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Public Inquiry on the Network Rail (London to Corby) (Land Acquisition, Level Crossing and Bridge Works) Order

Proof of Evidence
Appendices

Author - Peter Blakeman

Cycling Campaign for North Bedfordshire

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Date: 20 September 2018
Author: Network Rail

London to Corby TWAO Consultation
Brunel House, RTC Business Park
London Road, Derby
DE24 8UP

Peter Blakeman
CCNB Chair

20th September 2018

Dear Mr Blakeman,

REPRESENTATION REGARDING TRANSPORT AND WORKS ACT ORDER

The Department for Transport has passed to us your letter of objection to the proposed Order, which has been given the reference OBJ/15.

We note your concerns and, in the following paragraphs, would like to respond to the points you have raised.

As part of its ongoing work to upgrade the Midland Main Line, under the London to Corby Project, Network Rail is planning to reconstruct Bromham Road Bridge in Bedford. The London to Corby (L2C) Project includes electrifying the railway from Bedford northwards to Kettering and Corby, installation of a fourth track between Bedford and Kettering, and lengthened platforms to enable longer trains. The Order will enable Network Rail to gain the necessary powers to use land required in locations where agreements via negotiation have been unable to be brought to a conclusion.

Bromham Road Bridge is a two span brick arch bridge that lies to the north of Bedford Central station and carries the 2-lane single carriageway Bromham Road over the Midland Main Line. This bridge has been identified as having insufficient clearance for overhead line equipment (electrified wires carrying 25,000 volts) to safely pass beneath it. Therefore the bridge needs to be demolished and then reconstructed. The current proposals in the Order are for a reconstructed bridge which will be slightly wider than the existing bridge, and within the existing constraints of the current bridge supports.

With regard to your specific concerns, we have noted that you have made an objection based on the following ground(s):

1. **The lack of provision in the Order for cyclists over the new Bromham Road Bridge.**

The current proposals for Bromham Road bridge will widen the existing structure as far as possible using the existing foundations and piers, and providing (approximately) an additional 600mm of width on the bridge deck. Network Rail intends to retain and reuse the existing brick piers and foundations of the bridge. This delivery approach aligns with stakeholder feedback requesting that Network Rail minimises its construction time whilst on site, and minimises disruption to both rail and road users.

Widening the bridge further than this would require full demolition to ground level and possible changes to the foundations, which may impact on existing railway infrastructure. It would also require amendments to the alignment of the existing approach road to cater for a wider road profile, which would require more temporary and permanent land to be acquired, in order to construct the larger structure. Such works would result in a lengthier construction period and increase disruption to local residents. The provision of a new dedicated cycleway and segregated pedestrian footway sits outside the current scope and funding for this scheme.

However, whilst enhanced cycling provision is not part of the existing scope for reconstructing Bromham Road Bridge, since the Draft Order was published Bedford Borough Council has entered into an agreement with Network Rail to explore options for the future provision of a separate bridge for pedestrians and cyclists at this location. Therefore there may be future scope for improving provisions for cyclists and pedestrians in this area; this activity is being led by Bedford Borough Council.

We hope that our response has provided sufficient clarity on the points made in your objection and has addressed your concerns. If so, we would be grateful if you would kindly let the Department for Transport know by withdrawing your objection. We look forward to learning your position.

For further information or to give us your views you can call Network Rail's National Helpline on: 03457 11 41 41 or you can email on L2CTWAO@networkrail.co.uk

Yours faithfully,

R. D. John

Richard John
Head of Environment and Consents
03457 11 41 41

Document No: OBJ/15.2b
Date: July 2018
Author: Mohammad Yasin MP

Re: Bromham Road Bedford Railway Bridge Rebuild (Case Ref: MY3628)

Email dated 19/07/18 from Mohammad Yasin MP

Dear Peter Blakeman

Thank you for contacting this office to share your views and concerns regarding the proposals to demolish and rebuild Bromham Road Bridge.

Network Rail has published a report summarising the responses to the consultation and Network Rail's response to the feedback. You can read the report here: https://cdn.networkrail.co.uk/wp-content/uploads/2018/06/nr05-report-summarising-consultations-undertaken-22062018.pdf

Whilst I am pleased to note that concerns regarding car parking spaces have been acknowledged and the number of car parking spaces that will be taken out of use during the works has been decreased, the use of a crane will still affect some car parking spaces, the number of which won't become apparent until work has commenced.

I appreciate that the reconstruction of this bridge was seen by many constituents and local cycling organisations to represent an opportunity to improve the cycling and pedestrian route along this stretch of Bromham Road, which currently presents a significant gap in the cycle network. To this end, amended bridge designs will widen the existing structure by 6cm, which I appreciate is a disappointing outcome.

The report presents reasons why Network Rail are committed to providing a like-for-like replacement bridge, notably the explanation that the existing brick piers and foundations will be retained and reused, and that Network Rail do not own the structure. There is also a significant impact that would result from the total reconstruction of the bridge, namely compulsory purchases of residential property close to the bridge.

These are obstacles standing in the way of the desire that the reconstructed bridge include better provision for cyclists and pedestrians, although I await the feasibility study and Network Rail's commitment to exploring the possibility of 'passive provision for a cycle and or/footway in to the bridge design' with interest.

Thank you for contacting me to share your concerns on this important issue.

Mohammad Yasin MP
Member of Parliament for Bedford and Kempston
Email: office@mohammadyasin.org | Tel: 01234 346525

Document No: OBJ/15.2e
Date: September 2012
Author: DfT

Extract (pages 40-43) from DfT Local Transport Note (LTN) 1/12 Shared Use routes for Pedestrians & Cyclists

Width requirements

7.28 Width strongly influences the quality of shared use routes – insufficient width tends to reduce user comfort and increases the potential for conflict between pedestrians and cyclists. In preparing this section, the opportunity was taken to update the advice given in LTN 2/08. In general, **section 8.5 of LTN 2/08 is now superseded**.

7.29 The following advice on minimum width requirements relates to what is generally desirable in order to provide a high level of service to pedestrians and cyclists, but see paragraph 7.32. Achieving these dimensions gives no guarantee that the route will be wide enough – additional width might be required as flows increase.

7.30 Designers should generally aim to provide more than the minimum, regardless of flow rates. In addition, where gradients are steep, climbing cyclists might wobble to some extent, and descending cyclists can quickly gain speed. In both cases, additional width is helpful, even if it is only localised. There might be occasional pinch points along the route where the minimum dimensions cannot be met. such pinch points might be acceptable on less busy routes.

7.31 It might not always be possible to meet the minimum recommendations for the route as a whole. In this case, practitioners need to consider whether a new sub-standard facility is better than none. For example, on lightly used routes, especially rural shared use routes that avoid high speed roads which have no specific provision for pedestrians or cyclists, a narrow route might represent a considerable improvement on existing conditions.


Photo: spokesgroup #30779 CycleStreets, CC Attribution-Share Alike licence

Figure 7.5 Substandard width on both sides due to segregation

7.32 There might be situations, again particularly in rural areas, where flows are so light that the likelihood of two users encountering each other is very low. In this case, the minimum widths given below might be far more than are necessary (or desirable from an environmental point of view). The acceptability of width below the minimum recommended here is something for the designer to determine but, in any case, at the very least two wheelchair users should be able to pass one another, even if this involves the use of passing places.

7.33 Where room is limited, any plan to segregate a route needs careful consideration. In general, narrower routes might be best left unsegregated, especially where splitting the route would reduce the widths available for pedestrians or cyclists to near their minimum values – see Figure 7.5. A balance needs to be struck between possible benefits of segregating users and the disadvantages of reducing the space available to both groups.

7.34 A width of 3 metres should generally be regarded as the preferred minimum on an unsegregated route, although in areas with few cyclists or pedestrians a narrower route might suffice. Where a significant amount of two-way cycling is expected, additional width could be required. However, the need here for additional width is not clear cut, because the absence of segregation gives cyclists greater freedom to pass other cyclists. It might therefore depend on user flows.

7.35 Note here that 3 metres is the preferred minimum *effective* width, and this will be the *actual* width where the route is not bounded by vertical features (see Figure 7.6).

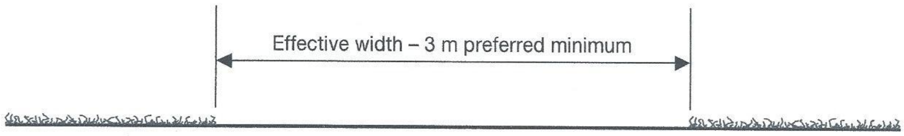


Figure 7.6 Unsegregated shared use route

7.36 Figure 7.7 shows an example of unsegregated shared use alongside a typical urban carriageway. In this case, the vertical edge features create the need for additional width – see Table 7.4. Where a route (segregated or otherwise) passes alongside a high speed road, it is recommended that the clearance to the kerb is increased as shown to provide a buffer zone. Paragraph 7.60 gives more advice on high speed roads and buffer zones.

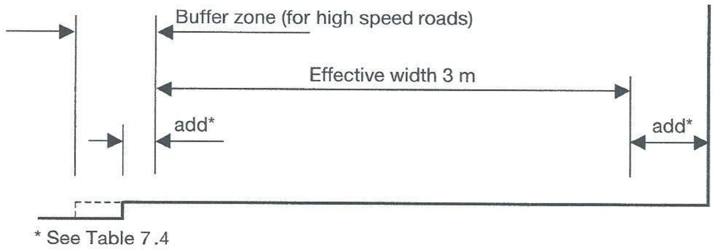


Figure 7.7 Unsegregated shared use bounded by vertical features

7.37 Where sign posts or lamp columns are present, they should be located outside the effective width zone where possible.

7.38 On segregated shared use routes, and where cycle flow is predominantly one-way, the preferred minimum effective width on the cycle track side is 2 metres. This will allow for the occasional overtaking manoeuvre and will easily accommodate users of cycle trailers, tandems, tricycles, etc. The preferred minimum effective width for a two-way cycle track is 3 metres. These effective widths will need additional clearance where track edge constraints such as kerbs or walls are present (see Table 7.4).

7.39 As a general rule, for any shared use route (segregated or otherwise) away from the road, it can be assumed that cyclists will want to travel along the route in both directions.

7.40 *Inclusive Mobility – A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure* and the *Manual for Streets* recommend a minimum clear width of 2 metres for footways. *Inclusive Mobility* states that, where this is not possible because of physical constraints, 1.5 metres could be regarded as the minimum acceptable under most circumstances. However, this might not be sufficient for wheelchair users or people with child buggies to pass one another comfortably. As such, a footpath or footway 1.5 metres wide is generally best suited to routes using level surface segregation and where flows are low. This makes it easy for people on the pedestrian side to partially occupy the cycle track when the occasional need arises.

7.41 Figure 7.8 shows how these minimum widths apply to a route segregated by white line, where cycle flow is assumed to be predominantly one-way. As there are no physical outer edge constraints on either side of the cycle track in this example, the effective width here is the actual width.

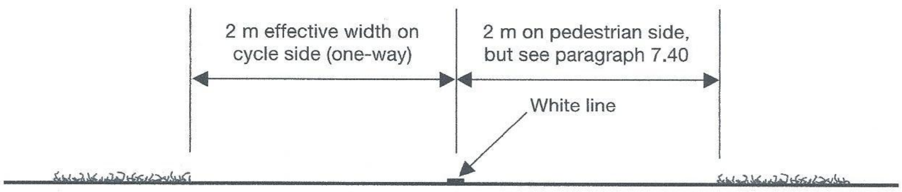


Figure 7.8 Level surface segregation example

7.42 Where the route is segregated by kerb, a minimum width of 2 m is recommended on the pedestrian side. This will allow two wheelchair users to pass comfortably. Narrowing to 1.5 m might be acceptable for short stretches.

7.43 Figure 7.9 shows how the minimum widths apply to a route segregated by kerb. In this example, cycle flow is assumed to be two-way, and the outer edge of the cycle track is physically constrained.

Extract (page 44) from
DfT Local Transport Note (LTN) 2/08 Cycle Infrastructure Design

8.7 Gradients

8.7.1 Cyclists often go out of their way to avoid climbing a hill, especially where the gradient is steep. The may also try to avoid losing height once it has been gained. For new routes in a hilly area, therefore, an indirect alignment may be preferable to one involving steep gradients. Where space permits, steep gradients can be mitigated by providing ramps in a zigzag arrangement up the hill. Where this approach is adopted, it is essential that the turning points are kept as level as possible using the minimum crossfall necessary to shed water. It is especially important to avoid adverse camber at these locations.

8.7.2 In general, a maximum gradient of 3 per cent is recommended, but this can rise to 5 per cent over a distance of up to 100 metres. Where steeper slopes are unavoidable, the limiting gradient is 7 per cent over a distance of up to 30 metres. Steeper gradients are not recommended, except over short distances. On the approach to priority junctions, the gradient would ideally not exceed 3 per cent. Where cyclists have to stop, such as at junctions, a short locally levelled section will be of benefit.

8.7.3 It is worth bearing in mind that recommendations on cycle route gradients relate to comfort not safety. While it is always preferable to minimise gradients to reduce the effort required, designers should not adhere too rigidly to the recommended maxima if doing so rules out the option of providing the cycle route in the first place. A very steep route may be better than none at all. In some hilly areas, it is not uncommon to find cycle routes on roads with gradients of between 10% and 15%.

8.7.4 The above advice on gradients relates to cycle routes in general. For ramps to subways or foot/cycle bridges, the gradient should normally be at 5% (see paragraph 10.8.1). Any less increases walking/cycling distances, while steeper gradients may cause difficulties for some users.

Document No: OBJ/15.2e
Date: January 2018
Author: CIHT

Extract (pages 25 & 26) from CIHT Buses in Urban Developments

Figure 18: A coherent street suitable for bus operation, with planted median and frontage development (Broughton, Milton Keynes) (Photo: Tim Pharoah, 2017)

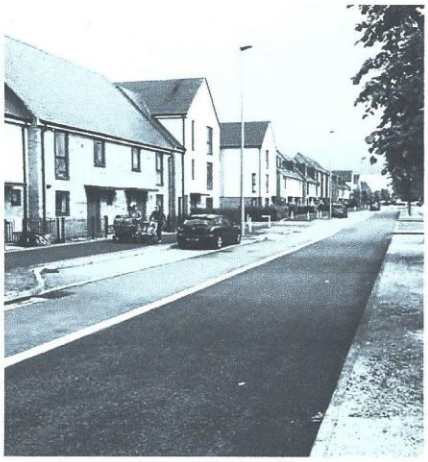
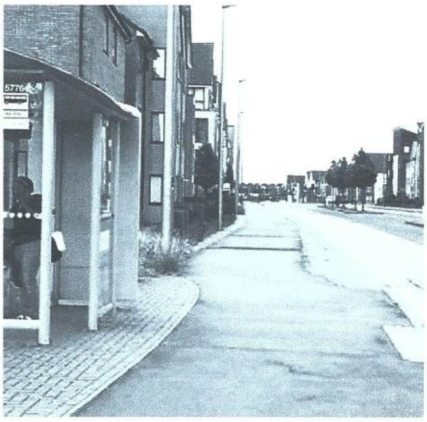


Figure 19: A coherent street suitable for bus operation, with planted median and frontage development. The design also includes bus lanes and bus-friendly traffic calming (Milton Keynes eastern expansion area). (Photo: Tim Pharoah, 2017)



for buses should be provided, with bus gates where necessary to prevent their use by cars and other motor vehicles.

Streets used by buses should be direct and without severe curves or frequent turns to minimise operating distances and times. Straight alignments can also help attract demand because they afford good visibility of buses approaching and make for a more comfortable and safer passenger riding experience. Measures other than curves should be used to moderate traffic speeds on bus routes, including the discouragement of through movement (see section B.3.1) and/or traffic calming measures (see section B.4). Figure 17 shows a street layout with many unnecessary curves that would be uncomfortable for a bus passenger, and Figure 18 shows one that is more suitable for bus services. *Bus Services and New Residential Developments* (Stagecoach, 2017) provides useful examples of the features of residential street layouts that make them suitable or unsuitable for bus operations.

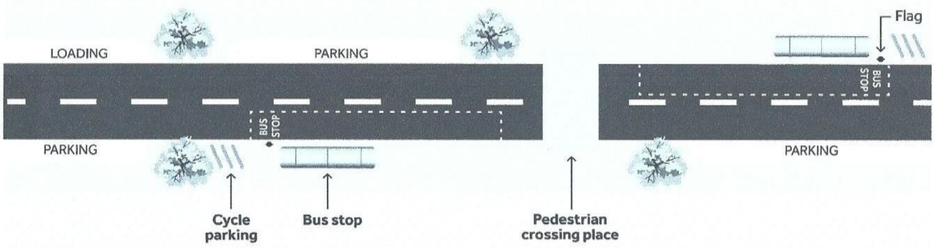
B.2.2 Street widths

Streets with bus services should provide for bus movement in both directions.

The carriageway width should be sufficient to ensure that buses are not obliged to wait to pass oncoming vehicles. To accommodate this, an unobstructed carriageway width of 6.5 metres will avoid buses having to slow to pass one another (or other large vehicles). Where a 20 mph (or lower) speed limit is applied, an unobstructed width of 6.2 metres is generally sufficient. To ensure the widths are consistently available, the carriageway must be kept clear of parked vehicles. Parking and loading activity should be provided for in parallel off-carriageway bays. These should have a width of 2.5 metres for car parking and 2.75 metres for loading, to allow for the opening of parked vehicle doors. *Bus Services and New Residential Developments* (Stagecoach, 2017) endorses the minimum carriageway width recommendations and advises that 'localised widening should be assumed on bends, in line with results of a realistic tracking exercise'.

Figure 20 shows the layout of a street suitable for bus operation, in which parking bays are intermittent, allowing space for a range of facilities including bus stops and shelters, tree planting, cycle parking and pedestrian crossings. Bus stops are located 'tail-to-tail' with a pedestrian crossing facility between them.

Figure 20: Example of bus street with bus stops (not to scale)



The maximum dimensions of buses are set by The Road Vehicles [Construction and Use] Regulations 1986, as amended (UK Government, 1986). The maximum length is 12 metres and the maximum body width 2.55 metres, though around 3 metres should be allowed when wing mirrors are included. Midi and minibuses are built to smaller dimensions for use where street widths are constrained.

Footways should have more generous dimensions on streets with buses or other heavy traffic to help mitigate the impact of noise and fumes but also to reduce intimidation when large or fast-moving vehicles pass close to pedestrians. The minimum footway width on bus routes recommended by CIHT is 2.5 metres. The addition of planted verges or swales can improve the pedestrian and driver experience. Parking bays can also act as a buffer between pedestrians and passing vehicles.

B.2.3 The walk to the bus stop

In new developments, the siting of bus stops and the walking routes to them form part of the same design exercise. Collaboration is required between the bus operator and those responsible for bus infrastructure and streets. Bus stops, and the walking routes to them, should be shown on the plan of the road layout for a new development when it is submitted for planning permission.

Walking routes on local streets and paths should be configured to minimise walking distances to bus stops (see Figures 21, 22 and 23). Routes to bus stops should be legible and, if necessary, made clear with signing. For example, a 'no through road' sign at the start of a cul-de-sac should make it clear if there is a through way for pedestrians and cyclists. The presence of bus stops can also be indicated.

The acceptability of the walk to the stop is not simply a matter of distance but also of the environment along the way and the opportunities for rest and for social interaction with others. Walking along a tree-lined street with strong visual interest and other people around, for example, is a completely different experience from walking the same distance along a street with blank frontage, or with frequent interruptions from side turns or vehicles parked on the footway. As with stops themselves, the walking routes to and from bus stops should be designed for use by people of all abilities. The CIHT guidelines Planning for Walking (CIHT, 2015a) and Designing for Walking (CIHT, 2015b) provide more information on how to make walking routes attractive.

Amongst the quality considerations are:

- Directness;
- Legibility, if necessary with pedestrian-specific signing to the nearest bus stop;
- The width of the footways or footpaths;
- Surface quality, including crossfall;
- Safe road crossings;
- Little exposure to vehicle traffic (volume, speed, composition, noise and air pollution);
- Seating (resting places);
- Safety and security, including oversight and good lighting;