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Broadband Connectivity Assessment

Cumming Group

Weston and Pendulum

December 2025







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Issue	Date	Detail of Changes
1	3rd December 2025	Initial issue
2	11th December 2025	Updated site plans
3	16th December 2025	Administrative revisions

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EXECUTIVE SUMMARY

Report Purpose

Pager Power has been commissioned to investigate the broadband connectivity for a proposed building development. The proposed development is located at 78 Sackville Street, M1 3BB in Manchester. This report presents an investigation into the current internet speeds and infrastructure in the surrounding area to determine whether national and local requirements can be met.

Process

There is a national requirement to ensure that new residences have access to superfast broadband download speeds (understood to mean a minimum of 30 Mbps). There is also a requirement in Manchester that all new development have Fibre To The Premises (FTTP) connections.

The availability of broadband infrastructure and the associated download speeds have been determined based on:

- A broadband coverage check for the proposed development and eight nearby addresses – available via the website of broadband infrastructure and service providers and identifies available speeds at that location;
    - This includes the following broadband providers: Openreach, BT, Sky, Virgin Media, Hyperoptic, Open Fibre Networks (OFNL), and City Fibre;
- Consultation with broadband infrastructure providers and broadband infrastructure map checks;
- An investigation of the process for obtaining superfast broadband services.

Conclusions

FTTP broadband services were not identified as available at the proposed development location using coverage checkers. FTTP broadband services are available at five of the six addresses near to the proposed development, from at least one service provider.

A review of the Openreach infrastructure map shows that there is Openreach infrastructure near to the proposed development location. In order to determine the capability for Openreach to install FTTP infrastructure, site registration[1] is required.

A review of the infrastructure map shows that there is Virgin Media infrastructure near to the proposed development location. Virgin Media have confirmed that any formal statement of availability will require site registration[2].

[1] https://www.openreach.com/building-developers-and-projects/fibre-for-developers/registering-your-site
[2] https://www.virginmediapartners.com/developersnetworkexpansion

Hyperoptic have responded that a connectivity assessment cannot be provided for this site

OFNL / GTC have yet to provide a response to consultation requests regarding FTTP availability. This report will be updated once a response is received.

City Fibre do not provide FTTP infrastructure at or near to the proposed development location.

Next Steps

To comply with policy JP-C2, as shown in Section 1.3, one or more of the site registration processes outlined below should be followed to ensure that FTTP is installed at the proposed development.

For new developments comprising more than 19 plots[3], Openreach will install FTTP for free. Therefore, FTTP infrastructure will be available free of charge for this development subject to application to Openreach. The site registration process is discussed in Section 6.2.

The proposed development may benefit from superfast services from Virgin Media, for which site registration is recommended[4]. The developer will need to ensure that Virgin Media install FTTP infrastructure in order to comply with policy JP-C2 as shown in Section 1.3.

Other Alt Nets[5] can still be contacted in advance regarding the potential to install FTTP for new builds. Alt Nets may either lease a connection from Openreach or be willing to install their own network for a development with a large number of residential addresses. Details are provided in Section 6.4.

[3] A plot is defined as: '*An individually Council Addressed property paying full residency council tax*'

[4] https://www.virginmedia.com/content/dam/virginmedia/dotcom/images/shop/downloads/New-Build-Handbook-v1-63.pdf

[5] Alternative Networks (Alt Nets) is a term used to refer to alternative broadband infrastructure providers other than Openreach and Virgin Media.

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ABOUT PAGER POWER

Pager Power is a dedicated consultancy company based in Suffolk, UK. The company has undertaken projects in 63 countries within Europe, Africa, America, Asia and Oceania.

The company comprises a team of experts to provide technical expertise and guidance on a range of planning issues for large and small developments.

Pager Power was established in 1997. Initially the company focus was on modelling the impact of wind turbines on radar systems. Over the years, the company has expanded into numerous fields including:

- Renewable energy projects;
- Building developments;
- Aviation and telecommunication systems.

Pager Power prides itself on providing comprehensive, understandable and accurate assessments of complex issues in line with national and international standards. This is underpinned by its custom software, longstanding relationships with stakeholders and active role in conferences and research efforts around the world.

Pager Power's assessments withstand legal scrutiny and the company can provide support for a project at any stage.

1 BACKGROUND

1.1 Introduction

Pager Power has been commissioned to investigate the broadband connectivity for a proposed building development. The proposed development is located 78 Sackville Street, M1 3BB in Manchester.

This report presents an investigation into the current internet speeds and infrastructure in the surrounding area to determine whether national and local requirements can be met.

1.2 National Planning Policy Framework (NPPF) – Section 10

Section 10 of the NPPF (December 2024) provides the following guidance, of which the most relevant extract is shown below.

'119. Advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being. Planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G) and full fibre broadband connections. Policies should set out how high quality digital infrastructure, providing access to services from a range of providers, is expected to be delivered and upgraded over time; and should prioritise full fibre connections to existing and new developments (as these connections will, in almost all cases, provide the optimum solution) …'

1.3 Policy JP-C2: Digital Connectivity

The 'Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford And Wigan'[6] was adopted in March 2024. The policy that relates to broadband connectivity is set out below.

'We support the provision of affordable, high quality, digital infrastructure.

In making decisions we will support a range of measures, including:

1. *Enabling the roll-out of latest generation mobile technology and full fibre to the premises connectivity, in a way that maximises coverage whilst protecting townscape quality and ensuring an ability to respond to updated/changing technology;*
2. ***Requiring all new development to have full fibre to premises connections, unless technically infeasible and/or unviable, and to incorporate multiple-ducting compliant with telecoms standards, to facilitate future-proof gigabit-capable network connections. It is expected that internet connections will be operational and immediately accessible to network providers when occupiers move into new properties** and*
3. *Facilitating the provision of free, secure, high speed public wi-fi connections, particularly in the most frequented areas.'*

[6] https://www.manchester.gov.uk/info/500113/city_centre_regeneration/8270/places_for_everyone

2 PROPOSED DEVELOPMENT DETAILS

2.1 Proposed Development Details

The red line boundary and building footprints[7] of the site is shown in Figure 1 below. The proposed development will consist of four buildings; two within Phase A to the east and two within Phase B to the west, and will comprise purpose-built student accommodation.

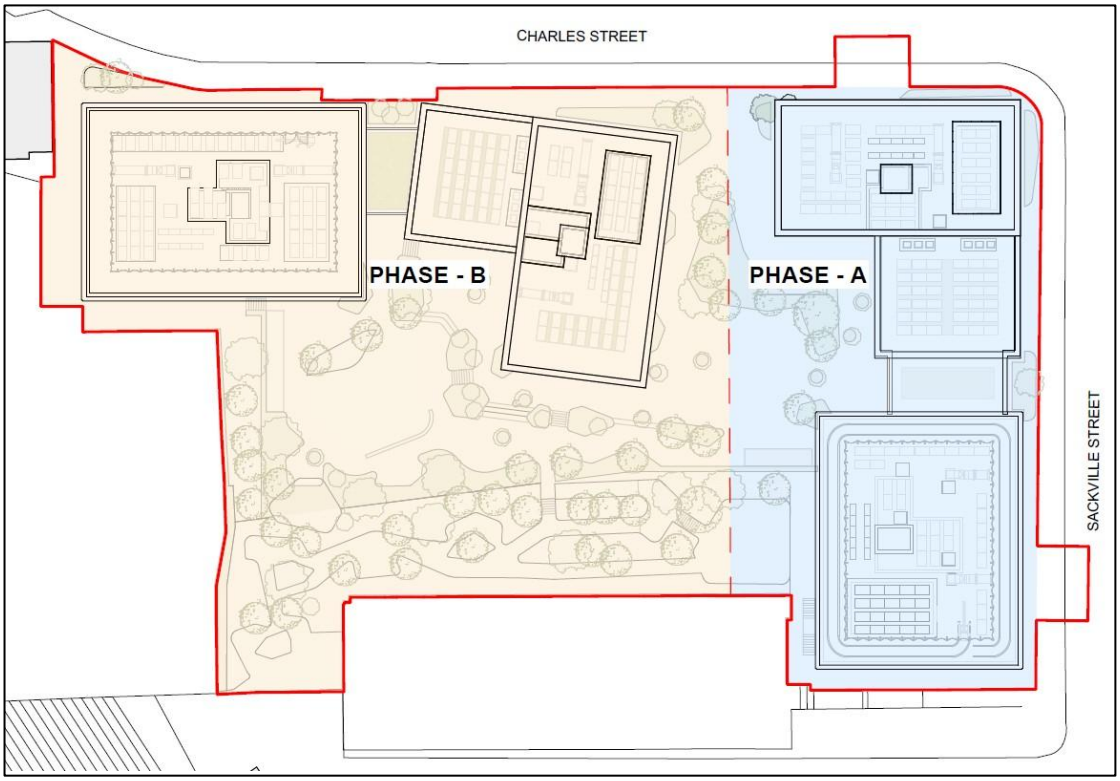


Figure 1 *Red line boundary and building footprints*

The project description is as follows:

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

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

[7] Source: 10346-SHA-Z0-A-B5D8-G100-PL-XX-002.pdf (cropped)

The maximum heights of the buildings are presented below:

- Phase A, north tower – 56.6m above ground level (agl);
- Phase A, south tower – 154.0m agl;
- Phase B, east tower – 76.25m agl;
- Phase B, west tower – 102.8m agl.

The assessment has been carried out considering a lower maximum altitude of the towers (at most 6m). Due to the nature of the assessment, this change will not influence the conclusions of the report as broadband connectivity and the presence of fibre infrastructure near to the development location is not influenced by the building height.

Figure 2 below shows the red line boundary and building footprints (pink outline), overlaid upon aerial imagery.

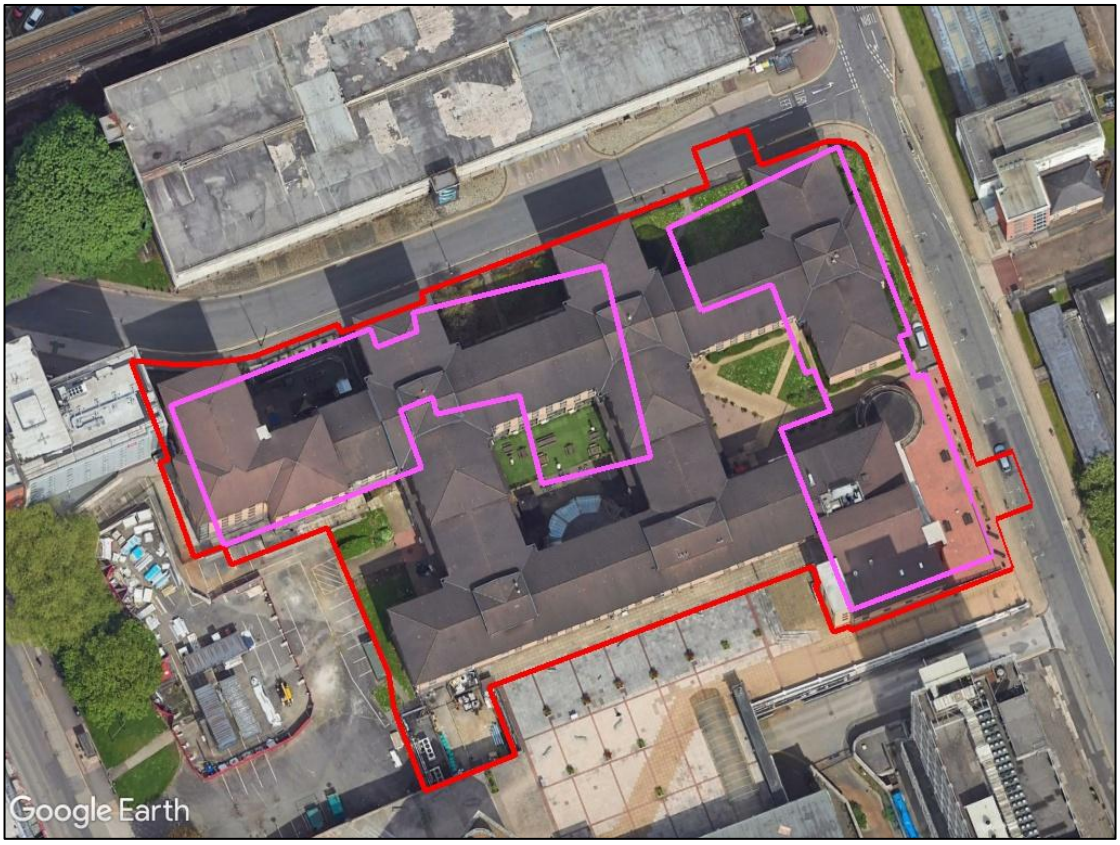


Figure 2 *Building footprint*

2.2 3D Building Visualisation

The coordinates for the tower blocks have been extrapolated from the site drawing.

A representative 3D visualisation of the proposed development is shown in Figure 3 on the following page.



Figure 3 *3D building visualisation*

3 INTERNET SERVICES IN THE UK

3.1 Common Types of Broadband Infrastructure

Broadband services in the UK can be provided in various ways. Typical fixed-line broadband options include:

- Asymmetric Digital Subscriber Line (ADSL) – which is provided via a copper telephone line as shown in Figure 4 on the following page. ADSL infrastructure is owned and operated by Openreach[8]. Download speeds are typically up to 24 Mbps;
- Fibre optic broadband – which is provided via a bespoke fibre network. Fibre optic broadband typically provides the highest speeds in the UK and can be further subdivided into:
    - Fibre To The Cabinet (FTTC) – whereby a fibre connection is made between the exchange and a distribution point (typically referred to as a cabinet), which in turn is connected to a residence via a copper cable. FTTC infrastructure is typically owned and operated by Openreach[9]. Download speeds are typically up to 80 Mbps;
    - Fibre To The Premises[10] (FTTP) – whereby a fibre connection is made throughout the connection between the exchange (or wider external network) and the residence. FTTP is understood to be the best form of broadband infrastructure and is considered to be 'future proofed' due to the potential for much faster speeds[11]. FTTP infrastructure providers in city centres typically include (but are not limited to): Openreach, Virgin Media, Hyperoptic, OFNL, and City Fibre. Download speeds are typically up to 1 Gbps[12].
- Gfast – which is a hybrid technology used by Openreach that delivers broadband much like FTTC; however, the transmission is typically modified at the distribution point to increase the speed of the service. Download speeds are typically up to 330 Mbps[13];
- Hybrid Fibre-Coaxial (HFC)[14] – typically provided by Virgin Media[15] who make the use of DOCSIS technology[16] standard whereby typically there is a fibre connection made up to a distribution point (similar to FTTC), which in turn is connected to a residence via coaxial cable. Download speeds are typically up to 1,130 Mbps[17].

[8] https://www.openreach.com/fibre-broadband
[9] https://www.openreach.com/fibre-broadband/fttc-vs-fttp
[10] Also referred to as Fibre To The Home (FTTH).
[11] https://phys.org/news/2018-04-fiber-transmission.html
[12] Source: Openreach. 1 Gbps = 1,000 Mbps.
[13] https://www.openreach.com/fibre-broadband/gfast-fibre-broadband
[14] Also known as 'Cable' broadband.
[15] Virgin Media now also provide FTTP solutions in the UK for home broadband services dependent on the location.
[16] Data Over Cable Service Interface Specification - An international standard for data transfer over cable.
[17] https://www.virginmedia.com/shop/broadband/speeds

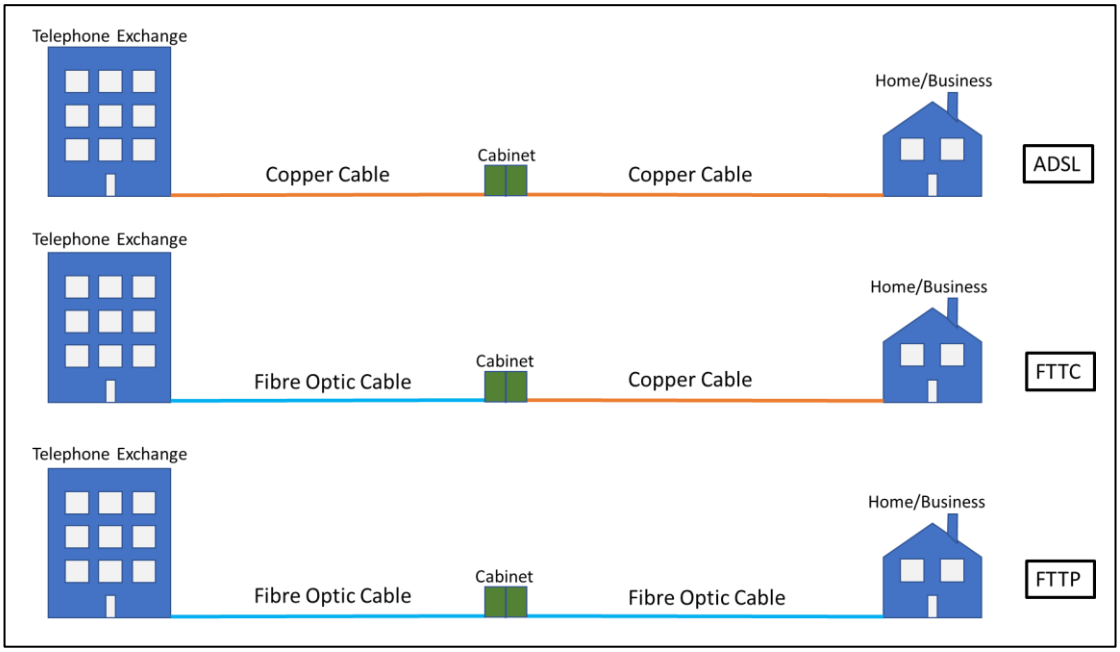


Figure 4 *Common types of broadband (fixed line)*

Wireless Broadband services are available in the UK; however, are less common. Typical wireless options include:

- Fixed Wireless Access (typically offered by small internet service providers to rural locations) whereby a fibre connection is made up to a distribution point, which in turn is connected to a residence via wireless technology (typically WI-FI). Download speeds vary depending on the provider. 'Alt net' fixed wireless access providers have included County Broadband and Voneus[18]. For example, County Broadband have previously provided download speeds of up to 32 Mbps for fixed wireless access services;
- Mobile network providers can also provide wireless home broadband via 4G/5G technology and may be sought as another alternative solution. In the UK, Mobile 4G/5G infrastructure is operated by EE, Virgin Media O2, Vodafone, and Three UK. Download speeds may vary depending on the provider. For example, EE provides an average 5G download speed of 146Mbps and 4G at 40 Mbps[19];
- Satellite internet services are very uncommon and used only in very remote rural areas typically where no alternative viable solutions are available. Satellite internet services are typically of a very low download speed e.g. less than 1Mbps. Latency has also been a key limitation due to the distance involved. More recently, satellite internet services have improved, with Starlink providing typical download speeds of between 25 and 220 Mbps[20].

[18] County Broadband and Voneus now also provide FTTP solutions in the UK for home broadband services dependent on the location.
[19] https://ee.co.uk/broadband/mobile-broadband
[20] https://www.starlink.com/legal/documents/DOC-1400-28829-70

3.2 Broadband Speed Terms

The term 'superfast' is understood to mean speeds of 30 Mbps or higher[21]. Broadband speed terms are as follows[22]:

- Standard broadband – download speeds of less than 30 Mbps;
- Superfast broadband – download speed of at least 30 Mbps;
- Ultrafast broadband – download speeds of at least 300 Mbps.

[21] https://commonslibrary.parliament.uk/research-briefings/sn06643/
[22] https://checker.ofcom.org.uk/en-gb/about-checker#broadband

4 BROADBAND CONNECTIVETY ASSESSMENT

4.1 Overview

The availability of broadband infrastructure and the associated download speeds have been determined based on:

- A broadband coverage check for the proposed development and six nearby addresses – available via the website of broadband infrastructure and service providers and identifies available speeds at that location;
    - This includes the following broadband providers: Openreach, BT, Sky, Virgin Media, Hyperoptic, Open Fibre Networks (OFNL), and City Fibre;
- Consultation with broadband infrastructure providers and broadband infrastructure map checks;
- An investigation of the process for obtaining superfast broadband services.

4.2 Coverage Checker Results

In total, seven addresses were assessed (the proposed development location and six neighbouring addresses), as shown in Figure 5 on the following page. Locations near to the proposed development are checked as it can provide further reassurances as to the likelihood of services being available at the proposed development in addition to the consultation carried out and detailed in Section 5.

Services for the assessed addresses from BT could not be confirmed due to technical issues with BT coverage checking services.

Results of coverage checkers for each assessed address and each provider is presented in Table 1 on the following pages.

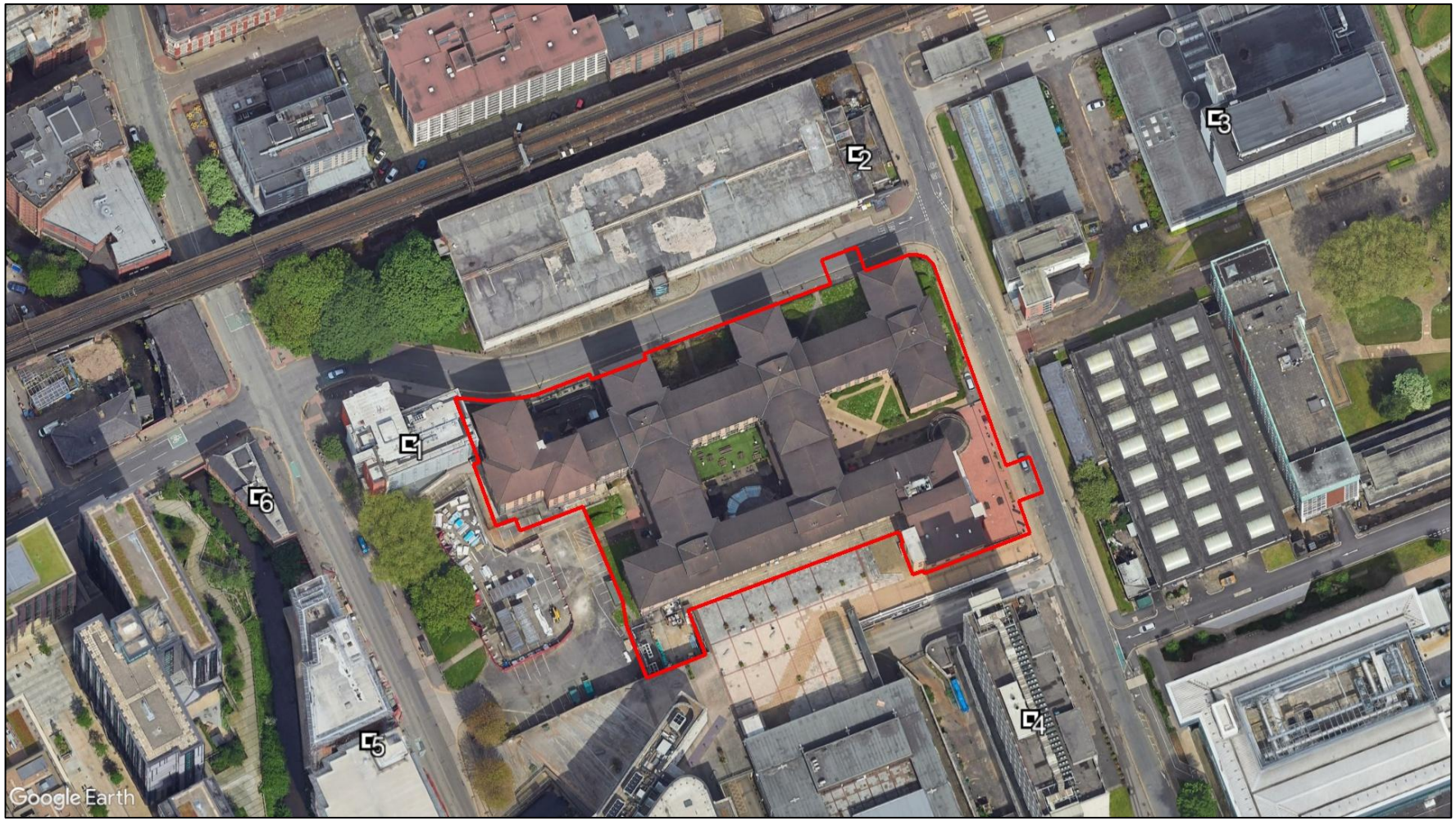


Figure 5 *Locations assessed, relative to the proposed development*

Location	Openreach	BT (Openreach Network)	Sky (Openreach Network)	Virgin Media	Hyperoptic	OFNL	City Fibre	Conclusion
Proposed Development Weston Hall, Sackville Street M1 3BB	Standard services available. Download speeds of 21 Mbps. ADSL infrastructure. **No 'Superfast' service or FTTP infrastructure available.**	Service from BT to this address could not be confirmed.	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	**'Ultrafast' services are not available.**
1 Ibis Hotel, Charles Street M1 7DG	Ultrafast broadband. Download speeds of 1600 Mbps. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	Service from BT to this address could not be confirmed.	Ultrafast broadband. Download speeds with an average of 900 Mbps. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	Ultrafast broadband. Download speeds with an average of 1Gb. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	**'Ultrafast' service available.** **FTTP infrastructure is available from Openreach, Sky, and Hyperoptic.**

Location	Openreach	BT (Openreach Network)	Sky (Openreach Network)	Virgin Media	Hyperoptic	OFNL	City Fibre	Conclusion
2 Retro Bar, 78 Sackville Street M1 3NJ	Standard services available. Download speeds of 21 Mbps. ADSL infrastructure. **No 'Superfast' service or FTTP infrastructure available.**	Service from BT to this address could not be confirmed.	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	Ultrafast broadband. Download speeds with an average of 1Gb. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	**'Ultrafast' service available.** **FTTP infrastructure is available from Virgin Media.**
3 Renold Building, Altrincham Street M1 7JR	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	Service from BT to this address could not be confirmed.	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	**'Ultrafast' services are not available.**

Location	Openreach	BT (Openreach Network)	Sky (Openreach Network)	Virgin Media	Hyperoptic	OFNL	City Fibre	Conclusion
4 Faraday Tower, Sackville Street M1 7DN	FTTP infrastructure to be available soon. **No 'Superfast' service or FTTP infrastructure currently available.**	Service from BT to this address could not be confirmed.	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	Ultrafast broadband. Download speeds with an average of 1Gb. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	**'Ultrafast' service available.** **FTTP infrastructure is available from Hyperoptic.**
5 144 Princess Street M1 7EP	Standard services available. Download speeds of 21 Mbps. ADSL infrastructure. **No 'Superfast' service or FTTP infrastructure available.**	Service from BT to this address could not be confirmed.	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	Ultrafast broadband. Download speeds with an average of 1Gb. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	Ultrafast broadband. Download speeds with an average of 1Gb. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	**'Ultrafast' service available.** **FTTP infrastructure is available from Virgin Media, and Hyperoptic.**

Location	Openreach	BT (Openreach Network)	Sky (Openreach Network)	Virgin Media	Hyperoptic	OFNL	City Fibre	Conclusion
6 112-118 Princess Street M1 7EN	Ultrafast broadband. Download speeds of 1600 Mbps. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	Service from BT to this address could not be confirmed.	Ultrafast broadband. Download speeds with an average of 900 Mbps. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	Ultrafast broadband. Download speeds with an average of 1Gb. FTTP infrastructure. **'Ultrafast' service available. FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	No services are currently available. **No 'Superfast' service or FTTP infrastructure available.**	**'Ultrafast' service available.** **FTTP infrastructure is available from Openreach, Sky, and Hyperoptic.**

Table 1 *Assessment of current availability – Broadband checkers*

5 CONSULTATION AND INFRASTRUCTURE MAP CHECK

5.1 Overview

Consultation was undertaken directly with the most prevalent FTTP infrastructure providers[23] in order to provide an indication of the expected availability and capability to install FTTP at the proposed development location.

Some broadband infrastructure providers may share an infrastructure coverage map with details regarding external planned/live broadband infrastructure, which also may include details of the nearest of any of the following:

- Duct/Trench;
- Camber/Pole;
- Cabinet;
- Primary Connection Point (PCP);
- Box;
- Manhole.

This information is relevant because it can provide an indication of how close the nearest fibre connection and therefore the capability to extend the fibre network to the development location.

5.2 Consultation Overview

Table 2 below presents a summary of the consultation to date.

Stakeholder	Summary
Openreach	Prior consultation has confirmed Openreach are unable to provide information on availability without site registration[24] being undertaken. 21/11/2025 – Map obtained from maps on demand service.
Virgin Media	21/11/2025 – FTTP infrastructure capability requested. 24/11/2025 – Virgin Media confirms they have infrastructure nearby to the location of the proposed development. Virgin Media have confirmed that any formal statement will require site registration[25]. Therefore, the capability for Virgin Media to install FTTP infrastructure could not be confirmed at this stage.

[23]https://www.ispreview.co.uk/index.php/2024/03/top-30-full-fibre-providers-by-share-of-uk-new-build-homes-2023-24.html
[24] https://www.openreach.com/building-developers-and-projects/fibre-for-developers/registering-your-site
[25] https://www.virginmediapartners.com/developersnetworkexpansion

Stakeholder	Summary
Hyperoptic	21/11/2025 – FTTP infrastructure capability requested. 27/11/2025 – Hyperoptic confirmed FTTP cannot be provided at this site.
OFNL & GTC-UK	21/11/2025 – FTTP infrastructure capability requested. 02/12/2025 – Follow up email sent. 03/12/2025 – Response not yet received.

Table 2 *FTTP infrastructure providers consultation overview*

5.3 Broadband Infrastructure Maps

The following sub-sections and figures provide further information regarding the surrounding broadband infrastructure for Openreach, Virgin Media, Hyperoptic, and OFNL[26] following consultation and/or review of available maps.

5.3.1 Openreach

The infrastructure map shows that there is Openreach infrastructure near to the proposed development location. Two boxes are located at the northwest boundary of the proposed development and trenches run along the west, north, and east boundary.

The Openreach map has not been included within this report due to the terms of use. It is possible that Openreach would be able to extend their infrastructure to provide services to the proposed development, subject to agreement from Openreach.

5.3.2 Virgin Media

Virgin Media has confirmed that some of their infrastructure is present in the area of the proposed development and provided the following infrastructure map, showing trenches surrounding the development and chambers to the west.

Figure 6 on the following page shows the Virgin Media infrastructure map.

[26] Copyright © Openreach, Virgin Media.

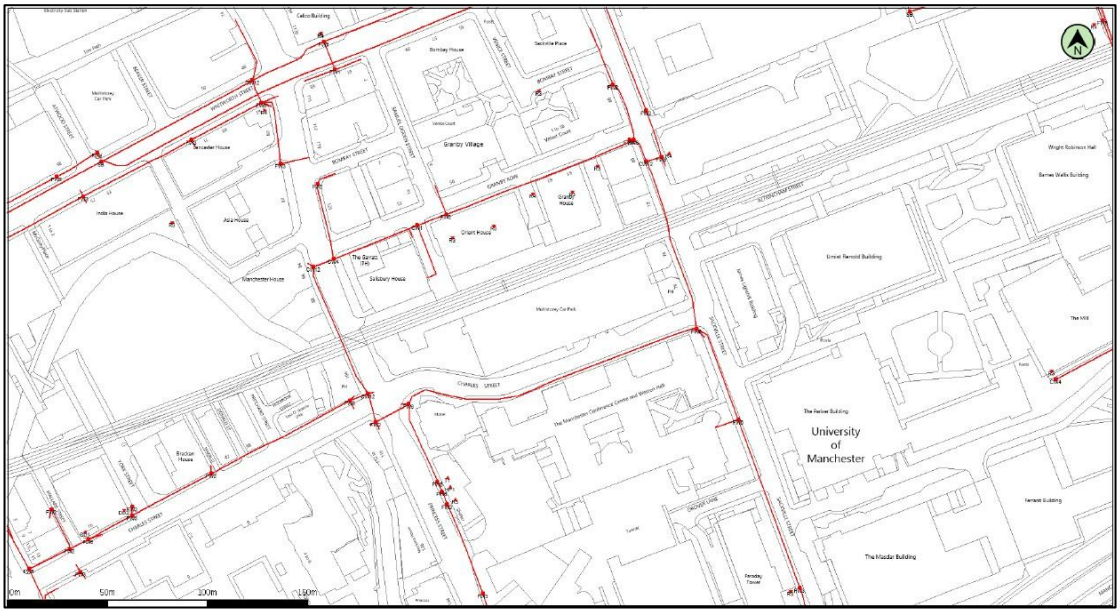


Figure 6 *Virgin Media infrastructure map*

5.3.3 Hyperoptic

Hyperoptic have responded that a connectivity assessment cannot be provided for this site. Therefore, no infrastrucutre map has been provided.

5.3.4 OFNL / GTC-UK

OFNL have been contacted, however are yet to reply to enquiries. This report will be updated once a response is received.

5.4 Consultation Conclusion

Available infrastructure maps from Openreach and Virgin Media confirm the existence of infrastructure nearby the proposed development. It is understood that FTTP infrastructure could be provided to the development, subject to agreement with the relevant provider(s).

6 FACILITATION OF SUPERFAST INTERNET SERVICES

6.1 Overview

The process of obtaining superfast services is outlined in Sections 6.2 to 6.4. Provided one or more of these processes are followed, superfast services can be made available for the proposed development.

An overview of guidance on data ducting infrastructure for new homes is outlined in Section 6.5 and Appendix B.

6.2 Openreach

The proposed development will benefit from the option of FTTP from Openreach. The benefit of FTTP over FTTC is that internet speeds are typically faster, and the network has a greater capacity for higher speeds in the future, whilst it is also considered to be more reliable and consistent[27]. The process and the cost of doing this varies depending on the development type and size. For developments comprising more than 19 plots, Openreach will install FTTP for free. A 'plot' in this context is defined as '*an individually Council Addressed property paying full residency council tax*'[28]. The proposed development will therefore qualify for free facilitation of the fibre network from the exchange to the properties themselves. This requires registration of the site, specifically:

- Registration is required six months before the provision of the service to the first property and eight weeks before development commences on site;
- The dates of commencement on site and required service must be provided;
- A description of the development including the number of plots and whether it is part of a larger development with associated phases;
- Contact details for the company building the properties and the person managing any queries from Openreach must be provided;
- Plans for the development must be provided including:
    - Location;
    - Site plan at a minimum of 1:500;
    - Schedule of accommodation that shows how many plots per floor and their connection to a riser in cases of multiple cores.
- Registration is undertaken online[29], whereupon it will be assessed by the Openreach team. The timescale for this assessment is not defined, with the customer service team

[27] Internet latency is typically lower for FTTP and internet speeds are usually more consistent.
[28] The definition was provided during an engagement with Openreach customer support carried out in 2018 it can also be found at the following link: https://www.openreach.com/fibre-broadband/fibre-for-developers/registering-your-site.
[29] https://www.developers.openreach.co.uk/developerportal/index

advising that this varies according to the number of applications being processed at any given time, however a response from the assessment team should be received within five working days from submission of the registration form;

- Following assessment of the registration documents, an agreement will be provided by Openreach, which must be signed and returned so that the application can be progressed by Openreach. This stage is not required if a framework agreement between the developer and Openreach has already been signed;
- Once the agreement has been signed, it will be processed by the Openreach planning team, who will coordinate the connection process based on the development timescales.

6.3 Virgin Media

The proposed development may benefit from superfast services from Virgin Media and site registration is recommended. Consultation with Virgin Media has confirmed their infrastructure is present in the vicinity of the proposed development. If Virgin Media is contacted within a sufficient time frame and notified of the site plans[30,31] it is possible that the proposed development will benefit from either FTTP or Hybrid Fibre-Coaxial broadband infrastructure supplied by Virgin Media. The developer will need to ensure that Virgin Media install FTTP infrastructure in order to comply with policy JP-C2 as shown in Section 1.3.

6.4 Other Internet Service Providers (Alt Nets)

Alt Nets[32] can be contacted in advance regarding the potential to install FTTP for new builds. In particular, Hyperoptic already provides FTTP infrastructure at the proposed development location; however, it is recommended that site registration is completed in advance in order to facilitate the connection.

Alt Nets may either lease a connection from Openreach or be willing to install their own network for a development with a large number of residential addresses. Details are provided below:

- Hyperoptic: https://www.hyperoptic.com/broadband/property/new-build/#form
- OFNL:
    - https://www.ofnl.co.uk/make-a-request/
    - https://portal.ofnl.co.uk/contactform
- Power On: https://www.poweron-uk.co.uk/contact/
- City Fibre: https://cityfibre.com/

[30] https://www.virginmediapartners.com/developersnetworkexpansion
[31] https://www.virginmedia.com/content/dam/virginmedia/dotcom/images/shop/downloads/New-Build-Handbook-v1-63.pdf
[32] Alt Nets is a term used to refer to alternative broadband infrastructure providers other than Openreach and Virgin Media.

6.5 Data Ducting Infrastructure for New Homes

Advice on infrastructure (internal and external) to ensure superfast services are installed for the proposed development is most likely to be provided by Openreach[33], Virgin Media[34], or other internet infrastructure stakeholders alongside the site registration and consultation as outlined in the previous sections. A guidance note titled '*Data Ducting Infrastructure for New Homes (March 2008)*[35]' produced by the Ministry of Housing, Communities & Local Government also provides advice on internal and external infrastructure. An overview of this document is shown in Appendix B.

[33] https://www.openreach.com/broadband-for-developers
[34]https://www.virginmedia.com/content/dam/virginmedia/dotcom/images/shop/downloads/New-Build-Handbook-v1-63.pdf
[35]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/11496/dataducting.pdf

7 CONCLUSIONS

7.1 Conclusions

FTTP broadband services were not identified as available at the proposed development location using coverage checkers. FTTP broadband services are available at five of the six addresses near to the proposed development, from at least one service provider.

A review of the Openreach infrastructure map shows that there is Openreach infrastructure near to the proposed development location. In order to determine the capability for Openreach to install FTTP infrastructure, site registration[36] is required.

A review of the infrastructure map shows that there is Virgin Media infrastructure near to the proposed development location. Virgin Media have confirmed that any formal statement of availability will require site registration[37].

Hyperoptic have responded that a connectivity assessment cannot be provided for this site

OFNL / GTC have yet to provide a response to consultation requests regarding FTTP availability. This report will be updated once a response is received.

City Fibre do not provide FTTP infrastructure at or near to the proposed development location.

7.2 Next Steps

To comply with policy JP-C2, as shown in Section 1.3, one or more of the site registration processes outlined below should be followed to ensure that FTTP is installed at the proposed development.

For new developments comprising more than 19 plots[38], Openreach will install FTTP for free. Therefore, FTTP infrastructure will be available free of charge for this development subject to application to Openreach. The site registration process is discussed in Section 6.2.

The proposed development may benefit from superfast services from Virgin Media, for which site registration is recommended[39]. The developer will need to ensure that Virgin Media install FTTP infrastructure in order to comply with policy JP-C2 as shown in Section 1.3.

Other Alt Nets[40] can still be contacted in advance regarding the potential to install FTTP for new builds. Alt Nets may either lease a connection from Openreach or be willing to install their own

[36] https://www.openreach.com/building-developers-and-projects/fibre-for-developers/registering-your-site
[37] https://www.virginmediapartners.com/developersnetworkexpansion
[38] A plot is defined as: '*An individually Council Addressed property paying full residency council tax*'
[39]https://www.virginmedia.com/content/dam/virginmedia/dotcom/images/shop/downloads/New-Build-Handbook-v1-63.pdf
[40] Alternative Networks (Alt Nets) is a term used to refer to alternative broadband infrastructure providers other than Openreach and Virgin Media.

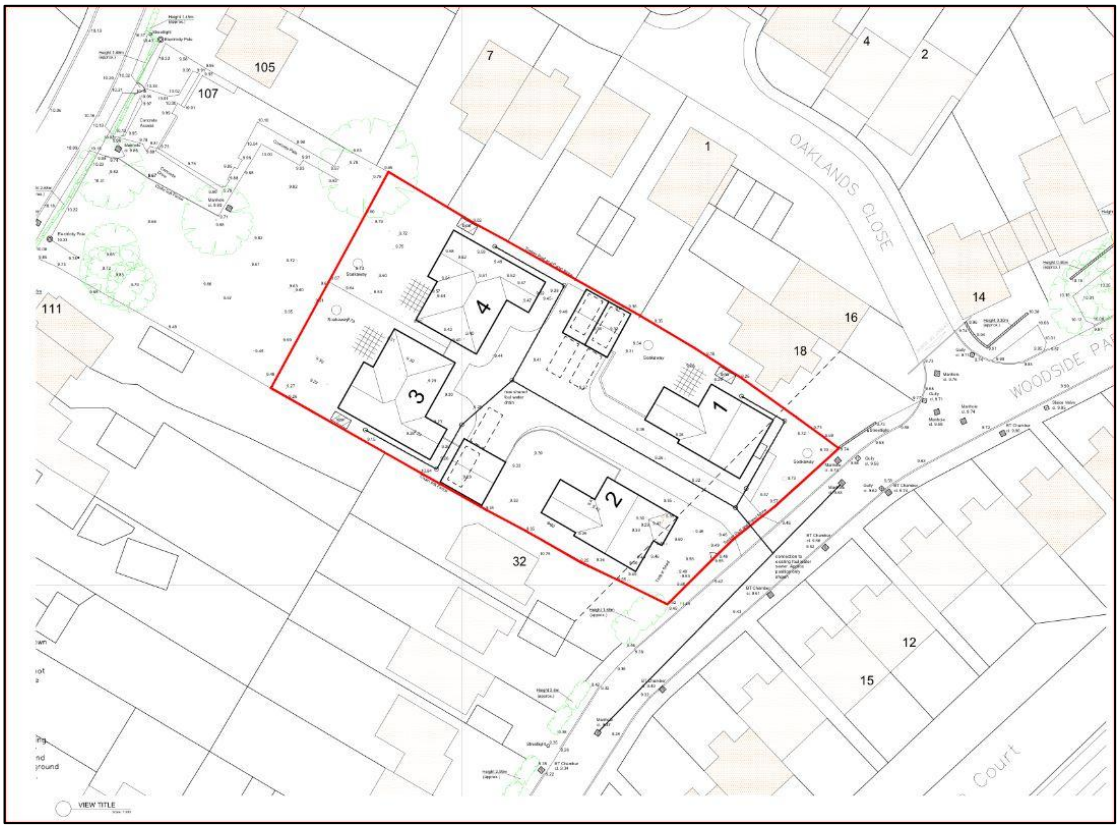
network for a development with a large number of residential addresses. Details are provided in Section 6.4.

APPENDIX A – EXAMPLE DOCUMENTS FOR SITE SUBMISSION

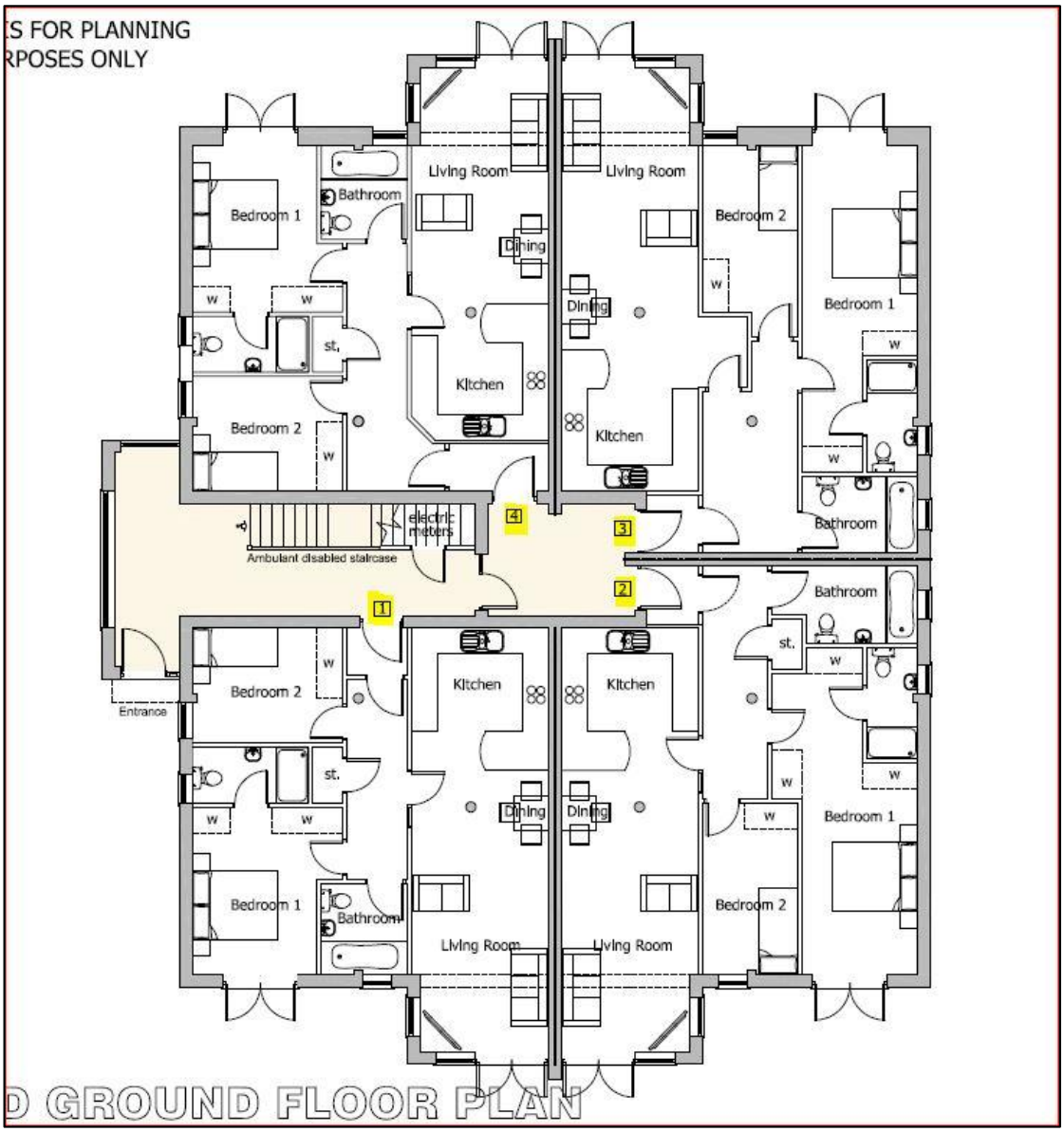
Purpose

Openreach has provided examples of good documentation to facilitate the site registration process. These are shown below for reference.

Example Site Plan



Example Site Plan with Plot Numbers



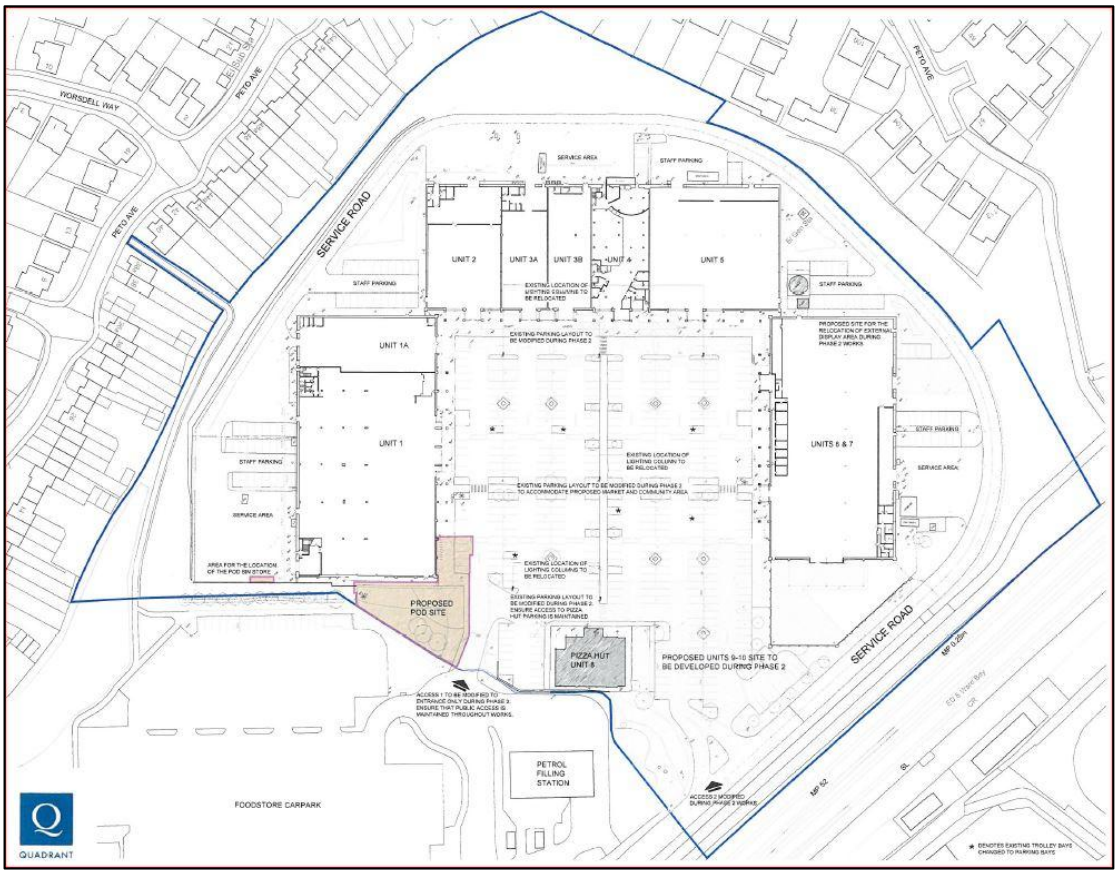
Example Flat Floor Plan with Plot Numbers



Example Site Plan for Business Unit



Example Site Plan for Business Unit Plots



APPENDIX B – DATA DUCTING INFRASTRUCTURE FOR NEW HOMES

Overview

The guidance note titled '*Data Ducting Infrastructure for New Homes (March 2008)*[41]' produced by the Ministry of Housing, Communities & Local Government also provides advice on internal and external ducting. An overview of the guidance for internal and external ducting is shown in the sections below.

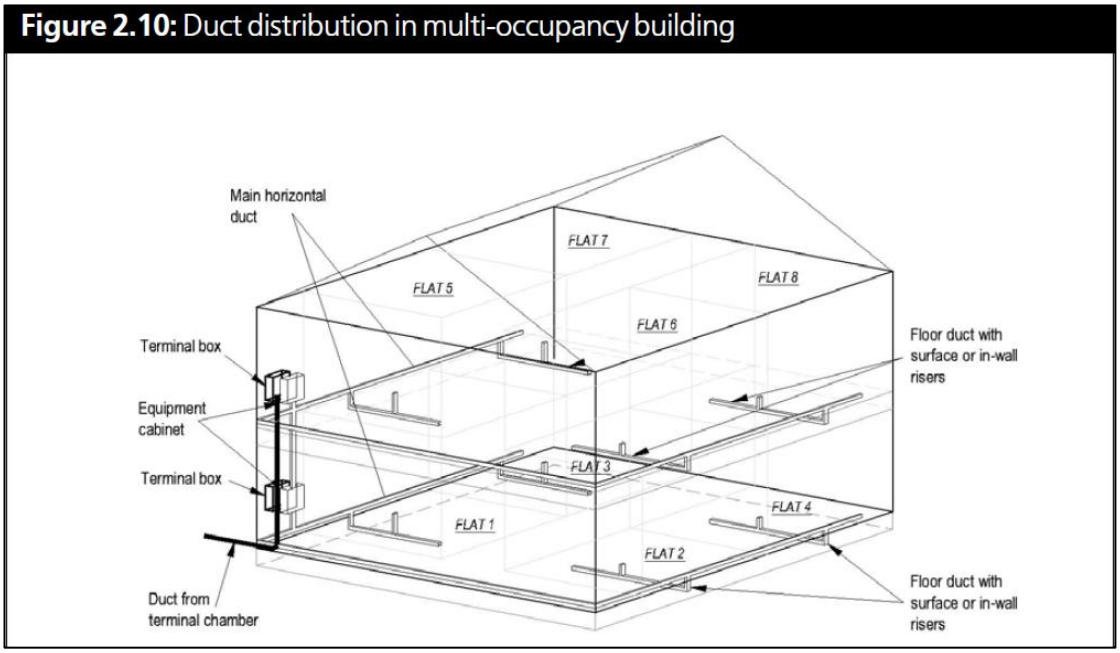
Internal Infrastructure Requirements Overview

Section 2.3.2 of the guidance details the following requirements that likely need to be considered for internal infrastructure:

- *Data sockets at 'useful locations' throughout the dwelling.*
- *A 'readily accessible' location where network equipment can be installed with a simple 'user-friendly' method of connecting the network equipment to 'live' data sockets.*
- *Mains electricity sockets that are located near the data sockets.*

The figure below presents an overview of duct distribution in a multi-occupancy building. Further details, including on ducts, are detailed within the guidance note.

Figure 2.10: Duct distribution in multi-occupancy building



Duct distribution in multi-occupancy building

[41]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/11496/dataducting.pdf

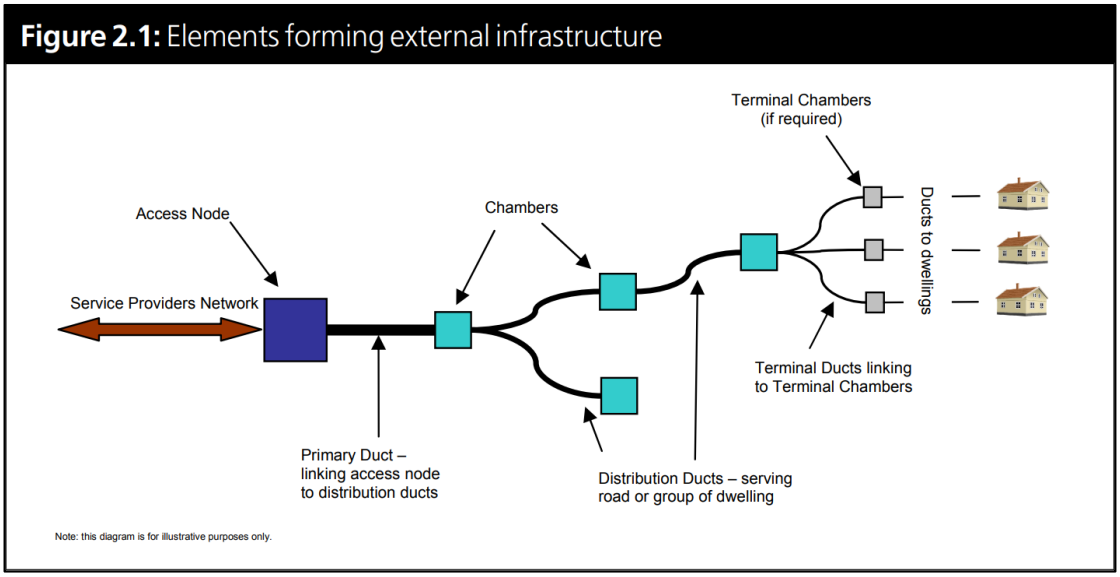
External Infrastructure Requirements Overview

Section 2.2.2 of the guidance details the following requirements that need to be considered in the design and implementation of external infrastructure:

- *Access node – to provide an interface between the external infrastructure and the data service provider's network. Depending on the network technology and the data service provider's requirement the access node may be implemented in a street cabinet or a chamber. The access node may be required to accommodate active (powered) network equipment.*
- *Street cabinets (not shown in the figure) – may be required for cable joints, cable distribution points and possibly to house active (powered) network equipment. Cabinets should be of sufficient size for additional ducting, at least one additional duct, for future requirements.*
- *Chambers – for cable installation, cable routing, cable jointing and some passive distribution points. Chambers may also be required to accommodate active (powered) network equipment that is designed specifically for such an environment although most data service providers are likely to favour street cabinets.*
- *Terminal chambers – chambers that may be required to connect the wider external infrastructure with dwellings or groups of dwellings. Terminal chambers should be located outside the dwelling plot as stated in paragraph 2.2.7 and illustrated in Figure 2.1.*
- *Ducts – pipes to facilitate the installation and later replacement of cables. This may also include micro or inner ducts.*

The figure below presents an overview of the elements forming external infrastructure. Further details, including on ducts, are detailed within the guidance note.

Figure 2.1: Elements forming external infrastructure



Elements forming external infrastructure

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