BUILDING A NEW HOME OR RENOVATING?

Plan your home with connectivity in mind.

By taking internet connectivity into account during the planning stage of your new build, you can help ensure your home is ready to deliver fast, reliable internet in every room from day one.

Retail Service Provider of

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Smart Connectivity Planning for Your New Home: Why It Matters

Just like planning your lighting and power points, it's worth thinking about your internet setup. Details such as Wi-Fi access points, router placement and in-home networking, can make a big difference once you move in.

By planning your connectivity early, you can avoid weak Wi-Fi zones and help ensure your home is ready for all of your devices. Getting it right early, can also help you avoid extra costs and complications associated with re-cabling once construction is complete.

What's the best way to connect my devices?

Wi-Fi, Wired or Both?

- Devices that require **high reliability** (e.g. gaming consoles, streaming TV's or security cameras) should be connected via **Ethernet Cables**.
- Devices that benefit from **mobility or whole home coverage** (e.g. phones, tablets or smart devices (e.g. vacuum cleaners, etc.) can use Wi-Fi. Coverage should be extended to reach every room throughout the home using **mesh Wi-Fi systems or fixed Wi-Fi access points**.

Size of Dwelling

The size and materials of your new build can affect your internet performance; factors such as distance, interference and obstructions can all impact your Wi-Fi signal.

Dwelling size	Dwelling internal material (e.g. walls)	Recommendation
Large (4+ bedrooms or multi-storey)	All material types	**Mesh Wi-Fi system** and in-wall data cabling to support high reliability and high bandwidth devices.
Medium (3-4 bedrooms)	All material types	
Small (2 bedrooms or less)	Brick/concrete	**Mesh system** (with in-wall data cabling where possible)
	Veneer, timber, aluminium/steel	**Wi-Fi router** (and in-wall data cabling to support high reliability and high bandwidth devices would be ideal)

Remember

Your home internet setup is just one part of your overall internet experience. Your experience on the nbn® network can also depend on other factors, such as your nbn access technology and whether you are using the internet during the busy period. If you've tried the hints and tips in this guide and are still unsatisfied with your nbn experience, we recommend speaking with your internet provider to discuss what in-home setup equipment may suit your usage and help troubleshoot the issue.

Top Tips when Building a New Home for Whole-Home Internet Connectivity

Here's how to set your home up for success

- **Use CAT 6 cabling or above:** For a future-ready option, CAT 6 data cable is the recommended minimum standard for new homes.
- **Optimise Wi-Fi router placement:** Place your Wi-Fi router in an open, central location (not in a cupboard or cabinet) to maximise signal strength.
- **Plan for structured cabling:** At a minimum, run a CAT 6 cable from the nbn Connection box to a central point in the home to connect your Wi-Fi Router. From there, you have the option to build a mesh network to increase your Wi-Fi coverage, or run data cabling to other parts of your home for wired connections.
- **Extend Wi-Fi coverage:** Install ceiling- or wall-mounted access points in multiple zones to ensure strong and consistent Wi-Fi coverage throughout the home.
- **Update your Wi-Fi:** Older Wi-Fi equipment can restrict the performance of your home connectivity.

Wi-Fi Generation	Typical maximum Wi-Fi Speeds	Approximate year of release
Wi-Fi 7 (802.11be)	Over 1Gbps	2024
Wi-Fi 6 (802.11ax)	Up to 1Gbps	2019
Wi-Fi 5 (802.11ac)	Up to 500Mbps	2013
Wi Fi 4 (802.11n)	Up to 100Mbps	2009

This table is intended to be a guide only. Device capabilities may vary by internet provider or manufacturer. We recommend speaking with your Internet Service Provider about the performance of your Wi-Fi router and your nbn plan.

Marking Plans and Getting Quotes

Request that your builder marks your preferences on the building plans, so that you can plan your internet setup early.

Power Planning

Ensure power points are near the nbn connection box and your intended Wi-Fi router locations.

Ensure Your Home is Pre-Installed

An nbn pre-installation is the installation of the nbn equipment and nbn fibre cable in an eligible property while it's still being built. This means you don't have to worry about any impact to your landscaping or driveways, or wait around for a technician to visit down the track after moving in, to be connected to the nbn network.*

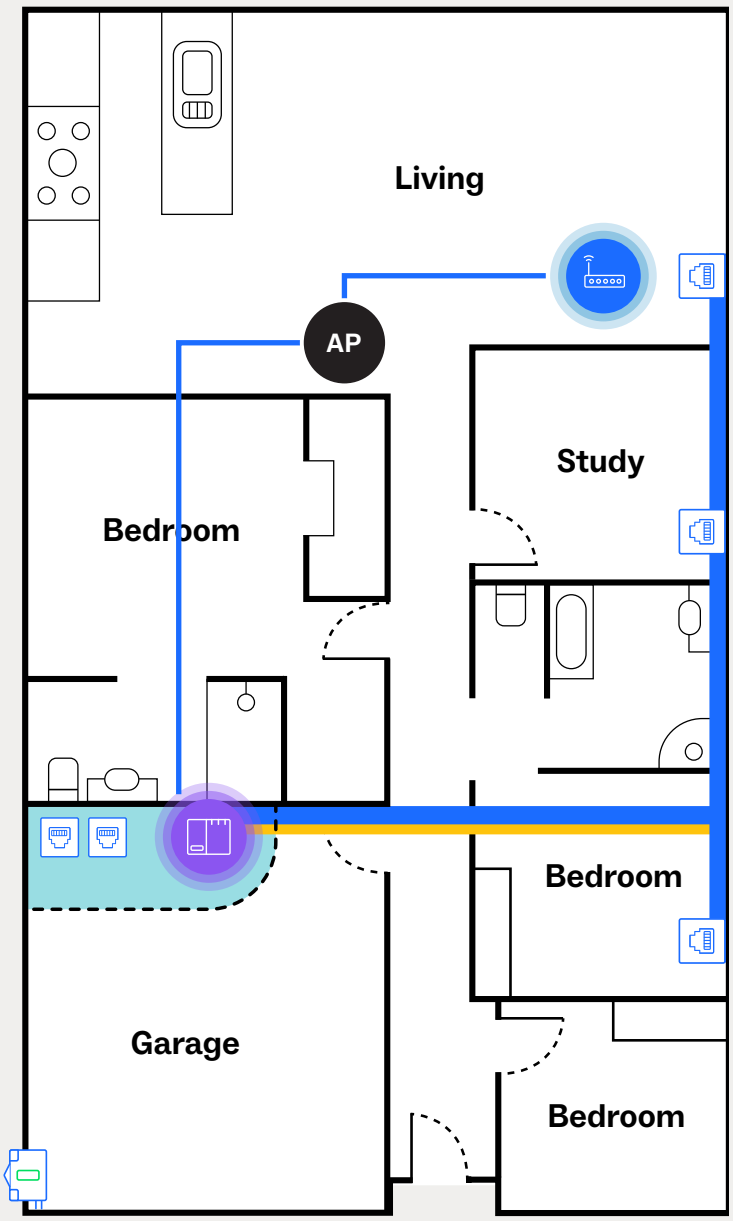
Standard pre-installations are at no additional cost and are carried out by a certified nbn pre-installer once the 'lock-up' phase of the property has been finalised. The pre-installation can be arranged by your builder and will need to take place at least 3 weeks before the estimated home completion date. Conditions and eligibility criteria apply.^

You can find out more here.

*nbn takes reasonable care and skill to ensure your ability to connect to the nbn network after pre-installation of the nbn equipment but cannot guarantee uninterrupted service or immediate connectivity in all situations. Further visits from an nbn certified technician may be required. You should contact your provider for assistance with any connectivity issues and additional equipment that may be required.

^Conditions and eligibility criteria include: (1) A premises is eligible for an nbn pre-installation when it is a house or a townhouse and is part of an nbn New Development stage. (2) The address is eligible to be serviced by the nbn Fibre to the Premises (FTTP) network. (3) The lead in conduit and internal conduit meets nbn specifications. If you aren't sure about a premises' eligibility, check the address using the nbn Pre-installation Request Form.

IN-HOME SETUP FOR NEW DEVELOPMENTS



nbn connection box

Acts as a modem, connects your home network to the internet via your internet provider.

Home Network Centre

A central point where all the network Ethernet cabling from Ethernet wall sockets and other Ethernet points in the home comes together, forming the wired part of the home network. This setup keeps things tidy, simplifies management, and helps deliver reliable connectivity throughout the premise.

Wi-Fi Router

Sends and receives data from the nbn network and shares it amongst your connected devices.

Ethernet Cable (Patch/Short)

Connects devices via the router with a wired connection to the internet.

Ethernet Cabling (In-Wall/ Structured Cabling):

Cables are typically routed through ‘hidden’ conduits within the walls, allowing long Ethernet runs that connect multiple rooms to the Home Network Centre via dedicated wall sockets.

Ethernet Wall Socket

Wall-mounted sockets where individual Ethernet cables connect devices in each room to the wider home network.

AP Access Point

A wireless connection point that improves Wi-Fi coverage by linking back to your wired network. They improve internet access in areas with weak or no signal. For a more stable connection, reduced network congestion and stronger coverage, it’s recommended to link access points (or mesh node points) via Ethernet cables. Think about where you use the internet most and consider placing access points in those areas.

HELPFUL TERMS

- **nbn Pre-Installation:** Getting the fibre cable and connection box installed early during the build of a new home.
- **Conduit:** A plastic or metal pipe that protects and carries cables through walls, ceilings or underground. It makes future upgrades easier and keeps wiring neat and safe.
- **Latency:** The time it takes for data to travel from one place to another. High latency could result in a poorer experience for interactive activities such as video calls.
- **Star Wiring:** A way of wiring where each cable runs from a central hub (like a patch panel) to each room or device.
- **CAT 6 / CAT 6A:** Types of Ethernet cabling, with CAT 6A offering higher speed and better performance.
- **Mesh Network:** A mesh network is a more advanced Wi-Fi network setup, typically beneficial to cover larger areas. It uses a main mesh router and one or more mesh nodes to improve Wi-Fi across your home. These devices work in unison to ensure better Wi-Fi coverage around the home.

Follow this **link** to learn more useful hints and tips.