

# Introduction

Building horse facilities is an expensive operation. Therefore, planning what you are going to have built, or build yourself, is an important first step. Time spent in the planning stage will help to save time and money later on. This book will help you to make the correct decisions and spend money on the right things. It is a guide, but make sure you do lots of other research as well; you can never have too much knowledge.

This book is about a *practical* approach to planning and building horse facilities. Remember - your 'dream' may be your horses' 'nightmare'. It is important that you learn as much as possible about horse behaviour before committing to any expensive projects. When planning and building any horse facilities, it is also good idea to talk to other people who have carried out similar projects and see what you can learn from them.

This book starts with extensive information about **horse housing/holding facilities** e.g. surfaced holding yards, shade/shelters and then stables. The next chapter covers **fences and gates/gateways**. After that comes **riding arenas and training yards**. Then it is on to the **planning** section of the book. The book includes information about **The Equicentral System**, a total equine management system that allows you to manage your horse/s, your land, the environment *and* your lifestyle in a sustainable way - a win-win situation all round.

*Good planning leads to a beautiful horse property that is enjoyable for all.*



# Chapter 1: Horse housing/holding facilities

If you plan to practice good land management, then you need areas for holding horses. Horses naturally spend around 12–16 hours a day grazing. That means that if horses are on the land 24 hours a day, they are also standing around/playing etc. ('loafing') and sleeping for 8–12 hours a day. Without horse holding areas, these other behaviours are taking place on your precious pasture, which results in compacted soil and its associated problems – less biodiversity, less pasture/more weeds/soil erosion/mud/dust etc. Therefore, problems are being created for the future which will take time and money to fix.

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Horse holding areas generally take the form of surfaced holding yards with shade/shelters and/or stables, with or without yards attached. In addition to reducing unnecessary hoof pressure and its resultant wear and tear on the land, these areas are also useful for giving individual horses supplementary feed and for tacking horses up for work etc.

**The sorts of questions that you need to answer before you build or make changes to your existing horse housing/holding facilities are:**

- What do you *really* need?
- What would *your horses* prefer?
- What are the *priorities*?
- What can you *afford*?

- Can you *amalgamate* facilities for better use of funds/space?
- What will be *cost effective*?
- What will make the task of caring for horses *easier*?

## Surfaced holding yards

Surfaced holding yards are called various names in different parts of the world. In the US these areas are commonly called 'dry lots'. In the UK they are sometimes called 'turn out areas', although they are still quite rare despite being desperately needed in such a wet climate. In Australia and New Zealand, like the UK, they have been slow to catch on to date. At Equiculture, we like and use the term 'surfaced holding yards'.

Traditional horse properties have stables for horses, but these are not usually the best type of facility for keeping horses.

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See ***The Equicentral System Series Book 1 – Horse Ownership Responsible Sustainable Ethical*** for a discussion about how and why stables evolved. See also the section ***Why stables?*** in this book.

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Surfaced holding yards are vital in order to manage the grazing pressure that horses can inflict during dry or wet times of the year. They also allow you to manage the pasture intake of horses at the times of the year when pasture is

abundant, therefore saving some for later when it may not be growing as well or not at all, and when the horses need supplementary feed.

Surfaced holding yards allow you to manage these booms and slumps so that your horses do not end up obese or underweight and your land does not end up degraded. This strategy will help you to grow healthy 'happy' pasture.

Surfaced holding yards can be used to *vastly* reduce the amount of pressure your horses inflict on the land, without compromising their behaviour or necessarily reducing their time spent grazing. However, if you do need to reduce their time spent grazing, surfaced holding yards allow you to do this.

**There are so many benefits to keeping horses off the land when they are not actually grazing. These include:**

- Better mud management, in fact, mud should become a thing of the past.
- Better dust management. Dust is related to mud, no mud – no dust.
- Fewer or even no instances of skin conditions caused by mud e.g. goodbye to greasy heel/mud fever etc.
- Better weed seed management by confining weed seeds from hay, something that is especially important if that hay is bought in rather than made on the property.
- Better manure management. Manure is easier to pick up from surfaced areas and this collected manure can be composted and put back on the land to increase the organic matter of your soil.
- More pasture over time – by holding your horses at the right time, the pasture gets in front of the horses rather than lagging behind the horses. You will therefore have healthier, 'happier' plants.
- Increased biodiversity - by removing horses before they overgraze the plants, the less robust plants get chance to set seed and thrive.
- Increased opportunity for cross-grazing and all the benefits that this provides - e.g. better weed management, better parasitic worm management, a reduction of pasture plant wastage due to the 'roughs' and 'lawns' that are created when horses only graze a pasture. This also means that you can produce your own meat if you wish.

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See ***The Equicentral System Series Book 2 - Healthy Land, Healthy Pasture, Healthy Horses*** for information about land/pasture and manure management.

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Individual holding yards or one larger surfaced holding yard can be built for pairs or even groups of horses. If you have more than one herd to accommodate, this larger surfaced holding yard can be replicated for each herd.

A large surfaced holding yard can be integrated into a system of management whereby the paddocks are linked back to a central area to which horses can take themselves, see Appendix: [\*\*The Equicentral System\*\*](#) for information about our total land management system. Since these areas cost money to set up, it is worth considering how you can maximise their use; with a bit of extra thought and planning, a large surfaced holding yard can also be used for riding or for stock work – see the section [\*\*Can this area be multipurpose?\*\*](#)

A horse property usually benefits from having surfaced holding yards, even if there are stables already on the property. Stables are often too hot to use during summer (depending on the materials used to build them and the climate) and it is during the heat of the day that horses most need shade. At this time of day, horses like to stand around swishing their tail at flies and dozing, behaviour which causes compaction to your land over time. Surfaced holding yards can either be attached to the stable complex if you are building one, or be separate to them.

If the property has stables and the stables are used regularly, it makes sense to have outside yards attached directly to them if possible, as opposed to having them situated in a separate area. This will save a lot of time moving horses

between the two and save doubling up on buildings e.g. building stables *and* shelters, because the surfaced holding yards will need a shelter. However, keep in mind that on a hot day, an enclosed stable may be too hot to retreat to (from an attached yard), so some outside shade may still be required. This could be something as simple as 'shade sails' attached to the roof of the building.

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As mentioned before, stables are, in most cases, unnecessary and the same money can instead be put to better use building surfaced holding yards that with good shelter. This type of surfaced holding yard works well on its own, without the need for stables; stables alone, on the other hand are not ideal. These surfaced holding yards are then comfortable for horses to use at *any* time of the day throughout the year and vastly reduce the amount of wear and tear on the land.

**Surfaced holding yards are invaluable in terms of land management and plenty of thought should go into their construction.**

## **Holding yard size and shape**

A common mistake is to make *individual holding* yards that are either too large or too small. If they are too large they are expensive to build and maintain e.g. more surface material and fencing is required and they use up too much space that could otherwise be dedicated to growing pasture. Keep in mind that unless horses

are grazing and/or with other horses, they do not tend to move much at all, therefore providing them with a very large area (that is not under pasture) does not necessarily mean that they will get essential exercise. Horses do not understand the concept of 'keeping fit' and will only move if there is a reason (from their point of view) to move.

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If surfaced holding yards are too small or narrow, the horse will be *too* confined and unable to roll safely or move around comfortably. In addition, if the horse is positioned next to another yarded horse, one horse can intimidate the other, even if there is a fence between them. This is because supplementary feed *creates* this behaviour in domestic horses, not because horses are aggressive just for the sake of it.

A good size to aim for with *individual holding* yards is between 50sq.m to 100sq.m per holding yard (60sq.yds. to 120sq.yds.). A *surfaced holding yard* can be roughly multiples of 50sq.m (60sq.yds.) per horse. The corners are best rounded off to avoid horses becoming trapped by other horses.

Keep in mind that feeding concentrate supplements to horses causes them to be more competitive than when they are simply grazing or eating hay. In the confines of a small area, even the best of friends can injure each other at feed times (see Appendix: [\*\*Feeding confined horses\*\*](#)). If space and budget allows, a

larger surfaced holding yard with individual holding yards attached directly to the outside gives the best of both worlds.

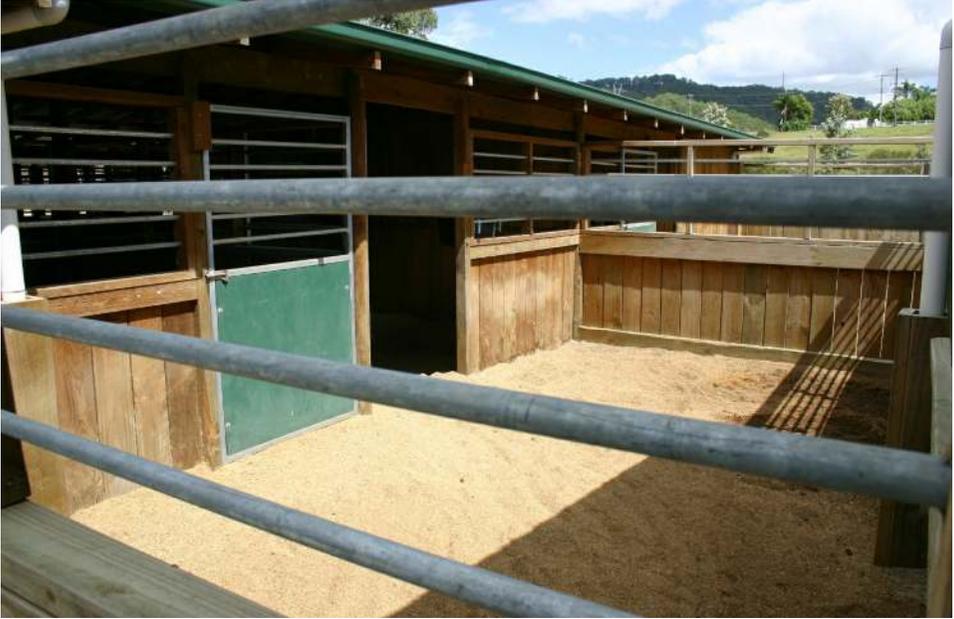
*Think about what will be the optimum size for surfaced holding yards. A good size to aim for with individual holding yards is between 50sq.m to 100sq.m per holding yard (60sq.yds. to 120sq.yds.)*



If you are also planning to use a riding arena or training yard as a surfaced holding yard, you will need to integrate the required size of both and go with whichever is larger. The corners can be easily rounded off by fixing a rail across each one.

If you are building (or already have) stables, keep in mind that long narrow yards, whilst not ideal, are sometimes unavoidable when they are attached to standard size stables. A possible option for surfaced holding yards that are attached to stables is to have one larger yard per two stables that two horses can use for part of each day/night on a rotational basis. If space and budget allows, have stables that are double the standard width, which then allows surfaced holding yards that are approximately 7m (24ft) wide. Yet another option if you are planning to build just four to six stables is to have them arranged in a U shape, giving more room around the outside for surfaced holding yards. Of course, if you are building surfaced holding yards *instead* of stables, you are then free to make them any size and shape you like.

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## **Holding yard surface**

The subsurface of surfaced holding yards can be permeable, but should preferably be impermeable, as this prevents the leaching of nutrients into any underground water (the water table). Compacted limestone will achieve this. In sensitive areas, for example near a watercourse, it may be necessary to lay a concrete base or use a rubber matting/concrete or limestone combination to prevent any leaching. If rubber mats are used, you will need to place absorbent bedding in one area of the surfaced holding yard to encourage urination and soak up urine; horses do not like to urinate on a hard surface as it then splashes on their legs. Other possibilities for a sub-surface are to compact the existing sub soil, after removing the topsoil, or excavate this sub soil and replace with layers of progressively finer material starting with rocks and ending up with fine gravel, compacting each layer as it is laid.

This sub surface will usually require a top surface that is more horse friendly than the subsurface might be, and also needs to be able to cope with wet weather. Top surface materials can be various types of sand, sawdust, shavings, pine bark, shell grit, or fine gravel etc. Various types of rubber are also available that may be worth considering.

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When horses eat directly off sand, they inadvertently pick up grains of it along with the feed. The sand then collects in the gut and *can* lead to sand colic over time. Rubber mats create a better feeding area than sand so in this case, it can work well to partially surface a sand surfaced holding yard with rubber mats.

Yet another alternative is to use rubber for the whole surface of the yard. Either solid rubber 'pavers' or porous rubber 'pavers' can be used. These have various names as there are various manufacturers that produce them, you will need to do some homework and find out if they are available in your locality and if they will be cost effective and suitable for your climate etc.

Materials have different names from region to region, so ask around about what is available in your area. What you use will depend on factors such as your budget, the climate, the local availability of materials and the amount of shelter over the surfaced holding yard.

*This is a porous rubber product used for the whole of the yard surface. In this case grass has been allowed to grow through it.*



If you are building a riding arena or training yard that will also be used as a surfaced holding yard (as mentioned in the previous section), then whatever surface you decide on for that will also be fine for using as a surfaced holding yard, so let that take precedence (see the sections about surfaces in the relevant sections about riding arenas and training yards).

The surfaced holding yards should have a slight slope (2% to 4%) for surface runoff, but otherwise be fairly level, because horses should never be forced to stand on a significant slope for long periods of time. Horses can suffer from premature joint problems if kept in such conditions, because they have no sideways flexion in their leg joints; an evolutionary strategy to allow them to gallop over 'rough' surfaces. Remember - in the wild horses can move themselves if they are uncomfortable, whereas a domestic horse is unable to do this, so forcing them to stand on a slope is not good.

Runoff water from other areas should not be allowed to pass through the surfaced holding yards, so water collection tanks should be fitted to any shelters or stables and drainage channels should be installed around the surfaced holding yards to channel water around them, rather than through them.

A buffer zone of plants and bushes can be grown around the surfaced holding yard area and this vegetation will act as a filter for any runoff from the yards, whilst at the same time helping to retain the surface. 'Sleepers' or logs can also be used to help retain the surface, although vegetation can work just as well and is cheaper. Check that any plants are not poisonous; it is better if the horses cannot

actually reach them even if they are safe to eat, because the horses will overgraze them and the plants will not be able to thrive.

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## Holding yard fences

All fences on a horse property should be **strong and safe** however, the smaller the area a horse is confined to, the more a horse comes into contact with the fence, and therefore this rule is especially true for fencing around surfaced holding yards.

Also the smaller the area horses are to be held in is, the **higher and stronger** the fence should be.

So, whereas a paddock fence can usually be 1.2m (3.9ft), a surfaced holding yard fence should usually be higher. A better height for surfaced holding yard fences is 1.4m (4.5ft) or higher. However, this is all very dependent on what you plan to do with your horses. Older, quieter horses are not as likely to challenge a fence as younger or insecure horses. If you are planning to hold a horse in a surfaced holding yard while, you take their companion for exercise for example, the surfaced holding yard may need a strong, high fence. Also, whereas a simple plain wire fence may be fine for a paddock, a more solid type of fence is usually required for a surfaced holding yard.

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See the section [Fence types](#) for more detailed information about each type of fencing mentioned below. In this section, the fence types are discussed with relevance to their suitability as a surfaced holding yard fence only.

Plain board fencing (post and rail) is a common type of fencing for surfaced holding yards, however the wood can splinter and cause injuries. Some types of

wood splinter more easily than others, so do some research about the types of wood you have available to you before deciding. Treated pine posts and rails are usually cheaper than hardwood, but may be poisonous if horses chew them. Wooden fencing also tends to be high maintenance and can soon start to look unkempt unless regularly serviced. Electric fencing is not a good idea for surfaced holding yards as it can result in the horse/s not being able to move freely without fear of touching the fence.

Steel fences, made from recycled steel pipe or commercial livestock steel fence panels are a very suitable option for surfaced holding yard fences and are *reasonably* safe when two horses are positioned on either side of a fence in individual holding yards. Horses should be able to interact reasonably safely with one another over the fence, providing each horse has enough space to avoid unwanted attention.

Mesh fencing should only be used in surfaced holding yards if it is strong enough for horses and the gaps are small enough to prevent a hoof from getting caught. Generally speaking, a commercial horse mesh fence is fine in this situation, but other types of mesh – such as ‘dog fence’ or ‘ringlock’ are not.

Surfaced holding yard gates should swing both ways, should lie flat against fence when open, be free of any projections and be wide enough to get machinery into the surfaced holding yard for topping up the surface and any maintenance work. See the section [Gates and gateways](#).

The subject of horses interacting over a fence is tricky; if horses start to play over a fence, they can get into serious trouble. Keeping horses together will prevent this scenario and horses usually cause less damage to each other than fences do to horses (ask any horse vet!).

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