ADVICE ON
Road crossings
for horses

The British Horse Society
In providing specifications for ways and facilities for equestrians, The British Horse Society considers all equestrian users (those riding, leading or driving horses). This 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 representative to establish what may be acceptable at a particular site.** Sites vary so much that BHS specifications can only be general in nature and may require tailoring for any site.

Routes used by equestrians include bridleways, byways, unsurfaced unclassified roads, quiet lanes, permissive paths, commons and public open space; most of which leave riders 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.
It is sometimes possible to improve the crossing point through clearing vegetation to increase sightlines and provide sufficient space for horses to wait away from the kerb or surfaced carriageway edge.

Fenced corrals are not usually necessary, although in some environments they can help horses and riders feel safe. Structures can also influence the behaviour of motorists by appearing to narrow the carriageway and therefore reduce speed or increase awareness of a hazard.

Signs in the verge or pavement sometimes obstruct riders’ sightlines because riders are at a greater height, generally at least a metre above a pedestrian or cyclist. Where possible, signs should be avoided within sightlines at a rider’s height (2.25-2.6m), which may also help drivers of some goods vehicles to see the riders. Design of a new crossing should ensure sufficient land is available for signs and other street furniture without affecting sightlines for those waiting to cross.

Structures in the verge may remove the potential for the verge to be used by riders as a refuge while waiting to cross, particularly if there is a group of riders. Cutting grips in the verge for drainage is also a hazard, particularly as these commonly become quickly overgrown and are not visible. Reduced cutting regimes mean that verges become overgrown and cannot be used as a refuge.

Bridleways or byways ending at a main road should not have a gate within several metres of the carriageway edge, partly to ensure there is space well off the carriageway for equestrians to wait, and partly so that equestrians are not negotiating a gate while at risk from motor traffic close by.

Safety barriers (such as Armco) are a common hazard obstructing the points
where equestrian routes cross carriageways, particularly on trunk roads. They force riders or carriage-drivers along the carriageway rather than being able to cross directly. Such barriers should always have gaps with rounded edges adequate for a horse to pass through at, or close to, the line of the crossing. The gap will need to be at least 1.6m for horse-drawn carriages, 1.5m for ridden or led horses. In certain circumstances, depending on the site, a lesser width may be agreed by The British Horse Society.

Structures and design of trunk roads are subject to Department of Transport prescriptions. These are mainly provided in the Design Manual for Roads and Bridges (DMRB) Volume 6 Section 3 Part 3 TA 57/87 (available online) which includes recommendations in Chapter 11 for roadside facilities for ridden horses. While local roads do not have to comply with the DMRB, it is commonly used as a guide and may still contain helpful information with regard to equestrians.

The ‘Design Manual for Roads and Bridges Volume 6 Section 3 Part 5 TA 90/05 The Geometric Design of Pedestrian, Cycle and Equestrian Routes’ contains useful specifications including speed, visibility, gradient, headroom and crossings.

For bridges and underpasses, see ‘BHS Advice on Bridges, and Width, Area and Height’ respectively.

**Trunk Roads and Dual Carriageways**

At grade crossings of dual carriageways are difficult and sometimes impossible for many horses. Road designers or others involved may consider crossing easier because those crossing are only negotiating traffic from one direction at a time. However, unlike cyclists or pedestrians, equestrians may find it too dangerous to wait on a central reservation; particularly if there has already been a wait to cross the first carriageway and if waiting for longer than a minute, which is commonplace on many dual carriageways. The noise and strong air currents from passing vehicles can be distressing for horse and rider.

On single carriageways traffic will be held behind slower vehicles, creating gaps between vehicles long enough for riders to cross, except on roads where traffic is so dense it forms a continuous stream. On busy dual carriageways, gaps tend to occur only when a lorry is overtaking slowly, holding faster traffic behind it, and creating a gap ahead. This may be infrequent, resulting in continuous traffic and waits of several minutes for a gap.
The preferred means of crossing a dual carriageway is by an underpass or overbridge. Ideally, the provision of underpasses where the road is on embankment and overbridges when it is in cutting would minimise visual impact and the length of ramps. Special factors which will have to be considered include high water table and high load routes, plus environmental impact of structures.

An underpass of sufficient height where a road is not embanked is often impractical without incurring drainage problems. Even if the depth below the road is available, the length of ramp to comply with the five percent gradient required for cycles or mobility vehicles could be difficult to accommodate. Where an underpass is not practical, an overbridge is the next choice, although this too is often impractical because of the required height of the bridge and the land required for ramps.

Where bridleways, byways and minor roads are diverted to a bridge or underpass, provision should be made alongside the carriageway as far from the traffic as possible, with screening for noise reduction.

Where an underpass or bridge are not practical, a light controlled crossing at grade should be considered.

Underpass beneath the A11 near the Elveden monument in East Anglia
**Pegasus Crossings**

Pegasus crossings are controlled by traffic signals which are operated by push-button by the user – a horse rider, cyclist or pedestrian. Toucan crossings are for pedestrians and cyclists, and Pelicans or Puffins are for pedestrians. Pegasus crossings incorporate a second crossing place, with segregated approaches and separate light controls, alongside the cyclist and/or pedestrian crossing.

A Pegasus crossing is a means of creating a relatively safe means of crossing at grade, which is cheaper and more practical on existing roads, and some new developments, than building an underpass or overpass. However, where new roads are planned, the British Horse Society recommends the use of an underpass as the first choice of crossing if feasible.

Current regulations mean that light controlled crossings are not recommended on roads where 85% of the traffic speed is greater than 50mph, however, a crossing can often be considered in conjunction with a reduction in the speed limit.

Government publications cover the design of Pegasus crossings in the Design Manual for Roads and Bridges (DMRB) and Traffic Advisory Leaflets (TAL). They can currently be found on the Standards for Highways website (such guidance is frequently moved so a general web search for the title may be required).

1. Design Manual for Roads and Bridges, Volume 6 Section 2 Part 3 Chapter 4 Road Users’ Specific Requirements 2004

2. The Department of Transport Traffic Advisory Leaflet 03/03 Equestrian Crossings describes construction and dimensions.

3. The Traffic Signs Regulations and General Directions provide standard formats for the control panels and lights used by riders.

Additional information on provision for equestrians is contained in TA 57 (DMRB 6.3.3) and TA 68 (DMRB 8.5.1) but these have been superseded by changes incorporated in the above documents.
DMRB Road Users’ Specific Requirements lists a number of measures considered relevant to the design of Pegasus crossings on trunk roads (correct at 3 March 2012 and quoted with permission). However, the recent experience of The British Horse Society suggests that simpler solutions are more sensible at some locations. These reduce costs and structures while providing a safer environment for equestrians and motorists. Some form of controlled crossing which can be used by equestrians will be better than nothing where a Pegasus crossing is not feasible.

Section 4.27 states that the following measures should be considered for equestrians [emphasis added: not all factors are required at every location]. The Society’s current view to each is given:

a) **increase eye height to 2.7m when considering visibility requirements for riders.** The Society agrees.

b) **avoid situating crossing points in soft verges which contain dangerous items such as manholes, gullies and ditches.** The Society agrees.

c) **ensure that there is sufficient verge width to accommodate the horse(s).** The Society agrees but notes that the space required will depend on the number of horses, walkers and cyclists using the space at any one time.

d) **avoid excessive use of large road markings on the carriageway or crossing, which can disturb horses.** The Society agrees.

e) **avoid locating crossings where sudden noises are likely to occur.** The Society agrees.

f) **push button units should be installed at 2.0m height for mounted equestrians with additional units at standard height for the dismounted rider leading the horse.** The Society agrees that button controls should be positioned at a height that accommodates the height variation from a child’s pony to a large horse so they can be easily reached by all riders. In some locations, a single control between 1.6 and 1.8m may be adequate to avoid the need for duplicate controls at two heights.

g) **staggered crossings are not advised for equestrians.** The Society agrees but the layout of each location should be assessed. It may be safer to have a staggered signal controlled crossing than a crossing not controlled by signals.

h) **timings should take into account the special needs of equestrians and the additional inter-green period.** Riders will wait 1-3 metres
back from the carriageway and walk when safe to cross. A horse walks at about 2.5mph; thus the time required to cross can be calculated depending on the width of the carriageway to be crossed. Three seconds should be added to that time so that equestrians are some distance from the carriageway before traffic moves. Horses can become restless while waiting to cross particularly in the presence of heavy traffic. Hence, the waiting time should be kept to a minimum and waiting times should be checked if the timing for vehicular traffic is changed.

i) **segregation of equestrians from pedestrians and cyclists.** The Society does not consider segregation to always be required. Horse riders, pedestrians and cyclists co-exist without problems on many bridleways that are as narrow as two metres (though at least three metres is recommended unless use is light or where there are no passing places). Riders, pedestrians and cyclists wait to cross roads together where there is no Pegasus crossing without incident. The need for segregation at crossings including the provision of fenced waiting pens should be considered site by site and conclusions should take account of the number of equestrians using the crossing at any one time (for example, the proximity of a riding school or livery yard which may mean groups of four or more horses may be using the crossing together) and whether significant numbers of pedestrians and cyclists are likely to be using the crossing at the same time. It should be noted that fenced waiting pens are not usually constructed where bridleways (which are for walkers, horse riders and cyclists) cross carriageways. In rural areas, fencing around waiting areas at a Pegasus crossing is only necessary if there is a drop or some other hazard beyond it, unless the waiting area is in the middle of a dual carriageway, when it is clearly helpful. All that is needed in most rural situations is an area large enough for horses to wait away from the carriageway and for the button for equestrian use to be sited in the equestrian waiting area.

Sometimes, installation of a fenced waiting pen may mean that a gate at the end of a bridleway can be set back away from the road so it can be dealt with safely away from traffic.

In addition to the above, the Society recommends that:

**Button boxes should ideally be set back from the carriageway edge** so that a horse is not next to the carriageway when the rider is operating the button (remembering that half the horse’s length is in front of the rider’s hand, 2m or more from the kerb is optimum).
Sites with low level of use or limited space

At some sites for retro-fitting, a Pegasus crossing may not be considered feasible because of lack of space or where the cost is not justified by the level of equestrian use. On the basis that ‘something is better than nothing’ at such sites, a lesser provision may still help riders to cross a road in safety and this would be preferable to riders being forced onto the carriageway or having to cross without control of the motor traffic. There are a frightening number of examples of crossings used by horses where only a pedestrian/cyclist crossing has been provided and riders are forced to risk the uncontrolled traffic to cross.

A separate crossing and fenced waiting areas are not always necessary. A non-standard crossing may be installed by the highway authority by seeking consent for variation from the Department for Transport.

The Society suggests a range of options dependent on the site and number of non-motorised users using the crossing at any one time:

1. Pelican/Puffin/Toucan with additional button box at the back of the pavement at 2m high so the horse is not adjacent to the traffic while the rider operates the button and waits
2 Ditto with post further back from carriageway, most appropriate where bridleway or byway is at the crossing, so the ‘waiting area’ is the last part of the bridleway

3 Ditto with fenced set back waiting area

4 Pegasus as specified in DMRB

1-3 do not require an additional crossing and may be feasible where the number of non-motorised users at any one time is low enough that it is uncommon for a group of riders to be waiting to cross with pedestrians and cyclists (however, tolerance between different types of user should be encouraged so that the need for segregation is reduced). Where a second button box at rider height is provided, it can be programmed to operate the lights with a shorter waiting time and, if necessary, longer crossing time. All assume that horses are legally permitted on the highway to access the crossing. If the crossing is on designated footway, then legal provision can be made for horses at that point.

Standards for crossings require tactile paving at a pedestrian crossing but not at an equestrian crossing. Tactile paving rarely presents a problem to horses in a small area (as is usually found at a crossing) so is not a limitation on horses being provided for at a non-Pegasus crossing.

Some horses and riders would be able to use a standard Pelican or Puffin crossing with an additional higher button box positioned so that it could be reached with the horse parallel to the kerb. This may be feasible in an area where motor traffic is at or below 30mph and where equestrian rights exist or are provided across the footway.

Crossings exist where the riders’ control is set back from the road so that the horse walks on after the rider has operated the control and reaches the kerb after the traffic has halted so there is no waiting at the carriageway.

Where a light-controlled crossing has not been considered necessary, approaching motorists may be warned of horses crossing or on the road by flashing warning signs (DfT P550.1). The signs may be activated manually by the rider at a control set back from the road, or automatically by sensor. These are particularly useful where sightlines are poor for the crossing or traffic speeds are more than 40 miles an hour.
Examples of Pegasus Crossings

- A405 Brickett Wood, Herts (deviation from the standard because of lack of space)
- A507, Millbrook
- A322 Guildford Road, Bisley
- A3 Wisley between Richmond Park and Wimbledon Common
- Ducks Hill, London Borough of Hillingdon: straight road 50mph, woodland both sides
- Windsor Great Park, Royal Borough of Windsor and Maidenhead: two lane road
- Off A602 Stevenage, Hertfordshire across entrance to Sainsbury’s; two lane road 30mph
- Pennine Bridleway at Waterfoot A681, Rossendale: two lane road 30mph
- A57 Saxilby Road, Lincoln, West Common; two lane road 30mph
- A43 Towcester, Northamptonshire: dual carriageway adjacent to roundabout

The BHS has many other examples if required.
For more information on The British Horse Society’s rights of way work contact:

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