



Horserrail International Fence Construction Guidelines

A.) PLANNING YOUR FENCE

Design of Paddocks/Yards/Arenas/Tracks

Lay of Land

Hazards

Any areas of the property that may be unsuitable should be fenced off for possible tree planting. Such areas include very wet, stony or unstable land including very steep areas that may end up close to the fence or gateway.

Slope

Due to its construction Horserrail is not well suited to uneven land due to the bonded wire at the edge of the rail giving minimal vertical movement. Experience installers believe that the limit of line change is 3 degrees per post without the need of a change of angle.

To minimise this problem, you should consider:

1. Trying to follow the lay of the land with rail fence. It will happily bend around corners following the contour.
2. Use a fence constructed of Horsecote coated wires over the most uneven areas.
3. Bulldoze the fence line prior to construction to flatten and minimise the number of dips and rises and place an end assembly or strainer (Tie off post) at the point of top or bottom of a hill or hollow in the land.
4. Adjust post height: Placing them deeper in the ground on a rise and shallower in hollows. This can be extended to skipping over a small gully and later building a fill in under section.
5. Cut the rail and Use two flat 'attachment' Buckles to change angle at the post.
6. Cut and rejoin one of the rails on the new line, at the point of direction change. (Be careful to clamp the two ends of rail to a plank in order to ensure that the rail is flat when rejoining using crimps.)

Number of Paddocks

The main considerations include economics, the number of incompatible animals, plus rotational grazing. The latter needs a little more explanation. Where grass is an important part of the animal's diet, it is highly desirable to graze and then spell the pasture as many of the most nutritious plants are deep rooted and will only thrive if allowed to recover between grazing. Further, intestinal parasitic worms can only survive for a relatively short time on the pasture. By grazing and spelling, many of them will die prior to be ingested by the animal, hence minimizing the need for chemical worm remedies.

Existing Fencing

Depending on how "safe" you plan to make your property, existing fences can be used to varying degrees. From placing a Horserrail or Ponyrail at the top of the fence for improved visibility to adding a Hotcote electric coated wire as an outrigger on each side of the fence to keep horses and ponies well away from the danger posed by the plain unprotected wires (plain woven or barbed) to removing all the unprotected wire and using only the posts with Horserrail coated rail and wire. One of the strengths of Horserrail is that it is able to be place over existing posts as the post spacing is not critical as it is for timber rails.



DESIGN OF THE FENCE:

Lay of Land

As discussed above, the lay of the land will often influence whether to use Horserail or Horsecote. However the lay of the land can influence such things as the positioning of gateways, fences and access tracks. Avoid the following situations if possible:
Fences at the foot of steep slopes especially on the feed/people side of the property.
Horses tend to rush to this area and may end up crashing into the fence.
Gateways in areas where the ground is often wet.

Type of Animals

While our fence products were conceived to over-come the problem of providing a safe and low maintenance solution for horses and ponies, we are finding that they are also well adapted to the unique requirements of diverse range of situations, including:

- Deer (low maintenance sighting panel as an overlay on deer netting fences etc)
- Ecology demarcation fencing. Because of its corrosion resistance, high visibility and low maintenance, it is ideal as a way of marking areas that are environmentally sensitive. Used in conjunction with clear signs describing the nature of the resource and the restricted activities, a single rail is an effective solution for area such as estuary and wetland sanctuaries.
- Alpaca's, Emus and Ostrich's (a safe long lasting solution for owners)
- Lifestyle and Show Homes: Driveway fencing.
- Subdivisions, where maintenance may be a problem
- Training Race Tracks and Riding Arenas
- Temporary Fencing

Value of Property

Expenditure on fencing must be viewed not only as a method of restraining animals, but is also a means of 'adding value' to your property. The decisions will always be based on your own situation this is why it is wise to plan the layout and the type of fence that you will install. Fencing with Horserail (as apposed to wire) to look more substantial and therefore adds value to your property.

Post Spacing

Extra rails and closer post spacing costs more, but increases the density of the fence and therefore the substantiality of the fence and the value of the property. Our recommendation is to range from 3 meters (10 feet) in a yard or arena situation, out to 4 meters (13 feet) in a paddock situation)

Fence Height

The 'industry standard' so to speak, for horse fencing is 1.5 meters (four foot six inches). Standard livestock fences such as those used in Australia and New Zealand are typically 1.07 Meters (three foot six inches) high. In most cases the latter has proven satisfactory for horses also, but if building from new, we recommend 1.22 Meters (4 feet). In the case of an arena/yard/coral where pressure on the animal is greater and tendency to jump is higher, we suggest that post height be increased to 1.5 Meters (5 feet). What ever height is chosen the appropriate post length must be used.



Electric Fencing

The decision whether to incorporate electricity into your fencing development should be relatively simple. The answer will most likely be yes, for the following reasons:

- Our new coated electric wires; Horsecote will allow for electricity to be introduced without degrading safety, as is usually the case with bare wires and woven tapes.
- The presence of electricity allows for annoying habits such as ‘cribbing’, pawing and leaning to be quickly rectified.
- Less substantial (expensive) options regarding rails and coated wires may be chosen,

Mark Out and Measure Up

The next step may be to find out what the programmed is going to cost. We suggest that you get an armful of stakes and go out and mark out where you want fences and gateways. Measure up, draw a rough sketch and write down the measurements. Now you can contact your supplier for suggestions and an estimate.

Preparation of Fence Lines

Power/Water

Ensure that you plan the installation of underground cables and pipe lines in conjunction with earth moving equipment. Often the equipment used to lay these services operates more freely **before** the fences are erected.

Land forming

Land forming should be done as soon as practical to ensure that the soil has an increased chance of settling or compacting prior to fencing. Rain is a very good influence on compaction. As a general rule, the bigger the equipment, the less expensive the operation is in total.

Ordering Materials

Make sure that you allow plenty of time for your requirements to be delivered. With the type and wide range of product we offer, it possible that we don’t have your requirements in stock and sometimes the product has to be ordered in. Check with us and you post supplier to avoid disappointment and annoying delays.

B.) CONSTRUCTION

End Assemblies/Strainers

Horserail and Horsecote are products that are designed to physically stop the animal even when crashed.

There are two main types of strainer assemblies:

1. Horizontal brace; using larger and longer posts as the end post and stay post. The top brace can be made of galvanized pipe or a long (2.5 meters) post.
2. Angle Stay; using a strainer which is a much larger single end post with a 2.5 meter diagonal stay post inset into the strain side of the strainer and angling down to a stay block set in the ground. Do not angle the stay over about 15 °

Which of the two you use will depend on personal experience and preference. Both have their merits. The unique features of the JWI range of fence products allows for minimal tension to keep the rail flat but it is important that the strainer assembly is strong enough to stand the strain caused by a horse(s) crashing into the fence in a panic. It is good to remember that any fence is only as strong as its weakest link.



Posts 'KEEP THEM IN LINE'

Standard wooden fence posts with at least one face rounded are suitable. The rounded face should be placed facing the rail or coated wires. The height of the fence will determine the length of the post. This ranges from 1.85 meters (6 foot) to 2.5 meters (8 feet).

With rail type fences two **IMPORTANT** factors must be remember when installing posts

1. **The tops of the post must be in-line**
2. **The sides of the posts must be it line**

Laying out rail and coated wire

The most suitable method is to sit the roll on a spinning jenny (extended slightly with slats to accommodate the wider rolls) and sit the spinning jenny on the back of a vehicle and drive the vehicle along the fence line, letting the roll out as you go. **This stops the rail being dragged in the dirt and over sharp objects.** Ensure that you have attached one end or the rail to the end-assembly before commencing. For small quantities and where you do not have a spinning jenny, the roll can be sat on a smooth flat square (carpet or rug or tin or plastic) on the back of the utility and fed out with a board to stop the roll from sliding off the tray or while a second person walks behind to stop the roll from being dragged off the tray. **DO NOT** attempt to roll out the rail along the ground, it becomes unmanageable very quickly.

Attaching Horserail Rail

General Comment

Whether it is the seasonal change of temperature or an accidental crash into the fence, it is almost inevitable that in time, some rail or coated wire tension will be lost. We strongly advise that at least one spooler be incorporated into every 100meters of coated rail. This will allow for adjustment to maintain tension on the rail and ensure that your investment is visually attractive.

Pre Tensioning

The use of a chain grab wire strainer (come-a-long) can make the tensioning of rail a much easier operation although 'hand' tension is adequate for shorter runs (less than 200 meters). Remember the Spooler has limited rail storage capacity. An attachment Buckle must be initially fitted at one end of the line and attached to the End Post. This will hold the end of the rail while laying it out along the fence line. Gently pretension the rail prior to attaching the other End attachment Buckle (Remember to slide on a Spooler if you haven't done so already). Note: The rail should be attached to all posts prior to pre-tensioning as this will reduce the pressure required to carry out the initial tension. Care must be taken when using the chain garb wire strainers as over5 tensioning will damage the edge of the rail.

Staples and Brackets

Brackets come in three configurations:

1. For Top of Post attachment so the rail is attached flush to the top of the post. [Top of post brackets]
2. For inside corners, where the rail is mounted on the inside of a curve, such as an arena. [Inside curve brackets]
3. For normal use. [Flat brackets]

They may be attached using four self tapping galvanized screws, ring shank galvanized nails, a staple top and bottom or two staples at the top and two at the bottom.

Staples: Square long leg 4" staples are available for attaching the rail to wooden posts. They are NOT recommended in pressure areas or where NO Hotcote is used.



Tensioning Horserail - Using Spoolers

The Horserail Spooler should be used to tension the rail Note: The spooler has limited rail storage capacity; the initial rail tension should be done with a chain grab wire strainer or by hand on shorter runs (under 200 meters) before tensioning.

- Use a speed square to assist with square cut ends.
- Always place the spooler on the rail before fitting the end attachment Buckle.
- Always keep the hub of the Spooler at right angles to the rail
- For a neat appearance at the end posts, rotate the spooler in a direction that keeps the rail on the same side of the Spooler hub as the posts.
- To make the installation easier and safer, use two ratchet handles (one at each end of the Spooler hub) for tightening. A long handled ½” (12mm) drive ratchet can be used.
- Always pull with both handles. Hold with one and ratchet back with the other and hold. Ratchet back with the first, before pulling with both again.
- Practice first. Get someone to lightly hold the hub and practice the sequence of ratcheting the spooler with two 12 mm (1/2”) drive handles. You can use a wooden cradle to help hold spooler at the correct angle (contact us for details)
- When tensioning, it is helpful to use two people: one to ratchet, one to assist with the alignment and to lock the pins on place.
- Always pull the handles towards you, NOT away from you. Please be careful.
- Don't over tension the rail.
- Safety First – use safety eyeglasses and gloves.

It is not as economical to have a spooler at each end of a short fence. One positioned at one end will be adequate. One Spooler in the middle is acceptable especially when there is a top horizontal post or pipe.

The new 2-part Spooler is ideal for fitting onto the rail after you have already attached the rail to the posts but you are wanting to tension the rail at some point in the fence line.

Using In-Line Permanent Wire Strainers

The use of these ratchet style permanent in line wire strainers is only recommended for the tensioning of coated wires.

Joining Rail

Using the Joining Buckle: Ensure that the end of the rail has been cut square, using a speed square. Simply scribe the rail with a knife, cut the wires using wire cutters and the rail will pull apart. To ensure that the join is neat and square you must make sure the bends are square to the rail. This ensures that the rail is matching and flat when joined.

Crimping is not essential but it does look a lot tidier than trying to tie a knot.

Temporary Fencing

By using the unique Horserail Attachment and Joining Buckles and brackets, Horserail is very easy to take down, move or just reconfigure. Our latest innovation, the NEW 2-part spooler allows you to replace the tensioner where ever it is required.

Help Desk

If you have any questions, please feel free to contact:

Horserail International on 0800 765 9724