



making the right connections



Maes Mona, Amlwch

Utility Study  
Level 2

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UCML Utility Study – Level 2

Land Between Maes Mona and Bull Bay Road,  
Amlwch

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## Contents

1.0	Introduction .....	4
2.0	Scope and Objectives .....	7
3.0	Assumptions and Exclusions .....	9
4.0	Terms and Definitions .....	10
5.0	Executive Summary.....	11
6.0	Electricity .....	13
7.0	Gas .....	21
8.0	Water .....	24
9.0	Communications .....	29
10.0	Other.....	37
11.0	Risk Matrix .....	42
12.0	Street Works UK.....	43
13.0	Further UCML Services .....	46
	Appendices.....	48

## 1.0 Introduction

UCML has been instructed by Isle of Anglesey County Council (hereafter referred to as 'the Client') to provide a desktop utility study to identify the outline constraints derived from the statutory utility infrastructure on a proposed residential development of up to 50 no. dwellings. The site is located between Maes Mona and Bull Bay Road. This study includes the land within the red line boundary as indicated within Figure 1.1 below.

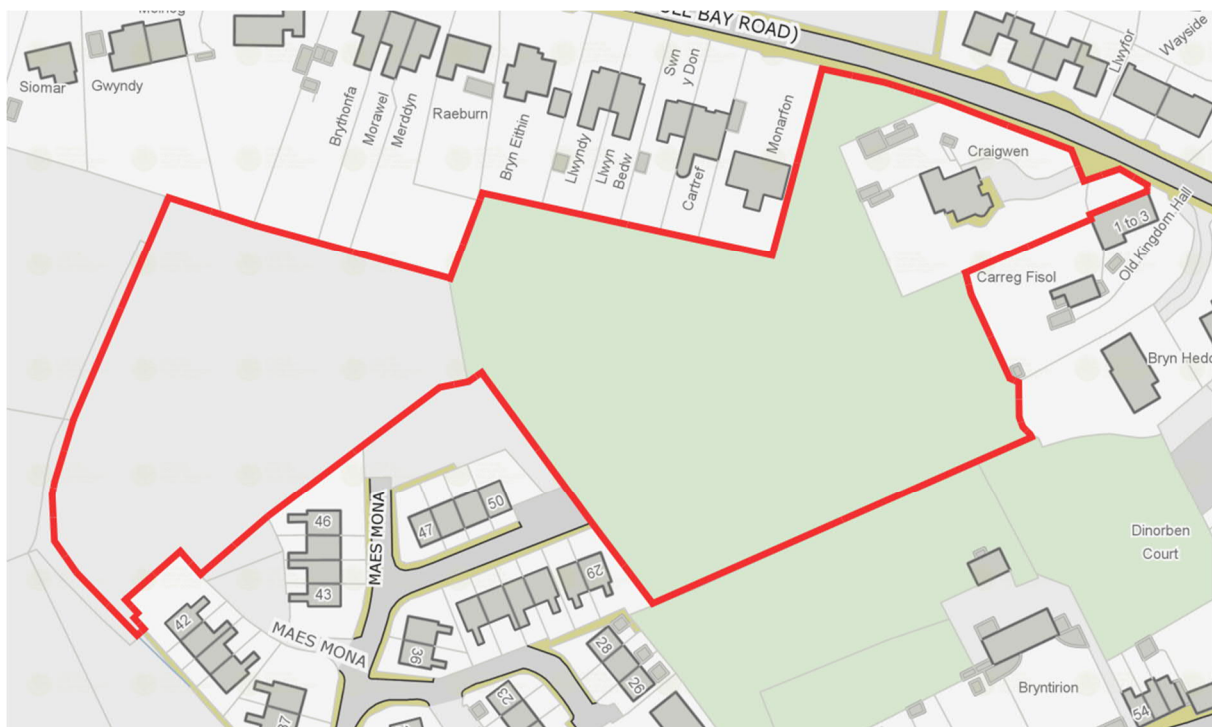


Figure 1.1 – Red Line Boundary Plan

UCML has been commissioned to provide a desktop utility study defining potential cost and timescale risks that could impact on the overall delivery of the project. The principal aim of this utility study is to identify the key constraints derived from statutory utility infrastructure on the proposed development. The information provided within this desktop study is based on review of the red line boundary plan only. At the time of writing, a site layout plan was not available for review.

The information provided within this desktop study is based on the development consisting of up to 50 no. residential dwellings. All utility load requirements have been estimated by UCML based on all dwellings being electrically heated, with the use of Air Source Heat Pumps (ASHPs) as the assumed heating method. UCML has also included an allowance for 1 no. 7.2 kW rated Electric Vehicle (EV) charging point per dwelling.

Table 1.1 below summarises the estimated loads used for the study. Please note, these estimated loads are intended for use as a guide only for the production of this study, and it is recommended that a Mechanical and Electrical Consultant is employed to calculate the actual load required based on the final layout design and proposed heating method. Please note, the load estimations for the residential development does not include a figure for individual clean water load requirements. As residential clean water connections are standardised, no individual load assessment for residential dwellings is required.

Utility	Total load
Electricity	200 kVA

Table 1.1 – Load summary

This desktop study has been produced using the statutory records received from each relevant body. The host statutory network operators which operate in the vicinity of the development site and covered within this study are listed in Table 1.2 below.

Utility	Statutory Operator
Electricity	SP Energy Networks
Gas	Wales & West Utilities
Water	Dŵr Cymru Welsh Water
Telecoms	Openreach

Table 1.2 – Host Statutory Network Operators

UCML is not responsible for the accuracy or quality of the information provided on statutory utility infrastructure records, and has attempted to use reasonable skill and care in investigating the existing site services. Unless stated otherwise, UCML has not made any provision for out-of-area water mains, private networks, unrecorded networks, Liquid Petroleum Gas (LPG) networks, street lighting, CCTV, traffic signals/illuminated signage, data centre networks, electricity generation installations, interconnectors, or drainage/sewerage networks.

Please note, all information on the drawings contained within this utility study and elsewhere is indicative only. The verification of the details and plant location given on the relevant infrastructure records should be undertaken using the following methods;

- The use of plant location equipment to trace all underground plant.
- The use of hand dug trial holes to confirm the precise location of plant.
- The use of suitable paint or markers on the surface to clearly indicate the position of buried apparatus.

All works undertaken are to be in accordance and compliance with the Construction Design and Management 2015 Regulations, published Health & Safety Guidelines, and the agreed working practices of the relevant utility companies. The following assumptions must be made in regards to any existing utility apparatus;

- All mains, services cables, and pipes should be assumed live until proven dead prior to any excavation, demolition or groundworks commencing.
- Any existing building is assumed to have live services until proven otherwise.
- Any site is assumed to have existing utility apparatus located within the boundary until proven otherwise.
- Service connections are not indicated on all utility infrastructure records. Where no service connections are indicated, their presence should be anticipated until proven otherwise.

## 2.0 Scope and Objectives

Utilities Connections Management Limited (UCML) is an independent Utility Consultancy providing services relating to the provision of utility connections to all types of developments.

This desktop utility study aims to provide a 'snapshot' in time of the current statutory utility networks and review the potential connection, diversion, and disconnection works that may be required to accommodate the development proposals. The objective of the commission is to provide a level of information relating to budgetary costs and risks, without incurring significant costs relating to distribution network studies. It should be noted that as this study is desktop in nature, no site visits or surveys have been undertaken during its completion.

The scope of works undertaken by UCML may be summarised as follows;

- Obtain the statutory Network Operators' infrastructure records.
- Review the existing utility distribution networks within the local area of the site.
- Application for firm points of connection for electricity, gas and water supplies to the site to determine the location of proposed connection.
- Consider the impact existing utility apparatus will have on proposed development works and provide a technical review and analysis of all statutory authority infrastructure affected by proposed on and off-site works, including the provision of the following;
  - Budget estimates for anticipated disconnection and diversion works.
  - Budget estimates for connection works, derived from firm non-contestable charges including an estimate of required reinforcement works where applicable.
  - Cost risk and analysis.
  - Timescales for provision and execution of quotations for the required works, highlighting risks to project programme.
  - Highlight of abnormal legal requirements including wayleaves and easements, and explanation of requirements to mitigate risk.

UCML's desktop utility studies provide a detailed overview of the statutory electricity, gas, clean water and telecommunications infrastructure in the vicinity of a proposed site, ideal for:

- Due diligence prior to land purchase to allow negotiation.
- Risk assessment prior to tender.
- Assistance with site layout design to minimise impact on existing utilities, taking into account statutory utility infrastructure legal requirements.
- Detailed planning statements.
- Investment analysis.



### 3.0 Assumptions and Exclusions

In view of the limitations of the available information, the following assumptions have been made in order to produce this utility study;

- All estimated loads have been based on information provided in the Network Operators Distribution Code and other documented standards.
- The information provided within the desktop study is based on the development site area as identified on the proposed site layout plan shown in Figure 1.2 within the introduction. Any land falling outside of the provided boundary is outside of the scope of this desktop study and, should it be incorporated within the proposed development boundary, this may affect the information and recommendations provided within this desktop study.
- The desktop study has been produced based on the specification provided by the Client/Developer at the time of instruction. Any changes to the size, type, number of specification of the development (for instance the extent of EV charging provision and/or use of Low Carbon heating solutions) may affect the information and recommendations provided within this desktop study.
- In the timescales and budget costs quoted, no allowances have been made in respect to the following unless stated otherwise;
  - Wayleaves, easements, or access rights.
  - Reinforcement charges.
  - Land transfers or lease arrangements for substation requirements if applicable.
  - Abnormal off-site civils.
  - Specialist traffic management (non-standard).
  - On-site civils and builders work.
  - Seasonal Embargoes.

It should be noted that all budgetary figures quoted are exclusive of any Value Added Tax (VAT) that may be applicable unless stated otherwise.

## 4.0 Terms and Definitions

ADMD	After Diversity Maximum Demand. The development demand taking into account diversity of usage.
CSEP	Controlled System Exit Point. Gas mains connection point.
DNO	Distribution Network Operator. This is the licensed electricity distributor for the geographic region.
EV	Electric Vehicle. Charging points for electric vehicles can significantly increase electricity demand of a development.
FTTP	Fibre to the Premise telecommunications connection.
GT	Gas Transporter. The GT is the licensed gas network operator for a specific geographical area.
ICP	Independent Connection Providers. Undertake new electrical connections, however they do take ownership of the asset.
IDNO	Independent Distribution Network Operator. Network owners and operators that are not constrained to a geographic area.
IGT	Independent Gas Transporter. A GT that is not governed by its geographic location.
POC	Point of Connection. This is a formal document submitted by the DNO identifying the location for a new electrical connection.

## 5.0 Executive Summary

This study comprises the results of the investigation and appraisal undertaken by UCML of the existing utility infrastructure located in the vicinity of the development site, and provides an overview of the likely demand requirements to support the proposed development works along with a review of any network reconfiguration works that are currently anticipated.

The relevant sections of the study will discuss the development requirements and constraints in further detail, however UCML would highlight the following main site constraints, along with the recommended next steps to be taken;

- SP Energy Networks has confirmed the development can take a connection at HV, which will require the installation of an on-site secondary substation.
- Capacity within the clean water network is to be confirmed, and detail will be provided in the final issue of the study.
- Possible site entrance diversionary works required to accommodate the construction of a site entrance off Bull Bay Road.
- Disconnection of any existing service connections to 'Craigwen' will be required if demolition of this unit is required as part of the development works.

## Cost Summary

Table 5.1 below summarises the total anticipated budget costs for the required utility works. Please refer to the relevant section of the study for further detail.

<b>Electricity</b>	<b>Budget Cost</b>
Non-Contestable Works	£5,553.67
Contestable Connection Works	£163,500.00
Diversionsary Works	None currently anticipated (TBC)
Disconnection Works	£500.00
<b>Total Electricity Costs</b>	<b>£169,533.67</b>
<b>Gas</b>	<b>Budget Cost</b>
Connection Works	N/A
Diversionsary Works	£25,000.00 (TBC)
Disconnection Works	£1,000.00
<b>Total Gas Costs</b>	<b>£26,000.00</b>
<b>Water</b>	<b>Budget Cost</b>
Connection Works	£TBC
Diversionsary Works	None currently anticipated (TBC)
Disconnection Works	£Nil
<b>Total Water Costs</b>	<b>£TBC</b>
<b>Openreach</b>	<b>Budget Cost</b>
Connection Works	£Nil
Diversionsary Works	£28,000.00
Disconnection Works	£Nil
Survey Fees	£1,200.00
<b>Total Openreach Costs</b>	<b>£29,200.00</b>
<b>Virgin Media</b>	<b>Budget Cost</b>
Budgetary sums exclude Value Added Tax, on-site civils and principal contractor preliminaries.	

Table 5.1 – Cost Summary Table

## 6.0 Electricity

### 6.1 Existing Electricity Network

The electricity distribution network in the vicinity of the development site is under the ownership of SP Energy Networks and is operated within the terms of its Electricity Distribution License issued by Ofgem. The local electricity distribution network in the immediate vicinity of the site comprises of underground cables and associated substations operating at High Voltage (HV) and Low Voltage (LV).

The figure below illustrates the location of existing SP Energy Networks infrastructure which has been extracted from its network records. The cables shown in red are operated at 11,000 Volts (HV), and those shown in brown are operated at 415 Volts (LV). Please refer to the infrastructure record appended to this study for further detail.

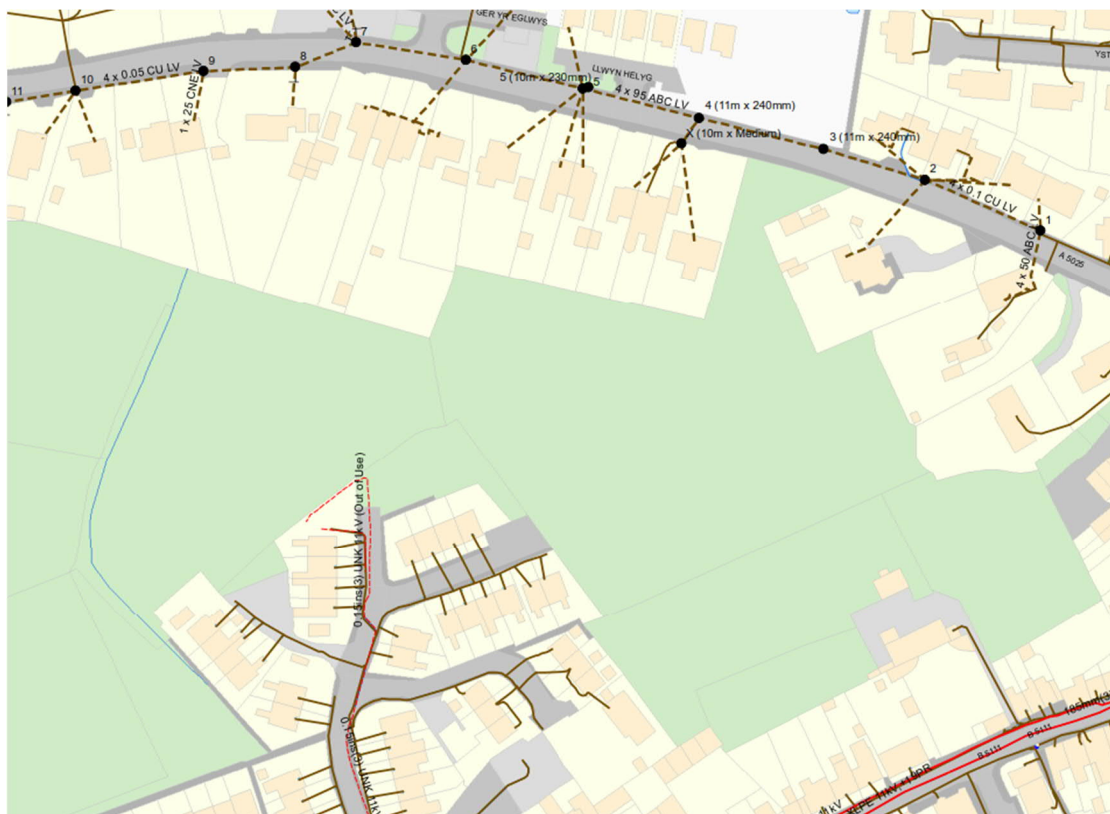
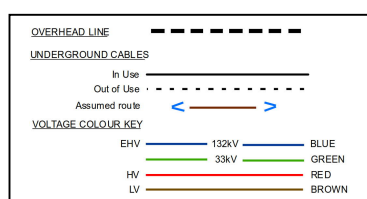


Figure 6.1 – Existing Electricity Infrastructure Plan



## 6.2 Connection Works

### 6.2.1 Non-Contestable Works

The non-contestable element of the connection works are works required to accommodate the provision of capacity for the development, which can only be undertaken by the relevant Distribution Network Operator (DNO). The non-contestable costs are covered within a Point of Connection (POC) quotation.

Based on the development information as outlined within the introduction, UCML has estimated the electrical load requirement for the proposed residential development of 50 no. dwellings to be 200 kVA, based on the use of electric heating and an allowance of 1 no. 7.2 kW rated Electric Vehicle (EV) charging point per dwelling. Based on this estimated load, UCML requested a Point of Connection quotation for the non-contestable works from SP Energy Networks.

SP Energy Networks has provided a POC quotation for a load of up to 200 kVA, confirming the development can be connected to the 11 kV HV distribution network. The POC will be located from an existing 11 kV HV cable routed within the car park to the front of Dinorben Court, as indicated in Figure 6.2 overleaf.

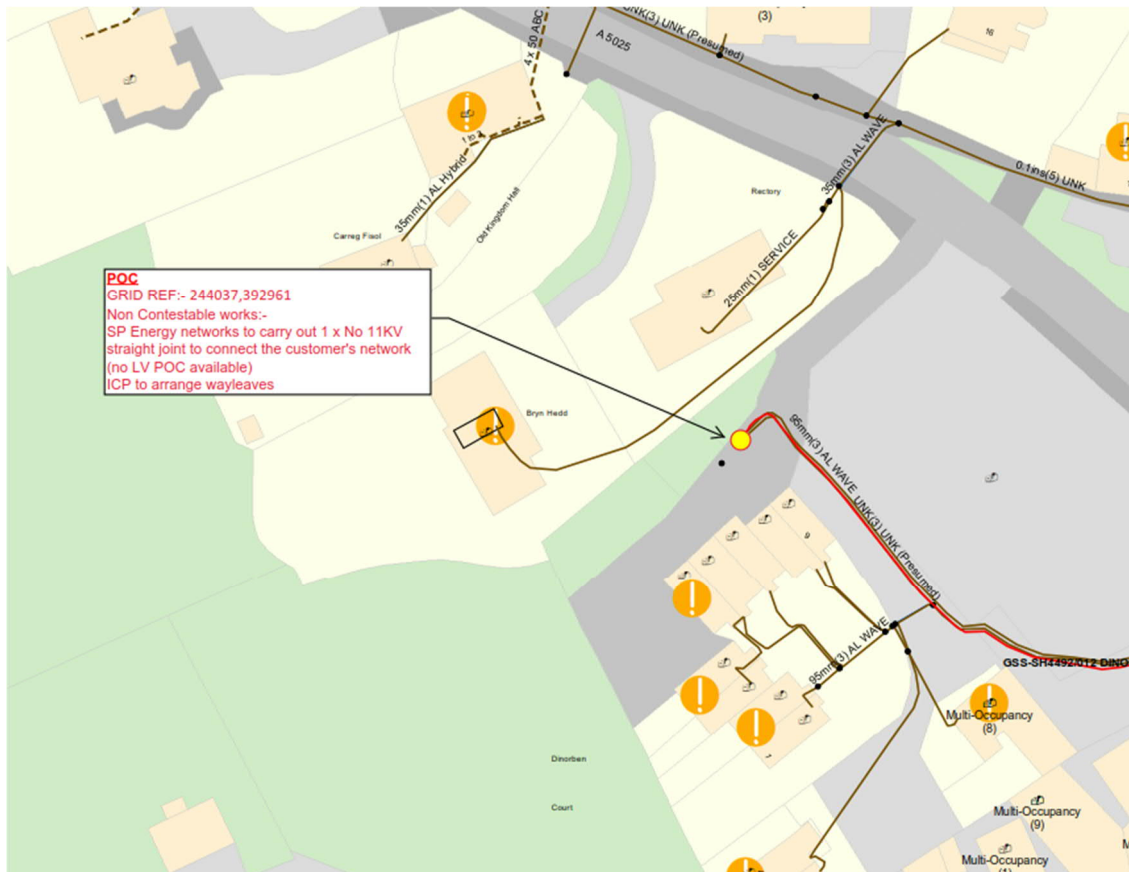


Figure 6.2 – Plan showing electricity HV Point of Connection

As part of the non-contestable works, SP Energy Networks will undertake ICP design approval and inspections. Cable jointing works for the POC will typically be undertaken by an SP Energy Networks Engineer. Please refer to Section 6.2.2 for further detail on the associated contestable connection works required to utilise the provided HV POC.

The total cost and breakdown of the SP Energy Networks non-contestable POC is detailed below;

Description	Cost
Assessment Charges	£1,250.00
Design Charges	£1,000.00
Operational Work	£3,053.67
Inspection Charges	£250.00
<b>Total Non-Contestable Charges</b>	<b>£5,553.67</b>

Table 6.1 – Point of Connection cost breakdown

SP Energy Networks has advised that, based on current network availability, there is sufficient electric capacity available within the existing electricity infrastructure to serve the proposed development; therefore, no reinforcement works are currently required. However, no capacity can be reserved until payment is made for a valid SP Energy Networks non-contestable POC offer.



### 6.2.2 Contestable Works

Based on the confirmed non-contestable POC provided by SP Energy Networks, the following contestable connection works will need to be undertaken to provide connections to the proposed dwellings;

- Lay HV cabling from Point of Connection to proposed substation position.
- Excavate, backfill and permanently reinstate public highway/footpath to Local Authority standards.
- Supply, install and commission the following within the substation housing;
  - High Voltage Ring Main Units
  - 1 no. 500kVA 11kV/433v distribution transformer
  - Low Voltage distribution board
- Lay LV mains infrastructure on-site.
- Install LV service connections to each dwelling, and connect to LV mains infrastructure.

For the purposes of establishing budget costs, it is assumed that the cable route from the POC location to the site will be up to 120 metres in length and will follow the route of Bull Bay Road. In the absence of a site layout plan, it is assumed that a site entrance will be located off Bull Bay Road to enable the cable to be routed into site. Review of the site layout plan, once available, will be required to confirm the route of cable to site. It is also assumed that the required on-site secondary substation will be located within a 50 metres radius of any site entrance off Bull Bay Road.

Based on the above, a budget cost of £163,500.00 is recommended for the contestable works. The cost provided is based on the developer undertaking all on-site excavation, reinstatement and civils works; including the construction of the substation concrete plinth and housing to the DNO, or appointed Independent Network Operator (IDNO), standard.

As discussed overleaf, the use of a HV POC will trigger the requirement for a secondary substation to be constructed on-site. In order to accommodate the construction of a secondary substation, a parcel of land of approximately 5m x 5m, along with suitable access and egress, will need to be allowed within the development boundary to accommodate the substation compound.

As the above works are contestable, they can be undertaken by the DNO, or an Independent Connection Provider (ICP) can be appointed to complete the works. The use of an ICP to undertake the contestable connection works provides the opportunity to open the contestable element of the works to competitive tender, which may provide significant cost savings in comparison to the DNO undertaking the works.

If an ICP is appointed, the network can then be adopted by an Independent Distribution Network Operator (IDNO). The license of an IDNO allows for an asset value to be offered to the appointed ICP for the adoption of the constructed network. The asset value offered by the IDNO reflects the anticipated value in adopting the newly constructed network, based on the expected revenue that may be generated from the acquisition of new customers. The cost incurred by the ICP in constructing the network may be offset by any asset value offered by the IDNO, which could provide further cost savings.

### 6.3 Diversions & Disconnections

SP Energy Networks infrastructure record indicates overhead LV cables routed along the adjacent side footpath of Bull Bay Road to the development site. Provided no alterations are made to the adjacent side footpath as part of the development works, this apparatus appears to be unaffected by the development.

SP Energy Networks infrastructure record indicates an overhead LV service cable routed into the development site boundary, which is indicated as providing a supply to the existing building, 'Craigwen', which is currently occupying the development site. If this building is planned to be demolished to accommodate the development, disconnection of the service cable will be required to enable demolition works to take place. A budget cost of £500.00 is recommended for disconnection works, based on the removal of 1 no. overhead line.

As previously discussed, a site layout plan was not available for review at the time of writing and review of the layout plan, once available, will be required to confirm the extent to which the development may affect existing network assets.

#### 6.4 Conclusion – Cost & Risk Analysis

Costs relating to the reconfiguration of the existing SP Energy Networks distribution system are identified in the following table;

Detail	Cost
Non-Contestable Works	£5,553.67
Contestable Connection Works	£163,500.00
Diversions	None currently anticipated (TBC following review of site layout plan, once available)
Disconnections	£500.00 (1 no. LV disconnection)
<b>Total</b>	<b>£169,553.67</b>

Table 6.2 – Electricity costs

The main risks associated with the procurement of proposals and required works are as follows;

- Some figures have been applied based on previous projects of similar size and UCML's experience, others have been provided for budgetary purposes by SP Energy Networks.
- The Point of Connection is valid for only 3 months from submission. The network capacity can only be reserved upon submission of signed acceptance and a suitable design from either an Independent Connection Provider or Independent Distribution Network Operator.
- Legal agreements corresponding with the proposed substation installation may cause time delays. In order to mitigate any potential negative impact on the project programme, it may be prudent to ensure solicitors representing all relevant parties start communication at the earliest opportunity.
- Diversionary works where required are not regulated by Ofgem, it is therefore advised that a work commencement date is identified as early as possible as this may have a significant impact on any construction programme.

## 7.0 Gas

### 7.1 Existing Gas Network

The local Gas Distribution Network in the vicinity of the development site is owned and operated by under its Gas Transportation License issued by Ofgem. The gas network in the immediate vicinity of the site comprises of gas mains and apparatus operating at Low Pressure (LP). Wales & West Utilities

The following diagram is an extract from Wales & West Utilities statutory records and details the currently indicated position of existing infrastructure, however it may be prudent to undertake a below ground survey to ensure there are no services present which are not recorded on statutory records. Please refer to the infrastructure record appended to this study for further detail.

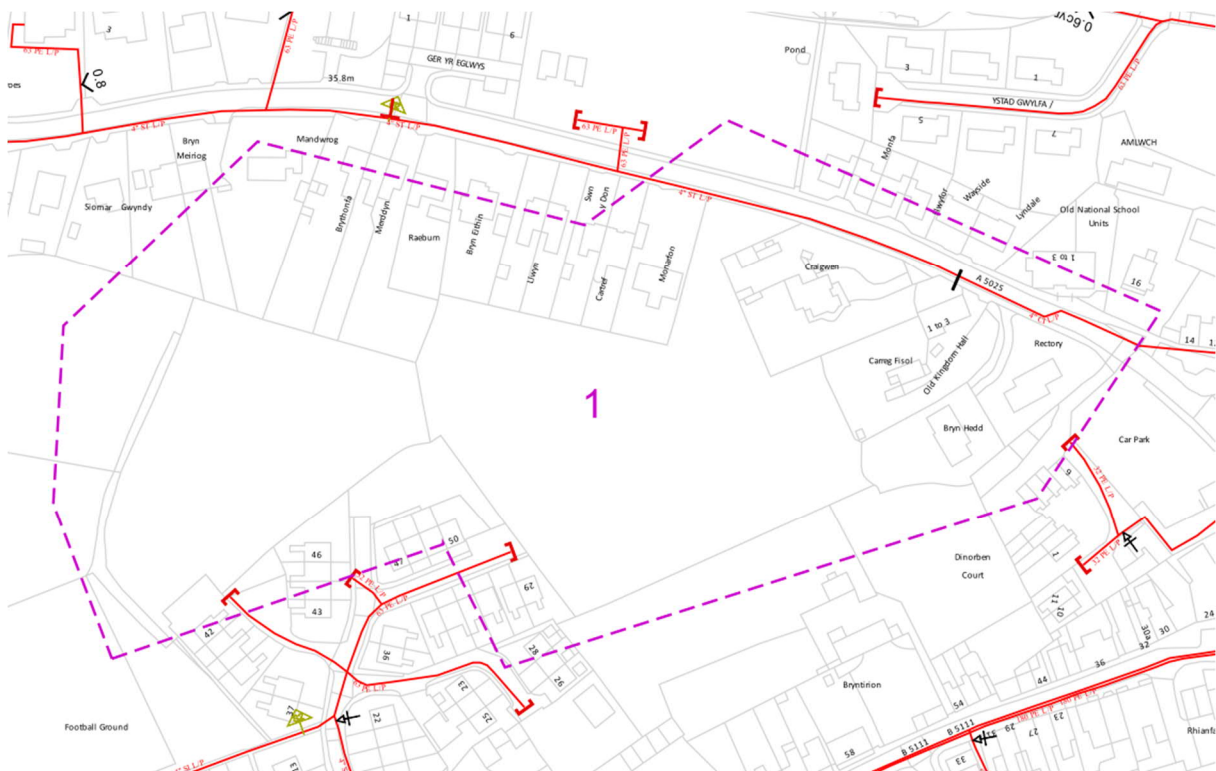
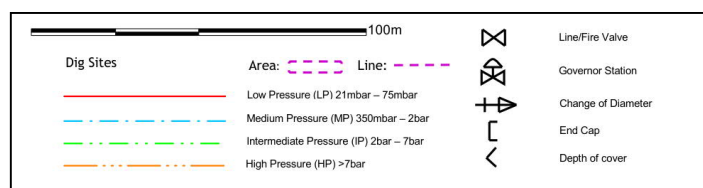


Figure 7.1 – Existing gas infrastructure plan



## 7.2 Proposed Gas Service

As outlined within the introduction, it is currently anticipated that the development will utilise an electrical heating strategy. Therefore, there is no current requirement for mains gas connections.

## 7.3 Diversions & Disconnections

Wales & West Utilities infrastructure record indicates a 4" steel LP main routed within the site side footpath of Bull Bay Road to the development site. This apparatus will be affected by the development proposals if a site entrance is proposed off Bull Bay Road to the site. As previously discussed, a site layout plan was not available for review at the time of writing and review of the layout plan, once available, will be required to confirm the extent to which the development may affect existing network assets.

If a site entrance is to be formed off Bull Bay Road, it is recommended that trial hole excavations are undertaken to determine the exact depth and location of the aforementioned asset. Should it be confirmed that the main in question is at a depth of 750mm below the finished ground level, diversionary works may be negated through discussions with Wales & West Utilities. When excavating in the immediate vicinity of this LP main, the HSG47 guide should be complied with at all times. If the apparatus is proved shallow and diversionary works required, allow a budget cost of £25,000.00 for the works based on a maximum diversion length of 20 metres.

Wales & West Utilities do not typically indicate individual service pipes on their infrastructure records; however, their presence should be anticipated until proven otherwise. The site is currently occupied by an existing building, 'Craigwen' and if this building is planned to be demolished to accommodate the development, disconnection of any existing service pipe will be required to enable demolition works to take place. It may be prudent to undertake a site survey to confirm if a service pipe is present, along with its location and diameter. A budget cost of £1,000.00 is recommended for disconnection works, based on 1 no. service of up to 63mm diameter being present.

#### 7.4 Conclusion – Cost & Risk Analysis

Costs relating to the reconfiguration of the existing Wales & West Utilities network are identified in the following table;

Detail	Cost
Connections	N/A (based on use of electric heating strategy)
Diversions	£25,000.00 (TBC following review of site layout plan)
Disconnections	£1,000.00 (based on 1 no. LP service disconnection)
Total	£26,000.00

Table 7.1 – Gas costs

The main risks associated with the procurement of proposals and required works are as follows;

- If the development reverts to requiring mains gas connections, consultation will be required with Wales & West Utilities to confirm the availability of capacity within the local network and confirm a connection point for the development.
- Diversionary works are not regulated by Ofgem and it is therefore advisable to programme the works at the earliest opportunity.

## 8.0 Water

### 8.1 Existing Water Network

The local clean water distribution network in the vicinity of the development site is owned and operated by Dŵr Cymru Welsh Water within the terms of its statutory license issued by Ofwat. The clean water network in the immediate vicinity of the site comprises of distribution water mains and associated apparatus. Please refer to the infrastructure record appended to this study for further detail.

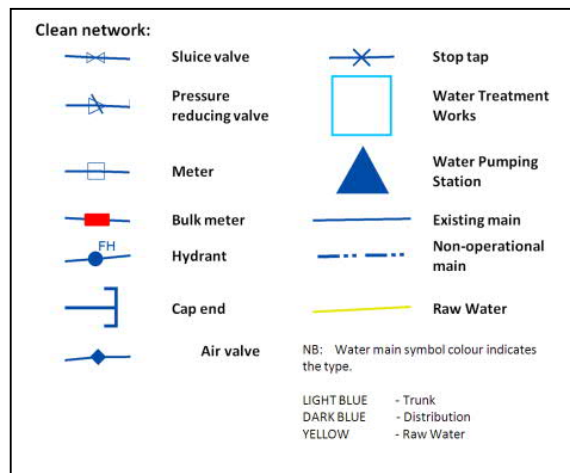
The figure on the following page is an extract from Dŵr Cymru Welsh Water statutory records and details the current indicated position of existing infrastructure, however it may be prudent to undertake a below ground survey to ensure there are no unknown services which are not recorded.

Please note on rare occasions 'out of area' water supply authorities have water mains crossing other water supply authority areas. This is typically trunk or raw water mains transporting water extracted from reservoirs or water courses between areas. Unless stated otherwise, UCML's utility study covers the statutory water network operator for this region as identified within the introduction only.





Figure 8.1 – Existing water infrastructure plan



### 8.2 Proposed Water Service

UCML has requested a pre-development response from Dŵr Cymru Welsh Water to establish the availability of capacity within the local distribution network, and confirm the likely connection point for the development. The response from Dŵr Cymru Welsh Water is due to be issued shortly, and will be provided in the final issue of the study.

### 8.3 Diversions & Disconnections

Dŵr Cymru Welsh Water infrastructure record indicates a 160mm polyethylene distribution main and a non-operational main routed within the site side carriageway of Bull Bay Road to the development site boundary. Provided the 160mm main is located within the carriageway as indicated, and no alterations will be made to the line or level of the carriageway as part of the development works, it can be assumed that the main will not be affected to the extent that diversionary works will be required.

As previously discussed, a site layout plan was not available for review at the time of writing and review of the layout plan, once available, will be required to confirm the extent to which the development may affect existing network assets.

Dŵr Cymru Welsh Water do not typically indicate individual service pipes on their infrastructure records; however, their presence should be anticipated until proven otherwise. The site is currently occupied by an existing building, 'Craigwen' and if this building is planned to be demolished to accommodate the development, disconnection of any existing service pipe will be required to enable demolition works to take place. It may be prudent to undertake a site survey to confirm if a service pipe is present, along with its location and diameter. Dŵr Cymru Welsh Water will typically complete the permanent disconnection of domestic sized pipes (of 32mm diameter and below) at nil cost to the developer.

#### 8.4 Conclusion – Cost & Risk Analysis

Costs relating to the reconfiguration of the existing Dŵr Cymru Welsh Water network distribution system are identified in the following table;

Detail	Cost
Mains and Connections	£TBC
Diversions	None currently anticipated
Disconnections	£Nil
Total	£TBC

Table 8.1 – Water costs

The main risks associated with the procurement of proposals and required works are as follows;

- Some figures have been applied based on previous projects of similar size and UCML’s experience, others have been provided for budgetary purposes by Dŵr Cymru Welsh Water.
- The pre-development response is valid for only 3 months from submission. The available network capacity can vary continually, due to proposed developments taking capacity from the water distribution network within the vicinity of this specific scheme.
- The developer cannot reserve any water capacity and pressure until a formal order has been placed with the relevant water Network Operator.
- Please be aware that the position of any required fire hydrants will be determined and implemented upon the advice and requirements of the Local Fire Authority.

## 9.0 Communications

### 9.1 Openreach

Openreach own and operate telecommunications apparatus in the vicinity of the development site within the terms of its statutory license issued by Ofcom. The Openreach network in the immediate vicinity of the site comprises of underground cables, overhead lines, and associated apparatus. Please refer to the infrastructure record appended to this study for further detail.

The following figure is an extract from Openreach records and details the current indicated position of existing infrastructure, however it may be prudent to undertake a below ground survey to ensure there are no unknown services which are not recorded.



Figure 9.1 – Existing Openreach infrastructure

KEY TO BT SYMBOLS	
DP	Pole
Planned DP	Planned Pole
PCP	Joint Box
Planned PCP	Change Of State
Built	Split Coupling
Planned	Duct Tee
Inferred	Planned Box
Building	Manhole
Kiosk	Planned Manhole
Hatchings	Cabinet
	Planned Cabinet

### 9.1.1 Openreach Connections

Openreach provide a Fibre to the Premise (FTTP) connection design as standard for new developments. FTTP connections will provide ultrafast broadband speeds to each dwelling and deliver a level of future proofing for broadband as the demand for speed increases. Openreach will provide an allowance of up to £3,400.00 per plot to undertake all off-site works required, however any costs incurred above this allowance will be chargeable to the developer. As the development consists of over 20 no. residential dwellings, Openreach will likely provide FTTP connections free of charge.

Openreach FTTP network is constructed as an Open Access Network, allowing multiple Internet Service Providers (ISPs) to provide services to future residents and customers utilising the same infrastructure. The installation of Open Access Networks mitigate the requirement for multiple service providers installing duplicate infrastructure within the development site.

Typically, the work undertaken by the developer as part of an Openreach FTTP network installation will consist of laying on-site duct and tubing, building all joint boxes, and providing a cable from a designated joint box to each dwelling (with cappings and covers over external entry points). Openreach will carry out all excess construction works outside of the site boundary and in the public highway.

For a FTTP installation, the developer will need to sign a contract and Wayleave agreement with Openreach. This is a legal requirement for Openreach to install and access its infrastructure. However, if the installation of an independent fibre network is being considered for the development site, exclusivity may be required and therefore the Openreach wayleave should not be signed until it is confirmed an independent third party fibre provider will not be used.

As part of the contract for the installation of Openreach connections, the developer may receive a rebate of up to £140.00 per house for carrying out on-site works as detailed within the contract provided with their connection proposal. The rebate is in line with the Home Builders Federation (HBF) rates and are payable by BT Plc through its Openreach division. If

the developer chooses to self-install the internal FTTP apparatus through Developer Self Install (DSI), an additional rebate payment of £20 per house or apartment will be available.

For the installation of FTTP within an individual dwelling, an Optical Network Termination (ONT) will be installed. The ONT is the Openreach demarcation point and replaces the traditional copper master socket. The Openreach ONT will sit in a wall mounted enclosure along with a Battery Backup Unit (BBU) and the associated wiring. The ONT will include an optical port which connects to the external Customer Splice Point (CSP), an Ethernet port which connects to the communications provider's router, and a telephony port to connect to the voice call network.

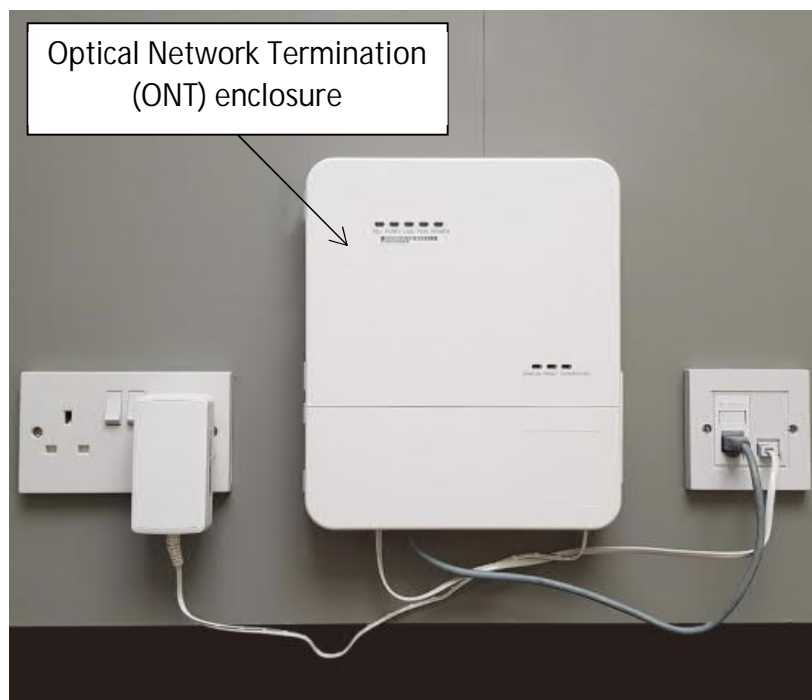


Figure 9.2 – Openreach FTTP Internal Equipment

Should the developer choose for Openreach to install the FTTP equipment, the ONT will be installed at the position of the incoming fibre cable, however, as previously discussed, the developer can choose to self-install the internal FTTP equipment at their preferred internal location within the dwelling. Where a developer opts to undertake the self-install of the internal equipment, Openreach will supply the ONT, BBU, and the required connectorised fibre cable.

Figure 9.3 below illustrates the simplest installation for the FTTP equipment in a domestic dwelling, where the ONT and associated equipment is located adjacent to the outside wall where the incoming fibre cable is located.

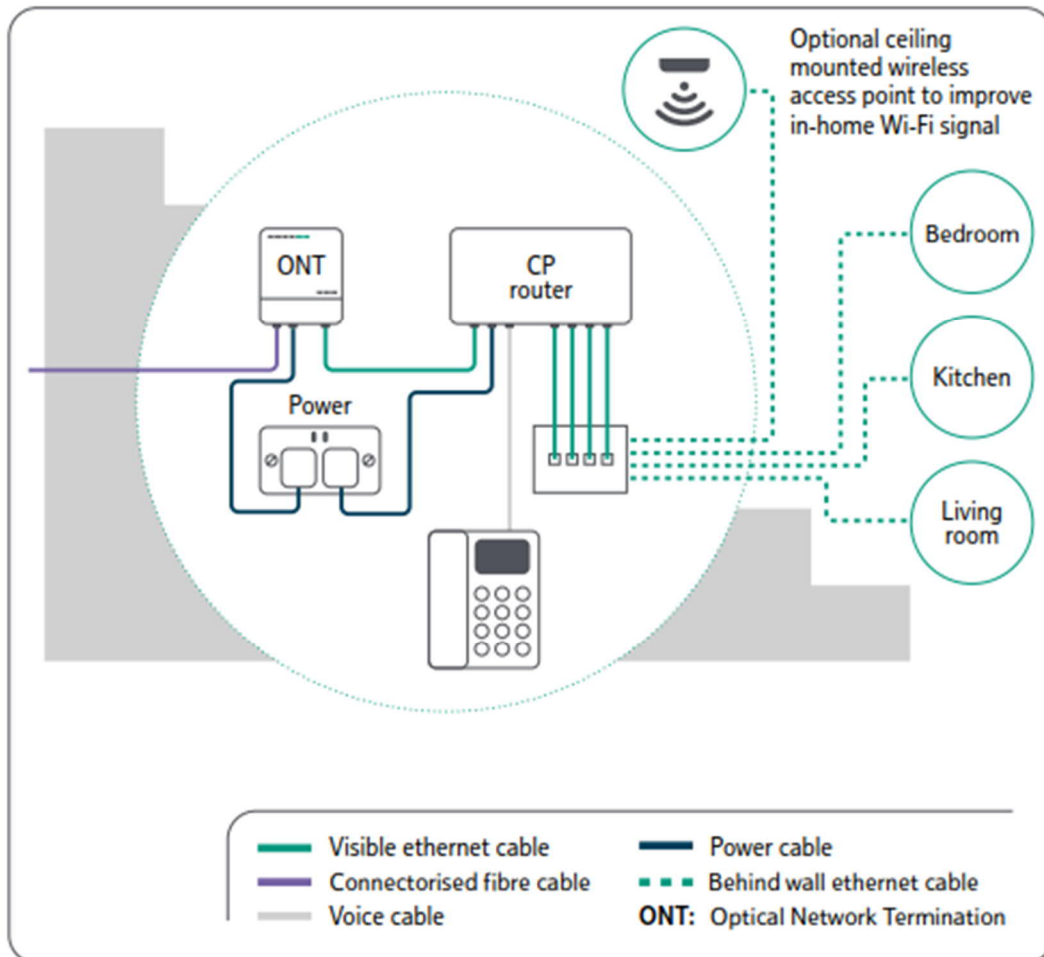


Figure 9.3 – Simple FTTP installation

Figure 9.4 overleaf illustrates a typical example of a developer self-install for the internal equipment, where they have chosen to locate the ONT further inside the dwelling. Further examples of the options for the internal installation are provided within the Openreach Developer Guide for building a fibre network.



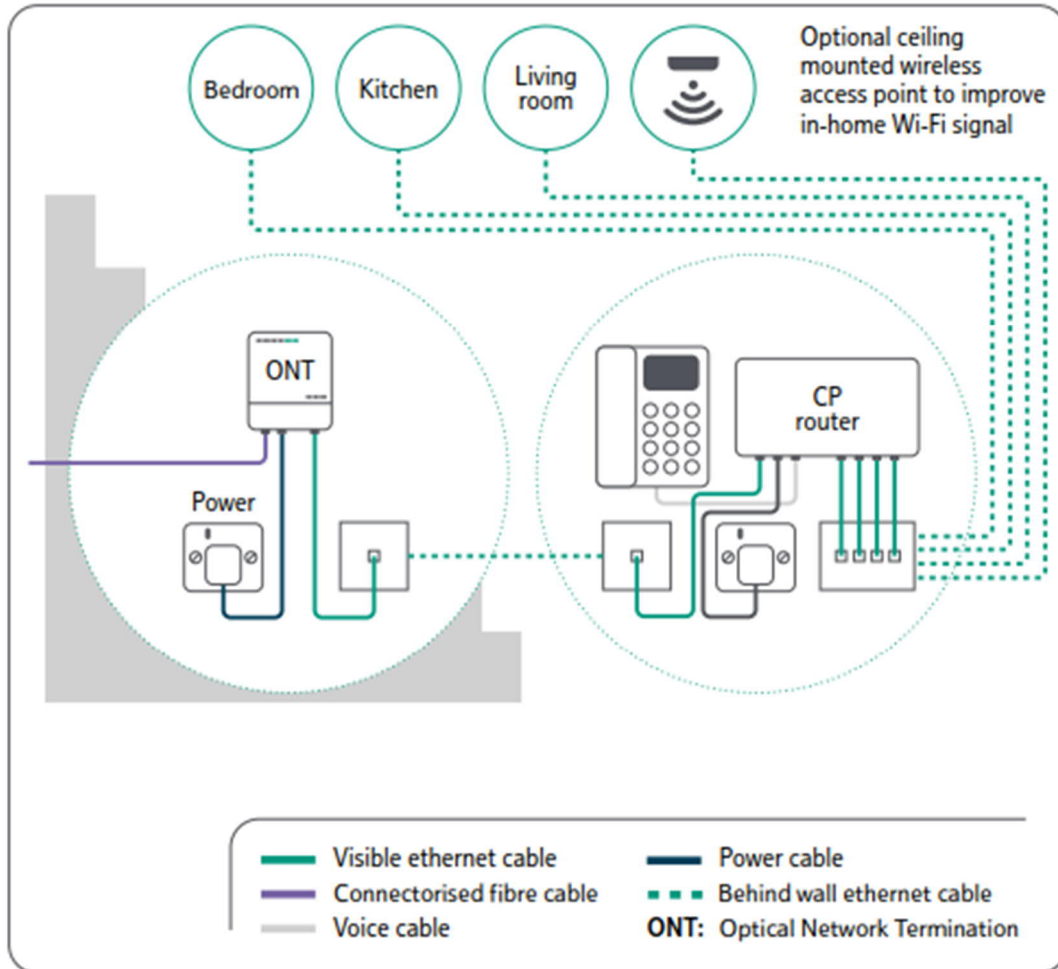


Figure 9.4 – Alternative Option for FTTP installation (DSI)

### 9.1.2 Diversions & Disconnections

Openreach infrastructure record indicates underground duct and associated apparatus routed within the site side footpath of Bull Bay Road to the development site boundary. This apparatus will be affected by the development proposals if a site entrance is proposed off Bull Bay Road to the site. As previously discussed, a site layout plan was not available for review at the time of writing and review of the layout plan, once available, will be required to confirm the extent to which the development may affect existing network assets.

If a site entrance is to be formed off Bull Bay Road, it is recommended that trial hole excavations are undertaken to determine the exact depth and location of the aforementioned asset. Should it be confirmed that the apparatus in question is at a depth of 600mm below the finished ground level, diversionary works may be negated through discussions with Openreach. When excavating in the immediate vicinity of this LP main, the HSG47 guide should be complied with at all times. If the apparatus is proved shallow and diversionary works required, allow a budget cost of £28,000.00 for the works based on the lowering of duct to a maximum length of 20 metres.

It should be noted that Openreach will require the payment of an upfront survey fee to undertake a site survey and provide a detailed estimate for the works. The survey fee is site specific; however, it is recommended that a minimum of £1,200.00 is allowed for the fee.

Please note, the aforementioned diversionary costs are based on the underground infrastructure being copper, as opposed to fibre optic cables. Openreach infrastructure records currently do not differentiate between copper and fibre optic cables, and as such the type of infrastructure within the ground cannot be determined by reviewing their statutory infrastructure records. Please note, the presence of fibre optic cables could multiply anticipated diversion costs significantly.

Openreach do not typically indicate individual service connections on their infrastructure records; however, their presence should be anticipated until proven otherwise. The site is currently occupied by an existing building, 'Craigwen' and if this building is planned to be

demolished to accommodate the development, disconnection of any existing service will be required to enable demolition works to take place. It may be prudent to undertake a site survey to confirm if a service is present, along with its location; however, in advance of this, it is assumed that an overhead service line may be present. In order to complete the disconnection works, Openreach may need to complete a site survey to determine the extent of works required and to confirm no surrounding customer's supply will be affected by the removal of the apparatus.

The cost of completing a site survey will be chargeable, and it is assumed that the fee advised overleaf will be sufficient to cover both the diversion and disconnection survey. Openreach will typically complete the disconnection of a redundant overhead line at no additional cost beyond the fee. If any required disconnection of apparatus affects multiple surrounding properties, further costs may be incurred.

9.1.3 Conclusion – Cost & Risk Analysis

Costs relating to the reconfiguration of the existing Openreach distribution network are identified in the following table;

Detail	Cost
Connections	£Nil
Diversions	£28,000.00
Disconnections	£Nil
Survey Fees	£1,200.00
<b>Total</b>	<b>£29,200.00</b>

Table 9.1 – Openreach Costs

The main risks associated with the procurement of proposals and the required works are as follows;

- Provisional sums have been applied based on previous projects of similar size and UCML’s experience.
- Openreach infrastructure records currently do not differentiate between copper and fibre optic cables, and as such the type of infrastructure within the ground cannot be determined through desktop review of their statutory infrastructure records. Please note, the presence of fibre optic cables could multiply anticipated diversion costs significantly.

## 10.0 Other

In addition to the statutory network operators operating within the vicinity of the development site, UCML has contacted a number of Independent Distribution Networks Operators (IDNOs), Independent Gas Transporters (IGTs), telecommunications providers, pipeline operators, and other third parties who own and operate apparatus nationwide to determine whether any apparatus is located within the vicinity of the development site.

The companies contacted, and their associated response, are summarised within Table 10.2 overleaf. Please refer to the key provided below for further detail on the definitions used.

Table Key	Definition
Affected	Utility apparatus is indicated as being located within the vicinity of the development site.
Not Affected	Utility apparatus is not indicated as being located within the vicinity of the development site.
No Response	No response has been received from the utility provider to date.
Desk Research	Any response determined from desktop research is indicated in this column. This indicates utility infrastructure records have been obtained in house using mapping software provided by the relevant utility provider.

Table 10.1 – Plant Enquiry Response Key

Utility	Company	Desk Research	Affected (date issued)	Not Affected (date issued)	No Response
IDNO	Engie				
IDNO	Leep Utilities			23/06/2022	
IDNO	Utility Assets				
IDNO	Eclipse Power Networks Ltd			27/06/2022	
IDNO	G2 Energy				
IGT	BBL Company				
IGT	GTC*	✓		15/06/2022	
IGT	Indigo Pipelines				
IGT	Interconnector UK LTD				
Comms	Arqiva				
Comms	Arelion (formerly Telia Carrier)	✓		22/06/2022	
Comms	Cityfibre	✓		22/06/2022	
Comms	Colt (CA Telecom)			11/07/2022	
Comms	Instalcom**			27/06/2022	
Comms	Interoute (Plancast)				
Comms	McNicholas (TATA)				
Comms	Mobile Broadband Network LTD			23/06/2022	
Comms	Sky UK LTD			23/06/2022	
Comms	SOTA			27/06/2022	
Comms	Spectrum Communications				
Comms	Telent			23/06/2022	
Comms	Verizon			23/06/2022	
Comms	Vodafone				
Transport	Network Rail			23/06/2022	
Transport	NTRS			28/06/2022	
Transport	Traffic Master				
Other	Mastdata.com (Mobile Phone Masts)	✓		22/06/2022	

Table 10.2 – Plant Enquiry Responses

\*Note GTC includes: GTC Pipelines Ltd, Independent Pipelines Ltd, Quadrant Pipelines Ltd, Electricity Network Company Ltd, Independent Power Networks Ltd, Independent Water Networks Ltd, Independent Fibre Networks Ltd, and Independent Community Heating Ltd.

\*\* Instalcom includes: Lumen Technologies (formerly CenturyLink Communications UK Limited, Level 3, Global Crossing (UK) Ltd, Global Crossing PEC, Fibernet UK Ltd and Fibrespan Ltd.

## Optional Searches

Some utility providers are rarely confirmed to be in the vicinity of infrastructure record searches and are therefore only included within the search upon request, as the charge per enquiry is disproportionate to the number of affected responses received. Please advise UCML if you would like to include these additional searches at an additional cost. These optional searches are as follows;

Optional Searches		
IDNO	Harlaxton	Approximate cost £35 (plus VAT)
IDNO	UK Power Distribution	Cost ranges from £9 - £95 (plus VAT) subject to site size
Comms	Vtesse	Approximate cost £55 (plus VAT)

Table 10.3 – Optional Searches

## LinesearchbeforeUDig

A number of asset owners are registered with LinesearchbeforeUDig (LSBUD), an online service used to review the location of utility assets in relation to a development site location. UCML has undertaken an LSBUD search for this development site, and the response is shown in Figure 10.1 below.

**LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.**

List of affected LSBUD members			
Asset Owner	Phone/Email	Emergency Only	Status
ESP Utilities Group	01372227560	01372227560	Await response
SP Energy Networks	08452734444	08000929290 / 105	Await response
Wales and West Utilities	02920278912	0800111999	Await response

**LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD Members make regular changes to their assets and this list may vary for new enquiries in the same area.**

List of not affected LSBUD members		
Angus Energy	AWE Pipeline	Balfour Beatty Investments Limited
BOC Limited (A Member of the Linde Group)	Box Broadband	BP Exploration Operating Company Limited
BPA	Cadent Gas	Carrington Gas Pipeline
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 Abandoned Pipelines)
DIO (MOD Live Pipelines)	E.ON UK CHP Limited	EirGrid
Eledink Limited	Electricity North West Limited	Energy Assets Pipelines
ENI & Himor c/o Penspen Ltd	EnQuest NNS Limited	EP Langage Limited
ESSAR	Esso Petroleum Company Limited	euNetworks Fiber UK Ltd
EXA Infrastructure	Exolum Pipeline System	Fulcrum Electricity Assets Limited
Fulcrum Pipelines Limited	Gamma	Gas Networks Ireland (UK)
Gateshead Energy Company	Gigaclear Ltd	Harbour Energy
Heathrow Airport LTD	Humbly Grove Energy	IGas Energy
INEOS FPS Pipelines	INEOS Manufacturing (Scotland and TSEP)	INOVYN Chlor/Vinyls Limited
INOVYN Enterprises Limited	Intergen (Coryton Energy or Spalding Energy)	Jurassic Fibre Ltd
Last Mile	Mainline Pipelines Limited	Manchester Jetline Limited
Manx Cable Company	Marchwood Power Ltd (Gas Pipeline)	Melbourn Solar Limited
Moray East Offshore Windfarm	Murphy Utility Assets	National Grid Electricity Transmission
National Grid Gas Transmission	Neos Networks	Northumbrian Water Group
NPower CHP Pipelines	NTT Global Data Centers EMEA UK Ltd	NYnet Ltd
Oikos Storage Limited	Ørsted	Palm Paper Ltd
Perenco UK Limited (Purbeck Southampton Pipeline)	Petroleos	Phillips 66
Portsmouth Water	Premier Transmission Ltd (SNIP)	Redundant Pipelines - LPDA
RWE - Great Yarmouth Pipeline (Bacton to Great Yarmouth Power Station)	RWEpower (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	SGN
Shell	Shell NOP	Squire Energy Networks
SSE Generation Ltd	SSE Transmission	SSE Utility Solutions Limited
Tata Communications (c/o JSM Construction Ltd)	Total Colnbrook Pipelines	Total Finaline Pipelines
Transmission Capital	UK Power Networks	Uniper UK Ltd
University of Cambridge Granta Backbone Network	Vattenfall	Veolia ES SELCHP Limited
Veolia ES Sheffield Ltd	Voneus Limited	VPI Power Limited
West of Duddon Sands Transmission Ltd	Western Power Distribution	Westminster City Council
Zayo Group UK Ltd c/o JSM Group Ltd		

Figure 10.1 – LSBUD search result






10.1 ESP Utilities Group

ESP Utilities Group are an Independent Gas Transporter (IGT) that own and operate inset gas utility networks nationally. ESP Utilities Group has advised that they have apparatus located within the vicinity of the development site, which consists of LP gas mains routed within Ger Y Eglwys to the north west of the development site. Given the location of the ESP Utilities Group network in relation to the site boundary, it will be unaffected by the development proposals. Please see Figure 10.2 below for further detail on the location of the ESP Utilities Group network.



Figure 10.2 – Extract from ESP Utilities Group records

Key for Mains & Service Pipework	
	Existing LP mains or services operating up to 75 millibar gauge
	Existing MP mains or services operating between 75 millibar and 2 bar gauge
	Existing IP mains or services operating between 2 bar and 7 bar gauge

11.0  
11.0 Risk Matrix

Based upon the anticipated utility works required for this development discussed within this study, UCML has drawn up an indicative risk matrix for the development. For the risk matrix, each item is allocated a 'traffic light' score based on the anticipated risk to the development and associated timescales based on the key shown below.








Matrix Key	
	Do not envisage any major issues.
	Could cause delay that can be measured in weeks, and can also be prevented.
	Could cause delay that can be measured in months, and may be prevented.
	Could cause major delay, that may not be mitigated.
Utility	Risk
<b>Electricity</b>	
Connection Works – HV POC, off an on-site HV mains lay, installation of secondary substation, installation of on-site LV network, and LV service connections to each dwelling. Diversiory Works – None currently anticipated. Disconnection Works – LV overhead service cable disconnection if required.	
<b>Gas</b>	
Connection Works – None required, based on use of electrical heating strategy. Diversiory Works – Site entrance diversion, if required. Disconnection Works – LP service pipe disconnection, if required.	
<b>Water</b>	
Connection Works – TBC Diversiory Works – None currently anticipated. Disconnection Works – Service pipe disconnection, if required.	TBC
<b>Telecoms – Openreach</b>	
Connection Works – FTTP network installation and service connections. Diversiory Works – Site entrance diversionary works, if required. Disconnection Works – Overhead service line disconnection.	

Table 11.1 – UCML Risk Matrix

## 12.0 Street Works UK

Existing and new utilities are assumed to be located in accordance with the Street Works UK (formerly the National Joint Utility Group) guidelines. However, in reality existing utilities are often not laid to these guidelines. Where new road entrances are being formed it is recommended that trial hole investigations are carried out to verify the precise position and depth of infrastructure. In some cases, if the utility infrastructures are sufficiently deep, this may enable the extent and cost of diversions to be reduced.

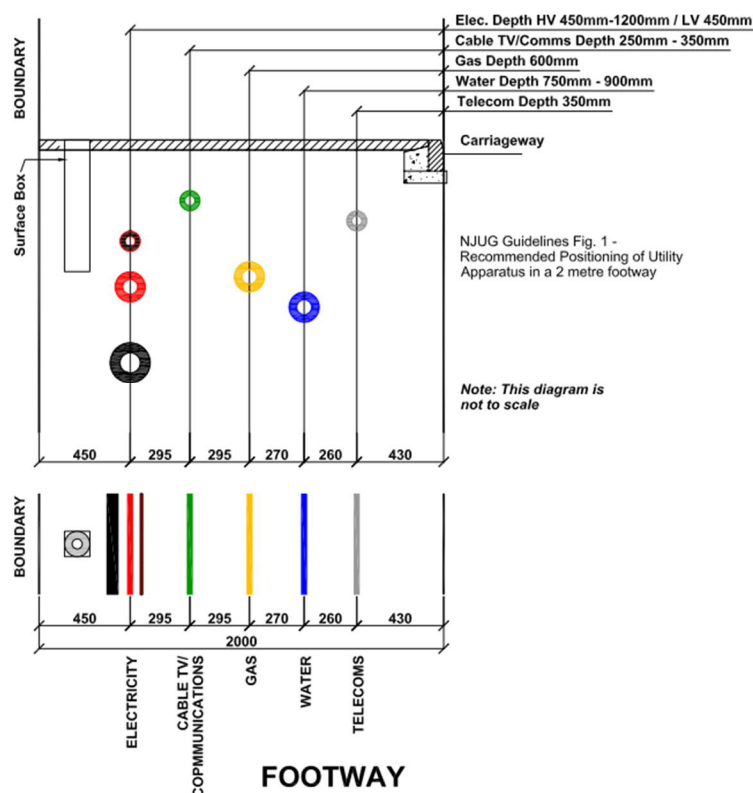
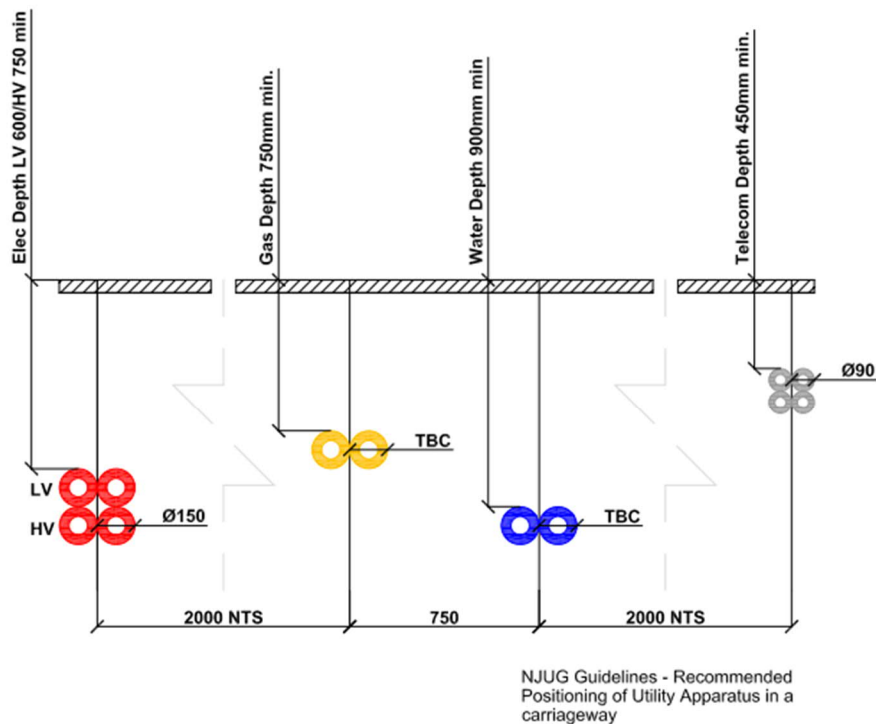


Figure 12.1 – Recommended positioning of utility apparatus in a footpath

The position and depths of underground and overhead apparatus as indicated on infrastructure records included within the utility study are approximate and may deviate from the marked route. The plan information shown is given without warranty and is derived from statutory network information provided by others. The accuracy thereof must not be relied upon in the event of any development or works without further below ground investigations taking place.



## CARRIAGEWAY

Figure 12.2 – Recommended positioning of utility apparatus in carriageway

When on-site, the contractor must use safe digging practices, in accordance with HSG 47, to verify and establish the actual position of mains, pipes, services, and any other apparatus on-site before any mechanical plant is used. The responsibility for locating the apparatus precisely before commencing any works rests entirely upon the person undertaking or directly responsible for those works.

The Contractor is to refer to the following documents before works commence within the vicinity of existing services;

- Health and Safety Guidance HSG 47 Avoiding Dangers from Underground Services.
- Health and Safety Guidance GS6 Avoiding Danger from Overhead Electric Lines.
- Street Works UK (formerly NJUG) Guidelines.
- General Safety Measures to Avoid Injury and Damage to Gas Apparatus.
- CDM Regulations 2015 (Regulation 25 – Energy Distribution Installations).

This desktop utility study covers statutory infrastructures surrounding the site. All information has been taken from the records of the statutory authorities and although this information is the most accurate available it may be prudent to undertake trial excavations in strategic locations to definitively determine the depth and location of infrastructure. Utility Providers Networks are constantly under review and subject to applications from other parties and the capacities and loads currently available may be subject to change.

The costs provided are advised as a predicted worst-case scenario of the foreseeable works. However, as these are only budget figures the actual costs entailed will not be determined until detailed proposals are received from the owners of the infrastructure.

Prepared by;  
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Utilities Connections Management Ltd.

Checked by;  
Casey Watmore – Technical Coordinator  
Utilities Connections Management Ltd.

This document has been prepared solely as a Desktop Utility Study for Isle of Anglesey County Council. Utilities Connections Management Ltd accepts no responsibility or liability for any use that is made of this document other than by Isle of Anglesey County Council for the purposes for which it was originally commissioned and prepared.

No individual is personally liable in connection with the preparation of this Desktop Utility Study. By receiving this study and acting on it, the client or any other person accepts that no individual is personally liable whether in contract, tort, for breach of statutory duty or otherwise.

Completeness – Due care and effort is made to locate all Utility companies in a search area, however, due to the existence of redundant utilities, emergence of new companies and the combining of, takeover or sale of existing companies, UCML cannot guarantee to provide details on all utilities in a given area.

There may be a time delay between the physical installation, repair or upgrading of utilities networks and the subsequent recording of the works on utility infrastructure records. Therefore, it should be noted there may be utilities present that are not shown on the records.

## 13.0 Further UCML Services

### Technical Procurement

UCML's technical procurement service deals with the obtaining of capacity checks as well as disconnection, diversion, connection, service alteration and temporary supply quotations. These include electricity, gas, clean water and telecom supplies for all forms of residential, commercial and industrial developments. Use of our technical procurement services can result in;

- Considerable cost savings.
- Reduced overheads.
- Reduced timescales.
- Reduced delays.
- Reduced time expenditure.
- Removal of provisional sums from tender submissions.

The services provided by UCML's Technical Procurement service includes;

- Review of proposed meter positions to ensure technical and regulatory viability.
- Application for:
  - Existing statutory infrastructure records.
  - Disconnection quotations including meter removals where required.
  - Statutory infrastructure diversion quotations.
  - Temporary building supplies.
  - New connections quotations.
  - Legal searches including easement, wayleaves and Land Registry title searches.
- Technical review of all quotations received including technical and commercial comparison across all competing quotes.
- Submission of successful quotations for acceptance.
- Single point of contact for project administration, and an assigned Technical Engineer to each scheme.

## Project Management

UCML's Project Management service deals with the project management of disconnections, diversions, connections, service alterations, capacity checks and temporary supply installations for all forms of residential, commercial and industrial developments. Our Project Management team can work in conjunction with our Technical Procurement service or as a stand-alone offering to manage the delivery of all electricity, gas, clean water and telecom works. Use of our Project Management service can result in:

- Improved program planning accuracy.
- Reduced time expenditure.
- Reduced abortive visit charges.
- Reduced delivery timescales and as a result less delays.

The services provided by UCML's Project Management service includes;

- Management of statutory connections from quotation acceptance to completion.
- Assigned Project Manager to the scheme to provide a single point of contact for site staff, and attend site meetings and design team meetings as required.
- Provision of a site pack including existing and proposed drawings and relevant technical information relating to dimensions and layout of metering enclosures.
- Management of legal agreements required including wayleaves, easements and adoption agreements.
- Programming of all mains, connections and metering works through proactive communication with site staff.

## Appendices

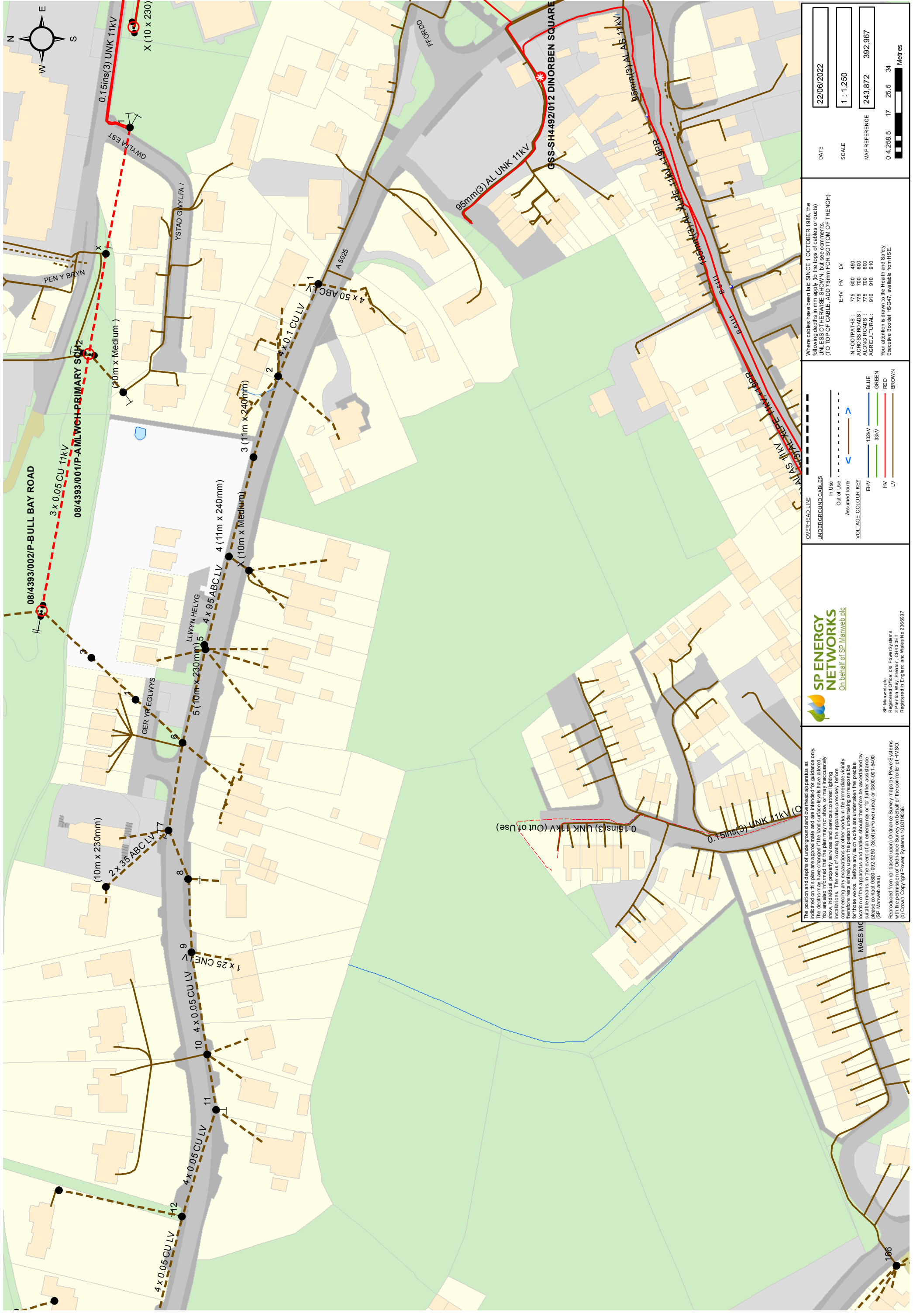
Appendix 1 – SP Energy Networks Infrastructure Plan

Appendix 2 – Wales & West Utilities Infrastructure Plan

Appendix 3 – Dŵr Cymru Welsh Water Infrastructure Plan

Appendix 4 – Openreach Infrastructure Plan





DATE: 22/06/2022

SCALE: 1 : 1,250

MAP REFERENCE: 243,872 392,967

0 4,258.5 17 25.5 34 Metres

Where cables have been laid SINCE 1 OCTOBER 1988, the following depths in mm apply to the tops of cables or ducts UNLESS OTHERWISE SHOWN, but see comments. (TO TOP OF CABLE, ADD 75mm FOR BOTTOM OF TRENCH)

	EHV	HV	LV
IN FOOTPATHS :	775	600	450
ACROSS ROADS :	775	700	600
ALONG ROADS :	775	700	600
AGRICULTURAL :	910	910	910

Your attention is drawn to the Health and Safety Executive Booklet HSG47, available from HSE.

**OVERHEAD LINE**

**UNDERGROUND CABLES**

In Use  
Out of Use  
Assumed route

**VOLTAGE COLOUR KEY**

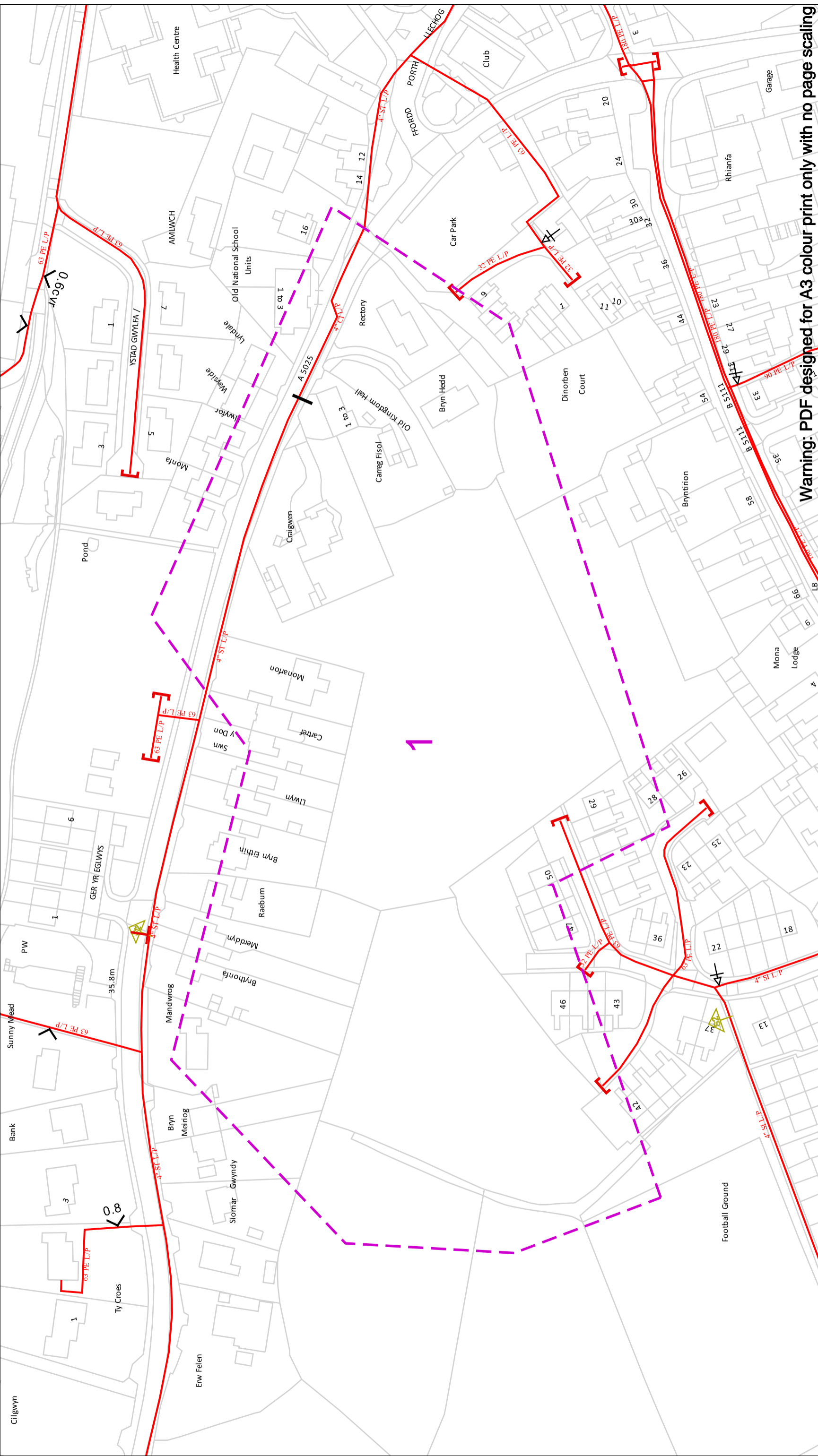
Voltage	Colour
EHV	BLUE
HV	GREEN
LV	BROWN

**SP ENERGY NETWORKS**  
On behalf of SP Manweb plc

SP Manweb plc  
Registered Office: c/o PowisSystems  
3 Prenton Way, Prenton, CH43 3ET  
Registered in England and Wales No 2368937

The position and depths of underground and overhead apparatus as indicated on this plan are approximate and are intended for guidance only. You are also informed that the plan may not show, or may inaccurately show, individual property services and services to street lighting installations. The onus of locating the apparatus precisely before commencing any excavations or other works in the immediate vicinity of those works. Before any such works are undertaken the precise location of the apparatus and cables should therefore be ascertained by suitable means. In the event of an emergency or for further assistance please contact 0800-092-9290 (ScottishPower area) or 0800-001-5400 (SP Manweb area).

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Warning: PDF designed for A3 colour print only with no page scaling

Contact Us  
 Mapping Enquiries: 02920 278 912  
 General Enquiries: 0800 912 2999

Date Requested: 15/06/2022  
 Job Reference: 25956161  
 Site Location: 243879 392969

Requested by:  
 Mr Steffan Iloyd  
 Your Scheme/Reference: Maes Mona  
 / Bull Bay Road, Amlwch

Scale: 1:1250 (When plotted at A3)

**IMPORTANT NOTICES**

- This information is given as a guide only and its accuracy cannot be guaranteed
- The plan only shows those pipes owned by Wales & West Utilities (WUU) as its role as a licensed Gas Transporter
- Service pipes, valves, syphons, stub connections etc. may not be shown but their presence should be anticipated
- You must use safe digging practices in accordance with HS(G)47 to establish the actual position of mains, services and other apparatus before any mechanical excavation is used
- It is your responsibility to ensure this information is provided to all persons working near our plant
- If in doubt call the WUU dig team on 02920 278912

**In case of an emergency call 0800 111 999**

Dig Sites	Area: - - - - -	Line: - - - - -	Line/Fire Valve
	Low Pressure (LP) 2.1mbar – 75mbar	Medium Pressure (MP) 350mbar – 2bar	Governor Station
	Intermediate Pressure (IP) 2bar – 7bar	High Pressure (HP) >7bar	Change of Diameter
			End Cap
			Depth of cover

100m

**WALES & WEST UTILITIES**

**Dial before you dig**

Small gas? Call the Gas Emergency Service on 0800 111 999.

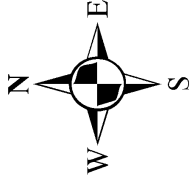
Investigate before you start work. Call 029 2027 8912

GO ahead Done your research? Now you can dig safely.



**Dŵr Cymru**  
**Welsh Water**

Land between Maes Mona and Bull Bay Road  
Amlwch Anglesey LL68 9EA



**LEGEND**

Clean network:

- Sluice valve
- Pressure reducing valve
- Meter
- Bulk meter
- Hydrant
- Cap end
- Air valve
- Stop tap
- Water Treatment Works
- Water Pumping Station
- Existing main
- Non-operational main
- Raw Water

NB: Water main symbol colour indicates the type:  
- Trunk  
- Distribution  
- Raw Water

**Notes:**

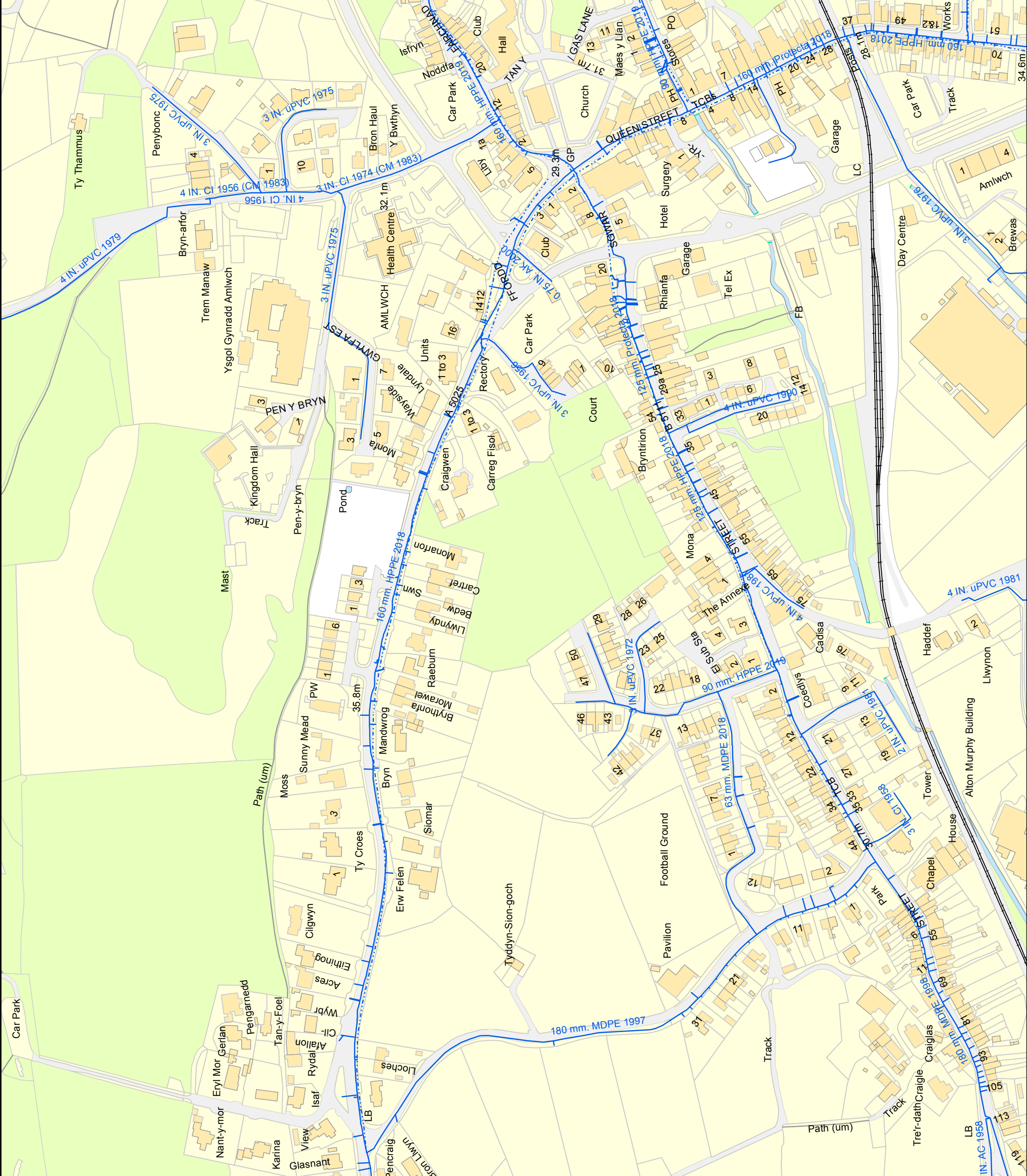
Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation.

Dŵr Cymru Cymrydd (the Company) gives this information as to the position of its underground apparatus by way of its records as to the position of its apparatus. The information is provided for your information only and is not to be relied upon in the event of excavations or other works made in the vicinity of the company's apparatus. The onus of locating apparatus before carrying out any excavations rests entirely on you. The information which is supplied to you is based on the records of the company and is not intended to be a guarantee of the position of the apparatus. The Company is not liable for any loss or damage caused by any excavation or other works made in the vicinity of the company's apparatus. If you are carrying out any excavations or other works made in the vicinity of the company's apparatus, you should ensure that you are aware of the location of the company's apparatus. If you are carrying out any excavations or other works made in the vicinity of the company's apparatus, you should ensure that you are aware of the location of the company's apparatus. If you are carrying out any excavations or other works made in the vicinity of the company's apparatus, you should ensure that you are aware of the location of the company's apparatus.

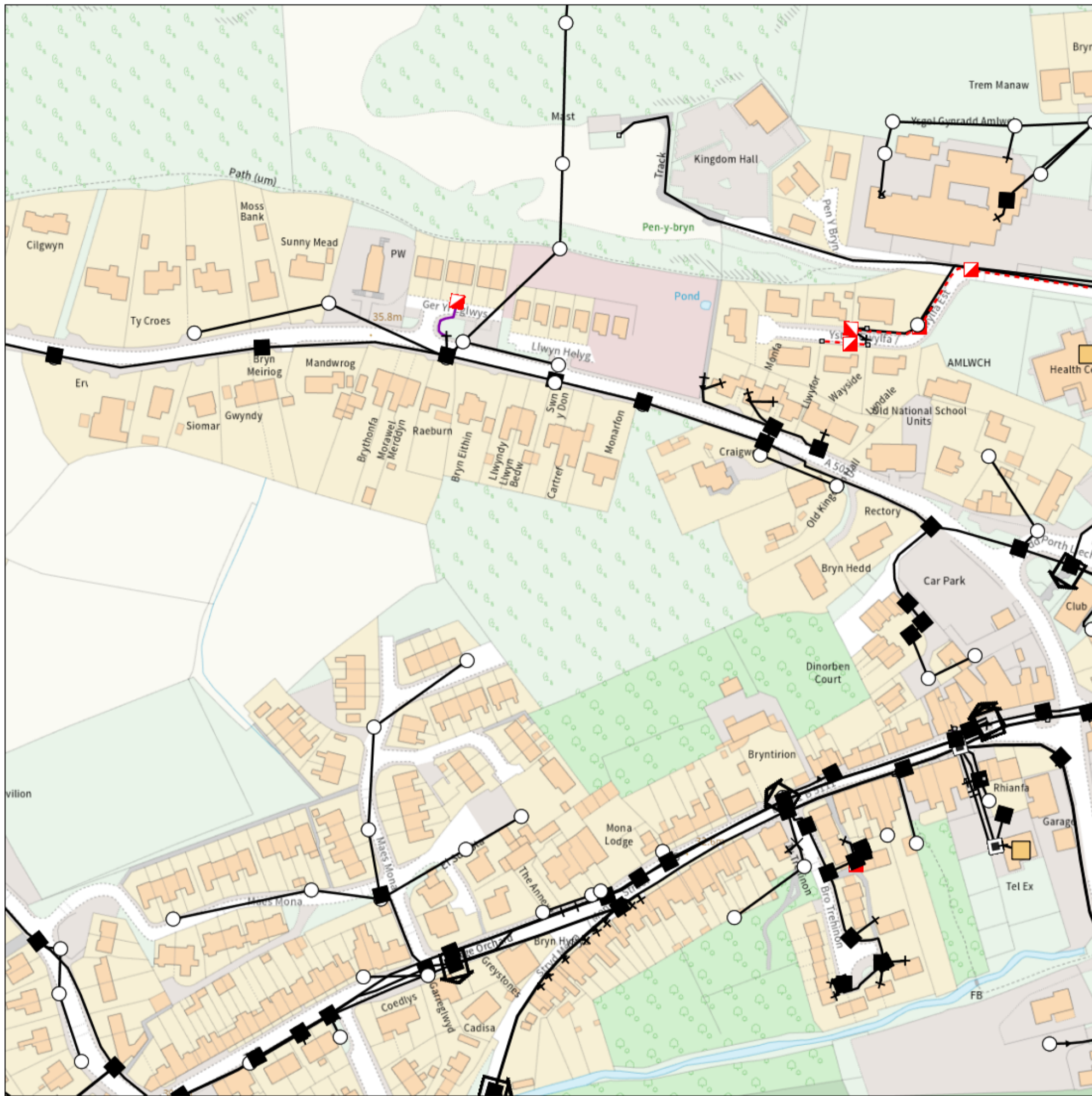
**EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE.**

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Map Ref: 243884,392970  
Map scale: 1:2500  
Printed by: Zara Howells  
Printed on: 29 Jun 2022



# Maps by email Plant Information Reply



## IMPORTANT WARNING

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



**openreach**

### CLICK BEFORE YOU DIG

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

email [cbyd@openreach.co.uk](mailto:cbyd@openreach.co.uk)

ADVANCE NOTICE REQUIRED  
(Office hours: Monday - Friday 08.00 to 17.00)  
[www.openreach.co.uk/cbyd](http://www.openreach.co.uk/cbyd)

### Accidents happen

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

### KEY TO BT SYMBOLS

			Change Of State	+	Hatchings	
	<i>Planned</i>	<i>Live</i>	Split Coupling	×	Built	
PCP			Duct Tee	▲	Planned	
Pole			Building		Inferred	
Box			Kiosk		Duct	
Manhole			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.			
Cabinet						
	<i>Pending Add</i>	<i>In Place</i>	<i>Pending Remove</i>	<i>Not In Use</i>		
Power Cable						
Power Duct				N/A		

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BT Ref : RLO03156Z  
Map Reference : (centre) SG4388492974  
Easting/Northing : (centre) 243884,392974  
Issued : 15/06/2022 15:16:15

**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](mailto:nnhc@openreach.co.uk)**