

Wavenet FTTP Service Description





Table of Contents

About FTTP	3
Why FTTP	4
Benefits of Wavenet FTTP	4
Where can you consume FTTP?	4
What is FTTP on Demand	5
Network Components	5
Broadband vs Ethernet	6
Mapping	6
FTTP Packages	6
Key Differences	7
Order Types	8
Hardware	9
Care Levels	9
Broadband	10
Ethernet	10
DDOS Protection	10
Voice Services	11



About FTTP

Openreach has announced the withdrawal of WLR, which means the traditional delivery of voice and other services across the PSTN (Public Switched Telephone Network) will come to an end. A stop sell of these services will take effect from 2023 and complete withdrawal by December 2025.



The withdrawal of the PSTN significantly changes how broadband is delivered, i.e. the broadband service will no longer require a WLR service, but rather the broadband service becomes the underlying technology to deliver data and over the top IP services such as Voice over IP (VoIP), enabling the transition to a true all-IP solution. These new data only, broadband products will replace the traditional broadband (based on PSTN service) and are referred to as Single Order Broadband which consists of:

- SOGEA
- FTTP
- SOTAP release 2021
- FTTP (Fibre to the Premises) is the next-generation connectivity solution that utilises a Fibre Connection from the local exchange to the premises. The circuit does not share the line with a WLR service (the PSTN network isn't enabled for the line so no telephone number or voice service is attached to the service)
- FTTP offers Data rates of up to 1Gbps and is the most reliable broadband technology utilising fibre optic cables instead of legacy copper



Why FTTP

The advancement of fibre technology allows better stability and increased bandwidth. With over 3.5 million premises and growing, users are now benefitting from greater asymmetrical speeds over the existing fixed yet shared broadband infrastructure. Performance demands are increasing as well and FTTP provides fast, stable connectivity to enhance business benefits in utilising technologies such as cloud-based applications, VoIP and collaboration tools

Benefits of Wavenet FTTP

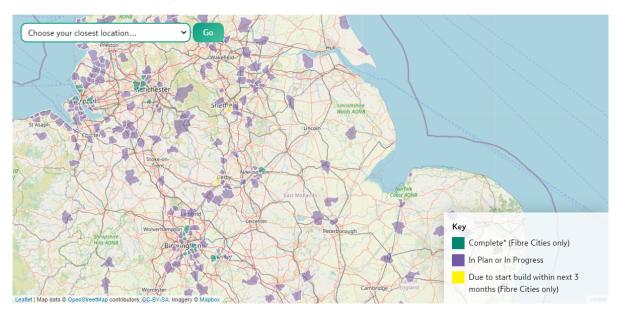
- Future proof ready for the PSTN withdrawal from 2025
- Availability available to over 3.5 UK premises and growing
- Cost-effective no separate line rental required
- Simple order single order journey and installation means faster provide and improved support
- DDoS optional DDoS protection

Where can you consume FTTP?

In line with Openreach's public deployment plan, FTTP may only be purchased in areas where the network infrastructure has been deployed.

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FTTP Fibre First Build Programme





The deployment plan is frequently updated to reflect our progress and availability can be determined on a line-by-line basis using the Wavenet Availability Checker.

Not all areas will be viable to serve. An area may serve too few end customers to justify the investment, or they may have an infrastructure issue (e.g. access to power, planning permission, and Traffic Management Act issues).

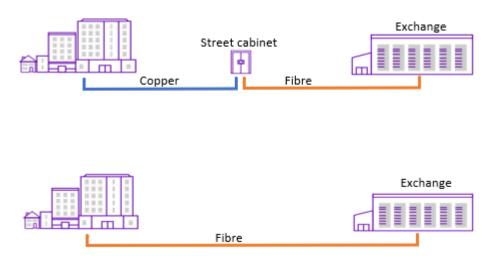
What is FTTP on Demand

Where an exchange is enabled for FTTP but the fibre rollout to premises is not completed customers can request a survey and can opt to pay for the installation of Fibre to their premises. Each site is a customer install and the lead time for installation is dependent on the amount of work needed to get fibre to your premises from the nearest NGA aggregation node.

Network Components

- A customer hub or router
- A fibre path to NGA
- Fibre backhauls from the NGA
- A Layer 2 Switch (L2S) in the exchange
- GEA cable link

Legacy connections utilised copper for the last mil. FTTP utilises fibre connected from the exchange to the premises.





Broadband vs Ethernet

Wavenet offers FTTP in two variations - Broadband and Ethernet.

- Broadband is connected to the broadband network and is supplied with throughput limits
- **Ethernet** is connected directly to the core ethernet network to provide enhanced performance, and improved Service Level Agreements

The connections are supported by separate cable links for Broadband and Business Ethernet traffic.

ADSL/FTTC	EoFTTC	EFM
•		
FTTP Broadband	FTTP Ethernet	FTTP Ethernet

Mapping

FTTP Packages

Description	Downstream (Up to)	Upstream (Up to)
FTTP – Broadband	40 Mbps	10 Mbps
FTTP – Broadband	80 Mbps	20 Mbps
FTTP – Broadband	160 Mbps	30 Mbps
FTTP – Broadband	220 Mbps	30 Mbps
FTTP – Broadband	330 Mbps	50 Mbps
FTTP – Ethernet	40 Mbps	10 Mbps
FTTP – Ethernet	80 Mbps	20 Mbps
FTTP – Ethernet	160 Mbps	30 Mbps
FTTP – Ethernet	220 Mbps	30 Mbps
FTTP – Ethernet	330 Mbps	50 Mbps

- Additional speeds may be available but are subject to availability of cable links
- Asymmetrical speeds
- FTTP speeds are up to and are subject to minimum speed and throughput guarantees



ALL STA

Key Differences

	FTTP Broadband	FTTP Ethernet
Target repair	40 working hours	8 clock hours
Engineering	Monday to Saturday 8:00 AM – 6:00 PM	24/7
Network	Broadband	Ethernet
DDOS protection	No	Yes
Core throughput limit	Yes	No

All packages are supplied with unmetered usage policy subject to acceptable use policies and the broadband care level can be increased.

Important Considerations:

At present, there will be circumstances whereby PSTN compatible solutions/hardware (Alarm systems, payment devices and critical services) are incompatible with FTTP meaning they are not IP enabled. Hence these devices or services will stop working.

Careful considerations should be taken when ordering/replacing existing broadband + WLR/ MPF services with FTTP Connection. By not taking precautions, you could put the end customer's health/ business at risk. New installations of FTTP have no voice as standard and existing numbers will need to be ported if the existing PSTN based service is being ceased.

With this in mind, it is critical to ensure services in use and attached to the existing line are identified when upgrading services. These services may include:

- Red care and alarm services or vulnerable customers who are using pendant solutions
- Businesses/services that rely on analogue phone systems or devices based on PSTN technology such as a medical practice (whereby a VoIP solution cannot be offered)
- PSTN based payment machines, franking machines, fax machines, security systems and elevator/lift services and critical services with built-in emergency calls



Order Types

New provide – new installation of FTTP service. Must be ordered with a standard or premium installation option. WLR Line is not required for FTTP orders. There are two types of installation:

When carrying out a managed install the engineer will do work required to uplift the network where necessary, including removing issues from the customer premises. The objective is to leave the customer with an optimum single order working service.

Standard

When carrying out a managed install the engineer will do the work required to uplift the network where necessary, including removing issues in the home. The objective is to leave the customer with an optimum single order working service.

Tasks will include:

- 1. Upgrade to NTE5c
- 2. Fit Service Specific Faceplate (SSFP) where required #
- 3. Ensure customer wiring to NTE meets Openreach standards
- 4. Connect CP router (next to the NTE)
- 5. Connect one device *
- 6. Show the customer the connection sync speed on HHT
- 7. Any Time-Related Charges (TRC) work required (within the task time)
- 8. Complete the customer checklist

In addition to the standard site visit elements, the engineer can carry out all of the below activities if required as well as the IP voice activities if ordered.

Premium

If you order premium site visits, in addition to the standard site visit elements the engineer can carry out all of the below activities if required as well as the IP voice activities if ordered. Tasks will include:

- Enhancing the environment reposition customer router, move NTE, agree ONT the location with the customer
 - 2. Add up to two data extension kits
 - 3. Connect up to two devices and demonstrate (fixed and wireless)
 - ** If required Add Voice Reinjection (VRI) service specific faceplate; reconnect voice extensions and prove working at up to three extension sockets by listening for dial tone
 - 5. Any time-related Charges (TRC) work required (within the task time)
 - 6. Complete the customer checklist



* Connectable devices include set-top boxes, PCs, laptops and smartphones, but does not include games consoles, Wi-Fi extenders and mesh units, dongles or any other units. Devices not previously connected at the customer's premises will not be connected. All devices must be configured correctly.

** On a premium install, if Voice Re-Injection (VRI) installation is required then please be advised that you or the customer are responsible for sourcing and providing the VRI cables before the engineer installation. The engineer will fit an isolation faceplate and prove on up to three extensions, by connecting a phone and listening for dial tone. If a VRI cable has not been delivered by the time of the scheduled appointment, the engineer will fit the isolation faceplate only.

A service-specific faceplate (SSFP) will prevent the DSL signals from reaching the extensions to avoid bridge taps and maximise DSL speeds

Hardware

Wavenet recommended routers offer the ability to utilise the same device on SoGEA and FTTP enabling customers to upgrade easily as FTTP becomes available

Router	SoGEA	FTTP
Zyxel VMG8623-T650B	Y	Υ
Draytek 2862(n/ac)	Y	Y
Cisco 1117-4P	Υ	Υ

Care Levels

Care Level	Hours of Work	Target Repair	Exclusions	Requirement
	WO IK			
Standard Care	Mon – Fri	40 working hours	Bank Holidays and	Included
	(8:00 AM -		allowable parked time	
	6:00 PM)			
Premium Care	24 x 7	8 clock hours	Allowable parked time	Broadband optional
				Ethernet included



Broadband

Standard Care (Maintenance Class 5): standard care is included with SOGEA. Wavenet will acknowledge and clear the fault within the specified times stated above. This excludes any allowable parked time. Engineer appointments to the site are available 8:00 AM – 6:00 PM Monday to Saturday (excluding regional Public and Bank Holidays).

Premium Care (Maintenance Class 14): Wavenet will clear the fault report within eight clock hours of receipt, excluding any allowable parked time. If diagnostics indicate a fault and an engineer is required on-site, then Openreach will aim to fix any fault within eight clock hours (BTW only) from the start time of the agreed appointment slot. Out of hours, engineering visits to the site may be used to complete a repair if unrestricted access is available.

Ethernet

Premium Care (Maintenance Class 14): Digital Wholesale Solutions will clear the fault report within eight clock hours of receipt, excluding any allowable parked time. If diagnostics indicate a fault and an engineer is required on-site, then Openreach will aim to fix any fault within seven clock hours (BTW only) from the start time of the agreed appointment slot. Out of hours, engineering visits to the site may be used to complete a repair if unrestricted access is available.

DDOS Protection

DDOS (Distributed Denial of Service) is included with Wavenet provided Premium Care packages (Optional for Broadband, included with Ethernet). Learn more about DDoS protection from Wavenet <u>here</u>.



Voice Services

FTTP is a data-only, broadband service whereby it does not include a voice service. Therefore, a separate order must be placed for IP voice and a number retention request if you wish to keep and port the existing telephone number associated with the WLR/MPF line (including any configuration and hardware requirements associated with the voice solution)

It is important to note that the FTTP order and over the top IP solutions (such as voice) are separate order journeys and will require individual management as they are not linked to one another. It is your responsibility to place, track and manage these orders including rejections and exceptions.

If you would like to provision FTTP along with a voice service and retain an existing PSTN number, you can use the following steps. Please note that some downtime is expected about the voice service. We recommend you consult your VoIP provider for further assistance in provisioning a voice service including lead times and expectations:

- 1. Place FTTP order first, with ample lead time for example 15-20 days
- place the IP voice order along with any additional voice features including the number port/transfer request. Importantly, the voice service should coincide with the FTTP order i.e. the voice order should be set to go live on the same date as to when the FTTP order is due to complete
- 3. Keep tracking the orders and manage any exceptions promptly until the completion date
- 4. On completion day, both orders should complete but please note that the number port/transfer may take longer and therefore there may be downtime experienced with the voice service. Please consult your VoIP provider for processes and guidance
- 5. Once the port is completed this will cease the legacy voice service, but you must ensure the circuit is ceased with the provider to prevent further invoicing

Managing exceptions and potential delays on these segregated orders are important in providing a good customer experience.

Wavenet provides a dedicated IP voice solution to enhance our all-IP solutions contact your Account Manager for details.