

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.

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

Why provide a natural surface	1
Establishing a natural surface	2
Design.....	2
Half-and-half at midline	3
Protecting existing surface during hard-top construction	3
Worst outcome	4
Process to create/reinstate natural surface	4
Conclusion	6

Why provide a natural surface

Bridleways and byways with a resilient natural grass surface are preferred by equestrians and many pedestrians, including those with dogs, but there is an increasing demand to provide asphalt surfaces on these rights of way for cycling and wheeling, which may reduce enjoyment for traditional users.

Natural surfaces also have many gains for drainage and nature.

Considering a hard-top surface for wheels should therefore always provide for a natural surface as well over a width that can be used on foot or horse.

Establishing a natural surface

Establishing a grass sward for a bridleway or restricted byway on disturbed ground is not a one-step process and the specification must adapt to soil type, weather and use.

A programme of several steps over months is needed to ensure growth from seed or turf, maintained until a sward is well established, which could take some time, depending on soil, shade and use, and quality of build and aftercare.

Design

Accommodating needs for both natural and sealed surfaces, and retaining the benefits of natural surfaces for biodiversity and slowing rainwater transmission, are best achieved by ensuring that no more than half of the width is hard-surfaced, as in [Figure 1](#), and that the hard surface should be porous, not draining onto the natural ground.



Figure 1 Hertfordshire 50:50 bridleway surface

Unfortunately, the tendency is to recreate roads, with a hard-top central strip dominating, and secondary verges. This creates conflict because it implies that the hard-top users have priority, and encourages speed on wheels which is incompatible with slower users.

The soft-top users are treated as second-class because the 'verges' are too narrow, often uneven, and may suffer from poor drainage and run-off from the hard surface where that is not porous. They may also lose part of the usable width to adjacent hedges or fences, and be obstructed by overhanging vegetation or encroachment. Importantly, with diminishing council budgets, maintenance of 'verges' may be neglected because the hard surface is presumed to serve all users, which crowds all use into that strip.

Half-and-half at midline

The optimum result is achieved by dividing the available width at the midline with half-and-half soft and hard surfaces as in [Figure 1](#). It emphasises that no user has priority and encourages a 'share with care' ethic. It also means that, where the track is enclosed by vertical boundaries (hedge, fence or wall) both surfaces have a vertical boundary to one side, again avoiding the impression of the hard-top being dominant, and moderating speeds.

Equitable appearance is more likely to encourage equitable and courteous use, particularly where this is encouraged by prominent signs and other messaging to 'share the trail'. A wider vegetated strip also provides for larger vegetation-cutting machinery which is more efficient and more effective.



Figure 2 Example of equal split between hard and soft surfaces and unequal split with narrow verges

If provision of a hard-top surface on part of the width is justified, how this is constructed alongside a soft-top is key to success. More failures are apparent across the country than successes.

Protecting existing surface during hard-top construction

Where an existing natural grass surface is ideal, the best outcome will be to protect it from disturbance during construction of the new hard-top half-width strip. The cost of protection may be weighed against the cost of reinstating the natural surface, which could need a lot of work for a less satisfactory outcome and commitment over a long period. Protection is achieved by use of temporary portable access track products, usually sheets of rubber compound or aluminium, which may be specified for use with different weights and types of vehicles and activity.

Importantly, protecting the original surface means that it is immediately usable on completion of the project rather than users being excluded from a newly created soft surface while it establishes, which may be months.

Worst outcome

The worst outcome is from constructing a hard-top strip down the middle of the natural surface width, destroying all the remaining natural surface in the process, and abandoning debris and random heaps of earth to either side and assuming that it will miraculously transform itself into an appropriate sward. It will not. It is most likely to grow vigorous invasive plants and be unusable because of the vegetation and the uneven, sloping surface with hidden trip hazards, probably including litter, dog mess, holes and poor drainage.

Where protection of the existing natural surface will not be achieved, or when aiming to build a new way on disturbed ground, the following process will apply to create a natural grass surface.

Process to create/reinstate natural surface

For the site it is first necessary to determine:

- Soil type – heavy clay is more fertile but harder to manage for water and structure; sandy soil will be possible to work even in moderately wet conditions but can dry quickly, so more irrigation may be needed to establish a sward. A soil may be anywhere between the two and will dictate steps to prepare for and establish a sward. Local landscaping services may be able to advise and assist.
- Ground disturbed by construction will have lost its soil structure and a grass sward appropriate for a bridleway or byway will not establish naturally. The ground must be cultivated to create a seedbed. Local landscaping services may be able to advise and assist.
- Undesirable plants must be controlled until a sward is established otherwise the site may be taken over by vigorous broadleaved plants such as nettle, dock, thistle, fireweed, hogweed, horsetail, bramble, blackthorn.
- Whether the new track will be in sun or shade must be considered for the grass species and establishment programme, especially irrigation.
- What drainage is in place and whether additional drainage is required appropriate to the soil type and expected level of use are key factors to avoid poaching. Compacted ground or a brown field site may require a base layer of stone with subsoil and finally topsoil layers above.
- The degree of soil moisture, shade and expected use may mean that a grass sward without reinforcement is impractical. Common reinforcement options are:

- Incorporating 20-35mm gravel in the topsoil,* usually a 40:60 gravel:soil proportion but higher gravel content may be needed if heavy shade, clay soil and high use.
- Geogrid stabilisation products can be successful but are higher initial cost and require a maintenance commitment to ensure that the mesh or grid is not exposed to become a trip or slip hazard, although maintenance should be minor after the initial period in which the contents settles.

Following those prerequisites, there are several steps required to ensure establishment of the new sward. The better they are undertaken, the faster a sward will establish.

1. Difference in level between hard and soft surfaces must be avoided so that all users have easy safe level access across both surfaces. If the hard-top strip is being excavated, the grass strip will also need to be excavated to approximately 450mm* or adjusted so the depths in steps 2-5 are in proportion with the final surface level with the hard-top. If the hard surface is being built on top of existing ground level, the grass strip will correspondingly need to be built up.

The following layers are suggested from base to top:

2. Around 150mm* of compacted, well-draining aggregate MOT Type 1 (or equivalent) to provide a solid and durable free-draining foundation.
3. Geotextile to prevent subsoil moving into the drainage foundation.
4. When returning subsoil above the foundation, ensure it is clear of large stones or debris to encourage uniform sward establishment and moisture content to approximately 150mm* depth. Pieces of stone, concrete or other debris in the mix will result in dry soil above and impair sward establishment. Metal or shards may work to the surface and cause injury.

The best time of year for the next steps is March-May or September-October, aiming to avoid heavy rain or drought and to have enough hours of sunlight and mild temperatures for growth.

5. Add around 150mm* topsoil and finish as a seedbed (a fine tilth). Lightly roll after tilling to firm the surface and prevent uneven settlement, but avoid compaction and ensure the resulting level is above that of the surrounding ground to avoid waterlogging.

If the topsoil has not already been weed-cleaned, this step should be timed for spring because it will be necessary to irrigate and wait some weeks for volunteer seed to grow,

* These figures are a rough guide only, not absolute. There are many variables on a site which will influence proportions.

then kill broadleaf species by manual or chemical means. The greater cost of clean topsoil is usually easily justified against the time and labour to remove undesirable species.

6. Ensure the final surface will be level and even, without hollows which will collect water. Any crossfall should be minimal because the established surface must be comfortable for users.
7. Spread seed or lay turf of species appropriate to the soil type and eventual level of use such as a good quality hard-wearing grass conservation mix (containing Red Fescue/ Dwarf or Perennial Ryegrass/ Timothy/ Cocksfoot). Species should be checked with the council's ecologist or environment team.

Note the further essential steps 8-10 below. Scattering seed and abandoning the site will be unsuccessful.

The species mix is dependent on the soil type and whether sun or shade. Quantity per square metre will depend on these conditions and predator levels. A good seed supplier or landscaping service should be able to advise according to site conditions (soil type, shade, use level).

Turf should be considered for bridleway-byway projects. The initial outlay for turf is greater than seed, but the time and labour after laying is much less than for seed. The delay until fit for use is much reduced with turf, which benefits users who will be excluded from site for a shorter period.

8. Implement an irrigation programme appropriate to the soil type and weather conditions to ensure the new sward remains hydrated to optimise growth.
9. Light rolling when growth from seed is at least 80% cover will encourage more dense growth by splitting and spreading the plants at tiller level. Rolling turf should not be necessary unless there has been loss of plant cover because of inadequate care.
10. High cut mowing to avoid growth higher than 100mm, as the wish is for root growth and spread rather than height. Remove arisings until the sward is well-established as leaving clumps of cut grass will restrict growth beneath.

Conclusion

A major difficulty of the process outlined is the length of time before the surface can come into use, and the requirement for ongoing skilled care and maintenance, which is affected by weather conditions.

Importantly, the variation and extended care are difficult to write into a specification and contract.

This may influence ensuring that an existing ideal natural surface is protected during construction of the hard-top instead.

Protection can be achieved by use of temporary portable access track products, usually sheets of rubber compound or aluminium.

Whether heavy or light duty protection is needed will depend on the type of vehicles used for the hard-top construction and the activity of the construction.

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