

Broadband Connectivity Assessment

Jersey Wharf

Manchester Life Development Company 3 Limited

December 2021

PLANNING SOLUTIONS FOR:

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ADMINISTRATION PAGE

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1	27 October 2021	Initial issue
2	15 December 2021	Minor amendments
3	20 December 2021	Minor amendments

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EXECUTIVE SUMMARY

Report Purpose

There is a requirement to ensure that new residences have access to superfast broadband speed (understood to mean a minimum of 24 Mbps) to ensure future occupants can obtain sufficient broadband services. Pager Power has been commissioned to investigate the broadband connectivity at the proposed development, consisting of 190 plots, located at Jersey Street, Manchester, UK.

Process

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.

Conclusions and Recommendations

Suitable superfast broadband speed, understood to mean a minimum of 24 Mbps, is not available at two of five assessed addresses checked near to the proposed development location; therefore, it is inconclusive whether this will be available to the proposed development under baseline conditions.

Virgin Media provide services with of an average of 1130Mbps and is available at two of five assessed addresses near to the proposed development location.

Openreach typically provide Fibre To The Cabinet (FTTC) infrastructure, and this is leased by BT and Sky who provide internet services, amongst other retail providers. However, fibre services are not available at four of the five assessed addresses near to the proposed development location; therefore, FTTC infrastructure may not currently be available for the proposed development from Openreach. The review has also shown that for majority of the assessed addresses near to the proposed development location, there is no superfast services from BT and Sky.

The proposed development consists of more than 19 plots. Therefore, Fibre To The Premises (FTTP) infrastructure is available free of charge for this development subject to application to Openreach. This would ensure internet speeds are maintained and is recommended for the proposed development. If the installation of FTTP were to be pursued, 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. The details that must be included within the registration are:

- Site start date and required service date.
- Site address and coordinates.
- Description of development including type, phases and capacity.

- Contact details.
- Location plan, site plan (1:500) and schematic or schedule of accommodation.

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ABOUT PAGER POWER

Pager Power is a dedicated consultancy company based in Suffolk, UK. The company has undertaken projects in 51 countries within Europe, Africa, America, Asia and Australasia.

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

There is a requirement to ensure that new residences have access to superfast broadband speed (understood to mean a minimum of 24 Mbps) to ensure future occupants can obtain the associated services. Pager Power has been commissioned to investigate the broadband connectivity at the proposed development, consisting of 190 plots, located at Jersey Street, Manchester, UK.

This report presents the investigation into the current internet speeds in the area around the proposed development to determine whether minimum internet speeds at the development can be met.

2 DEVELOPMENT PLANS

2.1 Proposed Development Boundary

The proposed development is located at Jersey Street, Manchester, UK. The development boundary for the proposed development is shown in Figure 1¹ below.

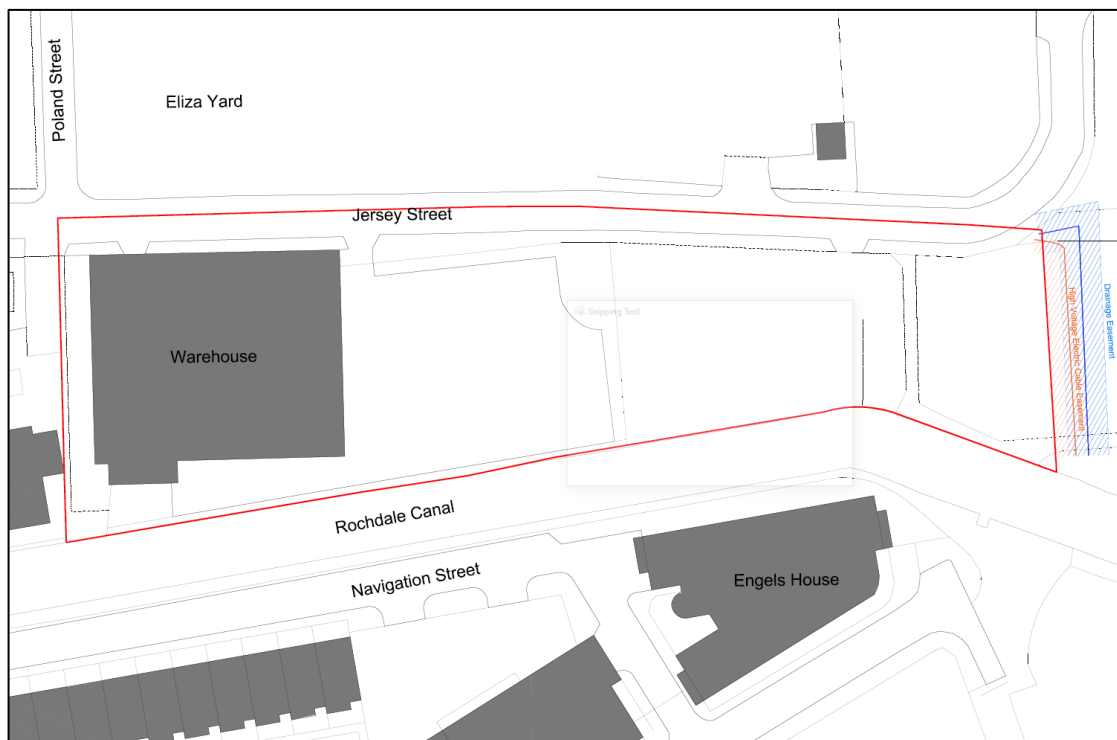


Figure 1 Proposed development boundary

¹ Source: BA9225_1140_Site Boundary.pdf (cropped).
Broadband Connectivity Assessment

2.2 Proposed Development Boundary – Aerial image

The development boundary (red line) for the proposed development overlaid on aerial imagery is shown in Figure 2² below.

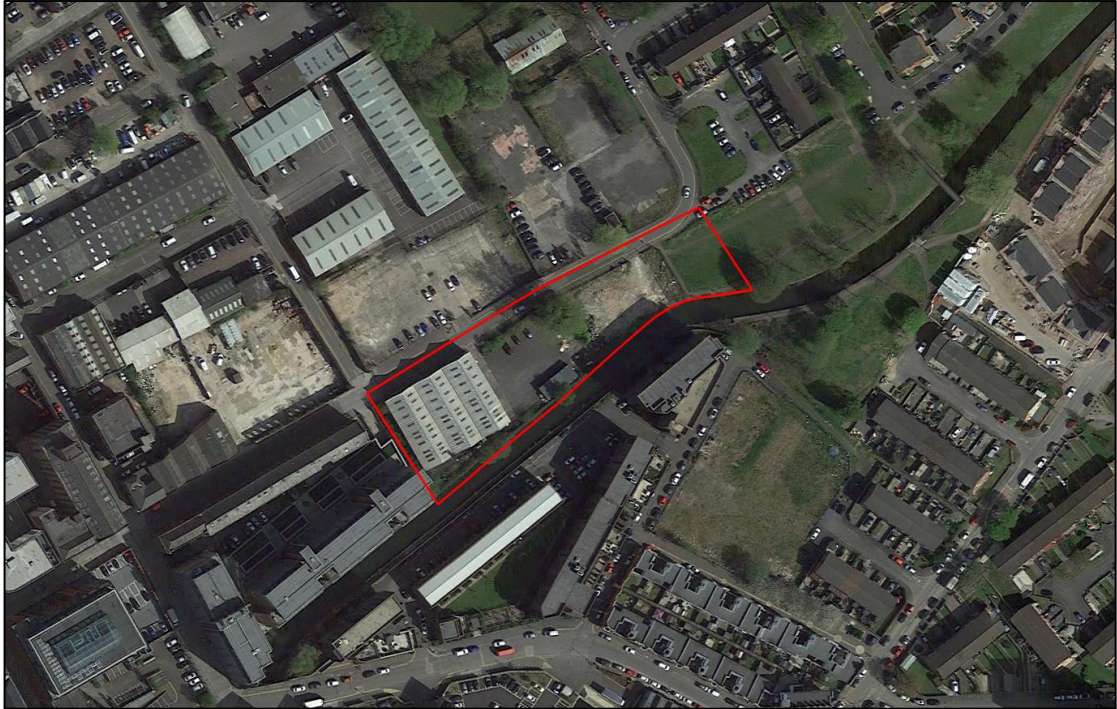


Figure 2 Proposed development boundary overlaid on aerial imagery

² Copyright © 2021 Google.

3 INTERNET SERVICES IN THE UK

3.1 Common Types of Broadband

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 3 below.
- 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.
 - Fibre To The Premises³ (FTTP) – whereby a fibre connection is made between the exchange and the residence.

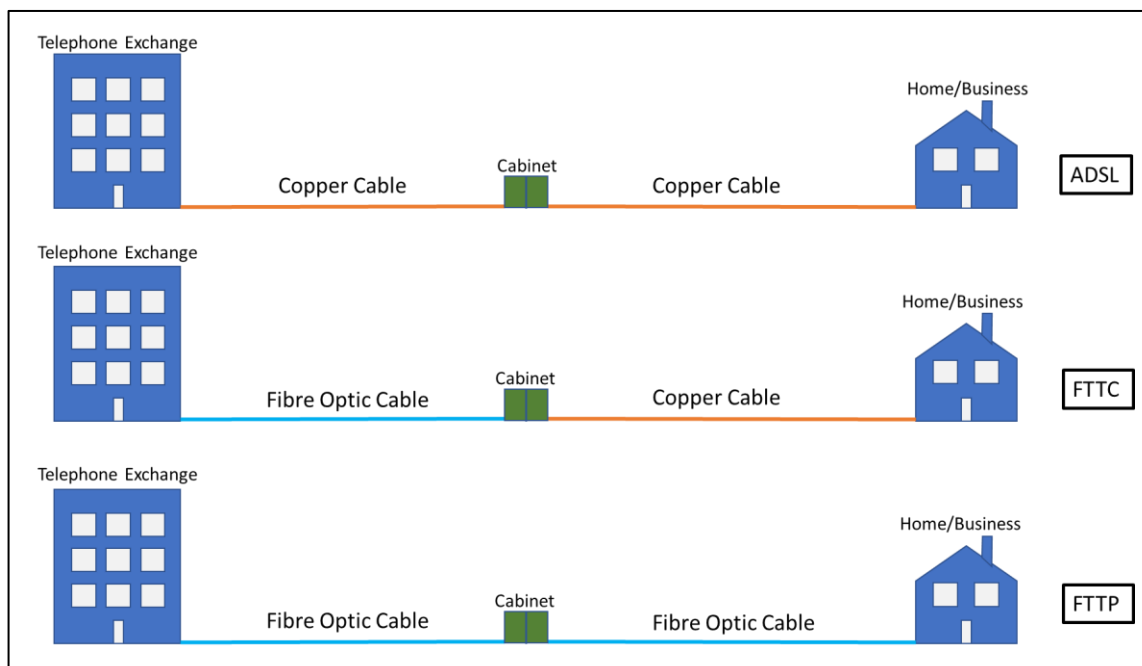


Figure 3 Common types of broadband (fixed line)

- Gfast – which is a new hybrid technology used by Openreach that delivers broadband much like FTTC; however, the transmission is modified typically at the distribution point to increase the speed of the service.

³ Also referred to as Fibre To The Home (FTTH).

- Cable (DOCSIS) – typically provided by Virgin Media⁴ who make use of DOCSIS technology⁵ standard whereby typically there is a fibre connection made up to a distribution point, which in turn is connected to a residence via coaxial cable.

Wireless Broadband services are available in the UK 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).
- Mobile network providers can also provide wireless home broadband via 4G / 5G technology and may be sought as another alternative solution.
- Satellite internet services are very uncommon and used only in very remote rural areas typically where no alternative viable solutions are available.

3.2 Broadband Speeds

The term 'superfast' is understood to mean speeds of 24 Mbps or higher⁶. Available speeds for the technologies are as follows:

- Standard broadband – up to 24Mbps;
- Superfast broadband – up to 80Mbps (FTTC);
- Gfast Broadband – up to 330 Mbps;
- Cable Broadband – up to 1130 Mbps⁷ (Virgin Media);
- Ultrafast Full Fibre – typically up to 1 Gbps⁸ (FTTP).

⁴ Virgin Media now also provide FTTP solutions in the UK for home broadband services.

⁵ Data Over Cable Service Interface Specification - An international standard for data transfer over cable.

⁶ Source: BBC, 2014, *One million UK properties on 'superfast broadband' after investment*. Last accessed August 2021.

⁷ <https://www.virginmedia.com/shop/broadband/speeds>

⁸ Source: Openreach. 1 Gbps = 1,000 Mbps.

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 three main high-speed broadband providers in the UK, namely:
 - BT;
 - Sky;
 - Virgin Media.

Five address locations were assessed near the development boundary shown in Figure 4² below. The results are shown in Table 1 on the following page.



Figure 4 Locations assessed⁹

⁹ The closest location and within the development boundary (66 Jersey St, Ancoats, Manchester M4 6JW) was not available to check on the Openreach website and therefore was not presented in the assessment table.

Location ¹⁰	Openreach	BT	Sky	Virgin Media
1.	No fibre service available (i.e. ADSL only). Superfast services not available.	Results showed that typical download speeds in practice average from 3 Mbps to 7Mbps ¹¹ .	Results showed that typical download speeds in practice average from 4.5 Mbps to 9.7Mbps.	Typical speeds at an average of 1130Mbps are available.
2.	No fibre service available (i.e. ADSL only). Superfast services not available.	Results showed that typical download speeds in practice average from 3 Mbps to 6Mbps ¹¹ .	Results showed that typical download speeds in practice average from 3.2 Mbps to 7.2 Mbps.	Services confirmed as not available.
3.	No fibre service available (i.e. ADSL only). Superfast services not available.	Results showed that typical download speeds in practice average from 3 Mbps to 7Mbps ¹¹ .	Results showed that typical download speeds in practice average from 3.5 Mbps to 7.9 Mbps.	Services confirmed as not available.
4.	FTTP available (up to 1 Gbps).	Results showed that up to 900Mbps download speeds are available; however, the guaranteed ¹² download speed is 450Mbps.	Results showed that typical download speeds in practice average from 470 Mbps to 515 Mbps.	Services confirmed as not available.
5.	No fibre service available. Superfast services not available (i.e. ADSL only).	Results showed that typical download speeds in practice average from 4 Mbps to 8 Mbps.	Results showed that typical download speeds in practice average from 5.2 Mbps to 10 Mbps.	Typical speeds at an average of 1130Mbps are available.

Table 1 Assessment of current availability

¹⁰ Locations assessed (1 to 5): 64 Jersey St, Ancoats, Manchester M4 6JW; 35 Radium St, Ancoats, Manchester M4 6AD; 23 Radium St, Ancoats, Manchester M4 6AY; Poland Street Industrial Estate, Ancoats, Manchester M4 6AZ; 86 Jersey St, Manchester M4 6JD.

¹¹ 4G Home Broadband with maximum download speed of 30Mbps is also available.

¹² BT 'Stay Fast Guarantee'.

3.4 Facilitation of Fibre Internet Services to Premises

The proposed development will benefit from the option of FTTP. 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 considered to be more reliable and consistent¹³. 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*¹⁴. The proposed development therefore qualifies for free facilitation of the fibre network from the exchange to the properties themselves. 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:
 - Location;
 - Site plan at a minimum of 1:500;
 - Schedule of accommodation that show how many plots per floor and their connection to a riser in cases of multiple cores.
- Registration is undertaken online¹⁵, 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. 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.

¹³ Internet latency is typically lower for FTTP and internet speeds are usually more consistent.

¹⁴ 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>.

¹⁵ <https://www.developers.openreach.co.uk/developerportal/index>

4 CONCLUSIONS

4.1 Conclusions

Suitable superfast broadband speed, understood to mean a minimum of 24 Mbps, is not available at two of five assessed addresses checked near to the proposed development location; therefore, it is inconclusive whether this will be available to the proposed development under baseline conditions.

Virgin Media provide services with of an average of 1130Mbps and is available at two of five assessed addresses near to the proposed development location.

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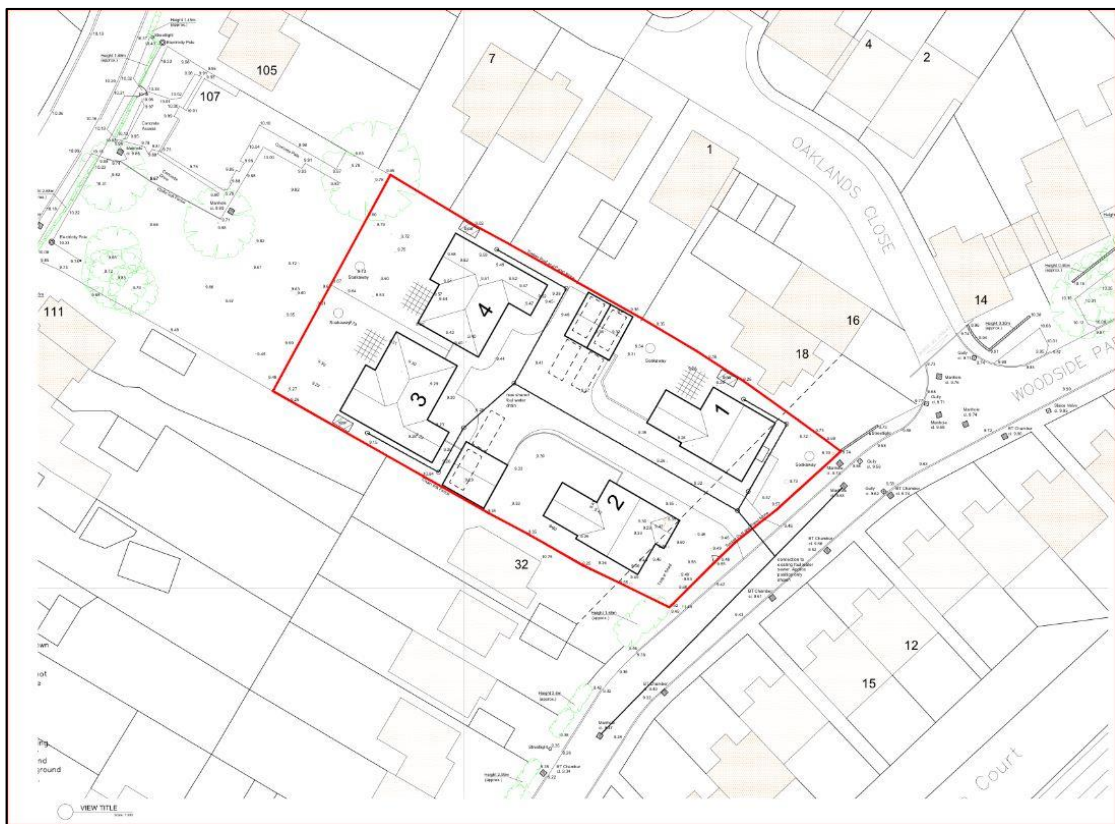
- Site start date and required service date.
- Site address and coordinates.
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APPENDIX A – EXAMPLE DOCUMENTS FOR SITE SUBMISSION

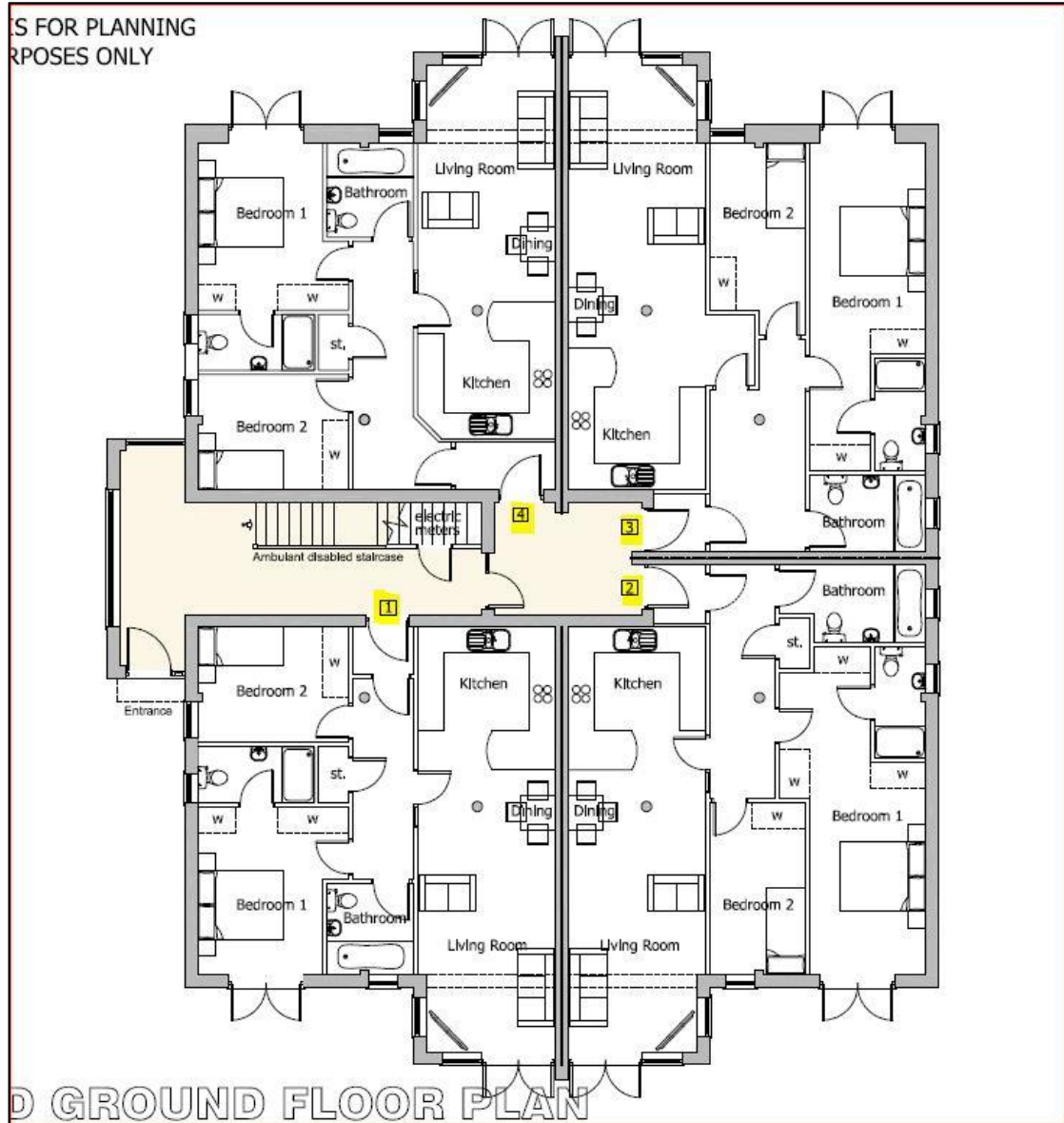
Purpose

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

Example Site Plan



Example Site Plan with Plot Numbers

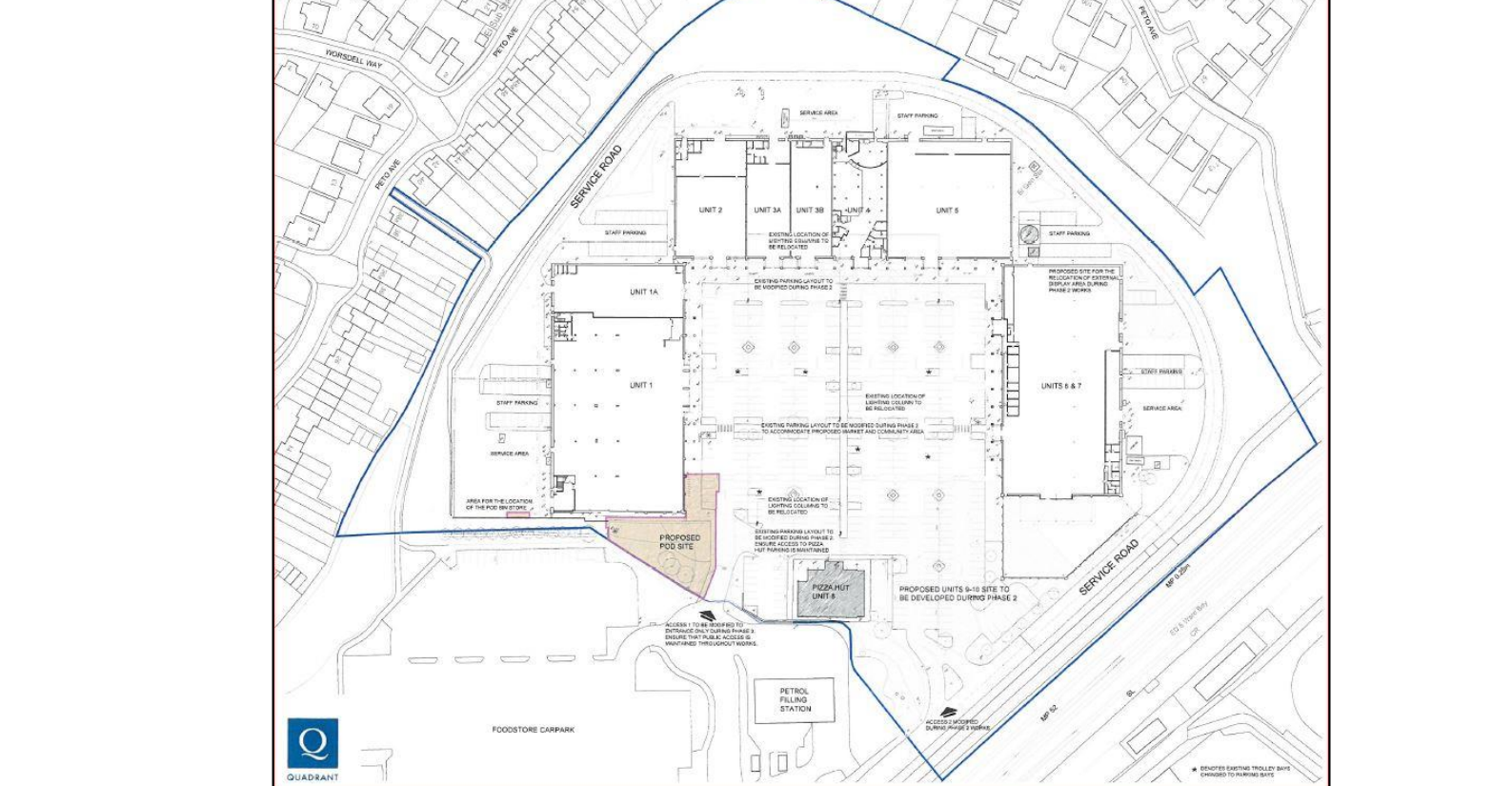


Example Flat Floor Plan with Plot Numbers



Example Site Plan for Business Unit







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