

## **Safety Characteristics of Bridleways**

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### **Abstract**

**Bridleways can technically be defined as routes practicable for horses, generally on excavated paths, through interesting places under a landscape, cultural and gastronomic profile. Unfortunately however, many of these pathways don't hold in due account safety characteristics for the safeguard of the binomial horse-rider. The purpose of this job instead is to individuate the possible dangers which the binomial horse-rider can go toward and to define all those actions that can eliminate or reduce the possible risks without penalizing the technical and functional characteristics of the pathway.**

**Keywords:** horse, safety, bridleway

### **Introduction**

Technically a bridleway can be defined as an itinerary which can be followed on horseback, generally on a prepared trail, through attractive countryside and areas of gastronomic cultural or other importance. Unfortunately many of these trails do not meet the essential levels of safety for both horses and riders.

Thus what should be a relaxing ride can become a high risk activity if it is carried out on unprepared roads or mule tracks. The horses, even when they are well trained and well mannered, are also much more energetic and vigorous than the riders, and this can also be a source of danger.

This work is designed to identify the possible risks to horse and rider and to define the specific actions which should be taken to eliminate or reduce these risks, without damaging the technical or functional characteristics of the bridleways.

### **Methods**

Planning bridleways must begin with an in-depth study of the available maps, in order to identify the network of paths available in the area and to identify those routes which will appeal to horseback trekkers because of the scenery, the environment or the history of the area that they pass through. Naturally the needs of the horse and rider must be taken into consideration right from the beginning, so that the bridleways chosen meet their requirements. The bridleways must be, as far as possible, easy and not technically difficult and should not exceed the threshold where they become too tiring for horse and/or rider. This means a maximum daily ride of not more than twenty-five to thirty kilometres, or about six hours for a

horse at walking pace in mixed terrain. Along the bridleways there will be places to take breaks and rest at intervals of not more than three hours between them. These will have watering troughs for the horses and benches and tables for the riders as well as covered areas, which will allow both horses and riders to rest in the shade. Where possible these halts will be in places of particular scenic beauty or where there are particularly interesting buildings or archaeological monuments. Once such places have been identified the next step is to connect them to a logical and functional bridleway.

### **Safety Planning**

Safety planning begins with an in-depth analysis of the map of the area, so that, generally speaking, impassible areas and rest areas can be identified.

### **Characteristics of the bridleway**

Information from the maps and on site inspection of the area will provide indispensable data for defining the safety characteristics of the particular bridleway.

This data will include:

- a map of the route, including the distances between resting points and the total distance;
- steepest climbs and descents;
- inclinations of the slopes for the parts of the bridleways that run along hillsides;
- width of the bridleways;
- condition and material of the bridleways;
- presence of obstacles;
- possible fords;
- road crossings and passing through built up areas;
- watering points;
- signposts;
- presence of resting points, and, if necessary, assistance for horses and riders.

Technically speaking certain of this data will be necessary for planning the bridleways, while other items are merely useful information.

### The Route

Preparing a good map of the route is the most important element from the point of view of safety, because it allows the rider to immediately ascertain the distances involved and the difficulty of the trail. Thus the map must be very detailed and must show the total and partial distances and the halts, possible basic dangers and also other less tangible ones which may depend on the particular conditions of the day. Modern mapping techniques allow us to prepare a detailed map using GPS references which allow the user to establish exactly where they are at any moment, and their position on the bridleway with reference to watering points, halts for themselves and the horses, and bathroom facilities. The bridleway and all the points of interest (halts, emergency facilities etc.) must be marked in digital geo-reference form (UTM-WGS84), on a 1:25,000 IGM map or better still a 1:10,000 CTR map. The map should also contain extra information such as contact information from the qualified Local Environmental Equestrian Guide recognised by the Regional Authorities and those of Fitetrec – Ante guide.

### Steep climbs and descents

The different climbs and descents in both the overall excursion and in particular parts of the bridleway are very important.

When the climbs and descents are very steep they may be too tiring to both horse and rider and there is also the risk of injury to the horse's legs, especially on steep slopes.

In order for the ride to be enjoyable and safer the maximum slope should not be more than 40%, as anything above this is very demanding for the rider and exceptionally tiring for the horse as well as being very dangerous. This is particularly true in descents where the horse may slip and, as a result, the rider fall off. In a similar way trails which run along hillsides with steep slopes should be avoided as much as possible, and where they are unavoidable should be furnished with barriers to protect horse and rider against falls on the lower side and protection against falling rocks on the upper side.

### Width of the Bridleway

Although in natural conditions horses can traverse any type of terrain, the minimum width of the bridleway needs to be defined. This should not be less than 0.80 m, except in exceptional circumstances, and should usually be about 2.00 m. Where possible the bridleway should avoid bottlenecks, overhangs, marshy or swampy ground and open grazing lands where the riders and horses could be attacked by the sheepdogs.

### Condition and material of the bridleway

The normal gait for horseback trekking is the walk, with occasional short intervals of trotting, cantering or galloping. The latter is better and less tiring for the horse than a continuous trot. However in order for an occasional gallop to be safe the bridleway must have a specially prepared surface. The basic substructure of the bridleway should not consist of large stones, in order to avoid the risk of the horses damaging or casting a shoe, or suffering bruising, and as a result becoming lame. In this respect it is important to remember that horses cannot modify the elasticity of their legs quickly when they move from a softer to a harder surface, and so sudden changes in the compactness of the surface may be dangerous for the horse. On particularly steep stretches it is better to dismount and to lead the horse in order to avoid pointless risks.

### Presence of obstacles on the bridleway

The bridleway must be kept in good condition and well-maintained, so as to avoid risks for the horses and riders. Fallen stones, branches or tree trunks left lying on the bridleway may make it unsafe. The bridleway should generally be checked monthly, but also particularly after bad weather, to ensure that it is safe to use. Rapid maintenance and repairs should be carried out if there is damage to the surface or safety walls, branches, tree trunks, or bushes across the bridleway or large puddles left by rain, and surrounding vegetation should be cut back so that it do not restrict the bridleway.

### Fords

A ford is a place where a stream or river is shallow enough for it to be crossed on horseback or even on foot. While it is one of the highlights of a trip, one must bear in mind that the river bed is generally stony and sometimes slippery because of weeds growing on the stones. Thus fords should be crossed with care. One must also bear in mind that after heavy rain crossing a ford can be very difficult. Normally a horse will not enter the water without encouragement, although horses which are used to being used for trekking may do so. Unless there are other

horses present which set an example, it is better to dismount and lead the horse across on foot. When crossing a stream at a ford, if the water is clean and not too cold and the horse is not sweating, the horse can be allowed to drink as much as it wants, but only if it is being led across on foot. A horse which found that it liked the water might suddenly lie down and roll over in the water to cool itself down.

### Crossing roads

Crossings of heavily trafficked roads are one of the key points to be borne in mind when assessing the safety of a bridleway. This is both because horses naturally feel nervous when vehicles are passing and also because of the real danger involved in crossing a road or riding along a bridleway which runs alongside a road. Collisions with vehicles are possible if one loses control of the horse.

The horse's saddle and harness should be fitted with reflectors and the rider should wear a brightly coloured vest or jacket. Road signs should also inform drivers that horses may be crossing.

### Watering points

There should be a good number of watering points at the halts along the bridleway because horses need to drink frequently. The horse should be allowed to drink on all possible occasions, with the possible exception of surface water which may often be polluted by run-offs from slag heaps. Water from mountain streams is, however, usually good, although it may be very cold.

The rider should dismount and lead the horse by the reins before a planned halt so that the animal can slowly cool down. Thus it is a good idea to put up signs giving advanced warning of halts so that the riders can do this.

### Signs

The official signs for danger, mandatory obligations, prohibitions and directions will all carry the official logo of the bridleway. The bridleway will be assessed for difficulty, and will be classified as **T** (Tourist) or **E** (Excursion) for most of the route, with only short stretches or secondary or alternative routes being classified as **EE** (Excursions for Experts).

## **Characteristics of halts**

The bridle way should be furnished with halts whose number will depend on the length and difficulty of the ride. These can be either simple structures with water troughs, covered shaded areas and small paddocks or more complex structures where the trekkers can stop for a picnic or even over night.

### Halts

These are an important part of the bridleway because they allow the horse and rider to interrupt the trek and so not become overtired, which may be risky.

These halts will be found every five to seven kilometres along the bridleway, depending on its difficulty, and may either be isolated structures or connected to a nearby associated farm or agri-tourist farm. In these cases the advantage is the trek is safer because the farms will be able to provide rapid medical or veterinary assistance if it should be necessary.

- Isolated structures. May consist of simple covered areas which offer protection from the sun or rain, with hitching posts for the horses, a water trough and benches and tables for the riders. The animals can also be given part of their daily feed ration here, leaving part of it for the evening feed.
- Structures in farms. The farms involved in the organisation of the bridledways must provide certain standards of service for the horses. The horses are usually kept in the open or in stall inside the stables, but ideally the stalls should also be connected to an open area where the horses can stretch their legs and take advantage of the halt in the open air and also the sunshine.

#### Resting places and overnight stops

These are the terminal points of each day's trek and so must offer more and better services than the simple halts. They must be linked to agri-tourism farms which can guarantee a relaxing overnight stay for the riders as well as feed and stabling for the horses.

The structures for the horses must include a stable with stalls and paddocks for the animals as well as trained staff who can feed and water the animals and take care of their general well-being. To be more precise the structures must include:

- enough stalls with minimum dimensions of 3m x 3m;
- mangers with a minimum capacity of 20 cm;
- access to drinking water;
- a saddlery of appropriate size for the number of horses;
- farrier services.

#### Safety conditions of stalls

The stalls should be sited far away from public thoroughfares or highways and provide protection from noise. They must be suitable for the climate of the area, facing South in colder areas and North or North-East in hotter areas.

They should be preferably rectangular in shape, e.g. 3 m x 3 m or 3.3 m x 3.8 m. The corridors between the stalls should be wide enough for the horses and stablemen to pass freely, with a minimum width of 2.5 m. The flooring must be chosen with great care. It must be rough and easily washable and there must be a slope of about 2% towards the door.

The traditional straw bedding may be replaced by specially designed rubber floor covering. These are mechanically ideal as they ensure that there is no danger of the horses slipping, in particular when they rise to their feet. However there are some disadvantages in terms of animal health as micro-organisms can grow in the rubber and the underlying floor and these may be dangerous for the horses' health. They are also not ideal in terms of the environment in the stall, as they may increase the internal temperature, above all in hotter periods. Well-maintained and frequently changed good straw, rice husk, or peat bedding can absorb the liquid wastes of the horses. Drains to remove the liquid wastes are useless, as they constantly block and become smelly.

The stalls should be at least four metres high so that there is sufficient space to provide heat insulation. This is indispensable in order to stop the horse from becoming too hot in summer and to be comfortably warm in winter.

The walls and partitions must be smooth so that they are easy to clean and without projections that could injure the horses. Whatever type of paint or varnish is used must be lead-free to avoid possible lead poisoning, or saturnism, which can cause permanent damage to the horse's

bones. The window should be a sufficiently large fanlight, and should not be less than 2.5 m above floor level.

The water trough must be without taps and furnished with an automatic system that will maintain the water level constant. It must be mounted about 1.1m above the floor and positioned in a corner of the stall, next to the manger.

Specific quiet areas must be provided for tending, grooming and washing the horses. These must be furnished with secure but easily releasable hitching points. The stablemen must wear overalls, gloves and protective boots (non-slip and heavy duty).

## **Conclusion**

The construction of new bridledways to open up attractive areas of countryside to horse-back trekkers is increasingly being suggested. Very often, however, when these routes are decided on, the key question of safety is overlooked. This work, while not exhaustive, is an attempt to establish the correct way of applying basic safety norms when planning bridledways. Many different accidents may happen in the countryside. To avoid them one must simply adopt a sensible and responsible attitude, choosing routes which are suitable for the horses and riders and avoiding useless fatigue for both horses and riders as that can lead to loss of attention and concentration and thus greater risk.

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