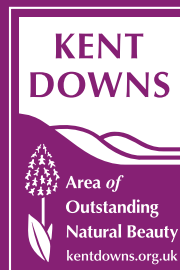


# MANAGING LAND FOR HORSES

a guide to good practice in the  
Kent Downs Area of Outstanding Natural Beauty



**Kent Downs AONB Unit**  
West Barn, Penstock Hall Farm  
Canterbury Road  
East Brabourne  
Ashford  
Kent TN25 5LL

Tel: 01303 815170  
Email: [mail@kentdowns.org.uk](mailto:mail@kentdowns.org.uk)  
Web: [www.kentdowns.org.uk](http://www.kentdowns.org.uk)

# MANAGING LAND FOR HORSES

a guide to good practice in the  
Kent Downs Area of Outstanding Natural Beauty

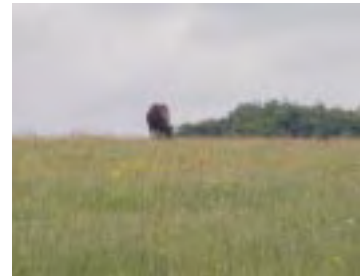
2011





## Contents

<b>Introduction</b>	<b>1</b>
<b>Grassland management</b>	<b>3</b>
Introduction	3
Needs of horses	4
Grasses for horses	7
Grass species for horses	9
Other plant species for horses	10
Managing horses and grassland	11
Good land management practices	15
Gateways	18
Manure	19
Weeds	20
Fertilisers	21
Rolling, harrowing and mowing	22
Hay making	23
Wildflower meadows	25
Enhance your grassland	26
Trees and hedges	29
Table of monthly activities	33
Grants	36
Single Payment Scheme	36
Environmental Stewardship	36
Summary	38
Need for planning permission	40



<b>Fencing</b>	<b>41</b>
Fencing around arenas	45
Summary	45
<b>Equine waste management</b>	<b>47</b>
Manure	47
Regulations	48
Other equestrian waste	55
<b>Buildings and development</b>	<b>57</b>
Planning regulations in relation to equine activity	57
When do you need planning permission?	58
The planning process	59
When you make your application	59
Additional information	60
<b>Further information</b>	<b>67</b>
Grass seed suppliers	67
Sources of information about horse welfare and horse keeping	69
Other sources of information about landscape and environment	69
Other sources of information about planning issues	69
References	70



## Introduction

Keeping horses is tremendously rewarding and a good form of healthy exercise but balancing the needs of the horse and the land can present various challenges, especially when managing horses with different needs. All horses can have a positive impact on landscape and the adoption of good practices can bring advantages for animal health and welfare, economics and the environment. This is a guide for recreational horse owners and land managers, which aims to provide information on achieving good land management and limiting the potentially negative impacts of horse keeping on the wider environment. This will help to foster a positive impression of the industry and demonstrate that horses can be successfully integrated into a grazed landscape without 'ruining' land.

Today there are around 1.35 million horses in the UK (BETA National Equestrian Survey 2006) being kept essentially for leisure purposes. Without due care these numbers, along with changes to agricultural practices and lifestyles, can affect the quality and character of the landscape and have an impact on wildlife and the environment. The equine industry is the second largest rural employer and generates a gross output of £3.4 billion (Strategy for the Horse Industry Dec 2005\*). It is a tremendously valuable and important industry, meeting economic and health objectives.

\* The Horse Industry – Research by Defra and the British Horse Industry Confederation.  
Reviewed 17 January 2008.



Horses can have an extremely positive impact on the landscape and may have an increasingly important role to play as key grazers in areas where other livestock numbers are declining due to the current economics of farming sheep and cattle, disease problems affecting the livestock industry and the introduction of electronic ID for sheep. Ponies are being used as conservation grazers more and more by organisations such as the National Trust, local authorities and Wildlife Trusts.

This publication provides information and advice to help you to ensure that the impact of your horse keeping is positive and to demonstrate that horse owners take their land management responsibilities seriously. This document contains ideas on how to incorporate landscape protection and enhancement with horse keeping, many of which may also benefit your horses' health and well being.

This guide results from a two year South East England Development Agency (SEEDA) funded study (2007-09) to research and promote good practice horse pasture management to ensure that the economic contribution of the horse industry can be realised without negative impact on landscape, wildlife and the environment. This was part of the SEEDA Rural Sector Champions programme.

#### **NOTE**

Where the term 'horse/s' is used throughout this publication it encompasses horses, ponies, donkeys and mules.



## Grassland management

### *Introduction*

---

Horses are becoming increasingly significant grazers in our countryside. Native ponies, such as Exmoor and Dartmoor ponies, are now widely used to carry out conservation grazing on sensitive sites. Indeed in areas where livestock numbers are decreasing horses may have an important role to play in grazing land and with careful management horses can do this well. You don't have to have native ponies or existing conservation sites to make sure that horse keeping has a positive impact on the landscape, wildlife and the environment. Good pasture management can have benefits for horse health too.

Good land management practices ensure that soil erosion, run off and pollution do not occur due to horse keeping, and soils are not poached or compacted.

---

*Photos:* Grass is the cheapest form of forage so it is worth managing carefully; good grassland management has positive benefits for horse health, biodiversity and landscape; Exmoor ponies used for conservation grazing at a country park.





## *Needs of horses*

---

The RSPCA Five Freedoms that apply to farmed animals should equally apply to horses. They should be free from:

- Hunger and thirst – need constant supply of high fibre food.
- Discomfort – need shelter and suitable resting area
- Pain, injury and disease – need safety with good boundaries, suitable forage.
- Express normal behaviour – need sufficient space for exercise & herd behaviour.
- Fear and distress – avoid boredom, loneliness.

The dietary needs of horses centre upon the availability of a high fibre diet of low to medium digestibility. A mixed sward grassland, containing a variety of grasses and other plants, including timothy, crested dogstail, meadow foxtail, cocksfoot and various fescues, trefoils, plantains, yarrow etc is better suited to providing this kind of forage to a horse than the swards dominated by ryegrass species which have become more common these days. In their natural environment horses would graze for up to 16–18 hours a day and this would generally be high fibre forage sourced whilst roaming large areas as part of a herd. Around four hours would be spent in social activity, mutual grooming etc. Horses can also graze grass very short which is partly

---

*Photos:* Ryegrass species – unsuitable for most horses; species-rich grassland – provides forage more akin to the natural diet of horses; Connemara ponies grazing in their natural environment.



why they have gained such a poor reputation for their impact on land. Horses are the only domestic grazing animals that create latrine areas, which can lead to areas of 'roughs' and 'lawns' in a field where there is grazing pressure. Horses won't graze the areas they have dunged as a natural form of parasite control and so may graze other areas even shorter ('lawns'). Horses also naturally create some paths and bare patches, particularly as dust is a way of coping with the flies in the summer.

Horses are selective grazers, choosing some species over others at different times of the year thus a mixed species sward can encourage them to walk around their available land area, searching for the species they prefer and ensuring that exercise is taken while at pasture. This is more akin to the diet and lifestyle that horses would have had in the wild. Obesity, laminitis and associated metabolic disorders (equine Cushing's Disease, equine metabolic syndrome and others) are now increasingly prevalent in this country. Grazing a mixed species grassland combined with a sensible exercise programme and restriction of grazing during the peak grass growing times (May and Sept) can help to reduce the risk of these conditions. For more advice about managing obesity and potential laminitis in horses see The Blue Cross information pack 'Fat Horse Slim' or [www.fathorseslim.org.uk](http://www.fathorseslim.org.uk) Or refer to the British Horse Society (BHS) leaflet on laminitis, available at [www.bhs.org.uk](http://www.bhs.org.uk)

---

*Photos:* Weeds can take hold if grass is continuously grazed too low; poaching can lead to animal welfare issues such as mud fever as well as soil erosion, compaction and potential pollution incidents; Konik ponies used for conservation grazing.



The last 50 years has witnessed a dramatic change in the type of grassland used by farmers with the loss of 97% of species rich meadows. Under pressure to maximise milk/meat production, swards rich in vigorous, high yielding varieties of ryegrass species and clover have been extensively sown. Ryegrass species appear to be unsuitable for most classes of horse (the exceptions perhaps being thoroughbred youngstock, brood mares and competition horses) as they have been bred to be high yielding, highly digestible and can accrue high levels of water soluble carbohydrates. The water soluble carbohydrates have been implicated in the elicitation of laminitis in pastured horses. Unfortunately, most horse and pony grass seed mixes currently contain large quantities of perennial ryegrass (as much as 10.5kg in a 14kg bag of seed). Such swards potentially enable horses to indulge in a high calorie intake in a short space of time. As ryegrass species have been developed to be both quick to establish and persistent, ryegrasses will tend to out compete most other species that may be more suitable for horses. Moreover, more sensitive grass and plant species can be damaged by the regular inorganic fertilizer applications that ryegrass species need, thereby exacerbating the lack of diversity that is typical in a ryegrass dominated grassland.

---

*Photos:* Well managed horse pasture – sustainable stocking density maintained, not overgrazed, no build up of weeds or latrine areas; horses positively incorporated into the farmed landscape and indeed helping to manage old parkland and sensitive downland habitats.



## *Grasses for horses*

---

The table on page 9 lists some of the grasses suitable and favoured by horses. For a full list refer to the book 'Managing Grass for Horses' by Elizabeth O'Beirne Ranelagh.

Grassland that is consistently grazed below 2.5cm in height will become damaged and plant species may be lost, this is often the case with starvation paddocks or winter poached paddocks. Re-growth is likely to be predominantly weed species and in extreme cases re-seeding will be necessary. Avoid overgrazing to this extent as it not only causes a lot of damage to the land but can also lead to welfare problems in horses such as mud fever and gastric ulcers where there is no forage for long periods. It also causes problems in terms of soils erosion, compaction and run off. Where re-seeding becomes necessary opt for a seed mix with little or no ryegrass species. Check the makeup of the seed mix carefully before you buy (list of suppliers on page 67).

---

*Photos:* Overgrazed horse pasture where stocking density is too high; resting grassland is an important part of good management; horses turned out onto standing hay in late November – provides forage during the winter and the thick grass helps to prevent poaching during the wettest months.



Grazing horses on a mixed species grassland where the grass length is around 8cm or above going into winter can help to reduce poaching, maintain visual landscape quality, protect watercourses from runoff by maintaining soil and sward quality, provide forage and material for browsing, and should help to reduce the time horses spend standing around gateways. This also provides a wonderful habitat for wildlife, increasing biodiversity through enhanced populations of our native species including butterflies, other invertebrates, nesting mammals and birds, and allows grasses and wildflowers to set seed. Grazing standing hay (foggage) can help to reduce the need to buy in so much supplementary feed in the winter but the grass should be shut up for long enough to allow it to set seed before it is grazed by horses. Allowing the grass to set seed in this way also encourages species diversity.

---

*Photos:* Ribwort plantain, a useful plant in horse pasture; overgrazing can lead to weed encroachment and a reduction in the amount of land available for grazing; good pasture management can support a variety of wildlife; ringlet.

## *Grass species for horses*

---

<b>Species</b>	<b>Information</b>
Cocksfoot ( <i>Dactylis glomerata</i> )	Quite drought resistant and productive. Can become dominant in fertile conditions. Horses are happy to graze it, especially in winter, but prefer it young.
Common bent ( <i>Agrostis capillaries</i> )	Not affected by latrines. Tillers well.
Creeping bent ( <i>Agrostis stolonifera</i> )	Tolerant of a wide range of conditions. Favoured by horses. Tillers well and is productive in conditions of low nitrogen.
Crested dogtail ( <i>Cynosurus cristatus</i> )	Favoured by horses. Good winter grass. One of the most productive grasses where nitrogen is not applied.
Meadow fescue ( <i>Festuca pratensis</i> )	Often included in conservation and horse seed mixes. May be favoured by horses.
Red fescue ( <i>Festuca rubra</i> )	The native variety is one of the most palatable grasses to horses. One of the most productive grasses where no nitrogen is used. Very tolerant grass.
Rough and smooth (-stalked) meadow grasses ( <i>Poa trivialis</i> )	Stands up well to grazing, especially on heavy soils, and is palatable.
Sheep's fescue ( <i>Festuca ovina</i> )	Nutritious but low-yielding. Withstands heavy grazing, is drought resistant and tillers well. Prefers poor soils.
Timothy, catstail ( <i>Phleum pratense</i> and <i>Phleum bertolonii</i> )	A good grass on moist, heavy land and persists through winter. Leafy and high yielding, even with lack of nitrogen.

Taken from *Managing Grass for Horses: The Responsible Owner's Guide* by Elizabeth O'Beirne Ranelagh

## *Other plant species for horses*

---

<b>Species</b>	<b>Information</b>
Birdsfoot trefoil ( <i>Lotus corniculatus</i> )	Liked by horses.
Black medick, yellow trefoil ( <i>Medicago lupulina</i> )	Nutritious, grows freely on most soils.
Ribwort plantain ( <i>Plantago lanceolata</i> )	Common in grasslands , some horses will seek it out.
Yarrow ( <i>Achillea millefolium</i> )	Liked by horses. Deep rooting and full of minerals.

Taken from *Managing Grass for Horses: The Responsible Owner's Guide* by Elizabeth O'Beirne Ranelagh



## *Managing horses and grassland*

---

Many of the negative landscape impacts relating to the keeping of horses can be negated by operating a sustainable stocking density. Overgrazing increases the risk of harmful parasites building up in your pasture which pose a threat to your horse's health, looks unsightly, can lead to a negative impression of the horse industry, and creates an ideal seed bed (in poached or bare ground) for weeds and poisonous plants such as ragwort to become established. Poaching can lead to mud fever in horses and soil erosion, compaction and run off problems.

There are many factors to take into account when considering stocking density:

- Soil / type of land
- Grass type
- Management objectives
- Type and size of horse

---

*Photos:* 2nd from left, Yarrow; livery yard providing grazing in a herd environment at a sustainable stocking density that contributes positively to the management of old parkland.





### **Soil/type of land**

Horses can do a lot of damage in a short space of time in wet weather, especially on clay soils. A flexible approach to management of horse and land can help to prevent excessive damage, for example bringing in horses in very wet weather. If you have heavy clay soils it may be necessary to avoid turn out altogether during the winter as it can be extremely difficult to repair this type of land if badly damaged. Use yards or arenas for turn out in such circumstances where facilities allow. Sandy or chalky soils are more free draining so grazing at a sensible stocking density may be possible all year round.

### **Grass type**

A natural diet of mixed species grassland is the best you can offer your horse so try to manage your grassland so this can be provided all year round. A mixture of grass, herb and flower species will help to maintain a better soil structure and provide a broader range of nutrients and minerals to the horse. This type of grassland should enable you to graze more extensively and provide good forage and browsing material for your horse. A ryegrass species dominated sward will not create such a good soil structure and will provide a diet high in water soluble carbohydrates and low in fibre and increase the need for grazing to be restricted for most horses.

---

*Photos: Sward quality in species-rich grassland in March helped by realistic stocking density and long grass going into the winter; sustainable stocking density leading to well managed land; visually sensitive electric fencing.*



## Management objectives

Stocking density will also depend on what you want to achieve from the land. Do you want to supply all or most of the nutrient requirements of the horse from the land and provide year round grazing and turn out? Do you want to make hay from the land? If you intend to use the land for exercising then you need to take this into account when thinking about how much land will be needed.

If there is limited land available are you prepared to stable or yard horses more to prevent damage to the land, this obviously increases bedding and feeding costs and can have behavioural implications in some cases.

Consider how productive you want and need the land to be, this may depend on the work requirements of the horse. Are you prepared to use fertilisers and sprays bearing in mind that inorganic fertilisers create problems for horses and for grassland diversity?

Do you want to encourage wildlife in your pasture? Supporting a mixed species grassland will promote flora and fauna and it will be good for your horse. It is tremendously rewarding to see the wildlife benefits you can bring about.

---

*Photos:* Horses can be used to effectively manage species-rich grassland; grazing horses at a sensible stocking density can enhance wildflower meadows or species-rich chalk grassland as here; eating meadow hay during a snowy spell.



## Type and size of horse

The type and size of horse has an obvious bearing on the number of animals the land can accommodate. The space and forage requirements of a Shetland pony will be different to those of a 15hh native breed horse and those of a 16.3hh warmblood will be different again. A full assessment of all factors needs to be carried out before deciding what the land can hold and how it can be managed to prevent negative impacts. If you have native type horses and want them to be able to live out 24/7 all year gaining the majority of their nutrient requirements from the grassland then you will need to have more land available over the year than if you have a warmblood that will be stabled for a significant proportion of the time. Ensuring that enough space and forage is available will help to prevent fighting if horses are grazed in groups.

As a guide one hectare of land will be needed to support a 500kg horse where the objective is to provide year round turnout and all or most of its nutritional requirements from that land\*. This should also allow for some resting and rotation of land in order to maintain it in good condition. Use this as a starting point and adjust for circumstances such as size of pony and management objectives.

\* National Research Council (2007): Nutrient Requirements for Horses, 6th Edition.

### **Other references for stocking density for horses:**

RSPCA (2007) 'Handle with Care – Guidance for Horse and Pony Owners'

Chapman, Paul (2007): Conservation Grazing of Semi-natural Habitats, Scottish Agricultural College, Technical Note 586.

O'Beirne-Ranelagh, Elizabeth (2005): Managing Grass for Horses

O'Beirne-Ranelagh, Elizabeth (2010): The Pony Club Guide to Pasture Management.



## *Good land management practices*

---

Having a well planned rotation programme in place will help to prevent damage to land. Rotation programs should ideally include resting enough land over the summer to ensure that some fields have longer grass for grazing in the winter months. Where possible allow more land to be available for grazing over the winter to spread the load and prevent localised damage. To create a longer grass sward for the winter months rest land from August to mid November, or after a hay cut or summer grazing rotation, or alternatively rest for the entire growing season (April to November) and graze after everything has seeded (foggage).

Grazing often needs to be restricted during the peak growing periods (May and Sept) especially where horses are at risk of obesity or laminitis. This can be done by keeping horses on a yard or stabling during the day and grazing at night when the sugar levels in the grass are lower, rather than using starvation paddocks which can seriously damage grassland. Paddocks can also be designed in such a way as to encourage maximum exercise whilst at grass, such as putting water troughs at the far side of the field or top of a hill and putting mineral/salt licks on the other side. Muzzles can also be used to restrict intake whilst allowing horses the freedom to be outside. Increase exercise and remove rugs to further help reduce the risk of obesity and laminitis. See [www.fathorseslim.org.uk](http://www.fathorseslim.org.uk) for further information about preventing obesity.

---

*Photos: Marbled white butterfly; mixed grazing; bird's foot trefoil and red clover.*



Grazing with sheep or cattle is an effective way of reducing the amount of grass intake for the horses, especially during the peak growing seasons. This can be done either by allowing sheep/cattle to graze the land before horses or by grazing them together. Local farmers and smallholders are often looking for extra grazing for livestock so it isn't necessary to have your own stock.

Sheep in particular will tidy up latrine areas, control weeds such as ragwort and buttercup, and can help to reduce the parasite burden in a field because ingestion of horse worms by other livestock will break the parasite cycle. The action of sheep hooves on the land can also help to even out the damage caused by horses' hooves. Sheep should be treated for liverfluke before being grazed with horses. Selectively timed grazing with cattle can help to reduce clover within a field.

Restricting pasture sizes on a temporary basis in the growing periods of spring and autumn for horses at risk of obesity and laminitis will enable intake to be restricted but should be viewed as a short term arrangement and part of a wider rotation programme. Keeping horses off grass for around two weeks prior to it setting seed (or not allowing it to set seed by continuously grazing) and for a similar to longer period

---

*Photos:* Sheep can effectively help to manage horse pasture and put nutrients back onto the land; thistles; taking your own hay crop can help to reduce costs of buying in forage.



for grass that has been cut for hay is also advised due to the high sugar levels that may be found in grass at these stages. Shutting some land up between April and late July – September to take for a hay crop is also a good way to cope with excess grass, this will help to reduce the costs of buying in forage and you can be sure of the quality of the hay.

It is possible to keep horses on less land with management adaption such as more time in stables and yards and provision of supplementary feed. The effects of horses being turned out for very short periods of time on limited grazing, often without company, and spending too much time in stables can sometimes result in stable vices and other behavioural problems. In addition, various intake studies have suggested that horses can eat a tremendous amount in a short space of time if they are in a routine of turnout for short periods. In a natural environment horses graze for around 16 hours a day, equine nutritionist, Clare MacLeod, ('The Truth About Feeding Your Horse'), suggests that horses should not go for more than four hours without some forage as this can increase the risk of gastric ulcers and lacerations.

---

*Photos: Sheep's sorrel; feeding ad lib barley straw through the winter; mixed species grassland.*



## *Gateways*

---

Gateways can get muddy and poached in wet weather or become bare ground in dry weather where they are used regularly or horses congregate in these areas. To reduce the problem drainage might be necessary or some type of surfacing such as grass matting, wood chip or gravel tamped down hard which may allow grass to seed on it thus reducing landscape impact. Try to site gateways where there is good drainage, perhaps put in more than one to spread the load. The problem is exacerbated by behaviour, i.e. horses hanging around gateways waiting to come in to be stabled and fed. Consider whether horses could live out all the time, perhaps with a rug in winter, see [www.bluecross.org.uk](http://www.bluecross.org.uk) for more advice. Poaching problems also occur where horses are fed so try to feed in different places in the field, although on species rich grassland it is probably best not to supplementary feed in the field at all. Providing plenty of land over the wettest months and feeding in different places will help to prevent poaching and so reduce the likelihood of associated welfare issues such as mud fever and foot problems. If pasture size is small and horses are in the habit of coming into stables they may also 'fence walk' which also causes land damage. Changing behaviour patterns where possible can help, e.g. leaving horses out with rugs in larger spaces with ad lib forage in cattle feeders in winter can help. Feeders should be moved regularly to prevent poaching.

---

*Photos:* Gateways can get poached by horses and need to be carefully managed; grass matting can help to reduce localised problems.



## *Manure*

---

A horse weighing about 450kg produces around 20kg of manure per day, around nine tonnes per year. If horses are grazed intensively then it will be necessary to pick up droppings to keep paddocks and horses healthy.

- Picking up droppings reduces the worm burden. Consult your vet and consider having regular worm counts carried out on your horses and use wormers according to need.
- Picking up droppings prevents latrine areas from building up. Horses won't graze these areas so more pressure is put on the rest of the paddock. These latrine areas are often weedy due to over-enrichment of the soil from the dung.
- Consider storage of collected dung carefully. Keep the dung heap out of sight and scent of neighbours if possible, and well away from water courses and ditches to prevent run off pollution. See Waste Management chapter, page 47, for more information on waste management and waste legislation.
- Avoid tipping dung in hedge bottoms and woodland as it can kill hedge plants and wildflowers, who don't do well in over rich soils.

---

*Photos:* Well managed manure storage; extensive grazing helps to prevent latrine areas from developing.





## *Weeds*

---

- Take a close look at your grassland, how many of the species you may consider to be weeds are actually herbs that are beneficial and palatable to your horse? Appreciate and encourage a mixed sward and see the benefits to your horse and wildlife.
- Other invasive plants such as docks, thistles and nettles can be controlled by cutting or mowing to stop them seeding and spreading, or by digging up or spot treating with a herbicide such as glyphosate (Roundup). Do not broad spray if you have a good range of beneficial plant species in your grassland already as many sprays will kill these valuable plants. Follow manufacturers instructions as to when a field can be grazed again after spraying. Consider leaving a patch of nettles or thistles somewhere on the land holding for wildlife, particularly butterflies.
- Poisonous weeds such as ragwort should certainly be removed. Landowners and occupiers have a duty to prevent the spread of ragwort under the Weeds Act 1959 and the Ragwort Control Act 2003. Ideally this should be carried out by hand pulling wearing gloves, followed immediately by burning. Ragwort is more palatable, and therefore more dangerous, when dried so be particularly careful not to leave any in reach of horses. An advice leaflet on ragwort is available from the BHS: [www.bhs.org.uk](http://www.bhs.org.uk)

---

*Photos:* Nettles; ragwort; hay meadow.



## *Fertilisers*

---

- Avoid using fertilisers as they increase the fertility of the soil to the detriment of the many plant and sensitive grass species that prefer nutrient poor soils. Applying fertiliser to existing flower rich grassland can be extremely damaging to the species which provide more suitable forage for horses. It also raises sugar levels and lowers fibre content in all grasses, not just ryegrass species, which is not good for horse health.
- Fertilisers will encourage the vigorous growth of ryegrass species which have been developed to rely on it and these may increase the risk of obesity in horses, which can in turn increase the risk of laminitis in some horses.
- If you consult a FACTS qualified agent to provide advice and recommendations for fertilising check that they are aware of the different requirements of horses and their pasture.
- If you regularly make hay from the field it may be necessary to occasionally apply well rotted manure of not more than 20 tonnes per hectare (2.5 acres) every three to five years, to replace nutrients removed in the hay crop.

---

*Photos:* Low input hay; yellow rattle; it is possible to have species-rich grassland such as this with horses as the sole grazers if managed carefully.



Alternatively put sheep on the pasture for a few months to add nutrients to the land through their dung. Taking a hay crop for a few years is also an effective way to reduce the fertility of the soil in order to encourage a greater diversity of plant species.

- In some situations an application of lime may be of benefit but each case should be considered carefully according to management and usage objectives.

### *Rolling, harrowing and mowing*

---

Not all these management operations are essential, it depends on the quality of the grassland, nature of grazing, previous management and soil type/condition.

- Harrowing can help to draw out dead grass so that air, water and nutrients can get to new grass. Sow bare patches with a suitable seed mix (see page 67) after harrowing in early spring. Timing for harrowing can be difficult as ground is often too wet in mid-winter to access with machinery and ideally harrowing should be avoided around the vulnerable time for ground nesting birds and early flowering plants (late winter to mid July).

---

*Photos: Mowing; hay turning; baling.*



- Rolling in early spring can level the surface and promote early grass growth BUT on wet ground or heavy clay can cause compaction which will subsequently reduce drainage, increase surface run off and reduce grass growth. Try to avoid poaching in the first place, or use sheep if possible to even out damaged ground through their hoof action.
- Cutting tall ungrazed grass helps to prevent the establishment of latrine areas. Remove cuttings as they can be harmful to horses, will smother plants if left on the land and will lead to the over enrichment of the soil.

## *Hay making*

---

If you have excess grass, especially during the peak growing periods, consider making hay for your own use or to sell. You will be sure of its quality (dustiness etc) and content (free of poisonous plants). Approach a local farmer or contractor to make the hay for you and save on the cost of buying in forage. If this is impractical then consider leaving these areas to grow long (like hay) and graze over the winter (see page 8) as standing hay.

Taking hay crops over several years is a good way to reduce the fertility of the soil ahead of adding wildflower seed and encouraging the variety of grasses, wild flowers and herbs.

---

*Photos: Hay; haylage; Harebells*



Try to cut hay late in July at the earliest to allow flowers and grasses to set seed. Graze the pasture over autumn and winter – subject to land condition and poaching – and then close it off from April to late July/August. Do not graze for at least two weeks after cutting.

If you take regular hay crops from the same field you may find it necessary to use a limited amount of fertiliser infrequently to compensate for the nutrients taken out of the soil through the crop. If your site is SSSI or Local Wildlife Site check with Natural England or your local wildlife trust before applying any fertiliser. Contact Natural England to find out if your land is designated or check on [www.kent.gov.uk/klis](http://www.kent.gov.uk/klis) If you have plenty of land you could take a hay crop only every three years from the same field as part of a rotation system. Graze with horses in year one, graze with sheep in year two and take a hay crop in year three.

---

*Photos: Pyramidal orchid; feeding hay in winter; foal*



## *Wildflower meadows*

---

If you already have species rich grassland it will benefit from a slightly tailored maintenance regime. One of the reasons that this grassland is so species rich is that it has not had fertiliser or chemicals applied to it – hence the term ‘unimproved’ that is often used. The plant species have adapted to low nutrient soils. Applications of fertiliser, chemicals or regular topping changes their delicate habitat. Fertiliser can detrimentally affect these valuable plant species, reducing the diversity of the grassland sward and have implications for your horse. Chalk grassland has become internationally rare. A square metre of this grassland can contain up to 40 species of plant which in turn support many butterflies and other insects. This can mean a stunning show of flowers, including rare orchids, in spring and summer, and for your horses this means a delicious herb rich, varied source of forage.

If you have land that is designated as a Site of Special Scientific Interest (SSSI) or Local Wildlife Sites you will need to be aware of restrictions as to what you can do on these important sites and you may be eligible for extra advice and support. Contact Natural England or your local wildlife trust to find out more. If your grassland is already species rich you may be subject to Environmental Impact Assessment. This will mean that you will need to carry out a full survey of the grassland before undertaking any changes to

---

*Photos:* Species rich grassland; wildflower meadow on a flood plain managed through careful horse grazing; Selfheal.



its management, such as spraying or ploughing. For more information contact the Freephone Helpline 0800 028 2140 or email [eia.England@defra.gsi.gov.uk](mailto:eia.England@defra.gsi.gov.uk) or [www.defra.gov.uk](http://www.defra.gov.uk)

There are many other valuable wildlife habitats; wetland, river banks, ponds, orchards, neutral/acid grassland, scrub and woodland. Manage these habitats according to their specific needs, if managed carefully horses can be successfully integrated as key grazers. Carry out regular surveys to see what's there to enable you to monitor change.

### *Enhance your grassland*

---

Enhancing your pasture in terms of plant species in grassland, hedgerow and woodland will not only benefit wildlife but also your horse. As well as the benefits of a variety of wildflowers, herbs and grasses mentioned above, native hedges and woodland can provide shelter in summer and winter.

If you need to reseed your pasture be sure to buy British provenance seed and one which has a mix of grasses, wildflowers and herbs (see page 67). Try to avoid those which contain ryegrass species as these tend to out-compete other species and will not provide your horse with the variety of minerals and trace elements that are so beneficial.

---

*Photos:* Gathering seed from a meadow donor site; hay meadow; mixed species grassland encourages wildlife; painted lady.



Contact Flora Locale for more information, courses and suppliers of locally produced native seed. Their Learning Zone will provide a step by step guide to improving species diversity on your pasture.

**[www.floralocale.org](http://www.floralocale.org)**

**Step 1** – Carry out a survey. What is currently in the grassland? Is there already a good mixture of grasses, wildflowers and herbs? If there is already a good diversity, i.e. a number of different species of grasses, flowers and herbs then make sure your management techniques continue to support the continued success of these species. Avoid the use of fertilisers, allow areas to set seed in rotation by shutting an area off from April to September, avoid over grazing or poaching.

**Step 2** – If you want to increase the number of different species and abundance it will probably be necessary to first reduce the fertility of the soil, especially if it has been regularly fertilised in the past or used for more intensive agriculture such as arable crops or forage grass for dairy cattle. Fertility can be reduced by taking a hay crop for two or three years or by grazing quite hard.

---

*Photos: Pyramidal orchid; Shetland ponies being used to manage grassland on the Lizard Peninsula in Cornwall; species rich grassland.*





**Step 3** – Prepare the ground for sowing seed in the autumn or early spring by grazing hard in the lead up to create patches of bare ground (not poached), or scarify the surface of the ground to create these bare patches or over seed. Seed can be spread directly by hand or by machine or by the spreading of green hay from a donor wildflower site. If green hay is used it must be spread on the recipient land within two hours of being cut on donor land.

**Step 4** – Light grazing by livestock after sowing can help to work the seed into the soil. If a whole field has been newly sown it should be grazed lightly by sheep or topped regularly in the first year. Horses should be able to start grazing between 12-18 months after sowing.

There are various companies who sell meadow seed suitable for horse pasture, see further information on pages 67 and 68.

---

*Photos:* Grazing in the New Forest; Exmoor ponies being used to manage grassland on a nature reserve; sheep's sorrel on old grassland.



## *Trees and hedges*

---

Trees and hedgerows are beneficial to horses as well as being important features in the landscape. In the summer trees and hedges provide shade from the sun and relief from the flies, in winter they provide important shelter from wind and rain, and they are also a good source of forage and can provide variety in the diet. Looking after your trees and hedges can be an economical way to provide shelter for your horses as well as contributing to landscape quality in your area. Native species of trees and hedging plants bring great benefits to birds, mammals and insects. These provide important food and shelter and hedges in particular act as wildlife corridors enabling wildlife to move between areas of habitat.

Species such as yew, laburnum, laurel and privet are poisonous to horses. These species should not be planted near horse pasture, instead use native hedging species. Acorns from oak trees are also poisonous to horses and should be raked up and removed, or the trees temporarily fenced off during the autumn. There is no need to remove oak trees, they are one of the most valuable species of all trees for wildlife.

---

*Photos:* Plant new native species hedges for landscape and wildlife gain and to create shelter for horses; manage hedges by laying them if possible to make them thicker and stronger.



Planting non-native species such as laurel, privet, conifers etc on boundaries, around arenas or to camouflage buildings can detract from the local character of the landscape and make the very thing that it is trying to conceal simply stand out more. A mixed native hedge containing a mixture of the following species is more varied, more interesting, attractive and, if managed well, can provide an excellent thick screen; hawthorn, spindle, hazel, blackthorn, holly, guelder rose, field maple, hornbeam, whitebeam, ash, crab apple, dogwood, wayfaring tree, wild honeysuckle and clematis. Look around your area at old established hedgerows to see what species they contain and in what proportions and try to replicate this when planting new hedgerows.

If you would like to plant a native species hedge try to buy plants that have been grown in your local area so they stand a greater chance of success. Choose bare root stock and plant from November to February. For guidance on planting techniques visit the Woodland Trust or the Wildlife Trust websites (details on page 69). Tree and hedge planting courses are run by various organisations, including BTCV.

---

*Photos:* Don't plant non native species such as laurel (left) and conifer (middle); Yew is extremely poisonous to horses.



The Hedgerows Regulations made under the Environment Act 1995, were introduced in England and Wales in 1997 in order to protect this characteristic feature of the countryside. The Regulations prevent the removal of most countryside hedgerows without first submitting a hedgerow removal notice to the Local Planning Authority. The Regulations also set out criteria that must be used by the Local Planning Authority in determining which hedgerows are ‘important’. Local Planning Authorities may order the retention of ‘important’ hedgerows.

Hedgerow berries are only found on old wood so don’t cut hedges more than every two to three years and ideally this should be in late January or February. If ground conditions don’t allow machinery onto land at this time try to cut as late into the autumn as possible. Leave berries on hedges as long as possible to provide winter food for birds. Avoid cutting hedgerows during the bird breeding season between 1 March and 31 July. All wild birds, their eggs, young and nests are protected by law.

More information

[www.defra.gov.uk/farm/environment/landscape/hedgerows.htm](http://www.defra.gov.uk/farm/environment/landscape/hedgerows.htm)  
[www.hedgeline.org.uk](http://www.hedgeline.org.uk)

---

*Photos:* Gap up hedges with native species, grants may be available locally to help; Blackthorn blossom – flowers and fruit occur on old wood (1+ years) so avoid cutting hedges every year and instead cut once every two or three years max; existing hedges and woodland provide natural shelter and forage material for horses.



A leaflet – The Hedgerows Regulations: Your Question Answered – provides a brief summary of the law. More detailed guidance is in The Hedgerows Regulations 1997: A Guide to the Law and Good Practice. Both are available free of charge by emailing [farmland.conservation@defra.gsi.gov.uk](mailto:farmland.conservation@defra.gsi.gov.uk).

Newly planted and specimen or veteran trees will need to be protected. Fences need to be at least two metres away from newly planted hedges to account for the long reach of a horse. See Fencing chapter for more detailed guidance on types of fencing to use. Protect individual or groups of veteran or specimen trees with parkland style guards. Most fencing and tree/hedge companies supply tree guards for use on young trees and hedging plants to prevent rabbits from chewing them. Putting netting around trees will protect them from being eaten and damaged by horses. Remember that the girth of the tree will expand as the tree grows and so guards will need to be checked regularly and loosened over time.

# Table of monthly activities

Month	Activity	Look out for ...
<b>March</b>	<ul style="list-style-type: none"> <li>• Harrow to remove dead grass and aerate soil.</li> <li>• Sow carefully sourced seed (see page 9) on bare patches.</li> <li>• Fertilise if really necessary bearing in mind that many of the plant species of benefit to horses have adapted to low nutrient levels and may be lost if fertilisers are used. Sugar levels in grass will also be raised if fertiliser is used and this can increase the risk of obesity and laminitis.</li> <li>• Roll if really necessary BUT only if the ground is dry enough.</li> </ul>	<ul style="list-style-type: none"> <li>• Ground nesting birds.</li> <li>• Only take machinery on land if it is dry enough not to cause damage.</li> <li>• Rolling should not be carried out to correct heavy poaching as this can lead to compaction, water logging and run off problems.</li> </ul>
<b>April</b>	<ul style="list-style-type: none"> <li>• Plan and start grazing rotations.</li> <li>• Dig out ragwort and creeping thistle as soon as it appears.</li> <li>• Shut up areas that will be used for growing hay.</li> <li>• Top fields only if they are not species rich and grass needs to be maintained at optimum growth or latrine areas need to be tidied up, continue to October. Maintain grass height above 2.5cm.</li> </ul>	<ul style="list-style-type: none"> <li>• Early summer plants such as primrose and record their frequency.</li> <li>• Monitor spring grass growth and horses' nutritional needs.</li> </ul>
<b>May</b>	<ul style="list-style-type: none"> <li>• Maintain grass at a height above 2.5cm for optimum growth and ground cover and to prevent damage and loss of species.</li> <li>• Undertake species surveys of your grassland over the next two months as this is when they will be most easy to identify.</li> <li>• Continue to control invasive plants such as ragwort, docks and creeping thistle.</li> </ul>	<ul style="list-style-type: none"> <li>• Beware of the early summer flush of grass which can increase the risk of obesity and laminitis in susceptible horses. Restrict grazing, preferably without overgrazing pasture by using yards, stables and arenas, to restrict turnout, reduce volume of grass by mixed grazing with other livestock and increase exercise to maintain healthy weight.</li> </ul>

<b>Month</b>	<b>Activity</b>	<b>Look out for ....</b>
<b>June</b>	<ul style="list-style-type: none"> <li>• Allow species-rich grassland to set seed if possible, either by grazing lightly or by shutting up for a late hay cut or for winter grazing.</li> </ul>	<ul style="list-style-type: none"> <li>• Enjoy the colours, smells and beauty of species rich grassland.</li> </ul>
<b>July</b>	<ul style="list-style-type: none"> <li>• Cut rushes repeatedly if control is needed.</li> <li>• Continue to rest and rotate pasture to prevent overgrazing. Overgrazed pasture provides little feed value, looks unsightly and may require time and money later in the year to prevent further deterioration.</li> <li>• Hay can be cut from late July to allow seed to drop.</li> </ul>	<ul style="list-style-type: none"> <li>• Have horses got enough shade from sun and flies?</li> <li>• Do not graze grass when it is setting seed as it will be very high in sugars, or immediately after taking a hay cut.</li> </ul>
<b>August</b>	<ul style="list-style-type: none"> <li>• Carry out necessary maintenance work on ditches.</li> <li>• Collect seed from beneficial flowering grasses and plants (see table on page 9) and spread on bare ground or create areas for sowing to improve species diversity in a pasture.</li> <li>• Finish any harrowing.</li> </ul>	
<b>September</b>	<ul style="list-style-type: none"> <li>• Continue to control ragwort by pulling up and burning or spot spraying.</li> </ul>	<ul style="list-style-type: none"> <li>• Restrict grazing for horses susceptible to obesity and laminitis during the autumn flush of grass growth.</li> </ul>
<b>October</b>	<ul style="list-style-type: none"> <li>• Tree and hedge planting can take place using native species of British provenance that are suited to the area and can be found locally.</li> </ul>	<ul style="list-style-type: none"> <li>• Rake up or temporarily fence off areas under oak trees to prevent horses eating acorns.</li> </ul>
<b>November</b>	<ul style="list-style-type: none"> <li>• Fields can be shut off for hay next year.</li> <li>• Start grazing standing hay once the flush of autumn grass growth has finished.</li> </ul>	<ul style="list-style-type: none"> <li>• Grazing thick grass (standing hay) will help to prevent poaching, will provide horses with cost effective forage, will keep them busy and encourage them to move around.</li> <li>• Keep horses off ground after heavy rain if possible.</li> </ul>

Month	Activity	Look out for ...
<b>December</b>	<ul style="list-style-type: none"> <li>• Open up maximum field area for grazing to spread the load over the wettest months and reduce damage through poaching.</li> </ul>	<ul style="list-style-type: none"> <li>• The longer the grass the better able the pasture will be to withstand grazing pressure over the winter.</li> <li>• If sufficient acreage per horse is available and it has been managed well throughout the year it should be possible to supply a lot of the horses' forage needs from the grass. If hay or haylage needs to be fed at pasture try to feed in different places and away from frequently trodden areas such as gateways.</li> </ul>
<b>January</b>	<ul style="list-style-type: none"> <li>• Cut hedges no more than every two – three years when ground conditions enable machinery to get onto the land without causing damage.</li> </ul>	<ul style="list-style-type: none"> <li>• Consider using grass matting or other sensitive hard standing (preferably not concrete) around gateways to prevent further damage.</li> <li>• Speak to a FACTS advisor about the soil analysis and grass management objectives in relation to horses to develop any necessary nutrient plans and applications.</li> </ul>
<b>February</b>	<ul style="list-style-type: none"> <li>• Continue to graze horses over a large area.</li> <li>• Take horses off land in very wet weather, use yards and stables when necessary.</li> <li>• Carry out soil analysis to determine soil nutrient and pH levels if necessary but bear in mind that species rich grassland will have differing pH levels depending on the type of grassland, e.g. acid grassland and chalk grassland, and this should not be altered if species diversity is to be encouraged.</li> </ul>	





## *Grants*

---

Funding is available to support good landscape and wildlife management. Some schemes cover all of England such as those mentioned below. For other local schemes contact your local authority, Area of Outstanding Natural Beauty (AONB), National Park or Wildlife Trust.

## *Single Payment Scheme*

---

The Single Payment Scheme has replaced traditional subsidy payments for farmers and landowners, equestrian land owners were also eligible to apply. All land for which Single Farm Payment is claimed must be kept in Good Agricultural and Environmental Condition (GAEC) and horses are accepted as grazers to help achieve this so long as the land is neither undergrazed nor overgrazed.

[www.defra.gov.uk](http://www.defra.gov.uk)

## *Environmental Stewardship*

---

You may be eligible for Environmental Stewardship grants to maintain existing features and deliver significant environmental benefits in high priority situations.



The **Entry Level Scheme** (ELS) is open to all farmers/landowners and works on a points basis. If you can achieve the necessary points for your landholding (area of holding x 30) you will receive £30 per hectare. Points are gained for a variety of management options and those most likely to be suitable for horse owners include:

- Boundary features
- Trees and Woodland
- Historic and landscape features
- Buffer strips on grassland
- Some of the lowland grassland options

Agreements under ELS are for five years. All holdings will need to be registered with the Rural Land Registry.

**Higher Level Stewardship** (HLS) is a competitive application process and applications have to be supported by a Farm Environment Plan. This Scheme is more suited to bigger applications which enhance and maintain biodiversity, historic environment, landscape and resource protection. Agreements are for 10 years.

For more information about these schemes visit [www.naturalengland.org.uk](http://www.naturalengland.org.uk)



## *Summary*

---

Managing land for horses is a difficult balance between ensuring that grass intake during the spring and autumn is appropriate to the individual animal and there is enough grass cover in the summer and winter months. This is especially difficult if you have a variety of horses with different needs, levels of work etc. Grass is by far the healthiest, and cheapest, form of food for your horse so it is worth managing well throughout the year.

- Encouraging a grassland with less ryegrass species and more wildflowers, herbs and mixed grasses will help to provide a more varied and healthy diet with more interest for the horse.
- Find out what you've got in your field. Whilst dangerous weeds will need to be removed, other species may be beneficial, such as yarrow, bird's foot trefoil, ribwort plantain, and grasses such as common bent, red fescue, crested dog's tail and timothy grass.
- An excess of grazing in the spring could be closed off for hay. You will know exactly what the hay contains and the quality of it if it is from your own land. Approach local farmers/contractors to make it for you.

---

*Photos:* An excess of grass in the summer can be used for hay; grazing other livestock with horses is a good way of maintaining pasture quality; build rest periods into your pasture rotation.



- The key to good grassland management is to rotate the grazing. Resting paddocks for six months is ideal if feasible. This will also help to break the life cycle of most internal parasites.
- Mix or alternate grazing with other livestock if possible. Grazing with sheep and cattle will help to prevent the formation of ungrazed latrine areas and help to control parasitic worms. A local farmer may welcome additional grazing.
- Move mineral licks and feeders around the field so no one area becomes poached. Consider placing them on opposite sides of the field to encourage horses with a tendency to put on weight to move around more.
- Remove feed buckets, jumps etc from the field for storage when not in use.
- Allow grasslands to set seed in some years to encourage a rich species diversity.
- Maintain a sustainable stocking density.
- Graze horses in groups, single sex if necessary, if possible. Providing enough space and grass/forage will reduce the likelihood of fighting and allow groups to determine herd order.
- Keep grass above 2.5cm to avoid damage to sward.
- Allocate more land for winter use than in summer to spread the load and reduce damage.

---

*Photos:* Keep field sizes large to allow enough space and forage to support grazing horses in groups and to prevent the negative landscape impact of excessive fencing; mixed grazing helps to manage latrine areas and reduce parasite burden; cut hay from mid July onwards to allow it to set seed and encourage a good plant diversity.



- Keep grass for winter use as long as possible in the lead up to its use to avoid poaching and runoff and provide horses with a good source of forage over the winter.
- Avoid the use of fertilizers as they will reduce sward diversity. Many beneficial plant species have adapted to thrive in nutrient poor soils.
- Ensure that there is an effective injurious weed programme and worming programme in place.

### *Need for planning permission*

---

Change of use of agricultural land to the keeping of horses for recreational purposes may constitute a material change of use requiring planning permission. There is a distinction between the grazing of horses, which does not require planning permission, and the keeping of horses which does require planning permission. The definition is based around the need for supplementary feed, i.e. if the land cannot support the horses through grazing alone (hay cut from the field can be used) then it is considered that the horses are being kept rather than simply grazed. The provision of some supplementary feed throughout bad weather would be expected.

---

*Photos:* Grazing horses on longer grass through the winter can help to reduce poaching; horses living out with rugs and ad lib forage from a cattle feeder; Bee Orchid.



## Fencing

Sensitive and well thought out fencing accompanied by careful grazing means that horses can contribute positively to the landscape. The choice of materials and where fencing is sited makes a big difference. There has been an increasing proliferation of sub-division of fields with insensitive materials, creating a sense of over intensification of use of the land, often associated with poor land management. This can lead to a negative impression of the equine industry.

Horses are naturally herd animals so allow them to run as a group as much as possible rather than grazing separately in small paddocks. Studs and livery yards often allow horses to make friends in pairs for several hours in a situation where they can touch each other but not injure themselves, for example in a barn with partitions. This can allow for diverse groups of (albeit typically single sex) horses to be kept together. Another important factor seems to be to ensure that field sizes are large enough to provide plenty of space and there is sufficient grass and/or supplementary forage for there to be no competition over resources\*. If you share land and feel you need to split

\* Equine Sector Champion Project (SEEDA 2007-09).

*Photos:* Horse-friendly wire netting – high tensile, strong, specifically designed for horses, minimum landscape impact; dark electric tape or electric rope with wooden posts is a low impact means of sub dividing pasture.



the pasture for dung management reasons consider whether you might be able to safely let all the horses run together and manage the dung by agreeing that everyone will remove a certain number of barrow loads of dung each day.

Many horses will need to have their grazing restricted during the peak growing seasons around May/June and September. There are a number of ways this can be done without necessarily creating starvation paddocks; grazing other livestock through the land before the horses can reduce the overall volume, and therefore calories, available to the horse; using a grazing muzzle; only grazing at night when the sugar levels in the grass are lower by stabling or keeping horses on a yard during the day. If you need to use semi-permanent or temporary fencing to enable you to rotate grazing or for hay making purposes use wooden or dark green/brown plastic posts and electric rope or dark green, brown or black electric tape. Horses have different eyesight to humans and can see natural colours most easily. Most electric fence companies now supply dark coloured electric tape, rope and dark coloured posts. Coloured tape can be purchased for the same price as white tape, lasts as long and is just as effective.

---

*Photos:* Post and rail fencing is expensive, difficult to maintain and looks incongruous in most UK landscape settings; horses often eat wooden fencing; locally sourced chestnut cleft fencing where it is a feature in the locality can be more in keeping than machine cut post and rail fencing.



Landscape character should influence the design, type of materials and siting of fencing. Hedgerows, dry stone walls, ditches and locally sourced timber are all traditional means of enclosure; think about what would have been used traditionally in your area and what impact modern materials may have in the landscape. Consider the contours of the land, how existing trees and hedges fit in and where existing fencing would tie in when considering new fence lines. Permanent sub-division of fields should be kept to an absolute minimum to avoid adverse impact on landscape. Fencing small, uniform rectangles is not likely to suit even the least open of landscapes in the UK.

The use of low impact materials will help to reduce the visual impact of horse paddock fencing. Post and rail fencing is expensive, tends to be eaten by horses and soon becomes a maintenance burden. It also looks incongruous in most landscape settings in the UK and thus detracts from landscape quality. A horse-friendly wire netting, such as Equi-fence or Tornado Fencing, has far less visual impact (use without a top wooden rail). It is high tensile, durable, and designed specifically for use with horses and so is an excellent choice for securing the perimeter of horse grazed land and horse

---

*Photos:* Plant native hedges alongside fences to provide shelter for horses and wildlife habitat, and to soften the impact of fencing on the landscape where hedges are in keeping with local landscape character; protect young hedges from the long reach of horses; protect veteran, young or specimen trees from horses who can chew the bark and ultimately kill the tree.





establishments. A strand of plain electric wire, rope or dark coloured tape can be added along the top to prevent horses from leaning on the fence. This fencing is generally cheaper than post and rail and because it is so high tensile fewer wooden uprights need be used and it should require less maintenance.

Never use trees instead of fence posts when putting in a fence as this will harm the tree by potentially introducing disease or by restricting the growth of the tree.

Making careful decisions about what fencing to use, the materials and colour will pay dividends in terms of local landscape quality, how equine enterprises are viewed by others, and the health and safety of your horses.

---

*Photos:* Excessive sub division of pasture with white tape (left and middle) has a negative impact on the landscape and leads to a poor impression of the horse industry; more sensitive materials are available such as electric rope and wooden posts.



## *Fencing around outdoor arenas*

---

The type of fencing used around an outdoor arena can make a difference to its impact in the landscape. Make use of existing natural boundaries such as hedges and don't use fencing at all unless it is really necessary. Choose fencing materials which will have less landscape impact such as chestnut cleft fencing and other local materials and styles and use fewer rails. Using locally coppiced (a traditional system of sustainable woodland management) timber can also help to support the local economy.

## *Summary*

---

- Maintain traditional field boundaries, particularly those with natural features like native hedges and trees and dry stone walls.
- Avoid the creation of individual turnout patches, small permanent enclosures or starvation paddocks (consider other ways of reducing grass intake when necessary).

---

*Photos:* Using natural boundaries instead of fencing around arenas where possible can reduce the impact of this kind of development; machine cut stained four bar fencing has a particularly high impact in open settings; black rubber and wooden posts.



- Where new fences are required, work with contours and continue existing fence lines to create cohesiveness.
- Avoid the use of harsh materials which stand out in the landscape, particularly machine finished post and rail, white tape and white posts.
- Use horse-friendly wire netting and widely spaced wooden posts as preferred materials for permanent secure fencing.
- For essential sub-division use widely spaced (approx four metres apart) wooden posts and electric rope or dark coloured tape.
- For temporary fencing, use dark plastic posts with electric rope or dark electric tape.
- Plant native hedges along boundaries where this is in accordance with local countryside character.

If fencing is over one metre in height and adjacent to a highway it will generally require planning permission and elsewhere, fencing over two metres in height will require planning permission.

---

*Photos:* Electric rope and dark plastic posts used for temporary fencing in a particularly sensitive location to enable Shetland ponies to graze on the Lizard Peninsula; electric rope and wooden posts; dark plastic posts and electric rope used as a temporary measure to manage grazing intake.



## Equine waste management

### *Manure*

---

Manure has the potential to be a valuable commodity with the average annual manure produced by a horse providing 45-55kg of nitrogen, 8-9kg of phosphorus and 30-45kg of potassium along with micro-organisms that can improve soil structure and biological activity (source: Surrey Horse Pasture Management Project). This will vary according to bedding materials used, the horses' diet and storage of the manure.

The best way for small scale horse owners to manage their manure is to compost it at home in a properly constructed manure store. Once manure has been composted for twelve months, it is generally accepted that the larvae of harmful parasites will have died.

Composted horse manure is still valuable to gardeners and allotment holders, you may be able to bag it up and leave it at an accessible gateway for local people to pick up.

---

*Photos:* On a small scale manure can be bagged up and made available for collection from the gate; if not properly managed and stored manure piles can become unsightly, leech into water courses, lead to weed infestation and cause problems for neighbours.



If you have a trailer consider contacting a local allotment group and deliver bulk quantities of manure to the allotment site.

With proper handling horse manure can be of little concern to other users of the countryside. Horse owners can help to create a positive image of their activities by handling and storing manure as inoffensively as possible.

## *Regulations*

---

An average horse produces 7.5 tonnes of manure each year. Traditionally this manure has been spread on fields as fertiliser. This is still the Environment Agency's preferred method of manure management. However, as farming systems have changed and chemical fertilisers have replaced manure, the opportunities for this have decreased.

Today greater numbers of horses are kept more intensively for recreation and sporting purposes but spreading manure on fields as a means of getting rid of it is not a realistic option for most horse owners. The storage and disposal of horse manure can impact on neighbours, water quality, species diversity and land quality so a well thought out plan for these issues is imperative.

---

*Photos:* Poo picking helps to keep pasture looking tidy and reduces the worm burden where stocking densities are high; in larger horse establishments manure may need to be removed from site by a contractor for disposal/composting.



These days there is a wide range of materials available to use as bedding for horses, these include straw, wood shavings, shredded paper, shredded card, elephant grass, and even by-products from hemp, flax and wool. Using rubber matting in stables will help to reduce the amount of bedding material that needs to be used. When using alternative bedding materials make sure you have fully considered how you will dispose of them once you have finished using them as bedding. In some cases you may be able to compost them yourself or send them to an authorized composting facility. In the case of some materials e.g. wood shavings and shredded paper it is recommended that you compost them first, before spreading them on land, in order to gain the most benefit from their nutrient content. In the case of some of the newer materials being offered as bedding you may not be able to spread the waste legally and could face a large disposal bill. It is therefore advisable to check with your local Environment Agency office if you are considering using an alternative material as bedding.

Anyone who keeps horses and ponies has a 'Duty of Care' to ensure that their horse manure is stored and disposed of correctly.

---

*Photos:* Home composting units should be located 10 metres from a watercourse and have non-permeable sides and base; reuse spoil from excavation carefully, bunds can create artificial landscape features which stand out rather than blend in.



**The Environment Agency regulations state:**

“The Duty of Care requires that you ensure all waste is stored and disposed of responsibly, that it is only handled or dealt with by individuals or companies that are authorised to deal with it and that a record is kept of all wastes received or transferred through a system of signed Waste Transfer Notes.”

An authorised person is someone who is authorised to carry waste or permitted to accept waste for disposal or recovery. An authorized person should be able to prove this with little effort when asked. If they cannot, use caution as you may be breaking the law if you give waste to them. Using unauthorized people is one of the biggest causes of flytipping. Details of registered carriers and permitted sites can be found on the Environment Agency’s website at [www2.environment-agency.gov.uk/epr/](http://www2.environment-agency.gov.uk/epr/)

**Environment Agency guidelines for stables state that the following is mandatory:**

“Run-off from manure heaps, contaminated yards, stable washings and hay soaking should not be allowed to enter surface waters or watercourses unless a written authorisation (a discharge consent) has been received from your Environmental Regulator.”

---

*Photos: Well-managed manure storage and composting.*



As an example of how to ensure that the rules are followed, there are the following guidelines for Good Practice:

“Temporary\* field heaps should be sited where there is no risk of run-off polluting watercourses. They should be at least 10 metres from a watercourse and 50 metres from a well, spring or borehole that supplies water for human consumption or for use in farm dairies.” Field heaps should also not be placed over field drains.

“Permanent stores should have an impermeable base that slopes so that run-off can be collected easily in a sealed underground tank.”

A well-constructed permanent manure store must therefore have a concrete base, which slopes to the back of the store (in the absence of a sealed underground tank), and solid sides which will prevent the muck spilling out and contaminating adjacent land. Ideally, the muck should be kept as dry as possible.

\* Temporary means 12 months and may not return until 3 years later.

---

*Photos:* Composted horse manure can be spread onto your own land; manure storage with non-permeable sides and base, run off collected and stored appropriately.





Horse manure from commercial yards can be treated in the same way as that from private horse owners. Despite changes in the law the Environment Agency has adopted a position that allows people to spread horse manure on land as fertiliser, provided the rate of application does not exceed crop need, or soil requirements or cause pollution. Where horse manures are spread as fertiliser on any land for benefit, then the manure is not considered to be waste. This includes agricultural land, parks, gardens and allotments. If however, the manure is disposed of by burning, burial, tipping etc then it is considered to be waste and the requirements of legislation such as the Environmental Protection Act 1990 and Environmental Permitting Regulation 2007 apply.

In the case of bedding materials such as wood shavings, shredded paper and cardboard it is also recommended that you compost these materials prior to spreading in order to make best use of the nutrients. You will be required to register an exemption form with the Environment Agency in order to cover this activity. Registration is free but read the guidance to understand the limits and conditions.

**[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)**

---

*Photos: Baler twine can be recycled.*



The open burning of manure as a controlled waste is an offence under the Environmental Protection Act 1990. It may also be an offence under the Clean Air Act 1993 if dark smoke is emitted from the burning of waste on a business premises. Effluent leaching from large manure piles can have serious pollution implications and offences are prosecutable. Run off from manure heaps, water used to wash down rubber matting in stables and water used to soak hay should be directed to an impermeable lagoon, a sealed effluent tank or a foul sewer. The liquid can either be removed by a licensed contractor or, if appropriate, may be spread on pasture in accordance with paragraph 7 of the Environmental Permitting Regulations 2007. If the land where the spreading is to take place is in a NVZ then the requirements of Nitrate Vulnerable Zone Regulations apply. If it is not, then the guidance in the Code of Good Agricultural Practice should be followed.

A waste carrier who is paid to transport manure must be registered with the Environment Agency. If you transporting waste that belongs to you then you are exempt from the need to register. If the manure is used as a fertiliser then it is not waste and so the requirements to use a registered waste carrier and transfer notes don't apply.

---

*Photos: Bags of manure – valuable to gardeners; wood shavings used as bedding; well managed compost system.*



Registered waste carriers must issue a waste transfer note detailing:

- the waste type and quantity
- the container used
- the place, date and time of transfer
- names and addresses of both people involved in the transfer
- information indicating whether the person transporting the waste is the importer or producer of the waste
- the registered waste carrier's certificate number and name of the issuing Environment Agency
- if applicable the waste management licence number and name of the issuing Environment Agency and reasons for any exemption from the requirement to register or have a licence.

The note must be filled in, signed and kept for two years by both persons involved in the transfer. If manure is to be transferred between the same two parties throughout the year, an annual note may be written in advance to cover the whole year.



### *Other equestrian waste*

---

The guiding principles of waste management are Reduce, Reuse and Recycle. Reduce the amount of time your horse spends in the stable to cut down on bedding and feed waste. Reduce the amount of bedding you use, perhaps by using rubber matting. Choose a more readily biodegradable bedding material such as paper or straw.

With an overwhelming selection of different horse feed stuffs now on the market many people tend to choose a combination of feeds. This increases the amount of waste packaging produced, especially if supplements are used as well. Consider whether you could reduce the variety of feed stuffs you are using, for example are you using two feeds which provide similar nutritional value?

Reuse packaging where possible – supplement containers make excellent storage containers for use around the stables or home. Use baler twine to make haynets, tie ups etc.

**Water** is becoming an increasingly precious commodity. Check water troughs around the stables and in fields regularly to make sure there are no leaks. Install water butts to collect water run off from stables and buildings to use for scrubbing hooves, horse and human boots etc.



## **Plastic**

Burning or burying plastics on your site is illegal. You can temporarily store your own plastic in a secure place and arrange for it to be collected by contractors for recycling.

For large livery yards/stables this will be an efficient and cost effective way of disposing of large quantities of haylage wrap, shavings bags, feed bags, plastic containers and baler twine. For small yards/individuals explore the possibility of forming a 'plastics cooperative' with your neighbours. Take all your waste plastic to a central collection point and split the cost of collection between you all.

Visit the following websites for a recycling directory where you can use your postcode to search for facilities in your local area.

**[www.wasterecycling.org.uk](http://www.wasterecycling.org.uk)**

For more information on waste legislation contact the Environment Agency on

**08708 506 506**

**[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)**



## Buildings and development

---

### *Planning regulations in relation to equine activity*

---

National planning policy guidance supports the use of land for horse riding and other equestrian activities as popular forms of recreation that can fit well with farming activities and help to diversify rural economies. Planning Policy Statement 4 (PPS4) policy EC6(g) replacing paragraph 32 of PPS7 supports equine enterprises where appropriate and where in conformity with retained paragraph 21 of PPS7 (Nationally Designated Areas).

#### **NOTE**

National Planning Guidance is under review and will be replaced with the new National Planning Framework. For up to date information see [www.communities.gov.uk](http://www.communities.gov.uk)

---

*Photos:* Horses can be a positive form of farm diversification; reflect local building style where possible; reuse old buildings if appropriate.



## *When do you need planning permission?*

---

You are likely to require planning permission for the following:

- Change of use – the use of agricultural land for the **keeping** of horses for recreational purposes may constitute a material change of use requiring planning permission.
- Permanent structures such as stables, field shelters, tack rooms, hay stores. Permitted development rights may exist for structures within a certain scale within the confines of a garden.
- New access – if you plan to create a new gateway and access point off a highway.
- Outdoor arena or other permanent exercise area (e.g. tracks, horse walkers).
- Lighting – around an existing or planned arena for example.
- Permanent jump structures, such as cross country jumps.

In some instances you may need to consider buildings regulations but not need planning permission. Planning permission generally relates to a change whereas buildings regulations concern the technical details of a structure, drainage, safety etc. Other consents may be necessary such as Environmental Health, Conservation Area and Listed Buildings consent. Consult your local authority to find out if they have specific policies relating to horse keeping.

---

*Photos:* Carry out consultation on your proposals; consider how your proposals will affect landscape character; reuse of existing farm buildings can be more in keeping with a farmstead setting than new build timber stables.



## *The planning process*

---

If you are considering applying for planning permission prepare the ground before you apply.

- Check with your local planning authority to find out whether planning permission is required for your particular proposals and what policies and designations cover your area.
- Ask the authority if they foresee any difficulties with what you are proposing and how you could resolve them.
- Check whether an Environmental Impact Assessment is needed. This will depend on the scale and location of your proposals. For more information on EIA: [www.communities.gov.uk](http://www.communities.gov.uk)
- Consider what impact your proposal will have on the landscape, amenity and services. Consult any neighbours and others who may be affected by your proposals.

## *When you make your application:*

---

- Obtain an application form and any guidance notes from your local planning authority. Find out how many copies you will be required to submit.
- Complete the form, location and layout plans, elevations and illustrations.
- Attach any additional information such as a land management plan (see page 60).

---

*Photos:* Painting existing buildings in dark colours can help them to have less impact.





- Send to the local planning authority with certificate of ownership or notification, and the correct fee.
- Find out from the authority whether (and when) your application is likely to go before the planning committee, or if it will be delegated to planning officers to decide. Find out when a decision is likely to be made.

For more detailed information visit your local authority website and look up the planning pages and refer to the Kent Downs Farm Diversification Toolkit chapters 8 and 11.

### *Additional information*

---

#### **Land management plan**

A land management plan should include the following information:

- Number and type of horse (breed, height, weight, use)
- Amount of land available (owned and rented). Type of land, soil type, topography and grass sward type.
- Land management programme including management objectives, resting and rotation programme, how poaching and overgrazing will be prevented, managing

---

*Photos:* Good grassland management is good for wildlife, landscape and horse health; laying hedges can help to create good boundaries to provide shelter; use dark colours for buildings.



land in wet weather and excessive seasonal grass growth, proposed use of fertilisers and weed management.

- Details of all fencing proposals, including materials and location.
- Manure and waste management including storage, management and disposal.

A land management plan need not be an onerous task and may be requested as a condition to planning permission being granted. A template for a land management plan is available on the Kent Downs website [www.kentdowns.org.uk](http://www.kentdowns.org.uk)

### **Careful siting of structures and choice of building materials**

Use existing buildings where possible, for example in farm diversification schemes stables are often built into existing redundant farm buildings. The Kent Downs Farmsteads Guidance is a useful tool, especially where existing buildings are being used. Impact can be reduced by siting new buildings close to existing buildings, avoiding building on the top of a hill or in a view line. Make use of hollows and copses of trees to minimise the impact on the landscape. The Kent Downs Farmsteads Guidance, the Kent Downs Landscape Design Handbook and Farm Diversification Toolkit provide useful guidance. [www.kentdowns.org.uk](http://www.kentdowns.org.uk)

---

*Photos:* Horse riding is a form of healthy exercise; beech tree; low impact horse fencing.



Waste storage and management is an important consideration, both for dung collected from the field, stable/bedding waste and plastics from haylage and bedding wrapping etc. Storage facilities should be built into any new application for stables and this should ensure that there will be no risk of contamination of watercourses or any likelihood of adverse impact on neighbours. For small scale operations manure can be composted at home. The composting unit should have non-permeable base and sides and be situated away from water courses and bore holes. For larger equestrian developments you will need to consider storage of waste and collection from site by a waste contractor. Well rotted manure can be spread back onto your own land. For more detail see Waste Management chapter.

Look closely at traditional local building materials. Try to reflect this in the design of your development where possible. Locally sourced wood can be used for some building work and some fencing. Generally darker building materials blend into the landscape better. If your proposal is within a farm setting it may be more in keeping to opt for a farm style building with internal stables rather than wooden stable blocks. Refer to the Kent Downs Landscape Design Handbook, Kent Downs Farmstead Guidance and your local planning authority for further advice on design.

---

*Photos: Protect trees from horse nibbling; working horses; riding.*



## Parking and access

Information regarding existing and proposed traffic movements and type of traffic will be required with most planning applications. Assess the traffic and car parking implications of your proposals, contact the highways authority and discuss sight lines and traffic movements.

The accessibility of your holding will affect the type of activities that you will be able to carry out. The design of accesses onto and off the highway will also be important in terms of safety and visibility. The visual impact of new access on roads and access points will also be an important element in your proposals. Consider the design of gateways so that they fit in with local environment. Further detail and advice on this can be found in the Kent Downs Rural Streets and Lanes: A Design Handbook, available at [www.kentdowns.org.uk](http://www.kentdowns.org.uk)

Look at potential problems such as increased traffic activity, change in type of vehicles, noise, safety or parking congestion. You may be required to produce a 'travel plan' or with larger applications, a full 'traffic assessment' which could address some of these issues.

The level of parking required will need to be considered in conjunction with the proposed use. Parking areas should be well designed and screened using suitable

---

*Photos:* Horse friendly wire netting fencing, secure and low visual impact; wooden posts and dark electric tape is a good choice for low impact essential sub division; locally sourced chestnut cleft fencing.



native plants. Roadside parking can cause access and safety issues and downgrading of the roadside and verge. Grass matting is available that can take a vehicle weight up to 20 tonnes and this might present a low visual impact solution to some parking issues.

### **Design of lighting**

New lighting can have an impact on the feeling of tranquillity in the countryside and can affect neighbours' quality of life. Few areas in the country are truly tranquil now and lighting can detract from the feeling of remoteness, 'ruralness' and dark night skies which are such celebrated features of the Kent Downs AONB. Minimise lighting, secure your property by using alarms, coding equipment and security by design (using hedgerows etc), make sure lights are on timers so they don't stay on when they are not being used and choose lights that point down and have little 'spill'. Restrictions on hours and design of low-level lighting may well be required by your local planning authority.

### **Design of fencing**

Landscape character should influence the design, type of materials and siting of fencing. Consider the contours of the land, how existing trees and hedges fit in and where existing fencing would tie in when considering new fence lines. Fencing small,

---

*Photos: Group buildings together, at bottom of slopes and use dark colours; horse related businesses can be a good form of farm diversification and help to sustain mixed farm landscapes; careful design and siting of structures can help to reduce their impact on the wider landscape.*



uniform rectangles is not likely to suit even the least open of landscapes in the Kent Downs and should be avoided, particularly when using visually intrusive materials like machine finished post and rail fencing. Permanent sub-division of fields should be kept to a minimum to avoid adverse impact on landscape. See Fencing chapter (page 41) for detail on types of fencing.

Making careful decisions about what fencing to use, the materials and colour will pay dividends in terms of local landscape quality, how equine enterprises are viewed by others, and the safety of horses. For specific advice and specifications on fencing and boundary treatments refer to the Fencing chapter.

### **Enhancement**

Use native trees and hedging species such as hawthorn, blackthorn, field maple and holly. These species are faster growing than you may realise, will be attractive in their own right, will provide good shelter with proper management and will be a haven for wildlife. The Kent Downs Landscape Design Handbook provides information on each of the thirteen landscape character areas that make up the AONB and provides details of appropriate tree and hedging species combinations for each local area. The Kent

---

*Photos: Mares and foals; farrier; dressage.*



Downs Land Managers Handbook provides detailed information on how to plant new hedges and manage them once they are established. For further advice on landscaping refer to Chapter 8.1.8 in the Farm Diversification Toolkit.

Earth bunds may seem like a good way of dealing with excavations from development but they can create a very artificial landscape. It can be better to reuse the soil elsewhere or to sell the top soil.

For more details on the planning system in relation to horses see the Country Land and Business Association guide at [www.cla.org.uk](http://www.cla.org.uk)

For more details on the planning system in general

[www.planningportal.gov.uk](http://www.planningportal.gov.uk)

[www.planning.odpm.gov.uk](http://www.planning.odpm.gov.uk)

Kent Downs Farm Diversification Toolkit

[www.kentdowns.org.uk](http://www.kentdowns.org.uk)

Chapters 8 and 11

---

*Photos: Storage of manure; mixed grazing; arena.*



## Further information

---

### *Grass seed suppliers*

---

These suppliers produce seed mixes which contain little or no ryegrass.

#### **MAS Seed Specialists**

[www.meadowmania.co.uk](http://www.meadowmania.co.uk)

Tel/fax 01249 819013

[shop@meadowmania.co.uk](mailto:shop@meadowmania.co.uk)

Produce a Natural Horsemanship Long Term Grazing Ley as well as a variety of meadow mixes.

#### **TGS Wildflowers**

01386 45868

Signed up to the Flora Locale Code of Good Practice. Also offer a contract service to harvest wildflowers for specific projects.



**Emorsgate Seeds**

[www.wildseed.co.uk](http://www.wildseed.co.uk)

01553 829028

[enquiries@emorsgateseeds.com](mailto:enquiries@emorsgateseeds.com)

Advice, seed. Signed up to the Flora Locale Code of Good Practice.

**Cotswold Seeds**

[www.cotswoldseeds.com](http://www.cotswoldseeds.com)

0800 252211

Natural Pony Paddock Mix

**Simple System Ltd**

[www.simplesystemhorsefeeds.co.uk](http://www.simplesystemhorsefeeds.co.uk)

01371 870753

Ryegrass free grass seed mix

**The Grass Seed Store**

[www.thegrassseedstore.co.uk](http://www.thegrassseedstore.co.uk)

0800 917 70 24

Ryegrass free mixes

**Boston Seeds**

[www.bostonseeds.co.uk](http://www.bostonseeds.co.uk)

01205 280069

The Choice Horse & Pony Paddock mix is ryegrass free.

*This is not an exhaustive list, there may be other suppliers. Please read the contents list of any bag of horse and pony pasture seed mix carefully before buying and seeding.*

## *Sources of information about horse welfare and horse keeping*

---

British Horse Society	<a href="http://www.bhs.org.uk">www.bhs.org.uk</a>
The Blue Cross – Fat Horse Slim	<a href="http://www.fathorseslim.org.uk">www.fathorseslim.org.uk</a>
World Horse Welfare	<a href="http://www.worldhorsewelfare.org">www.worldhorsewelfare.org</a>
RSPCA	<a href="http://www.rspca.org.uk">www.rspca.org.uk</a>
Donkey Sanctuary	<a href="http://www.thedonkeysanctuary.org.uk">www.thedonkeysanctuary.org.uk</a>
Donkey Breed Society	<a href="http://www.donkeybreedsociety.co.uk">www.donkeybreedsociety.co.uk</a>
Defra Code of Welfare for Horses	<a href="http://www.defra.gov.uk">www.defra.gov.uk</a>

## *Other sources of information about the landscape and environment*

---

Campaign to Protection Rural England	<a href="http://www.cpre.org.uk">www.cpre.org.uk</a>
Environment Agency	<a href="http://www.environment-agency.gov.uk">www.environment-agency.gov.uk</a>
Natural England	<a href="http://www.naturalengland.org.uk">www.naturalengland.org.uk</a>
Areas of Outstanding Natural Beauty	<a href="http://www.aonb.org.uk">www.aonb.org.uk</a>
Flora Locale	<a href="http://www.floralocale.org">www.floralocale.org</a>
Woodland Trust	<a href="http://www.woodlandtrust.org.uk">www.woodlandtrust.org.uk</a>
Wildlife Trusts	<a href="http://www.wildlifetrusts.org">www.wildlifetrusts.org</a>

## *Other sources of information about planning issues relating to horse keeping*

---

Planning portal	<a href="http://www.planningportal.gov.uk">www.planningportal.gov.uk</a>
National Farmers Union	<a href="http://www.nfuonline.com">www.nfuonline.com</a>
Country Land & Business Association	<a href="http://www.cla.org.uk">www.cla.org.uk</a>



