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A highly qualified and experienced animal therapist (over 20 years) with postgraduate qualifications in equine science including equine behaviour. I have treated and handled over 25,000 horses and have a keen interest in anatomy, biomechanics, behaviour, learning theory and social licence.

As a resident of Tackley for over 30 years, having ridden and walked the bridleways around Tackley including the horse level crossing prior to the closure in April 2020. She has a sound and comprehensive knowledge of the area.

Jin would like to point out she was first contacted in 2018 by two of the then Tackley Parish councillors (railway reps – Cannon (formerly Father) Robert (Robin) Gibbons and Emeritus Professor Richard Macrory) to give advice on the behaviour of horses to the PC and Network Rail. There seems to be no record of this in the documentation which is disappointing at the least and potentially would have been material to this inquiry and may have mitigated the consultation and deliberations over the last 6 years.

Jin has since spoken extensively to clients, behaviourist, equine vets, farriers, trainers (including those involved with training police horses), equestrians including stunt riders, Olympians, Paralympians and those at the top and lower level of the equestrian world in all disciplines. Some of these have knowledge of this area many not. There is a wealth of equestrian knowledge and experience in this room (>300years estimated).

From this position of extensive scientific knowledge and experience from this wide range of people we have the opportunity to future proof a bridleway that is safe for all we could/should do better than the proposed route. We can make a safe, useful and pleasant/enjoyable bridleway that will encourage recreational use and reduce contact of one of the most venerable road users - equestrians and therefore those most at risk of injury and accident from our roads.

- 1. A bridleway is a multi-users public right of way and as such needs to be safe to those who use the route regularly and those who may be using it for the first time with little or no knowledge.**
- 2. The present proposed bridleway due to its length, speed and length of trains, proximity and elevation of train compared to a horse will potentially lead to a flight response in a horse, endangering themselves their rider and other bridleway users.**
- 3. The nature of horses as a prey animal with heightened senses to detect predators leads to the conclusion that the horses response is likely to be to spook and bolt and the confinement means the rider, if still on board, will be unable to stop them safely. if they are aware how to stop a galloping horse.**
- 4. The frequency of the trains and the length of the bridleway and the surface proposed means a high likelihood of meeting a train.**
- 5. The highway code as of 29th January 2022 was updated to state road users to pass horses giving at least 2m distance and under 10mph.**

We everyday as riders make judgement on where to and how to position our horses out riding, yes I would avoid going close to something if I could if I thought it would 'upset' my horse. Equestrians know they are ultimately sitting on a sentient independent and to a degree unpredictable animal. Mine and my horses safety and other around me is paramount in these decisions.

We are judge in the highway code as one of the vulnerable users groups because we are.

The overall conclusion taking this information into account is that the bridleway could and should be made ideally at least as safe as the old crossing was for equestrians.

HORSE

Horses' innate behaviour.

The horse is a prey animal, with a strong flight/freeze/fight instinct. Choosing flight as its initial response "better to run than be eaten".

Responses to stimuli – it has highly developed senses to achieve this using its sight, hearing and smell.

The brain size of a horse is 2.5 lbs (1/500th of their bodyweight -human 3lbs 1/50th of bodyweight). This size relationship leads the horse to use its innate inherited prey instinct.

Horses' frontal lobe are very small this is the bit that allows abstract thinking, planning, strategy and forecasting future events. Humans are hardwired to think and plan horses are hardwired to move in response to a stimuli.

Horses main question is "am I safe?" things not recognised or moving on the horizon/periphery are seen as a threat. Training can mitigate this, but it will never completely remove this innate response.

Senses

Vision – range, depth, colour, sensitivity, movement.

The horse eye is one of the largest of any land mammal. Horses have a field of vision horizontally of 340° total with 285° (~145° per eye) monocular vision with 65° binocular vision. The binocular vision is directly in front of them (this is smaller than humans). Binocular vision allows them to perceive depth and distance. Monocular vision does not. They have blind spots directly behind them over their back and tail (including the rider) and 1.2m in front of them.

Visual acuity – is a visual streak linear in shape with 40 times more nerves, this allows them to focus here but reduces their vertical field of vision. This is like them looking through a letterbox (all be it a wide one) with reduced vision above and below.

Horses sees dichromatic – blue and green. Not seeing red or rather seeing it more as green. Akin to red/green colour-blindness in humans.

The wide monocular vision allows them to be very sensitive to motion and would normally be detected in their peripheral field of vision. Approximately 50% of horses are long sighted and 25-30% short sighted. They can see things at a distance in general better than humans especially if the object is moving.

Auditory range – vibration, distance, range. Horses hearing covers 14Hz to 25kHz (human 20Hz to 20kHz), they can move their ears 180 degrees using 10 different muscles. They will orientate and pinpoint the sound quickly and either turn itself towards a sound or run away from it, potentially at speed before a rider even realises or hears anything. They also are particularly sensitive to vibration, and this builds on their sensitivity to movement. Continual vibration along with visual movement will cause a heightened stimulus.

Smell – around 50 times stronger having 1066 olfactory receptors genes (humans 350 olfactory receptor). Several features add to the increased sensitivity of their smell including a convoluted structure to their internal nasal structure to increase turbulence. Vomeronasal organ with more fibres for increased smell are also present. They smell in stereo separate for each nostril so pinpointing direction of the stimulus.

So, they smell, hear, and see potential dangers before humans and then do not have the brain capacity to strategically analyse this.

TRAINS

Train – types, speed, time in view height, number per hour, length, - electrification.

Total of 14 per hour including 3 freight trains - from information from Aimi Blackmore – NR

A freight train was videoed. Information from this approximately as follows - Freight trains at present have over 45 containers taking 30 seconds to pass a stationary point travelling at approximately 70mph. Therefore basically, around 900m long.

Train in the future may travel faster but be longer?

This means a train every 5 minutes so with the length of the bridleway and the speed a horse at walk (see below) the likelihood of meeting a train is very high.

As above the horse may not have the strategic brain capacity to analyse this so potential will build fear if it does not act immediately. A frightened horse is not rational or predictable.

BRIDLEWAY PROPOSAL

Bridleway length, height of train compared to horses' eye height, time to walk it, how wide what points, distance from trains.

1000m bridleway length – trains at ground level up to 2-3m above the height of the horse, which goes into the reduced vision area of the horse (letterbox view). potentially the train could be in view negative stimulus then disappear from view – a very negative situation.

Speed of horse

Walk – 7km/hour.

(Note:-On highway report 10km/hour- this is high to a horse simply hacking)

So 1000m (bridleway length) in 6 to 8 minutes 36 seconds

*Trot – 13km/hour -----*So 1000m (bridleway length) in 4 minutes and 36 seconds
The suggested surface is not suitable for trotting.

Highway code – passing horses wide and slow.

States other road users to pass horses with giving at least 2m and under 10mph
This came into force since 29th January 2022

Closest train is to horses will be 4m and potentially 193kmh or 120mph – this seems incomprehensible to the highway code.

A Horse will not reason the training is not a threat.

RISK ASSESSMENT

Risk assessment for Riding Clubs, Pony Club and long distant ride (LDR) groups indicate many of the issues making it unsuitable.

Bernadette Evans has done a risk assessment for pony club. A copy is given in Appendix 1

PERSONAL STATEMENTS

A number of personal statements have been submitted by people who know the route to Network Rail.



APPENDIX 1

Risk Assessment - Bernadette Evans

I am writing to you as a former longstanding Branch Secretary of the Bicester and Warden Hill Branch of the Pony Club (with worldwide membership of 110,000 it makes it the largest association of young riders in the world). See the main website [here](#).

As Branch Secretary I organised our Branch one day event (eventing) for six years (80 volunteers, 150 competitors across three disciplines plus supporters at each event), long distance rides over three days (LDRs), fun rides, show jumping rallies, cross country rallies Road Rider tests and team training rallies. All of these have required a risk assessment to be carried out in advance. Some young riders are competent at riding in an arena but don't have the knowledge to be able to ride safely on a road or across fields and bridleways. As a Branch we have always encouraged members to 'get out of the arena' and improve their skills by taking part in the LDRs and fun rides which we organised.

In terms of the proposed bridleway rerouting at Tackley I shall be referring to my experience of risk assessing for the LDRs, fun rides and Road Rider tests particularly.

Fun rides would normally comprise three age groups / ability levels.

The youngest age groups (age 4 - 8 approx) would typically be:

- i) on the lead rein (with their parent or helper leading)
- ii) or just off the lead rein (with their parent or helper next to them but not being lead).
- iii) some would only be capable of walking on their pony, while others would be capable of trotting, with a few being confident at canter.

The middle and older age groups (age 9 - 12 and over 12) would typically be:

- i) off the lead rein and capable of walking and trotting, or
- ii) off the lead rein and capable of walking, trotting and cantering
- iii) they would not be accompanied by a parent/helper.

There would be a wide range of rider abilities and levels of competence/awareness of hazards (this also applies to the parents/helpers). Horses and ponies have an innate flight trigger which they would have used to escape from predators in the wild (it's stronger in some horses than others) and therefore we try to identify and eliminate sources of danger on our rides. These can include checking the route for badger and rabbit holes (which horses can put a leg in resulting in anything from tripping to breaking a leg), movement of tractors and farm machinery (particularly at harvest time), low branches (meaning children have to duck if it's not too low or us having to arrange to remove it), fallen trees etc. If we were crossing a main road, we would arrange for there to be an appropriately trained marshal to ensure we could cross safely. Suitably qualified instructors and adult riders accompany the rides (one of them would be trained in first aid).

We have run both LDRs and fun rides through Tackley (from Northbrook Farm) - both of which have involved crossing the railway.

I have been to visit the proposed route of the bridleway (running alongside the railway) and would not be able to sign it off in a risk assessment.

1. It's been suggested that horses could 'use the middle of the adjacent field' to move into when a train comes but with or without a fence (although we understand the landowner wants to put in a fence) the route is unsafe.
2. The narrow area proposed would be shared with bike riders and pedestrians. Some horses spook (the flight response) at pedestrians with rucksacks (as they're unused to seeing a human with a large 'hump' on their backs and likely think that it's a predator attacking the human). They may also spook at pushchairs.

3. If a horse spooks and spins/bolts at a train while in such a narrow space near a pedestrian or cyclist there is the potential for them to get 'tangled' up with other non equestrian users of the route. Horses panic and bolt and as it's innate, many times there's nothing that can be done to stop them until they decide they're far enough away from the 'predator' (or train in this instance). The route is on the edge of the village of Tackley and as such is very well used by dog walkers, cyclists etc.
4. Riders should be able to feel safe on a bridleway.
5. The proposed reroute is around a mile and even if riders waited for one train to pass before venturing onto the route, at walk they would not be able to reach the other end before another train came.
6. The trains would be at head height meaning horses would be even more likely to react. Some horses may not respond at all to the train but trains can be a strong trigger to the flight response/bolting in horses. Indeed, at a LDR organised by me in recent years just the sound of a train (in a cutting between Stonesfield and North Leigh on the GWR line) made a sensitive, well bred horse bolt. The rider was unable to stop the horse.
7. New advice in the Highway Code says that drivers should pass 'wide and slow'. Trains can do neither yet they are as likely to cause a horse to react as a car/lorry. In addition the nature of the train being on tracks means the driver is unable to take action to slow or move away from a frightened horse in the way that a car/lorry driver could.
8. We've been told that the BHS guidelines are that bridleways can sometimes run alongside trains - even high speed ones. We would strongly dispute this. Some horses become used to riding alongside high speed trains, but some will struggle. In particular those horses who are not local may never have encountered a train - particularly one 'coming from nowhere' and at head height.

The main issues with this proposed route is that the trains are at head height, that it is so close to the railway, that it is so narrow and that it's shared with others who will not be able to 'get out of the way' of a bolting horse.

Please do get in touch if you need any more information.

Best wishes.

Bernadette Evans

Former Branch Secretary - Bicester and Warden Hill Branch of the Pony Club