

WILD DOG EXCLUSION FENCING: A PRACTICAL GUIDE FOR WOOLGROWERS

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THE PURPOSE OF THIS GUIDE

Well designed, built and maintained wild dog exclusion fencing (exclusion fencing) can provide an effective first line of defence against wild dogs and other pest animals.

This guide gives an overview of many types of exclusion fences that are being used successfully by Australian woolgrowers to protect their sheep, and also control total grazing pressure.

It has been put together with the help of woolgrowers, fencing contractors, extension officers and representatives from fencing supply companies in Western Australia, Queensland, Victoria and New South Wales, and aims to:

- show you what a number of other woolgrowers have done to manage their wild dog problem;
- give you an overview of the most popular designs and materials for exclusion fencing;
- help you assess the suitability of those designs and materials for your own business;
- identify and resolve challenges that you may encounter when building and maintaining your own exclusion fencing;
- provide access to a variety of useful resources (links to fencing suppliers, funding bodies, etc) that may help you when designing and building your own exclusion fencing.

As its name implies, this publication is a guide only. AWI does not recommend, guarantee or warrant the performance of any design, product or service referred to in this guide.



SHARE YOUR KNOWLEDGE

AWI welcomes your input to keep this guide up-to-date and relevant. Please forward your comments, ideas and photographs to <u>wilddogs@wool.com</u>.

For more information about wild dog behaviour, and general wild dog exclusion fencing, refer to the **Kondinin Group Research Report No.288: Exclusion Fencing, Fighting Ferals**, available on the AWI website at www.wool.com/exclusionfencing

WILD DOG BEHAVIOUR

Wild dogs are intelligent animals that quickly identify and then take advantage of breaches or weak spots in a fence.

Research has shown that when a wild dog approaches a fence with the intention of getting to the other side, it will:

- *first*, try to *push through* the fence, at or below snout-level;
- *second*, try to *burrow under* the fence (usually where the fence meets the ground (see below));
- *very rarely*, try to climb or jump the fence. (Climbing or jumping is a learned behaviour, and therefore not usually seen in wild dogs.)



To effectively control wild dogs, your fence must:

- incorporate an effective barrier at and below snout-level (450mm);
- incorporate an effective barrier along the bottom of the fence;
- address the potential weak spots eg gateways, public roadways, gullies and floodways;
- be regularly monitored and maintained, especially in the case of an electric fence.

Most woolgrowers report that a height of around 950mm is adequate to control wild dogs, especially if the fence incorporates an electric or barbed top wire.

Many of the fences in this manual are considerably higher than 950mm. This may be due to funding requirements, personal preference and/or the type(s) of animals being controlled.

Products and methods of fencing construction are constantly evolving, particularly in relation to wild dog control. Always seek advice from suppliers and contractors before settling on a design.

TYPES OF EXCLUSION FENCING

The three main types of exclusion fencing currently being used by Australian woolgrowers are:

- prefabricated wire with a fixed or hinged apron or footer (preferred fencing for Queensland cluster fences) (*left*);
- plain electric wire fence with an electrified ground/bottom wire (often used in hilly terrain, for example eastern Victoria) (*centre*);
- upright, sloping or outrigger electric offset (used in conjunction with an existing electric or prefabricated wire fence) (*right*).

As our understanding of wild dog behaviour improves, many woolgrowers are designing composite fences that comprise elements of two or more of these types of fences to suit their conditions, and their budget. No matter what type of fence you build, it is critical that you monitor and maintain the fence and are extra vigilant for the first three months while the wild dogs become accustomed to the fence.

In the case of electric fencing, each section of the fence erected during the day should be electrified that same night so that the dogs immediately learn that contact with the fence will deliver a shock.

For the best results, exclusion fencing should be backed up with other methods of wild dog control. As wild dogs travel along fence lines, your exclusion fence is an ideal place to carry out additional control activities such as trapping and baiting.







PREFABRICATED WIRE FENCING

Prefabricated wire fencing provides both a physical and visual barrier to wild dogs (and other animals). There is now available in Australia a growing range of prefabricated wire that is specifically designed to exclude wild dogs. Some suppliers will also manufacture prefabricated wire to your specifications.





To prevent wild dogs pushing through the fence:

- choose a prefabricated wire with closely spaced line and picket spaces (no more than 150mm);
- consider a prefabricated wire with tightly spaced (eg 75mm) horizontal wires along the lower portion of the fence (450mm and below);
- consider the inclusion of an electric offset wire or barbed wire at or below snout-level (450mm).

To prevent wild dogs burrowing under the fence:

- incorporate a fixed or hinged apron or footer in the fence;
- consider a barbed selvage/edge wire (which can also provide additional strength to the fence), or an electric offset ground wire.

To prevent wild dogs climbing the fence:

- build the prefabricated wire component of your fence to a height of at least 950mm;
- consider adding barbed wire(s) or electric wire(s) to the top of the fence;
- consider a barbed wire as a selvage/edge wire (which can also provide additional strength to the fence);
- consider an electric offset outrigger midway up the fence.

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PREFABRICATED FENCING: THE ADVANTAGES AND THE DISADVANTAGES



Advantages of prefabricated wire

Formidable visual and physical barrierM
elIdeal for flat or gently undulating terrainD
veCan be reinforced with aprons/footers,
barbed wires and electric wiresD
wQuick to erectW
liHH
th

Easier to maintain than electric fencing

Advances in technology have resulted in a range of equipment and machinery designed to simplify the construction of prefabricated wire fences

Disadvantages of prefabricated wire

More expensive to build and erect than electric fencing

Difficult to erect on uneven and heavily vegetated terrain

Difficult to erect across gullies and waterways

Work to smooth and clear the fence line (eg vegetation, rocks, stumps and hollows) can add significantly to the cost of the fence

Permits may be required to clear the fence line

Carries a high risk of flood and storm damage as the mesh collects debris which puts pressure on the entire fence line

PREFABRICATED FENCING: FIXED, HINGED AND REMOVABLE APRONS/FOOTERS

Aprons or footers are made from tightly spaced prefabricated wire. Placed along the lower sections of a fence, aprons/ footers provide a physical barrier to prevent wild dogs from burrowing under the fence.

There are three main types of aprons or footers:

- fixed aprons/footers are formed by the bottom 300mm of the fence being allowed to flare out to the ground in a gradual curve (*left*);
- hinged aprons/footers are attached to the prefabricated wire during manufacture via a hinge knot (centre). Hinged aprons can be made to lie flat on the ground at a 90 degree angle to the fence and can be buried (either deliberately, or by the build up of soil over time);
- removable aprons/footers are attached to an existing fence, either as reinforcement or repair (*right*).

The best option for your fence will depend on a number of factors, including:

- whether you are building a new fence, or reinforcing or repairing an existing fence;
- soil type (corrosive; shifting);
- flood risk;
- the amount of debris expected to build up along the fenceline.

Aprons/footers should be constructed on the *approach* side of the fence.

In conditions where it is difficult to obtain an earth, incorporating an apron or footer that a wild dog must stand on when it makes contact with the hot wire, will improve the likelihood of it receiving an electric shock.



FIXED, HINGED & REMOVABLE APRONS/FOOTERS: THE ADVANTAGES AND DISADVANTAGES

	Advantages	Disadvantages
Fixed	Large amount of downward pressure on bottom wires prevents animals burrowing under the fence	Not suitable for corrosive soils as downward pressure pushes bottom wires into the ground where they can erode, causing a loss of tension throughout the entire fence
		Requires closer and deeper posts than hinged aprons, particularly in shifting soils, because of increased downward pressure
		Can collect large amounts of debris which puts extra pressure on the fence
		Difficult to repair damaged sections
Hinged	More suitable for corrosive soils because there is less downward pressure	Can be buried over time by wind and animals running along the fenceline
	Because there is less downward pressure, fewer posts are required	
	Wire can be tied close to the base of the posts	
	Can be buried if desired (avoid in corrosive soils)	
	Damaged sections are easily replaced	
Removable	Can be used to modify or repair an existing fence	Laborious over long stretches of fenceline
	Damaged sections are easily replaced	

PREFABRICATED FENCING: SOME EXAMPLES









These prefabricated fences have all been reinforced using at least one strand of barbed wire to add height and deter wild dogs from climbing the fence. Note the steel droppers top left and below right, which also provide a visual barrier. The fence top left has a fixed apron, while the fences at the centre and bottom right have an electric ground wire, to prevent wild dogs burrowing under the fence.

PREFABRICATED FENCING: SOME EXAMPLES





Note that all these fences incorporate electric offsets. Electric offsets are valuable for reinforcing fences against wild dogs, and also reducing the risk of damage caused by other animals.

PREFABRICATED FENCING: SOME EXAMPLES







PREFABRICATED WIRE: WHAT YOU NEED TO KNOW TO BUILD AN EFFECTIVE FENCE

Specifications

Prefabricated wire comes in continuous rolls of up to 500m, and ranges in height from 900mm to 1830mm. Prefabricated wire designed specifically for wild dog exclusion has stiffly knotted vertical pickets and small spaces between the horizontal and vertical wires (no more than 150mm).

Prefabricated wire is described by the number of horizontal wires, the height from the top to bottom wires, and the vertical picket spacing:

eg 13/150/15 13 horizontal wires 1500mm high 150mm spacing between vertical wires.



PREFABRICATED WIRE: WHAT YOU NEED TO KNOW TO BUILD AN EFFECTIVE FENCE

Knots

The preferred knots for prefabricated wire fencing are the large fixed knot and the smaller, more compact square knot. Both have stiff, one-piece vertical pickets which maintain downwards pressure on the ground.

The fixed knot is stronger (and more expensive) than the square knot.



Images supplied by Southern Wire

PREFABRICATED WIRE: WHAT YOU NEED TO KNOW TO BUILD AN EFFECTIVE FENCE

Posts and end assemblies

Strong posts and end assemblies are the key to a strong fence.

Be guided by your supplier as to the size, depth and spacing of your posts. The ideal size, depth and spacing of your posts will depend on a number of factors, including:

- soil type (shifting soils require bigger, deeper posts);
- terrain (more posts are needed to accommodate hills and undulations);
- the size and type of your fence (eg fixed aprons require more posts than hinged aprons).







POSTS AND ASSEMBLIES: SOME MORE EXAMPLES





PLAIN WIRE ELECTRIC FENCING

Plain wire electric fencing is used successfully by many producers in north-east Victoria and Gippsland. The main advantages of plain wire electric fencing include:

- its comparatively low cost;
- it is more easily erected in hilly and heavily vegetated areas where the fence line has to accommodate many bends, dips and curves;
- there is less risk to the entire fence in a flood.

Note that:

- electric fencing is a psychological barrier that relies on wild dogs learning that touching the fence is a painful experience. If the fence fails to deliver an adequate shock whenever it is touched, wild dogs will quickly pass through it.
- a wild dog's natural tendency is to 'shoot forward' when it receives an electric shock. This forward impulsion can actually force the wild dog through the fence, particularly if it has approached the fence at speed.

To prevent wild dogs pushing through the fence:

- provide for closely spaced wires (no more than 100mm apart) especially at and below snout-level (450mm);
- maintain adequate tension so that a wild dog cannot squeeze through the wires;
- consider droppers to maintain tension and also provide a visual barrier.

To prevent wild dogs burrowing under the fence:

- incorporate a live bottom wire as close to the ground as possible (no higher than 50mm on bare ground, and no higher than 150mm on grassy sites to avoid shorts);
- regularly spray along the ground wire to keep vegetation low and prevent the ground wire from shorting.

To prevent wild dogs climbing over the fence:

- build your fence to a height of at least 950mm;
- include at least one live wire at the top of the fence.

PLAIN WIRE ELECTRIC FENCING: THE ADVANTAGES AND THE DISADVANTAGES



You must check and maintain your electric fence so that it is capable of delivering an adequate electric shock at all times.

Advantages of plain wire electric fencing	Disadvantages of plain wire electric fencing
Lower cost option	Not a formidable physical barrier; deterrent lies in wild dogs 'learning' that they will get an electric shock
Quick to erect	Requires constant monitoring and maintenance to maintain voltage, tension and prevent breaches
Suitable for uneven and heavily vegetated terrain	Difficult to achieve a good earth in dry conditions
Provides options for protecting weak spots that are difficult to protect physically eg gateways, gullies, floodways, public roadways	
Less risk of damage to entire fence due to debris build-up	
Can be monitored remotely to check for faults	

PLAIN WIRE ELECTRIC FENCING: WHAT YOU NEED TO KNOW TO BUILD AN EFFECTIVE FENCE

Energise from the start

Plan your construction so that each section of the fence built during the day is electrified that night. This prevents wild dogs learning how to negotiate the new fence.

Choosing an energiser

To deter wild dogs, most woolgrowers aim to maintain their fence at a minimum of 6000 volts. A good quality energiser is essential and the choice will depend on a number of factors including:

- your power source (mains, solar or battery);
- the distance and number of wires to be electrified;
- the condition of your fence (a well insulated fence that is free of vegetation will have less leakage, and therefore require less power than one in poor condition).

Choosing a larger energiser than you believe you need will allow you to add more fencing in the future.

Know your voltage

Many woolgrowers recommend recording the voltage at several locations along your fence, both at various times of the day and night, and in different weather conditions. 'Knowing your voltage' will help you understand how, when and where your fence may lose power, and to take steps to maintain its integrity.

Your earthing system

In dry, sandy conditions it can be difficult to maintain a good earth resulting in little or no shock being received by the animal touching the wire. In these conditions, consider:

- fencing off and watering the earth system;
- installing a bi-polar system which does not require earth wires. In a bi-polar system, every wire can be energised with either a negative or positive pulse and is capable of delivering a shock. If one set of wires suffers a short, the other wires remain effective; or
- attaching a hinged apron or footer to the fence that lies flat on the ground and will earth the wild dog standing on it.

Monitoring your electric fence

Wild dogs are intelligent and will take advantage of any breach in a fence. There are many products now available that allow you to remotely monitor your fence, and also alert you via SMS or email of any faults or loss of voltage.

Maintaining your electric fence

Fence lines need to be sprayed at least annually to prevent vegetation from shorting the ground wire. Fences should be checked regularly for damage from fallen branches or animals, and immediately after storms and heavy rain.

ELECTRIC OFFSETS

There are three main types of offsets that can be used to protect an existing fence that is in good condition:

- free standing offset (basically a plain wire electric fence that runs parallel to the existing fence, with one or more wires (*left*));
- sloping offset, which is similar to a free-standing offset, except that it runs back towards the fence at a 45 degree angle from the ground line (*centre*);
- outrigger offset, which is attached to the fence (*right*). The live wire(s) are located specifically where additional protection is sought (eg snout level, to prevent pushing or at the base of the fence to prevent burrowing).

Free-standing and outrigger offsets should be located between 200mm and 300mm from the existing fence, on the approach side. This distance reduces the risk of shorts, and allows wild dogs to make contact with the offset without putting pressure on the existing fence.

The same considerations that apply to designing, constructing, monitoring and maintaining plain wire electric fencing apply to designing, constructing, monitoring and maintaining electric offsets.







FREE-STANDING, SLOPING & OUTRIGGER OFFSETS: THE ADVANTAGES AND DISADVANTAGES

	Advantages	Disadvantages
Free-standing	Fairly cheap and quick method of protecting an existing fence	
Sloping	Suitable for fences that are built on a ridge or the contour of a hill and are at extra risk from burrowing	Requires more maintenance to keep the offset free of vegetation than other offsets
Outrigger	Quick method of reinforcing an existing fence	
	Uses less materials than other offsets	
	Can easily target specific animal activity (eg burrowing, pushing through) and specific areas of the fence	

PLAIN WIRE ELECTRIC FENCING: SOME EXAMPLES



Speak to your local contractors and suppliers before settling on a design for your fence to see what products and systems are available for your situation and conditions.

The fence on the left is mains powered and is remotely monitored via iPhone. The owners can also log on to the system to check if there is a fault. Because the dry conditions make it difficult to maintain an earth, the earthing system is fenced off and watered. The fence on the right is solar-powered. In this case, the owners have used a bi-polar system which does not require an earth wire. The fence is monitored weekly using a hand-held voltage meter.

PROTECTING THE WEAK SPOTS: GATEWAYS, GRIDS AND PUBLIC ROADWAYS AND CROSSINGS

Gateways, grids and public roadways and crossings are particularly vulnerable as wild dogs:

- prefer to follow man-made tracks;
- can negotiate grids;
- are able to squeeze under seemingly small gaps beneath gates;
- are able to squeeze between the gate and the gate post;
- can burrow under gates.



To protect gateways, public roadways and grids:

- place gates as close to the ground as possible;
- grade gateways to reduce the space between the gate and the ground;
- minimise the gap between gates and the posts;
- attach a bed-log or other barricade to the bottom of gates;
- concrete gateways, or bury a concrete or steel barrier beneath gateways;
- run barbed wire at the base, through the middle and along the top of gates;
- use the highest gate possible (may be 'made to measure', or heightened by adding wires or other materials to the top);
- electrify gates;
- install a self-closing mechanism on gates (*left*);
- install an electrified 'shoestring' grid in front of a grid or gate (essentially, a zigzag of electrified tape approximately 100mm above the ground that can be crossed by vehicle);
- install motion-activated sirens, buzzers or alarms at the gateway, public roadway or grid.

PROTECTING THE WEAK SPOTS: GATEWAYS





These gates have all been designed to minimise the gap between the gate and the posts, and the gate and the ground. The gate on the far left has been built as high as the fence, and a bed log will be installed to prevent wild dogs burrowing underneath. The gate in the centre has been clad with tightly spaced chicken wire.

A footer has been built onto the bottom of the gate on the right. A bed log of railway iron allows the gates to be fastened more securely than with a chain latch.



PROTECTING THE WEAK SPOTS: GRIDS



Electrified tape in a 'shoestring' design is used to prevent wild dogs negotiating grids. In each case, the tape is electrified using a solar-powered energiser. Care has been taken to ensure that any wild dog attempting to negotiate the grid must touch the electric tape.

Note that the grid on the bottom right also incorporates a motionactivated light and siren to deter wild dogs.

These examples demonstrate how the availability of good quality solar-powered energisers allows woolgrowers to use electricity to protect weak spots, even if they are not using electric fencing elsewhere on their properties.





PROTECTING THE WEAK SPOTS: PUBLIC ROADWAYS AND CROSSINGS





Some woolgrowers are reporting success using solar-powered, motionactivated lights/beacons and sirens to deter wild dogs from crossing public roadways. These devices should not be relied on alone, however. In this example, a prefabricated fence, constructed close to the ground, provides a physical barrier to deter animals approaching the roadway.



PROTECTING THE WEAK SPOTS: GULLIES, WATERWAYS AND FLOODWAYS

Gullies, waterways and floodways can be very difficult to protect due to varying water levels and the risk of flood.

Prefabricated wire, in particular, can collect large amounts of debris during heavy rains which has the potential to put pressure on, and even destroy, the entire fence.

Many woolgrowers fence these high-risk areas independently of the rest of their fences using separate end assemblies and materials that are designed to lay-down, fold-over or even break away in the event of a flood.



Options for protecting gullies and floodways include:

- electric fencing;
- suspended or hanging fences;
- collapsible fences;
- filling in the gaps beneath the fencing.

Choosing the best option for protecting your gullies and floodways will involve many factors, including:

- the size of the gully or floodway;
- the likelihood of flooding;
- the expected height and velocity of water flows;
- the type of debris likely to flow down the gully or waterway;
- soil type;
- any applicable legislation governing the blocking or alteration of waterways.

Note that it is worth investing extra time and money in improving the flood resistance of your end assemblies. This makes the (sometimes inevitable) job of repairing flood-damaged fences quicker and easier.

ELECTRIC FENCING FOR GULLIES, WATERWAYS AND FLOODWAYS

Electric fencing can be a good option for gullies, waterways and floodways, even if it has not been installed on other parts of the property.



The advantages of electric fencing for guliies, waterways and floodways include:

- comparative ease in building a fence on sloping terrain;
- plain wire accumulates less debris than prefabricated mesh;
- easy to repair in event of a flood;
- needs less structure than prefabricated fencing;
- pickets can be inserted in the bed more easily and with less risk of erosion than posts.



SUSPENDED OR HANGING FENCES FOR GULLIES, WATERWAYS AND FLOODWAYS

Suspended or hanging fences are typically used to protect gullies and waterways that regularly contain water. The fence is attached to a steel cable, wire or chain suspended across the gully or waterway in a way that it can swing, pivot or lift in response to a rise in the water level. (Plastic floats, sheets of tins or buoys attached to the bottom of the fence can assist this.)

By allowing the fence to lie on top of the water, the risk of damage from water pressure and debris is reduced. Suspended or hanging fences can be made of a variety of materials including:

- plain wire fencing;
- prefabricated wire;
- mesh panels;
- sheets of tin;
- a 'curtain' of electrified, vertically hanging chains.

Suspended or hanging fences can be electrified, provided that the electrified segments sit above the normal water level. If the rest of your fences are electrified, install an energy limiter on the posts supporting the suspended or hanging fence to ensure the rest of the fence retains power in the event of a flood. If the water level is regularly low, It is important to maintain a formidable ground barrier to deter wild dogs. Aprons and electric ground wires can be used on suspended or hanging fences, and any gaps between the bottom of the fence and the ground should be filled with logs, mesh, tin or shade cloth.

Some woolgrowers recommend stiffening suspended or hanging fences with closely spaced droppers to help maintain both a physical and visual barrier.



SUSPENDED OR HANGING FENCES FOR GULLIES, WATERWAYS AND FLOODWAYS





The fences above left and above right are suspended from a steel cable attached to heavy duty posts dug deep into the ground. Each fence is designed to lift up or fold over in the event of a flood, as has occurred in the photo to the right. Although a large amount of debris has accumulated at the base of the fence, it has remained intact. Note the steel droppers in the middle panel of the fence above right, which assist flotation in a flood, and also provide a physical and visual barrier against wild dogs and other animals.



SUSPENDED OR HANGING FENCES FOR GULLIES, WATERWAYS AND FLOODWAYS



Even if the fencing protecting a floodway is sacrificial, the posts should be designed to withstand a flood event. The fence post above left has been driven 5 foot into the ground, and has been reinforced by a stay rail attached to a another post driven 7 foot into the ground. Shade cloth (stiffened with pickets above right, and weighed down with a log, below right) provides a visual and physical barrier while allowing water to pass through.





COLLAPSIBLE FENCES FOR GULLIES, WATERWAYS AND FLOODWAYS

Collapsible fences are designed to lay flat to avoid accumulating debris in the event of a flood. Some are designed to be laid down or folded over manually *(right)* while others give way automatically under the pressure of floodwater and debris.

Generally, the bottom of the fence is attached to steel posts using high-tensile wire or hinge-bolts, and at the top with low tensile wire. When sufficient water pressure or debris accumulates behind the fence, the low tensile wire breaks, forcing the fence to lay down in the direction of the water flow.

Collapsible fences can be made of prefabricated wire or plain electric wire. If the rest of your fence is electrified, install an energy limiter to ensure it retains power in the event of a flood.

IN-FILLING SHALLOWER GULLIES

Shallower gullies may be in-filled with soil, rocks, tin or logs.

If drainage pipes or culverts are necessary, ensure that the entrances are covered with removable wire grills to prevent wild dogs passing through.



SOME RESOURCES TO MAKE THE JOB EASIER

For more information about wild dog behaviour, and general wild dog exclusion fencing, refer to the Kondinin Group Research Report No.288: Exclusion Fencing, Fighting Ferals, available on the AWI website at www.wool.com/exclusionfencing

There is a growing range of products available that make the job of designing, building and maintaining effective wild dog exclusion fencing much easier. (*Note that AWI does not endorse, and has not received payment in respect of, any products or suppliers featured in this guide.*)

MANUFACTURERS, IMPORTERS & DISTRIBUTORS OF FENCING MATERIALS IN AUSTRALIA

The list below may assist producers in locating and determining the products which are best suited to their own exclusion fencing needs.

AWI has attempted to identify all manufacturers, importers and distributors of fencing materials and related products in Australia. AWI does not warrant that this list is exhaustive however, and any manufacturer, importer or distributor who does not appear on this list, and wishes to, is welcome to contact AWI on (02) 8295 3100 or feedback@wool.com.

CLIPEX

Toll Free: 1800 657 766 Reception: 07 3726 1149 Sales: 07 3733 1420 Fax: 1300 568 448 Email: sales@clipex.com.au

DAKEN HORNSBY

Cole Jones Email: dakenag@daken.com.au 30 Salisbury Road, Asquith NSW 2077 P.O. Box 50 Hornsby NSW 1630 Ph: 02 9477 2599 or 1800 636 451 (Toll Free)

GALLAGHER AUSTRALIA

Stephanie Larkin (Marketing) Email: Stephanie.Larkin@gallagher.com Website: www.am.gallagher.com/au

CYCLONE PRODUCTS

Ph: 1800 199 450 Fax: 1800 671 615 Email: sales@cycloneproducts.com.au Email: sales@clipex.com.au Web: www.cycloneproducts.com.au/Fencing

DINGO BEEPER (ADVANCE COMMUNICATIONS)

Michael Curran - Advance Communications 86 Miscamble Street, Roma QLD 4455 Ph: 07 4622 5223 Fax: 07 4622 1223

GALMAX FENCING

Ph: 1300 384 981 or Admin: (02) 9756 6300 Fax: (02) 9604 8299 Email: sales@galmax.com.au Factory: 15 Oatley Close, Blacktown NSW 2148 Postal: PO Box 6709, Wetherill Park NSW 2164 Website: www.galmax.com.au Galmax is proudly manufactured and distributed by Austral Wire Products

MANUFACTURERS, IMPORTERS & DISTRIBUTORS OF FENCING MATERIALS IN AUSTRALIA

JVA ELECTRIC FENCING

Ph: (primary): 0499 000 455 or +61 499 000 455 Ph:(secondary): (07) 3103 0582 or +61 7 3103 0582 1 Helium St, Narangba QLD 4504 Email: sales@jva-fence.com.au Website: www.jva-fence.com.au Skype: jva.technologies

NEMTEK ELECTRIC FENCING PRODUCTS

Ph: (08) 9303 9855 Email: sales@nemtek.com.au Unit 5, 19 Innovation Circuit, Wangara, 6065, Perth, WA Website: www.nemtek.com.au/agricultural/

WARATAH FENCING

Ph: 13 10 80 Email: sales@waratahfencing.com.au Website: www.waratahfencing.com.au

WESTONFENCE

Duncan Abbey Mobile: 0497 850 400 Email: duncan@westonfence.com.au P0 Box 728, Parkes NSW 2870

SOUTHERN WIRE NSW

Matthew Dowell Area Manager – Western NSW Mobile: 0439 009 232 Email: matthewd@southernwire.com.au

SOUTHERN WIRE WA

Ph: +61 8 9279 9999 Fax: +61 8 9377 3888 PO Box 3232, Bassendean DC, WA 6942

WHITES GROUP (WHITES WIRES)

Con Calagis - Marketing Manager Ph: 02 8602 0014 M: 0420 961 546 Fax: 02 8814 8057 4 Decker Place, Huntingwood NSW 2148 Email: ConC@whitesgroup.com.au Website: www.whitesgroup.com.au



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