DEWSBURY RIVERSIDE
DESIGNER'S RESPONSE
3rd NOVEMBER 2022

## INTRODUCTION

This note provides the designer's response to the November 2022 Stage 1 Road Safety Audit prepared by Local Transport Projects.

The Problems are responded to in the order that they are set out within the report.

## RAVENSTHORPE ROAD/ FORGE LANE/ LEES HALL ROAD/ LINK ROAD JUNCTION

PROBLEM 2.1:

Risk of late braking/rear end shunt collisions and collisions with pedestrian crossing users due to positioning of traffic signal heads

Recommendation:

1) It is recommended that the positioning of the traffic signal heads is suitably established; and

2) It is recommended that an appropriate forward visibility envelope is provided at all traffic signal head locations and that the visibility distance is commensurate with expected vehicle approach speeds.

Designer's Response:

The provision of traffic signal islands formed part of the preliminary discussions with the highway authority. It is assessed that signal heads can be located within the required viewing angles without the provision of islands.

Detailed consideration of signal head location will form part of the detailed design process and this problem will form part of these considerations.

PROBLEM 2.2:

Risk of vehicle/cyclist collisions due to discontinuation of cycle facilities at the junction exits

Recommendation:

It is recommended that the arrangements which require cyclists to re-join the carriageway upon exiting the junction are reviewed, with suitable design enhancements made which offer improved safety benefits for cyclists.
Designer's Response:

The observation with regard to the western arm is not accepted. The distance between the end of the cycle protection island and the parking is 32m. The distance between the end of the marked

cycle lane and the parking is 22m. There should be no requirement for cyclists to make a sharp movement.

The exit points to the north and east of the junction have been designed to be afforded protection using physical islands. This enhancement to these facilities has been added during the design process to address the problem raised. The cyclists would be required to give-way to traffic, whilst sat behind a kerbed island, i.e. protected.

Further consideration of this point will be given at detailed design stage.

PROBLEM 2.3:

Risk of cyclists losing control and falling from their bicycle as they negotiate a kerb upstand at an acute angle

Recommendation:

It is recommended that a flush kerb arrangement is provided at all locations where cyclists transition from on-road to off-road areas.

Designer's Response:

The issue of kerb heights and flushed kerbs is raised at a number of points within the RSA and is welcomed. As a preliminary design, the exact kerb details are not shown to the level of detail which has been commented on.

The exact details of flush kerbs and other kerb types would be determined at detailed design stage, informed by this RSA1.

As this issue is raised more than once, further similar comments will refer to Problem 2.3. The Designer wishes to confirm that referring back to Problem 2.3 is simply for consistency and not to reduce the consideration given to each point raised.

PROBLEM 2.4:

Increased general collision risk due to alignment of the traffic signal stop line.

Recommendation:

It is recommended the design is amended to show the stop line as being perpendicular to the kerb.

Designer's Response:

Due to physical on-site restrictions the angled cycle stopline (parallel to the crossing) was intended to extend the opportunity for cyclists to access the cycle track.

This issue can be further considered at detail design stage and does not materially impact on the design.

PROBLEM 2.5:

Risk of HGVs colliding with the low bridge due to lack of warning signing, resulting in potential injuries to vehicle occupants

Recommendation:

It is recommended that suitable low bridge ahead warning sign is incorporated into the scheme design.

Designer's Response:

Signage was not included at this stage of the design and the requirement is to be included within the detailed design.

PROBLEM 2.6:

Risk of pedestrian/cyclist collisions due to tactile paving arrangements at the crossing facilities

Recommendation:

It is recommended that the design is suitably amended to include stems on the outer most tactile paving at the cycle facility crossings.

Designer's Response:

The requirement is noted and will be included at detailed design stage.

As this issue is raised more than once, further similar comments will refer to Problem 2.6. The Designer wishes to confirm that referring back to Problem 2.6 is simply for consistency and not to reduce the consideration given to each point raised.

PROBLEM 2.7 – Refer Problem 2.3

PROBLEM 2.8:

Risk of cyclist skid/loss of control collisions due to the presence of leaves within the cycle track.

Recommendation:

It is recommended that, once constructed, a suitable highway maintenance regime is implemented to maintain the cycle facility free of leaves and gathered debris.

Designer's Response:

This issue to be considered as part of the maintenance regime.

PROBLEM 2.9:

Risk of collisions between HGVs and other road users due to turning requirements at the junction.

Recommendation:

It is recommended that the simulation speeds of the HGV swept paths are checked at the junction to ensure that the required large vehicle turning movements can be appropriately accommodated. If the swept paths cannot be suitably accommodated, then the junction design should be modified accordingly.

Designer's Response:

The swept path sows the movement by a HGV can be undertaken with the driver taking sufficient care. For an urban junction this is considered to be appropriate, especially as HGV movements from a residential estate are likely to be neglibigle.

PROBLEM 2.10:

Risk of collisions involving maintenance operatives at the junction.

Recommendation:

It is recommended that appropriate facilities for maintenance vehicles are provided as part of the scheme.

Designer's Response:

The industrial access turning area could be available for such a provision. Further consideration to be given at detailed design stage.

PROBLEM 2.11:

Risk of failure to give way collisions due to restricted visibility.

Recommendation:

It is recommended that the trees are located outside of the visibility splay and away from the junction.

Designer's Response:

The street trees are to have a clear stem of 2.1m. The presence of some minor vertical infringement in to a visibility splay is not uncommon.

Even so, consideration of this issue will be give at detail design stage.

PROBLEM 2.12:

Risk of cyclists/pedestrian collisions and pedestrian trip/fall injuries due to proposed pedestrian crossing arrangements.

Recommendation:

It is recommended that the design of the crossing points is modified so that pedestrians can cross the cycle facility and carriageway in separate stages and that flush kerbs are provided at all pedestrian crossing points.

Designer's Response:

With regard to the lane layout, the layout is fundamentally that of a lightly segregated cycle track which forms part of the overall carriageway provision. Cycle tracks at the edge of all-vehicle lanes are commonplace and form part of many cycle schemes across the UK, including the recently implemented cycle superhighways in the nearby districts of Leeds and Bradford. Also in locations including Cambridge.

Separating the crossings for pedestrians would relocate the cycle track away from the edge of the carriageway, resulting in cyclists losing priority through priority T-junctions to the detriment of cycle access, contrary to LTN 1/20.

The proposed design aligns with Figure 6.20 of LTN 1/20, as well as other figures which are shown for best practice.

For issues relating to kerb heights refer to Problem 2.3. It is recommended that the issue of kerb levels be given full consideration at detailed design stage.

PROBLEM 2.13 see Problem 2.11.

PROBLEM 2.14:

Risk of various collision types due to the design of the crossing facility.

Recommendation:

It is recommended that the design of the crossing is suitably amended taking into account the identified points.

Designer's Response:

For kerb type comments see Problem 2.3.

For tactile paving comments see Problem 2.6.

The ramp lengths are shown at a notional 0.75m and would be tailored to the kerb and crossing heights, which would be designed as per Problem 2.3.

With regard to cycle collisions, pedestrians would have priority at a zebra crossing and any approaching cyclist (within the cycle track, or otherwise) would be required to stop to let the pedestrian (and/ or cyclists) across. Clear visibility envelopes are shown to be provided in all directions between approaching cyclists and waiting pedestrians/ cyclists. The design of the layout

cannot reasonably take account of failures of road users to follow their legal and legislated requirements in this regard as a pedestrian within the zebra would have the right of way.

The zig zag markings would be updated at detailed design stage.

PROBLEM 2.15 as Problem 2.14.

PROBLEM 2.16 as Problem 2.6.

PROBLEM 2.17:

Risk of collisions involving pedestrians or cyclists due to bus stop arrangements

Recommendation:

It is recommended that the proposed bus stop arrangements for the link road are confirmed and, if bus stop bypasses are to be provided, then their layout should be in accordance with '*LTN 1/20'* (DfT, 2020).

Designer's Response:

The bus stop layouts are preliminary and have been based upon the design requirements set out within Paragraphs 6.6.8 to 6.6.11 and Figure 6.30 of LTN 1/20.

The comments relating to kerbs and tactile are as per Problems 2.3 and 2.6, respectively.

There appear to be no residual issues highlighted with regard to the bus stop design. The Designer notes that the location of bus stops has not been determined and the details of each stop would need to be considered based upon the comments from Problem 2.17 and the site-specific requirements of these final locations.

PROBLEM 2.18:

Risk of collisions involving pedestrians as a result of the proposed crossing arrangements.

Recommendation:

It is recommended that the design of the proposed crossings are suitably amended taking into account the points identified above.

Designer's Response:

The distance between the parallel and zebra crossing markings are noted and would be addressed at detailed design stage.

The residual issue are as per Problem 2.14.

PROBLEM 2.20:

Risk of loss of control collisions due to road markings guiding motorists into, rather than around, traffic islands.

Recommendation:

It is recommended that the central hatched lining is suitably amended so that motorists are guided around (rather than into) the central islands and that the number of zig zag markings at the crossing is appropriately increased.
Designer's Response:

This issue would be addressed as detailed design stage.

PROBLEM 2.21 as per Problem 2.3.

PROBLEM 2.22:

Risk of loss of control collisions, particularly for two-wheelers due to traffic calming arrangements

Recommendation:

It is recommended that the speed cushions are positioned with gaps that are in line with the requirements of '*LTN 1/07*' (DfT, 2007) and that they are positioned parallel to the adjacent kerbs.

Designer's Response:

The final location of speed cushions would be determined at detailed design stage and be in accordance with LTN 1/07.

PROBLEM 2.23 see Problem 2.3.

PROBLEM 2.24 see Problem 2.6.

PROBLEM 2.25 and PROBLEM 2.26.

This is an access being designed and delivered by others. It is recommended that the highway authority note these comments when considering that layout.

PROBLEM 2.27:

Risk of collisions involving cyclists exiting the link failing to give way to motorists on Ravensthorpe Road due to potentially restricted visibility.

Recommendation:

It is recommended that an appropriate level of visibility from the active travel link onto Ravensthorpe Road is provided.

Designer's Response:

The existing footway is 1.5m wide in this location. Discussions were held with the highway authority at preliminary design stage and it was considered that a minor reduction in visibility was likely to be preferable to a small build out of the kerb width (such as that for the allotment access discussed in Problems 2.25 and 2.26.