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Our ref: NC/PT.5299
24 April 2018

Nicola Chidley
South Gloucestershire Council
Dept for Environment & Community Services
Public Rights Of Way, Streetcare
PO Box 1954, Bristol
BS37 ODD

Dear Ms Chidley,

Charfield 8 Bridge and Tunnel Order 2017
Transport and Works Act 1992 Section 48(4)
South Gloucestershire Council
Charfield 8 (Public Footpath OCH 8) Level Crossing

1. I am directed by the Secretary of State for Transport to refer to the above-mentioned order. The Order, made following an application from the Planning Inspectorate made on 2 August 2017, requests that the Secretary of State considers a Bridge and Tunnel Order at Charfield 8 (Public Footpath OCH8) Level Crossing.

2. The Order route itself has been closed as a result of a temporary closure since 5 September 2012, on the grounds of safety. A proposed alternative route has already been constructed and is being used on a permissive basis.

3. An Inspector, Mr Martin Elliot, was asked by the Secretary of State for Environment, Food and Rural Affairs to inspect the crossing following a request by South Gloucestershire Council for a Diversion Order at Public Footpath OCH 8 to make the route safer. The Inspector's report concluded that the present level crossing was unsafe, and cannot be reasonably be made safe. The Inspector further concluded that the alternative crossing does not satisfy accessibility requirements.

4. This resulted in a recommendation being referred to the Secretary of State for Transport on 29 May 2014 for a Bridge or Tunnel Order to be considered under section 48(4) of the Transport and Works Act 1992 (the 1992 Act). The 1992 Act imposes a statutory deadline, which prevents the Secretary of State for Transport making a Tunnel Order after a period of two years from the date of application. This two-year period expired on 25 November 2013. The Department for Transport therefore advised that the Secretary of State for Transport was not in a position to consider the making of a Bridge or Tunnel Order.

5. The Department for Transport notes that the Bridge and Tunnel Order proposed here was issued on 2 August 2017 and can therefore be accepted for consideration by the Secretary of State for Transport, as the deadline for this Order to be considered is 2 August 2019.

6. Risk Assessments carried out by Network Rail (as the duty holder) indicated that the current crossing cannot be reopened without significantly reducing train speeds. Hard census data recorded the daily usage of Charfield 8 (Public Footpath OCH 8) to be anywhere between 6 and 20 users per day.

7. The construction of a bridge or tunnel would reduce all level crossing risks. However, the Secretary of State for Transport has to consider this proposal in line with his responsibility to adhere to *Managing Public Money* and to direct funds proportionately to the crossings most in need of risk reduction. Network Rail estimates the cost of a footbridge to be approximately £1.2M, while a proposed tunnel would be £5M. It has been noted that a proposed stepped footbridge would still not comply with accessibility requirements, which was the basis for the objection of the alternative route.

8. User convenience would not necessarily be enhanced at the crossing if a bridge or tunnel were constructed, unless further modifications were made as stated in paragraph 7. There are a number of people with access requirements who would remain excluded from using the crossing. If ramps were not included, this would not satisfy Network Rail's obligations towards those with protected characteristics under section 149 of the Equality Act 2010.

9. The Diversity Impact Assessment of December 2016 noted that prior to closure neither the existing crossing nor the alternative crossing were being used by vulnerable users (mobility impaired pedestrians, pedestrians with prams or young children, dogs or heavy bags, or cyclists). It would seem that the length of unmade approach and the style of it made the route unpopular with mobility impaired users. This implies that an additional ramp and further improvements to the footpath to make it accessible would have to be considered within the proposals at Charfield 8 (Public Footpath OCH 8) if the changes were to provide benefits to vulnerable and less mobile users.

10. The Secretary of State for Transport has examined Mr Christopher Dunn's claim that Charfield 8 (Public Footpath OCH 8) is reasonably flat and commodious for all highway users, especially the disabled. This conflicts with Network Rail's assessment of the path leading up to the crossing. The findings of Network Rail's Diversity Impact Assessment of December 2016 indicate that the topography does not lend itself to use by those who have difficulty walking.

11. Additional land would need to be purchased to construct the new bridge (either by private treaty or compulsory powers) and temporary use of land will also be needed during the construction phase.

12. Having regard to these matters, the Secretary of State for Transport has decided to reject a Bridge and Tunnel Order for Charfield 8 (Public Footpath OCH 8). The Secretary of State recognises that while the construction of a bridge or tunnel would reduce user risk associated with this crossing, the investment would be disproportionate to the realised benefits, given the limited number of individuals affected.

13. The Secretary of State for Transport recommends that Network Rail as the crossing operator and South Gloucestershire Council as the local highway authority make improvements to the path leading up to the alternative pathway, in order to address concerns related to accessibility. As Charfield 8 (Public Footpath OCH 8) will remain closed, appropriate barriers and signs should be erected so as to secure the crossing from public access.

14. The Order is hereby rejected.

Yours sincerely,

Richard Hepburn

Head of Commons, Access and Inland Waterways

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The Planning Inspectorate

Report to the Secretary of State for Environment, Food and Rural Affairs

by Martin Elliott BSc FIPROW

an Inspector appointed by the Secretary of State for Environment, Food and Rural Affairs

Date 2 August 2017

HIGHWAYS ACT 1980

REPORT INTO THE

SOUTH GLOUCESTERSHIRE COUNCIL (PUBLIC FOOTPATH OCH8, CHARFIELD) RAIL CROSSING DIVERSION ORDER (No. 2) 2016

Hearing Held on 14 June 2017

File Ref: FPS/P0119/4/15

File Ref: FPS/P0119/4/15

- This Order is made under Section 119A of the Highways Act 1980 ('the 1980 Act') and Section 53A(2) of the Wildlife and Countryside Act 1981 ('the 1981 Act') and is known as the South Gloucestershire Council (Public Footpath OCH8, Charfield) Rail Crossing Diversion Order (No. 2) 2016.
- The Order is dated 20 September 2016 and proposes to divert the public right of way shown on the Order plan and described in the Order Schedule. If confirmed, the Order will also modify the definitive map and statement for the area, in accordance with Section 53(3)(a)(i) of the 1981 Act, once the provisions relating to the diversion come into force.
- There was one objection outstanding at the commencement of the hearing.

Summary of Recommendation: I recommend that this matter be referred to the Secretary of State for Transport for the consideration of a bridge or tunnel order.

Procedural Matters

1. I held a hearing on 14 June 2017 at Poole Court, Yate. I carried out an accompanied site visit on the afternoon of 13 June. I was accompanied by Mr R Aston of Network Rail to enable me to go trackside and to access the existing crossing. The crossing is currently closed by virtue of a Temporary Traffic Regulation Order under Section 14 of the Road Traffic Regulation Act 1984 and remains in force until 16 April 2018; the crossing is not accessible from the existing public footpath. I did not discuss the merits of the case with Mr Aston. I carried out a further unaccompanied site visit following the close of the hearing. This was to observe the land identified by Mr Acton in respect of an alternative proposal for a bridge close to the existing crossing. I was able to locate the point identified by Mr Acton on New Street.

2. At the hearing Network Rail (NR) submitted an additional document (document 1), the Level Crossing Narrative Risk Assessment which relates to the proposed alternative crossing. The risk assessment was used to inform NRs Statement of Case. An opportunity was given to consider this additional document and there is nothing to suggest that anyone has been prejudiced by the late submission of the document. The Council also submitted a plan of development at Charfield (document 2) which identifies sites where planning permission for development has been granted and screening proposals. Again there is no evidence that anyone has been prejudiced.

3. This report includes the gist of the relevant submissions, and my conclusions and recommendation. Numbers in square brackets refer to paragraphs contained in this report. The statements of case submitted by the parties are identified at the end of this report.

4. Following the notice of the making of the order an objection was made by Mr Dunn who appeared at the hearing. A Mr Acton, who did not make an objection in response to the notice of the making of Order, subsequently raised an objection to the Order and appeared at the hearing. A letter of support was also received from a Mr Rosher although he did not make any further submissions and did not attend the hearing. The Council and NR were represented at the hearing.

Background information and site description

5. On 7 September 2012 the Council made an Order to divert the existing route and, following the receipt of objections to the Order, a hearing was held on 10 April 2014. Following the hearing the Inspector concluded that it was not expedient to confirm the Order before consideration had been given to the making of a tunnel order. The Secretary of State for Environment, Food and Rural Affairs referred the matter to the Secretary of State for Transport under Section 48 of the Transport and Works Act 1992 (the 1992 Act). However, as the two year deadline set out in the 1992 Act had elapsed the Department for Transport had no choice but to reject the referral.

6. Following further consideration of the matter NR submitted a new application to the Council on 5 April 2016. A second Order was made dated 20 September 2016 and, as noted above [4], one objection was received from Mr Dunn and one letter of support was also received. The current proceedings relate to this second Order. The second Order is essentially identical to the first order but addresses a number of technical points raised in respect of the first order.

7. The second Order seeks to divert a 207 metre section of public footpath OCH/8 (X-Y-Z-G on the Order map). Part of this section crosses the Birmingham to Bristol railway over an existing railway crossing which crosses four lines, the two main running lines and two loops to accommodate slower moving trains whilst faster moving trains pass. The remainder of the length of path provides access to and from the level crossing. The section X to Z initially follows, from New Street, the access to a property known as 'Appletrees' before turning to the south to point Y, this latter section is currently overgrown. The section Z to G crosses grazing land.

8. The alternative route (A-B-C-D-E-F-G) is 515 metres in length again commencing from New Street and follows the field edge in a general westerly and then north westerly direction to point C. The route then takes flights of steps up the side of the 11 metre high railway embankment before crossing the railway line on the level. At this point there are two running lines. The route then descends to point D down flights of steps before heading in a southerly direction to point E where the path follows the field edge via point F to point G. The alternative route has been constructed and is provided by NR as a permissive route. The fact that the alternative route has been constructed will not influence my conclusions when considering the relevant criteria which are set out below [68 to 72].

The Case for South Gloucestershire Council

9. In 2006 a Councillor had raised the issue of safety of public paths on railway crossings and identified 10 at grade crossings. The crossing on the level of footpath OCH/8 was identified as the most hazardous. Following a site visit with NR works were carried out at the crossing to ease the speed of crossing and to optimise sighting distances. In 2007 and again in 2009/10 works were carried out at the crossing with the provision of cushions between the rails and vegetation clearance.

10. In 2010 NR consulted the Council regarding a proposed increase in line speeds and concerns about safety at the crossing. Despite works it was found that the sighting time was considerably less than the traverse time. A safety audit identified insufficient sighting distance due to track curvature, the bridge

structure, vegetation and extended crossing times due to the need to cross four track lines. NR applied for the path to be temporarily closed whilst further improvements could be investigated. NR identified a point 200 metres north of the crossing point and applied for a diversion Order under Section 119A of the Highways Act. An Order was subsequently made on 20 September 2016 as it appeared to the Council that it was expedient in the interests of the safety of the public using the footpath crossing.

11. In considering the first Order the Inspector agreed that the crossing was unsafe and the Inspector and the Council were satisfied that, should the Order be confirmed, the original crossing could be secured. The Council considered that the new crossing would maintain links to the existing highways. The Council also agreed with the Inspector that the steps and landings provided are not within guidelines for accessibility. The ascent of flights of steps to 11 metres and descent is challenging to all but the very fit.

12. The Council request that the Order be referred to the Department for Transport with a request for a bridge or tunnel order. A tunnel would provide an accessible, easy to use, safe at grade crossing enabling use for the less agile and use with pushchairs. Should the Department for Transport not support a tunnel order then the diversion order should be considered. The Council refer to an offer of NR to adjust the design of steps to comply with Fieldfare Trust physical access standards in respect of the height of each flight of steps and its required landings to a height of 2 metres. The Council notes the typical stair rising of the constructed steps as being only 10mm outside the standards identified by the Fieldfare Trust. This is considered acceptable provided changes to the flights and landings are effected. Given that the embankment is 11 metres high the number of steps is required to reach the height of the embankment unless a longer ramped access is provided to accommodate some of the height difference. The Council observes that NR are to provide a design of how they propose to make the crossing more accessible.

13. The Council notes development proposals (document 2) in the vicinity of the railway crossing to the west of the line that may affect the number of pedestrians likely to use the crossing. The Council also notes that objections have been made to one proposal site, by NR and the area rights of way officer, on the perceived increase in pedestrian movements and likely use of the crossing and the subsequent increase in risk. The pending decision on the railway crossing adds some uncertainty about the risk values whilst a definitive footpath remains over the crossing, there is a permissive alternative and the request for the consideration of a bridge or tunnel order by the Council.

14. The Council request that, in order to allow for the full consideration of a bridge or tunnel order, the matter be referred to the Department of Transport. If a bridge or tunnel is not made then further consideration should be given to the Order with the changes proposed by NR regarding bringing the steps into line with accessibility recommendations.

The case for Network Rail

15. NR has a legal duty and responsibility for safety and operational efficiency. Under the Health and Safety at Work Act 1974 NR has a responsibility for the health, safety and welfare of its employees and for protecting others against risks in connection with its undertaking.

Existing crossing

16. The existing crossing has been in place since the railway was built circa 1840. Before the temporary closure the crossing was provided with stiles in the lineside fencing, 'Stop Look Listen Beware of Trains' signs and a rail top rubber surface system with contained crushed stone between the tracks to provide a flat surface.

17. The crossing crosses four lines of operational railway with trains travelling in both directions at speeds up to 90 mph. Of the four lines two are main lines and two are loop lines which are used to temporarily stable slower engineering and freight trains to allow faster trains to pass. Trains in the loops can obscure (or hide) approaching fast trains. The impact of 'hidden trains' is a real risk where there are more than two sets of rails. Independent research has deduced that some pedestrians do not stop look and listen for trains, some look but focus on looking in one direction and do not consider a second train. 108 trains pass through the area in a 24 hour period comprising 94 fast intercity and local commuter trains and 14 freight trains. There can also be various on-track machinery and plant operating during engineering works on the network.

18. The traverse time for a pedestrian at the crossing is 14.8 seconds based on a width between decision points and a pedestrian speed of 1.2 m/s. The decision point is 2 metres beyond the furthest rail. In 14.8 seconds a train travelling at 90 mph will cover 596 metres. A pedestrian must therefore have a warning of an approaching train of at least 596 metres to cross safely.

19. Achievable sighting distance at the crossing location falls short of the Office of Rail and Roads (ORR) guidance on level crossings (Appendix 1 to NR Statement of Case (SoC)). The best available sighting distance at line speed is 462 metres, at worst 268 metres (table 1 of NR SoC). Sighting is restricted by track curvature particularly south of the crossing and the Wooton Road overbridge. Sighting distances are all significantly below the required distances and NR deems that the significant shortfalls are unacceptable hazards to the public. In addition the presence of a short rail vehicle occupying the east (down) goods loop, but not blocking the footpath, would further restrict the sighting when crossing from east to west and looking south. Notwithstanding the inadequate sighting, a long train occupying one of the loops may come to stand over the crossing itself. It is a possibility that a member of the public will duck under the train or walk around the end to continue their walk. Both actions are extremely dangerous.

20. None of the sighting calculations address the anomaly created by faster and slower moving trains. A variation in speed and time available to cross can confuse pedestrians and may lull them into a false sense of security. A pedestrian may also think they have longer to cross than they actually have. They may commit to crossing when seeing a train approaching believing the train is travelling at a much slower speed and mistakenly have plenty of time to clear the path of the train. A person's judgement of speed is intuitive and often based on the daily experience of road vehicles. This can give rise to a highly inaccurate perception of the speed of an approaching train.

21. The braking distance of a local passenger train travelling at 60 mph is at least 620 metres and at 40 mph approximately 350 metres. A train driver sighting a

pedestrian on the crossing and immediately applying the brakes will not stop, or suitably slow down, before it reaches the level crossing.

Level crossing risk

22. The policy of NR for managing risk is set out in 'Our Approach to Managing Level Crossing Safety' (Appendix 3 of NR SoC). Level crossings are an open interface between the railway and the highway and are split into two groups 'Active' and 'Passive'. Most of the risk at level crossings is to pedestrians. Even with sufficient mitigation measures research confirms that users do not consistently behave in a predictable or appropriate manner.

Quantitative Risk Assessment

23. The quantitative assessment of risk is undertaken using the 'All Level Crossing Risk Model' (ALCRM) and determines level crossing risk using the same basic principles of any risk assessment. ALCRM reports two measures of risk, collective risk and individual risk of fatality.

24. Collective risk is a measure of total harm or safety loss and expressed in terms of 'Fatalities and Weighted Injuries' (FWI) per year. Collective risk is reported in numeric form where 1 represents the highest risk and 13 represents nil risk.

25. Individual risk is presented as the individual risk of fatality per year and is ranked from A (highest risk) to M (lowest risk).

26. The ALCRM rating for the existing OCH/8, when last assessed prior to the temporary closure, returned a rating of C5 (FWI 0.000976). Although not in the highest banded scoring it is considered to be high risk owing to its non-compliance.

Qualitative risk assessment

27. NR uses both the quantitative ALCRM and qualitative judgment of level crossing managers to ensure a balanced approach in risk management. In 2014 NR introduced the Narrative Risk Assessment which is a documented means of presenting the output of all new routine level crossing assessments. It adopts a quantitative calculated risk and qualitative commentary/observations recorded by the level crossing manager in ALCRM enabling the level crossing manager to reach and document balanced decision making of the risks and risk controls required.

Is it reasonably practicable to make the existing crossing safe for public use

28. NR has considered what actions are available at the existing crossing to improve the situation for pedestrians. NR has considered a reduction of the maximum speed limit, the reduction of the crossing distance, the installation of safe standing areas between lines, trains sounding their horns and the installation of an active warning system.

Speed reduction

29. This would be in direct contradiction of NR's licence requirement to operational efficiency. Further, in order to make the worst sighting distance into a compliant distance it would be necessary to limit the maximum speed to 40 mph. A reduction to 30 mph would be a better speed reduction however even with a

reduction to 40mph this could have national implications. In terms of providing a better passenger service such a reduction would not be reasonably practicable.

Reduced crossing distance

30. A reduction in crossing distance to meet the warning time required would require a reduction to a width of 7.9 metres. This would not be possible even if the two goods loops were removed. The loops are however integral to railway operations and, under operational efficiency, the expectation is for greater train capacity. Additionally, as the track curves, the cant produced adds distance between the main lines. At an approximate width of 10 metres the sighting distance of 338 metres cannot be achieved and the track would have to be reduced to a single line which is not practical.

Construction of safe standing areas between lines

31. There is insufficient space between the goods loops and the main lines for any refuges to be constructed. There is also insufficient space to widen the operational corridor to provide the required space in the centre of 4 tracks between two level crossings. Dividing the crossing into shorter safer sections is not reasonably practicable and is still a higher risk than a single crossing over two tracks.

Trains sounding their horns

32. The ORR instructions do not permit new whistle boards to be installed as they are not a complete solution. Further, existing whistle boards should be no further than 400 metres from a crossing. At OCH/8 the provision of whistle boards at 400 metres would provide a warning time of 8.78 seconds significantly less than the required 14.8 seconds. The effect of whistle boards is seriously questionable.

Active warning system

33. Neither signalling based miniature stop lights, nor a recently approved lower cost non-signalling based variant, could be designed to overcome difficulties presented by the goods loops. Users may make assumptions that a red light or an audible warning could relate to a train occupying the loops even if it did not foul the crossing; this would be unacceptable. The installation of any current active systems designed for footpath crossings is not practicable to make the crossing safe.

Other alternative measures

Footbridge at existing crossing

34. NR considers that a bridge or tunnel at the site of the existing crossing is not reasonably practicable or cost effective based on the number of known users. Appendix 4 to NR's SoC is an Option comparison report, compiled by NR's Future Projects Group (FPG), which sets out five options for major works at the existing crossing. A stepped crossing would cost between £2.85 and £3.3 million (paragraph 3.4) and would require a 29 hour stoppage to normal operations. Additionally there is a need for a 0.75 mile haul road and there are land purchase and potential planning approval issues.

Footbridge at or near the relocated crossing

35. Being on an embankment a footbridge over a section of line where there are only two tracks would require a height of 17 metres above ground level and require 100 steps on each side and would therefore be substantially less convenient than the current staircase. It would be necessary to construct a haul road and compound and the estimated cost would be between £3 and £3.5 million.

36. A footbridge at the existing crossing would be preferable since it would only require a small diversion, likely to be less intrusive visually and lower cost. However, an estimate of £3.3 million could not be justified by the cost benefit analysis.

Subway at existing crossing

37. Paragraph 3.6 of the FPG report is dismissive of any reasonable prospect of constructing a subway. A subway would require a lengthy excavation process of at least 10 days which would require the cessation of trains for at least 10 days. A more robust haul road would be required and the disruption to the local community is thought to be significant. No cost is estimated for the option of a subway but it is reasonable to presume that costs would be comparable to a subway at the proposed crossing of at least £5 million. Given the lightly used path and a better option being available the benefit does not justify the costs and the construction of a subway is not reasonably practicable.

Subway at relocated crossing

38. Paragraph 3.3 of the FPG report considers the option of a tunnel through the embankment at or near the site of the alternative crossing. Even if ground conditions and stability of the bank prove to be conducive to the construction of a tunnel the estimated cost is between £5 and £5.75 million. Such costs are in excess of any possible benefits and without doubt unreasonably practicable.

Relocated crossing

39. Although the proposed alternative crossing is still categorised as C5, with good sighting of approaching trains the crossing achieves a significantly lower FWI of 0.000565, a 42% reduction compared to the existing crossing. Sighting, based on a trains at 90 and 100 mph, is compliant with safety standards with the worst sighting distance from the east looking south being 120 metres more than the minimum required sighting distance. The best sighting distance is almost double the minimum required. Sighting from the west side at the proposed crossing is not compromised by a train occupying the loop line.

40. There is a slight anomaly where sighting from the east side looking south is compromised when there is a long freight train occupying the down loop. In this instance the sighting would be limited by the rear of the freight train to around 285 metres. The required sighting distance is 311 metres for a train at 90 mph (346 metres for 100 mph). Trains which occupy the loop are mainly short to medium length in which case sighting will not be compromised. Even when long freight trains occupy the down goods loop there are often no northbound trains running for the short duration of occupancy and therefore represents no risk to pedestrians. Based on records of train movements the probability of sighting being compromised due to a northbound train crossing a long train in the down loop in daylight hours is 0.0345%. Based on an average of 15 pedestrians

crossing per day the risk is incredibly small. NR is satisfied that the risk is as low as reasonably practicable and therefore acceptable. A new crossing cannot be implemented without consent from the ORR this is also accepted by the ORR.

Feasibility of ramps in lieu of steps

41. Because of stability issues a sloped approach up the length of the embankment cannot be excavated into the structure. It is therefore necessary to provide a 1.8 metre ramped structure piled into the embankment. Provided it is constructed to appropriate standards a boardwalk diversion from the foot of the embankment to either rail level, or to half way up the existing steps, is technically feasible. Each structure would cost at least £230k with a whole life cost of £1.5 million. This is dependent on the composition of the embankment and the need to support any structure with 150mm steel tubes or H piles and a concrete retaining wall. This would require an additional capital outlay of £230k for each embankment with a 60 year whole life cost of £380k. The high construction and whole life costs are beyond recommended cost benefit limits on current whole life estimations and consequently not cost effective.

Use of new path

42. NR consistently estimate the use of the former crossing as light but note that accurate counting of users became impossible after the temporary closure.

43. A nine day survey between Saturday 12 December 2015 and Sunday 15 December identified a total of 92 users (86 adults and 6 accompanied children). This equates to a daily average of 10 adults and one accompanied child. Further surveys between Wednesday 12 April 2017 and Tuesday 25 April highlighted an increase to 15 users per day. This period included the Easter weekend which could explain the increase although by comparison to other public footpath crossings this is considered relatively low. NR accept that the more recent data could be more representative of the likely average daily use.

44. The proposed alternative is approximately 513 metres long with the existing path being 207 metres. The alternative is therefore only 306 metres longer. To date neither NR nor the Council have received any complaints regarding the current permissive route. The Council have not received any complaints regarding the closure of the existing crossing. More significantly, there have been no reported incidents of near misses or other incidents or misuse.

45. In the report following the first hearing the Inspector considered the suitability of the surface and noted that the surface was loose gravel. The Inspector concluded that the surface would need to be consolidated if the order were to be confirmed. The Inspector did not consider the surface to be a reason not to confirm the order and NR agree. The Inspector also considered the introduction of kissing gates and concluded that whilst they were limitations to use they helped to prevent unauthorised vehicular access and prevented the risk that loose livestock could access the crossing. The Inspector concluded that the kissing gates would be acceptable and again NR agree.

Line speed increase

46. As part of NR's improvement programme the maximum permitted speed over the existing and proposed alternative crossing will increase from 90mph to 100mph. Consequently greater sighting distances will be needed in order to cross tracks.

These critical distances cannot be achieved at the existing crossing. By contrast the longer sighting distances can be accommodated at the proposed alternative crossing where there will still be sighting surpluses.

Managing public money and Cost Benefit Analysis

47. NR uses Cost Benefit Analysis (CBA) techniques to assist in decision making when managing key safety risks. A CBA tool, devised to principles used across the rail industry and approved by the ORR, puts monetary values on FWI/year. To justify expenditure any mitigation benefits must exceed the cost.

48. For the existing crossing including increasing use to 27 users per day realises a cost benefit of £29,000 and, with costs being grossly disproportionate to the benefits, this is insufficient to justify any other option than that proposed. This amount did not come close to the costs of NR investing in constructing the relocated crossing and paths. Nevertheless, the decision was taken that to do nothing would be intolerable to public safety risk and perpetuate a non-compliant infrastructure.

49. As a Government funded organisation NR has a requirement to adhere to 'Managing Public Money' (Appendix 5 to NR SoC). Unjustifiable expenditure is not acceptable.

Objections to the Order and NRs responses

50. Appendix 6 of NRs SOC sets out the objections and NRs responses.

Post-confirmation

51. NR are committed to public safety and will erect and maintain appropriate barriers to ensure that the existing crossing is secure from public access. All parts of the crossing will be removed and the public will be informed of the changes to the path alignment with signs and notices.

Equality Act 2010

52. NR has done all that is required under section 149 of the Equality Act 2010. The implications have been reflected in the statutory tests considered prior to the making of the Order. It is noted that there is no requirement for explicit referencing of the duty in overall terms or by specific mention of any one protected characteristic.

53. Section C15 of Defra guidance 'Authorising Structures (gaps, gates and stiles) on rights of way' speaks in terms of the decision maker concluding on the 'overall benefit of the scheme'. The Council has been conscious of its duty under section 149 and the duty has been properly discharged. This is not a decision to withdraw or reduce a service. The duty is to have 'due regard' to engaged characteristics not to provide or ensure the same or even similar level of provision or elevate through the decision making process any protected characteristic over a non-protected characteristic. In this way the duty is reflective of the convenience question under section 119 A.

Conclusion

54. NR concludes that there is no reasonably practicable means to improve the safety at OCH/8 level crossing or to provide an alternative bridge or subway for the

existing footpath. NR takes the view that the diversion to a relocated at grade crossing point will provide a significantly safer route for the public to cross the railway and therefore it is expedient to confirm the order.

The cases in opposition to the Order

Christopher Dunn

55. The closure of OCH/8 and a one mile diversion means there is no crossing of the railway for two miles. The existing OCH/8 is reasonably flat and commodious for all highway users, especially the disabled. The proposed route is tortuous, unnatural, involves steps and is disabled unfriendly. The handrails provided are too large and should be reduced to fit the hand properly. The steps do not comply with Fieldfare/normal standards and the concrete steps are unsafe slip hazards when frosty.

56. There appears to be a presumption that the diversion is a foregone conclusion. Safety issues cited for immediate closure are disingenuous as it is the ORR that have recently directed that footpath crossings through rail loops have to be closed due to pedestrians passing through goods wagons. Further there are only two live tracks and two stationary goods layby tracks seemingly safe for 70 years. As regards better sighting of trains this is not true because the curve of the track is constant and the sight line is the same anywhere on the curve. The increase to line speeds should not force closure/diversion or inconvenience pedestrians. Rail companies/NR have enjoyed unfettered access and commercial gain of four tracks at this point since 1942. A cost effective solution should not be allowed to impose a non-commodious solution on all.

57. It is practicable to make the crossing safe by a tunnel and the termination points are different locations from the original. There also appears to be enough room to accommodate a stepped or ramped bridge. Costs borne by the diverter make the authority far less likely to scrutinise and object to a diversion and to keep historic routes. Mr Dunn asks that the Order is not confirmed and that consideration should be given to a bridge or tunnel order.

John Acton

58. Mr Acton accepts the conclusions at paragraph 62-63 of the report by the Inspector in respect of the first order. In short, the design of the diversion is unacceptable and a grade separated crossing should be considered. There is no reason to depart from the examination and conclusions of the previous Inspector. The Inspector commented on the flight of 58 steps on the eastern side of the railway and 62 on the western side. She said that the 'steps present a formidable sight' and did not 'consider that sufficient attention had been paid by NR or the Council to the effect on users of inserting two formidable flights of steps on the proposed route'. She found that this led to 'a serious impediment to the confirmation of the Order'. At paragraph 56 the Inspector, when assessing the potential for a tunnel, returned to the inconvenience and dangers of the steps and railway crossing on the diversion. Mr Acton adds that the extra length of uninteresting route detracts from the amenity of the path.

59. Mr Acton also supports the conclusion of the Council that the stepped crossing cannot comply with accessibility requirements, after any alteration it would still be challenging, and full consideration should be given to a bridge or tunnel Order.

A bridge on or near the position of the existing OCH/8 crossing of the railway would be a practical cost effective solution to the problem of safety on the footpath.

60. Mr Acton questions the sighting distances being measured from points 2 metres back from the first rail. He makes the point that the outer two tracks are loop lines where no train will be entering at 90 mph. The time to cross the fast lines is the same as on the alternative route. The crossing is less hazardous than the automatic application of the assessment criteria indicates. It is not disputed that there is a degree of hazard when crossing the railway at OCH/8 however, both crossings have a risk score of C5 below the highest ranges. Although the standard assessment method indicates the alternative route as slightly less hazardous, with an improvement of 16% on the FWI, it is suggested that for reasons given above the actual improvement would be much less.

61. Mr Acton notes, from NR's SoC produced in March 2016[1], that the safety benefit of the crossing has been calculated as £4,500 whereas it would be £27,000 for a solution that eliminated the level crossing entirely. Six times the benefit could be obtained by providing a grade separated crossing. Therefore the same benefit to cost ratio would be achieved by a bridge or tunnel costing 6 times the cost of the proposed diversion. NR put the overall cost at a minimum of £1.5 million which they claim is unviable when compared to the preferred option. This suggests that the overall cost of the diversion has been no more than £250,000 which Mr Acton doubts. In any event there is no evidence that NR have done any serious estimating or consulted with the landowners.

62. Mr Acton understands that, in the rail industry, safety benefits are incorporated into a cost/benefit analysis by multiplying the expected risk reduction associated with a measure of preventing a fatality (VFP). The Department for Transport VFP is £1,783,556 (2015 prices). Although not to be directly compared it may help to put the cost of a bridge into perspective.

63. As concluded by the previous Inspector a grade separated crossing would remove entirely the risk of accident to pedestrians, railway employees and passengers. Mr Acton considers that a footbridge would be eminently suitable in or near the location of the existing crossing. A bridge from New Street could be routed on a gentler slope than the existing route and could be designed with minimal acquisition of land. There is no apparent evidence of any technical difficulty in design or construction. There is no need for a 17 metre high bridge, that suggestion being based on the wrong site. NR's costs of a bridge in the order of £1.5 to £2 million relates to an excessively high bridge and is therefore irrelevant.

64. Mr Acton is confident that a bridge could be designed and accommodated with minimal acquisition of land. Mr Acton does not accept that a modular design with standard components would be unsuitable. He notes that the Rail Safety and Standards Board has partly funded a modular glass fibre reinforced plastic bridge designed by Arup and installed in Oxford for NR. Proper examination of the options would show that a bridge would be a practical and effective solution to the problem of safety. It would fulfil the brief given by the Secretary of State for

[1] The Statement of Case dated March 2016 was submitted by NR in support of the application and can be found at Appendix 5a of the Council's Statement of Case

Environment, Food and Rural Affairs in being the best way to resolve the situation.

65. Mr Acton requests that the Order is not confirmed and that full consideration is given to the making of a bridge and/or tunnel order.

The case for the supporter of the Order - Mark Rosher

66. Mr Rosher fully supports the diversion of this well used right of way which takes the route from a muddy, steep and generally overgrown clamber up the embankment to a wide and mostly well maintained way.

67. The steps, though many and steep, are no less navigable to the disabled. Mr Rosher notes proposals to provide a ramp but cannot see the justification in the light of the condition of the remainder of the path and the remaining need to use the railway crossing.

Conclusions

68. Section 119A of the 1980 Act requires that for the Order to be confirmed, I must be satisfied that it is expedient to do so, having regard to all the circumstances, and in particular to:

a) Whether it is reasonably practicable to make the crossing safe for use by the public; and

b) What arrangements have been made for ensuring that, if the Order is confirmed, any appropriate barriers and signs are erected and maintained.

69. Where a rail crossing diversion order alters the point of termination of the path or way, it must not alter it otherwise than onto a highway of at least similar status, or alternatively it must connect to another point on the same highway as the existing route, or one connected to it.

70. Defra circular 1/09 advises that whilst other criteria are not specified in section 119A, the new way should be reasonably convenient to the public and authorities should have regard to the effect that the proposal will have on the land served by the existing path or way and on the land over which the new path or way is to be created. Consideration should also be given to the effect that the diverted way will have on the rights of way network as a whole and the safety of the diversion, particularly where it passes along or across a vehicular highway.

71. I have had due regard to the Public Sector Equality Duty contained in section 149 of the Equality Act 2010.

72. Section 48 of the Transport and Works Act 1992 enables the Secretary of State for Transport to make an Order requiring the railway operator to provide a bridge or tunnel within 2 years of any relevant application. Department of Transport Circular 1/94 provides guidance on the operation of Section 48 and states that where an inquiry inspector concludes that:

i) The crossing is unsafe

ii) It cannot reasonably practicably made safe

iii) The crossing should not be closed (because it is needed)

iv) And a bridge or tunnel should be provided

The Secretary of State for Transport will then consider whether to make a bridge or tunnel order. Once such an Order is made, consideration will then be given to whether or not the Rail Crossing Order should be confirmed with or without modification.

Whether it is reasonably practicable to make the crossing safe for use by the public

73. NR have carried out a risk assessment using ALCRM and have assessed the existing crossing as having a rating of C5 (FWI 0.000976). NR accept that this is not the highest banded score but it is considered that the crossing is high risk due to its non-compliance [26]. The achievable sighting distances for trains travelling at 90 mph are significantly below those required to use the crossing safely and fall short of ORR requirements in respect of crossings on the level [19]. Further risks arise from the occupation of the loop lines by rail vehicles and the possibility that a member of the public may duck under or walk around a train standing in the loop line [19].

74. Both Mr Dunn and Mr Acton raise issues in respect of the assessments as to sighting lines and decision points at the crossing. However, neither of the objectors disputed that the crossing is unsafe. Mr Dunn also made the point that trains standing in the loop line are obstructing the right of way which in his view was not permitted. Although the Secretary of State may note Mr Dunn's view, the obstruction of the footpath by a train, for the reasons identified above, presents a risk to the public. Whether or not the obstruction of the route is lawful is not a matter for consideration.

75. NR have considered a number of options to make the crossing safe [28 to 38] and have concluded that there are no solutions which could be implemented at the existing crossing which would render the crossing safe. There is no evidence before me to suggest that the conclusions of NR in respect of the various options should not be accepted.

76. Having regard to the above I conclude that the crossing is unsafe and that it is not reasonably practicable to make the crossing safe.

Arrangements for ensuring that, if the Order is confirmed, any appropriate barriers and signs are erected and maintained

77. NR confirm [51] that appropriate barriers and signs will be erected and maintained if the Order were to be confirmed. There is nothing to suggest that NR will not carry out the necessary works to prevent access to the existing crossing in the event of confirmation of the Order.

Alterations to the termination points of the proposed route

78. The altered termination points connect to the same highways at each end and there are therefore no issues in this respect.

Whether it is expedient to confirm the Order

79. The use of the word 'expedient' in section 119A of the 1980 Act implies that other factors may be taken into account in determining whether or not the Order should be confirmed. I am mindful of Circular 1/09 [70]. There is no evidence of any adverse effect on the land served by the existing path or on the land over which the new path or way is to be created.

Safety of alternative crossing

80. The proposed alternative crossing, as with the existing crossing is categorised following an assessment as C5 with an FWI of 0.000565 [39]. Mr Acton questions the degree of safety improvement at the crossing [60]. However, the Secretary of State will note that sighting lines are compliant with safety standards [39]. Mr Dunn also raises concerns as to the sighting line measurements taken by NR. At the hearing, NR explained that the measurements were taken using approved electronic devices and carried out carried out by the Level Crossings Manager. In my view some weight should be given to the assessment carried out by NR and there is no evidence before me which casts doubt on that assessment. NR is satisfied that the risk at the crossing is as low as reasonably practicable. The Secretary of State will note that a new crossing cannot be implemented without the consent of the ORR [40].

81. Overall whilst the ALCRM rating remains the same as the existing crossing the alternative crossing does present an improvement to safety in that the sighting times mean that the crossing is compliant with safety standards. Although there remains a risk the proposed alternative crossing is safer than the existing crossing.

Convenience of the alternative route

82. The use of the proposed alternative crossing involves the ascent and descent of an 11 metre embankment. The alternative route has already been constructed and consists of 58 steps on the eastern side and 62 on the western side [58]. The flights of steps are interspersed with landings and a metal handrail is provided. NR advised the hearing that the steps were constructed to European Standards although were unable to provide details of the specific standard. However, the Council made the point that the steps do not conform to standards recommended by the Fieldfare Trust [12], an organisation that promotes access for less able people.

83. In my view the steps up and down the embankment provide a serious impediment to the convenient use of the route. Mr Dunn also suggested that the steps would be unsafe in frosty weather and that the handrails used were too large to fit his hand [55]. Mr Dunn made the point that his wife could not use the alternative route. Mr Acton suggested that not all users of rural footpaths are young and agile and he knew of people who could not use the alternative route. Mr Greenwood accepted that not all people could use the alternative. The proposed alternative route therefore restricts access to the footpath and on that basis I do not consider that it can be argued that the alternative route is reasonably convenient. I am aware of the observations of Mark Rosher [66] however this conflicts with the evidence of Mr Dunn who suggests that the existing route is reasonably flat and commodious for all users. However, bearing in mind the above I do not consider that the alternative is reasonably convenient.

I note the point that no complaints have been made in respect of the current permissive route. However, as suggested by Mr Acton, the construction of the route may be seen as a fait accompli. It does not necessarily follow that the absence of complaints means that the alternative route is convenient or acceptable.

84. The alternative route is also 308 metres longer and whilst this is not a significant increase in the length of the path the additional length adds to the inconvenience of the alternative route. Mr Dunn also made representations as to the loose nature of the surface of the path. However, NR advised at the hearing that this would be remedied in the event of confirmation of the Order. The Council confirmed that finer material would be required to stabilise the surface.

Use of existing and alternative crossing

85. The Secretary of State will note that NR consider the use of the existing crossing to be light. However, due to the temporary closure it has not been possible to carry out an assessment of use [42]. Mr Rosher claims that the existing route was well used [66] and NR take the view [43] that the survey taken in April 2017 is a more realistic representation of the use of the way. However, as identified above, it is accepted that some members of the public will be prevented from using the alternative way. Consequently the use identified in the 2017 survey cannot be seen as a reasonable estimate as to the use of the way. Some caution therefore needs to be exercised when considering the extent of the use of the way. Nevertheless there is nothing to indicate that the way is not needed.

Conclusion

86. Having regard to all of the above and the various submissions I am satisfied that the existing crossing is unsafe and that it is not reasonably practicable to make the crossing safe. I am also satisfied that if the crossing were to be closed then appropriate barriers and signs will be erected so as to secure the crossing from public access. However, I do not consider that the alternative route is reasonably convenient given that in order to use the route it is necessary to cross an 11 metre embankment via two flights of steps. The steps constitute a significant impediment to the reasonably convenient use of the route and also impact significantly on the rights of way network in the area. In my view it is not expedient to confirm the Order.

87. I conclude that the crossing should not be closed and consideration should be given to the provision of a bridge or tunnel. The Secretary of State will note the submissions of NR in respect of the provision of a bridge or tunnel [34 to 38 and 47 to 49] and also the submissions made by Mr Acton made in response [61,62]. The Secretary of State may also wish to note that NR are considering proposals to make the alternative crossing more accessible [12]. However, at the hearing it was confirmed that no details of any proposal have been finalised and in the absence of any proposals I have not been able to give this further consideration. Furthermore the Secretary of State may wish to note the potential for development[2] [13] which may have an impact on the use of any crossing.

[2] Paragraph 8.7 of the Council's Statement of Case

Overall Conclusions

88. Having regard to these and all other matters raised at the hearing and in the written representations I conclude that the Order should not be determined until consideration has been given to a bridge or tunnel order.

Recommendation

89. I recommend that this matter be referred to the Secretary of State for Transport for the consideration of a bridge or tunnel order.

Martin Elliott

Inspector

APPEARANCES

South Gloucestershire Council:

Nicola Chidley	Senior Public Rights of Way Officer

In support of the Order:

Tim Mayo	Route Level Crossing Manager (Western), Network Rail
Jerry Greenwood	Head of Liability Negotiation, Network Rail
Mark Brunnen	Network Rail
James Audley	Liability Negotiations Adviser (Western Route), Network Rail
Mr C Smith	Network Rail

In opposition to the Order:

Christopher Dunn	Statutory Objector
John Acton	Interested Party

Documents handed in at the hearing

1 Level Crossing Narrative Risk Assessment
2 Plan showing Development at Charfield

Statements of Case

1 Statement of Case of South Gloucestershire Council with appendices
2 Statement of Case of Network Rail with appendices
3 Statement of Case of Christopher Dunn with appendices
4 Statement of Case of John Acton with appendices

Highways Act 1980 Section 119A, Wildlife and Countryside Act 1981, Section 53A
South Gloucestershire Council (Public Footpath OCH8, Charfield)
Rail Crossing Diversion Order (No. 2) 2016

South Gloucestershire Council

Date: August 2016	Map No: 375a	Scale: 1:2500 at A4