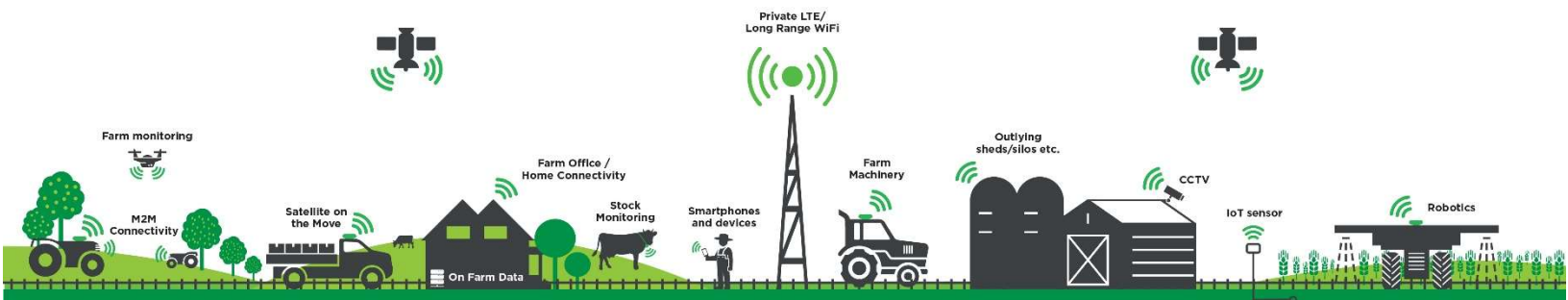




On Farm Connectivity Guide

Your Plain-English Guide to Better Wi-Fi and Internet on Rural Properties

A Connected Farms Mini Book for Australian Farmers



On Farm Connectivity Guide

Your Plain-English Guide to Better Wi-Fi and Internet on Rural Properties

Whether you're chasing a signal from the woolshed, trying to get the security camera working out by the yards, or just fed up with dropping out mid-video-call, this guide series is for you.

No tech degree required as it is simply practical advice written for everyday Australian farmers.

How to Use This Guide

This eBook is broken into eight standalone chapters. Each one tackles a specific challenge you might face on your farm. You can read them in order to build a complete picture or jump straight to the chapter that solves your most pressing problem right now.

Chapter	Topic
1	Spreading Wi-Fi through the house
2	Getting Wi-Fi to a distant shed (up to 5km away)
3	Creating a wide Wi-Fi zone outdoors
4	Taking Wi-Fi where the work is — the Connectivity Trailer
5	Powering remote equipment with solar
6	Adding more ports to your network
7	Installing it yourself — safely
8	Keeping your network secure

Chapter 1: Spreading Wi-Fi Through the House

The Problem Most Farmers Know Too Well

You've got NBN or Starlink connected to the house, but the signal falls apart the moment you walk down the hallway, step into the kitchen, or try to use your phone from the sleep-out. The modem sits in one corner, and everything more than a few rooms away feels like it's in another world.

This is one of the most common connectivity frustrations on Australian farms and the fix is simpler (and cheaper) than most people think.

Why Your Single Router Struggles

A standard modem-router (that's the box your internet provider gives you, or even a decent store-bought one), well it broadcasts Wi-Fi in all directions from a single point. Walls, especially older farmhouse walls built with brick, stone, timber frame with insulation, or metal roofing, soak up or reflect that signal. By the time it's reached the far end of the house, there's often not much left.

The answer isn't a more powerful router in the same spot. It's getting the signal *moving through* the house by using multiple devices working together. That's what a **Wi-Fi mesh system** does.

What Is a Mesh System?

Think of a mesh system as a team rather than a solo player. Instead of one device trying to cover everything, you place two, three, or more small units (called *nodes* or *points*) around the house. They all talk to each other and share the same network name. Your phone or tablet automatically hands off to the nearest node as you move around so you never have to manually switch networks.

A good consumer mesh system like the **TP-Link Deco** range is designed to be set up by everyday people without a tech background. Most systems use a simple app to walk you through the setup step by step.

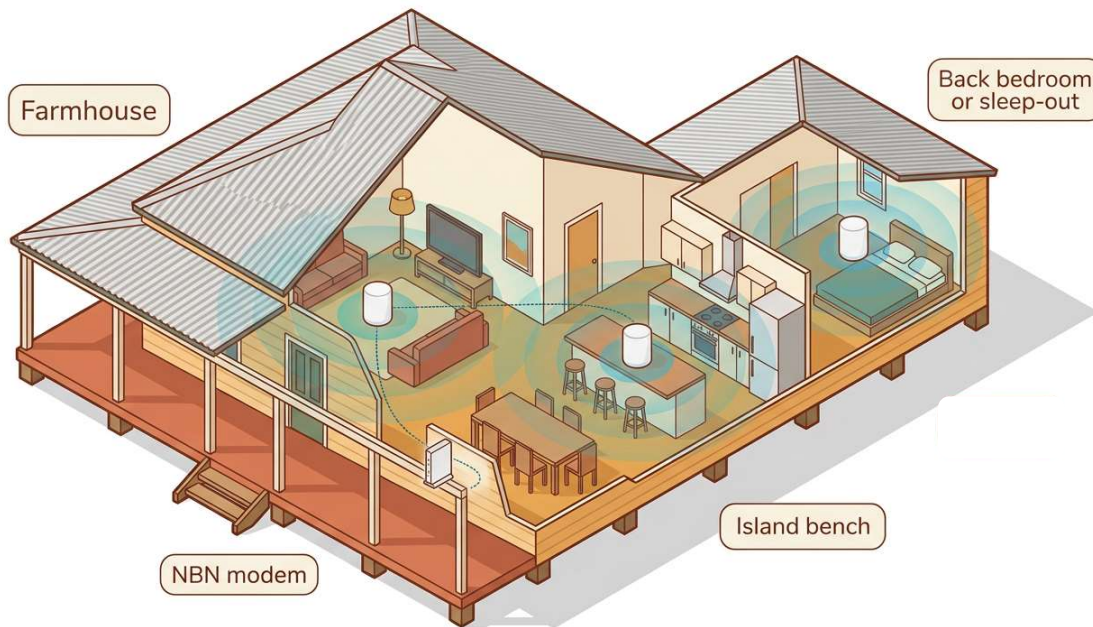


Diagram 1.1 — A mesh system uses multiple nodes to cover the whole house with one seamless network.

Choosing the Right System

For most farmhouses, a two or three-node TP-Link Deco system will be enough. When shopping, look for:

- **Wi-Fi 6 support** — newer standard, faster speeds, handles more devices at once
- **Ethernet backhaul** — if you can run a cable between nodes, the system is faster and more reliable than relying on wireless links between nodes
- **App-based management** — makes setup and troubleshooting easy from your phone
- **Enough coverage** — check the square metreage rating on the box; old farmhouses with thick walls may need to go one size up

Practical Tips for Farmhouses

Place nodes strategically, not randomly. Midway between where you need coverage is usually the sweet spot not shoved in a corner or hidden in a cupboard.

Wired is always better than wireless. If you can run even a short Ethernet cable between the main modem and the first Deco node, or between nodes, do it. Speed and reliability both improve significantly.

Don't put nodes near microwaves or cordless phones. These appliances can interfere with the 2.4GHz Wi-Fi band that mesh systems also use.

Check the number of Ethernet ports. If you have a desktop computer, smart TV, or security recorder that needs a wired connection, make sure your chosen node has enough ports. Some mesh nodes only have one or two. (If you run out of ports, Chapter 5 has the answer.)

What to Expect

A well-placed two or three-node mesh system should give you solid, usable Wi-Fi in every room of a standard-sized farmhouse. Video calls, streaming, and smart farm devices will all benefit. Setup usually takes less than 30 minutes, and the TP-Link Deco app provides a clear picture of what's connected and how everything is performing.

***Coming up next:** Once the house is sorted, the question most farmers ask is: "Can I get that same internet out to my shed?" Chapter 2 shows you how — up to 5 kilometers away.*

Chapter 2: Getting Wi-Fi to a Distant Shed or Building

You've Got Internet at the House — Now What About the Shed?

Running a cable underground to a shed a kilometre or two away is a big, expensive job — trenching, conduit, the works. And if the shed is 3 or 5km away? Forget it. For most small farms and hobby properties, a **wireless point-to-point bridge** is the practical answer: it sends your internet connection across the paddock using a focused radio beam, invisible to the naked eye but rock solid in the right conditions.

The **Connected Farms Wi-Fi Expansion Point-to-Point 5km Pack** is purpose-built for exactly this job. It includes everything you need to extend your existing internet connection to a second building up to 5km away with no additional data plan required.

How It Works

The concept is straightforward. Think of it like a pair of invisible binoculars one end sends, the other receives, and the signal travels in a tight, focused beam between them.

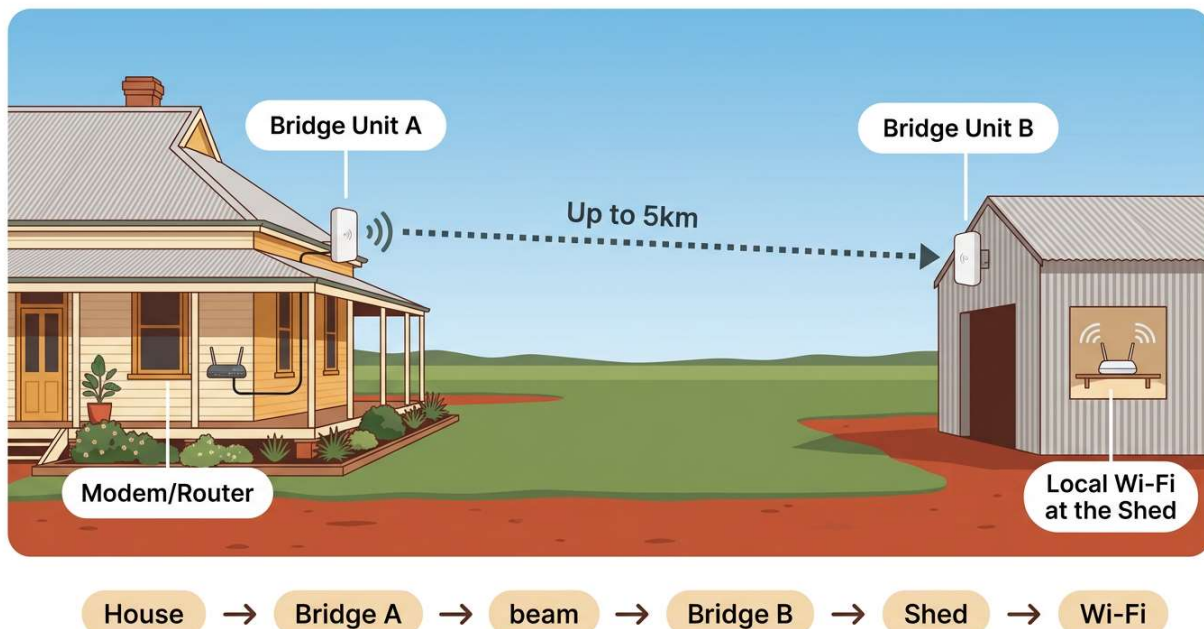


Diagram 2.1 — Bridge Unit A at the house sends internet to Bridge Unit B at the shed. The mesh router at the shed creates local Wi-Fi at that end.

What's in the Pack

The Connected Farms 5km Pack includes:

- **2x 5km Wireless Bridge units** — one for each end
- **1x Wi-Fi 6 Mesh Router** — plugs in at the shed to create local Wi-Fi
- **2x 10m outdoor UV-stabilised pre-made patch cables** — ready to plug in, no crimping needed

The bridge units are rated IP54 for dust and water resistance, so they're built for outdoor Australian conditions. Setup is managed through the Cloud app, and most users are up and running in under an hour.

The Golden Rule: Clear Line of Sight

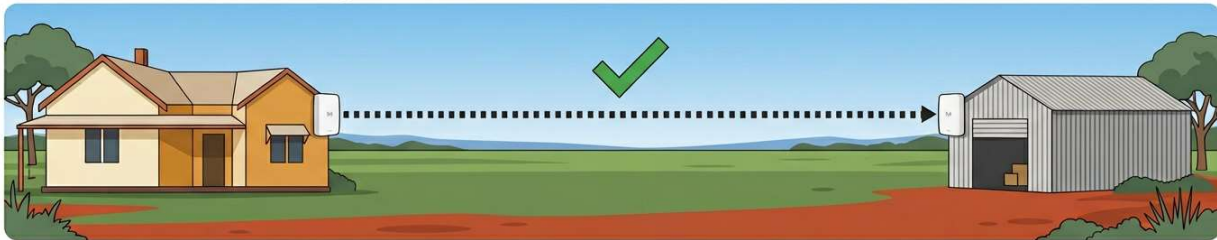
This is the single most important thing to understand about point-to-point wireless links — and where things go wrong if you skip this step.

The beam between the two bridge units must have a clear, unobstructed path. That means:

- No trees in the way (even a single large tree can block or severely degrade the signal)
- No buildings or sheds between the two points
- No hills or ridges cutting across the path
- No heavy foliage as even leaves in the path count

Australian farming connectivity guide

TOP PANEL: Clear Line of Sight — Good



BOTTOM PANEL: Blocked Line of Sight — Bad

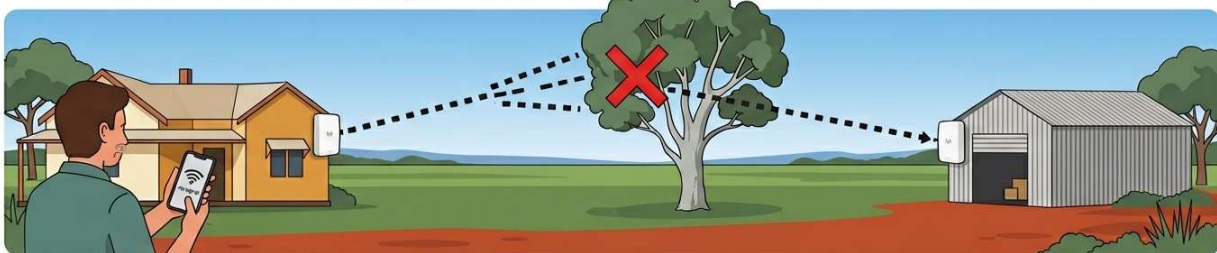


Diagram 2.2 — Clear line of sight gives a strong, reliable signal. Any obstruction — trees, hills, or buildings — will degrade or block it.

Before you buy, walk the path. Stand at the house and look towards the shed. Can you see the shed clearly? If you can see it with no obstructions, a wireless link will likely work well. If there are trees, fences, or terrain changes in the way, you'll need to plan around them either by mounting the bridge units higher (on a pole or rooftop) to clear the obstacle, or by choosing a different location.

Power Requirements

Both bridge units need standard mains power (a regular 3-pin powerpoint). If the shed doesn't have power, don't worry as Chapter 5 covers a solar solution specifically designed for this situation.

What You Can Do With It

Once the link is up, the shed effectively has the same internet connection as the house. That means:

- Web browsing and email for farm staff working in the shed
- Security cameras streaming back to a recorder or the cloud
- Farm management software and data apps

- Video calls from the shed office
- Smart sensors and IoT devices

The bridge supports up to 20 x 2MP security cameras at 5km range, and up to 45 cameras at 3km — more than enough for a working shed setup.

Compatible Internet Connections

The pack works with whatever you already have at the house: Starlink, NBN Fixed Wireless, NBN Sky Muster satellite, fibre, or standard ADSL broadband. No extra plans, no new subscriptions.

***Up next:** What if you need Wi-Fi coverage across a wider area — not just to a single shed, but across your yards, workshop, and paddock at once? Chapter 3 has a different solution for that.*

Chapter 3: Creating a Wide Wi-Fi Zone Outdoors

When You Need Coverage Everywhere, Not Just Point A to Point B

Sometimes the challenge isn't getting internet to a specific building it's having Wi-Fi available across a wide-open area. Think of yards where you're moving livestock and need to check the ear tag app. Or a workshop area with multiple buildings spread around. Or a loading ramp where you want to use your tablet while you work.

For these situations, a **radial coverage access point** is the right tool. Instead of sending a focused beam from one point to another, it broadcasts Wi-Fi in all directions creating a 360-degree "bubble" of coverage around a central location.

The **Connected Farms Premium Wi-Fi Expansion Radial Coverage 12 Hectares Pack** is designed for this job, providing coverage of up to 12 hectares which is roughly a 200-metre radius in all directions from the mounting point.

How It Works

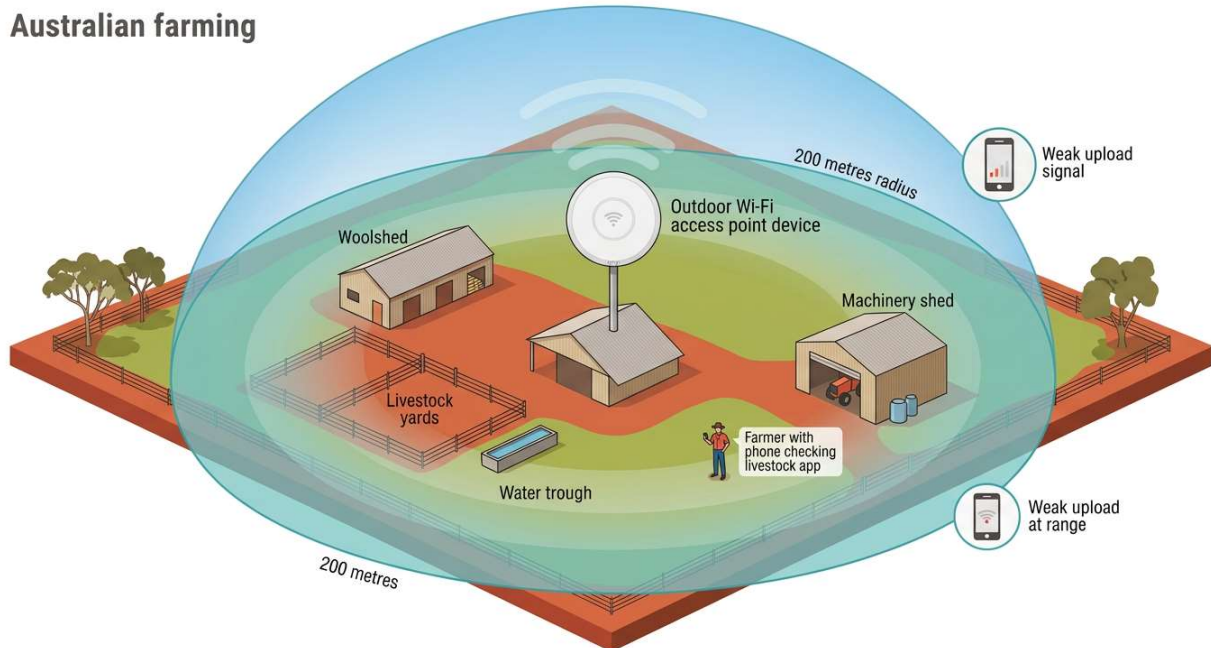


Diagram 3.1 — The radial access point creates a circular "bubble" of Wi-Fi coverage in all directions, covering farm yards, sheds, and open areas within range.

The access point connects to your existing internet using the included cables you run a cable from your modem or router to wherever you mount the device. From there, it creates a standalone Wi-Fi network that any phone, tablet, camera, or other device within range can join.

What's in the Pack

- **1x 12-hectare wireless outdoor access point** — weather-rated, designed for outdoor installation
- **1x 1-port passive PoE adapter** — powers the access point through the network cable (no separate power cable needed at the pole)
- **1m network patch lead**
- **10m outdoor UV-stabilised pre-made patch cable**

Two Important Limitations to Understand

1. Line of Sight Still Matters

Even though this device covers a wide area rather than a single point, the signal still travels in straight lines from the access point to your device. Obstacles between the access point and your phone — whether that's a shed wall, a row of trees, or a hill will reduce or block the signal just as they would with any Wi-Fi system.

Mount the access point as high as practical — on a shed roof, a dedicated pole, or on top of a water tank structure. The higher it is, the fewer obstacles there will be between it and your devices out in the open.

2. Your Phone Has Its Own Limits

This is one that catches people by surprise, and it's worth understanding clearly.

Your phone receives Wi-Fi signals very well and a good outdoor access point can reach a device from 150–200 metres in open conditions. **But your phone also has to send signals back to the access point.** And the Wi-Fi radio in a smartphone is deliberately low-powered to save battery.

The practical result: at longer distances, you might find you can *receive* data fine but uploads are slow or inconsistent. Video calls and streaming (heavy uploads) will work reliably within about 80–100 metres. Downloading data (like checking emails or loading a webpage) will work at greater distances.

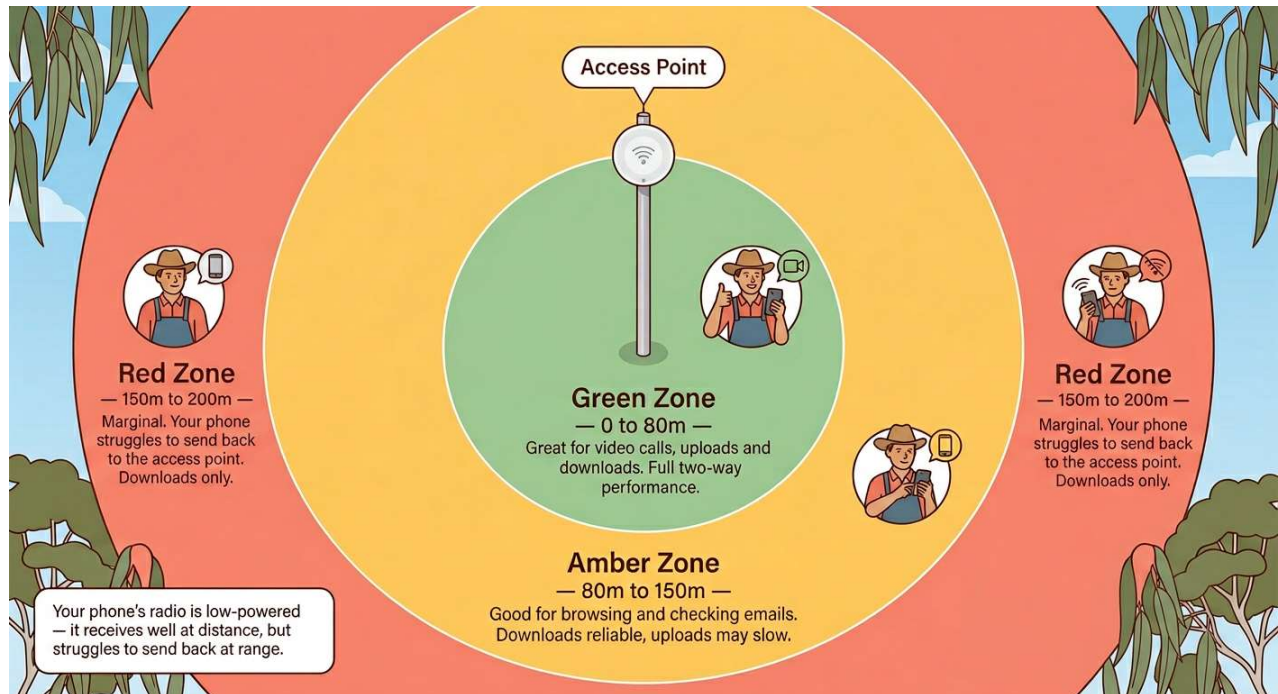


Diagram 3.2 — Smartphone upload power limits mean practical performance drops before the access point's maximum range is reached.

Best Uses for This Setup

- **Yards and loading areas** — use your phone for livestock management apps while you work
- **Workshop precincts** — multiple buildings and work areas all covered from one central point
- **Security cameras** — position cameras anywhere within the coverage zone
- **Water tanks and pump stations** — connect monitoring devices that send small data packets (works well even at range)
- **Machinery sheds** — connect devices that need to sync data when the tractor or header is parked

Mounting Location Matters

The single biggest factor in getting the most out of a radial access point is where you put it. Aim for:

- **Central to the area you want to cover** — not at one edge
- **As high as possible** — a 6-metre pole is ideal; even a shed roof makes a big difference
- **Away from metal structures** that might reflect or block the signal
- **With a cable run back** to your internet source (modem or router)

***Next:** What if you need Wi-Fi that moves with the work? Chapter 4 introduces the Connected Farms Connectivity Trailer; towable, solar-powered Wi-Fi for wherever the day takes you.*

Chapter 4: Taking Wi-Fi Where the Work Is

Fixed Wi-Fi Is Great — Until the Work Moves

The outdoor radial access point in Chapter 3 is the right answer for giving a permanent Wi-Fi zone over your yards, woolshed, or machinery area. But farming doesn't always happen in the same spot. Mustering moves across paddocks. Lamb marking happens out in the paddock, not at the yards. Shearing teams work across multiple locations across a season. Fencing crews push further out week by week.

For these situations, a permanently mounted access point isn't the answer because by the time you've set it up, the work has moved on. What you need is Wi-Fi that goes where you go.

That's exactly what the **Connected Farms Connectivity Trailer** was built for.

What Is the Connectivity Trailer?

The Connectivity Trailer is a purpose-built, towable Wi-Fi unit designed specifically for Australian farming conditions. It mounts a high-powered outdoor radial access point on a telescoping mast, powered entirely by an onboard solar and battery system — no mains power, no fixed cables, no infrastructure required.

You tow it to where the work is, raise the mast, switch it on, and you have a self-contained Wi-Fi zone up and running within minutes. Because it runs on solar and battery, it operates completely off-grid — no fuel costs, no generator noise, and no need to source power in remote paddocks.

The trailer supports Wi-Fi, LTE, or custom antenna configurations and is designed to integrate with modern farm systems, sensors, and automation platforms.

Diagram 4.1 — The Connectivity Trailer tows to wherever the day's work is. Raise the mast, and you have instant off-grid Wi-Fi coverage over the whole work area.

Line of Sight Still Applies

Just like the fixed radial access point in Chapter 3, the trailer unit sends and receives signals in straight lines. The big advantage of the trailer, however, is that **you can position it to get the best possible line of sight** to where you and your team are working.

On the job, look for the highest, most open point in the work area. Position the trailer there, raise the mast to its full height, and you maximise coverage for everyone on the ground. The same smartphone uplink limitation from Chapter 3 also applies — at distances beyond about 80–100 metres, uploading (video calls, sending photos, submitting records) will become less reliable. For most farm work tasks this is well within a workable range.

Safety reminder: Always lower the mast fully before towing to another location. A raised mast near power lines is a serious hazard.

Where the Trailer Earns Its Keep

Situation	Why the Trailer Works
Mustering	Tow to the paddock before the muster; the whole team stays connected
Lamb marking and weaning	Temporary coverage right where you're working
Shearing	Move between sheds across the season without reinstalling anything
Remote fencing crews	Workers can submit timesheets, look up diagrams, make calls
Emergency response	Flood or storm coordination, remote access for emergency services
Farm open days and field days	Instant Wi-Fi coverage for visitors and demonstrations
Temporary monitoring points	Park it near a new water point or feed area for a week

What It Connects Back To

The trailer doesn't need your existing internet connection as it creates one from scratch using its onboard LEO satellite dish.. A typical full-day paddock setup would be:

1. Take the trailer to where connectivity is needed – say stock yards, lambing area or motherbin at harvest etc
2. Set it up on its jacks, extend the mast, switch it on

3. The trailer connects to the Starlink network (can take 10 to 15 mins but most often just a couple)
4. The on-board Wi-Fi service starts
5. Follow the link to find out more about the **Connected Farms Connectivity Trailer**.

Up next: *What if the remote location you want to connect has no mains power at all?*

Chapter 5 covers the solar kit solution for powering fixed equipment completely off-grid.

Chapter 5: Powering Remote Equipment with Solar

No Power? No Problem.

If you've been nodding along to Chapters 1, 2 and 3 but thinking "*that's all very well, but my shed doesn't have power*" then this chapter is for you.

It's very common on Australian farms for remote sheds, woolsheds, pump stations, and outbuildings to have no mains electricity connected. Running power out to them involves trenching, licensed electrical work, and real cost. But the good news is that the Wi-Fi equipment involved in a point-to-point link, or a radial access point, uses very little power. A modest solar panel and battery system can run it reliably, day and night, through most Australian weather conditions.

Connected Farms offers a **Solar Kit** specifically designed to power their Wi-Fi expansion equipment, meaning you can set up your connection point even where there's no mains power at all.

What the Solar Kit Powers

At the remote end of a point-to-point link (see Chapter 2), you typically have two pieces of equipment that need power:

1. **The wireless bridge unit** — receives the signal from the house end
2. **The local Wi-Fi mesh router** — creates usable Wi-Fi at the shed

The solar kit is designed to keep both running reliably. Because these devices are relatively low-power (typical Wi-Fi access points and small bridge units draw well under 30W combined), even a modest solar setup can sustain them through several days of cloud cover if the battery is properly sized.

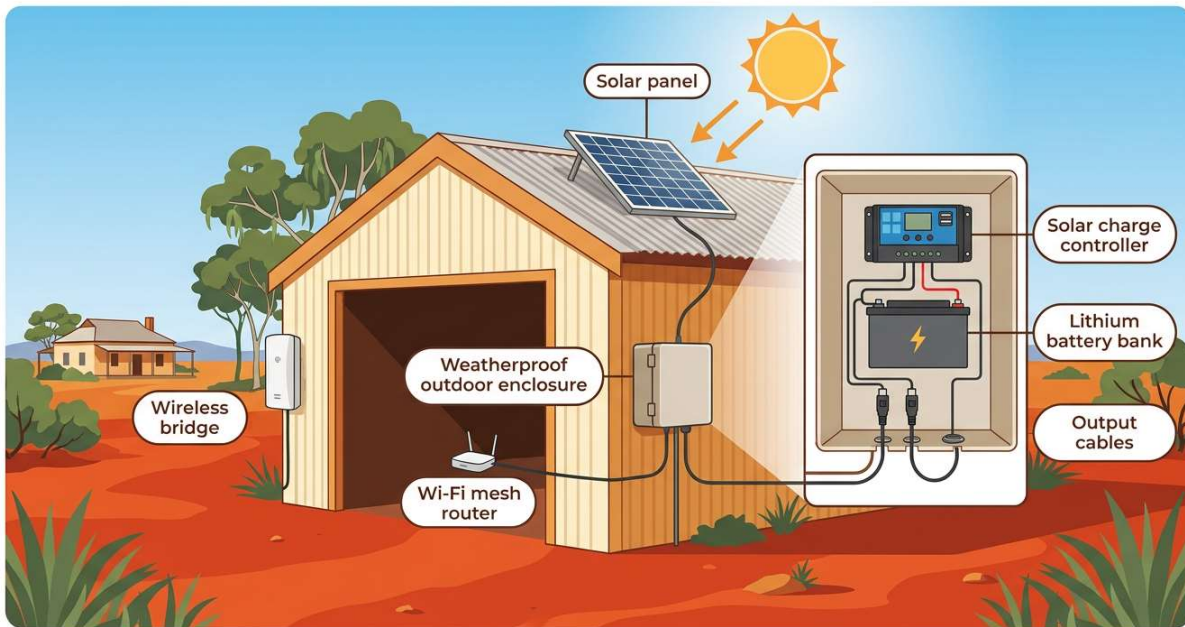


Diagram 5.1 — A simple solar system at the remote end powers both the wireless bridge and the local Wi-Fi router, with no mains power required.

Remote Locations This Works For

This solution is particularly well suited to:

- **Water tanks** — monitor water levels remotely, connect level sensors
- **Woolsheds** — seasonal use, rarely worth the cost of running mains power
- **Outbuildings and hay sheds** — security cameras, access monitoring
- **Yards** — livestock management devices, cameras for remote checking
- **Monitoring points** — weather stations, soil sensors, pump telemetry
- **Remote gates** — intercom and camera systems

Things to Consider When Planning a Solar Setup

Sun hours matter. Most of Australia gets excellent solar resources, but the system should be sized for the *worst* time of year at your location typically winter, when days are shorter and the panel angle relative to the sun is lower. A properly sized battery bank will carry the equipment through several consecutive cloudy days without issue.

Battery type. Modern lithium (LiFePO₄) batteries are lighter, longer-lived, and handle partial charge cycles better than traditional lead-acid batteries. They cost more upfront but last significantly longer — making them the better choice for a permanent installation.

Weatherproofing the enclosure. The battery, charge controller, and any wiring connections should be in a sealed or at least well-protected enclosure. Australian outback and coastal weather can be brutal on electronics. A proper IP-rated outdoor enclosure is worth the investment.

Cable management. Run cables through conduit where they're exposed to sunlight or physical wear. UV exposure degrades unprotected cables surprisingly quickly.

How to Get the Right Kit

Connected Farms' Solar Kit is matched to work with their Wi-Fi expansion packs, so you don't have to worry about whether the solar output matches what the gear needs. This is the simplest and safest approach for most farmers: buy the matched kit and follow the included instructions, rather than trying to piece together components from different suppliers.

Contact Connected Farms directly if you're unsure whether your specific setup needs the solar kit, or if you have an unusual power situation (very limited sun hours, very long cable runs, etc.).

Next up: *You've got your internet set up and expanding, but your modem is running out of ports. Chapter 6 explains the simple solution.*

Chapter 6: When You Need More Ports — Adding a Network Switch

Running Out of Sockets

Here's a situation that sneaks up on a lot of people. You've got your NBN modem or Starlink router, and it only has three or four Ethernet (network cable) ports on the back. By the time you've plugged in your point-to-point bridge, your desktop computer, and your security camera recorder, you've got nothing left for the next device.

The solution is a **network switch** which is an inexpensive piece of equipment that multiplies the number of available ports on your network. Think of it like a power board for network cables.

The Connected Farms 5-Port Managed PoE+ Switch

The **Connected Farms 5-Port Managed PoE+ Switch** (RG-ES205GC-P) is a practical, farm-appropriate switch that does more than just add ports as it also provides **Power over Ethernet (PoE)**, which is particularly useful on farms.

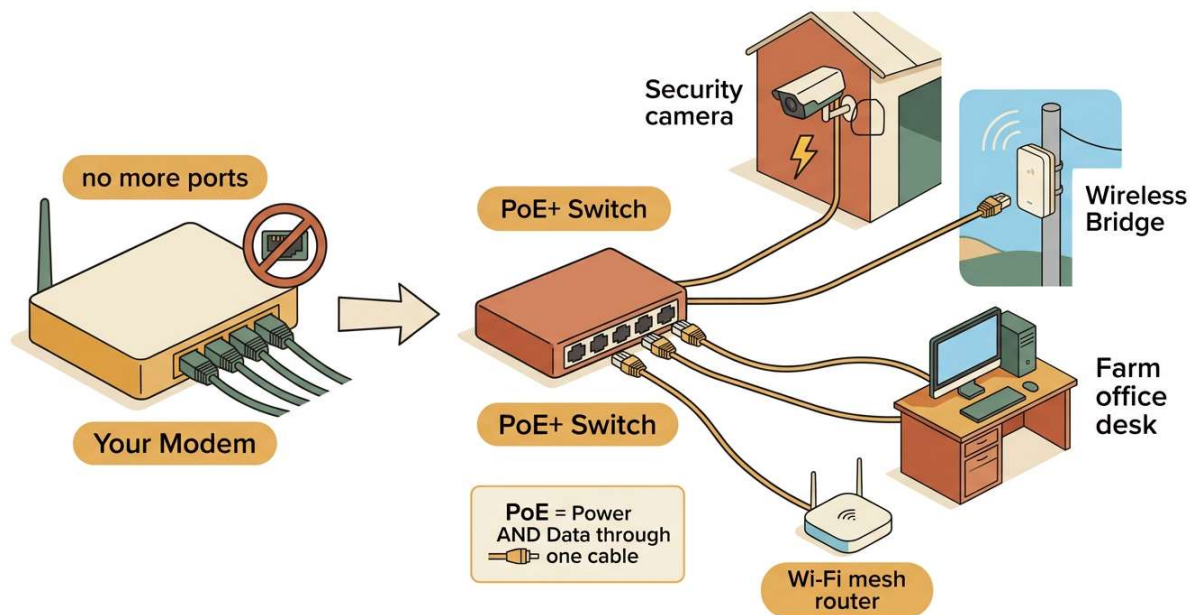


Diagram 6.1 — A switch expands the number of network ports available. A PoE switch also delivers power through the cable to compatible devices.

What Is PoE (Power over Ethernet)?

Standard network cables carry data. PoE cables carry **both data and power** at the same time. This is extremely handy for farm setups because it means:

- Security cameras can be powered through the same cable that carries the video feed no separate power cable needed at the camera
- Wireless access points mounted on poles or shed walls can be powered without running a separate power cable
- Bridge units can be PoE-powered, reducing the cabling complexity at both ends

The Connected Farms switch supports the **IEEE 802.3at (PoE+)** standard with a maximum PoE budget of 54W across all ports — enough to power several cameras and access points simultaneously.

Key Features of This Switch

Feature	Detail
Ports	5 x Gigabit Ethernet
PoE standard	IEEE 802.3at / 802.3af
Total PoE power budget	54W
Loop prevention	Automatic — prevents network disruption
Noise	Fanless — completely silent operation
Physical size	Compact: 148 x 78 x 26mm
Warranty	3 years
MTBF	200,000+ hours

When Do You Actually Need a Switch?

You need a switch when:

- Your modem/router has run out of available Ethernet ports
- You want to add security cameras, an NVR recorder, or additional computers
- You want the convenience of powering cameras or access points through the cable rather than running separate power cables
- You're setting up a more complex network with multiple connected devices

If you only have one or two wired devices connected (plus your Wi-Fi), you likely don't need a switch yet. But for farms with security systems, fixed computers, NAS storage, or multiple access points, a switch quickly becomes essential.

Nearly there: *The gear is sorted. Now it's time to talk about how to actually put it all together — safely. Chapter 7 covers DIY installation, what you can realistically do yourself, and when to call in a professional.*

Chapter 7: Installing It Yourself — Safely

Most of This Gear Is DIY-Friendly — But Safety Comes First

One of the genuine benefits of modern farm networking equipment is that most of it is genuinely designed for self-installation. The days of needing a network technician to configure every device are largely behind us. Connected Farms' kits, for example, are designed to be set up by everyday people using a smartphone app, and the company says most installations take under an hour.

That said, *some* parts of the job involve heights, electrical work, and outdoor conditions that demand more caution than setting up a mesh node in your living room. This chapter covers what you can confidently do yourself, and what you should seriously think about handing to a professional.

What's Usually Fine to DIY

For most farmers with basic handyman skills, the following tasks are well within reach:

- **Indoor equipment setup** — plugging in mesh nodes, configuring via an app, running short indoor cables
- **Mounting equipment at ground level or on low structures** — attaching a bridge unit to a fence post or the side of a shed at head height
- **Cable runs inside a shed or building** — running cable along walls with appropriate cable clips, through conduit
- **Basic app-based configuration** — the Ruijie Cloud app and similar tools are genuinely intuitive

Where to Be Careful: Working at Heights

Here's where the risk profile changes significantly. Getting a clear line of sight for a point-to-point wireless link (Chapter 2) or mounting a radial access point high for maximum coverage (Chapter 3) often means going up as in onto a roof, up a ladder with tools, or working at height on a pole.

Working at heights is one of the most common causes of serious injury in rural Australia. This is not a reason to be afraid of the job, but it is a reason to think it through carefully before you start.

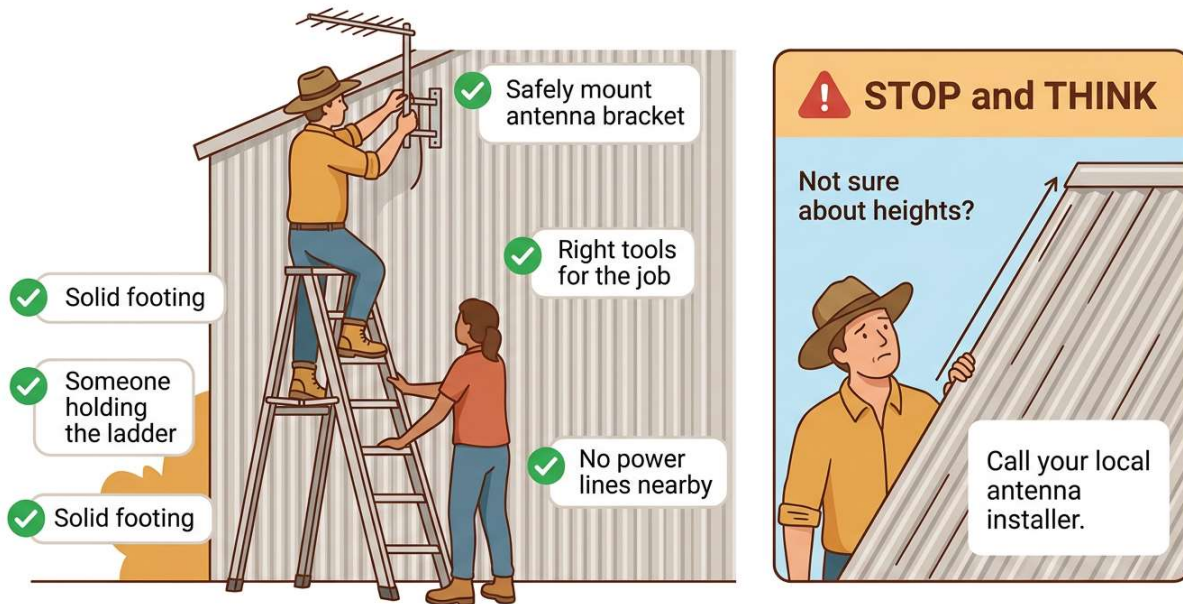


Diagram 7.1 — Run through a safety check before any work at height. If in doubt, call your local antenna installer or electrician.

Use the Right Mounting Hardware

One of the most common DIY mistakes is improvising on mounts. A wireless bridge or access point that falls off its mount during a storm isn't just wasted money it could also damage equipment or injure someone below.

Always use proper antenna/equipment mounting hardware:

- **J-mounts or wall mounts** rated for outdoor use and for the weight of your equipment
- **Stainless steel bolts and washers** — standard galvanised fasteners rust quickly in outdoor conditions
- **UV-stabilised cable ties** for securing cable runs (regular plastic cable ties become brittle and snap within months in direct sunlight)
- **Weatherproof conduit and fittings** for any cable runs that will be exposed to the elements

Most hardware stores and electrical suppliers carry appropriate mounts. The Connected Farms team can also advise on what's needed for their specific equipment.

When to Call a Professional

Be honest with yourself about your experience. Consider calling your local **antenna installer** or **licensed electrician** if:

- The mounting location requires roof work on a pitched or slippery surface
- You need to work at heights greater than 3 metres
- Any electrical wiring is involved (connecting a new powerpoint, running new power cable)
- You're unsure about structural fixing (attaching to roofing iron, fascia boards, or masonry)
- You've never done this type of work before

An experienced antenna installer will typically know exactly how to handle this type of equipment, and the cost of a professional installation is often less than you'd expect often only a few hundred dollars for a straightforward job, and money very well spent compared to a fall or a failed installation.

Practical Installation Tips

Plan the cable run before you buy cables. Measure the actual path the cable will take not the straight-line distance. A cable that has to go around a door frame, down a wall, and under a floor will need significantly more length than the straight distance suggests. Add 20% extra for comfort.

Label everything. Use cable labels or even masking tape and a marker on each cable and connection. Your future self will thank you when you're troubleshooting at 8pm.

Test before you fix permanently. Set up and test the wireless link on the ground or at a temporary height before drilling holes and making permanent mounts. Confirm the link is working and stable before you commit to the final installation position.

Secure cables against physical damage. Cable running along the outside of buildings should be in conduit or secured every 500mm. Pay particular attention to where cables enter buildings use a proper cable gland or weatherproof entry point.

***Last chapter:** You've got your network up and running. Now it's time to make sure it's secure. Chapter 8 covers simple, practical network security for the family farm.*

Chapter 8: Keeping Your Farm Network Secure

Security Isn't Just for Big Businesses

When people think about network security, they tend to picture big corporations protecting sensitive databases. But your home and farm network deserves the same basic protection perhaps more so, because it's connected to your banking, your farm management software, your security cameras, and quite possibly smart gates, water systems, or irrigation controls.

The good news is that basic network security doesn't require a tech background. It mostly comes down to good habits and a few important settings. This chapter covers everything a typical small farm or hobby property owner needs to know.

Start with Strong Passwords

The single most important thing you can do is use strong, unique passwords. This applies in two distinct places:

1. Your Wi-Fi Network Password

This is the password people type when they join your Wi-Fi network. A weak or obvious password means anyone within range, so a visitor, a neighbour, or someone parked on the road can join your network. Once they're on, they can see other devices on the network, slow down your connection, or worse.

A strong Wi-Fi password:

- Is at least 12 characters long
- Mixes letters, numbers, and symbols
- Is *not* your address, your name, or "password123"
- Is something you write down and keep safely (not something you tell everyone)

2. Your Router/Modem Admin Password

Your modem or router has a separate admin password the one you use to log into its settings page. This is different from your Wi-Fi password. Every device ships from the factory with a default admin password (often something like "admin" or "1234"), and these defaults are publicly known.

Change the admin password the day you set up your router. Use something completely different from your Wi-Fi password.

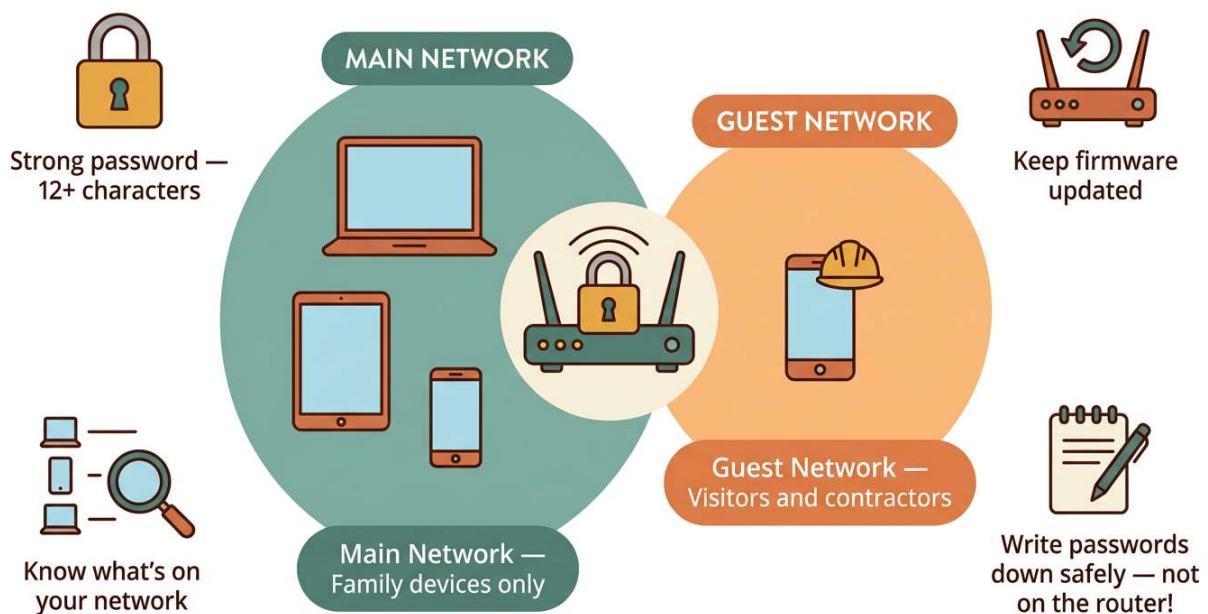


Diagram 8.1 — These are two separate passwords. Both need to be strong and both should be changed from their defaults. A guest network keeps visitors separate from your main devices.

Set Up a Guest Network

Most modern routers and mesh systems allow you to create a separate **Guest Wi-Fi network** a second network name and password that gives visitors internet access without letting them see or access your main network devices.

This is really useful on farms. When contractors, agronomists, shearers, or workers come through and need Wi-Fi access, give them the guest password. They get internet access, but they can't see your cameras, your NAS, your computers, or any other devices on the main network.

Set a separate guest password and change it regularly — especially after a work crew leaves.

Keep Your Devices Updated

Router firmware (the software that runs inside your router) gets updated by manufacturers to fix security vulnerabilities. Most modern routers can be set to update automatically turn this on if the option is available.

The same applies to:

- **Your modem/router** — check for firmware updates every few months
- **Mesh network nodes** — most update automatically via their app
- **Connected Farms equipment** — the Cloud app manages updates for their devices
- **Smart devices connected to your network** — cameras, smart switches, sensors

An unpatched device with known vulnerabilities is an open door. Updates close those doors.

Think About What's Connected to Your Network

On a modern farm, the list of network-connected devices can grow surprisingly long: smartphones, tablets, laptops, smart TVs, security cameras, NVRs, Starlink equipment, smart irrigation controllers, weather stations, and more.

Take a few minutes to log into your router's admin page and look at the device list. If you see something you don't recognise, investigate it. Your router may allow you to block unknown devices.

Consider separating your IoT (Internet of Things) devices so, sensors, cameras, smart plugs onto a separate network segment or VLAN if your router supports it. This way, if a camera or sensor is compromised, it can't easily "talk" to your computers or other important devices.

A Simple Security Checklist

Farm Network Security Checklist: Strong Wi-Fi password (12+ characters) · Router admin password changed from factory default · Guest network set up for visitors · Router firmware up to date · Device list reviewed regularly · Passwords written down and stored safely (not stuck to the router) · Wi-Fi network name doesn't reveal your farm address

Diagram 7.2 — Work through this checklist to make sure your farm network has the basics covered.

Don't Use the Same Password Everywhere

If you use the same password for your Wi-Fi as you do for your email, your farm software, or your online banking, a single breach puts everything at risk. Use different passwords for different things. A **password manager** app (like Bitwarden, which is free, or 1Password) can remember them all for you which means you only need to remember one master password.

Final Thought

Good network security doesn't have to be complicated. The basics of strong passwords, a guest network, keeping things updated, and knowing what's on your network will protect the vast majority of farms from the vast majority of threats. Start with those, and you're already ahead of most.

Putting It All Together

Your Farm Connectivity Road Map

The eight chapters in this guide are designed to be used as a journey. Most farms won't need everything at once but it helps to understand the full picture so you can plan and build your network one step at a time.

Farming connectivity guide

Full-property network

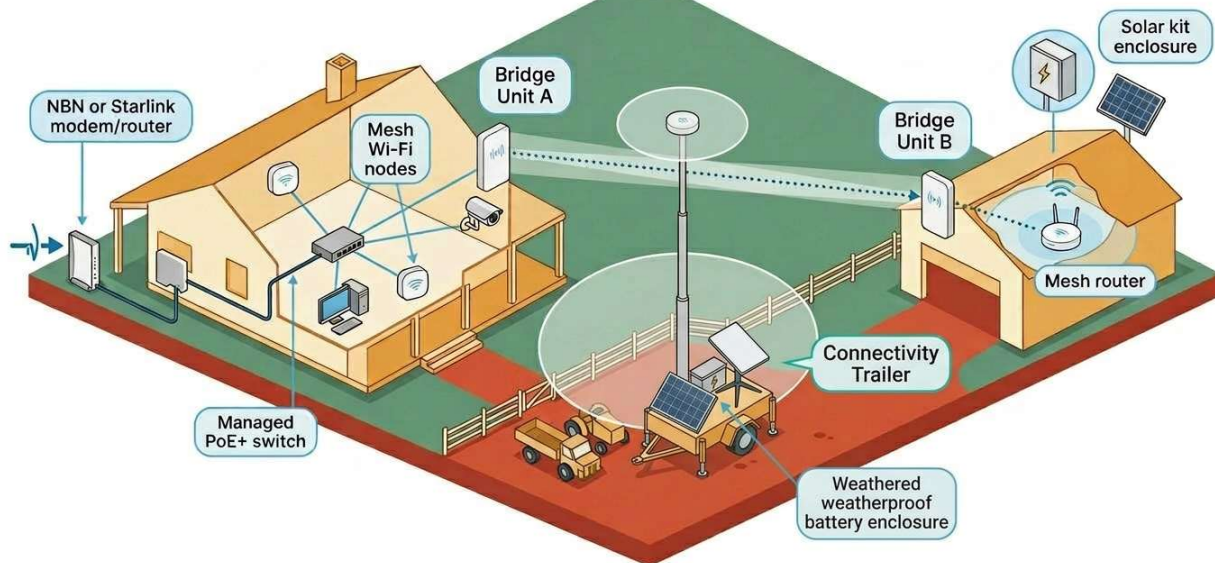


Diagram 9.1 — How all the pieces in this guide fit together on a typical small Australian farm (clearly not to scale – the yard with trailer in it would be many Km away from the house etc).

Next Steps

If you'd like to talk through your specific property and situation, Connected Farms are an Australian company who specialise in exactly this:

- **Website:**
connectedfarms.co
- **Shop:**
shopconnectedfarms.au
- **Email:**
info@connectedfarms.co
- **Phone:** 1800 497 148

Their team can help you work out which combination of products suits your property, your terrain, and your budget without any obligation.

This mini book was produced by the Connected Farms team. Product specifications and pricing are current as at the time of publication and may change. Always check the Connected Farms website for the latest information.

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