

Report: Road Safety Audit Stage 1

Report Title: WBLR Phase 3 Highway Works, A273/A2300, Burgess Hill, West Sussex

RSA Team: M.B.Projects Ltd Date: July 2024

RESPONSE REPORT

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action																																	
3.4.1 There is an existing bus stop located on the west side of A273 just north of the new Gatehouse Lane Pegasus Crossing. With the introduction of the proposed shared surface there is a risk of conflict between passengers waiting at the bus stop and a passing cyclist. The bus will need to stop on the zig-zag markings which would not be appropriate, adversely affecting safety of those using the crossing	The interaction between waiting passengers and passing cyclists should be assessed, plus the arrangement of the zig-zag markings in order to determine if the bus stop should be relocated. The possibility to install a future bus shelter should also be considered in terms of available width of the selected site	<u>Interaction between waiting passengers and passing cyclists:</u> <u>Bus stop - existing use:</u> The bus stop currently serves bus route 100 operated by Compass Travel – the timetable for which is shown below (approximately one bus per hour between 7:49am and 6:14pm): <table><tr><td> 100</td><td>Pulborough</td><td>7:49 AM</td></tr><tr><td> 100</td><td>Pulborough</td><td>9:19 AM</td></tr><tr><td> 100</td><td>Pulborough</td><td>10:19 AM</td></tr><tr><td> 100</td><td>Pulborough</td><td>11:19 AM</td></tr><tr><td> 100</td><td>Pulborough</td><td>12:19 PM</td></tr><tr><td> 100</td><td>Pulborough</td><td>1:19 PM</td></tr><tr><td> 100</td><td>Pulborough</td><td>2:34 PM</td></tr><tr><td> 100</td><td>Pulborough</td><td>3:34 PM</td></tr><tr><td> 100</td><td>Pulborough</td><td>4:34 PM</td></tr><tr><td> 100</td><td>Storrington</td><td>5:34 PM</td></tr><tr><td> 100</td><td>Washington</td><td>6:14 PM</td></tr></table> The bus operator was contacted to request usage information for this bus stop and has advised: <i><u>‘a report for July 2024 showed the stop in question was used by 59 passengers’.</u></i> This is approximately just 2 passengers per day (possibly the same person making a return journey). <u>Bus stop – proposed use:</u> It is not envisaged that this scheme (WBLR phase 3) will have any material impact on the usage of the existing bus stop. Although the footway will be extended north into the Brookleigh development, the new development incorporates new and	 100	Pulborough	7:49 AM	 100	Pulborough	9:19 AM	 100	Pulborough	10:19 AM	 100	Pulborough	11:19 AM	 100	Pulborough	12:19 PM	 100	Pulborough	1:19 PM	 100	Pulborough	2:34 PM	 100	Pulborough	3:34 PM	 100	Pulborough	4:34 PM	 100	Storrington	5:34 PM	 100	Washington	6:14 PM	The interaction between waiting passengers and passing cyclist has been assessed. The level of conflict would be very low due to the limited number and future number of waiting bus passengers. The proximity of the signalised crossing/visibility/ and straight alignment would all reduce speeds of cyclists however it is recommended appropriate signage is provided to slow cyclists on the south bound approach to the bus stop (northbound speeds will be lower due to the proximity to the crossing). The interaction of the bus stop and zig-zags marking have been assessed and guidance/commentary provided on the suitability of retaining the stop in its current location.	Regarding the interaction between waiting passengers and passing cyclist: We agree with the Overseeing Organisations recommendation to introduce appropriate signing to slow southbound cyclists approaching the bus stop. We will review available options and agree proposals during detailed design / Highway Authority S278 Technical Approval stage, post planning. Regarding the bus stop position: Our commentary has shown that busses are permitted to stop on zig-zag markings and that standards suggest this is a typical / accepted scenario. It is our understanding that the location of the bus stop relative to the crossing, in the existing layout, has been previously considered and accepted
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		frequently spaced bus stops - conveniently located to serve the proposed development parcels. The first new bus stop within the development area is located more conveniently to the local development parcels than this existing bus stop, therefore we do not anticipate any noticeable increase in use at this stop as a result of the development. <u>Cycle use of the new shared use footway:</u> The master planners for the wider Brookleigh development have advised the following forecast cycle use of the proposed shared use route: <i>We have looked at the Transport Assessment for the Outline Planning Application which has an estimate of cycle trip generation.</i> <i>The residential and employment developed on the land between the A2300 and A273 Jane Murray Way was estimated to generate approx. 48 two-way cycle trips.</i> <i>Whilst not all cyclists would use the section of path highlighted it is the quickest route to the town centre, so we could assume say 80% would use it, giving a daily total of around 40 two-way trips.</i> <i>We were also asked to do a sensitivity test with a higher cycle mode share, in line with WSCC's aspirations to promote active travel (assumed 10% mode share). Based on this, the daily total would be 130 two-way trips (applying the same 80% assumption).</i> <i>So in summary, the no. of cycle trips would be in the range 40-130 two-way trips/day.</i> This report by TfL: Analysis of Cycling Potential (tfl.gov.uk) provides an indication of trip intensity during the week, suggesting the busiest time is the weekday pm peak (16:00-19:00hrs) with approximately 28% of the daily trips made in this 3hr time period. Therefore starting with the forecast 40 two-way trips per day, we get 40 x 28% / 3hr = 4no. two-way trips per hour in the peak period. This equates to approximately one cyclist passing the bus stop every 60/(4x2) = 7.5 minutes (450 seconds).		by the Overseeing Organisation.
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		Or Using the higher 130 two-way trips per day forecast, we get $130 \times 28\% / 3\text{hr} = 12\text{no.}$ two-way trips per hour in the peak period. This equates to approximately one cyclist passing the bus stop every $60/(12 \times 2) = 2.5$ minutes (150 seconds). To give these figures some context, the DMRB standard CD143 'Designing for walking, cycling and horse riding' states that a 2m wide unsegregated shared use route is suitable for up to 200 uses per hour = one use every 18 seconds (the shared use route we are providing has a minimum width of approximately 2.5m). The above figures indicate that a) the bus stop has very light use and b) cycle traffic on the shared use route is also forecast to be relatively light. At the location of the bus stop the current proposals achieve a shared use path with 2.71m paved width. If we deduct a conservative 1.12m to accommodate the bench and person sitting – this still leaves a 1.5m wide path width for a cyclist to pass. LTN1-20 'Cycle Infrastructure Design', table 5-2, states 1.5m is the minimum for a 1-way cycle track at constraints. This would require the short length of path past the bench to be used in one direction at a time – with cyclists and pedestrians giving way to one and other. Based on the above usage estimates, the short distance over which the bench will actually restrict the path width, the straight path alignment providing good visibility, and the proximity of the Pegasus crossing (requiring cyclists to slow to negotiate the corners) – we consider the proposals are both suitable and a significant improvement to the alternative of leaving cyclists on-carriageway. <u>Arrangement of zig-zag markings:</u> The TSRGD lists a number of exemptions to the prohibition of stopping in the controlled area (on the zig-zag markings), including: <i>'the vehicle is a public service vehicle being used to carry passengers for hire or reward at separate fares, where the vehicle is waiting in the controlled area in order to take up or set down passengers having proceeded past the crossing or the light signals to which the controlled areas relates.'</i>	
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		This is also reflected in design guidance: Traffic Signs Manual Ch6: 15.19 Provision for bus stops 15.19.1. In urban areas, bus stops and crossings are often sited close together. In these circumstances, a bus stop is better positioned on the exit side of a crossing, and there is an exemption in the regulations for buses to stop on the zig-zags on the exit side, which should be borne in mind when considering layouts. It may be preferable to keep the standard eight zig-zag marks rather than shorten them to provide a bus stop bay – a flag and shelter can still be provided, and the zig-zags prevent other users parking there. Bus operators should be involved in agreeing the position of the bus stop as part of the planning process to ensure that buses at the stop do not obscure the vision of pedestrians or drivers. <u>TfL's Accessible Bus Stop Guidance (2017):</u> It should be noted that buses are permitted to stop on the exit side zig-zag markings at Pelican and Zebra crossings to pick up or drop off passengers. Whilst some authorities reduce the length of exit side zig-zag markings, this practice is not recommended.		
3.4.2 The proposed shared footway/cycleway along the south side of A2300 and west side of A273 passes close to some existing trees in the verges of A273 and A2300. Lower branches could be a hazard to cyclists, risking head injury.	It is recommended that existing trees adjacent to proposed cycleways should be checked and pruned as necessary, with a minimum of 2.4m headroom clearance for a cyclist. Any species of new trees for planting should be carefully selected in order to not require frequent future maintenance.	Agreed. Appropriate notes to be added to site clearance drawings regarding pruning. Landscape design team to be advised of headroom requirements and need for appropriate choice of tree species and planting locations.	Pruning of existing trees to be undertaken to provide sufficient headroom and new trees should be appropriate species	Agreed.
On behalf of the Design Organisation I certify that the RSA actions identified in response to the RSA problems have been discussed and agreed with the Overseeing Organisation		On behalf of the Overseeing Organisation I certify that: 1. The RSA actions identified in response to the RSA problems have been discussed and agreed with the Design Organisation 2. The agreed RSA actions will be progressed		
Name: S. Pearce		Name: Stephen Gee		

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Signed	Signed:
Position: Senior Associate Director	Position: Principal Transport Planner
Organisation: Waterman Infrastructure & Environment Ltd	Organisation: West Sussex County Council
Date:11/09/24	Date: 20/09/2024