Aberfeldy Village

Utilities and Foul Sewage Assessment

Prepared in Support of the Planning Submission

Issue P06 – 21 October 2022

Doc. Ref.: 2812-MHT-ME-RP-00001

Prepared For:

POPLAR HARCA

ECOWORLD INTERNATIONAL

CREATING TOMORROW & BEYOND

MEINHARDT

ABERFELDY VILLAGE

UTILITIES AND FOUL SEWAGE ASSESSMENT

PREPARED IN SUPPORT OF THE PLANNING SUBMISSION

Quality Assurance Page

Issue	Date	Prepared By	Checked By	Approved By	Remarks
P1	30/09/2021	James Ellis Steve Lueng	G.Bhuie	G. Bhuie	DRAFT issue for planning review
P2	05/10/21	James Ellis Steve Lueng Luke Boustead	G.Bhuie	G. Bhuie	P2 DRAFT issue for planning review
P3	20/10/21	James Ellis Steve Lueng Luke Boustead	G.Bhuie	G. Bhuie	P3 Issued for Planning
P4	24/03/22	James Ellis Steve Luke	P. Richardson	S. Baverstock	P4 – Jolly Green inclusion
P5	23/08/22	Paul Richardson Luke Boustead	Steve Leung	S. Baverstock	P5 - This report is an update to the previously submitted version that was submitted to the Council in support of the hybrid planning application. This updated version has been prepared in response to the changes to the planning application boundary as explained in the covering letter to accompany the amendments to the Proposed Development
P6	21/10/22	Gurdeep Bansal Richard Wilkes			Updated to reflect the remove of Block A3 from the masterplan

Table of Contents

Executive Summary

Meinhardt have been commissioned to undertake a utilities assessment for the subject site known as Aberfeldy village, which is located in East London.

This report outlines the known public utilities on and around the subject site and identifies the key constraints. It demonstrates that the proposed scheme can be supplied with gas, electricity, potable water, telecommunications and sewer connections with the need for significant offsite improvements or diversions.

Service	Existing services	Related constraints
Electrical Services	At the south east corner of the site where Blair Street joins Abbot Road,there is an existing 11kV cable running within the pavement which requires cutting back to the main branch serving Blairgowrie court. From here new 11kV cabling will be required to the new proposed UKPN substations around the site.	Disconnections will be required on Aberfeldy high street adjacent to Culloden primary school for Sherman House, No's 54,44. These services will need to be extracted back to the main UKPN branch, making way for Blocks, H1,H2,H3. Moving north of Culloden primary school,on Dee street there are a number of UKPN services which require removing back to the main branch which is currently serving Thistle, Heather and Tartan House residential blocks consisting of buildings1-9, 8,6, 1-5,13-17,4-18. This also relates to Killbrennan house Hiouse residential blocks buildings,1-17,6-25,16-32 Services to Balmore Close Residential blocks will also require re-diverting for buildings to 1-39. This is to make way for blocks C1, C2, C3 and C4.
Gas supply	There is an existing Cadent Grid medium pressure gas main within Abbot road, Benledi Road and Blair Street which will not be disturbed in the Phase A-D works. There is good distribution of low pressure gas around the site which will need stripping back where buildings are demolished, diverting where new roads are laid and new connections where new retail spaces are provided.	Works cannot be carried out within 0.5m of the existing medium pressure Gas main east of the site. Any existing gas connections where buildings are being demolished, gas will be stripped back to the existing Gas main. Where a new gas main is required, generally for retail spaces, a new branch to be installed from the supply generally within the road.
Potable water services	There is good distribution of are Thames Water potable water mains down Blair Street, Dee Street, Abbot Road, Aberfeldy Street. A bulk supply 16" (400mm) is running along the A12 and running under residential buildings at	New connections to the Thames Water will be required as part of the proposed development. The existing connections will need to be isolated and stripped back to the branch main.

	285-343 and 257-283 Abbot Road.	The bulk supplys will require diverting to suit the location of the new buildings within the new development.
Communication services	There are utilities available from multiple telecoms companies located in the roads surrounding the site.	All existing connections on site are to be removed. New connections are to be made with the client's preferred supplier. A strategy for the new incoming comms service is required to be able to coordinate the construction phasing and the installation of the telecoms cable and the associated ducts

Table 1: Summary table

This report is an update to the previously submitted version that was submitted to the Council in support of the hybrid planning application. This updated version has been prepared in response to the changes to the planning application boundary as explained in the covering letter to accompany the amendments to the Proposed Development.

1 Introduction

This Utilities Assessment is prepared to support the hybrid planning application submitted by Ecoworld and Poplar Harca to the redevelopment of the land at Aberfeldy village, East London. It sets out the requirements and the availability of Gas, Electricity, Water and communication Services to the site. The information and strategies contained in this report aim to highlight any issues and the requirements for the site as a whole.

2 Site Description and Context

The Aberfeldy village site extends to approximately 8.14 hectares (approx.. 20 acres) in total and comprises:

- Abbott Road;
- Aberfeldy Street;
- Balmore Close;
- Blairgowrie Court;
- Heather House;
- Jura House;
- Tartan House;
- Thistle House;
- Kilbrennan House;
- Nos. 33-35 Findhorn Street;
- 2a Ettrick Street;
- 384 Abbott Road;
- Lochnagar Street;
- Aberfeldy Neighbourhood Centre;
- Nairn Street Estate; and

▪ Leven Road Open Space and Braithwaite Park are included for their enhancement.'

- Direct link and connection from the pedestrian underpass into Jolly's Green and associated tree removal and level changes
- Landscaping and works to Jolly's Green (with a specification in line with the proposals at Leven Rd Open Space, Braithwaite Park and Millennium Green)
- Provision of play space in Jolly's Green

Figure 1: Existing Site

Site boundary

Extent of existing Outline Planning Permission for Aberfeldy Village

3 Development Proposals

3.1 Site Context

Figure 2: Proposed Development Masterplan

The new development shall consist of the following:

Phase A Residential and Retail uses

Phase B Residential, car park, Retail and workspace

Phase C Residential, car park, Retail and Commercial use

Phase D Residential and Retail

3.2 Site Phasing Strategy

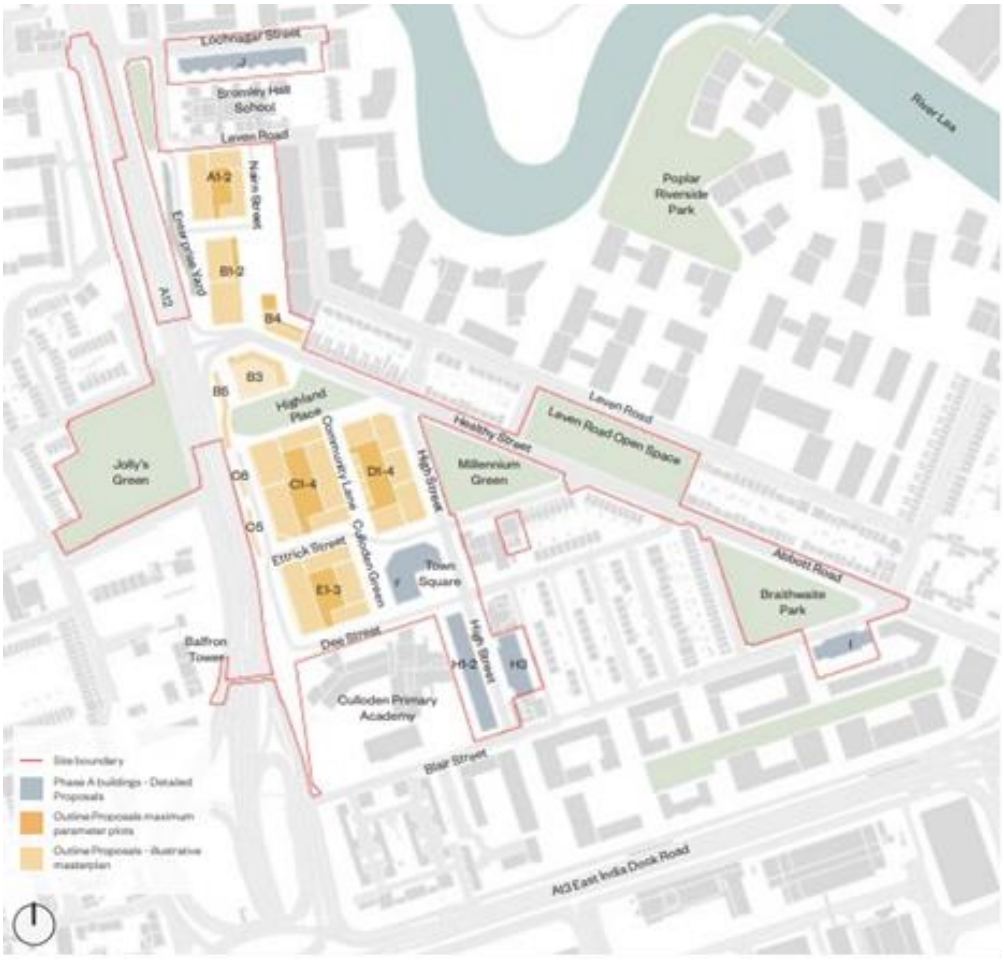


Figure 3: Proposed Site Phasing Strategy

The site phasing strategy has been developed to construct phase A first, which consist of block J1, block H1, block H2, block H3, blockF1, and block I1. The later phases will then allow the construction of phase B, phase C and phase D.

The existing services will also need to be considered in terms of isolations when the buildings are vacated in order to be able to demolish them in a safe and appropriate manner. The new Water, gas, comms and Electricity services to serve the entire site will have to be installed in conjunction with the site phasing strategy.

The existing services drawing, strip out/diversions and new connections drawings have been attached to the appendix of this document.

4 Electricity Supply

4.1 Existing electricity supply

There is an existing substation which would supply power to block J1 which comprises the town houses and block I1. The main LV distribution for Phase A is as stated below:

- Each block has a primary Low Voltage (LV) switchroom and a secondary Life Safety (LS) switchroom which is supplied from the UKPN double substation located in block F1.
- The individual LV supply for each town houses in block J1 is from the existing substation.
- The LV supply for block I1 is from the existing substation.
- The LV supply for block H1, block H2, block H3 and block F1 is from the new UKPN double substation located in block F1.

The plant asset records and mapping information received from UKPN indicates there are 3No substations feeding services on the site. (Detailed below)

- substation 01 – Culloden Sreett School
- substation 02 – Bromley Hall Road
- substation 03 - Dee Street

The UKPN asset records identify both high and low voltage services surrounding the site and traversing across the site. Please refer to detailed plans for information

The new substation serving the phase A of the Aberfeldy village site is located in the lower ground floor of block F1. This is as indicated on the diagram below. The substation serves mainly block H1, block H2, block H3 and block F1.

The other phases in the Aberfeldy village masterplan are Phase B, Phase C and Phase D.

Phase B has a new double UKPN substation located in block B2. This new substation would provide LV supply for block B1, block B2, block B3, block B4, block A1 and block A2.

Phase C has two new double UKPN substation located in block C1 and block E1. This new substion located in block C1 would provide LV supply for block C1, block C2, block C3,and block C4. Also, the new substation located in block E1 would provide LV supply for block E1, block E2 and block E3.

Phase D has a new double UKPN substation located in block D1. This would provide LV supply for block D1, block D2, block D3 and block D4.

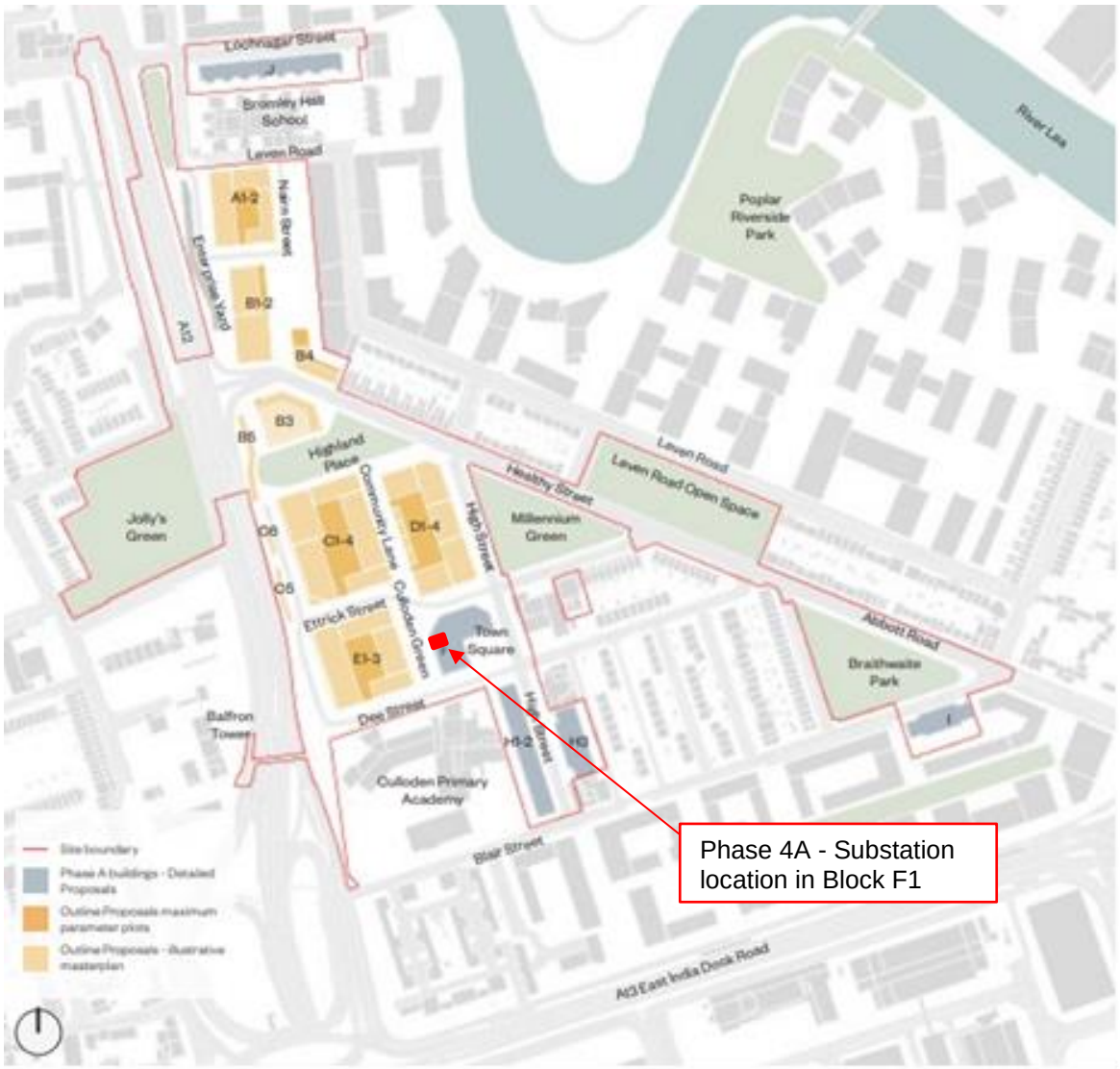


Figure 5: Substation location

4.2 Works Proposal

Based on the current information for the proposed occupancy, site use within the application and submission the current HV supply capacity feeding into the 2No existing substations; will need the demand adequacy confirmed for the development's electricity demand.

Further investigation will required to where the 11KV network can be taken from, but it is anticipated that the existing UKPN HV point of connection will be from the current location on Waterloo Road with a diversion from to new substation locations.

We also need to be aware of the current 132kV cable running across the site.

Should the existing supply be not adequate, an upgrade to the HV network will be required. This will be determined and included by UKPN.

This will be confirmed once all of the loads for the sites have been ascertained and an application is made to the regional electricity company, UKPN and or other iDNO. Utilitas have already started carrying out initial discussions with utility companies, so the budget quotations should be shared with the design team.

Feeder pillars will be provided for the street lighting and any other adoptable electrical services.

4.3 Diversion/Easement

Where possible, the existing HV supply, supplying the existing site will be retained and diverted to services the new development. Amendments of wayleaves and easements will be required for any diversions of existing cabling, cable ways and existing substations.

4.4 Decommissioning and Disconnection

The new UKPN substations required for the new proposed development are to be situated within each of the new buildings – as indicated on the current proposed plans

Metering to existing properties will be removed and all electrical supplies de-energized prior to the decommissioning and disconnections from the substations.

5 Potable Water Supply

5.1 Existing potable water supply

The existing Thames water surround mains infrastructure within Blair Street, will not be affected by the devlepment.

Existing water service pipes into existing building to be demolished, will be cut back into roads. This will occur in Leven Road, Enterprise Road, Dee Street.

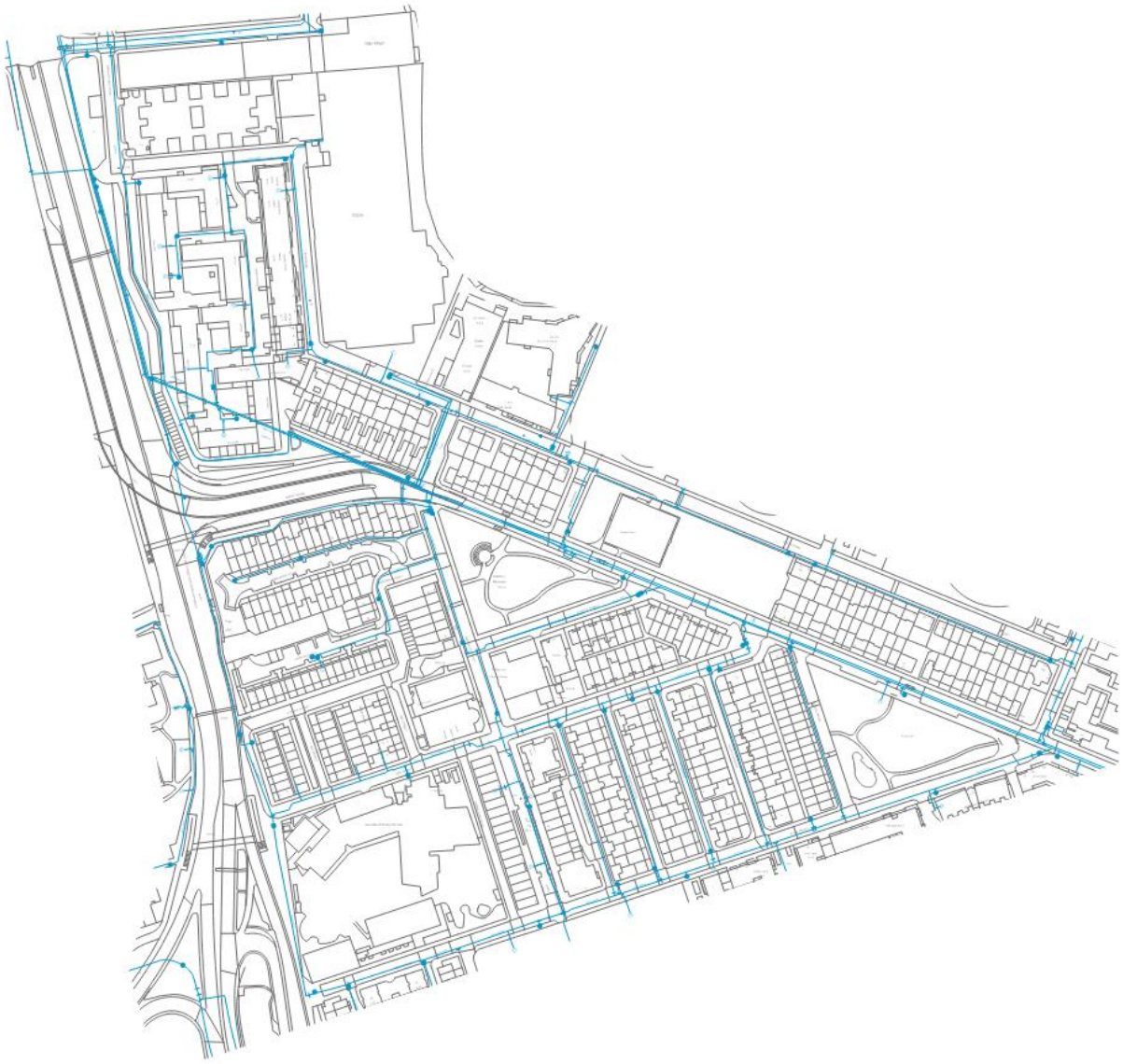


Figure 4: Existing Thames Water Asset Plan

5.2 Diversion/Easement

Major stripout and diversion works to be carried out Nairn Street, path along A12, Abbot Road, Balmore Road, Findhorn Street and generaly where blocks B3 and C1/2 are located within the new development.

See appendix for diversion sketches included within appendix.

5.3 New Connections

Application have been made and possible connection for new water mains could be made from the 9” main on Abbott Road. Thames water have confirmed due to the scale of the development Network Modelling will need to be carried out to confirm capacity is available in the surrounding network otherwise new mains or reinforcement could be required.

Outline durations, if reinforcement is required are:

Modelling: 6 months

Design (if required): 6 months

Reinforcement (if required): 6 months

Total: 18 months

Capacity report has been included within the appendix of this report.

5.4 Status of applications

Item	Status	Actions	Approved? (y/n)
Disconnection of existing potable local water connections	Application with new connections, diversions and disconnections submitted to Thames Water	Payments to be made when quotations received.	N
Pre-development enquiry for potable water service for the development.	Thames water confirmed there will be sufficient capacity for the development.	None	Y
Network modelling	Awaiting Payment	Water loadings to be revised and re-issued to Thames Water prior to modelling of infrastructure	N

Table 2: Status of potable water applications

6 Communication services

6.1 Existing communication services

The plant asset and mapping record information received from BT Openreach indicates there are communications services traversing the site, as indicated below, there is Openreach services along all residential roads, including Blair street, Abbott Road, Aberfeldy Street

Figure 5: Existing Openreach services

Virgin Media's plant asset and mapping record information received indicate there is good distribution along all roads throughout the existing development.

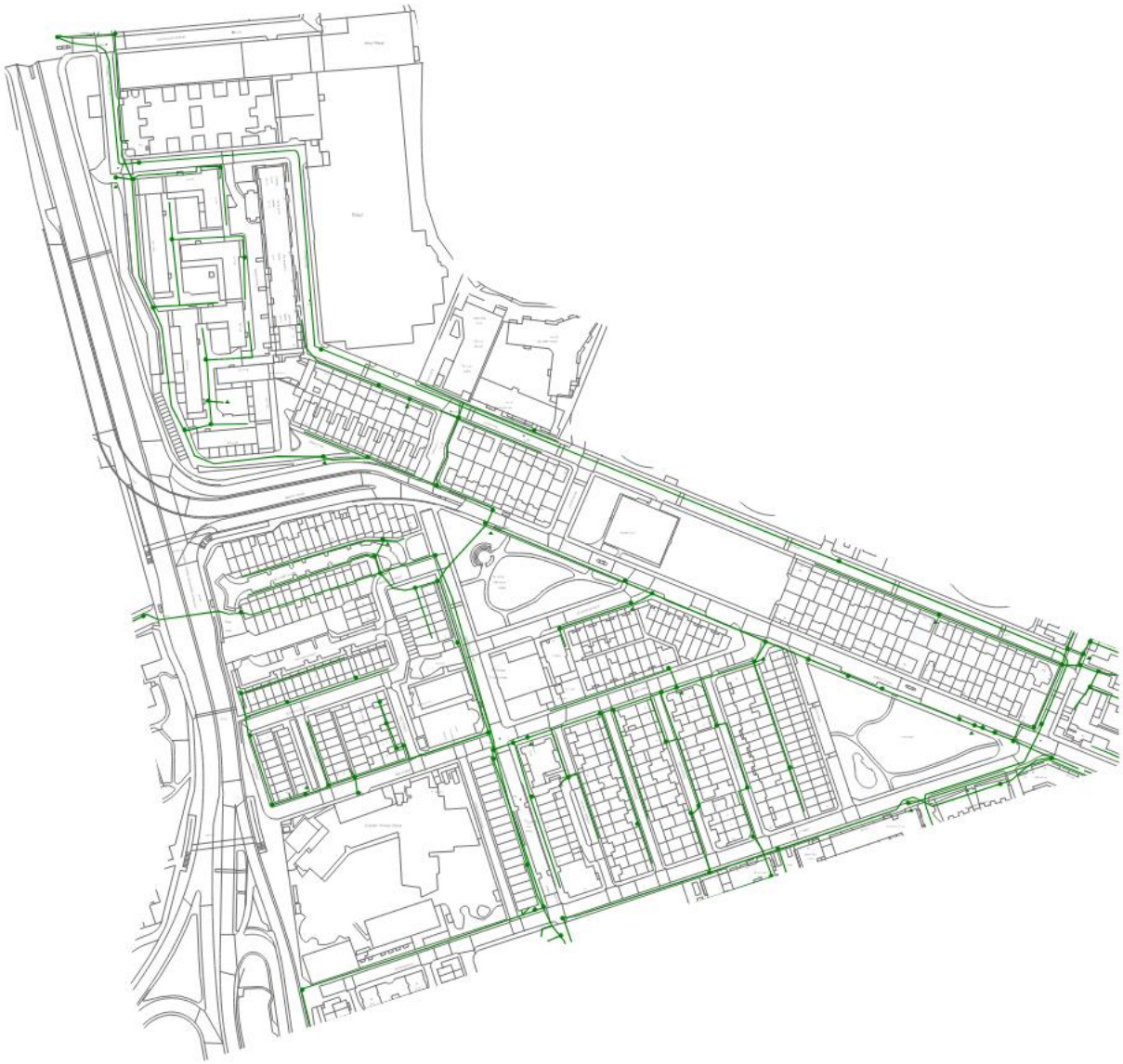


Figure 6: Existing Virgin Media services

Searches have also been made for other communication networks which include EU networks, Instalcom, GTT, Verizon, Zayo, Tata, Telent, KPN, SSE telecoms, City Fibre, Vodofone and Masts shown in figure below:

Figure 7: Other communication services

6.2 Disconnections and Diversions

The existing BT and Virgin Meda connections within the proposed developments site boundary are to be removed back to the point of connection outside of the site boundary.

It is expected that communication services running through Balmore Close to be diverted as this is a major route for this communication services serving Data Centres. These major works occur in phase C.

6.3 Works Proposals

Assumed existing telecommunication connections around the site should be adequate to connect on to.

6.4 Status of applications

Item	Status	Actions	Approved? (y/n)
BT Openreach	Application for new, disconnections and diversion made. Survey to be carried out to provide formal estimate for diversions. Awaiting response.	Survey fee £19,020 to be paid by EW	N
Virgin Media	Application for new, disconnections and diversion made. Awaiting response	Awaiting quote	N
EU networks	Application for diversions submitted. Response from EU networks networks: 1-way duct containing 9no Fibres at Balmore Close. EU confirmed Fibres are a major asset and serve Data Centres and the likes of Google, E-bay, etc. 9no Fibres will be diverted over separate weeks (9no) with >4km of Fibre to be pulled and jointed	Payments to be made	N
Instalcom	Awaiting response	None	N
GTT	Awaiting response	None	N
Verizon	Application for diversion made. Survey to be carried out to provide formal estimate for diversions. Awaiting response.	None	N
Zayo	Application for diversion made. Initial response from Zayo: 4no Fibres affected and is a major route, with the proposed Blocks C & D being on top of their current network currently running through Balmore road. Survey to be carried out by Zayo to provide formal quote. Awaiting response	None	N
Tata	Application for diversion made. Survey to be carried out to provide formal estimate for diversions. Tata have confirmed no diversions or disconnections are required.	None	N
Telent	Application for diversion made. Awaiting response	None	N
KPN	Application for diversion made. Awaiting response	None	N
SSE telecoms	Application for diversion made. Awaiting response	None	N

City Fibre	Application for diversion made. Initial response: City Fibre not impacted by the development. Ducts are running along soute of A13	None	N
Vodafone	Application for diversion made. Initial response: network is affected on Abbott Road by B2 and a full diversion will be required.	Awaiting quote	N
Masts	Application for diversion made. Awaiting response	None	N

Table 3: Status of communication supply approvals

7 Gas Supply

7.1 Existing gas supply

Phase A works include removal of gas meters and service pipes into buildings to be demolished shall be cut back and isolated within the road.

Part of the masterplan works, again removal of gas meters and supplies to be cut back into the road. The entire gas service in balmore close and Findhorn Street to be cut back into Aberfeldy Street. The majority of the gas service located within Nairn Street, Oakes Mews to be stripped back to accommodate A1, A2, A3, B1 & B2 in the masterplan.

Figure 8: Existing Gas Services Asset Plan

7.2 Diversion/Easement & Abondonment

Some diversion works to be carried out in Ettrick Street which gets relocated along with the road.

There is an existing medium pressure gas main to the east of the development that runs in Beneldi Street but is not impacted by the development. This MP gas main will need to be maintained and any works kept clear 0.5m proximity shown in blue of Figure 9.

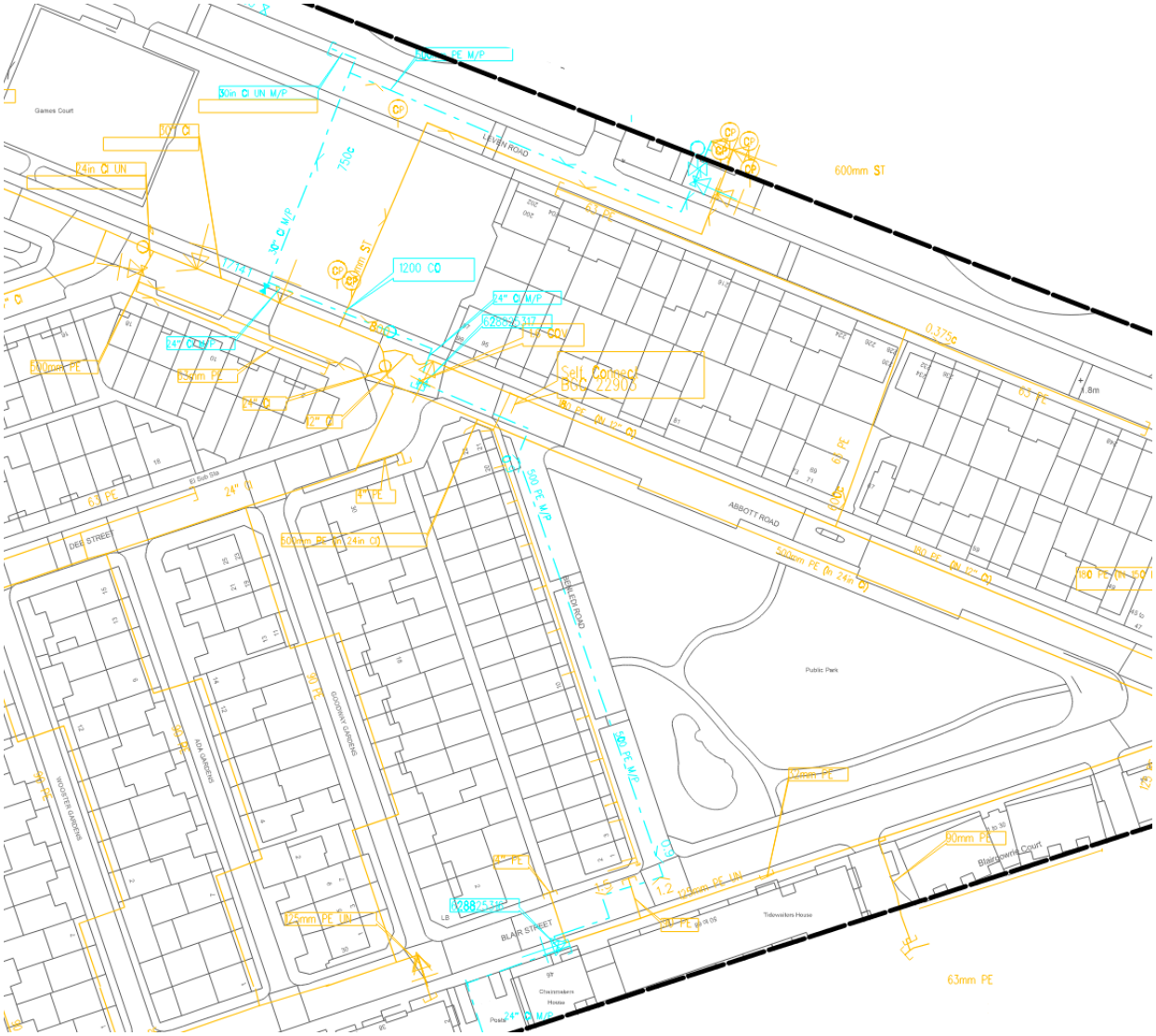


Figure 9: Existing medium pressure Gas Services

With the Energy Strategy of the scheme being electrically led, there is a significant number of disconnections of meters and supplies to buildings with gas mains within the road being redundant therefore a significant cost to abandon these services.

7.3 New Connections

There are 13 new new gas connections required for the commercial units (with gas cooking appliances) which would be run from Blair Street along Aberfeldy Street. These number of connections to be confirmed in the next stage.

7.4 Status of applications

Item	Status	Actions	Approved? (y/n)
Disconnection of existing gas meters and gas main connections	Applications made and budget cost for disconnections received.	Application to be confirmed in new stage of project.	N
Pre-development enquiry for gas service for the development.	Application made and confirmation capacity is available in the network. Connections costs received for new supplies to commercial units. Some gas mains are being abandoned due to the decarbonisation of the development. There is significant cost associated with these works.	Acquire alternative quotes for strip out of gas services.	N

Table 4: Status of gas meter and supply approvals

8 Foul Water Drainage

8.1.1 Drainage Design Parameters

The below-ground foul drainage system will be designed to Sewers for Adoption 7th Edition, BS EN 752 Parts 3 and 4, and the Building Regulations Document H where appropriate.

8.1.2 Public Sewers

Asset records obtained in November 2020 from Thames Water have revealed public surface and combined water sewers crossing through the proposed Aberfeldy Village site. The arrangement of the network is summarised below:

Thames Water Surface Water Sewers

The surface water sewers crossing the proposed site are located within:

- Abbott Road (B125) within the proposed site boundary (From MH Ref: 3406 – 3403 to 3402). The diameter of the surface water sewer is 225mm;
- Abbott Road (B125) within the proposed site boundary (From MH Ref: 2420 – 3403 to 3402). The diameter of the surface water sewer is 225mm. It is assumed to be a Thames Water pumping station for the road fly under. A CCTV survey will be required to establish what it serves.

These two sewers are assumed to be picking up Abbott Roads highway drainage and will therefore be abandoned along with the road itself as dictated by the scheme.

Thames Water Combined Water Sewers

The combined water sewers crossing the proposed site are located within:

- Lochnagar Street to the north of the site (the public combined water sewer is running west within Lochnagar Street to MH Ref: 2704). The diameter of the combined water sewer is 305mm and changes to 381mm just before connecting into Thames Water manhole 2704;
- Bromley Hall Road to the north west of the site (From MH Ref: 2630 to 2705). The diameter of the combined water sewer is 225mm and changes to 305mm just before connects to Thames Water manhole 2705;
- Leven Road to the east of the site (the public combined water sewer is running south within Leven Road: from MH Ref: 3605 to 5403). The diameter of the combined water sewer starts at 225mm and increases in size to 300mm sewer. The combined water sewer then changes into a 600mm before entering the proposed site and connecting into Thames Water combined manhole 5403;
- Leven Road to the east of the site (the public combined water sewer is running north within Leven Road: from MH Ref: 7403 to 5405). The diameter of the combined water sewer starts at 305mm, changes in size to 300mm sewer and then to 225 before connecting into Thames Water combined manhole 5405;
- Darnaway Place to the east of the site (the public combined water sewer is running south within Darnaway Place: from MH Ref: 4511 to 4407). The diameter of the combined water sewer is 229mm;
- Blair Street to the south of the site and running north through the proposed site boundary (From MH Ref: 7303 to 6302). The diameter of the combined water sewer is 305mm and changes to 457mm after the junction with Thames Water combined sewer which is running north to the combined Thames Water manhole 6302;
- Blair Street to the south of the site (the public combined water sewer is running east within Blair Street from: MH Ref: unknown-4203 to 5205). The diameter of the combined water sewer is 305mm and changes to 457 before connecting into Thames Water combined manhole 5205;

- Aberfeldy Street within the proposed site boundary (the public combined water sewer entering through the south of the site and is running north within Aberfeldy Street: from MH Ref: 5205 to 4407). The diameter of the combined water sewer starts at 457mm and changes to 533mm before connecting into Thames Water combined water manhole 4301A. The combined water sewer exiting Thames Water manhole 4301A is 610mm and changes to 686mm after Thames Water combined manhole 4420, before connecting into Thames Water combined manhole 4407;
- Dee Street within the proposed site boundary (the public combined water sewer is running east within Dee Street from MH Ref: 3222 to 4312). The diameter of the combined water sewer is 305mm;
- Ettrick Street within the proposed site boundary (the public combined water sewer is running east from MH Ref: 3316 to 4301A). The diameter of the combined water sewer is 300mm and changes to 305 before connecting into Thames Water combined manhole 4301A;
- Abbott Road (B125) within the proposed site boundary (From MH Ref: 8301 to the combined trunk running north within Joshua Street). The diameter of the combined water sewer is 914mm and changes to 991mm just before connects to the combined trunk in Joshua Street;
- Abbott Road (B125) within the proposed site boundary (From MH Ref: 4407 to the combined trunk running north within Joshua Street). The diameter of the combined water sewer is 991mm.

There is a combined water trunk sewer located to the west of the site within the proposed site boundary running north. The diameter of the combined water sewer is 2250mm.

Refer to the appendices for the complete Thames Water Asset Records.

Meinhardt has overlaid the existing sewer information from the Thames Water Asset Records and the proposed architectural masterplan on a sketch to determine whether there are any areas where proposed structure will sit over the existing Thames Water assets. The sketch has highlighted a number of the proposed buildings are located directly above the existing Thames Water sewers and manholes. Where this occurs either a build over agreement or a sewer diversion will be required with Thames Water to proceed with the current site layout.

Based on the Thames Water Assets Records all of the existing private drainage has been shown to be draining to the north of the site where there are multiple existing connections to the Thames Water surface and combined water sewers crossing through the site.

Refer to the sketch 2812-MHT-CV-BG-DR-050 in the appendices for details of the existing Thames Water sewers crossing the site.

8.1.3 Proposed Foul Water Drainage Strategy

Due to size and phasing of the development, it is proposed that foul drainage from the site will be split into 10 individual outfalls into the Thames Water combined network. Splitting the foul discharge from the site is important due to the potential increase in flow, reducing the impact on the existing Thames Water combined drainage network.

The proposed foul water drainage strategy for the site involves the MEP engineer's coordination of the superstructure drainage up until it exits the building and enters the below-ground drainage network. A bbelow-groundelow ground drainage network of pipes and manholes will collect the foul water discharge from the buildings and convey to a demarcation chamber, before discharging via gravity to the existing Thames Water combined water sewers within the site or surrounding the site. This will be coordinated during detailed design.

The proposed strategy includes various connections to the existing Thames Water combined sewer network. These are outlined below.

As phase A is divided into 3 different locations it is proposed that Blocks I1, J1, F1, H1&H2 and H3 to drain separately into the closest Thames Water combined water sewer network. Therefore five connections to the Thames Water combined water sewer network are proposed for phase A:

- For the building I1 it is proposed that a new connection will be made to the northwest corner of the building into the Thames Water combined water network in Blair Street (TWMH7303);
- It is proposed that building J1 to discharge foul water into Thames Water combined water sewer in Leven Road (TWMH3602) via a new connection;
- It is proposed that a new connection will be made to the southeast corner of the building F1 into the Thames Water combined water sewer in Aberfeldy Street (TWMH4313-TWMH4312); and
- Buildings H1&H2 and H3 will discharge foul water via two new separate connections into Thames Water combined sewer in Aberfeldy Street (TWMH4215).

The proposed strategy for phase B includes a total of three connections to the existing Thames Water combined sewer network. These are outlined below:

- One connection to the Thames Water combined sewer network in Leven Road (TWMH3605), through a new connection serving building A1/A2;
- One connection to the Thames Water combined sewer network in Abbott Road (TWMH3517 to TWMH2536), through a new connection serving buildings B1/B2 and B4;
- One connection to the Thames Water combined sewer network in Abbott Road (TWMH3516), through a new connection serving building B3/B5.

It is proposed that foul water from the Phase C will flow via gravity to the east of this phase where a new connection to the Thames Water network in Ettrick Street (TWMH4303) will be made. This will be serving the buildings C1/C2/C3/C4, C5, C6 & E1/E2/E3.

The proposed foul water strategy for the building Phase D is to discharge foul water via gravity to the southeast of the phase D into Thames Water combined water sewer in Ettrick Street (TWMH4302) via a new connection.

The proposed new connections are subject to a CCTV survey which will survey the line, level and condition of the existing sewers. If this survey identifies any available existing connections in those locations there may be an opportunity to reuse. This will be explored during detailed design.

The discharge locations and foul water strategy will be confirmed during detailed design and a Section 106 drainage connection application for each connection will be submitted at the construction stage to Thames Water for formal approval of the proposed connections arrangement.

8.1.4 Proposed Foul Water Discharge Rates

Based on the most recent accommodation schedule (as at 17.09.21), the peak foul water discharge rate from the site will be in the region of 75l/s. This proposed discharge rate has been calculated in accordance with BS EN 12056-2, however, this will be confirmed by Meinhardt's MEP engineer during detailed design.

Thames Water have been contacted and have confirmed they have sufficient capacity in their network to accept the proposed flows from the development (surface water and foul water).

8.1.5 Proposed Combined Water Flow Rates

The proposed combined water discharge rates for the site are outlined in Table 5.

Contributing Area (ha)	Proposed Surface Water Discharge Rate [1 in 100 year storm + 40% CC] (l/s)	Proposed Peak Foul Water Discharge Rate (l/s)	Proposed Combined Peak Discharge Rate (l/s)	Reduction compared to Existing Combined Discharge Rate
3.2	22.4	75.58	97.98	66%

Table 5: Proposed Combined Water Discharge Rates

The proposed discharge rates will be confirmed during detailed design.

8.1.6 Site Wide Foul Water Drainage Coordination

The proposed foul water drainage strategy for the site involve coordination with Meinhardt's MEP engineer's to coordination the superstructure drainage up until it enters the below ground drainage network. A below ground drainage network of pipes and manholes will collect the foul water discharge from the buildings before discharging via gravity into the Thames Water combined sewer located in the surrounding roads.

Any ground floor or basement level foul water drainage that can't be drained by gravity will be routed to private basement foul water pump chambers which will lift foul water from the basements into the internal drainage network before draining via gravity into the external below ground drainage network.

9 Conclusion and Recommendations

- In order to progress the drainage strategy and build over agreements, surveys of the public drainage infrastructure need to be carried out. The surveys required to progress these works are a CCTV drainage condition survey of all public drainage infrastructure in the area and a Gyroscopic survey of the Thames Water sewers that will require build over agreements
- The proposed development will not have adverse effects on the existing drainage infrastructure and Thames Water have confirmed there is sufficient capacity in the public sewers to accept the proposed foul flows generated by the site.
- Continued liaison with Utility companies via Utilitas (stats manager for Ecoworld). Update to applications if required in the next design station.

Appendix A – Utility Drawings

Appendix B – Thames Water Pre-development Enquiry and sewer plans

Appendix C – Thames Water Capacity Confirmation

Meinhardt (UK) Ltd
10 Aldersgate Street
London
EC1A 4HJ
T: +44 (0) 20 7831 7969

www.meinhardt.co.uk

Appendix A – Utility Drawings

NOTES

- Do not scale from this drawing.
- The information provided on this mapping plan about the existing utility services conforms to BSI PAS 128 (QL-D) and is based on historic records provided by the statutory utilities. The actual position and status of any mains and services must be verified and established on site. This plan is provided for information only.
- Should the background or topographical information for the mapping area be based on an ordnance survey tile we are not liable for any loss that may arise due to lack of accuracy in the digital data.
- The information on this plan is given without obligation or warranty. No liability of any kind whatsoever is accepted by Premier Energy Services Ltd, its agents or servants for any errors or omissions.
- Services to buildings are not always shown but it must be assumed that any existing building is served with "live" supplies until proven otherwise. Written confirmation that a supply is "dead" must be obtained from the relevant utility.
- Cables to street lighting, road signs, illuminated bollards, traffic controls and some overhead apparatus are not always shown but must be assumed to exist.
- The location of any mains and services must be undertaken by EML or GPR surveys followed, if required, by hand dug trial holes. The approval of the appropriate utility must be sought before any mechanical plant is used.
- Underground services must be located in accordance with HSE Guidance Note HS (G) 47 and BSI's PAS 128:2014.
- Overhead power lines must be dealt with in accordance with HSE Guidance Note GS 6 (third edition).
- For clarity existing plant is represented by single colours and not necessarily the colours used by each utility in its original format.
- For details of size, pressure, voltage, material and sectional data always refer to the original utility records. Any text and annotated data shown within the PALM (Premier Asset Layered Map) will depend on format and quality of utility records. Refer to original utility record for full details.
- All utility records valid for 3 months from date of issue provided in the original URS report.

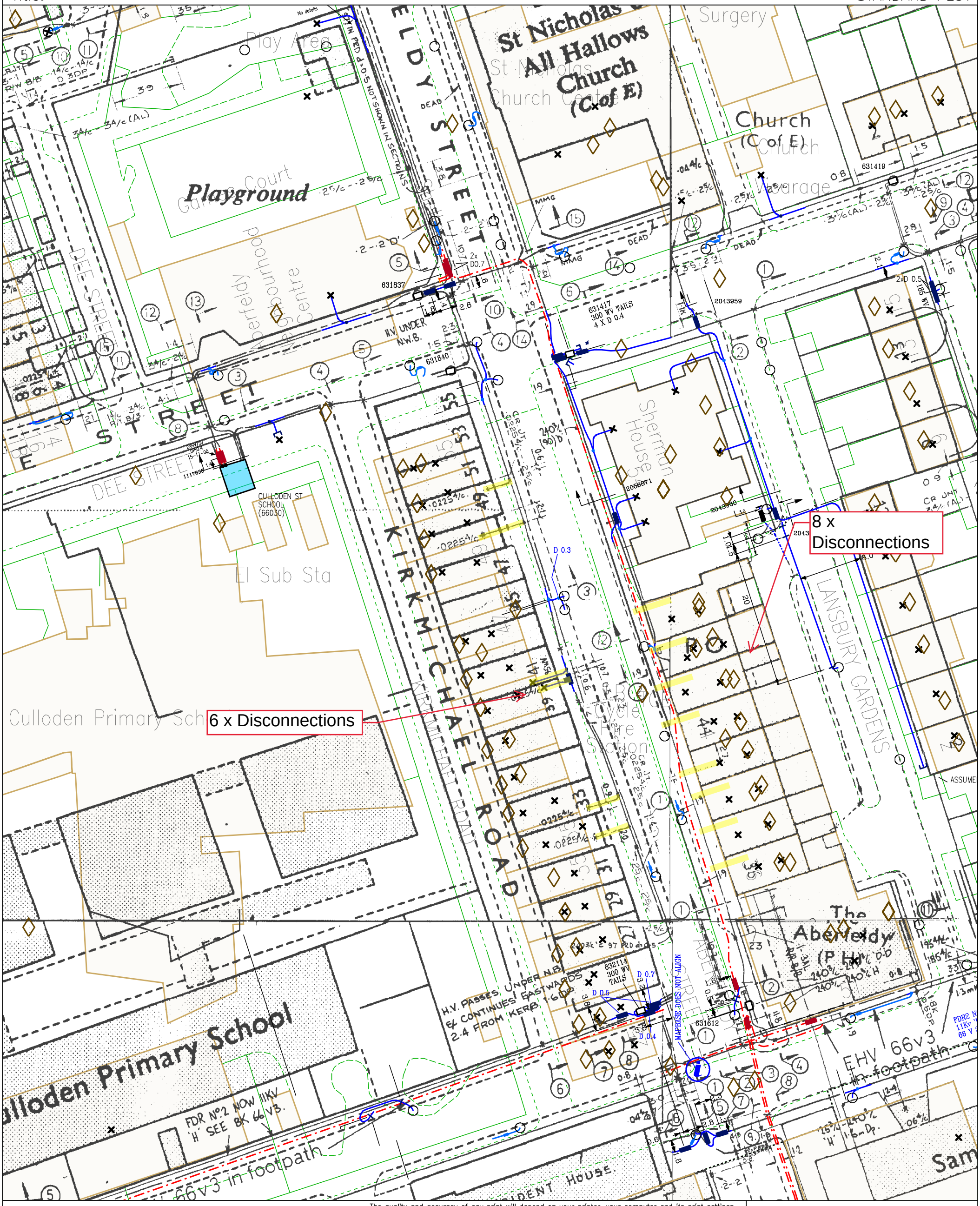
- ELECTRIC - UK POWER NETWORKS ☑
- HV ELECTRIC - LULHV ☑
- ELECTRIC - TFL ☑
- ELECTRIC - GTC ☑
- WATER - THAMES WATER ☑
- WATER - SEWERS - THAMES WATER ☑
  - SURFACE
  - FOUL
- GAS - CADENT ☑
  - LP
  - MP
- GAS - ESP ☑
- GAS - GTC ☑
- OPENREACH ☑
- CATV - VIRGIN MEDIA ☑
- COMMUNICATION - EU NETWORKS ☑
- COMMUNICATION - INSTALCOM ☑
- COMMUNICATION - GTT ☑
- COMMUNICATION - VERIZON ☑
- COMMUNICATION - ZAYO ☑
- COMMUNICATION - TATA ☑
- COMMUNICATION - TELENT ☑
- COMMUNICATION - KPN ☑
- COMMUNICATION - SSE TELECOMS ☑
- COMMUNICATION - CITY FIBRE ☑
- COMMUNICATION - VODAFONE ☑
- COMMUNICATION - MASTS ☑

Utility Search PALM 128

REPORT:	BSI's PAS 128 QUALITY LEVEL D
PROJECT:	ABERFELDY
CLIENT:	MEINHARDT
DRAWING STATUS :	FOR INFORMATION
DRAWN BY: TC	CHECKED BY: MR / APPROVED BY: TC
DATE: 10.12.2020	SCALE: Not to Scale
DRAWING NUMBER: PEM607454	REVISION:

Premier Energy
specialists in utility infrastructure
Premier House, Daux Road, Billingshurst, West Sussex, RH14 9SJ
01403 740240 info@premierenergy.co.uk www.premierenergy.co.uk

Title: STANDARD PLOT



0m 5m 10m 15m 20m 25m 30m 35m 40m 45m

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.

LV Cable or Line

HV Cable or Line

EHV Cable or Line approx. Location

Duct Ends

Service Discon & Street Furniture

Substation & Link Box

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified – use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all cables have been determined.
4. It must be assumed that each property and item of street furniture has an electricity supply. A separate record is kept for each service cable but its route is not necessarily shown on this record.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks' plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

Contact UK Power Networks on 0800 056 5866 for details of EHV Cable routes before commencing work.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any person or causes personal injury to a person where such death or personal injury is caused by its negligence.
3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and you must return it to the sender of the letter.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

Grid Ref: TQ3881SW

Scale 1:500

(When Plotted at A3)

UK Power Networks

Plotted on: 16/07/2021

Plotted by: <anonymous>

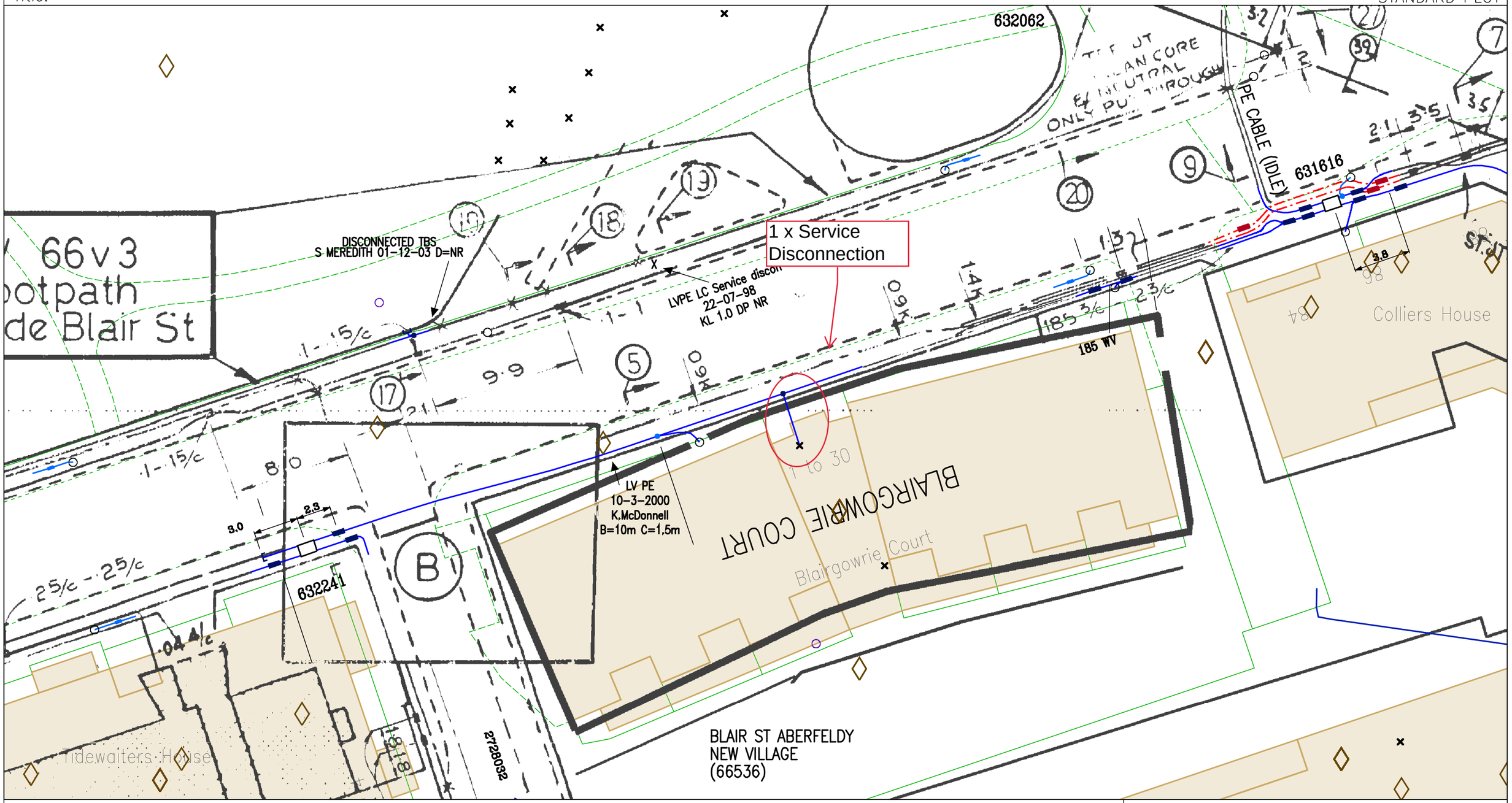
Raster Visibilities:

Comp	HV	LV	Mains	Ways
ON	ON	ON	ON	ON

IF IN DOUBT – ASK! PHONE 0800 056 5866
EMERGENCY – If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

Maps produced at 1:2500 scale are LV Geo–Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

Title: STANDARD PLOT



0m 5m 10m 15m 20m

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.

LV Cable or Line
HV Cable or Line
EHV Cable or Line approx. Location
Duct Ends
Service Discon & Street Furniture
Substation & Link Box

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified – use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all cables have been determined.
4. It must be assumed that each property and item of street furniture has an electricity supply. A separate record is kept for each service cable but its route is not necessarily shown on this record.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks' plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

Contact UK Power Networks on 0800 056 5866 for details of EHV Cable routes before commencing work.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any person or causes personal injury to a person where such death or personal injury is caused by its negligence.
3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and you must return it to the sender of the letter.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

Grid Ref: TQ3881SE
Scale 1:250
(When Plotted at A3)
Plotted on: 16/07/2021
Plotted by: <anonymous>

UK Power Networks

IF IN DOUBT – ASK! PHONE 0800 056 5866
EMERGENCY – If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

Raster Visibilities:

Comp	HV	LV	Mains	Ways
ON	ON	ON	ON	ON

Maps produced at 1:2500 scale are LV Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

Title: STANDARD PLOT

2 x LV mains cables 2 x HV Cable diversions and L/B Diversion

Customer to contact Major Connections directly if they require the 132kv EHV Route 384 cable and the related pilot cables to be diverted in any way

1 x Submain disconnection

19 x Service disconnections

0m 5m 10m 15m 20m 25m 30m 35m 40m 45m 50m 65m

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.

LV Cable or Line
HV Cable or Line
EHV Cable or Line approx. Location
Duct Ends
Service Discon & Street Furniture
Substation & Link Box

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified – use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all cables have been determined.
4. It must be assumed that each property and item of street furniture has an electricity supply. A separate record is kept for each service cable but its route is not necessarily shown on this record.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks' plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

Contact UK Power Networks on 0800 056 5866 for details of EHV Cable routes before commencing work.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any person or causes personal injury to a person where such death or personal injury is caused by its negligence.
3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and you must return it to the sender of the letter.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

Grid Ref: TQ3881SW
Scale 1:650
(When Plotted at A3)
Plotted on: 16/07/2021
Plotted by: <anonymous>

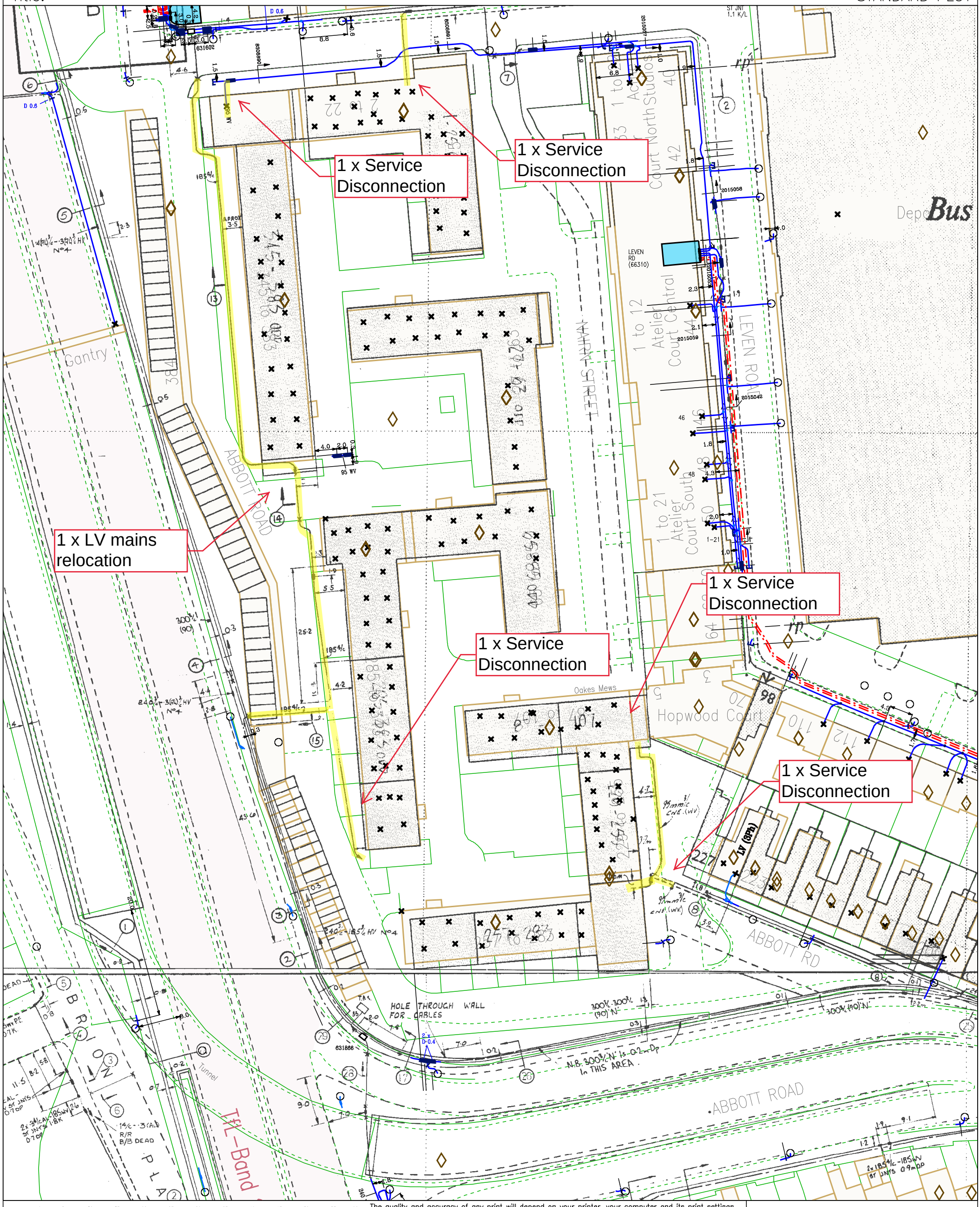
UK Power Networks

IF IN DOUBT – ASK! PHONE 0800 056 5866
EMERGENCY – If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

Raster Visibilities:				
Comp	HV	LV	Mains	Ways
ON	ON	ON	ON	ON

Maps produced at 1:2500 scale are LV Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

Title: STANDARD PLOT



0m 5m 10m 15m 20m 25m 30m 35m 40m 45m 50m 55m 60m

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.

LV Cable or Line

HV Cable or Line

EHV Cable or Line approx. Location

Duct Ends

Service Discon & Street Furniture

Substation & Link Box

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified – use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all cables have been determined.
4. It must be assumed that each property and item of street furniture has an electricity supply. A separate record is kept for each service cable but its route is not necessarily shown on this record.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks' plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

Contact UK Power Networks on 0800 056 5866 for details of EHV Cable routes before commencing work.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any person or causes personal injury to a person where such death or personal injury is caused by its negligence.
3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and you must return it to the sender of the letter.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

Grid Ref: TQ3881NW

Scale 1:650

(When Plotted at A3)

UK Power Networks

Plotted on: 16/07/2021

Plotted by: <anonymous>

Raster Visibilities:

Comp	HV	LV	Mains	Ways
ON	ON	ON	ON	ON

IF IN DOUBT – ASK! PHONE 0800 056 5866
EMERGENCY – If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

Maps produced at 1:2500 scale are LV Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

Title: STANDARD PLOT

2 x Disconnection

4 Way L/B to be relocated on to Culloden Street

1 x Mains cable cut back to Ettrick Street

1 x Disconnection

1 x Disconnection

3 x Disconnection

1 x Mains cable cut back to Dee Street

1 x Mains cable cut back to Dee Street

0m 5m 10m 15m 20m 25m 30m 35m 40m 45m

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.

LV Cable or Line

HV Cable or Line

EHV Cable or Line approx. Location

Duct Ends

Service Discon & Street Furniture

Substation & Link Box

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified – use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all cables have been determined.
4. It must be assumed that each property and item of street furniture has an electricity supply. A separate record is kept for each service cable but its route is not necessarily shown on this record.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks' plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

Contact UK Power Networks on 0800 056 5866 for details of EHV Cable routes before commencing work.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any person or causes personal injury to a person where such death or personal injury is caused by its negligence.
3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and you must return it to the sender of the letter.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

Grid Ref: TQ3881SW

Scale 1:500

(When Plotted at A3)

UK Power Networks

Plotted on: 16/07/2021

Plotted by: <anonymous>

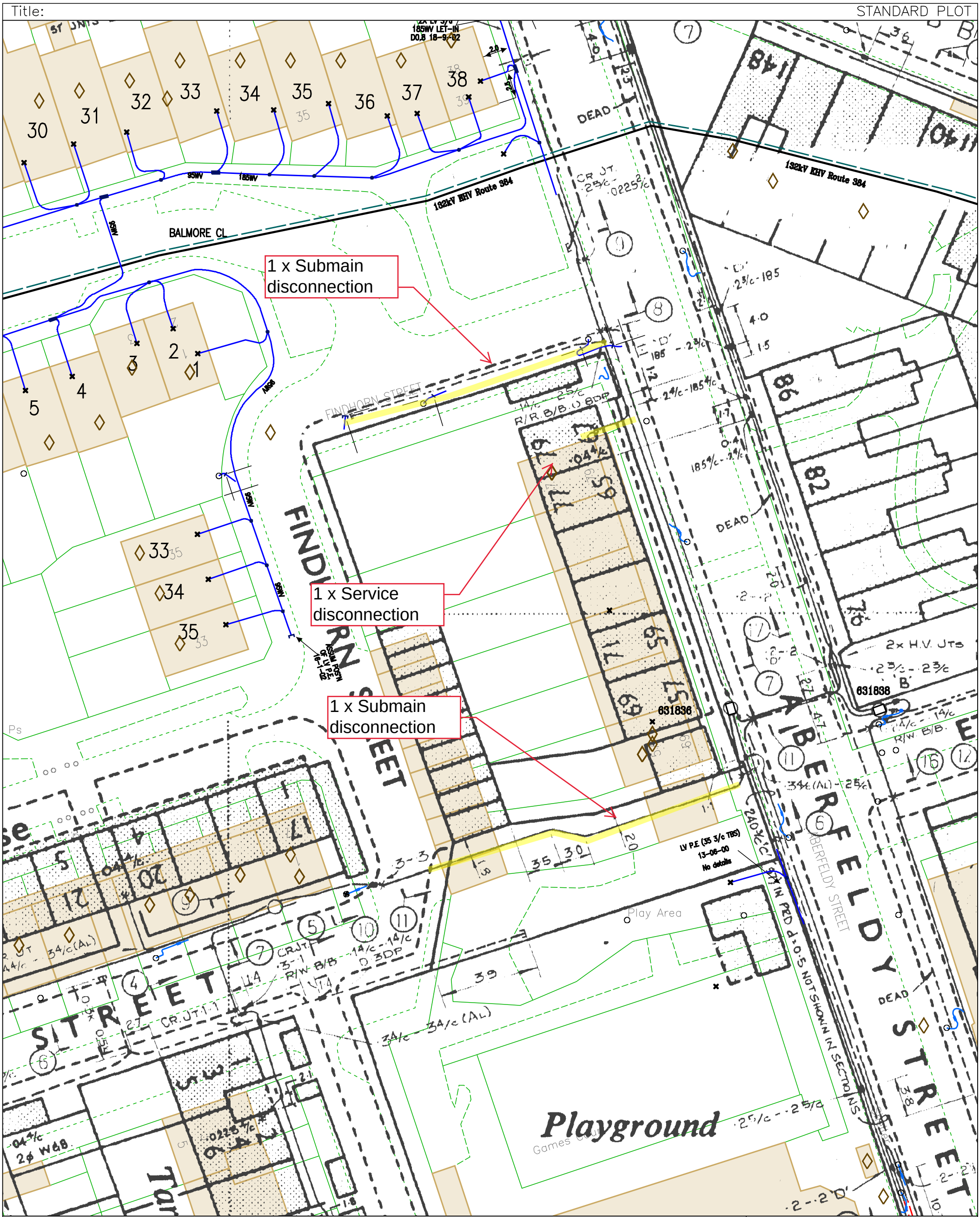
Raster Visibilities:

Comp	HV	LV	Mains	Ways
ON	ON	ON	ON	ON

IF IN DOUBT – ASK! PHONE 0800 056 5866
EMERGENCY – If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

Maps produced at 1:2500 scale are LV Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

Title: STANDARD PLOT



0m 5m 10m 15m 20m 25m 30m

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.

LV Cable or Line

HV Cable or Line

EHV Cable or Line approx. Location

Duct Ends

Service Discon & Street Furniture

Substation & Link Box

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified – use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all cables have been determined.
4. It must be assumed that each property and item of street furniture has an electricity supply. A separate record is kept for each service cable but its route is not necessarily shown on this record.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks' plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

Contact UK Power Networks on 0800 056 5866 for details of EHV Cable routes before commencing work.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any person or causes personal injury to a person where such death or personal injury is caused by its negligence.
3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and you must return it to the sender of the letter.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

Grid Ref: TQ3881SW

Scale 1:350

(When Plotted at A3)

Plotted on: 16/07/2021

Plotted by: <anonymous>

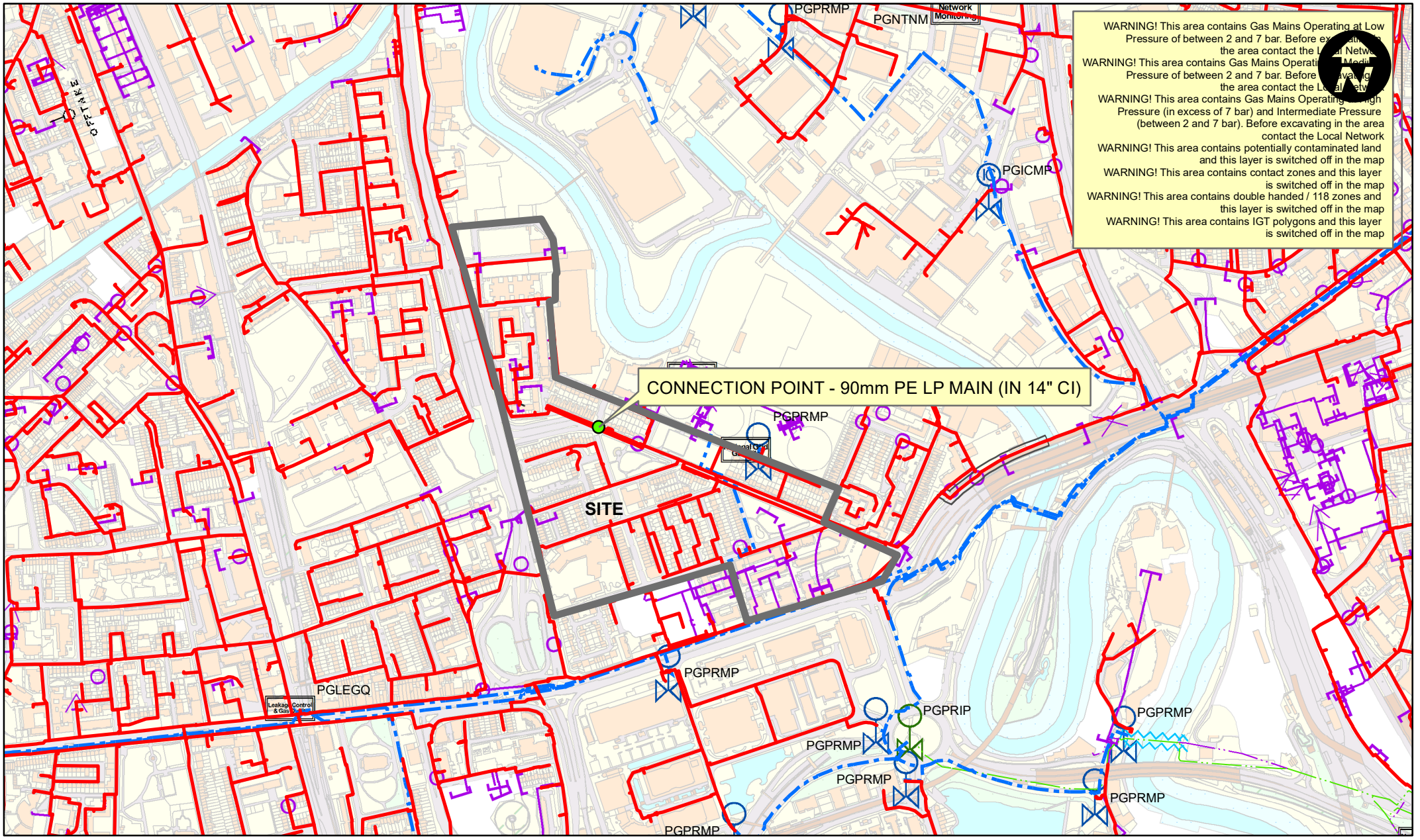
UK Power Networks

Raster Visibilities:

Comp	HV	LV	Mains	Ways
ON	ON	ON	ON	ON

IF IN DOUBT – ASK! PHONE 0800 056 5866
EMERGENCY – If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

Maps produced at 1:2500 scale are LV Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.



SCALE: 1:500 @ A4

USER ID: James.Mason

DATE: 05-Jul-2021 11:01:50

INTERNAL USE ONLY

OS Ref: 538609, 181489

CENTRE: <Centre>

L/P GAS MAIN
M/P GAS MAIN
I/P GAS MAIN
H/P GAS MAIN
N/H/P GAS MAIN
PROPOSED PIPE - LP
PROPOSED PIPE - MP
PROPOSED PIPE - IP
ABANDON - LP
ABANDON - MP
Out Of Standard Service

Some examples of Plant Items:
Valve, Syphon, Depth of Cover, Change of Dia, Change of Material

SCHEME: <NG GDFO Scheme Name>

DESIGN: <NG GDFO Design Number>

REVISION: <NG GDFO Revision>

This plan shows those pipes owned by Cadent in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area.Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plans given without warranty, the accuracy thereof cannot be iguranteed. 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 error oromission. Safe digging practices, inaccordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and any other apparatus on site before any mechanical plant is used. It is your responsability 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.

180013543

Cadent