

STATION HILL NORTH READING

TELECOMS SUMMARY AND SUPERFAST BROADBAND STRATEGY

DECEMBER 2019

Introduction.

With reference to Reading Borough Council Superfast Strategy Broadband Statement, this report provides a summary of proposed Superfast Broadband (24Mbps+) supplies to all Plots of the Site (Plots A,B, C, D and G) and discussions that have taken place with various network operators.

We have undertaken an initial study which shows current broadband speeds in the area range from 1Mbps up to 160Mbps. The applicant intends to provide superfast broadband to the residential plots of the North Site with speeds of 1Gbps, using a predominantly fibre network.

Suppliers who have confirmed that they will be able to provide the infrastructure to serve the apartments include BT Openreach, GTC, Virgin Media and Hyperoptic.

BT Openreach have already produced a formal offer for their fibre to the premises (FTTP) product offering speeds of up to 1Gbps, depending on the communications provider.

GTC provide the infrastructure and the network provider is Open Fibre Networks (OFNL), who offer 1Gbps services depending on the specific provider and their package. They have acknowledged the project and are in the process of producing a quote for the installation.

Virgin media currently have no fibre network in operating in near the site, however they have confirmed that they are able to offer 1Gbps to the residential plots of the Site. They would provide the necessary on-site materials and complete the off-site connection (location to be confirmed at later date). It is then the responsibility of the developer to install the provided equipment and internally wire from each unit to the agreed location. The development would then be limited to only using Virgin Media services.

Hyperoptic lease BT Openreach ducts so they are well set up to provide a superfast broadband and have confirmed that they are able to guarantee 1Gbps to each apartment. Once they have been accepted as the network provider, they will progress with a detailed design.

Telecomms infrastructure study in the area.

This report provides a summary of initial investigations made into telecom providers for Station Hill North, Reading. The current broadband availability for the site area includes ADSL, SDSL, LLU Services, cable and wireless. FTTC and FTTP are available from certain providers. The costs and details are purely indicative at this stage and are subject to more detailed inquiries.

Telecom ducts have been found around the site with most assets belonging to Openreach, as identified in the underground services survey from Plowman Craven, depicted in Figure 1b. (Original attached as Appendix A). Ducts have also been detected from Kingston Telecom, Cable and Wireless, Vodafone, and other unidentified providers. Contact has been established with all of these providers to gauge what broadband speeds they could provide for the scheme.

Figure 1a. shows a screenshot taken from Thinkbroadband.com with speedtest results taken on 03/10/2018. This test was unable to confirm which provider supplied a top speed of 160.3Mbps, therefore a breakdown of current and potential suppliers is outlined in the report.

There are a number of fibre service providers who offer ultra-fast broadband from speeds of up to 100Gbps consisting entirely of fibre connections. Companies which have shown interest in the Station Hill project include Hyperoptic and Zayo, which are detailed later in the report.

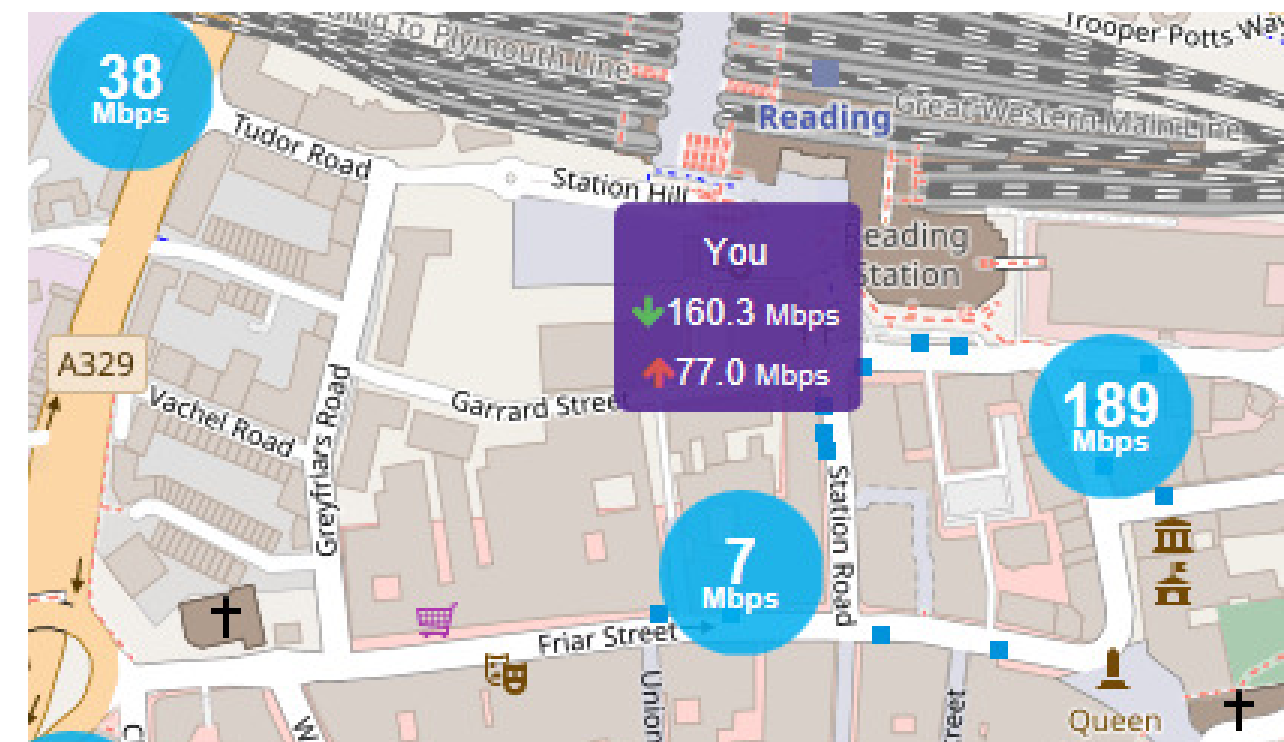


Figure 1a. – thinkbroadband.com speed test results



Figure 1b. – Results from Plowman Craven underground survey showing Telecoms providers and legend

1. Openreach

There is currently a supply of 24Mbps + to areas surrounding the site provided by Openreach VDSL2/FTTP, as shown in figure 2a in green. Some areas of the site are currently only receiving speeds of 0-3.9 Mbps, shown in red.

Currently Openreach have the largest supply of ducts in the area so would be best suited to providing connection to the site. Their current assets are shown in figure 2c.

Openreach are the installer company so the tenants would have the option to choose broadband from any provider eg. Sky, Virgin Media, BT/Openreach whom have various packages.

Openreach will offer ultrafast broadband FTTP to the residential blocks of the North site at no cost to the developer. Depending of the internet provider, customers could receive speeds of up to 1Gpbs.



Figure 2a. – Openreach VDSL2/FTTP current speeds from thinkbroadband

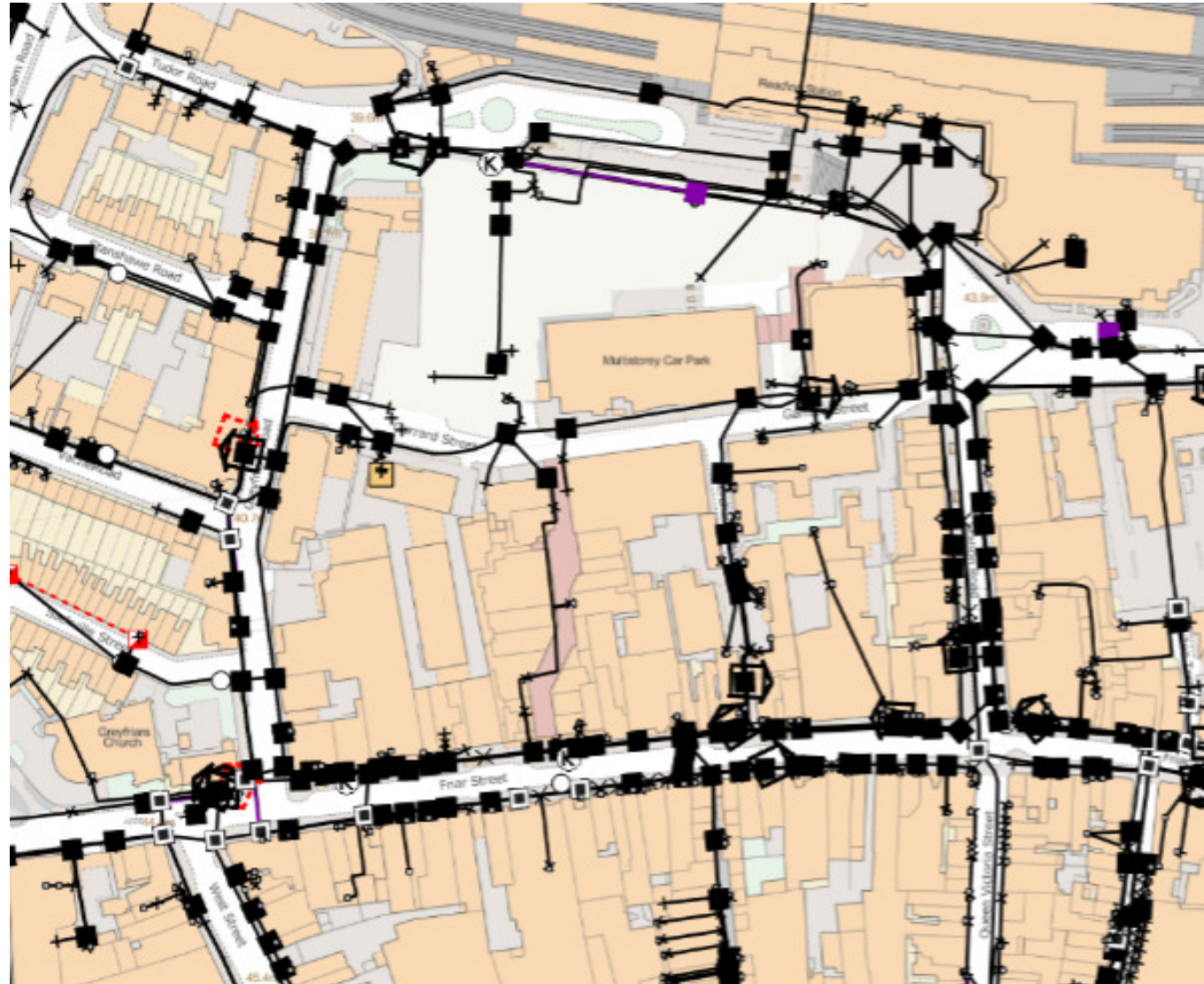


Figure 2c. Extract from Openreach asset map

2. Virgin Media

There are no Virgin Media services currently within close proximity to the site, as shown in figure 3a where the green shows current supplies. However, they have confirmed that they are able to offer 1GB to the apartments with no installation fee, this is attached as appendix C. Currently their highest speed offer is VIVID 350 Mbps which customers can have for £50 a month (broadband only).

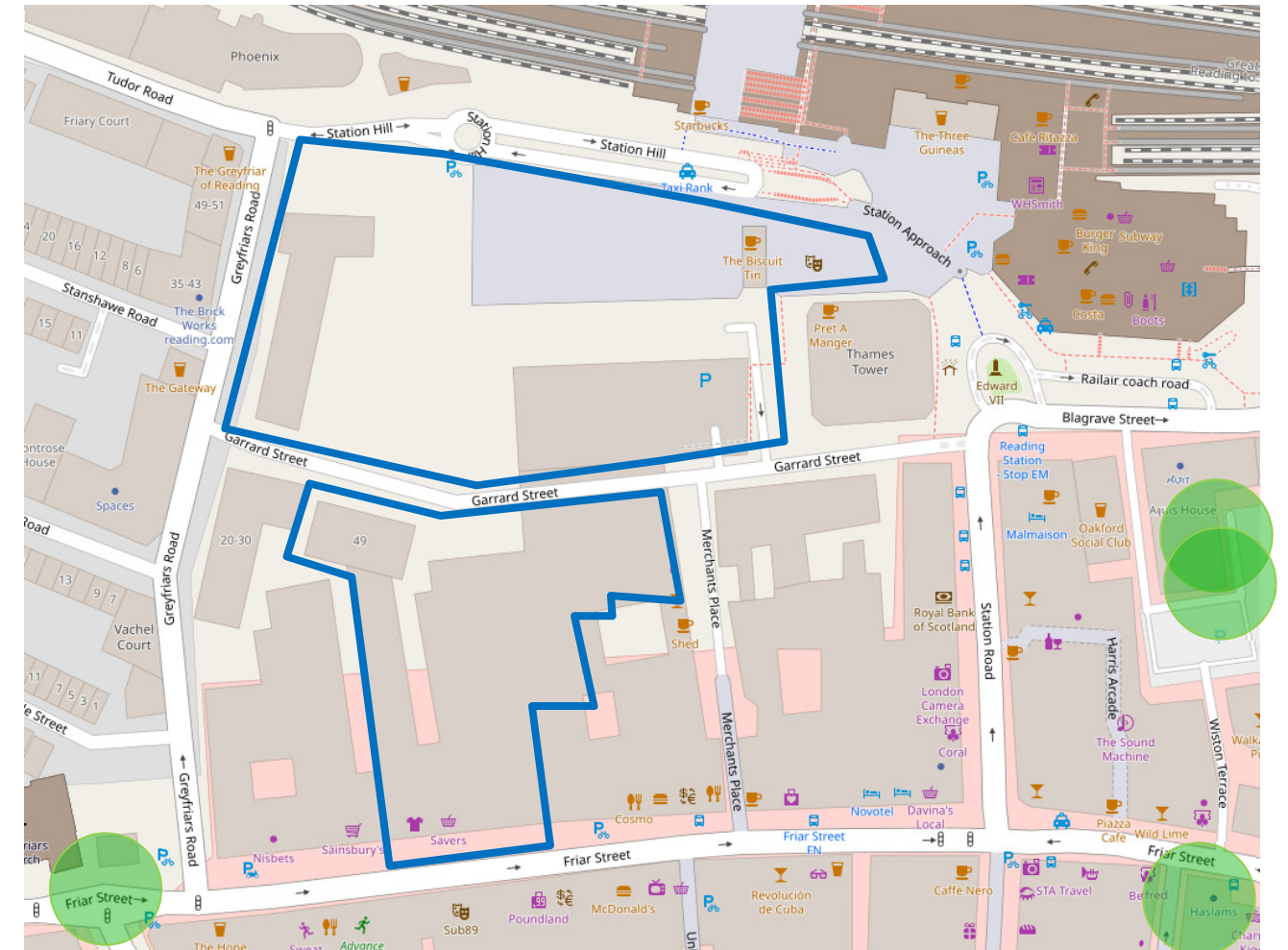


Figure 3a. – Virgin Media Cable current supplies from thinkbroadband.com

3. Kingston Telecommunications

Previous investigations show that Kingston have hardware in the area, along Garrard Street. Current speeds are unknown but the company predominantly offer business solutions.

4. Vodafone

Vodafone do not currently have any fibre network operating around the site and can only offer speeds of up to 19.5Mbps. They are unable to confirm if there will be new fibre connections for the area in the near future, as they are limited to upgrades provided by Openreach.

5. Hyperoptic

Hyperoptic operate with a brand new all-fibre network, offering fibre optic cables directly to the premises. Confirmation has been given that they have existing network in the area and are interested in the project. They are able to provide a 1 Gb connection to the accommodation blocks.

Hyperoptic provide a broadband service only. Hyperoptic will not provide a standard telephone service but they offer an IP telephone solution for an extra cost/month to the end user.

6. Open Fibre Networks (OFNL)/GTC

Open Fibre Networks are an 'open access' network who deliver fibre to the home (FTTH) with a range of service providers offering different packages. GTC provide the infrastructure. Currently these include:

- Direct Save Telecom
- Love your Broadband
- Pure Broadband
- Seethelight
- vFast
- Breeztel

Although they are able to approach new providers depending on the project. They currently offer a minimum speed of 40Mbps and maximum of 360Mbps in the surrounding area. Currently there are no planned upgrades to the network. They have acknowledged the project and are in the process of producing a quote for the works.

7. Zayo

Zayo have an extensive dark fibre network globally and have confirmed availability in the Reading area. They are able to provide speeds of up to 100Gbps, however an initial quote has been provided for 1Gb of dedicated internet access (Appendix B).

For this ultra high speed connection, a 12 month contract will cost £9,568. Longer contracts decrease accordingly and a 60 month contract will cost £3,838.

This monthly cost accounts for the construction costs of connecting cables from their POC to the chosen point on site. Note that the monthly cost can be reduced for a larger up front sum if preferred.

The map on figure 4a. shows the current Zayo network, the site is marked by the red circle. Blue = metro lit fibre, yellow = long haul lit fibre (lit = dark fibre that is used by a provider) (dark fibre = unused and is installed for future expansion).

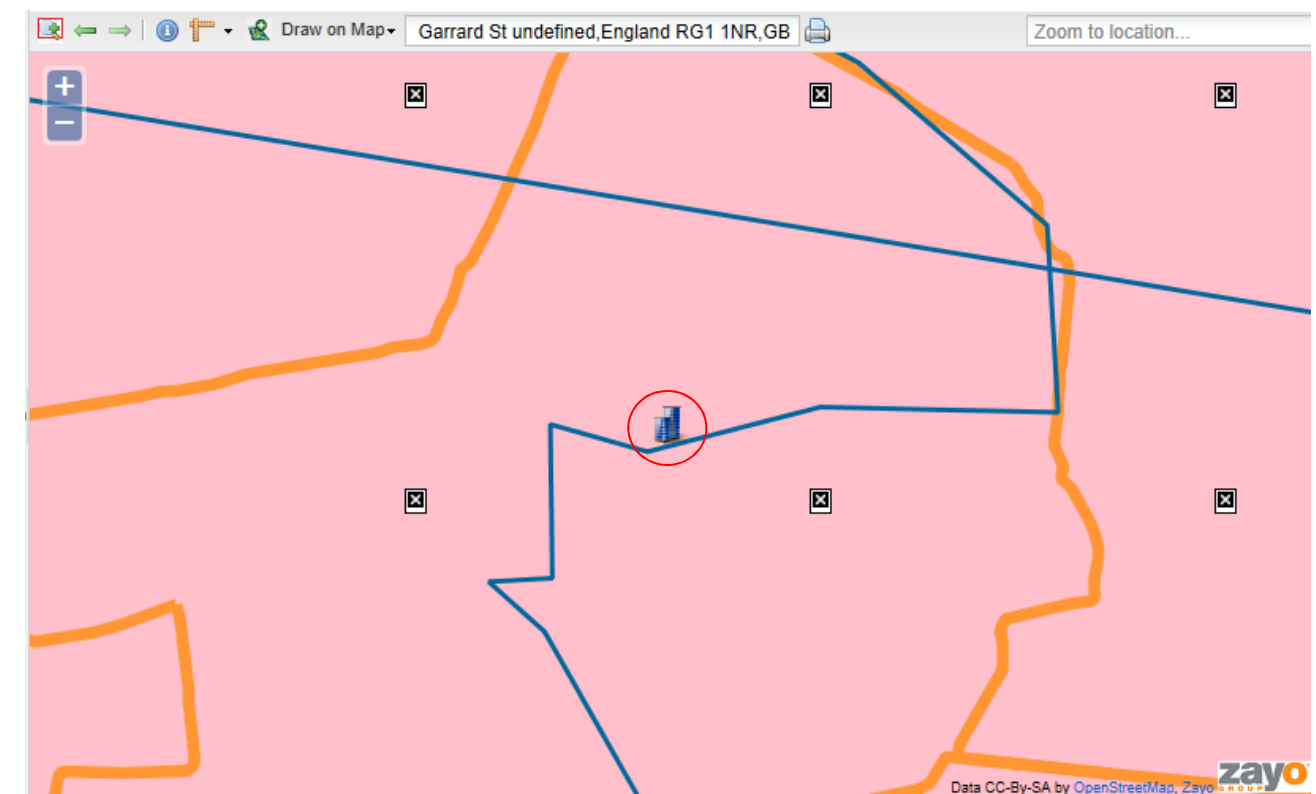


Figure 4a. – Zayo network map, Reading.

8. Infrastructure uplift to allow for 2no different telecoms providers for the residential buildings

Providing the necessary infrastructure for 2no different telecoms providers might prove beneficial from a marketing point of view and would provide the end user with multiple telecoms operator options.

Most comms operators like Virgin Media and Hyperoptic are keen to expand their network to the residential market and will free issue most of their equipment and cabling for the infrastructure of the building, to be installed by others; so there would be a cost uplift in comparison with a single telecom provider solution.

The list below tries to capture the extra requirements in order to facilitate the installation of a secondary telecoms provider infrastructure over and above Openreach (in this case Virgin Media). See Appendix D for schematic of installation within an apartment:

- Contractor to provide power supply to Virgin Media equipment in telecoms intake room. Virgin Media equipment will share the room with the primary telecoms provider.
- Contractor to install dedicated blown fibre ducts from the intake room to the ELV riser and from the ELV riser to each of the apartments. The blown fire ducts will be free issued by Virgin Media. Fibres to be blown and spliced by Virgin Media contractor.
- Contractor to provide power supplies within the ELV riser for Virgin Media distribution equipment.
- Virgin Media installation within apartments: Contractor to provide an additional twin switched socket outlet for Virgin Media termination box within the Utility Cupboard. Contractor to provide and install 2No Virgin Media TV plates (1No in Living room and 1No in Master bedroom). Contractor to install 2No Coax cable (free issued by Virgin Media) and terminate in the Virgin Media TV plates (1No Coax cable per plate).

Summary

The table below captures the Telecomms provider with existing infrastructure in the proximity of the site capable of providing connections compliant with Reading Borough Council Superfast Broadband Statement (24Mbps+).

Provider	Availability	Status of consultation	Pro's	Con's
Openreach	Large amount of existing network surrounding the site	Will free issue equipment for residential blocks.	Depending on network provider, can offer internet speeds of up to 1Gbps. Large amount of existing infrastructure already in place.	No guarantee of speeds.
Virgin Media	Infrastructure in the Reading area	Email confirmation received. Appendix C	Are able to offer 1Gbps internet speeds to the apartments with no installation fee.	Free issued equipment to be installed by main contractor. Rebate cost to be negotiated Residents limited to Virgin Media service.
Hyperoptic	Unknown	Meeting held last 03/12/2018. Hyperoptic are keen to meet the Developer to discuss options	Brand new all fibre network with high speeds.	Free issued equipment to be installed by main contractor. Rebate cost to be negotiated. Residents limited to Hyperoptic

Provider	Availability	Status of consultation	Pro's	Con's
				broadband service. No standard telephone service (IP telephone only)
OFNL	Use GTC infrastructure which is unknown	Communication established and assessment of speeds currently underway	Open access network with a variety of providers.	Current speeds in area range between 40 and 360Mbps.
Zayo	Locally owned infrastructure in Reading	Formal quote received. Appendix B	Can offer speeds of up to 100Gbps. Guaranteed 1Gbps as a minimum.	Large upfront/ monthly cost. Intended for business connections.

Glossary.

LLU	Local loop unbundling
ADSL	Asymmetric digital subscriber line
SDSL	Symmetric digital subscriber line
FTTC	Fibre to the Cabinet
FTTH	Fibre to the Premises
POC	Point of Connection



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