

Golden Hill (Short Stay) School, Earnshaw Drive, Leyland

Feasibility Report

Geotechnical Report No. 16-26-01 FS

HIGHWAY OPERATIONS AND DESIGN

HIGHWAYS AND TRANSPORT



Document Control Sheet

Project Title	16-26-01 FS - Golden Hill (Short Stay) School, Earnshaw Drive, Leyland
Report Title	16-26-01 FS - Golden Hill (Short Stay) School, Earnshaw Drive, Leyland - Geotechnical Feasibility Report
Report Reference	16-26-01 FS
Version	1
Issue Date	30/07/2026

Record of Issue

Version	Status	Author and Date	Check and Date	Authorised and Date
1	Final	Sian Thomas 27/07/2026	Robert Serjeant 27/07/2026	John Standing 30/07/2026

Distribution

Organisation	Contact	Format	Copies
LCC Geotechnical Team	All Team	PDF	1
LCC Estates Team	Gary Jones	PDF	1



DISCLAIMER

This report is presented to the Lancashire County Council (LCC) Estates Team in respect of Golden Hill (Short Stay) School, Earnshaw Drive, Leyland and may not be used or relied on by any other person or by the client in relation to any other matters not covered specifically by the scope of this Report.

Notwithstanding anything to the contrary contained in the report, the LCC Geotechnical Team is obliged to exercise reasonable skill, care and diligence in the performance of the services required by LCC Estates Team and the LCC Geotechnical Team shall not be liable except to the extent that it has failed to exercise reasonable skill, care and diligence, and this report shall be read and construed accordingly.

This report has been prepared by the LCC Geotechnical Team. No individual is personally liable in connection with the preparation of this report. By receiving this report and acting on it, the client or any other person accepts that no individual is personally liable whether in contract, tort, for breach of statutory duty or otherwise.

The LCC Geotechnical Team has used reasonable skill, care and diligence in the design and interpretation of the ground investigation, however, the inherent variability of ground conditions allows only definition of the actual conditions at the location and depths of exploratory holes and samples/tests therefrom, while at intermediate locations conditions can only be inferred.

New information, changed practices or new legislation may necessitate revised interpretation of the report after the date of its submission.



Contents

1.0	INTRODUCTION	6
2.0	DESK STUDY	7
2.1	Site Description.....	7
2.2	Trees.....	7
2.3	Topography.....	7
2.4	Site History	8
2.5	Geology	10
2.6	Hydrology and Hydrogeology.....	11
2.7	Coal Mining.....	12
2.8	Landfill	12
2.9	Radon Protection Measures	12
2.10	Flood Risk.....	12
2.11	Unexploded Ordnance Risk.....	13
2.12	Previous Site Investigations.....	13
2.13	Services	16
	BT Openreach	16
	Cadent Gas.....	16
	SP Electricity North-West.....	16
	United Utilities.....	17
	Virgin Media.....	17
3.0	CONTAMINATED LAND – INITIAL CONCEPTUAL SITE MODEL	19
	Potential Contamination Sources.....	19
	Potential Receptors	20
	Potential Pollutant Pathways	20
	Potential Pollutant Linkages.....	20
4.0	GROUND CONDITIONS	21
4.1	Preliminary Ground Model	21
5.0	REFERENCES	23



Appendix List:

Appendix A	Site Location Plan
Appendix B	Topographical Plans
Appendix C	Site History Information
Appendix D	Geological Maps
Appendix E	Hydrology and Hydrogeology Maps
Appendix F	Coal Mining Map
Appendix G	Landfill Map
Appendix H	Radon Map
Appendix I	Flood Risk Maps
Appendix J	Unexploded Ordnance Risk Map
Appendix K	Past Site Investigation Report
Appendix L	Service Plans



1.0 INTRODUCTION

At the request of the Lancashire County Council (LCC) Estates Team, a site feasibility study has been undertaken for an area of land at Golden Hill (Short Stay) School in Leyland (GR E353026:N422580), located between Leyland Lane and Earnshaw Drive. The location of the site is shown below in Figure 1, and is also enclosed within Appendix A.



Figure 1: Site Location Plan.

The purpose of this feasibility study is to provide a summary of desk study information prior to the sale of the site.



2.0 DESK STUDY

2.1 Site Description

The site is located directly northeast of Golden Hill (Short Stay) School in Leyland. The site is bounded to the northwest by Leyland Lane, and by Earnshaw Drive to the southeast. A footpath extends between Leyland Lane and Earnshaw Drive to the north of the site, the central section of which is located within the site boundary. Lighting columns are located along this footpath.

The majority of the site is comprised of a grassed field, however, the central section is partitioned off with fencing. Within this fenced area is a square section of hardstanding, approximately 35m wide. A footpath extends south from this point, connecting this area with the current school's playground, although the two areas are currently separated by the fencing. A small area of hardstanding is also present in the southeast corner of the site, located adjacent to the school's current car park.

Whilst the site is generally flat, the northeast section of the site is at a slightly lower topographical height in relation to the footway along Earnshaw Drive. The elevation difference appears to be approximately 1.0m.

Trees of varying size, species and maturity are located around the northwest, northeast and southeast perimeter of the site.

2.2 Trees

Various trees of differing species, height and maturity are located along the northwest, northeast and southeast perimeter of the site. Various trees are also located adjacent to the northwest perimeter, between the site and Leyland Lane.

If further information regarding the species of trees located at the site is required, a tree survey should be undertaken.

2.3 Topography

The site is located between approximately 23m AOD and 24m AOD. The site is relatively flat and the surrounding land slopes gently from the east down to the west, towards the River Lostock, at a gradient of approximately 1 in 50.



LiDAR data obtained from the NLS website (shown in Figure 2 below) indicates that the fenced section appears to be located within a shallow cutting, and is located at a slightly lower topographical height than the surrounding land. This topographical difference is particularly prominent in the northeast corner of the site.



Figure 2: A satellite image of the site next to LiDAR data (NLS: <https://maps.nls.uk/>).

Both the Mapzone topographical plan and the above LiDAR imagery are enclosed within Appendix B.

2.4 Site History

Historical maps dating back to the 1840's, accessed via the National Library of Scotland website (<https://maps.nls.uk/>) and LCC's Mapzone have been examined. Aerial photographs from the 1940s, 1960s and 2000s were also examined as part of this study, obtained from LCC's Mapzone and Google Earth.

A summary of the historical information for the site and the area within a 250m radius is shown in Table 1. Copies of the mapping referenced in Table 1 are enclosed within Appendix C.

Map, Date and Scale	Site Description	Regional Setting
Mapzone Basemap 1840's 1:5,000	The majority of the site is comprised of undeveloped agricultural fields, however a small building is marked spanning the southern site boundary.	Leyland Lane and Golden Hill Lane have already been constructed by this time, with various adjacent residential properties. A small road is located south of the site, linking Leyland Lane to the small building along the site's southern border. Ponds are located approximately 105m southwest and 230m east of the site.
Mapzone Basemap 1890's	The buildings along the southern site boundary have changed	Another farm is marked to the east of the site.



Map, Date and Scale	Site Description	Regional Setting
1:5,000	orientation and are now labelled as a farm (Horrock's Farm).	Further residential development has occurred along Leyland Land and Golden Hill Lane, with a mill also constructed approximately 150m north of the site. The pond east of the site appears to have been infilled.
NLS 1909 Lancashire Sheet LXIX.SW 1:10,560	No significant change.	St John's Church, marked as a school, has been constructed directly north of the site. The pond southwest of the site appears to have been infilled. Further residential development is recorded along Leyland Land and Golden Hill Lane.
NLS 1938 Lancashire LXIX.13 1:2,500	No significant change.	Broadfield Drive and Earnshaw Drive have been partially constructed, with the latter extending up to the northeast corner of the site. Further residential development is recorded along Leyland Land and Golden Hill Lane.
Mapzone Aerial Photos (1945 to 1952) 1:5,000	The farm buildings spanning the site boundary appear to have been demolished.	The section of Earnshaw Drive in the vicinity of the site has been partially constructed.
NLS 1955 SD52SW – A 1:10,560	A new building has been constructed at the site, however it is unlabelled at this time. The building also extends slightly south of the site.	The section of Earnshaw Drive in the vicinity to the site remains in a state of partial construction.
NLS 1961 SD5322NW – A 1:10,560 Mapzone Aerial Photos (1960s)	The new building is now labelled as 'Earnshaw Bridge County Infants School'. A playground appears to be recorded at the centre of the site, north of the buildings.	The Earnshaw Drive and Broadfield Drive housing estate has been fully constructed.
Google Earth 2000	No significant change.	St John's Vicarage has been constructed directly north of the site. The area surrounding the school's land, including the footpath to the north, generally reflects the present-day appearance.
Google Streetview (Historical) 2009	A tarmac footway extends northeast, adjacent to the east side of the Earnshaw Bridge County Infants School building.	No significant change.
Google Earth 2020	The Earnshaw Bridge County Infants School building appears recently demolished.	The existing Golden Hill Short Stay School building is shown located approximately 30m southwest of the site.



Map, Date and Scale	Site Description	Regional Setting
Google Earth 2021	The site resembles the present day. A section of hardstanding from the old playground has been left in place. The fencing which bordered the old playground and school building has been left in-situ.	No significant change.
Google Earth 2026	No significant change.	No significant change.

Table 1: Site History Summary.

2.5 Geology

The British Geological Survey (BGS) Sheet 75 (Preston) 1:50,000 Drift map and the BGS Geology Viewer indicate that the superficial deposits underlying the majority of site are cohesive Diamicton glacial till. However, the northeastern corner of the site appears to be underlain by undifferentiated glaciofluvial deposits of sand and gravel with lenses of clay and stony clay. Both superficial deposits formed between 116 thousand years ago and 11.8 thousand years ago during the Quaternary period in ice age conditions.

The BGS Sheet 75 (Preston) 1:50,000 solid series and combined maps, and the BGS Geology Viewer indicate that the site is underlain by the Singleton Mudstone Member, a sedimentary bedrock that formed between 252 million years ago and 241 million years ago, during the Triassic Period. The Singleton Mudstone Member is part of the Sidmouth Mudstone Formation, which itself is part of the Mercia Mudstone Group.

The mapping also records a normal fault bisecting the site in a north-northwest to south-southeast orientation. The northeastern side is recorded as being downthrown.

Sheet 75 (Preston) 1:50,000 Drift and Solid Map (530:226):

(<https://largeimages.bgs.ac.uk/iip/mapsportal.html?id=1004280>)

Sheet 75 (Preston) 1:50,000 Solid Map (530:226):

(<https://largeimages.bgs.ac.uk/iip/mapsportal.html?id=21719015>)

BGS Geology Viewer: (<https://geologyviewer.bgs.ac.uk/>)



The Soilscales website indicates that the topsoil at the site is designated as a slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soil with impeded drainage, a moderate fertility and a low carbon content.

Soilscales: (<https://www.landis.org.uk/soilscales/>)

Copies of the mapping described above are enclosed within Appendix D.

2.6 Hydrology and Hydrogeology

Two watercourses are located within 250m of the site. The first is Bannister Brook, which is located approximately 175m south of the site, and flows from east to west. Secondly, the River Lostock is located approximately 185m northwest of the site, which flows from northeast to southwest. Bannister Brook is culverted between approximately E352781:N421799 and E352676:N421679. After being culverted, the watercourse is then named Mill Brook, which flows into the River Lostock approximately 1.4km southwest of the site.

The Environment Agency Catchment Data Explorer designates the site as being part of the Lostock DS Farington Weir Water Body Catchment Area. This area has been designated as having a moderate ecological status. It failed various chemical tests in 2019, relating to benzo(g-h-i)perylene, mercury and its compounds, perfluorooctane sulphonate (PFOS) and polybrominated diphenyl ethers (PBDE).

Environment Agency Catchment Data Explorer (Lostock DS Farington Weir Water Body):

(<https://environment.data.gov.uk/catchment-planning/WaterBody/GB112070064912>)

The British Geological Survey (BGS) GeoIndex website indicates that the site is underlain by a low productivity aquifer associated with the undifferentiated Triassic rocks.

British Geological Survey (BGS) GeoIndex:

(<https://mapapps2.bgs.ac.uk/geoindex/home.html>)

Magic Maps designates the superficial glacial till deposits underlying the site as a Secondary (undifferentiated) aquifer, and the glaciofluvial deposits as a Secondary A aquifer. The bedrock is designated as a Secondary B aquifer.

Magic Maps: (<https://magic.defra.gov.uk/MagicMap.html>)



Copies of the mapping described above are enclosed within Appendix E.

2.7 Coal Mining

The Mining Remediation Authority Map Viewer indicates that the site is not located within a Coal Mining Reporting Area. Therefore, the site is not considered to be at risk of coal mining related subsidence. A copy of the map is enclosed within Appendix F.

Mining Remediation Authority Map Viewer: (<https://datamine-cauk.hub.arcgis.com/>)

2.8 Landfill

LCC'S Mapzone indicates that no historic landfills have been identified within 250m of the site. However, historic infilled ponds have been identified within this radius. The materials used for this infill are unknown and, if they are biodegradable, the decomposition of these materials may be a source of carbon dioxide, methane and hydrogen sulphide.

A copy of the historic landfill mapping described above is enclosed within Appendix G. For historic mapping, please refer to Appendix C.

2.9 Radon Protection Measures

Radon Maps from ukradon.org indicate that the site lies within the lowest band of radon potential, with less than 1% of homes above the action level.

UKradon: (<https://www.ukradon.org/information/ukmaps>)

A copy of the radon map is enclosed within Appendix H.

2.10 Flood Risk

Maps retrieved from LCC's Mapzone and Gov.uk indicate that the site is located within Flood Zone 1, an area defined as having a low probability of flooding.

Areas of Flood Zones 2 and 3, defined as having a medium to high probability of flooding, are located approximately 40m south and 110m north of the site. These areas are associated with Bannister Brook and the River Lostock, respectively.

Gov.uk Flood Map: (<https://flood-map-for-planning.service.gov.uk/>)

Groundwater flooding maps retrieved from LCC's Mapzone indicate that the site has a very high (>75%) susceptibility to groundwater flooding.



The site generally has a low susceptibility to surface water flooding. However, two linear sections of medium to high susceptibility are located in the southeastern section of the site, which are oriented northeast to southwest. It is likely that these lines correspond with topographical lows on the site, as they correspond with the LiDAR mapping discussed in Section 2.3.

In the wider area surrounding the site, land recording a higher susceptibility to surface water flooding generally forms isolated pockets, which again may be related to topographical low points.

Long Term Flood Risk Map: (<https://check-long-term-flood-risk.service.gov.uk/map>)

Copies of the mapping described above are enclosed within Appendix I.

2.11 Unexploded Ordnance Risk

The Zetica risk map indicates the site is at a low risk of unexploded ordnance and is defined as having less than 15 bombs per 1000 acres or less.

Zetica: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

A copy of the Zetica map is enclosed within Appendix J.

2.12 Previous Site Investigations

An LCC site investigation was undertaken in 2006 to obtain contamination samples prior to the construction of the car park south of the building.





Figure 3: The borehole plan from the 2006 site investigation.

The investigation comprised five boreholes (C1 to C5; see Figure 3 above), drilled to depths of between 1.10mbgl and 1.50mbgl. The boreholes recorded topsoil to between 0.13mbgl and 0.18mbgl, which overlay fill. The fill was comprised of variable material, including clayey silty soil, firm sandy silty clay and brick rubble, to maximum depths of between 0.56mbgl and 1.50mbgl. Natural clayey silty sand was then recorded in three boreholes (C1, C2 and C5) to maximum depths of between 1.30mbgl to 1.60mbgl. Natural firm to stiff sandy silty clay was recorded in the remaining two boreholes (C3 and C4) to maximum depths of 1.10mbgl and 1.20mbgl.

Water entries were recorded in Boreholes C2 and C5 at 1.30mbgl and 1.50mbgl respectively, with the other boreholes remaining dry.



The laboratory chemical test results were compared to assessment criteria available at the time of writing the report, which have now been superseded and are no longer considered applicable for contamination assessment. Based on a comparison of the laboratory chemical test results with these out of date assessment criteria, borehole C5 was found to be slightly above the Contaminated Land Exposure Assessment (CLEA) Soil Guideline Value (SGV) for arsenic and it was assessed that, since this soil was now covered by tarmac hardstanding, the pathway between the contaminant and the receptor is blocked and, therefore, no longer poses a risk to human health.

Values were also compared with the figures in the HSE document 'Protection of Workers and the General Public During the Development of Contaminated Land', which are now out of date and considered no longer applicable. Based on a comparison of the laboratory chemical test results with these out-of-date assessment criteria, boreholes C1 and C3 recorded slight nickel contamination, with C5 recording slight cadmium, mercury and nickel contamination.

Lastly, values were compared with those from the EA document 'Guidance for waste destined for disposal in landfills', which are now out of date and considered no longer applicable. Based on this assessment, most of the soils tested were determined to be inert. However, the recorded value for antimony from Borehole C5 was found to be double the value for inert waste. This sample corresponded to the brick fill, which was classified as non-hazardous for a landfill site.

Please be aware that the above contamination assessment was made using out of date assessment criteria and site conditions at the time of the 2006 investigation. Therefore, the above assessment may not be representative of current site conditions using current contamination assessment criteria. An updated contamination risk assessment may amend the previously identified risks to human health and other receptors and provide a different waste classification of the soils. Therefore, the 2006 assessment conclusions and recommendations summarised above should be treated with caution.

A copy of this site investigation report, which includes the chemical testing results, is enclosed within Appendix K.

The BGS GeoIndex does not indicate the presence of any boreholes within the vicinity of the site.



2.13 Services

Statutory service records in the vicinity of the site are described below. Plans of these services are enclosed in Appendix L.

BT Openreach

Underground cables are located on Earnshaw Drive, along the northeastern boundary. This cable is located between the footpath and carriageway, possibly in the verge. An overhead pole, with an adjacent underground box, is located along this section. The service plan also shows a planned cable, assumed to be overhead, extending between this pole and the next pole located approximately 85m southwest of the site.

Underground cables and boxes are also located along the verge southeast of Leyland Lane. An additional underground cable with multiple boxes diverges from the main cable adjacent to Golden Hill (Short Stay) School. The cable extends across the playground and supplies the school building at approximately E352983:N422528. An isolated overhead pole is located adjacent to the north of the playground entrance from Leyland Lane.

Cadent Gas

Along Earnshaw Drive, a 75mm PE low pressure pipe is located within the southeast footway. A low pressure 63mm PE pipe is located within the northern footway north of the northeastern site boundary. Opposite the footpath through to Leyland Lane, it crosses to the southeast footway and does not extend further southwest.

Along Leyland Lane, a 180mm PE Open Cut low pressure pipe is located along the southeastern edge of the carriageway. Parts of this pipe diverge, with a valve present on these sections, north of the Leyland Lane playground entrance and south of the school building. The latter supplies the school building at its southwest corner.

A 2in PE Open Cut low pressure pipe diverges from the 180mm PE Open Cut low pressure pipe directly north of the site boundary, extending east across the access road of St John's Vicarage.

SP Electricity North-West

Low voltage (LV) cables are located within the southeast footway of Leyland Lane, which originate north of the site and terminate at approximately E352974:N422609.



This cable splits, extending east down the footpath at the north edge of the site, however it diverts north between St John's Church and St John's Vicarage. This cable then supplies the Vicarage. Another LV cable extends across the length of the school's playground.

LV cables are also located along the southeastern footway of Earnshaw Drive. This cable occasionally splits, with the secondary cables extending across the carriageway and into either the northern footway or the properties northeast of the site. One of these cables branches off west and down the footpath, terminating at approximately E353058:N422615. Another of these cables extends into the site in a northwest-southeast orientation at approximately E353041:N422532. This cable terminates at the location of the historic fence within the site.

United Utilities

A 110mm PE 1994 clean water pipe is present within the carriageway of Leyland Lane. A commercial meter is located directly north of the car park entrance. Another 110mm PE clean water pipe is located along Earnshaw Drive, which is situated along the northern footway, but is only present to the northeast of the site. Opposite the footpath, it diverts across the road and extends south below the southeastern footway. Occasional hydrants are recorded along both pipes.

A surface water sewer is located within the carriageway of Leyland Lane. Another is located within the southeastern footway of Earnshaw Drive.

A combined sewer is located within the carriageway of Leyland Lane. Another is located within the carriageway of Earnshaw Drive, but is only present north of House No. 16, and does not extend adjacent to the site.

A foul water sewer is located within the carriageway and northwestern footway of Earnshaw Drive, to the south of the site. This pipe does not extend any further north than House No. 33.

Virgin Media

Underground cables and chambers are located along the southeastern footway of Leyland Lane, adjacent to the northwestern site boundary, and are also located on the opposite side of Leyland Lane. Underground cables and chambers are also present along the southeastern footway of Earnshaw Drive. An underground cable is present



along the northern footway of Earnshaw Drive, which originated from the junction with Broadfield Drive. This cable terminates outside Earnshaw Drive House No. 18, near the northeastern site boundary. It does not extend southeast past the site.



3.0 CONTAMINATED LAND – INITIAL CONCEPTUAL SITE MODEL

An initial Conceptual Site Model (CSM) has been developed from the available information which has been used to identify potential sources, receptors and pathways present at the site.

Potential Contamination Sources

Potential sources of contamination identified by the desk study process include:

- Previous agricultural site uses, including herbicides, pesticides, possible oil/fuel spillages or leaks and waste disposal.
- Contamination associated with nearby road use and fuel/oil spillages.
- Historical infilled ponds were identified within a 250m radius of the site, which have been filled with unknown materials. They are a potential source of contamination and ground gas.
- Current and previous site use as a school, including possible oil/fuel spillages or leaks and potential for contaminated materials from the various stages of construction.
- Contamination associated with the demolition of the historic school building which may have deposited contaminants, including asbestos, across the site.

The principal contaminants of concern associated with the potential contamination sources are shown in Table 2.

Area of site	Metals							Others			Hydrocarbons	
	As	Cd	Cr	Cu	Pb	Ni	Zn	Sulphide	Asbestos	pH	Oil/fuel hydrocarbons	PAHs
Farmland	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Highways	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
School construction/ use	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Building demolition	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 2: The Principal Potential Contaminants of Concern.



Heavy metal contamination has also been confirmed to exist at the school site during the 2006 ground investigation, although this was conducted using out of date assessment criteria.

Potential Receptors

Potential human or controlled water receptors were identified as:

- Local residents of properties adjacent to the school;
- Students and staff at the adjacent school;
- Construction workers involved in the scheme.

Potential controlled water receptors were identified as:

- The low productivity aquifer associated with the Singleton Mudstone Member.

Potential property receptors were identified as:

- Any future buildings and infrastructure developed at the site.

Potential Pollutant Pathways

The following pathways were considered relevant for human receptors:

- Dermal absorption and/or ingestion.
- Ingestion and/or inhalation of dust.
- Indoor/outdoor inhalation pathways.

The following pathways were considered relevant for controlled water receptors:

- Unsaturated zone transport of pore-water to groundwater.
- Saturated zone transport of soluble contaminants in groundwater.
- Contamination migration along pipes, drains, culverts, pipes etc.

Potential Pollutant Linkages

The initial CSM developed during the desk study identified several sources, pathways and receptors and, as such, Potential Pollutant Linkages (PPLs) are considered likely to exist at the site. Therefore, it is recommended that these PPLs are assessed by undertaking an appropriate level of ground investigation at the site. As there is the potential for ground gas contamination, as identified from historical infilled ponds



located within 250m of the site, it is recommended that a suitable programme of ground gas monitoring is undertaken during any future ground investigation to determine the requirement for gas protection measures for any new structures. The scope of ground investigation and programme of gas monitoring would be dependent on the scope of the proposed development for the site.

4.0 GROUND CONDITIONS

An assessment of the ground conditions underlying the site has been made based on available information from the LCC archives and geological maps.

4.1 Preliminary Ground Model

Topsoil

It is expected that topsoil would be encountered across the majority of the site, in areas with visible grass. However, sections of this are located in areas where previous construction and excavation have occurred, particularly along the eastern part of the site. As such, the topsoil in these areas would likely not be natural.

Made Ground

As mentioned above, much of the topsoil, particularly around the eastern section of the site, would be expected to be made ground. Made ground would also be expected within the footprint of the past school structure, and underlying the current hardstanding areas. The latter would be expected to comprise the subbase for the hardstanding.

Additionally, the 2006 site investigation confirmed the presence of made ground south of the site. The made ground topsoil was recorded to a maximum depth of 0.18mbgl. The underlying made ground was comprised of variable material, including clayey silty soil, firm sandy silty clay and brick rubble, to maximum depths of between 0.56mbgl and 1.50mbgl.

Superficial Deposits

Geological maps suggest that the majority of the site is underlain by glacial till comprising cohesive clay. The natural firm to stiff sandy silty clay which was recorded to a maximum depth of ≥ 1.20 mbgl in the 2006 site investigation may be this cohesive glacial till.



However, the past site investigation also indicates that shallow granular layers of natural clayey silty sand may be encountered within the areas designated as being underlain by glacial till. These layers may be isolated lenses of granular glacial till, which were recorded between depths of $\geq 1.30\text{mbgl}$ and $\geq 1.60\text{mbgl}$.

The geological mapping suggested that the northeastern corner of the site is underlain by glaciofluvial deposits, comprised of sand and gravel with occasional clay lenses.

Bedrock

Based on the geological mapping, the bedrock is expected to be the Singleton Mudstone Member. As mentioned in Section 2.5, the Singleton Mudstone Member is part of the Sidmouth Mudstone Formation. The Sidmouth Mudstone Formation is then part of the Mercia Mudstone Group. As detailed in the British Geological Survey document "Engineering geology of British rocks and soils – Mudstones of the Mercia Mudstone Group", the Mercia Mudstone Group is known to record high levels of sulphate, which is attributed to localised layers of gypsum.



5.0 REFERENCES

1. British Geological Survey GeoIndex: (<https://mapapps2.bgs.ac.uk/geoindex/home.html>)
2. British Geological Survey Geology Viewer: (<https://geologyviewer.bgs.ac.uk/>)
3. British Geological Survey Sheet 75 (Preston) 1:50,000 Drift and Solid Map: (<https://largeimages.bgs.ac.uk/iip/mapsportal.html?id=1004280>)
4. British Geological Survey Sheet 75 (Preston) 1:50,000 Solid Map: (<https://largeimages.bgs.ac.uk/iip/mapsportal.html?id=21719015>)
5. BS 8485:2015 Code of practice for the design of protective measures for methane and carbon dioxide ground gasses for new buildings.
6. BS8576: Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs)
7. CIRIA C665 – Assessing risks posed by hazardous ground gases to buildings
8. Contaminated Land: Applications in Real Environments (CL:AIRE), SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Final Project Report (Revision 2), 2014.
9. Engineering geology of British rocks and soils – Mudstones of the Mercia Mudstone Group. *British Geological Survey Research Report* (Hobbs P R N et al. 2002).
10. Environment Agency Catchment Data Explorer (Lostock DS Farington Weir Water Body): (<https://environment.data.gov.uk/catchment-planning/WaterBody/GB112070064912>)
11. Gov.uk Flood Map: (<https://flood-map-for-planning.service.gov.uk/>)
12. Gov.uk Long Term Flood Risk Map: (<https://check-long-term-flood-risk.service.gov.uk/map>)
13. LQM and CIEH, The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015.
14. Magic Maps: (<https://magic.defra.gov.uk/MagicMap.html>)
15. Mining Remediation Authority Map Viewer: (<https://datamine-cauk.hub.arcgis.com/>)
16. National Library of Scotland: <https://maps.nls.uk/>
17. Soilscape: (<https://www.landis.org.uk/soilscape/>)
18. UKradon: (<https://www.ukradon.org/information/ukmaps>)
19. Zetica: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)



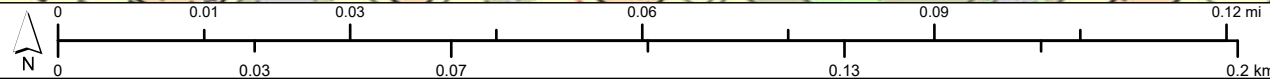
Appendix A

Site Location Plan

Land at Golden Hill

Author:

Date Created: 23/07/2026

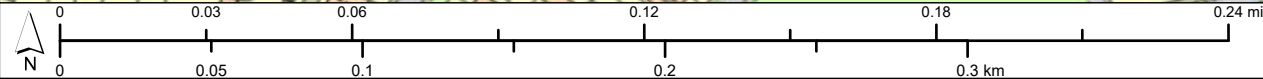


Map Scale: 1:1,250
Map Centre: 353018E 422586N

Land at Golden Hill

Author:

Date Created: 23/07/2026



Map Scale: 1:2,500
Map Centre: 353036E 422590N

Appendix B

Topographical Plans

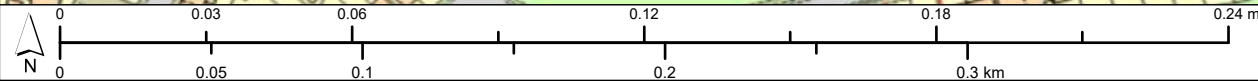
Topo

Author:

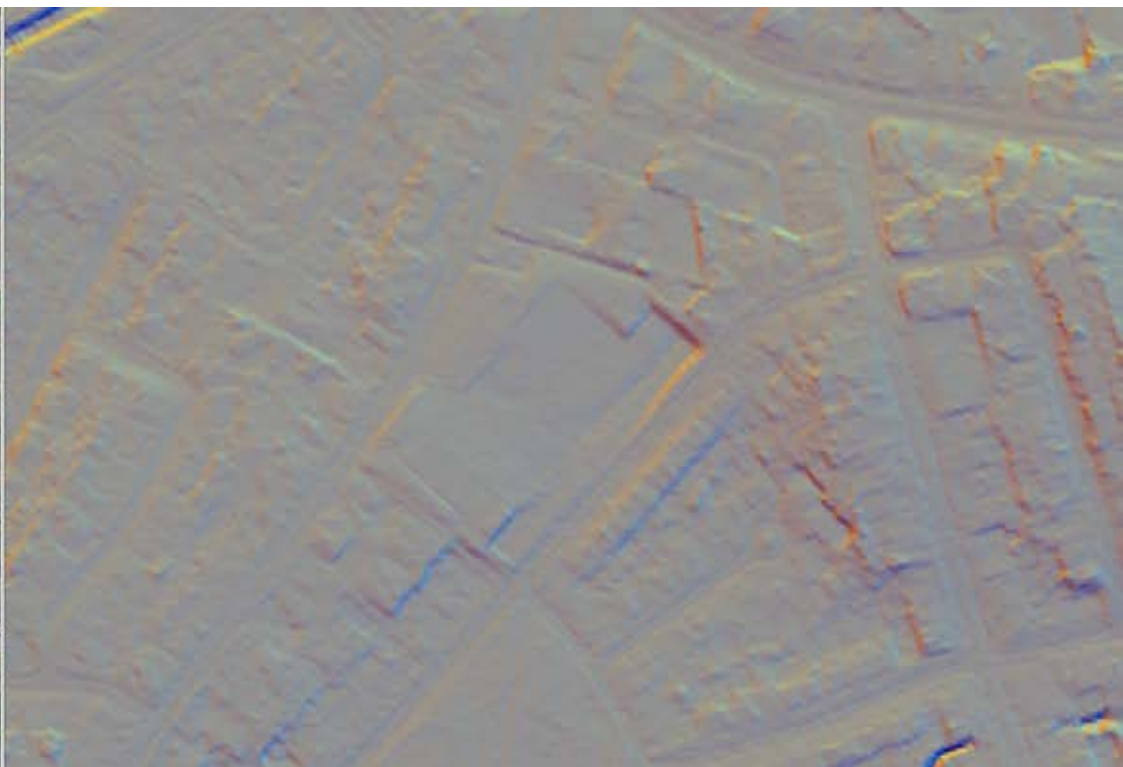
Date Created: 23/07/2026



— Contours 5m



Map Scale: 1:2,500
Map Centre: 353033E 422574N



Appendix C

Site History Information

NLS Lancashire Sheet 69, 1846



Lancashire Sheet 69
Surveyed: 1844 to 1846, Published: 1846
Size: map 61 x 92 cm (ca. 24 x 36 inches), on sheet ca. 70 x 100 cm (28 x 40 inches)

Maps home > Ordnance Survey > OS Six-Inch England and Wales, 1842-1952



Lancashire Sheet LXIX.SW, 1894



Lancashire Sheet LXIX.SW
Surveyed: 1893, Published: 1894
Size: map 31 x 46 cm (ca. 12 x 18 inches), on sheet ca. 43 x 58 cm (ca. 17 x 23 inches)

ne > Ordnance Survey > OS Six-Inch England and Wales, 1842-1952



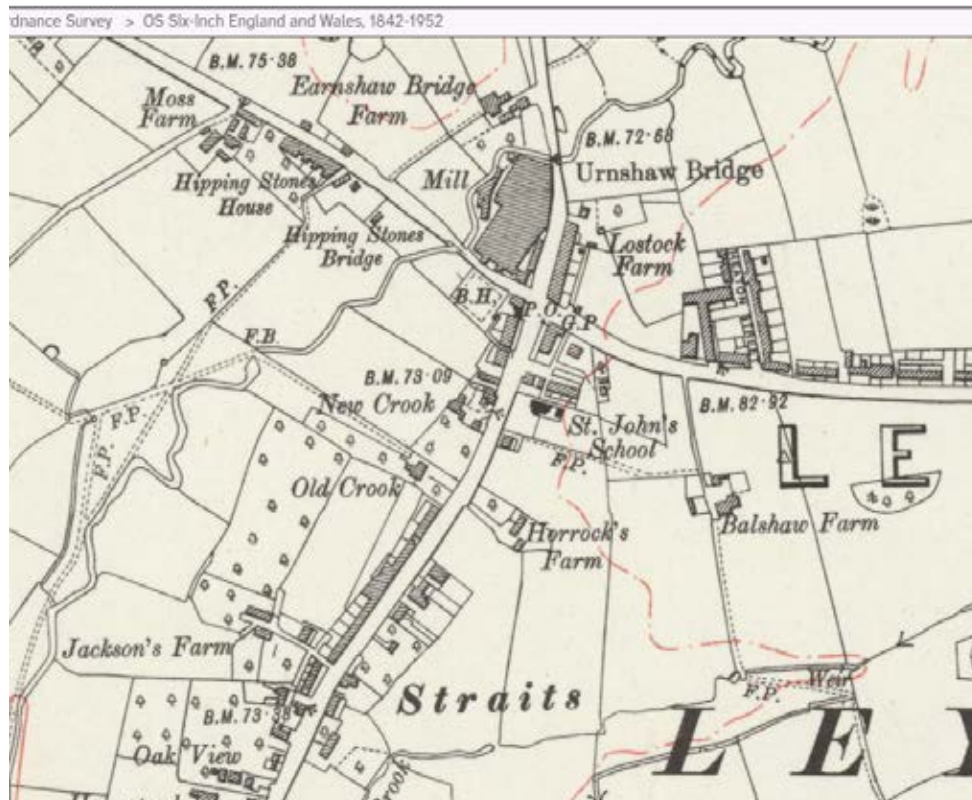
NLS Lancashire Sheet LXIX.SW, 1909

 National Library of Scotland
Leabhrairinn Nàiseanta na h-Alba
Lancashire Sheet LXIX.SW
Revised: 1909, Published: 1912
Size: map 31 x 46 cm (ca. 12 x 18 inches), on sheet ca. 43 x 58 cm (ca. 17 x 23 inches)



NLS Lancashire Sheet LXIX.SW, 1928

 National Library of Scotland
Leabhrairinn Nàiseanta na h-Alba
Lancashire Sheet LXIX.SW
Revised: 1928, Published: 1931
Size: map 31 x 46 cm (ca. 12 x 18 inches), on sheet ca. 43 x 58 cm (ca. 17 x 23 inches)



NLS Lancashire Sheet LXIX.SW, 1938

Lancashire LXIX.13
Revised: 1938, Published: 1940
Size: map 64.4 cm x 96.6 cm (25.344 x 38.016 inches), on sheet ca. 76 x 104 cm (ca. 30 x 41 inches)

Survey > OS 25 Inch England and Wales, 1841-1952



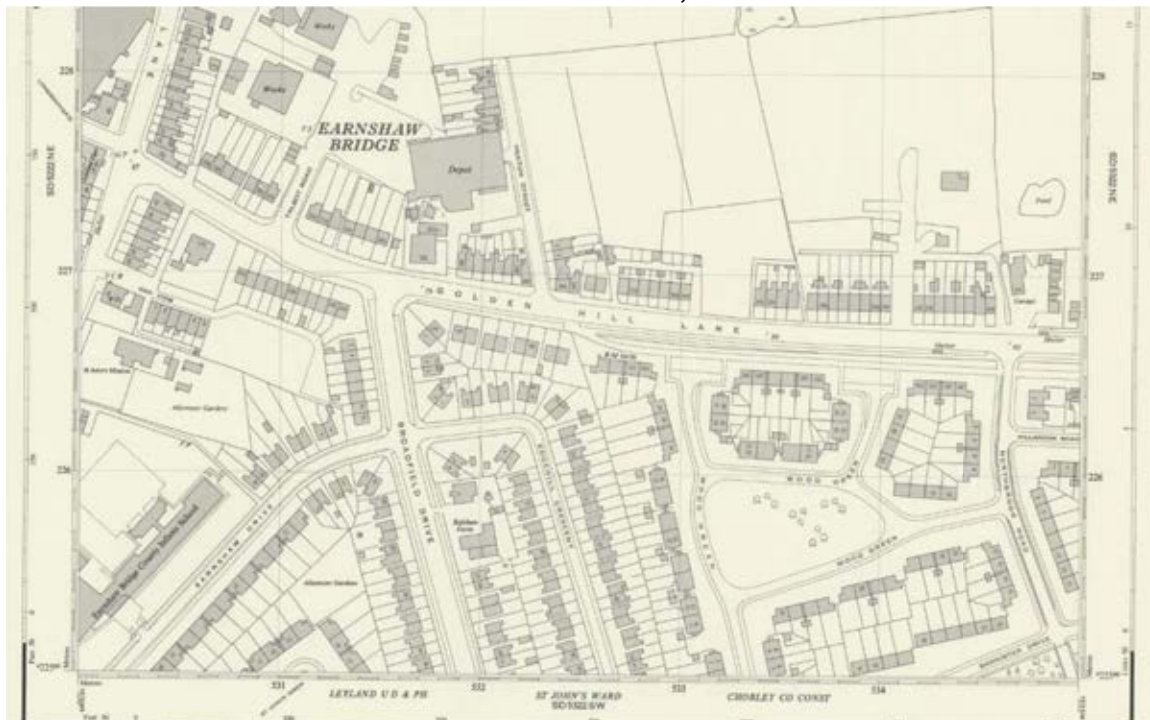
NLS Lancashire Sheet LXIX.SW, 1938

Lancashire Sheet LXIX.SW
Revised: 1938, Published: 1949
Size: map 31 x 46 cm (ca. 12 x 18 inches), on sheet ca. 43 x 58 cm (ca. 17 x 23 inches)

Survey > OS Six-inch England and Wales, 1842-1952



NLS SD5322NW – A, 1961



NLS SD5222-SD5322 – AA, 1962

National
Library of
Scotland

Leabharlann
Nàiseanta
na h-Alba

SD5222-SD5322 - AA

Revised: 1960 to 1962, Published: 1963

Size: map 40 x 80 cm (16 x 32 inches), on sheet ca. 56 x 96 cm (ca. 22 x 38 inches)

home > Ordnance Survey > National Grid maps, 1944-1975

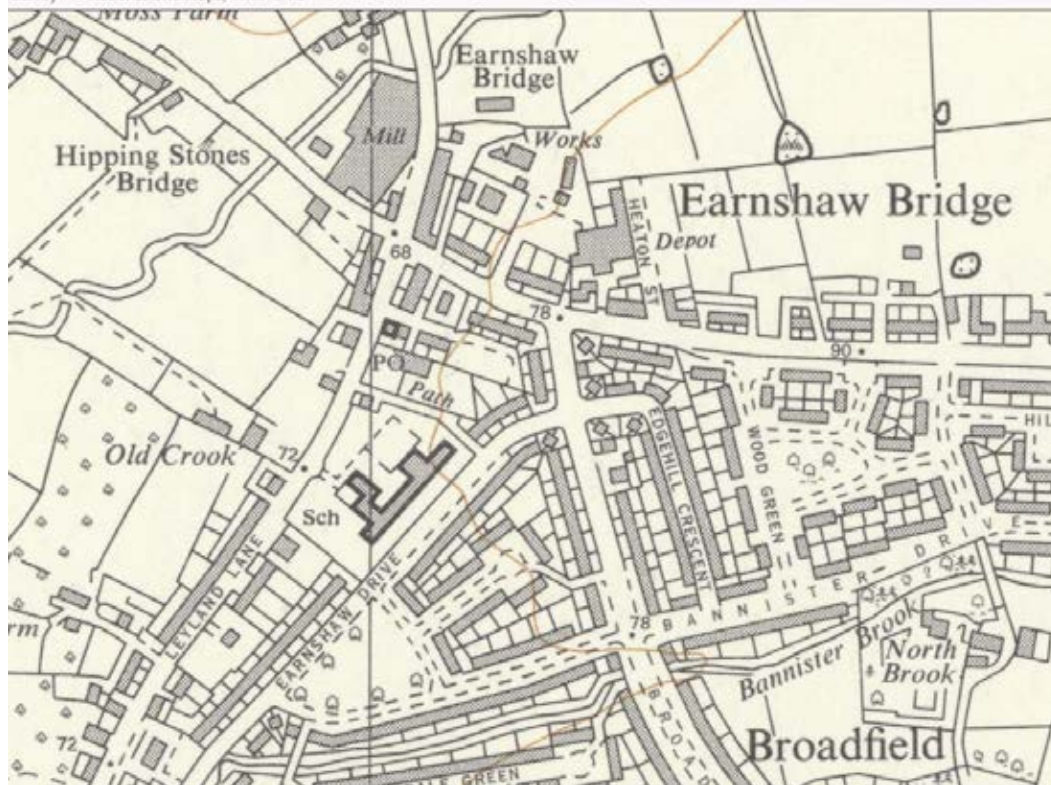


NLS SD52SW – A, 1965

artann
inta
lba

SD52SW - A
Surveyed / Revised: 1960 to 1965, Published: 1967
Size: map 47-50 x 47-50 cm (ca. 19 x 20 inches), on sheet ca. 68 x 58 cm (27 x 23 inches)

Survey > National Grid maps, 1944-1975



NLS SD5222-SD5322 – BB, 1967

National
Library of
Scotland

Leabharlann
Nàiseanta
na h-Alba

SD5222-SD5322 - BB
Revised: 1961 to 1967, Published: 1968
Size: map 40 x 60 cm (16 x 32 inches), on sheet ca. 56 x 96 cm (ca. 22 x 38 inches)

ome > Ordnance Survey > National Grid maps, 1944-1975



1840's Mapping

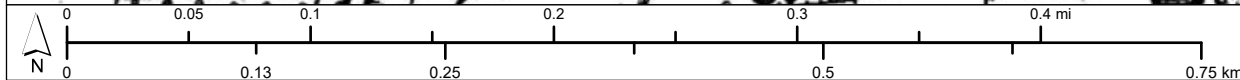
Author:

Date Created: 30/07/2026



1840s OS First Edition
1:10560 Mapping

Value

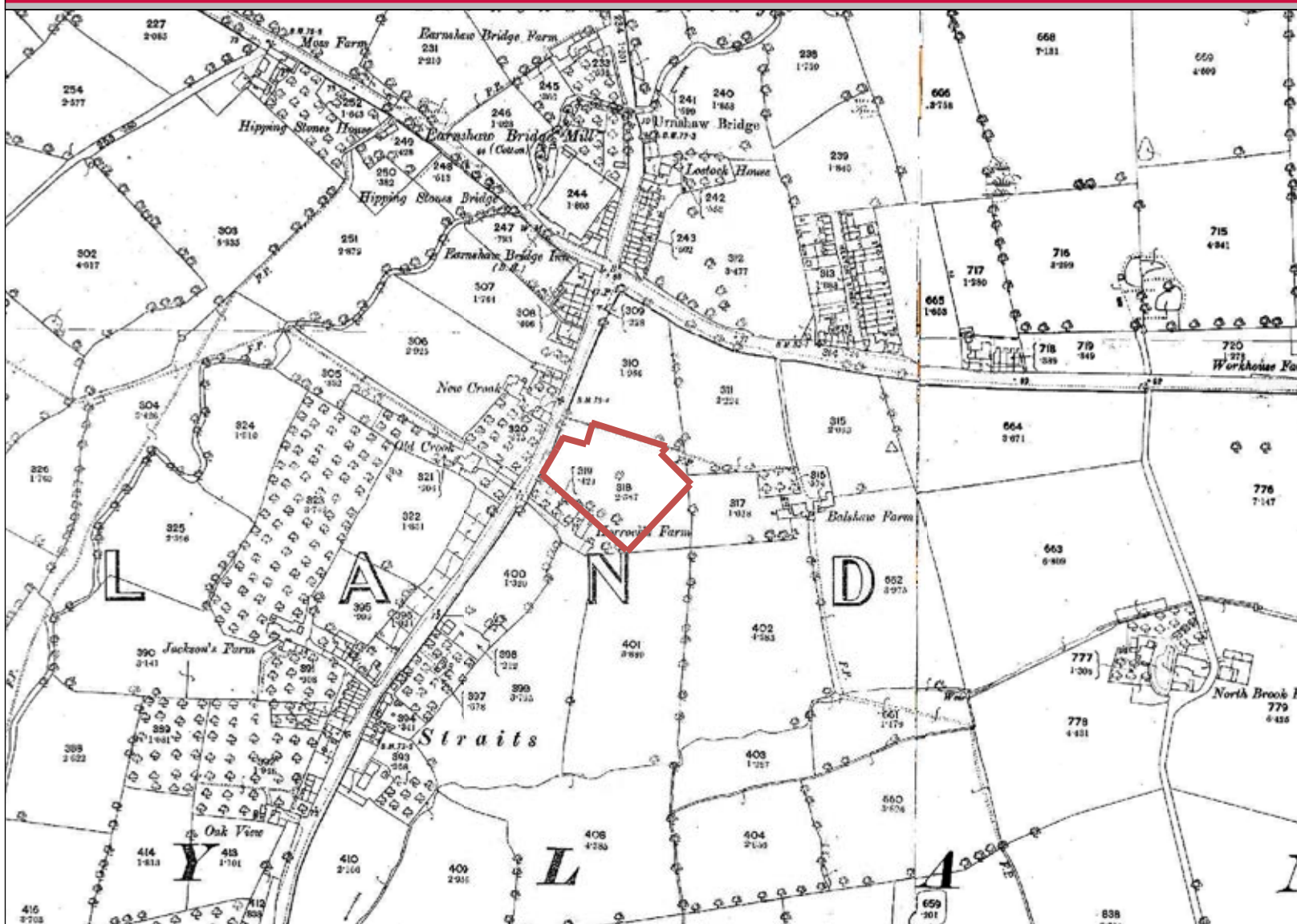


Map Scale: 1:5,000
Map Centre: 353063E 422596N

1890's Mapping

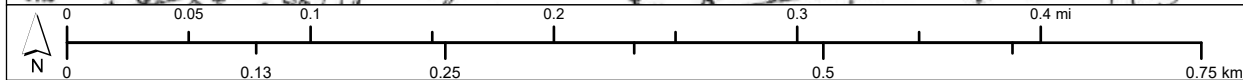
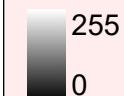
Author:

Date Created: 30/07/2026



1890s OS First Edition
1:2500 Maps

Value



Map Scale: 1:5,000
Map Centre: 353063E 422596N

1940's Aerial

Author:

Date Created: 30/07/2026



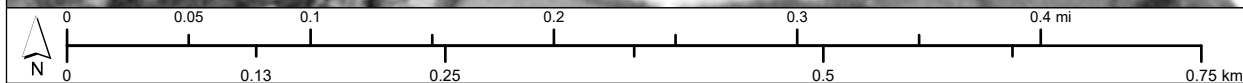
Aerial Photography
1940s

RGB

Red: Red

Green: Green

Blue: Blue



Map Scale: 1:5,000
Map Centre: 353063E 422596N

1960's Aerial

Author:

Date Created: 30/07/2026



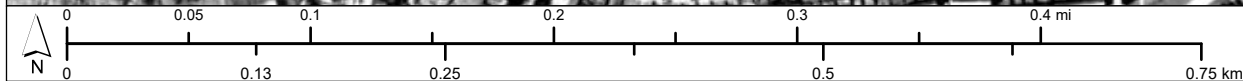
Aerial Photography
1960s

RGB

Red: Red

Green: Green

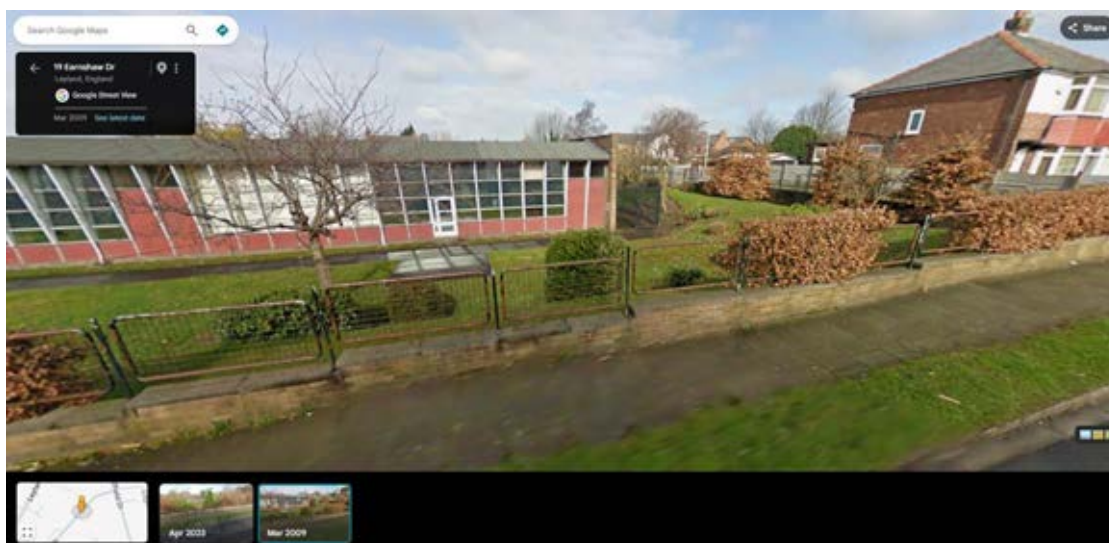
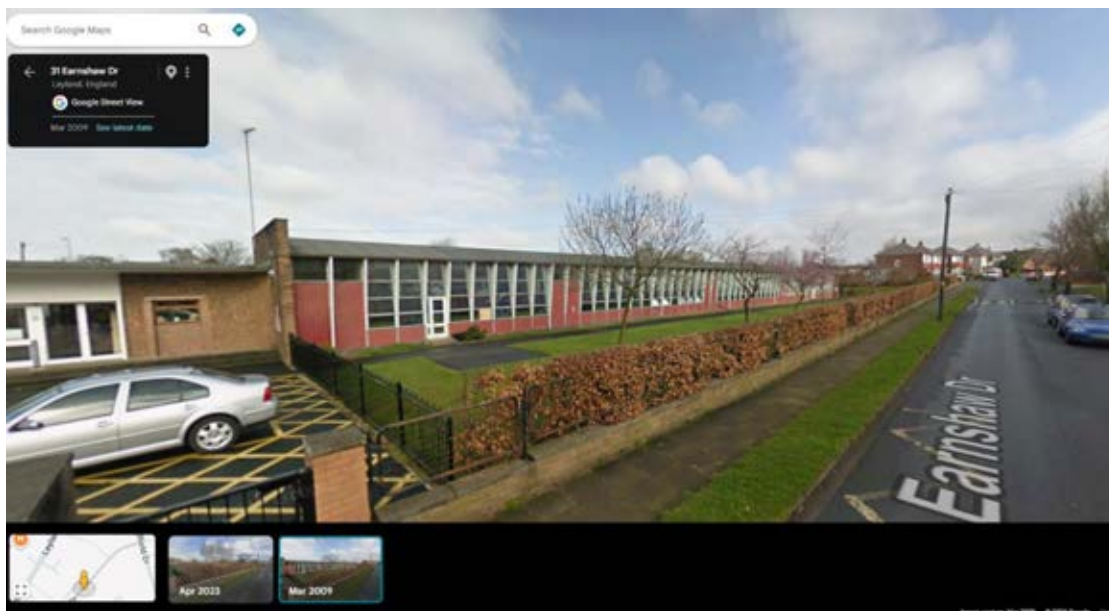
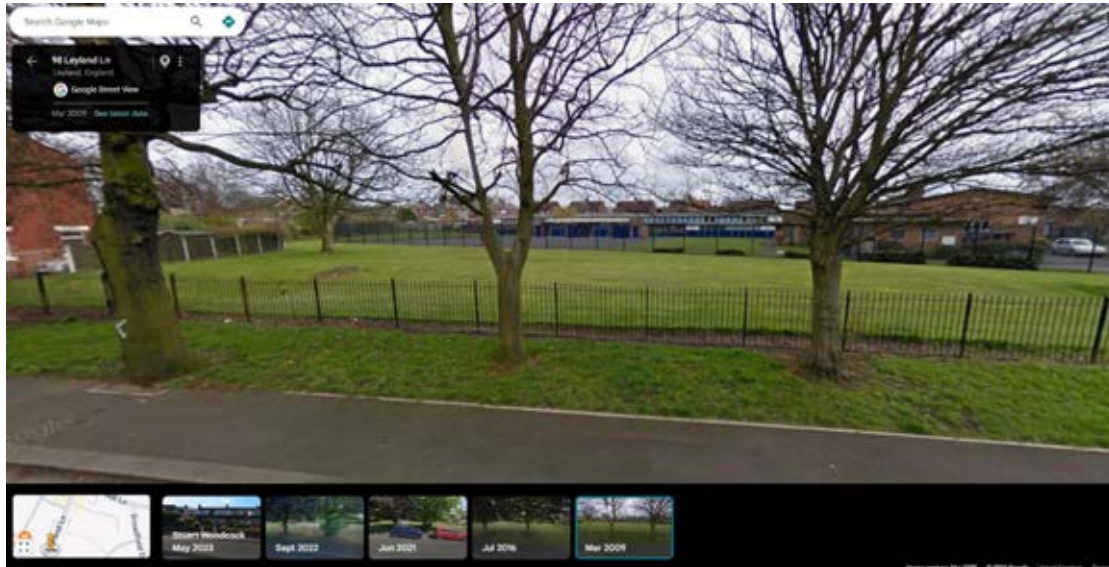
Blue: Blue



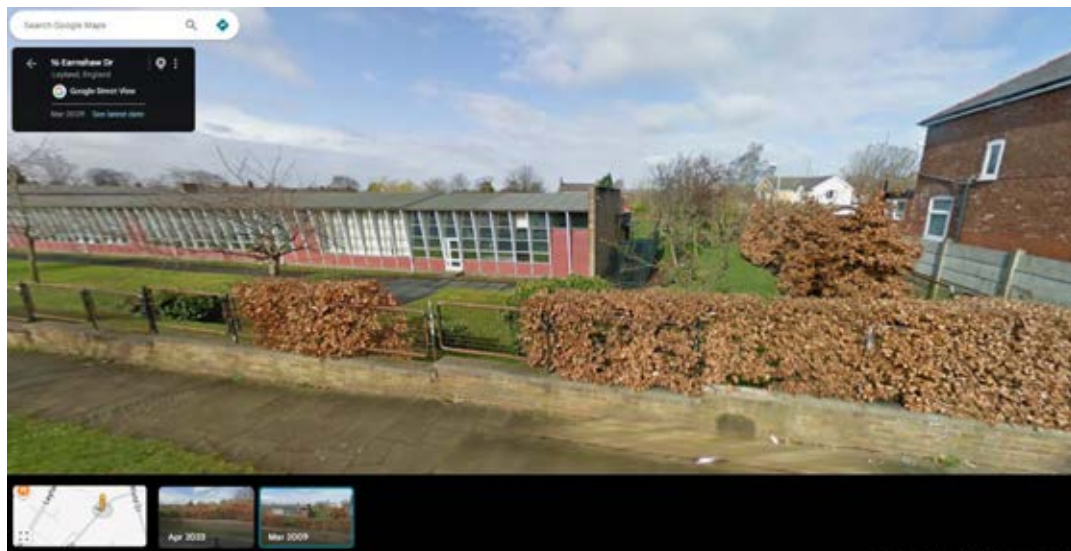
Map Scale: 1:5,000
Map Centre: 353063E 422596N

Historical Google Streetview Imagery

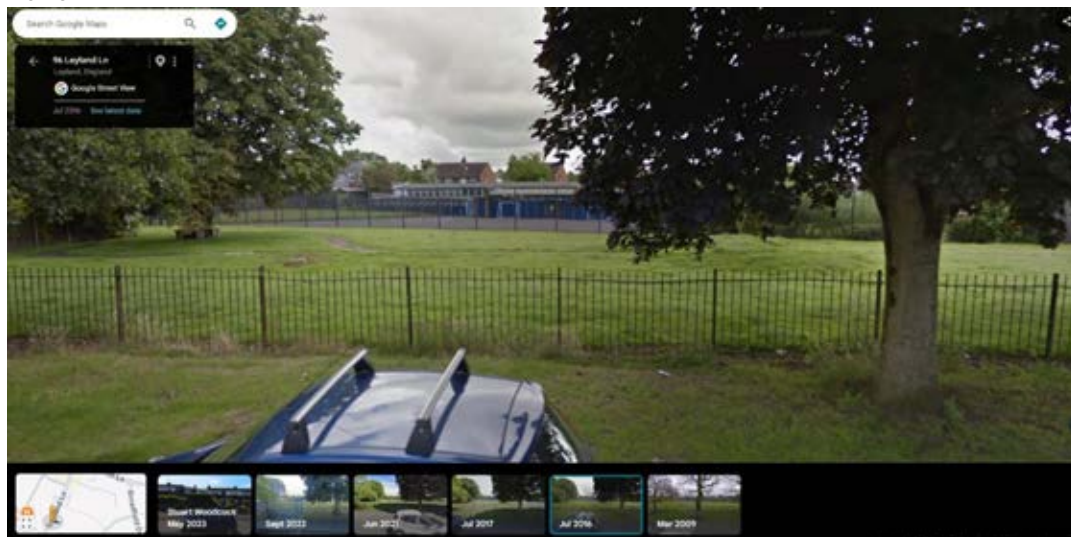
2009



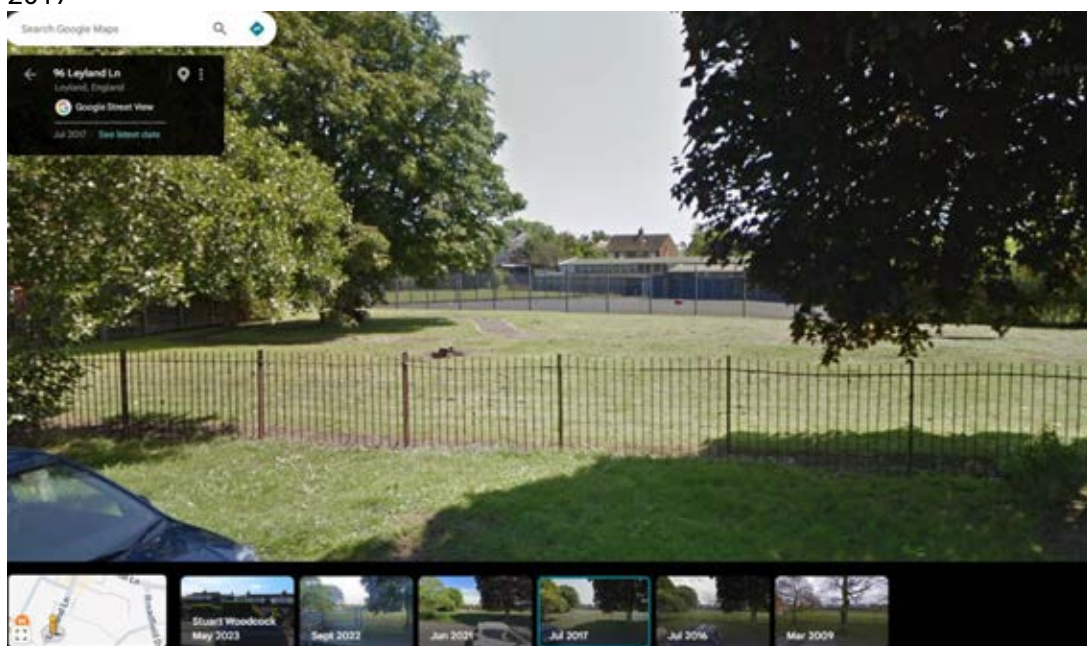
Historical Google Streetview Imagery



2016

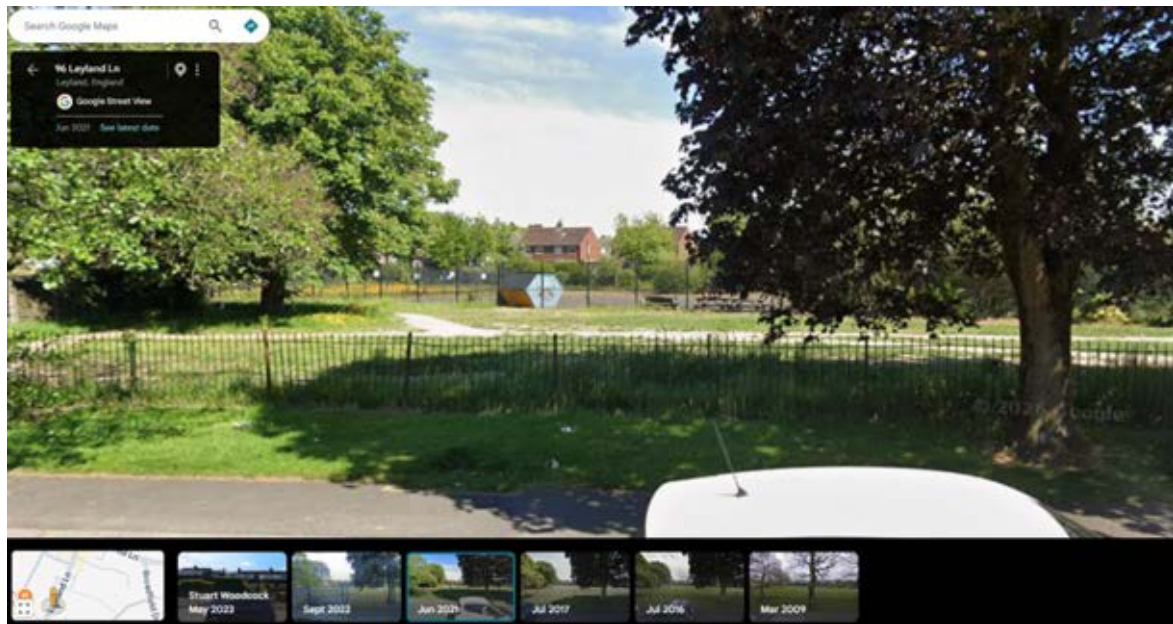


2017

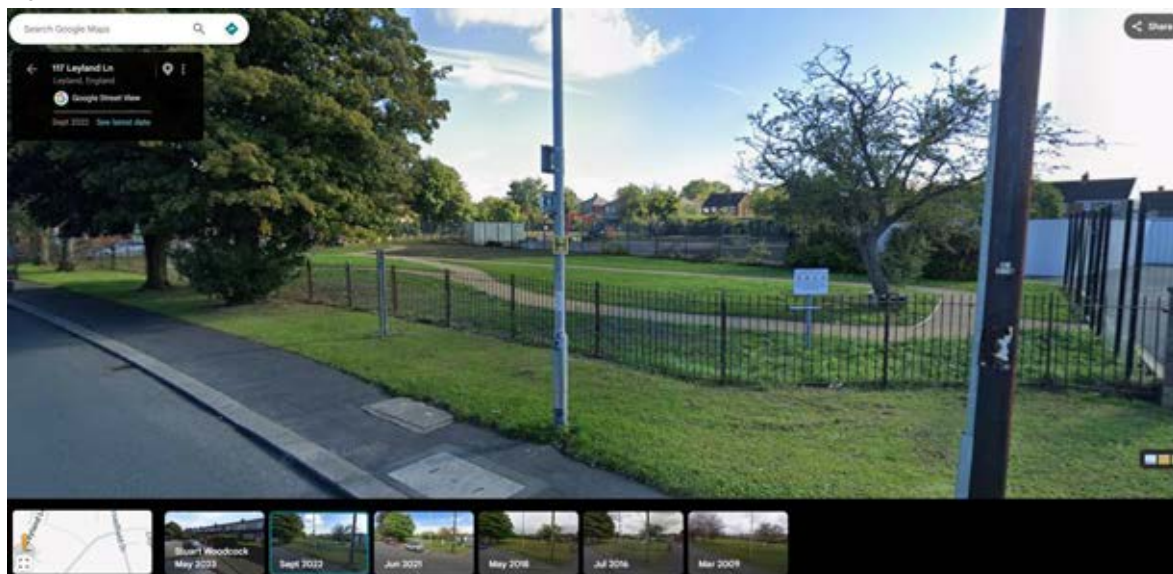


Historical Google Streetview Imagery

2021

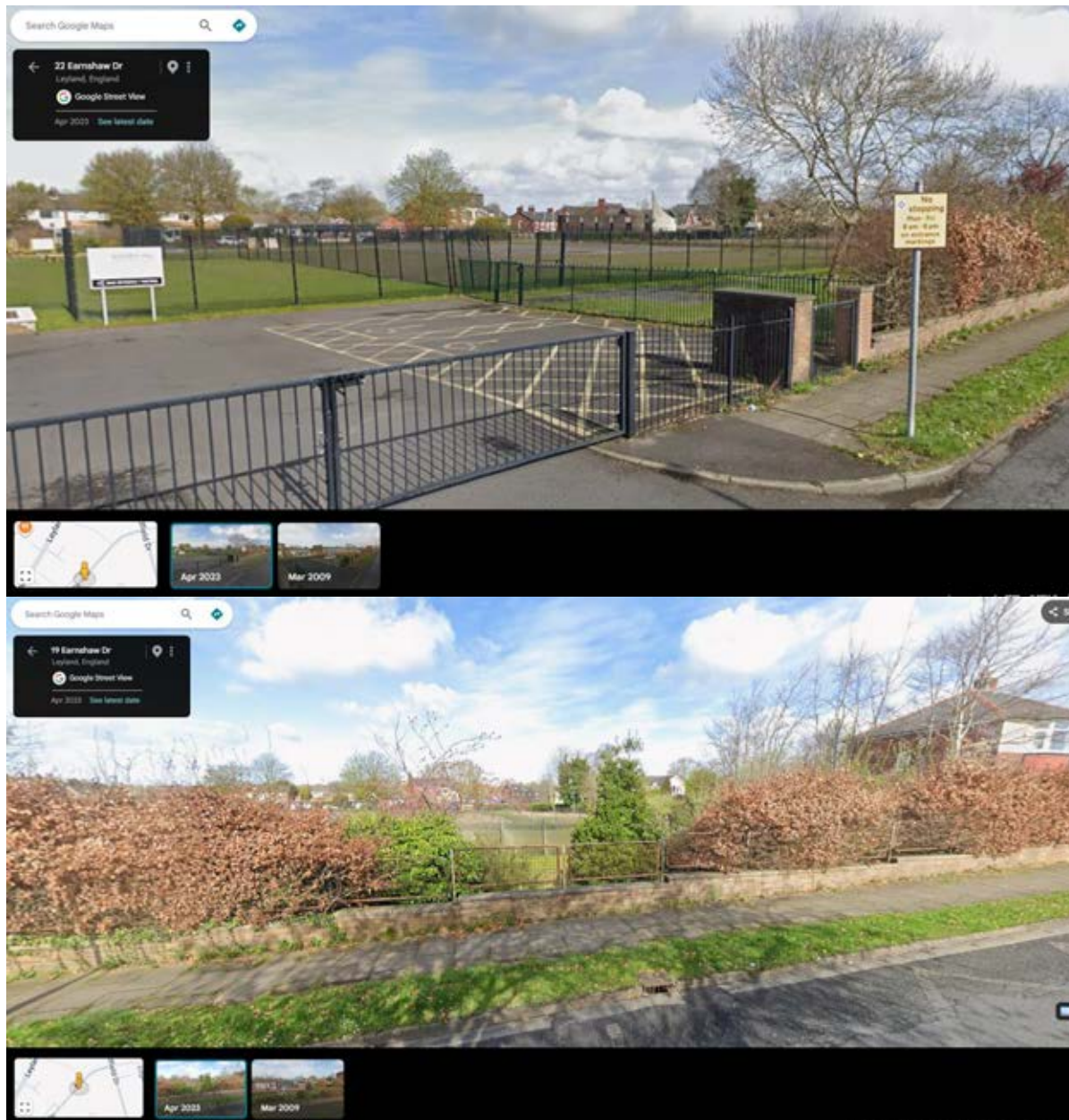


2022



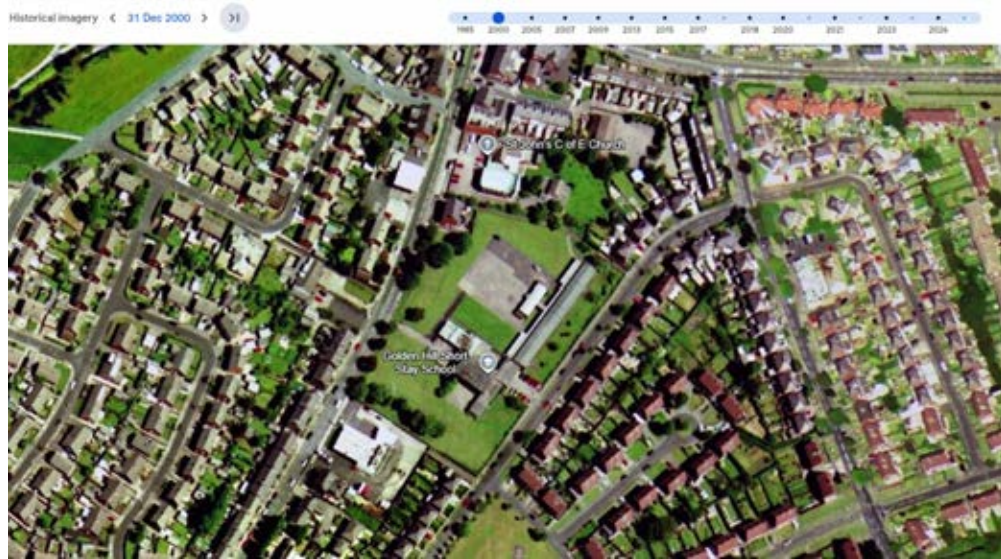
Historical Google Streetview Imagery

2023

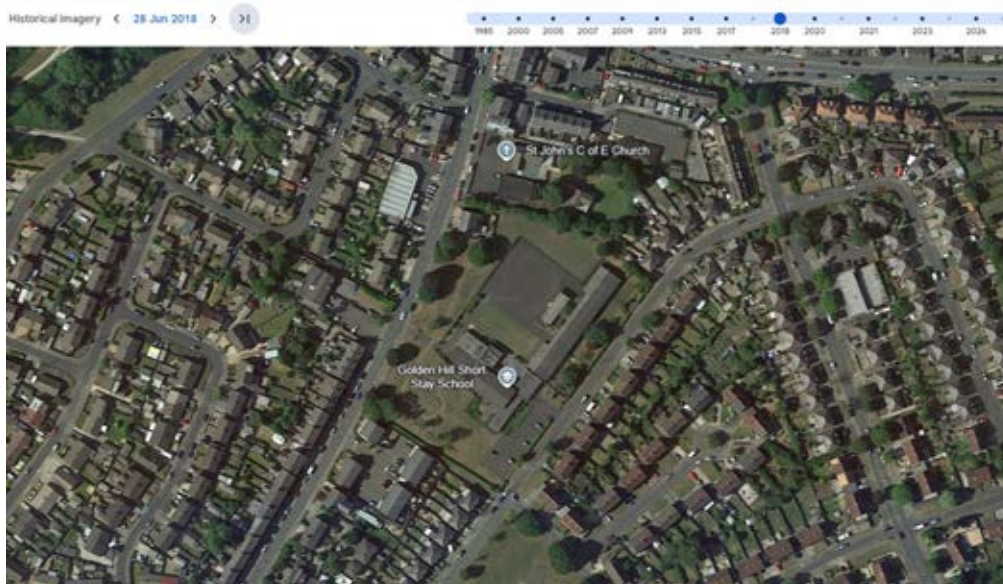


Google Earth Imagery

2000



2018

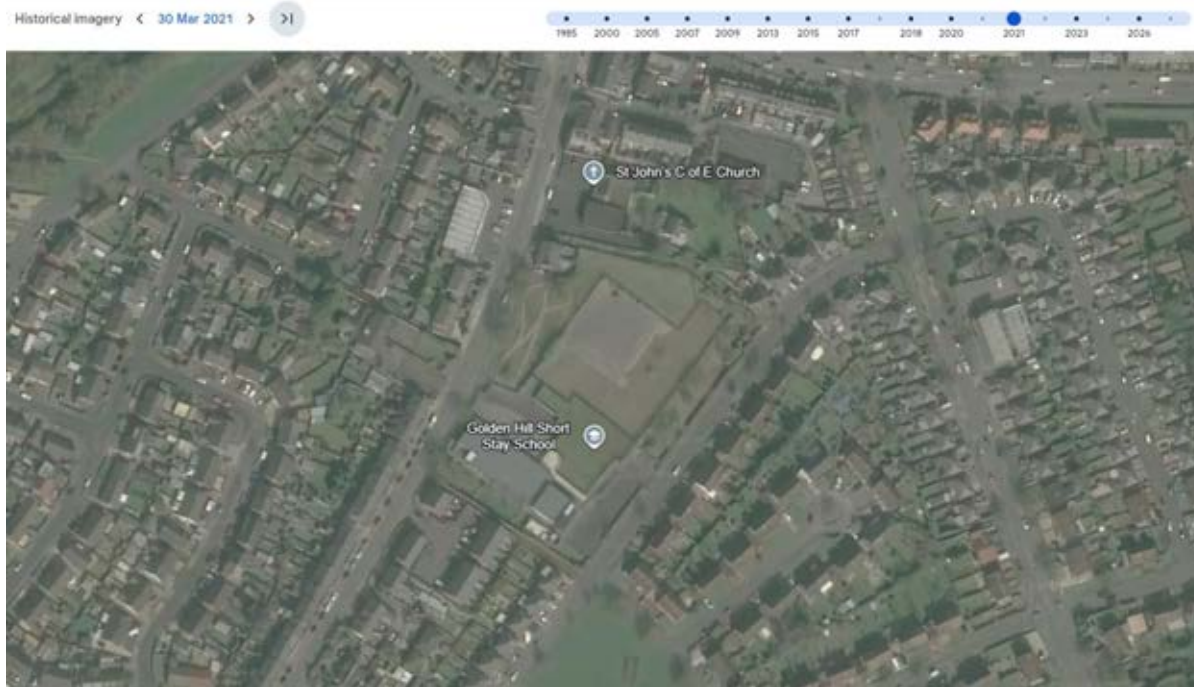


2020

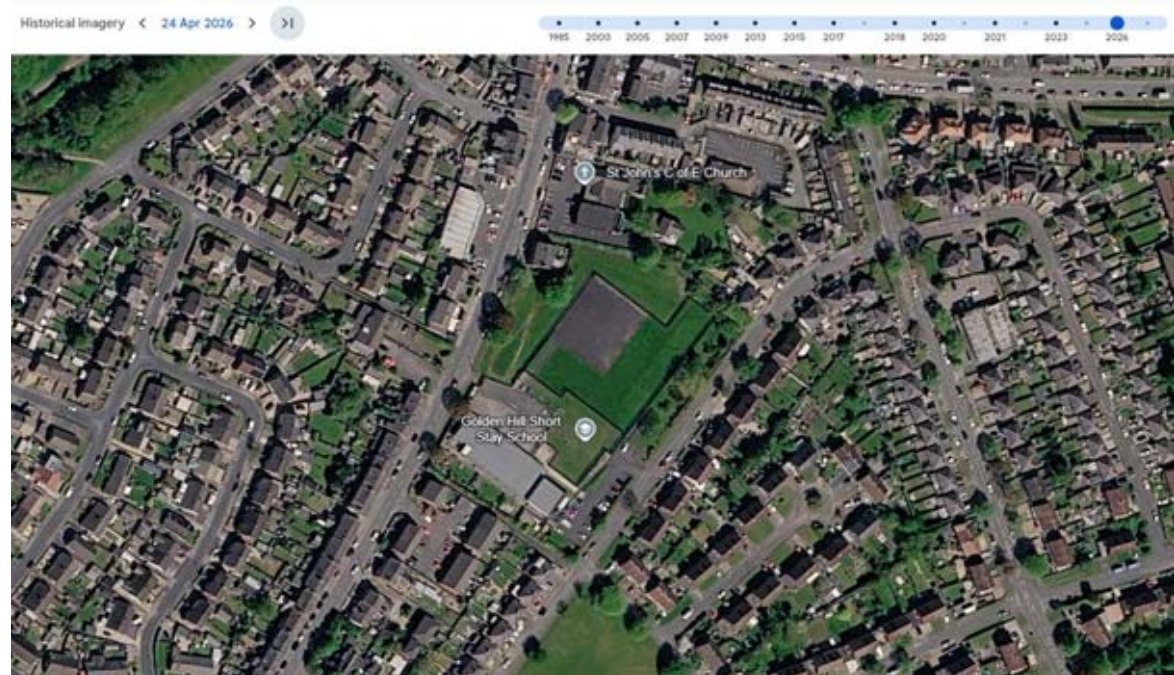


Google Earth Imagery

2021

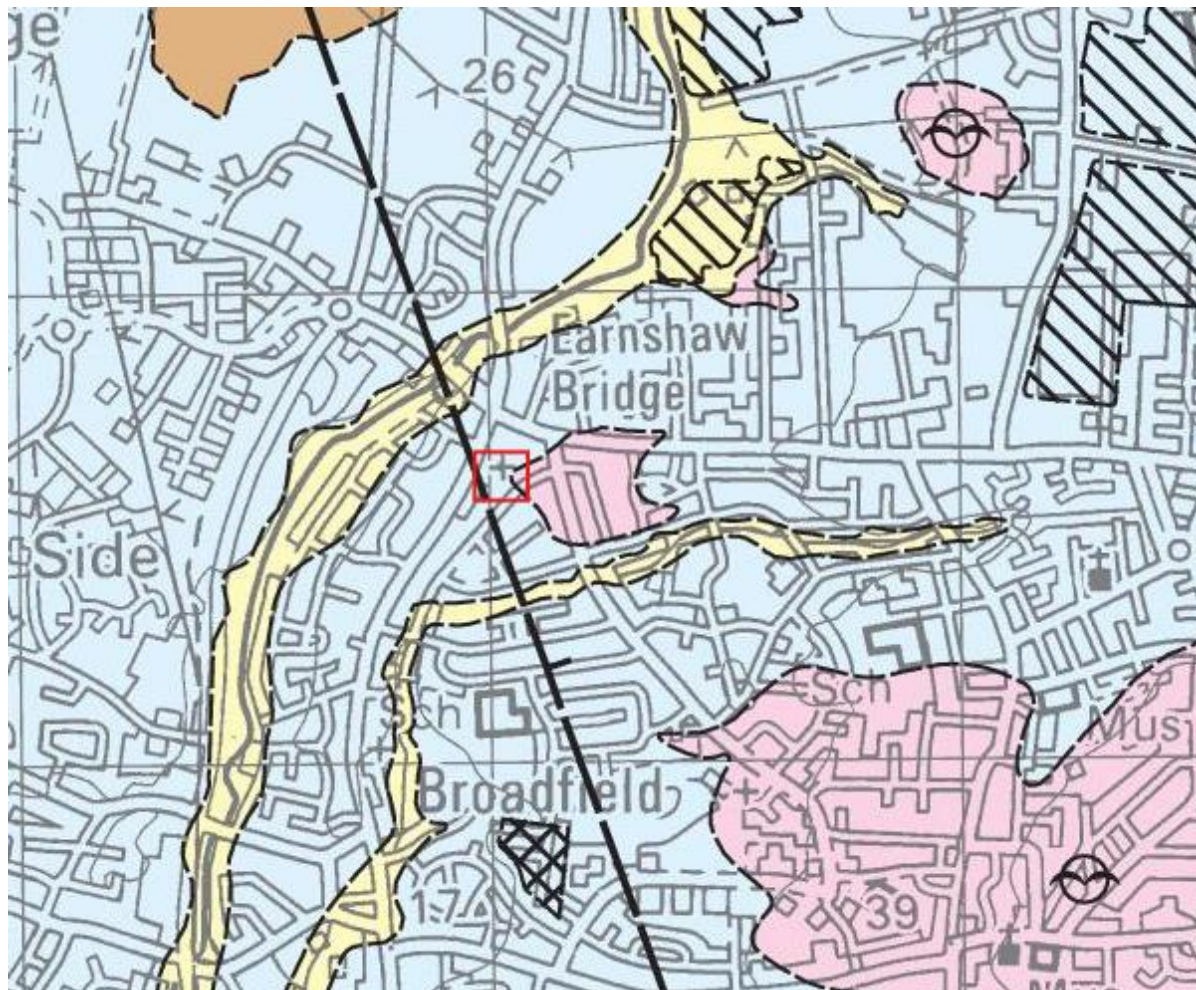


2026



Appendix D

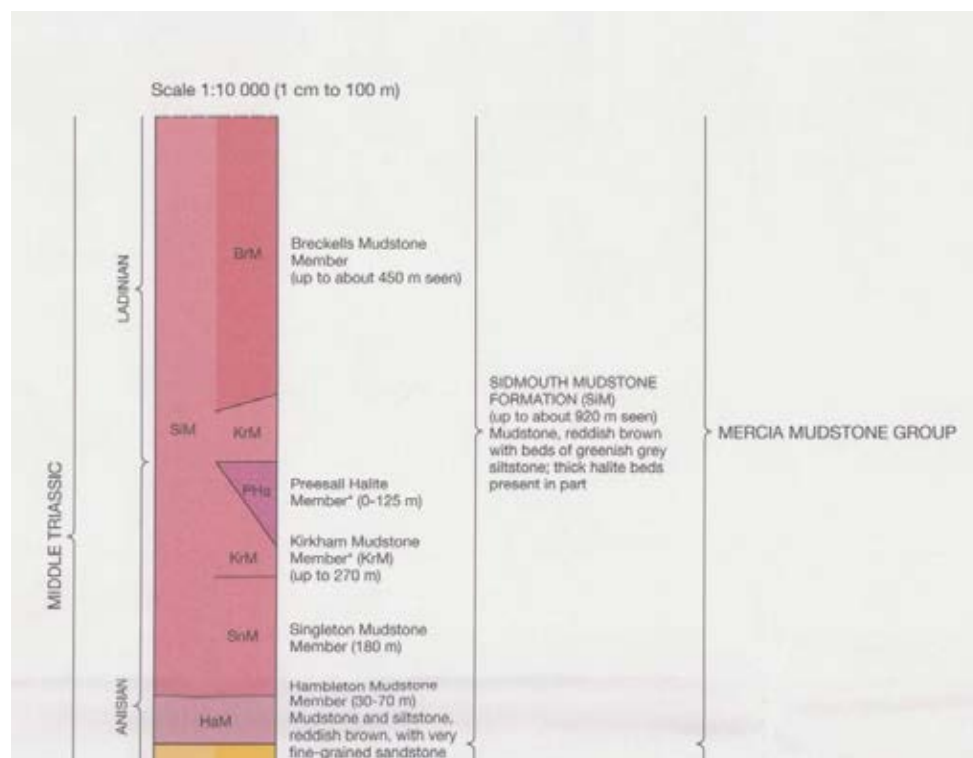
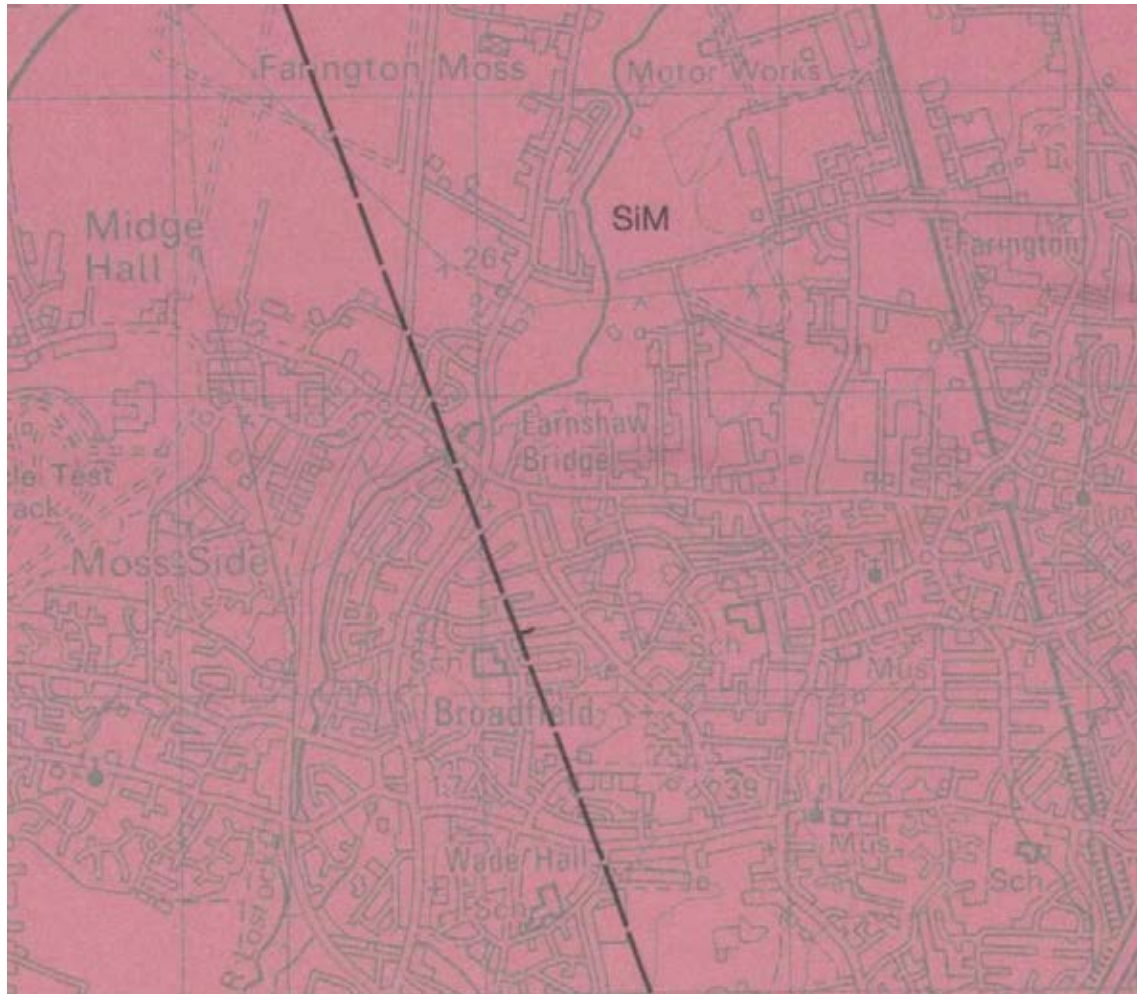
Geological Maps



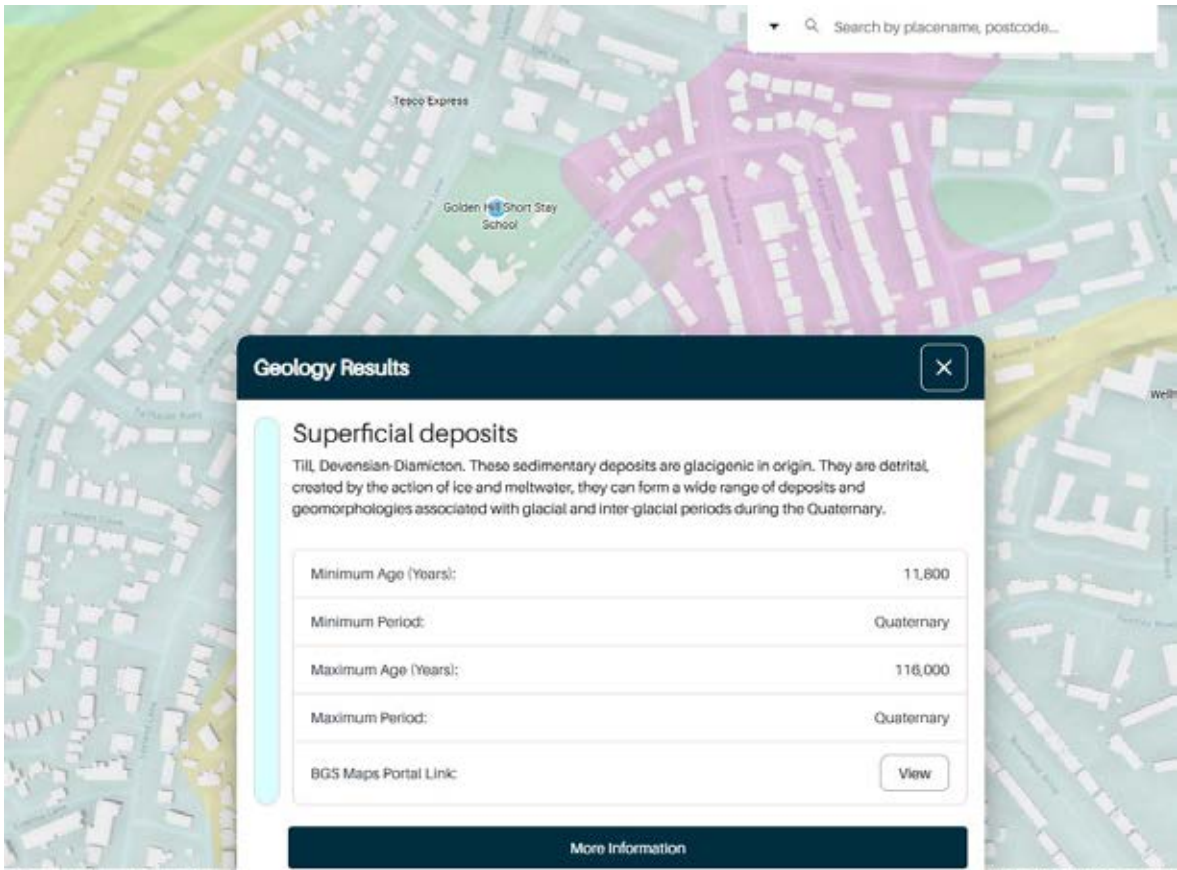
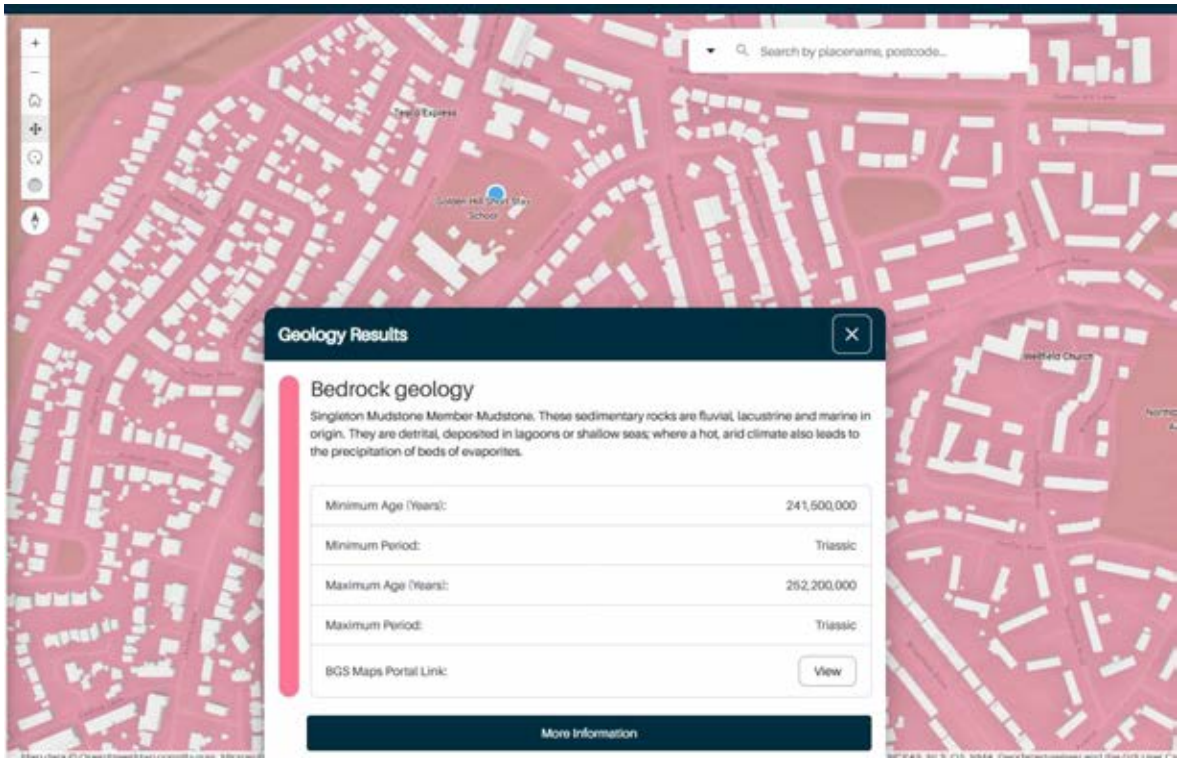
DEVENSIAN

	Glaciofluvial Deposits, undifferentiated: sand and gravel with lenses of clay and stony clay
	Glaciofluvial Subaerial Fan Deposits: sand and gravel
	Glaciofluvial Ice Contact Deposits: mainly sand with some gravel
	Glaciofluvial Sheet Deposits: sand and gravel
	Morainic Deposits: poorly sorted sand, gravel and silty clay with a moundy topography
	Till: clay to sandy clay, unsorted, with common pebbles, cobbles and some boulders (diamicton)

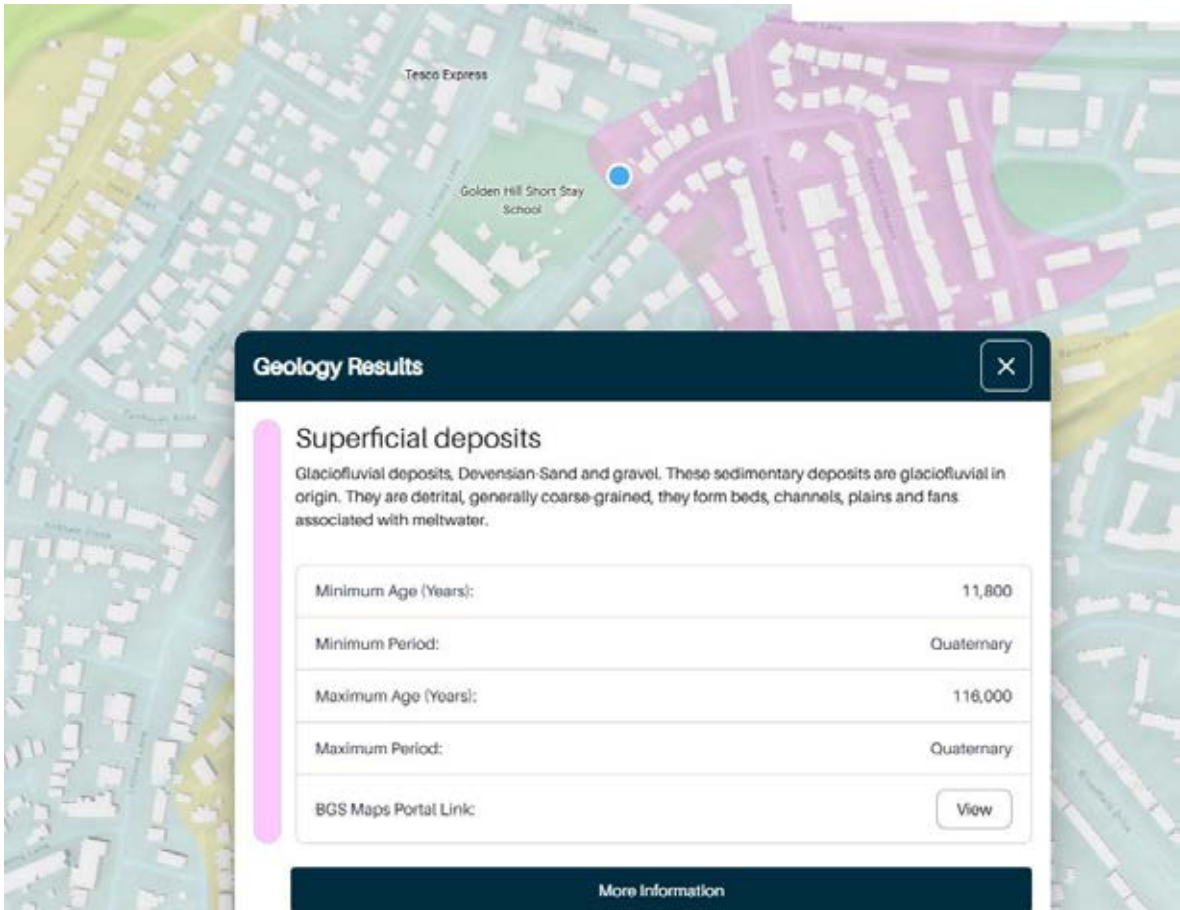
Geology Information



Geology Information



Geology Information



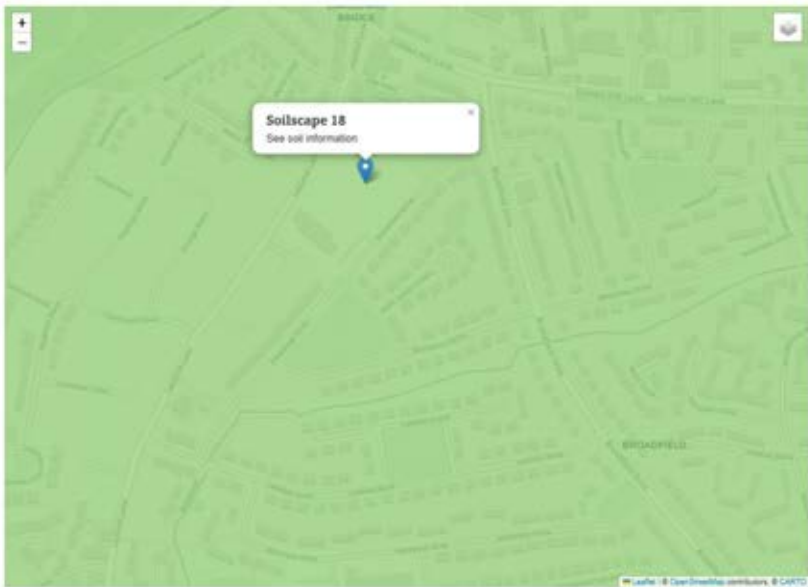
Geology Results

Superficial deposits

Glaciofluvial deposits, Devensian-Sand and gravel. These sedimentary deposits are glaciofluvial in origin. They are detrital, generally coarse-grained, they form beds, channels, plains and fans associated with meltwater.

Minimum Age (Years):	11,800
Minimum Period:	Quaternary
Maximum Age (Years):	116,000
Maximum Period:	Quaternary
BGS Maps Portal Link:	View

More Information



Soil Information

Soilscape 18:

Slowly permeable seasonally wet slightly acid but base-rich loamy and clay soils

Texture:

Loamy and clayey

Coverage:

England: 19.9%, Wales: 2.4%, England & Wales: 17.5%

Drainage:

Impeded drainage

Fertility:

Moderate

Landcover:

Grassland and arable some woodland

Habitats:

Seasonally wet pastures and woodlands

Carbon:

Low

Drains to:

Stream network

Water protection:

Main risks are associated with overland flow from compacted or poached fields. Organic slurry, dirty water, fertiliser, pathogens and fine sediment can move in suspension or solution with overland flow or drain water

General cropping:

© Developed by Cranfield University and Sponsored by DEFRA

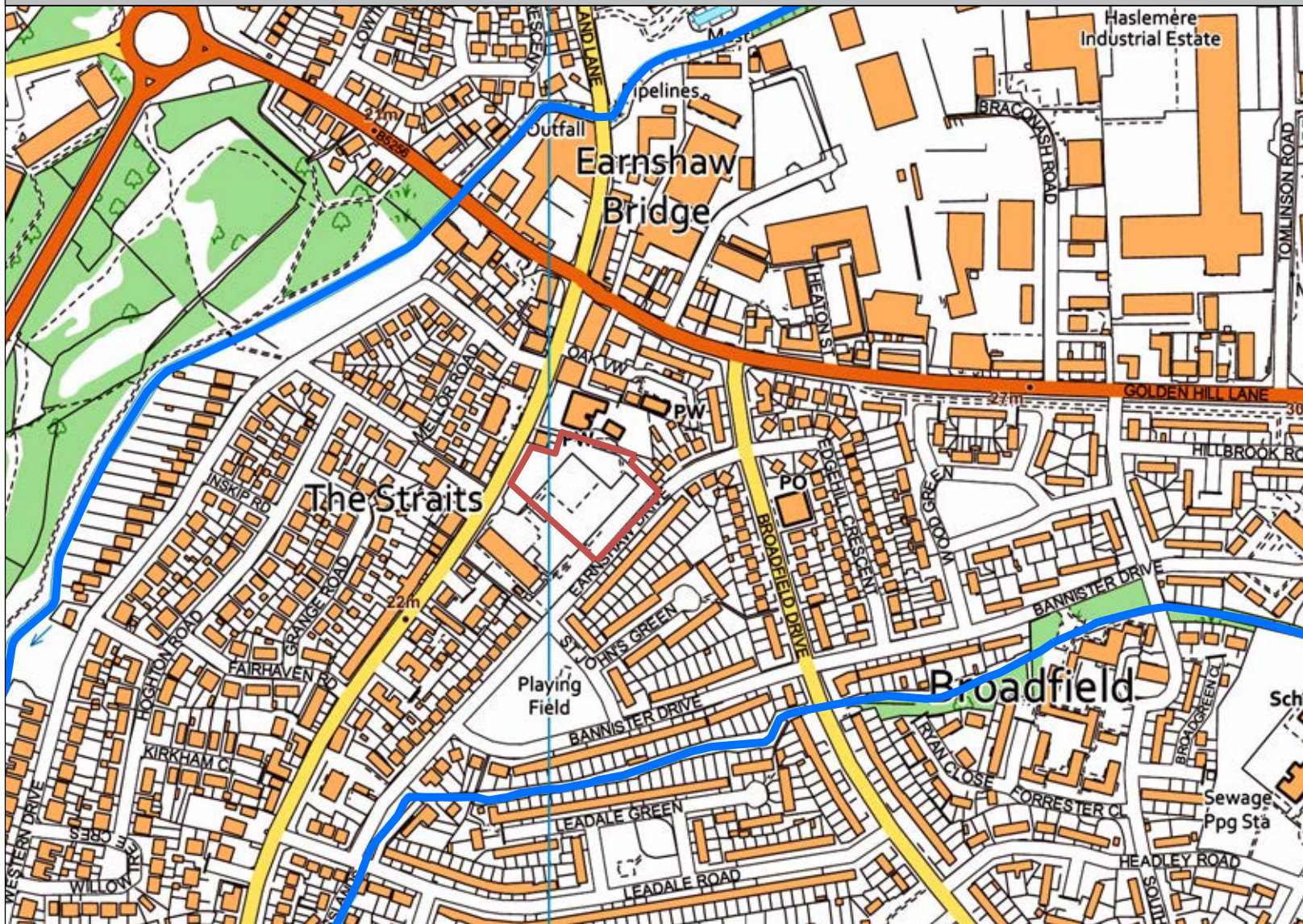
Appendix E

Hydrology and Hydrogeology Maps

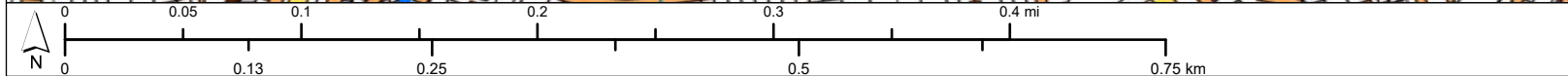
Watercourses

Author:

Date Created: 30/07/2026

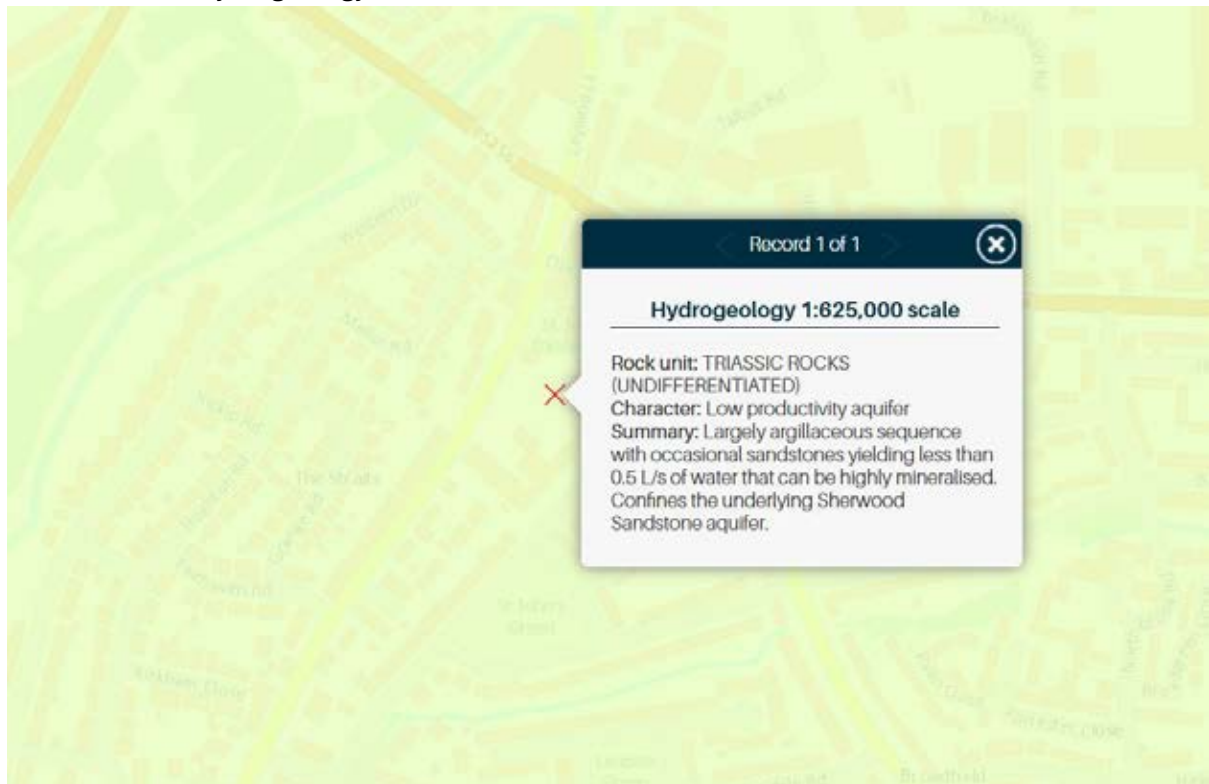


— Main River Lines



Map Scale: 1:5,000
Map Centre: 353091E 422605N

BGS GeoIndex Hydrogeology



Magic Maps - Aquifer Designations



Magic

Landscape

Geology and Soils

Aquifer Designation Map (Bedrock) (England)

TPOLOGY

- Principal
- Secondary A
- Secondary B
- Secondary (undifferentiated)
- Unproductive



Appendix F

Coal Mining Map

Mining Remediation Authority Map Viewer

Planning

Planning

Coal Mining

Mine Water Host

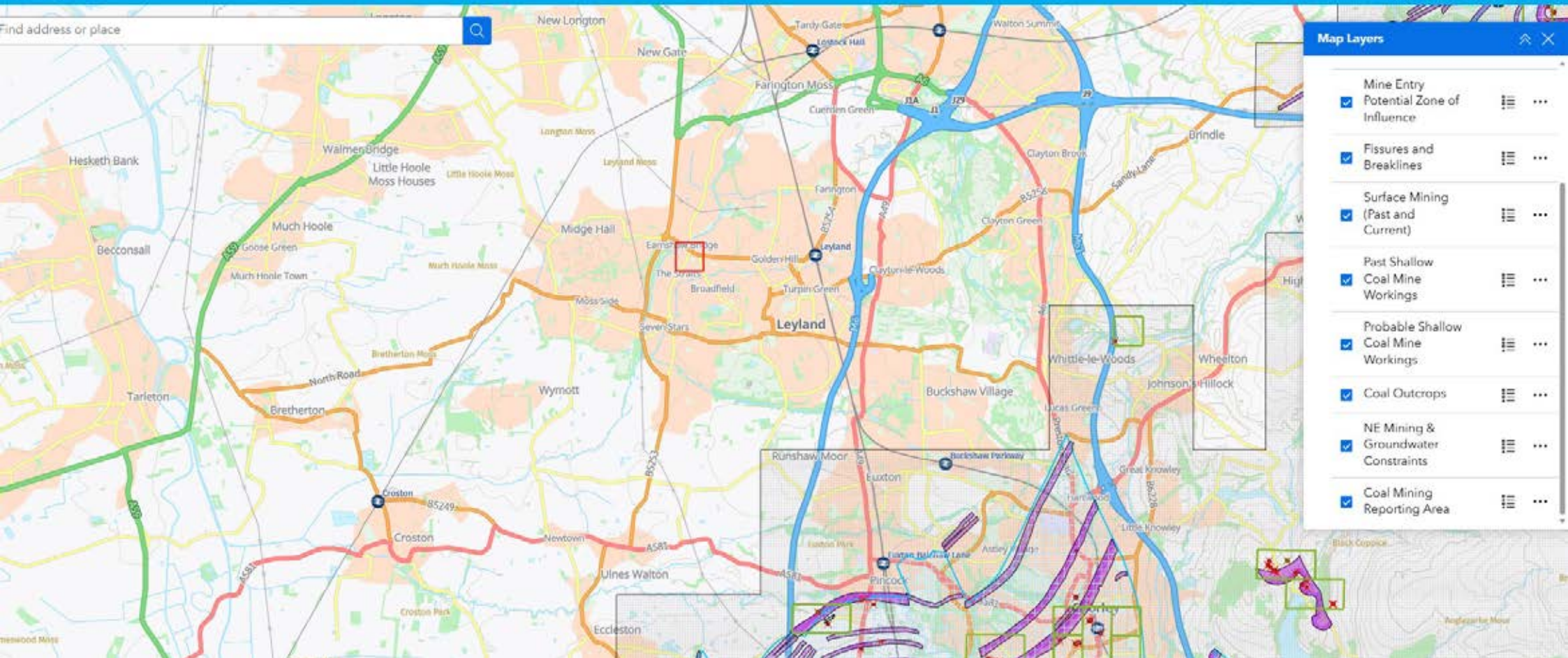
Metal Mines - England

Map Layers

Legend

Help

Find address or place



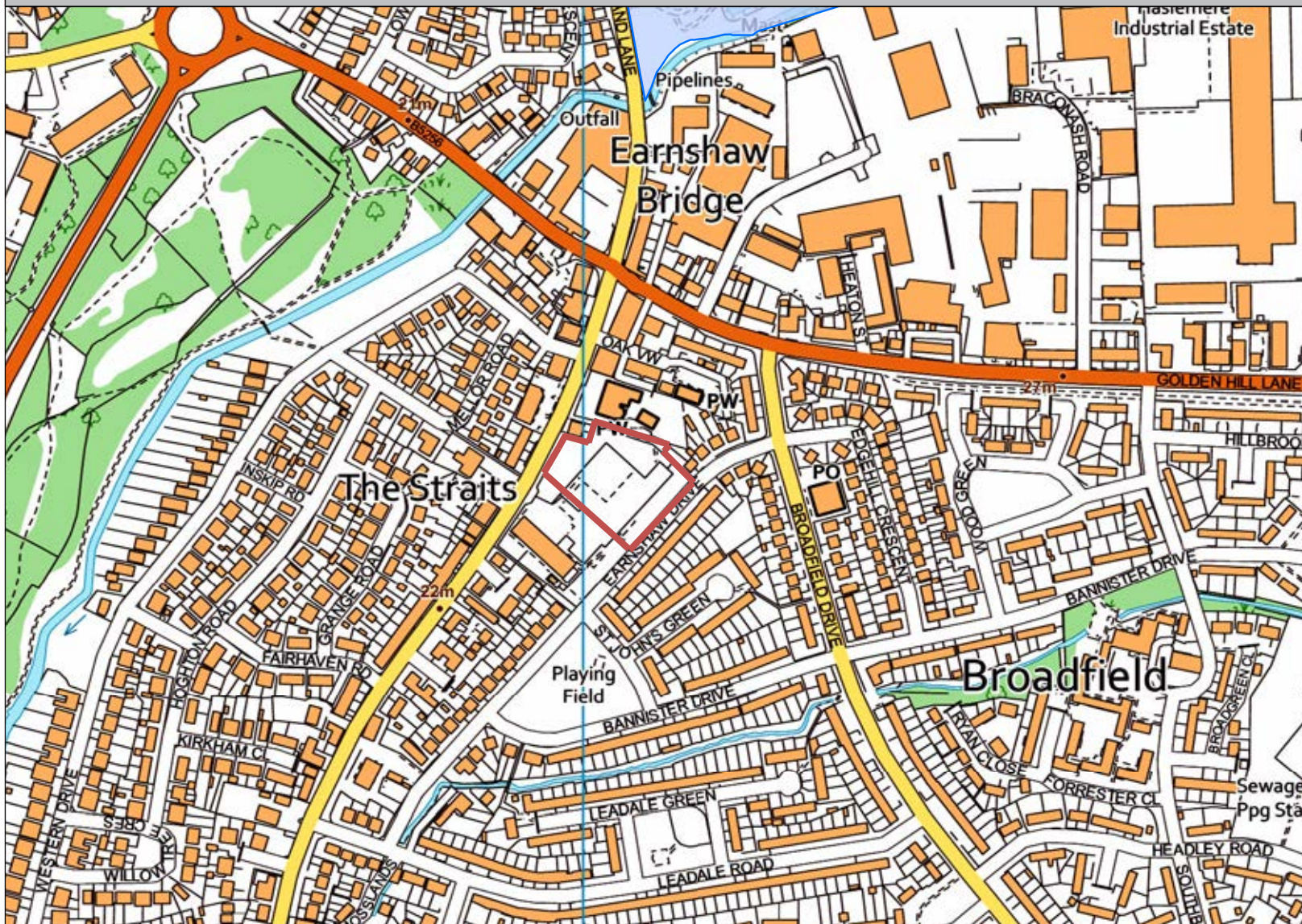
Appendix G

Landfill Map

Historic Landfill (275m away)

Author:

Date Created: 30/07/2026



- Historic Landfill Sites
- Landfill Sites



Map Scale: 1:5,000
Map Centre: 353063E 422596N

Appendix H

Radon Map

Search by Town or Postcode...



Click on a location to see the radon probability

Highest radon potential in 1 km grid square



Zoom to

All parts of this 1km grid square are in the lowest band of radon potential. Less than 1% of homes at or above the Action Level.

Legend

Maximum Radon Potential

- Less than 1 %
- 1 - 3 %
- 3 - 5 %
- 5 - 10 %
- 10 - 30 %
- Greater than 30 %

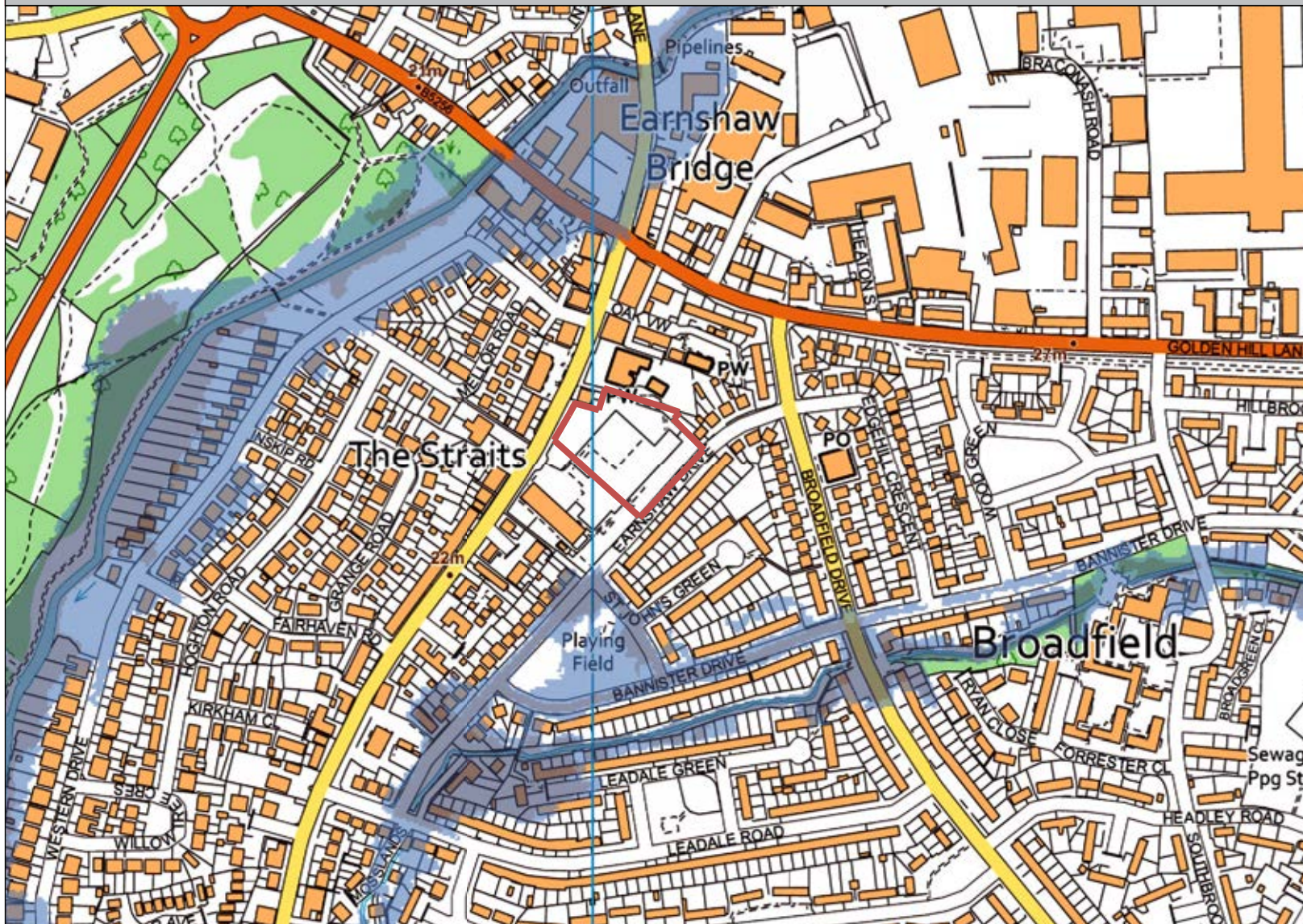
Appendix I

Flood Risk Maps

Flood Zones

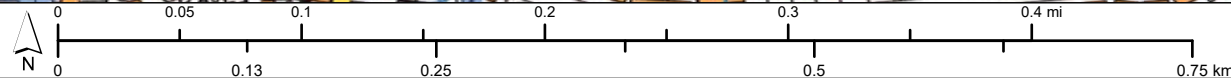
Author:

Date Created: 30/07/2026



Flood Zones 2 and 3

- Flood Zone 2
- Flood Zone 3

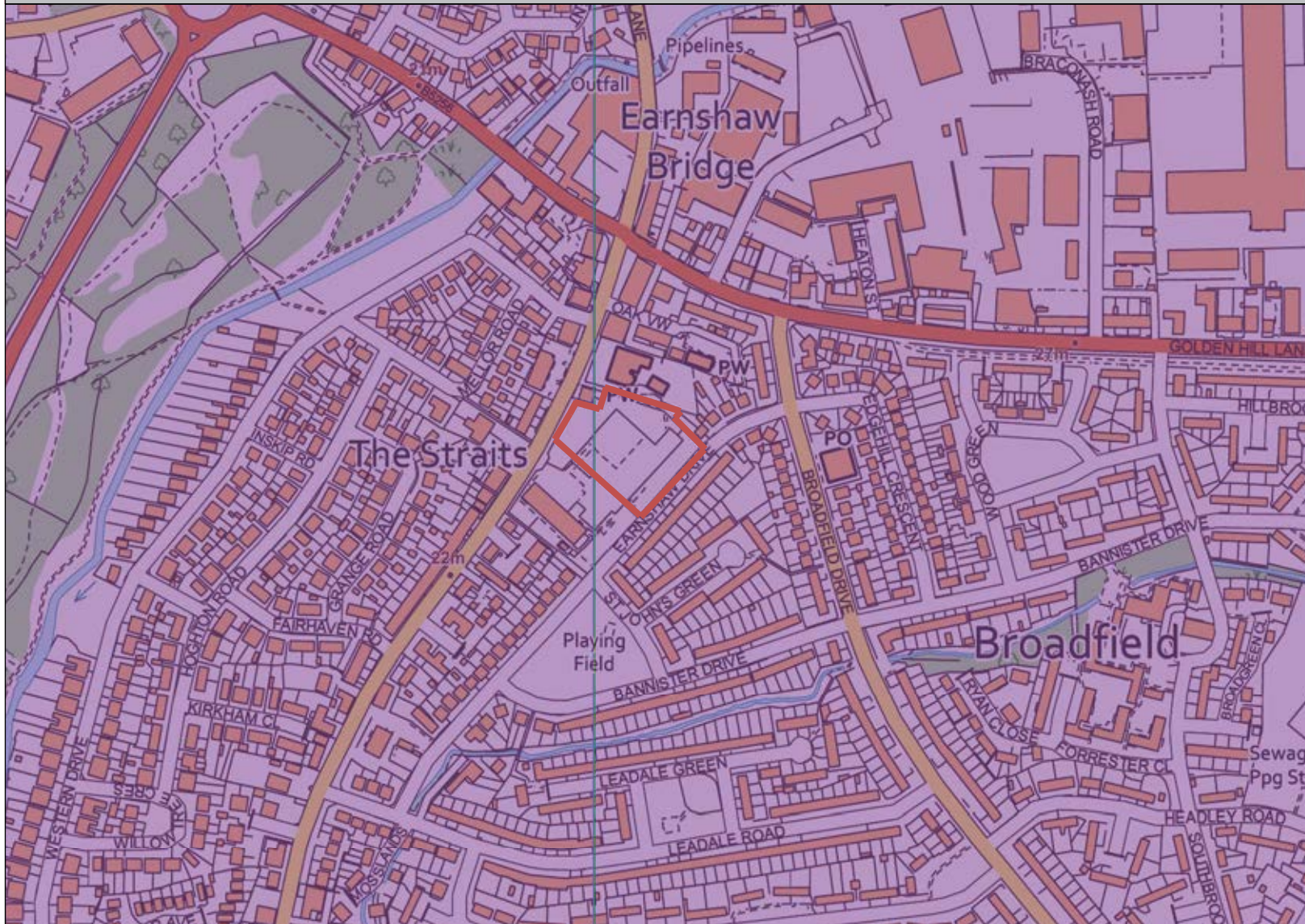


Map Scale: 1:5,000
Map Centre: 353055E 422569N

Groundwater Flooding

Author:

Date Created: 30/07/2026



Areas Susceptible to Groundwater Flooding

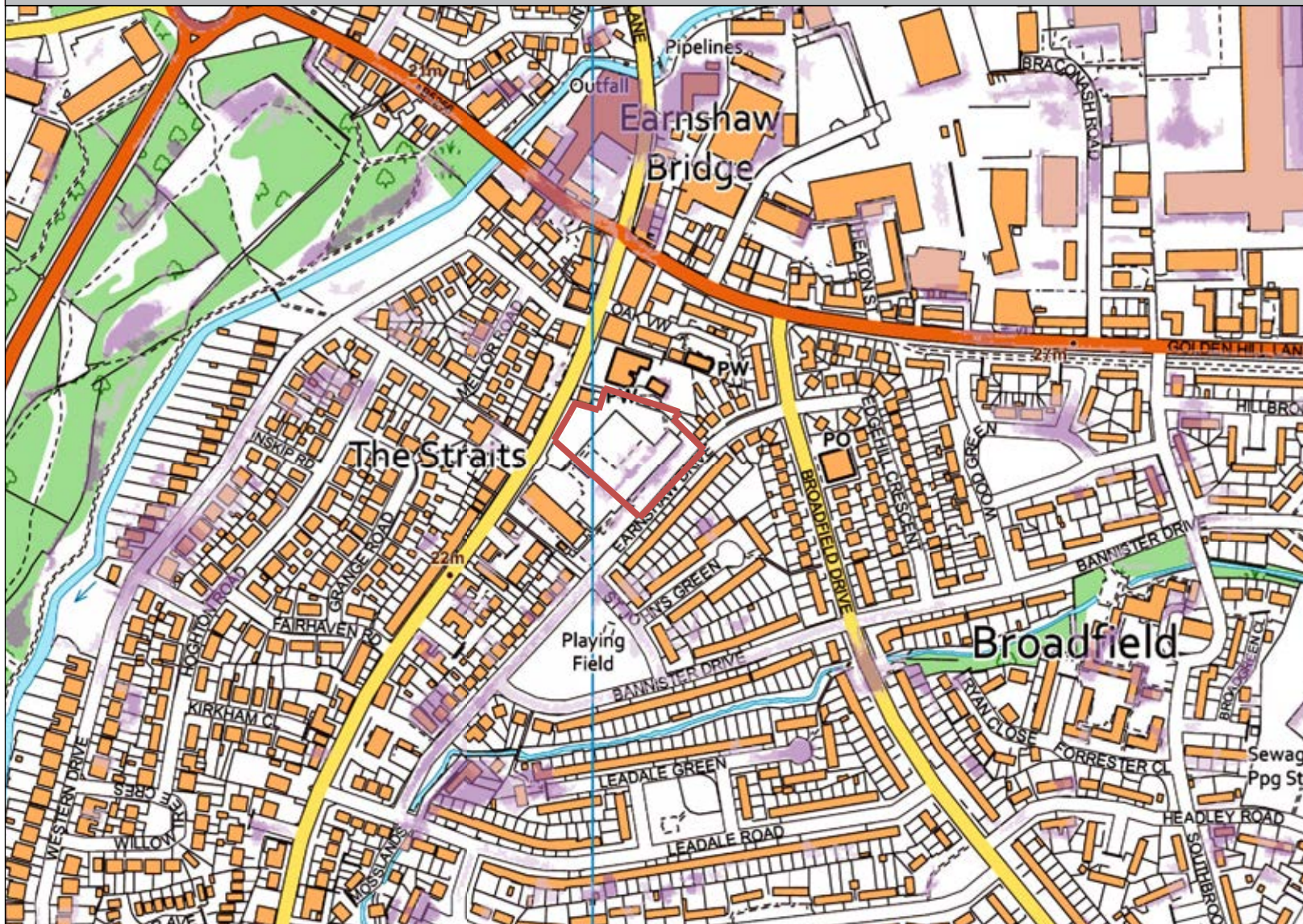
- < 25% Risk
- $\geq 25\%$ < 50% Risk
- $\geq 50\%$ < 75% Risk
- $\geq 75\%$ Risk

Map Scale: 1:5,000
Map Centre: 353055E 422569N

Surface Water Flooding

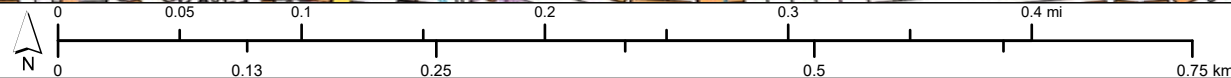
Author:

Date Created: 30/07/2026



Risk of Flooding from Surface Water - Current

- Low
- Medium
- High



Map Scale: 1:5,000
Map Centre: 353055E 422569N



Appendix J

Unexploded Ordnance Risk Map

UNEXPLODED BOMB RISK MAP



SITE LOCATION

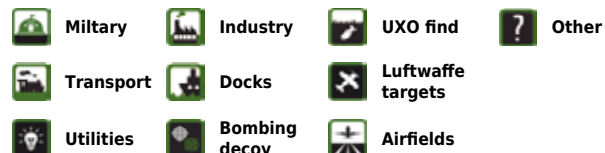
Map Centre: 353015,422584



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.



How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density. Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then [additional detailed research](#) is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our [pre-desk study assessments \(PDSA\)](#) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 email: uxo@zetica.com web: www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the [accompanying notes on our website](#).

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.

Appendix K

Past Site Investigation Report

DRAFT

Lancashire County Property Group
Resources Directorate
South Area Office
County Hall
Preston
PR1 8RE

From: Mr.D.C.Brown
Your Ref:
Our Ref: 28898 660-35
Conquest No. 2006-05109
Date: 19 October 2006

For the attention of: Ian Walker
Copy to J.Ormand

Dear Sir,

Leyland Golden Hill School – Short Stay Car Park

At the request of Lancashire County Property Group (South Area Office) a ground investigation was undertaken at the above site (Grid Ref SD 5300 2251) to obtain contamination samples prior to the construction of a new car park area.

The investigation comprised five hand auger boreholes (Nos. 1 – 5) located within the perimeter of the proposed car park, to give representative samples of the material to be excavated. These exploratory holes were taken to a depth of between 1.1m and 1.5m, in order to coincide with the proposed depth of any construction and drainage works.

The boreholes proved topsoil to between 0.13m and 0.18m overlying fill (comprising various materials including clayey silty soil, firm sandy silty clay and brick rubble) to a maximum depth of 1.5m (C5). Natural sand was established in Boreholes C1, C2 and C5 at depths of 1.0m, 1.1m and 1.5m where as firm clay was proved in Boreholes C3, C4 at 0.56m and 0.9m respectively.

The boreholes were examined and three representative samples of the material excavated were selected for analysis. These comprised a clayey soil from Borehole C1, firm clay with soil inclusions from Borehole C3 and a sample of brick and concrete from Borehole C5.

These samples were sent to the County Analyst laboratory for analysis in order to check whether the soil posed any long-term risk to human health and to determine an acceptable category and location for disposal of the excavated material.

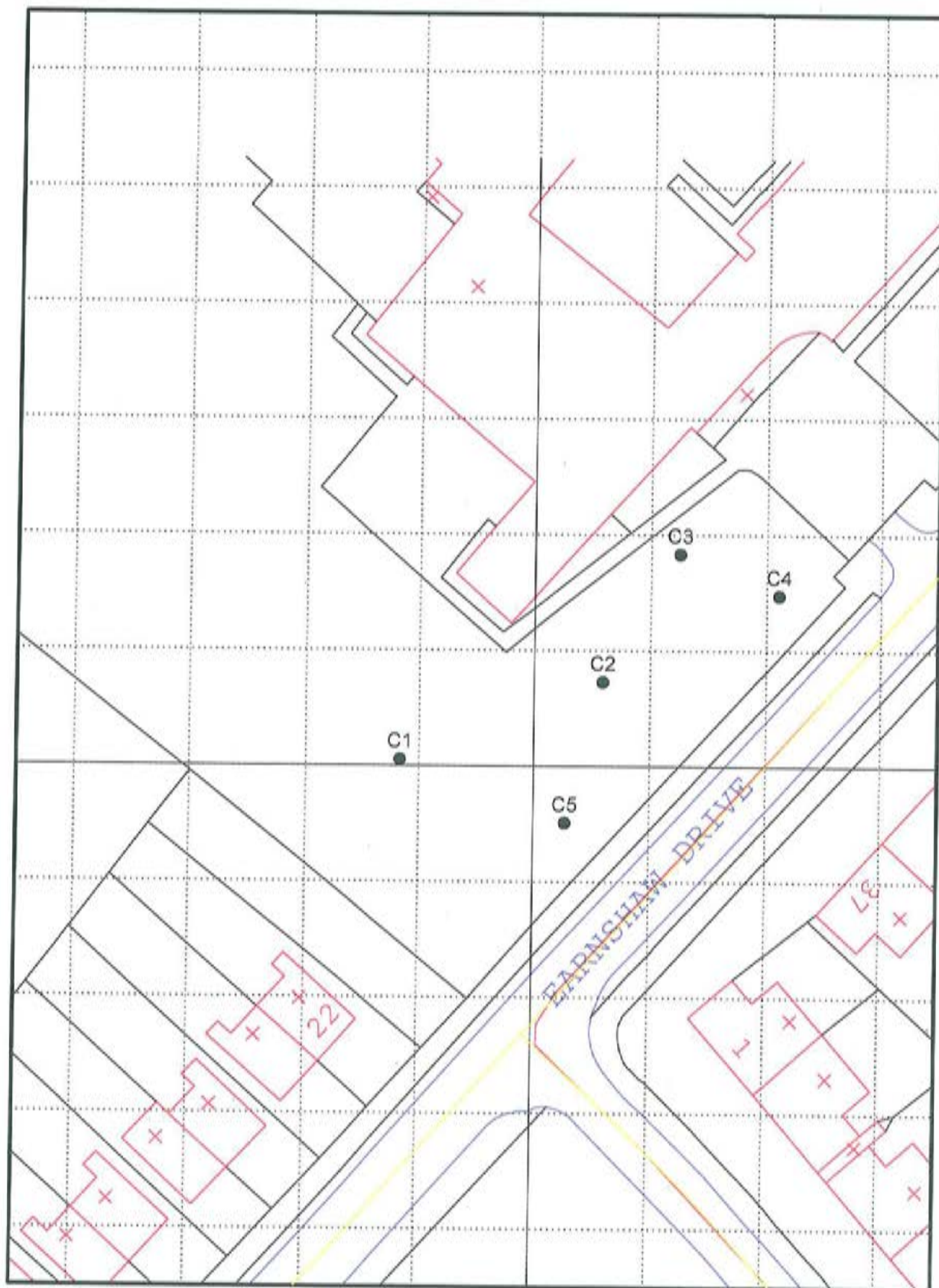
The samples were compared to the Contaminated Land Exposure Assessment (CLEA) Soil Guideline Values (SGV's) for the category Residential without plant uptake, which best equates to this site. The majority of the values were found to be below the SGV's but the value for Arsenic, from Borehole C5 was found to be slightly above this figure of 26. However, as the site is to be a car park area the soil will be covered hence blocking any pathway between the contaminant and potential receptors.

The values were also compared to the figures given in the HSE document 'Protection of Workers and the General Public During the Development of Contaminated Land'. This indicates that the soil from Boreholes C1 and C3 were similar to that for natural soils, although slight Nickel contamination was recorded. The sample from Borehole C5 revealed slight Cadmium, Mercury and Nickel contamination. It is therefore recommended that the contractor follow the guidelines outlined in the aforementioned HSE document.

Finally, the results were compared to the EA document "Guidance for waste destined for disposal in landfills" with the majority of the values appearing to indicate that the soils are inert. However, the value for Antimony in Borehole C5 was found to be double the value for inert waste. This sample was brick fill and is classed as non-hazardous by a landfill site. It is recommended that any brick fill or rubble be stockpiled and disposed of separately from the soil and clay.

The attached chemical analysis sheets should be submitted to a waste disposal facility in order that they can determine a suitable location and price for disposal of the excavated material.

Yours faithfully,



Lancashire County Council
Highways Laboratory
Cuerden Way
Bamber Bridge
Preston PR5 6BS

PROJECT SITE MAP

Client:

Project: Leyland Golden Hill School-Short Stay Car Park

Number: 660-35

Location	Description of Stratum	Sample			Key	M.C.	LL/PL/PI Core Rec'y	Class'n	N Value	Water & Casing Details
		Depth	1	2/3						
0	FILL: light brown silty sandy topsoil, with occ. cobbles				BD					Hand Auger Borehole Commenced 26/09/06
	FILL: dark brown slightly clayey silty sand, with brick pieces and gravel sized stone	0.18								
	FILL: dark brown clayey silty sandy soil	0.35								
1					BD					
	dark grey clayey silty SAND, with gravel sized stone (sat)	1.00								
2					BD					26/09/06 BH'DRY" No Casing Borehole Completed
		1.50								

Strength Test Results

[illegible]

Compton and other test results

[illegible]

Borehole Data

Sheet 1 of 1

Namas No. 2006 05109
Grid Ref.
Job No. 660-35
B.H. No. C2
Depth 1.30 m
Ground Level

Scheme Location Leyland Golden Hill School-Short Stay Car Park

Description of Stratum	Sample			Key	M.C.	LL/PL/PI Core Rec'y	Class'n	N Value	Water & Casing Details
	Depth	1	2/3						
0 TOPSOIL									Hand Auger Borehole Commenced 26/09/06
FILL: light brown silty sandy soil, with occ. gravel sized stone and rootlets (dry)	0.13			BD					
FILL: light brown silty sandy soil, with brick and clay inclusions	0.30			BD					
FILL: dark brown silty soil, with occ. brick pieces and gss	0.68			BD					
light grey slightly clayey silty medium coarse SAND (sat)	1.10			BD					
	1.30								WE at 1.3m
									26/09/06 SWL 1.3m
									No Casing
									Borehole Completed

Strength Test Results

Depth of Sample (m)	Bulk Density (kg/m ³)	Max Dry Density (kg/m ³)	M.C. (%)	Specimen Depth (m)	Comp. Stress (kN/m ²)	Cohesion (kN/m ²)	φ (degrees)	Remarks

Compaction and other test results

Depth of Sample (m)	Compaction	Max D.D. (kg/m ³)	Optimum M.C. (%)	Specific Gravity	Air Voids	Specimen Depth (m)	SO ₂ (g/l)	pH	Remarks/Other Tests

Borehole Data

Sheet 1 of 1

Namas No. 2006 05109
Grid Ref.
Job No. 660-35
B.H. No. C3
Depth 1.10 m
Ground Level

Scheme Leyland Golden Hill School-Short Stay Car Park
Location

Description of Stratum	Sample			Key	M.C.	LL/PL/PI Core Rec'y	Class'n	N Value	Water & Casing Details
	Depth	1	2/3						
0									Hand Auger Borehole Commenced 26/09/06
TOPSOIL									
FILL: dark brown very clayey silty soil, with gravel sized stone, brick pieces and rootlets	0.16			BD					
FILL: 'firm' clay with soil inclusions and gravel sized stone	0.35			BD					
'firm to stiff' orange brown sandy silty CLAY, with sand pockets, rootlets and occ. gss.	0.56								
				BD					
	1.10								
									26/09/06 BH'DRY'
									No Casing
									Borehole Completed

Strength Test Results

Depth of Sample (m)	Bulk Density (kg/m ³)	Max Dry Density (kg/m ³)	M.C. (%)	Specimen Depth (m)	Comp. Stress (kN/m ²)	Cohesion (kN/m ²)	φ (degrees)	Remarks

Compaction and other test results

Depth of Sample (m)	Compaction	Max D.D. (kg/m ³)	Optimum M.C. (%)	Specific Gravity	Air Voids	Specimen Depth (m)	SO ₄ (g/l)	pH	Remarks/Other Tests

Scheme Location	Leyland Golden Hill School-Short Stay Car Park
-----------------	--

[illegible]

Strength Test Results

[illegible]

Compton and other test results

[illegible]

Borehole Data

Sheet 1 of 1

Namas No. 2006 05109
Grid Ref.
Job No. 660-35
B.H. No. C5
Depth 1.60 m
Ground Level

Scheme Leyland Golden Hill School-Short Stay Car Park
Location

Description of Stratum	Sample			Key	M.C.	LL/PL/PI Core Rec'y	Class'n	N Value	Water & Casing Details
	Depth	1	23						
0	TOPSOIL								Hand Auger Borehole Commenced 26/09/06
	FILL: light brown silty sandy silty subsoil, with occ. soil inclusions and occ. gss	0.15		BD					
	FILL: light brown slightly clayey sandy soil, with gravel sized stone	0.30		BD					
	FILL: brick and concrete rubble in a sandy matrix	0.59		BD					
	FILL: dark brown clayey silty soil, with gss and occ. brick pieces	0.80		BD					
1	FILL: dark brown clayey silty organic soil, with occ. gss and brick pieces (old topsoil)	1.10		BD					WE at 1.5m 26/09/06 SWL1.5m No Casing Borehole Completed
	dark brown silty medium coarse SAND, with occ. gss	1.50		BD					
		1.60							
2									

Strength Test Results

Depth of Sample (m)	Bulk Density (kg/m ³)	Max Dry Density (kg/m ³)	M.C. (%)	Specimen Depth (m)	Comp. Stress (kN/m ²)	Cohesion (kN/m ²)	φ (degrees)	Remarks

Compaction and other test results

Depth of Sample (m)	Compaction	Max D ₅₀ (kg/m ³)	Optimum M.C. (%)	Specific Gravity	Air Voids	Specimen Depth (m)	SO ₂ (g/l)	pH	Remarks/Other Tests

John Thorpe
Highways Laboratory
Cuerden Way
Bamber Bridge
Preston

Details of samples
submitted by
DC Brown

Conquest No
File No
Scheme

ALcontrol Geochem Analytical Services
Sample Descriptions

Job Number: 06/17063/02/01

Client: Lancashire County Council

Client Ref: 061459

Grain sizes

<0.063mm Very Fine

0.1mm - 0.063mm Fine

0.1mm - 2mm Medium

2mm - 10mm Coarse

>10mm Very Coarse

Sample Identity	Depth (m)	Colour	Grain Size	Description	Batch
26008667		Brown	n/a	Clay	1
26008668		Brown	<0.063mm	Soil with some Stones	1
26008669		Brown	<0.063mm	Brick fill ¹ with some Crushed Brick	1

Signed
Principal Peter Moorcroft MChemA,CChem,MRSC
Lancashire County Council
Date 17/10/2006

John Thorpe
Highways Laboratory
Cuerden Way
Bamber Bridge
Preston

Details of samples submitted by DC Brown

Conquest No	File No	Scheme
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

2006-05109
660-35
Leyland Golden Hill School
Short Stay Car Park

ALcontrol Geochem - Table Of Results

Matrix: Solid

All results expressed on a dry weight basis.

			Sample Identity	26008667	26008668	26008669
			Depth	BH1 BD2	BH3 BD2	BH4 BD3
			Sample Type	SOLID	SOLID	SOLID
			Sample Received Date	29/09/2006	29/09/2006	29/09/2006
			Sampled Date			
			Batch	1	1	1
			Sample Number(s)	1	2	3
Total Sulphate	Method	Units	Method Detection Limit			
Boron Water Soluble	TM129	mg/kg	<100	225	162	2099
Arsenic	TM129	mg/kg	<1	<1	<1	2
Cadmium	TM129	mg/kg	<3.0	8	6	26
Chromium	TM129	mg/kg	<0.3	<0.3	<0.3	2.7
Copper	TM129	mg/kg	<4.5	23.0	24.5	64.1
Lead	TM129	mg/kg	<6	91	16	54
Mercury	TM129	mg/kg	<2	36	15	63
Nickel	TM129	mg/kg	<0.6	<0.6	<0.6	1.3
Selenium	TM129	mg/kg	<0.9	31.5	22.3	38.2
Zinc	TM129	mg/kg	<3	<3	<3	<3
Acid Soluble Sulphide	TM129	mg/kg	<2.5	59.7	46.1	133.0
Hexavalent Chromium	TM101	mg/kg	<50	<50	<50	<50
Phenols Monohydric	TM151	mg/kg	<0.3	<6.0	<0.3	<3.0
Thiocyanate	TM062	mg/kg	<0.01	<0.01	<0.01	0.01
Total Cyanide	TM153	mg/kg	<1	<1	<1	<1
Free Cyanide	TM153	mg/kg	<1	<1	<1	<1
pH Value	TM133	pH Units	<1.00	7.01	8.29	8.22
Total Sulphur	TM068	%	<0.01	0.07	0.02	0.14
PAH by GCMS						
Naphthalene	TM074	ug/kg	<10	170	48	2388
Acenaphthylene	TM074	ug/kg	<5	11	<5	94
Acenaphthene	TM074	ug/kg	<14	23	<14	46
Fluorene	TM074	ug/kg	<12	23	24	58
Phenanthrene	TM074	ug/kg	<21	365	98	189
Anthracene	TM074	ug/kg	<9	103	12	83
Fluoranthene	TM074	ug/kg	<25	524	98	414
Pyrene	TM074	ug/kg	<22	501	86	438
Benz(a)anthracene	TM074	ug/kg	<12	362	86	237
Chrysene	TM074	ug/kg	<10	292	49	225
Benzo(b)fluoranthene	TM074	ug/kg	<16	373	74	367
Benzo(k)fluoranthene	TM074	ug/kg	<25	198	49	95
Benzo(a)pyrene	TM074	ug/kg	<12	315	37	118
Indeno(123cd)pyrene	TM074	ug/kg	<11	147	<11	84
Dibenzo(ah)anthracene	TM074	ug/kg	<8	49	<8	36
Benzo(ghi)perylene	TM074	ug/kg	<10	208	<10	108
PAH 16 Total	TM074	ug/kg	<25	3664	661	4980

Signed

Principal Scientific Officer Peter Moorcroft MChemA,CChem,MRSC
Lancashire County Council

Date

17/10/2006

John Thorpe
Highways Laboratory
Cuerden Way
Bamber Bridge
Preston

Details of samples
submitted by
DC Brown

Conquest No 2006-05109
File No 660-35
Scheme Leyland Golden Hill School
Short Stay Car Park

ALcontrol Geochem - Table Of Results

Matrix: LEACHATE

Supplemental Report

Supplemental Report				Sample Identity	26008667	26008668	26008669
				Depth			
				Sample Type	SOLID	SOLID	SOLID
				Sample Received Date	29/09/2006	29/09/2006	29/09/2006
				Sampled Date			
				Batch	1	1	1
				Sample Number(s)	1	2	3
	Method	Units	Method Detection Limit				
Antimony Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<5		15	<5	20
Antimony Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<5		5	<5	12
Antimony Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.07	<0.04	0.14
Arsenic Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		4	<1	5
Arsenic Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		2	<1	8
Arsenic Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.024	<0.008	0.074
Barium Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		104	191	228
Barium Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		37	118	113
Barium Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.504	1.326	1.360
Boron Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<10		421	155	113
Boron Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<10		160	135	76
Boron Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			2.12	1.39	0.83
Cadmium Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<0.4		<0.4	<0.4	<0.4
Cadmium Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<0.4		<0.4	<0.4	<0.4
Cadmium Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			<0.0032	<0.0032	<0.0032
Chromium Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		1	<1	5
Chromium Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		<1	<1	1
Chromium Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			<0.008	<0.008	0.018
Copper Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		10	2	18
Copper Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		4	<1	5
Copper Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.052	<0.008	0.076
Lead Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		4	<1	41
Lead Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		4	<1	5
Lead Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.040	<0.008	0.122
Molybdenum Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		8	14	15
Molybdenum Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		3	11	3
Molybdenum Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.040	0.116	0.054
Nickel Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		10	1	1
Nickel Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		2	<1	<1
Nickel Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.036	<0.008	<0.008
Selenium Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		2	<1	<1
Selenium Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		<1	<1	<1
Selenium Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			<0.008	<0.008	<0.008
Zinc Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<3		42	13	27
Zinc Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<3		22	13	8
Zinc Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.260	0.130	0.118
Mercury Dissolved (CEN 2:1) (CVAA)	TM127	ug/l	<0.05		<0.05	<0.05	<0.05
Mercury Dissolved (CEN 8:1) (CVAA)	TM127	ug/l	<0.05		<0.05	<0.05	<0.05
Mercury Dissolved (CEN 10:1C) (CVAA)	TM127	mg/kg			<0.0004	<0.0004	<0.0004

Supplemental Report

Sample Identity	26008667	26008668	26008669
Depth			
Sample Type	SOLID	SOLID	SOLID
Sample Received Date	29/09/2006	29/09/2006	29/09/2006
Sampled Date			
Batch	1	1	1
Sample Number(s)	1	2	3

	Method	Units	Method Detection Limit				
Chloride (CEN 2:1)	TM097	mg/l	<1	4	3	4	
Chloride (CEN 8:1)	TM097	mg/l	<1	1	4	1	
Chloride (CEN 10:1C)	TM097	mg/kg		16	38	16	500
Fluoride (CEN 2:1)	TM104	mg/l	<0.5	0.5	1.2	1.5	
Fluoride (CEN 8:1)	TM104	mg/l	<0.5	<0.5	1.0	1.1	
Fluoride (CEN 10:1C)	TM104	mg/kg		<4	10	12	
Sulphate (CEN 2:1)	TM098	mg/l	<3	9	5	17	10
Sulphate (CEN 8:1)	TM098	mg/l	<3	<3	<3	3	
Sulphate (CEN 10:1C)	TM098	mg/kg		<24	<24	58	1000
Dissolved Organic Carbon (CEN 2:1)	TM090	mg/l	<1	8	5	9	
Dissolved Organic Carbon (CEN 8:1)	TM090	mg/l	<1	5	3	4	
Dissolved Organic Carbon (CEN 10:1C)	TM090	mg/kg		56	34	50	500
Total Dissolved Solids (CEN 2:1)	TM123	mg/l	<5	36	94	119	
Total Dissolved Solids (CEN 8:1)	TM123	mg/l	<5	12	53	57	
Total Dissolved Solids (CEN 10:1C)	TM123	mg/kg		168	612	694	4000
Phenols Monohydric (CEN 2:1)	TM062	mg/l	<0.01	<0.01	<0.01	<0.01	
Phenols Monohydric (CEN 8:1)	TM062	mg/l	<0.01	<0.01	0.01	<0.01	
Phenols Monohydric (CEN 10:1C)	TM062	mg/kg		<0.08	0.08	<0.08	1

Signed
Principal Scientific Officer
Lancashire County Council
Date

Peter Moorcroft MChemA, CChem, MRSC

17/10/2006

John Thorpe
Highways Laboratory
Cuerden Way
Bamber Bridge
Preston

Details of samples
submitted by
DC Brown

Conquest No 2006-05109
File No 660-35
Scheme Leyland Golden Hill School
Short Stay Car Park

ALcontrol Geochem - Table Of Results
Matrix: LEACHATE

Supplemental Report

Supplemental Report				Sample Identity			26008667	26008668	26008669
				Depth					
				Sample Type			SOLID	SOLID	SOLID
				Sample Received Date			29/09/2006	29/09/2006	29/09/2006
				Sampled Date					
				Batch			1	1	1
				Sample Number(s)			1	2	3
	Method	Units	Method Detection Limit						
Antimony Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<5		15	<5	20		
Antimony Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<5		5	<5	12		
Antimony Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.07	<0.04	0.14		0.06
Arsenic Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		4	<1	5		
Arsenic Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		2	<1	8		
Arsenic Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.024	<0.008	0.074		0.5
Barium Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		104	191	228		
Barium Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		37	118	113		
Barium Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.504	1.326	1.360		20
Boron Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<10		421	155	113		
Boron Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<10		160	135	76		
Boron Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			2.12	1.39	0.83		
Cadmium Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<0.4		<0.4	<0.4	<0.4		
Cadmium Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<0.4		<0.4	<0.4	<0.4		
Cadmium Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			<0.0032	<0.0032	<0.0032		0.04
Chromium Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		1	<1	5		
Chromium Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		<1	<1	1		
Chromium Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			<0.008	<0.008	0.018		0.50
Copper Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		10	2	18		
Copper Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		4	<1	5		
Copper Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.052	<0.008	0.076		2
Lead Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		4	<1	41		
Lead Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		4	<1	5		
Lead Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.040	<0.008	0.122		0.50
Molybdenum Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		8	14	15		
Molybdenum Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		3	11	3		
Molybdenum Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.040	0.116	0.054		0.50
Nickel Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		10	1	1		
Nickel Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		2	<1	<1		
Nickel Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.036	<0.008	<0.008		0.60
Selenium Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<1		2	<1	<1		
Selenium Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<1		<1	<1	<1		
Selenium Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			<0.008	<0.008	<0.008		0.1
Zinc Dissolved (CEN 2:1) (ICP-MS)	TM152	ug/l	<3		42	13	27		
Zinc Dissolved (CEN 8:1) (ICP-MS)	TM152	ug/l	<3		22	13	8		
Zinc Dissolved (CEN 10:1C) (ICP-MS)	TM152	mg/kg			0.260	0.130	0.118		4
Mercury Dissolved (CEN 2:1) (CVAA)	TM127	ug/l	<0.05		<0.05	<0.05	<0.05		
Mercury Dissolved (CEN 8:1) (CVAA)	TM127	ug/l	<0.05		<0.05	<0.05	<0.05		
Mercury Dissolved (CEN 10:1C) (CVAA)	TM127	mg/kg			<0.0004	<0.0004	<0.0004		0.01

Supplemental Report

Sample Identity	26008667	26008668	26008669
Depth			
Sample Type	SOLID	SOLID	SOLID
Sample Received Date	29/09/2006	29/09/2006	29/09/2006
Sampled Date			
Batch	1	1	1
Sample Number(s)	1	2	3

	Method	Units	Method Detection Limit			
Chloride (CEN 2:1)	TM097	mg/l	<1	4	3	4
Chloride (CEN 8:1)	TM097	mg/l	<1	1	4	1
Chloride (CEN 10:1C)	TM097	mg/kg		16	38	16
Fluoride (CEN 2:1)	TM104	mg/l	<0.5	0.5	1.2	1.5
Fluoride (CEN 8:1)	TM104	mg/l	<0.5	<0.5	1.0	1.1
Fluoride (CEN 10:1C)	TM104	mg/kg		<4	10	12
Sulphate (CEN 2:1)	TM098	mg/l	<3	9	5	17
Sulphate (CEN 8:1)	TM098	mg/l	<3	<3	<3	3
Sulphate (CEN 10:1C)	TM098	mg/kg		<24	<24	58
Dissolved Organic Carbon (CEN 2:1)	TM090	mg/l	<1	8	5	9
Dissolved Organic Carbon (CEN 8:1)	TM090	mg/l	<1	5	3	4
Dissolved Organic Carbon (CEN 10:1C)	TM090	mg/kg		56	34	50
Total Dissolved Solids (CEN 2:1)	TM123	mg/l	<5	36	94	119
Total Dissolved Solids (CEN 8:1)	TM123	mg/l	<5	12	53	57
Total Dissolved Solids (CEN 10:1C)	TM123	mg/kg		168	612	694
Phenols Monohydric (CEN 2:1)	TM062	mg/l	<0.01	<0.01	<0.01	<0.01
Phenols Monohydric (CEN 8:1)	TM062	mg/l	<0.01	<0.01	0.01	<0.01
Phenols Monohydric (CEN 10:1C)	TM062	mg/kg		<0.08	0.08	<0.08

Signed
Principal Scientific Officer
Lancashire County Council
Date

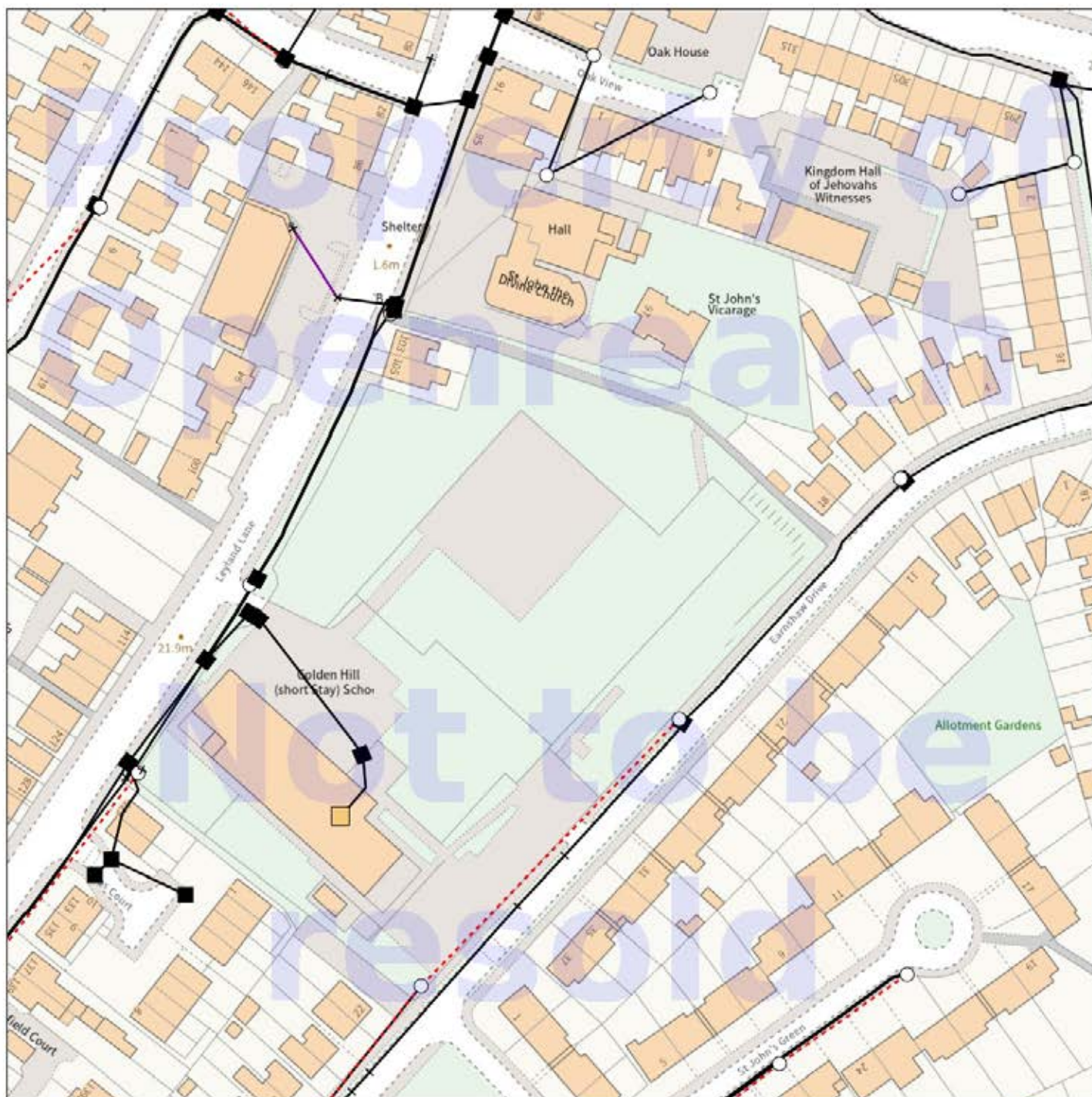
Peter Moorcroft MChemA, CChem, MRSC

17/10/2006

Appendix L

Service Plans

Maps on Demand Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

openreach

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08 00 to 17 00)
www.openreach.co.uk/cbyd

Accidents happen

If you do damage any Openreach equipment please let us know by calling 0800 023 2023 (opt 1 + opt 1) and we can get it fixed ASAP

KEY TO BT SYMBOLS

	<i>Planned</i>	<i>Live</i>	Change Of State	+	Hatchings	
PCP			Split Coupling	X	Built	
Pole			Duct Tee	▲	Planned	
Box			Building		Inferred	
Manhole			Kiosk	K	Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
		<i>Pending Add</i>	<i>In Place</i>	<i>Pending Remove</i>	<i>Not In Use</i>	
Power Cable						
Power Duct				N/A		

BT Ref : XEJ15544A

Map Reference : (centre) SD5302522582

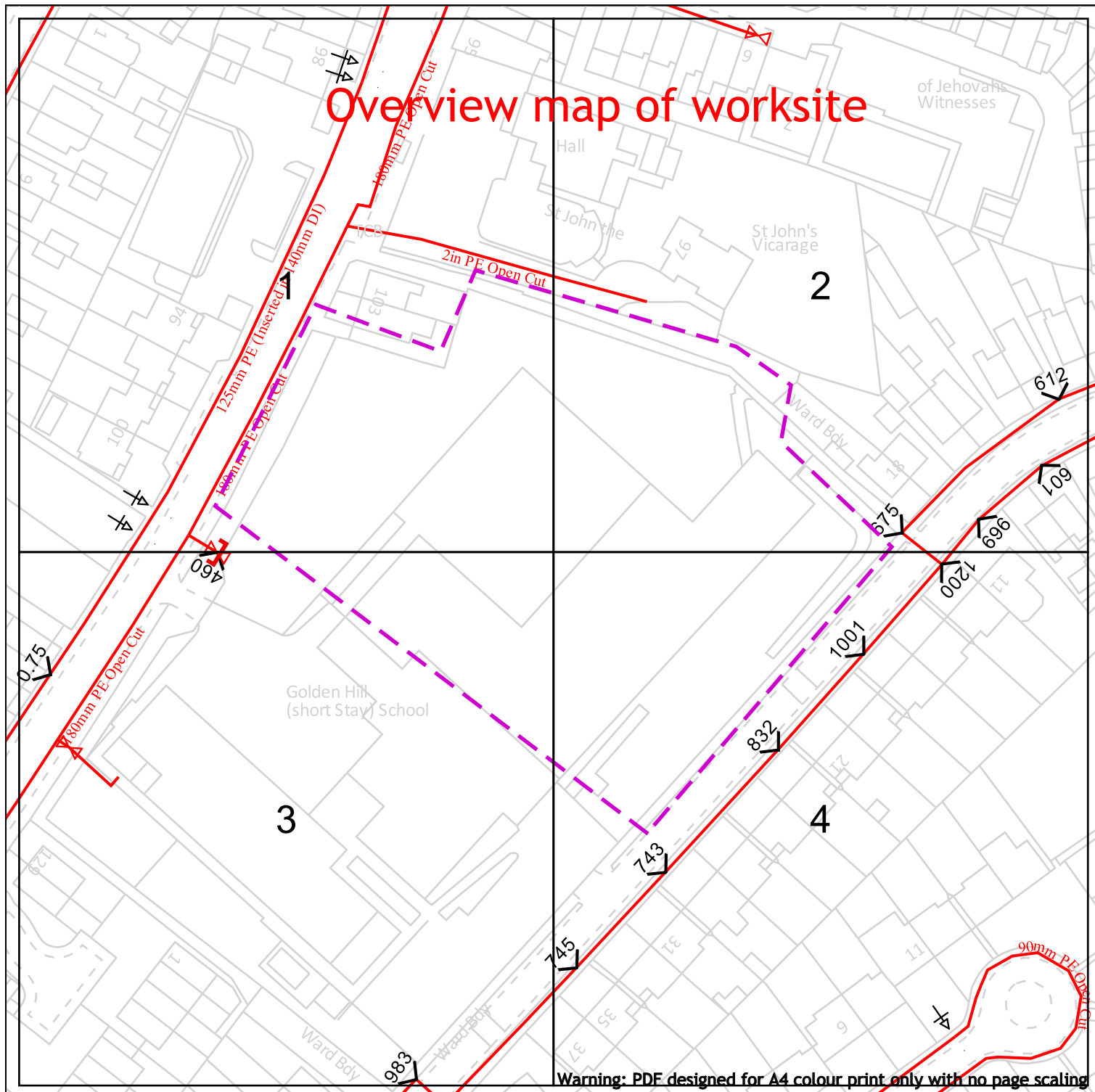
Easting/Northing : (centre) 353025,422582

Scale : 1:250

Issued : 23/07/2026 15:54:20

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

Overview map of worksite



Cadent
Your Gas Network

Dig Sites



LP Mains
MP Mains
IP Mains
LHP Mains

Area: - - - -



Valve
Depth of cover
Syphon

Line: - - - -



Diameter Change



Material Change



Out of Standard Service

Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information.

Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

Date Requested: 23/07/2026

Job Reference: 42352097

Site Location: 353003 422618

Requested by: Miss Sian Thomas

Your Scheme/Reference: Golden Hill

IMPORTANT NOTICES

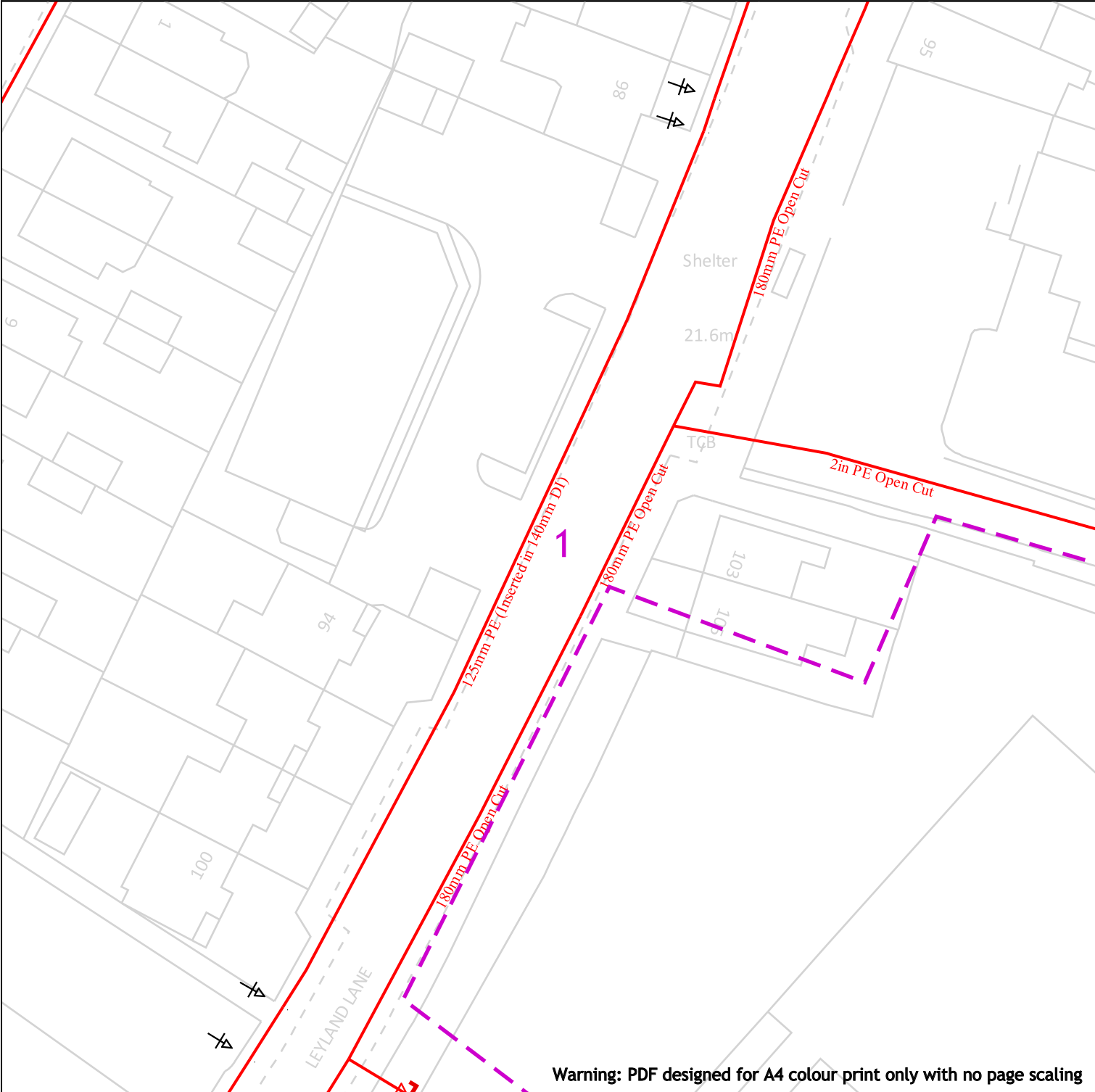
This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

View extent: 100m, 100m

Scale: 1:1025 (When plotted at A4)

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886





Cadent
Your Gas Network

Dig Sites

Area:  Line: 

	LP Mains			Diameter Change
	MP Mains			Material Change
	IP Mains			Out of Standard Service
	LHP Mains			

Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information.

Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

Date Requested: 23/07/2026
Job Reference: 42352097
Site Location: 353003 422618
Requested by: Miss Sian Thomas
Your Scheme/Reference: Golden Hill

View extent: 100m, 100m

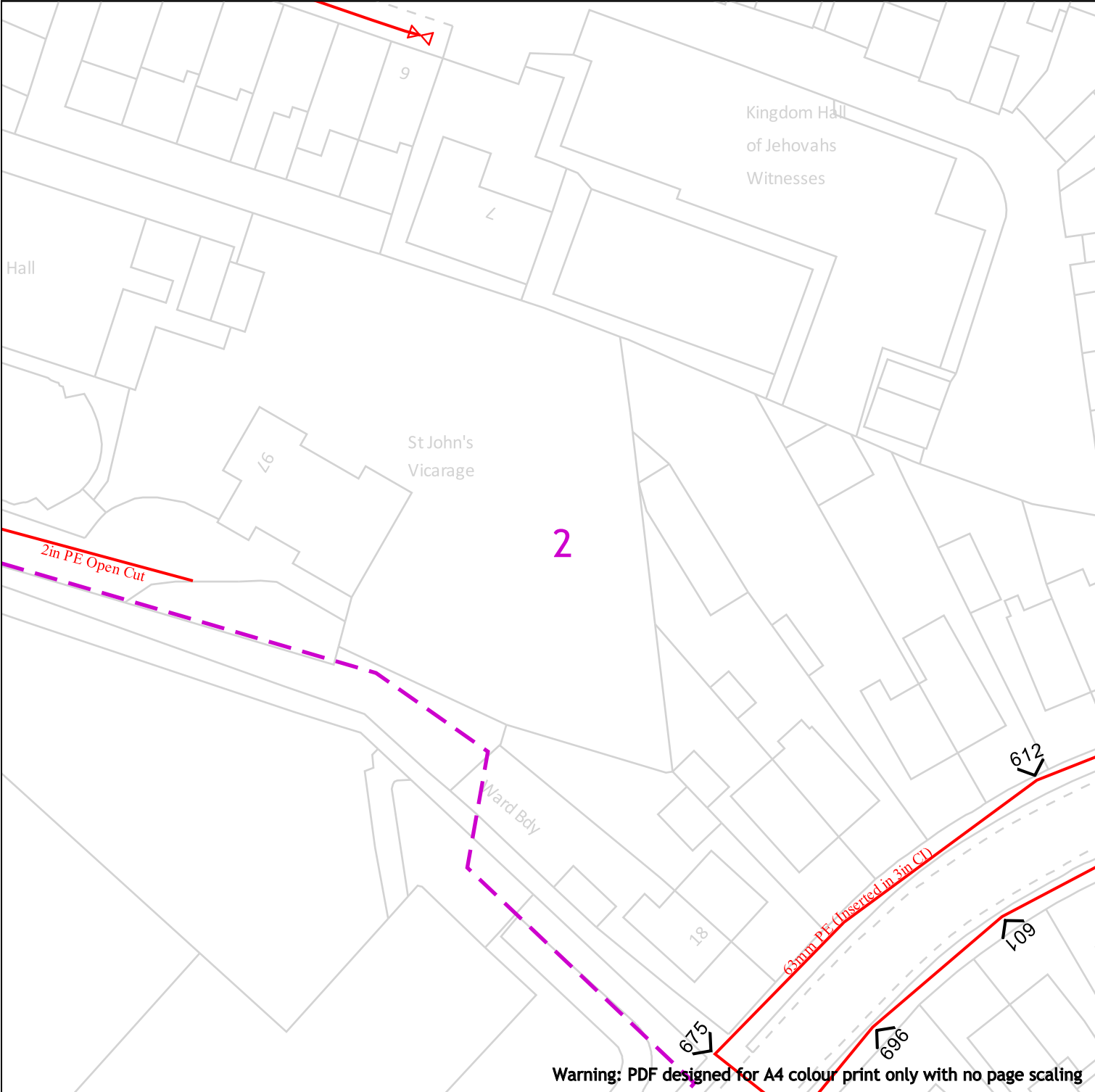
IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Scale: 1:500 (When plotted at A4)

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886



Warning: PDF designed for A4 colour print only with no page scaling



Cadent
Your Gas Network

Date Requested: 23/07/2026
Job Reference: 42352097
Site Location: 353003 422618
Requested by: Miss Sian Thomas
Your Scheme/Reference: Golden Hill

View extent: 100m, 100m

Scale: 1:500 (When plotted at A4)



Dig Sites

	LP Mains
	MP Mains
	IP Mains
	LHP Mains

Area:

Line:

	Valve
	Depth of cover
	Syphon
	Diameter Change
	Material Change
	Out of Standard Service

Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information.

Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

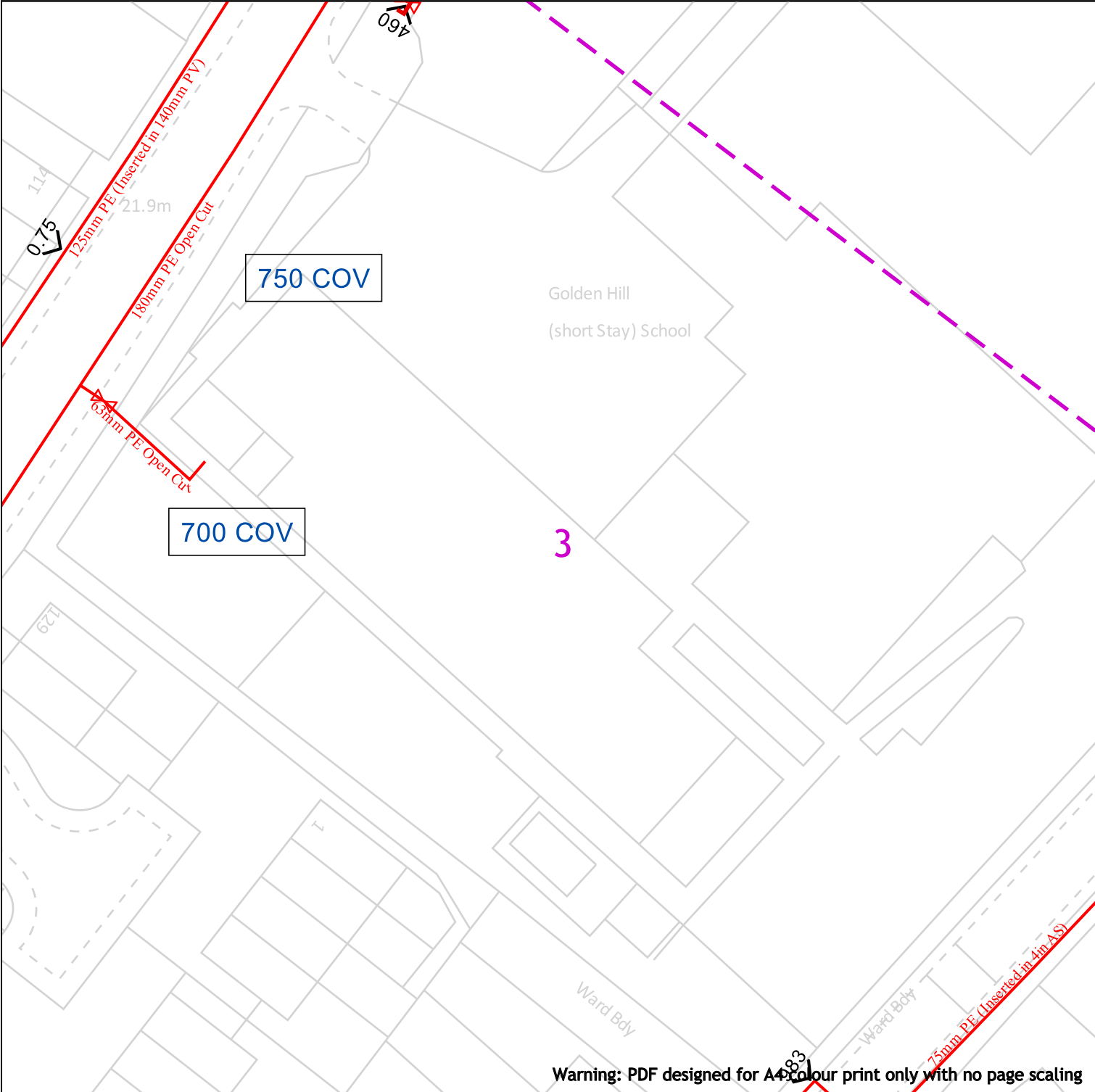
A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886



Warning: PDF designed for A4 colour print only with no page scaling



Cadent
Your Gas Network

Date Requested: 23/07/2026
Job Reference: 42352097
Site Location: 353003 422618
Requested by: Miss Sian Thomas
Your Scheme/Reference: Golden Hill

View extent: 100m, 100m

Scale: 1:500 (When plotted at A4)



Dig Sites

	LP Mains
	MP Mains
	IP Mains
	LHP Mains

Area:

Line:

	Valve
	Depth of cover
	Syphon
	Diameter Change
	Material Change
	Out of Standard Service

Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information.

Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

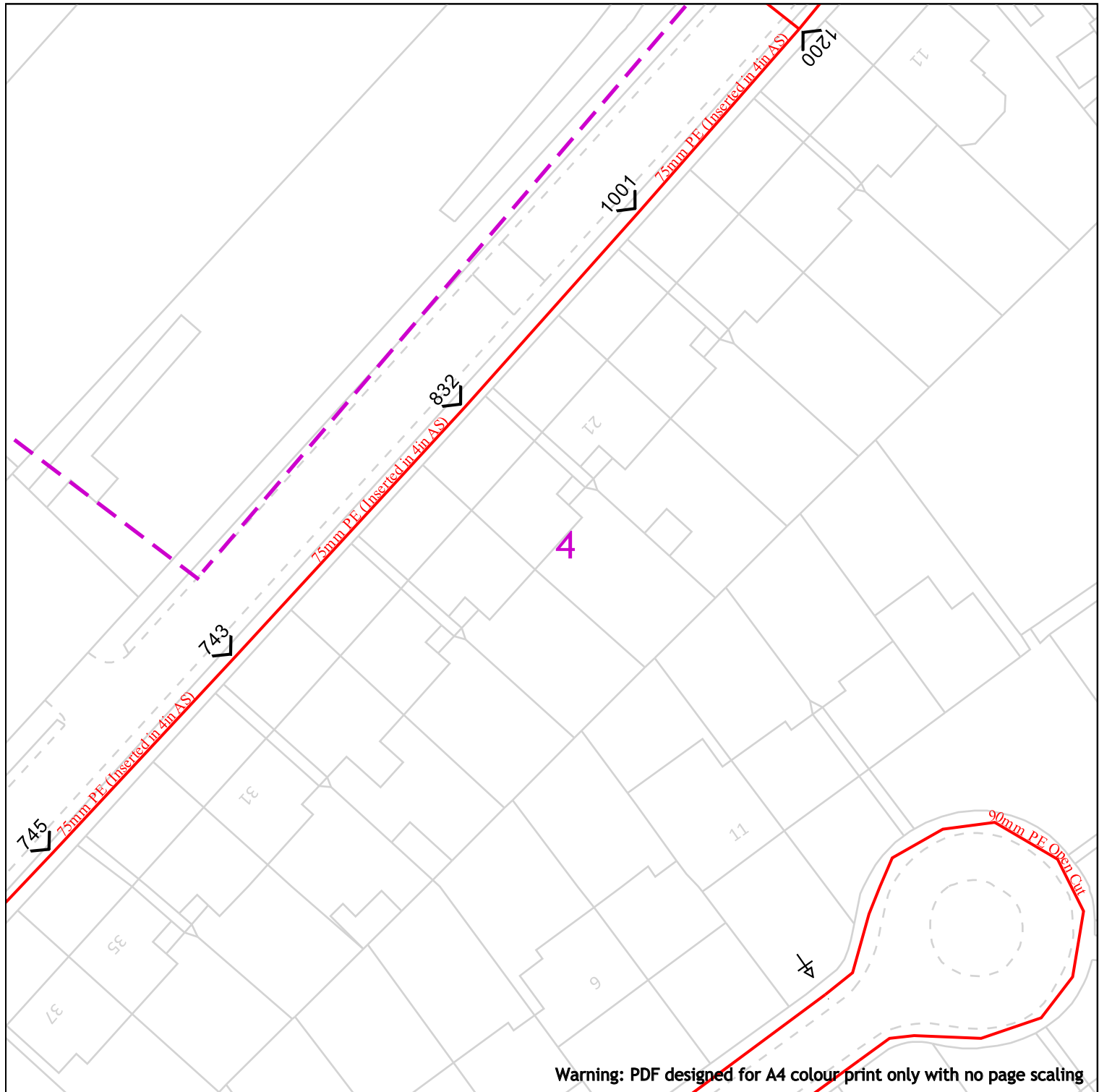
A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886



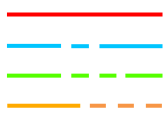
Warning: PDF designed for A4 colour print only with no page scaling



Dig Sites

Area:

Line:



LP Mains
MP Mains
IP Mains
LHP Mains



Valve



Depth of cover



Syphon



Diameter Change



Material Change



Out of Standard Service

Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information.

Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

Cadent
Your Gas Network

Date Requested: 23/07/2026
Job Reference: 42352097
Site Location: 353003 422618
Requested by: Miss Sian Thomas
Your Scheme/Reference: Golden Hill

View extent: 100m, 100m

Scale: 1:500 (When plotted at A4)

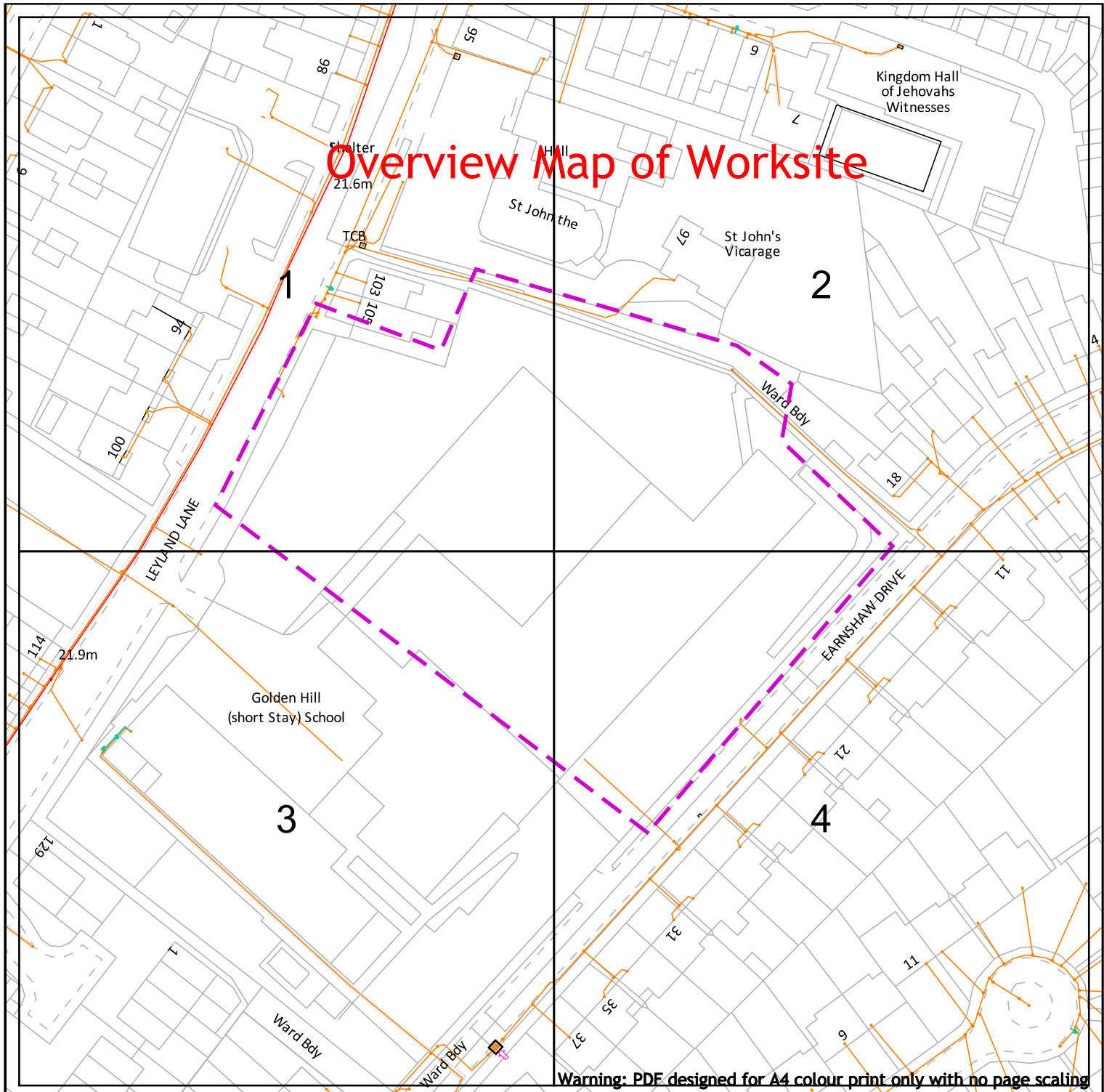
IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886

Overview Map of Worksite



Warning: PDF designed for A4 colour print only with no page scaling



Electricity North West
Borron Street
Portwood, Stockport
Cheshire, SK1 2 JD
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Operating Voltage

132kV
33kV
22kV-25kV
11kV
6kV-6.6kV
1kV-6kV
LV
Unknown Voltage

Colour Code

Black
Green
Yellow
Red
Blue
Violet
Orange
Brown

Line Colour



In an emergency call 105,
24 hours a day

Dig Sites

Line: ---
Area: []

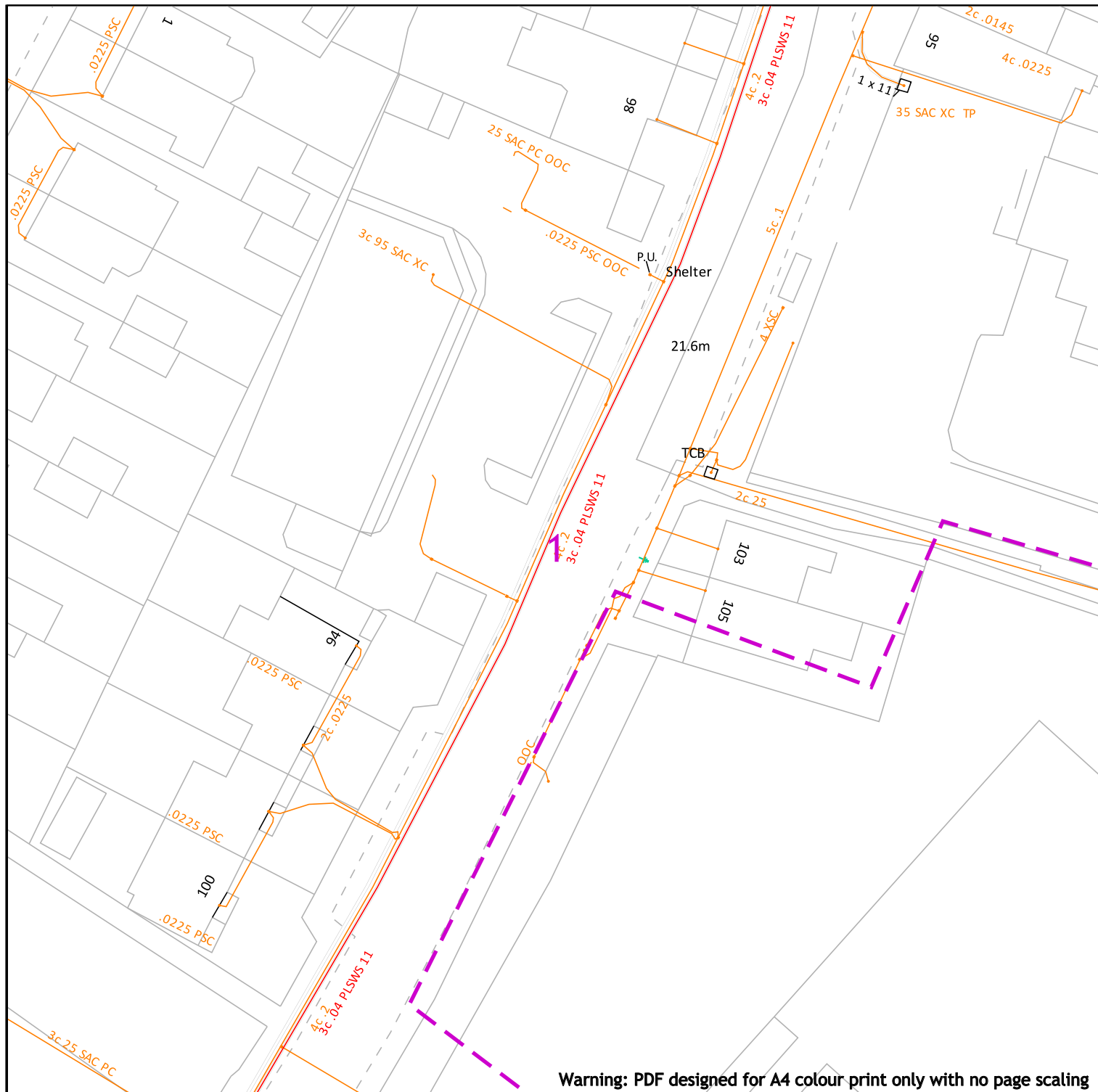
Date Requested: 23/07/2026
Job Reference: 42352097
Site Location: 353003 422618
Requested by: Miss Sian Thomas
Your Scheme/Reference: Golden Hill

IMPORTANT INFO

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited. Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoiding Danger from Overhead Power Lines". Electricity North West Limited, Borron Street, Portwood, Stockport, Cheshire, SK1 2JD Registered in England and Wales. Registered No 02366949

Scale: 1:1025 (When plotted at A4)

Reproduced from or based upon Ordnance Survey's map with the permission of His Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.



Warning: PDF designed for A4 colour print only with no page scaling



Electricity North West
Borron Street
Portwood, Stockport
Cheshire, SK1 2 JD
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Operating Voltage

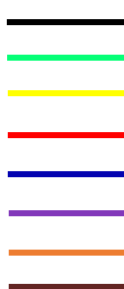
132kV
33kV
22kV-25kV
11kV
6kV-6.6kV
1kV-6kV
LV

Unknown Voltage

Colour Code

Black
Green
Yellow
Red
Blue
Violet
Orange
Brown

Line Colour



In an emergency call 105,
24 hours a day

Dig Sites

Line: - - - - -

Area: [] [] [] []

IMPORTANT INFO

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

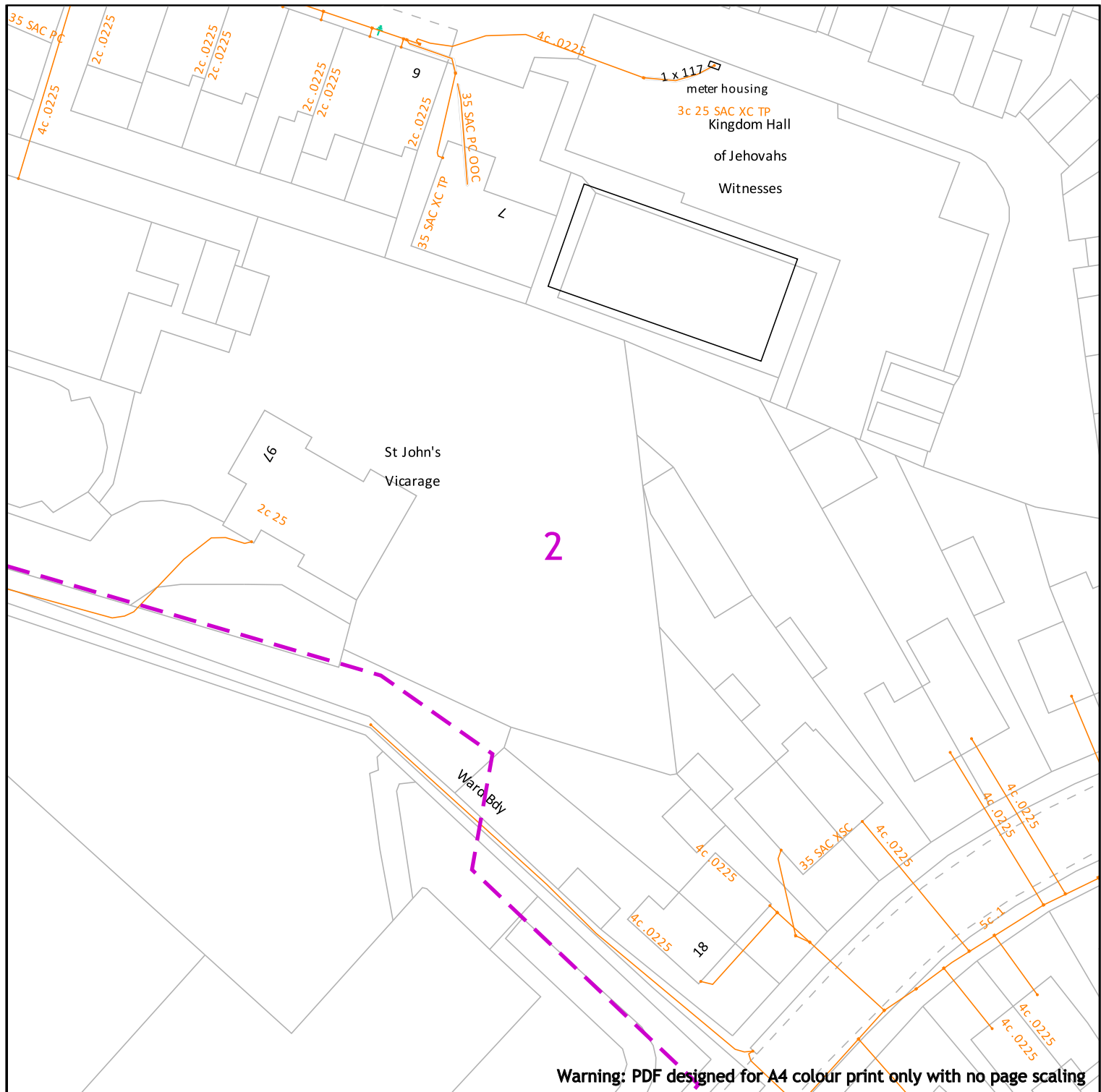
Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoiding Danger from Overhead Power Lines".

Electricity North West Limited, Borron Street, Portwood, Stockport, Cheshire, SK1 2JD Registered in England and Wales. Registered No 02366949

Reproduced from or based upon Ordnance Survey's map with the permission of His Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.

Date Requested: 23/07/2026
Job Reference: 42352097
Site Location: 353003 422618
Requested by: Miss Sian Thomas
Your Scheme/Reference: Golden Hill

Scale: 1:500 (When plotted at A4)



Warning: PDF designed for A4 colour print only with no page scaling



Electricity North West
Borron Street
Portwood, Stockport
Cheshire, SK1 2 JD
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Operating Voltage

132kV

33kV

22kV-25kV

11kV

6kV-6.6kV

1kV-6kV

LV

Unknown Voltage

Colour Code

Black

Green

Yellow

Red

Blue

Violet

Orange

Brown

Line Colour

Black

Green

Yellow

Red

Blue

Violet

Orange

Brown

In an emergency call 105,
24 hours a day

Dig Sites

Line: - - - -

Area: [] [] [] []

Date Requested: 23/07/2026

Job Reference: 42352097

Site Location: 353003 422618

Requested by: Miss Sian Thomas

Your Scheme/Reference: Golden Hill

IMPORTANT INFO

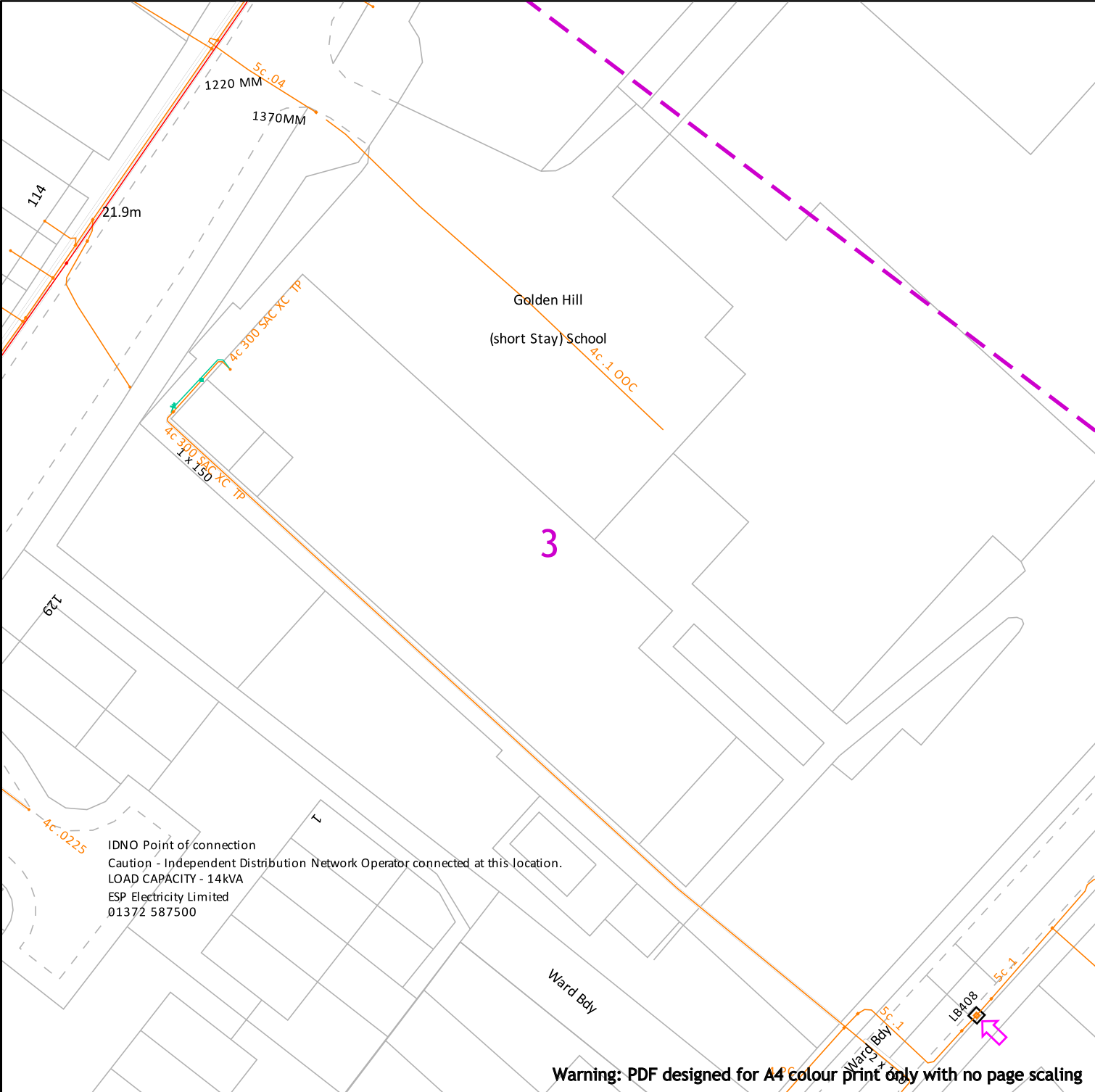
Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoiding Danger from Overhead Power Lines".

Electricity North West Limited, Borron Street, Portwood, Stockport, Cheshire, SK1 2JD Registered in England and Wales. Registered No 02366949

Scale: 1:500 (When plotted at A4)

Reproduced from or based upon Ordnance Survey's map with the permission of His Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.



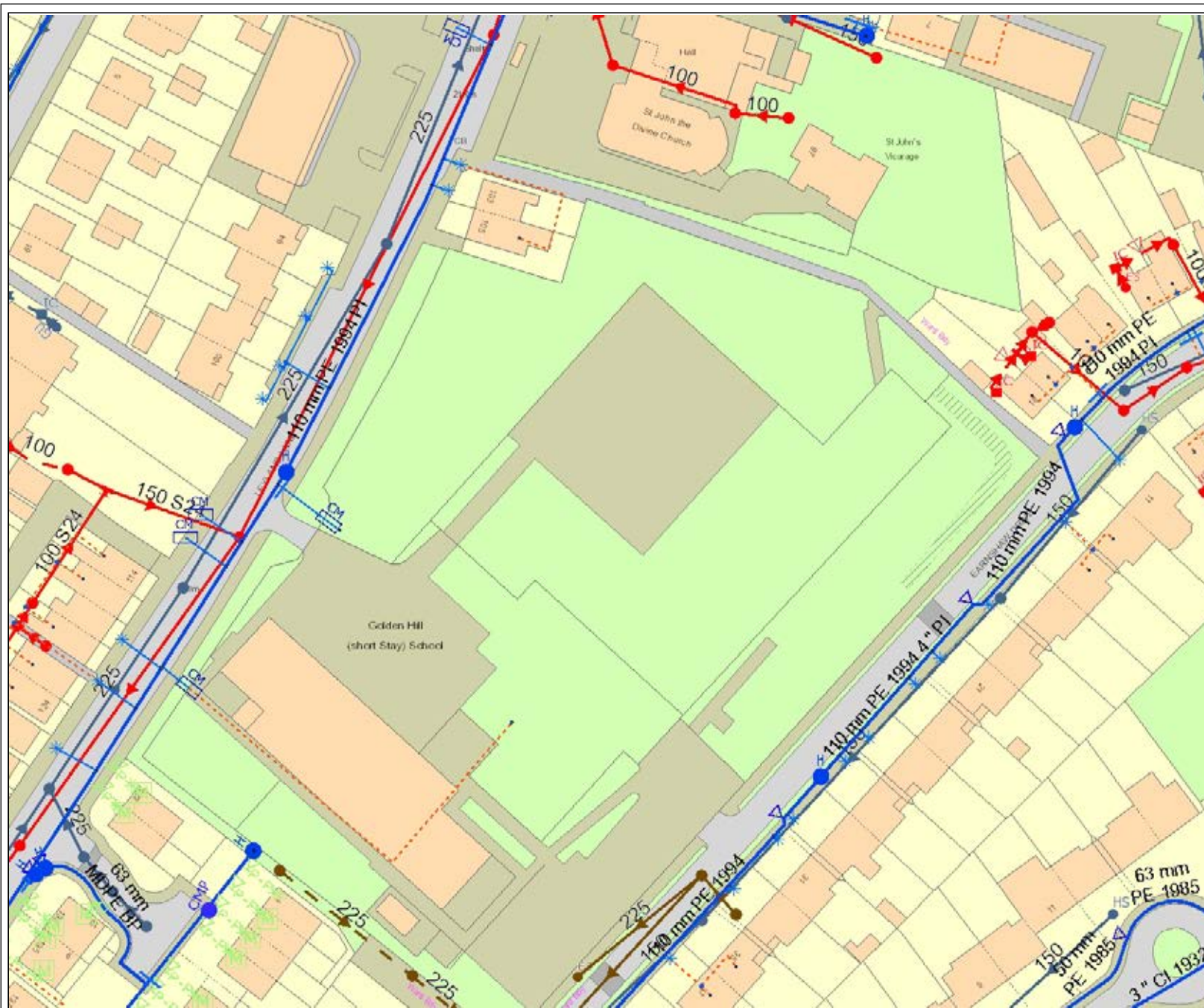
IDNO Point of connection
Caution - Independent Distribution Network Operator connected at this location.
LOAD CAPACITY - 14kVA
ESP Electricity Limited
01372 587500

Warning: PDF designed for A4 colour print only with no page scaling

 Electricity North West Borron Street Portwood, Stockport Cheshire, SK1 2 JD Phone: 0800 195 4141 Email: planrequest@enwl.co.uk	Operating Voltage	Colour Code	Line Colour	In an emergency call 105, 24 hours a day	Dig Sites
	132kV	Black			Line: 
	33kV	Green			Area: 
	22kV-25kV	Yellow			
	11kV	Red			
	6kV-6.6kV	Blue			
	1kV-6kV	Violet			
LV	Orange				
Date Requested: 23/07/2026 Job Reference: 42352097 Site Location: 353003 422618 Requested by: Miss Sian Thomas Your Scheme/Reference: Golden Hill	Unknown Voltage	Brown			
	IMPORTANT INFO Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited. Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoiding Danger from Overhead Power Lines". Electricity North West Limited, Borron Street, Portwood, Stockport, Cheshire, SK1 2JD Registered in England and Wales. Registered No 02366949				
Reproduced from or based upon Ordnance Survey's map with the permission of His Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.					

Scale: 1:500 (When plotted at A4)





United Utilities Maps for Safe Dig

Date : 23/07/2026 16:00:01

Centre X : 353013

Center Y : 422574

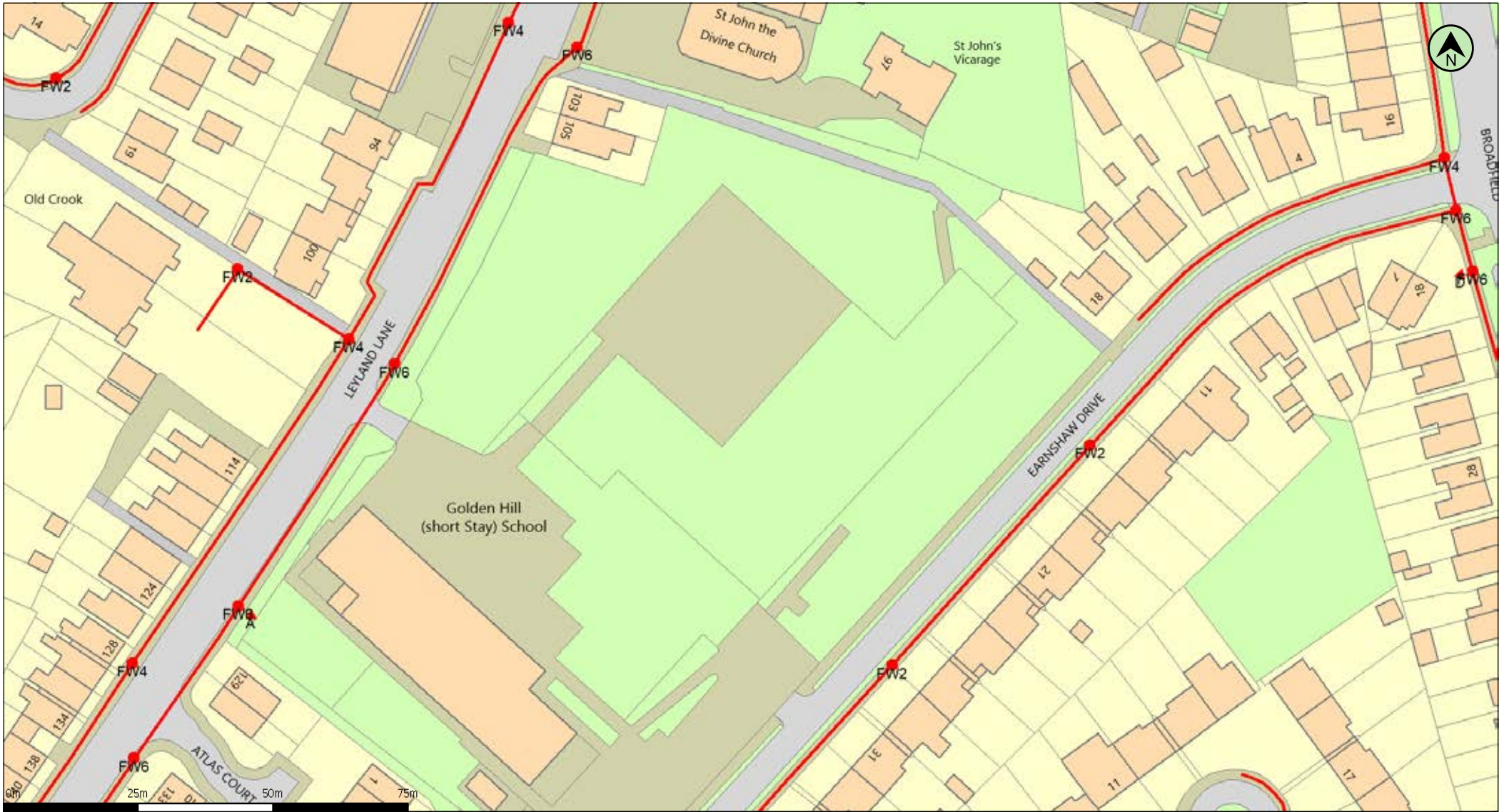
Scale : 1000

UserName: LCCBBC

Extract from maps of United Utilities' Underground Assets

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. The actual positions may be different from those shown on the plan and private service pipes may be shown by a blue broken line. United Utilities Water will not accept liability for any damage caused by the actual position being

Crown copyright and database rights 2026. Ordnance survey 0000813445 . This plan is based on the Ordnance Survey Map with the sanction of the Controller of H.M. Stationary Office. Crown and United Utilities Water copyrights are reserved. Unauthorised reproduction will infringe these copyrights.



(c) Crown copyright and database rights 2026 Ordnance Survey AC0000818557 Date: 23/07/26 Scale: 1:1000 Map Centre: 353024,422574 Data updated: 04/06/26 Our ref: 2176232 - 1 Telecoms Plan A4 Powered by digdat

This plan has been prepared to assist in identifying the location of Virgin Media apparatus. While we have taken care to ensure its accuracy, we cannot guarantee that it is complete or error-free. In addition, we caution that within Virgin Media apparatus there may be instances where mains voltage power cables have been placed inside green, rather than black ducting. This plan should not be relied upon as the sole source of information when carrying out excavation or other works. The actual position of any underground services must be confirmed on site using appropriate cable detection equipment and other verification methods before any mechanical plant is used. Accordingly, unless it is due to the negligence of Virgin Media, its employees or agents, Virgin Media will not have any liability for any omissions or inaccuracies in the plan or for any loss or damage caused or arising from the use of and/or any reliance on this plan. Should you find, whilst carrying out the works, that apparatus belonging to Virgin Media Limited, is not marked, or is incorrectly marked, can you please take such steps as are reasonably practicable to inform Virgin Media Limited of its location and (so far as appears from external inspection) its nature and whether it is in use. This plan is produced by Virgin Media Limited. © Crown copyright and database rights 2026 OS AC0000818557

Duct, Trench



Chamber



Cabinet



sian.thomas@lancashire.gov.uk

Golden Hill

