

The law and management of public access rights vary widely between the four countries of the United Kingdom. Practical elements of the following advice apply in all of them but the legal requirements in Scotland and Northern Ireland may differ from those in England and Wales.

Riders and drivers of horses are referred to generically as equestrians.

More advice is available on [www.bhs.org.uk/accessadvice](http://www.bhs.org.uk/accessadvice).

**IMPORTANT** This guidance is general and does not aim to cover every variation in circumstances. Where it is being relied upon, The Society strongly recommends seeking its advice specific to the site.

## Contents

Definition .....	2
Requirements.....	2
Barriers to motor vehicles .....	3
Evidence or perception .....	4
Equality and discrimination .....	4
Barriers at a roadside.....	5
Bollards .....	6
Lockable drop bollards .....	7
Split gates .....	7
Multiple structures .....	8
Kent Carriage Gap – not recommended .....	8
Structures for use on bridleways only .....	10
Horse stile (ridden horse routes only).....	10
Step-over gate (ridden horse routes only).....	13
Chicanes on bridleways (ridden horse routes only) .....	15

## Definition

The term vehicle barrier here is applied to an authorised obstruction of part of the width of a public bridleway, byway or minor road, installed with the intention of preventing, reducing or slowing unlawful use with motor vehicles.

Barriers have many variants. Most common examples are bollards, wooden or metal rails or fences forming gaps, gates, concrete blocks, rocks or boulders, tree trunks, banks. Some are more acceptable than others because of the risk of injury in negotiating the structure and whether every lawful user can use the structure.

This advice note does not attempt to include all variants because the same principles for safe access apply to all.

All barriers will have their challenges for horses and equestrians because a horse may not see that barrier in the same way as a human, and may perceive it as a threat. Asking a horse to step over or through or bend round a structure may be more difficult for a horse than a non-equestrian is aware. Requests to [The Society](#) for help to understand are welcome.

## Requirements

Whatever the form of barrier, the principles required for safe equestrian access are:

- Minimum gap of 1,525mm (1.525m) on a bridleway
- Minimum gap of 3,048mm (3.048m) on a carriageway — that is, a restricted byway, byway open to all traffic or road — unless subject to a permanent Traffic Regulation Order, in which case 1,800mm (1.8m) may be acceptable to permit passage with a horse-drawn vehicle (see [Bollards](#))
- Minimum gap measured between the narrowest section if edges of the structure are not vertical (e.g. bank, tapered bollard)
- Straight smooth vertical edges to the barrier reduce risk; rough, sharp or broken edges increase the risk of injury when negotiating a gap; fear of injury will increase reluctance to pass
- Set back from a road edge so that a horse is well clear of road traffic when negotiating the barrier: 3m on bridleway, 6m on byway (see [Barriers at a roadside](#))

- Straight approach and exit of 3m length on a bridleway (6m on byways) to allow the horse (and vehicle) to be aligned to pass the obstacle
- No further structures within 3m (6m on byway) to give space to align for the next gap (see [Multiple structures](#))
- Firm level ground through and on approach to the structure
- A non-slip surface to avoid a horse slipping, with deflexion ('give') if a vertical barrier on a bridleway such as a [horse stile](#) which a horse may jump (i.e. not asphalt or concrete) – polymer-bound rubbercrumb-grit is ideal
- Clear of overhanging vegetation and other hazards, to at least 3.7m if stepping over an obstacle, which a horse might jump
- If a barrier, such as a locked gate, is installed across the width of the main part of the right of way with a bypass, the bypass must be kept clear of vegetation and be on level ground. This is particularly important on a byway or road where the bypass gap must be negotiable with a horse-drawn vehicle which will tip in relation to the crossfall of the ground and may collide with the structure or even overturn, with serious consequences.

## Barriers to motor vehicles

There is no barrier to motor vehicles that does not impede passage by legitimate users. People riding a horse, and particularly driving a horse, and those in a mobility vehicle, are most severely obstructed but cyclists with heavy or longer cycles are also affected, and those with a pushchair.

Barriers which are intended to prevent access with motor vehicles are unlawful obstructions on a public footpath, bridleway or restricted byway unless:

- The right of way was created subject to their limitation on legitimate use
- They are authorised by the highway authority under the Highways Act 1980 section 66 or 115 for the safety of legitimate users (including equestrians)

And on a byway open to all traffic or all-purpose road unless:

- The carriageway is subject to a Traffic Regulation Order prohibiting use with a motor vehicle

Even if they are lawful by authorisation, barriers can be a hazard to equestrians—riders and drivers of horse-drawn carriages—and their horses, and to other legitimate users of the way, and may prevent public use of the way. Supposedly

'accessible' and authorised structures can be too difficult for some users. See [Evidence or perception](#) and [Equality and discrimination](#).

- The length and ability of horses to bend is mistakenly assumed to be as for humans. They are closer to a tandem bicycle where the front wheel/horse's neck may bend at least 90°, but the rest of the cycle/body may not bend at all.
- The space required for horse-drawn vehicles to manoeuvre is underestimated, the turning circle is around 6m unless with a highly skilled horse and driver.
- The difficulty of any step or vertical obstruction to a horse (and wheels for horse-drawn vehicles), is under-estimated, particularly where they are combined with other hazards or constraints such as narrow width.
- Horses are often taught to jump vertical structures so any step-over barrier, even if quite low, may tempt them to jump to avoid it. This is particularly hazardous if there is overhanging vegetation or a slippery surface or close proximity to a road (see [Requirements](#) and [Barriers at a roadside](#))

## Evidence or perception

Installing a barrier is a common reaction to antisocial or unlawful use with motor vehicles, not least to be 'seen to be doing something', but there may be no evidence that the level of antisocial or unlawful activity justifies the detrimental effect on legitimate users of the way, and no evidence that the barrier will remove antisocial activity. There should be genuine evidence of both need and effect, not just perception and reaction.

Any barrier must only be installed on a time-limited trial basis, with monitoring in place, to ensure that evidence is collected on reduction of antisocial activity in balance with impact on lawful use of the way, to allow assessment of whether the barrier is justified to remain.

## Equality and discrimination

The requirements of the Equality Act 2010 must be considered. A barrier affects people with limited mobility and vision as well as equestrians and any may have difficulty negotiating the structure safely. Drivers of horse-drawn vehicles are commonly excluded by failure to recognise the width required for their vehicle.

Equestrians may have limited agility and their horse and/or vehicle provides them with beneficial means for open air exercise. Many riders turn to driving their horse when they can no longer ride. There are horse-drawn vehicles adapted for use by wheelchair users.

The highway authority's Public Sector Equality Duty means that it must not authorise structures which reduce equitable access for legitimate users.

## Barriers at a roadside

Barriers immediately at the roadside are hazardous because a horse is being asked to negotiate an obstacle while at risk from motor traffic and a structure which may delay an equestrian on the road increases their risk of being hit with a motor vehicle, which may be the case where restricting the width of the entry means a sharp turn.

Any barrier should always be set well back from the roadside so that riders or drivers of horses have space to align themselves for the structure and to negotiate it away from the additional hazard from motor vehicles.

A proven problem of fly-tipping or parking and a need to prevent motor vehicles being driven off the road may be an exception to this principle. Bollards are the only acceptable constraint as allowing equestrians to pass between them most easily and to wait among them to cross or join the road. Concrete blocks are becoming more common at roadsides and a horse may easily react against being asked to pass between them, which is high risk whether joining or leaving the road.

On a byway leaving a road, bollards should be set back by 6m, so that a horse-drawn vehicle does not have to swing into the road to clear the bollards, which will require precise alignment. It may be a difficult manoeuvre for some horse-drivers, so not being exposed to motor traffic while undertaking it.

A horizontal 'step-over' barrier of any type such as a 'horse stile' or 'step-over gate' (below) on a bridleway must be installed well back from the roadside because of the risk of a horse jumping the barrier into the road and the need to align to negotiate the barrier from the road must not put horse and rider at risk from motorists. In both cases, a gap or alternative structure will be required for cyclists who cannot be assumed able to lift a cycle, and those in mobility vehicles, so the supposed benefit of the obstacle to reduce unlawful or antisocial access

must be weighed carefully against legitimate use. Step-over barriers are not acceptable on a byway as they are impossible to use with a horse-drawn vehicle.

## Bollards

Where it is necessary to prevent access with four-wheeled motor vehicles, the preference of the BHS would be for bollards because they are the least restrictive option to legitimate users. They may also be used to prevent fly-tipping or parking across entrances, which obstructs access to a bridleway or byway for equestrians, particularly drivers of horse-drawn vehicles who need greater width.

Bollards which can be lowered may benefit landholders and the emergency services where occasional authorised motor vehicle access is needed. Bollards obviously will not prevent access by motorcycles or quad bikes but neither will any barrier that is not an obstruction to equestrians. The legal users of the right of way must not be compromised to prevent illegal use. Other methods should be considered.

Bollards should have smooth tops and edges and have gaps between them of no less than 1.525m on a bridleway, 1.8m on a byway or road (carriageway) (where a Traffic Regulation Order (TRO) limits use with four-wheeled motor vehicles). On carriageways the minimum gap is 3.048m so a gap of 1.8m is an obstruction unless authorised by the highway authority's rights of way service as necessary for the safety of users.

Round bollards are preferred. Lengths of reinforced steel joists (RSJ) or similar are not acceptable because of their sharp edges and corners.

Recommended height of bollards is 600mm. Taller bollards may be more vulnerable to being removed and may increase risk at the widest part of a horse and rider. Shorter bollards are more difficult for horse-drivers to keep in view, especially when driving a pair. Very short bollards can be a trip hazard for all users.

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 1.525m and for carriage-drivers 1.8m (where a TRO is in place).

1.8m is a tight gap for a horse-driver to negotiate so it is important that on a byway or road with a TRO, the gap between the bollards plus 3m before and beyond has level, even ground across the width. Uneven ground between or in the approach to bollards may cause a horse-drawn vehicle 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 common that vegetation is not cut, so the growth around the bollards restricts the available width to a narrow central path, which makes the gap impassable with a horse-drawn vehicle.

It is unlikely that a gap of 1.8m will admit the type of four-wheeled motor vehicles most used for illegal or antisocial access. Smaller street vehicles 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.

## Lockable drop bollards

If a gap less than 1.8m is proven to be necessary on a byway or road with a TRO, local horse-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 lowered bollard must be less than 150mm high for axle clearance. Combination locks are more acceptable than key locking padlocks and the code should be circulated to the British Horse Society, British Driving Society 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.

## Split gates

Gates with one half secured and one half able to be opened must have the opening gate with a gap of 1.525m on a bridleway and 3.048m on a byway.

'Two-in-one' gates which permit a section to open as a bridlegate and the whole to open as a field gate (usually prevented for the public) are not appropriate on a byway as the standard width of the opening for the public is too narrow for a horse-drawn vehicle.

## Multiple structures

The gaps — 1.525m bridleway, 3.048m byway — quoted are the legal minimum between gateposts and are reasonably extended to any gap in a structure, such as between bollards, but the law is silent on multiple structures in a short distance.

Some barriers have been constructed on bridleways where multiple structures have gaps which are individually 1.525m wide and would be negotiable, but their frequency makes them collectively an obstruction because the space between is not possible to easily or safely negotiate with a horse (or cycle or mobility vehicle). For example, two 1.525m gaps at right angles to one another in a 1.525m square is too tight for many horses to bend round safely.

A 1.525m gateway will require a distance either side to open and close the gate on horseback, ideally 4m for safety, therefore riders need 4m between two consecutive gates. Where there is no gate, because a barrier is a gap, 3m is reasonable, allowing for a horse to negotiate one structure and align for the next without the space being so tight a horse may feel trapped.<sup>1</sup>

Multiple structures will require greater distance between them or wider gaps, as they could make a horse feel trapped, with increased risk of injury.

The shorter the distance between structures, the wider the gaps will need to be, otherwise this may result in a horse being required to bend more than is reasonable and could result in injury; and would class as an obstruction that is incapable of being authorised by the highway authority as it prevents legitimate use. Consideration of a **chicane** must include whether the dimensions required for legitimate use mean it has no value as a deterrent for unlawful use.

## Kent Carriage Gap – not recommended

A Kent Carriage Gap, shown in **Figure 1**, was an arrangement of bollards at specific widths and heights intended to permit access with horse-drawn vehicles while excluding four-wheeled motor vehicles.

The arrangement of bollards expected narrower horse-drawn vehicles to pass between bollards 1 and 2 (**Figure 1** below), and wider vehicles to pass with one wheel between 1 and 3. However, this would be possible only with vehicles of

---

<sup>1</sup> A horse's length is approximately 2.5m

specific design, with a high axle, which are rare as exercise vehicles today. The design has proved to obstruct most horse-drawn vehicles in common use.

The Kent Carriage Gap was included in the British Standard 5709 for gaps, gates and stiles but the British Horse Society has asked for it to be removed, and is against its use. It obstructs because:

1. The gap of 1.5m is too narrow for many horse-drawn vehicles to negotiate safely.
2. Bollard 1 is too high for modern vehicles to pass with one wheel between 1 and 3 because their axle-to-ground clearance is often less than 200mm and erosion or uneven ground may increase the relative height of the bollard.
3. It is impassable by a vehicle drawn by a pair of horses because for a wheel to pass between 1 and 3, 1 is in the path of one horse
4. Reducing the height of Bollard 1 to less than 200mm to allow clearance makes it a trip hazard on foot or for a pair of horses and it is likely to be obscured by vegetation as well as failing to prevent passage of four-wheeled motor vehicles.
5. The pattern of bollards has rarely been installed accurately, which makes it more of an obstruction to more users; plus the structure is rarely adequately maintained, so ruts, erosion or vegetation increased the risks to users.

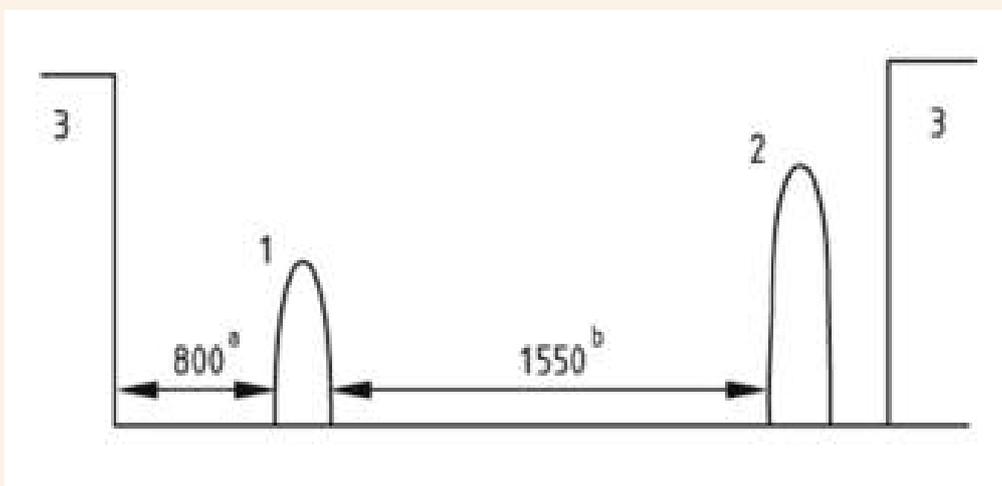


Figure 1 Kent carriage gap (not recommended) dimensions from BS5709  
 1 300-380mm high, 2 750mm high, 3 fencing, wall, etc.  
<sup>a</sup> 600mm-no max, <sup>b</sup> 1520-1600mm

## Structures for use on bridleways only

These structures will prevent access by horse-drawn vehicles and are therefore only to be considered on bridleways.

### Horse stile (ridden horse routes only)

Few barriers are effective in deterring motorcyclists, and some view any barrier as a challenge, 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 5709:2018 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.

It must also be considered that some motorcyclists will view the structure as a challenge to 'jump' or will infill it or build ramps.

Horse stiles can limit use by riders, especially children on small ponies, novices and horses which have been taught to jump such obstacles, horses being led from another horse, and people in mobility vehicles, as well as some cyclists or people with pushchairs. Therefore impact on their use **must** be considered before installation.

It is important that the surface is level, even and non-slip to horses on the approach from both directions and throughout the structure.

Horse stiles must not be used unless there is **evidence** that danger to users from motorcyclists is greater than the disbenefits to legal users.

Horse stiles must not be installed on a byway as horse-drawn vehicles 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 unlawful users going round the barrier.

- Height of sleepers 190mm +/- 60mm

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

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

**Figure 2** shows 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 was secured after the photograph was taken.)

It is particularly important that the surface before, after and within the barrier is free-draining and is maintained to prevent erosion because hollowing of the surface would increase the height to the top of the sleepers, 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.



*Figure 2 'horse stile'*

The BHS does not recommend using suspended scaffold-type poles or metal bars as they are less visible to horses and noisy if hit by a hoof. The Society accepts that in some locations wood is too vulnerable to vandalism, in which case metal is

necessary, but poles should not be suspended above ground as a horse's foot could slip underneath causing a serious injury, some infill of the gap is required.

Clear space at least 3m long and 2m wide is required to both sides of the horse stile so that the horse can be aligned and 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.

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, bearing in mind that the maximum height may near knee height for a small pony.

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 rubbercrumb-grit. It is important that ruts, depressions or potholes do not form on the line of travel as this will increase the height of the step needed.

## Step-over gate (ridden horse routes only)



*Figure 3 step-over gate*

A step-over vehicle barrier is a term 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 in [Figure 3](#) 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 considered in deciding that a barrier is justified, and that alternative provision is made for those users.

Step-over barriers should only be used on bridleways where all the following circumstances apply:

- Lawful motor vehicular access needs to be maintained while deterring illegal use
- There is insufficient space for a locked field gate with an adjacent 1.525m gap
- There is clear evidence of persistent unlawful access with four-wheeled motor vehicles
- The surface is not tarmac or of any material that may be slippery for horses
- The surface must have deflexion in case a horse should jump the obstacle
- The authority can legally authorise installation of the barrier and is satisfied that the requirements of its Public Sector Equality Duty 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 must 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. The surface must not be tarmac because it is slippery to horses, especially in such a manoeuvre as stepping over and has high risk of injury or falling if a horse should jump the barrier. Where a sealed surface is required, the BHS recommends use of polymer-bound rubbercrumb-grit.

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 bottom bar must be no more than 200mm from the ground.

Periodic maintenance of the surface under the barrier may be required to ensure it does not erode, so that the maximum height of the step-over bar is not exceeded. 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, especially when stepping high over the barrier or jumping. Raising the ground immediately below the barrier does not help as it is the height the horse must step which is limiting.

There should be solid wooden cladding on both sides of the central section, so that the metal 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 horse-drivers, however, availability of the code and maintenance of access is crucial for this to be considered.

## Chicanes on bridleways (ridden horse routes only)

A chicane formed by lengths of post and rail fencing, railing 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 unlawful use with 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 from a distance.

Chicanes must not be used on routes open to horse-drawn vehicles as the space needed to manoeuvre is too variable to accommodate all and the structure will either be unfit for purpose or an obstruction.

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 exposed to the traffic on the road.

At some sites, risk of vandalism makes wooden fencing undesirable, in which case metal rails may be used so long as edges and corners are rounded. Concrete blocks are increasingly popular but can appear intimidating.

There are four common design variants as shown in:

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.

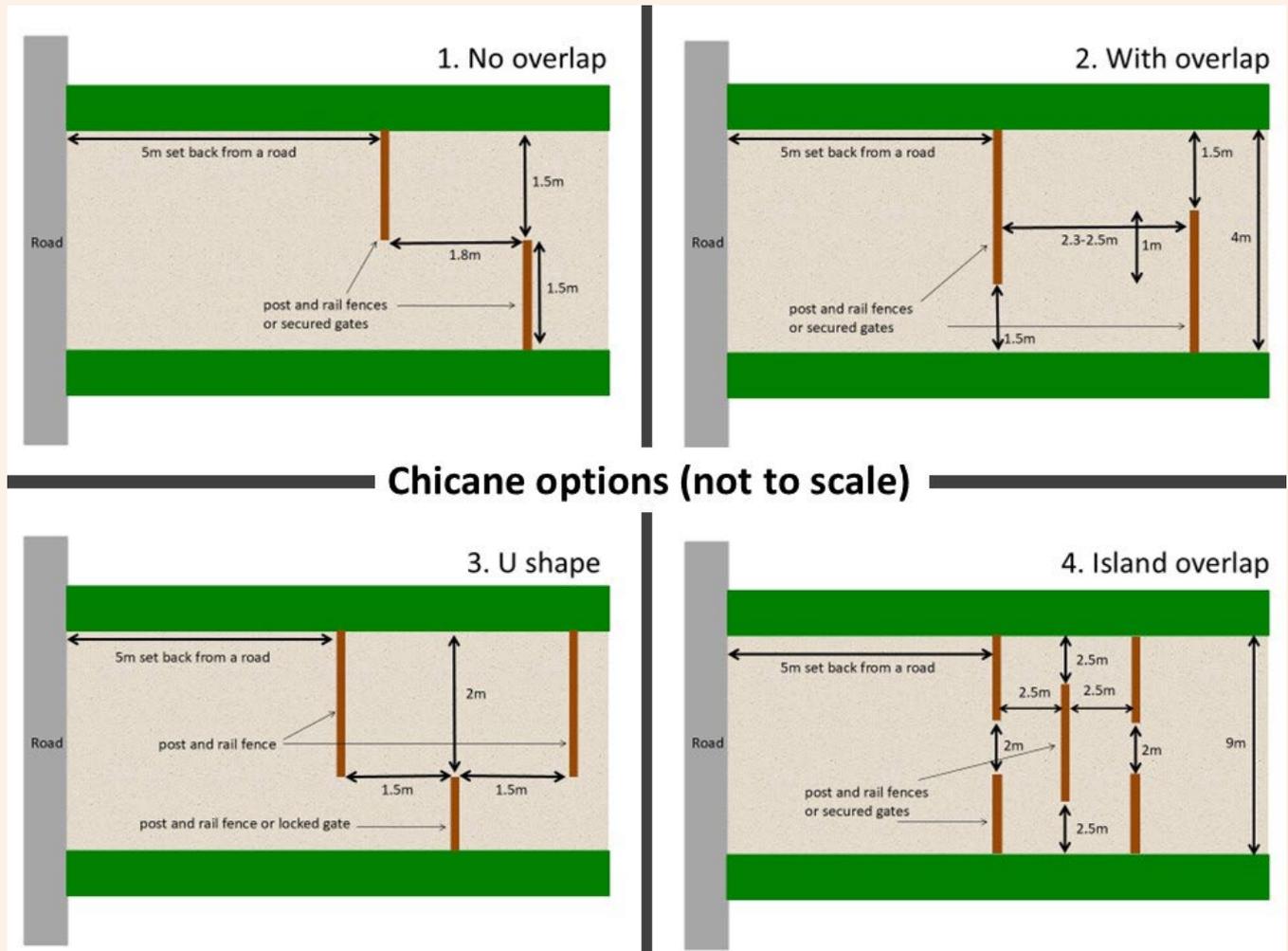


Figure 4 plans of options for chicanes

Each variation can fill a wider track by extending the barriers but the gaps are the minimum required whatever the length of barrier or overlap because there is a limit to the degree to which a horse can easily bend to negotiate the barrier. The ability of a horse to bend is commonly over-estimated by non-horse owners. A horse's neck can bend far enough for it to touch its ribs with its muzzle, but its body is much less flexible and, like humans, will be stiffer with age, fitness and health. Consider the ability of the average human to bend laterally, and that degree of bend will be like a horse: less than a rough semi-circle and nowhere near a U.

If this is a saved or printed copy, please check [www.bhs.org.uk/accessadvice](http://www.bhs.org.uk/accessadvice) for the latest version (date top of page 2).