Weston Halls & Pendulum Hotel

78 Sackville Street Manchester, M1 3BB

Flood Risk Assessment & Drainage Strategy

August 2026

PREPARED FOR

iQ Student Accommodation

Flood Risk Assessment & Drainage Strategy

Prepared By	Anna Wade & James King
Reviewed By	Katrina Wylie
Report Reference	FRA and Drainage Strategy
Issuing Company	Civic Engineers Limited
Issued	06/05/2025 – Issued for Planning

Revisions			
Date	**Rev**	**Reason**	**Name**
28/11/2025	01	Issued for Comment	Katrina Wylie
11/12/2025	02	Issued for Planning	James King
06/05/2026	03	Revised issue for Planning	James King
04/08/26	04	Revised issue based on EA comments	James King

This report is the copyright of the issuing Civic group company and is intended solely for the use of the individual or organisation to whom it is addressed. It may not be disclosed, reproduced, or referred to in whole or in part by any other party without the prior written consent of the relevant Civic group company. No liability is accepted by any Civic group company for any loss or damage arising from any unauthorised use of this report.

“Civic” is a trading name used by companies within the Civic Plus Limited group (registered number: 14208271), including Civic Engineers Limited (registered number 06824088), Civic Plus Limited (registered number: 752376), Civic Earth Limited (registered number 14897633), Civic Heritage Limited (registered number 15013145), Civic MEP Limited (registered number 09245443), Civic Rail Limited (registered number

CIVIC

CONTENTS

Executive Summary and Consultation 5
1. Introduction 6
2. Development Proposal 6
3. Existing Site 7
3.1. Site Description 7
3.2. Existing Watercourse 8
3.3. Existing Site Drainage and Water Supply 9
3.4. Topography 9
3.5. Geology 10
4. Relevant Policy and Guidance 11
4.1. National Planning Policy Framework 11
4.2. Flood risk assessment: climate change allowances 14
5. Hydrological Assessment 16
5.1. Flooding History 16
5.2. Fluvial Flood Risk 16
5.3 Surface Water Flood Risk 18
5.4. Groundwater Flood Risk 19
5.5. Reservoir Flood Risk 19
5.6. Sewers Flood Risk 20
5.7. Summary of Flood Risk 20
5.8. Proposed Flood Resilience Measures 21
5.9. Flood Compensatory Storage 23
6. Proposed Surface Water Drainage Strategy 26
6.1. Point of Discharge 26
6.2. Detailed Site Areas 26
6.3. Greenfield Runoff Rates 27
6.4. Proposed Discharge Rate 27
6.5. Water Quantity & Preliminary Drainage Modelling 27
6.6. Proposed Surface Water Attenuation & Sustainable Drainage Systems (SuDS) 29
7. Conclusion 31
8. Sturctural Interaction with Culvet 32
9. Appendixes 34
9.1. Appendix A - Site Constraints (Culvert) 35
9.2. Appendix B - Utility Report 36
9.3. Appendix C - Topographical Survey 37
9.4. Appendix D - BGS Borehole Records 38
9.5. Appendix E - EA Flood Model 39
9.6. Appendix F - United Utilites Asset Map 40

9.7. Appendix G - Exisitng Vs Proposed Flood Extent 41
9.8. Appendix H - Greenfeild Runoff Rates 42
9.9. Appendix I - Hydralic Calculations 43
9.10. Appendix J - Proposed Drainage Layouts 44
9.11. Appendix K - Proposed Structural and Culvet Intertaction Drawings 45

Executive Summary and Consultation

During the consultation period, flood resilience and mitigation were discussed with the Environment Agency (EA). A summary of this consultation has been included in Appendix K.

As part of this, design mitigation measures have been reviewed and revised to respond to the feedback from the EA. The mitigation measures have been agreed with the design team, and include raising FFLs, or where this has been deemed acceptable, providing flood resilient design and locating building entrances in accordance with the flood mapping.

This report has been amended and updated in response to comments raised by the EA. Table 1 provides a summary of these comments and directs the reader towards the relevant section where each comment has been addressed.

Stakeholder	Summary of Comment	Date Received	Location of addressal within this report
EA	The development proposes inadequate raised finished floor levels. Finished floor levels must be a minimum of 600mm above the 1 in 100-year flood level + 35% climate change.	07/01/2026	Section 5.8. Confirmation from the EA that the approach taken to FFL's was acceptable was received on 02/04/2026.
	The FRA still does not quantify the volume of floodwater that will be displaced during the 1 in 100 year plus 35% percent climate change event. Until the displaced volume, compensatory storage volume, and flow routing impacts are fully assessed, the FRA remains inadequate and our objection cannot be removed.	02/04/2026	Section 5.9. Table 7 added demonstrating flood offset compensation volumes. Figure 10, Figure 11 and Appendix G revised to show flood extent at varying water levels.
	• demonstrates that compensatory flood storage is provided on a level for level basis; • demonstrates that floodwaters can naturally and freely access the compensatory storage area during flood events; • confirms whether a retaining wall forms part of the development and, if so, demonstrates that it will not adversely affect floodplain connectivity, flood flow routes	04/08/2026	Section 5.9 Updated to better explain the proposals Appendix G. New flood extent drawings provided to show clearer flood compensation extents at different flood levels Section 8 Added to explain how the culvert is not at risk of damage from the proposed works. Structural drawings also added to Appendix K

	or increase flood risk elsewhere; and • provides the outstanding information relating to the proposed demolition works above the existing culvert.		

For the detailed site Phase 1, standalone analysis has been undertaken to ensure that we are not increasing flood risk elsewhere and finished floor levels have been set as high as possible to mitigate the flood risk. Safe access and egress routes to the Phase 1 buildings are possible via 'low hazard' routes.

1. Introduction

1.1 This document has been prepared on behalf of iQ Student Accommodation to support a Full Planning Application for the re-development of Weston Halls & Pendulum Hotel.

1.2 This report justifies why the proposals for the site are acceptable in relation to flood risk and drainage.

1.3 This report has been created in support of the planning application for the proposed development. The report aims to assess it against the risk of flooding and to establish the principles of the drainage scheme in line with the National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG) and the Non-Statutory Technical Guidance for Sustainable Drainage Systems, as well as Manchester City local policy and guidance.

2. Development Proposal

2.1 This FRA seeks to support the planning application of the development. The proposed development comprises the full demolition and redevelopment of the Weston Halls and Pendulum Hotel and the construction of purpose-built student accommodation ('PBSA') buildings comprising of 2,508 bed spaces. The development shall be phased as follows:

2.2 Phase A - Partial removal of existing structures and erection of two buildings comprising purpose-built student accommodation (sui generis), one of 50 storeys and one of 17 storeys with an 8-storey link, together with associated amenity space, external landscaping, highways works, and change of use of the Pendulum Hotel to purpose-built student accommodation; and

2.3 Phase B - Removal of remaining existing structures and erection of two buildings comprising purpose-built student accommodation (sui generis), one of 33 storeys and one of part-24 and part-8 storeys with a 1-storey link, together with associated amenity space, external landscaping, and highways works.

2.4 Phase A: 50 storeys, 17 storeys, with 8-storey link

Phase B: 33 storeys, part-24 and part 8-storey, with 1-storey link

3. Existing Site

3.1 The Site comprises two interconnected building blocks with a shared main entrance, courtyard design and limited degree of landscaping.

3.2 The buildings comprise of:

- Weston Hall, which is a part 5, part 6 storey purpose built student accommodation development comprising of 528 bed space. The Echoes Day Nursey occupies part of the ground floor of Weston Hall under an occupational lease and is accessed from Charles Street.
- The Pendulum Hotel, which is a part 5, part 6 storey hotel with 117 rooms and a conference centre and is part of the University of Manchester (UoM) campus buildings.

3.1. Site Description

3.1.1 The proposed development is located to the southern edge and periphery of the Manchester City Centre Core. The site is well connected to public transport with Manchester Piccadilly, Oxford Road and Deansgate Castlefield Train Stations all within 10-minute walk as shown in Figure 1.

3.1.2 The site covers an area of 0.73 hectares and is bound by Charles and Sackville Street to the north and east respectively. Drover Lane and the raised podium building of the George Begg and John Garside Building sit to the south with the Ibis Hotel, a private car park and Princess Street on the west, as shown in Figure 2.

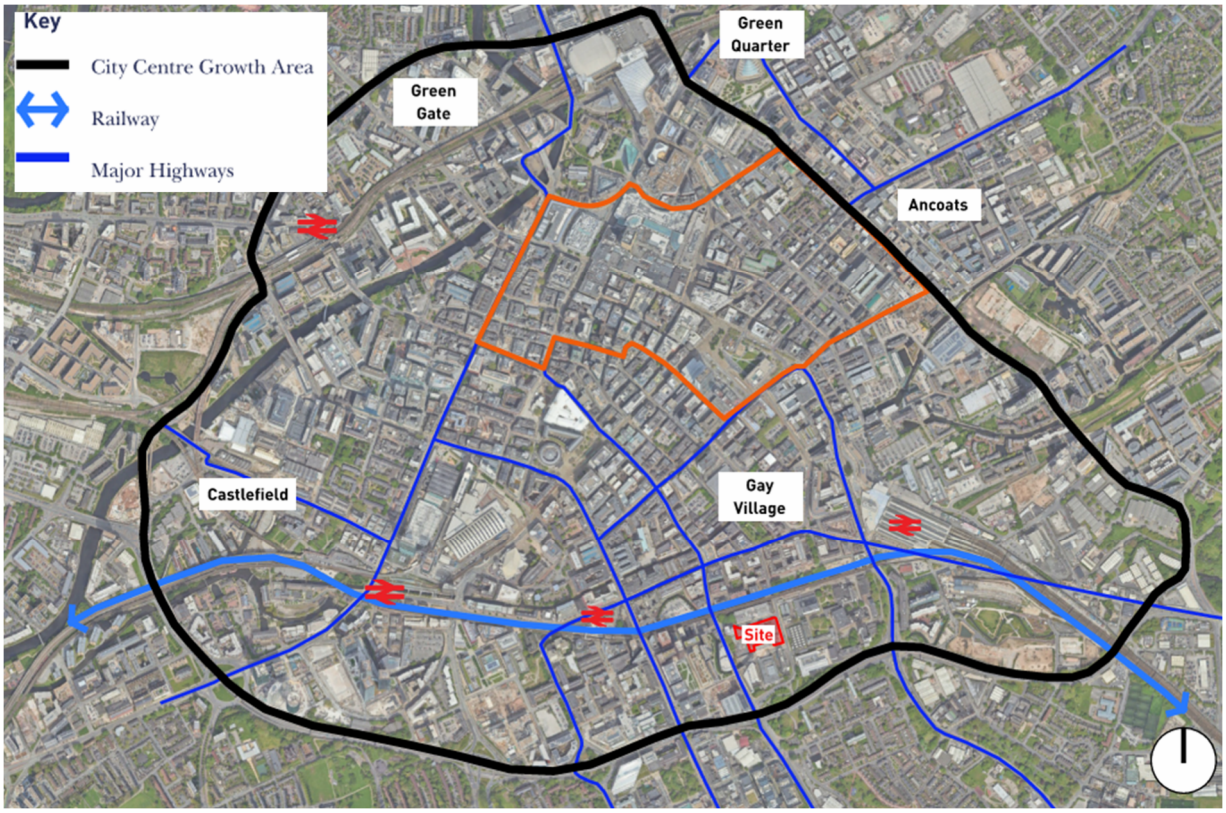


Figure 1 - Manchester City Centre Core (Source: DAS)

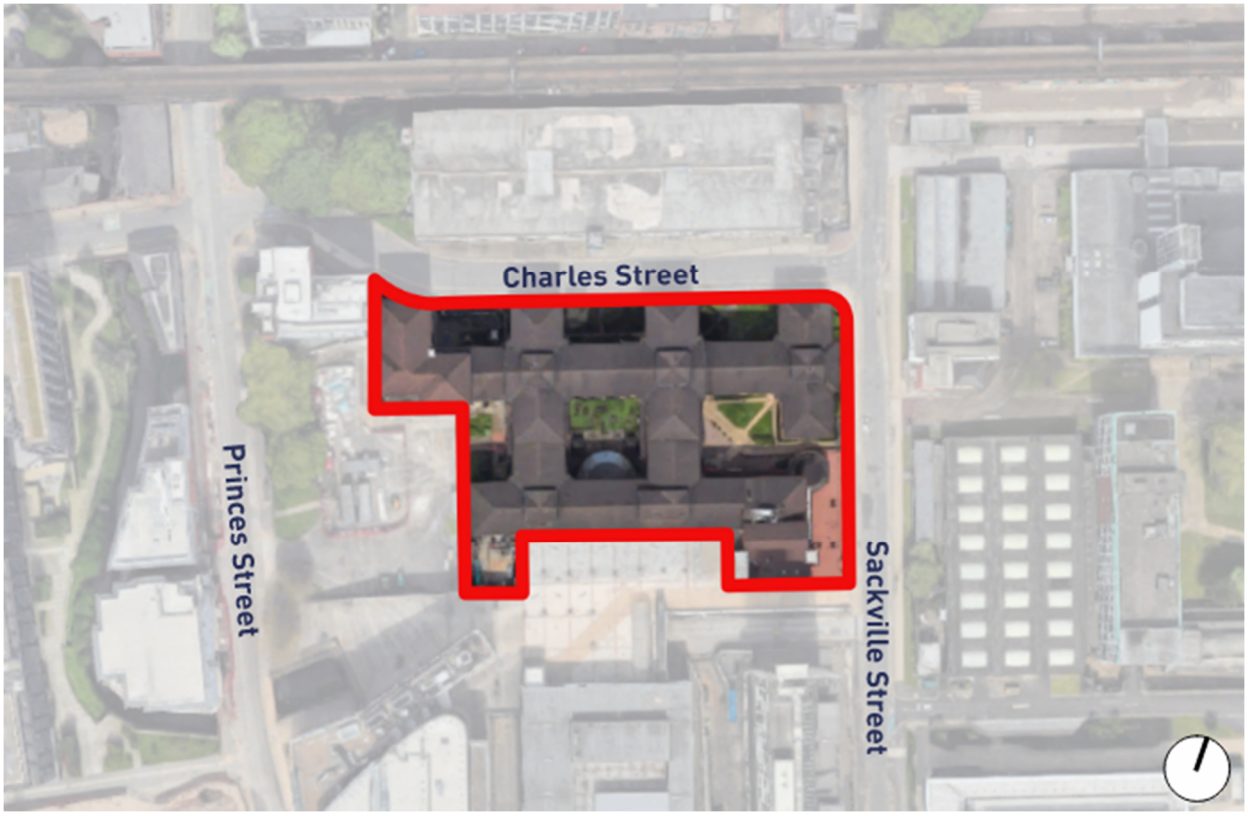


Figure 2 - Site location (Source: Open Street Map)

3.2. Existing Watercourse

3.2.1 The site sits adjacent to the River Medlock, an Environment Agency main river. The river is culverted where it is adjacent to the site and sits just south of the site with a small section encroaching into the Phase B site boundary at the south-west corner as shown in Figure 3. None of the proposed structure of the development is on top of or adjacent to the main river culvert. The topographical survey shows the top of culvert level as 31.91mAOD. Reference to this is included in Appendix A.

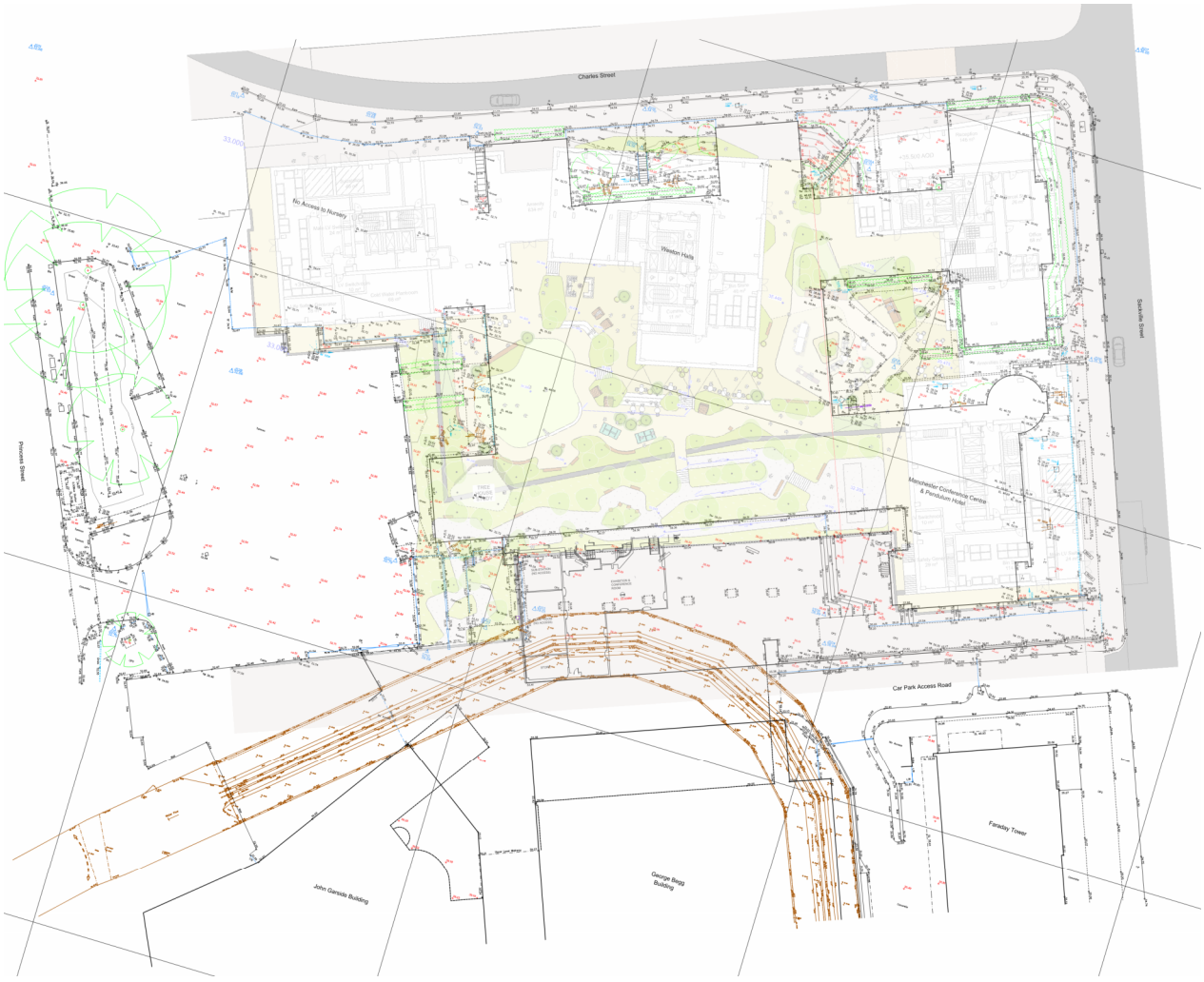


Figure 3 – Existing and proposed site overlay against culvert River Medlock topographical survey (brown)

3.3. Existing Site Drainage and Water Supply

3.3.1 The utilities report is available in Appendix B. The report shows that United Utilities have several combined water sewers serving the existing development. A CCTV survey of the existing drainage is currently being undertaken to establish where the existing foul and surface water networks discharge to. No trunk services appear to cross the site but there is an existing substation to the south of the site.

3.3.2 The existing private drainage on the site is shown as separate networks. The existing foul drainage is split between two separate networks. Both systems drain to the United Utilities combined water network. The east of the site discharges to the combined water sewer on Sackville Street drains, the west of the site discharges to the combined water sewer in the existing storage yard. The existing surface water drainage appears to drain to the culverted watercourse, via an outfall manhole located in the south-west of the site adjacent to the watercourse.

3.4. Topography

3.4.1 The existing Topographic Survey available in Appendix C, shows the existing site levels range from approximately +32.34 mAOD TO +39.38 mAOD. The highest levels are located in the centre of the southern edge of the site and slopes downwards, with the lowest levels located to the west of the site. This southern portion of the site is currently raised a storey up from the surrounding street level.

3.5. Geology

3.5.1 The British Geological Survey (BGS) information available online identifies the following geological succession underlying each site:

- Made Ground: Soft and firm silty and sandy CLAY, ashes, sand, brick etc
- Red sandstone rock

3.5.2 The closest available boreholes SJ89NW1500, SJ89NW247 and SJ89NW247 show similar findings as summarised above. Please refer to Appendix D for these boreholes records in the area.

4. Relevant Policy and Guidance

4.1. National Planning Policy Framework

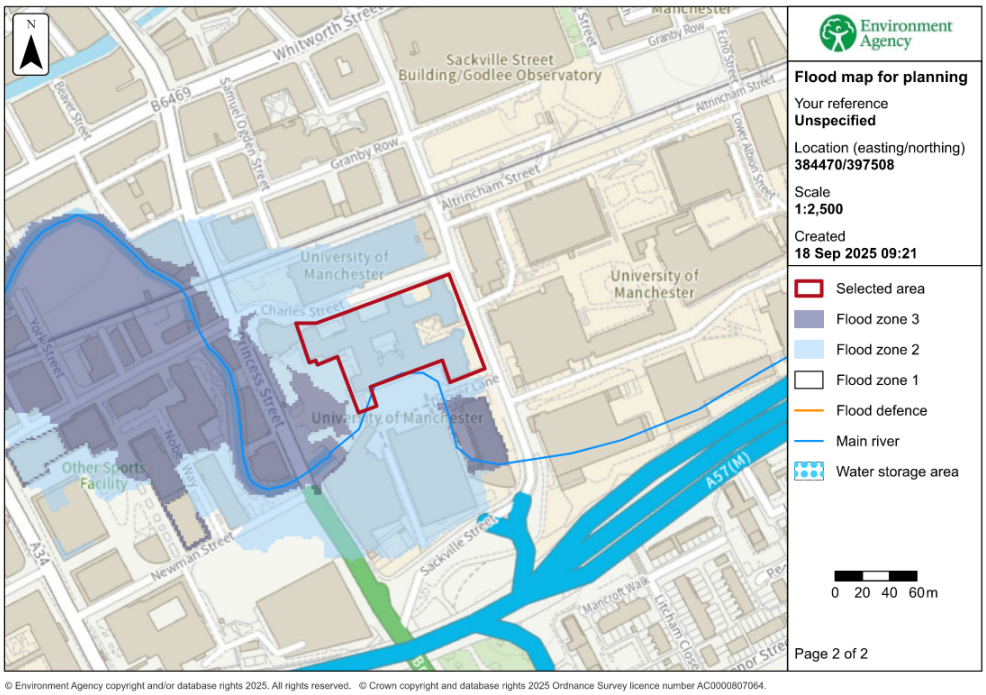
Flood Risk Categorisation

4.2.21 The NPPF refers to the Flood Zones shown on the EA Flood Map for Planning (Rivers and Sea), and establishes the range of uses which are appropriate, or compatible for each Flood Zone. Table 1, extracted from the Flood Risk and Coastal Change PPG (Table 1), summarises the Flood Zones.

Table 1: Flood Zone

FLOOD ZONE	DEFINITION
ZONE 1 LOW PROBABILITY	Land having a less than 1 in 1,000 (0.1%) annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map for Planning – all land outside Zones 2, 3a and 3b)
ZONE 2 MEDIUM PROBABILITY	Land having between a 1 in 100 and 1 in 1,000 (1% and 0.1%) annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 (0.5% and 0.1%) annual probability of sea flooding. (Land shown in light blue on the Flood Map for Planning)
ZONE 3A HIGH PROBABILITY	Land having a 1 in 100 (1%) or greater annual probability of river flooding; or Land having a 1 in 200 (0.5%) or greater annual probability of sea flooding. (Land shown in dark blue on the Flood Map for Planning)
ZONE 3B FUNCTIONAL FLOODPLAIN	This zone comprises land where water from rivers or the sea has to flow or be stored in times of flood. The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. Functional floodplain will normally comprise: - Land having a 1 in 30 (3.3%) or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively - Land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding) Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (No separately distinguished from Zone 3a on the Flood Map)

Figure 4 indicates that site is located in Flood Zone 2.



© Environment Agency copyright and/or database rights 2025. All rights reserved. © Crown copyright and database rights 2025 Ordnance Survey licence number AC0000807064.

Figure 4 - EA Flood Map for Planning (Source: https://flood-map-for-planning.service.gov.uk)

Flood risk vulnerability and flood zone compatibility

4.1.2 Annex 3 of the NPPR defines the type and nature of different development classifications in the context of their flood risk vulnerability. The information in Annex 3 was extracted and is presented in Table 2.

Table 2: Flood risk vulnerability classification

CLASSIFICATION	DESCRIPTION
ESSENTIAL INFRASTRUCTURE	- Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. - Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including infrastructure for electricity supply including generation, storage, and distribution systems; including electricity generating power stations, grid and primary substations storage; and water treatment works that need to remain operational in times of flood. - Wind turbines. - Solar farms.
HIGHLY VULNERABLE	- Police and ambulance stations; fire stations and command centres; telecommunications installations required to be operational during flooding. - Emergency dispersal points. - Basement dwellings. - Caravans, mobile homes, and park homes intended for permanent residential use. - Installations requiring hazardous substances consent. (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or waterside locations or need to be located in other high flood risk areas, in these instances the facilities should be classified as 'Essential Infrastructure'.)
MORE VULNERABLE	- Hospitals - Residential institutions such as residential care homes, children's homes, social services homes, prisons, and hostels. - **Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs, and hotels.** - Non–residential uses for health services, nurseries, and educational establishments. - Landfill* and sites used for waste management facilities for hazardous waste. - Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.
LESS VULNERABLE	- Police, ambulance, and fire stations which are not required to be operational during flooding. - Buildings used for shops; financial, professional, and other services; restaurants, cafes, and hot food takeaways; offices; general industry, storage, and distribution; non-residential institutions not included in the 'more vulnerable' class; and assembly and leisure. - Land and buildings used for agriculture and forestry.

	- Waste treatment (except landfill* and hazardous waste facilities). - Minerals working and processing (except for sand and gravel working). - Water treatment works which do not need to remain operational during times of flood. - Sewage treatment works, if adequate measures to control pollution and manage sewage during flooding events are in place. - Car parks.
WATER-COMPATIBLE DEVELOPMENT	- Flood control infrastructure. - Water transmission infrastructure and pumping stations. - Sewage transmission infrastructure and pumping stations. - Sand and gravel working. - Docks, marinas, and wharves. - Navigation facilities. - Ministry of Defence installations. - Ship building, repairing, and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location. - Water-based recreation (excluding sleeping accommodation). - Lifeguard and coastguard stations. - Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms. - Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.

The flood risk vulnerability and flood zone 'incompatibility' extracted from the PPG (flood zone and coastal change, Table 2) is presented below.

Table 3: Flood risk vulnerability and flood zone 'incompatibility'

FLOOD ZONES	ESSENTIAL INFRASTRUCTURE	HIGHLY VULNERABLE	MORE VULNERABLE	LESS VULNERABLE	WATER COMPATIBLE
ZONE 1	√	√	√	√	√
ZONE 2	√	Exception Test Required	√	√	√
ZONE 3A	Exception Test Required †	×	Exception Test Required	√	√
ZONE 3B (FUNCTIONAL FLOODPLAIN)	Exception Test Required *	×	×	×	√
√ Development is appropriate		**× Development should not be permitted.**			

"†" In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

"*" In Flood Zone 3b (functional floodplain) essential infrastructure that has passed the Exception Test, and water-compatible uses, should be designed and constructed to:

- Remain operational and safe for users in times of flood;
- Result in no net loss of floodplain storage;
- Not impede water flows and not increase flood risk elsewhere

4.1.3 The proposals for the development of the site fall within the category of more vulnerable under the definition of 'Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels.'

4.1.4 More Vulnerable development is appropriate in Flood Zone 2 and does not require an exception test.

4.1.5 In line with paragraph 175 of the National Planning Policy Framework "*Where a site-specific flood risk assessment demonstrates clearly that the proposed layout, design, and mitigation measures would ensure that occupiers and users would remain safe from current and future surface water flood risk for the lifetime of the development (therefore addressing the risks identified e.g. by Environment Agency flood risk mapping), without increasing flood risk elsewhere, then the sequential test need not be applied.*" This document shall demonstrate that the proposals provide suitable protection to the development and the users during flood risk. Refer to Section 5 for further information.

4.2. Flood risk assessment: climate change allowances

Peak Rainfall Climate change allowances

4.2.1 The site lies within the Irwell Management Catchment, as defined by the Department for Environment Food and Rural Affairs (Defra) Climate Change Allowances Map. Table 4 shows the anticipated increases in rainfall intensity over time, for this catchment, for the 3.3% and 1% annual exceedance rainfall events, to be applied for surface water drainage system design.

Table 4: Irwell Management Catchment peak rainfall climate change allowances

EPOCH	CENTRAL ALLOWANCE	UPPER END ALLOWANCE
3.3% ANNUAL EXCEEDANCE EVENT		
2050s	25%	35%
2070s	30%	40%
1% ANNUAL EXCEEDANCE EVENT		
2050s	25%	40%
2070s	30%	**45%**

*Use '2050s' for development with a lifetime up to 2060 and use the 2070s epoch for development between 2061 and 2125.

The EA guidance provides advice on using the peak rainfall intensity allowances to assess surface water flood risk, as quoted below:

'Use the development lifetime guidance to work out the lifetime of your development. You should consider residential development to have a minimum lifetime of a 100 years.

Development with a lifetime beyond 2100:

This includes development proposed in applications or local plan allocations.

For flood risk assessments and strategic flood risk assessments assess the upper end allowances. You must do this for both the 1% and 3.3% annual exceedance probability events for the 2070s

epoch (2061 to 2125).

Design your development so that for the upper end allowance in the 1% annual exceedance probability event:

- *There is no increase in flood risk elsewhere.*
- *Your development will be safe from surface water flooding.'*

4.2.2 The site lies within the Irwell Management Catchment, as defined by the Department for Environment Food and Rural Affairs (Defra) Climate Change Allowances Map. Table 4 shows the anticipated increases in rainfall intensity over time, for this catchment, for the 3.3% and 1% annual exceedance rainfall events, to be applied for surface water drainage system design.

4.2.3 The proposed development is considered to have a minimum lifetime of 100 years meaning that the 2070s epoch applies. To comply with previously stated guidance, the surface water drainage system will be designed based on a 45% climate change allowance to the 1% annual exceedance rainfall event and designed to ensure there is no increase in flood risk elsewhere and the development is safe from surface water flooding.

Peak River Climate Change Allowances

4.2.4 The "Flood Risk Assessments: Climate Change Allowances Guidance" published by the EA in 2022 provides climate change ranges to be used for the peak river flow allowances. As the site is affected by the River Medlock, peak river flow allowances are used to assess the design fluvial flood level at the site. The site is located within the Irwell Management catchment. The allowance category uses the vulnerability classification of the site to define the allowance that should be applied. For the proposed development, the site is classified as "more vulnerable". Within Flood Zone 2 and 3a, for "more vulnerable" uses the central allowance should be used. Therefore 35% climate change is used to obtain the predicted flood levels at the site to ensure that the development will be safe for its lifetime, and 46% climate change is used as a sensitivity check.

4.2.5 Table 5 shows the anticipated increase in river flow over time, for this catchment.

Table 5: Irwell Management Catchment peak river flow allowances

EPOCH	CENTRAL ALLOWANCE	HIGHER ALLOWANCE	UPPER ALLOWANCE
2020s	12%	15%	24%
2050s	19%	26%	43%
2080s	**35%**	46%	75%

5. Hydrological Assessment

This section of the FRA sets out the flood risk and describes any mitigation measures or interventions which are required to ensure that the development is safe for its lifetime and that there is no increase in flood risk elsewhere.

5.1. Flooding History

5.1.1 No history of flooding has been found on the Defra OGC Historic Flood Map.

5.2. Fluvial Flood Risk

5.2.1 Flooding from rivers, also known as fluvial flooding, happens when the volume of flow in a river exceeds its capacity and the excess water spills out, or breaches the containment area.

5.2.2 As outlined in the earlier sections of this report, a culverted section of the River Medlock runs just south of the site. Approximately 30m south-east of the site, the river becomes open resulting in a risk of flooding to the site should the river level raise significantly during storm events. The EA flood risk map indicates that the site has a low chance of flooding due to rivers as shown in Figure 5.

- A portion of the site to the North-East lies outside of the river flood extent
- The majority of the site is located in an area with a low flood extent probability which is land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding.

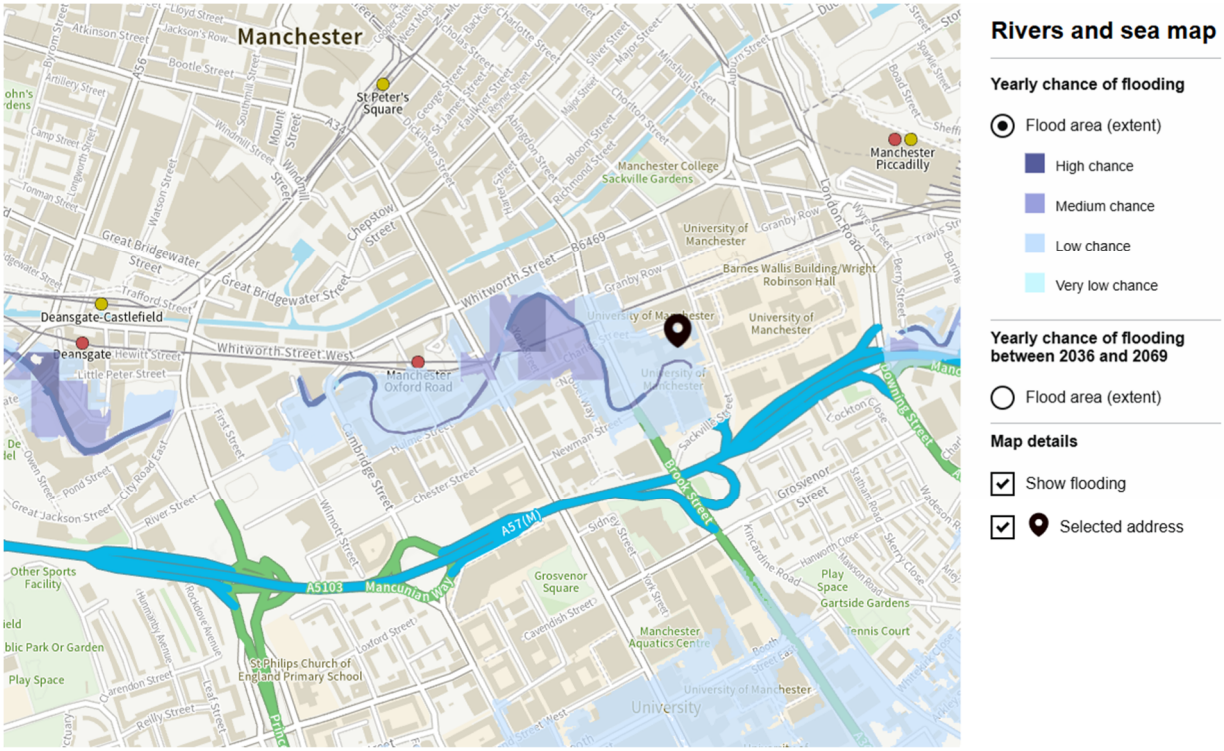


Figure 5 - Flood Risk from Rivers or Sea Map (Source: https://check-long-term-flood-risk.service.gov.uk/map)

5.2.3 The EA was contacted to provide available modelled flood data for the site, and to provide on-site modelled flood water levels. This data indicates that the flood water level during the design storm event 1% AEP (+35%) would be 33.46 mAOD. The Product 4 and 8 report data provided by the EA is available in Appendix E. An extract of the 1 in 100 + 70% climate change flood water levels can be seen in Figure 7 in lieu of the 1 in 100 + 35% climate change due to lack of availability. These maps are used to assess the impact of flooding

across the site and aid in determination of the required mitigation measures for the site. More detail is provided on the flood levels and mitigation strategy in Section 5.8.

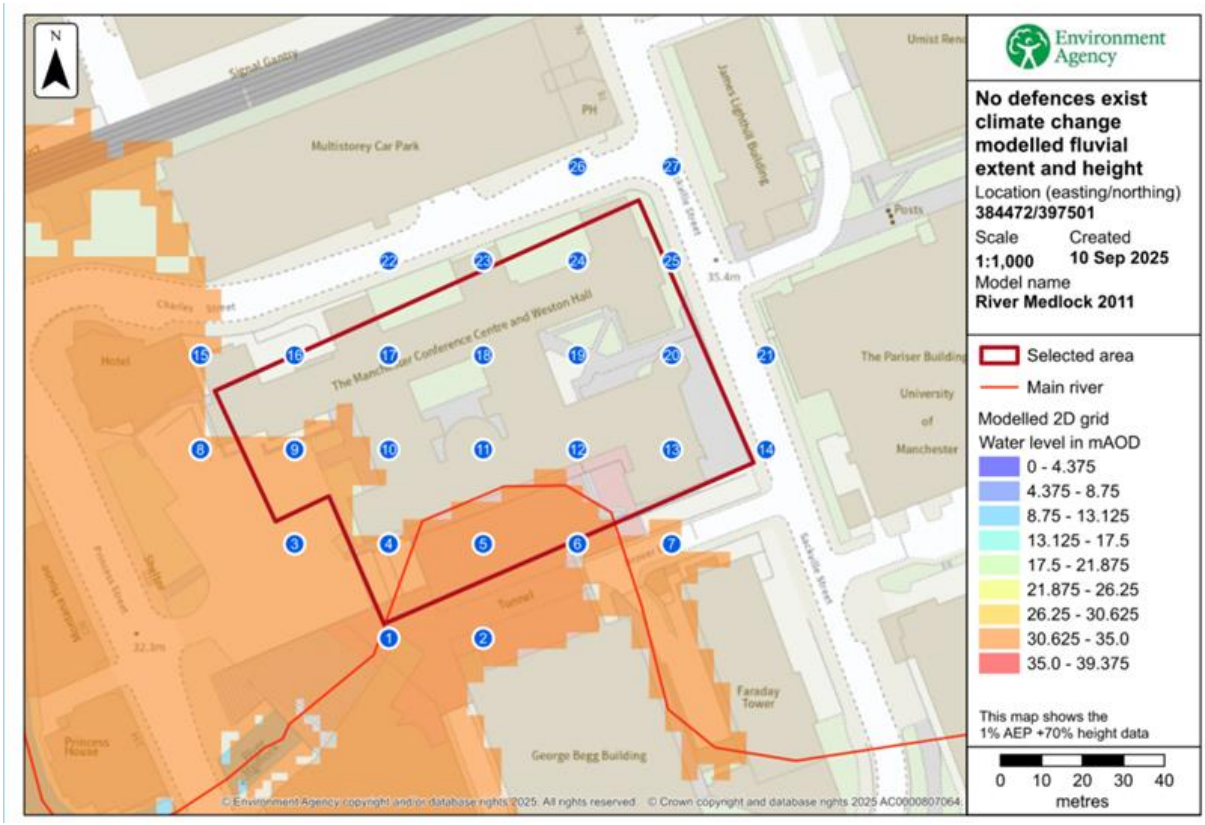


Figure 6: Product 4/8 data. 1 in 100+70% CC Flood Extents (Environment Agency)

5.3 Surface Water Flood Risk

5.3.1 Surface water flooding can occur as a result of either overland flow or ponding. Overland flow occurs following heavy or prolonged rainfall, or snow melt, where water can no longer be absorbed on the surface and results in surface run-off. Unless it is channelled elsewhere, the run-off travels overland, following the natural gradient of the land. Ponding occurs as the overland flow reaches natural depressions or blockages in the local topography.

5.3.2 As shown in Figure 7 the EA Flood Risk from Surface Water Map indicates that the site has a chance of surface water flooding. The area highlighted at risk is to the north of the existing development, off Charles Street. This area is a natural low point within the existing topography where ground levels drop approximately 1.5m between the road and the building perimeter to allow for level access. It is proposed that the site will be reprofiled so that these low points within the site boundary are removed, with the only low points provided within the landscaped areas.

5.3.3 In addition, this surface water flooding is not connected to a wider overland flow route indicating that this risk occurs from the site catchment, not offsite. The drainage strategy will be designed to accommodate the 1-in-100-year storm event +45% climate change without causing a risk of flooding to the development. As such the risk of flooding to the development from surface water is assessed as low.

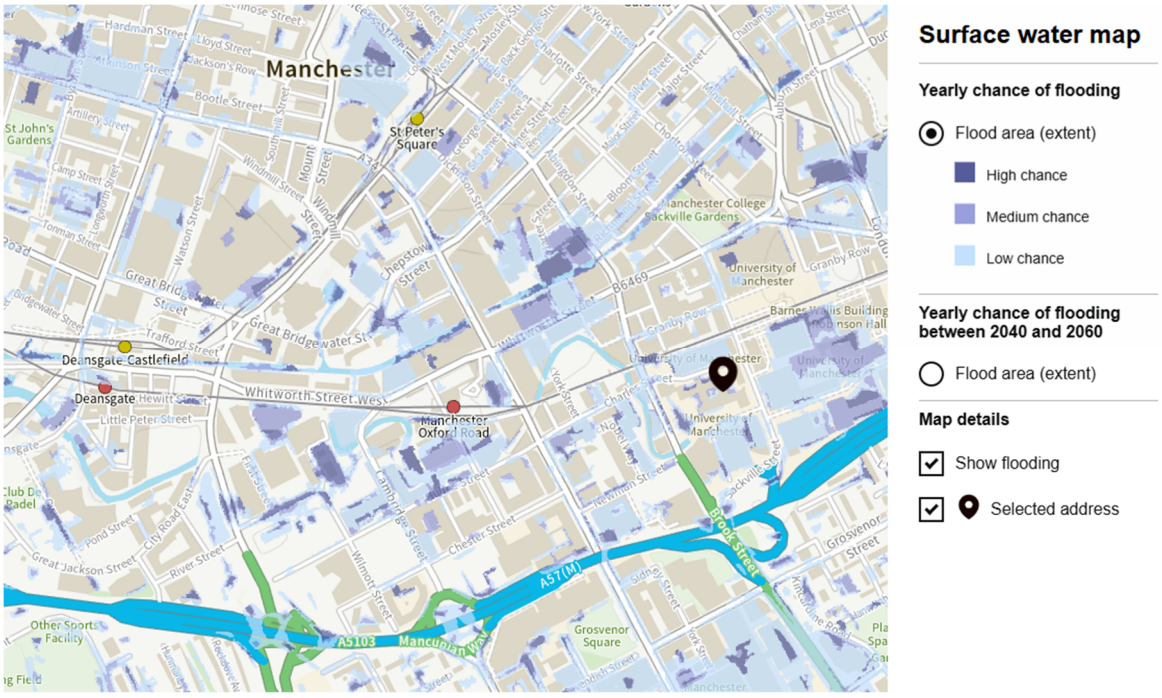
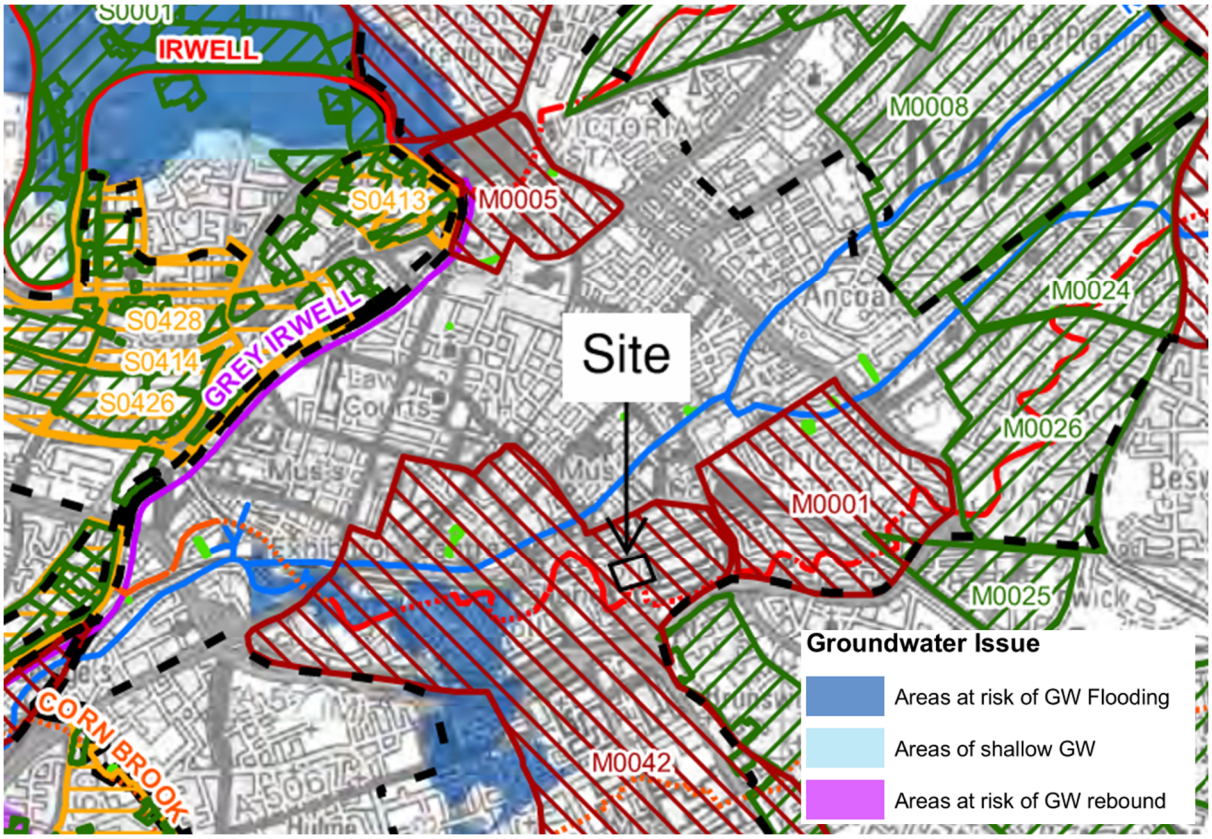


Figure 7 - Flood Risk from Surface Water Map (Source: https://check-long-term-flood-risk.service.gov.uk/map)

5.4. Groundwater Flood Risk

5.4.1 According to the EA, flooding from groundwater is unlikely in this area. Manchester City Council's SFRA mapping shows that the site is not identified as an area at risk of groundwater flooding.



5.4.2 Additionally, there are no proposed basements at the site, so the risk to groundwater flooding at the site is reduced. The proposed SuDS measures are also proposed to be lined with an impermeable geomembrane to prevent any possible groundwater ingress.

5.4.3 Using the above sources of information, the groundwater flood risk is considered to be low.

5.5. Reservoir Flood Risk

5.5.1 The development is at the edge of the potential flood extent from the Audenshaw No.1 and Audenshaw No.3 reservoirs. Both reservoirs are owned by United Utilities PLC.

5.5.2 The EA states that *"Flooding from reservoirs is extremely unlikely. We have an excellent reservoir safety record in the UK."* Additionally, the Reservoirs Act of 1975 ensures that all large reservoirs are regularly maintained and inspected by suitably qualified reservoir engineers. There has been no historical record of a major flood event directly involving Audenshaw No.1 or Audenshaw No.3. As such flood risk from reservoirs is considered to be very low.

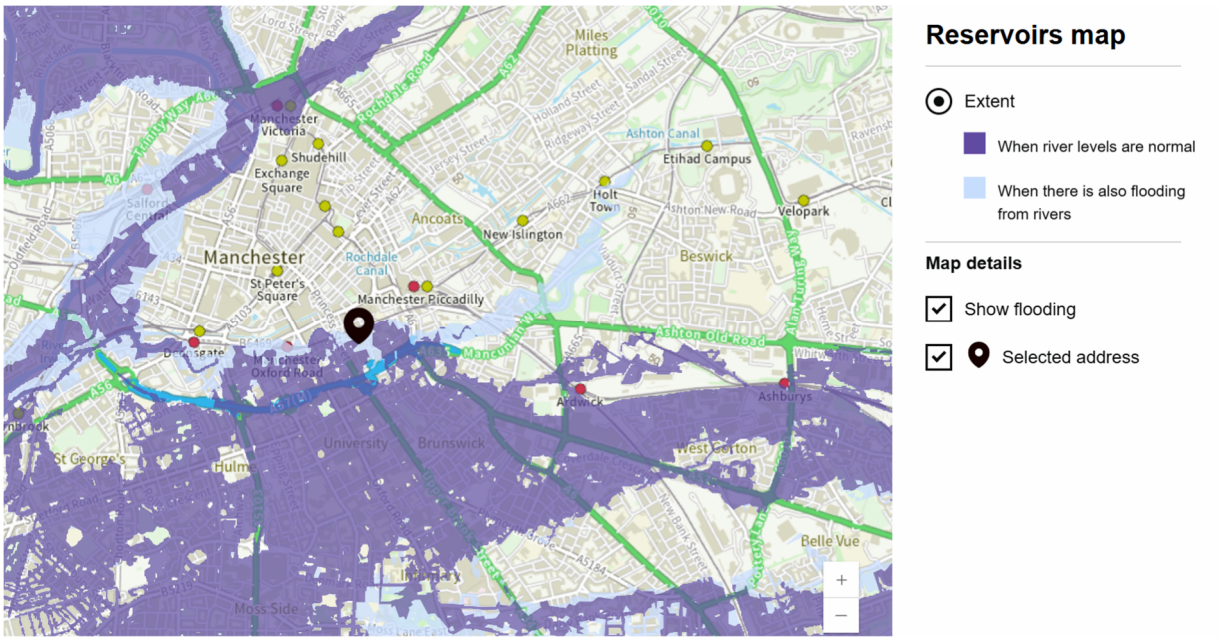


Figure 8: Flood Extent from Reservoirs (Source: https://check-long-term-flood-risk.service.gov.uk/map)

5.6. Sewers Flood Risk

5.6.1 Sewer and highway drainage flooding occurs when the capacity of systems is exceeded, or the function of the system is impeded (e.g. tide locking), which results in the surcharging and/or failure of the system and water being forced to the surface via gullies, manholes, dedicated overflows or connected infrastructure (e.g. toilets).

5.6.2 The United Utilities (UU) records show combined sewers in the area. Surface water sewers discharge to the River Medlock. Asset map can be found in Appendix F, extract shown in Image 14.

5.6.3 The most likely reason for sewer flooding onsite is due to capacity issues during heavy rainfalls within the UU network. The development proposes to reduce surface water runoff rates, as indicated in Section 6 of this report, hence will contribute towards reducing the risk of flooding from sewers within the neighbouring area. In addition, the development will aim to discharge surface water directly to the river in line with the drainage discharge hierarchy. All proposed floor levels are above the level of the sewer, any floor levels below street level shall be reviewed to ensure sufficient surcharge protection is provided.

5.6.4 All of these measures will reduce the risk of flooding from sewers. As a result, flooding from sewers is considered to be low.

5.7. Summary of Flood Risk

5.7.1 A summary of the flood risk to the site is shown in Table 6. Overall, flood risk to the site is considered to be low a summary of the flood risk to the development from different sources is shown in Table 6

Table 6 - Summary of Flood Risk

SOURCE OF FLOODING	RISK TO THE SITE
FLUVIAL	Low
SURFACE WATER	Low
GROUNDWATER	Low
RESERVOIR	Very Low
SEWERS	Low

5.8. Proposed Flood Resilience Measures

Flood Resistant Design

5.8.1 The key aim of this FRA is to assess the flood risk to the proposed development in order to ensure that the development is safe for is lifetime and does not increase flood risk elsewhere. Parts of the masterplan site lie within the 1 in 1000-year flood extents or the 1 in 100 year +35% climate change flood extent, for which principles of flood mitigation measures have been incorporated into the design.

5.8.2 These measures include the raising of finished floor levels (FFLs) across the site and considering safe access and egress routes for the residential lobby accesses.

5.8.3 The finished floor levels for all more vulnerable uses have been raised above the 1 in 100 + 35% flood level plus an additional 600mm freeboard. The finished floor levels for these accesses are set at a minimum of 34.060mAOD; the design flood level for the site is 33.460mAOD.

5.8.4 There are small areas on the site of less vulnerable uses where the FFLs are set lower than the design flood level due to tie ins with existing ground levels. These are the plant rooms located on the south-west of Phase 2. Coordination has been undertaken with the design team to review opportunities to raise these floor levels, however due to the existing ground levels an alternative strategy of raising the plant on plinths within these rooms is proposed. In the design storm event, raising the plant above flood levels will sufficiently protect the equipment during a flood event up to the design flood level including an allowance for climate change. This is possible by lifting ceiling levels within these rooms and raising plant on plinths to be above 33.46mAOD, ensuring plant remains operational and undamaged whilst maintaining level access and tie-ins to existing levels in the adjacent development.

5.8.5 Finally, the existing low points located between the existing building and Charles Street shall be removed since the topography will not need to be lowered compared to street level to allow for level access to the development in the proposed case. As such the regrading of the topography around the development will help the development be protected against surface water flood risk at its entrances.

5.8.6 Less vulnerable uses within the site are separated into areas which would impact operational resilience, in line with the NPPF, and areas that have been designed to allow flood water ingress.

5.8.7 The principles and proposed flood mitigation measures have been discussed and agreed by the design team. The proposed ground floor FFLs are included in Figure 10.

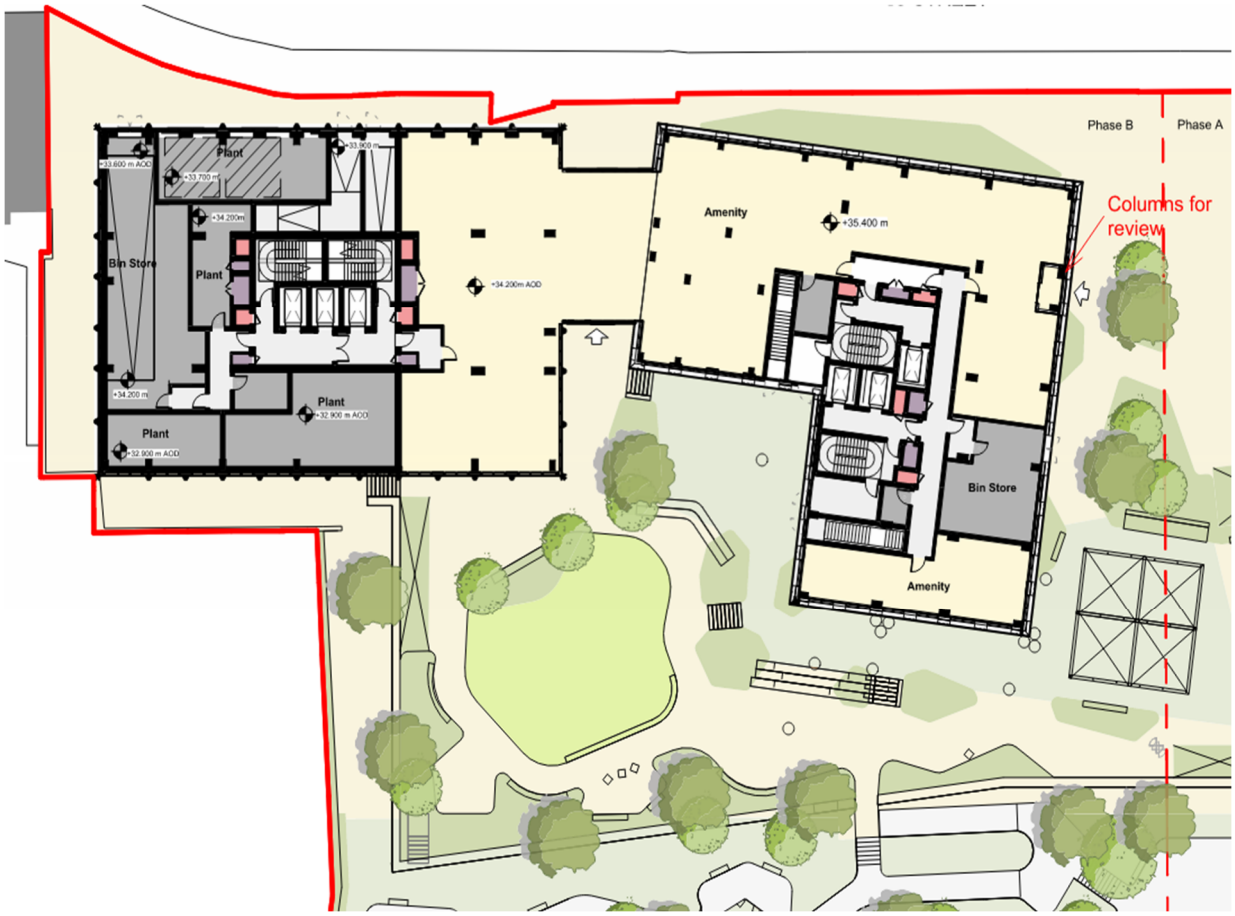


Figure 9: Proposed Finished Floor Levels

Safe Access & Egress

5.8.8 There is a requirement for a dry access route above the 1 in 100 year plus climate change flood level or, where appropriate modelled data exists, an access route within the 'low hazard' area of the floodplain to and from any residential development. Accesses to the residential and ground floor uses are all located outside of the flood extents for the site within dry routes.

5.8.9 Furthermore, the site lies within the designated flood warning area of the EA. The Flood Warning Service provides early warning of flooding in the catchment and will provide notice to implement precautionary measures where required. The full EA flood warning service comprises four staged warning codes, each indicating the severity of flooding and the level of danger. These are:

- All Clear
- Flood Watch
- Flood Warning
- Severe Flood Warning.

5.8.10 The flood status of an area is updated at 15-minute intervals on the internet and is also available by telephone on a 24 hour Floodline. Subscribers to this service are eligible to

receive free warnings by telephone, mobile, email, SMS text message or fax, whichever is most convenient. Users can subscribe either online via the EA's website or by calling Floodline on 0845 988 1188. Businesses who sign up for the telephonic service, for instance, will receive an automated message via the phone telling them that flooding is expected and giving advice as to what actions should be taken.

5.8.11 It is recommended that all future residents are made aware of the residual flood risk and encouraged to avail of the EA's "Flood Warning Direct Service". This would allow residents and users of the amenity spaces to vacate the development site.

5.9. Flood Compensatory Storage

5.9.1 Flood compensatory storage is required when any development or construction in a floodplain causes a loss of natural flood storage capacity.

5.9.2 In order to review how much flood compensatory storage is required for the site, a review of the existing and proposed building footprints, and floodwater flow paths, have been assessed against the design flood extents.

5.9.3 Compared with the existing development, the new building footprint does not extend to the south of the site allowing flood water to be stored within this sunken area. Based on the flood level of 33.46 mAOD (1 in 100 year +35% climate change), the volume of flood storage in the existing case is 377 m^3, and the volume of flood storage in the proposed case is 642 m^3. Therefore, the proposed development does not result in any loss to floodable area (provides an increase from existing) and therefore no additional flood compensatory storage is required to be provided as part of the proposed development.

5.9.4 Consideration has been given to the fact that the development is split into two separate phases. However, since Phase A (which will occur first) only impacts the East side of the development and has no effect on the existing flood storage availability, only the full, completed development has been modelled.

5.9.5 The landscaping has been designed to allow water the enter from the west of the development and use both topographical falls and a swale to convey to water in the recessed area of the landscaping at the south. The proposed retaining walls are positioned as to not impact the flow of water to the basin, and follows a similar area extent to the existing building resulting in no detrimental changes to the flow of flood water.

5.9.6 Once the flood water has subsided, flood water will be able to drain via the drainage features located around the sunken landscaped area. The draianeg features are proposed to ultimately discharge back to the River Medlock

5.9.7 A comparison of the existing and proposed building footprints against the design flood contour is shown below in Figure 10: River Flood Extent - Existing Site Figure 10 & Figure 11. The full drawings breaking down the flood extent at each flood level are available within Appendix G.

5.9.8 The breakdown of the flood volume compensation at differing depths is available in Table 7 and demonstrates that sufficient offset is provided during all flood events upto and including the 1-in-100 year + 35% CC.

Table 7: Flood Volume Compensation Comparison

Flood Volume Compensation Comparison		
Water Level (mAOD)	**Existing Flood Volume (m^3)**	**Proposed Flood Volume (m^3)**
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

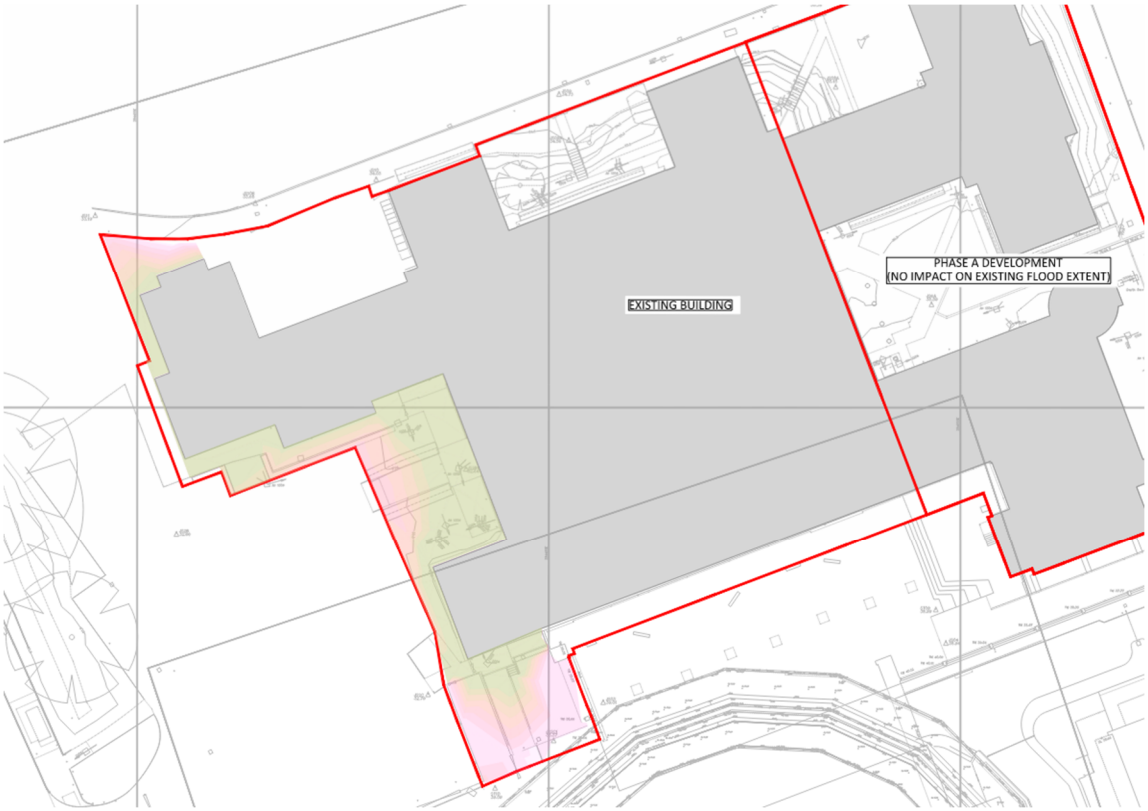


Figure 10: River Flood Extent - Existing Site



Figure 11: River Flood Extent - Proposed Site

6. Proposed Surface Water Drainage Strategy

6.1. Point of Discharge

i. The National Planning Policy Framework (NPPF) Guidance - Flood risk and coastal change specifies the following hierarchy of drainage options for the discharge of surface water:

1. Into the ground (infiltration)
2. To a surface water body
3. To a surface water sewer, highway drain or another drainage system
4. To a combined sewer

An appraisal of the drainage hierarchy follows, with a summary in Table 8:

ii. Infiltration based system

Due to the site currently being in use it has not been possible to undertake BRE 365 testing to confirm the acceptability of infiltration-based systems. It is assumed that the site sits on made ground making infiltration unfeasible however BRE 365 testing should be undertaken prior to construction.

iii. Surface Waterbody

It is proposed that a connection can be made to the culverted River Medlock. It is believed that the existing site currently discharges to an existing outfall into the culvert, however a CCTV survey is required to confirm this.

iv. Surface Water Sewer

There are no surface water sewers indicated within United Utilities asset map which can be reached by the development

v. Combined Sewer

If the existing site doesn't discharge to the culverted River Medlock, then a temporary connection to the existing United Utilities combined water sewer within Sackville Street is proposed during Phase A as a new connection to the river will be blocked by the existing development until Phase B is progressed.

Table 8 - Summary of Point of Discharge

POINT OF DISCHARGE	SUITABILITY
GROUND	×
WATERBODY	√
SURFACE WATER SEWER	×
COMBINED SEWER	√
√ suitable × unsuitable	

6.2. Detailed Site Areas

6.2.1 The site is split into two development phases; the total development is approximately 0.72 ha. With 0.265 ha being developed in Phase A, and 0.455 ha in Phase B.

6.2.2 There is an additional 111m^2 of highway within the development red line boundary to provide loading bays. However, these areas are adopted and so are proposed to discharge via the highway drainage network as per the existing case. As such this area has been discounted from any calculations.

6.2.3 The existing and proposed site impermeable/permeable split at each stage of the development is shown in Table 9.

Table 9 - Existing and proposed detailed site areas

SCENARIO	PERMEABLE	GREEN ROOF	IMPERMEABLE	TOTAL
EXISTING	1011 m^2	0 m^2	6189 m^2	7200 m^2
PHASE A	827 m^2	234 m^2	6139 m^2	7200 m^2
COMPLETED SITE	1556m^2	476 m^2	5168 m^2	7200 m^2

6.3. Greenfield Runoff Rates

6.3.1 Greenfield Runoff Rates for the site have been determined using the FEH statistical (2025) method within the HR Wallingford Greenfield Runoff Rate Estimation Tool.

6.3.2 The area of the development used to establish greenfield runoff rates is 0.72 ha

6.3.3 The results of this have been compiled in Table 10. The full exports from HR Wallingford are available in Appendix H.

Table 10: FEH statistical equation variables

Catchment	Q_{bar} (l/s)	1-in-1 YEAR (l/s)	1-IN-30 YEAR (l/s)	1-IN-100 YEAR (l/s)
PHASE A	2.1	1.8	3.6	4.3
COMPLETED SITE	5.7	5.0	9.8	11.9

6.4. Proposed Discharge Rate

6.4.1 It is proposed that the development will achieve the Q_{bar} greenfield runoff rate for the respective phasing. As such it is proposed to restrict the discharge rate during Phase A to 2.1 l/s and, when the whole development is completed restrict the entire development to 5.7 l/s. This will be achieved via the use of flow control devices such as orifice plates or vortex flow control devices located at the final manhole, set to the respective the Q_{bar} discharge rate.

6.5. Water Quantity & Preliminary Drainage Modelling

6.5.1 A preliminary storage estimate has been undertaken using the industry-standard Causeway Flow software. The estimated preliminary storage is given in Table 11. The full hydraulic calculations are available in Appendix I.

Table 11: Required storage volumes - modelled using Info Drainage

STORM EVENT	REQUIRED ATTENUATION (m3)	
PHASE	**PHASE A**	**COMPLETED SITE**
1 IN 100 YEAR + 40% CLIMATE CHANGE	210	460

6.5.2 Designing for water quality involves the specification of SuDS components which adequately cleanse and filter pollutants arising from runoff draining into the system. Runoff from developments is shown to potentially have high levels of suspended solids, copper, zinc, nickel and hydrocarbons which have toxic effects to aquatic life and the general environmental standard of waterbodies. The approach to providing treatment is closely related to source control. SuDS network should aim to use interception to prevent runoff from

entering the SuDS system for the first 5mm of rainfall and should direct runoff through SuDS components providing major treatment/filtering up to the 1 in 1 year storm event.

6.5.3 The primarily inlets of the proposed SuDS system – swales, bioretention systems, permeable paving are all components providing interception storage. In line with table 24.6 of CIREA C753 the proposed network provides the following interception for the first 5mm of rainfall for 80% of events during summer and 50% during winter given in Table 12.

Table 12: Proposed SuDS features - Runoff interception for first 5mm

FEATURE	AREA	CIREA C753 GUIDANCE	AREA INTERCEPTED
PERMEABLE PAVING	861 m^2	Complies assuming no additional area served	861 m^2
BIO-RETENTION AREA	227 m^2	5 times the vegetated area	1135 m^2
GREEN ROOF	476 m^2	All surfaces that have green roofs	476 m^2
TOTAL	1535 m^2		**2472 m^2**

6.5.4 As such the proposed SuDS features can be assumed to capture 2472 m^2 of runoff for the first 5mm of rainfall, totalling 12.36m^3. The remaining 2696 m^2 of runoff drained by the SuDS features are assumed not to be intercepted but will be treated prior to discharge. A preliminary check of water quality performance has been undertaken at this design stage based on the Simple Index Approach detailed in Section 26.7.1 of CIRIA C753. The pollution hazard level of runoff from the site varies from very low to medium, with the hazard indices shown in Table 13

Table 13: Pollution hazard indices for different land use classifications

LAND USE	POLLUTION HAZARD LEVEL	TOTAL SUSPENDED SOLIDS (TSS)	METALS	HYDROCARBONS
Residential Roofs	Very Low	0.2	0.2	0.0005

6.5.5 The proposed SuDS treatment train conveys the runoff through the primary inlets described above, which have the associated mitigation indices shown in Table 14

Table 14: SuDS mitigation indices for discharges to surface waters

TYPE OF SUDS COMPONENT	MITIGATION INDICIES		
	TSS	**Metals**	**Hydrocarbons**
Permeable Pavement	0.7	0.6	0.7
Bioretention System	0.8	0.8	0.8

6.5.6 For the proposed SuDS system all proposed inlet features have mitigation indices greater than the highest level of anticipated pollutants.

6.5.7 As such, the proposed system is considered to adequately mitigate the risks of water quality pollution. Where a greater pollutant hazard risk would be identified the proposed SuDS treatment train would provide the necessary treatment with the inclusion of secondary and tertiary features.

6.6. Proposed Surface Water Attenuation & Sustainable Drainage Systems (SuDS)

6.6.1 The SuDS features proposed for the site consist of the following:

- Blue Roofs
- Green Roofs
- Permeable Paving
- Rain Gardens/ Swales
- Below Ground Geocellular Crates

6.6.2 The proposals have been closely coordinated with the landscape architect and design team. The proposed surface water layouts are available in Appendix J.

6.6.3 development is split into two phases. In the temporary case, where Phase A has been completed and Phase B is progressing, it is proposed that the development shall be restricted to the greenfield runoff rate of Phase A (2.7 l/s) and connect to the surface water drainage network serving the existing development. During this time the existing Phase B development would continue draining unrestricted as per the existing case. It has been calculated that a total of 210m^3 of effective storage will be required for this phase to provided sufficient storage for the 1 in 100-year event + 45% climate change critical storm event.

6.6.4 The SuDS features for the completed development shall provide a total of 460m^3 of effective storage for the final development and restrict the peak discharge rate to 5.7 l/s for the 1 in 100-year event + 45% climate change which is the greenfield runoff rate for the full development. The required attenuation volume has been calculated using the Causeway Flow software, to ensure there is no flooding to habitable spaces or escape routes for up to the 1 in 100-year storm event +45% allowance.

6.6.5 In line with national and local guidance/policy, the drainage strategy aims to maximise the extent of SuDS features within the development to manage surface water using a variety of sustainable drainage systems, including rain gardens/ swales, green roofs and permeable pavements, providing a significant improvement to the quality of runoff from site as well as amenity, biodiversity and other benefits.

6.6.6 The extent of green roof has been maximised within the constraints of the development due to plant being required on the roof. The green roof is split into two types, bio-solar, and wildflower. It is assumed that the bio-solar green roof shall have a runoff coefficient of 50%, and the wildflower green roof shall have a runoff coefficient of 40%.

6.6.7 The majority of the landscape runoff shall be directly served by either green SuDS features such as raingardens, swales or permeable paving. The extent of the green SuDS features has been maximised while maintaining the space for its intended use of recreation. Some areas of the site may need to be served by traditional gullies if levels cannot be manipulated, but this shall be avoided where practicable and all catchments shall pass through at least one SuDS feature to provide treatment.

6.6.8 It is proposed that by using the change in levels between the raised and lowered areas of the site that all surface water runoff from the site can run through at least one SuDS feature in the form of a raingarden, swale or permeable paving.

6.6.9 Below ground geocellular crates and blue roofs shall be used to provide the required attenuation to protect the development in the 1-in-100 year + 45% climate change. Currently this is calculated as 464m^3, however this may vary following the detailed design.

6.6.10 The typical buildups used in determining the level of provided storage for each catchment can be seen in Table 15Table 15

Table 15: Typical SuDS Features Storage Parameters

SUDS FEATURE	VOLUME (m^3) **	AREA (m^2) **	TYPICAL DEPTH (m)
Blue Roofs	184	1940	0.1
Green Roofs	N/A*	476	N/A*
Permeable Paving	94	861	0.3 – 0.4
Raingardens/ Swales	37	227	0.55
Geocellular Crates	280	319	0.8 – 1.2

* Green roofs currently are not proposed to have a flow control system or blue roof located beneath them. As such no storage is considered to be provided by this feature at this stage, just a reduction in runoff.

** Final values to be confirmed as coordination with design team progresses

7. Conclusion

7.1 The majority of the site is located within Flood Zone 2, with the north-east section of the development located within Flood Zone 1.

7.2 The FRA has demonstrated that the main source of flood risk (fluvial and surface) can be appropriately mitigated via the use to raised floor levels and the revision of the existing topography. The development will also ensure there is no loss of flood compensatory storage by providing an enlarged external landscaping area to ensure that flood risk is not increased off site. As such there is no requirement to provide flood compensatory storage. The proposed surface water strategy also reduces the flood risk downstream by restricting the discharge rate into the River Medlock to greenfield runoff rates.

7.3 In line with national and local guidance/policy, surface water will be managed using a variety of sustainable drainage systems, including rain gardens/ swales, green roofs and permeable pavements, providing a significant improvement to the quality of runoff from site as well as amenity, biodiversity and other benefits.

7.4 The catchment of the two loading bays within the highway shall be adopted and as such will discharge into the highway network unrestricted as per the existing case. The area associated with these have been discounted from all design calculations.

7.5 The drainage network shall provide a total of 460m^3 of effective storage for the final development and restricts the peak discharge rate to 5.7 l/s for the 1 in 100-year event + 45% climate change which is the greenfield runoff rate for the development. The required attenuation volume has been calculated using the Causeway Flow software, to ensure there is no flooding to habitable spaces or escape routes for up to the 1 in 100-year storm event +45% allowance.

7.6 The proposed SuDS features provided shall provide sufficient mitigation indices in line with Section 26.7.1 of CIRIA C753.

8. Sturctural Interaction with Culvet

The culvert only enters the site boundary within the service yard, and is located approximately 10m south of the existing building being demolished. Please see below statement to be added to FRA regarding the structural integrity of the culvert, please can you confirm this is satisfactory evidence that the culvert is suitably protected during works:

The proposed demolition works are not directly over the culvert as the existing building is further north than the culvert location. Please refer to 3341-CIV-XX-XX-D-S-10001 and 3341-CIV-XX-ZZ-D-S-20001 in Appendix K, which show the location of the culvert in relation to the existing Weston Halls building and the George Begg building. This drawing has been compiled from archive information on the existing buildings and a survey of the culvert. From review of this and non-intrusive site investigations we have undertaken, the George Begg building which sits over the culvert is structurally independent to Weston Halls and Pendulum Hotel. The line between the two buildings is slightly north of the red line boundary and approximately 10m from the edge of the culvert. As they are independent, the removal of Weston Halls would not change the loading to the George Begg building, and the building is outside of a 45-degree line drawn from the base of the culvert walls.

To mitigate any loading to the culvert during demolition works, a plant and material storage exclusion zone for any items of plant that exceed the current vehicle weight allowances over the culvert.

Construction works for the proposed buildings are farther away from the current building however, these exclusion zones would remain in place.

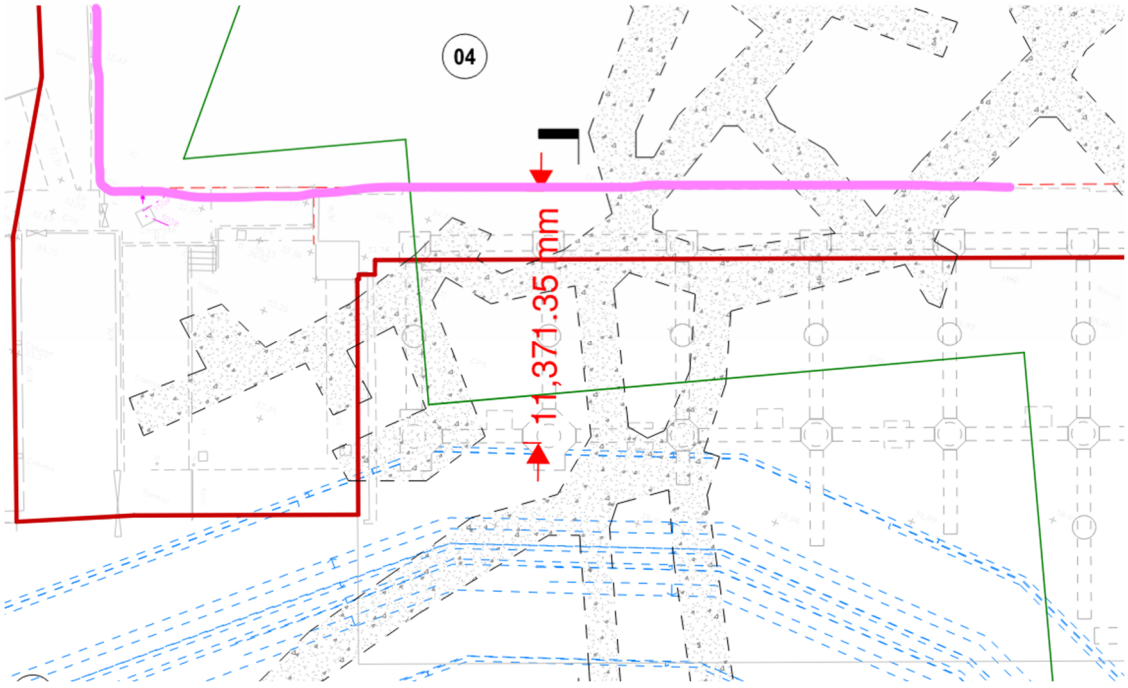


Figure 12: Construction Work Offset from Culvert Mark-up

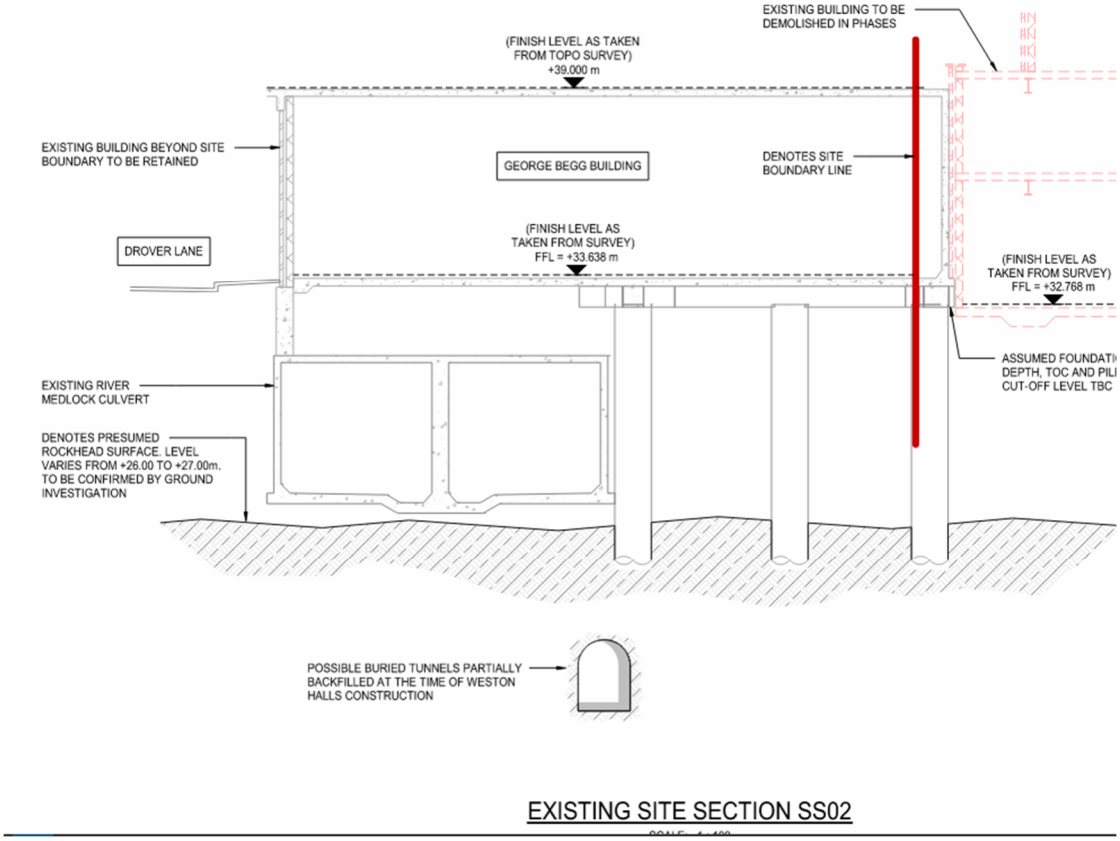
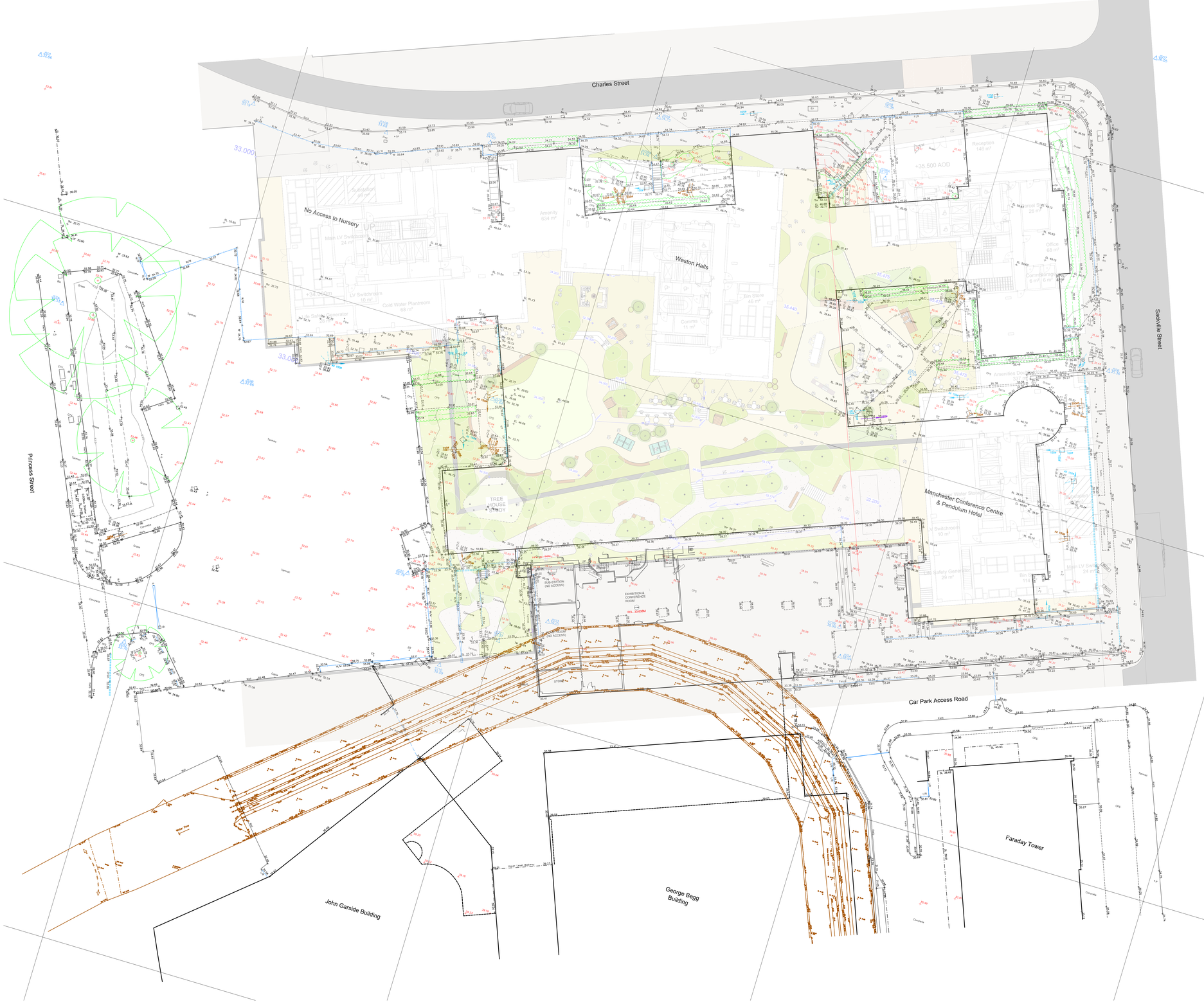


Figure 13: Section of Exisiting Foundations and Culvert

9. Appendixes

9.1. Appendix A - Site Constraints (Culvert)



STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC ENGINEERS LIMITED

NOTES:

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.10.25	P01	PRELIMINARY	DP	LM

CIVIC ENGINEERS

civicengineers.com

PROJECT

WESTON PENDULUM, MANCHESTER

TITLE

SITE CONTRAINTS COMMENTARY

DRAWING STATUS	STATUS CODE
INFORMATION	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	NTS	OCT 25	DP	LM

DRAWING No.	REV
3341-CIV-XX-XX-SK-00011	P01

9.2. Appendix B - Utility Report

GROUNDWISE

Groundwise Searches Ltd

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

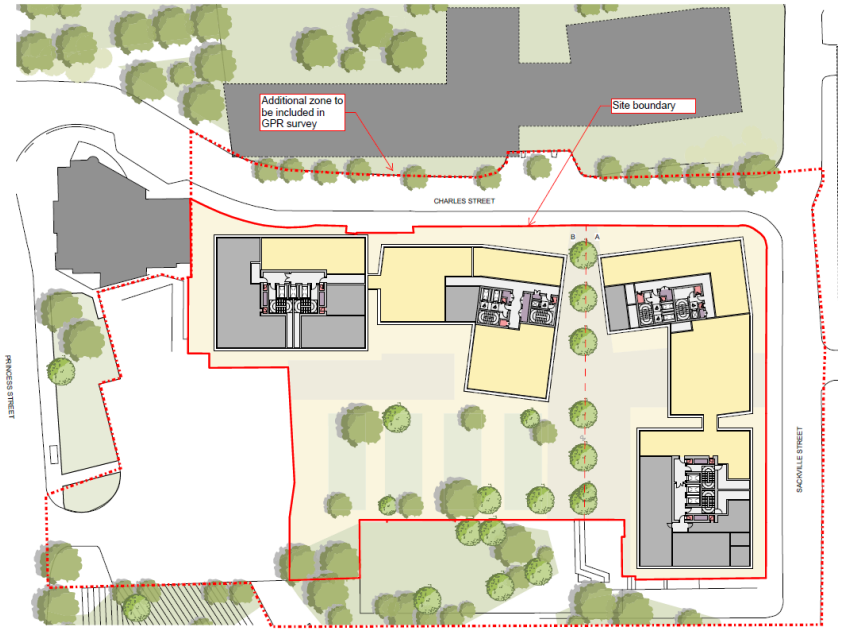
Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



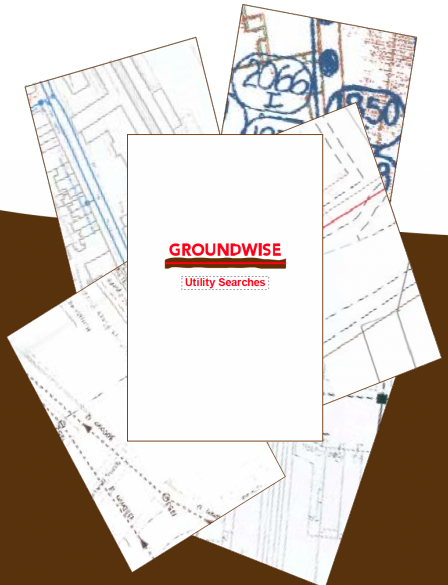
Groundwise Searches Ltd

Product	Comprehensive Desktop Utility Search
Scope	PAS 128 Survey Type D

Groundwise Reference	39540RB-GWS
Site	Weston Halls and Pendulum Hotel, Manchester, M1 3BB
Easting/Northing	384478/397512
Client	Kamryn Slivoskey
Company	Futureserv Ltd
Client Reference	Weston Halls and Pendulum Hotel, Manchester
Purchase Order	



Researcher	Rebecca Bennett rbennett@groundwise.com
Quality Check	Debbie Miller dmiller@groundwise.com



Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE

Groundwise Searches Ltd

Groundwise Reference	39540RB-GWS
Site	Weston Halls and Pendulum Hotel, Manchester, M1 3BB

Version	Date Issued	Notes
#1	15/09/2025	Complete.

GROUNDWISE

Groundwise Searches Ltd

Groundwise Reference	39540RB-GWS
Site	Weston Halls and Pendulum Hotel, Manchester, M1 3BB

Type	Date Supplier	Date Sent	Utility Present
Electricity	Eclipse Power	15/09	
Electricity	Harlaxton	15/09	
Electricity	SP ENWL	15/09	X
Electricity	Utility Assets Ltd	15/09	
Gas	Cadent	15/09	X
Mobile Phone Masts	Mast Data	15/09	X
Rail	Network Rail	15/09	
Street Lighting	Manchester City Council	15/09	X
Telecom	C.A Telecom-Colt	15/09	X
Telecom	Cityfibre	15/09	
Telecom	MBNL	15/09	
Telecom	Neos Networks	15/09	X
Telecom	OCU Group	15/09	X
Telecom	Openreach	15/09	X
Telecom	Sky UK Ltd	15/09	X
Telecom	Virgin Media	15/09	X
Telecom	Vodafone	15/09	X
Various	GTC	15/09	X
Various	HSE	15/09	
Various	Leep Utilities	15/09	
Various	LinesearchbeforeUdig	15/09	
Water Mains and Sewers	United Utilities	15/09	X

GROUNDWISE

Groundwise Searches Ltd

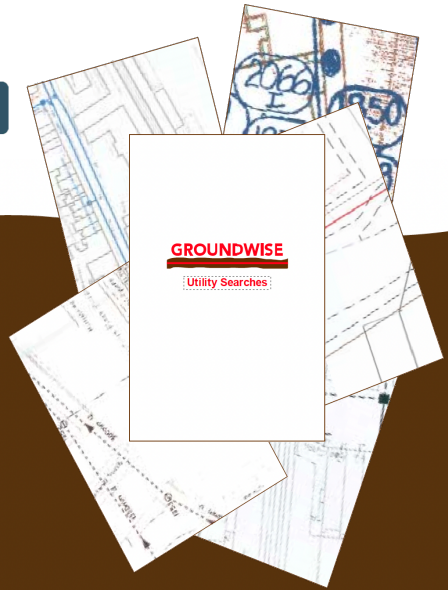
Eclipse Power

Utility Not Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Rebecca Bennett

From: Networks Enquiries <assetenquiries@eclipsepower.co.uk>
Sent: 08 September 2025 16:16
To: Responses
Subject: RE: 384478 397512
Attachments: N003459.png

Dear Sir/Madam,

We appreciate your correspondence via the Location website. We can confirm that, according to the Eastings and Northings coordinates you have supplied, there are Eclipse Power Network assets in close vicinity. The information provided within this response is valid for a duration of **90 days** from the time you receive this email.

As a result, we have appended the enclosed information to this email for the purpose of your examination.

It is important to mention, however, that the provided information should be utilised exclusively for its intended purpose. Furthermore, all content on our website is protected by our copyright and other intellectual property rights. Replication of such material, whether online or offline, without the prior written consent of Eclipse Power Networks, is strictly forbidden.
Please ensure that the required area is thoroughly searched, as the search parameters only return results within a **1000-meter radius.**

Although Eclipse Power Networks makes every effort to ensure the accuracy and completeness of the information provided, we cannot guarantee its accuracy or completeness since the content is provided by third parties. If we have attached proposal plans or if the asset is currently being constructed, please note that the drawings are not definitive and there may be variations in how the asset and cable routes are built. Hence, the onus falls on the undertaking of the works to manually identify services that adhere to the guidelines outlined in **HSG47** document.

You (or a third party) shall not hold Eclipse Power Networks or any other party (whether involved in producing, maintaining, or delivering this website) liable or responsible for any loss or injury that may occur as a result of your use of our website. This exclusion shall encompass expenses related to servicing or repairs, as well as any other direct, indirect, or consequential loss, without restriction.

Kindest regards,
Harry Constantine
Eclipse Power
Mobile: +44 (0) 7707 138077
www.eclipsepower.co.uk
https://www.linkedin.com/company/eclipse-power-networks

This e-mail is intended exclusively for the individual(s) to whom it is addressed and may contain information that is privileged, or confidential. If you are not the addressee, you must not read, use or disclose the contents of this e-mail. If you receive this e-mail in error, please notify enquiries@eclipsepower.co.uk giving the name of the sender and delete the e-mail immediately. Eclipse Power has taken every reasonable precaution to ensure that an attachment to this e-mail has been checked for any viruses. Eclipse Power cannot, however, accept liability for any damage sustained as a result of software viruses and would strongly advise that you carry out your own virus checks before opening any attachment.

Please don't print this e-mail unless you really need to!

From: Eclipse Power Networks <enquiries@eclipsepower.co.uk>
Sent: 08 September 2025 16:01
To: Networks Enquiries <assetenquiries@eclipsepower.co.uk>
Subject:

Power Locations Results of responses:

Name: responses
Email: responses@groundwise.com
Eastings X: 384478
Northings Y: 397512
Message:

Power Locations Results:

We have identified that we may have plant or apparatus within 500m of your searched location. An enquiry has been sent to the Operations team who will investigate this further and come back to you within 6 working days. If you have any queries, please contact assetenquiries@eclipsepower.co.uk

Power Locations

Project Code: N003459
Distance: 254.66 meters


N
EBDEN STREET
Fairfield House
GRANBY ROW
Lambert Hall
ECHO STREET
39.3m
96
94
ALTRINCHAM STREET
Viaduct
38.7m
Moffat Building
FB

GROUNDWISE

Groundwise Searches Ltd

Harlaxton

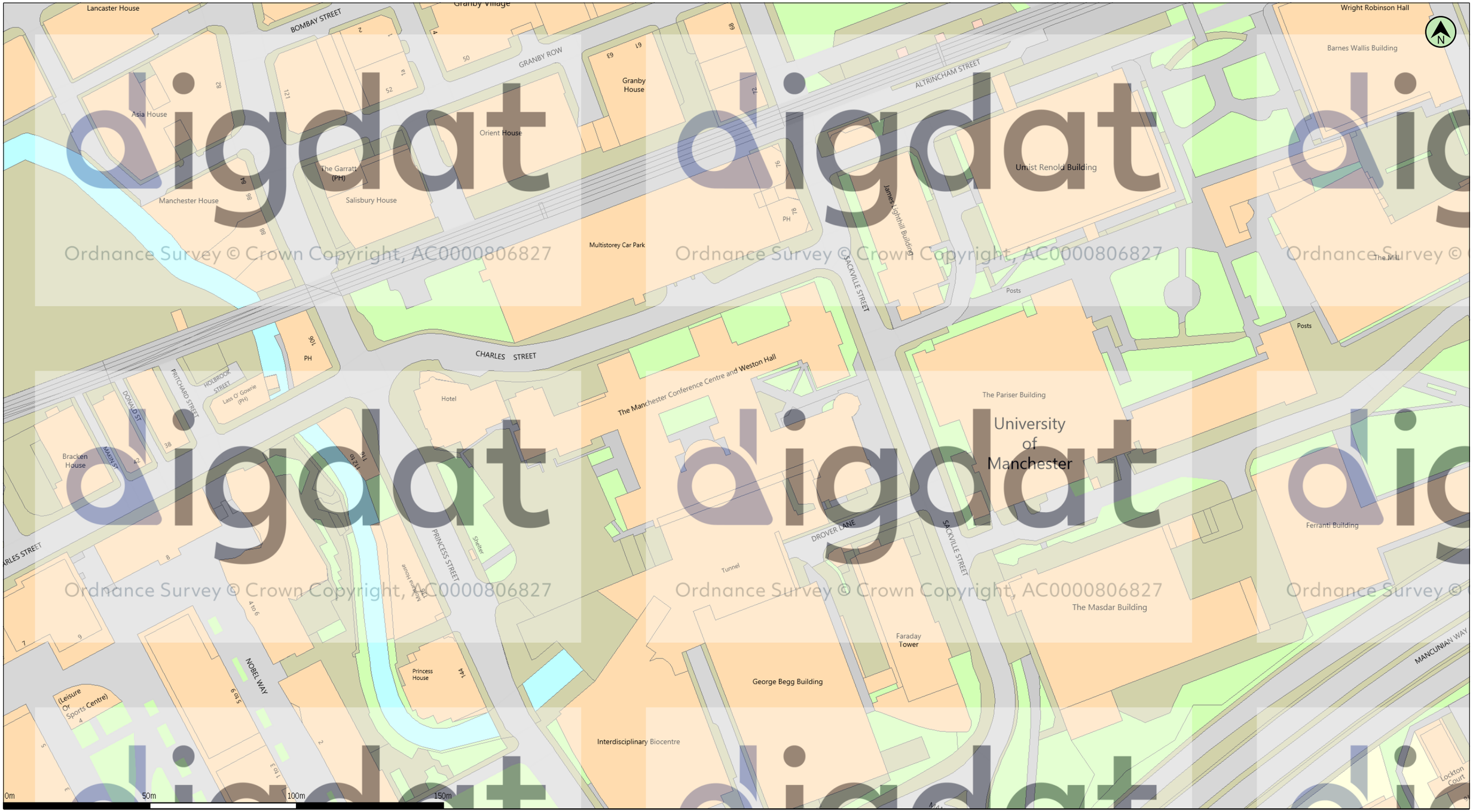
Utility Not Present



Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Ordnance Survey © Crown Copyright, AC0000806827

(c) Crown copyright and database rights 2025 Ordnance Survey AC0000813445 | Date: 15/09/25 | Scale: 1:1250 | Map Centre: 384478,397512 | Data updated: 15/07/21 | Our Ref: 1878997 - 5 | Electricity Dist Plan A3 Powered by digdat

Harlaxton Energy Networks Limited has provided this information in good faith on the understanding that it is the best information available at the time. However, Harlaxton Energy Networks Limited can accept no liability in respect of the information provided. The information on this map (provided by Harlaxton Energy Networks Limited) is based on data currently recorded but the position of infrastructure shown on the map must be regarded as approximate. Users of this map are strongly advised to commission their own survey of the area before carrying out any works and identify actual position of all Harlaxton's assets before works commence. No liability whatsoever, including liability for negligence, is accepted by Harlaxton Energy Networks Limited for any error or inaccuracy or omission, including the failure to accurately record, or record at all, the location of any assets. This information is valid for the date printed. This plan is produced by Harlaxton Energy Networks Limited (c) Crown copyright and database rights 2025 Ordnance Survey AC0000813445. This map is to be used for the purposes of viewing the location of Harlaxton Energy Networks infrastructure only. Any other use of the map data is not permitted.

LV Service	Meter Location	Pole Mounted TX
LV Cable	LV Pot End	Ground Mounted TX
11KV Cable	LV Link Box	Substation Outline
33KV Cable	LV Cable Joint	Site Boundary
Earth Cable	33KV Cable Joint	
Pilot Cable	11KV Cable Joint	

responses@groundwise.com

39540

Harlaxton Energy Networks Limited

Harlaxton Energy Networks Ltd

Terms & Conditions of Use

By accessing material through this service, you accept the terms and conditions specified below.

Data Displayed by digdat® Utilities Service

The data displayed in digdat is from the statutory plans provided on behalf of and maintained by Harlaxton Energy Networks Ltd ("Harlaxton Energy").

Use of the plans that can be viewed in digdat Utilities is subject to the disclaimers and conditions associated with them. The conditions under which the data can be viewed are specified below and these must be read before viewing the plans.

Warranties and Disclaimers

Information in this plan is provided for identification purposes only. No warranty as to accuracy is given or implied. The precise route of pipe work may not exactly match that shown. Harlaxton Energy does not accept liability for inaccuracies. In carrying out any works, you accept liability for the cost of any repairs to Harlaxton Energy apparatus damaged as a result of your works. You are strongly advised to commission your own survey of the area before carrying out any works and identify actual position of all Harlaxton Energy's assets before works commence. No liability whatsoever, including liability for negligence, is accepted by Harlaxton Energy for any error or inaccuracy or omission, including the failure to accurately record, or record at all, the location of any assets. Mechanical digging equipment should not be used until pipe work has been precisely located.

Nothing in this disclaimer limits or excludes our liability for (a) death or personal injury caused by our negligence; (b) fraud or fraudulent misrepresentation; or (c) any other liability that cannot be limited or excluded by applicable law. Subject to the above, we shall not be liable to you in tort (including negligence) or otherwise, arising under or in connection with your use of the asset map for: (a) loss of profits; (b) loss of sales or business; (c) loss of agreements or contracts; (d) loss of anticipated savings; (e) loss of or damage to goodwill; or (g) any indirect or consequential loss.

This information is valid for the date printed and is based on the Ordnance Survey map with the permission of the Controller of Her Majesty's Stationery Office © Crown Copyright reserved Licence number: 100022432. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings.

Harlaxton Energy Networks Ltd
Toll Bar Road, Marston, Grantham NG32 2HT. Tel: 0800 055 6288. Email: info@harlaxtonenergynetworks.com

Printing

The quality and accuracy of any prints produced from digdat depend upon the specific printer and printer driver that are used. Harlaxton Energy can take no responsibility for the results of actions arising from distortions and inaccuracies introduced by the user's printer.

GROUNDWISE

Groundwise Searches Ltd

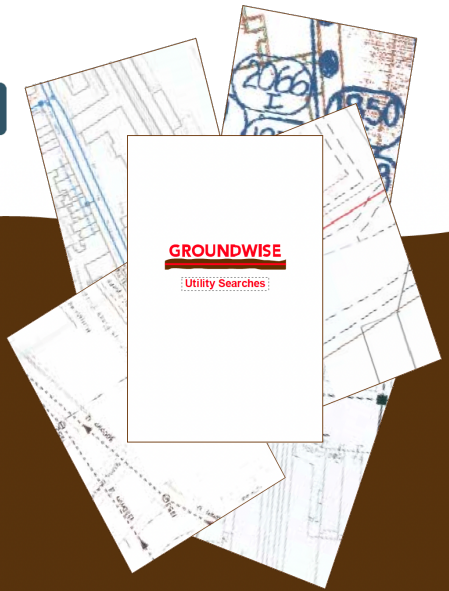
SP ENWL

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Rebecca Bennett

From: planrequest@enwl.co.uk
Sent: 08 September 2025 10:42
To: Sales
Subject: Plant Enquiry Ref Job No. 38617201
Attachments: 38617201_Electricity North West.pdf; SP ENWL Conditions and Information regarding electricity mains.pdf

08/09/2025

LinesearchbeforeUdig ref: 38617201

Your ref: 39540

Dear Sir/Madam,

Thank you for contacting us.

Please see attached information specific to your enquiry:

1. Plan (please print in colour):
2. Conditions and information regarding electricity mains.

I acknowledge with thanks your request dated above for information on the location of our services.

You must ensure safe digging practices, in accordance with HSE publication HSG47 "Avoiding Danger from Underground Services". You must 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 relevant people (direct labour or contractors) working for you on or near assets.

Please find enclosed plan(s) showing the approximate position of our apparatus known to be in the vicinity of this site.

I attach Conditions and information regarding electricity mains, which details contact numbers for additional services (i.e. new supplies, connections, diversion). In addition you should ensure they are made available to anyone carrying out any works which may affect our apparatus.

The attached files are in PDF format, to view them you will need Adobe Acrobat Reader(R). You can download it free of charge from http://get.adobe.com/reader

Contact Us

Mapping Enquiries:
If you have an enquiry relating to this letter or the attached map plan, please contact us using the following information:
Telephone: 0800 195 4141
Email: planrequest@enwl.co.uk
Our symbology guide can be found via this link

LinesearchbeforeUdig:
If you have an enquiry relating to the use of the LSBUD website, please contact LSBUD using the following information:
Telephone: 0345 437 7365
Email: enquiries@lsbud.co.uk
Website: www.lsbud.co.uk

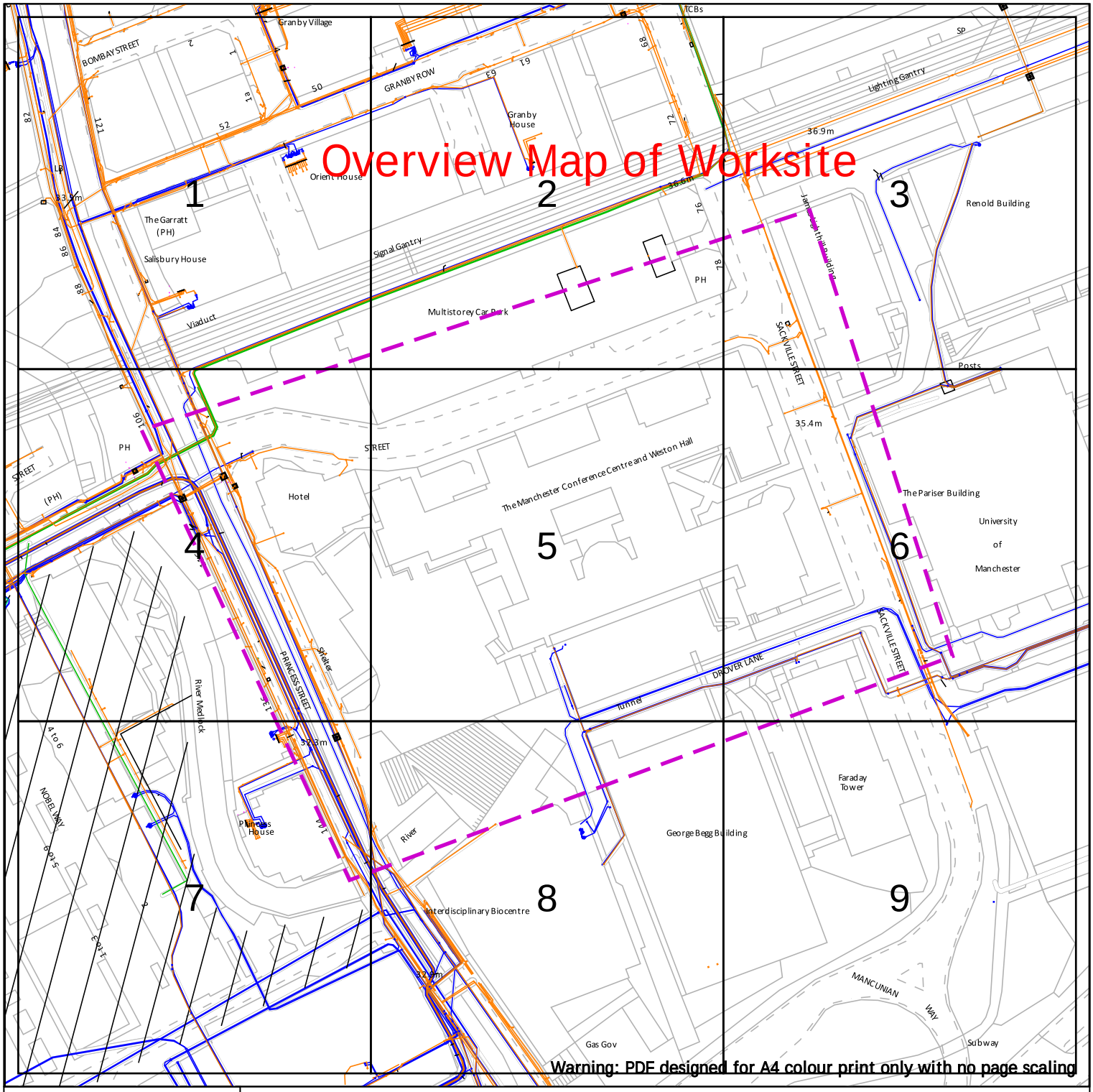
For more information, visit our website www.enwl.co.uk

Kindest regards,

SP E
Nort

Data Management Team
Tel: 0800 195 4141





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

SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:1538 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

In an emergency call 105, 24 hours a day

Dig Sites

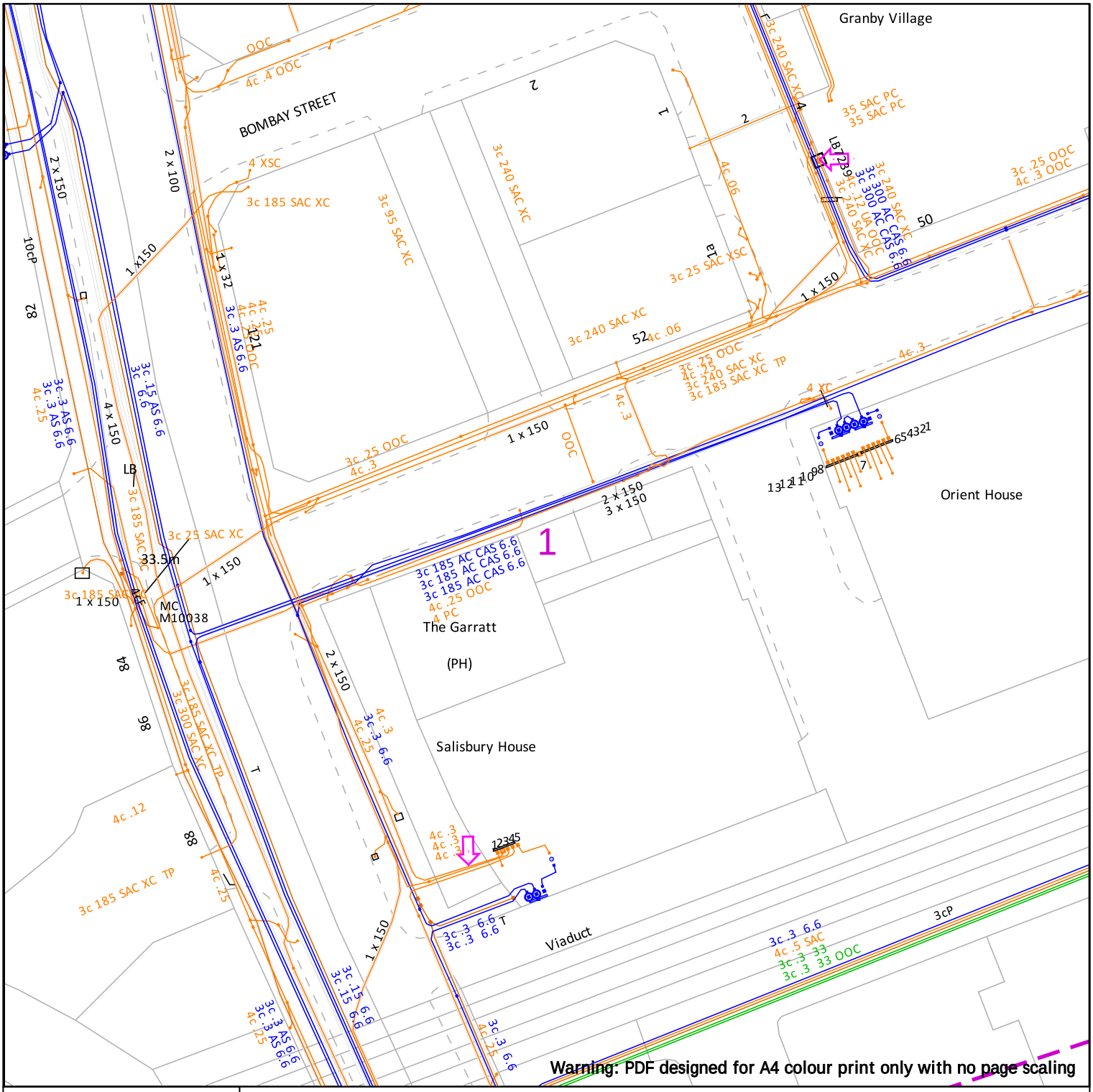
Line: - - - -

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.



SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

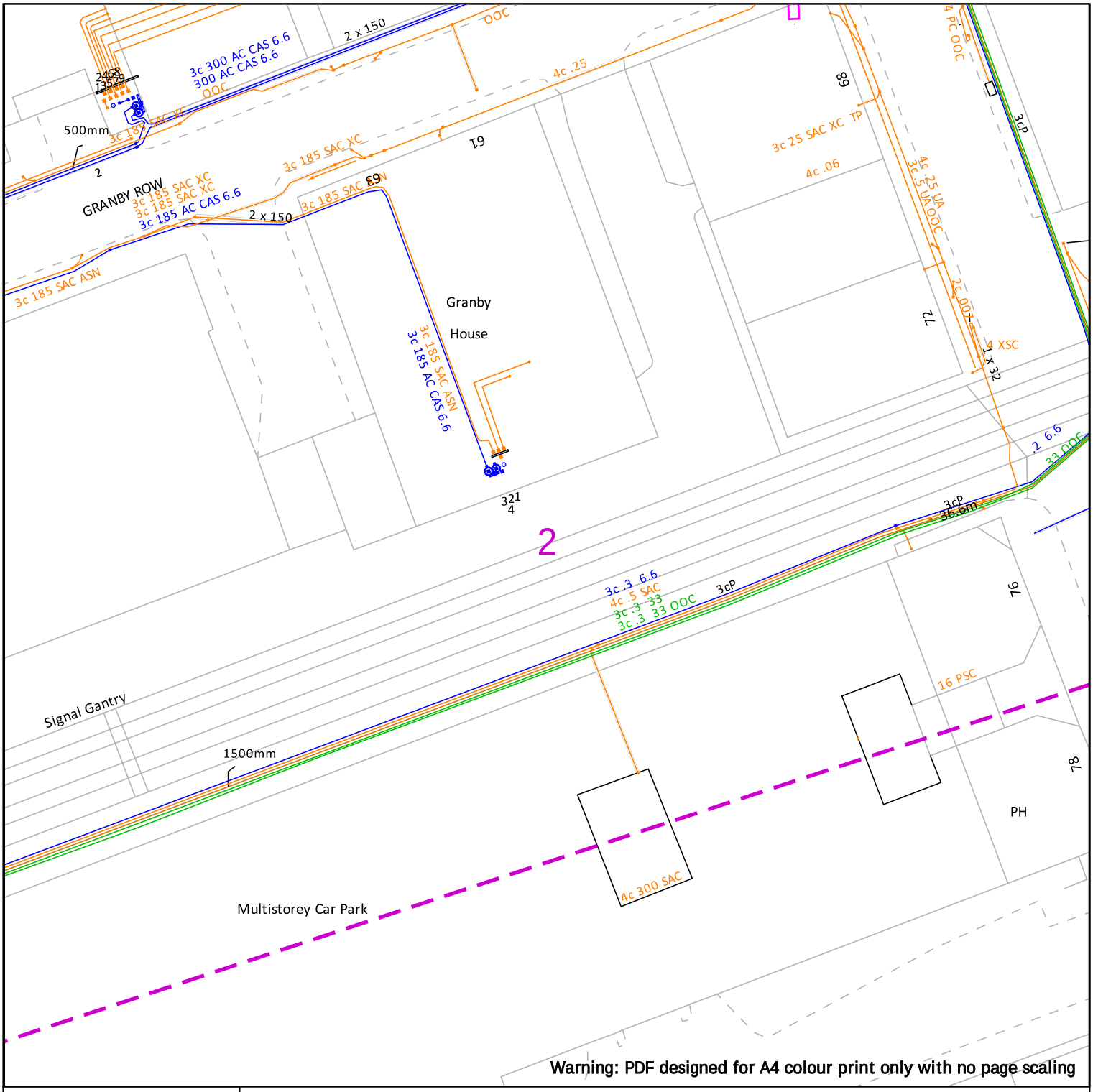
In an emergency call 105, 24 hours a day

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.



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

SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

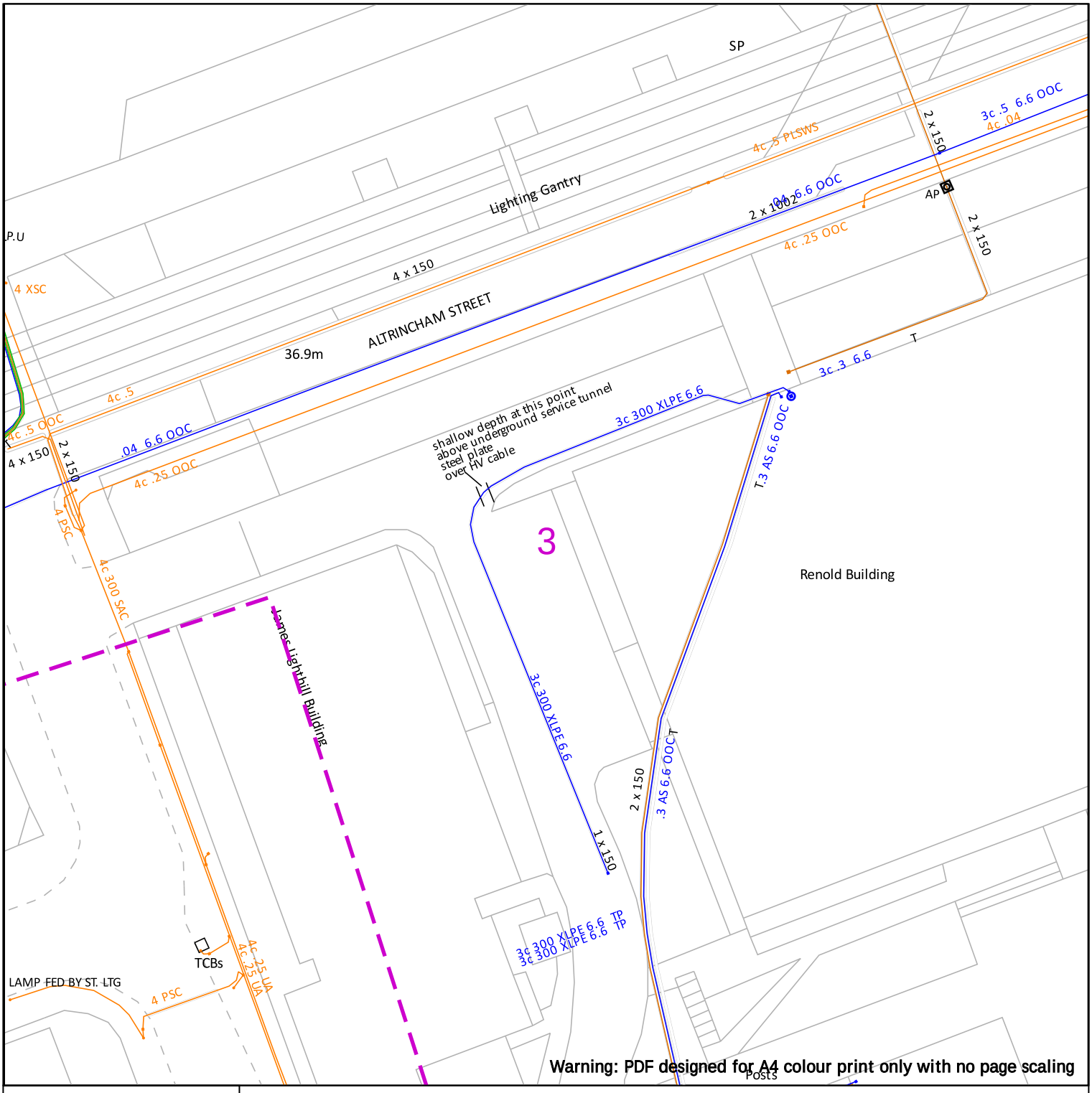
In an emergency call 105, 24 hours a day

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.



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

SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

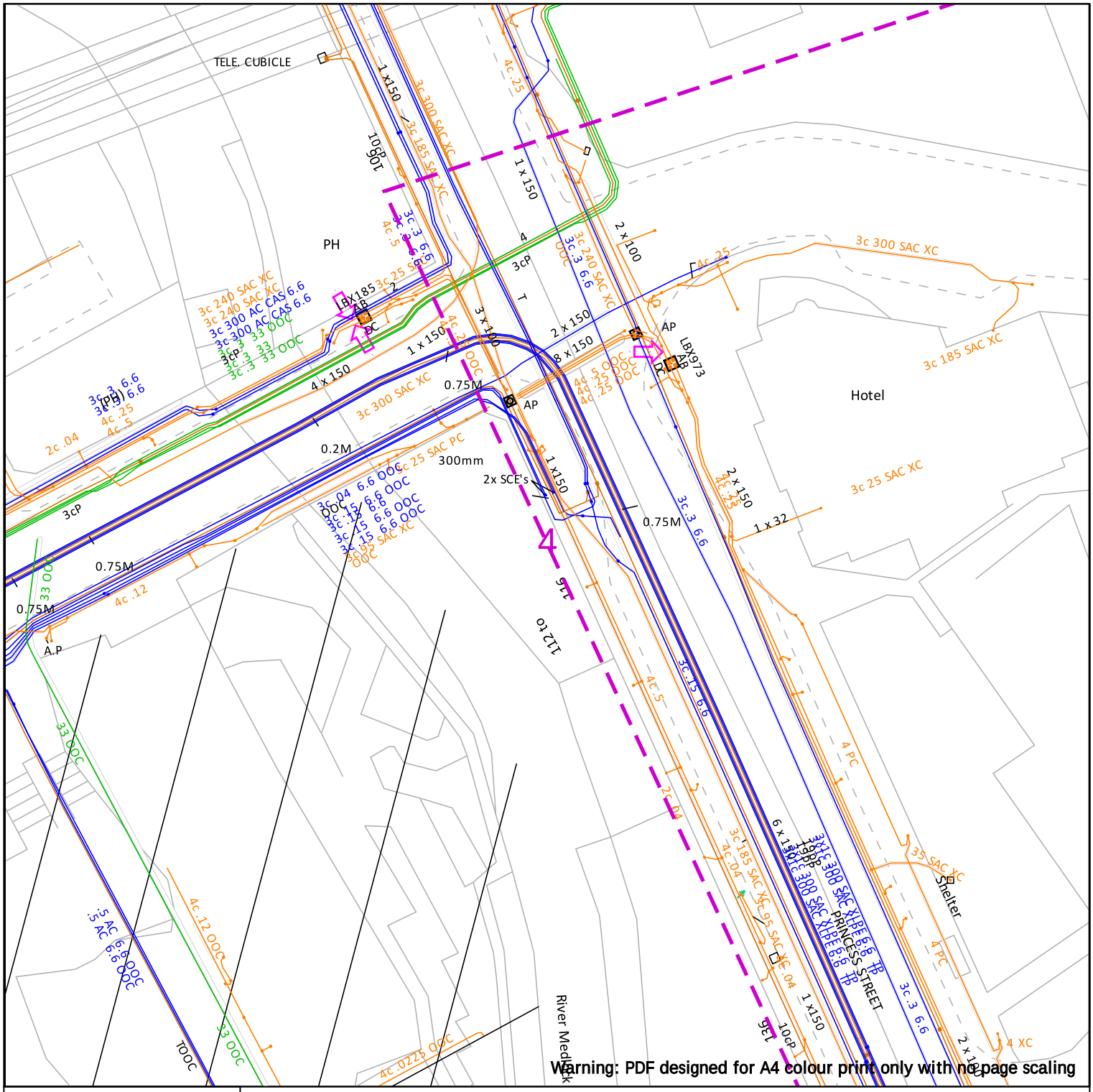
In an emergency call 105, 24 hours a day

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.



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

SP Electricity North West

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
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

In an emergency call 105, 24 hours a day

Dig Sites
Line:
Area:

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

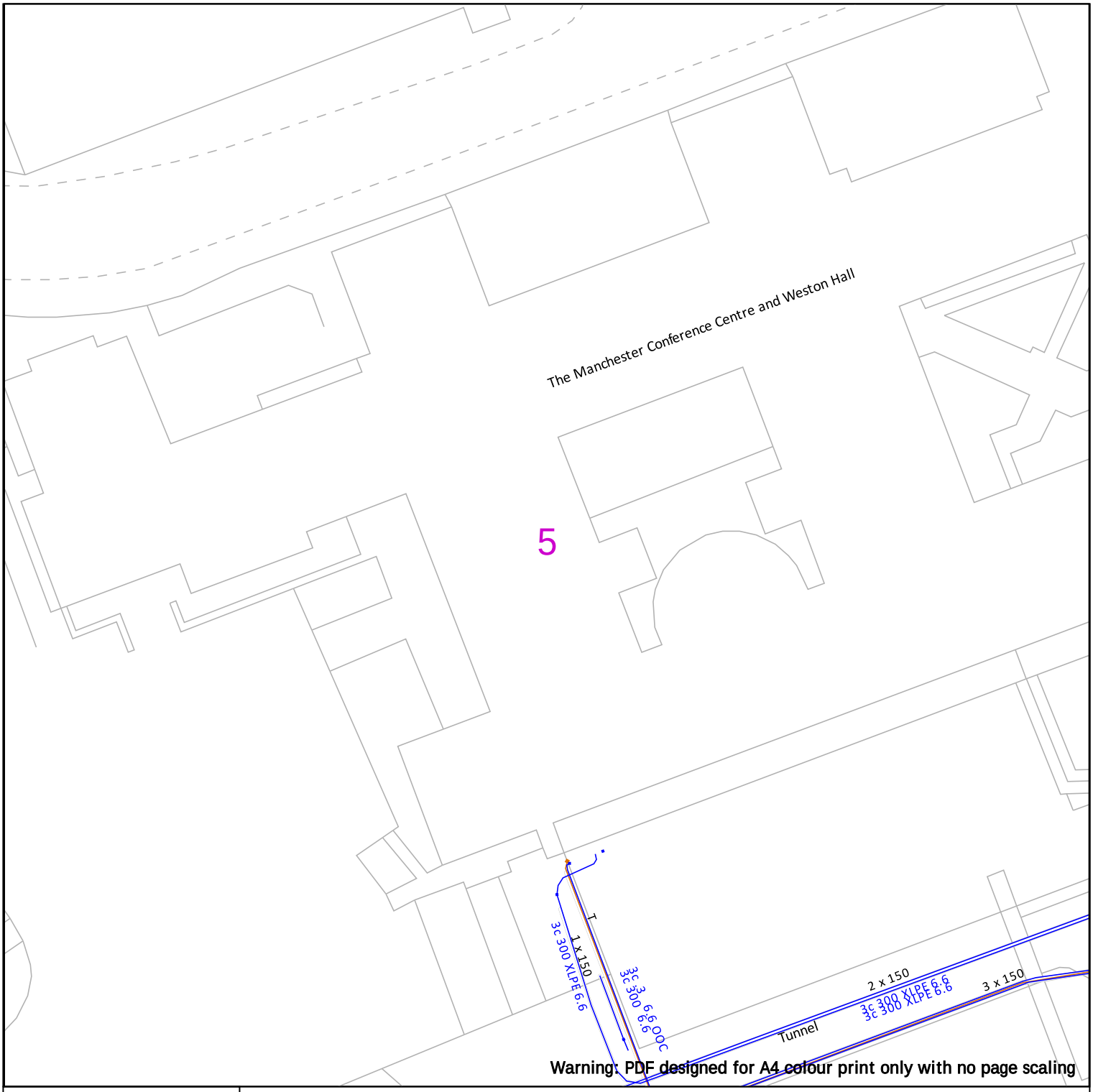
Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

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.



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

SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

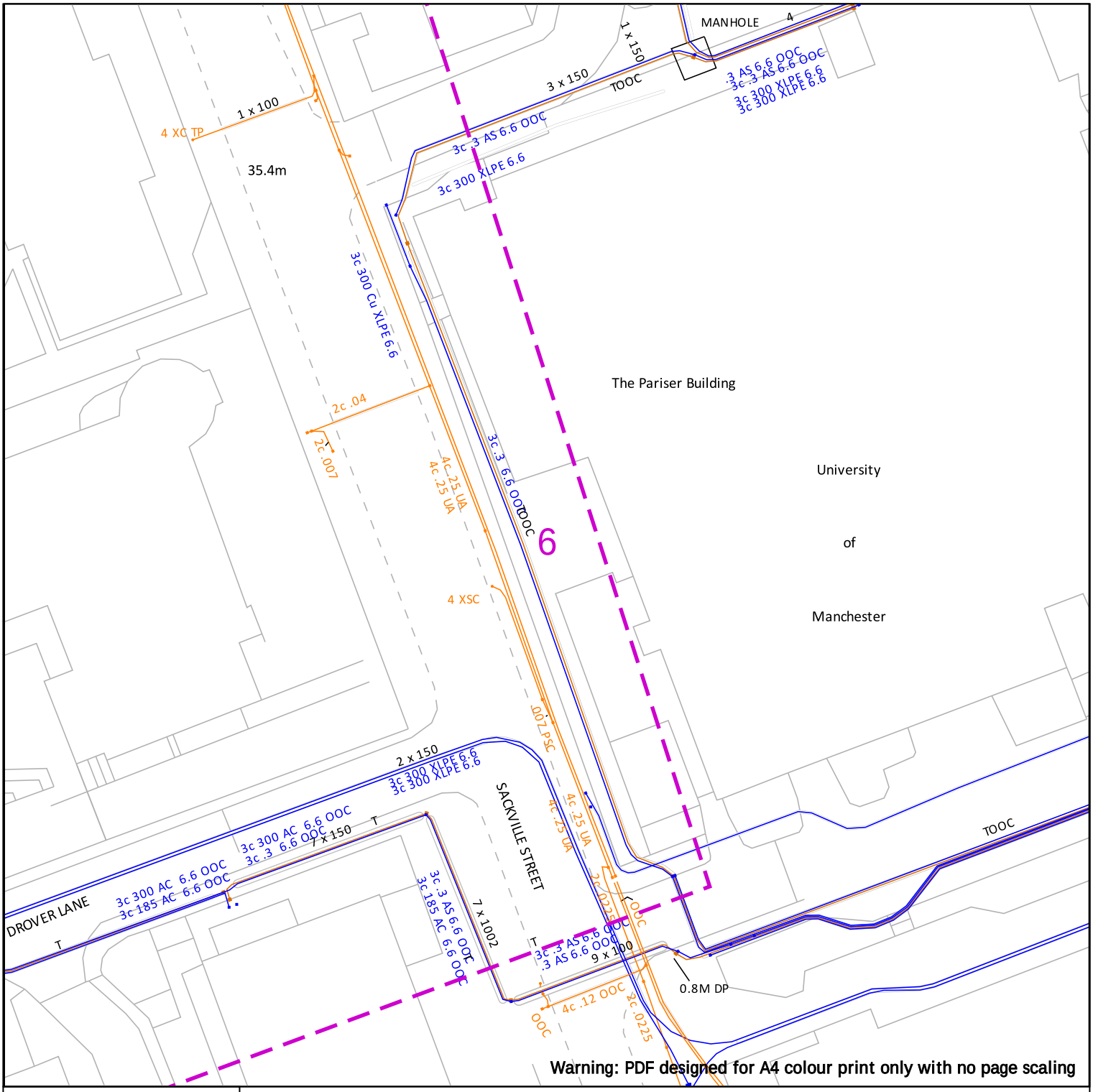
In an emergency call 105, 24 hours a day

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.



SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

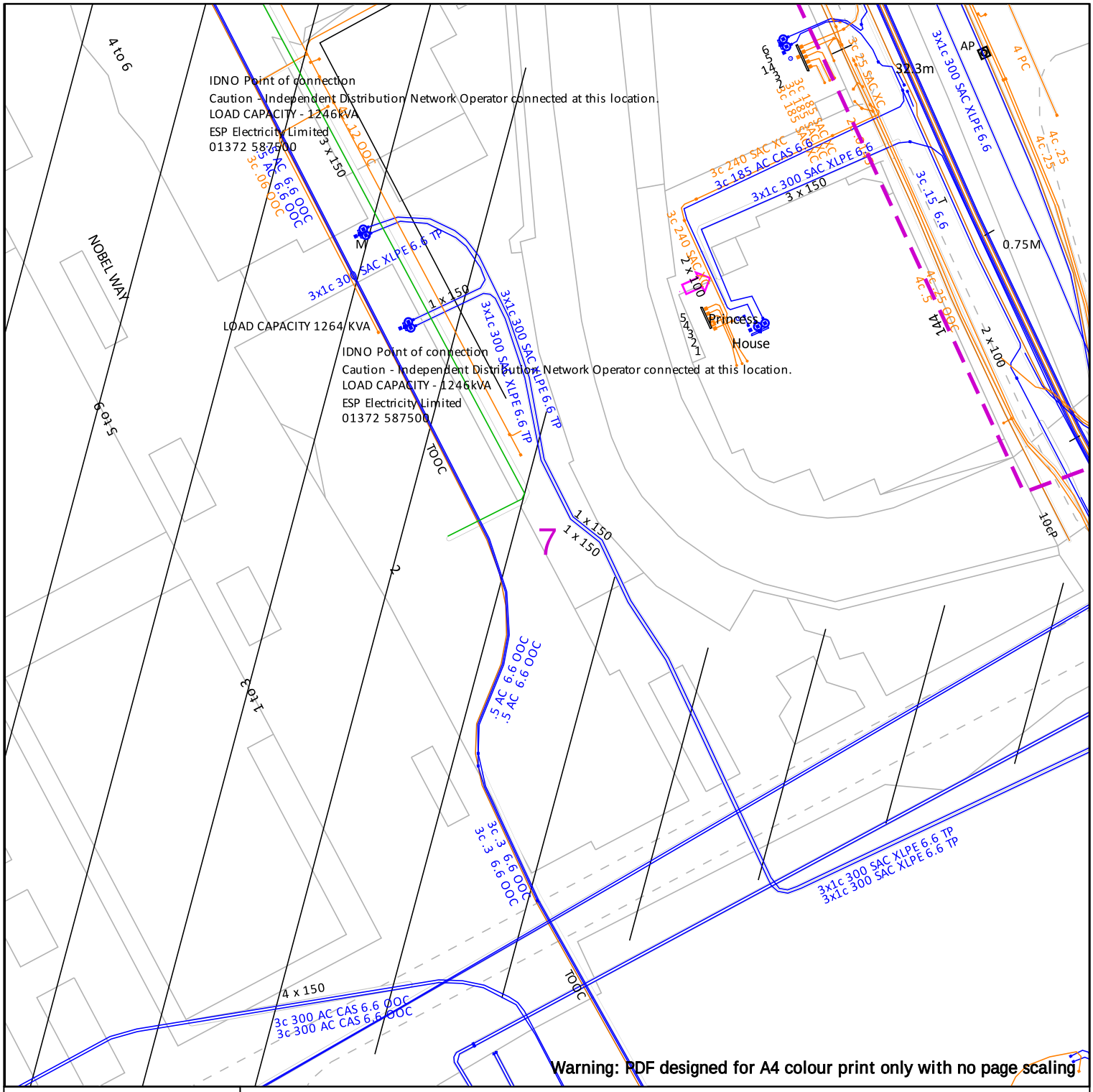
In an emergency call 105, 24 hours a day

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.



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

SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

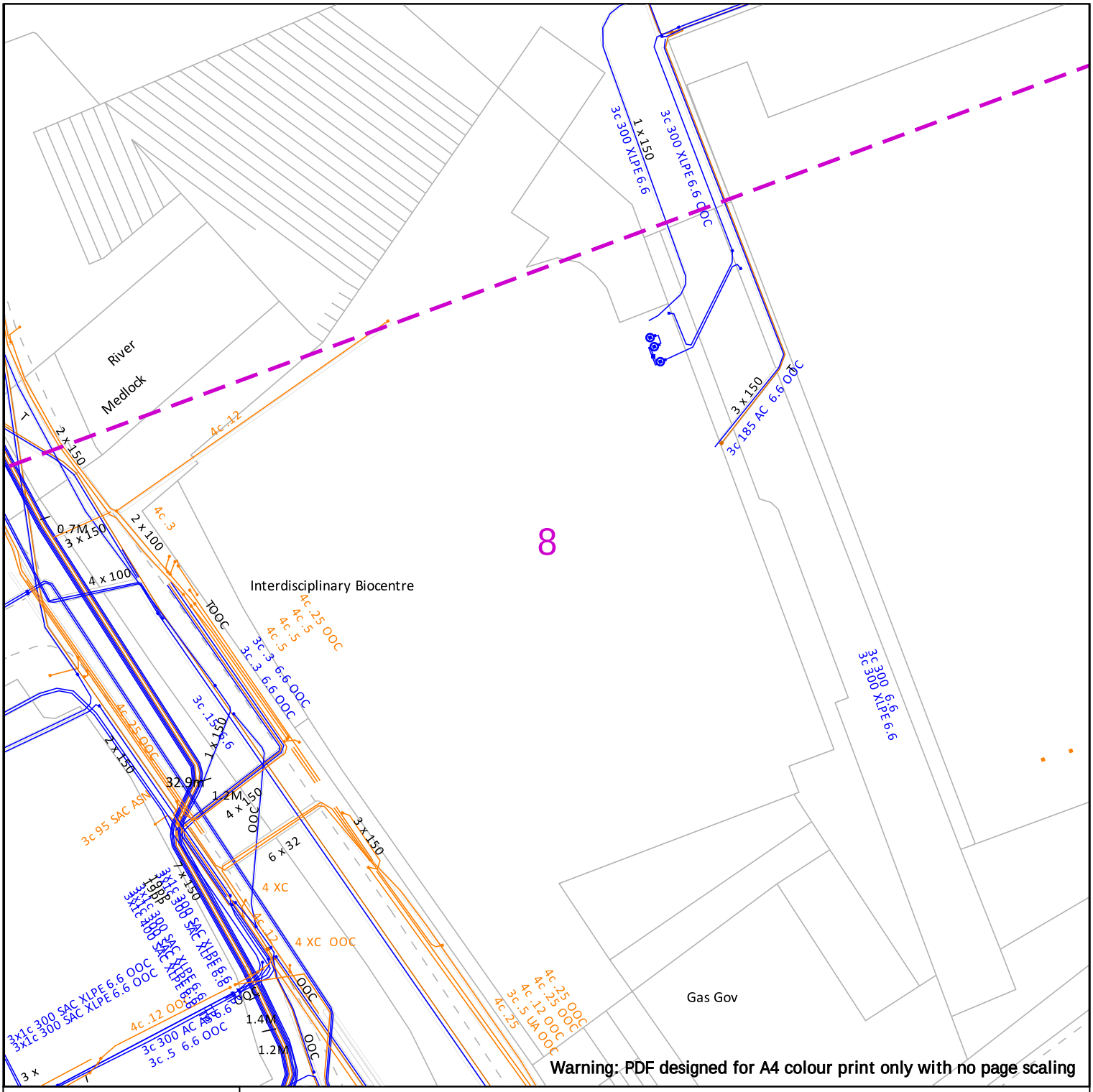
In an emergency call 105, 24 hours a day

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.



SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

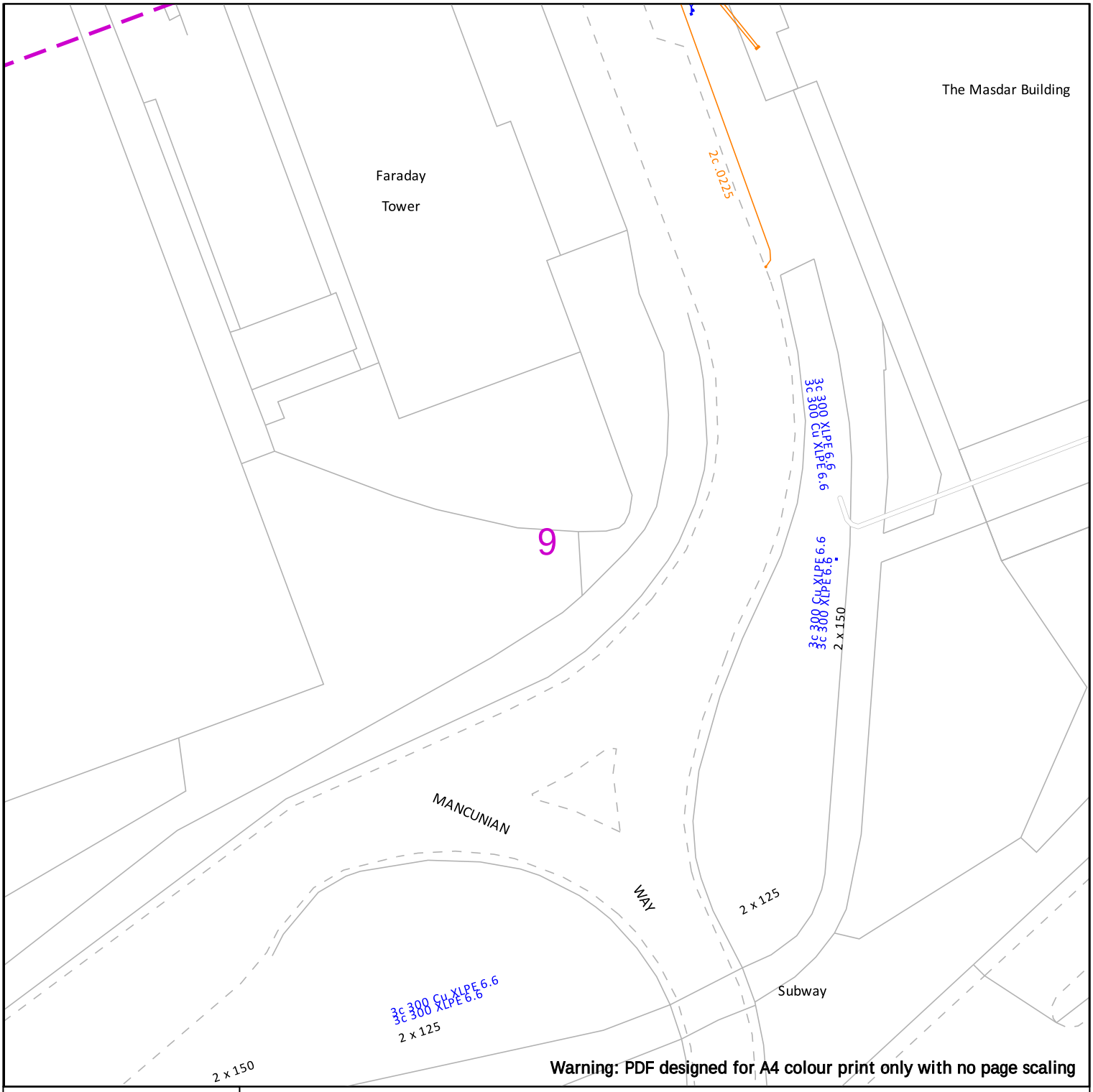
In an emergency call 105, 24 hours a day

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.



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

SP Electricity North West

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

Date Requested: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:500 (When plotted at A4)

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

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.

SP Electricity North West

Conditions and information regarding electricity mains

These general conditions and precautions apply to the electricity distribution system of Electricity North West Limited.

Please ensure that a copy of these conditions is passed to your representative and contractor on site.

1. 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 a third party owns other than Electricity North West Limited.

2. Before any machines are used, all of Electricity North West's underground apparatus should be located by manual excavation taking the appropriate safety precautions in accordance with the **Health and Safety Executive Guidance note HS(G)47 "Avoiding danger from underground services"**. This contains advice to site personnel when working near underground services.

   Underground services, particularly electricity and gas, can be dangerous. Damage to electricity cables can cause a dangerous flash, leading to severe burns or even death. Gas leaks can cause fire or explosion.

   Damage can result from excavation or penetration of the ground, e.g. by a road pin.

   Underground services may be found in roads, footpaths and on sites. Always assume that they are present. Treat any services found anywhere as live.

   Accidents have happened because people have mistaken one service for another, e.g. black plastic covered electricity cables look like black plastic water pipes and cast iron gas and water mains look alike. Check before you act.

3. Before starting work you must:

   - Make sure you have plans of the underground services in the area. This may not always be possible for emergency or unforeseen works. **Remember that service connection cables and pipes from the main to building or streetlight may not be shown**.
   - Use a cable and pipe locator to trace electricity cables and metal pipes.
   - Look for signs of service connection cables or pipes, e.g. a gas meter or service connection entry into a house or a streetlight.
   - Hand dig trial holes (as many as necessary) to confirm the position of services in close proximity to the area of work.

4. When you start work:

   - Hand dig near buried services whenever possible. Spades and shovels are safer than picks, pins or forks.
   - Remember that cables may be embedded in concrete. Electricity cables embedded in concrete **must** either be made dead before the concrete is broken out or another safe way of working agreed with the cable owner.
   - Watch out for signs of services as work continues.
   - Report damage to a cable, pipe or pipe coating however slight.
   - Do not use hand held power tools within 0.5m of he marked position of an electricity cable, unless this is impracticable and the line of the cable has been identified by plans and positively confirmed by a locator.
   - Do not use hand held power tools directly over the marked line of cable unless:

     a) You have already found the cable at that position by careful hand digging beneath the surface and it is at a safe depth (at least 300mm) below the bottom of the surface to be broken, or

     b) Physical means have been used to prevent the tool striking it.

   - If an excavator is used near an electricity cable keep everyone clear of the bucket while it is digging. Buckets should not be used near cable – hand dig.
   - Do not use exposed services as a convenient step or handhold.
   - Do not handle or attempt to alter the position of an exposed service.
   - Do not install plant close to an existing service.
   - Do not build existing services into a manhole or other structure or encase them in concrete.

Please ensure that all site operators have this information and if any electrical apparatus is damaged, they/you should contact Electricity North West Limited on **0800 195 4141 (option 1).**

5. **Overhead lines** are not necessarily shown on the Electricity North West Limited cable records but may be present. In the event of work being carried out adjacent to overhead lines (including access, storage etc.) please always ensure strict adherence to the requirements of the **Health and Safety Executive's Document GS6 "Avoiding Danger from Overhead Power Lines"**.

   Extreme personal danger can result from contact, or near contact, with live conductors or overhead lines.

   Treat all overhead lines and other electrical apparatus as live. If in doubt, get advice.

6. Electricity North West Limited must be consulted if work is to take place within 15 metres of overhead lines on steel towers or 9 metres of overhead lines on wood, concrete or steel pylons. (All distances should be measure at ground level from a position estimated by eye to be vertically under the outermost conductor at a tower or pole position) Any person involved in work in the vicinity of overhead lines should:

   - Understand and follow the instructions given on safe working areas and methods of work.
   - Make sure that warning notices are in the cabs of machines working in the vicinity of an overhead line.
   - Make sure that barriers and warning notices are erected as required.
   - Not tip soil or stack material underneath overhead lines as this may reduce the clearance to an unsafe distance.
   - Make sure when handling or using platforms, scaffold, poles, piping, ladders, hand tools etc., that they are kept at a safe distance from overhead lines.
   - Not steady a suspended load, skip, hoist wire, slings etc., unless satisfied that there isn't any danger from overhead lines.
   - Remember that when mobile plant, such as a crane or excavator, is operating near overhead lines , the raising or slewing of the jib may introduce danger.
   - Always keep overhead lines in view when manoeuvring mobile plant.
   - Never operate a machine unless carefully guided by an experienced banksman.
   - Not approach or touch any broken or fallen conductors or any plant in contact with an overhead line before Electricity North West Limited confirms that conditions are safe. Warn others to keep well clear.

   Machine operators should note that: if a machine comes into contact with an overhead line and cannot be disentangled by backing off, remain seated in the cab and warn others to keep clear of the machine until Electricity North West Limited confirms that conditions are safe. If it is essential to leave the machine while it is in contact with the overhead line, for example if it catches fire, jump well clear – and **do not** attempt to climb down in the normal way nor touch any part of the machine when on the ground.

7. Electricity North West Limited provides approximate locations of its electricity mains or apparatus according to its records but these records are not necessarily accurate or complete and do not always show the position of private cables from mains to properties. No person or company shall be relieved from liability for any damage caused by reason of the actual positions and/or depths being different from those indicated.

8. Care should be taken when excavating near cables. Known road crossings are highlighted on the enclosed plans. Should any cable, or Electricity North West Limited apparatus indicated on the attached plans, be affected by your proposals please contact us as follows:

   Electricity North west Limited
   Borron Street
   Portwood, Stockport
   Cheshire
   SK1 2JD

   Telephone: **0800 195 4141 (option 4)**

   Details of diversion costs, if any, will be provided on request once your firm proposals have been submitted.

9. Please note that service cables may be affected by some of the works being carried out on site.

   If any services do require temporary disconnection please phone **0800 195 4141 (option 2)** for domestic and commercial disconnection, so that arrangement can be made to disconnect before work commences on site.

11. Please note that cable records supplied may not be up to date, or may be incomplete, if the area concerned is a new site.

12. For information regarding wayleave or easement agreements contact WayleaveEnquiries@enwl.co.uk

13. The latest cable records are always available for inspection during normal working hours and you should satisfy yourself that the information you have is up to date at the time you commence work. This service is consistent with the requirement of Regulation 36 of the Electricity Supply Regulations and paragraph 79 of the New Road and Street Works Act.

SP Electricity North West

Electricity North West Ltd
Borron Street, Portwood
Stockport
SK1 2JD

www.enwl.co.uk

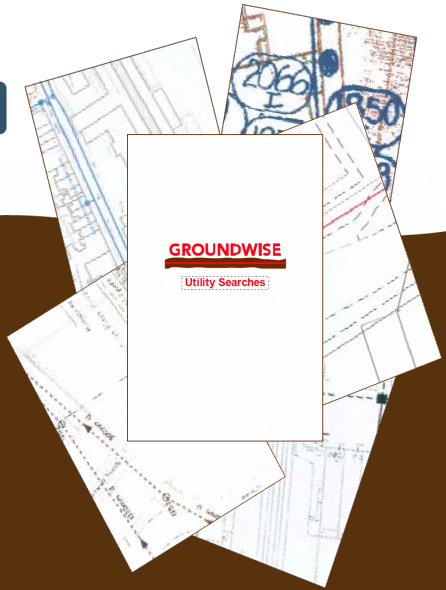
Registered in England and Wales
Registered Number 02366949

GROUNDWISE

Groundwise Searches Ltd

Utility Assets Ltd

Utility Not Present



Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE

Utility Assets Ltd

Thank you for recently contacting the Utility Assets plant record department. We will check whether we have any plant present at your site and contact you within 5 - 7 working days ONLY if we own any plant in the vicinity.

If you have sent an asset records enquiry to enquiries@utilityassets.co.uk please resend to assetrecords@utilityassets.co.uk

If we do not reply, we do not have any apparatus in the area of your works. However, PLEASE TAKE CARE when excavating around electricity cables in the event that not all cables present may be accurately shown. We recommend you use detecting equipment to map the site before excavating and fully comply with HSG47. DO NOT assume that a cable is dead if you don't have a record of its presence. The cable must be treated as live unless PROVEN DEAD by the cable owner. In case of emergency please contact your local electricity distribution company.

This is an automated reply from our dedicated asset records email address. If you receive further correspondence from us it will be from asset.manager@utilityassets.co.uk quoting a site reference number.
--
Kind regards

Asset Manager
asset.manager@utilityassets.co.uk

GROUNDWISE

Groundwise Searches Ltd

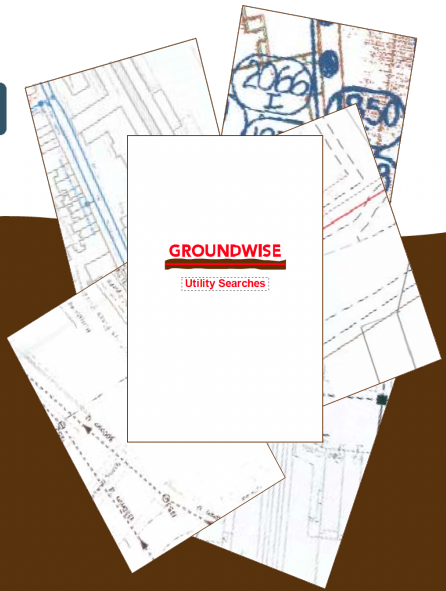
Cadent

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Rebecca Bennett

From: plantprotection@cadentgas.com
Sent: 08 September 2025 10:44
To: Sales
Subject: LSBUD Ref: 38617201 Your Ref: 39540 DBYD Information Only Enquiry
Attachments: 38617201_CadentGas.pdf

Date: 08/09/2025
LinesearchbeforeUdig ref: 38617201
Your ref: 39540

Dear Sir/Madam,

Please submit a planned works enquiry for your project

We have received a notification from the LinesearchbeforeUdig (LSBUD) platform regarding your information only to undertake works. As this is an information only, we haven't undertaken an assessment into the impact and risk posed to our assets. We need more information from you to do so.

You must not start any work until we confirm it is safe to do so after submission of a planned works enquiry.

There are Cadent gas pipes in the area you're planning to work. These pipes may impact and possibly prevent your work for safety or legal reasons.

If your works are proposed to be undertaken in an easement, please note any auto-response from our enquiry system does not constitute written consent and formal, signed written consent which will only be provided following consultation with our plant protection team.

What you need to do

To help develop your information only into a planned works enquiry, please review our attached plans, which detail the Cadent gas assets in the area along with our key guidance document Specification for Safe Working in the Vicinity of Cadent Assets.

Once you have a plan for review by our engineering teams, please submit a "Planned Works" enquiry via LSBUD. In the meantime, if you want to discuss specifics associated with your information only please contact us at plantprotection@cadentgas.com or on 0800 688 588 quoting your reference at the top of this letter.

Your responsibilities and obligations

It is your responsibility to ensure that the information you have given us is accurate, therefore you must not undertake any works until a planned works enquiry has been submitted for assessment. You must also share all relevant documents, including the guidance notes, with anyone who carries out work on your behalf.

Cadent may have a Deed of Easement on the pipeline, which provides us with a right of access for a number of functions and prevents change to existing ground levels and storage of materials. It also prevents the erection of permanent/temporary buildings, or structures. If necessary Cadent will take action to legally enforce the terms of the easement.

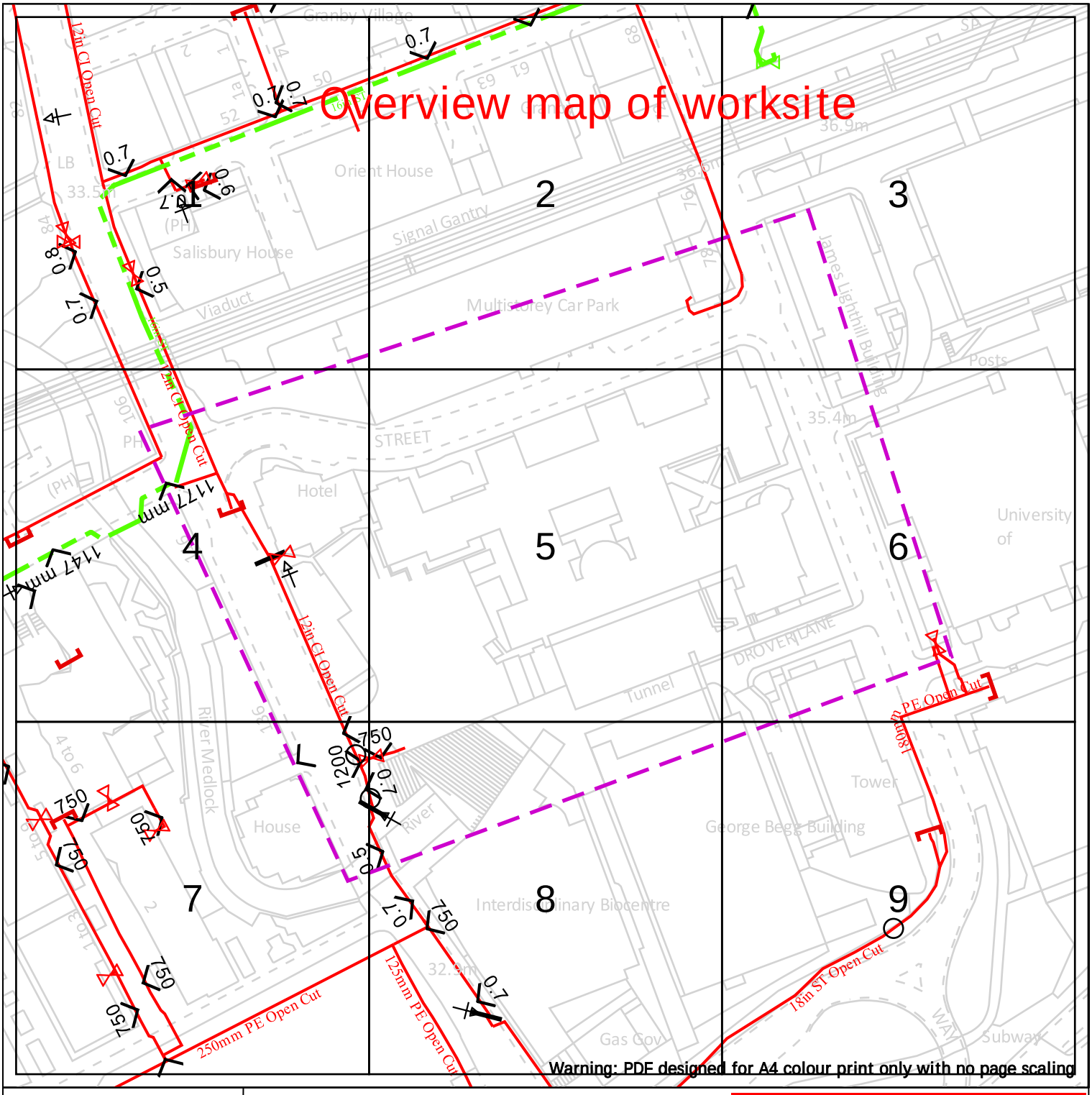
This letter does not constitute any formal agreement or consent for any proposed development work either generally or related to Cadent's easements or other rights, or any planning or building regulations applications.

Cadent Gas Ltd or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

Kind Regards,
Plant Protection Team
T: 0800 688 588
plantprotection@cadentgas.com
cadentgas.com

We work together | We take responsibility | We drive performance | We shape the future

Keeping people warm, *while protecting the planet*



Cadent
Your Gas Network

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

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

View extent: 100m, 100m

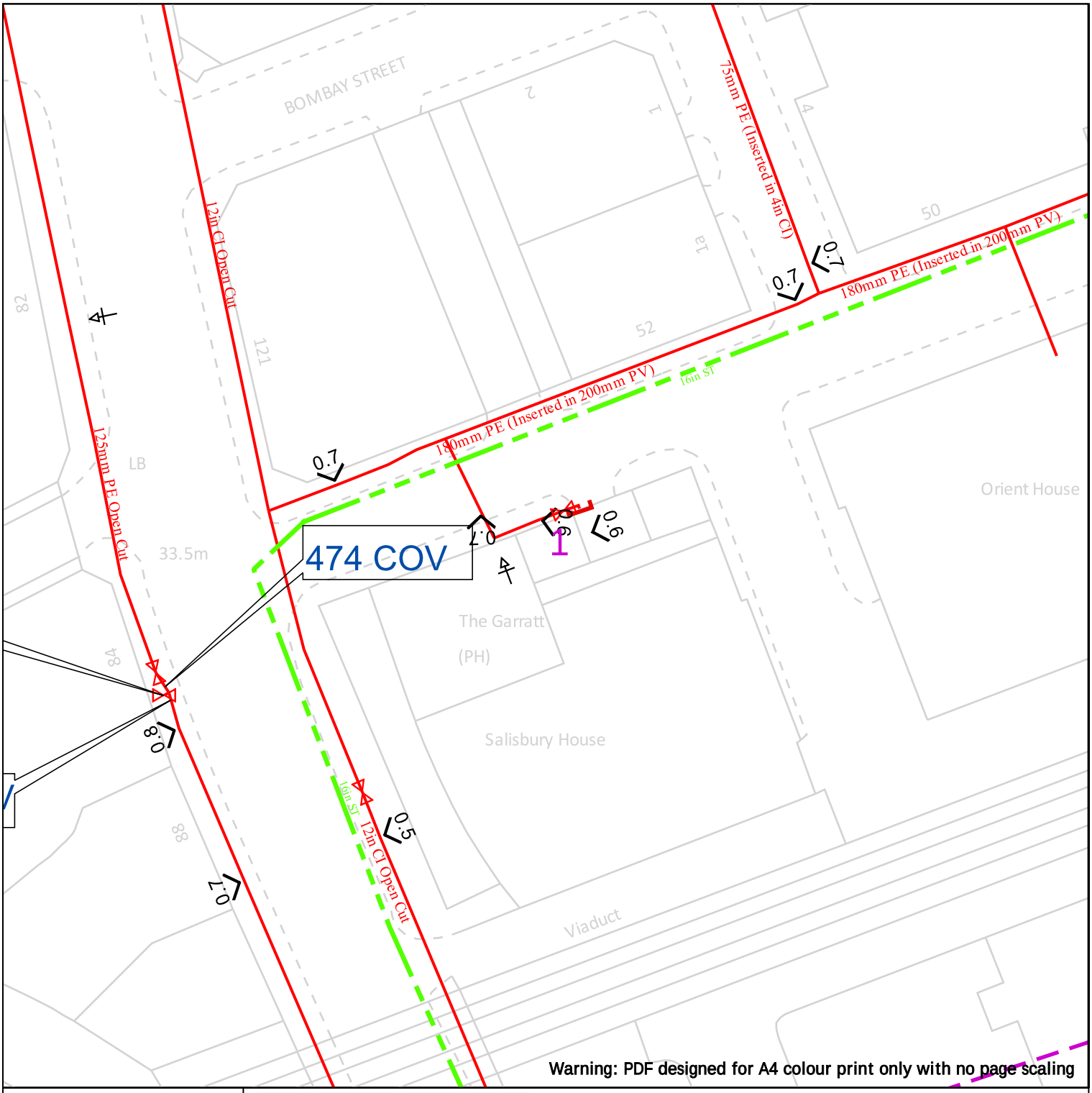
Scale: 1:1538 (When plotted at A4)

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



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

25m

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

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

View extent: 100m, 100m

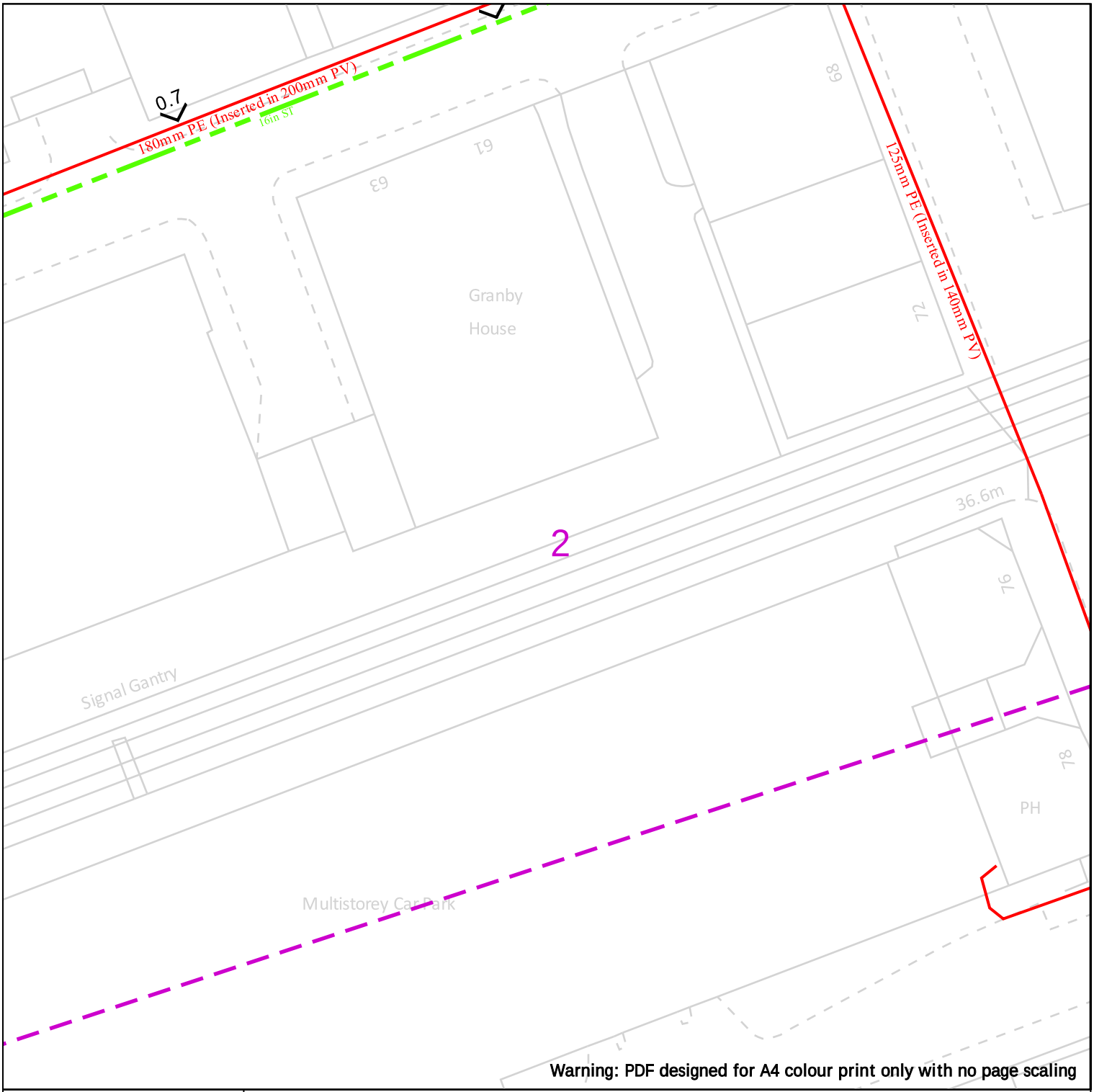
Scale: 1:500 (When plotted at A4)

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



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

25m

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

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer
Your Scheme/Reference: 39540

View extent: 100m, 100m

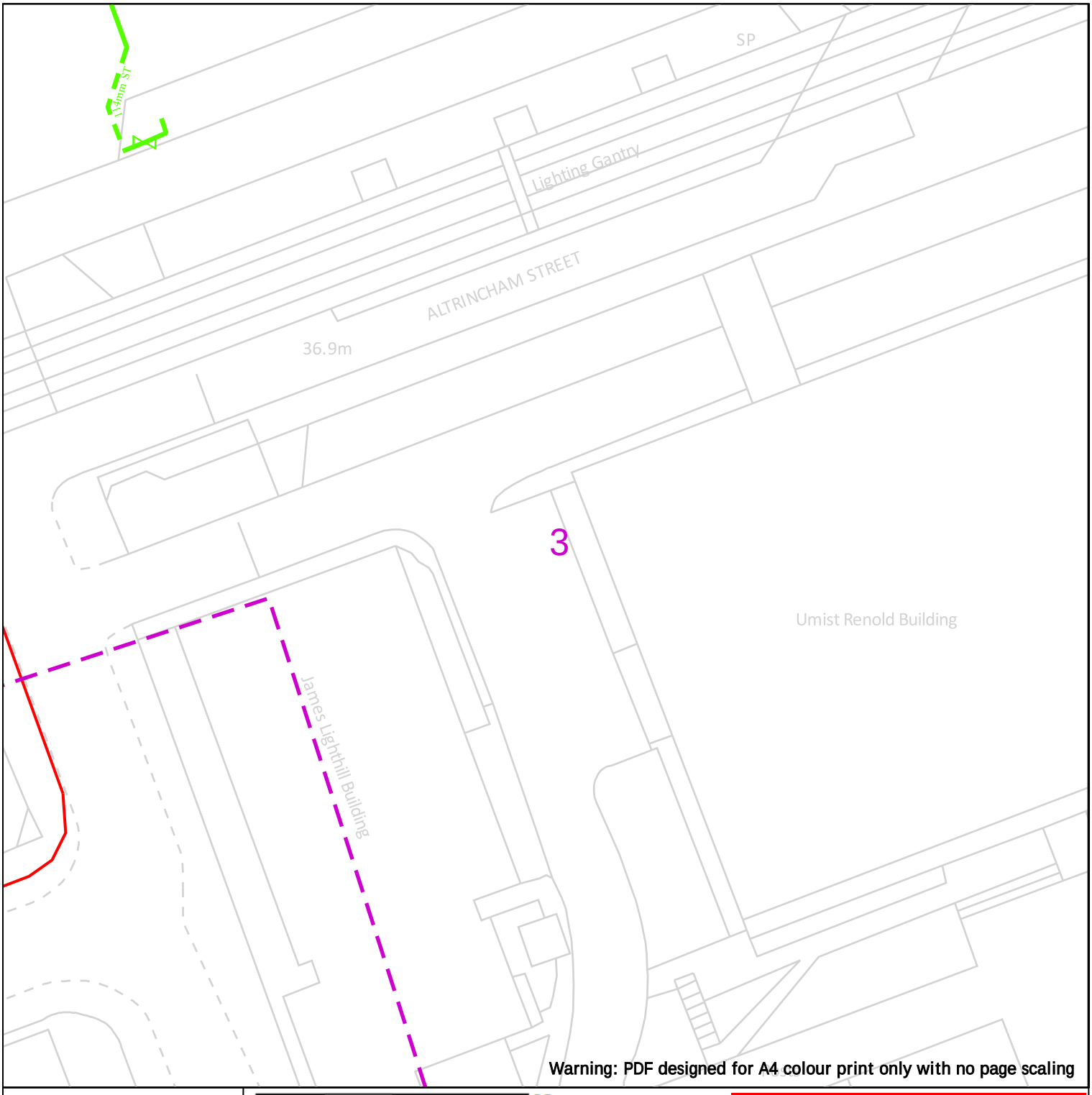
Scale: 1:500 (When plotted at A4)

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



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

25m

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

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

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer
Your Scheme/Reference: 39540

View extent: 100m, 100m

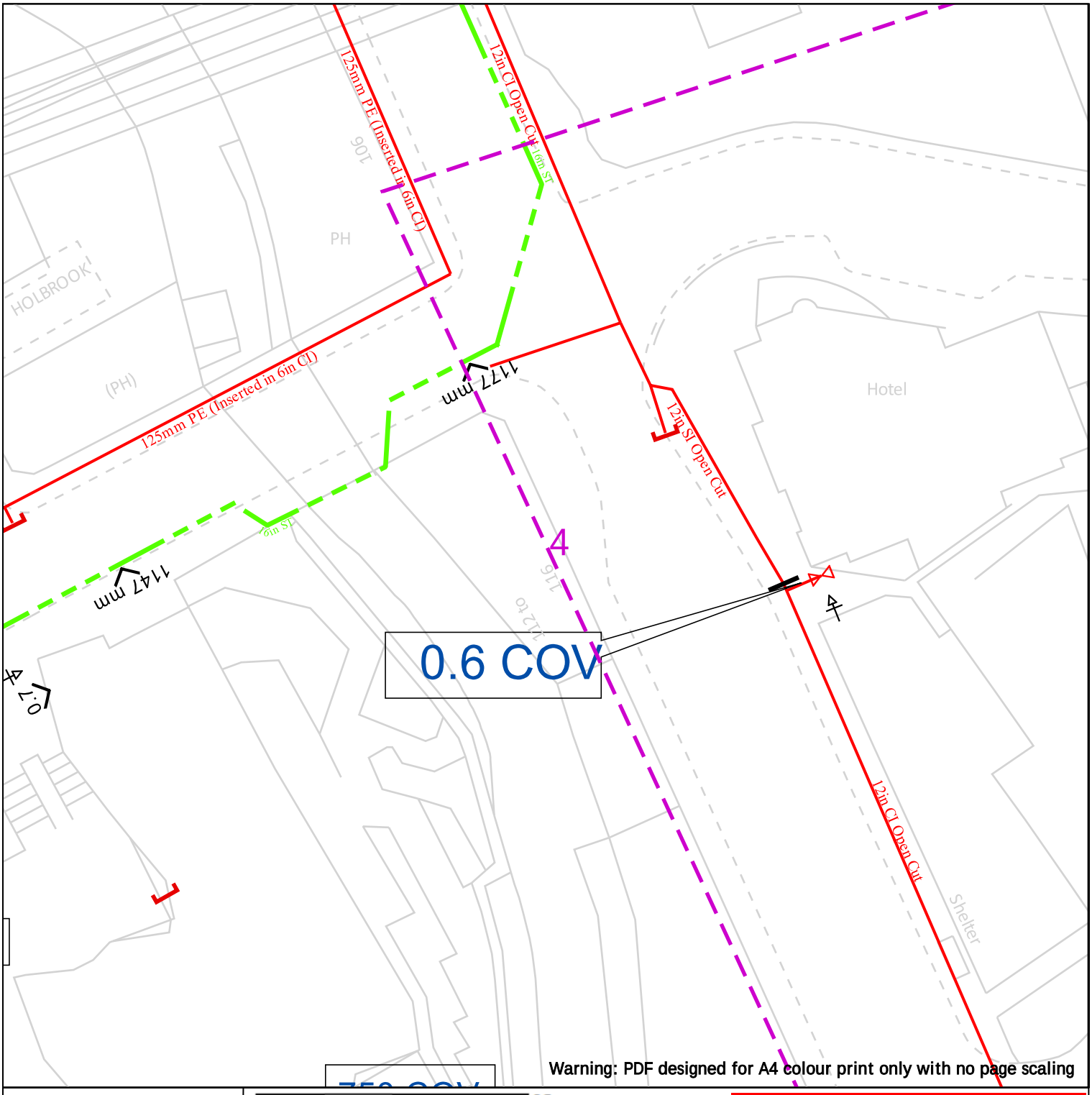
Scale: 1:500 (When plotted at A4)

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



25m

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

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

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer
Your Scheme/Reference: 39540

View extent: 100m, 100m

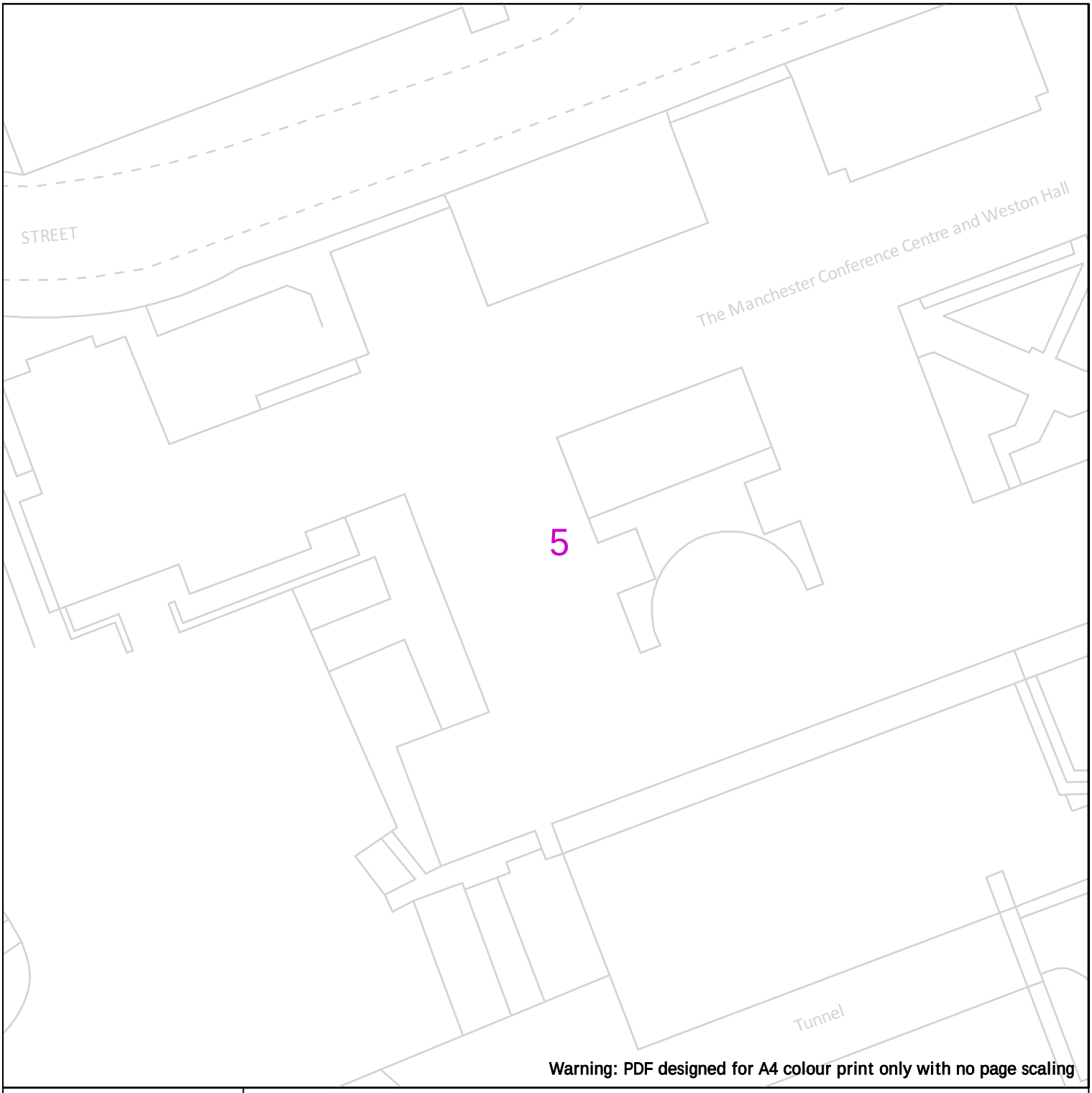
Scale: 1:500 (When plotted at A4)

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



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

25m

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

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

View extent: 100m, 100m

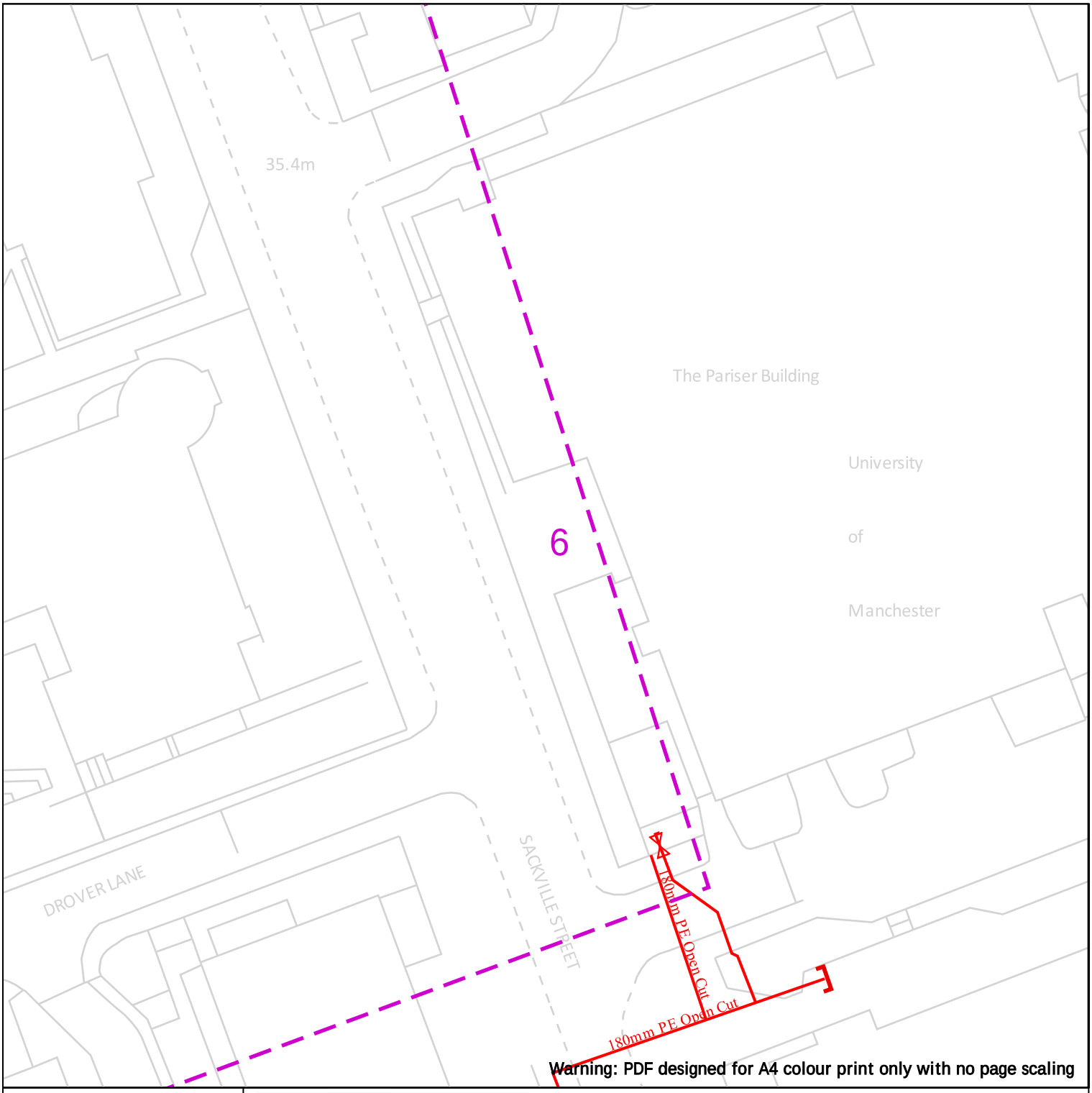
Scale: 1:500 (When plotted at A4)

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



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

25m

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

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer
Your Scheme/Reference: 39540

View extent: 100m, 100m

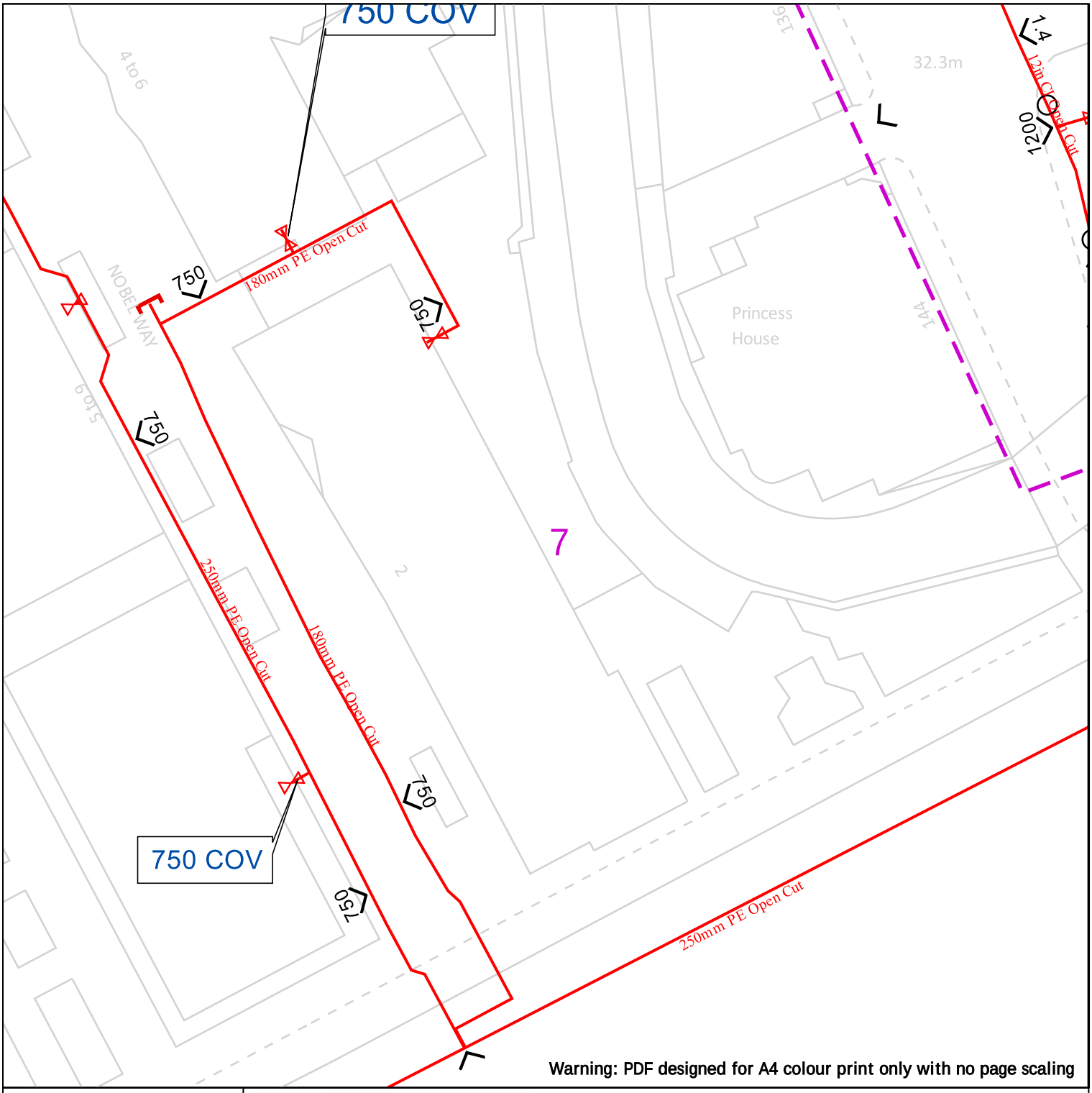
Scale: 1:500 (When plotted at A4)

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



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

25m

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

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

View extent: 100m, 100m

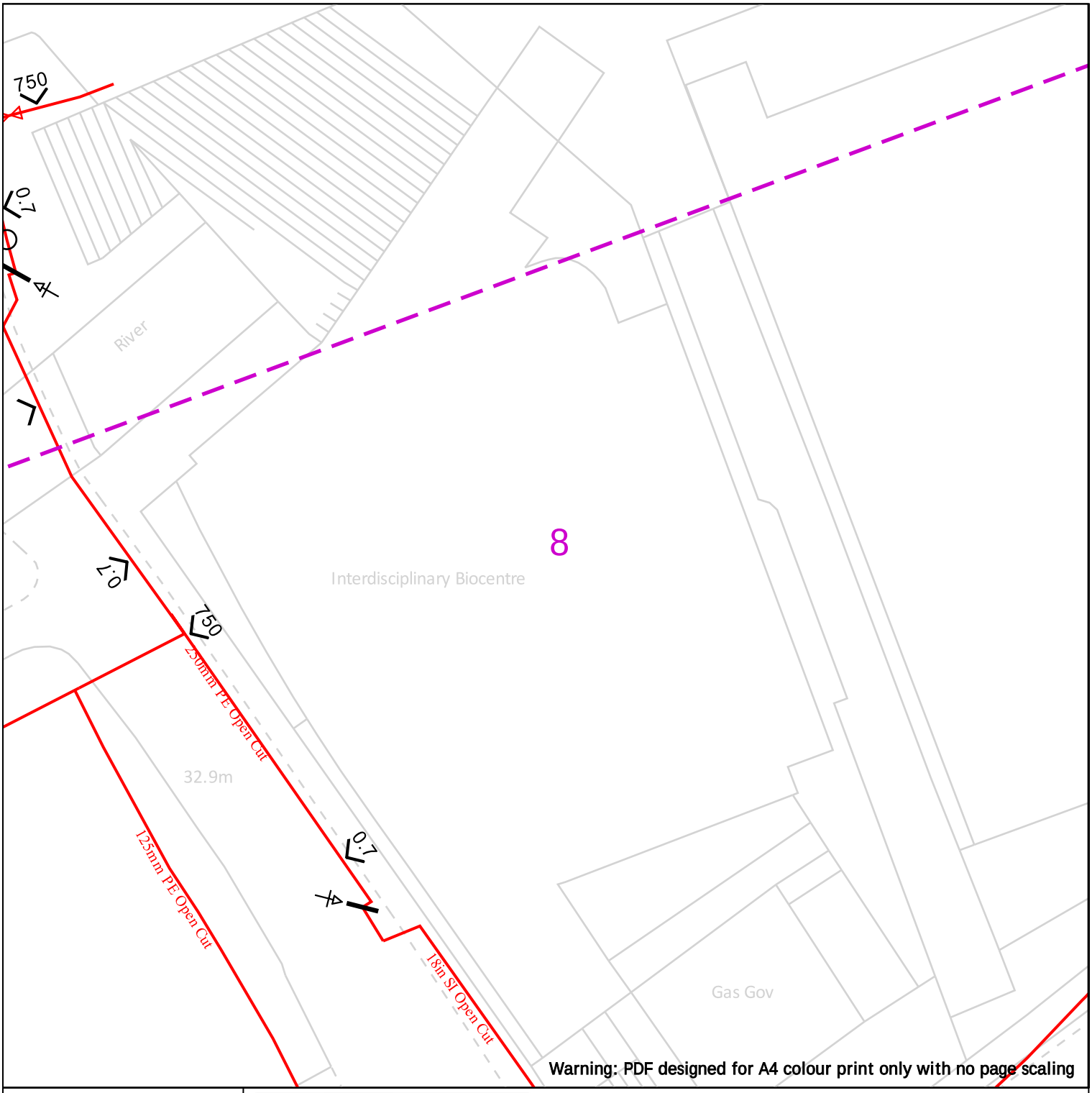
Scale: 1:500 (When plotted at A4)

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



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

25m

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

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

View extent: 100m, 100m

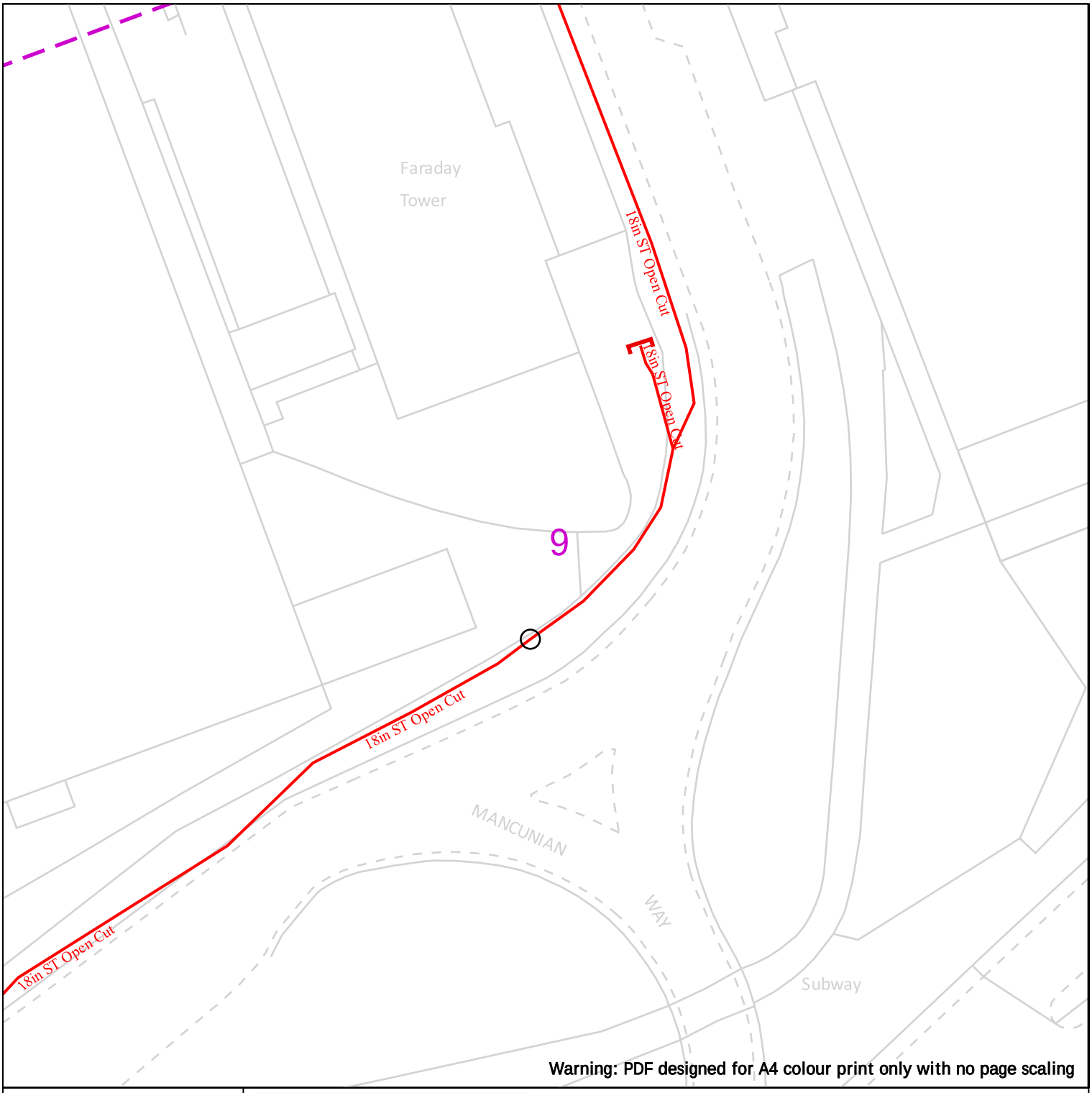
Scale: 1:500 (When plotted at A4)

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



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

25m

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

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and/or Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com

- 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: 08/09/2025
Job Reference: 38617201
Site Location: 384453 397500
Requested by: Mr Joe Shawyer
Your Scheme/Reference: 39540

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

CAD/SP/SSW/22
February 2023

Cadent
Your Gas Network

Specification for *Safe Working* in the Vicinity of Cadent Assets



Cadent Contact Details

East of England Operations Plant Protection

Address: Cadent Gas Limited, Vicarage Farm Road, Peterborough, PE1 5TP
Email: eaplantprotectionops@cadentgas.com

East Midlands Operations Plant Protection

Address: Cadent Gas Limited, Effingham Street, Sheffield, S4 7YP
Email: emplantprotectionops@cadentgas.com

North London Operations Plant Protection

Address: Cadent Gas Limited, Uxbridge Road, Slough, SL2 5NA
Email: nlplantprotection@cadentgas.com

North West Operations Plant Protection

Address: Cadent Gas Limited, Plant Protection (Block C), Mersey Road North, Failsworth, Greater Manchester, M35 9FF
Email: plantprotection.nw@cadentgas.com

West Midlands Operations Plant Protection

Address: Cadent Gas Limited, Windsor Street, Birmingham, B7 4DN
Email: plantprotection.wm@cadentgas.com



Disclaimer

This document is provided for use by third parties for safe working in the vicinity of Cadent assets. Where this document is used by any other party it is the responsibility of that party to ensure that this document is correctly applied.

Users should ensure that they are in possession of the latest edition of this document by referring to the Digging Safely webpage on the Cadent website.
www.cadentgas.com/help-advice/digging-safely

Contents

Step by Step Process	02
Introduction	03
1 Scope	05
2 Formal Consent	06
3 Location of Gas Assets	08
4 Temporary and Permanent Protective Measures	09
5 Working in the Vicinity of a High or Intermediate Pressure Gas Asset (Operating at Pressures Greater than 2 bar)	10
6 Working in the Vicinity of a Medium Pressure Gas Asset (Operating at Pressures Greater than 75 mbar but not Exceeding 2 bar)	20
7 Working in the Vicinity of a Low Pressure Gas Asset (Operating at Pressures up to 75 mbar)	32
8 Working in the Vicinity of a Pressure Reduction Installation (PRI)	42
9 Tree Planting	43
10 Unidentified Exposed Pipes	44
11 Action in Case of Damage to an Asset	45
12 References	46
13 Glossary of Terms	47
Appendix A – Typical Asset Location Markers	48
Appendix B – Tree Planting Guidance	49

Smell gas? Call the free, 24 hour National Gas Emergency Service:

0800 111 999*

*All calls are recorded and may be monitored

Step by Step Process

Register with LinesearchbeforeUdig (LSBUD)

LSBUD provide a free online enquiry service giving results within minutes from a grid reference, postcode or street name. This allows you to submit enquiries about activities and work that you are planning which may have an impact on the gas network.

www.lsbud.co.uk

Submit an Enquiry

Within LSBUD there are 3 enquiry types, **information only**, **planned works** and **emergency works**. Information only enquiries will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry. If your works are of a genuine emergency nature (e.g. burst water main etc.) then you should submit an emergency enquiry.

Review the Response, Asset Location and Enclosed Guidance

LSBUD will auto-generate a response based on your enquiry details and our assets in the area. The assessment will be based on the selected Work Category and Work Type. If your planned works propose activities to be undertaken within the distances specified in this booklet, you must obtain site specific advice from our specialist operational plant protection team.

If your response says that we need to assess your enquiry further, you must not start any work until we confirm it is safe to do so.

If you are advised to proceed with caution, then you must ensure that you utilise the provided asset plans and follow the guidance in this document.

Observe Restrictions

In addition to the guidance contained in this booklet, you must ensure that you observe any site-specific advice provided by our specialist operational plant protection teams.

If in doubt, contact Cadent by ringing the Central Admin Team on 0800 688 588

Introduction

Safe Working in the Vicinity of Cadent Assets: Requirements for Third Parties

This specification is for issue to third parties carrying out work in the vicinity of Cadent gas assets and associated installations. It is provided to ensure that individuals planning and undertaking work take appropriate measures to prevent damage.

Any damage to a gas asset, or its coating, can affect its integrity and can result in failure leading to potentially serious hazardous consequences for individuals located in the vicinity.

It is therefore essential that the safety advice outlined in this document, along with any site-specific advice given by our operatives, is complied with when working near to our assets. If Cadent consider any work to be in breach of the requirements stipulated in this document, then the Cadent Plant Protection Officer will request that work is suspended until the non-compliances have been rectified.

Every reasonable precaution shall be undertaken to avoid personal injury or damage to our apparatus. If we incur any direct or indirect costs as a consequence of your works and we are required to repair or divert any gas apparatus, you'll be recharged in full.



Any damage to our apparatus will be subject to legislative reporting responsibilities to the HSE under Reporting of Injuries, Diseases & Dangerous Occurrences Regulations 2013, Gas Safety Management Regulations 1996 and the Pipelines Safety Regulations 1996.

The requirements in this document are in line with the Institution of Gas Engineers and Managers (IGEM) recommendations IGEM/SR/18 Edition 3 - Safe Working Practices to Ensure the Integrity of Gas Assets and Associated Installations and the HSE's guidance document HS(G)47 Avoiding Danger from Underground Services.

It is the responsibility of the third party to ensure that any work carried out also conforms with the requirements of the Construction and Design Management (CDM) Regulations 2015 and all other relevant health and safety legislation. Reference shall be made to our apparatus within your site Health and Safety file.



Keeping you, your workers and the public safe when working near our pipelines

1 Scope

This specification sets out the safety precautions and other conditions associated with working in the vicinity of Cadent assets, located in negotiated easements and public highways.

Mandatory and non-mandatory requirements

In this document:

- Shall: indicates a mandatory requirement
- Should: indicates best practice and is the preferred option

If an alternative method is used then a suitable and sufficient risk assessment shall be completed to show that the alternative method delivers the same, or better, level of protection.

Where the guidance in this document cannot be adhered to, then the diversions process shall be followed.

Before contacting our diversions team, you'll need to have your site information and any design proposals available.

Once you have this information, please contact our diversions team diversions@cadentgas.com or on 0330 678 1034.

Visit www.cadentgas.com/diversions for more information.

You can contact our diversions team by email diversions@cadentgas.com or by phone 0330 678 1034



2 Formal Consent

Cadent's assets are either located in an easement agreed with the landowner at the time of installation, or within the highway. As the required arrangements for working in an easement and working in the highway differ, this section describes the specific requirements for these two areas.

Any documents handed to contractors or other individuals undertaking work (e.g. farmers, local authorities etc.), on site by Cadent, shall be signed for and adhered to by the site. All personnel working on site shall be made aware of the potential hazards of working near gas assets and the actions they should follow in case of an emergency.

2.1 Within an easement

The promoter of any works within an easement shall provide Cadent with details of the proposed works, including a risk assessment and method statement of how the work is intended to be carried out. Work shall not commence in an easement strip until formal written consent has been provided by Cadent. This will include details of Cadent's protection requirements, contact telephone numbers and the emergency telephone number. On acceptance of Cadent's requirements, the promoter of the works shall give Cadent at least 14 days' notice before commencing work on site.

Where clearance to proceed has been granted directly from the system, for example, if your works only affect low pressure assets (operating at less than 75 mbar), but the asset concerned is within an easement, the promoter of the works shall contact the network Plant Protection Office for formal written consent.

In addition to formal written consent, an easement crossing agreement (deed of indemnity) may be required. This shall be discussed with the Cadent Plant Protection Officer prior to the commencement of the works.

The width of an easement is dependent on a number of factors and is mainly dependent on the operating pressure, pipeline material and diameter, as these factors influence safe working requirements and building proximity distances. Easement details should be registered at Land Registry, however if you are unsure please liaise with your Cadent Plant Protection Officer.



Below is a list of our standard easement widths, however, some easements may vary:

Pressure tier/ Material	Diameter	Easement Width (total)
HP Steel	900mm, 1060mm, 1200mm (36", 42", 48")	24.4m (80')
HP Steel	750mm and 600mm (30" & 24")	18.3m (60')
HP Steel	Up to and including 450mm (18")	12.2m (40')
HP RTP	Determined on a case by case basis	
IP Steel	All sizes	6m plus pipe diameter
IP PE > 5.5 bar	Above 500mm (19")	30m plus pipe diameter
	356mm to 500mm	16m plus pipe diameter
	126mm to 365mm	12m plus pipe diameter
	Up to and including 125mm	12m plus pipe diameter
IP PE <5.5 bar	Above 500mm (19")	26m plus pipe diameter
	356mm to 500mm	8m plus pipe diameter
	126mm to 365mm	8m plus pipe diameter
	Up to and including 125mm	8m plus pipe diameter
AGI's	All sites	3m restrictive width around the installation
MP PE	Above 500mm (19")	12m plus pipe diameter
	356mm to 500mm	6m plus pipe diameter
	126mm to 355mm	5m plus pipe diameter
	Up to and including 125mm	4.5m plus pipe diameter
MP Steel	All sizes	6m plus pipe diameter
MP Iron	All sizes	6m plus pipe diameter
LP	Above 125mm	3m plus pipe diameter
	Up to and including 125mm	1m plus pipe diameter

2.2 Within a highway

Work shall be notified to Cadent in accordance with the requirements of the New Roads and Street Works Act (NRSWA) and HS(G)47. The promoter of any works within the highway should provide Cadent with details of the proposed works, including a risk assessment and method statement of how the work is intended to be carried out. This shall be submitted at least 14 days before the planned work is to be carried out. If similar works are being carried out at several locations in close proximity, a single risk assessment and method statement should be adequate depending on the nature of the works. Work should not go ahead until formal written consent has been given by Cadent. This will include details of Cadent's protection requirements, contact telephone numbers and the emergency telephone number.

3 Location of Gas Assets

A copy of our plans with your marked-out site is provided in our LSBUD response. Cadent asset records shall be consulted to establish the indicative location of the gas assets in relation to the promoter's work area.

If the marked-out area is incorrect you MUST resubmit your enquiry with the correct area marked out.

Prior to work commencing on site, the gas assets should be located to verify the indicative location from plans.

This should initially be carried out through non-intrusive methods utilising pipe locators where possible. The indicative location should be verified through trial holes. Once located, the gas assets should be marked out at regular intervals using asset location markers with triangular flags (see Appendix A) or other suitable methods.

For assets exceeding 2 bar, the excavation of all trial holes shall be monitored by Cadent. For assets not exceeding 2 bar, monitoring will be at the discretion of the Cadent Plant Protection Officer.

Safe digging practices, in accordance with HSE publication HS(G)47, shall be followed. Direct and consequential damage to gas plant can be dangerous both to employees and to the general public.

We utilise marker posts and surface boxes to denote the location of our apparatus providing access to key parts of our network. Free access shall be maintained to such apparatus during and after your works and these shall not be moved, covered or damaged during the works.





4 Temporary and Permanent Protective Measures

No temporary or permanent protective measures, including the installation of concrete slab protection, shall be installed over or near to a Cadent asset without the prior written consent of Cadent Plant Protection Officer. Cadent will need to approve the material, dimensions and method of installation for the proposed protective measure.

The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to Cadent. Where permanent protection is to be installed over an asset, Cadent will normally carry out a coating survey of metallic assets to check that there is no existing damage to the coating, prior to the slab protection being installed. Cadent shall, therefore, be given at least 14 days' notice prior to the laying of any slab protection to arrange for this survey to be carried out.

Generally, due to the need for future access to below 2 bar gas assets, permanent protection is not permitted, however, can be approved at Cadent's discretion.

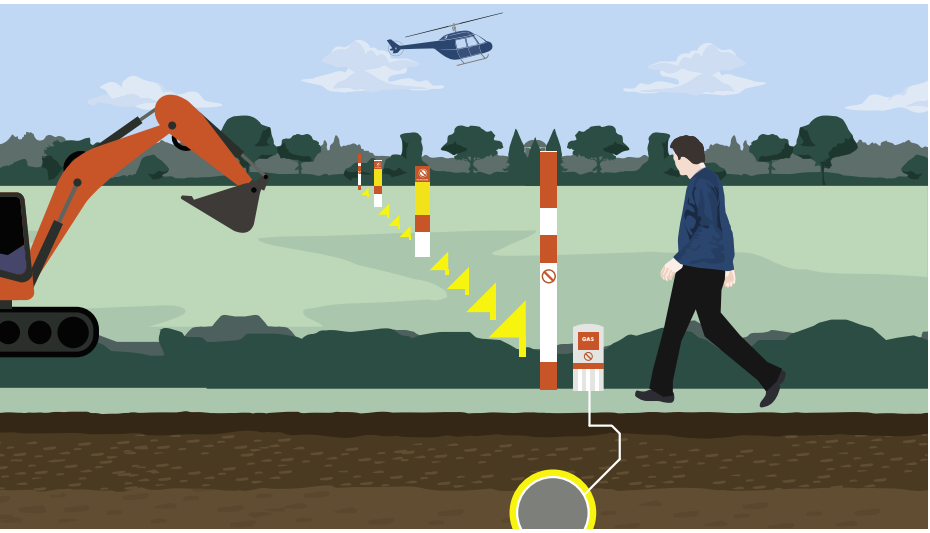
The safety precautions detailed in Sections 5, 6, 7 or 8 of this document should also be observed during the installation of the asset protection.



5 Working in the Vicinity of a High or Intermediate Pressure Gas Asset (Operating at Pressures Greater than 2 bar)

The below information shall only be used as guidance, for all works in the vicinity of High and Intermediate Pressure Pipelines the auto-response from the system will advise not to carry out any works until we have undertaken a technical review of the planned works and provided site specific safe working advice.

Information only enquiries will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry for assessment.



5.1 Excavation

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators, and any other powered mechanical plant, shall not dig on one side of the asset with the cab of the excavator positioned on the other side.

All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

5.1.1 In proximity to an asset in an easement

Following location and marking of assets in agreement with the Cadent Plant Protection Officer, powered mechanical excavation may be used no closer than 3m (see Figure 1). The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework on an asset shall be exposed by hand.

If third parties are using any form of trench support system, they shall ensure that none of the components are in contact with the Cadent asset.

Consideration may be given to a relaxation of these limits or lower risk excavation methods by agreement with the Cadent Plant Protection Officer on site.

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.) and following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm, using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or close to above ground gas installations.

After the completion of the work, the level of cover over an asset should be the same as that prior to work commencing, unless otherwise agreed by Cadent.

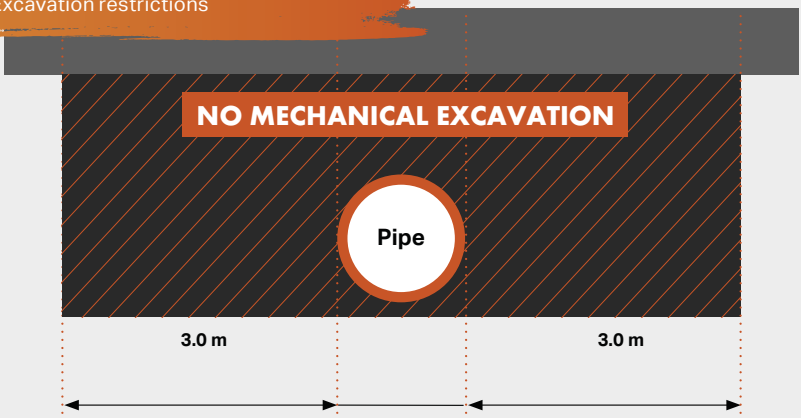
No new service shall be laid parallel to an asset within the easement. In special circumstances, and only with formal written agreement from Cadent, this may be relaxed for short excursions where the service shall be laid no closer than 600mm.

Where work is being carried out parallel to an asset, within or just alongside the easement, suitable barriers shall be erected for protection between the works and the asset to prevent encroachment.

5.1.2 In proximity to an asset in the highway

Following locating and marking of assets in agreement with the Cadent Plant Protection Officer, powered mechanical excavation may be used no closer than 3 meters (see Figure 1).

Figure 1. Excavation restrictions



The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework shall be exposed by hand.

If third parties are using any form of trench support system, they shall ensure that none of the components are in contact with the Cadent asset.

Removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 300mm, unless any attachments or projections are present on an asset (e.g. valve spindles, pressure points etc.). The use of chain trenchers is not permitted within 3m of an asset. The Cadent Plant Protection Officer may need to be present to monitor this work. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools under the observation of Cadent.

In special circumstances, consideration may be given to a relaxation of these rules by agreement with the Cadent Plant Protection Officer and only whilst they remain on site.

5.1.3 Crossing over an asset (Open cut)

Where a new service is to cross over an asset, a clearance distance of 600mm between the crown of the asset and underside of the service should be maintained. If this cannot be achieved, the service shall cross below the asset (see Section 5.1.4).

In special circumstances, this distance may be reduced at the discretion of the Cadent Plant Protection Officer on site.

5.1.4 Crossing below an asset (Open cut)

Where a service is to cross below an asset, a clearance distance of 600mm between the crown of the new service and underside of the asset shall be maintained. Where lengths of pipe greater than one metre are to be exposed, the Cadent Plant Protection Officer shall be consulted. Exposed assets should be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.

In special circumstances, this clearance distance may be reduced at the discretion of the Cadent Plant Protection Officer on site.

5.1.5 Cathodic Protection (CP)

Cathodic protection (CP) is applied to Cadent's buried steel pipe and is a method of protecting assets from corrosion by maintaining an electrical potential between the pipe and anodes placed at strategic poin ts along the asset. Where a new service is to be laid and similarly protected, the party installing the CP system shall undertake tests to determine whether the new service is interfering with the cathodic protection of Cadent assets.

Should any cathodic protection posts or associated apparatus need to be moved to facilitate third party works, at least 14 days' notice shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

5.1.6 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment and method statement shall be submitted to Cadent for approval, prior to the works commencing.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of the cathodic protection system. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's assets. The costs for any stray current mitigation systems required will be borne by the promoter of the works.

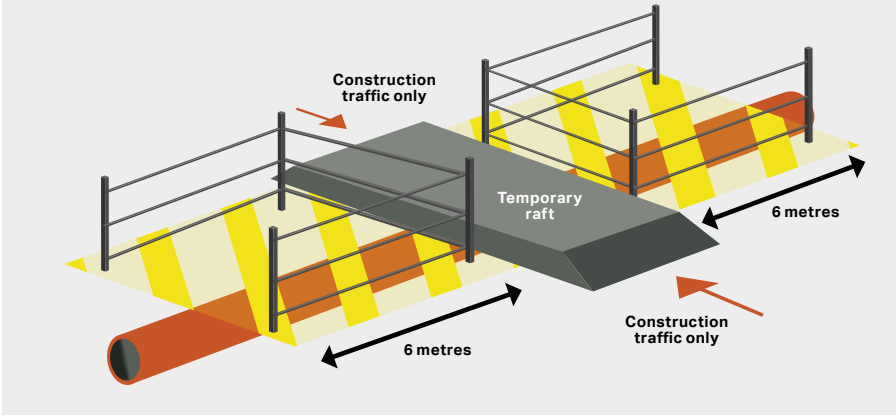
5.2 Construction Traffic

Where existing roads cannot be used, construction traffic shall only cross an asset at locations agreed with the Cadent Plant Protection Officer. Notices shall be placed directing traffic to the crossing points. Post and wire fencing shall be erected at all crossing points, and the fence should cover the width of the easement and extend a further 6 metres along the length of the easement on both sides (see Figure 2).

Assets shall be protected at all crossing points by a suitable method agreed with the Cadent Plant Protection Officer prior to installation. The promoter of the works shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the protection required.

For larger scale projects or permanent solutions, a protection slab may be required.

Figure 2. Construction traffic requirements



5.3 Specific Activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of an asset. The promoter of works is required to consult Cadent when intending to undertake one of the listed activities and/or further advice is required on whether the work has the potential to affect the asset. The table below shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought.

Activity	Distance within which Cadent advice shall be sought
Piling	15 m
Surface mineral extraction	100m
Landfilling	100 m
Demolition	150 m or 400m for structure mass > 10000 tonnes
Blasting	500 m if the MIC* is greater than 200 kg 250 m if the MIC* is greater than 10 kg but less than 200 kg 100 m if the MIC* is 10 kg or less.
Deep mining	1000 m
Wind turbine	1.5 times mast height

**MIC - Maximum Instantaneous Charge*

5.3.1 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced. This risk assessment and method statement shall be formally agreed with Cadent prior to the commencement of the work. Please provide Cadent with at least 14 days' notice as the Cadent Plant Protection Officer may wish to be present to monitor this work.

5.3.2 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Cadent shall be consulted for any activity proposed that will lead to a change in cover over the asset. Expert advice may need to be sought, which will be determined by the Cadent Plant Protection Officer.

5.3.3 Piling

No piling shall be allowed within 15m of an asset without an assessment of the vibration levels at the asset. The peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec. The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

5.3.4 Demolition

No demolition should be allowed within 150m of an asset, or 400m for a structure mass greater than 10,000t without an assessment of the vibration levels at the asset. The peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

5.3.5 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500m if the MIC is greater than 200kg
- 250m if the MIC is greater than 10kg but less than 200kg
- 100m if the MIC is 10kg or less

The peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

5.3.6 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100 metres of an asset. Consideration should also be given to extraction around other plant and equipment associated with assets (e.g. cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined by Cadent. The easement strip should be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope need to be inspected periodically to identify any signs of developing instability.

This may include any change of slope profile including:

- Bulging
- The development of tension cracks on the slope or easement
- Any changes in drainage around the slope

The results of each inspection should be recorded

Where surface mineral extraction activities are planned within 100m of the asset but do not extend up to the asset easement boundary, Cadent shall assess whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of Section 5.3.5 apply.



5.3.7 Deep mining

Assets within 1km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.

5.3.8 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of an asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which an asset is routed.

5.3.9 Pressure testing

Hydrostatic testing of a third-party asset should not be permitted within 8 metres either side of a Cadent asset, to provide protection against the effects of a burst. Where this cannot be achieved, typically where the third-party asset needs to cross a Cadent asset, one of the following precautions would need to be adopted:

- limiting of the design factor of the third-party pipeline to 0.3 at the asset's nominated maximum operating pressure (MOP), and the use of pre-tested pipe
- the use of sleeving
- Cadent conduct risk analysis of pipe failure

In either case, the third party shall submit their site-specific risk assessment and safe system of works for consideration by Cadent.

5.3.10 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of an asset that will result in peak particle velocities in excess of 75mm/sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

5.3.11 Hot work

Where a Cadent metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions has been agreed with Cadent.

If the gas asset is PE (polyethylene or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, should not take place within 500mm of the gas asset. This may be reduced if suitable protection and precautions have been agreed with the Cadent Plant Protection Officer to prevent against the effects of sparks, radiant heat transfer etc.

The Cadent Plant Protection Officer shall be present to monitor all welding, burning or other 'hot work' that takes place.

5.3.12 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of a gas asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) - Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

5.3.13 Solar farms

Solar Farms can be built adjacent to gas assets but never within an easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) - Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

5.4 Backfilling

No backfilling should be undertaken without Cadent's agreement to proceed and the Cadent Plant Protection Officer will stipulate the necessary requirements. Some equipment may not be suitable for use over or around an asset due to the adverse effects of excessive compaction and vibration levels. The Cadent Plant Protection Officer will be able to advise on suitable equipment. Third parties undertaking work shall provide Cadent with 48 hours' notice, or shorter only if agreed with Cadent, of the intent to backfill over, under or alongside the asset.

This requirement should also apply to any backfilling operations that:

- are within 3 metres of an asset
- could influence the ground stability

Any damage to an asset or its coating shall be reported to Cadent in order that damage can be assessed, and repairs carried out.

Minor damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If an asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party shall re-excavate to enable the condition of the asset coating to be assessed.



6 Working in the Vicinity of a Medium Pressure Gas Asset (Operating at Pressures Greater than 75 mbar but not Exceeding 2 bar)

The below information shall only be used as guidance, and where appropriate, will be supplemented by site specific safe working advice from the network Plant Protection Officer.

Information only enquiries will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry for assessment.

6.1 Temporary and Permanent Structures

No temporary or permanent structures are permitted to be installed above, or in close proximity to a gas asset or easement due to the restriction of access this imposes. This includes, but is not limited to, permanent street furniture such as planters and bollards and temporary buildings such as welfare units and other enclosed spaces. The building proximity distances for medium pressure assets is as follows:

Material	Minimum proximity to premises
Cast/Spun Iron	3m
Ductile Iron	30m
Steel	1m
PE (inserted)	1m
PE (non-inserted)	2m for diameters < 500mm 5m for diameters > 500mm

Please note that the easement distance may be greater than the building proximity distance. For any proposed structures in the easement, please consult with the Cadent Plant Protection Officer.



6.2 Excavation

6.2.1 General

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators and any other powered mechanical plant shall not dig on one side of the asset with the cab of the excavator positioned on the other side. All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

Excavation with a powered mechanical excavator should not be carried out until the asset has been located through vacuum excavation or by hand. No mechanical excavation is permitted within 500mm of a gas asset. Any mechanical excavation should utilise a banksperson. Toothless buckets shall be used due to the potential of damage to assets using toothed excavator buckets.

Consideration shall be given to apparatus installed on gas assets including valves, spindles, pressure points etc. Any fitting, attachment or connecting pipework on an asset shall be exposed by hand.

Where concrete is exposed around gas apparatus, it shall not be removed without first consulting with a Cadent Plant Protection Officer as it could be providing protection or anchorage to live apparatus.

Where a third party is using any trench support system, they shall ensure that none of its components are in contact with an asset.

The use of chain trenchers is not permitted within 3m of the confirmed location of an asset.

6.2.2 Working in vicinity of iron pipework

When deep excavation greater than 1.5m in depth is carried out in the vicinity of iron pipework, steps shall be taken to ensure the risk associated with immediate and latent asset failure are considered and, where necessary, excavations are cut back to reduce the shear factor created by ground disturbance likely to result in settlement. This also includes instances where excavations are part of construction works, including basement conversions, underground carparks, shaft construction, etc.

Care should be taken to ensure that any exposed iron pipework is suitably supported at 1m intervals and protected from damage to avoid creating tensions that could lead to joint disturbance or pipe barrel fracture.

Where fittings or existing repairs are uncovered, care shall be taken to ensure that these are not disturbed.

When working near ductile iron pipework, any corrosion identified on the pipeline shall be reported to 0800 111 999 for a first call operative to attend to undertake a hazard assessment.

6.2.3 In proximity to an asset in an easement

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or other gas assets.

After the completion of the work, the level of cover over the asset should be the same as that prior to work commencing.

No new service shall be laid parallel to the asset within the easement.

Where work is being carried out parallel to the asset, within or alongside the easement, suitable barriers shall be erected between the works and the asset to prevent encroachment or damage.

6.2.4 In proximity to an asset in the highway

Where sufficient depth of cover exists, and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 300mm. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools.

6.2.5 Crossing over an asset (Open cut)

Where a new service is to cross over a gas asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, shall be maintained. If this cannot be achieved, the service shall cross below the asset, see Section 6.2.6.

6.2.6 Crossing below an asset (Open cut)

Where a service is to cross below a gas asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset shall be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.

You can contact our diversions team by email diversions@cadentgas.com or by phone 0330 678 1034

6.2.7 Cathodic Protection (CP)

Cathodic protection (CP) is applied to some buried steel pipes and is a method of protecting assets from corrosion by maintaining an electrical potential between the asset and anodes placed at strategic points along the asset. Where a new service is to be laid and similarly protected, the party installing the CP system shall liaise with the Cadent Plant Protection Officer and undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

Should any cathodic protection posts or associated apparatus need moving to facilitate third party works, at least 14 days' notice shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

6.2.8 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party, a risk assessment carried out and this shall be provided to the Cadent Plant Protection Officer for inspection. Equipment shall not be installed if the integrity of Cadent's assets is compromised. In this case, diversion of the affected assets is required.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of cathodic protection systems. In these instances, Cadent will require the promoter of the works to work with the Cadent Plant Protection Officer to ensure that pre and post energisation potential surveys of Cadent's assets are undertaken. The costs for any stray current mitigation systems required will be borne by the third-party promoter.



6.3 Construction Traffic

The promoter of the works shall review the ground conditions, vehicle types and crossing frequency to determine the type and construction of crossing that will be required. Additionally, no undue loads such as spoil heaps, lighting columns, permanent traffic lights or road signs should be allowed over gas assets.

Iron pipes, or pipes that are not already within an existing road (such as those within footways or verges), shall not be crossed by construction vehicles without suitable protection and the consent of the Cadent Plant Protection Officer.

Where existing roads cannot be used, construction traffic should only cross Cadent assets at specific locations, with notices directing traffic to the crossing points erected. All crossing points shall:

- Be at right angles to the asset
- Be fenced denoting the existence of the asset to ensure all traffic uses the crossing point. The fencing shall cover the width of any easements and extend a further 6m along the length of any easements on both sides (see Figure 3).
- Have signs attached to the fence denoting the asset that the crossing point is located over
- Be regularly inspected and maintained in good condition

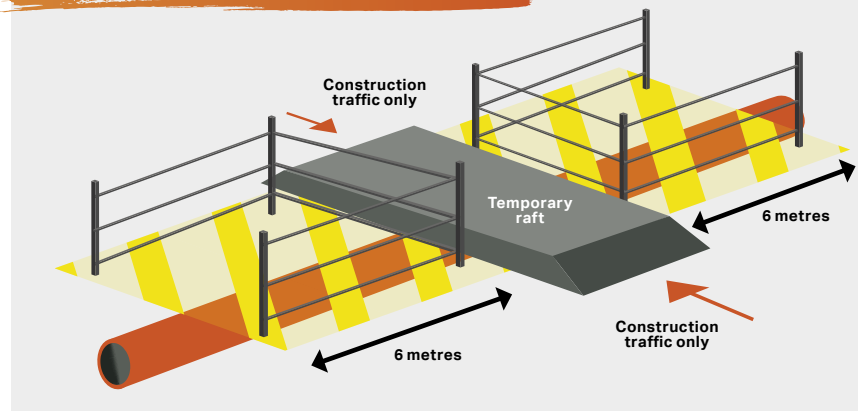
Note: A 5mph speed restriction should be enforced at all crossing points.

Suitable protection methods may include:

- Temporary protection slab
- Free-standing bridges (prefabricated modular steel or pre-cast concrete bridges)
- Proprietary access roadways
- Haul roads (including hardcore, sleepers, steel plates or a combination)

For larger scale projects or permanent crossings, diversion of the asset may be required.

Figure 3. Construction traffic requirements



6.4 Specific Activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of a Cadent asset. The promoter of works is required to consult Cadent when intending to undertake one of the activities listed below to obtain further site-specific advice on whether the work has the potential to affect the asset. The table to the right shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought.

You can contact our diversions team by email diversions@cadentgas.com or by phone 0330 678 1034

Activity	Distance within which Cadent advice shall be sought
Piling	15m
Surface mineral extraction	100m
Landfilling	100m
Demolition	150m or 400m for structure mass >10000 tonnes
Blasting	500m if the MIC is greater than 200kg 250m if the MIC is greater than 10kg but less than 200kg 100m if the MIC is 10kg or less.
Deep mining	1000m
Wind turbine	1.5 times mast height

6.4.1 Carriageway construction (including widening & bell mouth construction)

Where it is proposed to carry out carriageway construction over an asset previously located in a footway or verge, you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

6.4.2 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced and submitted to the Cadent Plant Protection Officer for review prior to commencing work. Please provide Cadent with at least 14 days' notice as we may wish to be present to monitor the work.

6.4.2.1 Tunnelling

Ground movement may occur when tunnelling in soft ground conditions. Ground movement contours from the tunnelling operation shall be calculated and all gas assets within the affected zone should be identified and assessed.

PE assets can tolerate some differential ground movement.

For cast and ductile iron assets, acceptable limits on stress increase and joint disturbances are defined in the performance acceptance criteria for iron mains.

For steel assets, an integrity assessment should be carried out according to the industry standard IGEM/TD/12 – Pipework stress analysis for gas industry plant. An expert on Soil/Pipe Interaction Analysis should be consulted when required for the evaluation of ground movement effects on the assets.

For any proposed tunnelling works, you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works, due to the likely impact on our assets.

6.4.3 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Where a change in cover is required, contact your Cadent Plant Protection Officer.

You can contact our diversions team by email diversions@cadentgas.com or by phone 0330 678 1034



6.4.4 Piling

No piling shall be allowed within 15m of an asset without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should provide the Cadent Plant Protection Officer with the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made, which may require expert advice.

6.4.5 Demolition

No demolition should be allowed within 150m of an asset for 400m for a structure mass greater than 10,000 tonnes without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should provide the Cadent Plant Protection Officer with the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6.4.6 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500m if the MIC is greater than 200kg
- 250m if the MIC is greater than 10kg but less than 200kg
- 100m if the MIC is 10kg or less

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should provide the Cadent Plant Protection Officer with the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6.4.7 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100m of a gas asset. Consideration should also be given to extraction around plant and equipment associated with assets (e.g. cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined. Where an easement exists, the easement strip shall be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope need to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including:

- Bulging
- The development of tension cracks on the slope or easement
- Any changes in drainage around the slope

The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100m of the asset but do not extend up to the asset easement boundary, an assessment should be made as to whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of Section 6.4.6 apply.

6.4.8 Deep mining

Gas assets within 1km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.

6.4.9 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

6.4.10 Pressure testing

Pressure testing should not be permitted within 8m of an asset unless suitable precautions have been taken against the effects of a pipe failure.

6.4.11 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of PE or steel assets that will result in peak particle velocities in excess of 75mm/sec at the asset or for iron assets that will result in peak particle velocities in excess of 25mm/sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.



6.4.12 Hot work

Where the Cadent's metallic gas assets have been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions have been agreed with Cadent.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, shall not take place within 500mm of the gas asset. For further advice contact your network Plant Protection Officer.

Protection measures shall be agreed with the Cadent Plant Protection Officer prior to installation to prevent the effects of sparks, radiant heat transfer etc.

Any hot works in proximity to a Cadent gas asset require leakage surveys prior to, during and after the works. If gas is detected, all works shall stop, and the leak immediately reported to the National Gas Emergency Service on 0800 111 999.

The Cadent Plant Protection Officer will determine the need to remain on site to monitor all welding, burning or other 'hot work' that takes place.

6.4.13 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) - Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

6.4.14 Solar farms

Solar Farms can be built adjacent to gas assets, but never within an easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

Interference checks shall be completed by the third party to ensure that the solar installations and associated infrastructure have no negative effect on cathodic protection systems.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) - Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

6.4.15 Lifting operations

Where lifting operations are planned to be carried out in the vicinity of medium pressure apparatus a site-specific risk assessment and lift plan is required to be reviewed by the Cadent Plant Protection Officer.

Protection shall be afforded to live apparatus when carrying out the works to prevent impact damage in the event of an uncontrolled failure or drop. Any loads shall be secured using suitable and sufficient lifting accessories to reduce the likelihood of the load being dropped.

Consideration shall be given to the location of lifting equipment and the loads induced into the ground to avoid the potential overloading of buried apparatus. Where the site cannot be laid out to avoid loading gas apparatus, the asset shall be suitably protected with the consent of the

Cadent Plant Protection Officer. Alternatively, the asset will require replacement/diversion.

6.5 Backfilling and Reinstatement

Reinstatement around Cadent apparatus still poses a risk to the integrity of the asset. A gas asset must not be located within the footway or carriageway construction as this has the potential to cause damage to the apparatus during and post completion of the reinstatement.

No backfilling should be undertaken without Cadent's agreement to proceed. Some equipment may not be suitable for use over or around assets due to the adverse effects of excessive compaction and vibration levels.

A gas asset shall not be encased in concrete or have concrete positioned within 300mm of the asset, or anywhere above an iron gas asset due to the need for future access.

The fine fill material should be firmly packed around the pipe in 100mm layers to achieve a compacted thickness of 75mm and shall be laid to a minimum depth of 150mm above the crown of the asset.

Mechanical compaction equipment shall not be used until a 250mm hand rammed layer has been compacted above the crown of the pipe.

For backfilling and reinstatement in the vicinity of iron apparatus, in addition to the above, the maximum weight of compaction equipment used above the crown of the asset shall not exceed 1.5t/m2 and vibratory compaction shall not be used.

You can contact our diversions team by email diversions@cadentgas.com or by phone 0330 678 1034

Material used in the backfill shall conform to the following requirements:

- Sand shall be well-graded in accordance with BS EN 13242:2002+A1:2007
- It shall not contain any sharp objects, large stones or bricks
- Foamed concrete shall not be used

We will require marker tape to be installed at least 250mm above the crown of the main.

Prior to backfilling, if the asset is coated, Cadent require the opportunity to inspect its condition in order assess and to carry out any repairs as necessary. Please contact your network Plant Protection office to arrange this. Any damage to the asset or coating shall be reported to the Cadent Plant Protection Officer so that damage can be assessed, and repairs carried out.

Minor (and existing) damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

All temporary supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.

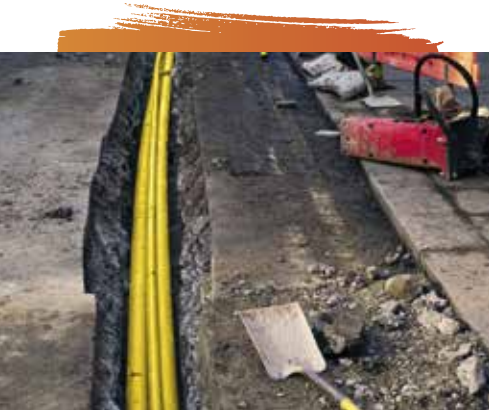
7 Working in the Vicinity of a Low Pressure Gas Asset (Operating at Pressures up to 75 mbar)

For planned and emergency works in the vicinity of Low Pressure gas assets, the promoter will be advised proceed with caution. The guidance contained within this section must be followed. If it cannot, contact shall be made with the network Plant Protection office for advice.

7.1 Temporary and Permanent Structures

No temporary or permanent structures are permitted to be installed above, or in close proximity to a gas asset or easement due to the restriction of access this imposes. This includes, but is not limited to, permanent street furniture such as planters and bollards and temporary buildings such as welfare units and other enclosed spaces. The building proximity distances for low pressure assets is 1m.

Please note that the easement distance may be greater than the building proximity distance, for any proposed structures in the easement please consult with the Cadent network Plant Protection Officer.



7.2 Excavation

7.2.1 General

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators and any other powered mechanical plant shall not dig on one side of an asset with the cab of the excavator positioned on the other side. All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

Excavation with a powered mechanical excavator should not be carried out until gas assets have been located through vacuum excavation or by hand. No mechanical excavation is permitted within 500mm of gas assets. Any mechanical excavation should utilise a banksperson. Toothless buckets shall be used due to the potential of damage to assets using toothed excavator buckets.

Consideration shall be given to apparatus installed on gas assets including valves, spindles, pressure points etc. Any fitting, attachment or connecting pipework on the asset shall be exposed by hand.

Where concrete is exposed around gas apparatus this shall not be removed as it could be providing protection or anchorage to the live apparatus.

Where a third party is using any trench support system, they shall ensure that none of its components are in contact with the asset.

The use of chain trenchers to do this is not permitted within 3m of the confirmed location of the asset.

7.2.2 Working in vicinity of iron pipework

When deep excavation greater than 1.5m in depth is carried out in the vicinity of iron pipework, steps shall be taken to ensure the risk associated with immediate and latent asset failure are considered, and where necessary, excavations are cut back to reduce the shear factor created by ground disturbance likely to result in settlement. This also includes instances where excavations are part of construction works including basement conversions, underground carparks, shaft construction, etc.

Care should be taken to ensure that any exposed iron pipework is suitably supported at 1m intervals and is protected from damage to avoid creating tensions that could lead to joint disturbance or pipe barrel fracture.

Where fittings or existing repairs are uncovered care shall be taken to ensure that these are not disturbed.

When working near ductile iron pipework should any corrosion be identified on the pipeline this shall be reported to 0800 111 999 for a first call operative to attend to undertake a hazard assessment.

7.2.3 In proximity to an asset in an easement

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or other gas assets.

After the completion of the work, the level of cover over an asset should be the same as that prior to work commencing.

No new service shall be laid parallel to an asset within an easement.

Where work is being carried out parallel to an asset, within or alongside an easement, suitable barriers shall be erected between the works and the asset to prevent encroachment or damage.

7.2.4 In proximity to an asset in the highway

Where sufficient depth of cover exists, and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 300mm. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools.

7.2.5 Crossing over an asset (Open cut)

Where a new service is to cross over an asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater shall be maintained. If this cannot be achieved, the service shall cross below the asset, see Section 7.2.6.

7.2.6 Crossing below an asset (Open cut)

Where a service is to cross below an asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset shall be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.

7.2.7 Cathodic Protection (CP)

Cathodic protection (CP) is applied to some buried steel pipes and is a method of protecting assets from corrosion by maintaining an electrical potential between the asset and anodes placed at strategic points along the asset. Where a new service is to be laid and similarly protected, the party installing the CP system shall undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

Should any cathodic protection posts or associated apparatus need moving to facilitate third party works, appropriate notice, shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

7.2.8 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment carried out. Equipment shall not be installed if the integrity of Cadent's assets is compromised. In this case, diversion of the affected assets will be required.

You can contact our diversions team by email diversions@cadentgas.com or by phone 0330 678 1034

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of cathodic protection systems. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's assets. The costs for any stray current mitigation systems required will be borne by the third-party promoter.

7.3 Construction Traffic

The promoter of the works should review the ground conditions, vehicle types and crossing frequency to determine the type and construction of crossing that will be required. Additionally, no undue loads such as spoil heaps, lighting columns, permanent traffic lights or road signs shall be allowed over gas assets.

Iron pipes, or pipes that are not already within an existing road such as those within footways or verges shall not be crossed by construction vehicles without suitable protection being designed and installed. Consideration shall be given to the requirement for access to low pressure apparatus therefore for large scale, long duration projects, or permanent crossings, the diversions process shall be followed to determine whether the asset requires diversion/

replacement in advance of the works taking place.

Where existing roads cannot be used, construction traffic should only cross Cadent assets with a minimum depth of cover of 750mm (post crossing construction) at specific locations, with notices directing traffic to the crossing points erected. All crossing points shall:

- Be at right angles to the asset
- Be fenced denoting the existence of the asset to ensure all traffic uses the crossing point. The fencing shall cover the width of any easements and extend a further 6m along the length of any easements on both sides (see Figure 2 on page 13).
- Have signs attached to the fence denoting the asset that the crossing point is located over
- Be regularly inspected and maintained in good condition

Note: A 5mph speed restriction should be enforced at all crossing points.

Suitable protection methods may include:

- Temporary protection slab
- Free-standing bridges (prefabricated modular steel or pre-cast concrete bridges)
- Proprietary access roadways
- Haul roads (including hardcore, sleepers, steel plates or a combination)

7.4 Specific Activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of a Cadent asset. The promoter of works is required to consult Cadent when intending to undertake one of the activities listed below and further advice is required on whether the work has the potential to affect the asset.

7.4.1 Carriageway construction (including widening & bell mouth construction)

Where it is proposed to carry out carriageway construction over an asset previously located in a footway or verge you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

7.4.2 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced prior to commencing work.

Trial holes shall be undertaken to ensure that sufficient clearance exists between gas assets and the proposed third-party asset (or the pipe to be split if a pipe splitting technique is being used) prior to the works.

If an asset is to be replaced using pipe splitting techniques in the vicinity of iron mains, in addition to the below clauses, an integrity assessment shall be undertaken.

When running parallel to gas assets, the minimum clearance shall be:

- 1m

When crossing gas assets, the minimum clearance shall be:

- 500mm or 1.5 times the diameter of the asset, whichever is greater.

Clearances may need to be increased due to the following factors:

- Ground conditions
- Largest reamer diameter
- Type of reamer used, e.g. hollow, finned, etc.
- Accuracy of equipment being used
- Construction of adjacent services and structures
- Configuration of other underground services crossing or running parallel to the drill path
- Consequences of damage
- Pipe stress increase from potential ground movement

The exposed asset should be suitably supported and be protected by matting and suitable timber cladding to reduce the risk of damage from any broken pipe fragments (if pipe splitting is used).



Supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.

All lateral crossings shall be exposed around their full circumference with an additional 250mm clearance below. The width of the excavation shall be three times the diameter of the largest reamer or 500mm either side of the largest reamer, whichever is the greatest. These clearances shall be measured from the drill path centre. Each crossing should be manned during the drilling/splitting operation to watch the reamer/splitter pass.

For pipe splitting running parallel to a buried gas asset, trial holes should be undertaken at suitable and frequent locations along the proposed route to confirm sufficient clearance distances exist, and the pipe route is confirmed.

The line of the pipe to be installed/split should be monitored along its length to ensure no variance from its path.

Consideration should be given for a leakage survey to be undertaken before work starts, during the works if safe to do so and following completion. If there is any likelihood of damage to the asset, the operation shall be stopped immediately.

7.4.2.1 Tunnelling

Ground movement may occur when tunnelling in soft ground conditions. Ground movement contours from the tunnelling operation shall be calculated and all gas assets within the affected zone should be identified and assessed.

PE assets can tolerate some differential ground movement.

For cast and ductile iron assets, acceptable limits on stress increase and joint disturbances are defined in the performance acceptance criteria for iron mains.

For steel assets an integrity assessment should be carried out according to the industry standard IGEM/TD/12 – Pipework stress analysis for gas industry plant.
An expert on Soil/Pipe Interaction Analysis should be sought when required for the evaluation of ground movement effects on the assets.

For any proposed tunnelling works, due to the likely impact on our assets you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

7.4.3 Changes to depth of cover

The depth of cover over or around Cadent's iron assets shall not be altered. If a change in the depth of cover is required, you must contact the diversions team to arrange for diversion or replacement of the asset before commencement of your works.

For PE and steel pipes, reductions in depth of cover are only permitted if the below minimum depths of cover can be maintained (following investigation across the affected length):

- In fields and agricultural land 1.1m
- In roads and verges 750mm
- In footpaths 600mm
- In private property 600mm

Substantial increases in depth of cover shall not be permitted.

Where a change in the depth of cover affects attachments and projections such as services and valves, liaison with our diversions team is required to ensure these are appropriately protected or altered.

You can contact our diversions team by email diversions@cadentgas.com or by phone 0330 678 1034

7.4.4 Piling

No piling shall be allowed within 15m of an asset without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made, which may require expert advice.

7.4.5 Demolition

No demolition should be allowed within 150m of an asset for 400m for a structure mass greater than 10,000 tonnes without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought.

Where demolition is proposed you must ensure that the gas supply to the premises has been isolated in a suitable, identified location.

7.4.6 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500m if the MIC is greater than 200kg
- 250m if the MIC is greater than 10kg but less than 200kg
- 100m if the MIC is 10kg or less

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought.

7.4.7 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100m of an asset. Consideration should also be given to extraction around plant and equipment associated with assets (e.g. cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined.

Where an easement exists, the easement strip shall be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope need to be inspected periodically to identify any signs of developing instability.

This may include any change of slope profile including:

- Bulging
- The development of tension cracks on the slope or easement
- Any changes in drainage around the slope

The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100m of the asset but do not extend up to the asset easement boundary, an assessment should be made as to whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of Section 7.4.6 apply.

7.4.8 Deep mining

Assets routed within 1km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance.

7.4.9 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. An assessment shall be carried out by the promoter of the works to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

7.4.10 Pressure testing

Pressure testing should not be permitted within 8m of an asset unless suitable precautions have been taken against the effects of a pipe failure.



7.4.11 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of PE or steel assets that will result in peak particle velocities in excess of 75mm/sec at the asset or for iron assets that will result in peak particle velocities in excess of 25mm/sec at the asset.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

7.4.12 Hot work

Where the Cadent's metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, shall not take place within 500mm of the gas asset.

Protection measures shall be installed to prevent the effects of sparks, radiant heat transfer etc.

Any hot works in proximity to a Cadent gas asset shall require leakage surveys prior to, during and after the works. If gas is detected, all works shall stop, and the leak immediately reported to the National Gas Emergency Service on 0800 111 999.

7.4.13 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) - Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

7.4.14 Solar farms

Solar Farms can be built adjacent to assets but never within an easement.

Interference checks shall be completed by the third party to ensure that the solar installations and associated infrastructure have no negative effect on cathodic protection systems.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) - Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

7.4.15 Lifting operations

Where lifting operations are planned to be carried out in the vicinity of low pressure apparatus a site-specific risk assessment and lift plan is required.

Protection shall be afforded to live apparatus when carrying out the works to prevent impact damage in the event of an uncontrolled failure or drop. Any loads shall be secured using suitable and sufficient lifting accessories to reduce the likelihood of the load being dropped.

Consideration shall be given to the location of lifting equipment and the loads induced into the ground to avoid the potential overloading of buried apparatus.

Where the site cannot be laid out to avoid loading gas apparatus, the asset shall be suitably protected with the consent of the Cadent Plant Protection Officer. Alternatively, the asset will require replacement/diversion.

7.5 Backfilling and Reinstatement

Reinstatement around Cadent apparatus still poses a risk to the integrity of the asset. A gas asset must not be located within the footway or carriageway construction as this has the potential to cause damage to the apparatus during and post completion of the reinstatement.

No backfilling should be undertaken without Cadent's agreement to proceed. Some equipment may not be suitable for use over or around assets due to the adverse effects of excessive compaction and vibration levels.

A gas asset shall not be encased in concrete or have concrete positioned within 300mm of the asset or anywhere above an iron gas asset due to the need for future access.

The fine fill material should be firmly packed around the pipe in 100mm layers to achieve a compacted thickness of 75mm and shall be laid to a minimum depth of 150mm above the crown of the asset

Mechanical compaction equipment shall not be used until a 250mm hand rammed layer has been compacted above the crown of the pipe

For backfilling and reinstatement in the vicinity of iron apparatus, in addition to the above, the maximum weight of compaction equipment used above the crown of the pipe shall not exceed 1.5t/m2 and vibratory compaction shall not be used.

Material used in the backfill shall conform to the following requirements:

- Sand shall be well-graded in accordance with BS EN 13242:2002+A1:2007
- It shall not contain any sharp objects, large stones or bricks
- Foamed concrete shall not be used

We will require marker tape to be installed at least 250mm above the crown of the pipe. Any damage to the asset or coating shall be reported to the Cadent Plant Protection Office so that damage can be assessed, and repairs carried out.

Minor (and existing) damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

All temporary supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.

You can contact our diversions team by email diversions@cadentgas.com or by phone 0330 678 1034

8 Working in the Vicinity of a Pressure Reduction Installation (PRI)

Pressure reduction installations come in a variety of forms:

- Above Ground Installation (AGI) – Sites with exposed pipes surrounded by fencing
- Above Ground Installation (AGI) – District governors often found in large above ground kiosks with vent stacks attached
- Below Ground Installation – District governors with large surface governors for valves and pressure reduction equipment with an above ground control cabinet and vent stack
- Service governor Installations – Small service governors providing gas to a small number of customers in an area often identified by a small green or brick kiosk



Where excavations are to be made within 10 metres of the perimeter of a pressure reduction installation (above or below ground), with the exception of service governor installations, appropriate protection methods should be determined and recorded by the Cadent Plant Protection Officer.

These installations may have magnetic slam shut devices which could operate in the event of high vibration levels being caused by the works. Advice on whether these are present shall be sought from the Cadent Plant Protection Officer and we may need to have an operative, with the competence to reset the plant, on site whilst your works are being undertaken.

Hazardous areas may be present around these installations and no ignition sources are permitted within these zones. Information on the zonings shall be sought from the Cadent Plant Protection Officer prior to commencement of any works on site.

There may be telemetry and pressure recording lines in the vicinity of these installations therefore extreme caution must be exercised when planning and undertaking works it the vicinity of these assets.

In addition to this, the safety advice detailed in either or a combination of Sections 5, 6 or 7 shall be observed when working in the proximity of an AGI.

Access to gas assets shall be maintained at all times.

9 Tree Planting

Before any tree planting is carried out in the vicinity of a Cadent asset or its easement, written consent should be obtained. This approval should be subject to Cadent retaining the right to remove any trees which might become a danger or restrict access to the asset at any time in the future.

The only hardwood plants which can be planted directly across an asset are shallow rooting hedge plants such as Quickthorn, Blackthorn, etc., and these shall only be planted where a hedge is necessary for screening or to indicate a field boundary.

Raspberries, Gooseberries and Blackcurrants shall not be planted within 2m of the outside edge of the pipe.

Dwarf Apple Stocks shall not be planted within 3m of an asset.

Christmas trees (Picea Abies) shall not be planted within 3 metres of an asset. However, permission may be given on the strict understanding that Christmas trees are clear-felled at intervals not exceeding seven years.

The following trees, and those of similar size which may be deciduous or evergreen, shall not be planted within 6 metres of an asset:

- Ash, Beech, Birch, most Conifers, Elm, Maple, Horse Chestnut, Oak, Sycamore, Apple, Lime and Pear trees.

Dense mass planting shall not be carried out within 10m of the outside edge of the pipe.

Poplar and Willow trees shall not be planted within 10m of the outside edge of the pipe.

For further guidance please refer to **Street Works UK Volume 4 and Appendix B**.



10 Unidentified Exposed Pipes

An unidentified pipe is one that is not shown on any current or historical records.

Iron and steel water pipes and gas pipelines may appear very similar. If any such pipe is uncovered, it shall be treated as if it were a gas pipe.

If upon checking with all other utilities you believe an unidentified pipe to be a gas pipe, the promoter of the works shall contact plantprotection@cadentgas.com with the following information:

- LSBUD enquiry reference
- Site address (please include postcode and grid references)
- Site contact details
- Size of pipe
- Pipe material
- Confirmation that the unidentified pipe is exposed (if not, it will need to be exposed prior to our attendance)
- Confirmation that Cadent and all other asset owners plans, are available for review and inspection
- Photos of the pipe

Please be aware that it can take up to 28 days for us to confirm whether the unidentified exposed pipe is a gas asset or not.



11 Action in Case of Damage to an Asset

If you hit a gas asset, whether the damage is visible or not, or in the event of an emergency, call the National Gas Emergency Service immediately on 0800 111 999*.

If the Cadent asset is damaged, even slightly, and even if no gas leak has occurred, then the following precautions shall be taken immediately:

- Shut down all plant and machinery and extinguish any potential sources of ignition
- Evacuate all personnel from the vicinity of the asset
- Notify Cadent using the free 24-hour emergency telephone number 0800 111 999*
- Notify the Cadent responsible person immediately using the contact telephone number provided
- Ensure no one approaches the asset
- Do not try to stop any leaking gas
- Provide assistance as requested by Cadent, or emergency services to safeguard persons and property

*All calls are recorded and may be monitored



12 References

Reference	Description
HASAWA	The Health and Safety at Work etc Act 1974
CDM	The Construction (Design and Management) Regulations 2015
LOLER	Lifting Operations and Lifting Equipment Regulations 1998
RIDDOR	Reporting of Injuries, Diseases & Dangerous Occurrences Regulations 2013
GS(M)R	Gas Safety (Management) Regulations 1996
PSR	Pipelines Safety Regulations 1996
NRSWA	New Roads and Street Works Act 1991
HS(G)47	Avoiding Danger from Underground Services
IGEM/SR/18	Safe Working Practices to Ensure the Integrity of Gas Pipelines and Associated Installations
IGEM/TD/12	Pipework stress analysis for gas industry plant
Street Works UK Volume 4	Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees
UKOPA/11/0027	Requirements for the Siting of Wind Turbines Close to HP Pipelines
UKOPA/GP/013	Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines
UKOPA/GP/014	Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines

13 Glossary of Terms

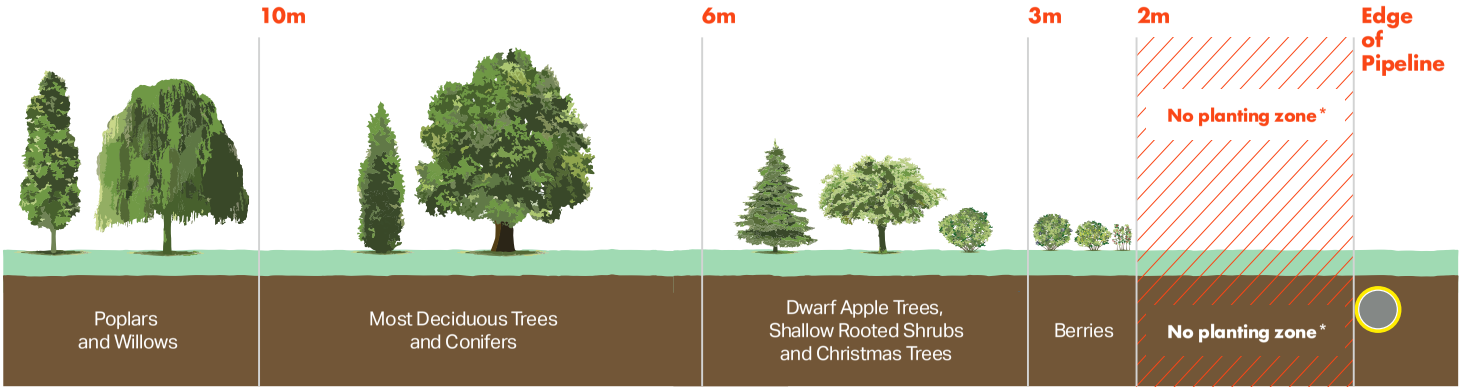
Term	Definition
Easement	Easements are negotiated legal entitlements between Cadent and landowners and allow Cadent to lay, operate and maintain assets within the easement strip. Easement strips may vary in width, typically between 6 and 25 metres depending on the diameter and pressure of the pipeline. Consult Cadent for details of the extent of the easement strip where work is intended.
Liquefaction	Liquefaction is a phenomenon in which the strength and stiffness of the soil is reduced by earthquake shaking or other rapid loading. Liquefaction occurs in saturated soils, that is, soils in which the space between individual particles is completely filled with water. When liquefaction occurs, the strength of the soil decreases and the ability of the soil to support assets are reduced.
Promoter of works	The person or persons, firm, company or authority for whom new services, structures or other works in the vicinity of existing Cadent assets and associated installations.
Cadent Plant Protection Officer	The person or persons appointed by Cadent with the competencies required to act as the Cadent representative for the purpose of monitoring a particular activity.
Banksperson	Another person who assists the machine operator from a position where they can safely see into the excavation and warn the driver of any services or other obstacles. This person should remain outside of the operating radius of the excavator arm and bucket.

Appendix A - Typical Asset Location Markers



Appendix B - Tree Planting Guidance

Distance is measured from the edge of the pipeline



*except for hedges where approved

Emergency

If you hit an asset, whether the damage is visible or not, or in the event of an emergency, call the National Gas Emergency Service immediately on

0800 111 999*

Self-service for Plant Protection Enquiries

If you are planning to do work near or in the vicinity of Cadent assets please submit an enquiry online at **lsbud.co.uk**

This is a free online enquiry service giving enquiry service giving an instant risk assessed response for your work activity relative to the Cadent gas assets in the vicinity.

If you require any assistance please contact the plant protection team for free on **0800 688 588** or at **plantprotection@cadentgas.com**

Action in Case of Damage to an Asset

- Shut down all plant and machinery and extinguish any potential sources of ignition
- Evacuate all personnel from the vicinity of the asset
- Notify Cadent using the free 24-hour emergency telephone number 0800 111 999*
- Notify the Cadent responsible person immediately using the contact telephone number provided
- Ensure no one approaches the asset
- Do not try to stop any leaking gas
- Provide assistance as requested by Cadent, or emergency services to safeguard persons and property

*All calls are recorded and may be monitored

Copyright Cadent 2023 ©, all rights reserved. No part of this publication may by reproduced in any material form (including photocopying and restoring in any medium or electronic means and whether or not transiently or incidentally) without the written permission of Cadent, except in accordance with the provisions of the Copyright, Designs and Patents Act 1988.

SSW22_vMar23

GROUNDWISE

Groundwise Searches Ltd

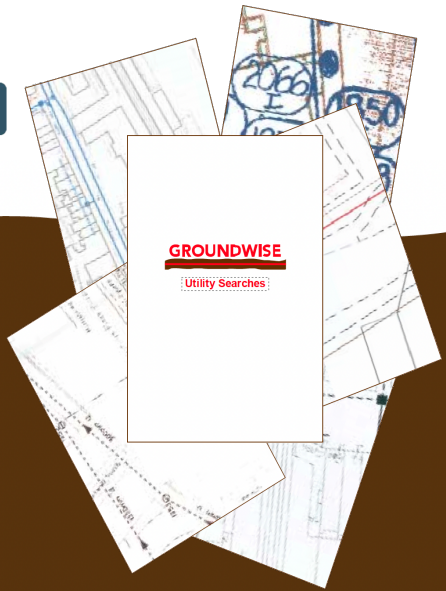
Mast Data

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Mast Data

Mobile Phone Masts

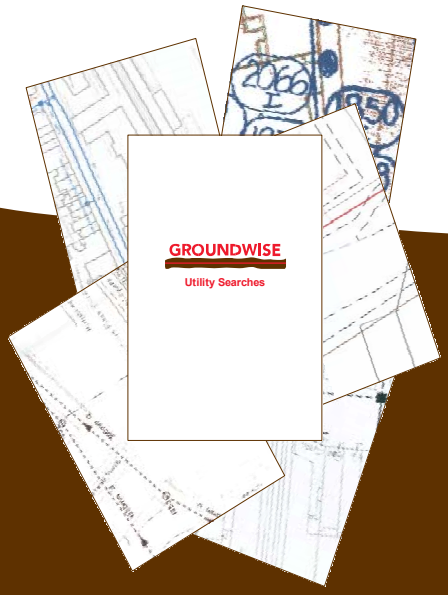
A search for the location of mobile phone masts has been carried out using http://www.mastdata.com/

On this occasion it's possible there are masts within the vicinity of your site.

Please see the enclosed Mast Data map and information – the circular area, shaded yellow, shows the location of your site.

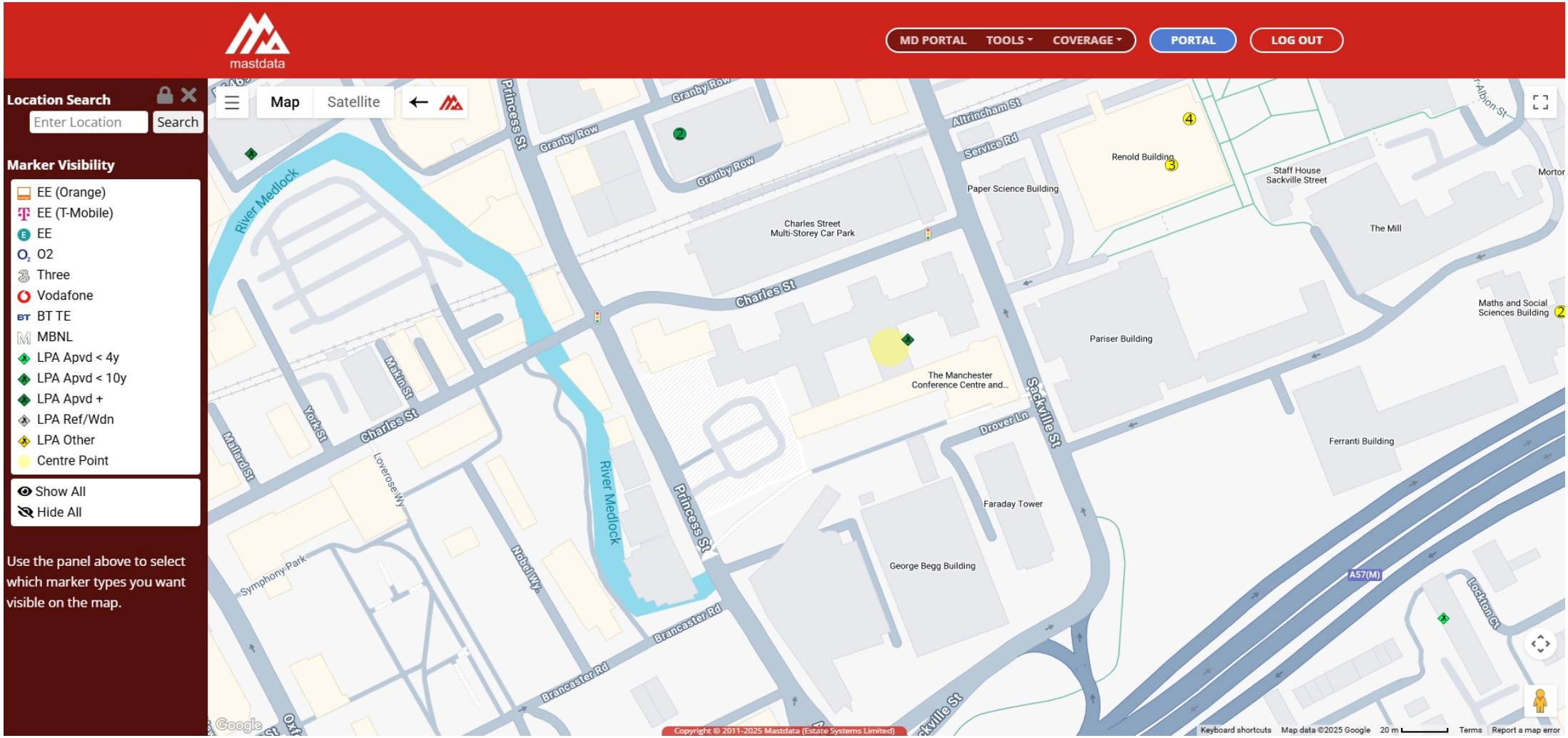
Further details can be found on the Mast Data website - http://www.mastdata.com/

Mast Data
North End House
Avon
Christchurch
Dorset
BH23 7BJ
020 8144 8143
info@mastdata.com



Groundwise Searches Limited
Suite 6, 3rd Floor, Princess Caroline House
1 High Street
Southend-on-Sea
Essex, SS1 1JE
Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address;
Matrix House, 12-16 Lionel Road,
Canvey Island, Essex, England, SS8 9DE


mastdata
MD PORTAL
TOOLS
COVERAGE
PORTAL
LOG OUT
Location Search
Enter Location
Search
Marker Visibility
EE (Orange)
EE (T-Mobile)
EE
O2
Three
Vodafone
BT TE
MBNL
LPA Apvd < 4y
LPA Apvd < 10y
LPA Apvd +
LPA Ref/Wdn
LPA Other
Centre Point
Show All
Hide All
Use the panel above to select which marker types you want visible on the map.
Map
Satellite
River Medlock
Granby Row
Princess St
Charles St
Charles Street Multi-Storey Car Park
Altrincham St
Service Rd
Renold Building
Paper Science Building
Staff House Sackville Street
The Mill
Maths and Social Sciences Building
Pariser Building
The Manchester Conference Centre and...
Drover Ln
Sackville St
Ferranti Building
Faraday Tower
George Begg Building
Brancaster Rd
A57(M)
Lockton Ct
Mavin St
York St
Mallard St
Loverose Wy
Nobel Wy
Symphony Park
Copyright © 2011-2025 Mastdata (Estate Systems Limited)
Keyboard shortcuts
Map data ©2025 Google
20 m
Terms
Report a map error

063197/FO/CITY2/01 Manchester Planning Application

List of All LPA's | MAP of All LPA's | Return to Previous Address | ATLAS MD

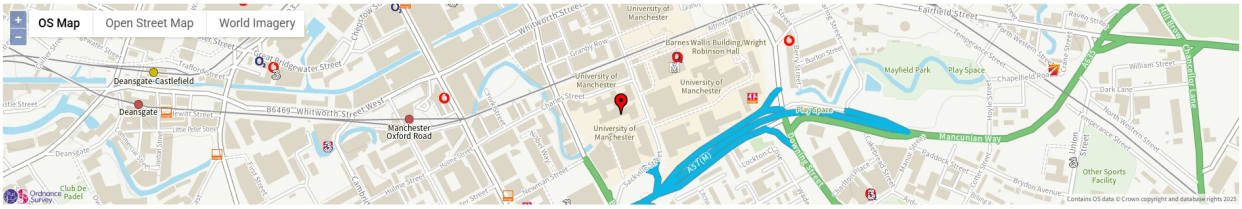
Previous Work / Planning Details

Data Type	Value
1.00 Mastdata ID	635871
2.00 Application (LPA) Ref	063197/FO/CITY2/01
8.00 Instruction Type	Retention of 1.0m diameter satellite antenna on wall mounting
10.00 Agent	DJ Design Ltd
11.00 Status/Decision	Decided
12.00 Agent Name	DJ Design td.,
12.00 Appeal Status	Unknown
12.00 Application Type	Full Application Consent
12.00 Decision	Approved
13.00 Decision	Approved
15.00 Plan Type	Planning
16.10 Main LPA URL	View Application on Manchester Website In New Tab
16.20 Google Search Web for Application	Google Search Web for Application
23.00 Map View Site with masts	Map of Application with additional local masts
31.10 Friis Radial Line of Sight	Friis Line of Sight Map - Radial
31.20 Binary Radial Line of Sight	Line of Sight Map - Radial
31.30 1km Grid Line of Sight	Line of Sight Map - 1km Grid - Approx 32km2
31.35 Incoming Los	Los at Location from Nearby Masts [BETA]
31.42 A>B Line of site [BETA]	Line of Site (LoS) to nearby Infrastructure
31.50 Spatial:Unitary Region	Manchester District (B)
31.50 Spatial:Historic County	Lancashire
31.70 Best Network Operator	BNO Map from Survey Data [BETA]
43.10 Address	, Coop Bank, Students Union, Sackville Street, City
46.00 Location	Good Accuracy (Map Scrape - Was Null)
47.10 East/North, click to reposition	384486/397514
47.20 Lat/Long, click to reposition	53.47/-2.23
48.10 View On Google Map	Open Google Map In New Tab
48.20 View On Google Streetview	Open Google Streetview In New Tab
50.00 Planning Authority	Map and Summary for Manchester telecoms applications
53.00 AMSL/AGL	43m(AMSL)
54.20 Nearest UPRN	10070863523
55.00 Start/End	Sep 17 2001 12:00AM / Oct 2 2001 12:00AM
58.00 View Addition Masts	View map with all masts at this location
70.00 Site Built? Add to Database	Click here to Add this Site to mastdata.com
80.00 Support Ticket	22890:FOI8 (8/5/19 to 12/10/19)

There are no images associated with this planning application

Location of Work/Planning Application





Nearest Mobile Phone Masts

	Map	Ref	Mtr	Name	Description	LoS	AdID
NGR→	Map	24194	138	Renold Building Altrincham Street Manchester M1 7JR, Renold Buildin...	[Transmitting]	119km²	316453
NGR→	Map	MAN178	138	Renold Building Altrincham Street Manchester M1 7JR, Renold Buildin...	[Transmitting]	119km²	316454
NGR→	Map	M0155	138	Renold Building, Manchester, Lancashire, M13AL	[Transmitting] Three UMTS Sectored	119km²	94853
NGR→	Map	13221	157	UMIST REYNOLD BUILDING, GRANBY ROW, MANCHESTER, Greater Manchester,...	[Transmitting] Vodafone UMTS Macro	117km²	117738
NGR→	Map	57035	157	057035 (005031) @@U UMIST U900 PHASE 1. 057035 (005031) @@U UMIST U...	[Transmitting] O2 UMTS Sectored	118km²	66050
NGR→	Map	5031	157	MANCHESTER LONDON RD, @@U UMISTRenolds BuildingSackville Street,Man...	[Transmitting] O2 UMTS Sectored	118km²	68400
NGR→	Map	9670	157	THE RETRO BAR, 78 SACKVILLE STREET, MANCHESTER, Greater Manchester,...	[Transmitting] Vodafone GSM Micro	15km²	116568
NGR→	Map	M0029	243	Armstrong House, Manchester, Lancashire, M17EL	[Transmitting] Three UMTS Sectored	95km²	94805
NGR→	Map	93530	285	T-Mobile Site, Manchester, Lancashire, M601HE	[Transmitting] T-Mobile GSM SECTOR	127km²	104875
NGR→	Map	GMN0001	285	UMIST, UMIST MATHS & SOC SCI BUILDING,SACKVILLE STREET,MANCHESTER,....	[Transmitting] Orange UMTS SECTOR	131km²	80322

1 2

Nearby and Related Planning Applications

	Map	LPA Ref	LPA	Mtr	Operator	Name	Date	Decision	Ref	Address	Outcome	LoS
Edit NGR→	Map	134005/LO/2022	Manchester	135	CTIL BEACON 3 O2	Listed Building Consent for the installation of 12 no. antennas at a top height of 38m and 4 no....	08/06/22	Refused	304396_01 O2 094693 20628 E366987	Orient House Granby Row Manchester M1 7AB,	Refused	70km²
Edit NGR→	Map	134004/FO/2022	Manchester	135	CTIL BEACON 3 O2	The installation of 12 no. antennas at a top height of 38m and 4 no. transmission dishes fixed to...	08/06/22	Refused	304396_01 O2 094693 20628 E366987	Orient House Granby Row Manchester M1 7AB,	Refused	70km²
Edit NGR→	Map	140885/FO/2024	Manchester	138	MBNL NTQ	Upgrade of roof top telecommunications infrastructure, removal of satellite dishes and installati...	29/08/24	Approved	1105663 E 24194 MAN178 M0155	Renold Building Altrincham Street Manchester M1 7JR,	Approved	78km²
Edit NGR→	Map	066398/FO/CITY3/02	Manchester	247	Orange	Installation of one Microcell Antenna and associated cabling to North & East elevations and inter...	16/10/02	Withdrawn		Lancaster House, Whitworth Street, City,	Withdrawn	44km²
Edit NGR→	Map	066399/LO/CITY3/02	Manchester	247	Orange	LISTED BUILDING CONSENT Installation of one Microcell Antenna and associated cabling to North & E...	16/10/02	Withdrawn		Lancaster House, Whitworth Street, City,	Withdrawn	44km²
Edit NGR→	Map	061249/FO/CITY3/01	Manchester	260	Orange	Installation of 1no. antenna with associated equipment cabinet	20/10/02	Refused		Euro Car Park, Whitworth Street, City,	Refused	35km²
Edit NGR→	Map	138456/TEL/2023	Manchester	264	MBNL NTQ	Prior Approval the installation of telecommunication equipment at rooftop including 7.5 metre hig...	01/11/23	Approved	1679680 E 74835 MAN388 M0782	Lockton Court Lockton Close Manchester M1 7JP,	Approved	64km²
Edit NGR→	Map	062231/FO/CITY2/01	Manchester	285	One2One	Installation of additional 7no. transmission link dishes, 3no. sector antennae and a portasilo ma...	27/07/01	Approved		UMIST Tower, Maths Tower Block, Sackville Street, City,	Approved	30km²
Edit NGR→	Map	096459/FO/2011/C1	Manchester	285	MBNL	The installation of 1 no. 300mm dish fixed to an existing antenna.	22/06/11	Approved	E 93530 MAN0100 M0385	Umist Maths Tower Sackville Street Manchester M1 1QD,M1 1QD	Approved	93km²
Edit NGR→	Map	078781/LO/2006/C3	Manchester	298		LISTED BUILDING CONSENT Installation of a security system antenna on rear of parapet at roof level	21/06/06	Approved		India House 73 Whitworth Street Manchester M1 6LG,M1 6LG	Approved	21km²

1 2 3 4 5 6 7 8 9 10 ...

Transmission data collected at this location

Signal Filter: All Operators | 10 Rows | 500m | Refresh

		mcc	mnc	lac	cid	Σ	mtr	TX Date	Tech	Avg	Pwr	Max	Pwr	Min	Pwr	lac/cid
Link	More	UK	O2 Ltd.	49840	1474172	12	82	23/08/2025 08:10:00 PM	LTE		-96		-89		-108	49840: 1474172
Link	More	UK	Everyth. Ev.wh./T-Mobile	24731	3314946	7	88	23/08/2025 08:10:00 PM	LTE		-92		-86		-97	24731: 3314946
Link	More	UK	O2 Ltd.	49840	139485065	3	88	23/08/2025 08:10:00 PM	LTE		-113		-107		-119	49840: 139485065
Link	More	UK	H3G Hutchinson	3394	1175040	13	88	23/08/2025 08:10:00 PM	LTE		-92		-69		-113	3394: 1175040
Link	More	UK	Everyth. Ev.wh./T-Mobile	2062	8309	7	91	23/08/2025 08:10:00 PM	GSM		-23		-16		-31	2062: 8309
Link	More	UK	Vodafone	57373	1474076	19	91	23/08/2025 08:10:00 PM	LTE		-87		-75		-99	57373: 1474076
Link	More	UK	Everyth. Ev.wh./T-Mobile	2062	8311	11	94	23/08/2025 08:10:00 PM	GSM		-20		-17		-24	2062: 8311
Link	More	UK	Everyth. Ev.wh./T-Mobile	24731	3314952	10	97	23/08/2025 03:40:00 PM	LTE		-99		-94		-105	24731: 3314952
Link	More	UK	Everyth. Ev.wh./T-Mobile	24731	2812423	10	100	23/08/2025 03:40:00 PM	LTE		-112		-98		-121	24731: 2812423
Link	More	UK	H3G Hutchinson	3394	158209	8	112	23/08/2025 08:10:00 PM	LTE		-96		-86		-113	3394: 158209

Update history for this site

FAQ - Data Accuracy and Updates

No	
1.	Keeping our Site Details Accurate
1.1	Our address data is created and updated from a number of sources. Data is checked before inclusion in our site. Our data sources include, but is not limited to the following:
2.	Data Sources
2.1	Data from ofcom which has been extensively corrected
2.3	A rolling review of Local Planning Authorities (LPA's) for the latest telecommunication Planning Applications
2.4.1	Sites added by, or corrected by Registered Users
2.4.2	Sites added by, or corrected by non-registered users. These are all reviewed by mastdata before inclusion in our site
2.5	Bulk uploads provided by registered users based on known Rollout work plans
2.6	Bulk uploads provided by non-registered users. These are extensively checked and corroborated before inclusion in our database
2.7	Third Party mapping organisations
2.8	Additional public domain data relating to telecoms masts and signal data from trusted sources
2.9	Feedback and signal data collected from our App
2.10	New Rollout - Data collected and updated using the LPA Services Module - Mast Registers updates, user feedback and Planning Applications using the Planning Determination Tools.
3.	Approving data change requests
3.1	Changes for additional new sites or modification of existing sites are reviewed by a member of our team through our Creq (Change Request) Module. The decision to accept additions or amendments are based on a scoring system which includes:
3.1.1	The credibility and history of the of the data supplier
3.1.2	Existing LPA planning data
3.1.3	Visibility on Google Street view and/or Bing aerial view
4.	Contribute Data
4.1	If you have a number of sites to add, you can upload the source document here. We will authenticate and merge any submissions into our existing dataset.
5.	Disclaimer
5.1	Please click here to view our general terms related to the supply of data.

Related Articles

Frequently Asked Questions Menu : ATLAS Extranet Manual -

End Of Article

© Copyright 2011-2022 Mastdata (Estate Systems Limited) Tel:+44(0)20 8144 8143

FAQ - Operator Contact Details

Mast Data

Article Contents		
Information	Information	Information / Instructions on how to perform the required tasks
Web Links	Web Links	External Links

No	
1.	Operator Contact Detail
1.1	How do I contact the operators about the sites
1.2	We cannot assist with site enquires, please click this link for the operator contact details provided by ofcom
2.	BRITISH TELECOMMUNICATIONS PLC
2.1	British Telecommunications Plc, 81, Newgate Street, London. EC1A 7AJ
2.2	Tel: +44 (0)20 7356 5000
3.	EE LIMITED (EE, T-Mobile and Orange)
3.1	EE Limited, Trident Place, Hatfield Business Park, Mosquito Way, Hatfield, Hertfordshire AL10 9BW
3.2	Tel: +44 (0)1707 315000
4.	TELEFÓNICA UK LIMITED
4.1	Telefónica UK LIMITED, 260 Bath Road, Slough, Berkshire SL1 4DX
4.2	Tel: +44 (0)113 272 2000
5.	VODAFONE LIMITED
5.1	Vodafone Limited, Vodafone House, The Connection, Newbury, Berkshire RG14 2FN
5.2	Tel: +44 (0)1635 33251
10.	The following contact details were provided by the Mobile Operators Association which is no longer in existance.
12.	Media Enquiries
12.1	EE: 0845 373 7070 / ee@nelsonbostock.com
12.2	O2: 01753 565656 / pressoffice@o2.com
12.3	Three: 07454 959 715 / three@mww.com
12.4	Vodafone: 01635666777 / ukmediarelations@vodafone.com
13.	Enquiries from Members of the Scottish/UK Parliaments or Northern Ireland/Welsh Assemblies
13.1	EE: public.affairs@ee.co.uk
13.2	Three: Public.Affairs@three.co.uk
13.3	Vodafone: govt.relations@vodafone.com
14.	Enquiries from Local Planning Authorities
14.1	CTIL (on behalf of Vodafone and Telefónica): EMF.Enquiries@ctil.co.uk
14.2	MBNL (EE and Three): Mark Shaw, Health & Safety and Community Affairs Manager Mark.shaw@mbnl.co.uk
14.3	EE: public.affairs@ee.co.uk
14.4	Three: William Comery, Community Affairs Manager william.comery@ericsson.com
15.	Enquiries about specific sites
15.1	CTIL (on behalf of Vodafone and Telefónica): EMF.Enquiries@ctil.co.uk
15.2	EE: public.affairs@ee.co.uk
15.3	Three: william.comery@ericsson.com or Jane.evans@three.co.uk
17.	BT Openreach
17.1	moving or taking away Openreach poles, cables, joint boxes or equipment - call 0800 783 2023 and pick option 1
17.2	reporting damage to some of our equipment - call 0800 023 2023 and pick option 1

Further Help / Contact Details

Name	Mast Data (Estate Systems Ltd)
Phone	+44 (0)20 8144 8143
Email	info@mastdata.com

© Copyright 2017, Mast Data (Estate Systems Ltd)

GROUNDWISE

Groundwise Searches Ltd

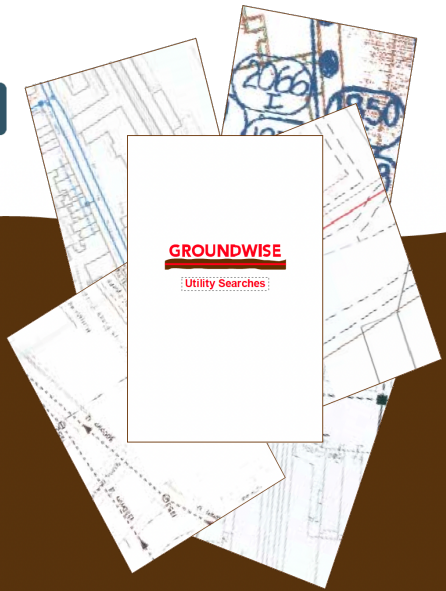
Network Rail

Utility Not Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Rebecca Bennett

From: Dain Fuller <Dain.Fuller@networkrail.co.uk> on behalf of OP Buried Services Enquiries <OPBuriedServicesEnquiries@networkrail.co.uk>
Sent: 08 September 2025 15:53
To: Responses
Subject: RE: Ref: 39540RB-GWS - Site: Weston Halls and Pendulum Hotel, Manchester, M1 3BB

OFFICIAL

Dear Enquirer,

With regards to your enquiry, Network Rail does not believe there is any Network Rail owned apparatus or underground services within the area you have defined. As there is always the possibility that new works could be planned and undertaken in this area by Network Rail this information is valid as at today's date and is supplied for general guidance only.

Please be aware that this response is based on Network Rail's records and knowledge and no guarantee can be given regarding accuracy or completeness. CAT scans, safe digging practices (as contained in HSE publications) and other appropriate investigative techniques should always be carried out.

There may be other apparatus or underground services owned or operated by Utility Companies and accordingly you should contact individual utilities for information.

If, in connection with your investigations and/or work, you become aware of Network Rail apparatus or underground services within your area of work, please ensure these are notified to our Asset Protection team via the following link as a matter of urgency so that appropriate measures for avoidance of risk and damage can be put in place.

Contact details can be found in the following link: Network Rail Asset Protection Teams

If you require any further clarification on any of the information provided by the team, please contact opburiedservicesenquiries@networkrail.co.uk.

Regards,

Dain Fuller
Worksite Survey Manager

Worksite Survey | Asset Information Services
National Records Centre | Audax Road | York YO30 4US
W: www.networkrail.co.uk

At Network Rail we work flexibly – so whilst it suits me to email now, I do not expect a response or action outside of your own working hours

GROUNDWISE

Groundwise Searches Ltd

Manchester City Council

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Where is the location?

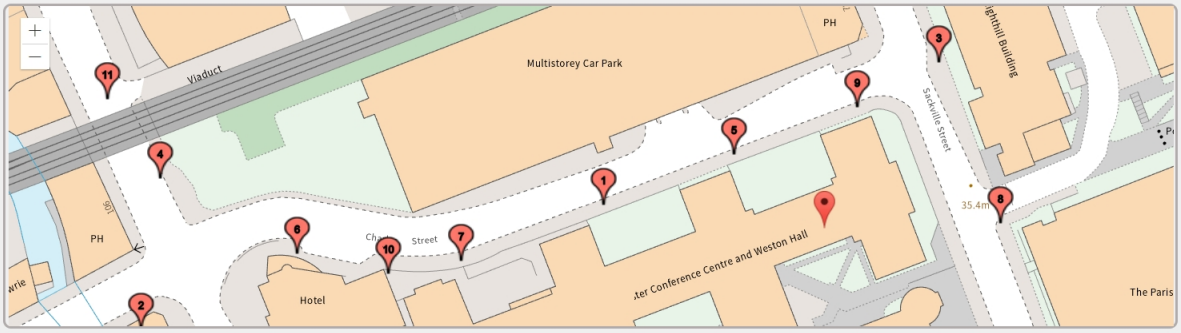
Where is the issue located?

Please first provide us with the location of the issue on the map by zooming in as required (using the + and - icons) and then clicking with the mouse at this location. You can also search for the location using the search box in the top left corner of the map.

Location search

WESTON HALL SACKVILLE STREET, MANCHESTER, MANCHESTER M1 3BB

Search again



WESTON HALL SACKVILLE STREET, MANCHESTER, MANCHESTER M1 3BB

This map is provided by ESRI under copyright of the Crown and database rights 2025. Ordnance Survey AC0000812035.

- 1. Street light, Unit no : 11, CHARLES STREET
- 2. Street light, Unit no : 07, CHARLES STREET
- 3. Street light, Unit no : 06, SACKVILLE STREET
- 4. Street light, Unit no : 28, PRINCESS STREET
- 5. Street light, Unit no : 12, CHARLES STREET
- 6. Street light, Unit no : 08, CHARLES STREET
- 7. Street light, Unit no : 10, CHARLES STREET
- 8. Street light, Unit no : 05, SACKVILLE STREET
- 9. Street light, Unit no : 13, CHARLES STREET
- 10. Street light, Unit no : 09, CHARLES STREET
- 11. Street light, Unit no : 27, PRINCESS STREET

More information that will help us locate the problem
for example nearest house number, road name, landmark

0/500

Back

Next

© 2025 Manchester City Council

Where is the location?

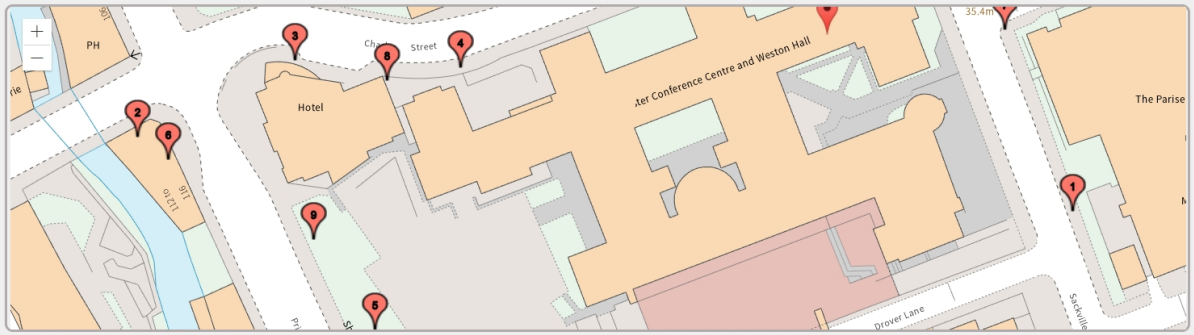
Where is the issue located?

Please first provide us with the location of the issue on the map by zooming in as required (using the + and - icons) and then clicking with the mouse at this location. You can also search for the location using the search box in the top left corner of the map.

Location search

WESTON HALL SACKVILLE STREET, MANCHESTER, MANCHESTER M1 3BB

Search again



WESTON HALL SACKVILLE STREET, MANCHESTER, MANCHESTER M1 3BB

This map is provided by ESRI under copyright of the Crown and database rights 2025. Ordnance Survey AC0000812035.

- 1. Street light, Unit no : 04, SACKVILLE STREET
- 2. Street light, Unit no : 07, CHARLES STREET
- 3. Street light, Unit no : 08, CHARLES STREET
- 4. Street light, Unit no : 10, CHARLES STREET
- 5. Street light, Unit no : 32, PRINCESS STREET
- 6. Street light, Unit no : 29, PRINCESS STREET
- 7. Street light, Unit no : 05, SACKVILLE STREET
- 8. Street light, Unit no : 09, CHARLES STREET
- 9. Street light, Unit no : 30, PRINCESS STREET

More information that will help us locate the problem

for example nearest house number, road name, landmark

0/500

Back

Next

© 2025 Manchester City Council

Where is the location?

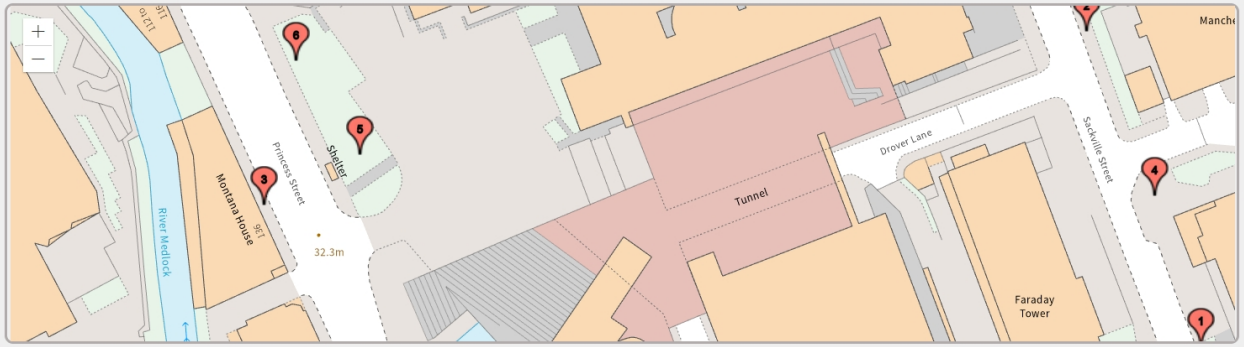
Where is the issue located?

Please first provide us with the location of the issue on the map by zooming in as required (using the + and - icons) and then clicking with the mouse at this location. You can also search for the location using the search box in the top left corner of the map.

Location search

WESTON HALL SACKVILLE STREET, MANCHESTER, MANCHESTER M1 3BB

Search again



WESTON HALL SACKVILLE STREET, MANCHESTER, MANCHESTER M1 3BB

This map is provided by ESRI under copyright of the Crown and database rights 2025. Ordnance Survey AC0000812035.

- 1. Street light, Unit no : 02, SACKVILLE STREET
- 2. Street light, Unit no : 04, SACKVILLE STREET
- 3. Street light, Unit no : 31, PRINCESS STREET
- 4. Street light, Unit no : 03, SACKVILLE STREET
- 5. Street light, Unit no : 32, PRINCESS STREET
- 6. Street light, Unit no : 30, PRINCESS STREET

More information that will help us locate the problem
for example nearest house number, road name, landmark

0/500

Back

Next

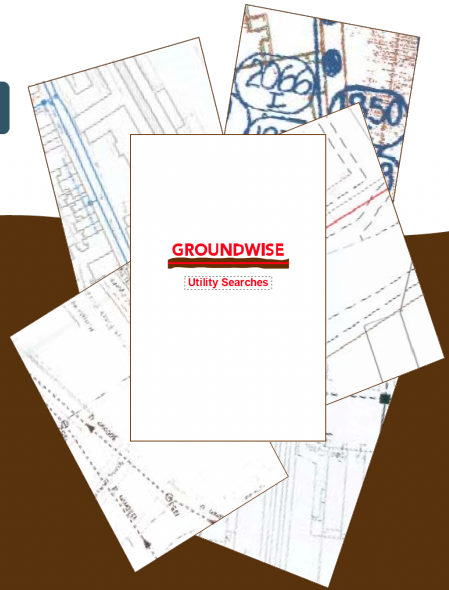
© 2025 Manchester City Council

GROUNDWISE

Groundwise Searches Ltd

C.A Telecom-Colt

Utility Present



Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE

COLT PLANT ENQUIRIES

C.A TELECOM UK LIMITED
Unit 2, CA Business Park
Colewood Road
Whitstable
Kent CT5 2RP

Email: plantenquiries@catelecomuk.com
Tel: 01227 768427

Our Reference: P047431

OVERSEEING ORGANISATION AGENT SCHEME REFERENCE

O.O Agent – Groundwise
Contact – N/A
Title – Weston Halls and Pendulum Hotel, Manchester, M1 3BB
Scheme Ref – 39540RB-GWS

11th September 2025

Dear Sir/Madam,

Thank you for your enquiry for the above reference. We can confirm that Colt Technology Services do have apparatus near the above location within the scheme reference and enclose the relevant drawings showing the approximate location of Colt apparatus for purpose of initial plant enquiry. Detailed network location will be presented via Scheme Identification Study Process. All reasonable effort has been made to capture network however image may not reflect unprocessed new build track. Search is based on Overseeing Organisation Agent data supplied; we do not accept responsibility for O.O Agent inaccurate data.

If your proposed works are likely to affect or expose the Colt Technology Services apparatus in anyway please contact Colt Civils Team members below to discuss any plant protection/diversionary measures that may be required, as per the code of Practice Measures necessary where apparatus is affected under NRSWA 1991 Diversionary Works Scheme Identification & Preliminary C2 Enquires. Along with proposed start dates for works to begin.

Clients request for C3 budget costs will trigger the onsite survey to ascertain the requirement's needed to ensure a safe area for the affected COLT network

Colt company policy negates any potentially detrimental effect on the network as well as protecting us from any potential costs and damages.

Please note as COLT moves to C3 status we will require an estimated start date for the project to allow for COLT policy lead-time's

Please email plantenquiries@catelecomuk.com with your official C3 Request.

We would remind you that mechanical excavators or borers should never be used within 1500mm of any COLT Technology Service apparatus.

If we can be of any further assistance please do not hesitate to contact us.

Yours sincerely,
Plant Enquiry Team



CONFIDENTIAL | PREPARED BY C.A. TELECOM UK LTD | DATE: 11th September 2025 | OUR REF: P047431

UTILITY UNDERTAKER

Colt Technology Services
Beaufort House,
15 St Botolph Street,
London,EC3A 7QN

www.colt.net

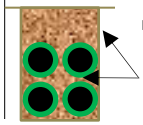
PLANT ENQUIRY AGENT FOR COLT

C.A. TELECOM UK LTD
Unit 2
CA Business Park
Colewood Road
Whitstable
Kent CT5 2RP

CONTACT Tel: 01227 768427
Fax: 01227 458884
email: plantenquiries@catelecomuk.com

MAP IMAGE PERMISSIONS

Centara supplied map
Promap



NOMINAL DEPTH OF COVER
250mm F/W
550mm C/W

COLT NETWORK LEGEND

Colt Infrastructure Network

NRSWA 1991 DIVERSIONARY WORKS

SCHEME & PRELIMINARY INQUIRIES C2
Colt Technology Services External Infrastructure general location indicated only for purposes of initial plant enquiry, detailed network location will be presented via Scheme Identification Study process. All reasonable effort has been made to capture network however image may not reflect unprocessed new build track.

OVERSEEING ORGANISATION AGENT REFERENCE

O.O Agent – Groundwise
Contact – N/A
Title –Weston Halls and Pendulum Hotel, Manchester, M1 3BB
Scheme Ref –39540RB-GWS

GROUNDWISE

Groundwise Searches Ltd

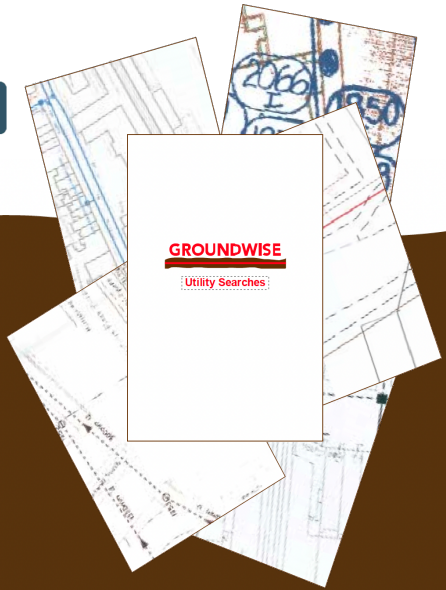
Cityfibre

Utility Not Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Rebecca Bennett

From: online.plantenquiries@cityfibre.com
Sent: 08 September 2025 15:53
To: Rebecca Bennett
Subject: CityFibre Plant Enquiry, issued on 9/8/25 2:53 PM. Reference 9ff3173e-d360-4e84-98c4-89a8f2cda88e.
Attachments: emap.pdf

You recently requested information pertaining to the above location and in relation to CityFibre Holdings Ltd plant.

Reference 9ff3173e-d360-4e84-98c4-89a8f2cda88e
User: User
Title: 39540
Comment:

Please find attached a plan of the area of your interest that may contain plant which may be affected by your proposed works.

The validity of this response is 6 weeks, after such time a new enquiry would need to be made.

Please see the points of contact below if they are required:

Plant Enquiries
Rutherford House
Birchwood Park
Warrington
WA3 6ZH
asset.team@cityfibre.com

Please quote the Reference ID in the subject line in any correspondence.

Please be aware that all information included in this eMap is the property of the sender and subject to copyright.
It is illegal to copy or send this information to any third party without the permission of the sender.

_____
[CityFibre]<https://cityfibre.com/>

Plant Enquiries

0203 5100 602

Disclaimer: CityFibre Limited is incorporated in England (No. 09759465) and its registered office is 15 Bedford Street, London WC2E 9HE. This email, together with any attachments, is confidential and for



bitmap_layout select_raster

LEGEND

EXISTING PLANT

EXISTING PLANT

bitmap_layout select_raster

Head Office
CityFibre Holdings Ltd
15 Bedford Street,
London,
WC2E 9HE

Tel: 0845 293 0774
Web: www.cityfibre.com

Asset Office
CityFibre Holdings Ltd,
Rutherford House,
Birchwood,
Warrington,
WA3 6ZH

Email: asset.team@cityfibre.com

Disclaimer:

Information shown on this plan is for general guidance only. No warranty is made as to its accuracy.
This plan must not be solely relied upon in the event of excavation or other works being carried out in the vicinity of Cityfibre plant.
No liability of any kind is accepted by Cityfibre, its agents or servants for any error, omission, discrepancy or deviation. This information is valid for the date printed.

Project

Plant Enquiry

Drawing

Existing Plant

Drawn by:

smallworld

Date: 08/09/2025

Drawing No.

CFH_EP_000001

Revision

001

Scale: 1:2500

A4

0m 20m 40m 60m 80m 100m

N

GROUNDWISE

Groundwise Searches Ltd

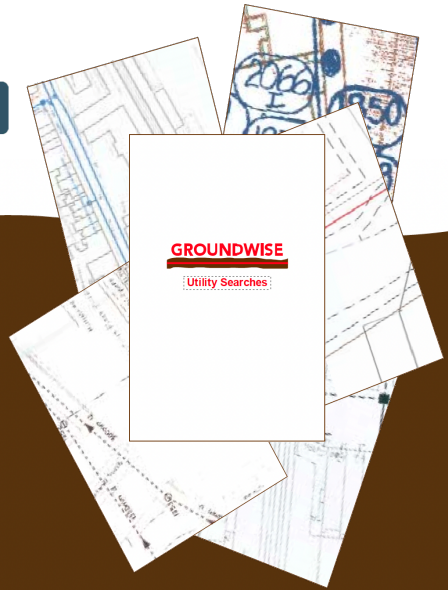
MBNL

Utility Not Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Rebecca Bennett

From: mbnl.plant.enquiries <mbnl.plant.enquiries@turntown.com>
Sent: 08 September 2025 15:54
To: Responses
Subject: [Automated] Ref: 39540 AFFECTED plants at M1 3BB

Dear Rebecca Bennett,

Turner & Townsend Project Management are appointed on behalf of MBNL to conduct Plant (apparatus) Searches in accordance with the relevant NRSWA Act 1991- Diversionary Works legislation. These searches considered plants belonging to EE and the H3G mobile telecommunication networks.

MBNL **do** have have either active, decommissioned or planned plants in or near to the area of development of M1 3BB. Please see below:

Latitude	Longitude	Easting	Northing	Map Link
53.473486	-2.234354	384542	397436	Map
53.47595	-2.233795	384580	397710	Map

However, f**urther details of the proposed development are needed to ascertain if works will affect either the plant or its coverage. Please keep us up to date with any future developments using the contact details below.**

Link to submit another response

[Response ID: 21233]

Kind regards,

MBNL SHQE Team

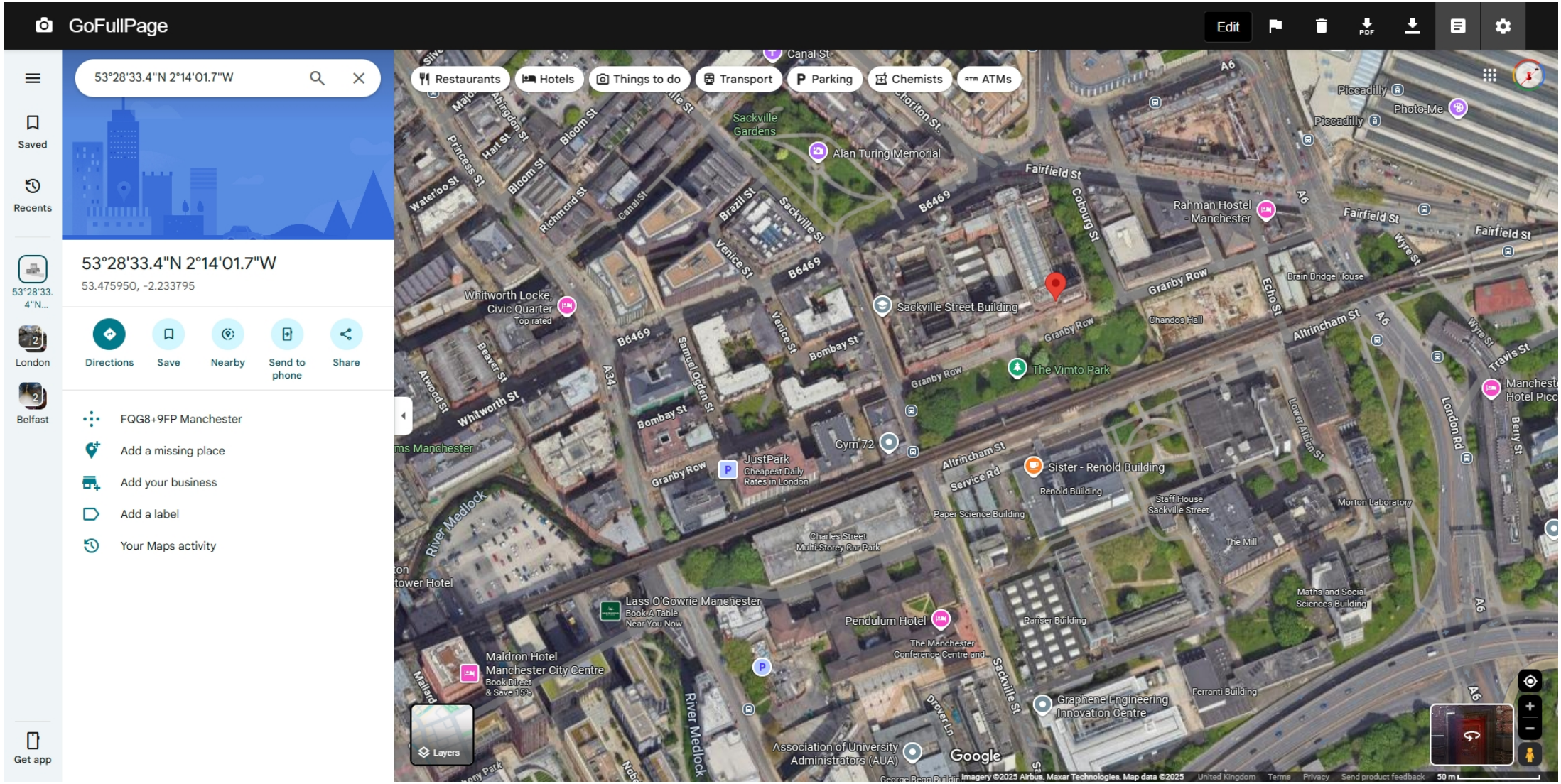
Turner & Townsend Advisory t: 0121 818 5025 | www.turnerandtownsend.com Turner & Townsend Europe Limited Registered office: Low Hall, Calverley Lane, Horsforth, Leeds LS18 4GH, United Kingdom | Registered in England and Wales | Registration No: 3514794

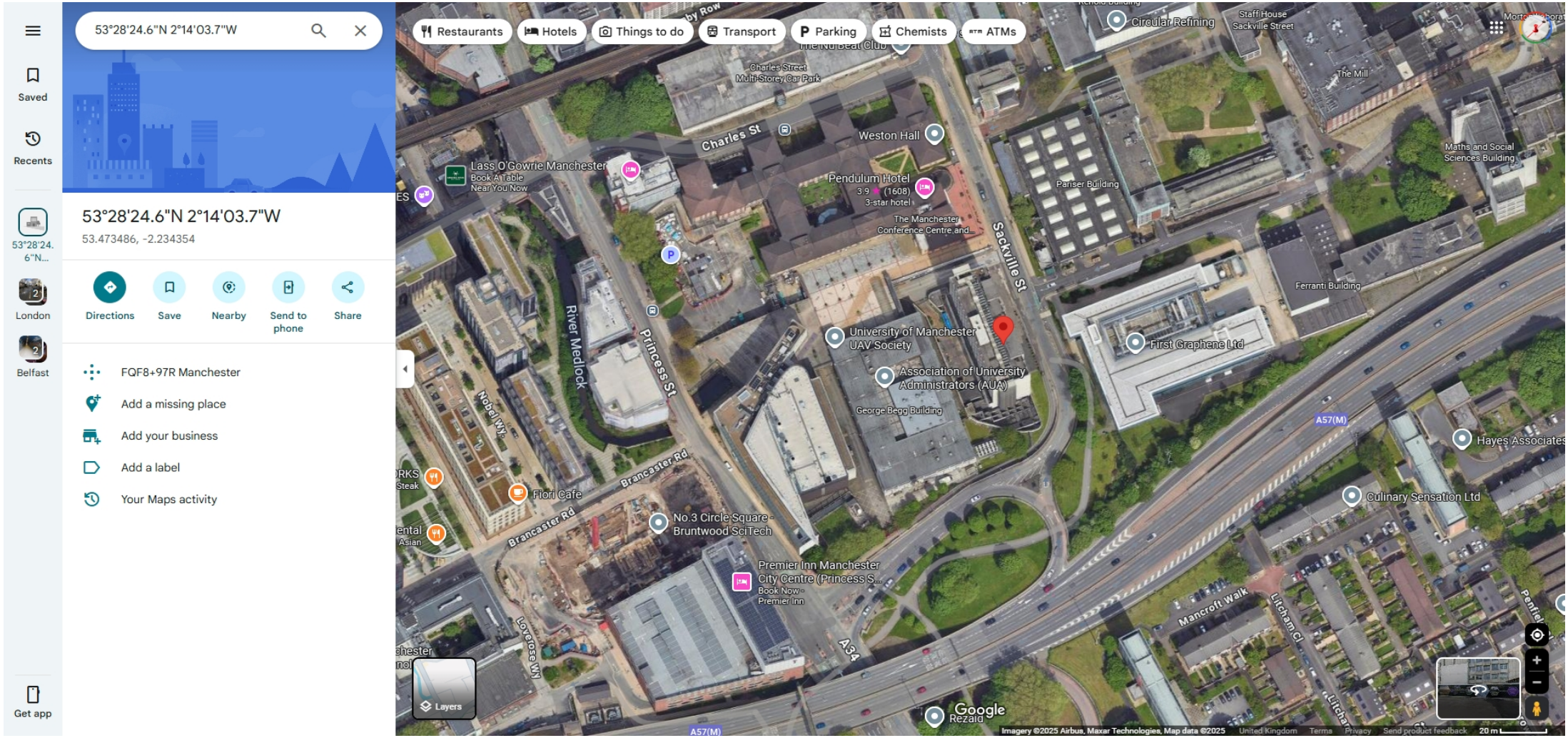
Turner & Townsend Limited

For further information and registration details visit our website http://www.turnerandtownsend.com.

This email and any attachments ("the email") is confidential and may also be privileged, is subject to copyright and may be read, copied and used only by the intended recipient. The recipient is responsible for virus checking this email. If you are not the intended recipient please immediately notify us, delete and do not use, disclose, distribute, copy, print or rely on this email or any part of it. Turner & Townsend does not accept any liability for any loss or damage from your receipt or use of this email.

Please consider the environment before printing this email.


GoFullPage
Edit
53°28'33.4"N 2°14'01.7"W
Saved
Recents
53°28'33.4"N...
London
Belfast
Get app
53°28'33.4"N 2°14'01.7"W
53.475950, -2.233795
Directions
Save
Nearby
Send to phone
Share
FQG8+9FP Manchester
Add a missing place
Add your business
Add a label
Your Maps activity
Restaurants
Hotels
Things to do
Transport
Parking
Chemists
ATMs
Sackville Gardens
Alan Turing Memorial
Sackville Street Building
The Vimto Park
Whitworth Locke, Civic Quarter
Top rated
Rahman Hostel - Manchester
Brain Bridge House
Chandos Hall
Gym 72
JustPark
Cheapest Daily Rates in London
Sister - Renold Building
Renold Building
Staff House Sackville Street
Morton Laboratory
Paper Science Building
Charles Street Multi-Storey Car Park
The Mill
Maths and Social Sciences Building
Lass O'Gowrie Manchester
Book A Table Near You Now
Pendulum Hotel
The Manchester Conference Centre and...
Pariser Building
Maldron Hotel Manchester City Centre
Book Direct & Save 15%
Graphene Engineering Innovation Centre
Ferranti Building
Association of University Administrators (AUA)
Google
Layers
Imagery ©2025 Airbus, Maxar Technologies, Map data ©2025
United Kingdom
Terms
Privacy
Send product feedback
50 m


53°28'24.6"N 2°14'03.7"W
Saved
Recents
53°28'24.6"N...
London
Belfast
Get app
53°28'24.6"N 2°14'03.7"W
53.473486, -2.234354
Directions
Save
Nearby
Send to phone
Share
FQF8+97R Manchester
Add a missing place
Add your business
Add a label
Your Maps activity
Restaurants
Hotels
Things to do
Transport
Parking
Chemists
ATMs
Charles Street Multi-Storey Car Park
Charles St
Weston Hall
Lass O'Gowrie Manchester
Book A Table
Near You Now
Pendulum Hotel
3.9 (1608)
3-star hotel
The Manchester Conference Centre and...
Sackville St
River Medlock
Princess St
Nobel Wy
Brancaster Rd
Flori Cafe
No.3 Circle Square - Bruntwood SciTech
Premier Inn Manchester City Centre (Princess S...
Book Now - Premier Inn
Loverose Wy
A34
A57(M)
University of Manchester UAV Society
Association of University Administrators (AUA)
George Begg Building
Pariser Building
Ferranti Building
First Graphene Ltd
Circular Refining
Staff House Sackville Street
The Mill
Maths and Social Sciences Building
Hayes Associates
Culinary Sensation Ltd
Mancroft Walk
Litcham Cl
Google
Rezaid
Layers
Imagery ©2025 Airbus, Maxar Technologies, Map data ©2025
United Kingdom
Terms
Privacy
Send product feedback
20 m

GROUNDWISE

Groundwise Searches Ltd

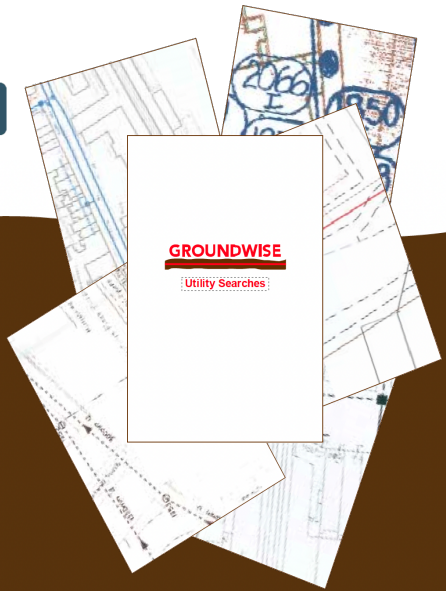
Neos Networks

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Our Ref: 38617201 Your Ref: 39540

Monday, 15 September 2025

Joe Shawyer
Groundwise Searches Ltd Suite 6, 3rd Floor, Princess Caroline House, 1 High Street
Southend on Sea
ESS
SS1 1JE

Dear Joe Shawyer

Neos Networks - Asset Network Plans

We acknowledge with thanks your request for information on the location of our assets.

If you're laying your own services, follow your HSG47 safe dig procedures. There is no need to contact us for permission to dig or arrange supervision.

If you have determined your works may impact our existing apparatus, then please contact alterations@neosnetworks.com to progress the diversion process. To start the process, we will require the following information:

- A covering letter or details on the email
- Plans / maps showing existing & proposed conditions (min 1:500 scale and PDF format if emailed)
- Overview of scheme, with timescales and approx. post codes.
- Scheme cost apportionment information with confirmation of who the works principal is (the person or company funding your project)

Yours sincerely

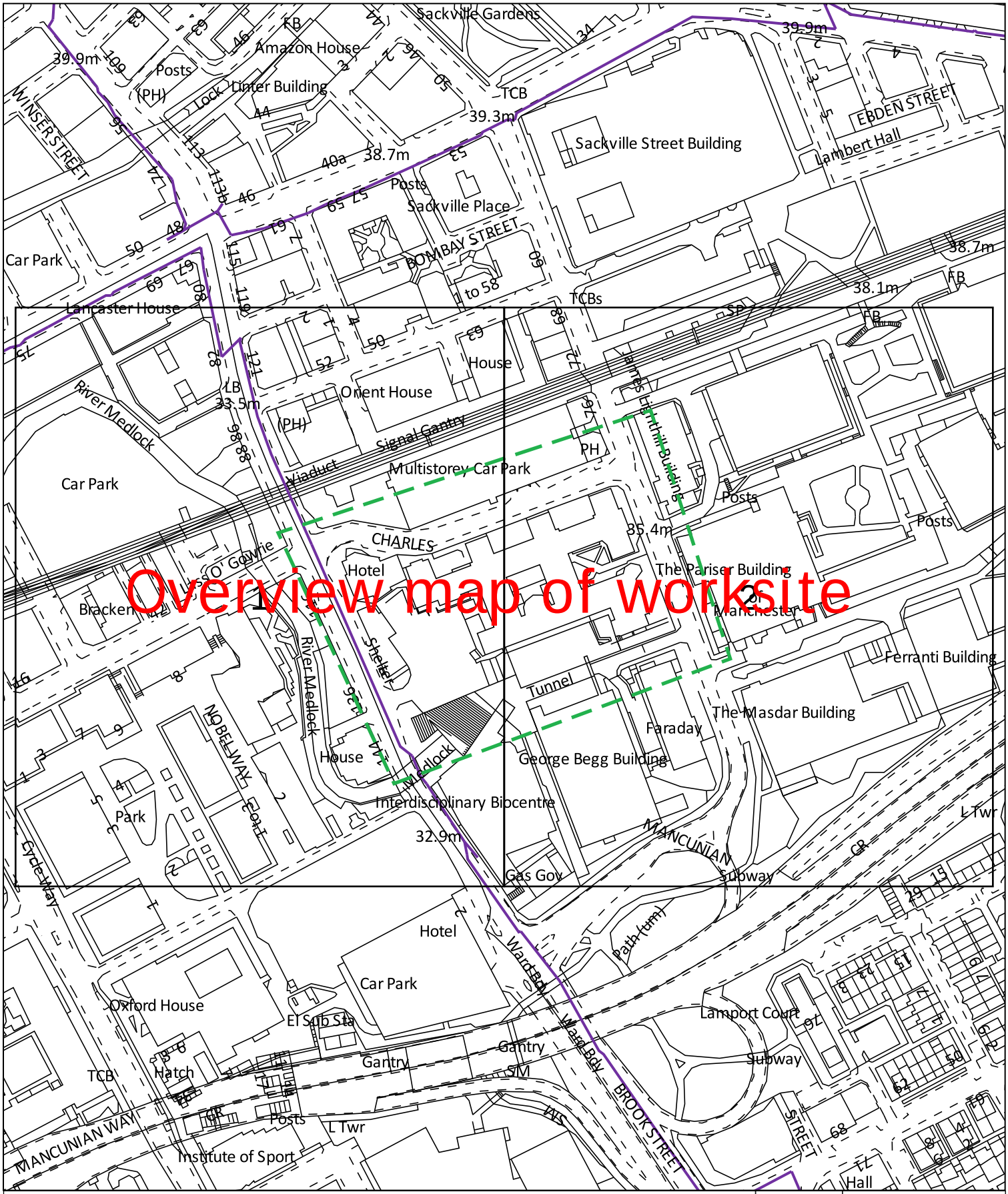
Neos Networks Team

Address: Neos Networks, 4 Penner Road, Havant, Hampshire, PO9 1QH
Email: C2requests@neosnetworks.com

For more information, visit our website:
https://neosnetworks.com/our-network/plant-enquires

Neos Networks is a trading name of Neos Networks Limited, registered in Scotland No. SC213457, which is 50% owned by the SSE Group and 50% owned by Infracapital (the infrastructure equity investment arm of M&G plc). The registered office of Neos Networks Limited is Inveralmond House, 200 Dunkeld Road, Perth, PH1 3AQ.

www.neosnetworks.com



Dig Sites Area: Line:

The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

Date Requested: 15/09/2025
Job Reference: 38617201
Site Location: 384453 397500

Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:2562 (When plotted at A4)

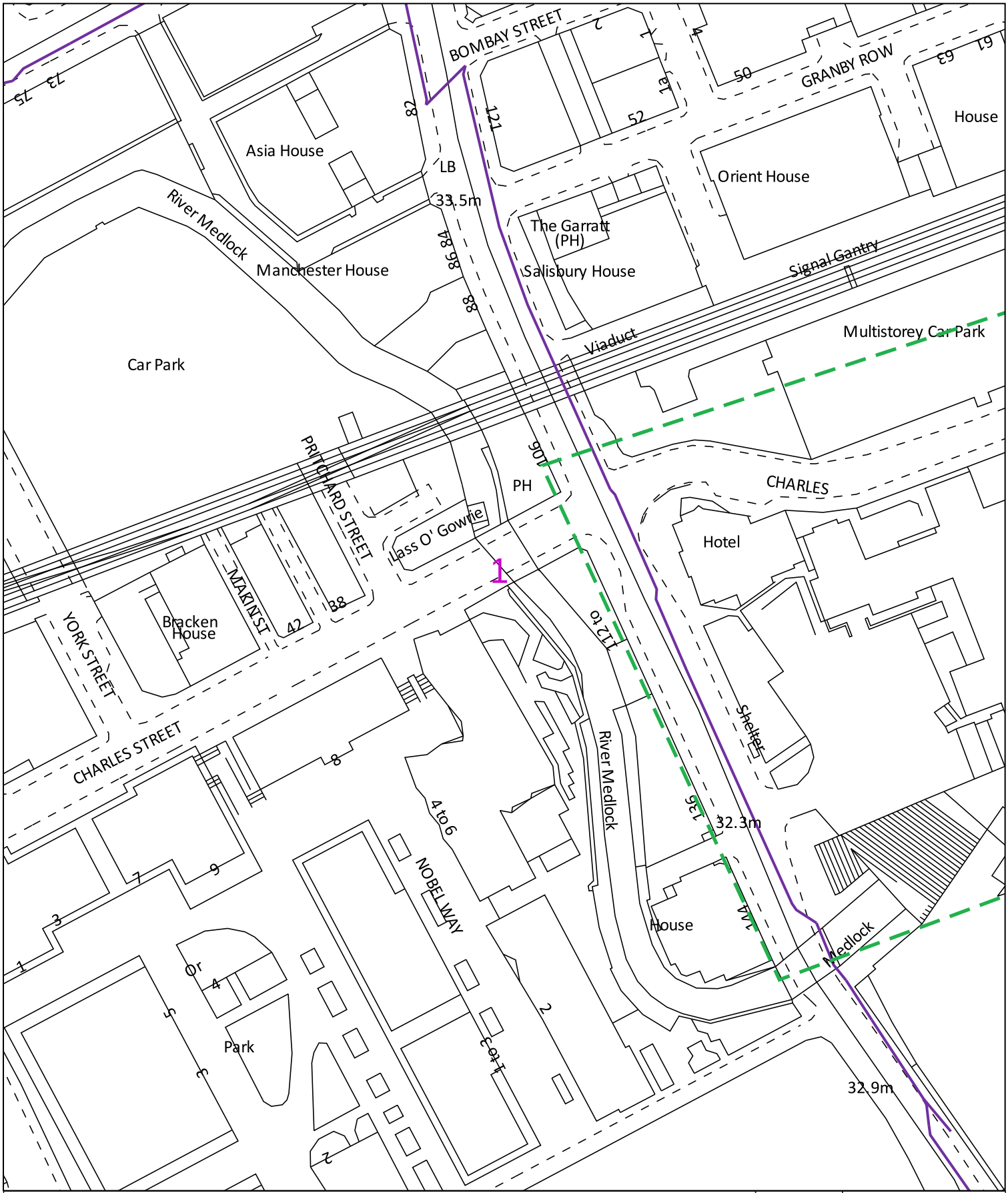
The information on this document is proprietary and shall not be used, copied, reproduced or disclosed in whole or in part without written consent of Neos Networks. Approximate location only is shown. To determine exact location a trial hole must be dug. Before excavation, please refer to HSG47. Neos Networks accept no liability for errors or omissions.

Neos Networks Underground Route

Emergency Number: 0345 305 3337

Registered Office:
Inveralmond House,
200 Dunkeld Road,
Perth, PH1 3AQ

Some of the material on this plot has been reproduced from an Ordnance Survey map with permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Licence No. AC0000808122
Warning: PDF designed for colour print only with no page scaling. This Information is given as a guide only and its accuracy cannot be guaranteed
Plans generated by DigSAFE Pro™ software provided by LinesearchbeforeUdig.



0 50m Dig Sites Area: Line:

The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

Date Requested: 15/09/2025
Job Reference: 38617201
Site Location: 384453 397500

Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

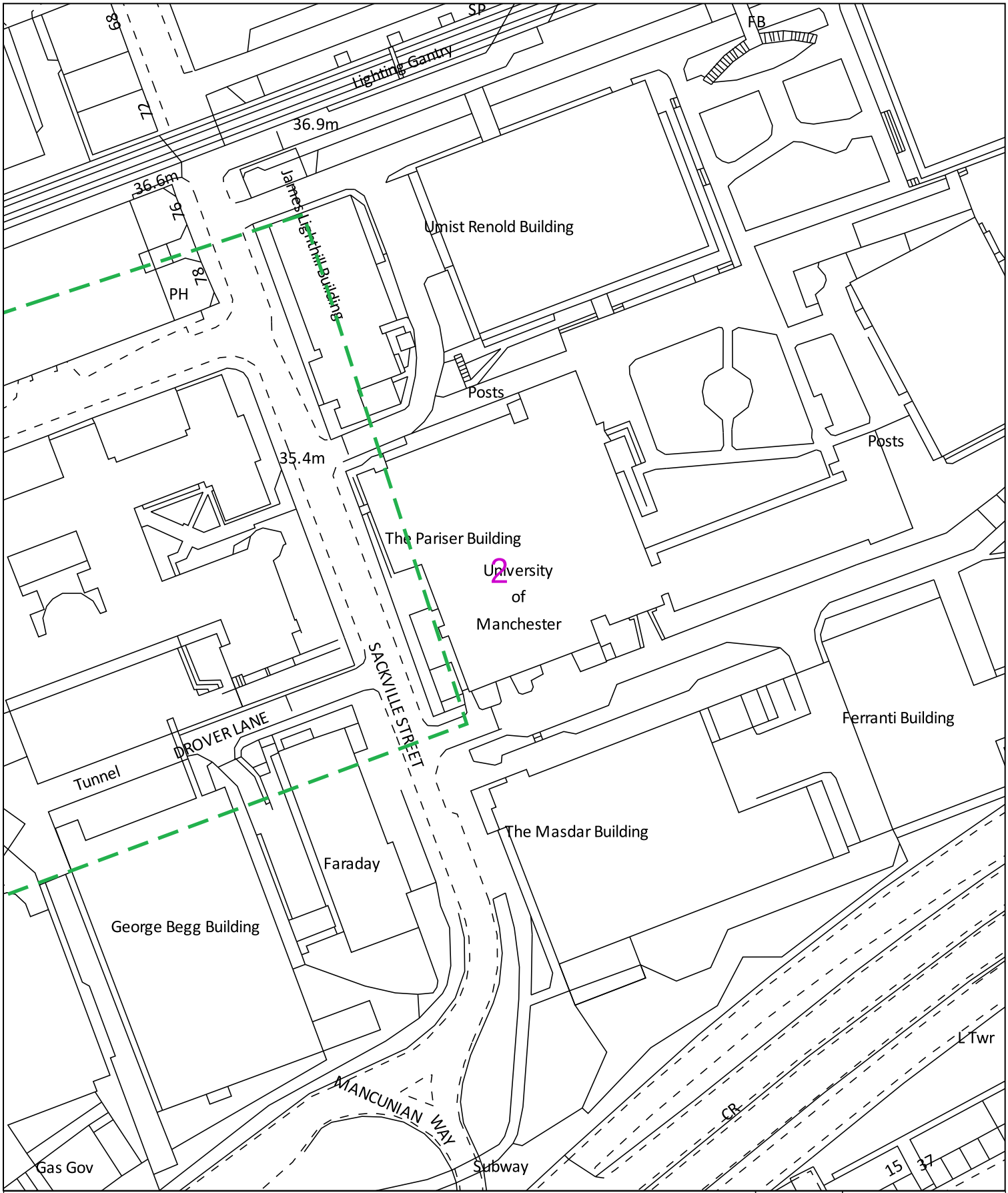
Scale: 1:1250 (When plotted at A4)

The information on this document is proprietary and shall not be used, copied, reproduced or disclosed in whole or in part without written consent of Neos Networks. Approximate location only is shown. To determine exact location a trial hole must be dug. Before excavation, please refer to HSG47. Neos Networks accept no liability for errors or omissions.

Neos Networks Underground Route **Emergency Number: 0345 305 3337**

Registered Office:
Inveralmond House,
200 Dunkeld Road,
Perth, PH1 3AQ

Some of the material on this plot has been reproduced from an Ordnance Survey map with permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Licence No. AC0000808122
Warning: PDF designed for colour print only with no page scaling. This Information is given as a guide only and its accuracy cannot be guaranteed
Plans generated by DigSAFE Pro™ software provided by LinesearchbeforeUdig.



0 50m Dig Sites Area: Line:

The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

Date Requested: 15/09/2025
Job Reference: 38617201
Site Location: 384453 397500

Requested by: Mr Joe Shawyer

Your Scheme/Reference: 39540

Scale: 1:1250 (When plotted at A4)

The information on this document is proprietary and shall not be used, copied, reproduced or disclosed in whole or in part without written consent of Neos Networks. Approximate location only is shown. To determine exact location a trial hole must be dug. Before excavation, please refer to HSG47. Neos Networks accept no liability for errors or omissions.

Neos Networks Underground Route **Emergency Number: 0345 305 3337**

Registered Office:
Inveralmond House,
200 Dunkeld Road,
Perth, PH1 3AQ

Some of the material on this plot has been reproduced from an Ordnance Survey map with permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Licence No. AC0000808122
Warning: PDF designed for colour print only with no page scaling. This Information is given as a guide only and its accuracy cannot be guaranteed
Plans generated by DigSAFE Pro™ software provided by LinesearchbeforeUdig.

GROUNDWISE

Groundwise Searches Ltd

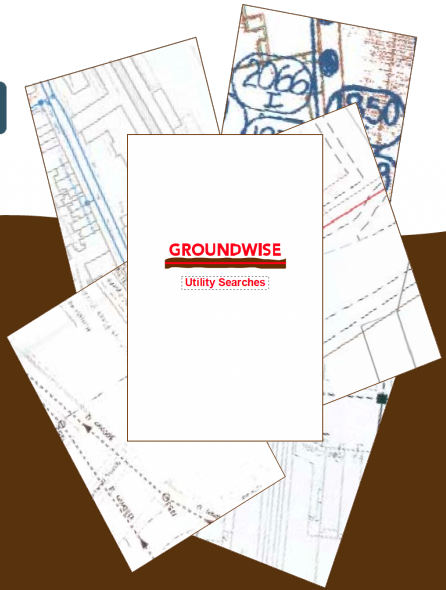
OCU Group

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Rebecca Bennett

From: Plantenquiries <Plantenquiries@ocugroup.com>
Sent: 10 September 2025 12:25
To: Responses
Subject: E09-25-2331 RE: Ref: 39540RB-GWS - Site: Weston Halls and Pendulum Hotel, Manchester, M1 3BB
Attachments: 39540RB-GWS - Weston Halls and Pendulum Hotel, Manchester, M1 3BB.pdf; Guide To Excavation.pdf

Dear Sir or Madam,

With reference to your enquiry regarding the above noted location, we enclose the drawing(s) indicating the approximate position of services in this area.

We would draw your attention to the fact that while the position of the plant has been shown as accurately as possible, the information is intended as a general guide only and must not be relied upon in the event of any excavations or other work in the vicinity. **We would remind you that the onus remains on you to determine the exact position for example by a hand excavated trial hole.** OCU accepts no liability for claims arising from any inaccuracy, omissions or errors contained herein. If you would like to query the location further, please email us accordingly and we can arrange an in depth survey, which will be charged at a cost. Enclosed is a guide to excavation works around existing plant.

OCU responds to plant enquiries for Lumen Technologies (formerly CenturyLink Communications UK Limited, Level 3, GLOBAL CROSSING (UK) LTD, GLOBAL CROSSING PEC and FIBERNET UK LTD and FIBRESPAN LTD) simultaneously and therefore you only need send one copy of a plant enquiry to cover all of these companies.

Please note that this response is only valid for 3 months. If your works do not commence within this time period, please resubmit your plant enquiry for assessment before any works commence.

Please note that our email address has changed from **plantenquiries@instalcom.co.uk** to **plantenquiries@ocugroup.com**. Could you please update your records accordingly.

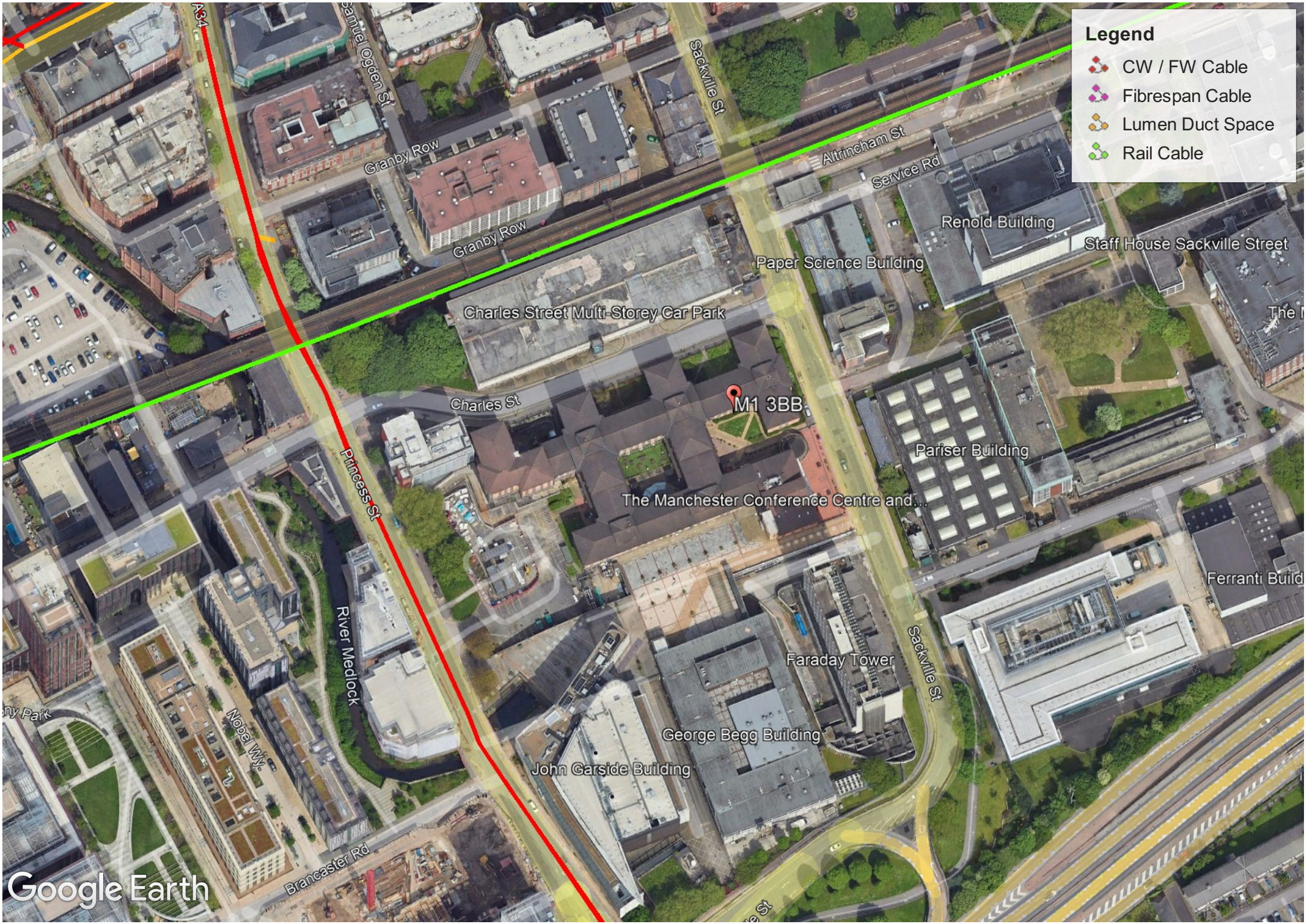
Response times for plant requests are up to 10 working days. Please allow for 10 working days to pass before chasing requests.

If you require any further information, please do not hesitate to contact us.

Regards

Plant Enquiries Dept
OCU
Borehamwood Ind. Park
Rowley Lane
Borehamwood
WD6 5PZ

Office: +44 (0)208 731 4613
Fax: +44 (0)208 731 4601
Email: plantenquiries@ocugroup.com
Web: http://www.ocugroup.com


Legend
CW / FW Cable
Fibrespan Cable
Lumen Duct Space
Rail Cable
A34
Samuel Ogden St
Granby Row
Granby Row
Sackville St
Altrincham St
Service Rd
Renold Building
Staff House Sackville Street
Paper Science Building
Charles Street Multi-Storey Car Park
Charles St
M1 3BB
Pariser Building
The Manchester Conference Centre and...
Princess St
River Medlock
Faraday Tower
Sackville St
George Begg Building
John Garside Building
Nobel Wy
Brancaster Rd
Google Earth

SPECIAL REQUIREMENTS IN RELATION TO LUMEN TECHNOLOGIES PLANT

1. In this special requirement, the following terms shall have the meanings assigned to it:-

   a. "Company" means Lumen Technologies.

   b. "Company Representative" means the staff of Lumen Technologies or its Authorized Representatives and Agents.

   c. "Apparatus" means all surface or sub-surface equipment and plant including any associated cabling and/or ducting owned leased or rented by Lumen Technologies.

2. Before commencing any work or moving heavy plant or equipment over any portion of the site, the contractor shall confirm details of the Apparatus, owned, leased or rented by the Company, within the site with the Company Representative, who can be contacted at the following point: -

OCU Group
Borehamwood Industrial Park
Rowley Lane
Borehamwood
Hertfordshire
WD6 5PZ
Tel: 0208 731 4600
Fax: 0208 731 4601
E-mail: plantenquiries@ocugroup.com

3. Where such details show that the works or the movement of plant or equipment may endanger the Apparatus of the Company the Contractor must give the Company Representative at least 7 days written notice of the date on which it is intended to commence such works of the movement of plant and equipment in order that the presence of any sub-surface apparatus can be indicated by markers to be supplied by the Company and placed by the Contractor under the supervision of a Company Representative. The Contractor shall ensure that all Company Apparatus, particularly surface running cabling is adequately protected from damage and such protective measures shall be approved by the Company Representative.

4. In the event of a Company marker being disturbed for any reason, it shall not be replaced other than in the exact position of its former depth unless the repositioning is carried out at the direction and under the supervision of a Company Representative.

5. The Contractor shall take particular care in relation to the protection of Company Apparatus, where such Apparatus includes the presence within the site of optical fibre cabling. The contractor should particularly note that the damage to such Apparatus is extremely disruptive to the Company network and costly to reinstate. The Contractor shall make every effort to avoid the disturbance of Company Apparatus more than is absolutely necessary for the completion of the works in accordance with the contract.

6. When excavating around, moving or backfilling around Company Apparatus, the Company Representative shall be given adequate notice, which shall not be less than 3 days, of the contractor's intentions in order that he may supervise the works. The Contractor should note that the normal depth of cover for Company Apparatus and ducts are as follows: -

   a. Carriageways 600mm
   b. Footways 350mm
   c. Verges 450mm

These minimum depths of cover should be maintained wherever possible.

Where the minimum depths of cover cannot be maintained, the Contractor shall carry out the instructions of the Company Representative for the protection of Company Apparatus.

Where cables are not in duct and the required depth of cover cannot be maintained, such cables as are affected shall be enclosed and protected in UPVC duct or equivalent materials as supplied by the Company and by the method directed by the Company Representative.

With regard to excavation in the vicinity of Company Apparatus the Contractor should have particular regard to the possibility of reduced cover and the encountering of such Company Apparatus at depths of cover less than that given at **a, b and c above**.

7. All excavation adjacent to Company Apparatus is to be carried out by hand until the exact extent and/or location of Company Apparatus is known. Mechanical borers and/or excavators shall not be used within 1.0m of Company Apparatus without the supervisory presence of a Company Representative, to prevent any movement of Company Apparatus during excavations, complete shuttering shall be used as directed by the Company Representative if:-

   a. Excavation is deeper than the depth of cover of adjacent Company Apparatus.

   b. Excavation is within 1.0m of Company Apparatus in stable ground.

   c. Excavation is within 5.0m of Company Apparatus in unstable ground.

   If for the completion of the works, the Contractor intends using any of the following: -

   a. Pile driving equipment within 10.0m of Company Apparatus.

   b. Explosives within 20.0m of Company Apparatus.

   c. Laser equipment within 10.0m of Company Apparatus.

   The Contractor shall advise the Company Representative, giving at least 7 working days written notice in order that any special protective measure for the Company Apparatus affected may be arranged.

8. All Company manhole, joint box and /or other access points and chambers within the site shall be kept clear and unobstructed. Access for vehicles, winches, cable drums and/or further equipment required by the Company for the maintenance of it's Apparatus, must be maintained at all reasonable times. The Contractor should particularly note that footway type jointing chambers are not specified for carriageway loadings and will need to be adequately protected and/or demolished and rebuilt under the supervision of a Company Representative where such chambers are likely to be placed at risk, either temporarily or permanently, from the movement of plant and/or equipment on the site.

9. The covers to Company chambers and/or Apparatus shall only be lifted by means of appropriate keys obtained from the Company Representative and under the direct supervision of the Company Representative. No employee of the Contractor or of any sub-contractor employed by the Contractor shall enter any chamber and/or Apparatus of the Company unless under the supervision of the Company Representative and in any case not before the mandatory gas check has been carried out in the presence of the Company Representative and such checks have shown it to be safe to enter the chamber and/or Apparatus of the Company.

   The Company Representatives shall be given reasonable access to all Company Apparatus and chambers when required.

10. In the event of any damage whatsoever to Company Apparatus, the Contractor shall immediately inform the Company Representative and report the occurrence immediately by contacting the Company as follows:-

Telephone:-

0208 731 4600
Mon-Fri Office Hours (OCU Group Office)

0845 330 8615
Out of Office Hours / Weekends

11. The above requirements do not relieve the Contractor of any of his obligations under the Contract.

The accuracy of information on the plans cannot be guaranteed and no liability can be accepted for errors or omissions.

Damage to Communications Plant is Expensive – Please Take Care.

GROUNDWISE

Groundwise Searches Ltd

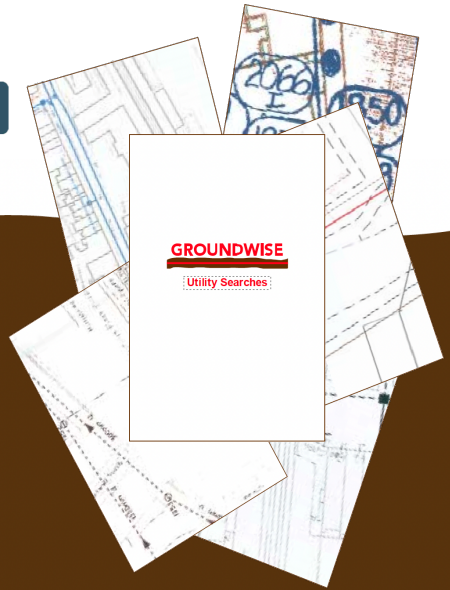
Openreach

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



BT Ref shown on map

Date of issue: shown on map

email: nnhc@openreach.co.uk

Dear Customer,

NR & SW ACT 1991 – PROPOSED WORKS

Prior to commencement of work: For free onsite guidance and accurate up to date location of BT Apparatus please contact our Plant Protection Service by the following methods:-

Email the Click Before You Dig Team CBYD@openreach.co.uk
Visit the Click Before You Dig Website www.openreach.co.uk/cbyd

Thank you for your request of ____ describing the above proposals.

Enclosed are copies of our drawings marked up to show the approximate locations of BT apparatus in the immediate vicinity of your works. It is intended for general guidance only. No guarantee is given of its accuracy.

The drawings are valid for 90 days from the date of issue and should not be relied upon after this time period has expired.

When planning excavation work or other works near to BT apparatus, please be mindful our apparatus may exist at various depths and may deviate from the marked route.

To avoid damage it is recommended that mechanical excavators or borers are not used within 600mm of BT apparatus. If scaffolding is erected, please ensure that our equipment is not enclosed, blocked, covered or otherwise obstructed by the scaffolding.

In the event of BT apparatus being in the area of your works we recommend that your plant/vehicle crossing is either resited, or apply for a budget estimate by submitting detailed plans to our Network Relocation Team at https://www.ournetwork.openreach.co.uk/altering-our-network.aspx

Yours faithfully,

Julie Cullum
NNHC & MBE Manager

OCCASIONALLY, MAPS MAY CONTAIN HATCHED AREAS. IT IS ESSENTIAL THAT YOU CONTACT THAT NATIONAL NOTICE HANDLING CENTRE by email on nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN ANY HATCHED AREAS.

NR & SW ACT 1991 - PROPOSED WORKS:

Prior to commencement of work: for free onsite guidance and accurate up to date location of BT plant please contact our Plant Protection Service by the following methods

Email Dial before you dig CBYD@openreach.co.uk

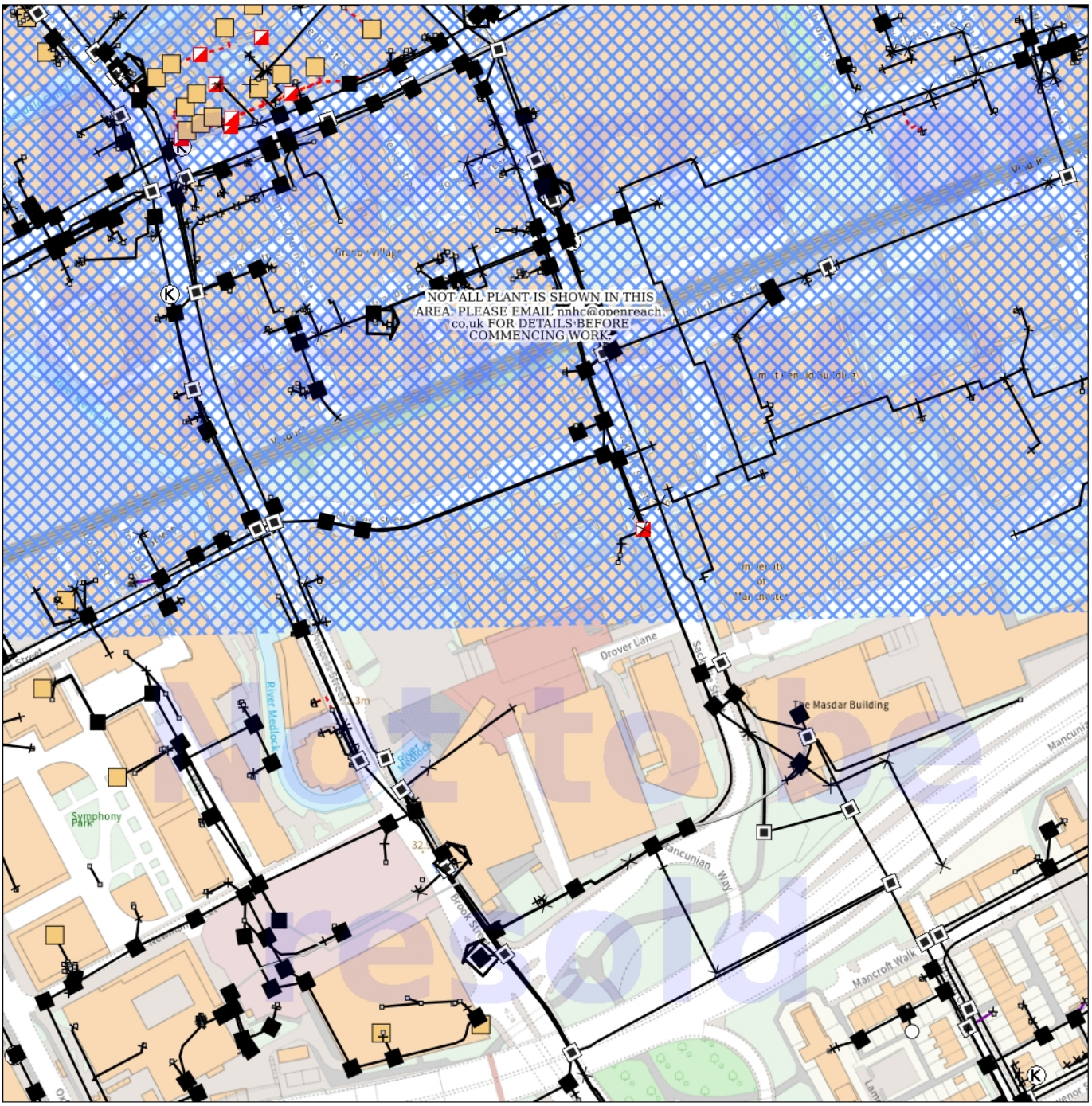
National Notice Handling Centre

Openreach

Web: www.openreach.co.uk

E-mail : nnhc@openreach.co.uk

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 newar 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

© Crown copyright 2023 OS 100028040. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-license, distribute or sell any of this data to third parties in any form.

KEY TO BT SYMBOLS

	Planned	Live
PCP		
Pole		
Box		
Manhole		
Cabinet		

Change Of State	+	Hatchings			
Split Coupling	×	Built			
Duct Tee	▲	Planned			
Building		Inferred			
Kiosk	K	Duct			

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.

	Pending Add	In Place	Pending Remove	Not In Use
Power Cable				
Power Duct				N/A

BT Ref : ITL15541P
Map Reference : (centre) SJ8447897512
Easting/Northing : (centre) 384478,397512
Scale : 1:500
Issued : 08/09/2025 15:54:51

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

GROUNDWISE

Groundwise Searches Ltd

Sky UK Ltd

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



SKY Telecommunications Services Ltd

70 Buckingham Avenue
SLOUGH
SL1 4PN
Tel: 0207 0323 234/250
Fax: 020 70323252
email: nrswa@sky.uk

12/09/2025

Further to your recent enquiry, the following Sky route(s) may be indirectly affected by your proposed works:

Manchester Equinix

The SKY route(s) is indirectly affected as we only lease telecoms infrastructure from **EQUINIX**, who own and are responsible for the maintenance or diversion thereof. For further information or detailed plans for this area, please contact the **EQUINIX** Enquiry Team, EQUINIX.

Please note that if our apparatus is deemed to be affected by your proposal and requires relocation or diversion in any way, you will need to contact SKY to provide estimates as per NRSWA Diversionary Works process.

Regards

NRSWA Department
Sky UK – Technology - Operations
nrswa@sky.uk +44 2070323234

GROUNDWISE

Groundwise Searches Ltd

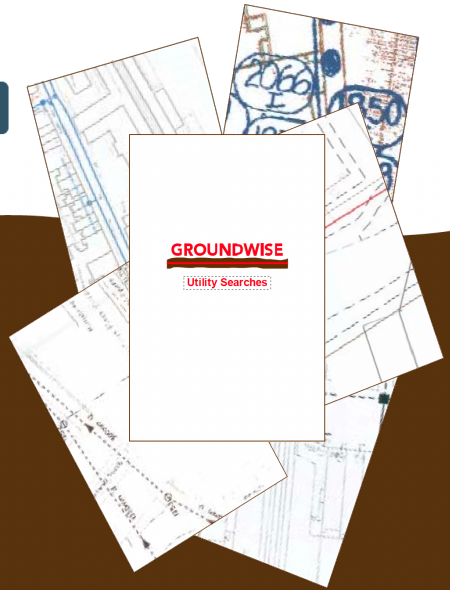
Virgin Media

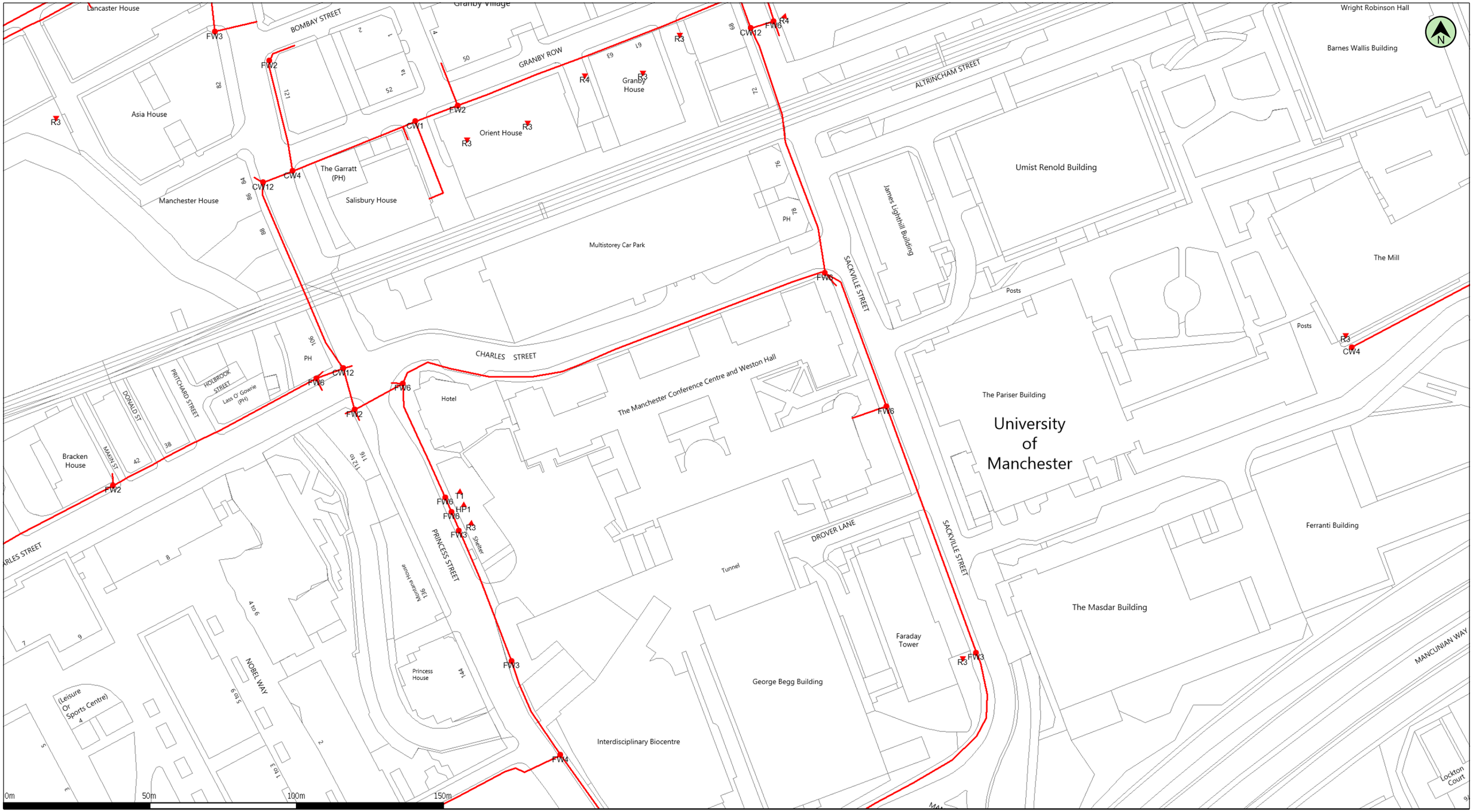
Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE





(c) Crown copyright and database rights 2025 Ordnance Survey AC0000818557 | Date: 15/09/25 | Scale: 1:1250 | Map Centre: 384478,397512 | Data updated: 01/08/25 | Our Ref: 1878997 - 4 | Telecoms Plan A3 Powered by digdat

Important Information - please read The purpose of this plan is to identify Virgin Media apparatus. We have tried to make it as accurate as possible but we cannot warrant its accuracy. 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. Further details can be found using the "Affected Postcodes.pdf", which can be downloaded from this website. Therefore, you must not rely solely on this plan if you are carrying out any excavation or other works in the vicinity of Virgin Media apparatus. The actual position of any underground service must be verified by cable detection equipment, etc. and established on site 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. This plan is produced by Virgin Media Limited (c) Crown copyright and database rights 2025 Ordnance Survey AC0000818557.

Duct, Trench | Chamber / Pole | Cabinet

responses@groundwise.com

39540

Virgin Media

Terms & Conditions of Use

By accessing material through this service you accept the terms and conditions specified below.

Data displayed by digdat

The data displayed in digdat is from the statutory plans provided on behalf of, and maintained by Virgin Media.

Use of the plans that can be viewed in digdat is subject to the disclaimers and conditions associated with them. The conditions under which the data can be viewed are specified below and these must be read before viewing the plans.

Warranties and Disclaimers

All information, software, products and related graphics contained on this service are provided 'as is' without warranty of any kind, either expressed or implied, including but not limited to the implied warranties of satisfactory quality, fitness for particular purpose, title and non-infringement. In no event shall Virgin Media be liable for any direct, indirect, incidental, special or consequential damages for loss of profits, revenue, data or use incurred by users or any third party, whether in action, in contract, in tort, or otherwise arising from your access to or use of this service.

Virgin Media make no representations about the suitability, reliability, timeliness or accuracy of the information, software, products and related graphics contained within this service.

Virgin Media reserves the right to make improvements, changes or updates to this service at any time without notice.

Based on the Ordnance Survey Plan with the sanction of the Controller of H.M. Stationary Office License Number:- 100019209. This plan is to be used for the purposes of viewing the location of Virgin Media plant only. Any other uses of the plan data or further copies are not permitted. The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. This information is valid for the date printed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Virgin Media for any error or omission. The actual position of mains and services must be verified on site before any works are undertaken.

Printing

The quality and accuracy of any prints produced from digdat depend upon the specific printer and printer driver that are used. Virgin Media can take no responsibility for the results of actions arising from distortions and inaccuracies introduced by the user's printer.

GROUNDWISE

Groundwise Searches Ltd

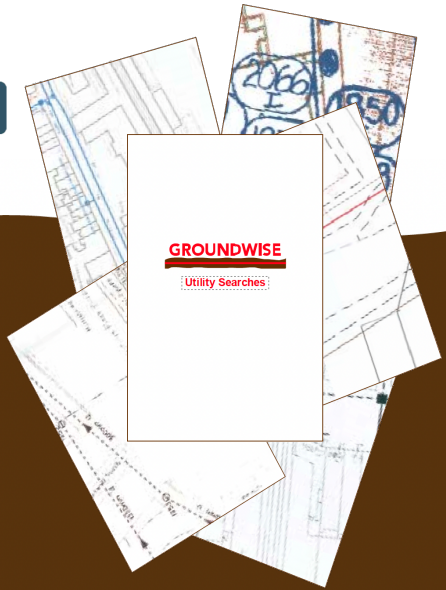
Vodafone

Utility Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Rebecca Bennett

From: Murthy, Srinivasa <Srinivasa.Murthy@atkinsrealis.com>
Sent: 12 September 2025 12:22
To: Responses
Subject: RE: Ref: 39540RB-GWS - Site: Weston Halls and Pendulum Hotel, Manchester, M1 3BB
Attachments: 39540RB-GWS.pdf; Special Requirements v4.pdf

Please accept this email as confirmation that Vodafone: Fixed **does** have apparatus within the vicinity of your proposed works detailed below.

Please see attached network information.

Please note that according to our records there is leased and/or third party network within your proposed works. However, because the plant is leased/third party we strongly recommend you contact all other utility providers to gather the extent of services within that area. Unfortunately, we are unable to advise who the plant is leased to or who the third party is.

IMPORTANT - PLEASE READ = Your Next Step?:-
Where apparatus is affected and requires diversion, please send all the scheme related proposals that affects the Vodafone Network to c3requests@vodafone.com with a request for a 'C3 Budget Estimate'. Please ensure you include a plan showing proposed works. (A location plan is insufficient for Vodafone to provide a costing). These estimates will be provided by Vodafone directly, normally within 20 working days from receipt of your request. Please include proof of this C2 response when requesting a C3 (*using the 'forward' option*). Diversionary works may be necessary if the existing line of the highway/railway or its levels are altered.

If you require a quote for new development, commercial site connections - please email your requirements and associated plans to c3requests@vodafone.com and a budget estimate will be returned, within 10 working days of receipt

Plant Enquiries Team(SM)
T: +44 (0)1454 662881
E: osm.enquiries@atkinsglobal.com

This response is made only in respect to electronic communications apparatus forming part of the Vodafone Limited electronic communications network formerly being part of the electronic communications networks of Cable & Wireless UK (now re-named Vodafone Enterprise UK), Energis Communications Limited, Thus Group Holdings Limited and Your Communications Limited.

ATKINS working on behalf of Vodafone: Fixed

PLEASE NOTE:

The information given is indicative only. No warranty is made as to its accuracy. This information must not be solely relied upon in the event of excavation or other works carried out in the vicinity of Vodafone plant. No liability of any kind whatsoever is accepted by Vodafone, its servants, or agents, for any error or omission in respect of information contained on this information. The actual position of underground services must be verified and established on site before any mechanical plant is used. Authorities and contractors will be held liable for the full cost of repairs to Vodafone's apparatus and all claims made against them by Third parties as a result of any interference or damage.

Please consider the environment before printing this e-mail

At Atkins - member of the SNC-Lavalin Group, we work flexible hours around the world. Although I have sent this email at a time convenient for me, I don't expect you to respond until it works for you.



Some of the material in this plan has been reproduced from an Ordnance Survey map with the permission of The Controller of Her Majesty's Stationary Office, © Crown Copyright
Ordnance Copyright & Ordnance Survey GB License 100031653

Legend

- Access Chamber.Location Active Manhole
- Access Chamber.Location Active Carriageway Chamber
- Access Chamber.Location Active Footway Chamber
- Underground Route.Route Abandoned - Leased
- Underground Route.Route Active - Owned
- Underground Route.Route Active - Leased

vodafone

Vodafone Limited (No01471587) registered office is at Vodafone House, The Connection, Newbury, Berkshire, RG142FN

Plot Date : 12/09/2025	Scale : 1:1250

This plan shows apparatus owned by members of the Vodafone Group of companies (including legacy telecommunication companies currently within the group)

Information with regard to such apparatus should always be obtained from Vodafone or its appointed agents.

Special Requirements relating to the External Plant Network of Vodafone

Contents

1. Introduction 1
2. Purpose of document 1
3. Scope 2
4. Vodafone Network and Apparatus 2
5. Plant records 2
6. Definitions 2
7. Requirements 3
8. Depths of cover 3
9. Separation 4
10. Jointing chambers 5
11. Notification periods 5
12. Excavation and backfill 5
13. Foam concrete 6
14. Attendance of Company Representative 6
15. Damage reports 6
16. Appendix A – Street Works Team Contacts for Vodafone 7
17. Appendix B – What constitutes Vodafone Network 8
18. About this Document 13

1. Introduction

This document sets out the procedure that will apply when Other Parties intend or are undertaking works in the vicinity of Vodafone apparatus (see Appendix B for further information on what constitutes Vodafone apparatus).

2. Purpose of document

This document provides a means by which the Vodafone specific special requirements relating to their apparatus, regardless of it being situated in the public highway / road, private street, land or any other areas, is made aware to Other Parties.

3. Scope

This document will be presented to Other Parties or Contractors to encourage those undertaking works within the vicinity of Vodafone apparatus to refer to and comply with. This is in order to protect where necessary the Vodafone apparatus and to avoid damage to the apparatus and loss of service.

A National Joint Utilities Group (NJUG) document NJUG Volume 3 Guidelines on the Management of Third Party Cable Ducting provides useful reference material.

It should be noted that, where appropriate, additional information on avoiding danger from underground apparatus is contained within the HSG47 guidance book titled "Avoiding Danger from Underground Services."

4. Vodafone Network and Apparatus

Damage to Vodafone apparatus is extremely disruptive and can be expensive to repair, especially where long lengths of cable have to be replaced.

In order to maintain the network integrity and minimise disruption to service, it is essential that disturbances are absolutely minimal. When working within the vicinity of Vodafone apparatus, extreme care is necessary in order to avoid costly repairs. The Other Parties / Contractor shall make every effort to ensure that disturbance of Vodafone apparatus is no more than is absolutely necessary for the completion of the works in accordance with their contract. It should be noted that it is an offence to interfere with Vodafone apparatus without first contacting the company for advice.

5. Plant records

It is the responsibility of the Other Parties undertaking works which may affect Vodafone apparatus to obtain all relevant Vodafone plant records from our agent Atkins Global prior to works commencing. This may be done by contacting the Atkins Global Plant Enquiries Team listed in Appendix B.

Plant records for such enquiries will generally be provided within 10 working days of receipt and in compliance with the New Roads and Street Works Act 1991 [NRSWA] requirements.

6. Definitions

The following definitions are applicable in this document:

a) **Apparatus -** means all surface or sub-surface equipment and plant used by Vodafone including any associated cables or ducts owned, leased or rented by Vodafone.

b) **Cable** - means any polythene or other sheath containing optical fibres or metallic conductors.

c) **Depth of cover** - means the depth from the surface to the topmost barrel of the duct nest, in the case of ducts encased in concrete, to the top of the concrete, and in the case of directly buried cable, the top of the cable.

d) **Jointing chamber** - means any manhole, surface box or other chamber giving access to Vodafone apparatus or their network.

e) **Utility** - means an organisation licensed to provide gas, water, electricity, Cable TV or telecommunications services.

f) **Developer** - means an organisation licensed to develop industrial/residential premises or given license to connect to utility apparatus.

C2 General

g) Contractor - means the individual, firm or company contracted to undertake the work for a Utility or Other Parties.

h) Other Parties - means the Utilities, Highway or Roads Authorities, Developers, Street/Roads Authority Section 50/109 licensees

i) Site - means the location of, or in the vicinity of, the various works.

7. Requirements

Prior to commencing any work or moving heavy plant or equipment over any portion of the site, the Other Parties or Contractor shall notify Vodafone of their intentions. This may be done by contacting Vodafone via the contact list in Appendix B.

Upon receipt of this notification, Vodafone will identify if their apparatus is affected. If any Vodafone apparatus is affected by the works then they will arrange for the necessary records to be provided and confirm details of Vodafone apparatus and network operated within the affected area or adjacent to the proposed work site.

7.1 Location of Plant

It is the responsibility of the Other Parties or Contractors to undertake adequate plant location procedures. These may include searches for metallic cables which must be performed by actively inducing a signal in a cable conductor via a transmitter. A passive search is not considered sufficient.

Before applying a tracing signal to the Vodafone apparatus, the Other Parties or Contractors shall seek confirmation from Atkins Global that the Vodafone apparatus will not suffer any disruption to its networks normal workings as a result of the nature of the signal being induced.

7.2 Trial excavations

Optic fibre cables are very susceptible to damage from excavation tools. They are not electrically conductive and cannot be located by radio induction methods. Once an approximate location is known, the exact location must be ascertained by means of hand dug pilot holes. Where the work to be carried out by the Other Party or Contractor involves excavation in the vicinity of our apparatus, the Other Party or Contractor shall, by trial excavation at his own expense, determine the exact location and depth of the Vodafone apparatus. All excavations adjacent to the Vodafone apparatus are to be carried out by hand until the extent and /or location of the apparatus is known.

All excavation work shall be executed in accordance with the current issue of Health and Safety series booklet HSG47, Avoiding danger from underground services.

8. Depths of cover

The Other Party or Contractor should note that the minimum depths of cover for Vodafone apparatus shall be maintained together with specified separation requirements. Where the minimum depths of cover specified by Vodafone cannot be maintained, the Other Party or Contractor shall at their own expense, carry out the instructions of Vodafone requirements for the protection or diversion of their apparatus.

The Other Party or Contractor should have particular regard to the possibility of encountering Vodafone apparatus (including ducts and cables), at depths of cover other than that reported.

Surface cables (such as cables on bridges or walls) which are liable to be placed in danger from the Other Parties or Contractors works shall be protected, at the Other Parties expense, as directed by the Vodafone representative.

C2 General

9. Separation

Reference should be made to HSG47 to ensure that adequate separation is achieved. The following details outline the specific requirements of Vodafone and capture the HSG47 requirements.

9.1 High voltage cables

High voltage single core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 500 mm.

High voltage multi-core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 350 mm.

In exceptional circumstances where the above clearances cannot be maintained, the separating distance may be reduced to a minimum of 175 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the High Voltage cable and the Company Apparatus, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.2 Low voltage cables

Low voltage cables of less than 1000 V shall have a minimum clearance from Company Apparatus of 180 mm. In exceptional circumstances where the above clearance cannot be maintained, the separating distance may be reduced to a minimum of 75 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the services, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.3 Ancillary electrical apparatus

Street furniture such as lamp posts, traffic posts and other such ancillary electrical apparatus shall have a minimum clearance of 150 mm from underground Company Apparatus and 600mm clearance from above ground Company Apparatus.

9.4 High pressure gas mains and other Undertakers plant/equipment

High pressure gas mains shall have a minimum clearance of 450 mm from Company Apparatus. All other undertakers' plant and equipment, when running in parallel with Company Apparatus, shall have a minimum clearance of 200mm. Where gas mains cross Company Apparatus, the minimum clearance shall be 200mm. All other undertakers' plant and equipment, when running across Company Apparatus, shall have a minimum clearance of 100 mm. NJUG Volume 1, Guidelines on the positioning and colour coding of underground utilities' apparatus refers.

9.5 Other Undertakers plant

Other undertakers' plant and equipment which runs in parallel with Company Apparatus shall have a minimum clearance of 200mm. All other undertakers' plant and equipment when running across Company Apparatus shall have a minimum clearance of 100mm.

9.6 Tramways

Each separating distance shall be individually agreed with the Company Representative.

C2 General

10. Jointing chambers

10.1 Protection

Footway type jointing chambers are not designed to withstand carriageway loadings.

Where such chambers are liable to be placed at risk, either temporarily or permanently, from vehicular traffic or from the movement of plant and/or equipment, they will need to be adequately protected. Alternatively, they may have to be demolished and rebuilt to carriageway standards, at the Other Parties or Contractors expense under supervision of Vodafone representative.

All Vodafone jointing chambers and / or other access points shall be kept clear and unobstructed. Access for vehicles, winches, cable drums and / or any further equipment required by Vodafone for the maintenance of its apparatus, must be maintained at all reasonable times.

10.2 Access

The covers to Vodafone jointing chambers and / or apparatus shall only be lifted by means of the appropriate keys and under the direct supervision of a Vodafone representative. Other Parties or Contractors shall not enter any Vodafone jointing chamber and / or apparatus unless under the supervision of a Vodafone representative and in any case not before the mandatory gas test has been carried out in the presence of Vodafone representative and such checks have shown it to be safe to enter the Vodafone chamber and / or apparatus. The Other Parties or Contractors shall be given reasonable access to Vodafone apparatus and chambers when required.

11. Notification periods

Where the Other Parties or Contractors works or the movement of plant or equipment may endanger Vodafone apparatus, the Other Party or Contractor shall give **Vodafone at least 7 working days' notice in writing** of the intended date to commence operations.

No excavation should be made without first consulting the relevant Vodafone apparatus layout drawings, which will be made available from the Vodafone agent Atkins Global on request and allowing 28 working days for processing the relevant drawings. However, should this not be possible, direct contact should be made to the Atkins Global Plant Enquiries Team as soon as possible to assess the situation.

When excavating, moving or backfilling (including use of Foamed Concrete for Reinstatements – FCR) around Vodafone apparatus, **Vodafone shall be given adequate prior written notice of the Other Parties or Contractors intentions in order that the works may be adequately Supervised at our standard daily Supervision rate, which will be confirmed at time of request and must be paid in advance of the works commencement. Such notice shall not be less than 3 working days.**

12. Excavation and backfill

All excavations adjacent to Vodafone apparatus are to be carried out by hand until the extent and or location of the Vodafone apparatus is known.

Use of mechanical borers and / or excavators shall not be used without the supervisory presence of a Vodafone representative or a given exemption.

Shuttering of the excavation or support to Vodafone apparatus, at the Other Parties or Contractors expense, shall be used as directed by the Vodafone representative.

At least 7 working days' notice must be given to Vodafone in order that any special protective measures which may be required to protect Vodafone apparatus, at the Other Parties or Contractors expense, when equipment

C2 General

such as pile driving, explosives, laser cutting high powered RF equipment or RF test gear, is to be used in conjunction with the works.

Other Parties or Contractors are advised to refer to the National Joint Utilities Group publication: NJUG Volume 1- Guidelines on the Positioning and Colour Coding of Underground Utilities' Apparatus

13. Foam concrete

If foam concrete is being used as the backfill material, it shall not be used either above or within 500 mm of any Company Apparatus. A suitable material in accordance with the specification for the Reinstatement of Openings in Highways shall be substituted.

14. Attendance of Company Representative

If a situation requires the attendance on site of a Vodafone representative for a continuous period of more than 6 hours, suitable facilities shall be provided by the Other Party or Contractor, at their expense, to meet the office and ablution requirements. If a situation arises that requires urgent attention Vodafone will endeavour to attend site within 2 hours for all other occasions arising, 24 hours.

15. Damage reports

In the event of any damage whatsoever occurring to Vodafone apparatus, the Other Party or Contractor shall immediately inform Vodafone by contacting their 24/7 number , (for contact details please refer to Appendix A).

All relevant costs of any subsequent repair and / or removal of the Vodafone apparatus shall be charged to the Other Party or Contractor, irrespective of who affects the repair.

The above requirements do not relieve the Other Party or Contractor of any of their obligations under their contract.

C2 General

16. Appendix A – Street Works Team Contacts for Vodafone

Function	Address	Phone	Email Address
Streetworks Team	Vodafone, Street Works, The Connection, Newbury, RG14 2FN	0333 304 0759	utilitiescentre@vodafone.com
Customer Complaints	n/a	0333 304 0762	n/a
Liability Claims Or Damage to Vodafone Apparatus	Vodafone, Damage Claims, 300 Bath Street, Glasgow, G2 4JR	0333 304 1104	claims@vodafone.com
Diversionary Works C2/C3	Atkins Global, PO Box 290, 500 Aztec West, Almondsbury, Bristol, BS32 4RZ.	01454 662881	osm.enquiries@atkinsglobal.com
Diversionary Works C4 / Escalations Networks Manager	Vodafone, Diversionary Works, 300 Bath Street, Glasgow, G2 4JR	07803 260359	c3requests@vodafone.com
Emergencies 24 Hour – Defects & Faults	n/a	0333 304 0762	n/a
Vodafone Plant Enquiries includes: Cable & Wireless; Mercury Comms; Thus plc; Scottish Telecoms; Your Comms; Norweb Comms; Energis	Atkins Global PO Box 290 500 Aztec West, Almondsbury, Bristol, BS32 4RZ	01454 662881	osm.enquiries@atkinsglobal.com

17. Appendix B – What constitutes Vodafone Network

Vodafone own fibre network dedicated to business and residential users of telecommunications and has an international cable network that provides connectivity to 153 countries, either directly or indirectly through partners, reaching across the Atlantic Ocean, through Europe and on to India and throughout Asia. Spanning approximately 500,000 km in length, including interests in more than 69 major global cable systems, our next-generation network improves the quality and performance of telecommunications services through our use of advance optical and IP transmission.

In the UK & Ireland Vodafone's overall network includes the following legacy networks now owned through acquisitions or Company name changes.

Below are examples of what you could see on the streets and should be aware of:

vodafone



Cable&Wireless Worldwide

Cable & Wireless became Cable & Wireless Worldwide in 2010



Mercury Communications – changed its name to Cable & Wireless in 1996

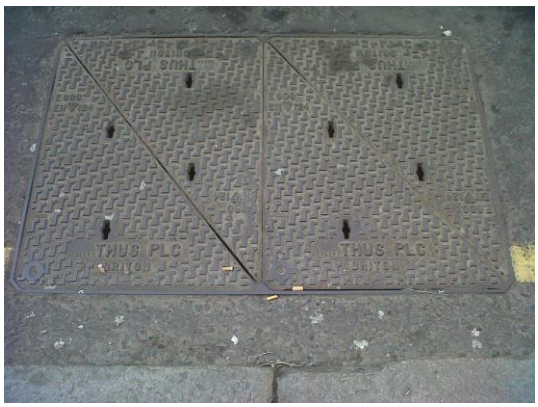


The linked image cannot be displayed. The file may have been moved, renamed, or deleted. Verify that the link points to the correct file and location.

Energis – was acquired by Cable Wireless in 2005



Thus plc was acquired by Cable & Wireless in 2008





Scottish Telecom

Scottish Telecom demerged from its parent company Scottish Power to become Thus plc in 2002



your communications

Your Communications was integrated into Thus plc in 2006



NORWEB COMMS

Norweb Communications became Your Communications in 2000





Our apparatus is installed in roads and streets of UK and Ireland, however in some places is undistinguishable from other operators' apparatus, for example in City Centres where high quality infill modular paving chamber covers are found; some with labels and some without.

See below as examples:









The apparatus shown here is now owned, maintained and still in operation by Vodafone and includes.

Vodafone
Cable & Wireless
Mercury Communications
Energis
Thus plc
Your Communications
Norweb Communications
Scottish Telecom

Please see the Contact Details in Appendix A for Plant Enquiries and help on site.

18. About this Document

Content Owner
Chris Nesbitt

Changes since last version
23/02/2021 - Reformatted using the current Vodafone template to include updated Contact Details 09/06/2023 – 11. Notification Periods - Supervisory Rates added. App B - Address, Contact Details amended.

-

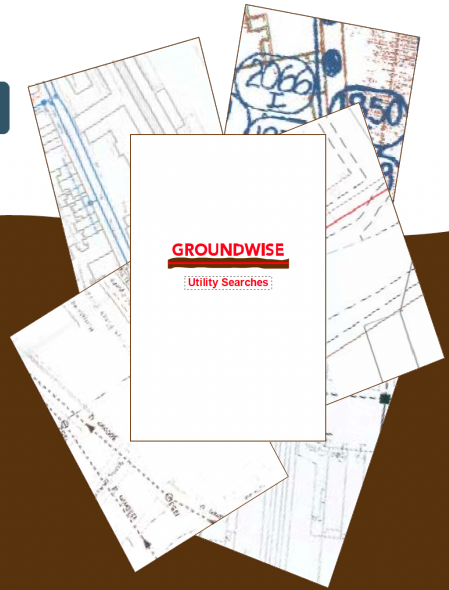
End of Document

GROUNDWISE

Groundwise Searches Ltd

GTC

Utility Present



Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE

Rebecca Bennett

From: plantenquiryservice@gtc-uk.co.uk
Sent: 08 September 2025 16:07
To: Rebecca Bennett
Subject: GTC Plant Enquiry - Ref- 5686090
Attachments: 5686090.png; GU-DPR-IG-0022 Safe working in the vicinity of utility networks.pdf

Warning: GTC Apparatus Exists in This Area

Our Plant Enquiry Service Ref: 5686090
Your Enquiry Ref: 39540

Dear rebecca,

Thank you for your enquiry concerning apparatus in the vicinity of your proposed work. For your records, the search area is shown in the attached map.

Please click on the links below to download copies of the relevant utility asset drawings locating our assets in the area which you identified. These drawings are grouped by our relevant network reference, should you need to contact us regarding any of our networks please quote this reference. Links to files will remain live for 10 days. If you do not download these files within this period you will need to submit a new enquiry – this will ensure you have an up-to-date copy of our asset records.

PLEASE NOTE: Where drawings are large, these have been provided in smaller segments. A drawing index is provided as the first file listed for each network reference (example of a network reference: N1234567) shown below. This is intended to help you find the drawing relevant to you more quickly. Please take care to ensure that you use the relevant drawings for every network listed below as we may have multiple networks and multiple utilities in this area.

N0020339

Electric

- EN0020339-1_1_of_8 Schematic.png
- EN0023296-1_1_of_3_Entire_site_Rev4-2.png
- EN0020339-1_1_of_5.png
- EN0020339-1_1_of_3_Entire_site_Rev5-1.png
- EN0023296-1_2_of_3_Rev4-2.png
- EN0020339-1_2_of_8 Schematic.png
- EN0020339-1_2_of_3_Rev5-1.png
- EN0020339-1_2_of_3_Rev5-1_stamp_appendix_1_of_1.png
- EN0020339-1_2_of_5.png
- EN0023296-1_3_of_3_Rev4-2_Contestable_HV_Rev4-2.png
- EN0020339-1_3_of_8 Schematic.png
- EN0020339-1_3_of_5.png
- EN0020339-1_3_of_3_Rev5-1_Contestable_HV_Rev5-1.png
- EN0020339-1_3_of_3_Rev5-1_Contestable_HV_Rev5-1_stamp_appendix_1_of_1.png
- EN0020339-1_4_of_8 Schematic.png
- EN0020339-1_4_of_5.png

- EN0020339-1_5_of_5.png
- EN0020339-1_5_of_8 Schematic.png
- EN0020339-1_6_of_8 Schematic.png
- EN0020339-1_7_of_8 Schematic.png
- EN0020339-1_8_of_8 Schematic.png

This information is for guidance only and the precise position of the plant must be established, prior to your works, using hand-digging methods only. The contractor will be held responsible for any damage caused to our asset. Please note our assets now include those owned and operated by:

- GTC Pipelines Limited
- Independent Pipelines Limited
- Quadrant Pipelines Limited
- Electricity Network Company Limited
- Independent Power Networks Limited
- Independent Water Networks Limited
- Open Fibre Networks Limited
- Independent Community Heating Limited

If you have any queries or require any further information please do not hesitate to contact us.

All works in the vicinity of our networks should be undertaken in accordance with the attached document "GU-DPR-IG-0022: Safe working in the vicinity of utility networks". Reference should also be made to HSG47 Avoiding Danger from Underground Services.

Important: The area of your proposed works may contain gas mains operating at Medium and Intermediate Pressure tiers or electric cables operating at High Voltage – please refer to the network drawings included with this email. If your proposed works are likely to involve excavation within 10 metres of any of these assets, including but not limited to gas governors and electric substations you MUST inform GTC Plant Enquiries by calling 01359 240363 and quoting your Plant Enquiries Service Reference number.
Important: Drawings provided by this service may include utility assets not owned or managed by GTC. Conversely our drawings will NOT display assets from all third parties. It is your responsibility to ensure you have requested information from all utility asset owners.

Gas Escape or Damage MUST be reported on 0800 111 999. National Grid / DNGT will attend to make safe and repair.
Electricity Network Damage MUST be reported to ENC on 0800 032 6990.
Water Network Damage MUST be reported to IWNL on 02920 028 711
Fibre Network Damage MUST be reported to IFNL on 0845 051 1669

Thank you for using the GTC Plant Enquiries Service.

Your sincerely,

GTC Plant Enquiry Service

GTC
Synergy House
Woolpit Business Park
Woolpit
Bury St Edmunds

Suffolk, IP30 9UP
Tel: 01359 240363
plant.enquiries@gtc-uk.co.uk

NOTE:
This E-Mail originates from GTC, Synergy House, Woolpit Business Park, Woolpit, Bury St Edmunds, Suffolk, IP30 9UP
VAT Number: GB688 8971 40. Registered No: 029431.

DISCLAIMER
The information in this E-Mail and in any attachments is confidential and may be privileged. If you are not the intended recipient, please destroy this message, delete any copies held on your system and notify the sender immediately. You should not retain, copy or use this E-Mail for any purpose, nor disclose all or any part of its content to any other person. Whilst we run antivirus software on Internet E-Mails, we are not liable for any loss or damage. The recipient is advised to run their own up to date antivirus software.
Thank you

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:05:45. This drawing is reproduced from our records archive at the time of enquiry.

14.06.2025

This design is across multiple drawings for details please refer to all drawings.

Electric Notes
All electric mains, services and ducts that shall contain electric cables must be overlain with electric identifiable marker tape laid 250mm above the cable. Mains, services and ducts carrying services should have a minimum of 250mm separation to any other utility.

Backfill Specification
Directly buried cables should be surrounded by cable sand installed to BS EN 13139 - Aggregate size of 0-2mm to CAT 4. A 75mm layer should be installed at the bottom of the trench and a further 75mm above the top of the cable.

Ducting Specification
- Black ducting for mains shall be 150mm rigid plastic ducting compliant with the ENA TS 12-24
- Ducting for LV single phase services shall be 38mm outside diameter black 'polyduct' compliant with ENA TS 12-24
- Ducting should be used when taking cables across roads and into buildings
- Ducts are shown on the drawing as a thick black line
- Only one cable is allowed per duct.

Electric cable	Outside Diameter
Single Phase	38mm
3 Phase LV	150mm
9V	150mm

Service Sizes
All service cables to properties are single phase 35mm² Al Cable terminated in 100 A single cut out except where specified.

Cable Identification
For voltage conversion, mains, the connected phases will be shown as B/R, BK, GY Where BR = brown / BK = black / GY = grey.

Material Specification
All cables, equipment and construction method on this network are to be in accordance with GSI documentation.

Excavation Carried Out by BUUK
Any highways or footpaths affected will be excavated and reinstated by BUUK contractors. The excavation and reinstatement of the other trenches will be the responsibility of the customer.

	Proposed	Laid
132kV Cable		
66kV Cable		
33kV Cable		
11kV Cable		
6.6kV Cable		
LV Cable		
Service Cable		
Fibre Cable		
Fibre with Earth Cable		
Low Cable		
Cable Joint		
Pot End		

Ducted Cable — Intumed
Excavated by BUUK Contractors — Waste Box
Directionally bored — Joint Box
4 Way Link Box — Point Load
Earth — Streetlight
Substation — Hot Earthing Zone — Network Boundary Point
Substation Radius — Engineering Difficulty — Shorting End Cap
Abandoned — To Decomm — Feeder Pillar

Plan Notes
This plan shows appoastus owned by the BUUK Group. Any third party appoastus indicated on these drawings is shown for indicative purposes only. The accuracy cannot be guaranteed. Service connections are not accurately cannot be guaranteed. No liability of any kind whatsoever is accepted by the company. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of appoastus. This plan is reproduced by the permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2007. All rights reserved Ordnance Survey Licence number 0100031673.

Developers Responsibility
When appoastus have been laid it becomes the responsibility of the developer to ensure it is suitably protected, therefore backfilling should be carried out in accordance with the requirements. Any damage to caged appoastus, including administrative costs will be fully recharged to the developer. It will be the developers responsibility recover the costs from the third parties.

Revision Notes
For a revision history of this network design please see seperate revision history document.

GTC, Woolpit Business Park, Suffolk, IP30 9UP
Tel: 01359 240363
www.gtc-uk.co.uk

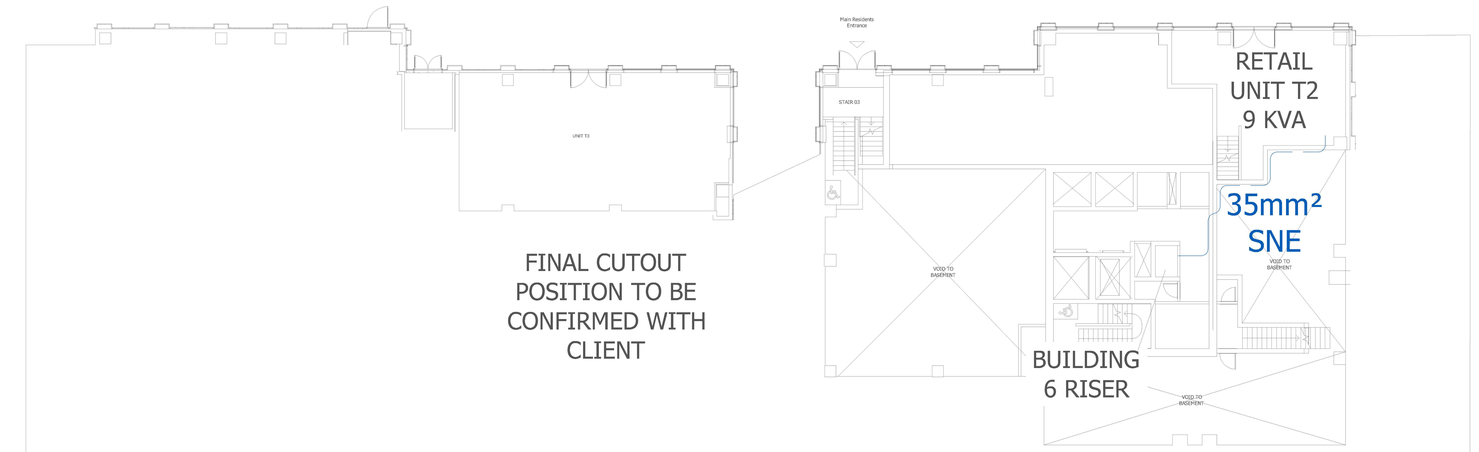
Last Edit By:	
Last Approved By	PETER ASHBY
	Approved
OS Ref:	384322,397370
Location:	Charles Street, MANCHESTER, M1 7EN
Developer/Client:	Circle Square District Company Ltd
Drawing Number/Title:	EN0020339-1_1_of_3_Entire_site_Rev5-1_appe
Network Number:	N0020339
Project Number:	N0020339-1
Scale:	1:500
Sheet Size:	A1
Revision:	5-1

0 13 m

(C1) Plant Enquiry, Our Ref 5986000, Your Ref 39541 generated for rlennett@groundwise.com at 06/08/2025 16:05:45. This drawing is reproduced from our records archive at the time of enquiry.

RORY CHRISTIAN 07.05.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Floor Plans SpR - JPID: 841765 P-0095151-DWG-011-Rev3 P-0095151-DWG-012-Rev2 P-0095151-DWG-027-Rev1 P-0095151-DWG-024-Rev8	28/11/23	JME	N/A
1-1	LRC Data added as per LVB5614 JPID: 873731	07/05/24	RC	N/A



Proposed HV Mains
All HV cables to be laid in pre-excavated trench to 600mm cover, provided by the developer (except A - B). Road crossings to be plastic 150mm ripduct, at 750mm cover to the finished level.

Proposed LV Mains
All LV cables to be laid in pre-excavated trench to 450mm cover, provided by the developer. Trench to be 300mm wide for single circuit and 600mm wide to accomodate the mains shown on this drawing, at 750mm cover to the finished level.

Harmonised Mains Cables – Phase Identification
Cable cores are identified by colour and phase connections will be shown as BR, BK, CY where **BR** = Brown (Red) / **BK** = Black (Yellow) / **GY** = Grey (Blue).

All services are to be ducted. Duct laid by the developer at 450mm cover to the finished level. Road crossings to be ducted with 150mm ripduct.

Electric Legend

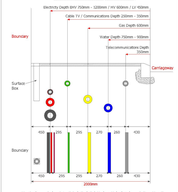
	Proposed	As-Laid
230V Cable (Service)		
400V Cable		
400V Cable (Live)		
6.6kV Cable		
11kV Cable		
20kV Cable		
33kV Cable		
66kV Cable		
132kV Cable		
Meter Position		
Cable Joint - LV		
Cable Joint - HV		
Pot end & earth electrode - LV		
Pot end & earth electrode - HV		
2 Way 1PN Box		
4 Way 1PN Box		
LV Feeder Pillar		
Shunting end cap		
Street lighting column		
Earth		
Sub station (doors shown)		
Network boundary point		
Ducted		
Excavated by BUUK		
Installed on cable tray		
SSTR Works Boundary		
Asset Boundary		

Cable Name	Built Name
11kV Main Link	33kV Grid
Metre Cable	11kV/0.4kV

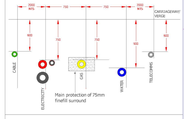
ANY DEVIATION FROM PRINT THESE SLIDES TO BE IN THE DEVELOPING OWN RISK

PRINT IN COLOUR FOR CORRECT VOLTAGE IDENTIFICATION

TYPICAL FOOTPATH SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



TYPICAL ROAD/VERGE SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with respect to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof is not guaranteed. The Electricity Network Company Ltd accepts no liability as the company, it's agents, servants or contractors for any error or commission. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :

Electricity Network Manager
GTC
Woolpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP

Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GS1 standards.

© Electricity Networks Company Ltd

Drawing Scale :	1:125
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Linked Network:	N0019788-1
Drawing Number :	EN0020339-1_R1-1_1_of_5
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street, MANCHESTER, M1 7EN

Building 5 & 6 - Lower Ground Floor

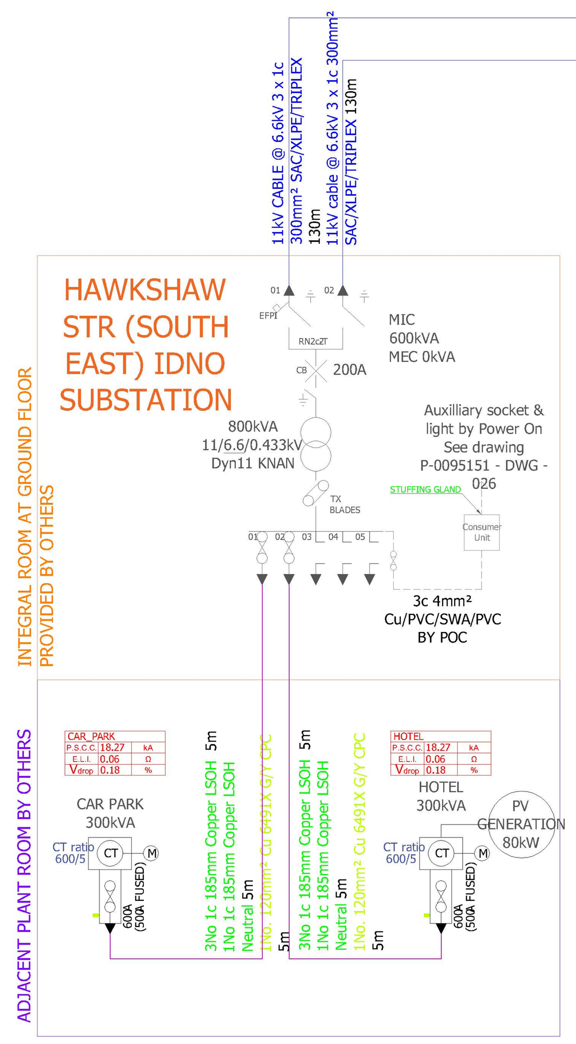
THIS DRAWING SHOWS:
GTC NETWORK

SHEET SIZE A0

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:05:53. This drawing is reproduced from our records archive at the time of enquiry.

LLEWELLYN WAKELING 29.11.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Updated design: P-0095151-DWG-008 Rev 1 Updated template - JPID: 601281	14/06/22	JS	N/A
1-1	LRC Data added from LV73466 JPID: 671078	09/12/22	PH	N/A
1-2	Updated design: P-0095151-DWG-003-Rev 11	08/03/23	JME	N/A
1-3	Updated design: P-0095151-DWG-003 Page 1 - Rev 12 & Page 2 - Rev 10	24/05/23	JME	N/A
1-4	LRC Data added as per LV78682 JPID: 756982	05/07/23	LWA	N/A
1-5	LRC Data added as per LV80490 JPID: 790820	29/09/23	LWA	N/A
1-6	Updated design: P-0095151 - DWG - 005 Rev8 LV Electrical Design-Buildings 7&8	14/02/24	BT	N/A
1-7	LRC Data added as per LV83746 JPID: 843085	21/02/24	ATR	N/A
1-8	Updated design: P-0095151/DWG/005 rev.7 JPID 849579	13/03/24	GD	N/A
1-9	LRC Data added as per: LV84393 JPID: 853805 LRC Data added as per: LV84394 JPID: 853812	18/03/24	LWA	N/A
2-0	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A
2-1	Design change:EN0020339-1 Ref 219 Retail L1 83Kva - 69kva. JPID: - 902919	18/07/24	BT	N/A
2-2	Updated design: P-0095151-DWG-004 REV 10, JPID: 953179	29/11/24	LWA	N/A

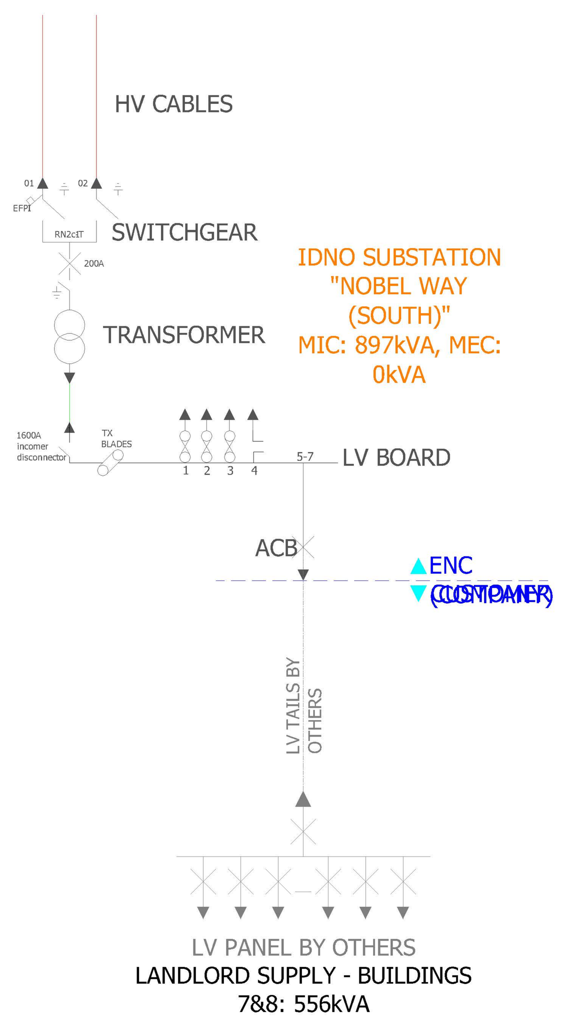


FOR INFORMATION ABOUT THE UPSTREAM HV NETWORK PLEASE REFER TO POWER ON DRAWING P-0095151-DWG-003

VIP 300 PROTECTION SETTINGS

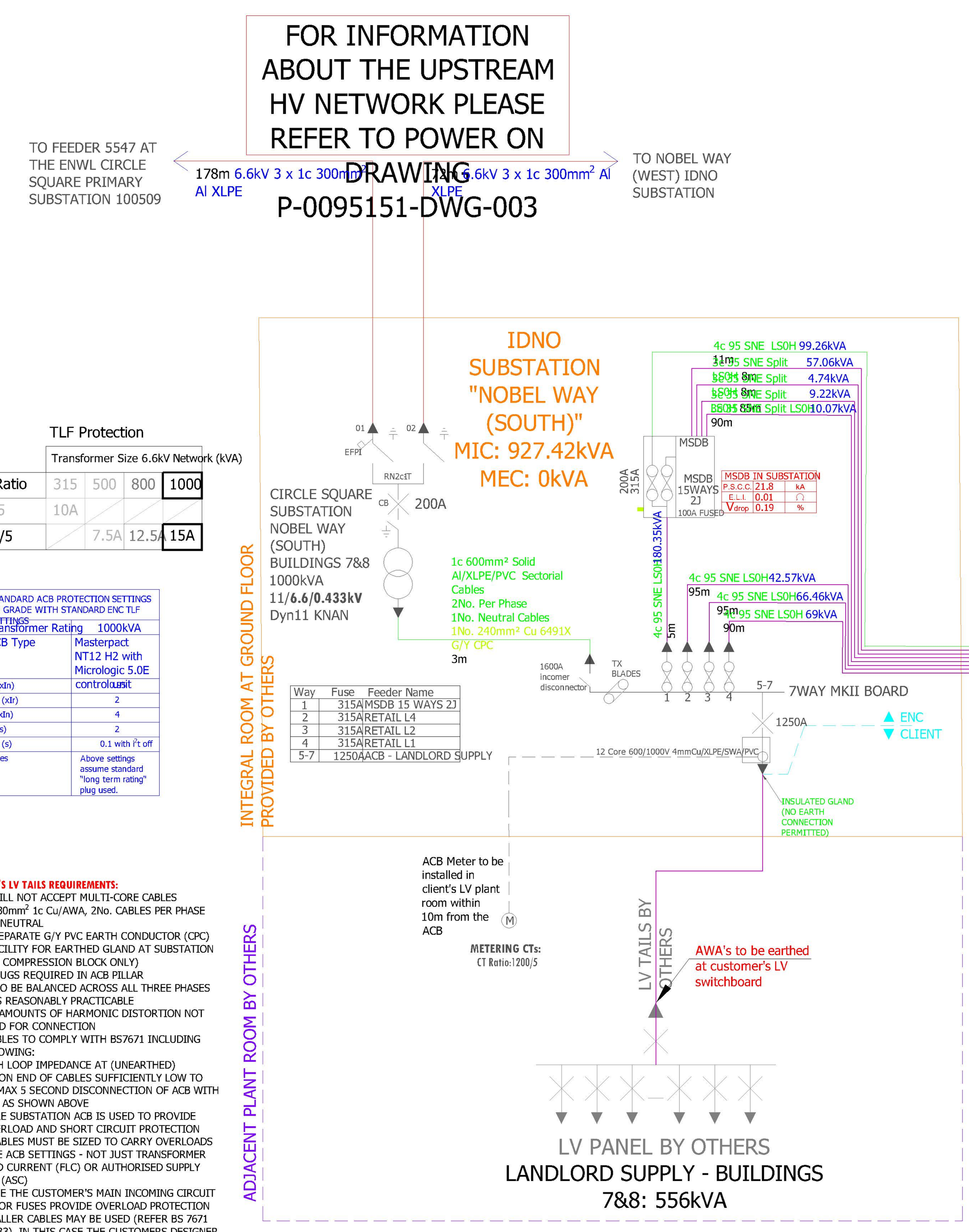
Overcurrent		Earth Fault	
Relay	VIP 300	Ios	24
Range	x2	Io> (Curve)	SI
IS	90	to>	0.2
I> (Curve)	EI	t> (x1/x10)	x1
t>	0.4	DT Only	1
t>	x1	Io>>	Off
DT Only	1	to>>	0.03
I>>	12x		
t>>	0.03		

Way	Fuse	Feeder Name
1	500A	Car Park
2	500A	Hotel
3	NA	Blank
4	NA	Blank
5	NA	Blank



IDNO SUBSTATION "NOBEL WAY (SOUTH)" MIC: 897kVA, MEC: 0kVA

FOR INFORMATION ABOUT THE UPSTREAM HV NETWORK PLEASE REFER TO POWER ON DRAWING P-0095151-DWG-003



Way	Fuse	Feeder Name
1	315A	MSDB 15 WAYS 2J
2	315A	RETAIL L4
3	315A	RETAIL L2
4	315A	RETAIL L1
5-7	1250A	ACB - LANDLORD SUPPLY

TLF Protection

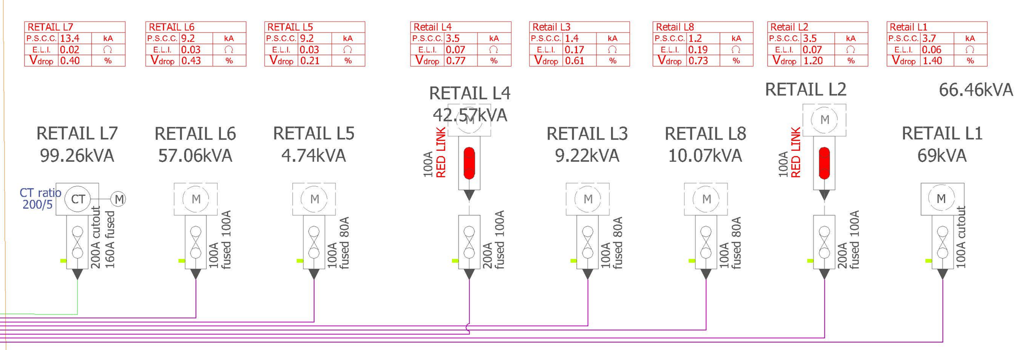
	Transformer Size 6.6kV Network (kVA)			
CT Ratio	315	500	800	1000
50/5	10A			
100/5		7.5A	12.5A	15A

STANDARD ACB PROTECTION SETTINGS TO GRADE WITH STANDARD ENC TLF SETTINGS

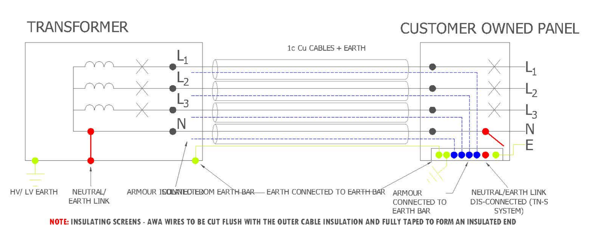
Transformer Rating	1000kVA
ACB Type	Masterpact NT12 H2 with Micrologic 5.0E control unit
Ir (xIn)	1
Isd (xIr)	2
Ii (xIn)	4
tr (s)	2
tsd (s)	0.1 with I^2t off
Notes	Above settings assume standard "long term rating" plug used.

CUSTOMER'S LV TAILS REQUIREMENTS:

1) ACB WILL NOT ACCEPT MULTI-CORE CABLES
2) MAX 630mm² 1c Cu/AWA, 2No. CABLES PER PHASE AND 2No. NEUTRAL
3) 1No. SEPARATE G/Y PVC EARTH CONDUCTOR (CPC)
4) NO FACILITY FOR EARTHED GLAND AT SUBSTATION (WOODEN COMPRESSION BLOCK ONLY)
5) C8B4 LUGS REQUIRED IN ACB PILLAR
6) LOAD TO BE BALANCED ACROSS ALL THREE PHASES SO FAR AS REASONABLY PRACTICABLE
7) LARGE AMOUNTS OF HARMONIC DISTORTION NOT PERMITTED FOR CONNECTION
8) LV CABLES TO COMPLY WITH BS7671 INCLUDING THE FOLLOWING:
  a) EARTH LOOP IMPEDANCE AT (UNEARTHED) SUBSTATION END OF CABLES SUFFICIENTLY LOW TO ACHIEVE MAX 5 SECOND DISCONNECTION OF ACB WITH SETTINGS AS SHOWN ABOVE
  b) WHERE SUBSTATION ACB IS USED TO PROVIDE BOTH OVERLOAD AND SHORT CIRCUIT PROTECTION THE LV CABLES MUST BE SIZED TO CARRY OVERLOADS UP TO THE ACB SETTINGS - NOT JUST TRANSFORMER FULL LOAD CURRENT (FLC) OR AUTHORISED SUPPLY CAPACITY (ASC)
  c) WHERE THE CUSTOMER'S MAIN INCOMING CIRCUIT BREAKER OR FUSES PROVIDE OVERLOAD PROTECTION THEN SMALLER CABLES MAY BE USED (REFER BS 7671 CLAUSE 433). IN THIS CASE THE CUSTOMERS DESIGNER MUST STILL CHECK THAT THE CABLES ARE ADEQUATELY RATED FOR THE SHORT CIRCUIT PROTECTION AFFORDED BY THE SUBSTATION ACB SETTINGS GIVEN ABOVE



Bonding Arrangement for customer's LV Tails



LEGEND

- HV Cable (& Existing HV)
- LV Cable
- Live LV Cable
- Earth Bonding
- Termination
- Joint (HV / LV / Live LV)
- Pressure End (LV / Live LV)
- Earth Rod

This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by the company, it's agents, servants or contractors for any error or ommision. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :

Electricity Network Manager
GTC
Woolpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP

Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with G81 standards.

© Electricity Networks Company Ltd

enc the electricity network co.

THIS DRAWING SHOWS:
SCHEMATIC

Drawing Scale :	NTS
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Project Number :	N0019788-1
Drawing Number :	EN0020339-1_R2-2_1_of_8 Schematic
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street MANCHESTER M1 7EN

SHEET SIZE A0

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:05:57. This drawing is reproduced from our records archive at the time of enquiry.

Please see appendix for stamps

14.06.2025

This design is across multiple drawings for details please refer to all drawings.

Electric Notes
All electric mains, services and ducts that shall contain electric cables must be overlaid with electric identifiable marker tape laid 250mm above the cable. All HV cables must have a minimum of 300mm and LV services should have a minimum of 250mm separation to any other utility.

Backfill Specification
Directly buried cables should be surrounded by cable sand installed to BS EN 13139 - Aggregate size of 0-2mm to CAT 4. A 75mm layer should be placed at the bottom of the trench and a further 75mm above the top of the cable.

Ducting Specification
- Black ducting for mains shall be 150mm rigid plastic ducting compliant with the ENA TS 12-24
- Ducting for LV single phase services shall be 38mm outside diameter black 'polyduct' compliant with ENA TS 12-24
- Ducting should be used when taking cables across roads and into buildings
- Ducts are shown on the drawing as a thick black line
- Only one cable is allowed per duct.

Electric cable	Outside Diameter
Single Phase	38mm
3 Phase LV	150mm
HV	150mm

Service Sizes
All service cables to properties are single phase 35mm² Al Cable terminated in 100A fuse unless stated otherwise.

Phase Identification
For voltage conversion mains, the connected phases will be shown as BR, BK, GY Where BR = brown / BK = black / GY = grey.

Material Specification
All cables, equipment and construction method on this network are to be in accordance with GBI documentation.

Excavation Carried Out by BULK
Any highway excavations carried out will be excavated and reinstated by BULK contractors. The excavation and reinstatement of the other trenches will be the responsibility of the customer.

	Proposed	Laid
132kV Cable		
66kV Cable		
33kV Cable		
11kV Cable		
6.6kV Cable		
LV Cable		
Service Cable		
Fibre Cable		
Fibre Cable With Cable		
Low Cable		
Cable Joint		
Pot End		
Ducted Cable		Interval
Terminated by BULK Contractors		Marker Box
Future Streetlight Install		Post
2 Way Link Box	4 Way Link Box	HSDB / Point Load / Unbox
Earth	Streetlight	
Substation	Hot Earthing Zone	Network Boundary Point
Substation Radius	Engineering Difficulty	Shorting End Cap
Abandoned	To Disconnect	Feeder Pillar

Plan Notes
The plan shows apparatus owned by the BULK Group. Any third party apparatus indicated on these drawings is shown for indicative purposes only. The information shown on this plan is given without warranty, the accuracy cannot be guaranteed. No liability of any kind whatsoever is accepted by BULK for any error or omission. The actual position of apparatus must be used to verify and establish the actual position of apparatus. This plan is reproduced by the permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2007. All rights reserved Ordnance Survey Licence number 0100021963.

Developers Responsibility
When apparatus have been laid it becomes the responsibility of the developer to ensure it is suitably protected, therefore backfilling should be carried out as soon as possible. Replacement and repair of damaged apparatus, including administrative costs will be fully recharged to the developer. It is then the developers responsibility recover the costs from the third parties.

Revision Notes
For a revision history of this network design please see seperate revision history document.

gtc
GTC, Wyvern Business Park, Suffolk, IP33 3UP
Tel: 01359 240363
www.gtc-uk.co.uk

Last Edit By:

Last Approved By PETER ASHBY

Approved

OS Ref: 384346,397368

Location: Charles Street, MANCHESTER, M1 7EN

Developer/Client: Circle Square District Company Ltd

Drawing Number/Title: EN0020339-1_2_of_3_Rev5-1_appendix

Network Number:	Project Number:
N0020339	N0020339-1

Scale:	Sheet Size:	Revision:
1:500	A1	5-1

0 13 m

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:06:09. This drawing is reproduced from our records archive at the time of enquiry.
Authorised by

N0020339 - Recent revisions

N0020339/elec Revision History

Rev	Comment	Date	Dsg.	App.
5.1	interim as laid	12/06/25	PA	PA
5.0	Units L1 and L2 (RIL) swapped Names	22/07/24	CM	CM
4.2	Energised Unit L1 as per JPID873731	07/05/24	RC	RC
4.1	Energise W2 at Substation to Retail L4 UV83746	20/02/24	SC	SC
4.0	(Legacy) 1 elec notes added. 1 elec notes removed.	19/01/24	N	N
3.3	824279	28/12/23	ZV	ZV
3.2	DNO as laid data added as per Joseph Skinner JPID: 824279	28/12/23	ZV	ZV
3.1	DNO AsLaid Cleanup - JPID: 824174	22/12/23	JM	JM
3.0	Elec GIS Import	21/12/23	DT	DT
2.2	(Legacy) 40m of elec mains added 40m of elec mains removed	24/01/23	EH	EH
2.1	(Legacy) 347m of elec mains added 337m of elec mains removed 4 ele ...	24/01/23	EH	EH
2.0	(Legacy) 133m of elec mains added 9 elec notes added. 1 elec notes ...	05/01/23	N	N
1.1	(Legacy) 1 elec notes added.	14/06/22	JS	JS
1.0	(Legacy) 392m of elec mains added 7 elec notes added. 3 elec arrow ...	08/04/22	N	N

N0020339_E1 M1_7FE

TEMPORARY CONFIGURATION

This network has a temporary connection / configuration, please refer to to the notes on the drawing for details. If further clarification is required please speak to either the Project Manager or Designer of this network.

N0020339_MMYD6 M1_7FE

MSDB Details	MMYD6	J2
Plot	Phase	Floor
RETAIL L3 - MSDB	GY,BR,BK	0
RETAIL L5 - MSDB	GY,BR,BK	0
RETAIL L6 - MSDB	GY,BR,BK	0
RETAIL L7 - MSDB	GY,BR,BK	0
RETAIL L8 - MSDB	GY,BR,BK	0

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7AA

POC Details

Name:
Capacity (kVA):
DNO ref: 5500123262
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M60 7HB

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

SUBSTATION NOBEL WAY (SOUTH)

Substation Details

Way	Cable	Fuse (A)
2	95mm	315
4	95mm	1250
3	95mm	315
5		1250
1	95mm	315

Name: CIRCLE SQUARE SUBSTATION
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB + 4
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339_Sub_SUMPHONY PARK IDNO SUBSTATION 2 M60 7HB

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SUMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0021304 M1_7DF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7AA

POC Details

Name:
Capacity (kVA):
DNO ref: 5500123262
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

BUILDINGS 5AND6 SUBSTATION

Substation Details

Way	Cable	Fuse (A)
2	95mm	315
3	95mm	315
5		1250
1	95mm	315

Name: CIRCLE SQUARE BUILDINGS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB + 4
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0024386_LV POC M1_6EY

POC Details

Name: LV POC
Capacity (kVA): 235
DNO ref:
Voltage: LV
Volt drop (%): 0.45
ELI: (mΩ) 0.13
Conn type: Straight joint

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_ M1_7EP

Substation Details

Way	Cable	Fuse (A)
1	185mm	500

Name:
Number:
Ownership:
Transformer size (kVA): 800 - dual ratio
LV cabinet: ACB + 1
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:
Intake RMU #1:

N0020339_Sub_SYMPHONY PARK IDNO SUBSTATION 3 M1_7EE

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SYMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_ M1_7DN

Substation Details

Way	Cable	Fuse (A)
1	185mm	500

Name:
Number:
Ownership:
Transformer size (kVA): 800 - dual ratio
LV cabinet: ACB + 1
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:
Intake RMU #1:

N0020339_Sub_ENWL Circle Square Primary Substation M1_7ED

Substation Details

Way	Cable	Fuse (A)

Name: ENWL Circle Square Primary
Number:
Ownership: DNO
Transformer size (kVA): 100
LV cabinet:
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Primary Substation
Door type:

N0020339 M60 7HB

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_MMYD4 M60 7HB

MSDB Details	MMYD4	J2
Plot	Phase	Floor
RETAIL UNIT T1 - MSDB	GY,BR,BK	0
RETAIL UNIT T2 - MSDB	GY,BR,BK	-1
RETAIL UNIT T3B - MSDB	GY,BR,BK	0
RETAIL UNIT T3A - MSDB	GY,BR,BK	0

N0020339_Sub_SYMPHONY PARK IDNO SUBSTATION 4 M1_7EE

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SYMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_ M1_7DN

Substation Details

Way	Cable	Fuse (A)
1	185mm	500

Name:
Number:
Ownership:
Transformer size (kVA): 800
LV cabinet: ACB + 1
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:
Intake RMU #1:

N0020339_Sub_SYMPHONY PARK IDNO SUBSTATION 1 M60 7HB

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SYMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0021304 M1_7DF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Loop Joint

N0020339_Sub_MALDRON HOTEL M1_7DE

Substation Details

Way	Cable	Fuse (A)
1	300mm	1250

Name: MALDRON HOTEL
Number:
Ownership: DNO_ENC
Transformer size (kVA): 800
LV cabinet: ACB + 1
CT ratio: 100/5
TLF size (A): 7.5A
Security assess:
Environ assess:
Building type: Integral
Door type:

SUBSTATION "CIRCLE SQ BUILDING 9

Substation Details

Way	Cable	Fuse (A)
2	95mm	315
1		1250

Name: DNO/IDNO SUBSTATION "CIR
Number:
Ownership: DNO_ENC
Transformer size (kVA): 800
LV cabinet: ACB + 1
CT ratio: 100/5
TLF size (A): 12.5A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296 M1_7ED

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Loop Joint

N0020339_Sub_PAVILION SUBSTATION M1_7EE

Substation Details

Way	Cable	Fuse (A)
1		800

Name: PAVILION SUBSTATION
Number:
Ownership: ENC
Transformer size (kVA): 500
LV cabinet: ACB + 2
CT ratio: 100/5
TLF size (A): 7.5A
Security assess:
Environ assess:
Building type: Integral
Door type:
RMU: Lucy VRN2a T1/21

(SOUTH EAST) IDNO SUBSTATION M1

Substation Details

Way	Cable	Fuse (A)
2	185mm	500
1	185mm	500

Name: HAWKSHAW STR (SOUTH EA
Number:
Ownership: ENC
Transformer size (kVA): 800
LV cabinet: 5-way
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:

This design is across multiple drawings for details please refer to all drawings.

Electric Notes
All electric mains, services and ducts that shall contain electric cables must be overlaid with electric identifiable marker tape laid 250mm above the cable / duct. Electric mains and services should have a minimum of 250mm separation to any other utility.

Backfill Specification
Directly buried cables should be surrounded by cable sand installed to BS EN 13139 - Aggregate size of 0/2mm to CAT 4. A 75mm layer should be placed on the bottom of the trench and a further 75mm above the top of the cable.

Ducting Specification
- Black ducting for mains shall be 150mm rigid plastic duting compliant with the ENA TS 12-24
- Ducting for LV single phase services shall be 38mm outside diameter black 'polyduct' compliant with ENA TS 12-24
- Ducting should be used when taking cables across roads and into buildings
- Ducts are shown on the drawing as a thick black line
- Only one cable is allowed per duct.

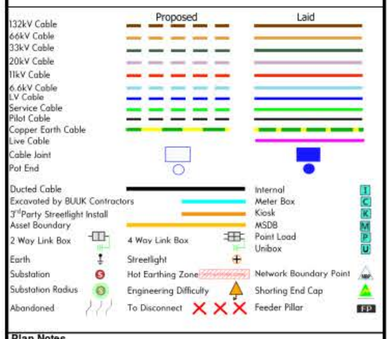
Electric cable	Outside Diameter
Single Phase	38mm
3 Phase LV	150mm
HV	150mm

Service Sizes
All service cables to properties are single phase 35mm² Al Cable terminated in 100 Amp cut out (except where specified).

Phase Identification
For colour convention mains, the connected phases will be shown as BR, BK, GY Where BR = brown / BK = black / GY = grey.

Material Specification
All cables, equipment and construction method on this network are to be in accordance with G81 documentation.

Excavation Carried Out by BUUK
The trenches highlighted in blue will be excavated and reinstated by BUUK contractors, the excavation and reinstatement of the other trenches will be the responsibility of the customer.



Plan Notes
This plan shows apparatus owned by the BUUK Group. Any third party apparatus indicated on these drawings is shown for indicative purposes only. The information shown on this plan is given without warranty, the accuracy cannot be guarenteed. No liability of any kind whatsoever is accepted by the company. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of apparatus. This plan is reproduced by the permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2007. All rights reserved Ordnance Survey Licence number 0100021063.

Developers Responsibility
When apparatus have been laid it becomes the responsibility of the developer to ensure it is suitably protected, therefire backfilling should be carried out as soon as possible. Replacement and repair of damaged apparatus, including administrative costs will be fully recharged to the developer. It will be the developers responsibiltyto recover the costs from the third parties.

Revision Notes
For a revision history of this network design please see seperate revision history document.

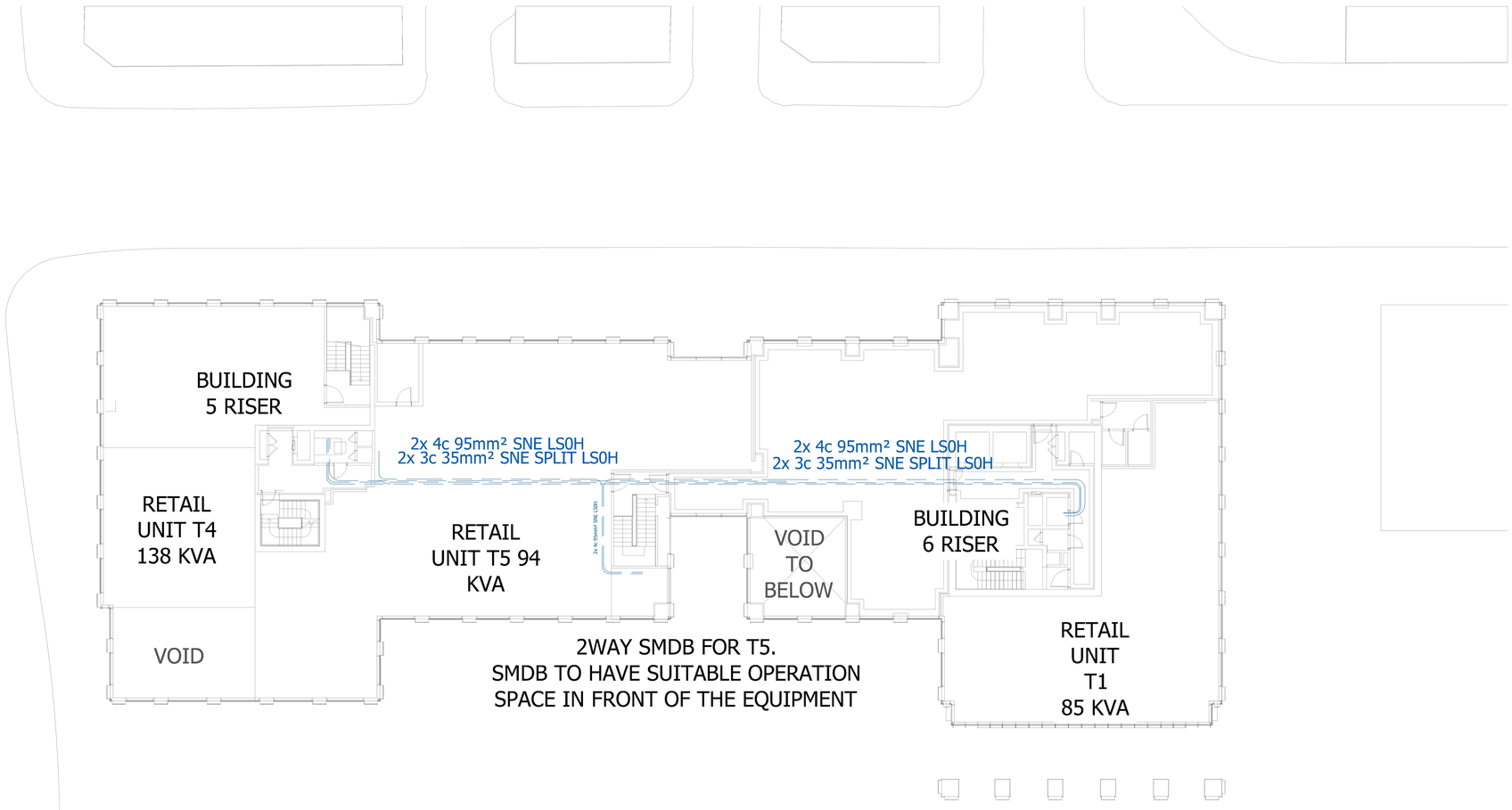
GTC, Woolpit Business Park, Suffolk, IP30 9UP
Tel: 01359 240363
www.gtc-uk.co.uk

Last Edit By:	
Last Approved By:	PETER ASHBY 12062025
Approved	
OS Ref:	384346,397368
Location:	Charles Street, MANCHESTER, M1 7EN
Developer/Client:	Circle Square District Company Ltd
Drawing Number/Title:	EN0020339-1_2_of_3_Rev5-1_appendix
Network Number:	N0020339
Project Number:	N0020339-1
Scale:	1:1000
Sheet Size:	A3
Revision:	5.1

(C01) Plant Enquiry, Our Ref 5986000, Your Ref 39540 generated for rbennett@groundwave.com at 09/09/2025 16:05:01. This drawing is reproduced from our records archive at the time of enquiry.

RORY CHRISTIAN 07.05.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Floor Plans SpR - JPID: 841765 P-0095151-DWG-011-Rev3 P-0095151-DWG-012-Rev2 P-0095151-DWG-027-Rev1 P-0095151-DWG-024-Rev8	28/11/23	JME	N/A
1-1	LRC Data added as per LVB5614 JPID: 873731	07/05/24	RC	N/A



BLOCK 4
SUBJECT TO SEPARATE
PLANNING APPROVAL

Proposed HV Mains
All HV cables to be laid in pre-excavated trench to 600mm cover, provided by the developer (circuits A - B). Road crossings to be plastic 150mm ripduct, at 750mm cover to the finished level.

Proposed LV Mains
All LV cables to be laid in pre-excavated trench to 450mm cover, provided by the developer. Trench to be 1 metre wide where multiple cables need to accommodate the mains shown on this drawing, at 750mm cover to the finished level.

Harmonised Mains Cables – Phase Identification
Phase identification of harmonised mains cables will be shown as BR, BK, CY where **BR** = Brown (Red) / **BK** = Black (Yellow) / **GY** = Grey (Blue).

All services are to be ducted. Duct laid by the developer at 450mm cover to the finished level. Road crossings to be ducted with 150mm ripduct.

Electric Legend

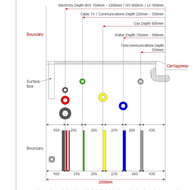
	Proposed	As-Laid
230V Cable (Service)		
400V Cable		
400V Cable (Link)		
6.6kV Cable		
11kV Cable		
20kV Cable		
33kV Cable		
66kV Cable		
132kV Cable		
Yellow Position		
Cable Joint - LV		
Cable Joint - HV		
Pot end & earth electrode - LV		
Pot end & earth electrode - HV		
2 Way LPA Box		
4 Way LPA Box		
LV Feeder Pillar		
Shunting end cap		
Street lighting column		
Earth		
Sub station (above drawn)		
Network boundary point		
Ducted		
Excavated by BUUK		
Installed on cable tray		
SLFB Works Boundary		
Asset Boundary		

Cable Sizes	Duct Sizes
HV and LV MV	150mm ripduct
132kV and 33kV	300mm ripduct

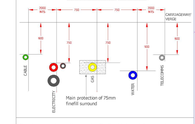
ANY DEVIATION FROM THESE SIZES TO BE TAKEN UP WITH DNO

PRINT IN COLOUR FOR CORRECT VOLTAGE IDENTIFICATION

TYPICAL FOOTPATH SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



TYPICAL ROAD/VERGE SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy of which is not guaranteed. Neither The Electricity Network Company Ltd nor any group company, it's agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :

Electricity Network Manager
GTC
Woodpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP

Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GS1 standards.

© Electricity Networks Company Ltd

Building 5 & 6 - Mezzanine Floor

THIS DRAWING SHOWS:
GTC NETWORK

Drawing Scale :	1:125
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Linked Network:	N0019788-1
Drawing Number :	EN0020339-1_R1-1_2_of_5
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street, MANCHESTER, M1 7EN

the electricity network company

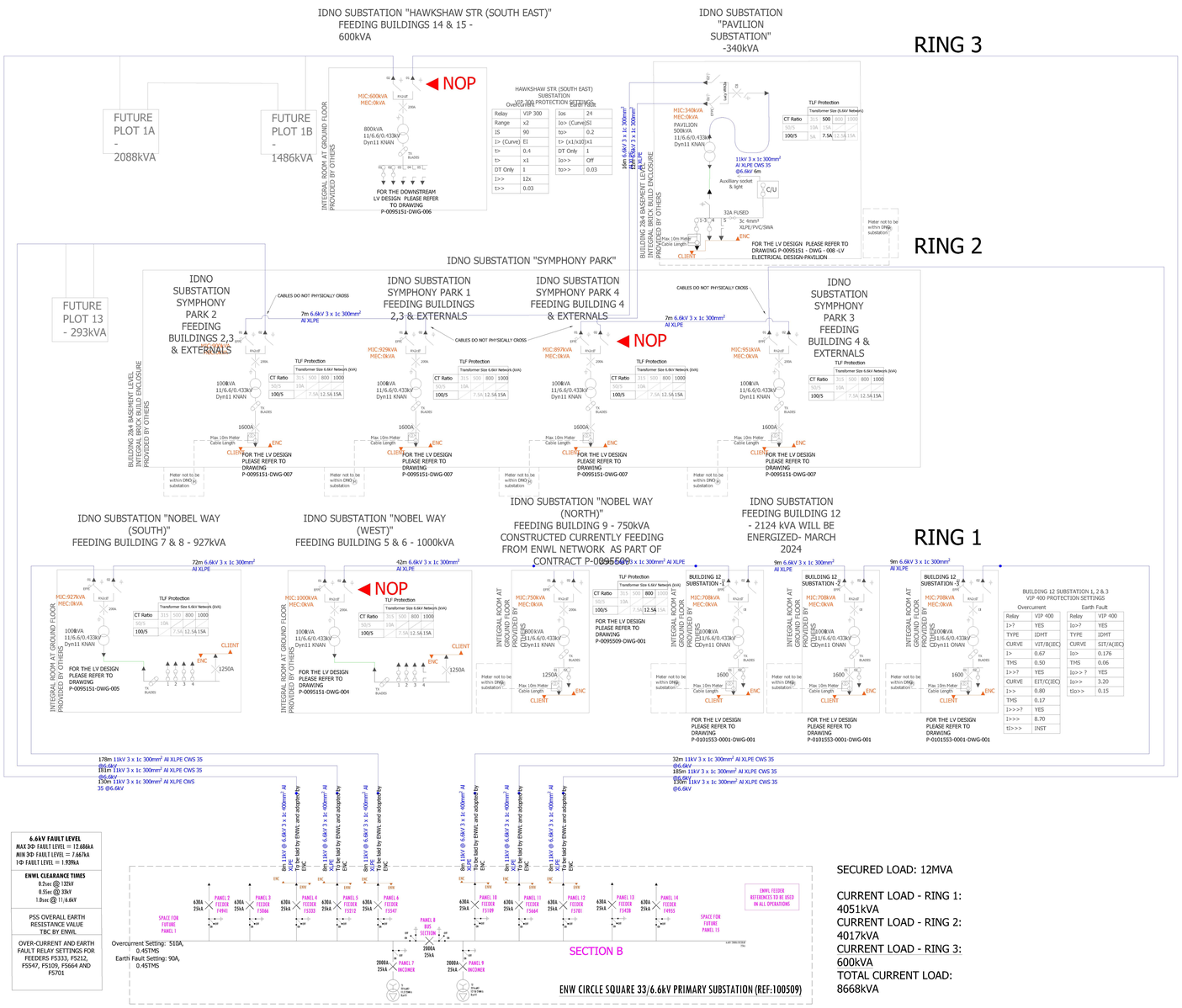
SHEET SIZE A0

(C) Pixel Enquiry. Our Ref 5986000, Your Ref 39541 generated for rbennett@groundwave.com at 06/09/2025 16:05:59. This drawing is reproduced from our records and/or at the time of enquiry.

LLEWELLYN WAKELING 29.11.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Updated design: P-0095151-DWG-008 Rev 1 Updated template - JPID: 601281	14/06/22	JS	N/A
1-1	LRC Data added from LV73466 JPID: 671078	09/12/22	PH	N/A
1-2	Updated design: P-0095151-DWG-003-Rev 11	08/03/23	JME	N/A
1-3	Updated design: P-0095151-DWG-003 Page 1 - Rev 12 & Page 2 - Rev 10	24/05/23	JME	N/A
1-4	LRC Data added as per LV78682 JPID: 756982	05/07/23	LWA	N/A
1-5	LRC Data added as per LV80490 JPID: 790820	29/09/23	LWA	N/A
1-6	Updated design: P-0095151 - DWG - 005 RevB LV Electrical Design-Buildings 7&8	14/02/24	BT	N/A
1-7	LRC Data added as per LV83746 JPID: 843085	21/02/24	ATR	N/A
1-8	Updated design: P-0095151/DWG/005 rev.7 JPID 849579	13/03/24	GD	N/A
1-9	LRC Data added as per: LV84393 JPID: 853805 LRC Data added as per: LV84394 JPID: 853812	18/03/24	LWA	N/A
2-0	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A
2-1	Design change:EN0020339-1 Ref 219 Retail L1 83Kva - 69Kva. JPID: - 902919	18/07/24	BT	N/A
2-2	Updated design: P-0095151-DWG-004 REV 10, JPID: 953179	29/11/24	LWA	N/A

PERMANENT AND FUTURE ARRANGEMENT



This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by the ENC, its agents, servants or contractors for any error or omission. All cables must be treated as live. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :
Electricity Network Manager
GTC
Woodpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP
Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GB1 standards.

© Electricity Networks Company Ltd

Drawing Scale :	NTS
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Project Number :	N0019788-1
Drawing Number :	EN0020339-1_R2-2_2_of_8 Schematic
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street MANCHESTER M1 7EN

enc the electricity network co

THIS DRAWING SHOWS: SCHEMATIC

SHEET SIZE A0

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:06:12. This drawing is reproduced from our records archive at the time of enquiry.

Please see appendix for stamps

14.06.2025

This design is across multiple drawings for details please refer to all drawings.

Electric Notes
All electric mains, services and ducts that shall contain electric cables must be overlaid with electric identifiable marker tape laid 250mm above the cable. Where HV cables cross other services should have a minimum of 250mm separation to any other utility.

Backfill Specification
Directly buried cables should be surrounded by cable sand installed to BS EN 13139 - Aggregate size of 0·2mm to CAT 4. A 75mm layer should be placed at the bottom of the trench and a further 75mm above the top of the cable.

Ducting Specification
- Black ducting for mains shall be 150mm rigid plastic duting compliant with the ENA TS 12-24
- Ducting for LV single phase services shall be 38mm outside diameter black polyduct compliant with ENA TS 12-24
- Ducting should be used when taking cables across roads and into buildings
- Ducts are shown on the drawing as a thick black line
- Only one cable is allowed per duct.

Electric cable	Outside Diameter
Single Phase	38mm
3 Phase LV	150mm
HV	150mm

Service Sizes
All service cables to properties are single phase 35mm² Al Cable terminated in 100 A fuse unit except where specified.

Cable Identification
For voltage conversion, mains, the connected phases will be shown as R/R, BK, GY Where BR = brown / BK = black / GY = grey.

Material Specification
All cables, equipment and construction method on this network are to be in accordance with GI1 documentation.

Excavation Carried Out by BULK
All excavations carried out by BULK will be excavated and reinstated by BULK contractors. The excavation and reinstatement of the other trenches will be the responsibility of the customer.

	Proposed	Laid
132kV Cable		
66kV Cable		
33kV Cable		
11kV Cable		
6.6kV Cable		
LV Cable		
Service Cable		
Fibre Optic Cable		
Low Cable		
Cable Joint		
Pot End		
Ducted Cable		
Excavated by BULK Contractors		
Ducts by Developer Install		
7 Way Link Box	4 Way Link Box	
Earth	Streetlight	
Substation	Hot Earthing Zone	
Substation Radius	Engineering Difficulty	
Abandoned	To Disconnect	

Interval
Meter Box
Pillar
ASSR
Point Load
Unbox
Network Boundary Point
Shorting End Cap
Feeder Pillar

Plan Notes
This plan shows apparatus owned by the BULK Group. Any third party apparatus indicated on these drawings is shown for indicative purposes only and the information shown on this plan is given without warranty, the accuracy cannot be guaranteed. No liability of any kind whatsoever is accepted by the company. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of apparatus. This plan is reproduced by the permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2007. All rights reserved Ordnance Survey Licence number:0100031673.

Developers Responsibility
Where diversions are required and it becomes the responsibility of the developer to ensure it is suitably protected, therefore backfilling should be carried out as soon as possible. Replacement and repair of damaged apparatus, including administrative costs will be fully recharged to the developer. It will be the developers responsibility recover the costs from the third parties.

Revision Notes
For a detailed history of this network design please see seperate revision history document.

GTC, Wherfgate Business Park, Suffolk IP30 9UP
Tel: 01359 240363
www.gtc-uk.co.uk

Last Edit By:

Last Approved By PETER ASHBY

Approved

OS Ref: 384334,397360

Location: Charles Street, MANCHESTER, M1 7EN

Developer/Client: Circle Square District Company Ltd

Drawing Number/Title: EN0020339-1_3_of_3_Rev5-1_Contestable HV

Network Number:	Project Number:
N0020339	N0020339-1

Scale:	Sheet Size:	Revision:
1:500	A1	5-1

0 13 m

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:05:45. This drawing is reproduced from our records archive at the time of enquiry.
Authorised by

N0020339 - Recent revisions

N0020339/elec Revision History

Rev	Comment	Date	Dsg.	App.
5.1	interim as laid	12/06/25	PA	PA
5.0	Units L1 and L2 (RIL) swapped Names	22/07/24	CM	CM
4.2	Energised Unit L1 as per JPID873731	07/05/24	RC	RC
4.1	Energise W2 at Substation to Retail L4 UV83746	20/02/24	SC	SC
4.0	(Legacy) 1 elec notes added. 1 elec notes removed.	19/01/24	N	N
3.3	824279	28/12/23	ZV	ZV
3.2	DNO as laid data added as per Joseph Skinner JPID: 824279	28/12/23	ZV	ZV
3.1	DNO AsLaid Cleanup - JPID: 824174	22/12/23	JM	JM
3.0	Elec GIS Import	21/12/23	DT	DT
2.2	(Legacy) 40m of elec mains added 40m of elec mains removed	24/01/23	EH	EH
2.1	(Legacy) 347m of elec mains added 337m of elec mains removed 4 ele ...	24/01/23	EH	EH
2.0	(Legacy) 133m of elec mains added 9 elec notes added. 1 elec notes ...	05/01/23	N	N
1.1	(Legacy) 1 elec notes added.	14/06/22	JS	JS
1.0	(Legacy) 392m of elec mains added 7 elec notes added. 3 elec arrow ...	08/04/22	N	N

N0020339_E1 M1_7FE

TEMPORARY CONFIGURATION

This network has a temporary connection / configuration, please refer to to the notes on the drawing for details. If further clarification is required please speak to either the Project Manager or Designer of this network.

N0021304 M1_7DF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M60 7HB

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_PAVILION SUBSTATION M1_7EE

Substation Details

Way	Cable	Fuse (A)
1		800

Name: PAVILION SUBSTATION
Number:
Ownership: ENC
Transformer size (kVA): 500
LV cabinet: ACB + 2
CT ratio: 100/5
TLF size (A): 7.5A
Security assess:
Environ assess:
Building type: Integral
Door type:
RMU: Lucy VRN2a T1/21

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_ENWL Circle Square Primary Substation M1_7ED

Substation Details

Way	Cable	Fuse (A)

Name: ENWL Circle Square Primary
Number:
Ownership: DNO
Transformer size (kVA): 100
LV cabinet:
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Primary Substation
Door type:

N0020339_Sub_SYMPHONY PARK IDNO SUBSTATION 4 M1_7EE

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SYMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M60 7HB

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_SYMPHONY PARK IDNO SUBSTATION 3 M1_7EE

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SYMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0024386_LV POC M1_6EY

POC Details

Name: LV POC
Capacity (kVA) 235
DNO ref:
Voltage: LV
Volt drop (%): 0.45
ELI: (mΩ) 0.13
Conn type: Straight joint

N0023296 M1_7ED

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Loop Joint

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7AA

POC Details

Name:
Capacity (kVA):
DNO ref: 5500123262
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Loop Joint

SUBSTATION "CIRCLE SQ BUILDING 9

Substation Details

Way	Cable	Fuse (A)
2	95mm	315
1		1250

Name: DNO/IDNO SUBSTATION "CIR
Number:
Ownership: DNO_ENC
Transformer size (kVA): 800
LV cabinet: ACB + 1
CT ratio: 100/5
TLF size (A): 12.5A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339_Sub_SYMPHONY PARK IDNO SUBSTATION 1 M60 7HB

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SYMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339_Sub_ M1_7DN

Substation Details

Way	Cable	Fuse (A)
1	185mm	500

Name:
Number:
Ownership:
Transformer size (kVA): 800 - dual ratio
LV cabinet: ACB + 1
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:
Intake RMU #1:

N0020339_Sub_ M1_7DN

Substation Details

Way	Cable	Fuse (A)
1	185mm	500

Name:
Number:
Ownership:
Transformer size (kVA): 800
LV cabinet: ACB + 1
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:
Intake RMU #1:

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7AA

POC Details

Name:
Capacity (kVA):
DNO ref: 5500123262
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_ M1_7EP

Substation Details

Way	Cable	Fuse (A)
1	185mm	500

Name:
Number:
Ownership:
Transformer size (kVA): 800 - dual ratio
LV cabinet: ACB + 1
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:
Intake RMU #1:

SUBSTATION NOBEL WAY (SOUTH)

Substation Details

Way	Cable	Fuse (A)
2	95mm	315
4	95mm	1250
3	95mm	315
5		1250
1	95mm	315

Name: CIRCLE SQUARE SUBSTATION
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB + 4
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0021304 M1_7DF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_SYMPHONY PARK IDNO SUBSTATION 2 M60 7HB

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SUMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

(SOUTH EAST) IDNO SUBSTATION M1

Substation Details

Way	Cable	Fuse (A)
2	185mm	500
1	185mm	500

Name: HAWKSHAW STR (SOUTH EA
Number:
Ownership: ENC
Transformer size (kVA): 800
LV cabinet: 5-way
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339_Sub_MALDRON HOTEL M1_7DE

Substation Details

Way	Cable	Fuse (A)
1	300mm	1250

Name: MALDRON HOTEL
Number:
Ownership: DNO_ENC
Transformer size (kVA): 800
LV cabinet: ACB + 1
CT ratio: 100/5
TLF size (A): 7.5A
Security assess:
Environ assess:
Building type: Integral
Door type:

BUILDINGS 5AND6 SUBSTATION

Substation Details

Way	Cable	Fuse (A)
2	95mm	315
3	95mm	315
5		1250
1	95mm	315

Name: CIRCLE SQUARE BUILDINGS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB + 4
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_SYMPHONY PARK IDNO SUBSTATION 2 M60 7HB

Substation Details

Way	Cable	Fuse (A)
1		1600

Name: SUMPHONY PARK IDNO SUBS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB only
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

(SOUTH EAST) IDNO SUBSTATION M1

Substation Details

Way	Cable	Fuse (A)
2	185mm	500
1	185mm	500

Name: HAWKSHAW STR (SOUTH EA
Number:
Ownership: ENC
Transformer size (kVA): 800
LV cabinet: 5-way
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339_Sub_MALDRON HOTEL M1_7DE

Substation Details

Way	Cable	Fuse (A)
1	300mm	1250

Name: MALDRON HOTEL
Number:
Ownership: DNO_ENC
Transformer size (kVA): 800
LV cabinet: ACB + 1
CT ratio: 100/5
TLF size (A): 7.5A
Security assess:
Environ assess:
Building type: Integral
Door type:

BUILDINGS 5AND6 SUBSTATION

Substation Details

Way	Cable	Fuse (A)
2	95mm	315
3	95mm	315
5		1250
1	95mm	315

Name: CIRCLE SQUARE BUILDINGS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB + 4
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

This design is across multiple drawings for details please refer to all drawings.

Electric Notes
All electric mains, services and ducts that shall contain electric cables must be overlaid with electric identifiable marker tape laid 250mm above the cable / duct. Electric mains and services should have a minimum of 250mm separation to any other utility.

Backfill Specification
Directly buried cables should be surrounded by cable sand installed to BS EN 13139 - Aggregate size of 0/2mm to CAT 4. A 75mm layer should be placed on the bottom of the trench and a further 75mm above the top of the cable.

Ducting Specification
- Black ducting for mains shall be 150mm rigid plastic duting compliant with the ENA TS 12-24
- Ducting for LV single phase services shall be 38mm outside diameter black 'polyduct' compliant with ENA TS 12-24
- Ducting should be used when taking cables across roads and into buildings
- Ducts are shown on the drawing as a thick black line
- Only one cable is allowed per duct.

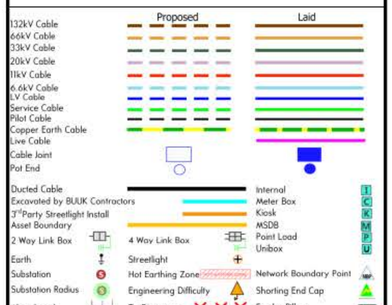
Electric cable	Outside Diameter
Single Phase	38mm
3 Phase LV	150mm
HV	150mm

Service Sizes
All service cables to properties are single phase 35mm² Al Cable terminated in 100 Amp cut out (except where specified).

Phase Identification
For colour convention mains, the connected phases will be shown as BR, BK, GY Where BR = brown / BK = black / GY = grey.

Material Specification
All cables, equipment and construction method on this network are to be in accordance with G81 documentation.

Excavation Carried Out by BUUK
The trenches highlighted in blue will be excavated and reinstated by BUUK contractors, the excavation and reinstatement of the other trenches will be the responsibility of the customer.



Plan Notes
This plan shows apparatus owned by the BUUK Group. Any third party apparatus indicated on these drawings is shown for indicative purposes only. The information shown on this plan is given without warranty, the accuracy cannot be guarenteed. No liability of any kind whatsoever is accepted by the company. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of apparatus. This plan is reproduced by the permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2007. All rights reserved Ordnance Survey Licence number 0100021063.

Developers Responsibility
When apparatus have been laid it becomes the responsibility of the developer to ensure it is suitably protected, therefire backfilling should be carried out as soon as possible. Replacement and repair of damaged apparatus, including administrative costs will be fully recharged to the developer. It will be the developer's responsibilityto recover the costs from the third parties.

Revision Notes
For a revision history of this network design please see seperate revision history document.

GTC, Woolpit Business Park, Suffolk, IP30 9UP
Tel: 01359 240363
www.gtc-uk.co.uk

Last Edit By:	
Last Approved By:	PETER ASHBY 12062025

Approved

OS Ref: 384334,397360

Location: Charles Street, MANCHESTER, M1 7EN

Developer/Client: Circle Square District Company Ltd

Drawing Number/Title: EN0020339-1_3_of_3_Rev5-1_Contestable_HV_

Network Number:	Project Number:	
N0020339	N0020339-1	
Scale: 1:1000	Sheet Size: **A3**	Revision: 5.1

(GY) Plant Enquiry, Our Ref 5986000, Your Ref 39540 generated for rbennett@groundwave.com at 09/09/2025 16:05:56. This drawing is reproduced from our records archive at the time of enquiry.

RORY CHRISTIAN 07.05.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Floor Plans SpR - JPID: 841765 P-0095151-DWG-011-Rev3 P-0095151-DWG-012-Rev2 P-0095151-DWG-027-Rev1 P-0095151-DWG-024-Rev8	28/11/23	JME	N/A
1-1	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A

CABLES TO BE INSTALLED IN CUPBOARD AND DROP TO GROUND LEVEL.

700 x 150 mm OPENING IN THE FLOOR. CABLE TO DROP THROUGH THE OPENING TO UNIT L8 BELOW.

VOID TO BELOW

VOID TO BELOW

PLANT (L1, L2, L3 & L8)

35mm² SNE

UNIT L4

PLANT (L4)

3x 4c 95mm² SNE LS0H
2x 3c 35mm² SNE SPLIT LS0H

VOID TO BELOW

UNIT L2

UNIT L1

VOID TO BELOW

FINAL CUTOUT POSITIONS TO BE CONFIRMED WITH CLIENT

Proposed HV Mains
All HV cables to be laid in pre-excavated trench to 600mm cover, provided by the developer (except A - B). Road crossings to be plastic 150mm ripduct, at 750mm cover to the finished level.

Proposed LV Mains
All LV cables to be laid in pre-excavated trench to 450mm cover, provided by the developer. Trench to be 300mm wide unless otherwise stated to accomodate the mains shown on this drawing, at 750mm cover to the finished level.

Harmonised Mains Cables - Phase Identification
All cables are to be identified at terminations and joints and shall be shown as BR, BK, CY where **BR** = Brown (Red) / **BK** = Black (Yellow) / **GY** = Grey (Blue).

All services are to be ducted. Duct laid by the developer at 450mm cover to the finished level. Road crossings to be ducted with 150mm ripduct.

Electric Legend

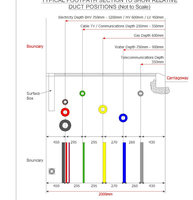
	Proposed	As-Laid
230V Cable (Service)		
400V Cable		
400V Cable (Live)		
6.6kV Cable		
11kV Cable		
20kV Cable		
33kV Cable		
66kV Cable		
132kV Cable		
Yellow Position		
Cable Joint - LV		
Cable Joint - HV		
Pot end & earth electrode - LV		
Pot end & earth electrode - HV		
2 Way 1Ph Box		
4 Way 1Ph Box		
LV Feeder Pillar		
Shunting end cap		
Street lighting column		
Earth		
Sub station (doors shown)		
Network boundary point		
Ducted		
Excavated by BUUK		
Installed on cable ties		
SGTR Works Boundary		
Asset Boundary		

Cable Sizes	Duct Sizes
11kV, 6.6kV, 3.3kV, 400V Mains cables	300mm SQUARE 150mm Duct

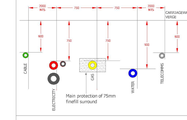
ANY DEVIATION FROM THESE SIZES MUST BE AGREED WITH NOE

PRINT IN COLOUR FOR CORRECT VOLTAGE IDENTIFICATION

TYPICAL FOOTPATH SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



TYPICAL ROAD/VERGE SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The accuracy of any cable shown on this plan is not guaranteed and the actual depth thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by the company, it's agents, servants or contractors for any error or ommission. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of cables, services and other equipment on site before any mechanical plant is used. It is the responsibility of the promoter of the works and all persons, companies or their servants or contractors) working for you on or near electrical equipment.

This electrical network design has been carried out by :

Electricity Network Manager
GTC
Woodpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP

Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GB1 standards.

© Electricity Networks Company Ltd

Drawing Scale : 1:125
O.S.REF : 384261, 397436
Network Number : N0020339-1
Linked Network: N0019788-1
Drawing Number : EN0020339-1_R1-1_3_of_5

Developer : Circle Square District Company Ltd
Enquirer : Power On Connections
Location : Charles Street, MANCHESTER, M1 7EN

THIS DRAWING SHOWS:
GTC NETWORK

SHEET SIZE: A0

Building 7 & 8 - Mezzanine Floor

(21) Plant Enquiry, Our Ref 5986080, Your Ref 39541 generated for rbennett@groundwave.com at 06/09/2025 16:06:05. This drawing is reproduced from our records archive at the time of enquiry.

LLEWELLYN WAKELING 29.11.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Updated design: P-0095151-DWG-008 Rev 1 Updated template - JPID: 601281	14/06/22	JS	N/A
1-1	LRC Data added from LV73466 JPID: 671078	09/12/22	PH	N/A
1-2	Updated design: P-0095151-DWG-003-Rev 11	08/03/23	JME	N/A
1-3	Updated design: P-0095151-DWG-003 Page 1 - Rev 12 & Page 2 - Rev 10	24/05/23	JME	N/A
1-4	LRC Data added as per LV78682 JPID: 756982	05/07/23	LWA	N/A
1-5	LRC Data added as per LV80490 JPID: 790820	29/09/23	LWA	N/A
1-6	Updated design: P-0095151 - DWG - 005 RevB LV Electrical Design-Buildings 768	14/02/24	BT	N/A
1-7	LRC Data added as per LV83746 JPID: 843085	21/02/24	ATR	N/A
1-8	Updated design: P-0095151/DWG/005 rev.7 JPID 849579	13/03/24	GD	N/A
1-9	LRC Data added as per: LV84393 JPID: 853805 LRC Data added as per: LV84394 JPID: 853812	18/03/24	LWA	N/A
2-0	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A
2-1	Design change:EN0020339-1 Ref 219 Retail L1 83Kva - 69Kva. JPID: - 902919	18/07/24	BT	N/A
2-2	Updated design: P-0095151-DWG-004 REV 10, JPID: 953179	29/11/24	LWA	N/A

HV POINT OF CONNECTION TO EXISTING 3c 0.15 6.6kV CABLE
FEEDER REFERENCE: F1137
ENW PLAN DATED: 15/05/18
OS MAP REF: 384266, 397468

OFF SITE
ON SITE
EXISTING HV NETWORK
3c 0.15 6.6kV CABLE

6.6kV 3 x 1c 300mm² SAC/XLPE/TRIPLEX
40m
6.6kV 3 x 1c 300mm² SAC/XLPE/TRIPLEX
40m

SUBSTATION STATUS
HV: LIVE
TX: LIVE
ACB: LIVE

SUBSTATION REFERENCE: CIRCLE SQ BUILDING 9 - 179308

STANDARD ACB PROTECTION SETTINGS TO GRADE WITH STANDARD TLF & VIP RELAY SETTINGS	
Transformer Rating	800kVA
ACB Type	Masterpact NW12H2 with Micrologic 5.0A control unit
Ir (xIn)	1
Isd (xIr)	2
Ii (xIn)	4
tr (s)	2
tsd (s)	0.1 with I^2t on
Overload trip current	1,314A
Earth fault 5 sec trip current	4,960A
Notes	Above settings assume standard "long term rating" plug used.

ACB EXIT		
P.S.C.C.	20.7	kA
E.L.I.	0.01	Ω
V_{drop}	N/A	%

01 02 EFPI RN2c1T CB
MC 550kVA MEC 0kVA
ENW
ENC
800 kVA 11/6.6/0.433kV Dyn11 KNAN
TX BLADES
Auxilliary socket & light by Power On See drawing P-0095151 - DWG - 021
STUFFING GLAND
Consumer Unit
ENC
CLIENT
4 Core 600/1000V 4mmCu/XLPE/SWA/PVC
INSULATED GLAND (NO EARTH CONNECTION PERMITTED)
3c 4mm² Cu/PVC/SWA/PVC BY POC
4c 95 Conc LSOH 8m
200A (200A FUSED)
4c 95 Conc LSOH 3m
INTEGRAL TO SUBSTATION PROVIDED BY OTHERS

10m Meter Cable Length

PLANT ROOM IN BASEMENT BY OTHERS

ACB Meter to be installed in client's LV plant room within 10m from the ACB
M
METERING CTs: 800kVA/1250A ACB - CT Ratio:1200/5

LV TAILS BY OTHERS
AWA's to be earthed at customer's LV switchboard

LV PANEL BY OTHERS
LANDLORD SUPPLY: 480kVA

EARTHING REQUIREMENT AT CUSTOMER'S INTAKE POINT:
WHERE THE CUSTOMER IS INSTALLING A SEPARATE EARTH MAT, A MEANS FOR DISCONNECTING IT MUST BE PROVIDED TO FACILITATE MEASURING THE RESISTANCE. THIS MUST BE PROVIDED IN AN ACCESSIBLE POSITION (IN ACCORDANCE WITH THE CURRENT EDITION OF THE IEE WIRING REGULATIONS).

TLF Protection

	Transformer Size 6.6kV Network (kVA)			
CT Ratio	315	500	800	1000
50/5	10A			
100/5		7.5A	12.5A	15A

Way	Fuse	Feeder Name
1	1250A ACB	LANDLORD SUPPLY
2	315A	RETAIL UNIT

Retail Unit 70kVA 3Φ
CT M CT ratio 200/5
200A (160A FUSED)

RETAIL UNIT		
P.S.C.C.	14.5	kA
E.L.I.	0.02	Ω
V_{drop}	0.16	%

CUSTOMER'S LV TAILS REQUIREMENTS:
1) ACB WILL NOT ACCEPT MULTI-CORE CABLES
2) MAX 630mm² 1c Cu/AWA, 2No. CABLES PER PHASE AND 1No. NEUTRAL (½ SIZED)
3) 1No. SEPARATE G/Y PVC EARTH CONDUCTOR (CPC)
4) NO FACILITY FOR EARTHED GLAND AT SUBSTATION (WOODEN COMPRESSION BLOCK ONLY)
5) C8B4 LUGS REQUIRED IN ACB PILLAR
6) LOAD TO BE BALANCED ACROSS ALL THREE PHASES SO FAR AS REASONABLY PRACTICABLE
7) LARGE AMOUNTS OF HARMONIC DISTORTION NOT PERMITTED FOR CONNECTION
8) LV CABLES TO COMPLY WITH BS7671 INCLUDING THE FOLLOWING:
a) EARTH LOOP IMPEDANCE AT (UNEARTHED) SUBSTATION END OF CABLES SUFFICIENTLY LOW TO ACHIEVE MAX 5 SECOND DISCONNECTION OF ACB WITH SETTINGS AS SHOWN ABOVE
b) WHERE SUBSTATION ACB IS USED TO PROVIDE BOTH OVERLOAD AND SHORT CIRCUIT PROTECTION THE LV CABLES MUST BE SIZED TO CARRY OVERLOADS UP TO THE ACB SETTINGS - NOT JUST TRANSFORMER FULL LOAD CURRENT (FLC) OR AUTHORISED SUPPLY CAPACITY (ASC)
c) WHERE THE CUSTOMER'S MAIN INCOMING CIRCUIT BREAKER OR FUSES PROVIDE OVERLOAD PROTECTION THEN SMALLER CABLES MAY BE USED (REFER BS 7671 CLAUSE 433). IN THIS CASE THE CUSTOMERS DESIGNER MUST STILL CHECK THAT THE CABLES ARE ADEQUATELY RATED FOR THE SHORT CIRCUIT PROTECTION AFFORDED BY THE SUBSTATION ACB SETTINGS GIVEN ABOVE

LEGEND
- HV Cable (& Existing HV)
- LV Cable
- Live LV Cable
- Earth Bonding
- Termination
- Joint (HV / LV / Live LV)
- Pressure End (LV / Live LV)
- Earth Rod

This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area and their presence and position should be established by contacting the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by the Electricity Network Company Ltd, its employees or agents for any action taken in reliance on the positions, in accordance with HSG47, must be used to verify and establish the actual position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :
Electricity Network Manager
GTC
Woolpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP
Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GB1 standards.

© Electricity Networks Company Ltd

Drawing Scale :	NTS
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Project Number :	N0019788-1
Drawing Number :	EN0020339-1_R2-2_3_of_8 Schematic
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street MANCHESTER M1 7EN

the electricity network company

THIS DRAWING SHOWS: SCHEMATIC

SHEET SIZE A0

(C71) Plant Enquiry, Our Ref 5986000, Your Ref 39540 generated for rbennett@groundwise.com at 06/08/2025 16:08:02. This drawing is reproduced from our records archive at the time of enquiry.

RORY CHRISTIAN 07.05.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Floor Plans SpR - JPID: 841765 P-0095151-DWG-011-Rev3 P-0095151-DWG-012-Rev2 P-0095151-DWG-027-Rev1 P-0095151-DWG-024-Rev8	28/11/23	JME	N/A
1-1	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A

CUSTOMER'S LV ROOM

AA

Penetration through pile wall to be sealed. Penetrations and sealing to be designed by others and approved by Power On.

2No 125mm Internal Diameter steel ducts for the HV cables

2No 125mm Internal Diameter steel ducts for the HV cables

Unswitched socket for RTU feed

Double Switched Socket

EMERGENCY LIGHT

ESCAPE DOOR KEEP CLEAR

I beam to be encased in concrete or clad by builder prior to plant installation to meet fire proofing requirements. Exact dimensions to be confirmed by others.

8

Anti vibration pads to be installed under substation to reduce vibration through the structure.

SUBSTATION 2

SUBSTATION 3

Slot/ducts at high level for LV cables Size and location to be provided by others.

50mm x 50mm slot in the wall 300mm above FFL for the copper tape

EMERGENCY LIGHT

EMERGENCY LIGHT

ESCAPE DOOR WITH PUSH PANIC BAR IN THE INSIDE

Slot/ducts at high level for LV cables Size and location to be to provided by others.

SUBSTATION 1

SUBSTATION 4

Escape Door

50mm x 50mm slot in the wall 100mm above FFL for the copper tape

I beam to be encased in concrete or clad by builder prior to plant installation to meet fire proofing requirements. Exact dimensions to be confirmed by others.

7

Fluorescent Lighting (mounted 1800mm above FFL)

Substation doors to be able to open fully to allow substation access. Hook and eye latch to be installed by client to hold the door open.

Double Switched Socket

Light Switch

Consumer Unit

Sunray Fire Rated Double SaverDoor. Two hour fire rated with panic bar system. To suit structural opening of 2710 wide X 2145 high. Doors are available from Sunray Engineering (Tel: 01233 639039). (By Others)

S T U

Proposed HV Mains
All HV cables to be laid in pre-excavated trench to 600mm cover, provided by the developer (circuit A - B). Road crossings to be plastic 150mm ripduct, at 750mm cover to the finished level.

Proposed LV Mains
All LV cables to be laid in pre-excavated trench to 450mm cover, provided by the developer. Trench to be 300mm wide unless otherwise noted to accomodate the mains shown on this drawing, at 750mm cover to the finished level.

Harmonised Mains Cables – Phase Identification
All cables are to be identified at terminations and joints and shall be shown as BR, BK, CF where **BR** = Brown (Red) / **BK** = Black (Yellow) / **CF** = Grey (Blue).

All services are to be ducted. Duct laid by the developer at 450mm cover to the finished level. Road crossings to be ducted with 150mm ripduct.

Electric Legend

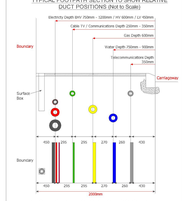
	Proposed	As-Laid
230V Cable (Service)		
400V Cable		
400V Cable (Live)		
6.6kV Cable		
11kV Cable		
20kV Cable		
33kV Cable		
66kV Cable		
132kV Cable		
Yellow Position		
Cable 3ϕFC - LV		
Cable 3ϕFC - HV		
Pot end & earth electrode - LV		
Pot end & earth electrode - HV		
2 Way CPA Box		
4 Way CPA Box		
LV Feeder Pillar		
Shunting end cap		
Street lighting column		
Earth		
Sub station (above shown)		
Network boundary point		
Ducted		
Excavated by BUUK		
Installed on cable tray		
SLFB Works Boundary		
Asset Boundary		

Cable Sizes	Duct Sizes
HV ducts (all)	150mm ripduct
LV ducts (all)	150mm ripduct

ANY DEVIATION FROM THESE SIZES TO BE TAG SEALED PRIOR TO WORK

PRINT IN COLOUR FOR CONTACT VOLTAGE IDENTIFICATION

TYPICAL FOOTPATH SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



TYPICAL ROAD/VERGE SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof is not guaranteed. The Electricity Network Company Ltd accepts no liability for the company, it's agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :

Electricity Network Manager
GTC
Woodpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP

Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GS1 standards.

© Electricity Networks Company Ltd

Drawing Scale :	1:25
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Linked Network:	N0019788-1
Drawing Number :	EN0020339-1_R1-1_4_of_5
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street, MANCHESTER, M1 7EN

the electricity network co

Symphony Park Substation - Basement Construction Drawing

THIS DRAWING SHOWS:
GTC NETWORK

SHEET SIZE A0

(C) Pixel Enquiry. Our Ref 5986080, Your Ref 39540 generated for rbennett@groundwave.com at 06/09/2025 16:05:45. This drawing is reproduced from our records archive at the time of enquiry.

LLEWELLYN WAKELING 29.11.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Updated design: P-0095151-DWG-008 Rev 1 Updated template - JPID: 601281	14/06/22	JS	N/A
1-1	LRC Data added from LV73466 JPID: 671078	09/12/22	PH	N/A
1-2	Updated design: P-0095151-DWG-003-Rev 11	08/03/23	JME	N/A
1-3	Updated design: P-0095151-DWG-003 Page 1 - Rev 12 & Page 2 - Rev 10	24/05/23	JME	N/A
1-4	LRC Data added as per LV78682 JPID: 756982	05/07/23	LWA	N/A
1-5	LRC Data added as per LV80490 JPID: 790820	29/09/23	LWA	N/A
1-6	Updated design: P-0095151 - DWG - 005 RevB LV Electrical Design-Buildings 7&8	14/02/24	BT	N/A
1-7	LRC Data added as per LV83746 JPID: 843085	21/02/24	ATR	N/A
1-8	Updated design: P-0095151/DWG/005 rev.7 JPID 849579	13/03/24	GD	N/A
1-9	LRC Data added as per: LV84393 JPID: 853805 LRC Data added as per: LV84394 JPID: 853812	18/03/24	LWA	N/A
2-0	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A
2-1	Design change:EN0020339-1 Ref 219 Retail L1 83Kva - 69Kva. JPID: - 902919	18/07/24	BT	N/A
2-2	Updated design: P-0095151-DWG-004 REV 10, JPID: 953179	29/11/24	LWA	N/A

FOR INFORMATION ABOUT THE UPSTREAM HV NETWORK PLEASE REFER TO POWER ON DRAWING P-0095151-DWG-003

6.6kV 3 x 1c 300mm² Al XLPE

6.6kV 3 x 1c 300mm² Al XLPE

TLF Protection

	Transformer Size 6.6kV Network (kVA)			
CT Ratio	315	500	800	1000
50/5	10A			
100/5		7.5A	12.5A	15A

STANDARD ACB PROTECTION SETTINGS TO GRADE WITH STANDARD ENC TLF SETTINGS	
Transformer Rating	1000kVA
ACB Type	Masterpact NT12 H2 with Micrologic 5.0E
Ir (xIn)	control unit
Isd (xIr)	2
Ii (xIn)	4
tr (s)	2
tsd (s)	0.1 with I²t off
Notes	Above settings assume standard "long term rating" plug used.

CUSTOMER'S LV TAILS REQUIREMENTS:

1) ACB WILL NOT ACCEPT MULTI-CORE CABLES
2) MAX 630mm² 1c Cu/AWA, 2No. CABLES PER PHASE AND 2No. NEUTRAL
3) 1No. SEPARATE G/Y PVC EARTH CONDUCTOR (CPC)
4) NO FACILITY FOR EARTHED GLAND AT SUBSTATION (WOODEN COMPRESSION BLOCK ONLY)
5) C8B4 LUGS REQUIRED IN ACB PILLAR
6) LOAD TO BE BALANCED ACROSS ALL THREE PHASES SO FAR AS REASONABLY PRACTICABLE
7) LARGE AMOUNTS OF HARMONIC DISTORTION NOT PERMITTED FOR CONNECTION
8) LV CABLES TO COMPLY WITH BS7671 INCLUDING THE FOLLOWING:
a) EARTH LOOP IMPEDANCE AT (UNEARTHED) SUBSTATION END OF CABLES SUFFICIENTLY LOW TO ACHIEVE MAX 5 SECOND DISCONNECTION OF ACB WITH SETTINGS AS SHOWN ABOVE
b) WHERE SUBSTATION ACB IS USED TO PROVIDE BOTH OVERLOAD AND SHORT CIRCUIT PROTECTION THE LV CABLES MUST BE SIZED TO CARRY OVERLOADS UP TO THE ACB SETTINGS - NOT JUST TRANSFORMER FULL LOAD CURRENT (FLC) OR AUTHORISED SUPPLY CAPACITY (ASC)
c) WHERE THE CUSTOMER'S MAIN INCOMING CIRCUIT BREAKER OR FUSES PROVIDE OVERLOAD PROTECTION THEN SMALLER CABLES MAY BE USED (REFER BS 7671 CLAUSE 433). IN THIS CASE THE CUSTOMERS DESIGNER MUST STILL CHECK THAT THE CABLES ARE ADEQUATELY RATED FOR THE SHORT CIRCUIT PROTECTION AFFORDED BY THE SUBSTATION ACB SETTINGS GIVEN ABOVE

GROUND FLOOR INTEGRAL SUBSTATION ROOM PROVIDED BY OTHERS

GROUND FLOOR CLIENT'S PLANT ROOM BY OTHERS

SUBSTATION "NOBEL WAY (WEST)" MIC:1000kVA MEC:0kVA

01 02 EFPI RN2c1T 200A

CIRCLE SQUARE BUILDINGS 5&6 SUBSTATION NOBEL WAY (WEST) 1000KVA 11/**6.6/0.433KV** Dyn11 KNAN

MIC:1000kVA MEC:0kVA

1c 600mm² Solid Al/XLPE/PVC Sectorial Cables
2No. Per Phase
1No. Neutral Cables
1No. 240mm² Cu 6491X G/Y CPC

3m 1600A incomer disconnector

TX BLADES

4c 95 SNE LS0H 85kVA
3c 35 SNE SPLIT LS0H 9kVA
3c 35 SNE SPLIT LS0H 30kVA
3c 35 SNE SPLIT LS0H 30kVA
30m 25m 85m

MSDB 200A 160A MSDB 15WAYS 2J 100A FUSED

MSDB IN SUBSTATION

P.S.C.C.	21.8	kA
E.L.I.	0.01	Ω
Vdrop	0.17	%

154kVA 4c 95 SNE LS0H 5m 138kVA 4c 95 SNE LS0H 90m 94kVA 4c 95 SNE LS0H

Way	Fuse	Feeder Name
1	315A	MSDB 15 ways 2J
2	315A	Retail T4
3	Blank	Spare Way
4	Blank	Spare Way
5-7	1250A	ACB-LANDLORD SUPPLY

1 2 3 4 5-7 7WAY MKII BOARD

▲ ENC
▼ CLIENT

12 Core 600/1000V 4mmCu/XLPE/SWA/PVC

INSULATED GLAND (NO EARTH CONNECTION PERMITTED)

ACB Meter to be installed in client's LV plant room within 10m from the ACB

METERING CTs: CT Ratio:1200/5

LV TAILS BY OTHERS

AWA's to be earthed at customer's LV switchboard

LV PANEL BY OTHERS
LANDLORD SUPPLY - BUILDINGS 5&6: 614kVA

RETAIL UNIT T1 85kVA — P.S.C.C. 8.8 kA; E.L.I. 0.03 Ω; Vdrop 0.57 %
CT ratio 200/5 — 200A fused at 160A

RETAIL UNIT T2 9kVA — P.S.C.C. 3.5 kA; E.L.I. 0.07 Ω; Vdrop 0.31 %
100A fused at 80A

RETAIL UNIT T3A 30kVA — P.S.C.C. 1.7 kA; E.L.I. 0.13 Ω; Vdrop 1.25 %
100A

RETAIL UNIT T3B 30kVA — P.S.C.C. 1.6 kA; E.L.I. 0.15 Ω; Vdrop 1.39 %
100A

RETAIL UNIT T4 138kVA — P.S.C.C. 3.7 kA; E.L.I. 0.06 Ω; Vdrop 2.36 %
CT ratio 200/5 — 200A fused at 200A

LV NETWORK AND SUPPLY ARRANGEMENT DOWNSTREAM OF THE SMDB (WAY 2) TO BE CONFIRMED AT A LATER STAGE.

UNIT T5 DISCONNECTED FROM THE SMDB
THE FUSE IS REMOVED FROM WAY 2 AND THE 95mm2 CABLE COILED UP AND PUT IT NEAR BY MSDB

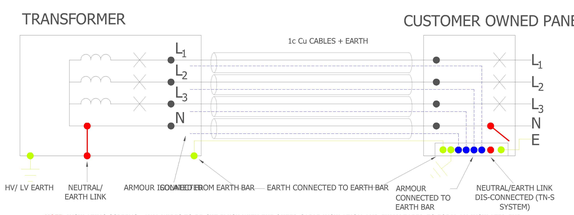
4c 95 SNE LS0H — SMDB

Way
1
2
3

SMDB-T5

P.S.C.C.	4.1
E.L.I.	0.06
Vdrop	1.43

Bonding Arrangement for LV Tails



NOTE: INSULATING SCREENS - AWA WIRES TO BE CUT FLUSH WITH THE OUTER CABLE INSULATION AND FULLY TAPED TO FORM AN INSULATED END

THIS DRAWING SHOWS: SCHEMATIC

LEGEND

- HV Cable (& Existing HV)
- LV Cable
- Live LV Cable
- Earth Bonding
- Termination
- Joint (HV / LV / Live LV)
- Pressure End (LV / Live LV)
- Earth Rod

This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof is not guaranteed. The Electricity Network Company Ltd and its subsidiary company, it's agents, servants or contractors for any error or ommision. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of mains before any excavation activities begin. NO DIGGING BY MECHANICAL plant to be 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 electrical equipment.

This electrical network design has been carried out by :
Electricity Network Manager
GTC
Woodpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP
Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GB1 standards.
© Electricity Networks Company Ltd

Drawing Scale :	NTS
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Project Number :	N0019788-1
Drawing Number :	EN0020339-1_R2-2_4_of_8 Schematic
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street MANCHESTER M1 7EN

SHEET SIZE A0

(C21) Plant Enquiry, Our Ref 5986000, Your Ref 39541 generated for rbennett@groundwise.com at 06/08/2025 16:05:45. This drawing is reproduced from our records archive at the time of enquiry.

RORY CHRISTIAN 07.05.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Floor Plans Split - JPID: 841765 P-0095151-DWG-011-Rev3 P-0095151-DWG-012-Rev2 P-0095151-DWG-027-Rev1 P-0095151-DWG-024-Rev8	28/11/23	JME	N/A
1-1	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A

3A-B1-06
MEANS OF
ESCAPE

FFL/

Double Swing Fire Doors

FFL/

WT20

3B-B1-07
MEANS OF
ESCAPE

Pop-Up.
Size
indicative

Service Route

BUILDING 3B (SOUTH)

SS

1260 x 2040 FD60s
DI.BM.0B.47

2550

Door to achieve
min.2300mm clearance,
details tbc

1260 x 2040 FD60s
DI.BM.0B.46

B2-0B-05
LOBBY

FFL/

WT24
Brickwork

WT20
Blockwork

XX-0B-04
SUBSTATION

1260 x 2040 FD30s
DI.BM.0B.40

B2-0B-06
ADDITIONAL B3
REFUSE/RECYCLING
STORE

Anti vibration pads
to be installed under
substation to reduce
vibration through
the structure.

798X2145mm
DI.BM.0B.30

BUILDING 2

XX-0B-06
PLANT

SUBSTATION B3

Fluorescent
Lighting (Mounted
at 1800mm above
FFL)

Slot to be sealed by
others
after cable
installation to
provide 2hr fire
rating.

TOTAL WEIGHT:
2590kg

400

B2-0B-04
MEANS OF
ESCAPE

2550

XX-0B-07
COMMS ROOM

Double
Switched
Socket

Sunray Fire Rated Double
SaverDoor.
Two hour fire rated with panic
bar system. To suit structural
opening of 2710 wide X 2145
high. Doors are available from
Sunray Engineering (Tel: 01233
639039). (By Others)

Fluorescent
Lighting
(Mounted above
substation door)

Light
Switch

Consumer
Unit

2600x2400
DI.BM.0B.31

3092

2300

ISSUED FOR
DESIGN
DISCUSSION ONLY

XX

Proposed HV Mains
All HV cables to be laid in pre-excavated trench to 600mm cover, provided by the developer (circuit A - B). Road crossings to be plastic 150mm ripduct, at 750mm cover to the finished level.

Proposed LV Mains
All LV cables to be laid in pre-excavated trench to 450mm cover, provided by the developer. Trench to be 450mm wide and 600mm deep to accomodate the mains shown on this drawing, at 750mm cover to the finished level.

Harmonised Mains Cables - Phase Identification
All HV cables are to be identified at terminations and joints to be shown as BR, BK, CY where **BR** = Brown (Red) / **BK** = Black (Yellow) / **GY** = Grey (Blue).
All services are to be ducted. Duct laid by the developer at 450mm cover to the finished level. Road crossings to be ducted with 150mm ripduct.

Electric Legend | Proposed | As-Laid

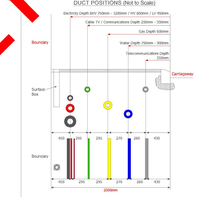
230V Cable (Service)
400V Cable
400V Cable (Live)
6.6kV Cable
11kV Cable
20kV Cable
33kV Cable
66kV Cable
132kV Cable
Yellow Position
Cable 3XP1 - LV
Cable 3XH1 - HV
Pot end & earth electrode - LV
Pot end & earth electrode - HV
2 Way GPA Box
4 Way GPA Box
LV Feeder Pillar
Shunting and cap
Street lighting column
Earth
Sub station (doors shown)
Network boundary point
Ducted
Excavated by JBUUK
Installed on cable tray
SLFB Wafer Boundary
Asset Boundary

Cable Sizes	Duct Sizes
33mm across cable Plastic cable	78mm ducts 130mm duct

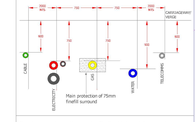
ANY DEVICES CAN MOVE THESE SIZES BY A THE DEVELOPER/ OWNER/AGENT

PRINT IN COLOUR FOR CORRECT VOLTAGE IDENTIFICATION

TYPICAL FOOTPATH SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



TYPICAL ROAD/VERGE SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area and will not necessarily be shown on these plans. Their position must be established by owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by the company, it's agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of mains before any excavation starts. The information shown on this plan is not a substitute for such investigations. 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 electrical equipment.

This electrical network design has been carried out by :

Electricity Network Manager
GTC
Woolpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP

Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GB1 standards.

© Electricity Networks Company Ltd

Drawing Scale : 1:25
O.S.REF : 384261, 397436
Network Number : N0020339-1
Linked Network: N0019788-1
Drawing Number : EN0020339-1_R1-1_5_of_5

Developer : Circle Square District Company Ltd
Enquirer : Power On Connections
Location : Charles Street,
MANCHESTER,
M1 7EN

THIS DRAWING SHOWS:
GTC NETWORK

SHEET SIZE A0

Pavilion Substation - Basement Construction Drawing

(21) Pod Enquiry, Our Ref 5986080, Your Ref 39541 generated for rbennett@groundwave.com at 06/09/2025 16:05:52. This drawing is reproduced from our records archive at the time of enquiry.

LLEWELLYN WAKELING 29.11.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Updated design: P-0095151-DWG-008 Rev 1 Updated template - JPID: 601281	14/06/22	JS	N/A
1-1	LRC Data added from LV73466 JPID: 671078	09/12/22	PH	N/A
1-2	Updated design: P-0095151-DWG-003-Rev 11	08/03/23	JME	N/A
1-3	Updated design: P-0095151-DWG-003 Page 1 - Rev 12 & Page 2 - Rev 10	24/05/23	JME	N/A
1-4	LRC Data added as per LV78682 JPID: 756982	05/07/23	LWA	N/A
1-5	LRC Data added as per LV80490 JPID: 790820	29/09/23	LWA	N/A
1-6	Updated design: P-0095151 - DWG - 005 RevB LV Electrical Design-Buildings 768	14/02/24	BT	N/A
1-7	LRC Data added as per LV83746 JPID: 843085	21/02/24	ATR	N/A
1-8	Updated design: P-0095151/DWG/005 rev.7 JPID 849579	13/03/24	GD	N/A
1-9	LRC Data added as per: LV84393 JPID: 853805 LRC Data added as per: LV84394 JPID: 853812	18/03/24	LWA	N/A
2-0	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A
2-1	Design change:EN0020339-1 Ref 219 Retail L1 83Kva - 69Kva. JPID: - 902919	18/07/24	BT	N/A
2-2	Updated design: P-0095151-DWG-004 REV 10, JPID: 953179	29/11/24	LWA	N/A

INTERIM CONNECTION ARRANGEMENT

FOR INFORMATION ABOUT THE UPSTREAM HV NETWORK PLEASE REFER TO POWER ON DRAWING P-0095151-DWG-003

TO CIRCLE SQUARE PRIMARY SUBSTATION 100509 FEEDER F5212

11kV cables @6.6kV 3 x 1c 300mm² Al XLPE
181m

SUMPHONY PARK IDNO SUBSTATION 2 MIC:900kVA, MEC:0kVA FEEDING BUILDINGS 2,3 & EXTERNALS

SYMPHONY PARK SUBSTATION
TOTAL MIC:1851kVA
TOTAL MEC:0kVA

11kV cables @6.6kV 3 x 1c 300mm² Al XLPE
185m

TO CIRCLE SQUARE PRIMARY SUBSTATION 100509 FEEDER F5664

FOR INFORMATION ABOUT THE UPSTREAM HV NETWORK PLEASE REFER TO POWER ON DRAWING P-0095151-DWG-003

SYMPHONY PARK IDNO SUBSTATION 3 MIC:951kVA, MEC:0kVA FEEDING BUILDING 4 & EXTERNALS

11kV cables @6.6kV 3 x 1c 300mm² Al XLPE
11m

INTERNAL HV CABLES TO BE PAINTED WITH 2 COATS OF PYRO SHIELD

BASEMENT INTEGRAL SUBSTATION ROOM PROVIDED BY OTHERS

CLIENT'S PLANT ROOM BY OTHERS

01 02 EFPI RN2cET CB

NOP

TLF Protection

Transformer Size 6.6kV Network (kVA)

CT Ratio	315	500	800	1000
50/5	10A			
100/5	7.5A	12.5A		15A

SUBSTATION_2
1000kVA
11/0.433kV
Dyn11 KNAN

TX BLADES

01 1600A

ENC
CLIENT

12 Core 600/1000V 4mmCu/XLPE/SWA/PVC

INSULATED GLAND (NO EARTH CONNECTION PERMITTED)

STANDARD ACB PROTECTION SETTINGS TO GRADE WITH STANDARD ENC TLF SETTINGS

Transformer Rating	1000kVA
ACB Type	Masterpact NW16 H1 with Micrologic 5.0E control unit
Ir (xIn)	4
Isd (xIr)	8
Ii (xIn)	8
tr (s)	4
tsd (s)	0.1 with I²t on
Notes	Above settings assume standard "long term rating" plug used.

ACB Meter to be installed in client's LV plant room within 1m of the ACB

CT Ratio:1600/5

LV UTILITY METER FOR SYMPHONY PARK SUBSTATION 2 900kVA

LV TAILS BY OTHERS

AWA's to be earthed at customer's LV switchboard

LV SWITCHBOARD 1 BY OTHERS

01 02 EFPI RN2cET CB

TLF Protection

Transformer Size 6.6kV Network (kVA)

CT Ratio	315	500	800	1000
50/5	10A			
100/5	7.5A	12.5A		15A

SUBSTATION_3
1000kVA
11/0.433kV
Dyn11 KNAN

TX BLADES

01 1600A

ENC
CLIENT

12 Core 600/1000V 4mmCu/XLPE/SWA/PVC

INSULATED GLAND (NO EARTH CONNECTION PERMITTED)

STANDARD ACB PROTECTION SETTINGS TO GRADE WITH STANDARD ENC TLF SETTINGS

Transformer Rating	1000kVA
ACB Type	Masterpact NW16 H1 with Micrologic 5.0E control unit
Ir (xIn)	4
Isd (xIr)	8
Ii (xIn)	8
tr (s)	4
tsd (s)	0.1 with I²t on
Notes	Above settings assume standard "long term rating" plug used.

ACB Meter to be installed in client's LV plant room within 1m of the ACB

CT Ratio:1600/5

LV UTILITY METER FOR SYMPHONY PARK SUBSTATION 3 951kVA

LV TAILS BY OTHERS

AWA's to be earthed at customer's LV switchboard

LV SWITCHBOARD 2 BY OTHERS

LEGEND

- HV Cable (& Existing HV)
- LV Cable
- Live LV Cable
- Earth Bonding
- Termination
- Joint (HV / LV / Live LV)
- Pressure End (LV / Live LV)
- Earth Rod

This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area and their presence may not be shown on this plan. Service pipes are also excluded from this plan. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by the Electricity Network Company Limited, its agents or servants for any error or omission. All practices, in accordance with HSG47, must be used to verify and establish the actual position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :
Electricity Network Manager
GTC
Woolpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP
Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GB1 standards.

© Electricity Networks Company Ltd

THIS DRAWING SHOWS:
SCHEMATIC

Drawing Scale :	NTS
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Project Number :	N0019788-1
Drawing Number :	EN0020339-1_R2-2_5_of_8 Schematic
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street MANCHESTER M1 7EN

enc the electricity network

SHEET SIZE A0

(21) Plant Enquiry, Our Ref 5986080, Your Ref 39541 generated for rbennett@groundview.com at 06/09/2025 16:05:58. This drawing is reproduced from our records archive at the time of enquiry.

LLEWELLYN WAKELING 29.11.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Updated design: P-0095151-DWG-008 Rev 1 Updated template - JPID: 601281	14/06/22	JS	N/A
1-1	LRC Data added from LV73466 JPID: 671078	09/12/22	PH	N/A
1-2	Updated design: P-0095151-DWG-003-Rev 11	08/03/23	JME	N/A
1-3	Updated design: P-0095151-DWG-003 Page 1 - Rev 12 & Page 2 - Rev 10	24/05/23	JME	N/A
1-4	LRC Data added as per LV78682 JPID: 756982	05/07/23	LWA	N/A
1-5	LRC Data added as per LV80490 JPID: 790820	29/09/23	LWA	N/A
1-6	Updated design: P-0095151 - DWG - 005 RevB LV Electrical Design-Buildings 768	14/02/24	BT	N/A
1-7	LRC Data added as per LV83746 JPID: 843085	21/02/24	ATR	N/A
1-8	Updated design: P-0095151/DWG/005 rev.7 JPID 849579	13/03/24	GD	N/A
1-9	LRC Data added as per: LV84393 JPID: 853805 LRC Data added as per: LV84394 JPID: 853812	18/03/24	LWA	N/A
2-0	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A
2-1	Design change:EN0020339-1 Ref 219 Retail L1 83Kva - 69Kva. JPID: - 902919	18/07/24	BT	N/A
2-2	Updated design: P-0095151-DWG-004 REV 10, JPID: 953179	29/11/24	LWA	N/A

PERMANENT CONNECTION ARRANGEMENT

FOR INFORMATION ABOUT THE UPSTREAM HV NETWORK PLEASE REFER TO POWER ON DRAWING P-0095151-DWG-003

FOR INFORMATION ABOUT THE UPSTREAM HV NETWORK PLEASE REFER TO POWER ON DRAWING P-0095151-DWG-003

SYMPHONY PARK SUBSTATION
TOTAL MIC:3677kVA
TOTAL MEC:0kVA

TO PRIMARY SUBSTATION 100509 FEEDER F5212

11kV cables by others 3 x 1c 300mm² Al XLPE 181m

11kV cables by others 3 x 1c 300mm² Al XLPE 185m

TO CIRCLE SQUARE PRIMARY SUBSTATION 100509 FEEDER F5664

SUMPHONY PARK IDNO SUBSTATION 2
MIC:900kVA, MEC:0kVA
FEEDING BUILDINGS 2,3 & EXTERNALS

SYMPHONY PARK IDNO SUBSTATION 1
MIC:929kVA, MEC:0kVA
FEEDING BUILDINGS 2,3 & EXTERNALS

SYMPHONY PARK IDNO SUBSTATION 4
MIC:897kVA, MEC:0kVA
FEEDING BUILDING 4 & EXTERNALS

SYMPHONY PARK IDNO SUBSTATION 3
MIC:951kVA, MEC:0kVA
FEEDING BUILDING 4 & EXTERNALS

CABLES DO NOT PHYSICALLY CROSS

7m 6.6kV 3 x 1c 300mm² Al XLPE

6m 6.6kV 3 x 1c 300mm² Al XLPE

INTERNAL HV CABLES TO BE PAINTED WITH 2 COATS OF PYRO SHIELD

01 02 EFPI RN2c0T CB

SUBSTATION_2 1000kVA 11/0.433kV Dyn11 KNAN

SUBSTATION_1 1000kVA 11/0.433kV Dyn11 KNAN

SUBSTATION_4 1000kVA 11/0.433kV Dyn11 KNAN

SUBSTATION_3 1000kVA 11/0.433kV Dyn11 KNAN

TX BLADES 01 1600A

▲ ENC ▼ CLIENT

12 Core 600/1000V 4mmCu/XLPE/SWA/PVC

INSULATED GLAND (NO EARTH CONNECTION PERMITTED)

NOP

TLF Protection

Transformer Size 6.6kV Network (kVA)

CT Ratio	315	500	800	1000
50/5	10A			
100/5	7.5A	12.5A	15A	

STANDARD ACB PROTECTION SETTINGS TO GRADE WITH STANDARD ENC TLF SETTINGS

Transformer Rating	1000kVA
ACB Type	Masterpact NW16 H1 with Micrologic 5.0E
Ir (xIn)	controlunit
Isd (xIr)	4
Ii (xIn)	8
tr (s)	4
tsd (s)	0.1 with I^2t on
Notes	Above settings assume standard "long term rating" plug used.

ACB Meter to be installed in client's LV plant room within ~~METERING CTs: ACB~~ ratio:1600/5

M

LV TAILS BY OTHERS

AWA's to be earthed at customer's LV switchboard

LV UTILITY METER FOR SYMPHONY PARK SUBSTATION 2 900kVA

LV UTILITY METER FOR SYMPHONY PARK SUBSTATION 1 929kVA

LV UTILITY METER FOR SYMPHONY PARK SUBSTATION 4 897kVA

LV UTILITY METER FOR SYMPHONY PARK SUBSTATION 3 951kVA

LV SWITCHBOARD 1 BY OTHERS

LV SWITCHBOARD 2 BY OTHERS

CLIENT TO INSTALL CASTELL INTERLOCK TO PREVENT REVERSE POWER FLOW TO THE ENC NETWORK

CLIENT TO INSTALL CASTELL INTERLOCK TO PREVENT REVERSE POWER FLOW TO THE ENC NETWORK

BASEMENT INTEGRAL SUBSTATION ROOM PROVIDED BY OTHERS

CLIENT'S PLANT ROOM BY OTHERS

LEGEND

- HV Cable (& Existing HV)
- LV Cable
- Live LV Cable
- Earth Bonding
- Termination
- Joint (HV / LV / Live LV)
- Pressure End (LV / Live LV)
- Earth Rod

This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The Electricity Network Company Ltd. does not guarantee the accuracy of the information thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by the company, it's agents, servants or contractors for any error or ommission. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :
Electricity Network Manager
GTC
Wyvern Business Park
Bury St Edmunds
Suffolk
IP30 9UP
Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GB1 standards.

© Electricity Networks Company Ltd

Drawing Scale : NTS
O.S.REF : 384261, 397436
Network Number : N0020339-1
Project Number : N0019788-1
Drawing Number : EN0020339-1_R2-2_6_of_8 Schematic

Developer : Circle Square District Company Ltd
Enquirer : Power On Connections
Location : Charles Street
MANCHESTER
M1 7EN

THIS DRAWING SHOWS:
SCHEMATIC

SHEET SIZE A0

(C) Plant Enquiry. Our Ref 5986080, Your Ref 39541 generated for rbennett@gsurvdesk.com at 06/09/2025 16:08:05. This drawing is reproduced from our records archive at the time of enquiry.

LLEWELLYN WAKELING 29.11.2024

CURRENT CONNECTION ARRANGEMENT

Rev	Revision Note	Date	Drawn by	Approved
1-0	Updated design: P-0095151-DWG-008 Rev 1 Updated template - JPID: 601281	14/06/22	JS	N/A
1-1	LRC Data added from LV73466 JPID: 671078	09/12/22	PH	N/A
1-2	Updated design: P-0095151-DWG-003-Rev 11	08/03/23	JME	N/A
1-3	Updated design: P-0095151-DWG-003 Page 1 - Rev 12 & Page 2 - Rev 10	24/05/23	JME	N/A
1-4	LRC Data added as per LV78682 JPID: 756982	05/07/23	LWA	N/A
1-5	LRC Data added as per LV80490 JPID: 790820	29/09/23	LWA	N/A
1-6	Updated design: P-0095151 - DWG - 005 RevB LV Electrical Design-Buildings 7&8	14/02/24	BT	N/A
1-7	LRC Data added as per LV83746 JPID: 843085	21/02/24	ATR	N/A
1-8	Updated design: P-0095151/DWG/005 rev.7 JPID 849579	13/03/24	GD	N/A
1-9	LRC Data added as per: LV84393 JPID: 853805 LRC Data added as per: LV84394 JPID: 853812	18/03/24	LWA	N/A
2-0	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A
2-1	Design change:EN0020339-1 Ref 219 Retail L1 83Kva - 69kva. JPID: - 902919	18/07/24	BT	N/A
2-2	Updated design: P-0095151-DWG-004 REV 10, JPID: 953179	29/11/24	LWA	N/A

RING 3

IDNO SUBSTATION "HAWKSHAW STR (SOUTH EAST)"
FEEDING BUILDINGS 14 & 15 -
600kVA

HAWKSHAW STR (SOUTH EAST) SUBSTATION
VIP 300 PROTECTION SETTINGS

Overcurrent		Earth Fault	
Relay	VIP 300	Ios	24
Range	x2	Io> (Curve)	SI
IS	90	to>	0.2
I> (Curve)	EI	t> (x1/x10)	x1
t>	0.4	DT Only	1
t>	x1	Io>>	Off
DT Only	1	to>>	0.03
I>>	12x		
t>>	0.03		

NOP
MIC:600kVA
MEC:0kVA
800kVA
11/6.6/0.433kV
Dyn11 KNAN
FOR THE DOWNSTREAM LV DESIGN PLEASE REFER TO DRAWING P-0095151-DWG-006
INTEGRAL ROOM AT GROUND FLOOR PROVIDED BY OTHERS

NETWORK STATUS
HV: LIVE
TX: LIVE
LV: NOT LIVE

PAVILION SUBSTATION
MIC:340kVA
MEC:0kVA
PAVILION
500kVA
11/6.6/0.433kV
Dyn11 KNAN

TLF Protection
Transformer Size (6.6kV Network)

CT Ratio	315	500	800	1000
50/5	10A			
100/5	5A	7.5A	12.5A	15A

(PAVILION) SS#5

Way	Fuse	Feeder Name
1-3	800A	300kVA PAVILION SUPPLY
4	315A	60kVA COMMERCIAL
5	BLANK	

STANDARD ACB PROTECTION SETTINGS TO GRADE WITH STANDARD ENC TLF & VIP - RELAY SETTINGS

Transformer Rating	500kVA
ACB Type	Masterpact NT08H2 with Micrologic 5.0A
I> (x1)	control unit
Isd (x1)	4
I> (x1)	OFF
tr (s)	2
tsd (s)	0.1 with I²t on

1c 600mm² Solid Al/XLPE/PVC/AWA sectorial Cables. 1No. Per Phase & 1No. Neutral Cable 1No. 120mm² Cu 6491X G/Y "OC" 3m
Way 1-3: Ganged 3 way
11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV 6m
Auxilliary socket & light
C/U
32A FUSED
3c 4mm² XLPE/PVC/SWA
ENC
CLIENT
Max 10m Meter Cable Length
Meter not to be within DNO substation

16m 6.6kV 3 x 1c 300mm² Al XLPE
17m 6.6kV 3 x 1c 300mm² Al XLPE
BUILDING 284 BASEMENT LEVEL INTEGRAL BRICK BUILD ENCLOSURE PROVIDED BY OTHERS

RING 2

IDNO SUBSTATION SYMPHONY PARK 2 FEEDING BUILDINGS 2,3 & EXTERNALS
MIC:1MVA
MEC:0kVA
TLF Protection
Transformer Size 6.6kV Network (kVA)

CT Ratio	315	500	800	1000
50/5	10A			
100/5	5A	7.5A	12.5A	15A

1000kVA
11/6.6/0.433kV
Dyn11 KNAN
1600A
Max 10m Meter Cable Length
ENC
CLIENT
FOR THE LV DESIGN PLEASE REFER TO DRAWING P-0095151-DWG-007
Meter not to be within DNO substation
NETWORK STATUS
HV: LIVE
TX: LIVE
LV: LIVE

CABLES DO NOT PHYSICALLY CROSS

IDNO SUBSTATION SYMPHONY PARK 1 FEEDING BUILDINGS 2,3 & EXTERNALS
7m 6.6kV 3 x 1c 300mm² Al XLPE
MIC:929kVA
MEC:0kVA
1000kVA
11/6.6/0.433kV
Dyn11 KNAN
1600A
FOR THE LV DESIGN PLEASE REFER TO DRAWING P-0095151-DWG-007

IDNO SUBSTATION SYMPHONY PARK 4 FEEDING BUILDING 4 & EXTERNALS
NOP
MIC:897kVA
MEC:0kVA
1000kVA
11/6.6/0.433kV
Dyn11 KNAN
1600A
FOR THE LV DESIGN PLEASE REFER TO DRAWING P-0095151-DWG-007

IDNO SUBSTATION SYMPHONY PARK 3 FEEDING BUILDING 4 & EXTERNALS
MIC:951kVA
MEC:0kVA
1000kVA
11/6.6/0.433kV
Dyn11 KNAN
1600A
FOR THE LV DESIGN PLEASE REFER TO DRAWING P-0095151-DWG-007

BUILDING 284 BASEMENT LEVEL INTEGRAL BRICK BUILD ENCLOSURE PROVIDED BY OTHERS

RING 1

IDNO SUBSTATION "NOBEL WAY (SOUTH)"
FEEDING BUILDING 7 & 8 - 927.42kVA
22m 6.6kV 3 x 1c 300mm² XLPE
MIC:927.42kVA
MEC:0kVA
1000kVA
11/6.6/0.433kV
Dyn11 KNAN
FOR THE LV DESIGN PLEASE REFER TO DRAWING P-0095151-DWG-005
1250A
NETWORK STATUS
HV: LIVE
TX: LIVE
LV: LIVE

IDNO SUBSTATION "NOBEL WAY (WEST)"
FEEDING BUILDING 5 & 6 - 1000kVA
NOP
MIC:1000kVA
MEC:0kVA
1000kVA
11/6.6/0.433kV
Dyn11 KNAN
FOR THE LV DESIGN PLEASE REFER TO DRAWING P-0095151-DWG-004
1250A
NETWORK STATUS
HV: LIVE
TX: LIVE
LV: LIVE

IDNO SUBSTATION "NOBEL WAY (NORTH)"
FEEDING BUILDING 9 - 750kVA
CONSTRUCTED CURRENTLY FEEDING FROM ENWL NETWORK AS PART OF CONTRACT P-0095509
MIC:750kVA
MEC:0kVA
800 kVA
11/6.6/0.433kV
Dyn11 KNAN
1250A
FOR THE LV DESIGN PLEASE REFER TO DRAWING P-0095509-DWG-001

IDNO SUBSTATION FEEDING BUILDING 12 - 2124 kVA WILL BE ENERGIZED- MARCH 2024
BUILDING SUBSTATION -1
MIC:708kVA
MEC:0kVA
1000kVA
11/6.6/0.433kV
Dyn11 ONAN
1600
BUILDING SUBSTATION -2
MIC:708kVA
MEC:0kVA
1000kVA
11/6.6/0.433kV
Dyn11 ONAN
1600
BUILDING SUBSTATION -3
MIC:708kVA
MEC:0kVA
1000kVA
11/6.6/0.433kV
Dyn11 ONAN
1600

BUILDING 12 SUBSTATION 1, 2 & 3
VIP 400 PROTECTION SETTINGS

Overcurrent		Earth Fault	
Relay	VIP 400	Relay	VIP 400
I>?	YES	Io>?	YES
TYPE	IDMT	TYPE	IDMT
CURVE	VIT/B(IEC)	CURVE	SIT/A(IEC)
I>	0.67	Io>	0.176
TMS	0.50	TMS	0.06
I>>?	YES	Io>> ?	YES
CURVE	EIT/C(IEC)	Io>>	3.20
I>>	0.80	tIo>>	0.15
TMS	0.17		
I>>>?	YES		
I>>>	8.70		
tI>>>	INST		

INTEGRAL ROOM AT GROUND FLOOR PROVIDED BY OTHERS

178m 11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV
181m 11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV
130m 11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV
8m 11kV @ 6.6kV 3 x 1c 400mm² Al XLPE To be laid by ENWL and adopted by ENC

240m 11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV
185m 11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV
130m 11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV

185m 11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV
130m 11kV 3 x 1c 300mm² Al XLPE CWS 35 @6.6kV

SECTION B
PANEL 2 FEEDER F4941
PANEL 3 FEEDER F5866
PANEL 4 FEEDER F5333
PANEL 5 FEEDER F5212
PANEL 6 FEEDER F5547
PANEL 7 INCOMER
PANEL 8 BUS SECTION
PANEL 9 INCOMER
PANEL 10 FEEDER F5109
PANEL 11 FEEDER F5664
PANEL 12 FEEDER F5701
PANEL 13 FEEDER F5428
PANEL 14 FEEDER F4955
630A 25kA
2000A 25kA
SPACE FOR FUTURE PANEL 1
SPACE FOR FUTURE PANEL 15
ENWL FEEDER REFERENCES TO BE USED IN ALL OPERATIONS
ENC
ENWL

6.6kV FAULT LEVEL
MAX 3Φ FAULT LEVEL = 12.686kA
MIN 3Φ FAULT LEVEL = 7.667kA
1Φ FAULT LEVEL = 1.939kA

ENWL CLEARANCE TIMES
0.2sec @ 132kV
0.5sec @ 33kV
1.0sec @ 11/6.6kV

PSS OVERALL EARTH RESISTANCE VALUE TBC BY ENWL

OVER-CURRENT AND EARTH FAULT RELAY SETTINGS FOR FEEDERS F5333, F5212, F5547, F5109, F5664 AND F5701

Overcurrent Setting: 510A, 0.45TMS
Earth Fault Setting: 90A, 0.45TMS

ENW CIRCLE SQUARE 33/6.6kV PRIMARY SUBSTATION (REF:100509)

LEGEND
HV Cable (& Existing HV)
LV Cable
Live LV Cable
Earth Bonding
Termination
Joint (HV / LV / Live LV)
Pressure End (LV / Live LV)
Earth Rod

This plan shows those cables owned by The Electricity Network Company Ltd. Electric cables owned by other operators or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy of which is not guaranteed. Neither the Electricity Network Company Ltd nor any of its company, it's agents, servants or contractors for any error or ommision. Safe digging practice, in accordance with HSG47, must be used to verify and establish the actual position of mains before any excavation commences. The information shown on this plan 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 electrical equipment.

This electrical network design has been carried out by :
Electricity Network Manager
GTC
Woodpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP
Tel : 01359 240363
Fax : 01359 244398
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GS1 standards.

© Electricity Networks Company Ltd

THIS DRAWING SHOWS:
SCHEMATIC

Drawing Scale :	NTS
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Project Number :	N0019788-1
Drawing Number :	EN0020339-1_R2-2_7_of_8 Schematic
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street MANCHESTER M1 7EN

the electricity network co

SHEET SIZE A0

(C1) Plant Enquiry, Our Ref 5986000, Your Ref 39541 generated for rbennett@groundwave.com at 06/08/2025 16:08:11. This drawing is reproduced from our records archive at the time of enquiry.

LLEWELLYN WAKELING 29.11.2024

Rev	Revision Note	Date	Drawn by	Approved
1-0	Updated design: P-0095151-DWG-008 Rev 1 Updated template - JPID: 601281	14/06/22	JS	N/A
1-1	LRC Data added from LV73466 JPID: 671078	09/12/22	PH	N/A
1-2	Updated design: P-0095151-DWG-003-Rev 11	08/03/23	JME	N/A
1-3	Updated design: P-0095151-DWG-003 Page 1 - Rev 12 & Page 2 - Rev 10	24/05/23	JME	N/A
1-4	LRC Data added as per LV78682 JPID: 756982	05/07/23	LWA	N/A
1-5	LRC Data added as per LV80490 JPID: 790820	29/09/23	LWA	N/A
1-6	Updated design: P-0095151 - DWG - 005 RevB LV Electrical Design-Buildings 768	14/02/24	BT	N/A
1-7	LRC Data added as per LV83746 JPID: 843085	21/02/24	ATR	N/A
1-8	Updated design: P-0095151/DWG/005 rev.7 JPID 849579	13/03/24	GD	N/A
1-9	LRC Data added as per: LV84393 JPID: 853805 LRC Data added as per: LV84394 JPID: 853812	18/03/24	LWA	N/A
2-0	LRC Data added as per LV85614 JPID: 873731	07/05/24	RC	N/A
2-1	Design change:EN0020339-1 Ref 219 Retail L1 83Kva - 69kva. JPID: - 902919	18/07/24	BT	N/A
2-2	Updated design: P-0095151-DWG-004 REV 10, JPID: 953179	29/11/24	LWA	N/A

DNO/IDNO SUBSTATION "CIRCLE SQ BUILDING 9 - 179308" FEEDING BUILDING 9 - 550kVA CONSTRUCTED AS PART OF CONTRACT P-0095509



NETWORK STATUS

HV: LIVE

TX: LIVE

LV: LIVE

TLF Protection

	Transformer Size 6.6kV Network (kVA)			
CT Ratio	315	500	800	1000
50/5	10A			
100/5		7.5A	12.5A	15A

FOR THE LV DESIGN PLEASE REFER TO DRAWING P-0095509-DWG-001

THIS DRAWING SHOWS: SCHEMATIC

LEGEND

- HV Cable (& Existing HV)
- LV Cable
- Live LV Cable
- Earth Bonding
- Termination
- Joint (HV / LV / Live LV)
- Pressure End (LV / Live LV)
- Earth Rod

This plan shows those cables owned by The Electricity Network Company Ltd. Other services may be present and their presence should be anticipated. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by the company, it's agents, servants or sub-contractors for any error or omission. Safe digging practices in accordance with HSG47 must be observed fully and the precise location and position of cables, services and other equipment 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 electrical equipment.

This electrical network design has been carried out by :
Electricity Network Manager
GTC
Woolpit Business Park
Bury St Edmunds
Suffolk
IP30 9UP
Tel :- 01359 240363
Fax :- 01359 244366
www.gtc-uk.co.uk

All cables and equipment used on this design are to be in accordance with GB1 standards.
© Electricity Networks Company Ltd

Drawing Scale :	NTS
O.S.REF :	384261, 397436
Network Number :	N0020339-1
Project Number :	N0019788-1
Drawing Number :	EN0020339-1_R2-2_8_of_8 Schematic
Developer :	Circle Square District Company Ltd
Enquirer :	Power On Connections
Location :	Charles Street MANCHESTER M1 7EN

the electricity network co

SHEET SIZE A0

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:05:47. This drawing is reproduced from our records archive at the time of enquiry.

BUILDING 4 RISER
CABLE ROUTE WITHIN CLIENT BOUNDARY SHOWN FOR MODELLING PURPOSES ONLY
PLEASE REFER TO MECHANICAL FLOOR GROUND FLOOR PLAN SCHEMATIC FOR INTERNAL CABLE ROUTE.
Way 1
Way 2
RETAIL UNIT 11
85 KVA
SPARE DUCT
SPARE DUCT
SPARE DUCT
LDING 4
48kVA
PUBLIC REALM
340kVA
N0020339-1
PRIVATE CABLE BEYOND ACB IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY
N "SYMPHONY PARK"
Y PACKAGE SUBSTATIONS
P EXIT ACB. TO BE HOUSED
OOM IN THE BASEMENT.
N0023296Sub_SYMPHONY PARK 1DNO SUBSTATION 2
N0023296Sub_SYMPHONY PARK1DNOSUBSTATION 1
N0023296Sub_SYMPHONY PARK 1DNO SUBSTATION_3
N0023296Sub_SYMPHONY PARK 1DNO SUBSTATION_4
N0023296Sub_PAVILION 1D SUBSTATION
PRIVATE CABLE BEYOND ACB IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY
PRIVATE CABLE BEYOND ACB IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY
1DNO SUBSTATION "PAVILION"
1No. 500kVA TOP ENTRY SUBSTATION WITH LUCY VRN2a AND WALL MOUNTED TOP EXIT ACB.
TO BE HOUSED WITHIN INTEGRAL ROOM IN THE BASEMENT.
BUILDINGS 2 & 3
1829kVA
1DNO SUBSTATION "NOBEL WAY (SOUTH)"
1No. 1MVA SUBSTATION WITH WALL MOUNTED ACB AND FUSEBOARD TO BE HOUSED WITHIN INTEGRAL ROOM AT GROUND FLOOR.
UNIT L7
99.26kVA
UNIT L6
57.06kVA
UNIT L5
4.74kVA
N0020339Sub_NOBEL WAY (SOUTH) BUILDINGS 7AND8
Way 1
Way 2
PLEASE REFER TO MECHANICAL FLOOR PLAN & SCHEMATIC FOR CONTROLGEAR ROUTE.
FINAL CUTOUT POSITIONS TO BE CONFIRMED WITH CLIENT.
The HV cables from the ENC joint bay outside the PSS to all the package substations will be 11kV 300mm² SAC/XLPE Triplexed cables to ENC specifications run at 6.6kV and ducted throughout their length.
BUILDINGS 7 & 8
927kVA
FINAL CUTOUT POSITIONS TO BE CONFIRMED WITH CLIENT
UNIT L4
42.57kVA
UNIT L1
66.46kVA
UNIT L2
.69kVA
UNIT L3
9.22kVA
UNIT L8
10.07kVA
CABLES DRAWN IN ONWARD FROM MEZZANINE LEVEL. PLEASE REFER TO MECHANICAL FLOOR PLAN FOR CABLE ROUTE/ DUCT/ LADDER.
4NO. HV POINTS OF DIVERSION
RED EMTELLE AND BLACK RIGIDUCTS TO BE JOINED USING DUCT ADAPTERS AT INTERFACE POINTS
4x 300mm LAID 2x2 ON TOP OF EACH OTHER
BUILDING 13 - 293kVA FUTURE CONNECTION
POWER ON TO STRAIGHT JOINT AND DIVERT CABLES ONTO THE EXISTING ENC 6.6KV NETWORK
TREES CANNOT BE LOCATED ABOVE HV CABLE
4NO. HV POINTS OF DIVERSION
HV POINT OF CONNECTION WILL BE CARRIED OUT BY POWER ON STRAIGHT JOINT ONTO EXISTING ENC NETWORK
ENWL shall bring 11kV 400mm² SAC/XLPE Triplexed cables run at 6.6kV from their breakers to the ENC joint bay outside the PSS. The HV cables from that joint bay to all the package substations will be 11kV 300mm² SAC/XLPE Triplexed cables to ENC specifications run at 6.6kV and ducted throughout their length. All the HV cables that are installed internally to be painted with two coats of Dulux Pyro Shield.
FUTURE POINTS OF CONNECTION
ENC JOINT BAY
FUTURE CONNECTION: BUILDING 1A 2088kVA
FUTURE CONNECTION: BUILDING 1B 1486kVA
ENWL 11kV 3 CORE 400mm² AL XLPE
ENWL 11kV AL XLPE
ENWL 33kV AL XLPE
ENC 300mm² 6.6kV AL XLPE
ENWL 11kV AL XLPE
ENWL 11kV AL XLPE
ENC 300mm² 6.6kV AL XLPE
ENC 300mm² 6.6kV AL XLPE
ENC 300mm² 6.6kV AL XLPE
ENC 300mm² 6.6kV AL XLPE
N0023296Sub_ENWL Circle Square Primary Substation
ENWL CIRCLE SQUARE PRIMARY SUBSTATION
ENWL REFERENCE: 100509
BUILDING 10
Princess Street
ON SITE ROUTE WITHIN POTENTIAL 3RD PARTY LAND: ALL PERMISSIONS AND AGREEMENTS TO BE MADE BEFORE WORK CAN START
BANCASTER ROAD
BANCASTER ROAD
PRINCESS STREET
PLOT 12, CIRCLE SQUARE, MANCHESTER TOTAL LOAD - 2124kVA
N0023296-1
PLOT 12, CIRCLE SQUARE DIVERSIONARY WORKS
SUBSTATION REQUIRES 24hr UNRESTRICTED VEHICULAR ACCESS (FOR HIAB TYPE VEHICLE) FROM THE PUBLIC HIGHWAY FOR ENC DESIGNATED AREA ON THE GROUND LEVEL
N0020339-2
CLOAK STREET
CLOAK STREET
Cloak Street
POWER ON TO SUPPLY AND INSTALL 2NO. 1000kVA PACKAGE SUBSTATION WITHIN INTEGRAL ENCLOSURE ON GROUND LEVEL PROVIDED BY OTHERS.
COMMERCIAL UNIT-1, UNIT-2 AND UNIT-3 - 2124kVA
1No. COPS METER TO BE WITHIN 10m OF SUBSTATION IN A SEGREGATED INTEGRAL ENCLOSURE PROVIDED BY OTHERS. REFER TO DRAWING POC-GL-0005-rev2
50mm DUCT REQUIRED FROM SUBSTATION TO METER CAB LOCATION
CAR PARK & HOTEL SUPPLY TO TERMINATE 1NO.) ADJACENT PLANE ARCH
N0023296Sub_HAWKSHAW STR (SOUTH EAST) 1DNO SUBSTATION
Brook Street
ENC SUBSTATION "HAWKSHAW STREET (SOUTH EAST)" 1No. 800KVA PACKAGE SUBSTATION. TO BE HOUSED WITHIN INTEGRAL ROOM AT GROUND FLOOR.
BUILDINGS 14 & 15
600kVA
Mancunian Way (Elevated Road)
Oxford Road
Mancunian Way (Elevated Road)
Mancunian Way
Brook Street
Mancunian Way
Brook Street
Mancunian Way (Elevated Road)
0
10 m

14.06.2025
This design is across multiple drawings for details please refer to all drawings.

Electric Notes
All electric mains, services and ducts that shall contain electric cables must be overlain with electric identifiable marker tape laid 250mm above the cables. All electric mains and services should have a minimum of 250mm separation to any other utility.

Backfill Specification
Directly buried cables should be surrounded by cable sand installed to BS EN 13139 . Aggregate size of 0/2mm to CAT 4 . A 75mm layer should be placed at the bottom of the trench and a further 75mm above the top of the cable.

Ducting Specification
- Black ducting for mains shall be 150mm rigid plastic ducting compliant with the ENA TS 12-24
- Ducting for LV single phase services shall be 38mm outside diameter black 3coiyduct compliant with ENA TS 12-24
- Ducting should be used when taking cables across roads and into buildings
- Ducts are shown on the drawing as a thick black line
- Only one cable is allowed per duct.

Electric cable	Outside Diameter
Single Phase	38mm
3 Phase LV	150mm
HV	150mm

Service Sizes
All service cables to properties are single phase 35mm² Al Cable terminated in 100 A fuse unit out out except where specified.

Cable Identification
For voltage conversion, mains, the connected phases will be shown as BR, BK, GY Where BR = brown ! BK = black ! GY = grey.

Material Specification
All cables, equipment and construction method on this network are to be in accordance with GB1 documentation.

Excavation Carried Out by BULK
Where BULK apparatus is present it will be excavated and reinstated by BULK contractors. Re excavation and reinstatement of the other trenches will be the responsibility of the customer.

	Proposed	Laid
132kV Cable		
66kV Cable		
33kV Cable		
22kV Cable		
11kV Cable		
LV Cable		
Service Cable		
Fibre Cable		
Multi Core Earth Cable		
Low Cable		
Cable Joint		
Pot End		
Ducted Cable		Interval
Terminated by BULK Contractors		Meter Box
Fibre Re-Generator Install		Pillar
2 Way Link Box		ASSR
	4 Way Link Box	Point Load
Earth		Unface
Substation	Hot Earthing Zone	Network Boundary Point
Substation Radius	Engineering Difficulty	Shorting End Cap
Abandoned	To Disconnect	Feeder Pillar

Plan Notes
This plan shows apparatus owned by the BULK Group. Any third party interests indicated on these drawings is shown for indicative purposes only. The information shown on this plan is given without warranty, the accuracy cannot be guaranteed. No liability of any kind whatsoever is accepted by the company. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of apparatus. This plan is reproduced by the permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2007. All rights reserved Ordnance Survey Licence number 0100021063.

Developers Responsibility
Where apparatus is damaged by said it becomes the responsibility of the developer to ensure it is suitably protected, therefire backfilling should be carried out as soon as possible. Replacement and repair of damaged apparatus, including administrative costs will be fully recharged to the developer. It will be the developers responsibility to recover the costs from the third party.

Revision Notes
For a revision history of this network design please see seperate revision history document.

GTC, Westpit Business Park, Suffolk, IP30 9UP
Tel: 01359 240363
www.gtc-uk.co.uk

Last Edit By:	
Last Approved By	PETER ASHBY
Approved	
OS Ref:	384385,397329
Location:	Plot 12 Circle Square Manchester
Developer/Client:	Crookes Walker Consulting
Drawing Number/Title:	EN0023296-1_1_of_3_Entire_site_Rev4-2_appe
Network Number:	N0023296
Project Number:	N0023296-1
Scale:	1:400
Sheet Size:	A1
Revision:	4-2

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:06:00. This drawing is reproduced from our records archive at the time of enquiry.

N0024386-1

CURRENT:
INTERIM HV POINT OF CONNECTION TO EXISTING 3c 0.15 6.6kV CABLE
FEEDER REFERENCE: F1137
ENW PLAN DATED: 15/05/18
ENW REFERENCE: 5500123262
GRAMP REF: 384260_397468
LOCAL ENW NETWORK

FUTURE:
RECONNECTION OF ENW NETWORK TO BE AGREED WITH ENW.

TBS-300kVA 3000kVA Way 1

Malin Street

Charles Street

CHARLES STREET

METERED EXIT POINT FOR THE RETAIL UNIT AT GROUND FLOOR

N0019788-1

CURRENT:
IDNO/IDNO SUBSTATION "CIRCLE SQ BUILDING 9 -179308"
2000kVA CABLE SUBSTATION,WITH ACB TO BE HOUSED WITHIN INTEGRAL SUBSTATION ROOM INCLUDES IN CONTRACT 5.000500

FUTURE:
IDNO SUBSTATION "HOBES WAY (NORTH)"

CURRENT ARRANGEMENT BUILDING 9 500kVA

FUTURE ARRANGEMENT BUILDING 9 750kVA

Retail Unit 70 kVA Way2

HV CC W1

INTERIM ENW CABLES TO BE DECOMMISSIONED

ENC SUBSTATION "NOBEL WAY(WEST)":
1No. 1MVA SUBSTATION WITH WALL MOUNTED ACE AND FLUEBOARD TO BE HOUSED WITHIN INTEGRAL ROOM AT GROUND FLOOR.

BUILDING 9 RISER

RETAIL UNIT T1 85 kVA

RETAIL UNIT T2 57.06 kVA Way1

RETAIL UNIT T3 57.06 kVA Way2

PLEASE REFER TO ARCHITECTURAL GROUND FLOOR PLAN ACCURATELY FOR INTERNAL CABLE ROUTES

BUILDINGS 5 & 6 000kVA

SPARE DUCT

SPARE DUCT

SPARE DUCT

BUILDING 4 1848kVA

PUBLIC REALM 340kVA

N0020339-1

PRIVATE CABLE BEYOND ACB IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY

SPARE DUCT

BSTATION "SYMPHONY PARK" OP ENTRY PACKAGE SUBSTATIONS NTING TOP EXIT ACB TO BE HOUSED EGRAL ROOM IN THE BASEMENT.

N0020339sub SYMPHONY PARK IDNO SUBSTATION 2

N0020339sub SYMPHONY PARK IDNO SUBSTATION 1

N0020339sub SYMPHONY PARK IDNO SUBSTATION 3

N0020339sub SYMPHONY PARK IDNO SUBSTATION 4

PRIVATE CABLE BEYOND ACB IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY

N0020339sub PAVILION SUBSTATION

PRIVATE CABLE BEYOND ACB IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY

IDNO SUBSTATION "PAVILION"
1No. 500kVA TOP ENTRY SUBSTATION WITH LUCY VRN2a AND WALL MOUNTED TOP EXIT ACB TO BE HOUSED WITHIN INTEGRAL ROOM IN THE BASEMENT.

BUILDINGS 2 & 3 1829kVA

BUILDING 11

BUILDING 10

FINAL CUTOUT POSITIONS TO BE CONFIRMED WITH CLIENT

The HV cables from the ENC joint bay outside the PSS to all the package substations will be 11kV 300mm² SAC/XLPE Triplexed cables to ENC specifications run at 6.6kV and ducted throughout their length.

BUILDINGS 7 & 8 927kVA

FINAL CUTOUT POSITIONS TO BE CONFIRMED WITH CLIENT

UNIT L4 42.57kVA

UNIT L1 66.46kVA

UNIT L2 69kVA

UNIT L3 9.22kVA

UNIT L5 TO BE REMOVED

TABLED DROP-OFF POINT BOARD FROM BASEMENT SUB-STATION TO BE CONFIRMED WITH PLAN LINE CLIENT ROUTE FROM ROOF

UNIT L7 99.26kVA

UNIT L6 57.06kVA

RETAIL L7 99.26 kVA Way3

RETAIL L6 57.06 kVA alt Way1

RETAIL L5 4.74 kVA alt Way1

UNIT L5 4.74kVA

RETAIL L4 57.06 kVA Way2

ROOF MOUNTED PHOTOVOLTAIC PANELS

IDNO SUBSTATION "NOBEL WAY (SOUTH)":
1No. 1MVA SUBSTATION WITH WALL MOUNTED ACE AND FLUEBOARD TO BE HOUSED WITHIN INTEGRAL ROOM AT GROUND FLOOR.

N0020339sub CIRCLE SQUARE SUBSTATION NOBEL WAY (SOUTH) BUILDINGS 7&8

N0020339sub MVD6

N0020339sub CIRCLE SQUARE BUILDINGS SAND SUBSTATION NOBEL WAY (WEST) IN SUBSTATION

N0020339sub MVD5

11kV 300mm² SAC/XLPE

ON SITE ROUTE WITHIN POTENTIAL 3RD PARTY LAND: ALL PERMISSIONS AND AGREEMENTS TO BE MADE BEFORE WORK CAN START

BANCASTER ROAD

BANCASTER ROAD

PRINCESS STREET

PLOT 12, CIRCLE SQUARE, MANCHESTER TOTAL LOAD - 2124kVA

N0023296-1

PLOT 12, CIRCLE SQUARE DIVERSIONARY WORKS

SUBSTATION REQUIRES 24hr UNRESTRICTED VEHICULAR ACCESS (FOR HIAB TYPE VEHICLE) FROM THE PUBLIC HIGHWAY FOR ENC DESIGNATED AREA ON THE GROUND LEVEL

Bulk LV Supply 2 Feeding Client 1 940 kVA

Bulk LV Supply 1 Feeding Clients Board 940 kVA

N0023395sub

Commercial Supply 1 708 kVA Way1

Commercial Supply 2 708 kVA Way2

Commercial Supply 3 708 kVA Way3

CLOAK STREET

CLOAK STREET

CLOAK STREET

POWER ON TO SUPPLY AND INSTALL 2NO. 1000kVA PACKAGE SUBSTATION WITHIN INTEGRAL ENCLOSURE ON GROUND LEVEL PROVIDED BY OTHERS.

COMMERCIAL UNIT-1, UNIT-2 AND UNIT-3 - 2124kVA

1No. COPS METER TO BE WITHIN 1No. 1000kVA PACKAGE SUBSTATION INTEGRAL ENCLOSURE CONSTRUCTED BY OTHERS REFER TO DRAWING ENG-CS-0007-rev2

50mm DUCT RESERVED FROM SUBSTATION TO CARRIAGEWAY

CAR PARK & HOUSE SUPPLY TO TENANTS ONLY - NOT PART OF PROJECT SCOPE

N0023395sub HAWKSHAW STR (SOUTH EAST) IDNO SUBSTATION

Car Park 300 kVA Way1

Way2

ENC SUBSTATION "HAWKSHAW STREET (SOUTH EAST)":
1No. 800KVA PACKAGE SUBSTATION. TO BE HOUSED WITHIN INTEGRAL ROOM AT GROUND FLOOR.

4NO. HV POINTS OF DIVERSION

RED EMTELLE AND BLACK RIGIDUCTS TO BE JOINED USING DUCT ADAPTERS AT INTERFACE POINTS

4x 300mm² LAID 2x2 ON TOP OF EACH OTHER

Technology Centre 1869 kVA

BUILDING 13 - 293kVA FUTURE CONNECTION

POWER ON TO STRAIGHT JOINT AND DIVERT CABLES ONTO THE EXISTING ENC 6.6KV NETWORK

TREES CANNOT BE LOCATED ABOVE HV CABLE

4NO. HV POINTS OF DIVERSION

HV POINT OF CONNECTION WILL BE CARRIED OUT BY POWER ON STRAIGHT JOINT ONTO EXISTING ENC NETWORK

N0020339-2

BUILDINGS 14 & 15 600kVA

ENWL shall bring 11kV 400mm² SAC/XLPE Triplexed cables run at 6.6kV from their breakers to the ENC joint bay outside the PSS. The HV cables from that joint bay to all the package substations will be 11kV 300mm² SAC/XLPE Triplexed cables to ENC specifications run at 6.6kV and ducted throughout their length. All the HV cables that are installed internally to be painted with two coats of Dulux Pyro Shield.

FUTURE POINTS OF CONNECTION

ENC JOINT BAY

N0020339sub ENWL Circle Square Primary Substation

FUTURE CONNECTION: BUILDING 1A 2088kVA

FUTURE CONNECTION: BUILDING 1B 1486kVA

ENWL CIRCLE SQUARE PRIMARY SUBSTATION
ENWL REFERENCE: 100509

Princess Street

Sackville Street

Sackville Street

Oxford Road

Oxford Road

Brook Street

Brook Street

Brook Street

Mancunian Way (Elevated Road)

Mancunian Way (Elevated Road)

Mancunian Way (Elevated Road)

Mancunian Way (Elevated Road)

Mancunian Way

Mancunian Way

Sidney Street

0 13 m

N0023339_E1 M1_7FE

TEMPORARY CONFIGURATION

This network has a temporary connection / configuration, please refer to to the notes on the drawing for details. If further clarification is required please speak to either the Project Manager or Designer of this network.

N0020339 M1_7FA

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M60 7HB

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296 M1_7ED

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Loop joint

N0020339 M1_7AA

POC Details
Name:
Capacity (kVA):
DNO ref: 5500123262
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M60 7HB

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7FA

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7FA

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7AA

POC Details
Name:
Capacity (kVA):
DNO ref: 5500123262
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296 M1_7EF

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296 M1_7EF

POC Details
Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Loop joint

14.06.2025

This design is across multiple drawings for details please refer to all drawings.

Electric Notes
All electric mains, services and ducts that shall contain electric cables must be overlaid with electric identifiable marker tape laid 250mm above the cables. All HV and LV mains and services should have a minimum of 250mm separation to any other utility.

Backfill Specification
Directly buried cables should be surrounded by cable sand installed to BS EN 13139 . Aggregate size of 0-2mm to CAT e . A 75mm layer should be placed at the bottom of the trench and a further 75mm above the top of the cable.

Ducting Specification
- Black ducting for mains shall be 150mm rigid plastic ducting compliant with the ENA TS 12-24
- Ducting for LV single phase services shall be 38mm outside diameter black 3coiduct compliant with ENA TS 12-24
- Ducting should be used when taking cables across roads and into buildings
- Ducts are shown on the drawing as a thick black line
- Only one cable is allowed per duct.

Electric cable	Outside Diameter
Single Phase	38mm
3 Phase LV	150mm
HV	150mm

Service Sizes
All service cables to properties are single phase 35mm² Al Cable terminated in 100 A plug out out (except where specified).

Cable Identification
For voltage conversion, mains, the connected phases will be shown as BR, BK, GY Where BR = brown / BK = black / GY = grey.

Material Specification
All cables, equipment and construction method on this network are to be in accordance with GS1 documentation.

Excavation Carried Out by BUUK
Where BUUK connections have been made, the excavated and reinstated by BUUK contractors, the excavation and reinstatement of the other trenches will be the responsibility of the customer.

	Proposed	Laid
132kV Cable		
66kV Cable		
33kV Cable		
20kV Cable		
11kV Cable		
6.6kV Cable		
LV Cable		
Service Cable		
Fibre Cable		
Pilot Cable with Cable		
Low Cable		
Cable Joint		
Pot End		

Ducted Cable Excavated by BUUK Contractors		Interval Meter Box	
Ducted Cable Excavated by Developer Install		Meter Box	
3 Way Link Box		4GDB	
4 Way Link Box		Point Load Unitor	
Earth		Streetlight	
Substation		Hot Earthing Zone	Network Boundary Point
Substation Radius		Engineering Difficulty	Shorting End Cap
Abandoned		To Disconnect	Feeder Pillar

Plan Notes
This plan shows apparatus owned by the BUUK Group. Any third party apparatus shown on this plan is for information only and its accuracy cannot be guaranteed. The information shown on this plan is given without warranty, the accuracy cannot be guaranteed. No liability of any kind whatsoever is accepted by the company. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of mains before any excavation starts. © Crown copyright and database right 2007. Survey on behalf of HMSO. © Crown copyright and database right 2007. All rights reserved Ordnance Survey Licence number 0100021053.

Developers Responsibility
When apparatus have been laid it becomes the responsibility of the developer to ensure that all the necessary protection measures should be carried out as soon as possible. Replacement and repair of damaged apparatus, including administrative costs will be fully recharged to the developer, it will be the developer's responsibility recover the costs from the third parties.

Revision Notes
For detailed revision history of this network design please see seperate revision history document.

gtc
GTC, Westfalt Business Park, Derby DE65 6LW
Tel: 01359 240363
www.gtc-uk.co.uk

Last Edit By:

Last Approved By PETER ASHBY

Approved

OS Ref: 384402,397347

Location: Plot 12 Circle Square Manchester

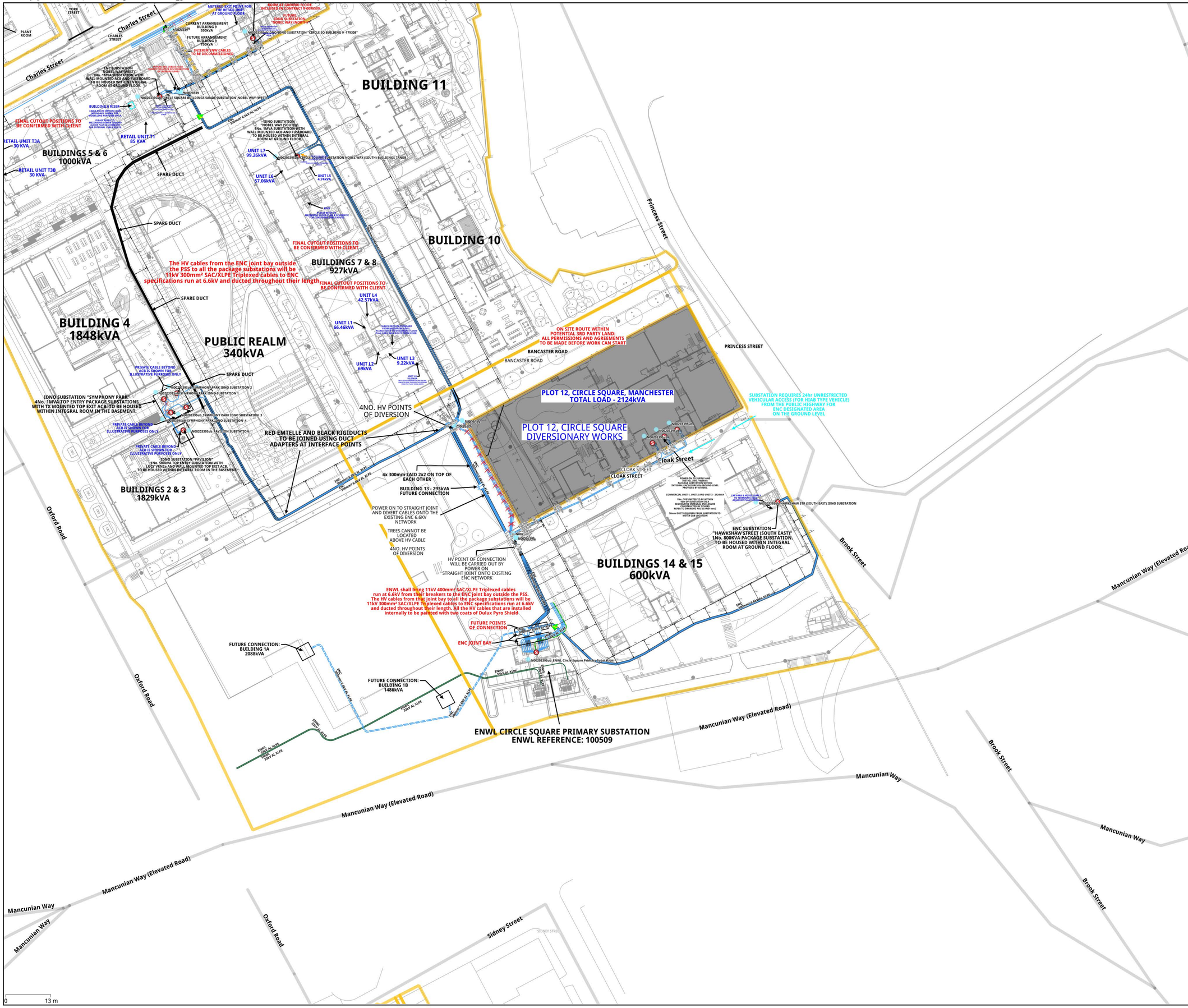
Developer/Client: Crookes Walker Consulting

Drawing Number/Title: EN0023296-1_2_of_3_Rev4-2_appendix

Network Number:	Project Number:
N0023296	N0023296-1

Scale:	Sheet Size:	Revision:
1:500	A1	4-2

GTC Plant Enquiry. Our Ref 5686090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:06:12. This drawing is reproduced from our records archive at the time of enquiry.



N0020339_E1 M1_7FE

TEMPORARY CONFIGURATION

This network has a temporary connection / configuration, please refer to to the notes on the drawing for details. If further clarification is required please speak to either the Project Manager or Designer of this network.

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_CIRCLE SQUARE SUBSTATION NOBEL WAY (WEST) M60 7HB

Substation Details

Way	Cable	Fuse (A)
4	95mm	315
3	95mm	1250
5		1250
1	95mm	315

Name: CIRCLE SQUARE BUILDINGS
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB + 4
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M60 7HB

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) Loop joint
Conn type: Straight joint

N0020339 M1_7AA

POC Details

Name:
Capacity (kVA):
DNO ref: 5500123262
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296 M1_7ED

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Loop joint

N0021304 M1_7DF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7AA

POC Details

Name:
Capacity (kVA):
DNO ref: 5500123262
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0023296_Sub_M1_7DN

Substation Details

Way	Cable	Fuse (A)
1	185mm	500

Name:
Number:
Ownership:
Transformer size (kVA): 800
LV cabinet: ACB + 1
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:
Intake RMU #1:

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_CIRCLE SQUARE SUBSTATION NOBEL WAY (SOUTH) BUILDINGS 7AND8 M60 7HB

Substation Details

Way	Cable	Fuse (A)
4	95mm	315
3	95mm	1250
5	95mm	315
1		1250
	95mm	315

Name: CIRCLE SQUARE SUBSTATION
Number:
Ownership: ENC
Transformer size (kVA): 1000
LV cabinet: ACB + 4
CT ratio: 100/5
TLF size (A): 15A
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M1_7FA

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339_Sub_HAWKSHAW STR (SOUTH EAST) IDNO SUBSTATION M1_7DN

Substation Details

Way	Cable	Fuse (A)
2	185mm	500
1	185mm	500

Name: HAWKSHAW STR (SOUTH EA
Number:
Ownership: ENC
Transformer size (kVA): 800
LV cabinet: 5-way
CT ratio:
TLF size (A):
Security assess:
Environ assess:
Building type: Integral
Door type:

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M1_7EF

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

N0020339 M60 7HB

POC Details

Name:
Capacity (kVA):
DNO ref:
Voltage: 6.6kV
Volt drop (%): None
ELI: (mΩ) None
Conn type: Straight joint

14.06.2025

This design is across multiple drawings for details please refer to all drawings.

Electric Notes
All electric mains, services and ducts that shall contain electric cables must be overlaid with electric identifiable marker tape laid 250mm above the cable. Gas and electric services should have a minimum of 250mm separation to any other utility.

Backfill Specification
Directly buried cables should be surrounded by cable sand installed to BS EN 13139 : Aggregate size of 0·2mm to CAT 4 . A 75mm layer should be placed at the bottom of the trench and a further 75mm above the top of the cable.

Ducting Specification
- Black ducting for mains shall be 150mm rigid plastic ducting compliant with the ENA TS 12-24
- Ducting for LV single phase services shall be 38mm outside diameter black polyduct compliant with ENA TS 12-24
- Ducting should be used when taking cables across roads and into buildings
- Ducts are shown on the drawing as a thick black line
- Only one cable is allowed per duct.

Electric cable	Outside Diameter
Single Phase	38mm
3 Phase LV	150mm
1W	150mm

Service Sizes
All service cables to properties are single phase 35mm² Al Cable terminated in 100 A plug out out (except where specified).

LV cabinet location
For service connections, mains, the connected phases will be shown as BR, BK, GY Where BR = brown / BK = black / GY = grey.

Material Specification
All cables, equipment and construction method on this network are to be in accordance with GB1 documentation.

Excavation Carried Out by BUUK
Where BUUK apparatus is present it will be excavated and reinstated by BUUK contractors. Re excavation and reinstatement of the other trenches will be the responsibility of the customer.

	Proposed	Laid
132kV Cable		
66kV Cable		
33kV Cable		
20kV Cable		
11kV Cable		
6.6kV Cable		
LV Cable		
Service Cable		
Fiber Cable		
Earthing Earth Cable		
Low Cable		
Cable Joint		
Pot End		
Ducted Cable		Interval
Cleaned by BUUK Contractors		Meter Box
Trench Reinstatement		Pillar
Footway		ASSR
3 Way Link Box		4 Way Link Box
Earth		Streetlight
Substation		Hot Earthing Zone
Substation Radius		Engineering Difficulty
Abandoned		To Disconnect

Point Load
Unbox
Network Boundary Point
Shorting End Cap
Feeder Pillar

Plan Notes
This plan shows apparatus owned by the BUUK Group. Any third party apparatus indicated on these drawings is shown for indicative purposes only. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes are not normally accepted by the company. Safe digging practices, in accordance with HSG47, must be used to verify and establish the actual position of apparatus. This plan is reproduced by the permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2007. All rights reserved Ordnance Survey Licence number 0100031673.

Developers Responsibility
Once the network has been laid it becomes the responsibility of the developer to ensure it is suitably protected, therefore backfilling should be carried out as soon as possible. Replacement and repair of damaged, displaced or exposed apparatus costs will be fully recharged to the developer. It will be the developers responsibility recover the costs from the third parties.

Revision Notes
For a revision history of this network design please see seperate revision History document.

GTC, Westpit Business Park, Suffolk, IP30 9UP
Tel: 01359 240363
www.gtc-uk.co.uk

Last Edit By:
Last Approved By PETER ASHBY
Approved
OS Ref: 384385,397329
Location: Plot 12 Circle Square Manchester
Developer/Client: Crookes Walker Consulting
Drawing Number/Title: EN0023296-1_3_of_3_Rev4-2_Contestable_HV
Network Number: N0023296
Project Number: N0023296-1
Scale: 1:500
Sheet Size: A1
Revision: 4-2


GTC Plant Enquiry. Our Ref 56860090, Your Ref 39540 generated for rbennett@groundwise.com at 08/09/2025 16:45:45. This map shows the search area of your enquiry.
Car Park
University
Sta
YORK ST
CHARLES STREET
5686090
New Broadcasting House
A34
BRANCASTER RD
LOCKTON CLOSE
A6
STREET

SAFE WORKING IN THE VICINITY OF UTILITY NETWORKS

(Refer to the HSE Guidance Document HSG47)

Introduction

This document should be issued to anyone intending on working in the vicinity of GTC and associated entities' utility networks and should be used in conjunction with HSG47, NJUG guidance and industry recognised practices.

Confirmation should be sought from the asset owner in any instance of ambiguity or if there is confusion.

Any querries regarding diversions, alterations, and disconnections for Gas, Water, Distributed Heat and Fibre please contact: Network_Variations@gtc-uk.co.uk

Any querries regarding diversions, alterations, and disconnections for Electric, please contact: Electricity.diversions@gtc-uk.co.uk

For more information please see the GTC website: https://www.gtc-uk.co.uk/ or alternatively contact plant.enquiries@bu-uk.co.uk

The Dangers

Damage to services can cause significant disruption and project delays and therefore incur considerable costs as well as the potential for severe or fatal injury to not only to those directly involved but also the general public.

Damages often have instantaneous reactions like explosive arcing with cables or leaks for gas and water mains however latent reactions due to damages that are ignored, consealed, or unnoticed can have much greater consequences.

General

1. It is imperative that all works are carried out in accordance with the guidance provided by the HSE (Health and Safety Executive) in their document HSG47 "Avoiding Danger from Underground Services", ISBN 978 0 7176 6584 6, 3rd Edition 2014. No party shall carry out any excavation works or other intrusive works such as piling, blasting or demolition without following the guidance in HSG47.

2. We own gas, electricity, water, waste water, fibre, and district heating apparatus located in the highway, private property and through the countryside. Some plant may be located in land for which a wayleave or easement has been granted and there may be no surface evidence of the presence of apparatus.

3. Ensure that you have obtained detailed plans of existing and proposed gas, electricity, water, waste water, fibre, and district heating networks before any works commence.

4. The position of the networks shall be pinpointed as accurately as possible by visually surveying the area for indications of apparatus, by means of a locating device, and reference the information gathered to the plans. Locating equipment must be tested and calibrated within the manufacturer's calibration date.

Excavation work should be carried out where applicable, carefully following recognised safe digging practices. Once a locating device has been used to determine position and route, excavation may proceed; trial holes should be dug using suitable hand tools to confirm the position of buried networks. During excavation the locating device should be reused to check position and route of buried apparatus.

Once the apparatus has been located, appropriate marking be made on the covering hard surface confirming location and any errors in plans identified, GTC should be advised to allow plans to be updated.

5. Hand-held power tools can damage buried apparatus and shall be used with care until the exact position of a utility has been determined. They may only be used to break a paved or concrete surface above the network, unless there are any indications that the network is particularly shallow; in such circumstances, accuracy of plant location is determined and excavation initiated adjacent to the apparatus.

6. No manhole, chamber or other structure shall be built over, around or under the network. Such structures, other pipes, ducts and cables should be laid to provide a minimum clearance from the existing network of 300mm or 1.5 times the diameter of the asset, whichever is the greater. No work should be carried out if this minimum clearance cannot be met or which results in a reduction of cover or protection over the network, without first consulting GTC, please seek advice from GTC.

7. Where an excavation uncovers any network apparatus the backfill shall be adequately compacted, particularly beneath the network, to prevent any settlement, which would subsequently damage the network. Backfill material adjacent to the network shall be selected fine material or sand, containing no stones, bricks or lumps of concrete etc. and shall be suitably compacted to give comparable support and protection to that provided before excavation. No power compaction shall take place until at least 200mm cover of selected fine fill has been suitably compacted by hand tools.

8. If the road construction is close to the top of the network, GTC shall be asked to identify whether any additional precautions are necessary. The road construction depth should not be reduced without permission from the local Highway Authority.

9. Costs incurred by GTC through direct or consequential damage shall be recharged.

10. Where utilities are within a duct the duct should be treated in the same manner as live utility cable/pipe/fibre and any work in the vicinity of the apparatus shall be carried out with caution.

Any damage caused no matter how insignificant or minor in appearance SHALL BE REPORTED to GTC as soon as possible.

Precautions for Gas Networks

11. Plans do not always show the presence of gas service pipes (from the gas main to premises) but their existence should be assumed with consideration given to the increased height of the service off-take fitting on the main.

12. The depth of cover for gas mains is typically 750mm in carriageways and grass verges, 600mm in footways and 1.1m in open field. The depth of cover for gas services is typically between 375mm and 600mm . Reference should always be made to the network drawing. Remember these covers are to finished level, you may be working in an area, which will be made up or lowered at a later date.

13. Gas pipes should be located by hand digging before mechanical excavation begins. When the positions and depth of the pipes have been determined, work can proceed.

14. If a gas leak is suspected, the following action should be taken immediately:

- Remove all people from the immediate vicinity of the escape. If the service connection to a building or the adjacent main has been damaged, warn the occupants to leave the building, and any adjoining building, until it is safe for them to return. It is important to note that a mechanical excavator may not only cause damage/leakage at the point of impact. For example, damage to a service connection outside the building may result in further, unseen damage to the connection inside the building. Gas leaking from the damage inside or gas travelling along the line of the service connection pipe from outside the building may cause a build-up of gas within the building.
- Prohibit smoking, and extinguish all naked flames and other sources of ignition i.e. stop excavator and compressor engines within at least 5.0m of the leak.
- Inform the National Gas Emergency Service immediately by dialling:

  0800 111 999

- Remain on site.
- Assist the Gas Emergency Service Provider staff, Police, Fire Services or other Statutory Authorities as requested.

15. Where gas pipes cross or are parallel and close to excavations, changes in backfill etc. may cause differential ground settlement and increased stress in the pipe. For pipes parallel and close to excavations, the degree of risk depends upon the depth of the excavation, the distance of the pipe from the excavation, the type of soil and any excessive loading from heavy construction plant and materials. Wherever excavation works may affect the support of the gas pipe or cause excessive loading over the gas pipe then GTC shall be consulted.

16. No concrete or other hard material should be placed or left under or adjacent to any gas pipe as this can cause pipe fracture at a later date. Concrete backfill should not be used within 300mm of a gas pipe.

17. Where an excavation uncovers a gas pipe with a damaged wrapping, GTC shall be informed, so that repairs can be made to prevent future corrosion and leakage.

18. Pipe restraints or thrust blocks close to gas mains shall not be removed or interfered with as they are a safety feature of the live gas network.

19. Anyone who carries out work near underground gas plant should observe any specific requirements made by the site manager, and ensure that access to the plant by the asset owners staff is available at all times. No unauthorised repairs to gas pipes should be made.

20. Where excavation is within 5m proximity to above or below ground pressure control equipment, ground workers must be aware of the possibility of encountering small auxilary pipework that is more susceptible to damage.

21. Where PE pipes and cables have been exposed and it is intended that hot work (e.g. welding, grinding, etc) be carried out, contact shall be made with GTC to confirm additional precautions and actions that may require to be undertaken.

22. GTC shall be consulted if it is intended to carry out any of the following activities:

- Using explosives within 30m of gas pipes or 400m of gas pressure reduction equipment.
- Piling or boring within 15m of gas plant.
- Excavating within 10m of pressure reduction equipment.
- Reducing the cover or protection of a gas pipe.
- Carrying out deep excavations nearby (minimum of 2m up to 15m).
- Working within 3m of GTC's intermediate pressure (IP) mains.

Precautions for Electricity Networks

23. Plans do not always show the presence of electric service cables (from the electricity main to premises) but their existence should be assumed.

24. In most cases there will be no permanent surface marker posts or other visible indication of the presence of a buried cable. Even if no cables are shown on plans or detected by a locator, there may still be cables present, which could be live and a close watch should be kept for any signs which could indicate their presence such as marker tape, tape tile, concrete tiles and wooden battens. Any marker which is disturbed by our excavations must be replaced once work is completed.

25. Typically underground cables are laid in trenches between 450mm and 1000mm deep, although some high voltage cables will be deeper, however, depths should never be assumed.

26. A cable is positively located only when it has been safely exposed. Even then, digging should still proceed with care as there may be other cables adjacent or lower down.

27. Occasionally, cables are terminated in the ground by means of a seal, sometimes with external mechanical protection. These "pot ended" or "bottle ended" cables should be treated as live and should not be assumed to be abandoned or disused. They can be difficult to detect with locators even when "live".

28. Where practicable, such power tools shall only be used 500mm or more away from the indicated line of a cable buried in or below a hard surface. Having done so, the cable shall then be positively located by careful hand digging under the hard surface. The hard surface should be gradually removed until the cable is exposed. If the cable is not exposed then it must be assumed to be embedded within the surface. Where possible a cable locator shall be used as a depth guide down the side of the excavation.

29. Because of the difficulty in confirming depth, hand held power tools shall never be used over the cable unless either:

- The cable has already been exposed by digging under the surface to be broken out and it is at a safe depth (at least 300mm) below the bottom of the hard surface material.

  or

- Physical precautions have been taken to prevent the tool striking the cable.

30. Excavating close to electricity cables buried in concrete is dangerous and shall not be undertaken unless the cable(s) have been isolated. For this reason alone electricity cables should not be buried in concrete.

31. Where mechanical excavators are used in the possible vicinity of underground cables, the work should be arranged so that damage to cables is avoided so far as is reasonably practicable. To minimise danger to operatives those onsite shall be outside of the reach of the excavator bucket and shall not enter the trench whilst digging is undertaken. Excavator operators shall be instructed to stay in the cab if a cable is struck. If excavator operators have to exit the cab they should jump clear. If excavator operators climb down from the cab the risk of electrocution is significantly increased. If a cable is struck, the machine involved shall be subject to continous observation and no one shall enter the excavation or approach the machine or the cable until GTC have been contacted and the damaged cable has been made safe.

32. Where cables have been exposed:

- Any damage shall be reported to GTC immediately on: **0800 032 6990**

  And work shall not be undertaken in the vicinity of a damaged cable until GTC has investigated its condition.

- For more than 1.0m and they cross a trench, support shall be provided. If the exposed cable length is shorter than 1.0m support shall still be considered if joints have been exposed or the cable appears otherwise vulnerable to damage. Where advice and help is needed contact GTC.

- Suitable precautions shall be taken to prevent damage from on-going work in the excavation. This may involve for example the use of physical means (e.g. timber boards, sandbags etc) to prevent mechanical damage. Materials or equipment which could damage or penetrate the outer sheath of the cable shall not be used. Cables lying in the bottom of an excavation are particularly vulnerable and shall be protected by nail free wooden planks, troughing or other suitable means.

- Cables shall not be moved aside unless the operation is supervised by GTC.

- Precautions shall be taken to prevent access by members of the public.

33. GTC shall be consulted if it is intended to carry out any of the following activities:

- Using explosives within 30m of plant or substations piling or boring within 15m of electric plant.

- Excavating within 10m of a substation.

- Carrying out deep excavations nearby (minimum of 2m up to 15m).

- Working near GTC's HV plant.

Precautions for Water Networks

34. Plans do not always show the presence of water service pipes (from the water main to premises) but their existence should be assumed with consideration given to the increased height of the service off-take fitting on the main.

35. The depth of cover for water mains are typically 900mm. The depth of cover for water services are typically 750mm. Remember these covers are to finished level, you may be working in an area, which will be made up or lowered at a later date.

36. Water mains shall be located by hand digging before mechanical excavation begins. When the positions and depth of the pipes have been determined, work can proceed.

37. The danger created by damaging a water pipe with an excavator is much greater than if the damage is done with a hand-held power tool. Water pipes may have projections such as valve housings, which are not shown on the plans and to allow for this mechanical excavators shall not be used within 500mm of a water pipe.

38. If a water leak is suspected, the following action should be taken immediately:

- Remove all people from the immediate vicinity of the damage. It is important to note that a mechanical excavator may not only cause damage/leakage at the point of impact. For example, damage to a service connection outside the building may result in further, unseen damage to the connection inside the building.
- Shut down all working plant and machinery in the vicinity of the damage
- Inform IWNL by dialling: **02920 442 716**
- Remain on site.
- Do not attempt to make a repair.
- Assist Approved Contractors, Police, Fire Services or other Statutory Authorities as requested.

39. Where water pipes cross or are parallel and close to excavations, changes in backfill etc. may cause differential ground settlement and increased stress in the pipe. For pipes parallel and close to excavations, the degree of risk depends upon the depth of the excavation, the distance of the pipe from the excavation, the type of soil and any excessive loading from heavy construction plant and materials. Wherever excavation works may affect the support of the water pipe or cause excessive loading over the water pipe then GTC must be consulted.

40. No concrete or other hard material should be placed or left under or adjacent to any water pipe as this can cause pipe fracture at a later date. Concrete backfill should not be used within 300mm of a water pipe.

41. Where an excavation uncovers a water pipe with a damaged wrapping, GTC shall be told, so that repairs can be made to prevent future corrosion and leakage.

42. Pipe restraints or thrust blocks close to water mains should never be removed.

43. Anyone who carries out work near underground water plant shall observe any specific requirements made by the site manager, and ensure that access to the plant by GTC staff is available at all times. No unauthorised repairs to water pipes should be made.

44. Where PE pipes and cables have been exposed and it is intended hot work (e.g. welding, grinding, etc) be carried out, contact shall be made with GTC to confirm additional precautions and actions that may require to be undertaken.

45. GTC shall be consulted if it is intended to carry out any of the following activities:

- Using explosives within 30m of plant.

- Piling or boring within 15m of water plant.
- Excavating within 10m of water asset structures.
- Reducing the cover or protection of a water main or service.
- Carrying out deep excavations nearby (minimum of 2m up to 15m).

Precautions for Fibre Networks

46. Plans may not always show the presence of fibre ducts but their existence should be assumed if GTC advise they have fibre services deployed in the given area. Any planned excavation work should only proceed with due care and attention.

47. Chambers with IFNL or OFNL marked lids can be used as an onsite indictor that GTC have fibre plant deployed in a given area however an exclusion of their presence does not necessarily mean there is no plant present.

48. In most cases there will be no permanent surface marker posts or other visible indication of the presence of a buried fibre duct. Even if no ducts are shown on plans there may still be ducts present which could have live fibre service installed. A close watch shall be kept for any signs which could indicate duct presence such as marker tape. Any marker which is disturbed by our excavations must be replaced once work is completed.

49. The depth of cover for fibre duct is typically between 350mm and 600mm in footways and grass verges, 600mm in carriageways and 1m in agricultural deployments. Remember these covers are to finished level, you may be working in an area, which will be made up or lowered at a later date.

50. Fibre ducts should be located by hand digging before mechanical excavation begins. When the positions and depth of the ducts have been determined, work can proceed. Even then, digging should still proceed with care as there may be other ducts adjacent or lower down.

51. If fibre duct damage is suspected, the following action should be taken immediately:

- Remove all people from the immediate vicinity of the damage. It is important to note that a mechanical excavator may not only cause damage at the point of impact. For example, damage to a fibre connection outside the building may result in further, unseen damage to the connection inside the building.
- Shut down all working plant and machinery in the vicinity of the damage.
- Inform GTC Fibre immediately on: **02920 028 726**
- Remain on site.
- Do not attempt to make a repair.
- Assist Approved Contractors, Police, Fire Services or other Statutory Authorities as requested.

52. Where fibre ducts cross or are parallel and close to excavations, changes in backfill etc. may cause differential ground settlement and increased stress on the duct. For ducts parallel and close to excavations, the degree of risk depends upon the depth of the excavation, the distance of the duct from the excavation, the type of soil and any

excessive loading from heavy construction plant and materials. Wherever excavation works may affect the support of the fibre duct or cause excessive loading over the fibre duct then GTC must be consulted.

53. No concrete or other hard material shall be placed or left under or adjacent to any fibre duct as this can cause damage to the duct at a later date. Any backfill should comply with the requirements of NRSWA. Concrete backfill should not be used within 300mm of a fibre duct.

54. Anyone who carries out work near underground fibre plant should observe any specific requirements made by the site manager, and ensure that access to the plant by GTC staff is available at all times. No unauthorised repairs to fibre ducts should be made.

55. Where fibre ducts have been exposed and it is intended hot work (e.g. welding, grinding, etc) be carried out, contact must be made with GTC to confirm additional precautions and actions that may require to be undertaken.

56. GTC shall be consulted if it is intended to carry out any of the following activities:

- Using explosives within 30m of plant or fibre asset structures.
- Piling or boring within 15m of fibre plant.
- Excavating within 10m of fibre asset structures (including the OSCP).
- Reducing the cover or protection of a fibre asset.
- Carrying out deep excavations nearby (minimum of 2m up to 15m).

Precautions for District Heating Networks

For information with respect to Dstrict Heating Networks this could also include District Cooling.

57. Plans do not always show the presence of District Heating service pipes (from the District Hearing main to premises) but their existence should be assumed.

58. The depth of cover for District Heating mains is typically a minimum of 600mm under normal light carriageways and during construction activities, additional temporary protective bridging should be placed over DHN pipe runs. The depth of cover for District Heating services is typically 6000mm. Remember these covers are to finished level, you may be working in an area, which will be made up or lowered at a later date.

59. District Heating mains shall be located by hand digging before mechanical excavation begins. When the positions and depth of the pipes have been determined, work can proceed.

60. The danger created by damaging a District Heating with an excavator is much greater than if the damage is done with a hand-held power tool. District Heating pipes may have projections such as valve housings, which are not shown on the plans and to allow for this mechanical excavators should not be used within 600mm of a District Heating pipe.

61. If a water leak is suspected, the following action should be taken immediately:

- Remove all people from the immediate vicinity of the damage. It is important to note that a mechanical excavator may not only cause damage/leakage at the point of impact. For example, damage to a service connection outside the building may result in further, unseen damage to the connection inside the building.
- Shut down all working plant and machinery in the vicinity of the damage.
- Inform Metropolitan by dialling: **02920 100 346**
- Remain on site.
- Do not attempt to make a repair.
- Assist Approved Contractors, Police, Fire Services or other Statutory Authorities as requested.

62. Where District Heating cross or are parallel and close to excavations, changes in backfill etc. may cause differential ground settlement and increased stress in the pipe. For pipes parallel and close to excavations, the degree of risk depends upon the depth of the excavation, the distance of the pipe from the excavation, the type of soil and any excessive loading from heavy construction plant and materials. Wherever excavation works may affect the support of the District Heating or cause excessive loading over the water pipe then Metropolitan must be consulted.

63. No concrete or other hard material should be placed or left under or adjacent to any District Heating as this can cause pipe fracture at a later date. Concrete backfill should not be used within 300mm of a District Heating.

64. Where an excavation uncovers a District Heating pipe with a damaged insulation, Metropolitan should be told, so that repairs can be made to prevent future corrosions and leakage.

65. Pipe restraints , Anchor blocks or foam padding close to district heating mains shall never be removed.

66. Anyone who carries out work near underground district heating plant shall observe any specific requirements made by the site manager, and ensure that access to the plant by the asset owners staff is available at all times. No unauthorised repairs to district heating pipes shall be made.

67. Where District Heating pipes have been exposed and it is intended hot work (e.g. welding, grinding, etc) will be carried out, contact shall be made with Metropolitan to confirm additional precautions and actions that may require to be undertaken.

68. Metropolitan shall be consulted if it is intended to carry out any of the following activities:

- Using explosives within 30m of gas pipes or 400m of gas pressure reduction equipment.
- Piling or boring within 15m of District Heating pipe.
- Reducing the cover or protection of a District Heating pipe.
- Carrying out deep excavations nearby.

GROUNDWISE

Groundwise Searches Ltd

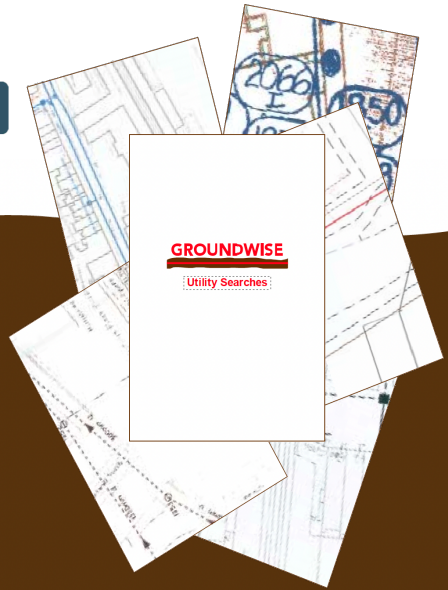
HSE

Utility Not Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



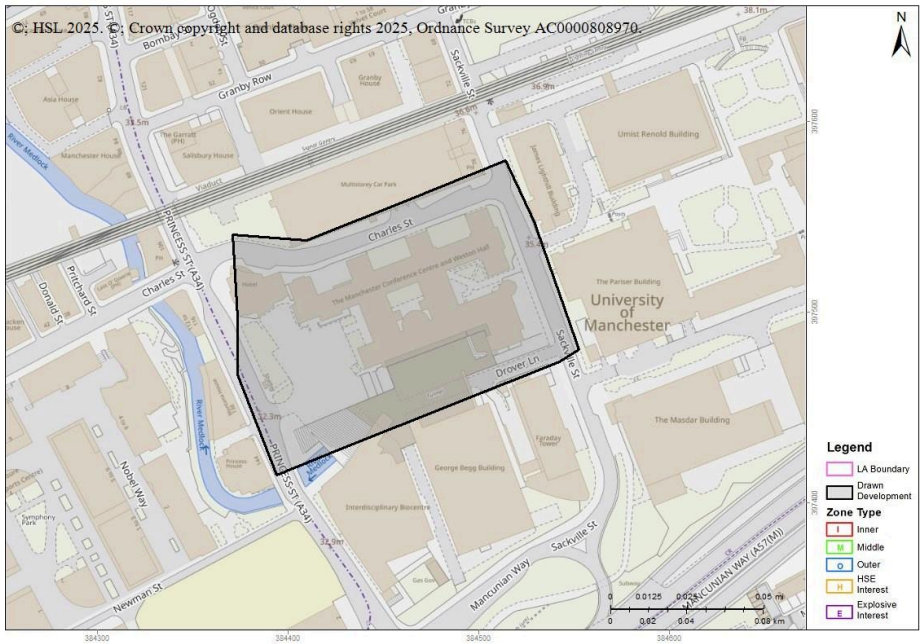
HSE's Advice

Your development does not intersect a pipeline or hazard zone, HSE Planning Advice does not have an interest in the development.

Our Reference : **HSL-250908155644-963**
Your Reference : **39540**
Development Name :
Date Created : **08/09/2025 15:56:44**
Description/Comments :
Created By : **RBENNETT@GROUNDWISE.COM**

Phase 1 documents
No HI/MHP Interest Report (../Download/File/?HSLRefer=HSL-250908155644-963&DownloadType=HSEHasNoInterest)

Please check all mapping details, including the drawn planning boundary and background mapping, are correct.



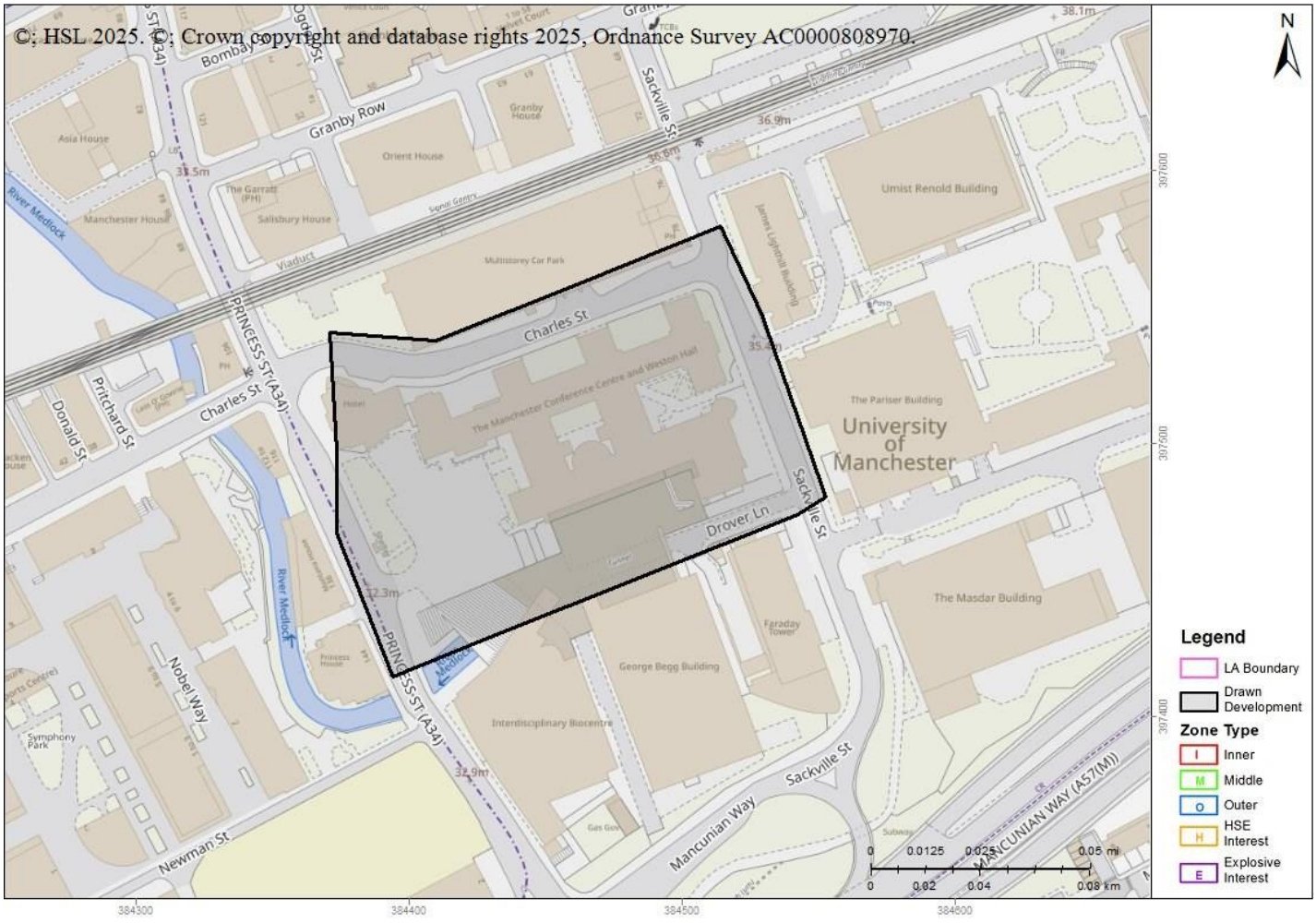
Menu

Groundwise Searches Ltd
Suite 6, Princess Caroline House, 1 High Street, Southend on Sea, Essex, SS1 1JE

Health and Safety Executive

Advice : HSL-250908155644-963 Does Not Cross Any Consultation Zones

Your Ref: 39540
Development Name:
Comments:



The proposed development site which you have identified does not currently lie within the consultation distance (CD) of a major hazard site or major accident hazard pipeline; therefore at present HSE does not need to be consulted on any developments on this site. However, should there be a delay submitting a planning application for the proposed development on this site, you may wish to approach HSE again to ensure that there have been no changes to CDs in this area in the intervening period.

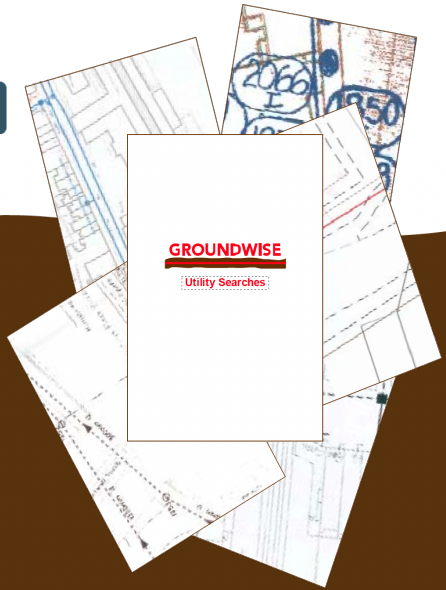
This advice report has been generated using information supplied by Rebecca Bennett at Groundwise Searches Ltd on 08 September 2025.

GROUNDWISE

Groundwise Searches Ltd

Leep Utilities

Utility Not Present



Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE

M1 3BB

Move map to
Manchester M1 3BB, UK

From Google show all on map

M1 3BB



GROUNDWISE

Groundwise Searches Ltd

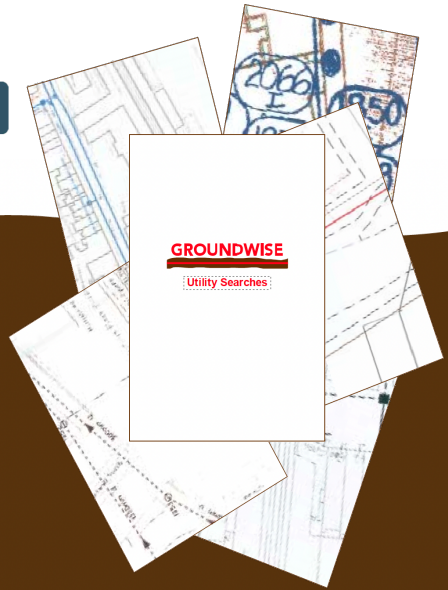
LinesearchbeforeUdig

Utility Not Present

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Enquiry Confirmation

LSBUD Ref: 38617201

Date of enquiry: 08/09/2025
Time of enquiry: 10:38

Enquirer

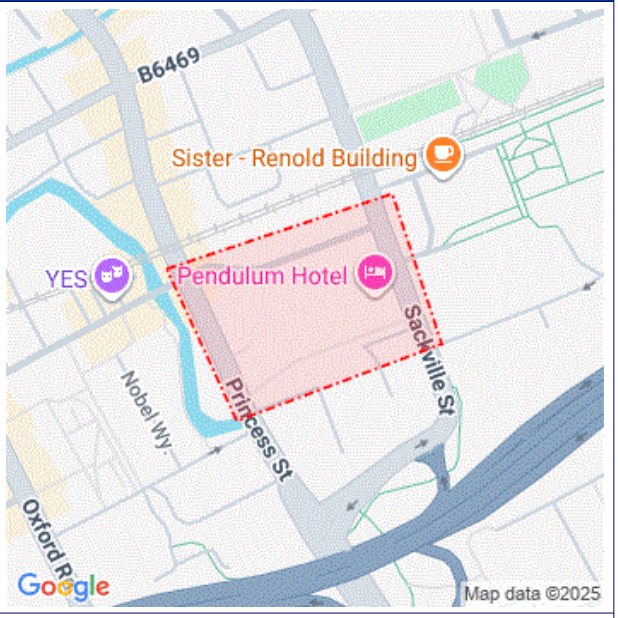
Name	Mr Joe Shawyer	Phone	01702615566
Company	Groundwise Searches Ltd	Mobile	Not Supplied
Address	Groundwise Searches Ltd Suite 6, 3rd Floor, Princess Caroline House, 1 High Street Southend on Sea ESS SS1 1JE		
Email	mail@groundwise.com		

Enquiry Details

Enquiry type	Initial Enquiry
Work category	Development Projects
Work type	Commercial/industrial
Work type buffer*	75 metres
Start date	09/09/2025
End date	09/09/2025
Scheme/Reference	39540
Search location	XY= 384478, 397512
Confirmed location	384453 397500
Site size	25972 metres square
Site Contact Name	Not Supplied
Site Phone No.	Not Supplied
Description of Works	

* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen.

Site Map



Please note that the above map only displays the location of the proposed work site and will not display any of the Members' pipes and cables. It is imperative that this area accurately reflects the proposed work site.

Affected LSBUD members

(LSBUD Members who have assets registered on LSBUD within the vicinity of your search area.)

Do not proceed until all Members listed below have confirmed that your works can continue.

Asset Owner	Phone/Email	Emergency Only	Status
Cadent Gas	0800688588	0800111999	Await response
Electricity North West Limited	08001954141	08001954141	Await response
Neos Networks	03453053337	03453053337	Await response

Status explanation

Await Response means that the asset owner will contact you. This is typically by sending the plan response but they may ask for further information before being able to do so, particularly if any payments or authorisations are required.

Email Additional Info means that the asset owner needs further information about your works to assess your enquiry before providing a response. Please provide any details you have available including plans, method statements etc. if available.

Enquiry Confirmation
LSBUD Ref: 38617201

Date of enquiry: 08/09/2025
Time of enquiry: 10:38

Important notices

It is very important that you correctly understand what the service does and the procedures in order for you to work safely. Please refer to the LSBUD Support Page (www.lsbud.co.uk/linesearchbeforeudig-support) for further guidance.
This information includes how to provide additional information to the LSBUD Members who request it to provide a response to your enquiry.
Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date and time of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LinesearchbeforeUdig (LSBUD) accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.
Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.lsbud.co.uk ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

List of not affected LSBUD members
(LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area.)

Advanced Electricity Networks	Air Products PLC	AllPoints Fibre
Angus Energy	AWE Pipeline	B & D Energy Limited
Balfour Beatty Investments Limited	BOC Limited (A Member of the Linde Group)	Box Broadband
BP Exploration Operating Company Limited	BPA	Burwell 11 Solar Limited
Cambridge Water	Cambridgeshire County Council Climate Change and Energy Services	CATS Pipeline c/o Wood Group PSN
Cemex	Centrica Storage Ltd	CNG Services Ltd
Concept Solutions People Ltd	ConocoPhillips (UK) Teesside Operator Ltd	D.S.Smith
Diamond Transmission Corporation	DIO (MOD Live Pipelines)	Drax Power Limited
Eden Estuary Energy Limited	EDF Energy Renewables Ltd	EET Fuels
EirGrid	Eleclink Limited	Energy Assets Networks
ENI & Himor c/o Penspen Ltd	EnQuest Heather Ltd	EP Langage Limited
ESB CCGT Power station (Carrington Gas Pipeline)	ESP Utilities Group	Esso Petroleum Company Limited
euNetworks Fiber UK Ltd	EXA Infrastructure	Exolum Pipeline System
Fulcrum Electricity Assets Limited	Fulcrum Pipelines Limited	G.Network Communication Ltd c/o JSM Group Ltd
Gamma	Gas Networks Ireland (UK)	Gateshead Energy Company
Gigaclear Ltd	Greenlink Interconnector Ltd	Harbour Energy
Heathrow Airport LTD	Humbly Grove Energy	IGas Energy
Impala Terminals Infrastructure Ltd	INEOS FPS Pipelines	INEOS Manufacturing (Scotland and TSEP)
INOVYN ChlorVinyls Limited	INOVYN Enterprises Limited	Intergen (Coryton Energy or Spalding Energy)
Kensa Utilities	Last Mile	Liverpool City Region Connect
Mainline Pipelines Limited	Manchester Jetline Limited	Manx Cable Company
Marchwood Power Ltd (Gas Pipeline)	Melbourn Solar Limited	MUA Group Limited
Mutual Energy	National Gas Transmission	National Grid Electricity Distribution
National Grid Electricity Transmission	National Grid Ventures	Northern Gas Networks Limited
Northumbrian Water Group	NPower CHP Pipelines	NTT Global Data Centers EMEA UK Ltd
NYnet Ltd	Ogi	Oikos Storage Limited
Ørsted	Palm Paper Ltd	Perenco UK Limited (Purbeck Southampton Pipeline)
Petroineos	Phillips 66	Portsmouth Water
Redundant Pipelines - LPDA	RWE - Great Yarmouth Pipeline (Bacton to Great Yarmouth Power Station)	RWEnpower (Little Barford and South Haven)
SABIC UK Petrochemicals	SAS Utility Services Ltd	Scottish and Southern Electricity Networks
Scottish Power Generation	Seabank Power Ltd	SES Water

Enquiry Confirmation
LSBUD Ref: 38617201

Date of enquiry: 08/09/2025
Time of enquiry: 10:38

SGN	Shell	Shell NOP
South Staffs Water	SP Energy Networks	Spring Fibre Limited
Squire Energy Networks	SSE Generation Ltd	SSE Transmission
SSE Utility Solutions Limited	Storengy	Sutton Bridge Power Generation
Tata Communications (c/o JSM Construction Ltd)	TfL – London Underground HV Cables (Road & Track Side Cables)	toob Limited
Total (Colnbrook) c/o Penspen	Total Finaline Pipelines	Transmission Capital
Trojan Energy Limited	UK Power Distribution	UK Power Networks
Uniper UK Ltd	University of Cambridge Granta Backbone Network	Vattenfall
Veolia ES SELCHP Limited	Veolia ES Sheffield Ltd	Virgin Media O2
Voneus Limited	VPI Power Limited	Wales and West Utilities
Welsh Power	West of Duddon Sands Transmission Ltd	West Sussex OpenNetwork (Cooperative National Infrastructure)
Westminster City Council	Winnington CHP Ltd	Zayo Group UK Ltd c/o JSM Group Ltd

Non-LSBUD members (Asset owners not registered on LSBUD)
(The following Non-LSBUD Members may have assets in your search area. It is YOUR RESPONSIBILITY to contact them before proceeding.
Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.)

Asset Owner	Preferred contact method	Phone	Status
Arelion UK Ltd	check-network@arelion.com		Not Notified
Bring Energy	nrswa@bringenergy.com	0800 130 3600	Not Notified
BT	https://www.swns.bt.com/pls/mbe/welcome.home	08000232023	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
Lumen Technologies	plantenquiries@ocugroup.com	02087314613	Not Notified
Manchester City Council	https://www.manchester.gov.uk		Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquiries@turntown.com	01212 621 100	Not Notified
Network Rail	OPBuriedServicesEnquiries@networkrail.co.uk	01904523401	Not Notified
Sky UK Limited	nrswa@sky.uk	02070323234	Not Notified
Sota	sota.plantenquiries@ocugroup.com		Not Notified
United Utilities	WastewaterDeveloperServices@uuplc.co.uk	08707510101	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified

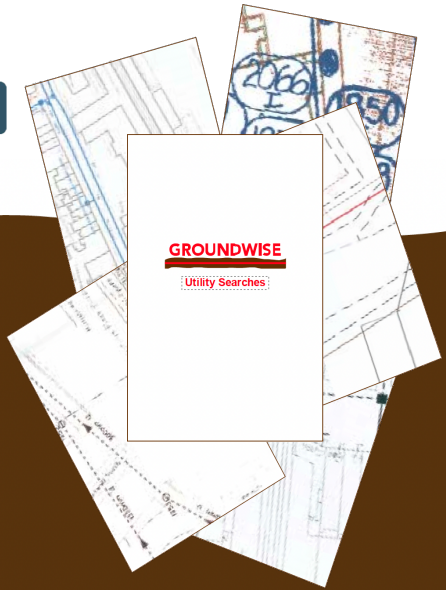
Disclaimer
Please refer to LSBUD's Terms of Use for full terms of use available at www.lsbud.co.uk
The results of this Enquiry are personal to the Enquirer and shall not be shared with or relied upon by any other party. The asset information on which the Enquiry results are based has been provided by LSBUD Members, therefore LSBUD will provide no guarantee that such information is accurate or reliable nor does it monitor such asset information for accuracy and reliability going forward. There may also be asset owners which do not participate in the enquiry service operated by LSBUD, including but not exclusively those set out above. Therefore, LSBUD cannot make any representation or give any guarantee or warranty as to the completeness of the information contained in the enquiry results or accept any responsibility for the accuracy of the mapping images used. LSBUD and its employees, agents and consultants accept no liability (save that nothing in this Enquiry Confirmation excludes or limits our liability for death or personal injury arising from our negligence, or our fraud or fraudulent misrepresentation, or any other liability that cannot be excluded or limited by English law) arising in respect thereof or in any other way for errors or omissions including responsibility to any person by reason of negligence.

GROUNDWISE

Groundwise Searches Ltd

United Utilities

Utility Present



Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex , SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE

United Utilities
Water for the North West

How to contact us:

United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

Groundwise Searches Ltd

Suite 6, Princess Caroline House
1 High Street,
Southend on Sea, ESSEX
SS1 1JE

FAO:

Your Ref: 39540
Our Ref: UUPS-ORD-676541
Date: 09/09/2025

Dear Sirs

Location: Weston Halls and Pendulum Hotel Manchester M1 3BB

I acknowledge with thanks your request dated 08/09/2025 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. http://www.unitedutilities.com/work-near-asset.aspx .

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please contact us .

Yours Faithfully,

Karen McCormack
Property Searches Manager

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

Water for the North West

TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

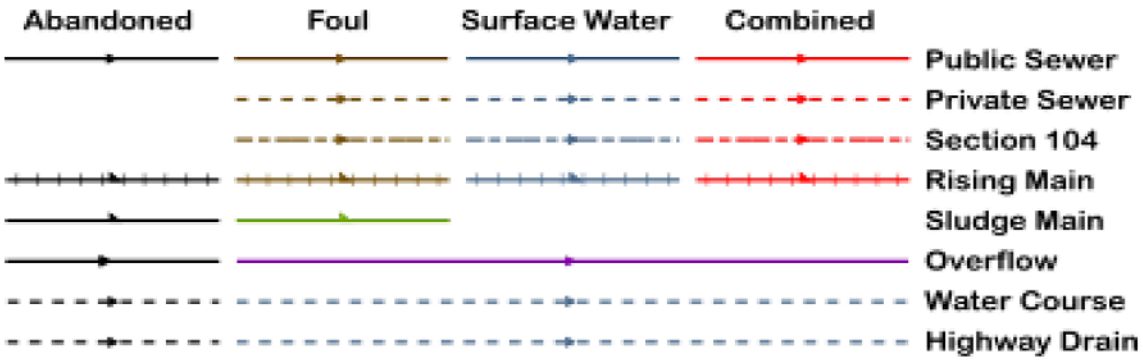
TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

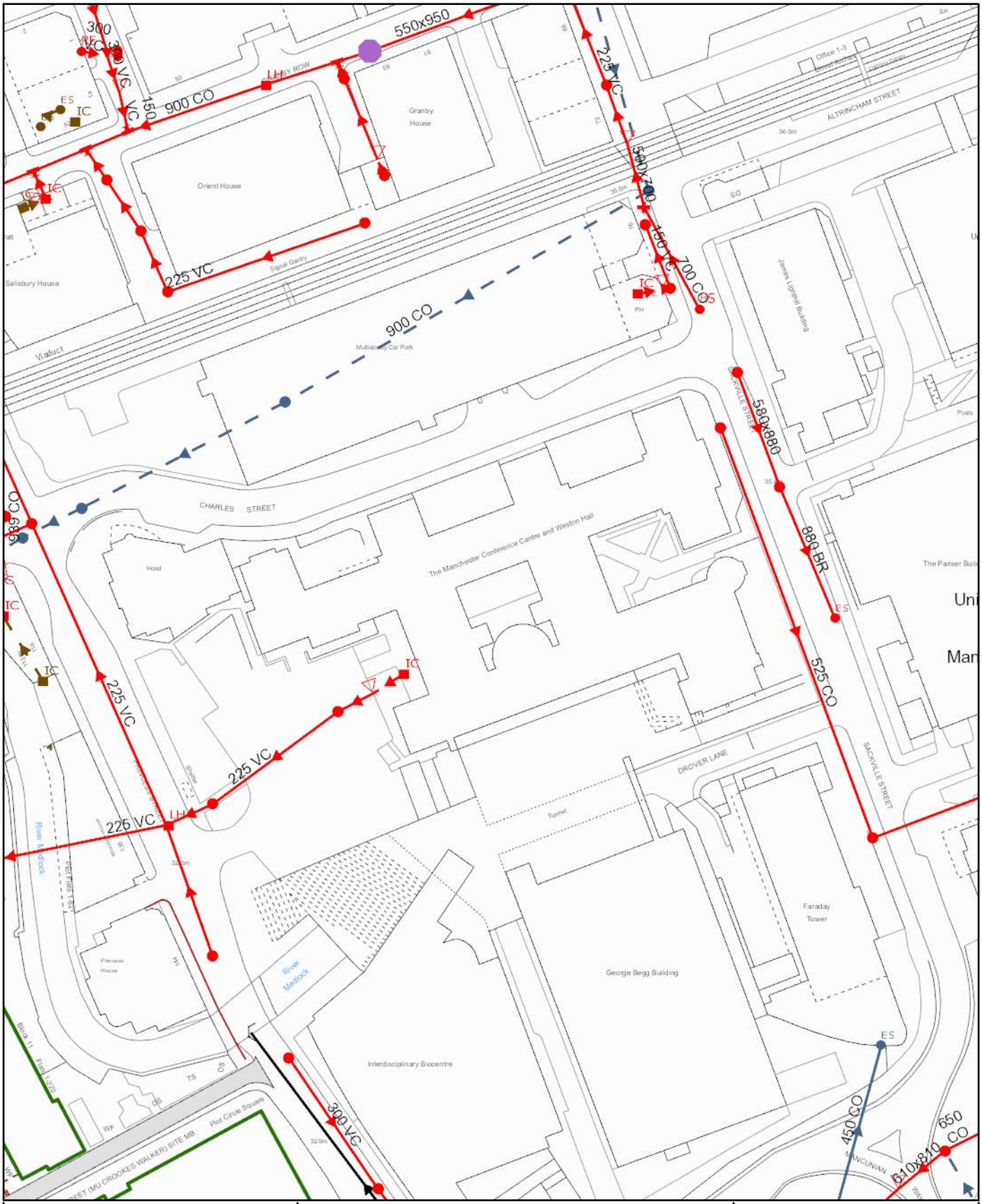
United Utilities
Water for the North West

Wastewater Symbology



All point assets follow the standard colour convention: red – combined, brown - foul, blue – surface water, purple - overflow

- Manhole
- HS Head of System
- ES Extent of Survey
- RE Rodding Eye
- IN Inlet
- DP Discharge Point
- HY Vortex
- PE Penstock
- WO Washout Chamber
- VA Valve
- AV Air Valve
- NRV Non Return Valve
- SO Soakaway
- GU Gully
- CA Cascade
- FM Flow Meter
- HA Hatch Box
- OI Oil Interceptor
- SM Summit
- DS Drop Shaft
- OP Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- IC Inspection Chamber
- Bifurcation Chamber
- LH Lamp Hole
- T Junction / Saddle
- CA Catchpit
- VC Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- T Network Storage Tank
- V Sewer Overflow
- WwTW Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- CK Control Kiosk
- DNM Network Monitoring Point
- Change of Characteristic



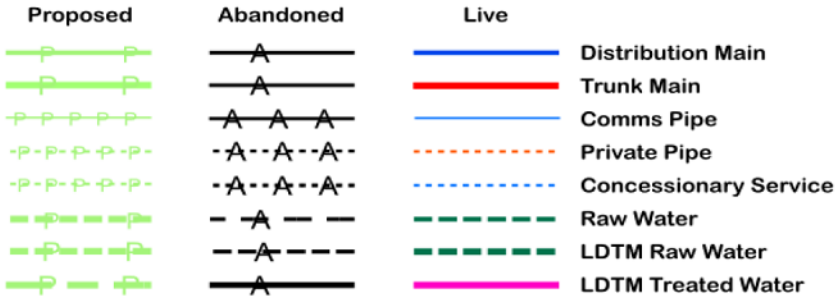
Scale:	1:1250	**SEWER RECORDS**	United Utilities Water for the North West
Date:	09/09/2025		
Address or Site Reference:	Weston Halls and Pendulum Hotel Manchester M1 3BB		
Printed by:	Property Searches		

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

Crown copyright and database rights 2025 Ordnance Survey 0000813445. Unauthorised reproduction will infringe these copyrights.

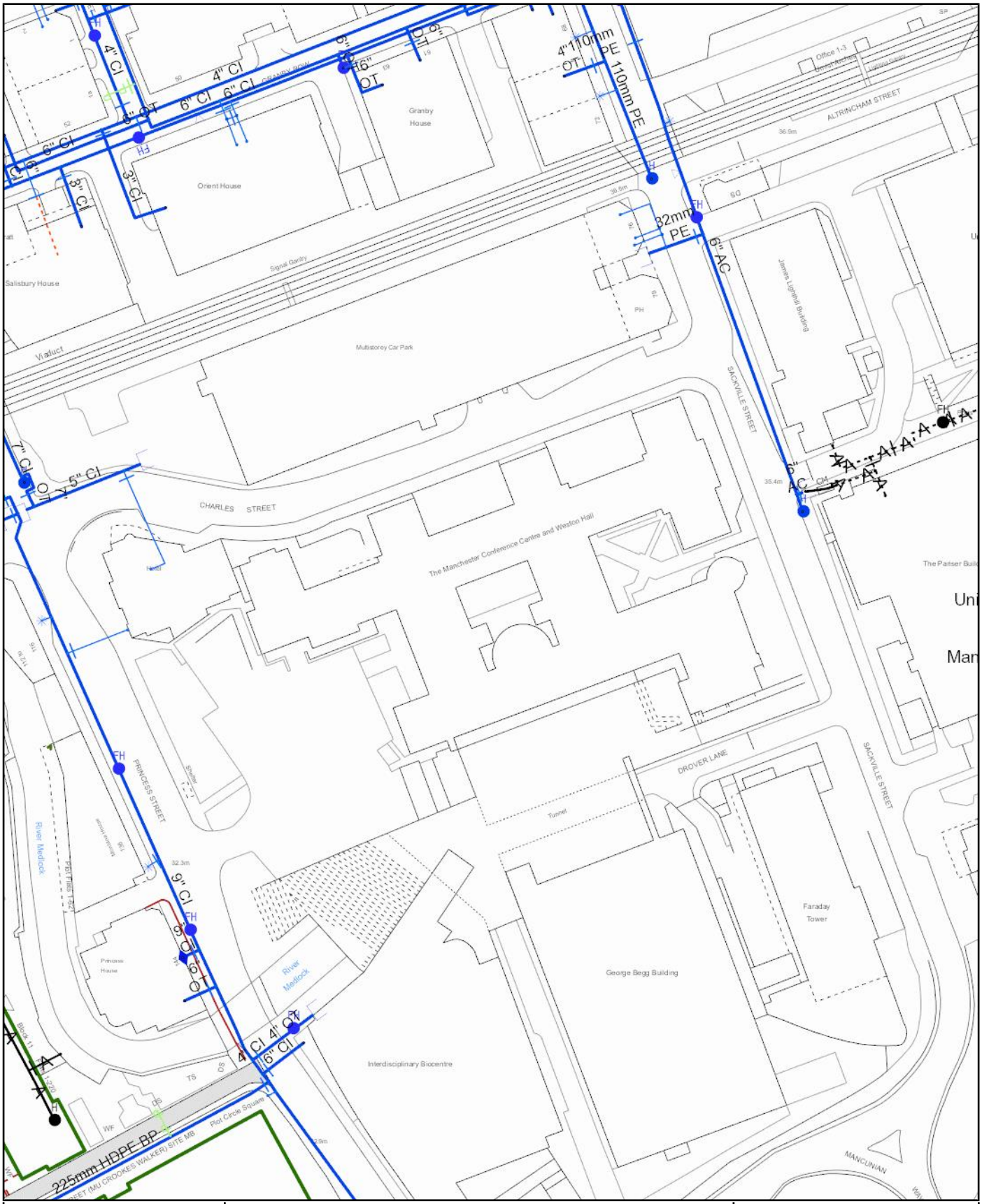
United Utilities
Water for the North West

Clean Water Symbology





Symbology for proposed assets is the same as above, but shown in green
Symbology for abandoned assets is the same as above, but shown in black



Scale:	1:1250	**WATER MAINS RECORDS**	United Utilities Water for the North West
Date:	09/09/2025		
Address or Site Reference:	Weston Halls and Pendulum Hotel Manchester M1 3BB		
Printed by:	Property Searches		

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

Crown copyright and database rights 2025 Ordnance Survey 0000813445. Unauthorised reproduction will infringe these copyrights.

Groundwise Searches Ltd

Advice

1 Purpose of Utilities Report

The Utilities Report is intended to be for project planning and feasibility only. It is not suitable to be used for construction or excavation purposes. The existence of utilities on the plans does not imply that they are suitable in size, capacity, type or location for the project purpose. The Utility Companies should be contacted directly for clarification in this regard.

2 Compilation of the Utilities Report

The Utilities Report is a compilation of Utility Company record plans. These are obtained via application to the Utility Companies following a geographic search to determine which Companies are in a given area. The data is provided by the Utility Companies in a variety of formats including faxed plans, pdf files, digital drawing files and paper drawings. They are all converted to pdf files for inclusion in the report. The quality of the plans therefore varies. A quality assured process is followed for each report. This requires that it is checked at different stages during the process before being subjected to a final assessment prior to issue.

3 Limitations and Accuracy of the data

Each Utility Company has its own disclaimer statement in respect of the information they provide. They do not guarantee or provide a warranty for the data. The Utility Company disclaimers should be referred to when considering the accuracy and completeness of the data. Generally the plans provided are for guidance only and are not guaranteed to be up to date or to be a complete record of the Utility Company plant in a given area.
Some Utility Companies only show main utilities. Therefore service pipes or cables may not be shown on the plans but they may be present on the site.
Some Utility Companies state that the utilities may deviate from the route and position shown on the plans.
Due to the time delay between installation of, or repair or upgrading of utilities and the subsequent updating of the Utility Companies plans, it should be noted that there could be utilities present that are not shown on the plans.
The exact position of the utilities should be verified by the use of suitable detecting devices and safe digging practices in accordance with HS(G)47. Further advice on the location of the utilities should be requested from the owner.

4 Completeness

Whilst every effort is made to locate all Utility Companies in a given area, due to the sensitive or restrictive nature of certain sites, the existence of redundant utilities, the emergence of new companies and the combining of, takeover or sale of existing Companies, we cannot guarantee to provide details on all utilities in a given area.

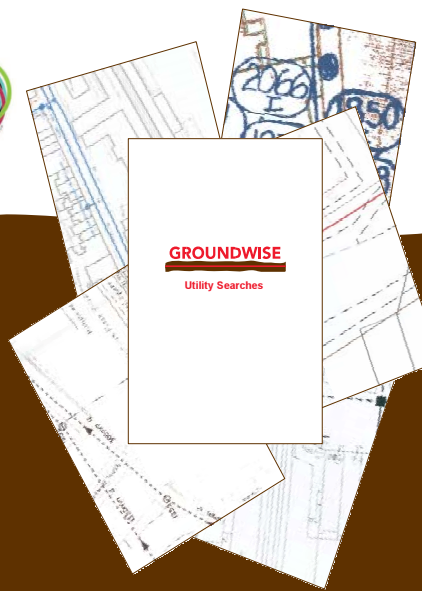
5 Date

Due to the Utility Companies plans being regularly changed and updated, the Utility Report is only valid at the time of production.

Groundwise Searches Limited
Suite 6, Princess Caroline House
1 High Street
Southend-on-Sea
Essex, SS1 1JE

Telephone 01702 615566
Email mail@groundwise.com
Website www.groundwise.com

Registered Office Address:
Matrix House, 12-16 Lionel Road
Canvey Island, Essex, England, SS8 9DE



Supporting Documents

The following documents should be referred to before work commences in the vicinity of existing services:

Health and Safety Booklet HS (GS) 6 Avoidance of Danger from Overhead Electric Lines

Click here to download a copy of HS (GS) 6

General Safety Measures to Avoid Injury and Damage to Gas Apparatus

Please refer to the supporting documents in your Utility Report, as provided by the Gas Distribution Networks Operator

HSE Guidance Note HS (G) 47 Avoiding Danger from Underground Services

Click here to download a copy of HS (G) 47

National Joint Utilities Group (NJUG) Publications Vol. 1

Click here to download a copy of NJUG

CDM Regulations 2015

Click here to download a copy of CDM2015

PAS 128:2022 Specification for Underground Utility Detection, Verification and Location

Click here to purchase a copy of PAS128:2022

Risk Assessment for Construction

Click here to download a copy of an example Risk Assessment form

Contact Us
Email: mail@groundwise.com
Phone: 01702 615566
Website: www.groundwise.com

Connect with Us
https://www.linkedin.com/company/groundwise-searches-ltd

GROUNDWISE

Desktop Mapping (CAD)

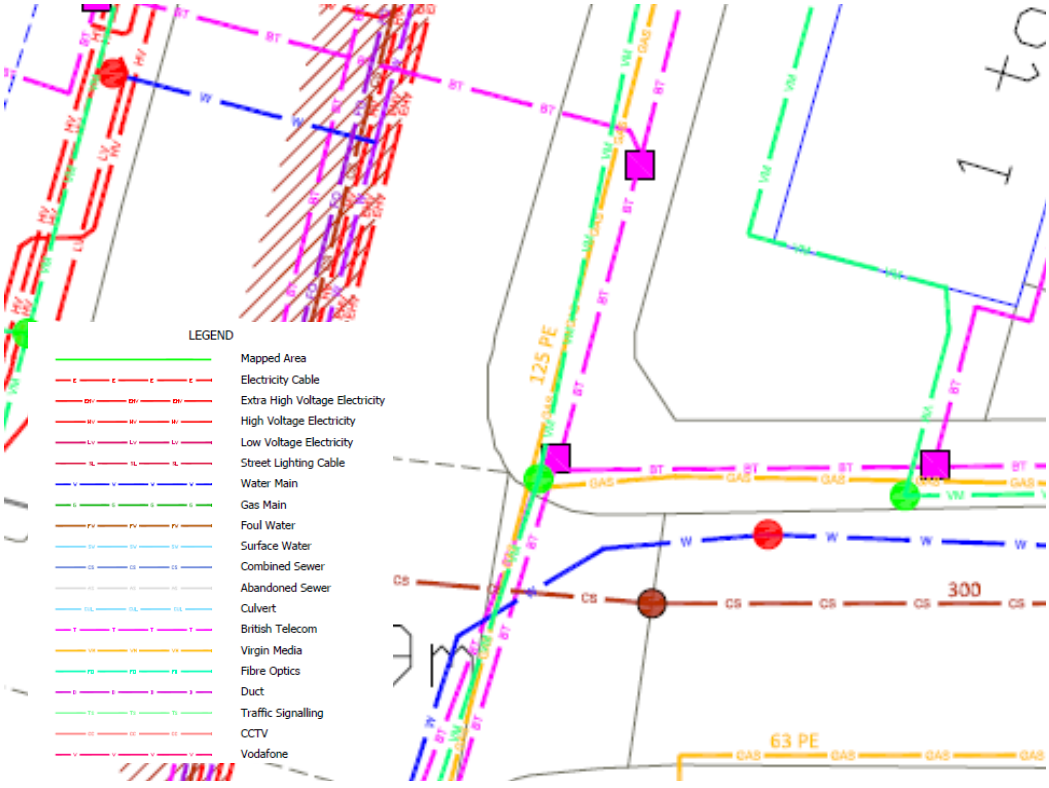
Get a clear visual representation of your Utility Search results, with a Groundwise CAD compilation drawing

Convert your Groundwise Utility Report to a single, CAD format drawing, with our cost-effective Desktop Mapping service;

- Receive an overview plan showing all existing utility networks within the boundary of your site
- A layered network plan, meaning specific utilities can be switched on and off
- Drawing is provided in DWG format, with PDF & KML output available on request

Click here to request a CAD quotation

Please use your Utility Search order number when requesting a CAD quote



Our Services

Before You Dig Service

PAS 128 Level D Surveys
Full & Bespoke Desktop Utility Searches

Get a quote & order your next Utility Search in less than 60 seconds at Groundwise.com

Desktop Mapping (CAD) Service

CAD compilation drawing

Environmental Reports

Historical Mapping
Contaminated Land
Geological Data
Unexploded Ordnance (UXO)

Historical Mining
Coal Mining

- - -

For further information on any of our services, please get in touch with the Groundwise team:

mail@groundwise.com

01702 615566

We'd love to hear your feedback!
Scan or click the QR code, below:

Contact Us
Email: mail@groundwise.com
Phone: 01702 615566
Website: www.groundwise.com

Connect with Us
https://www.linkedin.com/company/groundwise-searches-ltd

Groundwise Searches Ltd
Terms & Conditions

1. Definitions

"Client" means any company or other person or body placing an Order with Groundwise;
"Equipment" means pipes wires cables and other plant or equipment;
"Fee" means in relation to a Site of an area not exceeding the Standard Maximum Area the fee for carrying out a Search identified either on Groundwise website (where an Order is placed through the website) or on the Order Form where an Order is placed using an Order Form plus Value Added Tax and in relation to a Site of an area exceeding the Standard Maximum Area shall be such sum as shall be agreed between Groundwise and a Client plus Value Added Tax;
"Groundwise" means Groundwise Searches Limited;
"Order" means an order by a Client from Groundwise for the provision of a Search whether placed electronically through Groundwise's website or in paper form using an Order Form;
"Order Form" means Groundwise's current standard Utility Searches Order Form for placing an order for a Search in hard copy;
"Report" means a written report provided by Groundwise to a Client in response to an Order reflecting the results of Groundwise's enquiries of Utility Companies made on or before the date of the Report;
"Search" means making enquiries of the Utility Companies likely to have utilised or operated Equipment on a Site, as to the location of any Equipment on that Site following acceptance by Groundwise of an Order, and providing the Client with a Report;
"Site" means a site identified on a plan submitted with an Order which in relation to any Order placed electronically shall not exceed the Standard Maximum Area;
"Standard Maximum Area" means an area no greater than 15 hectares or of a length no greater than one kilometre and a width no greater than two hundred metres;
"Terms of an Order" means in the case of an Order placed electronically the information requested from a Client relating to a Site, the provisions relating to the method of payment, the information contained in or accessed through the tabs appearing on an Order Summary and all other applicable information contained in Groundwise's website and in the case of an Order placed in hard copy means the provisions of a completed Order Form.

2. Agreement

2.1 The Terms of an Order together with these Terms and Conditions constitute the terms of a contract ("Contract") between Groundwise and a Client for the carrying out of a Search.

2.2 A Contract shall come into effect when Groundwise notifies a Client that it has accepted an Order. Where such notification is by email it shall be deemed to have occurred as soon as Groundwise has sent the email to the Client, where such notification is by letter, upon the posting of the letter to the Client, or where there is a verbal acceptance when Groundwise verbally confirms acceptance of an Order to the Client.

3. Payment and Refunds

3.1 Other than in the case of Clients who have set up an account with Groundwise, when placing an Order a Client shall provide Groundwise with credit card details sufficient to enable Groundwise to debit that credit card with the Fee and by such notification and subject to accepting the relevant Order Groundwise is authorised to debit that credit card with the Fee.

3.2 In the case of Clients who have an account with Groundwise the Fee shall be paid within 30 days of the delivery of the Report.

3.3 Groundwise shall be entitled to terminate any account set up with it by a Client any time without notice and to require payment in accordance with paragraph 3.1.

3.4 Where a Client cancels an Order :

3.4.1 within three hours of that Order being accepted by Groundwise, Groundwise shall promptly refund the Fee paid plus Value Added Tax in full, or where no fee has been paid no fee shall be payable;

3.4.2 within three days but after the elapse of three hours of an Order being accepted by Groundwise, Groundwise shall promptly refund 50% of the Fee paid plus Value Added Tax or where no fee has been paid 50% of the fee plus Value Added Tax shall be payable and in either such case following such reimbursement or where no payment has been made upon making any payment due the relevant Contract shall terminate without further liability on the part of Groundwise or of the Client.

4. Limitation of Liability

4.1 Groundwise shall use its reasonable endeavours to provide a Search within the period referred to in the Order and shall not be liable for any delay arising because of any act omission or delay of any Utility Company.

4.2 Without limiting the liability of Groundwise in the case of death or personal injury Groundwise shall have no liability to a Client:

4.2.1 for the information contained in a Report to the extent that any errors or omissions reflect the errors or omissions of a Utility Company in providing or omitting to provide information to Groundwise and to the extent that that Utility Company has no liability to Groundwise in relation to the provision of such information, or the omission to provide relevant information;

4.2.2 in relation to any Report for loss or damage arising in relation to loss of profits, loss of business, loss of use, or any special indirect consequential or pure economic loss, costs, damages, charges or expenses and subject as earlier provided Groundwise's total liability in contract, tort (including negligence or breach of statutory duty), misrepresentation restitution or otherwise in relation to the performance or contemplated performance of the Services shall be limited £5,000,000.00.

4.2.3 In the absence of express written agreement to the contrary, Groundwise shall have no liability to any third party for any errors or omissions contained in or omitted from a Report.

5. Copyright

5.1 The copyright in the Report is the property of Groundwise and the Report may not be copied or reproduced in whole or in part nor communicated or divulged to any third party without the prior written consent of Groundwise save as set out below.

5.2 The Report may, without further charge, be made available to the owner of the Site at the date of the Report, their agents, consultants and professional advisors, any person who purchases the whole of the Site, any person who provides funding secured on the whole of the Site, and prospective buyers of the Site, and any of their respective agents, consultants and professional advisers. The Report may also be published on a local authority planning portal in relation to a proposed development of the site.

5.3 The provisions concerning liability in Clause 4 shall apply to any of the third parties mentioned above in the same manner as they do to the Client.

6. Data Protection

In processing any personal data received from a Client or potential Client, Groundwise will comply with its privacy policy a copy of which can be viewed at [address] on its website.

7. Force Majeure

Groundwise will have no liability to the Client if it is prevented from or delayed in performing its obligations under a Contract by acts events omissions or accidents beyond its reasonable control, including strikes, lock-outs and other industrial disputes, failure of a utility service or transport network, act of God, war, riot, civil commotion, malicious damage, compliance with any law or governmental order rule regulation or direction, accident, breakdown of plant or machinery, fire, flood, storm or default of suppliers or sub-contractors.

8. Severance

8.1 If any provision or part of any provision in these terms and conditions or of any Contract is found by any court or administrative body of competent jurisdiction to be invalid, unenforceable or illegal, the other provisions will remain force.

8.2 If any invalid, unenforceable or illegal provision would be valid, enforceable or legal if some of it were deleted that provision will apply with whatever modification is necessary to make it valid, enforceable and legal.

8.3 The parties agree, in the circumstances referred to in paragraph 8.1 above to attempt to substitute for any invalid, unenforceable or illegal provision a valid, enforceable and legal provision which achieves to the greatest extent possible the same effect as would have been achieved by the invalid, unenforceable or illegal provision.

9. Status of Pre-Contractual Statements

Each of the parties acknowledges and agrees that in entering into a Contract it does not rely on any undertaking, promise, assurance, statement, representation, warranty or understanding (whether in writing or not) of any person (whether party to these terms and conditions or not) relating to the subject matter of a Contract, provided that without prejudice to the generality of the foregoing, any revision to the Terms and Conditions agreed in writing by Groundwise and a Client or a potential Client (including any express written agreement relating to the assignment of copyright or licensing of all or part of the contents of a Report) shall apply to the Contract to which it has been agreed that it will apply.

10. Assignment

A Client shall not, without the prior written consent of Groundwise, assign transfer charge sub-contract or deal in any other matter with any of its rights under a Contract.

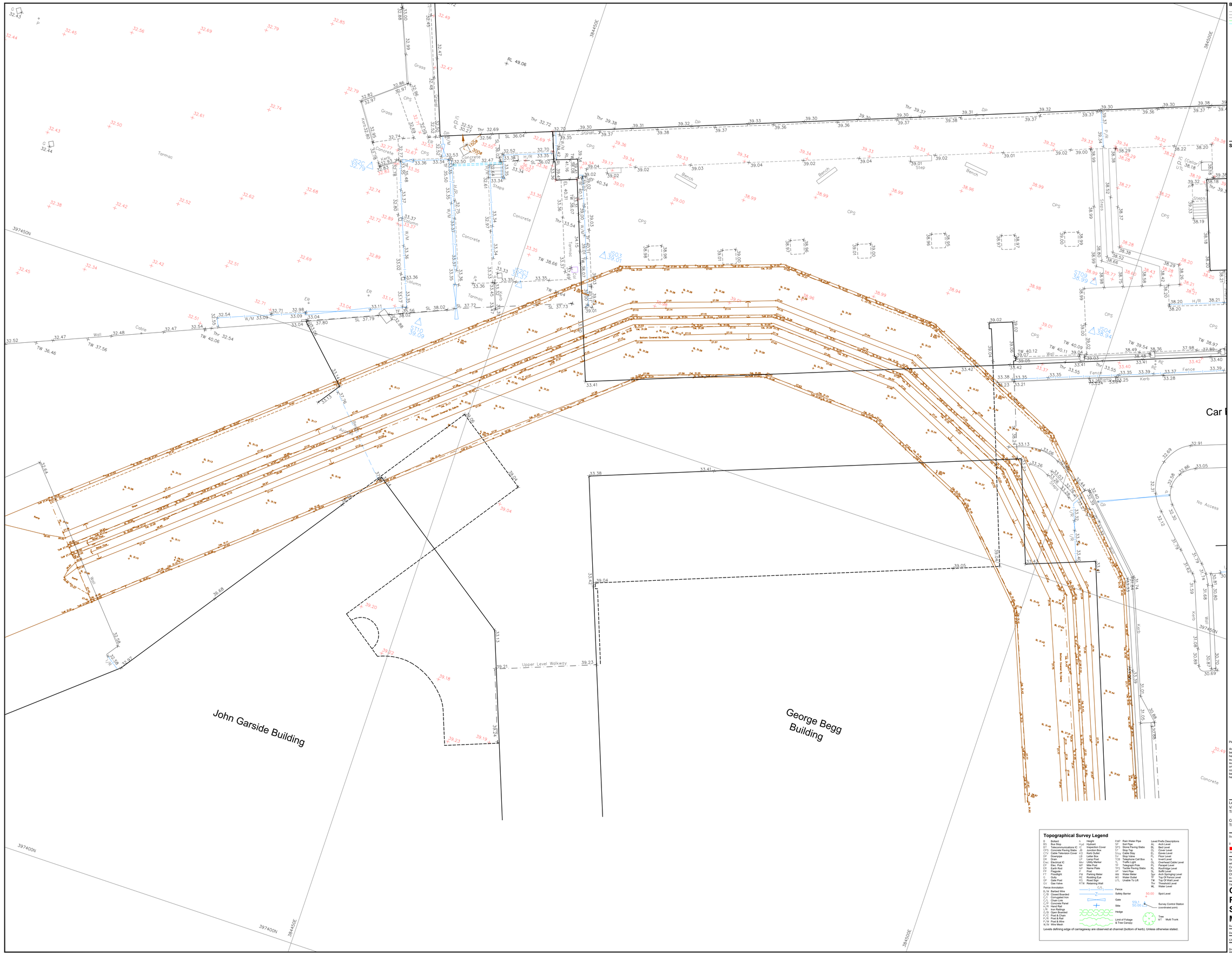
11. Third Party Rights

For the purposes of the Contracts (Rights of Third Parties) Act 1999 it is not intended that the rights of either of the parties shall be contractually enforceable by any third party.

12. Governing Law and Jurisdiction

These terms and conditions and any Contract are governing by and construed in accordance with the laws of England and Wales and the parties irrevocably agree that the courts of England and Wales shall have non-exclusive jurisdiction to settle any dispute or claim that arises out of or in connection with these terms and conditions or any Contract.

9.3. Appendix C - Topographical Survey



Topographical Survey Legend

B	Bollard	h	Height	RWP	Rain Water Pipe		Level Prefix Descriptions
BS	Bus Stop	Hyd	Hydrant	SP	Soil Pipe	AL	Arch Level
BT	Telecommunications IC	IC	Inspection Cover	SPS	Stone Paving Slabs	BL	Bed Level
CPS	Concrete Paving Slabs	JB	Junction Box	ST	Stop Tap	CL	Cover Level
CTV	Cable Television Cover	KO	Kerb Outlet	Stwy	Cable Stay	EL	Eaves Level
DP	Down Pipe	LP	Lamp Base	TC	Traffic Control	FCL	False Ceiling Level
DR	Drain	LP	Lamp Post	TCB	Telephone Call Box	IL	Invert Level
Elec	Electrical IC	Mkr	Utility Marker	TL	Traffic Light	OL	Overhead Cable Level
EP	Elec. Pole	MP	Mile Post	TP	Telegraph Pole	PL	Parapet Level
ER	Earth Rod	NP	Name Plate	TPS	Tactile Paving Slabs	RL	Roofridge Level
FH	Fire Hydrant	P	Post	TR	Traffic Radar	SL	Soffit Level
FT	Floodlight	PM	Parking Meter	WM	Water Meter	Spr	Arch Springing Level
G	Gully	RE	Rodding Eye	WO	Water Outlet	TF	Top Of Fence Level
GP	Gate Post	RS	Road Sign	U/L	Unable To Lift	TW	Top Of Wall Level
GV	Gas Valve	RTW	Retaining Wall			Thr	Threshold Level
						WL	Water Level

Fence Annotation

B/W	Barbed Wire	C/A	Fence		
C/B	Closed Boarded		Safety Barrier	50.00	Spot Level
C/I	Corrugated Iron		Gate	SS1 50.00	Survey Control Station (coordinated point)
C/L	Chain Link		Stile		
C/P	Concrete Panel		Hedge		
H/R	Hand Rail		Limit of Foliage & Tree Canopy		Tree
O/B	Open Boarded			MT	Multi Trunk
P/C	Post & Chain				
P/R	Post & Rail				
P/W	Post & Wire				
W/M	Wire Mesh				

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

Building Survey Legend

Beam
Change in ceiling height
Change in floor surface
Ducting
Pipe
Stairs/ramps (direction denotes rise)
Roof pitch (direction denotes fall)
Sloping ceiling (direction denotes rise)
Registration overlay
JB Junction box
C/L Fence
Safety barrier
Gate

Height prefix descriptions
AH Arch height
BH U/s of beam
CH Ceiling height
DH Door head height
FH Floor to ceiling height
HT Height
SprH Arch springing height
SW Window sill height
WH Window head height

Level prefix descriptions
AL Arch level
BeL U/s of beam level
CeL Ceiling level
EaL Eaves level
FCeL False ceiling level
FL Floor level
SprL Arch springing level
SwL Window sill level
WheL Window head level
Thr Threshold level
ToW Top of wall
SL Soffit level

50.00 Spot level

SS1 50.00 Survey control station (Coordinated point)

B Bollard
BiH Litter bin
BS Bus stop
BT British telecom ic
CPS Concrete paving sla
CTV Cable television cov
DP Down pipe
Elec Electrical ic
EP Elec. pole
ER Earth rod
FH Fire hydrant
FT Floodlight
G Gully
GP Gate post

Fence annotation
B/W Barbed wire
C/B Closed boarded
C/I Corrugated iron
C/L Chain link
C/P Concrete panel
H/R Hand rail
I/R Iron railings
O/B Open boarded
P/C Post & chain
P/R Post & rail
P/W Post & wire
W/M Wire mesh

Survey Station Coordinates

Stn	Easting	Northing	Level
JS01	384363.54	397521.45	32.66
JS02	384399.14	397444.10	32.70
JS03	384456.59	397464.19	39.01
JS04	384498.22	397471.36	38.94
JS05	384549.96	397485.19	35.09
JS06	384523.48	397521.69	35.36
JS07	384517.16	397566.67	36.05
JS08	384482.56	397550.09	35.38
JS09	384451.22	397538.16	34.73
JS10	384429.01	397527.81	34.03
JS28	384404.75	397484.68	32.66
JS2C	384435.32	397465.14	32.79
JS2A	384376.74	397488.11	32.53
JS2B1	384439.90	397492.57	32.64
JS2C1	384450.58	397459.56	33.37
JS6A	384496.48	397512.54	35.59
JS08A	384484.85	397539.04	35.15
JS09A	384452.40	397532.57	34.56
JS11	384394.88	397523.45	33.19
JS10B	384414.33	397524.93	33.68

Please note:

Any discrepancy found between an Ordnance Survey benchmark and an OSGM02 computed orthometric height is likely to be due to bench mark subsidence or uplift and, assuming precise GPS survey has been carefully carried out, the orthometric height given by OSGM02 should be considered correct in preference to archive benchmark heights. OSGM02 converts GPS ellipsoid heights to orthometric heights above mean sea level.

Head and Registered Office
Survey Systems Ltd
Willow Bank House
Old Road
Handforth • Wilmslow
Cheshire SK9 3AZ
Tel. 01625 533444
Fax 01625 526515
mail@survsys.co.uk
www.survsys.co.uk

Levels are related to **OSGM02**
Value **n/a**
Tied to NG by GPS, see note above.

Coordinates are related to **National Grid (GPS)**
Tied to NG by GPS at survey station ST01.

Scale **1:100**

0 1 2 3 4 5 6 7 8 9 metres

The accuracy of this survey is commensurate with the drawing scale specified on the title block.

Copyright in this drawing remains with Survey Systems Ltd.
Do not scale from this drawing, work to figured dimensions.
Check all dimensions on-site.
In the event of any discrepancy, please refer query to Survey Systems Ltd.

Title

Culvert Survey
River Medlock
Sackville Street
Manchester M1 3BB

Surveyed PN JDS DB RPo Drawn PN GAT AG

Date February 2020 Checked dlp AG

CAD file name 13441A Revision No.

Drawing No. **SSL:13441A:100:1:1:CUL**

SURVEYsystems

Charles Street

No Access to Nursery

Weston Halls

Sackville Street

Princess Street

Manchester Conference Centre
& Pendulum Hotel

Car Park Access Road

Faraday Tower

George Begg
Building

John Garside Building

Archive

Topographical Survey Legend

B	Bollard	H	Height	FWP	Rain Water Pipe	Level Prefix Descriptions	
BS	Bus Stop	Hyd	Hydrant	SP	Soil Pipe	AL	Arch Level
BT	Telecommunications IC	IC	Inspection Cover	SPS	Stone Paving Slabs	BL	Bed Level
CCTV	Closed Circuit Television	IL	Invert Level	SS	Sign Post	CL	Crown Level
CTV	Cable Television Cover	KO	Kerb Outlet	SVa	Cable Stay	EL	Eaves Level
DP	Downpipe	LB	Letter Box	SV	Stop Valve	FL	Floor Level
DR	Drain	LP	Lamp Post	TCB	Telephone Call Box	IL	Invert Level
Elec	Electrical IC	MH	Utility Marker	TL	Traffic Light	OL	Overhead Cable Leve
EM	Electric Meter	MP	Marker Post	TP	Tactile Paving	PL	Parapet Level
ER	Earth Rod	NP	Name Plate	TPS	Tactile Paving Slabs	RL	Roofridge Level
FP	Flagpole	P	Post	VP	Vent Pipe	SL	Soffit Level
FT	Floodlight	PM	Parking Meter	WM	Water Meter	Spr	Arch Springing Level
G	Gully	RS	Rodding Eye	WO	Water Outlet	TF	Top Of Fence Level
GP	Guard Post	RB	Road Sign	UTL	Unable To Lift	TW	Top Of Wall Level
GV	Gas Valve	RTB	Retaining Wall			Thr	Threshold Level
						WL	Water Level

Fence Annotation:

B/W	Barbed Wire		Fence
C/B	Closed Boarded		Safety Barrier
C/I	Corrugated Iron		Gate
C/L	Chain Link		
H/P	Hoarding Panel		Stile
H/R	Hand Rail		
I/R	Iron Railings		Hedge
O/B	Open Boarded		
P/C	Post & Chain		
P/R	Post & Rail		Limit of Foliage & Tree Canopy
P/W	Post & Wire		
W/M	Wire Mesh		

50.00 Spot Level

SSL1 50.00 Survey Control Statio (coordinated point)

Tree
MT Multi Trunk

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

Drainage/Services Legend

Foul		CCTV		Ducting	
Surface		Electric			
Combined		Street lighting	d	Service depth (m)	
Drainage (unspecified)		Traffic management	ø	Pipe diameter (mm)	
BT	British telecom	Gas	EOT	End of trace	
T	Telecom	Water			
FO	Fibre optics	Fuel			
CATV	CATV	Unknown / misc			

Drainage pipe size data has been determined from the surface, in order to comply with confined spaces health and safety legislation. Please regard this data as approximate.

Survey Station Coordinates

Stn	Easting	Northing	Level
JS01	384363.54	397521.45	32.66
JS02	384399.14	397444.10	32.70
JS03	384456.59	397464.19	39.01
JS04	384498.22	397471.36	38.94
JS05	384549.96	397485.19	35.09
JS06	384523.48	397521.69	35.36
JS07	384517.16	397566.67	36.05
JS08	384482.56	397550.09	35.38
JS09	384451.22	397538.16	34.73
JS10	384429.01	397527.81	34.03
JS2B	384404.75	397484.68	32.66
JS2C	384435.32	397465.14	32.79
JS2A	384376.74	397488.11	32.53
JS2B1	384439.90	397492.57	32.64
JS2C1	384450.58	397459.56	33.37
JS6A	384496.48	397512.54	35.59
JS08A	384484.85	397539.04	35.15
JS09A	384452.40	397532.57	34.56
JS11	384394.88	397523.45	33.19
JS10B	384414.33	397524.93	33.68

Please note:

Any discrepancy found between an Ordnance Survey benchmark and an OSGM02 computed orthometric height is likely to be due to bench mark subsidence or uplift and, assuming precise GPS survey has been carefully carried out, the orthometric height given by OSGM02 should be considered correct in preference to archive benchmark heights. OSGM02 converts GPS ellipsoid heights to orthometric heights above mean sea level.

Head and Registered Office
Survey Systems Ltd
Willow Bank House
Old Road
Handforth • Wilmslow
Cheshire SK9 3AZ
Tel. 01625 533444
Fax 01625 526815
mail@surveys.co.uk
www.surveys.co.uk

Levels are related to **OSGM02**
Value **n/a**
Tied to NG by GPS, see note above.

Coordinates are related to **National Grid (GPS)**
Tied to NG by GPS at survey station ST01.

Scale **1:200**

0 2 4 6 8 10 12 14 16 18 metres

The accuracy of this survey is commensurate with the drawing scale specified within the title block.
Copyright in this drawing remains with Survey Systems Ltd.
Do not scale from this drawing, work to figured dimensions.
Check all dimensions on-site.
In the event of any discrepancy, please refer query to Survey Systems Ltd.

Title

Topographical Survey
Weston Halls
Sackville Street
Manchester M1 3NJ

Surveyed	PN JDS DB RPo	Drawn	PN GAT AG
Date	February 2020	Checked	dlp AG
File name	13441A	Revision No.	Sheet size A0

Drawing No. **SSL:13441A:200:1:1:TOPO**

SURVEYsystems

© Copyright in Survey Systems Ltd. 4782474

Topographical Survey Legend

B	Bollard	h	Height	FWP	Rain Water Pipe	Level Prefix Descriptions	
BS	Bus Stop	Hyd	Hydrant	SP	Soil Pipe	AL	Arch Level
BT	Telecommunications IC	IC	Inspection Cover	SPS	Stone Paving Slabs	BL	Bed Level
CCTV	Closed Circuit Television	KO	Kerb Outlet	SS	Sign Post	CL	Cover Level
CTV	Cable Television Cover	LO	Kerb Outlet	SSy	Cable Stay	EL	Eaves Level
DP	Downpipe	LB	Letter Box	SV	Stop Valve	FL	Floor Level
DR	Drain	LP	Lamp Post	TCB	Telephone Call Box	IL	Invert Level
Elec	Electrical IC	Mkr	Utility Marker	TL	Traffic Light	OL	Overhead Cable Leve
EM	Electric Meter	MP	Marker Post	TP	Tactile Paving	PL	Parapet Level
ER	Earth Rod	NP	Name Plate	TPS	Tactile Paving Slabs	RL	Roofridge Level
FP	Flagpole	P	Post	VP	Vent Pipe	SL	Soffit Level
FT	Floodlight	PM	Parking Meter	WM	Water Meter	Spr	Arch Springing Level
G	Gully	RE	Rodding Eye	WO	Water Outlet	TF	Top Of Fence Level
LP	Lamp Post	RS	Road Sign	UTL	Unable To Lift	TL	Top Of Wall Level
GV	Gas Valve	RTW	Retaining Wall			Thr	Threshold Level
						WL	Water Level

Fence Annotation:

B/W	Barbed Wire		Fence
C/B	Closed Boarded		Safety Barrier
C/I	Corrugated Iron		Gate
C/L	Chain Link		Stile
H/P	Hoarding Panel		
H/R	Hand Rail		Hedge
I/R	Iron Railings		
O/B	Open Boarded		Limit of Foliage & Tree Canopy
P/C	Post & Chain		
P/R	Post & Rail		
P/W	Post & Wire		
W/M	Wire Mesh		

Spot Level: 50.00

Survey Control Station (coordinated point): SSL1 50.000

Tree: BT Multi Trunk

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

Drainage/Services Legend

Foul	CCTV	CCTV	Ducting
Surface	E	Electric	
Combined	SL	Street lighting	d Service depth (m)
Drainage (unspecified)	TM	Traffic management	ø Pipe diameter (mm)
BT British telecom	GAS	Gas	EOT End of trace
T Telecom	W	Water	
FO Fibre optics	F	Fuel	
CATV CATV	UK	Unknown / misc	

Drainage pipe size data has been determined from the surface, in order to comply with confined spaces health and safety legislation. Please regard this data as approximate.

Survey Station Coordinates

Stn	Easting	Northing	Level
JS01	384363.54	397521.45	32.66
JS02	384399.14	397444.10	32.70
JS03	384456.59	397464.19	39.01
JS04	384498.22	397471.36	38.94
JS05	384549.96	397485.19	35.09
JS06	384523.48	397521.69	35.36
JS07	384517.16	397566.67	36.05
JS08	384482.56	397550.09	35.38
JS09	384451.22	397538.16	34.73
JS10	384429.01	397527.81	34.03
JS2B	384404.75	397484.68	32.66
JS2C	384435.32	397465.14	32.79
JS2A	384376.74	397488.11	32.53
JS2B1	384439.90	397492.57	32.64
JS2C1	384450.58	397459.56	33.37
JS6A	384496.48	397512.54	35.59
JS08A	384484.85	397539.04	35.15
JS09A	384452.40	397532.57	34.56
JS11	384394.88	397523.45	33.19
JS10B	384414.33	397524.93	33.68

Please note:

Any discrepancy found between an Ordnance Survey benchmark and an OSGM02 computed orthometric height is likely to be due to bench mark subsidence or uplift and, assuming precise GPS survey has been carefully carried out, the orthometric height given by OSGM02 should be considered correct in preference to archive benchmark heights. OSGM02 converts GPS ellipsoid heights to orthometric heights above mean sea level.

Head and Registered Office
Survey Systems Ltd
Willow Bank House
Old Road
Handforth • Wilmslow
Cheshire SK9 3AZ
Tel. 01625 533444
Fax 01625 526815
mail@surveys.co.uk
www.surveys.co.uk

Levels are related to **OSGM02**
Value **n/a**
Tied to NG by GPS, see note above.

Coordinates are related to **National Grid (GPS)**
Tied to NG by GPS at survey station ST01.

Scale **1:200**

0 2 4 6 8 10 12 14 16 18 metres

The accuracy of this survey is commensurate with the drawing scale specified within the title block.
Copyright in this drawing remains with Survey Systems Ltd.
Do not scale from this drawing, work to figured dimensions.
Check all dimensions on-site.
In the event of any discrepancy, please refer query to Survey Systems Ltd.

Title

Topographical Survey
Weston Halls
Sackville Street
Manchester M1 3NJ

Surveyed	JDS DB RPs	Drawn	GAT
Date	February 2020	Checked	AG
File name	19864-2D	Revision No.	
Drawing No.	SSL:19864:200:1:1	Sheet size	A0

SURVEYsystems

© Copyright Survey Systems Ltd. 19/19/19

9.4. Appendix D - BGS Borehole Records

British Geological Survey

BGS ID: 1042402 : BGS Reference: SJ89NW248
British National Grid (27700) : 384446,397390

REPORT.

FROM E. TIMMINS & SONS LTD.

WATER WORKS CONTRACTORS.

RUNCORN, CHESHIRE.

TEL. NO. RUNCORN 2338

SJ 89 NW 248 SE 94

Name of Client **Dunlop Rubber Co., Ltd.,**

Brook Street,

Manchester.

Date **March 1944.**

Client's Ref.

Site **Brook Street.**

Borehole No. **2.**

Strata.	Thickness.	Depth.
Brown Clay.	3·05 **10'-0"**	3·05 **10'-0"**
Soft Red Sandstone.	15·24 **50'-0"**	18·29 **60'-0"**
Red Sandstone with Marl Viens.	7·62 **25'-0"**	25·91 **85'-0"**
Hard Red Sandstone.	6·10 **20'-0"**	32·00 **105'-0"**
Pebble Bed Sandstone.	32·61 **107'-0"**	64·62 **212'-0"**
Hard Red Sandstone with Large Pebbles.	11·89 **39'-0"**	76·51 **251'-0"**

Total Depth of Borehole **251'-0"**

Water Levels

Rest Water Level 22'-0" - surface.

Length of Temporary Lining Tubes (Withdrawn) :—

Size

Depth

Length of Tubes Left in Position :—

Size **15'-0"**

Depth **28'-3" - surface.**

General Remarks :— **Top. 11'-9" - surface.**
Length. 30'-0"

Yours faithfully,

E. TIMMINS & SONS.

DIRECTOR

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 1042402 : BGS Reference: SJ89NW248
British National Grid (27700) : 384446,397390

SJ 8446 9741 SJ89/72B

REPORT.

FROM E. TIMMINS & SONS LTD.
WATERWORKS CONTRACTORS.
RUNCORN. CHESHIRE.

TEL. NO. RUNCORN 2338

104SE 94.

Name of Client Dunlop Rubber Co., Ltd., *Date* March 1944.
Brook Street, *Client's Ref.*
Manchester.

Site Brook Street.

Borehole No. 2.

Strata.	Thickness.	Depth.
Brown Clay.	10'-0"	10'-0"
Soft Red Sandstone.	50'-0"	60'-0"
Red Sandstone with Marl Viens.	25'-0"	85'-0"
Hard Red Sandstone.	20'-0"	105'-0"
Pebble Bed Sandstone.	107'-0"	212'-0"
Hard Red Sandstone with Large Pebbles.	39'-0"	251'-0"
	Total Depth of Borehole	251'-0"

Water Levels

Rest Water Level 22'-0" - surface.

Length of Temporary Lining Tubes (Withdrawn) :—

Size
Depth

Length of Tubes Left in Position :—

Size 15'-0"
Depth 28'-3" - surface.

General Remarks :— Top. 11'-9" - surface.
Length. 30'-0"

Sect. 6 letter of 2nd. Nov. 1965. Factory closed 4/6/65, Borehole not in use. 3/11/65 S.C.

Yours faithfully,
E. TIMMINS & SONS
DIRECTOR

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 1042402 : BGS Reference: SJ89NW248
British National Grid (27700) : 384446,397390

Lancs 104 SE/94

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 1043694 : BGS Reference: SJ89NW1500
British National Grid (27700) : 384520,397530

ENGINEER AND SURVEYORS DEPARTMENT

SJ89NW 9753

INVESTIGATION FOR	Main Drainage	DATE COMMENCED	23.7.85. 8452
TION	Sackville Street REF:	BORING METHOD	Cable Percussive
HOLE No.	4	BORING DIAMETER	150MM
REFERENCE		SCALE:	1:50 approx. 1500

E	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW GL	Reduced Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legen
			0.1		Bituminous Surfacing					
			0.3		Concrete					
					Soft and firm silty and sandy CLAY, ashes, sand, brick pieces etc. Made Ground	D1	0.5			
						P2	1.35	1.65	6	
						D3	1.8			
						P4	2.35	2.65	5	
						D5	2.90			
						U6	3.0	3.45		
						D7	4.0			
						P8	4.15	4.45	4	
						D9	4.8			
						P10	5.15	5.45	4	
						D11	5.7			
						P12	5.8	6.25	4	
35	5.80	Dry	6.25							

OBSERVATIONS DURING BORING

OF ENTRY	ESTIMATED SEE PAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING

REMARKS:-

TEST KEY

D – DISTURBED SAMPLE B – BULK SAMPLE U – UNDISTURBED SAMPLE
P – SPT SAMPLE W – WATER SAMPLE

HERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED ENETRATION IS GIVEN (NOT N – VALUE)

THS AND REDUCED LEVELS IN (m) UNLESS OTHERWISE STATED

KS

Trial hole excavated to 1.20m below ground level

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 1042401 : BGS Reference: SJ89NW247
British National Grid (27700) : 384444,397459

(621) Wt. 5990—S.33 2000 6/22 Gp. 147 M.R.Co.Ltd

Dudbridge Rubber Co Ltd No. 8.

SJ 89 NW 247

SECTION OF Boring

Manchester

Maps: One-inch 85 Six-inch 104 S.E.W County Lancashire

Height above O.D. 240 Latitude Longitude

Communicated by Professor George Hickling. Date of sinking 1902.

Made by Dip of Strata M/c 11°

Hickling's 75: Trans. Inst. Min. E. Vol. LIV. 1918.

From street level approximately.

	Thickness.			Depth from Surface.		
made ground	0·61	2	-	0·61	2	-
Red sandstone rock.	63·55	208	6	63·55	210	6

Particulars given verbally by Mr Fidlay Bennett of Messrs Timmins, Dec 1940

SWL 40'

PWL 90'

Suction at 100'

Ream 8"

Yield, 8,000 g/hr, the capacity of the pump.

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 1042401 : BGS Reference: SJ89NW247
British National Grid (27700) : 384444,397459

SJ 8445 9745 SJ 89 / 72A

(621) Wt. 5991—S.33 2000 6 32 Gp. 147 M.R.Co.Ltd.

SECTION OF Boring

Dunlop Rubber Co Ltd (No. 8. D
(Formerly Messrs. Hans Renold's Works) Brook St, Manchester.

Maps: One-inch 85 Six-inch 104 S.E.W County Lancashire

Height above O.D. 240 Latitude Longitude

Communicated by Professor George Hickling Date of sinking 1902.

Made by Hickling's 75: Trans. Inst. Min. E. Vol. LIV. 1918. Dip of Strata M/c 111

	Thickness.		Depth from Surface.	
From street level approximately.				
Made ground	2	-	2	-
Red sandstone rock	208	6	210	6

Particulars given verbally by Mr Friday Bennett of Messrs Timmins, Dec 1940
SWL 40'
PWL 90'
Suction at 100'
Diam 8"
Yield, 8,000 g/hr, the capacity of the pump.

Section 6 letter of 2nd. Nov. 1965: 4/11/65
Factory now closed, borehole not in use.
g.c. 3/11/65.

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 1042401 : BGS Reference: SJ89NW247
British National Grid (27700) : 384444,397459

49

Canon 104 SE/8

Contact BGS: ngdc@bgs.ac.uk

9.5. Appendix E - EA Flood Model

Flood risk assessment data

Location of site: 384472 / 397501 (shown as easting and northing coordinates)
Document created on: 10 September 2025
This information was previously known as a product 4.
Customer reference number: RC83TKPT2Y7W

Map showing the location that flood risk assessment data has been requested for.



How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

We recommend that you work with a flood risk consultant to get your flood risk assessment.

Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- past floods
- modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Information that's unavailable

This document **does not** contain:

- flood defences and attributes

We aren't able to display flood defence locations and attributes as there are no formal flood defences in the area of interest.

Surface water and other sources of flooding

When using the surface water map on the check your long term flood risk service the following considerations apply:

- surface water extents are suitable for use in planning
- surface water climate change scenarios may help to inform risk assessments, but the available data fall short of what is required to assess planned development
- surface water depth information should not be used for planning purposes

To find out about other factors that might affect the flood risk of this location, you should also check:

- reservoir flood risk
- groundwater flood risk - you could use the British Geological Survey groundwater flooding data, groundwater: current status and flood risk and the guide on mining and groundwater constraints for development - further information may be available from the lead local flood authority (LLFA)
- your local planning authority's SFRA, which includes future flood risk

Your Lead Local Flood Authority is Manchester District.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Manchester Ship Canal 2018
Scenario(s): No defences exist fluvial, no defences exist climate change fluvial
Date: 1 May 2020

Model name: River Medlock 2011
Scenario(s): No defences exist fluvial, no defences exist climate change fluvial
Date: 22 December 2010

These models contain the most relevant data for your area of interest.

Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occuring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 2.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

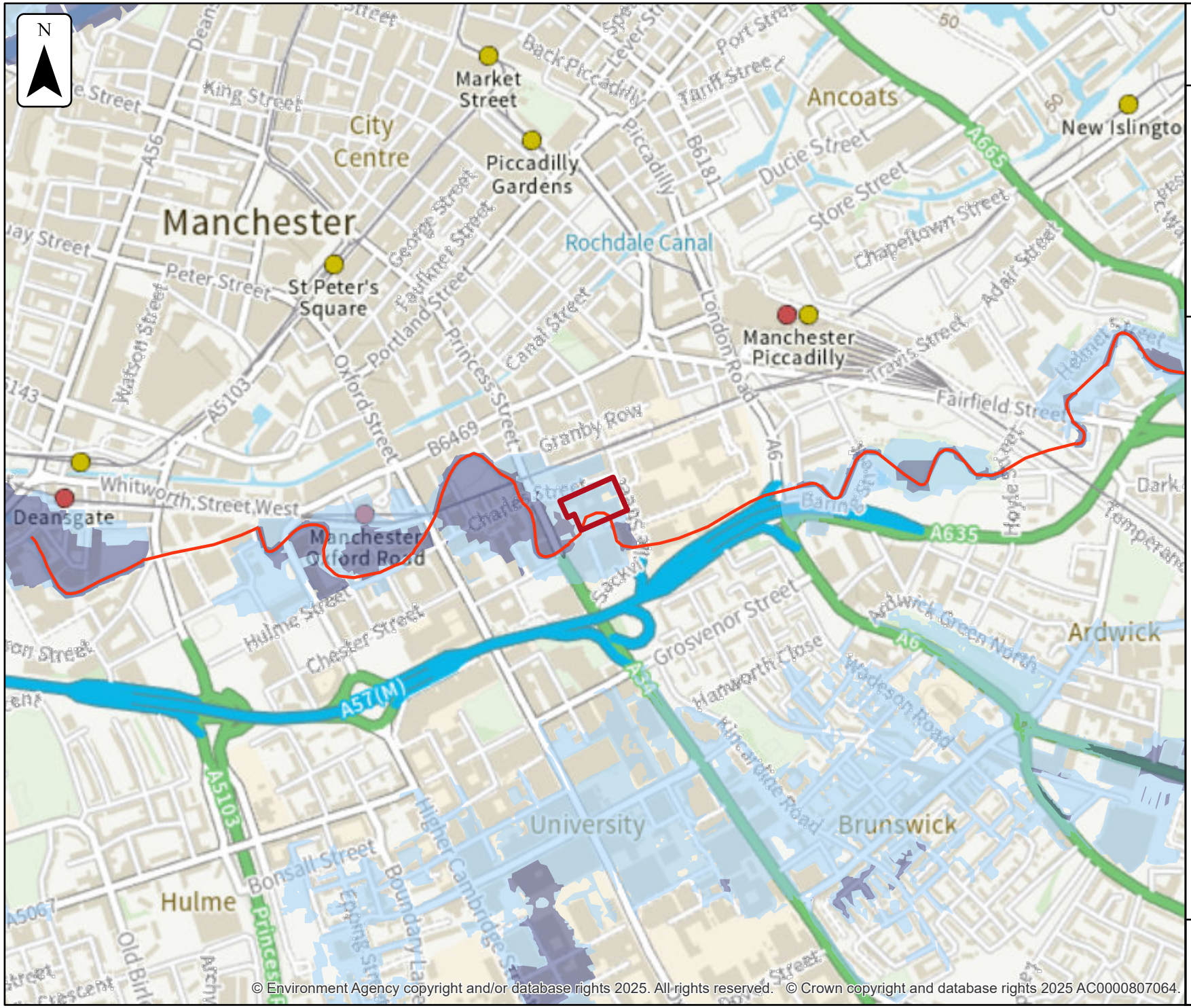
- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change



Environment Agency

Flood map for planning

Location (easting/northing)
384472/397501

Scale
1:10,000

Created
10 Sep 2025

- Selected area
- Main river
- Flood Zone 3
- Flood Zone 2

0 100 200 300 400 500
metres

Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- modelled node point map(s) showing the points used to get the data to model the scenarios and table(s) providing details of the flood risk for different return periods
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

Climate change

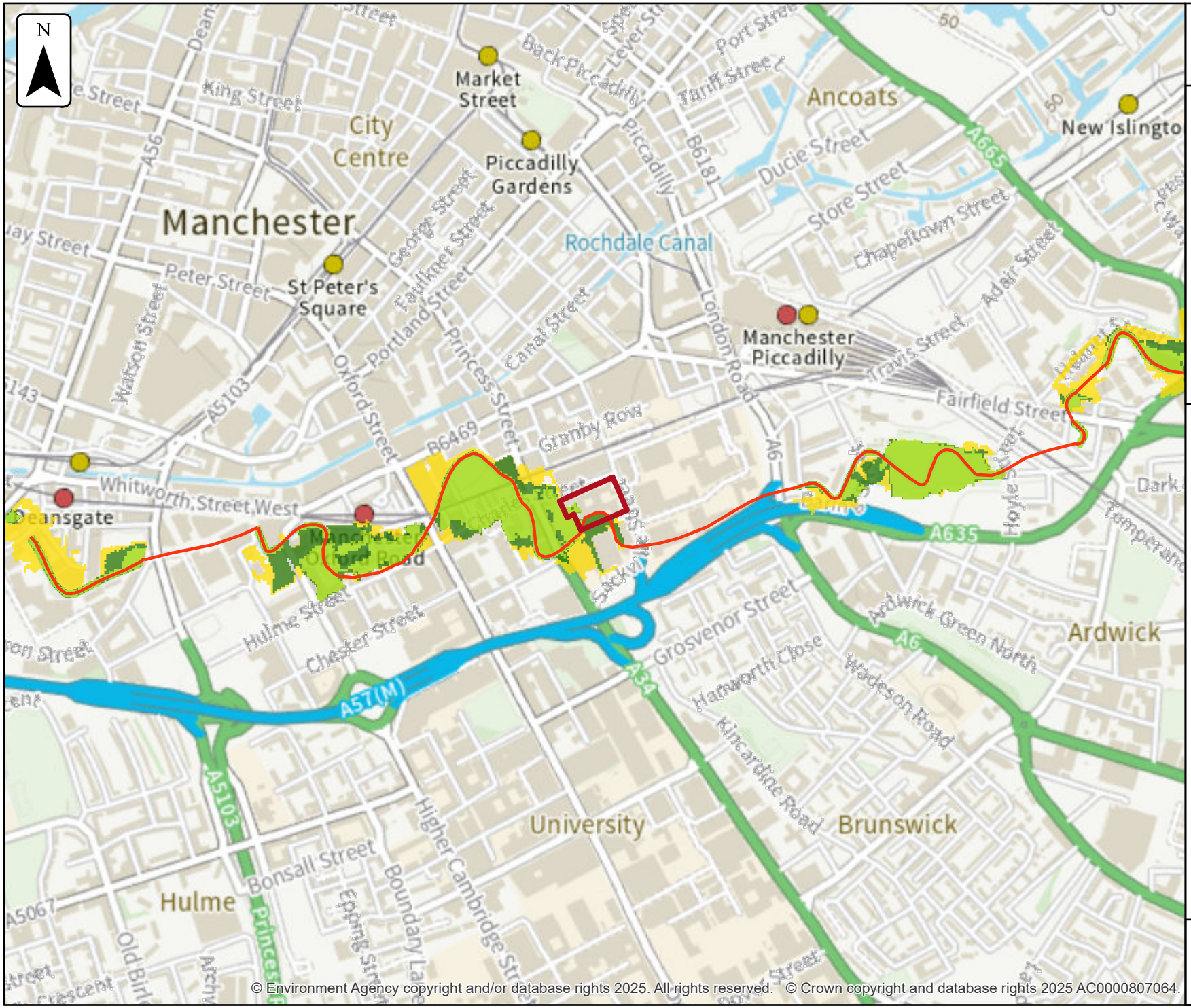
The climate change data included in the models may not include the latest flood risk assessment climate change allowances. Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences
- No defences exist climate change modelled fluvial: risk of flooding from rivers where there are no flood defences, including estimated impact of climate change



Environment Agency

No defences exist climate change modelled fluvial extent

Location (easting/northing)
384472/397501

Scale
1:10,000

Created
10 Sep 2025

Model name
River Medlock 2011

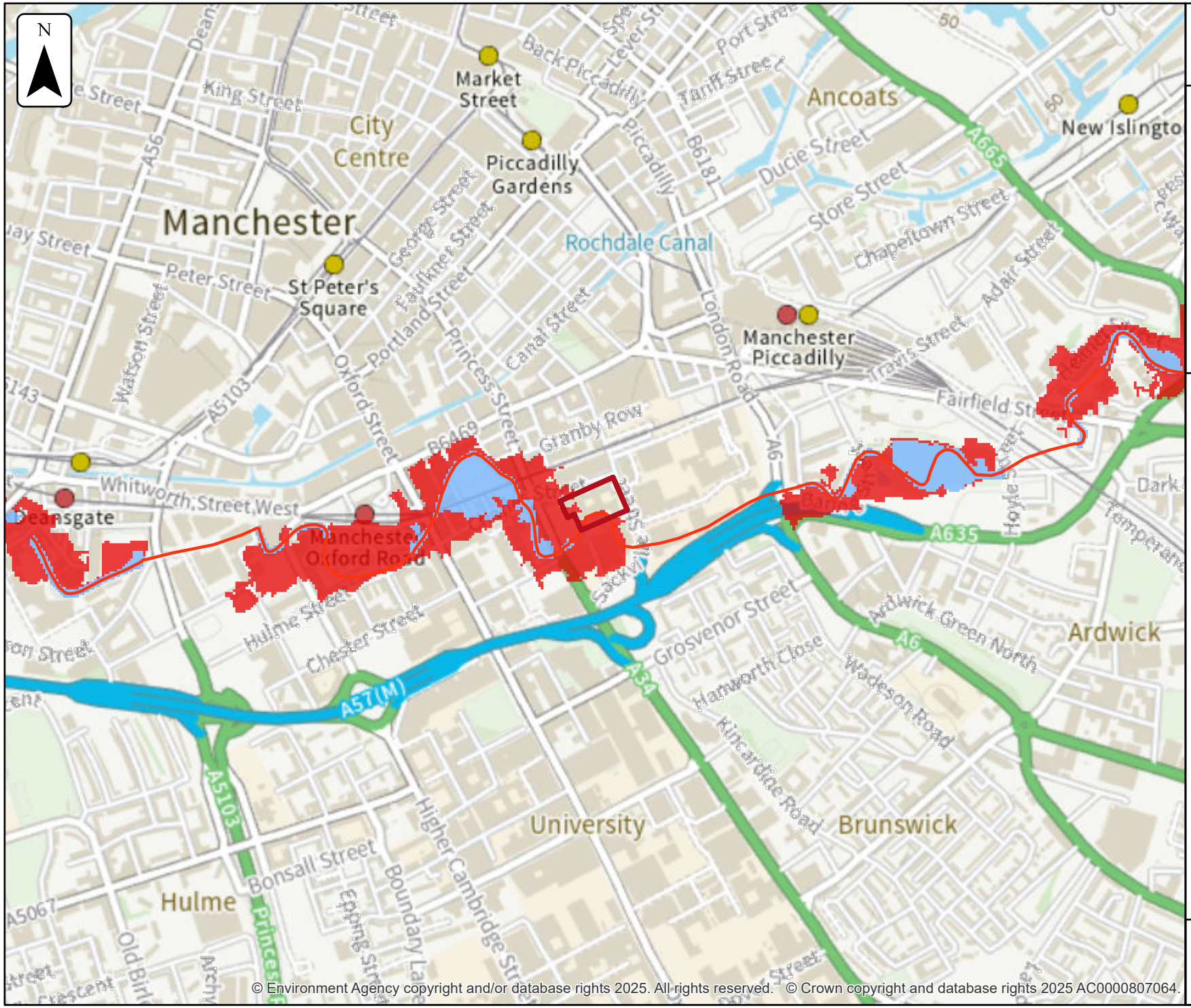
- Selected area
- Main river

Modelled flood extent

- 1% AEP (+20%)
- 1% AEP (+35%)
- 1% AEP (+70%)

Flood extents may not be visible where they overlap other return periods

0 100 200 300 400 500
metres



Environment Agency

No defences exist modelled fluvial extent

Location (easting/northing)
384472/397501

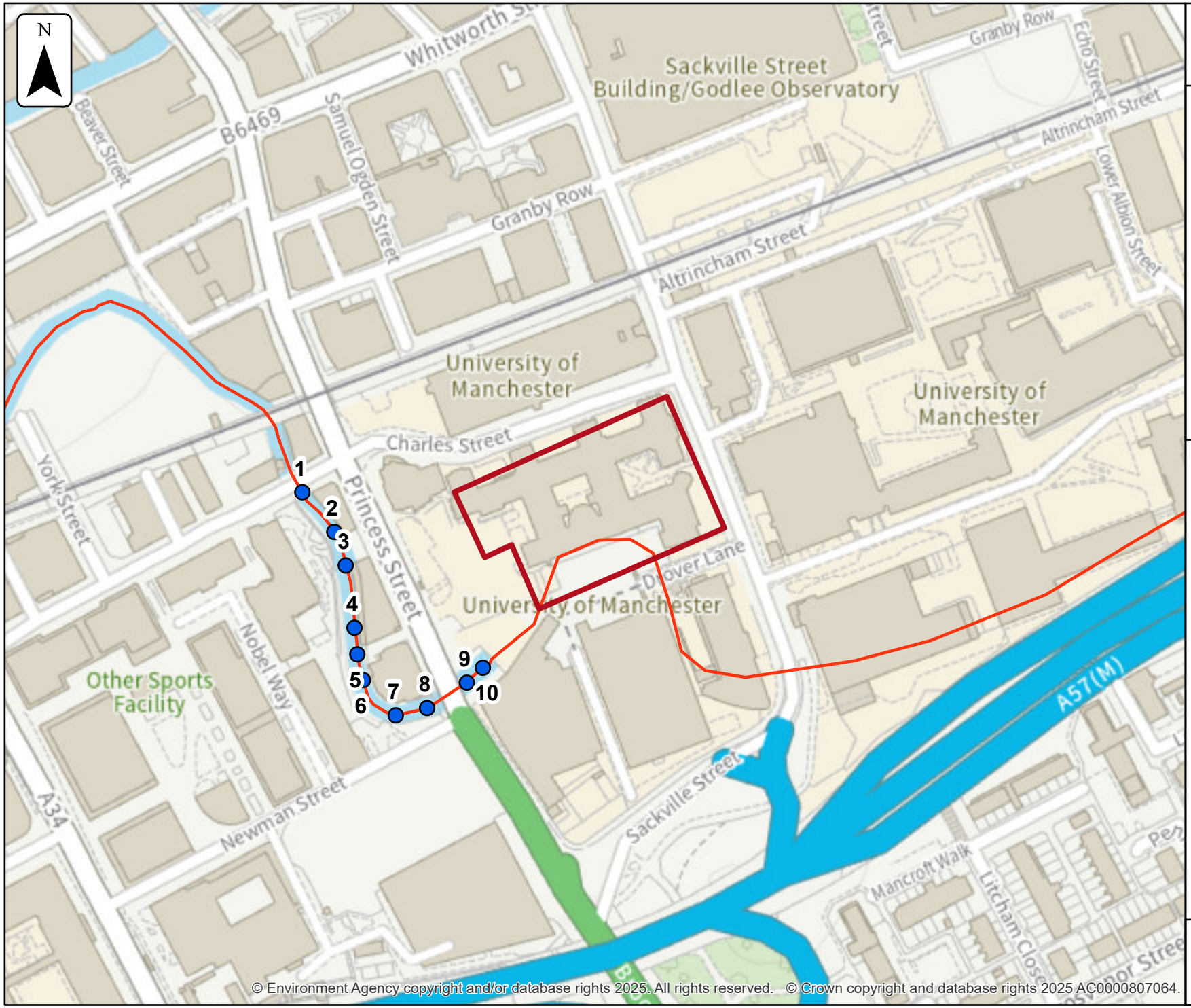
Scale
1:10,000

Created
10 Sep 2025

Model name
River Medlock 2011

Flood extents may not be visible where they overlap other return periods

0 100 200 300 400 500
metres



© Environment Agency copyright and/or database rights 2025. All rights reserved. © Crown copyright and database rights 2025 AC0000807064.

Environment Agency

No defences exist climate change modelled fluvial node locations

Location (easting/northing)
384472/397501

Scale
1:2,500

Created
10 Sep 2025

Model name
River Medlock 2011

- Selected area
- Modelled location
- Main river

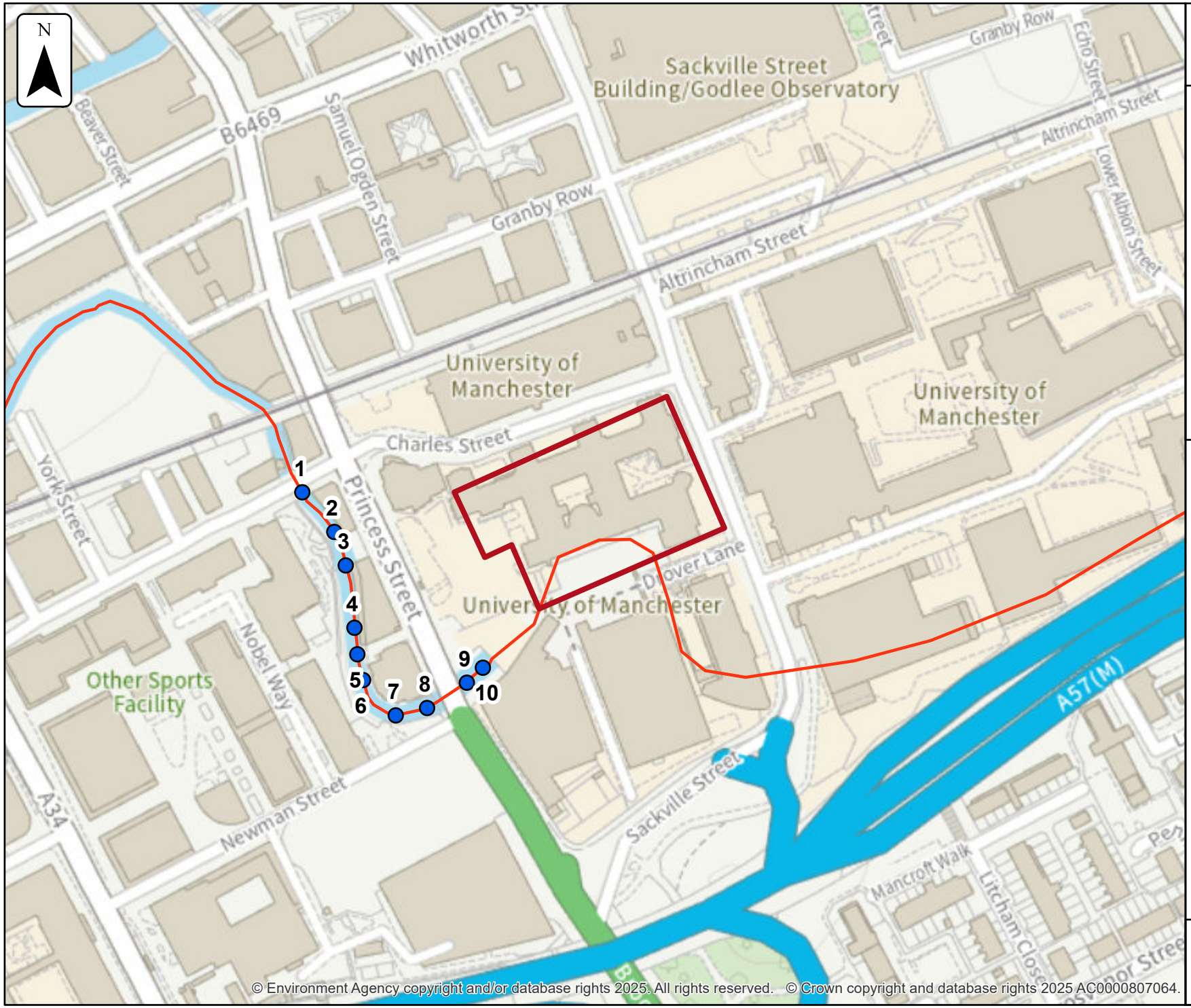
0 25 50 75 100
metres

Modelled node locations data

No defences exist climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)
				Level	Level	Level	Flow	Flow	Flow
1	1468049	384330	397506	31.99	32.62	34.08	63.24	63.54	87.12
2	1468180	384345	397487	32.33	32.77	33.33	62.58	63.04	63.08
3	1468063	384351	397471	32.34	32.77	33.34	65.0	65.66	66.07
4	1468096	384355	397440	32.35	32.77	33.27	65.98	66.67	67.12
5	1468142	384356	397428	32.37	32.78	33.28	65.60	66.30	66.72
6	1468191	384359	397415	32.39	32.80	33.29	65.06	65.78	66.20
7	1468020	384375	397398	32.41	32.82	33.29	65.35	66.12	66.56
8	1468018	384390	397401	32.42	32.84	33.30	66.26	67.08	67.55
9	1468054	384410	397414	33.23	33.54	33.77	66.26	67.08	67.55
10	1468077	384418	397421	33.20	33.48	33.66	66.27	68.16	75.01

Data in this table comes from the River Medlock 2011 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.



© Environment Agency copyright and/or database rights 2025. All rights reserved. © Crown copyright and database rights 2025 AC0000807064.

Environment Agency

No defences exist modelled fluvial node locations

Location (easting/northing)
384472/397501

Scale
1:2,500

Created
10 Sep 2025

Model name
River Medlock 2011

- Selected area
- Modelled location
- Main river

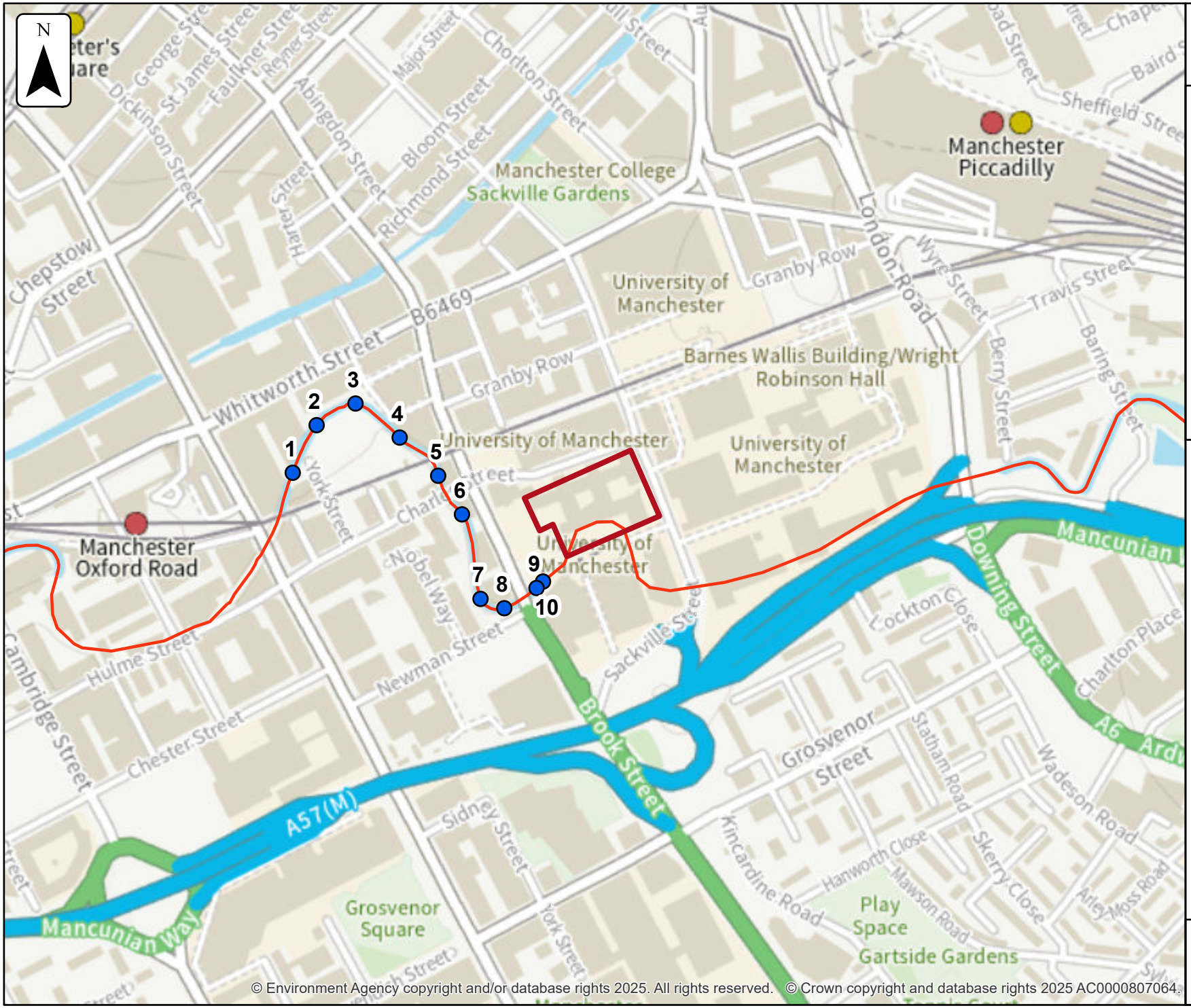
0 25 50 75 100
metres

Modelled node locations data

No defences exist

Label	Modelled location ID	Easting	Northing	4% AEP	1% AEP	0.1% AEP	4% AEP	1% AEP	0.1% AEP
				Level	Level	Level	Flow	Flow	Flow
1	1468049	384330	397506	30.52	31.29	33.55	50.87	59.40	64.42
2	1468180	384345	397487	30.64	31.49	33.83	50.86	59.87	63.97
3	1468063	384351	397471	30.67	31.52	33.73	50.85	59.97	66.80
4	1468096	384355	397440	30.72	31.55	33.76	50.83	60.01	67.92
5	1468142	384356	397428	30.75	31.57	33.83	50.82	60.03	67.59
6	1468191	384359	397415	30.77	31.59	33.83	50.81	59.98	67.10
7	1468020	384375	397398	30.81	31.62	33.83	50.79	59.90	67.54
8	1468018	384390	397401	30.84	31.64	33.84	50.77	60.17	68.61
9	1468054	384410	397414	31.09	32.07	34.07	50.77	60.17	68.61
10	1468077	384418	397421	31.10	32.08	33.92	50.77	60.19	87.91

Data in this table comes from the River Medlock 2011 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.



© Environment Agency copyright and/or database rights 2025. All rights reserved. © Crown copyright and database rights 2025 AC0000807064.

Environment Agency

No defences exist modelled fluvial node locations

Location (easting/northing)
384472/397501

Scale
1:5,000

Created
10 Sep 2025

Model name
Manchester Ship 2018

- Selected area
- Modelled location
- Main river

0 50 100 150 200 250
metres

					Normal Operation											Latchford 1 Gate Closed	Latchford all Gates Closed	
Map Reference	Model Node Reference	Easting	Northing	Data	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	4 % AEP (1 in 25 year)	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + 30% increase in flow	1 % AEP (1 in 100 year) + 35% increase in flow	1 % AEP (1 in 100 year) + 70% increase in flow	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year)	0.1 % AEP (1 in 1000 year)
1	ea013_0251_MEDL01_1555d	384422	397426	Modelled Water Level (m aodN)	30.03	30.47	31.07	31.81	32.27	32.67	33.43	33.49	33.77	33.27	34.06	32.67	32.67	34.06
				Modelled Flow (cumecs)	29.69	34.65	40.92	47.56	52.24	56.19	71.50	74.03	95.36	67.25	113.28	56.19	56.19	113.28
2	ea013_0251_MEDL01_1535	384416	397419	Modelled Water Level (m aodN)	30.03	30.47	31.07	31.81	32.27	32.66	33.43	33.49	33.77	33.26	34.06	32.66	32.66	34.06
				Modelled Flow (cumecs)	29.76	34.73	41.03	47.68	52.37	56.33	71.69	74.22	91.53	67.41	115.15	56.33	56.33	115.15
3	ea013_0251_MEDL01_1520	384385	397400	Modelled Water Level (m aodN)	29.95	30.41	30.97	31.66	32.09	32.49	33.42	33.48	33.76	33.25	34.06	32.49	32.49	34.06
				Modelled Flow (cumecs)	29.76	34.73	41.03	47.68	52.37	56.33	71.69	74.22	91.53	67.41	115.15	56.33	56.33	115.15
4	ea013_0251_MEDL01_1481	384362	397409	Modelled Water Level (m aodN)	29.91	30.36	30.93	31.62	32.05	32.46	33.38	33.44	33.70	33.21	33.97	32.46	32.46	33.97
				Modelled Flow (cumecs)	29.91	34.91	41.23	47.91	52.63	56.60	72.04	74.59	91.53	67.74	115.75	56.60	56.60	115.75
5	ea013_0251_MEDL01_1379	384342	397491	Modelled Water Level (m aodN)	29.86	30.32	30.89	31.59	32.02	32.43	33.35	33.41	33.66	33.19	33.90	32.43	32.43	33.90
				Modelled Flow (cumecs)	30.28	35.35	41.75	48.52	53.30	57.32	72.97	75.56	93.15	68.59	117.17	57.32	57.32	117.17
6	ea013_0251_MEDL01_1364	384321	397527	Modelled Water Level (m aodN)	29.77	30.21	30.80	31.47	31.98	32.41	33.35	33.40	33.66	33.18	33.90	32.41	32.41	33.90
				Modelled Flow (cumecs)	30.28	35.35	41.75	48.52	53.30	57.32	72.97	75.56	93.15	68.59	117.17	57.32	57.32	117.17
7	ea013_0251_MEDL01_1296	384284	397565	Modelled Water Level (m aodN)	29.74	30.18	30.77	31.44	31.95	32.38	33.32	33.37	33.62	33.15	33.84	32.38	32.38	33.84
				Modelled Flow (cumecs)	30.54	35.65	42.10	48.93	53.74	57.80	73.59	76.20	94.39	69.16	118.05	57.80	57.80	118.05
8	ea013_0251_MEDL01_1240	384240	397598	Modelled Water Level (m aodN)	29.73	30.17	30.77	31.44	31.95	32.39	33.33	33.39	33.65	33.16	33.87	32.39	32.39	33.87
				Modelled Flow (cumecs)	30.74	35.89	42.39	49.27	54.10	58.19	74.10	76.73	95.45	69.63	118.74	58.19	58.19	118.74
9	ea013_0251_MEDL01_1192	384204	397580	Modelled Water Level (m aodN)	29.71	30.15	30.75	31.43	31.94	32.37	33.31	33.36	33.62	33.15	33.82	32.37	32.37	33.82
				Modelled Flow (cumecs)	30.92	36.10	42.63	49.55	54.42	58.53	74.54	77.18	96.36	70.03	119.31	58.53	58.53	119.31
10	ea013_0251_MEDL01_1142	384178	397531	Modelled Water Level (m aodN)	29.69	30.14	30.73	31.41	31.92	32.36	33.30	33.35	33.60	33.13	33.79	32.36	32.36	33.79
				Modelled Flow (cumecs)	31.11	36.32	42.89	49.85	54.74	58.88	74.99	77.65	97.23	70.45	119.90	58.88	58.88	119.90

Model data taken from Manchester Ship Canal 2018

AEP - Annual Exceedence Probability

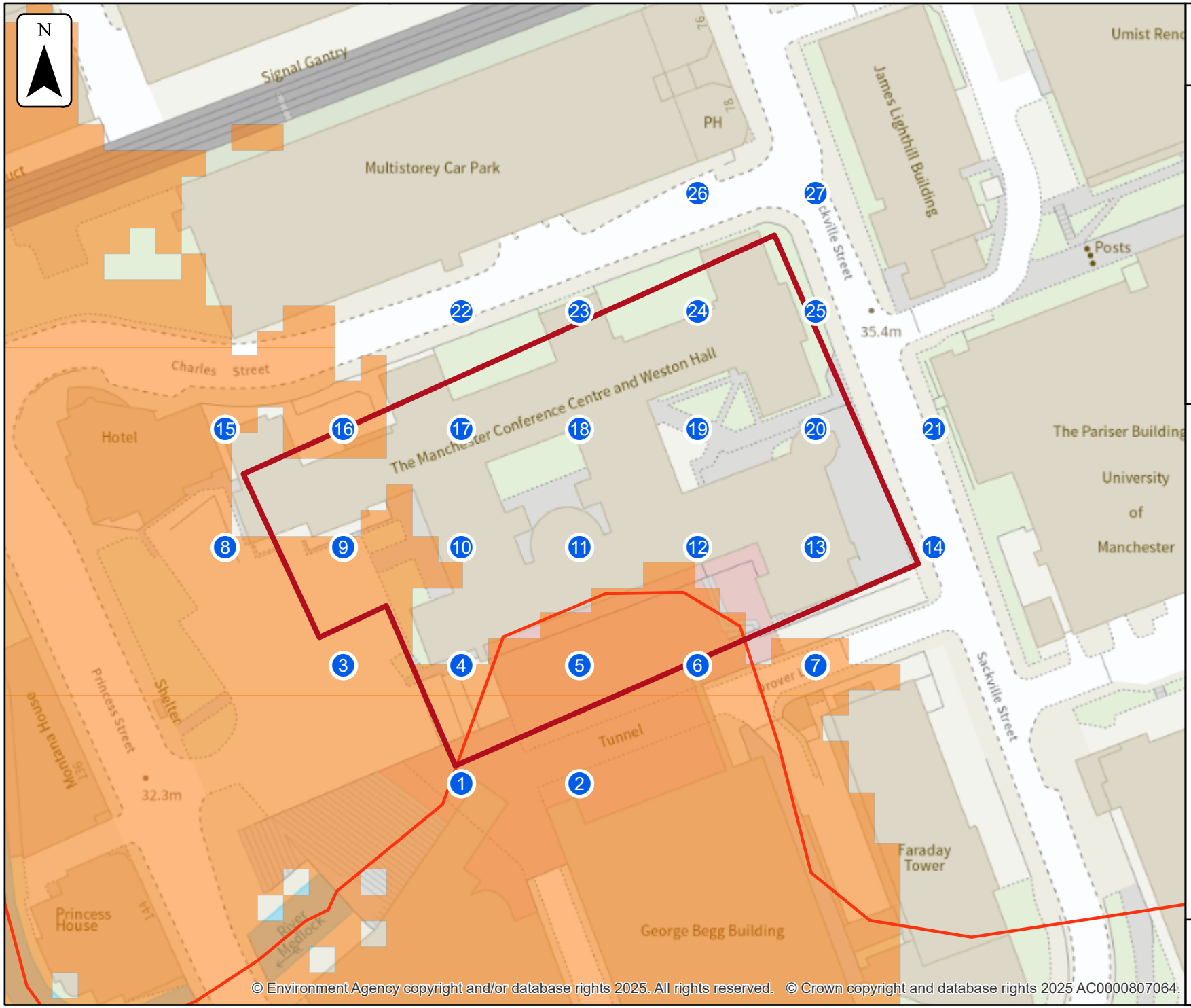
m aodN - metres above ordnance datum Newlyn

cumecs - cubic metres per second

Notes:

*Climate Change Scenario - 30%, 35% and 70% increases in flow calculated for the 2080's (2070 - 2115). Please see https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

For the Manchester Ship Canal Model, we provide the following three scenarios:
1. Normal Operation: All sluice gates operate automatically to maintain a navigable pounded water level upstream of each set of sluice gates. During times of high flow the gates are opened automatically to allow excess water pass downstream. During extreme conditions the sluice gates can be manually overridden to extend the opening heights.
2. Latchford 1 Gate Closed Scenario: This scenario represents a single operational sluice gate at Latchford Locks fixed closed. Therefore, only operational movements from 2 active sluice gates.The model setup removes the gate from PID controller setup and an IED file is used to define the sluice gate as fixed in the closed position.
3. Latchford 3 Gates Closed Scenario: This scenario has been defined as the removal of operational rules at all three sluice gates at Latchford Locks, thus, all gates are fixed in the closed position resulting in no regulation of upstream water levels. The model setup removes each of the gates from PID controller setup and an IED file is used to define sluice gates fixed in the closed position.



Environment Agency

No defences exist modelled fluvial extent and height

Location (easting/northing)
384472/397501

Scale
1:1,000

Created
10 Sep 2025

Model name
River Medlock 2011

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 4.5
- 4.5 - 9.0
- 9.0 - 13.5
- 13.5 - 18.0
- 18.0 - 22.5
- 22.5 - 27.0
- 27.0 - 31.5
- 31.5 - 36.0
- 36.0 - 40.5

This map shows the 0.1% AEP height data

0 10 20 30 40
metres

Sample point data

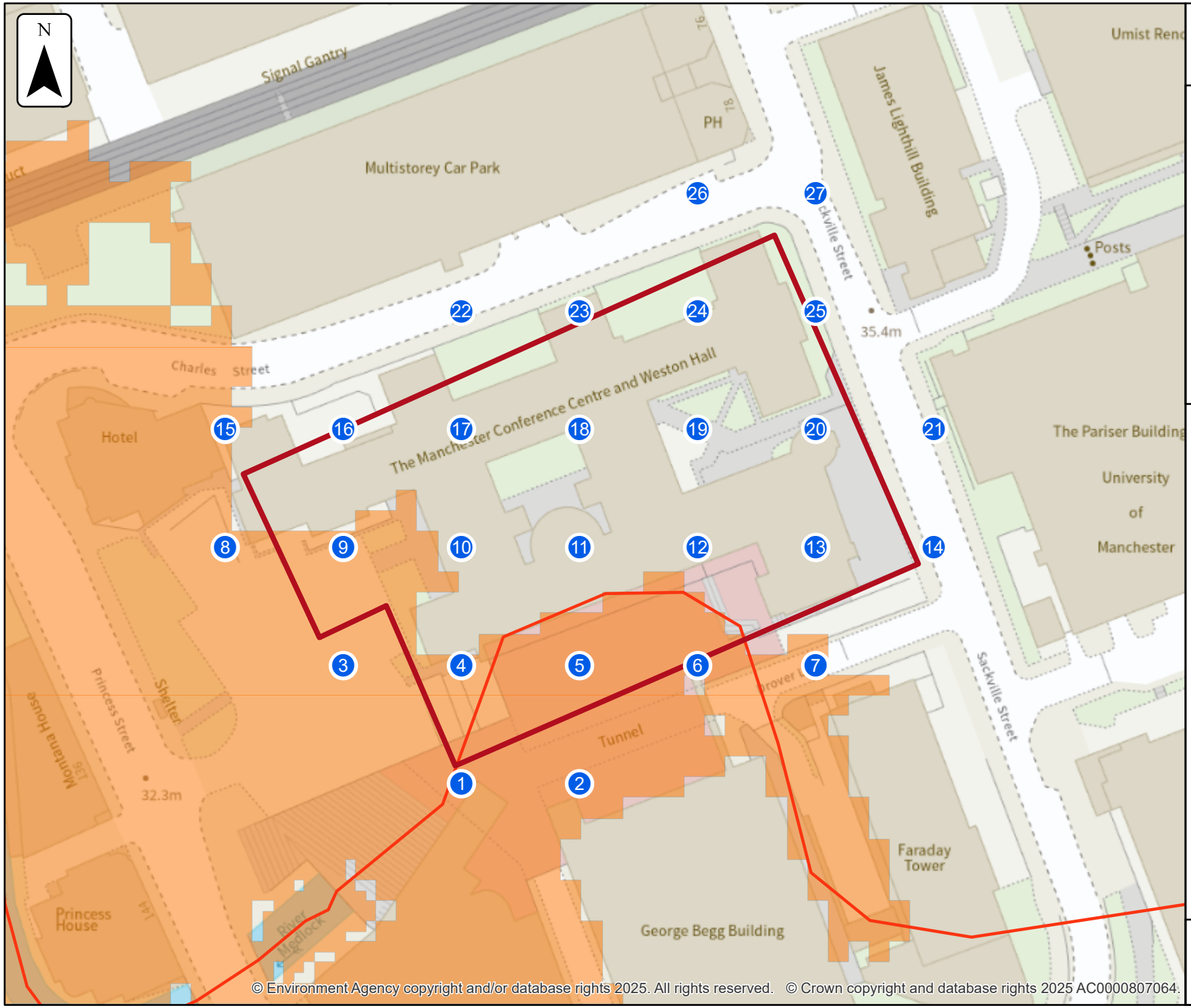
No defences exist

Label	Easting	Northing	4% AEP	1% AEP	0.1% AEP	4% AEP	1% AEP	0.1% AEP
			Height	Height	Height	Depth	Depth	Depth
1	384446	397446	NoData	NoData	33.92	NoData	NoData	1.05
2	384469	397446	NoData	NoData	33.92	NoData	NoData	0.52
3	384423	397469	NoData	NoData	33.92	NoData	NoData	1.23
4	384446	397469	NoData	NoData	33.92	NoData	NoData	1.04
5	384469	397469	NoData	NoData	33.92	NoData	NoData	0.59
6	384492	397469	NoData	NoData	33.92	NoData	NoData	0.54
7	384515	397469	NoData	NoData	33.92	NoData	NoData	0.79
8	384400	397492	NoData	NoData	33.97	NoData	NoData	1.31
9	384423	397492	NoData	NoData	33.95	NoData	NoData	0.98
10	384446	397492	NoData	NoData	NoData	NoData	NoData	NoData
11	384469	397492	NoData	NoData	NoData	NoData	NoData	NoData
12	384492	397492	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	4% AEP	1% AEP	0.1% AEP	4% AEP	1% AEP	0.1% AEP
			Height	Height	Height	Depth	Depth	Depth
13	384515	397492	NoData	NoData	NoData	NoData	NoData	NoData
14	384538	397492	NoData	NoData	NoData	NoData	NoData	NoData
15	384400	397515	NoData	NoData	33.90	NoData	NoData	0.54
16	384423	397515	NoData	NoData	33.88	NoData	NoData	0.95
17	384446	397515	NoData	NoData	NoData	NoData	NoData	NoData
18	384469	397515	NoData	NoData	NoData	NoData	NoData	NoData
19	384492	397515	NoData	NoData	NoData	NoData	NoData	NoData
20	384515	397515	NoData	NoData	NoData	NoData	NoData	NoData
21	384538	397515	NoData	NoData	NoData	NoData	NoData	NoData
22	384446	397538	NoData	NoData	NoData	NoData	NoData	NoData
23	384469	397538	NoData	NoData	NoData	NoData	NoData	NoData
24	384492	397538	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	4% AEP	1% AEP	0.1% AEP	4% AEP	1% AEP	0.1% AEP
			Height	Height	Height	Depth	Depth	Depth
25	384515	397538	NoData	NoData	NoData	NoData	NoData	NoData
26	384492	397561	NoData	NoData	NoData	NoData	NoData	NoData
27	384515	397561	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			NoData	NoData	33.96	NoData	NoData	1.27

Data in this table comes from the River Medlock 2011 model. Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Environment Agency

No defences exist climate change modelled fluvial extent and height

Location (easting/northing)
384472/397501

Scale
1:1,000

Created
10 Sep 2025

Model name
River Medlock 2011

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 4.375
- 4.375 - 8.75
- 8.75 - 13.125
- 13.125 - 17.5
- 17.5 - 21.875
- 21.875 - 26.25
- 26.25 - 30.625
- 30.625 - 35.0
- 35.0 - 39.375

This map shows the 1% AEP +70% height data

0 10 20 30 40
metres

Sample point data

No defences exist climate change

Label	Easting	Northing	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
1	384446	397446	33.20	33.46	33.63	0.33	0.40	0.57
2	384469	397446	NoData	33.46	33.64	NoData	0.06	0.24
3	384423	397469	33.20	33.46	33.64	0.50	0.73	0.91
4	384446	397469	33.20	33.46	33.64	0.32	0.39	0.53
5	384469	397469	NoData	33.46	33.64	NoData	0.16	0.34
6	384492	397469	NoData	33.43	33.64	NoData	0.07	0.27
7	384515	397469	NoData	NoData	33.64	NoData	NoData	0.23
8	384400	397492	33.19	33.46	33.65	0.54	0.81	0.99
9	384423	397492	33.20	33.46	33.65	0.22	0.54	0.73
10	384446	397492	NoData	NoData	NoData	NoData	NoData	NoData
11	384469	397492	NoData	NoData	NoData	NoData	NoData	NoData
12	384492	397492	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
13	384515	397492	NoData	NoData	NoData	NoData	NoData	NoData
14	384538	397492	NoData	NoData	NoData	NoData	NoData	NoData
15	384400	397515	NoData	33.46	33.64	NoData	0.15	0.30
16	384423	397515	NoData	NoData	NoData	NoData	NoData	NoData
17	384446	397515	NoData	NoData	NoData	NoData	NoData	NoData
18	384469	397515	NoData	NoData	NoData	NoData	NoData	NoData
19	384492	397515	NoData	NoData	NoData	NoData	NoData	NoData
20	384515	397515	NoData	NoData	NoData	NoData	NoData	NoData
21	384538	397515	NoData	NoData	NoData	NoData	NoData	NoData
22	384446	397538	NoData	NoData	NoData	NoData	NoData	NoData
23	384469	397538	NoData	NoData	NoData	NoData	NoData	NoData
24	384492	397538	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
25	384515	397538	NoData	NoData	NoData	NoData	NoData	NoData
26	384492	397561	NoData	NoData	NoData	NoData	NoData	NoData
27	384515	397561	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			33.20	33.46	33.65	0.51	0.86	1.05

Data in this table comes from the River Medlock 2011 model. Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

Your Lead Local Flood Authority is Manchester District.

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

Find out more about flood risk activity permits

Help and advice

Contact the Greater Manchester Merseyside and Cheshire Environment Agency team at inforequests.gmmc@environment-agency.gov.uk for:

- more information about getting a product 5, 6, 7 or 8
- general help and advice about the site you're requesting data for

9.6. Appendix F - United Utilites Asset Map

United Utilities
Water for the North West

How to contact us:

United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

Groundwise Searches Ltd

Suite 6, Princess Caroline House
1 High Street,
Southend on Sea, ESSEX
SS1 1JE

FAO:

Your Ref: 39540
Our Ref: UUPS-ORD-676541
Date: 09/09/2025

Dear Sirs

Location: Weston Halls and Pendulum Hotel Manchester M1 3BB

I acknowledge with thanks your request dated 08/09/2025 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. http://www.unitedutilities.com/work-near-asset.aspx .

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please contact us .

Yours Faithfully,

Karen McCormack
Property Searches Manager

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

Water for the North West

TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

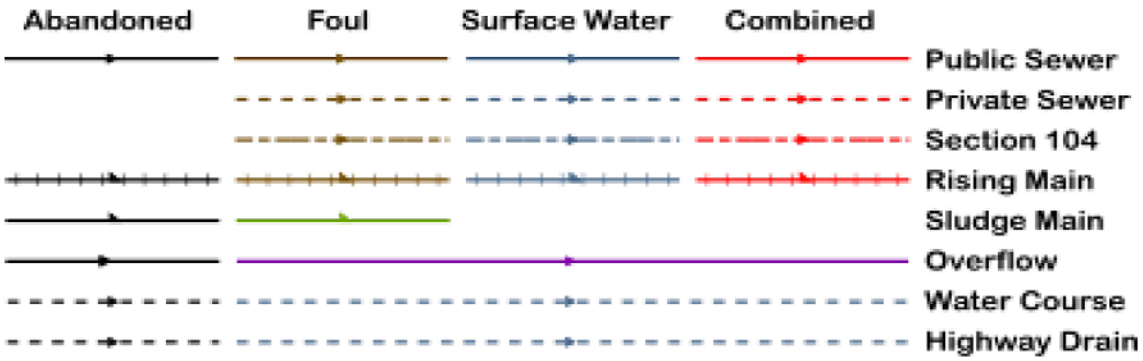
TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

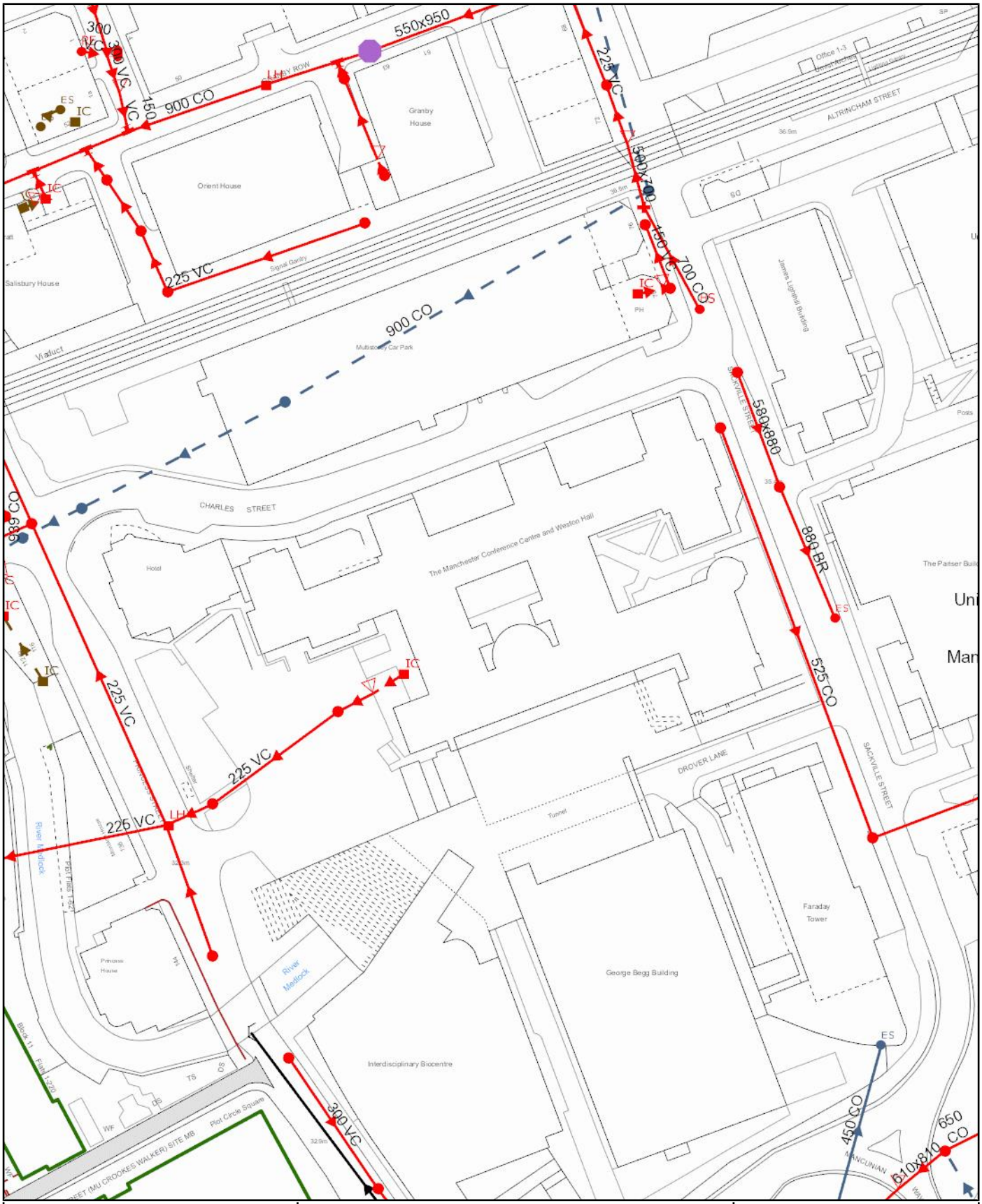
United Utilities
Water for the North West

Wastewater Symbology



All point assets follow the standard colour convention: red – combined, brown - foul, blue – surface water, purple - overflow

- Manhole
- HS Head of System
- ES Extent of Survey
- RE Rodding Eye
- IN Inlet
- DP Discharge Point
- HY Vortex
- PE Penstock
- WO Washout Chamber
- VA Valve
- AV Air Valve
- NRV Non Return Valve
- SO Soakaway
- GU Gully
- CA Cascade
- FM Flow Meter
- HA Hatch Box
- OI Oil Interceptor
- SM Summit
- DS Drop Shaft
- OP Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- IC Inspection Chamber
- Bifurcation Chamber
- LH Lamp Hole
- T Junction / Saddle
- CA Catchpit
- VC Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- T Network Storage Tank
- V Sewer Overflow
- WwTW Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- CK Control Kiosk
- DNM Network Monitoring Point
- Change of Characteristic



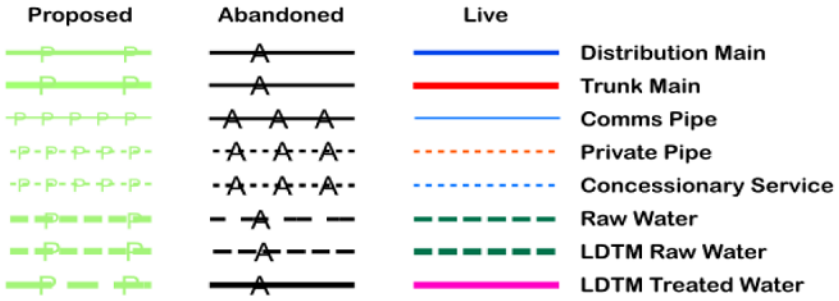
Scale:	1:1250	**SEWER RECORDS**	United Utilities Water for the North West
Date:	09/09/2025		
Address or Site Reference:	Weston Halls and Pendulum Hotel Manchester M1 3BB		
Printed by:	Property Searches		

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

Crown copyright and database rights 2025 Ordnance Survey 0000813445. Unauthorised reproduction will infringe these copyrights.

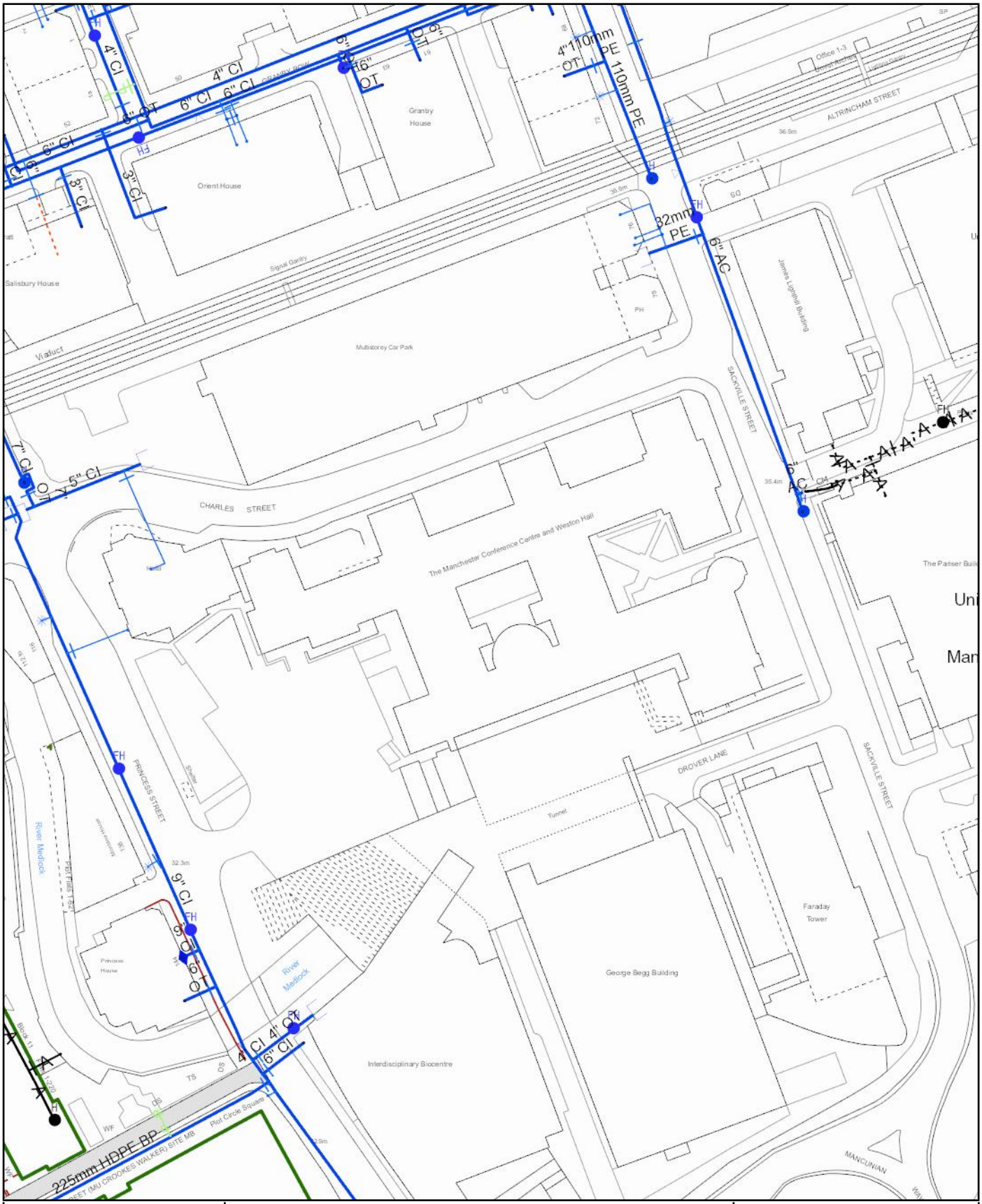
United Utilities
Water for the North West

Clean Water Symbology





Symbology for proposed assets is the same as above, but shown in green
Symbology for abandoned assets is the same as above, but shown in black



Scale: 1:1250
Date: 09/09/2025

WATER MAINS RECORDS

Address or Site Reference: Weston Halls and Pendulum Hotel Manchester M1 3BB

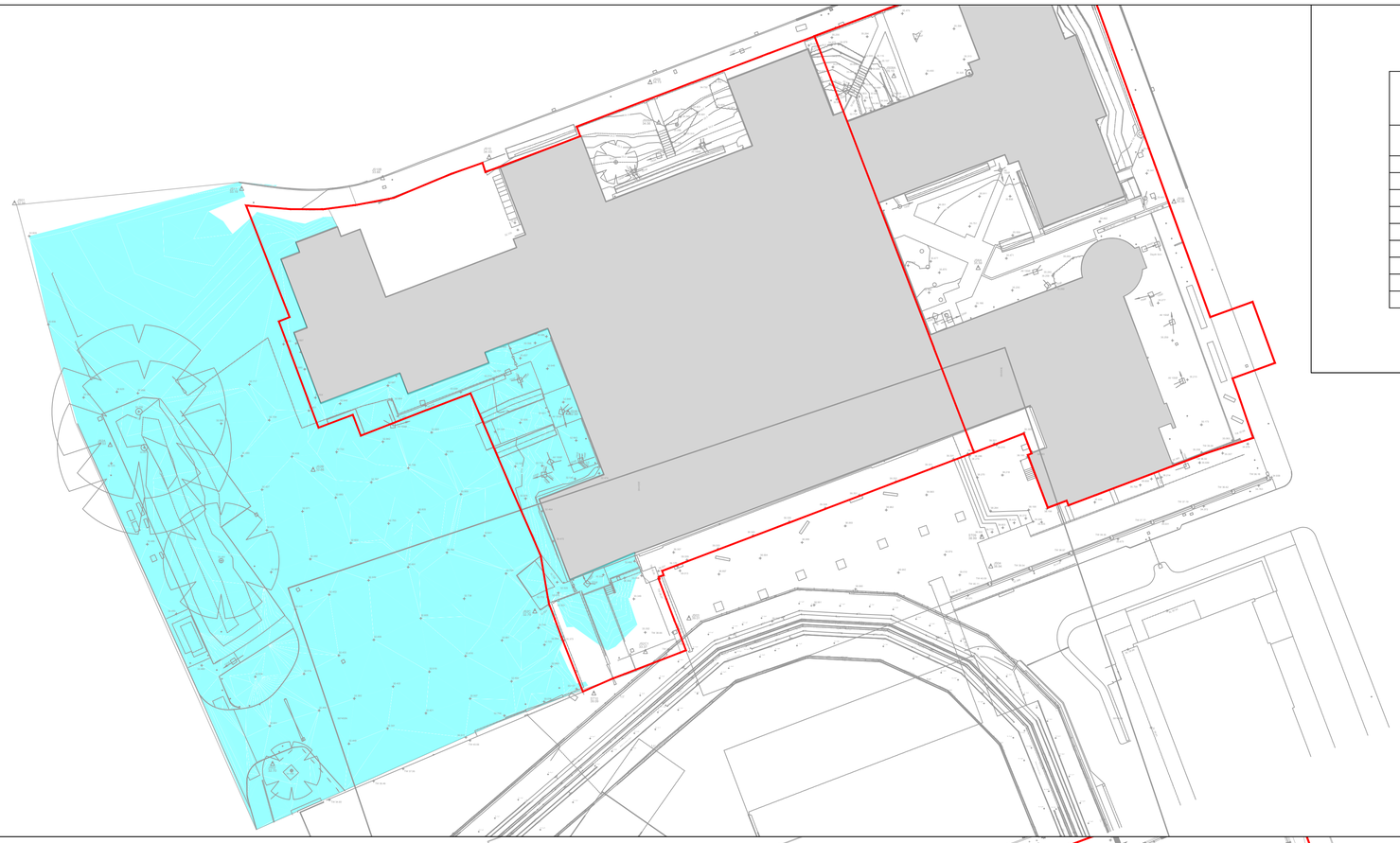
Printed by: Property Searches

United Utilities
Water for the North West

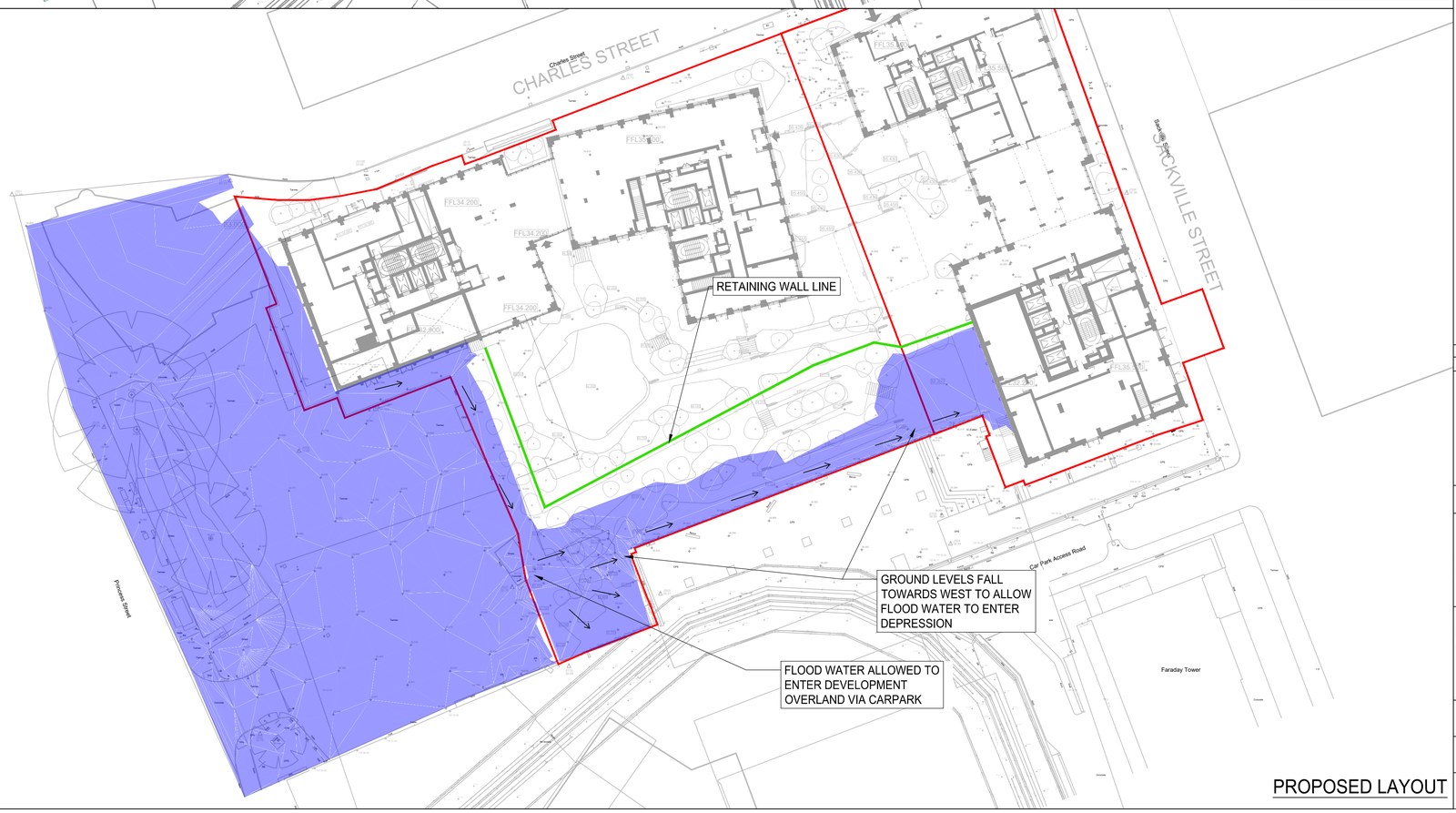
The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

Crown copyright and database rights 2025 Ordnance Survey 0000813445. Unauthorised reproduction will infringe these copyrights.

9.7. Appendix G - Exisitng Vs Proposed Flood Extent



EXISTING LAYOUT



PROPOSED LAYOUT

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

FLOOD VOLUME OFFSET COMPARISON

WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

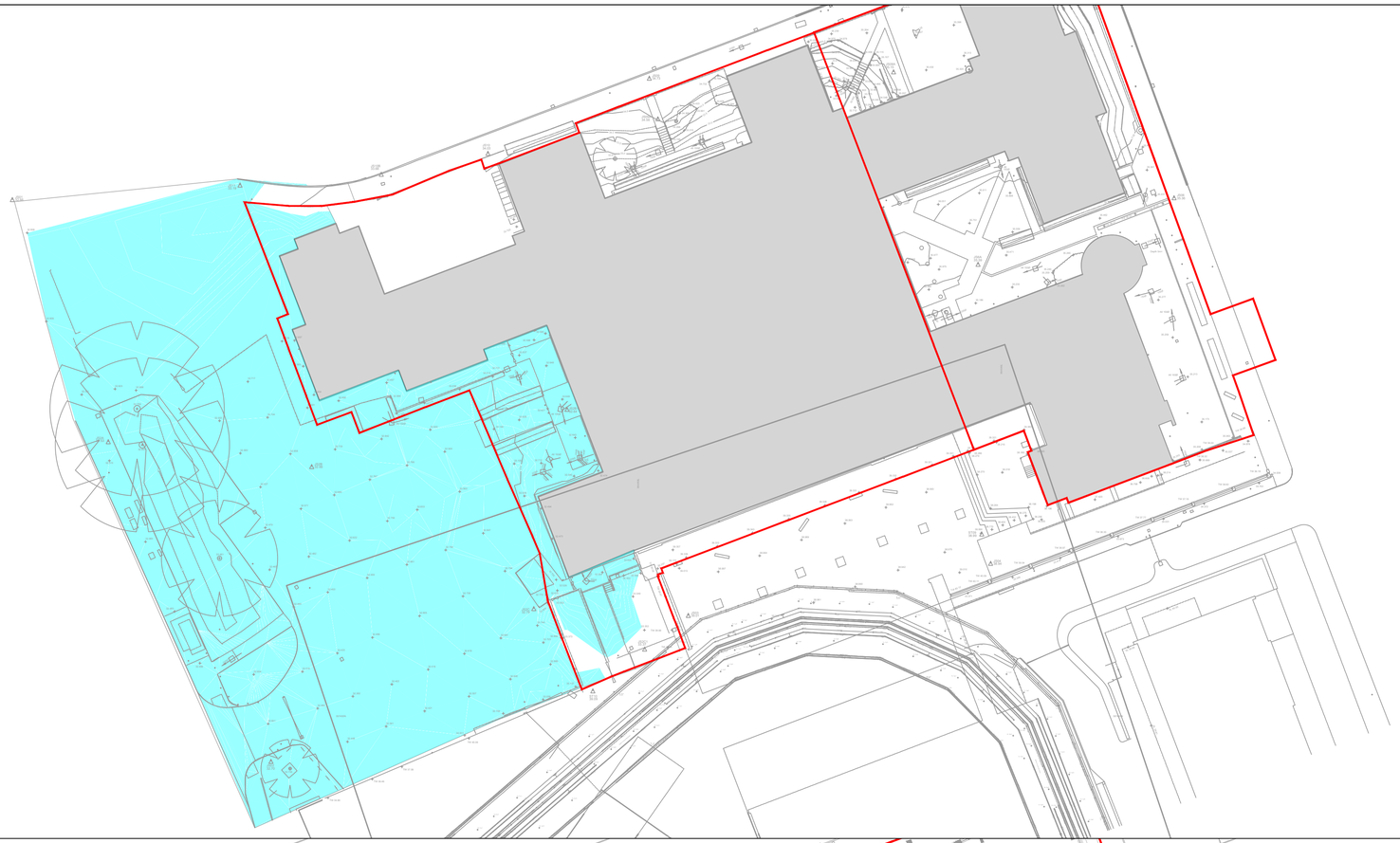
RIVER FLOODING EXTENT
WATER LEVEL: 33.200MAOD
EXISTING VS PROPOSED

DRAWING STATUS	STATUS CODE
PRELIMINARY	-

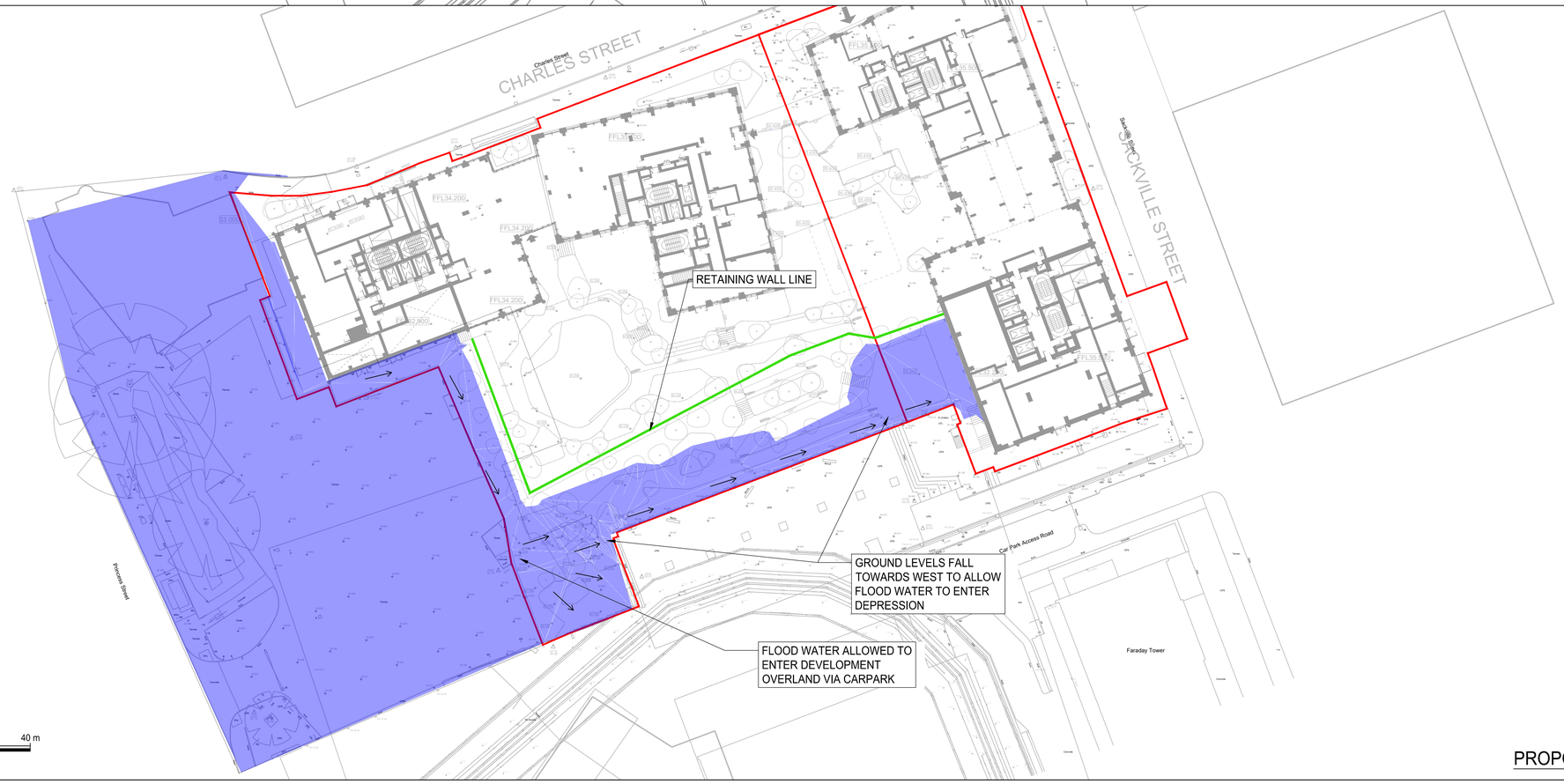
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30116	P01

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30116_EXISTING VS PROPOSED.DWG



EXISTING LAYOUT



PROPOSED LAYOUT

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

FLOOD VOLUME OFFSET COMPARISON

WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

RIVER FLOODING EXTENT
WATER LEVEL: 33.300MAOD
EXISTING VS PROPOSED

DRAWING STATUS	STATUS CODE
PRELIMINARY	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30117	P01

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30117_EXISTING VS PROPOSED.DWG

FLOOD VOLUME OFFSET COMPARISON

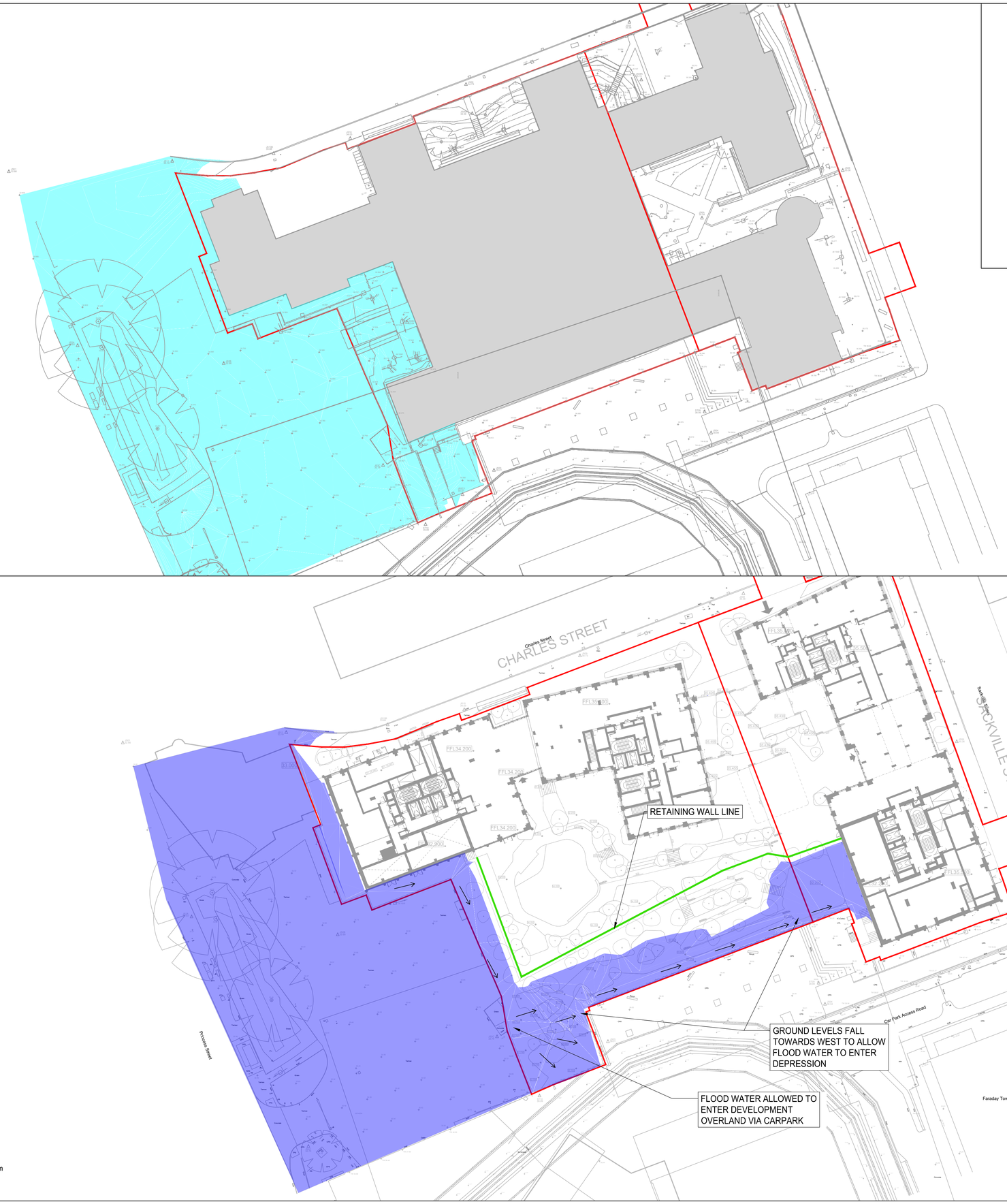
WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED

EXISTING LAYOUT



PROPOSED LAYOUT

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

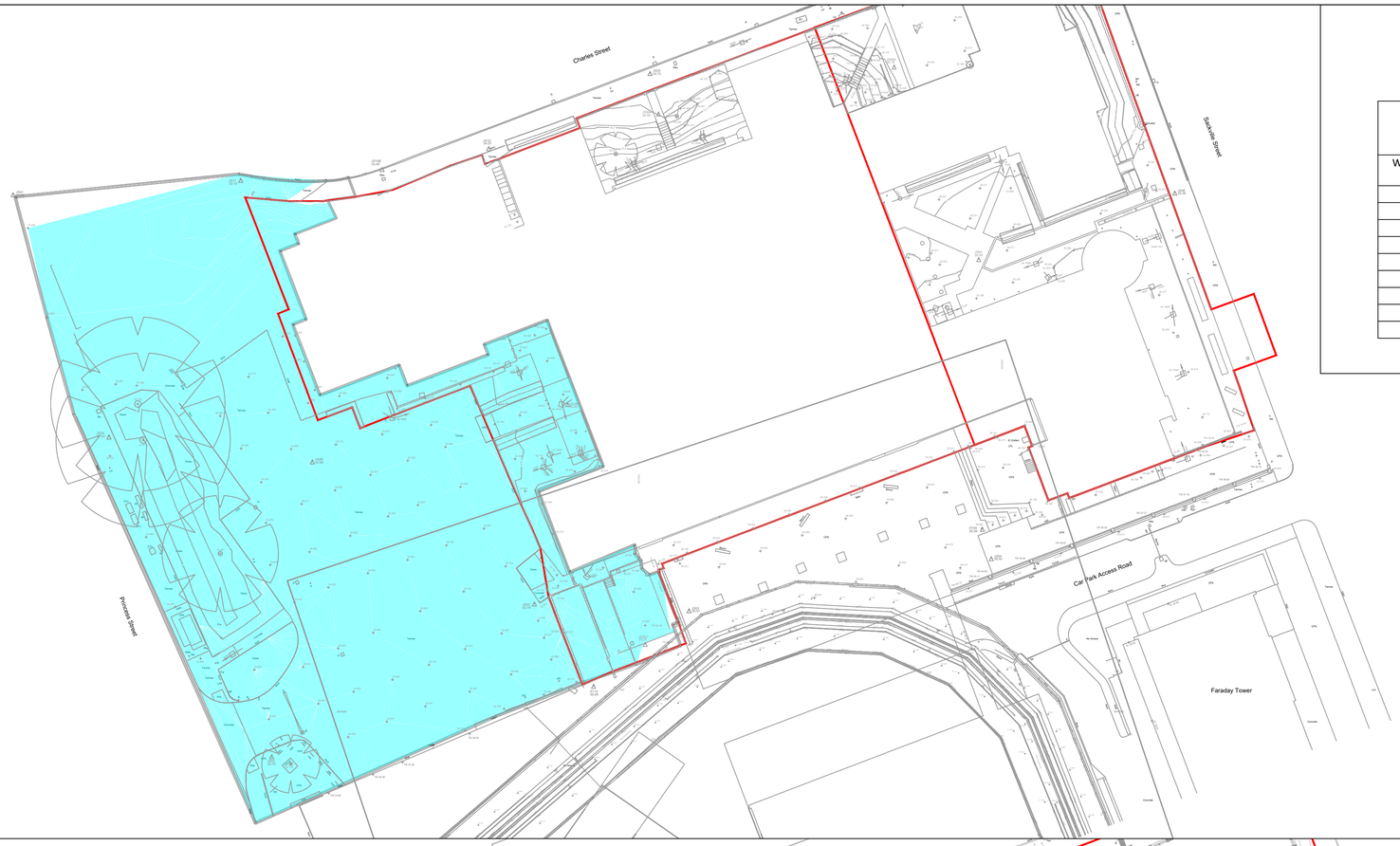
RIVER FLOODING EXTENT
WATER LEVEL: 33.400MAOD
EXISTING VS PROPOSED

DRAWING STATUS	STATUS CODE
PRELIMINARY	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30118	P01

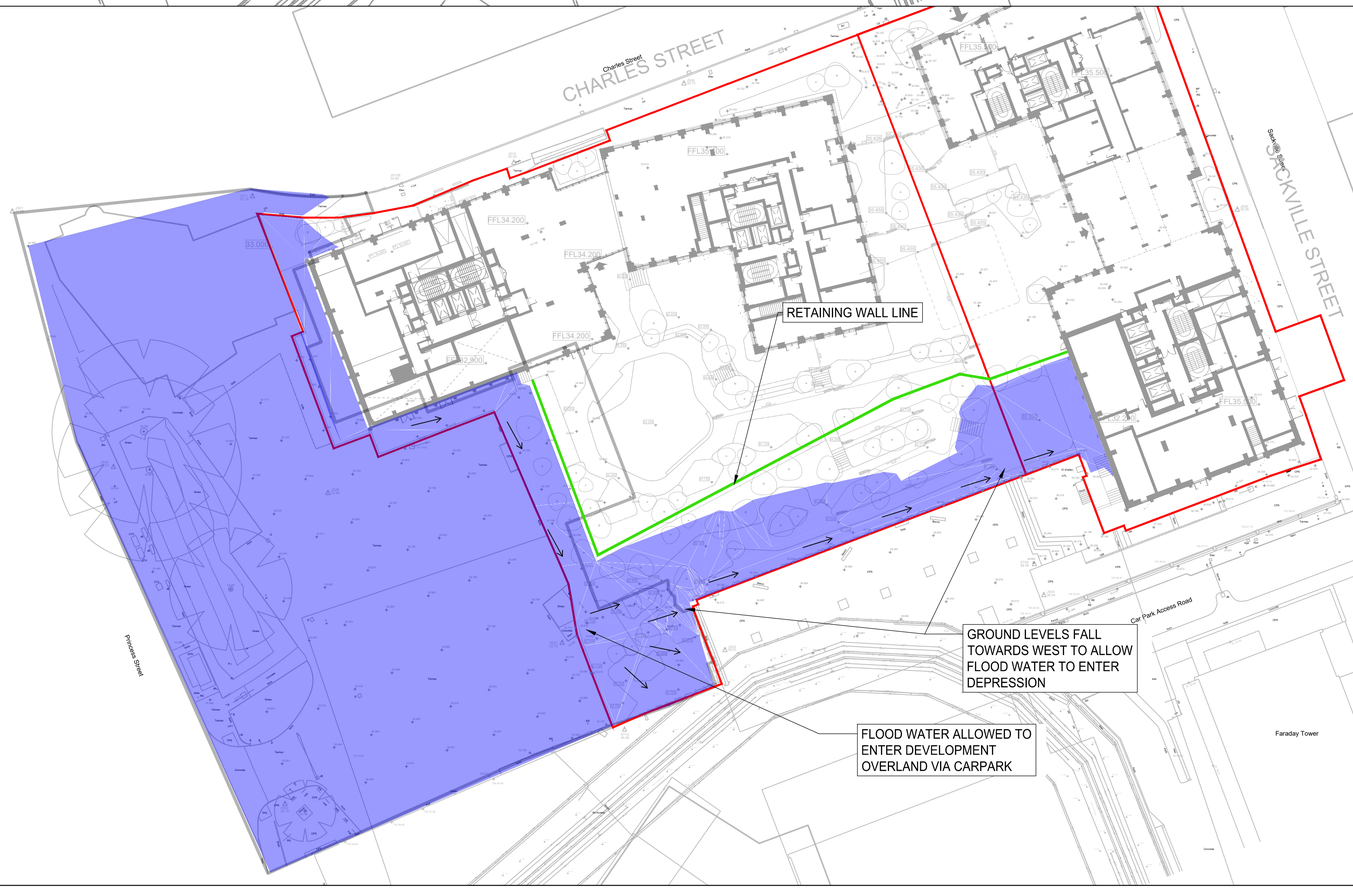
FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30118_EXISTING VS PROPOSED.DWG



EXISTING LAYOUT

FLOOD VOLUME OFFSET COMPARISON

WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672



PROPOSED LAYOUT

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

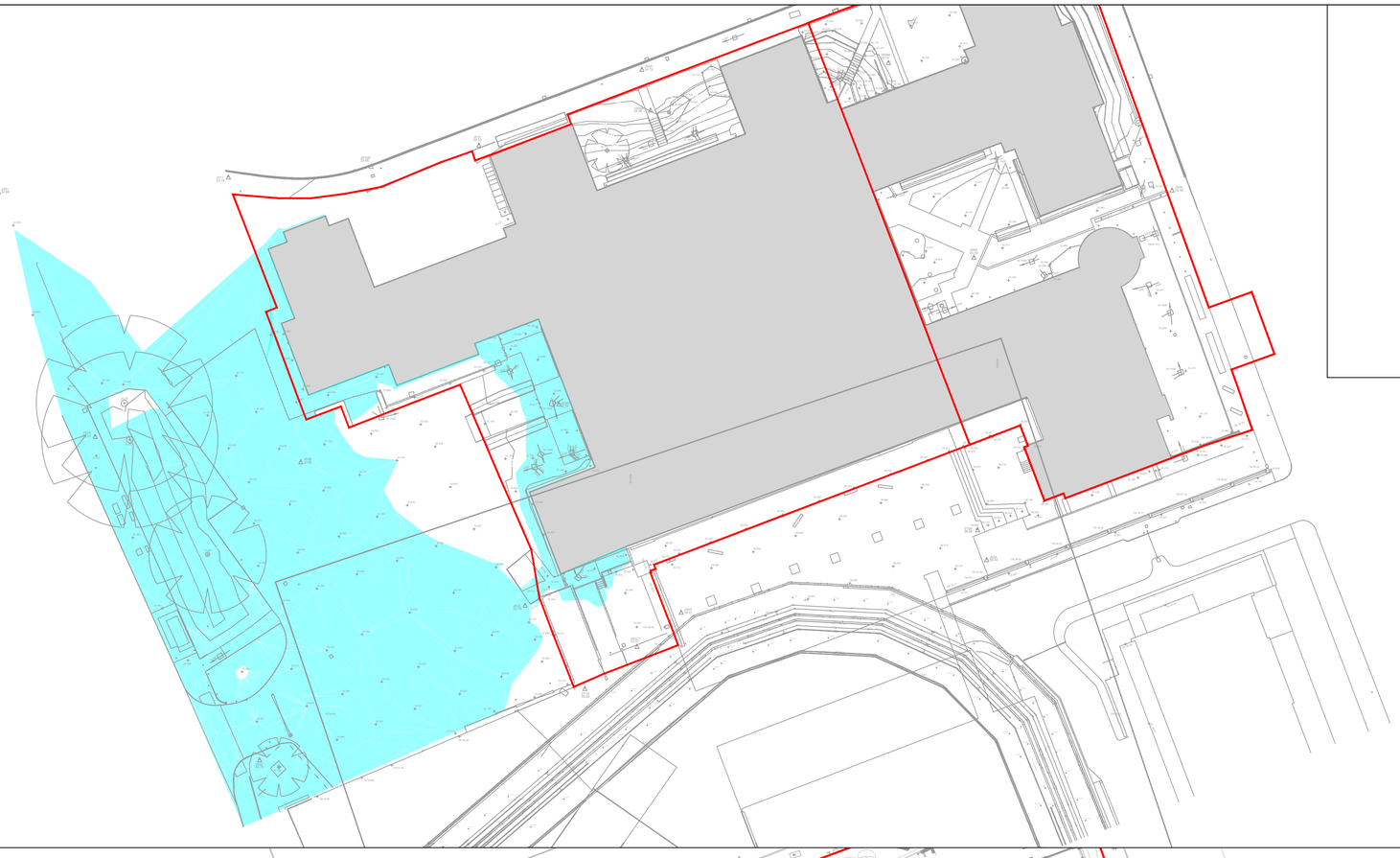
RIVER FLOODING EXTENT
WATER LEVEL: 33.460MAOD
EXISTING VS PROPOSED

DRAWING STATUS	STATUS CODE
PRELIMINARY	-

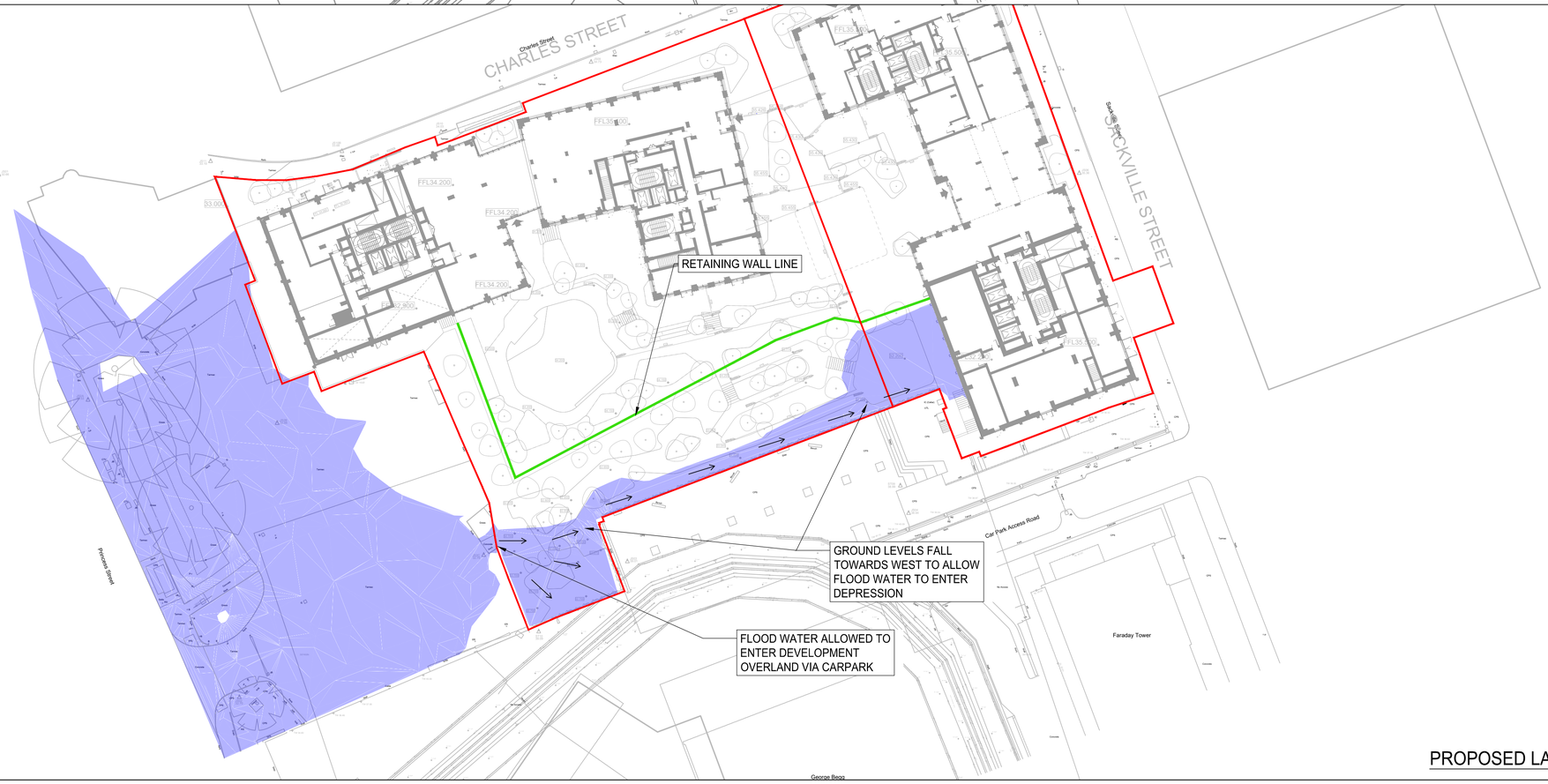
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30119	P01

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30119_EXISTING VS PROPOSED.DWG



EXISTING LAYOUT



PROPOSED LAYOUT

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

FLOOD VOLUME OFFSET COMPARISON

WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

RIVER FLOODING EXTENT
WATER LEVEL: 32.800MAOD
EXISTING VS PROPOSED

DRAWING STATUS	STATUS CODE
PRELIMINARY	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30112	P01

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30112_EXISTING VS PROPOSED.DWG

FLOOD VOLUME OFFSET COMPARISON

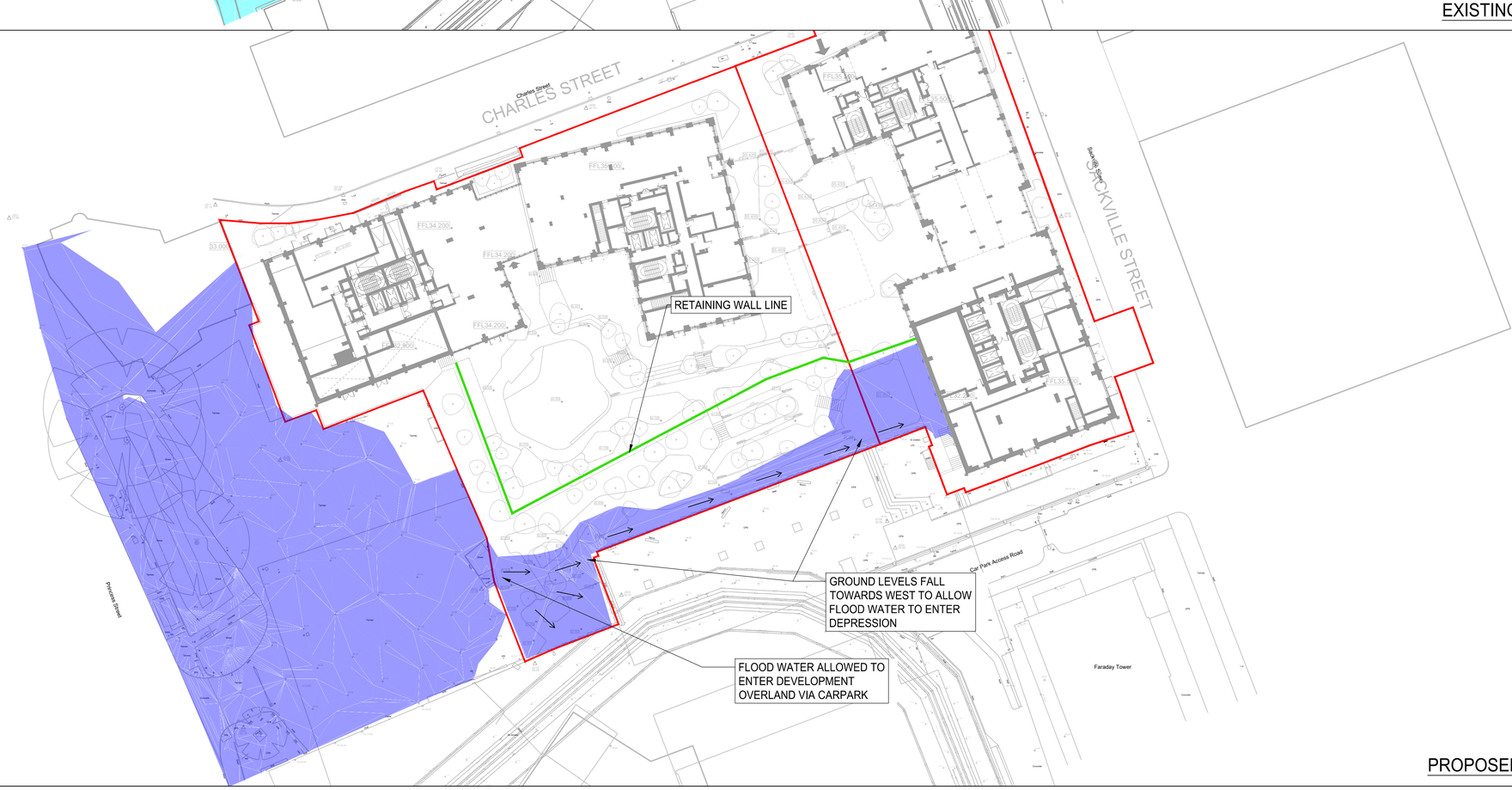
WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED

EXISTING LAYOUT



PROPOSED LAYOUT

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

RIVER FLOODING EXTENT
WATER LEVEL: 32.900MAOD
EXISTING VS PROPOSED

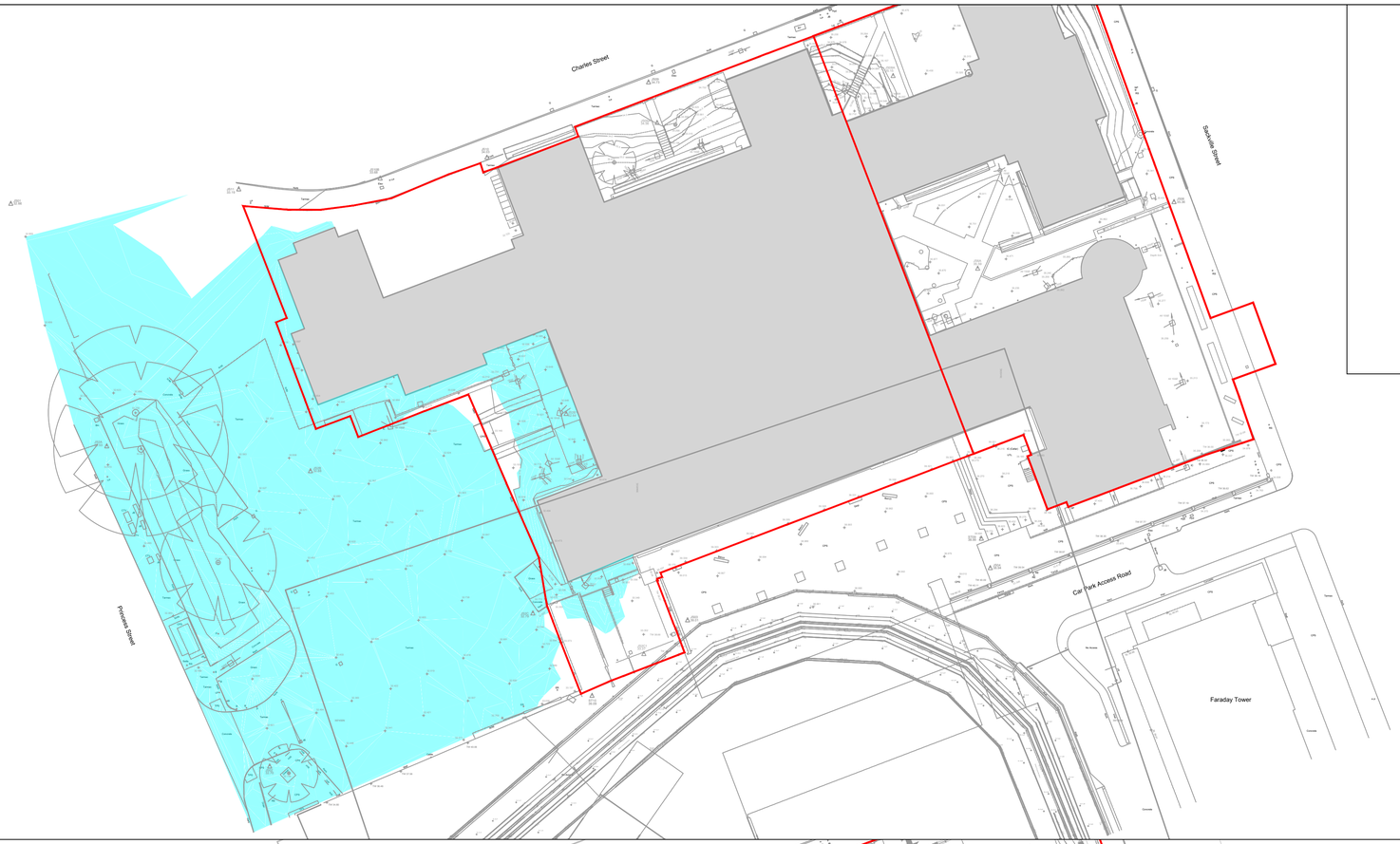
DRAWING STATUS	STATUS CODE
PRELIMINARY	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

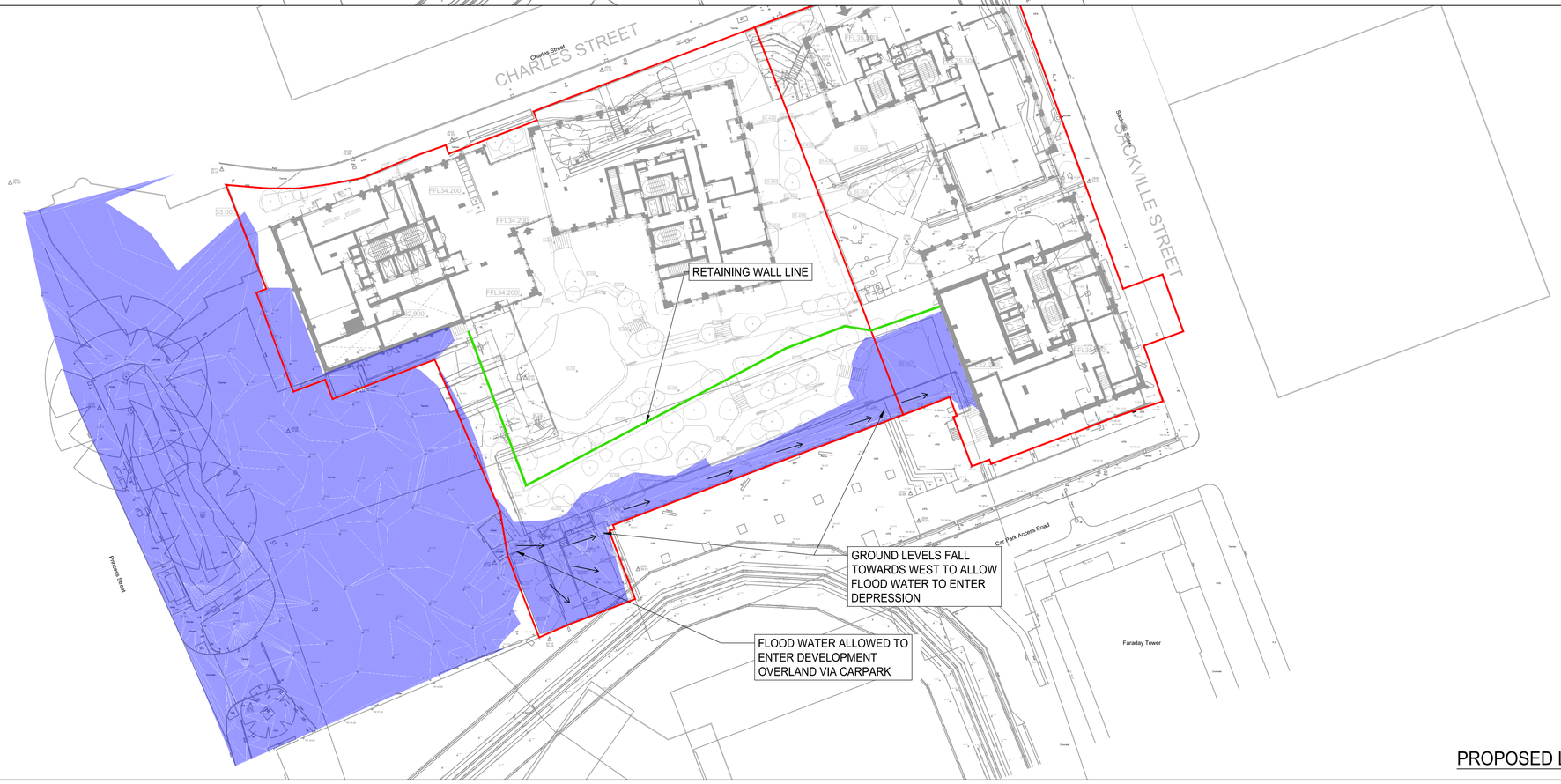
DRAWING No. 3341-CIV-XX-XX-D-C-30113

REV P01

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30113_EXISTING VS PROPOSED.DWG



EXISTING LAYOUT



PROPOSED LAYOUT

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

FLOOD VOLUME OFFSET COMPARISON

WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

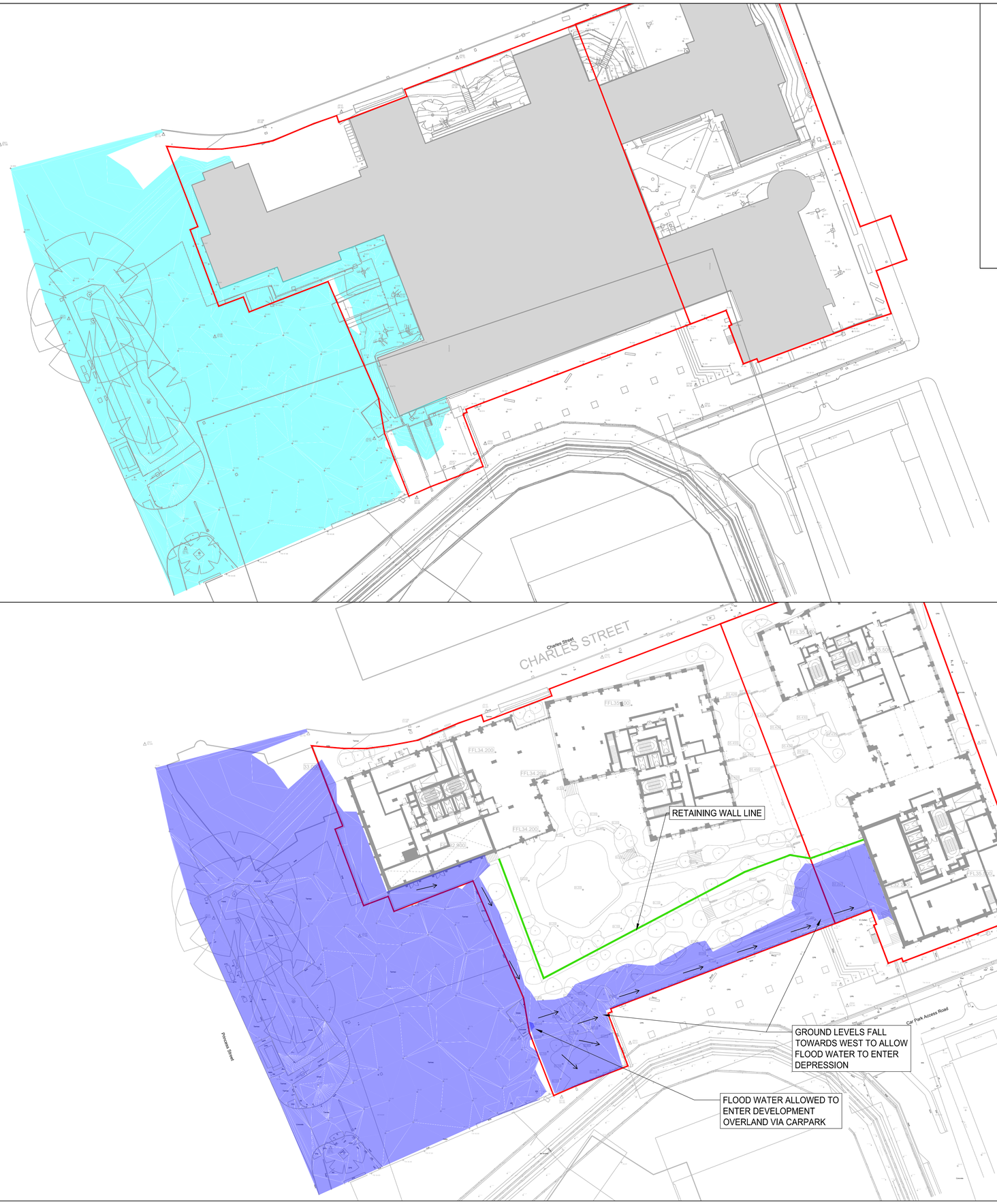
RIVER FLOODING EXTENT
WATER LEVEL: 33.000MAOD
EXISTING VS PROPOSED

DRAWING STATUS	STATUS CODE
PRELIMINARY	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30114	P01

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30114_EXISTING VS PROPOSED.DWG



N

FLOOD VOLUME OFFSET COMPARISON

WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

RIVER FLOODING EXTENT
WATER LEVEL: 33.100MAOD
EXISTING VS PROPOSED

DRAWING STATUS	STATUS CODE
PRELIMINARY	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30115	P01

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30115_EXISTING VS PROPOSED.DWG

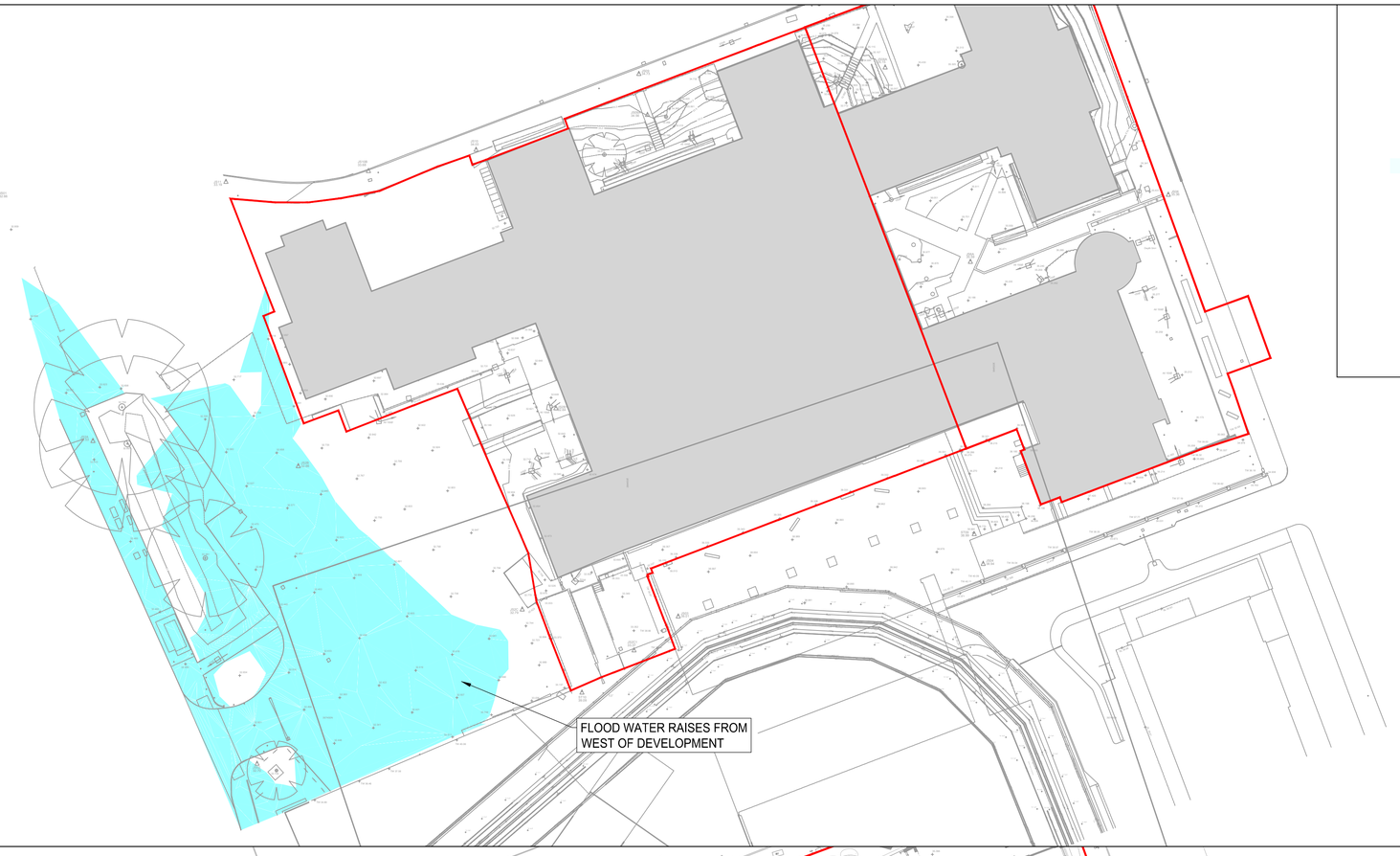
FLOOD VOLUME OFFSET COMPARISON

WATER LEVEL (mAOD)	EXISTING FLOOD VOLUME (m^3)	PROPOSED FLOOD VOLUME (m^3)
32.700	0	0
32.800	42	176
32.900	77	230
33.000	119	290
33.100	166	371
33.200	220	462
33.300	276	563
33.400	338	642
33.460	377	672

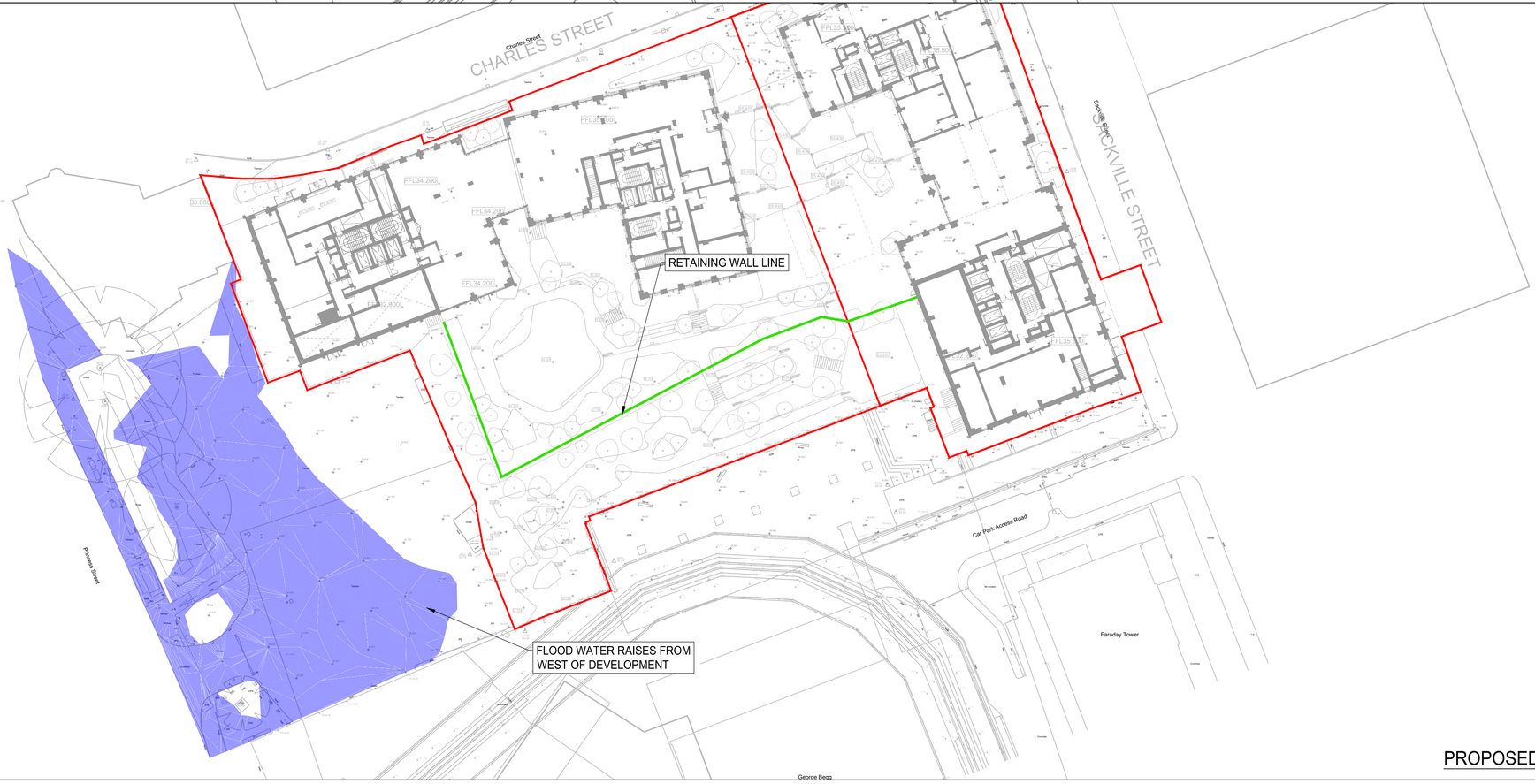
STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC LIMITED



EXISTING LAYOUT



PROPOSED LAYOUT

0 4 8 12 16 20 30 40 m

SCALE 1:400 @ A1
SCALE 1:800 @ A3

DATE	REV	DESCRIPTION	DRAWN	CHKD
03.08.26	P01	ISSUED FOR INFORMATION	JKo	JK

CIVIC

team-civic.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

RIVER FLOODING EXTENT
WATER LEVEL: 32.700MAOD
EXISTING VS PROPOSED

DRAWING STATUS	STATUS CODE
PRELIMINARY	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	JULY 26	JKo	JK

DRAWING No.: 3341-CIV-XX-XX-D-C-30111

REV: P01

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30111_EXISTING VS PROPOSED.DWG

9.8. Appendix H - Greenfeild Runoff Rates

Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (https://www.uksuds.com/)

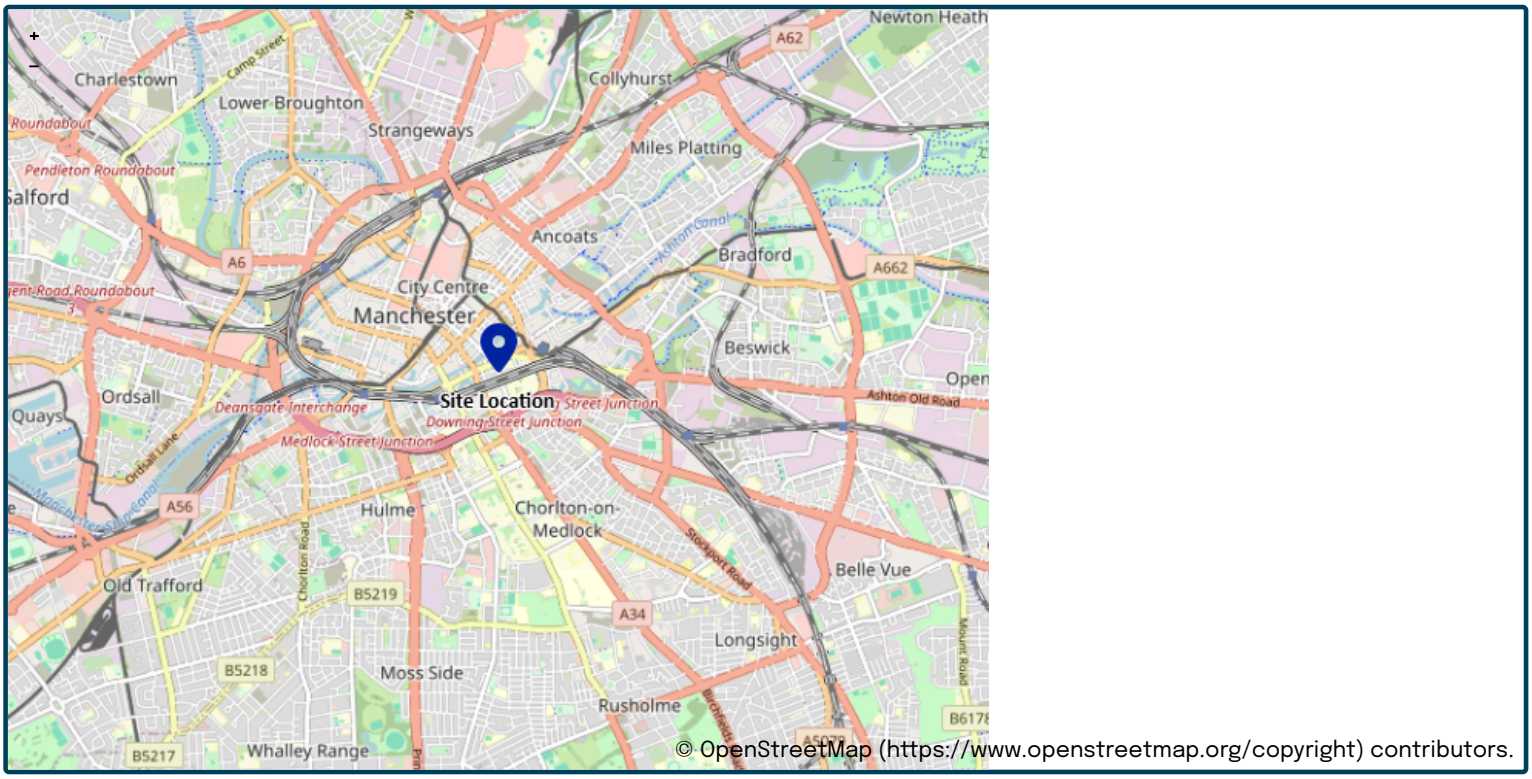
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	03/11/2025
Calculated by	James King
Reference	IQ Manchester - Site All
Model version	2.2.1

Location

Site name	IQ Manchester
Site location	Manchester



Site easting (British National Grid)	384475
Site northing (British National Grid)	397508

Site details

Total site area (ha)	0.7206 ha

Greenfield runoff

Method

Method	FEH statistical (2025)

FEH statistical (2025)

	My value		Map value
SAAR9120 (mm)	885 mm		
BFIHOST19scaled	0.33		
QMed-QBar conversion	1.075		1.075
QMed (l/s)	5.3 l/s		
QBar (FEH statistical 2025) (l/s)	5.7 l/s		

Growth curve factors

	My value		Map value
Hydrological region	10		10
1 year growth factor	0.87		
2 year growth factor	0.93		
10 year growth factor	1.38		
30 year growth factor	1.7		
100 year growth factor	2.08		
200 year growth factor	2.37		

Results

Method	FEH statistical (2025)
Flow rate 1 year (l/s)	5.0 l/s
Flow rate 2 year (l/s)	5.3 l/s
Flow rate 10 years (l/s)	7.9 l/s
Flow rate 30 years (l/s)	9.8 l/s
Flow rate 100 years (l/s)	11.9 l/s
Flow rate 200 years (l/s)	13.6 l/s

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent 'zero' figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.2.1) developed by HR Wallingford and available at uksuds.com (https://www.uksuds.com/). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (https://www.uksuds.com/terms-conditions). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (https://www.uksuds.com/)

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	14/10/2025
Calculated by	James King
Reference	IQ Manchester Phase A
Model version	2.2.1

Location

Site name	IQ Manchester Phase A
Site location	Manchester



Site easting (British National Grid)	384475
Site northing (British National Grid)	397508

Site details

Total site area (ha)	0.2643 ha

Greenfield runoff

Method

Method	FEH statistical (2025)

FEH statistical (2025)

	My value		Map value
SAAR9120 (mm)	885 mm		
BFIHOST19scaled	0.333		
QMed-QBar conversion	1.075		1.075
QMed (l/s)	1.9 l/s		
QBar (FEH statistical 2025) (l/s)	2.1 l/s		

Growth curve factors

	My value		Map value
Hydrological region	10		10
1 year growth factor	0.87		
2 year growth factor	0.93		
10 year growth factor	1.38		
30 year growth factor	1.7		
100 year growth factor	2.08		
200 year growth factor	2.37		

Results

Method	FEH statistical (2025)
Flow rate 1 year (l/s)	1.8 l/s
Flow rate 2 year (l/s)	1.9 l/s
Flow rate 10 years (l/s)	2.9 l/s
Flow rate 30 years (l/s)	3.6 l/s
Flow rate 100 years (l/s)	4.3 l/s
Flow rate 200 years (l/s)	5.0 l/s

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent 'zero' figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.2.1) developed by HR Wallingford and available at uksuds.com (https://www.uksuds.com/). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (https://www.uksuds.com/terms-conditions). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

9.9. Appendix I - Hydralic Calculations

Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	58.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
Phase A - High	0.215	5.00	35.400		62.782	59.233	2.000
Phase A - Low	0.016	5.00	32.000		62.512	69.772	0.560
Phase A - Final Manhole			35.400	1200	72.185	80.262	3.960
Phase A - OUTFALL			35.400	1200	72.276	86.767	4.022
Phase A&B - Phase A High	0.215	5.00	35.400	1200	135.983	60.328	2.000
Phase A&B - Phase B High	0.246	5.00	34.150		116.136	74.386	1.150
Phase A&B - Low	0.081	5.00	32.000		134.655	74.897	1.500
Phase A&B - OUTFALL			32.000		134.290	88.422	1.579

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	Phase A - High	Phase A - Low	5.000	0.600	33.400	31.440	1.960	2.6	150	5.01	52.7
1.001	Phase A - Low	Phase A - Final Manhole	8.000	0.600	31.440	31.440	0.000	0.0	150	5.15	52.2
1.002	Phase A - Final Manhole	Phase A - OUTFALL	5.000	0.600	31.440	31.378	0.062	80.6	150	5.22	51.9
2.000	Phase A&B - Phase A High	Phase A&B - Low	5.000	0.600	33.400	30.500	2.900	1.7	150	5.01	52.8
3.000	Phase A&B - Phase B High	Phase A&B - Low	5.000	0.600	33.000	30.500	2.500	2.0	150	5.01	52.8
2.001	Phase A&B - Low	Phase A&B - OUTFALL	5.000	0.600	30.500	30.421	0.079	63.3	300	5.05	52.6

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	6.357	112.3	41.0	1.850	0.410	0.215	0.0	62	5.859
1.001	1.000	17.7	43.6	0.410	3.810	0.231	0.0	0	∞
1.002	1.120	19.8	43.4	3.810	3.872	0.231	0.0	150	1.141
2.000	7.736	136.7	41.0	1.850	1.350	0.215	0.0	56	6.763
3.000	7.182	126.9	46.9	1.000	1.350	0.246	0.0	63	6.648
2.001	1.979	139.9	103.0	1.200	1.279	0.542	0.0	192	2.157

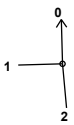
Flow+ v15.0 Copyright © 1988-2025 Causeway Technologies Ltd

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	5.000	2.6	150	Circular	35.400	33.400	1.850	32.000	31.440	0.410
1.001	8.000	0.0	150	Circular	32.000	31.440	0.410	35.400	31.440	3.810
1.002	5.000	80.6	150	Circular	35.400	31.440	3.810	35.400	31.378	3.872
2.000	5.000	1.7	150	Circular	35.400	33.400	1.850	32.000	30.500	1.350
3.000	5.000	2.0	150	Circular	34.150	33.000	1.000	32.000	30.500	1.350
2.001	5.000	63.3	300	Circular	32.000	30.500	1.200	32.000	30.421	1.279

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	Phase A - High		Junction		Phase A - Low		Junction	
1.001	Phase A - Low		Junction		Phase A - Final Manhole	1200	Manhole	Adoptable
1.002	Phase A - Final Manhole	1200	Manhole	Adoptable	Phase A - OUTFALL	1200	Manhole	Adoptable
2.000	Phase A&B - Phase A High	1200	Manhole	Adoptable	Phase A&B - Low		Junction	
3.000	Phase A&B - Phase B High		Junction		Phase A&B - Low		Junction	
2.001	Phase A&B - Low		Junction		Phase A&B - OUTFALL		Junction	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
Phase A - High	62.782	59.233	35.400	2.000					
						0	1.000	33.400	150
Phase A - Low	62.512	69.772	32.000	0.560			1	1.000	31.440	150
						0	1.001	31.440	150
Phase A - Final Manhole	72.185	80.262	35.400	3.960	1200		1	1.001	31.440	150
						0	1.002	31.440	150
Phase A - OUTFALL	72.276	86.767	35.400	4.022	1200		1	1.002	31.378	150
Phase A&B - Phase A High	135.983	60.328	35.400	2.000	1200					
						0	2.000	33.400	150
Phase A&B - Phase B High	116.136	74.386	34.150	1.150					
						0	3.000	33.000	150
Phase A&B - Low	134.655	74.897	32.000	1.500			1	3.000	30.500	150
							2	2.000	30.500	150
						0	2.001	30.500	300
Phase A&B - OUTFALL	134.290	88.422	32.000	1.579			1	2.001	30.421	300

Flow+ v15.0 Copyright © 1988-2025 Causeway Technologies Ltd

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	1440	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

Storm Durations

15	60	180	360	600	960	2160
30	120	240	480	720	1440	2880

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0
100	45	0	0

Node Phase A - High Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	1.000	Sump Available	✓
Replaces Downstream Link	x	Product Number	CTL-SHE-0055-1900-2000-1900
Invert Level (m)	33.400	Min Outlet Diameter (m)	0.075
Design Depth (m)	2.000	Min Node Diameter (mm)	1200
Design Flow (l/s)	1.9		

Node Phase A - Final Manhole Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	1.002	Sump Available	✓
Replaces Downstream Link	x	Product Number	CTL-SHE-0075-2100-0560-2100
Invert Level (m)	31.440	Min Outlet Diameter (m)	0.100
Design Depth (m)	0.560	Min Node Diameter (mm)	1200
Design Flow (l/s)	2.1		

Node Phase A&B - Phase A High Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	2.000	Sump Available	✓
Replaces Downstream Link	x	Product Number	CTL-SHE-0055-1900-2000-1900
Invert Level (m)	33.400	Min Outlet Diameter (m)	0.075
Design Depth (m)	2.000	Min Node Diameter (mm)	1200
Design Flow (l/s)	1.9		

Node Phase A&B - Phase B High Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	3.000	Sump Available	✓
Replaces Downstream Link	x	Product Number	CTL-SHE-0082-3000-1000-3000
Invert Level (m)	33.000	Min Outlet Diameter (m)	0.100
Design Depth (m)	1.000	Min Node Diameter (mm)	1200
Design Flow (l/s)	3.0		

Flow+ v15.0 Copyright © 1988-2025 Causeway Technologies Ltd

Node Phase A&B - Low Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	2.001	Sump Available	✓
Replaces Downstream Link	x	Product Number	CTL-SHE-0105-5700-1500-5700
Invert Level (m)	30.500	Min Outlet Diameter (m)	0.150
Design Depth (m)	1.500	Min Node Diameter (mm)	1200
Design Flow (l/s)	5.7		

Node Phase A - High Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	33.400	Depth (m)	1.200
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	1028	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	14.000	Number Required	1
Porosity	0.95	Pit Length (m)	10.000		

Node Phase A - Low Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	31.500	Depth (m)	0.400
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	216	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	7.800	Number Required	1
Porosity	0.30	Pit Length (m)	10.000		

Node Phase A - Low Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	31.440	Depth (m)	0.550
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	240	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	7.100	Number Required	1
Porosity	0.30	Pit Length (m)	3.500		

Node Phase A&B - Phase A High Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	33.400	Depth (m)	1.200
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	1032	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	14.000	Number Required	1
Porosity	0.95	Pit Length (m)	10.000		

Node Phase A&B - Phase B High Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	33.750	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	107	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	24.500	Number Required	1
Porosity	0.30	Pit Length (m)	10.000		

Node Phase A&B - Phase B High Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	33.000	Depth (m)	0.800
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	405	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	16.100	Number Required	1
Porosity	0.95	Pit Length (m)	10.000		

Node Phase A&B - Low Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	31.500	Depth (m)	0.400
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	810	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	60.000	Number Required	1
Porosity	0.30	Pit Length (m)	10.000		

Flow+ v15.0 Copyright © 1988-2025 Causeway Technologies Ltd

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.28%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	Phase A - High	480	33.663	0.263	5.5	34.9795	0.0000	SURCHARGED
360 minute summer	Phase A - Low	208	31.546	0.106	1.9	1.8709	0.0000	OK
360 minute summer	Phase A - Final Manhole	208	31.545	0.105	1.6	0.1184	0.0000	OK
360 minute summer	Phase A - OUTFALL	208	31.407	0.029	1.6	0.0000	0.0000	OK
720 minute summer	Phase A&B - Phase A High	480	33.661	0.261	5.5	34.9426	0.0000	SURCHARGED
360 minute summer	Phase A&B - Phase B High	232	33.206	0.206	10.4	31.4406	0.0000	SURCHARGED
240 minute summer	Phase A&B - Low	192	31.528	1.028	8.2	5.1897	0.0000	SURCHARGED
15 minute summer	Phase A&B - OUTFALL	53	30.462	0.041	5.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute summer	Phase A - High	1.000	Phase A - Low	1.2	0.326	0.011	0.0332	
360 minute summer	Phase A - Low	1.001	Phase A - Final Manhole	1.6	0.122	0.090	0.1056	
360 minute summer	Phase A - Final Manhole	1.002	Phase A - OUTFALL	1.6	0.654	0.081	0.0122	53.3
720 minute summer	Phase A&B - Phase A High	2.000	Phase A&B - Low	1.2	0.288	0.009	0.0452	
360 minute summer	Phase A&B - Phase B High	3.000	Phase A&B - Low	2.9	0.262	0.023	0.0463	
240 minute summer	Phase A&B - Low	2.001	Phase A&B - OUTFALL	5.7	0.986	0.041	0.0289	109.4

Flow+ v15.0 Copyright © 1988-2025 Causeway Technologies Ltd

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	Phase A - High	570	34.089	0.689	8.6	91.5728	0.0000	SURCHARGED
120 minute summer	Phase A - Low	80	31.603	0.163	4.3	3.6279	0.0000	SURCHARGED
120 minute summer	Phase A - Final Manhole	80	31.601	0.161	2.1	0.1825	0.0000	SURCHARGED
120 minute summer	Phase A - OUTFALL	80	31.411	0.033	2.1	0.0000	0.0000	OK
600 minute winter	Phase A&B - Phase A High	570	34.083	0.683	8.6	91.5785	0.0000	SURCHARGED
240 minute winter	Phase A&B - Phase B High	232	33.550	0.550	19.9	84.1069	0.0000	SURCHARGED
180 minute winter	Phase A&B - Low	176	31.623	1.123	12.3	22.3029	0.0000	SURCHARGED
60 minute summer	Phase A&B - OUTFALL	22	30.462	0.041	5.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	Phase A - High	1.000	Phase A - Low	1.2	0.247	0.011	0.0380	
120 minute summer	Phase A - Low	1.001	Phase A - Final Manhole	2.1	0.133	0.119	0.1408	
120 minute summer	Phase A - Final Manhole	1.002	Phase A - OUTFALL	2.1	0.702	0.104	0.0147	87.3
600 minute winter	Phase A&B - Phase A High	2.000	Phase A&B - Low	1.2	0.325	0.009	0.0452	
240 minute winter	Phase A&B - Phase B High	3.000	Phase A&B - Low	3.0	0.271	0.024	0.0464	
180 minute winter	Phase A&B - Low	2.001	Phase A&B - OUTFALL	5.6	0.984	0.040	0.0287	230.3

Flow+ v15.0 Copyright © 1988-2025 Causeway Technologies Ltd

37m^3 OF FLOODING IN PHASE TO BE REMOVED WITHIN 89m^3 OF BLUE ROOF STORAGE

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	Phase A - High	450	35.400	2.000	14.6	159.6665	36.4215	FLOOD
360 minute summer	Phase A - Low	368	31.819	0.379	4.1	10.2927	0.0000	FLOOD RISK
360 minute summer	Phase A - Final Manhole	368	31.818	0.378	2.2	0.4271	0.0000	SURCHARGED
30 minute winter	Phase A - OUTFALL	20	31.411	0.033	2.1	0.0000	0.0000	OK
600 minute winter	Phase A&B - Phase A High	390	35.400	2.000	16.8	161.9285	31.7203	FLOOD
360 minute winter	Phase A&B - Phase B High	216	34.150	1.150	29.1	144.5600	51.1242	FLOOD
600 minute winter	Phase A&B - Low	585	31.863	1.363	10.1	65.4168	0.0000	FLOOD RISK
15 minute winter	Phase A&B - OUTFALL	4	30.462	0.041	5.7	0.0000	0.0000	OK

51m^3 OF FLOODING IN PHASE TO BE REMOVED WITHIN 95m^3 OF BLUE ROOF STORAGE

Link Event (Upstream Depth)	US Node		DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	Phase A - High	1.000	Phase A - Low	1.9	0.247	0.017	0.0459	
360 minute summer	Phase A - Low	1.001	Phase A - Final Manhole	2.2	0.124	0.122	0.1408	
360 minute summer	Phase A - Final Manhole	1.002	Phase A - OUTFALL	2.1	0.704	0.106	0.0148	151.1
600 minute winter	Phase A&B - Phase A High	2.000	Phase A&B - Low	1.9	0.322	0.014	0.0456	
360 minute winter	Phase A&B - Phase B High	3.000	Phase A&B - Low	3.2	0.287	0.025	0.0465	
600 minute winter	Phase A&B - Low	2.001	Phase A&B - OUTFALL	5.7	0.986	0.041	0.0289	476.2

Flow+ v15.0 Copyright © 1988-2025 Causeway Technologies Ltd

9.10. Appendix J - Proposed Drainage Layouts

55m² AREA OF LOADING BAY PROPOSED TO BE ADOPTED NOT CONSIDERED AND TO DRAIN VIA HIGHWAY DRAINAGE SYSTEM AS PER EXISTING CASE

PHASE A ATTENUATION TANK
NET VOLUME = 158 m³

AREA = 140 m²
DEPTH = 1.2 m
VOID RATIO = 95%

PHASE A BLUE ROOF
NET VOLUME = 89 m³

BLUE ROOF AREA = 940 m²
100mm SYSTEM @ 95% VOID RATIO

EX. FW MANHOLE 5+ m DEEP

RWP'S FROM DEVELOPMENT TO DISCHARGE WITHIN UPPER LANDSCAPED AREAS

NEW OUTFALL TO SERVE PHASE A INSTALLED WITH HYDRO-BRAKE SET TO 1.9 l/s. DISCHARGING THROUGH RETAINING WALL TO SUDS FEATURE ABOVE GROUND.

56m² AREA OF LOADING BAY PROPOSED TO BE ADOPTED NOT CONSIDERED AND TO DRAIN VIA HIGHWAY DRAINAGE SYSTEM AS PER EXISTING CASE

EX SW MANHOLE
IL = 31.440 (T.B.C)

TO BE INSTALLED WITH HYDRO-BRAKE TO RESTRICT FLOWS FROM PHASE A TO 2.1 l/s
CHAMBER POTENTIALLY TO BE RECONSTRUCTED TO ALLOW INSTALLATION

NET VOLUME = 13.2 m³
25m² OF SWALE
550mm OF 30% VOID RATIO MATERIAL VIA BIO-RETENTION SOIL AN GRANULAR MATERIAL FOR ATTENUATION STORAGE.

78m² OF PERMEABLE PAVING:
400mm OF GRANULAR MATERIAL WITH MIN. 30% VOID RATIO FOR ATTENUATION STORAGE

EX FW MANHOLE
TO BE PICKED UP AND SERVED AS PART OF PHASE A DEVELOPMENT

FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30001_DRAINAGE LAYOUT PHASE A.DWG

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC ENGINEERS LIMITED

NOTES

1. THIS DRAWING IS PART OF A INFORMATION RELEASE SHOWING THE DRAINAGE STRATEGY TO SERVICE THE PROPOSED DEVELOPMENT.
2. THE PROPOSAL IS SUBJECT TO FURTHER DETAILED DESIGN DEVELOPMENT.

DESIGN NOTES

1. DRAINAGE DESIGNED IN ACCORDANCE WITH TO BS EN 752 & CURRENT BUILDING REGULATIONS PART 'H'
2. PIPES TO HAVE CLASS Z BEDDING WHERE LOCATED LESS THAN 0.6m BELOW FINISHED GROUND
3. UNDER BUILDING ALL DRAINAGE COMPONENTS USED ARE TO HAVE A 60 YEAR DESIGN LIFE.
4. ALL DRAINAGE DROP-POINTS TO HAVE RODDING ACCESS POINTS AT GROUND FLOOR LEVEL.
5. DRAINAGE MAY REQUIRE CO-ORDINATION WITH BELOW GROUND SERVICES.
6. DRAINAGE DESIGNED TO NOT FLOOD IN THE 1-IN-100-YEAR + 45% CC STORM EVENT
7. THIS DRAWING WAS PRODUCED USING THE FOLLOWING INFORMATION:
   - 7.1. TOPOGRAPHICAL SURVEY DRAWING 'SSL:13441A' BY SURVEY SYSTEMS, DATED FEB 2022
   - 7.2. PROPOSED LANDSCAPE LAYOUT '3489-PLA-XX-XX-DR-L-0001-General Arrangement Plan' BY PLANIT, DATED 07.11.2025

LEGEND

- PROPOSED BLUE ROOF
- PROPOSED BIO SOLAR ROOF
- PROPOSED GREEN ROOF
- PROPOSED BELOW GROUND ATTENUATION TANK
- PROPOSED GREEN SuDS FEATURES (RAIN GARDENS/ SWALES)
- PROPOSED PERMEABLE PAVING
- PROPOSED SURFACE WATER DRAIN
- EXISTING SURFACE WATER DRAIN
- EXISTING FOUL WATER DRAIN
- EXISTING COMBINED WATER SEWER

DATE	REV	DESCRIPTION	DRAWN	CHKD
11.12.12	P02	UPDATED BASED ON LATEST LAYOUTS	JK	KW
20.11.25	P01	STAGE 2 ISSUE	JK	KW

Civic Engineers

MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 2977
LEEDS 1 Saw Mill Street, Water Lane, Leeds, LS11 5WE. Tel: 0113 2025 130
GLASGOW 35 Virginia Street, Glasgow, G1 1TN. Tel: 0141 370 1829

www.civicengineers.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

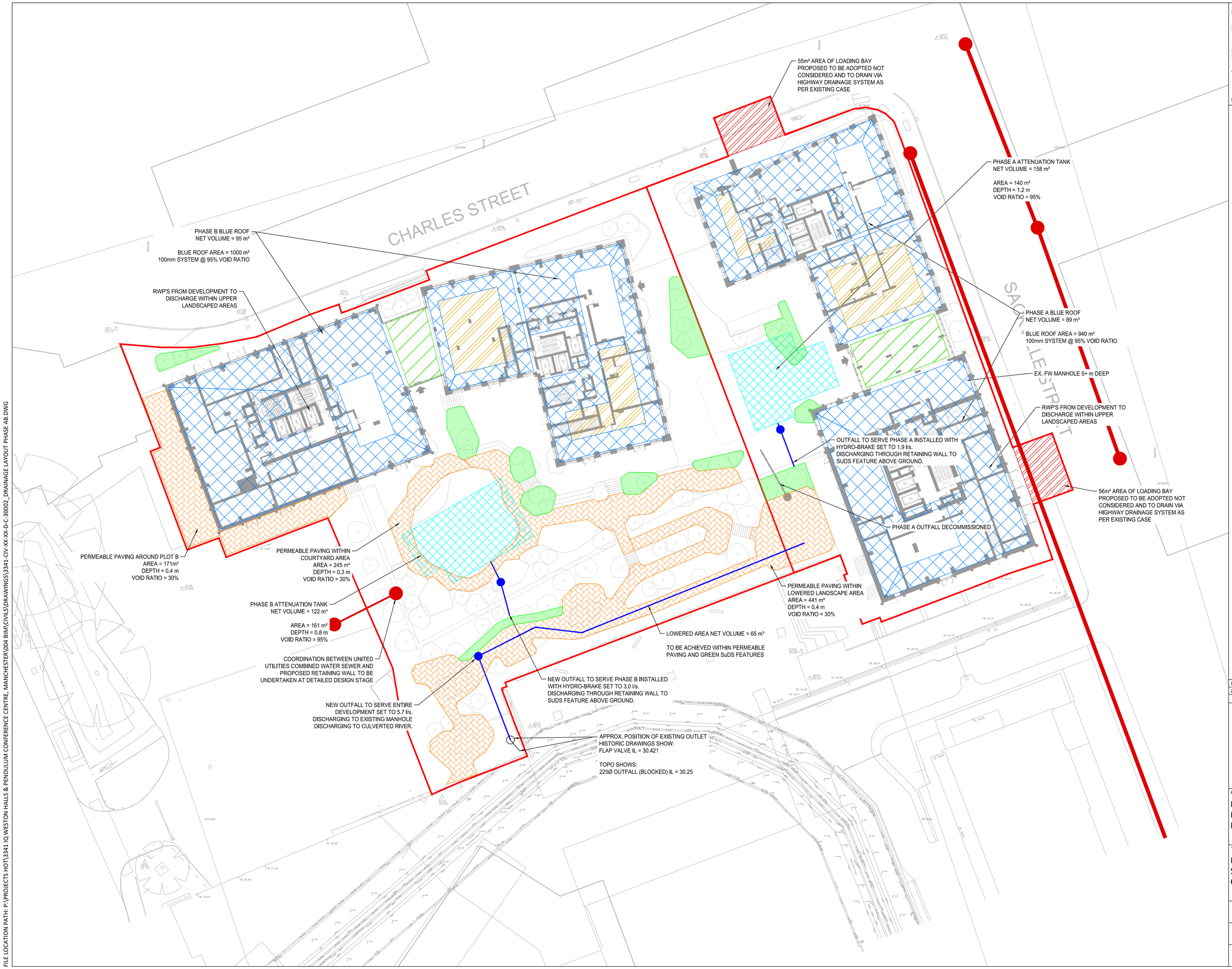
TITLE

BELOW GROUND DRAINAGE LAYOUT
SHEET 1
PHASE A

DRAWING STATUS	STATUS CODE
RIBA STAGE 2	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	NOV 25	JK	KW

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30001	P02



FILE LOCATION PATH: P:\PROJECTS HOT\3341 IQ WESTON HALLS & PENDULUM CONFERENCE CENTRE, MANCHESTER\004 BIM\CIVILS\DRAWINGS\3341-CIV-XX-XX-D-C-30002_DRAINAGE LAYOUT PHASE AB.DWG

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC ENGINEERS LIMITED

NOTES

1. THIS DRAWING IS PART OF A INFORMATION RELEASE SHOWING THE DRAINAGE STRATEGY TO SERVICE THE PROPOSED DEVELOPMENT.
2. THE PROPOSAL IS SUBJECT TO FURTHER DETAILED DESIGN DEVELOPMENT.

DESIGN NOTES

1. DRAINAGE DESIGNED IN ACCORDANCE WITH TO BS EN 752 & CURRENT BUILDING REGULATIONS PART 'H'
2. PIPES TO HAVE CLASS Z BEDDING WHERE LOCATED LESS THAN 0.6m BELOW FINISHED GROUND
3. UNDER BUILDING ALL DRAINAGE COMPONENTS USED ARE TO HAVE A 60 YEAR DESIGN LIFE.
4. ALL DRAINAGE DROP-POINTS TO HAVE RODDING ACCESS POINTS AT GROUND FLOOR LEVEL.
5. DRAINAGE MAY REQUIRE CO-ORDINATION WITH BELOW GROUND SERVICES.
6. DRAINAGE DESIGNED TO NOT FLOOD IN THE 1-IN-100-YEAR + 45% CC STORM EVENT
7. THIS DRAWING WAS PRODUCED USING THE FOLLOWING INFORMATION:
   - 7.1. TOPOGRAPHICAL SURVEY DRAWING 'SSL:13441A' BY SURVEY SYSTEMS, DATED FEB 2022
   - 7.2. PROPOSED LANDSCAPE LAYOUT '3489-PLA-XX-XX-DR-L-0001-General Arrangement Plan' BY PLANIT, DATED 07.11.2025

LEGEND

- PROPOSED BLUE ROOF
- PROPOSED BIO SOLAR ROOF
- PROPOSED GREEN ROOF
- PROPOSED BELOW GROUND ATTENUATION TANK
- PROPOSED GREEN SuDS FEATURES (RAIN GARDENS/ SWALES)
- PROPOSED PERMEABLE PAVING
- PROPOSED SURFACE WATER DRAIN
- PREVIOUSLY INSTALLED SURFACE WATER DRAIN TO BE DECOMMISSIONED
- EXISTING COMBINED WATER SEWER

DATE	REV	DESCRIPTION	DRAWN	CHKD
11.12.15	P02	UPDATED BASED ON LATEST LAYOUTS	JK	KW
20.11.25	P01	STAGE 2 ISSUE	JK	KW

Civic Engineers

MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 2977
LEEDS 1 Saw Mill Street, Water Lane, Leeds, LS11 5WE. Tel: 0113 2025 130
GLASGOW 35 Virginia Street, Glasgow, G1 1TN. Tel: 0141 370 1829

www.civicengineers.com

PROJECT

IQ WESTON HALL AND
PENDULUM CONFERENCE CENTRE
MANCHESTER

TITLE

BELOW GROUND DRAINAGE LAYOUT
SHEET 2
COMPLETE SCHEME

DRAWING STATUS	STATUS CODE
RIBA STAGE 2	-

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	1:250	NOV 25	JK	KW

DRAWING No.	REV
3341-CIV-XX-XX-D-C-30002	P02

9.11. Appendix K - Proposed Structural and Culvet Intertaction Drawings

PHASE B

PHASE A

Charles Street

IBIS HOTEL FOUNDATIONS

IBIS HOTEL

SS01
20001

SITE BOUNDARY LINE

PROPOSED BUILDING FOOTPRINT

ASSUMED POSITION OF TUNNEL NETWORK

SITE BOUNDARY LINE

PROPOSED BUILDING FOOTPRINT

Princess Street

Sackville Street

Mechanical Workshop

Physics Tower

Chemistry Building

Mechanical Engineering

SS03
20001

SS02
20001

SS04
20002

APPROX. LOCATION OF EXISTING CULVERT

Car Park Access Road

John Garside Building

George Begg Building

Faraday Tower

GENERAL NOTES

THE LOCATION OF SERVICES AND INFORMATION SHOWN ON THIS PLAN ARE SUBJECT TO DISTORTION (FOR ELECTROMAGNETIC TECHNIQUES).
NUMEROUS SERVICES SHOWN ON PLAN ARE FROM THE UTILITY RECORD DRAWINGS, WHICH MAY BE OF POOR QUALITY. THEREFORE, WE CANNOT GUARANTEE ACCURACY OF INFORMATION TAKEN FROM SUCH RECORDS.
IT IS THE RESPONSIBILITY OF THE USER UNDER HEALTH & SAFETY (HSG47) GUIDELINES TO SATISFY ONESELF OF THE SUSPECTED LOCATION OF ANY SERVICES PRIOR TO EXCAVATION IN THE VICINITY OF THE SERVICES SHOWN ON THIS DRAWING.

LEGEND

- + 35.80 — DENOTES EXISTING LEVELS
- DENOTES SITE BOUNDARY LINE
- DENOTES **PROPOSED** BUILDING FOOTPRINT
- DENOTES **EXISTING** BUILDING FOOTPRINT TO BE DEMOLISHED IN PHASES
- DENOTES ASSUMED LOCATION OF EXISTING UNDERGROUND TUNNELS
- DENOTES CONTAMINATION AREA FROM OIL WORKS

EXISTING SERVICES

- APPROXIMATE LOCATION OF KNOWN EXISTING SERVICES BASED ON ARCHIVE INFORMATION, CCTV AND GPR SURVEYS TO BE UNDERTAKEN TO CONFIRM LOCATIONS OF SITE SERVICES

PRINCIPAL CONSTRAINTS

01 DENOTES ASSUMED LOCATION OF EXISTING STRUCTURAL FOUNDATIONS FROM PREVIOUS DEVELOPMENT BASED ON HISTORIC DRAWINGS. FURTHER INTRUSIVE GROUND INVESTIGATIONS REQUIRED TO CONFIRM DEPTH AND SIZE OF EXISTING FOUNDATIONS TO INFORM DESIGN PROPOSALS

02 RIVER MEDLOCK CULVERT. LOCATION AND LEVEL TAKEN FROM SURVEY SYSTEM DRAWING 2020.

03 DENOTES APPROXIMATE LOCATION OF AN EXTENSIVE NETWORK OF FORMER UMIST TUNNELS. TUNNELS BELIEVED TO HAVE BEEN PARTIALLY GROUTED DURING THE CONSTRUCTION OF WESTON HALLS. INTERNAL VIEWS OF THE TUNNELS PRIOR TO GROUTING SHOW LOCALISED BRICK VAULTING AND IRON STRUTTING.
DEPTH BELIEVED TO BE CIRCA 10 FEET BELOW THE SURFACE OF THE SANDSTONE BEDROCK BASED ON ARCHIVE INFORMATION.

04 EXISTING FOUNDATIONS ARE ASSUMED TO BE SHALLOW RAFT UNLESS INDICATED OTHERWISE (CONSTRAINT 01). FURTHER INTRUSIVE GROUND INVESTIGATIONS REQUIRED TO CONFIRM DEPTH AND SIZE OF EXISTING FOUNDATIONS POSSIBLE THAT RAFT FOUNDATION MAY ALSO INCLUDE PILES

05 EXISTING BASEMENT RETAINING WALL TO WESTON HALLS. CONSTRUCTION ACTIVITY TO CONSIDER RISK OF SURCHARGING STRUCTURE

06 ADJACENT GEORGE BEGG PODIUM STRUCTURE. BELIEVED TO BE INDEPENDENT OF WESTON AND PENDULUM AND NOT PROVIDING OR RECEIVING STRUCTURAL SUPPORT OR STABILITY FROM EXISTING WESTON & PENDULUM BASED ON ARCHIVE INFORMATION AVAILABLE

07 ADJACENT RAMP STRUCTURE. NO EVIDENCE OF RETAINING STRUCTURES IN ARCHIVE INFORMATION. POSSIBILITY THAT PENDULUM HOTEL STRUCTURE IS PROVIDING RETENTION OF RAMP. CONSTRUCTION AND DEMOLITION SEQUENCE TO CONSIDER STABILITY OF RAMP

08 INSPECTION CHAMBER NOTED ON UNITED UTILITIES ASSETS. FURTHER INVESTIGATIONS REQUIRED TO UNDERSTAND IF ADOPTED OR PRIVATE AND WHICH PROPERTIES SERVING

09 IBIS HOTEL. CONSTRUCTION ACTIVITY TO CONSIDER RISK OF DAMAGE TO EXISTING BUILDING AND PROXIMITY OF HOTEL'S FOUNDATIONS

10 EXISTING SEWERS. IT IS CURRENTLY UNCLEAR IF THESE EXISTING SEWERS ARE SERVICING BUILDINGS OUTSIDE OF THE SITE BOUNDARY. THEREFORE REQUIREMENT FOR EASEMENTS OR ABANDONMENTS ARE TO BE DETERMINED.

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A.E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC ENGINEERS LIMITED

NOTES:

1. RED LINE BOUNDARY AS SHOWN BY SIMPSON HAUGH ARCHITECTS ON DRAWING REF. **10346-SHA-Z0-A-B5D8-G100-PL-00-001.**
2. TOPOGRAPHICAL SURVEY SHOWN TAKEN BY SURVEY SYSTEMS DRAWING REF. **SSL:13441A:200:1:1:TOPO.**
3. UTILITIES SHOWN ARE TAKEN FROM TOPO SURVEY ABOVE.
4. THIS DRAWING REFERENCES EXISTING BELOW-GROUND DRAINAGE UTILITIES ONLY, AS SHOWN ON THE REFERENCED EXISTING SERVICES DRAWING. CONSTRAINTS AND DIVERSIONS REQUIRED FOR OTHER SERVICES ARE TO BE ADVISED BY THE BUILDING SERVICES ENGINEER.
5. ROCKHEAD LEVEL DATA WAS TAKEN FROM ARUP'S DRAWING REF. **UNMC-ARUP-ZZ-XX-DR-CG-1003_P2**
6. CONTAMINATION DATA WAS TAKEN FROM ARUP'S DRAWING REF. **UNMC-ARUP-ZZ-XX-DR-CG-0001_P0**
7. TUNNEL NETWORK SHOWN IS INDICATIVE FROM ARCHIVE INFORMATION. EXTENTS TO BE CONFIRMED PRIOR TO CONSTRUCTION. IMPACT ON SUBSTRUCTURE DESIGN TO BE FURTHER EXPLORED THROUGH INTRUSIVE SITE INVESTIGATION AND DISCUSSIONS WITH PILING SPECIALIST PRIOR TO WORKS.
8. DETAILS OF EXISTING STRUCTURES PRIMARILY TAKEN FROM ARCHIVE INFORMATION. TO BE CONFIRMED BY FURTHER INTRUSIVE INVESTIGATIONS.
9. EXISTING STRUCTURES ARE OF STEEL FRAME AND TRADITIONAL MASONRY CONSTRUCTION WITH PRECAST CONCRETE PLANK FLOORS. FURTHER INTRUSIVE INVESTIGATIONS REQUIRED TO DETERMINE EXTENTS OF CUT LINE.

PRINTING IN BLACK AND WHITE MAY RESULT IN MISSING OR UNREADABLE INFORMATION.
ALWAYS PRINT IN COLOUR.

DATE	REV	DESCRIPTION	DRAWN	CHKD
14.11.25	P01	STAGE 2 ISSUE	FG	DP

CIVIC ENGINEERS

civicengineers.com

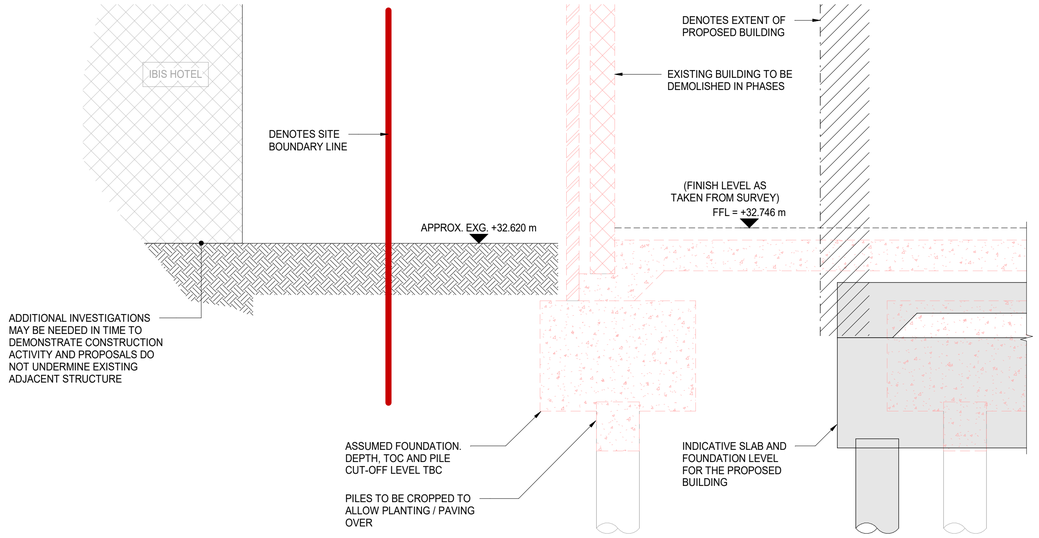
PROJECT
IQ WESTON HALLS AND PENDULUM CONFERENCE CENTRE MANCHESTER

TITLE
EXISTING SITE CONSTRAINTS

DRAWING STATUS: RIBA STAGE 2 — STATUS CODE:

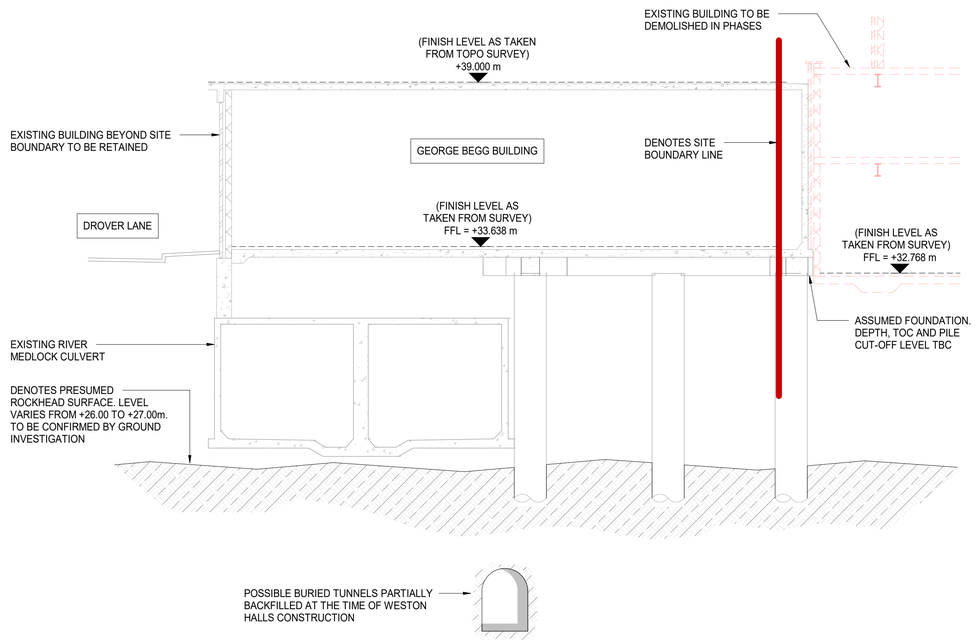
CE PROJECT No.	SCALE @ A2	DATE CREATED	DRAWN	CHECKED
3341	1:200	OCT. 25	FG	DP

DRAWING No.: 3341-CIV-XX-XX-D-S-10001 — REV: P01



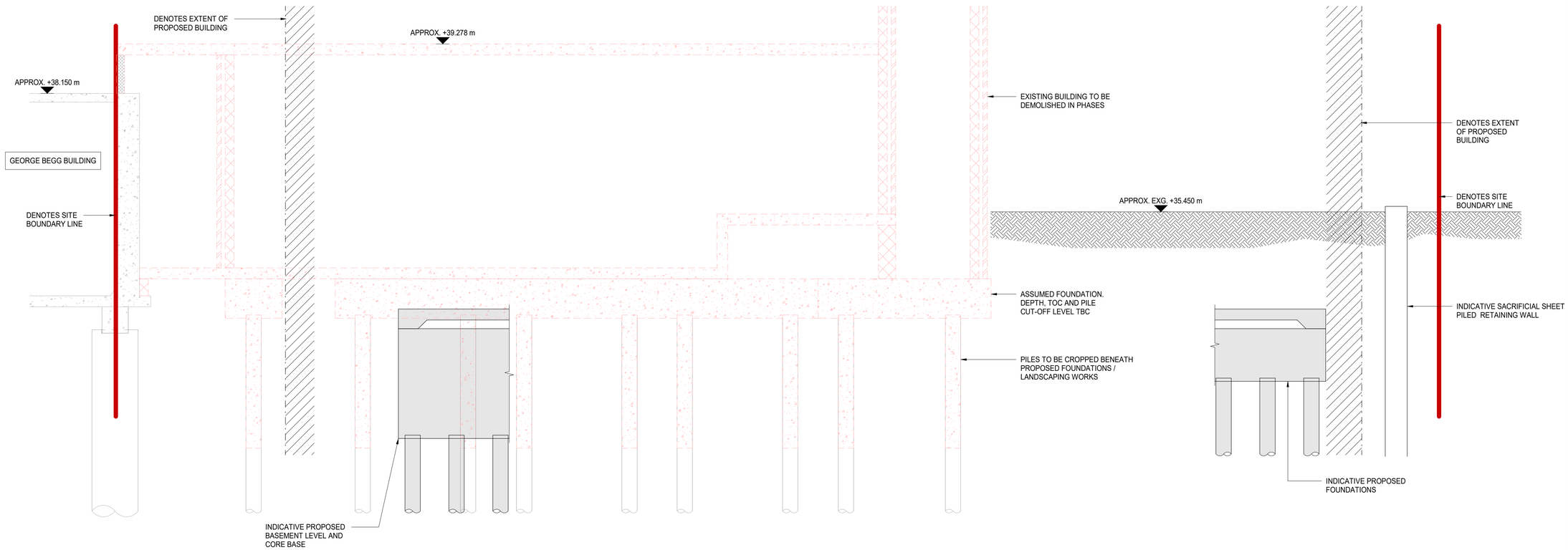
EXISTING SITE SECTION SS01

SCALE: 1 : 25



EXISTING SITE SECTION SS02

SCALE: 1 : 100



EXISTING SITE SECTION SS03

SCALE: 1 : 50

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC ENGINEERS LIMITED

NOTES:

1. RED LINE BOUNDARY AS SHOWN BY SIMPSON HAUGH ARCHITECTS ON DRAWING REF. **10346-SHA-Z0-A-B5D8-G100-PL-00-001.**
2. TOPOGRAPHICAL SURVEY SHOWN TAKEN BY SURVEY SYSTEMS DRAWING REF. **SSL:13441A:200:1:1:TOPO.**
3. UTILITIES SHOWN ARE TAKEN FROM TOPO SURVEY ABOVE.
4. THIS DRAWING REFERENCES EXISTING BELOW-GROUND DRAINAGE UTILITIES ONLY, AS SHOWN ON THE REFERENCED EXISTING SERVICES DRAWING. CONSTRAINTS AND DIVERSIONS REQUIRED FOR OTHER SERVICES ARE TO BE ADVISED BY THE BUILDING SERVICES ENGINEER.
5. ROCKHEAD LEVEL DATA WAS TAKEN FROM ARUP'S DRAWING REF. **UNMC-ARUP-ZZ-XX-DR-CG-1003_P2**
6. CONTAMINATION DATA WAS TAKEN FROM ARUP'S DRAWING REF. **UMNC-ARUP-ZZ-XX-DR-CG-0001_P0**
7. TUNNEL NETWORK SHOWN IS INDICATIVE FROM ARCHIVE INFORMATION. EXTENTS TO BE CONFIRMED PRIOR TO CONSTRUCTION. IMPACT ON SUBSTRUCTURE DESIGN TO BE FURTHER EXPLORED THROUGH INTRUSIVE SITE INVESTIGATION AND DISCUSSIONS WITH PILING SPECIALIST PRIOR TO WORKS.
8. DETAILS OF EXISTING STRUCTURES PRIMARILY TAKEN FROM ARCHIVE INFORMATION. TO BE CONFIRMED BY FURTHER INTRUSIVE INVESTIGATIONS.
9. EXISTING STRUCTURES ARE OF STEEL FRAME AND TRADITIONAL MASONRY CONSTRUCTION WITH PRECAST CONCRETE PLANK FLOORS. FURTHER INTRUSIVE INVESTIGATIONS REQUIRED TO DETERMINE EXTENTS OF CUT LINE.

PRINTING IN BLACK AND WHITE MAY RESULT IN MISSING OR UNREADABLE INFORMATION. **ALWAYS PRINT IN COLOUR.**

DATE	REV	DESCRIPTION	DRAWN	CHKD
14.11.25	P01	STAGE 2 ISSUE	FG	DP

CIVIC ENGINEERS

civicengineers.com

PROJECT

IQ WESTON HALLS AND PENDULUM CONFERENCE CENTRE MANCHESTER

TITLE

SITE SECTIONS - SHEET 1

DRAWING STATUS	STATUS CODE
RIBA STAGE 2	

CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
3341	SHOWN	OCT. 25	FG	DP

DRAWING No.	REV
3341-CIV-XX-ZZ-D-S-20001	P01