



DESIGN ENGINEER SUSTAIN

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33-41 Cheetham Hill Road
Manchester
Broadband Connectivity Assessment

QA

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Section 1 – Executive Summary

1.1 Introduction

Futureserv Ltd has been commissioned to investigate the broadband connectivity at the proposed building development located at 33-41 Cheetham Hill Road, Manchester.

To meet demand for broadband, the UK government has published Approved Document R volumes 1 and 2 to set out the requirements for electronic communications networks infrastructure in buildings. Both documents came into force in December 2022.

In updating Approved Document R, the government aims to ensure that as many UK homes as possible have better connections, with a target for a minimum of 85% gigabit-capable coverage by 2025.

Requirement RA1 and RA2 in volume 1 applies to the erection of a dwelling or of a building that contains one or more dwellings. This requires a network capable of providing broadband access at download speeds of at least 1,000Mbps – that is, one gigabit.

Volume 1 has been introduced to offer guidance for installing a gigabit connection that will enable faster internet as well as the infrastructure for it in new dwellings.

Requirement RA1 in volume 1 states that building work must ensure that each dwelling is first of all equipped with gigabit-ready physical infrastructure. This should extend from a termination point for gigabit-capable public electronic communications networks to a distribution point in the dwelling, or as close as is reasonably practicable.

The infrastructure should include the appropriate ductwork, chambers, cabling and network termination point for each dwelling, allowing for the connection to be installed.

Prior to starting on site, Part R states that a connectivity plan must be submitted to the building control body.

Information required in this connectivity plan includes demonstrating the location of the gigabit-ready physical infrastructure, including evidence of why it is being installed; or, if an exemption is to apply, evidence of measures such as the next fastest broadband being used. Assessment of this plan will be carried out when the plans are assessed by the building control body.

1.2 Results

An initial assessment of the availability of broadband services and the associated speeds has been determined based on:

- Openreach coverage checker – which is available via the Openreach website and identifies available speeds in any area within the UK.
- Crosschecks with three of the main UK broadband providers.
- Investigation of the process for obtaining superfast broadband to the premises.
- Standard broadband from Openreach in the form of Asymmetric Digital Subscriber Line (ADSL) is available at a nearby address (9 Carnarvon St, Cheetham Hill, Manchester M3 1EZ). Standard speeds of up to 24 Mbps are available (for BT and Openreach).
- Available internet speeds from BT up to 24 Mbps for the nearest house number that can be verified (9 Carnarvon St, Cheetham Hill, Manchester M3 1EZ).
- Infrastructure for Fast, superfast (FTTP) or Ultrafast Fibre broadband will need to be extended to the above address from the existing local networks.

1.3 Conclusions and Recommendations

Standard Broadband connectivity is currently available at the closest address (to 9 Carnarvon St, Cheetham Hill, Manchester M3 1EZ) in the form of ADSL (Asymmetric Digital Subscriber Line). ADSL typically provides a standard internet speed.

However it is anticipated that through separate applications to Openreach and Virgin Media that their gigabit ready infrastructure will be extended to 33-41 Cheetham Hill Road to enable ultrafast (up to 1 Gigabit per second) fibre broadband to the premises (FTTP), which is significantly faster than standard broadband.

FTTP construction to enable the above will be made available free (developments of more than 30 premises qualify) of charge for this development subject to application to Openreach. This will ensure internet speeds are maintained between the cabinet and premises. If this route were to be followed, the application must be done at least six months before provision of the service to the first property is provided. The site registration process is discussed in Section 3.4.

Based on the information through our studies and obtained from the main UK broadband providers, the site will be well equipped to provide residents with ultrafast broadband and meet the requirements of Approved Document R.

Section 2– Background

2.1 Introduction

Approved Document R requires that building of new residences must ensure each dwelling is equipped with gigabit-ready physical infrastructure.

Futureserv have been commissioned to investigate the broadband connectivity at the proposed residential development at 33 to 41 Cheetham Hill Road, Manchester.

This report presents the investigation into the current internet speeds in the area to determine whether minimum internet speeds at the development can be met, and a study of network provider capability for gigabit-ready physical infrastructure to ensure ultrafast speeds will be available to residents.

2.2 Development Plans

The Cheetham Hill Road development includes the construction of a residential tower and associated Amenity and commercial space bounded by Carnarvon Street to the East and Cheetham Hill Road to the South.

The development will consist of a single tower of 23 storeys, with circa 237no, 1- & 2-bedroom apartments set above reception lobbies, amenity space, back of house areas & plant space, it will also contain a space for commercial units at ground level.

The plot will deliver a mix of Open Market Sale (OMS) and Build To Rent (BTR) homes and with practical plant from a central location at ground floor level.

Hawkins Brown Architects have provided a set of GA's, existing site plans and proposed site layouts which will allow the team to construct a feasibility study of the development.

2.3 Proposed Development

The red line site boundary of the proposed development is shown in Figure 1 below.

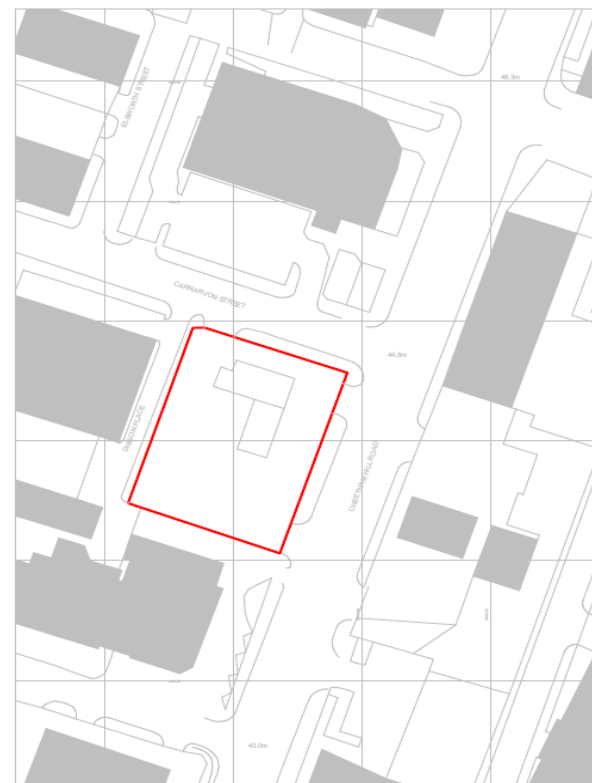


Figure 1 – *Proposed Development Location*

2.4 Proposed Development – Tower Location

The location of the proposed tower is shown in Figure 2 below. The plan is to show location of buildings only and landscaping and floorplan included is indicative.

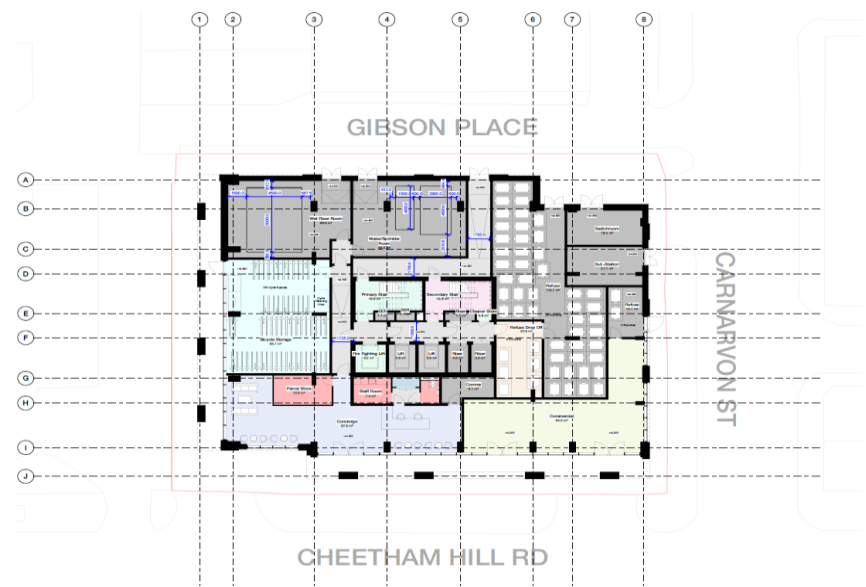


Figure 2 – Proposed development – tower location

Section 3 – Internet Service in the UK

3.1 Types of Broadband

Broadband services in the UK can be provided in various ways. Options include:

- Asymmetric Digital Subscriber Line (ADSL) – which is standard broadband in terms of speed provided via a copper telephone line.
- 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, which in turn is connected to a residence via a copper cable.
 - Fibre To The Premises (FTTP) – whereby a fibre connection is made between the exchange and the residence.
 - Gfast – which is a new technology that delivers broadband via a copper cable, much like ADSL, however the transmission is modified to increase the speed of the service.

3.2 Speed Requirements

The term 'superfast' is understood to mean speeds of up to 80 Mbps. Available speeds for the three fastest technologies are:

- Gfast – up to 330 Mbps
- FTTC – up to 80 Mbps
- FTTP – up to 1 Gbps

See figure 3 for an overview of current Openreach speeds.

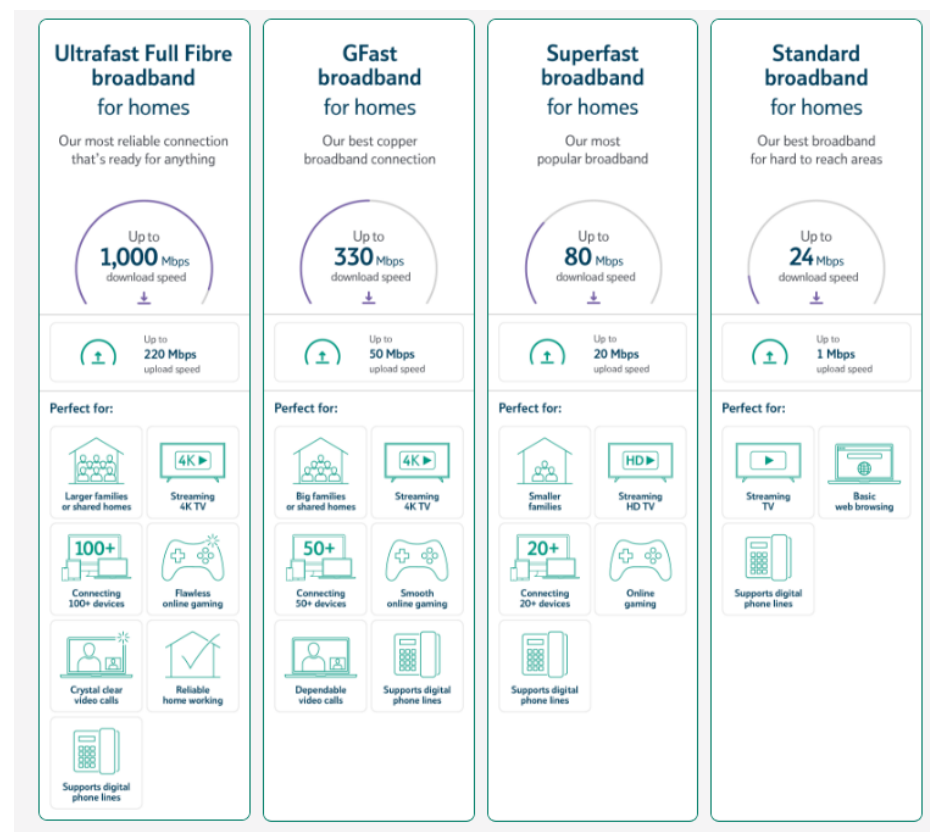


Figure 3 – Current Openreach Broadband Speeds

3.3 Current Availability

The availability of internet services at the proposed development has been explored in two ways:

- Assessment via Openreach – which shows the availability of their fibre network at UK locations via an automated service on their website.

- Enquiries with one main standard-speed broadband providers in the UK, namely:
 - BT
 - Virgin media

The results are shown in Table 1 below.

Company	Findings	Remarks
Openreach	The Openreach broadband network is accessible at the proposed development location.	Standard broadband speeds (up to 24Mbps) in the form of Asymmetric Digital Subscriber Line (ADSL) is available at the nearest address that could be assessed via this service(9 Carnarvon St, Cheetham Hill, Manchester M3 1EZ). The Openreach network is utilised by many providers.
BT	Broadband is available at the development location.	Broadband speed (up to 24Mbps) in the form of Asymmetric Digital Subscriber Line (ADSL) is available at the nearest address that could be assessed via this service (9 Carnarvon St, Cheetham Hill, Manchester M3 1EZ). Infrastructure runs in front of the site, it is available for future connection (see figure 4)
Virgin	Fibre broadband is not available at the development location.	Infrastructure runs in front of the site, it is available for future connection (see figure 5)

Maps by email Plant Information Reply

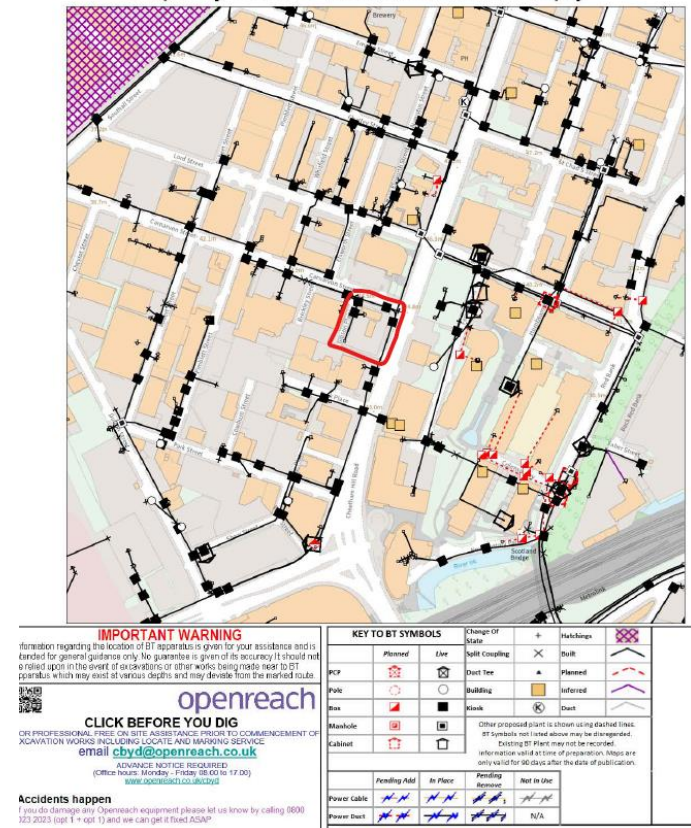


Figure 4 – Existing Openreach Infrastructure Plan

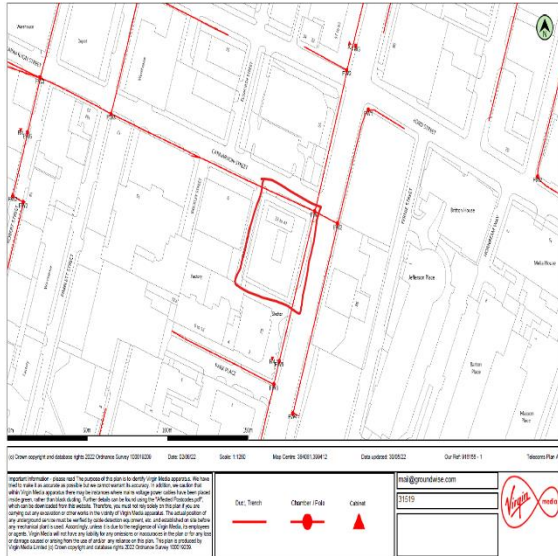


Figure 5 – Existing Virgin Media infrastructure plan

1. Location.
2. Site plan at a minimum of 1:500.
3. Schedule of accommodation that show how many plots per floor and their connection to a riser in cases of multiple cores.

Registration is undertaken online, whereupon it will be assessed by the Openreach team. The timescale for this assessment is not defined, the customer service team advised 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.
- 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.

3.4 Facilitation of Fibre Internet Services to the Premises

Whilst Asymmetric Digital Subscriber Line (ADSL) is currently available at the site location, Fibre To The Premises infrastructure is available from Openreach within the vicinity of the site and will need to be extended to the new development location from the existing fibre network.

This requires registration of the site, specifically:

- Registration is required 6 months before 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, whether it is part of a larger development and associated phases.
- Contact details for the company building the properties and the person managing any queries from Openreach must be provided.
- Plans of the development must be provided including:

Initial site investigation has discovered that a new Fibre cabinet has been installed in front of the site for future connections (see photo 1). This cabinet may be relocated to better suit the development access, but proves a clear intent from the regional network operators to roll out gigabit ready physical infrastructure to the development area.



Photo 1 – New Fibre cabinet installed on Cheetham Hill Road

Section 4 – Conclusions

4.1 Broadband Availability

Standard Broadband connectivity is currently available at the closest address to the site in the form of ADSL which can provide standard internet speeds, however following our study it is anticipated that through separate applications to Openreach and Virgin Media their gigabit ready infrastructure will easily be extended free of charge to 33-41 Cheetham Hill Road to enable ultrafast fibre to the premises (FTTP) speeds.

To meet demand for broadband, the UK government has published Approved Document R to set out the requirements for electronic communications networks infrastructure in buildings, and these came into force in December 2022.

In the Secretary of State's view, the Approved Document R requirement for gigabit-ready physical infrastructure will be met by installing physical infrastructure or installations, to host wired or fixed wireless access networks that can facilitate a functioning connection to a gigabit capable public electronic communications network to each new dwelling.

These measures will be provided at 33-41 Cheetham Hill through planning and liaison with the potential network providers, followed by formal applications to extend their existing FTTP network to the development. The infrastructure will include the appropriate ductwork, chambers, cabling and network termination point, allowing for the connection to be installed.

Prior to starting on site, a connectivity plan will be submitted to the building control body in accordance with AD Part R. Information required in this connectivity plan will include demonstrating the location of the gigabit-ready physical infrastructure and including evidence of why it is being installed.

The internal building network design will follow the network provider guidelines for FTTP infrastructure and be included within the building infrastructure, with dedicated comms rooms and risers to facilitate the network equipment along

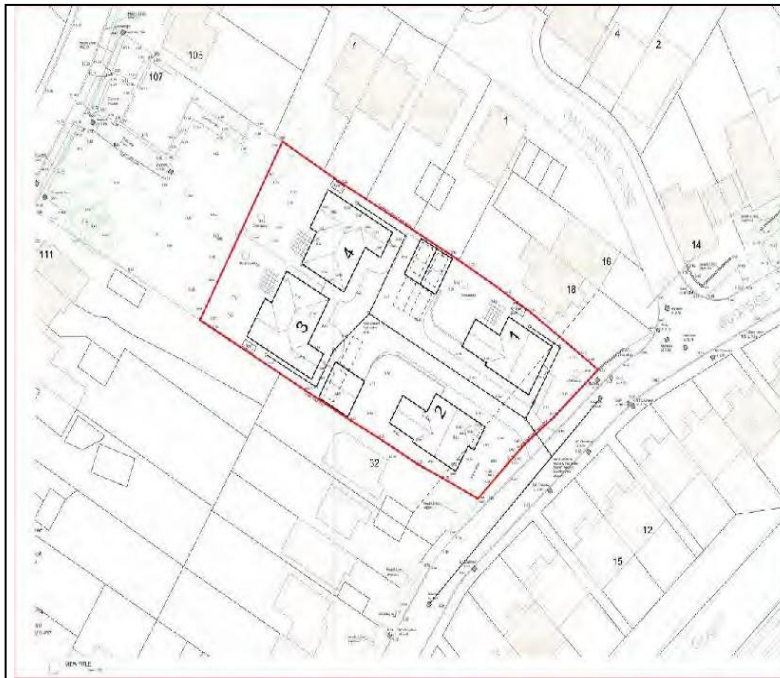
with space within each dwelling to allow connectivity broadband access at download speeds of at least 1,000Mbps – that is, one gigabit.

Appendix A – Example Documents For Site Submission

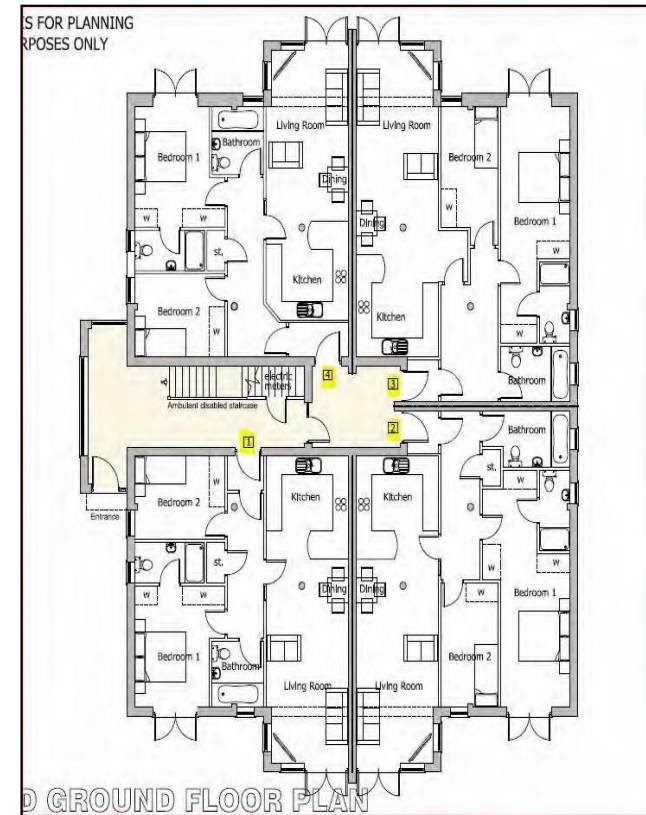
Purpose

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

Example Site Plan with Plot Numbers



Example Site Plan



Example Flat Floor Plan with Plot Numbers



Example Site Plan for Business Unit



Example Site Plan for Business Unit Plot

