GEOTECHNICAL AND GEO-ENVIRONMENTAL ASSESSMENT

Client: Exeter City Living

Clifton Hill, Exeter

Report No. 12072
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Version 1

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Executive Summary

South West Geotechnical Ltd (SWG) was instructed by Baker Ruff Hannon LLP, acting on behalf of Exeter City Living (the Client) to undertake a geotechnical and geo-environmental assessment to assist with the proposed development of the Clifton Hill Leisure Centre site.

At the time of the investigation, development proposals included the demolition of some existing structures on site (Leisure Centre and Rifle Range) and construction of residential properties, including 3 storey town houses and 3 – 4 storey blocks of flats.

This geotechnical and geo-environmental assessment was carried out to determine the ground conditions for foundation, retaining structure and pavement design. In addition, an assessment was required from a geo-environmental perspective to include recommendations for any contamination remediation that may be required. Large scale soakaway testing was undertaken in accordance with BRE 365 to assist with surface water drainage design.

Desk Study

The site is noted to have been partially undeveloped on the earliest maps (1880 - 90), with a small section of the adjacent brick works noted on the lower eastern boundary. The brick works is noted as disused on the 1948 – 51 mapping and a change of use is noted for the buildings on site that were associated with the works on the 1960 mapping (Hall / Scout Hut). In the surrounding area, potential sources of contamination of note are considered to be the adjacent brick works and subsequent use of particular areas of the former works as a refuse heap (landfill).

Any made ground associated with the historic landfill, former buildings and the carpark hard standing may contain contaminants including heavy metals, hydrocarbons and polycyclic aromatic hydrocarbons and asbestos.

The landfill is known to produce gasses including methane and carbon dioxide. Gas monitoring should be undertaken to determine the level of gas protection measures required for the development.

Ground Conditions

The investigation generally encountered made ground overlying cohesive Head Deposits soils overlying cohesive soils derived from the weathering of the Alphington Breccia Formation. Extremely weak, highly weathered Alphington Formation was encountered below the cohesive units.

Groundwater was only encountered during the investigation standing at a depth of 0.30mbgl in WS09. This is expected to be trapped surface water rather than true groundwater.

Subsequent monitoring visits recorded groundwater at depths of between 0.7 and 1.7m below ground level in WS03 undertaken in the southern corner of the site. This is expected to be surface water ingress rather than true groundwater given the borehole is in the highest area of the site.

Trapped surface water was also encountered in TPs 04 and 05 excavated adjacent to the large retaining wall.

Geo-environmental

The ground investigation and subsequent laboratory testing indicated the presence of elevated concentrations of lead, arsenic and various PAH species in two areas of made ground (TP02 and WS03) overlying the natural soils. Additional sampling to determine the extent of these hotspots and subsequent removal for the impacted materials is considered the most appropriate remediation method, especially given the reductions in ground level expected to be required along the south western boundary to accommodate the development.

With the exception of the two areas mentioned above, the made ground is not significantly contaminated. If made ground materials are to remain on site in soft landscaped areas, it is recommended that they are screened to remove the fill materials that are not texturally appropriate for garden areas (brick, glass, porcelain, concrete, organic matter, bottle tops, and metal).

A Contamination Remediation Method Statement will need to be produced to assist with any remediation undertaken. A subsequent validation report confirming the effective

removal of contaminated materials and minimum thickness of topsoil has been imported will be required. The Local Authority will need to confirm any proposed strategy is acceptable prior to commencement of works.

No radon protection measures are required.

Given the proximity of the historic landfill, it is recommended that CS2 gas protection measures are installed.

Standard potable, water pipes are expected to be suitable although, this should be confirmed by the service provider.

Should any obviously contaminated soils be encountered during the construction phase of the works, advice should be sought from a suitably experienced Geo-environmental Engineer.

Geotechnical

Beneath the made ground, the generally firm and stiff consistency cohesive soils will provide a suitable bearing stratum low rise residential development. A serviceable limit state (allowable) bearing capacity of 100 kN/m^2 is considered appropriate for foundation design at this stage. This could be improved on for specific units once detailed design has been finalised.

A combination of traditional strip and shallow trench fill foundations will be appropriate with foundation depths largely dependent on proposed reductions in ground level.

Given the volume change potential of the soils, suspended floors will be required.

The slope forming the eastern boundary between the site development and the playing field to the east is mathematically it is too steep for the materials present (cohesive soils) to provide a suitable over design factor for long term stability. In order to mitigate any long term maintenance issues, it is recommended that the stability of the slope is improved. This could be undertaken by installing a retaining wall at the base of the slope and reducing the overall angle to 18° (1V:3H). Alternatively, the long term stability could be improved by soil nailing the slope and the addition of a flexible mesh facing.

Concrete should be designed to a Design Sulphate Class of DS-1, and ACEC Class AC-1s.

Based on the plasticity of near surface cohesive soils, a CBR value of 3% is expected to be appropriate for pavement design.

Soakaways will not be suitable for the disposal of surface water and an alternative surface water drainage strategy will be required.

1 INTRODUCTION

1.1 General

South West Geotechnical Ltd (SWG) was instructed by Baker Ruff Hannon LLP, acting on behalf of Exeter City Living (the Client) to undertake a geotechnical and geo-environmental assessment to assist with the proposed development of the Clifton Hill Leisure Centre site.

At the time of the investigation, development proposals included the demolition of some existing structures on site (Leisure Centre and Rifle Range) and construction of residential properties, including 3 storey town houses and 3 – 4 storey blocks of flats.

This geotechnical and geo-environmental assessment was carried out to determine the ground conditions for foundation, retaining structure and pavement design. In addition, an assessment was required from a geo-environmental perspective to include recommendations for any contamination remediation that may be required. Large scale soakaway testing was undertaken in accordance with BRE 365 to assist with surface water drainage design.

The investigation comprised a desk study, walkover survey, intrusive investigation, geotechnical and geo-environmental laboratory testing and reporting.

1.2 Site Description

The site is situated in Clifton Hill, in the centre of Exeter, Devon. It is centred on National Grid Reference 293076, 093025, as shown in the Site Location Plan, Appendix A.

The site is set within a predominantly residential area near the centre of Exeter, and is bound to its east by a golf driving range elevated at approximately ~50.78m AOD, with the centre of the site at approximately ~44.40m AOD. The site is bound to the west by a row of terraced residential properties on Portland Street, with their associated gardens backing onto the site at its south-west boundary. Clifton Hill forms the northern site boundary, off which site access is gained.

The Leisure Centre car park is situated at the northern end of the site and is rectangular in shape. The car park (40.86m AOD) situated topographically below the Leisure Centre

building and is separated by a three metre high retaining wall running along the car parks southern boundary.

The Leisure Centre has a hill running from the retaining wall at the west of site encircling the building round to the access road at its south east corner. There is a row of trees running along the crest of the hill. The site has an access road running south east down the centre of the site towards the driving range, with associated Devon County Council parking at its margin. The parking extends east, with a forty metre long decommissioned Rifle Range adjacent to it.

Vegetation encountered on the site comprised primarily of well-maintained grass, with occasional large (10+m) high trees disseminated across the site. In addition, there as several smaller bushes located just below the driving range at the south east corner of the site.

Ground surface conditions encountered across the site were consistently firm underfoot.

Topographically, the site slopes unevenly, from the driving range east of the site, down slope towards the sites lowest point in the leisure centre car park in the north west of the site.

2 DESK STUDY

2.1 General

A desk study has been undertaken to provide background information on the history, geology and environmental conditions at the site. An Envirocheck report was obtained for the site that consulted the following sources of information:

- Historic Ordnance Survey maps.
- Geological maps and memoirs.
- Envirocheck Environmental Report.

As part of the Envirocheck report, historic Ordnance Survey maps published at a scale of 1:2,500, 1:10,000 and 1:10,560 were reviewed for past contaminative land uses, tanks, energy facilities, petrol and fuel sites, garages and potentially infilled land.

After review of the desk study information a site walk over was conducted to examine any features highlighted in the desk study, and identify any other features of environmental interest.

This information was used to produce an "initial conceptual model" of the site so that a preliminary risk assessment could be carried out.

The Envirocheck report is presented as Appendix B.

2.2 Site History

A series of historical maps were obtained for the site to provide information on the sites history. The information is summarised in Table 1:

Table 1: Site History

Date	On Site	Surrounding Area
1880 – 90	Site is largely unoccupied and segregated by tracks into plots. One are of the site (lower eastern boundary) is occupied by part of the adjacent brick works.	The upper eastern boundary of the site is bordered by an open plot, leading onto garden areas. The lower eastern boundary of the site and eastern section of the southern boundary are bordered by a brick works, with kiln

		noted at ~10m south. The western section of the southern boundary is bordered by unoccupied plots separated by tracks (as per the site). The western boundary is bordered by orchards. The northern boundary is Belmont Road. The wider area is largely residential / commercial. A brick and tile works is noted ~150m east and a brick works is noted ~40 north.
1891	Largely unchanged, plots now noted as allotment gardens and separated into smaller plots.	Orchard on western boundary replaced by residential development of terraced housing (Portland Street). Development of four residential properties on upper eastern site boundary. Brick works to the north now noted as allotment gardens and Belmont Pleasure Ground.
1905	Site still noted as allotment gardens, plots not shown.	No significant changes.
1932 – 33	No change.	Clay pit area of brick works now planted. Brick and tile works to the east no longer noted.
1948 – 51	No change.	Adjacent brick works now noted as disused. Refuse heap, associated with brick works noted ~25m south east.
1950 -55	No change.	No significant changes.
1960	Building features previously noted as part of the adjacent brick works, now noted as Hall and Scout Hut.	Kiln, chimneys, ponds, planted areas and refuse tips, previously associated with the brick works, no longer noted.
1964	NO change.	Clifton Hill Athletics Track noted on former brick works site.
1984	Rifle club noted on site.	No significant changes.
1988	Sports centre noted on site.	No significant changes.
1994 – date	No changes discernible from modern mapping techniques.	

In summary the site is noted to have been partially undeveloped on the earliest maps (1880 - 90), with a small section of the adjacent brick works noted on the lower eastern boundary. The brick works is noted as disused on the 1948 – 51 mapping and a change of use is noted for the buildings on site that were associated with the works on the 1960 mapping (Hall / Scout Hut). In the surrounding area, potential sources of contamination of note are considered to be the adjacent brick works and subsequent use of particular areas of the former works as a refuse heap.

Made ground associated with former buildings and the carpark is likely to be present.

2.3 Industrial Land Use

Five Contemporary Trade Directory Entries within 250m, with one entry noted as active, a Boiler Servicing, Replacement and Repair service.

The nearest fuel station entry is at 465m west, the entry is noted as obsolete. The nearest active entry is at 976, north east.

2.4 Environmental Permits, Incidents & Registers

The site has not been determined as contaminated land, under the Environmental Protection Act (1990).

There are no discharge consents within 250m. The nearest discharge consent is at 483m east.

There are no records of pollution incidents to controlled waters within 250m of the site.

There are no records of permitted activities within 250m of the site.

2.5 Landfill & Other Waste Sites

The site itself, the adjacent former Brick Works and the Brick and Tile Works to the north east of the site are noted as historical landfills, local authority recorded landfill sites and areas of potentially infilled land. They are noted to contain industrial, commercial and household waste.

Landfills are a source of gasses including methane (explosive) and carbon dioxide (asphyxiant). It is known that the adjacent landfill produces gasses.

2.6 Geology

The British Geological Survey (BGS) map for the area (325 Exeter) indicates the bedrock geology beneath the site comprises the Permian Alphington Breccia. Typically this comprises weakly cemented breccia at depth, although these materials often weather to a sandy clay nearer surface.

No Superficial (Recent) soils are shown to overlie the bedrock although, it is common to find locally transported Head Deposits overlying the bedrock derived soils in the area.

Made ground is mapped on the south eastern part of the site associated with the landfill discussed in Sections 2.2 and 2.5. Borehole records available on the BGS GeoIndex service shows the made ground to be between 5.0 and 7.0m thick in the development area. Some further made ground associated with existing structures on site is also expected.

2.7 Hydrogeology & Hydrology

The bedrock is classified as a Secondary A Aquifer – permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

The nearest surface water feature is noted 387m east.

There are no surface water abstractions recorded within 500m of the site.

There are no potable groundwater abstractions noted within the reports search boundaries.

The site is not located within a groundwater source protection zone.

The direction of groundwater flow is not known.

2.8 Natural Hazards

Natural hazards such as collapsible ground, running sand, landslide potential, shrinkable soils and soluble rocks are listed as at worst, as very low risk at the site.

The site is in an area where less than 1% of properties are above the action level for radon.

2.9 Mining

The site is not in an area known for mining.

2.10 Designated Environmentally Sensitive Sites

The site is located in a nitrate vulnerable zone.

2.11 Unexploded Ordnance (UXO)

A UXO desk study has been completed for the site by First Line Defence Ltd (Report No DA10382-00, February 2020).

The desk study concludes that there is a medium risk of UXO at the site.

2.12 Walkover Survey

The site walkover survey was conducted on 3rd February 2020. A full description, obtained from the walkover, is given in Section 1.2.

No obvious sources of significant contamination were noted on site.

Photographs of the site are presented as Appendix D.

3 INITIAL GEO-ENVIRONMENTAL CONCEPTUAL MODEL

It is understood the site is to be developed for residential purposes. Therefore, the assessment has assigned the site an end use designation of: residential with uptake from home grown produce.

The contamination assessment has been carried out following the guidelines outlined in the Chartered Institute of Environmental Health (CIEH) & Contaminated Land: Applications in Real Environments (CL:AIRE) document – Guidance on Comparing Soil Contamination Data with a Critical Concentration, May 2008 and Environment Agency (EA) documents: SR2, SR3, SR4, SR7 & CLR11 using a source-pathway-receptor analysis method, so that an appropriate conceptual model can be developed.

Based on the information collected and described in the previous sections, the following initial conceptual model of contaminative sources, pathways for contamination transmission, and potential receptors of contamination is considered below.

3.1 Potential Sources

The site is noted to have been partially undeveloped on the earliest maps (1880 - 90), with a small portion of the adjacent brick works noted on the lower eastern boundary. The brick works is noted as disused on the 1948 – 51 mapping and a change of use is noted for the buildings on site that were associated with the works on the 1960 mapping (Hall / Scout Hut). In the surrounding area, potential sources of contamination of note are considered to be the adjacent brick works and subsequent use of particular areas of the former works as a refuse heap (landfill).

In summary, the following sources of contaminants are considered a risk to the site;

- The historic landfill and any other made ground - hydrocarbons (TPH / PAH), heavy metals, asbestos.
- Historic Landfill – Ground gasses (methane and carbon dioxide)
- Unexploded Ordnance – this is outside the scope of this report

3.2 Pathways

In accordance with the LQM/CIEH model for residential land-use with home grown produce, the following potential migration pathways are considered potentially linking contamination to humans:

- Direct soil and indoor dust ingestion.
- Consumption of homegrown produce.
- Consumption of soil adhering to homegrown produce.
- Skin contact with soils and indoor dust.
- Inhalation of indoor and outdoor dust and vapours.

If present, groundwater flow is considered to be the main migration pathway linking any contamination to controlled waters receptors.

3.3 Receptors

As a residential land-use, end-users are considered as potential receptors of any contamination, with a female child, being the most vulnerable receptor.

Site workers are also considered as receptors during the building operations as they are exposed to the soils (short term exposure only).

The groundwater beneath the site is considered, being controlled waters, a potential receptor.

Building materials and buried services are also considered as receptors as their deterioration due to adverse ground conditions could have an impact on human health.

3.4 Desk Study Conclusions

The brick works is noted as disused on the 1948 – 51 mapping and a change of use is noted for the buildings on site that were associated with the works on the 1960 mapping (Hall / Scout Hut). In the surrounding area, potential sources of contamination of note are considered to be the adjacent brick works and subsequent use of particular areas of the former works as a refuse heap (landfill).

Any made ground associated with the historic landfill, former buildings and the carpark hard standing may contain contaminants including heavy metals, hydrocarbons and polycyclic aromatic hydrocarbons and asbestos.

The landfill is known to produce gasses including methane and carbon dioxide. Gas monitoring should be undertaken to determine the level of gas protection measures required for the development.

The Envirocheck Report States that less than 1% of properties are above the action level for radon. No radon protection measures are required for the development.

The Phase 2 ground investigation should include geo-environmental testing to identify whether any contaminants identified in Section 3.1 are present.

4 GROUND INVESTIGATION

4.1 Fieldwork

An intrusive investigation was carried out from the 3rd to the 5th of February 2020. The exploratory hole location plan, exploratory hole logs, in-situ test data / results and associated photographs are contained in Appendices C and D respectively.

The fieldwork was carried out following the guidelines of BS 5930 (2015): Code of Practice for Ground Investigation; British Standard BS10175 (2011): Investigation of Potentially Contaminated Sites – Code of Practice and BS EN 1997-2:2007 (Eurocode 7) – Geotechnical Design – Part 2: Ground investigation and testing).

The fieldwork consisted of:

- Twelve (12 no) Window Sample boreholes.
- Three (3 no) Gas and Water monitoring standpipes.
- Six (6 no) Trial Pits
- Three (3 no) BRE 365 Soakaway tests.
- Five (5 no) TRL DCP Probes.

The window sample boreholes and trial pits were positioned to give good representative coverage of the site from both a geotechnical and geo-environmental perspective.

4.2 Window Sampling

Window sampling was carried out using a Competitor percussive rig, which used a 63.5kg weight dropping a vertical distance of 750mm (BS 5930 Section 4, Clause 22.9). The boring produces a continuous sample in diameters ranging from 100mm down to 36mm, in clear rigid plastic liners.

Window sample holes included in-situ Standard Penetration Tests (SPTs), generally at metre centres. Where SPT blow counts exceed 50 without reaching the full 300mm penetration, the actual penetration was recorded and the extrapolated N-value for the full penetration was calculated.

4.3 Trial Pits

Six (6 no) trial pits were excavated with a 3 tonne tracked excavator. TP01, 02 and 03 were left open to enable BRE 365 soakaway testing to be undertaken to assist with surface water drainage design.

The pits are logged from the surface by a qualified SWG Engineering Geologist as work progressed. Representative samples were taken from each stratum, and the pit photographed on completion. A photograph was also taken of the respective spoil heap.

The results of the BRE 365 soakaway testing are detailed in Section 8.7.

4.4 TRL DCP Probes

Five (5 no) UKAS accredited TRL DCP probes were undertaken around the site. The TRL DCP apparatus is designed for determining soil and material strengths in a continuous profile. The probe uses an 8kg hammer dropping through a height of 575mm and a 60 degree cone with a diameter of 20mm (TRL Project Report PR/INT/277/04). CBR values were calculated using the formula given in Advice Note 73/06 Revision 1 (2009) Design Guidance for Road Pavement Foundations (Draft HD25).

The individual DCP probe plots are included as Appendix H.

5 LABORATORY TESTING

5.1 Geotechnical Laboratory Testing

All geotechnical testing was carried out in the SWG UKAS accredited laboratory in accordance with BS 1377; 1990, Methods of tests for soils for civil engineering purposes. Table 2 summarises geotechnical testing undertaken. The geotechnical laboratory test results are enclosed as Appendix F.

Table 2: Geotechnical Testing

Test	No. Tests
Moisture Content	7
Atterberg Limits	7
Particle Size Distribution Sieve	1
Dry Density/Moisture Content Relationship (compaction)	1
pH & Soluble Sulphate	5

5.2 Geo-environmental testing

Seven soil samples were selected for the following suite of determinands:

- pH, organic matter, sulphate (water soluble).
- Metals: Arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc and cyanide
- Speciated Polyaromatic Hydrocarbons (PAH): Acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h) anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene.
- Total Petroleum Hydrocarbons (TPH)
- Speciated Total Petroleum Hydrocarbons (TPH), aliphatic >C5-C6, aliphatic >C6-C8, aliphatic >C8-C10, aliphatic >C10-C12, aliphatic >C12-C16, aliphatic >C16-C21, aliphatic >C21-C35, aromatic >C5-C7, aromatic >C7-C8, aromatic >C8-C10, aromatic >C10-C12, aromatic >C12-C16, aromatic >C16-C21, aromatic >C21-C35.
- Benzene, toluene, ethylbenzene, p & m-xylene and o-xylene

Five soil samples were screened for asbestos. The test results and certificates are presented in Appendix G.

6 GROUND CONDITIONS

6.1 General

The investigation generally encountered made ground overlying cohesive Head Deposits soils overlying cohesive soils derived from the weathering of the Alphington Breccia Formation. Extremely weak, highly weathered Alphington Formation was encountered below the cohesive units in WS04, 06, 07, 10 and 12.

The ground conditions have been summarised in Table 3.

Table 3: Stratum summary

Stratum	Depth to base of stratum (m BGL)					
	WS1	WS2	WS3	WS4	WS5	WS6
Made Ground	1.2	>4.45	1.1	2.4	0.35	0.9
Head Deposits	2.1	-	1.9	4.2	1.2	
Residual Soil	>5.45	-	>4.45	5.2	3.8	3.8
Alphington Formation.	-	-	-	>5.45	>4.45	>4.45
Groundwater	-	-	-		-	-
Stratum	**Depth to base of stratum (m BGL)**					
	WS7	WS8	WS9	WS10	WS11	WS12
Made Ground	0.2	0.9	0.45	1.8	0.5	1.1
Head Deposits	-	2.3	-	3.1	-	1.5
Residual Soil	2.8	>4.45	>3.45	4.8	3.7	5.0
Alphington Formation.	>3.45	-	-	>5.45	>4.45	>5.3
Groundwater	-	-	0.3	-	-	-
Stratum	**Depth to base of stratum (m BGL)**					
	TP01	TP02	TP03	TP04	TP05	TP06
Made Ground	0.8	0.5	1.4	>0.5	>2.8	>2.6
Head Deposits	1.5	0.8	1.7	-	-	-
Residual Soil	>2.6	>2.4	>2.4	-	-	-
Alphington Formation.	-	-	-	-	-	-
Groundwater	-	-	-	-	-	-

Standard Penetration Tests (SPTs) were undertaken at frequent intervals in the window sample holes to allow the relative strength / density of near surface soils to be assessed. The SPT N values have been plotted against depth in Figure 1.

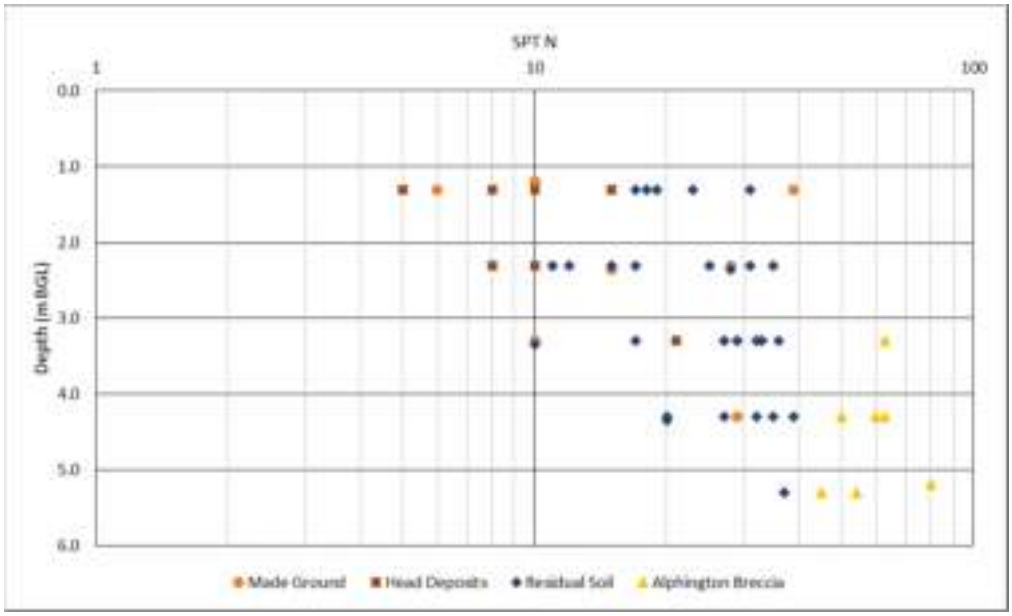

Figure 1: SPT N Vs Depth Plot

The N values show significant scatter near surface which is reflective of the highly variable nature of the made ground and Head Deposits. With depth the N values increase and the scatter decreases.

6.2 Made Ground

The made ground can be divided into two (2 no) components. The first of which is made ground of Landfill origin. As detailed in the desk study, the driving range is built over an old Landfill site. This made ground is only encountered in WS02 and is observed through to termination of the hole at 4.45mbgl. This comprises gravelly clay with materials including: brick, glass, porcelain, concrete, organic matter, bottle tops, charcoal and metal.

Similar materials were encountered across other areas of the site although, the fill materials were present in lesser quantities.

The greatest thicknesses of made ground were present in WS02, undertaken in the landfill, along with WS04, TPs 05 and 06, undertaken through the landscaped fill “hill” to the south west of the existing Leisure Centre building.

Liquid and Plastic (Atterberg) Limit testing undertaken on the cohesive made ground materials indicate the soils are of intermediate to high plasticity (CI/CH) and at worst, medium volume change potential in accordance with NHBC (2020).

A particle size distribution sieve undertaken on made ground from TP06 confirm the materials are predominantly cohesive.

SPT N values recorded in the made ground range from 6 to 39.

6.3 Head Deposits

Locally transported Head Deposits were encountered in the majority of exploratory holes extending to depths of between 0.8 and 4.2m below ground level. The materials generally comprise firm and stiff consistency, slightly sandy, gravelly clay.

In WS08, more granular Head Deposits were encountered interbedded with cohesive materials, and comprising yellow brown sand.

Liquid and Plastic (Atterberg) Limit testing undertaken on the cohesive Head Deposits indicate the soils are of intermediate to very high plasticity (CI/CV) and at worst, medium volume change potential in accordance with NHBC (2020).

SPT N values recorded in the Head Deposits range from 5 to 21 with an average of 11. Using correlations between SPT N value and undrained shear strength proposed by Stroud and Butler (1975), a characteristic undrained shear strength of 55kPa has been derived for the Head Deposit materials.

6.4 Residual Soil

Soils derived from the weathering of the Alphington Breccia Formation are present below depths of between 0.8 and 4.2m. These materials comprise generally of generally stiff and very stiff, locally firm consistency, red gravelly clay. The granular constituent of this unit is comprised of fine to medium sub-angular to sub-rounded sandstone, along with occasional sandy constituents.

A single Liquid and Plastic (Atterberg) Limit test undertaken on the materials indicates the soils have high plasticity and medium volume change potential in accordance with NHBC (2020).

SPT N values recorded in the residual soils range from 10 to 39. A characteristic undrained shear strength of 75kPa has been derived for the residual soils based on the SPT N values.

6.5 Alphington Breccia Formation

The upper surface of the Alphington Breccia Formation was encountered below depths of between 2.8 and 5.2m in the window sample boreholes. This unit comprised of an extremely weak, red, thinly bedded weathered Breccia.

SPT N values recorded in the residual soils range from 50 to 80 (average 59). A strength of 295kPa has been derived for the materials confirming they are high strength soil/ extremely weak rock.

6.6 Groundwater

Groundwater was only encountered during the investigation standing at a depth of 0.30mbgl in WS09. This is expected to be trapped surface water rather than true groundwater.

Subsequent monitoring visits recorded groundwater at depths of between 0.7 and 1.7m below ground level in WS03 undertaken in the southern corner of the site. This is expected to be surface water ingress rather than true groundwater given the borehole is in the highest area of the site.

Trapped surface water was also encountered in TPs 04 and 05 excavated adjacent to the large retaining wall.

6.7 Geo-environmental considerations

Made ground was encountered across the site largely comprising reworked local soils although, fill materials including: brick, glass, porcelain, concrete, organic matter, bottle tops, charcoal and metal, were present in the made ground.

6.8 Retaining Wall Foundations

TPs 04 and 05 were undertaken on the downslope and upslope side of the retaining wall in the Leisure Centre carpark.

On the downslope side (TP04) the top of the footing to the wall is present below the tarmac and protrudes 0.3m from the face of the wall. It appears to be of red brick construction. It was not possible to determine the depth of the base of the footing.

TP05 contains cobble drainage materials to the rear of the wall overlying a concrete footing. The edge of the footing was not found.

A Cross Section through the area is included in Appendix E, with the location of the section shown on the Exploratory Hole Location Plan, Appendix C.

7 GEO-ENVIRONMENTAL RISK ASSESSMENT

7.1 General

In order for land affected by contamination to cause harm, there must be a source of contamination, a receptor that can be harmed and a pathway by which the receptor can be exposed to the contamination. Based on the initial conceptual model an assessment of the risk posed by ground / groundwater contamination to potential receptors has been undertaken.

On the basis of the desk study information and walkover survey, the historic landfills were considered the main source of contamination on site. Chemical testing was undertaken to further assess the initial conceptual model.

7.2 Environmental Soil Test Results

The results of the environmental laboratory testing, presented as Appendix G, have been summarised in Table 4 and compared to Suitable for Use Level (S4UL) values for residential developments with home grown produce. For organic substances a 1% Soil Organic Matter (SOM) has been used, unless otherwise indicated, which represent the most stringent threshold limit.

LQM/ CIEH S4ULs have been developed by Land Quality Management Ltd jointly with the Chartered Institute of Environmental Health, and provide values for the assessment of potential risks to human health posed by contaminants in soil, and are compliant with UK legislative policy and guidelines. In particular, these include components of TPH and PAH.

The S4ULS have been derived in accordance with UK legislation, national as well as Environment Agency (EA) policy, and using a modified version of the EA CLEA software. The Department for the Environment, Food & Rural Affairs (DEFRA) has published Category 4 Screening Levels (C4SLs) for six substances including lead. The C4SLs represent the most stringent guidance available for the assessment of lead contamination in soils, and have been used in this report.

Where other guidelines are not available, local guidance, Dutch standards or an in-house screening value is used to provide an initial comparison figure.

Table 4: Environmental Testing Summary

Determinants	SGV / GAC mg/kg	Source of GAC	Recorded Range mg/kg	Location of Exceedances
Arsenic	37	LQM/ CIEH	8-77	TP02 – 0.2m
Cadmium	11	LQM/ CIEH	<0.2 – 1	
Chromium (III)	910	LQM/ CIEH	2-25	
Copper	2400	LQM/ CIEH	13-75	
Lead	200	Defra	26-378	WS03 - 0.9m
Mercury (inorganic)	40	LQM/ CIEH	<1 – 1.1	
Nickel	130	LQM/ CIEH	<3-36	
Selenium	250	LQM/ CIEH	<3	
Zinc	3700	LQM/ CIEH	10-239	
Cyanide (total)	50	DUTCH	<2	
TPH aliphatic C5-C6	42	LQM/ CIEH	<0.1-0.33	
TPH aliphatic C6-C8	100	LQM/ CIEH	<0.05	
TPH aliphatic C8-C10	27	LQM/ CIEH	<2	
TPH aliphatic C10-C12	130	LQM/ CIEH	<2	
TPH aliphatic C12-C16	1100	LQM/ CIEH	<3	
TPH aliphatic C16-C35	65000	LQM/ CIEH	<3	
TPH aromatic C5-C7	70	LQM/ CIEH	<0.01	
TPH aromatic C7-C8	130	LQM/ CIEH	<0.05	
TPH aromatic C8-C10	34	LQM/ CIEH	<2	
TPH aromatic C10-C12	74	LQM/ CIEH	<2	
TPH aromatic C12-C16	140	LQM/ CIEH	<2 – 3	
TPH aromatic C16-C21	260	LQM/ CIEH	<3 – 24	
TPH aromatic C21-C35	1100	LQM/ CIEH	<10 - 39	
Napthalene	2.3	LQM/ CIEH	<0.1 – 0.33	
Acenapthylene	170	LQM/ CIEH	<0.1 – 0.18	
Acenapthene	210	LQM/ CIEH	<0.1 – 0.21	
Flourene	170	LQM/ CIEH	<0.1 – 0.16	
Phenanthrene	95	LQM/ CIEH	<0.1 – 2.66	
Anthracene	2400	LQM/ CIEH	<0.1 – 0.58	
Flouranthene	280	LQM/ CIEH	<0.1 – 5.94	
Pyrene	620	LQM/ CIEH	<0.1 – 4.72	
Benzo(a)anthracene	7.2	LQM/ CIEH	<0.1 – 3.12	
Chrysene	15	LQM/ CIEH	<0.1 – 2.49	
Benzo(b)flouranthene	2.6	LQM/ CIEH	<0.1 – 3.35	
Benzo(k)flouranthene	77	LQM/ CIEH	<0.1 – 1.5	
Benzo(a)pyrene	2.2	LQM/ CIEH	<0.1 – 2.34	WS03 - 0.9m
Indeno(1,2,3-cd)pyrene	27	LQM/ CIEH	<0.1 – 0.7	
Dibenzo(a,h)anthracene	0.24	LQM/ CIEH	<0.1 – 0.29	WS03 - 0.9m
Benzo(g,h,i)perylene	320	LQM/ CIEH	<0.1 – 1.16	
Benzene	0.087	LQM/ CIEH	<2	
Toluene	130	LQM/ CIEH	<5	
Ethylbenzene	47	LQM/ CIEH	<2	
p & m xylene	59	LQM/ CIEH	<2	
O xylene	60	LQM/ CIEH	<2	

No asbestos fibres were identified in any of the samples tested.

On the basis of the above, the made ground materials in the vicinity of TP02 and WS03 contain concentrations of arsenic, lead and various species of PAH which are elevated above the SGV/GAC values for the proposed end use.

7.3 Human Health (Soils) Risk Assessment

In order for land affected by contamination to cause harm, there must be a source of contamination, a receptor that can be harmed and a pathway by which the receptor can be exposed to the contamination. The elevated levels of lead, arsenic and PAH represent a source of contamination, future residents of the properties represent the receptor, and exposure to the soils containing the elevated lead levels represent the potential pathway.

7.3.1 TP02

TP02 was undertaken beneath the footprint of the proposed block of flats. The recorded arsenic concentration (77 mg/kg) is elevated above both the residential with plant uptake and the, more appropriate in this case, residential without plant uptake value (shared soft landscaped areas rather than private gardens) 40mg/kg. The ground floor of the building will break the pathway between source of contamination (made ground) and receptor (future site residents) and so made ground beneath the footprint of the building will not pose a risk to future site residents. That being said, other made ground in the vicinity of TP02 may contain similarly elevated concentrations of arsenic. Therefore, some additional sampling in the soft landscaped areas will be beneficial to determine the extent of any arsenic impacted soils.

The made ground is only 0.5m thick in the area so a simple strip of the soils down to natural ground, validation of removal and replacement with fresh materials will be the most appropriate remediation measure in this area.

It will then be necessary to import topsoil into soft landscaped areas. In accordance with BS3882 (2015), a minimum of 450mm of topsoil will be required in garden areas.

A Contamination Remediation Method Statement will need to be produced to assist with this. A subsequent validation report confirming the effective removal of contaminated materials and minimum thickness of topsoil has been imported will be required.

The Local Authority will need to confirm the strategy is acceptable prior to commencement of works.

7.3.2 WS03

WS03 was undertaken in the southern most corner of the site. Lead and certain species of PAH exceed the SGV/GAC values for residential land use with uptake from home grown produce in the made ground in this area. In order to accommodate the proposed development, it is expected that ground levels will be reduced through this area and so the made ground will largely/totally be removed. It is recommended that additional sampling of this area is undertaken to delineate the extent of the lead and PAH impacted soils in this area. These soils should then be removed from site to appropriate landfill facilities.

A Contamination Remediation Method Statement will need to be produced to assist with this. A subsequent validation report confirming the effective removal of contaminated materials and minimum thickness of topsoil has been imported will be required.

The Local Authority will need to confirm any proposed strategy is acceptable prior to commencement of works.

7.3.3 Made Ground General

On the basis of the laboratory testing undertaken, the made ground is not significantly chemically contaminated however, the materials contain significant quantities of deleterious materials (brick, glass, porcelain, concrete, organic matter, bottle tops, and metal) that are not texturally appropriate for use as topsoil in accordance with BS3882 (2015). If the materials are to be reused in garden areas, it is recommended that they are screened to remove the fill materials as part of the development.

7.4 Controlled Waters Risk Assessment

The relatively low concentrations of contaminants present and the lack of sensitive receptors in the vicinity means that there is not considered to be a significant risk to controlled waters.

7.5 Ground Gas Assessment

The site is in an area where <1% of properties are above the action level for radon. Therefore, no radon protective measures are necessary.

The site itself and land immediately to the east of the site is registered as an historical landfill which is known to produce gasses. Therefore, monitoring wells were installed in WS01, 02 and 03 along the eastern boundary to determine whether any gasses are migrating on to the development site.

The monitoring has been undertaken in general accordance with BS8485 (2015) which is largely based on CIRIA C665 (2007).

Six (6 no) rounds of gas monitoring visits have been completed over a period of particularly inclement weather. The monitoring undertaken on 2 March 2020 is considered "worst case" conditions of falling barometric pressure over the previous days, a barometric pressure of 988mb recorded during the monitoring.

The monitoring was undertaken using a calibrated GA5000 gas analyser measuring concentrations of methane (CH_4), carbon dioxide (CO_2) and oxygen (O_2) as percentage in air, along with barometric pressure and gas flow.

As recommended by CIRIA C665 (2007) measurements of both peak and steady state CH_4, CO_2 and O_2 have been recorded in all of the monitoring wells.

7.5.1 Monitoring Results

The gas monitoring results show that low concentrations of CH_4 (maximum 0.2%) are present. In WS02, relatively low concentrations CO_2 (2.1%) are present. The lowest O_2 concentrations (3.8%) was recorded on 5 February 2020. A maximum flow of 0.5 l/hour was recorded. The results of the gas monitoring from the worst conditions (WS02) are summarised in Figure 2.

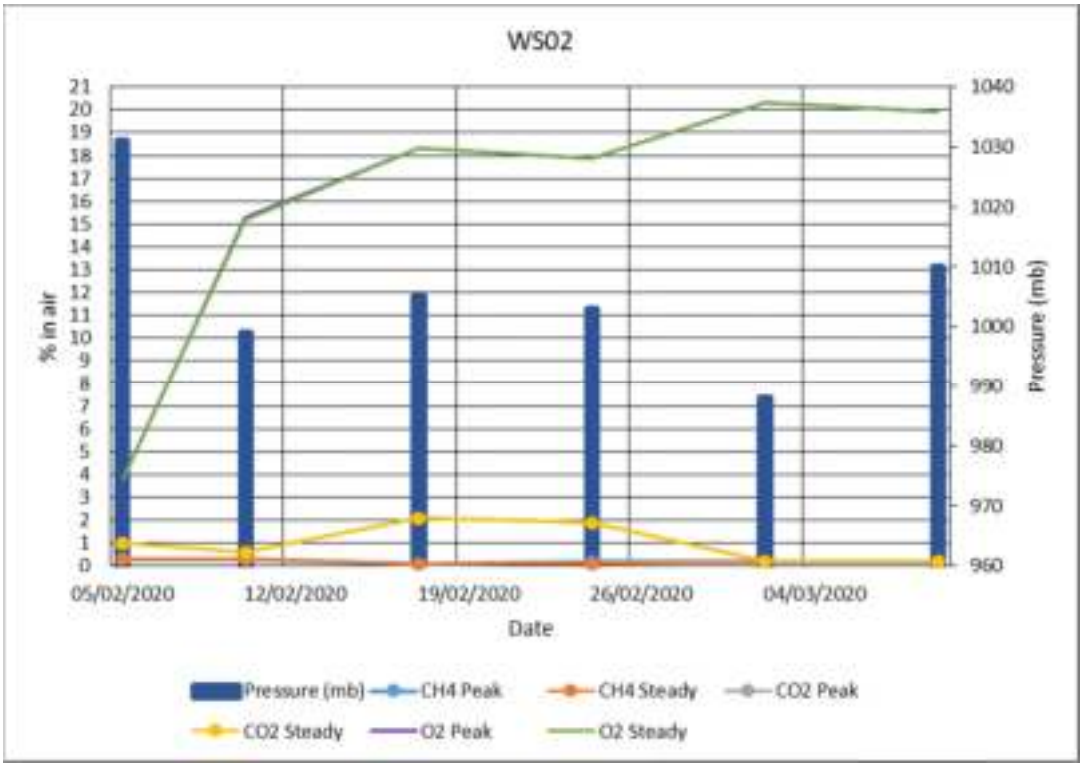

Figure 2: Gas Monitoring Summary

Gas monitoring data provided by Exeter City Council confirms the gas concentrations recorded in their boreholes within the development area are generally low with no methane recorded, a maximum carbon dioxide concentration of 11.7% and importantly no flow associated with the carbon dioxide.

7.5.2 Risk Assessment

The risk assessment has been undertaken using the approach detailed in BS8485 (2015). The Gas Screening Value (GSV) has been based on the maximum peak readings recorded. This is a conservative approach.

Based on the maximum CO_2 value (11.7%, from the Exeter City Council data) and the maximum flow rate 0.5l/hr. This results in a GSV of <0.06l/hr falling under a characteristic situation of CS1 – Very low hazard potential. This is considered typical of natural soils with low organic content.

The development would classified a Type A buildings in accordance with BS8485 (2015) and so the minimum gas protection score required is 0, which would ordinarily not require

specific gas protection measures. However, given the close proximity to the landfill, and the fact that the maximum recorded carbon dioxide concentration is >10%, it is recommended that the site is upgraded to CS2 – low hazard potential.

The development is considered a Type A building in accordance with BS8485 (2015) and so the minimum gas protection score required is 3.5.

A suspended block and beam floor slab will be required (Score 0) therefore, a clear void (Score 1.5) will be necessary beneath the slab along with a gas resistant membrane with a methane gas transmission rate <40.0 ml/day/m^2/atm (average) for sheet and joints (tested in accordance with BS ISO 15105-1 manometric method) (Score 2). This gives the required gas protection score of 3.5.

Given the low risk development the verification of installation can be undertaken by on-site staff and Local Authority Building Control or similar, in accordance with CIRIA C735 (2014).

7.6 Water Pipe Selection

When considering the results of this investigation, it is expected that standard pipework will be appropriate although, this will need to be checked with the service provider.

7.7 Remediation Requirements

The ground investigation and subsequent laboratory testing indicated the presence of elevated concentrations of lead, arsenic and various PAH species in two areas of made ground (TP02 and WS03) overlying the natural soils. Additional sampling to determine the extent of these hotspots and subsequent removal for the impacted materials is considered the most appropriate remediation method, especially given the reductions in ground level expected to be required along the south western boundary to accommodate the development.

With the exception of the two areas mentioned above, the made ground is not significantly contaminated. If made ground materials are to remain on site in soft landscaped areas, it is recommended that they are screened to remove the fill materials that are not texturally

appropriate for garden areas (brick, glass, porcelain, concrete, organic matter, bottle tops, and metal).

A Contamination Remediation Method Statement will need to be produced to assist with any remediation undertaken. A subsequent validation report confirming the effective removal of contaminated soils and minimum thickness of topsoil has been imported will be required. The Local Authority will need to confirm any proposed strategy is acceptable prior to commencement of works.

No radon protection measures are required.

Given the proximity of the historic landfill, it is recommended that CS2 gas protection measures are installed.

Standard potable, water pipes are expected to be suitable although, this should be confirmed by the service provider.

Should any obviously contaminated soils be encountered during the construction phase of the works, advice should be sought from a suitably experienced Geo-environmental Engineer.

8 GEOTECHNICAL CONSIDERATIONS

8.1 General

At the time of the investigation, development proposals included the demolition of some existing structures on site (Leisure Centre and Rifle Range) and construction of residential properties, including 3 storey town houses and 3 – 4 storey blocks of flats.

As discussed in Section 6.1, the results of this investigation has indicated the site is underlain by made ground overlying cohesive Head Deposits soils overlying cohesive soils derived from the weathering of the Alphington Breccia Formation.

8.2 Foundations

Beneath the made ground, the generally firm and stiff consistency cohesive soils will provide a suitable bearing stratum low rise residential development. A serviceable limit state (allowable) bearing capacity of 100 kN/m^2 is considered appropriate for foundation design. This could be increased on a plot by plot basis if required subject to further investigation works/ once final layouts have been formalised.

A combination of traditional strip and shallow trench fill foundations will be appropriate with foundation depths largely dependent on proposed reductions in ground level.

Based on the medium volume change potential soils, a minimum foundation depth of 0.9m below final ground level would be required although all made ground should be fully penetrated.

Where foundation depths exceed 1.5m, the inner face of these foundations will require compressible materials as recommended by NHBC.

A standard excavator bucket width of 600mm is likely to will provide adequate width foundations.

Lower loaded internal walls can be supported off 450mm wide foundations. Narrower widths are not recommended for practical setting-out reasons.

Any loose material should be removed prior to pouring of concrete. Should foundations be stepped to account for changes in topography, steps should not be higher than the thickness of the strip foundation and should not exceed 0.5m in height.

All foundation excavation bases should be inspected by a qualified and experienced engineer to ensure consistency.

Settlements of such foundations should be significantly less than the conventional 25mm limit.

Foundations for plots on the upslope side of the retaining wall will need to be deepened to avoid surcharging the wall. The Cross Section in Appendix E can be used to determine likely foundation depths along this feature.

8.3 Floors

Given the volume change potential of the soils, suspended floors are recommended. A void will be required beneath the floor with void dimensions as follows;

- 100mm under ground beams, and suspended in-situ concrete floor or,
- 250mm under suspended precast concrete or timber floors.

8.4 Reuse of Materials

In accordance with Highways Agency (2016) Series 600 Earthworks the soil materials are likely to comprise: Class 2A/B- wet/ dry cohesive material.

A dry density/ moisture content relationship (light compaction) test was carried out on made ground materials from TP06. The optimum moisture content for the materials is 17% whilst the natural moisture content, at the time of the investigation, was 21%. The remaining soil samples tested have moisture contents ranging from 17 to 23% (average 20%), indicating the soils were slightly wet of optimum at the time of the investigation.

Ideally soils should be compacted at optimum moisture content or within +3.0% of optimum to ensure sufficient compaction is achieved. The effectiveness of the reuse will largely be

dependent on the prevailing weather conditions at the time of the works and it will be necessary to ensure materials are blinded from the elements to ensure they do not deteriorate prior to compaction. It is suggested that this exercise is best completed during summer months.

It is expected that the materials will be suitable for use as general earthworks fill although deleterious materials (brick, glass, porcelain, concrete, organic matter, bottle tops, and metal) should be screened out of the materials prior to reuse. A method specification may be used for compaction using the above classifications in accordance with Series 600 (2016). SWG can provide an earthworks specification and can assist with in-situ compliance testing if required.

The silty fines content of these materials means that the soil will be susceptible to wetting up, and working during wet periods may need to be halted at times.

8.5 Landfill Slope (WS02)

WS02 was undertaken at the crest of the slope forming the eastern boundary between the site development and the playing field to the east. The slope is stood at an angle of approximately 30°. Whilst the slope appears to be stable, mathematically it is too steep for the materials present (cohesive soils) to provide a suitable over design factor for long term stability.

In order to mitigate any long term maintenance issues, it is recommended that the stability of the slope is improved. This could be undertaken by installing a retaining wall at the base of the slope and reducing the overall angle to 18° (1V:3H). This would result in a retaining wall approximately 3.5m high at the base to accommodate the reduced slope angle. The wall can then be backfilled with free draining coarse granular materials to reduce the slope to the appropriate gradient.

Alternatively, the long term stability could be improved by soil nailing the slope and the addition of a flexible mesh facing. This would result in nails being installed beneath the playing field and agreement would need to be sought from relevant parties to accommodate this if it was the preferred option.

SWG can assist with design of a soil nailing system if required.

The parameters detailed in Table 5 can be used for retaining wall design.

Table 5: Retaining Wall Design Parameters

Materials	Undrained (kPa)	Drained		Unit Weight kN/m^3
		Cohesion (kPa)	Friction°	
Made Ground	40	0	26	19

Eccentric loadings from the retaining walls should not exceed the bearing capacity detailed in Section 8.2.

8.6 Groundwater and Excavations

Generally significant groundwater issues are not expected on the site although in some areas surface waters trapped in the made ground may be present and depending on when construction takes place, some dewatering of excavations may locally be required.

Cohesive soils are likely to be stable in the short term. More granular soils, especially wet granular soils are likely to be unstable.

8.7 Sulphate Classification

The three soluble sulphate test results indicate concentrations of less than 0.5 g/l, with pH values of between 6.5 and 7.6, with an average of 7.0.

Groundwater is expected to be static.

On this basis, no special precautions to protect buried concrete from sulphate attack will be required, and concrete should be designed to a Design Sulphate Class of DS-1, and ACEC Class AC-1s (BRE Digest SD1, 2005).

8.8 Roads and Driveways

Based on the plasticity of near surface cohesive soils, a CBR value of 3% is expected to be appropriate for pavement design.

Based on a 3% CBR value, and following guidelines from the Devon County Specification for Highways Works, the following flexible pavement construction is recommended:

- Sub-base: 150mm, Type 1.
- Capping layer: 350mm, Class 6F2 fill or similar with less than 10% fines, minimum laboratory CBR = 15%
- Geotextile: Required

In accordance with NHBC (2020), for a CBR value of 3%, a minimum sub-base thickness of 325mm without a geotextile beneath or 225mm with a geotextile would be required for driveways with use by light vehicles only.

Any organic soils should be removed down to a minimum depth of 300mm, and the formation proof rolled. Any soft spots identified by rolling should be removed and replaced with compacted capping.

The construction materials should be compacted in thin layers following the Specification for Highways Works, Table 6/4. As with all sites underlain by cohesive or silty soils, sound earthworks management by an experienced contractor will be critical to ensure optimum programme achievement and satisfactory construction standards.

8.9 Soakaways

Large scale soakaway testing was undertaken in TPs 01, 02 and 03 to assist with surface water drainage design. Infiltration rates were very low and it was only possible to undertake one partial test in each of the trial pits undertaken in natural ground during the two days testing, with minimal to no reductions in induced water levels over extended time periods.

In order to calculate an infiltration rate for a soakaway test, the induced water level must reduce by 75% (i.e. must reach 25% storage volume). This did not occur in any of the pits. Table 6 summarises the testing.

Table 6: Soakaway Test Results

TP ID	Test Results
01	Induced water level of 1.0m reduced to 1.01m over 180 minutes and remained static for a further 90 minutes. Not possible to calculate infiltration rate.
02	Induced water level of 1.05m reduced to 1.06m over 105 minutes and remained static for a further 60 minutes. Not possible to calculate infiltration rate.
03	Induced water level of 1.09m did not reduce over 180 minutes. Not possible to calculate infiltration rate.

The testing indicates that the natural soils have very low permeability as it was not possible to undertake a full test in any of the trial pits. CIRIA 156 (1996) recommends an infiltration rate of 3 x 10^{-06} m/s as the lower limit of acceptability for soakaway feasibility. Resulting infiltration rates on the site would be lower than this.

The cohesive soils will have a very low permeability (typical permeability for clay soils ~1.0 x 10^{-8} m/s, Barnes, 2000) and would not be suitable for using soakaways to dispose of surface water.

On this basis, an alternative surface water drainage strategy will be required.

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Principal
Author

Neil Forrow
CGeol PgDip BSc FGS
Director
Checker

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10 LIMITATIONS

This report has been prepared by SWG solely for the benefit of Exeter City Living. It shall not be relied upon or transferred to any third party without the prior written authorisation of SWG.

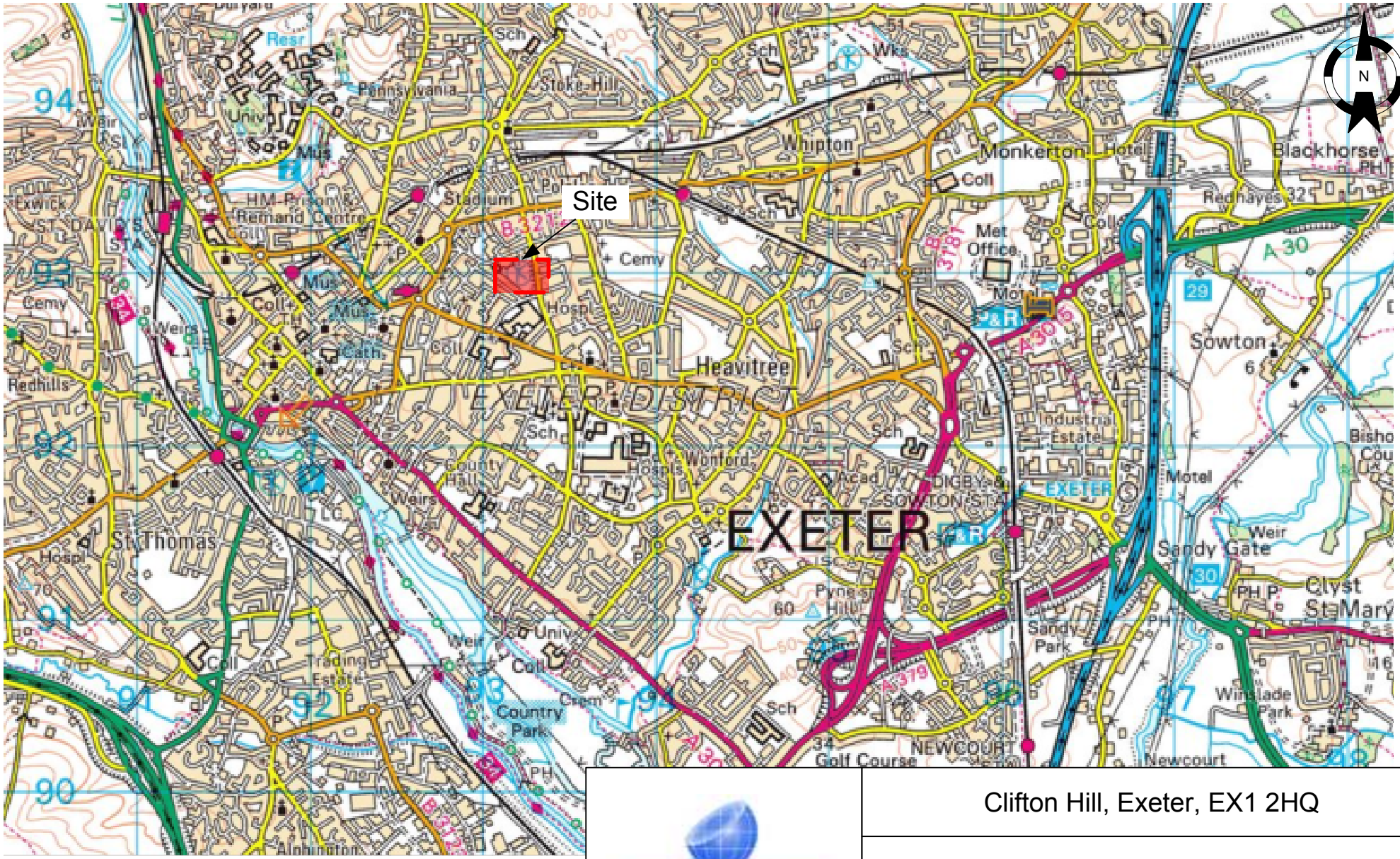
All information given in this report is based on the ground conditions encountered during the site work, and on the results of laboratory and field tests performed during the investigation. However, there may be conditions at the site which have not been taken into account, such as unpredictable soil strata, contaminant concentrations, and water conditions between or below exploratory holes.

It should be noted that groundwater levels usually vary due to seasonal and/or other effects and may at times differ to those measured during the investigation.

British Standards Institute (BSI, 2015) ordinarily recommends that laboratory measurements of strength in cohesive soils be undertaken only on high-quality (Category 'A') undisturbed samples, necessitating the use of wire-line drilling or thin-wall samples tubes. However, given the relatively low geotechnical risk presented and the low probability of being able to recover Category 'A' samples from the anticipated strata, it is considered that the use of such techniques is neither appropriate nor cost-effective.

Appendix A

Site Location Plan



	Clifton Hill, Exeter, EX1 2HQ
	Site Location Plan

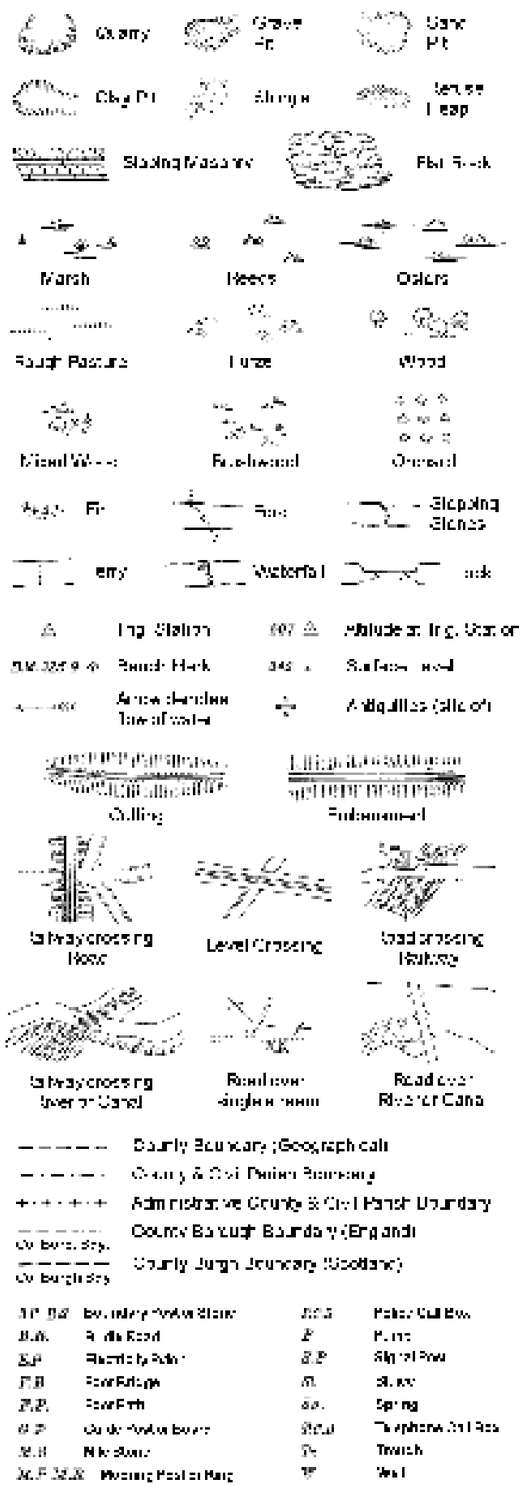
01884 252444	SIZE	JOB NO	DWG NO	REV
	A4	12072	DWG1	0
Drawn: ZM	SCALE NTS	3/2/20 – 5/2/20	SHEET 1 of 1	

Appendix B

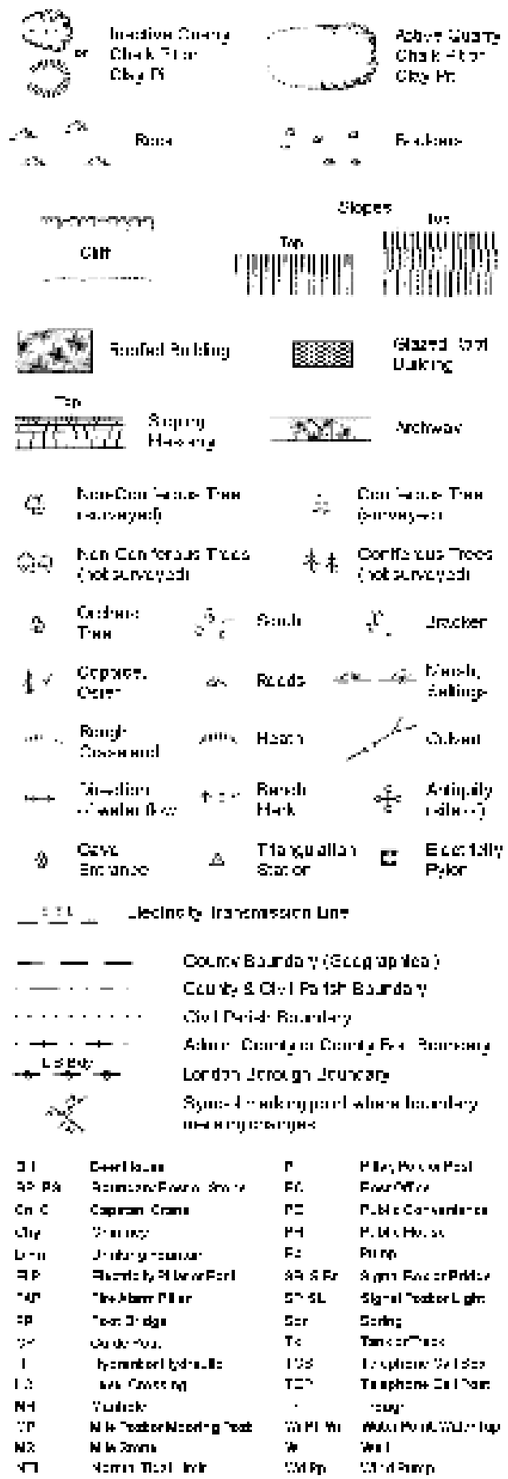
Envirocheck Report

Historical Mapping Legends

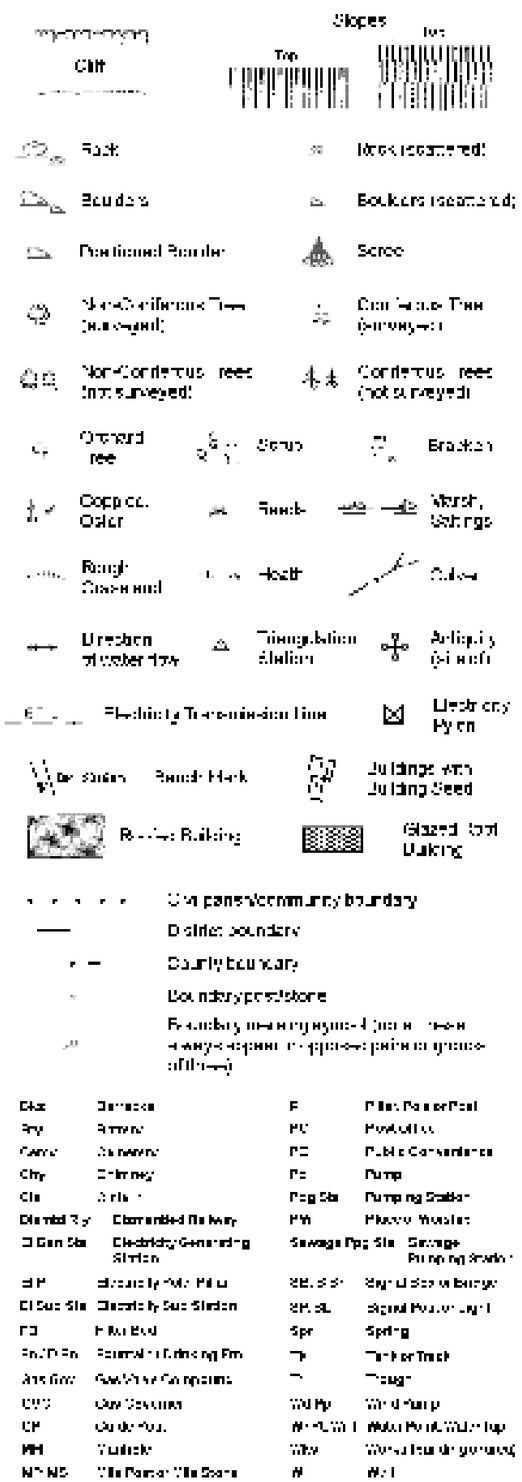
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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



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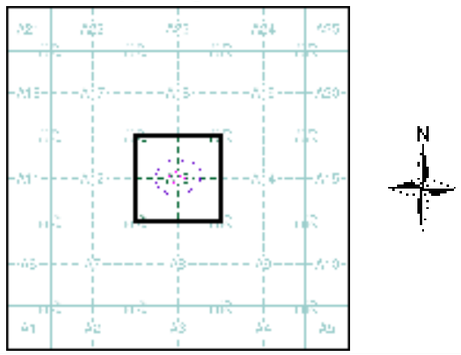
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Devon	1:2,500	1880	2
Devon	1:2,500	1905	3
Devon	1:2,500	1932	4
Ordnance Survey Plan	1:1,250	1949 - 1951	5
Ordnance Survey Plan	1:2,500	1951 - 1953	6
Ordnance Survey Plan	1:1,250	1960 - 1964	7
Ordnance Survey Plan	1:2,500	1962	8
Additional SIMs	1:1,250	1964 - 1984	9
Ordnance Survey Plan	1:1,250	1965 - 1972	10
Ordnance Survey Plan	1:2,500	1969	11
Ordnance Survey Plan	1:1,250	1977	12
Additional SIMs	1:1,250	1984 - 1990	13
Additional SIMs	1:1,250	1988	14
Large-Scale National Grid Data	1:1,250	1994	15

Historical Map - Segment A13



Order Details

Order Number: 234606878_1_1
Customer Ref: 12072
National Grid Reference: 293090, 93020
Slice: A
Site Area (Ha): 0.83
Search Buffer (m): 100

Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

Landmark INFORMATION GROUP

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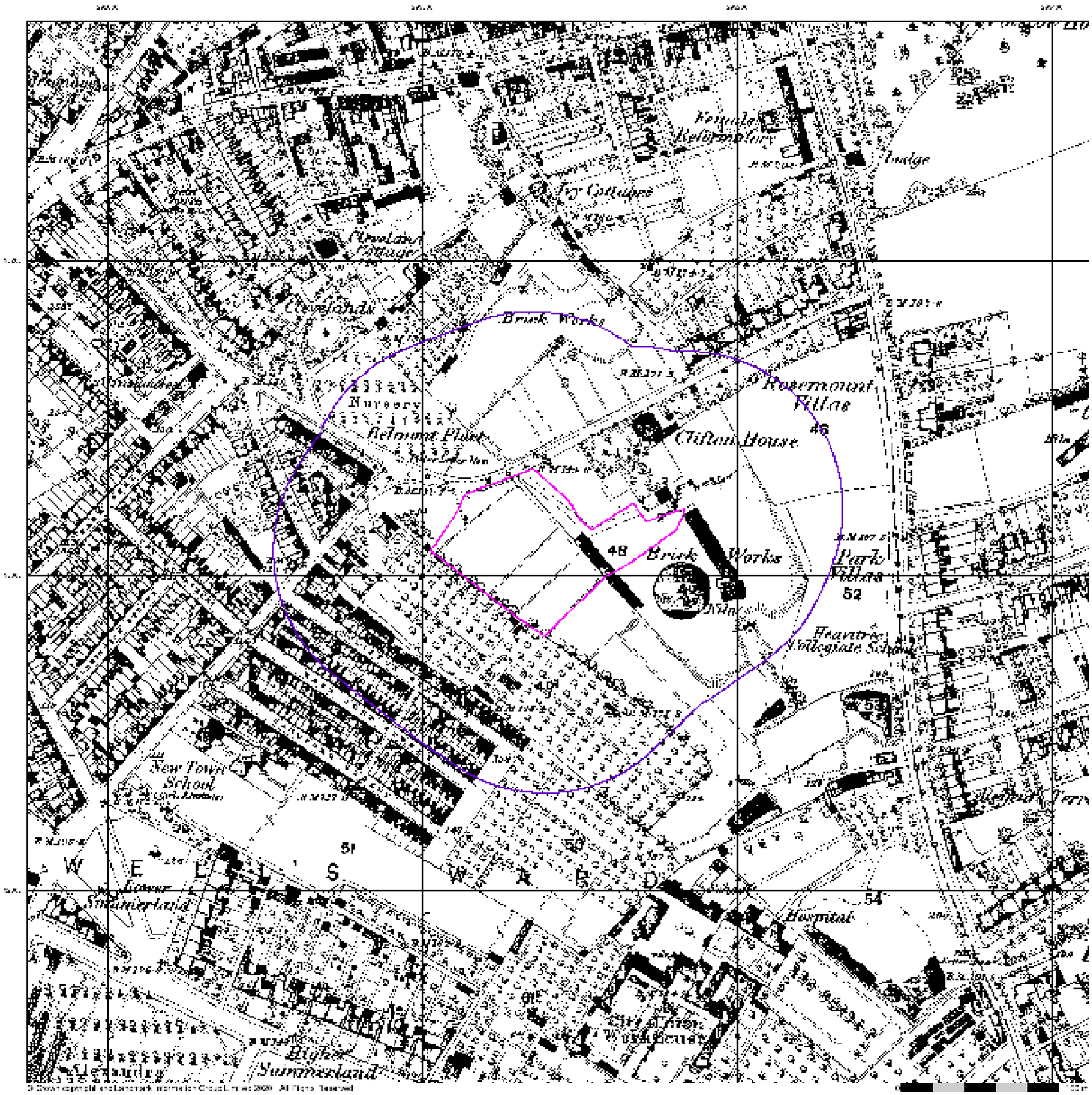
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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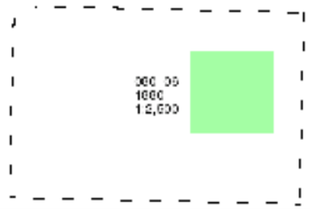
Devon

Published 1880

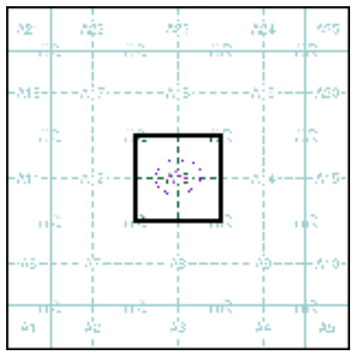
Source map scale - 1:2,500

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:	234606878_1_1
Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
Search Buffer (m):	100

Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

Landmark INFORMATION GROUP

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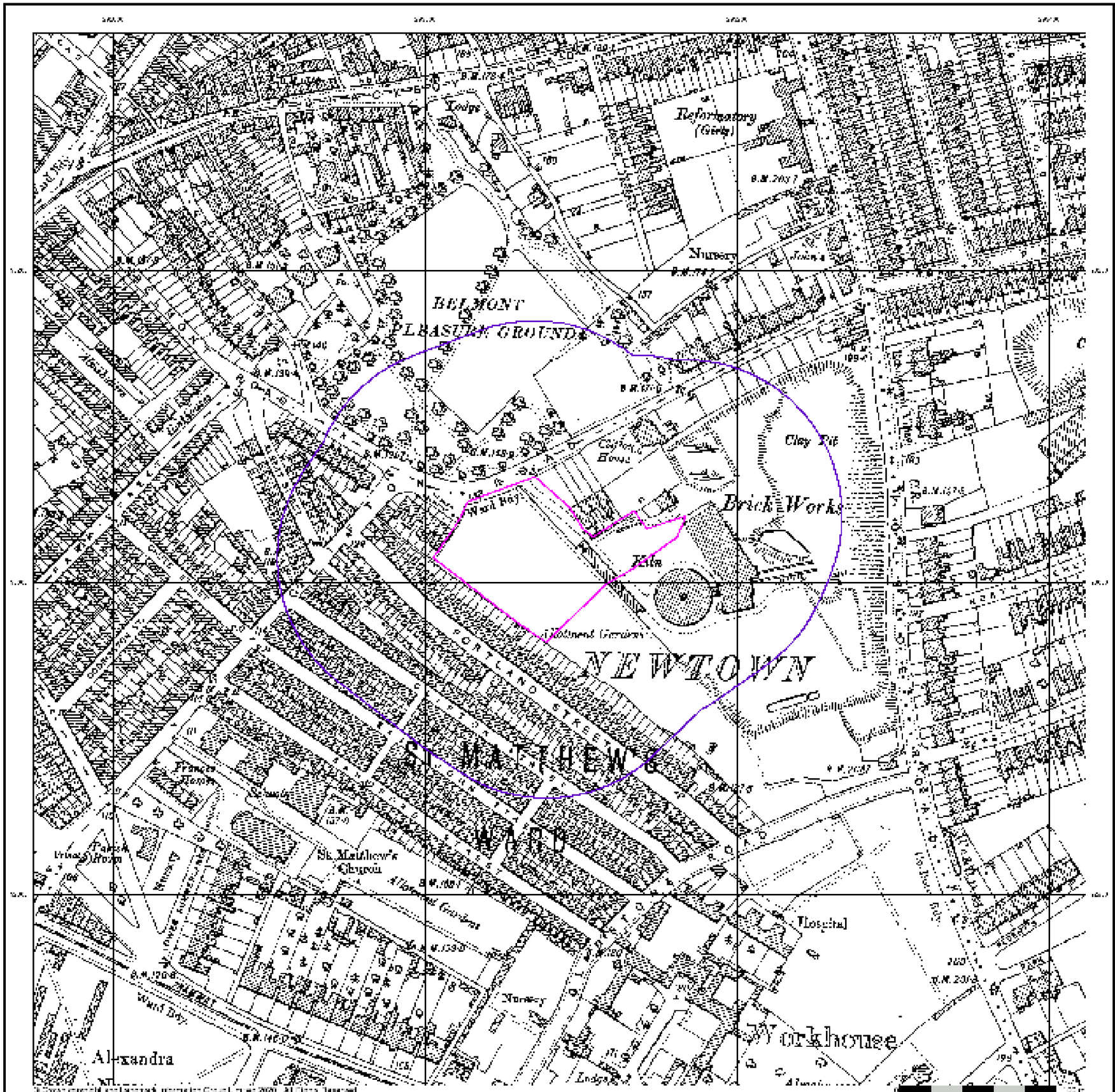
Web: www.envirocheck.co.uk



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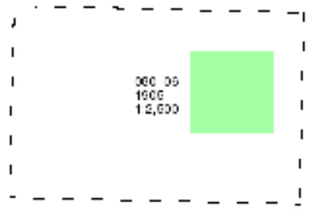
Devon

Published 1905

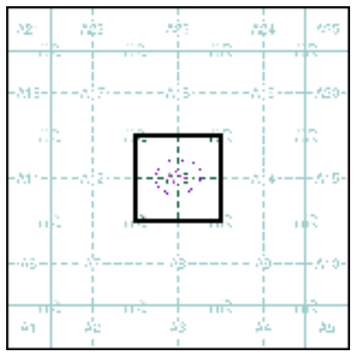
Source map scale - 1:2,500

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



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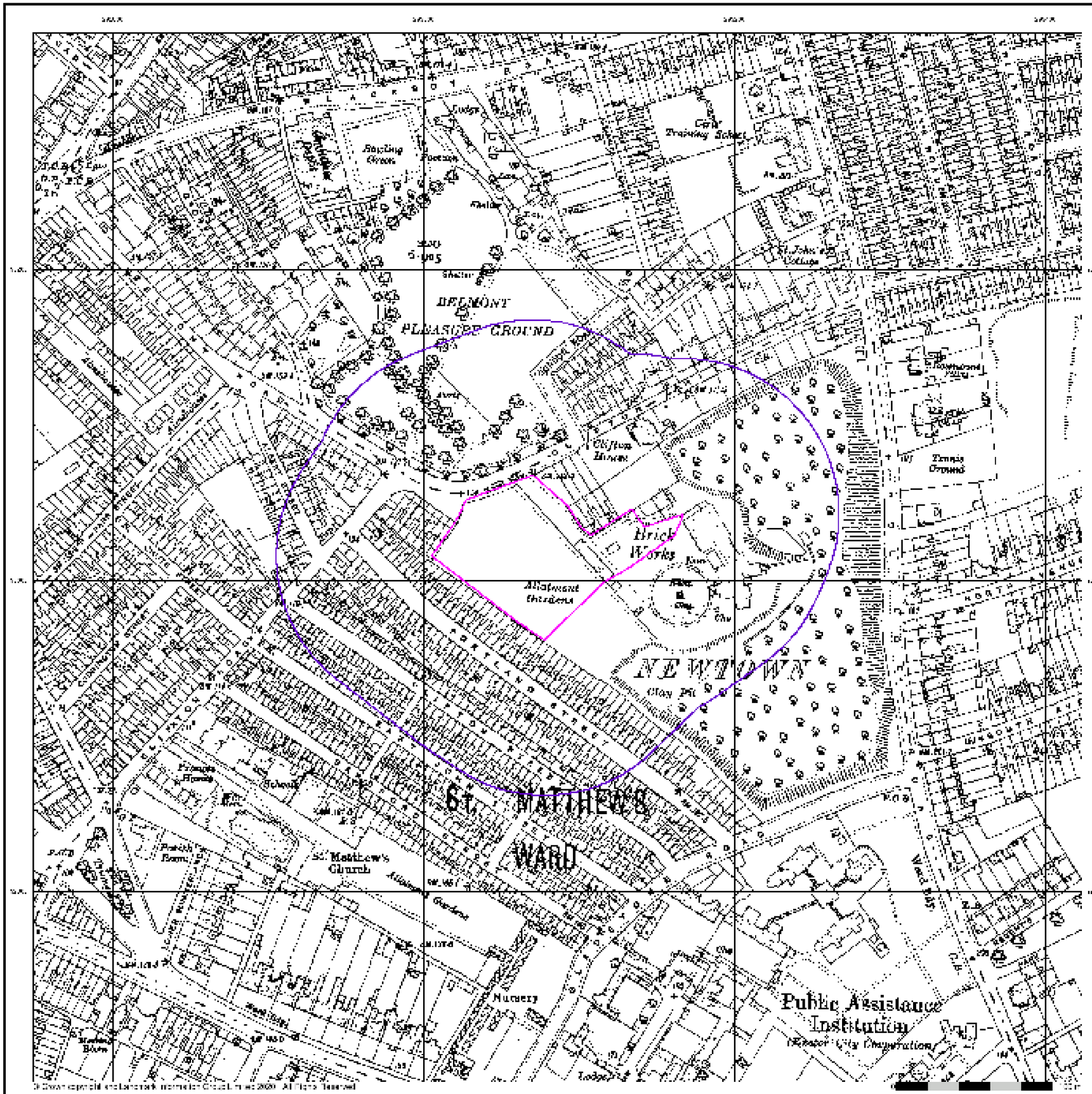

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Devon

Published 1932

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.

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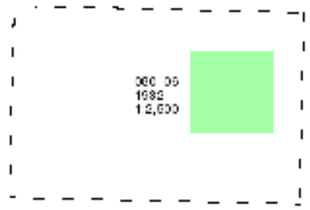
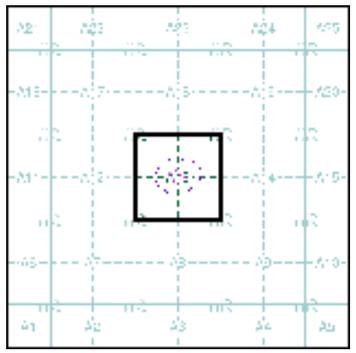


Historical Map - Segment A13



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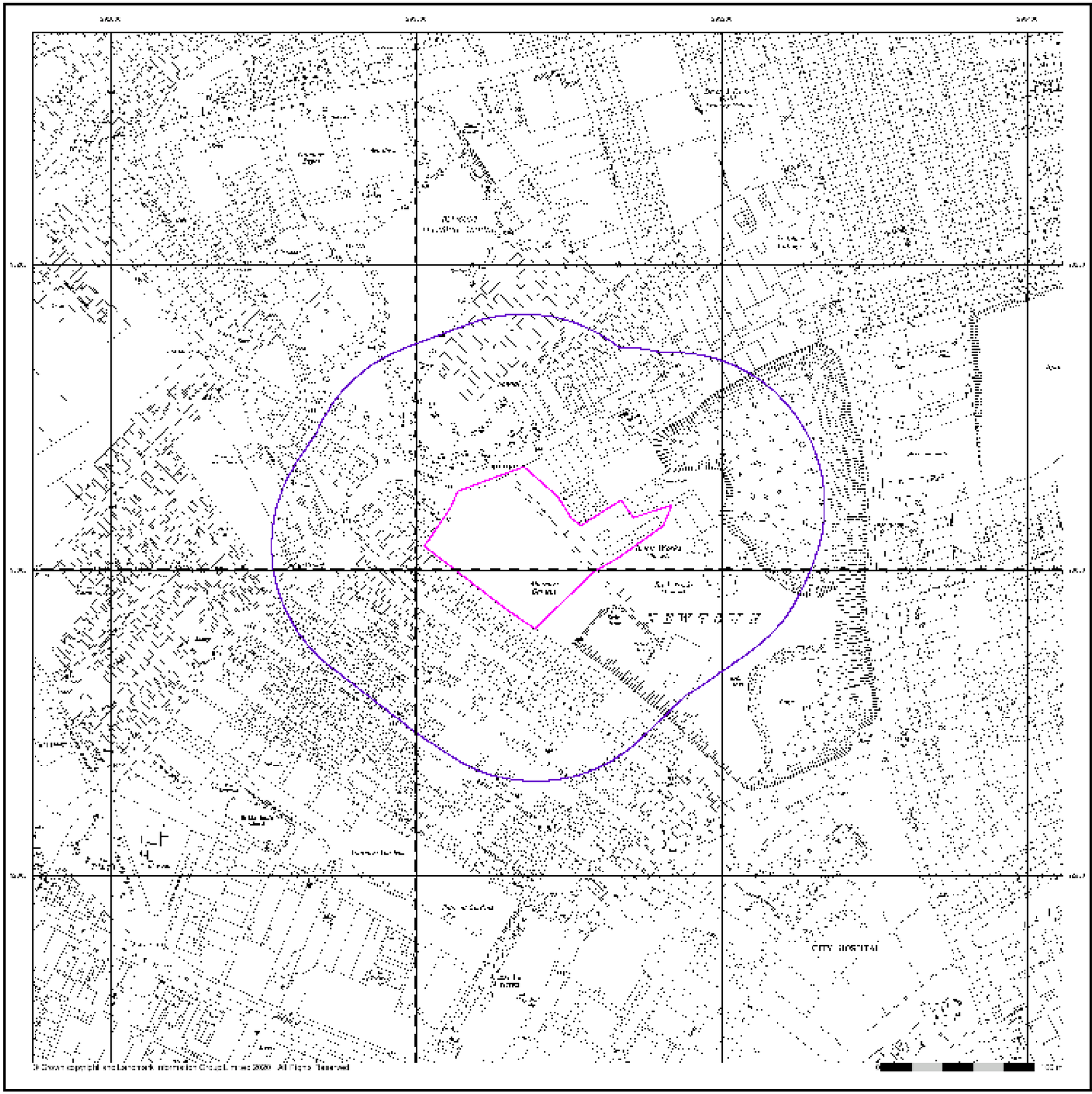

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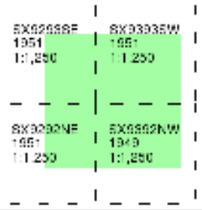
Ordnance Survey Plan

Published 1949 - 1951

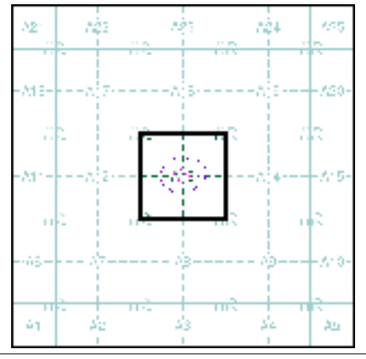
Source map scale - 1:1,250

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

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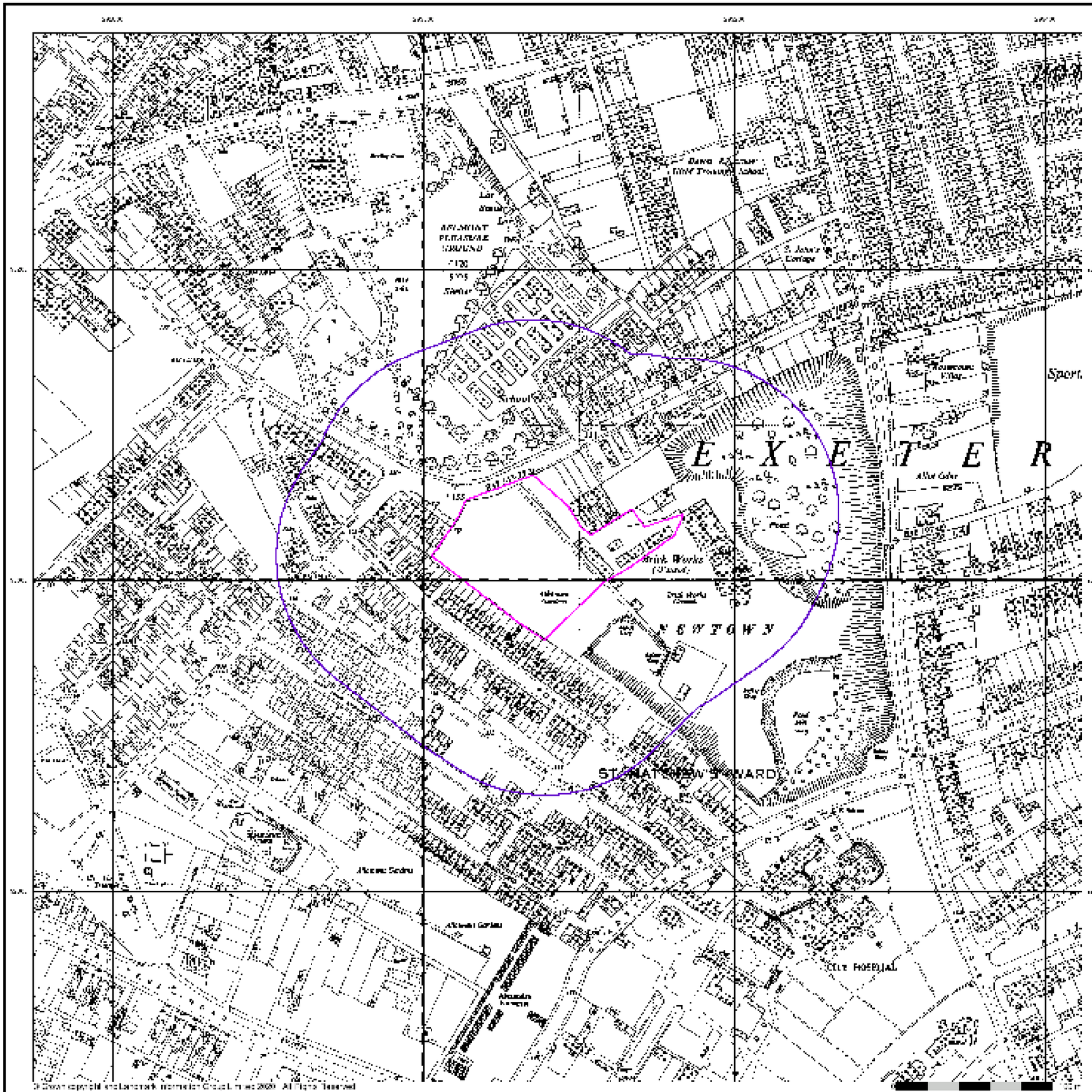

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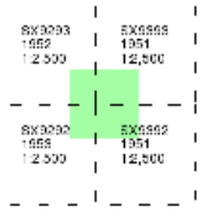
Ordnance Survey Plan

Published 1951 - 1953

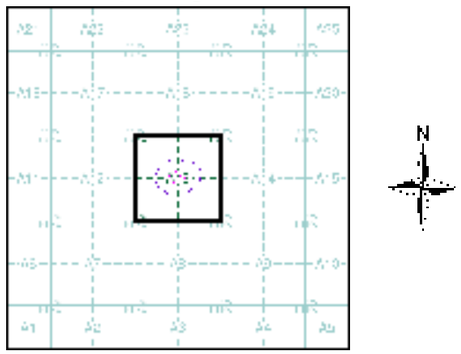
Source map scale - 1:2,500

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



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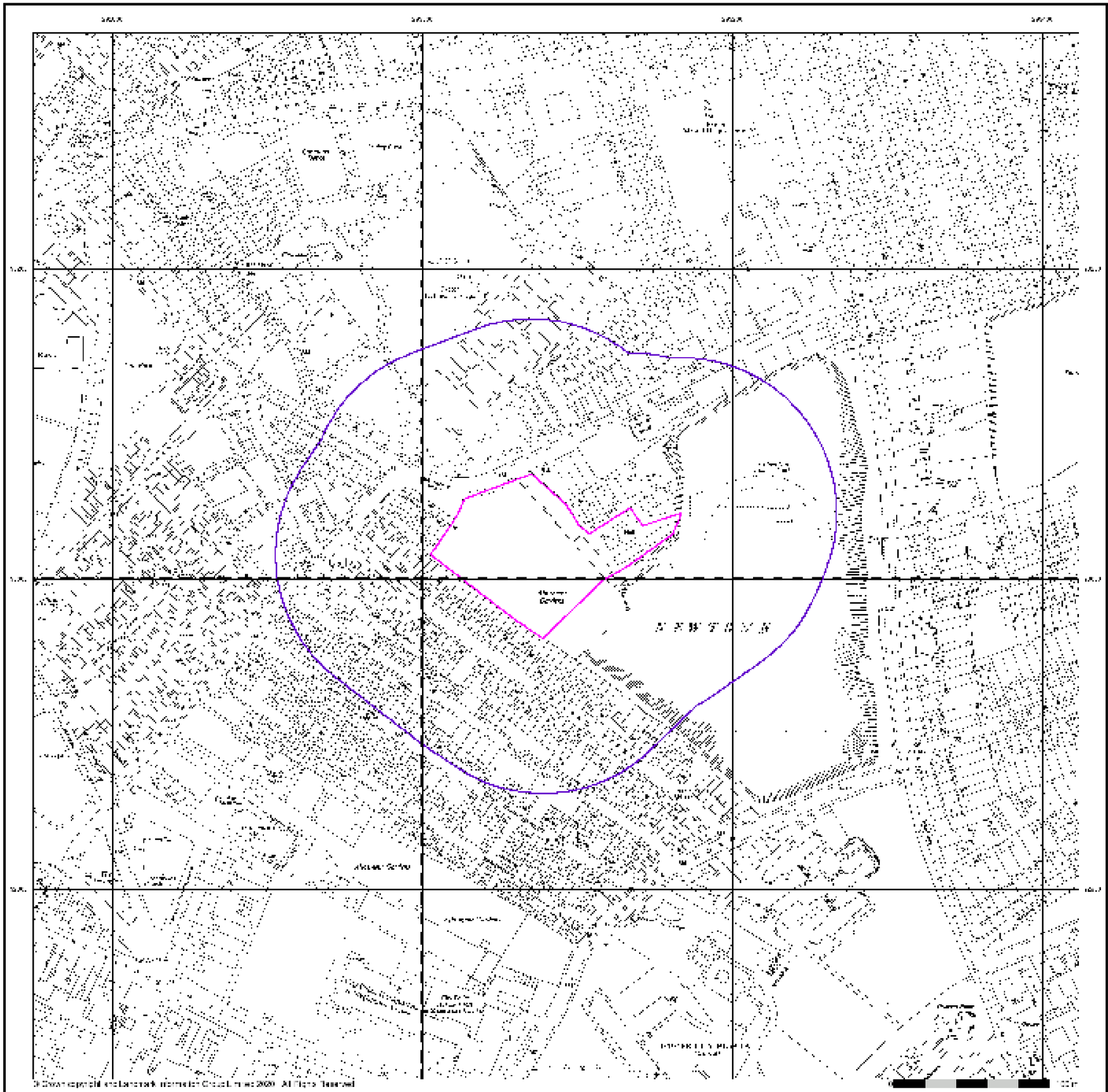

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LANDMARK INFORMATION GROUP

Ordnance Survey Plan

Published 1960 - 1964

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.

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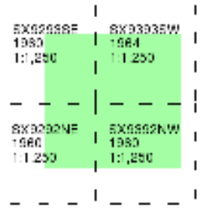
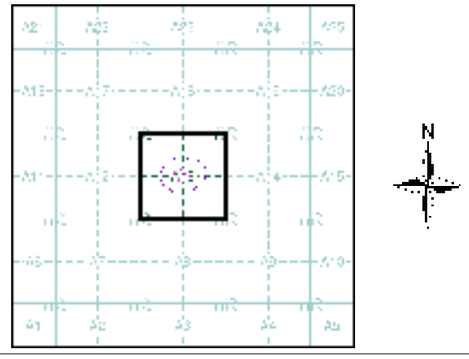


Historical Map - Segment A13



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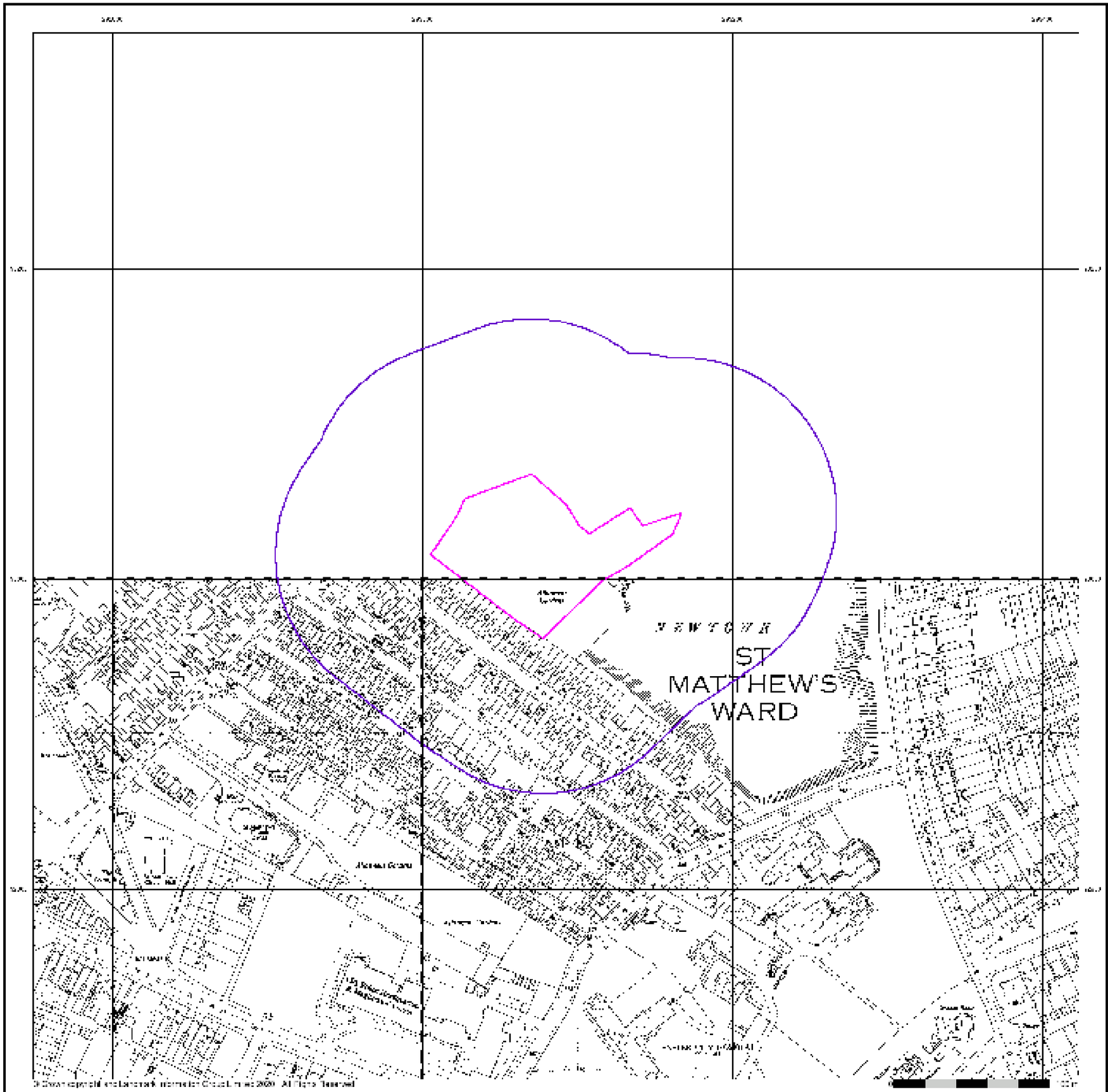

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LANDMARK INFORMATION GROUP

Ordnance Survey Plan

Published 1962

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.

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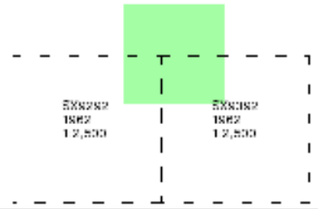
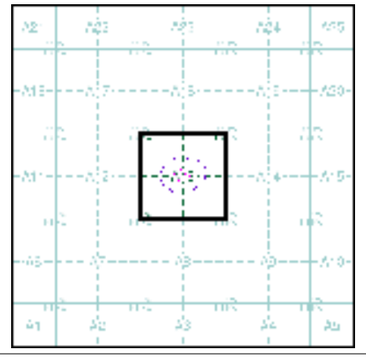


Historical Map - Segment A13



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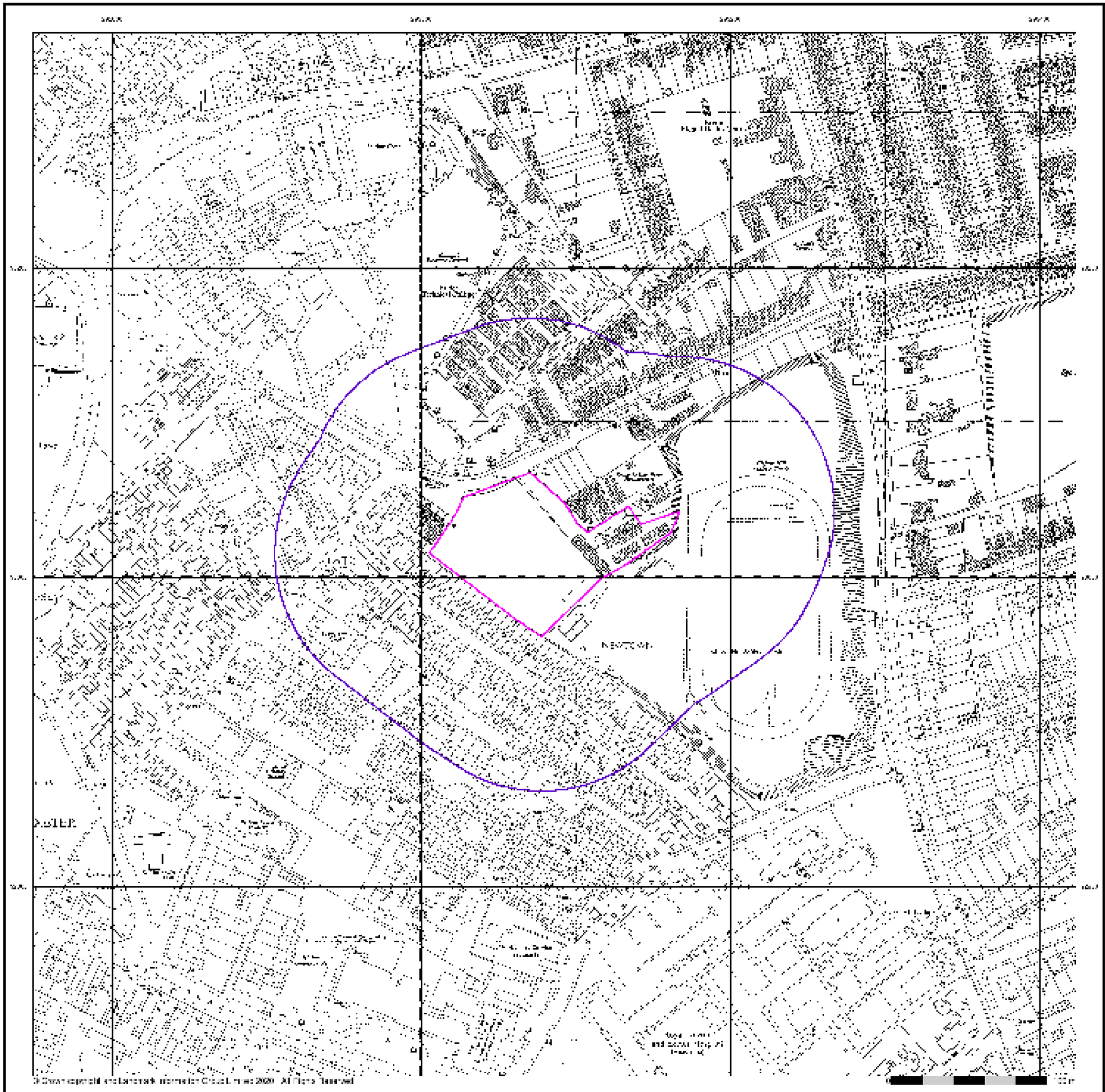

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LANDMARK INFORMATION GROUP

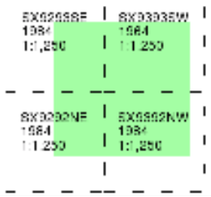
Additional SIMs

Published 1964 - 1984

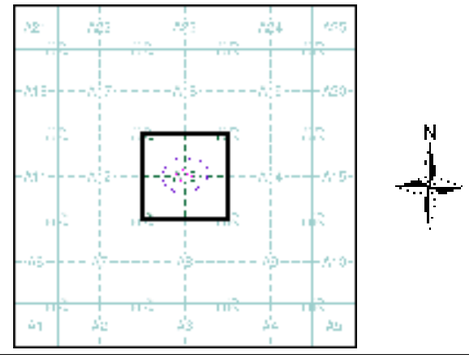
Source map scale - 1:1,250

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)



Historical Map - Segment A13



Order Details

Order Number:	234606878_1_1
Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
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Site Details

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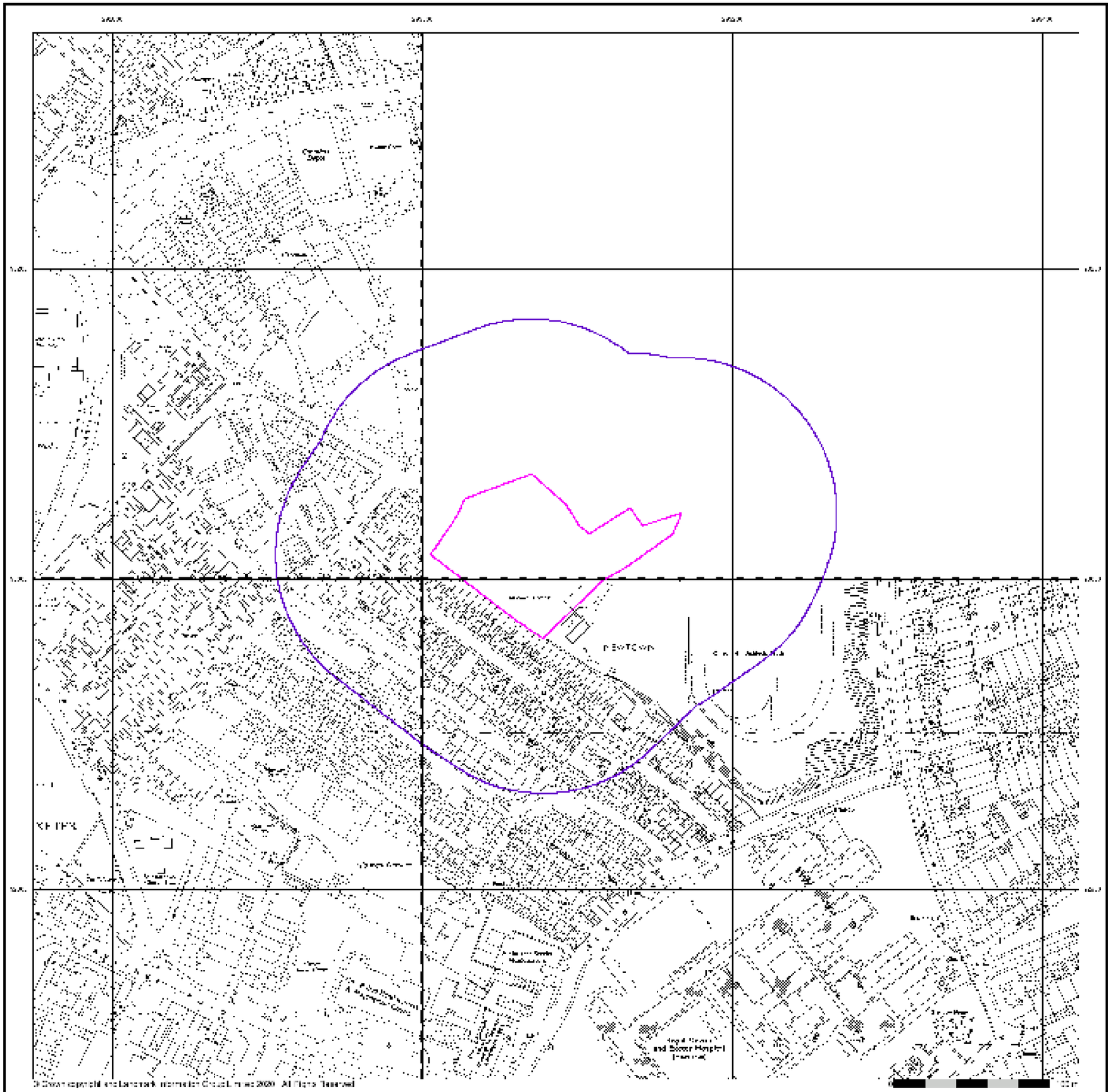

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Ordnance Survey Plan

Published 1965 - 1972

Source map scale - 1:1,250

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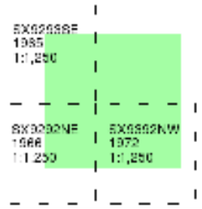
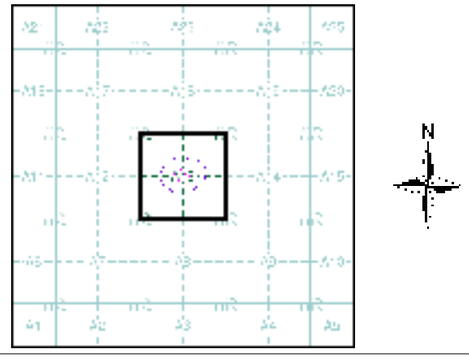


Historical Map - Segment A13



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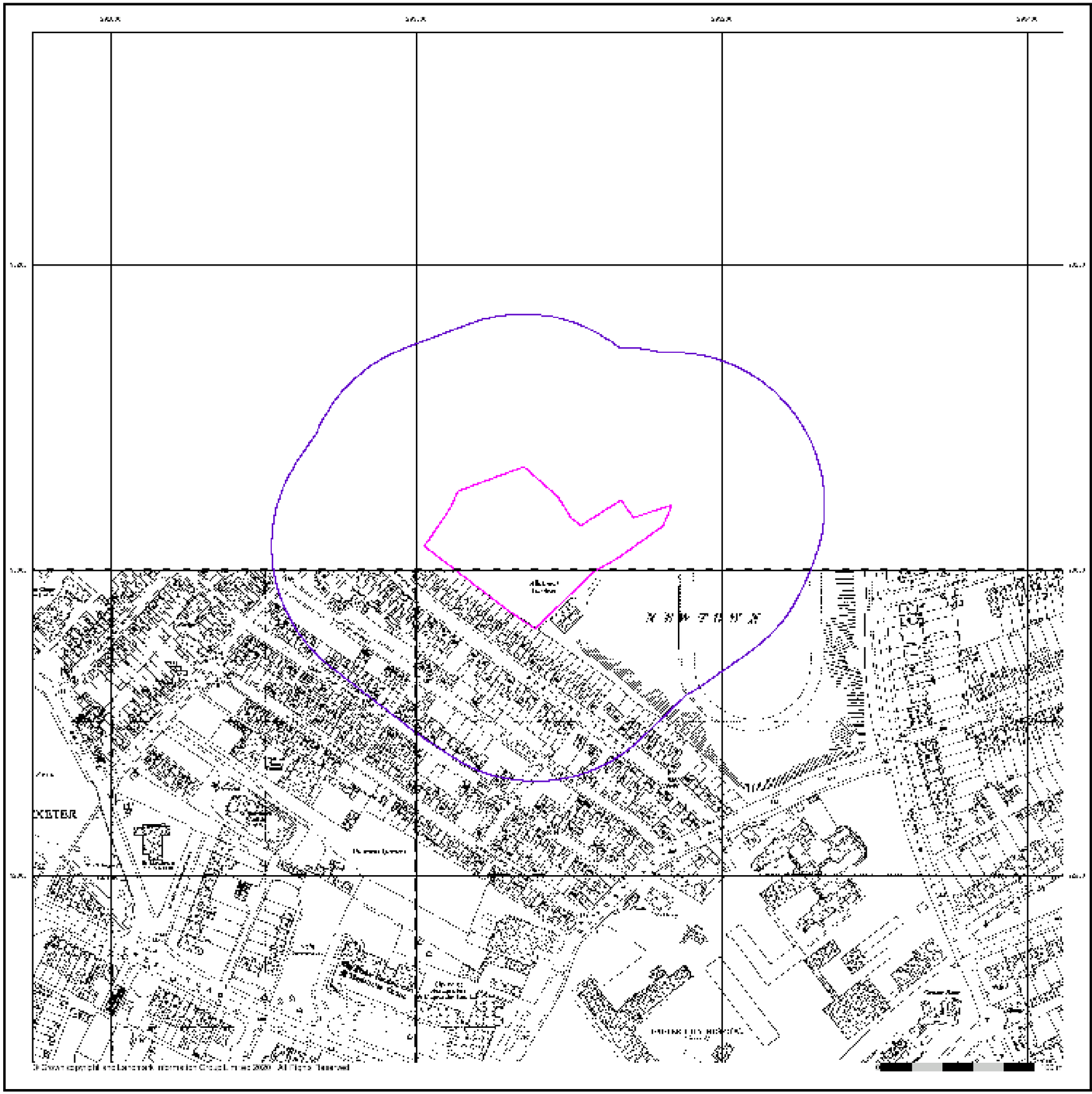

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Ordnance Survey Plan

Published 1969

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.

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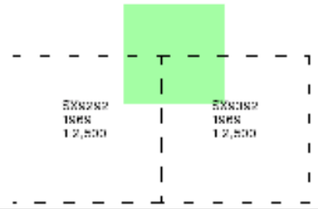
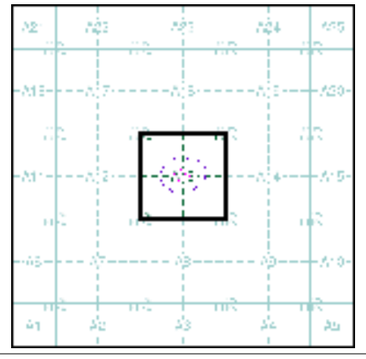


Historical Map - Segment A13



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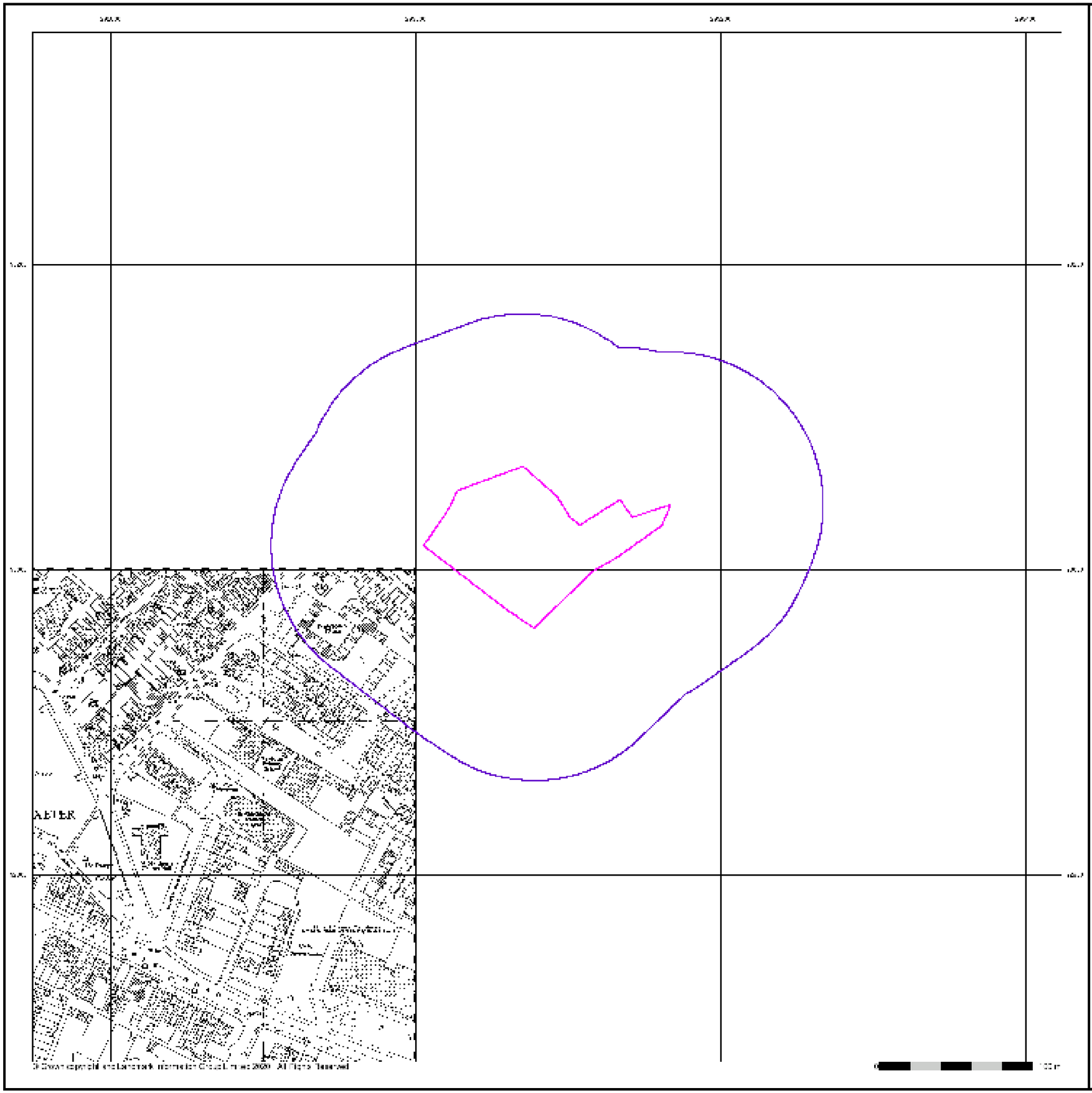

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Ordnance Survey Plan

Published 1977

Source map scale - 1:1,250

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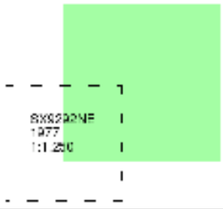
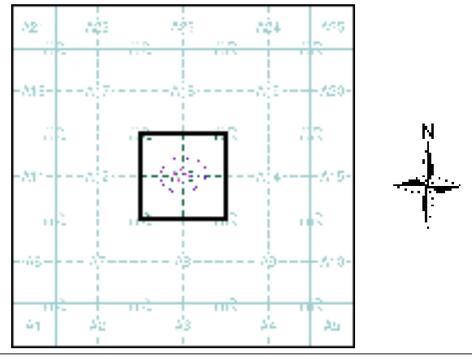


Historical Map - Segment A13



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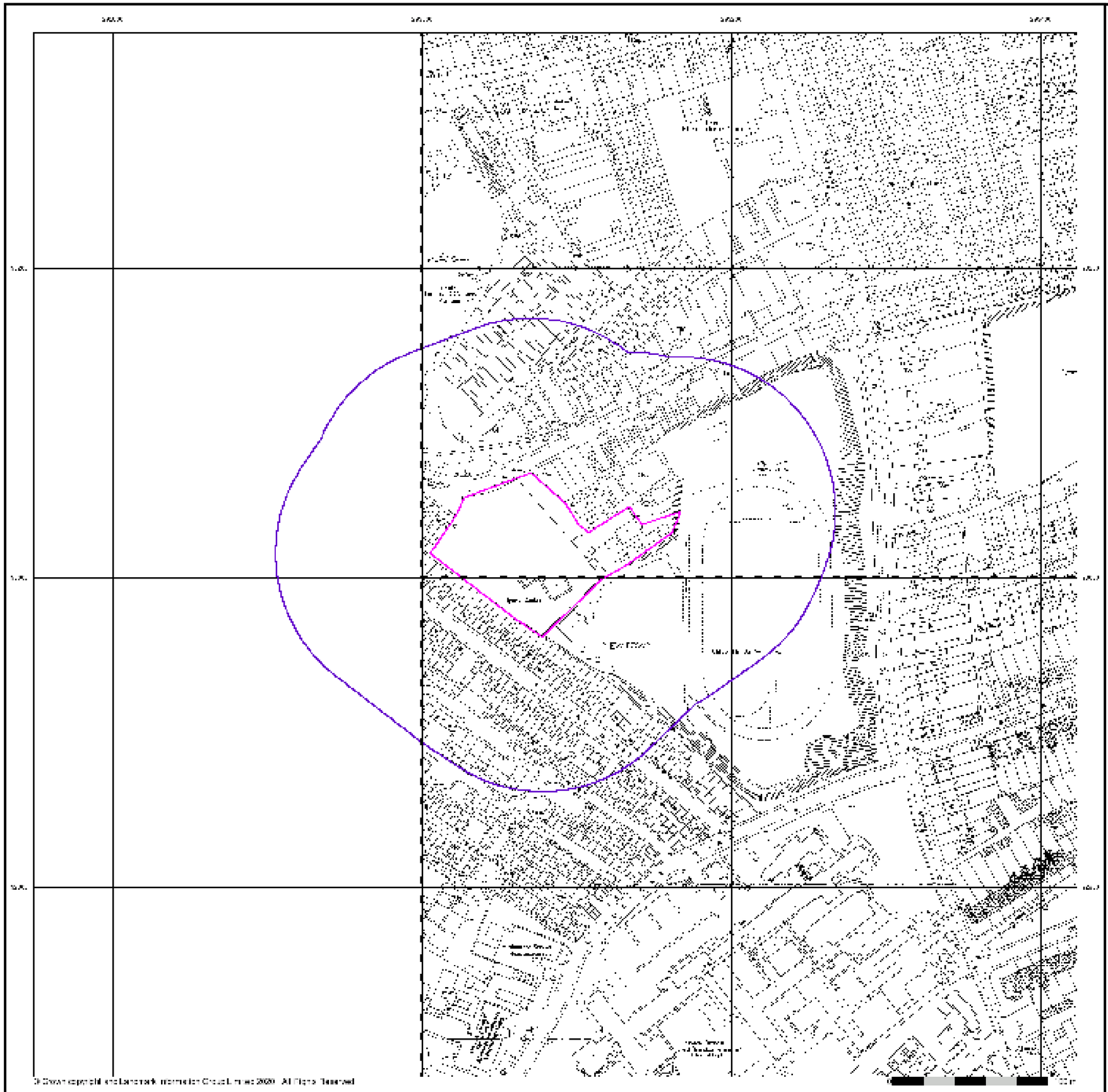

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Additional SIMs

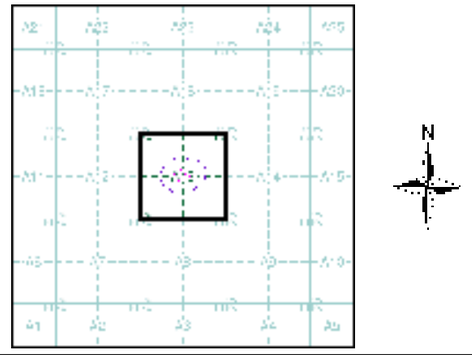
Published 1984 - 1990

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)

Historical Map - Segment A13



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Additional SIMs

Published 1988

Source map scale - 1:1,250

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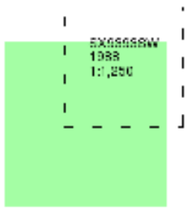
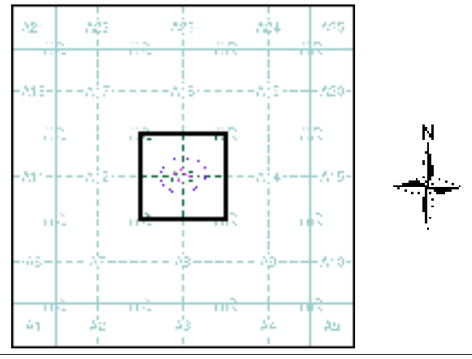


Historical Map - Segment A13



Order Details

Order Number:	234606878_1_1
Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
Search Buffer (m):	100

Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

Landmark INFORMATION GROUP

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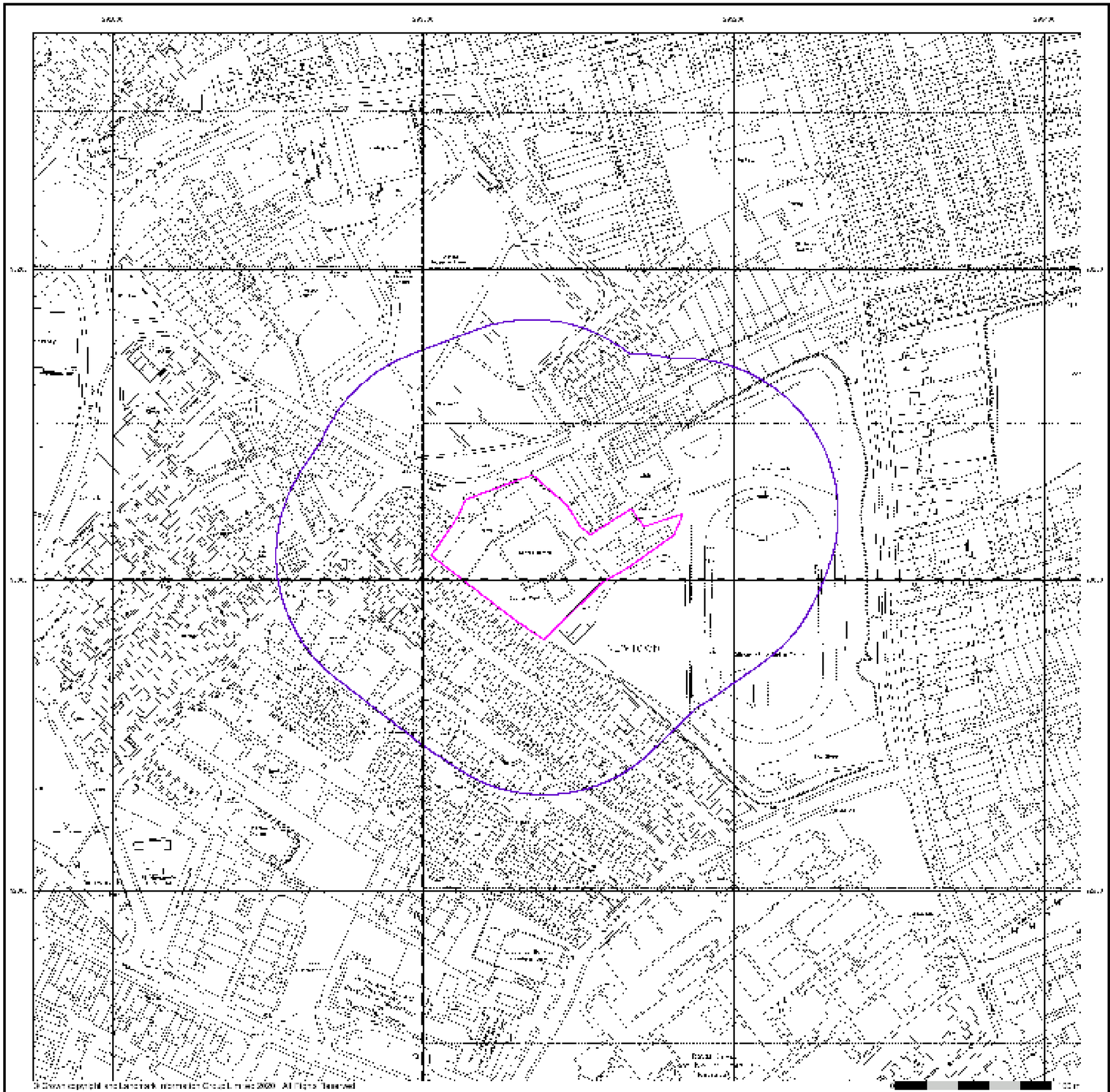
Web: www.envirocheck.co.uk



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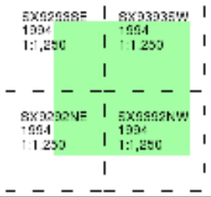
Large-Scale National Grid Data

Published 1994

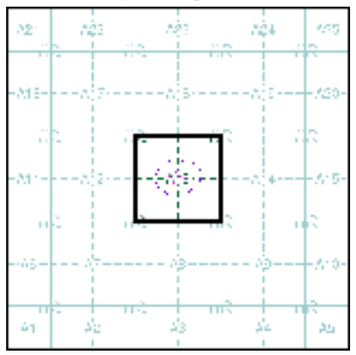
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM 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:	234606878_1_1
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National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
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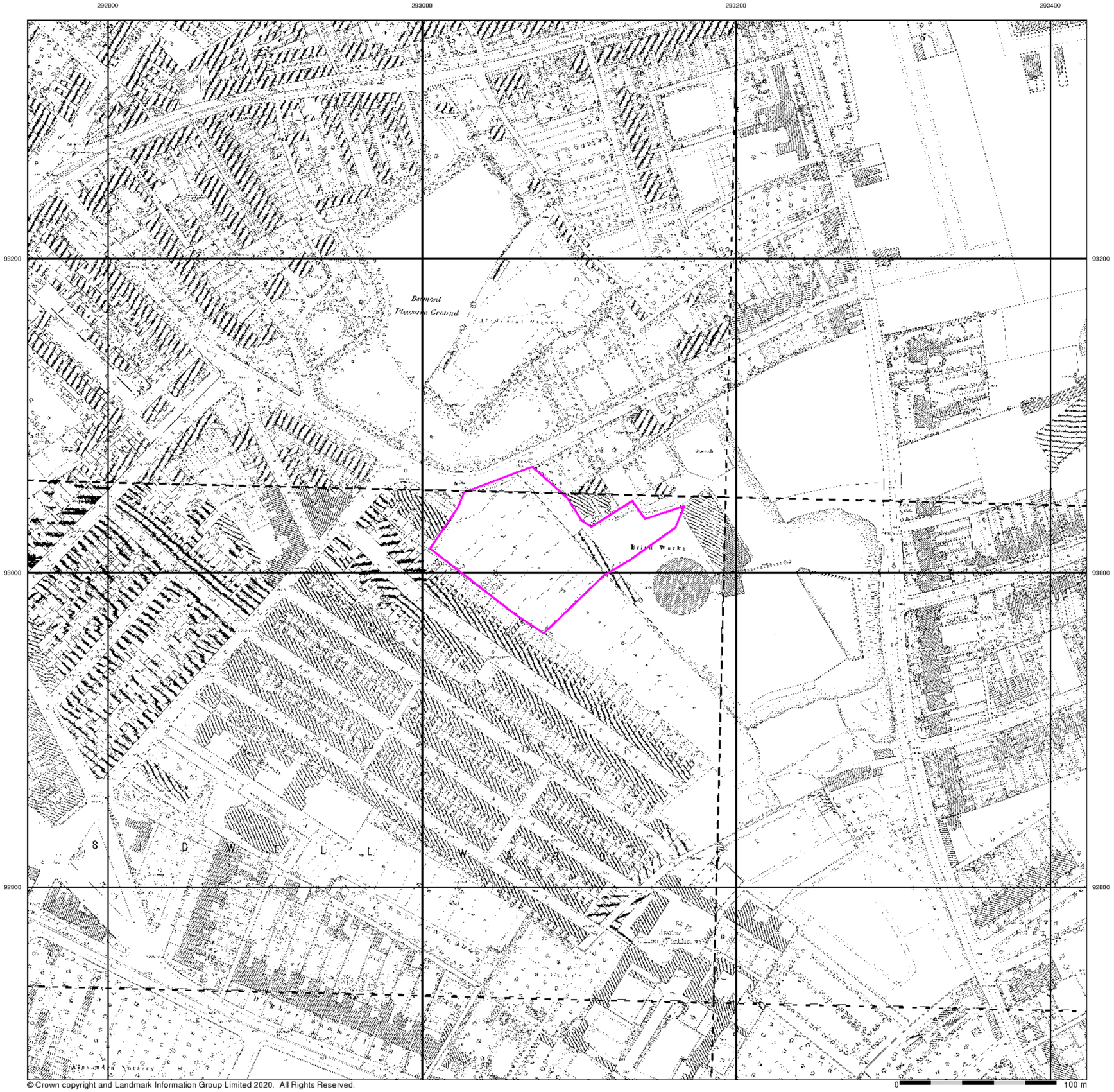

0 100 m

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LANDMARK INFORMATION GROUP®

Devon

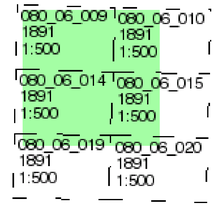
Published 1891

Source map scale - 1:500

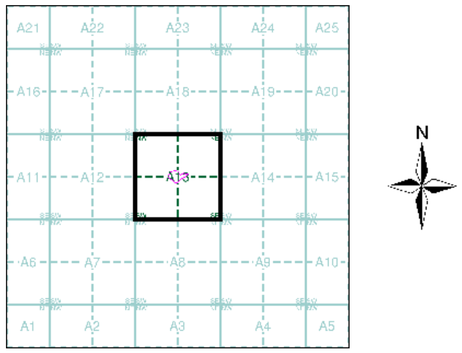
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:528 scale and to compliment the 1:2500 scale that had been implemented in 1853. By 1895, the 1:500 scale covered most towns over a population of about 4000 at the time of survey, although very few towns were mapped more than once at this scale, and none have been since 1910. The 1:500 scale gives particular emphasis to such features as lamp posts, man holes, arched passages and minor building projections. Also often featured are divisions between tenements, interior ground floor layouts of public buildings, and on earlier plans, the functions of the various parts of larger industrial premises are also indicated. Content of the plans does vary however, from one town to the next in terms of, for example, the completeness of railway tracks and the coverage of public buildings.

Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)



Historical Town Plan - Segment A13



Order Details

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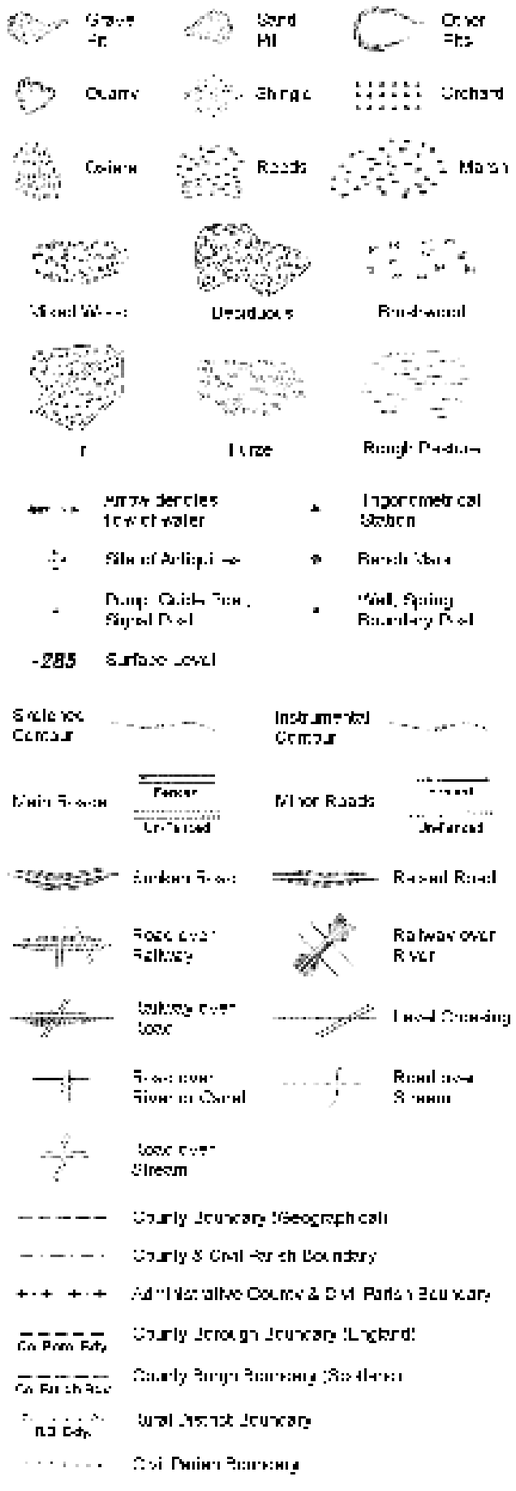
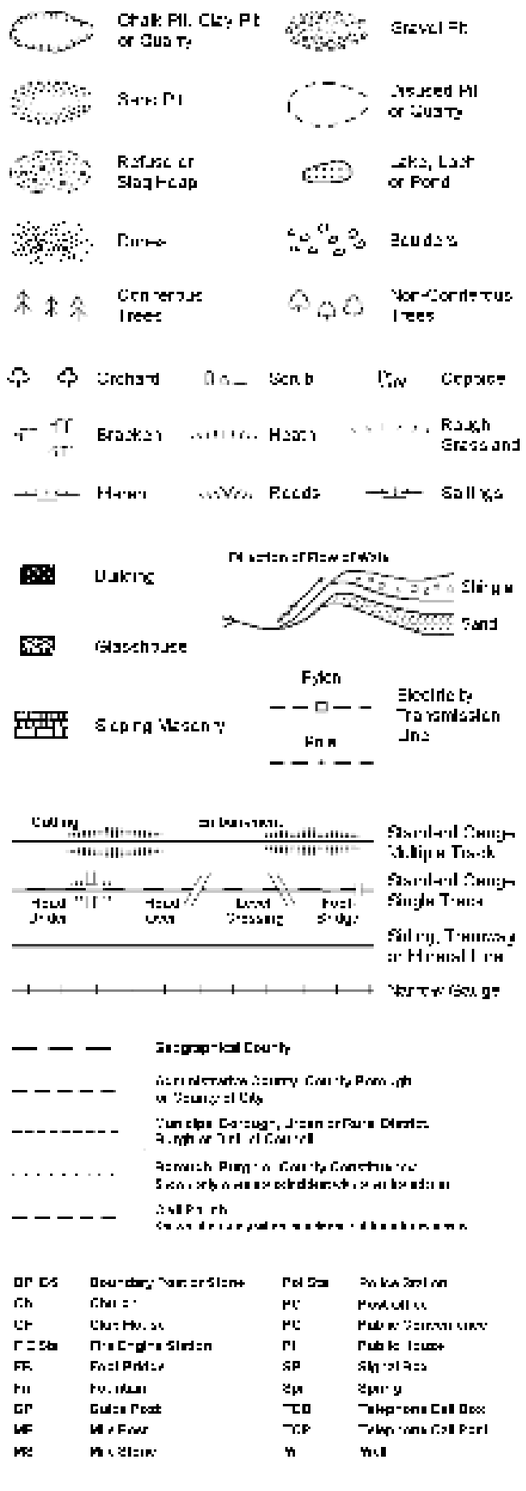
Historical Mapping Legends

Ordnance Survey County Series 1:10,560



Ordnance Survey Plan 1:10,000



1:10,000 Raster Mapping

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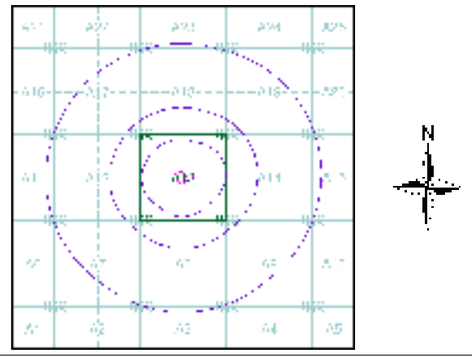
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Devon	1:10,560	1889 - 1890	2
Devon	1:10,560	1906 - 1907	3
Devon	1:10,560	1932 - 1933	4
Devon	1:10,560	1938	5
Devon	1:10,560	1938	6
Ordnance Survey Plan	1:10,000	1963	7
Ordnance Survey Plan	1:10,000	1970	8
Ordnance Survey Plan	1:10,000	1980	9
Ordnance Survey Plan	1:10,000	1989	10
10K Raster Mapping	1:10,000	1999	11
Street View	Variable		12

Historical Map - Slice A



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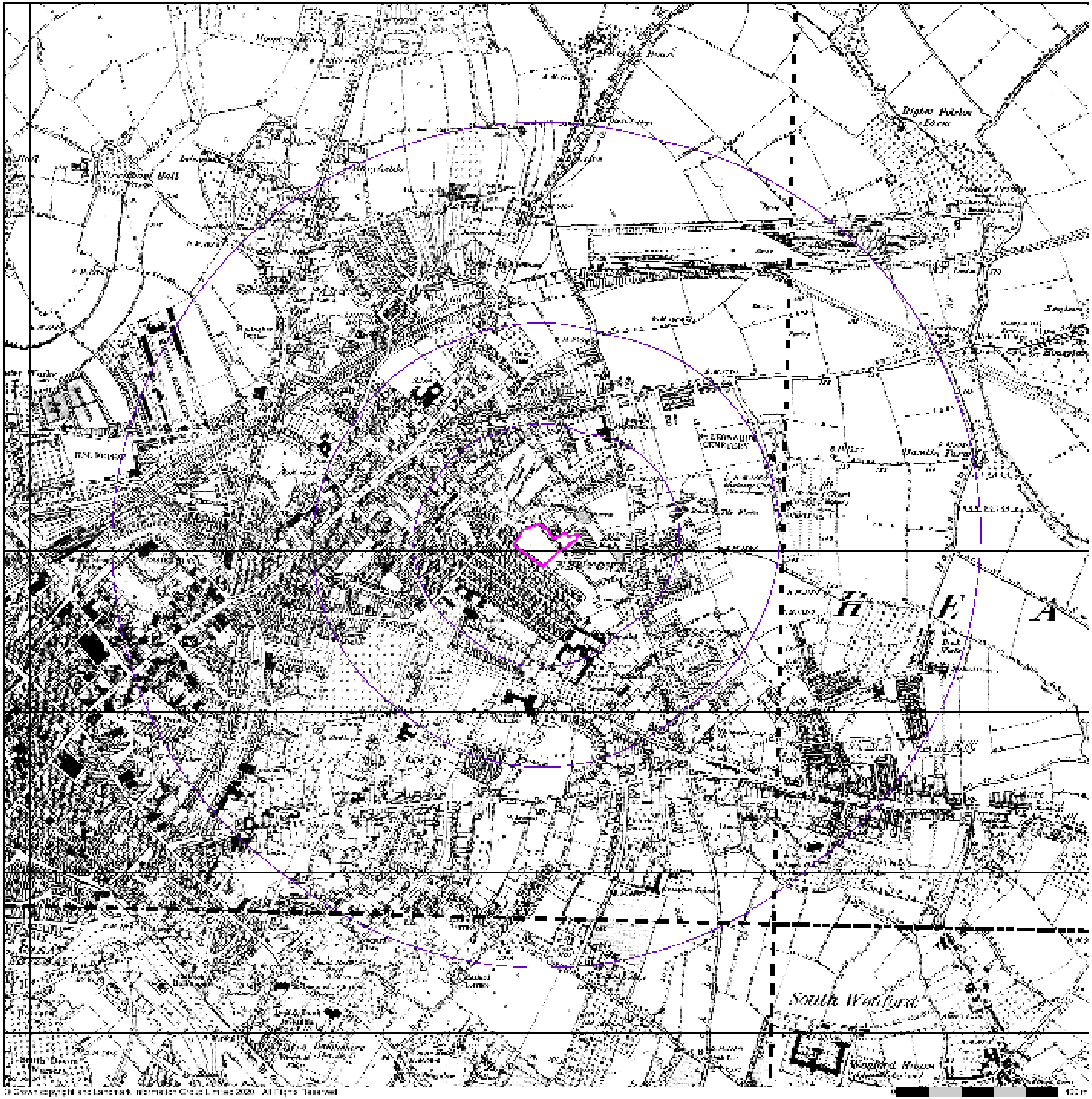

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Devon

Published 1889 - 1890

Source map scale - 1:10,560

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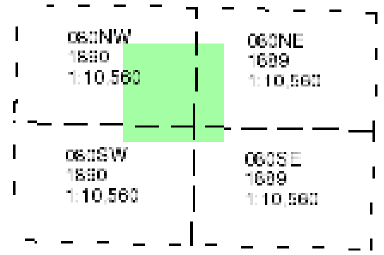
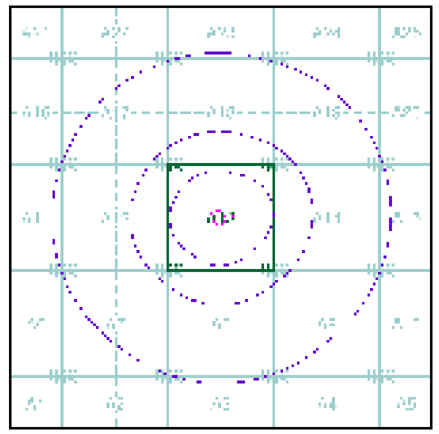
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 234606878_1_1
Customer Ref: 12072
National Grid Reference: 293090, 93020
Slice: A
Site Area (Ha): 0.83
Search Buffer (m): 1000

Site Details

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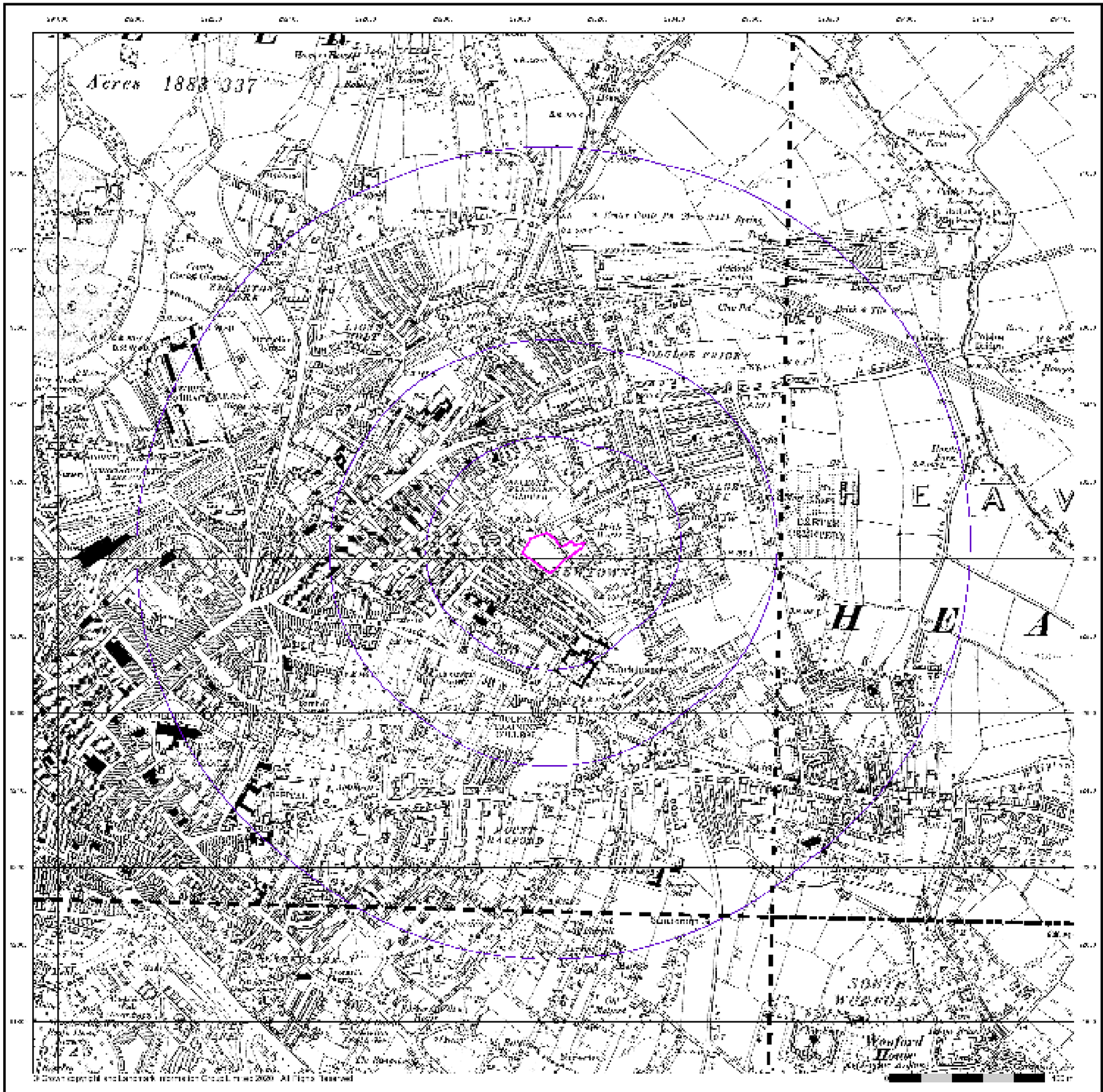

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LANDMARK INFORMATION GROUP

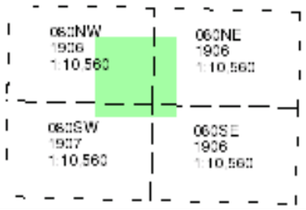
Devon

Published 1906 - 1907

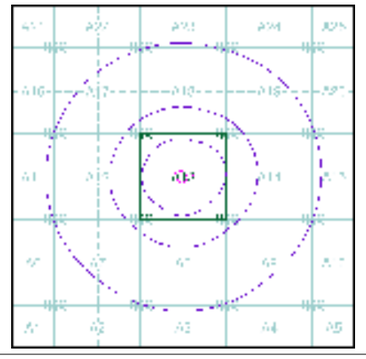
Source map scale - 1:10,560

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:	234606878_1_1
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Slice:	A
Site Area (Ha):	0.83
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Site Details

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Devon

Published 1932 - 1933

Source map scale - 1:10,560

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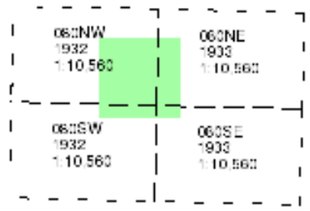
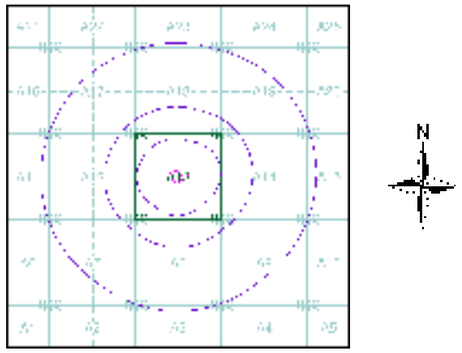
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	234606878_1_1
Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
Search Buffer (m):	1000

Site Details

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Devon

Published 1938

Source map scale - 1:10,560

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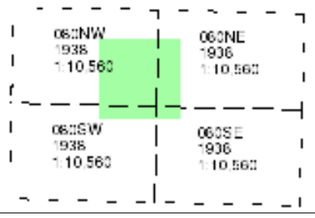
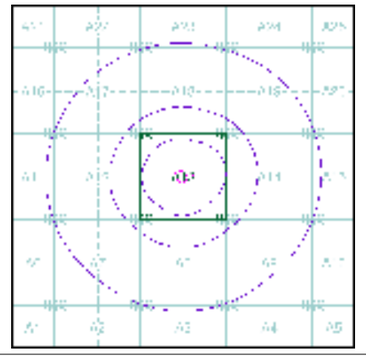


Historical Map - Slice A



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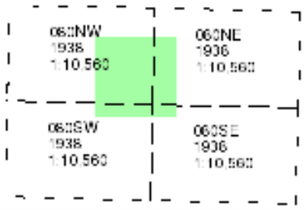
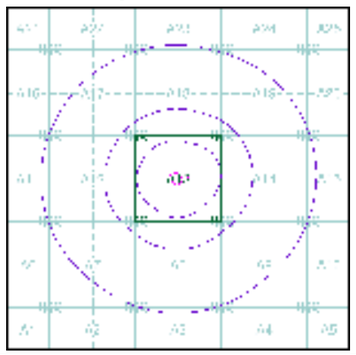


Historical Map - Slice A



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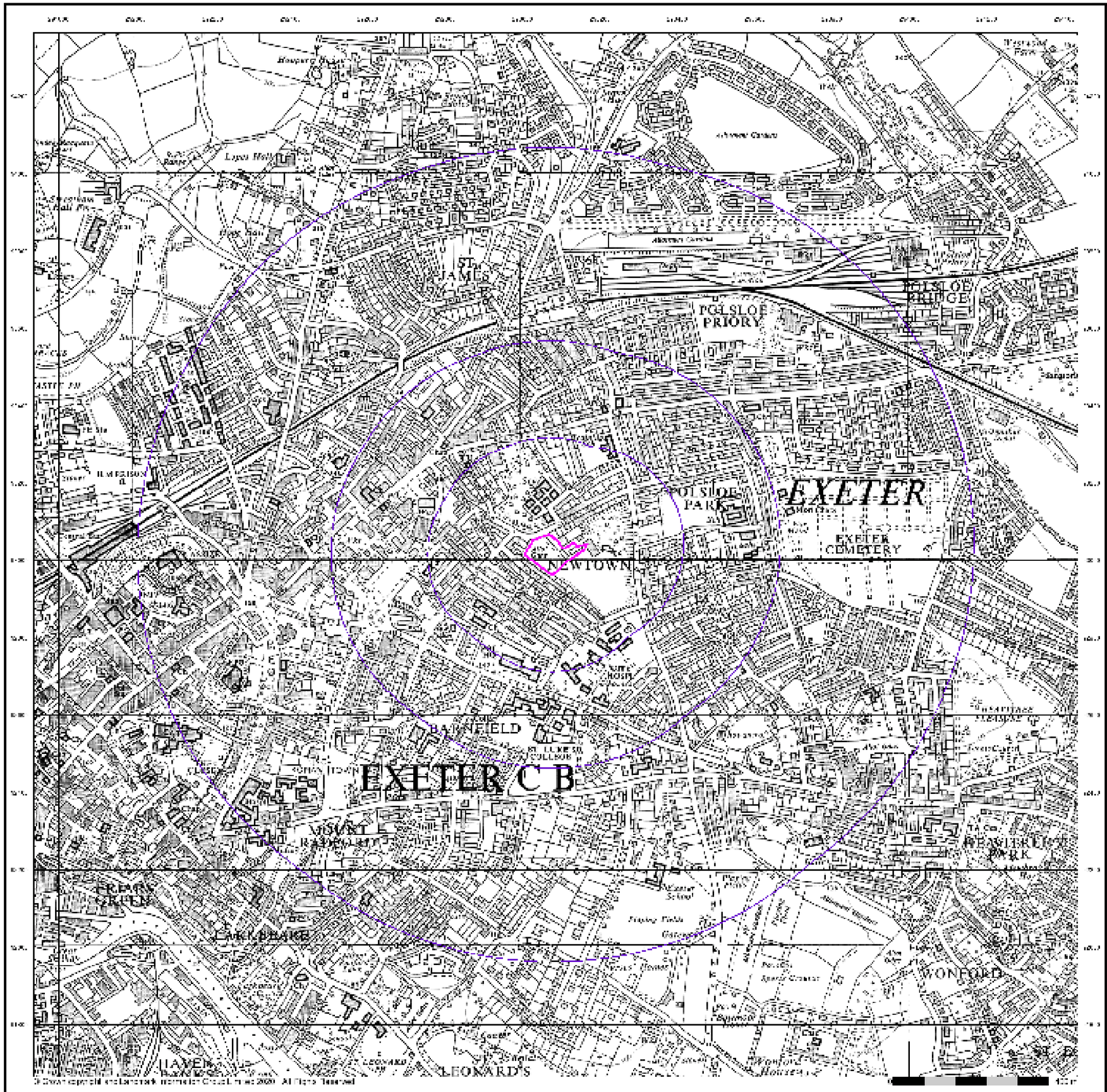

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Ordnance Survey Plan

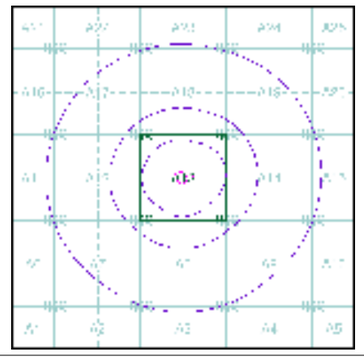
Published 1963

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:	234606878_1_1
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National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
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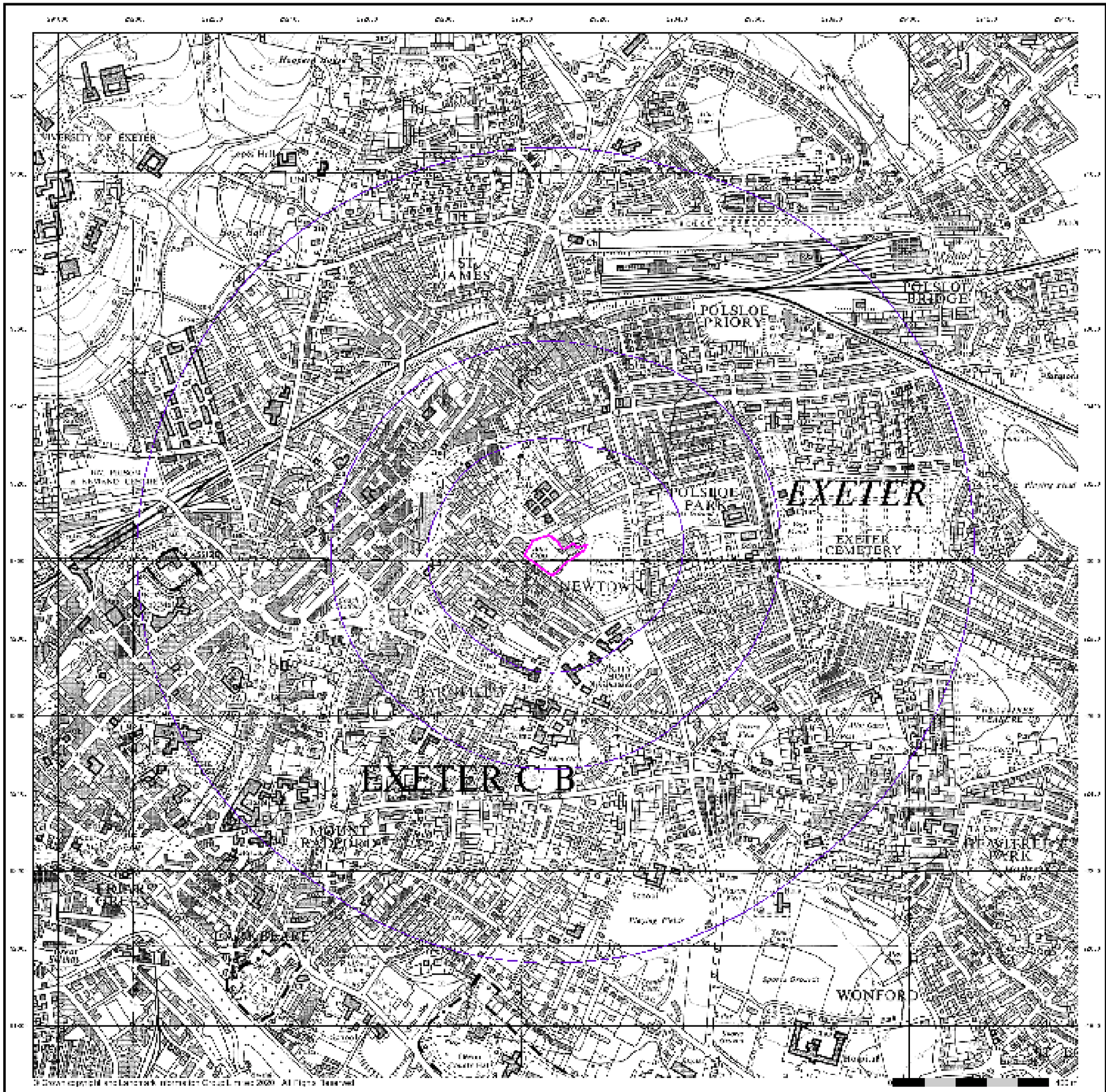

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Ordnance Survey Plan

Published 1970

Source map scale - 1:10,000

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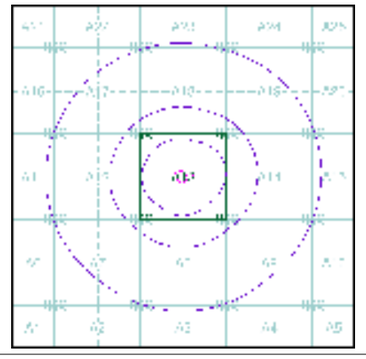
Map Name(s) and Date(s)

Historical Map - Slice A



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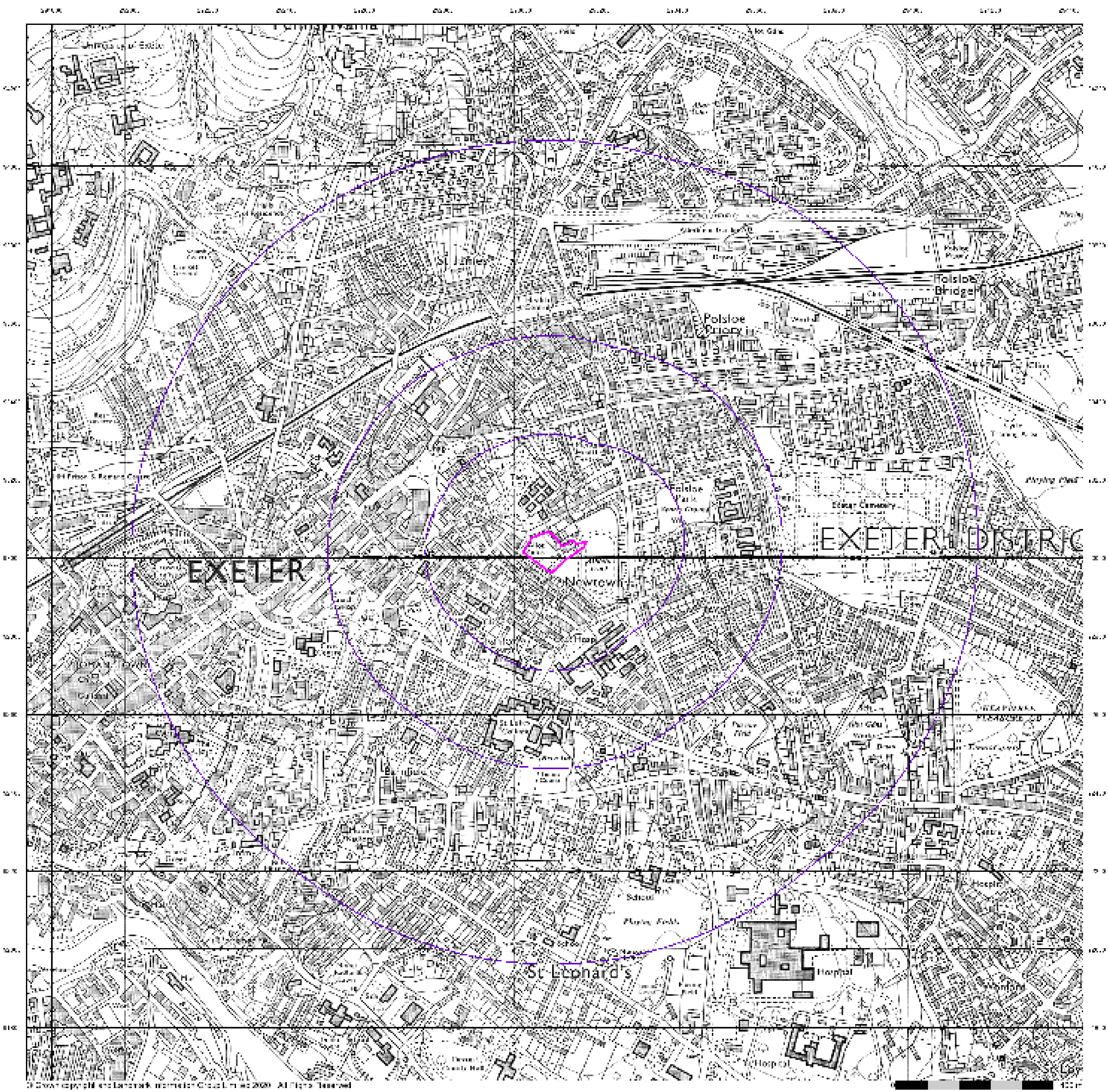

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Ordnance Survey Plan

Published 1980

Source map scale - 1:10,000

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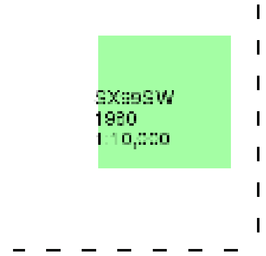
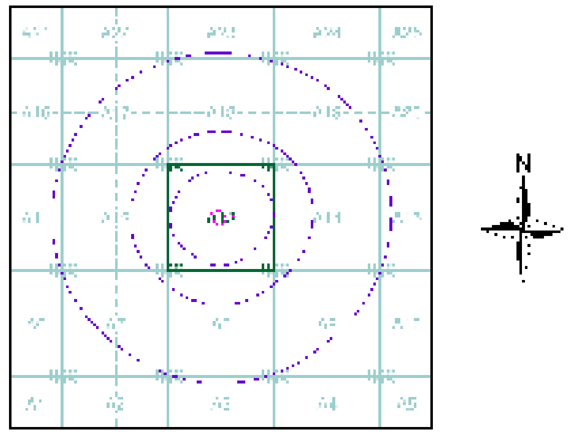


Historical Map - Slice A



Order Details

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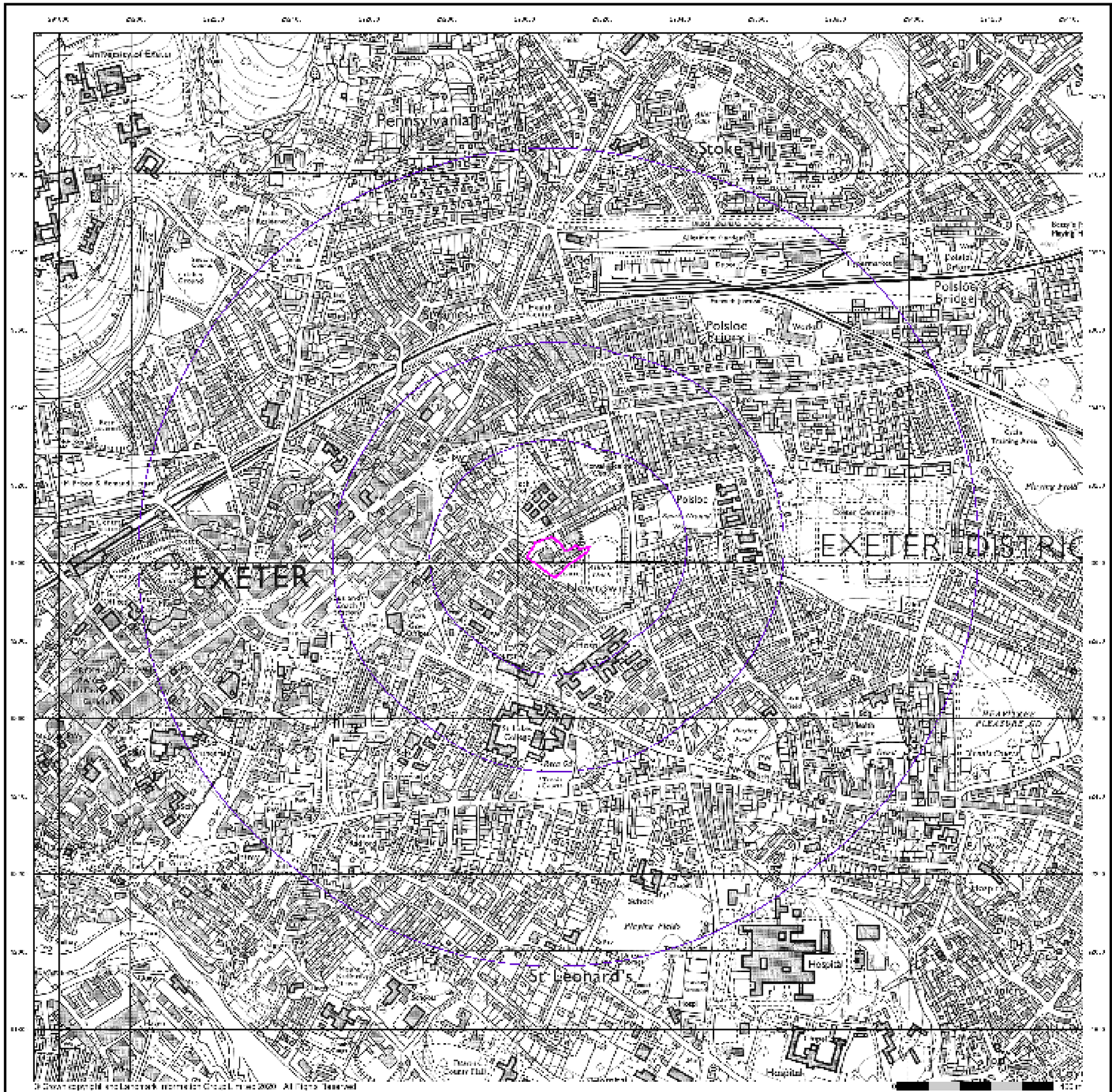

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Ordnance Survey Plan

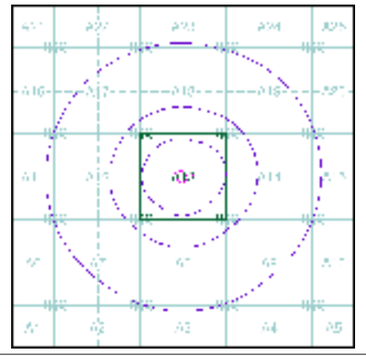
Published 1989

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)

Historical Map - Slice A



Order Details

Order Number:	234606878_1_1
Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
Search Buffer (m):	1000

Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

Landmark INFORMATION GROUP

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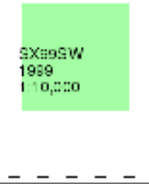
10k Raster Mapping

Published 1999

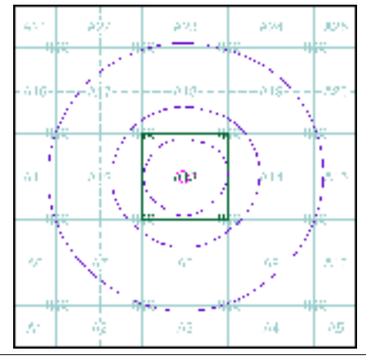
Source map scale - 1:10,000

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:	234606878_1_1
Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
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Site Details

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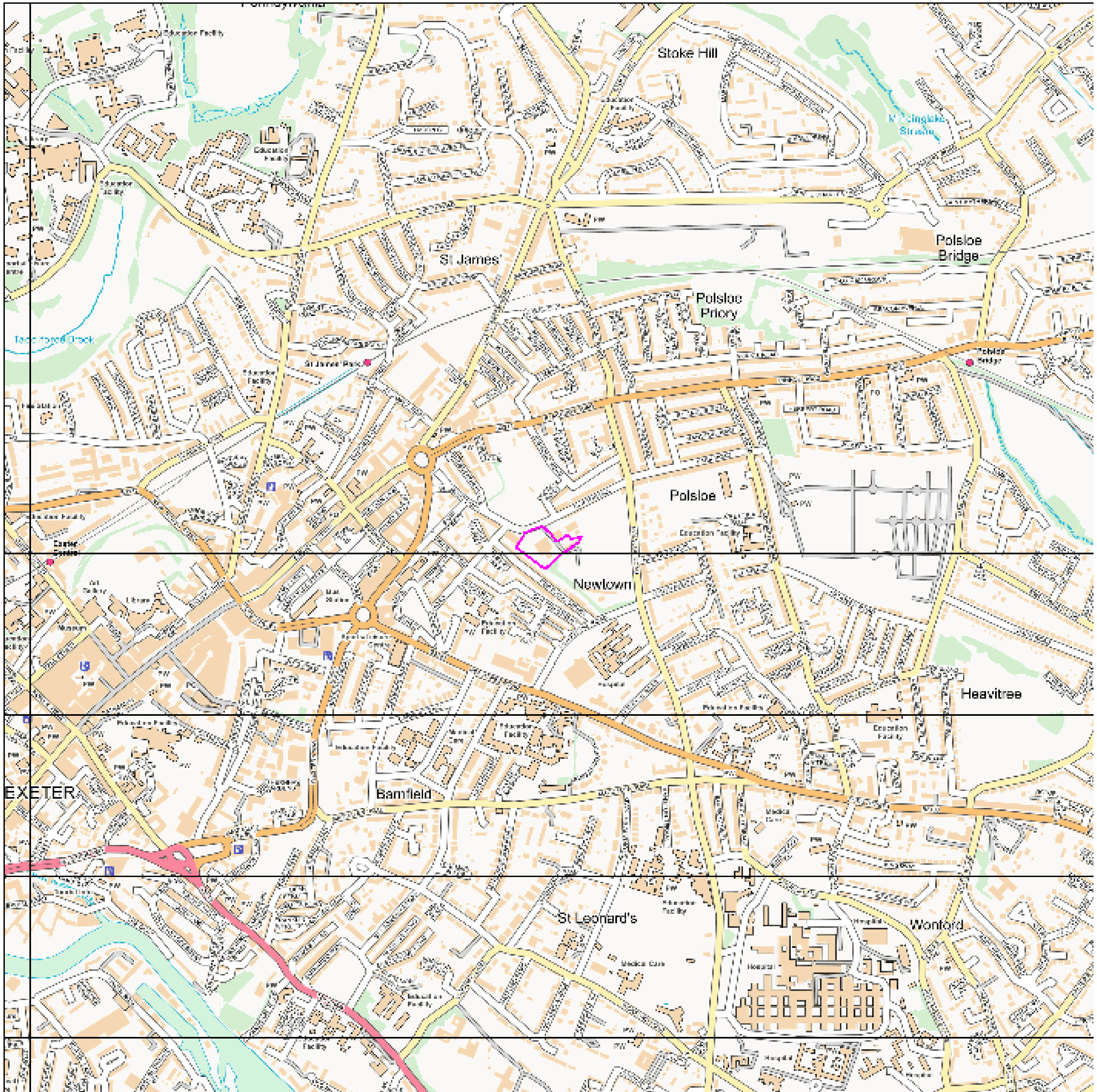

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Street View

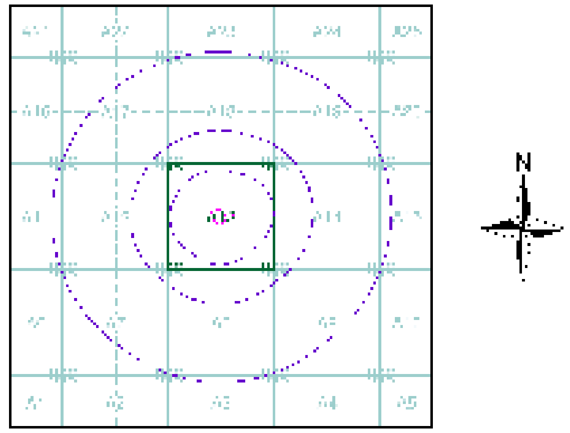
Published 2020

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: 234606878_1_1
Customer Ref: 12072
National Grid Reference: 293090, 93020
Slice: A
Site Area (Ha): 0.83
Search Buffer (m): 1000

Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

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Envirocheck® Report:

Datasheet

Order Details:

Order Number:
234606878_1_1

Customer Reference:
12072

National Grid Reference:
293090, 93020

Slice:
A

Site Area (Ha):
0.83

Search Buffer (m):
1000

Site Details:

Clifton Hill Sports Centre
Clifton Hill
EXETER
EX1 2DJ

Client Details:

Ms Z Brown
Hall Geoscience Ltd
Units 3&4
Brooklands
Howden Road
Tiverton
Devon
EX16 5HW

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Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Report Version v53.0

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2			2	7
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 4			5	6
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5			Yes	
Pollution Incidents to Controlled Waters	pg 6			2	6
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances	pg 7			3	
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 7				1 (*23)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 13	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 14				4

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 15	1	1		1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 15	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 15	1	1		1
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 17	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 17		1	1	2
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 17	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 17		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 18	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 18		Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 18		Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 19		5	59	83
Fuel Station Entries	pg 31			1	4
Gas Pipelines					
Underground Electrical Cables					
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	0	1	293085 93050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	0	1	293050 93050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	0	1	293050 93021
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	16	1	293000 93000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	24	1	293000 93050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	88	1	293100 93150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	161	1	292900 93150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	325	1	292900 93350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	337	1	292800 93300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	341	1	292750 93250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	348	1	292850 93350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	354	1	292950 93400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	371	1	292900 93400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	373	1	292750 93300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	375	1	292800 93350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	383	1	292700 93250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	401	1	292650 93200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	406	1	292750 92700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	406	1	292600 93000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (NW)	408	1	292750 93350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	427	1	292600 93150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	439	1	293000 93500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	449	1	292950 93500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A7NE (SW)	477	1	292700 92650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	483	1	293050 93550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	488	1	293000 93550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (NE)	492	1	293550 93350
1	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Lower Avenue Cso, 2 Lower Avenue, Exeter, Devon, Ex1 2pr Authority: Environment Agency, South West Region Catchment Area: Tidal Exe, Devon Reference: 201912 Permit Version: 1 Effective Date: 23rd October 2000 Issued Date: 1st October 2000 Revocation Date: 26th March 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Exe (S) **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	483	2	293643 92966
2	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: O/S Honiton Inn, Paris Street Cso, Exeter, Devon Authority: Environment Agency, South West Region Catchment Area: Tidal Exe, Devon Reference: 201895 Permit Version: 1 Effective Date: 1st October 2000 Issued Date: 1st October 2000 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Exe (S) **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12SE (W)	493	2	292547 92833
3	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: First Avenue Service Lane Cso, First Avenue, Exeter, Devon, Ex1 2ph Authority: Environment Agency, South West Region Catchment Area: Tidal Exe, Devon Reference: 201913 Permit Version: 1 Effective Date: 23rd October 2000 Issued Date: 1st October 2000 Revocation Date: 12th February 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Exe (S) **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	553	2	293668 92810

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: North Lawn Court Cso, Heavitree, Exeter, Devon, Ex1 2ra Authority: Environment Agency, South West Region Catchment Area: Tidal Exe, Devon Reference: 201911 Permit Version: 1 Effective Date: 23rd October 2000 Issued Date: 1st October 2000 Revocation Date: 12th February 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Exe (S) **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	592	2	293704 92794
4	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Well Street Cso, Exeter, Devon, Ex4 6qb Authority: Environment Agency, South West Region Catchment Area: Tidal Exe, Devon Reference: 201371 Permit Version: 1 Effective Date: 29th August 2000 Issued Date: 1st September 2000 Revocation Date: 30th January 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The Longbrook Culvert(S) **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	572	2	292700 93520
5	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: St Sidwells School Cso, York Road, Exeter, Devon, Ex4 6pg Authority: Environment Agency, South West Region Catchment Area: Tidal Exe, Devon Reference: 201374 Permit Version: 1 Effective Date: 29th August 2000 Issued Date: 7th November 2000 Revocation Date: 30th January 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The Longbrook Culvert **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12NE (W)	598	2	292460 93260
6	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Pennsylvania Road Cso, Exeter, Devon, Ex4 6bq Authority: Environment Agency, South West Region Catchment Area: Tidal Exe, Devon Reference: 201372 Permit Version: 1 Effective Date: 29th August 2000 Issued Date: 23rd October 2000 Revocation Date: 30th January 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The Longbrook Culvert (S) **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	670	2	292390 93280

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Howell Road Cso, Howell Road, Exeter, Devon, Ex4 4ey Authority: Environment Agency, South West Region Catchment Area: Tidal Exe, Devon Reference: 201376 Permit Version: 1 Effective Date: 29th August 2000 Issued Date: 20th October 2000 Revocation Date: 12th February 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The Longbrook Culvert(S) **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	852	2	292160 93120
8	**Discharge Consents** Operator: South West Water Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Exeter, Hanover Road, Hamelin Lane Authority: Environment Agency, South West Region Catchment Area: Lower Exe, Devon Reference: Nra-Sw-1200 Permit Version: 1 Effective Date: 30th October 1989 Issued Date: 30th October 1989 Revocation Date: 23rd October 2000 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Northbrook **Status:** **Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A15SW (E)	965	2	294100 92800
9	**Local Authority Pollution Prevention and Controls** Name: Silverspin Location: 12 Blackboy Road, Exeter, Ex4 6sg Authority: Exeter City Council, Environmental Health Department Permit Reference: 7.0/EP067 Dated: 30th October 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status:** **Permitted** Positional Accuracy: Manually positioned to the address or location	A13NW (NW)	300	3	292883 93314
10	**Local Authority Pollution Prevention and Controls** Name: Kenjo Washeteria Location: 139 Sidwell Street, Exeter Authority: Exeter City Council, Environmental Health Department Permit Reference: 7.0/EP073 Dated: 30th October 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status:** **Permitted** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	421	3	292592 93093
11	**Local Authority Pollution Prevention and Controls** Name: Care Clean Location: 43 Sidwell Street, Exeter, Ex4 6ns Authority: Exeter City Council, Environmental Health Department Permit Reference: 7.0/EP066 Dated: 30th October 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status:** **Permitted** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	474	3	292537 93087
12	**Local Authority Pollution Prevention and Controls** Name: Yeo & Davey Location: Old Tiverton Road, EXETER, Devon, EX4 6LG Authority: Exeter City Council, Environmental Health Department Permit Reference: 1.3/Ep008 Dated: 4th June 1992 Process Type: Local Authority Air Pollution Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status:** **Authorised** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	478	3	292924 93522

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Local Authority Pollution Prevention and Controls** Name: Exeter Motor Works Location: Unit 2, 31-35 Old Tiverton Road, Exeter, EX4 6LG Authority: Exeter City Council, Environmental Health Department Permit Reference: 6.5/EP077 Dated: 30th August 2011 Process Type: Local Authority Pollution Prevention and Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	515	3	292890 93550
13	**Local Authority Pollution Prevention and Controls** Name: Johnsons Location: 157 Sidwell Street, Exeter Authority: Exeter City Council, Environmental Health Department Permit Reference: 7.0/EP070/Var1 Dated: 30th October 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	481	3	292524 93022
14	**Local Authority Pollution Prevention and Controls** Name: Exeter Motors Location: 149 Ladysmith Road, EXETER, Devon, EX1 2NG Authority: Exeter City Council, Environmental Health Department Permit Reference: 1.3/Ep006/Var1 Dated: 4th June 1992 Process Type: Local Authority Air Pollution Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A14SW (E)	593	3	293716 92819
15	**Local Authority Pollution Prevention and Controls** Name: Vanborn & Radford Location: Lions Holt Garage, Rear of 77 Victoria Street, EXETER, Devon, EX4 6JG Authority: Exeter City Council, Environmental Health Department Permit Reference: 1.3/EP005/Var3 Dated: 4th June 1992 Process Type: Local Authority Pollution Prevention and Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	617	3	292776 93615
16	**Local Authority Pollution Prevention and Controls** Name: Ibstock Brick Products Location: Rougement Works, Monks Road, EXETER, Devon, EX4 7BH Authority: Exeter City Council, Environmental Health Department Permit Reference: 3.6/EPA002 Dated: 6th August 1992 Process Type: Local Authority Air Pollution Control Description: PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the road within the address or location	A19SE (NE)	760	3	293769 93505
17	**Local Authority Pollution Prevention and Controls** Name: British Fuels Ltd Location: Exmouth Junction, Mount Pleasant Road, Exeter, Devon, Ex Authority: Exeter City Council, Environmental Health Department Permit Reference: 29 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/5 Coal, coke and coal product processes **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	786	3	293464 93770
18	**Local Authority Pollution Prevention and Controls** Name: Morrisons Ltd Location: Prince Charles Road, Exeter, EX4 7BY Authority: Exeter City Council, Environmental Health Department Permit Reference: PV/EP080 Dated: 15th June 2012 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A19NE (NE)	976	3	293799 93785
	Nearest Surface Water Feature	A14NW (E)	387	-	293547 93111

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Pollution Incidents to Controlled Waters** Property Type: Dairies Location: Location Description Not Available Authority: Environment Agency, South West Region Pollutant: Oils - Waste Oil Note: Inadequate Design/Capacity Incident Date: 24th January 1991 Incident Reference: 62001857 Catchment Area: Lower Exe, Devon Receiving Water: Freshwater Stream/River Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	411	2	292700 93300
20	**Pollution Incidents to Controlled Waters** Property Type: Mines & Quarries/Mineral Industries Location: Location Description Not Available Authority: Environment Agency, South West Region Pollutant: Chemicals - Other Organic Note: Accidental Spillage/Leakage Incident Date: 7th November 1994 Incident Reference: 62012431 Catchment Area: Lower Exe, Devon Receiving Water: Freshwater Stream/River Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	473	2	293500 92700
21	**Pollution Incidents to Controlled Waters** Property Type: Industrial: Other Location: Location Description Not Available Authority: Environment Agency, South West Region Pollutant: Heating Oil Note: Accidental Spillage/Leakage Incident Date: 17th August 1992 Incident Reference: 62006844 Catchment Area: Lower Exe, Devon Receiving Water: Freshwater Stream/River Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SE (W)	518	2	292500 92900
22	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, South West Region Pollutant: Other Chemicals Note: Miscellaneous/Other Pollution Type Incident Date: 27th October 1991 Incident Reference: 62002989 Catchment Area: Lower Exe, Devon Receiving Water: Freshwater Stream/River Cause of Incident: Other Cause Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	703	2	293500 92400
23	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, South West Region Pollutant: Unknown Note: Not Supplied Incident Date: 28th May 1991 Incident Reference: 62002154 Catchment Area: Lower Exe, Devon Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	772	2	293700 93600
24	**Pollution Incidents to Controlled Waters** Property Type: Public Highway: Surface Runoff Location: Location Description Not Available Authority: Environment Agency, South West Region Pollutant: Oils - Diesel (Including Agricultural) Note: Accidental Spillage/Leakage Incident Date: 20th September 1995 Incident Reference: 62011497 Catchment Area: Lower Exe, Devon Receiving Water: Freshwater Stream/River Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	806	2	292200 93000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**Pollution Incidents to Controlled Waters** Property Type: Road (Road Traffic Accident) Location: Location Description Not Available Authority: Environment Agency, South West Region Pollutant: Oils - Petrol Note: Accidental Spillage/Leakage Incident Date: 21st November 1994 Incident Reference: 62012231 Catchment Area: Lower Exe, Devon Receiving Water: Freshwater Stream/River Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	874	2	293500 93850
26	**Pollution Incidents to Controlled Waters** Property Type: Public Highway: Other Location: Location Description Not Available Authority: Environment Agency, South West Region Pollutant: Oils - Petrol Note: Miscellaneous/Other Pollution Type Incident Date: 16th September 1993 Incident Reference: 62014794 Catchment Area: Lower Exe, Devon Receiving Water: Freshwater Stream/River Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3NW (S)	965	2	293000 92000
27	**Registered Radioactive Substances** Name: University Of Exeter Location: Peninsular College Of Medicine And Dentistry,St Lukes Campus,Magdalen Road, EXETER, EX1 2LU Authority: Environment Agency, South West Region Permit Reference: Bx8688 Dated: 19th July 2004 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A8NW (S)	344	2	293043 92620
27	**Registered Radioactive Substances** Name: University Of Exeter Location: Peninsular College Of Medicine & Dentistry, St Lukes Campus, Magdelene Road, Exeter, Ex1 2lu Authority: Environment Agency, South West Region Permit Reference: Bx9650 Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Application has been determined by the EA** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	344	2	293040 92620
27	**Registered Radioactive Substances** Name: University Of Exeter Location: Peninsular College Of Medicine & Dentistry, St Lukes Campus, Magdelene Road, Exeter, Ex1 2lu Authority: Environment Agency, South West Region Permit Reference: CD3412 Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Application has been determined by the EA** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	344	2	293040 92620
28	**Water Abstractions** Operator: CITY STEAM LAUNDRY Licence Number: 14450020002 Permit Version: Not Supplied Location: Exeter Ltd, Laundry 20/22, Edgerton Park Road, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Borehole Daily Rate (m3): 181.80 Yearly Rate (m3): 45455.00 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	620	2	292600 93500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Royal Devon & Exeter Nhs Foundation Trust Licence Number: Sw/045/0002/043 Permit Version: 1 Location: Royal Devon & Exeter Hospital Boreholes Authority: Environment Agency, South West Region Abstraction: Environmental: Pump & Treat: General use relating to Secondary Category (Very Low Loss) Abstraction Type: Water may be abstracted from any point within an area Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 23rd January 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	1253	2	293737 91897
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450020028 Permit Version: Not Supplied Location: St Annes Well Brewery, Lower North St, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Food And Drink) Abstraction Type: Not Supplied Source: Borehole Daily Rate (m3): 49.10 Yearly Rate (m3): 8510.00 Details: Brewery; Depth 35M Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A11SW (W)	1344	2	291700 92695
	Water Abstractions Operator: Exeter City Council Licence Number: 14/45/002/2547 Permit Version: 101 Location: Mincinglake Stream Authority: Environment Agency, South West Region Abstraction: Environmental: Pollution Remediation Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Mincinglake Stream, Mincinglake Valley Park, Exeter. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 24th August 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A24SE (NE)	1369	2	293830 94240
	Water Abstractions Operator: Exeter City Council Licence Number: 14/45/002/2602/R01 Permit Version: 1 Location: River Exe At Trews Weir Authority: Environment Agency, South West Region Abstraction: Industrial/Commercial/Energy/Public Services: Transfer between sources Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Transfer Of Water To The Exeter Ship Canal Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 27th May 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NW (SW)	1456	2	292270 91750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Exeter City Council Licence Number: 14/45/002/2602 Permit Version: 101 Location: River Exe At Trews Weir Authority: Environment Agency, South West Region Abstraction: Industrial/Commercial/Energy/Public Services: Transfer between sources Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Transfer Of Water To The Exeter Ship Canal Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 29th September 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NW (SW)	1456	2	292270 91750
	Water Abstractions Operator: Environment Agency Licence Number: Sw/045/0002/025 Permit Version: 1 Location: River Exe At Trews Side Weir Authority: Environment Agency, South West Region Abstraction: Other Environmental Improvements: Transfer between sources Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Trews Side Weir, Exeter Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 10th November 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NW (SW)	1459	2	292298 91729
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450021911 Permit Version: Not Supplied Location: Trews Weir Paper Mill, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Leat Daily Rate (m3): 13.60 Yearly Rate (m3): 3636.00 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2SE (S)	1479	2	292500 91600
	Water Abstractions Operator: JOHN PITTS & SONS LTD Licence Number: 14450021910 Permit Version: Not Supplied Location: Trews Weir Paper Mills, EXETER, Devon Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Borehole Daily Rate (m3): 763.60 Yearly Rate (m3): 206818.00 Details: Depth 74M Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2SE (S)	1484	2	292500 91595

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: JOHN PITTS & SONS LTD Licence Number: 14450021909 Permit Version: Not Supplied Location: Supply To Leat At Mill Authority: Environment Agency, South West Region Abstraction: Milling Abstraction Type: Not Supplied Source: River Daily Rate (m3): 620454.50 Yearly Rate (m3): 226409091.00 Details: River Exe Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2SW (SW)	1526	2	292400 91595
	Water Abstractions Operator: Exeter City Council Licence Number: 14/45/002/1708 Permit Version: 100 Location: R.Exe At Belle Isle Nursery Authority: Environment Agency, South West Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Lands At Belle Isle Nursery, Weirfield Path, Exeter Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SE (S)	1572	2	292500 91500
	Water Abstractions Operator: Exeter City Council Licence Number: Unknown Licence Number Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, South West Region Abstraction: Agricultural Spray Irrigation (Summer) Abstraction Type: Not Supplied Source: River Daily Rate (m3): 38 Yearly Rate (m3): 591 Details: APR 1 TO OCT 31 Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2SE (S)	1572	2	292500 91500
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450021762 Permit Version: Not Supplied Location: Exeter Gas Works, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Leat Daily Rate (m3): 786.40 Yearly Rate (m3): 185227.00 Details: Exeter Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NW (SW)	1592	2	292105 91700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450021762 Permit Version: Not Supplied Location: Exeter Gas Works, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Cooling (Miscellaneous) Abstraction Type: Not Supplied Source: Leat Daily Rate (m3): 1172.70 Yearly Rate (m3): 322727.00 Details: Exeter Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NW (SW)	1595	2	292100 91700
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450021762 Permit Version: Not Supplied Location: Exeter Gas Works, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Leat Daily Rate (m3): 231.80 Yearly Rate (m3): 63636.00 Details: Exeter Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NW (SW)	1596	2	292105 91695
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450021762 Permit Version: Not Supplied Location: Exeter Gas Works, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Cooling (Miscellaneous) Abstraction Type: Not Supplied Source: Leat Daily Rate (m3): 618.20 Yearly Rate (m3): 201136.00 Details: Exeter Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NW (SW)	1599	2	292100 91695
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450020029 Permit Version: Not Supplied Location: Old Brewery, Commercial Road, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Food And Drink) Abstraction Type: Not Supplied Source: Well Daily Rate (m3): 90.90 Yearly Rate (m3): 22730.00 Details: Brewery; Depth 10M Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6SW (SW)	1628	2	291600 92195

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Exeter City Council Licence Number: 14/45/002/2599/R01 Permit Version: 1 Location: River Exe Near The Mill On The Exe Authority: Environment Agency, South West Region Abstraction: Production Of Energy: Hydroelectric Power Generation Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Cricklepit Mill, Exeter Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 28th June 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1630	2	291413 92669
	Water Abstractions Operator: Exeter City Council Licence Number: 14/45/002/2599 Permit Version: 101 Location: River Exe Near The Mill On The Exe Authority: Environment Agency, South West Region Abstraction: Production Of Energy: Hydroelectric Power Generation Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Cricklepit Mill, Exeter Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 16th May 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1632	2	291410 92670
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450021930 Permit Version: Not Supplied Location: Head Weir Mill, Bonhay Road, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Leat Daily Rate (m3): 98.20 Yearly Rate (m3): 28413.00 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6NW (W)	1680	2	291405 92505
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450021929 Permit Version: Not Supplied Location: Head Weir Mill, Bonhay Road, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Water Power) Abstraction Type: Not Supplied Source: River Daily Rate (m3): 804655.20 Yearly Rate (m3): 204573350.00 Details: River Exe Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6NW (W)	1685	2	291400 92505

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Exeter City Council Licence Number: 14450021708 Permit Version: Not Supplied Location: Lands At, Belle Isle Nursery, Weirfield Path, EXETER Authority: Environment Agency, South West Region Abstraction: Agricultural Spray Irrigation (Summer) Abstraction Type: Not Supplied Source: River Daily Rate (m3): 38.20 Yearly Rate (m3): 591.00 Details: Two Points; Apr 1 To Oct 31 Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1789	2	292800 91195
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450020791 Permit Version: Not Supplied Location: Garton & King Ltd, Tan Lane, ALPHINGTON Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Borehole Daily Rate (m3): 11.40 Yearly Rate (m3): 3309.00 Details: Depth 6M Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1SE (SW)	1875	2	291900 91500
	Water Abstractions Operator: HAS BEEN ALLOCATED FOR Licence Number: 14450020790 Permit Version: Not Supplied Location: Premises Of Garton/King, Tan Lane, EXETER Authority: Environment Agency, South West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Borehole Daily Rate (m3): 11.40 Yearly Rate (m3): 3309.00 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1SE (SW)	1879	2	291900 91495
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NW (NW)	0	4	293085 93021

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Mixed Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13SW (S)	0	4	293085 93000
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (NW)	0	4	293085 93021
	Superficial Aquifer Designations No Data Available				
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Exe Primacy: 1	A17SE (NW)	581	5	292610 93455
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 246.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Exe Primacy: 1	A17SE (NW)	587	5	292613 93467
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Exe Primacy: 1	A17SE (NW)	619	5	292511 93393
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 93.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Exe Primacy: 1	A17SE (NW)	621	5	292507 93390

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Newtown, Exeter, Devon Name: Clifton Hill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD30051 First Input Date: 1st January 1950 Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 1100/0257 BGS Ref: Not Supplied Other Ref: GDO 257	A13NW (NW)	0	2	293085 93021
34	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Ladysmith School, Exeter, Devon Name: Polsloe Park Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD30053 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A13NE (E)	205	2	293371 93060
35	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Exeter, Devon Name: Polsloe Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD30050 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 1100/0273 BGS Ref: Not Supplied Other Ref: GDO 273	A19SW (NE)	597	2	293462 93561
	Local Authority Landfill Coverage Name: Exeter City Council - Has supplied landfill data		0	3	293085 93021
	Local Authority Landfill Coverage Name: Devon County Council - Has supplied landfill data		0	6	293085 93021
36	**Local Authority Recorded Landfill Sites** Location: Clifton Hill Golf Driving Range, Exeter Reference: Not Supplied Authority: Exeter City Council, Environmental Health Department **Last Reported Status: Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A13SE (SE)	0	3	293121 92991
37	**Local Authority Recorded Landfill Sites** Location: Polsloe Park (Site Of Sampsons Brickworks), Ladysmith School, Exeter Reference: Not Supplied Authority: Exeter City Council, Environmental Health Department **Last Reported Status: Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A13NE (E)	205	3	293371 93063

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	**Local Authority Recorded Landfill Sites** Location: Polsloe Priory, Exeter Reference: Not Supplied Authority: Exeter City Council, Environmental Health Department **Last Reported Status:** **Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A19SW (NE)	600	3	293464 93564

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian Rocks (Undifferentiated)	A13NW (NW)	0	1	293085 93021
39	**BGS Recorded Mineral Sites** Site Name: Newtown Brick Works Location: Exeter, Devon Source: British Geological Survey, National Geoscience Information Service Reference: 252125 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Alphington Breccia Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13NE (E)	95	1	293258 93018
40	**BGS Recorded Mineral Sites** Site Name: Polsloe Park Brick & Tile Works Location: Exeter, Devon Source: British Geological Survey, National Geoscience Information Service Reference: 252124 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Alphington Breccia Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14NW (E)	326	1	293471 93159
41	**BGS Recorded Mineral Sites** Site Name: Polsloe Priory Brick & Tile Works Location: Exeter, Devon Source: British Geological Survey, National Geoscience Information Service Reference: 252126 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Whipton Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	770	1	293642 93648
42	**BGS Recorded Mineral Sites** Site Name: Heavitree Brick Works Location: Heavitree, Exeter, Devon Source: British Geological Survey, National Geoscience Information Service Reference: 252132 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Alphington Breccia Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14SE (E)	963	1	294086 92756
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	293085 93021
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	293085 93021
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	16	1	293120 92977
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	226	1	293389 93081

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	293085 93021
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	293085 93021
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	293085 93021
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	16	1	293120 92977
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	91	1	293147 92903
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	96	1	292918 92977
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	293085 93021
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	96	1	292918 92977
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	293085 93021
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	293085 93021

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Contemporary Trade Directory Entries** Name: South West Safety Location: 48, Belmont Road, EXETER, EX1 2HG Classification: Safes & Vaults - Suppliers & Installers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (W)	87	-	292942 93077
44	**Contemporary Trade Directory Entries** Name: Gas Appliance Specialist Location: 4, Newtown Close, Exeter, EX1 2EU Classification: Boilers - Servicing, Replacements & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (W)	108	-	292916 92954
45	**Contemporary Trade Directory Entries** Name: Aztec Leisure Wear Location: 17, Clifton Road, Exeter, EX1 2BR Classification: T-Shirts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (W)	172	-	292851 92939
46	**Contemporary Trade Directory Entries** Name: Lovage London Location: Exeter, Devon, Ex1 2ds Classification: Candle Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SE (E)	186	-	293325 92942
47	**Contemporary Trade Directory Entries** Name: Michael J Watts Consultant Location: 4, Clifton Road, Exeter, EX1 2BR Classification: Electronic Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	237	-	292804 92890
48	**Contemporary Trade Directory Entries** Name: Johnsons Cleaners Location: Waitrose Exeter,Gladstone Rd Exeter Devon, Exeter, Devon, EX1 2ED Classification: Dry Cleaners **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SE (S)	269	-	293157 92705
49	**Contemporary Trade Directory Entries** Name: Kwik Fit Location: Summerland Street, Exeter, EX1 2AT Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	273	-	292733 93022
49	**Contemporary Trade Directory Entries** Name: Best Tyres Location: 2, Verney Street, Exeter, Devon, EX1 2AW Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	305	-	292704 93059
49	**Contemporary Trade Directory Entries** Name: Magnet Trade Location: Units 1-2 Tebay Retail Park,Tebay Road, Exeter, Devon, EX1 2AZ Classification: Kitchen Furniture Manufacturers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A12NE (W)	320	-	292687 93044
50	**Contemporary Trade Directory Entries** Name: Royal Devon & Exeter N H S Trust Location: Gladstone Road, Exeter, Devon, EX1 2ED Classification: Hospitals **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SE (SE)	274	-	293229 92734
50	**Contemporary Trade Directory Entries** Name: National Artificial Eye Service Location: Heavitree Hospital,Gladstone Road, Exeter, Devon, EX1 2ED Classification: Hospitals **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SE (SE)	274	-	293230 92735
50	**Contemporary Trade Directory Entries** Name: Heavitree Hospital Location: Rd&E Heavitree Hospital, Gladstone Road, Exeter, EX1 2ED Classification: Hospitals **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	275	-	293248 92747

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
51	**Contemporary Trade Directory Entries** Name: G&N Pvc Cleaning Location: 9, Kendall Close, Blackboy Road, Exeter, EX4 6SP Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	285	-	292923 93316
51	**Contemporary Trade Directory Entries** Name: Silver Spin Location: 12, Blackboy Road, Exeter, EX4 6SG Classification: Dry Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	297	-	292897 93318
52	**Contemporary Trade Directory Entries** Name: Flash Gordon Leisure Hire Centres Location: 5, Blackboy Road, Exeter, Devon, EX4 6SG Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	312	-	292838 93299
52	**Contemporary Trade Directory Entries** Name: Flash Gordon Hire Location: 5, Blackboy Road, Exeter, EX4 6SG Classification: Gas Suppliers - Bottled **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	312	-	292838 93299
52	**Contemporary Trade Directory Entries** Name: South West Gases Location: 5, Blackboy Road, Exeter, Devon, EX4 6SG Classification: Gas Suppliers - Bottled **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NW (NW)	312	-	292838 93299
52	**Contemporary Trade Directory Entries** Name: Flash Gordon Gases Location: 3, St. Annes Chapel, Old Tiverton Road, Exeter, EX4 6LA Classification: Gas Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	316	-	292813 93284
52	**Contemporary Trade Directory Entries** Name: Bottle Gas Uk Location: 3, St. Annes Chapel, Old Tiverton Road, Exeter, EX4 6LA Classification: Gas Suppliers - Bottled **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	316	-	292814 93285
52	**Contemporary Trade Directory Entries** Name: Bottle Gas Uk Location: 3, St. Annes Chapel, Old Tiverton Road, Exeter, EX4 6LA Classification: Gas Suppliers - Bottled **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	316	-	292813 93284
52	**Contemporary Trade Directory Entries** Name: Flash Gordon Location: 3, St. Annes Chapel, Old Tiverton Road, Exeter, EX4 6LA Classification: Gas Suppliers - Bottled **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	316	-	292814 93285
52	**Contemporary Trade Directory Entries** Name: Bottle Gas Uk Location: 3, St. Annes Chapel, Old Tiverton Road, Exeter, EX4 6LA Classification: Gas Suppliers - Bottled **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	316	-	292814 93285
52	**Contemporary Trade Directory Entries** Name: Tyre & Exhaust World Ltd Location: 7-9, Blackboy Road, Exeter, EX4 6SG Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	319	-	292852 93318
52	**Contemporary Trade Directory Entries** Name: C & D Appliances Location: 123, Old Tiverton Road, Exeter, Devon, EX4 6LD Classification: Cookers - Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	337	-	292818 93316

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	**Contemporary Trade Directory Entries** Name: Help At Hand Location: 9, St. Johns Road, Exeter, EX1 2HR Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	322	-	293293 93338
53	**Contemporary Trade Directory Entries** Name: Radiate Plumbing & Heating Services Location: 50, St. Johns Road, Exeter, EX1 2HR Classification: Heating Services - Industrial and Commercial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	325	-	293326 93326
54	**Contemporary Trade Directory Entries** Name: Flash Gordon Leisure Hire Centres Location: 1, Polsloe Road, Exeter, EX1 2HL Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	339	-	293247 93371
54	**Contemporary Trade Directory Entries** Name: Thorn'S Home & Garden Location: 1, Polsloe Road, Exeter, EX1 2HL Classification: Hardware **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	339	-	293247 93371
54	**Contemporary Trade Directory Entries** Name: Martial Arts Fitness Uk Location: 57-58 Blackboy Rd, Exeter, Devon, EX4 6TD Classification: Sports Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SE (N)	349	-	293218 93387
55	**Contemporary Trade Directory Entries** Name: Exeter Auto Centre Ltd Location: Summerland Street, EXETER, EX1 2AZ Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	344	-	292662 93023
56	**Contemporary Trade Directory Entries** Name: Disco Pixels Location: Flat 4, Summerlands Court, Heavitree Road, Exeter, EX1 2LY Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	345	-	292820 92724
57	**Contemporary Trade Directory Entries** Name: Premier Filtation Ltd Location: 13, Heavitree Road, Exeter, EX1 2LD Classification: Air Purification Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	349	-	292727 92804
58	**Contemporary Trade Directory Entries** Name: Prontaprint Location: 118, Sidwell Street, Exeter, EX4 6RY Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	352	-	292683 93157
58	**Contemporary Trade Directory Entries** Name: Kirk Radio Exeter Ltd Location: 126, Sidwell Street, Exeter, EX4 6RY Classification: Domestic Appliances - Servicing, Repairs & Parts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	380	-	292645 93134
58	**Contemporary Trade Directory Entries** Name: Uk Chemicals Ltd Location: A, 69, Sidwell Street, Exeter, EX4 6PH Classification: Chemical Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	399	-	292639 93174
59	**Contemporary Trade Directory Entries** Name: Figgys Puddings Location: 20, East Avenue, Exeter, EX1 2DY Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	372	-	293495 92866

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	**Contemporary Trade Directory Entries** Name: Antler Ltd Location: Western Way, Exeter, Devon, EX1 2AA Classification: Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12SE (W)	374	-	292653 92890
61	**Contemporary Trade Directory Entries** Name: Widworthy Commercials Location: Pinhoe Rd, Exeter, Devon, EX4 7HR Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SE (NE)	381	-	293317 93392
62	**Contemporary Trade Directory Entries** Name: Access Building Co Location: A, 48, Manston Road, Exeter, EX1 2QA Classification: Fireplaces & Mantelpieces **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	400	-	293468 93306
63	**Contemporary Trade Directory Entries** Name: Connect Location: Old Tiverton Rd, Exeter, Devon, EX4 6LG Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (NW)	404	-	292882 93428
64	**Contemporary Trade Directory Entries** Name: Mug Printers Location: 7a, Mount Pleasant Road, Exeter, EX4 7AB Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SE (N)	405	-	293189 93455
64	**Contemporary Trade Directory Entries** Name: Exon Location: Mount Pleasant Road, Exeter, Devon, EX4 7AB Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	405	-	293206 93448
65	**Contemporary Trade Directory Entries** Name: Kenjo Location: 139, Sidwell Street, Exeter, EX4 6RT Classification: Laundries & Launderettes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	413	-	292598 93088
65	**Contemporary Trade Directory Entries** Name: Kenjo Laundrette & Dry Cleaners Location: 139, Sidwell Street, Exeter, EX4 6RT Classification: Dry Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	413	-	292598 93088
65	**Contemporary Trade Directory Entries** Name: Abtec Heating And Plumbing Location: 139a, Sidwell Street, Exeter, EX4 6RT Classification: Boilers - Servicing, Replacements & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	413	-	292598 93088
65	**Contemporary Trade Directory Entries** Name: Wants Location: 147, Sidwell Street, Exeter, EX4 6RT Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	436	-	292571 93052
66	**Contemporary Trade Directory Entries** Name: Stagecoach (Devon) Ltd Location: Belgrave Road, Exeter, EX1 2LB Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	413	-	292596 92962
66	**Contemporary Trade Directory Entries** Name: Stagecoach Devon Location: Belgrave Road, Exeter, EX1 2LB Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	413	-	292596 92962

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
66	**Contemporary Trade Directory Entries** Name: Stagecoach Location: Belgrave Road, Exeter, EX1 2LB Classification: Bus & Coach Operators & Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	413	-	292596 92962
66	**Contemporary Trade Directory Entries** Name: Stagecoach Location: Belgrave Road, Exeter, EX1 2LB Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	413	-	292596 92962
67	**Contemporary Trade Directory Entries** Name: Phone World Location: 143, Sidwell Street, Exeter, EX4 6RT Classification: Telecommunications Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	430	-	292579 93072
67	**Contemporary Trade Directory Entries** Name: Care Clean Location: 43, Sidwell Street, Exeter, EX4 6NS Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	477	-	292534 93087
68	**Contemporary Trade Directory Entries** Name: Tickle & Reynolds Location: 83, Heavitree Road, Exeter, EX1 2ND Classification: Laboratories **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	435	-	293292 92584
69	**Contemporary Trade Directory Entries** Name: Printuk Location: 8, Barnfield Hill, Exeter, EX1 1SR Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	443	-	292777 92633
70	**Contemporary Trade Directory Entries** Name: Rose Motors Location: 10a, Oxford Road, Exeter, EX4 6QU Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	472	-	292577 93215
70	**Contemporary Trade Directory Entries** Name: Rose Motors Location: 10a, Oxford Road, Exeter, EX4 6QU Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	472	-	292577 93214
70	**Contemporary Trade Directory Entries** Name: Martins Motors Location: 2a, Oxford Road, Exeter, EX4 6QU Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	477	-	292565 93198
70	**Contemporary Trade Directory Entries** Name: David Gubbin & Son Location: 4, Well Street, Exeter, EX4 6QR Classification: Stained Glass Designers & Producers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	483	-	292562 93207
70	**Contemporary Trade Directory Entries** Name: Clinic For Sick Cars & Vans Location: 3, Well Street, Exeter, EX4 6QR Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	484	-	292558 93201
71	**Contemporary Trade Directory Entries** Name: Klick Location: 157, Sidwell Street, Exeter, EX4 6RT Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	479	-	292526 93017

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	**Contemporary Trade Directory Entries** Name: Johnson Cleaners (Uk) Ltd Location: 157, Sidwell Street, Exeter, Devon, EX4 6RT Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	479	-	292526 93017
72	**Contemporary Trade Directory Entries** Name: Yeo & Davey Autocare Ltd Location: Old Tiverton Rd, Exeter, Devon, EX4 6LG Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	484	-	292929 93530
72	**Contemporary Trade Directory Entries** Name: Yeo & Davey Location: 31-35 Old Tiverton Rd, Exeter, Devon, EX4 6LG Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	515	-	292889 93549
72	**Contemporary Trade Directory Entries** Name: D C Mardles Motor Engineer Location: Unit 1, 31-35, Old Tiverton Road, Exeter, EX4 6LG Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (N)	516	-	292889 93550
72	**Contemporary Trade Directory Entries** Name: Yeo & Davy Garage Services Ltd Location: 31-35 Old Tiverton Rd, Exeter, Devon, EX4 6LG Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	516	-	292889 93550
72	**Contemporary Trade Directory Entries** Name: Exeter Motor Works Location: 31-35 Old Tiverton Rd, Exeter, Devon, EX4 6LG Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	516	-	292889 93550
73	**Contemporary Trade Directory Entries** Name: Repaircare Domestic Appliances Location: Higher Croft, St. Marks Avenue, Exeter, EX1 2PX Classification: Domestic Appliances - Servicing, Repairs & Parts **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	491	-	293621 93229
74	**Contemporary Trade Directory Entries** Name: Thomson'S Independent Pest Control Location: 19, Mount Pleasant Road, Exeter, EX4 7AD Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SE (N)	498	-	293187 93551
75	**Contemporary Trade Directory Entries** Name: Exeter Ironing Services Location: 4, First Avenue, Exeter, EX1 2PH Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	524	-	293644 92828
76	**Contemporary Trade Directory Entries** Name: City Service Station Location: 36-37, Well Street, Exeter, EX4 6QQ Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	537	-	292616 93396
77	**Contemporary Trade Directory Entries** Name: Terry Hearne & Partners Location: 12, Baring Crescent, Exeter, EX1 1TL Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	547	-	293148 92420
78	**Contemporary Trade Directory Entries** Name: Roy J Bradford Location: A, 147, Ladysmith Road, Exeter, EX1 2PP Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	578	-	293705 92834

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
78	**Contemporary Trade Directory Entries** Name: Exeter Motors Location: 149, Ladysmith Road, Exeter, EX1 2PP Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	581	-	293707 92829
79	**Contemporary Trade Directory Entries** Name: Brighthouse Location: 180, Sidwell Street, Exeter, EX4 6RD Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	596	-	292418 92915
80	**Contemporary Trade Directory Entries** Name: The Eddystone Trust Location: Wat Tyler House, King William Street, Exeter, EX4 6PD Classification: Reclamation Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	603	-	292406 93080
81	**Contemporary Trade Directory Entries** Name: Exeter City Council Location: Civic Centre, Paris Street, Exeter, EX1 1JN Classification: Ports, Docks & Harbours **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	604	-	292446 92788
82	**Contemporary Trade Directory Entries** Name: Vanborn & Radford Location: Lions Holt Garage, 77, Victoria Street, Exeter, EX4 6JG Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	617	-	292776 93615
83	**Contemporary Trade Directory Entries** Name: K-Cars Location: 42, Magdalen Road, Exeter, EX2 4TE Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	639	-	292934 92339
84	**Contemporary Trade Directory Entries** Name: Exeter Small Automatics Location: 61-63, Magdalen Road, Exeter, EX2 4TA Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	640	-	292776 92397
84	**Contemporary Trade Directory Entries** Name: Carhouse Location: 61-63 Magdalen Rd, Exeter, Devon, EX2 4TA Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SW)	645	-	292788 92386
84	**Contemporary Trade Directory Entries** Name: St Leonard'S Cars Exeter Location: 61-63, Magdalen Road, EXETER, EX2 4TA Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	653	-	292780 92381
85	**Contemporary Trade Directory Entries** Name: Kodak Express Location: 13, Paris Street, Exeter, EX1 2JB Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (W)	642	-	292387 92842
85	**Contemporary Trade Directory Entries** Name: Quick Pic Location: 13, Paris Street, Exeter, Devon, EX1 2JB Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (W)	642	-	292387 92842
85	**Contemporary Trade Directory Entries** Name: Exe Access Location: 8-10, Paris Street, Exeter, EX1 1GA Classification: Disability Equipment - Manufacturers & Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	647	-	292394 92805

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	**Contemporary Trade Directory Entries** Name: Dilyn Leathers Location: 26 Hanover Rd, Exeter, Devon, EX1 2SU Classification: Leather Products - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	653	-	293800 92884
87	**Contemporary Trade Directory Entries** Name: G E P Services Location: 10, Victoria Road, Exeter, EX4 6JB Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	666	-	292687 93624
88	**Contemporary Trade Directory Entries** Name: All-Cure Location: 8, Tuffery Court, Devon Road, Exeter, EX4 7BR Classification: Damp & Dry Rot Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	673	-	293615 93544
89	**Contemporary Trade Directory Entries** Name: Dandy Dipper Location: 35, Magdalen Road, Exeter, EX2 4TA Classification: Laundries & Launderettes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	688	-	292707 92383
90	**Contemporary Trade Directory Entries** Name: Southernhay Motors Location: 4, Chichester Mews, Exeter, EX1 1QJ Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	688	-	292416 92661
90	**Contemporary Trade Directory Entries** Name: Devon Cleaning Contractors Ltd Location: Southernhay Lodge, Barnfield Crescent, Exeter, EX1 1QT Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	709	-	292402 92642
90	**Contemporary Trade Directory Entries** Name: Devon Carpet Cleaners Location: Southernhay Lodge, Barnfield Crescent, Exeter, EX1 1QT Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	709	-	292402 92642
91	**Contemporary Trade Directory Entries** Name: West Country Van & Car Sales Location: Mount Pleasant Rd, Exeter, Devon, EX4 7AH Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18NE (N)	693	-	293133 93757
91	**Contemporary Trade Directory Entries** Name: Exeter Automotives Location: Mount Pleasant Road, Exeter, Devon, EX4 7AQ Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18NE (N)	705	-	293096 93772
92	**Contemporary Trade Directory Entries** Name: Automotion Factors Ltd Location: 23, Longbrook Street, Exeter, EX4 6AB Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	709	-	292296 93018
93	**Contemporary Trade Directory Entries** Name: Devon Property Maintenance Ltd Location: 11, Barrack Road, Exeter, EX2 5ED Classification: Boilers - Servicing, Replacements & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	718	-	293465 92359
94	**Contemporary Trade Directory Entries** Name: Travel Line Location: The Senate,Southernhay Gardens, Exeter, Devon, EX1 1UG Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	744	-	292464 92505

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	**Contemporary Trade Directory Entries** Name: Traveline Location: The Senate,Southernhay Gardens, Exeter, Devon, EX1 1UG Classification: Bus & Coach Operators & Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	744	-	292464 92505
94	**Contemporary Trade Directory Entries** Name: Traveline Location: The Senate, Southernhay Gardens, Exeter, EX1 1UG Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	744	-	292464 92505
95	**Contemporary Trade Directory Entries** Name: Bvs Rubbish Removal Location: 48, Old Tiverton Road, Exeter, EX4 6NG Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	745	-	293024 93811
95	**Contemporary Trade Directory Entries** Name: Kelly'S Of Exeter Location: 52, Old Tiverton Road, Exeter, EX4 6NG Classification: Clocks & Watches - Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	769	-	293034 93836
96	**Contemporary Trade Directory Entries** Name: Lisa'S Leaflets Location: 57, Old Tiverton Road, Exeter, EX4 6NG Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	760	-	293074 93827
97	**Contemporary Trade Directory Entries** Name: Alpha Cleaning Systems Location: 29, Greyfriars Road, Exeter, EX4 7BS Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	771	-	293700 93600
98	**Contemporary Trade Directory Entries** Name: Bathwick Tyres Location: 41a, New North Road, Exeter, EX4 4EP Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	786	-	292220 93054
99	**Contemporary Trade Directory Entries** Name: Focal Point Imaging Location: Constable Court, Fore Street, Heavitree, Exeter, EX1 2QJ Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	796	-	293689 92434
100	**Contemporary Trade Directory Entries** Name: Apple Store Location: 24 Princesshay, Exeter, Devon, EX1 1GE Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	801	-	292243 92771
101	**Contemporary Trade Directory Entries** Name: Ibstock Building Products Ltd Location: Rougemont Works,Monks Rd, Exeter, Devon, EX4 7BH Classification: Brick Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	801	-	293755 93586
102	**Contemporary Trade Directory Entries** Name: Label Makers Location: Exeter, EX1 1UG Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	803	-	292440 92446
103	**Contemporary Trade Directory Entries** Name: Nbc Bird & Pest Solutions (Devon & Cornwall) Location: 41, Marlborough Road, Exeter, EX2 4TJ Classification: Pest & Vermin Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	808	-	292954 92164

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	**Contemporary Trade Directory Entries** Name: Nbc Bird & Pest Solutions Location: 41, Marlborough Road, Exeter, EX2 4TJ Classification: Pest & Vermin Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	808	-	292954 92164
104	**Contemporary Trade Directory Entries** Name: West Country Crane Hire Ltd Location: Exeter Delivery Office, Bedford Street, Exeter, EX1 1AA Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (SW)	809	-	292269 92680
105	**Contemporary Trade Directory Entries** Name: Clas 1 Location: 35, Southernhay East, Exeter, EX1 1NX Classification: Caravan Dealers & Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	827	-	292350 92512
106	**Contemporary Trade Directory Entries** Name: Pomegranate Floor Location: 1, Brewery Lane, North Street, Heavitree, Exeter, EX1 2QH Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	838	-	293786 92472
107	**Contemporary Trade Directory Entries** Name: Heritage Preservation South West Ltd Location: 15-16, Castle Street, Exeter, EX4 3PT Classification: Damp & Dry Rot Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	847	-	292171 92868
108	**Contemporary Trade Directory Entries** Name: Merlin'S Motors Location: Clifford Road, Exeter, EX4 7BJ Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	852	-	293851 93550
109	**Contemporary Trade Directory Entries** Name: The Volkswagen Centre Location: 47, Pennsylvania Road, Exeter, EX4 6DF Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	863	-	292445 93688
110	**Contemporary Trade Directory Entries** Name: Office Documents Solutions Ltd Location: 13, Southernhay West, Exeter, Devon, EX1 1PJ Classification: Photocopiers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	868	-	292283 92534
110	**Contemporary Trade Directory Entries** Name: Oreck Corporation Location: First Floor, 10, Southernhay West, Exeter, EX1 1JG Classification: Vacuum Cleaners - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	882	-	292279 92516
110	**Contemporary Trade Directory Entries** Name: Travel Line Location: 7 Southernhay West, Exeter, Devon, EX1 1JG Classification: Bus & Coach Operators & Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	902	-	292273 92490
111	**Contemporary Trade Directory Entries** Name: Masterclean Ltd Location: St. Leonards Rd, Exeter, Devon, EX2 4LR Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8SW (S)	876	-	292750 92150
111	**Contemporary Trade Directory Entries** Name: Masterclean Location: 35, St. Leonards Road, Exeter, EX2 4LR Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	911	-	292754 92111

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
111	**Contemporary Trade Directory Entries** Name: Masterclean Location: 35, St. Leonards Road, Exeter, EX2 4LR Classification: Carpet, Curtain & Upholstery Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SW (S)	911	-	292754 92111
112	**Contemporary Trade Directory Entries** Name: Warners Cleanco Location: 2, Pavilion Place, Exeter, EX2 4HR Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	879	-	292418 92362
113	**Contemporary Trade Directory Entries** Name: The Torquay Candle Co Ltd Location: 26, Bedford Street, Exeter, EX1 1LE Classification: Candle Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	883	-	292203 92648
114	**Contemporary Trade Directory Entries** Name: Howell Road M O T Centre Location: 68-72, Howell Road, Exeter, EX4 4LZ Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	904	-	292138 93268
115	**Contemporary Trade Directory Entries** Name: Jamar Group Location: 236, High Street, Exeter, Devon, EX4 3NE Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SW (W)	907	-	292128 92785
116	**Contemporary Trade Directory Entries** Name: Isca Cleaning Location: 38, Elizabeth Avenue, Exeter, EX4 7EQ Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	919	-	293374 93937
116	**Contemporary Trade Directory Entries** Name: M S M Cleaning Services Location: 38, Elizabeth Avenue, Exeter, EX4 7EQ Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	919	-	293374 93937
116	**Contemporary Trade Directory Entries** Name: Isca Cleaning Services Location: 38, Elizabeth Avenue, Exeter, EX4 7EQ Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	919	-	293374 93937
117	**Contemporary Trade Directory Entries** Name: Radford Motor Repairs Location: Mount Radford Square, Exeter, EX2 4EP Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	924	-	292617 92161
117	**Contemporary Trade Directory Entries** Name: Kwik Kerb West Ltd Location: 3, Vine Close, Exeter, EX2 4EX Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	938	-	292608 92151
118	**Contemporary Trade Directory Entries** Name: The Global Case Co Location: 2, Southernhay West, Exeter, Devon, EX1 1JG Classification: Lingerie Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7NW (SW)	930	-	292258 92462
119	**Contemporary Trade Directory Entries** Name: E J Hometech Location: 63-64 Magdalen St, Exeter, Devon, EX2 4HN Classification: Vacuum Cleaners - Sales & Service **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SW (SW)	933	-	292382 92321

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	**Contemporary Trade Directory Entries** Name: Purgo Location: 63-64, Magdalen Street, Exeter, Devon, EX2 4HN Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SW (SW)	937	-	292378 92320
119	**Contemporary Trade Directory Entries** Name: Tuff Products Location: 63-64, Magdalen Street, Exeter, Devon, EX2 4HN Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SW (SW)	937	-	292378 92320
120	**Contemporary Trade Directory Entries** Name: Johnson Cleaners Uk Ltd Location: 61, Fore Street, Heavitree, Exeter, EX1 2RJ Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	944	-	293869 92404
120	**Contemporary Trade Directory Entries** Name: Havills Location: 61, Fore Street, Heavitree, Exeter, EX1 2RJ Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	945	-	293868 92403
121	**Contemporary Trade Directory Entries** Name: Adapt Location: Rild, Haldon View Terrace, Exeter, EX2 5DW Classification: Medical & Dental Laboratories **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	949	-	293550 92139
122	**Contemporary Trade Directory Entries** Name: Bioskinjetting & Electrolysis Location: 36, Thornton Hill, Exeter, EX4 4NS Classification: Electrolysis **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	951	-	292236 93579
123	**Contemporary Trade Directory Entries** Name: Epos Cash Register Location: 38, Prince Charles Road, Exeter, EX4 7EF Classification: Cash Registers & Check-Out Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	965	-	293605 93902
123	**Contemporary Trade Directory Entries** Name: West Country Cash Registers Location: 38, Prince Charles Road, Exeter, Devon, EX4 7EF Classification: Cash Registers & Check-Out Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	966	-	293606 93903
123	**Contemporary Trade Directory Entries** Name: West Country Epos Cash Registers Location: 38, Prince Charles Road, Exeter, EX4 7EF Classification: Cash Registers & Check-Out Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	966	-	293606 93903
124	**Contemporary Trade Directory Entries** Name: Dixons Location: 230, High Street, Exeter, EX4 3NE Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (W)	971	-	292072 92748
124	**Contemporary Trade Directory Entries** Name: Duster Shine Location: 229, High Street, Exeter, EX4 3NE Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (W)	984	-	292059 92744
125	**Contemporary Trade Directory Entries** Name: W M Morrisons Petrol Station Location: Prince Charles Road, Exeter, Devon, EX4 7BY Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19NE (NE)	976	-	293800 93785

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
126	**Contemporary Trade Directory Entries** Name: Absolute Business Consumables Location: Unit 86 The Old Coal Yard,Prince Charles Road, Exeter, Devon, EX4 7BY Classification: Photocopiers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19NW (NE)	984	-	293689 93876
127	**Contemporary Trade Directory Entries** Name: Alpha Cleanse Location: 11, King Stephen Close, Exeter, Devon, EX4 4LX Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (W)	985	-	292084 93364
128	**Contemporary Trade Directory Entries** Name: Heat Engines Developments Location: 46, East Grove Road, Exeter, EX2 4LX Classification: Heating Equipment - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	999	-	292764 92014
129	**Fuel Station Entries** Name: Eveleighs Garage Ltd Location: 55, Sidwell Street , , Exeter, Devon, EX4 6NZ Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A12NE (W)	465	-	292552 93117
130	**Fuel Station Entries** Name: Yeo And Davey Location: 31-35, Old Tiverton Road , , Exeter, Devon, EX4 6LG Brand: Texaco Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A18SW (N)	519	-	292894 93555
131	**Fuel Station Entries** Name: City Service Station Location: 36-37, Well Street , , Exeter, Devon, EX4 6QQ Brand: Jet Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	533	-	292616 93391
132	**Fuel Station Entries** Name: Harrison Brett Location: 210, Monks Road , , Exeter, Devon, EX4 7BN Brand: Proteus Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	914	-	293930 93544
133	**Fuel Station Entries** Name: Morrisons Exeter Location: Prince Charles Road , , Exeter, Devon, EX4 7BY Brand: Morrisons Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A19NE (NE)	976	-	293800 93785

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Mid Devon District Council - Environmental Health Department	April 2014	Annual Rolling Update
Teignbridge District Council - Environmental Health Department	June 2014	Annual Rolling Update
East Devon District Council - Environmental Health Department	November 2013	Annual Rolling Update
Exeter City Council - Environmental Health Department	October 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - South West Region	October 2019	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - South West Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - South West Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Environment Agency - South West Region	October 2019	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Exeter City Council - Environmental Health Department	April 2014	Variable
Teignbridge District Council - Environmental Health Department	June 2014	Variable
Mid Devon District Council - Environmental Health Department	November 2014	Variable
East Devon District Council - Environmental Health Department	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Exeter City Council - Environmental Health Department	April 2014	Annual Rolling Update
Teignbridge District Council - Environmental Health Department	June 2014	Annual Rolling Update
Mid Devon District Council - Environmental Health Department	November 2014	Annual Rolling Update
East Devon District Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Exeter City Council - Environmental Health Department	April 2014	Variable
Teignbridge District Council - Environmental Health Department	June 2014	Variable
Mid Devon District Council - Environmental Health Department	November 2014	Variable
East Devon District Council - Environmental Health Department	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	November 2019	
Pollution Incidents to Controlled Waters		
Environment Agency - South West Region	September 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - South West Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - South West Region	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Environment Agency - South West Region	June 2016	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - South West Region - Devon Area	October 2019	Quarterly
Environment Agency - South West Region - Devon and Cornwall Area	October 2019	Quarterly
Water Abstractions		
Environment Agency - South West Region	October 2019	Quarterly
Water Industry Act Referrals		
Environment Agency - South West Region	October 2017	Quarterly

Data Currency

Agency & Hydrological	Version	Update Cycle
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	October 2019	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2019	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2019	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2019	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2019	Quarterly
Flood Defences Environment Agency - Head Office	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	October 2019	Quarterly
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	October 2019	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - South West Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - South West Region - Devon Area	November 2019	Quarterly
Environment Agency - South West Region - Devon and Cornwall Area	November 2019	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - South West Region - Devon Area	October 2019	Quarterly
Environment Agency - South West Region - Devon and Cornwall Area	October 2019	Quarterly
Local Authority Landfill Coverage		
Devon County Council	May 2000	Not Applicable
East Devon District Council - Environmental Health Department	May 2000	Not Applicable
Exeter City Council - Environmental Health Department	May 2000	Not Applicable
Mid Devon District Council - Environmental Health Department	May 2000	Not Applicable
Teignbridge District Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Devon County Council	May 2000	Not Applicable
East Devon District Council - Environmental Health Department	May 2000	Not Applicable
Exeter City Council - Environmental Health Department	May 2000	Not Applicable
Mid Devon District Council - Environmental Health Department	May 2000	Not Applicable
Teignbridge District Council - Environmental Health Department	May 2000	Not Applicable
Registered Landfill Sites		
Environment Agency - South West Region - Devon Area	March 2003	Not Applicable
Environment Agency - South West Region - Devon and Cornwall Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - South West Region - Devon Area	March 2003	Not Applicable
Environment Agency - South West Region - Devon and Cornwall Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - South West Region - Devon Area	March 2003	Not Applicable
Environment Agency - South West Region - Devon and Cornwall Area	March 2003	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
East Devon District Council - Planning Department	February 2016	Variable
Exeter City Council - Economic & Development Directorate	February 2016	Variable
Teignbridge District Council	February 2016	Variable
Mid Devon District Council - Planning Department	January 2016	Variable
Devon County Council	September 2008	Annual Rolling Update
Planning Hazardous Substance Consents		
East Devon District Council - Planning Department	February 2016	Variable
Exeter City Council - Economic & Development Directorate	February 2016	Variable
Teignbridge District Council	February 2016	Variable
Mid Devon District Council - Planning Department	January 2016	Variable
Devon County Council	September 2008	Annual Rolling Update

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

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	August 2018	Bi-Annually
Areas of Adopted Green Belt		
East Devon District Council - Planning Department	February 2020	As notified
Exeter City Council	February 2020	As notified
Mid Devon District Council	February 2020	As notified
Teignbridge District Council	February 2020	As notified
Areas of Unadopted Green Belt		
East Devon District Council - Planning Department	February 2020	As notified
Exeter City Council	February 2020	As notified
Mid Devon District Council	February 2020	As notified
Teignbridge District Council	February 2020	As notified
Areas of Outstanding Natural Beauty		
Natural England	June 2019	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	March 2019	Bi-Annually
Marine Nature Reserves		
Natural England	July 2019	Bi-Annually
National Nature Reserves		
Natural England	July 2019	Bi-Annually
National Parks		
Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones		
Environment Agency - Head Office	December 2017	Bi-Annually
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	
Ramsar Sites		
Natural England	April 2019	Bi-Annually
Sites of Special Scientific Interest		
Natural England	March 2019	Bi-Annually
Special Areas of Conservation		
Natural England	June 2019	Bi-Annually
Special Protection Areas		
Natural England	April 2019	Bi-Annually

Data Suppliers

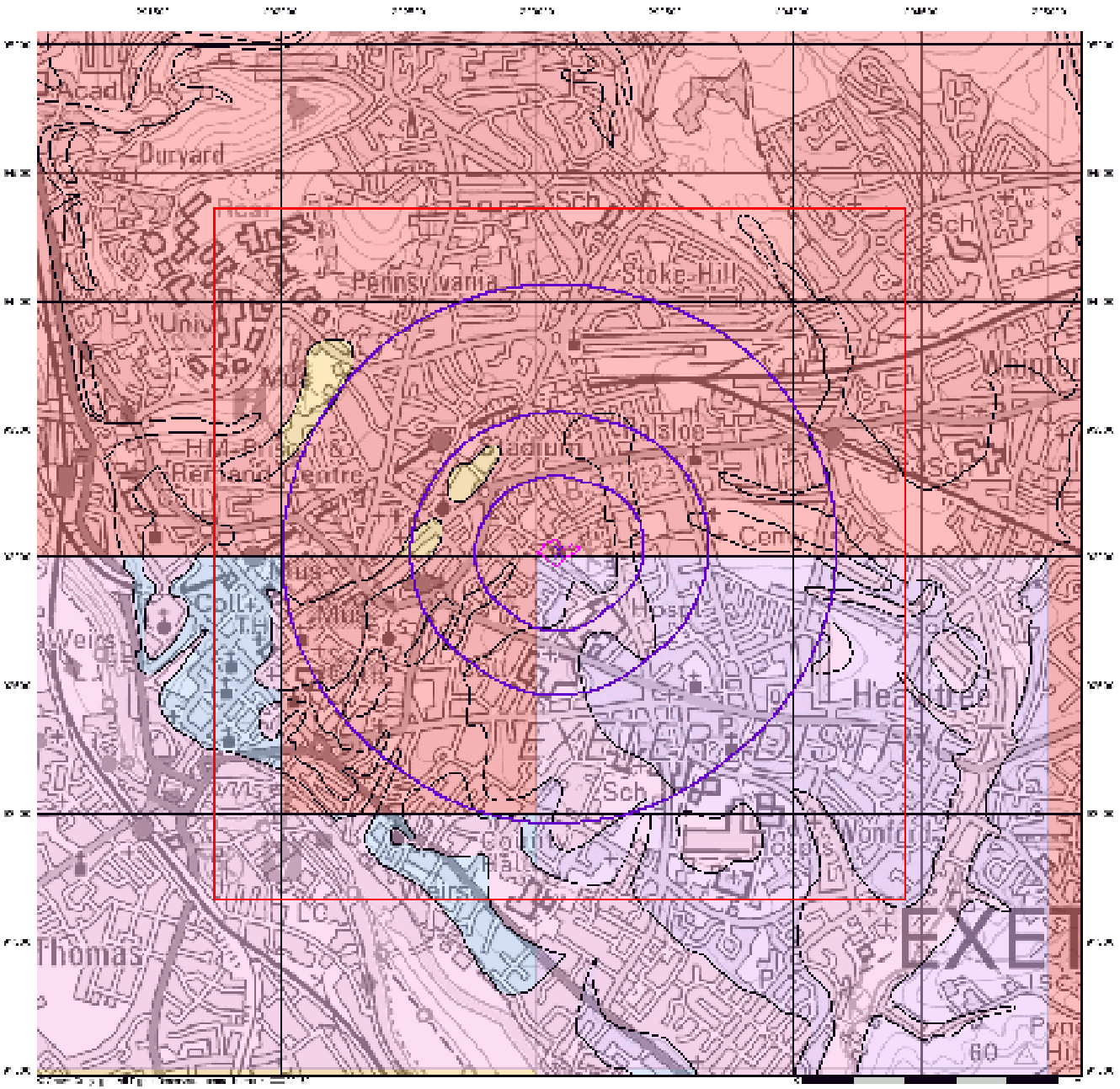
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Exeter City Council - Environmental Health Department** Civic Centre, Paris Street, Exeter, Devon, EX1 1RQ	Telephone: 01392 265476 Fax: 01392 265265 Website: www.exeter.gov.uk
4	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Devon County Council** County Hall, Topsham Road, Exeter, Devon, EX2 4QD	Telephone: 01392 382000 Fax: 01392 382135 Website: www.devon.gov.uk
7	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



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LANDMARK INFORMATION GROUP

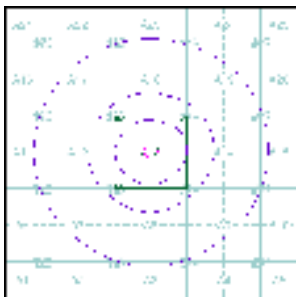
Groundwater Vulnerability

General

Agency and Hydrological

Bedrock Aquifers | Superficial Aquifers

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	234606878_1_1
Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
Search Buffer (m):	1000

Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

Landmark

Tel: 0844 844 9952
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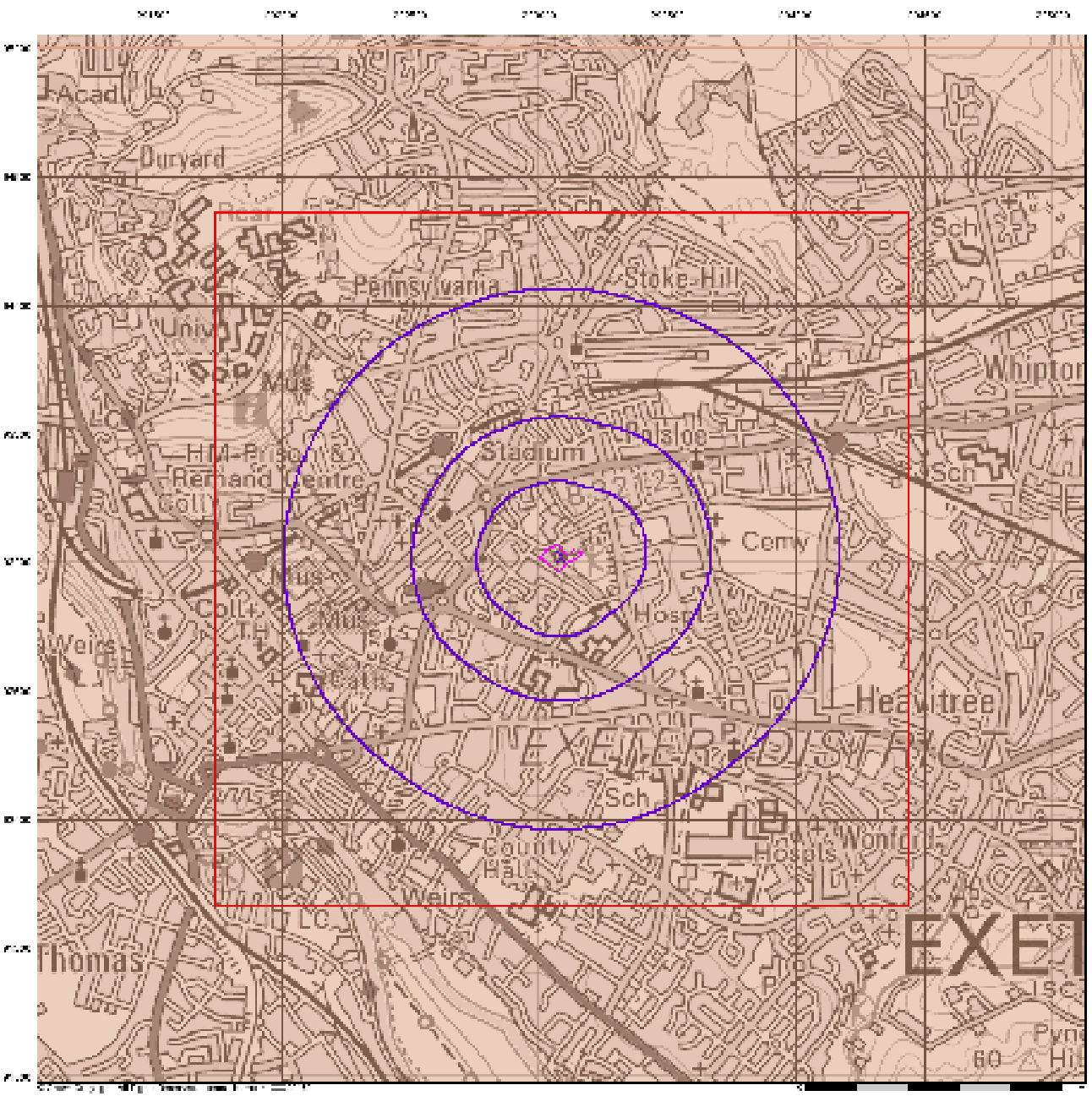

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LANDMARK INFORMATION GROUP

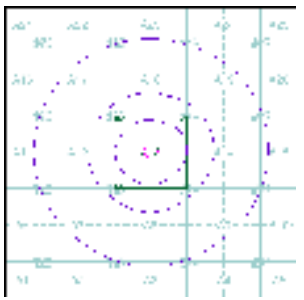
Bedrock Aquifer Designation

General

Agency and Hydrological

Geological Classes

Site Sensitivity Context Map - Slice A



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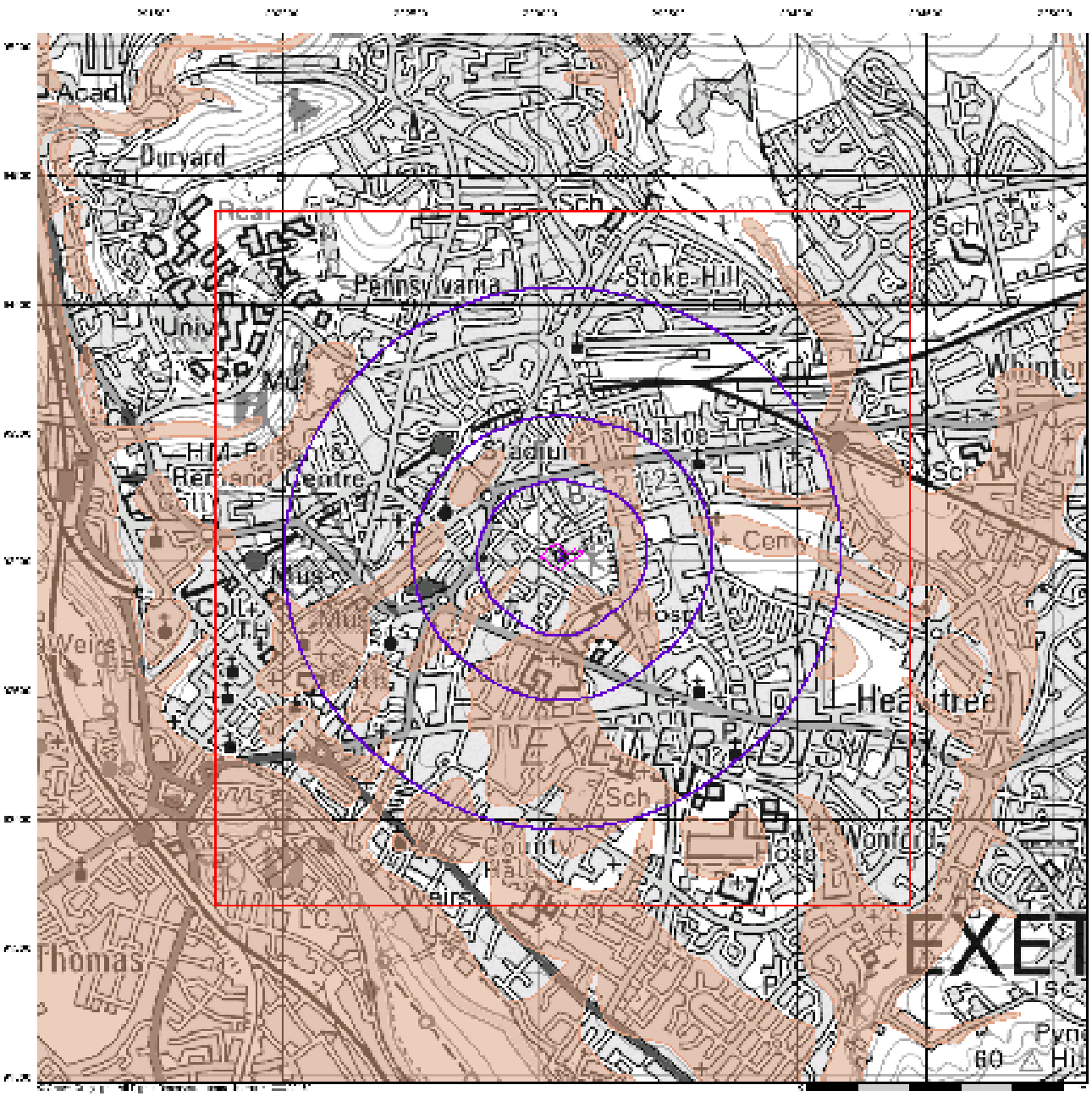

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LANDMARK INFORMATION GROUP

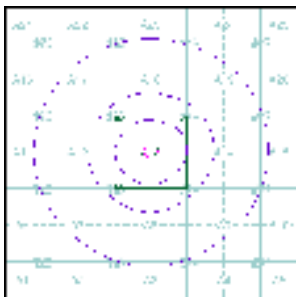
Superficial Aquifer Designation

General

Agency and Hydrological

Geological Classes

Site Sensitivity Context Map - Slice A



Order Details

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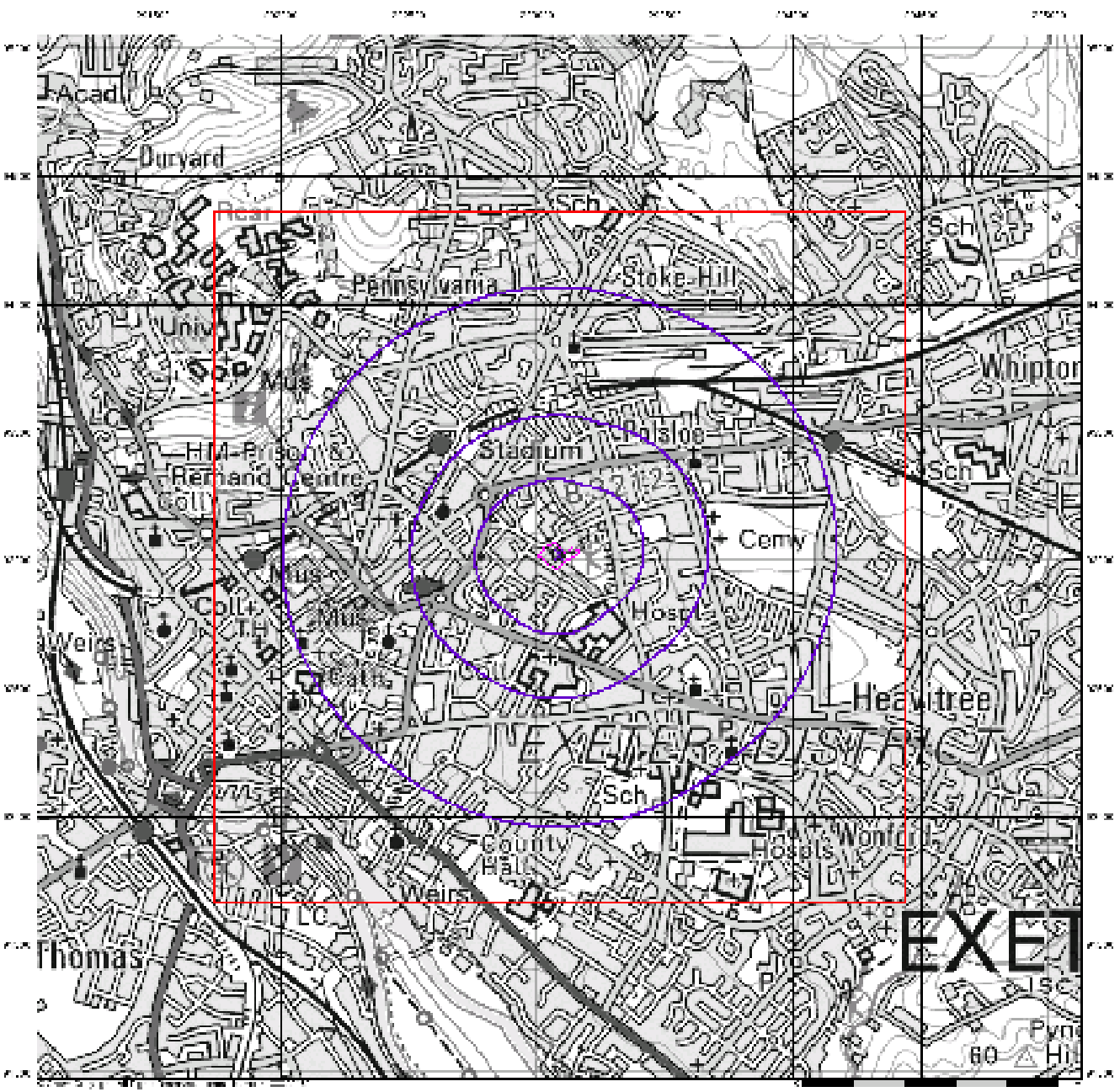

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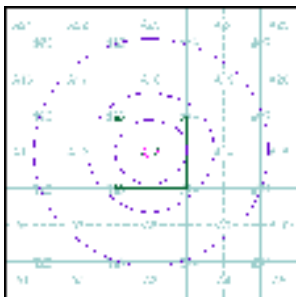
LANDMARK INFORMATION GROUP

Source Protection Zones

General

Agency and Hydrological

Site Sensitivity Context Map - Slice A



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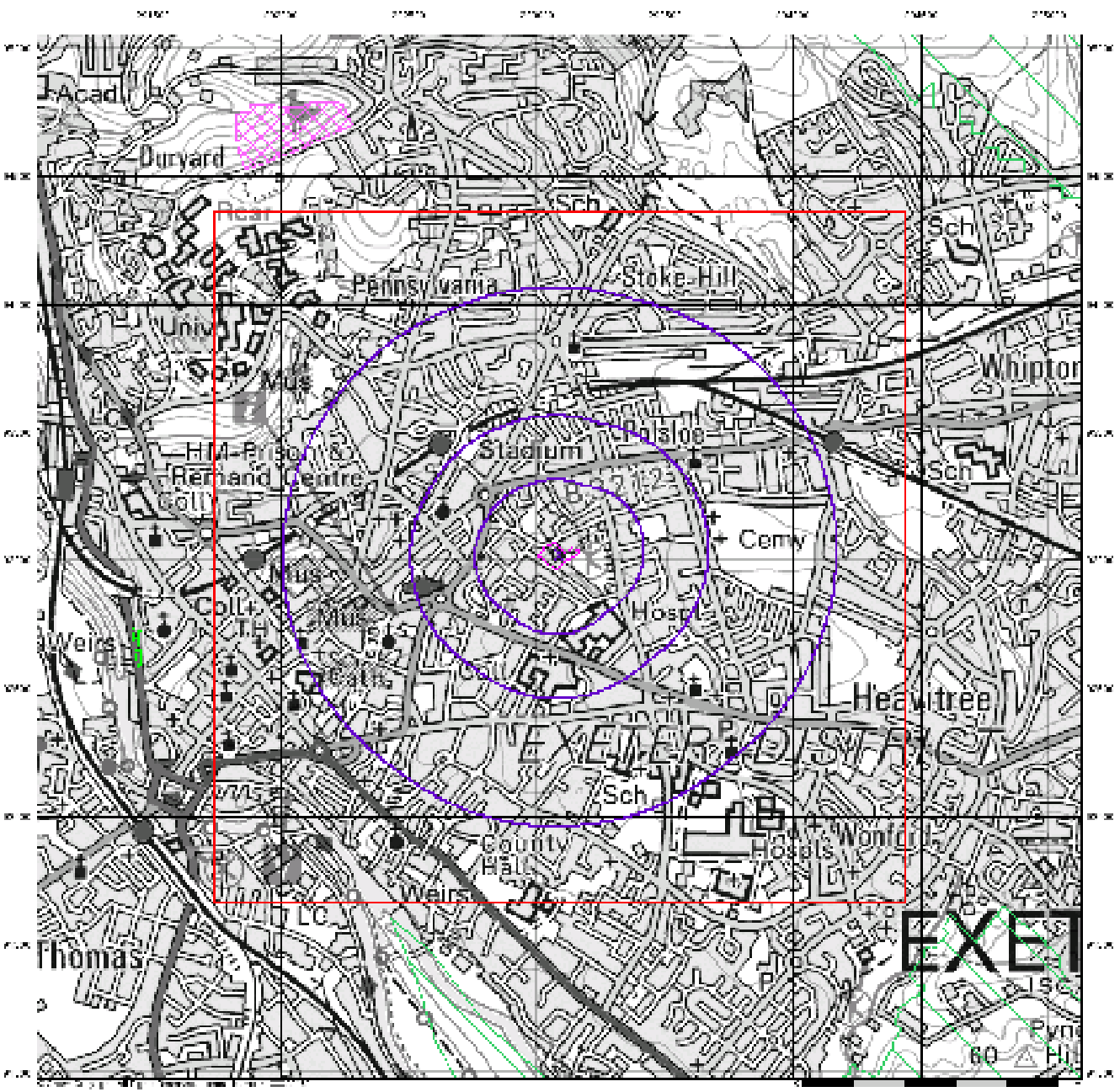

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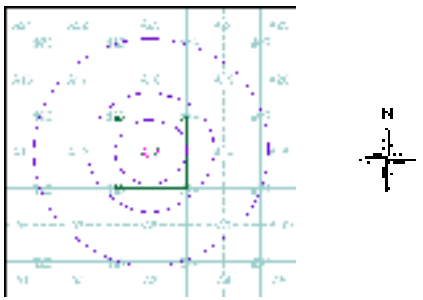
LANDMARK INFORMATION GROUP

Sensitive Land Uses

General

Sensitive Land Uses

Site Sensitivity Context Map - Slice A



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Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

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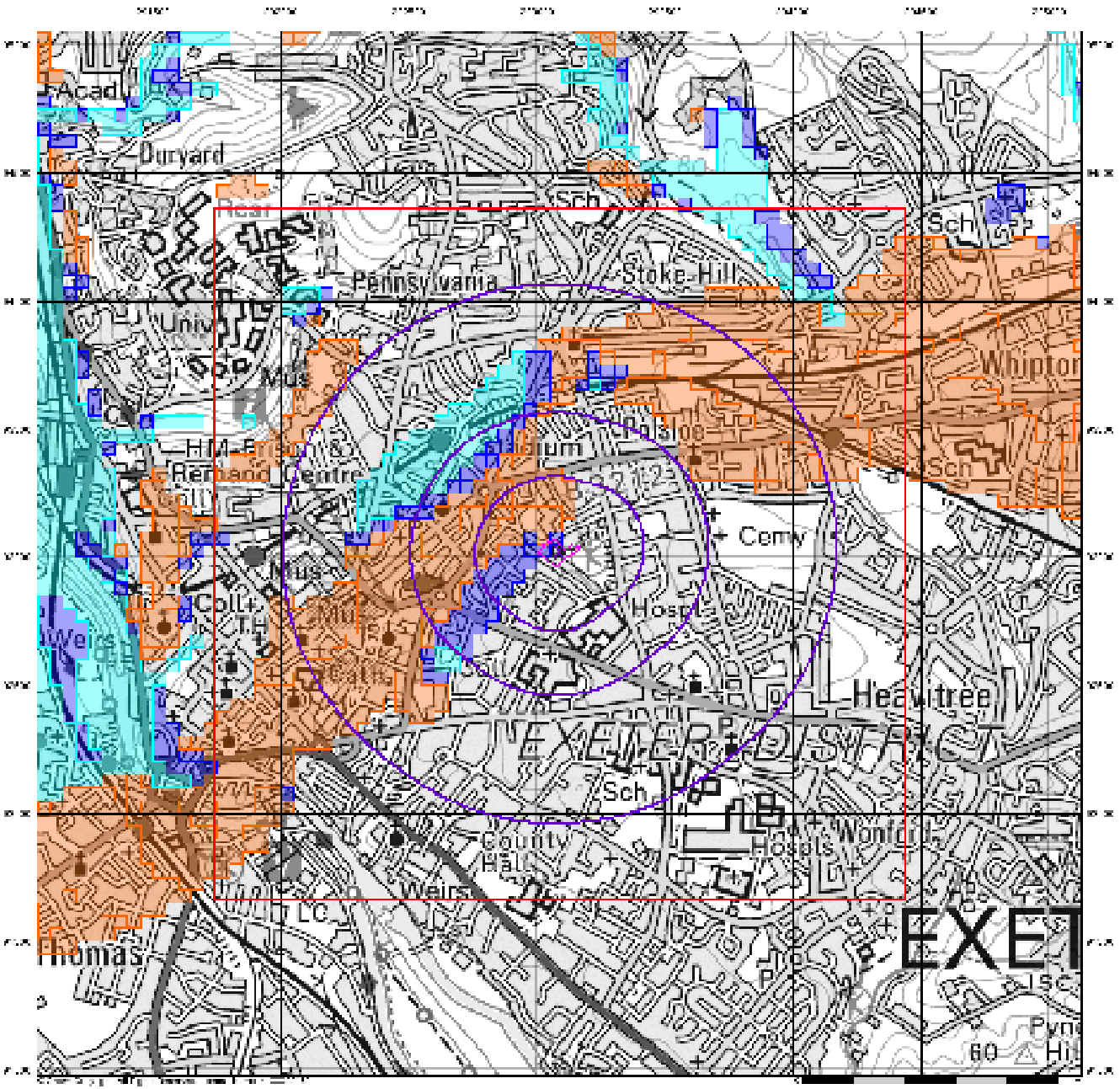
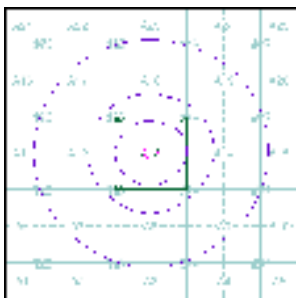


BGS Flood GFS Data

General

Agency and Hydrological (Flood)

Site Sensitivity Context Map - Slice A



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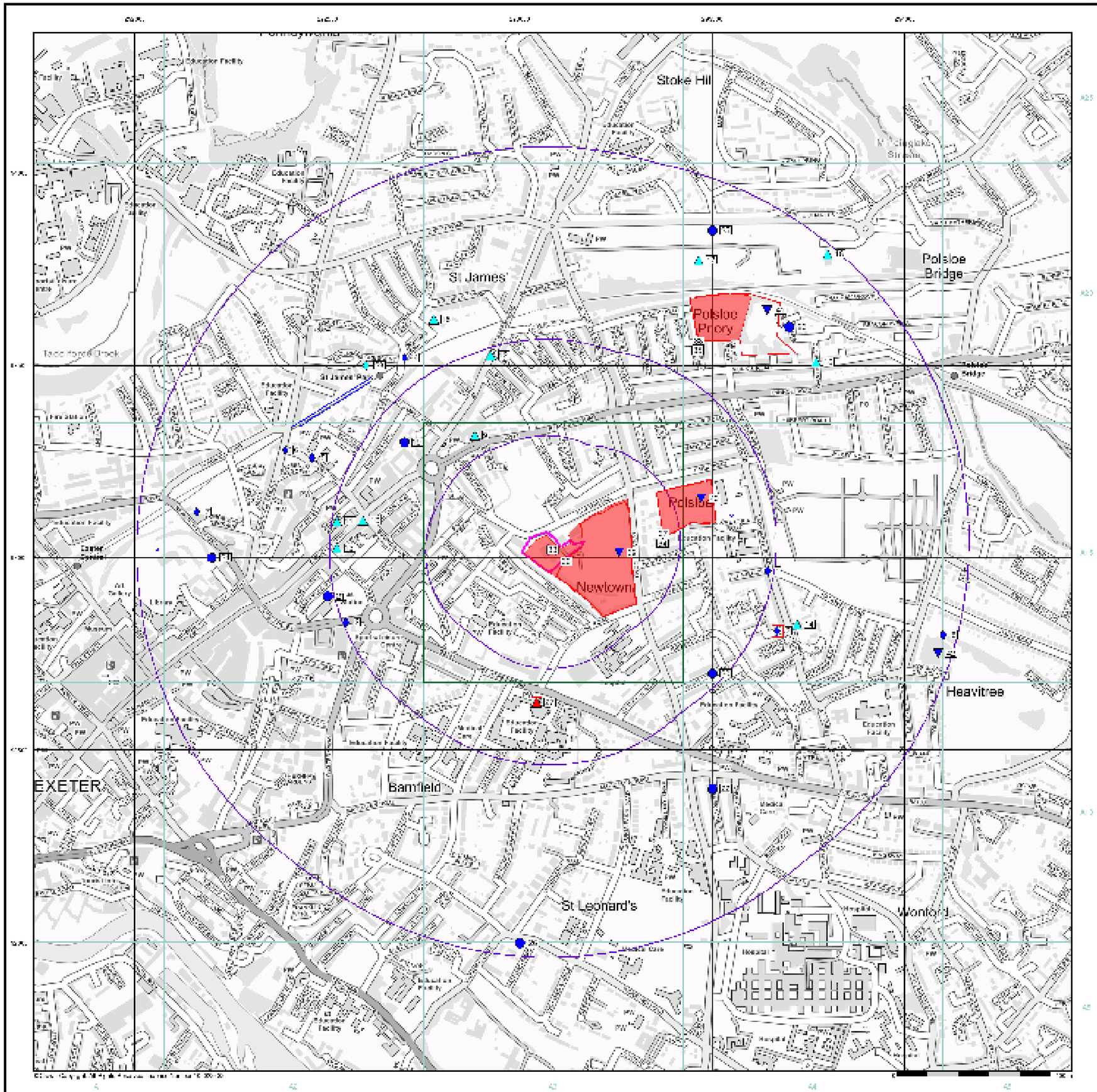
Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ



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LANDMARK INFORMATION GROUP

General

Agency and Hydrological

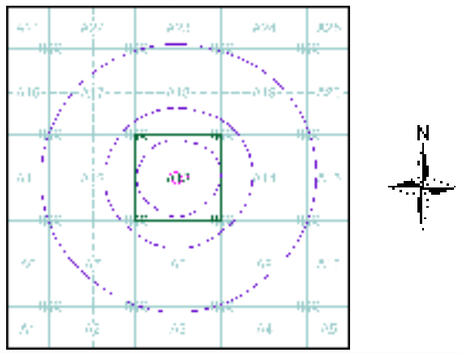
Waste

Geological

Hazardous Substances

Industrial Land Use

Site Sensitivity Map - Slice A



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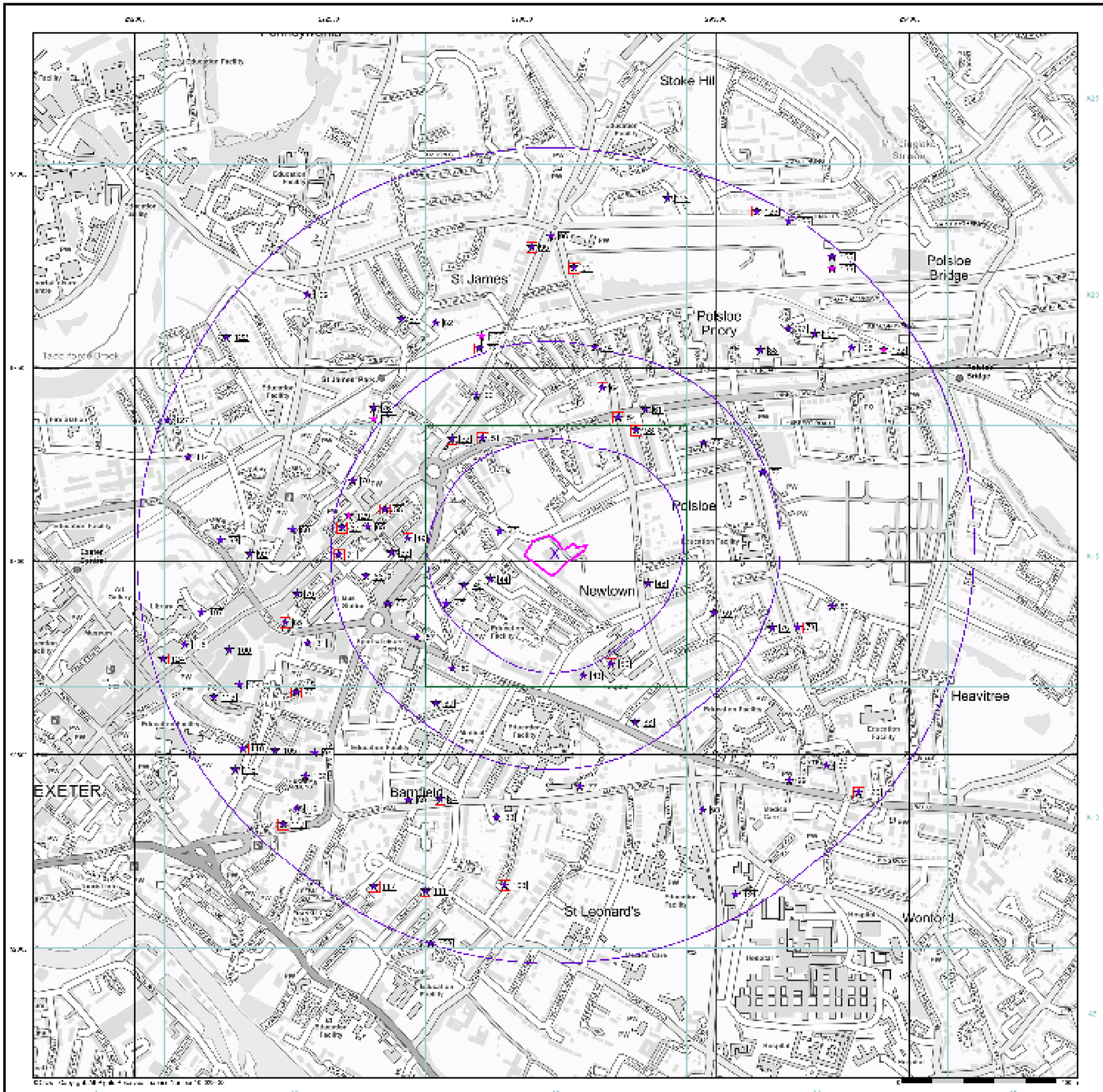

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LANDMARK INFORMATION GROUP

Industrial Land Use Map

General

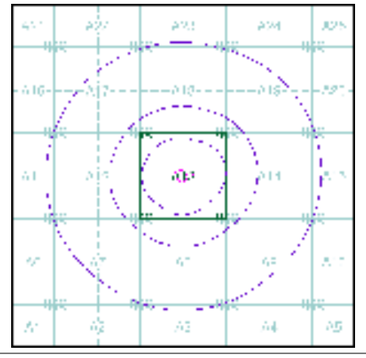
Specified Buffer(s)

Site

Map ID

Industrial Land Use

Industrial Land Use Map - Slice A



Order Details

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Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
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Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

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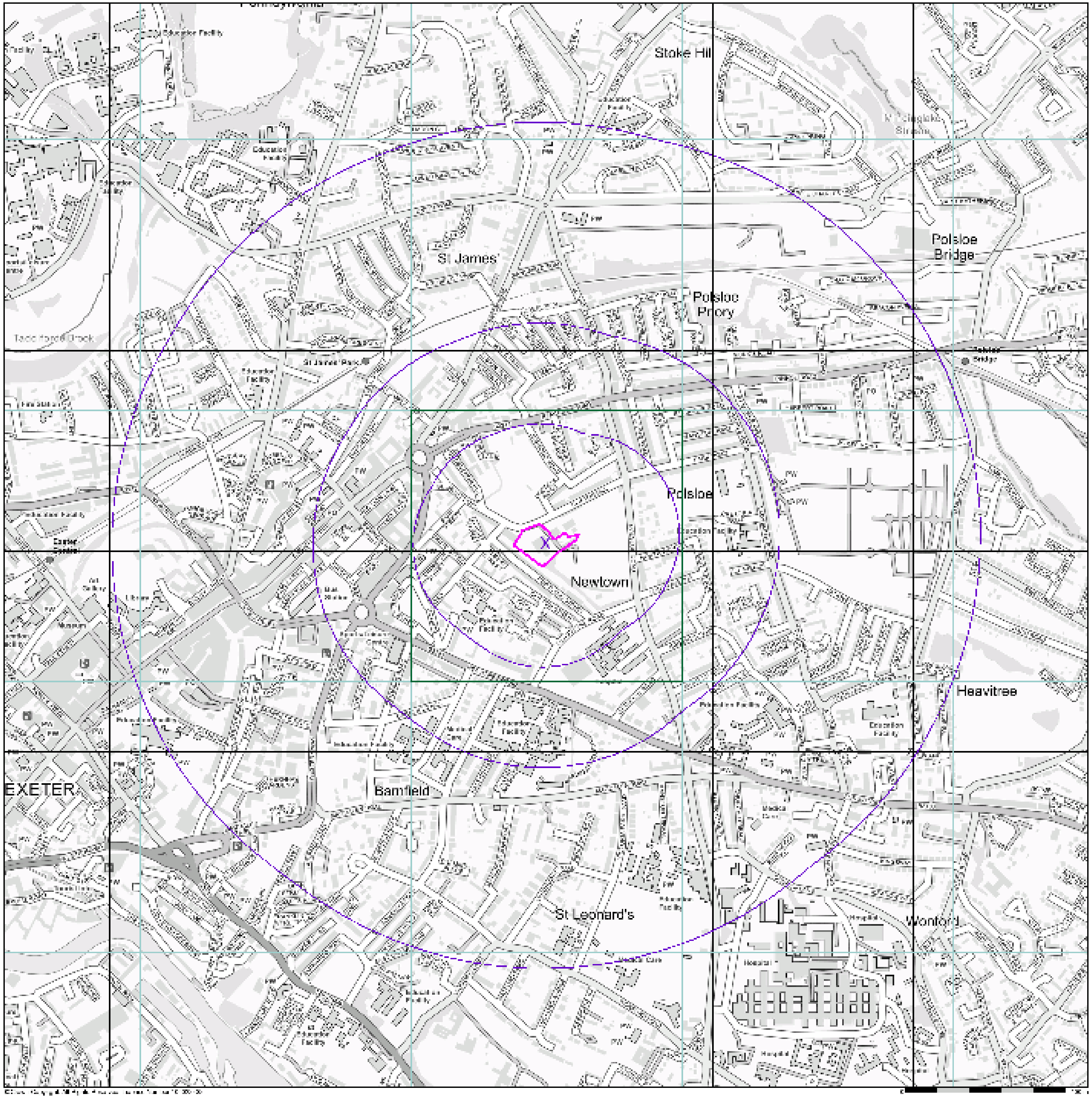


Envirocheck®

LANDMARK INFORMATION GROUP®

General

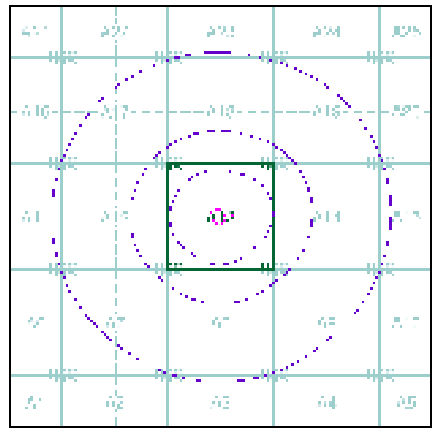
Agency and Hydrological (Flood)

Area Benefiting from Flood Defence

Flood Water Storage Areas

Flood Defence

Flood Map - Slice A



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Customer Ref: 12072
National Grid Reference: 293090, 93020
Slice: A
Site Area (Ha): 0.83
Search Buffer (m): 1000

Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

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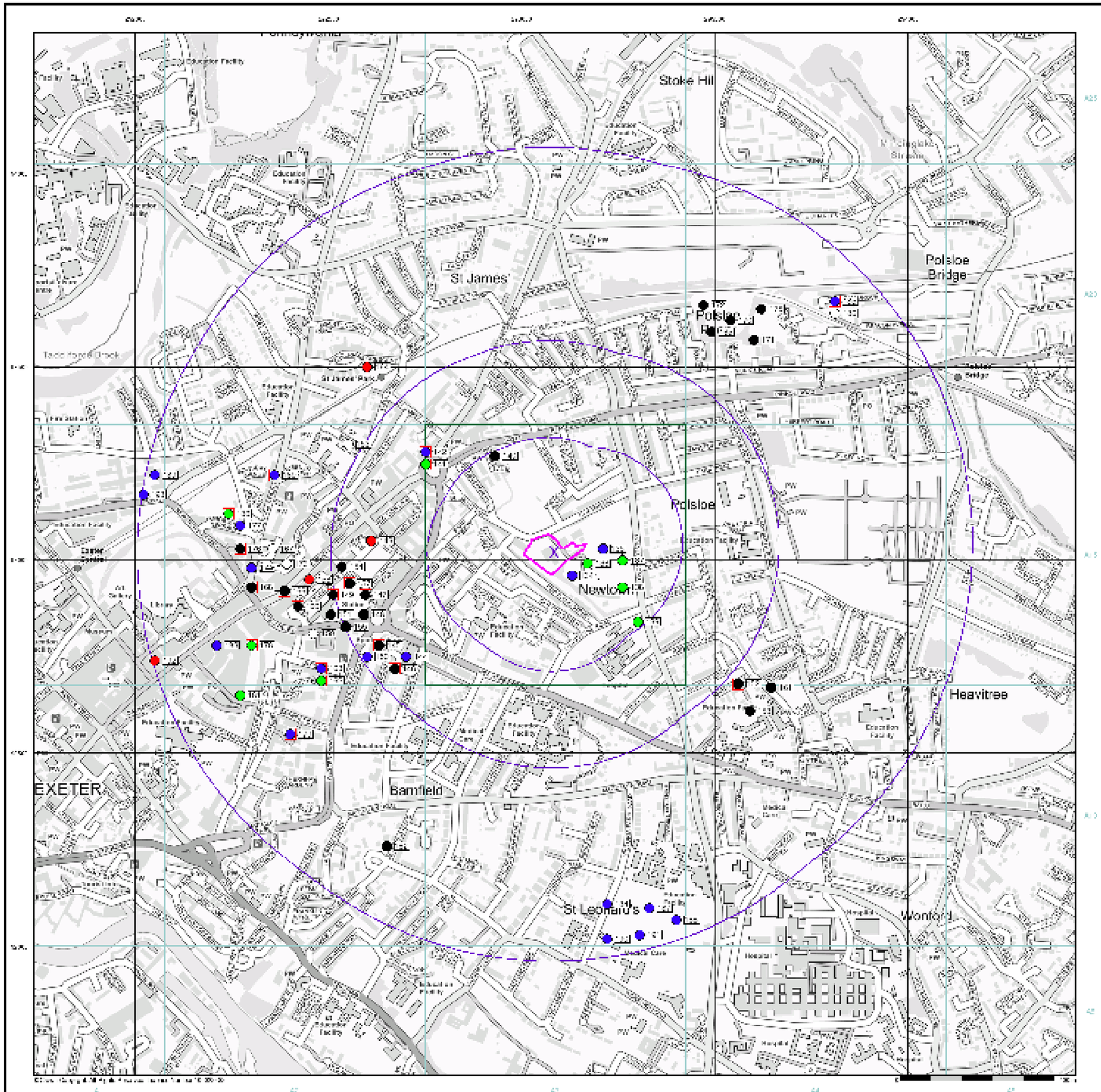
Web: www.envirocheck.co.uk



Envirocheck®

LANDMARK INFORMATION GROUP®

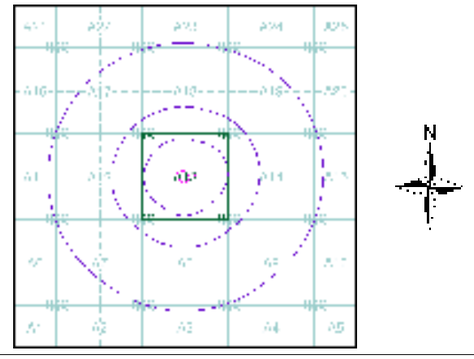
General

Agency and Hydrological (Boreholes)

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.

Borehole Map - Slice A



Order Details

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Customer Ref:	12072
National Grid Reference:	293090, 93020
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Site Area (Ha):	0.83
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Site Details

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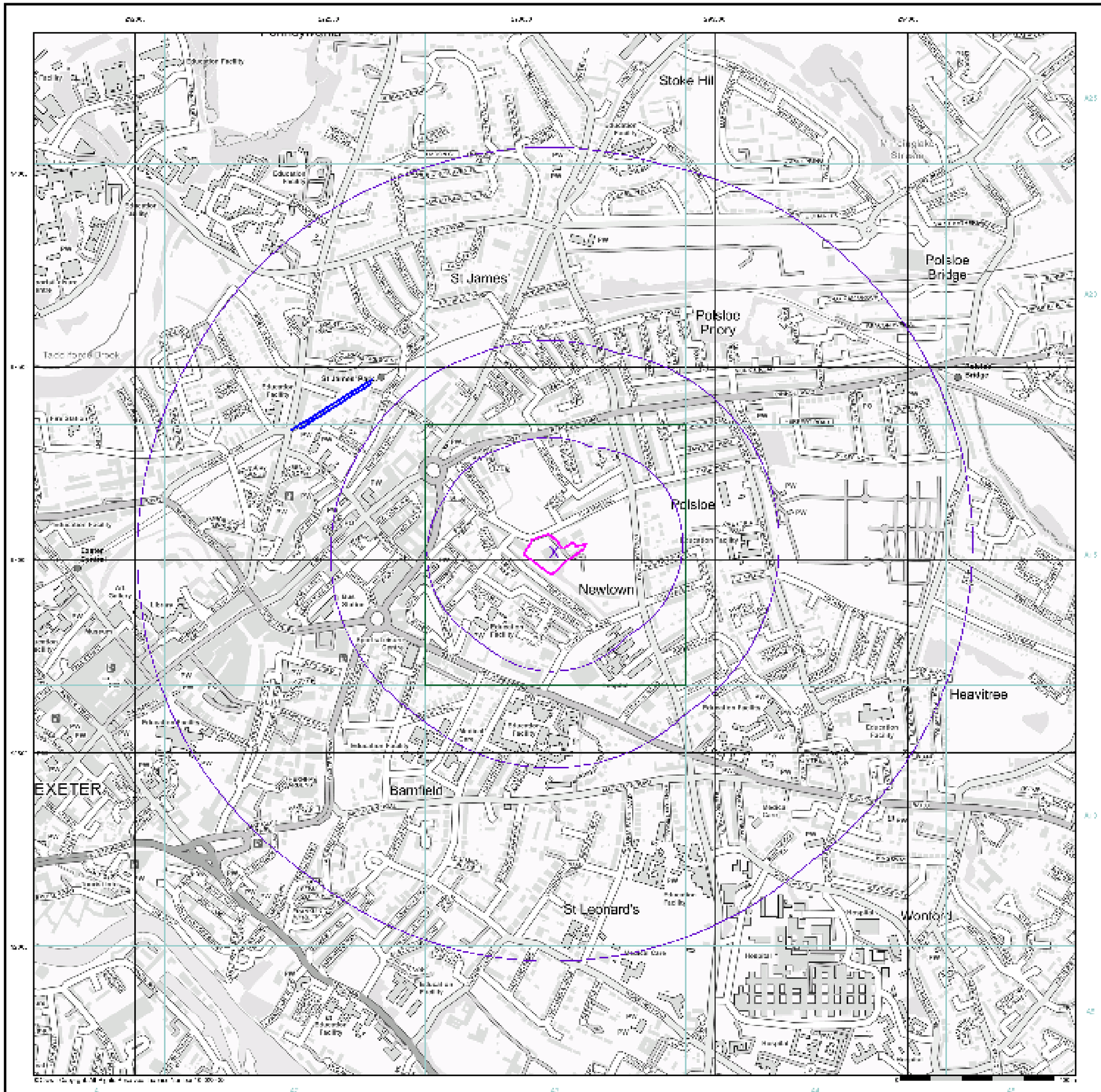

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LANDMARK INFORMATION GROUP®

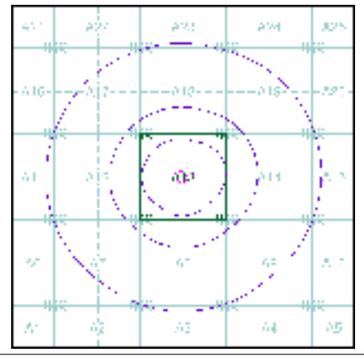
General

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

OS Water Network Data

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

OS Water Network Map - Slice A



N

Order Details

Order Number:	234606878_1_1
Customer Ref:	12072
National Grid Reference:	293090, 93020
Slice:	A
Site Area (Ha):	0.83
Search Buffer (m):	1000

Site Details

Clifton Hill Sports Centre, Clifton Hill, EXETER, EX1 2DJ

Landmark INFORMATION GROUP

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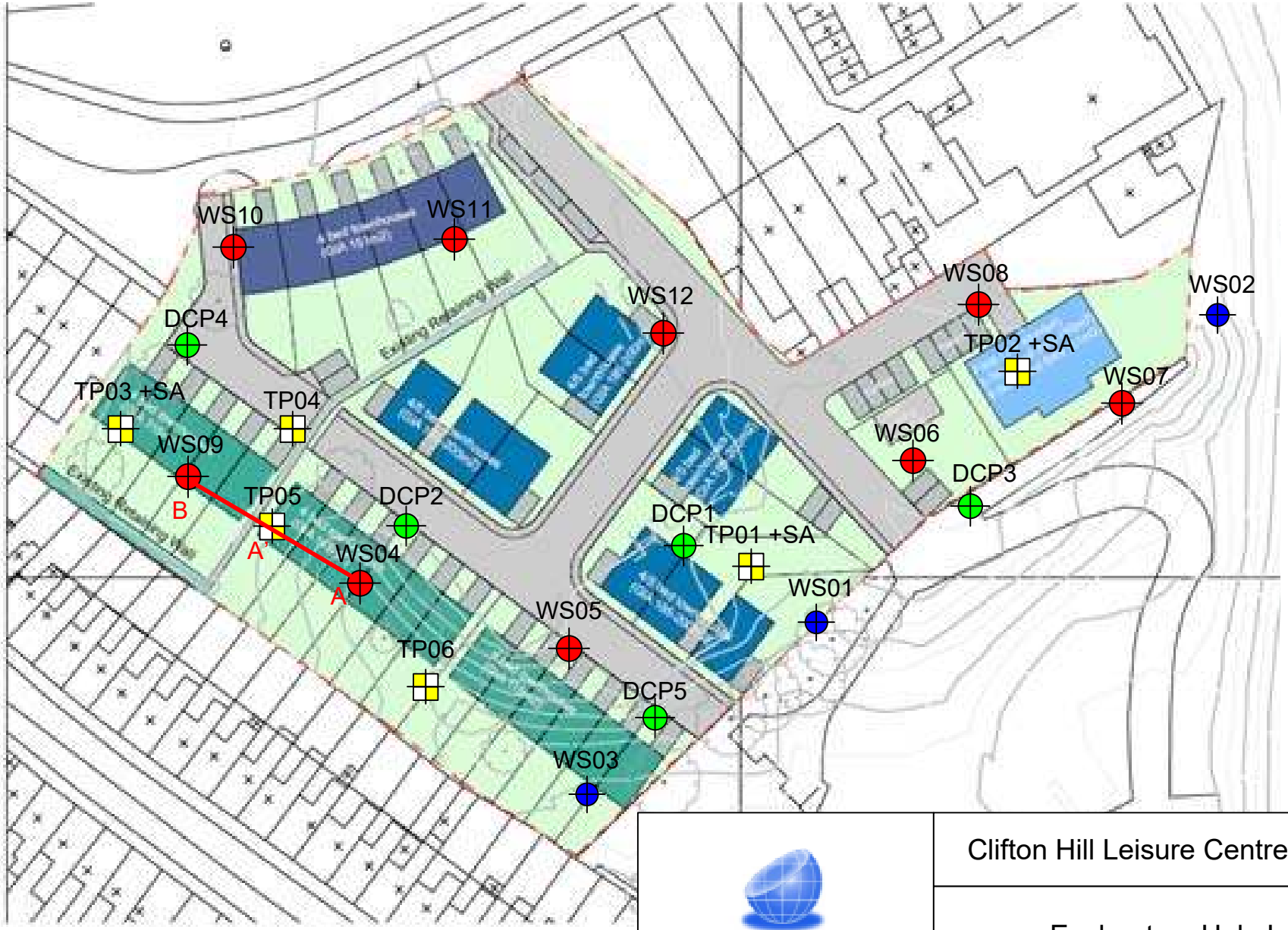
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Appendix C

Exploratory Hole Location Plan



Clifton Hill Leisure Centre, Exeter, EX1 2HQ

Exploratory Hole Location Plan

SOUTH WEST GEOTECHNICAL

01884 252444

Drawn: ZM

SIZE	JOB NO	DWG NO	REV
A4	12072	DWG1	0

SCALE	NTS	3/2/2020-5/2/2020	SHEET	1 of 1

Appendix D

Exploratory Hole Logs and Photos

KEY TO EXPLORATORY HOLE LOGS

SAMPLING

Undisturbed

U	Driven tube sample (Blow count recorded in results column i.e. U = 20)
TW	Pushed thin wall tube sample
P	Pushed piston sample
L	Liner sample
CBR	CBR mould sample
BLK	Block sample
WS	Window sample
CS	Core sample

Disturbed

D	Small sample
B	Bulk sample

Other

W	Water sample
G	Gas sample
ES	Soil sample for environmental analysis
EW	Water sample for environmental analysis

IN-SITU TESTING

SPT S or SPT C	Standard Penetration Test, open shoe (S) or solid cone (C) As defined in BS 1377 : Part 9 (1990). Standard Penetration Test (SPT): a 50mm split spoon or solid cone sampler is driven 450mm into the base of the borehole using a 63.5 kg hammer with a 760mm drop. The penetration resistance (e.g. 21) is expressed as the N-value, and represents the number of blows required to obtain 300mm penetration below an initial seating drive of 150mm. The depth on the borehole/ trial pit record is that of the start and end of the test. Where full penetration for the test has not been achieved, the final penetration depth is recorded.
HVP (kPa)	In-situ Hand Vane shear strength: a hand shear vane test (or average of a series), conducted on undisturbed samples or within trial pits.
GIVN (kPa)	Geonor in-situ vane shear strength carried out in base of borehole or self bored hole
VN (kPa)	Hand Vane shear strength, conducted on disturbed or remoulded samples.
PP (kg/cm^2)	Pocket penetrometer test: a pocket Penetrometer reading (or average of a series). If reported in kPa, the value has been converted to an equivalent undrained shear strength.
Ik	In situ permeability test
ICBR	In-situ CBR test
IPBT	In-situ plate bearing test
IPST	In-situ plate settlement test

All test results are provided in Results column

DRILLING RECORDS

TCR	Total Core Recovery %
SCR	Solid Core Recovery %
RQD	Rock Quality Designation %
FI	Fracture Spacing mm. Minimum, typical and maximum spacings are recorded.

GROUNDWATER

Groundwater Strike

Groundwater level after standing time

INSTALLATION

Standpipe/ piezometer

Details of standpipe/piezometer installations are given on the left side of the log. The column shows installed instrument depths including slotted pipe section or tip depth, response zone filter material type and layers of backfill.

SP	Standpipe
SPIE	Standpipe piezometer
PPIE	Pneumatic piezometer
EPIE	Electronic piezometer

NOTES

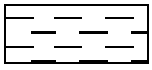
Water level observations of discernible entries during the advancing of the exploratory hole are given at the foot of the log and in the Legend column. The term “none observed” is used where no discrete entries are identified although this does not necessarily indicate that the hole has not been advanced below groundwater level. Under certain conditions groundwater cannot be observed, for instance, drilling with water flush or over water, or boring at a rate much faster than water can make its way into the borehole.

The declination of bedding and joints is given with respect to the normal to the core axis. Thus in a vertical borehole this will be the dip.

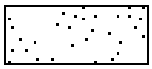
Remarks on chiselling times can be affected by a variety of factors not always related to the geotechnical properties of the strata. Chiselling records are given at the foot of the log.

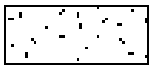
The assessment of SCR, RQD and Fracture Spacing excludes artificial fractures.

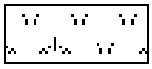
KEY TO SOIL LEGENDS

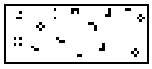

CLAY


SILT

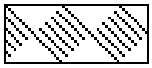

SAND

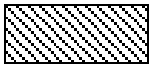

GRAVEL


PEAT

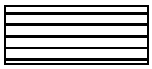

COBBLES

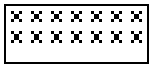

BOULDERS

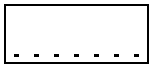

TOPSOIL

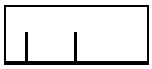

MADE GROUND

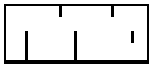
KEY TO ROCK LEGENDS


MUDSTONE


SILTSTONE

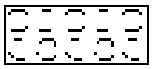

SANDSTONE

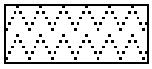

LIMESTONE

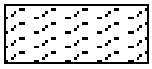

CHALK

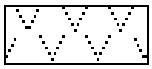

COAL

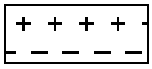

BRECCIA


CONGLOMERATE


FINE GRAINED METAMORPHIC


MEDIUM/COARSE GRAINED METAMORPHIC


FINE GRAINED IGNEOUS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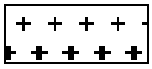
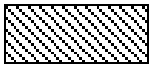
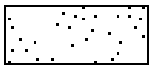
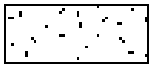

COARSE GRAINED IGNEOUS

KEY TO BACKFILL LEGENDS


BENTONITE


ARISINGS


SAND


GRAVEL

REFERENCES

BS 1377 : 1990 : British Standard Methods of test for soils for civil engineering purposes. British Standards Institution.
BS 5930 : 1999 : Code of practice for site investigations. British Standards Institution.

Trial Pit Log

TrialPit No: TP01
Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293099.00 - 93001.00 Level: 44.78	Date 03/02/2020
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Dimensions (m): 2.20 × 0.60 Depth 2.60	Scale 1:50
Client: Exeter City Living			Logged ZM

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
	0.40	D		0.30	44.48		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
	0.40	ES					
	0.70	D					
	0.70	ES		0.80	43.98		MADE GROUND: Stiff, red, gravelly Clay. Gravel is of mixed composition. Contains brick, porcelain and glass fragments. Contains rootlets.
	1.00	D					*Contains rootlets.*
				1.50	43.28		Stiff consistency, red to orange, gravelly CLAY. Gravel is fine, sub-rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Contains rootlets. HEAD DEPOSIT.
							Stiff consistency, red, slightly gravelly CLAY. Gravel is fine, sub-angular to sub-rounded Sandstone. Orange to grey vertical mottled seams. ALPHINGTON FORMATION.
							HSV =120 kPa
				2.60	42.18		End of Pit at 2.600m

Remarks: 1. Soakaway undertaken. 2. No Groundwater encountered. 3. Backfilled with arisings.

Stability: Pit stable, with slight spalling.

Trial Pit Log

TrialPit No: TP02
Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293133.00 - 93024.00 Level: 44.70	Date 03/02/2020
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Dimensions (m): Depth 2.40, 0.60 x 2.40	Scale 1:50
Client: Exeter City Living			Logged ZM

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
	0.20	D		0.10	44.60		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
	0.20	ES		0.30	44.40		
	0.40	D		0.50	44.20		MADE GROUND: Black, slightly clayey, sandy Gravel. Gravel is fine to medium and of mixed composition. Includes, brick and porcelain fragments.
	0.70	D					
	0.70	ES		0.80	43.90		MADE GROUND: Firm, red to brown, slightly sandy, Gravelly Clay. Gravel is fine to fine to medium, sub rounded to sub-angular. Occasional porcelain fragment.
	1.00	D					Stiff consistency, red to orange, gravelly CLAY. Gravel is fine, sub rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Contains rootlets. HEAD DEPOSIT.
							Stiff consistency, red, slightly gravelly CLAY. Gravel is fine, sub-angular to sub rounded Sandstone. Orange to grey vertical mottled seams. ALPHINGTON FORMATION.
				2.40	42.30		End of Pit at 2.400m

Remarks: 1. Soakaway undertaken. 2. No Groundwater encountered. 3. Backfilled with arisings.

Stability: Pit stable, with slight spalling.

Trial Pit Log

TrialPit No: TP03
Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293014.00 - 93019.00 Level: 40.50	Date 03/02/2020
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Dimensions (m): Depth 2.40, 0.60 x 2.10	Scale 1:50
Client: Exeter City Living			Logged ZM

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
	0.15 0.15 0.25 0.25	D ES D ES		0.20	40.30		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
							MADE GROUND: Black, silty, gravelly Clay. Gravel is fine to medium and of mixed composition. Contains builders rubble including: brick, glass, wood, metal and plastic piping.
	1.40	D		1.40	39.10		
				1.70	38.80		Stiff consistency, red to orange, gravelly CLAY. Gravel is fine, sub-rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Contains rootlets. HEAD DEPOSIT.
				2.40	38.10		Stiff consistency, red, slightly sandy, slightly gravelly CLAY. Gravel is fine, sub-angular to sub-rounded Sandstone. Orange to grey vertical mottled seams. ALPHINGTON FORMATION. *HSV = 120 kPa* End of Pit at 2.400m

Remarks: 1. Soakaway undertaken. 2. No Groundwater encountered. 3. Backfilled with arisings.

Stability: Pit stable, with slight spalling.

Trial Pit Log

TrialPit No: TP04
Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293040.00 - 93019.00 Level: 40.80	Date 03/02/2020
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Dimensions (m): 1.00 × 0.60 Depth 0.50	Scale 1:50
Client: Exeter City Living			Logged ZM

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
	0.30	D		0.20	40.60		MADE GROUND: Grey, fine to medium, sub-angular Gravel. Gravel is composed of angular limestone.
	0.30	ES		0.40	40.40		MADE GROUND: Orange to yellow, sandy Gravel.
				0.50	40.30		MADE GROUND: Red brick retaining wall footings.
							End of Pit at 0.500m

Remarks: 1. No Soakaway undertaken. 2. No Groundwater encountered. 3. Backfilled with arisings.

Stability: Pit stable, with slight spalling.

Trial Pit Log

TrialPit No: TP05
Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293034.00 - 93007.00 Level: 43.34	Date 03/02/2020
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Dimensions (m): 3.30 x 0.60 Depth 2.70	Scale 1:50
Client: Exeter City Living			Logged ZM

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
	0.15 0.15 0.40 0.40	D ES D ES		0.15	43.19		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
	1.20	D					MADE GROUND: Stiff, orange, gravelly Clay. Gravel is fine to medium sub-rounded to sub-angular and of varied composition. Contains builders rubble including: rope, brick, glass, porcelain, metal.
							HSV = 105 kPa
				2.00	41.34		MADE GROUND: Cobble fill. Cobbles are composed of brick, Granite and Sandstone.
				2.70 2.80	40.64 40.54		MADE GROUND: Concrete retaining wall footings. End of Pit at 2.700m

Remarks: 1. No Soakaway undertaken. 2. No Groundwater encountered. 3. Backfilled with arisings.

Stability: Pit stable, with slight spalling.

Trial Pit Log

			TrialPit No TP06 Sheet 1 of 1
Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293054.00 - 92988.00 Level: 45.90	Date 03/02/2020
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Dimensions (m): 2.50 x 0.60 Depth 2.60	Scale 1:50
Client: Exeter City Living			Logged ZM

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
	0.40 0.40	D ES		0.25	45.65		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
	1.40 1.40	D ES					MADE GROUND: Stiff, orange, gravelly Clay. Gravel is fine to medium sub rounded to sub angular and of varied composition. Contains builders rubble including: brick, glass, porcelain, metal. *HSV = 100 kPa*
				2.60	43.30		End of Pit at 2.600m

Remarks: 1. No Soakaway undertaken. 2. No Groundwater encountered. 3. Backfilled with arisings.

Stability: Pit stable, with slight spalling.

Borehole Log

Borehole No. **WS01**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293113.00 - 92993.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 46.60	Scale 1:50
Client: Exeter City Living		Dates: 03/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20	46.40		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
		0.50	D					
		0.50	ES					MADE GROUND: Soft to firm consistency, red to brown, slightly sandy gravelly Clay. Gravel is composed of Granite, Mudstone and quartz. Occasional brick fragment.
		1.00		N=10 (2,2/2,2,3,3)				*Contains rootlets.*
		1.20	D		1.20	45.40		Firm consistency, red to brown, slightly gravelly CLAY. Gravel is fine, sub-angular to sub-rounded and of varied composition including: Mudstone and Sandstone. HEAD DEPOSIT.
		2.00		N=15 (3,3/3,3,4,5)	2.10	44.50		Very stiff consistency, red, slightly gravelly CLAY. Gravel is fine, sub-angular to sub-rounded Sandstone. Orange to grey horizontal mottled seams. ALPHINGTON FORMATION.
		3.00		N=29 (5,5/5,8,8,8)				
		4.00		N=27 (8,7/7,7,6,7)				
		5.00		N=37 (7,7/8,9,9,11)				
					5.45	41.15		End of borehole at 5.45 m

1 2 3 4 5 6 7 8 9 10

Remarks

1. WS to 5.45m 2. No groundwater. 3. Installation: water/gas monitoring gas tap with flush cover at GL. GL to 0.5m plain pipe. 0.5m-1.5m slotted pipe (1m slotted, 0.5m plain.) 4. Gravel backfill, with bentonite seal around plain pipe and flush cover concreted.

Borehole Log

Borehole No. **WS02**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293170.00 - 93026.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 50.80	Scale 1:50
Client: Exeter City Living		Dates: 03/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.15	50.65		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
		0.80	D					MADE GROUND: Stiff, brown, gravelly Clay. Gravel is fine to coarse and of varied composition. Contains Landfill rubble including: brick, glass, porcelain, metal and occasional organic mater.
		1.00		N=39 (10,9/12,12,10,5)	1.00	49.80		*Limestone cobble.*
					1.40	49.40		*Soft orange Clay.*
								MADE GROUND: Dense, sandy Gravel. Gravel is of varied composition. Contains rubble including: flint, brick, sandstone and concrete.
		2.00		N=28 (10,9/8,8,6,6)				MADE GROUND: Very stiff consistency, sandy, Gravely Clay. Contains fine to medium, subangular to subrounded Mudstone and Sandstone. Occasional small brick fragment.
								3cm long wood shard.
								Broken bottle at 2.8m.
		3.00		N=10 (4,2/2,2,4,2)	3.00	47.80		MADE GROUND: Black, sandy, Gravel. Contains landfill material including: charcoal, organic matter, glass and metal.
		3.50	D					*Black organic matter.*
		3.50	ES					
		4.00		N=29 (4,5/3,3,3,20)				
					4.45	46.35		End of borehole at 4.45 m

Remarks

1. WS to 4.37m 2. No groundwater. 3. Installation: water/gas monitoring gas tap with flush cover at GL. GL to 0.5m plain pipe. 0.5m-3.5m slotted pipe (3m slotted, 0.5m plain.) 4. Gravel backfill, with bentonite seal around plain pipe and flush cover concreted.

Borehole Log

Borehole No. **WS03**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293083.00 - 92968.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 47.30	Scale 1:50
Client: Exeter City Living		Dates: 03/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	D		0.15	47.15		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
		0.30	ES					
		0.90	D					MADE GROUND: Firm consistency, dark brown, slightly gravelly Clay. Gravel is fine to coarse and of varied composition including: Granite, Mudstone, sandstone. Occasional brick fragment. Contains rootlets.
		0.90	ES		1.10	46.20		
		1.00		N=15 (3,3/3,4,4,4)				Stiff, red to orange, gravelly CLAY. Gravel is fine, sub-rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Contains rootlets. HEAD DEPOSIT.
		1.10	D					*Slightly Gravelly, sandy, CLAY.*
		2.00		N=25 (2,3/5,6,7,7)	1.90	45.40		Very stiff consistency, red, very sandy, slightly gravelly CLAY Sandstone. Gravel is fine, sub-angular to sub-rounded. occasional grey horizontal mottled seams. ALPHINGTON FORMATION.
					2.20	45.10		*Contains asphalt.*
		3.00		N=27 (5,5/6,7,7,7)	2.90	44.40		Very stiff consistency, red CLAY. ALPHINGTON FORMATION.
								Very stiff consistency, red, very sandy, slightly gravelly CLAY. Gravel is fine, sub-angular to sub-rounded Sandstone. occasional grey horizontal mottled seams. ALPHINGTON FORMATION.
					3.50	43.80		
					3.70	43.60		Very stiff consistency, red CLAY. ALPHINGTON FORMATION.
		4.00		N=32 (11,8/9,9,7,7)				Very stiff consistency, red, very sandy, gravelly CLAY. Gravel is fine, sub-angular to sub-rounded Sandstone. occasional grey horizontal mottled seams. ALPHINGTON FORMATION.
					4.45	42.85		End of borehole at 4.45 m

Remarks

1. WS to 4.45m 2. No groundwater. 3. Installation: water/gas monitoring gas tap with flush cover at GL. GL to 0.5m plain pipe. 0.5m-2.5m slotted pipe (2m slotted, 0.5m plain.) 4. Gravel backfill, with bentonite seal around plain pipe and flush cover concreted.

Borehole Log

Borehole No. **WS04**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293050.00 - 92996.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 46.18	Scale 1:50
Client: Exeter City Living		Dates: 03/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40	D		0.35	45.83		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
		0.40	ES					MADE GROUND: Stiff, orange, gravelly Clay. Gravel is fine to medium sub-rounded to sub-angular and of varied composition. Occasional rubble content including: brick, flint, plastic, glass, porcelain, metal.
		1.00	D					
		1.00		N=10 (1,2/2,3,2,3)				
		2.00		N=15 (3,3/3,4,4,4)				
					2.40	43.78		Stiff consistency, red to orange, gravelly CLAY. Gravel is fine, sub-rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Occasional horizontal grey mottling. Contains rootlets. HEAD DEPOSIT.
		2.60	D					
		2.60	ES					
		3.00		N=21 (3,3/4,4,6,7)				
					3.90	42.28		
		4.00		N=20 (5,4/4,5,5,6)				Stiff consistency, red, gravelly CLAY. Gravel is fine, sub-rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Contains rootlets. HEAD DEPOSIT.
					4.20	41.98		
					4.60	41.58		Stiff consistency, red, slightly gravelly CLAY. Gravel is fine, sub angular to sub rounded Sandstone. Occasional grey mottled seams. ALPHINGTON FORMATION.
		5.00		N=45 (7,7/8,12,12,13)				
					5.20	40.98		Very stiff consistency, red CLAY. ALPHINGTON FORMATION.
					5.45	40.73		Extremely weak, red, thinly bedded, highly weathered BRECCIA. ALPHINGTON FORMATION.
								End of borehole at 5.45 m

Remarks

1. WS to 5.45m. 2. No groundwater. 3. Backfilled with arisings.

Borehole Log

Borehole No. **WS05**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293077.00 - 92990.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 44.29	Scale 1:50
Client: Exeter City Living		Dates: 04/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	44.19		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains brick, shell and porcelain fragments. Contains rootlets.
		0.30	D		0.35	43.94		
		0.30	ES					MADE GROUND: Stiff concsistency, dark brown, slightly sandy, gravelly Clay. Gravel is fine to medium sub rounded to sub-angular and of varied composition. Contains builders rubble including: brick, glass, porcelain. Contains rootlets.
		0.60	D					
		1.00		N=19 (2,3/4,4,5,6)				
		1.20	D		1.20	43.09		
		1.20	ES					Stiff consistency, red to orange, gravelly Clay. Gravel is fine, sub-rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Contains rootlets. HEAD DEPOSIT.
		2.00		N=35 (4,5/9,9,9,8)				Very stiff consistency, red, very sandy, slightly gravelly Clay. Gravel is fine, sub-angular to sub-rounded Sandstone. Occasional grey mottled seams. ALPHINGTON FORMATION.
		3.00		N=36 (6,8/9,9,8,10)				
					3.80	40.49		
		4.00		N=60 (9,10/14,14,17,15)				Extremely weak, red, thinly bedded, highly weathered BRECCIA. ALPHINGTON FORMATION.
					4.45	39.84		End of borehole at 4.45 m

Remarks

1. WS to 4.45m. 2. No groundwater. 3. Backfilled with arisings.

Borehole Log

Borehole No. **WS06**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293123.00 - 93016.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 44.80	Scale 1:50
Client: Exeter City Living		Dates: 04/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10	D		0.05	44.75		MADE GROUND: Grey Paving slab.
		0.30	D		0.15	44.65		MADE GROUND: Grey to yellow to brown, slightly clayey, gravelly Sand.
		0.30	ES		0.30	44.50		MADE GROUND: Black, sandy Gravel. Gravel is of varied composition.
		0.90	D		0.90	43.90		MADE GROUND: Stiff consitency, orange, slightly sandy, slightly gravelly CLAY. Includes occasional brick fragment.
		1.00		N=23 (3,3/5,5,7,6)				Very stiff consistency, red, sandy, CLAY. Sand is medium to coarse. ALPHINGTON FORMATION.
								Slightly gravelly, sandy CLAY.
		2.00		N=28 (4,5/5,8,8,7)				
		3.00		N=27 (5,8/6,6,6,9)				
					3.80	41.00		Extremely weak, red, thinly bedded, highly weathered BRECCIA. ALPHINGTON FORMATION.
		4.00		N=50 (12,12/11,10,12,17)				*Becomes Very stiff consistency from 3.8m*
					4.45	40.35		End of borehole at 4.45 m

Remarks

1. WS to 4.45m. 2. No groundwater. 3. Backfilled with arisings.

Borehole Log

Borehole No. **WS07**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293153.00 - 93021.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 44.82	Scale 1:50
Client: Exeter City Living		Dates: 04/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.15	D		0.05	44.77		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains rootlets.
		0.15	ES		0.20	44.62		MADE GROUND: Black, gravelly Sand. Gravel is of varied composition. Contains brick fragments.
		0.50	D					Very stiff consistency, red, very sandy, slightly gravelly Clay. Gravel is fine, sub-angular to sub-rounded Sandstone. Occasional grey mottled seams. ALPHINGTON FORMATION.
		1.00	D					
		1.00		N=31 (6,5/6,7,9,9)				
		2.00		N=31 (9,8/8,7,8,8)				*Coarse Limestone Gravel.*
		3.00		N=63 (10,11/11,13,15,24)	2.80	42.02		Extremely weak, red, thinly bedded, highly weathered BRECCIA. ALPHINGTON FORMATION.
					3.45	41.37		End of borehole at 3.45 m

Remarks

1. WS to 2.95m. 2. No groundwater. 3. Backfilled with arisings.

Borehole Log

Borehole No. **WS08**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293134.00 - 93035.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 45.20	Scale 1:50
Client: Exeter City Living		Dates: 04/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	45.10		MADE GROUND: Black tarmac.
		0.40	D					MADE GROUND: Dark brown to black, Clayey, slightly Gravelly Sand. Occasional brick fragment.
		0.40	ES					
		0.90	D		0.90	44.30		
		1.00		N=5 (1,2/1,2,1,1)				Medium dense, yellow to brown SAND. Sand is fine to medium. HEAD DEPOSIT.
		1.30	D		1.20	44.00		Soft consistency, red to orange, gravelly CLAY. Gravel is fine, sub-rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Contains rootlets. HEAD DEPOSIT.
		1.30	ES					*Becomes Firm from 1.5m*
		2.00		N=10 (1,1/2,3,2,3)	2.00	43.20		Medium dense, yellow to brown SAND. Sand is fine to medium. HEAD DEPOSIT.
					2.30	42.90		Firm consistency, red, slightly sandy CLAY. Occasional horizontal grey mottled seams. ALPHINGTON FORMATION.
					2.60	42.60		Very stiff consistency, red, very sandy, slightly gravelly CLAY. Gravel is fine, sub-angular to sub-rounded. Occasional grey mottled seams. ALPHINGTON FORMATION.
		3.00		N=32 (7,5/7,8,8,9)				
		4.00		N=39 (11,10/10,9,8,12)				
					4.45	40.75		End of borehole at 4.45 m

Remarks

1. WS to 4.15m. 2. No groundwater. 3. Backfilled with arisings.

Borehole Log

Borehole No. **WS09**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293024.00 - 93012.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 40.70	Scale 1:50
Client: Exeter City Living		Dates: 05/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	40.60		MADE GROUND: Black tarmac.
	▼	0.30	D					MADE GROUND: Orange to brown, Gravel. Gravel is fine to corse medium and of varied composition. Contains concrete fragments.
		0.30	ES		0.45	40.25		Firm consistency, orange, slightly sandy CLAY. ALPHINGTON FORMATION.
		0.50	D					
		0.60	B					
		1.00		N=18 (1,2/3,4,6,5)				
					1.20	39.50		Stiff consistency, locally firm consistency, red, slightly sandy CLAY. ALPHINGTON FORMATION.
		2.00		N=12 (2,2/2,3,3,4)				
								Becomes Sandy CLAY.
		3.00		N=33 (3,2/3,5,7,18)				
					3.45	37.25		End of borehole at 3.45 m

Remarks

1. WS to 3.15m. 2. Groundwater at 0.5m. 3. Backfilled with arisings.

Borehole Log

Borehole No. **WS10**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293035.00 - 93045.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 41.02	Scale 1:50
Client: Exeter City Living		Dates: 05/02/2020 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.10	40.92		MADE GROUND: Turf over firm, dark brown, slightly gravelly Clay. Contains rootlets.
					0.40	40.62		MADE GROUND: Firm consistency, orange Clay. Contains rootlets.
		0.80	D		0.70	40.32		MADE GROUND: Firm consitency, brown to orange, gravelly Clay. Gravel is of varied composition. Contains brick and charcoal fragments. Contains rootlets.
		1.00	B					
		1.00		N=6 (1,1/1,1,1,3)				
					1.30	39.72		MADE GROUND: Stiff consistency, orange to brown, gravelly Clay. REWORKED NATURAL.
					1.80	39.22		MADE GROUND: Medium dense, grey, sandy Gravel. Gravel is fine to coarse, angular to sub-rounded Limestone.
		2.00		N=8 (1,1/2,2,2,2)				Soft consistency, locally firm, orange, slightly sandy, slightly gravelly CLAY. Gravel is fine, sub-rounded to sub angular and of mixed composition including: Mudstone and Sandstone. Fine shell fragments identified. Contains rootlets. HEAD DEPOSIT.
		3.00		N=17 (3,3/3,4,4,6)	3.10	37.92		Very stiff consistency, red CLAY. ALPHINGTON FORMATION.
		4.00		N=20 (4,3/3,5,5,7)				
					4.80	36.22		Extremely weak, red, thinly bedded, highly weathered BRECCIA. ALPHINGTON FORMATION.
		5.00		N=54 (11,10/12,11,11,20)				
					5.45	35.57		End of borehole at 5.45 m

Remarks

1. WS to 5.45m. 2. No groundwater. 3. Backfilled with arisings.

Borehole Log

Borehole No. **WS11**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293060.00 - 93045.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 41.14	Scale 1:50
Client: Exeter City Living		Dates: 05/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	41.04		MADE GROUND: Black tarmac.
		0.50	D		0.50	40.64		MADE GROUND: Orange to brown, Gravel. Gravel is fine to corse medium and of varied composition. Contains concrete fragments.
		0.50	ES					Stiff consistency, orange, slightly sandy CLAY. ALPHINGTON FORMATION.
		1.00		N=17 (3,3/4,4,4,5)				
					1.25	39.89		Stiff consistency, orange to red, slightly sandy CLAY. ALPHINGTON FORMATION.
		2.00		N=17 (2,3/3,4,5,5)				
		3.00		N=29 (2,3/4,5,8,12)				
					3.70	37.44		Extremely weak, red, thinly bedded, highly weathered BRECCIA. ALPHINGTON FORMATION.
		4.00		N=63 (8,7/10,15,18,20)				
					4.45	36.69		End of borehole at 4.45 m

Remarks

1. WS to 4.07m. 2. No groundwater. 3. Backfilled with arisings.

Borehole Log

Borehole No. **WS12**

Sheet 1 of 1

Project Name: Clifton Hill Leisure Centre, Exeter	Project No. 12072	Co-ords: 293089.00 - 93029.00	Hole Type WS
Location: Clifton Hill Leisure Centre, Exeter, EX1 2HQ		Level: 43.30	Scale 1:50
Client: Exeter City Living		Dates: 05/02/2020 -	Logged By ZM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.25	43.05		MADE GROUND: Turf over soft, dark brown, slightly sandy Clay. Contains rootlets.
		0.80	ES		0.70	42.60		MADE GROUND: orange, gravelly Sand. Gravel is fine to medium and of varied composition. Contains brick and glass and bottle tops.
		1.00 1.10 1.20	B D	N=8 (2,2/2,2,2,2)	1.10	42.20		MADE GROUND: Soft brown, sandy gravelly Clay.. Contains brick and glass.
		2.00		N=11 (1,1/2,2,3,4)	1.50	41.80		Firm consistency, orange, slightly gravelly CLAY. Gravel is fine, sub-rounded to sub-angular and of mixed composition including: Mudstone and Sandstone. Grey horizontal mottling. HEAD DEPOSIT.
		3.00		N=10 (2,1/2,2,3,3)				Firm consistency, orange, slightly gravelly CLAY. Gravel is fine, subrounded to subangular and of mixed composition, including: Mudstone and Sandstone. Grey horizontal mottled seams. ALPHINGTON FORMATION.
		4.00		N=35 (7,7/6,8,10,11)	3.50	39.80		Very stiff consistency, red, slightly sandy Clay. Sand is medium to coarse. ALPHINGTON FORMATION.
		5.00		40 (4,7/40 for 150mm)	5.00	38.30		Extremely weak, red, thinly bedded, highly weathered BRECCIA. ALPHINGTON FORMATION.
					5.30	38.00		End of borehole at 5.30 m

Remarks

1. WS to 5.30m. 2. No groundwater. 3. Backfilled with arisings.

Bottom Car park – Looking SW.

Looking S from the entrance of the site.

Rifle range – Looking SW.

Driving range – Looking E.

Leisure Centre – Looking NW.

Elevation along the SW boundary of the site.

TP01

TP01 – Spoil heap.

TP02

TP02 – Spoil heap.

TP03

TP03 – Spoil heap.

TP04 – Retaining wall footings from the NW side.

TP05 – Retaining wall inspection from SE side.

TP05 – retaining wall.

TP06

TP06 – Spoil Heap.

WS01

WS02

WS03

WS04

WS05

WS06

WS07

WS08

WS09

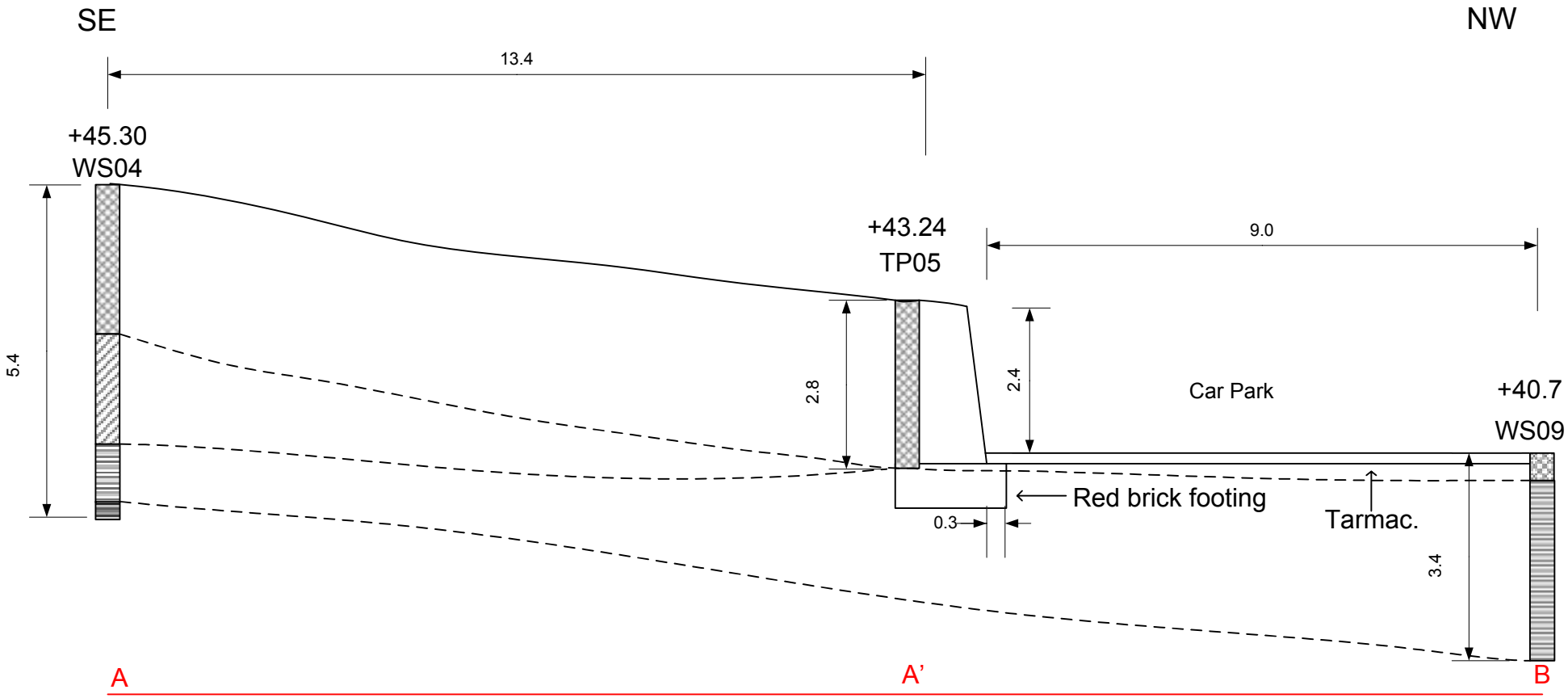
WS10

WS11

WS12

Appendix E

Geological Cross Section



Key

- Made Ground.
- Head Deposit.
- Cohesive Material (ALPHINGTON FORMATION.)
- ALPHINGTON FORMATION
- Geological Boundary (inferred)

SOUTH WEST GEOTECHNICAL

01884 252444

Drawn: ZM

Clifton Hill Leisure Centre, Exeter

Geological Cross Sections

SIZE	JOB NO	DWG NO	REV
A4	12072	DWG1	0

SCALE	1:100 @A4	12/03/2020	SHEET	1 of 1

Appendix F

Geotechnical Laboratory Test Results

Test Report

South West Geotechnical Ltd
Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW

Job No:	12072	**Date Received:**	10/02/20
Job Name:	Clifton Hill, Exeter	**Date Sent:**	16/03/20
Client Name:	South West Geotechnical Ltd	**Transmittal Number:**	T5471
Client Job No:	-	**Senders Initials:**	DT
Client Address	Unit 3 Brooklands, Howden Road, Tiverton, Devon, EX16 5HW	**Report Revision No.**	1
		Sampled by SWG lab staff?	NO

Ref.	Test Detail	No. of Tests / Report No.
A1	BS1377: Part 2: 1990: Clause 3 - Moisture Content - UKAS Accredited	7
A5	BS1377: Part 2: 1990: Clause 4 & 5 - Atterberg Limits - UKAS Accredited	7

Sampling not performed by South West Geotechnical laboratory staff. Results apply to the samples as received.

Approved Signatories:

David Trowbridge (Laboratory Manager)

Dan Ayre (Quality Manager)

Matt Stokes (Senior Technician)

8260
Accredited to
ISO/IEC
17025:2017

Summary of Classification Test Results

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW

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ISO/IEC
17025:2017

Project No.	Project Name
12072	Clyfton Hill, Exeter
Client Job No.	**Client**
12072	South West Geotechnical Ltd

Hole No.	Sample				Soil Description	*mc* Cl.3.2	Passing 425µm	LL	PL Cl5.3	PI Cl5.4	Particle density	Remarks
	Type	Top	Base	Ref		%	%	%	%	%	Mg/m3	
TP02	D	0.70		-	Reddish brown slightly gravelly slightly sandy CLAY	23	78 - Sieved	41 - 1pt	24	17	-	
WS01	D	1.20		-	Reddish brown slightly gravelly slightly sandy CLAY	19	72 - Sieved	42 - 1pt	23	19	-	
WS04	D	1.00		-	Dark brown slightly gravelly slightly sandy CLAY	19	71 - Sieved	46 - 1pt	24	22	-	
WS04	D	2.60		-	Orangish brown slightly gravelly slightly sandy CLAY	22	82 - Sieved	54 - 1pt	28	26	-	
WS09	B	0.60		-	Orangish brown slightly gravelly slightly sandy CLAY	21	93 - Sieved	55 - 1pt	26	29	-	
WS10	B	1.00		-	Orangish brown slightly gravelly slightly sandy CLAY	17	96 - Sieved	51 - 1pt	26	25	-	
WS12	D	1.20		-	Orangish brown slightly gravelly slightly sandy CLAY	23	87 - Sieved	50 - 1pt	27	23	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	

Preparation Clauses: Particle Density (BS1377:Part 1: 1990: CL7.4.4) Atterberg Limits (BS1377:Part 1: 1990: CL7.4.3) Moisture Content (BS1377: Part 1: 1990: CL7.3.3 & 7.4.2)

Key

Atterberg Limits BS1377-2:1990
4pt cone (CL.4.3) unless :
1pt - single point test (CL.4.4)
4.2.3 - Natural
4.2.4 - Sieved
Moisture Content (mc) %

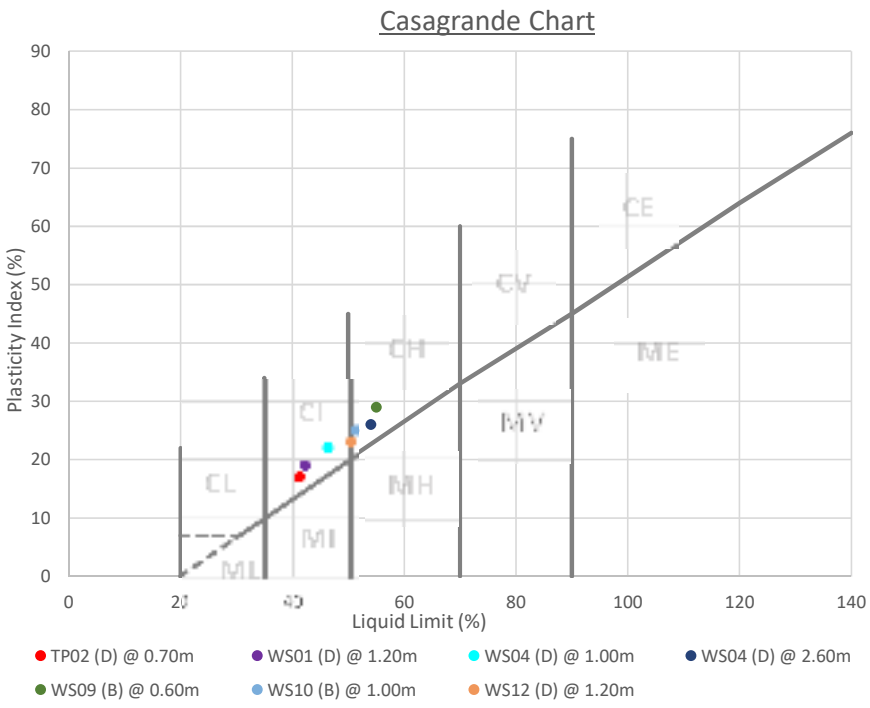
Particle density BS1377-2:1990
sp - small pyknometer CL.8.3
gj - gas jar CL.8.2

Date	Approved By	Page No.	1
16/03/2020	Matt Stokes - Senior Technician	KL001R Index Summary	

Graphical Summary of Atterberg Test Results

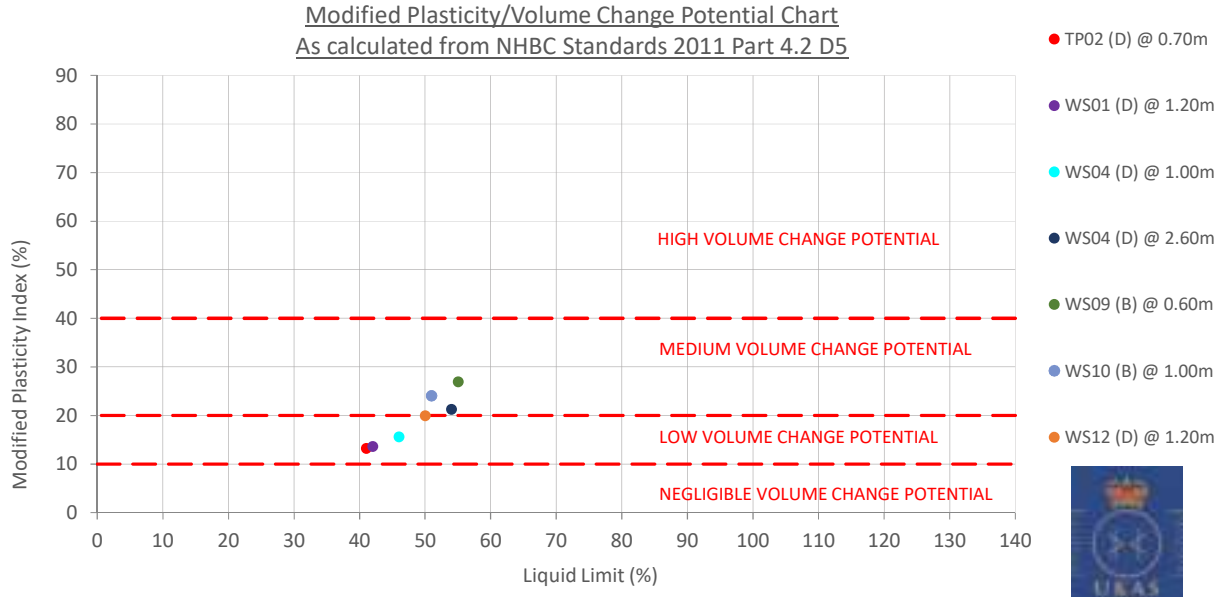
Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW

Project No.	Project Name
12072	Clifton Hill, Exeter
Client Job No.	**Client**
-	South West Geotechnical Ltd



Sample ID	Plasticity Index (%)	Modified Plasticity Index (%)
TP02 (D) @ 0.70m	17	13
WS01 (D) @ 1.20m	19	14
WS04 (D) @ 1.00m	22	16
WS04 (D) @ 2.60m	26	21
WS09 (B) @ 0.60m	29	27
WS10 (B) @ 1.00m	25	24
WS12 (D) @ 1.20m	23	20
-	-	-
-	-	-
-	-	-

The Modified Plasticity Index (I'p) is defined as the Plasticity Index (Ip) of the soil multiplied by the percentage of particles less than 425µm.
ie. I'p x % less than 425um/100%



KL001a Index Graphical Summary	Approved By	Date
	David Trowbridge - Laboratory Manager	16/03/2020 13:00

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Test Report

South West Geotechnical Ltd
Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW

Job No:	12072	**Date Received:**	17/02/20
Job Name:	Clifton Hill, Exeter	**Date Sent:**	06/03/20
Client Name:	South West Geotechnical Ltd	**Transmittal Number:**	T5493
Client Job No:	-	**Senders Initials:**	DA
Client Address	Unit 3 Brooklands, Howden Road, Tiverton, Devon, EX16 5HW	**Report Revision No.**	1
		Sampled by SWG lab staff?	NO

Ref.	Test Detail	No. of Tests / Report No.
A9	BS1377: Part 2: 1990: Clause 9.2 / 9.3 - Particle Size Distribution - UKAS Accredited	1
B1.1	BS1377: Part 4: 1990: Clause 3 - Determination of Dry Density / Moisture Content Relationship 2.5kg Rammer - Proctor Mould Size Specimen - UKAS Accredited	1

Sampling not performed by South West Geotechnical laboratory staff. Results apply to the samples as received.

Approved Signatories:

David Trowbridge (Laboratory Manager)

Dan Ayre (Quality Manager)

Matt Stokes (Senior Technician)

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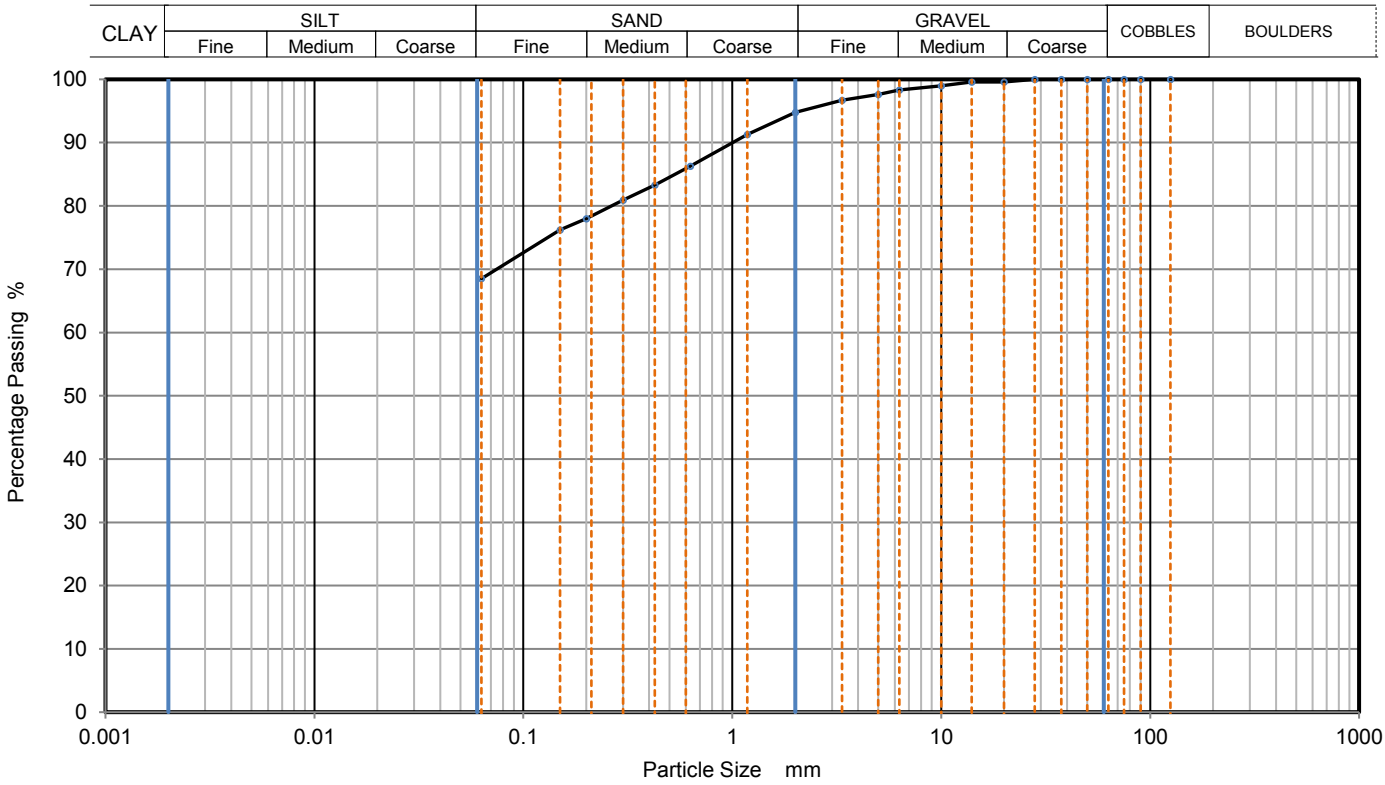
17025:2017

PARTICLE SIZE DISTRIBUTION

Project No.	12072		
Borehole/Pit No.	TP06		
Project Name	Clyfton Hill, Exeter	Sample No.	-
Soil Description	Reddish brown slightly gravelly slightly sandy CLAY	Depth, m	1.00
Specimen Reference	1	Specimen Depth	m
Sample Type	B		
Test Method	BS1377:Part 2:1990, clause 9.2		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	99		
6.3	98		
5	98		
3.35	97		
2	95		
1.18	91		
0.63	86		
0.425	83		
0.3	81		
0.2	78		
0.15	76		
0.063	69		

Dry Mass of sample, g	2354

Sample Proportions	% dry mass
Very coarse	0
Gravel	5
Sand	26
Fines <0.063mm	69

Grading Analysis		
D100	mm	
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Preparation and testing in accordance with BS1377: Part 1: 1990 CL7.3 & 7.4.5

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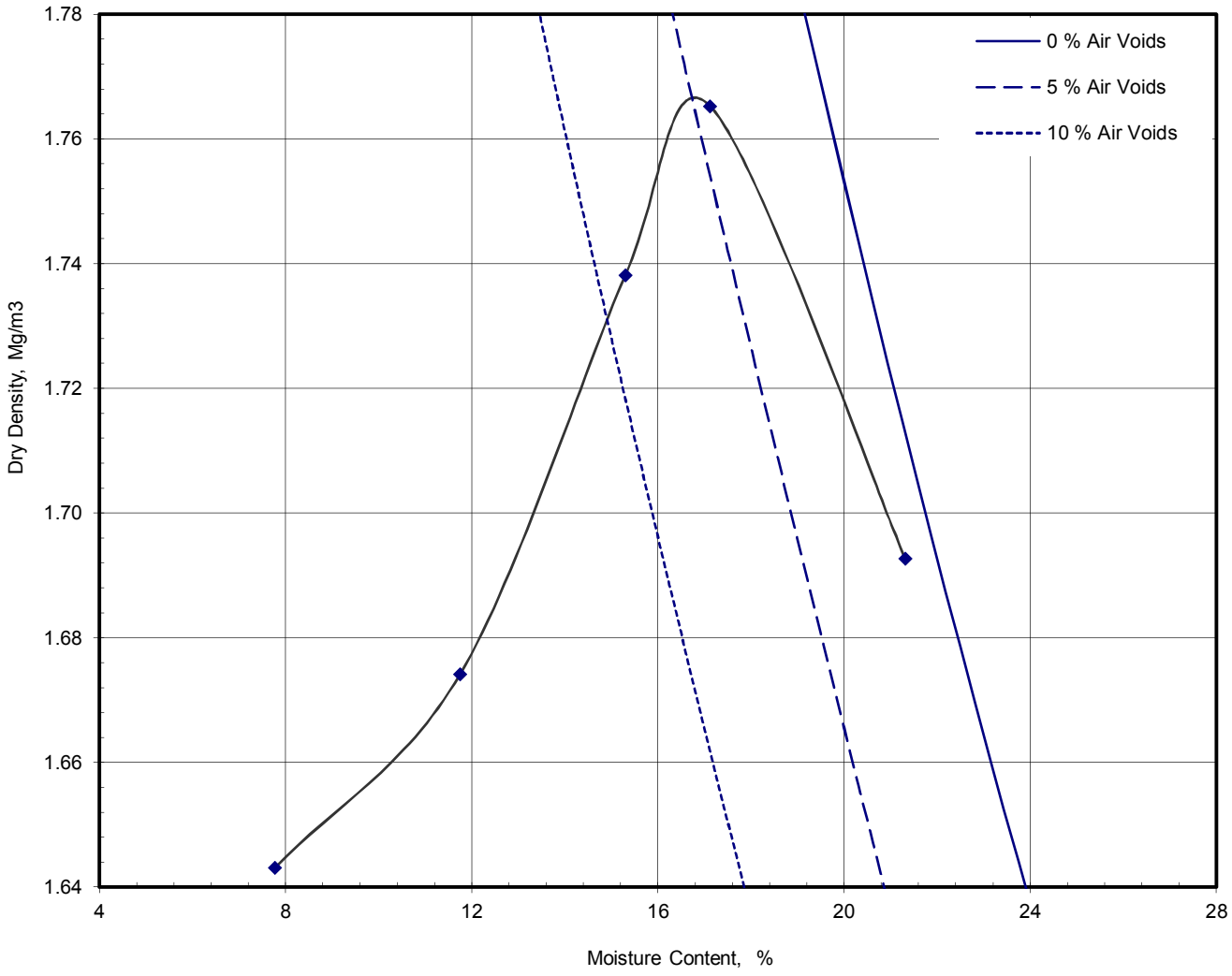
Approved by	Date	Sheet ID:
Matt Stokes - Senior Technician	06/03/2020	KL002R PSD

Unit 3 Brooklands, Howden Road, Tiverton, Devon, EX16 5HW

	Dry Density / Moisture Content Relationship Light Compaction			**Project No.**	**12072**
	BS1377:Part 4:1990, clause 3.3, 2.5kg rammer			**BH / TP No.**	TP06
Project Name	**Clyfton Hill, Exeter**			**Sample No**	-
Soil Description	Reddish brown slightly gravelly slightly sandy CLAY			**Depth (m)**	1.00 -
Client Job No.	12072	**Specimen Depth**	- m	**Sample Type**	B
Client	South West Geotechnical Ltd			**Prep Method**	3.2.4.2



Preparation in accordance with BS1377: Part 1: 1990 CL7.6 (CL7.6.2 - 1 Litre Mould or CL7.6.3 - CBR Mould)	Material used was natural
Mould Type	One Litre
Samples Used	Separate specimens tested
Material Retained on 37.5 mm Sieve (%)	0
Material Retained on 20.0 mm Sieve (%)	0
Particle Density Mg/m³ - Assumed	2.70
Natural Moisture Content (%)	21
Maximum Dry Density (Mg/m³)	**1.77**
Optimum Moisture Content (%)	**17**

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17025:2017

KL003R MDD (Light)	**Date**	**Approved**	**Remarks**	**Page No.**
	10/03/20	Matt Stokes - Senior Technician		**1**

Appendix G

Geo-environmental Laboratory Test Results

David Trowbridge
South West Geotechnical Ltd
Unit 3 Brooklands
Howden Road
Tiverton
Devon
EX16 5HW

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 20-01768

Site Reference:	Clifton Hill, Exeter
Project / Job Ref:	12072/T5471A
Order No:	None Supplied
Sample Receipt Date:	12/02/2020
Sample Scheduled Date:	12/02/2020
Report Issue Number:	1
Reporting Date:	18/02/2020

Authorised by:

Dave Ashworth
Technical Manager

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate						
DETS Report No: 20-01768	**Date Sampled**	03/02/20	03/02/20	03/02/20	03/02/20	03/02/20
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Clifton Hill, Exeter	**TP / BH No**	TP01	TP01	TP02	TP02	TP03
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.70	1.00	0.20	0.70	0.25
Reporting Date: 18/02/2020	**DETS Sample No**	462328	462329	462330	462331	462332

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected			Not Detected	Not Detected
pH	pH Units	N/a	MCERTS		6.7	7.3		
Total Cyanide	mg/kg	< 2	NONE			< 2		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS		13	60		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS		0.01	0.06		
Organic Matter	%	< 0.1	MCERTS			2.8		
Arsenic (As)	mg/kg	< 2	MCERTS			77		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS			1		
Chromium (Cr)	mg/kg	< 2	MCERTS			18		
Chromium (hexavalent)	mg/kg	< 2	NONE			< 2		
Copper (Cu)	mg/kg	< 4	MCERTS			40		
Lead (Pb)	mg/kg	< 3	MCERTS			57		
Mercury (Hg)	mg/kg	< 1	NONE			< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS			36		
Selenium (Se)	mg/kg	< 3	NONE			< 3		
Zinc (Zn)	mg/kg	< 3	MCERTS			86		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate						
DETS Report No: 20-01768	**Date Sampled**	03/02/20	04/02/20	04/02/20	05/02/20	05/02/20
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Clifton Hill, Exeter	**TP / BH No**	TP05	WS03	WS03	WS04	WS04
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.40	0.30	0.90	0.40	2.60
Reporting Date: 18/02/2020	**DETS Sample No**	462333	462334	462335	462336	462337

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025		Not Detected			
pH	pH Units	N/a	MCERTS	7.1		7.1	6.6	7.1
Total Cyanide	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	< 10		< 10	< 10	14
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	< 0.01		< 0.01	< 0.01	0.01
Organic Matter	%	< 0.1	MCERTS	1.7		3.6	0.4	0.5
Arsenic (As)	mg/kg	< 2	MCERTS	10		29	9	8
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2		0.5	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	18		25	23	23
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	34		75	22	13
Lead (Pb)	mg/kg	< 3	MCERTS	137		378	60	26
Mercury (Hg)	mg/kg	< 1	NONE	< 1		1.1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	19		25	32	22
Selenium (Se)	mg/kg	< 3	NONE	< 3		< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	101		239	77	38

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-01768	**Date Sampled**	05/02/20	04/02/20	05/02/20	05/02/20	05/02/20
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Clifton Hill, Exeter	**TP / BH No**	WS05	WS07	WS09	WS09	WS10
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.60	0.50	0.30	0.50	0.80
Reporting Date: 18/02/2020	**DETS Sample No**	462339	462340	462341	462342	462343

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025				Not Detected	
pH	pH Units	N/a	MCERTS	6.5	7.1	7.6		6.9
Total Cyanide	mg/kg	< 2	NONE			< 2		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	< 10	38	< 10		< 10
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.04	< 0.01		< 0.01
Organic Matter	%	< 0.1	MCERTS			0.1		
Arsenic (As)	mg/kg	< 2	MCERTS			5		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS			0.2		
Chromium (Cr)	mg/kg	< 2	MCERTS			2		
Chromium (hexavalent)	mg/kg	< 2	NONE			< 2		
Copper (Cu)	mg/kg	< 4	MCERTS			5		
Lead (Pb)	mg/kg	< 3	MCERTS			4		
Mercury (Hg)	mg/kg	< 1	NONE			< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS			< 3		
Selenium (Se)	mg/kg	< 3	NONE			< 3		
Zinc (Zn)	mg/kg	< 3	MCERTS			10		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-01768	**Date Sampled**	05/02/20	05/02/20			
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Clifton Hill, Exeter	**TP / BH No**	WS11	WS11			
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	0.50	0.50			
Reporting Date: 18/02/2020	**DETS Sample No**	462344	462345			

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025					
pH	pH Units	N/a	MCERTS	7.0	7.3			
Total Cyanide	mg/kg	< 2	NONE	< 2				
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	< 10	< 10			
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	< 0.01	< 0.01			
Organic Matter	%	< 0.1	MCERTS	1.5				
Arsenic (As)	mg/kg	< 2	MCERTS	14				
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2				
Chromium (Cr)	mg/kg	< 2	MCERTS	19				
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2				
Copper (Cu)	mg/kg	< 4	MCERTS	38				
Lead (Pb)	mg/kg	< 3	MCERTS	199				
Mercury (Hg)	mg/kg	< 1	NONE	< 1				
Nickel (Ni)	mg/kg	< 3	MCERTS	24				
Selenium (Se)	mg/kg	< 3	NONE	< 3				
Zinc (Zn)	mg/kg	< 3	MCERTS	65				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 20-01768	**Date Sampled**	03/02/20	03/02/20	04/02/20	05/02/20	05/02/20
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Clifton Hill, Exeter	**TP / BH No**	TP02	TP05	WS03	WS04	WS04
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.20	0.40	0.90	0.40	2.60
Reporting Date: 18/02/2020	**DETS Sample No**	462330	462333	462335	462336	462337

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.33	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.18	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.16	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	0.82	1.27	2.66	0.23	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	0.31	0.58	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	1.73	2.75	5.94	0.62	0.12
Pyrene	mg/kg	< 0.1	MCERTS	1.56	2.34	4.72	0.53	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	1.08	1.48	3.12	0.43	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	1	1.21	2.49	0.38	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	1.45	1.54	3.35	0.59	0.12
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.41	0.47	1.05	0.18	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.87	1.10	2.34	0.44	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.64	0.73	1.49	0.30	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	0.13	0.29	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.48	0.61	1.16	0.24	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	10	13.9	29.8	3.9	< 1.6

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 20-01768	**Date Sampled**	05/02/20	05/02/20			
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Clifton Hill, Exeter	**TP / BH No**	WS09	WS11			
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	0.30	0.50			
Reporting Date: 18/02/2020	**DETS Sample No**	462341	462344			

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.16			
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.17			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	0.14			
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	0.16			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.31			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.23			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.20			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	0.17			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 20-01768	**Date Sampled**	03/02/20	03/02/20	04/02/20	05/02/20	05/02/20
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Clifton Hill, Exeter	**TP / BH No**	TP02	TP05	WS03	WS04	WS04
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.20	0.40	0.90	0.40	2.60
Reporting Date: 18/02/2020	**DETS Sample No**	462330	462333	462335	462336	462337

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	3	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	7	10	24	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	31	22	39	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	38	32	65	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	65	< 42	< 42

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 20-01768	**Date Sampled**	05/02/20	05/02/20			
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Clifton Hill, Exeter	**TP / BH No**	WS09	WS11			
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	0.30	0.50			
Reporting Date: 18/02/2020	**DETS Sample No**	462341	462344			

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2			
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2			
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3			
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3			
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10			
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21			
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3			
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10			
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21			
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 20-01768	**Date Sampled**	03/02/20	03/02/20	04/02/20	05/02/20	05/02/20
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Clifton Hill, Exeter	**TP / BH No**	TP02	TP05	WS03	WS04	WS04
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.20	0.40	0.90	0.40	2.60
Reporting Date: 18/02/2020	**DETS Sample No**	462330	462333	462335	462336	462337

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 20-01768	**Date Sampled**	05/02/20	05/02/20			
South West Geotechnical Ltd	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Clifton Hill, Exeter	**TP / BH No**	WS09	WS11			
Project / Job Ref: 12072/T5471A	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	0.30	0.50			
Reporting Date: 18/02/2020	**DETS Sample No**	462341	462344			

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2			
Toluene	ug/kg	< 5	MCERTS	< 5	< 5			
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2			
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2			
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2			
MTBE	ug/kg	< 5	MCERTS	< 5	< 5			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 20-01768	
South West Geotechnical Ltd	
Site Reference: Clifton Hill, Exeter	
Project / Job Ref: 12072/T5471A	
Order No: None Supplied	
Reporting Date: 18/02/2020	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
462329	TP01	None Supplied	1.00	19.9	Light brown sandy clay
462330	TP02	None Supplied	0.20	18.7	Brown loamy sand with stones and concrete
462333	TP05	None Supplied	0.40	14.9	Light brown loamy clay
462335	WS03	None Supplied	0.90	17.2	Brown loamy sand with brick
462336	WS04	None Supplied	0.40	13.2	Brown loamy sand with stones
462337	WS04	None Supplied	2.60	18.6	Light brown clay
462339	WS05	None Supplied	0.60	14.1	Red loamy sand
462340	WS07	None Supplied	0.50	13.5	Red sandy clay
462341	WS09	None Supplied	0.30	3	Brown sandy gravel with stones
462343	WS10	None Supplied	0.80	14	Red sandy clay
462344	WS11	None Supplied	0.50	14	Light brown loamy sand with stones
462345	WS11	None Supplied	0.50	14.3	Brown loamy sand with stones

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 20-01768
South West Geotechnical Ltd
Site Reference: Clifton Hill, Exeter
Project / Job Ref: 12072/T5471A
Order No: None Supplied
Reporting Date: 18/02/2020

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

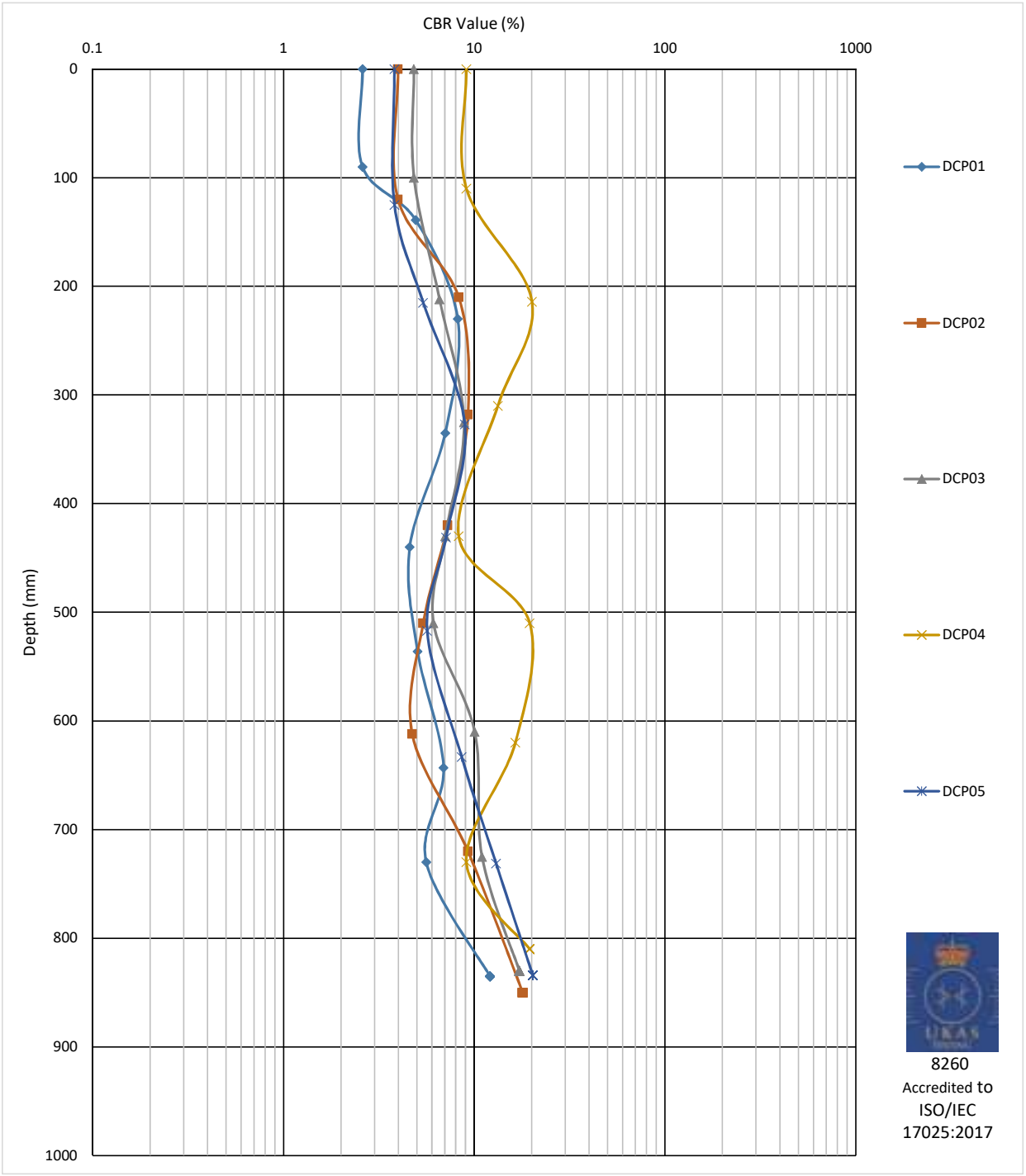
Appendix H

DCP Probe Plots

Graphical Summary of TRL DCP Results

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW

Project No.	Project Name
12072	Clifton Hill, Exeter
Client Job No.	**Client**
-	South West Geotechnical Ltd

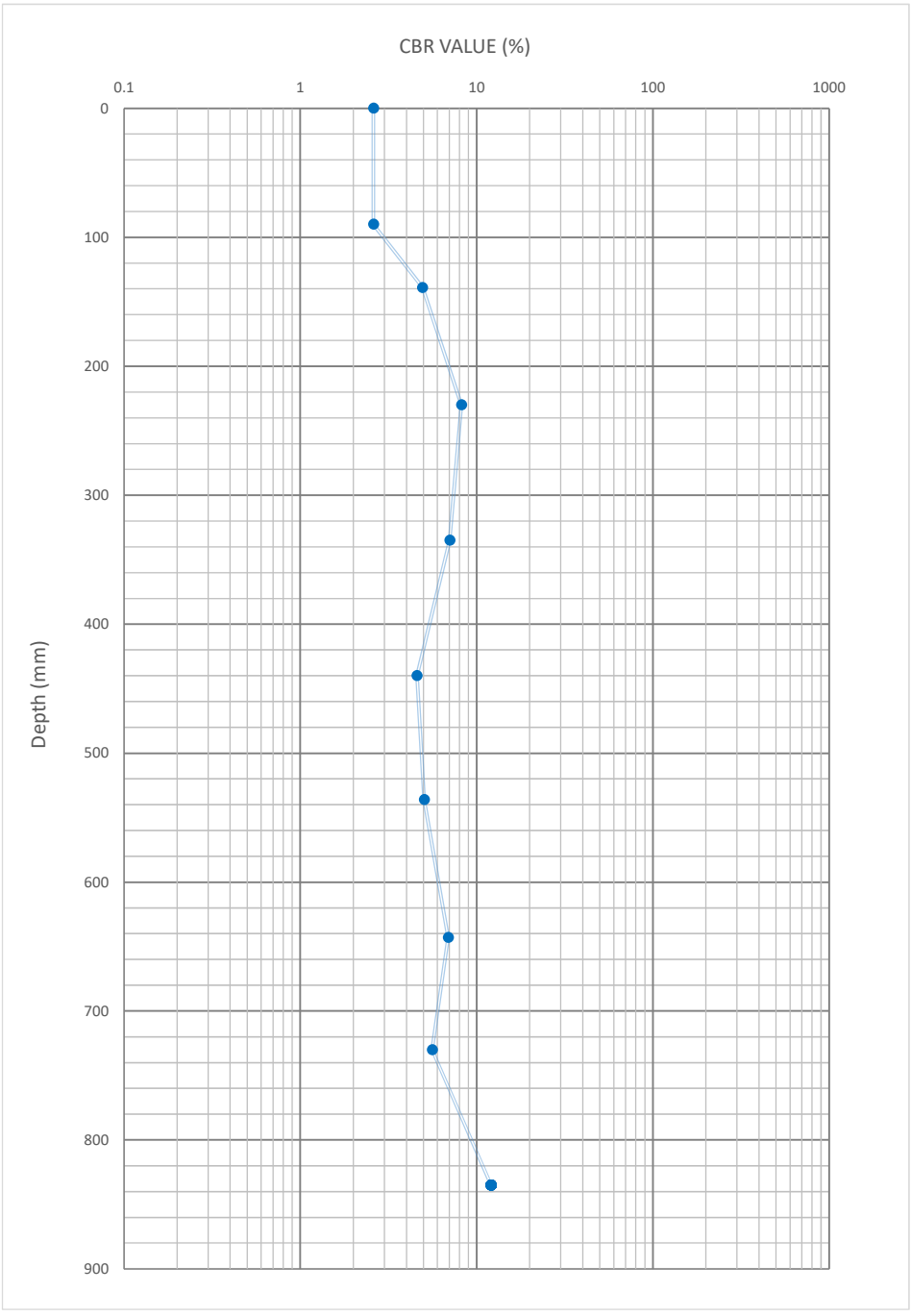


8260
Accredited to ISO/IEC 17025:2017

KL020R TRL DCP Graphical Summary	Approved By	Date
	David Trowbridge - Laboratory Manager	11/02/2020 15:05

	Determination of the In-Situ CBR of Soil using TRL Dynamic Cone Penetrometer Method - Design Manual for Roads/Pavement Foundations Draft HD 25 (2009)	Project No.	12072
		TRL DCP No.	DCP01
Project Name	Clifton Hill, Exeter	Top Depth (m)	0
Soil Description	Gravelly CLAY - Head deposits	Easting	-
Client Job No.	-	Northing	-
Client Name	South West Geotechnical Ltd	Date of Test	05/02/20
Test Location	-	Weather	Sunny

Depth (mm)	CBR (%)
90	2.6
139	4.9
230	8.2
335	7.0
440	4.6
536	5.0
643	6.9
730	5.6
835	12

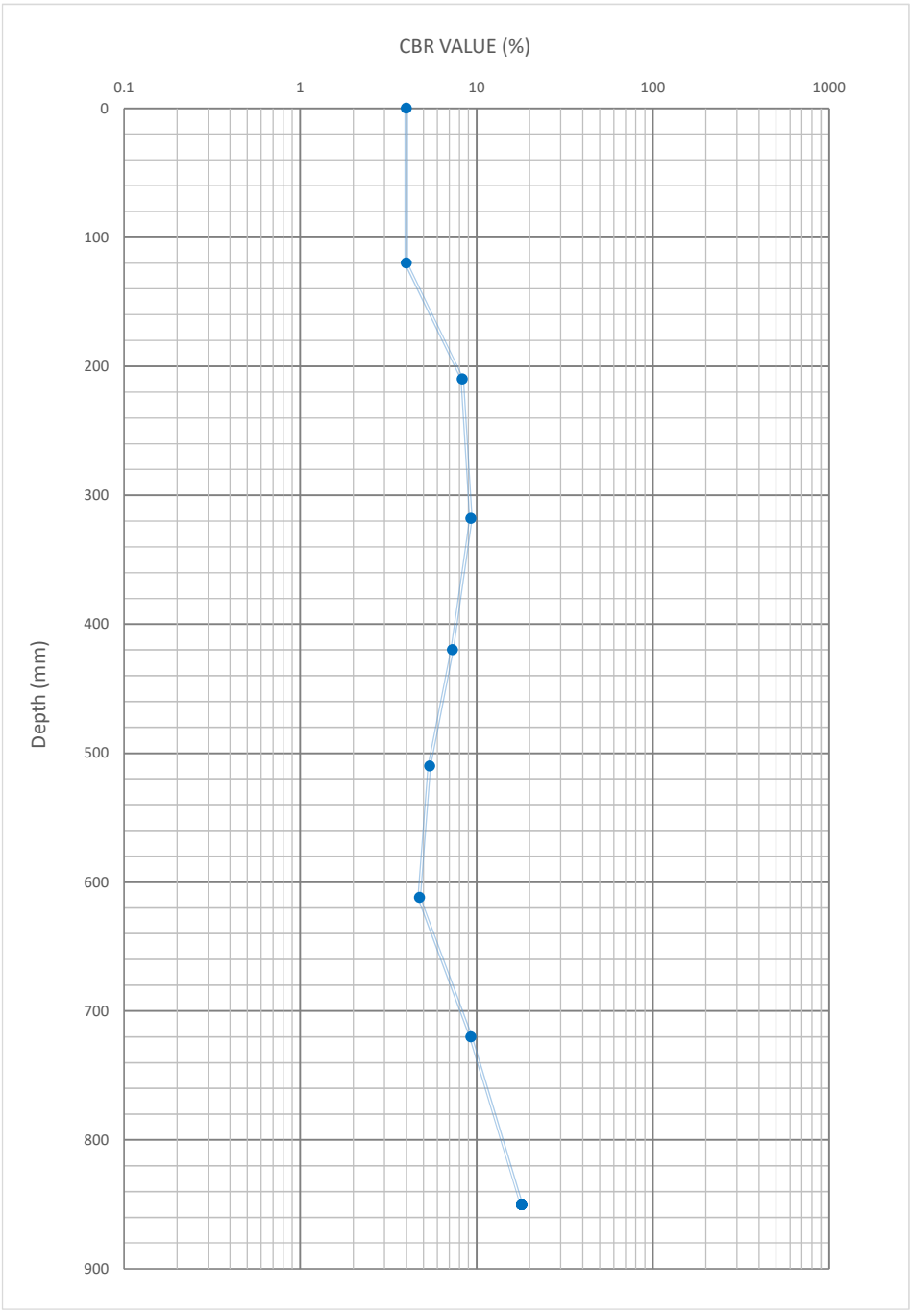


8260
Accredited to
ISO/IEC 17025:2017

KL020R TRL DCP		Date	Approved	Remarks
Page No.	2	11/02/20		

	Determination of the In-Situ CBR of Soil using TRL Dynamic Cone Penetrometer Method - Design Manual for Roads/Pavement Foundations Draft HD 25 (2009)	Project No.	12072
		TRL DCP No.	DCP02
Project Name	Clifton Hill, Exeter	Top Depth (m)	0
Soil Description	Made ground, gravelly CLAY	Easting	-
Client Job No.	-	Northing	-
Client Name	South West Geotechnical Ltd	Date of Test	05/02/20
Test Location	-	Weather	Sunny

Depth (mm)	CBR (%)
120	4.0
210	8.3
318	9.3
420	7.3
510	5.4
612	4.7
720	9.3
850	18

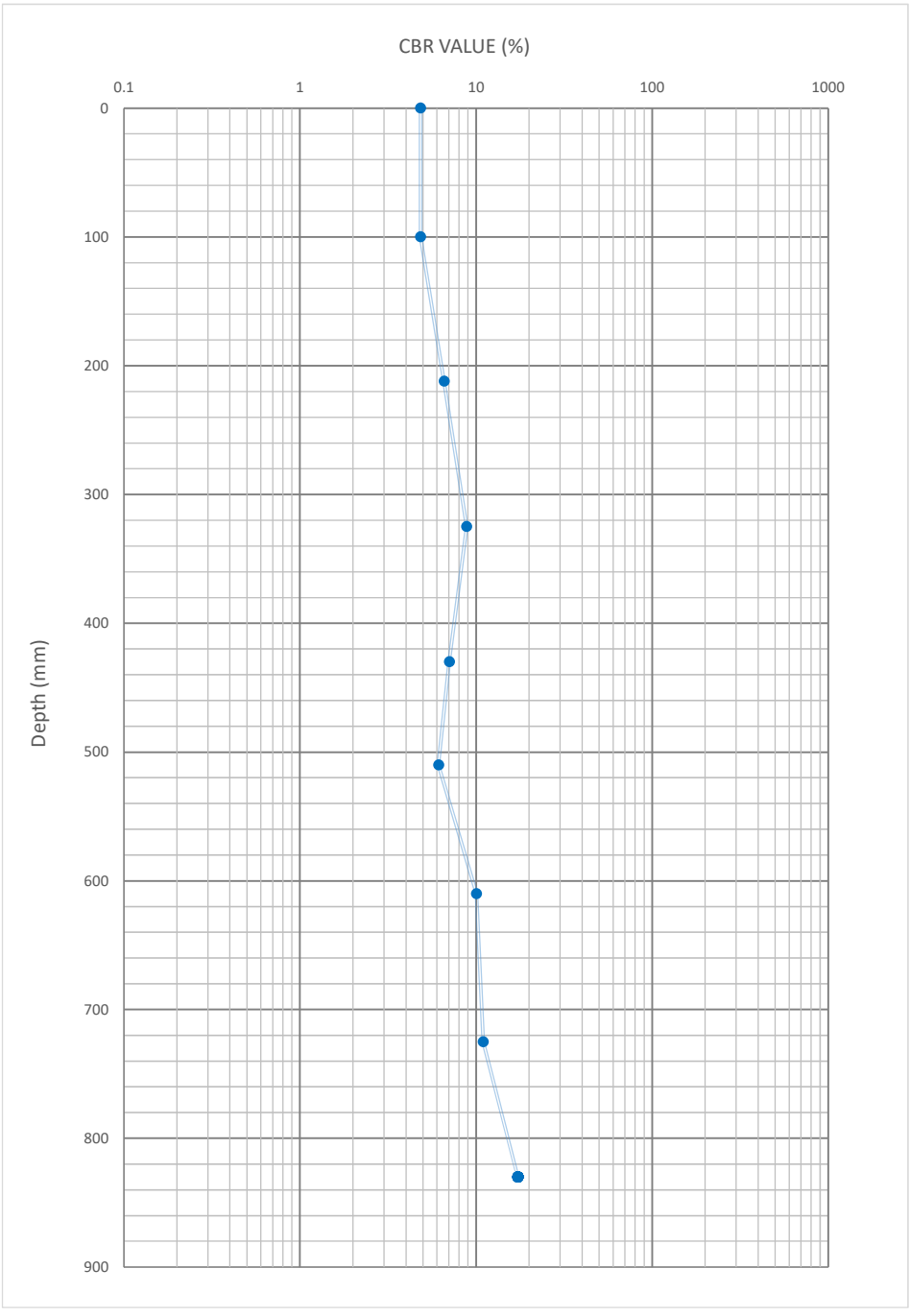


8260
Accredited to
ISO/IEC 17025:2017

KL020R TRL DCP		Date	Approved	Remarks
Page No.	3	11/02/20	David Trowbridge - Laboratory Manager	

	Determination of the In-Situ CBR of Soil using TRL Dynamic Cone Penetrometer Method - Design Manual for Roads/Pavement Foundations Draft HD 25 (2009)	Project No.	12072
		TRL DCP No.	DCP03
Project Name	Clifton Hill, Exeter	Top Depth (m)	0
Soil Description	Gravelly CLAY - Head deposits	Easting	-
Client Job No.	-	Northing	-
Client Name	South West Geotechnical Ltd	Date of Test	05/02/20
Test Location	-	Weather	Sunny

Depth (mm)	CBR (%)
100	4.8
212	6.6
325	8.8
430	7.0
510	6.1
610	10
725	11
830	17



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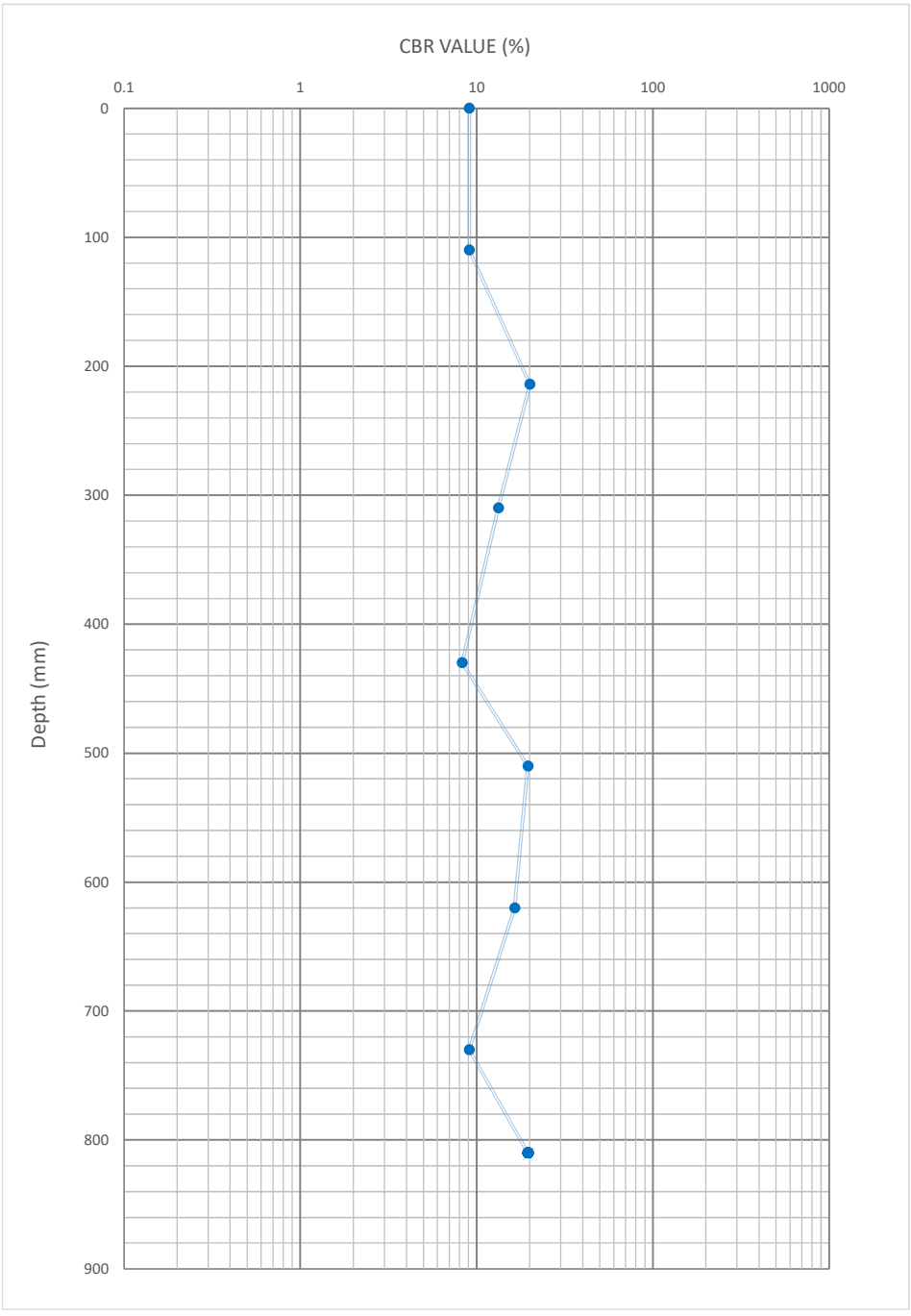
Accredited to
ISO/IEC 17025:2017

KL020R TRL DCP		Date	Approved	Remarks
Page No.	4	11/02/20	David Trowbridge - Laboratory Manager	

	Determination of the In-Situ CBR of Soil using TRL Dynamic Cone Penetrometer Method - Design Manual for Roads/Pavement Foundations Draft HD 25 (2009)	Project No.	12072
		TRL DCP No.	DCP04
Project Name	Clifton Hill, Exeter	Top Depth (m)	0
Soil Description	Made Ground, gravelly CLAY	Easting	-
Client Job No.	-	Northing	-
Client Name	South West Geotechnical Ltd	Date of Test	05/02/20
Test Location	-	Weather	Sunny

Depth (mm)	CBR (%)
110	9.1
214	20
310	13
430	8.3
510	20
620	16
730	9.1
810	20



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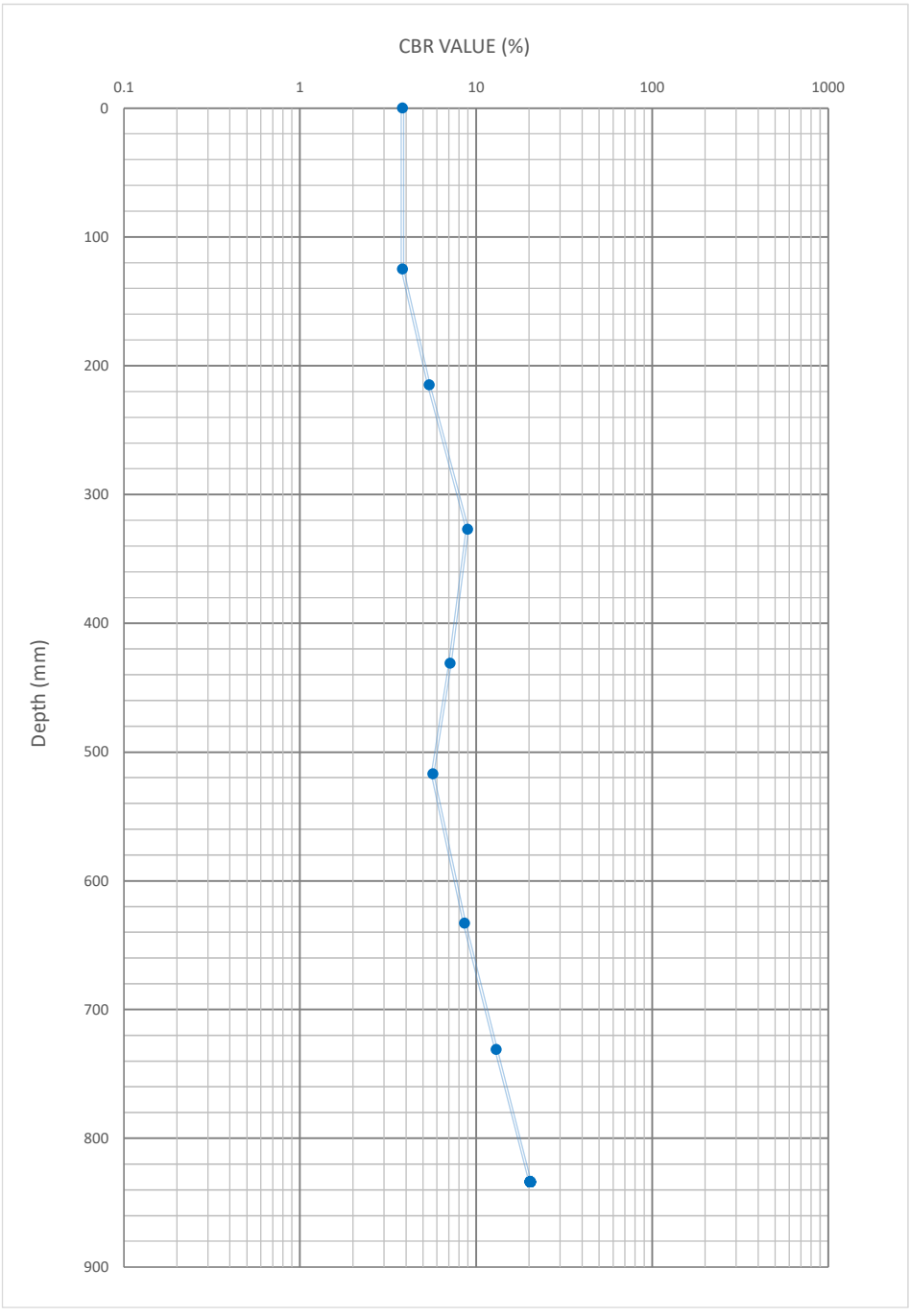
Accredited to
ISO/IEC 17025:2017

KL020R TRL DCP		Date	Approved	Remarks
Page No.	5	11/02/20	David Trowbridge - Laboratory Manager	

	Determination of the In-Situ CBR of Soil using TRL Dynamic Cone Penetrometer Method - Design Manual for Roads/Pavement Foundations Draft HD 25 (2009)	Project No.	12072
		TRL DCP No.	DCP05
Project Name	Clifton Hill, Exeter	Top Depth (m)	0
Soil Description	Made Ground, gravelly CLAY	Easting	-
Client Job No.	-	Northing	-
Client Name	South West Geotechnical Ltd	Date of Test	05/02/20
Test Location	-	Weather	Sunny

Depth (mm)	CBR (%)
125	3.8
215	5.4
327	8.9
431	7.1
517	5.7
633	8.6
731	13
834	20



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Accredited to
ISO/IEC 17025:2017

KL020R TRL DCP		Date	Approved	Remarks
Page No.	6	11/02/20	David Trowbridge - Laboratory Manager	

Appendix I

Gas and Groundwater Monitoring Results

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Summary of Gas / Water Monitoring Results

		Date of test	05/02/20
Project Name	Clifton Hill, Exeter	**Project No.**	12072
Client	South West Geotechnical Ltd	**Client Job No.**	-

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0.2	0.2	0.7	0.7	17.2	17.2	1017/1028	1031	0	0	0	-	1.20
WS02	0.3	0.3	1	1	3.8	3.8	1017/1028	1031	0.1	0.1	0	-	3.35
WS03	0.2	0.1	1.8	1.9	18	18	1017/1028	1031	0	0	0	-	2.35

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Moist	**Precipitation (None, drizzle, moderate, or heavy)**	None	**Instrument and serial no.**	GA5K0000-100 G504589
Wind conditions (Calm, light, moderate, or strong)	Calm	**Certificate Number**	G504589_1/18288	**Water Sampling Undertaken**	NA

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Summary of Gas / Water Monitoring Results

Date of test	10/02/20		
Project Name	Clifton Hill, Exeter	**Project No.**	12072
Client	South West Geotechnical Ltd	**Client Job No.**	-

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0.3	0.2	0.8	0.8	18.7	18.7	1016/992	999	0	0	0	-	1.20
WS02	0.3	0.3	0.6	0.6	15.3	15.2	1016/992	999	0.1	0.1	1	-	3.5
WS03	0.1	0.1	2.9	2.7	15.9	15.9	1016/992	999	0.1	0.1	0	-	2.3

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Moist	**Precipitation (None, drizzle, moderate, or heavy)**	None	**Instrument and serial no.**	GA5K0000-100 G504589
Wind conditions (Calm, light, moderate, or strong)	Calm	**Certificate Number**	G504589_1/18288	**Water Sampling Undertaken**	NA

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Summary of Gas / Water Monitoring Results

Date of test	17/02/20		
Project Name	Clifton Hill, Exeter	**Project No.**	12072
Client	South West Geotechnical Ltd	**Client Job No.**	-

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0.2	0.2	0.8	0.8	17	17	1003/994	1005	0	0		-	1.35
WS02	0.1	0.1	2.1	2.1	18.3	18.3	1003/994	1005	0.5	0.5		-	3.5
WS03	0.1	0.1	0.1	0.1	20.3	20.3	1003/994	1005	0	0		0.7	2.4

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Moist	**Precipitation (None, drizzle, moderate, or heavy)**	None	**Instrument and serial no.**	GA5K0000-100 G504589
Wind conditions (Calm, light, moderate, or strong)	Moderate - strong	**Certificate Number**	G504589_1/18288	**Water Sampling Undertaken**	No

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Summary of Gas / Water Monitoring Results

Date of test	24/02/20		
Project Name	Clifton Hill, Exeter	**Project No.**	12072
Client	South West Geotechnical Ltd	**Client Job No.**	-

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0.2	0.2	1	1	18.2	18.2	1022/1020	1003	0	0	0	-	1.35
WS02	0.2	0.1	1.9	1.9	17.9	17.9	1022/1020	1003	0	0	0	-	3.5
WS03	0.2	0.2	0.3	0.3	20.2	20.2	1022/1020	1003	0	0	0	-	2.4

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Wet	**Precipitation (None, drizzle, moderate, or heavy)**	None	**Instrument and serial no.**	GA5K0000-100 G504589
Wind conditions (Calm, light, moderate, or strong)	Moderate	**Certificate Number**	G504589_1/18288	**Water Sampling Undertaken**	No

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Summary of Gas / Water Monitoring Results

Date of test	02/03/20		
Project Name	Clifton Hill, Exeter	**Project No.**	12072
Client	South West Geotechnical Ltd	**Client Job No.**	-

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0.2	0.1	1.0	1.0	16.4	16.4	990/991	988	0	0	0	-	1.35
WS02	0.2	0.2	0.2	0.2	20.3	20.3	990/991	988	0.1	0.1	1	-	3.5
WS03	0.1	0.1	1.5	1.5	18.7	18.7	990/991	988	0	0	0	0.7	2.5
Air	0.1	0.1	0.1	0.1	20.5	20.5	990/991	988					

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Moist	**Precipitation (None, drizzle, moderate, or heavy)**	None	**Instrument and serial no.**	GA5K0000-100 G504589
Wind conditions (Calm, light, moderate, or strong)	Light	**Certificate Number**	G504589_1/18288	**Water Sampling Undertaken**	N/A

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Summary of Gas / Water Monitoring Results

		Date of test	09/03/20
Project Name	Clifton Hill, Exeter	**Project No.**	12072
Client	South West Geotechnical Ltd	**Client Job No.**	-

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0.2	0.2	1.5	1.5	16.1	16.0		1010	0	0	0	-	1.25
WS02	0.2	0.2	0.2	0.2	19.9	19.9		1010	0.1	0	0	-	3.4
WS03	0.1	0.1	2.1	2.1	17.1	17.1		1010	0	0	0	1.7	2.4
Air	0.2	0.2	0.2	0.2	20.6	20.6		1010					

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Moist	**Precipitation (None, drizzle, moderate, or heavy)**	None	**Instrument and serial no.**	GA5K0000-100 G504589
Wind conditions (Calm, light, moderate, or strong)	Light	**Certificate Number**	G504589_1/18288	**Water Sampling Undertaken**	N/A