

# Fencing

A simple guide to the posts and wires that can dramatically increase the value of your property.

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Fencing



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## Contents



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# The fence examined

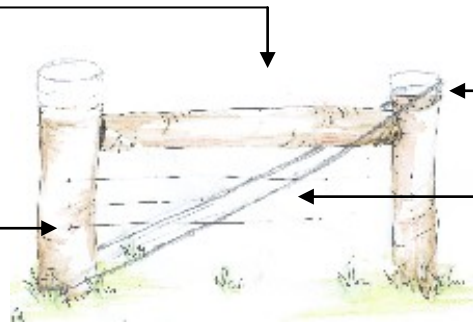
1.

Every fence begins and ends with either a ....

## Strainer Assembly

Stay bar. 2.4m long. Counters the pull of the wires.

Large strainer post.



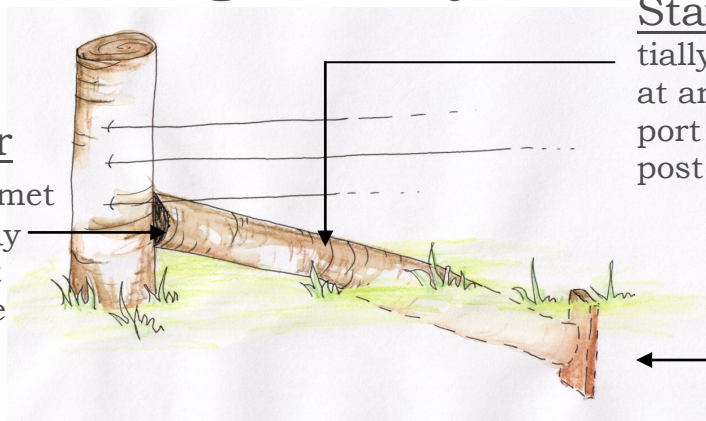
Stay post.

Diagonal wire. Also counters wire pressure.

Or

## Angle Stay

Large strainer post. Is met by the stay bar about 1/3 of the way up.



Stay bar. Partially below ground, at an angle to support the strainer post against the pull

Timber block supports the stay bar.

Then wires or netting and intermediate, (smaller) posts fill in the middle.

Positioning and placing of the stay bar really is important as this makes the fence last. It also ensures it looks tidy, and is capable of keeping in stock.

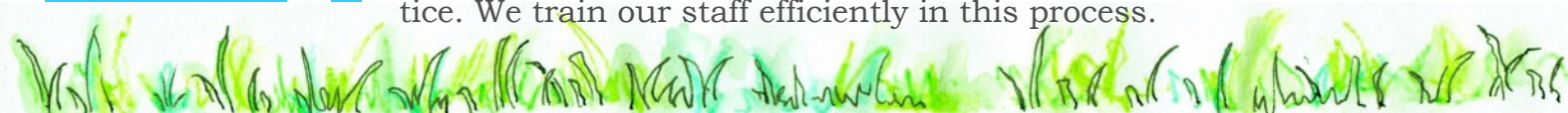
“Correct placement of a strainer assembly takes a lot of skill.”

If the strainer post used is too short or narrow it can ‘pop’ out of the ground, which then takes the tightness of the fence with it, and can make it not stock proof.

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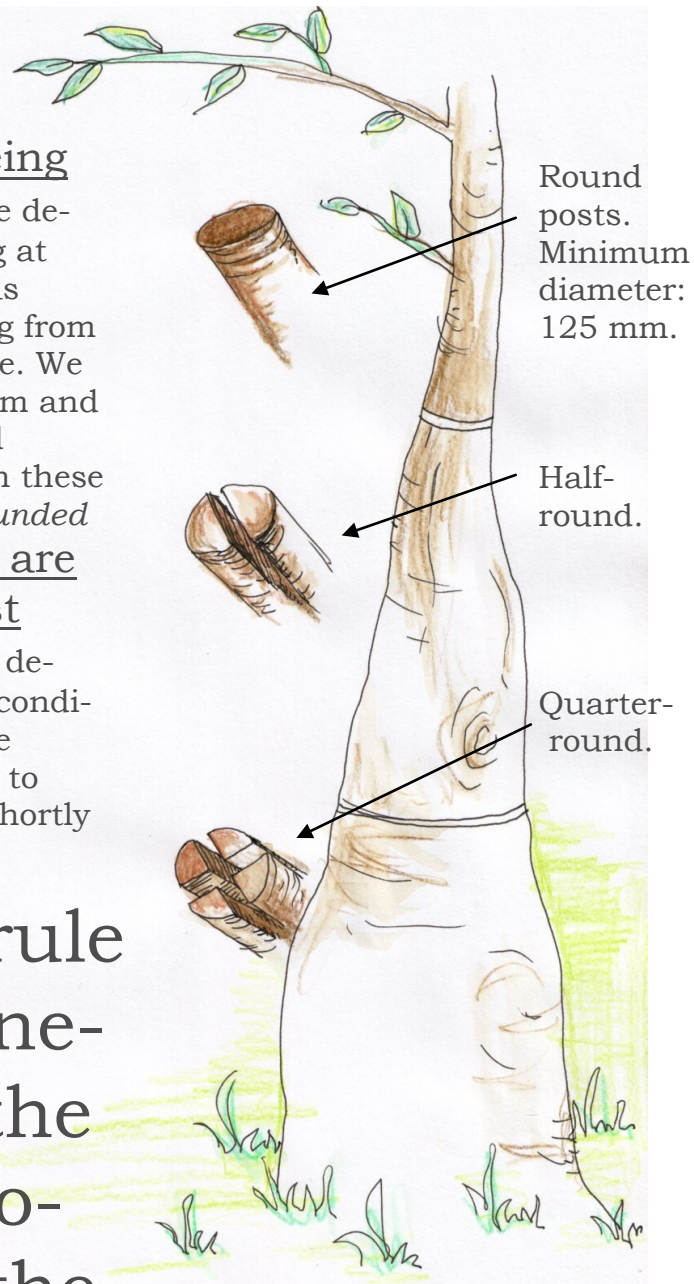
The correct placement of a strain assembly takes a lot of skill and practice.

We train our staff efficiently in this process.



## Posts

Round posts are becoming in short supply because only the top portion of the tree (below 180 mm in diameter) can be used for posts. Quarter- and half-rounds are now being produced to supplement the demand and these posts, starting at the correct diameter, are just as strong because they are coming from the larger, lower part of the tree. We have successfully driven 125mm and larger, quarter- and half-round posts. The wires and netting on these type of posts are put on the *rounded* side as when these posts are driven they always twist slightly, the amount of twist depends on the different ground conditions. Less than 125mm can be driven but they are more likely to break while driving, or if not, shortly after.



“The general rule of thumb is one-third post *in* the ground, to two-thirds *above* the ground.”

The determination of the size and height of posts in a fence line, depends on

- the type of stock requirements
- landscape
- the ground conditions.

In wet or very soft ground longer posts need to be used. The general rule of thumb is one-third post *in* the ground, to two-thirds *above* the ground.

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## Netting

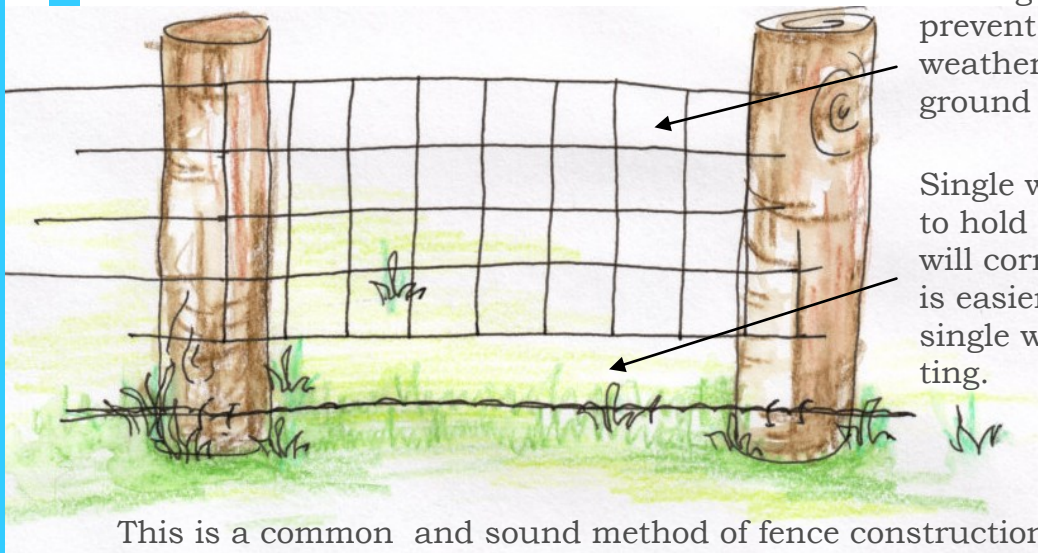
See page 6 “Netting and Wire Variations.” for more information.

### Problem:

I need a fence that will retain my stock securely, but if I put netting right to ground level it will rot too fast and require a big effort to replace.

### Solution:

Shown below.



Netting is elevated to prevent premature weathering from ground corrosion.

Single wire competent to hold stock. As this will corrode faster, it is easier to replace a single wire than netting.

This is a common and sound method of fence construction.

Netting is either hinge-joint or tight-lock.

Hinge-joint meaning the netting will fold up at the bottom, thus allowing animals to push up and get through. And tight-lock as the name implies, stays tight and securely in place.

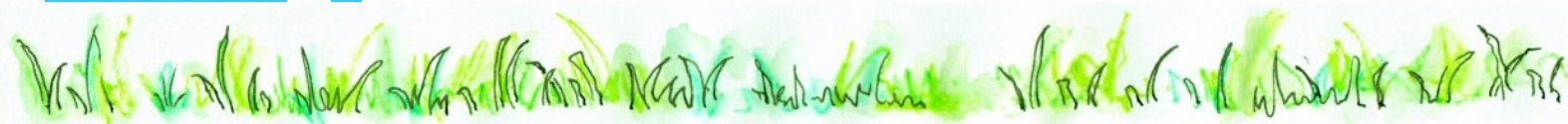
There is a special tool used for straining the netting and it is classified as a significant hazard so only skilled operators should use this tool.

The knots used for tying off the wiring are also very important, as they have to withstand the same strain as a straight length of wire.

## Wire

The alternative to netting is high-tensile wire, the most common fence is seven or eight wires. Between each post are attached three 'lightning droppers'. These are wire stabilisers that keep the separate wires at their correct placing. In the North Island wooden battens are used for the same purpose.

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## Method



1. To construct a fence the first stage is to 'mark out' where the fence line is going. We do this by placing standards one each end with several between these, then lining them up to get a straight line.



2. We mark where the intermediate posts are to go, and place the posts beside these marks. The tractor and post driver drive along the line and drive each post down.

*To save time and cost to the client it is easier if the tractor and post driver can drive unobstructed along the line, driving each post as they go, without having to reverse into position to drive each post, due to obstacles such as overhanging tree branches, next to tree lines, water races, ditches, creeks, or banks etc.*

3. The erecting of the strainer posts and stay assemblies.

4. Then we attach the wiring or netting.

5. And finally we attach any swinging gates.

“It is easier if the tractor and post driver can drive unobstructed...”

A usual boundary fence

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is made up of:

- posts at seven metre spacings,
- strainer assembly each end,
- either seven or eight wires, and three droppers in-between posts,
- or netting with one wire on top.



## Post Driving

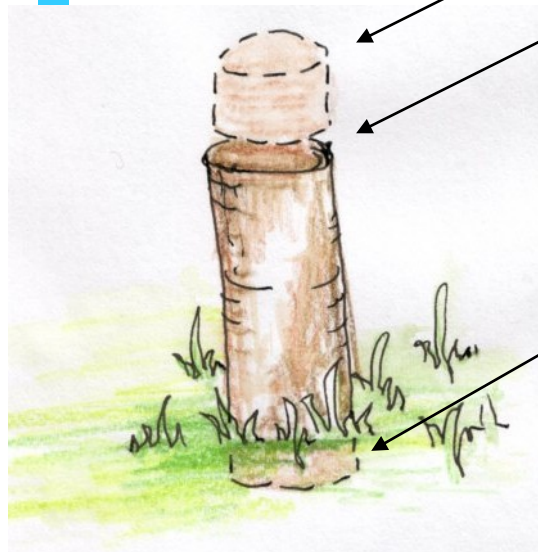
The cost of driving a post depends on

- the amount of posts to go into the ground and...
- the amount of depth per punch that the post goes into the ground.

This can vary from a quarter of an inch per hit to six inches per hit; therefore the amount of posts driven per hour can vary from twelve to fifty posts. This is one of the main variants in the costing of the job. Driving strainers usually takes between two to three times as long as other posts.

“Driving strainers usually takes between two to three times as long as other posts.”

### A Poor job:



Loss of timber.

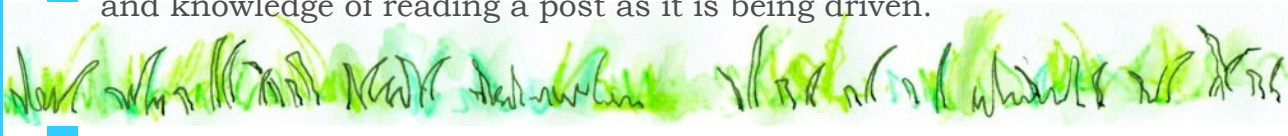
Open, untreated wound- more susceptible to weathering.

Shallow post- weaker fence.

Without the correct equipment, the posts cannot be driven to the desired depth and consequently the tops are then cut off to keep them in line. This method creates a shallow post, it also wastes the timber you have paid for, and allows the weather to get into the post through the cut, thus not allowing the post to last the expected thirty to fifty years. See diagram left.

Because each post is being hit with a very heavy hammer called a ‘monkey’, the post must be strong and stress-free to retain its strength. Posts vary due to the conditions they were growing in, and it is when they strike a setback in growing conditions (such as snow or drought) that a stress-line in the body of the post is caused. This leaves a weak spot which under pressure from a monkey can splay out, go spongy, or break. Sometimes posts can split vertically, so all these hazards show the need for extreme safety precaution, as well as skill in operating the post-driver correctly, and knowledge of reading a post as it is being driven.

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## Netting and Wire Variations

The most common type of deer netting is called ‘deer and fawn’ meaning the lower squares are smaller, so the young fawns cannot push through. Some netting fences have a single wire on the ground below the netting, this also prevents stock from pushing through.

Different animals have different needs. There is available special netting even for goats and dogs! Fences for dairy cows can vary from one to five wires. For horses we usually use number eight wire instead of high tensile wire, as no.8 is softer and does not cause as much damage to the animal if they break a wire.

“Fences for dairy cows can vary from one to five wires.”

See page 3 “Netting” and “Wire” for additional information.

## Escape Deterrents

The practice of using barbed-wire on the top has been mainly discontinued due to the damage to animals and humans.

Some fences have one or two wires on top of the netting, usually with insulators attached, so that the wires can be electrified.

Sometimes electric fencing is the best way to keep animals off a good fence-line and there are various methods; one being insulators on the post. The most common method for horses is using ‘outriggers’ which jut out, carrying the electric wire away from the post.

## Post Spacing

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The distance between posts in a fence line is determined by the type of animal or landscape being used. For example in a ‘high pressure’ stock area, e.g. a laneway entering a stock yard, posts are put closer together to withstand the pressure of many animals in a confined place.





## Wind or Shade Cloth

When windbreak or shade-cloth is being used in a landscape setting, it acts as a sail and can pull posts out of the ground if the posts are not placed closer together.

When constructing a fence with shade and/or wind cloth, factors taken into consideration are:

- The spacing between the posts
- The prevailing wind direction
- The type of cloth used.

Care is needed to ensure that the cloth is fastened on the correct side of the netting to prevent it being ripped by the knots in the netting. A wire top and bottom to attach the cloth to, is also advisable.

## Gateways

Placing a gateway in the middle of a fence-line can seriously increase the cost per metre on short strains, because each side of the gate has to have another strainer assembly. Therefore the once long strain now has become two short strains. To save cost while fencing, it is cheaper to put a gateway at the *end* of a fence-line as opposed to the *middle*.

“It is cheaper to put a gateway at the *end* of a fence-line...”

## Fence length

The length of a strain of fence is determined by several factors, such as:

- How many bends
- Whether it is flat or hilly
- How wet the ground
- The type of fence being erected etc.

This can only be decided after years of experience in the industry.

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# Pricing of a fence 8. can vary immensely

The pricing of a fencing job has many variables, so there is no direct answer to the question of how much does it cost per meter of fence line.

For example, a property with stony ground and many trees that each had to be avoided by the post driver and tractor, would require much more labour, and thus a higher price to fence than a property that was lacking obstructions and had easier ground conditions.

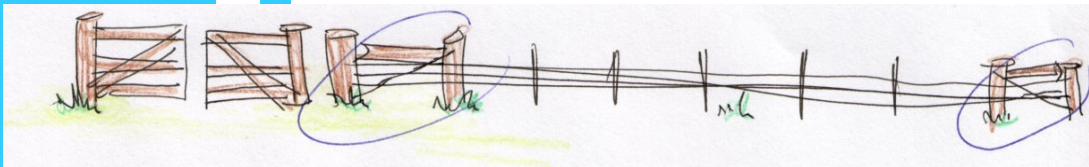
Other strong variables, namely:

- the length of the fence
- the number of corners
- the positioning of the gates.
- ...

“How much does a metre of fence cost? hour?”

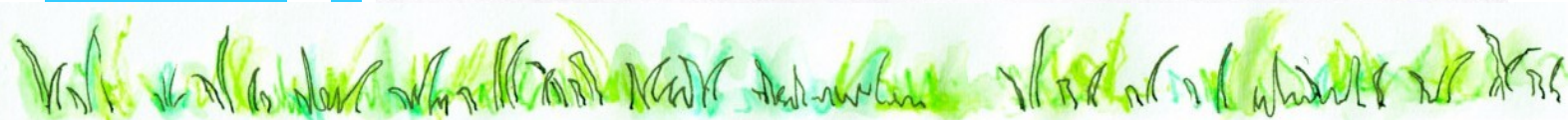
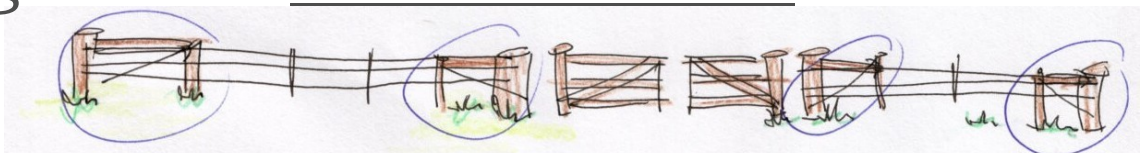
Remember; the strainer assemblies (or angle stays) are one of the most expensive parts of a fence.

End gate: cost of two strainer assemblies.



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Middle gate: cost of four strainer assemblies.



# COST...

# Influential Factors<sup>9.</sup>

Here are the important factors that contribute to the pricing of a fence, summarised:

- The main costs of a fence line are the strainer assemblies and/or angle stays.
- The condition of your property (Is it stony? Overhanging branches? Live on a hill?) varies the cost.
- The speed the post driver can operate, owing to the ground conditions i.e. hard, stoney, clay, iron-stone pan, varies the cost. Anything from 12 posts to 50 posts per hour can be driven. Significantly altering the cost of the job and only the experience and skill of an experienced professional fencing contractor can work this out.
- Gateways are cheaper at the end of a fence line.
- The more posts – the more expensive (e.g. for high stock-flow areas such as stock yards.)
- The size and length of the posts
- The less corners – the less expensive.

## Materials etc...

### Strainer assembly

- Strainer post
- Stay post
- Stay bar
- Wire and staples

### Angle stay

- Strainer post
- Stay bar
- Stay block
- Wire and staples

### Fence

- Netting
- Or
- High tensile wire
- Droppers

Labour is obviously also a necessary cost. Electric fencing or shade cloth etc. must be taken into account too.

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- Be aware that underground services, such as phone cables, must be very carefully avoided, this will add to the labour service.
- The longer your fence - the more efficient your money.



## Summary

When putting up fence-lines and gateways for stock it takes great skill, knowledge, and years of experience of understanding stock, stock behaviour, and stock movement to ensure easy stock flow and management for a whole property.

We have a consultant who will work with you to help design and access your requirements, including yards, stock-housing, laneways etc. to prioritise the order in which the development is undertaken, so as to minimise your costs.

“Putting up fence-lines and gateways for stock takes great skill, knowledge, and years of experience.”

## Contacts

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