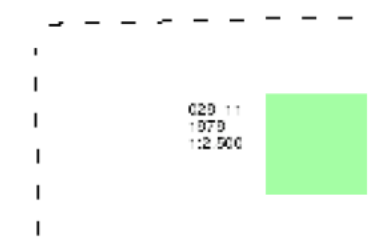
Site at, Welwyn Garden City, Hertfordshire

Landmark  
 INFORMATION GROUP

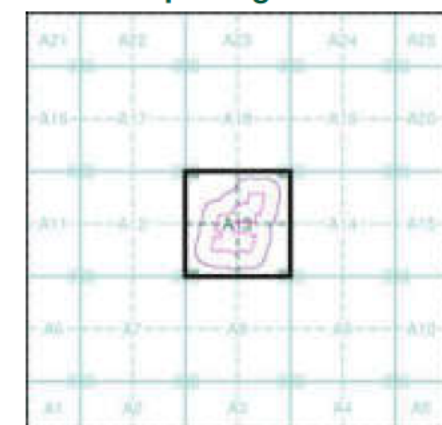
Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

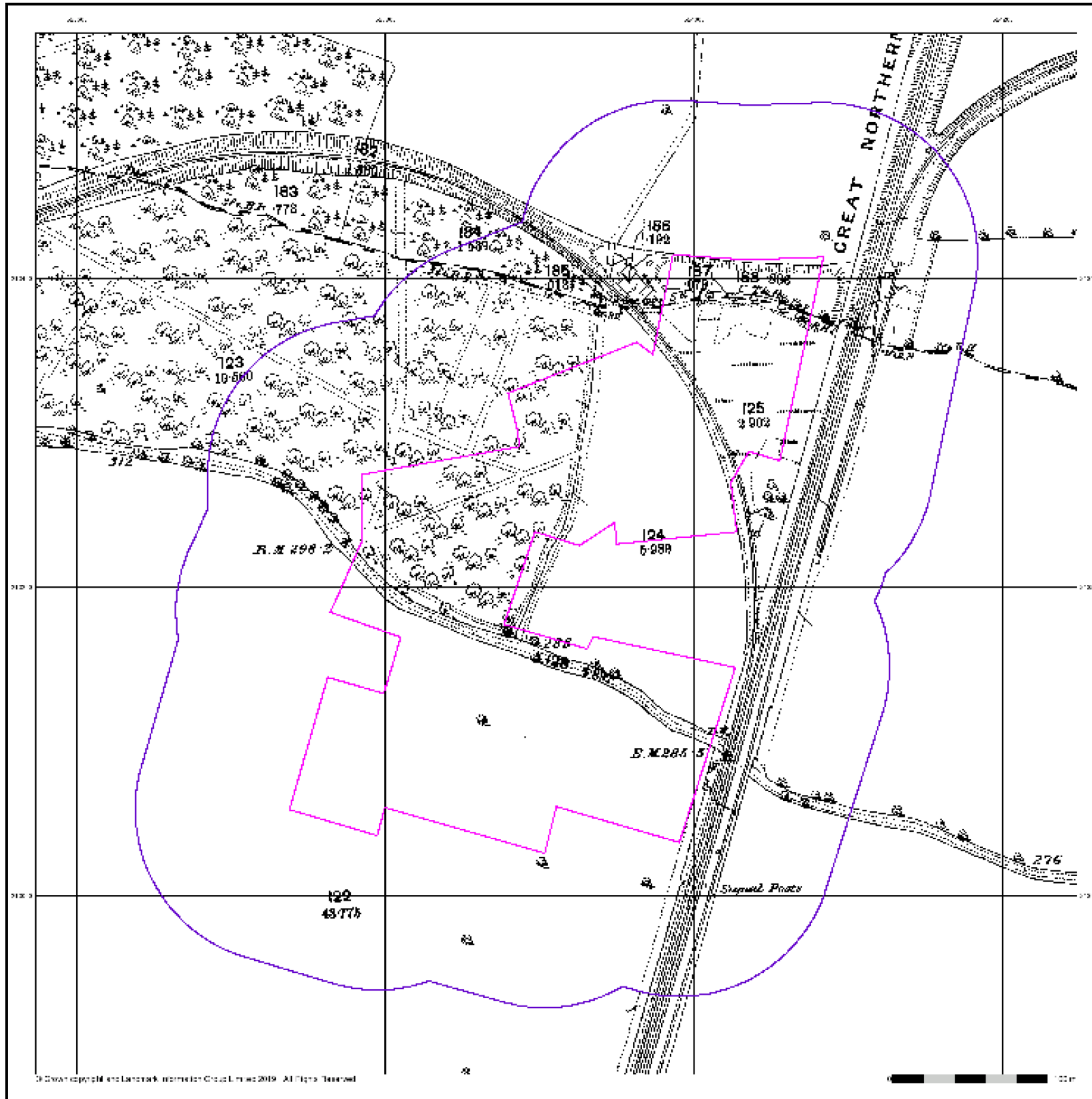


## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire



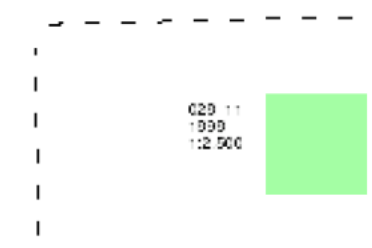
## Hertfordshire

Published 1898

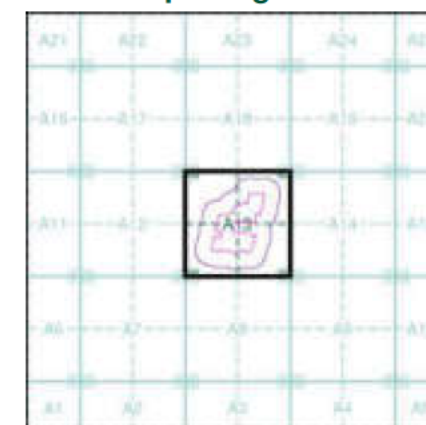
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

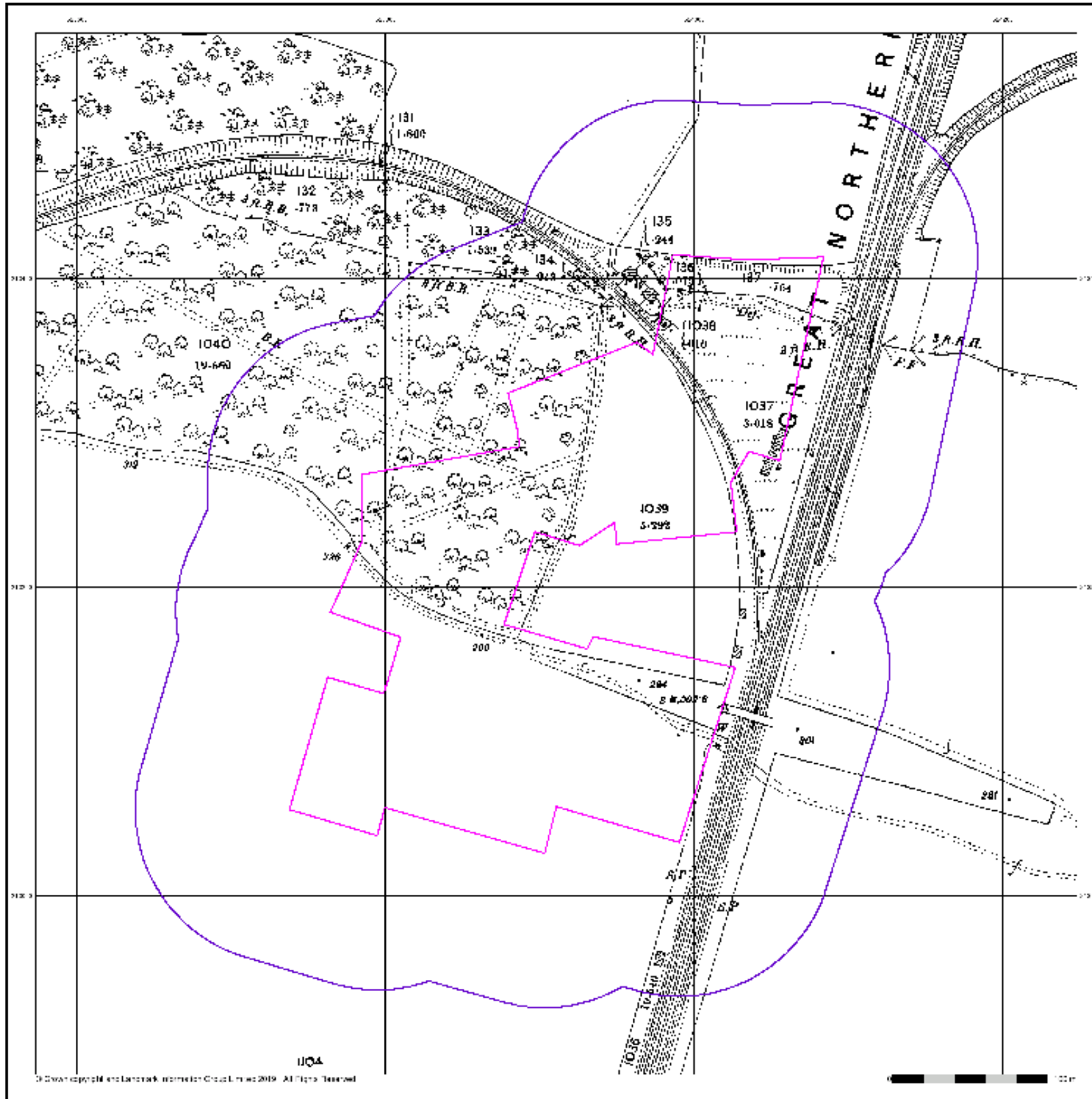


### Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

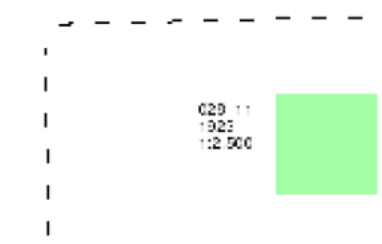
### Site Details

Site at, Welwyn Garden City, Hertfordshire

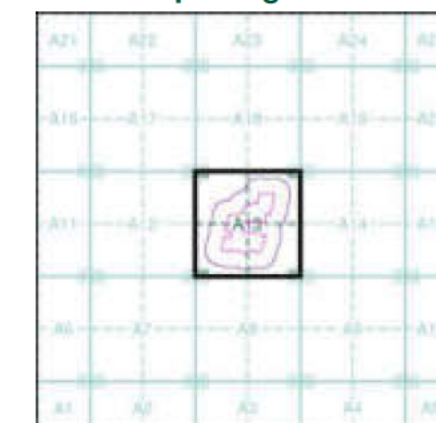


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

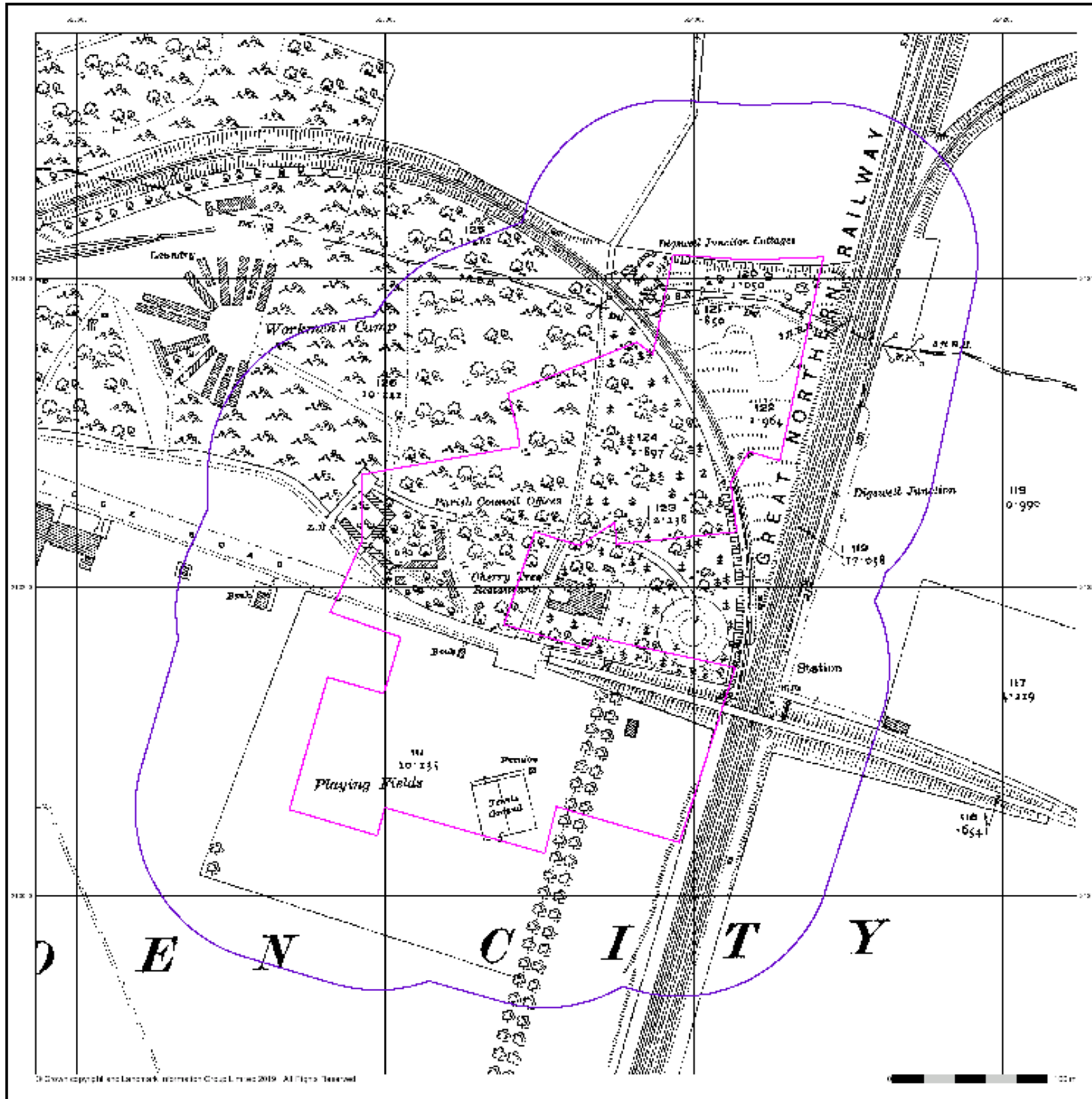


## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire



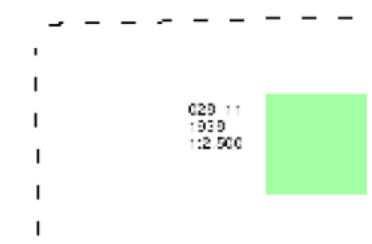
Hertfordshire

Published 1938

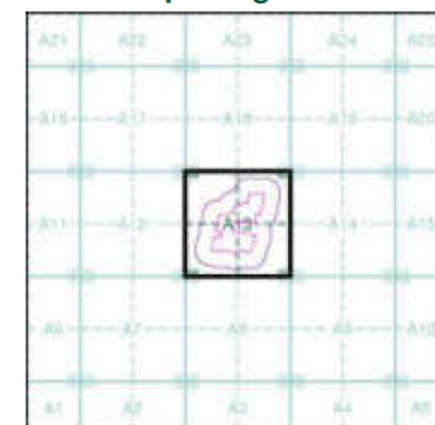
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

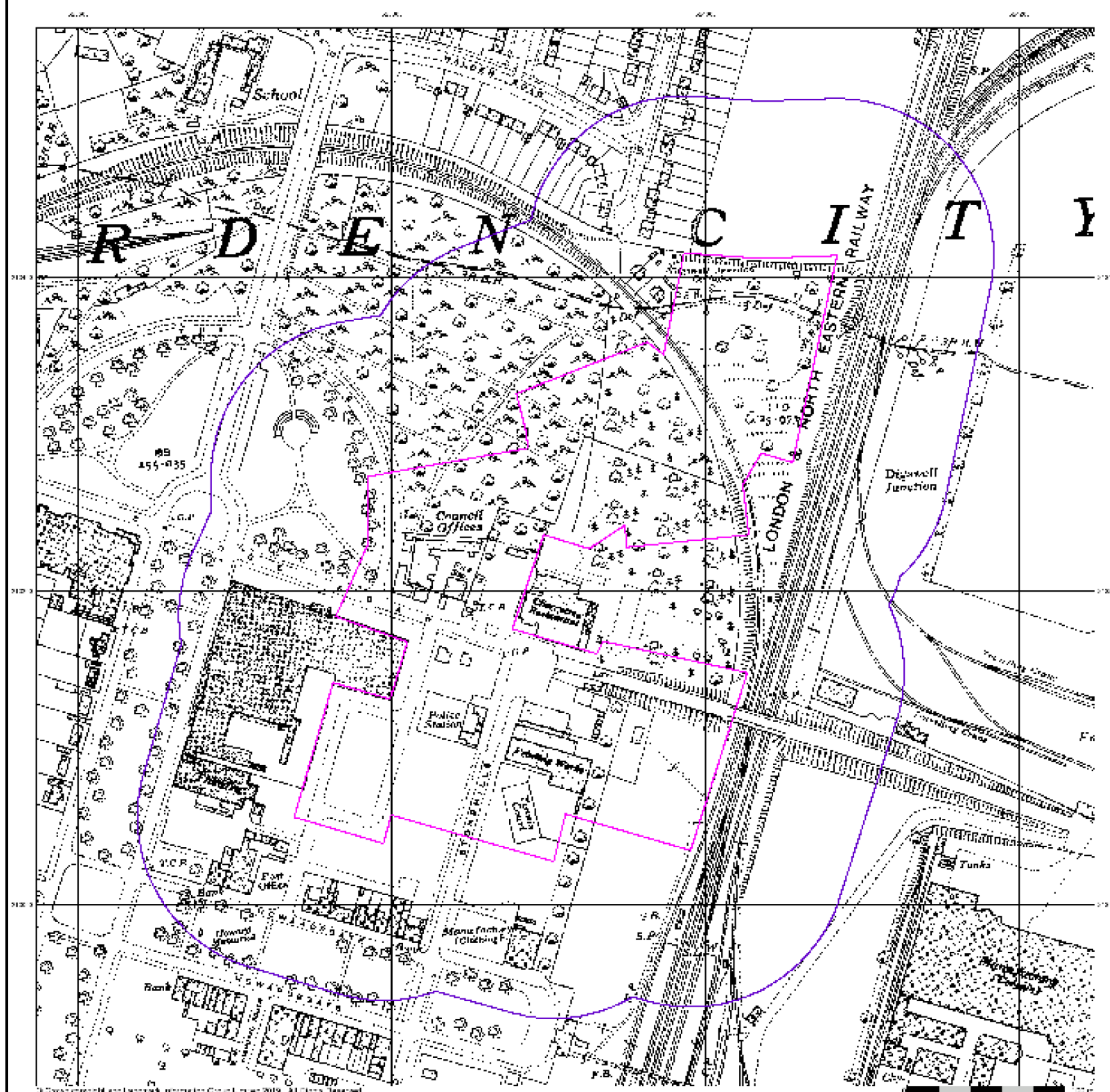


## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire



## Ordnance Survey Plan

Published 1960 - 1961

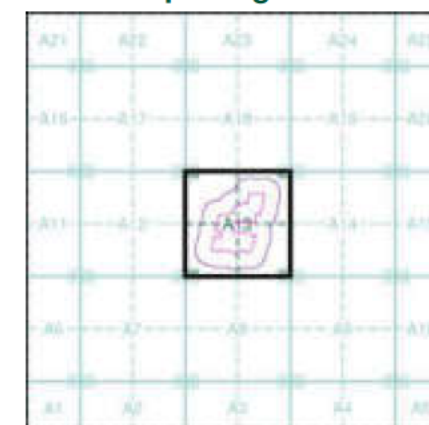
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)

1:2313NH	1:2413NW
1961	1961
1:1,250	1:1,250
1:2313NE	1:2413SE
1961	1961
1:1,250	1:1,250

## Historical Map - Segment A13



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire

## Additional SIMs

Published 1961 - 1986

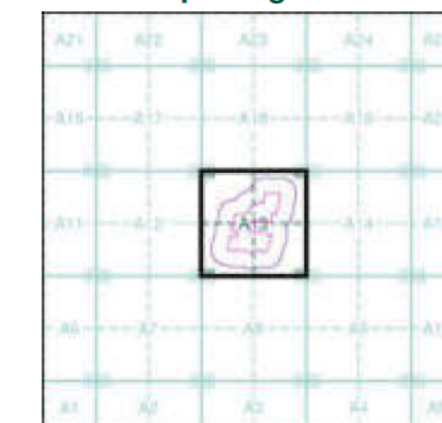
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

## Map Name(s) and Date(s)

T.2313NH	T.2413NW
1991	1978
1:1,250	1:1,250
T.2313SE	T.2413SW
1985	1978
1:1,250	1:1,250
T.2312NE	T.2412NW
1995	1995
1:1,250	1:1,250

## Historical Map - Segment A13



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire

## Ordnance Survey Plan

Published 1965 - 1971

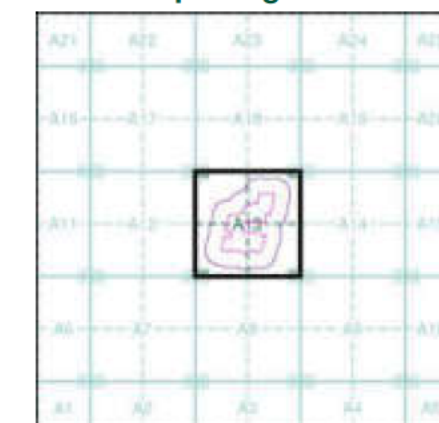
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)

T23135	T23136
1965	1971
1:1,250	1:1,250
T2312NE	T2412NW
1965	1969
1:1,250	1:1,250

## Historical Map - Segment A13



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire

## Ordnance Survey Plan

Published 1972

Source map scale - 1:2,500

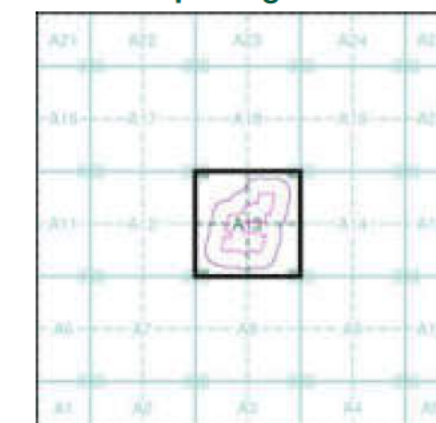
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)

1:2500  
1872  
1:2,500

1:2500  
1872  
1:2,500

## Historical Map - Segment A13



## Order Details

Order Number: 219952457\_1\_1  
Customer Ref: A115249 WGC Town Centre  
National Grid Reference: 523920, 213210  
Slice: A  
Site Area (Ha): 6.66  
Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire

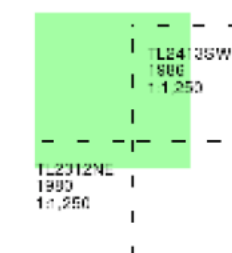
## Ordnance Survey Plan

Published 1980 - 1986

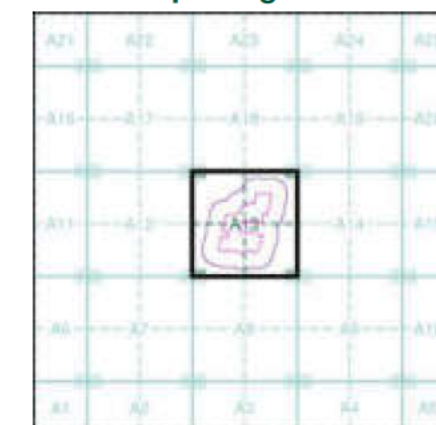
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire

## Additional SIMs

Published 1991 - 1992

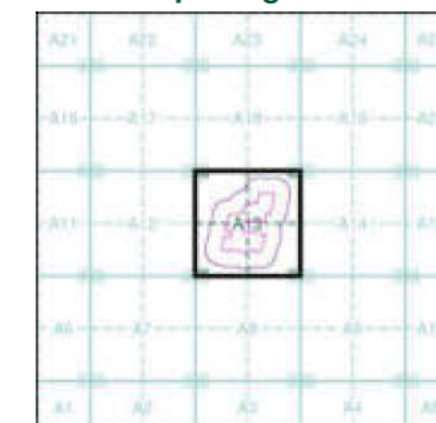
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

## Map Name(s) and Date(s)

T2413NW	1991	1:1,250
T2313SE	1992	1:1,250
T2313SE	1991	1:1,250
T2312NE	1991	1:1,250
T2412NW	1991	1:1,250

## Historical Map - Segment A13



## Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

## Site Details

Site at, Welwyn Garden City, Hertfordshire

## Large-Scale National Grid Data

Published 1993

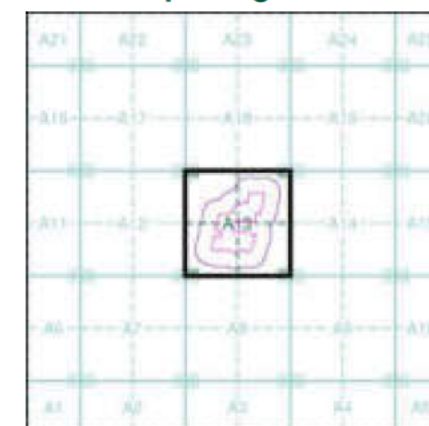
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded S M cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)

1:2413NW  
1993  
1:1,250  
T.221135 T.221135W  
1993 1993  
1:1,250 1:1,250  
1:2412NW  
1993  
1:1,250

### Historical Map - Segment A13



### Order Details

Order Number: 219952457\_1\_1  
Customer Ref: A115249 WGC Town Centre  
National Grid Reference: 523920, 213210  
Slice: A  
Site Area (Ha): 6.66  
Search Buffer (m): 100

### Site Details

Site at, Welwyn Garden City, Hertfordshire

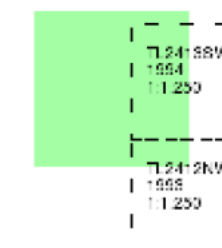
## Large-Scale National Grid Data

Published 1993 - 1994

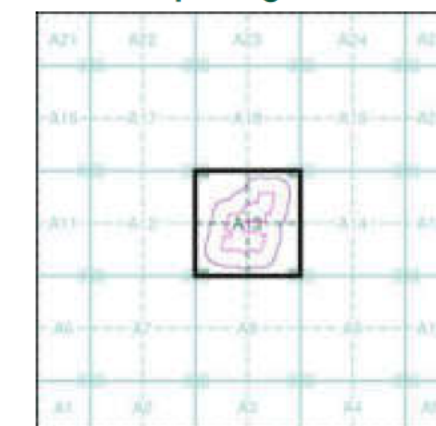
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded S M cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)



### Historical Map - Segment A13



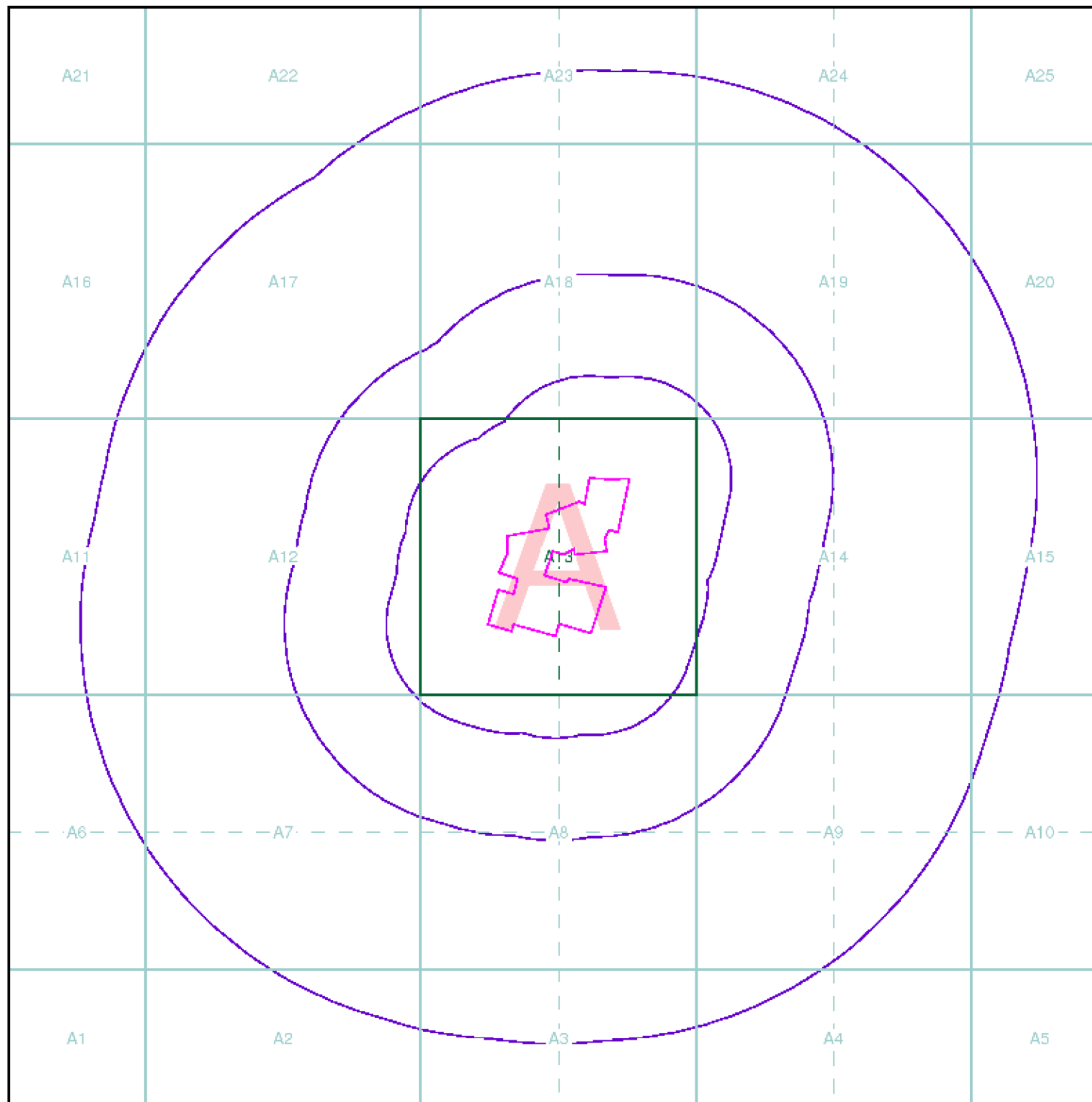
### Order Details

Order Number: 219952457\_1\_1  
 Customer Ref: A115249 WGC Town Centre  
 National Grid Reference: 523920, 213210  
 Slice: A  
 Site Area (Ha): 6.66  
 Search Buffer (m): 100

### Site Details

Site at, Welwyn Garden City, Hertfordshire





## Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

### Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

### Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

### Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

## Client Details

Mr D Perera, WYG Environment Planning Transport Ltd, 1 Angel Court, London, EC2R 7HJ

## Order Details

Order Number: 219952457\_1\_1  
Customer Ref: A115249 WGC Town Centre  
National Grid Reference: 523910, 213200  
Site Area (Ha): 6.66  
Search Buffer (m): 1000

## Site Details

Site at, Welwyn Garden City, Hertfordshire

Full Terms and Conditions can be found on the following link:  
<http://www.landmarkinfo.co.uk/Terms/Show/515>

Your ref: 19/0215/8116

Our ref: 47709//CBH/SC/HG/JE

04 October 2019

WYG Ltd,  
11<sup>th</sup> Floor,  
1 Angel Court,  
London,  
EC2R 7HJ

**PBA, now part of Stantec**  
Caversham Bridge House  
Waterman Place, Reading  
Berkshire RG1 8DN  
T: +44 (0)118 950 0761  
E: reading@peterbrett.com

**Attn: Agim Tafliku**

Dear Mr Tafliku,

**RE: PBA NATURAL CAVITIES DATABASE ARCHIVE SEARCH FOR THE SITE AT WELWYN GARDEN CITY CENTRE, WELWYN GARDEN CITY, AL8 6DG.**

We refer to your email dated 28 October 2019, regarding the above. We thank you for your instructions to carry out natural cavities database archive search for the above-named site.

The archive search has been carried out for the natural cavity records identified at the site, centred at National Grid Reference TL 2383 1326.

**NATURAL CAVITY ARCHIVE SEARCH**

*Table 1: PBA Natural Cavities Database records*

Approximate NGR	Approximate distance from site centre (m)	Recorded Location	Geology	Mining Cavity Details	Source
TL 2383 1326	On Site	B195 / College Way, Welwyn Garden City, Hertfordshire	<b>Superficial:</b> Glacial Till and morainic drift  <b>Solid:</b> Chalk Group	1 x Sinkhole	Welwyn Hatfield District Council
TL 2389 1312	On Site	B195 Bridge Road, Welwyn Garden City, Hertfordshire	<b>Superficial:</b> Glacial Till and morainic drift  <b>Solid:</b> Chalk Group	1 x Sinkhole	Welwyn Hatfield District Council
TL 2391 1310	On Site	Osborn Way / B195 Bridge Road, Welwyn Garden City, Hertfordshire	<b>Superficial:</b> Glacial Till and morainic drift  <b>Solid:</b> Chalk Group	1 x Sinkhole	Welwyn Hatfield District Council

The internal archive search indicates that the 3 natural cavity locations recorded on site pertain to individual single sinkhole features that had been recorded by Welwyn Hatfield Borough Council.

Welwyn Hatfield Borough Council kept a record of any natural cavity features that were discovered during construction when the city was being developed in the 1900s. The location of such features discovered where subsequently recorded and marked on a map. The map that contains the record for the sinkhole feature with a point accuracy of 100 feet (30 m). The map containing the natural cavity record was provided to PBA by Welwyn Hatfield Borough Council and was dated 22<sup>nd</sup> February 1983.

The map shows "swallow holes" that were often found during the course of road, sewer and housing construction in areas where the Glacial Gravels overlay the Chalk at approximately 10-14m bgl. Additionally, it was noted that some of the encountered features had been induced as a result of the construction works.

It was later noted that further clarification was sought on the terminology used within the reports and hence the type of solution feature has since been reclassified as a sinkhole instead of a swallow hole.

We trust that the information presented will assist you, but if you have any queries then please do not hesitate to contact the writer. We will invoice for this work at the end of the month and our payment terms are strictly 28 days.

Yours sincerely,



**James Weddle**

**Associate**

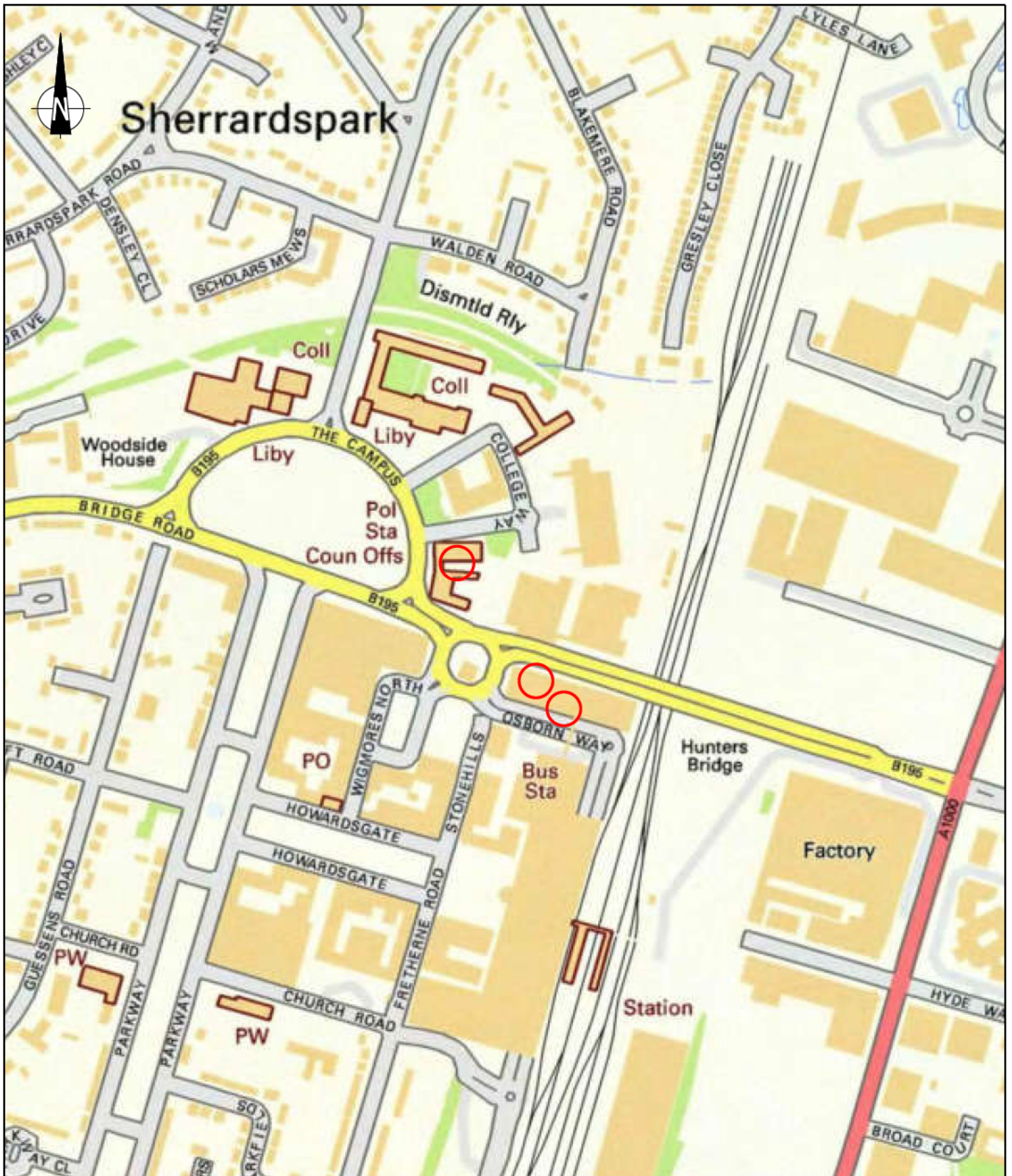
For and on behalf of

**PBA, NOW PART OF STANTEC**

The work undertaken by PBA was carried out on a fixed fee basis and in accordance with our Standard Terms and Conditions, a copy of which is attached to this report. ACE Agreement 2 Advisory, Investigatory and Other Service shall also apply where appropriate.

IN NO EVENT SHALL PBA BE LIABLE FOR ANY LOSS OR DAMAGE INCLUDING, WITHOUT LIMITATION, INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE ARISING FROM THE USE OF THE DATA FROM THE PBA CAVITIES DATABASES.

The Natural Cavities & Mining Cavities Databases have been compiled by Peter Brett Associates LLP (PBA Cavities Databases). They contain information collected since the 1980s from multiple sources including: academic publications, public/business organisations, online resources and commercial project experience. The databases are managed and updated with new records at regular intervals. The PBA Cavities Databases provide information to aid further assessment and should not be used alone to make final decisions on investment or construction on a site as further investigation may be necessary. Given the challenges of source data diversity, quality and age the PBA Cavities Databases cannot guarantee to contain a complete set of information relevant to a site, sometimes records may have been inaccurately positioned, incorrectly interpreted or missed. The data is not intended to be used in place of obtaining professional advice for a specific project. The PBA Cavities Databases are copyrighted and shall be treated as confidential information and must not, without the prior written consent of PBA, be disclosed to a third party. PBA is now part of Stantec.



0 100 200  
metres

○ Approximate Swallow Hole Location

Contains Ordnance Survey data © Crown copyright and database right 2018

## NC WELWYN GARDEN CITY TOWN CENTRE SITE LOCATION PLAN

Client

Date of 1st issue  
07.11.2019

A4 Scale  
1:5000

Figure Number

Drawn by  
davco

Checked by  
ZM

1



## Appendix C – Qualitative Risk Assessment Methodology

This qualitative risk assessment has been undertaken in accordance with CIRIA C552: Contaminated Land Risk Assessment, A Guide to Good Practice (Rudland et al., 2001). The CIRIA C552 risk categories and the assessment methodology are detailed below.

**Table C.1** Definition of Magnitude of Consequence

Category	Definition
Severe	Acute risks to human health, catastrophic damage to buildings/property, major pollution of controlled waters.
Medium	Chronic risk to human health, pollution of sensitive controlled waters, significant effects on sensitive ecosystems or species, significant damage to buildings or structures.
Mild	Pollution of non sensitive waters, minor damage to buildings or structures.
Minor	Requirement for protective equipment during site works to mitigate health effects, damage to non sensitive ecosystems or species.

The likelihood of an event (probability) takes into account both the presence of the hazard and target and the integrity of the pathway and has been assessed based on the categories given in Table C.2 below.

**Table C.2** Definition of Probability of Exposure

Category	Definition
High Likelihood	Pollutant linkage may be present, and risk is almost certain to occur in long term, or there is evidence of harm to the receptor.
Likely	Pollutant linkage may be present, and it is probable that the risk will occur over the long term.
Low Likelihood	Pollutant linkage may be present, and there is a possibility of the risk occurring, although there is no certainty that it will do so.
Unlikely	Pollutant linkage may be present, but the circumstances under which harm would occur are improbable.

The potential severity of the risk and the probability of the risk occurring have been combined in accordance with the matrix presented in Table C.3 below, in order to give a level of risk for each potential hazard.

**Table C.3** Definition of Magnitude of Consequence

		Potential Severity			
		Severe	Medium	Mild	Minor
Probability of Risk	High Likelihood	Very High	High	Moderate	Low/Moderate
	Likely	High	Moderate	Low/Moderate	Low
	Low Likelihood	Moderate	Low/Moderate	Low	Very Low
	Unlikely	Low/Moderate	Low	Very Low	Very Low

The risk assessment is presented in Table C.4.

**Table C.4** Qualitative Risk Assessment

Source		Pollutant	Pathway	Receptor	Likelihood of Occurrence	Associated Hazard (Severity)	Risk
On -Site	On-site historical activity and Made Ground (PAOC 1)	Heavy Metals, asbestos, inorganics and hydrocarbons.	Direct dermal contact or ingestion, migration and inhalation of dust/gases/vapours	Current & Future Site Users	<p>Low Likelihood</p> <p>Hardstanding covers most of the site, limiting potential for exposure to underlying soils, however the hardstanding may result in the accumulation of gases and vapours in concentrated areas.</p> <p>Risks to construction workers and future site users managed under CDM and remedial strategy.</p>	Medium	Low / Moderate
			Lateral and vertical migration in groundwater	Groundwater in Superficial Deposits	<p>Likely</p> <p>Groundwater if present is likely to be mobile with leaching potential and the site lies within a Source Protection Zone III. A groundwater abstraction is located within 250m of the site.</p>	Medium	Moderate
				Groundwater in Bedrock Geology			
			Surface water runoff	On-Site Surface Waters and Adjacent Land	<p>Unlikely</p> <p>Hardstanding covering reduces the pathway between the Made Ground and surface water run-off.</p>	Medium	Low
On -Site	Current site use including car park and vehicle usage.	Heavy Metals, Solvents, Hydrocarbons, asbestos	Surface water runoff	Adjacent Land	<p>Likely</p> <p>Car park in use during period where car emissions contained greater levels of lead etc.</p> <p>High mobility of fuel and oil leaks.</p> <p>Car parks potential targets for fly-tipping, introducing new hazards.</p>	Medium	Moderate

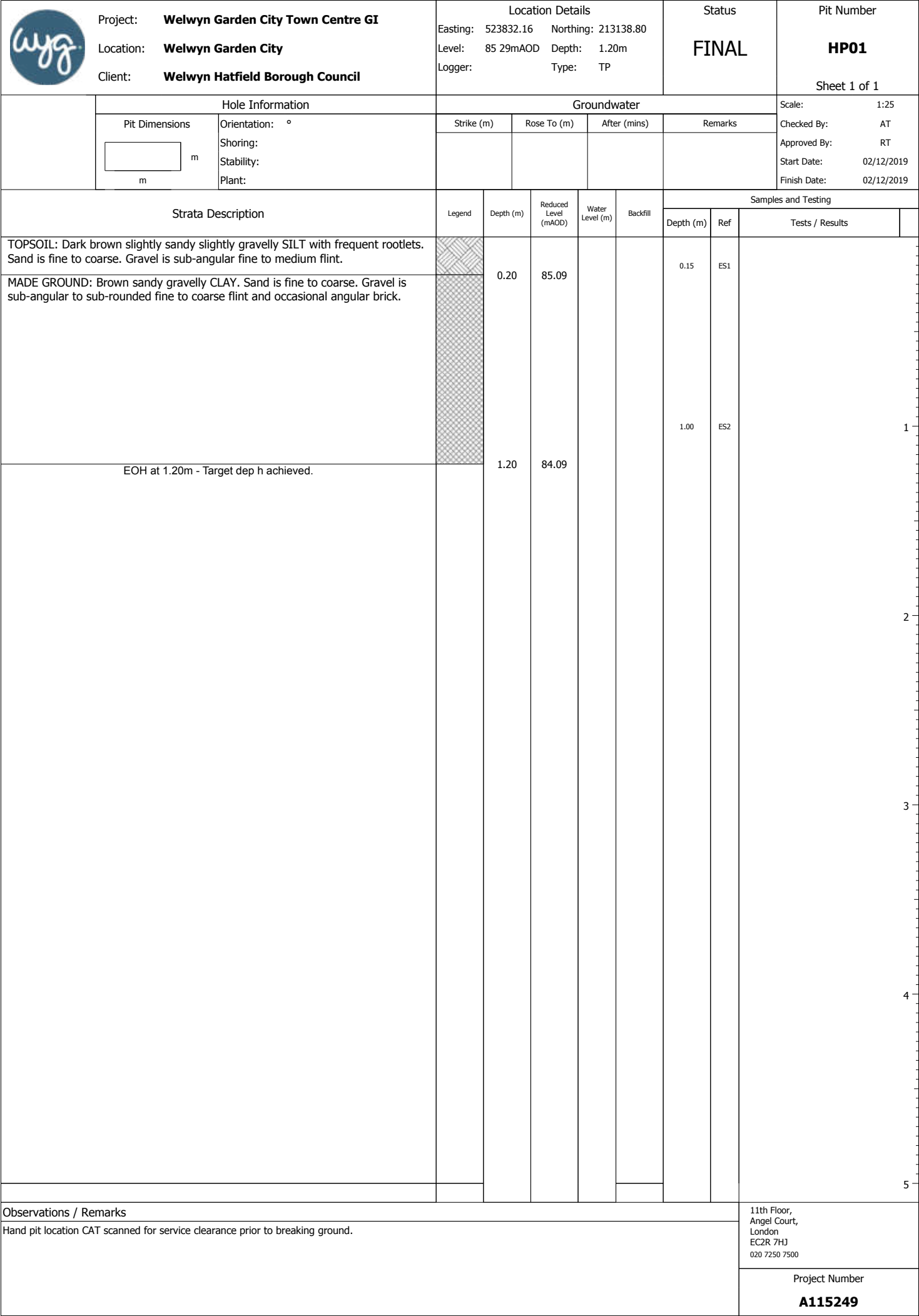
Ground Investigation Report  
Town Centre North

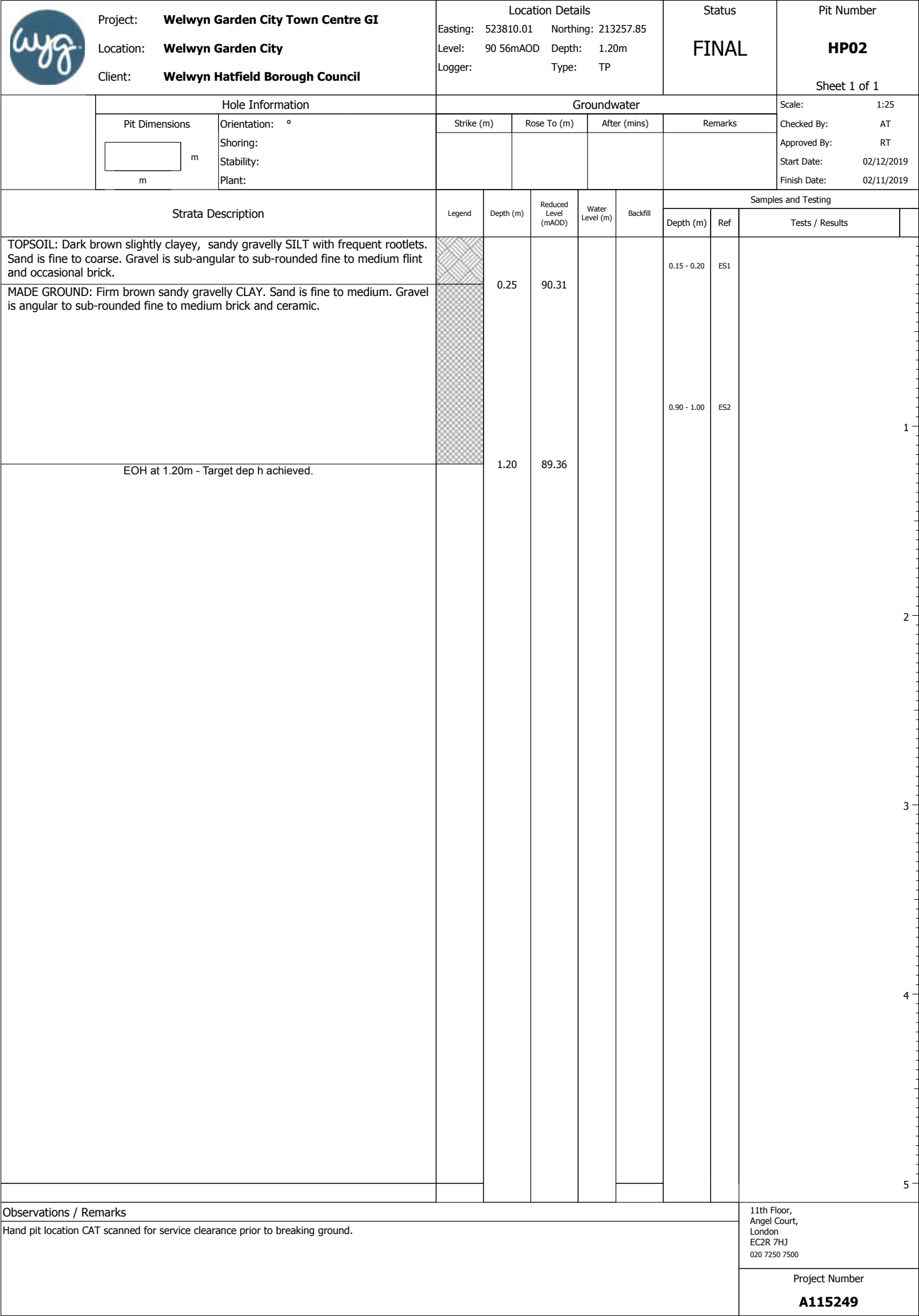
Source		Pollutant	Pathway	Receptor	Likelihood of Occurrence	Associated Hazard (Severity)	Risk
On-site	Leaks and spills from vehicles and previous land uses	Metals, inorganics, PAH, TPH, Solvents, hydrocarbons	Direct dermal contact or ingestion, migration and inhalation of dust/gases/vapours	Current & Future Site Users	Unlikely Hardstanding covers most of the site, limiting potential for exposure.	Medium	Low
			Lateral and vertical migration in groundwater	Groundwater in Superficial Deposits	Unlikely Hardstanding covers most of the site, limiting potential for exposure.	Medium	Low
				Groundwater in Bedrock Geology	The site is in Source Protection Zone III and a single groundwater abstraction present within 250m of the site.		
			Surface water runoff	Adjacent Land	Likely High surface runoff is anticipated as a result of the large amount of hardstanding covering the site.	Minor	Low
Off-Site	Electric power station, sewage works and waste management facilities (PAOC 3)	Metal and organic contaminants including PAH and PCBs	Inhalation of dust/gases/vapours	Current & Future Site Users	Low The electric power station was constructed off site in the 1920s although construction and use of materials containing PCBs had only stopped by 1977. Distance between sources and on-site receptors may allow for natural attenuation to reduce concentrations of potential contaminants.	Medium	Low / Moderate
			Vertical migration downwards via leaching	Shallow/perched groundwater within Made Ground			
			Lateral and vertical	Groundwater in Superficial Deposits			

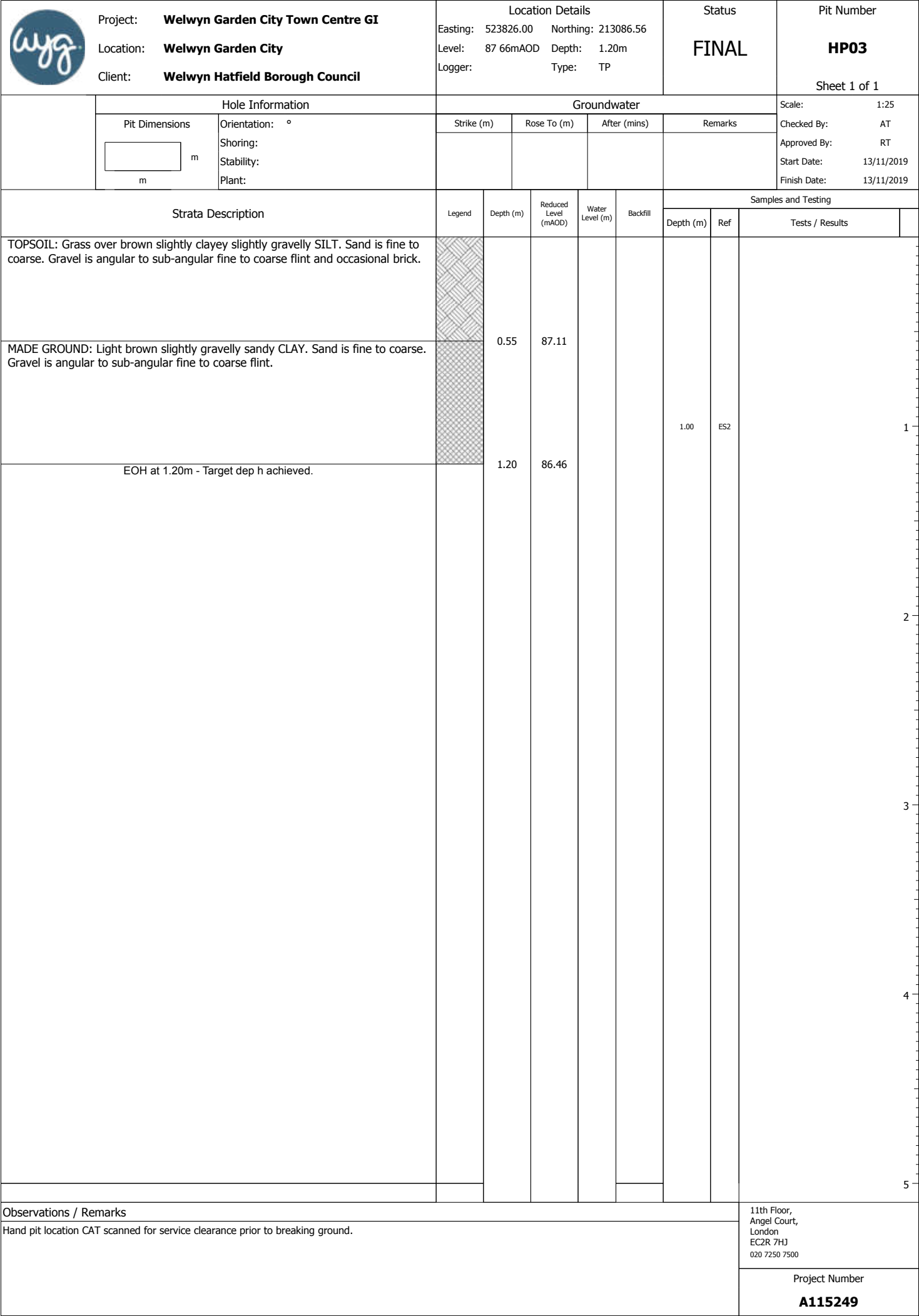
Ground Investigation Report  
Town Centre North

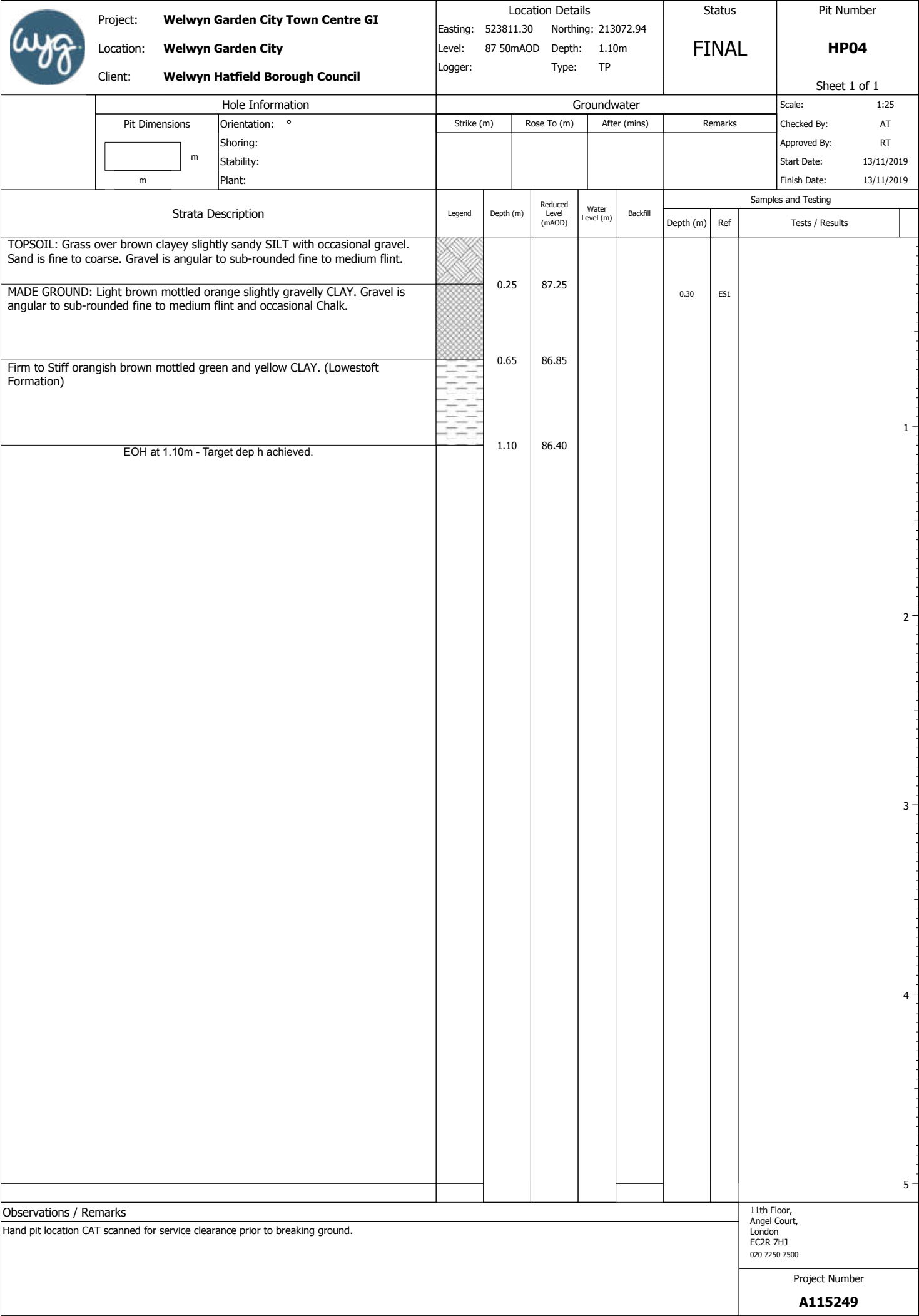
Source		Pollutant	Pathway	Receptor	Likelihood of Occurrence	Associated Hazard (Severity)	Risk
			migration in groundwater	Groundwater in Bedrock Geology			
			Surface water runoff	Adjacent Land			
Off-Site	Historic Gasholder (PAOC 4)	TPH, BTEX, Naphthalene, Coal Tar, Spent Oxides, Asbestos	Inhalation of dust/gases/vapours	Current & Future Site Users	<p>Low</p> <p>Gasholders often have legacy contamination issues as a result of the presence of a variety of harmful substances.</p> <p>Distance between sources and on-site receptors may allow for natural attenuation to reduce concentrations of potential contaminants.</p>	Medium	Low / Moderate
			Vertical migration downwards via leaching	Shallow/perched groundwater within Made Ground			
			Lateral and vertical migration in groundwater	Groundwater in Superficial Deposits			
			Surface water runoff	Adjacent Land			
Off-Site	Adjacent land uses, including the railway line and major roads (PAOC 5)	Metals, inorganics, PAH, TPH, hydrocarbon, asbestos and clinker	Surface water runoff	Adjacent Land	<p>Low</p> <p>Relatively inert and small-scale contamination from adjacent sources. Construction and expansion of railway in a period where contaminants such as asbestos and clinker were widespread.</p>	Medium	Low / Moderate


## **Appendix D – Exploratory Hole Logs**

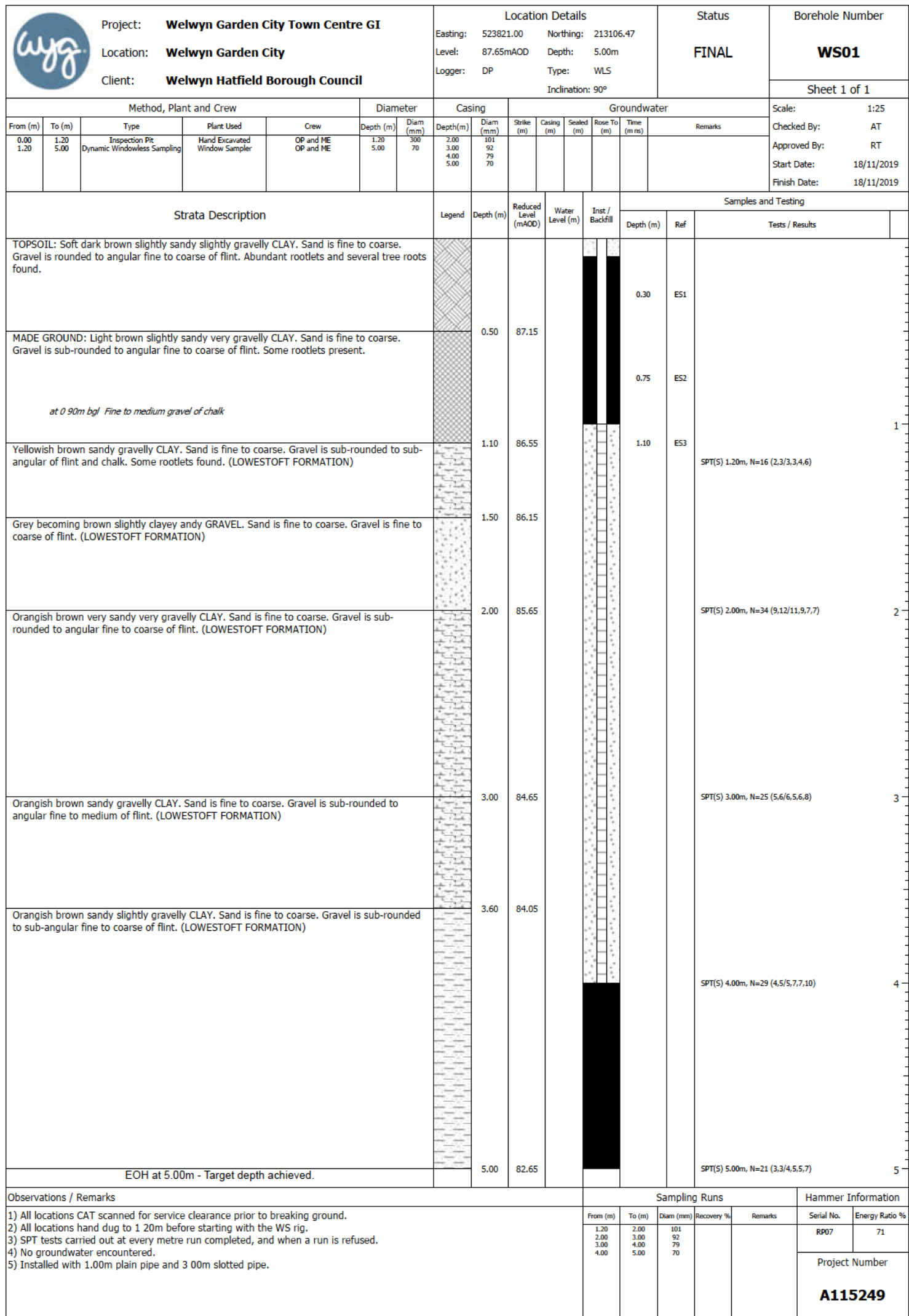


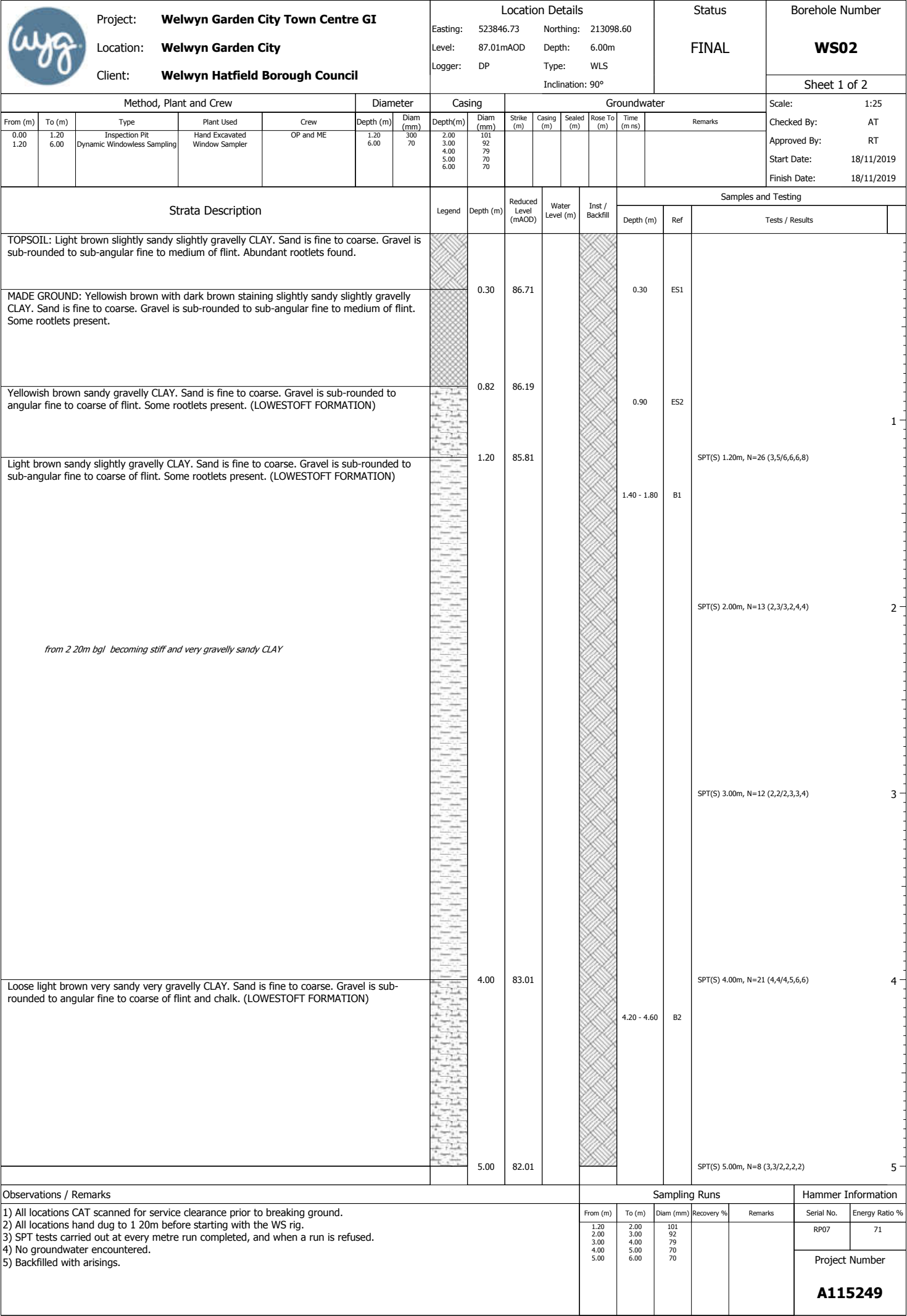









	Project: <b>Welwyn Garden City Town Centre GI</b>		Location Details				Status		Pit Number	
	Location: <b>Welwyn Garden City</b>		Easting: 523829.09    Northing: 213259.87				<b>FINAL</b>		<b>HP06 (WS06)</b>	
	Client: <b>Welwyn Hatfield Borough Council</b>		Level: 90 39mAOD    Depth: 1.30m Logger: DP/AT    Type: TP							
Hole Information			Groundwater					Scale: 1:25		
Pit Dimensions		Orientation: ° Shoring: Stability: Plant:	Strike (m)	Rose To (m)	After (mins)	Remarks		Checked By: AT		
<div><div></div><div>m</div><div>m</div></div>							Approved By: RT			
							Start Date: 19/11/2019			
							Finish Date: 19/11/2019			
Strata Description			Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
								Depth (m)	Ref	Tests / Results
TOPSOIL: Soft dark brown slightly sandy slightly gravelly SILT with frequent rootlets. Sand is fine to coarse. Gravel is sub-angular fine to coarse flint.				0.25	90.14			0.30 - 0.40	ES1	
MADE GROUND: Firm dark brown slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to sub-rounded fine to coarse flint and brick. Abundant rootlets present.				0.60	89.79					
MADE GROUND: Stiff brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse flint and occasional angular brick.										
EOH at 1.30m - Target depth achieved.				1.30	89.09			1.20 - 1.30	ES2	
										1
										2
										3
										4
										5
Observations / Remarks								11th Floor, Angel Court, London EC2R 7HJ 020 7250 7500		
Hand pit location CAT scanned for service clearance prior to breaking ground.								Project Number <b>A115249</b>		

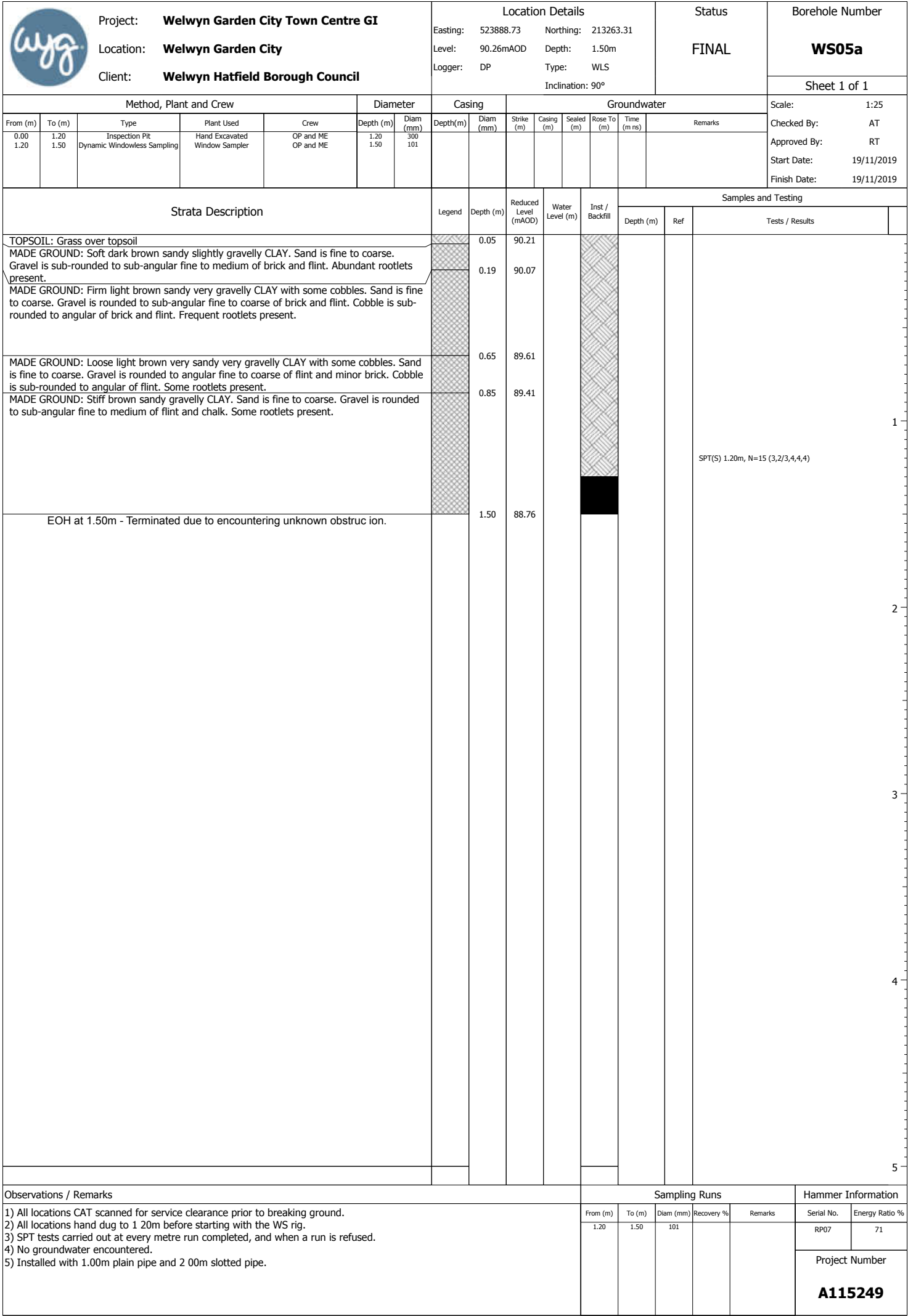


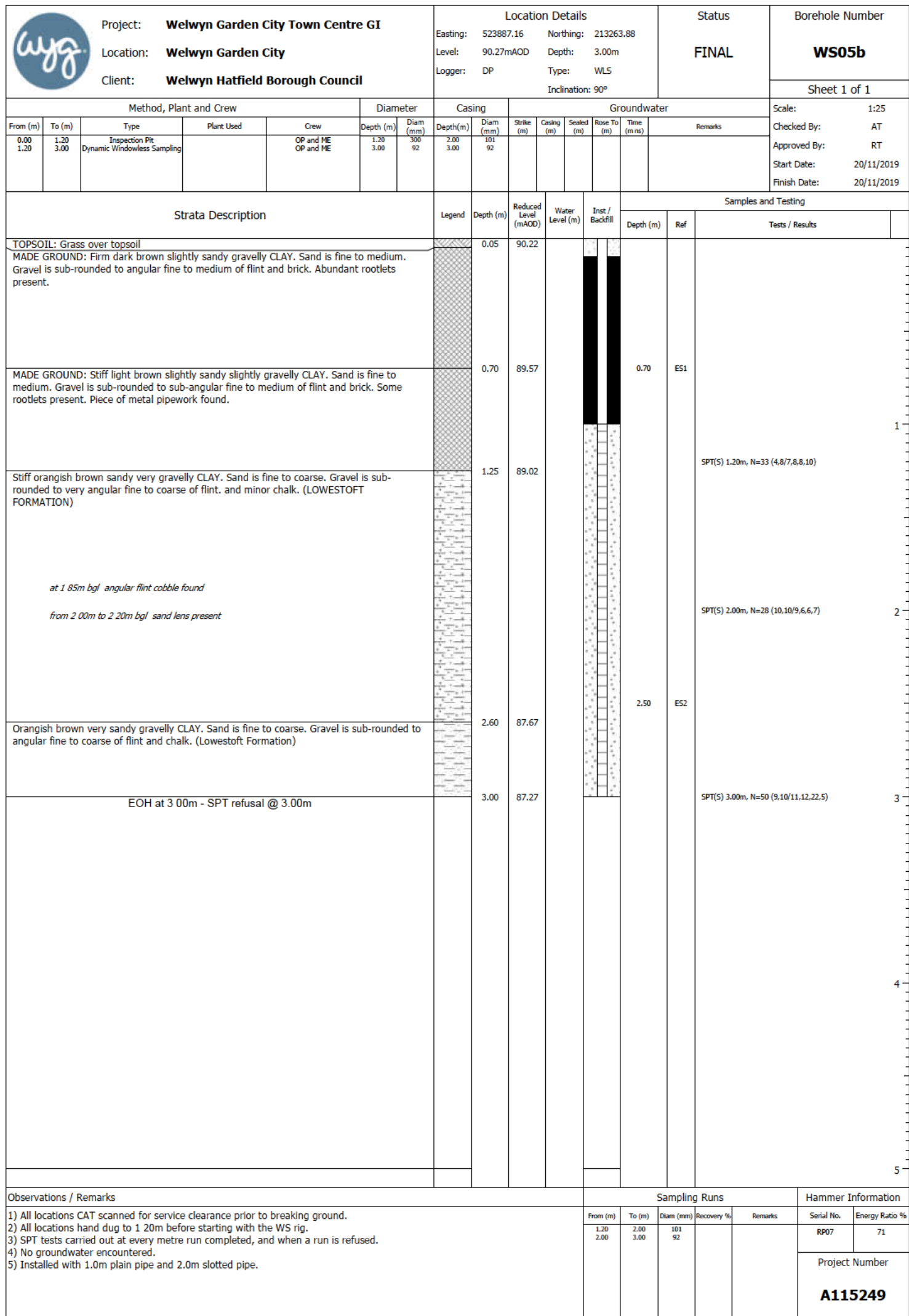



		Project: <b>Welwyn Garden City Town Centre GI</b>		Location Details						Status		Borehole Number					
		Location: <b>Welwyn Garden City</b>		Easting: 523846.73    Northing: 213098.60 Level: 87.01mAOD    Depth: 6.00m Logger: DP    Type: WLS Inclination: 90°						FINAL		<b>WS02</b>					
		Client: <b>Welwyn Hatfield Borough Council</b>										Sheet 2 of 2					
Method, Plant and Crew					Diameter		Casing		Groundwater						Scale: 1:25		
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (m ns)	Remarks	Checked By:	AT	
0.00 1.20	1.20 6.00	Inspection Pit Dynamic Windowless Sampling	Hand Excavated Window Sampler	OP and ME	1.20 6.00	300 70	2.00 3.00 4.00 5.00 6.00	101 92 79 70 70							Approved By:	RT	
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing				Finish Date:	18/11/2019
												Depth (m)	Ref	Tests / Results			
Stiff light orangish brown very sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to angular fine to coarse of flint and chalk. (LOWESTOFT FORMATION)																	
EOH at 6.00m - Target depth achieved.								6.00	81.01						SPT(S) 6.00m, N=11 (1,2/3,2,3,3)		6
																	7
																	8
																	9
																	10
Observations / Remarks										Sampling Runs				Hammer Information			
1) All locations CAT scanned for service clearance prior to breaking ground. 2) All locations hand dug to 1.20m before starting with the WS rig. 3) SPT tests carried out at every metre run completed, and when a run is refused. 4) No groundwater encountered. 5) Backfilled with arisings.										From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %	
															RP07	71	
																Project Number	
						A115249											

		Project: <b>Welwyn Garden City Town Centre GI</b>		Location Details				Status		Borehole Number					
		Location: <b>Welwyn Garden City</b>		Easting: 523855.36		Northing: 213150.51		<b>FINAL</b>		<b>WS03</b>					
		Client: <b>Welwyn Hatfield Borough Council</b>		Level: 84.94mAOD		Depth: 4.00m									
				Logger: DP		Type: WLS		Inclination: 90°		Sheet 1 of 1					
Method, Plant and Crew					Diameter		Casing		Groundwater					Scale: 1:25	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (m rs)	Remarks	Checked By: AT
0.00	1.20	Inspection Pit		OP and ME OP and ME	1.20	300	2.00	101							Approved By: RT
1.20	4.00				4.00	92									
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing			
												Depth (m)	Ref	Tests / Results	
TOPSOIL: Grass over topsoil								0.05	84.89						
TOPSOIL: Soft dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to medium of flint. Abundant rootlets present.															
Stiff light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to angular of flint and chalk. One cobble found. Some rootlets present. (LOWESTOFT FORMATION)								0.39	84.55			0.40 - 0.50	ES1		
Light brown clayey gravelly SAND. Sand is fine to coarse. Gravel is rounded to sub-angular fine to coarse of flint and chalk. (LOWESTOFT FORMATION)								0.81	84.13			0.90 - 1.00	ES2		
Light brown clayey very sandy GRAVEL. Sand is fine to coarse. Gravel is rounded to sub-angular fine to coarse of flint and chalk. (LOWESTOFT FORMATION)								0.90	84.04						
Stiff light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to angular fine to coarse of flint and chalk. (LOWESTOFT FORMATION)								1.00	83.94						
Orangish brown gravelly SAND. Sand is fine to medium. Gravel is sub-rounded to angular fine to coarse of flint. Occasional flint cobbles. (LOWESTOFT FORMATION)								2.50	82.44			2.50	ES3	SPT(S) 3.00m, N=42 (8,11/8,11,10,13)	
EOH at 4 00m - SPT refusal @ 4.00m								4.00	80.94					SPT(S) 4.00m, 50 (25,/50,...)	
Observations / Remarks							Sampling Runs							Hammer Information	
1) All locations CAT scanned for service clearance prior to breaking ground. 2) All locations hand dug to 1 20m before starting with the WS rig. 3) SPT tests carried out at every metre run completed, and when a run is refused. 4) No groundwater encountered. 5) Installed with 1.00m plain pipe and 3 00m slotted pipe.							From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %		
							1.20	2.00	101			RP07	71		
							2.00	3.00	92						
													Project Number		
													<b>A115249</b>		







<div></div> <div>Project: <b>Welwyn Garden City Town Centre GI</b></div> <div>Location: <b>Welwyn Garden City</b></div> <div>Client: <b>Welwyn Hatfield Borough Council</b></div>						Location Details						Status  <b>FINAL</b>		Borehole Number			
						Easting: 524054.96 Northing: 213393.39 Level: 91.49mAOD Depth: 5.00m Logger: DP Type: WLS Inclination: 90°								<b>WS04</b>			
Method, Plant and Crew						Diameter		Casing		Groundwater						Scale: 1:25	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (m ns)	Remarks	Checked By: AT		
0.00 1.20	1.20 5.00	Inspection Pit Dynamic Windowless Sampling		OP and ME OP and ME	1.20 5.00	300 70	2.00 3.00 4.00 5.00	101 92 79 70							Approved By: RT		
															Start Date: 20/11/2019		
															Finish Date: 20/11/2019		
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing					
												Depth (m)	Ref	Tests / Results			
MADE GROUND: Tarmac																	
MADE GROUND: Light greyish brown gravelly SAND. Sand is fine to coarse. Gravel is sub-rounded to angular fine to coarse of tarmac, concrete and flint.								0.20	91.29								
MADE GROUND: Firm reddish brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is rounded to sub-angular fine to coarse of tarmac concrete and flint. Some cobbles present.								0.35	91.14								
from 0.85m bgl becoming gravelly sandy CLAY													0.50	ES1			
Loose yellowish brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse of flint and chalk. Some cobbles present. (LOWESTOFT FORMATION)								1.00	90.49							1	
Stiff yellowish brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse of flint and chalk. (LOWESTOFT FORMATION)								1.25	90.24						SPT(S) 1.20m, N=14 (3,3/3,3,4,4)		
at 1.84m bgl potential cobble of chalk found																	
Loose brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to medium of flint and chalk. (LOWESTOFT FORMATION)								2.16	89.33				2.40 - 2.60	ES2			
Stiff yellowish brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to angular fine flint and chalk. (LOWESTOFT FORMATION)								2.75	88.74						SPT(S) 2.00m, N=23 (3,3/5,5,6,7)	2	
from 3.15m bgl gravel becoming medium to coarse																	
Reddish grey slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is sub-rounded to very angular fine to medium of flint and some chalk. (LOWESTOFT FORMATION)								3.26	88.23								
Stiff yellowish brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to angular fine to medium of flint. (LOWESTOFT FORMATION)								3.51	87.98						SPT(S) 3.00m, N=39 (4,5/4,15,10,10)	3	
Dense orangish brown clayey gravelly SAND. Sand is fine to coarse. Gravel is sub-rounded to angular flint and chalk. (LOWESTOFT FORMATION)								4.15	87.34				4.40 - 4.80	B1			
EOH at 5.00m - SPT refusal @ 5.00m								5.00	86.49						SPT(S) 4.00m, N=48 (6,8/10,8,13,17)	4	
															SPT(S) 5.00m, 50 (25,/50,,)	5	
Observations / Remarks										Sampling Runs					Hammer Information		
1) All locations CAT scanned for service clearance prior to breaking ground. 2) All locations hand dug to 1.20m before starting with the WS rig. 3) SPT tests carried out at every metre run completed, and when a run is refused. 4) No groundwater encountered. 5) Backfilled with arisings.										From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %	
										1.20	2.00	101			RP07	71	
										2.00	3.00	92					
										3.00	4.00	79					
										4.00	5.00	70					
															Project Number		
															<b>A115249</b>		

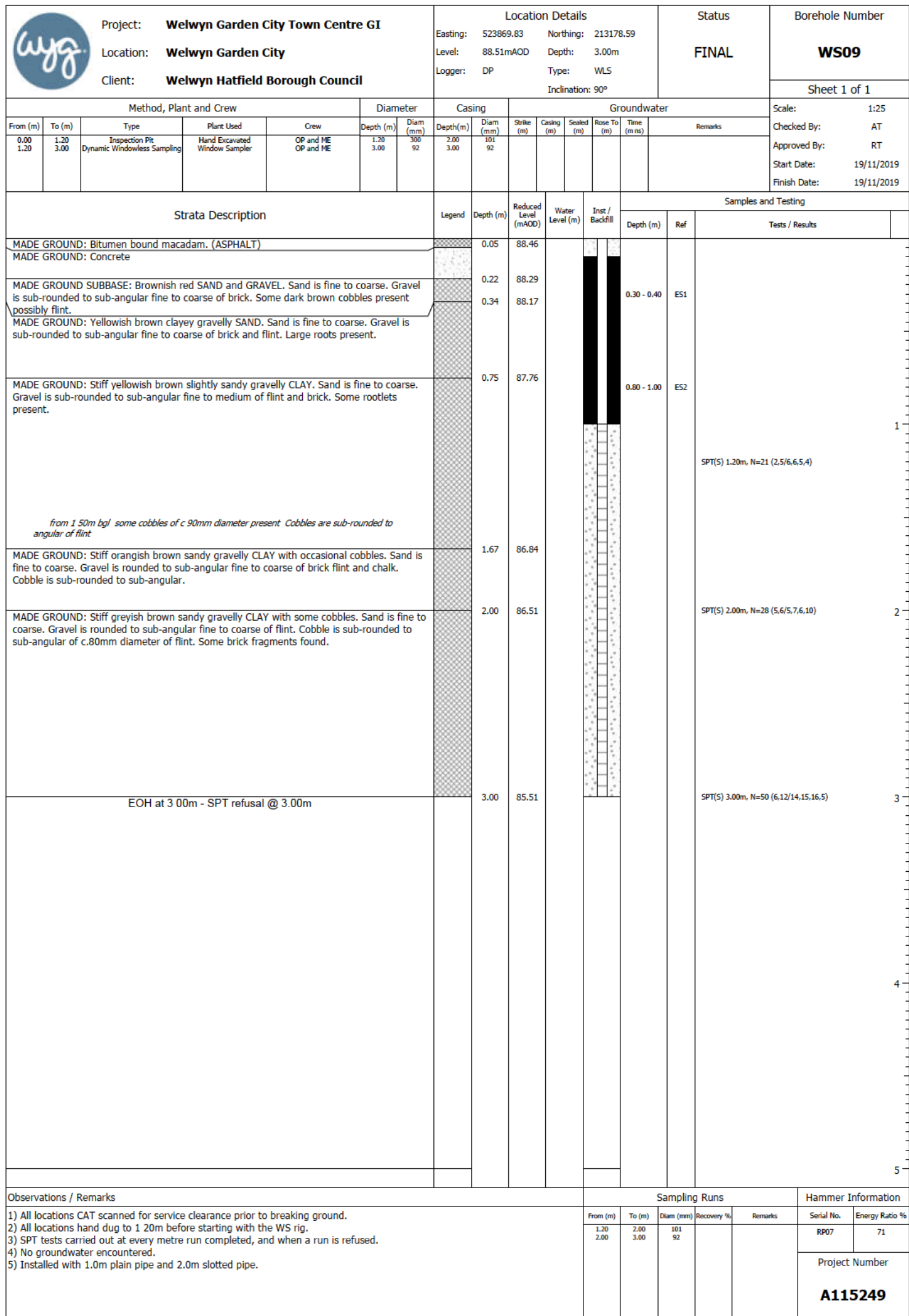





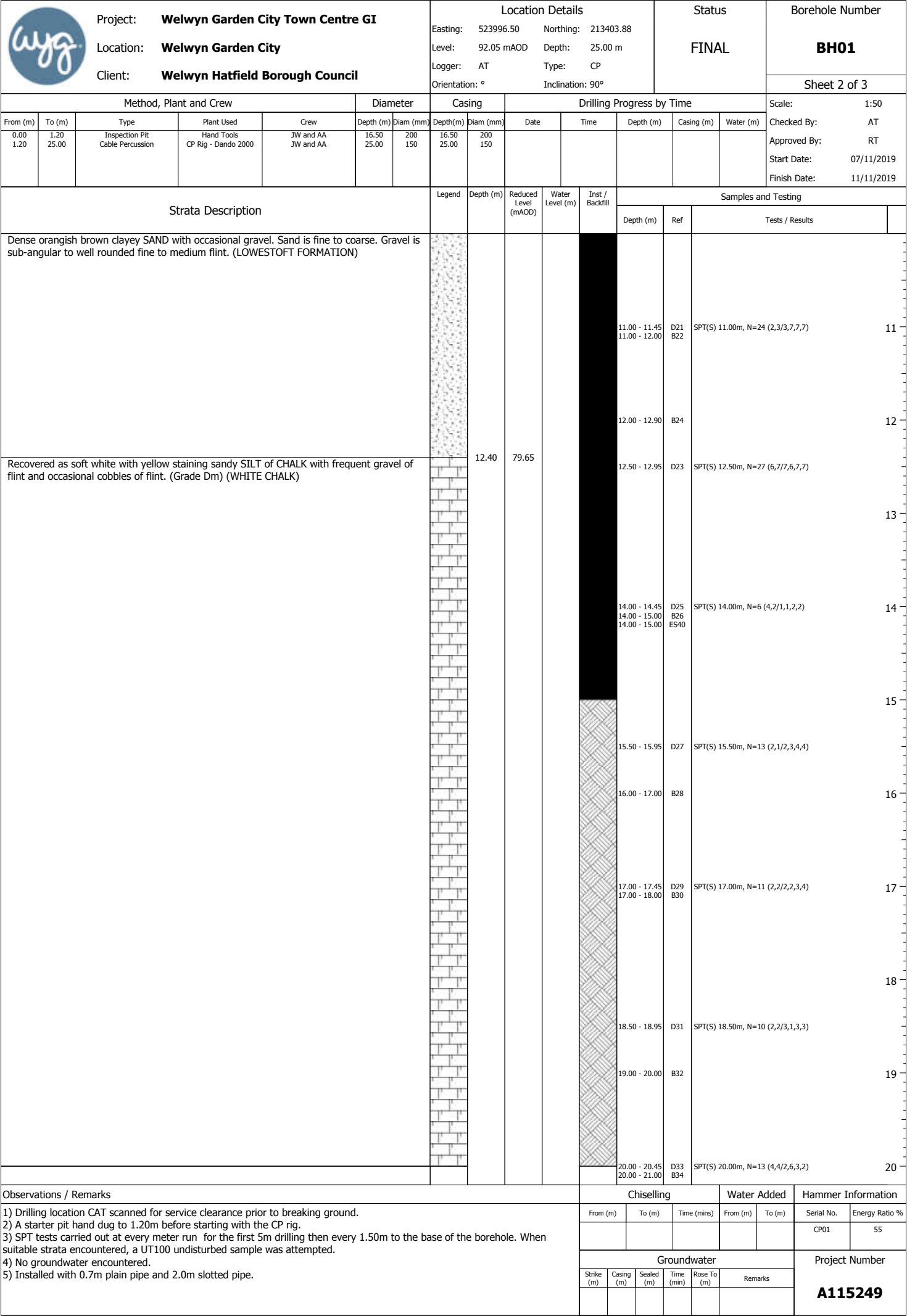
		Project: <b>Welwyn Garden City Town Centre GI</b>		Location Details						Status		Borehole Number				
		Location: <b>Welwyn Garden City</b>		Easting: 523852.91    Northing: 213185.77 Level: 88.59mAOD    Depth: 0.99m Logger: DP    Type: WLS Inclination: 90°						FINAL		<b>WS07a</b>				
		Client: <b>Welwyn Hatfield Borough Council</b>										Sheet 1 of 1				
Method, Plant and Crew					Diameter		Casing		Groundwater						Scale: 1:25	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (m ns)	Remarks	Checked By: AT	
0.00	0.99	Inspection Pit	Hand Excavated	OP and ME	0.99	300									Approved By: RT	
<b>Strata Description</b>  MADE GROUND: Tarmac MADE GROUND: Concrete  MADE GROUND SUBBASE: Brick rubble up to 150mm diameter. Matrix of reddish brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to angular fine to coarse of brick and flint. MADE GROUND: Stiff light brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to medium of brick and flint.  EOH at 0.99m - SPT refusal @ 0.99m							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing				
												Depth (m)	Ref	Tests / Results		
								0.05	88.54							
								0.21	88.38							
								0.40	88.19			0.40 - 0.50	ES1			
								0.99	87.60					SPT(S) 0.99m, 50 (6,11/14,18,18,)	1	
																2
																3
																4
																5
Observations / Remarks										Sampling Runs				Hammer Information		
1) All locations CAT scanned for service clearance prior to breaking ground. 2) All locations hand dug to 1.20m before starting with the WS rig. 3) SPT tests carried out at every metre run completed, and when a run is refused. 4) Location moved 1.50m east. 5) No groundwater encountered. 6) Backfilled with arisings to 0.1m bgl and from ground level to 0.1m bgl with concrete.										From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %
															RP07	71
															Project Number	
					A115249											

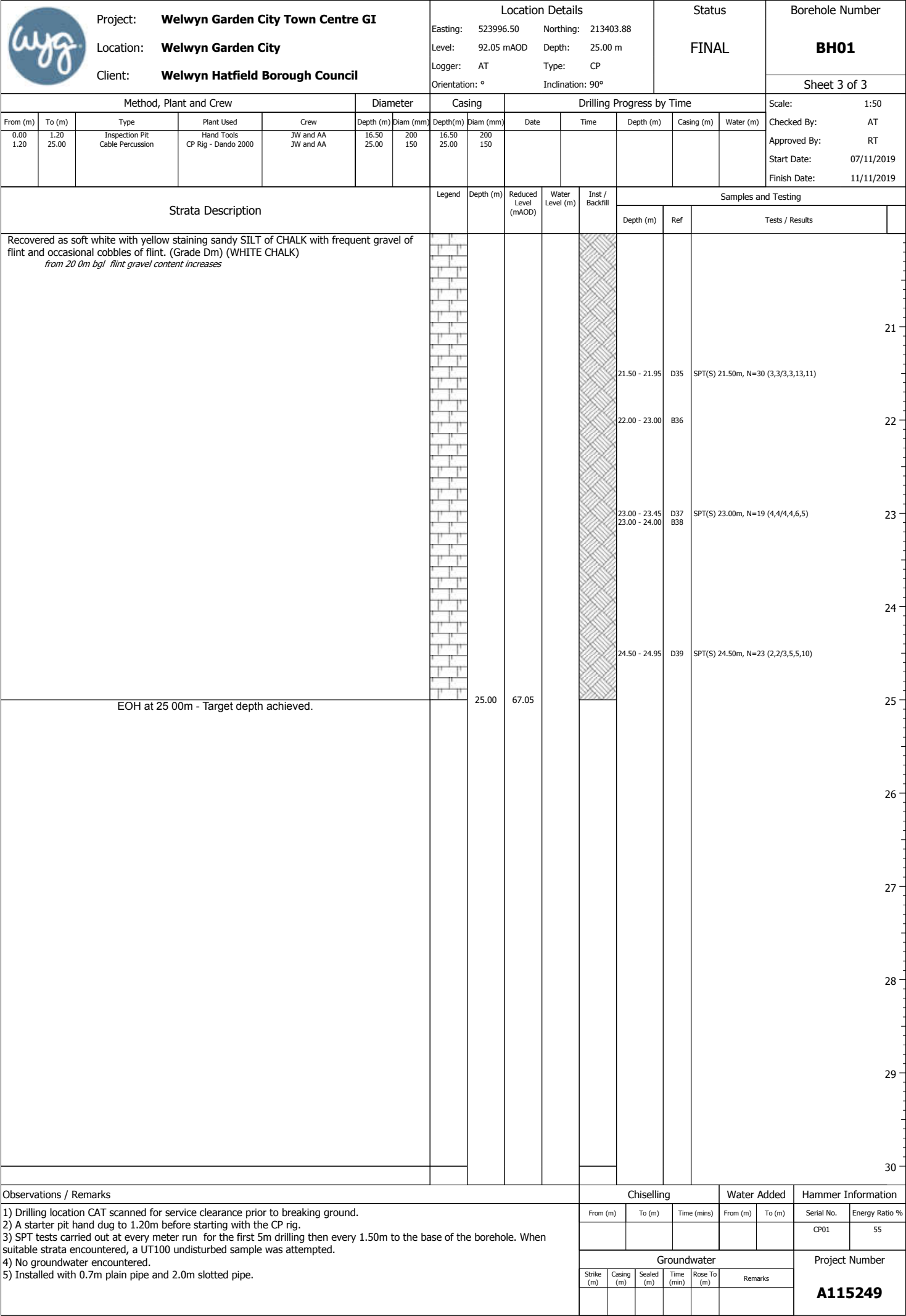


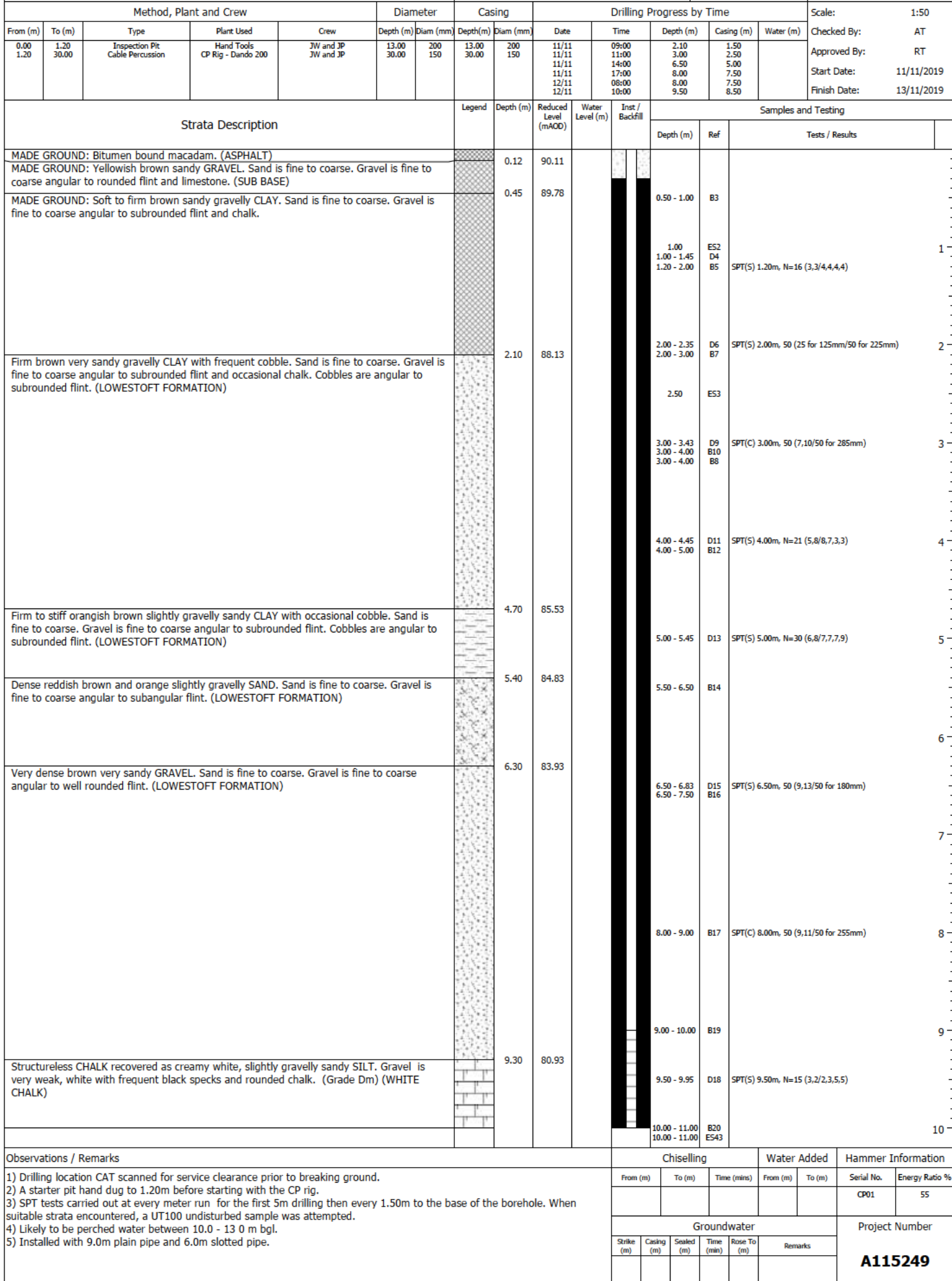
		Project: <b>Welwyn Garden City Town Centre GI</b>					Location Details					Status		Borehole Number			
		Location: <b>Welwyn Garden City</b>					Easting: 523864.24 Northing: 213190.56 Level: 88.46mAOD Depth: 2.90m Logger: DP Type: WLS Inclination: 90°					FINAL		<b>WS08</b>			
		Client: <b>Welwyn Hatfield Borough Council</b>												Sheet 1 of 1			
Method, Plant and Crew					Diameter		Casing		Groundwater							Scale: 1:25	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (m ns)	Remarks	Checked By: AT	Approved By: RT	
0.00 1.20	1.20 2.90	Dynamic Windowless Sampling Dynamic Windowless Sampling	Hand Excavated Window Sampler	OP and ME OP and ME	1.20 2.90	300 92	2.00 2.90	101 92							Start Date: 18/11/2019	Finish Date: 18/11/2019	
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing					
												Depth (m)	Ref	Tests / Results			
MADE GROUND: Tarmac and reinforced concrete								0.13	88.33			0.57	ES1	SPT(S) 1.20m, N=23 (2,3/6,6,5,6)			
MADE GROUND SUBBASE								0.37	88.09								
MADE GROUND: Light brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to angular fine to coarse of brick.								0.57	87.89								
MADE GROUND: Bluish grey slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse brick and concrete. One cobble found.								1.65	86.81			1.35 - 1.45	B1	SPT(S) 2.00m, N=15 (2,2/5,3,3,4)			
at 0.90m bgl rootlets found												1.65	ES2				
from 1.30m to 1.44m bgl black organic material found												2.90	B2		SPT(S) 2.90m, 50 (13,12/25,25,,)		
Orangish brown with black staining sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse of flint. (Lowestoft Formation)								2.90	85.56			2.90	B2	SPT(S) 2.90m, 50 (13,12/25,25,,)			
EOH at 2.90m - SPT refusal @ 2.9m																	
Observations / Remarks							Sampling Runs					Hammer Information					
1) All locations CAT scanned for service clearance prior to breaking ground. 2) All locations hand dug to 1.20m before starting with the WS rig. 3) SPT tests carried out at every metre run completed, and when a run is refused. 4) Location moved 0.75m east. 5) No groundwater encountered. 6) Backfilled with arisings to 0.10m bgl and from ground level to 0.10m bgl with concrete.							From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %				
							1.20 2.00	2.00 2.90	101 92			RP07	71				
							Project Number										
							<b>A115249</b>										

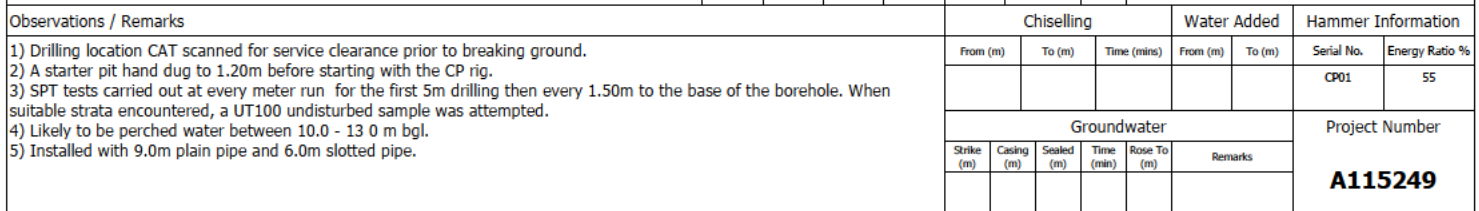


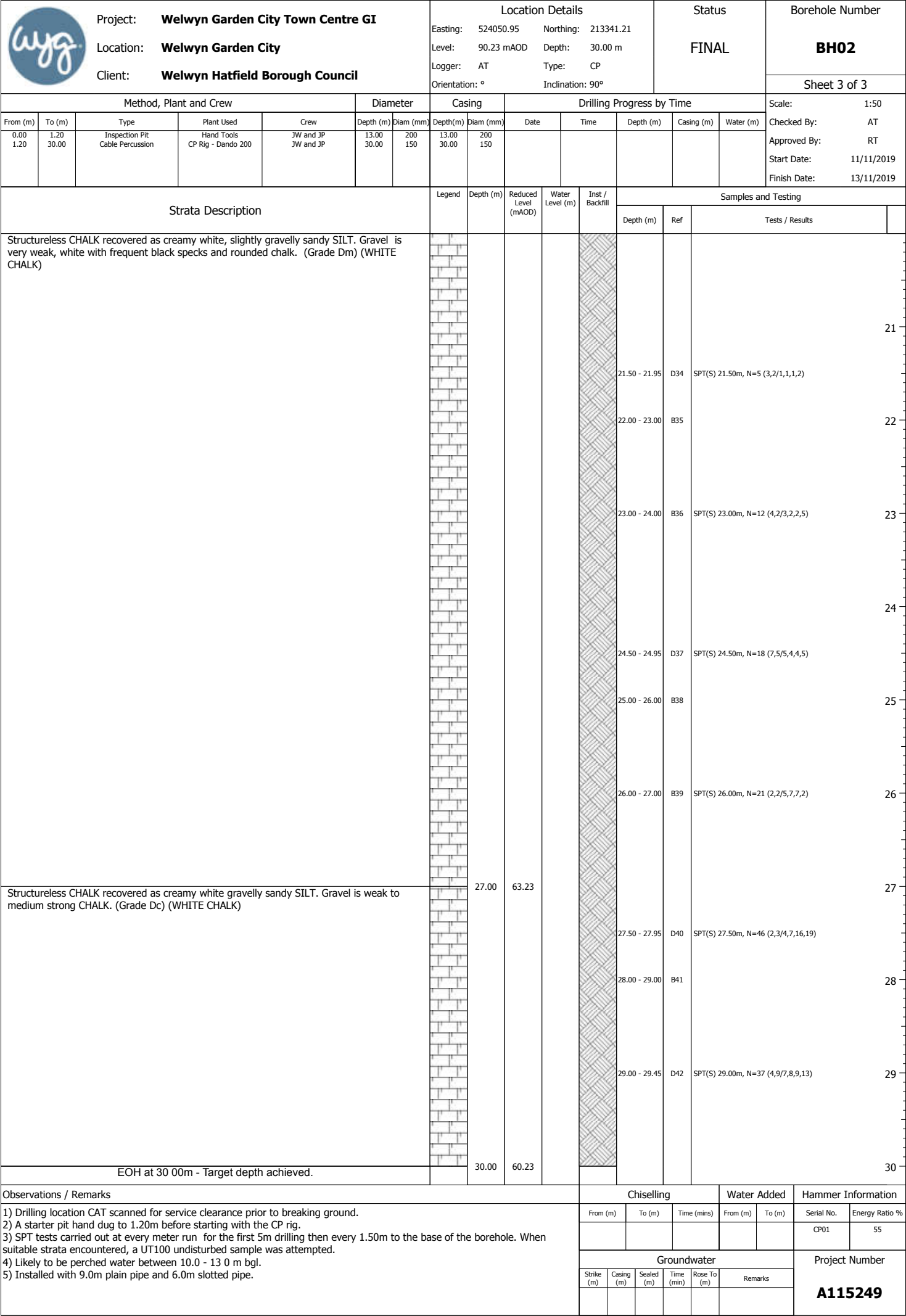
		Project: <b>Welwyn Garden City Town Centre GI</b>				Location Details				Status		Borehole Number				
		Location: <b>Welwyn Garden City</b>				Easting: 523996.50    Northing: 213403.88				<b>FINAL</b>		<b>BH01</b>				
		Client: <b>Welwyn Hatfield Borough Council</b>				Level: 92.05 mAOD    Depth: 25.00 m										
Logger: AT    Type: CP						Orientation: °    Inclination: 90°		Sheet 1 of 3								
Method, Plant and Crew						Diameter		Casing		Drilling Progress by Time					Scale: 1:50	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	AT	
0.00 1.20	1.20 25.00	Inspection Pit Cable Percussion	Hand Tools CP Rig - Dando 2000	JW and AA JW and AA	16.50 25.00	200 150	16.50 25.00	200 150	07/11 07/11 07/11	10:00 11:00 13:00 15:00	0.00 1.00 3.00 4.50	- - - -		Approved By:	RT	
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing				
												Depth (m)	Ref	Tests / Results		
MADE GROUND: Bitumen bound macadam (ASPHALT).								0.12	91.93			0.20	ES1			
MADE GROUND: Yellowish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse angular to rounded flint and limestone. (SUB BASE)								0.50	91.55							
MADE GROUND: Brown yellow and orange sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse angular to rounded flint and occasional chalk. (REWORKED CLAY)												1.00	ES2	SPT(5) 1.20m, N=8 (1,1/2,2,2,2)		
												1.20 - 1.65 1.20 - 2.00	D5 B6			
												2.00 - 2.45 2.00 - 3.00	D7 B8	SPT(5) 2.00m, N=27 (2,4/5,8,7,7)		
												2.50	ES3			
Firm brown sandy gravelly CLAY. Sand is fine. Gravel is fine to coarse angular to well rounded flint. (LOWESTOFT FORMATION)								2.70	89.35			3.00 - 3.45 3.00 - 4.00	D9 B10	SPT(5) 3.00m, N=14 (3,3/3,3,4,4)		
												4.00 4.00 - 4.45 4.00 - 5.00	ES4 D11 B12	SPT(5) 4.00m, N=13 (2,2/3,3,3,4)		
												5.00 - 5.45 5.00 - 6.00	D13 B14	SPT(5) 5.00m, N=11 (3,2/3,2,3,3)		
<i>from 6.50m bgl becoming gravelly very sandy CLAY</i>												6.00 - 7.00	B16			
												6.50 - 6.95	D15			SPT(5) 6.50m, N=11 (2,3/2,2,3,4)
Dense orangish brown clayey SAND with occasional gravel. Sand is fine to coarse. Gravel is sub-angular to well rounded fine to medium flint. (LOWESTOFT FORMATION)								9.30	82.75			9.30 - 10.00	B20	SPT(5) 9.50m, N=22 (3,4/4,6,6,6)		
												9.50 - 9.95	D19			







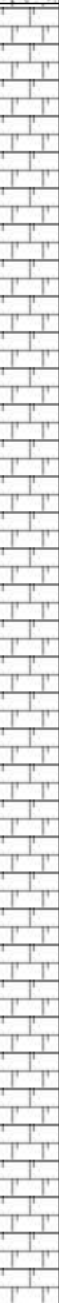





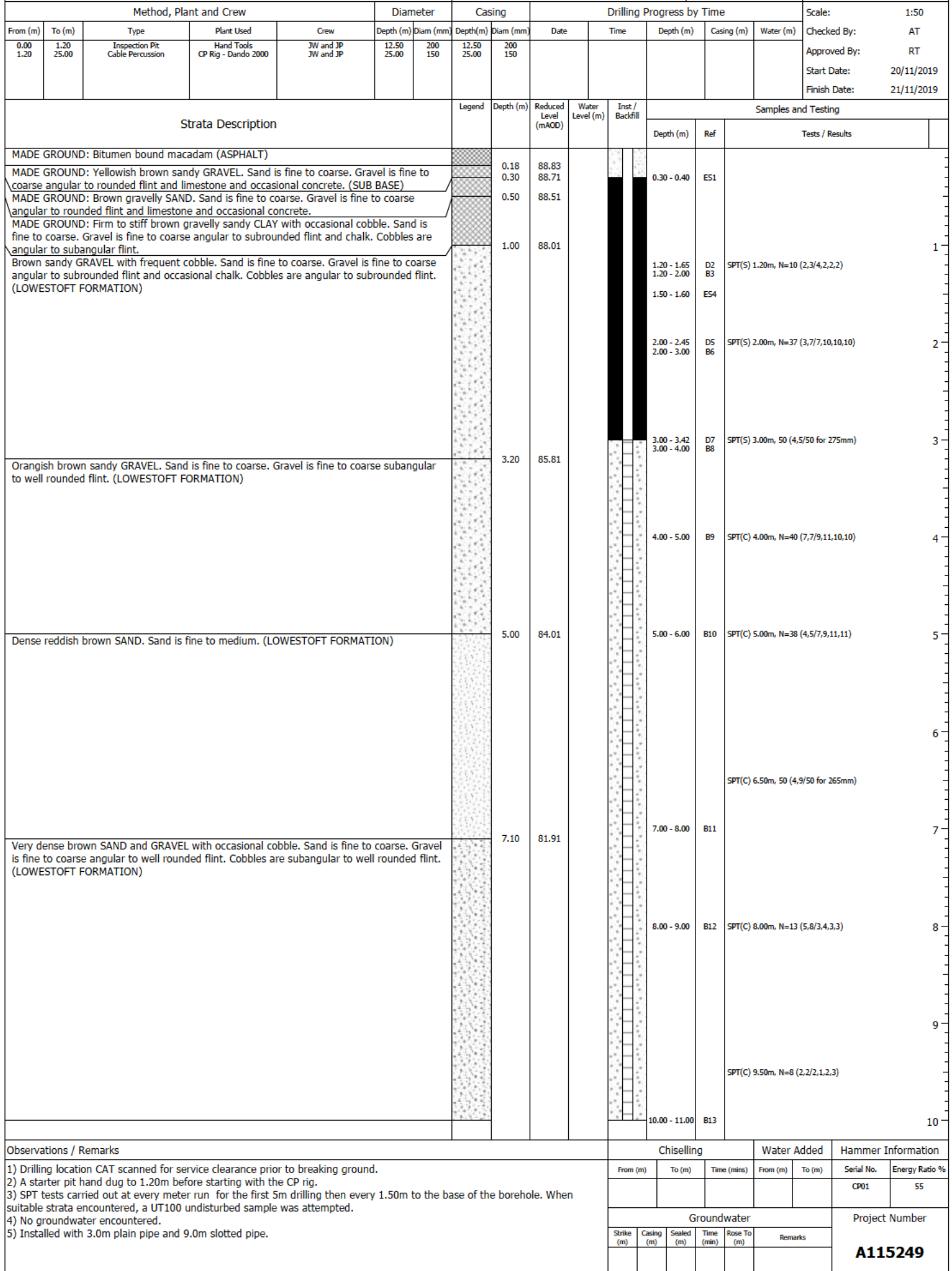





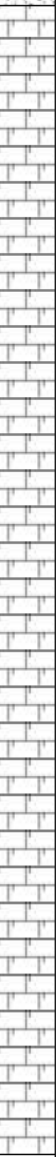



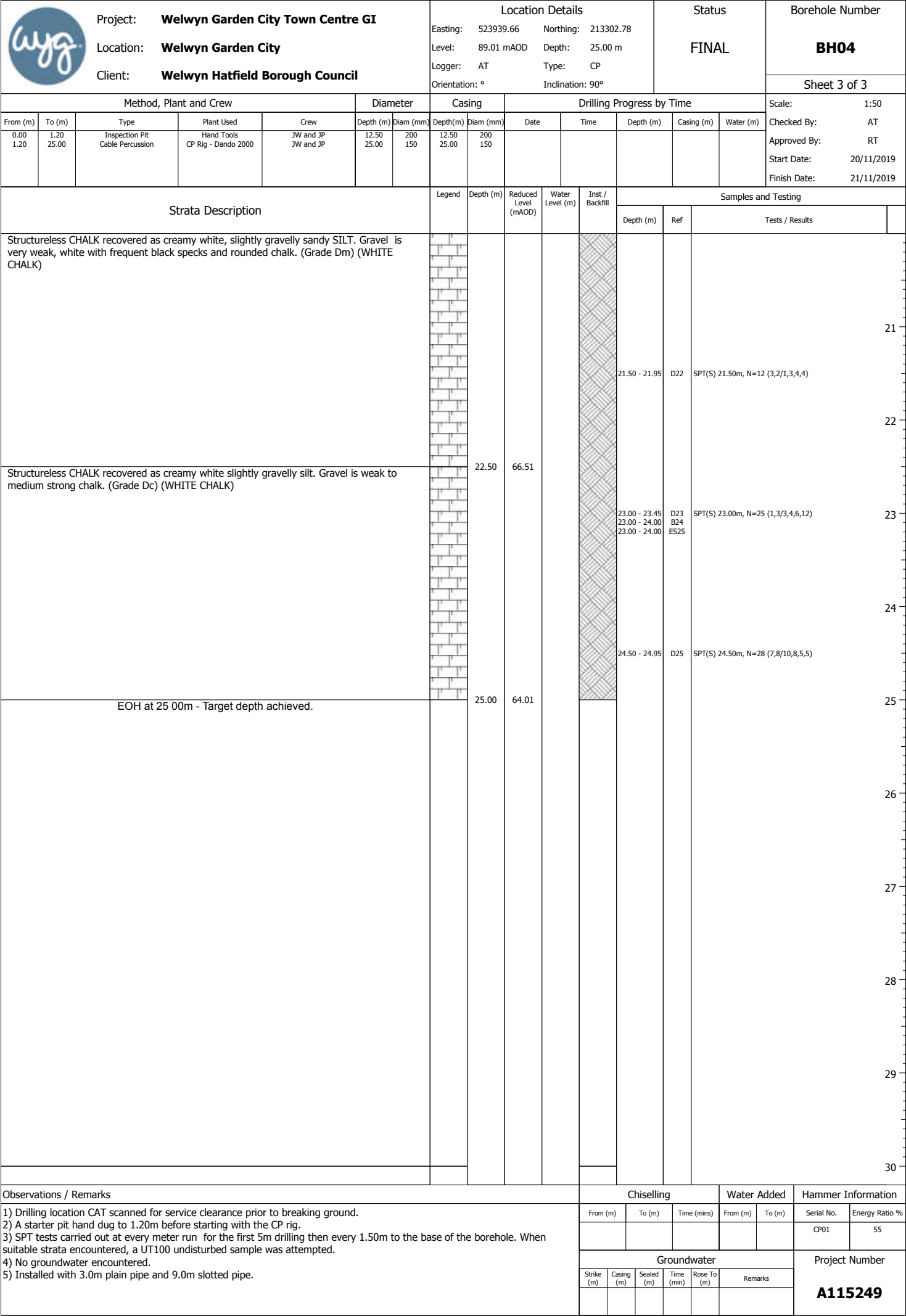
	Project: <b>Welwyn Garden City Town Centre GI</b>		Location Details				Status		Borehole Number							
	Location: <b>Welwyn Garden City</b>		Easting: 523997.81    Northing: 213310.04 Level: 89.38 mAOD    Depth: 25.00 m Logger: AT    Type: CP Orientation: °    Inclination: 90°				<b>FINAL</b>		<b>BH03</b>							
	Client: <b>Welwyn Hatfield Borough Council</b>		Sheet 1 of 3													
Method, Plant and Crew						Diameter		Casing		Drilling Progress by Time				Scale: 1:50		
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	AT	
0.00 1.20	1.20 25.00	Inspection Pit Cable Percussion	Hand Tools CP Rig - Dando 2000	JW and JP JW and JP	12.50 25.00	200 150	12.50 25.00	200 150						Approved By:	RT	
														Start Date:	14/11/2019	
														Finish Date:	16/11/2019	
Strata Description						Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing					
											Depth (m)	Ref	Tests / Results			
MADE GROUND: Bitumen bound macadam. (ASPHALT)							0.18	89.20								
MADE GROUND: Brown sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse angular to rounded flint and limestone. (SUB BASE) <i>frequent rootlets up to 15mm diameter</i>							0.55	88.83			0.60	E51				
Orangish brown sandy GRAVEL with occasional cobble. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded flint. Cobbles are subangular to well rounded flint. (LOWESTOFT FORMATION)											1.20 - 2.00	B3	SPT(S) 1.20m, N=45 (6,11/9,13,12,11)			
Orangish brown sandy very gravelly CLAY with occasional cobble. Sand is fine. Gravel is fine to coarse angular to subangular flint. Cobbles are angular to subangular flint. (LOWESTOFT FORMATION)							1.90	87.48			2.00 2.00 - 2.45 2.00 - 3.00	E52 D4 B5	SPT(S) 2.00m, N=16 (4,4/4,4,4,4)			
Dense reddish brown SAND. Sand is fine to medium. (LOWESTOFT FORMATION)							3.00	86.38			3.00 - 3.45	D6	SPT(S) 3.00m, N=37 (1,3/10,7,10,10)			
Brown slightly gravelly sandy CLAY with frequent cobble. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded flint. Cobbles are subrounded to well rounded flint. (LOWESTOFT FORMATION)							3.50	85.88			3.50 - 4.00	B7				
Very dense brown SAND and GRAVEL with occasional cobble. Sand is fine to coarse. Gravel is fine to coarse subrounded to well rounded flint. Cobbles are subangular to well rounded flint. (LOWESTOFT FORMATION)							4.50	84.88			4.00 - 4.45 4.00 - 5.00	D8 B9	SPT(S) 4.00m, N=38 (3,11/12,11,7,8)			
											5.00 - 5.39 5.00 - 6.00	D10 B11	SPT(S) 5.00m, 50 (5,11/50 for 245mm)			
											6.00 - 7.00	B12				
											7.00 - 8.00	B13	SPT(C) 6.50m, 50 (7,9/50 for 295mm)			
Dense brown clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subrounded to well rounded flint. (LOWESTOFT FORMATION)							7.50	81.88			8.00 - 9.00	B14	SPT(C) 8.00m, 50 (2,3/50 for 225mm)			
Dense brown SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subrounded to well rounded flint. (LOWESTOFT FORMATION)							8.10	81.28			9.00 - 10.00	B15				
											10.00 - 11.00	B16	SPT(C) 9.50m, N=40 (4,5/6,9,11,14)			
Observations / Remarks										Chiselling		Water Added		Hammer Information		
1) Drilling location CAT scanned for service clearance prior to breaking ground. 2) A starter pit hand dug to 1.20m before starting with the CP rig. 3) SPT tests carried out at every meter run for the first 5m drilling then every 1.50m to the base of the borehole. When suitable strata encountered, a UT100 undisturbed sample was attempted. 4) No groundwater encountered. 5) Installed with 4.5m plain pipe and 6.9m slotted pipe.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
															CP01	55
										Groundwater						
Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A115249										

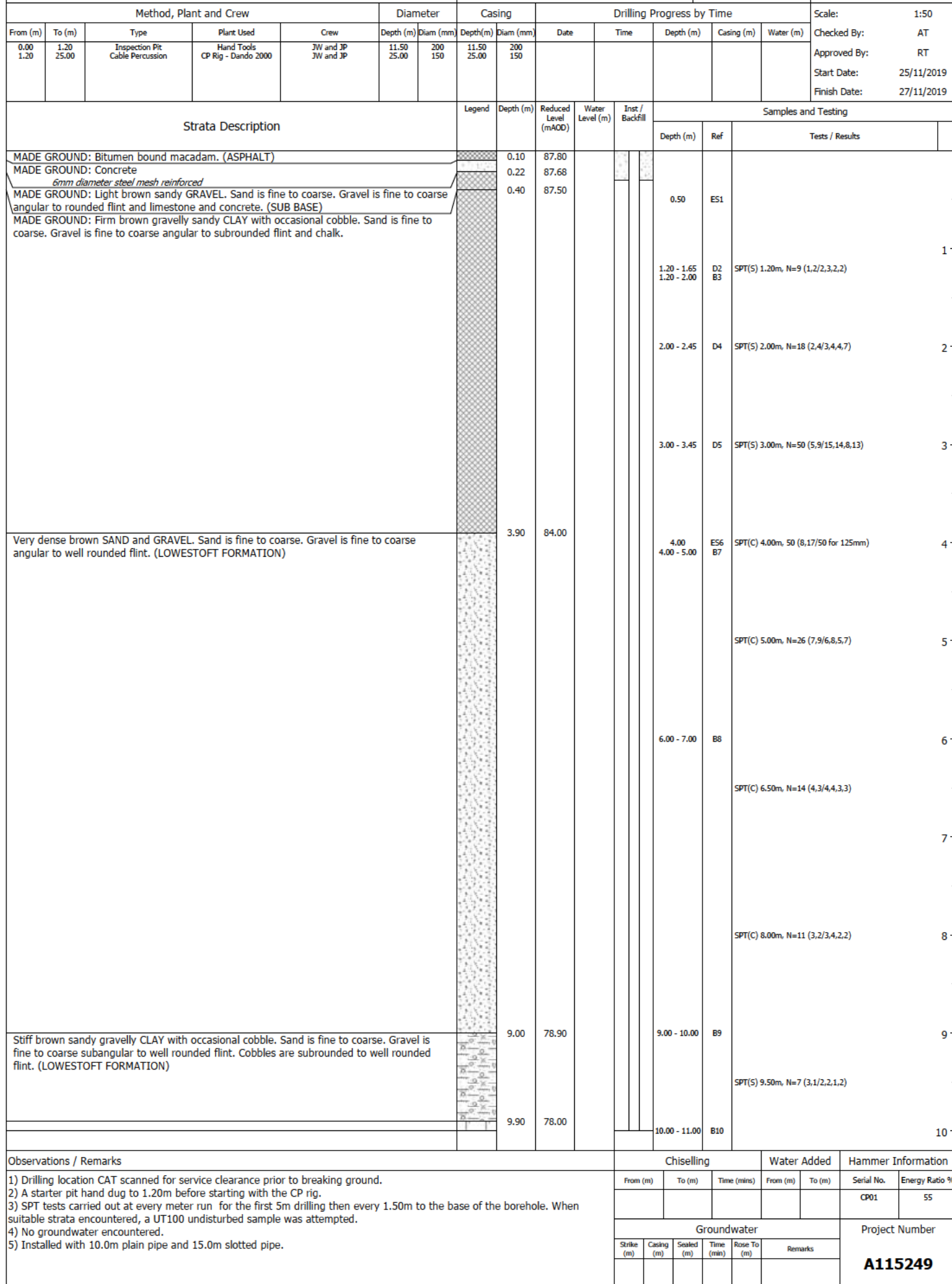
	Project: <b>Welwyn Garden City Town Centre GI</b>					Location Details					Status		Borehole Number			
	Location: <b>Welwyn Garden City</b>					Easting: 523997.81    Northing: 213310.04 Level: 89.38 mAOD    Depth: 25.00 m Logger: AT    Type: CP Orientation: °    Inclination: 90°					FINAL		BH03			
	Client: <b>Welwyn Hatfield Borough Council</b>												Sheet 2 of 3			
Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale: 1:50		
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	AT	
0.00 1.20	1.20 25.00	Inspection Pit Cable Percussion	Hand Tools CP Rig - Dando 2000	JW and JP JW and JP	12.50 25.00	200 150	12.50 25.00	200 150						Approved By:	RT	
														Start Date:	14/11/2019	
														Finish Date:	16/11/2019	
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing				
												Depth (m)	Ref	Tests / Results		
Dense brown SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subrounded to well rounded flint. (LOWESTOFT FORMATION)								11.40	77.98		11.40 - 12.00	B17	SPT(C) 11.00m, N=15 (3,2/3,4,4,4)		11	
											12.50 - 12.95	D18	SPT(S) 12.50m, N=9 (2,1/1,3,2,3)		12	
Structureless CHALK recovered as creamy white, slightly gravelly sandy SILT. Gravel is very weak, white with frequent black specks and rounded chalk. (Grade Dm) (WHITE CHALK)											13.00 - 14.00	B19	SPT(S) 14.00m, N=11 (1,2/2,2,4,3)		13	
											14.00 - 14.45	D20	SPT(S) 15.50m, N=13 (1,2/3,1,5,4)		14	
											15.50 - 15.95	D22	SPT(S) 17.00m, N=14 (2,1/3,4,4,3)		15	
											16.00 - 17.00	B23	SPT(S) 18.50m, N=13 (2,2/1,2,3,7)		16	
											17.00 - 17.45	D24	SPT(S) 20.00m, N=16 (2,2/2,6,4,4)		17	
											18.50 - 18.95	D26			18	
											19.00 - 20.00	B27			19	
											20.00 - 20.45	D28			20	
											20.00 - 21.00	B29				
											Observations / Remarks					
1) Drilling location CAT scanned for service clearance prior to breaking ground. 2) A starter pit hand dug to 1.20m before starting with the CP rig. 3) SPT tests carried out at every meter run for the first 5m drilling then every 1.50m to the base of the borehole. When suitable strata encountered, a UT100 undisturbed sample was attempted. 4) No groundwater encountered. 5) Installed with 4.5m plain pipe and 6.9m slotted pipe.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
															CP01	55
										Groundwater						Project Number
Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A115249										

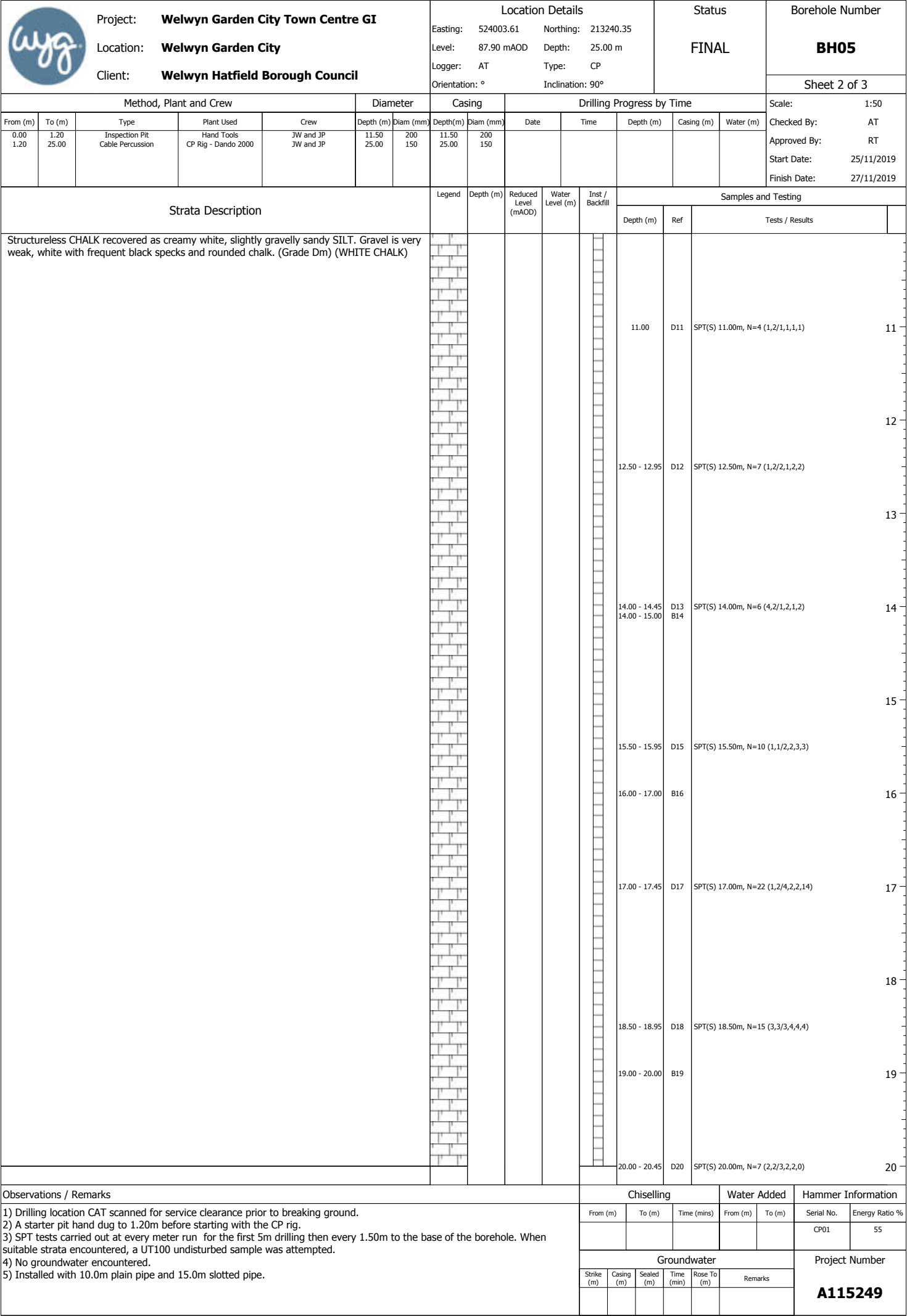


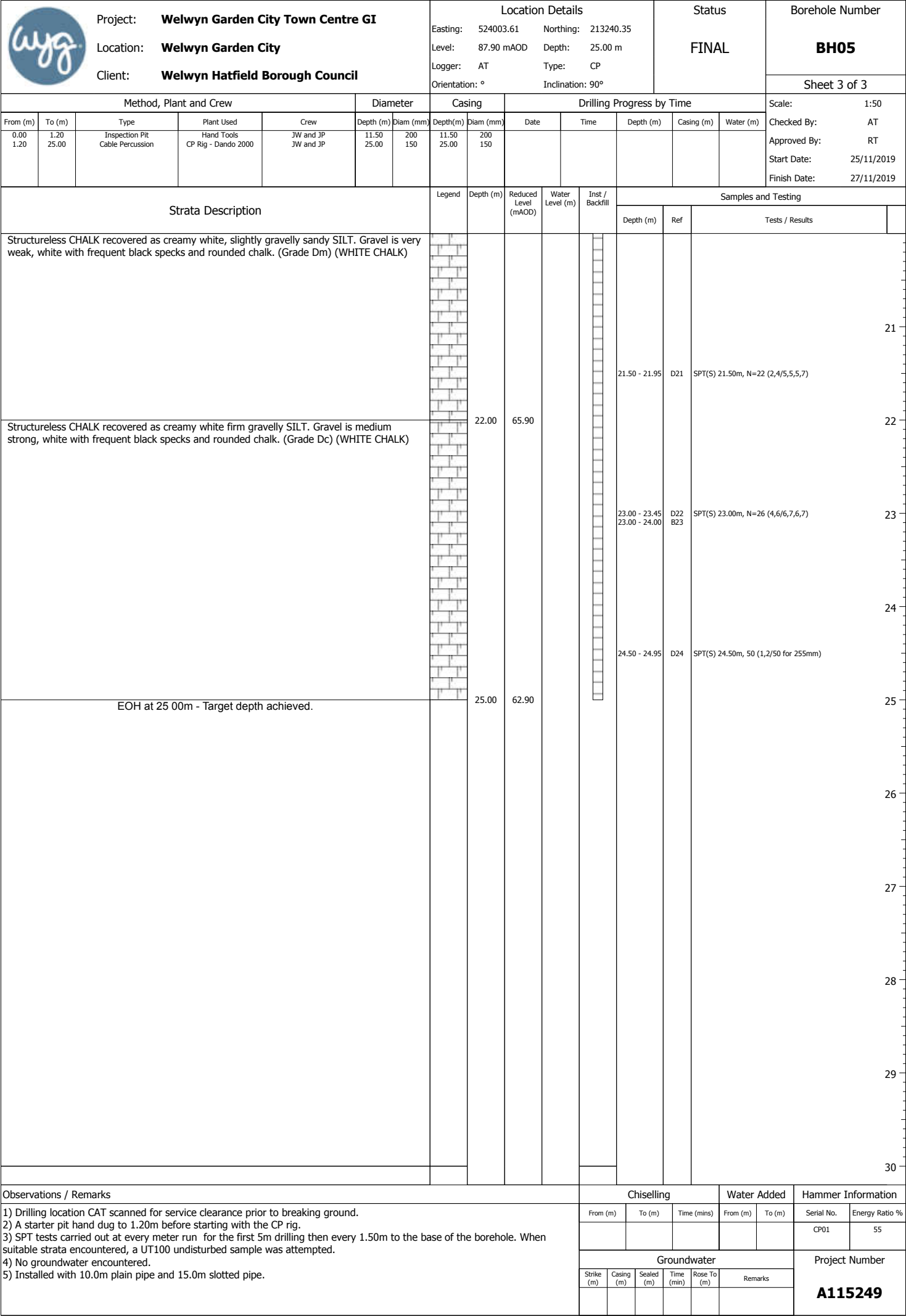



	Project: <b>Welwyn Garden City Town Centre GI</b>					Location Details					Status		Borehole Number				
	Location: <b>Welwyn Garden City</b>					Easting: 523939.66    Northing: 213302.78 Level: 89.01 mAOD    Depth: 25.00 m Logger: AT    Type: CP Orientation: °    Inclination: 90°					FINAL		BH04				
	Client: <b>Welwyn Hatfield Borough Council</b>												Sheet 2 of 3				
Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale: 1:50			
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth (m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	AT		
0.00 1.20	1.20 25.00	Inspection Pit Cable Percussion	Hand Tools CP Rig - Dando 2000	JW and JP JW and JP	12.50 25.00	200 150	12.50 25.00	200 150						Approved By:	RT		
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing					
												Depth (m)	Ref	Tests / Results			
Very dense brown SAND and GRAVEL with occasional cobble. Sand is fine to coarse. Gravel is fine to coarse angular to well rounded flint. Cobbles are subangular to well rounded flint. (LOWESTOFT FORMATION)								12.40	76.61		11.00 - 12.00	B14	SPT(C) 11.00m, N=11 (2,2/3,2,3,3)		11		
											13.00 - 14.00	B16	SPT(S) 12.50m, N=0 (1,0/0,0,0,0)		12		
Structureless CHALK recovered as creamy white, slightly gravelly sandy SILT. Gravel is very weak, white with frequent black specks and rounded chalk. (Grade Dm) (WHITE CHALK)								12.40	76.61		14.00 - 14.45	D17	SPT(S) 14.00m, N=4 (1,1/1,1,1,1)		14		
											15.50 - 15.95	D18	SPT(S) 15.50m, N=6 (2,3/3,1,1,1)		15		
											17.00 - 17.45	D19	SPT(S) 17.00m, N=15 (2,3/3,4,4,4)		17		
											18.50 - 18.95	D20	SPT(S) 18.50m, N=14 (1,3/2,2,5,5)		19		
											20.00 - 20.45	D21	SPT(S) 20.00m, N=17 (2,4/4,4,4,5)		20		
Observations / Remarks 1) Drilling location CAT scanned for service clearance prior to breaking ground. 2) A starter pit hand dug to 1.20m before starting with the CP rig. 3) SPT tests carried out at every meter run for the first 5m drilling then every 1.50m to the base of the borehole. When suitable strata encountered, a UT100 undisturbed sample was attempted. 4) No groundwater encountered. 5) Installed with 3.0m plain pipe and 9.0m slotted pipe.										Chiselling			Water Added		Hammer Information		
										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
															CP01	55	
										Groundwater						Project Number	
										Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A115249	












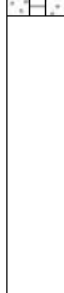

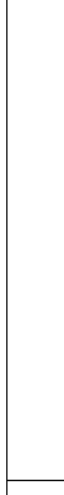






		Project: <b>Welwyn Garden City Town Centre GI</b>				Location Details				Status		Borehole Number					
		Location: <b>Welwyn Garden City</b>				Easting: 523841.56 Northing: 213075.06				<b>FINAL</b>		<b>BH06</b>					
		Client: <b>Welwyn Hatfield Borough Council</b>				Level: 87.11 mAOD Depth: 25.00 m											
						Logger: AT Type: CP				Orientation: ° Inclination: 90°		Sheet 1 of 3					
Method, Plant and Crew						Diameter		Casing		Drilling Progress by Time					Scale: 1:50		
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	AT		
0.00 1.20	1.20 25.00	Inspection Pit Cable Percussion	Hand Tools CP Rig Dando 2000	JW and AH JW and AH	8.00 25.00	200 150	8.00 25.00	200 150						Approved By:	RT		
														Start Date:	04/11/2019		
														Finish Date:	06/11/2019		
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing					
												Depth (m)	Ref	Tests / Results			
TOPSOIL: Grass over dark brown slightly clayey slightly sandy SILT. Sand is fine to coarse.								0.45	86.66			0.25	ES1				
MADE GROUND: Soft brownish orange mottled grey and blue silty CLAY with occasional fine gravel of chalk and brick.								0.90	86.21			0.60	ES2				
Firm light brown mottled orange and grey slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to medium sub-angular to sub-rounded flint and chalk. (LOWESTOFT FORMATION)								1.90	85.21			1.20 - 1.65 1.20 - 2.00	D4 B5	SPT(5) 1.20m, N=11 (2,1/2,3,3,3)	1		
Firm to stiff light brown sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse angular to sub-rounded flint. (LOWESTOFT FORMATION)								4.50	82.61			2.00	ES3	SPT(5) 2.00m, N=25 (5,7/6,5,7,7)	2		
Orangish brown SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular to well rounded flint. (LOWESTOFT FORMATION) <i>Occasional well rounded nodular flint cobbles and gravels (&lt;100mm)</i>												3.00 - 3.45 3.00 - 4.00	D6 B7	SPT(5) 3.00m, N=21 (5,8/6,5,5,5)	3		
												4.00 - 4.45 4.00 - 5.00	D8 B9	SPT(5) 4.00m, 50 (10,13/50 for 245mm)	4		
												5.00 - 5.45 5.00 - 6.00	D10 B11	SPT(5) 5.00m, N=25 (5,4/5,5,7,8)	5		
												6.00 - 7.00	B13		6		
Structureless CHALK recovered as creamy white, slightly gravelly sandy SILT. Gravel is very weak, white with frequent black specks and rounded chalk. (Grade Dm) (WHITE CHALK)												6.50 - 6.95	D12	SPT(5) 6.50m, N=16 (4,4/4,3,4,5)	7		
								7.90	79.21			8.00 - 8.45 8.00 - 9.00	D14 B15	SPT(5) 8.00m, N=14 (1,2/1,5,4,4)	8		
												9.00 - 10.00	B17		9		
												9.50 - 9.95	D16	SPT(5) 9.50m, N=15 (2,1/2,3,4,6)			
												10.00 - 11.00	ES33		10		
Observations / Remarks										Chiselling			Water Added		Hammer Information		
1) Drilling location CAT scanned for service clearance prior to breaking ground. 2) A starter pit hand dug to 1.20m before starting with the CP rig. 3) SPT tests carried out at every meter run for the first 5m drilling then every 1.50m to the base of the borehole. When suitable strata encountered, a UT100 undisturbed sample was attempted. 4) No groundwater encountered. 5) Installed with 22.0m plain pipe and 3 0m slotted pipe.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
													4.50	8.00	CP01	55	
										Groundwater						Project Number	
										Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	<b>A115249</b>	

	Project: <b>Welwyn Garden City Town Centre GI</b>					Location Details					Status		Borehole Number				
	Location: <b>Welwyn Garden City</b>					Easting: 523841.56    Northing: 213075.06 Level: 87.11 mAOD    Depth: 25.00 m Logger: AT    Type: CP Orientation: °    Inclination: 90°					FINAL		BH06				
	Client: <b>Welwyn Hatfield Borough Council</b>												Sheet 2 of 3				
Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale: 1:50			
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	AT		
0.00 1.20	1.20 25.00	Inspection Pit Cable Percussion	Hand Tools CP Rig Dando 2000	JW and AH JW and AH	8.00 25.00	200 150	8.00 25.00	200 150						Approved By:	RT		
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing			Start Date: 04/11/2019		
												Depth (m)	Ref	Tests / Results	Finish Date: 06/11/2019		
Structureless CHALK recovered as creamy white, slightly gravelly sandy SILT. Gravel is very weak, white with frequent black specks and rounded chalk. (Grade Dm) (WHITE CHALK)												11.00 - 11.45	D18	SPT(S) 11.00m, N=19 (4,3/2,6,5,6)	11		
												11.00 - 12.00	B19				
												12.00 - 13.00	B21		12		
												12.50 - 12.95	D20	SPT(S) 12.50m, N=14 (2,2/3,2,4,5)	13		
												14.00 - 14.45	D22	SPT(S) 14.00m, N=9 (3,2/2,2,2,3)	14		
												14.00 - 15.00	B23				
												15.00 - 16.00	B25		15		
												15.50 - 15.95	D24	SPT(S) 15.50m, N=18 (18,6/5,4,4,5)	16		
												17.00 - 17.45	D26	SPT(S) 17.00m, N=35 (6,5/6,7,10,12)	17		
												17.00 - 18.00	B27				
18.00 - 19.00	B29		18														
18.50 - 18.95	D28	SPT(S) 18.50m, N=29 (4,4/4,4,9,12)	19														
20.00 - 20.45	D30	SPT(S) 20.00m, N=48 (4,4/5,9,17,17)	20														
20.00 - 21.00	B31																
Observations / Remarks										Chiselling		Water Added		Hammer Information			
1) Drilling location CAT scanned for service clearance prior to breaking ground. 2) A starter pit hand dug to 1.20m before starting with the CP rig. 3) SPT tests carried out at every meter run for the first 5m drilling then every 1.50m to the base of the borehole. When suitable strata encountered, a UT100 undisturbed sample was attempted. 4) No groundwater encountered. 5) Installed with 22.0m plain pipe and 3 0m slotted pipe.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
															CP01	55	
										Groundwater						Project Number	
										Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A115249	

	Project: <b>Welwyn Garden City Town Centre GI</b>					Location Details					Status		Borehole Number				
	Location: <b>Welwyn Garden City</b>					Easting: 523841.56    Northing: 213075.06 Level: 87.11 mAOD    Depth: 25.00 m Logger: AT    Type: CP Orientation: °    Inclination: 90°					FINAL		BH06				
	Client: <b>Welwyn Hatfield Borough Council</b>												Sheet 3 of 3				
Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale: 1:50			
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	AT		
0.00 1.20	1.20 25.00	Inspection Pit Cable Percussion	Hand Tools CP Rig Dando 2000	JW and AH JW and AH	8.00 25.00	200 150	8.00 25.00	200 150						Approved By:	RT		
Strata Description							Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing					
												Depth (m)	Ref	Tests / Results			
Structureless CHALK recovered as creamy white, slightly gravelly sandy SILT. Gravel is very weak, white with frequent black specks and rounded chalk. (Grade Dm) (WHITE CHALK)								23.00	64.11			21.50 - 21.95	D32	SPT(5) 21.50m, N=8 (2,2/2,3,2,1)			
Structureless CHALK recovered as gravelly SILT. Gravel is weak to medium strong CHALK and occasional flint. (Grade Dc) (WHITE CHALK)								23.00	64.11					SPT(5) 23.00m, N=27 (5,5/5,6,6,10)			
EOH at 25 00m - Target depth achieved.								25.00	62.11					SPT(5) 24.50m, N=35 (7,6/7,7,9,12)			
								25.00	62.11								
Observations / Remarks										Chiselling		Water Added		Hammer Information			
1) Drilling location CAT scanned for service clearance prior to breaking ground. 2) A starter pit hand dug to 1.20m before starting with the CP rig. 3) SPT tests carried out at every meter run for the first 5m drilling then every 1.50m to the base of the borehole. When suitable strata encountered, a UT100 undisturbed sample was attempted. 4) No groundwater encountered. 5) Installed with 22.0m plain pipe and 3 0m slotted pipe.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
															CP01	55	
										Groundwater						Project Number	
										Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A115249	

## **Appendix E – Groundwater Monitoring Results**

# WYG GEO-ENVIRONMENT



Email: enviro.leeds@wyg.com

## GROUND GAS MONITORING RECORD SHEET

Client: Welwyn Hatfield Borough Council					Job No: A115249					Instruments Used: Portable Gas Analyser GA5000						
Project Name: WGC GI					Date: 06/12/2019					Make / Model : GA5000						
Weather: Overcast, some showers					Monitored By: AT and DP					Serial Number: GS02043 GeoTech						
Exploratory Hole No.	Peak <sup>1</sup>		Time to reach steady concentration (secs)	Steady <sup>2</sup>					Flow Rate Peak (L/hr)	Time to reach steady flow (secs)	Flow Rate Steady (L/hr)	Relative pressure (mb)	Atmospheric Pressure (mbar)	Water Depth (m bgl)	Base Depth (m bgl)	Remarks
	CH <sub>4</sub>	CO <sub>2</sub>		CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub> S <sup>3</sup>	CO <sup>3</sup>								
	(% vol)	(% vol)		(% vol)	(% vol)	(% vol)	(ppm)	(ppm)								
WS01	0.1	3.0	30	0.1	2.9	18.6	<1	<1	0.5	75	0.5	18.23	997	dry	4.0	dry at 3.98m bgl
WS03	<0.1	3.1	20	<0.1	3.1	18.1	<1	<1	0.5	70	0.5	11.02	997	dry	4.0	dry at 4.0m bgl
WS05b	<0.1	7.1	25	<0.1	7.1	14.2	<1	<1	0.5	80	0.5	29.39	997	dry	3.0	dry at 3.0m bgl
WS09	<0.1	10.6	20	<0.1	10.6	10.2	<1	<1	0.4	65	0.4	3.05	995	dry	3.0	dry at 3.0m bgl
BH01	0.4	6.1	55	0.3	5.9	1.6	<1	<1	0.3	55	0.3	9.15	994	dry	2.7	dry at 2.25m bgl
BH03	0.1	0.8	40	0.1	0.8	20.2	<1	3	0.5	40	0.5	28.37	994	dry	11.5	dry at 12.7m bgl
BH04	0.1	4.5	30	<0.1	4.5	17.2	<1	1	0.5	30	0.5	-0.02	994	11.4	12.0	base at 12.22m bgl - insufficient water for sampling

### Ambient Gas Levels:

	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	H <sub>2</sub> S (%)	CO (%)	PID ppm	Atmos (mbar)	
Before Monitoring	0.1	0.1	21.3	0.0	0.0		997	at 08:11 am
After Monitoring	0.1	0.0	21.6	0.0	0.0		994	at 14:55 pm
Before Monitoring								
After Monitoring								

1 The peak reading is the maximum recorded level during a monitoring event.

2 The steady reading is the level which remained constant after approximately 1 minute.

3 Recorded values are calculated from the Ambient Gas readings (live zero)

# WYG GEO-ENVIRONMENT



Email: enviro.leeds@wyg.com

## GROUND GAS MONITORING RECORD SHEET

<b>Client:</b> Welwyn Hatfield Borough Council				<b>Job No:</b> A115249				<b>Instruments Used:</b> Portable Gas Analyser GA5000										
<b>Project Name:</b> WGC GI				<b>Date:</b> 13/12/2019				<b>Make / Model :</b> GA5000										
<b>Weather:</b> Overcast				<b>Monitored By:</b> AT and DP				<b>Serial Number:</b> GS02043 GeoTech										
Exploratory Hole No.	Peak <sup>1</sup>		Time to reach steady concentration (secs)	Steady <sup>2</sup>					Flow Rate Peak (L/hr)	Time to reach steady flow (secs)	Flow Rate Steady (L/hr)	Relative pressure (mb)	Atmospheric Pressure (mbar)	Water Depth (m bgl)	Base Depth (m bgl)	Ground Level (mAOD)	Water Level (mAOD)	Remarks
	CH <sub>4</sub>	CO <sub>2</sub>		CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub> S <sup>3</sup>	CO <sup>3</sup>										
	(% vol)	(% vol)		(% vol)	(% vol)	(% vol)	(ppm)	(ppm)										
WS01	0.1	2.8	25	0.1	2.8	18.9	<1	<1	0.4	60	0.1	0.02	970	dry	4.0			dry at 4.0m bgl
WS03	0.1	3.2	25	0.1	3.2	17.9	<1	<1	0.5	55	0.1	0.05	971	dry	4.0			dry at 4.0m bgl
WS05b	0.1	3.0	30	0.1	2.8	21.0	<1	<1	0.4	65	0.4	0.07	970	dry	3.0			dry at 3.0m bgl
WS09	0.1	9.2	30	0.1	9.1	13.8	<1	<1	0.2	65	0.2	0.07	970	dry	3.0			dry at 3.0m bgl
BH01	0.8	7.2	50	0.8	7.2	0.1	<1	<1	0.3	65	0.2	2.73	971	dry	2.7			dry at 2.20m bgl
BH03	0.1	6.4	45	0.1	6.4	12.8	<1	6.0	0.3	55	0.1	2.92	972	dry	11.5			dry at 12.82m bgl
BH04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	unable to sample due to parked car obstructing well

### Ambient Gas Levels:

	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	H <sub>2</sub> S (%)	CO (%)	PID ppm	Atmos (mbar)
Before Monitoring	0.1	0.1	21.5	0.0	0.0		970
After Monitoring	0.1	0.1	21.2	0.0	0.0		972
Before Monitoring							
After Monitoring							

at 08:01 am  
at 13:35 pm

- 1 The peak reading is the maximum recorded level during a monitoring event.
- 2 The steady reading is the level which remained constant after approximately 1 minute.
- 3 Recorded values are calculated from the Ambient Gas readings (live zero)

# WYG GEO-ENVIRONMENT



Email: enviro.leeds@wyg.com

## GROUND GAS MONITORING RECORD SHEET

Client: Welwyn Hatfield Borough Council						Job No: A115249					Instruments Used: Portable Gas Analyser GA5000									
Project Name: WGC GI						Date: 07/01/2020					Make / Model : GA5000									
Weather: Overcast						Monitored By: AT and DP					Serial Number: GS02043 GeoTech									
Exploratory Hole No.	Peak <sup>1</sup>		Time to reach steady concentration (secs)	Steady <sup>2</sup>					Flow Rate Peak (L/hr)	Time to reach steady flow (secs)	Flow Rate Steady (L/hr)	Relative pressure (mb)	Atmospheric Pressure (mbar)	Water Depth (m bgl)	Base Depth (m bgl)	Ground Level (mAOD)	Water Level (mAOD)	Remarks		
	CH <sub>4</sub>	CO <sub>2</sub>		CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub> S <sup>3</sup>	CO <sup>3</sup>												
	(% vol)	(% vol)		(% vol)	(% vol)	(% vol)	(ppm)	(ppm)												
WS01	0.3	2.0	25	0.3	2.0	19.5	<1	<1	0.3	30	0.3	2.96	1015	dry	4.0			dry at 4.0m bgl		
WS03	0.3	2.7	35	0.3	2.7	17.5	0.0	<1	0.4	50	0.3	3.84	1015	dry	4.0			Flow rising slowly when sample time (60s) elapsed		
WS05b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to sample as a parked car blocking access		
WS09	0.3	7.1	40	0.3	7.1	15.9	<1	<1	0.3	55	0.3	3.32	1015	dry	3.0			dry at 3.06m bgl		
BH01	1.0	8.8	60	1.0	8.8	0.2	<1	0.0	0.1	45	0.1	5.93	1015	dry	2.7			dry at 2.19m bgl		
BH03	0.5	5.9	45	0.3	5.9	15.9	<1	2.0	0	30	0	13.91	1015	dry	11.5			dry at 12.88m bgl		
BH04	0.3	2.7	40	0.3	2.7	19.2	<1	<1	0.3	45	0.3	4.4	1012	12.03	12.0			base at 12.25m bgl - insufficient water for sampling		

### Ambient Gas Levels:

	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	H <sub>2</sub> S (%)	CO (%)	PID ppm	Atmos (mbar)
Before Monitoring	<0.1	0.1	21.6	<1	0.0		1015
After Monitoring	<0.1	<0.1	21.3	<1	0.0		1013
Before Monitoring							
After Monitoring							

- 1 The peak reading is the maximum recorded level during a monitoring event.  
2 The steady reading is the level which remained constant after approximately 1 minute.  
3 Recorded values are calculated from the Ambient Gas readings (live zero)

## **Appendix F – Landgas Monitoring Results**

# WYG GEO-ENVIRONMENT



Email: enviro.leeds@wyg.com

## GROUND GAS MONITORING RECORD SHEET

Client: Welwyn Hatfield Borough Council					Job No: A115249					Instruments Used: Portable Gas Analyser GA5000						
Project Name: WGC GI					Date: 06/12/2019					Make / Model : GA5000						
Weather: Overcast, some showers					Monitored By: AT and DP					Serial Number: GS02043 GeoTech						
Exploratory Hole No.	Peak <sup>1</sup>		Time to reach steady concentration (secs)	Steady <sup>2</sup>					Flow Rate Peak (L/hr)	Time to reach steady flow (secs)	Flow Rate Steady (L/hr)	Relative pressure (mb)	Atmospheric Pressure (mbar)	Water Depth (m bgl)	Base Depth (m bgl)	Remarks
	CH <sub>4</sub>	CO <sub>2</sub>		CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub> S <sup>3</sup>	CO <sup>3</sup>								
	(% vol)	(% vol)		(% vol)	(% vol)	(% vol)	(ppm)	(ppm)								
WS01	0.1	3.0	30	0.1	2.9	18.6	<1	<1	0.5	75	0.5	18.23	997	dry	4.0	dry at 3.98m bgl
WS03	<0.1	3.1	20	<0.1	3.1	18.1	<1	<1	0.5	70	0.5	11.02	997	dry	4.0	dry at 4.0m bgl
WS05b	<0.1	7.1	25	<0.1	7.1	14.2	<1	<1	0.5	80	0.5	29.39	997	dry	3.0	dry at 3.0m bgl
WS09	<0.1	10.6	20	<0.1	10.6	10.2	<1	<1	0.4	65	0.4	3.05	995	dry	3.0	dry at 3.0m bgl
BH01	0.4	6.1	55	0.3	5.9	1.6	<1	<1	0.3	55	0.3	9.15	994	dry	2.7	dry at 2.25m bgl
BH03	0.1	0.8	40	0.1	0.8	20.2	<1	3	0.5	40	0.5	28.37	994	dry	11.5	dry at 12.7m bgl
BH04	0.1	4.5	30	<0.1	4.5	17.2	<1	1	0.5	30	0.5	-0.02	994	11.4	12.0	base at 12.22m bgl - insufficient water for sampling

### Ambient Gas Levels:

	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	H <sub>2</sub> S (%)	CO (%)	PID ppm	Atmos (mbar)	
Before Monitoring	0.1	0.1	21.3	0.0	0.0		997	at 08:11 am
After Monitoring	0.1	0.0	21.6	0.0	0.0		994	at 14:55 pm
Before Monitoring								
After Monitoring								

1 The peak reading is the maximum recorded level during a monitoring event.

2 The steady reading is the level which remained constant after approximately 1 minute.

3 Recorded values are calculated from the Ambient Gas readings (live zero)

# WYG GEO-ENVIRONMENT



Email: enviro.leeds@wyg.com

## GROUND GAS MONITORING RECORD SHEET

<b>Client:</b> Welwyn Hatfield Borough Council				<b>Job No:</b> A115249				<b>Instruments Used:</b> Portable Gas Analyser GA5000										
<b>Project Name:</b> WGC GI				<b>Date:</b> 13/12/2019				<b>Make / Model :</b> GA5000										
<b>Weather:</b> Overcast				<b>Monitored By:</b> AT and DP				<b>Serial Number:</b> GS02043 GeoTech										
Exploratory Hole No.	Peak <sup>1</sup>		Time to reach steady concentration (secs)	Steady <sup>2</sup>					Flow Rate Peak (L/hr)	Time to reach steady flow (secs)	Flow Rate Steady (L/hr)	Relative pressure (mb)	Atmospheric Pressure (mbar)	Water Depth (m bgl)	Base Depth (m bgl)	Ground Level (mAOD)	Water Level (mAOD)	Remarks
	CH <sub>4</sub>	CO <sub>2</sub>		CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub> S <sup>3</sup>	CO <sup>3</sup>										
	(% vol)	(% vol)		(% vol)	(% vol)	(% vol)	(ppm)	(ppm)										
WS01	0.1	2.8	25	0.1	2.8	18.9	<1	<1	0.4	60	0.1	0.02	970	dry	4.0			dry at 4.0m bgl
WS03	0.1	3.2	25	0.1	3.2	17.9	<1	<1	0.5	55	0.1	0.05	971	dry	4.0			dry at 4.0m bgl
WS05b	0.1	3.0	30	0.1	2.8	21.0	<1	<1	0.4	65	0.4	0.07	970	dry	3.0			dry at 3.0m bgl
WS09	0.1	9.2	30	0.1	9.1	13.8	<1	<1	0.2	65	0.2	0.07	970	dry	3.0			dry at 3.0m bgl
BH01	0.8	7.2	50	0.8	7.2	0.1	<1	<1	0.3	65	0.2	2.73	971	dry	2.7			dry at 2.20m bgl
BH03	0.1	6.4	45	0.1	6.4	12.8	<1	6.0	0.3	55	0.1	2.92	972	dry	11.5			dry at 12.82m bgl
BH04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	unable to sample due to parked car obstructing well

### Ambient Gas Levels:

	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	H <sub>2</sub> S (%)	CO (%)	PID ppm	Atmos (mbar)
Before Monitoring	0.1	0.1	21.5	0.0	0.0		970
After Monitoring	0.1	0.1	21.2	0.0	0.0		972
Before Monitoring							
After Monitoring							

at 08:01 am  
at 13:35 pm

- 1 The peak reading is the maximum recorded level during a monitoring event.
- 2 The steady reading is the level which remained constant after approximately 1 minute.
- 3 Recorded values are calculated from the Ambient Gas readings (live zero)

# WYG GEO-ENVIRONMENT



Email: [enviro.leeds@wyg.com](mailto:enviro.leeds@wyg.com)

## GROUND GAS MONITORING RECORD SHEET

Client: Welwyn Hatfield Borough Council						Job No: A115249					Instruments Used: Portable Gas Analyser GA5000									
Project Name: WGC GI						Date: 07/01/2020					Make / Model : GA5000									
Weather: Overcast						Monitored By: AT and DP					Serial Number: GS02043 GeoTech									
Exploratory Hole No.	Peak <sup>1</sup>		Time to reach steady concentration (secs)	Steady <sup>2</sup>					Flow Rate Peak (L/hr)	Time to reach steady flow (secs)	Flow Rate Steady (L/hr)	Relative pressure (mb)	Atmospheric Pressure (mbar)	Water Depth (m bgl)	Base Depth (m bgl)	Ground Level (mAOD)	Water Level (mAOD)	Remarks		
	CH <sub>4</sub>	CO <sub>2</sub>		CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub> S <sup>3</sup>	CO <sup>3</sup>												
	(% vol)	(% vol)		(% vol)	(% vol)	(% vol)	(ppm)	(ppm)												
WS01	0.3	2.0	25	0.3	2.0	19.5	<1	<1	0.3	30	0.3	2.96	1015	dry	4.0			dry at 4.0m bgl		
WS03	0.3	2.7	35	0.3	2.7	17.5	0.0	<1	0.4	50	0.3	3.84	1015	dry	4.0			Flow rising slowly when sample time (60s) elapsed		
WS05b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to sample as a parked car blocking access		
WS09	0.3	7.1	40	0.3	7.1	15.9	<1	<1	0.3	55	0.3	3.32	1015	dry	3.0			dry at 3.06m bgl		
BH01	1.0	8.8	60	1.0	8.8	0.2	<1	0.0	0.1	45	0.1	5.93	1015	dry	2.7			dry at 2.19m bgl		
BH03	0.5	5.9	45	0.3	5.9	15.9	<1	2.0	0	30	0	13.91	1015	dry	11.5			dry at 12.88m bgl		
BH04	0.3	2.7	40	0.3	2.7	19.2	<1	<1	0.3	45	0.3	4.4	1012	12.03	12.0			base at 12.25m bgl - insufficient water for sampling		

### Ambient Gas Levels:

	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	H <sub>2</sub> S (%)	CO (%)	PID ppm	Atmos (mbar)
Before Monitoring	<0.1	0.1	21.6	<1	0.0		1015
After Monitoring	<0.1	<0.1	21.3	<1	0.0		1013
Before Monitoring							
After Monitoring							

- 1 The peak reading is the maximum recorded level during a monitoring event.  
2 The steady reading is the level which remained constant after approximately 1 minute.  
3 Recorded values are calculated from the Ambient Gas readings (live zero)

## **Appendix G – Geotechnical Laboratory Certificates**



# LABORATORY REPORT



4043

**Contract Number: PSL19/7560**

Report Date: 20 January 2020

Client's Reference: A115249

Client Name: WYG London  
11th Floor  
1 Angel Court  
London  
EC2R 7HJ

**For the attention of: Agim Tafliku**

Contract Title: Welwyn Garden City

Date Received: 11/12/2019

Date Commenced: 11/12/2019

Date Completed: 20/1/2020

**Notes: Opinions and Interpretations are outside the UKAS Accreditation**

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson  
(Director)



S Royle  
(Laboratory Manager)

A Watkins  
(Director)

S Eyre  
(Senior Technician)

R Berriman  
(Quality Manager)

L Knight  
(Senior Technician)

5 – 7 Hexthorpe Road, Hexthorpe,

Doncaster DN4 0AR

tel: +44 (0)844 815 6641

fax: +44 (0)844 815 6642

e-mail:   


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## SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH01	2	B	1.20	2.00	Brown slightly gravelly sandy CLAY.
BH01	6	B	3.00	4.00	Brown slightly gravelly sandy CLAY.
BH01	15	B	8.00	9.00	Brown gravelly very sandy CLAY.
BH01	25	B	14.00	15.00	Light brown slightly gravelly slightly sandy CLAY gravel is chalk and flint.
BH01	27	B	16.00	17.00	White structureless CHALK.
BH02	2	B	1.20	2.00	White CHALK.
BH02	5	B	3.00	4.00	Brown very gravelly sandy CLAY.
BH02	11	B	6.50	7.50	Brown very sandy GRAVEL.
BH02	14	B	10.00	11.00	Light brown very gravelly slightly sandy CLAY gravel is chalk and flint.
BH02	22	B	16.00	17.00	White structureless CHALK.
BH02	29	B	22.00	23.00	White CHALK.
BH02	37	B	28.00	29.00	White CHALK.
BH03	3	B	2.00	3.00	Brown very gravelly very sandy CLAY.
BH03	4	SD	3.00	3.45	Reddish brown slightly gravelly clayey silty SAND.
BH03	5	B	3.50	4.00	Brown very gravelly very sandy CLAY.
BH03	11	B	7.00	8.00	Brown very gravelly clayey silty SAND.
BH03	19	B	14.00	15.00	White structureless CHALK.
BH03	25	B	19.00	20.00	White structureless CHALK.
BH04	4	B	2.00	3.00	Brown gravelly silty SAND.



4043



Welwyn Garden City

Contract No:

PSL19/7560

Client Ref:

A115249