



# Enabling Equestrian Access in Northern Ireland



*Old Coach Road*  
**Public Footpath  
and Bridlepath**  
( to Agherton Road - 1 mile )

## Executive Summary

This document is a resource to enable the maintenance and opening up of new access for equestrians. It provides advice and technical information for the inclusion of equestrians on all existing and new public access areas.

Further advice and support on individual cases is available by emailing details to [access@bhs.org.uk](mailto:access@bhs.org.uk) or calling 02476 840515.

## Who are The British Horse Society?

The British Horse Society was founded in 1947 and has grown over the past 70 years to become the largest and most influential equestrian charity in the UK with over 117,500 members.

We aim to protect and promote the interests of all horses and those who care about them, including the 3.5 million people in the UK who care for, ride or who drive a horse-drawn carriage.

During 70 years, BHS Ireland has made a significant impact on the lives of horses and horse owners with wide-ranging campaigns and initiatives.

Our world-class qualifications, education and approved establishments ensure that the current and next generation of equestrians in Ireland are trained to the highest levels; with opportunities to expand on their particular areas of interest simply enjoying horses, training or riding at international level.

Our core work with welfare, access, safety and education – are more important than ever as they demonstrably make a difference to lives of horses and people every day.

Our charitable work includes Equestrian Welfare, Safety, Access and Rights of Way, World-class qualifications, Education and Approved Establishments, such as Riding Schools and Livery Yards.

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## Contact The British Horse Society

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**1.8 million** regular riders



Equine Population: **1,387,791**



Economic Value £4.7 billion/year across a wide range of goods and services



**8,561** UK Road incidents involving horses between 2010 - 2021\*



\* Number of road incidents reported to the BHS. Note not all incidents will be reported.



## Overview of Equestrian Access in Northern Ireland

The Society represents 758 equestrian land-based businesses. 736 based in the UK & Republic of Ireland, with 22 overseas, and over 117,000 equestrian members in the United Kingdom and Republic of Ireland.

We work proactively to facilitate and support safe off-road access for both horse riders and carriage drivers. We protect and promote the interests of all horses and those who care about them, including the 3 million people in the UK and 46,799 people in the Republic of Ireland who ride or who drive a horse-drawn carriage.

There have been 4,140 incidents reported to the BHS between 2010-2020, 76% of these incidents were in rural areas and 89% of these incidents involved vehicles passing too close or too fast, or both, to the horse. In 2020, there were 46 horses killed on rural roads, 118 horses and 130 riders injured as a result of a collision with a vehicle.

We work to provide equestrians with safe places to ride and carriage drive off the road. The majority of these routes and places are also enjoyed by walkers and cyclists.

There are not enough safe places for equestrians to access in Northern Ireland. The vast majority of the equestrian population are therefore forced to use the road. Some hack to, or transport a horse to an access site such as a forest or beach; however, these type of sites are not readily or sufficiently available throughout Northern Ireland.

Ireland is esteemed globally for its equestrian industry and economy, yet lacks the infrastructure to support critical sustainability and growth. The tourism economy relies heavily upon "hacking out" and accessing safe off-road places to ride, however this resource is very limited. Investing in the provision of equestrian routes will increase economic expenditure and tourism.

In Northern Ireland the BHS is working hard to lobby government and work in partnership with stakeholders for the provision of safe off-road opportunities and incentives for landowners, and to protect and extend the access that does exist.



The British Horse Society in Northern Ireland is working proactively and supportively with the PSNI to communicate BHS Safety Information by educating motorists and the general public on vulnerable road users.

The PSNI are also sharing the [BHS Riding Out in Northern Ireland video](#) on driver education days.



## The Greenways...

In 2021, the BHS published a template letter to encourage equestrians in Northern Ireland to lobby their MLA to ensure horse riders and carriage drivers are included in any plans and developments under the Greenways Strategy (2016).

Read more here:

[bhs.org.uk/our-charity/press-centre/news/2021/november/ni-greenways-strategy](https://www.bhs.org.uk/our-charity/press-centre/news/2021/november/ni-greenways-strategy)

## Permits

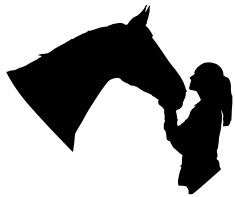
The BHS is pleased to see permits being either removed in exchange for more modern administration and site management systems, which are free of charge to the public, or, where permits are still used, that they are being applied fairly to all users, such as Drumkeeragh Forest managed by Newry Mourne and District Borough Council and Gortin Glen Forest managed by Fermanagh and Omagh District Council.

## Equestrian Expenditure in Northern Ireland



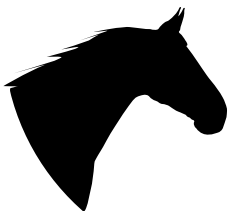
Estimated **£170-£212 million** per year

Core equestrian industry in Northern Ireland generates an estimated £170-212 million expenditure every year.



**£187 million** represents non-thoroughbred sector

The thoroughbred industry in Northern Ireland only accounts for 6% of the equine population.



**34,250** registered horses in Northern Ireland

Direct expenditure generated by the core equine industry in Northern Ireland is estimated at £170m to £212m per year. The non-thoroughbred sector represents the large majority (£187m). While the thoroughbred industry makes up 12% (£25m) of the total expenditure, it accounts for only 6% of the equine population. The economic value of the equestrian sector, excluding racing, stands at £4.3 billion of consumer spending. There are 1.8 million regular riders in the UK.

One of the key themes for further consideration included the 'need for development of additional infrastructure for accessible off-road routes and bridleways'.

**The Deloitte Analysis of the NI Equine Industry (2019)**

Equestrianism could be fuelled significantly by improving access infrastructure in Northern Ireland from visitors within the UK, Republic of Ireland and overseas.

"The Irish Sport Horse Industry provides a major contribution of €816 million to the Irish Economy. The total national equine population was estimated in 2016 as 135,715."

**The Contribution of the Sport Horse Industry to the Irish Economy (2017)**

Due to the historical evolution of the legal processes which protect Public Rights of Way in Northern Ireland, the many thousands of kilometres which once would have been frequently traversed by equestrians have been lost. Those routes would now be listed legally under Public Rights of Way as Bridleways or Carriageways.

There is a staggeringly small amount of legal Public Rights of Way which include equestrian rights in Northern Ireland.

A total of under 1% of the Public Right of Way Network in Northern Ireland provides access for equestrians. This is considerably less than neighbouring countries of England and Wales where 22% of the network is available to horse riders, of which just 5% is accessible to carriage drivers.

The existing legislation does not enable users to easily record a route which historically held equestrian rights, and to protect those rights for the future, unlike in England and Wales where an application is submitted to the council to update the Definitive Map. The Society fully supports any movement towards improving existing legislation to enable equestrian rights to be recorded so that they are protected for future generations.





Access for All - Inclusivity & Health Benefits of Riding

The benefits of countryside access and horse riding not only to physical health, but also to mental health, and wellbeing are well proven. Increasing and enhancing access to the outdoors supports the Government's aims to connect people with the environment to improve health and wellbeing, particularly in more remote and rural areas.

The Covid-19 pandemic resulted in a vast increase in use of the outdoors by the general public and reinforced the need for more access, and improved infrastructure. During the Covid-19 pandemic, 31% of adults increased the amount of time spent exercising outdoors and 83% of those said being in nature made them happy. (DEFRA - The People and Nature Survey (2020).)

Current research globally is predicting that post Covid-19, demand for public access to the outdoors will continue to rise.

Horse riders are vulnerable road users, just like walkers and cyclists. The BHS works closely with partner organisations such as the Ramblers, The Disabled Ramblers, and Cycling UK on shared or "multi-user" routes.

These public routes and/or open spaces allow access for all non-motor propelled access. Routes are shared and enjoyed responsibly by following common sense and promoted messages such as "Stop and say hi" and "Share the space". We work proactively to educate equestrians to ride and carriage drive responsibly, and inform other users how to share routes safely with horses.

Additionally, with an increasingly urban society, an improved and enhanced rights of way system that encourages activities such as horse riding and carriage driving provides vitally important opportunities to better connect the public with the natural environment, and understand the critical work undertaken by farmers.

Horse riding is classified as a moderate to high intensity physical activity which has proven to play an important part in mental and physical health. It aids fitness, weight management, strength, flexibility and mobility. Riding can play an important part in improving social well being and can aid depression and anxiety. Riding can improve long standing physical and mental illnesses and disabilities, and has been referred to as a method for individuals (who suffer with reduced mobility) reaching places they never could on a bike or in a wheelchair.

The British Horse Society released a new app in March 2021 that enables equestrians to quickly and easily submit details of incidents that have negatively affected their safety.

The free of charge new app, 'Horse i', has been specifically designed to empower equestrians to immediately report any incidents they encounter directly to the BHS via a simple, easy-to-use interface.



## What is an incident?

An incident is classed as an unplanned event that has resulted in a human or horse feeling unsafe (e.g., road rage), or that has the potential to cause injury (a near miss), or that has already caused injury. Equestrians can report problems with:

- a road or off-road user
- dogs
- slippery road surfaces
- low flying aircraft or nuisance drones
- fireworks

### **Multi-User Routes to Benefit all Users**

Multi-user routes should benefit all non-motorised users.

Part III of the Disability Discrimination Act 1995 Act makes it unlawful for a service provider to discriminate against a disabled person by:

- Refusing to provide (or deliberately not providing) any service which it provides to members of the public; or
- Providing service of a lower standard or in a worse manner; or
- Providing service on worse terms, whether or not there is a charge for the service.

It is also unlawful to fail to make reasonable adjustments which may assist a disabled person to make use of any such service.

Removing the barriers to enable access for users with mobility vehicles or restricted abilities will often deliver the same solution aimed for by horse riders.

Where a new multi-user route is opened for a community, proactive education should take place to inform users of each other's needs and how to share the space safely and responsibly.

### **Supporting Agriculture**

The equestrian industry is closely aligned with agriculture, supporting it in many diverse ways.

Equestrians are generally aware of the needs of landowners and agricultural land in particular, and respectful of rural practices and land management. Liaising with the BHS about opportunities will quickly identify if access is possible or not given the varied agricultural practices in any given scenario.

The BHS produce free advice on Riding Out on a vast range of topics including:

- Wind Farms (for developers and Riders)
- Solar Farms
- Riding through livestock
- Gates and Structures
- Bird Scarers - we support and promote the NFU guidance on bird scarers for both landowners and equestrians.





## Why Provide Equestrian Access

## The Need

Accessing the outdoors for the general public is vital for physical and mental health and wellbeing. With the increase in use of the outdoors since the 2020 Global Pandemic, combined with the ever-rising speed and volume of traffic on Northern Ireland's roads – the provision of safe off-road access for vulnerable road users has never been so important.

“ Boosting health and wellbeing will remain a crucial factor in motivating travel in 2021, with travellers seeking new ways to stay safe, active and healthy ”

Tourism Northern Ireland 360 publication 2021

Equestrians rely upon safe off-road access for recreation and leisure, exercise, sport and business. Providing safe off-road hacking for visitors is a recognised and popular service of Northern Ireland's Tourism industry.

The majority of horses, irrespective of their sport (i.e., recreational riding, eventing, show jumping or racing) from grass roots to elite competitive level will rely upon good quality hacking out as part of their regular training, development and exercise regime. To reduce road incidents, to increase public safety, and to fuel a growing industry at the heart of Ireland's economy, investment and plans to secure off-road provision in local areas is imperative.

Providing off-road routes provides key links between rural locations and can provide non-motorised access to destinations previously not accessed. This supports and further invests in local rural economies and businesses providing catering, accommodation and local services.

In Northern Ireland “the benefits of spending time outdoors during the COVID-19 lockdown were significant. 84% of participants reported feeling physical health benefits and 90% reported benefits related to mental health and wellbeing. Benefits were strongest amongst people who visited the outdoors most often during lockdown and people with quality trails and greenspaces close to home. 51% of respondents expected to spend more of their free time outdoors than they did pre-lockdown.

“People would most like to be able to visits local parks, the countryside and coast, to walk on off-road trails and to spend time with family and friends. There was significant support for the development and improvements of walking and cycling trails”. Outdoor Recreation NI survey, May 2020.

It is imperative that equestrians are considered in any proposed trail developments moving forward in the form of multi-user routes/trails.

“ Apart from health and well-being benefits, outdoor recreation contributes to Northern Ireland society in a wide range of areas, including social inclusion, community cohesion, environmental awareness, rural development and economic opportunities ”

Outdoor Recreation NI survey May 2020

Although Ireland is known as “Horse Country”, it has the poorest provision of off-road access in the UK and neighbouring European countries. Although close neighbouring countries (i.e., England, Wales and Scotland) have been able to protect public rights of access more easily than Northern Ireland, this does not prevent new routes being secured, and the provision of true multi-user off-road infrastructure to be included in government and local authority plans moving forward.

The British Horse Society has been proactively working in partnership with key stakeholders to open new access opportunities in the form of multi-user routes, and horse trails at Drumkeeragh Forest, Gortin Glen Forest and Gosford Forest Park. This includes Outdoor Recreation NI and the local authorities and landowners (Forest Service NI) responsible for these areas. These sites are a welcome positive step forward in the provision of multi-user access in Northern Ireland and can be used as case studies to replicate such access throughout Northern Ireland.

The Northern Ireland Greenway Strategy (2016) project aims to enable public access to the disused railway network which once, and could again, connect the communities of Northern Ireland, this time through an off-road, traffic-free multi-use network of walking, cycling and horse riding trails.

The Strategic Plan provides a framework for the development of a Greenway Network that reaches into all areas throughout the region, providing a safe and secure environment for all citizens to become more active, to improve their health and wellbeing, to access both town and countryside, to improve local areas and, the local economy. Investment in a Greenway Network has the potential to deliver outcomes that will benefit all and provide a positive return for future generations.

Exercise, Explore, Enjoy: A Strategic Plan for Greenways.  
Department for Infrastructure (November 2016)



## The Economic Benefits

In 2020, Invest NI stated “over the last decade Northern Ireland has been transformed and is now considered a ‘must-see’ tourism destination. Our tourism infrastructure has been bolstered by the development of five high profile visitor attractions – Saint Patrick and Christian Heritage; the Mourne; Causeway Coast and Glens; the Walled City of Derry; and Titanic – which have international standout and world-class excellence.”

Tourism is currently worth 4.9% of Northern Ireland’s GDP and sustains over 40,000 jobs. The aim is to double tourism’s contribution to the economy by 2020. This means generating an additional 10,000 new jobs and drawing in 4.5 million visitors into Northern Ireland every year.

Tourism Northern Ireland states that over 1,100 international investors and a multitude of investors from the rest of the UK have chosen to locate in Northern Ireland. Over 70% of new inward investors reinvest in Northern Ireland.

The economy is set to expand indicating spend in infrastructure improvement and continued urbanisation of rural spaces. Coupled with the housing targets set by the NI Executive will naturally generate opportunities and funds for new greenspace infrastructure (including multi-user routes and open spaces for the public).

For example, the DAERA Rural Tourism Scheme “will invest in natural and built heritage projects that can act as a key driver for encouraging rural tourism and particularly out of state visitors whilst preserving the natural assets of the rural community”.



## 'Multi-user Routes' Terminology

Defined as providing access for walkers, cyclists and horse riders. This term historically in Northern Ireland has varied, alongside 'shared' trails.

Outdoor Recreation NI and local authorities have supported the move forward to the use of common terminology as follows:

- Walking Trails and Footpaths – Walkers
- Cycling Routes and Bike Trails – Cyclists
- Bridleways/Bridlepaths – Horse riders (primary user) shared with cyclists and walkers
- Carriageways – Blacktop/hard surface - All traffic
- Carriageways - Not blacktop/not hard surfaced – non-motorised and including carriage drivers moving forward.
- Horse Trails – Horse Riders only
- Multi-user Routes – Walkers, Cyclists and Horse Riders

## Equestrian Routes Can Benefit All

Removing barriers – when providing equestrian access, in most cases, the provisions and physical routes on the ground are suitable for walkers, cyclists, users with restricted mobility and those who rely on mobility vehicles. The removal of barriers, or inclusion of particular barriers enable access for non-motorised users to share open spaces responsibly.

Typically, through the removal of barriers (such as stiles and high or difficult to operate gates), access is opened to individuals who otherwise may have previously been unable to use that route.

## User Management

Multi-user routes tend to naturally create respectful use amongst the variety of users. When users are aware it is a multi-user route, and are educated, they understand the needs of other individual users and how to share and enjoy the route responsibly, similar to any other open space.

The BHS also recommends the development of equestrian community groups to champion equestrian access in their local area; volunteers to be points of community contact for local authorities, and to communicate with other local user groups. Local Facebook groups can help with this, and the BHS can communicate with equestrians.

Our BHS Affiliated Equestrian Access Groups are a good contact point for equestrians for support on access matters within communities. (At the time of publication ) There are two very active BHS Affiliated Bridleway groups in Northern Ireland who work to increase awareness of our need for safe routes for riders and carriage drivers and responsible use by all users of public access areas and routes in their areas. They are The Ulster Rural Riders Association (URRA) based in Co.Down, and The Glens Bridleway Group (GBG) based in Co.Tyrone.

Find out more about BHS Affiliated Equestrian Access Groups [here](#).

## Free videos promoting responsible use

Examples of videos used to share responsible use messages can be viewed here:

Riding Out in NI (BHS Ireland)

Share the Trail - Mountain Bikers (Forestry Commission Wales)

A Shared Forest (Horse riding and mountain biking)

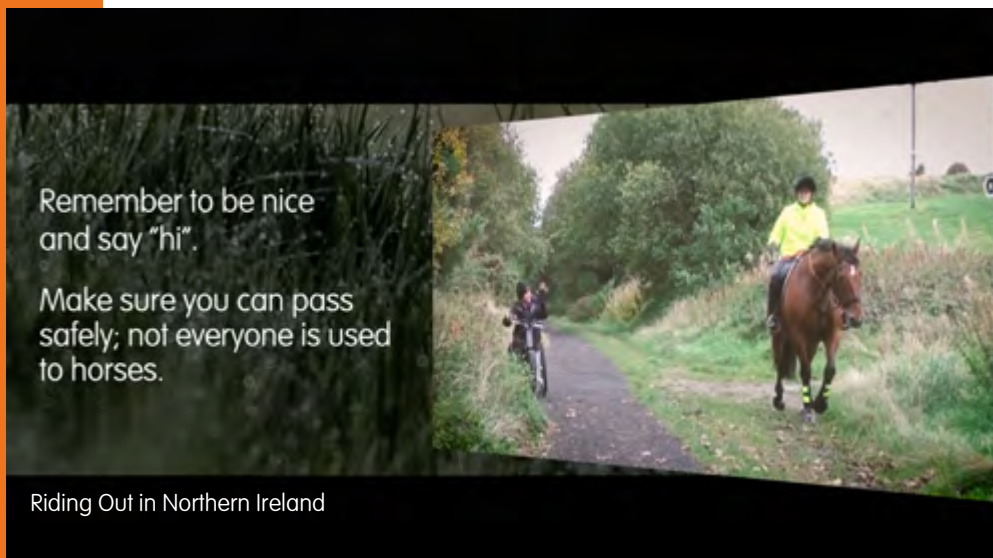
How to pass horses safely on the road (Cycling UK)

How to pass horses safely off the road (Cycling UK)

Opening Gates on Horseback (BHS)

Mobility Vehicle Users and Horse riders (Experience Community)

Ride Safe (The BHS)







## How to Enable Access

## How to Enable Equestrian Access

The legislation, set out in the Access to the Countryside (NI) Order 1983, places the district council in a unique and powerful position. The council has a statutory duty to identify, record and protect existing access opportunities along public rights of way. It also has wide discretionary powers to help manage and maintain that access and to establish new access opportunities where they are needed. Moreover, such action can only be taken by the district council; the powers and duties conferred by the Access Order are not available to any other body or organisation.

Source: A guide to public rights of way and the countryside - Guidance Notes on the Law, Practices and Procedures in Northern Ireland - Environment & Heritage Service.



## Latest Opportunities

### The 2020 Agricultural Bill

The BHS is lobbying to ensure a financial incentive and appropriate support is provided to landowners in Northern Ireland who are willing to open parts of their land for public access by permission. There should be increased incentive to provide routes for equestrians, similar to that of the Countryside Stewardship Scheme.

## Options

### Existing Public Rights of Way

Existing Public Rights of Way in Northern Ireland and those that hold rights for equestrians must be protected and where possible extended. These include:

- Footpath – open to walkers only
- Bridleway – open to horse-riders and walkers
- Carriageway – open to walkers, cyclists, horse-riders, carriage-drivers and drivers of motor vehicles

Many public rights of way (i.e., bridleways) have become fragmented due to the development of the road network surrounding them, rendering many inaccessible. Some of these routes may not be easily or safely accessed and therefore may not be regularly used. Work to connect these fragmented routes by providing further links of safe off-road sections is critical.

### Restricted Carriageways

The majority of blacktopped/hard surfaced carriageways form most of the road network. Routes which are presently listed as “Green lanes” or routes without status which could be legally recorded as restricted carriageways— public routes without the right to use with motor vehicles—would be ideal for vulnerable road users. Although the legislation does not yet provide for this, it ought to be considered.

### Creation of Rights of Way

#### Deemed Dedication at Common Law

A landowner can dedicate a right of way. Such dedications could provide critical short off-road links connecting two off-road routes or areas, or considerably longer sections such as disused railway lines (typically ideal for multi-user routes). There are no statutory criteria for the presumed dedication of a public right of way in Northern Ireland and the council will therefore need to be satisfied that a right of way can be shown to exist at common law. This involves two essential elements - dedication by the owner of the soil and acceptance by the public. Dedication may be as a footpath, bridleway or carriageway.

**Assertion**

This process entails the provision of sufficient evidence established through historical maps proving the existence of the route, local plans, guidebooks, records of proceedings and legal documentations such as title deeds and documentation referring to route upkeep and responsibility of maintenance. Article 3 of the Access to the Countryside (NI) Order 1983 places each district council under a duty to assert public rights of way, and to compile and preserve maps of public rights of way in its district.

Neither the term “assert” nor the procedures to be followed are defined in the legislation, but “assert” has been judicially interpreted as meaning “in essence, to claim there exists”. In practice, this involves researching and formally recognising a public right of way by a resolution of the council and, where necessary, asking the County Court to ‘vindicate’ (or confirm) the assertion.

“ Councils should not wait until a path becomes obstructed or some other dispute arises since this will complicate the issue and make it more difficult for all parties to agree amicably the line and status of the path in question. Given the growing recreational and economic importance of public rights of way and the paucity of assured routes in Northern Ireland, compared with other areas of the UK, it is hoped that all councils will strive to assert as many routes as possible.

The period of time and degree of use necessary to give rise to a dedication at common law has not been defined and the council must therefore make up its own mind on the facts and circumstances of each case. There is no equivalent in Northern Ireland legislation of the statutory period of 20 years provided for in the English legislation, although that does give a guideline to what might be an appropriate period in some circumstances. It should be noted, however, that in cases where the use of the path has been both very frequent and obvious the courts have been prepared to accept a much shorter period as sufficient to give rise to a presumed dedication at common law (e.g., periods of eight and six years). Conversely, much longer periods have been accepted where use has been regular but infrequent. The courts have also accepted that the degree of use needed to prove the existence of a public right of way in a remote, rural area may be less than that needed in an urban location ”

Ref. A Guide to Public Rights of Way and Access to the Countryside

**Permissive Access**

Permissive access is usually agreed in writing by the landowner to provide access on their land for a certain amount of time. Sometimes this can be in return for financial gain.

Sec 1.b of the 2020 Agriculture Act enables landowners to receive financial assistance in return for “supporting public access to and enjoyment of the countryside, farmland or woodland and better understanding of the environment”

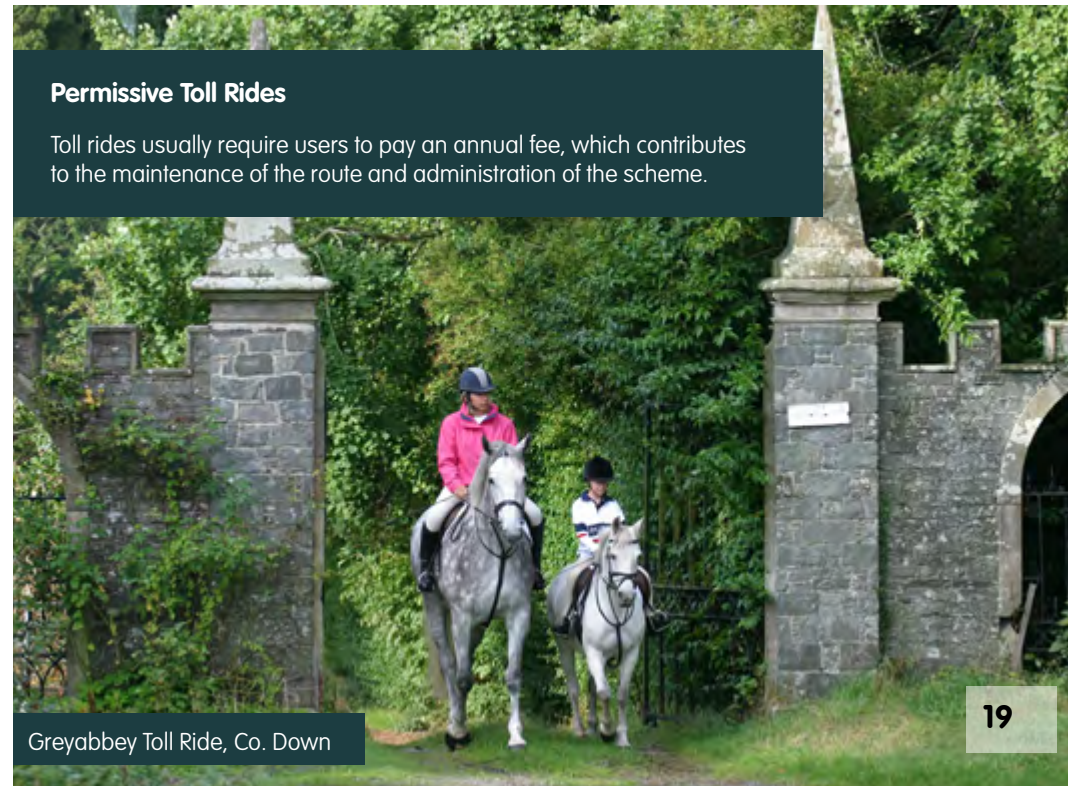
This should be explored as a good incentive for agreeing permissive access. If the permissive agreement is for a notable number of years, the BHS welcomes applications to its Ride Out Fund for further financial support.

**Access Agreements**

The 1983 Access Order (NI) enables a district council to enter into an access agreement with a landowner for the purpose of enabling public to have access for open-air recreation to open country. In the absence of a suitable agreement with a landowner, the district council has the power to make an access order.

**Permissive Toll Rides**

Toll rides usually require users to pay an annual fee, which contributes to the maintenance of the route and administration of the scheme.



Greyabbey Toll Ride, Co. Down



**A very successful case study of a Toll Ride in Northern Ireland is the BHS Greyabbey Toll Ride, Co. Down**

The Greyabbey Toll Ride has reopened and is a very popular ride for the equestrians of this area.

To find out more about this ride visit:  
[www.bhs.org.uk/bhs-in-your-area/ireland](http://www.bhs.org.uk/bhs-in-your-area/ireland)

In 2017, National Trust Mount Stewart opened up its gates to horse riders for the first time since 1973, which generated significant positive PR.

Moving forward, they welcome rides organised by the BHS throughout the year. This access was negotiated and agreed on a permissive basis and events are planned throughout the year with the landowners.

**Events**

Every year the BHS runs "Ride Out UK", a campaign to raise money for our charitable access work achieved through the Ride Out Fund. Events are planned throughout the UK and are often a good way to negotiate one-off access for rides in places where there isn't usually access for equestrians. This can often be a way of providing access throughout the year for further events, or can be used as a 'trial' to give landowners reassurances that providing access can work for them.

British Horse Society Affiliated Equestrian Access Groups and British Riding Clubs are good contacts to run events throughout the regions of Northern Ireland.



## Lobbying, Government & Key Stakeholder Consultations

The British Horse Society Ireland sit on the following stakeholder working groups in Northern Ireland and works in partnership with:

**Northern Ireland**

BHS seat on panel	BHS working with
DAERA Interim Equine Forum	DAERA Cross-Governmental Equine Steering Group
NORF (National Outdoor Recreation Forum)	ORNI (Outdoor Recreation NI)
NORF (National Outdoor Recreation Forum)	Sport NI
	Forest Service NI
	Local Authorities

**BHS Ireland also works with the following organisations in the Republic of Ireland to support Equestrian Access:**

- Comhairle na Tuaithe (seat on panel)
- Coillte
- Sport Ireland Outdoors
- Any other groups interested in developing access to the countryside





Current Access Provision  
Maps, Registers and Records of Access

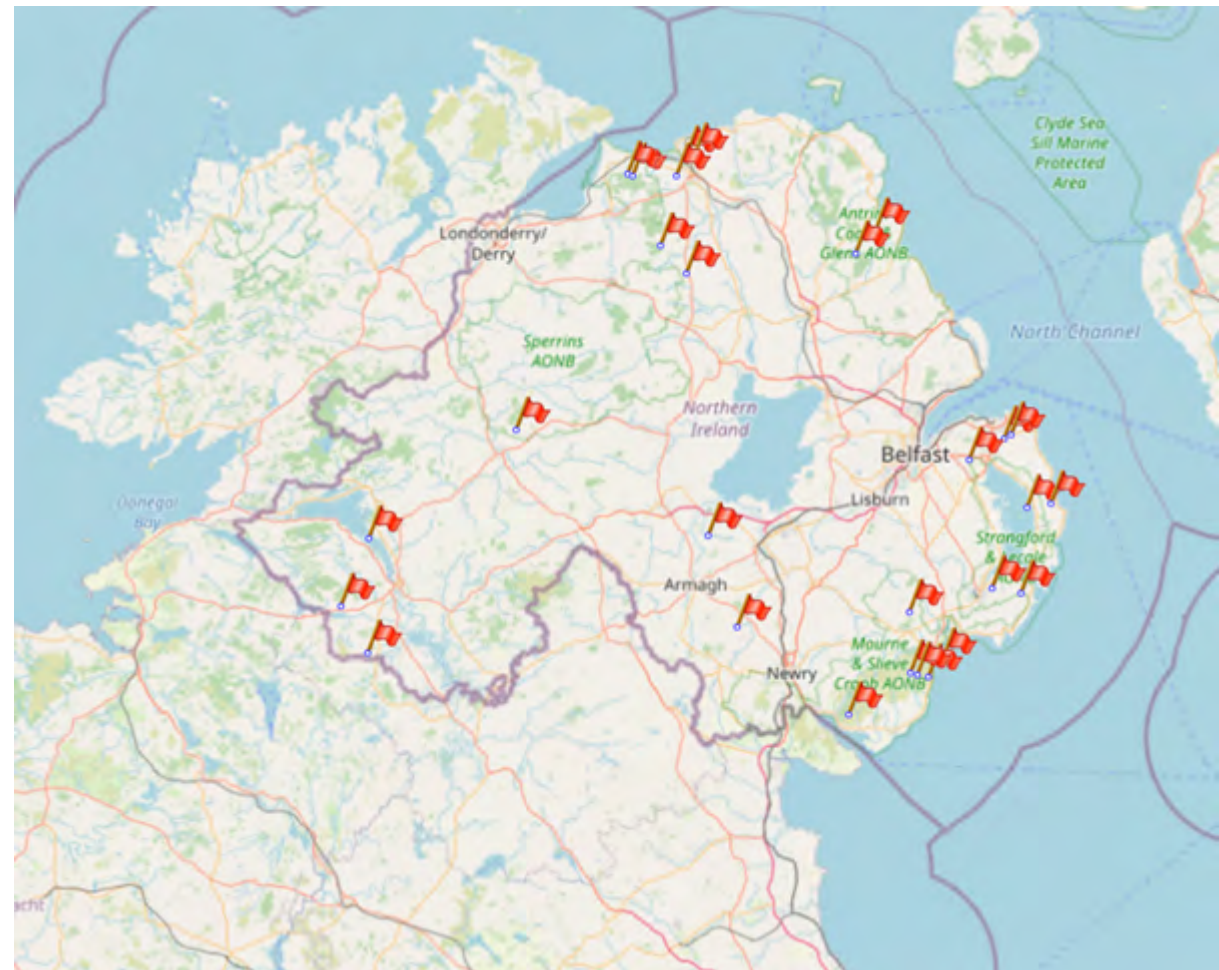
Article 3 (3) of the Access to the Countryside (NI) Order 1983 requires the district council to compile and preserve maps and other records (including a register) of the public rights of way in its area. Generally speaking, councils will display available routes in their area on their websites which will also include permissive routes. Access to Crown land (including land such as that owned by the Roads Service, Forest Service, Water Service, Ministry of Defence and public beaches) is usually detailed on the respective parties' websites. An example of this is the map displaying the Public Bridlepath (Mill Road to Agherton Road) on the Causeway Coast and Glens Borough Council Map system available here:

<https://www.causewaycoastandglens.gov.uk/maps/>

The British Horse Society has recorded a list of all known current access viewable including known permissive access available here:

[www.bhs.org.uk/our-work/access/ireland](http://www.bhs.org.uk/our-work/access/ireland)

These access areas are also recorded on the BHS mapping site [here](#).







## Basic Requirements for Enabling Equestrian Access

“ We must **include**  
horse riders ”  
and if not, ask  
“ Why are we **excluding**  
horse riders? ”



The cost of providing equestrian access does not differ from that for walkers or cyclists when providing a general multi-user route or area of open access. To provide additional features such as car parks and tie rails, can be incorporated into the budget but are not essential for providing access.

Due to the current state of access in Northern Ireland, the majority of equestrians will either ride on the road to any off-road are they can access, or if they are able to, transport their horse to that location parking at it, or nearby.

The basic requirements for enabling equestrian access are within this document.



Ideal Route Specification  
& Standards

## Dimensions for width, area & height

In providing specifications for equestrian ways and facilities, The British Horse Society considers all equestrian users, which may result in a high specification, which might not be appropriate in all circumstances. The recommendations should be read with this in mind. If the specification seems inappropriate in a situation, the Society strongly advises consultation with its local access volunteers or staff at head office to establish what may be acceptable at a particular site.

Riders and carriage drivers, like walkers and cyclists, come in all sizes, with considerable variety in their interests, skills, needs and preferences and this should be considered in providing or improving ways used by equestrians.

### Width for new routes

The intention of the recommended widths is to provide a useable width of minimum 3 metres for a bridleway, or 4 metres for a carriageway at all seasons, irrespective of whether a way is bounded by a hedge or fences, or may be fenced in future. A useable width is likely to require at least an additional half a metre to each side giving an overall width of 4 metres (bridleway) or 5 metres (carriageway) to avoid overgrowth reducing the useable width between cuts, or a rider catching a foot in a fence, being snagged by barbed wire, or a horse drawn vehicle having to avoid ruts. More than half a metre may be required where hedge growth must be accommodated for fast-growing hedge species or where the hedge is not cut each year.



A common difficult situation is where an unenclosed bridleway or carriageway with a recorded width of 2 metres becomes fenced as a 2-metre-wide corridor, resulting in a useable width of only 1 metre in the middle, as vegetation and debris may occur close to the boundaries and users naturally avoid passing close to a fence, wall or hedge.

Observing users pass one another on an unenclosed bridleway or carriageway makes it clear that 2 metres is rarely the actual used width, most people will choose to give one another more space. Two pedestrians may pass each other within a 2-metre width, however two horse riders, or any combination of riders, cyclists, carriage-drivers and pedestrians may prefer not to pass so close to one another. Passing is feasible where users are prepared to stop to allow others to pass.

Larger horses, which are commonly ridden, may need more than 3 metres in which to turn easily. A horse-drawn vehicle with fixed shafts may need 4 metres or more to turn. A corridor that is less than 4 metres wide makes turning potentially hazardous so any new route or reduction in width should ideally be 5 metres (especially when including horse drawn vehicles) or provide turning/passing places.

The Society recognises that the circumstances for all new equestrian routes (including diversions) vary and on occasion, particularly to gain a route away from motor vehicles, a width less than the recommended standard may be accepted as better than using a motor vehicular road. For situations where a lesser width is considered because the standard is not possible, advice and agreement should be sought from the BHS.

### For general maintenance or enforcement purposes

Where there is no substantive evidence of a right of way's width, the Society will request that a width of no less than 3 metres is cleared. If the map held at the local authority includes a width, then a minimum of that width should be reinstated so long as it is wide enough to be practical (minimum 3 metres if bounded on one or both sides, 2 metres if open. This is based on the provisions of the Rights of Way Act 1990 (England) for arable field bridleways, 4 metres for a carriageway. Although not enforceable in Northern Ireland, it may be a useful starting point.

## Barbed wire and electric fencing

Barbed wire and electric fencing alongside equestrian routes should be avoided at all costs. Users of the way should be protected from the barbs by a flat rail on the side of the right of way. A greater width may be required to provide sufficient passing space clear of the barbed wire. Electrified fencing should be treated as for barbed wire and avoided along or across equestrian routes at all times.

The width between gateposts should be 1.5 metres on a bridleway, 3 metres on all carriageways and roads. Stated in English legislation (S.145 Highways Act 1980), but of relevance and use in Northern Ireland.

Where bollards are considered to restrict vehicular access, the minimum width should be 1.5 metres on a bridleway, 1.8 metres on a carriageway (see BHS Advice on Vehicle Barriers).

## Area, Space and Safety at Gates for Ridden Horses

Where it is necessary to turn a ridden horse (in order to close a gate, for example), the area of manoeuvring space should ideally be no less than 4 metres by 4 metres; large horses may require more than 4 metres to turn easily. It allows no leeway at all for a horse being startled by a sudden movement or sound, perhaps from wildlife in a hedge, or for coping with temporary conditions such as standing water. A greater area is preferred to avoid potential of injury on fencing, gates or other structures and if ground is uneven or there is overhanging vegetation.

The more that area is restricted, the more important it is that the surface is firm, level and even and kept clear of overgrowth.

Horse-drawn vehicles are likely to need to turn only if there is an obstruction which prevents them continuing, which could present a problem if an area less than 5 metres (depending on size of turnout) is available although, if absolutely necessary, a horse can be unhitched and the vehicle turned separately, but this is not a task to be considered normal or 'convenient' for a highway user.

The recommended area for manoeuvring a ridden horse should also incorporate 1.2 metres in line with the gate beyond the clapper post. Manoeuvring a horse through a gate is particularly hazardous for riders and any obstacle or impediment within or close to the manoeuvring space and gateway greatly increases the difficulty of operating the gate safely. The manoeuvring space must be on firm, level and even ground without trip hazards or overgrowth.



Remember to leave gates as you found them

Electric fencing near gates can present a particularly serious hazard if it is possible for the horse, rider or gate to contact the electrified wire.

Drivers of horse-drawn vehicles are likely to be accompanied by another person who will open and close a gate. Additional space is not required but a gate at roadside which is not set back by at least 5 metres may put the horse and vehicle at risk from road traffic while waiting for the groom to close the gate and remount the vehicle.

Fenced enclosures for waiting areas or separation pens.

There is sometimes a need for enclosed areas, perhaps at road crossings, or at the end of a bridge where stock security is required but a gate should never be installed on the end of the bridge which is less than 3 metres wide.

For any enclosed area it is recommended that:

- Clear manoeuvring space of at least 4 metres by 4 metres is required within the pen.
- All fencing should be post and rail wooden fencing, no wire, wire netting or barbed wire.
- The ground throughout the structure should be firm, level and free from deep mud or vegetation that would reduce the useable area.

All other recommendations for gates, catches and surroundings apply (free of protrusions, barbed wire and so on, see BHS Advice on Gates).

If an area is likely to need to accommodate more than one ridden horse, such as a waiting area to cross a road, then more than 4 metres length or width will be required. For driven horses, a minimum of 6 metres length will be required.

## Fencing

As a general guide the following types of fencing are suitable for horses and can be used safely alongside rights of way, in order of preference:

1. Post and rail wooden fencing
2. Posts with impact resistant plastic rails
3. Posts with flexi-rails (PVC or rubber-coated webbing)
4. Vertical close board fencing has been used at roadside locations in waiting pens for light controlled crossings but while it may help horses feel safer while waiting, it will limit sightlines for equestrians.

Wire fencing (both straight and barbed) is less desirable and potentially injurious. This is more likely if it is not well installed and maintained with firm upright posts and fully tensioned wire. If barbed wire is proved to be a nuisance it could be deemed illegal.

Metal palisade security fencing with spikes on top, commonly seen by railways, should be avoided alongside bridleways and byways as the injuries that could be incurred by a rider falling onto the fence if thrown from a horse could easily be fatal.

Electric fencing should never be used alongside or across bridleways or byways except where proper provision has been made at gates and the way is wide enough between the fencing.



## Overgrowth

The average height of a mounted rider is 2.5 metres above ground level, tall riders on large horses will be close to 3 metres. Overhanging branches, overgrowth from the sides and any other obstructions should be cleared to a height of 3.4 metres on all routes.

Horse-drawn vehicles vary in height but clearance to accommodate riders will also give clearance for drivers as those vehicles higher than a rider are very unlikely to be used as exercise vehicles.



## Underpasses

Where underpasses are constructed to enable equestrians to cross below a road or railway, the ideal height is at least 3.7 metres (minimum 3.4 metres) preferably higher and width 5 metres (minimum 3 metres).

While the Society seeks the desirable height for underpasses, in exceptional circumstances a lower height may be tolerated to retain a crossing of a road or railway which would be unsafe to cross at grade and where there is no option to increase the height, such as where the water table is high. The absolute minimum in these circumstances only would be 2 metres.

When a lower height for an underpass is locally agreed as acceptable, equestrians would be expected to dismount although those with smaller horses and low vehicles may choose not to do if they are comfortable with the clearance. When a lower height has to be provided, a mounting block should be provided at either end (see BHS Advice on Mounting Blocks) for those who are forced to dismount.

The reason for asking for more than 3m is to provide a safety margin should a horse be startled and jump or rear and, for an underpass, to make the environment more appealing in what could potentially be a situation with additional hazards. A horse may be reluctant to enter under a low ceiling, especially in a dark environment because their eyes do not see easily into a dark space from a light one, and they are more likely to be distressed by other factors such as a train overhead. However, where a low or narrow underpass is the best available, equestrians must not be prevented from using it as many will be capable of doing so once the horse has accepted the new environment.





Surfacing & Drainage



Please note the term multi-use route is used throughout for simplicity to include any path or track with horse access.

### Surfaces

Many multi-use routes are tracks of natural low growth vegetation and beaten earth, perhaps with some stone embedded in the consolidated surface. These unsurfaced paths are ideal for equestrian use and capable of sustaining such use if they are adequately drained and kept clear of excess vegetation (overhanging and surface).

The level of intervention or maintenance required to establish or maintain natural routes is closely related to topography, underlying geology and drainage. On many paths, regularly cutting vegetation well back and maintaining drains will avoid the need for more extensive works.

On free-draining soils, artificial surfacing is generally unnecessary as the track will usually remain useable even where farm traffic or other use causes minor erosion. Extreme erosion from heavy use may justify intervention by consolidating the existing surface or preventing material being carried away, rather than introducing artificial surfaces.

On all soils or substrates, even poorly draining ones, successful drainage is often a cheaper, easier and more sustainable way to resolve poaching, erosion or other issues than artificial surfaces. The benefits of attention to drainage cannot be over-emphasised.

Where the soil type is clay, or drainage cannot be improved and use is higher than the surface will bear without poaching, then artificial surfacing may be required for the route to remain passable for all users. If a badly poached or rutted surface dries at some times of year to resemble deeply uneven rock, this too may need attention as it is unpleasant and potentially dangerous for all users.

Successful construction and maintenance of multi-use paths will be aided by an understanding of horses, their physiology and action; the effect that horses may have on a surface, and the effect of a surface on a horse.



## Facts about Horses

Horses vary massively in size and mass between breeds. A small pony (less than 1m high) will weigh about 200kg; the largest draught type horses (1.9m) may be a tonne. However, these are extremes and the most common range for riding and driving out will be 350 to 700kg (1.1 to 1.7m high).

The weight distribution of a standing horse on level ground is 30% each foreleg, 20% each rear leg. In walk, the peak force on a foreleg is about half the bodyweight so about 2,500N in a horse with 500kg body mass; at maximum speed, about 2.5 times bodyweight, so 12,500N, however, that peak force is momentary and quickly passes to another limb even in walk, where three limbs are in contact with the ground at any time but are not synchronous. In trot, because alternate fore and rear legs are in synchronous movement, it could be said that the peak force moment would be 8,333N (fore plus rear forces).

Guideline Values	Walk	Trot	Full Gallop
X bodyweight	0.5	1	2.5
Peak force foreleg (500kg body mass)	2,500N	5,000N	12,500N
Peak force rear leg (500kg body mass)	1,666N	3,333N	8,333N



A horse's hoof varies in size from 100mm to 280mm diameter.

The hoof comprises an insensitive outer layer of horn, which surrounds and protects sensitive inner structures. Most horses in regular work are shod with metal shoes to protect the bearing surface of the hoof wall from excessive wear. Shoes, especially when well worn, can slip on some artificial surfaces depending on their polished stone value.

The sole of the hoof appears hard but is relatively thin and easily bruised (comparable with human nails). On flat, compacted surfaces it will not come into contact with the path surface because of its natural arch, but on unconsolidated stone surfaces sharp edges of stones may protrude into and bruise the sole of the foot, causing lameness. (Put pressure on your nail with a stone to feel what it may be like.)

1. The height of horses is measured to the withers; the part of the spine in front of where a saddle sits, at the bottom of the neck/mane, which is the highest static point as the head and neck are very mobile and can rise to nearly half body height.
2. Common measurement of slippage but no record of it being measured for horses has been found; it generally relates to motor vehicles.

Loose stones may also become wedged between the shoe and the sole, exerting painful pressure on the underlying tissues. Infection within the hoof resulting from stone punctures or bruising to the sole can cause serious problems requiring veterinary attention. A stone-free surface is therefore preferred to avoid injury to horses.

An increasing proportion of horses are not shod at all, or shod on only fore (front) feet. Stony surfaces will therefore exclude a number of horses because walking on them is painful – think of walking barefoot on gravel or a pebble beach.

The level of concussion to both the hoof and horses' legs increases with the hardness of the surface and with the speed at which the horse is moving. This is exactly comparable to humans – running on a pavement transfers a lot more stress to the bones, joints and soft tissues than running on a grass sward, with typical increased wear and risk of deterioration and injury – therefore, riders avoid hard surfaces where possible.

The greatest risks for horses are:

- Slippery tarmac or other sealed surfaces
- Sharp stones which may bruise or puncture the soles of hooves
- Boggy ground, holes or deep mud in which may strain a tendon or break a leg

As with humans, slopes or steps (natural or created) change the force through each footfall which may increase stress on the surface. Going up, the thrust is backwards and down with greater proportion of load through the hind legs; going down a slope, load emphasis is on the front limbs and there is a tendency to slide; down a step will cause a concentrated downward force in a small area at the base of the step.



### **Ideal Route Surface**

The ideal route surface preferred by horses and their riders or drivers will therefore be:

- Non-slip
- Resilient, with some give (25-50mm at point load)
- Well drained
- Adequate bearing capacity to avoid erosion or poaching
- Free from stones, especially if angular or sharp edged

### **Route Types**

Types of path surface, in descending order of preference, are:

- Short, firm, well-drained turf, which is ideal for riding and walking, and usually firm enough for cycling.
- Vegetated paths on a firm base such as grassed over forest roads or disused railway tracks stripped of ballast to expose consolidated ash solum, which are ideal for supporting year-round multi-use, provided they are well drained.
- Routes where the natural vegetation is protected or reinforced by some type of partial surfacing, such as embedded stone.
- Formally constructed routes with firm, non-slip surface.

### **Hard Surfaces**

On routes where horses are legally included and may be the primary/ main user—bridleways, carriageways and other multi-user routes—a surface more appropriate to their use than to motor traffic or cycles should be provided. If this is not practical, or other users are in the majority then a compromise, in consultation with local BHS representatives, may be reached, preferably in providing parallel surfaces for different users.

On routes where a hard surface is necessary for vehicles, a grass or other vegetated central or parallel strip offers a better surface for horses while providing reinforced wheel tracks and offers a good compromise solution. It is important that the unsurfaced strip has even ground, and grass growth is controlled by use or cutting because if it obscures potential hazards riders are less likely to use it. It must be free from loose stones or debris that could be a trip hazard or cause injury. Care must be taken during maintenance of the hard surface that spoil or debris is not dumped on the grass strips.

On routes such as cycle tracks or permissive paths where horses are included as vulnerable road users but are not the majority user, a less than ideal equestrian surface may be acceptable where such a path gives equestrians a route free of motor vehicles.

Bound rubber crumb has been used very successfully to provide a hard surface that can look like tarmac, is easily used by cycles and wheelchairs but is also excellent under foot for pedestrians and riders as it has some 'give'. This is a surface that the BHS recommends for shared use paths where a bound surface is necessary.

### Route Construction

Where a constructed surface is required, the three elements of a good multi-use path construction to be considered are drainage, foundation and surface. The factors influencing all three will depend on local geology, gradient, nature of the path (such as holloway, in woodland, open and windy), local materials and use.

### Points of particular importance on paths for equestrian use

- Weight of horses and effect of horses' hooves must be taken into account in constructing or surfacing any paths and in ensuring drainage level will be adequate to prevent poaching.
- Where hard edged drainage grips or cut-offs have been created in the path, the space between the sides should ideally be less than 100mm or more than 300mm to prevent a horse's foot becoming stuck. They should be clearly visible.
- Brash or fascines traditionally used as floating rafts to support paths over wet ground are not usually recommended on equestrian paths because of risk of horses' hooves slipping through surfacing to penetrate branches below, leading to potential injury. However, they have been used successfully in Northumberland with geotextile to prevent the surfacing sinking into the fascines.
- Free-draining sandy or chalk soils are usually able to withstand horse use without need for surfacing.
- Clay soils are particularly prone to damage by horses. Well-used paths on such soils soon become a sticky mess impassable to walkers, cyclists or riders and may still be impassable in the driest weather if a badly poached surface hardens to jagged uneven rock. Clay paths will usually therefore need attention to drainage to avoid areas becoming wet and perhaps amelioration of the surface with other substances to reduce its overall clay content.

### Drainage, foundation and surface

Drainage is crucial to the suitability and longevity of a path surface.

If drainage is inadequate or inappropriate, any other work may be completely wasted. This is unfortunately too common, so the importance of getting the drainage right cannot be emphasised enough.

In many situations, attention to the drainage may be all that is required for a considerable improvement. It may be feasible to undertake drainage on a project then check how it works for a period before further work to finish the surface. The need for more drainage work may be identified which can then be undertaken without loss of a new surface (because it has not been laid) or it may become apparent that drainage alone has been the solution, or that less surfacing work than originally planned is required.



### Drainage, foundation and surface

Drains take many forms in construction, depending on geology, space, gradient and catchment. For routes used by horses, it is important to remember:

- the much greater weight and point load of a horse compared with a pedestrian or cycle, so more drainage may be necessary for the surface to remain sound; and
- that surface drains, cut-offs or other cross slope structures to slow and divert surface water must take account of hoof size as well as potential as a trip or slip hazard.

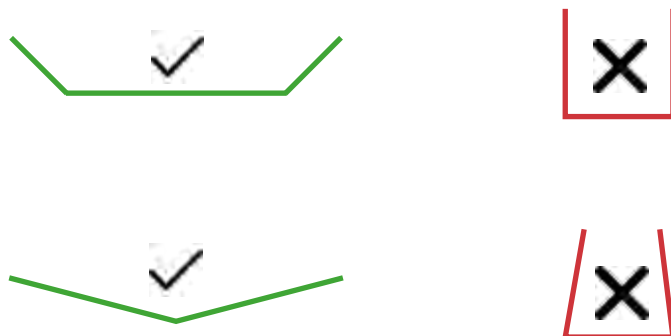
Guidance on drainage and construction of routes is well covered in other documents, including *On the Right Track: Surface Requirements for Shared Use Routes* (Countryside Agency - England), *Making the Best of Byways* (Defra) and *Paths for All* (produced in partnership with, and available from BHS Scotland [www.bhs.org.uk/scotland](http://www.bhs.org.uk/scotland)).

Once a firm foundation has been prepared a bearing surface layer will be required to spread the loads imposed by the equestrian traffic and to assist in protecting the foundation. The material chosen for the surfacing should preferably be readily available from local sources so that topping up can easily be undertaken as the need arises.

**Cross drains** are often required on sloping paths or tracks and can pose a particular problem to horses. It is important that drains are of a construction where a horse's hoof is unlikely to go into the drain and particularly not to be caught by it. Wide shallow drains are therefore safer than narrow deep ones unless the latter are slits or covered, in which case buried pipes are probably better as covers can be slippery.

The sides of a cross-drain should form a concave profile, not vertical and particularly not convex as these are more likely to cause injury.

**Diagrams showing good and bad cross drain profiles**



**Metal gratings** should be avoided as they are likely to be slippery to metal-shod horses and should never extend over the full width of a track. Metal gratings covering a gully across a tarmac road are a common engineering solution. In a case where this is deemed necessary, a 'bridge' should be made of at least 500mm so that horses can cross without touching the gratings or gratings should have a finish which is non-slip to shod and unshod horses.

The wide variety of weather conditions and run-off rates in most areas means that drains will have to be constructed dependent on the requirements of any individual site. A width between 70 and 200 mm should be avoided as a potential 'hoof trap' unless the drain is constructed with a shallow V profile.

**Surfacing options**

**Grass** paths should always be the first choice for multi-use, but sustainability depends on drainage and soil type. Regular use will help maintain a short sward suitable for all users and, provided trampling from use does not exceed plant growth, virtually no maintenance will be required.

Some mixes of grass species are more resistant to wear than others. Annual meadow grass is one of the most resistant species and can be introduced to or the proportion increased in most swards to improve wear resistance (subject to conservation controls). Usual treatments for grass sward – aerating, scarifying, fertilising, rolling and mowing – can make the sward stronger and denser.

Where use is high and vegetation is unable to keep up with wear resulting in deterioration of the sward despite attention to drainage and the sward quality, artificial surfacing may be required.

Well-drained short grass can provide a suitable year-round alternative parallel to a surfaced path, but it will be avoided if boggy or litter-strewn or where hidden hazards may be concealed by long vegetation. Riders will avoid vegetation that may obscure holes, drainage channels or debris because of risk of injury to the horse. Mowing may be necessary where use is insufficient to restrict grass growth.

On vehicular tracks a grass or other vegetated central or parallel strip offers a better surface for horses while providing reinforced wheel tracks. If the grass growth is not controlled by use or cutting, riders may avoid it in case of obscured hazards.

Rough, tussocky, moorland grass is unsuitable for most horses.

**Geocell** may also be used simply to confine aggregate on a difficult surface or to provide a temporary route for construction traffic without intention of it being vegetated.

If considered for use where there is horse access, care must be taken to identify grids which are not slippery – some are dangerous in providing no grip at all to shod horses. The cell size must be smaller than a horse's foot so that if the earth contents erode, the cell will not form a hole which could trap a horse's foot.

If use of geocell is essential, the cell contents should be frequently checked and topped up if necessary to ensure it is as high as the grid to provide a safe path for horses.

**Woodchips** may be popular with riders but are unsuitable for wheelchairs and cyclists. They are difficult to contain to the path and rot relatively quickly, requiring regular removal and/or replacement. They are not recommended.

**Recycled materials** such as shredded tyres, chopped plastic cable casing, and synthetic fabric scraps incorporated with sand, each on a well-draining substrate, can provide an excellent surface for horses. A border may be needed to contain the material within the path width as it is unbound. Like woodchips, such materials are unsuitable for non-equestrian users but can be a good solution on the horse section of multi-use paths with separate tracks for different user types.

Care must be taken to ensure there are no metal or other foreign parts included in the material. Some rubber crumb or shred materials can be bound with resin to form an excellent firm surface that is ideal for horses.

**Bound rubber crumb** has been used successfully on bridleways well-used by horses, even on a 1:4 gradient, to provide a hard surface that can look like tarmac, is easily used by cycles and wheelchairs but is also excellent under foot for pedestrians and riders. This is a surface that the BHS recommends on bridleways or shared use paths where a natural surface is not sustainable. Another option is polyester bound crumb which claims to be more flexible and therefore may be more appropriate in some situations.

**Rubber mats**, blocks and pavers or hot spray application have been successful in many equestrian applications around racetracks and training yards. It is expensive but may be a solution for short stretches such as a bridge or ramp. On inclined surfaces, consideration must be given to the force of hooves which will be much greater than on the flat. Applications will need to be secure so that they do not tear away from anchor points (mats) or separate from the sub surface (spray applications).

**Boardwalk** is not always appropriate for horse use, but some situations have no other solution, although a form of Irish ford (adjacent pipes laid

laterally across the path width, with surface on top so water can pass through, or causeways have been used successfully where a boardwalk was suggested.

As with a bridge, solidity and anti-slip finish are important with good landings at the ends, clear sightlines so that any users can choose to wait rather than share the boardwalk and be of adequate width. 2m is recommended but BHS representatives may agree a lesser width in local circumstances where it is practical. Passing places may be required on long lengths.

Wire mesh must not be used to attempt a non-slip surface as it may catch the nails used in horseshoes. There are grit products which can be applied to boards which are successful for all users, particularly if used from new. A kickboard along edges may increase safety.

**Stone flags** have been used commonly historically to provide safe paths across boggy uplands, in particular, and modern flags have been used successfully on such as the Pennine Bridleway, England. There is a danger where such paths are narrow if the ground immediately next to the path is boggy and a horse could step off the path when attempting to pass others. Additional flags or other hard surfacing should be used to create passing places wide enough for users to comfortably pass each other or for a horse to turn, if necessary, on long sections or where the full length cannot be seen. Ideally users should be able to see whether the next section of the path is clear before setting foot on the flags.

**Soil reversal** uses a digger to invert the soil, burying the topsoil, with sub soil on the surface which is then profiled to provide drainage and base for a new surface, sometimes stone or stone on geotextile, or left as a natural surface to vegetate. It has been used successfully on many bridleways over poorly drained ground in northern England.

**Sand** is popular with riders, provided it is not too deep (recommended 75mm on 150mm depth of free-draining sub-base) but it is usually difficult to contain on a path. It can be good on horse-only sections.

**Stone pitching** is not ideal for horses but may be necessary to provide a firm entry/exit to a ford and may be the only option on some heavily used steep hill paths. Smaller random (rather than dressed) stones laid to provide a slightly irregular finished surface will allow more grip than large, flat stone faces, but only if the horse's hoof can be placed flat on their top surface. Stones should be pitched vertically with the longest face into the slope. Adjoining stones should be pitched to provide a foothold of minimum 200mm width. Downhill gradient of foothold should be less than five degrees. Stone which may become polished and slippery through wear (such as limestone) must be avoided.

**Steps** can be used by horses, if the tread is deep enough, but must only be used where no alternative is possible, such as a graded ramp which is better for most users, including those with impaired mobility and cyclists. Where steps are the only option, the following dimensions are ideal but may be adjusted in consultation with local BHS representatives:

- Riser height should be minimum 150mm, maximum 250mm
- Tread depth (distance from front to back of step) should be minimum 2000mm

**Quarried aggregate** without a consolidated dust wearing course is completely inappropriate for multi-use paths because angular stones will damage horses' feet and may result in serious lameness. Where it is used as a substrate or structural layer, the surface must be finished with 75-100mm depth compacted MOT type 1 (40mm-dust) dressed with dust to fill the spaces between the stones and consolidated to withstand rainfall.

Aggregate surfaces may occur naturally or where erosion has removed an upper surface layer. Such a surface is 'out of repair' as it limits use by natural and legitimate users (horse riders) and should be topped off with a consolidated dust layer.

A specification for an aggregate surface should always include clauses for topping-off as required to a uniform consolidated dust finish and checking after so many months with subsequent top-off as appropriate. This is because aggregate quality is variable; it may settle in transit to give inconsistent levels of fines throughout the laid length of track or may wash through if there is heavy rain before consolidation.

Any new construction or path restoration project should always provide a finished surface to this standard. It is not acceptable to leave an unconsolidated surface of stones following work. Any stony tracks may need improvement by topping-off with consolidated dust to avoid injury to horses.

Rubble or similar recycled material may be used as a substrate but must be finished with a wearing surface as for aggregate. It is very important that it is 'clean', i.e., not contaminated by material such as wire, glass or nails that could work to the surface and cause puncture wounds or trip hazards. Specifications should state non-recycled MOT type 1 or clean rubble as a requirement.

**Breedon gravel** and **hoggin** are specific types of aggregate which are considered self-binding. They can be very successful for horse use. Such aggregates tend to improve with weathering, which assists the consolidation process. Care may be required in their first year of use in gateways or inclines where horses' hooves may dig into and loosen the surface. Periodic compaction over the first year may be required to ensure the surface does not loosen and start to scatter or degrade.

Due to closure of quarries, such material is less easily available. The alternatives of Coxwell self-binding gravel and Hydraulically Bound Materials have been used with success.

**Road planings** are used successfully and relatively cheaply to form a base course, on top of geotextile if the subsurface is wet, rolled and consolidated then topped with whinstone 3mm to dust (or similar local stone). This is a popular solution for railway trails as it provides some give for horse and pedestrian use but is still smooth enough for cycles. Planings can be consolidated, sometimes with added bitumen to form a sealed surface again, but this is not recommended because it forms a slippery surface for horses. Planings must be screened to ensure there are no metal, glass, wire or other foreign bodies included in the material.

## Examples

**Broughton in Furness Disused Railway Line, Cumbria, England** was surfaced with a combination of crushed slate from Burlington slate quarry, mainly MOT grade stone (25mm to dust), topped off with 10mm to dust to form a smooth surface. The stone was laid and spread with a tracked excavator and rolled in with a vibrating roller to form a hard surface. It has performed well as a bridleway and cycle route, with some occasional vehicle traffic from landowners. Grass has grown back through the surface in places which needs cutting back or spraying at different times, but the slate surface remains very good and fit for purpose.

**Durham Railway Paths, Durham, England** use road planings extensively throughout their 100 miles with alternatives of dolomite base course where environment dictates and bitumen on slopes where water erosion is a problem. For the latter, asphalt has proved to be the only affordable solution, but is acknowledged as not being ideal for horses. Grass or gravel verges or mounting blocks have been provided where possible.

Coxwell gravel supplied by Grundon was used on a **Berkshire, England** byway 15 years ago and still provides a good surface. It has also been used successfully in Richmond Park and for cycle tracks. Grundon's website, [www.grundon.com](http://www.grundon.com), provides construction specifications.

**Concrete** gives highly variable results depending on its composition, and it can become dangerously slippery. Consequently, the Society would not normally find it acceptable as a new surface unless local BHS representatives approve its use in the circumstances. Only the specification of concrete that is most likely to be safe (see below) should be used. Remedial action will be required if the surface should become dangerous, which could be more costly than using the specified mix.

The concrete mix most likely to give a safe surface is RC 35/45 CEM1, without added water, as it is least likely to polish and become slippery. The final tamped and highly roughened surface should be covered to cure slowly and completely. A lower quality concrete may either become

polished mortar or, if the aggregate becomes exposed, the aggregate may polish to become slippery. Some gravel aggregates are more likely to become smooth with wear. Crusher run carboniferous limestone or granite is more likely to remain rough even if partially exposed. Aggregate of high Polished Stone Value (gritty when worn) should be used if there is risk of the mortar wearing.

Concrete which has become slippery can be treated with machinery to roughen the surface by cutting grooves, sometimes in a set pattern of squares. This is commonly undertaken by contractors on dairy farms where slurry degrades the concrete, and it has been successful even on slopes.

If concrete is required for vehicular access, a safe surface in between concrete wheel tracks or alongside a concrete track may be a solution. If use of concrete is unavoidable for short distances, such as a bridge or its transition ramps, then care must be taken to ensure the surface is well roughened and ridged across the width by hard tamping (raising and lowering the compacting beam). Brushing does not usually give a durable rough finish.

Concrete blocks, pavements, setts, or bricks may be slippery for horses unless the blocks have been specifically made with high Polished Stone Value (PSV: a high PSV is gritty when worn, a low PSV is very smooth and potentially slippery). The quality of cement used in manufacture can also affect slip hazard, as in concrete slab above. It is important to check with manufacturers that blocks sold as non-slip include being non-slip to shod and unshod horses, not only to vehicles and pedestrians.

### **Bituminous Mastic ('Tarmac' or Bitmac)**

Bitmac is a standard carriageway surface in UK for highways or private roads. It is not appropriate on multi-use routes because it is designed to provide grip for motor vehicle tyres, not for metal horseshoes, and is often dangerously slippery for horses, a problem that may increase or decrease with wear depending on the exact compound in use and its final surface treatment.

Bitmac surfaces consist of a wearing layer of aggregate bound with bitumen. Aggregate and bitumen compounds vary depending on specifications and area. The bitumen forms a film over the stone which is gradually removed by wear.

All Bitmac surfaces have the potential to be initially slippery unless appropriate preventative action is taken, and this applies even more to horses than to vehicles as the surface treatments are designed for motor vehicles. The result is a surface which results in horses having to proceed unnaturally slowly and carefully, much as a car in icy conditions, which is unreasonable.

For motor vehicles, the increased skid potential of the unworn film may be reduced in key areas (e.g., junction approaches) by mechanically removal using grit brushing. This can be helpful on parts of the surface which are less used by vehicles but more used by horses such as close to the edge of the road.

The high skid risk can last for an unpredictable length of time depending on the variables of volume and type of traffic, construction method, stone and bitumen types and surface treatments. Vehicular wear can bring about an improvement quite effectively but only in the wheel tracks.

Horses may take different routes which remain slippery for longer periods particularly as horses are likely to keep close to the edge on busy roads where there is little vehicular wear so the slip hazard may remain for a long time. Top dressing with grit on routes used by horses is strongly recommended with attention to the usual path of the horses (i.e., road edge on a busy route).

Provided that the aggregates used within the mixes have a high resistance to polishing (high Polished Stone Value means that the stone retains a surface grittiness even when worn) and once the bituminous film has been suitably worn by vehicular traffic may produce an acceptable surface, but not necessarily as wear by wheeled traffic can result in an embedded surface that is more slippery to horses. Embedment due to high surface pressure is a common cause of failure of surface dressing therefore any surface of this type must be laid on a high-quality base layer.

Stone mastic asphalt is such a problem that the BHS worked with an association of highway engineers (CSS, now ADEPT) to produce Horses and Highway Surfacing – A guidance note for highway authorities.

Reported incidents of horses slipping on asphalt have increased since the guidance was published in 2005, indicating that it is a continuing and increasing problem. The report recommends grit during construction (e.g., 3mm quartzite at 1kg/m<sup>2</sup>) or post application of dry uncoated grit spread at 1kg/m<sup>2</sup> and rolled with a steel roller to abrade the bituminous film. It is important that the specification to contractors includes such measures as appropriate during construction to minimise the slip or skid incidences.

Hot rolled asphalt is usually better than stone mastic asphalt in terms of slip hazard for horses.

Where a tarmac surface is unavoidable, a top dressing of grit or spray and grit is recommended.



## Considerations for Shared Use or Cycle Tracks

Bituminous surfaces consist of a wearing layer of aggregate bound with bitumen. Aggregate and bitumen compounds vary depending on specifications and area. The bitumen forms a film over the stone which is gradually removed by wear. Softer surfaces are more ideal for horses than any hard sealed surface, although where a horse-friendly surface is considered impossible because the majority use is cycling there are ways in which horses can be accommodated so that off-road routes are available to all vulnerable road users. Increasingly:

- Off-road routes are being provided for cycling which could benefit riders who are also vulnerable road users; and
- Surfaces of routes with rights for riders or carriage drivers are being changed to facilitate cycling but to the detriment of equestrian access.

This is particularly influenced by current funding initiatives making provision for cycling. However, with more awareness in the planning stages, it is obvious that all non-motorised vulnerable road users can benefit from all off-road tracks, and none need be excluded. Importantly, it is sensible and cost effective to include all who wish to exercise and transport themselves in safety away from the danger and pollution of motor traffic and with care for the environment, rather than only accommodating one section of society.

Bound rubber-crumb-aggregate mixes (see page 10) have been found to be appropriate for all users and very acceptable for horses on multi-user paths. Although the initial cost may be higher than for tarmac, it has many advantages in construction, particularly on sites with limited access, and in not requiring edging (unlike tarmac) as well as providing a more beneficial surface for pedestrian and equestrian users without detriment to vehicles. Its porosity means it is safer for all users in icy conditions, there will no puddles and dung will quickly wash through. It has a very much longer life guarantee than tarmac.

Where equestrian rights exist, natural surfaces are best managed by drainage, strengthening and unsealed surfacing as appropriate to the local conditions rather than seeking a sealed surface. On shared use routes where this has failed or is judged insufficient, the following approach is recommended:

If a sealed surface is judged to be essential (by the highway authority's rights of way officer), the first choice should be two metres of surface suitable for horses alongside the sealed surface, by dedicating additional width as multi-use path if appropriate.

If it is not possible to have different surfaces alongside one another, then the options should be, in order of preference:

1. Two sealed strips for wheels either side of a central softer strip for horses. This is particularly important where there is tall side vegetation, as is often the case with old railways, as it allows the tallest users—the horse riders whose head height is often over three metres—to be in the centre away from the overhanging vegetation. The two sealed strips can also act as wheel tracks for maintenance vehicles and encourage 'keep to the left' use by cyclists. Signs should be used to encourage user separation. Where trees or bushes overhang the track for more than half its width in total, or have reduced the width, clearing these back to provide the maximum width will let sun and wind into the track to assist in keeping the surface firm and dry, and improve the available width for all users.
2. Divide the surface along the length down the middle with one side sealed, the other half softer. This would be acceptable if one or both sides of the track did not have overhanging vegetation. 'Soft' does not necessarily mean 'un-strengthened'. For instance, an old railway line has a certain amount of inherent strength that might only need attention at certain spots.



Bound rubber crumb is preferred where a bound surface is required.

Where a sealed surface has to be created, care should be taken to make it non-slip for horses by top dressing with quartzite grit or other treatments.

NOTE: Putting a tarmac strip down the middle and leaving two narrow verges, too narrow for horses, is a common bad practice. It forces all users onto the tarmac strip when they would be better served by a choice of surfaces, each of appropriate width. It may cause congestion or conflict between users and excessive wear of one part of the width. It is much better to put the tarmac strip as far to one side as possible.

In certain circumstances, a single surface for all users, designed for the majority user, may be appropriate as an off-road route is better and safer for all than pushing horses onto roads with motor traffic.

**Structures**
**Bridge Specifications for Equestrian Use Over Watercourses (ditch, stream or river) \*See notes below**

Route Type	Span	Deck Height	Width	Parapet Height	Infill Height	Kickboard	Kickboard Height
Bridleway	< 3m	< 1m	2m	1.2m	0.6m	250mm	25mm
Restricted Byway, Byway	< 3m	< 1m	3m*	1.8m *			
All Routes	3 – 8m	< 1m					
All Routes	< 8m	> 1m					
All Routes	> 8m	< 1m	4m* no parapet 3m with parapet	1.2–1.8m *			
All Routes	> 8m	> 1m	4m*	1.8m*			

**Bridge Specifications for Equestrian Use Over Roads and Railways \*See notes below**

Route Type	Span	Deck Height	Width	Parapet Height	Infill Height	Kickboard Height
Any route over road	Any	Any	Minimum 3m*	1.8m *	1m *	25mm *
Any route over railway					1.8m *	Not applicable

## Bridges

Infill is solid panelling fixed to the parapet railings to obscure a horse's view of traffic or turbulent water passing beneath the bridge. Uplift is the gap between deck and kickboard or infill.

Kickboards form a raised edge to the deck, preventing a foot sliding off the deck.

## Parapets

Parapets or infill are not always required, or may be acceptable at a lower height, or desired at a greater height in some circumstances. This is relative to the local conditions, particularly the height of the span, width and proximity of a horse's line of travel to the parapet, and what is being bridged. A railway or fast road will need a more substantial and higher parapet than a stream or minor road.

The psychological benefit of higher parapets is inestimable. Anecdotal evidence shows that even if a parapet would not withstand an impact, it makes an equestrian feel safer, which emotion is transmitted to the horse so both are more confident in passing over the bridge and more likely to do so safely. A standard height parapet may be below the waist of a rider on an average sized horse which may cause a rider to feel very vulnerable on a high span and that unease will be felt by the horse. A person driving a horse is less likely to be as high or as close to a parapet.

The desirable height of a parapet will be influenced by the likely proximity of a horse to the parapet on a normal line of travel as well as the local conditions. The Northern Ireland Department for Infrastructure road structures and road standard documents can be found here: [www.infrastructure-ni.gov.uk/articles/road-structures-and-road-standards](http://www.infrastructure-ni.gov.uk/articles/road-structures-and-road-standards)

The Design Manual for Roads and Bridges (England's Department for Transport) says 1.8m if adjacent to the parapet but does not define 'adjacent'. For a bridge over a dual carriageway, the Society recommend a parapet height of 1.8m if the natural line of travel is within 2m of the parapet, and 1.5m height if more than 2m away, however, there will be sites where a lower height is acceptable, such as a single track accommodation bridge where an equestrian may take the centre line with low incidence of other users. Alternative measures on carriageway bridges with lower parapets may include warning motorists of oncoming traffic (horses) in the centre of the bridge (or 2m away from the parapet on a wider bridge).

Parapets or infill may not be practical on low spans over watercourses where flood potential could allow waterborne debris to collect and increase stress on the bridge.

Horses might be alarmed by traffic passing beneath them, whether it is on a navigable river, road or railway. Solid infill of parapets to obscure their view may be desirable in some situations.

Parapets on ramps parallel to a railway line or motorway should also have solid infill on the rail or roadside of the ramp as for the bridge itself, if possible.

Bridges over bogs should be of reasonable width, with non-slip surfaces and edge boards to reduce the risk of a horse slipping off the bridge and being stuck in the bog.

Parapets on bridges are usually intended to prevent a pedestrian or vehicle from leaving the bridge while on the deck. Parapets to provide equivalent protection to a rider would be over 2m high and are rarely practical or desirable therefore the height of any parapet on an equestrian route is likely to be a compromise and there is no single solution for all situations.

Where it is not practicable to meet the recommended standard on any bridge, mounting blocks at each end of a bridge would be welcomed by equestrians who choose to dismount and lead across the bridge (see BHS Advice on Mounting Blocks).

## Width and Sightlines

The specified widths are primarily for the comfort of users passing one another. If it is not practicable to provide the recommended width, mitigation may be required such as signs at each end giving priority to horses so that passing another user does not place a horse too close to a parapet. A bridge width of less than 3m may be insufficient to turn a ridden horse safely. A horse drawing a vehicle is likely to need at least 3.5m to turn, depending on the type of vehicle.

Waiting areas should be at least 3m in width and length, 4m is preferable. The area should increase with the potential waiting period as horses may become restless, particularly if the environment is threatening. Bridges carrying roads with high volumes of traffic should have a segregated marked route for riders.

There should be no bollards, gates or other width limitations on the bridge or in the waiting area. A gate on a bridge less than 3m wide means a ridden horse having insufficient space to manoeuvre into the safest position – alongside the gate with head beyond the latch. Having to tackle a gate head-on is contrary to BHS recommended practice because it increases risk for horse and rider.

## Clearance

Where a canopy is provided to any bridge it should ideally have a height of 3.7m and a minimum of 3.4m. In exceptional circumstances a lower height may be acceptable for the horse to be led when mounting blocks are present. Advisory notices may be required if the low height is not obvious at a point where it is safe to dismount.

Overhanging vegetation should be clear of the bridge by 3m. Bridges overhung by trees may become slippery from vegetation or moss and greater attention will be needed to prevent slipping and rot.

## Structure and Surface

Structures should be stable.

Deck boards should be laid at right angles to the sides of the bridge. Ideally, decking should be substantial and non-echoing, without gaps in the decking through which the river, road or railway can be seen. Surfaces of bridges should be non-slip.

Stone mastic asphalt should be avoided as it will require a grit dressing to make it non-slip.

Wood is slippery when wet but a wooden deck can be made non-slip with epoxy resin and bauxite grit as a liquid application or in attached strips or sheets (there are a number of suppliers of both which have been used successfully). A quick and cheap solution on wood decks has been a generous scattering of sand. It will need replenishing but has been successful for months.

Wooden or recycled plastic struts may be screwed to slopes, but water and organic material may collect against them causing rot. This can be reduced by angling them to shed water and recycled plastic struts have been used successfully. Struts may become loose, and their edges are vulnerable to wear as struck by hooves.

Rubber compounds as a deck coating have the advantage of deadening sound as well as providing a comfortable non-slip surface. Rubber may come as a liquid, in sheets or as recycled crumbs bound with resin or polymer. For a bridge surface, it need not be as thick as would be used elsewhere and final cost would be roughly double that of bitumen and grit. Both grit and rubber options may be used on a central 1m strip to reduce costs if necessary. People on bridges often walk by the parapet to look over, but riders and carriage-drivers are more likely to use the centre of the deck. Metal is noisy and alarming to horses so should be avoided. Non-slip surfacing also dulls noise, which may be preferable. Rubber mat surfaces have been successful in some cases.

## Load

Horses vary in mass from about 200kg to a tonne. The most common range for riding and driving out will be 350 to 700kg.

In walk, the peak force on a horse's foreleg is about half its bodyweight so about 2,500N in a horse with 500kg body mass. The peak force will increase with speed to about 12,500N at full gallop.

Common exercise vehicles drawn by horses are generally between 100 and 300 kg. A vehicle drawn by a pair or team of horses will not necessarily be heavier.

## Other

Horses vary in mass from about 200kg to a tonne. The most common range for riding and driving out will be 350 to 700kg.

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Common exercise vehicles drawn by horses are generally between 100 and 300 kg. A vehicle drawn by a pair or team of horses will not necessarily be heavier.

## Fords

Fords are usually cheaper than bridges and may be appropriate where water in normal conditions is maximum depth of 0.5m. They are particularly suitable on less used routes. Environmental constraints, such as the work required to build the ford, the control of pollution and the watercourse profile may mean a proposal for a ford fails the impact assessment for watercourse consent.

Where a ford is deemed appropriate, the force of water flow in normal conditions should allow a horse to walk easily without being pushed off course.

The base of the ford within the watercourse must be firm, level, free from holes and non-slip. Often levelled bedrock or the natural bed of the watercourse will fit these criteria with little intervention. In other locations, ridged concrete or stone setts may be required.

Entry points must be firm and able to withstand fluctuating water levels and potential damage from horse use without erosion or poaching. Stone pitching may be necessary in some situations to protect the entry points.

Ideally, the gradient of the entry points should be no more than 1 in 12 although 1 in 10 may be acceptable if the bank is low. The entry points must

shelve into the river – abrupt banks are not recommended because a horse would have to jump in or out with high potential for slipping or falling. This is likely to cause erosion of the bank or riverbed. In a watercourse in a remote location, it may be appropriate if the level of use will have negligible impact and if users are likely to have encountered equivalent terrain to reach the ford.

Poles showing the water depth should be provided if the bottom of the ford cannot be seen in normal conditions. Markers for the entry/exit points may be required if the crossing is greater than 4m between banks.

Where the ford is through a river which has a strong current at times, no sharp or dangerous objects should be close to the path on its downstream side.

Steppingstones or footbridges for pedestrians should always be on the upstream side of the equestrian crossing to ensure the horse is not swept towards any sharp edges or forced against the structure.

If a ford is being considered, then permission must be gained from the government agency responsible for watercourse protection prior to any work taking place.



## Irish Bridges or Irish Fords

A low water crossing or Irish bridge/Irish ford provides a dry crossing at normal water level but in high water conditions, water will flow over its surface forming a ford. Low water crossings have no parapets or raised edges which would impede flow. Old ones may be constructed by large pipes (round or rectangular cross-section) laid adjacent to each other parallel to the flow with a concrete surface on top so the water flows through the pipes at normal levels and over the whole structure in high water forming a ford depth crossing. This type is now unlikely to be approved by river authorities because of potential effect on fish and scour in high water conditions, however a single wide low 'pipe', effectively a very low bridge, might be considered in specific conditions.

A low water crossing has an advantage over a ford in that earth and other contaminants are not taken into the watercourse during normal conditions.

## Gradients and Steps

Steep gradients are not a limiting factor for horse use and should be considered as for pedestrians where variation in experience and agility mean some people will choose to use certain steep routes or not. In natural terrain, the feasibility of any gradient is up to the judgement of the individual. Where use of a popular steep route is causing erosion which needs control, pitching and steps are feasible on a bridleway but greater space at any level will be required. They are not feasible on a route open to horse-drawn vehicles. Polymer or resin bound rubber crumb-grit compounds have been used very successfully on steep slopes with cross-gullies into the substrate filled with the porous rubber mix to reduce possible scour of the substrate.

## Ramps

For general purposes of a built path, such as a ramp for a bridge, a gradient of 1 in 12 is the ideal maximum for ridden use which may also be useable by people in mobility scooters or similar, although lower ramps for the latter are preferred. This does not apply to natural terrain where gradients of 1 in 3 or steeper are possible for some horses and riders, though few carriage-drivers would tackle such gradients except for very short distances.

Account must be taken of the geographical features of the area and discussion between the local BHS Access Officer and highway authority is essential. Compromise may be possible where there are no alternatives, particularly with close attention to an appropriate resilient surface and adequate provision to pass other users which, as with steps, may be passing places if an overall width of at least 3m is not feasible.

## Steps

The dimensions suggested here assume that for steps to be considered, there are likely to be significant site constraints and that steps are a 'last resort'. They are not feasible on routes open to horse-drawn vehicles. Consideration should be given to the widths needed to safely pass other users and if a horse should need to be turned while on the steps. Turning is likely to require a 3m x 3m area for safety. The ideal is therefore 2m wide with frequent passing or turning places, but much will depend on the site, its level or use and locality.

- Width ideally 2m or more, minimum 1.5m
- Sight lines of at least 15m and passing places along the flight at no more than 15m intervals. Passing places should be at least 3m by 3m to allow a horse to be turned if necessary.
- Treads should aim for the optimum length of 2m in locations likely to be well used by all abilities.

If insufficient space is available to gain required height, then alternate shorter tread with 2m tread as follows:

- Minimum length 0.5m for one tread between 2m treads
- Minimum 1m length each for two treads between 2m treads
- Minimum 1.5m length each for three treads between 2m treads

Riser height optimum 150mm at sites well used by all abilities. If insufficient space is available to gain required height, then alternate risers may be increased as follows:

- Maximum 200mm for maximum of three consecutive risers
- Maximum 300mm for maximum of two consecutive risers
- Maximum height 450mm at remote sites and only with a 2m tread below the 450mm riser

To increase height gain for length, treads may slope slightly towards the front. The higher the riser, the deeper its supports need to be to stay firm. This may not be possible in some locations.

If it is necessary to have more than one flight with each flight turning back on the previous, the turning area should be 3m x 3m.

Some, but not all, horses can cope with shorter steps, particularly going uphill; therefore, any reduction in this specification should only be with approval of the local BHS representative and in exceptional circumstances. Shorter or steeper steps must only be used where there is no option but to create a potentially one-way (uphill) section with an alternative descent.

Note that particularly on steeper gradients, a horse may trot or canter up steps to maintain impulsion. This is partly because the sequence in which its legs are used makes it easier than in walk, so it is a natural response of the horse.

Mounting blocks will be welcome if the gradient is such that riders may feel safer leading rather than riding their horse.

Recommendations for a common backfilled timber frame construction are:

- Use hardwood for the frame, especially the riser, e.g., railway sleepers, rather than softwood which is more likely to splinter if caught by a horse's hoof
- Ensure the supports for the risers are deep to avoid the riser being pushed forwards – the higher the riser, the greater the load against the riser may be (depending on the area of the tread).
- Consolidate the backfill thoroughly and ensure a good layer of fines. As with steps on a footway, erosion at the point of impact coming down and going up need extra attention to ensure hollows do not form with use. Impact increases with gradient so greater attention may be needed to construction and maintenance with steeper slopes.
- Provide for drainage and run-off to the side to avoid cascading down the steps.

If a handrail is desired for pedestrians, the available width for horses should be at least 2m otherwise there is a risk of the rider's foot or leg catching the handrail, potentially with serious injury. A handrail acts like a fence alongside the bridleway and such a situation would normally require at least 3m width to allow users to pass one another in comfort and to avoid a rider being too close to the fence (handrail). For only a couple of steps, the greater width may not be necessary but a longer flight with limited width may need passing places or open ground to one side of the steps without a handrail.

### Steps in upland or remote areas

On steep slopes, many horses will tend to descend partly sideways rather than straight, at a roughly 45° angle, and back legs are likely to slide which can cause erosion. It may sometimes be necessary to construct steps to reduce erosion.

Steps in remote areas or a more challenging environment may be very different from in a highly used area. In remote uplands, riders and horses are more likely to be able to cope with steep gradients and higher steps, as will occur naturally in terrain down to bedrock. When improving such a route or incorporating steps to reduce erosion, it is the length of a horse which is most commonly forgotten by those unfamiliar with horses and the fact that it has four feet to accommodate. The following are recommended:

- If possible, study how horses move on slopes and how much space they take up.
- Aim to produce a variety of heights and lengths, as would occur naturally in a large-scale version of the stone pitching that is used on some upland paths.
- Step height should not exceed 450mm and this height should be occasional, not every step.
- A high riser must have a long tread below it as it will be most difficult to descend, and a horse may try to jump it.
- Leave an area big enough for a horse to have all four feet on one level every several steps to provide relief from the strain of having front and back legs on different levels – this usually works well as the long tread below a high riser.

### Crossfall

Generally, a crossfall up to 1:10 is less likely to cause problems of slipping and erosion and is therefore acceptable, although this is dependent on drainage and soil type. Greater than 1:10 will need consideration of location, circumstances and likely use, particularly where this is a proposed diversion or a route used by horse-drawn vehicles. Where crossfall is greater than desirable on a new route which offers an off-road alternative, this may be accepted, however, some earth-work to reduce the crossfall would likely be beneficial to reduce future maintenance.





Structures



## Gates

Gates are a barrier which can be a major hazard to riders and carriage-drivers and obstruct a public right of way because they are too difficult for those users to negotiate. Even the best gate which is easily operated in ideal conditions is still a potential hazard and always an inconvenience for equestrians. Non-riders tend not to realise that while pedestrians may barely interrupt their stride to negotiate a gate, a rider will take at least five times as long, even at the best gate and with a high skill level of horse and rider. The ideal for safety and convenience is that there should be no gates across a route. This is reflected in the British Standard 5709 for Gaps, Gates and Stiles.



The Council have to make consideration in regard to obligations under the Disability Discrimination Act 1995 to ensure that access is open to all users. Legislation in this act and Countryside and Rights of Way Act (England) 2000 also advocates use of the least restrictive option so as to inconvenience or obstruct the fewest users. The least restrictive option is a gap, with a gate used only where a gap is impractical. Equestrian users may have impaired mobility and a horse provides them with many health benefits of exercise and access to countryside. Gates can be limiting factors on the distance people can travel independently.

There are many situations where a gap would be practical, but a gate remains, such as between arable fields or where there is no livestock. Any gate not currently required for the control of livestock could be removed or secured in its open position. This reduces wear on gates as well as improving the passage and safety of users. Tying back a gate in winter when stock is off the land is also beneficial in reducing footfall around the gateway when the ground is most vulnerable to poaching which can have a significant effect on ease of access and retention of vegetation. A horse having to manoeuvre to negotiate a closed gate will have many more footfalls, commonly turning tightly, so causing much more poaching than going straight through a gateway with the gate removed or tied back. If removed, a gate can be replaced in future if it is again required for the control of livestock.

Where a gate is necessary, it should be reasonably easy and convenient to use by equestrians as well as other users. A newly authorised gate should comply with the British Standard for Gaps Gates and Stiles. Regard should also be given to its site because although a gate itself may be sound or comply with the Standard, hazards in its site may make it an obstruction. It is vital for safety that the site has adequate manoeuvring space—commonly underestimated—and be clear of hazards such as uneven or sloping ground, holes, deep mud, overgrowth and barbed or electric wire. Gates should be set back by 4m from the edge of a carriageway because of obvious dangers to users (and motorists) while equestrians negotiate the gate in either direction.

### BHS Priorities in order of Preference

1. A gap at least 1.5m on a bridleway, 1.6m on a carriageway restricted to non-motor propelled users, 3m on a carriageway - Unless subject to a traffic regulation order suspending the right for mechanically propelled four-wheeled vehicles, in which case 1.6m
2. A gate without self-closing mechanism
3. A self-closing gate only where required for essential livestock security with at least eight seconds closing speed from 90 degrees. Gates must open to more than 90 degrees. The recommended minimum time may vary depending on the type of mechanism.

Essential livestock security is considered to be alongside a road or onto a track which is open to a road.

## Basic Requirements

Gates Should:

- Be openable with one hand, ideally the same hand that also operates the latch\*
- Be operable while mounted with no need to lift or exert strength
- Have manoeuvring space of 4m by 4m at each side, including 1.2m beyond the latch in line with the gate
- Have firm, level (i.e., not sloping in any direction), even ground with no vegetation overgrowth (from the surface, sides or overhanging) within the manoeuvring space
- Provide an opening of at least 1.5m on a bridleway, 1.6m on carriageway restricted to non-motorised users only, 3m on a carriageway which includes motorised users
- Open to more than 90 degrees
- Be set back from a road by 4m

<sup>2</sup>Unless subject to a traffic regulation order suspending the right for mechanically propelled four-wheeled vehicles, in which case 1.6m

<sup>3</sup>Gates must open to more than 90 degrees. The recommended minimum time may vary depending on the type of mechanism.

### \*One and the Same Hand

At all times, a rider needs a hand for the horse, so has only one for the gate. Having to use both hands for the gate or one for the latch and one for the gate means that the rider has jeopardised control of the horse. Swapping hands potentially loses control of the horse during the transition. Some latches may be operable with one hand but require the other hand to be used at the same time to move the gate clear of it (e.g., gravity latch). This leaves no hand free to control the horse.

A spring bolt latch should be fitted with a rod as its lever extending above the top rail and should, if possible, be protected where it sticks out from the gate to avoid injury from it. Spring bolt latches without an extended lever are rarely possible to operate while mounted and can require considerable strength even on foot.

Double gates must have one gate firmly anchored so that the rider only has to move one gate. Both gates moving may produce an impossible situation for anyone alone especially in wind or where the gates will not stay in one position. While this situation may be possible to deal with on foot because you can keep hold of both gates, that is impossible when you need sufficient space to take a horse through, even if the rider has dismounted.

## Self-Closing Gates

Self-closing mechanisms can be very dangerous for riders. Having opened a gate, many riders will not be able to keep one hand on it to hold it open as they pass because they cannot reach or because to do so would compromise control of the horse. They have to swing the gate wide enough to let it go and ride through the gap.

This is not safe with gates that close quickly as the narrowing gap may cause the horse to panic or the horse or rider may be hit by the gate or the post. Serious injuries from these gates are common and the BHS strongly recommends against their use unless the closing speed is at least eight seconds from 90 degrees.

The risk at self-closing gates is much increased by additional hazards such as lack of space to manoeuvre, uneven ground, overgrowth, slope, deep mud or standing water. **Where a site cannot meet the basic requirements (page 2), a self-closing gate should be avoided or removed.**

Self-closing gates are commonly impossible to use when riding one horse and leading another or when leading more than one horse. A horse may be led when ridden by a novice, child or disabled rider. Bridleways, carriageways and roads include the right to lead a horse and to ride one horse and lead others. 'Riding and leading' has been a commonplace activity on the highway for as long as horses have been used as transport and is a critical need for some business owners exercising horses or transporting from one location to another.

## New Gates

A new gate may only be authorised by a highway authority under certain conditions, usually for the control of livestock.

All gates should be useable from horseback as a gate for which a rider must dismount may comprise an obstruction for someone with impaired mobility and at the least will be a gross inconvenience to equestrian users.

## Dismounting

Dismounting is not the answer to a gate that cannot be operated from horseback. Even on the ground, the rider needs one hand for the horse. It may not be safe or possible to tie the horse somewhere close, open the gate, untie the horse, move it through, tie it again, close the gate, untie the horse. Dismounting and mounting are potentially hazardous, especially with other factors such as boggy ground or livestock.

Mounting without a mounting block is not possible for many riders and is not recommended because of the strain it puts on the horse's back, the rider and the saddle. Many riders have impaired mobility and can enjoy the exercise of riding once in the saddle but have difficulty mounting. Having to dismount in order to open and close a gate is an inconvenience even if it is possible. Access to the Countryside (NI) Order 1983 Article 5 places a duty on the owner of the land to maintain any stiles or gates across a right of way in a safe condition and "to a sufficient standard to prevent unreasonable interference with the rights of users".

Having to dismount and remount to open the gate means that the process takes very many times longer and substantially interferes with the passage of a rider. A mounted rider may take at least five times longer than a pedestrian to negotiate a gate, even if the gate is of high standard.

## Manoeuvring Space

Sufficient manoeuvring space around the gate on firm, level (not sloping) ground is particularly important and emphasised in the British Standard.

The recommended safest method of opening a gate is to approach the gate from the hinge end and align the horse parallel to the gate facing away from the hinges with the latch approximately level with the horse's shoulder so that the rider can reach and operate it. This position requires space of 1.2m for the horse's head and neck beyond the latch in line with the gate. Space for the horse to approach the gate and turn to this position is required (see BHS Advice on Opening Gates).

This method (commonly called 'heels to hinges') is recommended because it substantially reduces the chance of the reins, bridle or martingale becoming caught on the gate or its latch, or of the horse's head being hit by the gate or latch (if the latter protrudes). It enables the rider to operate the gate one handed, using the same hand throughout and controlling the horse with the other hand, thus avoiding a possible loss of control of the horse or gate while the rider changes hands.

Allowance needs to be made for the space taken up by the gate as the rider pulls it open and by the horse as it reverses while the rider operates the gate, if opening towards them. Two or more horses travelling together will need more space; normally a group of three horses should be allowed for, since a horse may become difficult to control if left alone while its companions move on.

Ideally, for safe and easy operation of a 1.5m bridle gate, a minimum clear manoeuvring space of 4m square should be provided before and after the gate, including space beyond the latch for the horse's head and neck, with an additional 4m length of waiting space if use by groups of horses is likely. For a longer gate the area on the opening side may need to be greater, depending on the length of the gate.

Riders of larger horses may not be able to operate a 1.5m bridle gate using the heels to hinges method because the length of the horse means the rider cannot keep a hand on the gate. The rider may have to approach diagonally, which makes the space required at the latch end particularly important, so that riders can position the horse beyond the latch so that they may reach the latch with the hand closest to the hinges.

Using methods other than heels to hinges to open a gate commonly have the horse approaching the gate at right angles and the rider operating the latch with the hand closest, which is then reliant on the gate remaining unlatched while manoeuvring the horse and pushing or pulling that gate wide with the other hand. Self-closing gates frequently defeat this method. The need for manoeuvring space means that gates must not be placed where the available width is less than 3m such as on bridges, fenced bridleways or narrow lanes.

Gates beside roads should be set back to allow manoeuvring space off the carriageway and, ideally, the waiting space beside a road should be large enough for at least three horses to wait before or after passing through a gate, because a horse may become difficult to control if asked to wait on its own on one side of the road when its companions have crossed. On a byway, the length should be 5m to give space for a horse and carriage.

## Gate Width

Some of the bridleway gates which cause problems or accidents for riders prove to be less than the statutory minimum width of 1.5m between the gateposts (Section 145 of the Highways Act 1980). The local authority may exercise its statutory powers to require a gateway to be increased.

A gate 1.5m to 1.8m is generally easier to handle than a longer field gate and its lighter weight will cause less load on the gate post so that it remains functional and requires less maintenance through its life.

## Gate Latches

Many latch designs are adequate and safe, although not all will be appropriate in every situation. The most universal is a spring latch, at mid height on the gate so giving greatest stock security, operated by an extended lever to the top of the gate, so most convenient for a rider. However, it needs an additional mechanism at the latch itself to be operable by someone on the ground and unable to use the extended lever. Some riders do not like extended levers because of the risk of reins or martingale being caught on them, therefore, in selecting the best latch, consideration should be given to the likely users.

The primary requirements are:

1. A latch release that can be operated with one hand, the same hand that will move the gate.
2. A latch that can be operated from horseback with the lever or latch on the top of the gate, so the rider does not have to bend so low as to risk being unbalanced.
3. A latch that does not need much physical strength to operate as 75 per cent of riders are female, 34 per cent are children ; some have arthritic hands or other disabilities (Disability Discrimination Act 1995). Consider a latch that could be operated by a twelve-year-old girl.

Latches should also:

- Be operable easily from either side of the gate.
- Have no protrusions or edges that can damage the side of the horse, the rider's leg or the saddle.
- Allow some leeway for the gatepost to move a little and for the rider to secure the latch quickly and easily.
- If the mechanism is within the space between the posts, posts should be further apart to ensure safety is not compromised.
- Avoid requiring movement in more than one direction. A handle that requires lifting as well as pulling or sliding sideways will be particularly difficult for riders who lack strength.

## Common Gate Latches in Order of Cost

A **chain or rope loop** is simple, cheap and easily maintained, and works well providing movement in the posts does not cause it to become too tight. It is easier to use if the loop is stapled to the gate rather than loose or stapled to the post. It should not require untying or a link releasing as this will demand both hands (see One and the same hand).

**Hook and eye** The hook should be at the top rail of the gate, no lower than the second rail, and the eye on the gatepost. Easy for riders to use and has proved stock proof for both cattle and sheep when installed on one-way gates up to 10 feet wide. A hook on a few links of chain provides flexibility which can reduce maintenance if posts shift.

A **triangular gravity latch** commonly requires one hand to lift it and the other to move the gate free of it so is undesirable for equestrians as this means dropping the reins. If used, it should have an extended handle, or a length of chain or cord stapled to the top of the post, so that it can be operated from the top of the gate.

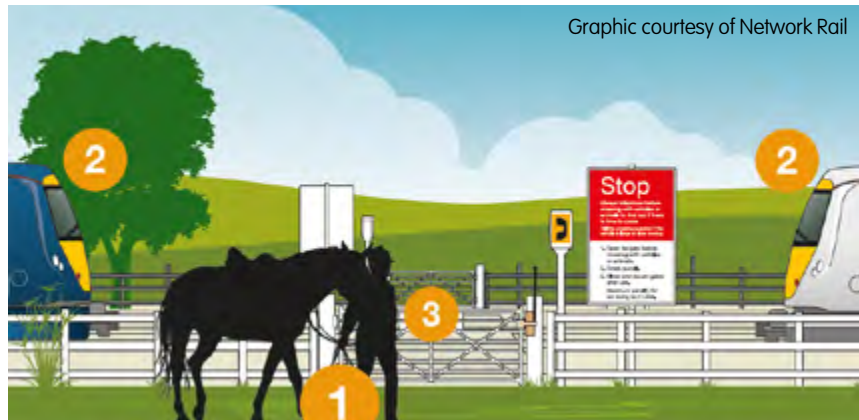
A **horizontal spring latch** is commonly found on metal field gates. It **MUST HAVE** a lever (a rod attached perpendicular to the spring) extending above the top rail of gate. Without the extended lever, it can be very difficult for people with less strength even on foot, requiring both hands, and mostly impossible from horseback. A 'trombone' style rod bent over the top of the gate and down to the latch is less likely to catch reins. Retrofit kits are available to improve existing spring latches.

## Gates Associated with Railway Crossings

To enable horses and riders to spend as little time within the railway boundaries as possible, bridle gates should always open away from the railway, should be slowly self-closing and should have no latches.

If a latch is necessary to prevent livestock from straying onto the railway, the gate should be set back into the field leaving a 'corridor' at least 4m wide and 6m long on the railway side so that horses are well away from the railway line while operating the gate. On the principle of least restrictive option, fencing the livestock off the right of way should be considered first.

On railway crossings where there are latched vehicle gates with narrow pedestrian gates beside them, the Society strongly recommends that the pedestrian gates are replaced with bridle gates where riders are likely to wish to use the crossing. See BHS Advice on Level Crossings.



### Network Rail offer the following advice to horse riders

1. HEIGHT - Overhead lines are electrified. Be mindful of your increased height, including the reach of your whip. Dismount when instructed to do so.
2. ASSUMPTION - Don't assume there is only one train or use previous experience to guess when the train is coming. Trains can come from either direction at any time. When instructed, use the telephone to find out whether you have time to cross.
3. OPEN GATES - It's surprisingly easy to forget to close a gate. We must close both gates after using the crossing.
4. REACTION - How will your horse react to flashing lights, alarms or other sudden noises?

## Gates Associated with Cattle Grids

See BHS Advice on Cattle Grids for legal requirements and the Society's recommendations on design. Key safety points are:

- The gate should always be hung with hinges closest to the grid so that the horse is as far from the grid as possible while the rider is operating the catch.
- There should be a fence separating the grid from the gate and its immediate approach so that a horse cannot step into the grid if startled while in the bypass.



All other requirements for gates in this Advice Note also apply

## Accessible mounting block at Gortin Glen Forest Park, Lislap East, Co Tyrone



A new 8km horse trail and horse box parking is now open at Gortin Glen Forest Park. The off-road riding opportunity at Gortin Glen provides a haven to riders for exercising their horses in a safe environment off the road and away from traffic.

The Council is continuing the redevelopment of Gortin Glen Forest Park to transform it into a family-friendly, shared outdoor experience with works completed on the new horse trails on the western side of the forest, off the Lisnaharney Road.

The British Horse Society has been delighted to support the project with technical information and guidance to ensure the route is fit for purpose and suited to the needs of horse riders. We are equally as delighted to provide part funding from the BHS Ride Out Fund, for the superb accessible mounting block in the car park.



Vehicle Barriers

## Are barriers really necessary?

Even if they are legal, barriers can cause serious hazards for equestrians—riders and drivers of horse-drawn carriages—and their horses and other legitimate users of the way, and may prevent their use of the way. Riders may be unseated if their horse chooses to jump the barrier—this is a common response of horses. Cyclists may not be able to lift a bicycle over the structure. Wheelchair users may be unable to pass. Visually impaired may not detect a barrier and be injured by it or discouraged from using a route.

The requirements of the Disability Discrimination Act 1995 must be taken into account. A barrier affects people with impaired mobility and impaired vision as well as riders who may have difficulty negotiating the structure safely and carriage-drivers are commonly excluded completely. Equestrians are quite often people with limited mobility whose horse and/or vehicle provides them with highly beneficial means for open air exercise.

Horse-drawn vehicles adapted for use by wheelchair users are increasingly common.

### Is there evidence

Is the threat that suggests a barrier is needed genuine? Is there evidence rather than just perception? Installing a barrier is a common 'knee-jerk' reaction but there may be no evidence that it will remove antisocial behaviour, yet it will have a detrimental effect on legitimate users of the way. Examples of these barriers can be seen at Drumkeeragh Forest, Co. Down.

### Barriers near the road

Any barrier should always be set well back from the roadside so that riders or carriage-drivers have space to align themselves for the structure and to negotiate it away from the additional hazard from motor vehicles. Structures should not cause equestrians to be delayed on the road as that increases the risk of a motor vehicle hitting them, particularly where motor traffic is at high speed.

This general requirement may have to be relaxed at certain sites where there is a proven problem of fly-tipping or parking, and the wish is to prevent motor vehicles pulling off the road by placing bollards. Bollards at the roadside can generally be easily negotiated by riders but may be a problem to carriage-drivers because of the length of horse and vehicle meaning they have to swing out into the road to clear the bollards.

A 'horse stile' (see below) or step-over barrier (see below) of any type should never be installed at the roadside because of the danger of a horse jumping

the barrier into the road or aligning to negotiate the barrier on the road while at risk from vehicles. Barriers other than bollards commonly cause considerable difficulty to equestrians because horses are likely to have been taught to jump similar obstacles.

If the solution appears to be a barrier close to the road edge, consideration must also be given to space for riders or carriage-drivers waiting to cross or join the road.

Bollards are therefore likely to be the only acceptable constraint at the roadside.

All barriers must have:

1. Straight approach and exit of at least 3m length on a bridleway, 6m on byways to allow the horse (and vehicle) to be aligned and opportunity to assess the structure
2. Level well-drained ground free from overhanging vegetation to 3.7m height (in case a horse jumps the structure)
3. A non-slip and giving surface as a horse may jump the barrier and slip or be injured (i.e., not tarmac)
4. On a bridleway joining a road, ample space for at least three horses to wait between the barrier and a road (5m assuming at least 3m width available but need not be straight as in 1.)





## Bollards

The preference of the BHS to prevent access by four-wheeled vehicles would be for bollards as being least restrictive to legitimate users. They may also be used to prevent parking vehicles, which commonly obstruct access to a bridleway or byway for equestrians, particularly carriage-drivers. Lockable bollards which can be lowered may benefit landowners and the emergency services where occasional motor vehicle access is desirable. Bollards obviously will not prevent access by motorcycles or quad bikes but neither will a gate that is usable by equestrians.

Bollards should have smooth tops and edges and have gaps between them of no less than 1.5m on a bridleway, 1.8m on a carriageway. Round bollards are preferred. On carriageways, the minimum gap is 3m so a gap of 1.8m is illegal unless authorised by the highway authority's rights of way service as necessary for the safety of users.

Recommended height of bollards is 600mm. Taller bollards may be more vulnerable to being removed; shorter bollards are more difficult for carriage-drivers to keep in view, especially when driving a pair. Very short bollards can be a trip hazard.

Where the route has verges, trees or hedges to the sides, a central bollard is not acceptable unless the surface to each side of the bollard is level and even with height clearance to 3.4m and no hedges that may restrict width. Two bollards may be required to give a clear central passage for riders of 1.5m and for carriage-drivers 1.8m.

On a byway, the gap between the bollards and 3m before and beyond it must have level and even ground. Uneven ground between or in the approach to bollards may cause a carriage to tip and collide with a bollard. Vegetation must be maintained so that the full width between the bollards is available with a level surface.

It is unlikely that a gap of 1.8m will admit the type of four-wheeled motor vehicles most commonly used for illegal or antisocial access. Smaller street cars are not usually a problem and the smaller four-wheel drive vehicles (e.g., Suzuki Jimny 1,645mm wide) would have clearance of less than 80mm each side.

If a gap less than 1.8m is proven to be necessary on a carriageway, local carriage drivers may be willing to accept lockable bollards which can be lowered and for which they have the code, but this is only a solution where such acceptance has been negotiated by the highway authority with local users. The bollard when lowered must be less than 150mm high. Combination locks are more acceptable than key locking padlocks and the code should be circulated to The British Horse Society, Driving Societies and local harness clubs each time it is changed as well as a local list of users to whom it has been supplied. Failing to communicate with users about locks has withdrawn cooperation in many areas. Contact details for acquiring the code must be provided on site.

On a carriageway leaving a road, bollards should be set back by 6m, so that a horse-drawn carriage does not have to swing into the road to clear the bollards. It may be a difficult manoeuvre for some carriages, so not being exposed to motor traffic is preferred. Where the purpose of the bollards is to prevent fly-tipping or parking, it may be necessary to reduce this length, but it should only be done where road traffic flow makes it possible for a horse and carriage to be lined up with the gap in safety.

## Structures for use on bridleways only

Only bollards may be erected on a byway as the structures below will prevent access by horse-drawn carriages and are therefore only to be considered on bridleways.

## Horse Stile (ridden horse routes only)

Few barriers are wholly effective in deterring motorcycles so the Society may accept that where there is a genuine risk to public safety from motorcyclists, the horse stile (sometimes called horse hops or motorbike traps) as specified in the British Standard 5709 for Gaps Gates and Stiles may be installed on a bridleway if the highway authority can justify authorisation of a limiting obstruction which will affect legitimate users including, potentially, their safety.

Horse stiles can limit use by riders, especially children on small ponies, novices and horses which have been taught to jump such obstacles, and people in mobility vehicles, so local use must be considered before installation. Some riders have difficulty with horse stiles, particularly where a horse has not met the structure before so it is vital that the surface is level, even and non-slip to horses on the approach from both directions and throughout the structure. They must not be used unless there is evidence that danger to users from motorcyclists is greater than the disbenefits to legal users.

They must not be installed on a carriageway as carriages cannot negotiate the obstacle (it would be like trying to push a heavily laden wheelbarrow up two high steps). Horse-drawn vehicles vary from 100 to 500kg so cannot be lifted over like a pushchair or bicycle.

Horse stiles are constructed using two parallel railway sleepers or equivalent with each sleeper lying on its narrow face across the line of passage, with fencing to each side forming a rectangle at least 1.5m wide and 1.2m long between the sleepers. Adjacent secure fencing is required to prevent illegal users going round the stile and is pointless unless other entries are secured.

- Height of sleepers 190mm +/- 60mm
- 'Short edge' or diameter 80mm to 160mm
- Width at least 1525mm
- Distance between sleepers 1200mm +/- 100mm

All of these dimensions should not be exceeded or reduced; to do so could render the obstacle more dangerous or pointless.

It is particularly important that the surface before, after and within the barrier is free-draining and is maintained to prevent erosion as hollowing of the surface would make the sleepers higher, increasing the severity of the obstacle and making horses more likely to jump or to trip.

Reducing the distance between the sleepers would increase the risk of a horse being unable to pass or trying to jump the obstacle. The distance is intended to be such that it is difficult to lift a motorcycle over it.

A British Standard horse stile with fencing to the right, and a motorcycle barrier that permits wheelchair users, pedestrians and cyclists to the left.  
(The gap to the left of the structures in the photograph also needs securing.)



The BHS does not recommend using suspended scaffold-type poles or metal bars as they are less visible to horses and if a hoof strikes them in crossing, the noise may startle the horse. However, the Society accepts that in some locations wood is too vulnerable to vandalism, but poles should not be suspended as a horse's foot may slip underneath causing a serious injury.

A gate must never be hung above the stile or within 4m before or after the line of travel through the stile. The many small steps forwards, backwards and sideways to open the gate are difficult enough without also trying to do them over a step, which will be in the most awkward place. Ideally, the top edges of sleepers should be rounded or chamfered to reduce injury to horses' legs.

Clear space at least 4m long and 2m wide is required to both sides of the horse stile so that the horse can walk straight through the structure. Where the stile is installed where a route leaves a road, space for at least three horses is required between the stile and the edge of the road so that they can wait together to cross the road. This also provides stopping distance if a horse should attempt to jump the stile towards the road and, when leaving the road, allows space for the horse to be attentive to the structure without the hazard of motor vehicles.

The ground through the stile and on the approaches should be maintained level, firm and well drained but not hard, slippery or stony. It must not be tarmac as a horse is more likely to slip when stepping over the barrier, and particularly if it should jump the barrier. Where a sealed surface is required, the BHS recommends use of resin or polymer bound rubber-crumb.



### **'Horse Friendly Vehicle Barrier' (ridden horse routes only)**

A 'horse friendly vehicle barrier' is a term used by a manufacturer for a strong metal barrier with a lowered mid-section over which horses can step. The mid-section must be low enough that it does not encourage a horse to jump it. More robust barriers of the same pattern as that illustrated above are available.

As with a horse stile, access to the sides must be secured otherwise the barrier will not prevent access by motorcyclists. However, in doing so, legitimate users who cannot step over the barrier will be prevented from using the way and this must be taken into account in deciding that a barrier is justified.

'Horse friendly vehicle barriers' should only be used on bridleways where all of the following circumstances apply:

- Lawful motor vehicular access needs to be maintained while deterring illegal use
- There is insufficient space beside a locked field gate for a 1.525m gap
- There is clear evidence of persistent problems with unlawful four wheeled motor vehicular access
- The surface is not tarmac or of any substance that may be slippery for horses
- The authority is able to legally authorise installation of the barrier and is satisfied that the requirements of the Disability Discrimination Act 1995 are met

A barrier should be at least 5m from the edge of a road; more is desirable where space permits and additional width may be necessary to allow three horses to wait together to cross the road on the road side of the barrier. The length allows for stopping distance if a horse should jump the barrier towards the road and, leaving the road, allows the horse to negotiate the structure away from the distraction of motor traffic.

The space over the barrier and its approaches should be clear of overhanging branches and other hazards to a height of 3.7m in case a horse should jump the barrier.

The ground under the barrier and on the approaches should be level, firm and well drained but not hard, slippery or stony; that is, it should be a surface on which a horse can safely jump. This may require a commitment to maintenance. It must not be tarmac as this is too dangerous if a horse jumps the barrier and may cause a horse to slip when stepping over, particularly when wet. Where a sealed surface is required, the BHS recommends use of resin or polymer bound rubber-crumbs.

The lowered central part of the gate over which the horse steps should be at least 1.2m wide at the bottom and 2m wide at the top. The top of this section bottom bar should be maximum 190mm  $\pm$  60mm from the ground.

Care must be taken to ensure that the height of the lowered rail does not exceed the maximum recommended height of 250mm overall height measured from the ground beneath that part of the barrier and for at least 2m on each side. Periodic maintenance of the surface under the barrier may be required to ensure it does not erode and increase the height between the ground and the top of the rail. Maintenance should not be simply adding stone to any eroded hollow because loose stone is painful for horses to walk on and may cause injury. Raising the ground immediately below the barrier does not help as it is the height the horse has to step which is important.

There should be solid wooden cladding on both sides of the central section, so that the barrier does not clang if the horse's foot strikes it. It may need to be painted so that the horse can distinguish it more easily from the ground. The edges of the wood should be rounded to reduce incidence of injury to a horse's legs.

As with lockable drop bollards (page three), use of this type of gate on a byway may be locally accepted provided the lock code is easily available to carriage-drivers, however, availability of the code and maintenance of access is vital for this to be considered.

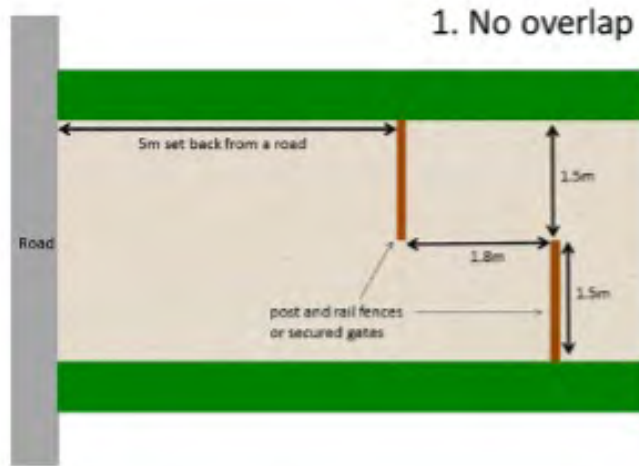
## Chicanes

A chicane formed by lengths of post and rail fencing and/or a locked gate or sleeper across a bridleway can be a helpful means of reducing speeds of cyclists, warning users of proximity to a road or deterring illegal use by motor vehicles. The latter is achieved by the openings in the chicane not being apparent from the road, so it looks like a solid barrier.

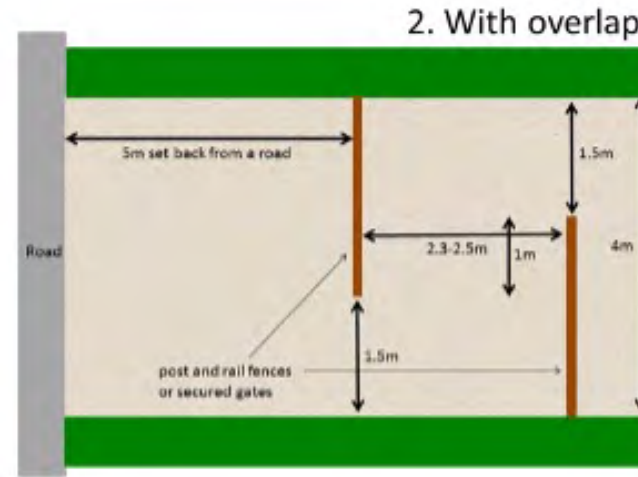
Chicanes must not be used on routes open to carriage-drivers as the space needed to manoeuvre is too variable to accommodate all and is likely to produce a barrier unfit for purpose.

As with all other vehicle barriers, they should be set back from a road by at least 5m so that a group of horses has space to wait at the roadside without being separated by the barrier and, should riders experience difficulty negotiating the barrier, they are not immediately exposed to the traffic on the road. At some sites, risk of vandalism makes wooden fencing undesirable, in which case metal may be used so long as edges and corners are rounded.

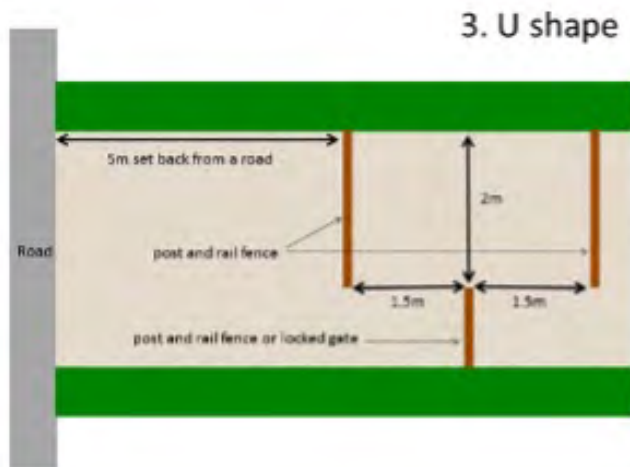
Examples of chicane variations



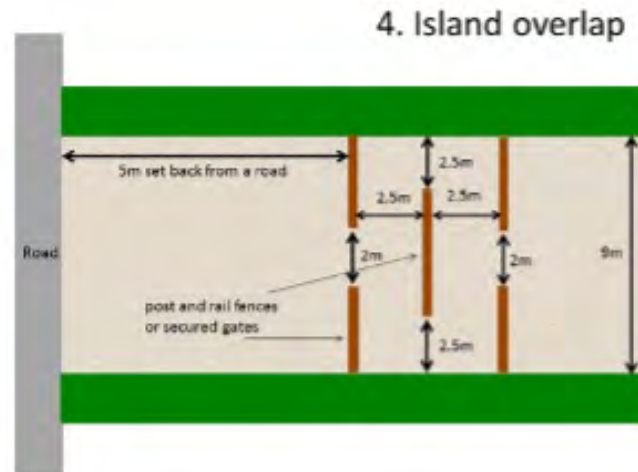
1. Two barriers staggered across the track without an overlap.



2. Two barriers with an overlap.



3. Two barriers forming a 'u' shape gap round the end of a third barrier.



4. Five barriers forming a passage round a central island.



### Road Crossings for Equestrians

Routes used by equestrians include bridleways, byways, unsurfaced unclassified roads, quiet lanes, permissive paths, commons and public open space; most of which leave riders and carriage-drivers no choice but to use busy roads to reach them.

Generally, crossing a main road is much preferred by equestrians as far safer than proceeding for any distance along it. An underpass or overpass are the ideal for crossing a busy road but commonly cannot be provided on the grounds of cost or available space and an at grade crossing is the only option.

Read the BHS advice leaflet on **Road Crossings** for more information.



Support

### **Advice on projects and ongoing support**

BHS Ireland are happy to provide appropriate professional support on all matters relating to Equestrian Access in Northern Ireland.

### **Financial**

The BHS would welcome discussions on projects where lack of funds is preventing access being delivered. Our HQ Fundraising team are willing to investigate options to provide part funding, alongside our BHS Ride Out Fund which has already provided funds for access projects in Northern Ireland.

### **Contact with user groups**

We are the voice of equestrianism for the UK and are willing to be the point of contact to acquire local feedback and support on access matters effecting horse riders and carriage drivers. Working regularly in partnership with other key user groups enables us to work collaboratively on projects.







## Multi-User Routes



### Addressing Common Concerns

Concerns about whether to include equestrian users on cycleways are:

**Assumption of Conflict** - Incidents of real conflict are rare and on investigation are usually found to be perceived rather than actual conflict or arising from lack of understanding of who may use the route or lack of consideration for others\*. The solution is to better educate all users and promote understanding and tolerance by shared use on all routes.

**Width** - There are many bridleways which are less than 3m wide and shared by riders, cyclists and pedestrians without problems. Intermittent verges or occasional passing places or refuges may be feasible even if the whole length cannot be wider. There are unlikely to be so many horses as to make narrow routes impractical but including those equestrians who need the route could save lives.

**Cost of Surface** - Surfaces suitable for all users can be provided at a lower cost than tarmac, and even a non-slip tarmac surface off-road is safer for equestrians than motor roads. Horses are unlikely to have a detrimental effect on a surface which would be provided for cycle use.

**Cost of barriers** - Barriers to prevent motor vehicular use but permit all other users are used successfully at relatively low cost. They must be legally authorised and comply with the British Standard. They should only be used where there is a genuine danger from motor vehicles and where the loss of accessibility of the path to all legitimate users is justified by that danger.

**Horses' droppings** - pose no hazard to human health and quickly disperse. Where horse use is high, providing an unsealed surface for part of the width and encouraging riders to use it or to keep to one side can be effective so that the other side will be dung-free.

\* Countryside Agency report CRN32, How people interact on off-road routes

## BHS Policy on Widths

Circumstances vary and every route should be considered independently on its own merits and potential benefits for increasing safety by taking equestrians off roads. A less than ideal width may be acceptable where a narrow off-road route is safer than the alternative road. Passing places, attention to vegetation or adjacent hazards (e.g., barbed wire) and encouraging cyclists to slow down may be adequate mitigation to provide safety for all.

## Share with Care

The BHS strongly advocates promotion of sharing and tolerance between all users. There are a great many examples nationally, including most bridleways and byways, where amicable shared use is normal.

It is very common that investigation of an alleged problem finds that it is only a matter of misperception or misunderstanding. It is essential to make clear to all users that horses are permitted and what behaviour is expected of all users—Be Aware, Take Care, Share. Be nice – say hi. Promoting a route as a cycleway often leads to minority users being discriminated against and made unwelcome, even if it is a bridleway. This is morally wrong and there is no need.

Appropriate signs will help considerably in passing the message that horses are welcome. The BHS has examples which are successfully in use to promote consideration (contact [access@bhs.org.uk](mailto:access@bhs.org.uk)). The more that horse use of routes is normal, the better the cooperation will be between users, if the use is promoted for all. Social media and posters at local livery yards and riding schools can be helpful in encouraging use.

## Design

Design of shared use routes is well covered in the government document “On the right track: surface requirements for shared use routes”.

The dilemma of what surface to use to accommodate horses where cycles are the majority user and desire a sealed surface can be met by using resin or polymer bound rubber crumb. This has been successful on a number of trails where it has been liked by all users. It has the bonus of using a waste product (vehicle tyres) as well as being free-draining, smooth to wheels and comfortable under foot and hoof.





Case Studies & Support of  
Multi-User Routes in the UK

### Gortin Glen Forest Park, Co Tyrone, Northern Ireland

8km Multi-user, non-permit, waymarked with Horse Car Park

[www.fermanaghomagham.com/residential-services/leisure/gortin-glen-forest-park](http://www.fermanaghomagham.com/residential-services/leisure/gortin-glen-forest-park)



### Gosford Forest Park, Co Armagh, Northern Ireland

6km Multi-user, non-permit, waymarked route with Horse Car Park

[www.getactiveabc.com/facility/gosford-forest-park](http://www.getactiveabc.com/facility/gosford-forest-park)



## Drumkeeragh Forest, Co Down, Northern Ireland

20km+ Multi-user, non-permit, waymarked with Horse Car Park

[www.nidirect.gov.uk/articles/drumkeeragh-forest](http://www.nidirect.gov.uk/articles/drumkeeragh-forest)



### The Downs Link, South East of England

The Downs Link is 37 miles (59km) long. It follows an old railway line, so the route is mostly level. It was opened in 1984 by West Sussex County Council, Surrey County Council and Waverley Borough Council. It also links two other long-distance routes together - the North Downs Way and the South Downs Way.

It is a multi-surface route allowing safe and easy access for all users.

[www.westsussex.gov.uk/leisure-recreation-and-community/walking-horse-riding-and-cycling/downs-link](http://www.westsussex.gov.uk/leisure-recreation-and-community/walking-horse-riding-and-cycling/downs-link)



### The Ridgeway, England

Starting in the World Heritage Site of Avebury most of the 87 miles (139 km) of this Trail still follow the same route over the high ground used since prehistoric times by travellers, herdsman and soldiers. Travels through the North Wessex Downs AONB and through the Chilterns AONB with Access to all. Cyclists and horse riders can use all the western half of the Trail.

[www.cyclinguk.org/blog/creating-ridgeway-riding-route](http://www.cyclinguk.org/blog/creating-ridgeway-riding-route)

[www.nationaltrail.co.uk/ridgeway](http://www.nationaltrail.co.uk/ridgeway)



### High Peak and Tissington Trails, Peak District, England



Over 30 miles of trails, the High Peak and Tissington Trails follow formerly the Cromford and High Peak, and the Ashbourne Buxton railway lines. You can walk, cycle or ride a horse on the trails all year round, with Access for all as the trail is suitable for all disabilities.

[www.peakdistrict.gov.uk/visiting/trails/tissington-trail](http://www.peakdistrict.gov.uk/visiting/trails/tissington-trail)

### The North Dorset Trailway, England



The North Dorset Trailway now extends approximately 14 miles from Sturminster Newton to Spetisbury with a section in Stalbridge aimed to link with, providing a safe route for walkers, runners, cyclists, equestrians, and people with mobility scooters. The Trailway is largely made up of sections of the old Somerset and Dorset Railway which linked Bristol and Bournemouth until the 1960s.

[www.northdorsettrailway.org.uk/extending.html](http://www.northdorsettrailway.org.uk/extending.html)



### The Pennine Bridleway, England

The Pennine Bridleway offers horse riders, cyclists and walkers the opportunity to explore 205 miles of the Pennines' ancient packhorse routes, drovers' roads and newly created bridleways. This route starts in the Peak District and ends in the Yorkshire Dales.

[www.nationaltrail.co.uk/pennine-bridleway](http://www.nationaltrail.co.uk/pennine-bridleway)



### The Forest Way, England

Running from East Grinstead to Groombridge, the Forest Way is a shared-use path for walkers, cyclists and horse riders. Part of the Downs and Weald cycle route, this tree-lined path takes you through the heart of the East Sussex countryside, through small fields and farms among wooded, rolling hills. This 10-mile route follows a disused railway line and is flat and traffic-free.

[www.sustrans.org.uk/find-a-route-on-the-national-cycle-network/forest-way](http://www.sustrans.org.uk/find-a-route-on-the-national-cycle-network/forest-way)

[www.geograph.org.uk/photo/2207113](http://www.geograph.org.uk/photo/2207113)



There are many other case studies of routes throughout the UK and Ireland.

If you would like to discuss proposals for a particular area, please contact [access@bhs.org.uk](mailto:access@bhs.org.uk)

## Support for Multi-User Routes

Multi-user routes are supported by organisations such as Outdoor Recreation Northern Ireland who create and support routes to enhance outdoor engagement for people.

## Get Involved

Why not give a multi-user route a trial? Use this information book and case studies as guidance for your own multi-user trail, with support from The British Horse Society.

## Horsebox Parking

Many riders and carriage-drivers who can afford to run a horse transport vehicle look forward to using it to access new areas to ride or drive. Some will need to transport to open spaces every time they go out because their local area lacks opportunities for hacking or driving. Parking areas for horseboxes and trailers with access to good networks or long-distance routes will be very welcome. Find our full advice note [here](#).

## Road Crossings

Routes used by equestrians include bridleways, byways, unclassified roads, quiet lanes, permissive paths, commons and public open space; most of which leave riders and carriage-drivers no choice but to use busy roads to reach them. Generally, crossing a main road is much preferred by equestrians as far safer than proceeding for any distance along it. An underpass or overpass are the ideal for crossing a busy road but commonly cannot be provided on the grounds of cost or available space and an at grade crossing is the only option. Find our full guidance leaflet [here](#).

For further information on legal public rights of way and public paths read **A GUIDE TO PUBLIC RIGHTS OF WAY AND ACCESS TO THE COUNTRYSIDE, Guidance Notes on the Law, Practices and Procedures in Northern Ireland - Environment & Heritage Service – 2006** available online.



## Solar Farms



The potential effect of solar farms on horses should be carefully considered on any route used by horses – including carriageways, bridleways, roads and permissive routes – and on equestrian businesses where horses are kept or trained.

Find our full Solar Farms advice note [here](#).

## Wind Turbines



The UK is committed to producing 15 percent of energy from renewable sources by 2020 and government strategies incorporate the use of wind energy towards this target. The BHS does not express an opinion on the use of wind energy as its concern is for equestrian safety, however: The potential effect of turbines on horses should be considered on any route used by them – this includes bridleways, byways, roads and permissive routes – and on businesses where horses are kept or trained.

Read our full Wind Turbines advice note [here](#).



## Contact

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### BHS Access & Rights of Way Department

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### BHS Office Hours

Monday - Thursday 8:35am – 5:00pm  
Friday 8:35am – 3:00pm

Closed Saturdays, Sundays & Bank Holidays.

🏠 [bhs.org.uk](https://www.bhs.org.uk)

📘 The British Horse Society

📷 BritishHorse

📘 BHS Ride Out UK

🐦 BritishHorse

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