

Property design

Designing your own horse property can be very rewarding, but it can also be frustrating because if you make the wrong decisions now you have to live with them forevermore (or sell the property and start again!). More time spent in planning and preparation will lead to more informed decision making. So take your time and gather as much information as possible. You won't regret it.

Suitable positioning of fences, lane ways, buildings and yards is essential for the environment as well as the successful operation and management of a horse property. If it is well planned, it will be safe, efficient, stress reducing and save money through reduced labour and running costs. It will also be more aesthetically pleasing property, a much better place to live and therefore a more valuable piece of real estate.

When planning your property, remember it may take many years to achieve your goals. See it as a never-ending journey and enjoy the trip, but, be flexible and accept that your own ideas will inevitably change as you gain experience.



Influencing factors

When planning a property there are environmental, economic, ergonomic, safety and aesthetic factors that should be taken into consideration. Checking that each decision you make takes these factors into account will help you make more informed decisions.

Environmental factors: This involves thinking out how the environment will affect the property and vice versa. Plan to have the least possible negative impact on the environment and where necessary, enhancing the environment should be major concerns. The elements (wind, water, earth and fire) and how to manage these is crucial and likewise the management of flora and fauna. Where to plant vegetation for shade and what surfaces to put where to reduce dust and mud are all essential considerations.

Economic factors: Your budget will determine what you can do and when you can do it. Planning will help you to prioritise projects. Strategically organising an area that the horses can be confined to (yards with shelters for example) as soon as possible will minimise the damage that horses can do if allowed free range access to a small property. What type of fences to use will make a big difference to how much money you have to spend on other fixtures. Planting trees and improving pasture should be the priorities.

Ergonomics: Ergonomic considerations includes the organisation of your working environment for ease of use, for example the logistics of moving horses and possibly vehicles around the property. Provision needs to be made for feeding out, handling horses and parking vehicles. It takes into account where the house, buildings and other horse facilities will be situated in relation to each other in order to reduce extra work. Areas that will be used most frequently need to be identified.

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Ultimately good ergonomics leads to a better lifestyle as good design reduces hard work and creates a safer and more pleasant working environment.

Safety factors. This means planning to build facilities that will be safe for people and horses. To achieve this you need to take factors such as horse behaviour into account. For example if paddocks come to a narrow point at the entrance there is a much greater risk that horses will get kicked by another horse (this situation is also very dangerous for people) when leading them in and out of the area. All facilities must have smooth edges and recessed fittings. There should be no small areas that horses can get parts of themselves (such as their head or their hoof) trapped in.

Aesthetics: what a property looks like is important. It is a much nicer experience to live and work in a beautiful environment than an ugly one. Planning with the environment in mind will also lead to an aesthetically pleasing property. A property with no trees, polluted water and bare overgrazed paddocks is grating to the eye whereas clean water and green paddocks are beautiful. Good environmental planning and management leads to a more aesthetically pleasing property.

Property design - part 2 - Environmental management

Achieving healthy environmental management of your property is as important as caring for your horse. It will lead to a better 'lifestyle' for your horses and boost their well being. Horses are not native to Australia or New Zealand and have a huge impact on the environment if they are not managed appropriately. At the same time horses thrive much better in an environment that is as close to natural as possible. This means that horses should have access to pasture and clean water - at least for part of each day - the companionship of other horses - this social imperative is often overlooked - and shade and shelter.

Fortunately good environmental management is integral to equine health and this and the other issues discussed above should suffice to motivate you to do the right thing for the environment. One adverse result of inadequate property management that impacts on equine health is the problem of dust and mud. These conditions cause acute and chronic health issues such as respiratory disorders (dust), eye problems (dust) and skin abnormalities such as greasy heel (mud) and slipping injuries (mud). By sustaining vegetation cover through good grazing management these and many other problems such as soil loss and compaction are avoided and more grass can be grown. The situation becomes a win win for humans and horses alike.

Horse property owners can benefit the environment greatly by providing habitat for wildlife. This need not detract from available grazing land but will enhance it. Fencing off dams and waterways enables vegetation to flourish (make sure that fencing allows native animals to pass through - preferably linking the area to others to create wildlife corridors). At times, new vegetation will need to be planted if the case of a badly degraded area. Protecting waterways with fencing and re-vegetating creates riparian zones. A riparian zone is a belt of mixed height vegetation which filters out harmful nutrients before they reach the waterway. Nutrients such as phosphorus and nitrogen in horse manure are causing major environmental problems in both local waterways and the sea. We must develop measures to ensure that these detrimental nutrients do not leave our property.



Creating habitat for wildlife such as insect eating frogs, birds and sugar gliders has great advantages for all concerned. These animals eat thousands of pest insects a day. Old hollow trees and logs should be left alone as native animals rely on them for habitat. In fact you must look at

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providing man made habitat if there are no natural examples around. It takes many years for these to develop naturally. Speak to your local Landcare group (or similar) for advice. Vegetation also shades the water if planted next to waterway and water does not evaporate as quickly when the weather is hot. This cleaner cooler water can then be reticulated (collected and distributed via tanks, pumps and troughs) around the property as and when needed.

Planting new and protecting existing trees enhances your property and the look of the surrounding area. We have all heard of the latest buzz term 'carbon offsetting'. By nurturing flora you are assisting in the reduction of carbon based pollutants in the atmosphere. A better managed property with healthy diverse flora provides a habitat conducive to many native animals. This is called an ecosystem. The more diverse the ecosystem the better it can cope with environmental disasters such as floods, drought, pests and disease.

Twenty first century horse management need not be detrimental to the environment or the horse. In fact horses can live in reasonable harmony with the environment much more so than many other domesticated animals such as cats and dogs because they are a herbivore rather than a predator. It is possible to create horse care systems that once established are easy to sustain in terms of time and expense and are not only less damaging but can enhance the environment. And this is conducive with the natural life style of horses resulting in less stress for them and a better lifestyle for yourself and your neighbours.

Property design - part 3 - economic factors

It is always difficult to know where to start when you buy a property. Most people have a budget and in many cases just buying the property in the first place has used all available funds. You need to separate what you want from what you, your horses and your property needs. Many people start with the fences (external and internal) and perhaps constructing an arena and stables.

The most important fences are the external ones. These keep your horses on the property and can also keep intruders out (depending on the construction). I usually recommend that the fences are done in two stages. The external fences should be done ASAP if they are not already safe when you buy the property. The internal fences can come later, even a year or two later, meanwhile temporary electric fencing can be used.



Leaving the permanent internal fences until later has many benefits. It enables you to carry out pasture improvement without solid fences getting in the way. It allows you more time to plan where the internal fences need to go (there are many factors to take into consideration) and it saves money that can be spent on pasture improvements (which will save you money on feed). This way you will have more money available for an arena/buildings and more fencing further down the track.

Pasture improvements should be a major priority and carried out as soon as possible. These improvements will actually save you money in the long run which will enable you to get the things that you want sooner. Planting trees on the boundaries for bio-security, wildlife habitat, and the many many benefits that they provide, should also be done as soon as you can. Your neighbours, your animals, the wildlife and the environment will reap the benefits sooner.

If the property is commercial then an arena or work yard may be necessary from the beginning so that you can get on with business. An arena or yard is a large expense if done properly and it is important that you get it right the first time, both in terms of where you put it and correct construction, so plan it well and get as much qualified advice as possible. Probably the biggest

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mistake that people make is that they do not get the base right, economising on the base leads to a compromised arena that will require more expense further down the track to correct it.

An area to confine your horses is important, especially on a small horse property. When the land is improved your horses will be able to spend more time grazing but there will always be times of the year when horses have to be confined either because there is too much or not enough grass. These yards will be invaluable in terms of property management and plenty of thought should go into their construction.

Initially temporary yards can be constructed using electric tape. Make them large enough so that horses do not come into contact with the fence every time they turn around. Approximately 100 square meters per horse should be adequate. Solid fenced yards (such as steel or post and rail) can be smaller. Around 50 squares up to 100 squares is OK but keep in mind that they will probably need a surface so the larger they are the more the surface costs.



These yards will require some form of shelter/shade. This can range from trees, to shade sails to moveable or permanent shelters/stables. Again shelters/stables are a large outlay so take time to plan them. In many parts of Australia stables are not usually necessary - and can even be unusable in the hot weather - yards with a simple shelter (such as a carport style roof) have many more benefits. Trees can be planted outside the yards that will function as windbreaks. If flying foxes are an issue in your area do not plant trees that will attract them (flying foxes - a type of bat - are implicated in the Hendra disease that effects people as well as horses).

Property design - part 4 - ergonomics

Ergonomics is about organising your working environment for ease and safety of use. On a horse property this includes the logistics of safely moving horses and possibly vehicles around the property. It also encompasses planning for feeding out, handling horses and parking vehicles etc and taking into account where the house, buildings and other horse facilities will be situated in relation to each other in order to minimise work and increase safety. When planning horse properties it is also essential to take horse behaviour into consideration. Areas that will be used most frequently by horses and humans must be identified. Ultimately good ergonomics leads to a better lifestyle as good design reduces hard work, accidents and stress.

A good laneway system means that horses (and vehicles) can be moved around the property quickly and safely. It is not safe to lead a horse through a paddock that contains loose horses for example. Laneways may need to be surfaced (road base or similar) depending on the amount of usage they receive and should be wide enough for a vehicle plus several metres extra for trees and/or bushes. Trees and bushes planted on the outside edges of the laneway provide many benefits including the provision of shade and shelter for horses and habitat for wildlife (be careful not to plant trees that attract flying foxes - a type of bat). A good laneway system means that feeding out takes less time and is safer. If the horses run in herds they can be moved around en masse, when necessary, via the laneways. Laneways can also double up as exercise tracks in some instances.



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Facilities should be designed so that less experienced people than yourself can feed and move horses around safely if necessary. There may be a time when you have to be away and friends or family members have to look after your animals. Inexperienced people should never have to walk into an area to feed loose horses for example, and even experienced people should avoid this situation.



An arena should be situated where riders can be seen easily. On a busy horse property this may be near the stables where there are other people about. On a small property it may need to be near the house. Trees can be planted strategically to reduce dust and to create shade for the arena. Preferably, the arena should be near the tack room so that if you need extra equipment while riding it is not too far away. Alternatively a small shed can be positioned on the edge of the arena for gear items (such as lunging equipment) that are frequently needed.

The area for tacking up horses should be situated where the horse can still see other horses. My own preference is for the yards/stables/tacking areas to be near the house (good stable management means that smells and flies should not be a problem). This way you can check easily on a sick horse late at night etc when necessary. Tack rooms and feed rooms should be separate as the latter create a lot of dust. Large amounts of hay should not be stored near stables or yards due to fire risks.

A well planned property will provide economic and safety benefits, be pleasing to the eye and save plenty of time and effort.

Property design part - 5 - Safety

A property should be safe for all that live there including humans (residents and visitors), horses, livestock and pets. The design of the property should also take into account that people less experienced than yourself may need to take care of your animals if you are away.

The driveway of the property should not be rutted or unduly steep. It should be possible to see in both directions along the road when pulling out of the driveway. Remember that when towing a horse trailer more time is needed as you need to pull away more slowly than when driving just a car. Property gates should be positioned so that longer vehicles can pull in off the road safely while the driver opens or closes the gate. The property gate can be positioned at the house end of the driveway if this means that vehicles do not have to be parked on a slope while the gate is opened/closed.



Horses and sometimes vehicles will need to be moved around a property efficiently in all weathers and preferably without having to go through one paddock to get to another. It is not safe to lead a horse through a paddock that contains other horses. Laneways should ideally link paddocks to the main facilities area for convenience and safety. In wetter climates you may need to surface some or all laneways. Look out for local road works. The old road surface can make an excellent (and often free) base material for a laneway.

There should be no protruding objects in stables, around buildings or in fences/gateways that horses can get hung up on or bang into or inadvertently knock a handler into. This is especially true for gateways where horses and people come into close contact with one another. Make sure all gate

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fasteners are recessed or around the back of the post (into the fence line) as many injuries are caused by fasteners that protrude into openings.



Safe fences are a must on a horse property. More expensive is not always safer. A horse can and will injure itself on any type of fence. Generally speaking the smaller the area the more solid the fence needs to be. Therefore yard fences need to be high and made of heavy duty materials if they are going to hold horses properly. A good solid yard will be necessary if you wish to leave one horse at home while you take its mate out for a ride. External fences must be strong. Posts and wire should be the minimum. These can then be enhanced with electric fencing. Internal paddock fencing can be less substantial (i.e. electric only) if the horses are turned out to graze on good grass. If grazing is good horses will spend time eating rather than looking for ways to get into the next paddock or try to eat the

grass on the other side of the fence (the grass is always greener on the other side of the fence!). Whatever fencing material is used it must be smooth and strong.

Consider additional gates in boundary fences in case you need to evacuate your horses in the event of flood or fire, think of these as your 'emergency exits'. These gates might open onto a neighbouring property if it has higher ground. This would be my preference rather than gates that lead out on to roads from paddocks.

Just as stables are prone to fire so are paddocks and vegetation. Horse properties are often located in the bush where grass and bush fires are common. It is therefore imperative to develop a fire response plan in case of emergencies. Local fire services are often happy to give advice. Make sure you read "The Victorian Department of Primary Industries Horses and Bushfires Agnote : AG0858". This Agnote was published in November 1999 and was updated March 2009 after the recent spate of devastating Victorian Bushfires. This is a must read for all horse property owners. To find it go to the the Victorian Department of Primary Industries (DPI) website which is www.dpi.vic.gov.au. Go to the Animals and Livestock section and then the Horses section, here you will find a section called Horses - Information Notes. The bushfire agnote is in this section along with many other useful agnotes including one on flood planning.

Alternatively [click here](#) to go straight to the page for the bushfire agnote



An finally to return to aesthetics, as I mentioned earlier by putting all of these factors into place, the aesthetic will take care of themselves. You will end up with a safe, productive efficient property which will by default look great and stand out from its neighbours. By following these simple guidelines, you will have a property which will enhance your lifestyle, demonstrate good management practices and be admired by horse owners and the wider community.

More information on the subject of sustainable horse keeping can be found in our book **Managing Horses on Small Properties** or by

attending one of our seminars by the same name. Further articles on this and similar subjects will be published on our website www.equiculture.com.au

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