



Desktop Feasibility Report Crossings Road, Chapel-en-le-Frith

Prepared for Barratt Homes
By Technical & Development Services (Northern) Ltd

Project Information

Title	Desktop Feasibility Report
Site Location	Crossings Road, Chapel-en-le-Frith
Client	Barratt Homes
Prepared by	Alisha Forrester
Checked by	Lee Tayler

Copyright

Copyright of this report remains with Technical and Development Services (Northern) Limited (TDSN). Should the client wish to release this report to a third party, for that party's reliance TDSS agree to such a release provided that TDSN assumes no duties, liabilities, or obligations to that third party.

Contents

Project Information	2
Copyright	2
1 Project Description	5
2 Utility Overview	6
3 Review of Existing Infrastructure	7
3.1 Electricity	7
3.1.1 Electricity North West Limited	7
3.1.2 ESP Utilities	8
3.2 Gas	9
3.2.1 Cadent Gas	9
3.2.2 ESP Utilities	10
3.3 Water	11
3.3.1 Untied Utilities - Clean	11
3.3.2 United Utilities - Waste	12
3.3.3 Severn Trent - Clean	13
3.4 BT Openreach	14
3.4.1 BT Openreach	14
4 Development Impact on Existing Utility Infrastructure	15
4.1 Overview	15
4.2 Electricity	16
4.2.1 Electricity North West Limited	16
4.2.2 ESP Utilities	17
4.3 Cadent Gas	18
4.3.1 Cadent Gas	18
4.4 Water	19
4.4.1 Untied Utilities	19
4.4.2 Severn Trent	20
4.5 Telecoms	21
4.5.1 BT Openreach	21
5 Utility Points of Connection	22
5.1 Overview	22
5.2 Electricity	23
5.2.1 Electricity - ASHP Heating Type	23
5.2.2 Electricity - Gas Heating Type	24
5.3 Gas	25
5.3.1 Cadent Gas	25
5.4 Water	26
5.4.1 Severn Trent Water	26
5.5 Telecoms	27

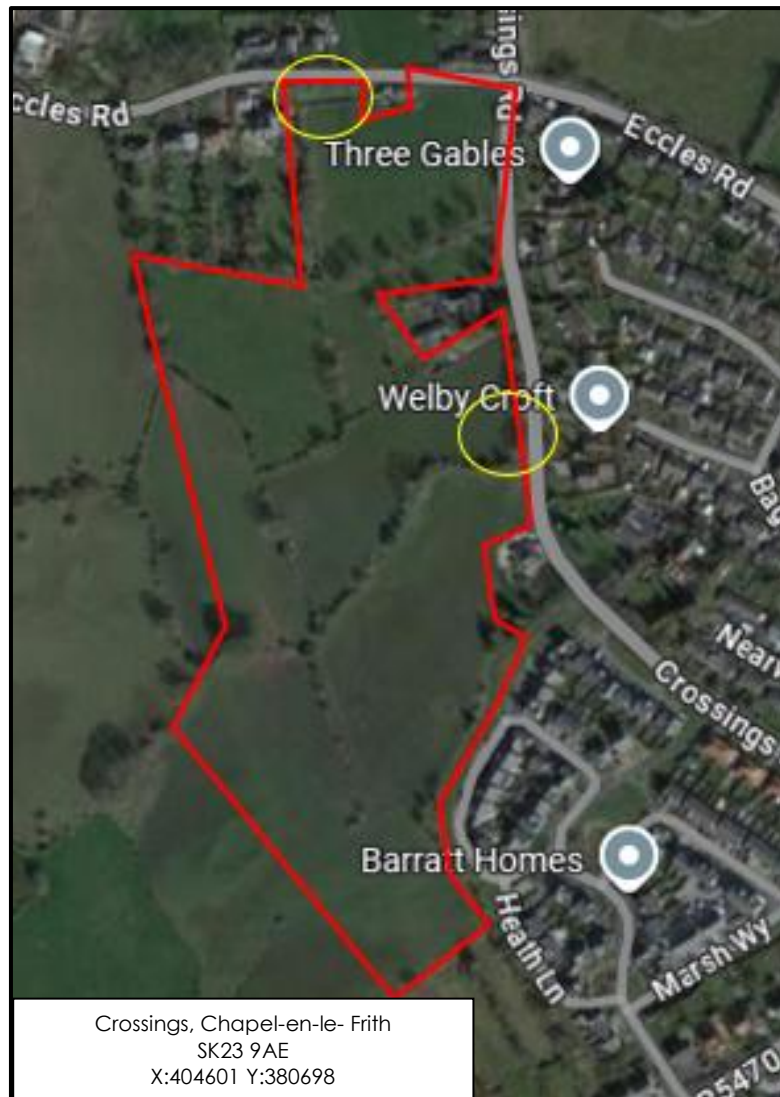
5.5.1 BT Openreach.....	27
6 Assumed Utility Connections.....	29
6.1 Electricity, Gas, Water and Telecoms Connections - Budget	29
7 Summary	30
APPENDIX 1 – Existing Infrastructure	31

1 Project Description

Barratt Homes has engaged Technical and Development Services (Northern) Ltd. to determine the availability and sufficiency of existing utilities to serve a proposed residential development of 250 dwellings, 50% 3 bed and 4 bed and to identify any utility apparatus on, or adjacent to the site, that may be affected by the development.

The purpose of the report is to identify the impact of the proposed development site on existing electricity, gas, water and telecoms infrastructure.

The red edge location plan shows the proposed development area.



The site is assumed to be accessed from Crossings Road and Eccles Road and bounded by greenfield to the north, south and west with residential dwellings to the east. The site entrances are highlighted in yellow. The proposed site layout is not currently available.

2 Utility Overview

Following a review of the developments effect on existing infrastructure, requirements for proposed infrastructure and relevant applications to utility companies the following overview can be provided. This overview aims to provide clarification of the possible design, programme and cost implications of works required. The details relating the below can be found in the following report.

Disconnections		
Utility	Item	Cost
Electricity	Not Anticipated	Not Anticipated
Gas	Not Anticipated	Not Anticipated
Water	Not Anticipated	Not Anticipated
BT Openreach	Removal of overhead pole within the site and diversion on Eccles Road site entrance.	£50,000
Diversions		
Utility	Item	Cost
Electricity	Underground low-voltage cables at the presumed site entrance on Crossings Road	£33,000
Water	Underground live main at the presumed site entrance on Crossings Road	£30,000
Connections		
Utility	Item	Cost
Electricity Gas heated	High-Voltage Point of Connection	Included in Connections Cost
	Reinforcement	TBC Upon application to Statutory Undertaker.
	1845 Meters of Cable Lay to site – based on assume site entrance	£461,250
	1no. secondary Substation (500kva)	1No. Cost Included in On Site Connection cost below
	1no Substation Civils	£35,000
Electricity-ASHP	High-Voltage Point of Connection	Included in Connections Cost
	Reinforcement	TBC Upon application to Statutory Undertaker.
	1845 Meters of Cable Lay to site – based on assume site entrance	£461,250
	1no. secondary Substation (1000 kva)	1No. Cost Included in On Site Connection cost below
	1no Substation Civils	£35,000
Gas	6" Low Pressure-Point of Connection	Included in Connections Cost
	Reinforcement	TBC Upon application to Statutory Undertaker.
	17 Meters of Pipe Lay to site	£4,250
Water	3" CI live distribution main Point of Connection	Included in Connections Cost
	Reinforcement	TBC Upon application to Statutory Undertaker.
	2 Meters of Pipe Lay to site	£1,000
Electricity, Gas and Water Connections on Site	250 Number of Plots at £1500 per plot gas heated	Gas Heated £375,000
	250 Number of Plots at £1800 per plot electric heated	Electrically Heated -£450,000
TOTAL BUDGET CONNECTION COST	Based on Gas Connection: £989,500	
	Based on ASHP Connection: £1,060,250	

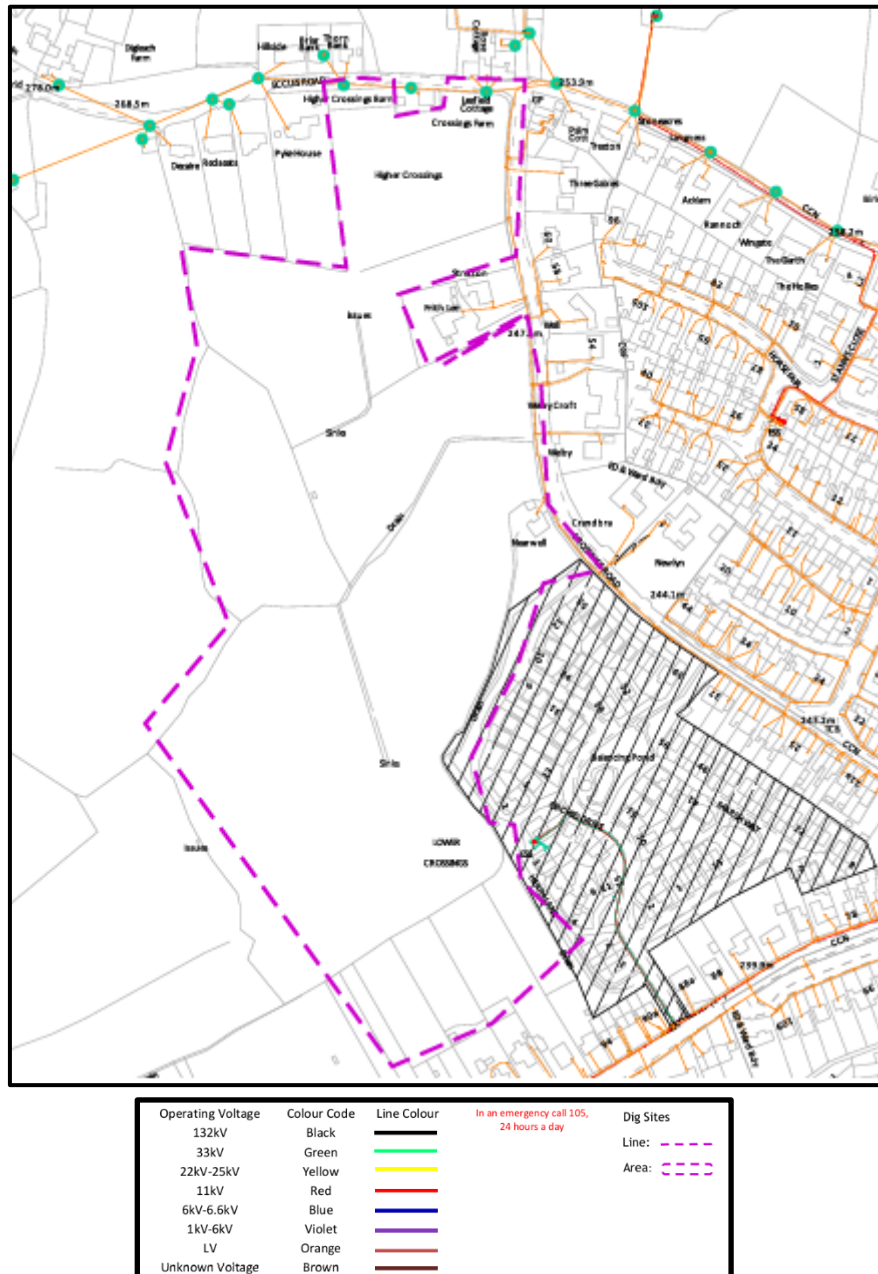
Budget figures provided by TDS Northern Ltd are based on a range of information derived from existing network records and previously secured quotations however TDS Northern do not have access to detailed network information and contractor rates and therefore budget figures should be used as a guide only.

3 Review of Existing Infrastructure

3.1 Electricity

3.1.1 Electricity North West Limited

The existing electricity infrastructure within the vicinity of the site is owned and operated by Electricity North West Limited as a licenced Distribution Network Operator. The below plan shows existing Electricity North West Limited infrastructure records in the vicinity of the site. (For more detailed plans see the APPENDIX 1).



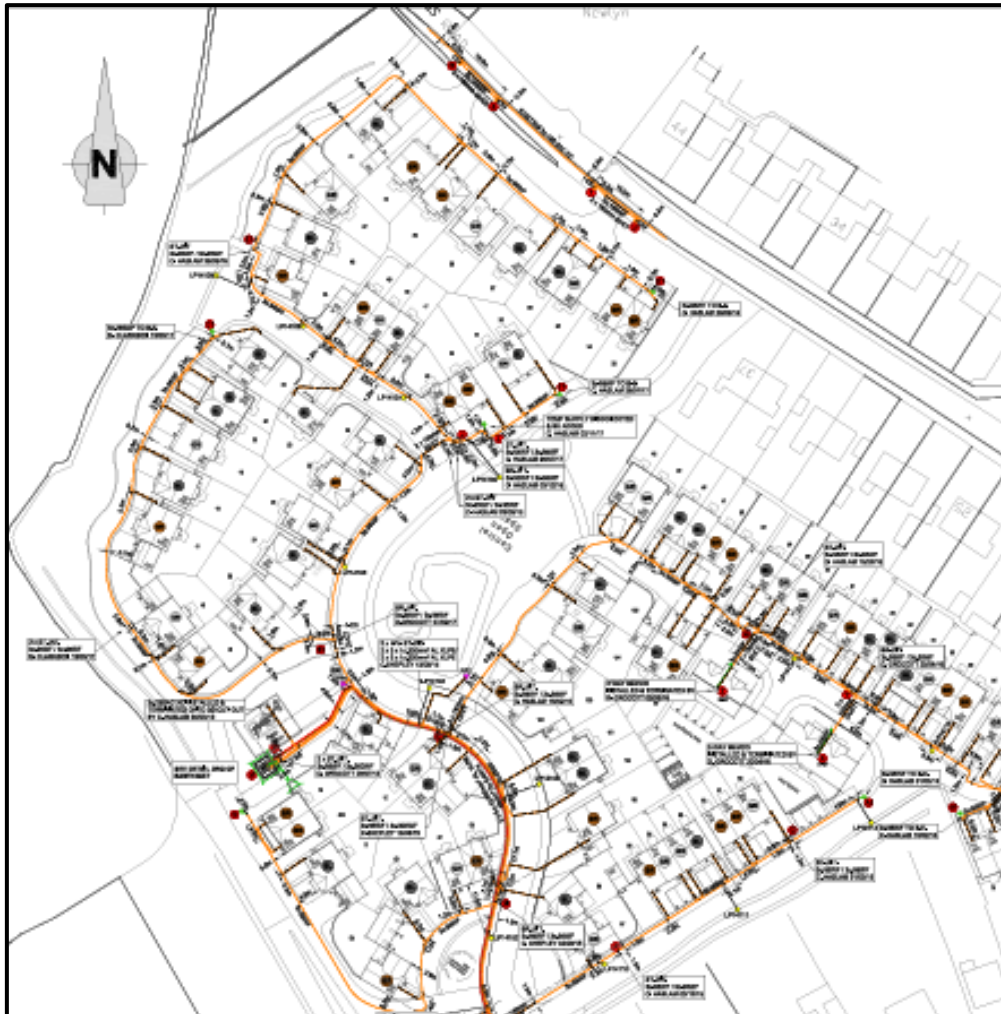
Electricity North West Limited plans show there is no existing infrastructure within the site. However, there are overhead poles, cables and underground ducting that could affect the proposed site entrances.

To the north of the site, there are overhead poles and cabling that run east to west on the adjoining verge, which feeds residential dwellings on Eccles Road.

To the east of the site, there is an underground low-voltage network that feeds the existing residential dwellings within the adjoining verge on Crossings Road.

3.1.2 ESP Utilities

The existing electricity infrastructure within the vicinity of the site is owned and operated by ESP as a licenced Distribution Network Operator. The below plan shows existing ESP infrastructure records in the vicinity of the site. (For more detailed plans see the APPENDIX 1).



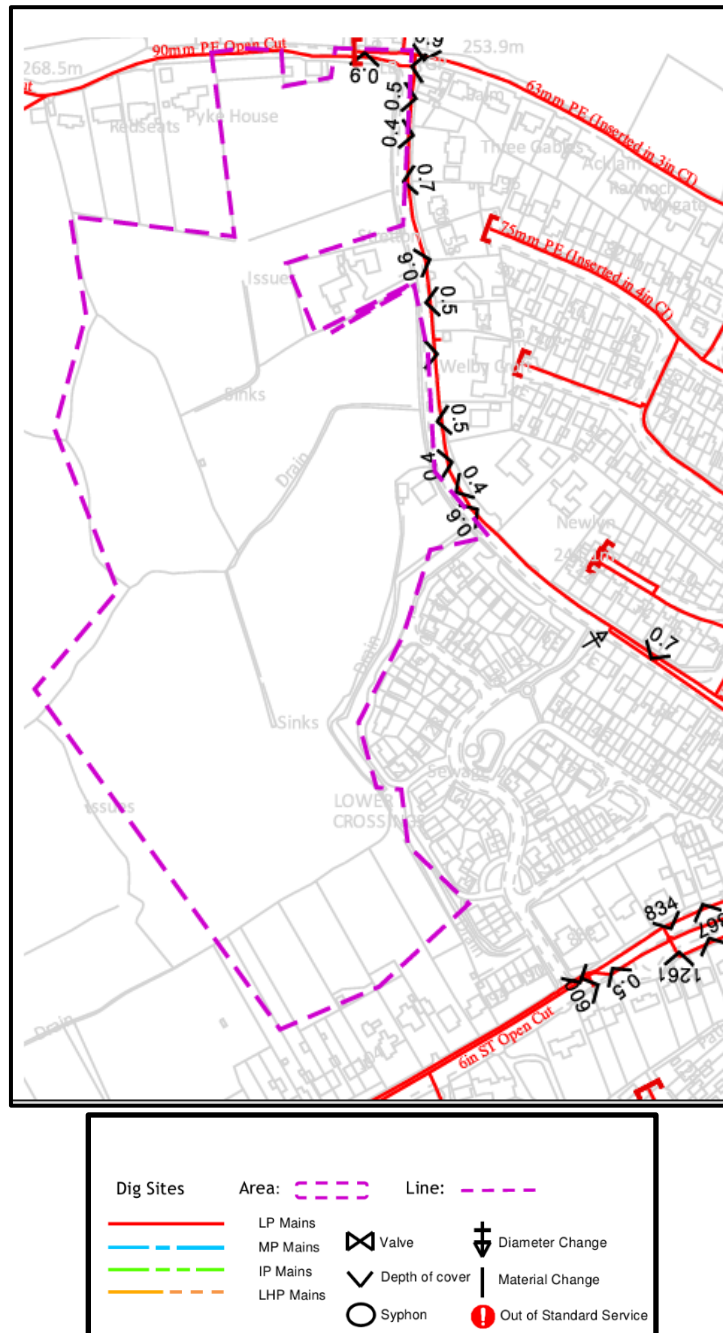
ESP Utilities plans show there is no existing infrastructure within the site.

To the southeast of the site, there are underground low-voltage cables that feed residential dwellings on Orchid Drive.

3.2 Gas

3.2.1 Cadent Gas

The existing gas infrastructure within the vicinity of the site is owned and operated by Cadent Gas as a licenced Gas Transporter. The below plan shows existing Cadent Gas infrastructure records in the vicinity of the site. (For more detailed plans see the **APPENDIX 1**).



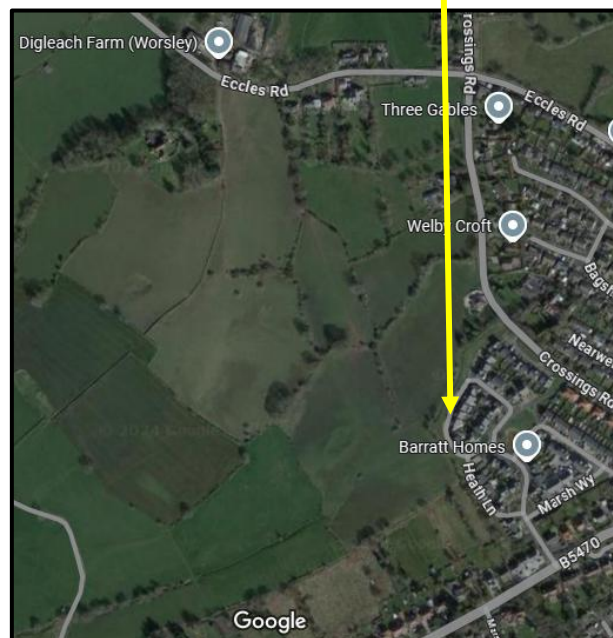
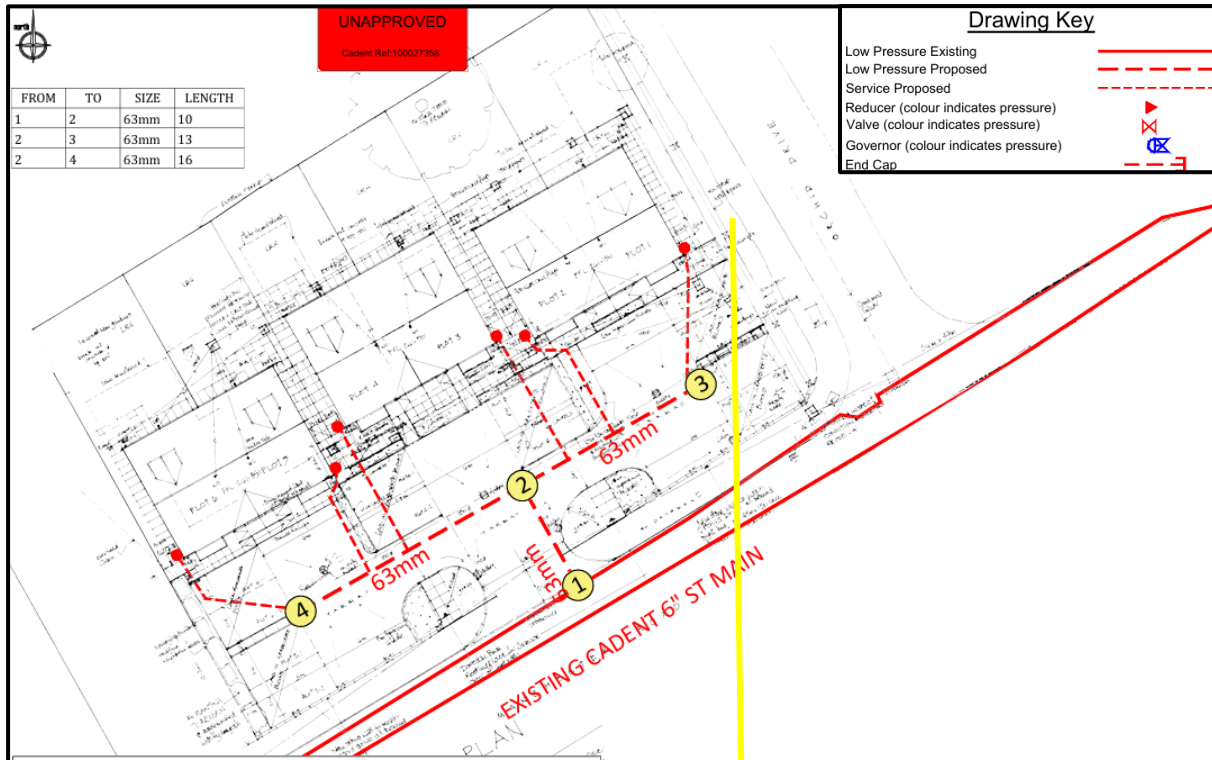
Cadent Gas plans show no existing infrastructure within the site. However, there are low-pressure mains on the site boundary that may affect the site entrances.

To the north of the site, there is a 90mm PE low-pressure main travelling east to west within the verge on Eccles Road. It continues within the greenfield near the site boundary that feed residential dwellings.

To the east of the site, there is a 6" CI within a 125mm PE low-pressure main travelling north to south on Crossings Road within the verge, then carries on within the carriageway.

3.2.2 ESP Utilities

The existing gas infrastructure within the vicinity of the site is owned and operated by ESP Utilities as an independent Gas Transporter. The below plan shows existing ESP Utilities infrastructure records in the vicinity of the site. (For more detailed plans see the **APPENDIX 1**)



ESP Utilities plans show no existing infrastructure within the site. However, there is proposed gas work near the site boundary.

To the east of the site, there are proposed gas work off Crossing Road near Orchid Drive.

3.3 Water

3.3.1 Untied Utilities - Clean

The existing water infrastructure within the vicinity of the site is owned and operated by United Utilities as a licenced water network operator. The below plan shows existing United Utilities infrastructure records in the vicinity of the site. (For more detailed plans see the **APPENDIX 1**).



United Utilities plans show there is no existing infrastructure within the development.

3.3.2 United Utilities - Waste

The existing waste water infrastructure within the vicinity of the site is owned and operated by United Utilities as a licenced waste water network operator. The below plan shows existing United Utilities infrastructure records in the vicinity of the site. (For more detailed plans see the **APPENDIX 1**).



In order to obtain detailed information regarding the waste water network, it is advised to seek advice from an engineering consultancy. Waste water advice is outside the scope of TDS.

3.3.3 Severn Trent - Clean

The existing water infrastructure within the vicinity of the site is owned and operated by Severn Trent as a licenced water network operator. The below plan shows existing Severn Trent infrastructure records in the vicinity of the site. (For more detailed plans see the **APPENDIX 1**).



Severn Trent plans show no existing infrastructure within the site.

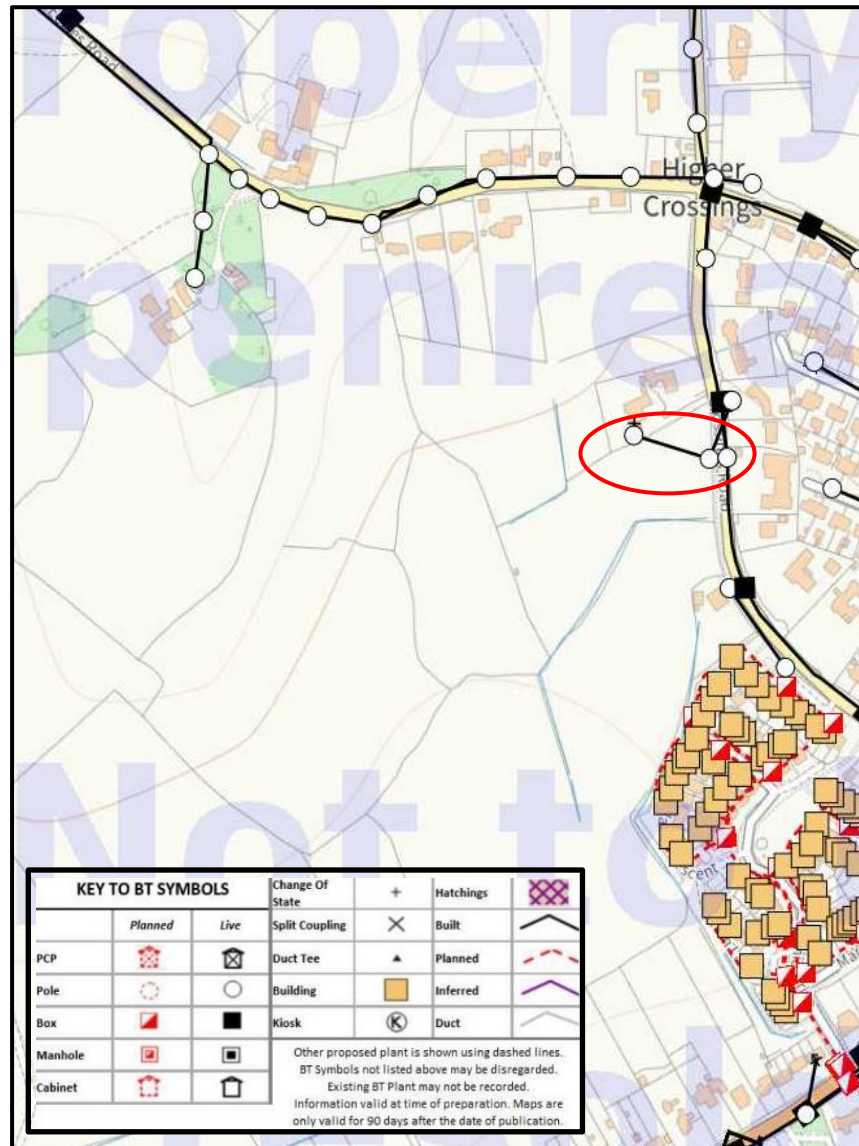
To the north of the site, there is a 3" CI live main within the opposing verge that travels east to west on Eccles Road. It terminates at an underground hydrant within the carriageway.

To the east of the site, there are 3no underground live main travelling north to south. 2no underground live mains run within the carriageway on Crossings Road. The other underground main runs within the adjoining verge and then carries on in the carriageway on Crossings Road.

3.4 BT Openreach

3.4.1 BT Openreach

BT Openreach own and operate existing telecommunications infrastructure within the vicinity of the proposed site under its rights derived from the telecommunications act. The below plan shows existing BT Openreach infrastructure records in the vicinity of the site. (For more detailed plans see the **APPENDIX 1**).



BT Openreach plans show there is existing infrastructure within the site.

To the north of the site, there are overhead poles on the opposing and adjoining verge on Eccles Road.

Highlighted above, to the east of the site, there is an overhead pole and ducting entering the site. It connects to another pole that feeds a residential dwelling on the site boundary on Crossings Road.

To the northeast and east of the site, there are overhead poles and underground ducting on the opposing verge on Crossings Road.

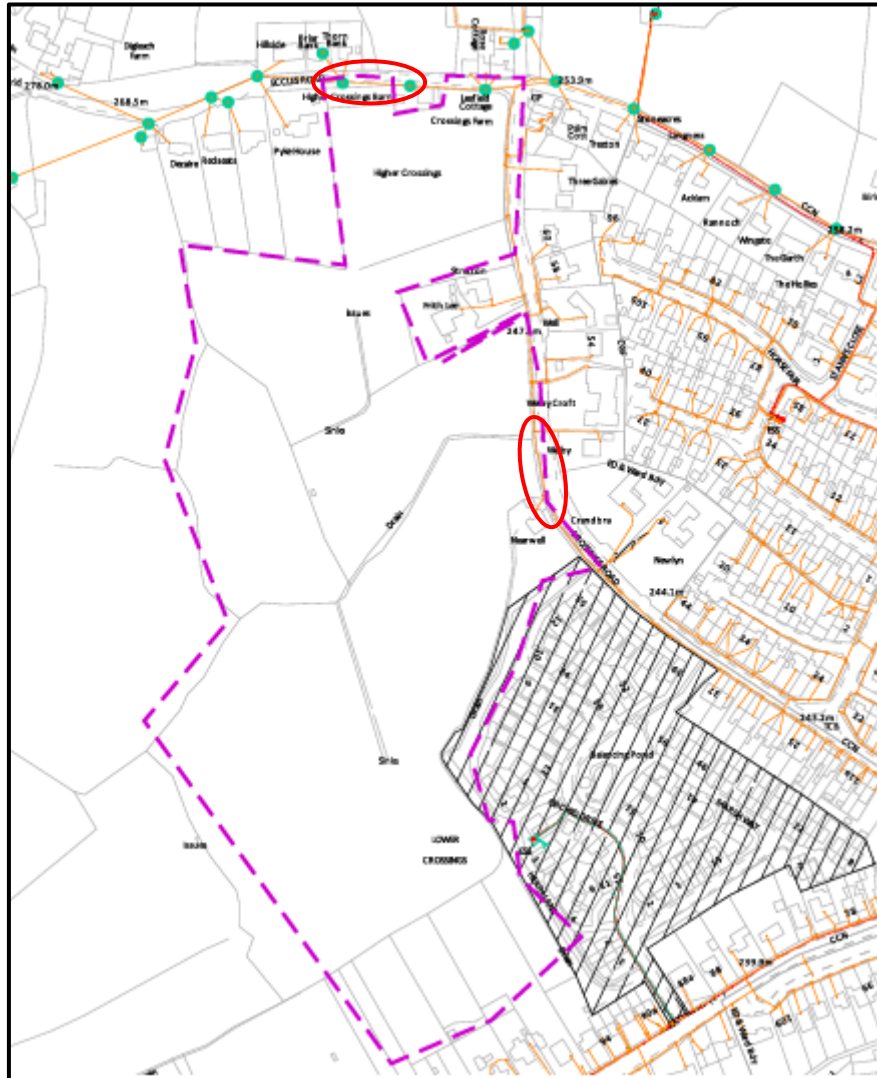
4 Development Impact on Existing Utility Infrastructure

4.1 Overview

The below table provides an overview of the likely disconnection and diversions identified as part of section 4 of this report.

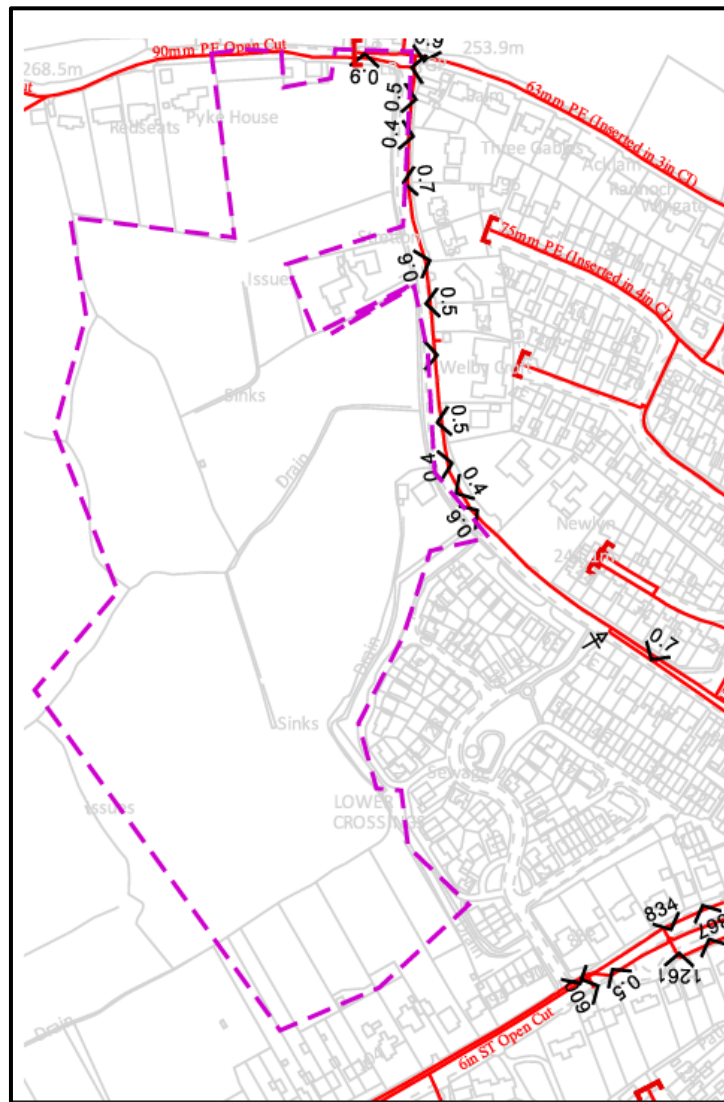
Disconnections		
Utility	Item	Cost
Electricity	Not Anticipated	Not Anticipated
Gas	Not Anticipated	Not Anticipated
Water	Not Anticipated	Not Anticipated
BT Openreach	Removal of overhead pole within the site and diversion on Eccles Road site entrance.	£50,000
Diversions		
Utility	Item	Cost
Electricity	Overhead poles at the presumed site entrance on Eccles Road	£20,000
	Underground low-voltage cables at the presumed site entrance on Crossings Road	£13,000
Water	Underground live main at the presumed site entrance on Crossings Road – if the depth is not sufficient, budget for worst case scenario	£30,000

4.2.1 Electricity North West Limited



It is not anticipated that any electrical diversions will be required to accommodate for the proposed development.

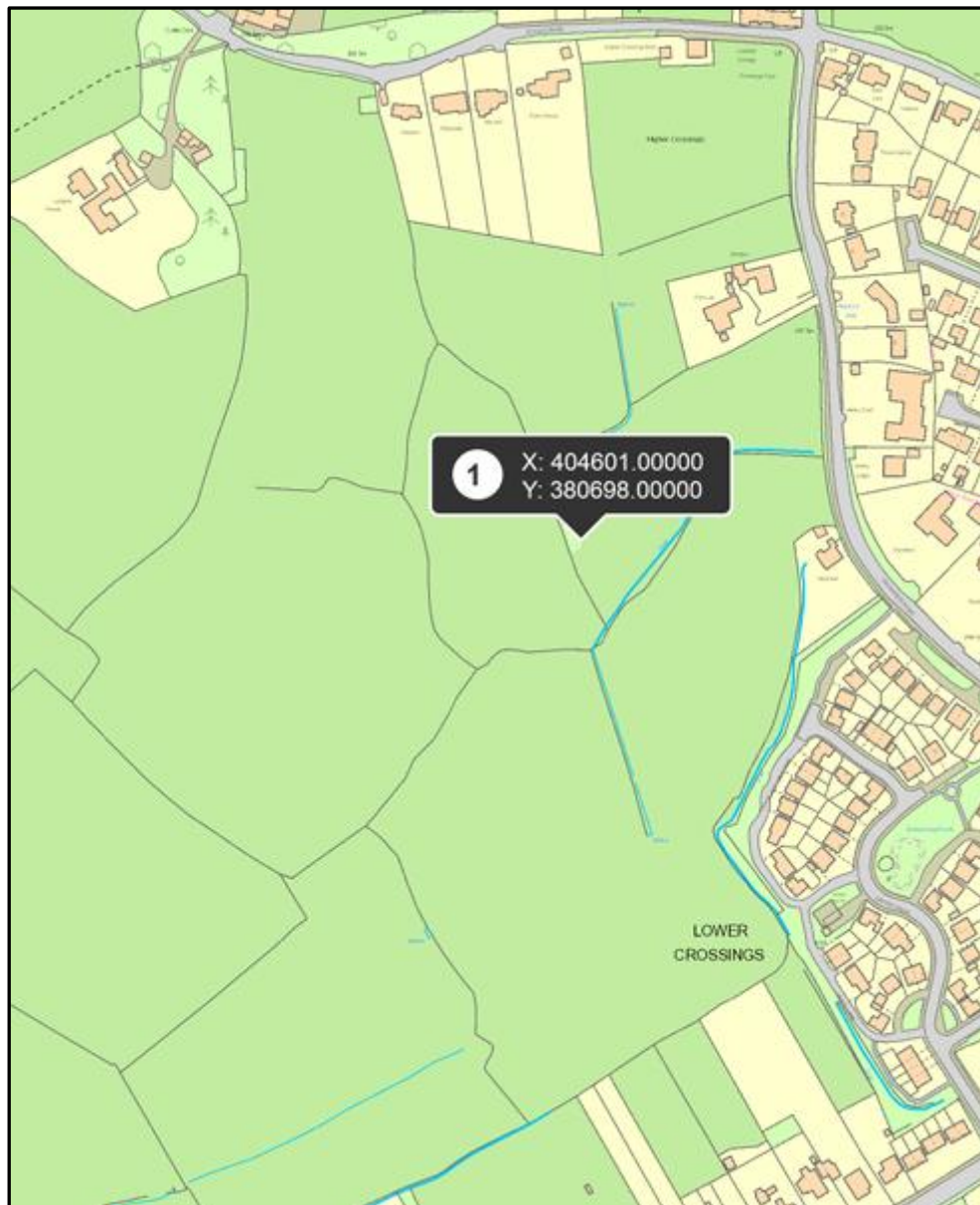




4.4 Water

4.4.1 Untied Utilities

It is not anticipated that any water diversions will be required to accommodate for the proposed development.



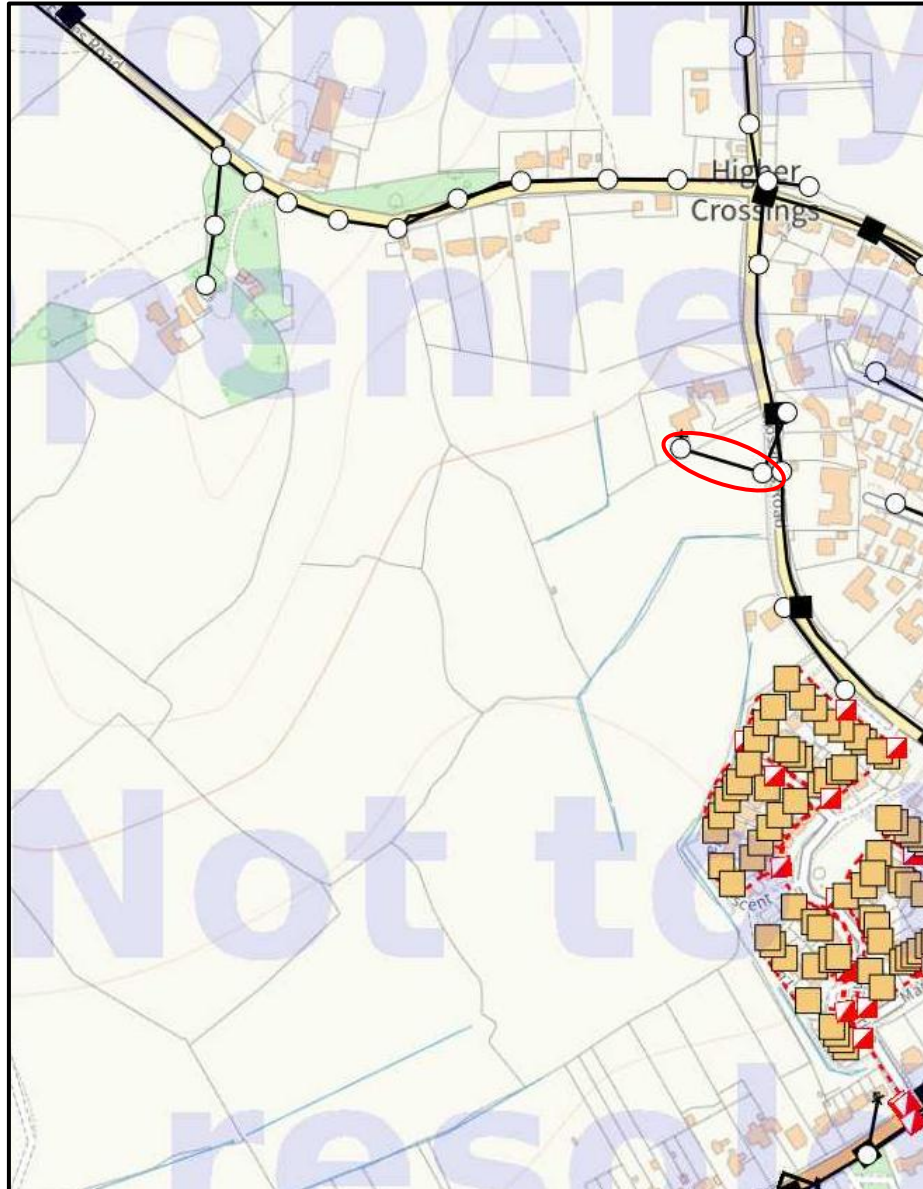
Sewer Trent distribution infrastructure crossing the site could be affected by the proposed development and may require a diversion. If there is sufficient depth coverage of 900mm for the live distribution main, then a diversion will not be required. Budget £30,000 for worst case scenario.

The map shows the River Ouse flowing through York. Key landmarks include the city wall, the Minster, the Museum, the Railway, and the City Wall. A red oval highlights a section of the riverbank near the city wall, indicating the location of the archaeological excavation site.

4.5 Telecoms

4.5.1 BT Openreach

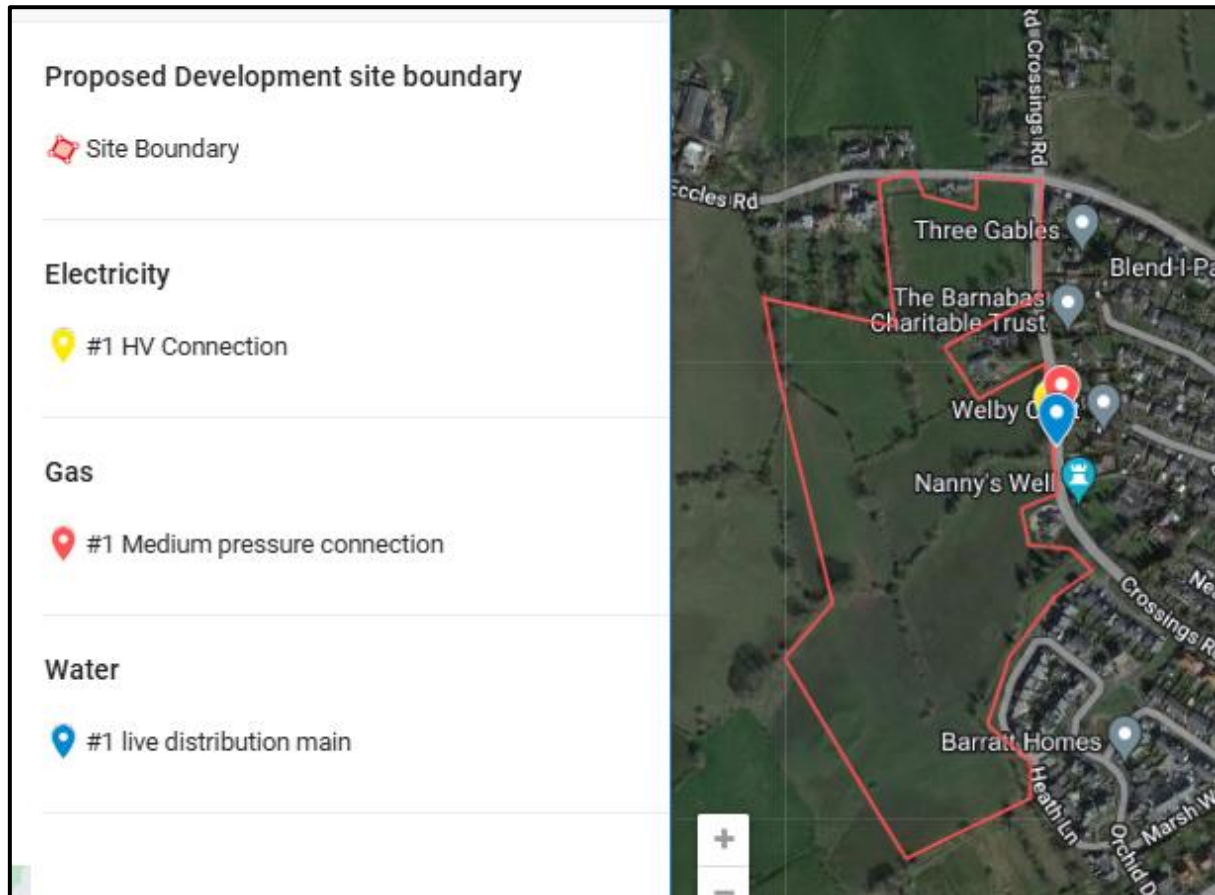
BT Openreach overhead poles and cables crossing the site will be affected by the proposed development and will require a disconnection. Allow a budget cost of £50,000.



5 Utility Points of Connection

5.1 Overview

The below plan provides an overview of the received points of connection identified as part of section 5 of this report.



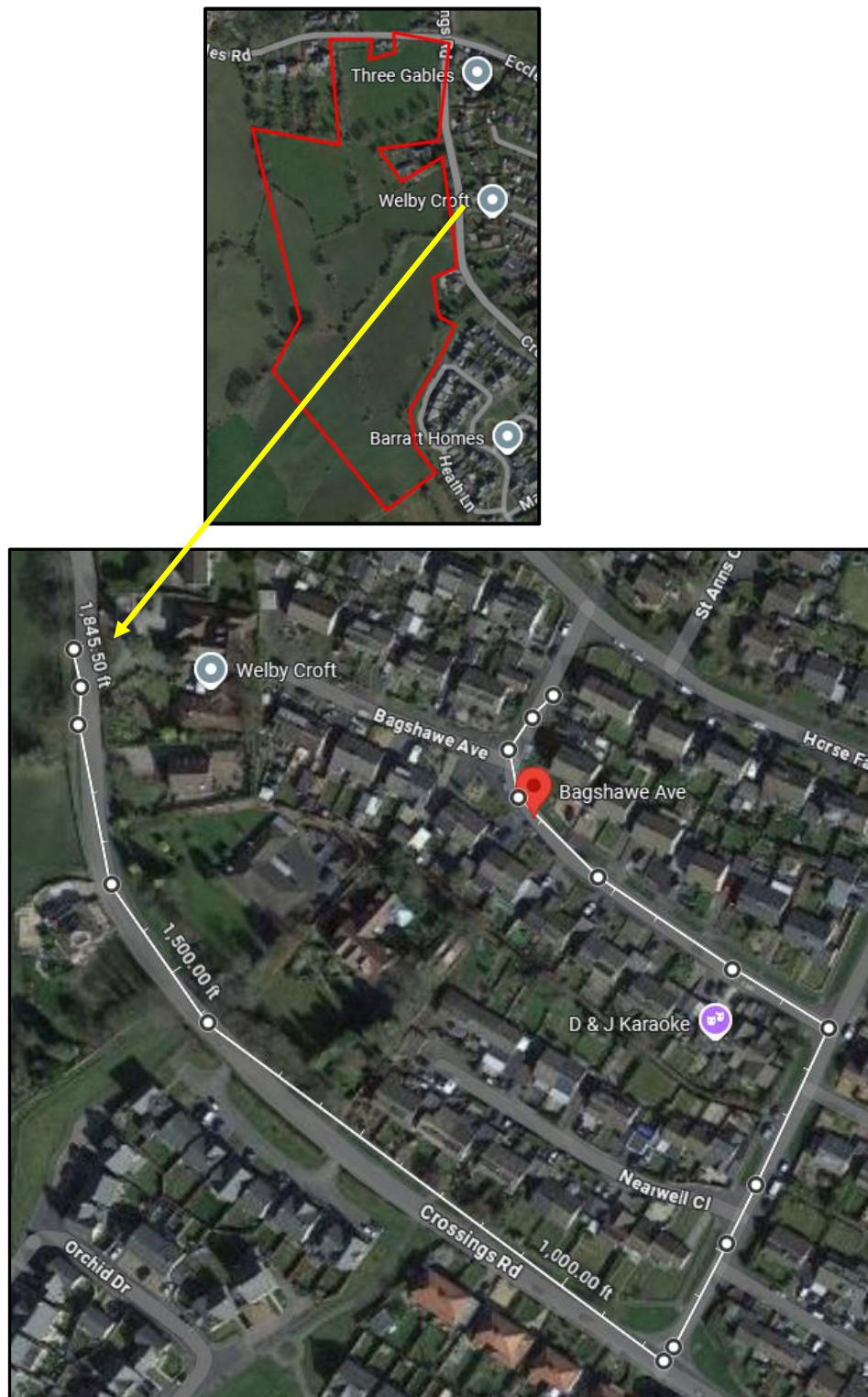
5.2 Electricity

5.2.1 Electricity - ASHP Heating Type

In order to serve a development of approximately 250 plots, electrically heated, a load of 860 kva will be required to service the site. It is expected that this load can be taken from the High Voltage network on Bagshawe Avenue, 1845 meters from the site access on Crossing Road.

A secondary substation will be required onsite, allow a space of 6m x 6m onsite for a substation.

The below plan shows the anticipated location of the connection.

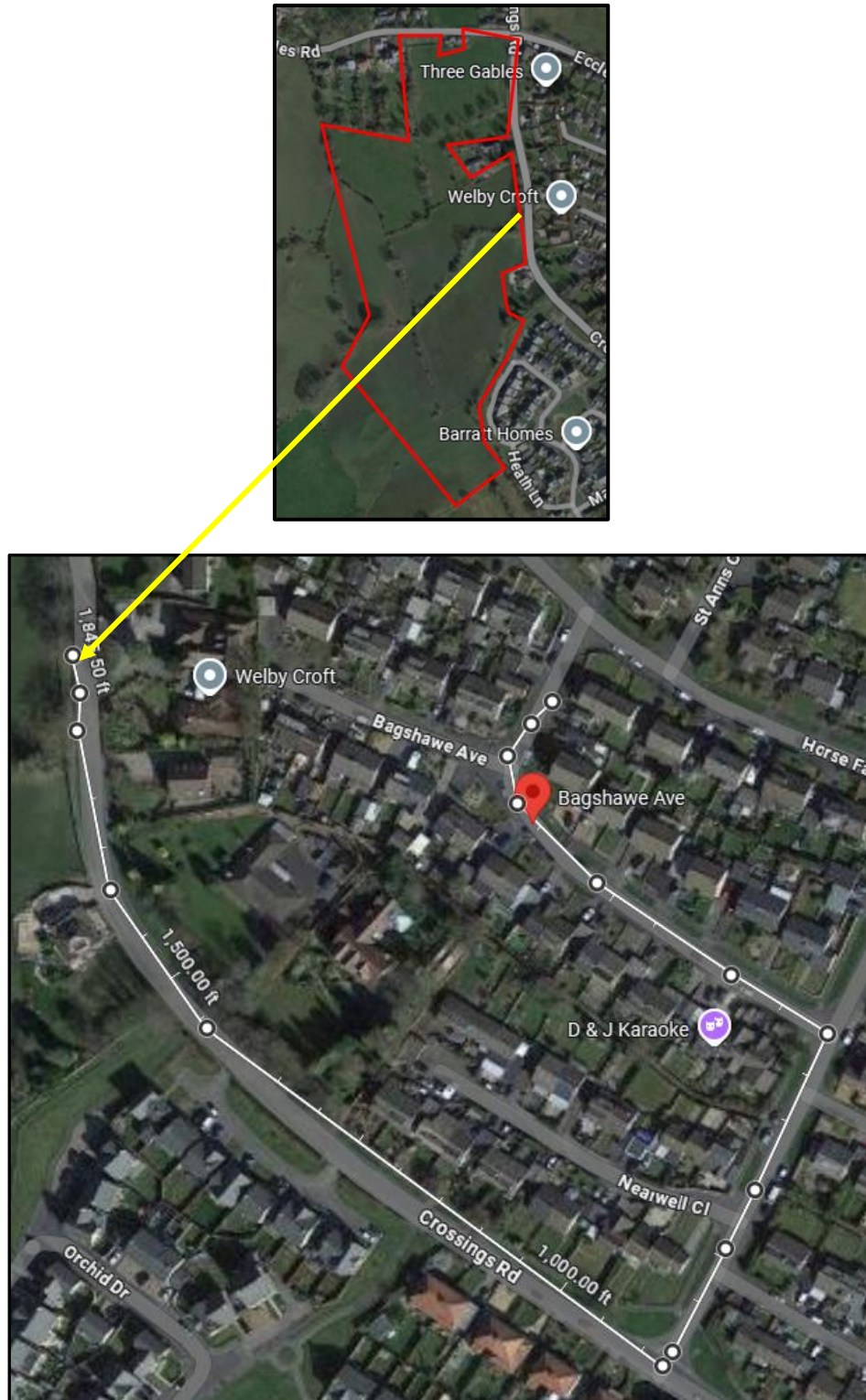


5.2.2 Electricity - Gas Heating Type

In order to serve a development of approximately 250 plots, electrically heated, a load of 440kva will be required to service the site. It is expected that this load can be taken from the High Voltage network on Bagshawe Avenue, 1845 meters from the site access on Crossings Road.

A secondary substation will be required onsite, allow a space of 6m x 6m onsite for a substation.

The below plan shows the anticipated location of the connection.

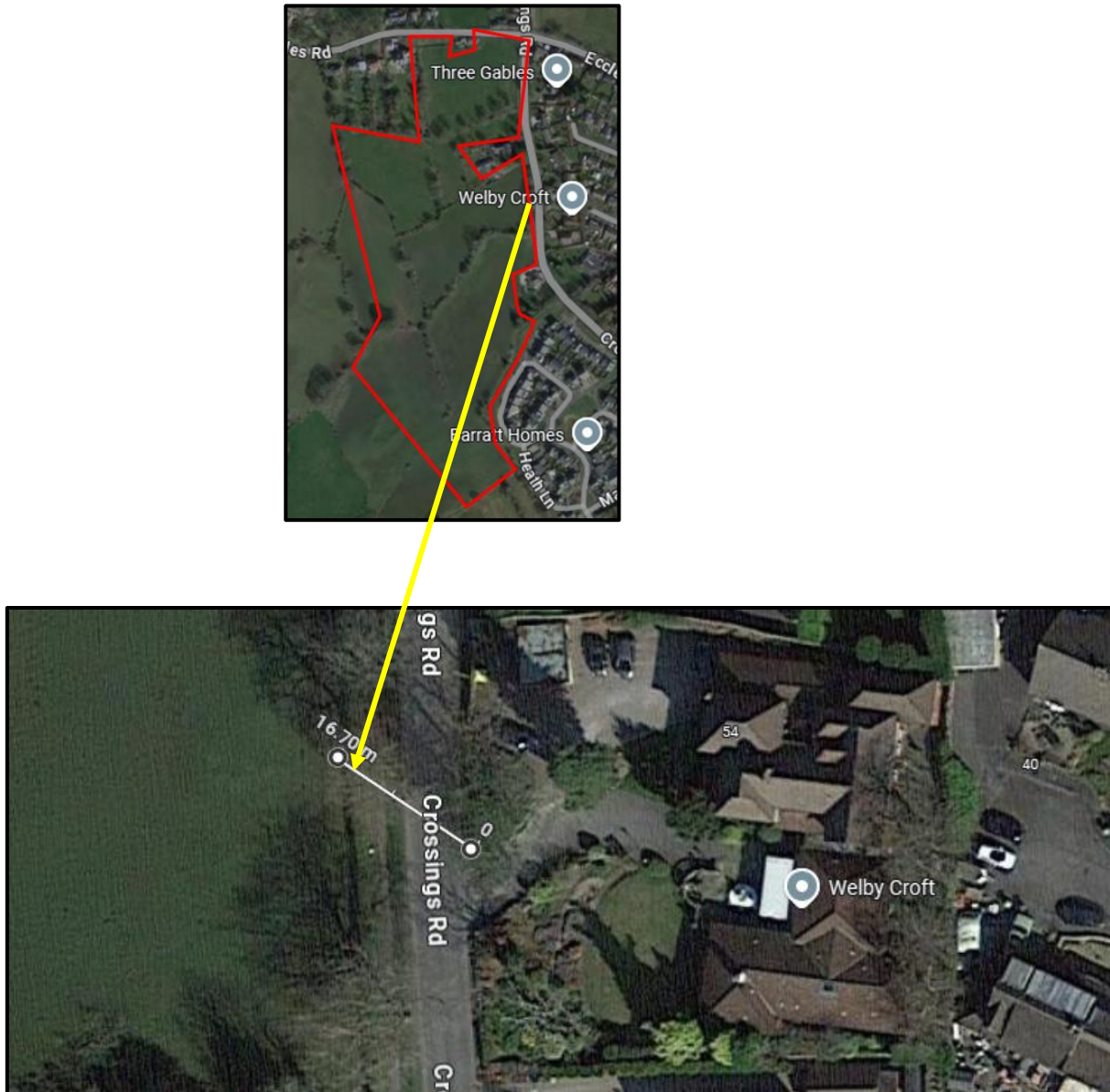


5.3 Gas

5.3.1 Cadent Gas

In order to serve a development of approximately 250 plots, it is assumed that a point of connection will be made from a 6" CI low-pressure main encased in a 125mm PE on the opposing verge on Crossings Road, approximately 17 metres from the proposed site entrance on Crossings Road.

The below plan outlines a possible point of connection.

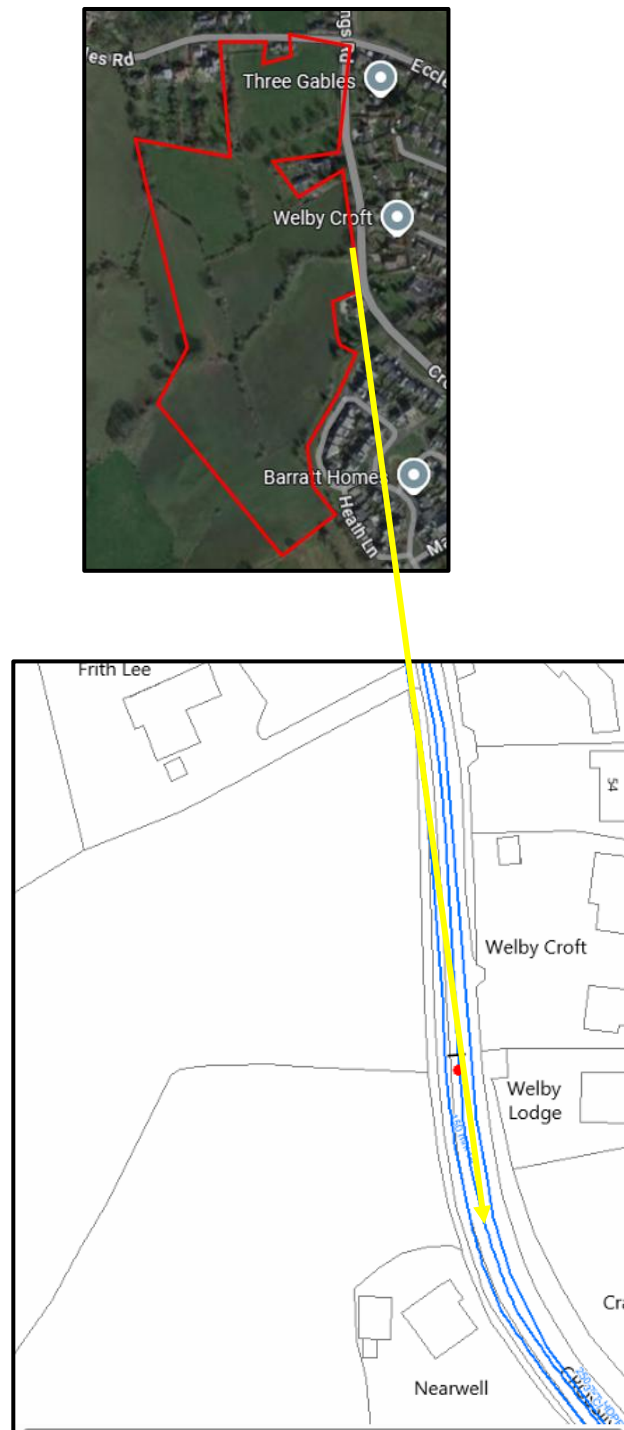


5.4 Water

5.4.1 Serven Trent Water

In order to serve a site of 250 plots, it is assumed that a point of connection will be made from the 150mm DI distribution main on Crossings Road, approximately 2 metres from the proposed site entrance on Crossings Road.

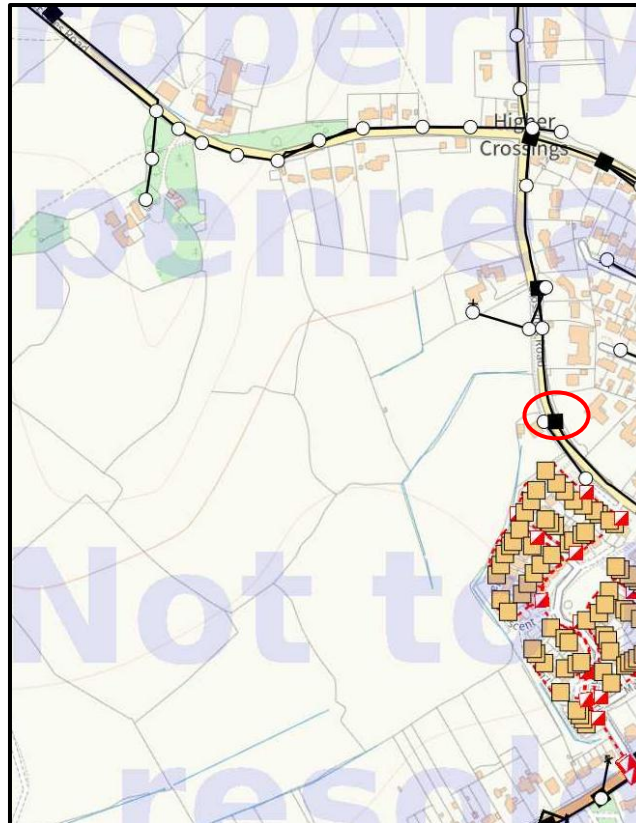
The below plan outlines a possible point of connection.



5.5 Telecoms

5.5.1 BT Openreach

BT Openreach own and operate existing telecommunications infrastructure within the vicinity of the proposed site under its rights derived from the telecommunications act. The below plan shows existing BT Openreach infrastructure records in the vicinity of the site where black denotes existing infrastructure and red denotes proposed infrastructure.



Infrastructure records show that BT Openreach has infrastructure within close proximity of the site and can be registered with BT Openreach FTTP to assist them with planning the proposed infrastructure to the development and as part of BT Openreach's 'Fibre First' Initiative. It is likely the development will be served with full Fibre to the Property infrastructure benefitting from speeds up to 1.0GBPS. BT Openreach offer free Fibre to the Property services to developments of 20 plots or more and charges for sites from 2-19 plots can be seen below.

Plots	Developer contribution per plot	Developer contribution per site
2	£2,000	£4,000
3	£2,000	£6,000
4	£2,000	£8,000
5	£1,800	£9,000
6	£1,600	£9,600
7	£1,400	£9,800
8	£1,200	£9,600
9	£1,000	£9,000
10	£747	£7,470
11	£662	£7,282
12	£588	£7,056
13	£524	£6,812
14	£467	£6,538
15	£415	£6,225
16	£369	£5,904
17	£328	£5,576
18	£290	£5,220
19	£255	£4,845

BT Openreach offer rebates, designed to offset the cost of duct and chamber installations, for sites of 11 plots and above and the rebate rates can be seen below.

Plot Type	Amount
Single Dwelling Unit (SDU) - House	£140
Single Dwelling Unit (SDU) – House inside M25	£151
Multiple Dwelling Unit (MDU) – Flat/Apartment	£50 per individual unit
Enhanced DSI rebate – All plot types	Additional £20

6 Assumed Utility Connections

6.1 Electricity, Gas, Water and Telecoms Connections - Budget

Based on the information identified in section 5, TDS has used standard rates to provide a high-level budget cost for utility connections for the site. The breakdown of this cost can be seen as follows.

Connections		
Utility	Item	Cost
Electricity	Based on #1 High-Voltage Point of Connection	Included in Connections Cost
	Reinforcement	TBC Upon application to Statutory Undertaker.
	1845M of Cable Lay to site – based on assume site entrance	£461,250
	1no. secondary Substation (500kva)	1No. Cost Included in On Site Connection cost below
	1no Substation Civils	£35,000
Electricity-ASHP	Based on #1 High-Voltage Point of Connection	Included in Connections Cost
	Reinforcement	TBC Upon application to Statutory Undertaker.
	1845M of Cable Lay to site – based on assume site entrance	£461,250
	1no. High-Voltage secondary Substation (1000kva)	1No. Cost Included in On Site Connection cost below
	1no Substation Civils	£35,000
Gas	6" low pressure main -Point of Connection	Included in Connections Cost
	Reinforcement	TBC Upon application to Statutory Undertaker.
	17M of Pipe Lay to site	£4,250
Water	6" CI live distribution main Point of Connection	Included in Connections Cost
	Reinforcement	TBC Upon application to Statutory Undertaker.
	2 Meters of Pipe Lay to site	£1,000
Electricity, Gas and Water Connections on Site	250 Number of Plots at £1500 per plot gas heated	Gas Heated £375,000
	250 Number of Plots at £1800 per plot electric heated	Electrically Heated -£450,000
TOTAL BUDGET CONNECTION COST	Based on Gas Connection	£876,500
	Based on ASHP Connection	£947,250

7 Summary

It can be concluded from the formal responses received from the host asset owners of the gas, water and electricity infrastructure that all the main utilities are all assumed to be available within the local area to serve the proposed development.

The assumed electricity ASHP heating connection will be provided from a High Voltage cable approximated 1845 metres from the site boundary. A new secondary substation will be required.

The assumed electricity heating connection will be provided from a High Voltage cable approximated 1845 metres from the site boundary. A new secondary substation will be required.

The assumed gas point of connection will be from a 6" CI low-pressure main encased in a 125mm PE mains on Crossings Road, approx. 17 meters from the site entrance on Crossings Road.

The assumed water point of connection will be from existing distribution mains on Crossings Road, approx. 2meters from the site entrance on Crossings Road.

Asset Values for gas, electric and NAVS have not obtained as it is not part of the scope. Additional information including a housing schedule to begin approaching IDNOs for a and AV.

Technical & Development Services (Northern) Ltd
Northern House
3A Kennerley's Lane
Wilmslow
Cheshire
SK9 5EQ

01625 462 350
northern@t-d-s.com
www.t-d-s-com



APPENDIX 1 – Existing Infrastructure