

Road Safety Audit Stage 2

Botley Bypass

November 2023

Document reference: 09/246

Client reference: C.J008882.01

Road User Audit Team
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1 Introduction

- 1.1 This report results from a Stage 2 Road Safety Audit carried out on the proposed Botley bypass. The bypass will cross the River Hamble to the northeast of Botley village and accessed by a roundabout to the southeast at the current A334/A3051 junction tying in to the newly completed Woodhouse Lane link road.
- 1.2 The Road Safety Audit Team membership was as follows: -
- | | |
|-----------------------|--|
| Audit Team Leader: | Ross Rawlings MCIHT MSoRSA
Hampshire Engineering Services |
| Audit Team Member: | Steve Willoughby MCIHT MSoRSA
Hampshire Engineering Services |
| Audit Team Observers: | James Heathcote IEng MCIHT AMSoRSA
Hampshire Engineering Services |
| | Geoff Wells MCIHT
Hampshire Engineering Services |
- 1.3 The Road Safety Audit comprised an examination of the documents provided, as listed in the attached Road Safety Audit Brief. The Audit Team visited the site together, on 01 November 2023 at 2pm. During the visit the weather was raining, and the existing road surface was wet. Traffic conditions were light with low levels of pedestrian and cycle activity observed during the site visit.
- 1.4 The audit has been carried out in accordance with the requirements specified in Hampshire County Council's Technical Guidance Note 18. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.
- 1.5 No drawings for the landscaping or structures have been provided so these have not been considered as a part of this Stage 2 Road Safety Audit.
- 1.6 All problems described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme.
- 1.7 All references to diagram numbers refer to the Traffic Signs Regulations and General Directions 2016 (TSRGD).

2 Departures from Standards

- 2.1 All Departures from Standard are listed in the attached Road Safety Audit Brief.

3 Items raised at previous stage audits

- 3.1 A Stage 1 Road Safety Audit was carried out as part of a wider scheme in September 2017. Items raised at this stage that remain a problem are referred to again in this report.

4 Items raised at this Stage 2 Audit

4.1 Problem

Location: Various locations.

Summary: Inappropriate vertical/horizontal sign mounting heights and locations.

Some signs are shown to be situated close to pedestrian crossing points, the edge of carriageway or in front of other signs. If these signs are not installed with the correct mounting heights or they mask pedestrians or other signs, then there is an increased risk of vehicles losing control should they strike the signs, drivers breaking suddenly increasing the risk of vehicle shunt collisions or collisions involving vehicles and vulnerable road users at the crossing points.

Recommendation: Ensure all signs are mounted and positioned accordingly so they do not present a hazard to road users.

4.2 Problem

Location: A334 Station Hill at commercial estate access at chainage E90.

Summary: Risk of vehicle shunt collisions.

Although the layout suggests vehicles are not permitted to turn right into the commercial estate access there are no signs to warn road users of the prohibition. Drivers may attempt to turn in then brake suddenly when they realise they cannot carry out this manoeuvre which could increase the risk of vehicle shunt collisions.

Recommendation: Review the right turn prohibition and provide adequate signing to warn drivers of the banned movement and the need to turn at the roundabout.

4.3 Problem

Location: A334 Station Hill southwest bound approach to Pinkmead roundabout.

Summary: Risk of vehicle side swipe or shunt collisions.

The directional arrows on this approach direct drivers to use both lanes to continue ahead onto the A334 Mill Hill although it is a single lane exit. This could increase the risk of vehicle side swipe collisions as vehicles exit the roundabout.

Recommendation: Review and amend the directional road markings on the roundabout approach and circuit to reflect the desired layout.

4.4 Problem

Location: Segregated left turn lane (SLTL) at Pinkmead Roundabout.

Summary: Risk of vehicle side impact or shunt collisions.

Due to the length and proximity of the SLTL to the roundabout circuit, drivers may not anticipate having to give way as they continue travelling east along the A334. This could increase the risk of vehicle shunt collisions should drivers brake suddenly.

Drivers who become familiar with the layout may concentrate looking right as they travel along the SLTL and make their decision to give way early failing to anticipate drivers slowing or stopping ahead at the junction. This could result in an increased risk of shunt collisions on the SLTL.

Drivers looking right at the end of the SLTL may fail to see an eastbound vehicle circulating on the outside lane of the roundabout due to the entry angle which could result in vehicle side swipe collisions.

Recommendation: Review the requirement for a SLTL and either reconfigure the layout so that it closely resembles the layout shown in CD116 Figure 6.31 or simplify the roundabout configuration by providing a conventional flared dual lane approach on this arm.

4.5 Problem

Location: A334 Station Hill southeastern side at Pinkmead roundabout.

Summary: Potential road user ambiguity.

Pedestrians, especially those with visual impairment, may continue along the short section of cycle track due to the lack of signing or hazard corduroy paving. Vulnerable users including cyclists may then choose to cross away from the formal crossing point increasing the risk of collisions with vehicles.

Recommendation: Provide tactile hazard paving along with appropriate signing to indicate the start/end of the cycle track. Cycle directional signing should also be provided to aid cyclists negotiating and crossing at the roundabout.

4.6 Problem

Location: All crossing points on Pinkmead roundabout.

Summary: Inadequate pedestrian crossing provision.

Pedestrians and cyclists may struggle to find suitable gaps in traffic, especially in peak times, when attempting to cross at the roundabout. Although crossing movements are likely to be low, there is still an increased risk of vehicle/pedestrian collisions at this location.

Recommendation: Assess forecasted traffic flow data on all arms of the roundabout to determine if uncontrolled crossings are acceptable or if a greater crossing provision is required.

4.7 Problem

Location: Crossing points on A334 Botley Bypass and Station Hill arms of Pinkmead roundabout.

Summary: Risk of vehicle/pedestrian or cycle collisions.

Pedestrians/cyclists will have to cross multiple lanes when negotiating the crossings on these arms. There is a risk some users may become disorientated as to which direction traffic is travelling as they attempt to cross which may increase the risk of collisions between vehicles and vulnerable road users.

Recommendation: Provide Dia.1029 LOOK LEFT/RIGHT road markings at each of the crossing points on these arms.

4.8 Problem

Location: Pinkmead roundabout.

Summary: Risk of vehicle/pedestrian or cycle collisions.

The distance users are expected to cross at some of the uncontrolled crossings are excessive. Pedestrians, especially those with visual or mobility impairment, may struggle to cross at these locations due to traffic volumes and speed. This could increase the risk of pedestrian/vehicle collisions at these locations.

Recommendation: Assess forecasted traffic flow data on all arms of the roundabout to determine if uncontrolled crossings are acceptable or if a greater crossing provision is required. If uncontrolled crossings are deemed to be acceptable then reduce the crossing distance by widening islands and reducing traffic lane widths.

4.9 Problem

Location: Various crossing points on Pinkmead roundabout.

Summary: Risk of vehicle/pedestrian or cycle collisions.

The conspicuity of users crossing at the central refuge islands could be reduced if the lighting levels are uneven. This could increase the risk of collisions involving vehicles with pedestrians or cyclists.

Recommendation: Ensure street lighting levels are even across the full width of the crossing points to maximise vulnerable road user conspicuity.

4.10 Problem

Location: Central refuge island on A334 Botley Bypass at chainage A1800.

Summary: Potential pedestrian trip hazard.

The proposed kerbing within the refuge island creates a nib which could create a potential pedestrian trip hazard.

Recommendation: Realign the kerbing within the refuge island to remove the nib.

4.11 Problem

Location: A334 Station Hill/SLTL junction at Pinkmead roundabout.

Summary: Risk of vehicle side impact collisions.

Drivers heading northeast bound may continue and turn left at the roundabout rather than use the SLTL, especially if queuing occurs in the SLTL at peak times. This coupled with the issue raised in Problem 4.4 could increase the risk of vehicle side swipe collisions.

Recommendation: Change the ahead/left arrows on this approach to ahead only and install additional directional signing to discourage drivers from bypassing the SLTL.

4.12 Problem

Location: Segregated left turn lane at Pinkmead roundabout.

Summary: Risk of late lane changing/weave type collisions.

The proposed advanced directional sign (ADS) PS56 is positioned beyond the start of the SLTL. This could lead to late lane changing or weaving increasing the risk of vehicle side impact collisions.

Recommendation: Relocate the ADS a suitable distance in advance of the SLTL to and provide additional directional signing at the development of the SLTL to reinforce lane discipline.

4.13 Problem

Location: A3051 approach to Pinkmead roundabout.

Summary: Risk of vehicle side swipe collisions.

Drivers may be tempted to use lane 1 to turn right and continue along the A334 eastbound, especially if traffic starts to queue in lane 2 on this approach. As the A334 Station Hill is a single lane exit this could increase the risk of vehicle side swipe collisions at this point.

Recommendation: Review the directional arrows and signing on this approach and the roundabout circuit to reflect the desired road layout and reinforce lane discipline.

4.14 Problem

Location: Central reservation on A3051 approach to Pinkmead roundabout.

Summary: Risk of vehicle side impact collisions.

Drivers may be tempted to use the hardstanding within the central reservation to access/egress the commercial premises on the southern side rather than use the roundabout or right turn facility. This could increase the risk of vehicle side impact collisions should approaching drivers fail to anticipate vehicles carrying out unorthodox turning manoeuvres at these locations.

Recommendation: Change the surface material and kerbing type within the central reservation to change its character and deter drivers from using this as a point of access.

4.15 Problem

Location: A3051 northwest bound approach to Pinkmead roundabout.

Summary: Risk of late lane changing/weaving collisions.

The proposed advanced directional sign (ADS) PS92 is positioned beyond the start of the lane split. This could lead to late lane changing or weaving increasing the risk of vehicle side impact collisions.

Recommendation: Relocate the ADS a suitable distance in advance of the lane split to reinforce lane discipline.

4.16 Problem

Location: Traffic island on A334 Botley Bypass at chainage A1580 – A1640.

Summary: Risk of vehicle loss of control collisions.

Drivers overtaking along this length of road, especially in hours of darkness, may not anticipate the traffic island due to the lack of high-level signing. This could result in vehicles striking the island at high-speed increasing the risk of loss of control collisions.

Recommendation: Provide high level Dia.610 keep left signs on both lead ends of the traffic island.

4.17 Problem

Location: Traffic island on A334 Botley Bypass at chainage A1580 – A1640.

Summary: Risk of vehicle loss of control collisions.

The proposed hazard line markings are shown to lead drivers into the traffic island kerbs. This could increase the risk of vehicles striking the island leading to loss of control collisions.

Recommendation: Terminate the hazard markings in a position offset from the edge of the traffic island as detailed in Traffic Signs Manual 5, 2.8.2.

4.18 Problem

Location: Commercial access on A334 Botley Bypass at chainage A1620.

Summary: Risk of vehicle/pedestrian cycle collisions.

Pedestrians accessing/egressing the commercial estate from the southern footpath may choose to cross away from the northern crossing point if a potential desire line is created to the south of the proposed access. Pedestrian crossing away from the formal crossing point could increase the risk of vehicle/pedestrian collisions.

Recommendation: Assess and review the internal layout of the proposed commercial estate to ensure crossings are provided on any potential east/west desire lines.

4.19 Problem

Location: End of Dual carriageway A3051 southeast bound.

Summary: Risk of vehicle head on collisions.

Drivers unfamiliar with the layout may believe the dual carriageway continues beyond the point it changes to a two-way single carriageway. As a result, this could lead to dangerous overtaking manoeuvres increasing the risk of head on type collisions.

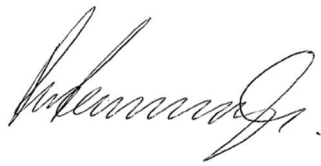
Recommendation: Provide Dia.520 Dual carriageway ends ahead warning signs along with Dia.521 Two-way traffic signs at the eastbound tie-in.

5 Audit team statement

We certify that the terms of reference of the audit are as described in Hampshire County Council's Technical Guidance Note 18.

Audit Team Leader

Ross Rawlings MCIHT, MSoRSA, HE RSA Cert. Comp.
Principal Engineer,
Road User Audit Team
Hampshire County Council

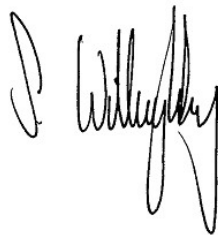


Signed:

Date: 05/12/2023

Audit Team Member

Steve Willoughby MCIHT, MSoRSA, HE RSA Cert. Comp.
Group Engineer,
Road User Audit Team
Hampshire County Council



Signed:

Date: 07/12/2023

Road Safety Audit Brief

Document Reference:

(For audit team use only)

Scheme Name:	Botley Bypass
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Job Number:	C.J008882
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Road Safety Audit Stage: <i>(X as appropriate)</i>	Feasibility (F)	Preliminary (1)	Detailed (2) X	Combined (1/2)	As Built (3)
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Site & Scheme Description

1. Introduction & Background

1.1. HES are providing design, planning, procurement, delivery, and project management services to the CCBS Estate Development Services team for the Botley Bypass.

1.2. The Botley Bypass design includes:

- Construction of a new 1.8km long, 7.3m wide single carriageway bypass through a greenfield site. A new 3m wide shared use footway also runs adjacent to the carriageway.
- Construction of a new bridge over the river Hamble.
- Construction of a new roundabout to replace the existing A334/A3051 priority junction.
- Realignment of the A3051 to tie into the proposed roundabout.
- Construction of acoustic bunding to the west of the river Hamble.
- Construction of a new drainage network for the bypass including SuDs drainage features.
- Existing utilities to be diverted to enable the construction works.
- Preparatory works for new street lighting. The street lighting works will be delivered by others.
- Preparatory works required for new landscaping. The landscaping planting works will be delivered by others.

1.3. Botley Bypass – planning permission was granted by HCC as the planning authority on the 15th of November 2017 by HCC as the determining planning authority.

2. Design Standards

2.1. The road geometry for the Botley Bypass is based on the Design Manual for Roads and Bridges (Standards such as- TD9/93, TD42/95, TD16/07 and TD51/17).

2.2. Where the design has required modification after its initial design new DMRB standards and HCC TGs have been adopted.

2.3. Design Speeds

- 2.3.1. Botley bypass – 70kph
- 2.3.2. A334 – 70kph
- 2.3.3. A3051 – 70kph
- 2.3.4. New House Farm Access Rd – 50kph

3. Design Features

3.1. Carriageway widths

- 3.1.1. Botley bypass - 7.3m (nominal). NB to discourage excessive speeding on the main alignment, central hatching has been provided to reduce lanes to 3.2m
- 3.1.2. A3051 Southeast of new roundabout junction, 7.3m (2 x 3.65m lanes)
- 3.1.3. New House Farm Access Rd - 4m

3.2. Footway and shared footway/cycleway widths.

- 3.2.1. Refer to drawing number CJ008882-ECH-HKF-44301694-DR-HE-0001 KERBS FOOTWAYS AND PAVED AREAS - 1 to 14 for footway areas. Generally, a 1m margin strip between carriageway and either 2.5m footway or shared use 3m footway/cycleway has been adopted.

3.3. Surface course material: Hot Rolled Asphalt with 65PSV for Botley Bypass. New House Farm Access Rd is expected to be Hot Rolled Asphalt with 55PSV or greater.

4. Existing Conditions

4.1. Speeds

- A3051 – 40mph
- A334 – 40mph
- Uplands Way – 40mph

4.2. Bus Stops – There are two on carriageway Bus Stops situated on the Southern arm of the new proposed roundabout junction. The bus stops have been situated on carriageway to reduce speeds and trips through Botley and encourage use of the proposed Botley Bypass.

4.3. Railway Station – Botley Station is located north of the A334/ A3051 junction.

4.4. There is a Light industrial estate located north of the A334 / A3051 junction.

4.5. Shercroft development is under construction – located west of existing Mill Hill junction.

4.6. There are three public rights of way (PROW's) that cross the proposed Botley Bypass site the route number and chainage where they cross the site are below:

- Route 026/3/1 at CH A960
- Route 062/3/1 at CH A1580
- Route 062/8/1 at CH D220

Departures & Relaxations

The original design of the Botley Bypass complied with HCC guidance, other relevant national guidance and the DMRB except for the pre agreed departures. The departures previously agreed are:

DfS 01 – Eastern Roundabout Segregated Left Turn – Uncontrolled Pedestrian Crossings

DfS 02 – Eastern Roundabout Segregated Left Turn Lane – reduced lane width.

Review of the current design for this RSA2 against the current HCC guidance and DMRB guidance, has identified that the original Botley Bypass design doesn't comply with some of the current HCC TGs. The non-compliance is due to the guidance changing between completion of the original design and this RSA2.

Where the design has been changed/updated after its original completion, new standards have been applied where possible. Where it has not been possible to comply with the current standards, new departures from standard have been applied for. These are:

DfS 07 – Botley Bypass – CH A964 - Reduced Central Refuge Width. The current TG10 requires shared use and cycling refuge islands to have an absolute minimum depth of 3.0m, whereas the Botley Bypass design has provided a depth of 2.5m.

DfS 08 – Botley Bypass – CH A1600 - Reduced Central Refuge Width. The current TG10 requires shared use and cycling refuge islands to have an absolute minimum depth of 3.0m, whereas the Botley Bypass design has provided a depth of 2.5m.

DfS 09 – Botley Bypass – CH A1400 – The northbound SSD from Balancing Pond 5 doesn't meet the 120m DMRB visibility requirement. The SSD northbound from Balancing Pond 5 is limited to 103m due to the bridge parapets.

Other items to note:

- The access point to balancing pond 6 on the A334 Mill Hill has only 59m SSD to the roundabout circulatory.
- There is a farm/field access on the A3051 (opposite Pink Mead Farm) with only 56m SSD from the roundabout circulatory.

List of included documents and drawings

CJ008882-ECH-HGN-44301694-DR-HE-0001 GENERAL ARRANGEMENT - 1 of 7

CJ008882-ECH-HGN-44301694-DR-HE-0002 GENERAL ARRANGEMENT - 2 of 7

CJ008882-ECH-HGN-44301694-DR-HE-0003 GENERAL ARRANGEMENT - 3 of 7

CJ008882-ECH-HGN-44301694-DR-HE-0004 GENERAL ARRANGEMENT - 4 of 7

CJ008882-ECH-HGN-44301694-DR-HE-0005 GENERAL ARRANGEMENT - 5 of 7

CJ008882-ECH-HGN-44301694-DR-HE-0006 GENERAL ARRANGEMENT - 6 of 7

CJ008882-ECH-HGN-44301694-DR-HE-0007 GENERAL ARRANGEMENT - 7 of 7

CJ008882-ECH-HKF-44301694-DR-HE-0001 KERBS FOOTWAYS AND PAVED AREAS - 1 of 14

CJ008882-ECH-HKF-44301694-DR-HE-0002 KERBS FOOTWAYS AND PAVED AREAS - 2 of 14

CJ008882-ECH-HKF-44301694-DR-HE-0003 KERBS FOOTWAYS AND PAVED AREAS - 3 of 14

CJ008882-ECH-HKF-44301694-DR-HE-0004 KERBS FOOTWAYS AND PAVED AREAS - 4 of 14

CJ008882-ECH-HKF-44301694-DR-HE-0005 KERBS FOOTWAYS AND PAVED AREAS - 5 of 14
CJ008882-ECH-HKF-44301694-DR-HE-0006 KERBS FOOTWAYS AND PAVED AREAS - 6 of 14
CJ008882-ECH-HKF-44301694-DR-HE-0007 KERBS FOOTWAYS AND PAVED AREAS - 7 of 14
CJ008882-ECH-HKF-44301694-DR-HE-0008 KERBS FOOTWAYS AND PAVED AREAS - 8 of 14
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CJ008882-ECH-HKF-44301694-DR-HE-0012 KERBS FOOTWAYS AND PAVED AREAS - 12 of 14
CJ008882-ECH-HKF-44301694-DR-HE-0013 KERBS FOOTWAYS AND PAVED AREAS - 13 of 14
CJ008882-ECH-HKF-44301694-DR-HE-0014 KERBS FOOTWAYS AND PAVED AREAS - 14 of 14
CJ008882-ECH-HRR-44301694-DR-HE-0003 ROAD RESTRAINT SYSTEMS - 2 of 4
CJ008882-ECH-HRR-44301694-DR-HE-0004 ROAD RESTRAINT SYSTEMS - 3 of 4
CJ008882-ECH-HRR-44301694-DR-HE-0005 ROAD RESTRAINT SYSTEMS - 4 of 4
CJ008882-ECH-HSN-44301694-DR-HE-0001 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 1 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0002 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 2 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0003 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 3 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0004 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 4 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0005 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 5 of 16
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CJ008882-ECH-HSN-44301694-DR-HE-0009 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 9 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0010 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 10 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0011 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 11 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0012 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 12 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0013 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 13 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0014 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 14 of 16
CJ008882-ECH-HSN-44301694-DR-HE-0016 PROPOSED TRAFFIC SIGNS, LINES AND ROAD STUDS - 16 of 16

Name: Chris Campos.....

Position: Senior Engineer.....

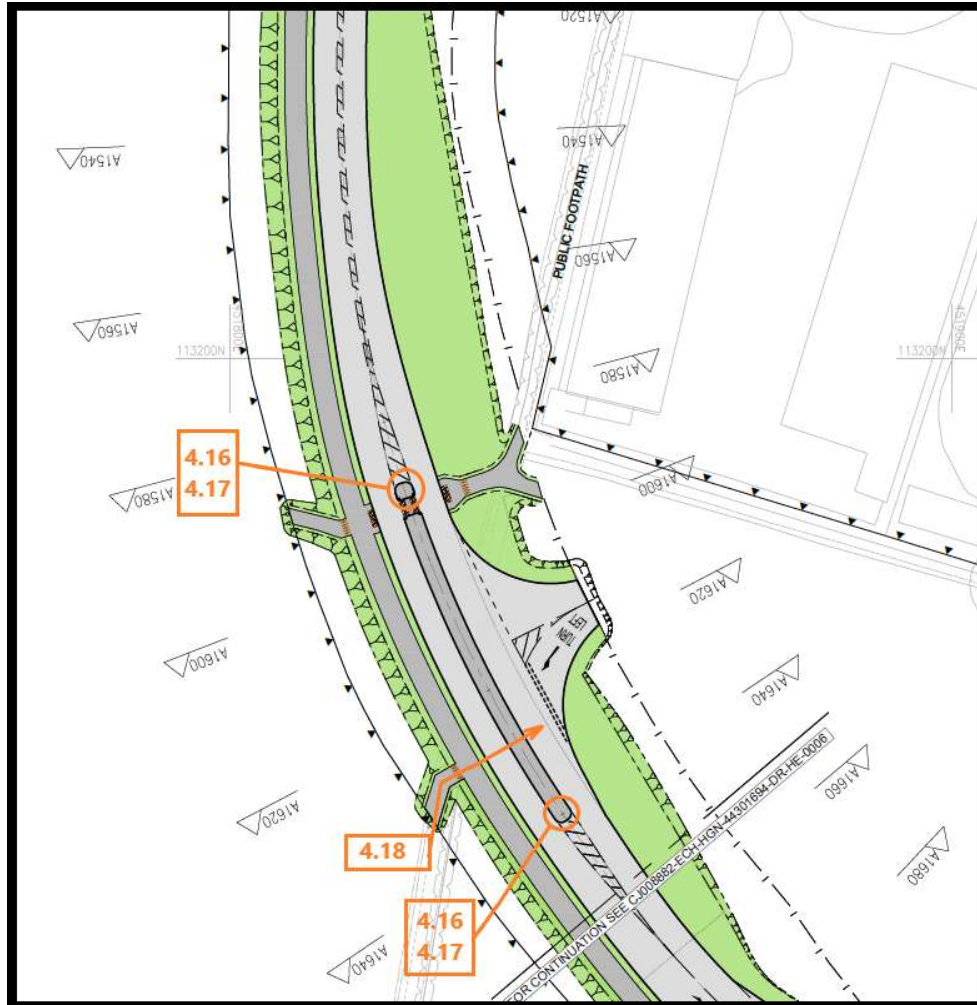
Signed: 

Date: 09/10/2023.....

Email address: Chris.Campos@hants.gov.uk.....

Annotated Plans





Road Safety Audit Response Report

All the problems raised by the Road Safety Audit Team should be given due consideration.

Item No.	Problem Accepted (yes/no)	Recommendation Accepted (yes/no)	Designers Response
4.1	Y	Y	All signs are to be mounted and positioned so as do not to present a hazard to road users.
4.2	Y	Y	Provision of a physical island to prevent the right turn into the future development site in Station Hill, with 'no right turn' prohibition signs added (TRO applied for).
4.3	Y	Y	Narrowing the carriageway on the roundabout approach alongside the refuge and revised direction markings.
4.4	Y	Y	Removal of SLTL to address problem raised.
4.5	Y	Y	Relocation of proposed uncontrolled crossing from Station Hill splitter island and inclusion of a pedestrian refuge to the northeast, with extension of SUF to new crossing location. Tactile paving and signage amended accordingly. See also 4.6.
4.6	Y	Y	The previous roundabout that included a left turn lane to prioritise traffic flows which would have created three separate crossing movements for pedestrians. The revised design removes the SLTL, narrows the exit lane onto the bypass and thereby reduces the distance to cross and the number of crossing movements for pedestrians. Uncontrolled crossings at the roundabout and are in line with the guidance for the predicted two-way traffic flow of 23,000 AADT using the bypass arm. The use of controlled crossings was not considered feasible due to the impact on desire lines due to the minimum distance the crossings need to be located from the junction, land constraints and the impact on the compliant revised roundabout geometry to locate the crossings and user demand unlikely to meet the PV² assessment criteria to justify controlled crossings. The eastern (Station Hill) crossing has been relocated from the splitter island to a new refuge 60m northeast of the roundabout, with the SUF to the southeast being extended, thereby removing the need to cross a free-flow SLTL either side of the roundabout. This also addresses Problem 4.5
4.7	Y	Y	To be added.

4.8	Y	Y	The option to install signalised and Zebra crossings on the bypass and A3051 arms were considered. Despite not having predicted pedestrian and cycle flows, it is not possible to provide signal-controlled crossings due to land constraints, nor is it considered safe to install Zebra crossings due the potential speeds. The uncontrolled crossings proposed across the three remaining arms are within 20 metres of the junction so as to support the desire lines, which neither signal controlled, nor Zebra crossings would be able to achieve.
4.9	Y	Y	Street lighting levels are even across the full width of the crossing points to maximise vulnerable road user conspicuity.
4.10	Y	Y	The splitter islands containing uncontrolled crossings have been revised and the proposed kerbing has been amended to reduce potential pedestrian trip hazards.
4.11	Y	Y	Removal of SLTL to address problem raised.
4.12	Y	Y	Removal of SLTL to address problem raised and ADS repositioned prior to the start of the approach flare.
4.13	Y	Y	Remarking the approaches and circulatory to avoid the issues identified.
4.14	Y	Y	Replacement of the proposed footway within the central reserve with a 'gravel' footway surface more suited to this equestrian crossing location. If required, bollards can be added each side to further deter vehicular use.
4.15	Y	Y	ADS on A3051 has been relocated in advance of the bifurcation to two lanes on the approach to the roundabout
4.16	Y	Y	High level Dia.610 keep left signs have been added at both lead ends of the elongated traffic island on the bypass
4.17	Y	Y	The alignment of the hatching on the approach to the elongated traffic island has been amended to guide drivers past the island, with solid edge lines added alongside the island.
4.18	Y	Y	The problem raised is somewhat outside the control of this scheme. However, draft plans for the proposed development to the northeast do show a footway link to and from the proposed crossing location. As the proposed development will not commence until after the bypass is completed (land being used as a compound for bypass construction), these proposals could change.
4.19	Y	Y	Two-way traffic signs are to be added at the eastbound tie-in of the single-lane dualling inform drivers that the road ahead is subject to two-way traffic.

In accordance with Technical Guidance Note 18, should any of the problems and/or recommendations not be excepted, an Exception Report will be required. If there is more than one exception, then each must be considered and approved separately.

Prepared by:

Signed:.....



(Design Team Leader)

Date: 08-04-25

Approved by:

Signed:

B. Smith (Project Sponsor)

Date:

10 April 2025